

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. 30-025-50386	
3a. Address		3b. Phone No. (include area code)	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory [98309] 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	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		17. Spacing Unit dedicated to this well 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)	
Title		Date	
Approved by (Signature)		Name (Printed/Typed)	
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- 30-025-50386		² Pool Code 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 11H
⁷ OGRID No. 215099		⁸ Operator Name CIMAREX ENERGY CO.		⁹ Elevation 3607.0

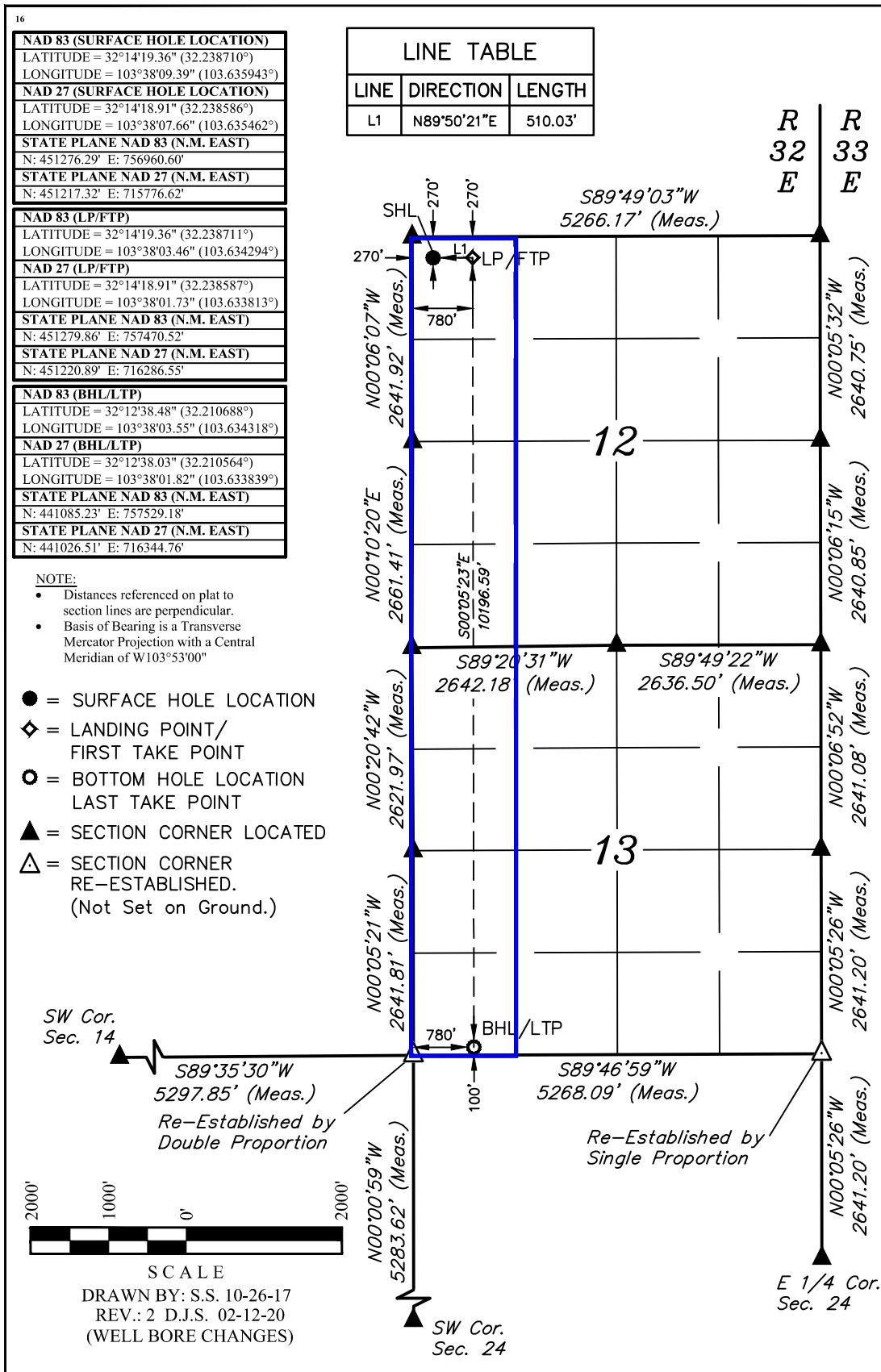
¹⁰ Surface Location

UL or lot no. D	Section 12	Township 24S	Range 32E	Lot Idn	Feet from the 270	North/South line NORTH	Feet from the 270	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 780	East/West line WEST	County LEA
¹² Dedicated Acres 320		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



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 Knauth Date 4-29-20

Hope Knauls
Printed Name

hknauls@cimarex.com
E-mail Address

18 SURVEYOR CERTIFICATION

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

October 18, 2017

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



Certificate Number:

Intent ☐ As Drilled ☐

API # 30-025-50386	
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:

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 / 29 / 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 11H		D, Sec 12, 24S, 32E	270 FNL/270 FWL	1900	3800	4500
30-025-50386						

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 11H		1/1/2024	2/1/2024	5/1/2024	7/1/2024	7/1/2024
30-025-50386						

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.

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 11H
SURFACE HOLE FOOTAGE:	270'/N & 270'/W
BOTTOM HOLE FOOTAGE:	100'/S & 780'/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

1. Geological Formations

TVD of target 12,900

Pilot Hole TD N/A

MD at TD 22,896

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1185	Useable Water	
Salado	1400	N/A	
Base of Salt	4650	N/A	
Lamar	4918	N/A	
Bell Canyon	4947	N/A	
Cherry Canyon	5874	N/A	
Brushy Canyon	7222	Hydrocarbons	
Bone Spring	8780	Hydrocarbons	
Upper Avalon Shale	9219	Hydrocarbons	
1st Bone Spring	9943	Hydrocarbons	
2nd Bone Spring	10478	Hydrocarbons	
3rd Bone Spring	11845	Hydrocarbons	
Wolfcamp	12327	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
14 3/4	0	1235	1235	10-3/4"	40.50	J-55	BT&C	2.95	5.85	12.58
9 7/8	0	13050	12851	7-5/8"	29.70	L-80	BT&C	2.38	1.15	1.74
6 3/4	0	12325	12325	5-1/2"	20.00	L-80	LT&C	1.39	1.23	2.11
6 3/4	12325	22896	12900	5"	18.00	P-110	BT&C	1.60	1.62	56.04
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

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

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

Cimarex Energy Co., Dos Equis 12-13 Federal Com 11H

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

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	480	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	128	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate Stage 1	633	10.30	3.64	22.18		Lead: Tuned Light + LCM
	207	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS
Intermediate Stage 2	782	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
Production	841	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

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

Casing String	TOC	% Excess
Surface	0	45
Intermediate Stage 1	4900	47
Intermediate Stage 2	0	37
Production	12850	25

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

4. Pressure Control Equipment

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
9 7/8	13 5/8	5M	Annular	X	5M
			Blind Ram		
			Pipe Ram	X	
			Double Ram	X	
			Other		
6 3/4	13 5/8	10M	Annular	X	50% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			Double Ram	X	
			Other		

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

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

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1235'	Fresh Water	7.83 - 8.33	28	N/C
1235' to 13050'	Brine Diesel Emulsion	8.50 - 9.00	30-35	N/C
13050' to 22896'	OBM	12.00 - 12.50	50-70	N/C

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

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

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

6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	8385 psi
Abnormal Temperature	No

Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

	H ₂ S is present
	H ₂ S plan is attached

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

A multi-bowl wellhead system will be utilized.

After running the 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 vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 10000 psi.

All casing strings will be tested as per Onshore Order No.2 to at least 0.22 psi/ft or 1,500 whichever is greater and not to exceed 70% of casing burst.

If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.



Cimarex Dos Equis 12-13 Federal Com #11H Rev1 RM 18Feb20 Anti-Collision Summary Report

Analysis Date-24hr Time: February 18, 2020 - 15:45
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure: Cimarex Dos Equis 12-13 Federal Com #11H
Slot: New Slot
Well: Dos Equis 12-13 Federal Com #11H
Borehole: Dos Equis 12-13 Federal Com #11H
Scan MD Range: 0.00ft ~ 22896.30ft

Analysis Method: 3D Least Distance
Reference Trajectory: Cimarex Dos Equis 12-13 Federal Com #11H Rev1 RM 18Feb20 (Non-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.COMDRILLING-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 #10H Rev1 RM
18Feb20 (Def Plan)

Warning Alert

20.06	16.31	18.77	3.75	N/A	MAS = 4.97 (m)	0.00	0.00	CtCt<=15m<15.00	Enter Alert
20.06	16.31	18.77	3.75	42250.31	MAS = 4.97 (m)	26.00	26.00		WRP
20.06	19.45	6.66	0.61	1.55	OSF1.50	1990.00	1990.00		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
71.50	22.40	56.14	49.10	4.99	OSF1.50	2550.00	2550.00	OSF>5.00	Exit Alert
213.68	45.88	182.67	167.80	7.14	OSF1.50	6034.07	6000.00		MinPt-O-SF
449.93	80.47	395.86	369.46	8.50	OSF1.50	11850.00	11814.48		MinPt-CtCt
449.94	80.51	395.84	369.43	8.49	OSF1.50	11880.00	11844.48		MINPT-O-EOU
449.95	80.53	395.84	369.42	8.49	OSF1.50	11890.00	11854.48		MinPt-O-ADP
450.20	80.61	396.03	369.59	8.49	OSF1.50	11950.00	11914.48		MinPt-O-SF
750.12	225.99	599.04	524.14	5.00	OSF1.50	19400.00	12900.00	OSF<5.00	Enter Alert
750.13	333.67	527.25	416.46	3.38	OSF1.50	22896.30	12900.00		MinPts

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

Warning Alert

399.85	32.81	397.87	367.04	N/A	MAS = 10.00 (m)	0.00	0.00		MinPts
399.85	32.81	397.87	367.04	47145.48	MAS = 10.00 (m)	26.00	26.00		WRP
397.70	32.81	390.27	364.89	72.60	MAS = 10.00 (m)	1200.00	1200.00		MinPts
85.11	32.81	66.27	52.30	4.99	MAS = 10.00 (m)	4920.00	4897.58	OSF<5.00	Enter Alert
46.81	32.81	26.07	14.00	2.39	MAS = 10.00 (m)	5460.00	5431.93		MinPts
46.83	32.81	26.05	14.02	2.39	MAS = 10.00 (m)	5470.00	5441.83		MINPT-O-EOU
46.96	32.81	26.11	14.15	2.38	MAS = 10.00 (m)	5490.00	5461.62		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		
103.54		32.81	81.22	70.74	4.99	MAS = 10.00 (m)	6180.00	6144.87	OSF>5.00			Exit Alert	
113.86		32.81	92.32	81.06	5.72	MAS = 10.00 (m)	6520.00	6484.48				MinPts	
113.98		32.81	92.20	81.17	5.66	MAS = 10.00 (m)	6610.00	6574.48				MINPT-O-EOU	
121.86		35.00	97.86	86.85	5.44	OSF1.50	7380.00	7344.48				MinPt-O-SF	
125.74		36.12	101.00	89.62	5.44	OSF1.50	7590.00	7554.48				MinPt-O-SF	
129.73		37.20	104.27	92.53	5.44	OSF1.50	7790.00	7754.48				MinPt-O-SF	
153.05		45.34	122.16	107.71	5.23	OSF1.50	9080.00	9044.48				MinPt-O-SF	
161.20		48.03	128.52	113.17	5.19	OSF1.50	9490.00	9454.48				MinPt-O-SF	
174.00		51.58	138.95	122.41	5.20	OSF1.50	10000.00	9964.48				MinPt-O-SF	
1974.46		33.02	1951.79	1941.44	95.32	OSF1.50	13450.00	12900.00				MinPt-CtCt	
1969.89		51.68	1934.78	1918.22	59.40	OSF1.50	14260.00	12900.00				MinPt-CtCt	
1974.90		70.46	1927.27	1904.44	43.22	OSF1.50	14950.00	12900.00				MinPt-CtCt	
1971.19		86.43	1912.91	1884.76	34.98	OSF1.50	15510.00	12900.00				MinPt-CtCt	
1974.29		93.88	1911.04	1880.40	32.19	OSF1.50	15780.00	12900.00				MINPT-O-EOU	
1972.61		121.04	1891.26	1851.57	24.83	OSF1.50	16690.00	12900.00				MinPt-CtCt	
1975.27		142.26	1879.76	1833.00	21.10	OSF1.50	17410.00	12900.00				MINPT-O-EOU	
1975.40		142.43	1879.79	1832.98	21.08	OSF1.50	17420.00	12900.00				MinPt-O-ADP	
1993.78		145.56	1896.08	1848.22	20.81	OSF1.50	17660.00	12900.00				MinPt-O-SF	
5851.68		111.45	5776.72	5740.23	80.16	OSF1.50	22896.30	12900.00				TD	

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

Warning Alert

399.85	32.81	397.87	367.04	N/A	MAS = 10.00 (m)	0.00	0.00	OSF<5.00	MinPts
399.85	32.81	397.87	367.04	47145.48	MAS = 10.00 (m)	26.00	26.00		WRP
397.70	32.81	390.27	364.89	72.60	MAS = 10.00 (m)	1200.00	1200.00		MinPts
85.11	32.81	66.27	52.30	4.99	MAS = 10.00 (m)	4920.00	4897.58		Enter Alert
46.81	32.81	26.07	14.00	2.39	MAS = 10.00 (m)	5460.00	5431.93		MinPts
46.83	32.81	26.05	14.02	2.39	MAS = 10.00 (m)	5470.00	5441.83	OSF>5.00	MINPT-O-EOU
46.96	32.81	26.11	14.15	2.38	MAS = 10.00 (m)	5490.00	5461.62		MinPt-O-SF
103.54	32.81	81.22	70.74	4.99	MAS = 10.00 (m)	6180.00	6144.87		Exit Alert
113.86	32.81	92.32	81.06	5.72	MAS = 10.00 (m)	6520.00	6484.48		MinPts
113.98	32.81	92.20	81.17	5.66	MAS = 10.00 (m)	6610.00	6574.48		MINPT-O-EOU
121.86	35.00	97.86	86.85	5.44	OSF1.50	7380.00	7344.48		MinPt-O-SF
125.74	36.12	101.00	89.62	5.44	OSF1.50	7590.00	7554.48		MinPt-O-SF
129.73	37.20	104.27	92.53	5.44	OSF1.50	7790.00	7754.48		MinPt-O-SF
153.05	45.34	122.16	107.71	5.23	OSF1.50	9080.00	9044.48		MinPt-O-SF
161.20	48.03	128.52	113.17	5.19	OSF1.50	9490.00	9454.48		MinPt-O-SF
174.00	51.58	138.95	122.41	5.20	OSF1.50	10000.00	9964.48		MinPt-O-SF
2313.12	58.28	2273.61	2254.84	61.58	OSF1.50	14380.00	12900.00		MinPt-O-SF
10202.82	80.69	10148.37	10122.14	194.41	OSF1.50	22896.30	12900.00		TD

