

Well Name: DOS EQUIS 12-13 FEDERAL COM	Well Location: T24S / R32E / SEC 12 / NENW /	County or Parish/State:
Well Number: 49H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM001917	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002550121	Well Status: Approved Application for Permit to Drill	Operator: CIMAREX ENERGY COMPANY

Notice of Intent

Sundry ID: 2705375

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 12/01/2022	Time Sundry Submitted: 08:56
Date proposed operation will begin: 01/01/2023	

**Procedure Description:** Cimarex Energy company respectfully requests approval to change the SHL, FTP, BHL and proposed total depth. The SHL will change as follows: From: 195' FNL & 1540' FWL, Unit C, Sec 12, 24S, 32E, NENW. To: 255' FNL & 1560' FWL, Unit C , Sec 12,24S, 32E, NENW. The FTP will change as follows: From: 195' FNL & 1540' FWL, Unit C, Sec 12, 24S, 32E, NENW. To: 100' FNL & 1930' FWL, Unit C, Sec 12, 24S, 32 E, NENW. The BHL will change as follows: From: 100' FSL & 1430' FWL, Unit N, Sec 13, 24S, 32E, SESW. To: 100' FSL & 1930' FWL, Unit N, Sec 13, 24S, 32E, SESW. The proposed TD of this well will change as follows: From: 22376' MD/12300'TVD - Wolfcamp To: 23044'MD/12920'TVD -Wolfcamp An updated C-102, drilling plan, new directional survey is attached for these changes. We are also requesting approval for offline cement and to skid the rig.

NOI Attachments

Procedure Description

Re\_Submitted\_31605\_\_Dos\_Equis\_12\_13\_Federal\_Com\_49H\_\_change\_SHL\_\_FTP\_\_BHL\_\_12.1.2022\_2022  
1201085505.pdf

<b>Well Name:</b> DOS EQUIS 12-13 FEDERAL COM	<b>Well Location:</b> T24S / R32E / SEC 12 / NENW /	<b>County or Parish/State:</b>
<b>Well Number:</b> 49H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM001917	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3002550121	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> CIMAREX ENERGY COMPANY

Operator

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

**Operator Electronic Signature:** KANICIA02 SCHLICHTING

**Signed on:** DEC 01, 2022 08:55 AM

**Name:** CIMAREX ENERGY COMPANY

**Title:** Regulatory Specialist

**Street Address:** 300 N MARIENFELD ST SUITE 1000

**City:** MIDLAND**State:** TX

**Phone:** (432) 232-2875

**Email address:** INACTIVE@NOTREAL.COM

Field

**Representative Name:**

**Street Address:**

**City:****State:****Zip:**

**Phone:**

**Email address:**

BLM Point of Contact

**BLM POC Name:** CHRISTOPHER WALLS

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5752342234

**BLM POC Email Address:** cwalls@blm.gov

**Disposition:** Approved

**Disposition Date:** 10/31/2023

**Signature:** Chris Walls

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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.

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

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)

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 recompleate 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 perfonned 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 recompletion 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

To: 100' FSL & 1930' FWL, Unit N, Sec 13, 24S, 32E, SESW.

The proposed TD of this well will change as follows:

From: 22376' MD/12300'TVD - Wolfcamp

To: 23044'MD/12920'TVD -Wolfcamp

An updated C-102, drilling plan, new directional survey is attached for these changes. We are also requesting approval for offline cement and to skid the rig.

### Location of Well

0. SHL: NENW / 195 FNL / 1540 FWL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238919 / LONG: -103.631836 ( TVD: 0 feet, MD: 0 feet )

PPP: NENW / 195 FNL / 1430 FWL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238919 / LONG: -103.631836 ( TVD: 12235 feet, MD: 12404 feet )

PPP: NENW / 0 FNL / 1430 FWL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.224931 / LONG: -103.629942 ( TVD: 12300 feet, MD: 17197 feet )

PPP: NESW / 2640 FNL / 1430 FWL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.232197 / LONG: -103.629933 ( TVD: 12300 feet, MD: 14553 feet )

BHL: SESW / 100 FSL / 1430 FWL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.21069 / LONG: -103.632217 ( TVD: 12300 feet, MD: 22376 feet )



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) 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

<sup>1</sup> API Number 30-025-50121	<sup>2</sup> Pool Code 98309	<sup>3</sup> Pool Name WC-025: G-08: S243213C: WOLFCAMP
<sup>4</sup> Property Code 326056	<sup>5</sup> Property Name DOS EQUIS 12-13 FEDERAL COM	<sup>6</sup> Well Number 49H
<sup>7</sup> OGRID No. 215099	<sup>8</sup> Operator Name CIMAREX ENERGY CO.	<sup>9</sup> Elevation 3607.5'

