

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. [326056]
2. Name of Operator [215099]		9. API Well No. 30-025-50385
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory [98309]
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish 13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|---|---|
| 1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

Application approval 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.
 Conditions of approval, if any, are attached.

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.

NGMP Rec 06/29/2022

SL

(Continued on page 2)



Approval Date: 02/02/2022

KZ
07/27/2022

*(Instructions on page 2)

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

¹ API Number 30-025-30-025-50385		² Pool Code 98603 98309	³ Pool Name WC-025-G-08 S243213C;WOLFCAMP
⁴ Property Code 326056	⁵ Property Name DOS EQUIS 12-13 FEDERAL COM		⁶ Well Number 10H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.		⁹ Elevation 3607.2

¹⁰ Surface Location

UL or lot no. D	Section 12	Township 24S	Range 32E	Lot Idn	Feet from the 270	North/South line NORTH	Feet from the 290	East/West line WEST	County LEA
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. M	Section 13	Township 24S	Range 32E	Lot Idn	Feet from the 100	North/South line SOUTH	Feet from the 1230	East/West line WEST	County LEA
¹² Dedicated Acres 640		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.

NAD 83 (SURFACE HOLE LOCATION)
 LATITUDE = 32°14'19.36" (32.238710°)
 LONGITUDE = 103°38'09.16" (103.635878°)

NAD 27 (SURFACE HOLE LOCATION)
 LATITUDE = 32°14'18.91" (32.238586°)
 LONGITUDE = 103°38'07.43" (103.635397°)
STATE PLANE NAD 83 (N.M. EAST)
 N: 451276.39' E: 756980.66'
STATE PLANE NAD 27 (N.M. EAST)
 N: 451217.42' E: 715796.68'

NAD 83 (LP/FTP)
 LATITUDE = 32°14'19.36" (32.238712°)
 LONGITUDE = 103°37'58.22" (103.632838°)

NAD 27 (LP/FTP)
 LATITUDE = 32°14'18.92" (32.238588°)
 LONGITUDE = 103°37'56.49" (103.632358°)
STATE PLANE NAD 83 (N.M. EAST)
 N: 451283.17' E: 757920.43'
STATE PLANE NAD 27 (N.M. EAST)
 N: 451224.20' E: 716736.46'

NAD 83 (BHL/LTP)
 LATITUDE = 32°12'38.48" (32.210689°)
 LONGITUDE = 103°37'58.31" (103.632864°)

NAD 27 (BHL/LTP)
 LATITUDE = 32°12'38.04" (32.210566°)
 LONGITUDE = 103°37'56.59" (103.632385°)
STATE PLANE NAD 83 (N.M. EAST)
 N: 441088.82' E: 757979.09'
STATE PLANE NAD 27 (N.M. EAST)
 N: 441030.10' E: 716794.66'

NOTE:

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

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

SW Cor.
Sec. 14

SW Cor.
Sec. 24

E 1/4 Cor.
Sec. 24

The survey map displays two adjacent sections, 12 and 13, separated by a vertical section line. Section 12 is on the left and Section 13 is on the right. The map includes several key points and measurements:

- Surface Hole Location (SHL):** Located at the top left corner of Section 12. It is defined by coordinates NAD 83 (32°14'19.36" N, 103°38'09.16" W) and NAD 27 (32°14'18.91" N, 103°38'07.43" W). State Plane coordinates are also provided.
- Landing Point / First Take Point (LP/FTP):** Located near the SHL. Its coordinates are also listed.
- Bottom Hole Location (BHL/LTP):** Located at the bottom left corner of Section 12. It is defined by coordinates NAD 83 (32°12'38.48" N, 103°37'58.31" W) and NAD 27 (32°12'38.04" N, 103°37'56.59" W). State Plane coordinates are also provided.
- Section Corners:** SW Corner of Sec. 14, SW Corner of Sec. 24, and East 1/4 Corner of Sec. 24 are indicated.
- Measurements:** Various bearings and distances are shown along the section lines and between points. For example, the distance from SHL to LP/FTP is 1230'. The distance from LP/FTP to BHL/LTP is 10196.32'.
- Re-establishment:** The SW Corner of Sec. 14 is re-established by double proportion, and the East 1/4 Corner of Sec. 24 is re-established by single proportion.

A scale bar indicates distances up to 2000 feet. A north arrow is also present.

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N89°49'36"E	939.97'

17 OPERATOR CERTIFICATION

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

Signature: Hope Knauls Date: 4-21-20

Printed Name: Hope Knauls

E-mail Address: hknauls@cimarex.com

18 SURVEYOR CERTIFICATION

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

Date of Survey: October 18, 2017

Signature and Seal of Professional Surveyor:

Certificate Number: _____

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Cimarex Energy Company **OGRID:** 215099 **Date:** 6 / 22 / 2022

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Dos Equis 12-13 Fed Com 10H	30-025-50385	D, Sec 12, 24S, 32E	270 FNL/290 FWL	1900	3800	4500

IV. Central Delivery Point Name: Dos Equis 12-13 CDP Sales [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Dos Equis 12-13 Fed Com 10H	30-025-50385	1/1/2024	2/1/2024	5/1/2024	7/1/2024	7/1/2024

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

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: 
Printed Name: Sarah Jordan
Title: Regulatory Analyst
E-mail Address: sarah.jordan@coterra.com
Date: 6/29/2022
Phone: 432/620-1909
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

From State of New Mexico, Natural Gas Management Plan

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

XEC Standard Response

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

Cimarex

VII. Operational Practices

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

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

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

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

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

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

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

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



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report

06/22/2022

APD ID: 10400053048

Submission Date: 05/08/2020

Highlighted data
reflects the most
recent changes

Operator Name: CIMAREX ENERGY COMPANY

Well Name: DOS EQUIS 12-13 FEDERAL COM

Well Number: 10H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
722494	RUSTLER	3607	1185	1185	ANHYDRITE	USEABLE WATER	N
722495	SALADO	2207	1400	1400	SALT	NONE	N
722496	BASE OF SALT	-1043	4650	4650	SALT	NONE	N
722497	LAMAR	-1311	4918	4918	SANDSTONE	NONE	N
722498	BELL CANYON	-1340	4947	4947	SANDSTONE	NONE	N
722530	CHERRY CANYON	-2267	5874	5874	SANDSTONE	NONE	N
722531	BRUSHY CANYON	-3615	7222	7222	SANDSTONE	NATURAL GAS, OIL	N
722532	BONE SPRING	-5173	8780	8780	LIMESTONE	NATURAL GAS, OIL	N
722533	UPPER AVALON SHALE	-5612	9219	9219	SHALE	NATURAL GAS, OIL	N
725836	BONE SPRING 1ST	-6336	9943	9943	SANDSTONE	NATURAL GAS, OIL	N
725837	BONE SPRING 2ND	-6871	10478	10478	SANDSTONE	NATURAL GAS, OIL	N
725838	BONE SPRING 3RD	-8238	11845	11845	SANDSTONE	NATURAL GAS, OIL	N
725839	WOLFCAMP	-9293	12900	12900	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 10H**Pressure Rating (PSI):** 10M**Rating Depth:** 22342

Equipment: A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

Requesting Variance? YES

Variance request: Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only. Cimarex requests a 5M annular variance for the 10M BOP system. See attached procedure.(

Testing Procedure: 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 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 vendors 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. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 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.

Choke Diagram Attachment:

Dos_Equis_12_13_Fed_Com_10H_Choke_10M_20200428075147.pdf

BOP Diagram Attachment:

Dos_Equis_12_13_Fed_Com_10H_BOP_10M_20200428075159.pdf

Pressure Rating (PSI): 5M**Rating Depth:** 12496

Equipment: A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

Requesting Variance? YES

Variance request: Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only. Cimarex requests a 5M annular variance for the 10M BOP system. See attached procedure.

Testing Procedure: 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 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors 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. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 10H

pressure requirements.

Choke Diagram Attachment:

Dos_Equis_12_13_Fed_Com_10H_Choke_5M_20200428074919.pdf

BOP Diagram Attachment:

Dos_Equis_12_13_Fed_Com_10H_BOP_5M_20200428074935.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	14.75	10.75	NEW	API	N	0	1235	0	1235	3607	2372	1235	J-55	40.5	BUTT	2.95	5.85	BUOY	12.58	BUOY	12.58
2	PRODUCTION	6.75	5.5	NEW	API	Y	0	11771	0	11771	0	-8164	11771	P-110	20	LT&C	1.45	1.65	BUOY	2.48	BUOY	2.48
3	INTERMEDIATE	9.875	7.625	NEW	NON API	N	0	12496	0	12251	0	-8644	12496	L-80	29.7	BUTT	2.5	1.2	BUOY	1.82	BUOY	1.82
4	PRODUCTION	6.75	5.0	NEW	API	Y	11771	22342	11771	12300	-11771	-8693	10571	P-110	18	BUTT	1.68	1.7	BUOY	60.91	BUOY	60.91

Casing Attachments**Casing ID:** 1 **String** SURFACE**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

Dos_Equis_12_13_Fed_Com_10H_Casing_Assumptions_20200428081705.pdf

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 10H**Casing Attachments****Casing ID:** 2 **String** PRODUCTION**Inspection Document:****Spec Document:****Tapered String Spec:**

Dos_Equis_12_13_Fed_Com_10H_Tapered_Prod_Csg_Specs_20210315101306.pdf

Casing Design Assumptions and Worksheet(s):

Dos_Equis_12_13_Fed_Com_10H_Casing_Assumptions_20200428092455.pdf

Casing ID: 3 **String** INTERMEDIATE**Inspection Document:****Spec Document:**

Dos_Equis_12_13_Fed_Com_10H_Int_Csg_Spec_Sheet_20200428090621.pdf

Tapered String Spec:**Casing Design Assumptions and Worksheet(s):**

Dos_Equis_12_13_Fed_Com_10H_Casing_Assumptions_20200428090740.pdf

Casing ID: 4 **String** PRODUCTION**Inspection Document:****Spec Document:****Tapered String Spec:**

Dos_Equis_12_13_Fed_Com_10H_Tapered_Prod_Csg_Specs_20210315101207.pdf

Casing Design Assumptions and Worksheet(s):

Dos_Equis_12_13_Fed_Com_10H_Casing_Assumptions_20200428092857.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 10H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0	0	0	0

SURFACE	Lead		0	1235	480	1.72	13.5	824	50	Class C	Bentonite
SURFACE	Tail		0	1235	128	1.34	14.8	171	25	Class C	LCM
INTERMEDIATE	Lead	4900	0	4900	782	1.88	12.9	1470	37	35:65 (PozC)	Salt, Bentonite

INTERMEDIATE	Lead	4900	4900	1249 6	585	3.64	10.3	2126	47	Tuned Light	LCM
INTERMEDIATE	Tail		4900	1249 6	207	1.3	14.2	268	47	50:50 (PozH)	Salt, bentonite, fluid loss, dispersant, sms
PRODUCTION	Lead		0	2234 2	841	1.3	14.2	1093	25	50:50 (Poz:H)	Salt, Bentonite, Fluid loss, dispersant, sms

Section 5 - Circulating Medium

Mud System Type: Closed**Will an air or gas system be Used?** NO**Description of the equipment for the circulating system in accordance with Onshore Order #2:****Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 10H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1235	SPUD MUD	7.83	8.33							
1235	1249 6	OTHER : Brine Diesel Emulsion	8.5	9							
1249 6	2234 2	OIL-BASED MUD	12	12.5							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

No DST Planned

List of open and cased hole logs run in the well:

GAMMA RAY LOG,COMPENSATED NEUTRON LOG,DIRECTIONAL SURVEY,

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7995

Anticipated Surface Pressure: 5288

Anticipated Bottom Hole Temperature(F): 190

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? NO

Hydrogen sulfide drilling operations

Operator Name: CIMAREX ENERGY COMPANY

Well Name: DOS EQUIS 12-13 FEDERAL COM

Well Number: 10H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Dos_Equis_12_13_Fed_Com_10H_AC_Report_20200428111840.pdf

Dos_Equis_12_13_Fed_Com_10H_Directional_Plan_20200428111840.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Dos_Equis_12_13_Fed_Com_10H_Gas_Capture_Plan_20200428124946.pdf

Dos_Equis_12_13_Fed_Com_10H_Flex_Hose_20200428124948.pdf

Dos_Equis_12_13_Fed_Com_10H_Drilling_Plan_20210315101401.pdf

Other Variance attachment:

Dos_Equis_12_13_Fed_Com_10H_Well_Control_10M_w_5M_annular_Plan__BLM_Approved__20200428125038.pdf

Dos_Equis_12_13_Fed_Com_10H_Multibowl_Wellhead_20210315101624.pdf



Cimarex Dos Equis 12-13 Federal Com #10H Rev1 RM 18Feb20 Anti-Collision Summary Report

Analysis Date-24hr Time: February 18, 2020 - 16:06
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure: Cimarex Dos Equis 12-13 Federal Com #10H
Slot: New Slot
Well: Dos Equis 12-13 Federal Com #10H
Borehole: Dos Equis 12-13 Federal Com #10H
Scan MD Range: 0.00ft ~ 22342.02ft

Analysis Method: 3D Least Distance
Reference Trajectory: Cimarex Dos Equis 12-13 Federal Com #10H Rev1 RM 18Feb20 (Def Plan)
Depth Interval: Every 10.00 Measured Depth (ft)
Rule Set: NAL Procedure: D&M AntiCollision Standard S002
Min Pts: All local minima indicated.
Version / Patch: 2.10.787.0
Database \ Project: us1153APP452.DIR.SLB.COM\DRILLING-NM Lea County 2.10

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

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan:

Selection filters:

Not performed!

Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans

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

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

Results highlighted: Sep-Factor separation <= 1.50 ft

Cimarex Dos Equis 12-13
Federal Com #48H Rev0 RM
13Sept19 (Non-Def Plan)

Fail Major

1289.79	32.81	1288.50	1256.98	N/A	MAS = 10.00 (m)	0.00	0.00					Surface
1289.79	32.81	1288.50	1256.98	N/A	MAS = 10.00 (m)	26.00	26.00					WRP
350.19	97.83	284.13	252.36	5.47	OSF1.50	11870.00	11788.44					MinPt-O-SF
277.01	86.23	218.69	190.78	4.92	OSF1.50	12080.00	11991.88	OSF<5.00				Enter Alert
176.94	83.94	120.05	92.99	3.22	OSF1.50	12470.00	12243.61					MinPt-O-SF
176.32	83.50	119.73	92.82	3.22	OSF1.50	12490.00	12249.45					MinPts
176.14	83.08	119.83	93.06	3.24	OSF1.50	12510.00	12254.61					MinPt-CtCt
169.34	169.57	55.34	-0.23	1.50	OSF1.50	17540.00	12300.00	OSF<1.50				Enter Minor
164.57	245.54	-0.09	-80.97	1.00	OSF1.50	20080.00	12300.00			OSF<1.00		Enter Major
161.15	316.35	-50.73	-155.19	0.76	OSF1.50	22342.02	12300.00					MinPts

Cimarex Dos Equis 12-13
Federal Com #11H Rev1 RM
18Feb20 (Def Plan)

Warning Alert

20.06	16.31	18.78	3.76	N/A	MAS = 4.97 (m)	0.00	0.00	CtCt<=15m<15.00				Enter Alert
20.06	16.31	18.77	3.75	N/A	MAS = 4.97 (m)	26.00	26.00					WRP
20.06	19.54	6.60	0.52	1.54	OSF1.50	2000.00	2000.00					MinPt-CtCt
20.08	19.62	6.57	0.46	1.54	OSF1.50	2010.00	2010.00					MINPT-O-EOU
20.13	19.69	6.58	0.44	1.54	OSF1.50	2020.00	2020.00					MinPts
72.07	22.71	56.50	49.36	4.96	OSF1.50	2550.00	2546.67	OSF>5.00				Exit Alert
213.87	45.98	182.79	167.89	7.13	OSF1.50	6030.00	5971.11					MinPt-O-SF
449.93	80.49	395.85	369.44	8.50	OSF1.50	11900.00	11818.42					MinPt-CtCt
449.94	80.51	395.84	369.43	8.50	OSF1.50	11920.00	11838.36					MINPT-O-EOU

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
	449.94	80.51	395.84	369.43	8.49	OSF1.50	11930.00	11848.29				MinPt-O-ADP	
	450.03	80.54	395.91	369.49	8.49	OSF1.50	11970.00	11887.74				MinPt-O-SF	
	750.12	226.09	598.97	524.04	5.00	OSF1.50	18850.00	12300.00	OSF<5.00			Enter Alert	
	750.12	333.62	527.28	416.50	3.38	OSF1.50	22342.02	12300.00				MinPts	

Cimarex Dos Equis 12 Federal
Com #4H Gyro 0ft to 11189ft
MD (Def Survey)

