

Well Name: WEST GRAMA RIDGE 7-6 FEDERAL COM	Well Location: T22S / R34E / SEC 7 / SWSE / 32.400257 / -103.504928	County or Parish/State: LEA / NM
Well Number: 3H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM17440	Unit or CA Name:	Unit or CA Number:
US Well Number: 300254765500X1	Well Status: Drilling Well	Operator: CIMAREX ENERGY COMPANY

Notice of Intent

Type of Submission: Notice of Intent	Type of Action Other
Date Sundry Submitted: 04/22/2021	Time Sundry Submitted: 02:09
Date proposed operation will begin: 04/30/2021	

Procedure Description: Cimarex respectfully requests to change the well name and BHL of this well. New Well Name: West Grama Ridge 7 Federal 3H New BHL: 100' FNL & 660' FEL Section 7, 22S 34E Cimarex respectfully requests approval to change casing design and perform offline cementing for the West Grama 7 Federal 3H. (1) Land casing on solid body mandrel hanger (1a) Engage packoff and lockring (2) Install BPV (3) Skid rig (4) Check for pressure and remove BPV (5) Circulate down casing, taking returns through casing valves (6) Pump lead and tail cement (7) Displace cement and bump the plug (8) Ensure floats are holding pressure (9) RD cement crew (10) Install BPV and TA cap Cimarex respectfully requests permission to skid the rig to the next well on the pad to begin operations instead of waiting 8 hours for surface cement to harden on this 3H well. Surface cement will be pumped, we will ensure floats hold, do a green cement test and then Skid to the next well on pad. We will not perform any operations on this 3H well until at least 8 hours and when both tail and lead slurry reach 500psi. The hanging mandrel is made up on the last joint of 13 3/8" casing and then lowered down with and landing joint. It is then lowered down until the mandrel contacts the landing ring which is prewelded to the conductor pipe. At this point the 13 3/8" casing is entirely supported by the conductor pipe via the landing ring / mandrel and is independent from the rig. This allows us to walk the rig away from the 3H well and begin work on the next well while the cement is hardening. There is no way for the casing to be moved or knocked off center since it is hanging from the landing ring. Please See attached- C102, Directional and AC Report, OLC Procedure, Drilling Plan, BOPs & Multibowl WH diagrams.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- West_Grama_Ridge_7_Fed_3H_BOPS_Choke___Multibowl_20210422134516.pdf
- West_Grama_Ridge_7_Federal_3H_Drilling_Plan_20210422134507.pdf
- West_Grama_Ridge_7_Federal_3H_OLC_Procedure_20210422102947.pdf

Well Name: WEST GRAMA RIDGE 7-6 FEDERAL COM	Well Location: T22S / R34E / SEC 7 / SWSE / 32.400257 / -103.504928	County or Parish/State: LEA / NM
Well Number: 3H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM17440	Unit or CA Name:	Unit or CA Number:
US Well Number: 300254765500X1	Well Status: Drilling Well	Operator: CIMAREX ENERGY COMPANY

West_Grama_Ridge_7_Federal_3H_AC_Report_20210422102935.pdf

West_Grama_Ridge_7_Federal_3H_Directional_20210422102930.pdf

West_Grama_Ridge_7_Federal_3H_C102_20210422102924.pdf

Conditions of Approval

Specialist Review

West_Grama_Ridge_7_Federal_3H_COA_20210506164136.pdf

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: AMITHY CRAWFORD	Signed on: APR 22, 2021 02:09 PM
Name: CIMAREX ENERGY COMPANY	
Title: Regulatory Analyst	
Street Address: 600 N MARIENFELD STE 600	
City: MIDLAND	State: TX
Phone: (432) 620-1909	
Email address: acrawford@cimarex.com	

Field Representative

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

BLM Point of Contact

BLM POC Name: ZOTA M STEVENS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752345998	BLM POC Email Address: ZSTEVENS@BLM.GOV
Disposition: Approved	Disposition Date: 05/07/2021
Signature: Zota Stevens	

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

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

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 746-3460 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 30-025-47655		² Pool Code 28432	³ Pool Name Grama Ridge; Bone Springs, West	
⁴ Property Code		⁵ Property Name WEST GRAMA RIDGE 7 FEDERAL		⁶ Well Number 3H
⁷ OGRID No. 215099		⁸ Operator Name CIMAREX ENERGY CO.		⁹ Elevation 3515.4'

¹⁰Surface Location

UL or lot no. O	Section 7	Township 22S	Range 34E	Lot Idn	Feet from the 469	North/South line SOUTH	Feet from the 1339	East/West line EAST	County LEA
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. A	Section 7	Township 22S	Range 34E	Lot Idn	Feet from the 100	North/South line NORTH	Feet from the 660	East/West line EAST	County LEA
¹² Dedicated Acres 160		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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.

Amithy Crawford 4/22/21
Signature Date

Amithy Crawford
Printed Name

acrawford@cimarex.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.

November 13, 2019

Date of Survey _____
Signature and Seal of Professional Surveyor: _____



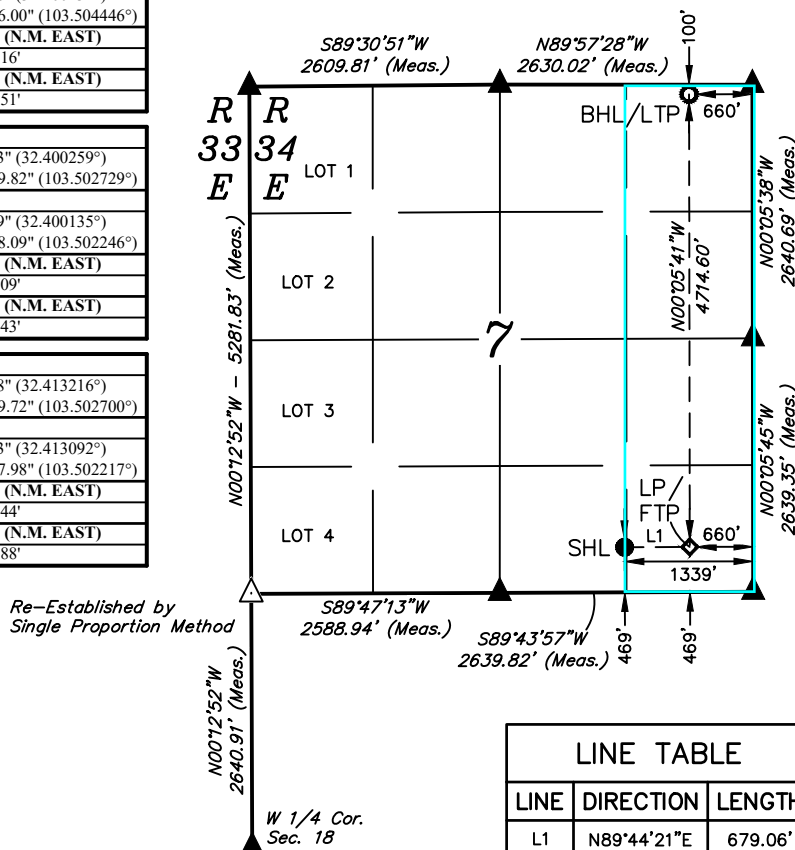
Certificate Number:

16

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°24'00.93" (32.400257°)
LONGITUDE = 103°30'17.74" (103.504928°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°24'00.48" (32.400134°)
LONGITUDE = 103°30'16.00" (103.504446°)
STATE PLANE NAD 83 (N.M. EAST)
N: 510335.41' E: 797015.16'
STATE PLANE NAD 27 (N.M. EAST)
N: 510274.71' E: 755832.51'

NAD 83 (LP/FTP)
LATITUDE = 32°24'00.93" (32.400259°)
LONGITUDE = 103°30'09.82" (103.502729°)
NAD 27 (LP/FTP)
LATITUDE = 32°24'00.49" (32.400135°)
LONGITUDE = 103°30'08.09" (103.502246°)
STATE PLANE NAD 83 (N.M. EAST)
N: 510341.35' E: 797694.09'
STATE PLANE NAD 27 (N.M. EAST)
N: 510280.66' E: 756511.43'

NAD 83 (LTP/BHL)
LATITUDE = 32°24'47.58" (32.413216°)
LONGITUDE = 103°30'09.72" (103.502700°)
NAD 27 (LTP/BHL)
LATITUDE = 32°24'47.13" (32.413092°)
LONGITUDE = 103°30'07.98" (103.502217°)
STATE PLANE NAD 83 (N.M. EAST)
N: 515055.10' E: 797666.44'
STATE PLANE NAD 27 (N.M. EAST)
N: 514994.27' E: 756483.88'



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N89°44'21"E	679.06'

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

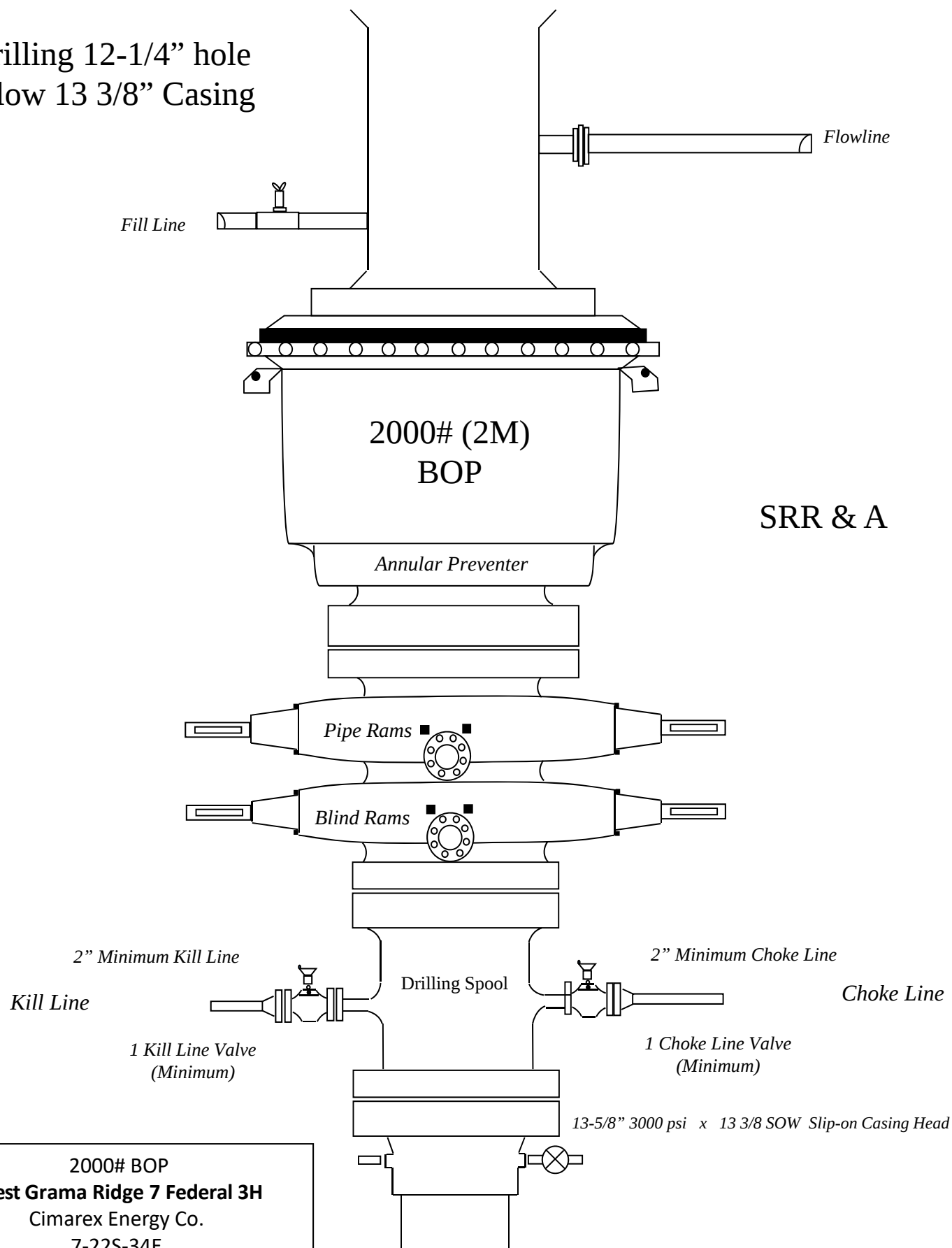
NOTE:

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

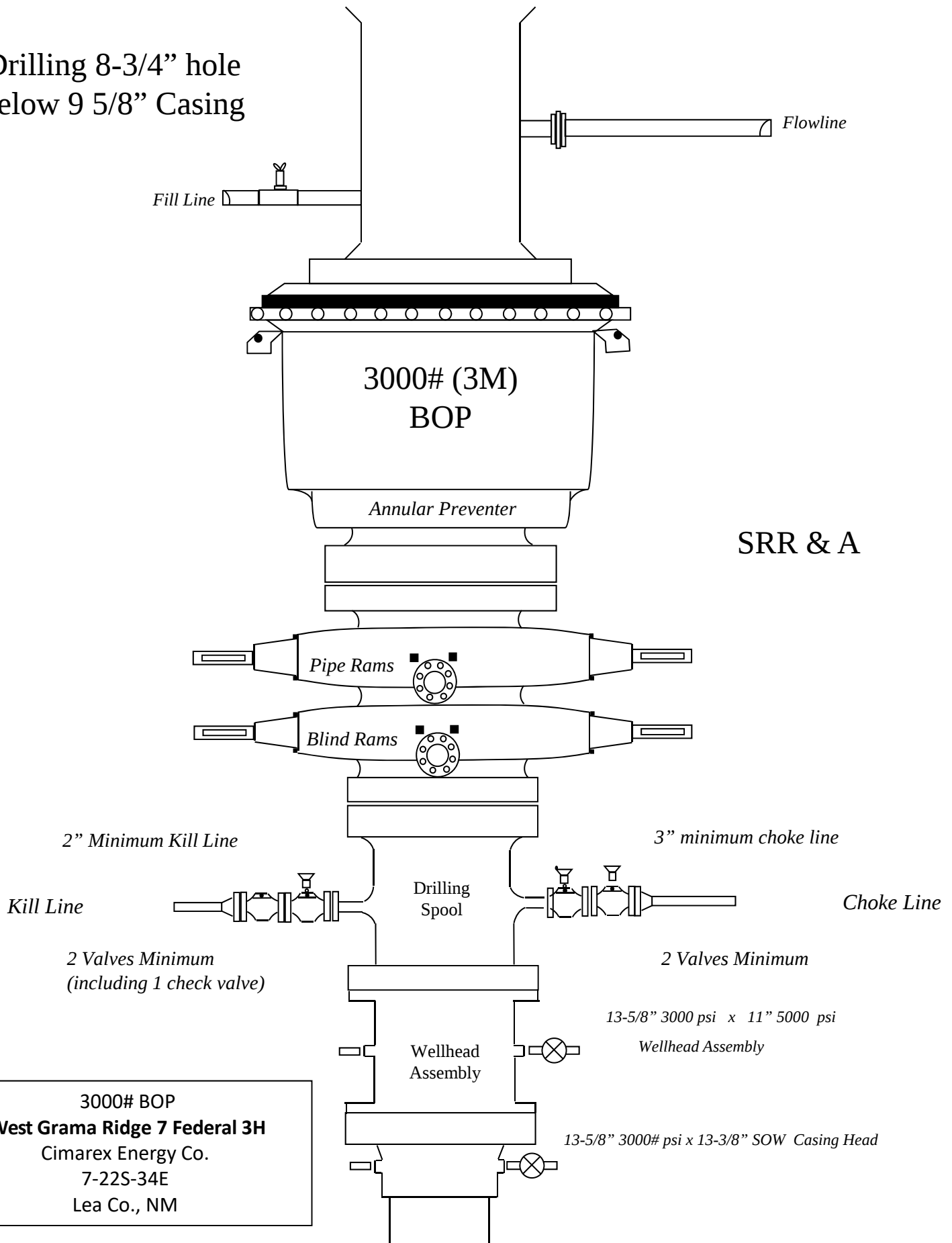


SCALE
DRAWN BY: K.A. 11-19-19
REV: 1 04-19-21 R.J. (LTP/FTP & BHL CHANGES)

