

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 364890

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 30-025-52913
4. Property Code 334306	5. Property Name SHOWBIZ 13 12 STATE COM	6. Well No. 201H

7. Surface Location

UL - Lot M	Section 13	Township 19S	Range 34E	Lot Idn M	Feet From 216	N/S Line S	Feet From 230	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot D	Section 12	Township 19S	Range 34E	Lot Idn D	Feet From 101	N/S Line N	Feet From 330	E/W Line W	County Lea
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9. Pool Information

SCHARB;BONE SPRING	55610
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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 3852
16. Multiple N	17. Proposed Depth 20478	18. Formation Bone Spring	19. Contractor	20. Spud Date 12/1/2024
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	54.5	1805	1109	0
Int1	12.25	9.625	40	3636	837	0
Prod	8.75	7	29	10527	515	3436
Liner1	6	4.5	11.6	20478	738	10427

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	2500	
Double Ram	5000	2500	
Pipe	5000	2500	

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.		OIL CONSERVATION DIVISION	
Signature:			
Printed Name:	Electronically filed by Phillip Levasseur	Approved By:	Paul F Kautz
Title:	Regulatory Compliance Manager	Title:	Geologist
Email Address:	phillip.levasseur@coterra.com	Approved Date:	5/10/2024
Date:	5/7/2024	Phone:	412-759-4585
		Conditions of Approval Attached	Expiration Date: 5/10/2026

☐ AMENDED REPORT

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NOTE:

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

Detail "A"
No Scale

LINE TABLE

LINE	DIRECTION	LENGTH
L1	S41°04'32"E	152.72'

See Detail "A"

- = SURFACE HOLE LOCATION
- ◆ = LANDING POINT/
FIRST TAKE POINT
- = LAST TAKE POINT/BOTTOM
HOLE LOCATION
- ▲ = SECTION CORNER LOCATED
- △ = SECTION CORNER
RE-ESTABLISHED.
(Not Set on Ground.)

SCALE

DRAWN BY: N.D.T. 06-08-23

NAD 83 (SURFACE HOLE LOCATION) LATITUDE = 32°39'13.25" (32.653680°) LONGITUDE = -103°31'17.83" (-103.521620°)	NAD 83 (LP/FTP) LATITUDE = 32°39'12.11" (32.653363°) LONGITUDE = -103°31'16.66" (-103.521296°)	NAD 83 (LTP/BHL) LATITUDE = 32°40'54.61" (32.681837°) LONGITUDE = -103°31'16.80" (-103.521334°)
NAD 27 (SURFACE HOLE LOCATION) LATITUDE = 32°39'12.80" (32.653556°) LONGITUDE = -103°31'16.06" (-103.521128°)	NAD 27 (LP/FTP) LATITUDE = 32°39'11.66" (32.653239°) LONGITUDE = -103°31'14.89" (-103.520803°)	NAD 27 (LTP/BHL) LATITUDE = 32°40'54.17" (32.681713°) LONGITUDE = -103°31'15.03" (-103.520840°)
STATE PLANE NAD 83 (N.M. EAST) N: 602494.65' E: 791160.86'	STATE PLANE NAD 83 (N.M. EAST) N: 602379.97' E: 791261.67'	STATE PLANE NAD 83 (N.M. EAST) N: 612739.35' E: 791170.73'
STATE PLANE NAD 27 (N.M. EAST) N: 602431.03' E: 749980.61'	STATE PLANE NAD 27 (N.M. EAST) N: 602316.35' E: 750081.43'	STATE PLANE NAD 27 (N.M. EAST) N: 612675.39' E: 749990.77'

**17 OPERATOR
CERTIFICATION**

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

Brittany Gordon 7/11/2023

Signature

Date

Brittany Gordon

Printed Name

brittany.gordon@coterra.com

E-mail Address

**18 SURVEYOR
CERTIFICATION**

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

June 07, 2023

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number:

