

Form 3160-5
(June 2019)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

3a. Address

3b. Phone No. (include area code)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.

9. API Well No.

10. Field and Pool or Exploratory Area

11. Country or Parish, State

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

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

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

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

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Additional Remarks

FROM:WC-025;G-08;S243213C;Wolfcamp (Pool Code 98309)

TO: Triple X; Bone Spring, West (96674)

Proposed Total Depth will be changed as follows:

FROM:22379'MD/12340'TVD

TO:20048'MD/10167'TVD

The drilling plan will be updated to include a request for approval to perform off-line cementing and request approval to skid the rig to the next well on the pad to begin operations instead of waiting 8 hours for surface casing cement to harden before skidding rig.

Location of Well

0. SHL: NENW / 255 FNL / 1580 FWL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238754 / LONG: -103.631707 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 0 FNL / 1386 FWL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.224911 / LONG: -103.632347 (TVD: 12367 feet, MD: 17205 feet)

PPP: NESW / 2640 FNL / 1386 FWL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.232194 / LONG: -103.632339 (TVD: 12381 feet, MD: 14555 feet)

PPP: NENW / 255 FNL / 1386 FWL / TWSP: 24S / RANGE: 32E / SECTION: 42 / LAT: 32.238753 / LONG: -103.632334 (TVD: 12235 feet, MD: 12318 feet)

BHL: SESW / 100 FSL / 1386 FWL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.21069 / LONG: -103.632359 (TVD: 12340 feet, MD: 22379 feet)

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 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) 476-3460 Fax: (505) 476-3462

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

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-50120		² Pool Code 96674		³ Pool Name Triple X: Bone Spring, West	
⁴ Property Code 326056		⁵ Property Name DOS EQUIS 12-13 FEDERAL COM		⁶ Well Number 48H	
⁷ OGRID No. 215099		⁸ Operator Name CIMAREX ENERGY CO.		⁹ Elevation 3606.7'	

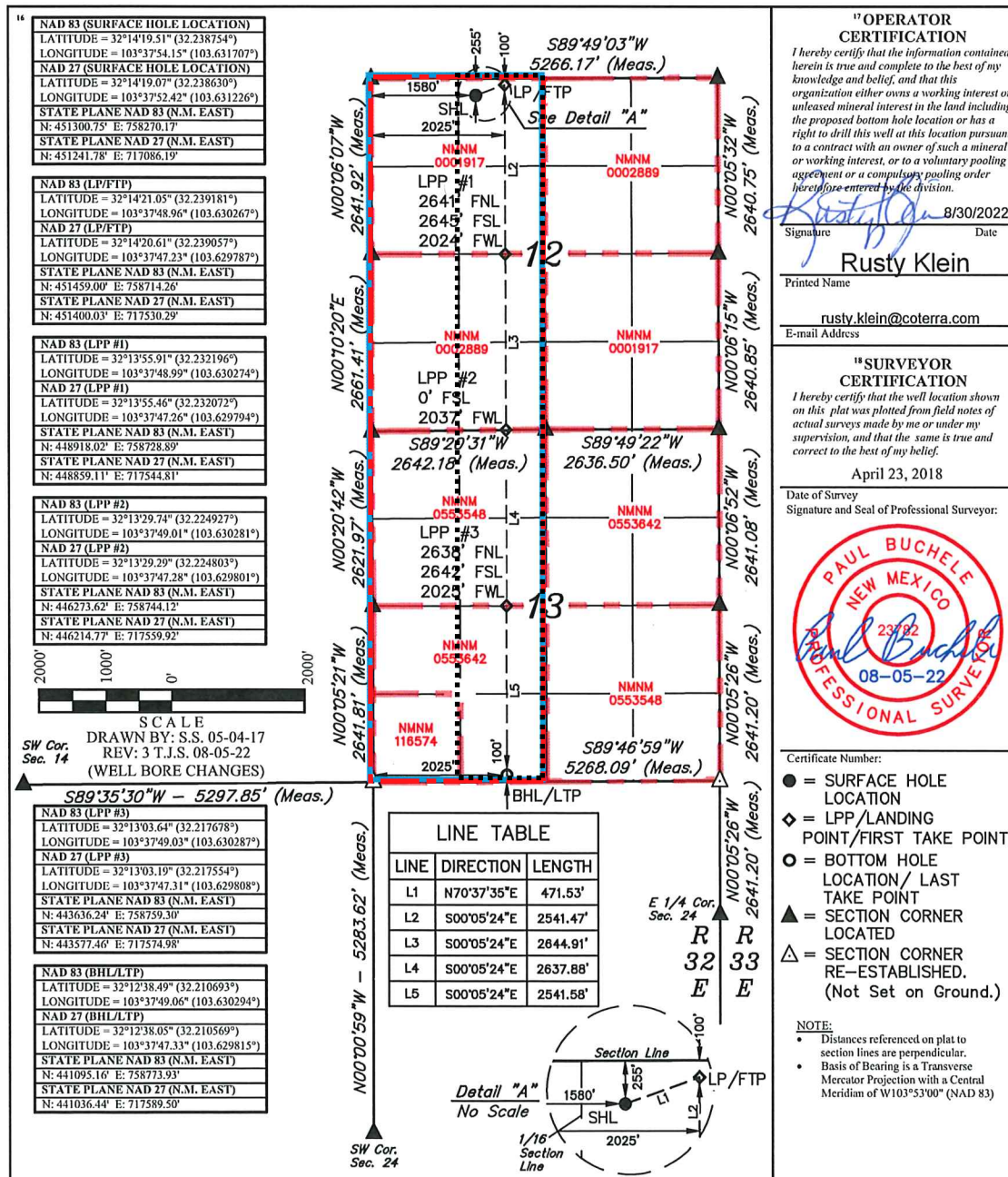
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	12	24S	32E		255	NORTH	1580	WEST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	13	24S	32E		100	SOUTH	2025	WEST	LEA
¹² Dedicated Acres 320		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.