<sup>10</sup> Surface Location

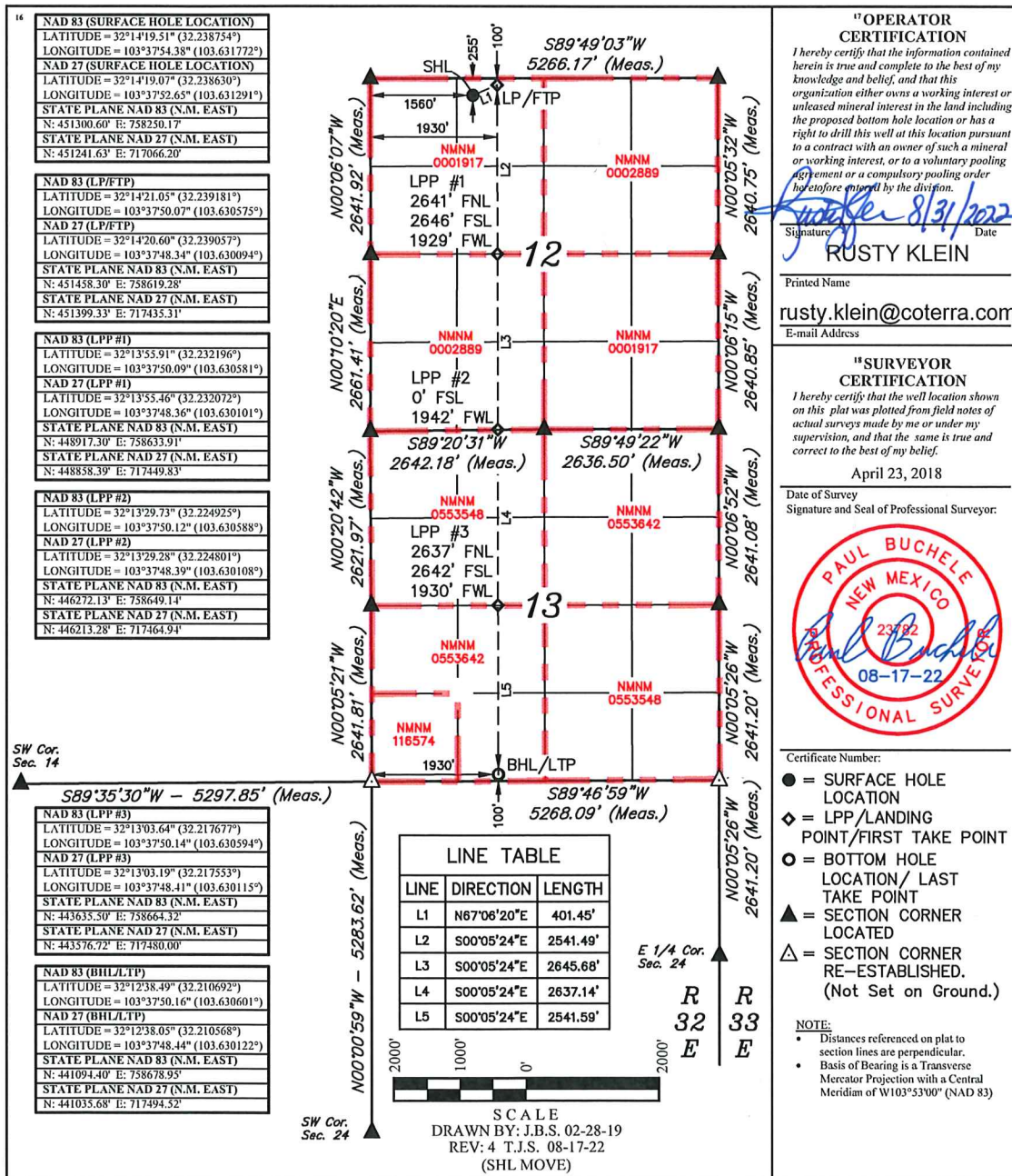
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	12	24S	32E		255	NORTH	1560	WEST	LEA

<sup>11</sup> 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	1930	WEST	LEA

<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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 12,920'  
MD at TD 23,044'

Pilot Hole TD N/A  
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1165	Useable Water	
Salado	1500	N/A	
Base of Salt	4650	N/A	
Bell Canyon	4947	N/A	
Cherry Canyon	5874	N/A	
Brushy Canyon	7311	Hydrocarbons	
Bone Spring	8845	Hydrocarbons	
1st Bone Spring	9980	Hydrocarbons	
2nd Bone Spring	10640	Hydrocarbons	
3rd Bone Spring	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
14 3/4	0	1235	1235	10-3/4"	40.50	J-55	BT&C	2.95	5.85	12.58
9 7/8	0	12456	12300	7-5/8"	29.70	L-80	LT&C	2.50	1.20	1.55
6 3/4	0	11732	11732	5-1/2"	20.00	L-80	LT&C	1.16	1.21	1.88
6 3/4	11732	22377	12300	5"	18.00	P-110	BT&C	1.68	1.70	56.73
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

Request Variance for 5-1/2" x 7-5/8" annular clearance. The portion that does not meet clearance will not be cemented

## Cimarex Energy Co., Dos Equis 12-13 Federal Com 49H

	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 <sup>3</sup> /sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	480	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	128	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate Stage 1	581	10.30	3.64	22.18		Lead: Tuned Light + LCM
	200	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate Stage 2	782	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
Production	847	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

DV tool with possible annular casing packer as needed is proposed at a depth of +/- 4,900'.

Casing String	TOC	% Excess
Surface	0	45
Intermediate Stage 1	4900	47
Intermediate Stage 2	0	37
Production	12256	25

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

4. Pressure Control Equipment

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
9 7/8	13 5/8	5M	Annular	X	5M
			Blind Ram		
			Pipe Ram	X	
			Double Ram	X	
			Other		
6 3/4	13 5/8	10M	Annular	X	50% of working pressure
			Blind Ram		10M
			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 1235'	Fresh Water	7.83 - 8.33	28	N/C
1235' to 12456'	Brine Diesel Emulsion	8.50 - 9.00	30-35	N/C
12456' to 22377'	OBM	12.00 - 12.50	50-70	N/C

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

The Brine Emulsion is completely saturated brine fluid that ties diesel into itself to lower the weight of the fluid. The drilling fluid is completely salt saturated.

What will be used to monitor the loss or gain of fluid?

PVT/Pason/Visual Monitoring

**6. Logging and Testing Procedures**

Logging, Coring and Testing	
X	Will run GR/CNL 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	7995 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.

H2S is present

H2S plan is attached

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

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 10000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10000 psi test. Annular will be tested to working pressure, or a maximum test pressure of 5000 psi. 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 10000 psi.

All casing strings will be tested as per Onshore Order No.2 to atleast 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 49H 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 49H 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 10 3/4" 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 10 3/4" 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 49H 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 #49H Rev2 kFc 05Aug22 Proposal  
Geodetic Report  
(Def Plan)



Report Date: August 05, 2022 - 06:12 PM  
Client: Cimarex Energy  
Field: NM Lea County (NAD 83)  
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #49H / 49H  
Well: Dos Equis 12-13 Federal Com #49H  
Borehole: Dos Equis 12-13 Federal Com #49H  
UWI / API#: Unknown / Unknown  
Survey Name: Cimarex Dos Equis 12-13 Federal Com #49H Rev2 kFc 05Aug22  
Survey Date: December 26, 2019  
Tort / AHD / DDI / ERD Ratio: 104.000 \* / 10765.702 ft / 6.300 / 0.833  
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet  
Location Lat / Long: N 32° 14' 19.51497", W 103° 37' 54.37795"  
Location Grid N/E Y/X: N 451300.750 ftUS, E 758250.170 ftUS  
CRS Grid Convergence Angle: 0.3743 \*  
Grid Scale Factor: 0.99996298  
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: 6.326 \*  
Total Gravity Field Strength: 998.4380mgn (9.80665 Based)  
Gravity Model: GARM  
Total Magnetic Field Strength: 47573.150 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: 5.9513 \*  
Local Coord Referenced To: Well Head