Warning Alert

379.94	32.81	377.96	347.13	N/A	MAS = 10.00 (m)	0.00	0.00					MinPts	
379.94	32.81	377.96	347.13	46879.13	MAS = 10.00 (m)	26.00	26.00					WRP	
377.82	32.81	370.40	345.02	69.05	MAS = 10.00 (m)	1200.00	1200.00					MinPts	
73.95	32.81	57.07	41.15	4.89	MAS = 10.00 (m)	3960.00	3934.16	OSF<5.00				Enter Alert	
34.29	32.81	15.97	1.48	1.98	MAS = 10.00 (m)	4310.00	4278.57					MinPt-O-SF	
34.23	32.81	15.96	1.43	1.98	MAS = 10.00 (m)	4320.00	4288.41					MinPts	
83.62	32.81	65.20	50.81	4.97	MAS = 10.00 (m)	4770.00	4731.23	OSF>5.00				Exit Alert	
563.57	43.57	533.86	519.99	20.25	OSF1.50	8450.00	8368.44					MinPt-O-ADP	
626.88	56.47	588.57	570.41	17.20	OSF1.50	11280.00	11198.44					MinPt-O-SF	
1615.57	44.46	1585.27	1571.11	56.98	OSF1.50	13280.00	12300.00					MinPt-O-SF	
10135.16	64.63	10091.41	10070.53	242.63	OSF1.50	22342.02	12300.00					TD	

Cimarex Dos Equis 12 Fed 4H
Gyro+MWD 10305ft to 15240ft
MD (Def Survey)

Warning Alert

379.94	32.81	377.96	347.13	N/A	MAS = 10.00 (m)	0.00	0.00					MinPts	
379.94	32.81	377.96	347.13	46879.13	MAS = 10.00 (m)	26.00	26.00					WRP	
377.82	32.81	370.40	345.02	69.05	MAS = 10.00 (m)	1200.00	1200.00					MinPts	
73.95	32.81	57.07	41.15	4.89	MAS = 10.00 (m)	3960.00	3934.16	OSF<5.00				Enter Alert	
34.29	32.81	15.97	1.48	1.98	MAS = 10.00 (m)	4310.00	4278.57					MinPt-O-SF	
34.23	32.81	15.96	1.43	1.98	MAS = 10.00 (m)	4320.00	4288.41					MinPts	
83.62	32.81	65.20	50.81	4.97	MAS = 10.00 (m)	4770.00	4731.23	OSF>5.00				Exit Alert	
563.57	43.57	533.86	519.99	20.25	OSF1.50	8450.00	8368.44					MinPt-O-ADP	
599.67	51.83	564.45	547.84	17.98	OSF1.50	10460.00	10378.44					MinPt-O-SF	
608.21	52.27	572.71	555.95	18.08	OSF1.50	10590.00	10508.44					MinPt-O-SF	
613.35	52.72	577.54	560.62	18.07	OSF1.50	10660.00	10578.44					MinPt-O-SF	
1492.09	34.32	1468.54	1457.76	69.10	OSF1.50	12880.00	12300.00					MinPt-CtCt	
1492.17	34.57	1468.46	1457.60	68.59	OSF1.50	12900.00	12300.00					MINPT-O-EOU	
1492.39	34.83	1468.50	1457.55	68.05	OSF1.50	12920.00	12300.00					MinPt-O-ADP	
1477.91	52.33	1442.36	1425.58	43.97	OSF1.50	13620.00	12300.00					MinPt-CtCt	
1483.06	65.90	1438.47	1417.17	34.76	OSF1.50	14080.00	12300.00					MINPT-O-EOU	
1483.90	66.87	1438.66	1417.03	34.25	OSF1.50	14120.00	12300.00					MinPt-O-ADP	
1489.99	75.39	1439.07	1414.60	30.40	OSF1.50	14350.00	12300.00					MinPt-CtCt	
1480.62	96.41	1415.69	1384.22	23.49	OSF1.50	15000.00	12300.00					MinPt-CtCt	
1466.99	137.80	1374.46	1329.19	16.18	OSF1.50	16280.00	12300.00					MinPt-CtCt	
1474.91	170.74	1360.42	1304.17	13.09	OSF1.50	16870.00	12300.00					MinPts	
1475.93	170.92	1361.32	1305.01	13.09	OSF1.50	16900.00	12300.00					MinPt-O-SF	
5701.23	90.83	5640.02	5610.40	96.22	OSF1.50	22342.02	12300.00					TD	

Cimarex Dos Equis 12-13
Federal Com #9H Rev1 RM
18Feb20 (Def Plan)

Warning Alert

72.19	32.81	70.90	39.38	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
72.19	32.81	70.90	39.38	106373.57	MAS = 10.00 (m)	26.00	26.00					WRP	
66.79	32.81	52.32	33.98	4.97	MAS = 10.00 (m)	2250.00	2249.68	OSF<5.00				Enter Alert	
60.17	32.81	44.81	27.36	4.18	MAS = 10.00 (m)	2480.00	2477.76					MinPts	
60.20	32.81	44.80	27.39	4.17	MAS = 10.00 (m)	2490.00	2487.61					MINPT-O-EOU	
60.45	32.81	44.96	27.64	4.16	MAS = 10.00 (m)	2512.61	2509.88					MinPt-O-SF	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
77.03	32.81	60.49	44.22	4.96		MAS = 10.00 (m)	2750.00	2743.48	OSF>5.00			Exit Alert	
901.90	96.73	836.99	805.17	14.15		OSF1.50	11871.56	11790.00				MinPts	
899.80	90.84	838.81	808.96	15.05		OSF1.50	12910.00	12300.00				MinPt-CtCt	
899.87	271.05	718.74	628.82	5.00		OSF1.50	20810.00	12300.00	OSF<5.00			Enter Alert	
899.88	318.39	687.19	581.49	4.25		OSF1.50	22342.02	12300.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #50H Rev1 RM
17Feb20 (Def Plan)

Warning Alert

1231.99	32.81	1230.70	1199.18	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1231.99	32.81	1230.70	1199.18	553914.69		MAS = 10.00 (m)	26.00	26.00				WRP	
1231.99	32.81	1218.59	1199.18	101.60		MAS = 10.00 (m)	1990.00	1990.00				MinPts	
1119.85	32.81	1102.06	1087.05	68.10		MAS = 10.00 (m)	3150.00	3137.09				MinPt-O-SF	
365.14	95.12	300.95	270.03	5.87		OSF1.50	11871.56	11790.00				MinPts	
365.17	95.16	300.95	270.01	5.86		OSF1.50	11880.00	11798.44				MinPt-O-ADP	
365.51	95.27	301.21	270.24	5.86		OSF1.50	11900.00	11818.42				MinPt-O-SF	
683.86	49.53	650.41	634.33	21.22		OSF1.50	12871.56	12300.00				MinPt-CtCt	
683.86	206.25	545.93	477.61	5.00		OSF1.50	18940.00	12300.00	OSF<5.00			Enter Alert	
683.86	310.27	476.59	373.60	3.31		OSF1.50	22342.02	12300.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #49H Rev1 RM
17Feb20 (Def Plan)

Warning Alert

1251.94	32.81	1250.66	1219.14	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1251.94	32.81	1250.66	1219.14	562895.80		MAS = 10.00 (m)	26.00	26.00				WRP	
1251.94	32.81	1238.54	1219.14	103.25		MAS = 10.00 (m)	1990.00	1990.00				MinPts	
903.11	80.05	849.13	823.06	17.29		OSF1.50	11871.56	11790.00				MinPts	
903.09	80.02	849.13	823.07	17.29		OSF1.50	11900.00	11818.42				MINPT-O-EOU	
900.15	76.00	848.87	824.15	18.17		OSF1.50	12440.00	12233.36				MinPt-O-ADP	
900.07	75.91	848.85	824.16	18.19		OSF1.50	12470.00	12243.61				MINPT-O-EOU	
899.88	75.76	848.76	824.12	18.22		OSF1.50	12820.00	12299.07				MinPt-CtCt	
899.88	271.56	718.23	628.33	4.99		OSF1.50	20690.00	12300.00	OSF<5.00			Enter Alert	
899.88	323.51	683.60	576.38	4.19		OSF1.50	22342.02	12300.00				MinPts	

Gulf Oil Hanagan D Federal #2
(Offset) Plugged Oil Blind Off-
5100ft (Def Survey)

Warning Alert

5263.94	32.81	5262.65	5231.13	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
5263.66	32.81	5262.34	5230.85	141566.75		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
4895.18	1470.21	3914.50	3424.97	5.00		OSF1.50	4830.00	4790.27	OSF<5.00			Enter Alert	
4805.57	1585.47	3748.02	3220.10	4.55		OSF1.50	5560.00	5508.61				MinPt-O-SF	
4797.29	1580.90	3742.78	3216.38	4.56		OSF1.50	5720.00	5666.06				MinPt-O-ADP	
4795.79	1579.12	3742.48	3216.67	4.56		OSF1.50	5770.00	5715.26				MINPT-O-EOU	
4794.32	1574.13	3744.35	3220.19	4.57		OSF1.50	5890.00	5833.35				MinPt-CtCt	
4930.62	1480.19	3943.40	3450.44	5.00		OSF1.50	7040.00	6964.98	OSF>5.00			Exit Alert	
7890.15	685.70	7432.59	7204.46	17.29		OSF1.50	15160.00	12300.00				MinPt-CtCt	
7890.18	685.76	7432.57	7204.42	17.29		OSF1.50	15180.00	12300.00				MINPT-O-EOU	
7890.21	685.80	7432.58	7204.41	17.29		OSF1.50	15190.00	12300.00				MinPt-O-ADP	
10065.68	1136.45	9307.61	8929.23	13.30		OSF1.50	21410.00	12300.00				MinPt-O-SF	
10669.44	1197.20	9870.88	9472.24	13.38		OSF1.50	22342.02	12300.00				TD	

Cimarex Dos Equis 12-13
Federal Com #51H Rev1 RM
17Feb20 (Def Plan)

Pass

1212.03	32.81	1210.74	1179.22	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1212.03	32.81	1210.74	1179.22	544929.31		MAS = 10.00 (m)	26.00	26.00				WRP	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
	279.53	77.02	227.36	202.51	5.57	OSF1.50	9280.00	9198.44				MinPt-O-SF	
	278.81	76.79	226.79	202.02	5.58	OSF1.50	9350.00	9268.44				MinPts	
	278.80	76.76	226.79	202.03	5.58	OSF1.50	9360.00	9278.44				MinPt-CtCt	
	2718.73	319.62	2505.22	2399.11	12.80	OSF1.50	22340.00	12300.00				MinPt-CtCt	
	2718.73	319.67	2505.18	2399.05	12.80	OSF1.50	22342.02	12300.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #52H Rev1 RM
17Feb20 (Def Plan)

Pass

1192.07	32.81	1190.79	1159.26	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1192.07	32.81	1190.78	1159.26	595498.88	MAS = 10.00 (m)	26.00	26.00					WRP	
312.86	74.48	262.44	238.38	6.45	OSF1.50	9210.00	9128.44					MinPt-O-SF	
281.56	73.31	231.86	208.25	5.91	OSF1.50	9540.00	9458.44					MinPts	
281.59	73.33	231.88	208.26	5.91	OSF1.50	9550.00	9468.44					MinPt-O-SF	
2716.42	320.96	2502.02	2395.46	12.74	OSF1.50	22340.00	12300.00					MinPt-CtCt	
2716.42	321.01	2501.98	2395.41	12.74	OSF1.50	22342.02	12300.00					MinPts	

Cimarex Dos Equis 12 Federal
Com #3H Gyro+MWD 0ft to
15227ft MD (Def Survey)

Pass

1697.16	32.81	1695.18	1664.35	N/A	MAS = 10.00 (m)	0.00	0.00					MinPts	
1697.19	32.81	1695.20	1664.38	131818.63	MAS = 10.00 (m)	26.00	26.00					WRP	
1691.21	32.81	1682.63	1658.40	255.89	MAS = 10.00 (m)	1410.00	1410.00					MinPts	
738.36	43.92	708.00	694.44	27.10	OSF1.50	7600.00	7518.58					MinPt-O-SF	
700.04	48.47	666.62	651.57	23.14	OSF1.50	9540.00	9458.44					MinPt-CtCt	
700.06	48.55	666.59	651.51	23.10	OSF1.50	9560.00	9478.44					MINPT-O-EOU	
700.09	48.59	666.60	651.50	23.08	OSF1.50	9570.00	9488.44					MinPt-O-ADP	
692.20	52.85	655.86	639.35	20.86	OSF1.50	10550.00	10468.44					MinPt-CtCt	
692.27	53.23	655.68	639.04	20.70	OSF1.50	10610.00	10528.44					MINPT-O-EOU	
692.33	53.31	655.69	639.02	20.67	OSF1.50	10620.00	10538.44					MinPt-O-ADP	
696.88	54.04	659.76	642.83	20.49	OSF1.50	10730.00	10648.44					MinPt-O-SF	
1461.65	52.99	1425.66	1408.66	42.92	OSF1.50	13020.00	12300.00					MinPt-CtCt	
1462.49	55.27	1424.98	1407.22	41.11	OSF1.50	13110.00	12300.00					MINPT-O-EOU	
1465.82	60.20	1425.03	1405.62	37.71	OSF1.50	13280.00	12300.00					MINPT-O-EOU	
1468.53	63.42	1425.60	1405.12	35.81	OSF1.50	13390.00	12300.00					MinPt-O-ADP	
1474.42	72.28	1425.57	1402.14	31.42	OSF1.50	13660.00	12300.00					MINPT-O-EOU	
1470.34	104.56	1399.97	1365.77	21.47	OSF1.50	14590.00	12300.00					MinPt-CtCt	
1471.86	115.19	1394.41	1356.67	19.48	OSF1.50	14880.00	12300.00					MinPt-CtCt	
1472.20	129.53	1385.18	1342.66	17.29	OSF1.50	15270.00	12300.00					MinPt-CtCt	
1473.88	133.31	1384.35	1340.57	16.81	OSF1.50	15390.00	12300.00					MINPT-O-EOU	
1472.59	145.48	1374.94	1327.11	15.37	OSF1.50	15700.00	12300.00					MinPt-CtCt	
1474.02	163.24	1364.53	1310.78	13.69	OSF1.50	16170.00	12300.00					MinPt-CtCt	
1474.69	165.34	1363.80	1309.35	13.52	OSF1.50	16240.00	12300.00					MINPT-O-EOU	
1475.66	166.50	1364.00	1309.16	13.44	OSF1.50	16280.00	12300.00					MinPt-O-ADP	
1478.52	170.41	1364.25	1308.10	13.15	OSF1.50	16380.00	12300.00					MINPT-O-EOU	
1478.99	170.93	1364.37	1308.05	13.11	OSF1.50	16400.00	12300.00					MinPt-O-ADP	
1495.14	195.33	1364.26	1299.81	11.58	OSF1.50	16840.00	12300.00					MinPts	
1498.49	196.34	1366.94	1302.15	11.55	OSF1.50	16920.00	12300.00					MinPt-O-SF	
5723.34	107.23	5651.20	5616.11	81.54	OSF1.50	22342.02	12300.00					TD	

Final Surveys - Cimarex Dos
Equis 13 Federal Com #9H
MWD 0ft-15788ft (Surcon
Corrected) (Def Survey)

Pass

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
5363.43	32.81	5362.15	5330.63	N/A		MAS = 10.00 (m)	0.00	0.00				MinPts	
5363.44	32.81	5362.12	5330.63	180088.15		MAS = 10.00 (m)	26.00	26.00				WRP	
5364.62	32.81	5361.06	5331.81	2362.72		MAS = 10.00 (m)	490.00	490.00				MINPT-O-EOU	
5365.43	32.81	5360.80	5332.62	1602.30		MAS = 10.00 (m)	750.00	750.00				MinPts	
5365.52	32.81	5359.72	5332.72	1187.01		MAS = 10.00 (m)	1040.00	1040.00				MinPts	
5365.61	32.81	5359.11	5332.80	1030.04		MAS = 10.00 (m)	1180.00	1180.00				MINPT-O-EOU	
5282.50	44.30	5252.60	5238.20	183.32		OSF1.50	7290.00	7211.00				MinPt-CtCt	
5282.50	44.32	5252.59	5238.18	183.23		OSF1.50	7300.00	7220.85				MinPts	
5305.43	48.42	5272.79	5257.00	167.97		OSF1.50	9370.00	9288.44				MinPt-CtCt	
5305.51	48.68	5272.70	5256.83	167.06		OSF1.50	9430.00	9348.44				MINPT-O-EOU	
5303.60	50.49	5269.59	5253.11	160.91		OSF1.50	9830.00	9748.44				MinPt-CtCt	
5303.62	50.56	5269.56	5253.06	160.67		OSF1.50	9850.00	9768.44				MINPT-O-EOU	
5303.68	50.64	5269.57	5253.05	160.43		OSF1.50	9870.00	9788.44				MinPt-O-ADP	
5452.63	57.95	5413.66	5394.68	143.65		OSF1.50	11871.56	11790.00				MinPt-O-SF	
1478.61	153.10	1376.20	1325.51	14.57		OSF1.50	18290.00	12300.00				MinPt-CtCt	
1479.62	155.72	1375.46	1323.90	14.34		OSF1.50	18390.00	12300.00				MINPT-O-EOU	
1481.73	158.26	1375.89	1323.47	14.13		OSF1.50	18490.00	12300.00				MinPt-O-ADP	
1483.91	160.13	1376.82	1323.79	13.98		OSF1.50	18570.00	12300.00				MinPt-O-SF	
1481.46	164.54	1371.42	1316.91	13.58		OSF1.50	18750.00	12300.00				MinPt-CtCt	
1481.68	169.66	1368.23	1312.02	13.17		OSF1.50	18950.00	12300.00				MinPt-CtCt	
1481.19	175.11	1364.12	1306.09	12.75		OSF1.50	19160.00	12300.00				MinPt-CtCt	
1453.04	211.86	1311.46	1241.18	10.33		OSF1.50	20540.00	12300.00				MinPt-CtCt	
1454.83	234.25	1298.32	1220.58	9.35		OSF1.50	21340.00	12300.00				MinPt-CtCt	
1457.77	244.92	1294.15	1212.85	8.96		OSF1.50	21720.00	12300.00				MINPT-O-EOU	
1455.86	262.16	1280.75	1193.70	8.36		OSF1.50	22340.00	12300.00				MinPt-CtCt	
1455.86	262.22	1280.71	1193.64	8.35		OSF1.50	22342.02	12300.00				MinPts	

