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

Form C-101
August 1, 2011

Permit 388126

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
Coterra Energy Operating Co. 6001 Deauville Blvd Midland, TX 79706	215099
	3. API Number 30-025-54746

4. Property Code	5. Property Name	6. Well No.
321280	CANYONLANDS 2 STATE COM	401H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	2	24S	34E	M	370	S	810	W	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
N	2	24S	34E	N	100	S	1604	W	Lea

9. Pool Information

ANTELOPE RIDGE;WOLFCAMP	2220

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3292
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	22610	Wolfcamp		7/1/2025
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	10.75	40.5	930	462	0
Int1	9.875	7.625	29.7	11382	1097	0
Prod	6.75	5.5	20	11382	1479	0
Prod	6.75	5	18	22610	1479	11182

Casing/Cement Program: Additional Comments

Casing design is a tapered long string 5.5" x 5" design

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	50000	5000	
Double Ram	10000	10000	
Pipe	10000	10000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**	
Printed Name:	Electronically filed by Phillip Levasseur	Approved By:	Jeffrey Harrison
Title:	Regulatory Compliance Manager	Title:	Petroleum Specialist III
Email Address:	phillip.levasseur@coterra.com	Approved Date:	6/13/2025 Expiration Date: 6/13/2027
Date:	4/25/2025 Phone: 412-759-4585	Conditions of Approval Attached	

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	Pool Code	Pool Name
30-025-54746	2220	Antelope Ridge; Wolfcamp

Property Code	Property Name	Well Number
321280	CANYONLANDS 2 STATE COM	401H

OGRID No.	Operator Name	Ground Level Elevation
215099	Coterra Energy Operating Co.	3,292.4'

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
M	2	24S	34E		370 SOUTH	810 WEST	32.240305°	-103.446678°	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD 83)	Longitude (NAD 83)	County
N	2	24S	34E		100 SOUTH	1,604 WEST	32.239569°	-103.444109°	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
640.16	Infill	351H - NA	N	C

Order Numbers. NA 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
M	2	24S	34E		100 SOUTH	334 WEST	32.239559°	-103.448216°	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
M	2	24S	34E		100 SOUTH	334 WEST	32.239559°	-103.448216°	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
N	2	24S	34E		100 SOUTH	1,604 WEST	32.239569°	-103.444109°	LEA

Unitized Area or Area of Uniform Interest	Spacing Unit Type	Ground Floor Elevation:
NA	☒ Horizontal ☐ Vertical	3292

OPERATOR CERTIFICATIONS

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.

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.

Shelly Bowen 3/12/2025

Signature Date

Shelly Bowen

Printed Name

shelly.bowen@coterra.com

Email Address

SURVEYOR CERTIFICATIONS

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.

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 02-27-25

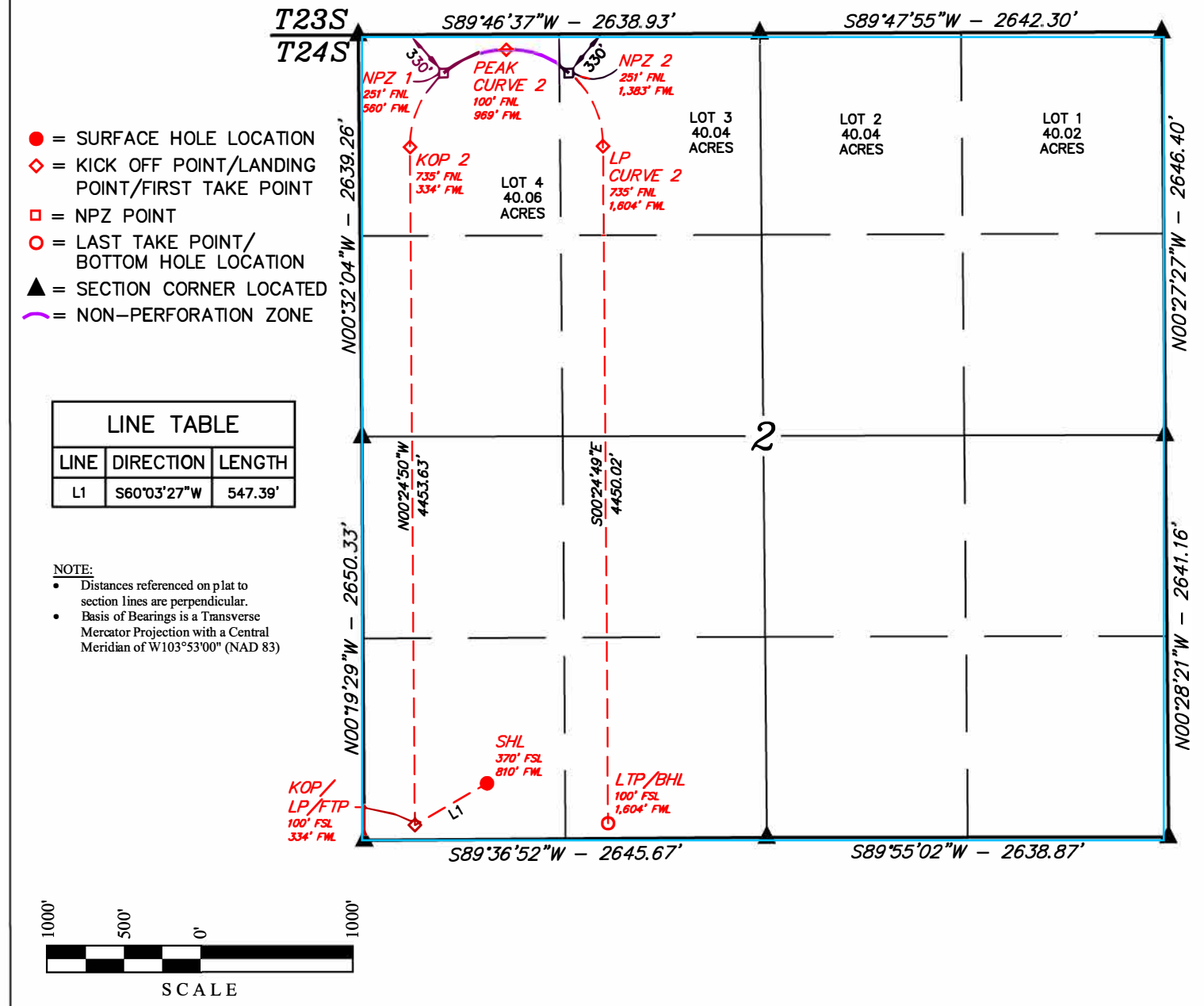
Signature and Seal of Professional Surveyor

23782 January 02, 2025

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	Well Number	Drawn By	Revised By
CANYONLANDS 2 STATE COM	401H	N.R. 01-08-25	REV. 1 T.I.R. 02-27-25 (WELLBORE CHANGES & ADD NPZ)



● = SURFACE HOLE LOCATION
◇ = KICK OFF POINT/LANDING POINT/FIRST TAKE POINT
□ = NPZ POINT
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
⌒ = NON–PERFORATION ZONE

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S60°03'27"W	547.39'

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)

1000' 500' 0' 1000'
SCALE

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°14'25.10" (32.240305°)
LONGITUDE = -103°26'48.04" (-103.446678°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°14'24.65" (32.240180°)
LONGITUDE = -103°26'46.33" (-103.446203°)
STATE PLANE NAD 83 (N.M. EAST)
N: 452288.10' E: 815475.50'
STATE PLANE NAD 27 (N.M. EAST)
N: 452228.99' E: 774291.10'

NAD 83 (KOP/LP/FTP)
LATITUDE = 32°14'22.41" (32.239559°)
LONGITUDE = -103°26'53.58" (-103.448216°)
NAD 27 (KOP/LP/FTP)
LATITUDE = 32°14'21.97" (32.239435°)
LONGITUDE = -103°26'51.87" (-103.447741°)
STATE PLANE NAD 83 (N.M. EAST)
N: 452012.94' E: 815002.40'
STATE PLANE NAD 27 (N.M. EAST)
N: 451953.84' E: 773817.99'

NAD 83 (KOP 2)
LATITUDE = 32°15'06.48" (32.251799°)
LONGITUDE = -103°26'53.74" (-103.448261°)
NAD 27 (KOP 2)
LATITUDE = 32°15'06.03" (32.251674°)
LONGITUDE = -103°26'52.03" (-103.447786°)
STATE PLANE NAD 83 (N.M. EAST)
N: 456465.57' E: 814951.58'
STATE PLANE NAD 27 (N.M. EAST)
N: 456406.36' E: 773767.37'

NAD 83 (NPZ 1)
LATITUDE = 32°15'11.26" (32.253128°)
LONGITUDE = -103°26'51.14" (-103.447538°)
NAD 27 (NPZ 2)
LATITUDE = 32°15'10.81" (32.253003°)
LONGITUDE = -103°26'49.42" (-103.447062°)
STATE PLANE NAD 83 (N.M. EAST)
N: 456950.94' E: 815171.17'
STATE PLANE NAD 27 (N.M. EAST)
N: 456891.71' E: 773986.96'

NAD 83 (PEAK CURVE 2)
LATITUDE = 32°15'12.76" (32.253544°)
LONGITUDE = -103°26'46.39" (-103.446218°)
NAD 27 (PEAK CURVE 2)
LATITUDE = 32°15'12.31" (32.253419°)
LONGITUDE = -103°26'44.67" (-103.445743°)
STATE PLANE NAD 83 (N.M. EAST)
N: 457105.55' E: 815577.88'
STATE PLANE NAD 27 (N.M. EAST)
N: 457046.32' E: 774393.67'

NAD 83 (NPZ 2)
LATITUDE = 32°15'11.26" (32.253128°)
LONGITUDE = -103°26'41.56" (-103.444877°)
NAD 27 (NPZ 2)
LATITUDE = 32°15'10.81" (32.253003°)
LONGITUDE = -103°26'39.84" (-103.444401°)
STATE PLANE NAD 83 (N.M. EAST)
N: 456957.59' E: 815993.95'
STATE PLANE NAD 27 (N.M. EAST)
N: 456898.35' E: 774809.72'

NAD 83 (LP CURVE 2)
LATITUDE = 32°15'06.47" (32.251798°)
LONGITUDE = -103°26'38.95" (-103.444154°)
NAD 27 (LP CURVE 2)
LATITUDE = 32°15'06.03" (32.251674°)
LONGITUDE = -103°26'37.24" (-103.443679°)
STATE PLANE NAD 83 (N.M. EAST)
N: 456475.83' E: 816221.36'
STATE PLANE NAD 27 (N.M. EAST)
N: 456416.61' E: 775037.11'

NAD 83 (LTP/BHL)
LATITUDE = 32°14'22.45" (32.239569°)
LONGITUDE = -103°26'38.79" (-103.444109°)
NAD 27 (LTP/BHL)
LATITUDE = 32°14'22.00" (32.239444°)
LONGITUDE = -103°26'37.08" (-103.443634°)
STATE PLANE NAD 83 (N.M. EAST)
N: 452026.80' E: 816272.12'
STATE PLANE NAD 27 (N.M. EAST)
N: 451967.69' E: 775087.68'

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

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Phone: (505) 629-6116

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

Form APD Conditions

Permit 388126

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
Coterra Energy Operating Co. [215099] 6001 Deauville Blvd Midland, TX 79706	30-025-54746
	Well: CANYONLANDS 2 STATE COM #401H

OCD Reviewer	Condition
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.
jeffrey.harrison	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.
jeffrey.harrison	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.
jeffrey.harrison	Cement is required to circulate on both surface and intermediate1 strings of casing.
jeffrey.harrison	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
jeffrey.harrison	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.
jeffrey.harrison	Surface casing shall be set a minimum of 25' into the Rustler Anhydrite, above the salt, and below usable fresh water and cemented to the surface. If salt is encountered set casing at least 25 ft. above the salt.
jeffrey.harrison	Administrative order required for non-standard spacing unit prior to production.

COTERRA

Rev0

Borehole:	Well:	Field:	Structure:
Canyonlands 2 State Com 401U	Canyonlands 2 State Com 401U	NM Lea County (NAD 83)	Coterra Canyonlands 2 State Come Pad Lot M

Gravity & Magnetic Parameters						Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	HDGM 2025	Dip:	59.699°	Date:	02-Apr-2025	Lat:	N 32 14 25.10	Northing:	452288.1ftUS	Grid Conv:	0.473°	Slot:	Canyonlands 2 State Com 401U	TVD Ref:	RKB (3315.400 ft above MSL)
MagDec:	6.105°	FS:	47218.141nT	Gravity FS:	998.476mgn (9.80665 Based)	Lon:	W 103 26 48.04	Easting:	815475.5ftUS	Scale Fact:	0.99999516	Plan:	Coterra Canyonlands 2 State Com 401U Rev0 kFc 02Apr25		

Critical Points

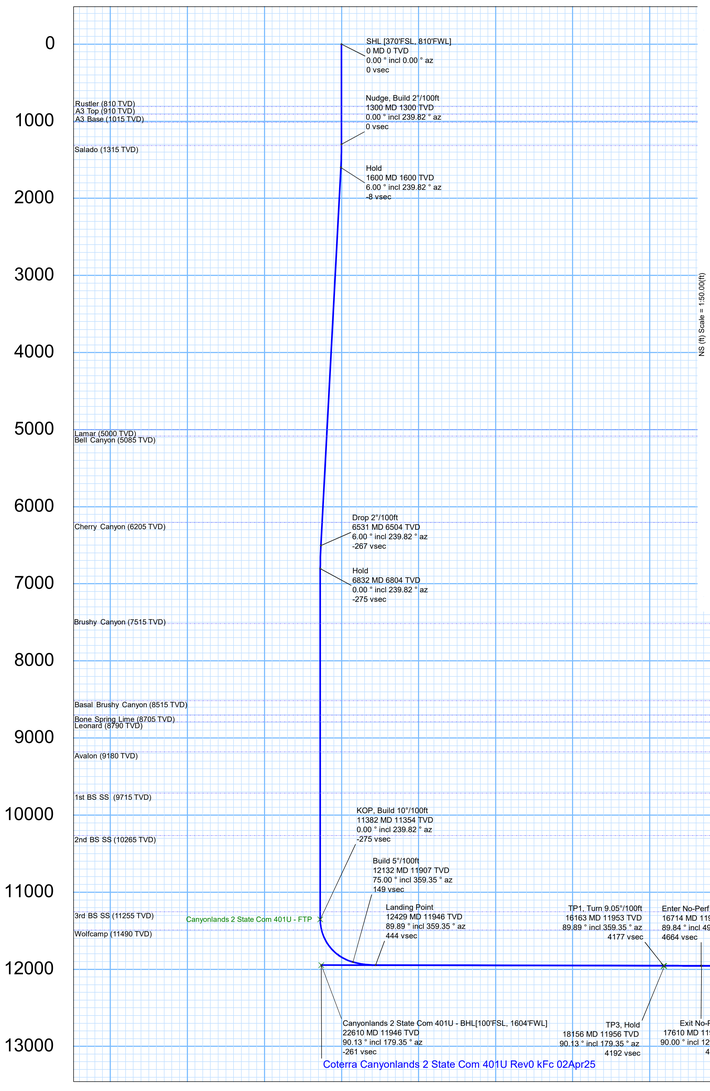
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [370'FSL, 810'FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rustler	810.00	0.00	239.82	810.00	0.00	0.00	0.00	0.00
A3 Top	910.00	0.00	239.82	910.00	0.00	0.00	0.00	0.00
A3 Base	1015.00	0.00	239.82	1015.00	0.00	0.00	0.00	0.00
Nudge, Build 2°/100ft	1300.00	0.00	239.82	1300.00	0.00	0.00	0.00	0.00
Salado	1315.00	0.30	239.82	1315.00	-0.02	-0.02	-0.03	2.00
Hold	1600.24	6.00	239.82	1599.69	-7.90	-7.90	-13.59	2.00
Lamar	5019.31	6.00	239.82	5000.00	-187.73	-187.73	-322.77	0.00
Bell Canyon	5104.78	6.00	239.82	5085.00	-192.22	-192.22	-330.50	0.00
Cherry Canyon	6230.96	6.00	239.82	6205.00	-251.46	-251.46	-432.34	0.00
Drop 2°/100ft	6531.43	6.00	239.82	6503.83	-267.26	-267.26	-459.52	0.00
Hold	6831.68	0.00	239.82	6803.52	-275.16	-275.16	-473.10	2.00
Brushy Canyon	7543.16	0.00	239.82	7515.00	-275.16	-275.16	-473.10	0.00
Basal Brushy Canyon	8543.16	0.00	239.82	8515.00	-275.16	-275.16	-473.10	0.00
Bone Spring Lime	8733.16	0.00	239.82	8705.00	-275.16	-275.16	-473.10	0.00
Leonard	8818.16	0.00	239.82	8790.00	-275.16	-275.16	-473.10	0.00
Avalon	9208.16	0.00	239.82	9180.00	-275.16	-275.16	-473.10	0.00
1st BS SS	9743.16	0.00	239.82	9715.00	-275.16	-275.16	-473.10	0.00
2nd BS SS	10293.16	0.00	239.82	10265.00	-275.16	-275.16	-473.10	0.00
3rd BS SS	11283.16	0.00	239.82	11255.00	-275.16	-275.16	-473.10	0.00
KOP, Build 10°/100ft	11381.68	0.00	239.82	11353.52	-275.16	-275.16	-473.10	0.00
Wolfcamp	11519.48	13.78	359.35	11490.00	-258.67	-258.67	-473.29	10.00
Build 5°/100ft	12131.68	75.00	359.35	11906.95	149.48	149.48	-477.92	10.00
Landing Point	12429.38	89.89	359.35	11946.00	443.75	443.75	-481.27	5.00
TP1, Turn 9.05°/100ft	16163.38	89.89	359.35	11953.47	4177.50	4177.50	-523.92	0.00
Enter No-Perf zone	16714.00	89.84	49.18	11954.89	4663.81	4663.81	-304.74	9.05
Hold	17157.91	89.89	89.35	11956.00	4817.79	4817.79	101.95	9.05
TP2, Turn 9.05°/100ft	17161.91	89.89	89.35	11956.00	4817.83	4817.83	105.95	0.00
Exit No-Perf zone	17610.00	90.00	129.90	11956.48	4670.45	4670.45	519.26	9.05
TP3, Hold	18156.38	90.13	179.35	11955.83	4191.95	4191.95	746.20	9.05
	18156.57	90.13	179.35	11955.83	4191.76	4191.76	746.20	2.00
Canyonlands 2 State Com 401U - BHL[100'FSL, 1604'FWL]	22609.93	90.13	179.35	11946.00	-261.30	-261.30	796.63	0.00