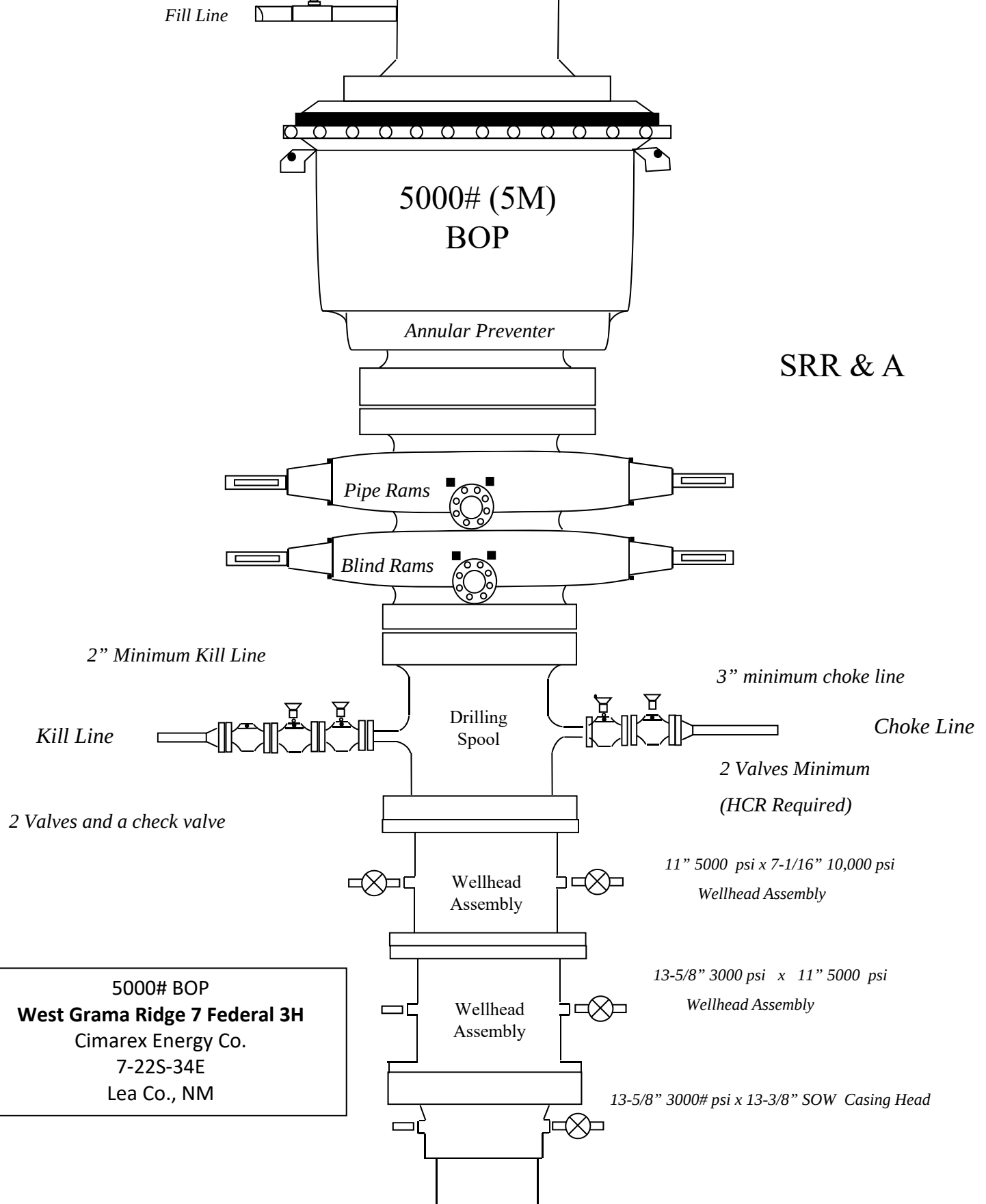
Drilling 12-1/4" hole
below 13 3/8" Casing

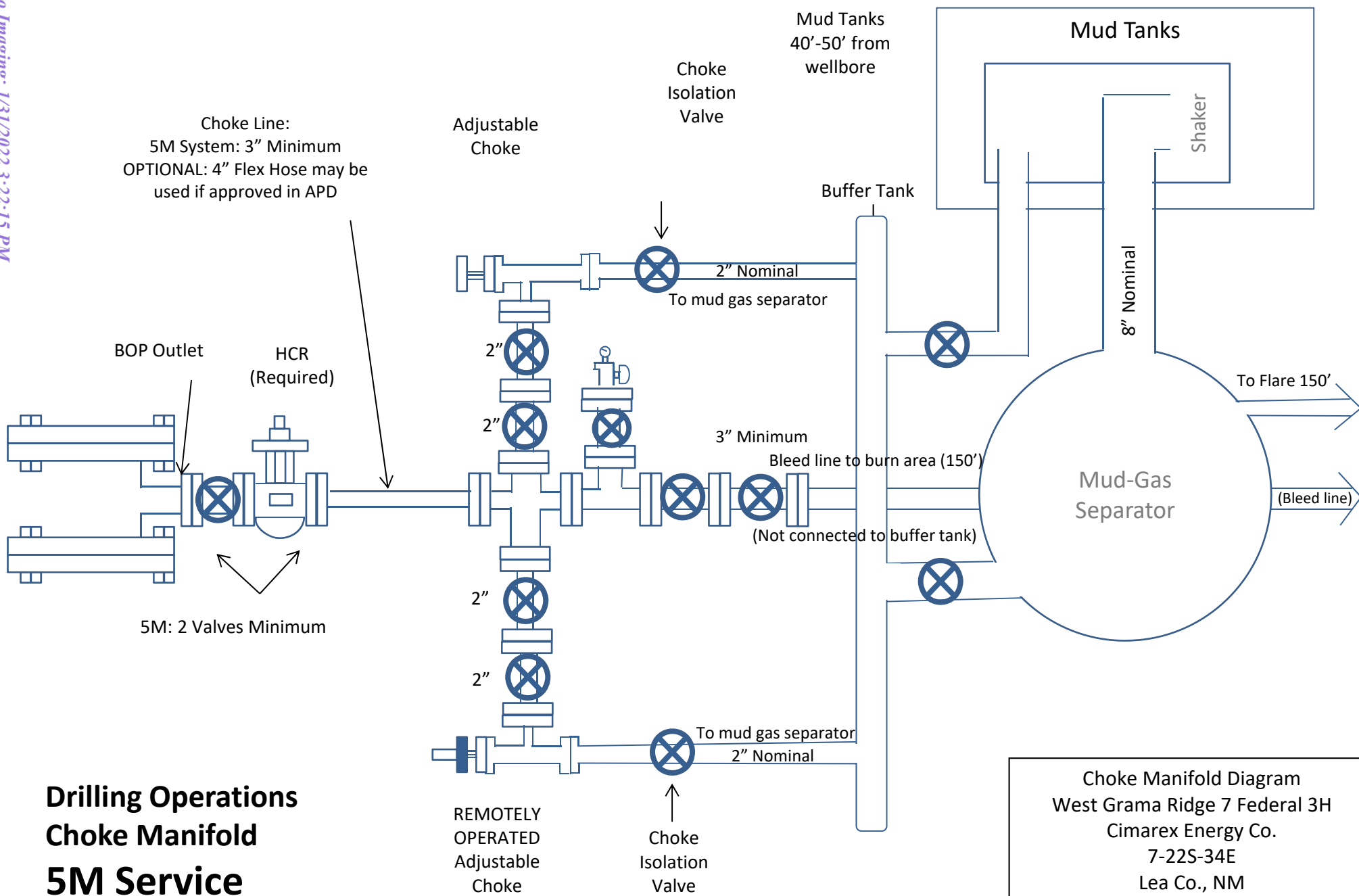


Drilling 8-3/4" hole
below 9 5/8" Casing

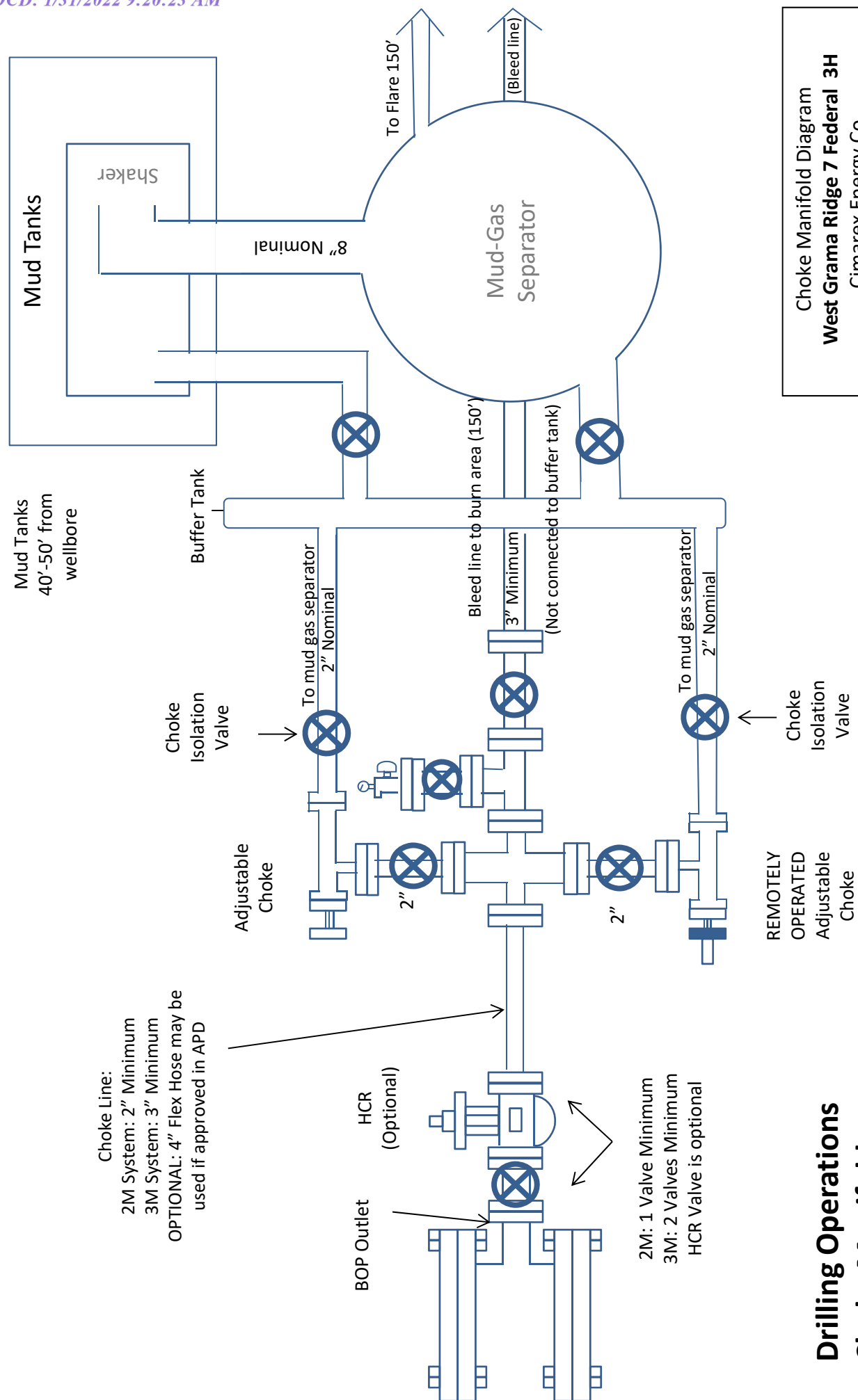


Drilling 6" hole below 9
7" Casing





Drilling Operations Choke Manifold 5M Service



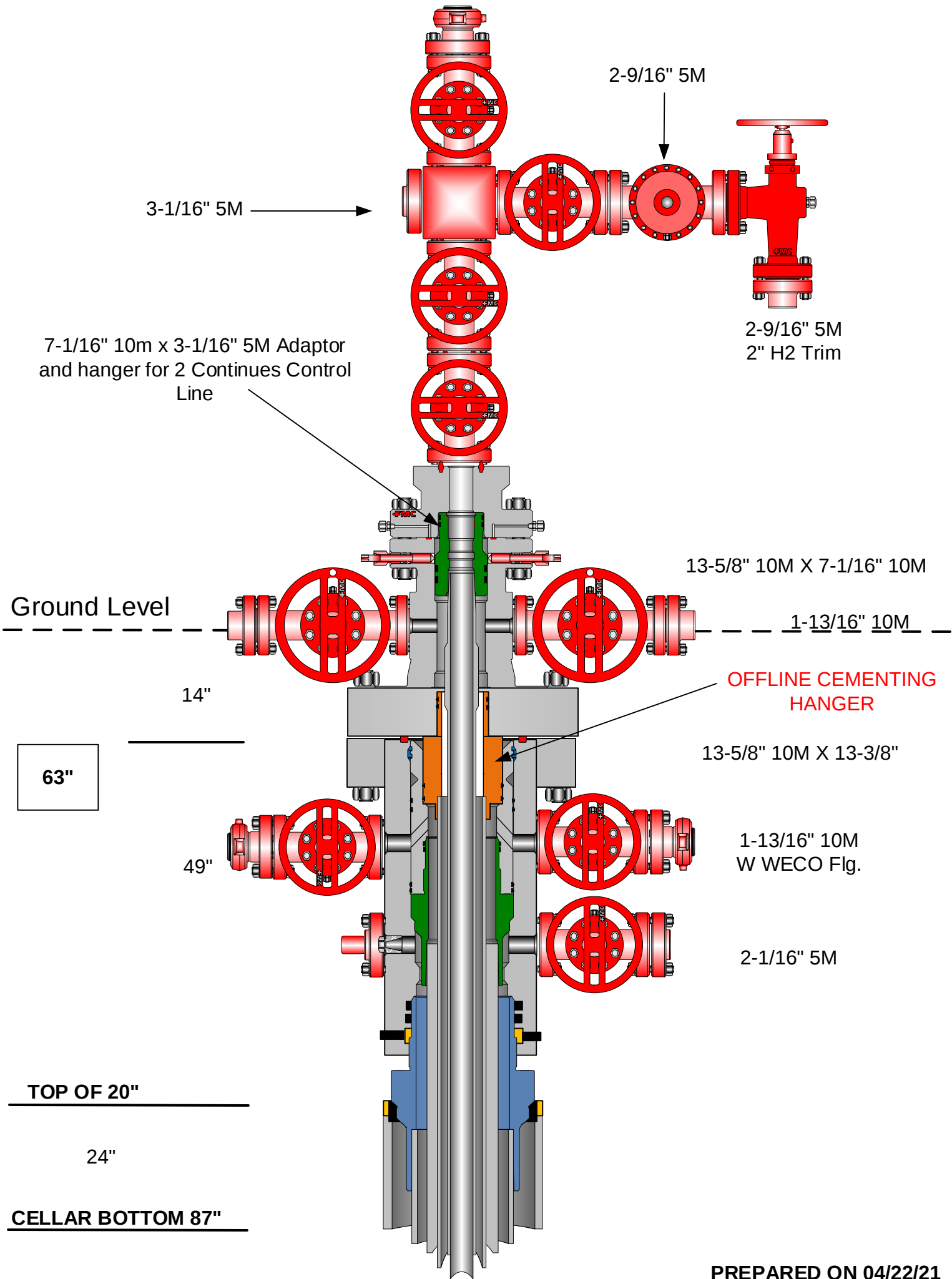
WEST GRAMA RIDGE
Federal 3H



CACTUS FOR SERVICE
WEARBUSHING
IN CASING HEAD &
CASING SPOOL

LEA CO., NM

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	1680	1680	13-3/8"	54.50	J-55	BT&C	1.55	3.77	9.32
12 1/4	0	5175	5175	9-5/8"	40.00	J-55	LT&C	1.35	1.47	2.51
8 3/4	0	9416	9416	7"	29.00	L-80	LT&C	1.59	1.85	1.89
8 3/4	9416	10966	10713	7"	29.00	L-80	BT&C	1.40	1.63	17.97
6	9215	15266	11000	4-1/2"	11.60	HCP-110	BT&C	1.72	2.08	17.72
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet





Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1 RM 21Apr21 Anti-Collision Summary Report

Analysis Date-24hr Time: April 21, 2021 - 16:06

Client: Cimarex Energy

Field: NM Lea County (NAD 83)

Structure: Cimarex West Grama Ridge 7-6 Federal Com #3H

Slot: New Slot

Well: West Grama Ridge 7-6 Federal Com #3H

Borehole: West Grama Ridge 7-6 Federal Com #3H

Scan MD Range: 0.00ft ~ 15266.14ft

Analysis Method: 3D Least Distance

Reference Trajectory: Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1 RM 21Apr21 (Def Plan)

Depth Interval: Every 10.00 Measured Depth (ft)

Rule Set: NAL Procedure: D&M AntiCollision Standard S002

Min Pts: All local minima indicated.

