

District I1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720**District II**811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720**District III**1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170**District IV**1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 358410

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

1. Operator Name and Address CIMAREX ENERGY CO. 6001 Deauville Blvd Midland, TX 79706		2. OGRID Number 215099
		3. API Number 30-025-52660
4. Property Code 333771	5. Property Name CORIANDER 1 12 STATE COM	6. Well No. 213H

7. Surface Location

UL - Lot A	Section 1	Township 23S	Range 32E	Lot Idn 1	Feet From 211	N/S Line N	Feet From 691	E/W Line E	County Lea
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8. Proposed Bottom Hole Location

UL - Lot P	Section 12	Township 23S	Range 32E	Lot Idn P	Feet From 100	N/S Line S	Feet From 660	E/W Line E	County Lea
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9. Pool Information

DIAMONDTAIL;BONE SPRING	17644
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3749
16. Multiple N	17. Proposed Depth 20920	18. Formation 2nd Bone Spring Sand	19. Contractor	20. Spud Date 1/1/2025
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	17.5	13.375	48	1306	802	0
Int1	12.25	9.625	40	4967	1222	0
Prod	8.75	7	29	10920	456	4777
Liner1	6	4.5	11.6	20920	742	10720

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	50	2000	
Double Ram	50	2000	
Annular	50	3000	
Double Ram	50	3000	
Annular	50	5000	
Pipe	50	5000	
Double Ram	50	5000	

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:

Printed Name: Electronically filed by Shelly Bowen

Title: Regulatory Analyst

Email Address: shelly.bowen@coterra.com

Date: 3/15/2024

Phone: 432-620-1644

OIL CONSERVATION DIVISION

Approved By: Paul F Kautz

Title: Geologist

Approved Date: 3/19/2024

Expiration Date: 3/19/2026

Conditions of Approval Attached

District I
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District IV
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Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
	17644	Diamondtail; Bone Spring
⁴ Property Code	⁵ Property Name	
	CORIANDER 1-12 STATE COM	
⁷ OGRID No.	⁸ Operator Name	⁶ Well Number
215099	CIMAREX ENERGY CO.	213H
⁹ Elevation		
3749.2'		

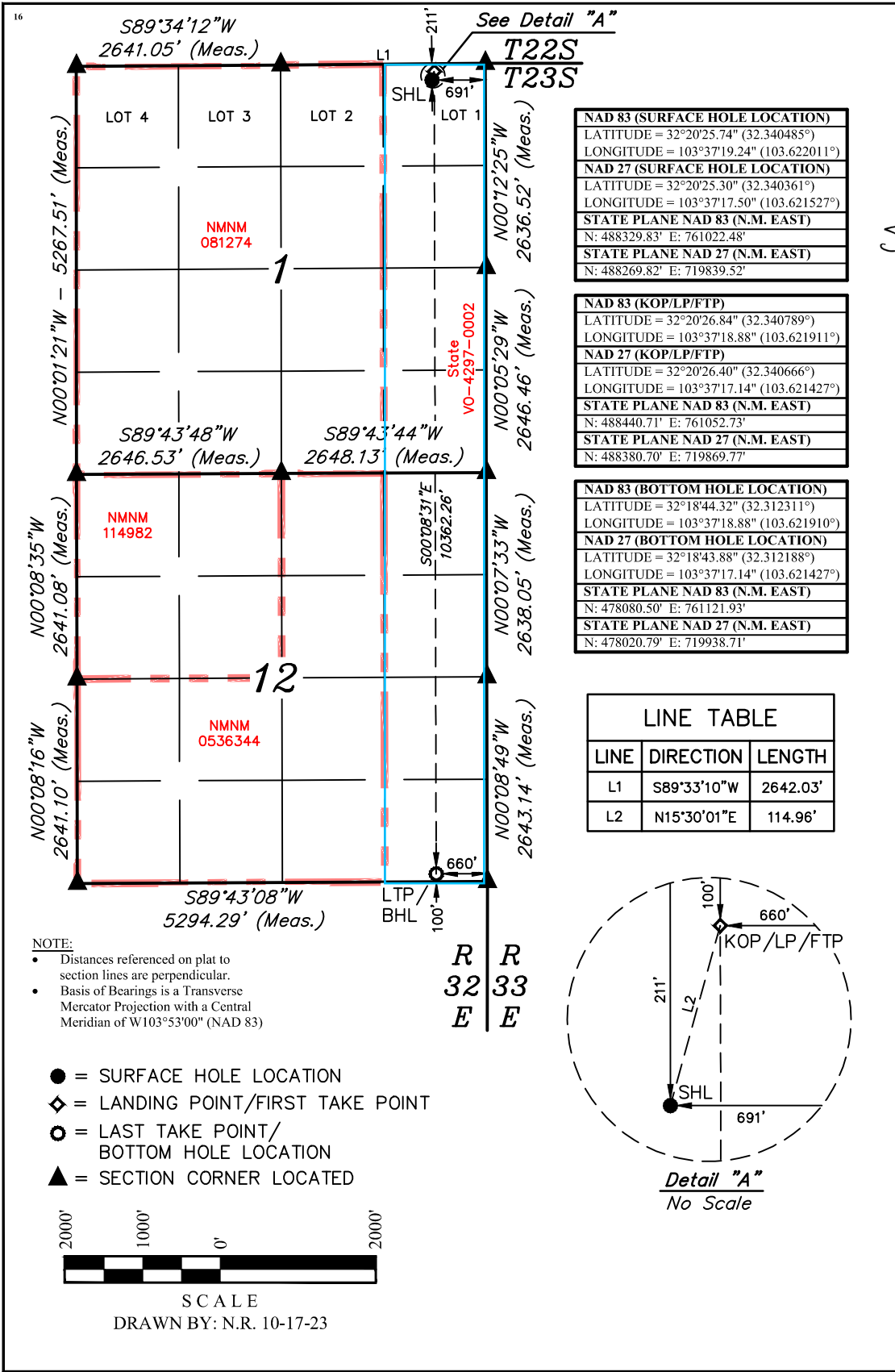
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	1	23S	32E		211	NORTH	691	EAST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	12	23S	32E		100	SOUTH	660	EAST	LEA
¹² Dedicated Acres		¹³ Joint or Infill	¹⁴ Consolidation Code		¹⁵ Order No.				
320									

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



¹⁷ OPERATOR
CERTIFICATION

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

Shelly Bowen 1/26/24
Signature Date
Shelly Bowen
Printed Name
shelly.bowen@coterra.com
E-mail Address

¹⁸ SURVEYOR
CERTIFICATION

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

September 9, 2021
Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number:

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

Form APD Conditions

Permit 358410

PERMIT CONDITIONS OF APPROVAL

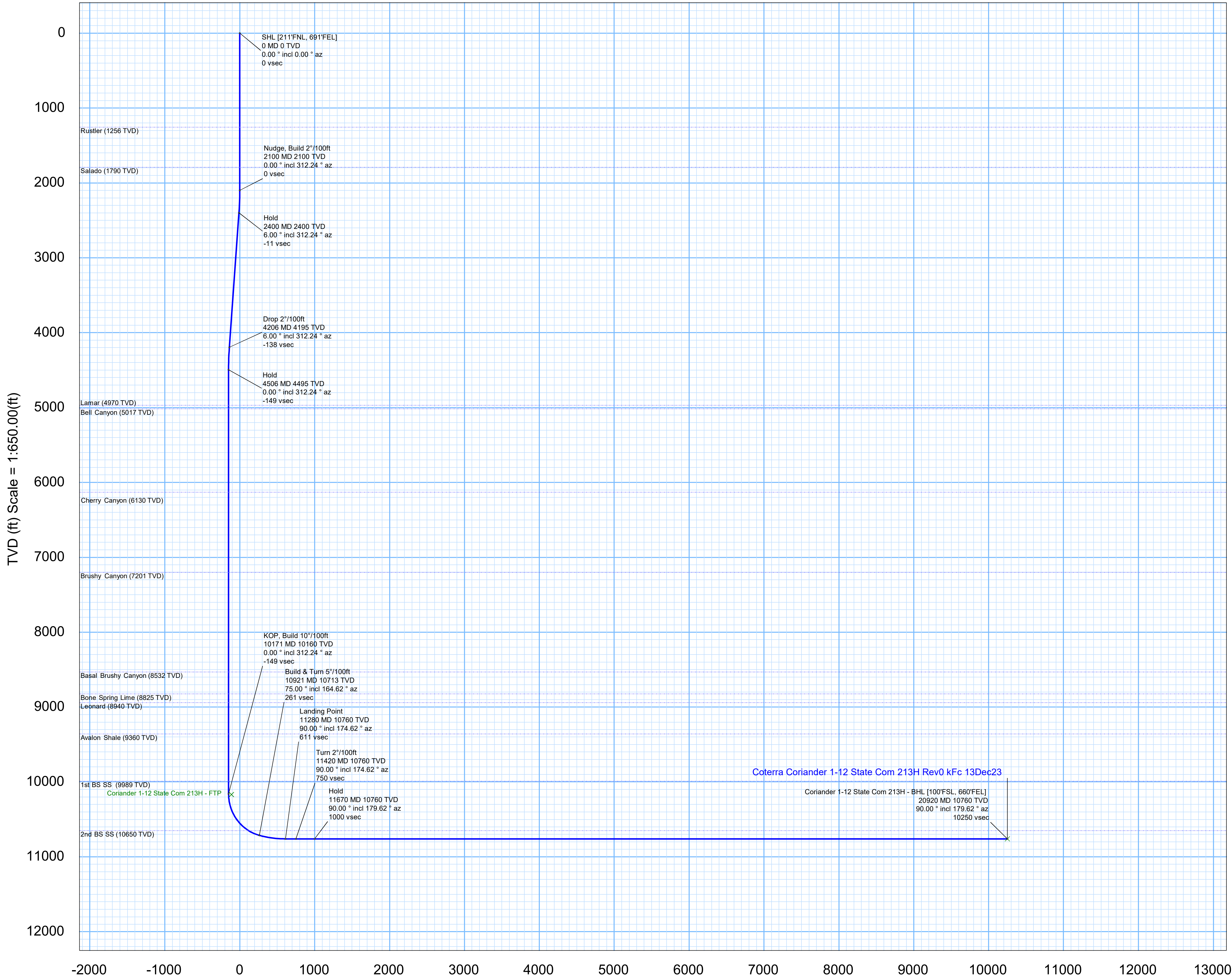
Operator Name and Address: CIMAREX ENERGY CO. [215099] 6001 Deauville Blvd Midland, TX 79706	API Number: 30-025-52660
	Well: CORIANDER 1 12 STATE COM #213H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

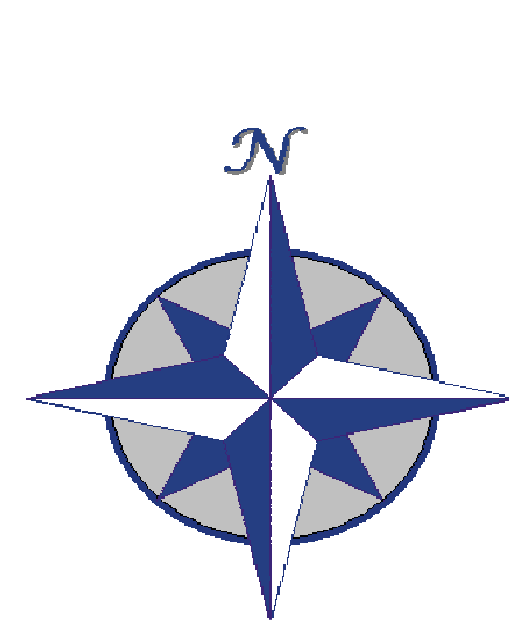
Borehole: Coriander 1-12 State Com 213H			Well: Coriander 1-12 State Com 213H			Field: NM Lea County (NAD 83)			Structure: Cimarex Coriander 1-12 State Com Lot 1 Pad		
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Gravity & Magnetic Parameters				Surface Location				NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	HDGM 2023	Dip:	59.9°	Date:	13-Dec-2023	Lat:	N 32 20 25.74	Northing:	488329.83ftUS	Grid Conv:	0.3805°	Slot:	Coriander 1-12 State	TVD Ref:	RKB (3772.200 ft above MSL)
MagDec:	6.255°	FS:	47509.746nT	Gravity FS:	998.44mgN (9.80665 Based)	Lon:	W 103 37 19.24	Easting:	761022.48ftUS	Scale Fact:	0.99996436	Plan:	Com 213H		Coterra Coriander 1-12 State Com 213H Rev0 kFc 13Dec23

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [211°FNL, 691°FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rustler	1256.00	0.00	312.24	1256.00	0.00	0.00	0.00	0.00
Salado	1790.00	0.00	312.24	1790.00	0.00	0.00	0.00	0.00
Nudge, Build 2°/100ft	2100.00	0.00	312.24	2100.00	0.00	0.00	0.00	0.00
Hold	2400.06	6.00	312.24	2399.51	-10.63	10.55	-11.62	2.00
Drop 2°/100ft	4205.62	6.00	312.24	4195.17	-138.45	137.45	-151.38	0.00
Hold	4505.67	0.00	312.24	4494.68	-149.08	148.00	-163.00	2.00
Lamar	4980.99	0.00	312.24	4970.00	-149.08	148.00	-163.00	0.00
Bell Canyon	5027.99	0.00	312.24	5017.00	-149.08	148.00	-163.00	0.00
Cherry Canyon	6140.99	0.00	312.24	6130.00	-149.08	148.00	-163.00	0.00
Brushy Canyon	7211.99	0.00	312.24	7201.00	-149.08	148.00	-163.00	0.00
Basal Brushy Canyon	8542.99	0.00	312.24	8532.00	-149.08	148.00	-163.00	0.00
Bone Spring Lime	8835.99	0.00	312.24	8825.00	-149.08	148.00	-163.00	0.00
Leonard	8950.99	0.00	312.24	8940.00	-149.08	148.00	-163.00	0.00
Avalon Shale	9370.99	0.00	312.24	9360.00	-149.08	148.00	-163.00	0.00
1st BS SS	9999.99	0.00	312.24	9989.00	-149.08	148.00	-163.00	0.00
KOP, Build 10°/100ft	10170.67	0.00	312.24	10159.68	-149.08	148.00	-163.00	0.00
2nd BS SS	10759.12	58.84	164.62	10650.00	118.03	-118.63	-89.65	10.00
Build & Turn 5°/100ft	10920.67	75.00	164.62	10713.11	261.11	-261.45	-50.35	10.00
Landing Point	11279.98	90.00	174.62	10760.00	610.57	-610.49	13.05	5.00
Turn 2°/100ft	11419.98	90.00	174.62	10760.00	750.03	-749.88	26.17	0.00
Hold	11670.17	90.00	179.62	10760.00	999.91	-999.68	38.73	2.00
Coriander 1-12 State Com 213H - BHL [100°FSL, 660°FEL]	20920.41	90.00	179.62	10760.00	10250.15	-10249.72	99.45	0.00



