

Well Name: RED HILLS UNIT	Well Location: T25S / R33E / SEC 33 / NWNE / 32.093037 / -103.093037	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM005792	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551923	Operator: CIMAREX ENERGY COMPANY	

Notice of Intent

Sundry ID: 2865390

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 07/28/2025	Time Sundry Submitted: 07:18
Date proposed operation will begin: 07/28/2025	

Procedure Description: Coterra Energy Operating Co. requests the following change to the Red Hills Unit 20H: SHL from 453 FNL/ 1620 FEL to 335 FNL/ 2249 FEL. Updated C102 and directionals are attached.

NOI Attachments

Procedure Description

RH_Unit_20H_SHL_BHL_Sundry_07282025_20250728071752.pdf

Well Name: RED HILLS UNIT	Well Location: T25S / R33E / SEC 33 / NWNE / 32.093037 / -103.093037	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM005792	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551923	Operator: CIMAREX ENERGY COMPANY	

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SHELLY BOWEN	Signed on: JUL 28, 2025 07:18 AM
Name: CIMAREX ENERGY COMPANY	
Title: Regulatory Analyst	
Street Address: 6001 DEAUVILLE BLVD STE 300N	
City: MIDLAND	State: TX
Phone: (432) 620-1644	
Email address: DL_PBUREGULATORY@COTERRA.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: cwalls@blm.gov
Disposition: Approved	Disposition Date: 07/28/2025
Signature: Chris Walls	

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.	
6. If Indian, Allottee or Tribe Name	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No.	
9. API Well No.	
10. Field and Pool or Exploratory Area	
11. Country or Parish, State	

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well		
☐ Oil Well	☐ Gas Well	☐ Other
2. Name of Operator		
3a. Address	3b. Phone No. (include area code)	
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other	
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)	Title
Signature	Date

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice 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.	Office	

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

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

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

Additional Information

Location of Well

0. SHL: NWN / 453 FNL / 1620 FEL / TWSP: 25S / RANGE: 33E / SECTION: 33 / LAT: 32.093037 / LONG: -103.093037 (TVD: 0 feet, MD: 0 feet)

PPP: NWN / 100 FNL / 1380 FEL / TWSP: 25S / RANGE: 33E / SECTION: 33 / LAT: 32.094005 / LONG: -103.57321 (TVD: 12428 feet, MD: 12538 feet)

BHL: SWSE / 100 FSL / 1380 FEL / TWSP: 26S / RANGE: 33E / SECTION: 4 / LAT: 32.065541 / LONG: -103.573171 (TVD: 12946 feet, MD: 23222 feet)

CONFIDENTIAL

Well Name: RED HILLS UNIT	Well Location: T25S / R33E / SEC 33 / NWNE / 32.093037 / -103.093037	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM005792	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551923	Operator: CIMAREX ENERGY COMPANY	

Notice of Intent

Sundry ID: 2830708

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 04/01/2025	Time Sundry Submitted: 09:44
Date proposed operation will begin: 06/02/2025	

Procedure Description: Cimarex Energy Co. of Colorado requests the following changes to the Red Hills Unit 20H: BHL change from 100 FSL/2024 FEL to 100 FSL/1380 FEL TVD change from 12,375' to 12946' Please see the attached updated plat and documents for this request.

NOI Attachments

Procedure Description

RH_Unit_20H_Sundry_06032025_20250603065510.pdf

Conditions of Approval

Specialist Review

Red_Hills_Unit_20H_Sundry_ID_2830708_20250603084927.pdf

Well Name: RED HILLS UNIT	Well Location: T25S / R33E / SEC 33 / NWNE / 32.093037 / -103.093037	County or Parish/State: LEA / NM
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Lease Number: NMNM005792	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551923	Operator: CIMAREX ENERGY COMPANY	

Operator

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Operator Electronic Signature: SHELLY BOWEN	Signed on: JUN 03, 2025 06:55 AM
Name: CIMAREX ENERGY COMPANY	
Title: Regulatory Analyst	
Street Address: 6001 DEAUVILLE BLVD STE 300N	
City: MIDLAND	State: TX
Phone: (432) 620-1644	
Email address: DL_PBUREGULATORY@COTERRA.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: LONG VO	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5759885402	BLM POC Email Address: LVO@BLM.GOV
Disposition: Approved	Disposition Date: 06/03/2025
Signature: Long Vo	

Form 3160-5 (June 2019)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021
SUNDRY NOTICES AND REPORTS ON WELLS <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No.
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well ☐ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No.
2. Name of Operator		9. API Well No.
3a. Address	3b. Phone No. (include area code)	10. Field and Pool or Exploratory Area
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		11. Country or Parish, State

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☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
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	Title	
Signature	Date	

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Approved by	Title	Date
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Additional Information

Location of Well

0. SHL: NWNW / 453 FNL / 1620 FEL / TWSP: 25S / RANGE: 33E / SECTION: 33 / LAT: 32.093037 / LONG: -103.093037 (TVD: 0 feet, MD: 0 feet)

PPP: NWNW / 453 FNL / 2024 FEL / TWSP: 25S / RANGE: 33E / SECTION: 33 / LAT: 32.09304 / LONG: -103.575287 (TVD: 12210 feet, MD: 12283 feet)

BHL: SWSE / 100 FSL / 2024 FEL / TWSP: 26S / RANGE: 33E / SECTION: 4 / LAT: 32.065545 / LONG: -103.575249 (TVD: 12375 feet, MD: 22432 feet)

CONFIDENTIAL

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type:	☐ Initial Submittal
			☒ Amended Report
		☐ As Drilled	

WELL LOCATION INFORMATION

API Number 30-025-51923	Pool Code 30094 83600	Pool Name Bobcat Draw- Upper Wolfcamp RED HILLS WOLFCAMP (GAS)
Property Code 323150	Property Name RED HILLS UNIT	Well Number 20H
OGRID No. 215099	Operator Name Coterra Energy Operating Co.	Ground Level Elevation 3,354.3'
Surface Owner: ☐ State ☒ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL B	Section 33	Township 25S	Range 33E	Lot	Ft. from N/S 335 NORTH	Ft. from E/W 2,249 EAST	Latitude (NAD 83) 32.093366°	Longitude (NAD 83) -103.576016°	County LEA
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Bottom Hole Location

UL O	Section 4	Township 26S	Range 33E	Lot	Ft. from N/S 100 SOUTH	Ft. from E/W 1,380 EAST	Latitude (NAD 83) 32.065541°	Longitude (NAD 83) -103.573171°	County LEA
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Dedicated Acres 320	Infill or Defining Well Infill	Defining Well API 30-025-24030	Overlapping Spacing Unit (Y/N) N	Consolidation Code
Order Numbers. NMNM105417597		Well setbacks are under Common Ownership: ☒ Yes ☐ No		

Kick Off Point (KOP)

UL B	Section 33	Township 25S	Range 33E	Lot	Ft. from N/S 100 NORTH	Ft. from E/W 1,380 EAST	Latitude (NAD 83) 32.094005°	Longitude (NAD 83) -103.573210°	County LEA
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First Take Point (FTP)

UL B	Section 33	Township 25S	Range 33E	Lot	Ft. from N/S 100 NORTH	Ft. from E/W 1,380 EAST	Latitude (NAD 83) 32.094005°	Longitude (NAD 83) -103.573210°	County LEA
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Last Take Point (LTP)

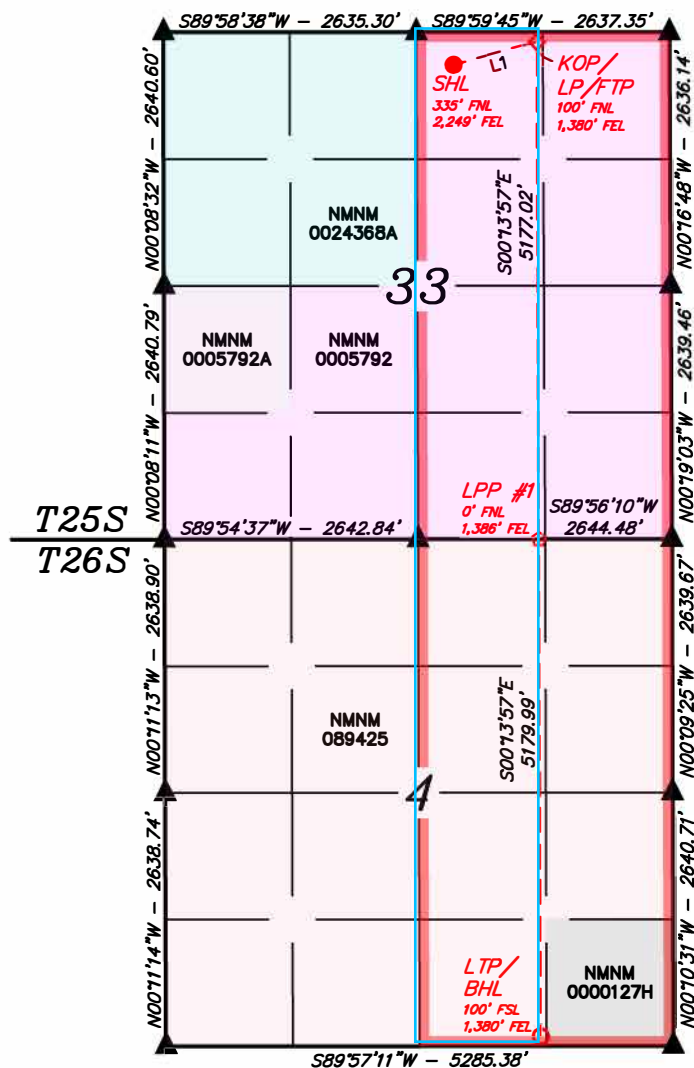
UL O	Section 4	Township 26S	Range 33E	Lot	Ft. from N/S 100 SOUTH	Ft. from E/W 1,380 EAST	Latitude (NAD 83) 32.065541°	Longitude (NAD 83) -103.573171°	County LEA
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Unitized Area or Area of Uniform Interest NA	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3354.3
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OPERATOR CERTIFICATIONS <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i> 6/1/2025 Signature _____ Date _____ Shelly Bowen Printed Name _____ Shelly.Bowen@coterra.com Email Address _____	SURVEYOR CERTIFICATIONS <i>I hereby certify that the well location shown on this plat was plotted from the 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.</i> Signature and Seal of Professional Surveyor 23782 March 27, 2018 Certificate Number _____ Date of Survey _____
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Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

Property Name RED HILLS UNIT	Well Number 20H	Drawn By L.T.T. 11-08-24	Revised By REV. 1 L.T.T. 01-21-25 (UPDATE WELLBORE)
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**NAD 83 (SURFACE HOLE LOCATION)**

LATITUDE = 32°05'36.12" (32.093366°)

LONGITUDE = -103°34'33.66" (-103.576016°)

NAD 27 (SURFACE HOLE LOCATION)

LATITUDE = 32°05'35.67" (32.093241°)

LONGITUDE = -103°34'31.96" (-103.575545°)

STATE PLANE NAD 83 (N.M. EAST)

N: 398526.86' E: 775861.75'

STATE PLANE NAD 27 (N.M. EAST)

N: 398469.24' E: 734675.25'

NAD 83 (KOP/LP/FTP)

LATITUDE = 32°05'38.42" (32.094005°)

LONGITUDE = -103°34'23.56" (-103.573210°)

NAD 27 (KOP/LP/FTP)

LATITUDE = 32°05'37.97" (32.093881°)

LONGITUDE = -103°34'21.86" (-103.572740°)

STATE PLANE NAD 83 (N.M. EAST)

N: 398765.61' E: 776728.91'

STATE PLANE NAD 27 (N.M. EAST)

N: 398707.99' E: 735542.41'

NAD 83 (LPP #1)

LATITUDE = 32°04'47.20" (32.079777°)

LONGITUDE = -103°34'23.49" (-103.573190°)

NAD 27 (LPP #1)

LATITUDE = 32°04'46.75" (32.079652°)

LONGITUDE = -103°34'21.80" (-103.572721°)

STATE PLANE NAD 83 (N.M. EAST)

N: 393589.64' E: 776771.51'

STATE PLANE NAD 27 (N.M. EAST)

N: 393532.16' E: 735584.77'

NAD 83 (LTP/BHL)

LATITUDE = 32°03'55.95" (32.065541°)

LONGITUDE = -103°34'23.41" (-103.573171°)

NAD 27 (LTP/BHL)

LATITUDE = 32°03'55.50" (32.065416°)

LONGITUDE = -103°34'21.73" (-103.572702°)

STATE PLANE NAD 83 (N.M. EAST)

N: 388410.71' E: 776814.13'

STATE PLANE NAD 27 (N.M. EAST)

N: 388353.35' E: 735627.14'

LINE TABLE

LINE	DIRECTION	LENGTH
L1	N74°50'44"E	899.58'

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)
- Colored areas within section lines represent Federal oil & gas leases.

- = SURFACE HOLE LOCATION
- ◇ = KICK OFF POINT/LANDING POINT/FIRST TAKE POINT
- ◊ = LEASE PENETRATION POINT
- = LAST TAKE POINT/BOTTOM HOLE LOCATION
- ▲ = SECTION CORNER LOCATED
- = DEDICATED ACREAGE



SCALE

1. Geological Formations

TVD of target 12,946

Pilot Hole TD N/A

MD at TD 23,223

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	920	N/A	
Top of Salt	1334	N/A	
Base of Salt	4892	N/A	
Bell Canyon	4919	N/A	
Cherry Canyon	6019	N/A	
Brushy Canyon	7578	N/A	
Bone Spring	9047	Hydrocarbons	
Upper Avalon Shale	9338	Hydrocarbons	
1st Bone Spring	10030	Hydrocarbons	
2nd Bone Spring	10230	Hydrocarbons	
3rd Bone Spring	11017	Hydrocarbons	
Wolfcamp	12117	Hydrocarbons	
Wolfcamp B - Target	12946	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
14 3/4	0	1094	1094	10-3/4"	40.50	J-55	BT&C	3.33	6.61	14.20
9 7/8	0	12538	12429	7-5/8"	29.70	L-80	BT&C	2.37	1.18	1.80
6 3/4	0	12038	12038	5-1/2"	23.00	L-80	LT&C	1.56	1.38	2.10
6 3/4	12038	23223	12946	5"	18.00	P-110	BT&C	1.82	1.84	78.98
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

Cimarex Energy Co., Red Hills Unit 20H

	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?	N

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	425	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	114	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	995	10.30	3.64	22.18	12	Lead: Tuned Light + LCM
	198	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Production	1384	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	49
Production	12238	25

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
9 7/8	13 5/8	10M	Annular	X	100% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			Double Ram	X	
			Other		
6 3/4	13 5/8	10M	Annular	X	100% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			Double Ram	X	
			Other		

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

Cimarex Energy Co., Red Hills Unit 20H

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1094'	Fresh Water	7.83 - 8.33	28	N/C
1094' to 12538'	Brine Diesel Emulsion	8.50 - 9.00	30-35	N/C
12538' to 23223'	OBM	10.50 - 11.00	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.

The Brine Emulsion is completely saturated brine fluid that ties diesel into itself to lower the weight of the fluid. The drilling fluid is completely salt saturated.

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 from TD 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	7405 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	H ₂ S is present
X	H ₂ S plan is attached

8. Other Facets of Operation**9. Wellhead**

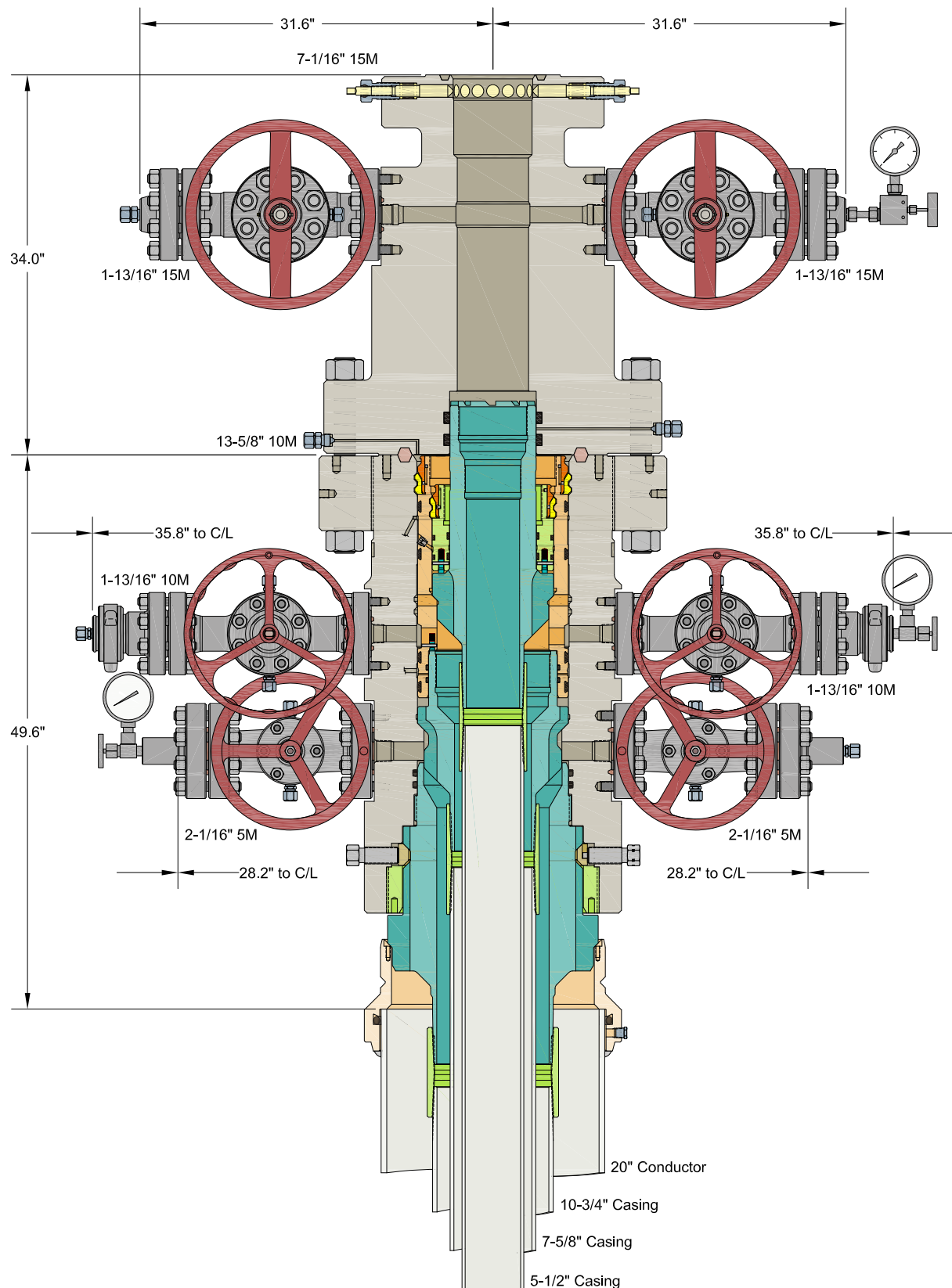
1. The multi-bowl wellhead will be installed by a vendor representative. A copy of the installation instructions has been sent to the BLM field office.
2. A packoff will be installed after running and cementing the production casing. This packoff will be tested to 10K psi.

BOPE Additional Information & Testing

1. After running the first string of casing, a 10M BOP/BOPE system with 5M annular will be installed. BOPs will be tested according to Onshore Order #2. BOPE will be tested to full rated pressure (10K for all BOPE except the annular, which is tested to 5K). For the low test, the system will be tested to 250 psi.
2. All BOP equipment will be tested utilizing a conventional test plug.
3. A remote kill line is included in the BOPE system
4. All casing strings will be tested per Onshore Order #2, to 0.22 psi/ft or 1,500 psi, whichever is greater, not to exceed 70% of casing burst.
5. If well conditions dictate, conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Additional Well Control Notes

1. In the event wellbore pressure encroaches to the maximum rated pressure of the annular, primary pressure control will be switched to the higher rated components (i.e., switch from annular to pipe rams) – upper pipe rams will be closed, and the annular opened in order to not exceed maximum rated pressures.
- The Brine Emulsion is completely saturated brine fluid that ties diesel into itself to lower the weight of the fluid. The drilling fluid is completely salt saturated.



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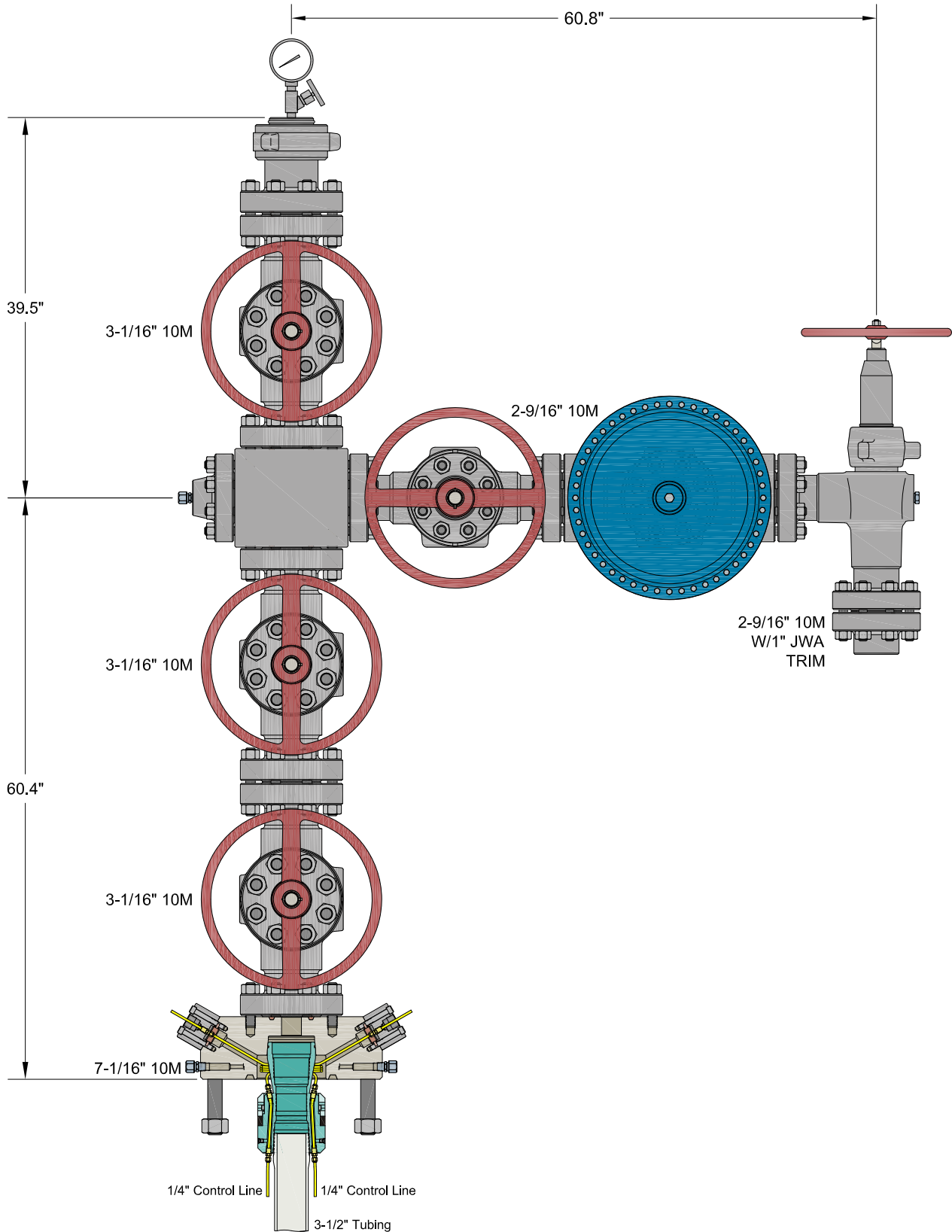
ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

**COTERRA ENERGY INC
HOBBS, NM**

**20" x 10-3/4" x 7-5/8" x 5-1/2" MBU-3T-CFL-R-DBLO-SF Wellhead
With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head
And 7-5/8" & 5-1/2" Mandrel Casing Hangers**

DRAWN	VJK	07JUL23
APPRV		
DRAWING NO.	HBE0000965	



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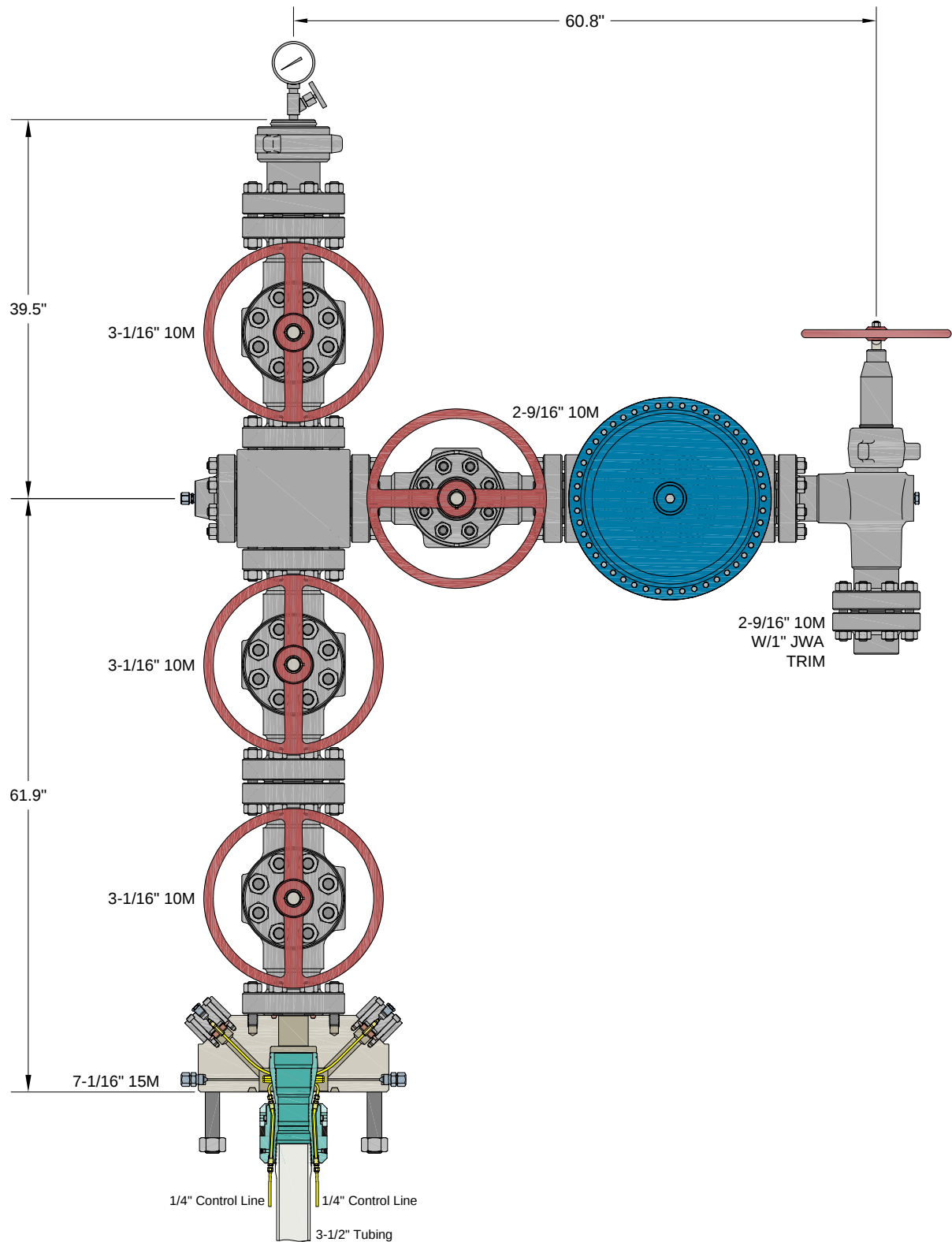
ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

CIMAREX
HOBBS, NM

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

DRAWN	VJK	05SEP23
APPRV		
DRAWING NO.	HBE0001018	



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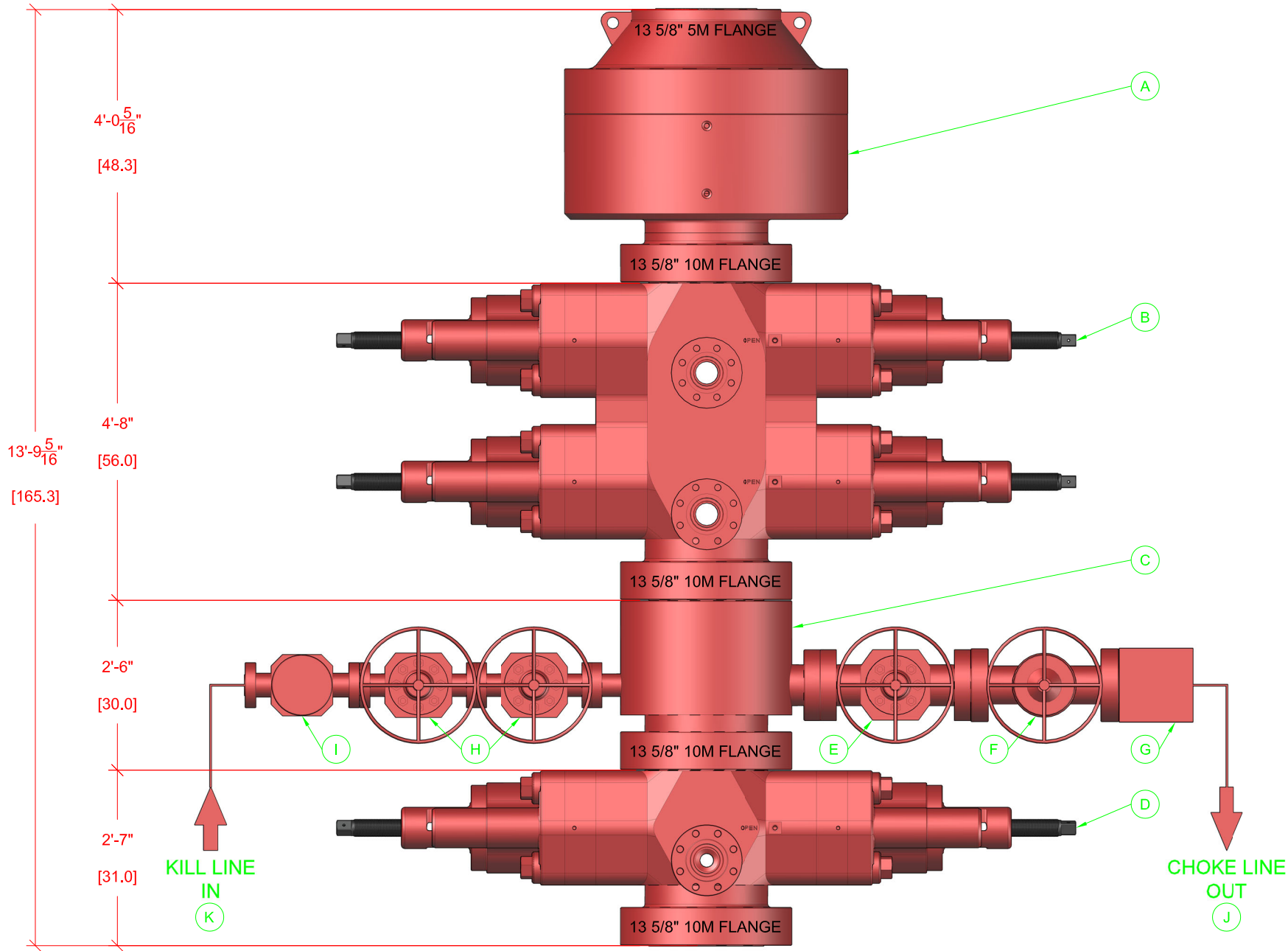
ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

CIMAREX
HOBBS, NM

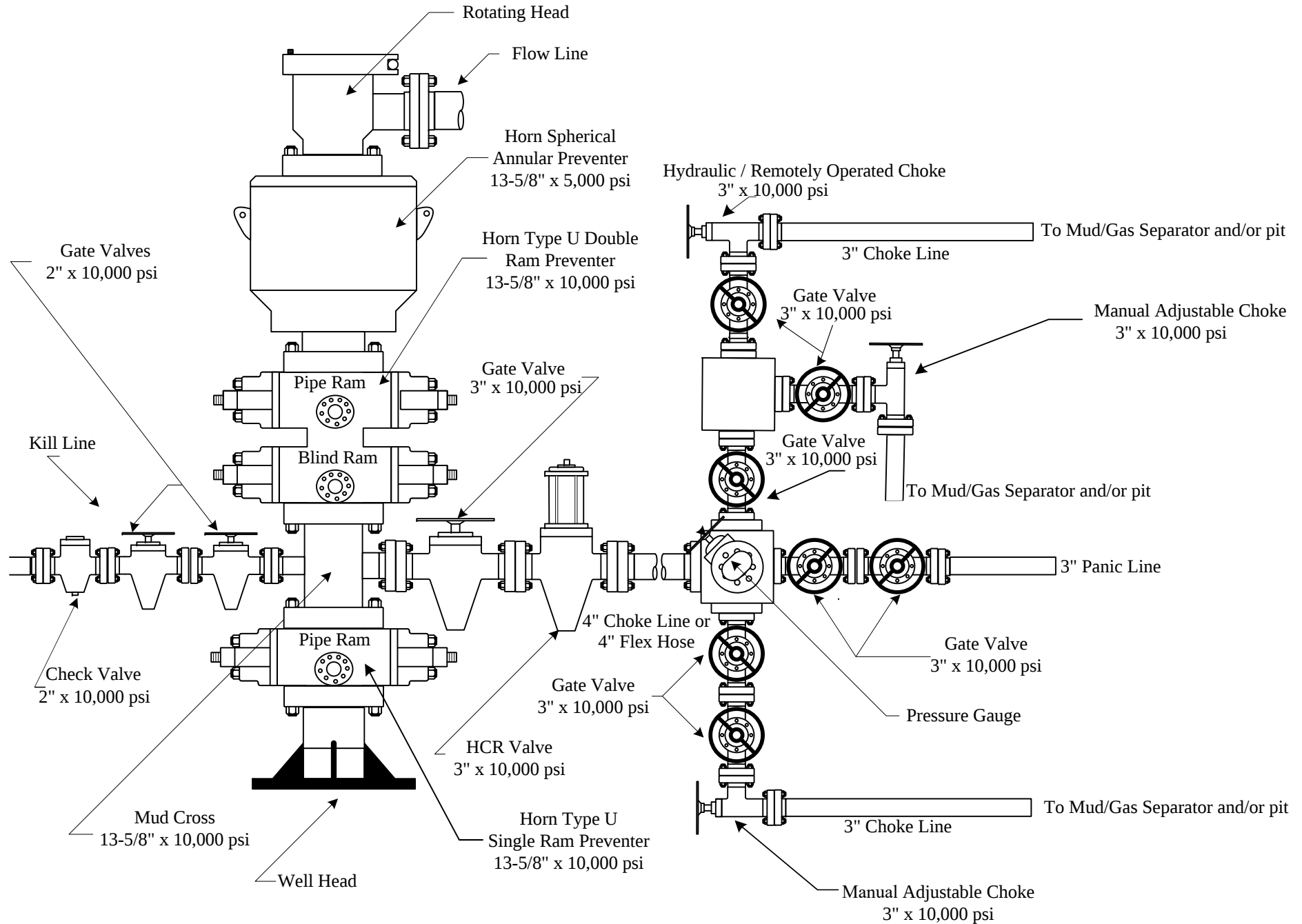
7-1/16" 15M x 3-1/16" x 2-9/16" 10M Production Tree Assembly
With 7-1/16" 15M x 3-1/16" 10M T40-CCL Tubing Head Adapter
And 7-1/16" 3-1/2" T40-CCL Tubing Hanger

DRAWN	VJK	13DEC23
APPRV		
DRAWING NO.	HBE0001018	



BOP EQUIPMENT INFORMATION

DESCRIPTION	MODEL	QTY	ITEM	DESCRIPTION	MODEL	QTY
ANNULAR BOP	13 5/8" 5M	1	G	STUDDED BLOCK	4 1/2" 10M	1
DOUBLE RAM BOP	13 5/8" 10M TYPE-U	1	H	GATE VALE	2 1/2" 10M FC MANUAL	2
MUD CROSS	13 5/8" 10M	1	I	CHECK VALVE	2 1/2" 10M	1
SINGLE RAM BOP	13 5/8" 10M TYPE-U	1	J	CHOKE HOSE	4 1/2" 10M	1
GATE VALVE	4 1/2" 10M FC MANUAL	1	K	KILL HOSE	2 1/2" 10M	1
HCR VALVE	4 1/2" 10M HCR	1	L			



Coterra: H2S Plan



H2S Drilling Operations Plan

Training

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

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

H2S Detection and Alarm Systems

1. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
2. An audio alarm system will be installed on the derrick floor and in the top doghouse

Windsock and/or wind streamers

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

Condition Flags & Signs

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

Coterra: H2S Plan

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

Well Control Equipment

1. See the pressure control section of this submission.

Communication

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

Drillstem Testing

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

Coterra: H2S Plan

H2S Contingency Plan

Emergency Procedures

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

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

Ignition of the Gas Source

1. Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Contacting Authorities

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

Coterra: H2S Plan

Emergency Contacts

Coterra Energy

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

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

Third Party

PERMIAN REGION CONTACT NUMBERS					
CALL 911					
Air Ambulance Services					
	Reeves County Medical - Pecos, TX		432-447-3551		
	Aero Care - Midland, TX		800-627-2376		
	Tri State Care Flight - Artesia, NM		800-800-0900		
	Air Methods - Hobbs, NM		800-242-6199		
Fire / Police / Medical Care					
Sheriff's Office		Fire Departments		Hospital / Medical Care Facilities	
Andrews County	432-523-5545	Andrews	432-523-3111	Permian Regional Med.	432-523-2200
Reagan County	325-884-2929	Big Lake	325-884-3650	Reagan Memorial Hosp.	325-884-2561
Howard County	432-264-2244	Big Springs	432-264-2303	Scenic Mountain Med Ctr	432-263-1211
Terry County	806-637-2212	Brownfield	806-637-6633		
Crane County	432-558-3571	Crane	432-558-2361	Crane Memorial Hosp.	432-558-3555
Val Verde County	830-774-7513	Del Rio	830-774-8648	Val Verde Regional Med.	830-775-8566
		Denver City	806-592-3516	Yoakum County Hospital	806-592-2121
Pecos County	432-336-3521	Ft Stockton	432-336-8525		
Glasscock County	432-354-2361	Garden City			
Winkler County	432-586-3461	Kernit	432-586-2577	Winkler County Memorial	432-586-5864
		McCamey	432-652-8232	McCamey Hospital	432-652-8626
Loving County	432-377-2411	Mentone			
Irion County	325-835-2551	Mertzon			
Ward County	432-943-6703	Monahans	432-943-2211	Ward Memorial Hospital	432-943-2511
Ector County	432-335-3050	Odessa	432-335-4650	Odessa Regional Hosp.	432-582-8340
Crocket County	325-392-2661	Ozona	325-392-2626		
Reeves County	432-445-4901	Pecos	505-757-6511	Reeves County Hospital	432-447-3551
Yoakum County	806-456-2377	Plains	806-456-2288		
Garza County	806-495-3595	Post			
Upton County	432-693-2422	Rankin			
Coke County	915-453-2717	Robert Lee			
		Roscoe	325-766-3931		
Hockley County	806-894-3126	Levelland	806-894-3155	Covenant Health	806-894-4963
Tom Green County	325-655-8111	San Angelo	325-657-4355	San Angelo Comm. Med.	325-949-9511
Gaines County	432-758-9871	Seminole	432-758-3621	Memorial Hospital	432-758-5811
Terrell County	432-345-2525	Sanderson			
Scurry County	325-573-3551	Snyder	325-573-3546	DM Cogdell Memorial	325-573-6374
Sterling County	325-378-4771	Sterling City			
Nolan County	325-235-5471	Sweetwater	325-235-8130	Rolling Plains Memorial	325-235-1701
Culberson County	432-283-2060	Van Horn		Culberson Hospital	432-283-2760
New Mexico					
Lea County	505-396-3611	Knowles	505-392-7469	Lea Reg Med Ctr	575-492-5000
Eddy County	575-887-7551	Carlsbad	575-885-3125	Carlsbad Medical	575-887-4100
		Artesia	575-746-5050	Artesia Hospital	575-748-3333
Roosevelt County	575-356-4408				
Chaves County	575-624-7590				
Ground Ambulance Services					
	Reeves County Medical		Pecos, TX		432-447-3551