1. Geological Formations

TVD of target 10,167
MD at TD 20,048

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1185	Useable Water	
Salado	1500	N/A	
Base of Salt	4650	N/A	
Bell Canyon	4947	N/A	
Cherry Canyon	4947	N/A	
Brushy Canyon	7311	Hydrocarbons	
Bone Spring	8845	Hydrocarbons	
1st Bone Spring Sand	9980	Hydrocarbons	
2nd Bone Spring Sand	10640	Hydrocarbons	
3rd Bone Spring Carb	11090	Hydrocarbons	
Wolfcamp	12235	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	1215	1215	13-3/8"	48.00	H-40	ST&C	1.41	3.29	5.52
12 1/4	0	4945	4945	9-5/8"	40.00	HCK-55	LT&C	1.44	1.49	2.84
8 3/4	0	9611	9611	7"	29.00	L-80	LT&C	1.56	1.81	2.00
8 3/4	9611	10361	10127	7"	29.00	P-110	BT&C	1.80	2.37	62.08
6	8611	20048	10167	4-1/2"	11.60	P-110	BT&C	1.59	2.25	20.33
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., Dos Equis 12-13 Federal Com 48H

	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.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N
Is AC Report included?	Y

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	589	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	158	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	929	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	289	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	433	10.30	3.64	22.18		Lead: Tuned Light + LCM
	-238	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Completion System	719	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	51
Production	4745	25
Completion System	10161	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		
			Double Ram	X	
			Other		
8 3/4	13 5/8	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.

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 1215'	Fresh Water	7.83 - 8.33	28	N/C
1215' to 4945'	Brine Water	9.80 - 10.30	30-32	N/C
4945' to 10361'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
12939' to 20048'	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
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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	4758 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.

10. Other Variances

Cimarex requests to perform offline cementing. OLC procedure as follows: 1. Land casing on solid body mandrel hanger. Engage packoff and lock ring. 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 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 48H well. Surface cement will be pumped and 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 48H well until at least 8 hours and when both tail and lead slurry reach 500 psi. The mandrel hanger is made up on the last joint of 13 3/8" casing and then lowered down with a landing joint. It is then lowered down until the mandrel contacts the landing ring which is pre-welded 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 48H 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.



Cimarex Dos Equis 12-13 Federal Com #48H Rev1 kFc 05Aug22 Proposal
Geodetic Report
(Def Plan)



Report Date: August 05, 2022 - 05:48 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #48H / 48H
Well: Dos Equis 12-13 Federal Com #48H
Borehole: Dos Equis 12-13 Federal Com #48H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #48H Rev1 kFc 05Aug22
Survey Date: September 24, 2019
Tort / AHD / DDI / ERD Ratio: 110.000 * / 10563.906 ft / 6.360 / 1.039
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 19.51367", W 103° 37' 54.14509"
Location Grid N/E Y/X: N 451300.750 RUS, E 758270.170 RUS
CRS Grid Convergence Angle: 0.3743 °
Grid Scale Factor: 0.99996299
Version / Patch: 2.10.832.2

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.670 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3634.200 ft above MSL
Seabed / Ground Elevation: 3608.200 ft above MSL
Magnetic Declination: 6.325 °
Total Gravity Field Strength: 998.4381mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47573.131 nT
Magnetic Dip Angle: 59.831 °
Declination Date: August 05, 2022
Magnetic Declination Model: HDGM 2022
North Reference: Grid North
Grid Convergence Used: 0.3743 °
Total Corr Mag North->Grid North: 5.9512 °
Local Coord Referenced To: Well Head