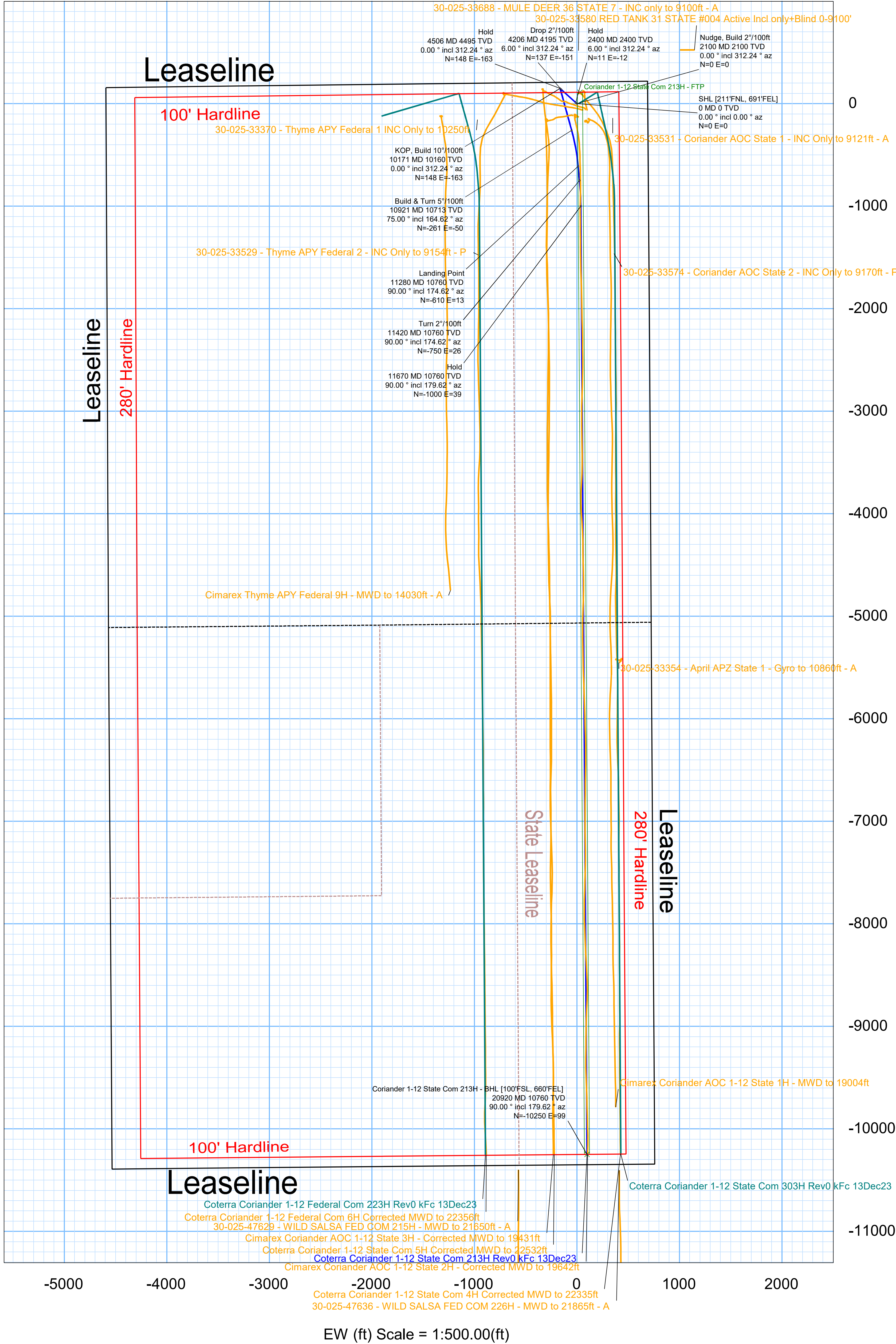
Vertical Section (ft) Azim = 179.62° Scale = 1:650.00(ft) Origin = 0N/-S, 0E/-W



Grid
True
Mag
Grid North
Tot Corr (M->G 5.874°)
Mag Dec (6.255°)
Grid Conv (0.381°)

CONTROLLED	
Plan ref	Coterra Coriander 1-12 State Com 213H Rev0 kFc 13Dec23
Drawing ref	
Copy number	of 3
Date	14-Dec-2023
1	Client
2	Client
3	Office
4	Office
Copy number for	

NS (ft) Scale = 1:500.00(ft)



EW (ft) Scale = 1:500.00(ft)

Schlumberger

Coterra Coriander 1-12 State Com 213H Rev0 kFc 13Dec23 Proposal Geodetic

Report
Def Plan

Report Date: December 13, 2023 - 10:20 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Coriander 1-12 State Com Lot 1 Pad / Coriander 1-12 State Com
Well: Coriander 1-12 State Com 213H
Borehole: Coriander 1-12 State Com 213H
UBH / API#: Unknown / Unknown
Survey Name: Coterra Coriander 1-12 State Com 213H Rev0 kFc 13Dec23
Survey Date: December 13, 2023
Tort / AHD / DDI / ERD Ratio: 109.971' / 10640.464 ft / 6.357' / 0.989
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: 32°20'25.74470"N, 103°37'19.24134"W
Location Grid N/E Y/X: N 488329.830 RUS, E 761022.480 RUS
CRS Grid Convergence Angle: 0.381"
Grid Scale Factor: 0.99996436
Version / Patch: 2023.1.0.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.620 °(GRID North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3772.200 ft above MSL
Sealed / Ground Elevation: 3749.200 ft above MSL
Magnetic Declination: 6.255"
Total Gravity Field Strength: 998.44mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47509.746 nT
Magnetic Dip Angle: 59.9°
Declination Date: December 13, 2023
Magnetic Declination Model: HDGM 2023
North Reference: Grid North
Grid Convergence Used: 0.381"
Total Corr Mag North->Grid North: 5.874"
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [211FNL, 691FEL]	0.00	0.00	0.00	0.00	-3.772.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148			
	100.00	0.00	312.24	100.00	-3.672.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	200.00	0.00	312.24	200.00	-3.572.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	300.00	0.00	312.24	300.00	-3.472.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	400.00	0.00	312.24	400.00	-3.372.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	500.00	0.00	312.24	500.00	-3.272.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	600.00	0.00	312.24	600.00	-3.172.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	700.00	0.00	312.24	700.00	-3.072.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	800.00	0.00	312.24	800.00	-2.972.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	900.00	0.00	312.24	900.00	-2.872.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,000.00	0.00	312.24	1,000.00	-2.772.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,100.00	0.00	312.24	1,100.00	-2.672.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,200.00	0.00	312.24	1,200.00	-2.572.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,256.00	0.00	312.24	1,256.00	-2.516.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,300.00	0.00	312.24	1,300.00	-2.472.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,400.00	0.00	312.24	1,400.00	-2.372.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
Rustler□	1,400.00	0.00	312.24	1,400.00	-2.372.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,500.00	0.00	312.24	1,500.00	-2.272.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,600.00	0.00	312.24	1,600.00	-2.172.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,700.00	0.00	312.24	1,700.00	-2.072.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,790.00	0.00	312.24	1,790.00	-1.982.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,800.00	0.00	312.24	1,800.00	-1.972.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	1,900.00	0.00	312.24	1,900.00	-1.872.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	2,000.00	0.00	312.24	2,000.00	-1.772.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	2,100.00	0.00	312.24	2,100.00	-1.672.20	0.00	0.00	0.00	488,329.83	761,022.48	32.34048464	-103.62201148	0.00	0.00	0.00
	2,200.00	2.00	312.24	2,199.98	-1.572.22	-1.18	1.17	-1.29	488,331.00	761,021.19	32.34048789	-103.62201564	2.00	2.00	0.00
	2,300.00	4.00	312.24	2,299.84	-1.472.36	-4.73	4.69	-5.17	488,334.52	761,017.31	32.34049763	-103.62202811	2.00	2.00	0.00
	2,400.00	6.00	312.24	2,399.45	-1.372.75	-10.63	10.55	-11.62	488,340.38	761,010.86	32.34051385	-103.62204887	2.00	2.00	0.00
	2,400.06	6.00	312.24	2,399.51	-1.372.69	-10.63	10.55	-11.62	488,340.38	761,010.86	32.34051386	-103.62204889	2.00	2.00	0.00
	2,500.00	6.00	312.24	2,498.90	-1.273.30	-17.71	17.58	-19.36	488,347.41	761,003.12	32.34053330	-103.62207378	0.00	0.00	0.00
	2,600.00	6.00	312.24	2,598.36	-1.173.84	-24.78	24.61	-27.10	488,354.43	760,995.38	32.34055276	-103.62209869	0.00	0.00	0.00
	2,700.00	6.00	312.24	2,697.81	-1.074.39	-31.86	31.63	-34.84	488,361.46	760,987.64	32.34057222	-103.62212360	0.00	0.00	0.00
Nudge, Build 2"/100ft	2,800.00	6.00	312.24	2,797.26	-974.94	-38.94	38.66	-42.58	488,368.49	760,979.80	32.34059168	-103.62214851	0.00	0.00	0.00
	2,900.00	6.00	312.24	2,896.71	-875.49	-46.02	45.69	-50.32	488,375.52	760,972.16	32.34061114	-103.62217342	0.00	0.00	0.00
	3,000.00	6.00	312.24	2,996.16	-776.04	-53.10	52.72	-58.06	488,382.55	760,964.42	32.34063059	-103.62219832	0.00	0.00	0.00
	3,100.00	6.00	312.24	3,095.62	-676.58	-60.18	59.74	-65.80	488,389.57	760,956.68	32.34065005	-103.62222323	0.00	0.00	0.00
	3,200.00	6.00	312.24	3,195.07	-577.13	-67.26	66.77	-73.54	488,396.60	760,948.94	32.34066951	-103.62224814	0.00	0.00	0.00
	3,300.00	6.00	312.24	3,294.52	-477.68	-74.34	73.80	-81.28	488,403.63	760,941.20	32.34068897	-103.62227305	0.00	0.00	0.00
	3,400.00	6.00	312.24	3,393.97	-378.23	-81.42	80.83	-89.02	488,410.66	760,933.46	32.34070842	-103.62229796	0.00	0.00	0.00
	3,500.00	6.00	312.24	3,493.42	-278.78	-88.50	87.88	-96.76	488,417.69	760,925.72	32.34072788	-103.62232287	0.00	0.00	0.00
	3,600.00	6.00	312.24	3,592.88	-179.32	-95.58	94.88	-104.50	488,424.71	760,917.98	32.34074734	-103.62234777	0.00	0.00	0.00
	3,700.00	6.00	312.24	3,692.33	-79.87	-102.65	101.91	-112.24	488,431.74	760,910.24	32.34076680	-103.62237268	0.00	0.00	0.00
	3,800.00	6.00	312.24	3,791.78	19.58	-109.73	108.94	-119.98	488,438.77	760,902.50	32.34078626	-103.62239759	0.00	0.00	0.00
	3,900.00	6.00	312.24	3,891.23	119.03	-116.81	115.97	-127.72	488,445.79	760,894.76	32.34080571	-103.62242250	0.00	0.00	0.00
	4,000.00	6.00	312.24	3,990.68	218.48	-123.89	123.00	-135.46	488,452.82	760,887.02	32.34082517	-103.62244741	0.00	0.00	0.00
	4,100.00	6.00	312.24	4,090.14	317.94	-130.97	130.02	-143.20	488,459.85	760,879.28	32.34084463	-103.62247232	0.00	0.00	0.00
	4,200.00	6.00	312.24	4,189.59	417.39	-137.05	137.08	-150.94	488,466.88	760,871.54	32.34086409	-103.62249723	0.00	0.00	0.00
	Drop 2"/100ft	4,205.62	6.00	312.24	4,195.17	422.97	-138.45	137.45	-151.38	488,467.27	760,871.54	32.34086518	-103.62249862	0.00	0.00
4,300.00		4.11	312.24	4,289.19	516.99	-144.08	143.04	-157.54	488,472.86	760,864.95	32.34088066	-103.62251845	2.00	-2.00	0.00
4,400.00		2.11	312.24	4,389.03	616.83	-147.76	146.69	-161.56	488,476.51	760,860.93	32.34089077	-103.62253139	2.00	-2.00	0.00
4,500.00		0.11	312.24	4,489.01	716.81	-149.07	148.00	-163.00	488,477.82	760,859.49	32.34089439	-103.62253602	2.00	-2.00	0.00
4,505.67		0.00	312.24	4,494.68	722.48	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	2.00	-2.00	0.00
4,600.00		0.00	312.24	4,589.01	816.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
4,700.00		0.00	312.24	4,689.01	916.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
4,800.00		0.00	312.24	4,789.01	1,016.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
4,900.00		0.00	312.24	4,889.01	1,116.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
4,980.99		0.00	312.24	4,970.00	1,197.80	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
5,000.00		0.00	312.24	4,989.01	1,216.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
5,027.99		0.00	312.24	5,017.00	1,244.80	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
5,100.00		0.00	312.24	5,089.01	1,316.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
5,200.00		0.00	312.24	5,189.01	1,416.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
5,300.00		0.00	312.24	5,289.01	1,516.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603			