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

Warning Alert

84.97	32.81	83.68	52.16	N/A	MAS = 10.00 (m)	0.00	0.00	OSF<5.00	Surface
84.97	32.81	83.68	52.16	75328.95	MAS = 10.00 (m)	26.00	26.00		WRP
81.08	32.81	63.73	48.27	4.97	MAS = 10.00 (m)	2680.00	2679.88		Enter Alert
60.22	32.81	41.18	27.41	3.32	MAS = 10.00 (m)	3120.00	3116.41		MinPts
60.23	32.81	41.14	27.42	3.31	MAS = 10.00 (m)	3130.00	3126.30		MINPT-O-EOU
60.46	32.81	41.25	27.65	3.30	MAS = 10.00 (m)	3160.00	3155.99	OSF>5.00	MinPt-O-SF
102.78	32.81	81.13	69.97	4.98	MAS = 10.00 (m)	3700.00	3690.34		Exit Alert
453.97	98.12	388.13	355.85	7.01	OSF1.50	11830.00	11794.48		MinPts
453.99	98.13	388.14	355.86	7.01	OSF1.50	11840.00	11804.48		MinPt-O-SF
750.32	60.33	709.67	689.99	19.03	OSF1.50	13490.00	12900.00		MinPt-CtCt
750.35	226.10	599.19	524.25	5.00	OSF1.50	20200.00	12900.00	OSF<5.00	Enter Alert

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		
	750.36	308.48	544.29	441.89	3.66	OSF1.50	22896.30	12900.00				MinPts	

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

Warning Alert

1309.85	32.81	1308.56	1277.04	N/A	MAS = 10.00 (m)	0.00	0.00		Surface
1309.85	32.81	1308.56	1277.04	N/A	MAS = 10.00 (m)	26.00	26.00		WRP
800.00	98.10	733.97	701.90	12.44	OSF1.50	11760.00	11724.48		MinPts
658.89	98.56	592.46	560.33	10.22	OSF1.50	12290.00	12254.48		MinPts
658.98	98.58	592.54	560.40	10.22	OSF1.50	12300.00	12264.48		MinPt-O-SF
791.78	78.18	739.23	713.60	15.42	OSF1.50	13450.00	12900.00		MinPt-CtCt
791.80	78.24	739.21	713.56	15.41	OSF1.50	13460.00	12900.00		MINPT-O-EOU
816.09	245.82	651.78	570.27	5.00	OSF1.50	20440.00	12900.00	OSF<5.00	Enter Alert
824.87	320.97	610.46	503.90	3.86	OSF1.50	22896.30	12900.00		MinPts

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

Warning Alert

1252.01	32.81	1250.73	1219.20	N/A	MAS = 10.00 (m)	0.00	0.00		Surface
1252.01	32.81	1250.72	1219.20	469105.03	MAS = 10.00 (m)	26.00	26.00		WRP
1252.01	32.81	1238.61	1219.20	103.25	MAS = 10.00 (m)	1990.00	1990.00		MinPts
1252.13	32.81	1238.45	1219.32	100.88	MAS = 10.00 (m)	2040.00	2040.00		MINPT-O-EOU
1235.57	32.81	1217.16	1202.76	72.11	MAS = 10.00 (m)	3140.00	3136.20		MinPt-O-SF
795.55	101.18	727.48	694.37	11.99	OSF1.50	12425.52	12390.00		MinPts
780.61	95.24	716.50	685.38	12.51	OSF1.50	13030.00	12845.46		MinPt-O-ADP
780.18	94.69	716.43	685.49	12.58	OSF1.50	13140.00	12871.64		MINPT-O-EOU
779.88	93.98	716.61	685.90	12.67	OSF1.50	13370.00	12898.92		MinPt-CtCt
779.89	235.49	622.27	544.40	5.00	OSF1.50	20170.00	12900.00	OSF<5.00	Enter Alert
779.90	318.78	566.76	461.12	3.68	OSF1.50	22896.30	12900.00		MinPts

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

Warning Alert

5280.41	32.81	5279.12	5247.60	N/A	MAS = 10.00 (m)	0.00	0.00		Surface
5280.14	32.81	5278.81	5247.33	143118.42	MAS = 10.00 (m)	26.00	26.00		MinPt-O-SF
5019.05	1510.13	4011.79	3508.93	4.99	OSF1.50	4940.00	4917.37	OSF<5.00	Enter Alert
4965.10	1586.70	3906.77	3378.40	4.70	OSF1.50	5480.00	5451.72		MinPt-O-SF
4958.68	1583.27	3902.64	3375.42	4.70	OSF1.50	5630.00	5600.15		MinPt-O-ADP
4957.74	1582.11	3902.47	3375.63	4.70	OSF1.50	5670.00	5639.74		MINPT-O-EOU
4956.78	1578.75	3903.76	3378.03	4.71	OSF1.50	5770.00	5738.69		MinPt-CtCt
5077.50	1524.23	4060.92	3553.27	5.00	OSF1.50	6640.00	6604.48	OSF>5.00	Exit Alert
8626.47	709.67	8152.93	7916.80	18.26	OSF1.50	15710.00	12900.00		MinPt-CtCt
8626.49	709.73	8152.91	7916.76	18.26	OSF1.50	15730.00	12900.00		MINPT-O-EOU
8626.52	709.76	8152.91	7916.76	18.26	OSF1.50	15740.00	12900.00		MinPt-O-ADP
10920.76	1137.87	10161.76	9782.90	14.41	OSF1.50	22410.00	12900.00		MinPt-O-SF
11225.54	1167.91	10446.51	10057.63	14.43	OSF1.50	22896.30	12900.00		TD

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

Pass

1232.05	32.81	1230.76	1199.24	N/A	MAS = 10.00 (m)	0.00	0.00		Surface
1232.05	32.81	1230.76	1199.24	461616.75	MAS = 10.00 (m)	26.00	26.00		WRP
723.74	75.14	673.02	648.61	14.78	OSF1.50	9150.00	9114.48		MinPt-CtCt
723.76	75.22	672.98	648.54	14.77	OSF1.50	9170.00	9134.48		MINPT-O-EOU
723.79	75.25	672.99	648.54	14.76	OSF1.50	9180.00	9144.48		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		
	724.26	75.44	673.34	648.82	14.73	OSF1.50	9240.00	9204.48				MinPt-O-SF	
	3387.53	318.39	3174.84	3069.14	16.02	OSF1.50	22896.30	12900.00				MinPts	

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

Pass

1212.09	32.81	1210.81	1179.28	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1212.09	32.81	1210.80	1179.28	495417.45	MAS = 10.00 (m)	26.00	26.00					WRP	
1212.09	32.81	1195.55	1179.28	79.37	MAS = 10.00 (m)	2490.00	2490.00					MinPts	
1105.94	32.81	1085.08	1073.13	56.68	MAS = 10.00 (m)	3630.00	3621.07					MinPt-O-SF	
735.68	72.74	686.57	662.94	15.53	OSF1.50	9220.00	9184.48					MinPt-O-SF	
730.47	72.23	681.69	658.24	15.53	OSF1.50	9420.00	9384.48					MinPt-O-SF	
730.35	72.20	681.60	658.16	15.54	OSF1.50	9440.00	9404.48					MinPts	
730.34	72.18	681.60	658.16	15.54	OSF1.50	9450.00	9414.48					MinPt-CtCt	
3383.00	319.82	3169.36	3063.19	15.92	OSF1.50	22896.30	12900.00					MinPts	

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

Pass

1717.21	32.81	1715.23	1684.40	N/A	MAS = 10.00 (m)	0.00	0.00					MinPts	
1717.25	32.81	1715.25	1684.44	131506.84	MAS = 10.00 (m)	26.00	26.00					WRP	
1711.27	32.81	1702.69	1678.46	258.94	MAS = 10.00 (m)	1410.00	1410.00					MinPts	
1712.34	32.81	1700.81	1679.53	179.06	MAS = 10.00 (m)	2200.00	2200.00					MINPT-O-EOU	
1217.12	33.52	1193.92	1183.60	58.89	OSF1.50	6100.00	6065.34					MinPt-O-SF	
1146.84	46.80	1114.73	1100.03	38.92	OSF1.50	9490.00	9454.48					MinPt-CtCt	
1146.86	46.91	1114.68	1099.95	38.83	OSF1.50	9510.00	9474.48					MINPT-O-EOU	
1146.95	47.01	1114.70	1099.93	38.74	OSF1.50	9530.00	9494.48					MinPt-O-ADP	
1137.08	53.57	1100.46	1083.51	33.47	OSF1.50	10590.00	10554.48					MinPt-CtCt	
1137.10	53.65	1100.43	1083.45	33.42	OSF1.50	10600.00	10564.48					MINPT-O-EOU	
1137.16	53.72	1100.44	1083.44	33.37	OSF1.50	10610.00	10574.48					MinPt-O-ADP	
1147.12	54.80	1109.70	1092.32	32.93	OSF1.50	10790.00	10754.48					MinPt-O-SF	
2205.79	52.35	2170.23	2153.44	65.63	OSF1.50	13570.00	12900.00					MinPt-CtCt	
2206.43	54.05	2169.74	2152.38	63.51	OSF1.50	13650.00	12900.00					MINPT-O-EOU	
2207.35	55.15	2169.92	2152.20	62.21	OSF1.50	13700.00	12900.00					MinPt-O-ADP	
2209.84	58.34	2170.29	2151.50	58.76	OSF1.50	13810.00	12900.00					MINPT-O-EOU	
2211.82	60.66	2170.72	2151.15	56.48	OSF1.50	13900.00	12900.00					MinPt-O-ADP	
2219.63	70.98	2171.65	2148.65	48.21	OSF1.50	14220.00	12900.00					MINPT-O-EOU	
2216.07	103.47	2146.43	2112.60	32.72	OSF1.50	15140.00	12900.00					MinPt-CtCt	
2217.89	114.12	2141.15	2103.77	29.64	OSF1.50	15430.00	12900.00					MinPt-CtCt	
2218.46	128.73	2131.98	2089.73	26.23	OSF1.50	15820.00	12900.00					MinPt-CtCt	
2220.10	132.49	2131.11	2087.61	25.49	OSF1.50	15950.00	12900.00					MINPT-O-EOU	
2218.98	145.27	2121.47	2073.71	23.21	OSF1.50	16260.00	12900.00					MinPt-CtCt	
2220.63	162.99	2111.31	2057.64	20.67	OSF1.50	16720.00	12900.00					MinPt-CtCt	
2221.31	165.16	2110.54	2056.15	20.40	OSF1.50	16800.00	12900.00					MINPT-O-EOU	
2222.17	166.22	2110.70	2055.96	20.28	OSF1.50	16840.00	12900.00					MinPt-O-ADP	
2225.05	170.41	2110.79	2054.65	19.80	OSF1.50	16940.00	12900.00					MINPT-O-EOU	
2225.46	170.88	2110.88	2054.58	19.75	OSF1.50	16960.00	12900.00					MinPt-O-ADP	
2241.75	197.09	2109.69	2044.65	17.22	OSF1.50	17410.00	12900.00					MinPts	
2251.16	198.88	2117.91	2052.28	17.13	OSF1.50	17580.00	12900.00					MinPt-O-SF	
5962.94	133.67	5873.16	5829.27	67.90	OSF1.50	22896.30	12900.00					TD	

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

Pass

1271.97	32.81	1270.68	1239.16	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
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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		
1271.97	32.81	1270.68	1239.16	476589.74		MAS = 10.00 (m)	26.00	26.00				WRP	
1271.97	32.81	1258.57	1239.16	104.90		MAS = 10.00 (m)	1990.00	1990.00				MinPts	
1272.02	32.81	1258.48	1239.21	103.66		MAS = 10.00 (m)	2020.00	2020.00				MINPT-O-EOU	
1313.65	32.81	1298.23	1280.84	92.87		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
1337.02	44.50	1306.92	1292.52	46.37		OSF1.50	6040.00	6005.87				MinPts	
1342.09	45.01	1311.66	1297.09	46.00		OSF1.50	6200.00	6164.79				MinPt-O-SF	
1351.71	81.35	1297.05	1270.36	25.30		OSF1.50	11890.00	11854.48				MinPt-O-SF	
1349.81	81.39	1295.12	1268.42	25.25		OSF1.50	12080.00	12044.48				MinPt-CtCt	
1349.82	81.41	1295.12	1268.41	25.25		OSF1.50	12090.00	12054.48				MinPts	
1351.37	81.59	1296.55	1269.78	25.22		OSF1.50	12190.00	12154.48				MinPt-O-SF	
1477.66	328.87	1257.98	1148.78	6.76		OSF1.50	22896.30	12900.00				MinPts	

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

Pass

1739.46	32.81	1738.17	1706.65	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1738.96	32.81	1737.62	1706.15	32789.15		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
1738.84	32.81	1737.47	1706.03	20781.61		MAS = 10.00 (m)	50.00	50.00				MinPts	
1739.25	92.24	1677.33	1647.01	28.66		OSF1.50	1800.00	1800.00				MinPt-CtCt	
1711.24	192.73	1582.32	1518.51	13.40		OSF1.50	3740.00	3729.92				MinPt-CtCt	
1699.29	240.26	1538.69	1459.04	10.66		OSF1.50	4650.00	4630.40				MinPt-CtCt	
1701.05	245.66	1536.84	1455.39	10.43		OSF1.50	4790.00	4768.94				MINPT-O-EOU	
1706.45	264.83	1529.47	1441.62	9.71		OSF1.50	5130.00	5105.38				MinPts	
7806.10	44.23	7776.19	7761.87	272.65		OSF1.50	14410.00	12900.00				MinPt-CtCt	
7807.07	46.82	7775.43	7760.26	257.16		OSF1.50	14530.00	12900.00				MINPT-O-EOU	
7808.49	48.50	7775.73	7760.00	248.06		OSF1.50	14600.00	12900.00				MinPt-O-ADP	
10642.24	237.82	10483.27	10404.42	67.48		OSF1.50	21640.00	12900.00				MinPt-O-SF	
11533.00	254.63	11362.82	11278.37	68.28		OSF1.50	22896.30	12900.00				TD	