30.025-50120

	MD	Incl	Azim Grid	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(RUS)	(RUS)	(N/S °)	(E/W °)
SHL [255' FNL, 1580' FVWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451300.75	758270.17	N 32.238754	W 103.631707
Rustler	100.00	0.00	102.49	100.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	200.00	0.00	102.49	200.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	300.00	0.00	102.49	300.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	400.00	0.00	102.49	400.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	500.00	0.00	102.49	500.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	600.00	0.00	102.49	600.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	700.00	0.00	102.49	700.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	800.00	0.00	102.49	800.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	900.00	0.00	102.49	900.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1000.00	0.00	102.49	1000.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1100.00	0.00	102.49	1100.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1186.50	0.00	102.49	1186.50	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1200.00	0.00	102.49	1200.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1300.00	0.00	102.49	1300.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1400.00	0.00	102.49	1400.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
1500.00	0.00	102.49	1500.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707	
Salado (Top Salt)	1501.50	0.00	102.49	1501.50	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
Nudge, Build 2"/100ft	1600.00	0.00	102.49	1600.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1700.00	0.00	102.49	1700.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1800.00	0.00	102.49	1800.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	1900.00	0.00	102.49	1900.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	2000.00	0.00	102.49	2000.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	2100.00	0.00	102.49	2100.00	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	2101.50	0.00	102.49	2101.50	0.00	0.00	0.00	0.00	451300.75	758270.17	N 32.238754	W 103.631707
	2200.00	1.97	102.49	2199.98	0.38	-0.37	1.85	2.00	451300.38	758271.82	N 32.238753	W 103.631702
	2300.00	3.97	102.49	2299.84	1.53	-1.49	6.71	2.00	451299.26	758276.88	N 32.238750	W 103.631685
	2400.00	5.97	102.49	2399.46	3.45	-3.36	15.17	2.00	451297.39	758285.34	N 32.238744	W 103.631658
	2500.00	7.97	102.49	2498.72	6.14	-5.99	27.02	2.00	451294.76	758297.19	N 32.238737	W 103.631620
	2600.00	9.97	102.49	2597.49	9.60	-9.36	42.24	2.00	451291.39	758312.41	N 32.238727	W 103.631571
	2601.51	10.00	102.49	2598.97	9.66	-9.41	42.49	2.00	451291.34	758312.66	N 32.238727	W 103.631570
	2700.00	10.00	102.49	2695.97	13.46	-13.11	59.19	0.00	451287.64	758329.36	N 32.238717	W 103.631516
	2800.00	10.00	102.49	2794.45	17.31	-16.87	76.15	0.00	451283.88	758346.31	N 32.238706	W 103.631461
2900.00	10.00	102.49	2892.93	21.16	-20.63	93.10	0.00	451280.12	758363.27	N 32.238695	W 103.631406	
Hold	3000.00	10.00	102.49	2991.41	25.02	-24.38	110.05	0.00	451276.37	758380.22	N 32.238685	W 103.631352
	3100.00	10.00	102.49	3089.89	28.87	-28.14	127.01	0.00	451272.61	758397.17	N 32.238674	W 103.631297
	3200.00	10.00	102.49	3188.37	32.73	-31.90	143.96	0.00	451268.85	758414.13	N 32.238664	W 103.631242
	3300.00	10.00	102.49	3286.85	36.58	-35.65	160.92	0.00	451265.10	758431.08	N 32.238653	W 103.631187
	3400.00	10.00	102.49	3385.33	40.43	-39.41	177.87	0.00	451261.34	758448.03	N 32.238642	W 103.631133
	3500.00	10.00	102.49	3483.81	44.29	-43.17	194.82	0.00	451257.59	758464.99	N 32.238632	W 103.631078
	3600.00	10.00	102.49	3582.30	48.14	-46.92	211.78	0.00	451253.83	758481.94	N 32.238621	W 103.631023
	3700.00	10.00	102.49	3680.78	51.99	-50.68	228.73	0.00	451250.07	758498.89	N 32.238610	W 103.630968
	3800.00	10.00	102.49	3779.26	55.85	-54.43	245.69	0.00	451246.32	758515.85	N 32.238600	W 103.630914
	3900.00	10.00	102.49	3877.74	59.70	-58.19	262.64	0.00	451242.56	758532.80	N 32.238589	W 103.630859
	4000.00	10.00	102.49	3976.22	63.56	-61.95	279.59	0.00	451238.81	758549.75	N 32.238579	W 103.630804
	4100.00	10.00	102.49	4074.70	67.41	-65.70	296.55	0.00	451235.05	758566.71	N 32.238568	W 103.630749
	4200.00	10.00	102.49	4173.18	71.26	-69.46	313.50	0.00	451231.29	758583.66	N 32.238557	W 103.630695
	4300.00	10.00	102.49	4271.66	75.12	-73.22	330.46	0.00	451227.54	758600.61	N 32.238547	W 103.630640
	4400.00	10.00	102.49	4370.14	78.97	-76.97	347.41	0.00	451223.78	758617.57	N 32.238536	W 103.630585
Base to Salt	4500.00	10.00	102.49	4468.62	82.83	-80.73	364.36	0.00	451220.02	758634.52	N 32.238525	W 103.630530
	4600.00	10.00	102.49	4567.10	86.68	-84.49	381.32	0.00	451216.27	758651.47	N 32.238515	W 103.630476
	4685.70	10.00	102.49	4651.50	89.98	-87.70	395.85	0.00	451213.05	758668.00	N 32.238506	W 103.630429
	4700.00	10.00	102.49	4665.58	90.53	-88.24	398.27	0.00	451212.51	758668.43	N 32.238504	W 103.630421
	4729.10	10.00	102.49	4694.25	91.66	-89.34	403.21	0.00	451211.42	758673.36	N 32.238501	W 103.630405
	4800.00	8.58	102.49	4764.21	94.20	-91.81	414.38	2.00	451208.94	758684.54	N 32.238494	W 103.630369
	4900.00	6.58	102.49	4863.33	97.12	-94.67	427.26	2.00	451206.09	758697.42	N 32.238486	W 103.630327
	4985.60	4.87	102.49	4948.50	99.02	-96.51	435.60	2.00	451204.24	758705.75	N 32.238481	W 103.630300
	5000.00	4.58	102.49	4962.85	99.28	-96.77	436.76	2.00	451203.98	758706.91	N 32.238480	W 103.630297
	5100.00	2.58	102.49	5062.65	100.67	-98.12	442.86	2.00	451202.63	758713.01	N 32.238476	W 103.630277
	5200.00	0.58	102.49	5162.61	101.28	-98.72	445.56	2.00	451202.04	758715.71	N 32.238474	W 103.630268
	5229.11	0.00	102.49	5191.72	101.32	-98.75	445.70	2.00	451202.00	758715.85	N 32.238474	W 103.630268
	5300.00	0.00	102.49	5262.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	5400.00	0.00	102.49	5362.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	5500.00	0.00	102.49	5462.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
Hold	5600.00	0.00	102.49	5562.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	5700.00	0.00	102.49	5662.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	5800.00	0.00	102.49	5762.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	5900.00	0.00	102.49	5862.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	5912.89	0.00	102.49	5875.50	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6000.00	0.00	102.49	5962.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6100.00	0.00	102.49	6062.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6200.00	0.00	102.49	6162.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6300.00	0.00	102.49	6262.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6400.00	0.00	102.49	6362.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6500.00	0.00	102.49	6462.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268