Curtis Hankamer Gulf
Hanagan Federal #3 (Offset)
Plugged Oil Inc Only 0ft-5049ft
(Def Survey)

Pass

1735.07	32.81	1733.79	1702.26	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1734.57	32.81	1733.23	1701.76	32305.52		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
1734.45	32.81	1733.08	1701.64	21391.27		MAS = 10.00 (m)	50.00	50.00				MinPts	
1734.76	92.24	1672.83	1642.51	28.59		OSF1.50	1800.00	1800.00				MinPt-CtCt	
1695.55	188.13	1569.70	1507.42	13.60		OSF1.50	3650.00	3629.11				MinPt-CtCt	
1694.35	233.13	1538.50	1461.22	10.95		OSF1.50	4520.00	4485.22				MinPt-CtCt	
1696.19	242.89	1533.83	1453.30	10.52		OSF1.50	4730.00	4691.87				MINPT-O-EOU	
1698.07	245.15	1534.21	1452.92	10.44		OSF1.50	4790.00	4750.91				MinPt-O-ADP	
1710.34	264.89	1533.32	1445.46	9.73		OSF1.50	5140.00	5095.32				MinPts	
1710.51	265.03	1533.40	1445.48	9.72		OSF1.50	5150.00	5105.16				MinPt-O-SF	
7226.38	48.20	7193.82	7178.18	231.03		OSF1.50	13850.00	12300.00				MinPt-CtCt	
7227.02	50.13	7193.18	7176.90	221.91		OSF1.50	13950.00	12300.00				MINPT-O-EOU	
7228.30	51.65	7193.44	7176.65	215.25		OSF1.50	14020.00	12300.00				MinPt-O-ADP	
9831.84	229.75	9678.25	9602.09	64.54		OSF1.50	20520.00	12300.00				MinPt-O-SF	
11148.03	253.58	10978.55	10894.45	66.27		OSF1.50	22342.02	12300.00				TD	

Cimarex Dos Equis 12-13
Federal Com #91H Rev1 RM
14Feb20 (Def Plan)

Pass

3425.67	32.81	3424.38	3392.86	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3425.66	32.81	3424.37	3392.85	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
1726.08	63.55	1682.56	1662.53	43.01		OSF1.50	9220.00	9138.44				MinPts	
1726.06	63.46	1682.59	1662.59	43.07		OSF1.50	9300.00	9218.44				MinPt-CtCt	
3199.98	322.64	2984.45	2877.34	14.93		OSF1.50	22342.02	12300.00				MinPts	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Cimarex Dos Equis 12-13 Federal Com #73H Rev5 RM 19Dec19 (Def Plan)													
												Pass	
	2627.18	32.81	2625.89	2594.37	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2627.18	32.81	2625.89	2594.37	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	1949.43	56.34	1911.19	1893.09	53.81	OSF1.50	6960.00	6886.26				MinPt-O-SF	
	1847.03	90.44	1785.99	1756.59	31.38	OSF1.50	11970.00	11887.74				MinPts	
	1847.03	90.42	1786.00	1756.61	31.39	OSF1.50	11980.00	11897.51				MinPt-CtCt	
	1910.83	317.82	1698.26	1593.00	9.07	OSF1.50	22342.02	12300.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #77H Rev1 RM 17Feb20 (Def Plan)													
												Pass	
	2525.83	32.81	2524.54	2493.02	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2525.83	32.81	2524.54	2493.02	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	2205.96	45.50	2175.10	2160.46	75.29	OSF1.50	5840.00	5784.14				MinPt-O-SF	
	1908.28	87.51	1849.23	1820.77	33.49	OSF1.50	11871.56	11790.00				MinPt-CtCt	
	1908.32	87.65	1849.18	1820.67	33.43	OSF1.50	11900.00	11818.42				MinPts	
	1911.31	87.96	1851.97	1823.35	33.36	OSF1.50	12090.00	12000.90				MinPt-O-SF	
	1912.02	87.99	1852.66	1824.03	33.36	OSF1.50	12110.00	12018.65				MinPt-O-SF	
	1999.21	78.16	1946.60	1921.04	39.08	OSF1.50	12860.00	12299.95				MinPts	
	1999.19	78.14	1946.60	1921.05	39.09	OSF1.50	12870.00	12300.00				MinPt-CtCt	
	2000.78	312.01	1792.28	1688.77	9.66	OSF1.50	22342.02	12300.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #76H Rev1 RM 17Feb20 (Def Plan)													
												Pass	
	2545.83	32.81	2544.54	2513.02	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2545.83	32.81	2544.54	2513.02	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	2318.38	40.32	2291.00	2278.06	89.49	OSF1.50	5370.00	5321.65				MinPt-O-SF	
	1936.50	66.00	1891.78	1870.50	45.45	OSF1.50	9260.00	9178.44				MinPts	
	1936.04	65.66	1891.55	1870.38	45.68	OSF1.50	9390.00	9308.44				MinPt-O-ADP	
	1936.03	65.64	1891.54	1870.38	45.69	OSF1.50	9400.00	9318.44				MINPT-O-EQU	
	1936.02	65.63	1891.55	1870.39	45.70	OSF1.50	9410.00	9328.44				MinPt-CtCt	
	3320.98	331.66	3099.44	2989.32	15.07	OSF1.50	22342.02	12300.00				MinPts	
Cimarex Dos Equis 12 Federal Com #2H ST01 Gyro+MWD 10486ft to 13433ft MD (Def Survey)													
												Pass	
	3002.77	32.81	3000.79	2969.97	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3002.76	32.81	3000.78	2969.95	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	2994.99	32.81	2984.10	2962.18	335.93	MAS = 10.00 (m)	1630.00	1630.00				MinPts	
	2995.05	32.81	2984.00	2962.24	329.92	MAS = 10.00 (m)	1690.00	1690.00				MINPT-O-EQU	
	2995.00	32.81	2983.20	2962.19	304.66	MAS = 10.00 (m)	1950.00	1950.00				MinPts	
	2957.74	32.81	2945.04	2924.93	276.41	MAS = 10.00 (m)	2460.00	2458.03				MinPt-O-SF	
	2089.63	44.86	2058.67	2044.77	75.03	OSF1.50	7320.00	7240.56				MinPt-O-SF	
	2054.51	43.16	2024.67	2011.36	77.04	OSF1.50	7760.00	7678.44				MinPts	
	2054.50	43.13	2024.67	2011.37	77.09	OSF1.50	7770.00	7688.44				MinPt-CtCt	
	2008.96	51.90	1973.25	1957.06	61.94	OSF1.50	10470.00	10388.44				MinPt-O-SF	
	1957.66	55.49	1919.52	1902.17	56.32	OSF1.50	10960.00	10878.44				MinPts	
	1957.71	55.56	1919.52	1902.14	56.24	OSF1.50	10970.00	10888.44				MinPt-O-ADP	
	2012.06	58.52	1972.02	1953.54	54.34	OSF1.50	11450.00	11368.44				MinPt-O-SF	
	2044.56	59.03	2004.26	1985.53	54.51	OSF1.50	11590.00	11508.44				MinPt-O-SF	
	2057.95	59.84	2017.14	1998.11	54.00	OSF1.50	11640.00	11558.44				MinPt-O-SF	
	2289.24	66.66	2244.14	2222.59	53.05	OSF1.50	12980.00	12300.00				MinPt-CtCt	
	2292.34	77.20	2240.22	2215.14	45.67	OSF1.50	13320.00	12300.00				MINPT-O-EQU	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
2296.07	96.32	2231.19	2199.74	36.48		OSF1.50	13780.00	12300.00				MinPt-CtCt	
2297.42	100.33	2229.87	2197.09	35.01		OSF1.50	13910.00	12300.00				MINPT-O-EOU	
2298.71	101.86	2230.14	2196.85	34.49		OSF1.50	13960.00	12300.00				MinPt-O-ADP	
2365.18	138.88	2271.93	2226.30	25.89		OSF1.50	14850.00	12300.00				MinPt-O-ADP	
2374.58	218.35	2228.36	2156.23	16.45		OSF1.50	14990.00	12300.00				MinPts	
2375.22	218.42	2228.95	2156.81	16.45		OSF1.50	15000.00	12300.00				MinPt-O-SF	
7864.35	129.47	7777.38	7734.88	92.51		OSF1.50	22342.02	12300.00				TD	

Cimarex Dos Equis 12 Federal
Com #2H ST02 Gyro+MWD
13330ft to 15399ft MD (Def
Survey)

Pass

3002.77	32.81	3000.79	2969.97	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3002.76	32.81	3000.78	2969.95	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
2994.99	32.81	2984.10	2962.18	335.93	MAS = 10.00 (m)	1630.00	1630.00	MinPts
2995.05	32.81	2984.00	2962.24	329.92	MAS = 10.00 (m)	1690.00	1690.00	MINPT-O-EOU
2995.00	32.81	2983.20	2962.19	304.66	MAS = 10.00 (m)	1950.00	1950.00	MinPts
2957.74	32.81	2945.04	2924.93	276.41	MAS = 10.00 (m)	2460.00	2458.03	MinPt-O-SF
2089.63	44.86	2058.67	2044.77	75.03	OSF1.50	7320.00	7240.56	MinPt-O-SF
2054.51	43.16	2024.67	2011.36	77.04	OSF1.50	7760.00	7678.44	MinPts
2054.50	43.13	2024.67	2011.37	77.09	OSF1.50	7770.00	7688.44	MinPt-CtCt
2008.96	51.90	1973.25	1957.06	61.94	OSF1.50	10470.00	10388.44	MinPt-O-SF
1957.66	55.49	1919.52	1902.17	56.32	OSF1.50	10960.00	10878.44	MinPts
1957.71	55.56	1919.52	1902.14	56.24	OSF1.50	10970.00	10888.44	MinPt-O-ADP
2012.06	58.52	1972.02	1953.54	54.34	OSF1.50	11450.00	11368.44	MinPt-O-SF
2044.56	59.03	2004.26	1985.53	54.51	OSF1.50	11590.00	11508.44	MinPt-O-SF
2057.95	59.84	2017.14	1998.11	54.00	OSF1.50	11640.00	11558.44	MinPt-O-SF
2289.24	66.66	2244.14	2222.59	53.05	OSF1.50	12980.00	12300.00	MinPt-CtCt
2292.34	77.20	2240.22	2215.14	45.67	OSF1.50	13320.00	12300.00	MINPT-O-EOU
2296.07	96.32	2231.19	2199.74	36.48	OSF1.50	13780.00	12300.00	MinPt-CtCt
2297.42	100.33	2229.87	2197.09	35.01	OSF1.50	13910.00	12300.00	MINPT-O-EOU
2298.71	101.86	2230.14	2196.85	34.49	OSF1.50	13960.00	12300.00	MinPt-O-ADP
2365.18	138.88	2271.93	2226.30	25.89	OSF1.50	14850.00	12300.00	MinPt-O-ADP
2369.10	143.59	2272.71	2225.51	25.07	OSF1.50	14900.00	12300.00	MinPts
2446.62	296.50	2248.29	2150.11	12.45	OSF1.50	16850.00	12300.00	MinPts
2449.69	297.19	2250.91	2152.51	12.44	OSF1.50	16930.00	12300.00	MinPt-O-SF
6061.58	172.80	5945.72	5888.78	53.21	OSF1.50	22342.02	12300.00	TD

Cimarex Dos Equis 12 Federal
Com #2H Pilot Gyro+MWD 0ft
to 12650ft (Def Survey)

Pass

3002.77	32.81	3000.79	2969.97	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3002.76	32.81	3000.78	2969.95	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
2994.99	32.81	2984.10	2962.18	335.93	MAS = 10.00 (m)	1630.00	1630.00	MinPts
2995.05	32.81	2984.00	2962.24	329.92	MAS = 10.00 (m)	1690.00	1690.00	MINPT-O-EOU
2995.00	32.81	2983.20	2962.19	304.66	MAS = 10.00 (m)	1950.00	1950.00	MinPts
2957.74	32.81	2945.04	2924.93	276.41	MAS = 10.00 (m)	2460.00	2458.03	MinPt-O-SF
2089.63	44.86	2058.67	2044.77	75.03	OSF1.50	7320.00	7240.56	MinPt-O-SF
2054.51	43.16	2024.67	2011.36	77.04	OSF1.50	7760.00	7678.44	MinPts
2054.50	43.13	2024.67	2011.37	77.09	OSF1.50	7770.00	7688.44	MinPt-CtCt
1974.82	58.45	1934.71	1916.37	53.75	OSF1.50	11900.00	11818.42	MinPt-O-SF
1961.09	56.80	1922.07	1904.30	55.06	OSF1.50	12260.00	12136.99	MinPts
1961.08	56.75	1922.10	1904.33	55.10	OSF1.50	12270.00	12143.78	MinPt-CtCt
10302.44	86.55	10244.09	10215.90	182.70	OSF1.50	22342.02	12300.00	TD

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20 (Def Plan)													
												Pass	
	2565.82	32.81	2564.53	2533.01	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2565.82	32.81	2564.53	2533.01	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	2327.50	42.00	2299.00	2285.50	86.16	OSF1.50	5890.00	5833.35				MinPt-O-SF	
	2038.59	60.63	1997.49	1977.96	52.14	OSF1.50	9200.00	9118.44				MinPt-CtCt	
	2038.62	60.75	1997.44	1977.87	52.04	OSF1.50	9230.00	9148.44				MINPT-O-EOU	
	2038.64	60.78	1997.44	1977.86	52.01	OSF1.50	9240.00	9158.44				MinPt-O-ADP	
	2038.77	60.86	1997.52	1977.91	51.94	OSF1.50	9270.00	9188.44				MinPt-O-SF	
	3380.22	331.74	3158.63	3048.47	15.34	OSF1.50	22342.02	12300.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #90H Rev1 RM 14Feb20 (Def Plan)													
												Pass	
	3445.67	32.81	3444.38	3412.86	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3445.66	32.81	3444.37	3412.85	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	2505.93	75.05	2455.06	2430.88	51.76	OSF1.50	8970.00	8888.44				MinPts	
	2420.71	75.38	2369.58	2345.34	49.87	OSF1.50	9650.00	9568.44				MinPt-CtCt	
	2420.72	75.41	2369.57	2345.32	49.85	OSF1.50	9660.00	9578.44				MinPts	
	2424.99	75.70	2373.66	2349.29	49.71	OSF1.50	9800.00	9718.44				MinPt-O-SF	
	3564.92	60.22	3524.35	3504.70	90.70	OSF1.50	12496.56	12251.19				MinPt-O-SF	
	3599.26	326.64	3381.07	3272.62	16.59	OSF1.50	22342.02	12300.00				MinPts	
Cimarex Dos Equis 13 Federal #2H XEM + MWD 0ft to 15311 (Def Survey)													
												Pass	
	6021.57	32.81	6019.59	5988.76	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6021.55	32.81	6019.57	5988.75	N/A	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	6021.55	32.81	6019.57	5988.74	N/A	MAS = 10.00 (m)	20.00	20.00				MinPts	
	6021.55	32.81	6019.57	5988.74	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	6025.19	32.81	6014.89	5992.38	723.99	MAS = 10.00 (m)	1460.00	1460.00				MINPT-O-EOU	
	6027.14	32.81	6015.24	5994.34	606.93	MAS = 10.00 (m)	1880.00	1880.00				MINPT-O-EOU	
	5940.18	32.81	5923.63	5907.37	409.47	MAS = 10.00 (m)	3620.00	3599.59				MinPt-O-SF	
	5737.61	45.84	5706.29	5691.77	197.49	OSF1.50	7300.00	7220.85				MinPt-O-SF	
	5728.96	44.35	5698.63	5684.61	204.22	OSF1.50	7640.00	7558.51				MinPt-O-ADP	
	5728.86	44.23	5698.61	5684.63	204.80	OSF1.50	7660.00	7578.49				MINPT-O-EOU	
	5728.77	43.99	5698.68	5684.78	205.98	OSF1.50	7700.00	7618.46				MinPt-CtCt	
	5740.67	53.57	5704.20	5687.09	167.76	OSF1.50	10600.00	10518.44				MinPt-CtCt	
	5740.70	53.65	5704.18	5687.05	167.50	OSF1.50	10620.00	10538.44				MINPT-O-EOU	
	5740.73	53.69	5704.18	5687.04	167.37	OSF1.50	10630.00	10548.44				MinPt-O-ADP	
	5867.18	57.75	5828.02	5809.43	157.74	OSF1.50	11871.56	11790.00				MinPt-O-SF	
	2423.60	146.99	2324.94	2276.60	25.05	OSF1.50	17910.00	12300.00				MinPt-CtCt	
	2424.15	148.76	2324.32	2275.39	24.75	OSF1.50	17970.00	12300.00				MINPT-O-EOU	
	2424.86	149.63	2324.45	2275.23	24.61	OSF1.50	18000.00	12300.00				MinPt-O-ADP	
	2446.78	254.29	2276.60	2192.49	14.53	OSF1.50	20760.00	12300.00				MinPt-CtCt	
	2461.46	292.77	2265.62	2168.68	12.69	OSF1.50	21650.00	12300.00				MINPT-O-EOU	
	2466.81	299.29	2266.62	2167.52	12.44	OSF1.50	21810.00	12300.00				MinPt-O-ADP	
	2475.86	308.62	2269.46	2167.24	12.10	OSF1.50	22020.00	12300.00				MinPt-O-ADP	
	2487.12	334.66	2263.36	2152.46	11.21	OSF1.50	22230.00	12300.00				MinPts	
	2493.16	335.83	2268.61	2157.33	11.19	OSF1.50	22310.00	12300.00				MinPt-O-SF	
	2496.29	336.21	2271.49	2160.08	11.19	OSF1.50	22342.02	12300.00				TD	
Cimarex Dos Equis 12-13 Federal Com #5H Rev5 RM 19Dec19 (Def Plan)													
												Pass	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
2647.17		32.81	2645.88	2614.36	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
2647.17		32.81	2645.88	2614.36	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
2468.93		32.81	2449.99	2436.12	140.60	MAS = 10.00 (m)	3750.00	3727.51				MinPts	
2468.94		32.81	2449.98	2436.13	140.37	MAS = 10.00 (m)	3760.00	3737.35				MINPT-O-EQU	
2718.57		56.46	2680.50	2662.11	73.87	OSF1.50	7300.00	7220.85				MinPt-O-SF	
2804.46		57.66	2765.59	2746.80	74.59	OSF1.50	7800.00	7718.44				MinPt-O-SF	
2806.01		80.16	2752.15	2725.86	53.34	OSF1.50	11900.00	11818.42				MinPts	
2806.17		80.20	2752.27	2725.97	53.31	OSF1.50	11990.00	11907.23				MinPt-O-SF	
2808.74		75.27	2758.13	2733.47	56.92	OSF1.50	12860.00	12299.95				MinPt-CtCt	
2810.85		319.39	2597.50	2491.47	13.25	OSF1.50	22342.02	12300.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #87H Rev0 RM
13Sept19 (Non-Def Plan)

