

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.	
2. Name of Operator		9. API Well No.	
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 11. Sec., T. R. M. or Blk. and Survey or Area	
14. Distance in miles and direction from nearest town or post office*		12. County or Parish	
13. State			
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		16. No of acres in lease	
17. Spacing Unit dedicated to this well			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		19. Proposed Depth	
20. BLM/BIA Bond No. in file			
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		22. Approximate date work will start*	
23. Estimated duration			
24. Attachments			
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)			
1. Well plat certified by a registered surveyor. 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).		4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 5. Operator certification. 6. Such other site specific information and/or plans as may be requested by the BLM.	
25. Signature		Name (Printed/Typed)	
Title		Date	
Approved by (Signature)		Name (Printed/Typed)	
Title		Date	
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.			

(Continued on page 2)

*(Instructions on page 2)



Additional Operator Remarks

Location of Well

0. SHL: NWNE / 300 FNL / 1550 FEL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238635 / LONG: -103.6248 (TVD: 0 feet, MD: 0 feet)

PPP: NWNE / 0 FNL / 2310 FEL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.224944 / LONG: -103.627267 (TVD: 9600 feet, MD: 14482 feet)

PPP: NWSE / 2640 FNL / 2310 FEL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.231881 / LONG: -103.627261 (TVD: 9600 feet, MD: 11957 feet)

PPP: NWNE / 300 FNL / 2310 FEL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238633 / LONG: -103.627257 (TVD: 9283 feet, MD: 9356 feet)

BHL: SWSE / 100 FSL / 2310 FEL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.210696 / LONG: -103.627277 (TVD: 9600 feet, MD: 19665 feet)

BLM Point of Contact

Name: JORDAN NAVARRETTE

Title: LIE

Phone: (575) 234-5972

Email: jnavarrette@blm.gov

CONFIDENTIAL

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

☐ AMENDED REPORT

NAD 83 (SURFACE HOLE LOCATION)
 LATITUDE = 32°14'19.09" (32.238635°)
 LONGITUDE = 103°37'29.28" (103.624800°)

NAD 27 (SURFACE HOLE LOCATION)
 LATITUDE = 32°14'18.64" (32.238511°)
 LONGITUDE = 103°37'27.55" (103.624319°)

STATE PLANE NAD 83 (N.M. EAST)
 N: 451271.51' E: 760406.18'

STATE PLANE NAD 27 (N.M. EAST)
 N: 451212.54' E: 719222.20'

NAD 83 (LP/FTP)
 LATITUDE = 32°14'19.08" (32.238633°)
 LONGITUDE = 103°37'38.12" (103.627257°)

NAD 27 (LP/FTP)
 LATITUDE = 32°14'18.63" (32.238510°)
 LONGITUDE = 103°37'36.40" (103.626777°)

STATE PLANE NAD 83 (N.M. EAST)
 N: 451265.91' E: 759646.38'

STATE PLANE NAD 27 (N.M. EAST)
 N: 451206.94' E: 718462.40'

NAD 83 (BHL/LTP)
 LATITUDE = 32°12'38.51" (32.210696°)
 LONGITUDE = 103°37'38.20" (103.627277°)

NAD 27 (BHL/LTP)
 LATITUDE = 32°12'38.06" (32.210572°)
 LONGITUDE = 103°37'36.48" (103.626799°)

STATE PLANE NAD 83 (N.M. EAST)
 N: 441102.59' E: 759706.81'

STATE PLANE NAD 27 (N.M. EAST)
 N: 441043.88' E: 718522.37'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S89°49'03"W	759.95'

SCALE
 DRAWN BY: S.T.O. 12-13-19
 REV: 1 S.T.O. 01-31-20
 (WELLBORE CHANGE)

SW Cor.
 Sec. 14

SW Cor.
 Sec. 24

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

NOTE:

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

E 1/4 Cor.
 Sec. 24

R
 32
 E

R
 33
 E

17 OPERATOR CERTIFICATION

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

Amithy Crawford 7/7/20
 Signature Date

Printed Name **Amithy crawford**

E-mail Address **Arcrawford@cimarex.com**

18 SURVEYOR CERTIFICATION

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

April 23, 2018

Date of Survey
 Signature and Seal of Professional Surveyor:

Certificate Number: _____

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description **Effective May 25, 2021**

I. Operator: Cimarex Energy Company **OGRID:** 215099 **Date:** 5 / 2 / 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 91H		B, Sec 12, T24S, R32E	300 FNL/ 1550 FEL	1900	2850	3500

IV. Central Delivery Point Name: Dos Equis 12-13 CTB 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 91H		1/1/2023	3/1/2023	6/1/2023	8/1/2023	8/1/2023

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

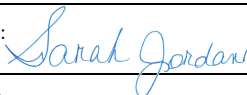
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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: 5/2/2022
Phone: 432/620-1909
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

From State of New Mexico, Natural Gas Management Plan

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

XEC Standard Response

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

Cimarex

VII. Operational Practices

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

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

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

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

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

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

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

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



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

Drilling Plan Data Report

10/27/2021

APD ID: 10400058474

Submission Date: 07/24/2020

Highlighted data
reflects the most
recent changes

Operator Name: CIMAREX ENERGY COMPANY

Well Name: DOS EQUIS 12-13 FEDERAL COM

Well Number: 91H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
771821	RUSTLER	3608	1185	1185	LIMESTONE	USEABLE WATER	N
771822	SALADO	2108	1500	1500	ANHYDRITE	NONE	N
771823	CASTILE	-1042	4650	4650	ANHYDRITE	NONE	N
771824	BELL CANYON	-1339	4947	4947	SANDSTONE	NONE	N
771825	CHERRY CANYON	-2266	5874	5874	SANDSTONE	NONE	N
771826	BRUSHY CANYON	-3703	7311	7311	SANDSTONE	NATURAL GAS, OIL	N
771827	BONE SPRING	-5237	8845	8845	LIMESTONE	NATURAL GAS, OIL	N
771828	UPPER AVALON SHALE	-5675	9283	9286	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M

Rating Depth: 4900

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

Requesting Variance? YES

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

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, 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 3000 psi. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing strings utilizing steel

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 91H

body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Dos_Equis_12_13_Fed_Com_91H_Choke_2M3M_20200707135340.pdf

BOP Diagram Attachment:

Dos_Equis_12_13_Fed_Com_91H_BOP_2M_20200707135348.pdf

Pressure Rating (PSI): 5M**Rating Depth:** 19665

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

Requesting Variance? YES

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

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi. Slips will be utilized after running and cementing the production casing. After installation of the slips and wellhead on the production casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Dos_Equis_12_13_Fed_Com_91H_Choke_5M_20200707135406.pdf

BOP Diagram Attachment:

Dos_Equis_12_13_Fed_Com_91H_BOP_5M_20200707135412.pdf

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 91H**Section 3 - Casing**

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1235	0	1235	3600	2365	1235	H-40	48	ST&C	1.38	3.23	BUOY	5.43	BUOY	5.43
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4900	0	4900	3608	-1300	4900	J-55	36	ST&C	1.21	1.38	BUOY	2.23	BUOY	2.23
3	PRODUCTION	8.75	5.5	NEW	API	N	0	9193	0	9193	3608	-5593	9193	L-80	20	LT&C	2.05	2.14	BUOY	2.17	BUOY	2.17
4	PRODUCTION	8.75	5.5	NEW	API	N	9193	19665	9193	9600	-5593	-6000	10472	L-80	20	BUTT	1.97	2	BUOY	57.25	BUOY	57.25

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

Dos_Equis_12_13_Fed_Com_91H_Casing_Assumptions_20200707135451.pdf

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 91H**Casing Attachments**

Casing ID: 2 **String Type:**INTERMEDIATE**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**Dos_Equis_12_13_Fed_Com_91H_Casing_Assumptions_20200707135602.pdf

Casing ID: 3 **String Type:**PRODUCTION**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**Dos_Equis_12_13_Fed_Com_91H_Casing_Assumptions_20200707135637.pdf

Casing ID: 4 **String Type:**PRODUCTION**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**Dos_Equis_12_13_Fed_Com_91H_Casing_Assumptions_20200707135526.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 91H

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

SURFACE	Lead		0	1235	599	1.72	13.5	1030	45	Class C	Bentonite
SURFACE	Tail		0	1235	160	1.34	14.8	214	45	Class C	LCM
INTERMEDIATE	Lead		0	4900	919	1.88	12.9	1727	51	35:65 POZ C	Salt Bentonite
INTERMEDIATE	Tail		0	4900	286	1.34	14.8	383	51	Class C	LCM
PRODUCTION	Lead		0	1966 5	388	3.64	10.3	1412	25	Tuned Light	LCM
PRODUCTION	Tail		0	1966 5	2544	1.3	14.2	3307	25	50:50 POZ H	Salt, Bentonite, Fluid Loss, Dispersant, SMS

Section 5 - Circulating Medium

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

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

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1235	OTHER : Fresh Water	7.83	8.33							

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 91H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1235	4900	SALT SATURATED	9.5	10							
4900	1966 5	OIL-BASED MUD	8.5	9							

Section 6 - Test, Logging, Coring

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

No DST Planned

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

GAMMA RAY LOG,DIRECTIONAL SURVEY,COMPENSATED NEUTRON LOG,

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4492

Anticipated Surface Pressure: 2379

Anticipated Bottom Hole Temperature(F): 166

Anticipated abnormal pressures, temperatures, or potential geologic hazards? YES

Describe:

Lost circulation may be encountered in the Delaware mountain group. Abnormal pressure as well as hole stability issues may be encountered in the Wolfcamp.