Grid



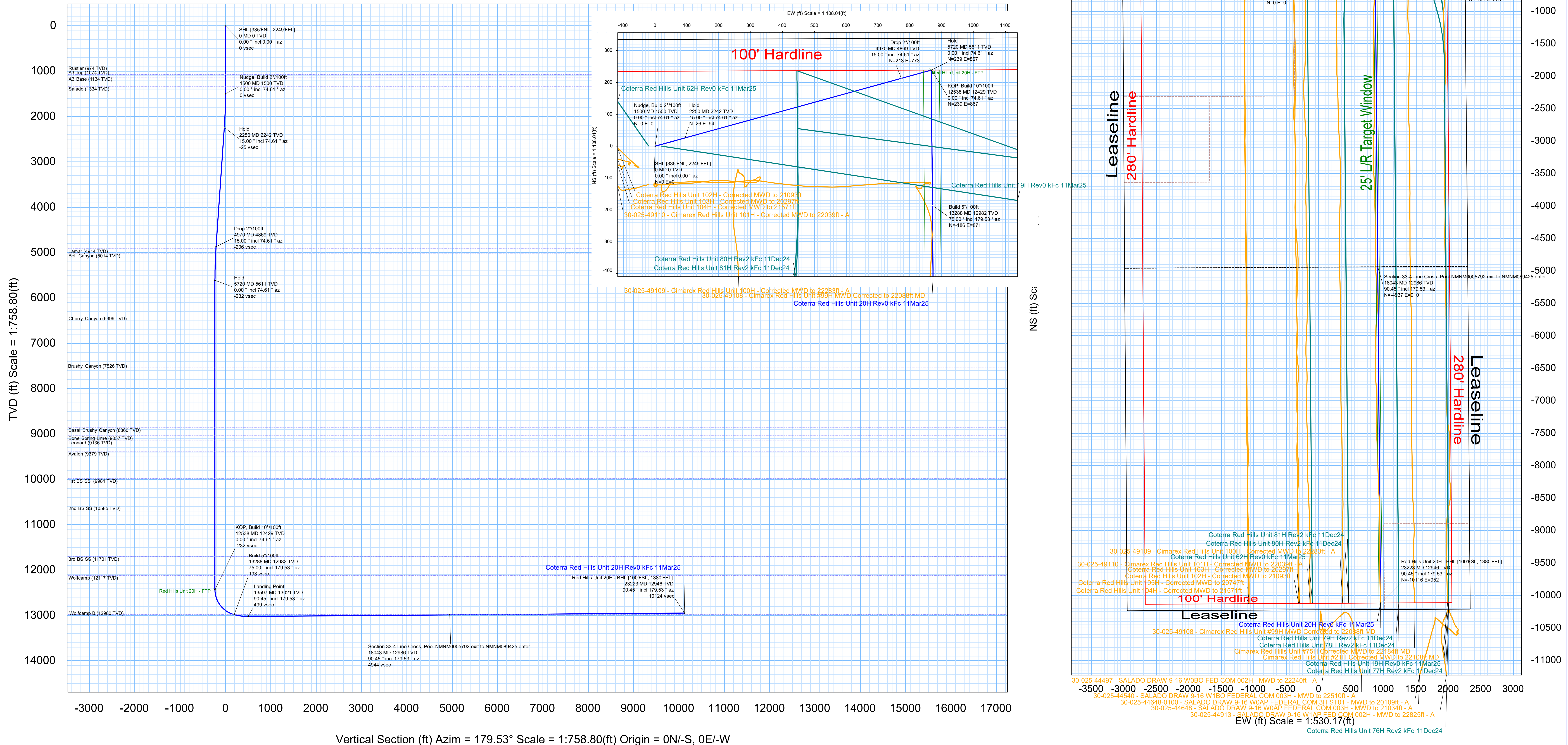
True Mag

Grid North
Tot Corr (M->G 5.689°)
Mag Dec (6.092°)
Grid Conv (0.402°)

CONTROLLED	
Plan ref	Coterra Red Hills Unit 20H Rev0 kFc 11Mar25
Drawing ref	
Copy number	of 3
Date	11-Mar-2025

1	Client	
2	Client	
3	Office	
4	Office	

Copy number _____ for _____





Coterra Red Hills Unit 20H Rev0 kFC 11Mar25 Proposal Geodetic Report

Def Plan

Report Date: March 11, 2025 - 11:28 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure / Slot: Coterra - Red Hills Unit Pad lot B / Red Hills Unit 20H
Well: Red Hills Unit 20H
Borehole: Red Hills Unit 20H
UBH / API#: Unknown / Unknown
Survey Name: Coterra Red Hills Unit 20H Rev0 kFC 11Mar25
Survey Date: March 11, 2025
Tort / AHD / DDI / ERD Ratio: 120.453 / 11255.014 ft / 6.383 / 0.864
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: 32°5'36.11759"N, 103°34'33.65620"W
Location Grid N/E Y/X: N 398526.860 RUS , E 775861.750 RUS
CRS Grid Convergence Angle: 0.402°
Grid Scale Factor: 0.99997209(Applied)
Version / Patch: 2024.5.0.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.529 °(GRID North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3377.300 ft above MSL
Sealed / Ground Elevation: 3354.300 ft above MSL
Magnetic Declination: 6.092°
Total Gravity Field Strength: 998.4363mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47115.031 nT
Magnetic Dip Angle: 59.567°
Declination Date: March 11, 2025
Magnetic Declination Model: HDGM 2025
North Reference: Grid North
Grid Convergence Used: 0.402°
Total Corr Mag North->Grid North: 5.689°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [335°FNL, 2249°FEL]	0.00	0.00	0.00	0.00	-3.377.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561			
	100.00	0.00	74.61	100.00	-3.277.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	200.00	0.00	74.61	200.00	-3.177.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	300.00	0.00	74.61	300.00	-3.077.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	400.00	0.00	74.61	400.00	-2.977.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	500.00	0.00	74.61	500.00	-2.877.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	600.00	0.00	74.61	600.00	-2.777.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	700.00	0.00	74.61	700.00	-2.677.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	800.00	0.00	74.61	800.00	-2.577.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	900.00	0.00	74.61	900.00	-2.477.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
Rustler	974.00	0.00	74.61	974.00	-2.403.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
A3 Top	1,000.00	0.00	74.61	1,000.00	-2.377.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	1,074.00	0.00	74.61	1,074.00	-2.303.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	1,100.00	0.00	74.61	1,100.00	-2.277.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
A3 Base	1,134.00	0.00	74.61	1,134.00	-2.243.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	1,200.00	0.00	74.61	1,200.00	-2.177.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
Salado	1,300.00	0.00	74.61	1,300.00	-2.077.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	1,334.00	0.00	74.61	1,334.00	-2.043.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
Nudge, Build 2°/100ft	1,400.00	0.00	74.61	1,400.00	-1.977.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	1,500.00	0.00	74.61	1,500.00	-1.877.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00
	1,600.00	2.00	74.61	1,599.98	-1.777.32	-0.45	0.46	1.68	398,527.32	775,863.43	32.09336724	-103.57601017	2.00	2.00	0.00
	1,700.00	4.00	74.61	1,699.84	-1.677.46	-1.80	1.85	6.73	398,528.71	775,868.48	32.09337096	-103.57599385	2.00	2.00	0.00
	1,800.00	6.00	74.61	1,799.45	-1.577.85	-4.04	4.17	15.13	398,531.03	775,876.88	32.09337715	-103.57599666	2.00	2.00	0.00
	1,900.00	8.00	74.61	1,898.70	-1.478.60	-7.18	7.40	26.88	398,534.26	775,888.63	32.09338582	-103.57592865	2.00	2.00	0.00
	2,000.00	10.00	74.61	1,997.47	-1.379.83	-11.21	11.55	41.96	398,538.41	775,903.73	32.09339694	-103.57587896	2.00	2.00	0.00
	2,100.00	12.00	74.61	2,095.62	-1.281.68	-16.12	16.62	60.36	398,543.48	775,922.10	32.09341051	-103.57582035	2.00	2.00	0.00
	2,200.00	14.00	74.61	2,193.06	-1.184.24	-21.91	22.59	82.04	398,549.45	775,943.79	32.09342650	-103.57575019	2.00	2.00	0.00
	2,250.16	15.00	74.61	2,241.61	-1.135.69	-25.15	25.92	94.15	398,552.78	775,955.90	32.09343543	-103.57571102	2.00	2.00	0.00
Hold	2,300.00	15.00	74.61	2,289.76	-1.087.54	-28.47	29.35	106.59	398,556.21	775,968.34	32.09344460	-103.57567078	0.00	0.00	0.00
	2,400.00	15.00	74.61	2,386.35	-990.95	-35.14	36.22	131.55	398,563.08	775,993.30	32.09346301	-103.57559003	0.00	0.00	0.00
	2,500.00	15.00	74.61	2,482.94	-894.36	-41.80	43.09	156.51	398,569.95	776,018.25	32.09348141	-103.57550929	0.00	0.00	0.00
	2,600.00	15.00	74.61	2,579.53	-797.77	-48.47	49.96	181.47	398,576.82	776,043.21	32.09349982	-103.57542855	0.00	0.00	0.00
	2,700.00	15.00	74.61	2,676.12	-701.18	-55.14	56.83	206.43	398,583.69	776,068.17	32.09351823	-103.57534781	0.00	0.00	0.00
	2,800.00	15.00	74.61	2,772.71	-604.59	-61.80	63.71	231.38	398,590.56	776,093.13	32.09353663	-103.57526706	0.00	0.00	0.00
	2,900.00	15.00	74.61	2,869.30	-508.00	-68.47	70.58	256.34	398,597.44	776,118.09	32.09355504	-103.57518632	0.00	0.00	0.00
	3,000.00	15.00	74.61	2,965.90	-411.40	-75.13	77.45	281.30	398,604.31	776,143.04	32.09357344	-103.57510558	0.00	0.00	0.00
	3,100.00	15.00	74.61	3,062.49	-314.81	-81.80	84.32	306.26	398,611.18	776,168.00	32.09359185	-103.57502484	0.00	0.00	0.00
	3,200.00	15.00	74.61	3,159.08	-218.22	-88.47	91.19	331.22	398,618.05	776,192.96	32.09361025	-103.57494409	0.00	0.00	0.00
Drop 2°/100ft	3,300.00	15.00	74.61	3,255.67	-121.63	-95.13	98.06	356.18	398,624.92	776,217.92	32.09362866	-103.57486335	0.00	0.00	0.00
	3,400.00	15.00	74.61	3,352.26	-25.04	-101.80	104.94	381.14	398,631.79	776,242.87	32.09364706	-103.57478261	0.00	0.00	0.00
	3,500.00	15.00	74.61	3,448.85	71.55	-108.47	111.81	406.09	398,638.66	776,267.83	32.09366547	-103.57470186	0.00	0.00	0.00
	3,600.00	15.00	74.61	3,545.44	168.14	-115.13	118.68	431.05	398,645.54	776,292.79	32.09368387	-103.57462112	0.00	0.00	0.00
	3,700.00	15.00	74.61	3,642.03	264.73	-121.80	125.55	456.01	398,652.41	776,317.75	32.09370228	-103.57454038	0.00	0.00	0.00
	3,800.00	15.00	74.61	3,738.63	361.33	-128.46	132.42	480.97	398,659.28	776,342.70	32.09372068	-103.57445964	0.00	0.00	0.00
	3,900.00	15.00	74.61	3,835.22	457.92	-135.13	139.29	505.93	398,666.15	776,367.66	32.09373909	-103.57437889	0.00	0.00	0.00
	4,000.00	15.00	74.61	3,931.81	554.51	-141.80	146.17	530.89	398,673.02	776,392.62	32.09375749	-103.57429815	0.00	0.00	0.00
	4,100.00	15.00	74.61	4,028.40	651.10	-148.46	153.04	555.84	398,679.89	776,417.58	32.09377590	-103.57421741	0.00	0.00	0.00
	4,200.00	15.00	74.61	4,124.99	747.69	-155.13	159.91	580.80	398,686.76	776,442.54	32.09379430	-103.57413666	0.00	0.00	0.00
Lamar	4,300.00	15.00	74.61	4,221.58	844.28	-161.80	166.78	605.76	398,693.64	776,467.49	32.09381271	-103.57405592	0.00	0.00	0.00
	4,400.00	15.00	74.61	4,318.17	940.87	-168.46	173.65	630.72	398,700.51	776,492.45	32.09383111	-103.57397518	0.00	0.00	0.00
	4,500.00	15.00	74.61	4,414.76	1,037.46	-175.13	180.52	655.68	398,707.38	776,517.41	32.09384952	-103.57389443	0.00	0.00	0.00
	4,600.00	15.00	74.61	4,511.35	1,134.05	-181.79	187.40	680.64	398,714.25	776,542.37	32.09386792	-103.57381369	0.00	0.00	0.00
	4,700.00	15.00	74.61	4,607.95	1,230.65	-188.46	194.27	705.60	398,721.12	776,567.32	32.09388633	-103.57373295	0.00	0.00	0.00
	4,800.00	15.00	74.61	4,704.54	1,327.24	-195.13	201.14	730.56	398,727.99	776,592.25	32.09390473	-103.57365221	0.00	0.00	0.00
	4,900.00	15.00	74.61	4,801.13	1,423.83	-201.79	208.01	755.51	398,734.86	776,617.24	32.09392313	-103.57357146	0.00	0.00	0.00
	4,970.20	15.00	74.61	4,868.94	1,491.64	-206.47	212.83	773.03	398,739.69	776,634.76	32.09393605	-103.57351478	0.00	0.00	0.00
	5,000.00	14.41	74.61	4,897.76	1,520.46	-208.42	214.84	780.33	398,741.70	776,642.05	32.09394143	-103.57349119	2.00	-2.00	0.00
	5,016.76	14.07	74.61	4,914.00	1,536.70	-209.48	215.94	784.30	398,742.79	776,646.03	32.09394436	-103.57347833	2.00	-2.00	0.00
Bell Canyon	5,100.00	12.41	74.61	4,995.03	1,617.73	-214.39	221.00	802.68	398,747.85	776,664.41	32.09395792	-103.573.			

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (ft/100ft)	BR (ft/100ft)	TR (ft/100ft)
Bone Spring Lime	9,100.00	0.00	74.61	8,990.19	5,612.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,146.81	0.00	74.61	9,037.00	5,659.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,200.00	0.00	74.61	9,090.19	5,712.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
Leonard	9,245.81	0.00	74.61	9,136.00	5,758.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,300.00	0.00	74.61	9,190.19	5,812.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,400.00	0.00	74.61	9,290.19	5,912.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
Avallon	9,488.81	0.00	74.61	9,379.00	6,001.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,500.00	0.00	74.61	9,390.19	6,012.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,600.00	0.00	74.61	9,490.19	6,112.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,700.00	0.00	74.61	9,590.19	6,212.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,800.00	0.00	74.61	9,690.19	6,312.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,900.00	0.00	74.61	9,790.19	6,412.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
1st BS SS	10,000.00	0.00	74.61	9,890.19	6,512.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,090.81	0.00	74.61	9,981.00	6,603.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,100.00	0.00	74.61	9,990.19	6,612.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,200.00	0.00	74.61	10,090.19	6,712.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,300.00	0.00	74.61	10,190.19	6,812.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,400.00	0.00	74.61	10,290.19	6,912.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,500.00	0.00	74.61	10,390.19	7,012.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
2nd BS SS	10,600.00	0.00	74.61	10,490.19	7,112.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,694.81	0.00	74.61	10,585.00	7,203.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,700.00	0.00	74.61	10,590.19	7,212.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,800.00	0.00	74.61	10,690.19	7,312.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,900.00	0.00	74.61	10,790.19	7,412.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,000.00	0.00	74.61	10,890.19	7,512.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,100.00	0.00	74.61	10,990.19	7,612.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,200.00	0.00	74.61	11,090.19	7,712.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,300.00	0.00	74.61	11,190.19	7,812.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,400.00	0.00	74.61	11,290.19	7,912.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,500.00	0.00	74.61	11,390.19	8,012.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,600.00	0.00	74.61	11,490.19	8,112.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,700.00	0.00	74.61	11,590.19	8,212.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,800.00	0.00	74.61	11,690.19	8,312.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,810.81	0.00	74.61	11,701.00	8,323.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,900.00	0.00	74.61	11,790.19	8,412.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,000.00	0.00	74.61	11,890.19	8,512.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,100.00	0.00	74.61	11,990.19	8,612.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,200.00	0.00	74.61	12,090.19	8,712.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,226.81	0.00	74.61	12,117.00	8,739.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,300.00	0.00	74.61	12,190.19	8,812.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,400.00	0.00	74.61	12,290.19	8,912.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,500.00	0.00	74.61	12,390.19	9,012.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
KOP, Build 10"/100ft	12,538.36	0.00	74.61	12,428.55	9,051.25	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,600.00	6.16	179.53	12,490.07	9,112.77	-228.31	235.44	867.21	398,762.30	776,728.94	32.09399638	-103.57321017	10.00	10.00	0.00
	12,700.00	16.16	179.53	12,588.06	9,210.76	-208.97	216.11	867.37	398,742.96	776,729.10	32.09394322	-103.57321010	10.00	10.00	0.00
	12,800.00	26.16	179.53	12,681.19	9,303.89	-172.91	180.05	867.67	398,706.91	776,729.39	32.09384411	-103.57320997	10.00	10.00	0.00
	12,900.00	36.16	179.53	12,766.65	9,389.35	-121.23	128.37	868.09	398,655.22	776,729.82	32.09370205	-103.57320977	10.00	10.00	0.00
	13,000.00	46.16	179.53	12,841.84	9,464.54	-55.49	62.63	868.63	398,589.49	776,730.35	32.09352135	-103.57320953	10.00	10.00	0.00
	13,100.00	56.16	179.53	12,904.47	9,527.17	22.31	-15.16	869.27	398,511.70	776,730.99	32.09330751	-103.57320924	10.00	10.00	0.00
	13,200.00	66.16	179.53	12,952.64	9,575.34	64.22	-49.99	869.99	398,424.22	776,731.71	32.09307603	-103.57320891	10.00	10.00	0.00
Wolfcamp	13,280.87	74.25	179.53	12,980.00	9,602.70	185.83	-178.68	870.61	398,348.19	776,732.33	32.09285804	-103.57320863	10.00	10.00	0.00
	13,288.36	75.00	179.53	12,981.98	9,604.68	193.04	-185.89	870.67	398,340.97	776,732.39	32.09283820	-103.57320860	10.00	10.00	0.00
	13,300.00														

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
	20,700.00	90.45	179.53	12,965.66	9,588.36	7,601.06	-7,593.65	931.64	390,933.43	776,793.36	32.07247573	-103.57318029	0.00	0.00	0.00
	20,800.00	90.45	179.53	12,964.88	9,587.58	7,701.05	-7,693.65	932.47	390,833.44	776,794.19	32.07220087	-103.57317991	0.00	0.00	0.00
	20,900.00	90.45	179.53	12,964.10	9,586.80	7,801.05	-7,793.64	933.29	390,733.45	776,795.01	32.07192600	-103.57317952	0.00	0.00	0.00
	21,000.00	90.45	179.53	12,963.32	9,586.02	7,901.05	-7,893.63	934.11	390,633.46	776,795.83	32.07165114	-103.57317914	0.00	0.00	0.00
	21,100.00	90.45	179.53	12,962.54	9,585.24	8,001.04	-7,993.63	934.93	390,533.47	776,796.66	32.07137628	-103.57317876	0.00	0.00	0.00
	21,200.00	90.45	179.53	12,961.76	9,584.46	8,101.04	-8,093.62	935.76	390,433.48	776,797.48	32.07110141	-103.57317837	0.00	0.00	0.00
	21,300.00	90.45	179.53	12,960.98	9,583.68	8,201.04	-8,193.62	936.58	390,333.49	776,798.30	32.07082655	-103.57317799	0.00	0.00	0.00
	21,400.00	90.45	179.53	12,960.20	9,582.90	8,301.03	-8,293.61	937.40	390,233.50	776,799.13	32.07055169	-103.57317761	0.00	0.00	0.00
	21,500.00	90.45	179.53	12,959.42	9,582.12	8,401.03	-8,393.60	938.23	390,133.51	776,799.95	32.07027683	-103.57317723	0.00	0.00	0.00
	21,600.00	90.45	179.53	12,958.64	9,581.34	8,501.03	-8,493.60	939.05	390,033.52	776,800.77	32.07000196	-103.57317684	0.00	0.00	0.00
	21,700.00	90.45	179.53	12,957.87	9,580.57	8,601.03	-8,593.59	939.87	389,933.53	776,801.59	32.06972710	-103.57317646	0.00	0.00	0.00
	21,800.00	90.45	179.53	12,957.09	9,579.79	8,701.02	-8,693.58	940.70	389,833.54	776,802.42	32.06945224	-103.57317608	0.00	0.00	0.00
	21,900.00	90.45	179.53	12,956.31	9,579.01	8,801.02	-8,793.58	941.52	389,733.55	776,803.24	32.06917737	-103.57317569	0.00	0.00	0.00
	22,000.00	90.45	179.53	12,955.53	9,578.23	8,901.02	-8,893.57	942.34	389,633.56	776,804.06	32.06890251	-103.57317531	0.00	0.00	0.00
	22,100.00	90.45	179.53	12,954.75	9,577.45	9,001.01	-8,993.56	943.17	389,533.56	776,804.89	32.06862765	-103.57317493	0.00	0.00	0.00
	22,200.00	90.45	179.53	12,953.97	9,576.67	9,101.01	-9,093.56	943.99	389,433.57	776,805.71	32.06835278	-103.57317454	0.00	0.00	0.00
	22,300.00	90.45	179.53	12,953.19	9,575.89	9,201.01	-9,193.55	944.81	389,333.58	776,806.53	32.06807792	-103.57317416	0.00	0.00	0.00
	22,400.00	90.45	179.53	12,952.41	9,575.11	9,301.00	-9,293.54	945.63	389,233.59	776,807.36	32.06780306	-103.57317378	0.00	0.00	0.00
	22,500.00	90.45	179.53	12,951.63	9,574.33	9,401.00	-9,393.54	946.46	389,133.60	776,808.18	32.06752819	-103.57317339	0.00	0.00	0.00
	22,600.00	90.45	179.53	12,950.85	9,573.55	9,501.00	-9,493.53	947.28	389,033.61	776,809.00	32.06725333	-103.57317301	0.00	0.00	0.00
	22,700.00	90.45	179.53	12,950.07	9,572.77	9,601.00	-9,593.53	948.10	388,933.62	776,809.83	32.06697847	-103.57317263	0.00	0.00	0.00
	22,800.00	90.45	179.53	12,949.30	9,572.00	9,700.99	-9,693.52	948.93	388,833.63	776,810.65	32.06670360	-103.57317224	0.00	0.00	0.00
	22,900.00	90.45	179.53	12,948.52	9,571.22	9,800.99	-9,793.51	949.75	388,733.64	776,811.47	32.06642874	-103.57317186	0.00	0.00	0.00
	23,000.00	90.45	179.53	12,947.74	9,570.44	9,900.99	-9,893.51	950.57	388,633.65	776,812.29	32.06615388	-103.57317148	0.00	0.00	0.00
	23,100.00	90.45	179.53	12,946.96	9,569.66	10,000.98	-9,993.50	951.40	388,533.66	776,813.12	32.06587901	-103.57317109	0.00	0.00	0.00
	23,200.00	90.45	179.53	12,946.18	9,568.88	10,100.98	-10,093.49	952.22	388,433.67	776,813.94	32.06560415	-103.57317071	0.00	0.00	0.00
	23,222.96	90.45	179.53	12,946.00	9,568.70	10,123.94	-10,116.45	952.41	388,410.71	776,814.13	32.06554104	-103.57317062	0.00	0.00	0.00

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Code	Vendor / Tool	Borehole / Survey
	1	0.000	12,500.000	1/100.000 - 12.25 – 8.75 – 6 '5 – 9.625 – 7 – 6				A001Mb_MWD		Red Hills Unit 20H / Coterra Red Hills Unit 20H Ren
	1	12,500.000	23,222.961	1/100.000	6	6		A008Mb_MWD+IFR1+MS		Red Hills Unit 20H / Coterra Red Hills Unit 20H Ren

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
1,300.200	17.500	13.375	
4,895.200	12.250	9.625	
11,483.200	8.750	7.000	
23,222.961	6.000		



Coterra Red Hills Unit 20H Rev0 kFc 11Mar25 Proposal Geodetic Report

Def Plan

Report Date:	March 11, 2025 - 11:26 PM (UTC 0)	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	COTERRA	Vertical Section Azimuth:	179.529 °(GRID North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Coterra - Red Hills Unit Pad lot B / Red Hills Unit 20H	TVD Reference Datum:	RKB
Well:	Red Hills Unit 20H	TVD Reference Elevation:	3377.300 ft above MSL
Borehole:	Red Hills Unit 20H	Seabed / Ground Elevation:	3354.300 ft above MSL
UBHI / API#:	Unknown / Unknown	Magnetic Declination:	6.092°
Survey Name:	Coterra Red Hills Unit 20H Rev0 kFc 11Mar25	Total Gravity Field Strength:	998.4363mgn (9.80665 Based)
Survey Date:	March 11, 2025	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	120.453 ° / 11255.014 ft / 6.383 / 0.864	Total Magnetic Field Strength:	47115.031 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.567°
Location Lat / Long:	32°5'36.11759"N , 103°34'33.65620"W	Declination Date:	March 11, 2025
Location Grid N/E Y/X:	N 398526.860 RUS , E 775861.750 RUS	Magnetic Declination Model:	HCOM 2025
CRS Grid Convergence Angle:	0.402°	North Reference:	Grid North
Grid Scale Factor:	0.99997209(Applied)	Grid Convergence Used:	0.402°
Version / Patch:	2024.5.0.1	Total Corr Mag North->Grid North:	5.689°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [335FNL, 2248FEL]	0.00	0.00	0.00	0.00	-3.377.30	0.00	0.00	0.00	398.526.86	775.861.75	32.09336600	-103.57601561			
Nudge, Build 2"/100ft	1,500.00	0.00	74.61	1,500.00	-1,877.30	0.00	0.00	0.00	398.526.86	775.861.75	32.09336600	-103.57601561	0.00	0.00	0.00
Hold	2,250.16	15.00	74.61	2,241.61	-1,135.69	-25.15	25.92	94.15	398.552.78	775.955.90	32.09343543	-103.57571102	2.00	2.00	0.00
Drop 2"/100ft	4,970.20	15.00	74.61	4,868.94	1,491.64	-206.47	212.83	773.03	398.739.69	776.634.76	32.09393605	-103.57351478	0.00	0.00	0.00
Hold	5,720.36	0.00	74.61	5,610.55	2,233.25	-231.62	238.76	867.19	398.765.61	776.728.91	32.09400548	-103.57321019	2.00	-2.00	0.00
KOP, Build 10"/100ft	12,538.36	0.00	74.61	12,428.55	9,051.25	-231.62	238.76	867.19	398.765.61	776.728.91	32.09400548	-103.57321019	0.00	0.00	0.00
Build 5"/100ft	13,288.36	75.00	179.53	12,981.98	9,604.68	193.04	-185.69	870.67	398.340.97	776.732.39	32.09263820	-103.57320860	10.00	10.00	0.00
Landing Point	13,597.29	90.45	179.53	13,021.00	9,643.70	498.56	-491.40	873.18	398.035.48	776.734.90	32.09199844	-103.57320745	5.00	5.00	0.00
Red Hills Unit 20H - BHL [100FSL, 1380FEL]	23,222.96	90.45	179.53	12,946.00	9,568.70	10,123.94	-10,116.45	952.41	388,410.71	776,814.13	32.06554104	-103.57317062	0.00	0.00	0.00

Survey Type: Def Plan

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

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Code	Vendor / Tool	Borehole / Survey
	1	0.000	12,500.000	1/100.000 - 12.25 - 8.75 - 6 '5 - 9.625 - 7 - 6				A001Mb_MWD		Red Hills Unit 20H / Coterra Red Hills Unit 20H Rer
	1	12,500.000	23,222.961	1/100.000	6	6		A008Mb_MWD+IFR1+MS		Red Hills Unit 20H / Coterra Red Hills Unit 20H Rer

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
1,300.200	17.500	13.375	
4,895.200	12.250	9.625	
11,483.200	8.750	7.000	
23,222.961	6.000		



Coterra Red Hills Unit 20H Rev0 kFc 11Mar25 Anti-Collision Summary Report

Analysis Date-24hr Time: March 11, 2025 - 11:28 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure: Coterra - Red Hills Unit Pad lot B
Slot: Red Hills Unit 20H
Well: Red Hills Unit 20H
Borehole: Red Hills Unit 20H
Scan MD Range: 0.00ft ~ 23222.96ft

Analysis Method: 3D Least Distance
Reference Trajectory: Coterra Red Hills Unit 20H Rev0 kFc 11Mar25 (Def Plan)
Depth Interval: Every 10.00 Measured Depth (ft)
Rule Set: NAL Procedure: D&M AntiCollision Standard S002
Min Pts: Absolute minima indicated.
Engine Version: 2024.5.0.1
Database \ Project: Red Hills Unit 20H-COTERRA

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

Offset Trajectories Summary

Offset Selection Criteria

Bounding box scan: minimum Ct-Ct separation <= 2000ft
 Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans
 Selection filters:
 - 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

28 out of 36 are selected

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	

Results highlighted in red: Sep-Factor <= 1.5

Result highlighted in boxed, red and bold: all local minima indicated.

30-025-08391 - ANNIE R BASS-FED 1 - Blind to 5081ft - P (DefinitiveSurvey) - Fail Major

1894.32	32.81	1892.34	1861.51	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
1894.22	32.81	1892.22	1861.41	126983.01	MAS = 10.00 (m)	10.00	10.00					MinPt-SF
1894.17	32.81	1892.18	1861.36	211135.22	MAS = 10.00 (m)	20.00	20.00					MinPt-EOU
1894.17	32.81	1892.18	1861.36	607275.72	MAS = 10.00 (m)	23.00	23.00					WRP
1894.16	587.86	1501.60	1306.30	4.84	OSF1.50	410.00	410.00	OSF<=5.00				Enter Alert
1894.16	1895.47	629.86	-1.31	1.50	OSF1.50	1040.00	1040.00		OSF<=1.50			Enter Minor
1894.16	2850.01	-6.43	-955.85	1.00	OSF1.50	1500.00	1500.00			OSF<=1.00		Enter Major
1101.44	10331.67	-5786.88	-9230.23	0.16	OSF1.50	5230.00	5122.58					MinPt-ADP
1100.18	10329.80	-5786.90	-9229.63	0.16	OSF1.50	5240.00	5132.44					MinPt-EOU
1095.66	10307.73	-5776.70	-9212.08	0.16	OSF1.50	5290.00	5181.81					MinPt-SF
1094.16	10264.68	-5749.49	-9170.51	0.16	OSF1.50	5339.58	5230.89					MinPt-CtCt
2703.57	4072.35	-11.87	-1368.78	1.00	OSF1.50	7700.00	7590.19				OSF>1.00	Exit Major
3310.91	3325.81	1093.17	-14.90	1.49	OSF1.50	8350.00	8240.19		OSF>1.50			Exit Minor
6059.25	1819.30	4845.84	4239.95	5.00	OSF1.50	11180.00	11070.19	OSF>5.00				Exit Alert
8144.40	2446.13	6513.15	5698.27	5.00	OSF1.50	13880.00	13018.79	OSF<=5.00				Enter Alert
9340.96	5535.61	5650.05	3805.35	2.53	OSF1.50	17050.00	12994.10					MinPt-EOU
10124.99	6493.07	5795.78	3631.92	2.34	OSF1.50	18420.00	12983.42					MinPt-ADP
11170.40	7339.16	6277.12	3831.24	2.28	OSF1.50	20000.00	12971.11					MinPt-SF
13626.05	8453.44	7989.92	5172.61	2.42	OSF1.50	23222.96	12946.00					TD

Coterra Red Hills Unit 62H Rev0 kFc 11Mar25 (DefinitivePlan) - Fail Minor

20.00	16.26	18.71	3.74	N/A	MAS = 4.96 (m)	0.00	0.00	CtCt<=15.00m				Enter Alert
20.00	16.26	18.71	3.74	26408.38	MAS = 4.96 (m)	23.00	23.00					WRP
19.76		6.40	0.25	1.52	OSF1.50	1290.00	1290.00					MinPts
20.00	20.05	6.30	-0.05	1.50	OSF1.50	1330.00	1330.00	OSF<=1.50				Enter Minor
20.00	22.61	4.60	-2.61	1.32	OSF1.50	1500.00	1500.00					MinPt-CtCt
20.15	23.06	4.45	-2.90	1.30	OSF1.50	1530.00	1530.00					MinPt-EOU
20.27	23.21	4.47	-2.94	1.30	OSF1.50	1540.00	1540.00					MinPts
24.90	25.13	7.82	-0.23	1.49	OSF1.50	1670.00	1669.90	OSF>1.50				Exit Minor
106.96	33.10	84.57	73.87	4.95	OSF1.50	2210.00	2202.75	OSF>5.00				Exit Alert
1049.85	315.90	838.93	733.96	5.00	OSF1.50	20770.00	12965.11	OSF<=5.00				Enter Alert
1049.85	381.79	794.99	668.06	4.13	OSF1.50	23210.00	12946.10					MinPt-CtCt
1049.85	382.11	794.79	667.74	4.13	OSF1.50	23222.96	12946.00					MinPts

Coterra Red Hills Unit 19H Rev0 kFc 11Mar25 (DefinitivePlan) - Warning Alert

20.00	16.26	18.72	3.74	N/A	MAS = 4.96 (m)	0.00	0.00	CtCt<=15.00m				Enter Alert
20.00	16.26	18.71	3.74	N/A	MAS = 4.96 (m)	23.00	23.00					WRP
20.00	16.26	13.32	3.74	3.47	MAS = 4.96 (m)	600.00	600.00					MinPts
20.15	16.26	13.17	3.89	3.31	MAS = 4.96 (m)	630.00	630.00					MinPt-EOU
21.38	16.26	13.81	5.12	3.20	MAS = 4.96 (m)	690.00	690.00					MinPt-SF
48.98	16.26	38.10	32.72	4.97	MAS = 4.96 (m)	1030.00	1030.00	OSF>5.00				Exit Alert
408.71	92.05	347.02	316.66	6.72	OSF1.50	5010.00	4907.45					MinPt-SF
766.52	188.19	640.73	578.33	6.13	OSF1.50	13430.00	13010.11					MinPt-CtCt
766.52	188.28	640.67	578.24	6.13	OSF1.50	13440.00	13011.44					MinPt-EOU
766.59	188.37	640.68	578.22	6.13	OSF1.50	13450.00	13012.69					MinPt-ADP
767.94	188.88	641.69	579.06	6.12	OSF1.50	13500.00	13017.63					MinPt-SF
1049.91	315.90	838.98	734.01	5.00	OSF1.50	20960.00	12963.63	OSF<=5.00				Enter Alert
1049.86	376.62	798.45	673.24	4.19	OSF1.50	23222.96	12946.00					MinPts

Coterra Red Hills Unit 80H Rev2 kFc 11Dec24 (DefinitivePlan) - Warning Alert

1241.27	32.81	1240.09	1208.46	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
1241.22	32.81	1240.04	1208.41	556970.98	MAS = 10.00 (m)	10.00	10.00					MinPts
1241.22	32.81	1240.04	1208.41	N/A	MAS = 10.00 (m)	23.00	23.00					WRP
1241.22	32.81	1229.59	1208.41	118.65	MAS = 10.00 (m)	1110.00	1110.00					MinPt-EOU
228.32	70.34	181.10	157.98	4.92	OSF1.50	4530.00	4443.74	OSF<=5.00				Enter Alert
106.38	87.10	47.98	19.28	1.84	OSF1.50	5050.47	4946.75					MinPt-CtCt
106.43	87.22	47.96	19.21	1.83	OSF1.50	5060.00	4956.02					MinPts
336.94	101.86	268.70	235.08	5.00	OSF1.50	6800.00	6690.19	OSF>5.00				Exit Alert
421.89	127.31	336.69	294.58	5.00	OSF1.50	8450.00	8340.19	OSF<=5.00				Enter Alert
421.89	163.78	312.37	258.11	3.88	OSF1.50	10970.00	10860.19					MinPt-CtCt
422.05	164.63	311.97	257.42	3.86	OSF1.50	11050.00	10940.19					MinPt-EOU
422.11	164.73	311.97	257.39	3.86	OSF1.50	11060.00	10950.19					MinPt-ADP
422.76	165.10	312.36	257.66	3.85	OSF1.50	11110.00	11000.19					MinPt-SF
519.10	158.11	413.36	360.98	4.95	OSF1.50	11590.00	11480.19	OSF>5.00				Exit Alert

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
1667.08	120.67	1586.38	1546.52	20.90		OSF 1.50	13620.00	13020.82				MinPt-EQU
1667.18	120.67	1586.40	1546.51	20.88		OSF 1.50	13630.00	13020.74				MinPt-ADP
1624.25	357.55	1385.56	1266.71	6.83		OSF 1.50	23222.96	12946.00				MinPts
30-025-49109 - Cimarex Red Hills Unit 100H - Corrected MWD to 22283ft - A (DefinitiveSurvey) - Warning Alert												
120.00	32.81	118.82	87.19	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
119.99	32.81	118.81	87.18	491630.61		MAS = 10.00 (m)	10.00	10.00				MinPts
119.99	32.81	118.81	87.18	78447.27		MAS = 10.00 (m)	23.00	23.00				WRP
120.12	32.81	116.24	87.31	44.12		MAS = 10.00 (m)	340.00	340.00				MinPts
115.54	32.81	102.38	82.74	9.41		MAS = 10.00 (m)	1440.96	1440.96				MinPts
115.61	32.81	102.30	82.80	9.30		MAS = 10.00 (m)	1460.00	1460.00				MinPt-EQU
133.84	32.81	117.42	101.03	8.61		MAS = 10.00 (m)	1860.00	1859.05				MinPt-SF
450.02	53.47	414.05	396.55	12.83		OSF 1.50	3900.00	3835.22				MinPt-SF
631.94	94.82	568.40	537.12	10.09		OSF 1.50	6740.00	6630.19				MinPt-CiCt
633.78	98.16	568.01	535.62	9.77		OSF 1.50	6990.00	6880.19				MinPt-EQU
635.35	100.04	568.33	535.31	9.61		OSF 1.50	7130.00	7020.19				MinPt-ADP
676.44	155.89	572.18	520.54	6.54		OSF 1.50	11030.00	10920.19				MinPt-CiCt
677.00	157.21	571.87	519.79	6.49		OSF 1.50	11130.00	11020.19				MinPt-EQU
678.41	159.66	571.64	518.75	6.40		OSF 1.50	11300.00	11190.19				MinPt-EQU
679.44	160.90	571.85	518.54	6.36		OSF 1.50	11390.00	11280.19				MinPt-ADP
682.29	169.32	569.08	512.97	6.07		OSF 1.50	11960.00	11850.19				MinPt-CiCt
682.37	169.51	569.04	512.86	6.06		OSF 1.50	11980.00	11870.19				MinPts
682.62	169.66	569.19	512.96	6.06		OSF 1.50	12000.00	11890.19				MinPt-SF
847.37	162.46	738.73	684.90	7.86		OSF 1.50	12760.00	12644.71				MinPt-SF
790.54	150.92	689.60	639.63	7.90		OSF 1.50	13960.00	13018.17				MinPt-CiCt
790.58	151.01	689.58	639.57	7.89		OSF 1.50	13970.00	13018.09				MinPt-EQU
790.66	151.10	689.60	639.56	7.89		OSF 1.50	13980.00	13018.01				MinPt-ADP
793.03	151.97	691.39	641.06	7.87		OSF 1.50	14070.00	13017.31				MinPt-SF
795.41	153.11	693.01	642.30	7.83		OSF 1.50	14240.00	13015.99				MinPt-CiCt
795.55	153.54	692.87	642.01	7.81		OSF 1.50	14290.00	13015.60				MinPt-EQU
795.70	153.71	692.90	641.99	7.81		OSF 1.50	14310.00	13015.44				MinPt-ADP
790.21	156.60	685.48	633.61	7.61		OSF 1.50	14650.00	13012.79				MinPt-CiCt
790.32	156.93	685.38	633.39	7.59		OSF 1.50	14680.00	13012.56				MinPt-EQU
790.51	157.15	685.41	633.36	7.58		OSF 1.50	14700.00	13012.40				MinPt-ADP
790.23	158.62	684.15	631.61	7.51		OSF 1.50	14840.00	13011.31				MinPt-CiCt
790.38	159.12	683.97	631.26	7.49		OSF 1.50	14880.00	13011.00				MinPt-EQU
791.26	160.10	684.20	631.16	7.45		OSF 1.50	14960.00	13010.38				MinPt-ADP
746.10	185.44	622.15	560.66	6.06		OSF 1.50	16630.00	12997.37				MinPt-CiCt
746.37	186.11	621.97	560.26	6.04		OSF 1.50	16660.00	12997.13				MinPt-EQU
746.55	186.33	622.00	560.22	6.03		OSF 1.50	16670.00	12997.06				MinPt-ADP
754.00	192.27	625.49	561.73	5.90		OSF 1.50	16950.00	12994.87				MinPt-ADP
759.73	197.62	627.66	562.11	5.79		OSF 1.50	17190.00	12993.00				MinPt-ADP
763.71	206.96	625.41	556.76	5.55		OSF 1.50	17600.00	12989.81				MinPt-CiCt
754.78	227.15	603.02	527.63	5.00		OSF 1.50	18460.00	12983.11	OSF<=5.00			Enter Alert
750.75	232.89	595.16	517.86	4.85		OSF 1.50	18690.00	12981.32				MinPt-CiCt
749.53	243.52	586.86	506.01	4.63		OSF 1.50	19110.00	12978.05				MinPt-CiCt
750.56	247.74	585.07	502.82	4.56		OSF 1.50	19270.00	12976.80				MinPt-EQU
750.80	248.02	585.12	502.78	4.55		OSF 1.50	19280.00	12976.72				MinPt-ADP
755.46	250.40	588.20	505.06	4.54		OSF 1.50	19370.00	12976.02				MinPt-SF
734.08	297.22	535.60	436.86	3.71		OSF 1.50	21100.00	12962.54				MinPt-CiCt
731.53	304.45	528.23	427.08	3.61		OSF 1.50	21360.00	12960.51				MinPt-CiCt
729.46	314.74	519.30	414.72	3.48		OSF 1.50	21720.00	12957.71				MinPt-CiCt
729.93	316.24	518.78	413.69	3.47		OSF 1.50	21770.00	12957.32				MinPt-EQU
730.41	316.82	518.67	413.59	3.46		OSF 1.50	21790.00	12957.16				MinPt-ADP
736.65	324.02	520.30	412.62	3.42		OSF 1.50	22040.00	12955.22				MinPt-CiCt
731.36	340.50	504.03	390.86	3.23		OSF 1.50	22610.00	12950.78				MinPt-CiCt
731.72	341.71	503.59	390.01	3.22		OSF 1.50	22650.00	12950.46				MinPt-EQU
731.96	342.00	503.63	389.96	3.22		OSF 1.50	22660.00	12950.39				MinPt-ADP
737.00	356.84	498.78	380.16	3.10		OSF 1.50	23160.00	12946.49				MinPt-CiCt
737.71	358.73	498.23	378.98	3.09		OSF 1.50	23222.96	12946.00				MinPts
30-025-49108 - Cimarex Red Hills Unit 99H - Corrected MWD to 22088ft - A (DefinitiveSurvey) - Warning Alert												
121.66	32.81	120.49	88.86	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
121.64	32.81	120.46	88.83	N/A		MAS = 10.00 (m)	2.50	2.50				MinPts
121.66	32.81	120.47	88.85	10201.90		MAS = 10.00 (m)	23.00	23.00				WRP
121.77	32.81	120.46	88.96	879.70		MAS = 10.00 (m)	50.00	50.00				MinPt-EQU
140.81	32.81	124.74	108.00	9.27		MAS = 10.00 (m)	1820.00	1819.33				MinPts
141.07	32.81	124.49	108.26	8.99		MAS = 10.00 (m)	1880.00	1878.89				MinPt-EQU
151.25	32.81	132.29	118.44	8.36		MAS = 10.00 (m)	2150.00	2144.44				MinPt-SF
286.91	42.92	257.97	243.99	10.23		OSF 1.50	3180.00	3139.76				MinPt-SF
477.82	67.19	432.70	410.63	10.80		OSF 1.50	4710.00	4617.61				MinPt-SF
368.66	111.29	294.14	257.37	5.00		OSF 1.50	7400.00	7290.19	OSF<=5.00			Enter Alert
351.98	123.57	269.28	228.41	4.29		OSF 1.50	8200.00	8090.19				MinPt-CiCt
355.08	132.69	266.29	222.39	4.03		OSF 1.50	8870.00	8760.19				MinPt-EQU
357.24	140.29	263.39	216.96	3.84		OSF 1.50	9430.00	9320.19				MinPt-CiCt
355.85	147.14	257.43	208.71	3.64		OSF 1.50	9940.00	9830.19				MinPt-CiCt
357.41	151.28	256.23	206.13	3.56		OSF 1.50	10250.00	10140.19				MinPt-EQU
357.94	151.93	256.32	206.01	3.55		OSF 1.50	10300.00	10190.19				MinPt-ADP
366.90	172.79	251.38	194.11	3.19		OSF 1.50	11820.00	11710.19				MinPts
366.97	172.82	251.42	194.14	3.19		OSF 1.50	11830.00	11720.19				MinPt-SF
529.89	160.20	422.76	369.69	4.98		OSF 1.50	12380.00	12270.19	OSF>5.00			Exit Alert
763.49	122.60	681.43	640.89	9.40		OSF 1.50	13550.00	13020.39				MinPt-SF
697.73	127.87	612.15	569.86	8.24		OSF 1.50	14860.00	13011.16				MinPt-CiCt
698.73	133.17	609.62	565.56	7.92		OSF 1.50	15230.00	13008.28				MinPt-EQU
699.18	133.69	609.73	565.49	7.89		OSF 1.50	15260.00	13008.04				MinPt-ADP
699.93	136.57	608.55	563.36	7.73		OSF 1.50	15450.00	13006.56				MinPt-CiCt
697.51	148.26	598.35	549.25	7.09		OSF 1.50	16090.00	13001.57				MinPt-CiCt
695.56	156.19	591.11	539.37	6.71		OSF 1.50	16470.00	12998.61				MinPt-CiCt
671.32	202.29	536.13	469.03	4.99		OSF 1.50	18340.00	12984.04	OSF<=5.00			Enter Alert
671.19	203.70	535.06	467.49	4.96		OSF 1.50	18390.00	12983.65				MinPt-CiCt
668.14	222.75	519.31	445.39	4.51		OSF 1.50	19090.00	12978.20				MinPt-CiCt