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
Avalon Shale	9,100.00	0.00	312.24	9,089.01	5,316.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,200.00	0.00	312.24	9,189.01	5,416.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,300.00	0.00	312.24	9,289.01	5,516.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,370.99	0.00	312.24	9,360.00	5,587.80	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,400.00	0.00	312.24	9,389.01	5,616.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,500.00	0.00	312.24	9,489.01	5,716.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,600.00	0.00	312.24	9,589.01	5,816.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,700.00	0.00	312.24	9,689.01	5,916.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,800.00	0.00	312.24	9,789.01	6,016.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	9,900.00	0.00	312.24	9,889.01	6,116.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
1st BS SS	9,999.99	0.00	312.24	9,989.00	6,216.80	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	10,000.00	0.00	312.24	9,989.01	6,216.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	10,100.00	0.00	312.24	10,089.01	6,316.81	-149.08	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	10,170.67	10.00	312.24	10,159.68	6,387.48	-149.06	148.00	-163.00	488,477.82	760,859.49	32.34089440	-103.62253603	0.00	0.00	0.00
	10,200.00	2.93	164.62	10,189.00	6,416.80	-148.35	147.28	-162.80	488,477.10	760,859.69	32.34089240	-103.62253540	10.00	10.00	0.00
	10,300.00	12.93	164.62	10,287.91	6,515.71	-135.04	133.99	-159.14	488,463.81	760,863.34	32.34085581	-103.62253285	10.00	10.00	0.00
	10,400.00	22.93	164.62	10,382.93	6,610.73	-105.34	104.34	-150.99	488,434.16	760,871.50	32.34077417	-103.62249807	10.00	10.00	0.00
	10,500.00	32.93	164.62	10,471.17	6,698.97	-60.15	59.23	-138.58	488,389.06	760,883.91	32.34064996	-103.62245887	10.00	10.00	0.00
	10,600.00	42.93	164.62	10,549.95	6,777.75	-0.84	0.03	-122.29	488,329.86	760,900.19	32.34048696	-103.62240741	10.00	10.00	0.00
	10,700.00	52.93	164.62	10,616.86	6,844.66	70.77	-71.45	-102.62	488,258.38	760,919.86	32.34020912	-103.62234527	10.00	10.00	0.00
2nd BS SS	10,759.12	58.94	164.62	10,654.01	6,877.10	118.03	-39.65	-80.17	488,211.21	760,932.84	32.34016022	-103.62230427	10.00	10.00	0.00
	10,800.00	62.93	164.62	10,669.88	6,897.68	152.52	-153.06	-80.17	488,176.78	760,942.31	32.34006542	-103.62227434	10.00	10.00	0.00
	10,900.00	72.93	164.62	10,707.41	6,935.21	241.92	-242.30	-55.62	488,087.54	760,966.86	32.33981969	-103.62219677	10.00	10.00	0.00
	10,920.67	75.00	164.62	10,713.11	6,940.91	261.11	-261.45	-50.35	488,068.39	760,972.13	32.33976695	-103.62218012	10.00	10.00	0.00
	11,000.00	78.29	166.90	10,731.44	6,959.24	336.03	-336.25	-31.38	487,993.59	760,991.11	32.33956102	-103.62212029	5.00	4.15	2.87
	11,100.00	82.46	169.70	10,748.16	6,975.96	432.68	-432.76	-11.40	487,897.08	761,011.08	32.33929538	-103.62205769	5.00	4.17	2.80
	11,200.00	86.65	172.44	10,757.66	6,985.46	531.09	-531.07	4.04	487,798.78	761,026.52	32.33902488	-103.62200982	5.00	4.19	2.75
	11,279.98	90.00	174.62	10,760.00	6,987.80	610.32	-610.32	45.15	487,719.52	761,036.52	32.33880643	-103.62198238	0.00	0.00	2.72
	11,300.00	90.00	174.62	10,760.00	6,987.80	630.51	-630.43	14.92	487,699.43	761,037.40	32.33875161	-103.62197671	0.00	0.00	0.00
	11,400.00	90.00	174.62	10,760.00	6,987.80	730.13	-729.99	24.30	487,599.87	761,046.78	32.33847780	-103.62194851	0.00	0.00	0.00
Turn 2°/100ft	11,419.98	90.00	174.62	10,760.00	6,987.80	750.03	-749.88	26.17	487,579.98	761,046.65	32.33842309	-103.62194288	0.00	0.00	0.00
	11,500.00	90.00	176.22	10,760.00	6,987.80	829.84	-829.64	32.56	487,500.22	761,055.04	32.33820374	-103.62192390	2.00	0.00	2.00
	11,600.00	90.00	178.22	10,760.00	6,987.80	929.75	-929.52	37.41	487,400.35	761,059.89	32.33792914	-103.62191035	2.00	0.00	2.00
	11,670.17	90.00	179.62	10,760.00	6,987.80	999.91	-999.68	38.73	487,330.19	761,061.21	32.33773628	-103.62190759	2.00	0.00	2.00
	11,700.00	90.00	179.62	10,760.00	6,987.80	1,029.74	-1,029.50	39.58	487,260.37	761,061.40	32.33765430	-103.62190759	0.00	0.00	0.00
	11,800.00	90.00	179.62	10,760.00	6,987.80	1,129.74	-1,129.50	39.58	487,200.37	761,062.06	32.33737944	-103.62190762	0.00	0.00	0.00
	11,900.00	90.00	179.62	10,760.00	6,987.80	1,229.74	-1,229.50	40.24	487,100.38	761,062.72	32.33710458	-103.62190765	0.00	0.00	0.00
	12,000.00	90.00	179.62	10,760.00	6,987.80	1,329.74	-1,329.50	40.90	487,000.38	761,063.37	32.33682972	-103.62190767	0.00	0.00	0.00
	12,100.00	90.00	179.62	10,760.00	6,987.80	1,429.74	-1,429.49	41.55	486,900.39	761,064.03	32.33655486	-103.62190770	0.00	0.00	0.00
	12,200.00	90.00	179.62	10,760.00	6,987.80	1,529.74	-1,529.49	42.21	486,800.40	761,064.69	32.33628000	-103.62190772	0.00	0.00	0.00
Landing Point	12,300.00	90.00	179.62	10,760.00	6,987.80	1,629.74	-1,629.49	42.86	486,700.40	761,065.34	32.33600514	-103.62190775	0.00	0.00	0.00
	12,400.00	90.00	179.62	10,760.00	6,987.80	1,729.74	-1,729.49	43.52	486,600.41	761,066.00	32.33573028	-103.62190777	0.00	0.00	0.00
	12,500.00	90.00	179.62	10,760.00	6,987.80	1,829.74	-1,829.49	44.18	486,500.41	761,066.66	32.33545544	-103.62190780	0.00	0.00	0.00
	12,600.00	90.00	179.62	10,760.00	6,987.80	1,929.74	-1,929.48	44.83	486,400.42	761,067.31	32.33518055	-103.62190782	0.00	0.00	0.00
	12,700.00	90.00	179.62	10,760.00	6,987.80	2,029.74	-2,029.48	45.49	486,300.42	761,067.97	32.33490569	-103.62190785	0.00	0.00	0.00
	12,800.00	90.00	179.62	10,760.00	6,987.80	2,129.74	-2,129.48	46.15	486,200.43	761,068.63	32.33463083	-103.62190787	0.00	0.00	0.00
	12,900.00	90.00	179.62	10,760.00	6,987.80	2,229.74	-2,229.48	46.80	486,100.44	761,069.28	32.33435597	-103.62190790	0.00	0.00	0.00
	13,000.00	90.00	179.62	10,760.00	6,987.80	2,329.74	-2,329.48	47.46	486,000.44	761,069.94	32.33408111	-103.62190792	0.00	0.00	0.00
	13,100.00	90.00	179.62	10,760.00	6,987.80	2,429.74	-2,429.47	48.12	485,900.45	761,070.59	32.33380625	-103.62190795	0.00	0.00	0.00
	13,200.00	90.00	179.62	10,760.00	6,987.80	2,529.74	-2,529.47	48.77	485,800.45	761,071.25	32.33353139	-103.62190797	0.00	0.00	0.00
Turn 2°/100ft	13,300.00	90.00	179.62	10,760.00	6,987.80	2,629.74	-2,629.47	49.43	485,700.46	761,071.91	32.33325653	-103.62190800	0.00	0.00	0.00
	13,400.00	90.00	179.62	10,760.00	6,987.80	2,729.74	-2,729.47	50.09	485,600.47	761,072.56	32.33298167	-103.62190802	0.00	0.00	0.00
	13,500.00	90.00	179.62	10,7											

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)
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	10,100.000	1/100,000	5 – 12.25	8.75 3.375 – 9.625	7	A001Mb_MWD				Coriander 1-12 State Com 213H / Coterra Coriander			
	1	10,100.000	20,869.282	1/100,000	8.75 – 6	7 – 4.5		A008Mb_MWD+IFR1+MS				Coriander 1-12 State Com 213H / Coterra Coriander			
EOU Geometry:															
End MD (ft)	Hole Size (in)			Casing Size (in)			Name								
1,325.600	17.500			13.375											
4,986.600	12.250			9.625											
11,369.600	8.750			7.000											
20,920.411	6.000			4.500											



Coterra Coriander 1-12 State Com 213H Rev0 kFc 13Dec23 Anti-Collision Summary Report

Analysis Date-24hr Time: December 13, 2023 - 10:20 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure: Cimarex Coriander 1-12 State Com Lot 1 Pad
Slot: Coriander 1-12 State Com 213H
Well: Coriander 1-12 State Com 213H
Borehole: Coriander 1-12 State Com 213H
Scan MD Range: 0.00ft ~ 20920.41ft

Analysis Method: 3D Least Distance
Reference Trajectory: Coterra Coriander 1-12 State Com 213H Rev0 kFc 13Dec23 (Def Plan)
Depth Interval: Every 10.00 Measured Depth (ft)
Rule Set: NAL Procedure: D&M AntiCollision Standard S002
Min Pts: Absolute minima indicated.
Engine Version: 2023.1.0.1
Database 1 Project: Coriander 1-12 State Com 213H-COTERRA

Trajectory Error Model: ISCSA0 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

18 out of 40 are selected

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

Results highlighted in red: Sep-Factor <= 1.5

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

Coterra Coriander 1-12 State Com 303H Rev0 kFc 13Dec23 (DefinitivePlan)

Fail Minor

20.00	16.26	18.72	3.74	N/A	MAS = 4.96 (m)	0.00	0.00	CtCt<=15m<15.00				Enter Alert	
20.00	16.26	18.72	3.74	N/A	MAS = 4.96 (m)	23.00	23.00					WRP	
20.00	19.76	6.40	0.25	1.52	OSF1.50	1290.00	1290.00					MinPts	
20.00	20.05	6.31	-0.05	1.50	OSF1.50	1330.00	1330.00			OSF<1.50		Enter Minor	
20.00	27.12	1.59	-7.12	1.09	OSF1.50	1800.00	1800.00					MinPt-CtCt	
20.14	27.56	1.43	-7.43	1.08	OSF1.50	1830.00	1830.00					MinPt-EOU	
20.24	27.71	1.44	-7.47	1.08	OSF1.50	1840.00	1840.00					MinPt-SF	
20.37	27.86	1.47	-7.49	1.08	OSF1.50	1850.00	1850.00					MinPt-ADP	
30.62	30.89	9.70	-0.27	1.49	OSF1.50	2060.00	2060.00			OSF>1.50		Exit Minor	
136.24	41.65	108.15	94.59	4.99	OSF1.50	2790.00	2787.31			OSF>5.00		Exit Alert	
364.75	110.19	290.96	254.56	5.00	OSF1.50	7350.00	7339.01			OSF<5.00		Enter Alert	
340.55	155.06	236.64	185.45	3.31	OSF1.50	10570.00	10527.46					MinPts	
340.66	155.13	236.92	185.53	3.31	OSF1.50	10580.00	10535.07					MinPt-SF	
519.89	157.43	414.61	362.47	4.98	OSF1.50	11020.00	10735.36			OSF>5.00		Exit Alert	
763.91	111.68	689.13	652.23	10.34	OSF1.50	11330.00	10760.00					MinPt-EOU	
764.67	114.99	687.68	649.68	10.05	OSF1.50	11670.00	10760.00					MinPt-CtCt	
764.76	230.24	610.94	534.52	5.00	OSF1.50	16810.00	10760.00			OSF<5.00		Enter Alert	
764.83	354.41	528.23	410.42	3.24	OSF1.50	20920.00	10760.00					MinPts	
764.83	354.41	528.23	410.42	3.24	OSF1.50	20920.41	10760.00					TD	

30-025-33688 - MULE DEER 36 STATE 7 - INC only to 9100ft - A (DefinitiveSurvey)

Fail Minor

515.59	32.81	513.62	482.79	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
515.34	32.81	513.33	482.53	16344.65	MAS = 10.00 (m)	10.00	10.00					MinPt-SF	
515.27	32.81	513.21	482.46	6142.11	MAS = 10.00 (m)	23.00	23.00					WRP	
500.65	152.09	398.67	348.56	4.98	OSF1.50	2470.00	2469.07			OSF<5.00		Enter Alert	
408.40	408.99	135.20	-0.59	1.50	OSF1.50	6020.00	6009.01			OSF<1.50		Enter Minor	
408.40	590.49	14.20	-182.09	1.04	OSF1.50	9120.00	9109.01					MinPt-CtCt	
408.41	590.93	13.92	-182.52	1.04	OSF1.50	9130.00	9119.01					MinPts	
491.12	495.45	160.28	-4.34	1.49	OSF1.50	9400.00	9389.01			OSF>1.50		Exit Minor	
918.56	280.87	730.78	637.69	4.93	OSF1.50	9950.00	9939.01			OSF>5.00		Exit Alert	
2283.24	420.37	2002.50	1862.87	8.17	OSF1.50	11740.00	10760.00					MinPt-SF	
10889.83	591.13	10495.24	10298.70	27.70	OSF1.50	20920.41	10760.00					TD	

Coterra Coriander 1-12 State Com 5H Corrected MWD to 22532ft (DefinitiveSurvey)