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

Form APD Conditions
Permit 364890

PERMIT CONDITIONS OF APPROVAL

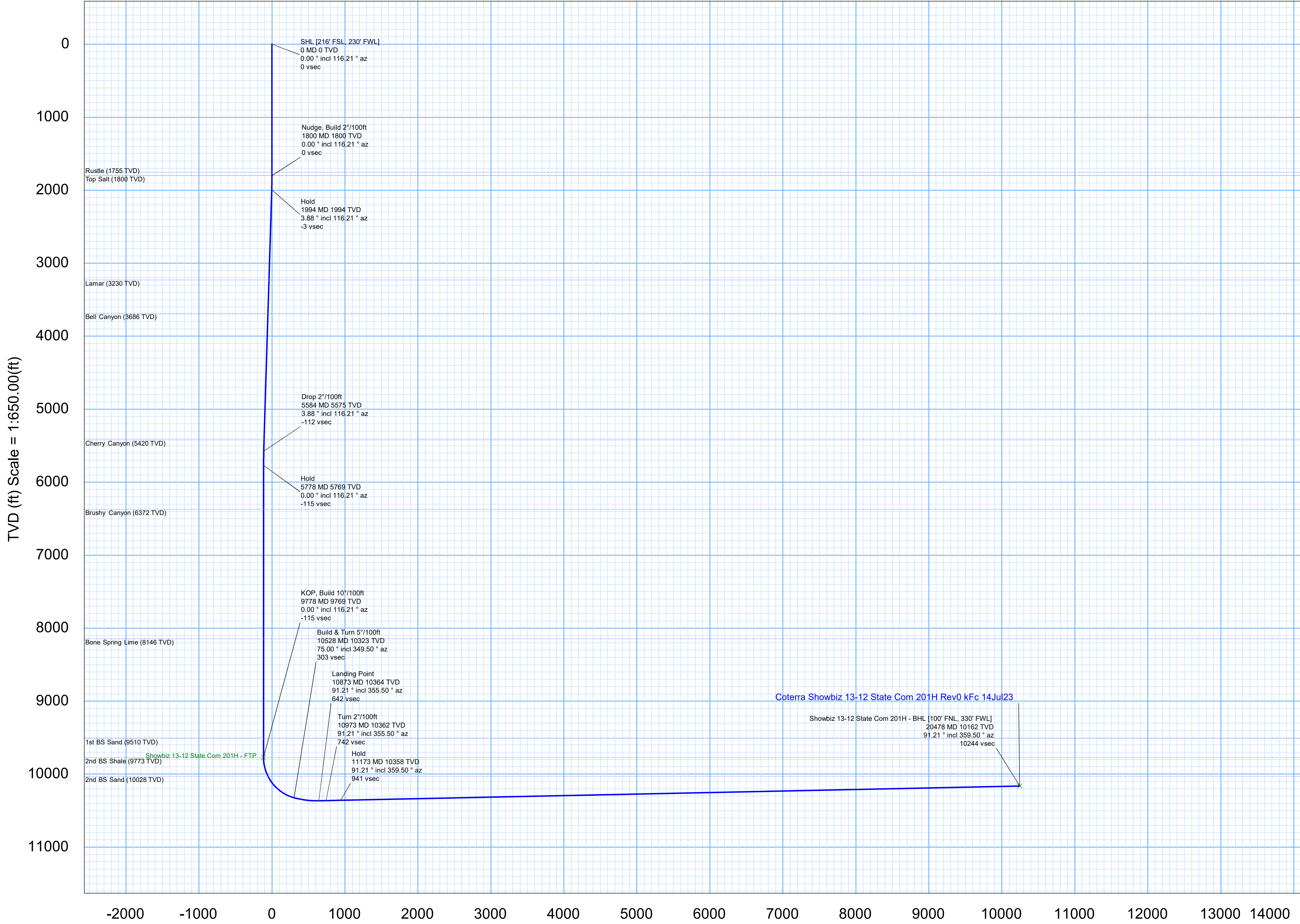
Operator Name and Address: CIMAREX ENERGY CO. [215099] 6001 Deauville Blvd Midland, TX 79706	API Number: 30-025-52913
	Well: SHOWBIZ 13 12 STATE COM #201H