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

Pass

3445.73	32.81	3444.44	3412.92	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3445.72	32.81	3444.43	3412.91	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
2226.93	47.49	2194.36	2179.44	74.52		OSF1.50	6300.00	6264.55				MinPt-O-SF	
2175.99	61.70	2133.91	2114.29	55.39		OSF1.50	9260.00	9224.48				MinPt-CtCt	
2175.99	61.70	2133.91	2114.29	55.39		OSF1.50	9270.00	9234.48				MinPts	
2181.06	61.95	2138.82	2119.11	55.25		OSF1.50	9580.00	9544.48				MinPt-O-SF	
3948.49	316.90	3736.79	3631.58	18.76		OSF1.50	22896.30	12900.00				MinPts	

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

Pass

5367.41	32.81	5366.12	5334.60	N/A		MAS = 10.00 (m)	0.00	0.00				MinPts	
5367.42	32.81	5366.10	5334.61	177772.27		MAS = 10.00 (m)	26.00	26.00				WRP	
5368.60	32.81	5365.04	5335.79	2364.30		MAS = 10.00 (m)	490.00	490.00				MINPT-O-EOU	
5369.41	32.81	5364.82	5336.60	1621.81		MAS = 10.00 (m)	740.00	740.00				MinPts	
5369.51	32.81	5363.70	5336.70	1187.87		MAS = 10.00 (m)	1040.00	1040.00				MinPts	
5369.59	32.81	5363.10	5336.78	1030.80		MAS = 10.00 (m)	1180.00	1180.00				MINPT-O-EOU	
5365.57	32.81	5353.62	5332.76	495.93		MAS = 10.00 (m)	2470.00	2470.00				MinPts	
5319.94	32.81	5297.91	5287.13	253.69		MAS = 10.00 (m)	6100.00	6065.34				MinPt-O-SF	
5317.31	32.81	5295.98	5284.50	262.44		MAS = 10.00 (m)	6340.00	6304.51				MINPT-O-EOU	
5317.28	32.81	5296.01	5284.47	263.23		MAS = 10.00 (m)	6360.00	6324.49				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		
5383.55	43.54	5354.18	5340.01	189.90		OSF1.50	8850.00	8814.48				MINPT-O-EOU	
5384.10	44.21	5354.29	5339.89	186.97		OSF1.50	8970.00	8934.48				MinPt-O-ADP	
5384.42	45.41	5353.81	5339.01	181.93		OSF1.50	9160.00	9124.48				MinPt-CtCt	
5384.53	45.75	5353.69	5338.78	180.53		OSF1.50	9220.00	9184.48				MINPT-O-EOU	
5385.02	46.65	5353.58	5338.37	177.00		OSF1.50	9360.00	9324.48				MINPT-O-EOU	
5383.92	49.29	5350.72	5334.63	167.29		OSF1.50	9780.00	9744.48				MinPt-CtCt	
5383.99	49.50	5350.65	5334.49	166.55		OSF1.50	9820.00	9784.48				MINPT-O-EOU	
5384.09	49.61	5350.68	5334.49	166.19		OSF1.50	9840.00	9804.48				MinPt-O-ADP	
5641.54	61.31	5600.33	5580.23	140.34		OSF1.50	12280.00	12244.48				MinPt-O-SF	
2225.19	146.25	2127.34	2078.93	22.97		OSF1.50	18840.00	12900.00				MinPt-CtCt	
2226.36	149.32	2126.48	2077.04	22.51		OSF1.50	18960.00	12900.00				MINPT-O-EOU	
2228.48	151.83	2126.92	2076.65	22.16		OSF1.50	19060.00	12900.00				MinPt-O-ADP	
2230.08	153.33	2127.53	2076.76	21.95		OSF1.50	19120.00	12900.00				MinPt-O-SF	
2228.19	157.68	2122.72	2070.50	21.32		OSF1.50	19300.00	12900.00				MinPt-CtCt	
2228.51	162.79	2119.64	2065.71	20.65		OSF1.50	19500.00	12900.00				MinPt-CtCt	
2228.15	168.22	2115.67	2059.94	19.98		OSF1.50	19710.00	12900.00				MinPt-CtCt	
2199.72	204.83	2062.83	1994.89	16.18		OSF1.50	21080.00	12900.00				MinPt-CtCt	
2202.29	228.00	2049.95	1974.29	14.55		OSF1.50	21910.00	12900.00				MinPt-CtCt	
2205.02	238.63	2045.59	1966.38	13.91		OSF1.50	22290.00	12900.00				MINPT-O-EOU	
2202.36	255.59	2031.63	1946.77	12.97		OSF1.50	22890.00	12900.00				MinPt-CtCt	
2202.36	255.76	2031.52	1946.61	12.96		OSF1.50	22896.30	12900.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #73H Rev5 RM
19Dec19 (Def Plan)

Pass

2647.23	32.81	2645.94	2614.42	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2647.23	32.81	2645.94	2614.42	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
2238.03	48.24	2205.30	2189.80	72.11	OSF1.50	6110.00	6075.27					MinPt-O-SF	
2237.52	48.22	2204.80	2189.30	72.13	OSF1.50	6160.00	6124.97					MinPts	
2295.20	50.34	2261.10	2244.86	70.63	OSF1.50	6890.00	6854.48					MinPt-O-SF	
2297.05	91.94	2235.21	2205.11	38.13	OSF1.50	11930.00	11894.48					MINPT-O-EOU	
2297.09	91.98	2235.22	2205.11	38.11	OSF1.50	11940.00	11904.48					MinPt-O-ADP	
2299.61	92.19	2237.61	2207.42	38.06	OSF1.50	12060.00	12024.48					MinPt-O-SF	
2407.12	86.34	2349.13	2320.78	42.43	OSF1.50	13460.00	12900.00					MinPt-CtCt	
2408.75	318.95	2195.69	2089.80	11.37	OSF1.50	22896.30	12900.00					MinPts	

Cimarex Dos Equis 12-13
Federal Com #77H Rev1 RM
17Feb20 (Def Plan)

Pass

2545.89	32.81	2544.60	2513.08	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2545.89	32.81	2544.60	2513.08	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
2413.23	43.62	2383.68	2369.61	85.71	OSF1.50	5840.00	5807.96					MinPt-O-SF	
2357.81	93.77	2294.79	2264.04	38.31	OSF1.50	12425.52	12390.00					MinPt-CtCt	
2357.81	93.78	2294.79	2264.03	38.31	OSF1.50	12430.00	12394.48					MinPts	
2357.77	93.75	2294.77	2264.02	38.32	OSF1.50	12500.00	12464.18					MinPts	
2356.07	87.45	2297.27	2268.62	41.10	OSF1.50	13320.00	12896.12					MinPt-CtCt	
2357.76	317.39	2145.66	2040.37	11.19	OSF1.50	22896.30	12900.00					MinPts	

Cimarex Dos Equis 12-13
Federal Com #76H Rev1 RM
17Feb20 (Def Plan)

Pass

2565.89	32.81	2564.60	2533.08	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2565.89	32.81	2564.60	2533.08	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
2509.77	38.77	2483.48	2471.00	100.51	OSF1.50	5370.00	5342.87					MinPt-O-SF	
2386.36	64.25	2343.01	2322.11	57.05	OSF1.50	9210.00	9174.48					MinPt-O-SF	
2385.95	64.07	2342.73	2321.89	57.21	OSF1.50	9360.00	9324.48					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		
	2385.95	64.06	2342.73	2321.89	57.21	OSF1.50	9370.00	9334.48				MinPt-CtCt	
	2392.86	64.24	2349.53	2328.62	57.18	OSF1.50	9660.00	9624.48				MinPt-O-SF	
	4070.98	325.89	3853.29	3745.09	18.81	OSF1.50	22896.30	12900.00				MinPts	

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

Pass

3022.83	32.81	3020.85	2990.02	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3022.82	32.81	3020.84	2990.01	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
3015.05	32.81	3004.16	2982.24	338.18	MAS = 10.00 (m)	1630.00	1630.00	MinPts
3015.11	32.81	3004.06	2982.30	332.13	MAS = 10.00 (m)	1690.00	1690.00	MINPT-O-EOU
3015.06	32.81	3003.26	2982.25	306.69	MAS = 10.00 (m)	1950.00	1950.00	MinPts
3014.36	32.81	3000.63	2981.56	256.38	MAS = 10.00 (m)	2360.00	2360.00	MinPts
3014.44	32.81	3000.55	2981.63	253.05	MAS = 10.00 (m)	2410.00	2410.00	MINPT-O-EOU
3014.89	32.81	3000.77	2982.08	248.29	MAS = 10.00 (m)	2500.00	2500.00	MinPt-O-SF
3013.79	32.81	2999.66	2980.98	248.06	MAS = 10.00 (m)	2600.00	2599.98	MinPt-O-SF
2529.96	33.15	2507.00	2496.80	123.93	OSF1.50	6100.00	6065.34	MinPt-O-SF
2500.62	34.82	2476.53	2465.80	116.35	OSF1.50	7220.00	7184.48	MinPt-CtCt
2500.65	34.92	2476.50	2465.73	116.00	OSF1.50	7240.00	7204.48	MINPT-O-EOU
2500.73	35.01	2476.52	2465.72	115.65	OSF1.50	7260.00	7224.48	MinPt-O-ADP
2396.78	64.11	2353.07	2332.67	58.68	OSF1.50	12500.00	12464.18	MinPt-O-SF
2392.04	64.34	2348.17	2327.70	58.36	OSF1.50	12610.00	12569.92	MinPt-O-SF
2390.14	63.91	2346.55	2326.23	58.73	OSF1.50	12690.00	12641.16	MinPt-O-ADP
2390.09	63.86	2346.54	2326.23	58.78	OSF1.50	12700.00	12649.61	MINPT-O-EOU
2390.08	63.80	2346.57	2326.28	58.83	OSF1.50	12710.00	12657.94	MinPt-CtCt
10395.44	92.51	10333.11	10302.93	172.21	OSF1.50	22896.30	12900.00	TD

Cimarex Dos Equis 12 Federal
Com #2H ST01 Gyro+MWD
10486ft to 13433ft MD (Def
Survey)

Pass

3022.83	32.81	3020.85	2990.02	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3022.82	32.81	3020.84	2990.01	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
3015.05	32.81	3004.16	2982.24	338.18	MAS = 10.00 (m)	1630.00	1630.00	MinPts
3015.11	32.81	3004.06	2982.30	332.13	MAS = 10.00 (m)	1690.00	1690.00	MINPT-O-EOU
3015.06	32.81	3003.26	2982.25	306.69	MAS = 10.00 (m)	1950.00	1950.00	MinPts
3014.36	32.81	3000.63	2981.56	256.38	MAS = 10.00 (m)	2360.00	2360.00	MinPts
3014.44	32.81	3000.55	2981.63	253.05	MAS = 10.00 (m)	2410.00	2410.00	MINPT-O-EOU
3014.89	32.81	3000.77	2982.08	248.29	MAS = 10.00 (m)	2500.00	2500.00	MinPt-O-SF
3013.79	32.81	2999.66	2980.98	248.06	MAS = 10.00 (m)	2600.00	2599.98	MinPt-O-SF
2529.96	33.15	2507.00	2496.80	123.93	OSF1.50	6100.00	6065.34	MinPt-O-SF
2500.62	34.82	2476.53	2465.80	116.35	OSF1.50	7220.00	7184.48	MinPt-CtCt
2500.65	34.92	2476.50	2465.73	116.00	OSF1.50	7240.00	7204.48	MINPT-O-EOU
2500.73	35.01	2476.52	2465.72	115.65	OSF1.50	7260.00	7224.48	MinPt-O-ADP
2460.29	51.60	2424.99	2408.69	75.41	OSF1.50	10370.00	10334.48	MinPt-O-SF
2405.15	56.11	2366.79	2349.04	67.66	OSF1.50	10910.00	10874.48	MinPt-CtCt
2405.20	56.24	2366.75	2348.95	67.49	OSF1.50	10930.00	10894.48	MinPts
2487.18	61.83	2445.20	2425.36	62.62	OSF1.50	11600.00	11564.48	MinPt-O-SF
3004.89	63.82	2961.68	2941.07	72.84	OSF1.50	13520.00	12900.00	MinPt-CtCt
3008.07	72.96	2958.77	2935.11	63.53	OSF1.50	13860.00	12900.00	MINPT-O-EOU
3011.25	92.32	2949.04	2918.92	49.96	OSF1.50	14360.00	12900.00	MinPt-CtCt
3012.31	95.58	2947.93	2916.73	48.24	OSF1.50	14480.00	12900.00	MINPT-O-EOU
3013.38	96.87	2948.14	2916.51	47.60	OSF1.50	14530.00	12900.00	MinPt-O-ADP
3055.94	119.96	2975.31	2935.99	38.83	OSF1.50	15190.00	12900.00	MinPt-O-ADP
3078.96	132.07	2990.26	2946.90	35.48	OSF1.50	15460.00	12900.00	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		
	3087.71	206.50	2949.39	2881.21	22.63	OSF1.50	15590.00	12900.00				MinPts	
	3091.25	206.78	2952.73	2884.47	22.63	OSF1.50	15640.00	12900.00				MinPt-O-SF	
	8108.17	144.16	8011.40	7964.01	85.52	OSF1.50	22896.30	12900.00				TD	