Pass

3526.67	32.81	3525.38	3493.86	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3526.66	32.81	3525.38	3493.85	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
2587.05	98.16	2520.77	2488.89	40.53	OSF1.50	11960.00	11877.93	MinPt-O-SF
2587.02	98.14	2520.76	2488.88	40.54	OSF1.50	11970.00	11887.74	MinPts
2587.00	98.11	2520.76	2488.89	40.55	OSF1.50	11980.00	11897.51	MinPt-CtCt
2651.83	112.00	2576.40	2539.83	36.23	OSF1.50	14940.00	12300.00	MinPt-CtCt
2652.14	318.66	2438.93	2333.48	12.56	OSF1.50	22342.02	12300.00	MinPts

Cimarex Dos Equis 12-13
Federal Com #89H Rev1 RM
14Feb20 (Def Plan)

Pass

3465.66	32.81	3464.37	3432.85	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3465.65	32.81	3464.36	3432.84	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
3315.73	44.83	3285.37	3270.90	114.51	OSF1.50	6020.00	5961.27	MinPt-O-SF
3047.78	53.97	3011.15	2993.81	87.83	OSF1.50	7690.00	7608.46	MinPt-O-SF
3045.99	61.98	3004.01	2984.00	76.07	OSF1.50	9210.00	9128.44	MinPt-CtCt
3046.00	62.09	3003.95	2983.91	75.93	OSF1.50	9250.00	9168.44	MinPts
3046.01	62.09	3003.96	2983.92	75.93	OSF1.50	9260.00	9178.44	MinPt-O-SF
3073.14	62.61	3030.80	3010.53	75.77	OSF1.50	9940.00	9858.44	MinPt-O-SF
4067.14	335.36	3843.14	3731.78	18.26	OSF1.50	22342.02	12300.00	MinPts

Cimarex Dos Equis 12-13
Federal Com #6H - Rev2 RM
03Dec19 (Def Plan)

Pass

3566.65	32.81	3565.36	3533.84	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3566.64	32.81	3565.36	3533.83	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
3566.64	32.81	3556.35	3533.83	395.75	MAS = 10.00 (m)	1500.00	1500.00	MinPts
3566.68	32.81	3556.26	3533.88	390.01	MAS = 10.00 (m)	1530.00	1530.00	MINPT-O-EQU
3463.67	40.73	3436.05	3422.94	132.03	OSF1.50	5470.00	5420.05	MinPts
3099.05	53.97	3062.38	3045.08	89.50	OSF1.50	7690.00	7608.46	MinPt-O-SF
3096.09	81.43	3041.11	3014.65	58.48	OSF1.50	12160.00	12061.21	MinPts
3096.09	81.44	3041.11	3014.65	58.48	OSF1.50	12170.00	12069.38	MinPt-O-ADP
3096.92	81.49	3041.91	3015.43	58.45	OSF1.50	12270.00	12143.78	MinPt-O-SF
3098.06	81.50	3043.04	3016.55	58.45	OSF1.50	12320.00	12175.36	MinPt-O-SF
3313.66	313.54	3104.21	3000.13	15.91	OSF1.50	22342.02	12300.00	MinPts

Continental Wimberly #8
(Offset) Plugged Oil Inc Only
0ft-5070ft (Def Survey)

Pass

3459.56	32.81	3458.27	3426.75	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3459.39	32.81	3458.08	3426.58	177038.44	MAS = 10.00 (m)	20.00	20.00	MinPt-O-SF
3459.36	32.81	3458.05	3426.55	197386.20	MAS = 10.00 (m)	26.00	26.00	WRP

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)		Minor	Major		
	3459.33	32.81	3458.01	3426.52	104586.01	MAS = 10.00 (m)	40.00	40.00				MinPts	
	3462.22	53.18	3426.34	3409.04	100.04	OSF1.50	1140.00	1140.00				MinPt-CtCt	
	3244.29	259.64	3070.70	2984.64	18.84	OSF1.50	5280.00	5233.08				MinPt-O-SF	
	3243.25	259.44	3069.81	2983.82	18.85	OSF1.50	5350.00	5301.97				MinPts	
	3243.23	259.40	3069.81	2983.83	18.85	OSF1.50	5360.00	5311.81				MinPt-CtCt	
	7230.90	80.88	7176.55	7150.02	136.25	OSF1.50	15180.00	12300.00				MinPt-CtCt	
	7231.65	83.02	7175.87	7148.63	132.70	OSF1.50	15280.00	12300.00				MINPT-O-EOU	
	7232.76	84.38	7176.08	7148.39	130.55	OSF1.50	15340.00	12300.00				MinPt-O-ADP	
	9450.12	236.62	9291.95	9213.51	60.23	OSF1.50	21260.00	12300.00				MinPt-O-SF	
	10180.49	252.06	10012.02	9928.43	60.89	OSF1.50	22342.02	12300.00				TD	

Cimarex Dos Equis 12 Federal
Com #1H Gyro 0ft to 11268ft
MD (Def Survey)

Pass

4172.66	32.81	4170.68	4139.85	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4172.64	32.81	4170.66	4139.83	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
4172.65	32.81	4170.67	4139.84	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
4172.73	32.81	4170.63	4139.93	32297.35	MAS = 10.00 (m)	70.00	70.00					MINPT-O-EOU	
4177.78	32.81	4167.36	4144.98	494.22	MAS = 10.00 (m)	1820.00	1820.00					MinPts	
3344.27	47.09	3311.86	3297.18	113.80	OSF1.50	7300.00	7220.85					MinPt-O-SF	
3306.56	45.50	3275.18	3261.06	116.93	OSF1.50	7760.00	7678.44					MinPt-O-ADP	
3306.54	45.48	3275.18	3261.06	117.01	OSF1.50	7770.00	7688.44					MinPts	
3279.46	51.45	3243.95	3228.01	102.75	OSF1.50	9770.00	9688.44					MinPt-O-SF	
3247.97	53.70	3211.10	3194.27	96.40	OSF1.50	10540.00	10458.44					MinPt-CtCt	
3247.97	53.73	3211.09	3194.24	96.33	OSF1.50	10550.00	10468.44					MINPT-O-EOU	
3248.01	53.78	3211.10	3194.23	96.18	OSF1.50	10570.00	10488.44					MinPt-O-ADP	
3308.10	59.43	3267.82	3248.67	86.32	OSF1.50	11871.56	11790.00					MinPt-O-SF	
4283.91	83.65	4227.48	4200.26	78.65	OSF1.50	14830.00	12300.00					MinPt-O-SF	
10652.48	113.75	10575.99	10538.73	142.94	OSF1.50	22342.02	12300.00					TD	

Cimarex Dos Equis 12 Federal
Com #1H ST01 Gyro+MWD
10506ft to 15399ft MD (Def
Survey)

Pass

4172.66	32.81	4170.68	4139.85	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4172.64	32.81	4170.66	4139.83	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
4172.65	32.81	4170.67	4139.84	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
4172.73	32.81	4170.63	4139.93	32297.35	MAS = 10.00 (m)	70.00	70.00					MINPT-O-EOU	
4177.78	32.81	4167.36	4144.98	494.22	MAS = 10.00 (m)	1820.00	1820.00					MinPts	
3344.27	47.09	3311.86	3297.18	113.80	OSF1.50	7300.00	7220.85					MinPt-O-SF	
3306.56	45.50	3275.18	3261.06	116.93	OSF1.50	7760.00	7678.44					MinPt-O-ADP	
3306.54	45.48	3275.18	3261.06	117.01	OSF1.50	7770.00	7688.44					MinPts	
3279.46	51.45	3243.95	3228.01	102.75	OSF1.50	9770.00	9688.44					MinPt-O-SF	
3247.97	53.70	3211.10	3194.27	96.40	OSF1.50	10540.00	10458.44					MinPt-CtCt	
3247.97	53.73	3211.09	3194.24	96.33	OSF1.50	10550.00	10468.44					MINPT-O-EOU	
3248.01	53.78	3211.10	3194.23	96.18	OSF1.50	10570.00	10488.44					MinPt-O-ADP	
3365.28	58.76	3325.36	3306.52	89.25	OSF1.50	11740.00	11658.44					MinPt-O-SF	
3429.01	59.02	3389.01	3370.00	90.13	OSF1.50	12010.00	11926.51					MinPt-O-SF	
3456.88	59.08	3416.83	3397.80	90.76	OSF1.50	12140.00	12044.52					MinPt-O-SF	
3535.79	71.69	3487.33	3464.10	76.04	OSF1.50	13170.00	12300.00					MinPts	
3565.70	98.05	3499.67	3467.65	55.64	OSF1.50	13780.00	12300.00					MINPT-O-EOU	
3569.84	111.71	3494.70	3458.13	48.77	OSF1.50	14020.00	12300.00					MinPt-CtCt	
3581.85	167.61	3469.45	3414.24	32.42	OSF1.50	15160.00	12300.00					MinPt-CtCt	
3587.90	207.02	3449.23	3380.88	26.23	OSF1.50	15930.00	12300.00					MinPt-CtCt	
3576.33	274.74	3392.51	3301.59	19.66	OSF1.50	16810.00	12300.00					MinPt-CtCt	
3576.47	275.10	3392.41	3301.37	19.63	OSF1.50	16840.00	12300.00					MINPT-O-EOU	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
3576.57	275.22	3392.43	3301.35	19.62		OSF1.50	16850.00	12300.00				MinPt-O-ADP	
3589.87	277.68	3404.10	3312.20	19.52		OSF1.50	17120.00	12300.00				MinPt-O-SF	
6588.65	210.56	6447.62	6378.09	47.37		OSF1.50	22342.02	12300.00				TD	

Continental Wimberly #4
(Offset) Plugged Oil Inc Only
0ft-5030ft (Def Survey)

Pass

3732.75	32.81	3731.46	3699.94	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3732.60	32.81	3731.29	3699.79	219135.47		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3732.57	32.81	3731.27	3699.76	251463.64		MAS = 10.00 (m)	26.00	26.00				WRP	
3732.55	32.81	3731.22	3699.74	87670.22		MAS = 10.00 (m)	40.00	40.00				MinPts	
3733.50	64.09	3690.35	3669.41	89.14		OSF1.50	1290.00	1290.00				MinPt-CtCt	
3257.48	260.20	3083.44	2997.29	18.89		OSF1.50	5380.00	5331.49				MinPt-O-SF	
3249.29	258.57	3076.34	2990.71	18.96		OSF1.50	5580.00	5528.29				MinPt-O-ADP	
3249.20	258.46	3076.32	2990.73	18.97		OSF1.50	5590.00	5538.13				MINPT-O-EOU	
3249.12	258.24	3076.39	2990.87	18.99		OSF1.50	5610.00	5557.82				MinPt-CtCt	
7616.50	98.09	7550.67	7518.41	118.00		OSF1.50	13840.00	12300.00				MinPt-CtCt	
7616.75	98.79	7550.46	7517.96	117.15		OSF1.50	13900.00	12300.00				MINPT-O-EOU	
7617.05	99.17	7550.51	7517.89	116.71		OSF1.50	13930.00	12300.00				MinPt-O-ADP	
9956.35	237.92	9797.30	9718.42	63.10		OSF1.50	20250.00	12300.00				MinPt-O-SF	
11416.43	264.14	11239.90	11152.29	65.14		OSF1.50	22342.02	12300.00				TD	

Cimarex Dos Equis 12-13
Federal Com #88H Rev1 RM
14Feb20 (Def Plan)

Pass

3485.66	32.81	3484.37	3452.85	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3485.65	32.81	3484.36	3452.84	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
3485.65	32.81	3474.10	3452.84	339.43		MAS = 10.00 (m)	1700.00	1700.00				MinPts	
3485.69	32.81	3474.01	3452.88	335.06		MAS = 10.00 (m)	1730.00	1730.00				MINPT-O-EOU	
3437.74	58.64	3398.21	3379.10	89.93		OSF1.50	7310.00	7230.70				MinPts	
3454.81	59.23	3414.90	3395.59	89.41		OSF1.50	7620.00	7538.54				MinPt-O-SF	
3705.53	69.40	3658.83	3636.12	81.57		OSF1.50	9140.00	9058.44				MinPt-O-SF	
3705.78	68.03	3660.00	3637.75	83.25		OSF1.50	9370.00	9288.44				MinPt-CtCt	
3705.80	68.07	3659.99	3637.73	83.20		OSF1.50	9400.00	9318.44				MINPT-O-EOU	
3705.81	68.09	3659.99	3637.72	83.18		OSF1.50	9410.00	9328.44				MinPt-O-ADP	
3766.42	70.94	3718.70	3695.48	81.08		OSF1.50	10270.00	10188.44				MinPt-O-SF	
4582.40	346.23	4351.14	4236.16	19.92		OSF1.50	22342.02	12300.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #86H Rev1 RM
03Dec19 (Def Plan)

Pass

3546.66	32.81	3545.38	3513.86	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3546.66	32.81	3545.37	3513.85	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
3546.66	32.81	3536.36	3513.85	393.53		MAS = 10.00 (m)	1500.00	1500.00				MinPts	
3546.70	32.81	3536.27	3513.89	387.65		MAS = 10.00 (m)	1530.00	1530.00				MINPT-O-EOU	
3468.51	60.36	3427.81	3408.15	88.18		OSF1.50	7340.00	7260.31				MinPt-CtCt	
3468.53	60.38	3427.81	3408.14	88.14		OSF1.50	7350.00	7270.18				MinPts	
3708.67	70.85	3661.00	3637.82	79.94		OSF1.50	9100.00	9018.44				MinPt-O-SF	
3709.94	83.83	3653.62	3626.11	67.39		OSF1.50	11890.00	11808.44				MINPT-O-EOU	
3709.96	83.86	3653.62	3626.10	67.37		OSF1.50	11900.00	11818.42				MinPts	
3706.52	79.70	3652.96	3626.82	70.88		OSF1.50	12860.00	12299.95				MinPt-CtCt	
3708.17	324.02	3491.73	3384.15	17.23		OSF1.50	22342.02	12300.00				MinPts	

Cimarex Dos Equis 13 Federal
#1H Pilot Hole Extreme 0ft to
11400ft (Def Survey)