Contingency Plans geohazards description:

Lost circulation material will be available, as well as additional drilling fluid along with the fluid volume in the drilling rig pit system. Drilling fluid can be mixed on location or mixed in vendor mud plant and trucked to location if needed. Sufficient barite will be available to maintain appropriate mud weight for the Wolfcamp interval.

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Dos_Equis_12_13_Fed_Com_91H_H2S_Plan_20200707135943.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: DOS EQUIS 12-13 FEDERAL COM

Well Number: 91H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Dos_Equis_12_13_Fed_Com_91H_AC_Report_20200707140007.pdf

Dos_Equis_12_13_Fed_com_91H_Directional_20200707140016.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Dos_Equis_12_13_Fed_Com_91H_Gas_Capture_Plan_20200707140040.pdf

Dos_Equis_12_13_Fed_com_91H_Drilling_Plan_20210304071442.pdf

Other Variance attachment:

Dos_Equis_12_13_Fed_Com_91H_Flex_Hose_20200707140107.pdf

Dos_Equis_12_13_Fed_Com_91H_Multibowl_Wellhead_20200707140114.pdf

1. Geological Formations

TVD of target 9,600
MD at TD 19,665

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1185	Useable Water	
Salado	1500	N/A	
Castille	4650	N/A	
Bell Canyon	4947	N/A	
Cherry Canyon	5874	N/A	
Brushy Canyon	7311	Hydrocarbons	
Bone Spring	8845	Hydrocarbons	
Upper Avalon Shale	9283	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	36.00	J-55	ST&C	1.21	1.38	2.23
8 3/4	0	9193	9193	5-1/2"	20.00	L-80	LT&C	2.05	2.14	2.17
8 3/4	9193	19665	9600	5-1/2"	20.00	L-80	BT&C	1.97	2.00	57.25
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

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N
Is AC Report included?	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	599	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	160	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	919	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	286	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	388	10.30	3.64	22.18		Lead: Tuned Light + LCM
	2544	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	51
Production	4700	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
12 1/4	13 5/8	2M	Annular	X	2M
			Blind Ram		
			Pipe Ram	X	
			Double Ram	X	
			Other		
8 3/4	13 5/8	5M	Annular	X	5M
			Blind Ram		
			Pipe Ram	X	
			Double Ram	X	
			Other		

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

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

Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
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 4900'	Brine Water	9.50 - 10.00	30-32	N/C
4900' to 19665'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C

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

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

6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	4492 psi
Abnormal Temperature	No

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

	H ₂ S is present
	H ₂ S plan is attached

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

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

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

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

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

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

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



Cimarex Dos Equis 12-13 Federal Com #91H Rev1 RM 14Feb20 Anti-Collision Summary Report

Analysis Date-24hr Time: February 18, 2020 - 13:59

Client: Cimarex Energy

Field: NM Lea County (NAD 83)

Structure: Cimarex Dos Equis 12-13 Federal Com #91H

Slot: New Slot

Well: Dos Equis 12-13 Federal Com #91H

Borehole: Dos Equis 12-13 Federal Com #91H

Scan MD Range: 0.00ft ~ 19665.20ft

Analysis Method: 3D Least Distance

Reference Trajectory: Cimarex Dos Equis 12-13 Federal Com #91H Rev1 RM 14Feb20 (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.COMIDRILLING-NM Lea County 2.10

Trajectory Error Model: ISCSA0 3-D 95.000% Confidence 2.7955 sigma, for subject well. For offset wells, error model version is specified with each well respectively.

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan: Not performed!

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

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

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

Results highlighted: Sep-Factor separation <= 1.50 ft

Cimarex Dos Equis 12-13 Federal Com #91H Rev5 RM 19Dec19 (Def Plan)													
												Fail Major	

782.20	32.81	780.91	749.39	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
782.20	32.81	780.90	749.39	106506.71	MAS = 10.00 (m)	26.00	26.00					WRP	
108.73	34.62	85.02	74.11	4.90	OSF1.50	4490.00	4459.94	OSF<5.00				Enter Alert	
35.54	36.84	10.42	-1.30	1.44	OSF1.50	4690.00	4656.23		OSF<1.50			Enter Minor	
31.76	37.13	6.50	-5.37	1.27	OSF1.50	4710.00	4675.86				StcRul<10.00	Enter Major	
29.87	37.37	4.53	-7.50	1.19	OSF1.50	4740.00	4705.30					MinPts	
31.50	37.36	6.16	-5.86	1.26	OSF1.50	4760.00	4724.93				StcRul>10.00	Exit Major	
35.13	37.14	9.94	-2.01	1.42	OSF1.50	4780.00	4744.56					Exit Minor	
116.34	36.63	91.49	79.71	4.88	OSF1.50	5000.00	4960.48	OSF>5.00				Exit Alert	
1079.96	61.22	1038.71	1018.73	26.89	OSF1.50	9200.00	9129.88					MinPts	
3025.94	318.94	2812.88	2707.00	14.28	OSF1.50	19665.20	9600.00					MinPts	

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

879.88	32.81	878.59	847.07	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
879.88	32.81	878.58	847.07	109843.33	MAS = 10.00 (m)	26.00	26.00					WRP	
123.25	38.98	96.60	84.27	4.92	OSF1.50	5130.00	5088.07	OSF<5.00				Enter Alert	
47.46	41.36	19.48	6.12	1.73	OSF1.50	5660.00	5608.25					MinPts	
47.53	41.43	19.48	6.10	1.73	OSF1.50	5670.00	5618.06					MinPts	
151.65	46.63	120.14	105.03	4.97	OSF1.50	6410.00	6344.35	OSF>5.00				Exit Alert	
213.34	63.87	170.33	149.46	5.08	OSF1.50	9200.00	9129.88					MinPts	
213.24	63.78	170.33	149.51	5.09	OSF1.50	9240.00	9169.80					MINPT-O-EQU	
210.65	60.21	170.08	150.44	5.33	OSF1.50	9660.00	9518.75					MinPt-O-ADP	
210.29	59.83	169.97	150.46	5.35	OSF1.50	9730.00	9553.42					MinPt-O-ADP	
210.14	59.66	169.94	150.48	5.37	OSF1.50	9770.00	9569.12					MINPT-O-EQU	
209.97	59.24	170.04	150.72	5.40	OSF1.50	9880.00	9595.89					MinPt-CtCt	
210.00	64.02	166.89	145.98	4.99	OSF1.50	10740.00	9600.00	OSF<5.00				Enter Alert	
210.00	210.11	69.50	-0.11	1.50	OSF1.50	16170.00	9600.00		OSF<1.50			Enter Minor	
210.00	314.46	-0.07	-104.46	1.00	OSF1.50	19470.00	9600.00			OSF<1.00		Enter Major	
210.00	320.52	-4.11	-110.52	0.98	OSF1.50	19660.00	9600.00					MinPt-CtCt	
210.00	320.66	-4.21	-110.67	0.98	OSF1.50	19665.20	9600.00					MinPts	

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

20.00	16.26	18.72	3.74	N/A	MAS = 4.96 (m)	0.00	0.00	CtCt<=15m<15.00				Enter Alert	
20.00	16.26	18.71	3.74	N/A	MAS = 4.96 (m)	26.00	26.00					WRP	
20.00	20.02	6.23	-0.01	1.50	OSF1.50	2050.00	2050.00	OSF<1.50				Enter Minor	
20.00	24.26	3.40	-4.26	1.22	OSF1.50	2500.00	2500.00					MinPt-CtCt	
20.02	24.33	3.37	-4.31	1.22	OSF1.50	2510.00	2510.00					MINPT-O-EQU	
20.07	24.40	3.37	-4.33	1.22	OSF1.50	2520.00	2520.00					MinPts	
25.04	25.34	7.72	-0.30	1.48	OSF1.50	2670.00	2669.90					Exit Minor	
89.87	28.09	70.71	61.77	4.96	OSF1.50	3140.00	3134.96	OSF>5.00				Exit Alert	
779.66	74.46	729.59	705.20	15.99	OSF1.50	9192.66	9122.54					MinPt-O-SF	
660.11	70.03	612.99	590.08	14.38	OSF1.50	9960.00	9600.00					MinPt-O-SF	
659.91	69.96	612.83	589.93	14.38	OSF1.50	9990.00	9600.00					MinPts	
659.91	199.00	526.81	460.91	5.00	OSF1.50	15830.00	9600.00	OSF<5.00				Enter Alert	
659.90	318.56	447.11	341.35	3.11	OSF1.50	19660.00	9600.00					MinPt-CtCt	
659.91	318.67	447.03	341.24	3.11	OSF1.50	19665.20	9600.00					MinPts	