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

Pass

3022.83	32.81	3020.85	2990.02	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3022.82	32.81	3020.84	2990.01	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
3015.05	32.81	3004.16	2982.24	338.18	MAS = 10.00 (m)	1630.00	1630.00	MinPts
3015.11	32.81	3004.06	2982.30	332.13	MAS = 10.00 (m)	1690.00	1690.00	MINPT-O-EOU
3015.06	32.81	3003.26	2982.25	306.69	MAS = 10.00 (m)	1950.00	1950.00	MinPts
3014.36	32.81	3000.63	2981.56	256.38	MAS = 10.00 (m)	2360.00	2360.00	MinPts
3014.44	32.81	3000.55	2981.63	253.05	MAS = 10.00 (m)	2410.00	2410.00	MINPT-O-EOU
3014.89	32.81	3000.77	2982.08	248.29	MAS = 10.00 (m)	2500.00	2500.00	MinPt-O-SF
3013.79	32.81	2999.66	2980.98	248.06	MAS = 10.00 (m)	2600.00	2599.98	MinPt-O-SF
2529.96	33.15	2507.00	2496.80	123.93	OSF1.50	6100.00	6065.34	MinPt-O-SF
2500.62	34.82	2476.53	2465.80	116.35	OSF1.50	7220.00	7184.48	MinPt-CtCt
2500.65	34.92	2476.50	2465.73	116.00	OSF1.50	7240.00	7204.48	MINPT-O-EOU
2500.73	35.01	2476.52	2465.72	115.65	OSF1.50	7260.00	7224.48	MinPt-O-ADP
2460.29	51.60	2424.99	2408.69	75.41	OSF1.50	10370.00	10334.48	MinPt-O-SF
2405.15	56.11	2366.79	2349.04	67.66	OSF1.50	10910.00	10874.48	MinPt-CtCt
2405.20	56.24	2366.75	2348.95	67.49	OSF1.50	10930.00	10894.48	MinPts
2487.18	61.83	2445.20	2425.36	62.62	OSF1.50	11600.00	11564.48	MinPt-O-SF
3004.89	63.82	2961.68	2941.07	72.84	OSF1.50	13520.00	12900.00	MinPt-CtCt
3008.07	72.96	2958.77	2935.11	63.52	OSF1.50	13860.00	12900.00	MINPT-O-EOU
3011.25	92.32	2949.04	2918.92	49.96	OSF1.50	14360.00	12900.00	MinPt-CtCt
3012.31	95.58	2947.93	2916.73	48.24	OSF1.50	14480.00	12900.00	MINPT-O-EOU
3013.38	96.87	2948.14	2916.51	47.60	OSF1.50	14530.00	12900.00	MinPt-O-ADP
3055.94	119.96	2975.31	2935.99	38.83	OSF1.50	15190.00	12900.00	MinPt-O-ADP
3078.96	132.07	2990.26	2946.90	35.48	OSF1.50	15460.00	12900.00	MinPts
3081.98	136.87	2990.07	2945.11	34.25	OSF1.50	15500.00	12900.00	MinPts
3108.81	151.27	3007.31	2957.54	31.22	OSF1.50	15870.00	12900.00	MinPt-O-ADP
3135.30	189.67	3008.19	2945.63	25.04	OSF1.50	16560.00	12900.00	MINPT-O-EOU
3143.87	204.27	3007.03	2939.60	23.30	OSF1.50	16880.00	12900.00	MINPT-O-EOU
3154.86	281.49	2966.54	2873.38	16.92	OSF1.50	17420.00	12900.00	MinPts
3160.45	282.46	2971.49	2878.00	16.89	OSF1.50	17550.00	12900.00	MinPt-O-SF
6381.14	192.88	6251.90	6188.26	50.12	OSF1.50	22896.30	12900.00	TD

Cimarex Dos Equis 12-13
Federal Com #75H Rev1 RM
17Feb20 (Def Plan)

Pass

2585.88	32.81	2584.59	2553.07	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
2585.88	32.81	2584.59	2553.07	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
2536.49	39.93	2509.42	2496.55	98.50	OSF1.50	5890.00	5857.43	MinPt-O-SF
2491.89	39.86	2464.85	2452.03	97.19	OSF1.50	6300.00	6264.55	MinPt-O-SF
2488.04	58.78	2448.37	2429.26	65.04	OSF1.50	9160.00	9124.48	MinPt-CtCt
2488.09	58.95	2448.32	2429.14	64.85	OSF1.50	9200.00	9164.48	MINPT-O-EOU
2488.16	59.03	2448.33	2429.13	64.76	OSF1.50	9220.00	9184.48	MinPt-O-ADP
2511.30	59.91	2470.93	2451.40	64.26	OSF1.50	9760.00	9724.48	MinPt-O-SF
4130.34	325.85	3912.68	3804.49	19.08	OSF1.50	22896.30	12900.00	MinPts

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		
2667.22		32.81	2665.93	2634.41	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
2667.22		32.81	2665.93	2634.41	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
2601.53		32.81	2582.86	2568.72	149.78	MAS = 10.00 (m)	3570.00	3561.70				MinPts	
2601.54		32.81	2582.85	2568.74	149.64	MAS = 10.00 (m)	3580.00	3571.59				MINPT-O-EOU	
2839.66		42.31	2811.03	2797.36	103.79	OSF1.50	6100.00	6065.34				MinPt-O-SF	
3253.91		53.32	3217.94	3200.59	93.77	OSF1.50	7810.00	7774.48				MinPt-O-SF	
3255.84		82.97	3200.09	3172.86	59.76	OSF1.50	12100.00	12064.48				MinPt-CtCt	
3255.84		82.98	3200.09	3172.86	59.76	OSF1.50	12110.00	12074.48				MINPT-O-EOU	
3255.84		82.98	3200.09	3172.86	59.76	OSF1.50	12120.00	12084.48				MinPt-O-ADP	
3260.81		83.57	3204.67	3177.24	59.42	OSF1.50	12425.52	12390.00				MinPt-O-SF	
3290.92		322.99	3075.16	2967.93	15.34	OSF1.50	22896.30	12900.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #90H Rev1 RM
14Feb20 (Def Plan)

Pass

3465.73	32.81	3464.44	3432.92	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3465.72	32.81	3464.43	3432.91	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
2955.84	72.59	2906.82	2883.25	62.68	OSF1.50	8860.00	8824.48	MinPts
2866.85	74.22	2816.69	2792.64	59.54	OSF1.50	9610.00	9574.48	MinPt-CtCt
2866.86	74.25	2816.68	2792.61	59.52	OSF1.50	9620.00	9584.48	MinPts
2875.52	74.77	2825.01	2800.75	59.22	OSF1.50	9840.00	9804.48	MinPt-O-SF
4347.30	320.41	4133.26	4026.89	20.43	OSF1.50	22896.30	12900.00	MinPts

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

Pass

3546.73	32.81	3545.44	3513.92	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
3546.72	32.81	3545.43	3513.91	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
3037.01	99.32	2970.16	2937.69	46.73	OSF1.50	11900.00	11864.48	MinPt-CtCt
3037.02	99.44	2970.10	2937.58	46.67	OSF1.50	11920.00	11884.48	MinPts
3040.78	99.87	2973.58	2940.91	46.51	OSF1.50	12090.00	12054.48	MinPt-O-SF
3140.59	93.76	3077.60	3046.83	51.00	OSF1.50	13520.00	12900.00	MinPts
3140.59	93.76	3077.61	3046.83	51.00	OSF1.50	13530.00	12900.00	MinPt-O-SF
3150.61	317.48	2938.49	2833.13	14.94	OSF1.50	22896.30	12900.00	MinPts

Cimarex Dos Equis 13 Federal
#2H XEM + MWD 0ft to 15311
(Def Survey)

Pass

6031.28	32.81	6029.30	5998.47	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
6031.27	32.81	6029.28	5998.46	N/A	MAS = 10.00 (m)	10.00	10.00	MinPt-O-SF
6031.26	32.81	6029.28	5998.45	N/A	MAS = 10.00 (m)	20.00	20.00	MinPts
6031.26	32.81	6029.28	5998.45	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
6034.88	32.81	6024.58	6002.07	725.13	MAS = 10.00 (m)	1460.00	1460.00	MINPT-O-EOU
6036.82	32.81	6024.92	6004.02	607.86	MAS = 10.00 (m)	1880.00	1880.00	MINPT-O-EOU
6000.23	32.81	5983.43	5967.42	405.52	MAS = 10.00 (m)	3610.00	3601.28	MinPt-O-SF
5890.83	34.05	5867.42	5856.78	276.78	OSF1.50	6100.00	6065.34	MinPt-O-SF
5885.30	32.98	5862.60	5852.32	286.21	OSF1.50	6350.00	6314.50	MinPt-O-ADP
5885.27	32.93	5862.60	5852.34	286.62	OSF1.50	6360.00	6324.49	MINPT-O-EOU
5885.25	32.84	5862.64	5852.40	287.44	OSF1.50	6380.00	6344.49	MinPt-CtCt
5910.13	53.57	5873.71	5856.55	172.15	OSF1.50	10550.00	10514.48	MinPt-CtCt
5910.18	53.74	5873.65	5856.44	171.61	OSF1.50	10580.00	10544.48	MINPT-O-EOU
5910.22	53.79	5873.66	5856.43	171.43	OSF1.50	10590.00	10554.48	MinPt-O-ADP
6176.77	61.91	6134.84	6114.87	154.56	OSF1.50	12425.52	12390.00	MinPt-O-SF
3140.28	140.16	3046.18	3000.12	34.07	OSF1.50	18480.00	12900.00	MinPt-CtCt
3140.83	141.74	3045.68	2999.09	33.69	OSF1.50	18540.00	12900.00	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		
3141.47	142.52	3045.80	2998.95	33.51		OSF1.50	18570.00	12900.00				MinPt-O-ADP	
3161.41	244.41	2997.81	2917.00	19.55		OSF1.50	21320.00	12900.00				MinPt-CtCt	
3175.03	280.78	2987.18	2894.25	17.07		OSF1.50	22200.00	12900.00				MINPT-O-EOU	
3180.08	286.90	2988.15	2893.18	16.73		OSF1.50	22360.00	12900.00				MinPt-O-ADP	
3182.89	289.62	2989.15	2893.27	16.59		OSF1.50	22430.00	12900.00				MinPt-O-ADP	
3202.80	321.89	2987.54	2880.91	15.01		OSF1.50	22830.00	12900.00				MinPts	
3207.51	322.84	2991.62	2884.67	14.99		OSF1.50	22896.30	12900.00				MinPt-O-SF	

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

3469.40	32.81	3468.12	3436.59	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3469.24	32.81	3467.93	3436.43	179907.63		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3469.21	32.81	3467.90	3436.40	201531.19		MAS = 10.00 (m)	26.00	26.00				WRP	
3469.18	32.81	3467.86	3436.37	100860.65		MAS = 10.00 (m)	40.00	40.00				MinPts	
3472.08	53.18	3436.20	3418.90	100.33		OSF1.50	1140.00	1140.00				MinPt-CtCt	
3471.56	112.72	3395.98	3358.83	46.71		OSF1.50	2290.00	2290.00				MinPt-CtCt	
3316.90	259.42	3143.48	3057.48	19.28		OSF1.50	5250.00	5224.13				MinPt-O-SF	
3315.96	259.23	3142.67	3056.73	19.28		OSF1.50	5320.00	5293.40				MinPts	
3315.95	259.19	3142.68	3056.76	19.29		OSF1.50	5330.00	5303.29				MinPt-CtCt	
7884.26	83.57	7828.12	7800.69	143.71		OSF1.50	15730.00	12900.00				MinPt-CtCt	
7885.04	85.78	7827.43	7799.26	139.97		OSF1.50	15840.00	12900.00				MINPT-O-EOU	
7886.11	87.05	7827.65	7799.07	137.91		OSF1.50	15900.00	12900.00				MinPt-O-ADP	
10308.49	244.63	10144.97	10063.86	63.53		OSF1.50	22370.00	12900.00				MinPt-O-SF	
10655.15	252.23	10486.57	10402.92	63.68		OSF1.50	22896.30	12900.00				TD	

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

3750.66	32.81	3749.37	3717.85	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3750.51	32.81	3749.20	3717.70	223702.34		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3750.48	32.81	3749.18	3717.68	258114.78		MAS = 10.00 (m)	26.00	26.00				WRP	
3750.46	32.81	3749.13	3717.66	83657.51		MAS = 10.00 (m)	40.00	40.00				MinPts	
3751.42	64.10	3708.26	3687.32	89.56		OSF1.50	1290.00	1290.00				MinPt-CtCt	
3749.98	106.35	3678.65	3643.63	53.52		OSF1.50	2100.00	2100.00				MinPt-CtCt	
3425.77	260.13	3251.81	3165.64	19.87		OSF1.50	5320.00	5293.40				MinPt-O-SF	
3419.74	258.97	3246.56	3160.77	19.92		OSF1.50	5500.00	5471.51				MinPts	
3419.65	258.80	3246.59	3160.85	19.93		OSF1.50	5520.00	5491.30				MinPt-CtCt	
8330.95	101.97	8262.54	8228.97	124.09		OSF1.50	14390.00	12900.00				MinPt-CtCt	
8331.16	102.57	8262.35	8228.59	123.37		OSF1.50	14450.00	12900.00				MINPT-O-EOU	
8331.42	102.88	8262.41	8228.54	122.99		OSF1.50	14480.00	12900.00				MinPt-O-ADP	
10913.01	244.56	10749.54	10668.45	67.28		OSF1.50	21440.00	12900.00				MinPt-O-SF	
11905.69	263.04	11729.90	11642.65	68.22		OSF1.50	22896.30	12900.00				TD	

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

3485.72	32.81	3484.43	3452.91	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3485.71	32.81	3484.42	3452.90	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
3485.71	32.81	3472.27	3452.90	286.74		MAS = 10.00 (m)	2000.00	2000.00				MinPts	
3485.75	32.81	3472.18	3452.95	283.66		MAS = 10.00 (m)	2030.00	2030.00				MINPT-O-EOU	
3511.64	32.81	3496.21	3478.83	248.31		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
3520.43	32.81	3504.91	3487.62	247.20		MAS = 10.00 (m)	2930.00	2928.39				MinPts	
3529.20	42.65	3500.34	3486.56	127.95		OSF1.50	6010.00	5976.18				MinPt-O-SF	
3503.51	41.93	3475.11	3461.57	129.38		OSF1.50	6240.00	6204.67				MinPt-O-SF	
3495.90	60.07	3455.41	3435.83	89.25		OSF1.50	9160.00	9124.48				MinPt-CtCt	

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		
	3495.92	60.28	3455.28	3435.64	88.94	OSF1.50	9210.00	9174.48				MinPts	
	3550.33	62.30	3508.36	3488.02	87.25	OSF1.50	10140.00	10104.48				MinPt-O-SF	
	4804.14	329.16	4584.27	4474.98	21.97	OSF1.50	22896.30	12900.00				MinPts	

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

Pass

3505.72	32.81	3504.43	3472.91	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
3505.71	32.81	3504.43	3472.90	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
3505.71	32.81	3494.16	3472.90	341.36	MAS = 10.00 (m)	1700.00	1700.00					MinPts	
3505.75	32.81	3494.07	3472.95	336.99	MAS = 10.00 (m)	1730.00	1730.00					MINPT-O-EOU	
3566.25	32.81	3551.58	3533.45	266.24	MAS = 10.00 (m)	2600.00	2599.98					MinPt-O-SF	
4155.14	67.72	4109.56	4087.41	93.79	OSF1.50	9130.00	9094.48					MinPt-O-SF	
4155.72	67.10	4110.56	4088.62	94.69	OSF1.50	9330.00	9294.48					MinPt-CtCt	
4155.75	67.20	4110.52	4088.55	94.55	OSF1.50	9370.00	9334.48					MINPT-O-EOU	
4155.80	67.25	4110.53	4088.54	94.47	OSF1.50	9390.00	9354.48					MinPt-O-ADP	
4252.67	71.64	4204.49	4181.04	90.65	OSF1.50	10470.00	10434.48					MinPt-O-SF	
5303.78	340.48	5076.36	4963.30	23.45	OSF1.50	22896.30	12900.00					MinPts	