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 °)
Brushy Canyon	6600.00	0.00	102.49	8562.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6700.00	0.00	102.49	8662.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6800.00	0.00	102.49	8762.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	6900.00	0.00	102.49	8862.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7000.00	0.00	102.49	8962.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7100.00	0.00	102.49	9062.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7200.00	0.00	102.49	9162.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7300.00	0.00	102.49	9262.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7349.89	0.00	102.49	9312.50	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7400.00	0.00	102.49	9362.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7500.00	0.00	102.49	9462.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7600.00	0.00	102.49	9562.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7700.00	0.00	102.49	9662.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7800.00	0.00	102.49	9762.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	7900.00	0.00	102.49	9862.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8000.00	0.00	102.49	9962.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8100.00	0.00	102.49	10062.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8200.00	0.00	102.49	10162.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8300.00	0.00	102.49	10262.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8400.00	0.00	102.49	10362.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
Bone Spring	8500.00	0.00	102.49	10462.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8600.00	0.00	102.49	10562.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8700.00	0.00	102.49	10662.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8800.00	0.00	102.49	10762.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8883.89	0.00	102.49	10846.50	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	8900.00	0.00	102.49	10862.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	9000.00	0.00	102.49	10962.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	9100.00	0.00	102.49	11062.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	9200.00	0.00	102.49	11162.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	9300.00	0.00	102.49	11262.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
Avalon	9321.89	0.00	102.49	11284.50	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	9400.00	0.00	102.49	11362.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	9500.00	0.00	102.49	11462.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	9600.00	0.00	102.49	11562.61	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
	9611.41	0.00	102.49	11574.02	101.32	-98.75	445.70	0.00	451202.00	758715.85	N 32.238474	W 103.630268
KOP, Build 10"/100ft	9700.00	8.86	179.67	9662.25	108.15	-105.58	445.74	10.00	451195.17	758715.89	N 32.238456	W 103.630268
	9800.00	18.88	179.67	9759.22	132.07	-129.51	445.88	10.00	451171.25	758716.03	N 32.238390	W 103.630268
	9900.00	28.88	179.67	9850.58	172.47	-169.90	446.11	10.00	451130.85	758716.26	N 32.238279	W 103.630268
	10000.00	38.88	179.67	9933.49	228.11	-225.55	446.43	10.00	451075.21	758716.58	N 32.238126	W 103.630268
1st Bone Spring Sand	10064.73	45.33	179.67	9981.50	271.48	-268.91	446.68	10.00	451031.85	758716.83	N 32.238007	W 103.630268
Build 5"/100ft	10100.00	48.86	179.67	10005.51	297.31	-294.74	446.83	10.00	451006.02	758716.98	N 32.237936	W 103.630268
	10200.00	58.86	179.67	10064.41	377.97	-375.40	447.29	10.00	450925.37	758717.45	N 32.237714	W 103.630268
	10300.00	68.86	179.67	10108.41	467.62	-465.05	447.81	10.00	450835.72	758717.96	N 32.237468	W 103.630268
	10361.41	75.00	179.67	10127.45	525.98	-523.41	448.15	10.00	450777.36	758718.30	N 32.237307	W 103.630268
	10400.00	76.93	179.67	10136.81	563.41	-560.84	448.36	5.00	450739.93	758718.51	N 32.237204	W 103.630268
Landing Point	10500.00	81.93	179.67	10155.15	661.69	-659.11	448.93	5.00	450641.67	758719.08	N 32.236934	W 103.630268
	10600.00	86.93	179.67	10164.86	761.18	-758.60	449.50	5.00	450542.17	758719.65	N 32.236661	W 103.630268
	10661.41	90.00	179.67	10166.50	822.57	-819.99	449.85	5.00	450480.79	758720.01	N 32.236492	W 103.630270
	10700.00	90.00	179.67	10166.50	861.15	-858.57	450.08	0.00	450442.21	758720.23	N 32.236386	W 103.630270
	10800.00	90.00	179.67	10166.50	961.15	-958.57	450.85	0.00	450342.22	758720.80	N 32.236111	W 103.630270
	10900.00	90.00	179.67	10166.50	1061.15	-1058.57	451.23	0.00	450242.22	758721.38	N 32.235836	W 103.630270
	11000.00	90.00	179.67	10166.50	1161.15	-1158.57	451.80	0.00	450142.23	758721.96	N 32.235561	W 103.630270
	11100.00	90.00	179.67	10166.50	1261.15	-1258.57	452.38	0.00	450042.23	758722.53	N 32.235286	W 103.630271
	11200.00	90.00	179.67	10166.50	1361.15	-1358.57	452.96	0.00	449942.24	758723.11	N 32.235012	W 103.630271
	11300.00	90.00	179.67	10166.50	1461.15	-1458.56	453.53	0.00	449842.24	758723.68	N 32.234737	W 103.630271
	11400.00	90.00	179.67	10166.50	1561.15	-1558.56	454.11	0.00	449742.25	758724.26	N 32.234462	W 103.630271
	11500.00	90.00	179.67	10166.50	1661.15	-1658.56	454.68	0.00	449642.25	758724.84	N 32.234187	W 103.630272
	11600.00	90.00	179.67	10166.50	1761.15	-1758.56	455.26	0.00	449542.26	758725.41	N 32.233912	W 103.630272
	11700.00	90.00	179.67	10166.50	1861.15	-1858.56	455.84	0.00	449442.27	758725.99	N 32.233637	W 103.630272
	11800.00	90.00	179.67	10166.50	1961.15	-1958.56	456.41	0.00	449342.27	758726.56	N 32.233362	W 103.630272
	11900.00	90.00	179.67	10166.50	2061.15	-2058.55	456.99	0.00	449242.28	758727.14	N 32.233087	W 103.630273
	12000.00	90.00	179.67	10166.50	2161.15	-2158.55	457.56	0.00	449142.28	758727.72	N 32.232813	W 103.630273
	12100.00	90.00	179.67	10166.50	2261.15	-2258.55	458.14	0.00	449042.29	758728.29	N 32.232538	W 103.630273
	12200.00	90.00	179.67	10166.50	2361.15	-2358.55	458.71	0.00	448942.29	758728.87	N 32.232263	W 103.630273
NMNMO001917 exit to NMNMO002889 enter Lease Crossing	12224.26	90.00	179.67	10166.50	2385.41	-2382.81	458.85	0.00	448918.03	758729.01	N 32.232196	W 103.630273
Section 12-13 Line, NMNMO002889 exit to NMNMO553548 enter Lease Crossing	12300.00	90.00	179.67	10166.50	2461.15	-2458.55	459.29	0.00	448842.30			