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

802.14	32.81	800.85	769.33	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
802.14	32.81	800.85	769.33	106014.28	MAS = 10.00 (m)	26.00	26.00					WRP	
156.41	48.34	123.52	108.07	5.00	OSF1.50	5860.00	5804.54	OSF<5.00				Enter Alert	
52.22	52.33	16.87	-0.12	1.50	OSF1.50	6340.00	6275.64		OSF<1.50			Enter Minor	
51.52	52.52	16.08	-1.00	1.47	OSF1.50	6370.00	6305.09					MinPts	
52.27	52.70	16.71	-0.43	1.49	OSF1.50	6400.00	6334.53					Exit Minor	
120.87	67.68	75.33	53.20	2.70	OSF1.50	9390.00	9314.31					MinPts	
224.49	68.84	178.17	155.65	4.96	OSF1.50	9680.00	9529.56	OSF>5.00				Exit Alert	
2806.38	316.22	2595.14	2490.16	13.39	OSF1.50	19665.20	9600.00					MinPts	

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

859.89	32.81	858.60	827.08	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
859.89	32.81	858.59	827.08	110410.94	MAS = 10.00 (m)	26.00	26.00					WRP	
117.30	36.78	92.18	80.53	4.95	OSF1.50	5120.00	5078.26	OSF<5.00				Enter Alert	
89.66	38.53	63.53	51.12	3.56	OSF1.50	5350.00	5303.99					MinPt-CtCt	
89.67	38.59	63.51	51.08	3.55	OSF1.50	5360.00	5313.81					MinPts	
89.81	38.66	63.61	51.15	3.53	OSF1.50	5370.00	5323.62					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		
128.28	39.86		101.27	88.41	4.94	OSF1.50	5640.00	5588.62	OSF>5.00			Exit Alert	
329.27	58.83		289.62	270.44	8.59	OSF1.50	9192.66	9122.54				MinPts	
329.16	58.52		289.72	270.64	8.59	OSF1.50	9250.00	9179.74				MINPT-O-EOU	
309.97	94.04		246.85	215.93	4.99	OSF1.50	12270.00	9600.00	OSF<5.00			Enter Alert	
309.97	310.18		102.76	-0.21	1.50	OSF1.50	19310.00	9600.00		OSF<1.50		Enter Minor	
309.97	321.37		95.29	-11.40	1.45	OSF1.50	19660.00	9600.00				MinPt-CtCt	
309.97	321.52		95.20	-11.55	1.45	OSF1.50	19665.20	9600.00				MinPts	

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

Warning Alert

423.47	32.81	421.49	390.66	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
423.47	32.81	421.49	390.66	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts
423.47	32.81	421.48	390.66	36019.73	MAS = 10.00 (m)	26.00	26.00				WRP
426.45	32.81	418.74	393.64	74.00	MAS = 10.00 (m)	920.00	920.00				MINPT-O-EOU
431.38	32.81	419.94	398.57	45.36	MAS = 10.00 (m)	1810.00	1810.00				MinPts
431.43	32.81	419.88	398.62	44.88	MAS = 10.00 (m)	1840.00	1840.00				MINPT-O-EOU
431.71	32.81	419.46	398.90	41.87	MAS = 10.00 (m)	2050.00	2050.00				MinPts
429.55	32.81	415.35	396.75	34.93	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF
81.14	32.81	62.93	48.33	4.96	MAS = 10.00 (m)	4610.00	4577.71	OSF<5.00			Enter Alert
34.79	32.81	15.29	1.98	1.87	MAS = 10.00 (m)	4970.00	4931.04				MinPts
95.45	32.81	74.52	62.64	4.93	MAS = 10.00 (m)	5440.00	5392.33	OSF>5.00			Exit Alert
325.76	35.39	301.51	290.37	14.54	OSF1.50	7240.00	7169.88				MinPt-CtCt
325.78	35.45	301.49	290.33	14.51	OSF1.50	7260.00	7189.88				MinPts
333.17	40.60	305.44	292.57	12.86	OSF1.50	8440.00	8369.88				MinPt-CtCt
328.06	44.26	297.89	283.80	11.57	OSF1.50	9200.00	9129.88				MinPt-O-SF
318.33	43.10	288.94	275.23	11.54	OSF1.50	9420.00	9341.38				MinPt-O-SF
317.25	42.86	288.02	274.40	11.57	OSF1.50	9470.00	9384.54				MinPts
1450.01	53.85	1413.45	1396.16	41.87	OSF1.50	10960.00	9600.00				MinPt-O-ADP
1473.40	72.67	1424.30	1400.73	31.22	OSF1.50	11570.00	9600.00				MinPt-CtCt
1472.96	78.08	1420.25	1394.88	29.00	OSF1.50	11740.00	9600.00				MinPt-CtCt
1467.70	89.16	1407.60	1378.54	25.22	OSF1.50	12080.00	9600.00				MinPt-CtCt
1467.91	89.79	1407.43	1378.17	25.06	OSF1.50	12110.00	9600.00				MINPT-O-EOU
1468.07	89.93	1407.46	1378.14	25.00	OSF1.50	12120.00	9600.00				MinPt-O-ADP
1470.18	97.86	1404.28	1372.32	22.97	OSF1.50	12340.00	9600.00				MinPt-CtCt
1472.97	104.37	1402.73	1368.60	21.55	OSF1.50	12550.00	9600.00				MINPT-O-EOU
1474.40	106.12	1403.00	1368.29	21.21	OSF1.50	12610.00	9600.00				MinPt-O-ADP
1481.25	114.05	1404.55	1367.19	19.80	OSF1.50	12840.00	9600.00				MinPt-O-ADP
1474.08	143.83	1377.53	1330.25	15.57	OSF1.50	13730.00	9600.00				MinPt-CtCt
1474.64	164.57	1364.27	1310.07	13.59	OSF1.50	14120.00	9600.00				MinPt-CtCt
1474.74	164.85	1364.18	1309.89	13.56	OSF1.50	14140.00	9600.00				MinPts
1477.83	165.70	1366.70	1312.13	13.52	OSF1.50	14220.00	9600.00				MinPt-O-SF
5735.08	82.65	5679.32	5652.43	106.61	OSF1.50	19665.20	9600.00				TD

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

Warning Alert

423.47	32.81	421.49	390.66	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
423.47	32.81	421.49	390.66	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts
423.47	32.81	421.48	390.66	36019.73	MAS = 10.00 (m)	26.00	26.00				WRP
426.45	32.81	418.74	393.64	74.00	MAS = 10.00 (m)	920.00	920.00				MINPT-O-EOU
431.38	32.81	419.94	398.57	45.36	MAS = 10.00 (m)	1810.00	1810.00				MinPts
431.43	32.81	419.88	398.62	44.88	MAS = 10.00 (m)	1840.00	1840.00				MINPT-O-EOU
431.71	32.81	419.46	398.90	41.87	MAS = 10.00 (m)	2050.00	2050.00				MinPts
429.55	32.81	415.35	396.75	34.93	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF
81.14	32.81	62.93	48.33	4.96	MAS = 10.00 (m)	4610.00	4577.71	OSF<5.00			Enter Alert
34.79	32.81	15.29	1.98	1.87	MAS = 10.00 (m)	4970.00	4931.04				MinPts
95.45	32.81	74.52	62.64	4.93	MAS = 10.00 (m)	5440.00	5392.33	OSF>5.00			Exit Alert
325.76	35.39	301.51	290.37	14.54	OSF1.50	7240.00	7169.88				MinPt-CtCt
325.78	35.45	301.49	290.33	14.51	OSF1.50	7260.00	7189.88				MinPts
333.17	40.60	305.44	292.57	12.86	OSF1.50	8440.00	8369.88				MinPt-CtCt
328.06	44.26	297.89	283.80	11.57	OSF1.50	9200.00	9129.88				MinPt-O-SF
318.33	43.10	288.94	275.23	11.54	OSF1.50	9420.00	9341.38				MinPt-O-SF
317.25	42.86	288.02	274.40	11.57	OSF1.50	9470.00	9384.54				MinPts
10135.56	43.60	10105.83	10091.96	365.18	OSF1.50	19665.20	9600.00				TD