Version / Patch: 2.10.825.0

Database \ Project: us1455vsm3115\drilling-NM Lea County 2.10

Trajectory Error Model: ISCWSA0 3-D 95.000% Confidence 2.7955 sigma, for subject well. For offset wells, error model version is specified with each well respectively.

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan: Not performed!

Selection filters: Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans

- All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Offset Trajectory	Separation			Allow 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: Sep-Factor separation <= 1.50 ft

Cimarex West Grama Ridge 7-6

Federal Com #1H Rev1 RM

07Apr21 (Def Plan)

Warning Alert

39.99	32.25	38.71	7.74	N/A	MAS = 9.83 (m)	0.00	0.00	CtCt<=15m<15.00				Enter Alert	
39.99	32.25	38.70	7.74	19356.41	MAS = 9.83 (m)	23.00	23.00					WRP	
39.99	32.25	23.44	7.74	2.54	MAS = 9.83 (m)	2490.00	2490.00					MinPts	
40.01	32.25	23.35	7.76	2.52	MAS = 9.83 (m)	2510.00	2510.00					MINPT-O-EQU	
40.16	32.25	23.40	7.91	2.51	MAS = 9.83 (m)	2530.00	2530.00					MinPt-O-SF	
80.87	32.25	63.33	48.62	4.90	MAS = 9.83 (m)	2930.00	2929.75		OSF>5.00			Exit Alert	
1319.71	71.32	1271.73	1248.38	28.24	OSF1.50	10780.00	10636.95					MinPt-CtCt	
1327.40	178.00	1208.30	1149.40	11.28	OSF1.50	15266.14	11000.00					MinPts	

Marland Oil Slattery Permit #1

(Offset) Dry Oil Plugged Blind

0ft-4155ft (Def Survey)

Warning Alert

2675.77	32.81	2674.64	2642.96	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2675.70	32.81	2674.19	2642.89	7091.43	MAS = 10.00 (m)	23.00	23.00					WRP	
2675.70	806.35	2137.76	1869.35	4.98	OSF1.50	2630.00	2630.00		OSF<5.00			Enter Alert	
2675.70	828.35	2123.09	1847.35	4.85	OSF1.50	2700.00	2700.00					MinPt-CtCt	
2759.15	1291.22	1897.95	1467.92	3.21	OSF1.50	4190.00	4172.77					MinPts	
2759.89	1291.73	1898.36	1468.16	3.21	OSF1.50	4200.00	4182.62					MinPt-O-SF	
3547.77	1065.32	2837.18	2482.45	5.00	OSF1.50	6230.00	6182.49		OSF>5.00			Exit Alert	
6906.18	368.37	6660.22	6537.81	28.20	OSF1.50	11980.00	10798.18					MinPt-O-ADP	
6883.36	341.58	6655.27	6541.78	30.32	OSF1.50	12300.00	10817.83					MINPT-O-EQU	
6875.37	322.49	6660.00	6552.88	32.09	OSF1.50	12630.00	10838.10					MinPt-CtCt	
7362.86	493.30	7033.62	6869.56	22.44	OSF1.50	15266.14	11000.00					MinPt-O-SF	

Continental Bell Lake Unit #8

(Offset) Dry Plugged Oil Blind

0ft-6500ft (Def Survey)

Warning Alert

3232.26	32.81	3231.13	3199.45	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
3232.19	32.81	3231.05	3199.38	297248.74	MAS = 10.00 (m)	10.00	10.00					MinPt-O-SF	
3232.15	32.81	3231.01	3199.34	479246.26	MAS = 10.00 (m)	23.00	23.00					WRP	
3232.14	825.71	2681.29	2406.43	5.88	OSF1.50	2700.00	2700.00					MinPt-CtCt	
3277.29	985.14	2620.15	2292.15	4.99	OSF1.50	3210.00	3207.32		OSF<5.00			Enter Alert	
3854.86	2028.71	2502.01	1826.15	2.85	OSF1.50	6580.00	6527.30					MinPts	
5139.70	1543.90	4110.05	3595.80	5.00	OSF1.50	9920.00	9863.76		OSF>5.00			Exit Alert	
7466.80	1626.34	6382.20	5840.46	6.89	OSF1.50	15266.14	11000.00					TD	

Cimarex West Grama Ridge 6

Federal #4H Gyro+MWD 0ft to

15315ft MD (Def Survey)

Pass

9802.72	32.81	9799.90	9769.91	11661.88	MAS = 10.00 (m)	0.00	0.00					Surface	
9802.47	32.81	9799.59	9769.66	10910.74	MAS = 10.00 (m)	23.00	23.00					WRP	
9785.33	32.81	9771.32	9752.52	813.40	MAS = 10.00 (m)	2140.00	2140.00					MinPts	
6540.09	75.51	6489.09	6464.58	133.39	OSF1.50	6930.00	6873.97					MinPt-O-SF	
5836.68	71.23	5787.50	5765.44	132.18	OSF1.50	8220.00	8163.76					MinPt-O-SF	
457.66	90.17	391.98	367.49	9.00	OSF1.50	15266.14	11000.00					MinPts	

C W Trainer Barbara Federal #1

(Offset) Plugged Oil Inc Only 0ft-

15156ft (Def Survey)

Pass

5798.28	32.81	6795.79	6765.45	5079.76	MAS = 10.00 (m)	0.00	0.00					MinPts	
6798.27	32.81	6795.39	6765.46	3882.70	MAS = 10.00 (m)	23.00	23.00					WRP	
6797.84	32.81	6786.55	6765.03	668.84	MAS = 10.00 (m)	290.00	290.00					MinPts	
6795.14	115.00	6718.10	6680.14	89.50	OSF1.50	2170.00	2170.00					MinPt-CtCt	
6787.65	183.98	6664.62	6603.67	55.68	OSF1.50	3560.00	3552.12					MinPt-CtCt	
6788.30	185.86	6664.01	6602.44	55.11	OSF1.50	3670.00	3660.49					MINPT-O-EQU	
6789.00	186.71	6664.15	6602.29	54.87	OSF1.50	3720.00	3709.75					MinPt-O-ADP	
6762.16	256.82	6590.55	6505.33	39.67	OSF1.50	4780.00	4754.02					MinPt-CtCt	
6766.02	329.09	6546.25	6436.93	30.94	OSF1.50	6120.00	6074.13					MinPt-CtCt	
6767.10	460.06	6460.02	6307.05	22.11	OSF1.50	8660.00	8603.76					MinPt-CtCt	
6774.19	487.82	6448.61	6286.38	20.88	OSF1.50	9340.00	9283.76					MINPT-O-EQU	
6777.08	536.55	6418.98	6240.51	18.98	OSF1.50	10170.00	10113.76					MinPt-CtCt	
2092.94	589.33	1697.20	1503.61	5.38	OSF1.50	15266.14	11000.00					MinPts	



Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1 RM 21Apr21 Proposal Geodetic Report (Def Plan)



Report Date: April 21, 2021 - 04:06 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex West Grama Ridge 7-6 Federal Com #3H / New Slot
Well: West Grama Ridge 7-6 Federal Com #3H
Borehole: West Grama Ridge 7-6 Federal Com #3H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1 RM 21Apr21
Survey Date: December 12, 2019
Tort / AHD / DDI / ERD Ratio: 106.247 ° / 5392.707 ft / 5.900 / 0.490
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 24' 0.92631", W 103° 30' 17.74204"
Location Grid N/E Y/X: N 510335.410 ftUS, E 797015.160 ftUS
CRS Grid Convergence Angle: 0.4439 °
Grid Scale Factor: 0.99998396
Version / Patch: 2.10.825.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.665 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3538.400 ft above MSL
Seabed / Ground Elevation: 3515.400 ft above MSL
Magnetic Declination: 6.428 °
Total Gravity Field Strength: 998.4762mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47838.161 nT
Magnetic Dip Angle: 60.143 °
Declination Date: April 21, 2021
Magnetic Declination Model: HDGM 2020
North Reference: Grid North
Grid Convergence Used: 0.4439 °
Total Corr Mag North->Grid North: 5.9839 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [469' FSL, 1339' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	100.00	0.00	89.49	100.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	200.00	0.00	89.49	200.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	300.00	0.00	89.49	300.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	400.00	0.00	89.49	400.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	500.00	0.00	89.49	500.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	600.00	0.00	89.49	600.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	700.00	0.00	89.49	700.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	800.00	0.00	89.49	800.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	900.00	0.00	89.49	900.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
Rustler	1000.00	0.00	89.49	1000.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	1100.00	0.00	89.49	1100.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	1200.00	0.00	89.49	1200.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	1300.00	0.00	89.49	1300.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	1400.00	0.00	89.49	1400.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	1500.00	0.00	89.49	1500.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	1600.00	0.00	89.49	1600.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	1700.00	0.00	89.49	1700.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	1791.00	0.00	89.49	1791.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
	Salado (Top Salt)	1800.00	0.00	89.49	1800.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93
1900.00		0.00	89.49	1900.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
2000.00		0.00	89.49	2000.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
2100.00		0.00	89.49	2100.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
2200.00		0.00	89.49	2200.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
2300.00		0.00	89.49	2300.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
2400.00		0.00	89.49	2400.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
2500.00		0.00	89.49	2500.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
2600.00		0.00	89.49	2600.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
2700.00		0.00	89.49	2700.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
Nudge 2"/100' DLS	2800.00	2.00	89.49	2799.98	0.01	0.02	1.75	2.00	510335.43	797016.91	N 32 24 0.93	W 103 30 17.72
	2900.00	4.00	89.49	2899.84	0.02	0.06	6.98	2.00	510335.47	797022.14	N 32 24 0.93	W 103 30 17.66
	3000.00	6.00	89.49	2999.45	0.05	0.14	15.69	2.00	510335.55	797030.85	N 32 24 0.93	W 103 30 17.56
	3100.00	8.00	89.49	3098.70	0.08	0.25	27.88	2.00	510335.66	797043.04	N 32 24 0.93	W 103 30 17.42
	3194.19	9.88	89.49	3191.74	0.13	0.38	42.52	2.00	510335.79	797057.68	N 32 24 0.93	W 103 30 17.25
	3200.00	9.88	89.49	3197.47	0.13	0.39	43.52	0.00	510335.80	797058.67	N 32 24 0.93	W 103 30 17.23
	3300.00	9.88	89.49	3295.98	0.18	0.54	60.68	0.00	510335.95	797075.84	N 32 24 0.93	W 103 30 17.03
	3400.00	9.88	89.49	3394.50	0.24	0.69	77.84	0.00	510336.10	797093.00	N 32 24 0.93	W 103 30 16.83
	3500.00	9.88	89.49	3493.01	0.29	0.84	95.01	0.00	510336.25	797110.17	N 32 24 0.93	W 103 30 16.63
	3600.00	9.88	89.49	3591.53	0.34	1.00	112.17	0.00	510336.41	797127.33	N 32 24 0.93	W 103 30 16.43
Base Salt	3700.00	9.88	89.49	3690.05	0.39	1.15	129.34	0.00	510336.56	797144.49	N 32 24 0.93	W 103 30 16.23
	3800.00	9.88	89.49	3788.56	0.44	1.30	146.50	0.00	510336.71	797161.66	N 32 24 0.93	W 103 30 16.03
	3806.54	9.88	89.49	3795.00	0.45	1.31	147.62	0.00	510336.72	797162.78	N 32 24 0.93	W 103 30 16.02
	3900.00	9.88	89.49	3887.08	0.50	1.45	163.67	0.00	510336.86	797178.82	N 32 24 0.93	W 103 30 15.83
	4000.00	9.88	89.49	3985.59	0.55	1.61	180.83	0.00	510337.02	797195.99	N 32 24 0.93	W 103 30 15.63
	4100.00	9.88	89.49	4084.11	0.60	1.76	197.99	0.00	510337.17	797213.15	N 32 24 0.93	W 103 30 15.43
	4200.00	9.88	89.49	4182.62	0.65	1.91	215.16	0.00	510337.32	797230.31	N 32 24 0.93	W 103 30 15.23
	4300.00	9.88	89.49	4281.14	0.71	2.06	232.32	0.00	510337.47	797247.48	N 32 24 0.93	W 103 30 15.03
	4400.00	9.88	89.49	4379.66	0.76	2.22	249.49	0.00	510337.63	797264.64	N 32 24 0.93	W 103 30 14.83
	4500.00	9.88	89.49	4478.17	0.81	2.37	266.65	0.00	510337.78	797281.81	N 32 24 0.93	W 103 30 14.63
Lamar	4600.00	9.88	89.49	4576.69	0.86	2.52	283.82	0.00	510337.93	797298.97	N 32 24 0.93	W 103 30 14.43
	4700.00	9.88	89.49	4675.20	0.91	2.67	300.98	0.00	510338.08	797316.14	N 32 24 0.93	W 103 30 14.23
	4800.00	9.88	89.49	4773.72	0.97	2.83	318.15	0.00	510338.24	797333.30	N 32 24 0.93	W 103 30 14.03
	4900.00	9.88	89.49	4872.23	1.02	2.98	335.31	0.00	510338.39	797350.46	N 32 24 0.93	W 103 30 13.83
	5000.00	9.88	89.49	4970.75	1.07	3.13	352.47	0.00	510338.54	797367.63	N 32 24 0.93	W 103 30 13.63
	5100.00	9.88	89.49	5069.27	1.12	3.28	369.64	0.00	510338.69	797384.79	N 32 24 0.93	W 103 30 13.43
	5187.03	9.88	89.49	5155.00	1.17	3.42	384.58	0.00	510338.83	797399.73	N 32 24 0.93	W 103 30 13.26
	5200.00	9.88	89.49	5167.78	1.17	3.44	386.80	0.00	510338.85	797401.96	N 32 24 0.93	W 103 30 13.23
	5300.00	9.88	89.49	5266.30	1.23	3.59	403.97	0.00	510339.00	797419.12	N 32 24 0.93	W 103 30 13.03
	5326.09	9.88	89.49	5292.00	1.24	3.63	408.45	0.00	510339.04	797423.60	N 32 24 0.93	W 103 30 12.98
Bell Canyon	5400.00	9.88	89.49	5364.81	1.28	3.74	421.13	0.00	510339.15	797436.28	N 32 24 0.93	W 103 30 12.83
	5500.00	9.88	89.49	5463.33	1.33	3.89	438.30	0.00	510339.30	797453.45	N 32 24 0.93	W 103 30 12.63
	5600.00	9.88	89.49	5561.85	1.38	4.05	455.46	0.00	510339.46	797470.61	N 32 24 0.93	W 103 30 12.43
	5700.00	9.88	89.49	5660.36	1.44	4.20	472.62	0.00	510339.61	797487.78	N 32 24 0.93	W 103 30 12.23
	5800.00	9.88	89.49	5758.88	1.49	4.35	489.79	0.00	510339.76	797504.94	N 32 24 0.93	W 103 30 12.03
	5900.00	9.88	89.49	5857.39	1.54	4.50	506.95	0.00	510339.91	797522.10	N 32 24 0.93	W 103 30 11.83
	5941.22	9.88	89.49	5898.00	1.56	4.57	514.03	0.00	510339.98	797529.18	N 32 24 0.93	W 103 30 11.75
	6000.00	9.88	89.49	5955.91	1.59	4.66	524.12	0.00	510340.07	797539.27	N 32 24 0.93	W 103 30 11.63
	6100.00	9.88	89.49	6054.42	1.64	4.81	541.28	0.00	510340.22	797556.43	N 32 24 0.93	W 103 30 11.43
	6200.00	9.88	89.49	6152.94	1.70	4.96	558.45	0.00	510340.37	797573.60	N 32 24 0.93	W 103 30 11.23
Cherry Canyon	6300.00	9.88	89.49	6251.46	1.75	5.11	575.61	0.00	510340.52	797590.76	N 32 24 0.93	W 103 30 11.03
	6400.00	9.88	89.49	6349.97	1.80	5.27	592.78	0.00	510340.68	797607.92	N 32 24 0.93	W 103 30 10.83
	6500.00	9.88	89.49	6448.49	1.85	5.42	609.94	0.00	510340.83	797625.09	N 32 24 0.93	W 103 30 10.63
	6600.00	9.88	89.49	6547.00	1.90	5.57	627.10	0.00	510340.98	797642.25	N 32 24 0.93	W 103 30 10.43