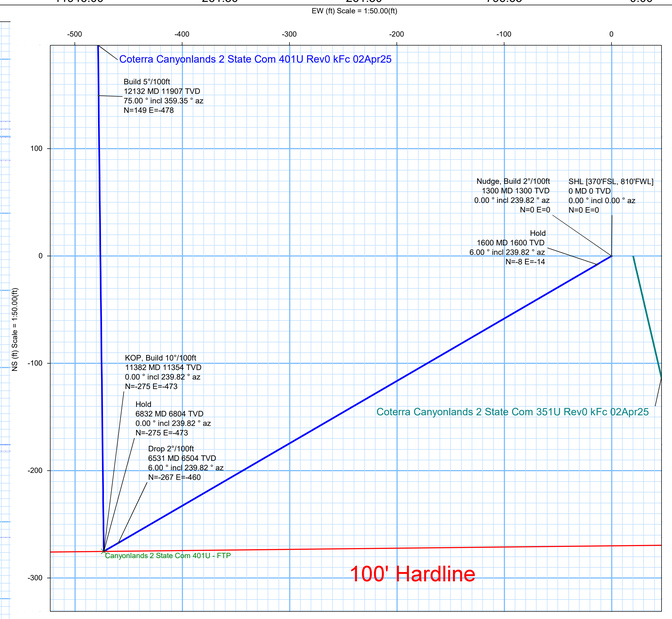
CONTROLLED

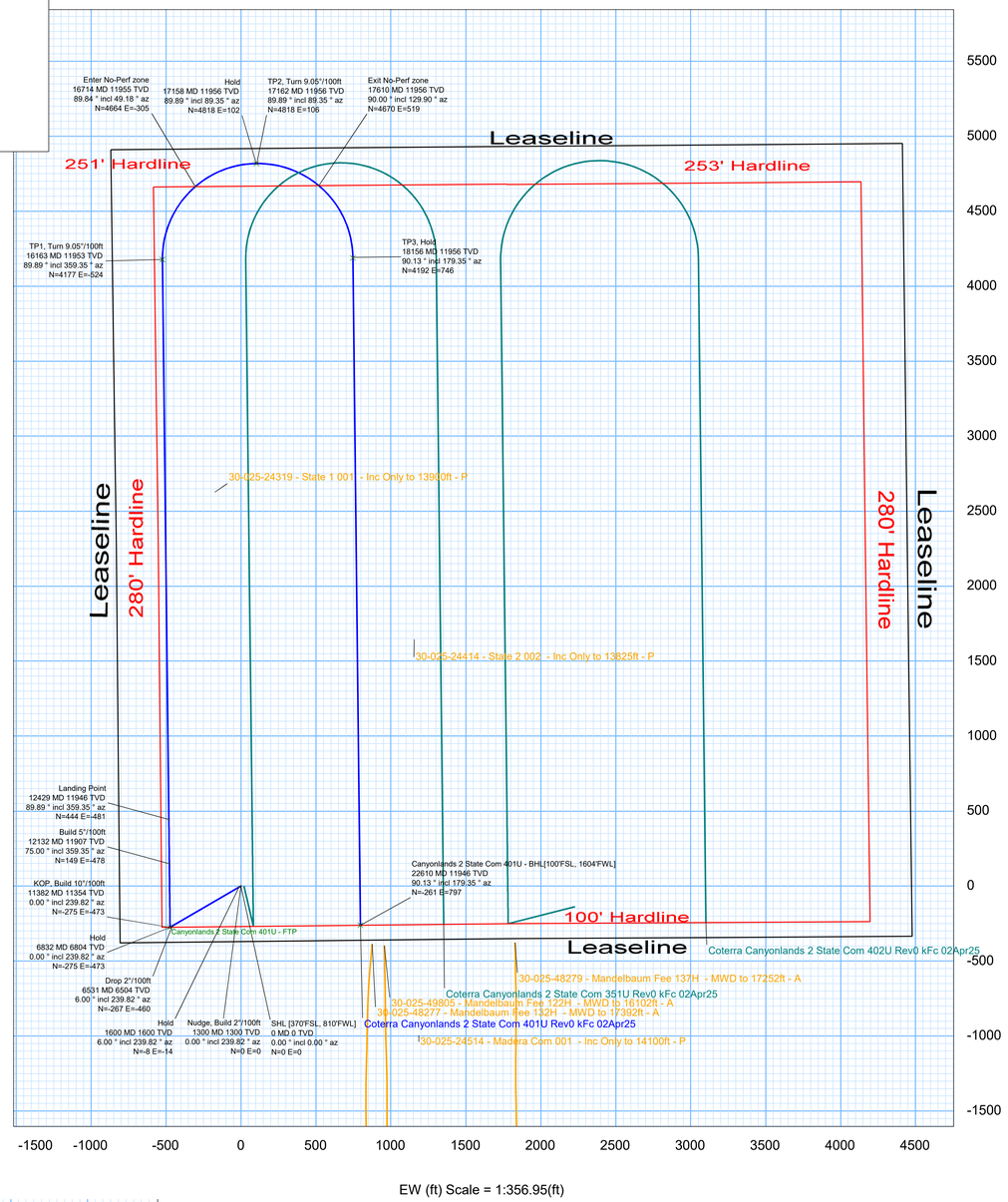
Plan ref	Coterra Canyonlands 2 State Com 401U Rev0 kFc 02Apr25
Drawing ref	
Copy number	of 3
Date	02-Apr-2025

1	Client	
2	Client	
3	Office	
4	Office	

Copy number for







Coterra Canyonlands 2 State Com 401U Rev0 kFc 02Apr25 Proposal
Geodetic Report
Def Plan