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 °)
	15400.00	90.00	179.67	10166.50	5561.15	-5558.50	477.14	0.00	445742.47	758747.30	N 32.223467	W 103.630282
	15500.00	90.00	179.67	10166.50	5661.15	-5658.49	477.72	0.00	445642.48	758747.87	N 32.223192	W 103.630282
	15600.00	90.00	179.67	10166.50	5761.15	-5758.49	478.30	0.00	445542.48	758748.45	N 32.222917	W 103.630282
	15700.00	90.00	179.67	10166.50	5861.15	-5858.49	478.87	0.00	445442.49	758749.02	N 32.222643	W 103.630282
	15800.00	90.00	179.67	10166.50	5961.15	-5958.49	479.45	0.00	445342.49	758749.60	N 32.222368	W 103.630283
	15900.00	90.00	179.67	10166.50	6061.15	-6058.49	480.02	0.00	445242.50	758750.17	N 32.222093	W 103.630283
	16000.00	90.00	179.67	10166.50	6161.15	-6158.49	480.60	0.00	445142.50	758750.75	N 32.221818	W 103.630283
	16100.00	90.00	179.67	10166.50	6261.15	-6258.48	481.18	0.00	445042.51	758751.33	N 32.221543	W 103.630283
	16200.00	90.00	179.67	10166.50	6361.15	-6358.48	481.75	0.00	444942.52	758751.90	N 32.221268	W 103.630284
	16300.00	90.00	179.67	10166.50	6461.15	-6458.48	482.33	0.00	444842.52	758752.48	N 32.220993	W 103.630284
	16400.00	90.00	179.67	10166.50	6561.15	-6558.48	482.90	0.00	444742.53	758753.05	N 32.220719	W 103.630284
	16500.00	90.00	179.67	10166.50	6661.15	-6658.48	483.48	0.00	444642.53	758753.63	N 32.220444	W 103.630284
	16600.00	90.00	179.67	10166.50	6761.15	-6758.48	484.05	0.00	444542.54	758754.21	N 32.220169	W 103.630285
	16700.00	90.00	179.67	10166.50	6861.15	-6858.47	484.63	0.00	444442.54	758754.78	N 32.219894	W 103.630285
	16800.00	90.00	179.67	10166.50	6961.15	-6958.47	485.21	0.00	444342.55	758755.36	N 32.219619	W 103.630285
	16900.00	90.00	179.67	10166.50	7061.15	-7058.47	485.78	0.00	444242.55	758755.93	N 32.219344	W 103.630285
	17000.00	90.00	179.67	10166.50	7161.15	-7158.47	486.36	0.00	444142.56	758756.51	N 32.219069	W 103.630286
	17100.00	90.00	179.67	10166.50	7261.15	-7258.47	486.93	0.00	444042.57	758757.09	N 32.218794	W 103.630286
	17200.00	90.00	179.67	10166.50	7361.15	-7358.47	487.51	0.00	443942.57	758757.66	N 32.218520	W 103.630286
	17300.00	90.00	179.67	10166.50	7461.15	-7458.46	488.09	0.00	443842.58	758758.24	N 32.218245	W 103.630286
	17400.00	90.00	179.67	10166.50	7561.15	-7558.46	488.66	0.00	443742.58	758758.81	N 32.217970	W 103.630287
	17500.00	90.00	179.67	10166.50	7661.15	-7658.46	489.24	0.00	443642.59	758759.39	N 32.217695	W 103.630287