Warning Alert

39.39	32.81	98.81	67.19	18778.30	MAS = 10.00 (m)	0.00	0.00					MinPts	
100.00	32.81	98.82	67.19	18778.30	MAS = 10.00 (m)	23.00	23.00					WRP	
101.04	32.81	98.38	68.23	67.42	MAS = 10.00 (m)	220.00	220.00					MinPt-EOU	
100.36	32.81	87.11	67.55	8.22	MAS = 10.00 (m)	1290.00	1290.00					MinPt-EOU	
86.42	32.81	68.24	53.61	4.97	MAS = 10.00 (m)	1810.00	1810.00			OSF<5.00		Enter Alert	
44.20	34.96	20.56	9.24	1.91	OSF1.50	2360.51	2360.15					MinPt-CtCt	
44.36	35.40	20.43	8.96	1.89	OSF1.50	2390.00	2389.50					MinPt-ADP	
44.78	35.86	20.55	8.93	1.88	OSF1.50	2420.00	2419.34					MinPt-SF	
46.65	37.52	21.31	9.13	1.88	OSF1.50	2530.00	2528.74					MinPt-EOU	
94.06	83.24	38.23	10.81	1.70	OSF1.50	5540.00	5529.01					MinPt-ADP	
94.43	84.27	37.92	10.16	1.68	OSF1.50	5610.00	5599.01					MinPt-EOU	
94.94	84.86	38.04	10.08	1.68	OSF1.50	5650.00	5639.01					MinPt-ADP	
95.26	85.15	38.17	10.11	1.68	OSF1.50	5670.00	5659.01					MinPt-SF	
132.20	102.73	63.39	29.47	1.93	OSF1.50	6860.00	6849.01					MinPt-ADP	
133.05	103.47	63.74	29.58	1.93	OSF1.50	6910.00	6899.01					MinPt-SF	
142.61	111.35	68.05	31.25	1.92	OSF1.50	7440.00	7429.01					MinPt-SF	
151.49	119.99	71.17	31.50	1.90	OSF1.50	8020.00	8009.01					MinPt-ADP	
157.55	126.84	72.66	30.71	1.87	OSF1.50	8480.00	8469.01					MinPt-EOU	
161.97	138.18	69.52	23.78	1.76	OSF1.50	9240.00	9229.01					MinPt-EOU	
164.28	143.22	68.48	21.07	1.72	OSF1.50	9580.00	9569.01					MinPt-CtCt	
165.22	145.62	67.81	19.60	1.70	OSF1.50	9740.00	9729.01					MinPt-EOU	
166.45	147.12	68.04	19.33	1.70	OSF1.50	9840.00	9829.01					MinPt-ADP	
167.43	148.02	68.42	19.41	1.70	OSF1.50	9900.00	9889.01					MinPt-SF	
515.05	156.49	410.40	358.56	4.96	OSF1.50	10940.00	10717.99			OSF>5.00		Exit Alert	
1711.60	124.65	1628.18	1586.95	20.75	OSF1.50	12700.00	10760.00					MinPt-ADP	
1716.01	129.08	1629.63	1586.93	20.08	OSF1.50	12940.00	10760.00					MinPt-ADP	
1723.57	136.51	1632.24	1587.06	19.07	OSF1.50	13310.00	10760.00					MinPt-ADP	
1711.91	165.58	1601.19	1546.33	15.59	OSF1.50	14520.00	10760.00					MinPt-CtCt	
1714.73	171.65	1599.97	1543.08	15.06	OSF1.50	14780.00	10760.00					MinPt-EOU	
1724.81	192.84	1595.93	1531.97	13.48	OSF1.50	15570.00	10760.00					MinPt-EOU	
1732.04	212.63	1589.96	1519.41	12.27	OSF1.50	16250.00	10760.00					MinPt-CtCt	
1732.70	214.56	1589.33	1518.13	12.16	OSF1.50	16340.00	10760.00					MinPt-EOU	
1739.20	225.50	1588.54	1513.70	11.61	OSF1.50	16720.00	10760.00					MinPt-EOU	
1741.45	243.93	1578.50	1497.52	10.75	OSF1.50	17320.00	10760.00					MinPt-CtCt	
1741.92	250.48	1574.61	1491.45	10.47	OSF1.50	17540.00	10760.00					MinPt-CtCt	
1742.73	253.38	1673.48	1489.35	10.35	OSF1.50	17660.00	10760.00					MinPt-EOU	
1739.78	300.29	1539.24	1439.47	8.71	OSF1.50	19180.00	10760.00					MinPt-CtCt	
1740.57	302.71	1538.44	1437.86	8.65	OSF1.50	19280.00	10760.00					MinPt-EOU	
1741.16	312.96	1532.19	1428.20	8.37	OSF1.50	19590.00	10760.00					MinPt-CtCt	
1741.71	314.48	1531.74	1427.24	8.33	OSF1.50	19660.00	10760.00					MinPt-EOU	
1744.24	322.78	1528.72	1421.46	8.13	OSF1.50	19930.00	10760.00					MinPt-EOU	
1745.04	327.92	1526.10	1417.12	8.00	OSF1.50	20070.00	10760.00					MinPt-CtCt	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
	1743.00	348.87	1510.09	1394.13	7.51	OSF1.50	20740.00	10760.00				MinPt-CtCt	
	1743.85	354.56	1507.15	1389.29	7.39	OSF1.50	20920.41	10760.00				MinPts	
Coterra Coriander 1-12 Federal Com 6H Corrected MWD to 22356ft (DefinitiveSurvey)													Warning Alert
	84.84	32.81	83.55	52.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	84.84	32.81	83.55	52.03	35916.35	MAS = 10.00 (m)	23.00	23.00				WRP	
	84.77	32.81	83.04	51.96	186.43	MAS = 10.00 (m)	100.00	100.00				MinPts	
	82.89	32.81	69.48	50.08	6.73	MAS = 10.00 (m)	1280.00	1280.00				MinPt-EOU	
	75.60	32.81	59.60	42.79	4.97	MAS = 10.00 (m)	1720.00	1720.00	OSF<5.00			Enter Alert	
	46.85	32.81	27.75	14.04	2.54	MAS = 10.00 (m)	2128.99	2128.99				MinPts	
	46.89	32.81	27.75	14.09	2.53	MAS = 10.00 (m)	2140.00	2140.00				MinPt-EOU	
	47.19	32.81	27.88	14.38	2.52	MAS = 10.00 (m)	2160.00	2160.00				MinPt-SF	
	145.26	44.33	115.38	100.93	4.99	OSF1.50	3350.00	3344.25	OSF>5.00			Exit Alert	
	202.07	56.66	163.96	145.40	5.42	OSF1.50	4180.00	4169.70				MinPt-SF	
	552.53	111.06	478.17	441.47	7.52	OSF1.50	7910.00	7899.01				MinPt-CtCt	
	548.02	127.99	462.36	420.03	6.46	OSF1.50	9100.00	9089.01				MinPt-CtCt	
	548.90	131.21	461.10	417.69	6.31	OSF1.50	9320.00	9309.01				MinPt-EOU	
	549.64	132.09	461.25	417.55	6.28	OSF1.50	9380.00	9369.01				MinPt-ADP	
	555.06	143.55	459.03	411.51	5.83	OSF1.50	10210.00	10198.98				MinPt-CtCt	
	555.11	143.68	459.00	411.44	5.83	OSF1.50	10230.00	10218.90				MinPts	
	556.00	144.06	459.64	411.94	5.82	OSF1.50	10290.00	10278.15				MinPt-SF	
	1733.54	129.00	1647.21	1604.54	20.30	OSF1.50	12250.00	10760.00				MinPt-EOU	
	1733.62	129.09	1647.23	1604.53	20.29	OSF1.50	12260.00	10760.00				MinPt-ADP	
	1760.33	144.99	1663.34	1615.34	18.33	OSF1.50	13270.00	10760.00				MinPt-CtCt	
	1759.33	151.56	1657.96	1607.77	17.52	OSF1.50	13620.00	10760.00				MinPt-CtCt	
	1758.39	156.02	1654.05	1602.38	17.00	OSF1.50	13840.00	10760.00				MinPt-CtCt	
	1758.93	157.60	1653.54	1601.33	16.84	OSF1.50	13930.00	10760.00				MinPt-EOU	
	1762.41	161.77	1654.24	1600.64	16.43	OSF1.50	14130.00	10760.00				MinPt-ADP	
	1764.94	164.81	1654.74	1600.13	16.15	OSF1.50	14250.00	10760.00				MinPt-EOU	
	1766.42	166.56	1655.05	1599.86	15.99	OSF1.50	14330.00	10760.00				MinPt-ADP	
	1769.91	171.38	1655.32	1598.53	15.57	OSF1.50	14530.00	10760.00				MinPt-EOU	
	1770.40	171.97	1655.43	1598.43	15.52	OSF1.50	14560.00	10760.00				MinPt-ADP	
	1777.89	178.20	1658.76	1599.69	15.04	OSF1.50	14820.00	10760.00				MinPt-EOU	
	1779.81	180.43	1659.19	1599.38	14.87	OSF1.50	14920.00	10760.00				MinPt-ADP	
	1774.22	201.50	1639.56	1572.72	13.27	OSF1.50	15730.00	10760.00				MinPt-CtCt	
	1774.45	202.20	1639.32	1572.25	13.22	OSF1.50	15770.00	10760.00				MinPt-EOU	
	1774.75	202.53	1639.40	1572.22	13.20	OSF1.50	15790.00	10760.00				MinPt-ADP	
	1777.83	227.26	1626.00	1550.57	11.78	OSF1.50	16680.00	10760.00				MinPt-CtCt	
	1777.52	234.26	1621.02	1543.26	11.42	OSF1.50	16930.00	10760.00				MinPt-CtCt	
	1778.07	243.63	1615.32	1534.44	10.99	OSF1.50	17260.00	10760.00				MinPt-CtCt	
	1778.01	250.25	1610.85	1527.76	10.69	OSF1.50	17490.00	10760.00				MinPt-CtCt	
	1754.51	308.58	1548.47	1445.94	8.55	OSF1.50	19460.00	10760.00				MinPt-CtCt	
	1755.76	314.32	1545.89	1441.44	8.40	OSF1.50	19670.00	10760.00				MinPt-EOU	
	1755.49	327.12	1537.08	1428.37	8.07	OSF1.50	20070.00	10760.00				MinPt-CtCt	
	1755.70	327.86	1536.80	1427.85	8.05	OSF1.50	20110.00	10760.00				MinPt-EOU	
	1756.00	328.21	1536.87	1427.79	8.04	OSF1.50	20130.00	10760.00				MinPt-ADP	
	1761.75	335.63	1537.67	1426.12	7.89	OSF1.50	20370.00	10760.00				MinPt-EOU	
	1762.55	336.56	1537.85	1425.99	7.87	OSF1.50	20410.00	10760.00				MinPt-ADP	
	1749.23	353.18	1513.45	1396.05	7.45	OSF1.50	20920.41	10760.00				MinPts	
Coterra Coriander 1-12 State Com 4H Corrected MWD to 22335ft (DefinitiveSurvey)													Warning Alert
	116.60	32.81	115.32	83.80	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	116.60	32.81	115.32	83.80	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
	116.60	32.81	115.32	83.80	42115.43	MAS = 10.00 (m)	23.00	23.00				WRP	
	120.35	32.81	107.06	87.54	9.92	MAS = 10.00 (m)	1280.00	1280.00				MinPt-EOU	
	116.32	32.81	99.76	83.61	7.40	MAS = 10.00 (m)	1643.73	1643.73				MinPts	
	116.51	32.81	99.59	83.70	7.25	MAS = 10.00 (m)	1680.00	1680.00				MinPt-EOU	
	121.39	32.81	100.11	88.59	5.93	MAS = 10.00 (m)	2120.00	2120.00				MinPts	
	121.54	32.81	99.96	88.73	5.85	MAS = 10.00 (m)	2150.00	2150.00				MinPt-EOU	
	125.69	33.63	102.94	92.06	5.73	OSF1.50	2270.00	2269.90				MinPt-SF	
	135.95	35.55	111.92	100.40	5.86	OSF1.50	2400.06	2399.51				MinPt-SF	
	209.38	56.01	171.72	153.37	5.68	OSF1.50	3780.00	3771.89				MinPt-SF	
	242.32	68.86	196.09	173.46	5.33	OSF1.50	4640.00	4629.01				MinPt-CtCt	
	242.68	69.87	195.77	172.81	5.26	OSF1.50	4710.00	4699.01				MinPt-EOU	
	243.16	70.44	195.88	172.73	5.23	OSF1.50	4750.00	4739.01				MinPt-ADP	
	250.51	75.85	199.62	174.66	5.00	OSF1.50	5120.00	5109.01	OSF<5.00			Enter Alert	
	226.85	95.67	162.75	131.18	3.58	OSF1.50	6450.00	6439.01				MinPt-CtCt	
	226.49	100.22	159.35	126.27	3.41	OSF1.50	6760.00	6749.01				MinPt-CtCt	
	158.46	152.79	56.27	5.67	1.56	OSF1.50	10490.00	10462.73				MinPts	
	158.51	152.87	56.27	5.65	1.56	OSF1.50	10500.00	10471.17				MinPts	
	510.01	155.41	406.08	354.60	4.94	OSF1.50	11070.00	10743.90	OSF>5.00			Exit Alert	
	1443.59	117.43	1364.97	1326.18	18.58	OSF1.50	12190.00	10760.00				MinPt-ADP	
	1446.56	123.05	1364.20	1323.52	17.76	OSF1.50	12540.00	10760.00				MinPt-EOU	
	1447.33	123.95	1364.37	1323.38	17.64	OSF1.50	12600.00	10760.00				MinPt-ADP	
	1479.72	147.71	1380.92	1332.01	15.12	OSF1.50	13750.00	10760.00				MinPt-CtCt	
	1479.80	147.96	1380.83	1331.84	15.09	OSF1.50	13770.00	10760.00				MinPt-EOU	
	1480.01	148.21	1380.88	1331.80	15.07	OSF1.50	13790.00	10760.00				MinPt-ADP	
	1482.80	153.03	1380.46	1329.77	14.62	OSF1.50	13980.00	10760.00				MinPt-CtCt	
	1483.17	154.11	1380.10	1329.06	14.52	OSF1.50	14040.00	10760.00				MinPt-EOU	
	1483.78	154.84	1380.23	1328.94	14.46	OSF1.50	14080.00	10760.00				MinPt-ADP	
	1486.44	157.90	1380.85	1328.54	14.20	OSF1.50	14210.00	10760.00				MinPt-ADP	
	1490.66	164.81	1380.46	1325.85	13.64	OSF1.50	14460.00	10760.00				MinPt-CtCt	
	1491.01	165.92	1380.07	1325.10	13.55	OSF1.50	14520.00	10760.00				MinPt-EOU	
	1491.47	166.48	1380.16	1325.00	13.51	OSF1.50	14550.00	10760.00					

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
1528.11	264.26	1351.60	1263.83	8.70		OSF1.50	17990.00	10760.00				MinPt-EOU	
1528.58	264.83	1351.69	1263.74	8.68		OSF1.50	18020.00	10760.00				MinPt-ADP	
1530.85	284.77	1340.37	1245.78	8.08		OSF1.50	18650.00	10760.00				MinPt-CtCt	
1529.17	296.40	1331.24	1232.76	7.76		OSF1.50	19030.00	10760.00				MinPt-CtCt	
1529.47	297.41	1330.87	1232.06	7.73		OSF1.50	19080.00	10760.00				MinPt-EOU	
1527.54	311.48	1319.56	1216.06	7.37		OSF1.50	19520.00	10760.00				MinPt-CtCt	
1517.15	326.02	1299.48	1191.13	7.00		OSF1.50	19990.00	10760.00				MinPt-CtCt	
1517.76	327.91	1298.83	1189.85	6.96		OSF1.50	20070.00	10760.00				MinPt-EOU	
1518.52	328.81	1298.98	1189.70	6.94		OSF1.50	20110.00	10760.00				MinPt-ADP	
1516.09	355.08	1279.05	1161.01	6.42		OSF1.50	20920.00	10760.00				MinPt-CtCt	
1516.09	355.08	1279.05	1161.01	6.42		OSF1.50	20920.41	10760.00				MinPts	

Cimarex Coriander AOC 1-12 State 2H - Corrected MWD to 19642ft (DefinitiveSurvey)