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

Warning Alert

423.47	32.81	421.49	390.66	N/A	MAS = 10.00 (m)	0.00	0.00				Surface
423.47	32.81	421.49	390.66	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts
423.47	32.81	421.48	390.66	36019.73	MAS = 10.00 (m)	26.00	26.00				WRP
426.45	32.81	418.74	393.64	74.00	MAS = 10.00 (m)	920.00	920.00				MINPT-O-EOU
431.38	32.81	419.94	398.57	45.36	MAS = 10.00 (m)	1810.00	1810.00				MinPts
431.43	32.81	419.88	398.62	44.88	MAS = 10.00 (m)	1840.00	1840.00				MINPT-O-EOU
431.71	32.81	419.46	398.90	41.87	MAS = 10.00 (m)	2050.00	2050.00				MinPts
429.55	32.81	415.35	396.75	34.93	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF
81.14	32.81	62.93	48.33	4.96	MAS = 10.00 (m)	4610.00	4577.71	OSF<5.00			Enter Alert
34.79	32.81	15.29	1.98	1.87	MAS = 10.00 (m)	4970.00	4931.04				MinPts
95.45	32.81	74.52	62.64	4.93	MAS = 10.00 (m)	5440.00	5392.33	OSF>5.00			Exit Alert
325.76	35.39	301.51	290.37	14.54	OSF1.50	7240.00	7169.88				MinPt-CtCt
325.78	35.45	301.49	290.33	14.51	OSF1.50	7260.00	7189.88				MinPts
333.17	40.60	305.44	292.57	12.86	OSF1.50	8440.00	8369.88				MinPt-CtCt
328.06	44.26	297.89	283.80	11.57	OSF1.50	9200.00	9129.88				MinPt-O-SF
318.33	43.10	288.94	275.23	11.54	OSF1.50	9420.00	9341.38				MinPt-O-SF
317.25	42.86	288.02	274.40	11.57	OSF1.50	9470.00	9384.54				MinPts
1450.01	53.85	1413.45	1396.16	41.87	OSF1.50	10960.00	9600.00				MinPt-O-ADP
1473.40	72.67	1424.30	1400.73	31.22	OSF1.50	11570.00	9600.00				MinPt-CtCt
1472.96	78.08	1420.25	1394.88	29.00	OSF1.50	11740.00	9600.00				MinPt-CtCt
1464.36	99.63	1397.28	1364.73	22.46	OSF1.50	12170.00	9600.00				MinPt-CtCt
1464.50	99.94	1397.21	1364.55	22.39	OSF1.50	12190.00	9600.00				MinPts
1477.91	102.13	1409.17	1375.78	22.13	OSF1.50	12370.00	9600.00				MinPt-O-SF
7636.56	67.91	7590.63	7568.65	173.70	OSF1.50	19665.20	9600.00				TD

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

Warning Alert

39.99	32.25	38.71	7.74	N/A	MAS = 9.83 (m)	0.00	0.00	CtCt<=15m<15.00			Enter Alert
39.99	32.25	38.71	7.74	N/A	MAS = 9.83 (m)	26.00	26.00				WRP
39.99	32.25	26.53	7.74	3.18	MAS = 9.83 (m)	2000.00	2000.00				MinPts
40.01	32.25	26.50	7.76	3.17	MAS = 9.83 (m)	2010.00	2010.00				MINPT-O-EOU
40.27	32.25	26.62	8.01	3.15	MAS = 9.83 (m)	2040.00	2040.00				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		
Cimarex Dos Equis 12-13 Federal Com #77H Rev1 RM 17Feb20 (Def Plan)													
68.76	32.25	53.81	36.51	4.94	MAS = 9.83 (m)	2410.00	2410.00	OSF>5.00				Exit Alert	
1267.17	45.96	1236.10	1221.21	42.50	OSF1.50	6466.71	6400.00					MinPt-O-SF	
1320.27	60.07	1279.75	1260.20	33.68	OSF1.50	9200.00	9129.88					MinPts	
1319.82	56.22	1281.92	1263.60	36.00	OSF1.50	9920.00	9599.46					MinPt-O-ADP	
1319.82	56.22	1281.92	1263.61	36.01	OSF1.50	9940.00	9599.99					MINPT-O-EOU	
1319.82	56.22	1281.91	1263.60	36.00	OSF1.50	9960.00	9600.00					MinPt-CtCt	
1319.82	322.00	1104.72	997.82	6.17	OSF1.50	19660.00	9600.00					MinPt-CtCt	
1319.82	322.12	1104.65	997.70	6.16	OSF1.50	19665.20	9600.00					MinPts	
Warning Alert													
899.88	32.81	898.59	867.07	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
899.88	32.81	898.58	867.07	106431.10	MAS = 10.00 (m)	26.00	26.00					WRP	
136.71	42.79	107.55	93.92	4.95	OSF1.50	5420.00	5372.70	OSF<5.00				Enter Alert	
91.98	44.71	61.75	47.28	3.13	OSF1.50	5800.00	5745.65					MinPt-CtCt	
91.98	44.72	61.74	47.27	3.13	OSF1.50	5810.00	5755.47					MinPts	
158.76	48.76	125.83	110.00	4.98	OSF1.50	6500.00	6432.71	OSF>5.00				Exit Alert	
198.77	60.56	157.97	138.21	5.00	OSF1.50	8580.00	8509.88	OSF<5.00				Enter Alert	
198.77	65.41	154.73	133.35	4.62	OSF1.50	9192.66	9122.54					MINPT-O-EOU	
198.79	65.45	154.73	133.34	4.62	OSF1.50	9200.00	9129.88					MinPts	
214.62	65.82	170.31	148.80	4.96	OSF1.50	9370.00	9295.83	OSF>5.00				Exit Alert	
3301.11	318.37	3088.44	2982.74	15.61	OSF1.50	19665.20	9600.00					MinPts	
Cimarex Dos Equis 13 Federal #2H XEM + MWD Off to 15311 (Def Survey)													
Warning Alert													
5276.82	32.81	5274.84	5244.01	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
5276.81	32.81	5274.84	5244.01	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
5276.82	32.81	5274.84	5244.01	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
5279.52	32.81	5272.61	5246.71	1070.43	MAS = 10.00 (m)	890.00	890.00					MINPT-O-EOU	
5316.19	32.81	5299.25	5283.39	355.10	MAS = 10.00 (m)	3600.00	3586.43					MinPt-O-SF	
5367.71	38.86	5341.14	5328.85	218.26	OSF1.50	6500.00	6432.71					MinPt-O-SF	
5404.93	47.04	5372.91	5357.89	179.84	OSF1.50	9192.66	9122.54					MinPt-O-SF	
354.41	110.93	278.62	243.48	4.96	OSF1.50	14640.00	9600.00	OSF<5.00				Enter Alert	
272.95	124.45	189.32	148.50	3.32	OSF1.50	14850.00	9600.00					MinPt-O-SF	
272.52	124.12	189.11	148.40	3.32	OSF1.50	14860.00	9600.00					MinPts	
272.46	123.65	189.37	148.81	3.33	OSF1.50	14870.00	9600.00					MinPt-CtCt	
322.90	99.87	255.66	223.03	4.92	OSF1.50	15040.00	9600.00	OSF>5.00				Exit Alert	
1402.71	177.80	1283.52	1224.91	11.95	OSF1.50	16870.00	9600.00					MinPt-CtCt	
1400.95	207.23	1262.14	1193.73	10.22	OSF1.50	17950.00	9600.00					MinPt-CtCt	
1393.57	253.46	1223.93	1140.10	8.30	OSF1.50	19410.00	9600.00					MinPt-CtCt	
1393.61	253.63	1223.86	1139.98	8.29	OSF1.50	19420.00	9600.00					MINPT-O-EOU	
1393.72	253.79	1223.87	1139.94	8.29	OSF1.50	19430.00	9600.00					MinPt-O-ADP	
1395.36	254.37	1225.12	1140.99	8.28	OSF1.50	19480.00	9600.00					MinPt-O-SF	
1416.88	253.87	1246.97	1163.01	8.43	OSF1.50	19665.20	9600.00					TD	
Gulf Oil Hanagan D Federal #2 (Offset) Plugged Oil Blind Off- 5100ft (Def Survey)													
Warning Alert													
3117.63	32.81	3116.34	3084.82	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
3117.22	32.81	3115.88	3084.41	58617.87	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
3117.00	752.09	2615.18	2364.91	6.22	OSF1.50	2500.00	2500.00					MinPt-CtCt	
3139.39	945.47	2508.65	2193.92	4.99	OSF1.50	3120.00	3115.33	OSF<5.00				Enter Alert	
3300.33	1588.96	2240.60	1711.37	3.12	OSF1.50	5210.00	5166.59					MinPts	
4265.45	1283.10	3409.62	2982.35	4.99	OSF1.50	7750.00	7679.88	OSF>5.00				Exit Alert	
4734.51	558.25	4361.91	4176.26	12.75	OSF1.50	12490.00	9600.00					MinPt-CtCt	
4734.53	558.29	4361.90	4176.24	12.75	OSF1.50	12500.00	9600.00					MINPT-O-EOU	
4735.07	558.89	4362.05	4176.18	12.73	OSF1.50	12560.00	9600.00					MinPt-O-ADP	
6264.84	1127.85	5512.51	5136.99	8.34	OSF1.50	16590.00	9600.00					MinPt-O-SF	
8598.77	1366.62	7687.26	7232.15	9.45	OSF1.50	19665.20	9600.00					TD	
Cimarex Dos Equis 12-13 Federal Com #88H Rev1 RM 14Feb20 (Def Plan)													
Pass													
60.00	32.81	58.71	27.19	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
59.99	32.81	58.71	27.19	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
59.99	32.81	48.42	27.19	5.71	MAS = 10.00 (m)	1700.00	1700.00					MinPts	
60.01	32.81	48.39	27.20	5.68	MAS = 10.00 (m)	1710.00	1710.00					MINPT-O-EOU	
61.08	32.81	49.12	28.27	5.60	MAS = 10.00 (m)	1780.00	1780.00					MinPt-O-SF	
1966.72	67.13	1921.53	1899.58	44.77	OSF1.50	8900.00	8829.88					MinPt-O-SF	
1979.82	66.68	1934.95	1913.16	45.40	OSF1.50	9192.66	9122.54					MinPts	
1979.72	328.23	1760.47	1651.49	9.08	OSF1.50	19660.00	9600.00					MinPt-CtCt	
1979.73	328.35	1760.40	1651.38	9.07	OSF1.50	19665.20	9600.00					MinPts	
Cimarex Dos Equis 12-13 Federal Com #87H Rev0 RM 13Sept19 (Non-Def Plan)													
Pass													
116.60	32.81	115.32	83.79	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
116.60	32.81	115.31	83.79	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
116.60	32.81	100.00	83.79	7.53	MAS = 10.00 (m)	2500.00	2500.00					MinPts	
116.66	32.81	99.97	83.85	7.49	MAS = 10.00 (m)	2520.00	2520.00					MINPT-O-EOU	
118.14	32.81	101.06	85.33	7.40	MAS = 10.00 (m)	2600.00	2599.98					MinPt-O-SF	
859.81	75.32	809.16	784.48	17.39	OSF1.50	9500.00	9409.09					MinPts	
860.20	75.39	809.51	784.81	17.39	OSF1.50	9540.00	9440.04					MinPt-O-SF	
2891.94	318.68	2679.06	2573.26	13.68	OSF1.50	19665.20	9600.00					MinPts	
Cimarex Dos Equis 12-13 Federal Com #86H Rev1 RM 03Dec19 (Def Plan)													
Pass													
134.15	32.81	132.86	101.34	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
134.15	32.81	132.86	101.34	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
134.15	32.81	123.83	101.34	14.71	MAS = 10.00 (m)	1500.00	1500.00					MinPts	
134.20	32.81	123.78	101.39	14.56	MAS = 10.00 (m)	1520.00	1520.00					MINPT-O-EOU	
140.48	32.81	129.17	107.67	13.89	MAS = 10.00 (m)	1720.00	1720.00					MinPt-O-SF	
1976.44	68.78	1930.15	1907.65	43.89	OSF1.50	8890.00	8819.88					MinPt-O-SF	
1986.73	68.38	1940.77	1918.43	44.44	OSF1.50	9200.00	9129.88					MinPts	
3396.76	317.90	3184.40	3078.86	16.09	OSF1.50	19660.00	9600.00					MinPt-CtCt	
3396.77	318.00	3184.34	3078.77	16.08	OSF1.50	19665.20	9600.00					MinPts	
Cimarex Dos Equis 12-13 Federal Com #6H - Rev2 RM 03Dec19 (Def Plan)													
Pass													
152.29	32.81	151.01	119.48	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	