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

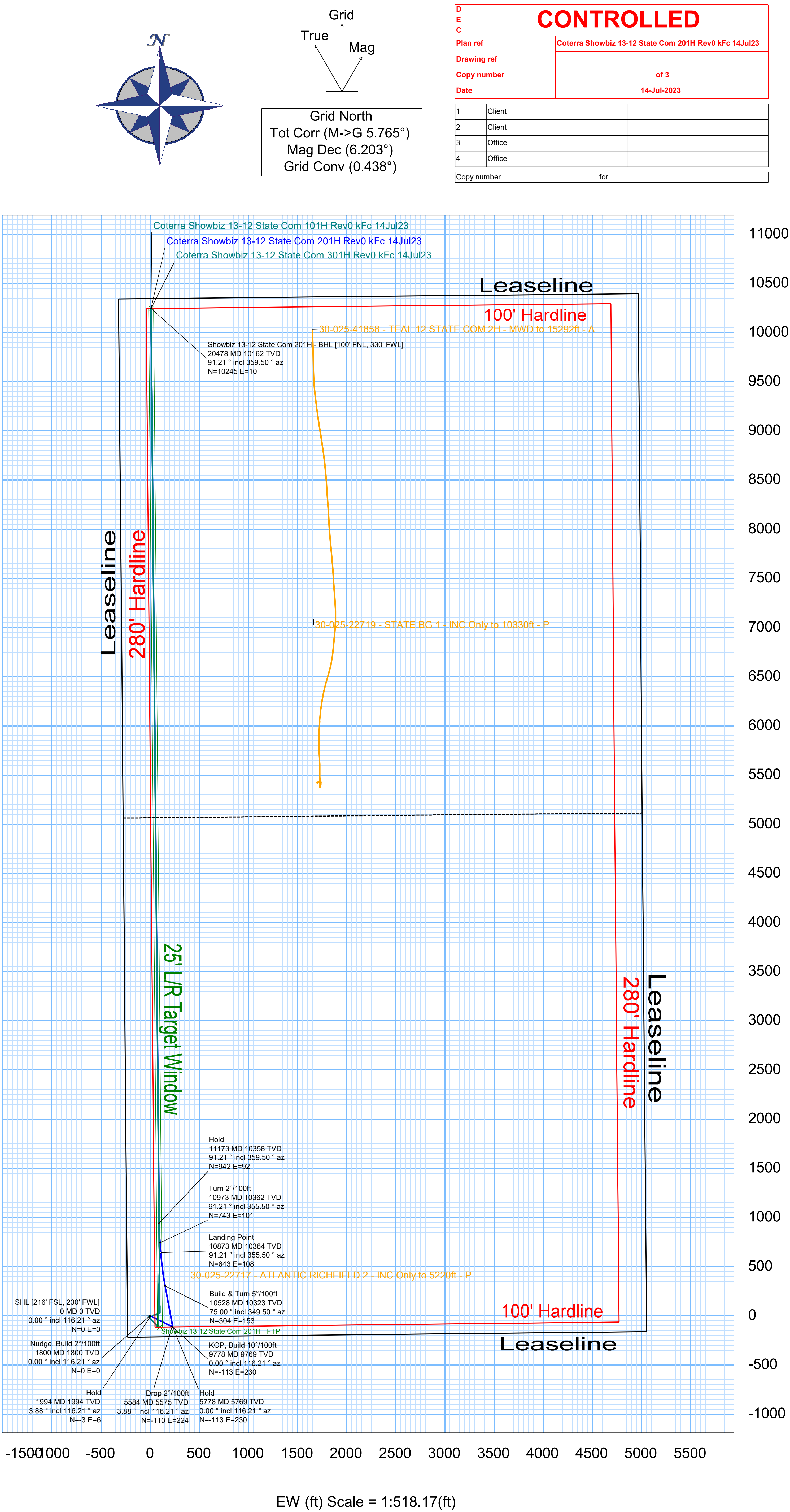
Borehole: Showbiz 13-12 State Com 201H				Well: Showbiz 13-12 State Com 201H				Field: NM Lea County (NAD 83)				Structure: Showbiz 13-12 State Com Pad			
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Gravity & Magnetic Parameters				Surface Location				NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	HDGM 2023	Dip:	60.461°	Date:	14-Jul-2023	Lat:	N 32 39 13.25	Northing:	602494.65ftUS	Grid Conv:	0.438°	Slot:	Showbiz 13-12 State	TVD Ref:	RKB (3875.100 ft above MSL)
MagDec:	6.203°	FS:	47659.099nT	Gravity FS:	998.504mgn (9.80665 Based)	Lon:	W 103 31 17.83	Easting:	791160.86ftUS	Scale Fact:	0.99998056	Plan:	Com 201H	Coterra Showbiz 13-12 State Com 201H Rev0 kFc 14Jul23	

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [216° FSL, 230° FWL]	0.00	0.00	116.21	0.00	0.00	0.00	0.00	
Rustle	1755.00	0.00	116.21	1755.00	0.00	0.00	0.00	0.00
Nudge, Build 2°/100ft	1800.00	0.00	116.21	1800.00	0.00	0.00	0.00	0.00
Top Salt	1800.00	0.00	116.21	1800.00	0.00	0.00	0.00	0.00
Hold	1994.24	3.88	116.21	1994.09	-2.96	-2.91	5.91	2.00
Lamar	3233.00	3.88	116.21	3230.00	-40.67	-39.97	81.21	0.00
Bell Canyon	3690.05	3.88	116.21	3686.00	-54.59	-53.64	108.99	0.00
Cherry Canyon	5428.04	3.88	116.21	5420.00	-107.51	-105.64	214.64	0.00
Drop 2°/100ft	5583.64	3.88	116.21	5575.24	-112.24	-110.29	224.09	0.00
Hold	5777.87	0.00	116.21	5769.33	-115.20	-113.20	230.00	2.00
Brushy Canyon	6380.54	0.00	116.21	6372.00	-115.20	-113.20	230.00	0.00
Bone Spring Lime	8154.54	0.00	116.21	8146.00	-115.20	-113.20	230.00	0.00
1st BS Sand	9518.54	0.00	116.21	9510.00	-115.20	-113.20	230.00	0.00
KOP, Build 10°/100ft	9777.87	0.00	116.21	9769.33	-115.20	-113.20	230.00	0.00
2nd BS Shale	9781.54	0.37	349.50	9773.00	-115.19	-113.19	230.00	10.00
2nd BS Sand	10046.25	26.84	349.50	10028.00	-54.43	-52.52	218.75	10.00
Build & Turn 5°/100ft	10527.87	75.00	349.50	10322.76	303.01	304.35	152.61	10.00
Landing Point	10873.13	91.21	355.50	10364.11	641.96	642.93	108.35	5.00
Turn 2°/100ft	10973.13	91.21	355.50	10362.00	741.69	742.60	100.50	0.00
Hold	11172.86	91.21	359.50	10357.79	941.21	942.05	91.79	2.00
Showbiz 13-12 State Com 201H - BHL [100° FNL, 330° FWL]	20478.15	91.21	359.50	10162.00	10244.44	10244.92	9.87	0.00