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Drop to Vertical 2°/100' DLS	6653.80	9.88	89.49	6600.00	1.93	5.65	636.34	0.00	510341.06	797651.49	N 32 24 0.93	W 103 30 10.32
	6700.00	8.96	89.49	6645.58	1.96	5.72	643.90	2.00	510341.13	797659.05	N 32 24 0.93	W 103 30 10.23
	6800.00	6.96	89.49	6744.61	2.00	5.84	657.75	2.00	510341.25	797672.90	N 32 24 0.93	W 103 30 10.07
	6900.00	4.96	89.49	6844.07	2.03	5.94	668.13	2.00	510341.35	797683.28	N 32 24 0.93	W 103 30 9.95
	7000.00	2.96	89.49	6943.82	2.05	6.00	675.03	2.00	510341.41	797690.18	N 32 24 0.93	W 103 30 9.87
	7100.00	0.96	89.49	7043.76	2.06	6.03	678.45	2.00	510341.44	797693.60	N 32 24 0.93	W 103 30 9.83
Hold Vertical	7147.99	0.00	89.49	7091.74	2.06	6.03	678.86	2.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	7200.00	0.00	89.49	7143.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
Brushy Canyon	7231.24	0.00	89.49	7175.00	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	7300.00	0.00	89.49	7243.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	7400.00	0.00	89.49	7343.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	7500.00	0.00	89.49	7443.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	7600.00	0.00	89.49	7543.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	7700.00	0.00	89.49	7643.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	7800.00	0.00	89.49	7743.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	7900.00	0.00	89.49	7843.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8000.00	0.00	89.49	7943.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8100.00	0.00	89.49	8043.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8200.00	0.00	89.49	8143.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8300.00	0.00	89.49	8243.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8400.00	0.00	89.49	8343.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8500.00	0.00	89.49	8443.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8600.00	0.00	89.49	8543.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8700.00	0.00	89.49	8643.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
Bone Spring	8740.24	0.00	89.49	8684.00	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8800.00	0.00	89.49	8743.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	8900.00	0.00	89.49	8843.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9000.00	0.00	89.49	8943.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9100.00	0.00	89.49	9043.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9200.00	0.00	89.49	9143.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
Avalon	9253.24	0.00	89.49	9197.00	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9300.00	0.00	89.49	9243.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9400.00	0.00	89.49	9343.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9500.00	0.00	89.49	9443.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9600.00	0.00	89.49	9543.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9700.00	0.00	89.49	9643.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9800.00	0.00	89.49	9743.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
1st Bone Spring Sand	9874.24	0.00	89.49	9818.00	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	9900.00	0.00	89.49	9843.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	10000.00	0.00	89.49	9943.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	10100.00	0.00	89.49	10043.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	10200.00	0.00	89.49	10143.76	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
KOP - Build 10°/100' DLS	10215.92	0.00	89.49	10159.68	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
	10300.00	8.41	359.67	10243.46	8.22	12.19	678.82	10.00	510347.60	797693.97	N 32 24 0.99	W 103 30 9.82
	10400.00	18.41	359.67	10340.61	31.38	35.35	678.68	10.00	510370.76	797693.83	N 32 24 1.22	W 103 30 9.82
2nd Bone Spring Sand	10452.95	23.70	359.67	10390.00	50.39	54.36	678.57	10.00	510389.77	797693.72	N 32 24 1.41	W 103 30 9.82
	10500.00	28.41	359.67	10432.26	71.05	75.02	678.45	10.00	510410.43	797693.60	N 32 24 1.62	W 103 30 9.82
	10600.00	38.41	359.67	10515.63	126.04	130.01	678.13	10.00	510465.42	797693.28	N 32 24 2.16	W 103 30 9.82
	10700.00	48.41	359.67	10588.19	194.67	198.64	677.73	10.00	510534.05	797692.88	N 32 24 2.84	W 103 30 9.82
	10800.00	58.41	359.67	10647.73	274.86	278.83	677.26	10.00	510614.23	797692.41	N 32 24 3.63	W 103 30 9.82
	10900.00	68.41	359.67	10692.43	364.17	368.13	676.74	10.00	510703.54	797691.89	N 32 24 4.52	W 103 30 9.82
Build 5°/100' DLS	10965.92	75.00	359.67	10713.12	426.73	430.69	676.37	10.00	510766.09	797691.52	N 32 24 5.14	W 103 30 9.81
	11000.00	76.70	359.66	10721.45	459.77	463.73	676.18	5.00	510799.13	797691.33	N 32 24 5.46	W 103 30 9.81
	11100.00	81.70	359.66	10740.17	557.97	561.93	675.61	5.00	510897.33	797690.75	N 32 24 6.43	W 103 30 9.81
2nd Bone Sand Target Landina Point	11195.50	86.48	359.66	10750.00	652.93	656.89	675.05	5.00	510992.29	797690.20	N 32 24 7.37	W 103 30 9.81
	11200.00	86.48	359.66	10750.28	657.42	661.38	675.02	0.00	510996.78	797690.17	N 32 24 7.42	W 103 30 9.81
	11300.00	86.48	359.66	10756.42	757.23	761.19	674.44	0.00	511096.59	797689.59	N 32 24 8.41	W 103 30 9.81
	11400.00	86.48	359.66	10762.56	857.05	861.00	673.86	0.00	511196.39	797689.00	N 32 24 9.39	W 103 30 9.80
	11500.00	86.48	359.66	10768.70	956.86	960.81	673.27	0.00	511296.20	797688.42	N 32 24 10.38	W 103 30 9.80
	11600.00	86.48	359.66	10774.84	1056.67	1060.62	672.69	0.00	511396.01	797687.84	N 32 24 11.37	W 103 30 9.80
	11700.00	86.48	359.66	10780.98	1156.48	1160.43	672.11	0.00	511495.82	797687.25	N 32 24 12.36	W 103 30 9.80
	11800.00	86.48	359.66	10787.13	1256.29	1260.24	671.52	0.00	511595.63	797686.67	N 32 24 13.34	W 103 30 9.80
	11900.00	86.48	359.66	10793.27	1356.10	1360.05	670.94	0.00	511695.43	797686.09	N 32 24 14.33	W 103 30 9.79
	12000.00	86.48	359.66	10799.41	1455.91	1459.86	670.35	0.00	511795.24	797685.50	N 32 24 15.32	W 103 30 9.79
	12100.00	86.48	359.66	10805.55	1555.72	1559.67	669.77	0.00	511895.05	797684.92	N 32 24 16.31	W 103 30 9.79
	12200.00	86.48	359.66	10811.69	1655.54	1659.48	669.19	0.00	511994.86	797684.33	N 32 24 17.29	W 103 30 9.79
	12300.00	86.48	359.66	10817.83	1755.35	1759.29	668.60	0.00	512094.66	797683.75	N 32 24 18.28	W 103 30 9.78
	12400.00	86.48	359.66	10823.97	1855.16	1859.10	668.02	0.00	512194.47	797683.17	N 32 24 19.27	W 103 30 9.78
	12500.00	86.48	359.66	10830.12	1954.97	1958.90	667.44	0.00	512294.28	797682.58	N 32 24 20.26	W 103 30 9.78
	12600.00	86.48	359.66	10836.26	2054.78	2058.71	666.85	0.00	512394.09	797682.00	N 32 24 21.25	W 103 30 9.78
	12700.00	86.48	359.66	10842.40	2154.59	2158.52	666.27	0.00	512493.89	797681.42	N 32 24 22.23	W 103 30 9.78
	12800.00	86.48	359.66	10848.54	2254.40	2258.33	665.69	0.00	512593.70	797680.83	N 32 24 23.22	W 103 30 9.77
3rd Bone Spring Carb	12872.61	86.48	359.66	10853.00	2326.87	2330.80	665.26	0.00	512666.17	797680.41	N 32 24 23.94	W 103 30 9.77
	12900.00	86.48	359.66	10854.68	2354.21	2358.14	665.10	0.00	512693.51	797680.25	N 32 24 24.21	W 103 30 9.77
	13000.00	86.48	359.66	10860.82	2454.02	2457.95	664.52	0.00	512793.32	797679.67	N 32 24 25.20	W 103 30 9.77
	13100.00	86.48	359.66	10866.97	2553.84	2557.76	663.93	0.00	512893.13	797679.08	N 32 24 26.18	W 103 30 9.77
	13200.00	86.48	359.66	10873.11	2653.65							

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Cimarex West Grama Ridge 7- 6 Federal Com #3H - PBHL [100' FNL, 660' FEL]	15266.14	86.48	359.66	11000.00	4715.89	4719.78	651.29	0.00	515055.10	797666.44	N 32 24 47.58 W 103 30 9.72	

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	23.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	West Grama Ridge 7-6 Federal Com #3H / Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1
	1	23.000	15266.139	1/100.000	17.500	13.375		NAL_MWD_JFR1+MS	West Grama Ridge 7-6 Federal Com #3H / Cimarex West Grama



Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1 RM 21Apr21 Proposal Geodetic Report (Def Plan)



Report Date: April 21, 2021 - 04:06 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex West Grama Ridge 7-6 Federal Com #3H / New Slot
Well: West Grama Ridge 7-6 Federal Com #3H
Borehole: West Grama Ridge 7-6 Federal Com #3H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1 RM 21Apr21
Survey Date: December 12, 2019
Tort / AHD / DDI / ERD Ratio: 106.247 ° / 5392.707 ft / 5.900 / 0.490
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 24' 0.92631", W 103° 30' 17.74204"
Location Grid N/E Y/X: N 510335.410 ftUS, E 797015.160 ftUS
CRS Grid Convergence Angle: 0.4439 °
Grid Scale Factor: 0.99998396
Version / Patch: 2.10.825.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.665 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3538.400 ft above MSL
Seabed / Ground Elevation: 3515.400 ft above MSL
Magnetic Declination: 6.428 °
Total Gravity Field Strength: 998.4762mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47838.161 nT
Magnetic Dip Angle: 60.143 °
Declination Date: April 21, 2021
Magnetic Declination Model: HDGM 2020
North Reference: Grid North
Grid Convergence Used: 0.4439 °
Total Corr Mag North->Grid North: 5.9839 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [469' FSL, 1339' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
Nudge 2"/100' DLS	2700.00	0.00	89.49	2700.00	0.00	0.00	0.00	0.00	510335.41	797015.16	N 32 24 0.93	W 103 30 17.74
Hold Nudge	3194.19	9.88	89.49	3191.74	0.13	0.38	42.52	2.00	510335.79	797057.68	N 32 24 0.93	W 103 30 17.25
Drop to Vertical 2"/100' DLS	6653.80	9.88	89.49	6600.00	1.93	5.65	636.34	0.00	510341.06	797651.49	N 32 24 0.93	W 103 30 10.32
Hold Vertical	7147.99	0.00	89.49	7091.74	2.06	6.03	678.86	2.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
KOP - Build 10"/100' DLS	10215.92	0.00	89.49	10159.68	2.06	6.03	678.86	0.00	510341.44	797694.00	N 32 24 0.93	W 103 30 9.82
Build 5"/100' DLS	10965.92	75.00	359.67	10713.12	426.73	430.69	676.37	10.00	510766.09	797691.52	N 32 24 5.14	W 103 30 9.81
Landing Point Cimarex West Grama Ridge 7-6 Federal Com #3H - PBHL	11195.50	86.48	359.66	10750.00	652.93	656.89	675.05	5.00	510992.29	797690.20	N 32 24 7.37	W 103 30 9.81
[100' FNL, 660' FEL]	15266.14	86.48	359.66	11000.00	4715.89	4719.78	651.29	0.00	515055.10	797666.44	N 32 24 47.58	W 103 30 9.72

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	23.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	West Grama Ridge 7-6 Federal Com #3H / Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1
	1	23.000	15266.139	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	West Grama Ridge 7-6 Federal Com #3H / Cimarex West Grama

Borehole: West Grama Ridge 7-6 Federal Com #3H	Well: West Grama Ridge 7-6 Federal Com #3H	Field: NM Lea County (NAD 83)	Structure: Cimarex West Grama Ridge 7-6 Federal Com #3H
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Gravity & Magnetic Parameters	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous
Model: HDGM 2020	Lat: N 32 24 0.93	Northing: 510335.41ftUS	Slot: New Slot
MagDec: 6.428°	Lon: W 103 30 17.74	Easting: 797015.16ftUS	Plan: Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1 RM 21Apr21
Dip: 60.143°	Date: 21-Apr-2021	Grid Conv: 0.4439°	TVD Ref: RKB(3538.4ft above MSL)
FS: 47838.161nT	Gravity FS: 998.476mgn (9.80665 Based)	Scale Fact: 0.99998396	

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [469' FSL, 1339' FEL]	0.00	0.00	89.49	0.00	0.00	0.00	0.00	0.00
Rustler	1600.00	0.00	89.49	1600.00	0.00	0.00	0.00	0.00
Salado (Top Salt)	1791.00	0.00	89.49	1791.00	0.00	0.00	0.00	0.00
Nudge 2"/100' DLS	2700.00	0.00	89.49	2700.00	0.00	0.00	0.00	0.00
Hold Nudge	3194.19	9.88	89.49	3191.74	0.13	0.38	42.52	2.00
Base Salt	3806.54	9.88	89.49	3795.00	0.45	1.31	147.62	0.00
Lamar	5187.03	9.88	89.49	5155.00	1.17	3.42	384.58	0.00
Bell Canyon	5326.09	9.88	89.49	5292.00	1.24	3.63	408.45	0.00
Cherry Canyon	5941.22	9.88	89.49	5898.00	1.56	4.57	514.03	0.00
Drop to Vertical 2"/100' DLS	6653.80	9.88	89.49	6600.00	1.93	5.65	636.34	0.00
Hold Vertical	7147.99	0.00	89.49	7091.74	2.06	6.03	678.86	2.00
Brushy Canyon	7231.24	0.00	89.49	7175.00	2.06	6.03	678.86	0.00
Bone Spring	8740.24	0.00	89.49	8684.00	2.06	6.03	678.86	0.00
Avalon	9253.24	0.00	89.49	9197.00	2.06	6.03	678.86	0.00
1st Bone Spring Sand	9874.24	0.00	89.49	9818.00	2.06	6.03	678.86	0.00
KOP - Build 10"/100' DLS	10215.92	0.00	89.49	10159.68	2.06	6.03	678.86	0.00
2nd Bone Spring Sand	10452.95	23.70	359.67	10390.00	50.39	54.36	678.57	10.00
Build 5"/100' DLS	10965.92	75.00	359.67	10713.12	426.73	430.69	676.37	10.00
2nd Bone Sand Target	11195.50	86.48	359.66	10750.00	652.93	656.89	675.05	5.00
Landing Point	11195.50	86.48	359.66	10750.00	652.93	656.89	675.05	5.00
3rd Bone Spring Carb	12872.61	86.48	359.66	10853.00	2326.87	2330.80	665.26	0.00
Cimarex West Grama Ridge 7-6 Federal Com #3H - PBHL	15266.14	86.48	359.66	11000.00	4715.89	4719.78	651.29	0.00
[100' FNL, 660' FEL]				11370.00				
3rd bone Spring Sand	NaN			11370.00				
Wolfcamp	NaN			11755.00				