Warning Alert

121.53	32.81	120.25	88.72	741241.35	MAS = 10.00 (m)	0.00	0.00					Surface	
121.52	32.81	120.23	88.71	13394.06	MAS = 10.00 (m)	23.00	23.00					WRP	
120.49	32.81	116.64	87.69	46.43	MAS = 10.00 (m)	350.00	350.00					MinPts	
120.24	32.81	108.16	87.43	11.02	MAS = 10.00 (m)	1180.00	1180.00					MinPts	
120.24	32.81	107.96	87.43	10.82	MAS = 10.00 (m)	1200.00	1200.00					MinPt-EOU	
120.21	32.81	107.18	87.40	10.01	MAS = 10.00 (m)	1290.00	1290.00					MinPt-EOU	
120.09	32.81	106.07	87.28	9.14	MAS = 10.00 (m)	1404.17	1404.17					MinPts	
122.84	32.81	103.60	90.03	6.68	MAS = 10.00 (m)	1930.00	1930.00					MinPt-EOU	
131.96	33.70	109.16	98.26	6.01	OSF1.50	2290.00	2289.86					MinPt-SF	
140.06	35.32	116.19	104.74	6.08	OSF1.50	2400.06	2399.51					MinPt-SF	
317.28	95.90	253.02	221.38	5.00	OSF1.50	6500.00	6489.01	OSF<5.00				Enter Alert	
289.54	127.37	204.30	162.17	3.42	OSF1.50	8630.00	8619.01					MinPt-CtCt	
290.99	135.76	200.14	155.21	3.23	OSF1.50	9200.00	9189.01					MinPts	
421.74	127.80	336.21	293.94	4.98	OSF1.50	9660.00	9649.01	OSF>5.00				Exit Alert	
997.33	108.62	924.59	888.71	13.88	OSF1.50	12850.00	10760.00					MinPt-CtCt	
997.79	109.86	924.22	887.93	13.73	OSF1.50	12910.00	10760.00					MinPt-EOU	
998.33	110.49	924.34	887.84	13.66	OSF1.50	12940.00	10760.00					MinPt-ADP	
994.04	116.80	915.85	877.24	12.86	OSF1.50	13220.00	10760.00					MinPt-CtCt	
995.13	119.54	915.11	875.59	12.58	OSF1.50	13340.00	10760.00					MinPt-EOU	
976.66	137.59	884.60	839.06	10.71	OSF1.50	14060.00	10760.00					MinPt-CtCt	
977.18	139.10	884.12	838.08	10.60	OSF1.50	14120.00	10760.00					MinPt-EOU	
977.59	139.60	884.20	837.99	10.57	OSF1.50	14140.00	10760.00					MinPt-ADP	
954.70	170.44	840.83	784.35	8.44	OSF1.50	15250.00	10760.00					MinPt-CtCt	
955.77	173.21	839.97	782.56	8.32	OSF1.50	15350.00	10760.00					MinPt-EOU	
957.39	175.17	840.28	782.22	8.24	OSF1.50	15420.00	10760.00					MinPt-ADP	
960.98	181.61	839.57	779.36	7.97	OSF1.50	15640.00	10760.00					MinPt-EOU	
963.09	184.18	839.96	778.91	7.88	OSF1.50	15730.00	10760.00					MinPt-ADP	
969.49	192.31	840.95	777.18	7.59	OSF1.50	16000.00	10760.00					MinPt-CtCt	
970.16	194.27	840.32	775.89	7.52	OSF1.50	16070.00	10760.00					MinPt-EOU	
973.00	201.43	838.38	771.57	7.27	OSF1.50	16310.00	10760.00					MinPt-EOU	
974.18	202.85	838.62	771.33	7.23	OSF1.50	16360.00	10760.00					MinPt-ADP	
976.15	206.66	838.05	769.49	7.11	OSF1.50	16480.00	10760.00					MinPt-CtCt	
964.38	227.96	812.06	736.40	6.37	OSF1.50	17180.00	10760.00					MinPt-CtCt	
966.78	251.08	799.04	715.68	5.79	OSF1.50	17930.00	10760.00					MinPt-CtCt	
968.82	259.94	795.19	708.87	5.61	OSF1.50	18220.00	10760.00					MinPt-EOU	
970.07	261.41	795.47	708.65	5.58	OSF1.50	18270.00	10760.00					MinPt-ADP	
976.19	274.98	792.58	701.26	5.34	OSF1.50	18700.00	10760.00					MinPt-EOU	
980.09	280.90	792.45	699.19	5.25	OSF1.50	18890.00	10760.00					MinPt-EOU	
982.12	283.31	792.92	698.81	5.21	OSF1.50	18970.00	10760.00					MinPt-ADP	
1000.13	300.81	799.26	699.32	5.00	OSF1.50	19520.00	10760.00	OSF<5.00				Enter Alert	
1009.59	317.84	797.37	691.76	4.77	OSF1.50	20060.00	10760.00					MinPt-EOU	
1015.93	338.41	789.99	677.51	4.51	OSF1.50	20700.00	10760.00					MinPt-CtCt	
1017.41	345.37	786.84	672.04	4.43	OSF1.50	20920.41	10760.00					MinPts	

Cimarex Coriander AOC 1-12 State 3H - Corrected MWD to 19431ft (DefinitiveSurvey)

Warning Alert

126.40	32.81	125.12	93.59	#####	MAS = 10.00 (m)	0.00	0.00					Surface	
126.40	32.81	125.11	93.59	11600.99	MAS = 10.00 (m)	23.00	23.00					WRP	
122.57	32.81	112.35	89.77	13.57	MAS = 10.00 (m)	970.00	970.00					MinPts	
122.51	32.81	110.09	89.71	10.88	MAS = 10.00 (m)	1190.00	1190.00					MinPt-EOU	
122.39	32.81	109.11	89.58	9.99	MAS = 10.00 (m)	1290.00	1290.00					MinPt-EOU	
122.25	32.81	107.90	89.44	9.08	MAS = 10.00 (m)	1411.44	1411.44					MinPts	
122.64	32.81	107.52	89.83	8.61	MAS = 10.00 (m)	1490.00	1490.00					MinPt-EOU	
127.55	32.81	106.65	94.74	6.36	MAS = 10.00 (m)	2070.00	2070.00					MinPt-EOU	
144.44	38.01	118.77	106.43	6.81	OSF1.50	2550.00	2548.63					MinPt-SF	
340.98	103.05	271.95	237.93	5.00	OSF1.50	6900.00	6889.01	OSF<5.00				Enter Alert	
325.02	133.83	235.47	191.19	3.66	OSF1.50	8980.00	8969.01					MinPt-CtCt	
325.11	134.10	235.38	191.01	3.65	OSF1.50	9000.00	8989.01					MinPt-EOU	
325.24	134.23	235.42	191.01	3.65	OSF1.50	9010.00	8999.01					MinPt-ADP	
325.66	134.48	235.68	191.19	3.65	OSF1.50	9030.00	9019.01					MinPt-SF	
422.13	128.78	335.94	293.35	4.94	OSF1.50	9440.00	9429.01	OSF>5.00				Exit Alert	
1260.92	92.11	1199.18	1168.81	20.74	OSF1.50	11419.98	10760.00					MinPt-CtCt	
1261.17	92.68	1199.09	1168.54	20.63	OSF1.50	11470.00	10760.00					MinPt-EOU	
1262.04	93.69	1199.25	1168.35	20.40	OSF1.50	11570.00	10760.00					MinPt-ADP	
1204.55	139.91	1110.95	1064.64	12.99	OSF1.50	13970.00	10760.00					MinPt-CtCt	
1204.23	144.03	1107.89	1060.21	12.62	OSF1.50	14130.00	10760.00					MinPt-CtCt	
1204.66	145.21	1107.53	1059.45	12.52	OSF1.50	14180.00	10760.00					MinPt-EOU	
1205.26	145.92	1107.65	1059.34	12.46	OSF1.50	14210.00	10760.00					MinPt-ADP	
1229.10	184.53	1105.75	1044.57	10.04	OSF1.50	15620.00	10760.00					MinPt-CtCt	
1233.80	194.74	1103.65	1039.06	9.54	OSF1.50	15980.00	10760.00					MinPt-EOU	
1239.93	203.24	1104.11	1036.69	9.19	OSF1.50	16270.00	10760.00					MinPt-EOU	
1254.99	220.95	1107.36	1034.04	8.55	OSF1.50	16870.00	10760.00					MinPt-ADP	
1259.09	226.47	1107.79	1032.63	8.37	OSF1.50	17050.00	10760.00					MinPt-EOU	
1259.82	263.21	1084.02	996.61	7.20	OSF1.50	18250.00	10760.00					MinPt-CtCt	
1233.07	322.12	1018.00	910.95	5.75	OSF1.50	20130.00	10760.00					MinPt-CtCt	
1231.73	344.33	1001.85	887.40	5.38	OSF1.50	20830.00	10760.00					MinPt-CtCt	
1231.33	347.20	999.54	884.14	5.33	OSF1.50	20920.41	10760.00					MinPts	

Cimarex Coriander AOC 1-12 State 1H - MWD to 19004ft (DefinitiveSurvey)

Warning Alert

205.80	32.81	203.83	173.00	2154791.10	MAS = 10.00 (m)	0.00	0.00					Surface
205.79	32.81	203.80	172.98	29833.47	MAS = 10.00 (m)	23.00	23.00					WRP
198.50	32.81	184.42	165.69	16.24	MAS = 10.00 (m)	1290.00	1290.00					MinPt-EOU
198.22	32.81	183.26	165.41	14.88	MAS = 10.00 (m)	1400.00	1400.00					MinPts
195.20	32.81	172.92	162.39	9.43	MAS = 10.00 (m)	2129.81	2129.81					MinPts
195.36	32.99	172.78	162.37	9.30	OSF1.50	2160.00	2160.00					MinPt-EOU
195.62	33.29	172.84	162.33	9.22	OSF1.50	2180.00	2179.99					MinPt-ADP
212.20	37.39	186.68	174.80	8.86	OSF1.50	2460.00	2459.12					MinPt-SF
251.87	44.15	221.85	207.72	8.85	OSF1.50	2920.00	2916.60					MinPt-SF
420.01	67.63	374.34	352.38	9.52	OSF1.50	4530.00	4519.01					MinPt-EOU
420.47	68.20	374.42	352.28	9.45	OSF1.50	4570.00	4559.01					MinPt-ADP
429.91	85.35	372.47	344.56	7.67	OSF1.50	5740.00	5729.01					MinPt-CICt

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
404.76	122.65	322.46	282.11	5.00		OSF1.50	8250.00	8239.01	OSF<5.00			Enter Alert	
400.93	132.56	312.02	268.37	4.57		OSF1.50	8920.00	8909.01				MinPt-CtCt	
400.98	132.82	311.89	268.16	4.57		OSF1.50	8940.00	8929.01			MinPt-EOU		
401.19	133.07	311.93	268.11	4.56		OSF1.50	8960.00	8949.01			MinPt-ADP		
402.09	133.56	312.51	268.53	4.55		OSF1.50	9000.00	8989.01			MinPt-SF		
435.72	132.35	346.95	303.37	4.98		OSF1.50	9220.00	9209.01	OSF>5.00			Exit Alert	
1208.27	116.55	1130.07	1091.72	15.73		OSF1.50	12970.00	10760.00				MinPt-CtCt	
1210.40	122.36	1128.33	1088.04	15.00		OSF1.50	13230.00	10760.00			MinPt-EOU		
1214.32	127.75	1128.65	1086.57	14.41		OSF1.50	13450.00	10760.00			MinPt-EOU		
1217.15	146.78	1118.80	1070.37	12.55		OSF1.50	14160.00	10760.00			MinPt-CtCt		
1217.41	150.22	1116.76	1067.19	12.26		OSF1.50	14290.00	10760.00			MinPt-CtCt		
1218.66	153.63	1115.74	1065.03	12.00		OSF1.50	14420.00	10760.00			MinPt-EOU		
1220.73	156.06	1116.19	1064.67	11.83		OSF1.50	14510.00	10760.00			MinPt-ADP		
1216.10	183.46	1093.30	1032.64	10.01		OSF1.50	15470.00	10760.00			MinPt-CtCt		
1216.54	184.75	1092.88	1031.80	9.95		OSF1.50	15520.00	10760.00			MinPt-EOU		
1217.87	186.34	1093.14	1031.53	9.87		OSF1.50	15580.00	10760.00			MinPt-ADP		
1225.44	203.95	1088.97	1021.49	9.07		OSF1.50	16150.00	10760.00			MinPt-EOU		
1228.45	207.52	1089.60	1020.92	8.93		OSF1.50	16270.00	10760.00			MinPt-ADP		
1220.95	237.53	1062.10	983.42	7.75		OSF1.50	17240.00	10760.00			MinPt-CtCt		
1225.04	257.00	1053.21	968.04	7.18		OSF1.50	17860.00	10760.00			MinPt-CtCt		
1220.31	276.74	1035.32	943.57	6.64		OSF1.50	18460.00	10760.00			MinPt-CtCt		
1231.21	311.19	1023.25	920.02	5.96		OSF1.50	19510.00	10760.00			MinPt-CtCt		
1231.12	323.20	1015.15	907.92	5.73		OSF1.50	19870.00	10760.00			MinPt-CtCt		
1232.97	332.94	1010.51	900.03	5.57		OSF1.50	20170.00	10760.00			MinPt-EOU		
1233.97	334.14	1010.71	899.83	5.56		OSF1.50	20210.00	10760.00			MinPt-ADP		
1236.13	342.80	1007.10	893.34	5.43		OSF1.50	20460.00	10760.00			MinPt-CtCt		
1236.27	343.29	1006.91	892.98	5.42		OSF1.50	20480.00	10760.00			MinPt-EOU		
1236.46	343.51	1006.95	892.95	5.42		OSF1.50	20490.00	10760.00			MinPt-ADP		
1238.02	344.22	1008.04	893.80	5.41		OSF1.50	20530.00	10760.00			MinPt-SF		
1318.53	337.84	1092.80	980.69	5.87		OSF1.50	20920.41	10760.00			TD		
30-025-33354 - April APZ State 1 - Gyro to 10860ft - A (DefinitiveSurvey)													Warning Alert
5428.57	32.81	5427.59	5395.77	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
5428.44	32.81	5427.44	5395.63	321268.20		MAS = 10.00 (m)	23.00	23.00				WRP	
5428.40	32.81	5427.32	5395.60	55573.53		MAS = 10.00 (m)	50.00	50.00				MinPts	
5428.50	32.81	5413.44	5395.69	385.60		MAS = 10.00 (m)	1500.00	1500.00				MinPts	
5430.32	32.81	5409.21	5397.52	269.74		MAS = 10.00 (m)	2120.00	2120.00				MinPt-EOU	
5601.81	67.65	5556.38	5534.16	126.02		OSF1.50	4580.00	4569.01				MinPt-EOU	
5606.32	76.24	5555.16	5530.08	111.72		OSF1.50	5140.00	5129.01				MinPt-CtCt	
5593.73	101.62	5525.66	5492.12	83.36		OSF1.50	6860.00	6849.01				MinPt-CtCt	
5593.76	102.80	5524.90	5490.96	82.40		OSF1.50	6940.00	6929.01				MinPt-CtCt	
5594.37	112.85	5518.81	5481.52	75.00		OSF1.50	7620.00	7609.01				MinPt-CtCt	
5594.44	115.07	5517.40	5479.37	73.55		OSF1.50	7770.00	7759.01				MinPt-CtCt	
5595.18	122.61	5513.11	5472.57	68.99		OSF1.50	8280.00	8269.01				MinPt-CtCt	
5595.45	127.05	5510.42	5468.40	66.57		OSF1.50	8580.00	8569.01				MinPt-CtCt	
5595.48	128.23	5509.64	5467.22	65.95		OSF1.50	8660.00	8649.01				MinPt-CtCt	
5596.37	132.52	5507.70	5463.85	63.81		OSF1.50	8970.00	8959.01				MinPt-EOU	
5596.63	132.84	5507.75	5463.80	63.66		OSF1.50	9000.00	8989.01				MinPt-ADP	
5597.70	133.83	5508.16	5463.88	63.19		OSF1.50	9080.00	9069.01				MinPt-ADP	
5612.91	143.02	5517.23	5469.89	59.27		OSF1.50	9710.00	9699.01				MinPt-ADP	
5614.27	144.33	5517.72	5469.94	58.74		OSF1.50	9790.00	9779.01				MinPt-ADP	
5615.00	145.20	5517.87	5469.80	58.39		OSF1.50	9840.00	9829.01				MinPt-EOU	
5616.19	146.65	5518.10	5469.54	57.82		OSF1.50	9940.00	9929.01				MinPt-ADP	
5616.73	147.20	5518.27	5469.53	57.61		OSF1.50	9980.00	9969.01				MinPt-ADP	
562.71	171.48	448.06	391.23	4.94		OSF1.50	15680.00	10760.00	OSF<5.00			Enter Alert	
344.02	201.26	209.52	142.76	2.57		OSF1.50	16125.31	10760.00				MinPt-CtCt	
344.05	201.36	209.48	142.69	2.57		OSF1.50	16130.00	10760.00				MinPts	
344.33	201.53	209.65	142.81	2.57		OSF1.50	16140.00	10760.00				MinPt-SF	
594.36	179.10	474.64	415.27	5.00		OSF1.50	16610.00	10760.00	OSF>5.00			Exit Alert	
4807.37	168.63	4694.63	4638.75	43.01		OSF1.50	20920.41	10760.00				TD	
30-025-33531 - Coriander AOC State 1 - INC Only to 9121ft - A (DefinitiveSurvey)													Warning Alert
379.13	32.81	377.15	346.33	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
378.52	32.81	376.45	345.71	3967.42		MAS = 10.00 (m)	10.00	10.00				MinPt-SF	
378.12	32.81	376.08	345.31	6024.53		MAS = 10.00 (m)	23.00	23.00				WRP	
378.08	114.66	301.06	263.42	5.00		OSF1.50	2020.00	2020.00	OSF<5.00			Enter Alert	
378.06	119.71	297.69	258.37	4.79		OSF1.50	2100.00	2100.00				MinPt-CtCt	
380.85	127.88	295.01	252.98	4.51		OSF1.50	2230.00	2229.96				MinPt-EOU	
384.00	131.63	295.66	252.37	4.41		OSF1.50	2290.00	2289.86				MinPt-ADP	
589.65	575.36	205.54	14.29	1.54		OSF1.50	9160.00	9149.01				MinPts	
1077.17	328.66	857.53	748.51	4.93		OSF1.50	10060.00	10049.01	OSF>5.00			Exit Alert	
2235.43	409.90	1961.66	1825.53	8.20		OSF1.50	12330.00	10760.00				MinPt-SF	
10238.58	575.64	9854.32	9662.94	26.75		OSF1.50	20920.41	10760.00			TD		
30-025-47636 - WILD SALSA FED COM 226H - MWD to 21865ft - A (DefinitiveSurvey)													Warning Alert
15228.51	212.16	15086.40	15016.34	108.67		OSF1.50	0.00	0.00				Surface	
15211.73	212.10	15069.67	14999.63	108.58		OSF1.50	23.00	23.00				WRP	
13585.49	198.44	13452.61	13387.05	103.60		OSF1.50	2400.00	2399.45				MinPt-SF	
969.62	292.21	774.32	677.42	5.00		OSF1.50	20230.00	10760.00	OSF<5.00			Enter Alert	
497.54	470.58	183.32	26.96	1.59		OSF1.50	20920.41	10760.00				MinPts	
30-025-47629 - WILD SALSA FED COM 215H - MWD to 21650ft - A (DefinitiveSurvey)													Warning Alert
14920.35	206.64	14781.93	14713.71	109.34		OSF1.50	0.00	0.00				Surface	
14903.88	206.56	14765.52	14697.33	109.26		OSF1.50	23.00	23.00				WRP	
13315.72	190.93	13187.84	13124.79	105.57		OSF1.50	2400.00	2399.45				MinPt-SF	
12698.97	182.51	12576.71	12516.46	105.37		OSF1.50	3550.00	3543.15				MinPt-SF	
1193.85	363.68	950.90	830.17	4.94		OSF1.50	20080.00	10760.00	OSF<5.00			Enter Alert	
689.38	598.62	289.79	90.75	1.73		OSF1.50	20920.41	10760.00				MinPts	
30-025-33370 - Thyme APY Federal 1 INC Only to 10250ft (DefinitiveSurvey)													Warning Alert
981.91	32.81	979.93	949.10	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
981.75	32.81	979.75	948.94	47775.17		MAS = 10.00 (m)	10.00	10.00				MinPt-SF	
981.70	32.81	979.67</											