NS (ft) Scale = 1:518.17(ft)



Schlumberger

Coterra Showbiz 13-12 State Com 201H Rev0 kFc 14Jul23 Proposal Geodetic

Report

Def Plan

Report Date: July 14, 2023 - 07:08 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure / Slot: Showbiz 13-12 State Com Pad / Showbiz 13-12 State Com 201H
Well: Showbiz 13-12 State Com 201H
Borehole: Showbiz 13-12 State Com 201H
UBH1 / API#: Unknown / Unknown
Survey Name: Coterra Showbiz 13-12 State Com 201H Rev0 kFc 14Jul23
Survey Date: July 14, 2023
Tort / AHD / DDI / ERD Ratio: 104.027' / 10625.514 ft / 6.339 / 1.025
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: 32°39'13.24835"N, 103°31'17.83298"W
Location Grid N/E Y/X: N 602494.650 RUS, E 791160.860 RUS
CRS Grid Convergence Angle: 0.438"
Grid Scale Factor: 0.9998056
Version / Patch: 2023.1.0.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.500 °(GRID North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3875.100 ft above MSL
Sealed / Ground Elevation: 3852.100 ft above MSL
Magnetic Declination: 6.203"
Total Gravity Field Strength: 998.5045mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47659.099 nT
Magnetic Dip Angle: 60.461°
Declination Date: July 14, 2023
Magnetic Declination Model: HDGM 2023
North Reference: Grid North
Grid Convergence Used: 0.438"
Total Corr Mag North->Grid North: 5.7652'
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 [216° FSL, 230° FWL]	0.00	0.00	116.21	0.00	-3.875.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027			
	100.00	0.00	116.21	100.00	-3.775.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	200.00	0.00	116.21	200.00	-3.675.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	300.00	0.00	116.21	300.00	-3.575.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	400.00	0.00	116.21	400.00	-3.475.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	500.00	0.00	116.21	500.00	-3.375.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	600.00	0.00	116.21	600.00	-3.275.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	700.00	0.00	116.21	700.00	-3.175.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	800.00	0.00	116.21	800.00	-3.075.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	900.00	0.00	116.21	900.00	-2.975.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,000.00	0.00	116.21	1,000.00	-2.875.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,100.00	0.00	116.21	1,100.00	-2.775.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,200.00	0.00	116.21	1,200.00	-2.675.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,300.00	0.00	116.21	1,300.00	-2.575.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,400.00	0.00	116.21	1,400.00	-2.475.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,500.00	0.00	116.21	1,500.00	-2.375.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,600.00	0.00	116.21	1,600.00	-2.275.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,700.00	0.00	116.21	1,700.00	-2.175.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,755.00	0.00	116.21	1,755.00	-2.120.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,800.00	0.00	116.21	1,800.00	-2.075.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
Rustle Nudge, Build 2°/100ft Top Salt	1,800.00	0.00	116.21	1,800.00	-2.075.10	0.00	0.00	0.00	602.494.65	791.160.86	32.65368010	-103.52162027	0.00	0.00	0.00
	1,900.00	2.00	116.21	1,899.98	-1.975.12	-0.78	-0.77	1.57	602.493.88	791.162.43	32.65367795	-103.52161521	2.00	2.00	0.00
	1,994.24	3.88	116.21	1,994.09	-1.881.01	-2.96	-2.91	5.91	602.491.74	791.166.77	32.65367199	-103.52160116	2.00	2.00	0.00
	2,000.00	3.88	116.21	1,999.84	-1.875.26	-3.13	-3.08	6.26	602.491.57	791.167.12	32.65367150	-103.52160003	0.00	0.00	0.00
	2,100.00	3.88	116.21	2,099.61	-1.775.49	-6.18	-6.07	12.33	602.488.58	791.173.19	32.65368315	-103.52158035	0.00	0.00	0.00
	2,200.00	3.88	116.21	2,199.38	-1.675.72	-9.22	-9.06	18.41	602.485.59	791.179.27	32.65365480	-103.52156068	0.00	0.00	0.00
	2,300.00	3.88	116.21	2,299.15	-1.575.95	-12.27	-12.05	24.49	602.482.60	791.185.35	32.65364645	-103.52154100	0.00	0.00	0.00