Pass

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
6857.65	32.81	6855.67	6824.84	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
6857.58	32.81	6855.60	6824.78	N/A		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
6857.58	32.81	6855.59	6824.77	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
6857.57	32.81	6855.56	6824.76	220381.39		MAS = 10.00 (m)	40.00	40.00				MinPts	
6858.79	32.81	6854.88	6825.98	3537.60		MAS = 10.00 (m)	490.00	490.00				MINPT-O-EOU	
6859.21	32.81	6854.56	6826.41	2561.01		MAS = 10.00 (m)	660.00	660.00				MinPts	
6861.08	32.81	6853.53	6828.27	1233.07		MAS = 10.00 (m)	1300.00	1300.00				MINPT-O-EOU	
6865.28	32.81	6854.41	6832.47	771.89		MAS = 10.00 (m)	2100.00	2099.98				MinPt-O-SF	
6396.65	44.37	6366.23	6352.28	229.12		OSF1.50	7300.00	7220.85				MinPt-O-SF	
6379.78	42.62	6350.52	6337.16	238.65		OSF1.50	7700.00	7618.46				MinPt-O-ADP	
6379.75	42.58	6350.52	6337.17	238.86		OSF1.50	7710.00	7628.45				MINPT-O-EOU	
6379.74	42.55	6350.53	6337.20	239.08		OSF1.50	7720.00	7638.45				MinPt-CtCt	
6394.76	44.40	6364.32	6350.36	228.88		OSF1.50	8530.00	8448.44				MinPt-O-SF	
6397.09	45.73	6365.77	6351.35	221.85		OSF1.50	8940.00	8858.44				MINPT-O-EOU	
6397.20	45.87	6365.79	6351.33	221.16		OSF1.50	8980.00	8898.44				MinPt-O-ADP	
6392.87	50.17	6358.59	6342.70	201.09		OSF1.50	10090.00	10008.44				MinPt-CtCt	
6393.09	50.74	6358.43	6342.35	198.73		OSF1.50	10220.00	10138.44				MINPT-O-EOU	
6393.22	50.89	6358.46	6342.33	198.11		OSF1.50	10260.00	10178.44				MinPt-O-ADP	
6394.44	55.83	6356.39	6338.61	179.77		OSF1.50	11400.00	11318.44				MinPt-CtCt	
6394.52	56.07	6356.31	6338.45	178.98		OSF1.50	11450.00	11368.44				MINPT-O-EOU	
6394.64	56.21	6356.34	6338.43	178.50		OSF1.50	11480.00	11398.44				MinPt-O-ADP	
6395.04	57.32	6355.99	6337.72	174.90		OSF1.50	11550.00	11468.44				MinPts	
6405.06	58.66	6365.15	6346.40	170.79		OSF1.50	11871.56	11790.00				MinPt-O-SF	
3502.34	133.13	3412.75	3369.22	40.20		OSF1.50	17570.00	12300.00				MinPt-CtCt	
3502.73	134.38	3412.34	3368.35	39.78		OSF1.50	17620.00	12300.00				MINPT-O-EOU	
3503.31	135.12	3412.45	3368.18	39.54		OSF1.50	17650.00	12300.00				MinPt-O-ADP	
3719.46	159.42	3612.52	3560.04	35.42		OSF1.50	18820.00	12300.00				MinPt-O-SF	
5921.10	167.08	5809.05	5754.02	53.78		OSF1.50	22342.02	12300.00				TD	

Cimarex Dos Equis 13 Federal
#1H ST01 Xem+MWD 0ft to
15250ft (Def Survey)

Pass

6857.65	32.81	6855.67	6824.84	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
6857.58	32.81	6855.60	6824.78	N/A		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
6857.58	32.81	6855.59	6824.77	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
6857.57	32.81	6855.56	6824.76	220381.39		MAS = 10.00 (m)	40.00	40.00				MinPts	
6858.79	32.81	6854.88	6825.98	3537.60		MAS = 10.00 (m)	490.00	490.00				MINPT-O-EOU	
6859.21	32.81	6854.56	6826.41	2561.01		MAS = 10.00 (m)	660.00	660.00				MinPts	
6861.08	32.81	6853.53	6828.27	1233.07		MAS = 10.00 (m)	1300.00	1300.00				MINPT-O-EOU	
6865.28	32.81	6854.41	6832.47	771.89		MAS = 10.00 (m)	2100.00	2099.98				MinPt-O-SF	
6396.65	44.37	6366.23	6352.28	229.12		OSF1.50	7300.00	7220.85				MinPt-O-SF	
6379.78	42.62	6350.52	6337.16	238.65		OSF1.50	7700.00	7618.46				MinPt-O-ADP	
6379.75	42.58	6350.52	6337.17	238.86		OSF1.50	7710.00	7628.45				MINPT-O-EOU	
6379.74	42.55	6350.53	6337.20	239.08		OSF1.50	7720.00	7638.45				MinPt-CtCt	
6394.76	44.40	6364.32	6350.36	228.88		OSF1.50	8530.00	8448.44				MinPt-O-SF	
6397.09	45.73	6365.77	6351.35	221.85		OSF1.50	8940.00	8858.44				MINPT-O-EOU	
6397.20	45.87	6365.79	6351.33	221.16		OSF1.50	8980.00	8898.44				MinPt-O-ADP	
6392.87	50.17	6358.59	6342.70	201.09		OSF1.50	10090.00	10008.44				MinPt-CtCt	
6393.09	50.74	6358.43	6342.35	198.73		OSF1.50	10220.00	10138.44				MINPT-O-EOU	
6393.22	50.89	6358.46	6342.33	198.11		OSF1.50	10260.00	10178.44				MinPt-O-ADP	
6514.42	56.70	6475.96	6457.72	178.52		OSF1.50	11871.56	11790.00				MinPt-O-SF	
3617.82	157.76	3511.99	3460.06	34.82		OSF1.50	18370.00	12300.00				MinPt-CtCt	
3619.19	162.00	3510.54	3457.20	33.91		OSF1.50	18510.00	12300.00				MINPT-O-EOU	
3620.93	164.11	3510.86	3456.81	33.48		OSF1.50	18580.00	12300.00				MinPt-O-ADP	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
3622.15	201.35	3487.26	3420.81	27.24		OSF1.50	19510.00	12300.00				MinPt-CtCt	
3626.77	214.76	3482.94	3412.02	25.55		OSF1.50	19860.00	12300.00				MINPT-O-EOU	
3631.50	221.30	3483.31	3410.21	24.82		OSF1.50	20020.00	12300.00				MinPt-O-ADP	
3645.20	240.87	3483.96	3404.33	22.88		OSF1.50	20400.00	12300.00				MinPt-CtCt	
3651.39	262.51	3475.72	3388.88	21.01		OSF1.50	20910.00	12300.00				MINPT-O-EOU	
3654.18	290.21	3460.04	3363.97	19.01		OSF1.50	21450.00	12300.00				MinPt-CtCt	
3640.77	356.41	3402.50	3284.36	15.40		OSF1.50	22060.00	12300.00				MinPt-CtCt	
3641.08	357.33	3402.20	3283.75	15.36		OSF1.50	22110.00	12300.00				MINPT-O-EOU	
3641.40	357.68	3402.28	3283.72	15.35		OSF1.50	22130.00	12300.00				MinPt-O-ADP	
3651.49	360.79	3410.30	3290.70	15.26		OSF1.50	22342.02	12300.00				MinPt-O-SF	

Continental Wimberly #2
(Offset) Plugged Oil Inc Only
0ft-5038ft (Def Survey)

Pass

4337.19	32.81	4335.90	4304.38	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4337.07	32.81	4335.77	4304.26	332399.53		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
4337.05	32.81	4335.75	4304.24	406095.55		MAS = 10.00 (m)	26.00	26.00				WRP	
4337.04	32.81	4335.68	4304.23	62609.58		MAS = 10.00 (m)	40.00	40.00				MinPts	
4331.19	70.34	4283.87	4260.85	94.05		OSF1.50	1460.00	1460.00				MinPt-CtCt	
3781.77	256.56	3610.12	3525.21	22.26		OSF1.50	5480.00	5429.89				MinPt-O-SF	
3768.71	254.29	3598.59	3514.42	22.38		OSF1.50	5760.00	5705.42				MinPt-O-ADP	
3768.62	254.18	3598.58	3514.44	22.39		OSF1.50	5770.00	5715.26				MINPT-O-EOU	
3768.53	253.85	3598.71	3514.69	22.41		OSF1.50	5800.00	5744.78				MinPt-CtCt	
10430.56	234.22	10273.98	10196.34	67.16		OSF1.50	19230.00	12300.00				MinPt-O-SF	
12660.89	268.68	12481.35	12392.22	71.02		OSF1.50	22342.02	12300.00				TD	

Continental Wimberly #3
(Offset) Plugged Oil Inc Only
0ft-3570ft (Def Survey)

Pass

4635.54	32.81	4634.25	4602.73	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4635.26	32.81	4633.94	4602.45	127190.04		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
4635.11	32.81	4633.68	4602.30	31820.30		MAS = 10.00 (m)	70.00	70.00				MinPts	
4632.52	60.87	4591.52	4571.66	116.59		OSF1.50	1320.00	1320.00				MinPt-CtCt	
4131.87	262.27	3956.44	3869.60	23.78		OSF1.50	5560.00	5508.61				MinPt-O-SF	
4121.40	260.58	3947.10	3860.82	23.87		OSF1.50	5820.00	5764.46				MinPt-O-ADP	
4121.33	260.50	3947.09	3860.83	23.88		OSF1.50	5830.00	5774.30				MINPT-O-EOU	
4121.24	260.23	3947.19	3861.01	23.90		OSF1.50	5860.00	5803.82				MinPt-CtCt	
7931.79	127.55	7846.32	7804.23	94.21		OSF1.50	13850.00	12300.00				MinPt-CtCt	
7931.91	127.91	7846.21	7804.00	93.94		OSF1.50	13890.00	12300.00				MINPT-O-EOU	
7932.14	128.20	7846.24	7803.94	93.74		OSF1.50	13920.00	12300.00				MinPt-O-ADP	
10076.53	244.29	9913.24	9832.24	62.19		OSF1.50	20060.00	12300.00				MinPt-O-SF	
11623.61	272.08	11441.80	11351.53	64.38		OSF1.50	22342.02	12300.00				TD	

Jubilee Energy Gulf Federal #1
(Offset) Plugged Oil Inc Only
0ft-5020ft (Def Survey)

Pass

4804.45	32.81	4803.16	4771.64	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4804.27	32.81	4802.97	4771.46	252878.18		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
4804.23	32.81	4802.86	4771.42	59076.75		MAS = 10.00 (m)	50.00	50.00				MinPts	
4803.01	97.28	4737.73	4705.74	75.04		OSF1.50	1930.00	1930.00				MinPt-CtCt	
4360.39	261.57	4185.45	4098.83	25.16		OSF1.50	5450.00	5400.37				MinPt-O-SF	
4351.70	260.19	4177.68	4091.51	25.24		OSF1.50	5700.00	5646.38				MinPts	
4351.62	259.97	4177.76	4091.65	25.26		OSF1.50	5730.00	5675.90				MinPt-CtCt	
7847.43	126.09	7762.94	7721.34	94.30		OSF1.50	14840.00	12300.00				MinPt-CtCt	
7847.72	127.02	7762.60	7720.69	93.61		OSF1.50	14910.00	12300.00				MINPT-O-EOU	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
7848.16	127.58	7762.68	7720.58	93.20		OSF1.50	14950.00	12300.00				MinPt-O-ADP	
9882.50	248.31	9716.53	9634.19	60.00		OSF1.50	20850.00	12300.00				MinPt-O-SF	
10854.23	268.04	10675.11	10586.20	61.03		OSF1.50	22342.02	12300.00				TD	

Continental Wimberly #7
(Offset) Plugged Oil Inc Only
0ft-5100ft (Def Survey)

Pass

4655.64	32.81	4654.36	4622.83	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4655.60	32.81	4654.30	4622.79	766050.97		MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
4655.57	32.81	4654.28	4622.76	N/A		MAS = 10.00 (m)	20.00	20.00				MINPT-O-EOU	
4655.57	32.81	4654.28	4622.76	N/A		MAS = 10.00 (m)	26.00	26.00				MinPts	
4655.68	38.80	4629.38	4616.87	186.08		OSF1.50	860.00	860.00				MinPt-CtCt	
4655.46	74.29	4605.50	4581.16	95.63		OSF1.50	1540.00	1540.00				MinPt-CtCt	
4497.49	261.11	4322.95	4236.38	25.97		OSF1.50	5310.00	5262.61				MinPt-O-SF	
4496.98	261.03	4322.49	4235.95	25.97		OSF1.50	5370.00	5321.65				MinPts	
4496.98	261.02	4322.50	4235.96	25.97		OSF1.50	5380.00	5331.49				MinPt-CtCt	
7213.63	107.10	7141.81	7106.54	102.24		OSF1.50	16490.00	12300.00				MinPt-CtCt	
7214.41	109.54	7140.95	7104.87	99.94		OSF1.50	16600.00	12300.00				MINPT-O-EOU	
7215.54	110.93	7141.16	7104.61	98.70		OSF1.50	16660.00	12300.00				MinPt-O-ADP	
9117.33	245.02	8953.55	8872.31	56.10		OSF1.50	22070.00	12300.00				MinPt-O-SF	
9286.18	249.33	9119.53	9036.85	56.15		OSF1.50	22342.02	12300.00				TD	

Stanolind Wimberly A Unit B
#1 Inc Only (Def Survey)

Pass

6410.82	32.81	6408.84	6378.01	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
6410.73	32.81	6408.74	6377.93	646430.62		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
6410.72	32.81	6408.73	6377.91	741802.33		MAS = 10.00 (m)	26.00	26.00				WRP	
6063.27	553.57	5693.46	5509.70	16.49		OSF1.50	5280.00	5233.08				MinPt-O-SF	
6057.12	552.19	5688.24	5504.93	16.52		OSF1.50	5510.00	5459.41				MinPt-O-ADP	
6057.05	552.12	5688.22	5504.94	16.52		OSF1.50	5520.00	5469.25				MINPT-O-EOU	
6056.94	551.79	5688.32	5505.15	16.53		OSF1.50	5560.00	5508.61				MinPt-CtCt	
7479.24	191.16	7351.14	7288.08	59.29		OSF1.50	17720.00	12300.00				MinPt-CtCt	
7480.14	193.81	7350.28	7286.33	58.47		OSF1.50	17840.00	12300.00				MINPT-O-EOU	
7481.56	195.52	7350.55	7286.04	57.97		OSF1.50	17910.00	12300.00				MinPt-O-ADP	
8790.26	383.20	8534.13	8407.06	34.58		OSF1.50	22342.02	12300.00				MinPt-O-SF	

Westates Petroleum Wolley #1
(Offset) Plugged Oil Blind 0ft-
5063ft (Def Survey)

Pass

10538.71	32.81	10537.42	10505.90	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
10538.61	32.81	10537.31	10505.80	867426.91		MAS = 10.00 (m)	26.00	26.00				WRP	
10321.88	1576.71	9270.24	8745.17	9.83		OSF1.50	5510.00	5459.41				MinPt-O-SF	
10317.13	1575.12	9266.56	8742.01	9.83		OSF1.50	5750.00	5695.58				MinPt-O-ADP	
10316.98	1574.95	9266.53	8742.04	9.83		OSF1.50	5770.00	5715.26				MINPT-O-EOU	
10316.78	1574.40	9266.70	8742.39	9.84		OSF1.50	5830.00	5774.30				MinPt-CtCt	
10109.62	1112.32	9367.64	8997.30	13.65		OSF1.50	15500.00	12300.00				MinPt-O-SF	
7933.50	706.82	7461.85	7226.68	16.86		OSF1.50	21770.00	12300.00				MinPt-CtCt	
7933.68	707.27	7461.74	7226.41	16.85		OSF1.50	21820.00	12300.00				MINPT-O-EOU	
7934.05	707.70	7461.82	7226.35	16.84		OSF1.50	21860.00	12300.00				MinPt-O-ADP	
7954.37	718.55	7474.91	7235.82	16.63		OSF1.50	22342.02	12300.00				MinPt-O-SF	



Cimarex Dos Equis 12-13 Federal Com #10H Rev1 RM 18Feb20 Proposal

Geodetic Report

(Def Plan)



Report Date: February 18, 2020 - 04:03 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #10H / New Slot
Well: Dos Equis 12-13 Federal Com #10H
Borehole: Dos Equis 12-13 Federal Com #10H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #10H Rev1 RM 18Feb20
Survey Date: December 26, 2019
Tort / AHD / DDI / ERD Ratio: 110.504 ° / 11134.858 ft / 6.349 / 0.905
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 19.35573", W 103° 38' 9.16038"
Location Grid N/E Y/X: N 451276.390 ftUS, E 756980.660 ftUS
CRS Grid Convergence Angle: 0.3721 °
Grid Scale Factor: 0.99996235
Version / Patch: 2.10.787.0