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
	967.44	152.59	885.39	834.85	9.76	OSF1.50	10170.67	10159.68				MinPt-CtCt	
	987.45	152.66	885.36	834.80	9.76	OSF1.50	10180.00	10169.01				MinPt-EOU	
	987.51	152.73	885.36	834.78	9.75	OSF1.50	10190.00	10179.01				MinPt-ADP	
	990.20	153.48	887.55	836.72	9.73	OSF1.50	10290.00	10278.15				MinPt-SF	
	1024.44	151.77	922.93	872.67	10.18	OSF1.50	10890.00	10704.39				MinPt-CtCt	
	1024.48	151.84	922.92	872.64	10.18	OSF1.50	10900.00	10707.41				MinPts	
	1030.58	154.57	927.21	876.01	10.06	OSF1.50	11350.00	10760.00				MinPt-EOU	
	1030.63	154.62	927.22	876.01	10.05	OSF1.50	11360.00	10760.00				MinPt-ADP	
	1033.84	310.90	826.24	722.94	5.00	OSF1.50	18900.00	10760.00	OSF<5.00			Enter Alert	
	1033.81	369.06	787.44	664.75	4.21	OSF1.50	20920.41	10760.00				MinPts	
30-025-33580 RED TANK 31 STATE #004 Active Incl only+Blind 0-9100' (DefinitiveSurvey)													Warning Alert
	1134.71	32.81	1132.73	1101.91	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1134.32	32.81	1132.30	1101.51	26668.61	MAS = 10.00 (m)	20.00	20.00				MinPt-SF	
	1134.29	32.81	1132.28	1101.49	30750.55	MAS = 10.00 (m)	23.00	23.00				WRP	
	1134.26	32.81	1132.25	1101.45	34734.69	MAS = 10.00 (m)	32.20	32.20				MinPts	
	1151.20	125.22	1067.14	1025.99	13.97	OSF1.50	2350.00	2349.68				MinPt-EOU	
	1202.03	181.52	1080.43	1020.52	10.02	OSF1.50	3370.00	3364.14				MinPt-ADP	
	1204.31	183.79	1081.19	1020.52	9.91	OSF1.50	3410.00	3403.92				MinPt-ADP	
	1322.60	398.45	1056.42	924.14	4.99	OSF1.50	6540.00	6529.01	OSF<5.00			Enter Alert	
	1347.90	476.54	1029.65	871.35	4.25	OSF1.50	7750.00	7739.01				MinPt-EOU	
	1363.93	655.20	926.59	708.73	3.13	OSF1.50	9150.00	9139.01				MinPts	
	1738.90	529.89	1382.86	1209.01	4.98	OSF1.50	10220.00	10208.95	OSF>5.00			Exit Alert	
	10946.97	661.72	10504.78	10285.25	24.93	OSF1.50	20920.41	10760.00				TD	
30-025-33574 - Coriander AOC State 2 - INC Only to 9170ft - P (DefinitiveSurvey)													Warning Alert
	1506.66	32.81	1504.68	1473.85	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1506.25	32.81	1504.21	1473.44	27072.72	MAS = 10.00 (m)	20.00	20.00				MinPt-SF	
	1506.21	32.81	1504.18	1473.40	27420.53	MAS = 10.00 (m)	23.00	23.00				WRP	
	1506.10	119.80	1425.64	1386.30	19.12	OSF1.50	2100.00	2100.00				MinPt-CtCt	
	1509.36	129.69	1422.32	1379.67	17.68	OSF1.50	2250.00	2249.93				MinPt-EOU	
	1512.50	133.60	1422.84	1378.90	17.19	OSF1.50	2310.00	2309.81				MinPt-ADP	
	1693.41	509.19	1353.41	1184.21	5.00	OSF1.50	8710.00	8699.01	OSF<5.00			Enter Alert	
	1693.43	542.60	1331.16	1150.83	4.69	OSF1.50	9230.00	9219.01				MinPts	
	1749.36	526.70	1397.68	1222.66	4.99	OSF1.50	9660.00	9649.01	OSF>5.00			Exit Alert	
	1882.67	159.19	1476.04	1423.48	15.04	OSF1.50	12130.00	10760.00				MinPt-CtCt	
	1582.87	159.63	1475.94	1423.23	15.00	OSF1.50	12160.00	10760.00				MinPt-EOU	
	1598.65	177.06	1480.11	1421.59	13.65	OSF1.50	12360.00	10760.00				MinPt-ADP	
	2136.71	388.40	1877.28	1748.31	8.28	OSF1.50	13570.00	10760.00				MinPt-SF	
	8927.34	542.53	8565.15	8384.80	24.75	OSF1.50	20920.41	10760.00				TD	
30-025-33529 - Thyme APY Federal 2 - INC Only to 9154ft - P (DefinitiveSurvey)													Warning Alert
	1762.41	32.81	1760.43	1729.60	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1762.17	32.81	1760.17	1729.36	70151.37	MAS = 10.00 (m)	20.00	20.00				MinPt-SF	
	1762.16	32.81	1760.16	1729.35	83317.14	MAS = 10.00 (m)	23.00	23.00				WRP	
	1762.14	124.10	1678.82	1638.04	21.58	OSF1.50	2100.00	2100.00				MinPt-CtCt	
	1810.59	544.81	1446.84	1265.78	5.00	OSF1.50	8450.00	8439.01	OSF<5.00			Enter Alert	
	1810.60	591.08	1416.00	1219.51	4.60	OSF1.50	9200.00	9189.01				MinPts	
	1888.17	568.53	1508.61	1319.64	4.99	OSF1.50	9730.00	9719.01	OSF>5.00			Exit Alert	
	1867.86	333.94	1644.73	1533.91	8.42	OSF1.50	12140.00	10760.00				MinPt-CtCt	
	1867.87	333.96	1644.72	1533.89	8.42	OSF1.50	12150.00	10760.00				MinPts	
	2187.30	422.96	1904.82	1764.34	7.78	OSF1.50	13280.00	10760.00				MinPt-SF	
	8975.08	589.65	8581.48	8385.43	22.89	OSF1.50	20920.41	10760.00				TD	
Cimarex Thyme APY Federal 9H - MWD to 14030ft - A (DefinitiveSurvey)													Pass
	1336.63	32.81	1334.65	1303.82	#####	MAS = 10.00 (m)	0.00	0.00				Surface	
	1336.63	32.81	1334.61	1303.82	42641.04	MAS = 10.00 (m)	23.00	23.00				WRP	
	1333.49	32.81	1319.39	1300.68	109.84	MAS = 10.00 (m)	1290.00	1290.00				MinPt-EOU	
	1333.43	32.81	1317.39	1300.62	93.18	MAS = 10.00 (m)	1510.00	1510.00				MinPts	
	1182.61	67.54	1136.99	1115.07	26.93	OSF1.50	4490.00	4479.01				MinPt-CtCt	
	1182.35	71.00	1134.46	1111.38	25.58	OSF1.50	4724.77	4713.78				MinPt-CtCt	
	1182.69	71.88	1134.18	1110.81	25.26	OSF1.50	4790.00	4779.01				MinPt-EOU	
	1183.04	72.28	1134.27	1110.76	25.13	OSF1.50	4820.00	4809.01				MinPt-ADP	
	1184.10	73.30	1134.65	1110.80	24.79	OSF1.50	4890.00	4879.01				MinPt-ADP	
	1185.93	75.05	1135.36	1110.88	24.19	OSF1.50	5020.00	5009.01				MinPt-CtCt	
	1190.46	123.27	1107.74	1067.19	14.66	OSF1.50	8280.00	8269.01				MinPt-EOU	
	1192.60	134.73	1102.26	1057.88	13.42	OSF1.50	9060.00	9049.01				MinPt-CtCt	
	1193.21	137.01	1101.33	1056.20	13.20	OSF1.50	9210.00	9199.01				MinPt-EOU	
	1193.29	137.24	1101.28	1056.05	13.18	OSF1.50	9230.00	9219.01				MinPt-ADP	
	1193.39	137.36	1101.28	1056.03	13.17	OSF1.50	9240.00	9229.01				MinPt-SF	
	1203.86	140.38	1109.73	1063.49	13.00	OSF1.50	9490.00	9479.01				MinPt-SF	
	1737.46	127.64	1651.87	1609.82	20.64	OSF1.50	11480.00	10760.00				MinPt-SF	
	1760.25	132.33	1671.53	1627.93	20.16	OSF1.50	11810.00	10760.00				MinPt-ADP	
	1762.74	137.50	1670.57	1625.24	19.43	OSF1.50	12110.00	10760.00				MinPt-CtCt	
	1758.34	145.74	1660.68	1612.60	18.27	OSF1.50	12540.00	10760.00				MinPt-CtCt	
	1759.44	153.17	1655.82	1605.27	17.38	OSF1.50	12860.00	10760.00				MinPt-EOU	
	1758.77	154.06	1655.67	1604.72	17.28	OSF1.50	12910.00	10760.00				MinPt-ADP	
	1759.08	154.41	1655.64	1604.69	17.24	OSF1.50	12930.00	10760.00				MinPt-CtCt	
	1773.28	187.14	1648.02	1586.13	14.32	OSF1.50	14050.00	10760.00				MinPt-EOU	
	1775.95	201.11	1641.38	1574.84	13.33	OSF1.50	14490.00	10760.00				MinPt-ADP	
	1776.82	202.13	1641.57	1574.69	13.27	OSF1.50	14530.00	10760.00				MinPt-CtCt	
	1749.62	233.07	1593.74	1516.55	11.32	OSF1.50	15410.00	10760.00				MinPt-EOU	
	1749.65	233.19	1593.69	1516.46	11.32	OSF1.50	15420.00	10760.00				MinPt-ADP	
	1749.73	233.30	1593.69	1516.43	11.31	OSF1.50	15430.00	10760.00				MinPt-SF	
	1752.42	234.03	1595.89	1518.38	11.29	OSF1.50	15510.00	10760.00				MinPt-SF	
	5780.44	182.27	5658.43	5598.17	47.95	OSF1.50	20920.41	10760.00				TD	

Cimarex Energy Co., Coriander 1-12 State Com 213H

1. Geological Formations

TVD of target 10,760

Pilot Hole TD N/A

MD at TD 20,920

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1256	N/A	
Top of Salt	1790	N/A	
Base of Salt	4970	N/A	
Top Delaware Sands/Bell Canyon	5017	Hydrocarbons	
Cherry Canyon	6130	Hydrocarbons	
Brushy Canyon	7201	Hydrocarbons	
Basal Brushy Canyon	8532	N/A	
Bone Spring Lime	8825	N/A	
Leonard/Avalon Sand	8940	Hydrocarbons	
Avalon Shale	9360	Hydrocarbons	
1st Bone Spring Sand	9989	Hydrocarbons	
2nd Bone Spring Sand	10650	Hydrocarbons	
2nd Bone Spring Lime		N/A	
2nd Bone Spring Sand - Target	10760	Hydrocarbons	
Wolfcamp		N/A	
Wolfcamp		N/A	
Cisco		N/A	
Cisco		N/A	
Canyon		N/A	
Canyon		N/A	
Strawn		N/A	
Strawn		N/A	
Atoka		N/A	
Atoka		N/A	
Morrow		N/A	
Morrow		N/A	
Barnett Shale		N/A	
Barnett Shale		N/A	
Woodford		N/A	
Woodford		N/A	
Devonian		N/A	
Devonian		N/A	
Fusselman		N/A	
Fusselman		N/A	
Ellenburger		N/A	
Ellenburger		N/A	
Granite Wash		N/A	
Granite Wash		N/A	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1306	1306	13-3/8"	48.00	H-40	ST&C	1.31	3.06	5.14
12 1/4	0	4977	4967	9-5/8"	40.00	HCK-55	LT&C	1.48	1.53	2.82
8 3/4	0	10170	10170	7"	29.00	L-80	BT&C	1.47	1.71	2.18