NMNM0553548
exit to
NMNM0553642
enter Lease
Crossing

17506.33	90.00	179.67	10166.50	7667.48	-7664.79	489.27	0.00	443636.26	758759.43	N 32.217678	W 103.630287
17600.00	90.00	179.67	10166.50	7761.15	-7758.46	489.81	0.00	443542.59	758759.96	N 32.217420	W 103.630287
17700.00	90.00	179.67	10166.50	7861.15	-7858.46	490.39	0.00	443442.50	758760.54	N 32.217145	W 103.630287
17800.00	90.00	179.67	10166.50	7961.15	-7958.46	490.97	0.00	443342.50	758761.12	N 32.216870	W 103.630288
17900.00	90.00	179.67	10166.50	8061.15	-8058.45	491.54	0.00	443242.51	758761.69	N 32.216598	W 103.630288
18000.00	90.00	179.67	10166.50	8161.15	-8158.45	492.12	0.00	443142.52	758762.27	N 32.216321	W 103.630288
18100.00	90.00	179.67	10166.50	8261.15	-8258.45	492.69	0.00	443042.52	758762.84	N 32.216046	W 103.630288
18200.00	90.00	179.67	10166.50	8361.15	-8358.45	493.27	0.00	442942.53	758763.42	N 32.215771	W 103.630289
18300.00	90.00	179.67	10166.50	8461.15	-8458.45	493.85	0.00	442842.53	758764.00	N 32.215496	W 103.630289
18400.00	90.00	179.67	10166.50	8561.15	-8558.45	494.42	0.00	442742.54	758764.57	N 32.215221	W 103.630289
18500.00	90.00	179.67	10166.50	8661.15	-8658.44	495.00	0.00	442642.54	758765.15	N 32.214946	W 103.630289
18600.00	90.00	179.67	10166.50	8761.15	-8758.44	495.57	0.00	442542.55	758765.72	N 32.214672	W 103.630290
18700.00	90.00	179.67	10166.50	8861.15	-8858.44	496.15	0.00	442442.55	758766.30	N 32.214397	W 103.630290
18800.00	90.00	179.67	10166.50	8961.15	-8958.44	496.72	0.00	442342.56	758766.88	N 32.214122	W 103.630290
18900.00	90.00	179.67	10166.50	9061.15	-9058.44	497.30	0.00	442242.57	758767.45	N 32.213847	W 103.630290
19000.00	90.00	179.67	10166.50	9161.15	-9158.44	497.88	0.00	442142.57	758768.03	N 32.213572	W 103.630291
19100.00	90.00	179.67	10166.50	9261.15	-9258.43	498.45	0.00	442042.58	758768.60	N 32.213297	W 103.630291
19200.00	90.00	179.67	10166.50	9361.15	-9358.43	499.03	0.00	441942.58	758769.18	N 32.213022	W 103.630291
19300.00	90.00	179.67	10166.50	9461.15	-9458.43	499.60	0.00	441842.59	758769.75	N 32.212747	W 103.630291
19400.00	90.00	179.67	10166.50	9561.15	-9558.43	500.18	0.00	441742.59	758770.33	N 32.212473	W 103.630292
19500.00	90.00	179.67	10166.50	9661.15	-9658.43	500.76	0.00	441642.70	758770.91	N 32.212198	W 103.630292
19600.00	90.00	179.67	10166.50	9761.15	-9758.43	501.33	0.00	441542.70	758771.48	N 32.211923	W 103.630292
19700.00	90.00	179.67	10166.50	9861.15	-9858.42	501.91	0.00	441442.71	758772.06	N 32.211648	W 103.630292
19800.00	90.00	179.67	10166.50	9961.15	-9958.42	502.48	0.00	441342.72	758772.63	N 32.211373	W 103.630293
19900.00	90.00	179.67	10166.50	10061.15	-10058.42	503.06	0.00	441242.72	758773.21	N 32.211098	W 103.630293
20000.00	90.00	179.67	10166.50	10161.15	-10158.42	503.64	0.00	441142.73	758773.79	N 32.210823	W 103.630293

Cimarex Dos
Equis 12-13
Federal Com
48H - PBHL
[100' FSL, 2025'
FWL]

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 3 *** 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	26.000	1/100.000	17.500	13.375		A001Mb_MWD-Depth Only	Dos Equis 12-13 Federal Com #48H / Cimarex Dos Equis 12-13
	1	26.000	20047.561	1/100.000	17.500	13.375		A001Mb_MWD	Dos Equis 12-13 Federal Com #48H / Cimarex Dos Equis 12-13