Grid
True
Mag

Grid North
Tot Corr (M->G 5.984°)
Mag Dec (6.428°)
Grid Conv (0.444°)

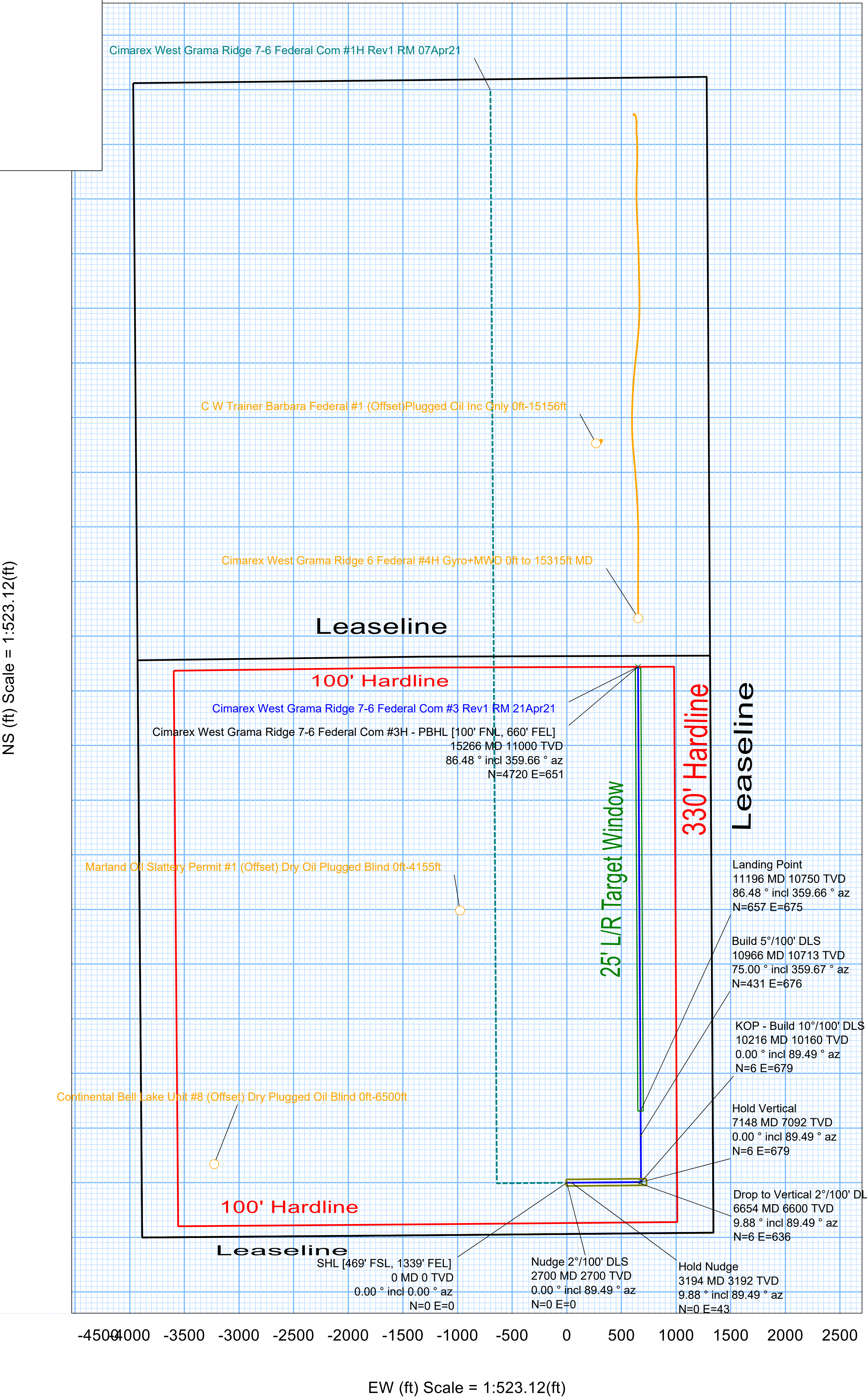
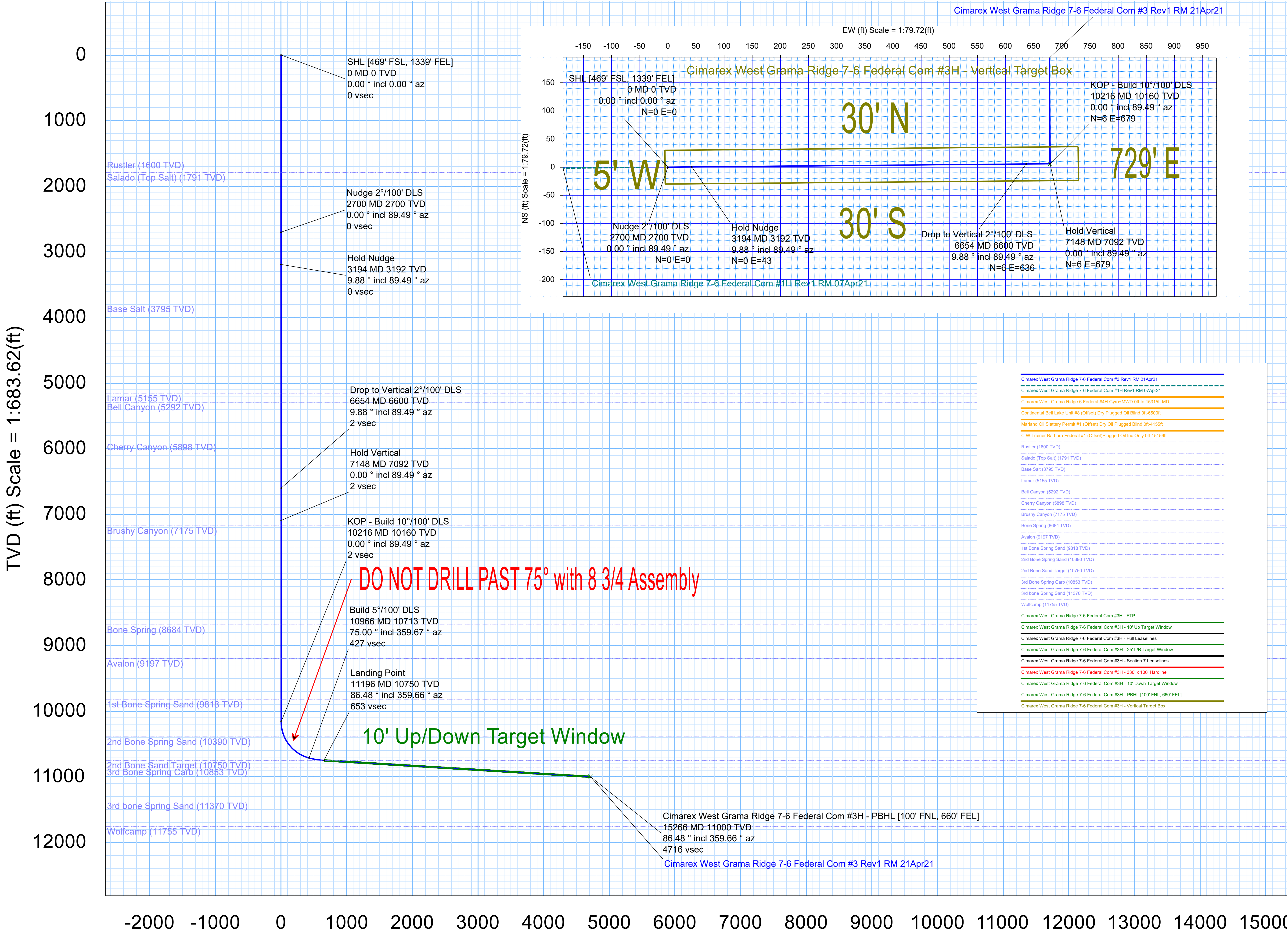
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CONTROLLED

Cimarex West Grama Ridge 7-6 Federal Com #3 Rev1 RM 21Apr21

of 3

21-Apr-2021



1. Geological Formations

TVD of target 11,000

Pilot Hole TD N/A

MD at TD 15,266

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1600	Useable Water	
Salado	1791	N/A	
Lamar	5155	N/A	
Bell Canyon	5292	N/A	
Cherry Canyon	5898	N/A	
Brushy Canyon	7175	N/A	
Bone Spring	8684	N/A	
Upper Avalon Shale	9197	N/A	
1st Bone Spring	9818	Hydrocarbons	
2nd Bone Spring	10390	Hydrocarbons	
3rd Bone Spring	10853	Hydrocarbons	
Wolfcamp	11755	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	1680	1680	13-3/8"	54.50	J-55	BT&C	1.55	3.77	9.32
12 1/4	0	5175	5175	9-5/8"	40.00	J-55	LT&C	1.35	1.47	2.51
8 3/4	0	9416	9416	7"	29.00	L-80	LT&C	1.59	1.85	1.89
8 3/4	9416	10966	10713	7"	29.00	L-80	BT&C	1.40	1.63	17.97
6	9215	15266	11000	4-1/2"	11.60	HCP-110	BT&C	1.72	2.08	17.72
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., West Grama Ridge 7 Federal 3H

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

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	814	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	218	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	948	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	292	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	339	10.50	3.45	22.18	N/A	Lead: NeoCem
	127	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Completion System	335	14.50	1.30	5.79	20	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + Expanding Agent + Retarder + Antifoam

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	51
Production	4975	25
Completion System	10665	10

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

4. Pressure Control Equipment

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

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

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

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.	
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 1680'	FW Spud Mud	7.83 - 8.33	30-32	N/C
1680' to 5175'	Brine Water	9.50 - 10.00	30-32	N/C
5175' to 10966'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
10966' to 15266'	OBM	8.50 - 9.00	50-70	N/C

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

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

6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	5148 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.

	H ₂ S is present
	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 100% 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.