Cimarex Energy Co., Coriander 1-12 Fed Com 213H

8 3/4	10170	10920	10713	7"	29.00	L-80	BT&C	1.40	1.63	42.93
6	9670	20920	10760	4-1/2"	11.60	P-110	BT&C	1.35	1.91	29.03
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	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	632	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	170	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	931	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	291	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	331	10.30	3.64	22.18		Lead: Tuned Light + LCM
	125	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Completion System	742	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate		51
Production	4777	25
Completion System	10720	10

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

4. Pressure Control Equipment

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	3M	Annular	X	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	X	
			Other		
6	13 5/8	5M	Annular	X	50% of working pressure
			Blind Ram		5M
			Pipe Ram	X	
			Double Ram	X	
			Other		

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

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

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

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1306'	Fresh Water	7.83 - 8.33	28	N/C
1306' to 4977'	Brine Water	9.50 - 10.00	30-32	N/C
4977' to 10920'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
11280' to 20920'	OBM	9.50 - 10.00	50-70	N/C

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

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

6. Logging and Testing Procedures

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

Additional Logs Planned	Interval
-------------------------	----------

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	5595 psi
Abnormal Temperature	No

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

X	H ₂ S is present
X	H ₂ S plan is attached

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

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

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

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

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

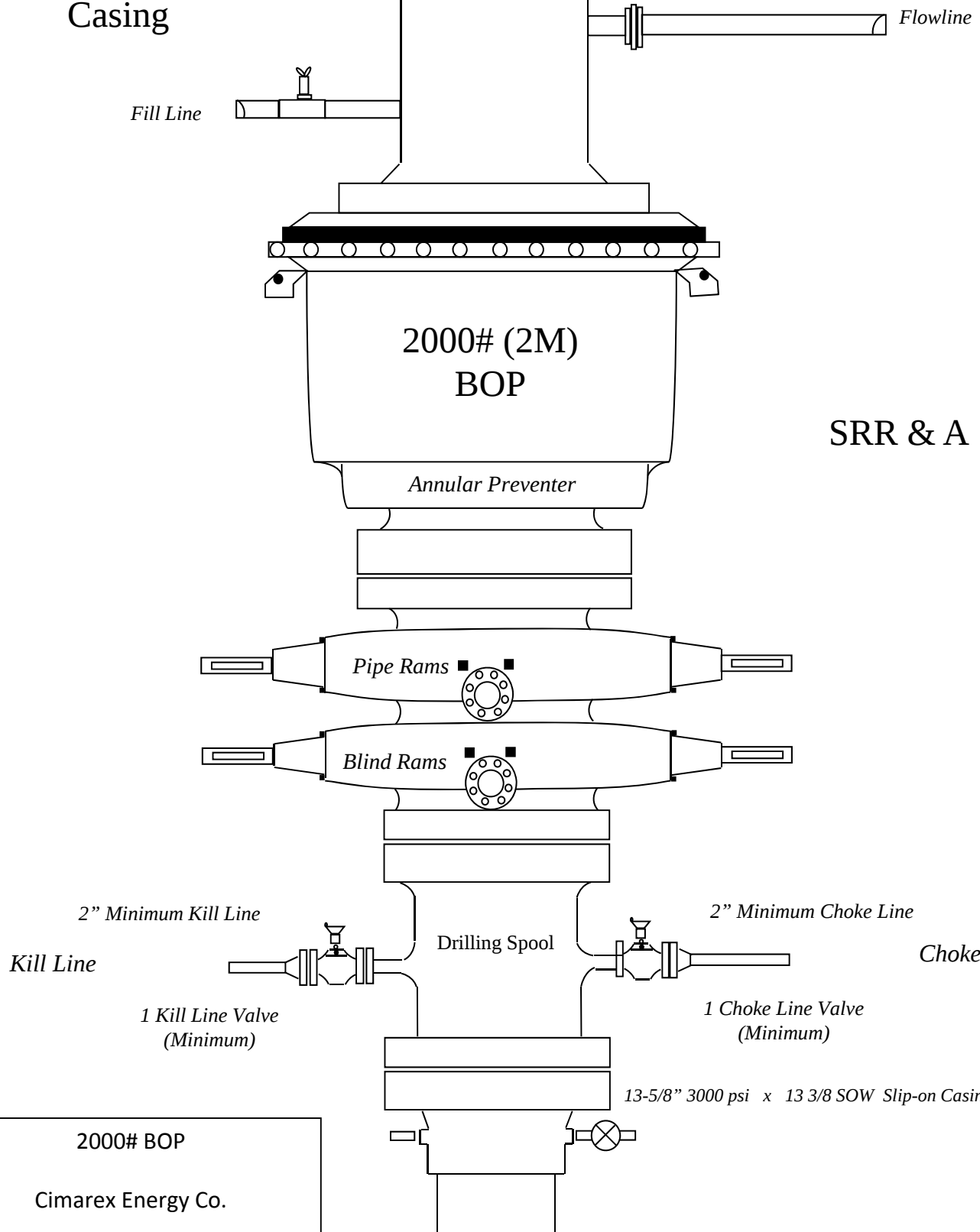
A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

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

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

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

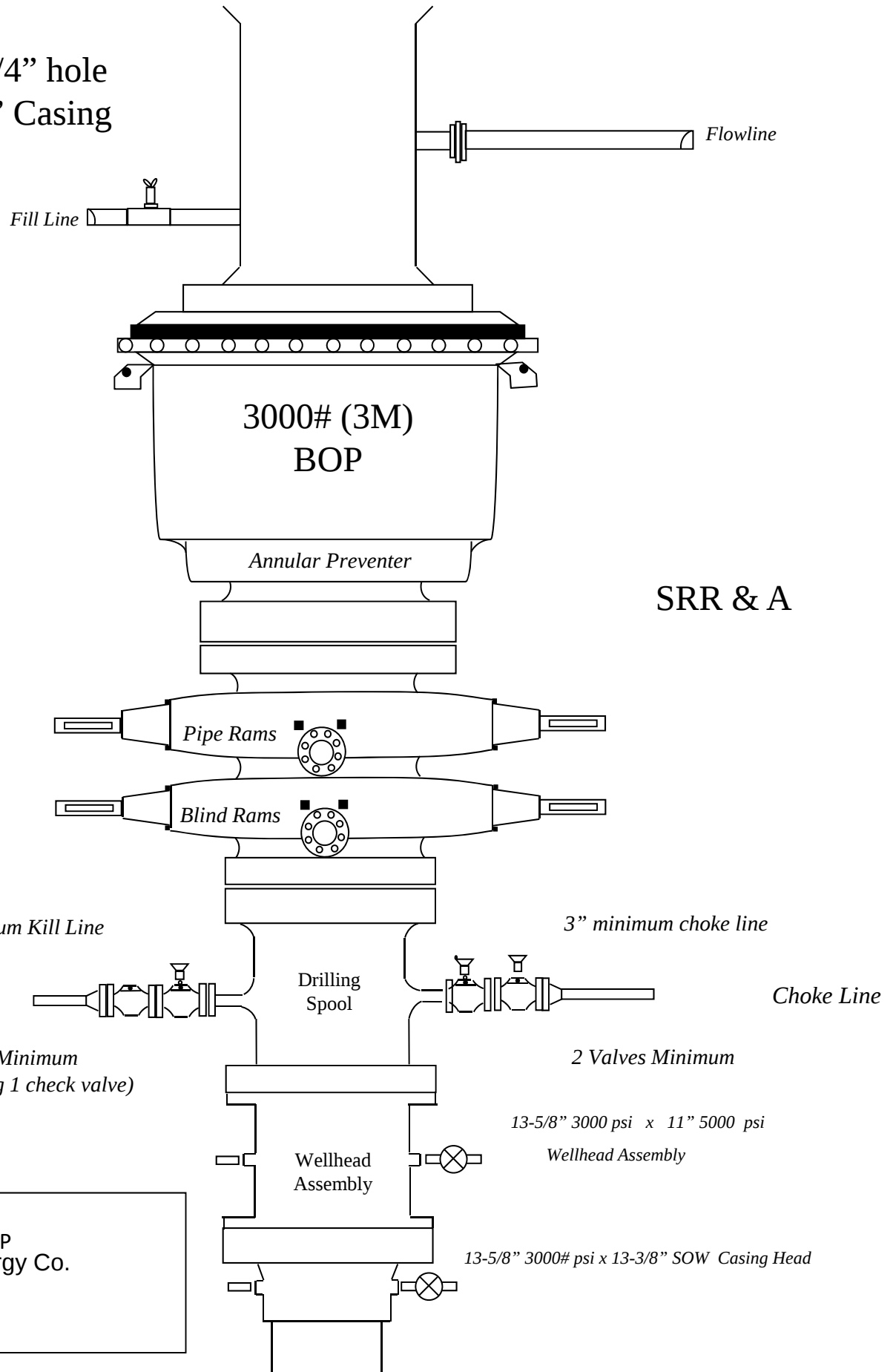
Drilling 12 1/4" hole
below 13 3/8"
Casing



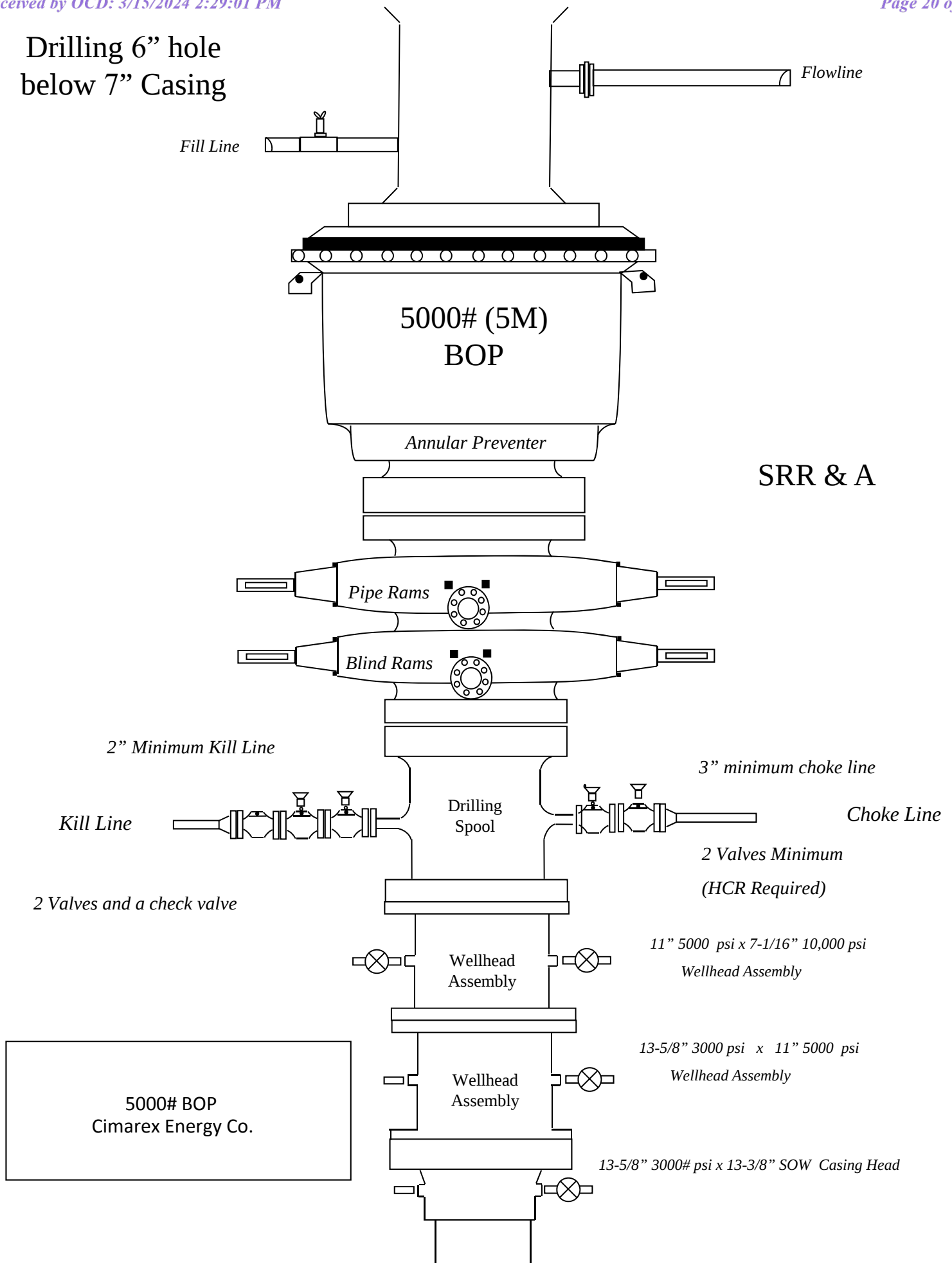
2000# BOP

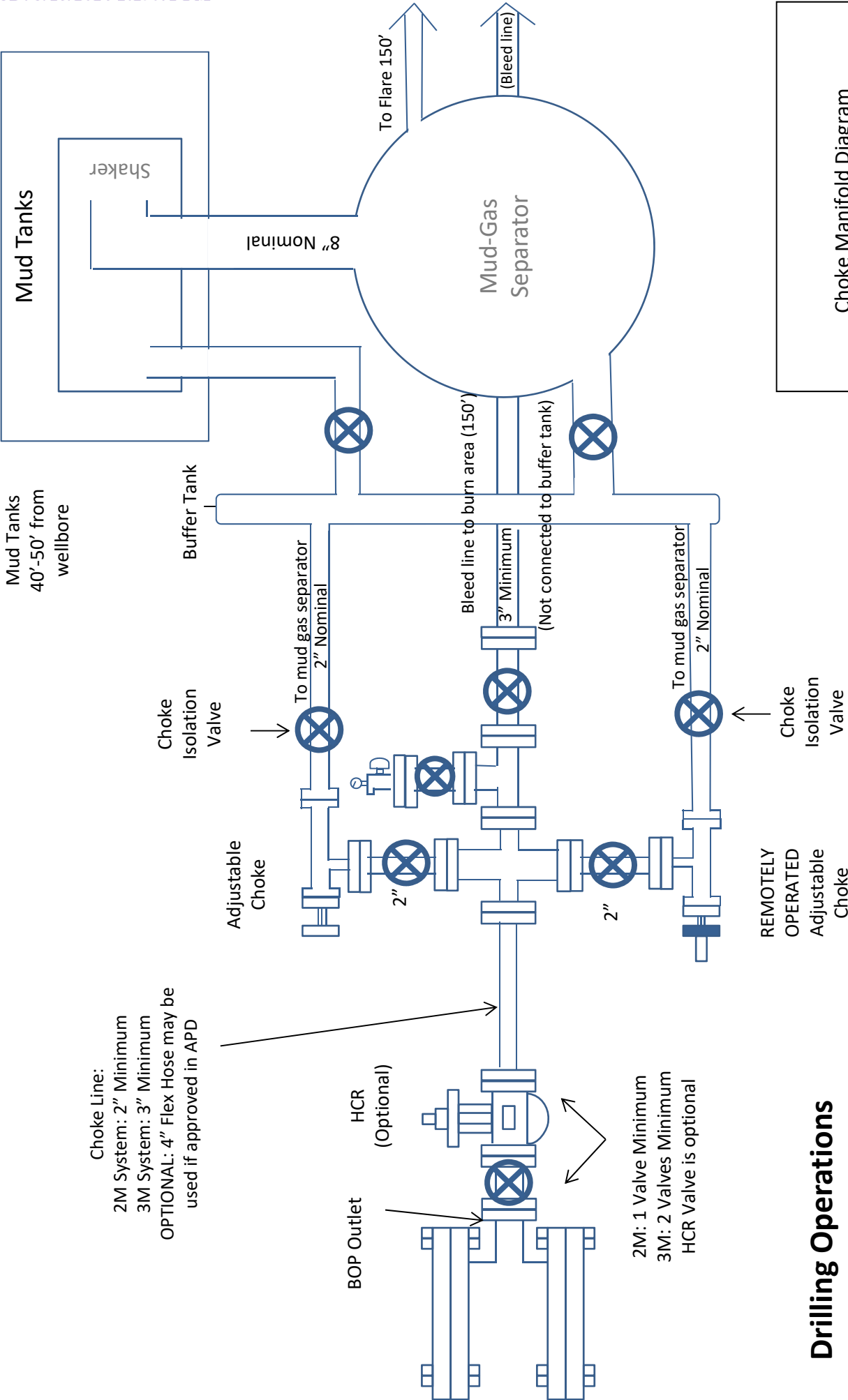
Cimarex Energy Co.