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		
152.29	32.81	151.01	119.48	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
152.29	32.81	141.98	119.48	16.72		MAS = 10.00 (m)	1500.00	1500.00				MinPts	
152.35	32.81	141.94	119.54	16.56		MAS = 10.00 (m)	1520.00	1520.00				MINPT-O-EQU	
156.71	32.81	145.68	123.90	15.96		MAS = 10.00 (m)	1670.00	1670.00				MinPt-O-SF	
1320.16	45.84	1289.17	1274.32	44.40		OSF1.50	6466.71	6400.00				MinPt-O-SF	
1370.06	60.07	1329.58	1309.99	34.93		OSF1.50	9480.00	9392.84				MinPt-O-SF	
1370.02	60.06	1329.55	1309.96	34.93		OSF1.50	9500.00	9409.09				MinPts	
3637.52	317.17	3425.65	3320.35	17.27		OSF1.50	19660.00	9600.00				MinPt-CtCt	
3637.52	317.27	3425.58	3320.25	17.28		OSF1.50	19665.20	9600.00				MinPts	

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

Pass

747.07	32.81	745.09	714.26	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
747.06	32.81	745.08	714.25	N/A		MAS = 10.00 (m)	10.00	10.00				MinPts	
747.08	32.81	745.08	714.27	50648.27		MAS = 10.00 (m)	26.00	26.00				WRP	
747.16	32.81	745.05	714.35	5847.91		MAS = 10.00 (m)	60.00	60.00				MINPT-O-EQU	
752.18	32.81	741.75	719.37	88.84		MAS = 10.00 (m)	1820.00	1820.00				MinPts	
753.50	32.81	739.75	720.69	63.85		MAS = 10.00 (m)	2500.00	2500.00				MINPT-O-EQU	
755.38	32.81	741.38	722.57	62.64		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
877.94	32.81	862.45	845.13	64.84		MAS = 10.00 (m)	3460.00	3449.03				MinPt-O-SF	
998.50	32.81	981.72	965.69	67.34		MAS = 10.00 (m)	4140.00	4116.42				MinPt-O-SF	
1270.74	32.81	1250.15	1237.93	68.18		MAS = 10.00 (m)	5330.00	5284.36				MinPt-O-SF	
1305.01	32.81	1283.91	1272.20	68.14		MAS = 10.00 (m)	5470.00	5421.77				MinPt-O-SF	
1514.75	38.35	1488.52	1476.40	62.39		OSF1.50	6466.71	6400.00				MinPt-O-SF	
1582.93	47.25	1550.77	1535.68	52.39		OSF1.50	9200.00	9129.88				MinPt-O-SF	
1564.50	45.09	1533.82	1519.48	54.45		OSF1.50	9620.00	9495.06				MinPts	
1564.48	44.97	1533.84	1519.51	54.51		OSF1.50	9630.00	9501.24				MinPt-CtCt	
10199.70	45.33	10168.82	10154.37	352.84		OSF1.50	19665.20	9600.00				TD	

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

Pass

747.07	32.81	745.09	714.26	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
747.06	32.81	745.08	714.25	N/A		MAS = 10.00 (m)	10.00	10.00				MinPts	
747.08	32.81	745.08	714.27	50648.27		MAS = 10.00 (m)	26.00	26.00				WRP	
747.16	32.81	745.05	714.35	5847.91		MAS = 10.00 (m)	60.00	60.00				MINPT-O-EQU	
752.18	32.81	741.75	719.37	88.84		MAS = 10.00 (m)	1820.00	1820.00				MinPts	
753.50	32.81	739.75	720.69	63.85		MAS = 10.00 (m)	2500.00	2500.00				MINPT-O-EQU	
755.38	32.81	741.38	722.57	62.64		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
877.94	32.81	862.45	845.13	64.84		MAS = 10.00 (m)	3460.00	3449.03				MinPt-O-SF	
998.50	32.81	981.72	965.69	67.34		MAS = 10.00 (m)	4140.00	4116.42				MinPt-O-SF	
1270.74	32.81	1250.15	1237.93	68.18		MAS = 10.00 (m)	5330.00	5284.36				MinPt-O-SF	
1305.01	32.81	1283.91	1272.20	68.14		MAS = 10.00 (m)	5470.00	5421.77				MinPt-O-SF	
1514.75	38.35	1488.52	1476.40	62.39		OSF1.50	6466.71	6400.00				MinPt-O-SF	
1582.93	47.25	1550.77	1535.68	52.39		OSF1.50	9200.00	9129.88				MinPt-O-SF	
1564.50	45.09	1533.82	1519.48	54.45		OSF1.50	9620.00	9495.06				MinPts	
1564.48	44.97	1533.84	1519.51	54.51		OSF1.50	9630.00	9501.24				MinPt-CtCt	
2200.98	110.39	2126.73	2090.59	30.43		OSF1.50	11710.00	9600.00				MinPt-CtCt	
2209.67	157.16	2104.24	2052.51	21.34		OSF1.50	12760.00	9600.00				MinPt-CtCt	
2210.61	160.07	2103.24	2050.54	20.96		OSF1.50	12860.00	9600.00				MINPT-O-EQU	
2219.12	187.62	2093.38	2031.50	17.91		OSF1.50	13440.00	9600.00				MinPt-CtCt	
2215.20	234.45	2058.24	1980.75	14.28		OSF1.50	14140.00	9600.00				MinPt-CtCt	
2215.25	234.54	2058.22	1980.70	14.28		OSF1.50	14150.00	9600.00				MinPts	
2217.65	235.15	2060.23	1982.50	14.25		OSF1.50	14240.00	9600.00				MinPt-O-SF	
5956.65	119.80	5876.12	5836.85	75.81		OSF1.50	19665.20	9600.00				TD	

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

Pass

2178.35	32.81	2177.06	2145.54	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2178.35	32.81	2177.05	2145.54	128927.86		MAS = 10.00 (m)	26.00	26.00				WRP	
829.35	48.31	796.17	781.04	27.39		OSF1.50	6970.00	6899.88				MinPt-O-SF	
828.93	61.46	786.99	767.47	21.16		OSF1.50	9122.54	9122.54				MinPt-CtCt	
828.93	61.48	786.97	767.45	21.14		OSF1.50	9200.00	9129.88				MinPts	
2816.83	318.63	2603.99	2498.20	13.31		OSF1.50	19665.20	9600.00				MinPts	

Continental Wimberly #2
(Offset) Plugged Oil Inc Only Off:
5038ft (Def Survey)