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

Fill Line

Flowline

2000# (2M)
BOP

SRR & A

Annular Preventer

Pipe Rams

Blind Rams

2" Minimum Kill Line

Kill Line

1 Kill Line Valve
(Minimum)

Drilling Spool

2" Minimum Choke Line

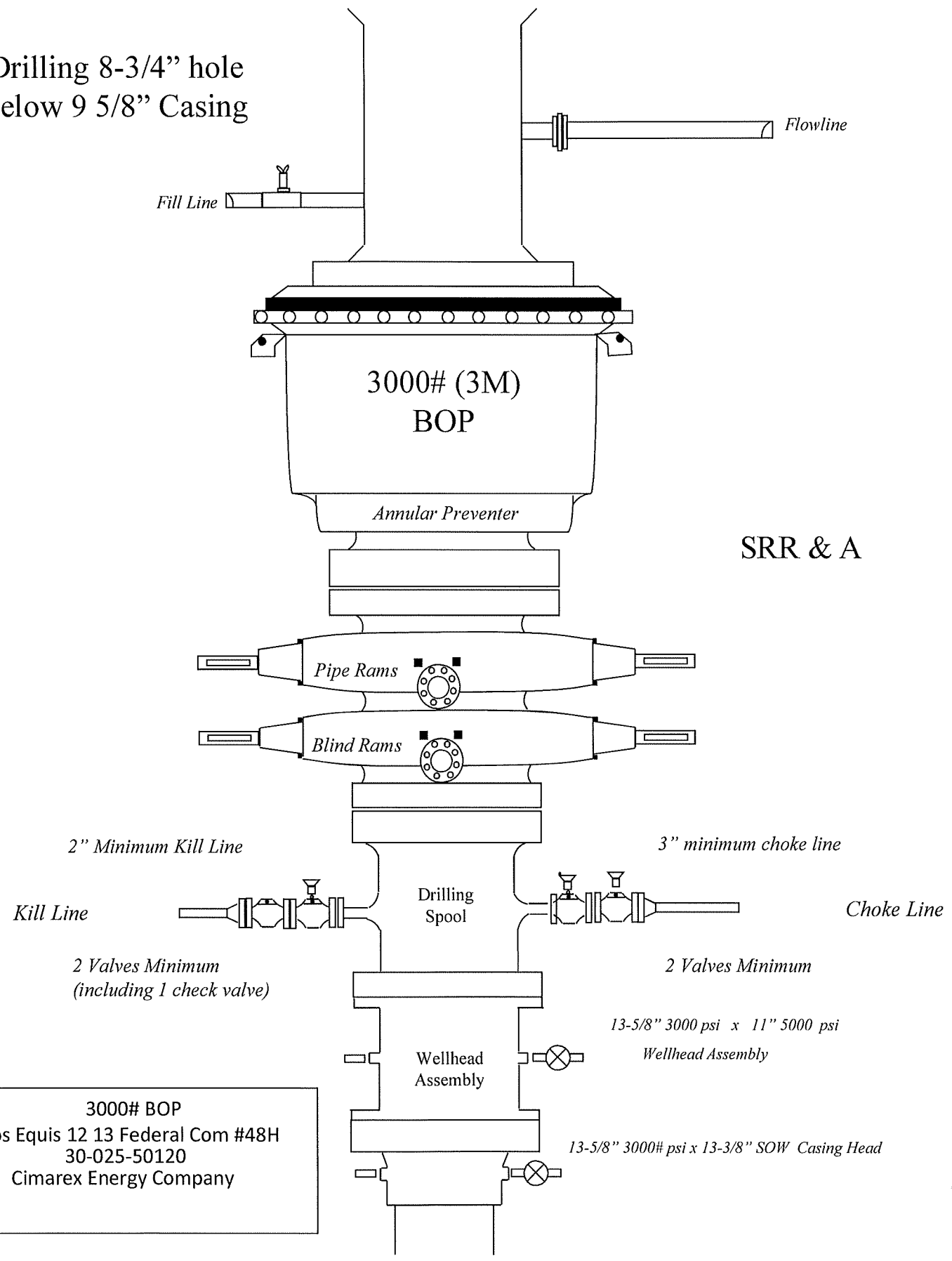
Choke Line

1 Choke Line Valve
(Minimum)

13-5/8" 3000 psi x 13 3/8 SOW Slip-on Casing Head

2000# BOP
Dos Equis 12 13 Federal Com #48H
30-025-50120
Cimarex Energy Company

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



SRR & A

3000# BOP
Dos Equis 12 13 Federal Com #48H
30-025-50120
Cimarex Energy Company

Drilling 6" hole
below 7" Casing

Fill Line

Flowline

5000# (5M)
BOP

Annular Preventer

SRR & A

Pipe Rams

Blind Rams

2" Minimum Kill Line

Kill Line

Drilling
Spool

3" minimum choke line

Choke Line

2 Valves and a check valve

2 Valves Minimum
(HCR Required)

Wellhead
Assembly

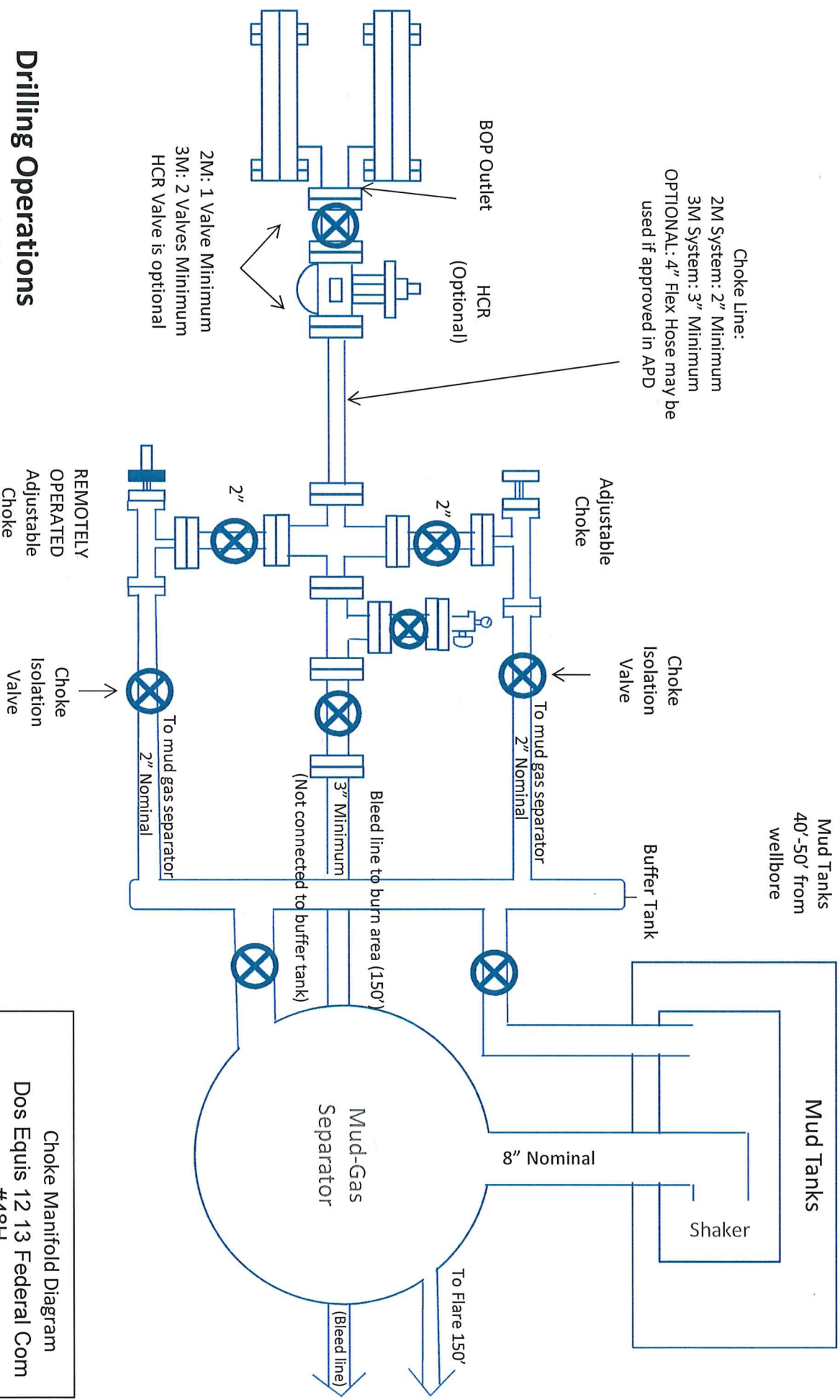
11" 5000 psi x 7-1/16" 10,000 psi
Wellhead Assembly

Wellhead
Assembly

13-5/8" 3000 psi x 11" 5000 psi
Wellhead Assembly

13-5/8" 3000# psi x 13-3/8" SOW Casing Head

5000# BOP
Dos Equis 12 13 Federal Com #48H
30-025-50120
Cimarex Energy Co.