	2,400.00	3.88	116.21	2,398.92	-1.476.18	-15.31	-15.05	30.57	602.479.60	791.191.43	32.65363810	-103.52152133	0.00	0.00	0.00
	2,500.00	3.88	116.21	2,498.69	-1.376.41	-18.36	-18.04	36.65	602.476.61	791.197.51	32.65362975	-103.52150165	0.00	0.00	0.00
	2,600.00	3.88	116.21	2,598.46	-1.276.64	-21.40	-21.03	42.73	602.473.62	791.203.59	32.65362140	-103.52148198	0.00	0.00	0.00
	2,700.00	3.88	116.21	2,698.23	-1.176.87	-24.45	-24.02	48.81	602.470.63	791.209.67	32.65361305	-103.52146231	0.00	0.00	0.00
	2,800.00	3.88	116.21	2,798.00	-1.077.10	-27.49	-27.01	54.89	602.467.64	791.215.74	32.65360470	-103.52144263	0.00	0.00	0.00
	2,900.00	3.88	116.21	2,897.77	-0.977.33	-30.54	-30.01	60.96	602.464.65	791.221.82	32.65359635	-103.52142296	0.00	0.00	0.00
	3,000.00	3.88	116.21	2,997.54	-0.877.56	-33.58	-33.00	67.04	602.461.65	791.227.90	32.65358800	-103.52140328	0.00	0.00	0.00
	3,100.00	3.88	116.21	3,097.31	-0.777.79	-36.63	-35.99	73.12	602.458.66	791.233.98	32.65357965	-103.52138361	0.00	0.00	0.00
	3,200.00	3.88	116.21	3,197.08	-0.678.02	-39.67	-38.98	79.20	602.455.67	791.240.06	32.65357130	-103.52136394	0.00	0.00	0.00
	3,233.00	3.88	116.21	3,230.00	-0.645.10	-40.67	-39.97	81.21	602.454.68	791.242.06	32.65356855	-103.52135744	0.00	0.00	0.00
	3,300.00	3.88	116.21	3,298.85	-0.578.25	-42.71	-41.97	85.28	602.452.68	791.246.14	32.65356295	-103.52134426	0.00	0.00	0.00
	3,400.00	3.88	116.21	3,396.62	-0.478.48	-45.76	-44.96	91.36	602.449.69	791.252.22	32.65355460	-103.52132459	0.00	0.00	0.00
	Lamar	3,500.00	3.88	116.21	3,496.39	-0.378.71	-48.80	-47.96	97.44	602.446.70	791.258.29	32.65354625	-103.52130491	0.00	0.00
3,600.00		3.88	116.21	3,596.16	-0.278.94	-51.85	-50.95	103.52	602.443.70	791.264.37	32.65353790	-103.52128524	0.00	0.00	0.00
3,690.05		3.88	116.21	3,686.00	-0.189.10	-54.59	-53.64	108.99	602.441.01	791.269.85	32.65353038	-103.52126752	0.00	0.00	0.00
3,700.00		3.88	116.21	3,695.93	-0.179.17	-54.89	-53.94	109.59	602.440.71	791.270.45	32.65352955	-103.52126557	0.00	0.00	0.00
3,800.00		3.88	116.21	3,795.70	-0.79.40	-57.94	-56.93	115.67	602.437.72	791.276.53	32.65352120	-103.52124589	0.00	0.00	0.00
3,900.00		3.88	116.21	3,895.47	-0.20.37	-60.98	-59.92	121.75	602.434.73	791.282.61	32.65351285	-103.52122622	0.00	0.00	0.00
4,000.00		3.88	116.21	3,995.24	-0.120.14	-64.03	-62.91	127.83	602.431.74	791.288.69	32.65350450	-103.52120654	0.00	0.00	0.00
4,100.00		3.88	116.21	4,095.01	-0.219.91	-67.07	-65.91	133.91	602.428.75	791.294.77	32.65349615	-103.52118687	0.00	0.00	0.00
4,200.00		3.88	116.21	4,194.78	-0.319.68	-70.12	-68.90	139.99	602.425.75	791.300.84	32.65348780	-103.52116720	0.00	0.00	0.00
4,300.00		3.88	116.21	4,294.55	-0.419.45	-73.16	-71.89	146.07	602.422.76	791.306.92	32.65347945	-103.52114752	0.00	0.00	0.00
4,400.00		3.88	116.21	4,394.32	-0.519.22	-76.21	-74.88	152.14	602.419.77	791.313.00	32.65347110	-103.52112785	0.00	0.00	0.00
4,500.00		3.88	116.21	4,494.09	-0.618.99	-79.25	-77.87	158.22	602.416.78	791.319.08	32.65346275	-103.52110817	0.00	0.00	0.00
4,600.00		3.88	116.21	4,593.86	-0.718.76	-82.30	-80.87	164.30	602.413.79	791.325.16	32.65345440	-103.52108850	0.00	0.00	0.00
4,700.00		3.88	116.21	4,693.63	-0.818.53	-85.34	-83.86	170.38	602.410.79	791.331.24	32.65344605	-103.52106883	0.00	0.00	0.00
4,800.00		3.88	116.21	4,793.40	-0.918.30	-88.39	-86.85	176.46	602.407.80	791.337.32	32.65343770	-103.52104915	0.00	0.00	0.00
4,900.00		3.88	116.21	4,893.17	-1.018.07	-91.43	-89.84	182.54	602.404.81	791.343.39	32.65342935	-103.52102948	0.00	0.00	0.00
5,000.00		3.88	116.21	4,992.94	-1.117.84	-94.47	-92.83	188.62	602.401.82	791.349.47	32.65342100	-103.52100980	0.00	0.00	0.00
5,100.00		3.88	116.21	5,092.72	-1.217.62	-97.52	-95.82	194.70	602.398.83	791.355.55	32.65341264	-103.52099013	0.00	0.00	0.00
5,200.00		3.88	116.21	5,192.49	-1.317.39	-100.56	-98.82	200.77	602.395.84	791.361.63	32.65340429	-103.52097046	0.00	0.00	0.00
5,300.00		3.88	116.21	5,292.26	-1.417.16	-103.61	-101.81	206.85	602.392.84	791.367.71	32.65339594	-103.52095078	0.00	0.00	0.00
5,400.00	3.88	116.21	5,392.03	-1.516.93	-106.65	-1									