Offset Trajectory	Separation			Allow	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
668.89	224.90	518.63	444.00	4.47		OSF1.50	19160.00	12977.66				MinPt-EQU
663.30	241.14	502.21	422.16	4.14		OSF1.50	19740.00	12973.14				MinPt-CiCt
664.79	246.02	500.45	418.77	4.06		OSF1.50	19900.00	12971.89				MinPt-EQU
651.64	283.33	462.43	368.31	3.46		OSF1.50	21170.00	12962.00				MinPt-CiCt
650.08	294.54	453.39	355.54	3.32		OSF1.50	21540.00	12959.11				MinPt-CiCt
649.07	313.71	439.61	335.37	3.11		OSF1.50	22170.00	12954.20				MinPt-CiCt
655.11	346.02	424.10	309.09	2.84		OSF1.50	23222.96	12946.00				MinPts
Coterra Red Hills Unit 81H Rev2 kFc 11Dec24 (DefinitivePlan) - Warning Alert												
1221.30	32.81	1220.01	1188.49	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
1221.25	32.81	1219.96	1188.44	628990.00		MAS = 10.00 (m)	10.00	10.00				MinPts
1221.25	32.81	1219.96	1188.44	N/A		MAS = 10.00 (m)	23.00	23.00				WRP
1221.25	32.81	1209.51	1188.44	116.72		MAS = 10.00 (m)	1110.00	1110.00				MinPt-EQU
1221.25	32.81	1207.86	1188.44	99.55		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EQU
235.77	72.41	187.17	163.37	4.93		OSF1.50	4430.00	4347.15	OSF<=5.00			Enter Alert
186.45	82.76	130.94	103.68	3.40		OSF1.50	4784.44	4689.51				MinPt-CiCt
186.55	83.04	130.86	103.51	3.39		OSF1.50	4800.00	4704.54				MinPts
187.01	83.37	131.10	103.64	3.39		OSF1.50	4820.00	4723.86				MinPt-SF
283.92	86.00	226.26	197.93	4.99		OSF1.50	5390.00	5280.92	OSF>5.00			Exit Alert
458.29	138.22	365.82	320.07	5.00		OSF1.50	9200.00	9090.19	OSF<=5.00			Enter Alert
458.34	153.75	355.51	304.59	4.49		OSF1.50	10280.00	10170.19				MinPts
458.58	153.88	355.67	304.71	4.49		OSF1.50	10300.00	10190.19				MinPt-SF
506.68	153.33	404.14	353.35	4.98		OSF1.50	10670.00	10560.19	OSF>5.00			Exit Alert
2314.11	114.78	2237.26	2199.33	30.49		OSF1.50	13780.00	13019.57				MinPt-CiCt
2314.19	114.96	2237.22	2199.23	30.44		OSF1.50	13800.00	13019.42				MinPt-EQU
2314.27	115.05	2237.24	2199.22	30.42		OSF1.50	13810.00	13019.34				MinPt-ADP
2252.72	352.61	2017.32	1900.11	9.61		OSF1.50	23222.96	12946.00				MinPts
Coterra Cascade 28 Federal 404H - Corrected MWD to 17214ft (DefinitiveSurvey) - Warning Alert												
5407.57	32.81	5406.39	5374.76	#####		MAS = 10.00 (m)	0.00	0.00				MinPts
5407.58	32.81	5406.35	5374.77	105501.14		MAS = 10.00 (m)	23.00	23.00				WRP
5402.45	32.81	5389.26	5369.65	442.25		MAS = 10.00 (m)	1310.00	1310.00				MinPts
5402.84	32.81	5388.87	5370.03	415.98		MAS = 10.00 (m)	1410.00	1410.00				MinPt-EQU
5254.68	92.48	5192.69	5162.19	86.13		OSF1.50	5570.00	5460.26				MinPt-CiCt
5255.18	94.32	5191.97	5160.86	84.44		OSF1.50	5700.00	5590.19				MinPt-EQU
5261.68	101.73	5193.54	5159.96	78.33		OSF1.50	6260.00	6150.19				MinPt-ADP
541.32	164.04	431.63	377.28	4.97		OSF1.50	11950.00	11840.19	OSF<=5.00			Enter Alert
215.17	192.91	86.23	22.25	1.67		OSF1.50	12446.72	12336.91				MinPt-CiCt
215.19	193.00	86.20	22.19	1.67		OSF1.50	12450.00	12340.19				MinPts
595.76	180.36	475.20	415.41	4.97		OSF1.50	12960.00	12813.15	OSF>5.00			Exit Alert
10575.20	206.65	10437.11	10368.55	77.12		OSF1.50	23222.96	12946.00				TD
Coterra Red Hills Unit 78H Rev2 kFc 11Dec24 (DefinitivePlan) - Warning Alert												
1281.23	32.81	1279.94	1248.42	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
1281.18	32.81	1279.90	1248.38	923039.27		MAS = 10.00 (m)	10.00	10.00				MinPts
1281.18	32.81	1279.90	1248.38	N/A		MAS = 10.00 (m)	23.00	23.00				WRP
1281.18	32.81	1269.44	1248.38	122.44		MAS = 10.00 (m)	1110.00	1110.00				MinPt-EQU
1281.18	32.81	1267.80	1248.38	104.43		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EQU
286.68	86.82	228.47	199.86	4.99		OSF1.50	5690.00	5580.19	OSF<=5.00			Enter Alert
279.96	156.92	175.02	123.04	2.68		OSF1.50	10510.00	10400.19				MinPt-CiCt
280.15	157.86	174.58	122.29	2.67		OSF1.50	10620.00	10510.19				MinPt-EQU
280.31	158.05	174.62	122.26	2.67		OSF1.50	10640.00	10530.19				MinPt-ADP
280.75	158.36	174.85	122.39	2.67		OSF1.50	10670.00	10560.19				MinPt-SF
466.97	141.98	371.99	324.99	4.96		OSF1.50	11270.00	11160.19	OSF>5.00			Exit Alert
1963.16	355.91	1725.56	1607.26	8.29		OSF1.50	23222.96	12946.00				MinPts
Coterra Red Hills Unit 79H Rev2 kFc 11Dec24 (DefinitivePlan) - Warning Alert												
1261.25	32.81	1259.97	1228.45	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
1261.20	32.81	1259.91	1228.39	503131.81		MAS = 10.00 (m)	10.00	10.00				MinPts
1261.20	32.81	1259.91	1228.39	N/A		MAS = 10.00 (m)	23.00	23.00				WRP
1261.20	32.81	1249.46	1228.39	120.57		MAS = 10.00 (m)	1110.00	1110.00				MinPt-EQU
1261.20	32.81	1247.82	1228.39	102.83		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EQU
347.12	104.90	276.86	242.22	5.00		OSF1.50	6750.00	6640.19	OSF<=5.00			Enter Alert
326.71	150.14	226.30	176.58	3.28		OSF1.50	9910.00	9800.19				MinPt-CiCt
326.74	150.28	226.22	176.46	3.27		OSF1.50	9920.00	9810.19				MinPt-EQU
326.83	150.39	226.24	176.43	3.27		OSF1.50	9930.00	9820.19				MinPt-ADP
327.22	150.61	226.48	176.61	3.27		OSF1.50	9950.00	9840.19				MinPt-SF
466.74	142.55	371.38	324.19	4.94		OSF1.50	10500.00	10390.19	OSF>5.00			Exit Alert
2554.79	351.94	2319.83	2202.84	10.91		OSF1.50	23222.96	12946.00				MinPts
Cimarex Red Hills Unit #75H Corrected MWD to 22184ft MD (DefinitiveSurvey) - Warning Alert												
1364.78	32.81	1363.60	1331.97	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
1364.73	32.81	1363.55	1331.92	392808.53		MAS = 10.00 (m)	10.00	10.00				MinPts
1364.73	32.81	1363.55	1331.92	2087367.00		MAS = 10.00 (m)	20.00	20.00				MinPts
1364.73	32.81	1363.55	1331.92	1326904.88		MAS = 10.00 (m)	23.00	23.00				WRP
575.05	97.66	509.62	477.39	8.91		OSF1.50	6680.00	6570.19				MinPt-CiCt
576.27	112.32	501.06	463.94	7.75		OSF1.50	7730.00	7620.19				MinPt-CiCt
576.55	113.46	500.59	463.10	7.68		OSF1.50	7810.00	7700.19				MinPt-EQU
577.01	114.02	500.67	462.99	7.64		OSF1.50	7850.00	7740.19				MinPt-ADP
610.64	136.74	519.15	473.90	6.74		OSF1.50	9450.00	9340.19				MinPt-ADP
570.25	169.91	456.66	400.35	5.06		OSF1.50	11967.01	11857.20				MinPt-CiCt
570.32	170.04	456.64	400.29	5.05		OSF1.50	11980.00	11870.19				MinPts
570.71	170.22	456.90	400.49	5.05		OSF1.50	12000.00	11890.19				MinPt-SF
713.32	153.62	610.58	559.71	7.00		OSF1.50	14180.00	13016.46				MinPt-CiCt
713.43	153.87	610.52	559.55	6.99		OSF1.50	14220.00	13016.14				MinPt-EQU
713.55	154.02	610.54	559.53	6.98		OSF1.50	14240.00	13015.99				MinPt-ADP
704.76	169.59	591.37	535.17	6.26		OSF1.50	15640.00	13005.08				MinPt-CiCt
704.97	170.23	591.15	534.74	6.24		OSF1.50	15680.00	13004.77				MinPt-EQU
705.26	170.56	591.22	534.70	6.23		OSF1.50	15700.00	13004.61				MinPt-ADP
710.61	181.48	589.30	529.13	5.90		OSF1.50	16310.00	12999.86				MinPt-CiCt
710.29	185.80	586.23	524.69	5.76		OSF1.50	16530.00	12998.15				MinPt-CiCt

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
698.04	210.35	557.48	487.69	4.99		OSF1.50	17720.00	12988.87	OSF<=5.00			Enter Alert
696.20	215.14	552.45	481.07	4.87		OSF1.50	17930.00	12987.24				MinPt-CtCt
694.30	222.74	545.48	471.57	4.69		OSF1.50	18250.00	12984.75				MinPt-CtCt
694.70	223.99	545.04	470.71	4.67		OSF1.50	18300.00	12984.36				MinPt-EOU
695.30	224.74	545.14	470.56	4.65		OSF1.50	18330.00	12984.12				MinPt-ADP
696.41	228.14	543.99	468.27	4.59		OSF1.50	18470.00	12983.03				MinPt-CtCt
697.02	229.94	543.40	467.08	4.56		OSF1.50	18540.00	12982.49				MinPt-EOU
698.84	233.06	543.14	465.79	4.51		OSF1.50	18660.00	12981.55				MinPt-EOU
700.18	234.64	543.42	465.54	4.49		OSF1.50	18720.00	12981.08				MinPt-ADP
700.69	240.42	540.08	460.27	4.38		OSF1.50	18950.00	12979.29				MinPt-CtCt
692.91	267.70	514.12	425.22	3.89		OSF1.50	20020.00	12970.96				MinPt-CtCt
690.59	282.15	502.16	408.44	3.68		OSF1.50	20550.00	12966.83				MinPt-CtCt
691.49	289.46	498.19	402.03	3.59		OSF1.50	20810.00	12964.80				MinPt-CtCt
691.32	297.92	492.38	393.40	3.49		OSF1.50	21110.00	12962.46				MinPt-CtCt
690.89	308.08	485.18	382.82	3.37		OSF1.50	21470.00	12959.66				MinPt-CtCt
691.55	310.13	484.47	381.42	3.35		OSF1.50	21540.00	12959.11				MinPt-EOU
692.29	311.00	484.63	381.29	3.34		OSF1.50	21570.00	12958.88				MinPt-ADP
701.82	320.10	488.09	381.71	3.29		OSF1.50	21880.00	12956.46				MinPt-EOU
702.75	321.24	488.27	381.51	3.29		OSF1.50	21920.00	12956.15				MinPt-ADP
707.47	324.28	490.95	383.18	3.28		OSF1.50	22030.00	12955.29				MinPt-SF
696.47	340.85	468.91	355.62	3.07		OSF1.50	22620.00	12950.70				MinPt-CtCt
699.13	347.96	466.83	351.17	3.02		OSF1.50	22860.00	12948.83				MinPt-EOU
700.36	349.44	467.08	350.93	3.01		OSF1.50	22910.00	12948.44				MinPt-ADP
706.57	353.49	470.58	353.08	3.00		OSF1.50	23050.00	12947.35				MinPt-SF
714.10	358.89	474.52	355.22	2.99		OSF1.50	23222.96	12946.00				MinPts

Coterra Cascade 28 Federal 413H - Corrected MWD to 17363ft (DefinitiveSurvey) - Warning Alert

5406.88	32.81	5405.69	5374.08	432792.91	MAS = 10.00 (m)	0.00	0.00					Surface
5406.84	32.81	5405.55	5374.04	45691.15	MAS = 10.00 (m)	23.00	23.00					WRP
5402.92	32.81	5397.90	5370.11	1408.51	MAS = 10.00 (m)	460.00	460.00					MinPts
5400.07	32.81	5389.91	5367.26	601.04	MAS = 10.00 (m)	980.00	980.00					MinPts
5400.43	32.81	5389.68	5367.62	563.76	MAS = 10.00 (m)	1060.00	1060.00					MinPt-EOU
5317.55	87.98	5258.56	5229.57	91.67	OSF1.50	5310.00	5201.59					MinPt-CtCt
5318.41	90.92	5257.47	5227.49	88.69	OSF1.50	5500.00	5390.41					MinPt-EOU
5319.11	91.73	5257.63	5227.38	87.91	OSF1.50	5560.00	5450.28					MinPt-ADP
5333.22	102.82	5264.35	5230.41	78.55	OSF1.50	6370.00	6260.19					MinPt-ADP
5336.00	105.53	5265.32	5230.47	76.54	OSF1.50	6570.00	6460.19					MinPt-ADP
5338.51	107.95	5266.21	5230.56	74.85	OSF1.50	6750.00	6640.19					MinPt-ADP
699.31	211.72	557.84	487.59	4.97	OSF1.50	12450.00	12340.19		OSF<=5.00			Enter Alert
668.93	216.12	524.52	452.81	4.66	OSF1.50	12630.23	12520.03					MinPts
704.60	213.08	562.22	491.52	4.98	OSF1.50	12820.00	12698.99		OSF>5.00			Exit Alert
10585.51	207.14	10447.09	10378.37	77.01	OSF1.50	23222.96	12946.00					TD

30-025-46314 - CASCADE 28 FEDERAL 86H - MWD to 17120ft - A (DefinitiveSurvey) - Warning Alert

5292.79	32.81	5290.81	5259.98	#####	MAS = 10.00 (m)	0.00	0.00					MinPts
5292.82	32.81	5290.83	5260.01	447558.51	MAS = 10.00 (m)	23.00	23.00					WRP
5292.94	32.81	5290.79	5260.13	31896.21	MAS = 10.00 (m)	60.00	60.00					MinPt-EOU
5293.28	32.81	5290.82	5260.48	10906.74	MAS = 10.00 (m)	120.00	120.00					MinPt-EOU
5300.19	32.81	5286.09	5267.38	436.94	MAS = 10.00 (m)	1290.00	1290.00					MinPt-EOU
5300.17	32.81	5286.13	5267.36	431.74	MAS = 10.00 (m)	1310.00	1310.00					MinPts
5300.45	32.81	5285.83	5267.65	412.02	MAS = 10.00 (m)	1390.00	1390.00					MinPt-EOU
4998.27	94.28	4934.88	4903.99	80.88	OSF1.50	5630.00	5520.21					MinPt-CtCt
4998.59	95.26	4934.55	4903.33	80.05	OSF1.50	5700.00	5590.19					MinPt-EOU
4998.69	95.37	4934.58	4903.32	79.95	OSF1.50	5710.00	5600.19					MinPt-ADP
5001.86	97.93	4936.04	4903.93	77.88	OSF1.50	5890.00	5780.19					MinPt-EOU
5004.65	101.23	4936.63	4903.42	75.33	OSF1.50	6130.00	6020.19					MinPt-ADP
5011.18	108.24	4938.49	4902.94	70.47	OSF1.50	6610.00	6500.19					MinPt-EOU
5014.78	116.88	4936.32	4897.90	65.24	OSF1.50	7200.00	7090.19					MinPt-EOU
5015.26	117.46	4936.42	4897.80	64.92	OSF1.50	7250.00	7140.19					MinPt-ADP
828.11	251.12	660.20	576.99	4.97	OSF1.50	12120.00	12010.19		OSF<=5.00			Enter Alert
671.18	297.77	472.16	373.40	3.39	OSF1.50	12588.70	12478.83					MinPt-CtCt
671.18	297.80	472.14	373.38	3.39	OSF1.50	12590.00	12480.12					MinPt-EOU
671.31	297.99	472.15	373.32	3.39	OSF1.50	12600.00	12490.07					MinPts
876.89	266.53	698.71	610.36	4.95	OSF1.50	13090.00	12898.83		OSF>5.00			Exit Alert
10582.78	211.62	10441.20	10371.16	75.54	OSF1.50	23222.96	12946.00					TD

30-025-44540 - SALADO DRAW 9-16 W1BO FEDERAL COM 003H - MWD to 22510ft - A (DefinitiveSurvey) - Warning Alert

10531.02	32.81	10529.04	10498.21	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
10530.97	32.81	10528.98	10498.16	1723110.00	MAS = 10.00 (m)	20.00	20.00					MinPt-SF
10530.97	32.81	10528.98	10498.16	1836330.21	MAS = 10.00 (m)	23.00	23.00					WRP
10530.66	32.81	10526.70	10497.86	5297.11	MAS = 10.00 (m)	280.00	280.00					MinPts
10530.75	32.81	10522.24	10497.94	1612.02	MAS = 10.00 (m)	740.00	740.00					MinPts
10531.81	32.81	10520.38	10499.00	1114.19	MAS = 10.00 (m)	1090.00	1090.00					MinPt-EOU
10556.34	32.81	10537.51	10523.53	618.29	MAS = 10.00 (m)	1990.00	1987.61					MinPt-EOU
10556.50	32.81	10535.07	10523.69	536.62	MAS = 10.00 (m)	2100.00	2095.62					MinPts
10556.65	32.81	10534.92	10523.84	528.59	MAS = 10.00 (m)	2140.00	2134.69					MinPt-EOU
10752.97	74.86	10702.48	10678.11	220.61	OSF1.50	4650.00	4559.65					MinPts
10760.29	78.87	10707.17	10681.42	208.89	OSF1.50	4850.00	4752.83					MinPts
10507.62	178.20	10388.33	10329.43	89.19	OSF1.50	12060.00	11950.19					MinPt-CtCt
10507.76	178.66	10388.16	10329.10	88.95	OSF1.50	12120.00	12010.19					MinPt-EOU
10507.95	178.89	10388.19	10329.06	88.84	OSF1.50	12150.00	12040.19					MinPt-ADP
10517.66	181.66	10396.06	10336.00	87.56	OSF1.50	12538.36	12428.55					MinPt-SF
798.05	242.61	635.81	555.45	4.96	OSF1.50	23160.00	12946.49		OSF<=5.00			Enter Alert
760.76	246.58	595.88	514.18	4.65	OSF1.50	23222.96	12946.00					MinPts

Cimarex Red Hills Unit #21H Corrected MWD to 22108ft MD (DefinitiveSurvey) - Warning Alert

1404.70	32.81	1403.52	1371.89	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
1404.64	32.81	1403.46	1371.83	344385.30	MAS = 10.00 (m)	10.00	10.00					MinPts
1404.64	32.81	1403.46	1371.83	1334690.79	MAS = 10.00 (m)	20.00	20.00					MinPts
1404.64	32.81	1403.46	1371.83	835794.13	MAS = 10.00 (m)	23.00	23.00					WRP
1406.11	32.81	1402.91	1373.31	692.73	MAS = 10.00 (m)	300.00	300.00					MinPt-EOU

Offset Trajectory	Separation			Allow	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
1407.33	32.81		1398.31	1374.52	179.26	MAS = 10.00 (m)	880.00	880.00				MinPts
1407.44	32.81		1398.17	1374.63	173.75	MAS = 10.00 (m)	910.00	910.00				MinPt-EQU
997.77	77.59		945.72	920.19	19.52	OSF1.50	5350.66	5241.88				MinPt-CiCt
997.96	78.21		945.49	919.75	19.37	OSF1.50	5390.00	5280.92				MinPt-EQU
998.22	78.52		945.55	919.71	19.29	OSF1.50	5410.00	5300.80				MinPt-ADP
1074.89	138.39		982.31	936.51	11.72	OSF1.50	9700.00	9590.19				MinPt-CiCt
1070.57	148.81		971.04	921.76	10.85	OSF1.50	10430.00	10320.19				MinPt-CiCt
1071.08	150.54		970.39	920.54	10.73	OSF1.50	10550.00	10440.19				MinPt-EQU
1071.79	151.39		970.53	920.40	10.68	OSF1.50	10610.00	10500.19				MinPt-ADP
1082.83	160.34		975.61	922.49	10.18	OSF1.50	11230.00	11120.19				MinPt-ADP
1087.16	167.78		974.98	919.38	9.77	OSF1.50	11750.00	11640.19				MinPt-CiCt
1087.30	168.41		974.70	918.89	9.73	OSF1.50	11800.00	11690.19				MinPt-EQU
1087.38	168.50		974.71	918.87	9.73	OSF1.50	11810.00	11700.19				MinPt-ADP
1095.58	170.62		981.51	924.97	9.66	OSF1.50	12040.00	11930.19				MinPt-SF
1247.55	167.10		1135.82	1080.45	11.26	OSF1.50	14240.00	13015.99				MinPt-CiCt
1247.56	167.16		1135.80	1080.41	11.25	OSF1.50	14250.00	13015.91				MinPt-EQU
1247.61	167.21		1135.81	1080.40	11.25	OSF1.50	14260.00	13015.83				MinPt-ADP
1261.08	170.97		1146.77	1090.11	11.12	OSF1.50	14690.00	13012.48				MinPt-EQU
1261.24	171.15		1146.81	1090.09	11.11	OSF1.50	14710.00	13012.33				MinPt-ADP
1238.85	181.00		1117.85	1057.85	10.31	OSF1.50	15550.00	13005.78				MinPt-CiCt
1234.32	195.88		1103.41	1038.44	9.49	OSF1.50	16490.00	12998.46				MinPt-CiCt
1234.97	206.52		1096.96	1028.45	9.01	OSF1.50	17050.00	12994.10				MinPt-CiCt
1228.97	219.44		1082.35	1009.53	8.43	OSF1.50	17680.00	12989.19				MinPt-CiCt
1229.22	220.24		1082.07	1008.98	8.40	OSF1.50	17720.00	12988.87				MinPt-EQU
1229.55	220.64		1082.13	1008.91	8.39	OSF1.50	17740.00	12988.72				MinPt-ADP
1232.19	227.27		1080.35	1004.92	8.16	OSF1.50	18030.00	12986.46				MinPt-CiCt
1232.06	230.48		1078.08	1001.58	8.05	OSF1.50	18170.00	12985.37				MinPt-CiCt
1232.56	232.01		1077.55	1000.54	8.00	OSF1.50	18240.00	12984.82				MinPt-EQU
1233.35	234.87		1076.44	998.48	7.90	OSF1.50	18360.00	12983.89				MinPt-CiCt
1234.16	242.14		1072.40	992.01	7.67	OSF1.50	18670.00	12981.47				MinPt-CiCt
1232.74	252.83		1063.86	979.91	7.34	OSF1.50	19110.00	12978.05				MinPt-CiCt
1233.24	254.48		1063.26	978.77	7.29	OSF1.50	19180.00	12977.50				MinPt-EQU
1229.19	268.30		1049.99	960.89	6.89	OSF1.50	19730.00	12973.21				MinPt-CiCt
1228.02	274.26		1044.85	953.76	6.74	OSF1.50	19960.00	12971.42				MinPt-CiCt
1228.55	276.00		1044.22	952.55	6.70	OSF1.50	20030.00	12970.88				MinPt-EQU
1229.20	279.54		1042.51	949.66	6.61	OSF1.50	20160.00	12969.86				MinPt-CiCt
1229.89	281.55		1041.86	948.33	6.57	OSF1.50	20240.00	12969.24				MinPt-EQU
1231.97	284.45		1042.01	947.52	6.51	OSF1.50	20350.00	12968.38				MinPt-ADP
1241.88	288.74		1049.06	953.15	6.47	OSF1.50	20540.00	12966.90				MinPt-SF
1251.52	307.49		1046.19	944.03	6.12	OSF1.50	21190.00	12961.84				MinPt-CiCt
1251.96	309.03		1045.62	942.94	6.09	OSF1.50	21250.00	12961.37				MinPt-EQU
1252.55	309.78		1045.70	942.77	6.08	OSF1.50	21280.00	12961.14				MinPt-ADP
1262.68	314.22		1052.87	948.46	6.04	OSF1.50	21470.00	12959.66				MinPt-SF
1196.53	338.01		970.86	858.51	5.32	OSF1.50	22300.00	12953.19				MinPt-CiCt
1197.22	340.15		970.12	857.06	5.29	OSF1.50	22380.00	12952.57				MinPt-EQU
1197.77	343.97		968.13	853.80	5.23	OSF1.50	22510.00	12951.55				MinPt-CiCt
1201.15	353.30		965.29	847.85	5.11	OSF1.50	22840.00	12948.98				MinPt-EQU
1205.66	359.35		965.77	846.31	5.04	OSF1.50	23050.00	12947.35				MinPt-EQU
1206.75	360.70		965.96	846.06	5.03	OSF1.50	23100.00	12946.96				MinPt-ADP
1210.00	363.92		967.07	846.09	5.00	OSF1.50	23210.00	12946.10	OSF<=5.00			Enter Alert
1210.30	364.31		967.09	845.99	4.99	OSF1.50	23222.96	12946.00				MinPts

Coterra Red Hills Unit 102H - Corrected MWD to 21093ft (DefinitiveSurvey) - Pass

84.84	32.81		83.56	52.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
84.84	32.81		83.55	52.03	87025.17	MAS = 10.00 (m)	23.00	23.00				WRP
83.32	32.81		79.15	50.51	28.41	MAS = 10.00 (m)	373.90	373.90				MinPts
86.16	32.81		77.69	53.35	11.82	MAS = 10.00 (m)	810.00	810.00				MinPt-EQU
87.79	32.81		75.57	54.99	7.91	MAS = 10.00 (m)	1190.00	1190.00				MinPt-EQU
87.52	32.81		74.46	54.71	7.24	MAS = 10.00 (m)	1290.00	1290.00				MinPt-EQU
86.75	32.81		71.66	53.94	6.08	MAS = 10.00 (m)	1510.00	1510.00				MinPts
86.96	32.81		71.48	54.16	5.93	MAS = 10.00 (m)	1550.00	1550.00				MinPt-EQU
91.95	32.81		75.00	59.14	5.70	MAS = 10.00 (m)	1700.00	1699.84				MinPt-SF
1319.58	136.72		1228.10	1182.85	14.57	OSF1.50	9270.00	9160.19				MinPt-CiCt
1320.08	138.20		1227.61	1181.87	14.42	OSF1.50	9380.00	9270.19				MinPt-EQU
1320.61	138.88		1227.69	1181.73	14.35	OSF1.50	9430.00	9320.19				MinPt-ADP
1324.01	141.69		1229.22	1182.31	14.10	OSF1.50	9620.00	9510.19				MinPt-EQU
1325.07	142.96		1229.43	1182.10	13.99	OSF1.50	9710.00	9600.19				MinPt-ADP
1329.29	146.74		1231.14	1182.55	13.67	OSF1.50	9970.00	9860.19				MinPt-ADP
1319.94	158.73		1213.79	1161.20	12.54	OSF1.50	10800.00	10690.19				MinPt-CiCt
1319.97	158.82		1213.76	1161.15	12.54	OSF1.50	10810.00	10700.19				MinPt-EQU
1320.03	158.91		1213.77	1161.13	12.53	OSF1.50	10820.00	10710.19				MinPt-ADP
1322.53	159.55		1215.84	1162.98	12.50	OSF1.50	10910.00	10800.19				MinPt-SF
2379.78	137.99		2287.46	2241.79	26.04	OSF1.50	14360.00	13015.05				MinPt-CiCt
2370.70	144.78		2273.85	2225.92	24.72	OSF1.50	14880.00	13011.00				MinPt-CiCt
2370.91	145.49		2273.59	2225.42	24.60	OSF1.50	14930.00	13010.61				MinPt-EQU
2371.28	145.92		2273.67	2225.36	24.53	OSF1.50	14960.00	13010.38				MinPt-ADP
2370.45	148.22		2271.31	2222.23	24.14	OSF1.50	15110.00	13009.21				MinPt-CiCt
2370.63	148.84		2271.08	2221.79	24.04	OSF1.50	15150.00	13008.90				MinPt-EQU
2370.89	149.15		2271.12	2221.73	23.99	OSF1.50	15170.00	13008.74				MinPt-ADP
2377.57	155.53		2273.56	2222.04	23.07	OSF1.50	15520.00	13008.02				MinPt-EQU
2379.76	161.13		2272.01	2218.63	22.28	OSF1.50	15810.00	13003.76				MinPt-EQU
2381.20	167.21		2269.40	2213.99	21.48	OSF1.50	16110.00	13001.42				MinPt-CiCt
2381.04	171.80		2266.17	2209.23	20.90	OSF1.50	16330.00	12999.70				MinPt-CiCt
2380.85	177.34		2262.29	2203.50	20.24	OSF1.50	16580.00	12997.76				MinPt-CiCt
2381.45	179.27		2261.61	2202.18	20.03	OSF1.50	16670.00	12997.06				MinPt-EQU
2381.87	185.21		2258.07	2196.66	19.39	OSF1.50	16920.00	12995.11				MinPt-CiCt
2364.58	217.95		2218.96	2146.64	16.34	OSF1.50	18230.00	12984.90				MinPt-CiCt
2365.23	225.52		2214.56	2139.71	15.79	OSF1.50	18510.00	12982.72				MinPt-CiCt
2360.13	237.29		2201.60	2122.83	14.97	OSF1.50	18950.00	12979.29				MinPt-CiCt
2360.68	239.00		2201.03	2121.69	14.87	OSF1.50	19020.00	12978.75				MinPt-EQU
2361.29	239.72		2201.15	2121.57	14.83	OSF1.50	19050.00	12978.51				MinPt-ADP

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
2357.20	258.89	2184.28	2098.31	13.70		OSF1.50	19730.00	12973.21				MinPt-CiCt
2329.01	303.60	2126.28	2025.41	11.54		OSF1.50	21260.00	12961.29				MinPt-CiCt
2330.81	308.08	2125.10	2022.73	11.38		OSF1.50	21420.00	12960.05				MinPt-EOU
2312.18	357.23	2073.70	1954.95	9.73		OSF1.50	23040.00	12947.43				MinPt-CiCt
2313.38	363.08	2071.00	1950.30	9.58		OSF1.50	23222.96	12946.00				MinPts

Coterra Red Hills Unit 103H - Corrected MWD to 20297ft (DefinitiveSurvey) - Pass

99.99	32.81	98.70	67.18	#####		MAS = 10.00 (m)	0.00	0.00				Surface
99.99	32.81	98.70	67.18	81215.42		MAS = 10.00 (m)	23.00	23.00				WRP
99.87	32.81	96.52	67.06	47.97		MAS = 10.00 (m)	290.00	290.00				MinPts
92.81	32.81	77.56	60.00	6.44		MAS = 10.00 (m)	1523.34	1523.34				MinPts
92.88	32.81	77.47	60.07	6.37		MAS = 10.00 (m)	1540.00	1540.00				MinPt-EOU
97.50	32.81	80.82	64.69	6.15		MAS = 10.00 (m)	1670.00	1669.90				MinPt-SF
1311.54	94.92	1247.93	1216.61	20.93		OSF1.50	6380.00	6270.19				MinPt-CiCt
1316.01	118.47	1236.70	1197.54	16.79		OSF1.50	8030.00	7920.19				MinPt-CiCt
1326.28	146.50	1228.29	1179.78	13.66		OSF1.50	9950.00	9840.19				MinPt-CiCt
1326.40	146.99	1228.08	1179.41	13.62		OSF1.50	9990.00	9880.19				MinPt-EOU
1326.48	147.09	1228.09	1179.39	13.61		OSF1.50	10000.00	9890.19				MinPt-ADP
1337.56	149.53	1237.55	1188.03	13.50		OSF1.50	10250.00	10140.19				MinPt-SF
2918.08	128.23	2832.26	2789.85	34.39		OSF1.50	14410.00	13014.66				MinPt-CiCt
2918.24	128.69	2832.12	2789.55	34.27		OSF1.50	14450.00	13014.35				MinPt-EOU
2918.43	128.92	2832.16	2789.51	34.21		OSF1.50	14470.00	13014.20				MinPt-ADP
2918.51	130.15	2831.41	2788.35	33.88		OSF1.50	14560.00	13013.50				MinPt-CiCt
2918.65	130.63	2831.23	2788.01	33.76		OSF1.50	14600.00	13013.18				MinPt-EOU
2918.96	131.01	2831.29	2787.95	33.66		OSF1.50	14630.00	13012.95				MinPt-ADP
2919.06	133.84	2829.51	2785.22	32.95		OSF1.50	14820.00	13011.47				MinPt-CiCt
2919.39	134.81	2829.19	2784.58	32.71		OSF1.50	14890.00	13010.92				MinPt-EOU
2919.75	135.24	2829.26	2784.51	32.61		OSF1.50	14920.00	13010.69				MinPt-ADP
2922.61	138.83	2829.73	2783.78	31.79		OSF1.50	15130.00	13009.05				MinPt-CiCt
2922.85	139.55	2829.49	2783.31	31.63		OSF1.50	15180.00	13008.66				MinPt-EOU
2923.11	139.84	2829.56	2783.28	31.57		OSF1.50	15200.00	13008.51				MinPt-ADP
2924.31	142.50	2828.99	2781.81	30.99		OSF1.50	15350.00	13007.34				MinPt-CiCt
2924.62	143.28	2828.77	2781.34	30.82		OSF1.50	15400.00	13006.95				MinPt-EOU
2924.89	143.61	2828.83	2781.29	30.75		OSF1.50	15420.00	13006.79				MinPt-ADP
2925.67	145.07	2828.63	2780.60	30.45		OSF1.50	15490.00	13006.25				MinPt-CiCt
2925.90	145.70	2828.43	2780.19	30.32		OSF1.50	15530.00	13005.94				MinPt-EOU
2926.15	146.02	2828.48	2780.13	30.25		OSF1.50	15550.00	13005.78				MinPt-ADP
2914.71	159.76	2807.88	2754.96	27.53		OSF1.50	16220.00	13000.56				MinPt-CiCt
2911.96	165.74	2801.13	2746.21	26.50		OSF1.50	16490.00	12998.46				MinPt-CiCt
2910.20	179.56	2790.17	2730.64	24.44		OSF1.50	17070.00	12993.94				MinPt-CiCt
2882.33	203.47	2746.35	2678.85	21.34		OSF1.50	18010.00	12986.62				MinPt-CiCt
2883.40	206.64	2745.31	2676.76	21.02		OSF1.50	18140.00	12985.60				MinPt-EOU
2883.54	235.02	2726.53	2648.52	18.48		OSF1.50	19150.00	12977.73				MinPt-CiCt
2884.66	238.91	2725.05	2645.74	18.18		OSF1.50	19300.00	12976.56				MinPt-EOU
2885.65	240.15	2725.23	2645.51	18.09		OSF1.50	19350.00	12976.18				MinPt-ADP
2887.08	260.60	2713.02	2626.48	16.68		OSF1.50	20040.00	12970.80				MinPt-CiCt
2888.43	264.26	2711.93	2624.17	16.45		OSF1.50	20180.00	12969.71				MinPt-EOU
2883.30	276.14	2698.88	2607.16	15.71		OSF1.50	20570.00	12966.67				MinPt-CiCt
2884.52	280.16	2697.42	2604.36	15.49		OSF1.50	20720.00	12965.50				MinPt-EOU
2885.61	281.43	2697.67	2604.19	15.43		OSF1.50	20770.00	12965.11				MinPt-ADP
2879.87	301.50	2678.54	2578.37	14.37		OSF1.50	21420.00	12960.05				MinPt-CiCt
2880.47	303.18	2678.03	2577.30	14.29		OSF1.50	21490.00	12959.50				MinPt-EOU
2881.09	303.88	2678.17	2577.20	14.26		OSF1.50	21520.00	12959.27				MinPt-ADP
2846.43	358.16	2607.33	2488.27	11.95		OSF1.50	23222.96	12946.00				MinPts