30-025-50121

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 [255' FNL, 1560' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451300.75	758250.17	N 32.238754	W 103.631772
	100.00	0.00	66.88	100.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	200.00	0.00	66.88	200.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	300.00	0.00	66.88	300.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	400.00	0.00	66.88	400.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	500.00	0.00	66.88	500.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	600.00	0.00	66.88	600.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	700.00	0.00	66.88	700.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	800.00	0.00	66.88	800.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	900.00	0.00	66.88	900.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1000.00	0.00	66.88	1000.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1100.00	0.00	66.88	1100.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
Rustler	1185.00	0.00	66.88	1185.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1200.00	0.00	66.88	1200.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1300.00	0.00	66.88	1300.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1400.00	0.00	66.88	1400.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
Salado (Top Salt)	1500.00	0.00	66.88	1500.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1600.00	0.00	66.88	1600.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1700.00	0.00	66.88	1700.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1800.00	0.00	66.88	1800.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	1900.00	0.00	66.88	1900.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	2000.00	0.00	66.88	2000.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	2100.00	0.00	66.88	2100.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	2200.00	0.00	66.88	2200.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	2300.00	0.00	66.88	2300.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
Nudge, Build 2"/100ft	2400.00	0.00	66.88	2400.00	0.00	0.00	0.00	0.00	451300.75	758250.17	N 32.238754	W 103.631772
	2500.00	2.00	66.88	2499.98	-0.68	0.69	1.61	2.00	451301.44	758251.77	N 32.238756	W 103.631766
	2600.00	4.00	66.88	2599.84	-2.70	2.74	6.42	2.00	451303.49	758256.59	N 32.238762	W 103.631751
	2700.00	6.00	66.88	2699.45	-6.08	6.16	14.43	2.00	451306.91	758264.60	N 32.238771	W 103.631725
Hold	2749.99	7.00	66.88	2749.12	-8.27	8.38	19.64	2.00	451309.13	758269.81	N 32.238777	W 103.631708
	2800.00	7.00	66.88	2798.76	-10.63	10.78	25.24	0.00	451311.53	758275.41	N 32.238783	W 103.631690
	2900.00	7.00	66.88	2898.01	-15.35	15.56	36.45	0.00	451316.31	758286.62	N 32.238796	W 103.631653
	3000.00	7.00	66.88	2997.27	-20.07	20.35	47.66	0.00	451321.09	758297.83	N 32.238809	W 103.631617
	3100.00	7.00	66.88	3096.52	-24.79	25.13	58.87	0.00	451325.88	758309.03	N 32.238822	W 103.631581
	3200.00	7.00	66.88	3195.78	-29.51	29.91	70.08	0.00	451330.66	758320.24	N 32.238835	W 103.631544
	3300.00	7.00	66.88	3295.03	-34.23	34.70	81.28	0.00	451335.45	758331.45	N 32.238848	W 103.631508
	3400.00	7.00	66.88	3394.29	-38.95	39.48	92.49	0.00	451340.23	758342.66	N 32.238861	W 103.631472
	3500.00	7.00	66.88	3493.54	-43.67	44.27	103.70	0.00	451345.02	758353.87	N 32.238874	W 103.631435
	3600.00	7.00	66.88	3592.79	-48.39	49.05	114.91	0.00	451349.80	758365.07	N 32.238887	W 103.631399
	3700.00	7.00	66.88	3692.05	-53.11	53.84	126.12	0.00	451354.59	758376.28	N 32.238900	W 103.631363
	3800.00	7.00	66.88	3791.30	-57.83	58.62	137.32	0.00	451359.37	758387.49	N 32.238913	W 103.631326
	3900.00	7.00	66.88	3890.56	-62.55	63.41	148.53	0.00	451364.15	758398.70	N 32.238926	W 103.631290
	4000.00	7.00	66.88	3989.81	-67.27	68.19	159.74	0.00	451368.94	758409.90	N 32.238939	W 103.631254
	4100.00	7.00	66.88	4089.07	-71.99	72.98	170.95	0.00	451373.72	758421.11	N 32.238952	W 103.631217
	4200.00	7.00	66.88	4188.32	-76.71	77.76	182.16	0.00	451378.51	758432.32	N 32.238965	W 103.631181
	4300.00	7.00	66.88	4287.58	-81.43	82.55	193.36	0.00	451383.29	758443.53	N 32.238978	W 103.631145
	4400.00	7.00	66.88	4386.83	-86.15	87.33	204.57	0.00	451388.08	758454.73	N 32.238991	W 103.631108
	4500.00	7.00	66.88	4486.09	-90.87	92.11	215.78	0.00	451392.86	758465.94	N 32.239003	W 103.631072
	4600.00	7.00	66.88	4585.34	-95.59	96.90	226.99	0.00	451397.65	758477.15	N 32.239016	W 103.631036
Base fo Salt	4665.14	7.00	66.88	4650.00	-98.67	100.02	234.29	0.00	451400.76	758484.45	N 32.239025	W 103.631012
	4700.00	7.00	66.88	4684.60	-100.31	101.68	238.20	0.00	451402.43	758488.36	N 32.239029	W 103.630999
	4800.00	7.00	66.88	4783.85	-105.03	106.47	249.40	0.00	451407.21	758499.56	N 32.239042	W 103.630963
	4900.00	7.00	66.88	4883.11	-109.75	111.25	260.61	0.00	451412.00	758510.77	N 32.239055	W 103.630926
Bell Canyon	4964.37	7.00	66.88	4947.00	-112.79	114.33	267.83	0.00	451415.08	758517.99	N 32.239064	W 103.630903
	5000.00	7.00	66.88	4982.36	-114.47	116.04	271.82	0.00	451416.78	758521.98	N 32.239068	W 103.630890
	5100.00	7.00	66.88	5081.61	-119.19	120.82	283.03	0.00	451421.57	758533.19	N 32.239081	W 103.630854
	5200.00	7.00	66.88	5180.87	-123.91	125.61	294.24	0.00	451426.35	758544.39	N 32.239094	W 103.630817
	5300.00	7.00	66.88	5280.12	-128.63	130.39	305.44	0.00	451431.14	758555.60	N 32.239107	W 103.630781
	5400.00	7.00	66.88	5379.38	-133.35	135.18	316.65	0.00	451435.92	758566.81	N 32.239120	W 103.630745
	5500.00	7.00	66.88	5478.63	-138.07	139.96	327.86	0.00	451440.71	758578.02	N 32.239133	W 103.630708
	5600.00	7.00	66.88	5577.89	-142.79	144.75	339.07	0.00	451445.49	758589.23	N 32.239146	W 103.630672
Drop 2"/100ft	5692.20	7.00	66.88	5669.40	-147.14	149.16	349.40	0.00	451449.90	758599.56	N 32.239158	W 103.630639
	5700.00	6.84	66.88	5677.14	-147.51	149.53	350.27	2.00	451450.27	758600.42	N 32.239159	W 103.630636
	5800.00	4.84	66.88	5776.62	-151.45	153.52	359.83	2.00	451454.27	758609.79	N 32.239170	W 103.630605
Cherry Canyon	5897.61	2.89	66.88	5874.00	-154.00	156.11	365.69	2.00	451456.85	758615.84	N 32.239177	W 103.630586
	5900.00	2.84	66.88	5876.39	-154.05	156.15	365.80	2.00	451456.90	758615.95	N 32.239177	W 103.630585
	6000.00	0.84	66.88	5976.33	-155.29	157.42	368.75	2.00	451458.16	758618.91	N 32.239180	W 103.630578
	6042.19	0.00	66.88	6018.52	-155.41	157.54	369.04	2.00	451458.28	758619.20	N 32.239181	W 103.630575
	6100.00	0.00	66.88	6076.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	6200.00	0.00	66.88	6176.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	6300.00	0.00	66.88	6276.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	6400.00	0.00	66.88	6376.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	6500.00	0.00	66.88	6476.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	6600.00	0.00	66.88	6576.33	-155.41	157.54	369.04	0.00				