Report Date:	April 02, 2025 - 04:32 PM (UTC 0)	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	COTERRA	**Vertical Section Azimuth:**	0.000 °(GRID North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Coterra Canyonlands 2 State Come Pad Lot M / Canyonlands 2 State	**TVD Reference Datum:**	RKB
Well:	Canyonlands 2 State Com 401U	**TVD Reference Elevation:**	3315.400 ft above MSL
Borehole:	Canyonlands 2 State Com 401U	**Seabed / Ground Elevation:**	3292.400 ft above MSL
UBHI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.105°
Survey Name:	Coterra Canyonlands 2 State Com 401U Rev0 kFc 02Apr25	**Total Gravity Field Strength:**	998.4756mgn (9.80665 Based)
Survey Date:	April 02, 2025	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	281.903 ° / 11446.790 ft / 6.785 / 0.957	**Total Magnetic Field Strength:**	47218.141 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.699°
Location Lat / Long:	32°14'25.09795"N , 103°26'48.04144"W	**Declination Date:**	April 02, 2025
Location Grid N/E Y/X:	N 452288.100 ftUS , E 815475.500 ftUS	**Magnetic Declination Model:**	HDGM 2025
CRS Grid Convergence Angle:	0.473°	**North Reference:**	Grid North
Grid Scale Factor:	0.99999516(Applied)	**Grid Convergence Used:**	0.473°
Version / Patch:	2024.5.0.1	**Total Corr Mag North->Grid North:**	5.631°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [370'FSL, 810'FWL]	0.00	0.00	0.00	0.00	-3,315.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818			
	100.00	0.00	239.82	100.00	-3,215.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	200.00	0.00	239.82	200.00	-3,115.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	300.00	0.00	239.82	300.00	-3,015.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	400.00	0.00	239.82	400.00	-2,915.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	500.00	0.00	239.82	500.00	-2,815.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	600.00	0.00	239.82	600.00	-2,715.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	700.00	0.00	239.82	700.00	-2,615.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	800.00	0.00	239.82	800.00	-2,515.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
Rustler□	810.00	0.00	239.82	810.00	-2,505.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	900.00	0.00	239.82	900.00	-2,415.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
A3 Top□	910.00	0.00	239.82	910.00	-2,405.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	1,000.00	0.00	239.82	1,000.00	-2,315.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
A3 Base□	1,015.00	0.00	239.82	1,015.00	-2,300.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	1,100.00	0.00	239.82	1,100.00	-2,215.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
	1,200.00	0.00	239.82	1,200.00	-2,115.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
Nudge, Build 2°/100ft	1,300.00	0.00	239.82	1,300.00	-2,015.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
Salado□	1,315.00	0.30	239.82	1,315.00	-2,000.40	-0.02	-0.02	-0.03	452,288.08	815,475.47	32.24030493	-103.44667829	2.00	2.00	0.00
	1,400.00	2.00	239.82	1,399.98	-1,915.42	-0.88	-0.88	-1.51	452,287.22	815,473.99	32.24030261	-103.44668308	2.00	2.00	0.00
	1,500.00	4.00	239.82	1,499.84	-1,815.56	-3.51	-3.51	-6.03	452,284.59	815,469.47	32.24029548	-103.44669778	2.00	2.00	0.00
	1,600.00	6.00	239.82	1,599.45	-1,715.95	-7.89	-7.89	-13.57	452,280.21	815,461.93	32.24028361	-103.44672226	2.00	2.00	0.00
Hold	1,600.24	6.00	239.82	1,599.69	-1,715.71	-7.90	-7.90	-13.59	452,280.20	815,461.91	32.24028357	-103.44672233	2.00	2.00	0.00
	1,700.00	6.00	239.82	1,698.90	-1,616.50	-13.15	-13.15	-22.61	452,274.95	815,452.89	32.24026936	-103.44675164	0.00	0.00	0.00
	1,800.00	6.00	239.82	1,798.35	-1,517.05	-18.41	-18.41	-31.65	452,269.69	815,443.85	32.24025511	-103.44678103	0.00	0.00	0.00
	1,900.00	6.00	239.82	1,897.81	-1,417.59	-23.67	-23.67	-40.69	452,264.43	815,434.81	32.24024086	-103.44681042	0.00	0.00	0.00
	2,000.00	6.00	239.82	1,997.26	-1,318.14	-28.93	-28.93	-49.74	452,259.17	815,425.76	32.24022660	-103.44683980	0.00	0.00	0.00
	2,100.00	6.00	239.82	2,096.71	-1,218.69	-34.19	-34.19	-58.78	452,253.91	815,416.72	32.24021235	-103.44686919	0.00	0.00	0.00
	2,200.00	6.00	239.82	2,196.16	-1,119.24	-39.45	-39.45	-67.82	452,248.65	815,407.68	32.24019810	-103.44689857	0.00	0.00	0.00
	2,300.00	6.00	239.82	2,295.61	-1,019.79	-44.71	-44.71	-76.87	452,243.39	815,398.63	32.24018385	-103.44692796	0.00	0.00	0.00
	2,400.00	6.00	239.82	2,395.06	-920.34	-49.97	-49.97	-85.91	452,238.13	815,389.59	32.24016960	-103.44695734	0.00	0.00	0.00
	2,500.00	6.00	239.82	2,494.51	-820.89	-55.23	-55.23	-94.95	452,232.87	815,380.55	32.24015535	-103.44698673	0.00	0.00	0.00
	2,600.00	6.00	239.82	2,593.97	-721.43	-60.49	-60.49	-104.00	452,227.62	815,371.50	32.24014110	-103.44701611	0.00	0.00	0.00
	2,700.00	6.00	239.82	2,693.42	-621.98	-65.74	-65.74	-113.04	452,222.36	815,362.46	32.24012685	-103.44704550	0.00	0.00	0.00
	2,800.00	6.00	239.82	2,792.87	-522.53	-71.00	-71.00	-122.08	452,217.10	815,353.42	32.24011260	-103.44707488	0.00	0.00	0.00
	2,900.00	6.00	239.82	2,892.32	-423.08	-76.26	-76.26	-131.12	452,211.84	815,344.38	32.24009835	-103.44710427	0.00	0.00	0.00
	3,000.00	6.00	239.82	2,991.77	-323.63	-81.52	-81.52	-140.17	452,206.58	815,335.33	32.24008410	-103.44713365	0.00	0.00	0.00
	3,100.00	6.00	239.82	3,091.22	-224.18	-86.78	-86.78	-149.21	452,201.32	815,326.29	32.24006984	-103.44716304	0.00	0.00	0.00
	3,200.00	6.00	239.82	3,190.67	-124.73	-92.04	-92.04	-158.25	452,196.06	815,317.25	32.24005559	-103.44719242	0.00	0.00	0.00
	3,300.00	6.00	239.82	3,290.12	-25.28	-97.30	-97.30	-167.30	452,190.80	815,308.20	32.24004134	-103.44722181	0.00	0.00	0.00
	3,400.00	6.00	239.82	3,389.58	74.18	-102.56	-102.56	-176.34	452,185.54	815,299.16	32.24002709	-103.44725119	0.00	0.00	0.00
	3,500.00	6.00	239.82	3,489.03	173.63	-107.82	-107.82	-185.38	452,180.28	815,290.12	32.24001284	-103.44728058	0.00	0.00	0.00
	3,600.00	6.00	239.82	3,588.48	273.08	-113.08	-113.08	-194.43	452,175.02	815,281.08	32.23999859	-103.44730996	0.00	0.00	0.00
	3,700.00	6.00	239.82	3,687.93	372.53	-118.34	-118.34	-203.47	452,169.76	815,272.03	32.23998434	-103.44733935	0.00	0.00	0.00
	3,800.00	6.00	239.82	3,787.38	471.98	-123.60	-123.60	-212.51	452,164.50	815,262.99	32.23997009	-103.44736873	0.00	0.00	0.00
	3,900.00	6.00	239.82	3,886.83	571.43	-128.86	-128.86	-221.55	452,159.24	815,253.95	32.23995584	-103.44739812	0.00	0.00	0.00
	4,000.00	6.00	239.82	3,986.28	670.88	-134.12	-134.12	-230.60	452,153.98	815,244.90	32.23994159	-103.44742750	0.00	0.00	0.00
	4,100.00	6.00	239.82	4,085.73	770.33	-139.38	-139.38	-239.64	452,148.72	815,235.86	32.23992733	-103.44745689	0.00	0.00	0.00
	4,200.00	6.00	239.82	4,185.19	869.79	-144.64	-144.64	-248.68	452,143.46	815,226.82	32.23991308	-103.44748627	0.00	0.00	0.00
	4,300.00	6.00	239.82	4,284.64	969.24	-149.90	-149.90	-257.73	452,138.20	815,217.77	32.23989883	-103.44751566	0.00	0.00	0.00
	4,400.00	6.00	239.82	4,384.09	1,068.69	-155.16	-155.16	-266.77	452,132.94	815,208.73	32.23988458	-103.44754504	0.00	0.00	0.00
	4,500.00	6.00	239.82	4,483.54	1,168.14	-160.42	-160.42	-275.81	452,127.69	815,199.69	32.23987033	-103.44757443	0.00	0.00	0.00
	4,600.00	6.00	239.82	4,582.99	1,267.59	-165.68	-165.68	-284.86	452,122.43	815,190.65	32.23985608	-103.44760381	0.00	0.00	0.00
	4,700.00	6.00	239.82	4,682.44	1,367.04	-170.93	-170.93	-293.90	452,117.17	815,181.60	32.23984183	-103.44763320	0.00	0.00	0.00
	4,800.00	6.00	239.82	4,781.89	1,466.49	-176.19	-176.19	-302.94	452,111.91	815,172.56	32.23982758	-103.44766259	0.00	0.00	0.00
	4,900.00	6.00	239.82	4,881.35	1,565.95	-181.45	-181.45	-311.98	452,106.65	815,163.52	32.23981333	-103.44769197	0.00	0.00	0.00
	5,000.00	6.00	239.82	4,980.80	1,665.40	-186.71	-186.71	-321.03	452,101.39	815,154.47	32.23979908	-103.44772136	0.00	0.00	0.00
Lamar□	5,019.31	6.00	239.82	5,000.00	1,684.60	-187.73	-187.73	-322.77	452,100.37	815,152.73	32.23979632	-103.44772703	0.00	0.00	0.00
	5,100.00	6.00	239.82	5,080.25	1,764.85	-191.97	-191.97	-330.07	452,096.13	815,145.43	32.23978482	-103.44775074	0.00	0.00	0.00
Bell Canyon□	5,104.78	6.00	239.82	5,085.00	1,769.60	-192.22	-192.22	-330.50	452,095.88	815,145.00	32.23978414	-103.44775214	0.00	0.00	0.00
	5,200.00	6.00	239.82	5,179.70	1,864.30	-197.23	-197.23	-339.11	452,090.87	815,136.39	32.23977057	-103.44778013	0.00	0.00	0.00
	5,300.00	6.00	239.82	5,279.15	1,963.75	-202.49	-202.49	-348.16	452,085.61	815,127.35	32.23975632	-103.44780951	0.00	0.00	0.00
	5,400.00	6.00	239.82	5,378.60	2,063.20	-207.75	-207.75	-357.20	452,080.35	815,118.30	32.23974207	-103.44783890	0.00	0.00	0.00
	5,500.00	6.00	239.82	5,478.05	2,162.65	-213.01	-213.01	-366.24	452,075.09	815,109.26	32.23972782	-103.44786828	0.00	0.00	0.00
	5,600.00	6.00	239.82	5,577.50	2,262.10	-218.27	-218.27	-375.29	452,069.83	815,100.22	32.23971357	-103.44789767	0.00	0.00	0.00
	5,700.00	6.00	239.82	5,676.96	2,361.56	-223.53	-223.53	-384.33	452,064.57	815,091.17	32.23969932	-103.44792705	0.00	0.00	0.00
	5,800.00	6.00	239.82	5,776.41	2,461.01	-228.79	-228.79	-393.37	452,059.31	815,082.13	32.23968507	-103.44795643	0.00	0.00	0.00
	5,900.00	6.00	239.82	5,875.86	2,560.46	-234.05	-234.05	-402.41	452,054.05	815,073.09	32.23967082	-103.44798582	0.00	0.00	0.00
	6,000.00	6.00	239.82	5,975.31	2,659.91	-239.31	-239.31	-411.46	452,048.79	815,064.04	32.23965656	-103.44801520	0.00	0.00	0.00
	6,100.00	6.00	239.82	6,074.76	2,759.36	-244.57	-244.57	-420.50	452,043.53	815,055.00	32.23964231	-103.44804459	0.00	0.00	0.00
	6,200.00	6.00	239.82	6,174.21	2,858.81	-249.83	-249.83	-429.54	452,038.27	815,045.96	32.23962806	-103.44807397	0.00	0.00	0.00
Cherry Canyon□	6,230.96	6.00	239.82	6,205.00	2,889.60	-251.46	-251.46	-432.34	452,036.65	815,043.16	32.23962365	-103.44808307	0.00	0.00	0.00
	6,300.00	6.00	239.82	6,273.66	2,958.26	-255.09	-255.09	-438.59	452,033.01	815,036.92	32.23961381	-103.44810336	0.00	0.00	0.00
	6,400.00	6.00	239.82	6,373.11	3,057.71	-260.35	-260.35	-447.63	452,027.76	815,027.87	32.23959956	-103.44813274	0.00	0.00	0.00
	6,500.00	6.00	239.82	6,472.57	3,157.17	-265.61	-265.61	-456.67	452,022.50	815,018.83	32.23958531	-103.44816213	0.00	0.00	0.00
Drop 2°/100ft	6,531.43	6.00	239.82	6,503.83	3,188.43	-267.26	-267.26	-459.52	452,020.84	815,015.99	32.23958083	-103.44817137	0.00	0.00	0.00
	6,600.00	4.63	239.82	6,572.10	3,256.70	-270.45	-270.45	-465.01	452,017.65	815,010.49	32.23957217	-103.44818922	2.00	-2.00	0.00
	6,700.00	2.63	239.82	6,671.89	3,356.49	-273.64	-273.64	-470.49	452,014.46	815,005.02	32.23956354	-103.44820702	2.00	-2.00	0.00
	6,800.00	0.63	239.82	6,771.84	3,456.44	-275.07	-275.07	-472.95	452,013.03	815,002.55	32.23955965	-103.44821503	2.00	-2.00	0.00
Hold	6,831.68	0.00	239.82	6,803.52	3,488.12	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	2.00	-2.00	0.00
	6,900.00	0.00	239.82	6,871.84	3,556.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,000.00	0.00	239.82	6,971.84	3,656.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,100.00	0.00	239.82	7,071.84	3,756.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,200.00	0.00	239.82	7,171.84	3,856.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,300.00	0.00	239.82	7,271.84	3,956.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,400.00	0.00	239.82	7,371.84	4,056.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,500.00	0.00	239.82	7,471.84	4,156.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
Brushy Canyon□	7,543.16	0.00	239.82	7,515.00	4,199.60	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,600.00	0.00	239.82	7,571.84	4,256.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,700.00	0.00	239.82	7,671.84	4,356.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,800.00	0.00	239.82	7,771.84	4,456.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	7,900.00	0.00	239.82	7,871.84	4,556.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,000.00	0.00	239.82	7,971.84	4,656.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,100.00	0.00	239.82	8,071.84	4,756.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,200.00	0.00	239.82	8,171.84	4,856.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,300.00	0.00	239.82	8,271.84	4,956.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,400.00	0.00	239.82	8,371.84	5,056.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,500.00	0.00	239.82	8,471.84	5,156.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
Basal Brushy Canyon□	8,543.16	0.00	239.82	8,515.00	5,199.60	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,600.00	0.00	239.82	8,571.84	5,256.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,700.00	0.00	239.82	8,671.84	5,356.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
Bone Spring Lime□	8,733.16	0.00	239.82	8,705.00	5,389.60	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,800.00	0.00	239.82	8,771.84	5,456.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
Leonard□	8,818.16	0.00	239.82	8,790.00	5,474.60	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	8,900.00	0.00	239.82	8,871.84	5,556.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,000.00	0.00	239.82	8,971.84	5,656.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,100.00	0.00	239.82	9,071.84	5,756.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,200.00	0.00	239.82	9,171.84	5,856.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
Avalon□	9,208.16	0.00	239.82	9,180.00	5,864.60	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,300.00	0.00	239.82	9,271.84	5,956.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
	9,400.00	0.00	239.82	9,371.84	6,056.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,500.00	0.00	239.82	9,471.84	6,156.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,600.00	0.00	239.82	9,571.84	6,256.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,700.00	0.00	239.82	9,671.84	6,356.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
1st BS SS □	9,743.16	0.00	239.82	9,715.00	6,399.60	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,800.00	0.00	239.82	9,771.84	6,456.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	9,900.00	0.00	239.82	9,871.84	6,556.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,000.00	0.00	239.82	9,971.84	6,656.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,100.00	0.00	239.82	10,071.84	6,756.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,200.00	0.00	239.82	10,171.84	6,856.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
2nd BS SS□	10,293.16	0.00	239.82	10,265.00	6,949.60	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,300.00	0.00	239.82	10,271.84	6,956.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,400.00	0.00	239.82	10,371.84	7,056.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,500.00	0.00	239.82	10,471.84	7,156.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,600.00	0.00	239.82	10,571.84	7,256.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,700.00	0.00	239.82	10,671.84	7,356.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,800.00	0.00	239.82	10,771.84	7,456.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	10,900.00	0.00	239.82	10,871.84	7,556.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	11,000.00	0.00	239.82	10,971.84	7,656.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	11,100.00	0.00	239.82	11,071.84	7,756.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	11,200.00	0.00	239.82	11,171.84	7,856.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
3rd BS SS□	11,283.16	0.00	239.82	11,255.00	7,939.60	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	11,300.00	0.00	239.82	11,271.84	7,956.44	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
KOP, Build 10°/100ft	11,381.68	0.00	239.82	11,353.52	8,038.12	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
	11,400.00	1.83	359.35	11,371.84	8,056.44	-274.87	-274.87	-473.11	452,013.23	815,002.40	32.23956022	-103.44821552	10.00	10.00	0.00
	11,500.00	11.83	359.35	11,471.00	8,155.60	-262.99	-262.99	-473.24	452,025.11	815,002.26	32.23959288	-103.44821564	10.00	10.00	0.00
Wolfcamp□	11,519.48	13.78	359.35	11,490.00	8,174.60	-258.67	-258.67	-473.29	452,029.43	815,002.21	32.23960475	-103.44821568	10.00	10.00	0.00