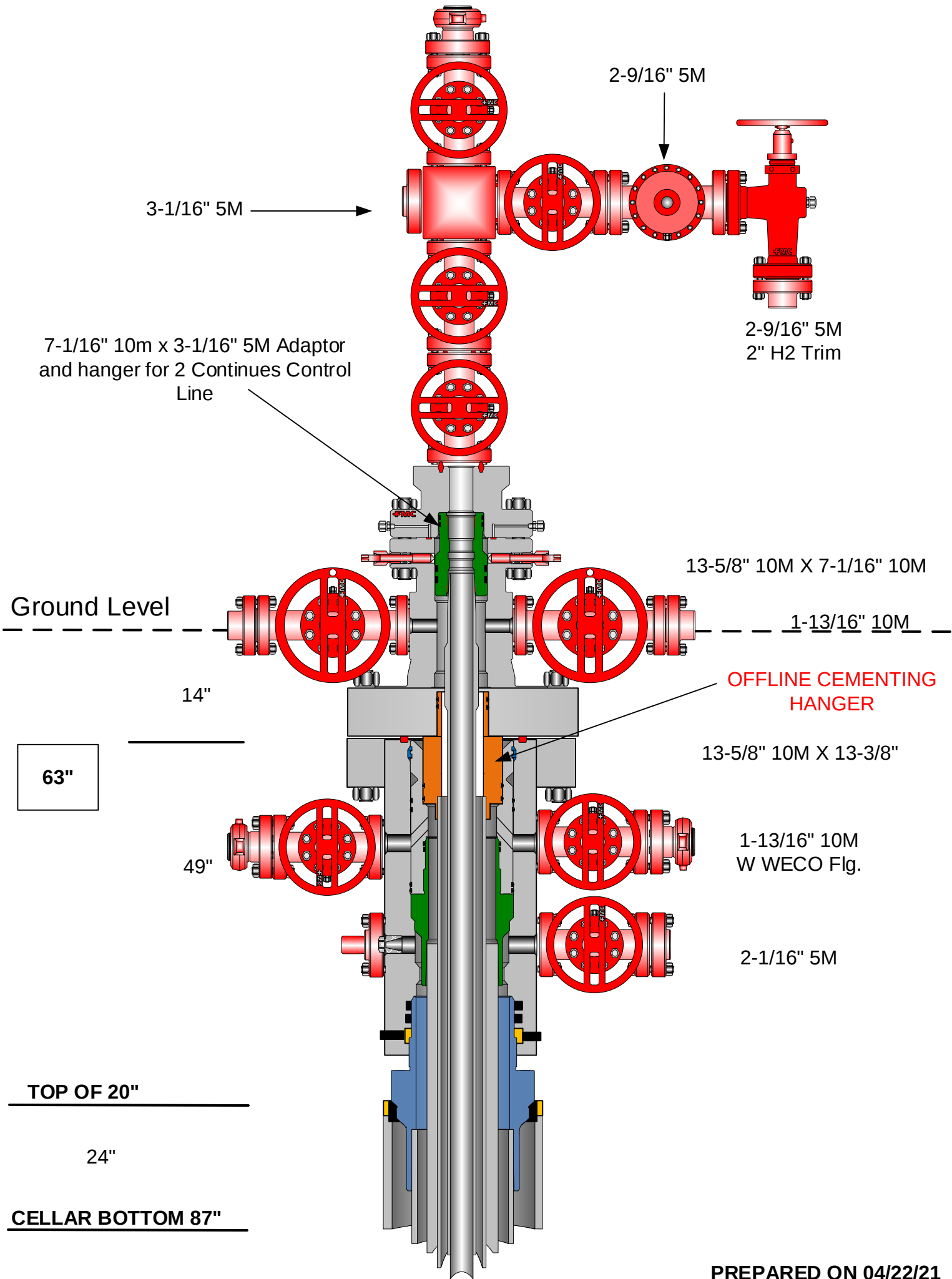
WEST GRAMA RIDGE
Federal 3H

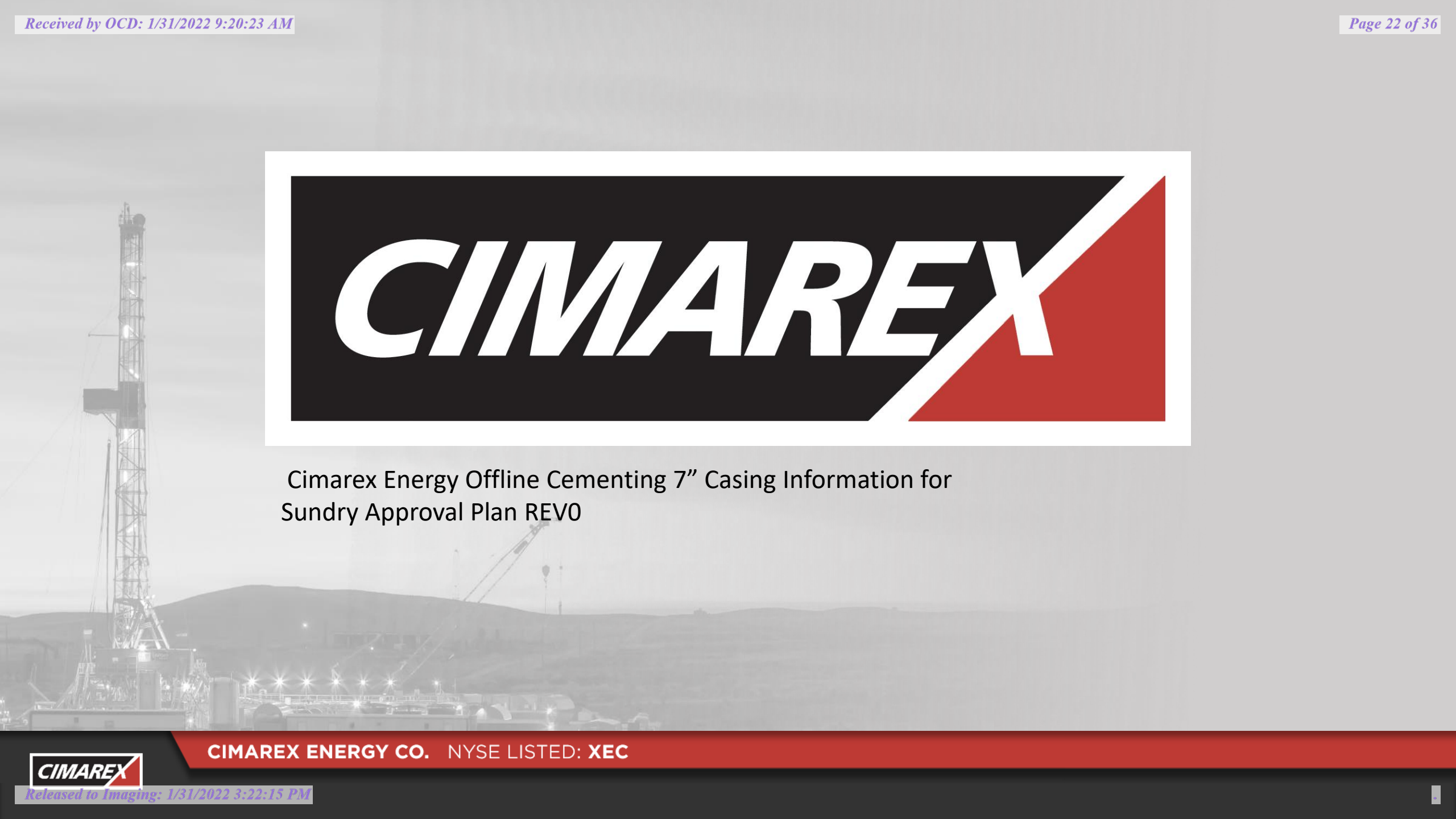


CACTUS FOR SERVICE
WEARBUSHING
IN CASING HEAD &
CASING SPOOL

LEA CO., NM

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	1680	1680	13-3/8"	54.50	J-55	BT&C	1.55	3.77	9.32
12 1/4	0	5175	5175	9-5/8"	40.00	J-55	LT&C	1.35	1.47	2.51
8 3/4	0	9416	9416	7"	29.00	L-80	LT&C	1.59	1.85	1.89
8 3/4	9416	10966	10713	7"	29.00	L-80	BT&C	1.40	1.63	17.97
6	9215	15266	11000	4-1/2"	11.60	HCP-110	BT&C	1.72	2.08	17.72
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet





CIMAREX

Cimarex Energy Offline Cementing 7" Casing Information for
Sundry Approval Plan REV0



CIMAREX ENERGY CO. NYSE LISTED: XEC

Cementing Operational Workflow

Conventional Cementing

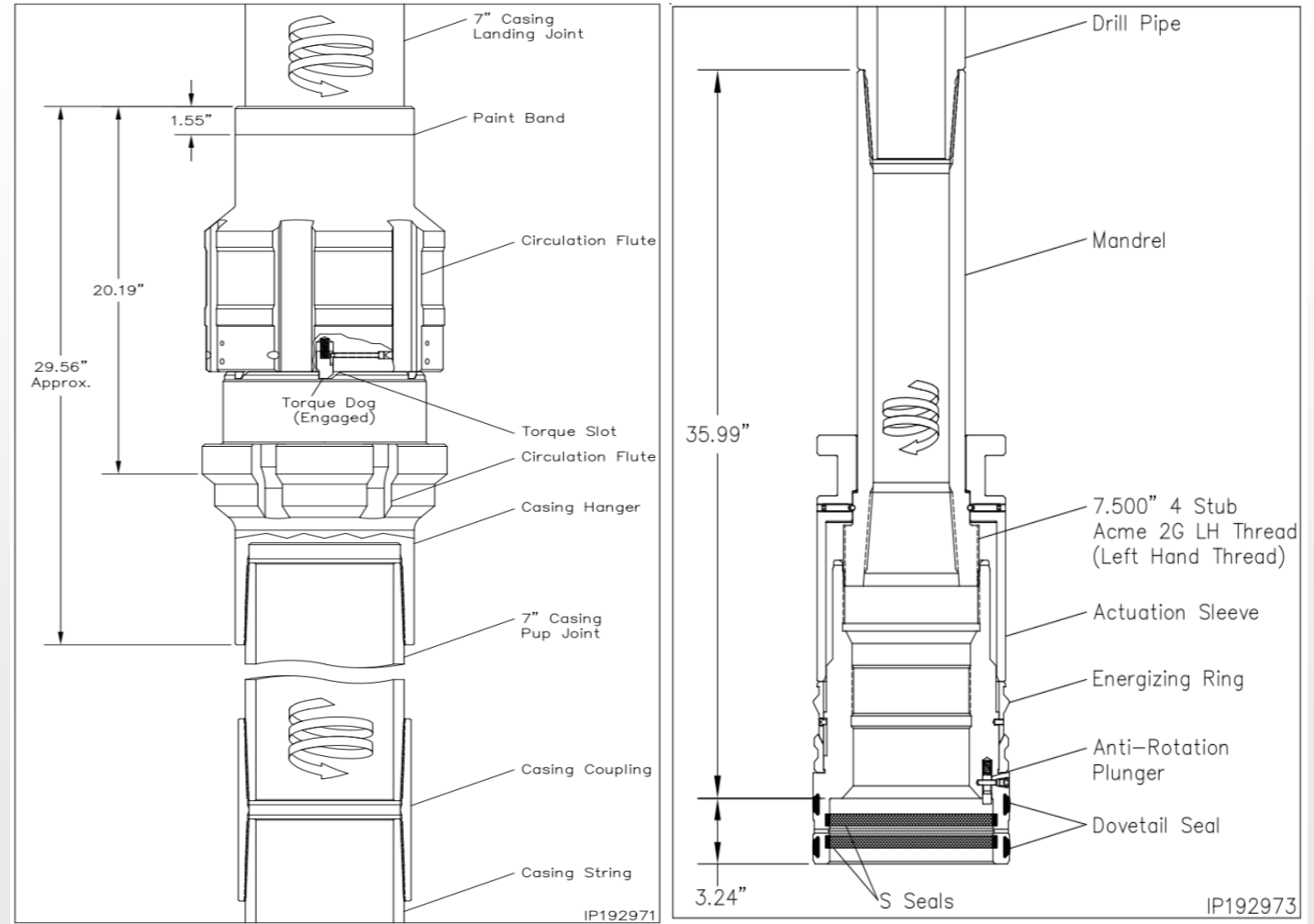
1. Land casing on fluted mandrel hanger
2. Circulate down casing, taking returns through BOP stack
3. Pump lead and tail cement
4. Displace cement and bump the plug
5. Ensure floats are holding pressure
6. RD cement crew
7. Install packoff to isolate pressure
8. Install BPV and skid rig

Offline Cementing

1. Land casing on **solid body** mandrel hanger
 - a) Engage packoff and lockring
2. Install BPV
3. Skid rig
4. Check for pressure and remove BPV
5. Circulate down casing, taking returns through casing valves
6. Pump lead and tail cement
7. Displace cement and bump the plug
8. Ensure floats are holding pressure
9. RD cement crew
10. Install BPV and TA cap

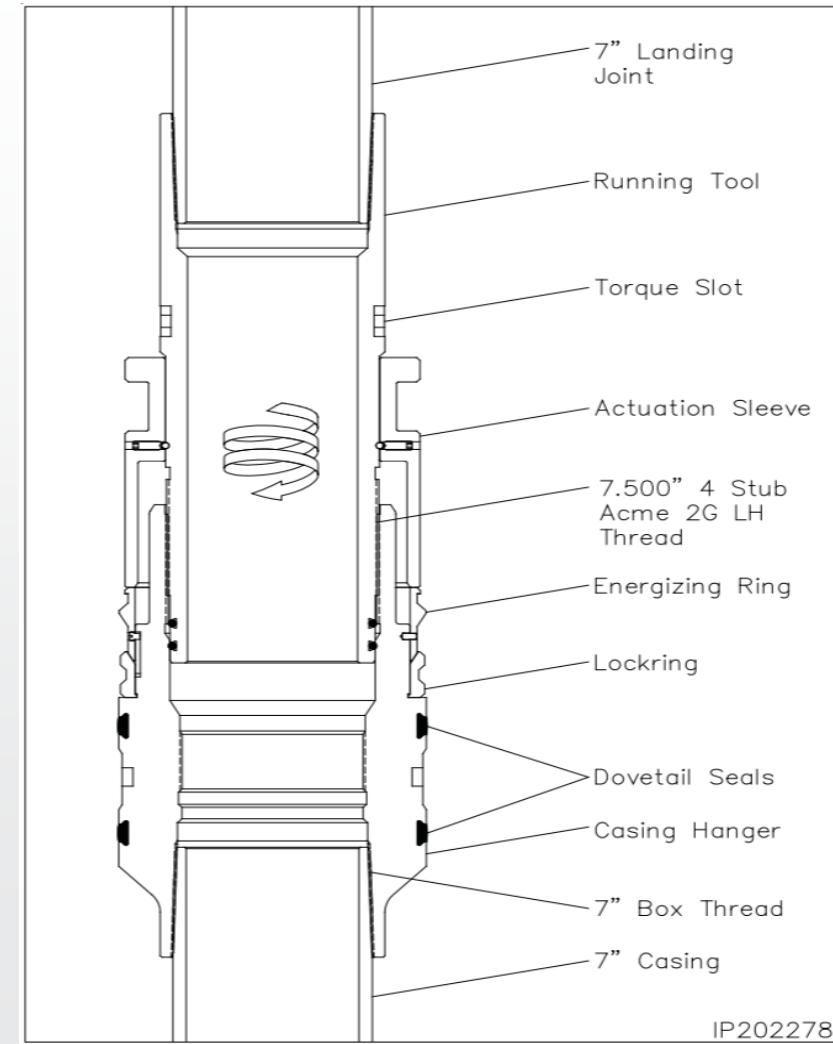
Conventional Cementing Equipment-Fluted Mandrel