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	6800.00	0.00	66.88	6776.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	6900.00	0.00	66.88	6876.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7000.00	0.00	66.88	6976.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7100.00	0.00	66.88	7076.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7200.00	0.00	66.88	7176.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7300.00	0.00	66.88	7276.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7334.67	0.00	66.88	7311.00	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7400.00	0.00	66.88	7376.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7500.00	0.00	66.88	7476.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7600.00	0.00	66.88	7576.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7700.00	0.00	66.88	7676.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7800.00	0.00	66.88	7776.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	7900.00	0.00	66.88	7876.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8000.00	0.00	66.88	7976.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8100.00	0.00	66.88	8076.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8200.00	0.00	66.88	8176.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8300.00	0.00	66.88	8276.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8400.00	0.00	66.88	8376.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8500.00	0.00	66.88	8476.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8600.00	0.00	66.88	8576.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
Bone Spring	8700.00	0.00	66.88	8676.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8800.00	0.00	66.88	8776.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8868.67	0.00	66.88	8845.00	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	8900.00	0.00	66.88	8876.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9000.00	0.00	66.88	8976.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9100.00	0.00	66.88	9076.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9200.00	0.00	66.88	9176.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9300.00	0.00	66.88	9276.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9306.67	0.00	66.88	9283.00	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9400.00	0.00	66.88	9376.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
Avalon	9500.00	0.00	66.88	9476.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9600.00	0.00	66.88	9576.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9700.00	0.00	66.88	9676.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9800.00	0.00	66.88	9776.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	9900.00	0.00	66.88	9876.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10000.00	0.00	66.88	9976.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10003.67	0.00	66.88	9980.00	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10100.00	0.00	66.88	10076.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10200.00	0.00	66.88	10176.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10300.00	0.00	66.88	10276.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
10400.00	0.00	66.88	10376.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575	
2nd Bone Spring Sand	10500.00	0.00	66.88	10476.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10600.00	0.00	66.88	10576.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10663.67	0.00	66.88	10640.00	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10700.00	0.00	66.88	10676.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10800.00	0.00	66.88	10776.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	10900.00	0.00	66.88	10876.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11000.00	0.00	66.88	10976.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11100.00	0.00	66.88	11076.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11113.67	0.00	66.88	11090.00	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11200.00	0.00	66.88	11176.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
11300.00	0.00	66.88	11276.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575	
3rd Bone Spring Carb	11400.00	0.00	66.88	11376.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11500.00	0.00	66.88	11476.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11600.00	0.00	66.88	11576.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11700.00	0.00	66.88	11676.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11800.00	0.00	66.88	11776.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11848.67	0.00	66.88	11825.00	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	11900.00	0.00	66.88	11876.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	12000.00	0.00	66.88	11976.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	12100.00	0.00	66.88	12076.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	12200.00	0.00	66.88	12176.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
12258.67	0.00	66.88	12235.00	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575	
Wolfcamp	12300.00	0.00	66.88	12276.33	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	12351.19	0.00	66.88	12327.52	-155.41	157.54	369.04	0.00	451458.28	758619.20	N 32.239181	W 103.630575
	12400.00	4.88	179.67	12376.27	-153.33	155.46	369.05	10.00	451456.21	758619.21	N 32.239175	W 103.630575
	12413.79	6.26	179.67	12390.00	-152.00	154.12	369.06	10.00	451454.87	758619.22	N 32.239171	