	11,600.00	21.83	359.35	11,566.60	8,251.20	-234.07	-234.07	-473.57	452,054.03	815,001.93	32.23967237	-103.44821593	10.00	10.00	0.00
	11,700.00	31.83	359.35	11,655.72	8,340.32	-188.99	-188.99	-474.08	452,099.11	815,001.42	32.23979628	-103.44821638	10.00	10.00	0.00
	11,800.00	41.83	359.35	11,735.66	8,420.26	-129.12	-129.12	-474.76	452,158.98	815,000.74	32.23996085	-103.44821699	10.00	10.00	0.00
	11,900.00	51.83	359.35	11,803.98	8,488.58	-56.29	-56.29	-475.59	452,231.82	814,999.92	32.24016107	-103.44821772	10.00	10.00	0.00
	12,000.00	61.83	359.35	11,858.62	8,543.22	27.31	27.31	-476.53	452,315.41	814,998.97	32.24039085	-103.44821856	10.00	10.00	0.00
	12,100.00	71.83	359.35	11,897.92	8,582.52	119.12	119.12	-477.58	452,407.22	814,997.93	32.24064323	-103.44821948	10.00	10.00	0.00
Build 5°/100ft	12,131.68	75.00	359.35	11,906.95	8,591.55	149.48	149.48	-477.92	452,437.58	814,997.58	32.24072666	-103.44821978	10.00	10.00	0.00
	12,200.00	78.42	359.35	11,922.66	8,607.26	215.96	215.96	-478.68	452,504.05	814,996.83	32.24090940	-103.44822045	5.00	5.00	0.00
	12,300.00	83.42	359.35	11,938.44	8,623.04	314.66	314.66	-479.80	452,602.76	814,995.70	32.24118073	-103.44822145	5.00	5.00	0.00
	12,400.00	88.42	359.35	11,945.56	8,630.16	414.37	414.37	-480.94	452,702.47	814,994.57	32.24145481	-103.44822247	5.00	5.00	0.00
Landing Point	12,429.38	89.89	359.35	11,946.00	8,630.60	443.75	443.75	-481.27	452,731.85	814,994.23	32.24153556	-103.44822277	5.00	5.00	0.00
	12,500.00	89.89	359.35	11,946.14	8,630.74	514.36	514.36	-482.08	452,802.46	814,993.43	32.24172966	-103.44822350	0.00	0.00	0.00
	12,600.00	89.89	359.35	11,946.34	8,630.94	614.35	614.35	-483.22	452,902.45	814,992.28	32.24200453	-103.44822453	0.00	0.00	0.00
	12,700.00	89.89	359.35	11,946.54	8,631.14	714.35	714.35	-484.36	453,002.44	814,991.14	32.24227939	-103.44822556	0.00	0.00	0.00
	12,800.00	89.89	359.35	11,946.74	8,631.34	814.34	814.34	-485.50	453,102.44	814,990.00	32.24255425	-103.44822659	0.00	0.00	0.00
	12,900.00	89.89	359.35	11,946.94	8,631.54	914.33	914.33	-486.65	453,202.43	814,988.86	32.24282911	-103.44822761	0.00	0.00	0.00
	13,000.00	89.89	359.35	11,947.14	8,631.74	1,014.33	1,014.33	-487.79	453,302.42	814,987.71	32.24310398	-103.44822864	0.00	0.00	0.00
	13,100.00	89.89	359.35	11,947.34	8,631.94	1,114.32	1,114.32	-488.93	453,402.41	814,986.57	32.24337884	-103.44822967	0.00	0.00	0.00
	13,200.00	89.89	359.35	11,947.54	8,632.14	1,214.31	1,214.31	-490.07	453,502.41	814,985.43	32.24365370	-103.44823070	0.00	0.00	0.00
	13,300.00	89.89	359.35	11,947.74	8,632.34	1,314.31	1,314.31	-491.22	453,602.40	814,984.29	32.24392856	-103.44823173	0.00	0.00	0.00
	13,400.00	89.89	359.35	11,947.94	8,632.54	1,414.30	1,414.30	-492.36	453,702.39	814,983.15	32.24420343	-103.44823276	0.00	0.00	0.00
	13,500.00	89.89	359.35	11,948.14	8,632.74	1,514.29	1,514.29	-493.50	453,802.38	814,982.00	32.24447829	-103.44823379	0.00	0.00	0.00
	13,600.00	89.89	359.35	11,948.34	8,632.94	1,614.29	1,614.29	-494.64	453,902.38	814,980.86	32.24475315	-103.44823481	0.00	0.00	0.00
	13,700.00	89.89	359.35	11,948.54	8,633.14	1,714.28	1,714.28	-495.79	454,002.37	814,979.72	32.24502801	-103.44823584	0.00	0.00	0.00
	13,800.00	89.89	359.35	11,948.74	8,633.34	1,814.27	1,814.27	-496.93	454,102.36	814,978.58	32.24530288	-103.44823687	0.00	0.00	0.00
	13,900.00	89.89	359.35	11,948.94	8,633.54	1,914.27	1,914.27	-498.07	454,202.35	814,977.43	32.24557774	-103.44823790	0.00	0.00	0.00
	14,000.00	89.89	359.35	11,949.14	8,633.74	2,014.26	2,014.26	-499.21	454,302.35	814,976.29	32.24585260	-103.44823893	0.00	0.00	0.00
	14,100.00	89.89	359.35	11,949.34	8,633.94	2,114.25	2,114.25	-500.35	454,402.34	814,975.15	32.24612746	-103.44823996	0.00	0.00	0.00
	14,200.00	89.89	359.35	11,949.54	8,634.14	2,214.25	2,214.25	-501.50	454,502.33	814,974.01	32.24640233	-103.44824099	0.00	0.00	0.00
	14,300.00	89.89	359.35	11,949.74	8,634.34	2,314.24	2,314.24	-502.64	454,602.32	814,972.86	32.24667719	-103.44824202	0.00	0.00	0.00
	14,400.00	89.89	359.35	11,949.94	8,634.54	2,414.23	2,414.23	-503.78	454,702.32	814,971.72	32.24695205	-103.44824304	0.00	0.00	0.00
	14,500.00	89.89	359.35	11,950.14	8,634.74	2,514.23	2,514.23	-504.92	454,802.31	814,970.58	32.24722691	-103.44824407	0.00	0.00	0.00
	14,600.00	89.89	359.35	11,950.34	8,634.94	2,614.22	2,614.22	-506.07	454,902.30	814,969.44	32.24750177	-103.44824510	0.00	0.00	0.00
	14,700.00	89.89	359.35	11,950.54	8,635.14	2,714.21	2,714.21	-507.21	455,002.29	814,968.30	32.24777664	-103.44824613	0.00	0.00	0.00
	14,800.00	89.89	359.35	11,950.74	8,635.34	2,814.21	2,814.21	-508.35	455,102.29	814,967.15	32.24805150	-103.44824716	0.00	0.00	0.00
	14,900.00	89.89	359.35	11,950.94	8,635.54	2,914.20	2,914.20	-509.49	455,202.28	814,966.01	32.24832636	-103.44824819	0.00	0.00	0.00
	15,000.00	89.89	359.35	11,951.14	8,635.74	3,014.19	3,014.19	-510.63	455,302.27	814,964.87	32.24860122	-103.44824921	0.00	0.00	0.00
	15,100.00	89.89	359.35	11,951.34	8,635.94	3,114.19	3,114.19	-511.78	455,402.27	814,963.73	32.24887609	-103.44825024	0.00	0.00	0.00
	15,200.00	89.89	359.35	11,951.54	8,636.14	3,214.18	3,214.18	-512.92	455,502.26	814,962.58	32.24915095	-103.44825127	0.00	0.00	0.00
	15,300.00	89.89	359.35	11,951.74	8,636.34	3,314.17	3,314.17	-514.06	455,602.25	814,961.44	32.24942581	-103.44825230	0.00	0.00	0.00
	15,400.00	89.89	359.35	11,951.94	8,636.54	3,414.17	3,414.17	-515.20	455,702.24	814,960.30	32.24970067	-103.44825333	0.00	0.00	0.00
	15,500.00	89.89	359.35	11,952.14	8,636.74	3,514.16	3,514.16	-516.35	455,802.24	814,959.16	32.24997553	-103.44825436	0.00	0.00	0.00
	15,600.00	89.89	359.35	11,952.34	8,636.94	3,614.15	3,614.15	-517.49	455,902.23	814,958.02	32.25025040	-103.44825539	0.00	0.00	0.00
	15,700.00	89.89	359.35	11,952.54	8,637.14	3,714.15	3,714.15	-518.63	456,002.22	814,956.87	32.25052526	-103.44825641	0.00	0.00	0.00
	15,800.00	89.89	359.35	11,952.74	8,637.34	3,814.14	3,814.14	-519.77	456,102.21	814,955.73	32.25080012	-103.44825744	0.00	0.00	0.00
	15,900.00	89.89	359.35	11,952.94	8,637.54	3,914.13	3,914.13	-520.92	456,202.21	814,954.59	32.25107498	-103.44825847	0.00	0.00	0.00
	16,000.00	89.89	359.35	11,953.14	8,637.74	4,014.13	4,014.13	-522.06	456,302.20	814,953.45	32.25134985	-103.44825950	0.00	0.00	0.00
	16,100.00	89.89	359.35	11,953.34	8,637.94	4,114.12	4,114.12	-523.20	456,402.19	814,952.30	32.25162471	-103.44826053	0.00	0.00	0.00
TP1, Turn 9.05°/100ft	16,163.38	89.89	359.35	11,953.47	8,638.07	4,177.50	4,177.50	-523.92	456,465.57	814,951.58	32.25179893	-103.44826118	0.00	0.00	0.00
	16,200.00	89.88	2.66	11,953.55	8,638.15	4,214.10	4,214.10	-523.28	456,502.18	814,952.22	32.25189952	-103.44825813	9.05	-0.02	9.05
	16,300.00	89.86	11.71	11,953.77	8,638.37	4,313.22	4,313.22	-510.79	456,601.29	814,964.71	32.25217165	-103.44821508	9.05	-0.02	9.05
	16,400.00	89.85	20.76	11,954.02	8,638.62	4,409.13	4,409.13	-482.86	456,697.20	814,992.64	32.25243464	-103.44812219	9.05	-0.01	9.05
	16,500.00	89.84	29.81	11,954.29	8,638.89	4,499.45	4,499.45	-440.20	456,787.52	815,035.31	32.25268194	-103.44798178	9.05	-0.01	9.05
	16,600.00	89.84	38.86	11,954.56	8,639.16	4,581.94	4,581.94	-383.85	456,870.01	815,091.65	32.25290739	-103.44779734	9.05	0.00	9.05
	16,700.00	89.84	47.91	11,954.85	8,639.45	4,654.54	4,654.54	-315.24	456,942.61	815,160.27	32.25310538	-103.44757347	9.05	0.00	9.05
Enter No-Perf zone	16,714.00	89.84	49.18	11,954.89	8,639.49	4,663.81	4,663.81	-304.74	456,951.88	815,170.76	32.25313061	-103.44753929	9.05	0.00	9.05
	16,800.00	89.84	56.96	11,955.12	8,639.72	4,715.45	4,715.45	-236.05	457,003.52	815,239.45	32.25327098	-103.44731573	9.05	0.00	9.05
	16,900.00	89.85	66.01	11,955.39	8,639.99	4,763.14	4,763.14	-148.28	457,051.20	815,327.23	32.25340006	-103.44703055	9.05	0.01	9.05
	17,000.00	89.86	75.06	11,955.65	8,640.25	4,796.43	4,796.43	-54.09	457,084.49	815,421.41	32.25348942	-103.44672502	9.05	0.01	9.05
	17,100.00	89.88	84.11	11,955.88	8,640.48	4,814.49	4,814.49	44.16	457,102.55	815,519.66	32.25353683	-103.44640675	9.05	0.01	9.05
Hold	17,157.91	89.89	89.35	11,956.00	8,640.60	4,817.79	4,817.79	101.95	457,105.86	815,577.45	32.25354459	-103.44621974	9.05	0.02	9.05
TP2, Turn 9.05°/100ft	17,161.91	89.89	89.35	11,956.00	8,640.60	4,817.83	4,817.83	105.95	457,105.90	815,581.45	32.25354463	-103.44620680	0.00	0.00	0.00
	17,200.00	89.89	92.80	11,956.08	8,640.68	4,817.12	4,817.12	144.03	457,105.19	815,619.53	32.25354180	-103.44608365	9.05	0.02	9.05
	17,300.00	89.92	101.85	11,956.24	8,640.84	4,804.39	4,804.39	243.11	457,092.45	815,718.61	32.25350455	-103.44576351	9.05	0.02	9.05
	17,400.00	89.94	110.90	11,956.37	8,640.97	4,776.23	4,776.23	338.96	457,064.30	815,814.46	32.25342498	-103.44545426	9.05	0.02	9.05
	17,500.00	89.97	119.95	11,956.45	8,641.05	4,733.34	4,733.34	429.18	457,021.41	815,904.68	32.25330506	-103.44516359	9.05	0.03	9.05
	17,600.00	90.00	129.00	11,956.48	8,641.08	4,676.80	4,676.80	511.54	456,964.87	815,987.03	32.25314778	-103.44489873	9.05	0.03	9.05
Exit No-Perf zone	17,610.00	90.00	129.90	11,956.48	8,641.08	4,670.45	4,670.45	519.26	456,958.52	815,994.75	32.25313014	-103.44487393	9.05	0.03	9.05
	17,700.00	90.02	138.05	11,956.46	8,641.06	4,608.01	4,608.01	583.97	456,896.08	816,059.47	32.25295705	-103.44466629	9.05	0.03	9.05
	17,800.00	90.05	147.10	11,956.40	8,641.00	4,528.68	4,528.68	644.68	456,816.75	816,120.18	32.25273763	-103.44447204	9.05	0.03	9.05
	17,900.00	90.07	156.15	11,956.29	8,640.89	4,440.79	4,440.79	692.16	456,728.86	816,167.66	32.25249497	-103.44432083	9.05	0.03	9.05
	18,000.00	90.10	165.20	11,956.14	8,640.74	4,346.52	4,346.52	725.23	456,634.59	816,200.72	32.25223513	-103.44421641	9.05	0.02	9.05
	18,100.00	90.12	174.25	11,955.95	8,640.55	4,248.23	4,248.23	743.05	456,536.30	816,218.54	32.25196456	-103.44416140	9.05	0.02	9.05
TP3, Hold	18,156.38	90.13	179.35	11,955.83	8,640.43	4,191.95	4,191.95	746.20	456,480.02	816,221.69	32.25180981	-103.44415273	9.05	0.02	9.05
	18,156.57	90.13	179.35	11,955.83	8,640.43	4,191.76	4,191.76	746.20	456,479.84	816,221.69	32.25180929	-103.44415272	2.00	-1.89	0.64
	18,200.00	90.13	179.35	11,955.73	8,640.33	4,148.34	4,148.34	746.69	456,436.41	816,222.19	32.25168992	-103.44415230	0.00	0.00	0.00
	18,300.00	90.13	179.35	11,955.51	8,640.11	4,048.35	4,048.35	747.82	456,336.42	816,223.32	32.25141506	-103.44415131	0.00	0.00	0.00
	18,400.00	90.13	179.35	11,955.29	8,639.89	3,948.35	3,948.35	748.96	456,236.43	816,224.45	32.25114020	-103.44415033	0.00	0.00	0.00
	18,500.00	90.13	179.35	11,955.07	8,639.67	3,848.36	3,848.36	750.09	456,136.43	816,225.58	32.25086534	-103.44414934	0.00	0.00	0.00
	18,600.00	90.13	179.35	11,954.85	8,639.45	3,748.37	3,748.37	751.22	456,036.44	816,226.72	32.25059048	-103.44414836	0.00	0.00	0.00
	18,700.00	90.13	179.35	11,954.63	8,639.23	3,648.37	3,648.37	752.35	455,936.45	816,227.85	32.25031561	-103.44414738	0.00	0.00	0.00
	18,800.00	90.13	179.35	11,954.41	8,639.01	3,548.38	3,548.38	753.48	455,836.46	816,228.98	32.25004075	-103.44414639	0.00	0.00	0.00
	18,900.00	90.13	179.35	11,954.19	8,638.79	3,448.39	3,448.39	754.62	455,736.46	816,230.11	32.24976589	-103.44414541	0.00	0.00	0.00
	19,000.00	90.13	179.35	11,953.97	8,638.57	3,348.39	3,348.39	755.75	455,636.47	816,231.24	32.24949103	-103.44414443	0.00	0.00	0.00
	19,100.00	90.13	179.35	11,953.75	8,638.35	3,248.40	3,248.40	756.88	455,536.48	816,232.38	32.24921617	-103.44414344	0.00	0.00	0.00
	19,200.00	90.13	179.35	11,953.52	8,638.12	3,148.41	3,148.41	758.01	455,436.48	816,233.51	32.24894130	-103.44414246	0.00	0.00	0.00
	19,300.00	90.13	179.35	11,953.30	8,637.90	3,048.41	3,048.41	759.15	455,336.49	816,234.64	32.24866644	-103.44414147	0.00	0.00	0.00
	19,400.00	90.13	179.35	11,953.08	8,637.68	2,948.42	2,948.42	760.28	455,236.50	816,235.77	32.24839158	-103.44414049	0.00	0.00	0.00
	19,500.00	90.13	179.35	11,952.86	8,637.46	2,848.43	2,848.43	761.41	455,136.51	816,236.91	32.24811672	-103.44413951	0.00	0.00	0.00
	19,600.00	90.13	179.35	11,952.64	8,637.24	2,748.43	2,748.43	762.54	455,036.51	816,238.04	32.24784186	-103.44413852	0.00	0.00	0.00
	19,700.00	90.13	179.35	11,952.42	8,637.02	2,648.44	2,648.44	763.68	454,936.52	816,239.17	32.24756699	-103.44413754	0.00	0.00	0.00
	19,800.00	90.13	179.35	11,952.20	8,636.80	2,548.45	2,548.45	764.81	454,836.53	816,240.30	32.24729213	-103.44413655	0.00	0.00	0.00
	19,900.00	90.13	179.35	11,951.98	8,636.58	2,448.45	2,448.45	765.94	454,736.54	816,241.44	32.24701727	-103.44413557	0.00	0.00	0.00
	20,000.00	90.13	179.35	11,951.76	8,636.36	2,348.46	2,348.46	767.07	454,636.54	816,242.57	32.24674241	-103.44413459	0.00	0.00	0.00
	20,100.00	90.13	179.35	11,951.54	8,636.14	2,248.47	2,248.47	768.20	454,536.55	816,243.70	32.24646755	-103.44413360	0.00	0.00	0.00
	20,200.00	90.13	179.35	11,951.32	8,635.92	2,148.47	2,148.47	769.34	454,436.56	816,244.83	32.24619268	-103.44413262	0.00	0.00	0.00
	20,300.00	90.13	179.35	11,951.10	8,635.70	2,048.48	2,048.48	770.47	454,336.57	816,245.96	32.24591782	-103.44413163	0.00	0.00	0.00
	20,400.00	90.13	179.35	11,950.88	8,635.48	1,948.49	1,948.49	771.60	454,236.57	816,247.10	32.24564296	-103.44413065	0.00	0.00	0.00
	20,500.00	90.13	179.35	11,950.66	8,635.26	1,848.49	1,848.49	772.73	454,136.58	816,248.23	32.24536810	-103.44412967	0.00	0.00	0.00
	20,600.00	90.13	179.35	11,950.44	8,635.04	1,748.50	1,748.50	773.87	454,036.59	816,249.36	32.24509323	-103.44412868	0.00	0.00	0.00
	20,700.00	90.13	179.35	11,950.21	8,634.81	1,648.51	1,648.51	775.00	453,936.59	816,250.49	32.24481837	-103.44412770	0.00	0.00	0.00
	20,800.00	90.13	179.35	11,949.99	8,634.59	1,548.51	1,548.51	776.13	453,836.60	816,251.63	32.24454351	-103.44412671	0.00	0.00	0.00
	20,900.00	90.13	179.35	11,949.77	8,634.37	1,448.52	1,448.52	777.26	453,736.61	816,252.76	32.24426865	-103.44412573	0.00	0.00	0.00
	21,000.00	90.13	179.35	11,949.55	8,634.15	1,348.53	1,348.53	778.40	453,636.62	816,253.89	32.24399379	-103.44412475	0.00	0.00	0.00
	21,100.00	90.13	179.35	11,949.33	8,633.93	1,248.53	1,248.53	779.53	453,536.62	816,255.02	32.24371892	-103.44412376	0.00	0.00	0.00
	21,200.00	90.13	179.35	11,949.11	8,633.71	1,148.54	1,148.54	780.66	453,436.63	816,256.16	32.24344406	-103.44412278	0.00	0.00	0.00
	21,300.00	90.13	179.35	11,948.89	8,633.49	1,048.55	1,048.55	781.79	453,336.64	816,257.29	32.24316920	-103.44412179	0.00	0.00	0.00
	21,400.00	90.13	179.35	11,948.67	8,633.27	948.55	948.55	782.93	453,236.65	816,258.42	32.24289434	-103.44412081	0.00	0.00	0.00
	21,500.00	90.13	179.35	11,948.45	8,633.05	848.56	848.56	784.06	453,136.65	816,259.55	32.24261947	-103.44411983	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
	21,600.00	90.13	179.35	11,948.23	8,632.83	748.57	748.57	785.19	453,036.66	816,260.68	32.24234461	-103.44411884	0.00	0.00	0.00
	21,700.00	90.13	179.35	11,948.01	8,632.61	648.57	648.57	786.32	452,936.67	816,261.82	32.24206975	-103.44411786	0.00	0.00	0.00
	21,800.00	90.13	179.35	11,947.79	8,632.39	548.58	548.58	787.45	452,836.68	816,262.95	32.24179489	-103.44411687	0.00	0.00	0.00
	21,900.00	90.13	179.35	11,947.57	8,632.17	448.59	448.59	788.59	452,736.68	816,264.08	32.24152003	-103.44411589	0.00	0.00	0.00
	22,000.00	90.13	179.35	11,947.35	8,631.95	348.59	348.59	789.72	452,636.69	816,265.21	32.24124516	-103.44411490	0.00	0.00	0.00
	22,100.00	90.13	179.35	11,947.13	8,631.73	248.60	248.60	790.85	452,536.70	816,266.35	32.24097030	-103.44411392	0.00	0.00	0.00
	22,200.00	90.13	179.35	11,946.90	8,631.50	148.61	148.61	791.98	452,436.70	816,267.48	32.24069544	-103.44411294	0.00	0.00	0.00
	22,300.00	90.13	179.35	11,946.68	8,631.28	48.61	48.61	793.12	452,336.71	816,268.61	32.24042058	-103.44411195	0.00	0.00	0.00
	22,400.00	90.13	179.35	11,946.46	8,631.06	-51.38	-51.38	794.25	452,236.72	816,269.74	32.24014571	-103.44411097	0.00	0.00	0.00
	22,500.00	90.13	179.35	11,946.24	8,630.84	-151.37	-151.37	795.38	452,136.73	816,270.88	32.23987085	-103.44410998	0.00	0.00	0.00
	22,600.00	90.13	179.35	11,946.02	8,630.62	-251.37	-251.37	796.51	452,036.73	816,272.01	32.23959599	-103.44410900	0.00	0.00	0.00
Canyonlands 2 State Com 401U	22,609.93	90.13	179.35	11,946.00	8,630.60	-261.30	-261.30	796.63	452,026.80	816,272.12	32.23956868	-103.44410890	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	11,300.000	1/100.000	- 12.25 – 8.75 – 6 ′5 – 9.625 – 7 – 6			A001Mb_MWD		Canyonlands 2 State Com 401U / Coterra Canyon
	1	11,300.000	22,609.935	1/100.000	6	6		A008Mb_MWD+IFR1+MS		Canyonlands 2 State Com 401U / Coterra Canyon