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

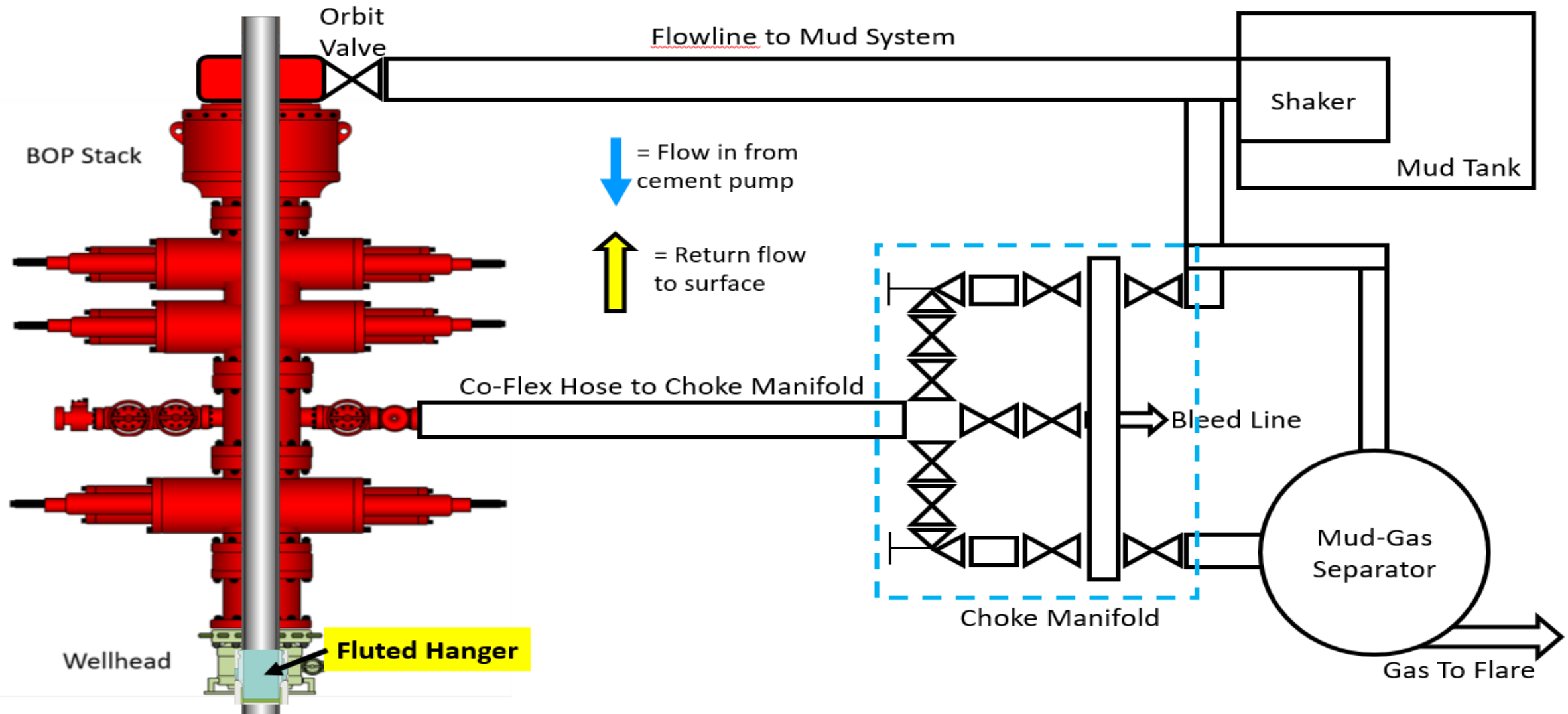


Offline Cementing Equipment-Solid Body Mandrel Hanger

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



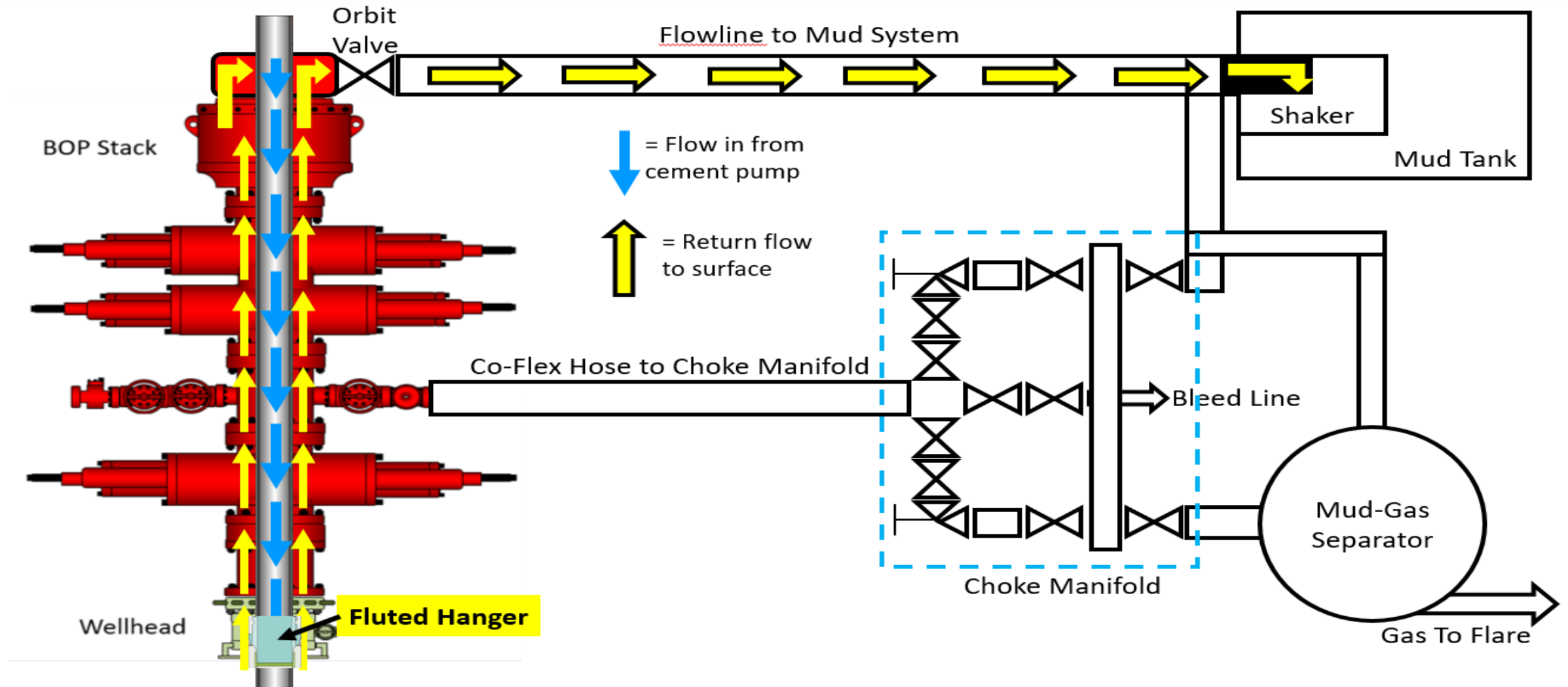
Conventional Cementing Flow Diagram



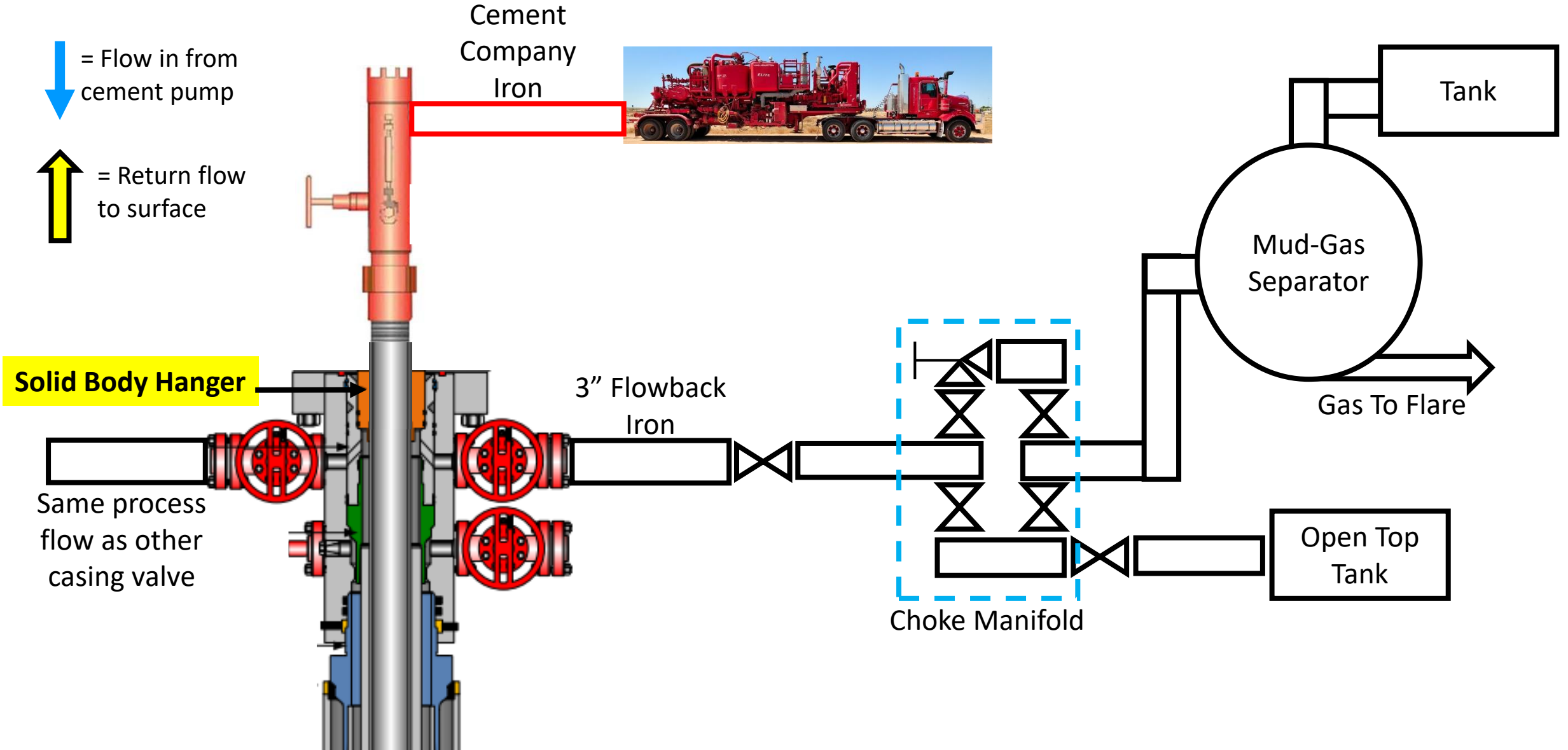
CIMAREX ENERGY CO. NYSE LISTED: XEC



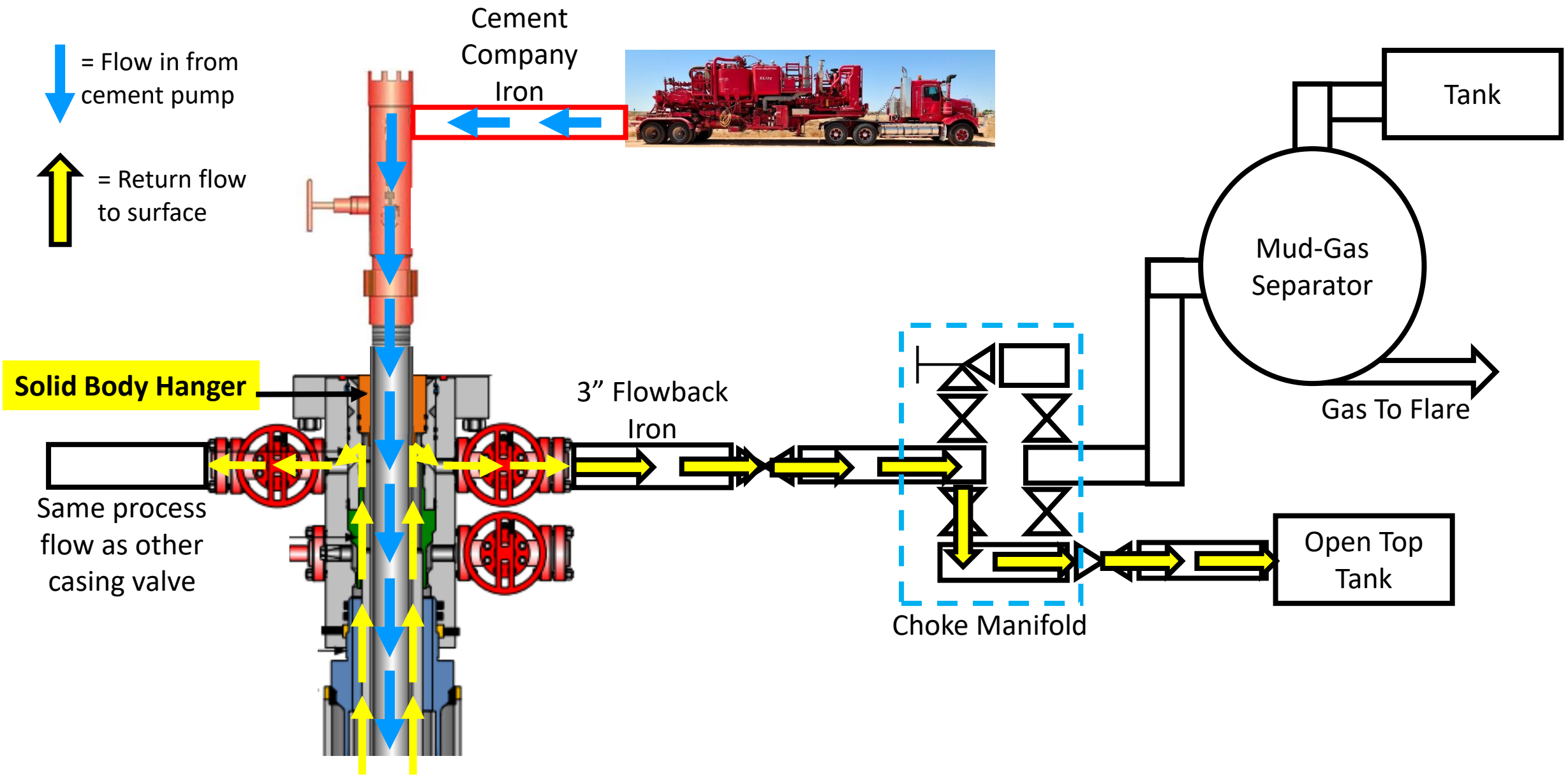
Conventional Cementing Flow Diagram



Offline Cementing -- Intermediate Casing

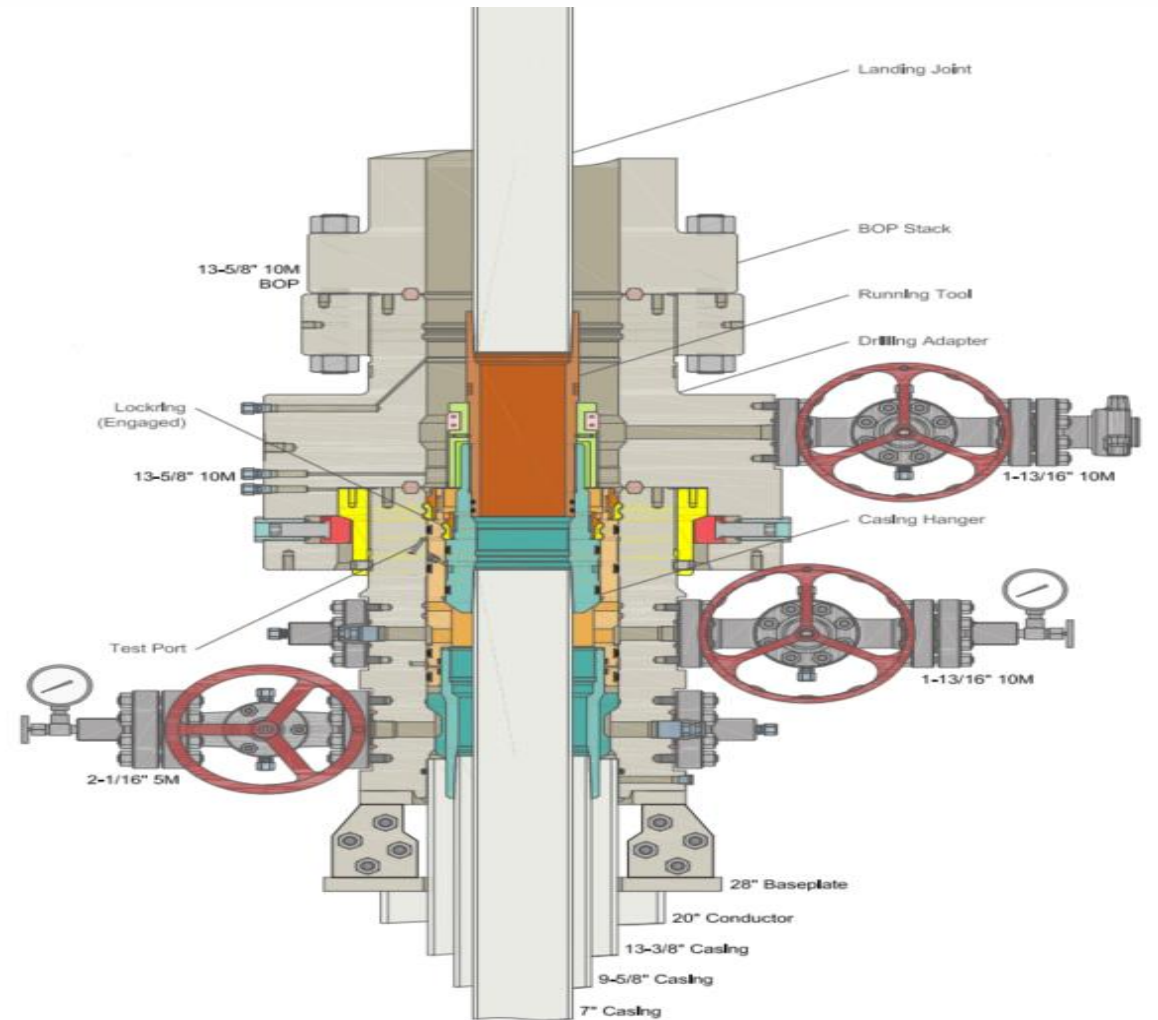


Offline Cementing -- Intermediate Casing



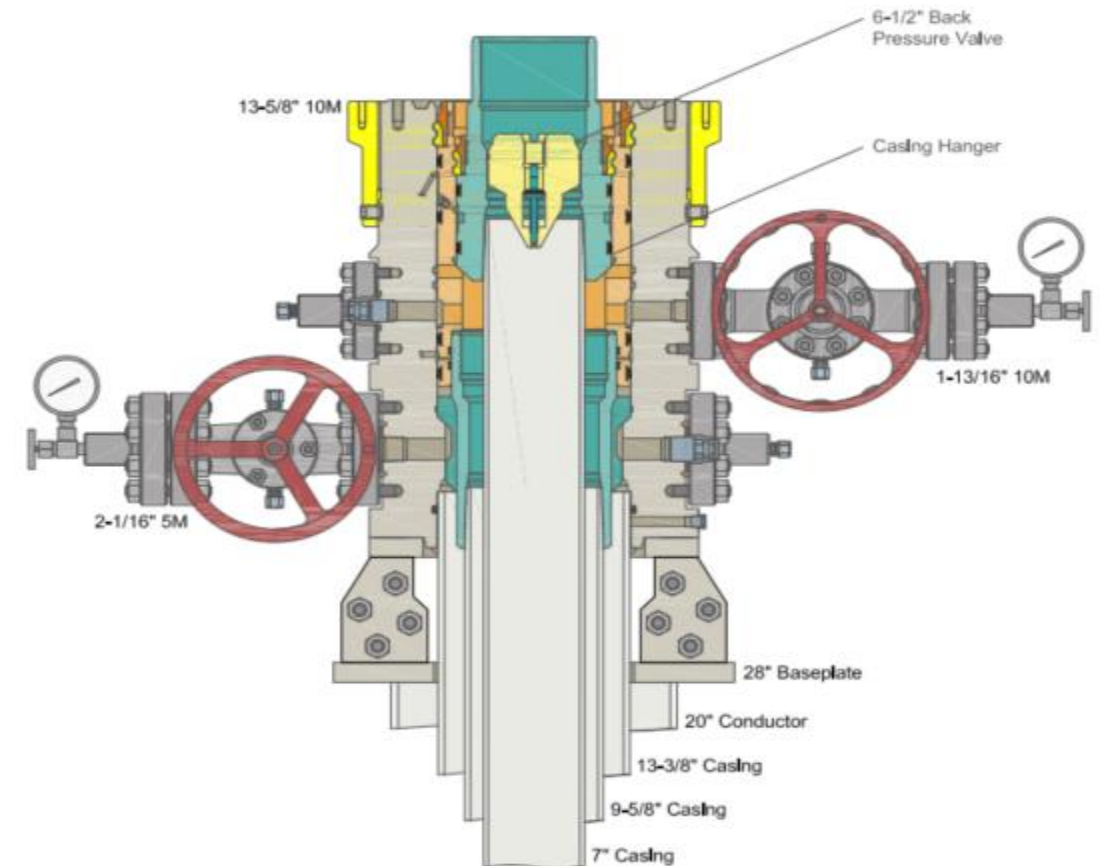
Offline Cementing Progression

- Run 7" casing
- Land 11" nominal x 7" hanger
- Test casing hanger
- Energize 11" nom x 7" hanger lock ring and pull test
- Re-test casing hanger
- Barriers & Procedures after landing casing before setting packoff
 - 10K BOP & 5K Annular-Internal and Annular barrier
 - Kill Weight Fluid in annulus and casing (ensure well is static before setting solid body packoff) Internal and Annular barrier
 - **If well is not static we WILL NOT set solid body packoff.**
 - 10K float collar-Internal Barrier
 - 10k float Shoe-Internal Barrier
 - **After circulating a 1.5 casing capacities to ensure full column of mud and no entrained gas pumps will be shut off and floats checked for flow**