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 °)
	15300.00	90.00	179.67	12920.00	2464.65	-2462.48	384.14	0.00	448838.37	758634.29	N 32.231979	W 103.630581
	15400.00	90.00	179.67	12920.00	2564.65	-2562.48	384.71	0.00	448738.37	758634.87	N 32.231704	W 103.630582
	15500.00	90.00	179.67	12920.00	2664.65	-2662.47	385.29	0.00	448638.38	758635.44	N 32.231429	W 103.630582
	15600.00	90.00	179.67	12920.00	2764.65	-2762.47	385.86	0.00	448538.39	758636.02	N 32.231154	W 103.630582
	15700.00	90.00	179.67	12920.00	2864.65	-2862.47	386.44	0.00	448438.39	758636.59	N 32.230879	W 103.630582
	15800.00	90.00	179.67	12920.00	2964.65	-2962.47	387.02	0.00	448338.40	758637.17	N 32.230605	W 103.630583
	15900.00	90.00	179.67	12920.00	3064.65	-3062.47	387.59	0.00	448238.40	758637.75	N 32.230330	W 103.630583
	16000.00	90.00	179.67	12920.00	3164.65	-3162.47	388.17	0.00	448138.41	758638.32	N 32.230055	W 103.630583
	16100.00	90.00	179.67	12920.00	3264.65	-3262.46	388.74	0.00	448038.41	758638.90	N 32.229780	W 103.630583
	16200.00	90.00	179.67	12920.00	3364.65	-3362.46	389.32	0.00	447938.42	758639.48	N 32.229505	W 103.630584
	16300.00	90.00	179.67	12920.00	3464.65	-3462.46	389.90	0.00	447838.42	758640.05	N 32.229230	W 103.630584
	16400.00	90.00	179.67	12920.00	3564.65	-3562.46	390.47	0.00	447738.43	758640.63	N 32.228955	W 103.630584
	16500.00	90.00	179.67	12920.00	3664.65	-3662.46	391.05	0.00	447638.44	758641.20	N 32.228681	W 103.630584
	16600.00	90.00	179.67	12920.00	3764.65	-3762.46	391.63	0.00	447538.44	758641.78	N 32.228406	W 103.630585
	16700.00	90.00	179.67	12920.00	3864.65	-3862.45	392.20	0.00	447438.45	758642.36	N 32.228131	W 103.630585
	16800.00	90.00	179.67	12920.00	3964.65	-3962.45	392.78	0.00	447338.45	758642.93	N 32.227856	W 103.630585
	16900.00	90.00	179.67	12920.00	4064.65	-4062.45	393.35	0.00	447238.46	758643.51	N 32.227581	W 103.630586
	17000.00	90.00	179.67	12920.00	4164.65	-4162.45	393.93	0.00	447138.46	758644.08	N 32.227306	W 103.630586
	17100.00	90.00	179.67	12920.00	4264.65	-4262.45	394.51	0.00	447038.47	758644.66	N 32.227031	W 103.630586
	17200.00	90.00	179.67	12920.00	4364.65	-4362.45	395.08	0.00	446938.47	758645.24	N 32.226756	W 103.630586
	17300.00	90.00	179.67	12920.00	4464.65	-4462.44	395.66	0.00	446838.48	758645.81	N 32.226482	W 103.630587
	17400.00	90.00	179.67	12920.00	4564.65	-4562.44	396.23	0.00	446738.49	758646.39	N 32.226207	W 103.630587
	17500.00	90.00	179.67	12920.00	4664.65	-4662.44	396.81	0.00	446638.49	758646.97	N 32.225932	W 103.630587
	17600.00	90.00	179.67	12920.00	4764.65	-4762.44	397.39	0.00	446538.50	758647.54	N 32.225657	W 103.630587
	17700.00	90.00	179.67	12920.00	4864.65	-4862.44	397.96	0.00	446438.50	758648.12	N 32.225382	W 103.630588
	17800.00	90.00	179.67	12920.00	4964.65	-4962.44	398.54	0.00	446338.51	758648.69	N 32.225107	W 103.630588

Section 12-13  
Line,  
NMNMO002889  
exit to  
NMNMO553548  
enter Lease  
Crossing