Pass

958.97	32.81	957.68	926.16	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
958.71	32.81	957.39	925.90	26821.12		MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
958.52	32.81	957.21	925.71	56141.19		MAS = 10.00 (m)	26.00	26.00				WRP	
958.51	32.81	957.21	925.70	85093.51		MAS = 10.00 (m)	30.00	30.00				MinPts	
952.18	73.81	902.54	878.37	19.67		OSF1.50	1520.00	1520.00				MinPt-CtCt	
951.81	125.82	867.50	825.98	11.45		OSF1.50	2520.00	2520.00				MinPt-CtCt	
953.40	130.41	866.03	822.99	11.06		OSF1.50	2610.00	2609.97				MINPT-O-EQU	
955.06	132.42	866.34	822.63	10.91		OSF1.50	2650.00	2649.93				MinPt-O-ADP	
1162.45	194.14	1032.60	968.31	9.03		OSF1.50	3850.00	3831.80				MinPt-O-ADP	
1317.18	236.45	1159.11	1080.72	8.39		OSF1.50	4690.00	4656.23				MinPt-O-ADP	
1381.16	256.65	1209.63	1124.51	8.11		OSF1.50	5060.00	5019.37				MinPt-O-SF	
6451.27	198.07	6318.80	6253.20	49.18		OSF1.50	14120.00	9600.00				MinPt-O-SF	
10947.59	254.22	10777.68	10693.37	64.91		OSF1.50	19665.20	9600.00				TD	

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

Pass

5749.32	32.81	5748.03	5716.51	N/A		MAS = 10.00 (m)	0.00	0.00				MinPts	
5749.32	32.81	5747.99	5716.51	122990.50		MAS = 10.00 (m)	26.00	26.00				WRP	
5750.03	32.81	5745.25	5717.22	1643.77		MAS = 10.00 (m)	790.00	790.00				MinPts	
5749.54	32.81	5743.17	5716.73	1131.34		MAS = 10.00 (m)	1150.00	1150.00				MINPT-O-EQU	
5740.01	32.81	5728.14	5707.20	534.85		MAS = 10.00 (m)	2450.00	2450.00				MinPts	
5453.06	37.61	5427.55	5415.45	225.29		OSF1.50	6500.00	6432.71				MinPt-O-SF	
5359.74	46.60	5328.21	5313.14	177.77		OSF1.50	9200.00	9129.88				MinPt-O-SF	
991.02	121.34	909.09	869.68	12.53		OSF1.50	14730.00	9600.00				MinPt-CtCt	
991.29	121.99	908.97	869.30	12.46		OSF1.50	14750.00	9600.00				MINPT-O-EQU	
991.58	122.30	909.08	869.28	12.42		OSF1.50	14760.00	9600.00				MinPt-O-ADP	
1006.07	125.41	921.84	880.65	12.19		OSF1.50	14900.00	9600.00				MinPt-O-SF	
1720.24	145.72	1622.76	1574.52	17.82		OSF1.50	16200.00	9600.00				MinPt-CtCt	
1720.16	149.94	1619.87	1570.23	17.32		OSF1.50	16360.00	9600.00				MinPt-CtCt	
1719.98	157.14	1614.88	1562.85	16.52		OSF1.50	16630.00	9600.00				MinPt-CtCt	
1721.06	160.25	1613.88	1560.80	16.20		OSF1.50	16750.00	9600.00				MINPT-O-EQU	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
	1722.59	162.07	1614.20	1560.52	16.03	OSF1.50	16820.00	9600.00				MinPt-O-ADP	
	1744.57	179.36	1624.65	1565.20	14.66	OSF1.50	17450.00	9600.00				MinPt-O-ADP	
	1744.71	203.34	1608.81	1541.37	12.93	OSF1.50	18300.00	9600.00				MinPt-CtCt	
	1741.39	229.66	1587.94	1511.73	11.42	OSF1.50	19220.00	9600.00				MinPt-CtCt	
	1743.53	238.38	1584.30	1505.19	11.01	OSF1.50	19530.00	9600.00				MINPT-O-EOU	
	1746.61	242.10	1584.88	1504.52	10.86	OSF1.50	19665.20	9600.00				MinPts	
Cimarex Dos Equis 12 Federal Com #3H Gyro+MWD Off to 15227ft MD (Def Survey)													Pass
	1729.10	32.81	1727.12	1696.29	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1729.01	32.81	1726.97	1696.21	25896.58	MAS = 10.00 (m)	26.00	26.00				WRP	
	1725.58	32.81	1721.67	1692.78	890.15	MAS = 10.00 (m)	400.00	400.00				MinPts	
	1726.29	32.81	1721.28	1693.48	568.30	MAS = 10.00 (m)	670.00	670.00				MINPT-O-EOU	
	1732.65	32.81	1719.90	1699.84	160.66	MAS = 10.00 (m)	2470.00	2470.00				MinPts	
	1007.96	37.38	982.09	970.58	43.67	OSF1.50	6680.00	6610.67				MinPt-O-SF	
	991.46	36.17	966.39	955.30	44.56	OSF1.50	6980.00	6909.88				MinPts	
	991.44	36.12	966.40	955.32	44.62	OSF1.50	6990.00	6919.88				MinPt-CtCt	
	1034.62	45.25	1003.52	989.37	36.49	OSF1.50	9192.66	9122.54				MinPt-O-SF	
	1033.96	43.69	1003.90	990.27	37.82	OSF1.50	9490.00	9401.03				MinPt-O-ADP	
	1033.91	43.68	1003.85	990.28	37.88	OSF1.50	9500.00	9409.09				MINPT-O-EOU	
	1033.87	43.52	1003.93	990.35	37.98	OSF1.50	9520.00	9424.83				MinPt-CtCt	
	1728.68	66.13	1683.94	1662.55	40.37	OSF1.50	11100.00	9600.00				MinPt-CtCt	
	1731.40	104.66	1660.97	1626.74	25.26	OSF1.50	12130.00	9600.00				MinPt-CtCt	
	1728.90	117.32	1650.03	1611.59	22.46	OSF1.50	12460.00	9600.00				MinPt-CtCt	
	1729.80	119.93	1649.19	1609.88	21.97	OSF1.50	12550.00	9600.00				MINPT-O-EOU	
	1726.53	132.24	1637.71	1594.29	19.86	OSF1.50	12840.00	9600.00				MinPt-CtCt	
	1727.07	133.86	1637.17	1593.21	19.62	OSF1.50	12900.00	9600.00				MINPT-O-EOU	
	1727.71	134.66	1637.27	1593.05	19.51	OSF1.50	12930.00	9600.00				MinPt-O-ADP	
	1726.85	151.84	1624.98	1575.03	17.27	OSF1.50	13340.00	9600.00				MinPt-CtCt	
	1707.78	194.61	1577.38	1513.17	13.28	OSF1.50	14140.00	9600.00				MinPt-CtCt	
	1707.85	194.94	1577.25	1512.95	13.26	OSF1.50	14160.00	9600.00				MINPT-O-EOU	
	1707.97	195.04	1577.29	1512.93	13.25	OSF1.50	14170.00	9600.00				MinPt-O-ADP	
	1711.70	196.01	1580.37	1515.69	13.22	OSF1.50	14260.00	9600.00				MinPt-O-SF	
	5779.08	104.67	5708.64	5674.41	84.38	OSF1.50	19665.20	9600.00				TD	
Cimarex Dos Equis 12-13 Federal Com #48H Rev0 RM 13Sept19 (Non-Def Plan)													Pass
	2136.29	32.81	2135.00	2103.48	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2136.29	32.81	2134.99	2103.48	157528.27	MAS = 10.00 (m)	26.00	26.00				WRP	
	1376.16	75.60	1325.01	1300.56	28.09	OSF1.50	9192.66	9122.54				MinPt-CtCt	
	1376.21	75.82	1324.91	1300.39	28.01	OSF1.50	9270.00	9199.54				MINPT-O-EOU	
	1376.25	75.87	1324.92	1300.38	27.99	OSF1.50	9290.00	9219.20				MinPt-O-ADP	
	1379.14	76.28	1327.53	1302.85	27.89	OSF1.50	9480.00	9392.84				MinPt-O-SF	
	3153.58	310.01	2946.48	2843.55	15.32	OSF1.50	19665.20	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #50H Rev1 RM 17Feb20 (Def Plan)													Pass
	2198.32	32.81	2197.03	2165.51	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2198.32	32.81	2197.01	2165.51	130110.42	MAS = 10.00 (m)	26.00	26.00				WRP	
	1403.89	72.71	1354.66	1331.18	29.85	OSF1.50	9192.66	9122.54				MinPt-CtCt	
	1403.89	72.75	1354.64	1331.15	29.83	OSF1.50	9200.00	9129.88				MinPts	
	1407.24	73.10	1357.76	1334.14	29.79	OSF1.50	9360.00	9286.47				MinPt-O-SF	
	3576.87	313.86	3367.21	3263.02	17.18	OSF1.50	19665.20	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #51H Rev1 RM 17Feb20 (Def Plan)													Pass
	2218.30	32.81	2217.01	2185.49	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2218.30	32.81	2216.99	2185.49	131293.57	MAS = 10.00 (m)	26.00	26.00				WRP	
	1457.71	75.53	1406.61	1382.19	29.78	OSF1.50	9190.00	9119.88				MinPt-O-SF	
	1416.16	70.87	1368.14	1345.29	30.94	OSF1.50	9870.00	9594.48				MinPts	
	1416.16	70.85	1368.15	1345.31	30.95	OSF1.50	9880.00	9595.89				MinPt-CtCt	
	1417.90	321.63	1202.70	1096.27	6.65	OSF1.50	19665.20	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #52H Rev1 RM 17Feb20 (Def Plan)													Pass
	2238.26	32.81	2236.98	2205.46	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2238.26	32.81	2236.96	2205.46	134242.50	MAS = 10.00 (m)	26.00	26.00				WRP	
	1465.41	72.98	1416.01	1392.43	31.03	OSF1.50	9192.66	9122.54				MinPt-O-SF	
	1436.24	68.06	1390.10	1368.18	32.71	OSF1.50	9790.00	9575.80				MinPt-O-ADP	
	1436.17	67.98	1390.08	1368.19	32.75	OSF1.50	9820.00	9584.33				MINPT-O-EOU	
	1436.15	67.92	1390.10	1368.23	32.78	OSF1.50	9850.00	9591.04				MinPt-CtCt	
	1437.90	322.23	1222.31	1115.67	6.73	OSF1.50	19665.20	9600.00				MinPts	
Continental Wimberly #4 (Offset) Plugged Oil Inc Only Off: 5030ft (Def Survey)													Pass
	1665.38	32.81	1664.09	1632.57	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1665.12	32.81	1663.81	1632.31	68392.59	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	1665.09	32.81	1663.79	1632.28	108973.14	MAS = 10.00 (m)	26.00	26.00				WRP	
	1664.98	32.81	1650.95	1632.18	130.45	MAS = 10.00 (m)	440.00	440.00				MinPts	
	1665.17	70.70	1617.61	1594.47	35.95	OSF1.50	1410.00	1410.00				MinPt-CtCt	
	1665.43	117.10	1586.94	1548.33	21.55	OSF1.50	2300.00	2300.00				MinPt-CtCt	
	1664.49	163.44	1555.10	1501.05	15.39	OSF1.50	3190.00	3184.03				MinPt-CtCt	
	1678.59	215.88	1534.24	1462.71	11.72	OSF1.50	4220.00	4194.94				MINPT-O-EOU	
	1683.06	221.13	1535.21	1461.93	11.47	OSF1.50	4340.00	4312.72				MinPt-O-ADP	
	1715.26	254.58	1545.12	1460.69	10.15	OSF1.50	4960.00	4921.22				MINPT-O-EOU	
	1718.37	258.28	1545.76	1460.09	10.02	OSF1.50	5050.00	5009.55				MinPt-O-ADP	
	1721.05	260.43	1547.00	1460.62	9.95	OSF1.50	5110.00	5068.44				MinPt-O-SF	
	4586.94	55.71	4549.37	4531.23	126.38	OSF1.50	11160.00	9600.00				MinPt-CtCt	
	4587.27	56.70	4549.04	4530.57	124.15	OSF1.50	11220.00	9600.00				MINPT-O-EOU	
	4587.92	57.47	4549.18	4530.45	122.46	OSF1.50	11260.00	9600.00				MinPt-O-ADP	
	6229.59	204.40	6092.90	6025.19	46.09	OSF1.50	15380.00	9600.00				MinPt-O-SF	
	9659.02	255.61	9488.18	9403.41	56.96	OSF1.50	19665.20	9600.00				TD	
Cimarex Dos Equis 13 Federal #1H Pilot Hole Extreme Off to 11400ft (Def Survey)													Pass
	5374.36	32.81	5372.38	5341.55	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Cl (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
5374.32	32.81	5372.33	5341.51	N/A		MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
5374.30	32.81	5372.32	5341.49	N/A		MAS = 10.00 (m)	20.00	20.00				MINPT-O-EQU	
5374.29	32.81	5372.32	5341.49	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
5373.99	32.81	5371.49	5341.18	10335.73		MAS = 10.00 (m)	170.00	170.00				MinPts	
5375.10	32.81	5371.04	5342.29	2575.35		MAS = 10.00 (m)	520.00	520.00				MINPT-O-EQU	
5375.26	32.81	5370.60	5342.45	2006.83		MAS = 10.00 (m)	660.00	660.00				MinPts	
5376.72	32.81	5370.00	5343.92	1132.47		MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EQU	
5386.46	32.81	5374.30	5353.65	528.92		MAS = 10.00 (m)	2350.00	2350.00				MINPT-O-EQU	
5614.79	37.94	5588.83	5576.84	234.11		OSF1.50	6500.00	6432.71				MinPt-O-SF	
5666.53	45.14	5635.78	5621.40	196.88		OSF1.50	9200.00	9129.88				MinPt-O-SF	
1695.83	123.24	1613.02	1572.60	20.95		OSF1.50	14880.00	9600.00				MinPt-CtCt	
1695.88	123.34	1613.00	1572.54	20.94		OSF1.50	14890.00	9600.00				MinPts	
1700.29	124.18	1616.84	1576.11	20.85		OSF1.50	15000.00	9600.00				MinPt-O-SF	
5079.53	70.34	5031.98	5009.19	111.41		OSF1.50	19665.20	9600.00				TD	