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: 3633.200 ft above MSL
Seabed / Ground Elevation: 3607.200 ft above MSL
Magnetic Declination: 6.618 °
Total Gravity Field Strength: 998.4378mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47841.978 nT
Magnetic Dip Angle: 59.879 °
Declination Date: February 18, 2020
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3721 °
Total Corr Mag North->Grid North: 6.2464 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [270' FNL, 290' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	100.00	0.00	89.58	100.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	200.00	0.00	89.58	200.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	300.00	0.00	89.58	300.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	400.00	0.00	89.58	400.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	500.00	0.00	89.58	500.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	600.00	0.00	89.58	600.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	700.00	0.00	89.58	700.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	800.00	0.00	89.58	800.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	900.00	0.00	89.58	900.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1000.00	0.00	89.58	1000.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1100.00	0.00	89.58	1100.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
Rustler	1185.00	0.00	89.58	1185.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1200.00	0.00	89.58	1200.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1300.00	0.00	89.58	1300.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1400.00	0.00	89.58	1400.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
Salado (Top Salt)	1500.00	0.00	89.58	1500.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1600.00	0.00	89.58	1600.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1700.00	0.00	89.58	1700.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1800.00	0.00	89.58	1800.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	1900.00	0.00	89.58	1900.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
Nudge 2°/100' DLS	2000.00	0.00	89.58	2000.00	0.00	0.00	0.00	0.00	451276.39	756980.66	N 32 14 19.36 W 103 38	9.16
	2100.00	2.00	89.58	2099.98	0.00	0.01	1.75	2.00	451276.40	756982.41	N 32 14 19.36 W 103 38	9.14
	2200.00	4.00	89.58	2199.84	-0.01	0.05	6.98	2.00	451276.44	756987.64	N 32 14 19.36 W 103 38	9.08
	2300.00	6.00	89.58	2299.45	-0.03	0.12	15.69	2.00	451276.51	756996.35	N 32 14 19.36 W 103 38	8.98
	2400.00	8.00	89.58	2398.70	-0.05	0.21	27.88	2.00	451276.60	757008.54	N 32 14 19.36 W 103 38	8.84

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 ° ' ")
Hold Nudge	2500.00	10.00	89.58	2497.47	-0.07	0.32	43.52	2.00	451276.71	757024.18	N 32 14 19.36 W 103 38	8.65
	2512.61	10.25	89.58	2509.88	-0.07	0.34	45.74	2.00	451276.73	757026.40	N 32 14 19.36 W 103 38	8.63
	2600.00	10.25	89.58	2595.87	-0.10	0.45	61.29	0.00	451276.84	757041.95	N 32 14 19.36 W 103 38	8.45
	2700.00	10.25	89.58	2694.28	-0.13	0.58	79.09	0.00	451276.97	757059.75	N 32 14 19.36 W 103 38	8.24
	2800.00	10.25	89.58	2792.68	-0.16	0.72	96.89	0.00	451277.11	757077.54	N 32 14 19.36 W 103 38	8.03
	2900.00	10.25	89.58	2891.08	-0.19	0.85	114.68	0.00	451277.24	757095.34	N 32 14 19.36 W 103 38	7.83
	3000.00	10.25	89.58	2989.49	-0.22	0.98	132.48	0.00	451277.37	757113.14	N 32 14 19.36 W 103 38	7.62
	3100.00	10.25	89.58	3087.89	-0.24	1.11	150.28	0.00	451277.50	757130.93	N 32 14 19.36 W 103 38	7.41
	3200.00	10.25	89.58	3186.29	-0.27	1.24	168.08	0.00	451277.63	757148.73	N 32 14 19.36 W 103 38	7.20
	3300.00	10.25	89.58	3284.70	-0.30	1.37	185.88	0.00	451277.76	757166.53	N 32 14 19.36 W 103 38	7.00
	3400.00	10.25	89.58	3383.10	-0.33	1.50	203.67	0.00	451277.89	757184.32	N 32 14 19.36 W 103 38	6.79
	3500.00	10.25	89.58	3481.50	-0.36	1.64	221.47	0.00	451278.03	757202.12	N 32 14 19.36 W 103 38	6.58
	3600.00	10.25	89.58	3579.91	-0.39	1.77	239.27	0.00	451278.16	757219.92	N 32 14 19.36 W 103 38	6.37
	3700.00	10.25	89.58	3678.31	-0.42	1.90	257.07	0.00	451278.29	757237.72	N 32 14 19.36 W 103 38	6.17
	3800.00	10.25	89.58	3776.71	-0.45	2.03	274.86	0.00	451278.42	757255.51	N 32 14 19.36 W 103 38	5.96
	3900.00	10.25	89.58	3875.12	-0.48	2.16	292.66	0.00	451278.55	757273.31	N 32 14 19.36 W 103 38	5.75
	4000.00	10.25	89.58	3973.52	-0.50	2.29	310.46	0.00	451278.68	757291.11	N 32 14 19.36 W 103 38	5.55
	4100.00	10.25	89.58	4071.92	-0.53	2.42	328.26	0.00	451278.81	757308.90	N 32 14 19.36 W 103 38	5.34
	4200.00	10.25	89.58	4170.33	-0.56	2.55	346.05	0.00	451278.94	757326.70	N 32 14 19.36 W 103 38	5.13
	4300.00	10.25	89.58	4268.73	-0.59	2.69	363.85	0.00	451279.08	757344.50	N 32 14 19.36 W 103 38	4.92
Base fo Salt	4400.00	10.25	89.58	4367.13	-0.62	2.82	381.65	0.00	451279.21	757362.29	N 32 14 19.36 W 103 38	4.72
	4500.00	10.25	89.58	4465.54	-0.65	2.95	399.45	0.00	451279.34	757380.09	N 32 14 19.36 W 103 38	4.51
	4600.00	10.25	89.58	4563.94	-0.68	3.08	417.24	0.00	451279.47	757397.89	N 32 14 19.36 W 103 38	4.30
	4687.45	10.25	89.58	4650.00	-0.70	3.20	432.81	0.00	451279.59	757413.45	N 32 14 19.36 W 103 38	4.12
Bell Canyon	4700.00	10.25	89.58	4662.34	-0.71	3.21	435.04	0.00	451279.60	757415.69	N 32 14 19.36 W 103 38	4.10
	4800.00	10.25	89.58	4760.75	-0.74	3.34	452.84	0.00	451279.73	757433.48	N 32 14 19.36 W 103 38	3.89
	4900.00	10.25	89.58	4859.15	-0.76	3.47	470.64	0.00	451279.86	757451.28	N 32 14 19.36 W 103 38	3.68
	4989.27	10.25	89.58	4947.00	-0.79	3.59	486.53	0.00	451279.98	757467.17	N 32 14 19.36 W 103 38	3.50
Cherry Canyon	5000.00	10.25	89.58	4957.55	-0.79	3.61	488.44	0.00	451280.00	757469.08	N 32 14 19.36 W 103 38	3.47
	5100.00	10.25	89.58	5055.96	-0.82	3.74	506.23	0.00	451280.13	757486.87	N 32 14 19.36 W 103 38	3.27
	5200.00	10.25	89.58	5154.36	-0.85	3.87	524.03	0.00	451280.26	757504.67	N 32 14 19.36 W 103 38	3.06
	5300.00	10.25	89.58	5252.77	-0.88	4.00	541.83	0.00	451280.39	757522.47	N 32 14 19.36 W 103 38	2.85
	5400.00	10.25	89.58	5351.17	-0.91	4.13	559.63	0.00	451280.52	757540.26	N 32 14 19.36 W 103 38	2.64
	5500.00	10.25	89.58	5449.57	-0.94	4.26	577.42	0.00	451280.65	757558.06	N 32 14 19.36 W 103 38	2.44
	5600.00	10.25	89.58	5547.98	-0.97	4.39	595.22	0.00	451280.78	757575.86	N 32 14 19.36 W 103 38	2.23
	5700.00	10.25	89.58	5646.38	-1.00	4.53	613.02	0.00	451280.92	757593.65	N 32 14 19.36 W 103 38	2.02
	5800.00	10.25	89.58	5744.78	-1.02	4.66	630.82	0.00	451281.05	757611.45	N 32 14 19.36 W 103 38	1.82
	5900.00	10.25	89.58	5843.19	-1.05	4.79	648.61	0.00	451281.18	757629.25	N 32 14 19.36 W 103 38	1.61
	5931.31	10.25	89.58	5874.00	-1.06	4.83	654.19	0.00	451281.22	757634.82	N 32 14 19.36 W 103 38	1.54
	6000.00	10.25	89.58	5941.59	-1.08	4.92	666.41	0.00	451281.31	757647.05	N 32 14 19.36 W 103 38	1.40
	6100.00	10.25	89.58	6039.99	-1.11	5.05	684.21	0.00	451281.44	757664.84	N 32 14 19.36 W 103 38	1.19
	6200.00	10.25	89.58	6138.40	-1.14	5.18	702.01	0.00	451281.57	757682.64	N 32 14 19.36 W 103 38	0.99
	6300.00	10.25	89.58	6236.80	-1.17	5.31	719.80	0.00	451281.70	757700.44	N 32 14 19.36 W 103 38	0.78
	6400.00	10.25	89.58	6335.20	-1.20	5.45	737.60	0.00	451281.84	757718.23	N 32 14 19.36 W 103 38	0.57
	6500.00	10.25	89.58	6433.61	-1.23	5.58	755.40	0.00	451281.97	757736.03	N 32 14 19.36 W 103 38	0.37
	6600.00	10.25	89.58	6532.01	-1.26	5.71	773.20	0.00	451282.10	757753.83	N 32 14 19.36 W 103 38	0.16
	6700.00	10.25	89.58	6630.41	-1.28	5.84	791.00	0.00	451282.23	757771.62	N 32 14 19.36 W 103 37	59.95
	6800.00	10.25	89.58	6728.82	-1.31	5.97	808.79	0.00	451282.36	757789.42	N 32 14 19.36 W 103 37	59.74
Drop to Vertical 2°/100' DLS	6900.00	10.25	89.58	6827.22	-1.34	6.10	826.59	0.00	451282.49	757807.22	N 32 14 19.36 W 103 37	59.54
	7000.00	10.25	89.58	6925.62	-1.37	6.23	844.39	0.00	451282.62	757825.01	N 32 14 19.36 W 103 37	59.33
	7100.00	10.25	89.58	7024.03	-1.40	6.37	862.19	0.00	451282.76	757842.81	N 32 14 19.36 W 103 37	59.12
	7200.00	10.25	89.58	7122.43	-1.43	6.50	879.98	0.00	451282.89	757860.61	N 32 14 19.36 W 103 37	58.91
Brushy Canyon	7278.83	10.25	89.58	7200.00	-1.45	6.60	894.01	0.00	451282.99	757874.64	N 32 14 19.36 W 103 37	58.75
	7300.00	9.83	89.58	7220.85	-1.46	6.63	897.70	2.00	451283.02	757878.33	N 32 14 19.36 W 103 37	58.71
	7391.26	8.00	89.58	7311.00	-1.48	6.73	911.85	2.00	451283.12	757892.47	N 32 14 19.36 W 103 37	58.54
	7400.00	7.83	89.58	7319.66	-1.48	6.74	913.05	2.00	451283.13	757893.67	N 32 14 19.36 W 103 37	58.53
	7500.00	5.83	89.58	7418.94	-1.50	6.83	924.94	2.00	451283.22	757905.56	N 32 14 19.36 W 103 37	58.39
	7600.00	3.83	89.58	7518.58	-1.52	6.89	933.36	2.00	451283.28	757913.98	N 32 14 19.36 W 103 37	58.29

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 ° ' ")	
Hold Vertical	7700.00	1.83	89.58	7618.46	-1.52	6.93	938.29	2.00	451283.32	757918.92	N 32 14 19.36	W 103 37 58.24	
	7791.44	0.00	89.58	7709.88	-1.53	6.94	939.75	2.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	7800.00	0.00	89.58	7718.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	7900.00	0.00	89.58	7818.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8000.00	0.00	89.58	7918.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8100.00	0.00	89.58	8018.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8200.00	0.00	89.58	8118.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8300.00	0.00	89.58	8218.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8400.00	0.00	89.58	8318.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8500.00	0.00	89.58	8418.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8600.00	0.00	89.58	8518.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8700.00	0.00	89.58	8618.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8800.00	0.00	89.58	8718.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	8900.00	0.00	89.58	8818.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	Bone Spring	8926.56	0.00	89.58	8845.00	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22
Avalon	9000.00	0.00	89.58	8918.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9100.00	0.00	89.58	9018.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9200.00	0.00	89.58	9118.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9300.00	0.00	89.58	9218.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9364.56	0.00	89.58	9283.00	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9400.00	0.00	89.58	9318.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9500.00	0.00	89.58	9418.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9600.00	0.00	89.58	9518.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9700.00	0.00	89.58	9618.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9800.00	0.00	89.58	9718.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	9900.00	0.00	89.58	9818.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	10000.00	0.00	89.58	9918.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	1st Bone Spring Sand	10061.56	0.00	89.58	9980.00	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22
	2nd Bone Spring Sand	10100.00	0.00	89.58	10018.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22
		10200.00	0.00	89.58	10118.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22
10300.00		0.00	89.58	10218.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
10400.00		0.00	89.58	10318.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
10500.00		0.00	89.58	10418.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
10600.00		0.00	89.58	10518.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
10700.00		0.00	89.58	10618.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
10721.56		0.00	89.58	10640.00	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
10800.00		0.00	89.58	10718.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
10900.00		0.00	89.58	10818.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
11000.00		0.00	89.58	10918.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
11100.00		0.00	89.58	11018.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
3rd Bone Spring Carb		11171.56	0.00	89.58	11090.00	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22
KOP - Build 12°/100' DLS		11200.00	0.00	89.58	11118.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22
		11300.00	0.00	89.58	11218.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22
	11400.00	0.00	89.58	11318.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	11500.00	0.00	89.58	11418.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	11600.00	0.00	89.58	11518.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	11700.00	0.00	89.58	11618.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	11800.00	0.00	89.58	11718.44	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	11871.56	0.00	89.58	11790.00	-1.53	6.94	939.75	0.00	451283.33	757920.37	N 32 14 19.36	W 103 37 58.22	
	11900.00	3.41	179.67	11818.42	-0.68	6.09	939.76	12.00	451282.48	757920.38	N 32 14 19.36	W 103 37 58.22	
	3rd Bone Spring Sand	11906.59	4.20	179.67	11825.00	-0.24	5.65	939.76	12.00	451282.04	757920.38	N 32 14 19.35	W 103 37 58.22
	12000.00	15.41	179.67	11916.90	15.65	-10.23	939.85	12.00	451266.16	757920.47	N 32 14 19.19	W 103 37 58.22	
	12100.00	27.41	179.67	12009.82	52.09	-46.68	940.06	12.00	451229.72	757920.68	N 32 14 18.83	W 103 37 58.22	
	12200.00	39.41	179.67	12093.14	107.06	-101.64	940.38	12.00	451174.75	757921.00	N 32 14 18.29	W 103 37 58.22	