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
1,054.300	17.500	13.375	
4,904.300	12.250	9.625	
10,890.300	8.750	7.000	
22,609.935	6.000		

Coterra Canyonlands 2 State Com 401U Rev0 kFc 02Apr25 Proposal
Geodetic Report
Def Plan

Report Date:	April 02, 2025 - 04:34 PM (UTC 0)	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	COTERRA	**Vertical Section Azimuth:**	0.000 °(GRID North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Coterra Canyonlands 2 State Come Pad Lot M / Canyonlands 2 State	**TVD Reference Datum:**	RKB
Well:	Canyonlands 2 State Com 401U	**TVD Reference Elevation:**	3315.400 ft above MSL
Borehole:	Canyonlands 2 State Com 401U	**Seabed / Ground Elevation:**	3292.400 ft above MSL
UBHI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.105°
Survey Name:	Coterra Canyonlands 2 State Com 401U Rev0 kFc 02Apr25	**Total Gravity Field Strength:**	998.4756mgn (9.80665 Based)
Survey Date:	April 02, 2025	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	281.903 ° / 11446.790 ft / 6.785 / 0.957	**Total Magnetic Field Strength:**	47218.141 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.699°
Location Lat / Long:	32°14'25.09795"N , 103°26'48.04144"W	**Declination Date:**	April 02, 2025
Location Grid N/E Y/X:	N 452288.100 ftUS , E 815475.500 ftUS	**Magnetic Declination Model:**	HDGM 2025
CRS Grid Convergence Angle:	0.473°	**North Reference:**	Grid North
Grid Scale Factor:	0.99999516(Applied)	**Grid Convergence Used:**	0.473°
Version / Patch:	2024.5.0.1	**Total Corr Mag North->Grid North:**	5.631°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [370'FSL, 810'FWL]	0.00	0.00	0.00	0.00	-3,315.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818			
Nudge, Build 2°/100ft	1,300.00	0.00	239.82	1,300.00	-2,015.40	0.00	0.00	0.00	452,288.10	815,475.50	32.24030499	-103.44667818	0.00	0.00	0.00
Hold	1,600.24	6.00	239.82	1,599.69	-1,715.71	-7.90	-7.90	-13.59	452,280.20	815,461.91	32.24028357	-103.44672233	2.00	2.00	0.00
Drop 2°/100ft	6,531.43	6.00	239.82	6,503.83	3,188.43	-267.26	-267.26	-459.52	452,020.84	815,015.99	32.23958083	-103.44817137	0.00	0.00	0.00
Hold	6,831.68	0.00	239.82	6,803.52	3,488.12	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	2.00	-2.00	0.00
KOP, Build 10°/100ft	11,381.68	0.00	239.82	11,353.52	8,038.12	-275.16	-275.16	-473.10	452,012.94	815,002.40	32.23955942	-103.44821552	0.00	0.00	0.00
Build 5°/100ft	12,131.68	75.00	359.35	11,906.95	8,591.55	149.48	149.48	-477.92	452,437.58	814,997.58	32.24072666	-103.44821978	10.00	10.00	0.00
Landing Point	12,429.38	89.89	359.35	11,946.00	8,630.60	443.75	443.75	-481.27	452,731.85	814,994.23	32.24153556	-103.44822277	5.00	5.00	0.00
TP1, Turn 9.05°/100ft	16,163.38	89.89	359.35	11,953.47	8,638.07	4,177.50	4,177.50	-523.92	456,465.57	814,951.58	32.25179893	-103.44826118	0.00	0.00	0.00
Hold	17,157.91	89.89	89.35	11,956.00	8,640.60	4,817.79	4,817.79	101.95	457,105.86	815,577.45	32.25354459	-103.44621974	9.05	0.00	9.05
TP2, Turn 9.05°/100ft	17,161.91	89.89	89.35	11,956.00	8,640.60	4,817.83	4,817.83	105.95	457,105.90	815,581.45	32.25354463	-103.44620680	0.00	0.00	0.00
TP3, Hold	18,156.38	90.13	179.35	11,955.83	8,640.43	4,191.95	4,191.95	746.20	456,480.02	816,221.69	32.25180981	-103.44415273	9.05	0.02	9.05
	18,156.57	90.13	179.35	11,955.83	8,640.43	4,191.76	4,191.76	746.20	456,479.84	816,221.69	32.25180929	-103.44415272	2.00	-1.89	0.64
Canyonlands 2 State Com 401U - BHL[100'FSL, 1604'FWL]	22,609.93	90.13	179.35	11,946.00	8,630.60	-261.30	-261.30	796.63	452,026.80	816,272.12	32.23956868	-103.44410890	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	11,300.000	1/100.000	12.25 – 8.75 – 6	5 – 9.625 – 7 – 6		A001Mb_MWD		Canyonlands 2 State Com 401U / Coterra Canyor
	1	11,300.000	22,609.935	1/100.000	6	6		A008Mb_MWD+IFR1+MS		Canyonlands 2 State Com 401U / Coterra Canyor

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
1,054.300	17.500	13.375	
4,904.300	12.250	9.625	
10,890.300	8.750	7.000	
22,609.935	6.000		

Coterra Canyonlands 2 State Com 401U Rev0 kFc 02Apr25 Anti-Collision Summary Report

Analysis Date-24hr Time:	April 02, 2025 - 04:33 PM (UTC 0)	**Analysis Method:**	3D Least Distance
Client:	COTERRA	**Reference Trajectory:**	(Def Plan)
Field:	NM Lea County (NAD 83)	**Depth Interval:**	Every 10.00 Measured Depth (ft)
Structure:	Coterra Canyonlands 2 State Come Pad Lot M	**Rule Set:**	NAL Procedure: D&M AntiCollision Standard S002
Slot:	Canyonlands 2 State Com 401U	**Min Pts:**	Absolute minima indicated.
Well:	Canyonlands 2 State Com 401U	**Engine Version:**	2024.5.0.1
Borehole:	Canyonlands 2 State Com 401U	**Database \ Project:**	Canyonlands 2 State Com 401U–COTERRA
Scan MD Range:	0.00ft ~ 22609.93ft		

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

Offset Trajectories Summary

Offset Selection Criteria

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

Selection filters: Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans - All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

8 out of 14 are selected

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major	
Results highlighted in red: Sep-Factor <= 1.5												
Result highlighted in boxed, red and bold: all local minima indicated.												
30-025-24319 - State 1 001 - Inc Only to 13900ft - P (DefinitiveSurvey) - **Fail Major**												
	2632.35	32.81	2627.15	2599.54	816.75	MAS = 10.00 (m)	0.00	0.00				Surface
	2632.35	32.81	2626.75	2599.54	724.97	MAS = 10.00 (m)	23.00	23.00				WRP
	2632.35	84.34	2575.54	2548.01	47.78	OSF1.50	1300.00	1300.00				MinPt-CtCt
	2639.37	105.16	**2568.68**	2534.21	38.26	OSF1.50	1600.24	1599.69				MinPt-EOU
	2652.16	124.65	**2568.48**	2527.52	32.35	OSF1.50	1870.00	1867.97				MinPt-EOU
	2733.84	226.70	**2582.12**	2507.14	18.22	OSF1.50	3490.00	3479.08				MinPt-EOU
	2867.22	397.38	2601.76	**2469.84**	10.86	OSF1.50	5860.00	5836.08				MinPt-ADP
	2890.62	420.56	2609.70	**2470.06**	10.34	OSF1.50	6250.00	6223.94				MinPt-ADP
	2699.60	810.94	2158.47	1888.66	5.00	OSF1.50	11900.00	11803.98	OSF<=5.00			Enter Alert
	827.66	827.82	275.28	-0.16	1.50	OSF1.50	13850.00	11948.84		OSF<=1.50		Enter Minor
	549.52	828.26	-3.15	-278.74	0.99	OSF1.50	14170.00	11949.48			OSF<=1.00	Enter Major
	331.16	830.20	**-222.80**	-499.04	**0.60**	OSF1.50	14608.53	11950.36				MinPts
	331.17	830.20	-222.80	**-499.04**	0.60	OSF1.50	14610.00	11950.36				MinPt-ADP
	551.88	829.48	-1.61	-277.60	1.00	OSF1.50	15050.00	11951.24			OSF>1.00	Exit Major
	821.21	829.09	267.98	-7.89	1.49	OSF1.50	15360.00	11951.86		OSF>1.50		Exit Minor
	938.89	833.48	**382.73**	**105.41**	**1.69**	OSF1.50	19710.00	11952.40				MinPts
	2753.71	828.84	2200.66	1924.88	4.99	OSF1.50	22300.00	11946.68	OSF>5.00			Exit Alert
	3046.91	828.62	2494.00	2218.29	5.52	OSF1.50	22609.93	11946.00				TD
30-025-24414 - State 2 002 - Inc Only to 13825ft - P (DefinitiveSurvey) - **Fail Major**												
	2011.01	32.81	2005.84	1978.20	631.08	MAS = 10.00 (m)	0.00	0.00				Surface
	2011.01	32.81	2005.09	1978.20	510.68	MAS = 10.00 (m)	23.00	23.00				WRP
	2011.01	77.07	1959.04	1933.94	40.02	OSF1.50	1300.00	1300.00				MinPt-CtCt
	2013.29	83.89	**1956.78**	1929.40	36.74	OSF1.50	1420.00	1419.96				MinPt-EOU
	2016.14	87.30	1957.36	**1928.85**	35.32	OSF1.50	1480.00	1479.88				MinPt-ADP
	2478.85	745.83	1981.13	1733.02	4.99	OSF1.50	11630.00	11594.14	OSF<=5.00			Enter Alert
	1651.38	772.61	**1135.80**	**878.76**	3.21	OSF1.50	13610.00	11948.36				MinPts
	1651.39	772.63	1135.81	878.77	**3.21**	OSF1.50	13620.00	11948.38				MinPt-SF
	2576.68	774.36	2059.94	1802.32	5.00	OSF1.50	15590.00	11952.32	OSF>5.00			Exit Alert
	2576.01	774.15	2059.41	1801.86	5.00	OSF1.50	18160.00	11955.82	OSF<=5.00			Enter Alert
	768.90	774.69	251.94	-5.79	1.49	OSF1.50	20040.00	11951.67		OSF<=1.50		Enter Minor
	516.07	775.98	-1.75	-259.91	1.00	OSF1.50	20360.00	11950.97			OSF<=1.00	Enter Major
	381.43	777.58	**-137.46**	**-396.15**	**0.73**	OSF1.50	20707.62	11950.20				MinPts
	512.55	775.18	-4.74	-262.64	0.99	OSF1.50	21050.00	11949.44			OSF>1.00	Exit Major
	773.03	773.77	256.68	-0.74	1.50	OSF1.50	21380.00	11948.71		OSF>1.50		Exit Minor
	1940.17	772.77	1424.49	1167.40	3.77	OSF1.50	22609.93	11946.00				TD
Coterra Canyonlands 2 State Com 351U Rev0 kFc 02Apr25 (DefinitivePlan) - **Fail Minor**												
	20.00	16.38	16.82	3.62	9.41	MAS = 4.99 (m)	0.00	0.00	CtCt<=15.00m			Enter Alert
	20.00	16.38	16.82	3.62	9.41	MAS = 4.99 (m)	23.00	23.00				WRP
	20.00	16.38	**9.31**	3.62	1.98	MAS = 4.99 (m)	990.00	990.00				MinPt-EOU
	20.00	19.69	6.54	0.31	1.52	OSF1.50	1290.00	1290.00				MinPt-CtCt
	20.08	20.13	**6.33**	-0.05	1.50	OSF1.50	1320.00	1320.00		OSF<=1.50		Enter Minor
	20.31	20.41	6.37	**-0.10**	**1.49**	OSF1.50	1340.00	1340.00				MinPts
	20.69	20.69	6.56	-0.01	1.50	OSF1.50	1360.00	1360.00		OSF>1.50		Exit Minor
	103.01	31.70	81.55	71.31	4.98	OSF1.50	2130.00	2126.54	OSF>5.00			Exit Alert
	430.42	79.24	377.27	351.18	**8.23**	OSF1.50	5230.00	5209.53				MinPt-SF
	555.96	161.99	447.63	393.96	5.17	OSF1.50	10940.00	10911.84				MinPt-CtCt
	556.07	162.69	**447.29**	393.39	5.15	OSF1.50	11040.00	11011.84				MinPt-EOU
	556.18	162.82	447.30	**393.36**	5.15	OSF1.50	11060.00	11031.84				MinPt-ADP
	556.90	163.18	447.79	393.72	**5.14**	OSF1.50	11120.00	11091.84				MinPt-SF
	686.74	206.84	548.52	479.90	5.00	OSF1.50	16480.00	11954.23	OSF<=5.00			Enter Alert
	447.97	204.68	**311.19**	**243.29**	**3.29**	OSF1.50	17450.00	11956.41				MinPts
	632.87	190.67	505.43	442.20	5.00	OSF1.50	17980.00	11956.17	OSF>5.00			Exit Alert
	708.83	215.14	565.08	493.69	4.96	OSF1.50	18130.00	11955.89	OSF<=5.00			Enter Alert
	720.37	291.41	**525.77**	**428.96**	**3.72**	OSF1.50	22609.93	11946.00				MinPts
30-025-24514 - Madera Com 001 - Inc Only to 14100ft - P (DefinitiveSurvey) - **Fail Minor**												
	1548.17	32.81	1542.66	1515.36	438.92	MAS = 10.00 (m)	0.00	0.00				Surface
	1548.17	32.81	1541.94	1515.36	364.00	MAS = 10.00 (m)	23.00	23.00				WRP
	1548.17	86.27	1490.07	1461.90	27.45	OSF1.50	1300.00	1300.00				MinPt-CtCt
	1572.49	132.81	**1483.36**	1439.68	17.98	OSF1.50	2100.00	2096.71				MinPt-EOU
	1579.68	143.59	**1483.36**	1436.08	16.69	OSF1.50	2280.00	2275.72				MinPt-EOU
	1766.42	531.83	1411.34	1234.60	4.99	OSF1.50	5990.00	5965.36	OSF<=5.00			Enter Alert
	1786.18	562.85	**1410.40**	1223.32	4.77	OSF1.50	6320.00	6293.55				MinPt-EOU