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



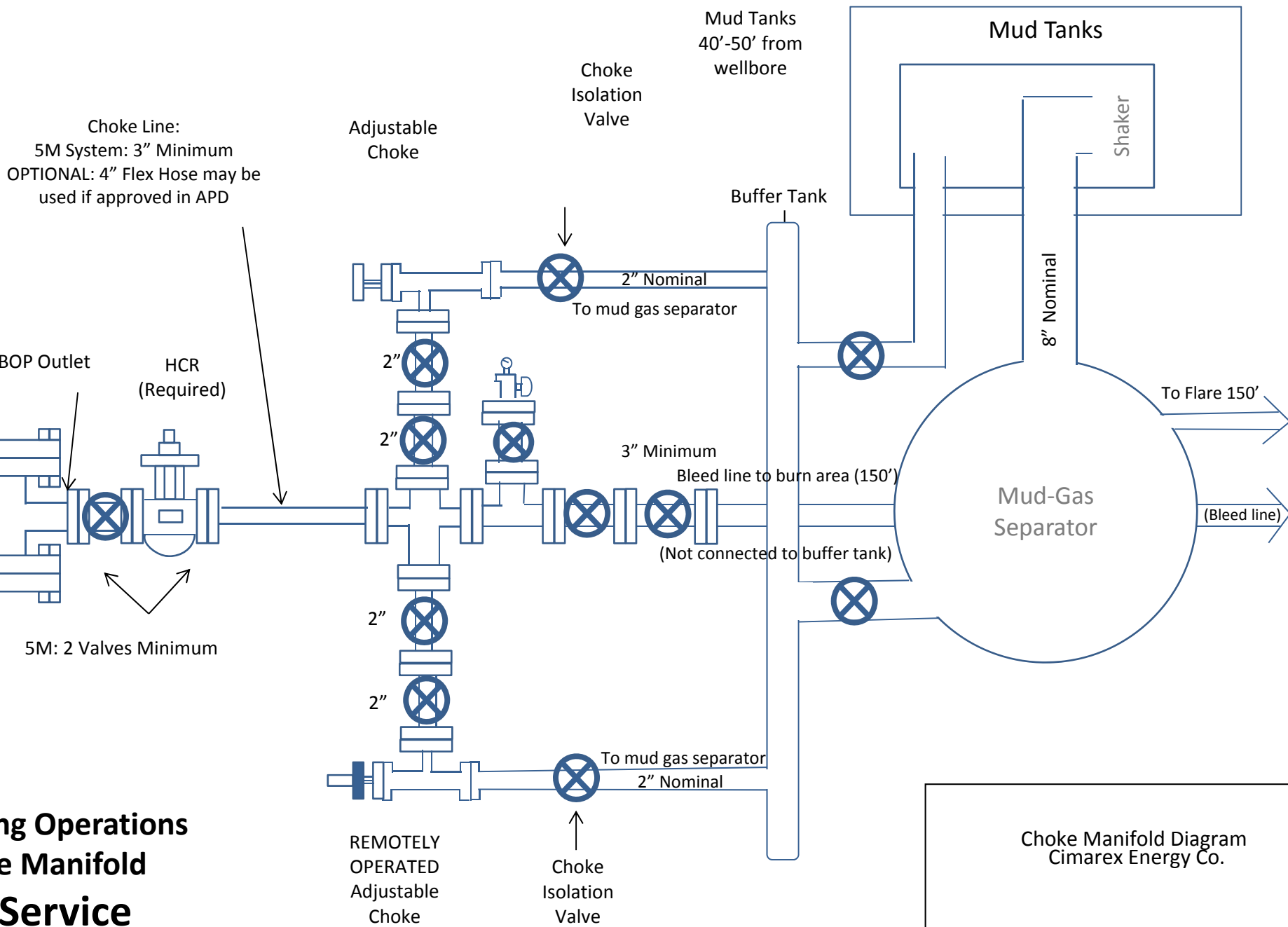
Drilling 6" hole
below 7" Casing





Choke Manifold Diagram
Cimarex Energy Co.

**Drilling Operations
Choke Manifold
2M/3M Service**

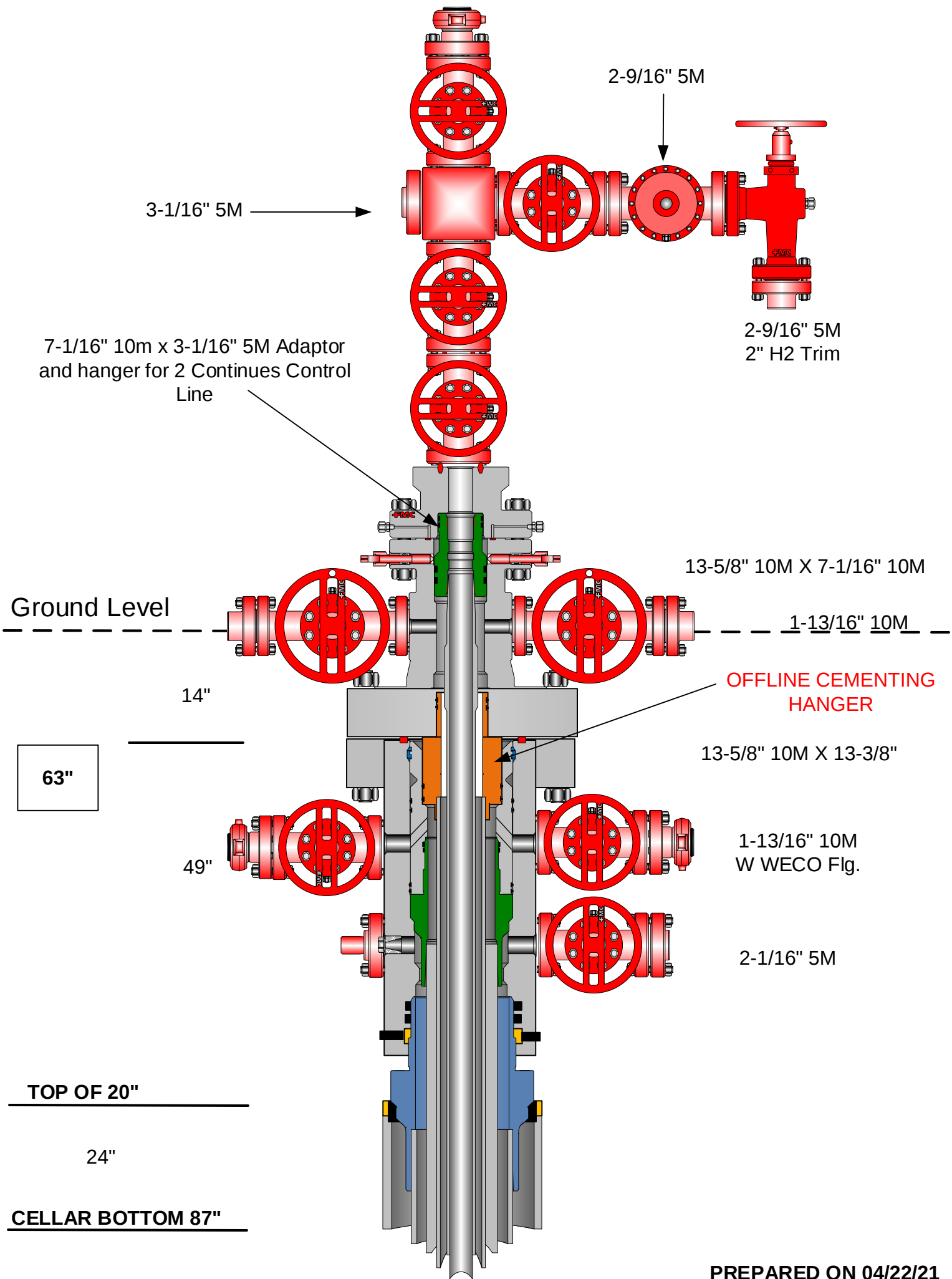


Drilling Operations Choke Manifold 5M Service



CACTUS FOR SERVICE
WEARBUSHING
IN CASING HEAD &
CASING SPOOL

LEA CO., NM



PREPARED ON 04/22/21

State of New Mexico
Energy, Minerals and Natural Resources DepartmentSubmit Electronically
Via E-permittingOil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505**NATURAL GAS MANAGEMENT PLAN**

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

Section 1 – Plan Description
Effective May 25, 2021**I. Operator:** Cimarex Energy Company **OGRID:** 215099 **Date:** 1/2/24**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
Coriander 1-12 State Com 213H		1, Sec 1 T23S, R32E	211 FNL/690 FEL	1064	1596	2128

IV. Central Delivery Point Name: Coriander 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
Coriander 1-12 State Com 213H		7/1/25	8/16/25	1/1/26	3/15/26	3/15/26

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: 
Printed Name: Sarah Jordan
Title: Regulatory Analyst
E-mail Address: sarah.jordan@coterra.com
Date: 1/2/24
Phone: 432/620-1909
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

From State of New Mexico, Natural Gas Management Plan

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

XEC Standard Response

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

Cimarex

VII. Operational Practices

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

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

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

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

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

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

- **Workovers:**
 - Always strive to kill well when performing downhole maintenance.
 - If vapors or trapped pressure is present and must be relieved then:
 - Initial blowdown to production facility:
 - Route vapors to LP flare if possible/applicable
 - Blowdown to portable gas buster tank:
 - Vent to existing or portable flare if applicable.
- **Stock tank servicing:**
 - Minimize time spent with thief hatches open.
 - When cleaning or servicing via manway, suck tank bottoms to ensure minimal volatiles exposed to atmosphere.
 - Connect vacuum truck to low pressure flare while cleaning bottoms to limit venting.
 - Isolate the vent lines and overflows on the tank being serviced from other tanks.
- **Pressure vessel/compressor servicing and associated blowdowns:**
 - Route to flare where possible.
 - Blow vessel down to minimum available pressure via pipeline, prior to venting vessel.
 - Preemptively changing anodes to reduce failures and extended corrosion related servicing.
 - When cleaning or servicing via manway, suck vessel bottoms to ensure minimal volatiles exposed to atmosphere.
- **Flare/combustor maintenance:**
 - Minimize downtime by coordinating with vendor and Cimarex staff travel logistics.
 - Utilizing preventative and predictive maintenance programs to replace high wear components before failure.
 - Because the flare/combustor is the primary equipment used to limit venting practices, ensure flare/combustor is properly maintained and fully operational at all times via routine maintenance, temperature telemetry, onsite visual inspections.

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

All Company and Contract personnel admitted on location must be trained by a qualified

1 H₂S safety instructor to the following:

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

2 H₂S Detection and Alarm Systems:

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

3 Windsock and/or wind streamers:

- A. Windsock at mudpit area should be high enough to be visible.
- B. Windsock on the rig floor and / or top doghouse should be high enough to be visible.

4 Condition Flags and Signs

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

5 Well control equipment:

- A. See exhibit "E-1"

6 Communication:

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

7 Drillstem Testing:

No DSTs or cores are planned at this time.

- 8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

H₂S Contingency Plan

New Mexico

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- « Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- « Evacuate any public places encompassed by the 100 ppm ROE.
- « Be equipped with H₂S monitors and air packs in order to control the release.
- « Use the "buddy system" to ensure no injuries occur during the 432-620-1975
- « Take precautions to avoid personal injury during this operation.
- « Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- « Have received training in the:
 - Detection of H₂S, and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

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

Characteristics of H₂S & SO₂

Please see attached International Chemical Safety Cards.

Contacting Authorities

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

H₂S Contingency Plan Emergency Contacts

New Mexico

<u>Company Office</u>			
Office		800-969-4789	
and After-Hours Menu			
<u>Key Personnel</u>			
Name	Title	Office	Mobile
Grant Muncrief	Drilling & Completions Manager	432-570-3607	918-805-7951
Charlie Pritchard	Drilling & Completions Ops Manager	432-620-1975	432-238-7084
Monte Thiems	Drlg & Completions Superintendent	918-570-7235	918-607-6030
<u>Artesia</u>			
Ambulance		911	
State Police		575-746-2703	
City Police		575-746-2703	
Sheriff's Office		575-746-9888	
Fire Department		575-746-2701	
Local Emergency Planning Committee		575-746-2122	
New Mexico Oil Conservation Division		575-748-1283	
<u>Carlsbad</u>			
Ambulance		911	
State Police		575-885-3137	
City Police		575-885-2111	
Sheriff's Office		575-887-7551	
Fire Department		575-887-3798	
Local Emergency Planning Committee		575-887-6544	
US Bureau of Land Management		575-887-6544	
<u>Santa Fe</u>			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
<u>National</u>			
National Emergency Response Center (Washington, D.C.)		800-424-8802	
<u>Medical</u>			
Trans-Aero Medevac (Carlsbad & Artesia)		1-844-435-4911	
Air Methods (Carlsbad & Hobbs)		1-800-242-6199	
Aero Care (Odessa & Fort Stockton)		1-800-627-2376	
<u>Other</u>			
Cudd Well Control		432-699-0139	or 432-563-3356
Wild Well Control		281-784-4700	
Halliburton Boots & Coots		281-931-8884	