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
1st BS Sand	9,300.00	0.00	116.21	9,291.46	5,416.36	-115.20	-113.20	230.00	602,381.45	791,390.86	32.65336415	-103.52087586	0.00	0.00	0.00
	9,400.00	0.00	116.21	9,391.46	5,516.36	-115.20	-113.20	230.00	602,381.45	791,390.86	32.65336415	-103.52087586	0.00	0.00	0.00
	9,500.00	0.00	116.21	9,491.46	5,616.36	-115.20	-113.20	230.00	602,381.45	791,390.86	32.65336415	-103.52087586	0.00	0.00	0.00
	9,518.54	0.00	116.21	9,510.00	5,634.90	-115.20	-113.20	230.00	602,381.45	791,390.86	32.65336415	-103.52087586	0.00	0.00	0.00
	9,600.00	0.00	116.21	9,591.46	5,716.36	-115.20	-113.20	230.00	602,381.45	791,390.86	32.65336415	-103.52087586	0.00	0.00	0.00
KOP, Build 10°/100ft	9,700.00	0.00	116.21	9,691.46	5,816.36	-115.20	-113.20	230.00	602,381.45	791,390.86	32.65336415	-103.52087586	0.00	0.00	0.00
	9,777.87	0.00	116.21	9,769.33	5,894.23	-115.20	-113.20	230.00	602,381.45	791,390.86	32.65336415	-103.52087586	0.00	0.00	0.00
2nd BS Shale	9,781.54	0.37	349.50	9,773.00	5,897.90	-115.19	-113.19	230.00	602,381.46	791,390.85	32.65336418	-103.52087587	10.00	10.00	0.00
	9,800.00	2.21	349.50	9,791.45	5,916.35	-114.78	-112.78	229.92	602,381.87	791,390.78	32.65336530	-103.52087611	10.00	10.00	0.00
2nd BS Sand	9,900.00	12.21	349.50	9,890.53	6,015.43	-102.43	-100.45	227.64	602,394.20	791,388.49	32.65339924	-103.52088322	10.00	10.00	0.00
	10,000.00	22.21	349.50	9,985.93	6,110.83	-73.33	-71.39	222.25	602,423.26	791,383.11	32.65347921	-103.52090000	10.00	10.00	0.00
	10,046.25	26.84	349.50	10,028.00	6,152.90	-54.43	-52.52	218.75	602,442.13	791,379.61	32.65353116	-103.52091089	10.00	10.00	0.00
	10,100.00	32.21	349.50	10,074.75	6,199.65	-28.35	-26.49	213.93	602,468.17	791,374.78	32.65360281	-103.52092592	10.00	10.00	0.00
	10,200.00	42.21	349.50	10,154.29	6,279.19	31.13	-32.20	202.92	602,527.55	791,363.78	32.65376627	-103.52096021	10.00	10.00	0.00
Build & Turn 5°/100ft	10,300.00	52.21	349.50	10,222.13	6,347.03	103.31	104.97	189.56	602,599.62	791,350.42	32.65396461	-103.52100181	10.00	10.00	0.00
	10,400.00	62.21	349.50	10,276.22	6,401.12	186.00	187.53	174.26	602,682.17	791,335.12	32.65419183	-103.52104947	10.00	10.00	0.00
	10,500.00	72.21	349.50	10,314.90	6,439.80	276.68	278.06	157.48	602,772.71	791,318.34	32.65444101	-103.52110173	10.00	10.00	0.00
	10,527.87	75.00	349.50	10,322.76	6,447.66	303.01	304.35	152.61	602,799.00	791,313.47	32.65451337	-103.52111691	10.00	10.00	0.00
	10,600.00	78.38	350.80	10,339.37	6,464.27	372.25	373.50	140.61	602,868.14	791,301.47	32.65470365	-103.52115418	5.00	4.68	1.80
Landing Point	10,700.00	83.07	352.54	10,355.48	6,480.38	470.00	471.12	126.32	602,965.76	791,287.18	32.65497225	-103.52119816	5.00	4.69	1.75
	10,800.00	87.77	354.26	10,363.46	6,488.36	569.38	570.11	114.87	603,064.74	791,275.73	32.65524456	-103.52123259	5.00	4.70	1.71
Turn 2°/100ft	10,873.13	91.21	355.50	10,364.11	6,489.01	641.96	642.93	108.35	603,137.56	791,269.21	32.65544663	-103.52125230	5.00	4.70	1.70
	10,900.00	91.21	355.50	10,363.54	6,488.44	668.76	669.71	106.24	603,164.35	791,267.10	32.65551849	-103.52125848	0.00	0.00	0.00
Hold	10,973.13	91.21	355.50	10,362.00	6,486.90	741.69	742.60	100.50	603,237.23	791,261.36	32.65571892	-103.52127531	0.00	0.00	0.00
	11,000.00	91.21	356.04	10,361.43	6,486.33	768.50	769.39	98.52	603,264.02	791,259.38	32.65579261	-103.52128108	2.00	0.00	2.00
	11,100.00	91.21	358.04	10,359.32	6,484.22	868.38	869.23	93.36	603,363.86	791,254.21	32.65606711	-103.52129538	2.00	0.00	2.00