17866.39	90.00	179.67	12920.00	5031.03	-5028.82	398.92	0.00	446272.13	758649.08	N 32.224925	W 103.630588
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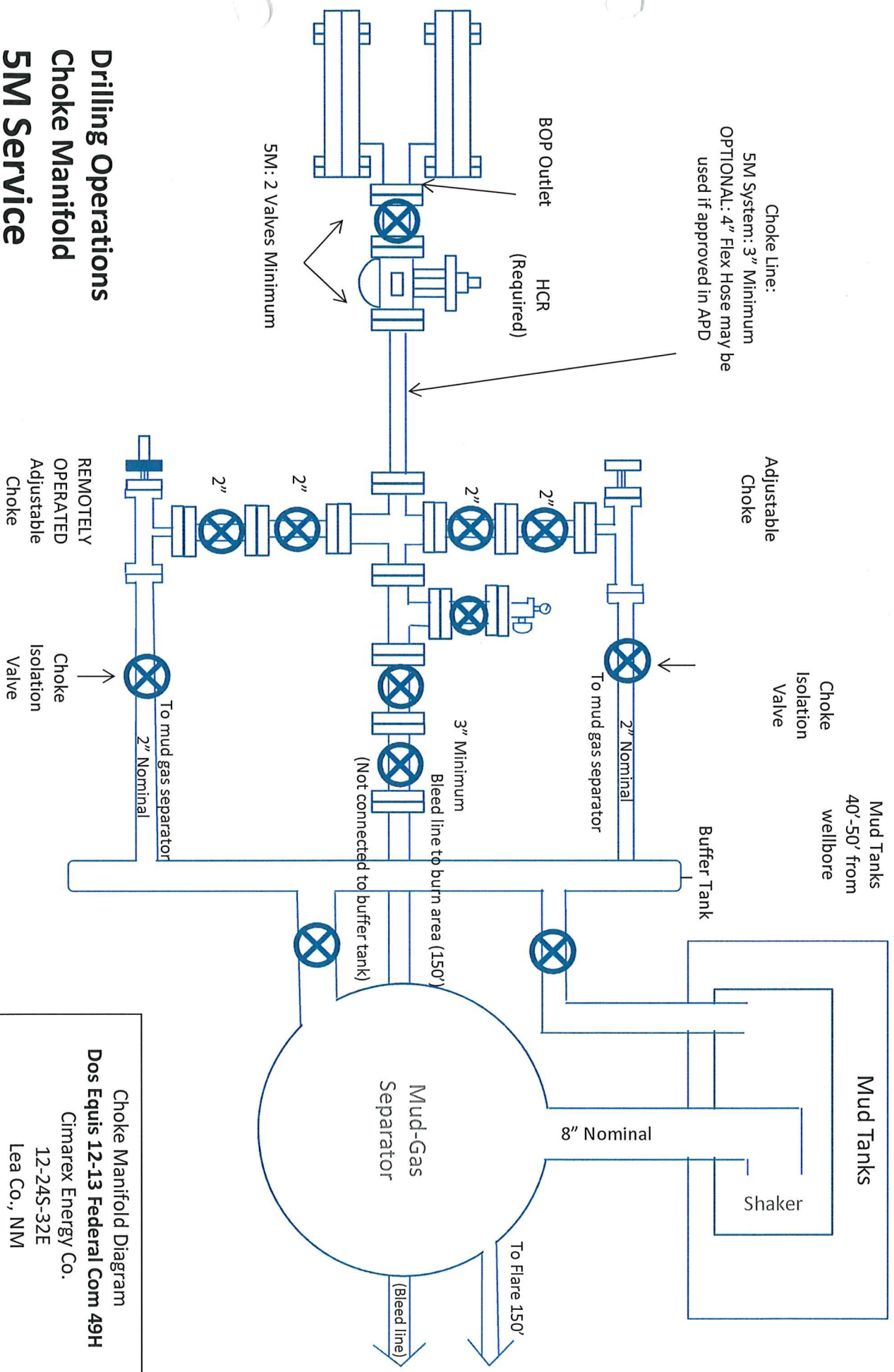
17900.00	90.00	179.67	12920.00	5064.65	-5062.43	399.12	0.00	446238.51	758649.27	N 32.224832	W 103.630588
18000.00	90.00	179.67	12920.00	5164.65	-5162.43	399.69	0.00	446138.52	758649.85	N 32.224558	W 103.630588
18100.00	90.00	179.67	12920.00	5264.65	-5262.43	400.27	0.00	446038.52	758650.42	N 32.224283	W 103.630589
18200.00	90.00	179.67	12920.00	5364.65	-5362.43	400.84	0.00	445938.53	758651.00	N 32.224008	W 103.630589
18300.00	90.00	179.67	12920.00	5464.65	-5462.43	401.42	0.00	445838.54	758651.57	N 32.223733	W 103.630589
18400.00	90.00	179.67	12920.00	5564.65	-5562.43	402.00	0.00	445738.54	758652.15	N 32.223458	W 103.630589
18500.00	90.00	179.67	12920.00	5664.65	-5662.42	402.57	0.00	445638.55	758652.73	N 32.223183	W 103.630590
18600.00	90.00	179.67	12920.00	5764.65	-5762.42	403.15	0.00	445538.55	758653.30	N 32.222908	W 103.630590
18700.00	90.00	179.67	12920.00	5864.65	-5862.42	403.73	0.00	445438.56	758653.88	N 32.222634	W 103.630590
18800.00	90.00	179.67	12920.00	5964.65	-5962.42	404.30	0.00	445338.56	758654.46	N 32.222359	W 103.630590
18900.00	90.00	179.67	12920.00	6064.65	-6062.42	404.88	0.00	445238.57	758655.03	N 32.222084	W 103.630591
19000.00	90.00	179.67	12920.00	6164.65	-6162.42	405.45	0.00	445138.57	758655.61	N 32.221809	W 103.630591
19100.00	90.00	179.67	12920.00	6264.65	-6262.41	406.03	0.00	445038.58	758656.18	N 32.221534	W 103.630591
19200.00	90.00	179.67	12920.00	6364.65	-6362.41	406.61	0.00	444938.59	758656.76	N 32.221259	W 103.630591
19300.00	90.00	179.67	12920.00	6464.65	-6462.41	407.18	0.00	444838.59	758657.34	N 32.220984	W 103.630592
19400.00	90.00	179.67	12920.00	6564.65	-6562.41	407.76	0.00	444738.60	758657.91	N 32.220709	W 103.630592
19500.00	90.00	179.67	12920.00	6664.65	-6662.41	408.33	0.00	444638.60	758658.49	N 32.220435	W 103.630592
19600.00	90.00	179.67	12920.00	6764.65	-6762.41	408.91	0.00	444538.61	758659.06	N 32.220160	W 103.630592
19700.00	90.00	179.67	12920.00	6864.65	-6862.40	409.49	0.00	444438.61	758659.64	N 32.219885	W 103.630593
19800.00	90.00	179.67	12920.00	6964.65	-6962.40	410.06	0.00	444338.62	758660.22	N 32.219610	W 103.630593
19900.00	90.00	179.67	12920.00	7064.65	-7062.40	410.64	0.00	444238.62	758660.79	N 32.219335	W 103.630593
20000.00	90.00	179.67	12920.00	7164.65	-7162.40	411.22	0.00	444138.63	758661.37	N 32.219060	W 103.630593
20100.00	90.00	179.67	12920.00	7264.65	-7262.40	411.79	0.00	444038.64	758661.95	N 32.218785	W 103.630594
20200.00	90.00	179.67	12920.00	7364.65	-7362.40	412.37	0.00	443938.64	758662.52	N 32.218511	W 103.630594
20300.00	90.00	179.67	12920.00	7464.65	-7462.39	412.94	0.00	443838.65	758663.10	N 32.218236	W 103.630594
20400.00	90.00	179.67	12920.00	7564.65	-7562.39	413.52	0.00	443738.65	758663.67	N 32.217961	W 103.630594
20500.00	90.00	179.67	12920.00	7664.65	-7662.39	414.10	0.00	443638.66	758664.25	N 32.217686	W 103.630595