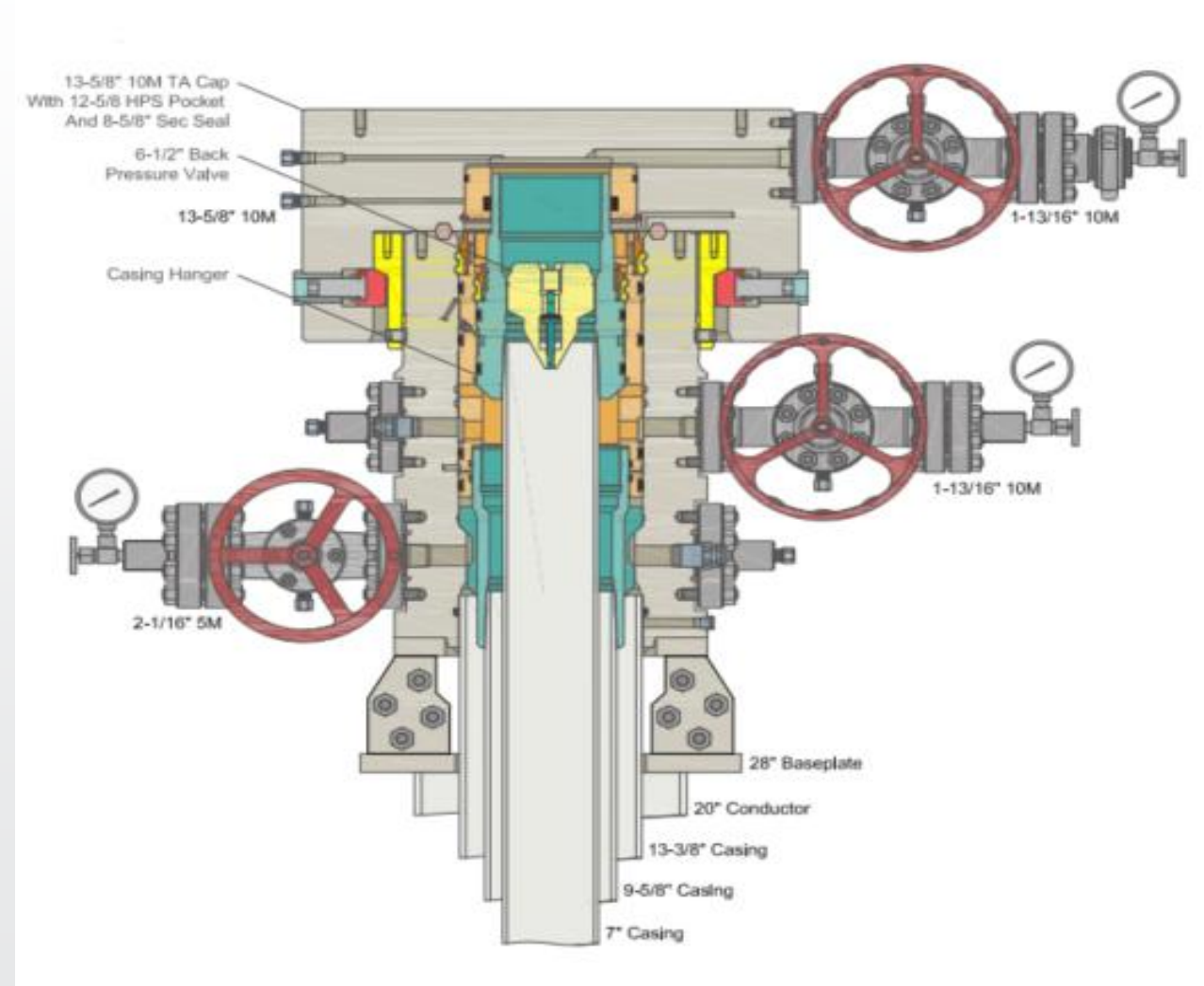
Offline Cementing Progression

- Pick up running tool with 6-1/2" nominal Back Pressure valve run into well and set
- Barriers and procedures **BEFORE** removing BOP's
 - Kill weight Fluid in annulus-Annular Barrier
 - Solid Body Packoff-Annular Barrier
 - 10K Float Equipment-Internal Barrier
 - 10K Back pressure valve installed with BOP still on well-Internal Barrier
 - BPV will be tested before it arrives on location by Cactus



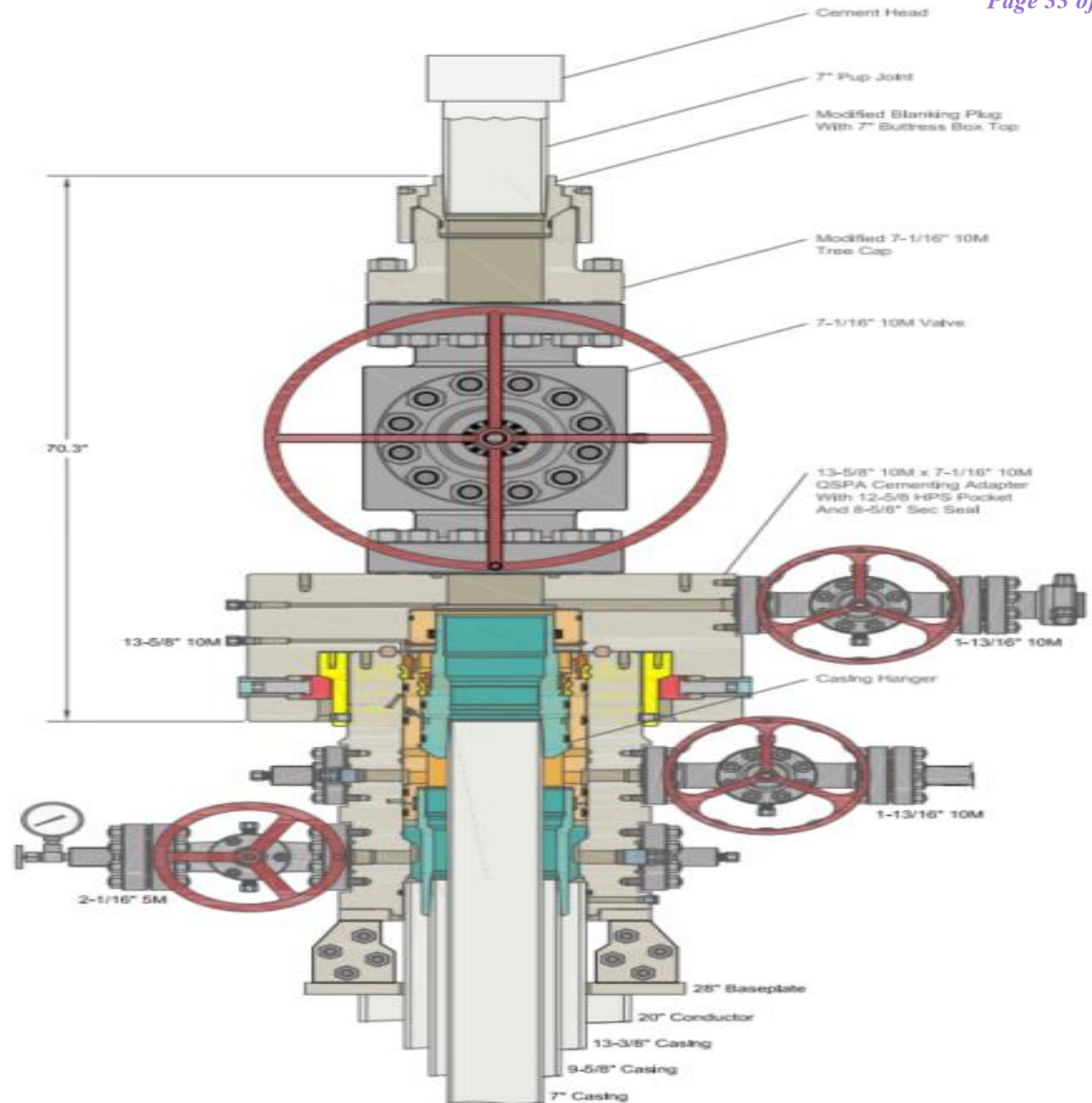
Offline Cementing Progression

- Nipple down BOP
- Nipple up TA Cap and test
- Skid Drilling Rig
- Barriers and procedures **AFTER** removing BOP's
 - Kill weight Fluid in annulus-Annular Barrier
 - Solid Body Packoff-Annular Barrier
 - 10K Float Equipment-Internal Barrier
 - 10K Back pressure valve-Internal Barrier
 - 10K rated TA cap with Valve-Internal Barrier



Offline Cementing Progression

- Check Pressure on TA Cap and remove
- Install adaptor with Gate valve for off line cementing and test
- Rig up flowback iron independent of rig
- Retrieve Back Pressure Valve
- Shut in well
- Rig up to cement and pump job
- NU 10K TA cap after cement job
- Barriers and procedures before rigging up cementing equipment
 - Address well and ensure no pressure on TA cap
 - Ability to pump into well through casing valves on backside to kill if needed
 - Kill weight Fluid in annulus-Annular barrier
 - Solid Body Packoff-Annular barrier
 - 10K Float Equipment-Internal Barrier
 - 10K Back pressure valve-Internal Barrier



Offline Cementing Risk and COA Compliance

- All testing and breaks tested in accordance with Onshore Order # 2 and COA's
- If no cement to surface, bradenhead squeeze still possible with offline cementing equipment
- Time from skid rig to offline cementing ops typically 24 hours
- **Conditions where we would not Offline Cement**
 - Well is flowing
- All wellhead equipment rated to 10K maintaining APD compliant
 - 10K flowback iron independent of rig circulating system
 - 10K Back Pressure Valve
 - 10K Gate Valve & TA combo for second barrier during operations
 - 10K 1-13/16 Valve coming off TA cap
 - 10K TA Cap

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

District II
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Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 746-3460 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 30-025-47655		² Pool Code 28432	³ Pool Name Grama Ridge; Bone Springs, West	
⁴ Property Code		⁵ Property Name WEST GRAMA RIDGE 7 FEDERAL		⁶ Well Number 3H
⁷ OGRID No. 215099		⁸ Operator Name CIMAREX ENERGY CO.		⁹ Elevation 3515.4'

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
O	7	22S	34E		469	SOUTH	1339	EAST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no. A	Section 7	Township 22S	Range 34E	Lot Idn	Feet from the 100	North/South line NORTH	Feet from the	East/West line EAST	County LEA
¹² Dedicated Acres 160		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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.

Amithy Crawford 4/22/21
Signature Date

Amithy Crawford
Printed Name

acrawford@cimarex.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.

November 13, 2019

Date of Survey _____
Signature and Seal of Professional Surveyor: _____



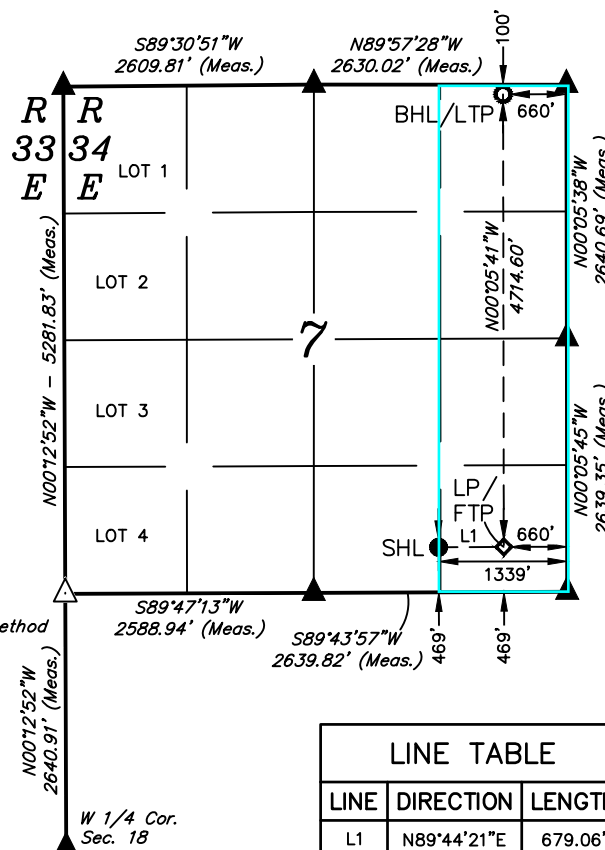
Certificate Number:

16

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°24'00.93" (32.400257°)
LONGITUDE = 103°30'17.74" (103.504928°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°24'00.48" (32.400134°)
LONGITUDE = 103°30'16.00" (103.504446°)
STATE PLANE NAD 83 (N.M. EAST)
N: 510335.41' E: 797015.16'
STATE PLANE NAD 27 (N.M. EAST)
N: 510274.71' E: 755832.51'

NAD 83 (LP/FTP)
LATITUDE = 32°24'00.93" (32.400259°)
LONGITUDE = 103°30'09.82" (103.502729°)
NAD 27 (LP/FTP)
LATITUDE = 32°24'00.49" (32.400135°)
LONGITUDE = 103°30'08.09" (103.502246°)
STATE PLANE NAD 83 (N.M. EAST)
N: 510341.35' E: 797694.09'
STATE PLANE NAD 27 (N.M. EAST)
N: 510280.66' E: 756511.43'

NAD 83 (LTP/BHL)
LATITUDE = 32°24'47.58" (32.413216°)
LONGITUDE = 103°30'09.72" (103.502700°)
NAD 27 (LTP/BHL)
LATITUDE = 32°24'47.13" (32.413092°)
LONGITUDE = 103°30'07.98" (103.502217°)
STATE PLANE NAD 83 (N.M. EAST)
N: 515055.10' E: 797666.44'
STATE PLANE NAD 27 (N.M. EAST)
N: 514994.27' E: 756483.88'



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N89°44'21"E	679.06'

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

NOTE:

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



SCALE
DRAWN BY: K.A. 11-19-19
REV: 1 04-19-21 R.J. (LTP/FTP & BHL CHANGES)

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1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
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Santa Fe, NM 87505

CONDITIONS

Action 76800

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 76800
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	1/31/2022