	11,172.86	91.21	359.50	10,357.79	6,482.69	941.21	942.05	91.79	603,436.68	791,252.65	32.65626729	-103.52129867	2.00	0.00	2.00
	11,200.00	91.21	359.50	10,357.20	6,482.12	1,068.35	1,069.18	90.67	603,463.92	791,252.41	32.65643187	-103.52129877	0.00	0.00	0.00
	11,300.00	91.21	359.50	10,355.11	6,480.01	1,088.33	1,089.16	90.67	603,563.79	791,251.53	32.65661666	-103.52129915	0.00	0.00	0.00
	11,400.00	91.21	359.50	10,353.01	6,477.91	1,168.31	1,169.13	89.79	603,663.76	791,250.65	32.65689144	-103.52129952	0.00	0.00	0.00
	11,500.00	91.21	359.50	10,350.90	6,475.80	1,268.28	1,269.11	88.91	603,763.73	791,249.77	32.65716623	-103.52129990	0.00	0.00	0.00
	11,600.00	91.21	359.50	10,348.80	6,473.70	1,368.26	1,369.08	88.03	603,863.70	791,248.89	32.65744101	-103.52130027	0.00	0.00	0.00
	11,700.00	91.21	359.50	10,346.70	6,471.60	1,468.24	1,469.06	87.15	603,963.68	791,248.00	32.65771580	-103.52130065	0.00	0.00	0.00
	11,800.00	91.21	359.50	10,344.59	6,469.49	1,568.22	1,569.03	86.27	604,063.65	791,247.12	32.65799058	-103.52130103	0.00	0.00	0.00
	11,900.00	91.21	359.50	10,342.49	6,467.39	1,668.20	1,669.01	85.39	604,163.62	791,246.24	32.65826537	-103.52130140	0.00	0.00	0.00
	12,000.00	91.21	359.50	10,340.38	6,465.28	1,768.17	1,768.98	84.51	604,263.59	791,245.36	32.65854015	-103.52130178	0.00	0.00	0.00
	12,100.00	91.21	359.50	10,338.28	6,463.18	1,868.15	1,868.95	83.63	604,363.56	791,244.48	32.65881494	-103.52130215	0.00	0.00	0.00
	12,200.00	91.21	359.50	10,336.18	6,461.08	1,968.13	1,968.93	82.75	604,463.53	791,243.60	32.65908972	-103.52130253	0.00	0.00	0.00
	12,300.00	91.21	359.50	10,334.07	6,458.97	2,068.11	2,068.90	81.86	604,563.51	791,242.72	32.65936451	-103.52130291	0.00	0.00	0.00
	12,400.00	91.21	359.50	10,331.97	6,456.87	2,168.09	2,168.87	80.98	604,663.48	791,241.84	32.65963929	-103.52130328	0.00	0.00	0.00
	12,500.00	91.21	359.50	10,329.86	6,454.76	2,268.06	2,268.85	80.10	604,763.45	791,240.96	32.65991408	-103.52130366	0.00	0.00	0.00
	12,600.00	91.21	359.50	10,327.76	6,452.66	2,368.04	2,368.82	79.22	604,863.42	791,240.08	32.66018886	-103.52130403	0.00	0.00	0.00
	12,700.00	91.21	359.50	10,325.66	6,450.56	2,468.02	2,468.80	78.34	604,963.39	791,239.20	32.66046365	-103.52130441	0.00	0.00	0.00
	12,800.00	91.21	359.50	10,323.55	6,448.45	2,568.00	2,568.77	77.46	605,063.37	791,238.32	32.66073843	-103.52130478	0.00	0.00	0.00
	12,900.00	91.21	359.50	10,321.45	6,446.35	2,667.97	2,668.74	76.58	605,163.34	791,237.44	32.66101322	-103.52130516	0.00	0.00	0.00
	13,000.00	91.21	359.50	10,319.34	6,444.24	2,767.95	2,768.72	75.70	605,263.31	791,236.56	32.66128800	-103.52130554	0.00	0.00	0.00
	13,100.00	91.21	359.50	10,317.24	6,442.14	2,867.93	2,868.69	74.82	605,363.28	791,235.68	32.66156279	-103.52130591	0.00	0.00	0.00
	13,200.00	91.21	359.50	10,315.14	6,440.04	2,967.91	2,968.67	73.94	605,463.25	791,234.80	32.66183757	-103.52130629	0.00	0.00	0.00
	13,300.00	91.21	359.50	10,313.03	6,437.93	3,067.89	3,068.64	73.06	605,563.22	791,233.92	32.66211236	-103.52130666	0.00	0.00	0.00
	13,400.00	91.21	359.50	10,310.93	6,435.83	3,167.86	3,168.61	72.18	605,663.19	791,233.04	32.66238714	-103.52130704	0.00	0.00	0.00
	13,500.00	91.21	359.50	10,308.82	6,433.72	3,267.84	3,268.59	71.30	605,763.17	791,232.16	32.66266193	-103.52130741	0.00	0.00	0.00
	13,600.00	91.21	359.50	10,306.72	6,431.62	3,367.82	3,368.56	70.42	605,863.14	791,231.28	32.66293671	-103.52130779	0.00	0.00	0.00
	13,700.00	91.21	359.50	10,304.62	6,429.52	3,467.80	3,468.54	69.54	605,963.11						