NMNMO553548  
exit to  
NMNMO553642  
enter Lease  
Crossing

20503.17	90.00	179.67	12920.00	7667.82	-7665.56	414.11	0.00	443635.49	758664.27	N 32.217677	W 103.630595
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20600.00	90.00	179.67	12920.00	7764.65	-7762.39	414.67	0.00	443538.66	758664.83	N 32.217411	W 103.630595
20700.00	90.00	179.67	12920.00	7864.65	-7862.39	415.25	0.00	443438.67	758665.40	N 32.217136	W 103.630595
20800.00	90.00	179.67	12920.00	7964.65	-7962.39	415.83	0.00	443338.67	758665.98	N 32.216861	W 103.630595
20900.00	90.00	179.67	12920.00	8064.65	-8062.38	416.40	0.00	443238.68	758666.55	N 32.216586	W 103.630596
21000.00	90.00	179.67	12920.00	8164.65	-8162.38	416.98	0.00	443138.69	758667.13	N 32.216312	W 103.630596
21100.00	90.00	179.67	12920.00	8264.65	-8262.38	417.55	0.00	443038.69	758667.71	N 32.216037	W 103.630596
21200.00	90.00	179.67	12920.00	8364.65	-8362.38	418.13	0.00	442938.70	758668.28	N 32.215762	W 103.630596
21300.00	90.00	179.67	12920.00	8464.65	-8462.38	418.71	0.00	442838.70	758668.86	N 32.215487	W 103.630597
21400.00	90.00	179.67	12920.00	8564.65	-8562.38	419.28	0.00	442738.71	758669.44	N 32.215212	W 103.630597
21500.00	90.00	179.67	12920.00	8664.65	-8662.37	419.86	0.00	442638.71	758670.01	N 32.214937	W 103.630597
21600.00	90.00	179.67	12920.00	8764.65	-8762.37	420.43	0.00	442538.72	758670.59	N 32.214662	W 103.630597
21700.00	90.00	179.67	12920.00	8864.65	-8862.37	421.01	0.00	442438.72	758671.16	N 32.214388	W 103.630598
21800.00	90.00	179.67	12920.00	8964.65	-8962.37	421.59	0.00	442338.73	758671.74	N 32.214113	W 103.630598
21900.00	90.00	179.67	12920.00	9064.65	-9062.37	422.16	0.00	442238.74	758672.32	N 32.213838	W 103.630598
22000.00	90.00	179.67	12920.00	9164.65	-9162.37	422.74	0.00	442138.74	758672.89	N 32.213563	W 103.630598
22100.00	90.00	179.67	12920.00	9264.65	-9262.36	423.32	0.00	442038.75	758673.47	N 32.213288	W 103.630599
22200.00	90.00	179.67	12920.00	9364.65	-9362.36	423.89	0.00	441938.75	758674.05	N 32.213013	W 103.630599
22300.00	90.00	179.67	12920.00	9464.65	-9462.36	424.47	0.00	441838.76	758674.62	N 32.212738	W 103.630599
22400.00	90.00	179.67	12920.00	9564.65	-9562.36	425.04	0.00	441738.76	758675.20	N 32.212463	W 103.630599
22500.00	90.00	179.67	12920.00	9664.65	-9662.36	425.62	0.00	441638.77	758675.77	N 32.212189	W 103.630600
22600.00	90.00	179.67	12920.00	9764.65	-9762.36	426.20	0.00	441538.77	758676.35	N 32.211914	W 103.630600
22700.00	90.00	179.67	12920.00	9864.65	-9862.35	426.77	0.00	441438.78	758676.93	N 32.211639	W 103.630600
22800.00	90.00	179.67	12920.00	9964.65	-9962.35	427.35	0.00	441338.79	758677.50	N 32.211364	W 103.630600
22900.00	90.00	179.67	12920.00	10064.65	-10062.35	427.92	0.00	441238.79	758678.08	N 32.211089	W 103.630601
23000.00	90.00	179.67	12920.00	10164.65	-10162.35	428.50	0.00	441138.80	758678.65	N 32.210814	W 103.630601

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 °)
		1	0.000	26.000	1/100.000	17.500	13.375		A001Mb_MWD-Depth Only		Dos Equis 12-13 Federal Com #49H / Cimarex Dos Equis 12-13 Dos Equis 12-13 Federal Com #49H / Cimarex Dos Equis 12-13	
		1	26.000	23044.381	1/100.000	17.500	13.375		A001Mb_MWD			

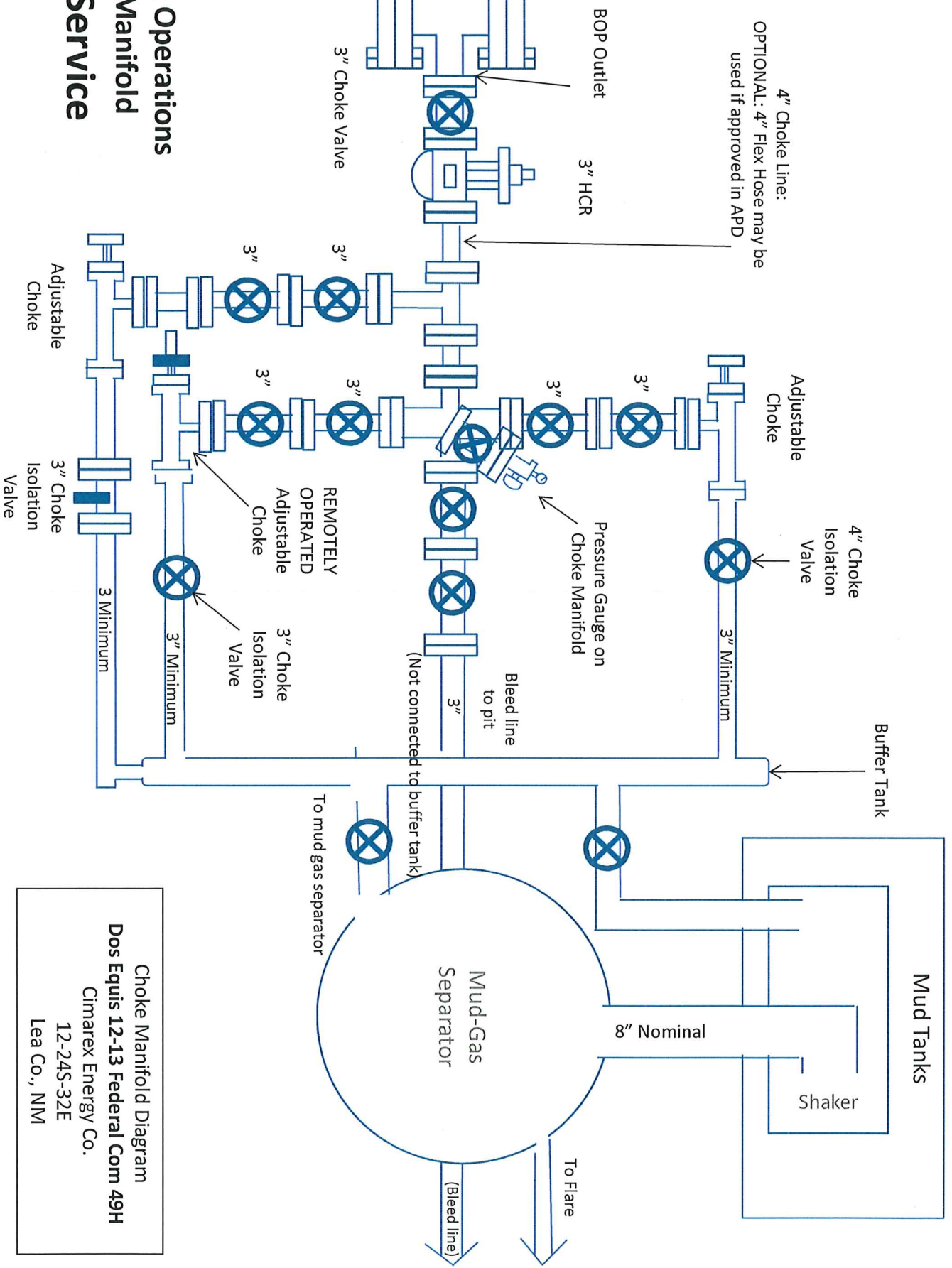


**Drilling Operations  
Choke Manifold  
5M Service**

Choke Manifold Diagram  
Dos Equis 12-13 Federal Com 49H  
Cimarex Energy Co.  
12-24S-32E  
Lea Co., NM