Coterra Red Hills Unit 104H - Corrected MWD to 21571ft (DefinitiveSurvey) - Pass

116.60	32.81	115.42	83.79	2869348.44		MAS = 10.00 (m)	0.00	0.00				Surface
116.59	32.81	115.41	83.78	17704.43		MAS = 10.00 (m)	23.00	23.00				WRP
114.81	32.81	110.20	82.00	33.11		MAS = 10.00 (m)	428.45	428.45				MinPts
115.20	32.81	109.89	82.39	27.57		MAS = 10.00 (m)	500.00	500.00				MinPt-EOU
122.56	32.81	112.31	89.75	13.37		MAS = 10.00 (m)	1000.00	1000.00				MinPt-EOU
128.07	32.81	112.44	95.26	8.67		MAS = 10.00 (m)	1560.00	1560.00				MinPts
128.23	32.81	112.31	95.43	8.52		MAS = 10.00 (m)	1590.00	1589.99				MinPt-EOU
135.99	32.81	118.24	103.18	8.05		MAS = 10.00 (m)	1780.00	1779.55				MinPt-SF
1830.23	122.30	1748.37	1707.93	22.62		OSF1.50	8170.00	8060.19				MinPt-CiCt
1830.20	125.27	1746.36	1704.93	22.08		OSF1.50	8380.00	8270.19				MinPt-CiCt
1830.20	127.27	1745.03	1702.93	21.73		OSF1.50	8520.00	8410.19				MinPt-CiCt
1832.62	135.96	1741.65	1696.66	20.36		OSF1.50	9130.00	9020.19				MinPt-EOU
1835.03	139.45	1741.73	1695.57	19.87		OSF1.50	9370.00	9260.19				MinPt-EOU
1840.56	150.87	1739.65	1689.69	18.41		OSF1.50	10160.00	10050.19				MinPt-EOU
1844.83	156.29	1740.31	1688.54	17.81		OSF1.50	10530.00	10420.19				MinPt-EOU
1845.73	157.41	1740.47	1688.32	17.69		OSF1.50	10610.00	10500.19				MinPt-ADP
1863.59	163.94	1753.96	1699.64	17.14		OSF1.50	11150.00	11040.19				MinPt-SF
2591.75	169.58	2478.37	2422.17	23.05		OSF1.50	14760.00	13011.94				MinPt-CiCt
2589.47	174.23	2472.99	2415.24	22.41		OSF1.50	15100.00	13009.29				MinPt-CiCt
2588.92	179.31	2469.05	2409.61	21.77		OSF1.50	15430.00	13006.72				MinPt-CiCt
2586.68	186.28	2462.17	2400.40	20.93		OSF1.50	15840.00	13003.52				MinPt-CiCt
2587.17	187.82	2461.63	2399.35	20.76		OSF1.50	15930.00	13002.82				MinPt-EOU
2587.57	188.33	2461.69	2399.24	20.71		OSF1.50	15960.00	13002.59				MinPt-ADP
2583.36	199.77	2449.85	2383.59	19.49		OSF1.50	16540.00	12998.07				MinPt-CiCt
2584.11	202.32	2448.90	2381.78	19.24		OSF1.50	16670.00	12997.06				MinPt-EOU
2582.33	209.63	2442.24	2372.69	18.56		OSF1.50	17010.00	12994.41				MinPt-CiCt
2581.90	223.10	2432.83	2358.79	17.43		OSF1.50	17610.00	12989.73				MinPt-CiCt
2582.84	225.75	2432.01	2357.08	17.23		OSF1.50	17730.00	12988.80				MinPt-EOU
2580.20	234.27	2423.69	2345.92	16.58		OSF1.50	18080.00	12986.07				MinPt-CiCt
2580.20	244.59	2416.80	2335.60	15.88		OSF1.50	18500.00	12982.80				MinPt-CiCt
2580.56	249.62	2413.82	2330.94	15.56		OSF1.50	18700.00	12981.24				MinPt-CiCt
2582.34	263.77	2406.16	2318.57	14.73		OSF1.50	19250.00	12976.95				MinPt-CiCt
2578.36	275.90	2394.10	2302.46	14.06		OSF1.50	19710.00	12973.37				MinPt-CiCt
2576.45	282.32	2387.90	2294.13	13.73		OSF1.50	19950.00	12971.50				MinPt-CiCt

Offset Trajectory	Separation			Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)			MD (ft)	TVD (ft)	Alert	Minor	Major	
2567.47	300.63	2366.72	2266.84	12.85	OSF1.50	20620.00	12966.28				MinPt-CiCt
2564.02	308.42	2358.08	2255.60	12.51	OSF1.50	20900.00	12964.10				MinPt-CiCt
2565.31	314.07	2355.60	2251.24	12.29	OSF1.50	21110.00	12962.46				MinPt-EOU
2566.35	315.35	2355.79	2251.00	12.24	OSF1.50	21160.00	12962.07				MinPt-ADP
2574.56	325.36	2357.32	2249.20	11.90	OSF1.50	21500.00	12959.42				MinPt-CiCt
2569.62	337.66	2344.18	2231.96	11.44	OSF1.50	21930.00	12956.07				MinPt-CiCt
2566.60	345.73	2335.79	2220.87	11.16	OSF1.50	22210.00	12953.89				MinPt-CiCt
2564.00	352.11	2328.93	2211.88	10.95	OSF1.50	22430.00	12952.18				MinPt-CiCt
2564.44	353.80	2328.38	2210.84	10.90	OSF1.50	22490.00	12951.71				MinPt-EOU
2565.04	354.32	2328.50	2210.72	10.89	OSF1.50	22520.00	12951.48				MinPt-ADP
2559.34	365.51	2315.34	2193.83	10.53	OSF1.50	22890.00	12948.59				MinPt-CiCt
2560.43	368.74	2314.28	2191.69	10.44	OSF1.50	23010.00	12947.66				MinPt-EOU
2558.90	379.79	2305.38	2179.11	10.13	OSF1.50	23222.96	12946.00				MinPts

30-025-49110 - Cimarex Red Hills Unit 101H - Corrected MWD to 22039ft - A (DefinitiveSurvey) - Pass

121.65	32.81	120.48	88.85	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
121.64	32.81	120.46	88.83	N/A	MAS = 10.00 (m)	1.80	1.80				MinPts
121.65	32.81	120.47	88.84	30679.82	MAS = 10.00 (m)	23.00	23.00				WRP
124.91	32.81	119.70	92.10	30.73	MAS = 10.00 (m)	480.00	480.00				MinPt-EOU
153.84	32.81	138.20	121.03	10.43	MAS = 10.00 (m)	1760.00	1759.64				MinPt-SF
989.90	66.30	945.37	923.60	22.71	OSF1.50	4820.00	4723.86				MinPt-SF
1140.81	81.11	1086.41	1059.71	21.34	OSF1.50	5840.00	5730.19				MinPt-ADP
1164.64	100.98	1096.99	1063.66	17.46	OSF1.50	7220.00	7110.19				MinPt-CiCt
1168.51	114.03	1092.16	1054.48	15.49	OSF1.50	8140.00	8030.19				MinPt-EOU
1170.99	117.28	1092.47	1053.71	15.09	OSF1.50	8370.00	8260.19				MinPt-ADP
1181.91	140.98	1087.59	1040.93	12.65	OSF1.50	10000.00	9890.19				MinPt-CiCt
1183.96	147.42	1085.36	1036.54	12.12	OSF1.50	10450.00	10340.19				MinPt-EOU
1184.66	148.24	1085.51	1036.42	12.06	OSF1.50	10510.00	10400.19				MinPt-ADP
1192.18	153.84	1089.29	1038.34	11.69	OSF1.50	10890.00	10780.19				MinPt-ADP
1231.59	169.72	1118.12	1061.87	10.94	OSF1.50	12100.00	11990.19				MinPt-SF
1299.11	158.85	1192.88	1140.26	12.33	OSF1.50	14030.00	13017.62				MinPt-CiCt
1299.14	158.92	1192.86	1140.21	12.33	OSF1.50	14040.00	13017.55				MinPt-EOU
1299.20	159.00	1192.87	1140.20	12.32	OSF1.50	14050.00	13017.47				MinPt-ADP
1301.53	159.75	1194.70	1141.78	12.29	OSF1.50	14140.00	13016.77				MinPt-SF
1300.86	160.68	1193.41	1140.18	12.21	OSF1.50	14310.00	13015.44				MinPt-CiCt
1300.94	160.87	1193.37	1140.07	12.20	OSF1.50	14330.00	13015.29				MinPts
1304.65	163.21	1195.52	1141.45	12.05	OSF1.50	14600.00	13013.18				MinPt-CiCt
1304.72	163.43	1195.44	1141.30	12.04	OSF1.50	14620.00	13013.03				MinPt-EOU
1304.81	163.54	1195.46	1141.27	12.03	OSF1.50	14630.00	13012.95				MinPt-ADP
1305.82	165.39	1195.23	1140.43	11.90	OSF1.50	14810.00	13011.55				MinPt-CiCt
1305.99	165.85	1195.09	1140.14	11.87	OSF1.50	14850.00	13011.24				MinPt-EOU
1306.08	165.97	1195.11	1140.11	11.87	OSF1.50	14860.00	13011.16				MinPt-ADP
1328.13	170.88	1213.88	1157.25	11.72	OSF1.50	15230.00	13008.28				MinPt-SF
1296.94	186.23	1172.46	1110.71	10.49	OSF1.50	16300.00	12999.94				MinPt-CiCt
1297.20	186.96	1172.24	1110.24	10.45	OSF1.50	16340.00	12999.63				MinPt-EOU
1297.52	187.33	1172.31	1110.19	10.44	OSF1.50	16360.00	12999.47				MinPt-ADP
1306.11	193.41	1176.84	1112.70	10.17	OSF1.50	16680.00	12996.98				MinPt-EOU
1307.07	194.61	1177.00	1112.46	10.12	OSF1.50	16740.00	12996.51				MinPt-ADP
1307.18	203.49	1171.19	1103.69	9.68	OSF1.50	17180.00	12993.08				MinPt-CiCt
1304.26	213.97	1161.28	1090.28	9.18	OSF1.50	17670.00	12989.26				MinPt-CiCt
1300.19	218.19	1154.41	1082.00	8.97	OSF1.50	17860.00	12987.78				MinPt-CiCt
1292.01	225.67	1141.23	1066.33	8.62	OSF1.50	18190.00	12985.21				MinPt-CiCt
1292.37	226.84	1140.82	1065.53	8.58	OSF1.50	18240.00	12984.82				MinPt-EOU
1292.74	227.30	1140.88	1065.44	8.56	OSF1.50	18260.00	12984.67				MinPt-ADP
1288.95	233.32	1133.08	1055.63	8.32	OSF1.50	18510.00	12982.72				MinPt-CiCt
1289.41	234.51	1132.74	1054.90	8.28	OSF1.50	18560.00	12982.33				MinPt-EOU
1290.01	235.21	1132.88	1054.80	8.26	OSF1.50	18590.00	12982.10				MinPt-ADP
1306.50	263.30	1130.63	1043.19	7.47	OSF1.50	19710.00	12973.37				MinPt-CiCt
1306.81	264.31	1130.28	1042.51	7.44	OSF1.50	19750.00	12973.06				MinPt-EOU
1307.23	264.80	1130.37	1042.43	7.43	OSF1.50	19770.00	12972.90				MinPt-ADP
1303.78	273.92	1120.84	1029.86	7.16	OSF1.50	20100.00	12970.33				MinPt-CiCt
1289.88	290.65	1095.78	999.23	6.67	OSF1.50	20720.00	12965.50				MinPt-CiCt
1290.31	291.96	1095.34	998.35	6.65	OSF1.50	20770.00	12965.11				MinPt-EOU
1290.92	292.73	1095.44	998.19	6.63	OSF1.50	20800.00	12964.88				MinPt-ADP
1271.20	326.69	1053.08	944.51	5.85	OSF1.50	22020.00	12955.37				MinPt-CiCt
1263.96	338.51	1037.96	925.45	5.61	OSF1.50	22440.00	12952.10				MinPt-CiCt
1264.48	340.17	1037.37	924.31	5.59	OSF1.50	22500.00	12951.63				MinPt-EOU
1265.12	340.98	1037.47	924.14	5.58	OSF1.50	22530.00	12951.40				MinPt-ADP
1264.50	361.21	1023.37	903.29	5.26	OSF1.50	23222.96	12946.00				MinPts

Coterra Red Hills Unit 105H - Corrected MWD to 20747ft (DefinitiveSurvey) - Pass

134.15	32.81	132.86	101.34	6139244.32	MAS = 10.00 (m)	0.00	0.00				MinPts
134.15	32.81	132.86	101.34	42651.33	MAS = 10.00 (m)	23.00	23.00				WRP
135.77	32.81	130.44	102.96	33.23	MAS = 10.00 (m)	490.00	490.00				MinPt-EOU
164.02	32.81	149.07	131.21	11.67	MAS = 10.00 (m)	1670.00	1669.90				MinPt-SF
1601.60	71.79	1553.42	1529.82	33.91	OSF1.50	5390.00	5280.92				MinPt-SF
1633.30	73.15	1584.21	1560.15	33.93	OSF1.50	5500.00	5390.41				MinPt-SF
1963.08	99.91	1896.14	1863.17	29.75	OSF1.50	7190.00	7080.19				MinPt-ADP
1968.42	128.97	1882.11	1839.44	23.06	OSF1.50	9110.00	9000.19				MinPt-CiCt
1969.34	144.97	1872.37	1824.37	20.51	OSF1.50	10230.00	10120.19				MinPt-CiCt
1969.42	145.30	1872.23	1824.12	20.46	OSF1.50	10260.00	10150.19				MinPt-EOU
1969.59	145.52	1872.25	1824.07	20.43	OSF1.50	10280.00	10170.19				MinPt-ADP
2004.79	151.05	1903.76	1853.74	20.03	OSF1.50	10790.00	10680.19				MinPt-SF
3052.19	141.37	2957.61	2910.81	32.60	OSF1.50	13870.00	13018.87				MinPt-CiCt
3052.28	141.63	2957.53	2910.65	32.54	OSF1.50	13900.00	13018.64				MinPt-EOU
3052.51	141.90	2957.58	2910.61	32.48	OSF1.50	13930.00	13018.40				MinPt-ADP
3049.20	154.46	2945.90	2894.74	29.79	OSF1.50	14920.00	13010.69				MinPt-CiCt
3048.16	157.95	2942.54	2890.22	29.12	OSF1.50	15140.00	13008.98				MinPt-CiCt
3046.95	163.78	2937.43	2883.17	28.07	OSF1.50	15480.00	13006.33				MinPt-CiCt
3045.34	166.89	2933.75	2878.45	27.52	OSF1.50	15650.00	13005.00				MinPt-CiCt

Offset Trajectory	Separation			Allow	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
	3045.77	178.26	2926.61	2867.52	25.76	OSF1.50	16220.00	13000.56				MinPt-CiCt
	3043.69	184.66	2920.25	2859.03	24.85	OSF1.50	16520.00	12998.22				MinPt-CiCt
	3037.57	195.48	2906.92	2842.09	23.42	OSF1.50	17000.00	12994.48				MinPt-CiCt
	3034.78	204.23	2898.30	2830.55	22.39	OSF1.50	17370.00	12991.60				MinPt-CiCt
	3031.71	220.37	2884.46	2811.33	20.72	OSF1.50	18020.00	12986.54				MinPt-CiCt
	3028.40	236.52	2870.39	2791.88	19.28	OSF1.50	18640.00	12981.71				MinPt-CiCt
	3028.18	244.88	2864.60	2783.30	18.62	OSF1.50	18950.00	12979.29				MinPt-CiCt
	3031.76	259.10	2858.70	2772.66	17.61	OSF1.50	19470.00	12975.24				MinPt-CiCt
	3032.85	267.20	2854.39	2765.65	17.08	OSF1.50	19760.00	12972.98				MinPt-CiCt
	3033.55	269.33	2853.67	2764.23	16.95	OSF1.50	19850.00	12972.28				MinPt-EOU
	3034.37	270.26	2853.87	2764.11	16.90	OSF1.50	19890.00	12971.97				MinPt-ADP
	3032.78	282.14	2844.36	2750.64	16.18	OSF1.50	20290.00	12968.85				MinPt-CiCt
	3019.61	310.92	2812.00	2708.69	14.61	OSF1.50	21290.00	12961.06				MinPt-CiCt
	3007.50	337.51	2782.16	2669.99	13.40	OSF1.50	22190.00	12954.05				MinPt-CiCt
	3004.65	350.01	2770.98	2654.64	12.91	OSF1.50	22610.00	12950.78				MinPt-CiCt
	3002.46	359.61	2762.39	2642.85	12.55	OSF1.50	22930.00	12948.28				MinPt-CiCt
	3002.09	364.73	2758.61	2637.36	12.38	OSF1.50	23100.00	12946.96				MinPt-CiCt
	3002.35	369.53	2755.67	2632.82	12.22	OSF1.50	23222.96	12946.00				MinPts
Coterra Red Hills Unit 76H Rev2 kFc 11Dec24 (DefinitivePlan) - Pass												
	1321.20	32.81	1320.02	1288.39	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
	1321.14	32.81	1319.96	1288.33	464980.39	MAS = 10.00 (m)	10.00	10.00				MinPts
	1321.14	32.81	1319.96	1288.33	N/A	MAS = 10.00 (m)	23.00	23.00				WRP
	1321.14	32.81	1309.52	1288.33	126.33	MAS = 10.00 (m)	1110.00	1110.00				MinPt-EOU
	730.83	84.25	674.33	646.58	13.15	OSF1.50	5502.90	5393.30				MinPt-CiCt
	730.95	84.65	674.19	646.31	13.09	OSF1.50	5530.00	5420.33				MinPt-EOU
	731.20	84.94	674.25	646.26	13.05	OSF1.50	5550.00	5440.29				MinPt-ADP
	746.15	163.19	637.03	582.96	6.89	OSF1.50	10960.00	10850.19				MinPt-EOU
	746.23	163.29	637.04	582.93	6.89	OSF1.50	10970.00	10860.19				MinPt-ADP
	748.18	164.03	638.50	584.15	6.87	OSF1.50	11050.00	10940.19				MinPt-SF
	1858.94	365.52	1614.92	1493.41	7.65	OSF1.50	23222.96	12946.00				MinPts
Coterra Red Hills Unit 77H Rev2 kFc 11Dec24 (DefinitivePlan) - Pass												
	1301.21	32.81	1299.92	1268.40	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
	1301.16	32.81	1299.87	1268.35	714044.28	MAS = 10.00 (m)	10.00	10.00				MinPts
	1301.16	32.81	1299.87	1268.35	N/A	MAS = 10.00 (m)	23.00	23.00				WRP
	1301.16	32.81	1289.42	1268.35	124.37	MAS = 10.00 (m)	1110.00	1110.00				MinPt-EOU
	1301.16	32.81	1287.77	1268.35	106.07	MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
	749.85	84.63	693.10	665.21	13.43	OSF1.50	5478.37	5368.85				MinPt-CiCt
	750.00	85.11	692.93	664.89	13.36	OSF1.50	5510.00	5400.38				MinPt-EOU
	750.25	85.40	692.99	664.85	13.31	OSF1.50	5530.00	5420.33				MinPt-ADP
	805.71	154.05	702.68	651.66	7.89	OSF1.50	10310.00	10200.19				MinPt-EOU
	805.81	154.17	702.70	651.63	7.88	OSF1.50	10320.00	10210.19				MinPt-ADP
	808.39	155.06	704.69	653.33	7.86	OSF1.50	10400.00	10290.19				MinPt-SF
	2441.11	126.76	2356.28	2314.35	29.10	OSF1.50	13680.00	13020.35				MinPt-CiCt
	2441.16	126.92	2356.22	2314.24	29.06	OSF1.50	13700.00	13020.20				MinPt-EOU
	2441.23	127.01	2356.23	2314.22	29.04	OSF1.50	13710.00	13020.12				MinPt-ADP
	2413.14	358.37	2173.89	2054.76	10.12	OSF1.50	23222.96	12946.00				MinPts
30-025-46313 - CASCADE 28 FEDERAL 85H - MWD to 16925ft - A (DefinitiveSurvey) - Pass												
	5296.08	32.81	5294.10	5263.28	#####	MAS = 10.00 (m)	0.00	0.00				MinPts
	5296.11	32.81	5294.12	5263.30	441679.20	MAS = 10.00 (m)	23.00	23.00				WRP
	5296.76	32.81	5293.91	5263.96	6050.34	MAS = 10.00 (m)	170.00	170.00				MinPt-EOU
	5308.00	32.81	5293.71	5275.20	430.79	MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
	5023.09	92.27	4961.03	4930.81	83.08	OSF1.50	5470.00	5360.51				MinPt-CiCt
	5023.09	95.60	4958.82	4927.49	80.14	OSF1.50	5630.00	5520.21				MinPt-CiCt
	5023.43	96.66	4958.46	4926.77	79.25	OSF1.50	5700.00	5590.19				MinPt-EOU
	5025.05	98.51	4958.84	4926.54	77.76	OSF1.50	5830.00	5720.19				MinPt-ADP
	5049.25	114.98	4972.07	4934.28	66.79	OSF1.50	6900.00	6790.19				MinPt-EOU
	5051.22	117.10	4972.61	4934.12	65.59	OSF1.50	7040.00	6930.19				MinPt-ADP
	1066.98	302.04	865.12	764.94	5.32	OSF1.50	12370.17	12260.36				MinPt-CiCt
	1067.03	302.22	865.05	764.81	5.31	OSF1.50	12380.00	12270.19				MinPt-EOU
	1067.17	302.38	865.08	764.78	5.31	OSF1.50	12390.00	12280.19				MinPt-ADP
	1067.72	302.65	865.45	765.07	5.31	OSF1.50	12410.00	12300.19				MinPt-SF
	10626.24	219.34	10479.51	10406.90	73.16	OSF1.50	23222.96	12946.00				TD
30-025-44913 - SALADO DRAW 9-16 W1AP FED COM 002H - MWD to 22825ft - A (DefinitiveSurvey) - Pass												
	10752.63	32.81	10750.65	10719.83	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
	10752.62	32.81	10750.64	10719.81	7055798.61	MAS = 10.00 (m)	10.00	10.00				MinPt-SF
	10752.62	32.81	10750.64	10719.81	#####	MAS = 10.00 (m)	20.00	20.00				MinPts
	10752.62	32.81	10750.64	10719.81	#####	MAS = 10.00 (m)	23.00	23.00				WRP
	10751.97	32.81	10744.07	10719.16	1815.44	MAS = 10.00 (m)	670.00	670.00				MinPts
	10752.99	32.81	10741.70	10720.18	1155.41	MAS = 10.00 (m)	1060.00	1060.00				MinPt-EOU
	10797.42	56.29	10759.31	10741.14	296.99	OSF1.50	3670.00	3613.06				MinPt-CiCt
	10798.44	59.16	10758.41	10739.28	282.17	OSF1.50	3860.00	3796.58				MinPt-EOU
	10799.73	60.71	10758.67	10739.02	274.78	OSF1.50	3960.00	3893.17				MinPt-ADP
	10802.65	64.21	10759.25	10738.43	259.42	OSF1.50	4130.00	4057.38				MinPt-EOU
	10803.95	65.75	10759.52	10738.19	253.20	OSF1.50	4230.00	4153.97				MinPt-ADP
	10521.34	141.56	10426.43	10379.78	112.76	OSF1.50	9520.00	9410.19				MinPt-CiCt
	10521.60	142.26	10426.22	10379.34	112.20	OSF1.50	9600.00	9490.19				MinPt-EOU
	10521.90	142.61	10426.29	10379.30	111.92	OSF1.50	9640.00	9530.19				MinPt-ADP
	10530.40	154.66	10426.76	10375.74	103.19	OSF1.50	10460.00	10350.19				MinPt-EOU
	10530.26	159.18	10423.60	10371.08	100.23	OSF1.50	10780.00	10670.19				MinPt-CiCt
	10530.91	165.13	10420.28	10365.78	96.59	OSF1.50	11200.00	11090.19				MinPt-CiCt
	10531.49	167.38	10419.36	10364.10	95.28	OSF1.50	11390.00	11280.19				MinPts
	10531.69	167.61	10419.45	10364.08	95.09	OSF1.50	11420.00	11310.19				MinPt-EOU
	10533.81	173.57	10417.60	10360.24	91.82	OSF1.50	11800.00	11690.19				MinPt-CiCt
	10534.05	174.30	10417.35	10359.75	91.43	OSF1.50	11880.00	11770.19				MinPt-EOU
	10534.42	174.76	10417.42	10359.86	91.19	OSF1.50	11930.00	11820.19				MinPt-ADP
	10550.16	180.83	10429.10	10369.32	88.23	OSF1.50	12538.36	12428.55				MinPt-SF

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
	1095.13	281.17	907.18	813.96	5.87	OSF1.50	23222.96	12946.00				MinPts
30-025-44648 - SALADO DRAW 9-16 W0AP FEDERAL COM 003H - MWD to 21034ft - A (DefinitiveSurvey) - Pass												
10801.81	32.81	10799.83	10769.00	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
10801.80	32.81	10799.82	10768.99	8095896.83		MAS = 10.00 (m)	10.00	10.00				MinPt-SF
10801.79	32.81	10799.81	10768.98	#####		MAS = 10.00 (m)	20.00	20.00				MinPts
10801.79	32.81	10799.81	10768.99	#####		MAS = 10.00 (m)	23.00	23.00				WRP
10804.74	32.81	10798.85	10771.93	2767.66		MAS = 10.00 (m)	510.00	510.00				MinPt-EOU
10806.93	32.81	10799.02	10774.12	1820.43		MAS = 10.00 (m)	720.00	720.00				MinPt-EOU
10809.62	32.81	10796.74	10776.81	991.60		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
10808.75	32.81	10793.38	10775.94	794.03		MAS = 10.00 (m)	1630.00	1629.96				MinPts
10809.26	32.81	10792.36	10776.45	714.01		MAS = 10.00 (m)	1820.00	1819.33				MinPt-EOU
10812.08	32.81	10793.51	10779.27	643.30		MAS = 10.00 (m)	2010.00	2007.31				MinPt-EOU
10815.80	32.81	10794.93	10782.99	565.91		MAS = 10.00 (m)	2230.00	2222.13				MinPt-EOU
10847.79	51.66	10812.77	10796.14	326.07		OSF1.50	3450.00	3400.56				MinPt-EOU
10848.79	52.87	10812.96	10795.93	318.37		OSF1.50	3530.00	3477.83				MinPt-ADP
10852.52	56.27	10814.42	10796.25	298.57		OSF1.50	3720.00	3661.35				MinPt-EOU
10853.18	56.95	10814.63	10796.23	294.91		OSF1.50	3760.00	3699.99				MinPt-ADP
10808.74	176.51	10490.57	10432.23	90.91		OSF1.50	11930.00	11820.19				MinPt-CtCt
10608.90	176.98	10490.42	10431.92	90.67		OSF1.50	11990.00	11880.19				MinPt-EOU
10609.10	177.21	10490.46	10431.89	90.55		OSF1.50	12020.00	11910.19				MinPt-ADP
10624.89	181.04	10503.70	10443.85	88.76		OSF1.50	12538.36	12428.55				MinPt-SF
1142.43	269.40	962.33	873.03	6.39		OSF1.50	23222.96	12946.00				MinPts
30-025-44648-0100 - SALADO DRAW 9-16 W0AP FEDERAL COM 3H ST01 - MWD to 20109ft - A (DefinitiveSurvey) - Pass												
10801.81	32.81	10799.83	10769.00	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
10801.80	32.81	10799.82	10768.99	8095896.83		MAS = 10.00 (m)	10.00	10.00				MinPt-SF
10801.79	32.81	10799.81	10768.98	#####		MAS = 10.00 (m)	20.00	20.00				MinPts
10801.79	32.81	10799.81	10768.99	#####		MAS = 10.00 (m)	23.00	23.00				WRP
10804.74	32.81	10798.85	10771.93	2767.66		MAS = 10.00 (m)	510.00	510.00				MinPt-EOU
10806.93	32.81	10799.02	10774.12	1820.43		MAS = 10.00 (m)	720.00	720.00				MinPt-EOU
10809.62	32.81	10796.74	10776.81	991.60		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
10808.75	32.81	10793.38	10775.94	794.03		MAS = 10.00 (m)	1630.00	1629.96				MinPts
10809.26	32.81	10792.36	10776.45	714.01		MAS = 10.00 (m)	1820.00	1819.33				MinPt-EOU
10812.08	32.81	10793.51	10779.27	643.30		MAS = 10.00 (m)	2010.00	2007.31				MinPt-EOU
10815.80	32.81	10794.93	10782.99	565.91		MAS = 10.00 (m)	2230.00	2222.13				MinPt-EOU
10847.79	51.66	10812.77	10796.14	326.07		OSF1.50	3450.00	3400.56				MinPt-EOU
10848.79	52.87	10812.96	10795.93	318.37		OSF1.50	3530.00	3477.83				MinPt-ADP
10852.52	56.27	10814.42	10796.25	298.57		OSF1.50	3720.00	3661.35				MinPt-EOU
10853.18	56.95	10814.62	10796.23	294.91		OSF1.50	3760.00	3699.99				MinPt-ADP
10808.72	176.51	10490.55	10432.21	90.91		OSF1.50	11930.00	11820.19				MinPt-CtCt
10608.89	176.98	10490.40	10431.91	90.67		OSF1.50	11990.00	11880.19				MinPt-EOU
10609.09	177.21	10490.44	10431.87	90.55		OSF1.50	12020.00	11910.19				MinPt-ADP
10624.87	181.04	10503.68	10443.84	88.76		OSF1.50	12538.36	12428.55				MinPt-SF
1142.44	269.40	962.34	873.04	6.39		OSF1.50	23222.96	12946.00				MinPts
30-025-44497 - SALADO DRAW 9-16 W0B0 FED COM 002H - MWD to 22240ft - A (DefinitiveSurvey) - Pass												
10530.99	32.81	10529.01	10498.19	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
10530.94	32.81	10528.95	10498.13	1534783.21		MAS = 10.00 (m)	20.00	20.00				MinPt-SF
10530.93	32.81	10528.95	10498.13	1596277.76		MAS = 10.00 (m)	23.00	23.00				WRP
10529.76	32.81	10524.03	10496.95	2803.57		MAS = 10.00 (m)	460.00	460.00				MinPts
10531.02	32.81	10522.82	10498.21	1693.18		MAS = 10.00 (m)	750.00	750.00				MinPt-EOU
10531.06	32.81	10514.28	10498.25	700.69		MAS = 10.00 (m)	1740.00	1739.72				MinPts
10531.54	32.81	10513.70	10498.73	654.80		MAS = 10.00 (m)	1850.00	1849.13				MinPt-EOU
10756.35	80.21	10702.34	10676.14	205.26		OSF1.50	4940.00	4839.76				MinPts
10763.48	84.50	10706.61	10678.98	194.75		OSF1.50	5180.00	5073.39				MinPt-EOU
10511.60	170.54	10397.41	10341.06	93.26		OSF1.50	11570.00	11460.19				MinPt-CtCt
10511.89	171.40	10397.13	10340.50	92.80		OSF1.50	11660.00	11550.19				MinPt-EOU
10512.10	171.71	10397.13	10340.39	92.63		OSF1.50	11690.00	11580.19				MinPt-EOU
10512.94	172.72	10397.30	10340.22	92.09		OSF1.50	11780.00	11670.19				MinPt-ADP
10537.76	179.36	10417.69	10358.40	88.86		OSF1.50	12538.36	12428.55				MinPt-SF
1227.13	270.82	1046.08	956.31	6.83		OSF1.50	23222.96	12946.00				MinPts
Coterra Cascade 28 Federal 403H - Corrected MWD to 17160ft (DefinitiveSurvey) - Pass												
5406.31	32.81	5405.13	5373.50	2044800.95		MAS = 10.00 (m)	0.00	0.00				Surface
5406.29	32.81	5405.01	5373.48	54702.26		MAS = 10.00 (m)	23.00	23.00				WRP
5402.17	32.81	5390.92	5369.36	536.34		MAS = 10.00 (m)	1080.00	1080.00				MinPt-EOU
5401.96	32.81	5389.58	5369.15	476.65		MAS = 10.00 (m)	1210.00	1210.00				MinPts
5402.21	32.81	5389.20	5369.40	451.72		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
5402.35	32.81	5389.25	5369.54	445.89		MAS = 10.00 (m)	1310.00	1310.00				MinPt-EOU
5343.14	69.43	5296.52	5273.71	117.07		OSF1.50	4330.00	4250.56				MinPt-CtCt
5344.57	73.74	5295.09	5270.84	110.17		OSF1.50	4550.00	4463.06				MinPt-CtCt
5345.19	75.49	5294.54	5269.70	107.60		OSF1.50	4660.00	4569.31				MinPt-EOU
5345.69	79.44	5292.40	5266.25	102.18		OSF1.50	4840.00	4743.17				MinPt-CtCt
5346.22	81.03	5291.87	5265.19	100.16		OSF1.50	4940.00	4839.76				MinPt-EOU
5347.33	82.39	5292.07	5264.93	98.51		OSF1.50	5020.00	4917.15				MinPt-ADP
5420.03	107.06	5348.33	5312.97	76.63		OSF1.50	6630.00	6520.19				MinPt-EOU
1229.26	217.12	1084.18	1012.13	8.52		OSF1.50	12435.08	12325.27				MinPt-CtCt
1229.27	217.18	1084.16	1012.09	8.52		OSF1.50	12440.00	12330.19				MinPt-EOU
1229.35	217.28	1084.17	1012.07	8.52		OSF1.50	12450.00	12340.19				MinPt-ADP
1230.48	217.61	1085.08	1012.87	8.51		OSF1.50	12490.00	12380.19				MinPt-SF
10648.98	209.11	10509.25	10439.87	76.74		OSF1.50	23222.96	12946.00				TD

Coterra: Well Control Plan



Well Control Plan

Warning Signs of a Kick

If a kick is ever suspected, perform flow check.

While Drilling:

1. Drilling break or increase in penetration rate
2. Increase of flow
3. Pit gain
4. Flow without pumping
5. Circulating pressure decrease and/or spm increase
6. Increase in gas cutting at the shakers
7. Decrease in cuttings at shakers

While Tripping:

1. Hole not taking the proper fill on trip out of hole
2. Hole returns too much mud on trip in hole
3. Flow without pumping

While Out of the Hole:

1. Flow
2. Pit gain

Well Control Procedures with Diverter

A TIW valve in the open position must be on the rig floor at all times.

If rotating head is installed:

1. Perform flow check.
2. If well is flowing, divert flow down flow line and through separator, before returning across shakers.
3. Swap to 10 ppg brine and circulate around. Notify superintendent.

Coterra: Well Control Plan

4. If well becomes uncontrollable, close annular, which will open HCR to divert flow away from rig.

If rotating head is not installed:

1. Perform flow check.
2. If well is flowing uncontrollably, close annular, which will open HCR to divert flow away from rig.
3. Swap to 10 ppg brine and circulate around. Notify superintendent.
4. After 10 ppg is circulated around shut pumps off and perform flow check.

Well Control Procedures

Coterra follows a hard shut-in procedure. Choke will be in the closed position.

General Well Control

1. If in doubt, secure the well first, then inform your supervisor.
2. Never wait for approval to shut in the well.
3. Verify that the mud pump is off before you close the BOP.
4. Always check and verify the well is properly secured after shut in.
5. Always install TIW valve in the open position.
6. If TIW valve is installed and then closed, apply estimated DP shut-in pressure above valve before opening.
7. The weak link in the mud system and mud lines is the pressure relief valve or pop off valve on the mud pump.
8. Keep the TIW valve wrench in a designated location on the rig floor and in the open position.
9. Use a drill string float above the bit. Don't perforate or disable the float.
10. In the event wellbore pressure encroaches to the maximum rated pressure of the annular, primary pressure control will be switched to the higher rated components (i.e., switch from annular to pipe rams) – upper pipe rams will be closed, and the annular opened in order to not exceed maximum rated pressures.

Hard Shut-In

1. Remote choke is closed.
2. Stop pumping and space out.
3. Check for flow.
4. To shut in, close annular or pipe ram if no annular is present.
5. Open the HCR valve.
6. Check systems, bump float. Record Initial Shut in Drill pipe pressure and Initial shut in casing pressure.

Coterra: Well Control Plan

Flow Check when on Bottom

1. Alert crew & stop rotating
2. Pick up and space out
3. Shut down pumps
4. Observe well for flow
5. Shut-in if flowing

Shutting in while Drilling

1. After flow has been detected via flow check, kill pumps, shut in well and open HCR
2. Verify well is shut-in and flow has stopped
3. Notify supervisory personnel
4. Record data
5. Begin go forward planning

Flow Check while Tripping

1. Alert crew & pick up / space out
2. Stop pipe movement. Set slips with tool joint accessible at rotary table
3. Install open TIW safety valve and close valve
4. Observe well for flow
5. Shut-in if flowing

Shutting in while Tripping

1. Install open TIW safety valve and close valve
2. Shut-in the well
3. Verify well is shut-in and flow has stopped
4. Install IBOP
5. Notify supervisory personnel
6. Record data; SICP, shut-in time, kick depth, and pit gain
7. Begin go forward planning

Shutting in while Out of Hole

1. Sound alarm
2. Shut-in well: close blind rams.
3. Verify well is shut-in and monitor pressures.
4. Notify supervisory personnel
5. Record data; SICP, shut-in time, kick depth, and pit gain
6. Begin go forward planning

Information to Record while Shut-In

1. Shut in drill pipe pressure every 5 minutes

Coterra: Well Control Plan

2. Shut in casing pressure every 5 minutes
3. Pit gain
4. Total volume in pit system
5. Mud weight in suction pit
6. Current depth
7. Total depth
8. Time the well is shut in

H2S with Annular Diverter:

1. Kill Pumps, close annular, which will open HCR, to divert flow away from rig.
2. Muster and take head count.
3. Call ASSI to check location for H2S. Call Coterra superintendent.
4. After ASSI has checked for H2S the path forward will be decided from Coterra superintendent.

H2S with BOP's:

1. Kill pumps
2. Shut in annular with HCR open and chokes closed.
3. Muster and take head count.
4. Call ASSI to check location for H2S. Call Coterra superintendent.
5. After ASSI has checked for H2S. discuss path forward with Coterra superintendent

Procedure for Closing Blind Rams

- Open HCR valve (visually check that the HCR valve is open – stem in the valve is open, stem out the valve is closed).
- Verify all circulating pumps are off (mud pumps, trip tank pump, etc.)
- Ensure that the hydraulic choke is in the closed position.
- Close the blind rams and place the “blind rams closed, bleed pressure and remove hole cover before opening” sign on the console.
- Monitor the shut in casing pressure gauge periodically while the blinds are closed to ensure that wellbore pressure isn't building. If pressure build up is observed, monitor the shut in casing pressure more frequently & document. Notify rig management and Coterra representative of the pressure build up.
- Ensure that the inner bushings are locked into the master bushings if applicable.
- Install hole cover.

Procedure for Opening Blind Rams

- Make sure choke manifold is aligned correctly.
- Open the hydraulic choke to bleed any trapped pressure that may be under the blind rams. (Even if the casing pressure gauge is reading zero).

Coterra: Well Control Plan

- Confirm that no flow is discharging into the trip tank or possum bellies of the shale shaker (wherever the separator is discharging into).
- Remove hole cover.
- Confirm that the inner bushing are locked into the master bushings if applicable.
- Clear all personnel from the rig floor.
- Remove sign and open blind rams.
- Return the BOPE to its original operating alignment.

BOP Drills

- Drilling crews should conduct BOP drills weekly from BOP nipple up to TD for reaction time to properly simulate securing the well. Record BOP drills on that day's report.
- Standard precautions such as checking the accumulator for proper working pressure, function testing rams, and recording slow pump rates are performed on a daily basis or on trips..
- All supervisory personnel onsite need to be properly trained and currently hold certification from an approved blowout prevention school. Any deviation from this needs to be discussed prior to spud.
- Drillers should always notify the tool pusher and the drilling foreman before performing a blowout drill.

Choke Manifold Freeze Prevention

- When possible, blow out the choke & kill lines as well as the choke manifold with rig air to remove water based fluids.
- When clear water is being placed into the choke & kill line as well as the choke manifold, make sure that the water has a mixture of 30% methanol added.
- When applicable, choke & kill lines as well as choke manifold needs to be pumped through with the rig pump by the driller to ensure that the lines aren't plugged with settling barite or solids.

Well Name: RED HILLS UNIT	Well Location: T25S / R33E / SEC 33 / NWNE / 32.093037 / -103.093037	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM005792	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551923	Operator: CIMAREX ENERGY COMPANY	

Notice of Intent

Sundry ID: 2830708

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 04/01/2025	Time Sundry Submitted: 09:44
Date proposed operation will begin: 06/02/2025	

Procedure Description: Cimarex Energy Co. of Colorado requests the following changes to the Red Hills Unit 20H: BHL change from 100 FSL/2024 FEL to 100 FSL/1380 FEL TVD change from 12,375' to 12946' Please see the attached updated plat and documents for this request.