Choke Line:
2M System: 2" Minimum
3M System: 3" Minimum
OPTIONAL: 4" Flex Hose may be
used if approved in APD

2M: 1 Valve Minimum
3M: 2 Valves Minimum
HCR Valve is optional

Drilling Operations Choke Manifold 2M/3M Service

Choke Manifold Diagram
Dos Equis 12 13 Federal Com
#48H
30-025-50120
Lea Co., NM



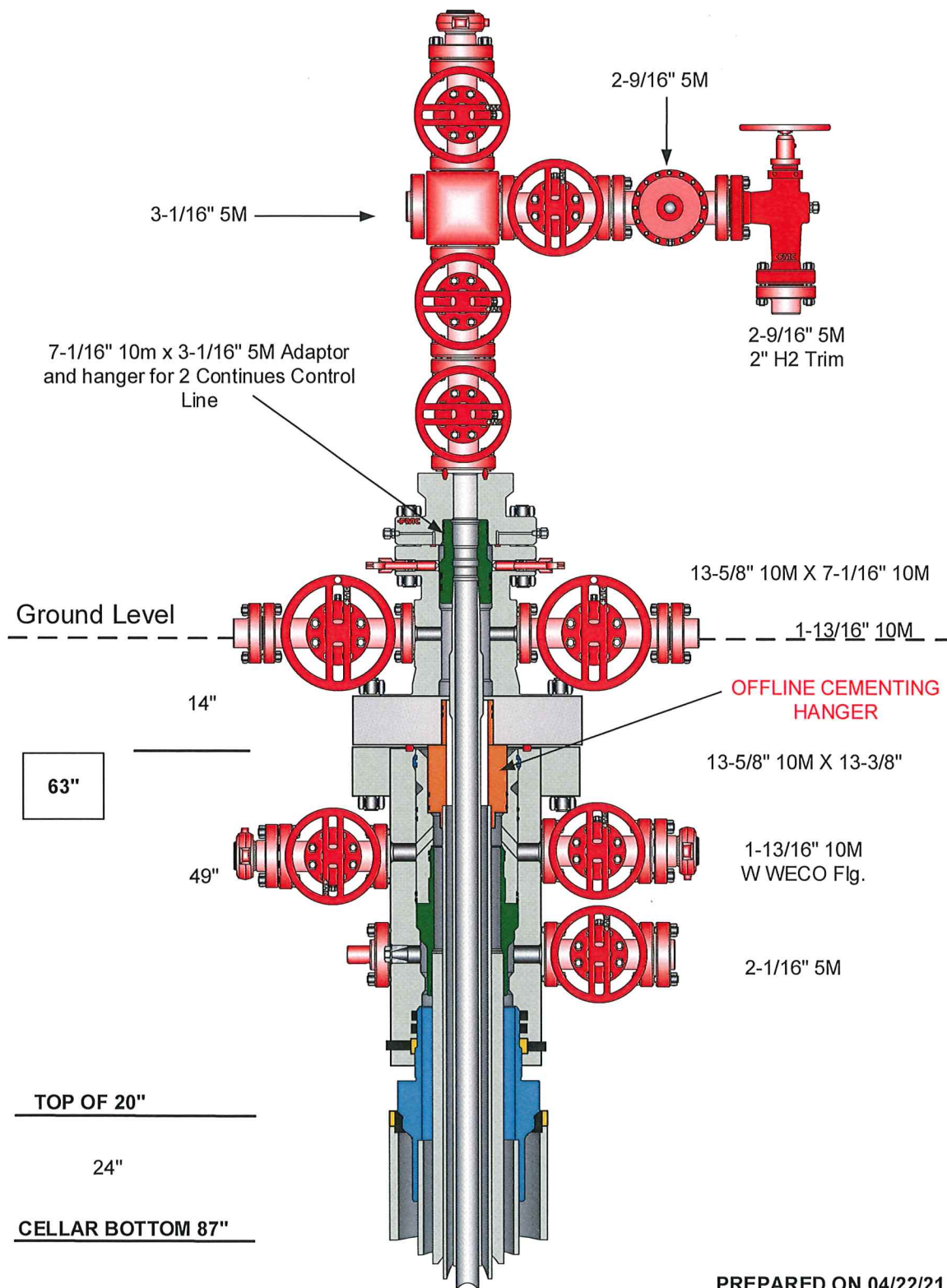


Dos Equis 12 13 Federal Com #48H - 30-025-50120

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	1215	1215	13-3/8"	48.00	H-40	ST&C	1.41	3.29	5.52
12 1/4	0	4945	4945	9-5/8"	40.00	HCK-55	LT&C	1.44	1.49	2.84
8 3/4	0	9611	9611	7"	29.00	L-80	LT&C	1.56	1.81	2.00
8 3/4	9611	10361	10127	7"	29.00	P-110	BT&C	1.80	2.37	62.08
6	8611	20048	10167	4-1/2"	11.60	P-110	BT&C	1.59	2.25	20.33
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

CACTUS FOR SERVICE
WEARBUSHING
IN CASING HEAD &
CASING SPOOL

LEA CO., NM



PREPARED ON 04/22/21

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

CONDITIONS

Action 164200

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 164200
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	12/29/2022