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major	
	1811.12	938.04	**1185.26**	873.08	2.90	OSF1.50	11470.00	11441.49				MinPt-EOU
	1814.23	941.70	1185.93	**872.53**	2.89	OSF1.50	11510.00	11480.77				MinPt-ADP
	1827.15	950.51	1192.98	876.64	**2.89**	OSF1.50	11610.00	11575.85				MinPt-SF
	3275.15	985.46	2617.68	2289.69	4.99	OSF1.50	13800.00	11948.74	OSF>5.00			Exit Alert
	3280.86	986.39	2622.77	2294.47	4.99	OSF1.50	20090.00	11951.56	OSF<=5.00			Enter Alert
	985.17	986.07	327.29	-0.90	1.50	OSF1.50	22440.00	11946.38		OSF<=1.50		Enter Minor
	831.02	986.32	**172.97**	**-155.30**	**1.26**	OSF1.50	22609.93	11946.00				MinPts
30-025-48277 - Mandelbaum Fee 132H - MWD to 17392ft - A (DefinitiveSurvey) - **Warning Alert**												
	4952.58	32.81	4948.85	4919.77	2825.89	MAS = 10.00 (m)	0.00	0.00				Surface
	4952.25	32.81	4948.42	4919.45	2667.40	MAS = 10.00 (m)	23.00	23.00				WRP
	4948.48	32.81	4942.22	**4915.67**	1155.45	MAS = 10.00 (m)	390.00	390.00				MinPts
	4949.48	32.81	4938.46	**4916.67**	547.11	MAS = 10.00 (m)	890.00	890.00				MinPts
	4949.86	32.81	**4938.04**	4917.05	502.83	MAS = 10.00 (m)	990.00	990.00				MinPt-EOU
	4951.33	32.81	**4936.93**	4918.52	391.49	MAS = 10.00 (m)	1280.00	1280.00				MinPt-EOU
	4982.12	34.90	4958.27	**4947.22**	225.41	OSF1.50	2290.00	2285.67				MinPt-ADP
	5189.72	90.28	**5129.00**	**5099.44**	87.77	OSF1.50	5660.00	5637.17				MinPts
	5195.43	93.97	**5132.24**	5101.46	84.35	OSF1.50	5810.00	5786.35				MinPt-EOU
	5197.59	97.77	**5131.87**	5099.82	81.06	OSF1.50	6020.00	5995.20				MinPt-EOU
	5199.38	100.27	**5131.99**	5099.11	79.03	OSF1.50	6170.00	6144.38				MinPt-EOU
	5199.87	100.82	5132.12	**5099.05**	78.60	OSF1.50	6210.00	6184.16				MinPt-ADP
	5202.31	105.51	5131.43	5096.80	75.09	OSF1.50	6440.00	6412.90				MinPt-CtCt
	5202.68	106.74	**5130.99**	5095.94	74.21	OSF1.50	6531.43	6503.83				MinPt-EOU
	1356.15	285.82	1165.10	1070.33	**7.15**	OSF1.50	11500.00	11471.00				MinPt-SF
	1355.50	285.57	**1164.62**	**1069.93**	7.15	OSF1.50	11530.00	11500.19				MinPts
	1355.47	285.46	1164.66	1070.01	7.15	OSF1.50	11540.00	11509.84				MinPt-CtCt
	753.88	228.12	601.30	525.76	4.98	OSF1.50	22100.00	11947.13	OSF<=5.00			Enter Alert
	423.21	292.38	**227.79**	**130.83**	**2.17**	OSF1.50	22609.93	11946.00				MinPts
Coterra Canyonlands 2 State Com 402U Rev0 kFc 02Apr25 (DefinitivePlan) - **Pass**												
	2232.71	32.81	2229.31	2199.90	1055.20	MAS = 10.00 (m)	0.00	0.00				Surface
	2232.71	32.81	2229.25	2199.90	1026.86	MAS = 10.00 (m)	23.00	23.00				WRP
	2232.71	32.81	**2221.10**	2199.90	216.11	MAS = 10.00 (m)	990.00	990.00				MinPt-EOU
	2159.02	84.26	2102.52	2074.76	38.87	OSF1.50	5380.00	5358.71				MinPt-CtCt
	2159.16	84.75	**2102.33**	2074.41	38.64	OSF1.50	5420.00	5398.49				MinPt-EOU
	2159.36	85.00	2102.36	**2074.36**	38.54	OSF1.50	5440.00	5418.38				MinPt-ADP
	2255.95	221.86	**2107.71**	2034.08	15.31	OSF1.50	16160.00	11953.46				MinPt-EOU
	986.57	225.21	836.10	761.36	**6.59**	OSF1.50	18140.00	11955.86				MinPt-SF
	985.76	224.81	**835.56**	**760.95**	6.60	OSF1.50	18170.00	11955.80				MinPts
	985.67	224.56	835.63	761.11	6.61	OSF1.50	18187.67	11955.76				MinPt-CtCt
	985.88	200.00	852.22	785.88	7.42	OSF1.50	22070.00	11947.19				MinPt-CtCt
	985.92	200.12	**852.18**	785.80	7.42	OSF1.50	22120.00	11947.08				MinPt-EOU
	985.97	200.17	852.19	**785.80**	7.42	OSF1.50	22140.00	11947.04				MinPt-ADP
	987.56	200.70	853.43	786.85	**7.41**	OSF1.50	22290.00	11946.71				MinPt-SF
	1014.62	203.43	878.68	811.19	7.51	OSF1.50	22609.93	11946.00				TD
30-025-48279 - Mandelbaum Fee 137H - MWD to 17252ft - A (DefinitiveSurvey) - **Pass**												
	4963.01	32.81	4959.46	4930.21	3150.50	MAS = 10.00 (m)	0.00	0.00				Surface
	4962.94	32.81	4959.36	4930.13	3088.27	MAS = 10.00 (m)	23.00	23.00				WRP
	4962.93	32.81	4959.32	**4930.12**	3039.01	MAS = 10.00 (m)	40.00	40.00				MinPts
	4962.94	32.81	**4959.31**	4930.13	3007.84	MAS = 10.00 (m)	50.00	50.00				MinPt-EOU
	4963.84	32.81	**4959.34**	4931.03	1969.97	MAS = 10.00 (m)	210.00	210.00				MinPt-EOU
	4964.42	32.81	4955.77	**4931.61**	743.64	MAS = 10.00 (m)	640.00	640.00				MinPts
	4964.75	32.81	**4955.43**	4931.94	676.45	MAS = 10.00 (m)	730.00	730.00				MinPt-EOU
	4965.00	32.81	4954.70	**4932.19**	596.10	MAS = 10.00 (m)	810.00	810.00				MinPts
	4965.49	32.81	**4953.54**	4932.69	497.37	MAS = 10.00 (m)	990.00	990.00				MinPt-EOU
	5290.59	59.45	5250.36	**5231.13**	137.51	OSF1.50	3990.00	3976.34				MinPt-ADP
	5493.75	86.09	**5435.82**	**5407.67**	97.53	OSF1.50	5660.00	5637.17				MinPts
	2305.47	289.34	2112.08	2016.13	12.01	OSF1.50	11530.00	11500.19				MinPt-CtCt
	2305.47	289.34	**2112.08**	**2016.13**	**12.01**	OSF1.50	11540.00	11509.84				MinPts
	1113.03	306.85	**907.97**	**806.19**	**5.46**	OSF1.50	22609.93	11946.00				MinPts
30-025-49805 - Mandelbaum Fee 122H - MWD to 16102ft - A (DefinitiveSurvey) - **Pass**												
	5014.14	32.81	**5010.69**	**4981.34**	3395.78	MAS = 10.00 (m)	0.00	0.00				MinPts
	5014.40	32.81	5010.90	4981.59	3316.34	MAS = 10.00 (m)	23.00	23.00				WRP
	4967.68	33.95	4944.46	4933.73	231.44	OSF1.50	2160.00	2156.38				MinPt-CtCt
	4967.87	34.57	**4944.23**	4933.29	227.02	OSF1.50	2220.00	2216.05				MinPt-EOU
	4968.13	34.89	4944.28	**4933.24**	224.87	OSF1.50	2250.00	2245.89				MinPt-ADP
	1434.77	274.77	1251.05	1160.00	**7.87**	OSF1.50	10380.00	10351.84				MinPt-SF
	1434.68	274.74	**1250.99**	**1159.94**	7.87	OSF1.50	10390.00	10361.84				MinPts
	1434.66	274.70	1250.99	1159.96	7.87	OSF1.50	10398.35	10370.20				MinPt-CtCt
	1582.96	293.84	**1386.57**	**1289.12**	**8.11**	OSF1.50	22609.93	11946.00				MinPts

1. Geological Formations

TVD of target 11,945'
MD at TD 22,610'

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	980	N/A	
Top of Salt	1485	N/A	
Base of Salt/Lamar	5170	N/A	
Top Delaware Sands/Bell Canyon	5255	Hydrocarbons	
Cherry Canyon	6375	Hydrocarbons	
Brushy Canyon	7685	Hydrocarbons	
Basal Brushy Canyon	8685	N/A	
Bone Spring Lime	8875	N/A	
Leonard	8960	Hydrocarbons	
Avalon Shale	9350	Hydrocarbons	
1st Bone Spring Sand	9885	Hydrocarbons	
2nd Bone Spring Sand	10435	Hydrocarbons	
3rd Bone Spring Sand	11425	Hydrocarbons	
Wolfcamp	11660	Hydrocarbons	
Wolfcamp - Target	12116	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	930	930	10-3/4"	40.50	J-55	BT&C	3.92	7.77	16.70
9 7/8	0	11382	11354	7-5/8"	29.70	HCL-80	BT&C	1.00	1.23	2.03
6 3/4	0	11382	11382	5-1/2"	20.00	P-110	BT&C	1.70	1.90	2.98
6 3/4	11382	22610	11946	5"	18.00	P-110	BT&C	1.97	1.99	57.13
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

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

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

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft3/sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	306	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	156	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	897	10.30	3.64	22.18	12	Lead: Tuned Light + LCM
	200	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	1479	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	42
Intermediate	0	49
Production	11182	

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

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 930'	Fresh Water	7.83 - 8.33	28	N/C
930' to 11382'	Brine Diesel Emulsion	9.00 - 9.50	30-35	N/C
11382' to 22610'	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	
X	Will run GR/CNL fromTD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	6833 psi
Abnormal Temperature	No

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

8. Other Facets of Operation

9. Wellhead

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.

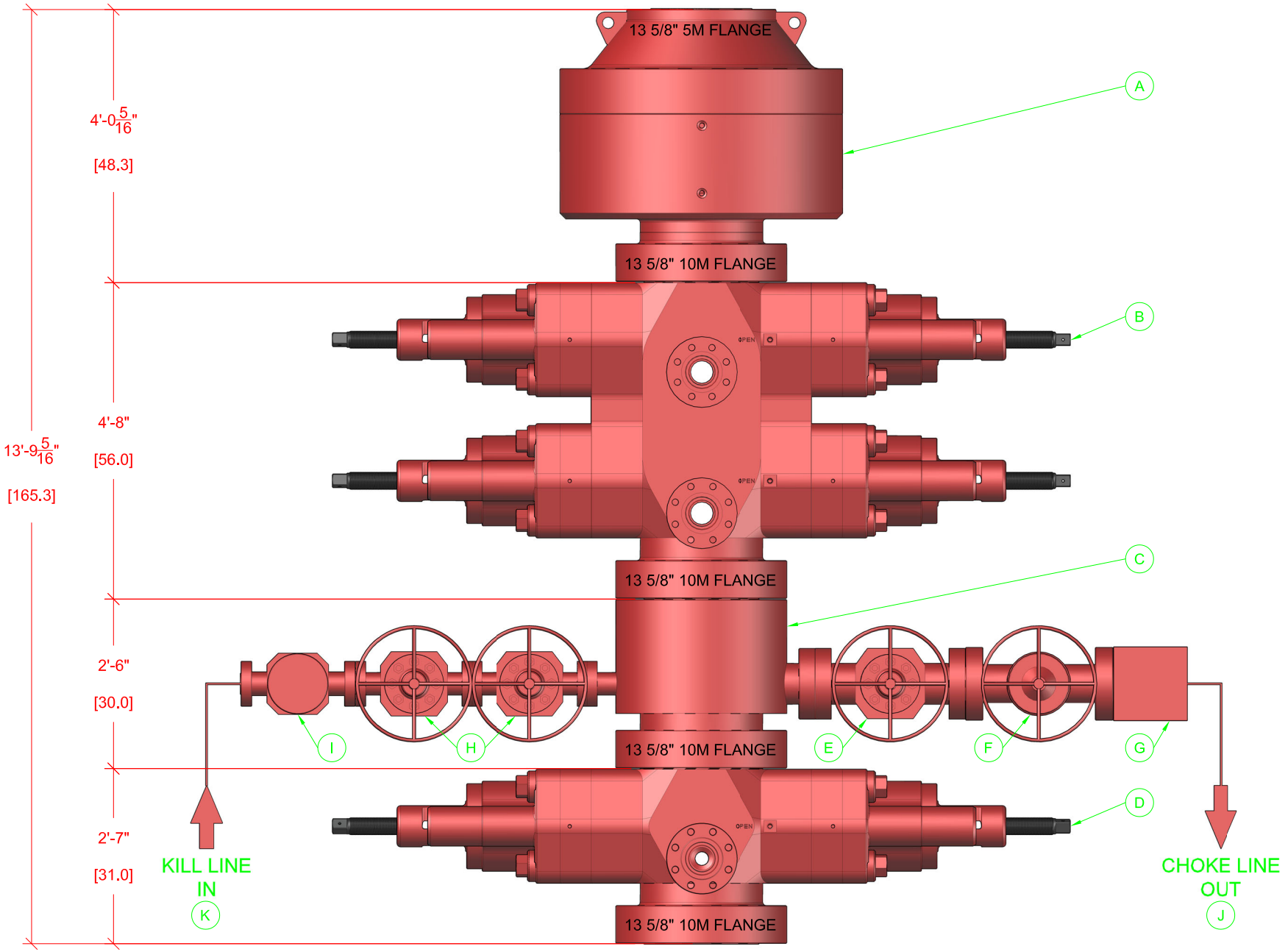
3. A remote kill line is included in the BOPE system

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.