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

Pass

3586.70	32.81	3585.42	3553.90	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
3586.70	32.81	3585.41	3553.89	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
3586.70	32.81	3576.40	3553.89	397.95	MAS = 10.00 (m)	1500.00	1500.00					MinPts	
3586.74	32.81	3576.31	3553.93	392.20	MAS = 10.00 (m)	1530.00	1530.00					MINPT-O-EOU	
3658.51	39.01	3632.08	3619.50	145.42	OSF1.50	5460.00	5431.93					MinPts	
3553.92	41.89	3525.51	3512.03	131.77	OSF1.50	6250.00	6214.64					MinPt-O-SF	
3547.03	86.78	3488.69	3460.25	62.33	OSF1.50	12360.00	12324.48					MinPt-CtCt	
3547.07	86.88	3488.66	3460.18	62.26	OSF1.50	12380.00	12344.48					MinPts	
3547.51	87.10	3488.96	3460.42	62.11	OSF1.50	12425.52	12390.00					MinPt-O-SF	
3707.58	316.73	3496.00	3390.85	17.62	OSF1.50	22896.30	12900.00					MinPts	

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

Pass

3566.72	32.81	3565.43	3533.91	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
3566.71	32.81	3565.43	3533.91	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
3566.71	32.81	3556.42	3533.91	395.73	MAS = 10.00 (m)	1500.00	1500.00					MinPts	
3566.76	32.81	3556.32	3533.95	389.84	MAS = 10.00 (m)	1530.00	1530.00					MINPT-O-EOU	
4158.35	69.19	4111.80	4089.16	91.84	OSF1.50	9090.00	9054.48					MinPt-O-SF	
4159.33	85.96	4101.60	4073.38	73.66	OSF1.50	11930.00	11894.48					MinPt-O-SF	
4155.72	86.11	4097.89	4069.61	73.47	OSF1.50	12260.00	12224.48					MinPt-CtCt	
4155.75	86.17	4097.87	4069.57	73.41	OSF1.50	12280.00	12244.48					MinPts	
4157.93	86.72	4099.69	4071.21	72.98	OSF1.50	12425.52	12390.00					MinPt-O-SF	
4191.59	326.61	3973.42	3864.98	19.32	OSF1.50	22896.30	12900.00					MinPts	

Cimarex Dos Equis 12 Federal
Com #11H Gyro 0ft to 11268ft
MD (Def Survey)

Pass

4192.72	32.81	4190.74	4159.91	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4192.70	32.81	4190.72	4159.90	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
4192.71	32.81	4190.73	4159.90	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
4192.79	32.81	4190.69	4159.99	32403.65	MAS = 10.00 (m)	70.00	70.00					MINPT-O-EOU	
4197.85	32.81	4187.42	4165.04	496.59	MAS = 10.00 (m)	1820.00	1820.00					MinPts	
3759.35	34.40	3735.60	3724.96	176.57	OSF1.50	6100.00	6065.34					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		
3742.61	33.77	3719.26	3708.84	179.50		OSF1.50	6400.00	6364.48				MinPt-O-ADP	
3742.59	33.75	3719.26	3708.85	179.61		OSF1.50	6410.00	6374.48				MinPts	
3729.29	50.28	3694.73	3679.00	118.43		OSF1.50	9710.00	9674.48				MinPt-O-SF	
3697.68	53.69	3661.02	3643.99	108.47		OSF1.50	10500.00	10464.48				MinPt-CtCt	
3697.71	53.77	3661.01	3643.94	108.26		OSF1.50	10520.00	10484.48				MINPT-O-EOU	
3697.74	53.81	3661.02	3643.93	108.15		OSF1.50	10530.00	10494.48				MinPt-O-ADP	
3794.37	62.28	3752.20	3732.10	94.34		OSF1.50	12070.00	12034.48				MinPt-O-SF	
5174.06	88.18	5114.61	5085.88	90.00		OSF1.50	16020.00	12900.00				MinPt-O-SF	
10873.34	118.77	10793.50	10754.57	139.63		OSF1.50	22896.30	12900.00				TD	

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

Pass

4192.72	32.81	4190.74	4159.91	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4192.70	32.81	4190.72	4159.90	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
4192.71	32.81	4190.73	4159.90	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
4192.79	32.81	4190.69	4159.99	32403.65	MAS = 10.00 (m)	70.00	70.00					MINPT-O-EOU	
4197.85	32.81	4187.42	4165.04	496.59	MAS = 10.00 (m)	1820.00	1820.00					MinPts	
3759.35	34.40	3735.60	3724.96	176.57	OSF1.50	6100.00	6065.34					MinPt-O-SF	
3742.61	33.77	3719.26	3708.84	179.50	OSF1.50	6400.00	6364.48					MinPt-O-ADP	
3742.59	33.75	3719.26	3708.85	179.61	OSF1.50	6410.00	6374.48					MinPts	
3729.29	50.28	3694.73	3679.00	118.43	OSF1.50	9710.00	9674.48					MinPt-O-SF	
3697.68	53.69	3661.02	3643.99	108.47	OSF1.50	10500.00	10464.48					MinPt-CtCt	
3697.71	53.77	3661.01	3643.94	108.26	OSF1.50	10520.00	10484.48					MINPT-O-EOU	
3697.74	53.81	3661.02	3643.93	108.15	OSF1.50	10530.00	10494.48					MinPt-O-ADP	
3850.44	61.08	3809.06	3789.37	97.68	OSF1.50	11910.00	11874.48					MinPt-O-SF	
3888.44	62.39	3846.19	3826.05	96.51	OSF1.50	12060.00	12024.48					MinPt-O-SF	
3948.16	63.56	3905.13	3884.60	96.12	OSF1.50	12270.00	12234.48					MinPt-O-SF	
4187.50	71.57	4139.13	4115.93	90.22	OSF1.50	13760.00	12900.00					MinPts	
4213.45	95.00	4149.46	4118.46	67.91	OSF1.50	14330.00	12900.00					MINPT-O-EOU	
4216.56	98.72	4150.08	4117.84	65.35	OSF1.50	14450.00	12900.00					MinPt-O-ADP	
4217.57	108.65	4144.48	4108.92	59.28	OSF1.50	14580.00	12900.00					MinPt-CtCt	
4217.91	115.35	4140.35	4102.56	55.78	OSF1.50	14730.00	12900.00					MinPt-CtCt	
4220.16	123.76	4136.99	4096.40	51.96	OSF1.50	14980.00	12900.00					MINPT-O-EOU	
4227.74	150.38	4126.82	4077.36	42.71	OSF1.50	15550.00	12900.00					MINPT-O-EOU	
4229.04	162.77	4119.86	4066.26	39.43	OSF1.50	15730.00	12900.00					MinPt-CtCt	
4234.10	200.81	4099.57	4033.29	31.93	OSF1.50	16500.00	12900.00					MinPt-CtCt	
4222.46	265.18	4045.01	3957.28	24.05	OSF1.50	17360.00	12900.00					MinPt-CtCt	
4222.55	265.49	4044.90	3957.06	24.02	OSF1.50	17390.00	12900.00					MINPT-O-EOU	
4222.63	265.60	4044.91	3957.03	24.02	OSF1.50	17400.00	12900.00					MinPt-O-ADP	
4241.20	268.52	4061.52	3972.68	23.86	OSF1.50	17760.00	12900.00					MinPt-O-SF	
6961.35	220.98	6813.37	6740.37	47.67	OSF1.50	22896.30	12900.00					TD	

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

Pass

4357.18	32.81	4355.89	4324.37	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4357.06	32.81	4355.76	4324.25	339664.68	MAS = 10.00 (m)	20.00	20.00					MinPt-O-SF	
4357.04	32.81	4355.74	4324.23	418045.40	MAS = 10.00 (m)	26.00	26.00					WRP	
4357.03	32.81	4355.67	4324.22	60365.88	MAS = 10.00 (m)	40.00	40.00					MinPts	
4351.18	70.35	4303.85	4280.83	94.48	OSF1.50	1460.00	1460.00					MinPt-CtCt	
3980.05	256.50	3808.50	3723.55	23.42	OSF1.50	5410.00	5382.45					MinPt-O-SF	
3971.44	255.06	3800.85	3716.38	23.50	OSF1.50	5640.00	5610.05					MinPt-O-ADP	
3971.36	254.98	3800.83	3716.39	23.50	OSF1.50	5650.00	5619.94					MINPT-O-EOU	
3971.29	254.81	3800.88	3716.49	23.52	OSF1.50	5670.00	5639.74					MinPt-CtCt	

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		
	11448.70	240.09	11288.21	11208.61	71.91	OSF1.50	20490.00	12900.00				MinPt-O-SF	
	13137.66	267.14	12959.14	12870.52	74.12	OSF1.50	22896.30	12900.00				TD	

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

Pass

6870.32	32.81	6868.34	6837.51	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
6870.26	32.81	6868.27	6837.45	N/A	MAS = 10.00 (m)	20.00	20.00	MinPt-O-SF
6870.25	32.81	6868.27	6837.44	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
6870.25	32.81	6868.26	6837.44	764411.85	MAS = 10.00 (m)	30.00	30.00	MinPts
6871.47	32.81	6867.55	6838.66	3544.06	MAS = 10.00 (m)	490.00	490.00	MINPT-O-EOU
6871.89	32.81	6867.24	6839.08	2565.76	MAS = 10.00 (m)	660.00	660.00	MinPts
6873.75	32.81	6866.21	6840.94	1235.33	MAS = 10.00 (m)	1300.00	1300.00	MINPT-O-EOU
6619.77	32.87	6597.11	6586.91	324.29	OSF1.50	6100.00	6065.34	MinPt-O-SF
6612.70	32.81	6590.83	6579.89	337.25	MAS = 10.00 (m)	6360.00	6324.49	MINPT-O-EOU
6612.67	32.81	6590.86	6579.86	338.30	MAS = 10.00 (m)	6380.00	6344.49	MinPts
6649.71	42.11	6620.90	6607.60	249.81	OSF1.50	8750.00	8714.48	MinPt-O-ADP
6649.96	42.72	6620.75	6607.24	246.06	OSF1.50	8860.00	8824.48	MinPt-CtCt
6643.34	50.10	6609.20	6593.24	208.01	OSF1.50	10150.00	10114.48	MinPt-CtCt
6643.63	50.96	6608.92	6592.67	204.35	OSF1.50	10310.00	10274.48	MINPT-O-EOU
6643.98	51.39	6608.99	6592.59	202.56	OSF1.50	10390.00	10354.48	MinPt-O-ADP
6643.50	56.96	6604.79	6586.54	181.94	OSF1.50	11350.00	11314.48	MinPt-CtCt
6643.65	57.38	6604.66	6586.27	180.56	OSF1.50	11420.00	11384.48	MINPT-O-EOU
6644.16	58.67	6604.31	6585.49	176.46	OSF1.50	11510.00	11474.48	MinPts
6713.07	63.21	6670.27	6649.86	164.42	OSF1.50	12425.52	12390.00	MinPt-O-SF
4114.19	128.74	4027.70	3985.45	48.66	OSF1.50	18120.00	12900.00	MinPt-CtCt
4114.77	130.46	4027.14	3984.31	48.02	OSF1.50	18190.00	12900.00	MINPT-O-EOU
4115.38	131.18	4027.26	3984.20	47.75	OSF1.50	18220.00	12900.00	MinPt-O-ADP
4406.76	159.00	4300.10	4247.75	42.08	OSF1.50	19700.00	12900.00	MinPt-O-SF
6303.10	171.58	6188.06	6131.53	55.73	OSF1.50	22896.30	12900.00	TD

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

Pass

6870.32	32.81	6868.34	6837.51	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
6870.26	32.81	6868.27	6837.45	N/A	MAS = 10.00 (m)	20.00	20.00	MinPt-O-SF
6870.25	32.81	6868.27	6837.44	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
6870.25	32.81	6868.26	6837.44	764411.85	MAS = 10.00 (m)	30.00	30.00	MinPts
6871.47	32.81	6867.55	6838.66	3544.06	MAS = 10.00 (m)	490.00	490.00	MINPT-O-EOU
6871.89	32.81	6867.24	6839.08	2565.76	MAS = 10.00 (m)	660.00	660.00	MinPts
6873.75	32.81	6866.21	6840.94	1235.33	MAS = 10.00 (m)	1300.00	1300.00	MINPT-O-EOU
6619.77	32.87	6597.11	6586.91	324.29	OSF1.50	6100.00	6065.34	MinPt-O-SF
6612.70	32.81	6590.83	6579.89	337.25	MAS = 10.00 (m)	6360.00	6324.49	MINPT-O-EOU
6612.67	32.81	6590.86	6579.86	338.30	MAS = 10.00 (m)	6380.00	6344.49	MinPts
6649.71	42.11	6620.90	6607.60	249.81	OSF1.50	8750.00	8714.48	MinPt-O-ADP
6649.96	42.72	6620.75	6607.24	246.06	OSF1.50	8860.00	8824.48	MinPt-CtCt
6643.34	50.10	6609.20	6593.24	208.01	OSF1.50	10150.00	10114.48	MinPt-CtCt
6643.63	50.96	6608.92	6592.67	204.35	OSF1.50	10310.00	10274.48	MINPT-O-EOU
6643.98	51.39	6608.99	6592.59	202.56	OSF1.50	10390.00	10354.48	MinPt-O-ADP
6887.97	61.27	6846.46	6826.70	174.21	OSF1.50	12425.52	12390.00	MinPt-O-SF
4269.20	152.35	4166.98	4116.86	42.57	OSF1.50	18930.00	12900.00	MinPt-CtCt
4270.51	156.29	4165.66	4114.23	41.49	OSF1.50	19070.00	12900.00	MINPT-O-EOU
4272.40	158.54	4166.05	4113.86	40.92	OSF1.50	19150.00	12900.00	MinPt-O-ADP
4273.64	194.64	4143.23	4079.01	33.26	OSF1.50	20060.00	12900.00	MinPt-CtCt

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		
4278.17	207.70	4139.04	4070.47	31.18		OSF1.50	20420.00	12900.00				MINPT-O-EOU	
4283.00	214.39	4139.42	4068.61	30.23		OSF1.50	20590.00	12900.00				MinPt-O-ADP	
4296.24	232.33	4140.69	4063.90	27.96		OSF1.50	20930.00	12900.00				MinPt-CtCt	
4301.86	250.71	4134.06	4051.15	25.93		OSF1.50	21390.00	12900.00				MINPT-O-EOU	
4292.04	345.28	4061.19	3946.76	18.74		OSF1.50	22620.00	12900.00				MinPt-CtCt	
4292.27	345.95	4060.97	3946.32	18.71		OSF1.50	22660.00	12900.00				MINPT-O-EOU	
4292.52	346.27	4061.01	3946.25	18.69		OSF1.50	22680.00	12900.00				MinPt-O-ADP	
4301.20	349.33	4067.65	3951.87	18.57		OSF1.50	22896.30	12900.00				MinPt-O-SF	