NOI Attachments

Procedure Description

RH_Unit_20H_Sundry_06032025_20250603065510.pdf

Well Name: RED HILLS UNIT	Well Location: T25S / R33E / SEC 33 / NWNE / 32.093037 / -103.093037	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM005792	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551923	Operator: CIMAREX ENERGY COMPANY	

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SHELLY BOWEN	Signed on: JUN 03, 2025 06:55 AM
Name: CIMAREX ENERGY COMPANY	
Title: Regulatory Analyst	
Street Address: 6001 DEAUVILLE BLVD STE 300N	
City: MIDLAND	State: TX
Phone: (432) 620-1644	
Email address: DL_PBUREGULATORY@COTERRA.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

APPROVED by Long Vo
Petroleum Engineer
Carlsbad Field Office
575-988-50402
LVO@BLM.GOV

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Company ▼
LOCATION:	Section 33, T.25 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico ▼

WELL NAME & NO.:	Red Hills Unit 20H
ATS/API ID:	3002551923
APD ID:	10400060223
Sundry ID:	2830708

COA

H2S	Yes ▼		
Potash	None ▼	None ▼	
Cave/Karst Potential	Low ▼		
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	Conventional and Multibowl ▼		
Other	☐ 4 String ☐ 5 String	Capitan Reef None ▼	☐ WIPP
Other	Pilot Hole None ▼	☐ Open Annulus	
Cementing	Contingency Squeeze None ▼	Echo-Meter None ▼	Primary Cement Squeeze None ▼
Special Requirements	☐ Water Disposal/Injection	☐ COM	☒ Unit
Special Requirements	☐ Batch Sundry	Waste Prevention None ▼	
Special Requirements Variance	☐ BOPE Break Testing ☐ Offline BOPE Testing	☐ Offline Cementing	☒ Casing Clearance

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H₂S) Drilling Plan shall be activated 500 feet prior to drilling into the **Bone Springs and Wolfcamp** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1050 feet** (a minimum of 70 feet into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **14 3/4** inch in diameter.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2.

Option 1:

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

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **10-3/4** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi**. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

D. SPECIAL REQUIREMENT (S)**Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months.

Casing Clearance

Operator casing variance is approved for the utilization of 5 inch P-110 BTC **from** base of curve and a minimum of 500 feet or the minimum tie-back requirement above, whichever is greater into the previous casing shoe.

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

GENERAL REQUIREMENTS

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

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

☒ Lea County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

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 of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke

manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be

initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and

disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

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

Long Vo (LVO) 6/3/2025

Form 3160-5 (June 2019)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021
SUNDRY NOTICES AND REPORTS ON WELLS <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No.
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well ☐ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No.
2. Name of Operator		9. API Well No.
3a. Address	3b. Phone No. (include area code)	10. Field and Pool or Exploratory Area
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)		
	Title	
Signature	Date	

THE SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice 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.	Office	

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

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

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

Additional Information

Location of Well

0. SHL: NWNW / 453 FNL / 1620 FEL / TWSP: 25S / RANGE: 33E / SECTION: 33 / LAT: 32.093037 / LONG: -103.093037 (TVD: 0 feet, MD: 0 feet)

PPP: NWNW / 453 FNL / 2024 FEL / TWSP: 25S / RANGE: 33E / SECTION: 33 / LAT: 32.09304 / LONG: -103.575287 (TVD: 12210 feet, MD: 12283 feet)

BHL: SWSE / 100 FSL / 2024 FEL / TWSP: 26S / RANGE: 33E / SECTION: 4 / LAT: 32.065545 / LONG: -103.575249 (TVD: 12375 feet, MD: 22432 feet)

CONFIDENTIAL

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION		Revised July 9, 2024	
			Submittal Type:	☐ Initial Submittal
				☒ Amended Report
		☐ As Drilled		

WELL LOCATION INFORMATION

API Number 30-025-51923	Pool Code 98094	Pool Name Bobcat Draw; Upper Wolfcamp
Property Code	Property Name RED HILLS UNIT	Well Number 20H
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Ground Level Elevation 3,354.3'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD 83)	Longitude (NAD 83)	County
B	33	25S	33E		335 NORTH	2,249 EAST	32.093366°	-103.576016°	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD 83)	Longitude (NAD 83)	County
O	4	26S	33E		100 SOUTH	1,380 EAST	32.065541°	-103.573171°	LEA

Dedicated Acres 640	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
Order Numbers.		Well setbacks are under Common Ownership: ☐ Yes ☐ No		

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD 83)	Longitude (NAD 83)	County
B	33	25S	33E		100 NORTH	1,380 EAST	32.094005°	-103.573210°	LEA

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD 83)	Longitude (NAD 83)	County
B	33	25S	33E		100 NORTH	1,380 EAST	32.094005°	-103.573210°	LEA

Last Take Point (LTP)

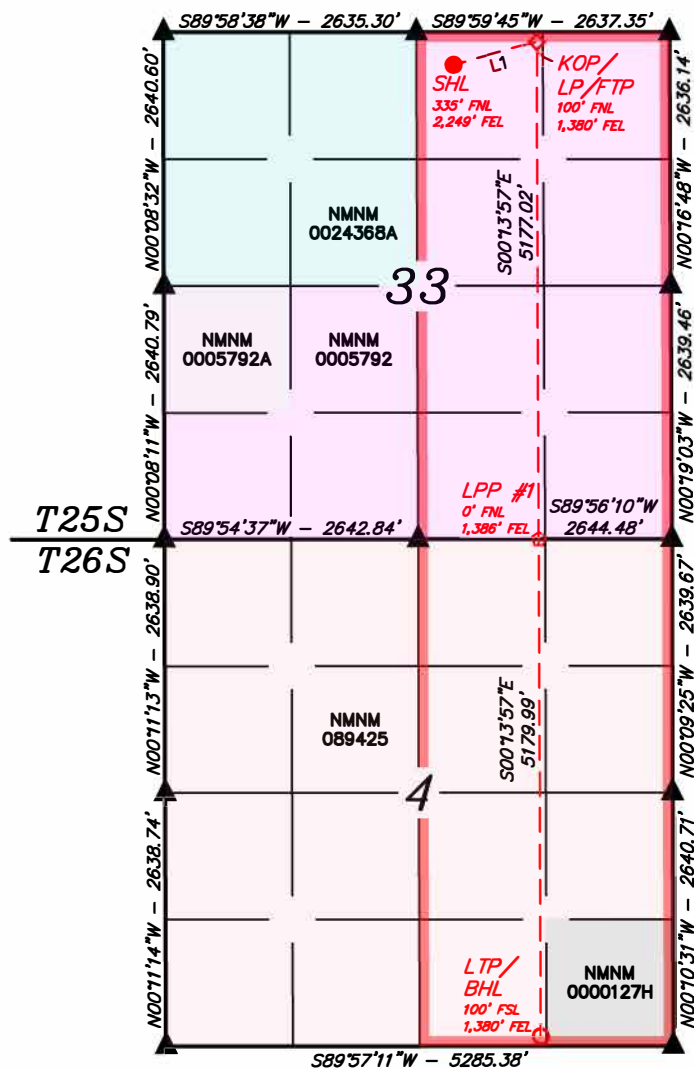
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD 83)	Longitude (NAD 83)	County
O	4	26S	33E		100 SOUTH	1,380 EAST	32.065541°	-103.573171°	LEA

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☐ Horizontal ☐ Vertical	Ground Floor Elevation:
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OPERATOR CERTIFICATIONS <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i>  4/1/2025 Signature _____ Date _____ Shelly Bowen Printed Name _____ Shelly.Bowen@coterra.com Email Address _____	SURVEYOR CERTIFICATIONS <i>I hereby certify that the well location shown on this plat was plotted from the 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.</i>  Signature and Seal of Professional Surveyor 23782 March 27, 2018 Certificate Number _____ Date of Survey _____
--	--

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

Property Name RED HILLS UNIT	Well Number 20H	Drawn By L.T.T. 11-08-24	Revised By REV. 1 L.T.T. 01-21-25 (UPDATE WELLBORE)
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**NAD 83 (SURFACE HOLE LOCATION)**

LATITUDE = 32°05'36.12" (32.093366°)

LONGITUDE = -103°34'33.66" (-103.576016°)

NAD 27 (SURFACE HOLE LOCATION)

LATITUDE = 32°05'35.67" (32.093241°)

LONGITUDE = -103°34'31.96" (-103.575545°)

STATE PLANE NAD 83 (N.M. EAST)

N: 398526.86' E: 775861.75'

STATE PLANE NAD 27 (N.M. EAST)

N: 398469.24' E: 734675.25'

NAD 83 (KOP/LP/FTP)

LATITUDE = 32°05'38.42" (32.094005°)

LONGITUDE = -103°34'23.56" (-103.573210°)

NAD 27 (KOP/LP/FTP)

LATITUDE = 32°05'37.97" (32.093881°)

LONGITUDE = -103°34'21.86" (-103.572740°)

STATE PLANE NAD 83 (N.M. EAST)

N: 398765.61' E: 776728.91'

STATE PLANE NAD 27 (N.M. EAST)

N: 398707.99' E: 735542.41'

NAD 83 (LPP #1)

LATITUDE = 32°04'47.20" (32.079777°)

LONGITUDE = -103°34'23.49" (-103.573190°)

NAD 27 (LPP #1)

LATITUDE = 32°04'46.75" (32.079652°)

LONGITUDE = -103°34'21.80" (-103.572721°)

STATE PLANE NAD 83 (N.M. EAST)

N: 393589.64' E: 776771.51'

STATE PLANE NAD 27 (N.M. EAST)

N: 393532.16' E: 735584.77'

NAD 83 (LTP/BHL)

LATITUDE = 32°03'55.95" (32.065541°)

LONGITUDE = -103°34'23.41" (-103.573171°)

NAD 27 (LTP/BHL)

LATITUDE = 32°03'55.50" (32.065416°)

LONGITUDE = -103°34'21.73" (-103.572702°)

STATE PLANE NAD 83 (N.M. EAST)

N: 388410.71' E: 776814.13'

STATE PLANE NAD 27 (N.M. EAST)

N: 388353.35' E: 735627.14'

LINE TABLE

LINE	DIRECTION	LENGTH
L1	N74°50'44"E	899.58'

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)
- Colored areas within section lines represent Federal oil & gas leases.

- = SURFACE HOLE LOCATION
- ◇ = KICK OFF POINT/LANDING POINT/FIRST TAKE POINT
- ◊ = LEASE PENETRATION POINT
- = LAST TAKE POINT/BOTTOM HOLE LOCATION
- ▲ = SECTION CORNER LOCATED
- = DEDICATED ACREAGE



SCALE

Cimarex Energy Co., Red Hills Unit 20H

1. Geological Formations

TVD of target 12,946

Pilot Hole TD N/A

MD at TD 23,223

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	920	N/A	
Top of Salt	1334	N/A	
Base of Salt	4892	N/A	
Bell Canyon	4919	N/A	
Cherry Canyon	6019	N/A	
Brushy Canyon	7578	N/A	
Bone Spring	9047	Hydrocarbons	
Upper Avalon Shale	9338	Hydrocarbons	
1st Bone Spring	10030	Hydrocarbons	
2nd Bone Spring	10230	Hydrocarbons	
3rd Bone Spring	11017	Hydrocarbons	
Wolfcamp	12117	Hydrocarbons	
Wolfcamp B - Target	12946	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
14 3/4	0	1094	1094	10-3/4"	40.50	J-55	BT&C	3.33	6.61	14.20
9 7/8	0	12538	12429	7-5/8"	29.70	L-80	BT&C	2.37	1.18	1.80
6 3/4	0	12038	12038	5-1/2"	23.00	L-80	LT&C	1.56	1.38	2.10
6 3/4	12038	23223	12946	5"	18.00	P-110	BT&C	1.82	1.84	78.98
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

Cimarex Energy Co., Red Hills Unit 20H

	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?	N

Cimarex Energy Co., Red Hills Unit 20H

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	425	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	114	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	995	10.30	3.64	22.18	12	Lead: Tuned Light + LCM
	198	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Production	1384	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	49
Production	12238	25

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
9 7/8	13 5/8	10M	Annular	X	100% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			Double Ram	X	
			Other		
6 3/4	13 5/8	10M	Annular	X	100% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			Double Ram	X	
			Other		

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

Cimarex Energy Co., Red Hills Unit 20H

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1094'	Fresh Water	7.83 - 8.33	28	N/C
1094' to 12538'	Brine Diesel Emulsion	8.50 - 9.00	30-35	N/C
12538' to 23223'	OBM	10.50 - 11.00	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.

The Brine Emulsion is completely saturated brine fluid that ties diesel into itself to lower the weight of the fluid. The drilling fluid is completely salt saturated.

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 from TD 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	7405 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	H ₂ S is present
X	H ₂ S plan is attached

8. Other Facets of Operation**9. Wellhead**

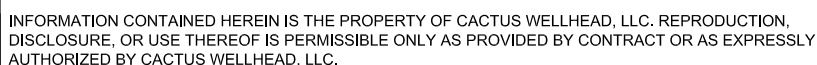
1. The multi-bowl wellhead will be installed by a vendor representative. A copy of the installation instructions has been sent to the BLM field office.
2. A packoff will be installed after running and cementing the production casing. This packoff will be tested to 10K psi.

BOPE Additional Information & Testing

1. After running the first string of casing, a 10M BOP/BOPE system with 5M annular will be installed. BOPs will be tested according to Onshore Order #2. BOPE will be tested to full rated pressure (10K for all BOPE except the annular, which is tested to 5K). For the low test, the system will be tested to 250 psi.
2. All BOP equipment will be tested utilizing a conventional test plug.
3. A remote kill line is included in the BOPE system
4. All casing strings will be tested per Onshore Order #2, to 0.22 psi/ft or 1,500 psi, whichever is greater, not to exceed 70% of casing burst.
5. If well conditions dictate, conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Additional Well Control Notes

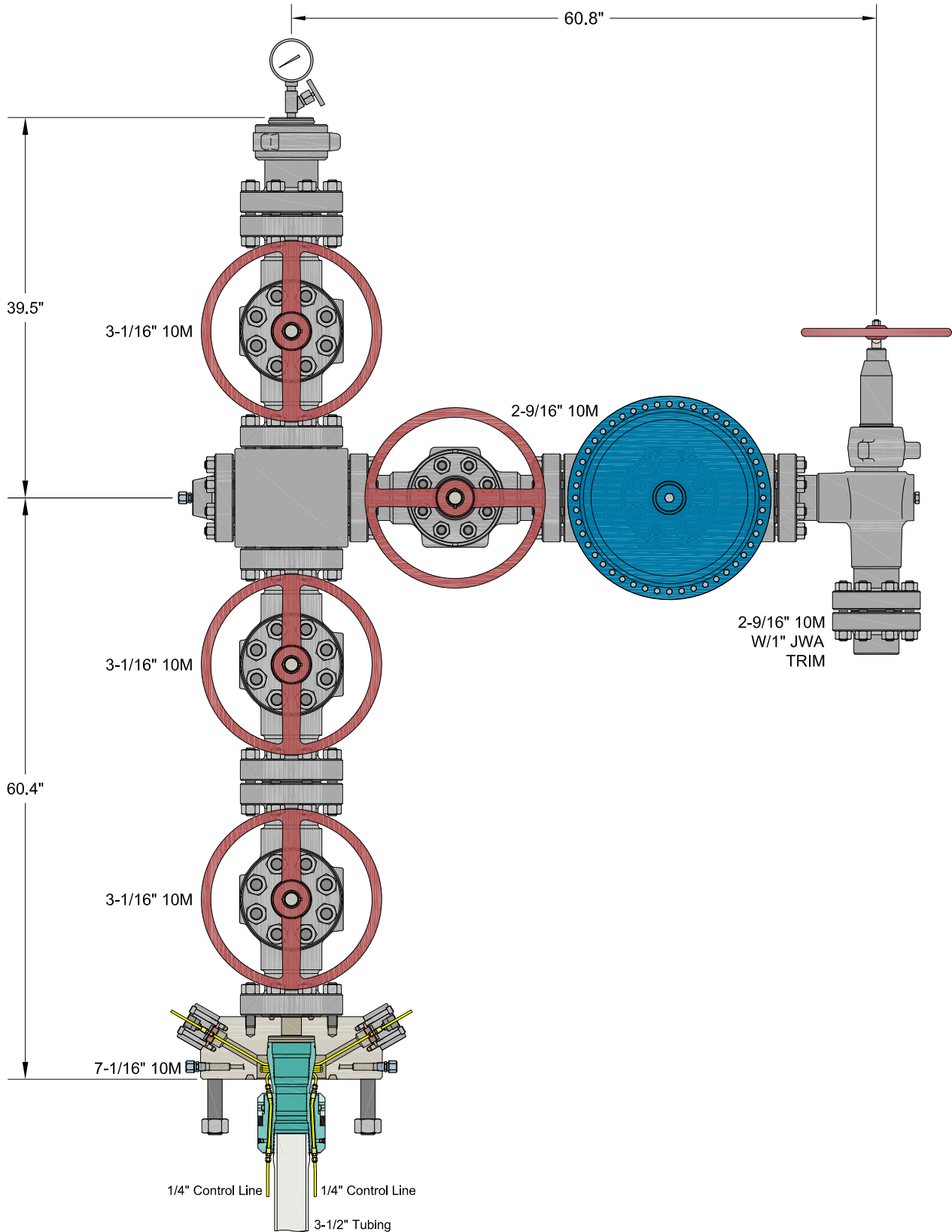
1. In the event wellbore pressure encroaches to the maximum rated pressure of the annular, primary pressure control will be switched to the higher rated components (i.e., switch from annular to pipe rams) – upper pipe rams will be closed, and the annular opened in order to not exceed maximum rated pressures.
- The Brine Emulsion is completely saturated brine fluid that ties diesel into itself to lower the weight of the fluid. The drilling fluid is completely salt saturated.



ALL DIMENSIONS APPROXIMATE

COTERRA ENERGY INC
HOBBS, NM

DRAWN	VJK	07JUL23
APPRV		
DRAWING NO. HBE0000965		



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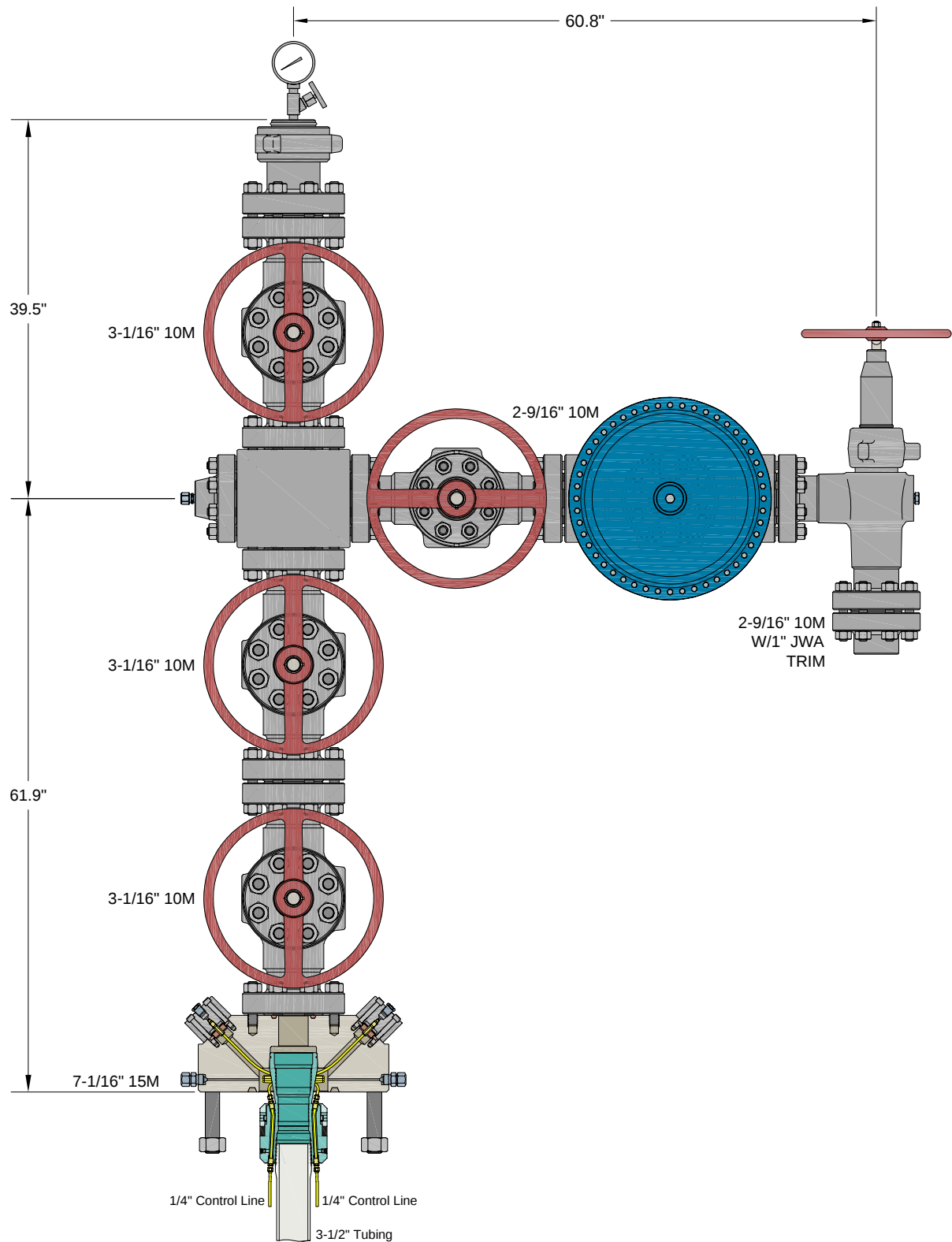
ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

CIMAREX
HOBBS, NM

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

DRAWN	VJK	05SEP23
APPRV		
DRAWING NO.	HBE0001018	



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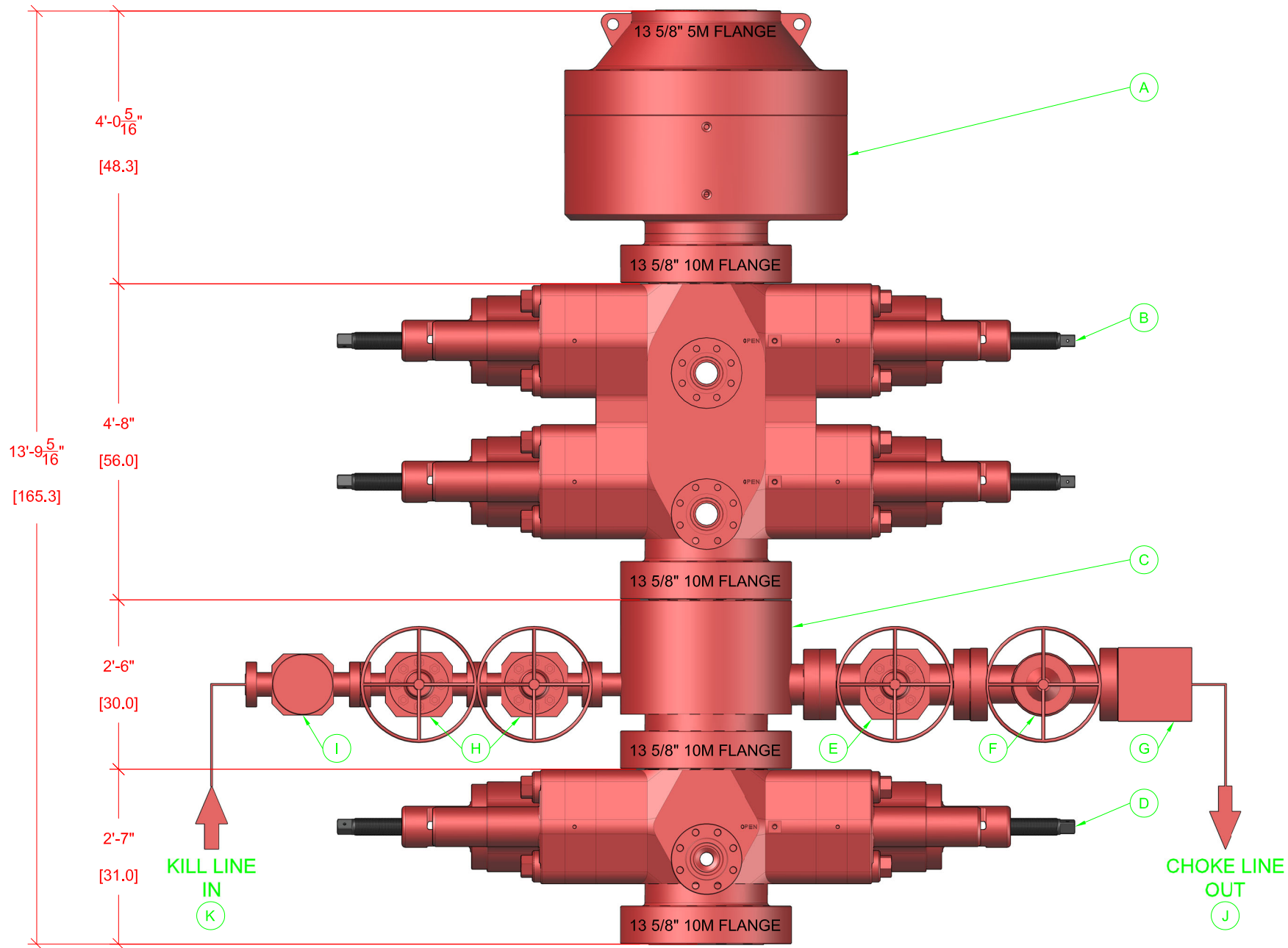
ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

CIMAREX
HOBBS, NM

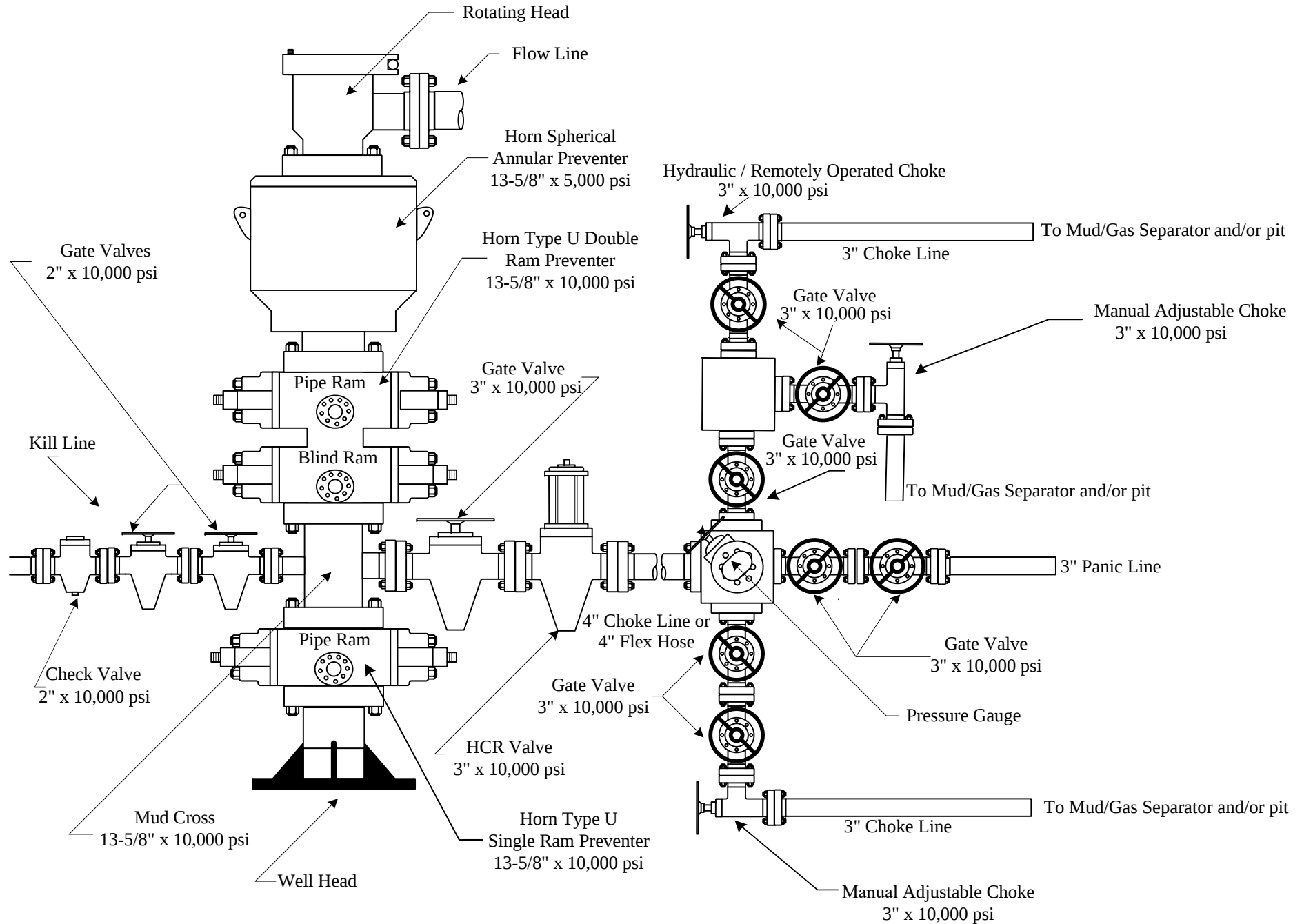
7-1/16" 15M x 3-1/16" x 2-9/16" 10M Production Tree Assembly
With 7-1/16" 15M x 3-1/16" 10M T40-CCL Tubing Head Adapter
And 7-1/16" 3-1/2" T40-CCL Tubing Hanger

DRAWN	VJK	13DEC23
APPRV		
DRAWING NO.	HBE0001018	



BOP EQUIPMENT INFORMATION

DESCRIPTION	MODEL	QTY	ITEM	DESCRIPTION	MODEL	QTY
ANNULAR BOP	13 5/8" 5M	1	G	STUDDED BLOCK	4 1/2" 10M	1
DOUBLE RAM BOP	13 5/8" 10M TYPE-U	1	H	GATE VALE	2 1/2" 10M FC MANUAL	2
MUD CROSS	13 5/8" 10M	1	I	CHECK VALVE	2 1/2" 10M	1
SINGLE RAM BOP	13 5/8" 10M TYPE-U	1	J	CHOKE HOSE	4 1/2" 10M	1
GATE VALVE	4 1/2" 10M FC MANUAL	1	K	KILL HOSE	2 1/2" 10M	1
HCR VALVE	4 1/2" 10M HCR	1	L			



Coterra: H2S Plan



H2S Drilling Operations Plan

Training

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

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

H2S Detection and Alarm Systems

1. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
2. An audio alarm system will be installed on the derrick floor and in the top doghouse

Windsock and/or wind streamers

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

Condition Flags & Signs

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

Coterra: H2S Plan

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

Well Control Equipment

1. See the pressure control section of this submission.

Communication

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

Drillstem Testing

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

Coterra: H2S Plan

H2S Contingency Plan

Emergency Procedures

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

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

Ignition of the Gas Source

1. Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Contacting Authorities

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

Coterra: H2S Plan

Emergency Contacts

Coterra Energy

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

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

Third Party

PERMIAN REGION CONTACT NUMBERS					
CALL 911					
Air Ambulance Services					
	Reeves County Medical - Pecos, TX		432-447-3551		
	Aero Care - Midland, TX		800-627-2376		
	Tri State Care Flight - Artesia, NM		800-800-0900		
	Air Methods - Hobbs, NM		800-242-6199		
Fire / Police / Medical Care					
Sheriff's Office		Fire Departments		Hospital / Medical Care Facilities	
Andrews County	432-523-5545	Andrews	432-523-3111	Permian Regional Med.	432-523-2200
Reagan County	325-884-2929	Big Lake	325-884-3650	Reagan Memorial Hosp.	325-884-2561
Howard County	432-264-2244	Big Springs	432-264-2303	Scenic Mountain Med Ctr	432-263-1211
Terry County	806-637-2212	Brownfield	806-637-6633		
Crane County	432-558-3571	Crane	432-558-2361	Crane Memorial Hosp.	432-558-3555
Val Verde County	830-774-7513	Del Rio	830-774-8648	Val Verde Regional Med.	830-775-8566
		Denver City	806-592-3516	Yoakum County Hospital	806-592-2121
Pecos County	432-336-3521	Ft Stockton	432-336-8525		
Glasscock County	432-354-2361	Garden City			
Winkler County	432-586-3461	Kernit	432-586-2577	Winkler County Memorial	432-586-5864
		McCamey	432-652-8232	McCamey Hospital	432-652-8626
Loving County	432-377-2411	Mentone			
Irion County	325-835-2551	Mertzon			
Ward County	432-943-6703	Monahans	432-943-2211	Ward Memorial Hospital	432-943-2511
Ector County	432-335-3050	Odessa	432-335-4650	Odessa Regional Hosp.	432-582-8340
Crocket County	325-392-2661	Ozona	325-392-2626		
Reeves County	432-445-4901	Pecos	505-757-6511	Reeves County Hospital	432-447-3551
Yoakum County	806-456-2377	Plains	806-456-2288		
Garza County	806-495-3595	Post			
Upton County	432-693-2422	Rankin			
Coke County	915-453-2717	Robert Lee			
		Roscoe	325-766-3931		
Hockley County	806-894-3126	Levelland	806-894-3155	Covenant Health	806-894-4963
Tom Green County	325-655-8111	San Angelo	325-657-4355	San Angelo Comm. Med.	325-949-9511
Gaines County	432-758-9871	Seminole	432-758-3621	Memorial Hospital	432-758-5811
Terrell County	432-345-2525	Sanderson			
Scurry County	325-573-3551	Snyder	325-573-3546	DM Cogdell Memorial	325-573-6374
Sterling County	325-378-4771	Sterling City			
Nolan County	325-235-5471	Sweetwater	325-235-8130	Rolling Plains Memorial	325-235-1701
Culberson County	432-283-2060	Van Horn		Culberson Hospital	432-283-2760
New Mexico					
Lea County	505-396-3611	Knowles	505-392-7469	Lea Reg Med Ctr	575-492-5000
Eddy County	575-887-7551	Carlsbad	575-885-3125	Carlsbad Medical	575-887-4100
		Artesia	575-746-5050	Artesia Hospital	575-748-3333
Roosevelt County	575-356-4408				
Chaves County	575-624-7590				
Ground Ambulance Services					
	Reeves County Medical		Pecos, TX		432-447-3551



COTERRA

Rev0



Borehole:	Well:	Field:	Structure:
Red Hills Unit 20H	Red Hills Unit 20H	NM Lea County (NAD 83)	Coterra - Red Hills Unit Pad lot B

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	HDGM 2025	Dip:	59.567°	Date:	11-Mar-2025	Lat:	N 32 5 36.12	Northing:	398526.86ftUS	Grid Conv:	0.4024°
MagDec:	6.092°	FS:	47115.031nT	Gravity FS:	998.436mgn (9.80665 Based)	Lon:	W 103 34 33.66	Easting:	775861.75ftUS	Scale Fact:	0.99997209
								Slot: Red Hills Unit 20H			
								TVD Ref: RKB (3377.300 ft above MSL)			
								Plan: Coterra Red Hills Unit 20H Rev0 kFc 11Mar25			

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [335°FNL, 2249°FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler	974.00	0.00	74.61	974.00	0.00	0.00	0.00	0.00
A3 Top	1074.00	0.00	74.61	1074.00	0.00	0.00	0.00	0.00
A3 Base	1134.00	0.00	74.61	1134.00	0.00	0.00	0.00	0.00
Salado	1334.00	0.00	74.61	1334.00	0.00	0.00	0.00	0.00
Nudge, Build 2°/100ft	1500.00	0.00	74.61	1500.00	0.00	0.00	0.00	0.00
Hold	2250.16	15.00	74.61	2241.61	-25.15	25.92	94.15	2.00
Drop 2°/100ft	4970.20	15.00	74.61	4868.94	-206.47	212.83	773.03	0.00
Lamar	5016.76	14.07	74.61	4914.00	-209.48	215.94	784.30	2.00
Bell Canyon	5119.41	12.02	74.61	5014.00	-215.45	222.09	806.64	2.00
Hold	5720.36	0.00	74.61	5610.55	-231.62	238.76	867.19	2.00
Cherry Canyon	6508.81	0.00	74.61	6399.00	-231.62	238.76	867.19	0.00
Brushy Canyon	7635.81	0.00	74.61	7526.00	-231.62	238.76	867.19	0.00
Basal Brushy Canyon	8969.81	0.00	74.61	8860.00	-231.62	238.76	867.19	0.00
Bone Spring Lime	9146.81	0.00	74.61	9037.00	-231.62	238.76	867.19	0.00
Leonard	9245.81	0.00	74.61	9136.00	-231.62	238.76	867.19	0.00
Avalon	9488.81	0.00	74.61	9379.00	-231.62	238.76	867.19	0.00
1st BS SS	10090.81	0.00	74.61	9981.00	-231.62	238.76	867.19	0.00
2nd BS SS	10694.81	0.00	74.61	10585.00	-231.62	238.76	867.19	0.00
3rd BS SS	11810.81	0.00	74.61	11701.00	-231.62	238.76	867.19	0.00
Wolfcamp	12226.81	0.00	74.61	12117.00	-231.62	238.76	867.19	0.00
KOP, Build 10°/100ft	12538.36	0.00	74.61	12428.55	-231.62	238.76	867.19	0.00
Wolfcamp B	13280.87	74.25	179.53	12980.00	-185.83	-178.68	870.61	10.00
Build 5°/100ft	13288.36	75.00	179.53	12981.98	-193.04	-185.89	870.67	10.00
Section 33-4 Line Cross, Pool NMNM0005792 exit to NMNM089425 enter	13507.29	90.45	179.53	13021.00	498.56	-491.40	873.18	5.00
NMNM089425 enter	18043.00	90.45	179.53	12986.36	4944.14	-4936.82	909.77	0.00
Red Hills Unit 20H - BHL [100°FSL, 1380°FEL]	18859.09	90.45	179.53	12980.00	5760.21	-5752.87	916.49	0.00
	23222.96	90.45	179.53	12946.00	10123.94	-10116.45	952.41	0.00

Grid North
Tot Corr (M->G 5.689°)
Mag Dec (6.092°)
Grid Conv (0.402°)