Mud Tanks  
40'-50' from  
wellbore



**Drilling Operations  
Choke Manifold  
10M Service**

Choke Manifold Diagram  
Dos Equis 12-13 Federal Com 49H  
Cimarex Energy Co.  
12-24S-32E  
Lea Co., NM



Drilling 9-7/8" hole below  
10-3/4" 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 Minimum  
(HCR Required)

2 Valves and a check valve

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 49H  
Cimarex Energy Co.  
12-24S-32E  
Lea Co., NM

Drilling 6-3/4" Hole  
below 7-5/8" Casing

5M Annular Preventer

10M Double  
Ram BOP

Pipe Rams

Blind Rams

2" Kill Line Valves (2)  
with Check Valve

3" Manual Choke Valve  
and 3" HCR Valve

2" Kill Line

3" Choke Line

10M Single  
Ram BOP

Pipe Rams

10,000# BOP  
Dos Equis 12-13 Federal Com 49H  
Cimarex Energy Co.  
12-24S-32E  
Lea Co., NM

11" 10M x 13-5/8"  
5M Casing Spool

13-5/8" 5M x  
13-3/8" SOW  
Wellhead

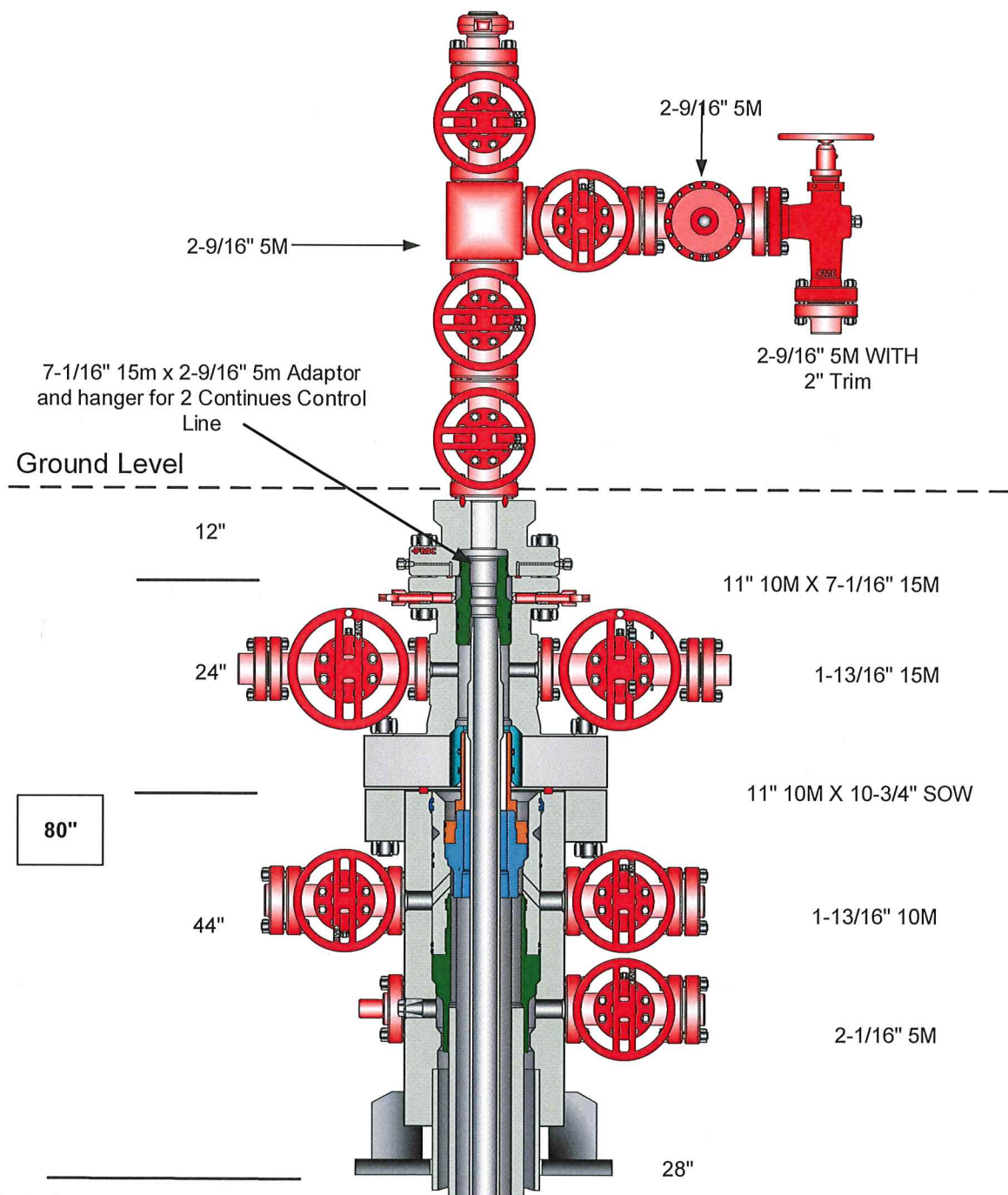


Dos Equis 12-13 Fed Com #49H

CACTUS FOR SERVICE  
WEARBUSHING  
IN CASING HEAD &  
CASING SPOOL

LEA CO., NM

### Multi-bowl Wellhead Diagram



#### 2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
14 3/4	0	1235	1235	10-3/4"	40.50	J-55	BT&C	2.95	5.95	12.58
9 7/8	0	12456	12200	7-5/8"	29.70	L-80	LT&C	2.50	1.20	1.55
6 3/4	0	11732	11732	5-1/2"	20.00	L-80	LT&C	1.16	1.21	1.88
6 3/4	11732	22377	12300	5"	18.00	P-110	BT&C	1.68	1.70	56.73
BIM 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  
Request Variance for 5-1/2" x 7-5/8" annular clearance. The portion that does not meet clearance will not be cemented

**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 321098

CONDITIONS

Operator: CIMAREX ENERGY CO. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 321098
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	5/3/2024