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

Pass

4654.24	32.81	4652.95	4621.43	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4653.96	32.81	4652.63	4621.15	128911.47	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
4653.81	32.81	4652.38	4621.00	31448.25	MAS = 10.00 (m)	70.00	70.00					MinPts	
4651.22	60.87	4610.21	4590.35	117.06	OSF1.50	1320.00	1320.00					MinPt-CtCt	
4650.99	119.02	4571.21	4531.97	59.24	OSF1.50	2440.00	2440.00					MinPt-CtCt	
4316.33	262.16	4141.02	4054.18	24.84	OSF1.50	5490.00	5461.62					MinPt-O-SF	
4309.50	261.03	4134.95	4048.48	24.91	OSF1.50	5710.00	5679.32					MinPts	
4309.44	260.89	4134.98	4048.55	24.92	OSF1.50	5730.00	5699.11					MinPt-CtCt	
8668.13	129.23	8581.55	8538.90	101.61	OSF1.50	14400.00	12900.00					MinPt-CtCt	
8668.23	129.53	8581.45	8538.70	101.37	OSF1.50	14440.00	12900.00					MINPT-O-EOU	
8668.42	129.77	8581.48	8538.66	101.19	OSF1.50	14470.00	12900.00					MinPt-O-ADP	
11080.02	250.32	10912.71	10829.70	66.73	OSF1.50	21300.00	12900.00					MinPt-O-SF	
12138.73	269.96	11958.32	11868.76	67.76	OSF1.50	22896.30	12900.00					TD	

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

Pass

4821.12	32.81	4819.83	4788.31	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4820.97	32.81	4819.66	4788.16	256900.24	MAS = 10.00 (m)	20.00	20.00					MinPt-O-SF	
4820.94	32.81	4819.63	4788.13	257195.11	MAS = 10.00 (m)	26.00	26.00					WRP	
4820.90	32.81	4819.53	4788.09	57596.98	MAS = 10.00 (m)	50.00	50.00					MinPts	
4819.67	97.28	4754.39	4722.40	75.30	OSF1.50	1930.00	1930.00					MinPt-CtCt	
4517.53	261.44	4342.71	4256.09	26.07	OSF1.50	5380.00	5352.77					MinPt-O-SF	
4511.44	260.51	4337.25	4250.93	26.12	OSF1.50	5590.00	5560.57					MinPt-O-ADP	
4511.40	260.45	4337.24	4250.94	26.13	OSF1.50	5600.00	5570.47					MINPT-O-EOU	
4511.37	260.33	4337.29	4251.04	26.14	OSF1.50	5620.00	5590.26					MinPt-CtCt	
8577.00	127.26	8491.73	8449.73	102.11	OSF1.50	15400.00	12900.00					MinPt-CtCt	
8577.31	128.10	8491.48	8449.21	101.44	OSF1.50	15470.00	12900.00					MINPT-O-EOU	
8577.62	128.47	8491.55	8449.15	101.15	OSF1.50	15500.00	12900.00					MinPt-O-ADP	
10861.28	254.73	10691.03	10606.54	64.27	OSF1.50	22060.00	12900.00					MinPt-O-SF	
11393.51	265.88	11215.83	11127.63	64.58	OSF1.50	22896.30	12900.00					TD	

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

Pass

4662.96	32.81	4661.68	4630.16	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
4662.92	32.81	4661.63	4630.11	778068.54	MAS = 10.00 (m)	10.00	10.00					MinPt-O-SF	
4662.90	32.81	4661.60	4630.09	N/A	MAS = 10.00 (m)	20.00	20.00					MINPT-O-EOU	
4662.89	32.81	4661.61	4630.08	N/A	MAS = 10.00 (m)	26.00	26.00					MinPts	
4663.00	38.81	4636.70	4624.19	186.37	OSF1.50	860.00	860.00					MinPt-CtCt	
4662.78	74.29	4612.83	4588.49	95.78	OSF1.50	1540.00	1540.00					MinPt-CtCt	
4549.89	260.88	4375.51	4289.01	26.29	OSF1.50	5280.00	5253.81					MinPt-O-SF	
4549.43	260.80	4375.10	4288.63	26.30	OSF1.50	5340.00	5313.19					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		
	4549.43	260.78	4375.11	4288.64	26.30	OSF1.50	5350.00	5323.08				MinPt-CtCt	
	7866.83	108.52	7794.05	7758.30	110.02	OSF1.50	17050.00	12900.00				MinPt-CtCt	
	7867.63	110.90	7793.27	7756.73	107.65	OSF1.50	17160.00	12900.00				MINPT-O-EOU	
	7868.94	112.47	7793.53	7756.47	106.14	OSF1.50	17230.00	12900.00				MinPt-O-ADP	
	9802.82	249.21	9636.25	9553.61	59.30	OSF1.50	22896.30	12900.00				MinPt-O-SF	

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

Pass

6420.26	32.81	6418.28	6387.45	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
6420.17	32.81	6418.18	6387.36	655538.72	MAS = 10.00 (m)	20.00	20.00					MinPt-O-SF	
6420.15	32.81	6418.17	6387.35	756387.52	MAS = 10.00 (m)	26.00	26.00					WRP	
6141.64	553.58	5771.84	5588.06	16.70	OSF1.50	5220.00	5194.44					MinPt-O-SF	
6136.17	552.40	5767.16	5583.77	16.72	OSF1.50	5440.00	5412.14					MinPt-O-ADP	
6136.11	552.33	5767.15	5583.78	16.73	OSF1.50	5450.00	5422.04					MINPT-O-EOU	
6136.02	552.11	5767.21	5583.91	16.73	OSF1.50	5480.00	5451.72					MinPt-CtCt	
8181.60	201.29	8046.75	7980.31	61.56	OSF1.50	18280.00	12900.00					MinPt-CtCt	
8182.38	203.47	8046.07	7978.91	60.90	OSF1.50	18390.00	12900.00					MINPT-O-EOU	
8183.65	204.99	8046.33	7978.66	60.45	OSF1.50	18460.00	12900.00					MinPt-O-ADP	
9395.61	375.43	9144.66	9020.18	37.73	OSF1.50	22896.30	12900.00					MinPt-O-SF	

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

Pass

10546.94	32.81	10545.65	10514.13	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
10546.84	32.81	10545.54	10514.03	874988.09	MAS = 10.00 (m)	26.00	26.00					WRP	
10396.27	1576.89	9344.54	8819.39	9.90	OSF1.50	5430.00	5402.25					MinPt-O-SF	
10392.67	1575.72	9341.72	8816.95	9.90	OSF1.50	5640.00	5610.05					MinPt-O-ADP	
10392.55	1575.57	9341.69	8816.98	9.90	OSF1.50	5660.00	5629.84					MINPT-O-EOU	
10392.41	1575.18	9341.82	8817.23	9.90	OSF1.50	5710.00	5679.32					MinPt-CtCt	
10962.32	1112.68	10220.10	9849.64	14.79	OSF1.50	15610.00	12900.00					MinPt-O-SF	
8669.30	728.50	8183.20	7940.79	17.88	OSF1.50	22320.00	12900.00					MinPt-CtCt	
8669.44	728.90	8183.08	7940.54	17.87	OSF1.50	22370.00	12900.00					MINPT-O-EOU	
8669.77	729.29	8183.15	7940.48	17.86	OSF1.50	22410.00	12900.00					MinPt-O-ADP	
8688.47	738.54	8195.68	7949.93	17.67	OSF1.50	22896.30	12900.00					MinPt-O-SF	



Cimarex Dos Equis 12-13 Federal Com #11H Rev1 RM 18Feb20 Proposal

Geodetic Report

(Non-Def Plan)



Report Date: February 18, 2020 - 03:44 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #11H / New Slot
Well: Dos Equis 12-13 Federal Com #11H
Borehole: Dos Equis 12-13 Federal Com #11H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #11H Rev1 RM 18Feb20
Survey Date: December 26, 2019
Tort / AHD / DDI / ERD Ratio: 106.588 ° / 10705.301 ft / 6.306 / 0.830
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 19.35603", W 103° 38' 9.39394"
Location Grid N/E Y/X: N 451276.290 ftUS, E 756960.600 ftUS
CRS Grid Convergence Angle: 0.3720 °
Grid Scale Factor: 0.99996234
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: 3633.000 ft above MSL
Seabed / Ground Elevation: 3607.000 ft above MSL
Magnetic Declination: 6.618 °
Total Gravity Field Strength: 998.4379mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47841.979 nT
Magnetic Dip Angle: 59.879 °
Declination Date: February 18, 2020
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3720 °
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, 270, FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	100.00	0.00	89.58	100.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	200.00	0.00	89.58	200.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	300.00	0.00	89.58	300.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	400.00	0.00	89.58	400.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	500.00	0.00	89.58	500.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	600.00	0.00	89.58	600.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	700.00	0.00	89.58	700.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	800.00	0.00	89.58	800.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	900.00	0.00	89.58	900.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1000.00	0.00	89.58	1000.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1100.00	0.00	89.58	1100.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
Rustler	1185.00	0.00	89.58	1185.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1200.00	0.00	89.58	1200.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1300.00	0.00	89.58	1300.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1400.00	0.00	89.58	1400.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
Salado (Top Salt)	1500.00	0.00	89.58	1500.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1600.00	0.00	89.58	1600.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1700.00	0.00	89.58	1700.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1800.00	0.00	89.58	1800.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	1900.00	0.00	89.58	1900.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	2000.00	0.00	89.58	2000.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	2100.00	0.00	89.58	2100.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	2200.00	0.00	89.58	2200.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	2300.00	0.00	89.58	2300.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	2400.00	0.00	89.58	2400.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39

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 ° ' ")
Nudge 2°/100' DLS	2500.00	0.00	89.58	2500.00	0.00	0.00	0.00	0.00	451276.29	756960.60	N 32 14 19.36 W 103 38	9.39
	2600.00	2.00	89.58	2599.98	0.00	0.01	1.75	2.00	451276.30	756962.35	N 32 14 19.36 W 103 38	9.37
	2700.00	4.00	89.58	2699.84	-0.01	0.05	6.98	2.00	451276.34	756967.58	N 32 14 19.36 W 103 38	9.31
	2800.00	6.00	89.58	2799.45	-0.03	0.12	15.69	2.00	451276.41	756976.29	N 32 14 19.36 W 103 38	9.21
	2900.00	8.00	89.58	2898.70	-0.05	0.21	27.88	2.00	451276.50	756988.48	N 32 14 19.36 W 103 38	9.07
Hold Nudge	2914.70	8.29	89.58	2913.25	-0.05	0.22	29.96	2.00	451276.51	756990.56	N 32 14 19.36 W 103 38	9.05
	3000.00	8.29	89.58	2997.66	-0.07	0.31	42.27	0.00	451276.60	757002.87	N 32 14 19.36 W 103 38	8.90
	3100.00	8.29	89.58	3096.62	-0.09	0.42	56.69	0.00	451276.71	757017.29	N 32 14 19.36 W 103 38	8.73
	3200.00	8.29	89.58	3195.57	-0.12	0.53	71.12	0.00	451276.82	757031.71	N 32 14 19.36 W 103 38	8.57
	3300.00	8.29	89.58	3294.52	-0.14	0.63	85.54	0.00	451276.92	757046.14	N 32 14 19.36 W 103 38	8.40
	3400.00	8.29	89.58	3393.48	-0.16	0.74	99.97	0.00	451277.03	757060.56	N 32 14 19.36 W 103 38	8.23
	3500.00	8.29	89.58	3492.43	-0.19	0.84	114.39	0.00	451277.13	757074.99	N 32 14 19.36 W 103 38	8.06
	3600.00	8.29	89.58	3591.39	-0.21	0.95	128.82	0.00	451277.24	757089.41	N 32 14 19.36 W 103 38	7.89
	3700.00	8.29	89.58	3690.34	-0.23	1.06	143.24	0.00	451277.35	757103.84	N 32 14 19.36 W 103 38	7.73
	3800.00	8.29	89.58	3789.29	-0.26	1.16	157.67	0.00	451277.45	757118.26	N 32 14 19.36 W 103 38	7.56
	3900.00	8.29	89.58	3888.25	-0.28	1.27	172.09	0.00	451277.56	757132.68	N 32 14 19.36 W 103 38	7.39
	4000.00	8.29	89.58	3987.20	-0.30	1.38	186.52	0.00	451277.67	757147.11	N 32 14 19.36 W 103 38	7.22
	4100.00	8.29	89.58	4086.16	-0.33	1.48	200.94	0.00	451277.77	757161.53	N 32 14 19.36 W 103 38	7.05
	4200.00	8.29	89.58	4185.11	-0.35	1.59	215.37	0.00	451277.88	757175.96	N 32 14 19.36 W 103 38	6.89
	4300.00	8.29	89.58	4284.06	-0.37	1.70	229.79	0.00	451277.99	757190.38	N 32 14 19.36 W 103 38	6.72
	4400.00	8.29	89.58	4383.02	-0.40	1.80	244.21	0.00	451278.09	757204.81	N 32 14 19.36 W 103 38	6.55
	4500.00	8.29	89.58	4481.97	-0.42	1.91	258.64	0.00	451278.20	757219.23	N 32 14 19.36 W 103 38	6.38
	4600.00	8.29	89.58	4580.93	-0.44	2.02	273.06	0.00	451278.31	757233.65	N 32 14 19.36 W 103 38	6.21
Base fo Salt	4669.80	8.29	89.58	4650.00	-0.46	2.09	283.13	0.00	451278.38	757243.72	N 32 14 19.36 W 103 38	6.10
	4700.00	8.29	89.58	4679.88	-0.47	2.12	287.49	0.00	451278.41	757248.08	N 32 14 19.36 W 103 38	6.05
	4800.00	8.29	89.58	4778.83	-0.49	2.23	301.91	0.00	451278.52	757262.50	N 32 14 19.36 W 103 38	5.88
	4900.00	8.29	89.58	4877.79	-0.51	2.34	316.34	0.00	451278.63	757276.93	N 32 14 19.36 W 103 38	5.71
Bell Canyon	4969.94	8.29	89.58	4947.00	-0.53	2.41	326.43	0.00	451278.70	757287.02	N 32 14 19.36 W 103 38	5.59
	5000.00	8.29	89.58	4976.74	-0.54	2.44	330.76	0.00	451278.73	757291.35	N 32 14 19.36 W 103 38	5.54
	5100.00	8.29	89.58	5075.70	-0.56	2.55	345.19	0.00	451278.84	757305.78	N 32 14 19.36 W 103 38	5.37
	5200.00	8.29	89.58	5174.65	-0.58	2.65	359.61	0.00	451278.94	757320.20	N 32 14 19.36 W 103 38	5.21
	5300.00	8.29	89.58	5273.61	-0.61	2.76	374.04	0.00	451279.05	757334.62	N 32 14 19.36 W 103 38	5.04
	5400.00	8.29	89.58	5372.56	-0.63	2.87	388.46	0.00	451279.16	757349.05	N 32 14 19.36 W 103 38	4.87
	5500.00	8.29	89.58	5471.51	-0.65	2.97	402.89	0.00	451279.26	757363.47	N 32 14 19.36 W 103 38	4.70
	5600.00	8.29	89.58	5570.47	-0.68	3.08	417.31	0.00	451279.37	757377.90	N 32 14 19.36 W 103 38	4.54
	5700.00	8.29	89.58	5669.42	-0.70	3.19	431.74	0.00	451279.48	757392.32	N 32 14 19.36 W 103 38	4.37
	5800.00	8.29	89.58	5768.38	-0.72	3.29	446.16	0.00	451279.58	757406.75	N 32 14 19.36 W 103 38	4.20
	5900.00	8.29	89.58	5867.33	-0.75	3.40	460.59	0.00	451279.69	757421.17	N 32 14 19.36 W 103 38	4.03
Cherry Canyon	5906.74	8.29	89.58	5874.00	-0.75	3.41	461.56	0.00	451279.70	757422.14	N 32 14 19.36 W 103 38	4.02
	6000.00	8.29	89.58	5966.28	-0.77	3.51	475.01	0.00	451279.80	757435.59	N 32 14 19.36 W 103 38	3.86
Drop to Vertical 2°/100' DLS	6034.07	8.29	89.58	6000.00	-0.78	3.54	479.93	0.00	451279.83	757440.51	N 32 14 19.36 W 103 38	3.81
	6100.00	6.98	89.58	6065.34	-0.79	3.61	488.69	2.00	451279.90	757449.27	N 32 14 19.36 W 103 38	3.70
	6200.00	4.98	89.58	6164.79	-0.81	3.68	499.10	2.00	451279.97	757459.68	N 32 14 19.36 W 103 38	3.58
	6300.00	2.98	89.58	6264.55	-0.82	3.74	506.03	2.00	451280.03	757466.61	N 32 14 19.36 W 103 38	3.50
	6400.00	0.98	89.58	6364.48	-0.83	3.76	509.47	2.00	451280.05	757470.05	N 32 14 19.36 W 103 38	3.46
Hold Vertical	6448.77	0.00	89.58	6413.25	-0.83	3.76	509.89	2.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	6500.00	0.00	89.58	6464.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	6600.00	0.00	89.58	6564.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	6700.00	0.00	89.58	6664.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	6800.00	0.00	89.58	6764.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	6900.00	0.00	89.58	6864.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7000.00	0.00	89.58	6964.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7100.00	0.00	89.58	7064.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7200.00	0.00	89.58	7164.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7300.00	0.00	89.58	7264.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
Brushy Canyon	7346.52	0.00	89.58	7311.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7400.00	0.00	89.58	7364.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46