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)
Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Code	Borehole / Survey						
EOU Geometry:	1	0.000	9,700.000	1/100.000	1.25 – 8.75 – 6.75	3.75 – 7.625 – 5.5		A001Mb_MWD	Showbiz 13-12 State Com 201H / Coterra Showbiz 13-12 State Com 201H Rev0 kFc 14Jul23						
	1	9,700.000	20,478.146	1/100.000	6.75	5.5		A008Mb_MWD+IFR1+MS	Showbiz 13-12 State Com 201H / Coterra Showbiz 13-12 State Com 201H Rev0 kFc 14Jul23						
End MD (ft)	Hole Size (in)			Casing Size (in)			Name								
1,834.500	17.500			13.375											
5,834.500	12.250			10.750											
8,834.500	8.750			7.625											
15,834.500	6.750			5.500											

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

Submit Electronically
Via E-permitting

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Cimarex Energy Company **OGRID:** 215099 **Date:** 4/30/24

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
Showbiz 13-12 State Com 201H	NWNE Sec 13 T19S, R34E	216FSL/ 230 FWL	850	800	1850	

IV. Central Delivery Point Name: Showbiz 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
Showbiz 13-12 State Com 201H		6/15/25	8/2/25	10/22/25	11/1/25	11/1/25

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:	<i>Shelly Bowen</i>
Printed Name:	Shelly Bowen
Title:	Sr. Regulatory Analyst
E-mail Address:	shelly.bowen@coterra.com
Date:	4/30/24
Phone:	432/620-1644
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.

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

☐ AMENDED REPORT¹⁰Surface Location¹¹ Bottom Hole Location If Different From Surface

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.

DRAWN BY: N.D.T. 06-08-23

Certificate Number:

1. Geological Formations

TVD of target 10,162

Pilot Hole TD N/A

MD at TD 20,478

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1755	N/A	
Top of Salt	1800	N/A	
Base of Salt	3230	N/A	
Top Delaware Sands/Bell Canyon	3686	Hydrocarbons	
Cherry Canyon	5420	Hydrocarbons	
Brushy Canyon	6372	Hydrocarbons	
Bone Spring Lime	8146	N/A	
1st Bone Spring Sand	9510	Hydrocarbons	
2nd Bone Spring Shale	9773	Hydrocarbons	
2nd Bone Spring Sand	10028	Hydrocarbons	
2nd Bone Spring Sand - Target	10362	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1805	1805	13-3/8"	54.50	J-55	BT&C	1.45	3.50	8.67
12 1/4	0	3636	3636	9-5/8"	40.00	HCK-55	LT&C	2.02	2.09	3.86
8 3/4	0	9778	9778	7"	29.00	P-110	BT&C	1.86	2.45	3.10
8 3/4	9778	10527	10322	7"	29.00	P-110	BT&C	1.77	2.32	58.89
6	9527	20478	10162	4-1/2"	11.60	P-110	BT&C	1.56	2.20	49.82
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Cimarex Energy Co., Showbiz 13-12 State Com 201H

	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	875	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	234	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	624	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	213	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	390	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	738	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	56
Production	3436	25
Completion System	10327	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	5M	Annular	X	50% of working pressure
			Blind Ram		5M
			Pipe Ram	X	
			Double Ram	X	
			Other		
8 3/4	13 5/8	5M	Annular	X	50% of working pressure
			Blind Ram		5M
			Pipe Ram	X	
			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 1805'	FW Spud Mud	7.83 - 8.33	30-32	N/C
1805' to 3636'	Brine Water	9.50 - 10.00	30-32	N/C
3636' to 10527'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
10873' to 20478'	OBM	8.70 - 9.20	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
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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
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7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	4861 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.