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 ° ' ")
Wolfcamp Build 4°/100' DLS	12300.00	51.41	179.67	12163.21	178.14	-172.73	940.79	12.00	451103.67	757921.41	N 32 14 17.59	W 103 37 58.22
	12400.00	63.41	179.67	12216.97	262.25	-256.83	941.27	12.00	451019.57	757921.89	N 32 14 16.75	W 103 37 58.22
	12444.48	68.75	179.67	12235.00	302.89	-297.48	941.50	12.00	450978.93	757922.13	N 32 14 16.35	W 103 37 58.22
	12496.56	75.00	179.67	12251.19	352.36	-346.94	941.79	12.00	450929.46	757922.41	N 32 14 15.86	W 103 37 58.22
Landing Point	12500.00	75.14	179.67	12252.08	355.69	-350.27	941.81	4.00	450926.13	757922.43	N 32 14 15.83	W 103 37 58.22
	12600.00	79.14	179.67	12274.34	453.16	-447.74	942.37	4.00	450828.67	757922.99	N 32 14 14.86	W 103 37 58.22
	12700.00	83.14	179.67	12289.74	551.95	-546.52	942.94	4.00	450729.89	757923.56	N 32 14 13.89	W 103 37 58.22
	12800.00	87.14	179.67	12298.21	651.57	-646.14	943.51	4.00	450630.27	757924.14	N 32 14 12.90	W 103 37 58.22
	12871.56	90.00	179.67	12300.00	723.09	-717.67	943.93	4.00	450558.75	757924.55	N 32 14 12.19	W 103 37 58.23
	12900.00	90.00	179.67	12300.00	751.54	-746.11	944.09	0.00	450530.31	757924.71	N 32 14 11.91	W 103 37 58.23
	13000.00	90.00	179.67	12300.00	851.54	-846.11	944.66	0.00	450430.31	757925.29	N 32 14 10.92	W 103 37 58.23
	13100.00	90.00	179.67	12300.00	951.54	-946.11	945.24	0.00	450330.32	757925.86	N 32 14 9.93	W 103 37 58.23
	13200.00	90.00	179.67	12300.00	1051.54	-1046.11	945.82	0.00	450230.33	757926.44	N 32 14 8.94	W 103 37 58.23
	13300.00	90.00	179.67	12300.00	1151.54	-1146.10	946.39	0.00	450130.33	757927.02	N 32 14 7.95	W 103 37 58.23
	13400.00	90.00	179.67	12300.00	1251.54	-1246.10	946.97	0.00	450030.34	757927.59	N 32 14 6.96	W 103 37 58.23
	13500.00	90.00	179.67	12300.00	1351.54	-1346.10	947.54	0.00	449930.34	757928.17	N 32 14 5.98	W 103 37 58.23
	13600.00	90.00	179.67	12300.00	1451.54	-1446.10	948.12	0.00	449830.35	757928.74	N 32 14 4.99	W 103 37 58.23
	13700.00	90.00	179.67	12300.00	1551.54	-1546.10	948.70	0.00	449730.35	757929.32	N 32 14 4.00	W 103 37 58.23
	13800.00	90.00	179.67	12300.00	1651.54	-1646.10	949.27	0.00	449630.36	757929.89	N 32 14 3.01	W 103 37 58.23
	13900.00	90.00	179.67	12300.00	1751.54	-1746.09	949.85	0.00	449530.36	757930.47	N 32 14 2.02	W 103 37 58.23
	14000.00	90.00	179.67	12300.00	1851.54	-1846.09	950.42	0.00	449430.37	757931.05	N 32 14 1.03	W 103 37 58.24
	14100.00	90.00	179.67	12300.00	1951.54	-1946.09	951.00	0.00	449330.38	757931.62	N 32 14 0.04	W 103 37 58.24
	14200.00	90.00	179.67	12300.00	2051.54	-2046.09	951.58	0.00	449230.38	757932.20	N 32 13 59.05	W 103 37 58.24
	14300.00	90.00	179.67	12300.00	2151.54	-2146.09	952.15	0.00	449130.39	757932.77	N 32 13 58.06	W 103 37 58.24
	14400.00	90.00	179.67	12300.00	2251.54	-2246.09	952.73	0.00	449030.39	757933.35	N 32 13 57.07	W 103 37 58.24
	14500.00	90.00	179.67	12300.00	2351.54	-2346.08	953.30	0.00	448930.40	757933.93	N 32 13 56.08	W 103 37 58.24
Lease NMNM0001917												
-	14518.40	90.00	179.67	12300.00	2369.94	-2364.48	953.41	0.00	448912.00	757934.03	N 32 13 55.90	W 103 37 58.24
NMNM0002889 Crossing												
	14600.00	90.00	179.67	12300.00	2451.54	-2446.08	953.88	0.00	448830.40	757934.50	N 32 13 55.09	W 103 37 58.24
	14700.00	90.00	179.67	12300.00	2551.54	-2546.08	954.46	0.00	448730.41	757935.08	N 32 13 54.10	W 103 37 58.24
	14800.00	90.00	179.67	12300.00	2651.54	-2646.08	955.03	0.00	448630.42	757935.65	N 32 13 53.11	W 103 37 58.24
	14900.00	90.00	179.67	12300.00	2751.54	-2746.08	955.61	0.00	448530.42	757936.23	N 32 13 52.12	W 103 37 58.24
	15000.00	90.00	179.67	12300.00	2851.54	-2846.08	956.18	0.00	448430.43	757936.81	N 32 13 51.13	W 103 37 58.24
	15100.00	90.00	179.67	12300.00	2951.54	-2946.07	956.76	0.00	448330.43	757937.38	N 32 13 50.14	W 103 37 58.25
	15200.00	90.00	179.67	12300.00	3051.54	-3046.07	957.34	0.00	448230.44	757937.96	N 32 13 49.15	W 103 37 58.25
	15300.00	90.00	179.67	12300.00	3151.54	-3146.07	957.91	0.00	448130.44	757938.53	N 32 13 48.16	W 103 37 58.25
	15400.00	90.00	179.67	12300.00	3251.54	-3246.07	958.49	0.00	448030.45	757939.11	N 32 13 47.17	W 103 37 58.25
	15500.00	90.00	179.67	12300.00	3351.54	-3346.07	959.06	0.00	447930.45	757939.69	N 32 13 46.18	W 103 37 58.25
	15600.00	90.00	179.67	12300.00	3451.54	-3446.07	959.64	0.00	447830.46	757940.26	N 32 13 45.20	W 103 37 58.25
	15700.00	90.00	179.67	12300.00	3551.54	-3546.06	960.22	0.00	447730.47	757940.84	N 32 13 44.21	W 103 37 58.25
	15800.00	90.00	179.67	12300.00	3651.54	-3646.06	960.79	0.00	447630.47	757941.41	N 32 13 43.22	W 103 37 58.25
	15900.00	90.00	179.67	12300.00	3751.54	-3746.06	961.37	0.00	447530.48	757941.99	N 32 13 42.23	W 103 37 58.25
	16000.00	90.00	179.67	12300.00	3851.54	-3846.06	961.94	0.00	447430.48	757942.57	N 32 13 41.24	W 103 37 58.25
	16100.00	90.00	179.67	12300.00	3951.54	-3946.06	962.52	0.00	447330.49	757943.14	N 32 13 40.25	W 103 37 58.25
	16200.00	90.00	179.67	12300.00	4051.54	-4046.06	963.10	0.00	447230.49	757943.72	N 32 13 39.26	W 103 37 58.25
	16300.00	90.00	179.67	12300.00	4151.54	-4146.05	963.67	0.00	447130.50	757944.29	N 32 13 38.27	W 103 37 58.26
	16400.00	90.00	179.67	12300.00	4251.54	-4246.05	964.25	0.00	447030.51	757944.87	N 32 13 37.28	W 103 37 58.26
	16500.00	90.00	179.67	12300.00	4351.54	-4346.05	964.82	0.00	446930.51	757945.44	N 32 13 36.29	W 103 37 58.26
	16600.00	90.00	179.67	12300.00	4451.54	-4446.05	965.40	0.00	446830.52	757946.02	N 32 13 35.30	W 103 37 58.26
	16700.00	90.00	179.67	12300.00	4551.54	-4546.05	965.97	0.00	446730.52	757946.60	N 32 13 34.31	W 103 37 58.26
	16800.00	90.00	179.67	12300.00	4651.54	-4646.05	966.55	0.00	446630.53	757947.17	N 32 13 33.32	W 103 37 58.26
	16900.00	90.00	179.67	12300.00	4751.54	-4746.05	967.13	0.00	446530.53	757947.75	N 32 13 32.33	W 103 37 58.26
	17000.00	90.00	179.67	12300.00	4851.54	-4846.04	967.70	0.00	446430.54	757948.32	N 32 13 31.34	W 103 37 58.26
	17100.00	90.00	179.67	12300.00	4951.54	-4946.04	968.28	0.00	446330.54	757948.90	N 32 13 30.35	W 103 37 58.26

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 ° ' ")
Lease												
NMNM0002889												
-	17169.40	90.00	179.67	12300.00	5020.94	-5015.44	968.68	0.00	446261.15	757949.30	N 32 13 29.67	W 103 37 58.26
NMNM0553548												
Crossing												
	17200.00	90.00	179.67	12300.00	5051.54	-5046.04	968.85	0.00	446230.55	757949.48	N 32 13 29.36	W 103 37 58.26
	17300.00	90.00	179.67	12300.00	5151.54	-5146.04	969.43	0.00	446130.56	757950.05	N 32 13 28.37	W 103 37 58.26
	17400.00	90.00	179.67	12300.00	5251.54	-5246.04	970.01	0.00	446030.56	757950.63	N 32 13 27.38	W 103 37 58.27
	17500.00	90.00	179.67	12300.00	5351.54	-5346.04	970.58	0.00	445930.57	757951.20	N 32 13 26.39	W 103 37 58.27
	17600.00	90.00	179.67	12300.00	5451.54	-5446.03	971.16	0.00	445830.57	757951.78	N 32 13 25.41	W 103 37 58.27
	17700.00	90.00	179.67	12300.00	5551.54	-5546.03	971.73	0.00	445730.58	757952.36	N 32 13 24.42	W 103 37 58.27
	17800.00	90.00	179.67	12300.00	5651.54	-5646.03	972.31	0.00	445630.58	757952.93	N 32 13 23.43	W 103 37 58.27
	17900.00	90.00	179.67	12300.00	5751.54	-5746.03	972.89	0.00	445530.59	757953.51	N 32 13 22.44	W 103 37 58.27
	18000.00	90.00	179.67	12300.00	5851.54	-5846.03	973.46	0.00	445430.60	757954.08	N 32 13 21.45	W 103 37 58.27
	18100.00	90.00	179.67	12300.00	5951.54	-5946.03	974.04	0.00	445330.60	757954.66	N 32 13 20.46	W 103 37 58.27
	18200.00	90.00	179.67	12300.00	6051.54	-6046.02	974.61	0.00	445230.61	757955.24	N 32 13 19.47	W 103 37 58.27
	18300.00	90.00	179.67	12300.00	6151.54	-6146.02	975.19	0.00	445130.61	757955.81	N 32 13 18.48	W 103 37 58.27
	18400.00	90.00	179.67	12300.00	6251.54	-6246.02	975.77	0.00	445030.62	757956.39	N 32 13 17.49	W 103 37 58.27
	18500.00	90.00	179.67	12300.00	6351.54	-6346.02	976.34	0.00	444930.62	757956.96	N 32 13 16.50	W 103 37 58.28
	18600.00	90.00	179.67	12300.00	6451.54	-6446.02	976.92	0.00	444830.63	757957.54	N 32 13 15.51	W 103 37 58.28
	18700.00	90.00	179.67	12300.00	6551.54	-6546.02	977.49	0.00	444730.63	757958.11	N 32 13 14.52	W 103 37 58.28
	18800.00	90.00	179.67	12300.00	6651.54	-6646.01	978.07	0.00	444630.64	757958.69	N 32 13 13.53	W 103 37 58.28
	18900.00	90.00	179.67	12300.00	6751.54	-6746.01	978.65	0.00	444530.65	757959.27	N 32 13 12.54	W 103 37 58.28
	19000.00	90.00	179.67	12300.00	6851.54	-6846.01	979.22	0.00	444430.65	757959.84	N 32 13 11.55	W 103 37 58.28
	19100.00	90.00	179.67	12300.00	6951.54	-6946.01	979.80	0.00	444330.66	757960.42	N 32 13 10.56	W 103 37 58.28
	19200.00	90.00	179.67	12300.00	7051.54	-7046.01	980.37	0.00	444230.66	757960.99	N 32 13 9.57	W 103 37 58.28
	19300.00	90.00	179.67	12300.00	7151.54	-7146.01	980.95	0.00	444130.67	757961.57	N 32 13 8.58	W 103 37 58.28
	19400.00	90.00	179.67	12300.00	7251.54	-7246.00	981.53	0.00	444030.67	757962.15	N 32 13 7.59	W 103 37 58.28
	19500.00	90.00	179.67	12300.00	7351.54	-7346.00	982.10	0.00	443930.68	757962.72	N 32 13 6.60	W 103 37 58.28
	19600.00	90.00	179.67	12300.00	7451.54	-7446.00	982.68	0.00	443830.69	757963.30	N 32 13 5.61	W 103 37 58.29
	19700.00	90.00	179.67	12300.00	7551.54	-7546.00	983.25	0.00	443730.69	757963.87	N 32 13 4.63	W 103 37 58.29
	19800.00	90.00	179.67	12300.00	7651.54	-7646.00	983.83	0.00	443630.70	757964.45	N 32 13 3.64	W 103 37 58.29
Lease												
NMNM0553548												
-	19800.70	90.00	179.67	12300.00	7652.24	-7646.70	983.83	0.00	443630.00	757964.45	N 32 13 3.63	W 103 37 58.29
NMNM0553642												
Crossing												
	19900.00	90.00	179.67	12300.00	7751.54	-7746.00	984.40	0.00	443530.70	757965.03	N 32 13 2.65	W 103 37 58.29
	20000.00	90.00	179.67	12300.00	7851.54	-7845.99	984.98	0.00	443430.71	757965.60	N 32 13 1.66	W 103 37 58.29
	20100.00	90.00	179.67	12300.00	7951.54	-7945.99	985.56	0.00	443330.71	757966.18	N 32 13 0.67	W 103 37 58.29
	20200.00	90.00	179.67	12300.00	8051.54	-8045.99	986.13	0.00	443230.72	757966.75	N 32 12 59.68	W 103 37 58.29
	20300.00	90.00	179.67	12300.00	8151.54	-8145.99	986.71	0.00	443130.72	757967.33	N 32 12 58.69	W 103 37 58.29
	20400.00	90.00	179.67	12300.00	8251.54	-8245.99	987.28	0.00	443030.73	757967.91	N 32 12 57.70	W 103 37 58.29
	20500.00	90.00	179.67	12300.00	8351.54	-8345.99	987.86	0.00	442930.74	757968.48	N 32 12 56.71	W 103 37 58.29
	20600.00	90.00	179.67	12300.00	8451.54	-8445.98	988.44	0.00	442830.74	757969.06	N 32 12 55.72	W 103 37 58.29
	20700.00	90.00	179.67	12300.00	8551.54	-8545.98	989.01	0.00	442730.75	757969.63	N 32 12 54.73	W 103 37 58.29
	20800.00	90.00	179.67	12300.00	8651.54	-8645.98	989.59	0.00	442630.75	757970.21	N 32 12 53.74	W 103 37 58.30
	20900.00	90.00	179.67	12300.00	8751.54	-8745.98	990.16	0.00	442530.76	757970.79	N 32 12 52.75	W 103 37 58.30
	21000.00	90.00	179.67	12300.00	8851.54	-8845.98	990.74	0.00	442430.76	757971.36	N 32 12 51.76	W 103 37 58.30
	21100.00	90.00	179.67	12300.00	8951.54	-8945.98	991.32	0.00	442330.77	757971.94	N 32 12 50.77	W 103 37 58.30
	21200.00	90.00	179.67	12300.00	9051.54	-9045.97	991.89	0.00	442230.77	757972.51	N 32 12 49.78	W 103 37 58.30
	21300.00	90.00	179.67	12300.00	9151.54	-9145.97	992.47	0.00	442130.78	757973.09	N 32 12 48.79	W 103 37 58.30
	21400.00	90.00	179.67	12300.00	9251.54	-9245.97	993.04	0.00	442030.79	757973.66	N 32 12 47.80	W 103 37 58.30
	21500.00	90.00	179.67	12300.00	9351.54	-9345.97	993.62	0.00	441930.79	757974.24	N 32 12 46.81	W 103 37 58.30
	21600.00	90.00	179.67	12300.00	9451.54	-9445.97	994.20	0.00	441830.80	757974.82	N 32 12 45.82	W 103 37 58.30
	21700.00	90.00	179.67	12300.00	9551.54	-9545.97	994.77	0.00	441730.80	757975.39	N 32 12 44.84	W 103 37 58.30
	21800.00	90.00	179.67	12300.00	9651.54	-9645.96	995.35	0.00	441630.81	757975.97	N 32 12 43.85	W 103 37 58.30
	21900.00	90.00	179.67	12300.00	9751.54	-9745.96	995.92	0.00	441530.81	757976.54	N 32 12 42.86	W 103 37 58.31
	22000.00	90.00	179.67	12300.00	9851.54	-9845.96	996.50	0.00	441430.82	757977.12	N 32 12 41.87	W 103 37 58.31

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Cimarex Dos Equis 12-13 Federal Com #10H - PBHL [100' FSL, 1230' FWL]	22100.00	90.00	179.67	12300.00	9951.54	-9945.96	997.08	0.00	441330.83	757977.70	N 32 12 40.88 W 103 37 58.31	
	22200.00	90.00	179.67	12300.00	10051.54	-10045.96	997.65	0.00	441230.83	757978.27	N 32 12 39.89 W 103 37 58.31	
	22300.00	90.00	179.67	12300.00	10151.54	-10145.96	998.23	0.00	441130.84	757978.85	N 32 12 38.90 W 103 37 58.31	
	22342.02	90.00	179.67	12300.00	10193.56	-10187.97	998.47	0.00	441088.82	757979.09	N 32 12 38.48 W 103 37 58.31	

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #10H / Cimarex Dos Equis 12-13 Federal Com #10H Rev1 RM
	1	26.000	22342.019	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #10H / Cimarex Dos Equis 12-13