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 ° ' ")
	7500.00	0.00	89.58	7464.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7600.00	0.00	89.58	7564.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7700.00	0.00	89.58	7664.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7800.00	0.00	89.58	7764.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	7900.00	0.00	89.58	7864.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8000.00	0.00	89.58	7964.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8100.00	0.00	89.58	8064.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8200.00	0.00	89.58	8164.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8300.00	0.00	89.58	8264.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8400.00	0.00	89.58	8364.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8500.00	0.00	89.58	8464.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8600.00	0.00	89.58	8564.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8700.00	0.00	89.58	8664.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8800.00	0.00	89.58	8764.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
Bone Spring	8880.52	0.00	89.58	8845.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	8900.00	0.00	89.58	8864.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9000.00	0.00	89.58	8964.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9100.00	0.00	89.58	9064.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9200.00	0.00	89.58	9164.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9300.00	0.00	89.58	9264.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
Avalon	9318.52	0.00	89.58	9283.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9400.00	0.00	89.58	9364.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9500.00	0.00	89.58	9464.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9600.00	0.00	89.58	9564.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9700.00	0.00	89.58	9664.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9800.00	0.00	89.58	9764.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	9900.00	0.00	89.58	9864.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10000.00	0.00	89.58	9964.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
1st Bone Spring Sand	10015.52	0.00	89.58	9980.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10100.00	0.00	89.58	10064.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10200.00	0.00	89.58	10164.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10300.00	0.00	89.58	10264.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10400.00	0.00	89.58	10364.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10500.00	0.00	89.58	10464.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10600.00	0.00	89.58	10564.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
2nd Bone Spring Sand	10675.52	0.00	89.58	10640.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10700.00	0.00	89.58	10664.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10800.00	0.00	89.58	10764.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	10900.00	0.00	89.58	10864.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11000.00	0.00	89.58	10964.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11100.00	0.00	89.58	11064.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
3rd Bone Spring Carb	11125.52	0.00	89.58	11090.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11200.00	0.00	89.58	11164.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11300.00	0.00	89.58	11264.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11400.00	0.00	89.58	11364.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11500.00	0.00	89.58	11464.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11600.00	0.00	89.58	11564.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11700.00	0.00	89.58	11664.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11800.00	0.00	89.58	11764.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
3rd Bone Spring Sand	11860.52	0.00	89.58	11825.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	11900.00	0.00	89.58	11864.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	12000.00	0.00	89.58	11964.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	12100.00	0.00	89.58	12064.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	12200.00	0.00	89.58	12164.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
Wolfcamp	12270.52	0.00	89.58	12235.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46

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 Y Target KOP - Build 12°/100' DLS Wolfcamp A1	12300.00	0.00	89.58	12264.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	12400.00	0.00	89.58	12364.48	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	12425.52	0.00	89.58	12390.00	-0.83	3.76	509.89	0.00	451280.05	757470.47	N 32 14 19.36 W 103 38	3.46
	12452.53	3.24	179.67	12417.00	-0.06	3.00	509.89	12.00	451279.29	757470.47	N 32 14 19.35 W 103 38	3.46
Build 4°/100' DLS	12500.00	8.94	179.67	12464.18	4.97	-2.03	509.92	12.00	451274.26	757470.50	N 32 14 19.30 W 103 38	3.46
	12600.00	20.94	179.67	12560.62	30.70	-27.76	510.07	12.00	451248.53	757470.65	N 32 14 19.05 W 103 38	3.46
	12700.00	32.94	179.67	12649.61	75.92	-72.98	510.33	12.00	451203.31	757470.91	N 32 14 18.60 W 103 38	3.46
	12800.00	44.94	179.67	12727.25	138.65	-135.71	510.69	12.00	451140.58	757471.27	N 32 14 17.98 W 103 38	3.46
Landing Point	12900.00	56.94	179.67	12790.15	216.16	-213.22	511.14	12.00	451063.08	757471.72	N 32 14 17.21 W 103 38	3.46
	13000.00	68.94	179.67	12835.56	305.05	-302.11	511.65	12.00	450974.20	757472.23	N 32 14 16.33 W 103 38	3.46
	13050.52	75.00	179.67	12851.19	353.06	-350.12	511.93	12.00	450926.19	757472.51	N 32 14 15.86 W 103 38	3.46
	13100.00	76.98	179.67	12863.17	401.07	-398.13	512.20	4.00	450878.18	757472.78	N 32 14 15.38 W 103 38	3.46
Lease NMNM0001917 - NMNM0002889 Crossing	13200.00	80.98	179.67	12882.28	499.21	-496.26	512.77	4.00	450780.05	757473.35	N 32 14 14.41 W 103 38	3.46
	13300.00	84.98	179.67	12894.50	598.44	-595.49	513.34	4.00	450680.82	757473.92	N 32 14 13.43 W 103 38	3.46
	13400.00	88.98	179.67	12899.77	698.28	-695.33	513.92	4.00	450580.99	757474.50	N 32 14 12.44 W 103 38	3.46
	13425.52	90.00	179.67	12900.00	723.79	-720.84	514.06	4.00	450555.48	757474.64	N 32 14 12.19 W 103 38	3.46
	13500.00	90.00	179.67	12900.00	798.28	-795.32	514.49	0.00	450481.00	757475.07	N 32 14 11.45 W 103 38	3.46
	13600.00	90.00	179.67	12900.00	898.28	-895.32	515.07	0.00	450381.00	757475.65	N 32 14 10.46 W 103 38	3.47
	13700.00	90.00	179.67	12900.00	998.28	-995.32	515.64	0.00	450281.01	757476.22	N 32 14 9.47 W 103 38	3.47
	13800.00	90.00	179.67	12900.00	1098.28	-1095.32	516.22	0.00	450181.01	757476.80	N 32 14 8.48 W 103 38	3.47
	13900.00	90.00	179.67	12900.00	1198.28	-1195.32	516.80	0.00	450081.02	757477.38	N 32 14 7.50 W 103 38	3.47
	14000.00	90.00	179.67	12900.00	1298.28	-1295.32	517.37	0.00	449981.02	757477.95	N 32 14 6.51 W 103 38	3.47
	14100.00	90.00	179.67	12900.00	1398.28	-1395.32	517.95	0.00	449881.03	757478.53	N 32 14 5.52 W 103 38	3.47
	14200.00	90.00	179.67	12900.00	1498.28	-1495.31	518.52	0.00	449781.04	757479.10	N 32 14 4.53 W 103 38	3.47
	14300.00	90.00	179.67	12900.00	1598.28	-1595.31	519.10	0.00	449681.04	757479.68	N 32 14 3.54 W 103 38	3.47
	14400.00	90.00	179.67	12900.00	1698.28	-1695.31	519.67	0.00	449581.05	757480.25	N 32 14 2.55 W 103 38	3.47
	14500.00	90.00	179.67	12900.00	1798.28	-1795.31	520.25	0.00	449481.05	757480.83	N 32 14 1.56 W 103 38	3.47
	14600.00	90.00	179.67	12900.00	1898.28	-1895.31	520.83	0.00	449381.06	757481.41	N 32 14 0.57 W 103 38	3.47
	14700.00	90.00	179.67	12900.00	1998.28	-1995.31	521.40	0.00	449281.06	757481.98	N 32 13 59.58 W 103 38	3.47
	14800.00	90.00	179.67	12900.00	2098.28	-2095.30	521.98	0.00	449181.07	757482.56	N 32 13 58.59 W 103 38	3.48
	14900.00	90.00	179.67	12900.00	2198.28	-2195.30	522.55	0.00	449081.08	757483.13	N 32 13 57.60 W 103 38	3.48
	15000.00	90.00	179.67	12900.00	2298.28	-2295.30	523.13	0.00	448981.08	757483.71	N 32 13 56.61 W 103 38	3.48
Lease NMNM0001917 - NMNM0002889 Crossing	15072.50	90.00	179.67	12900.00	2370.78	-2367.80	523.55	0.00	448908.59	757484.13	N 32 13 55.89 W 103 38	3.48
	15100.00	90.00	179.67	12900.00	2398.28	-2395.30	523.71	0.00	448881.09	757484.29	N 32 13 55.62 W 103 38	3.48
	15200.00	90.00	179.67	12900.00	2498.28	-2495.30	524.28	0.00	448781.09	757484.86	N 32 13 54.63 W 103 38	3.48
	15300.00	90.00	179.67	12900.00	2598.28	-2595.30	524.86	0.00	448681.10	757485.44	N 32 13 53.64 W 103 38	3.48
	15400.00	90.00	179.67	12900.00	2698.28	-2695.29	525.43	0.00	448581.10	757486.01	N 32 13 52.65 W 103 38	3.48
	15500.00	90.00	179.67	12900.00	2798.28	-2795.29	526.01	0.00	448481.11	757486.59	N 32 13 51.66 W 103 38	3.48
	15600.00	90.00	179.67	12900.00	2898.28	-2895.29	526.59	0.00	448381.11	757487.16	N 32 13 50.67 W 103 38	3.48
	15700.00	90.00	179.67	12900.00	2998.28	-2995.29	527.16	0.00	448281.12	757487.74	N 32 13 49.68 W 103 38	3.48
	15800.00	90.00	179.67	12900.00	3098.28	-3095.29	527.74	0.00	448181.13	757488.32	N 32 13 48.69 W 103 38	3.48
	15900.00	90.00	179.67	12900.00	3198.28	-3195.29	528.31	0.00	448081.13	757488.89	N 32 13 47.70 W 103 38	3.49
	16000.00	90.00	179.67	12900.00	3298.28	-3295.28	528.89	0.00	447981.14	757489.47	N 32 13 46.72 W 103 38	3.49
	16100.00	90.00	179.67	12900.00	3398.28	-3395.28	529.46	0.00	447881.14	757490.04	N 32 13 45.73 W 103 38	3.49
	16200.00	90.00	179.67	12900.00	3498.28	-3495.28	530.04	0.00	447781.15	757490.62	N 32 13 44.74 W 103 38	3.49
	16300.00	90.00	179.67	12900.00	3598.28	-3595.28	530.62	0.00	447681.15	757491.20	N 32 13 43.75 W 103 38	3.49
	16400.00	90.00	179.67	12900.00	3698.28	-3695.28	531.19	0.00	447581.16	757491.77	N 32 13 42.76 W 103 38	3.49
	16500.00	90.00	179.67	12900.00	3798.28	-3795.28	531.77	0.00	447481.17	757492.35	N 32 13 41.77 W 103 38	3.49
	16600.00	90.00	179.67	12900.00	3898.28	-3895.27	532.34	0.00	447381.17	757492.92	N 32 13 40.78 W 103 38	3.49
	16700.00	90.00	179.67	12900.00	3998.28	-3995.27	532.92	0.00	447281.18	757493.50	N 32 13 39.79 W 103 38	3.49
	16800.00	90.00	179.67	12900.00	4098.28	-4095.27	533.50	0.00	447181.18	757494.07	N 32 13 38.80 W 103 38	3.49