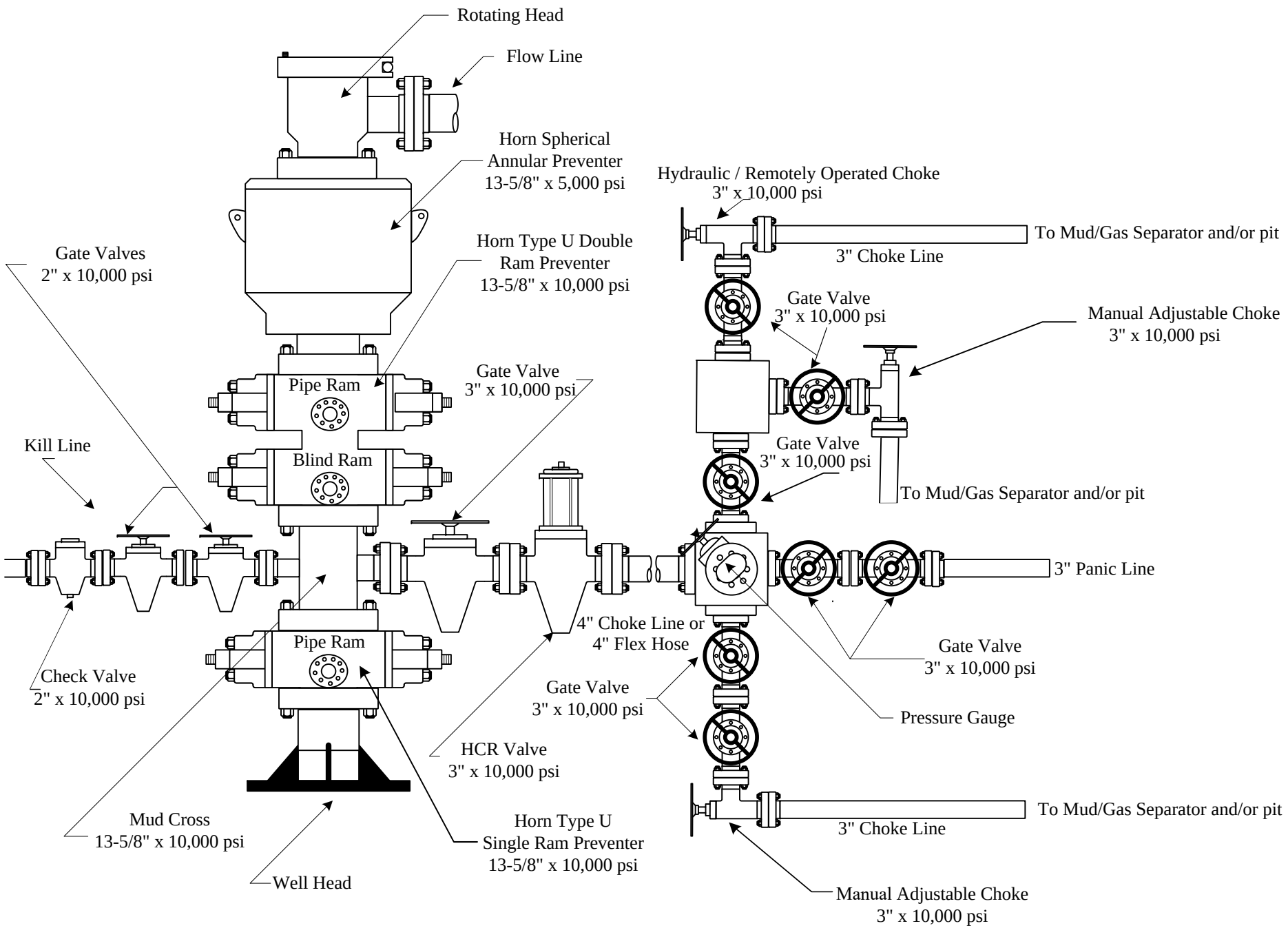


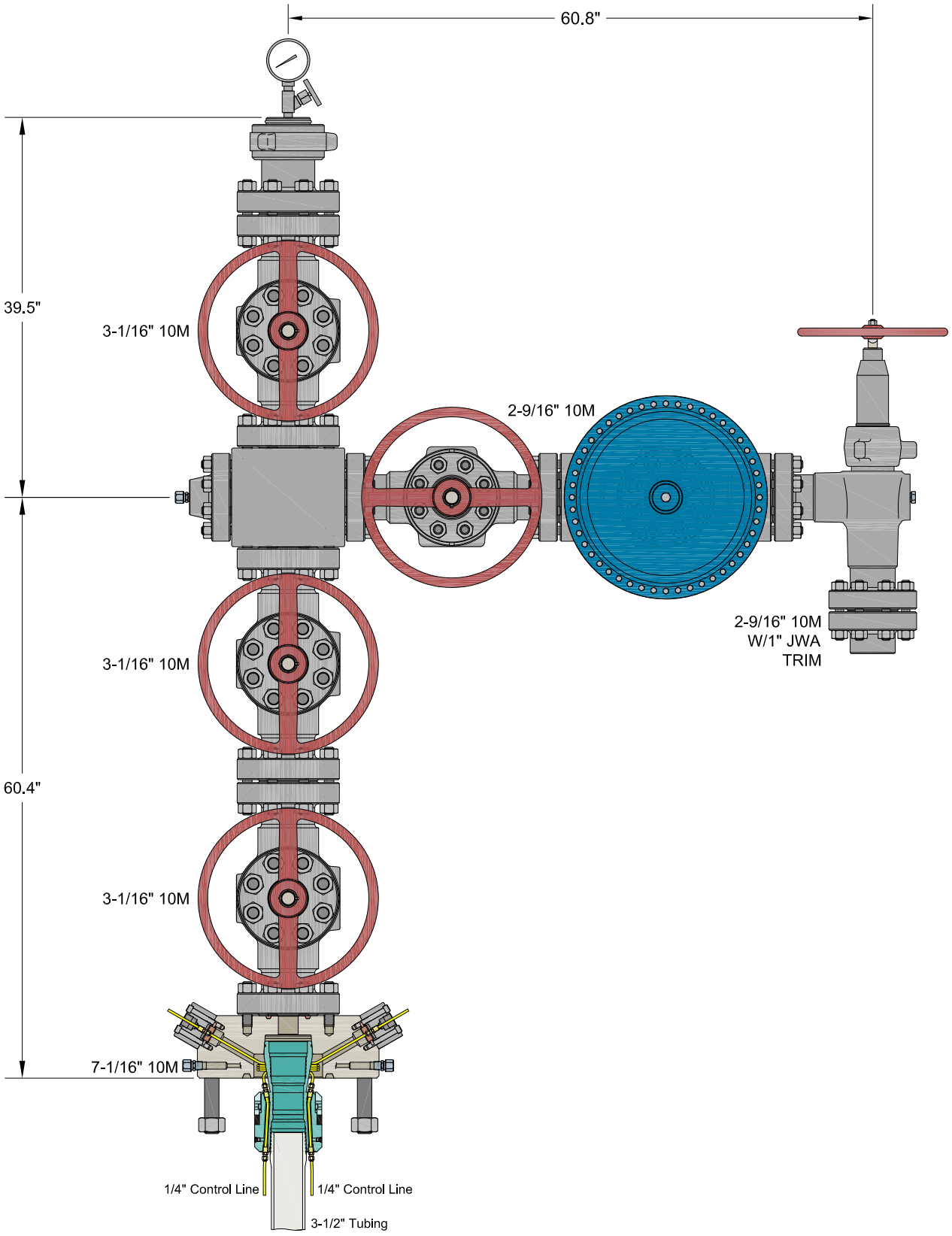
BOP EQUIPMENT INFORMATION

DESCRIPTION	MODEL	QTY
ANNULAR BOP	13 5/8" 5M	1
DOUBLE RAM BOP	13 5/8" 10M TYPE-U	1
MUD CROSS	13 5/8" 10M	1
SINGLE RAM BOP	13 5/8" 10M TYPE-U	1
GATE VALVE	4 1/16" 10M FC MANUAL	1
HCR VALVE	4 1/16" 10M HCR	1

ITEM	DESCRIPTION	MODEL	QTY
G	STUDDED BLOCK	4 1/16" 10M	1
H	GATE VALE	2 1/16" 10M FC MANUAL	2
I	CHECK VALVE	2 1/16" 10M	1
J	CHOKE HOSE	4 1/16" 10M	1
K	KILL HOSE	2 1/16" 10M	1
L			

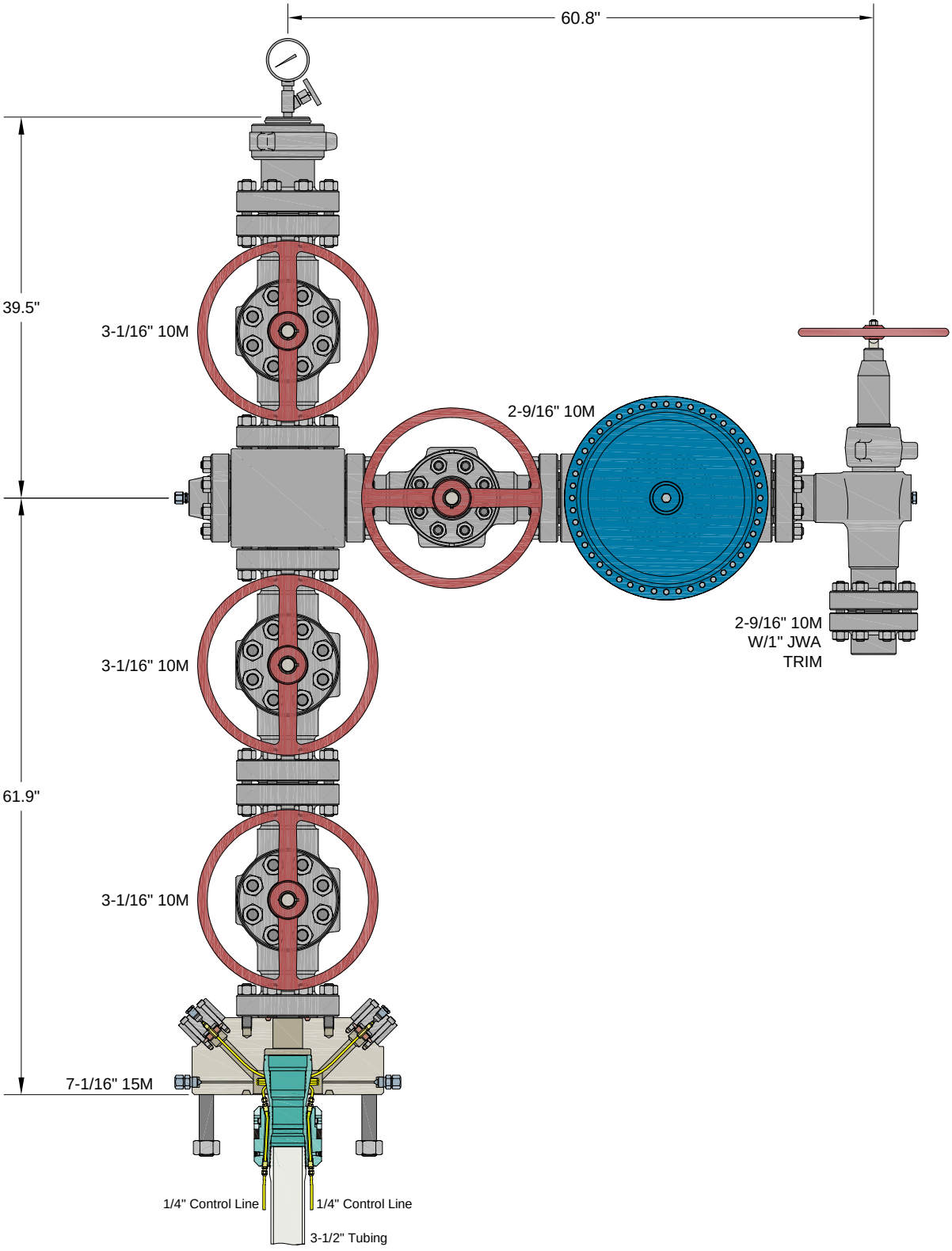
COTERRA





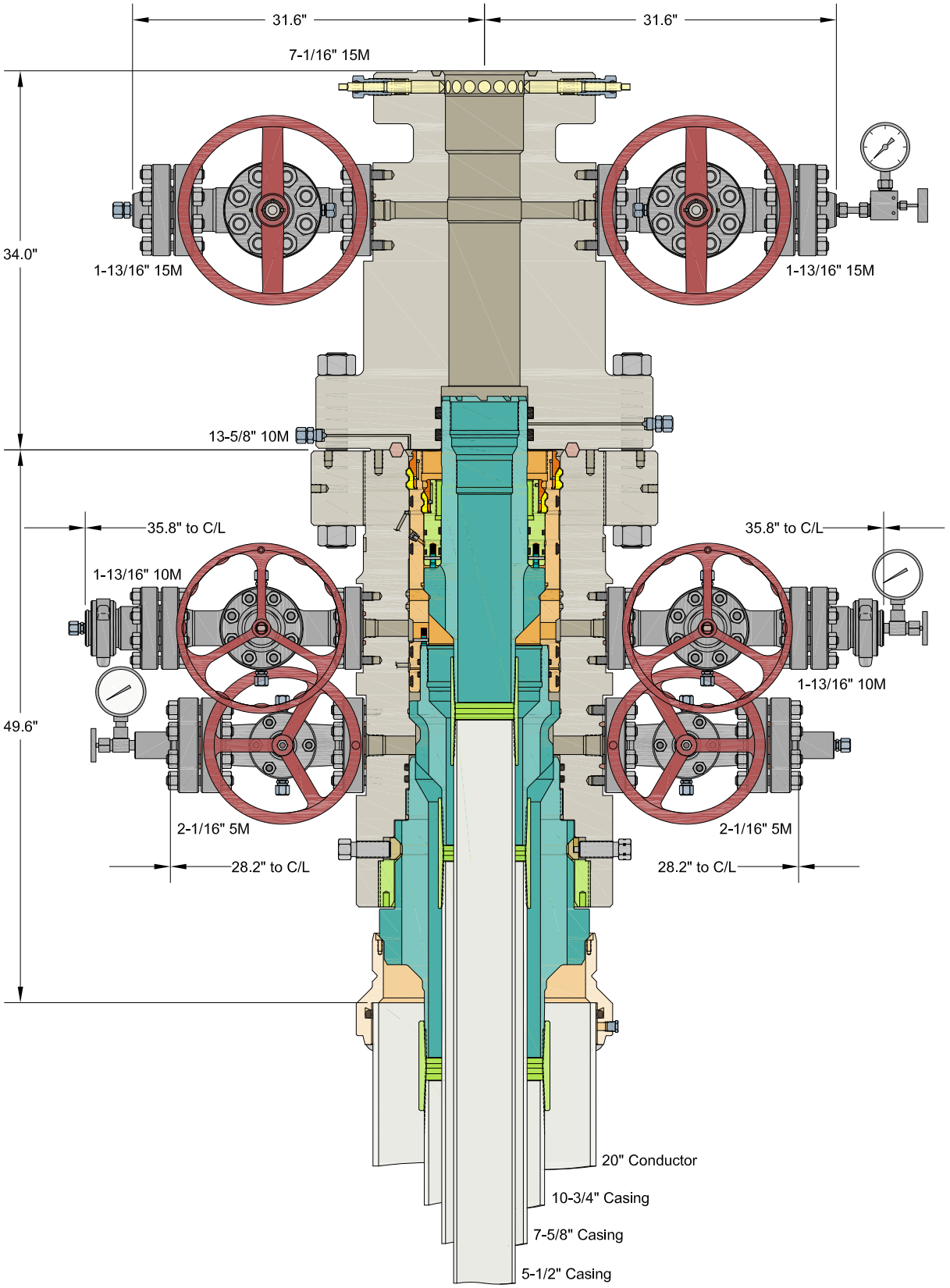
ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	CIMAREX HOBBS, NM
7-1/16" 10M x 3-1/16" x 2-9/16" 10M Production Tree Assembly With 7-1/16" 10M x 3-1/16" 10M T40-CCL Tubing Head Adapter And 7-1/16" 3-1/2" T40-CCL Tubing Hanger	DRAWN VJK 05SEP23 APPRV DRAWING NO. HBE0001018