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

Pass

5374.36	32.81	5372.38	5341.55	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
5374.32	32.81	5372.33	5341.51	N/A		MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
5374.30	32.81	5372.32	5341.49	N/A		MAS = 10.00 (m)	20.00	20.00				MINPT-O-EQU	
5374.29	32.81	5372.32	5341.49	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
5373.99	32.81	5371.49	5341.18	10335.73		MAS = 10.00 (m)	170.00	170.00				MinPts	
5375.10	32.81	5371.04	5342.29	2575.35		MAS = 10.00 (m)	520.00	520.00				MINPT-O-EQU	
5375.26	32.81	5370.60	5342.45	2006.83		MAS = 10.00 (m)	660.00	660.00				MinPts	
5376.72	32.81	5370.00	5343.92	1132.47		MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EQU	
5386.46	32.81	5374.30	5353.65	528.92		MAS = 10.00 (m)	2350.00	2350.00				MINPT-O-EQU	
5614.79	37.94	5588.83	5576.84	234.11		OSF1.50	6500.00	6432.71				MinPt-O-SF	
5666.53	45.14	5635.78	5621.40	196.88		OSF1.50	9200.00	9129.88				MinPt-O-SF	
1695.83	123.24	1613.02	1572.60	20.95		OSF1.50	14880.00	9600.00				MinPt-CtCt	
1695.88	123.34	1613.00	1572.54	20.94		OSF1.50	14890.00	9600.00				MinPts	
1700.29	124.18	1616.84	1576.11	20.85		OSF1.50	15000.00	9600.00				MinPt-O-SF	
2185.78	193.77	2055.94	1992.00	17.08		OSF1.50	16830.00	9600.00				MinPt-CtCt	
2190.12	207.80	2050.93	1982.32	15.95		OSF1.50	17230.00	9600.00				MINPT-O-EQU	
2192.22	210.50	2051.22	1981.72	15.76		OSF1.50	17310.00	9600.00				MinPt-O-ADP	
2166.48	262.92	1990.54	1903.56	12.44		OSF1.50	18530.00	9600.00				MinPt-CtCt	
2167.20	265.00	1989.88	1902.21	12.35		OSF1.50	18610.00	9600.00				MINPT-O-EQU	
2168.08	266.08	1990.03	1902.00	12.30		OSF1.50	18650.00	9600.00				MinPt-O-ADP	
2187.25	286.89	1995.33	1900.36	11.51		OSF1.50	19150.00	9600.00				MINPT-O-EQU	
2197.26	325.38	1979.67	1871.87	10.18		OSF1.50	19470.00	9600.00				MinPts	
2213.01	325.25	1995.51	1887.75	10.26		OSF1.50	19665.20	9600.00				TD	

Cimarex Dos Equis 12-13
Federal Com #9H Rev0 RM
26Dec19 (Non-Def Plan)

Pass

3385.77	32.81	3384.48	3352.96	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3385.77	32.81	3384.46	3352.96	220765.99		MAS = 10.00 (m)	26.00	26.00				WRP	
1729.37	64.78	1685.02	1664.59	42.24		OSF1.50	9200.00	9129.88				MinPts	
1726.08	64.20	1682.12	1661.89	42.57		OSF1.50	9510.00	9417.02				MinPts	
1726.08	64.18	1682.12	1661.89	42.58		OSF1.50	9520.00	9424.83				MinPt-CtCt	
3222.48	321.46	3007.74	2901.02	15.09		OSF1.50	19665.20	9600.00				MinPts	

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

Pass

1885.66	32.81	1884.37	1852.85	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1885.06	32.81	1883.70	1852.25	25562.33		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
1884.81	32.81	1883.43	1852.00	19496.33		MAS = 10.00 (m)	60.00	60.00				MinPts	
1883.83	65.69	1839.60	1818.14	43.84		OSF1.50	1410.00	1410.00				MinPt-CtCt	
1882.63	123.10	1800.13	1759.53	23.17		OSF1.50	2510.00	2510.00				MinPt-CtCt	
1883.86	126.78	1798.91	1757.07	22.50		OSF1.50	2600.00	2599.98				MINPT-O-EQU	
1888.91	132.48	1800.16	1756.43	21.58		OSF1.50	2720.00	2719.78				MinPt-O-ADP	
2177.49	262.41	2002.13	1915.08	12.50		OSF1.50	5170.00	5127.33				MinPt-O-SF	
4775.92	100.78	4708.31	4675.14	71.98		OSF1.50	11170.00	9600.00				MinPt-CtCt	
4775.96	100.91	4708.25	4675.04	71.89		OSF1.50	11190.00	9600.00				MINPT-O-EQU	
4776.07	101.05	4708.27	4675.02	71.79		OSF1.50	11210.00	9600.00				MinPt-O-ADP	
6228.08	205.15	6090.89	6022.93	45.89		OSF1.50	15170.00	9600.00				MinPt-O-SF	
9743.44	257.23	9571.52	9486.21	57.10		OSF1.50	19665.20	9600.00				TD	