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 - NMNM0553548 Crossing	16900.00	90.00	179.67	12900.00	4198.28	-4195.27	534.07	0.00	447081.19	757494.65	N 32 13 37.81 W 103 38	3.49
	17000.00	90.00	179.67	12900.00	4298.28	-4295.27	534.65	0.00	446981.19	757495.23	N 32 13 36.82 W 103 38	3.49
	17100.00	90.00	179.67	12900.00	4398.28	-4395.27	535.22	0.00	446881.20	757495.80	N 32 13 35.83 W 103 38	3.50
	17200.00	90.00	179.67	12900.00	4498.28	-4495.26	535.80	0.00	446781.20	757496.38	N 32 13 34.84 W 103 38	3.50
	17300.00	90.00	179.67	12900.00	4598.28	-4595.26	536.38	0.00	446681.21	757496.95	N 32 13 33.85 W 103 38	3.50
	17400.00	90.00	179.67	12900.00	4698.28	-4695.26	536.95	0.00	446581.22	757497.53	N 32 13 32.86 W 103 38	3.50
	17500.00	90.00	179.67	12900.00	4798.28	-4795.26	537.53	0.00	446481.22	757498.11	N 32 13 31.87 W 103 38	3.50
	17600.00	90.00	179.67	12900.00	4898.28	-4895.26	538.10	0.00	446381.23	757498.68	N 32 13 30.88 W 103 38	3.50
	17700.00	90.00	179.67	12900.00	4998.28	-4995.26	538.68	0.00	446281.23	757499.26	N 32 13 29.89 W 103 38	3.50
	17727.10	90.00	179.67	12900.00	5025.38	-5022.35	538.83	0.00	446254.13	757499.41	N 32 13 29.63 W 103 38	3.50
Lease NMNM0553548 - NMNM0553642 Crossing	17800.00	90.00	179.67	12900.00	5098.28	-5095.25	539.25	0.00	446181.24	757499.83	N 32 13 28.90 W 103 38	3.50
	17900.00	90.00	179.67	12900.00	5198.28	-5195.25	539.83	0.00	446081.24	757500.41	N 32 13 27.91 W 103 38	3.50
	18000.00	90.00	179.67	12900.00	5298.28	-5295.25	540.41	0.00	445981.25	757500.98	N 32 13 26.93 W 103 38	3.50
	18100.00	90.00	179.67	12900.00	5398.28	-5395.25	540.98	0.00	445881.26	757501.56	N 32 13 25.94 W 103 38	3.50
	18200.00	90.00	179.67	12900.00	5498.28	-5495.25	541.56	0.00	445781.26	757502.14	N 32 13 24.95 W 103 38	3.51
	18300.00	90.00	179.67	12900.00	5598.28	-5595.25	542.13	0.00	445681.27	757502.71	N 32 13 23.96 W 103 38	3.51
	18400.00	90.00	179.67	12900.00	5698.28	-5695.24	542.71	0.00	445581.27	757503.29	N 32 13 22.97 W 103 38	3.51
	18500.00	90.00	179.67	12900.00	5798.28	-5795.24	543.29	0.00	445481.28	757503.86	N 32 13 21.98 W 103 38	3.51
	18600.00	90.00	179.67	12900.00	5898.28	-5895.24	543.86	0.00	445381.28	757504.44	N 32 13 20.99 W 103 38	3.51
	18700.00	90.00	179.67	12900.00	5998.28	-5995.24	544.44	0.00	445281.29	757505.02	N 32 13 20.00 W 103 38	3.51
	18800.00	90.00	179.67	12900.00	6098.28	-6095.24	545.01	0.00	445181.29	757505.59	N 32 13 19.01 W 103 38	3.51
	18900.00	90.00	179.67	12900.00	6198.28	-6195.24	545.59	0.00	445081.30	757506.17	N 32 13 18.02 W 103 38	3.51
	19000.00	90.00	179.67	12900.00	6298.28	-6295.23	546.16	0.00	444981.31	757506.74	N 32 13 17.03 W 103 38	3.51
	19100.00	90.00	179.67	12900.00	6398.28	-6395.23	546.74	0.00	444881.31	757507.32	N 32 13 16.04 W 103 38	3.51
	19200.00	90.00	179.67	12900.00	6498.28	-6495.23	547.32	0.00	444781.32	757507.89	N 32 13 15.05 W 103 38	3.51
	19300.00	90.00	179.67	12900.00	6598.28	-6595.23	547.89	0.00	444681.32	757508.47	N 32 13 14.06 W 103 38	3.51
	19400.00	90.00	179.67	12900.00	6698.28	-6695.23	548.47	0.00	444581.33	757509.05	N 32 13 13.07 W 103 38	3.52
	19500.00	90.00	179.67	12900.00	6798.28	-6795.23	549.04	0.00	444481.33	757509.62	N 32 13 12.08 W 103 38	3.52
	19600.00	90.00	179.67	12900.00	6898.28	-6895.22	549.62	0.00	444381.34	757510.20	N 32 13 11.09 W 103 38	3.52
	19700.00	90.00	179.67	12900.00	6998.28	-6995.22	550.20	0.00	444281.35	757510.77	N 32 13 10.10 W 103 38	3.52
	19800.00	90.00	179.67	12900.00	7098.28	-7095.22	550.77	0.00	444181.35	757511.35	N 32 13 9.11 W 103 38	3.52
	19900.00	90.00	179.67	12900.00	7198.28	-7195.22	551.35	0.00	444081.36	757511.93	N 32 13 8.12 W 103 38	3.52
	20000.00	90.00	179.67	12900.00	7298.28	-7295.22	551.92	0.00	443981.36	757512.50	N 32 13 7.13 W 103 38	3.52
	20100.00	90.00	179.67	12900.00	7398.28	-7395.22	552.50	0.00	443881.37	757513.08	N 32 13 6.15 W 103 38	3.52
	20200.00	90.00	179.67	12900.00	7498.28	-7495.21	553.08	0.00	443781.37	757513.65	N 32 13 5.16 W 103 38	3.52
	20300.00	90.00	179.67	12900.00	7598.28	-7595.21	553.65	0.00	443681.38	757514.23	N 32 13 4.17 W 103 38	3.52
Lease NMNM0553548 - NMNM0553642 Crossing	20354.90	90.00	179.67	12900.00	7653.18	-7650.11	553.97	0.00	443626.48	757514.55	N 32 13 3.62 W 103 38	3.52
	20400.00	90.00	179.67	12900.00	7698.28	-7695.21	554.23	0.00	443581.38	757514.81	N 32 13 3.18 W 103 38	3.52
	20500.00	90.00	179.67	12900.00	7798.28	-7795.21	554.80	0.00	443481.39	757515.38	N 32 13 2.19 W 103 38	3.53
	20600.00	90.00	179.67	12900.00	7898.28	-7895.21	555.38	0.00	443381.40	757515.96	N 32 13 1.20 W 103 38	3.53
	20700.00	90.00	179.67	12900.00	7998.28	-7995.21	555.95	0.00	443281.40	757516.53	N 32 13 0.21 W 103 38	3.53
	20800.00	90.00	179.67	12900.00	8098.28	-8095.20	556.53	0.00	443181.41	757517.11	N 32 12 59.22 W 103 38	3.53
	20900.00	90.00	179.67	12900.00	8198.28	-8195.20	557.11	0.00	443081.41	757517.68	N 32 12 58.23 W 103 38	3.53
	21000.00	90.00	179.67	12900.00	8298.28	-8295.20	557.68	0.00	442981.42	757518.26	N 32 12 57.24 W 103 38	3.53
	21100.00	90.00	179.67	12900.00	8398.28	-8395.20	558.26	0.00	442881.42	757518.84	N 32 12 56.25 W 103 38	3.53
	21200.00	90.00	179.67	12900.00	8498.28	-8495.20	558.83	0.00	442781.43	757519.41	N 32 12 55.26 W 103 38	3.53
	21300.00	90.00	179.67	12900.00	8598.28	-8595.20	559.41	0.00	442681.44	757519.99	N 32 12 54.27 W 103 38	3.53
	21400.00	90.00	179.67	12900.00	8698.28	-8695.19	559.99	0.00	442581.44	757520.56	N 32 12 53.28 W 103 38	3.53
	21500.00	90.00	179.67	12900.00	8798.28	-8795.19	560.56	0.00	442481.45	757521.14	N 32 12 52.29 W 103 38	3.53
	21600.00	90.00	179.67	12900.00	8898.28	-8895.19	561.14	0.00	442381.45	757521.72	N 32 12 51.30 W 103 38	3.53
	21700.00	90.00	179.67	12900.00	8998.28	-8995.19	561.71	0.00	442281.46	757522.29	N 32 12 50.31 W 103 38	3.54

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 ° ' ")
	21800.00	90.00	179.67	12900.00	9098.28	-9095.19	562.29	0.00	442181.46	757522.87	N 32 12 49.32 W 103 38	3.54
	21900.00	90.00	179.67	12900.00	9198.28	-9195.19	562.87	0.00	442081.47	757523.44	N 32 12 48.33 W 103 38	3.54
	22000.00	90.00	179.67	12900.00	9298.28	-9295.18	563.44	0.00	441981.47	757524.02	N 32 12 47.34 W 103 38	3.54
	22100.00	90.00	179.67	12900.00	9398.28	-9395.18	564.02	0.00	441881.48	757524.59	N 32 12 46.36 W 103 38	3.54
	22200.00	90.00	179.67	12900.00	9498.28	-9495.18	564.59	0.00	441781.49	757525.17	N 32 12 45.37 W 103 38	3.54
	22300.00	90.00	179.67	12900.00	9598.28	-9595.18	565.17	0.00	441681.49	757525.75	N 32 12 44.38 W 103 38	3.54
	22400.00	90.00	179.67	12900.00	9698.28	-9695.18	565.74	0.00	441581.50	757526.32	N 32 12 43.39 W 103 38	3.54
	22500.00	90.00	179.67	12900.00	9798.28	-9795.18	566.32	0.00	441481.50	757526.90	N 32 12 42.40 W 103 38	3.54
	22600.00	90.00	179.67	12900.00	9898.28	-9895.17	566.90	0.00	441381.51	757527.47	N 32 12 41.41 W 103 38	3.54
	22700.00	90.00	179.67	12900.00	9998.28	-9995.17	567.47	0.00	441281.51	757528.05	N 32 12 40.42 W 103 38	3.54
	22800.00	90.00	179.67	12900.00	10098.28	-10095.17	568.05	0.00	441181.52	757528.63	N 32 12 39.43 W 103 38	3.55
Cimarex Dos Equis 12-13 Federal Com #11H - PBHL [100' FSL, 780' FWL]	22896.30	90.00	179.67	12900.00	10194.57	-10191.46	568.60	0.00	441085.23	757529.18	N 32 12 38.48 W 103 38	3.55

Survey Type: Non-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 #11H / Cimarex Dos Equis 12-13 Federal Com #11H Rev1 RM
	1	26.000	22896.295	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #11H / Cimarex Dos Equis 12-13

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

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

Fill Line

Flowline

5000# (5M)
BOP

Annular Preventer

SRR & A

Pipe Rams

Blind Rams

2" Minimum Kill Line

Kill Line

Drilling
Spool

3" minimum choke line

Choke Line

2 Valves Minimum
(HCR Required)

2 Valves and a check valve

Wellhead
Assembly

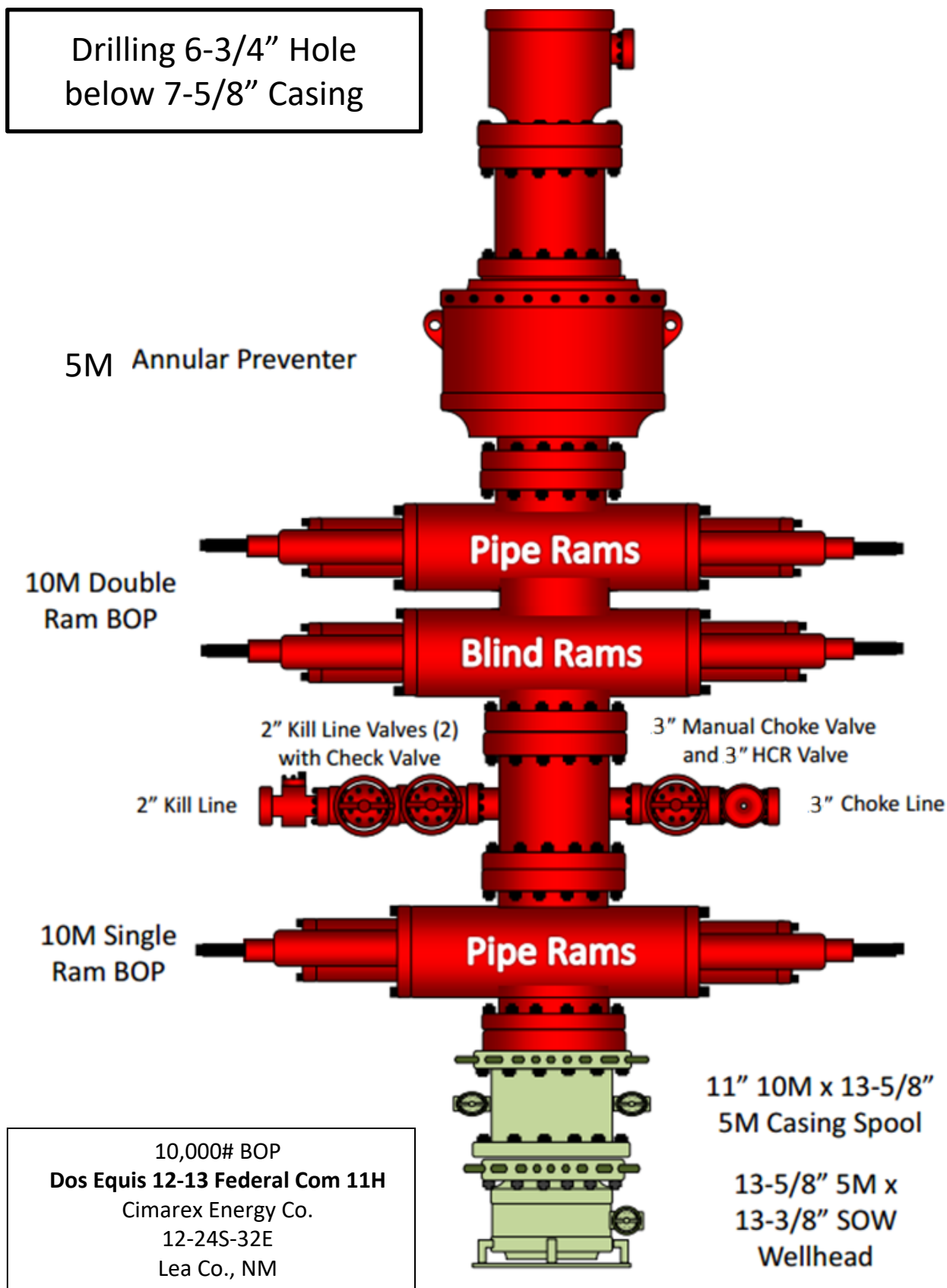
11" 5000 psi x 7-1/16" 10,000 psi
Wellhead Assembly

Wellhead
Assembly

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

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

5000# BOP
Dos Equis 12-13 Federal Com 11H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM



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 121343

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 121343
	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