ALL DIMENSIONS APPROXIMAT

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



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	

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: Cimarex Energy Company **OGRID:** 215099 **Date:** 4/23/2025

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Canyonlands 2 State Com 401H		Sec 2 T24S, R34E	370 FSL/810 FWL	2148	4152	4554

IV. Central Delivery Point Name: _Canyonlands CTB ___ _____ [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Canyonlands 2 State Com 401H		7/23/25	9/4/25	1/15/2026	2/4/2026	2/4/2026

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

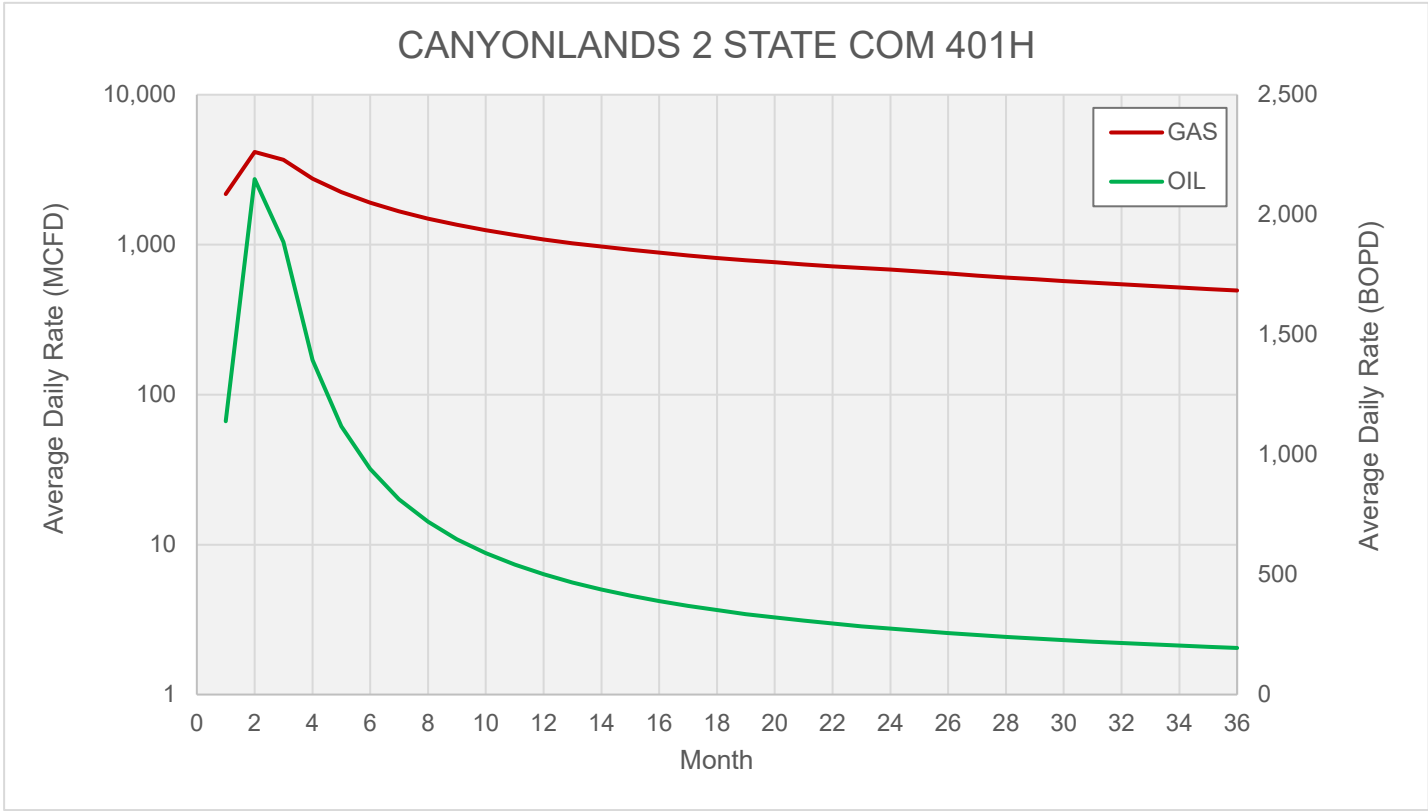
Signature:	Shelly Bowen
Printed Name:	Shelly Bowen
Title:	Sr. Regulatory Analyst
E-mail Address:	shelly.bowen@coterra.com
Date:	4/23/2025
Phone:	432/6201644

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

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

CANYONLANDS 2 STATE COM 401H	CANYONLANDS 2 STATE COM 401H
GAS MCFD	OIL BOPD
2176	1139
4152	2148
3688	1886
2757	1394
2237	1118
1902	940
1666	814
1491	720
1356	647
1248	589
1159	541
1086	501
1024	467
970	438
924	412
883	389
848	369
816	352
788	336
762	321
739	308
719	296
700	285
682	274
663	265
642	256
623	248
605	241
588	233
572	227
557	221
543	215
530	209
518	204
506	199
495	194
GAS	OIL


CANYONLANDS 2 STATE COM 401H
Average Daily Rate (MCFD)
10,000
1,000
100
10
1
Average Daily Rate (BOPD)
2,500
2,000
1,500
1,000
500
0
GAS
OIL
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36
Month

From State of New Mexico, Natural Gas Management Plan

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

XEC Standard Response

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

Cimarex
VII. Operational Practices

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

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

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

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

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

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

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

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

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

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

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

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

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

WELL LOCATION INFORMATION

API Number	Pool Code 2220	Pool Name Antelope Ridge; Wolfcamp
Property Code	Property Name CANYONLANDS 2 STATE COM	Well Number 401H
OGRID No. 215099	Operator Name Coterra Energy Operating Co.	Ground Level Elevation 3,292.4'

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
M	2	24S	34E		370 SOUTH	810 WEST	32.240305°	-103.446678°	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD 83)	Longitude (NAD 83)	County
N	2	24S	34E		100 SOUTH	1,604 WEST	32.239569°	-103.444109°	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
640.16				

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
M	2	24S	34E		100 SOUTH	334 WEST	32.239559°	-103.448216°	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
M	2	24S	34E		100 SOUTH	334 WEST	32.239559°	-103.448216°	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
N	2	24S	34E		100 SOUTH	1,604 WEST	32.239569°	-103.444109°	LEA

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☐ Horizontal ☐ Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

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.

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.

Shelly Bowen 3/12/2025

Signature Date

Shelly Bowen

Printed Name

shelly.bowen@coterra.com

Email Address

SURVEYOR CERTIFICATIONS

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.

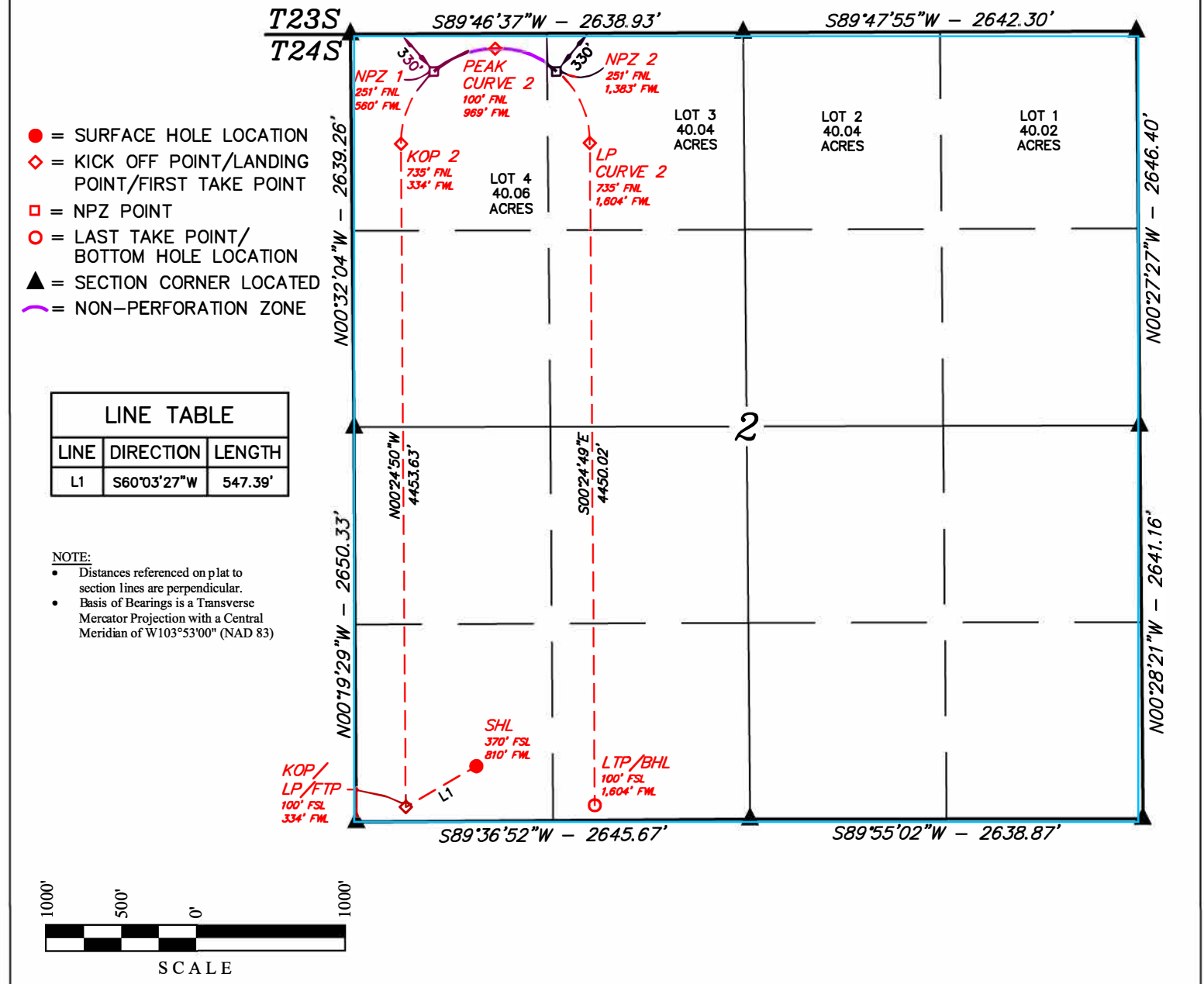
Signature and Seal of Professional Surveyor

23782 January 02, 2025

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	Well Number	Drawn By	Revised By
CANYONLANDS 2 STATE COM	401H	N.R. 01-08-25	REV. 1 T.I.R. 02-27-25 (WELLBORE CHANGES & ADD NPZ)



● = SURFACE HOLE LOCATION
◇ = KICK OFF POINT/LANDING POINT/FIRST TAKE POINT
□ = NPZ POINT
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
⌒ = NON–PERFORATION ZONE

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S60°03'27"W	547.39'

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)

1000' 500' 0' 1000'
SCALE

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°14'25.10" (32.240305°)
LONGITUDE = -103°26'48.04" (-103.446678°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°14'24.65" (32.240180°)
LONGITUDE = -103°26'46.33" (-103.446203°)
STATE PLANE NAD 83 (N.M. EAST)
N: 452288.10' E: 815475.50'
STATE PLANE NAD 27 (N.M. EAST)
N: 452228.99' E: 774291.10'

NAD 83 (KOP/LP/FTP)
LATITUDE = 32°14'22.41" (32.239559°)
LONGITUDE = -103°26'53.58" (-103.448216°)
NAD 27 (KOP/LP/FTP)
LATITUDE = 32°14'21.97" (32.239435°)
LONGITUDE = -103°26'51.87" (-103.447741°)
STATE PLANE NAD 83 (N.M. EAST)
N: 452012.94' E: 815002.40'
STATE PLANE NAD 27 (N.M. EAST)
N: 451953.84' E: 773817.99'

NAD 83 (KOP 2)
LATITUDE = 32°15'06.48" (32.251799°)
LONGITUDE = -103°26'53.74" (-103.448261°)
NAD 27 (KOP 2)
LATITUDE = 32°15'06.03" (32.251674°)
LONGITUDE = -103°26'52.03" (-103.447786°)
STATE PLANE NAD 83 (N.M. EAST)
N: 456465.57' E: 814951.58'
STATE PLANE NAD 27 (N.M. EAST)
N: 456406.36' E: 773767.37'

NAD 83 (NPZ 1)
LATITUDE = 32°15'11.26" (32.253128°)
LONGITUDE = -103°26'51.14" (-103.447538°)
NAD 27 (NPZ 2)
LATITUDE = 32°15'10.81" (32.253003°)
LONGITUDE = -103°26'49.42" (-103.447062°)
STATE PLANE NAD 83 (N.M. EAST)
N: 456950.94' E: 815171.17'
STATE PLANE NAD 27 (N.M. EAST)
N: 456891.71' E: 773986.96'

NAD 83 (PEAK CURVE 2)
LATITUDE = 32°15'12.76" (32.253544°)
LONGITUDE = -103°26'46.39" (-103.446218°)
NAD 27 (PEAK CURVE 2)
LATITUDE = 32°15'12.31" (32.253419°)
LONGITUDE = -103°26'44.67" (-103.445743°)
STATE PLANE NAD 83 (N.M. EAST)
N: 457105.55' E: 815577.88'
STATE PLANE NAD 27 (N.M. EAST)
N: 457046.32' E: 774393.67'

NAD 83 (NPZ 2)
LATITUDE = 32°15'11.26" (32.253128°)
LONGITUDE = -103°26'41.56" (-103.444877°)
NAD 27 (NPZ 2)
LATITUDE = 32°15'10.81" (32.253003°)
LONGITUDE = -103°26'39.84" (-103.444401°)
STATE PLANE NAD 83 (N.M. EAST)
N: 456957.59' E: 815993.95'
STATE PLANE NAD 27 (N.M. EAST)
N: 456898.35' E: 774809.72'

NAD 83 (LP CURVE 2)
LATITUDE = 32°15'06.47" (32.251798°)
LONGITUDE = -103°26'38.95" (-103.444154°)
NAD 27 (LP CURVE 2)
LATITUDE = 32°15'06.03" (32.251674°)
LONGITUDE = -103°26'37.24" (-103.443679°)
STATE PLANE NAD 83 (N.M. EAST)
N: 456475.83' E: 816221.36'
STATE PLANE NAD 27 (N.M. EAST)
N: 456416.61' E: 775037.11'

NAD 83 (LTP/BHL)
LATITUDE = 32°14'22.45" (32.239569°)
LONGITUDE = -103°26'38.79" (-103.444109°)
NAD 27 (LTP/BHL)
LATITUDE = 32°14'22.00" (32.239444°)
LONGITUDE = -103°26'37.08" (-103.443634°)
STATE PLANE NAD 83 (N.M. EAST)
N: 452026.80' E: 816272.12'
STATE PLANE NAD 27 (N.M. EAST)
N: 451967.69' E: 775087.68'

H2S Drilling Operations Plan

Training

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

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

H2S Detection and Alarm Systems

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

Windsock and/or wind streamers

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

Condition Flags & Signs

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

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

Well Control Equipment

1. See the pressure control section of this submission.

Communication

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

Drillstem Testing

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

H2S Contingency Plan

Emergency Procedures

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

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

Ignition of the Gas Source

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

Contacting Authorities

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

Coterra: H2S Plan

Emergency Contacts

Coterra Energy

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

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

Third Party

PERMIAN REGION CONTACT NUMBERS

CALL 911

Air Ambulance Services

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

Fire / Police / Medical Care

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

Ground Ambulance Services

Reeves County Medical	Pecos, TX	432-447-3551