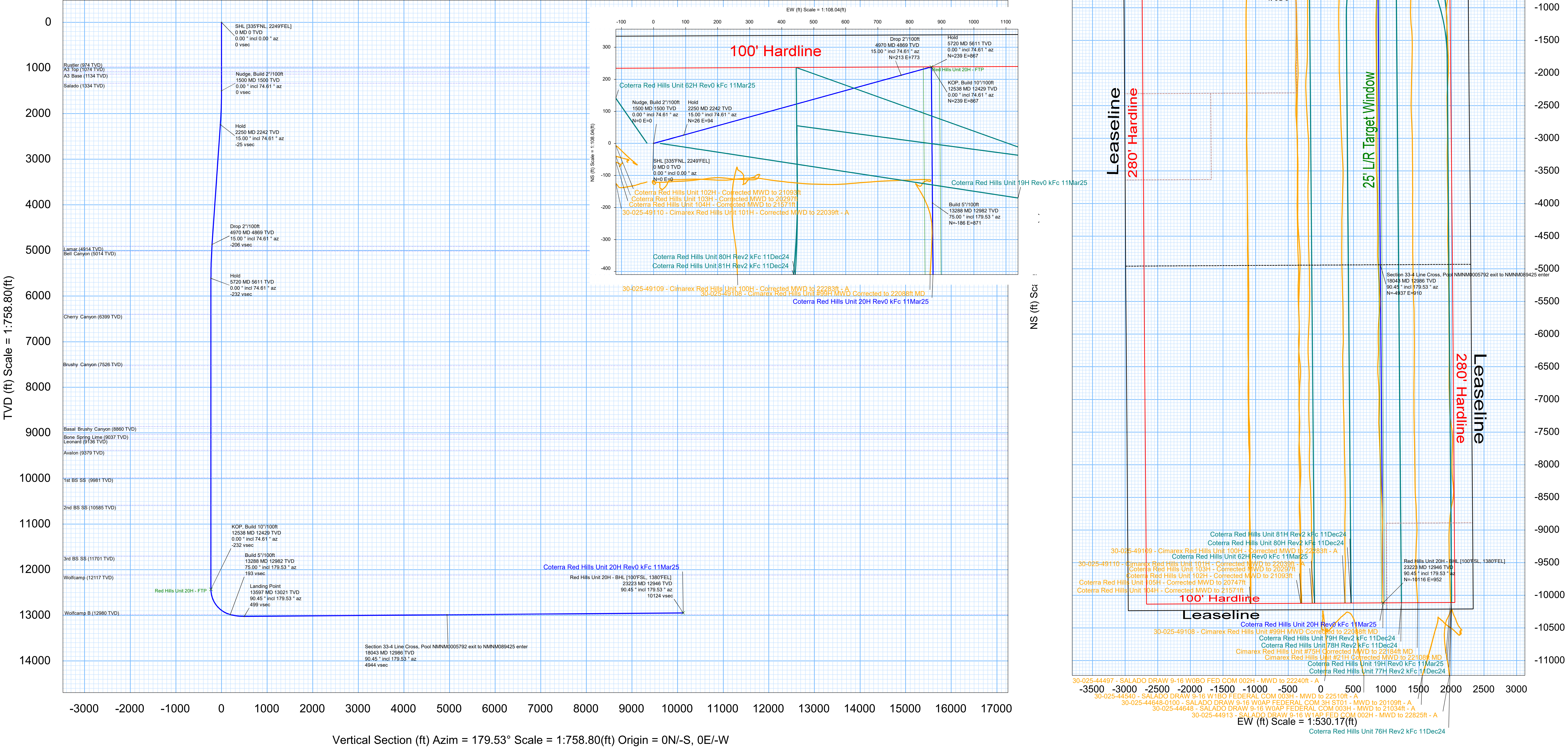
CONTROLLED

Plan ref
Drawing ref
Copy number
Date

Coterra Red Hills Unit 20H Rev0 kFc 11Mar25
of 3
11-Mar-2025

1	Client	
2	Client	
3	Office	
4	Office	

Copy number for





Coterra Red Hills Unit 20H Rev0 kFC 11Mar25 Proposal Geodetic Report

Def Plan

Report Date: March 11, 2025 - 11:28 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure / Slot: Coterra - Red Hills Unit Pad lot B / Red Hills Unit 20H
Well: Red Hills Unit 20H
Borehole: Red Hills Unit 20H
UBH / API#: Unknown / Unknown
Survey Name: Coterra Red Hills Unit 20H Rev0 kFC 11Mar25
Survey Date: March 11, 2025
Tort / AHD / DDI / ERD Ratio: 120.453" / 11255.014 ft / 6.383 / 0.864
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: 32°5'36.11759"N, 103°34'33.65620"W
Location Grid N/E Y/X: N 398526.860 RUS , E 775861.750 RUS
CRS Grid Convergence Angle: 0.402"
Grid Scale Factor: 0.99997209(Applied)
Version / Patch: 2024.5.0.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.529 °(GRID North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3377.300 ft above MSL
Sealed / Ground Elevation: 3354.300 ft above MSL
Magnetic Declination: 6.092"
Total Gravity Field Strength: 998.4363mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47115.031 nT
Magnetic Dip Angle: 59.567"
Declination Date: March 11, 2025
Magnetic Declination Model: HDGM 2025
North Reference: Grid North
Grid Convergence Used: 0.402"
Total Corr Mag North->Grid North: 5.689"
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS ("/100ft)	BR ("/100ft)	TR ("/100ft)	
SHL [335FNL, 2249FEL]	0.00	0.00	0.00	0.00	-3.377.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561				
	100.00	0.00	74.61	100.00	-3.277.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	200.00	0.00	74.61	200.00	-3.177.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	300.00	0.00	74.61	300.00	-3.077.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	400.00	0.00	74.61	400.00	-2.977.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	500.00	0.00	74.61	500.00	-2.877.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	600.00	0.00	74.61	600.00	-2.777.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	700.00	0.00	74.61	700.00	-2.677.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	800.00	0.00	74.61	800.00	-2.577.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	900.00	0.00	74.61	900.00	-2.477.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
Rustler	974.00	0.00	74.61	974.00	-2.403.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
A3 Top	1,000.00	0.00	74.61	1,000.00	-2.377.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	1,074.00	0.00	74.61	1,074.00	-2.303.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	1,100.00	0.00	74.61	1,100.00	-2.277.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
A3 Base	1,134.00	0.00	74.61	1,134.00	-2.243.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	1,200.00	0.00	74.61	1,200.00	-2.177.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
Salado	1,300.00	0.00	74.61	1,300.00	-2.077.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	1,334.00	0.00	74.61	1,334.00	-2.043.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
Nudge, Build 2"/100ft	1,400.00	0.00	74.61	1,400.00	-1.977.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	1,500.00	0.00	74.61	1,500.00	-1.877.30	0.00	0.00	0.00	398,526.86	775,861.75	32.09336600	-103.57601561	0.00	0.00	0.00	
	1,600.00	2.00	74.61	1,599.98	-1.777.32	-0.45	0.46	1.68	398,527.32	775,863.43	32.09336724	-103.57601017	2.00	2.00	0.00	
	1,700.00	4.00	74.61	1,699.84	-1.677.46	-1.80	1.85	6.73	398,528.71	775,868.48	32.09337096	-103.57599385	2.00	2.00	0.00	
	1,800.00	6.00	74.61	1,799.45	-1.577.85	-4.04	4.17	15.13	398,531.03	775,876.88	32.09337715	-103.57599666	2.00	2.00	0.00	
	1,900.00	8.00	74.61	1,898.70	-1.478.60	-7.18	7.40	26.88	398,534.26	775,888.63	32.09338582	-103.57592865	2.00	2.00	0.00	
	2,000.00	10.00	74.61	1,997.47	-1.379.83	-11.21	11.55	41.96	398,538.41	775,903.73	32.09339694	-103.57587986	2.00	2.00	0.00	
	2,100.00	12.00	74.61	2,095.62	-1.281.68	-16.12	16.62	60.36	398,543.48	775,922.10	32.09341051	-103.57582035	2.00	2.00	0.00	
	2,200.00	14.00	74.61	2,193.06	-1.184.24	-21.91	22.59	82.04	398,549.45	775,943.79	32.09342650	-103.57575019	2.00	2.00	0.00	
	2,250.16	15.00	74.61	2,241.61	-1.135.69	-25.15	25.92	94.15	398,552.78	775,955.90	32.09343543	-103.57571102	2.00	2.00	0.00	
	2,300.00	15.00	74.61	2,289.76	-1.087.54	-28.47	29.35	106.59	398,556.21	775,968.34	32.09344460	-103.57567078	0.00	0.00	0.00	
	2,400.00	15.00	74.61	2,386.35	-990.95	-35.14	36.22	131.55	398,563.08	775,993.30	32.09346301	-103.57559003	0.00	0.00	0.00	
	2,500.00	15.00	74.61	2,482.94	-894.36	-41.80	43.09	156.51	398,569.95	776,018.25	32.09348141	-103.57550929	0.00	0.00	0.00	
	2,600.00	15.00	74.61	2,579.53	-797.77	-48.47	49.96	181.47	398,576.82	776,043.21	32.09349982	-103.57542855	0.00	0.00	0.00	
	2,700.00	15.00	74.61	2,676.12	-701.18	-55.14	56.83	206.43	398,583.69	776,068.17	32.09351823	-103.57534781	0.00	0.00	0.00	
	2,800.00	15.00	74.61	2,772.71	-604.59	-61.80	63.71	231.38	398,590.56	776,093.13	32.09353663	-103.57526706	0.00	0.00	0.00	
	2,900.00	15.00	74.61	2,869.30	-508.00	-68.47	70.58	256.34	398,597.44	776,118.09	32.09355504	-103.57518632	0.00	0.00	0.00	
	3,000.00	15.00	74.61	2,965.90	-411.40	-75.13	77.45	281.30	398,604.31	776,143.04	32.09357344	-103.57510558	0.00	0.00	0.00	
	3,100.00	15.00	74.61	3,062.49	-314.81	-81.80	84.32	306.26	398,611.18	776,168.00	32.09359185	-103.57502484	0.00	0.00	0.00	
	Hold	3,200.00	15.00	74.61	3,159.08	-218.22	-88.47	91.19	331.22	398,618.05	776,192.96	32.09361025	-103.57494409	0.00	0.00	0.00
3,300.00		15.00	74.61	3,255.67	-121.63	-95.13	98.06	356.18	398,624.92	776,217.92	32.09362866	-103.57486335	0.00	0.00	0.00	
3,400.00		15.00	74.61	3,352.26	-25.04	-101.80	104.94	381.14	398,631.79	776,242.87	32.09364706	-103.57478261	0.00	0.00	0.00	
3,500.00		15.00	74.61	3,448.85	71.55	-108.47	111.81	406.09	398,638.66	776,267.83	32.09366547	-103.57470186	0.00	0.00	0.00	
3,600.00		15.00	74.61	3,545.44	168.14	-115.13	118.68	431.05	398,645.54	776,292.79	32.09368387	-103.57462112	0.00	0.00	0.00	
3,700.00		15.00	74.61	3,642.03	264.73	-121.80	125.55	456.01	398,652.41	776,317.75	32.09370228	-103.57454038	0.00	0.00	0.00	
3,800.00		15.00	74.61	3,738.63	361.33	-128.46	132.42	480.97	398,659.28	776,342.70	32.09372068	-103.57445964	0.00	0.00	0.00	
3,900.00		15.00	74.61	3,835.22	457.92	-135.13	139.29	505.93	398,666.15	776,367.66	32.09373909	-103.57437899	0.00	0.00	0.00	
4,000.00		15.00	74.61	3,931.81	554.51	-141.80	146.17	530.89	398,673.02	776,392.62	32.09375749	-103.57429815	0.00	0.00	0.00	
4,100.00		15.00	74.61	4,028.40	651.10	-148.46	153.04	555.84	398,679.89	776,417.58	32.09377590	-103.57421741	0.00	0.00	0.00	
4,200.00		15.00	74.61	4,124.99	747.69	-155.13	159.91	580.80	398,686.76	776,442.54	32.09379430	-103.57413666	0.00	0.00	0.00	
4,300.00		15.00	74.61	4,221.58	844.28	-161.80	166.78	605.76	398,693.64	776,467.49	32.09381271	-103.57405592	0.00	0.00	0.00	
4,400.00		15.00	74.61	4,318.17	940.87	-168.46	173.65	630.72	398,700.51	776,492.45	32.09383111	-103.57397518	0.00	0.00	0.00	
4,500.00		15.00	74.61	4,414.76	1,037.46	-175.13	180.52	655.68	398,707.38	776,517.41	32.09384952	-103.57389443	0.00	0.00	0.00	
4,600.00		15.00	74.61	4,511.35	1,134.05	-181.79	187.40	680.64	398,714.25	776,542.37	32.09386792	-103.57381369	0.00	0.00	0.00	
4,700.00		15.00	74.61	4,607.95	1,230.65	-188.46	194.27	705.60	398,721.12	776,567.32	32.09388633	-103.57373295	0.00	0.00	0.00	
4,800.00		15.00	74.61	4,704.54	1,327.24	-195.13	201.14	730.56	398,727.99	776,592.25	32.09390473	-103.57365221	0.00	0.00	0.00	
4,900.00		15.00	74.61	4,801.13	1,423.83	-201.79	208.01	755.51	398,734.86	776,617.24	32.09392313	-103.57357146	0.00	0.00	0.00	
Drop 2"/100ft		4,970.20	15.00	74.61	4,868.94	1,491.64	-206.47	212.83	773.03	398,739.69	776,634.76	32.09393605	-103.57351478	0.00	0.00	0.00
Lamar		5,000.00	14.41	74.61	4,897.76	1,520.46	-208.42	214.84	780.33	398,741.70	776,642.05	32.09394143	-103.57349119	2.00	-2.00	0.00
	5,016.76	14.07	74.61	4,914.00	1,536.70	-209.48	215.94	784.30	398,742.79	776,646.03	32.09394436	-103.57347833	2.00	-2.00	0.00	
Bell Canyon	5,100.00	12.41	74.61	4,995.03	1,617.73	-214.39	221.00	802.68	398,747.85	776,664.41	32.09395792	-103.57341887	2			

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS ("100)	BR ("100)	TR ("100)
Bone Spring Lime	9,100.00	0.00	74.61	8,990.19	5,612.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,146.81	0.00	74.61	9,037.00	5,659.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,200.00	0.00	74.61	9,090.19	5,712.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,245.81	0.00	74.61	9,136.00	5,758.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,300.00	0.00	74.61	9,190.19	5,812.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
Leonard	9,400.00	0.00	74.61	9,290.19	5,912.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,458.81	0.00	74.61	9,379.00	6,001.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,500.00	0.00	74.61	9,390.19	6,012.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,600.00	0.00	74.61	9,490.19	6,112.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,700.00	0.00	74.61	9,590.19	6,212.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
Avalon	9,800.00	0.00	74.61	9,690.19	6,312.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	9,900.00	0.00	74.61	9,790.19	6,412.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,000.00	0.00	74.61	9,890.19	6,512.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,090.81	0.00	74.61	9,981.00	6,603.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,100.00	0.00	74.61	9,990.19	6,612.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
1st BS SS	10,200.00	0.00	74.61	10,090.19	6,712.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,300.00	0.00	74.61	10,190.19	6,812.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,400.00	0.00	74.61	10,290.19	6,912.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,500.00	0.00	74.61	10,390.19	7,012.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,600.00	0.00	74.61	10,490.19	7,112.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
2nd BS SS	10,694.81	0.00	74.61	10,585.00	7,207.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,700.00	0.00	74.61	10,590.19	7,212.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,800.00	0.00	74.61	10,690.19	7,312.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	10,900.00	0.00	74.61	10,790.19	7,412.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,000.00	0.00	74.61	10,890.19	7,512.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,100.00	0.00	74.61	10,990.19	7,612.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,200.00	0.00	74.61	11,090.19	7,712.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,300.00	0.00	74.61	11,190.19	7,812.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,400.00	0.00	74.61	11,290.19	7,912.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,500.00	0.00	74.61	11,390.19	8,012.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,600.00	0.00	74.61	11,490.19	8,112.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,700.00	0.00	74.61	11,590.19	8,212.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,800.00	0.00	74.61	11,690.19	8,312.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,810.81	0.00	74.61	11,701.00	8,323.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	11,900.00	0.00	74.61	11,790.19	8,412.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,000.00	0.00	74.61	11,890.19	8,512.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,100.00	0.00	74.61	11,990.19	8,612.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,200.00	0.00	74.61	12,090.19	8,712.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,226.81	0.00	74.61	12,117.00	8,739.70	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,300.00	0.00	74.61	12,190.19	8,812.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,400.00	0.00	74.61	12,290.19	8,912.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,500.00	0.00	74.61	12,390.19	9,012.89	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,538.36	0.00	74.61	12,428.55	9,051.25	-231.62	238.76	867.19	398,765.61	776,728.91	32.09400548	-103.57321019	0.00	0.00	0.00
	12,600.00	6.16	179.53	12,490.07	9,112.77	-228.31	235.44	867.21	398,762.30	776,728.94	32.09396938	-103.57321017	10.00	10.00	0.00
	12,700.00	16.16	179.53	12,588.06	9,210.76	-208.97	216.11	867.37	398,742.96	776,729.10	32.09394322	-103.57321010	10.00	10.00	0.00
	12,800.00	26.16	179.53	12,681.19	9,303.89	-172.91	180.05	867.67	398,706.91	776,729.39	32.09384411	-103.57320997	10.00	10.00	0.00
	12,900.00	36.16	179.53	12,766.65	9,389.35	-121.23	128.37	868.09	398,655.22	776,729.82	32.09370205	-103.57320977	10.00	10.00	0.00
	13,000.00	46.16	179.53	12,841.84	9,464.54	-55.49	62.63	868.63	398,589.49	776,730.35	32.09352135	-103.57320953	10.00	10.00	0.00
	13,100.00	56.16	179.53	12,904.47	9,527.17	22.31	-15.16	869.27	398,511.70	776,730.99	32.09330751	-103.57320924	10.00	10.00	0.00
	13,200.00	66.16	179.53	12,952.64	9,575.34	64.22	-49.99	869.99	398,424.22	776,731.71	32.09308702	-103.57320891	10.00	10.00	0.00
Wolfcamp	13,280.87	74.25	179.53	12,980.00	9,602.70	185.83	-178.68	870.61	398,348.19	776,732.33	32.09285804	-103.57320863	10.00	10.00	0.00
	13,288.36	75.00	179.53	12,981.98	9,604.68	193.04	-185.89	870.67	398,340.97	776,732.39	32.09283820	-103.57320860	10.00	10.00	0.00
	13,300.00	75.58	179.53	12,984.94	9,607.64	204.31	-197.15	870.76	398,329.71	776,732.49	32.09280725	-103.57320856	5.00		

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
	20,700.00	90.45	179.53	12,965.66	9,588.36	7,601.06	-7,593.65	931.64	390,933.43	776,793.36	32.07247573	-103.57318029	0.00	0.00	0.00
	20,800.00	90.45	179.53	12,964.88	9,587.58	7,701.05	-7,693.65	932.47	390,833.44	776,794.19	32.07220087	-103.57317991	0.00	0.00	0.00
	20,900.00	90.45	179.53	12,964.10	9,586.80	7,801.05	-7,793.64	933.29	390,733.45	776,795.01	32.07192600	-103.57317952	0.00	0.00	0.00
	21,000.00	90.45	179.53	12,963.32	9,586.02	7,901.05	-7,893.63	934.11	390,633.46	776,795.83	32.07165114	-103.57317914	0.00	0.00	0.00
	21,100.00	90.45	179.53	12,962.54	9,585.24	8,001.04	-7,993.63	934.93	390,533.47	776,796.66	32.07137628	-103.57317876	0.00	0.00	0.00
	21,200.00	90.45	179.53	12,961.76	9,584.46	8,101.04	-8,093.62	935.76	390,433.48	776,797.48	32.07110141	-103.57317837	0.00	0.00	0.00
	21,300.00	90.45	179.53	12,960.98	9,583.68	8,201.04	-8,193.62	936.58	390,333.49	776,798.30	32.07082655	-103.57317799	0.00	0.00	0.00
	21,400.00	90.45	179.53	12,960.20	9,582.90	8,301.03	-8,293.61	937.40	390,233.50	776,799.13	32.07055169	-103.57317761	0.00	0.00	0.00
	21,500.00	90.45	179.53	12,959.42	9,582.12	8,401.03	-8,393.60	938.23	390,133.51	776,799.95	32.07027683	-103.57317723	0.00	0.00	0.00
	21,600.00	90.45	179.53	12,958.64	9,581.34	8,501.03	-8,493.60	939.05	390,033.52	776,800.77	32.07000196	-103.57317684	0.00	0.00	0.00
	21,700.00	90.45	179.53	12,957.87	9,580.57	8,601.03	-8,593.59	939.87	389,933.53	776,801.59	32.06972710	-103.57317646	0.00	0.00	0.00
	21,800.00	90.45	179.53	12,957.09	9,579.79	8,701.02	-8,693.58	940.70	389,833.54	776,802.42	32.06945224	-103.57317608	0.00	0.00	0.00
	21,900.00	90.45	179.53	12,956.31	9,579.01	8,801.02	-8,793.58	941.52	389,733.55	776,803.24	32.06917737	-103.57317569	0.00	0.00	0.00
	22,000.00	90.45	179.53	12,955.53	9,578.23	8,901.02	-8,893.57	942.34	389,633.56	776,804.06	32.06890251	-103.57317531	0.00	0.00	0.00
	22,100.00	90.45	179.53	12,954.75	9,577.45	9,001.01	-8,993.56	943.17	389,533.56	776,804.89	32.06862765	-103.57317493	0.00	0.00	0.00
	22,200.00	90.45	179.53	12,953.97	9,576.67	9,101.01	-9,093.56	943.99	389,433.57	776,805.71	32.06835278	-103.57317454	0.00	0.00	0.00
	22,300.00	90.45	179.53	12,953.19	9,575.89	9,201.01	-9,193.55	944.81	389,333.58	776,806.53	32.06807792	-103.57317416	0.00	0.00	0.00
	22,400.00	90.45	179.53	12,952.41	9,575.11	9,301.00	-9,293.54	945.63	389,233.59	776,807.36	32.06780306	-103.57317378	0.00	0.00	0.00
	22,500.00	90.45	179.53	12,951.63	9,574.33	9,401.00	-9,393.54	946.46	389,133.60	776,808.18	32.06752819	-103.57317339	0.00	0.00	0.00
	22,600.00	90.45	179.53	12,950.85	9,573.55	9,501.00	-9,493.53	947.28	389,033.61	776,809.00	32.06725333	-103.57317301	0.00	0.00	0.00
	22,700.00	90.45	179.53	12,950.07	9,572.77	9,601.00	-9,593.53	948.10	388,933.62	776,809.83	32.06697847	-103.57317263	0.00	0.00	0.00
	22,800.00	90.45	179.53	12,949.30	9,572.00	9,700.99	-9,693.52	948.93	388,833.63	776,810.65	32.06670360	-103.57317224	0.00	0.00	0.00
	22,900.00	90.45	179.53	12,948.52	9,571.22	9,800.99	-9,793.51	949.75	388,733.64	776,811.47	32.06642874	-103.57317186	0.00	0.00	0.00
	23,000.00	90.45	179.53	12,947.74	9,570.44	9,900.99	-9,893.51	950.57	388,633.65	776,812.29	32.06615388	-103.57317148	0.00	0.00	0.00
	23,100.00	90.45	179.53	12,946.96	9,569.66	10,000.98	-9,993.50	951.40	388,533.66	776,813.12	32.06587901	-103.57317109	0.00	0.00	0.00
	23,200.00	90.45	179.53	12,946.18	9,568.88	10,100.98	-10,093.49	952.22	388,433.67	776,813.94	32.06560415	-103.57317071	0.00	0.00	0.00
Red Hills Unit 20H - BHL 1100'FS	23,222.96	90.45	179.53	12,946.00	9,568.70	10,123.94	-10,116.45	952.41	388,410.71	776,814.13	32.06554104	-103.57317062	0.00	0.00	0.00

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Code	Vendor / Tool	Borehole / Survey
	1	0.000	12,500.000	1/100.000 - 12.25 – 8.75 – 6 '5 – 9.625 – 7 – 6				A001Mb_MWD		Red Hills Unit 20H / Coterra Red Hills Unit 20H Ren
	1	12,500.000	23,222.961	1/100.000	6	6		A008Mb_MWD+IFR1+MS		Red Hills Unit 20H / Coterra Red Hills Unit 20H Ren

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
1,300.200	17.500	13.375	
4,895.200	12.250	9.625	
11,483.200	8.750	7.000	
23,222.961	6.000		



Coterra Red Hills Unit 20H Rev0 kFc 11Mar25 Proposal Geodetic Report

Def Plan

Report Date:	March 11, 2025 - 11:26 PM (UTC 0)	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	COTERRA	Vertical Section Azimuth:	179.529 °(GRID North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Coterra - Red Hills Unit Pad lot B / Red Hills Unit 20H	TVD Reference Datum:	RKB
Well:	Red Hills Unit 20H	TVD Reference Elevation:	3377.300 ft above MSL
Borehole:	Red Hills Unit 20H	Seabed / Ground Elevation:	3354.300 ft above MSL
UBHI / API#:	Unknown / Unknown	Magnetic Declination:	6.092°
Survey Name:	Coterra Red Hills Unit 20H Rev0 kFc 11Mar25	Total Gravity Field Strength:	998.4363mgn (9.80665 Based)
Survey Date:	March 11, 2025	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	120.453 ° / 11255.014 ft / 6.383 / 0.864	Total Magnetic Field Strength:	47115.031 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.567°
Location Lat / Long:	32°5'36.11759"N , 103°34'33.65620"W	Declination Date:	March 11, 2025
Location Grid NIE YJK:	N 398526.860 RUS , E 775861.750 RUS	Magnetic Declination Model:	HCOM 2025
CRS Grid Convergence Angle:	0.402°	North Reference:	Grid North
Grid Scale Factor:	0.99997209(Applied)	Grid Convergence Used:	0.402°
Version / Patch:	2024.5.0.1	Total Corr Mag North->Grid North:	5.689°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [335FNL, 2248FEL]	0.00	0.00	0.00	0.00	-3.377.30	0.00	0.00	0.00	398.526.86	775.861.75	32.09336600	-103.57601561			
Nudge, Build 2"/100ft	1,500.00	0.00	74.61	1,500.00	-1,877.30	0.00	0.00	0.00	398.526.86	775.861.75	32.09336600	-103.57601561	0.00	0.00	0.00
Hold	2,250.16	15.00	74.61	2,241.61	-1,135.69	-25.15	25.92	94.15	398.552.78	775.955.90	32.09343543	-103.57571102	2.00	2.00	0.00
Drop 2"/100ft	4,970.20	15.00	74.61	4,868.94	1,491.64	-206.47	212.83	773.03	398.739.69	776.634.76	32.09393605	-103.57351478	0.00	0.00	0.00
Hold	5,720.36	0.00	74.61	5,610.55	2,233.25	-231.62	238.76	867.19	398.765.61	776.728.91	32.09400548	-103.57321019	2.00	-2.00	0.00
KOP, Build 10"/100ft	12,538.36	0.00	74.61	12,428.55	9,051.25	-231.62	238.76	867.19	398.765.61	776.728.91	32.09400548	-103.57321019	0.00	0.00	0.00
Build 5"/100ft	13,288.36	75.00	179.53	12,981.98	9,604.68	193.04	-185.69	870.67	398.340.97	776.732.39	32.09263820	-103.57320860	10.00	10.00	0.00
Landing Point	13,597.29	90.45	179.53	13,021.00	9,643.70	498.56	-491.40	873.18	398.035.48	776.734.90	32.09199844	-103.57320745	5.00	5.00	0.00
Red Hills Unit 20H - BHL [100FSL, 1380FEL]	23,222.96	90.45	179.53	12,946.00	9,568.70	10,123.94	-10,116.45	952.41	388,410.71	776,814.13	32.06554104	-103.57317062	0.00	0.00	0.00

Survey Type: Def Plan

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

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Code	Vendor / Tool	Borehole / Survey
	1	0.000	12,500.000	1/100.000 - 12.25 - 8.75 - 6 '5 - 9.625 - 7 - 6				A001Mb_MWD		Red Hills Unit 20H / Coterra Red Hills Unit 20H Rer
	1	12,500.000	23,222.961	1/100.000	6	6		A008Mb_MWD+IFR1+MS		Red Hills Unit 20H / Coterra Red Hills Unit 20H Rer

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
1,300.200	17.500	13.375	
4,895.200	12.250	9.625	
11,483.200	8.750	7.000	
23,222.961	6.000		



Coterra Red Hills Unit 20H Rev0 kFc 11Mar25 Anti-Collision Summary Report

Analysis Date-24hr Time: March 11, 2025 - 11:28 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure: Coterra - Red Hills Unit Pad lot B
Slot: Red Hills Unit 20H
Well: Red Hills Unit 20H
Borehole: Red Hills Unit 20H
Scan MD Range: 0.00ft ~ 23222.96ft

Analysis Method: 3D Least Distance
Reference Trajectory: Coterra Red Hills Unit 20H Rev0 kFc 11Mar25 (Def Plan)
Depth Interval: Every 10.00 Measured Depth (ft)
Rule Set: NAL Procedure: D&M AntiCollision Standard S002
Min Pts: Absolute minima indicated.
Engine Version: 2024.5.0.1
Database \ Project: Red Hills Unit 20H-COTERRA

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

Offset Trajectories Summary

Offset Selection Criteria

Bounding box scan: minimum Ct-Ct separation <= 2000ft
 Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans
 Selection filters:
 - 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

28 out of 36 are selected

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	

Results highlighted in red: Sep-Factor <= 1.5

Result highlighted in boxed, red and bold: all local minima indicated.

30-025-08391 - ANNIE R BASS-FED 1 - Blind to 5081ft - P (DefinitiveSurvey) - Fail Major

1894.32	32.81	1892.34	1861.51	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
1894.22	32.81	1892.22	1861.41	126983.01	MAS = 10.00 (m)	10.00	10.00					MinPt-SF
1894.17	32.81	1892.18	1861.36	211135.22	MAS = 10.00 (m)	20.00	20.00					MinPt-EOU
1894.17	32.81	1892.18	1861.36	607275.72	MAS = 10.00 (m)	23.00	23.00					WRP
1894.16	587.86	1501.60	1306.30	4.84	OSF1.50	410.00	410.00	OSF<=5.00				Enter Alert
1894.16	1895.47	629.86	-1.31	1.50	OSF1.50	1040.00	1040.00		OSF<=1.50			Enter Minor
1894.16	2850.01	-6.43	-955.85	1.00	OSF1.50	1500.00	1500.00			OSF<=1.00		Enter Major
1101.44	10331.67	-5786.88	-9230.23	0.16	OSF1.50	5230.00	5122.58					MinPt-ADP
1100.18	10329.80	-5786.90	-9229.63	0.16	OSF1.50	5240.00	5132.44					MinPt-EOU
1095.66	10307.73	-5776.70	-9212.08	0.16	OSF1.50	5290.00	5181.81					MinPt-SF
1094.16	10264.68	-5749.49	-9170.51	0.16	OSF1.50	5339.58	5230.89					MinPt-CtCt
2703.57	4072.35	-11.87	-1368.78	1.00	OSF1.50	7700.00	7590.19				OSF>1.00	Exit Major
3310.91	3325.81	1093.17	-14.90	1.49	OSF1.50	8350.00	8240.19		OSF>1.50			Exit Minor
6059.25	1819.30	4845.84	4239.95	5.00	OSF1.50	11180.00	11070.19	OSF>5.00				Exit Alert
8144.40	2446.13	6513.15	5698.27	5.00	OSF1.50	13880.00	13018.79	OSF<=5.00				Enter Alert
9340.96	5535.61	5650.05	3805.35	2.53	OSF1.50	17050.00	12994.10					MinPt-EOU
10124.99	6493.07	5795.78	3631.92	2.34	OSF1.50	18420.00	12983.42					MinPt-ADP
11170.40	7339.16	6277.12	3831.24	2.28	OSF1.50	20000.00	12971.11					MinPt-SF
13626.05	8453.44	7989.92	5172.61	2.42	OSF1.50	23222.96	12946.00					TD

Coterra Red Hills Unit 62H Rev0 kFc 11Mar25 (DefinitivePlan) - Fail Minor

20.00	16.26	18.71	3.74	N/A	MAS = 4.96 (m)	0.00	0.00	CtCt<=15.00m				Enter Alert
20.00	16.26	18.71	3.74	26408.38	MAS = 4.96 (m)	23.00	23.00					WRP
19.76		6.40	0.25	1.52	OSF1.50	1290.00	1290.00					MinPts
20.00	20.05	6.30	-0.05	1.50	OSF1.50	1330.00	1330.00	OSF<=1.50				Enter Minor
20.00	22.61	4.60	-2.61	1.32	OSF1.50	1500.00	1500.00					MinPt-CtCt
20.15	23.06	4.45	-2.90	1.30	OSF1.50	1530.00	1530.00					MinPt-EOU
20.27	23.21	4.47	-2.94	1.30	OSF1.50	1540.00	1540.00					MinPts
24.90	25.13	7.82	-0.23	1.49	OSF1.50	1670.00	1669.90		OSF>1.50			Exit Minor
106.96	33.10	84.57	73.87	4.95	OSF1.50	2210.00	2202.75	OSF>5.00				Exit Alert
1049.85	315.90	838.93	733.96	5.00	OSF1.50	20770.00	12965.11	OSF<=5.00				Enter Alert
1049.85	381.79	794.99	668.06	4.13	OSF1.50	23210.00	12946.10					MinPt-CtCt
1049.85	382.11	794.79	667.74	4.13	OSF1.50	23222.96	12946.00					MinPts

Coterra Red Hills Unit 19H Rev0 kFc 11Mar25 (DefinitivePlan) - Warning Alert

20.00	16.26	18.72	3.74	N/A	MAS = 4.96 (m)	0.00	0.00	CtCt<=15.00m				Enter Alert
20.00	16.26	18.71	3.74	N/A	MAS = 4.96 (m)	23.00	23.00					WRP
20.00	16.26	13.32	3.74	3.47	MAS = 4.96 (m)	600.00	600.00					MinPts
20.15	16.26	13.17	3.89	3.31	MAS = 4.96 (m)	630.00	630.00					MinPt-EOU
21.38	16.26	13.81	5.12	3.20	MAS = 4.96 (m)	690.00	690.00					MinPt-SF
48.98	16.26	38.10	32.72	4.97	MAS = 4.96 (m)	1030.00	1030.00	OSF>5.00				Exit Alert
408.71	92.05	347.02	316.66	6.72	OSF1.50	5010.00	4907.45					MinPt-SF
766.52	188.19	640.73	578.33	6.13	OSF1.50	13430.00	13010.11					MinPt-CtCt
766.52	188.28	640.67	578.24	6.13	OSF1.50	13440.00	13011.44					MinPt-EOU
766.59	188.37	640.68	578.22	6.13	OSF1.50	13450.00	13012.69					MinPt-ADP
767.94	188.88	641.69	579.06	6.12	OSF1.50	13500.00	13017.63					MinPt-SF
1049.91	315.90	838.98	734.01	5.00	OSF1.50	20960.00	12963.63	OSF<=5.00				Enter Alert
1049.86	376.62	798.45	673.24	4.19	OSF1.50	23222.96	12946.00					MinPts

Coterra Red Hills Unit 80H Rev2 kFc 11Dec24 (DefinitivePlan) - Warning Alert

1241.27	32.81	1240.09	1208.46	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
1241.22	32.81	1240.04	1208.41	556970.98	MAS = 10.00 (m)	10.00	10.00					MinPts
1241.22	32.81	1240.04	1208.41	N/A	MAS = 10.00 (m)	23.00	23.00					WRP
1241.22	32.81	1229.59	1208.41	118.65	MAS = 10.00 (m)	1110.00	1110.00					MinPt-EOU
228.32	70.34	181.10	157.98	4.92	OSF1.50	4530.00	4443.74	OSF<=5.00				Enter Alert
106.38	87.10	47.98	19.28	1.84	OSF1.50	5050.47	4946.75					MinPt-CtCt
106.43	87.22	47.96	19.21	1.83	OSF1.50	5060.00	4956.02					MinPts
336.94	101.86	268.70	235.08	5.00	OSF1.50	6800.00	6690.19	OSF>5.00				Exit Alert
421.89	127.31	336.69	294.58	5.00	OSF1.50	8450.00	8340.19	OSF<=5.00				Enter Alert
421.89	163.78	312.37	258.11	3.88	OSF1.50	10970.00	10860.19					MinPt-CtCt
422.05	164.63	311.97	257.42	3.86	OSF1.50	11050.00	10940.19					MinPt-EOU
422.11	164.73	311.97	257.39	3.86	OSF1.50	11060.00	10950.19					MinPt-ADP
422.76	165.10	312.36	257.66	3.85	OSF1.50	11110.00	11000.19					MinPt-SF
519.10	158.11	413.36	360.98	4.95	OSF1.50	11590.00	11480.19	OSF>5.00				Exit Alert

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
1667.08	120.67	1586.38	1546.52	20.90		OSF 1.50	13620.00	13020.82				MinPt-EQU
1667.18	120.67	1586.40	1546.51	20.88		OSF 1.50	13630.00	13020.74				MinPt-ADP
1624.25	357.55	1385.56	1266.71	6.83		OSF 1.50	23222.96	12946.00				MinPts
30-025-49109 - Cimarex Red Hills Unit 100H - Corrected MWD to 22283ft - A (DefinitiveSurvey) - Warning Alert												
120.00	32.81	118.82	87.19	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
119.99	32.81	118.81	87.18	491630.61		MAS = 10.00 (m)	10.00	10.00				MinPts
119.99	32.81	118.81	87.18	78447.27		MAS = 10.00 (m)	23.00	23.00				WRP
120.12	32.81	116.24	87.31	44.12		MAS = 10.00 (m)	340.00	340.00				MinPts
115.54	32.81	102.38	82.74	9.41		MAS = 10.00 (m)	1440.96	1440.96				MinPts
115.61	32.81	102.30	82.80	9.30		MAS = 10.00 (m)	1460.00	1460.00				MinPt-EQU
133.84	32.81	117.42	101.03	8.61		MAS = 10.00 (m)	1860.00	1859.05				MinPt-SF
450.02	53.47	414.05	396.55	12.83		OSF 1.50	3900.00	3835.22				MinPt-SF
631.94	94.82	568.40	537.12	10.09		OSF 1.50	6740.00	6630.19				MinPt-CiCt
633.78	98.16	568.01	535.62	9.77		OSF 1.50	6990.00	6880.19				MinPt-EQU
635.35	100.04	568.33	535.31	9.61		OSF 1.50	7130.00	7020.19				MinPt-ADP
676.44	155.89	572.18	520.54	6.54		OSF 1.50	11030.00	10920.19				MinPt-CiCt
677.00	157.21	571.87	519.79	6.49		OSF 1.50	11130.00	11020.19				MinPt-EQU
678.41	159.66	571.64	518.75	6.40		OSF 1.50	11300.00	11190.19				MinPt-EQU
679.44	160.90	571.85	518.54	6.36		OSF 1.50	11390.00	11280.19				MinPt-ADP
682.29	169.32	569.08	512.97	6.07		OSF 1.50	11960.00	11850.19				MinPt-CiCt
682.37	169.51	569.04	512.86	6.06		OSF 1.50	11980.00	11870.19				MinPts
682.62	169.66	569.19	512.96	6.06		OSF 1.50	12000.00	11890.19				MinPt-SF
847.37	162.46	738.73	684.90	7.86		OSF 1.50	12760.00	12644.71				MinPt-SF
790.54	150.92	689.60	639.63	7.90		OSF 1.50	13960.00	13018.17				MinPt-CiCt
790.58	151.01	689.58	639.57	7.89		OSF 1.50	13970.00	13018.09				MinPt-EQU
790.66	151.10	689.60	639.56	7.89		OSF 1.50	13980.00	13018.01				MinPt-ADP
793.03	151.97	691.39	641.06	7.87		OSF 1.50	14070.00	13017.31				MinPt-SF
795.41	153.11	693.01	642.30	7.83		OSF 1.50	14240.00	13015.99				MinPt-CiCt
795.55	153.54	692.87	642.01	7.81		OSF 1.50	14290.00	13015.60				MinPt-EQU
795.70	153.71	692.90	641.99	7.81		OSF 1.50	14310.00	13015.44				MinPt-ADP
790.21	156.60	685.48	633.61	7.61		OSF 1.50	14650.00	13012.79				MinPt-CiCt
790.32	156.93	685.38	633.39	7.59		OSF 1.50	14680.00	13012.56				MinPt-EQU
790.51	157.15	685.41	633.36	7.58		OSF 1.50	14700.00	13012.40				MinPt-ADP
790.23	158.62	684.15	631.61	7.51		OSF 1.50	14840.00	13011.31				MinPt-CiCt
790.38	159.12	683.97	631.26	7.49		OSF 1.50	14880.00	13011.00				MinPt-EQU
791.26	160.10	684.20	631.16	7.45		OSF 1.50	14960.00	13010.38				MinPt-ADP
746.10	185.44	622.15	560.66	6.06		OSF 1.50	16630.00	12997.37				MinPt-CiCt
746.37	186.11	621.97	560.26	6.04		OSF 1.50	16660.00	12997.13				MinPt-EQU
746.55	186.33	622.00	560.22	6.03		OSF 1.50	16670.00	12997.06				MinPt-ADP
754.00	192.27	625.49	561.73	5.90		OSF 1.50	16950.00	12994.87				MinPt-ADP
759.73	197.62	627.66	562.11	5.79		OSF 1.50	17190.00	12993.00				MinPt-ADP
763.71	206.96	625.41	556.76	5.55		OSF 1.50	17600.00	12989.81				MinPt-CiCt
754.78	227.15	603.02	527.63	5.00		OSF 1.50	18460.00	12983.11	OSF<=5.00			Enter Alert
750.75	232.89	595.16	517.86	4.85		OSF 1.50	18690.00	12981.32				MinPt-CiCt
749.53	243.52	586.86	506.01	4.63		OSF 1.50	19110.00	12978.05				MinPt-CiCt
750.56	247.74	585.07	502.82	4.56		OSF 1.50	19270.00	12976.80				MinPt-EQU
750.80	248.02	585.12	502.78	4.55		OSF 1.50	19280.00	12976.72				MinPt-ADP
755.46	250.40	588.20	505.06	4.54		OSF 1.50	19370.00	12976.02				MinPt-SF
734.08	297.22	535.60	436.86	3.71		OSF 1.50	21100.00	12962.54				MinPt-CiCt
731.53	304.45	528.23	427.08	3.61		OSF 1.50	21360.00	12960.51				MinPt-CiCt
729.46	314.74	519.30	414.72	3.48		OSF 1.50	21720.00	12957.71				MinPt-CiCt
729.93	316.24	518.78	413.69	3.47		OSF 1.50	21770.00	12957.32				MinPt-EQU
730.41	316.82	518.67	413.59	3.46		OSF 1.50	21790.00	12957.16				MinPt-ADP
736.65	324.02	520.30	412.62	3.42		OSF 1.50	22040.00	12955.22				MinPt-CiCt
731.36	340.50	504.03	390.86	3.23		OSF 1.50	22610.00	12950.78				MinPt-CiCt
731.72	341.71	503.59	390.01	3.22		OSF 1.50	22650.00	12950.46				MinPt-EQU
731.96	342.00	503.63	389.96	3.22		OSF 1.50	22660.00	12950.39				MinPt-ADP
737.00	356.84	498.78	380.16	3.10		OSF 1.50	23160.00	12946.49				MinPt-CiCt
737.71	358.73	498.23	378.98	3.09		OSF 1.50	23222.96	12946.00				MinPts
30-025-49108 - Cimarex Red Hills Unit 99H - Corrected MWD to 22088ft - A (DefinitiveSurvey) - Warning Alert												
121.66	32.81	120.49	88.86	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
121.64	32.81	120.46	88.83	N/A		MAS = 10.00 (m)	2.50	2.50				MinPts
121.66	32.81	120.47	88.85	10201.90		MAS = 10.00 (m)	23.00	23.00				WRP
121.77	32.81	120.46	88.96	879.70		MAS = 10.00 (m)	50.00	50.00				MinPt-EQU
140.81	32.81	124.74	108.00	9.27		MAS = 10.00 (m)	1820.00	1819.33				MinPts
141.07	32.81	124.49	108.26	8.99		MAS = 10.00 (m)	1880.00	1878.89				MinPt-EQU
151.25	32.81	132.29	118.44	8.36		MAS = 10.00 (m)	2150.00	2144.44				MinPt-SF
286.91	42.92	257.97	243.99	10.23		OSF 1.50	3180.00	3139.76				MinPt-SF
477.82	67.19	432.70	410.63	10.80		OSF 1.50	4710.00	4617.61				MinPt-SF
368.66	111.29	294.14	257.37	5.00		OSF 1.50	7400.00	7290.19	OSF<=5.00			Enter Alert
351.98	123.57	269.28	228.41	4.29		OSF 1.50	8200.00	8090.19				MinPt-CiCt
355.08	132.69	266.29	222.39	4.03		OSF 1.50	8870.00	8760.19				MinPt-EQU
357.24	140.29	263.39	216.96	3.84		OSF 1.50	9430.00	9320.19				MinPt-CiCt
355.85	147.14	257.43	208.71	3.64		OSF 1.50	9940.00	9830.19				MinPt-CiCt
357.41	151.28	256.23	206.13	3.56		OSF 1.50	10250.00	10140.19				MinPt-EQU
357.94	151.93	256.32	206.01	3.55		OSF 1.50	10300.00	10190.19				MinPt-ADP
366.90	172.79	251.38	194.11	3.19		OSF 1.50	11820.00	11710.19				MinPts
366.97	172.82	251.42	194.14	3.19		OSF 1.50	11830.00	11720.19				MinPt-SF
529.89	160.20	422.76	369.69	4.98		OSF 1.50	12380.00	12270.19	OSF>5.00			Exit Alert
763.49	122.60	681.43	640.89	9.40		OSF 1.50	13550.00	13020.39				MinPt-SF
697.73	127.87	612.15	569.86	8.24		OSF 1.50	14860.00	13011.16				MinPt-CiCt
698.73	133.17	609.62	565.56	7.92		OSF 1.50	15230.00	13008.28				MinPt-EQU
699.18	133.69	609.73	565.49	7.89		OSF 1.50	15260.00	13008.04				MinPt-ADP
699.93	136.57	608.55	563.36	7.73		OSF 1.50	15450.00	13006.56				MinPt-CiCt
697.51	148.26	598.35	549.25	7.09		OSF 1.50	16090.00	13001.57				MinPt-CiCt
695.56	156.19	591.11	539.37	6.71		OSF 1.50	16470.00	12998.61				MinPt-CiCt
671.32	202.29	536.13	469.03	4.99		OSF 1.50	18340.00	12984.04	OSF<=5.00			Enter Alert
671.19	203.70	535.06	467.49	4.96		OSF 1.50	18390.00	12983.65				MinPt-CiCt
668.14	222.75	519.31	445.39	4.51		OSF 1.50	19090.00	12978.20				MinPt-CiCt