Cimarex Energy

Rev 1



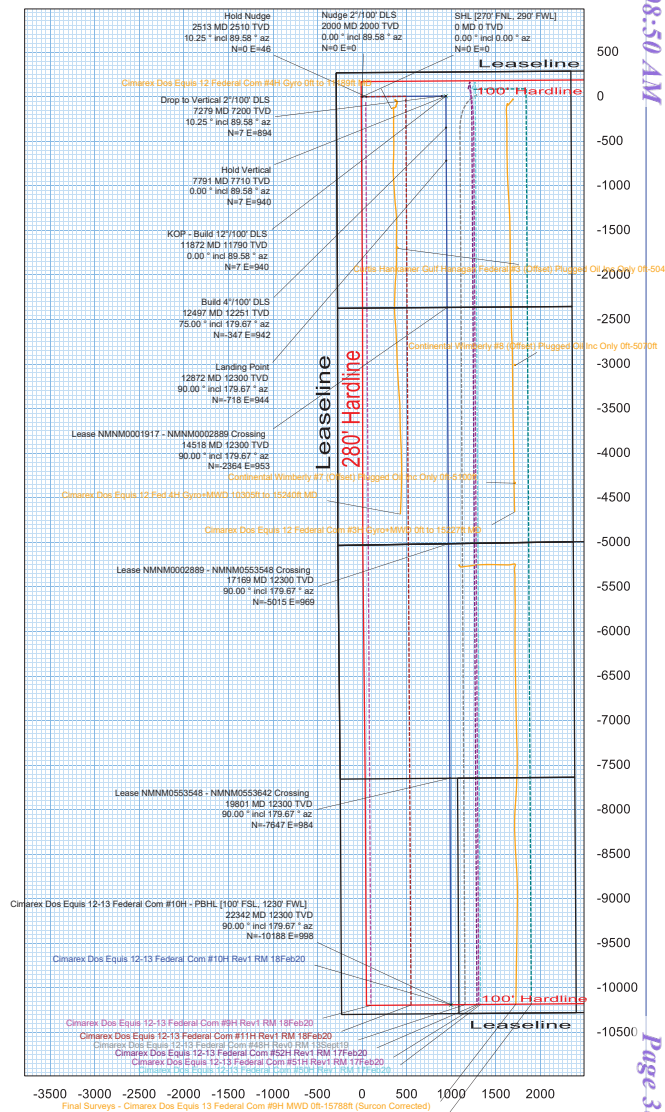
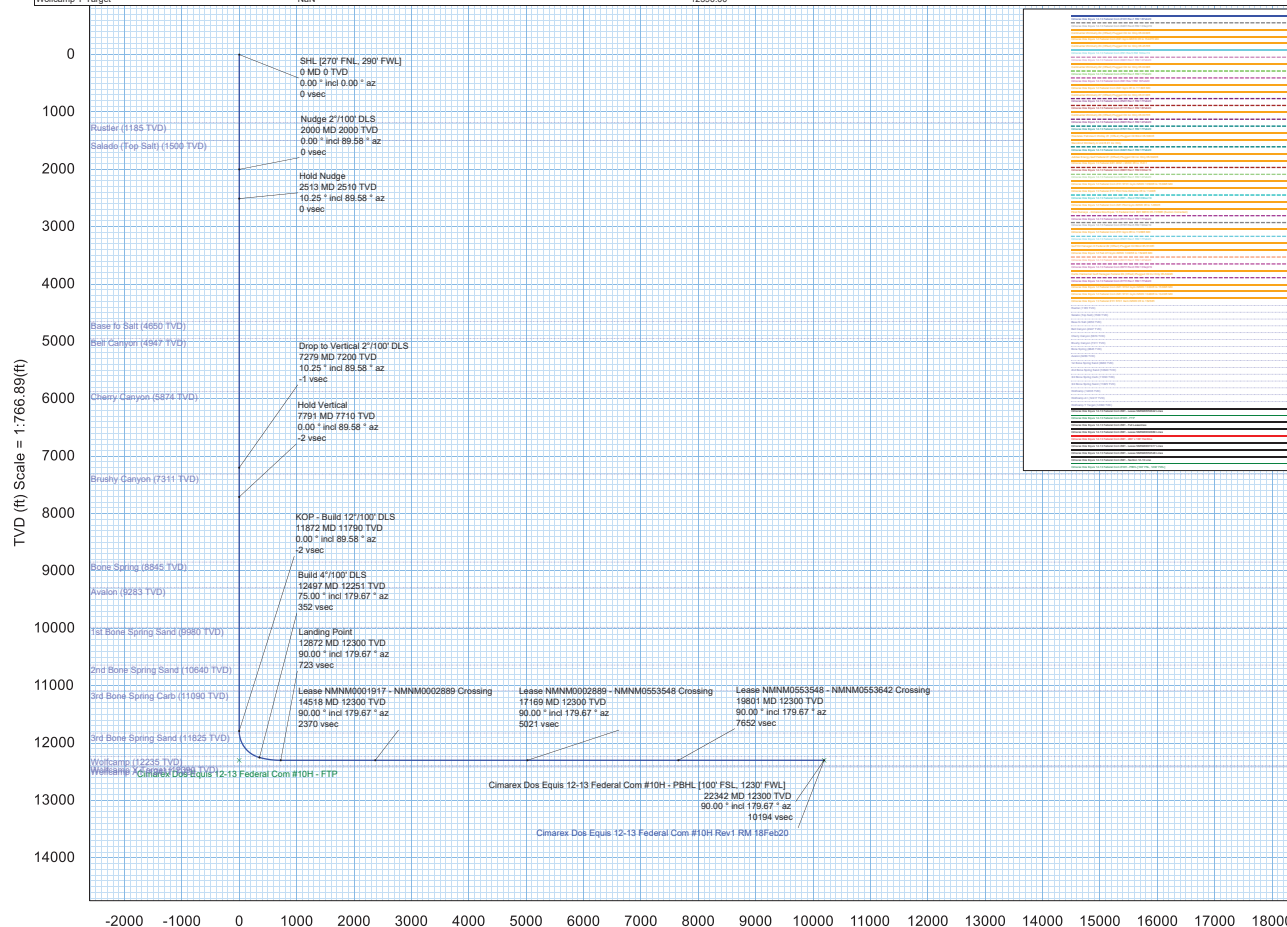
Borehole:	Well:	Field:	Structure:
Dos Equis 12-13 Federal Com #10H	Dos Equis 12-13 Federal Com #10H	NM Lea County (NAD 83)	Cimarex Dos Equis 12-13 Federal Com #10H

Gravity & Magnetic Parameters	Dip: 59.87°	Date: 18-Feb-2020	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Grid Conv: 0.3721°	Miscellaneous
Model: HDGM 2019	FS: 47841.978mT	Gravity FS: 998.438mg (9.80665 Based)	Lat: N 32 14 18.36	451276.39NUS	Scale Fact: 0.99996235	Slot: New Slot
MagDec: 6.618°			Long: W 103 38 9.16	North: 451276.39NUS		Plan: Cimarex Dos Equis 12-13 Federal Com #10H Rev1 RM 18Feb20

Critical Point	MD	INCL	AZIM	Critical Points	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [270° FNL, 290° FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler	1185.00	0.00	89.58	1185.00	0.00	0.00	0.00	0.00	0.00
Salado (Top Salt)	1500.00	0.00	89.58	1500.00	0.00	0.00	0.00	0.00	0.00
Nudge 2°/100° DLS	2000.00	0.00	89.58	2000.00	0.00	0.00	0.00	0.00	0.00
Hold Nudge	2512.61	10.25	89.58	2509.88	-0.07	0.34	45.74	2.00	0.00
Base to Salt	4687.45	10.25	89.58	4650.00	-0.70	3.20	432.81	0.00	0.00
Bell Canyon	4989.27	10.25	89.58	4947.00	-0.79	3.59	496.53	0.00	0.00
Cherry Canyon	5591.31	10.25	89.58	5874.00	-1.06	4.83	654.19	0.00	0.00
Drop to Vertical 2°/100° DLS	7278.83	10.25	89.58	7200.00	-1.45	6.60	894.01	0.00	0.00
Brushy Canyon	7391.26	8.00	89.58	7311.00	-1.48	6.73	911.85	2.00	0.00
Hold Vertical	7791.44	0.00	89.58	7709.88	-1.53	6.94	939.75	2.00	0.00
Bone Spring	8926.56	0.00	89.58	8945.00	-1.53	6.94	939.75	0.00	0.00
Avalon	9364.56	0.00	89.58	9283.00	-1.53	6.94	939.75	0.00	0.00
1st Bone Spring Sand	10061.56	0.00	89.58	9980.00	-1.53	6.94	939.75	0.00	0.00
2nd Bone Spring Sand	10721.56	0.00	89.58	10640.00	-1.53	6.94	939.75	0.00	0.00
3rd Bone Spring Sand	11171.56	0.00	89.58	11090.00	-1.53	6.94	939.75	0.00	0.00
KOP - Build 12°/100° DLS	11871.56	0.00	89.58	11790.00	-1.53	6.94	939.75	0.00	0.00
3rd Bone Spring Sand	11906.59	4.20	179.67	11825.00	-0.24	5.65	939.76	12.00	0.00
Wolfcamp	12444.48	68.75	179.67	12235.00	302.89	-297.48	941.50	12.00	0.00
Build 4°/100° DLS	12496.56	75.00	179.67	12291.19	352.36	-346.94	941.79	12.00	0.00
Landing Point	12871.56	90.00	179.67	12300.00	723.09	-717.67	943.93	4.00	0.00
Lease NMNM0001917 - NMNM0002889 Crossing	14518.40	90.00	179.67	12300.00	2369.94	-2364.48	953.41	0.00	0.00
Lease NMNM0002889 - NMNM0553548 Crossing	17169.40	90.00	179.67	12300.00	5020.94	-5015.44	968.68	0.00	0.00
Lease NMNM0553548 - NMNM0553642 Crossing	18900.70	90.00	179.67	12300.00	7652.24	-7646.70	983.83	0.00	0.00
Cimarex Dos Equis 12-13 Federal Com #10H - PHL [100° FSL, 1230° FWL]	22342.02	90.00	179.67	12300.00	10193.56	-10187.97	998.47	0.00	0.00
Wolfcamp #1	NaN			12417.00					
Wolfcamp Y Target	NaN			12390.00					

Grid North
Tot Corr (M->G 6.246")
Mag Dec (6.618")
Grid Conv (0.372")

CONTROLLED
Plan ref: _____
Drawing ref: _____
Copy number: _____ of 3
Date: 18-Feb-2020
1 Client _____
2 Client _____
3 Office _____
4 Office _____
Copy number for: _____



Vertical Section (ft) Azim = 179.67° Scale = 1:766.89(ft) Origin = 0N/-S, 0E/-W

EW (ft) Scale = 1:493.68(ft)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex
LEASE NO.:	NMNM001917
LOCATION:	Section 12, T.24 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Dos Equis 12-13 Fed Com 10H
SURFACE HOLE FOOTAGE:	270'/N & 290'/W
BOTTOM HOLE FOOTAGE:	100'/S & 1230'/W

COA

H2S	☒ Yes	☐ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	☐ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☒ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☒ COM	☐ Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware Group** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately 1520 feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept 1/3rd fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is: Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

3. The minimum required fill of cement behind the 5-1/2 x 5 inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. **Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).**
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for

the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

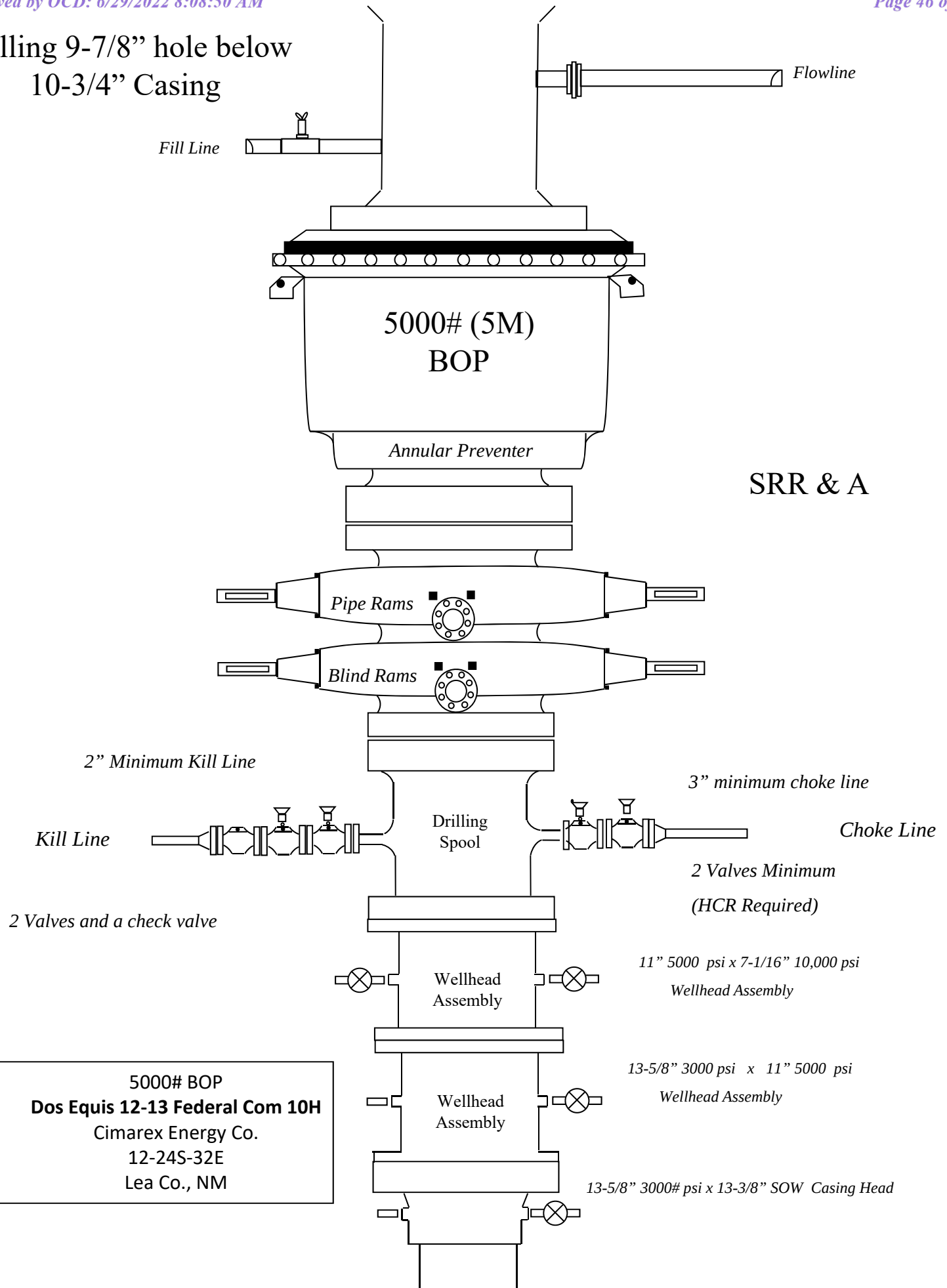
D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

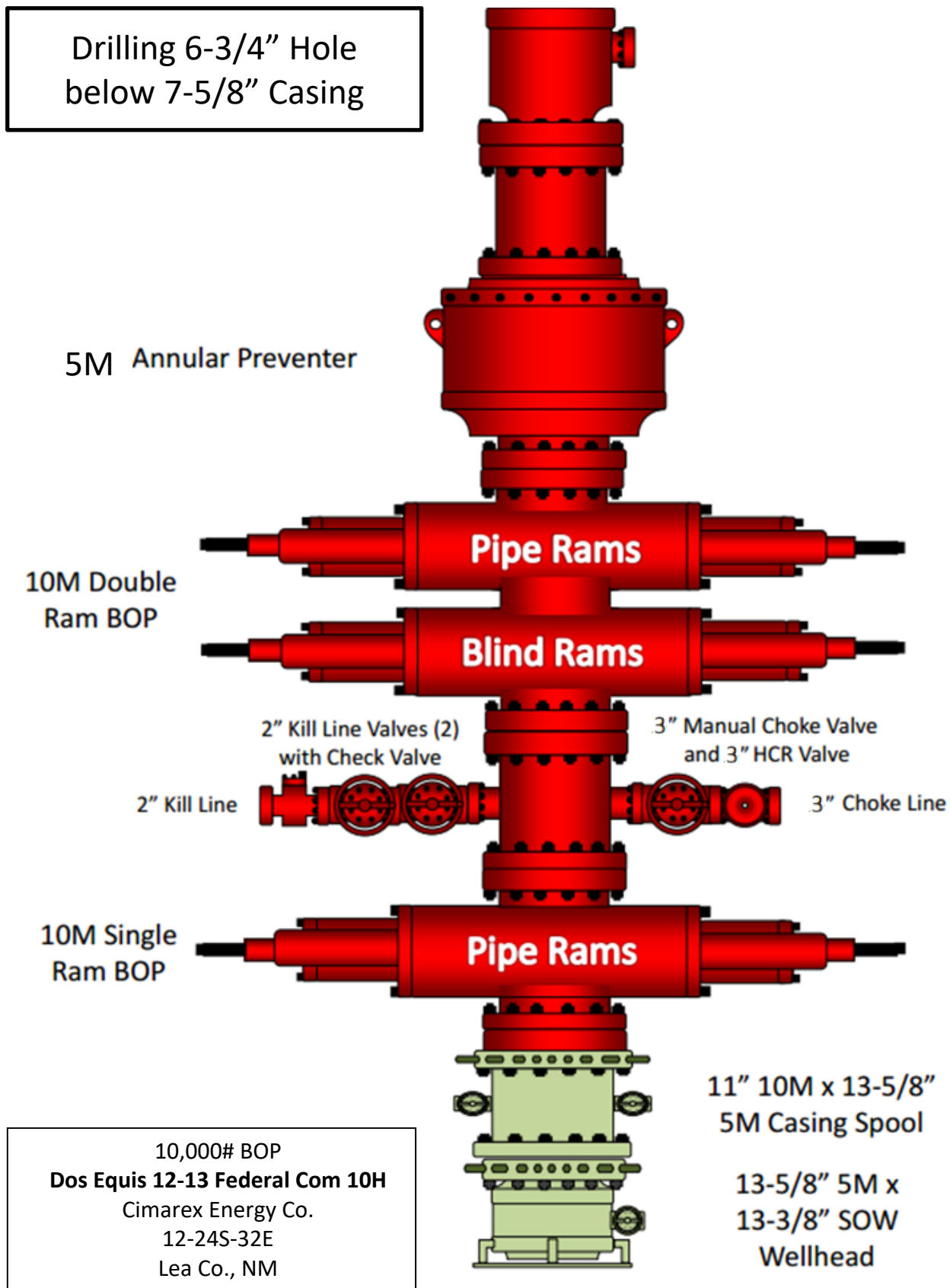
Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

ZS 011922

Drilling 9-7/8" hole below
10-3/4" Casing



5000# BOP
Dos Equis 12-13 Federal Com 10H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM



Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude			NAD	

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude			NAD	

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude			NAD	

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

Estimated Formation Tops

Formation:	Top:	Formation:	Top:

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 121336

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 121336
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/27/2022
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	7/27/2022
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	7/27/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	7/27/2022