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
668.89	224.90	518.63	444.00	4.47		OSF1.50	19160.00	12977.66				MinPt-EOU
663.30	241.14	502.21	422.16	4.14		OSF1.50	19740.00	12973.14				MinPt-CiCt
664.79	246.02	500.45	418.77	4.06		OSF1.50	19900.00	12971.89				MinPt-EOU
651.64	283.33	462.43	368.31	3.46		OSF1.50	21170.00	12962.00				MinPt-CiCt
650.08	294.54	453.39	355.54	3.32		OSF1.50	21540.00	12959.11				MinPt-CiCt
649.07	313.71	439.61	335.37	3.11		OSF1.50	22170.00	12954.20				MinPt-CiCt
655.11	346.02	424.10	309.09	2.84		OSF1.50	23222.96	12946.00				MinPts
Coterra Red Hills Unit 81H Rev2 kFc 11Dec24 (DefinitivePlan) - Warning Alert												
1221.30	32.81	1220.01	1188.49	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
1221.25	32.81	1219.96	1188.44	628990.00		MAS = 10.00 (m)	10.00	10.00				MinPts
1221.25	32.81	1219.96	1188.44	N/A		MAS = 10.00 (m)	23.00	23.00				WRP
1221.25	32.81	1209.51	1188.44	116.72		MAS = 10.00 (m)	1110.00	1110.00				MinPt-EOU
1221.25	32.81	1207.86	1188.44	99.55		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
235.77	72.41	187.17	163.37	4.93		OSF1.50	4430.00	4347.15	OSF<=5.00			Enter Alert
186.45	82.76	130.94	103.68	3.40		OSF1.50	4784.44	4689.51				MinPt-CiCt
186.55	83.04	130.86	103.51	3.39		OSF1.50	4800.00	4704.54				MinPts
187.01	83.37	131.10	103.64	3.39		OSF1.50	4820.00	4723.86				MinPt-SF
283.92	86.00	226.26	197.93	4.99		OSF1.50	5390.00	5280.92	OSF>5.00			Exit Alert
458.29	138.22	365.82	320.07	5.00		OSF1.50	9200.00	9090.19	OSF<=5.00			Enter Alert
458.34	153.75	355.51	304.59	4.49		OSF1.50	10280.00	10170.19				MinPts
458.58	153.88	355.67	304.71	4.49		OSF1.50	10300.00	10190.19				MinPt-SF
506.68	153.33	404.14	353.35	4.98		OSF1.50	10670.00	10560.19	OSF>5.00			Exit Alert
2314.11	114.78	2237.26	2199.33	30.49		OSF1.50	13780.00	13019.57				MinPt-CiCt
2314.19	114.96	2237.22	2199.23	30.44		OSF1.50	13800.00	13019.42				MinPt-EOU
2314.27	115.05	2237.24	2199.22	30.42		OSF1.50	13810.00	13019.34				MinPt-ADP
2252.72	352.61	2017.32	1900.11	9.61		OSF1.50	23222.96	12946.00				MinPts
Coterra Cascade 28 Federal 404H - Corrected MWD to 17214ft (DefinitiveSurvey) - Warning Alert												
5407.57	32.81	5406.39	5374.76	#####		MAS = 10.00 (m)	0.00	0.00				MinPts
5407.58	32.81	5406.35	5374.77	105501.14		MAS = 10.00 (m)	23.00	23.00				WRP
5402.45	32.81	5389.26	5369.65	442.25		MAS = 10.00 (m)	1310.00	1310.00				MinPts
5402.84	32.81	5388.87	5370.03	415.98		MAS = 10.00 (m)	1410.00	1410.00				MinPt-EOU
5254.68	92.48	5192.69	5162.19	86.13		OSF1.50	5570.00	5460.26				MinPt-CiCt
5255.18	94.32	5191.97	5160.86	84.44		OSF1.50	5700.00	5590.19				MinPt-EOU
5261.68	101.73	5193.54	5159.96	78.33		OSF1.50	6260.00	6150.19				MinPt-ADP
541.32	164.04	431.63	377.28	4.97		OSF1.50	11950.00	11840.19	OSF<=5.00			Enter Alert
215.17	192.91	86.23	22.25	1.67		OSF1.50	12446.72	12336.91				MinPt-CiCt
215.19	193.00	86.20	22.19	1.67		OSF1.50	12450.00	12340.19				MinPts
595.76	180.36	475.20	415.41	4.97		OSF1.50	12960.00	12813.15	OSF>5.00			Exit Alert
10575.20	206.65	10437.11	10368.55	77.12		OSF1.50	23222.96	12946.00				TD
Coterra Red Hills Unit 78H Rev2 kFc 11Dec24 (DefinitivePlan) - Warning Alert												
1281.23	32.81	1279.94	1248.42	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
1281.18	32.81	1279.90	1248.38	923039.27		MAS = 10.00 (m)	10.00	10.00				MinPts
1281.18	32.81	1279.90	1248.38	N/A		MAS = 10.00 (m)	23.00	23.00				WRP
1281.18	32.81	1269.44	1248.38	122.44		MAS = 10.00 (m)	1110.00	1110.00				MinPt-EOU
1281.18	32.81	1267.80	1248.38	104.43		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
286.68	86.82	228.47	199.86	4.99		OSF1.50	5690.00	5580.19	OSF<=5.00			Enter Alert
279.96	156.92	175.02	123.04	2.68		OSF1.50	10510.00	10400.19				MinPt-CiCt
280.15	157.86	174.58	122.29	2.67		OSF1.50	10620.00	10510.19				MinPt-EOU
280.31	158.05	174.62	122.26	2.67		OSF1.50	10640.00	10530.19				MinPt-ADP
280.75	158.36	174.85	122.39	2.67		OSF1.50	10670.00	10560.19				MinPt-SF
466.97	141.98	371.99	324.99	4.96		OSF1.50	11270.00	11160.19	OSF>5.00			Exit Alert
1963.16	355.91	1725.56	1607.26	8.29		OSF1.50	23222.96	12946.00				MinPts
Coterra Red Hills Unit 79H Rev2 kFc 11Dec24 (DefinitivePlan) - Warning Alert												
1261.25	32.81	1259.97	1228.45	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
1261.20	32.81	1259.91	1228.39	503131.81		MAS = 10.00 (m)	10.00	10.00				MinPts
1261.20	32.81	1259.91	1228.39	N/A		MAS = 10.00 (m)	23.00	23.00				WRP
1261.20	32.81	1249.46	1228.39	120.57		MAS = 10.00 (m)	1110.00	1110.00				MinPt-EOU
1261.20	32.81	1247.82	1228.39	102.83		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
347.12	104.90	276.86	242.22	5.00		OSF1.50	6750.00	6640.19	OSF<=5.00			Enter Alert
326.71	150.14	226.30	176.58	3.28		OSF1.50	9910.00	9800.19				MinPt-CiCt
326.74	150.28	226.22	176.46	3.27		OSF1.50	9920.00	9810.19				MinPt-EOU
326.83	150.39	226.24	176.43	3.27		OSF1.50	9930.00	9820.19				MinPt-ADP
327.22	150.61	226.48	176.61	3.27		OSF1.50	9950.00	9840.19				MinPt-SF
466.74	142.55	371.38	324.19	4.94		OSF1.50	10500.00	10390.19	OSF>5.00			Exit Alert
2554.79	351.94	2319.83	2202.84	10.91		OSF1.50	23222.96	12946.00				MinPts
Cimarex Red Hills Unit #75H Corrected MWD to 22184ft MD (DefinitiveSurvey) - Warning Alert												
1364.78	32.81	1363.60	1331.97	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
1364.73	32.81	1363.55	1331.92	392808.53		MAS = 10.00 (m)	10.00	10.00				MinPts
1364.73	32.81	1363.55	1331.92	2087367.00		MAS = 10.00 (m)	20.00	20.00				MinPts
1364.73	32.81	1363.55	1331.92	1326904.88		MAS = 10.00 (m)	23.00	23.00				WRP
575.05	97.66	509.62	477.39	8.91		OSF1.50	6680.00	6570.19				MinPt-CiCt
576.27	112.32	501.06	463.94	7.75		OSF1.50	7730.00	7620.19				MinPt-CiCt
576.55	113.46	500.59	463.10	7.68		OSF1.50	7810.00	7700.19				MinPt-EOU
577.01	114.02	500.67	462.99	7.64		OSF1.50	7850.00	7740.19				MinPt-ADP
610.64	136.74	519.15	473.90	6.74		OSF1.50	9450.00	9340.19				MinPt-ADP
570.25	169.91	456.66	400.35	5.06		OSF1.50	11967.01	11857.20				MinPt-CiCt
570.32	170.04	456.64	400.29	5.05		OSF1.50	11980.00	11870.19				MinPts
570.71	170.22	456.90	400.49	5.05		OSF1.50	12000.00	11890.19				MinPt-SF
713.32	153.62	610.58	559.71	7.00		OSF1.50	14180.00	13016.46				MinPt-CiCt
713.43	153.87	610.52	559.55	6.99		OSF1.50	14220.00	13016.14				MinPt-EOU
713.55	154.02	610.54	559.53	6.98		OSF1.50	14240.00	13015.99				MinPt-ADP
704.76	169.59	591.37	535.17	6.26		OSF1.50	15640.00	13005.08				MinPt-CiCt
704.97	170.23	591.15	534.74	6.24		OSF1.50	15680.00	13004.77				MinPt-EOU
705.26	170.56	591.22	534.70	6.23		OSF1.50	15700.00	13004.61				MinPt-ADP
710.61	181.48	589.30	529.13	5.90		OSF1.50	16310.00	12999.86				MinPt-CiCt
710.29	185.80	586.23	524.69	5.76		OSF1.50	16530.00	12998.15				MinPt-CiCt

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
698.04	210.35	557.48	487.69	4.99		OSF1.50	17720.00	12988.87	OSF<=5.00			Enter Alert
696.20	215.14	552.45	481.07	4.87		OSF1.50	17930.00	12987.24				MinPt-CtCt
694.30	222.74	545.48	471.57	4.69		OSF1.50	18250.00	12984.75				MinPt-CtCt
694.70	223.99	545.04	470.71	4.67		OSF1.50	18300.00	12984.36				MinPt-EOU
695.30	224.74	545.14	470.56	4.65		OSF1.50	18330.00	12984.12				MinPt-ADP
696.41	228.14	543.99	468.27	4.59		OSF1.50	18470.00	12983.03				MinPt-CtCt
697.02	229.94	543.40	467.08	4.56		OSF1.50	18540.00	12982.49				MinPt-EOU
698.84	233.06	543.14	465.79	4.51		OSF1.50	18660.00	12981.55				MinPt-EOU
700.18	234.64	543.42	465.54	4.49		OSF1.50	18720.00	12981.08				MinPt-ADP
700.69	240.42	540.08	460.27	4.38		OSF1.50	18950.00	12979.29				MinPt-CtCt
692.91	267.70	514.12	425.22	3.89		OSF1.50	20020.00	12970.96				MinPt-CtCt
690.59	282.15	502.16	408.44	3.68		OSF1.50	20550.00	12966.83				MinPt-CtCt
691.49	289.46	498.19	402.03	3.59		OSF1.50	20810.00	12964.80				MinPt-CtCt
691.32	297.92	492.38	393.40	3.49		OSF1.50	21110.00	12962.46				MinPt-CtCt
690.89	308.08	485.18	382.82	3.37		OSF1.50	21470.00	12959.66				MinPt-CtCt
691.55	310.13	484.47	381.42	3.35		OSF1.50	21540.00	12959.11				MinPt-EOU
692.29	311.00	484.63	381.29	3.34		OSF1.50	21570.00	12958.88				MinPt-ADP
701.82	320.10	488.09	381.71	3.29		OSF1.50	21880.00	12956.46				MinPt-EOU
702.75	321.24	488.27	381.51	3.29		OSF1.50	21920.00	12956.15				MinPt-ADP
707.47	324.28	490.95	383.18	3.28		OSF1.50	22030.00	12955.29				MinPt-SF
696.47	340.85	468.91	355.62	3.07		OSF1.50	22620.00	12950.70				MinPt-CtCt
699.13	347.96	466.83	351.17	3.02		OSF1.50	22860.00	12948.83				MinPt-EOU
700.36	349.44	467.08	350.93	3.01		OSF1.50	22910.00	12948.44				MinPt-ADP
706.57	353.49	470.58	353.08	3.00		OSF1.50	23050.00	12947.35				MinPt-SF
714.10	358.89	474.52	355.22	2.99		OSF1.50	23222.96	12946.00				MinPts

Coterra Cascade 28 Federal 413H - Corrected MWD to 17363ft (DefinitiveSurvey) - Warning Alert

5406.88	32.81	5405.69	5374.08	432792.91	MAS = 10.00 (m)	0.00	0.00				Surface
5406.84	32.81	5405.55	5374.04	45691.15	MAS = 10.00 (m)	23.00	23.00				WRP
5402.92	32.81	5397.90	5370.11	1408.51	MAS = 10.00 (m)	460.00	460.00				MinPts
5400.07	32.81	5389.91	5367.26	601.04	MAS = 10.00 (m)	980.00	980.00				MinPts
5400.43	32.81	5389.68	5367.62	563.76	MAS = 10.00 (m)	1060.00	1060.00				MinPt-EOU
5317.55	87.98	5258.56	5229.57	91.67	OSF1.50	5310.00	5201.59				MinPt-CtCt
5318.41	90.92	5257.47	5227.49	88.69	OSF1.50	5500.00	5390.41				MinPt-EOU
5319.11	91.73	5257.63	5227.38	87.91	OSF1.50	5560.00	5450.28				MinPt-ADP
5333.22	102.82	5264.35	5230.41	78.55	OSF1.50	6370.00	6260.19				MinPt-ADP
5336.00	105.53	5265.32	5230.47	76.54	OSF1.50	6570.00	6460.19				MinPt-ADP
5338.51	107.95	5266.21	5230.56	74.85	OSF1.50	6750.00	6640.19				MinPt-ADP
699.31	211.72	557.84	487.59	4.97	OSF1.50	12450.00	12340.19	OSF<=5.00			Enter Alert
668.93	216.12	524.52	452.81	4.66	OSF1.50	12630.23	12520.03				MinPts
704.60	213.08	562.22	491.52	4.98	OSF1.50	12820.00	12698.99	OSF>5.00			Exit Alert
10585.51	207.14	10447.09	10378.37	77.01	OSF1.50	23222.96	12946.00				TD

30-025-46314 - CASCADE 28 FEDERAL 86H - MWD to 17120ft - A (DefinitiveSurvey) - Warning Alert

5292.79	32.81	5290.81	5259.98	#####	MAS = 10.00 (m)	0.00	0.00				MinPts
5292.82	32.81	5290.83	5260.01	447558.51	MAS = 10.00 (m)	23.00	23.00				WRP
5292.94	32.81	5290.79	5260.13	31896.21	MAS = 10.00 (m)	60.00	60.00				MinPt-EOU
5293.28	32.81	5290.82	5260.48	10906.74	MAS = 10.00 (m)	120.00	120.00				MinPt-EOU
5300.19	32.81	5286.09	5267.38	436.94	MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
5300.17	32.81	5286.13	5267.36	431.74	MAS = 10.00 (m)	1310.00	1310.00				MinPts
5300.45	32.81	5285.83	5267.65	412.02	MAS = 10.00 (m)	1390.00	1390.00				MinPt-EOU
4998.27	94.28	4934.88	4903.99	80.88	OSF1.50	5630.00	5520.21				MinPt-CtCt
4998.59	95.26	4934.55	4903.33	80.05	OSF1.50	5700.00	5590.19				MinPt-EOU
4998.69	95.37	4934.58	4903.32	79.95	OSF1.50	5710.00	5600.19				MinPt-ADP
5001.86	97.93	4936.04	4903.93	77.88	OSF1.50	5890.00	5780.19				MinPt-EOU
5004.65	101.23	4936.63	4903.42	75.33	OSF1.50	6130.00	6020.19				MinPt-ADP
5011.18	108.24	4938.49	4902.94	70.47	OSF1.50	6610.00	6500.19				MinPt-EOU
5014.78	116.88	4936.32	4897.90	65.24	OSF1.50	7200.00	7090.19				MinPt-EOU
5015.26	117.46	4936.42	4897.80	64.92	OSF1.50	7250.00	7140.19				MinPt-ADP
828.11	251.12	660.20	576.99	4.97	OSF1.50	12120.00	12010.19	OSF<=5.00			Enter Alert
671.18	297.77	472.16	373.40	3.39	OSF1.50	12588.70	12478.83				MinPt-CtCt
671.18	297.80	472.14	373.38	3.39	OSF1.50	12590.00	12480.12				MinPt-EOU
671.31	297.99	472.15	373.32	3.39	OSF1.50	12600.00	12490.07				MinPts
876.89	266.53	698.71	610.36	4.95	OSF1.50	13090.00	12898.83	OSF>5.00			Exit Alert
10582.78	211.62	10441.20	10371.16	75.54	OSF1.50	23222.96	12946.00				TD

30-025-44540 - SALADO DRAW 9-16 W1BO FEDERAL COM 003H - MWD to 22510ft - A (DefinitiveSurvey) - Warning Alert

10531.02	32.81	10529.04	10498.21	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
10530.97	32.81	10528.98	10498.16	1723110.00	MAS = 10.00 (m)	20.00	20.00				MinPt-SF
10530.97	32.81	10528.98	10498.16	1836330.21	MAS = 10.00 (m)	23.00	23.00				WRP
10530.66	32.81	10526.70	10497.86	5297.11	MAS = 10.00 (m)	280.00	280.00				MinPts
10530.75	32.81	10522.24	10497.94	1612.02	MAS = 10.00 (m)	740.00	740.00				MinPts
10531.81	32.81	10520.38	10499.00	1114.19	MAS = 10.00 (m)	1090.00	1090.00				MinPt-EOU
10556.34	32.81	10537.51	10523.53	618.29	MAS = 10.00 (m)	1990.00	1987.61				MinPt-EOU
10556.50	32.81	10535.07	10523.69	536.62	MAS = 10.00 (m)	2100.00	2095.62				MinPts
10556.65	32.81	10534.92	10523.84	528.59	MAS = 10.00 (m)	2140.00	2134.69				MinPt-EOU
10752.97	74.86	10702.48	10678.11	220.61	OSF1.50	4650.00	4559.65				MinPts
10760.29	78.87	10707.17	10681.42	208.89	OSF1.50	4850.00	4752.83				MinPts
10507.62	178.20	10388.33	10329.43	89.19	OSF1.50	12060.00	11950.19				MinPt-CtCt
10507.76	178.66	10388.16	10329.10	88.95	OSF1.50	12120.00	12010.19				MinPt-EOU
10507.95	178.89	10388.19	10329.06	88.84	OSF1.50	12150.00	12040.19				MinPt-ADP
10517.66	181.66	10396.06	10336.00	87.56	OSF1.50	12538.36	12428.55				MinPt-SF
798.05	242.61	635.81	555.45	4.96	OSF1.50	23160.00	12946.49	OSF<=5.00			Enter Alert
760.76	246.58	595.88	514.18	4.65	OSF1.50	23222.96	12946.00				MinPts

Cimarex Red Hills Unit #21H Corrected MWD to 22108ft MD (DefinitiveSurvey) - Warning Alert

1404.70	32.81	1403.52	1371.89	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
1404.64	32.81	1403.46	1371.83	344385.30	MAS = 10.00 (m)	10.00	10.00				MinPts
1404.64	32.81	1403.46	1371.83	1334690.79	MAS = 10.00 (m)	20.00	20.00				MinPts
1404.64	32.81	1403.46	1371.83	835794.13	MAS = 10.00 (m)	23.00	23.00				WRP
1406.11	32.81	1402.91	1373.31	692.73	MAS = 10.00 (m)	300.00	300.00				MinPt-EOU

Offset Trajectory	Separation			Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)			MD (ft)	TVD (ft)	Alert	Minor	Major	
1407.33	32.81	1398.31	1374.52	179.26	MAS = 10.00 (m)	880.00	880.00				MinPts
1407.44	32.81	1398.17	1374.63	173.75	MAS = 10.00 (m)	910.00	910.00				MinPt-EOU
997.77	77.59	945.72	920.19	19.52	OSF1.50	5350.66	5241.88				MinPt-CtCt
997.96	78.21	945.49	919.75	19.37	OSF1.50	5390.00	5280.92				MinPt-EOU
998.22	78.52	945.55	919.71	19.29	OSF1.50	5410.00	5300.80				MinPt-ADP
1074.89	138.39	982.31	936.51	11.72	OSF1.50	9700.00	9590.19				MinPt-CtCt
1070.57	148.81	971.04	921.76	10.85	OSF1.50	10430.00	10320.19				MinPt-CtCt
1071.08	150.54	970.39	920.54	10.73	OSF1.50	10550.00	10440.19				MinPt-EOU
1071.79	151.39	970.53	920.40	10.68	OSF1.50	10610.00	10500.19				MinPt-ADP
1082.83	160.34	975.61	922.49	10.18	OSF1.50	11230.00	11120.19				MinPt-ADP
1087.16	167.78	974.98	919.38	9.77	OSF1.50	11750.00	11640.19				MinPt-CtCt
1087.30	168.41	974.70	918.89	9.73	OSF1.50	11800.00	11690.19				MinPt-EOU
1087.38	168.50	974.71	918.87	9.73	OSF1.50	11810.00	11700.19				MinPt-ADP
1095.58	170.62	981.51	924.97	9.68	OSF1.50	12040.00	11930.19				MinPt-SF
1247.55	167.10	1135.82	1080.45	11.26	OSF1.50	14240.00	13015.99				MinPt-CtCt
1247.56	167.16	1135.80	1080.41	11.25	OSF1.50	14250.00	13015.91				MinPt-EOU
1247.61	167.21	1135.81	1080.40	11.25	OSF1.50	14260.00	13015.83				MinPt-ADP
1261.08	170.97	1146.77	1090.11	11.12	OSF1.50	14690.00	13012.48				MinPt-EOU
1261.24	171.15	1146.81	1090.09	11.11	OSF1.50	14710.00	13012.33				MinPt-ADP
1238.85	181.00	1117.85	1057.85	10.31	OSF1.50	15550.00	13005.78				MinPt-CtCt
1234.32	195.88	1103.41	1038.44	9.49	OSF1.50	16490.00	12998.46				MinPt-CtCt
1234.97	206.52	1096.96	1028.45	9.01	OSF1.50	17050.00	12994.10				MinPt-CtCt
1228.97	219.44	1082.35	1009.53	8.43	OSF1.50	17680.00	12989.19				MinPt-CtCt
1229.22	220.24	1082.07	1008.98	8.40	OSF1.50	17720.00	12988.87				MinPt-EOU
1229.55	220.64	1082.13	1008.91	8.39	OSF1.50	17740.00	12988.72				MinPt-ADP
1232.19	227.27	1080.35	1004.92	8.16	OSF1.50	18030.00	12986.46				MinPt-CtCt
1232.06	230.48	1078.08	1001.58	8.05	OSF1.50	18170.00	12985.37				MinPt-CtCt
1232.56	232.01	1077.55	1000.54	8.00	OSF1.50	18240.00	12984.82				MinPt-EOU
1233.35	234.87	1076.44	998.48	7.90	OSF1.50	18360.00	12983.89				MinPt-CtCt
1234.16	242.14	1072.40	992.01	7.67	OSF1.50	18670.00	12981.47				MinPt-CtCt
1232.74	252.83	1063.86	979.91	7.34	OSF1.50	19110.00	12978.05				MinPt-CtCt
1233.24	254.48	1063.26	978.77	7.29	OSF1.50	19180.00	12977.50				MinPt-EOU
1229.19	268.30	1049.99	960.89	6.89	OSF1.50	19730.00	12973.21				MinPt-CtCt
1228.02	274.26	1044.85	953.76	6.74	OSF1.50	19960.00	12971.42				MinPt-CtCt
1228.55	276.00	1044.22	952.55	6.70	OSF1.50	20030.00	12970.88				MinPt-EOU
1229.20	279.54	1042.51	949.66	6.61	OSF1.50	20160.00	12969.86				MinPt-CtCt
1229.89	281.55	1041.86	948.33	6.57	OSF1.50	20240.00	12969.24				MinPt-EOU
1231.97	284.45	1042.01	947.52	6.51	OSF1.50	20350.00	12968.38				MinPt-ADP
1241.88	288.74	1049.06	953.15	6.47	OSF1.50	20540.00	12966.90				MinPt-SF
1251.52	307.49	1046.19	944.03	6.12	OSF1.50	21190.00	12961.84				MinPt-CtCt
1251.96	309.03	1045.62	942.94	6.09	OSF1.50	21250.00	12961.37				MinPt-EOU
1252.55	309.78	1045.70	942.77	6.08	OSF1.50	21280.00	12961.14				MinPt-ADP
1262.68	314.22	1052.87	948.46	6.04	OSF1.50	21470.00	12959.66				MinPt-SF
1196.53	338.01	970.86	858.51	5.32	OSF1.50	22300.00	12953.19				MinPt-CtCt
1197.22	340.15	970.12	857.06	5.29	OSF1.50	22380.00	12952.57				MinPt-EOU
1197.77	343.97	968.13	853.80	5.23	OSF1.50	22510.00	12951.55				MinPt-CtCt
1201.15	353.30	965.29	847.85	5.11	OSF1.50	22840.00	12948.98				MinPt-EOU
1205.66	359.35	965.77	846.31	5.04	OSF1.50	23050.00	12947.35				MinPt-EOU
1206.75	360.70	965.96	846.06	5.03	OSF1.50	23100.00	12946.96				MinPt-ADP
1210.00	363.92	967.07	846.09	5.00	OSF1.50	23210.00	12946.10	OSF<=5.00			Enter Alert
1210.30	364.31	967.09	845.99	4.99	OSF1.50	23222.96	12946.00				MinPts

Coterra Red Hills Unit 102H - Corrected MWD to 21093ft (DefinitiveSurvey) - Pass

84.84	32.81	83.56	52.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
84.84	32.81	83.55	52.03	87025.17	MAS = 10.00 (m)	23.00	23.00				WRP
83.32	32.81	79.15	50.51	28.41	MAS = 10.00 (m)	373.90	373.90				MinPts
86.16	32.81	77.69	53.35	11.82	MAS = 10.00 (m)	810.00	810.00				MinPt-EOU
87.79	32.81	75.57	54.99	7.91	MAS = 10.00 (m)	1190.00	1190.00				MinPt-EOU
87.52	32.81	74.46	54.71	7.24	MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
86.75	32.81	71.66	53.94	6.08	MAS = 10.00 (m)	1510.00	1510.00				MinPts
86.96	32.81	71.48	54.16	5.93	MAS = 10.00 (m)	1550.00	1550.00				MinPt-EOU
91.95	32.81	75.00	59.14	5.70	MAS = 10.00 (m)	1700.00	1699.84				MinPt-SF
1319.58	136.72	1228.10	1182.85	14.57	OSF1.50	9270.00	9160.19				MinPt-CtCt
1320.08	138.20	1227.61	1181.87	14.42	OSF1.50	9380.00	9270.19				MinPt-EOU
1320.61	138.88	1227.69	1181.73	14.35	OSF1.50	9430.00	9320.19				MinPt-ADP
1324.01	141.69	1229.22	1182.31	14.10	OSF1.50	9620.00	9510.19				MinPt-EOU
1325.07	142.96	1229.43	1182.10	13.99	OSF1.50	9710.00	9600.19				MinPt-ADP
1329.29	146.74	1231.14	1182.55	13.67	OSF1.50	9970.00	9860.19				MinPt-ADP
1319.94	158.73	1213.79	1161.20	12.54	OSF1.50	10800.00	10690.19				MinPt-CtCt
1319.97	158.82	1213.76	1161.15	12.54	OSF1.50	10810.00	10700.19				MinPt-EOU
1320.03	158.91	1213.77	1161.13	12.53	OSF1.50	10820.00	10710.19				MinPt-ADP
1322.53	159.55	1215.84	1162.98	12.50	OSF1.50	10910.00	10800.19				MinPt-SF
2379.78	137.99	2287.46	2241.79	26.04	OSF1.50	14360.00	13015.05				MinPt-CtCt
2370.70	144.78	2273.85	2225.92	24.72	OSF1.50	14880.00	13011.00				MinPt-CtCt
2370.91	145.49	2273.59	2225.42	24.60	OSF1.50	14930.00	13010.61				MinPt-EOU
2371.28	145.92	2273.67	2225.36	24.53	OSF1.50	14960.00	13010.38				MinPt-ADP
2370.45	148.22	2271.31	2222.23	24.14	OSF1.50	15110.00	13009.21				MinPt-CtCt
2370.63	148.84	2271.08	2221.79	24.04	OSF1.50	15150.00	13008.90				MinPt-EOU
2370.89	149.15	2271.12	2221.73	23.99	OSF1.50	15170.00	13008.74				MinPt-ADP
2377.57	155.53	2273.56	2222.04	23.07	OSF1.50	15520.00	13008.02				MinPt-EOU
2379.76	161.13	2272.01	2218.63	22.28	OSF1.50	15810.00	13003.76				MinPt-EOU
2381.20	167.21	2269.40	2213.99	21.48	OSF1.50	16110.00	13001.42				MinPt-CtCt
2381.04	171.80	2266.17	2209.23	20.90	OSF1.50	16330.00	12999.70				MinPt-CtCt
2380.85	177.34	2262.29	2203.50	20.24	OSF1.50	16580.00	12997.76				MinPt-CtCt
2381.45	179.27	2261.61	2202.18	20.03	OSF1.50	16670.00	12997.06				MinPt-EOU
2381.87	185.21	2258.07	2196.66	19.39	OSF1.50	16920.00	12995.11				MinPt-CtCt
2364.58	217.95	2218.96	2146.64	16.34	OSF1.50	18230.00	12984.90				MinPt-CtCt
2365.23	225.52	2214.56	2139.71	15.79	OSF1.50	18510.00	12982.72				MinPt-CtCt
2360.13	237.29	2201.60	2122.83	14.97	OSF1.50	18950.00	12979.29				MinPt-CtCt
2360.68	239.00	2201.03	2121.69	14.87	OSF1.50	19020.00	12978.75				MinPt-EOU
2361.29	239.72	2201.15	2121.57	14.83	OSF1.50	19050.00	12978.51				MinPt-ADP

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
2357.20	258.89	2184.28	2098.31	13.70		OSF1.50	19730.00	12973.21				MinPt-CiCt
2329.01	303.60	2126.28	2025.41	11.54		OSF1.50	21260.00	12961.29				MinPt-CiCt
2330.81	308.08	2125.10	2022.73	11.38		OSF1.50	21420.00	12960.05				MinPt-EOU
2312.18	357.23	2073.70	1954.95	9.73		OSF1.50	23040.00	12947.43				MinPt-CiCt
2313.38	363.08	2071.00	1950.30	9.58		OSF1.50	23222.96	12946.00				MinPts

Coterra Red Hills Unit 103H - Corrected MWD to 20297ft (DefinitiveSurvey) - Pass

99.99	32.81	98.70	67.18	#####		MAS = 10.00 (m)	0.00	0.00				Surface
99.99	32.81	98.70	67.18	81215.42		MAS = 10.00 (m)	23.00	23.00				WRP
99.87	32.81	96.52	67.06	47.97		MAS = 10.00 (m)	290.00	290.00				MinPts
92.81	32.81	77.56	60.00	6.44		MAS = 10.00 (m)	1523.34	1523.34				MinPts
92.88	32.81	77.47	60.07	6.37		MAS = 10.00 (m)	1540.00	1540.00				MinPt-EOU
97.50	32.81	80.82	64.69	6.15		MAS = 10.00 (m)	1670.00	1669.90				MinPt-SF
1311.54	94.92	1247.93	1216.61	20.93		OSF1.50	6380.00	6270.19				MinPt-CiCt
1316.01	118.47	1236.70	1197.54	16.79		OSF1.50	8030.00	7920.19				MinPt-CiCt
1326.28	146.50	1228.29	1179.78	13.66		OSF1.50	9950.00	9840.19				MinPt-CiCt
1326.40	146.99	1228.08	1179.41	13.62		OSF1.50	9990.00	9880.19				MinPt-EOU
1326.48	147.09	1228.09	1179.39	13.61		OSF1.50	10000.00	9890.19				MinPt-ADP
1337.56	149.53	1237.55	1188.03	13.50		OSF1.50	10250.00	10140.19				MinPt-SF
2918.08	128.23	2832.26	2789.85	34.39		OSF1.50	14410.00	13014.66				MinPt-CiCt
2918.24	128.69	2832.12	2789.55	34.27		OSF1.50	14450.00	13014.35				MinPt-EOU
2918.43	128.92	2832.16	2789.51	34.21		OSF1.50	14470.00	13014.20				MinPt-ADP
2918.51	130.15	2831.41	2788.35	33.88		OSF1.50	14560.00	13013.50				MinPt-CiCt
2918.65	130.63	2831.23	2788.01	33.76		OSF1.50	14600.00	13013.18				MinPt-EOU
2918.96	131.01	2831.29	2787.95	33.66		OSF1.50	14630.00	13012.95				MinPt-ADP
2919.06	133.84	2829.51	2785.22	32.95		OSF1.50	14820.00	13011.47				MinPt-CiCt
2919.39	134.81	2829.19	2784.58	32.71		OSF1.50	14890.00	13010.92				MinPt-EOU
2919.75	135.24	2829.26	2784.51	32.61		OSF1.50	14920.00	13010.69				MinPt-ADP
2922.61	138.83	2829.73	2783.78	31.79		OSF1.50	15130.00	13009.05				MinPt-CiCt
2922.85	139.55	2829.49	2783.31	31.63		OSF1.50	15180.00	13008.66				MinPt-EOU
2923.11	139.84	2829.56	2783.28	31.57		OSF1.50	15200.00	13008.51				MinPt-ADP
2924.31	142.50	2828.99	2781.81	30.99		OSF1.50	15350.00	13007.34				MinPt-CiCt
2924.62	143.28	2828.77	2781.34	30.82		OSF1.50	15400.00	13006.95				MinPt-EOU
2924.89	143.61	2828.83	2781.29	30.75		OSF1.50	15420.00	13006.79				MinPt-ADP
2925.67	145.07	2828.63	2780.60	30.45		OSF1.50	15490.00	13006.25				MinPt-CiCt
2925.90	145.70	2828.43	2780.19	30.32		OSF1.50	15530.00	13005.94				MinPt-EOU
2926.15	146.02	2828.48	2780.13	30.25		OSF1.50	15550.00	13005.78				MinPt-ADP
2914.71	159.76	2807.88	2754.96	27.53		OSF1.50	16220.00	13000.56				MinPt-CiCt
2911.96	165.74	2801.13	2746.21	26.50		OSF1.50	16490.00	12998.46				MinPt-CiCt
2910.20	179.56	2790.17	2730.64	24.44		OSF1.50	17070.00	12993.94				MinPt-CiCt
2882.33	203.47	2746.35	2678.85	21.34		OSF1.50	18010.00	12986.62				MinPt-CiCt
2883.40	206.64	2745.31	2676.76	21.02		OSF1.50	18140.00	12985.60				MinPt-EOU
2883.54	235.02	2726.53	2648.52	18.48		OSF1.50	19150.00	12977.73				MinPt-CiCt
2884.66	238.91	2725.05	2645.74	18.18		OSF1.50	19300.00	12976.56				MinPt-EOU
2885.65	240.15	2725.23	2645.51	18.09		OSF1.50	19350.00	12976.18				MinPt-ADP
2887.08	260.60	2713.02	2626.48	16.68		OSF1.50	20040.00	12970.80				MinPt-CiCt
2888.43	264.26	2711.93	2624.17	16.45		OSF1.50	20180.00	12969.71				MinPt-EOU
2883.30	276.14	2698.88	2607.16	15.71		OSF1.50	20570.00	12966.67				MinPt-CiCt
2884.52	280.16	2697.42	2604.36	15.49		OSF1.50	20720.00	12965.50				MinPt-EOU
2885.61	281.43	2697.67	2604.19	15.43		OSF1.50	20770.00	12965.11				MinPt-ADP
2879.87	301.50	2678.54	2578.37	14.37		OSF1.50	21420.00	12960.05				MinPt-CiCt
2880.47	303.18	2678.03	2577.30	14.29		OSF1.50	21490.00	12959.50				MinPt-EOU
2881.09	303.88	2678.17	2577.20	14.26		OSF1.50	21520.00	12959.27				MinPt-ADP
2846.43	358.16	2607.33	2488.27	11.95		OSF1.50	23222.96	12946.00				MinPts

Coterra Red Hills Unit 104H - Corrected MWD to 21571ft (DefinitiveSurvey) - Pass

116.60	32.81	115.42	83.79	2869348.44		MAS = 10.00 (m)	0.00	0.00				Surface
116.59	32.81	115.41	83.78	17704.43		MAS = 10.00 (m)	23.00	23.00				WRP
114.81	32.81	110.20	82.00	33.11		MAS = 10.00 (m)	428.45	428.45				MinPts
115.20	32.81	109.89	82.39	27.57		MAS = 10.00 (m)	500.00	500.00				MinPt-EOU
122.56	32.81	112.31	89.75	13.37		MAS = 10.00 (m)	1000.00	1000.00				MinPt-EOU
128.07	32.81	112.44	95.26	8.67		MAS = 10.00 (m)	1560.00	1560.00				MinPts
128.23	32.81	112.31	95.43	8.52		MAS = 10.00 (m)	1590.00	1589.99				MinPt-EOU
135.99	32.81	118.24	103.18	8.05		MAS = 10.00 (m)	1780.00	1779.55				MinPt-SF
1830.23	122.30	1748.37	1707.93	22.62		OSF1.50	8170.00	8060.19				MinPt-CiCt
1830.20	125.27	1746.36	1704.93	22.08		OSF1.50	8380.00	8270.19				MinPt-CiCt
1830.20	127.27	1745.03	1702.93	21.73		OSF1.50	8520.00	8410.19				MinPt-CiCt
1832.62	135.96	1741.65	1696.66	20.36		OSF1.50	9130.00	9020.19				MinPt-EOU
1835.03	139.45	1741.73	1695.57	19.87		OSF1.50	9370.00	9260.19				MinPt-EOU
1840.56	150.87	1739.65	1689.69	18.41		OSF1.50	10160.00	10050.19				MinPt-EOU
1844.83	156.29	1740.31	1688.54	17.81		OSF1.50	10530.00	10420.19				MinPt-EOU
1845.73	157.41	1740.47	1688.32	17.69		OSF1.50	10610.00	10500.19				MinPt-ADP
1863.59	163.94	1753.96	1699.64	17.14		OSF1.50	11150.00	11040.19				MinPt-SF
2591.75	169.58	2478.37	2422.17	23.05		OSF1.50	14760.00	13011.94				MinPt-CiCt
2589.47	174.23	2472.99	2415.24	22.41		OSF1.50	15100.00	13009.29				MinPt-CiCt
2588.92	179.31	2469.05	2409.61	21.77		OSF1.50	15430.00	13006.72				MinPt-CiCt
2586.68	186.28	2462.17	2400.40	20.93		OSF1.50	15840.00	13003.52				MinPt-CiCt
2587.17	187.82	2461.63	2399.35	20.76		OSF1.50	15930.00	13002.82				MinPt-EOU
2587.57	188.33	2461.69	2399.24	20.71		OSF1.50	15960.00	13002.59				MinPt-ADP
2583.36	199.77	2449.85	2383.59	19.49		OSF1.50	16540.00	12998.07				MinPt-CiCt
2584.11	202.32	2448.90	2381.78	19.24		OSF1.50	16670.00	12997.06				MinPt-EOU
2582.33	209.63	2442.24	2372.69	18.56		OSF1.50	17010.00	12994.41				MinPt-CiCt
2581.90	223.10	2432.83	2358.79	17.43		OSF1.50	17610.00	12989.73				MinPt-CiCt
2582.84	225.75	2432.01	2357.08	17.23		OSF1.50	17730.00	12988.80				MinPt-EOU
2580.20	234.27	2423.69	2345.92	16.58		OSF1.50	18080.00	12986.07				MinPt-CiCt
2580.20	244.59	2416.80	2335.60	15.88		OSF1.50	18500.00	12982.80				MinPt-CiCt
2580.56	249.62	2413.82	2330.94	15.56		OSF1.50	18700.00	12981.24				MinPt-CiCt
2582.34	263.77	2406.16	2318.57	14.73		OSF1.50	19250.00	12976.95				MinPt-CiCt
2578.36	275.90	2394.10	2302.46	14.06		OSF1.50	19710.00	12973.37				MinPt-CiCt
2576.45	282.32	2387.90	2294.13	13.73		OSF1.50	19950.00	12971.50				MinPt-CiCt

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
2567.47	300.63	2366.72	2266.84	12.85		OSF1.50	20620.00	12966.28				MinPt-CiCt
2564.02	308.42	2358.08	2255.60	12.51		OSF1.50	20900.00	12964.10				MinPt-CiCt
2565.31	314.07	2355.60	2251.24	12.29		OSF1.50	21110.00	12962.46				MinPt-EOU
2566.35	315.35	2355.79	2251.00	12.24		OSF1.50	21160.00	12962.07				MinPt-ADP
2574.56	325.36	2357.32	2249.20	11.90		OSF1.50	21500.00	12959.42				MinPt-CiCt
2569.62	337.66	2344.18	2231.96	11.44		OSF1.50	21930.00	12956.07				MinPt-CiCt
2566.60	345.73	2335.79	2220.87	11.16		OSF1.50	22210.00	12953.89				MinPt-CiCt
2564.00	352.11	2328.93	2211.88	10.95		OSF1.50	22430.00	12952.18				MinPt-CiCt
2564.44	353.80	2328.38	2210.84	10.90		OSF1.50	22490.00	12951.71				MinPt-EOU
2565.04	354.32	2328.50	2210.72	10.89		OSF1.50	22520.00	12951.48				MinPt-ADP
2559.34	365.51	2315.34	2193.83	10.53		OSF1.50	22890.00	12948.59				MinPt-CiCt
2560.43	368.74	2314.28	2191.69	10.44		OSF1.50	23010.00	12947.66				MinPt-EOU
2558.90	379.79	2305.38	2179.11	10.13		OSF1.50	23222.96	12946.00				MinPts

30-025-49110 - Cimarex Red Hills Unit 101H - Corrected MWD to 22039ft - A (DefinitiveSurvey) - Pass

121.65	32.81	120.48	88.85	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
121.64	32.81	120.46	88.83	N/A		MAS = 10.00 (m)	1.80	1.80				MinPts
121.65	32.81	120.47	88.84	30679.82		MAS = 10.00 (m)	23.00	23.00				WRP
124.91	32.81	119.70	92.10	30.73		MAS = 10.00 (m)	480.00	480.00				MinPt-EOU
153.84	32.81	138.20	121.03	10.43		MAS = 10.00 (m)	1760.00	1759.64				MinPt-SF
989.90	66.30	945.37	923.60	22.71		OSF1.50	4820.00	4723.86				MinPt-SF
1140.81	81.11	1086.41	1059.71	21.34		OSF1.50	5840.00	5730.19				MinPt-ADP
1164.64	100.98	1096.99	1063.66	17.46		OSF1.50	7220.00	7110.19				MinPt-CiCt
1168.51	114.03	1092.16	1054.48	15.49		OSF1.50	8140.00	8030.19				MinPt-EOU
1170.99	117.28	1092.47	1053.71	15.09		OSF1.50	8370.00	8260.19				MinPt-ADP
1181.91	140.98	1087.59	1040.93	12.65		OSF1.50	10000.00	9890.19				MinPt-CiCt
1183.96	147.42	1085.36	1036.54	12.12		OSF1.50	10450.00	10340.19				MinPt-EOU
1184.66	148.24	1085.51	1036.42	12.06		OSF1.50	10510.00	10400.19				MinPt-ADP
1192.18	153.84	1089.29	1038.34	11.69		OSF1.50	10890.00	10780.19				MinPt-ADP
1231.59	169.72	1118.12	1061.87	10.94		OSF1.50	12100.00	11990.19				MinPt-SF
1299.11	158.85	1192.88	1140.26	12.33		OSF1.50	14030.00	13017.62				MinPt-CiCt
1299.14	158.92	1192.86	1140.21	12.33		OSF1.50	14040.00	13017.55				MinPt-EOU
1299.20	159.00	1192.87	1140.20	12.32		OSF1.50	14050.00	13017.47				MinPt-ADP
1301.53	159.75	1194.70	1141.78	12.29		OSF1.50	14140.00	13016.77				MinPt-SF
1300.86	160.68	1193.41	1140.18	12.21		OSF1.50	14310.00	13015.44				MinPt-CiCt
1300.94	160.87	1193.37	1140.07	12.20		OSF1.50	14330.00	13015.29				MinPts
1304.65	163.21	1195.52	1141.45	12.05		OSF1.50	14600.00	13013.18				MinPt-CiCt
1304.72	163.43	1195.44	1141.30	12.04		OSF1.50	14620.00	13013.03				MinPt-EOU
1304.81	163.54	1195.46	1141.27	12.03		OSF1.50	14630.00	13012.95				MinPt-ADP
1305.82	165.39	1195.23	1140.43	11.90		OSF1.50	14810.00	13011.55				MinPt-CiCt
1305.99	165.85	1195.09	1140.14	11.87		OSF1.50	14850.00	13011.24				MinPt-EOU
1306.08	165.97	1195.11	1140.11	11.87		OSF1.50	14860.00	13011.16				MinPt-ADP
1328.13	170.88	1213.88	1157.25	11.72		OSF1.50	15230.00	13008.28				MinPt-SF
1296.94	186.23	1172.46	1110.71	10.49		OSF1.50	16300.00	12999.94				MinPt-CiCt
1297.20	186.96	1172.24	1110.24	10.45		OSF1.50	16340.00	12999.63				MinPt-EOU
1297.52	187.33	1172.31	1110.19	10.44		OSF1.50	16360.00	12999.47				MinPt-ADP
1306.11	193.41	1176.84	1112.70	10.17		OSF1.50	16680.00	12996.98				MinPt-EOU
1307.07	194.61	1177.00	1112.46	10.12		OSF1.50	16740.00	12996.51				MinPt-ADP
1307.18	203.49	1171.19	1103.69	9.68		OSF1.50	17180.00	12993.08				MinPt-CiCt
1304.26	213.97	1161.28	1090.28	9.18		OSF1.50	17670.00	12989.26				MinPt-CiCt
1300.19	218.19	1154.41	1082.00	8.97		OSF1.50	17860.00	12987.78				MinPt-CiCt
1292.01	225.67	1141.23	1066.33	8.62		OSF1.50	18190.00	12985.21				MinPt-CiCt
1292.37	226.84	1140.82	1065.53	8.58		OSF1.50	18240.00	12984.82				MinPt-EOU
1292.74	227.30	1140.88	1065.44	8.56		OSF1.50	18260.00	12984.67				MinPt-ADP
1288.95	233.32	1133.08	1055.63	8.32		OSF1.50	18510.00	12982.72				MinPt-CiCt
1289.41	234.51	1132.74	1054.90	8.28		OSF1.50	18560.00	12982.33				MinPt-EOU
1290.01	235.21	1132.88	1054.80	8.26		OSF1.50	18590.00	12982.10				MinPt-ADP
1306.50	263.30	1130.63	1043.19	7.47		OSF1.50	19710.00	12973.37				MinPt-CiCt
1306.81	264.31	1130.28	1042.51	7.44		OSF1.50	19750.00	12973.06				MinPt-EOU
1307.23	264.80	1130.37	1042.43	7.43		OSF1.50	19770.00	12972.90				MinPt-ADP
1303.78	273.92	1120.84	1029.86	7.16		OSF1.50	20100.00	12970.33				MinPt-CiCt
1289.88	290.65	1095.78	999.23	6.67		OSF1.50	20720.00	12965.50				MinPt-CiCt
1290.31	291.96	1095.34	998.35	6.65		OSF1.50	20770.00	12965.11				MinPt-EOU
1290.92	292.73	1095.44	998.19	6.63		OSF1.50	20800.00	12964.88				MinPt-ADP
1271.20	326.69	1053.08	944.51	5.85		OSF1.50	22020.00	12955.37				MinPt-CiCt
1263.96	338.51	1037.96	925.45	5.61		OSF1.50	22440.00	12952.10				MinPt-CiCt
1264.48	340.17	1037.37	924.31	5.59		OSF1.50	22500.00	12951.63				MinPt-EOU
1265.12	340.98	1037.47	924.14	5.58		OSF1.50	22530.00	12951.40				MinPt-ADP
1264.50	361.21	1023.37	903.29	5.26		OSF1.50	23222.96	12946.00				MinPts

Coterra Red Hills Unit 105H - Corrected MWD to 20747ft (DefinitiveSurvey) - Pass

134.15	32.81	132.86	101.34	6139244.32		MAS = 10.00 (m)	0.00	0.00				MinPts
134.15	32.81	132.86	101.34	42651.33		MAS = 10.00 (m)	23.00	23.00				WRP
135.77	32.81	130.44	102.96	33.23		MAS = 10.00 (m)	490.00	490.00				MinPt-EOU
164.02	32.81	149.07	131.21	11.67		MAS = 10.00 (m)	1670.00	1669.90				MinPt-SF
1601.60	71.79	1553.42	1529.82	33.91		OSF1.50	5390.00	5280.92				MinPt-SF
1633.30	73.15	1584.21	1560.15	33.93		OSF1.50	5500.00	5390.41				MinPt-SF
1963.08	99.91	1896.14	1863.17	29.75		OSF1.50	7190.00	7080.19				MinPt-ADP
1968.42	128.97	1882.11	1839.44	23.06		OSF1.50	9110.00	9000.19				MinPt-CiCt
1969.34	144.97	1872.37	1824.37	20.51		OSF1.50	10230.00	10120.19				MinPt-CiCt
1969.42	145.30	1872.23	1824.12	20.46		OSF1.50	10260.00	10150.19				MinPt-EOU
1969.59	145.52	1872.25	1824.07	20.43		OSF1.50	10280.00	10170.19				MinPt-ADP
2004.79	151.05	1903.76	1853.74	20.03		OSF1.50	10790.00	10680.19				MinPt-SF
3052.19	141.37	2957.61	2910.81	32.60		OSF1.50	13870.00	13018.87				MinPt-CiCt
3052.28	141.63	2957.53	2910.65	32.54		OSF1.50	13900.00	13018.64				MinPt-EOU
3052.51	141.90	2957.58	2910.61	32.48		OSF1.50	13930.00	13018.40				MinPt-ADP
3049.20	154.46	2945.90	2894.74	29.79		OSF1.50	14920.00	13010.69				MinPt-CiCt
3048.16	157.95	2942.54	2890.22	29.12		OSF1.50	15140.00	13008.98				MinPt-CiCt
3046.95	163.78	2937.43	2883.17	28.07		OSF1.50	15480.00	13006.33				MinPt-CiCt
3045.34	166.89	2933.75	2878.45	27.52		OSF1.50	15650.00	13005.00				MinPt-CiCt

Offset Trajectory	Separation			Allow	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
	3045.77	178.26	2926.61	2867.52	25.76	OSF1.50	16220.00	13000.56				MinPt-CiCt
	3043.69	184.66	2920.25	2859.03	24.85	OSF1.50	16520.00	12998.22				MinPt-CiCt
	3037.57	195.48	2906.92	2842.09	23.42	OSF1.50	17000.00	12994.48				MinPt-CiCt
	3034.78	204.23	2898.30	2830.55	22.39	OSF1.50	17370.00	12991.60				MinPt-CiCt
	3031.71	220.37	2884.46	2811.33	20.72	OSF1.50	18020.00	12986.54				MinPt-CiCt
	3028.40	236.52	2870.39	2791.88	19.28	OSF1.50	18640.00	12981.71				MinPt-CiCt
	3028.18	244.88	2864.60	2783.30	18.62	OSF1.50	18950.00	12979.29				MinPt-CiCt
	3031.76	259.10	2858.70	2772.66	17.61	OSF1.50	19470.00	12975.24				MinPt-CiCt
	3032.85	267.20	2854.39	2765.65	17.08	OSF1.50	19760.00	12972.98				MinPt-CiCt
	3033.55	269.33	2853.67	2764.23	16.95	OSF1.50	19850.00	12972.28				MinPt-EOU
	3034.37	270.26	2853.87	2764.11	16.90	OSF1.50	19890.00	12971.97				MinPt-ADP
	3032.78	282.14	2844.36	2750.64	16.18	OSF1.50	20290.00	12968.85				MinPt-CiCt
	3019.61	310.92	2812.00	2708.69	14.61	OSF1.50	21290.00	12961.06				MinPt-CiCt
	3007.50	337.51	2782.16	2669.99	13.40	OSF1.50	22190.00	12954.05				MinPt-CiCt
	3004.65	350.01	2770.98	2654.64	12.91	OSF1.50	22610.00	12950.78				MinPt-CiCt
	3002.46	359.61	2762.39	2642.85	12.55	OSF1.50	22930.00	12948.28				MinPt-CiCt
	3002.09	364.73	2758.61	2637.36	12.38	OSF1.50	23100.00	12946.96				MinPt-CiCt
	3002.35	369.53	2755.67	2632.82	12.22	OSF1.50	23222.96	12946.00				MinPts
Coterra Red Hills Unit 76H Rev2 kFc 11Dec24 (DefinitivePlan) - Pass												
	1321.20	32.81	1320.02	1288.39	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
	1321.14	32.81	1319.96	1288.33	464980.39	MAS = 10.00 (m)	10.00	10.00				MinPts
	1321.14	32.81	1319.96	1288.33	N/A	MAS = 10.00 (m)	23.00	23.00				WRP
	1321.14	32.81	1309.52	1288.33	126.33	MAS = 10.00 (m)	1110.00	1110.00				MinPt-EOU
	730.83	84.25	674.33	646.58	13.15	OSF1.50	5502.90	5393.30				MinPt-CiCt
	730.95	84.65	674.19	646.31	13.09	OSF1.50	5530.00	5420.33				MinPt-EOU
	731.20	84.94	674.25	646.26	13.05	OSF1.50	5550.00	5440.29				MinPt-ADP
	746.15	163.19	637.03	582.96	6.89	OSF1.50	10960.00	10850.19				MinPt-EOU
	746.23	163.29	637.04	582.93	6.89	OSF1.50	10970.00	10860.19				MinPt-ADP
	748.18	164.03	638.50	584.15	6.87	OSF1.50	11050.00	10940.19				MinPt-SF
	1858.94	365.52	1614.92	1493.41	7.65	OSF1.50	23222.96	12946.00				MinPts
Coterra Red Hills Unit 77H Rev2 kFc 11Dec24 (DefinitivePlan) - Pass												
	1301.21	32.81	1299.92	1268.40	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
	1301.16	32.81	1299.87	1268.35	714044.28	MAS = 10.00 (m)	10.00	10.00				MinPts
	1301.16	32.81	1299.87	1268.35	N/A	MAS = 10.00 (m)	23.00	23.00				WRP
	1301.16	32.81	1289.42	1268.35	124.37	MAS = 10.00 (m)	1110.00	1110.00				MinPt-EOU
	1301.16	32.81	1287.77	1268.35	106.07	MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
	749.85	84.63	693.10	665.21	13.43	OSF1.50	5478.37	5368.85				MinPt-CiCt
	750.00	85.11	692.93	664.89	13.36	OSF1.50	5510.00	5400.38				MinPt-EOU
	750.25	85.40	692.99	664.85	13.31	OSF1.50	5530.00	5420.33				MinPt-ADP
	805.71	154.05	702.68	651.66	7.89	OSF1.50	10310.00	10200.19				MinPt-EOU
	805.81	154.17	702.70	651.63	7.88	OSF1.50	10320.00	10210.19				MinPt-ADP
	808.39	155.06	704.69	653.33	7.86	OSF1.50	10400.00	10290.19				MinPt-SF
	2441.11	126.76	2356.28	2314.35	29.10	OSF1.50	13680.00	13020.35				MinPt-CiCt
	2441.16	126.92	2356.22	2314.24	29.06	OSF1.50	13700.00	13020.20				MinPt-EOU
	2441.23	127.01	2356.23	2314.22	29.04	OSF1.50	13710.00	13020.12				MinPt-ADP
	2413.14	358.37	2173.89	2054.76	10.12	OSF1.50	23222.96	12946.00				MinPts
30-025-46313 - CASCADE 28 FEDERAL 85H - MWD to 16925ft - A (DefinitiveSurvey) - Pass												
	5296.08	32.81	5294.10	5263.28	#####	MAS = 10.00 (m)	0.00	0.00				MinPts
	5296.11	32.81	5294.12	5263.30	441679.20	MAS = 10.00 (m)	23.00	23.00				WRP
	5296.76	32.81	5293.91	5263.96	6050.34	MAS = 10.00 (m)	170.00	170.00				MinPt-EOU
	5308.00	32.81	5293.71	5275.20	430.79	MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
	5023.09	92.27	4961.03	4930.81	83.08	OSF1.50	5470.00	5360.51				MinPt-CiCt
	5023.09	95.60	4958.82	4927.49	80.14	OSF1.50	5630.00	5520.21				MinPt-CiCt
	5023.43	96.66	4958.46	4926.77	79.25	OSF1.50	5700.00	5590.19				MinPt-EOU
	5025.05	98.51	4958.84	4926.54	77.76	OSF1.50	5830.00	5720.19				MinPt-ADP
	5049.25	114.98	4972.07	4934.28	66.79	OSF1.50	6900.00	6790.19				MinPt-EOU
	5051.22	117.10	4972.61	4934.12	65.59	OSF1.50	7040.00	6930.19				MinPt-ADP
	1066.98	302.04	865.12	764.94	5.32	OSF1.50	12370.17	12260.36				MinPt-CiCt
	1067.03	302.22	865.05	764.81	5.31	OSF1.50	12380.00	12270.19				MinPt-EOU
	1067.17	302.38	865.08	764.78	5.31	OSF1.50	12390.00	12280.19				MinPt-ADP
	1067.72	302.65	865.45	765.07	5.31	OSF1.50	12410.00	12300.19				MinPt-SF
	10626.24	219.34	10479.51	10406.90	73.16	OSF1.50	23222.96	12946.00				TD
30-025-44913 - SALADO DRAW 9-16 W1AP FED COM 002H - MWD to 22825ft - A (DefinitiveSurvey) - Pass												
	10752.63	32.81	10750.65	10719.83	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
	10752.62	32.81	10750.64	10719.81	7055798.61	MAS = 10.00 (m)	10.00	10.00				MinPt-SF
	10752.62	32.81	10750.64	10719.81	#####	MAS = 10.00 (m)	20.00	20.00				MinPts
	10752.62	32.81	10750.64	10719.81	#####	MAS = 10.00 (m)	23.00	23.00				WRP
	10751.97	32.81	10744.07	10719.16	1815.44	MAS = 10.00 (m)	670.00	670.00				MinPts
	10752.99	32.81	10741.70	10720.18	1155.41	MAS = 10.00 (m)	1060.00	1060.00				MinPt-EOU
	10797.42	56.29	10759.31	10741.14	296.99	OSF1.50	3670.00	3613.06				MinPt-CiCt
	10798.44	59.16	10758.41	10739.28	282.17	OSF1.50	3860.00	3796.58				MinPt-EOU
	10799.73	60.71	10758.67	10739.02	274.78	OSF1.50	3960.00	3893.17				MinPt-ADP
	10802.65	64.21	10759.25	10738.43	259.42	OSF1.50	4130.00	4057.38				MinPt-EOU
	10803.95	65.75	10759.52	10738.19	253.20	OSF1.50	4230.00	4153.97				MinPt-ADP
	10521.34	141.56	10426.43	10379.78	112.76	OSF1.50	9520.00	9410.19				MinPt-CiCt
	10521.60	142.26	10426.22	10379.34	112.20	OSF1.50	9600.00	9490.19				MinPt-EOU
	10521.90	142.61	10426.29	10379.30	111.92	OSF1.50	9640.00	9530.19				MinPt-ADP
	10530.40	154.66	10426.76	10375.74	103.19	OSF1.50	10460.00	10350.19				MinPt-EOU
	10530.26	159.18	10423.60	10371.08	100.23	OSF1.50	10780.00	10670.19				MinPt-CiCt
	10530.91	165.13	10420.28	10365.78	96.59	OSF1.50	11200.00	11090.19				MinPt-CiCt
	10531.49	167.38	10419.36	10364.10	95.28	OSF1.50	11390.00	11280.19				MinPts
	10531.69	167.61	10419.45	10364.08	95.09	OSF1.50	11420.00	11310.19				MinPt-EOU
	10533.81	173.57	10417.60	10360.24	91.82	OSF1.50	11800.00	11690.19				MinPt-CiCt
	10534.05	174.30	10417.35	10359.75	91.43	OSF1.50	11880.00	11770.19				MinPt-EOU
	10534.42	174.76	10417.42	10359.86	91.19	OSF1.50	11930.00	11820.19				MinPt-ADP
	10550.16	180.83	10429.10	10369.32	88.23	OSF1.50	12538.36	12428.55				MinPt-SF

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	
	1095.13	281.17	907.18	813.96	5.87	OSF1.50	23222.96	12946.00				MinPts
30-025-44648 - SALADO DRAW 9-16 W0AP FEDERAL COM 003H - MWD to 21034ft - A (DefinitiveSurvey) - Pass												
10801.81	32.81	10799.83	10769.00	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
10801.80	32.81	10799.82	10768.99	8095896.83		MAS = 10.00 (m)	10.00	10.00				MinPt-SF
10801.79	32.81	10799.81	10768.98	#####		MAS = 10.00 (m)	20.00	20.00				MinPts
10801.79	32.81	10799.81	10768.99	#####		MAS = 10.00 (m)	23.00	23.00				WRP
10804.74	32.81	10798.85	10771.93	2767.66		MAS = 10.00 (m)	510.00	510.00				MinPt-EOU
10806.93	32.81	10799.02	10774.12	1820.43		MAS = 10.00 (m)	720.00	720.00				MinPt-EOU
10809.62	32.81	10796.74	10776.81	991.60		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
10808.75	32.81	10793.38	10775.94	794.03		MAS = 10.00 (m)	1630.00	1629.96				MinPts
10809.26	32.81	10792.36	10776.45	714.01		MAS = 10.00 (m)	1820.00	1819.33				MinPt-EOU
10812.08	32.81	10793.51	10779.27	643.30		MAS = 10.00 (m)	2010.00	2007.31				MinPt-EOU
10815.80	32.81	10794.93	10782.99	565.91		MAS = 10.00 (m)	2230.00	2222.13				MinPt-EOU
10847.79	51.66	10812.77	10796.14	326.07		OSF1.50	3450.00	3400.56				MinPt-EOU
10848.79	52.87	10812.96	10795.93	318.37		OSF1.50	3530.00	3477.83				MinPt-ADP
10852.52	56.27	10814.42	10796.25	298.57		OSF1.50	3720.00	3661.35				MinPt-EOU
10853.18	56.95	10814.63	10796.23	294.91		OSF1.50	3760.00	3699.99				MinPt-ADP
10808.74	176.51	10490.57	10432.23	90.91		OSF1.50	11930.00	11820.19				MinPt-CtCt
10608.90	176.98	10490.42	10431.92	90.67		OSF1.50	11990.00	11880.19				MinPt-EOU
10609.10	177.21	10490.46	10431.89	90.55		OSF1.50	12020.00	11910.19				MinPt-ADP
10624.89	181.04	10503.70	10443.85	88.76		OSF1.50	12538.36	12428.55				MinPt-SF
1142.43	269.40	962.33	873.03	6.39		OSF1.50	23222.96	12946.00				MinPts
30-025-44648-0100 - SALADO DRAW 9-16 W0AP FEDERAL COM 3H ST01 - MWD to 20109ft - A (DefinitiveSurvey) - Pass												
10801.81	32.81	10799.83	10769.00	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
10801.80	32.81	10799.82	10768.99	8095896.83		MAS = 10.00 (m)	10.00	10.00				MinPt-SF
10801.79	32.81	10799.81	10768.98	#####		MAS = 10.00 (m)	20.00	20.00				MinPts
10801.79	32.81	10799.81	10768.99	#####		MAS = 10.00 (m)	23.00	23.00				WRP
10804.74	32.81	10798.85	10771.93	2767.66		MAS = 10.00 (m)	510.00	510.00				MinPt-EOU
10806.93	32.81	10799.02	10774.12	1820.43		MAS = 10.00 (m)	720.00	720.00				MinPt-EOU
10809.62	32.81	10796.74	10776.81	991.60		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
10808.75	32.81	10793.38	10775.94	794.03		MAS = 10.00 (m)	1630.00	1629.96				MinPts
10809.26	32.81	10792.36	10776.45	714.01		MAS = 10.00 (m)	1820.00	1819.33				MinPt-EOU
10812.08	32.81	10793.51	10779.27	643.30		MAS = 10.00 (m)	2010.00	2007.31				MinPt-EOU
10815.80	32.81	10794.93	10782.99	565.91		MAS = 10.00 (m)	2230.00	2222.13				MinPt-EOU
10847.79	51.66	10812.77	10796.14	326.07		OSF1.50	3450.00	3400.56				MinPt-EOU
10848.79	52.87	10812.96	10795.93	318.37		OSF1.50	3530.00	3477.83				MinPt-ADP
10852.52	56.27	10814.42	10796.25	298.57		OSF1.50	3720.00	3661.35				MinPt-EOU
10853.18	56.95	10814.62	10796.23	294.91		OSF1.50	3760.00	3699.99				MinPt-ADP
10808.72	176.51	10490.55	10432.21	90.91		OSF1.50	11930.00	11820.19				MinPt-CtCt
10608.89	176.98	10490.40	10431.91	90.67		OSF1.50	11990.00	11880.19				MinPt-EOU
10609.09	177.21	10490.44	10431.87	90.55		OSF1.50	12020.00	11910.19				MinPt-ADP
10624.87	181.04	10503.68	10443.84	88.76		OSF1.50	12538.36	12428.55				MinPt-SF
1142.44	269.40	962.34	873.04	6.39		OSF1.50	23222.96	12946.00				MinPts
30-025-44497 - SALADO DRAW 9-16 W0B0 FED COM 002H - MWD to 22240ft - A (DefinitiveSurvey) - Pass												
10530.99	32.81	10529.01	10498.19	N/A		MAS = 10.00 (m)	0.00	0.00				Surface
10530.94	32.81	10528.95	10498.13	1534783.21		MAS = 10.00 (m)	20.00	20.00				MinPt-SF
10530.93	32.81	10528.95	10498.13	1596277.76		MAS = 10.00 (m)	23.00	23.00				WRP
10529.76	32.81	10524.03	10496.95	2803.57		MAS = 10.00 (m)	460.00	460.00				MinPts
10531.02	32.81	10522.82	10498.21	1693.18		MAS = 10.00 (m)	750.00	750.00				MinPt-EOU
10531.06	32.81	10514.28	10498.25	700.69		MAS = 10.00 (m)	1740.00	1739.72				MinPts
10531.54	32.81	10513.70	10498.73	654.80		MAS = 10.00 (m)	1850.00	1849.13				MinPt-EOU
10756.35	80.21	10702.34	10676.14	205.26		OSF1.50	4940.00	4839.76				MinPts
10763.48	84.50	10706.61	10678.98	194.75		OSF1.50	5180.00	5073.39				MinPt-EOU
10511.60	170.54	10397.41	10341.06	93.26		OSF1.50	11570.00	11460.19				MinPt-CtCt
10511.89	171.40	10397.13	10340.50	92.80		OSF1.50	11660.00	11550.19				MinPt-EOU
10512.10	171.71	10397.13	10340.39	92.63		OSF1.50	11690.00	11580.19				MinPt-EOU
10512.94	172.72	10397.30	10340.22	92.09		OSF1.50	11780.00	11670.19				MinPt-ADP
10537.76	179.36	10417.69	10358.40	88.86		OSF1.50	12538.36	12428.55				MinPt-SF
1227.13	270.82	1046.08	956.31	6.83		OSF1.50	23222.96	12946.00				MinPts
Coterra Cascade 28 Federal 403H - Corrected MWD to 17160ft (DefinitiveSurvey) - Pass												
5406.31	32.81	5405.13	5373.50	2044800.95		MAS = 10.00 (m)	0.00	0.00				Surface
5406.29	32.81	5405.01	5373.48	54702.26		MAS = 10.00 (m)	23.00	23.00				WRP
5402.17	32.81	5390.92	5369.36	536.34		MAS = 10.00 (m)	1080.00	1080.00				MinPt-EOU
5401.96	32.81	5389.58	5369.15	476.65		MAS = 10.00 (m)	1210.00	1210.00				MinPts
5402.21	32.81	5389.20	5369.40	451.72		MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU
5402.35	32.81	5389.25	5369.54	445.89		MAS = 10.00 (m)	1310.00	1310.00				MinPt-EOU
5343.14	69.43	5296.52	5273.71	117.07		OSF1.50	4330.00	4250.56				MinPt-CtCt
5344.57	73.74	5295.09	5270.84	110.17		OSF1.50	4550.00	4463.06				MinPt-CtCt
5345.19	75.49	5294.54	5269.70	107.60		OSF1.50	4660.00	4569.31				MinPt-EOU
5345.69	79.44	5292.40	5266.25	102.18		OSF1.50	4840.00	4743.17				MinPt-CtCt
5346.22	81.03	5291.87	5265.19	100.16		OSF1.50	4940.00	4839.76				MinPt-EOU
5347.33	82.39	5292.07	5264.93	98.51		OSF1.50	5020.00	4917.15				MinPt-ADP
5420.03	107.06	5348.33	5312.97	76.63		OSF1.50	6630.00	6520.19				MinPt-EOU
1229.26	217.12	1084.18	1012.13	8.52		OSF1.50	12435.08	12325.27				MinPt-CtCt
1229.27	217.18	1084.16	1012.09	8.52		OSF1.50	12440.00	12330.19				MinPt-EOU
1229.35	217.28	1084.17	1012.07	8.52		OSF1.50	12450.00	12340.19				MinPt-ADP
1230.48	217.61	1085.08	1012.87	8.51		OSF1.50	12490.00	12380.19				MinPt-SF
10648.98	209.11	10509.25	10439.87	76.74		OSF1.50	23222.96	12946.00				TD

Coterra: Well Control Plan



Well Control Plan

Warning Signs of a Kick

If a kick is ever suspected, perform flow check.

While Drilling:

1. Drilling break or increase in penetration rate
2. Increase of flow
3. Pit gain
4. Flow without pumping
5. Circulating pressure decrease and/or spm increase
6. Increase in gas cutting at the shakers
7. Decrease in cuttings at shakers

While Tripping:

1. Hole not taking the proper fill on trip out of hole
2. Hole returns too much mud on trip in hole
3. Flow without pumping

While Out of the Hole:

1. Flow
2. Pit gain

Well Control Procedures with Diverter

A TIW valve in the open position must be on the rig floor at all times.

If rotating head is installed:

1. Perform flow check.
2. If well is flowing, divert flow down flow line and through separator, before returning across shakers.
3. Swap to 10 ppg brine and circulate around. Notify superintendent.

Coterra: Well Control Plan

4. If well becomes uncontrollable, close annular, which will open HCR to divert flow away from rig.

If rotating head is not installed:

1. Perform flow check.
2. If well is flowing uncontrollably, close annular, which will open HCR to divert flow away from rig.
3. Swap to 10 ppg brine and circulate around. Notify superintendent.
4. After 10 ppg is circulated around shut pumps off and perform flow check.

Well Control Procedures

Coterra follows a hard shut-in procedure. Choke will be in the closed position.

General Well Control

1. If in doubt, secure the well first, then inform your supervisor.
2. Never wait for approval to shut in the well.
3. Verify that the mud pump is off before you close the BOP.
4. Always check and verify the well is properly secured after shut in.
5. Always install TIW valve in the open position.
6. If TIW valve is installed and then closed, apply estimated DP shut-in pressure above valve before opening.
7. The weak link in the mud system and mud lines is the pressure relief valve or pop off valve on the mud pump.
8. Keep the TIW valve wrench in a designated location on the rig floor and in the open position.
9. Use a drill string float above the bit. Don't perforate or disable the float.
10. In the event wellbore pressure encroaches to the maximum rated pressure of the annular, primary pressure control will be switched to the higher rated components (i.e., switch from annular to pipe rams) – upper pipe rams will be closed, and the annular opened in order to not exceed maximum rated pressures.

Hard Shut-In

1. Remote choke is closed.
2. Stop pumping and space out.
3. Check for flow.
4. To shut in, close annular or pipe ram if no annular is present.
5. Open the HCR valve.
6. Check systems, bump float. Record Initial Shut in Drill pipe pressure and Initial shut in casing pressure.

Coterra: Well Control Plan

Flow Check when on Bottom

1. Alert crew & stop rotating
2. Pick up and space out
3. Shut down pumps
4. Observe well for flow
5. Shut-in if flowing

Shutting in while Drilling

1. After flow has been detected via flow check, kill pumps, shut in well and open HCR
2. Verify well is shut-in and flow has stopped
3. Notify supervisory personnel
4. Record data
5. Begin go forward planning

Flow Check while Tripping

1. Alert crew & pick up / space out
2. Stop pipe movement. Set slips with tool joint accessible at rotary table
3. Install open TIW safety valve and close valve
4. Observe well for flow
5. Shut-in if flowing

Shutting in while Tripping

1. Install open TIW safety valve and close valve
2. Shut-in the well
3. Verify well is shut-in and flow has stopped
4. Install IBOP
5. Notify supervisory personnel
6. Record data; SICP, shut-in time, kick depth, and pit gain
7. Begin go forward planning

Shutting in while Out of Hole

1. Sound alarm
2. Shut-in well: close blind rams.
3. Verify well is shut-in and monitor pressures.
4. Notify supervisory personnel
5. Record data; SICP, shut-in time, kick depth, and pit gain
6. Begin go forward planning

Information to Record while Shut-In

1. Shut in drill pipe pressure every 5 minutes

Coterra: Well Control Plan

2. Shut in casing pressure every 5 minutes
3. Pit gain
4. Total volume in pit system
5. Mud weight in suction pit
6. Current depth
7. Total depth
8. Time the well is shut in

H2S with Annular Diverter:

1. Kill Pumps, close annular, which will open HCR, to divert flow away from rig.
2. Muster and take head count.
3. Call ASSI to check location for H2S. Call Coterra superintendent.
4. After ASSI has checked for H2S the path forward will be decided from Coterra superintendent.

H2S with BOP's:

1. Kill pumps
2. Shut in annular with HCR open and chokes closed.
3. Muster and take head count.
4. Call ASSI to check location for H2S. Call Coterra superintendent.
5. After ASSI has checked for H2S. discuss path forward with Coterra superintendent

Procedure for Closing Blind Rams

- Open HCR valve (visually check that the HCR valve is open – stem in the valve is open, stem out the valve is closed).
- Verify all circulating pumps are off (mud pumps, trip tank pump, etc.)
- Ensure that the hydraulic choke is in the closed position.
- Close the blind rams and place the “blind rams closed, bleed pressure and remove hole cover before opening” sign on the console.
- Monitor the shut in casing pressure gauge periodically while the blinds are closed to ensure that wellbore pressure isn't building. If pressure build up is observed, monitor the shut in casing pressure more frequently & document. Notify rig management and Coterra representative of the pressure build up.
- Ensure that the inner bushings are locked into the master bushings if applicable.
- Install hole cover.

Procedure for Opening Blind Rams

- Make sure choke manifold is aligned correctly.
- Open the hydraulic choke to bleed any trapped pressure that may be under the blind rams. (Even if the casing pressure gauge is reading zero).

Coterra: Well Control Plan

- Confirm that no flow is discharging into the trip tank or possum bellies of the shale shaker (wherever the separator is discharging into).
- Remove hole cover.
- Confirm that the inner bushing are locked into the master bushings if applicable.
- Clear all personnel from the rig floor.
- Remove sign and open blind rams.
- Return the BOPE to its original operating alignment.

BOP Drills

- Drilling crews should conduct BOP drills weekly from BOP nipple up to TD for reaction time to properly simulate securing the well. Record BOP drills on that day's report.
- Standard precautions such as checking the accumulator for proper working pressure, function testing rams, and recording slow pump rates are performed on a daily basis or on trips..
- All supervisory personnel onsite need to be properly trained and currently hold certification from an approved blowout prevention school. Any deviation from this needs to be discussed prior to spud.
- Drillers should always notify the tool pusher and the drilling foreman before performing a blowout drill.

Choke Manifold Freeze Prevention

- When possible, blow out the choke & kill lines as well as the choke manifold with rig air to remove water based fluids.
- When clear water is being placed into the choke & kill line as well as the choke manifold, make sure that the water has a mixture of 30% methanol added.
- When applicable, choke & kill lines as well as choke manifold needs to be pumped through with the rig pump by the driller to ensure that the lines aren't plugged with settling barite or solids.

32-25-33-B Sundry ID 2830708 Red Hills Unit 20H Lea NM005792 Cimarex Energy Company 13-22h 11-14-2024 LV.xlsm

Red Hills Unit 20H

10 3/4	surface csg in a		14 3/4	inch hole.		Design Factors				Surface		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.50		j 55	btc	14.79	3.48	0.54	1,050	7	1.02	7.07	42,525
"B"				btc				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500				Tail Cmt	does not	circ to sfc.		Totals:	1,050			42,525
Comparison of Proposed to Minimum Required Cement Volumes												
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg
14 3/4	0.5563	539	884	584	51	8.33	3077	5M				1.50
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.												
Site plot (pipe racks 5 or 6) as per 0.0.1 ill 0.4-1, not found.												

7 5/8		casing inside the		10 3/4		Design Factors					Int 1		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	29.70		l 80	btc	1.85	0.82	0.93	12,538	1	1.51	1.56	372,379	
"B"								0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: -601						Totals:		12,538				372,379	
The cement volume(s) are intended to achieve a top of 0						ft from surface or a		1050				overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg	
9 7/8	0.2148	1193	3891	2713	43	9.00	4550	5M				0.69	
r D V Tool(s):						sum of sx		Σ CuFt				Σ%excess	
t by stage % :						1193		3891				43	
Class 'H' tail cmt yld > 1.20						MASP is within 10% of 5000psig, need exrta equip?							
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.55, b, c, d <0.70 a Problem!!													

5 1/2	casing inside the	7 5/8	A Buoyant	Design Factors					Prod 1		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	l 80	lrc	2.23	1.28	1.24	12,038	1	2.02	2.09	240,760
"B"	18.00	p 110	btc	35.50	1.82	1.84	11,185	2	2.99	2.96	201,330
"C"							0				0
"D"							0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,180							Totals:	23,223			442,090
The cement volume(s) are intended to achieve a top of 12038 ft from surface or a								500			overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
6 3/4	0.0835	1384	1799	939	92	11.00					0.35
Class 'C' tail cmt yld > 1.35											

#N/A	0	5 1/2		Design Factors					<Choose Casing>		
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"			0.00				0				0
"B"			0.00				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	0			0
Cmt vol calc below includes this csg, TOC intended								#N/A			overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A						
#N/A Capitan Reef est top XXXX.											

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 489079

CONDITIONS

Operator: Coterra Energy Operating Co. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 489079
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
matthew.gomez	Administrative order required for non-standard location prior to production.	8/12/2025
matthew.gomez	Administrative order required for non-standard spacing unit prior to production.	8/12/2025
matthew.gomez	Notify the OCD 24 hours prior to casing & cement.	8/12/2025
matthew.gomez	Any previous COA's not addressed within the updated COA's still apply.	8/12/2025