Cimarex Dos Equis 12-13
Federal Com #10H Rev0 RM
26Dec19 (Non-Def Plan)

Pass

3425.65	32.81	3424.37	3392.85	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3425.65	32.81	3424.35	3392.85	233520.96		MAS = 10.00 (m)	26.00	26.00				WRP	
2178.48	48.25	2145.39	2130.24	71.79		OSF1.50	6900.00	6829.91				MinPt-O-SF	
2176.01	61.50	2134.08	2114.51	55.53		OSF1.50	9200.00	9129.88				MinPt-O-SF	
2175.99	61.49	2134.06	2114.49	55.53		OSF1.50	9280.00	9209.39				MinPts	
2175.99	61.49	2134.06	2114.49	55.53		OSF1.50	9290.00	9219.20				MinPt-CtCt	
3948.31	317.06	3736.51	3631.26	18.75		OSF1.50	19665.20	9600.00				MinPts	

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

Pass

3048.77	32.81	3046.79	3015.96	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3048.77	32.81	3046.77	3015.96	136894.83		MAS = 10.00 (m)	26.00	26.00				WRP	
3048.73	32.81	3045.93	3015.92	3707.12		MAS = 10.00 (m)	200.00	200.00				MinPts	
3050.91	32.81	3044.05	3018.11	624.06		MAS = 10.00 (m)	1030.00	1030.00				MINPT-O-EQU	
3051.38	32.81	3044.06	3018.57	570.28		MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EQU	
3051.13	32.81	3040.91	3018.32	369.90		MAS = 10.00 (m)	1890.00	1890.00				MinPts	
2322.29	37.43	2296.37	2284.86	100.73		OSF1.50	6500.00	6432.71				MinPt-O-SF	
2274.48	35.64	2249.74	2238.83	104.18		OSF1.50	7000.00	6929.88				MinPt-O-ADP	
2274.44	35.60	2249.73	2238.84	104.30		OSF1.50	7010.00	6939.88				MINPT-O-EQU	
2274.44	35.57	2249.75	2238.87	104.42		OSF1.50	7019.16	6949.03				MinPt-CtCt	
2274.66	35.60	2249.91	2239.00	104.12		OSF1.50	7120.00	7049.88				MINPT-O-EQU	
2274.96	36.04	2249.96	2238.93	102.91		OSF1.50	7220.00	7149.88				MinPt-O-ADP	
2284.28	42.26	2255.12	2242.00	86.91		OSF1.50	8600.00	8529.88				MINPT-O-EQU	
2284.60	42.68	2255.19	2241.93	86.03		OSF1.50	8670.00	8599.88				MinPt-O-ADP	
2288.84	45.42	2257.61	2243.43	80.57		OSF1.50	9192.66	9122.54				MinPt-O-SF	
2288.10	44.03	2257.78	2244.07	83.27		OSF1.50	9460.00	9376.13				MinPt-O-ADP	
2288.03	43.94	2257.78	2244.08	83.44		OSF1.50	9480.00	9392.84				MINPT-O-EQU	
2288.00	43.86	2257.81	2244.15	83.61		OSF1.50	9500.00	9409.09				MinPt-CtCt	
2874.76	58.27	2835.25	2816.49	76.55		OSF1.50	11330.00	9600.00				MinPt-O-SF	
10328.05	83.47	10271.74	10244.57	190.06		OSF1.50	19665.20	9600.00				TD	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Cimarex Dos Equis 12 Fed 4H Gyro+MWD 10305ft to 15240ft MD (Def Survey)													
												Pass	
	3048.77	32.81	3046.79	3015.96	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3048.77	32.81	3046.77	3015.96	136894.83	MAS = 10.00 (m)	26.00	26.00				WRP	
	3048.73	32.81	3045.93	3015.92		MAS = 10.00 (m)	200.00	200.00				MinPts	
	3050.91	32.81	3044.05	3018.11	624.06	MAS = 10.00 (m)	1030.00	1030.00				MINPT-O-EOU	
	3051.38	32.81	3044.06	3018.57	570.28	MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EOU	
	3051.13	32.81	3040.91	3018.32	369.90	MAS = 10.00 (m)	1890.00	1890.00				MinPts	
	2322.29	37.43	2296.37	2284.86	100.73	OSF1.50	6500.00	6432.71				MinPt-O-SF	
	2274.48	35.64	2249.74	2238.83	104.18	OSF1.50	7000.00	6929.88				MinPt-O-ADP	
	2274.44	35.60	2249.73	2238.84	104.30	OSF1.50	7010.00	6939.88				MINPT-O-EOU	
	2274.44	35.57	2249.75	2238.87	104.42	OSF1.50	7019.16	6949.03				MinPt-CtCt	
	2274.66	35.66	2249.91	2239.00	104.12	OSF1.50	7120.00	7049.88				MINPT-O-EOU	
	2274.96	36.04	2249.96	2238.93	102.91	OSF1.50	7220.00	7149.88				MinPt-O-ADP	
	2284.28	42.29	2255.12	2242.00	86.91	OSF1.50	8600.00	8529.88				MINPT-O-EOU	
	2284.60	42.68	2255.19	2241.93	86.03	OSF1.50	8670.00	8599.88				MinPt-O-ADP	
	2288.84	45.42	2257.61	2243.43	80.57	OSF1.50	9192.66	9122.54				MinPt-O-SF	
	2288.10	44.03	2257.79	2244.07	83.27	OSF1.50	9460.00	9376.13				MinPt-O-ADP	
	2288.03	43.94	2257.78	2244.08	83.44	OSF1.50	9480.00	9392.84				MINPT-O-EOU	
	2288.00	43.86	2257.81	2244.15	83.61	OSF1.50	9500.00	9409.09				MinPt-CtCt	
	2644.04	71.90	2595.44	2572.14	56.68	OSF1.50	10920.00	9600.00				MINPT-O-EOU	
	2645.04	73.56	2595.34	2571.48	55.39	OSF1.50	10980.00	9600.00				MINPT-O-EOU	
	2646.81	90.73	2585.66	2556.08	44.70	OSF1.50	11310.00	9600.00				MinPt-CtCt	
	2647.22	94.43	2583.61	2552.79	42.92	OSF1.50	11420.00	9600.00				MINPT-O-EOU	
	2647.73	95.05	2583.71	2552.68	42.64	OSF1.50	11450.00	9600.00				MinPt-O-ADP	
	2617.20	170.71	2502.73	2446.49	23.25	OSF1.50	12980.00	9600.00				MinPt-CtCt	
	2607.62	203.19	2471.50	2404.43	19.42	OSF1.50	13640.00	9600.00				MinPt-CtCt	
	2612.15	216.58	2467.10	2395.57	18.24	OSF1.50	13970.00	9600.00				MINPT-O-EOU	
	2616.49	221.87	2467.92	2394.62	17.83	OSF1.50	14100.00	9600.00				MinPt-O-ADP	
	2623.14	277.55	2437.45	2345.59	14.27	OSF1.50	14260.00	9600.00				MinPts	
	2625.50	277.88	2439.59	2347.62	14.26	OSF1.50	14310.00	9600.00				MinPt-O-SF	
	6096.16	166.53	5984.48	5929.64	55.55	OSF1.50	19665.20	9600.00				TD	
Cimarex Dos Equis 12-13 Federal Com #11H Rev0 RM 26Dec19 (Non-Def Plan)													
												Pass	
	3445.71	32.81	3444.43	3412.91	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3445.71	32.81	3444.41	3412.91	242229.25	MAS = 10.00 (m)	26.00	26.00				WRP	
	2685.89	75.87	2634.56	2610.02	54.68	OSF1.50	9290.00	9219.20				MinPt-CtCt	
	2685.92	75.99	2634.51	2609.93	54.59	OSF1.50	9340.00	9267.55				MINPT-O-EOU	
	2685.96	76.04	2634.52	2609.92	54.55	OSF1.50	9360.00	9286.47				MinPt-O-ADP	
	2692.81	76.56	2641.04	2616.25	54.29	OSF1.50	9650.00	9513.08				MinPt-O-SF	
	3782.40	310.42	3575.03	3471.98	18.35	OSF1.50	19665.20	9600.00				MinPts	
Jubilee Energy Gulf Federal #1 (Offset) Plugged Oil Inc Only Off: 5020ft (Def Survey)													
												Pass	
	2715.64	32.81	2714.35	2682.83	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2715.42	32.81	2714.11	2682.61	108229.69	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	2715.39	32.81	2714.08	2682.58	120251.98	MAS = 10.00 (m)	26.00	26.00				WRP	
	2715.35	32.81	2714.03	2682.54	84137.75	MAS = 10.00 (m)	40.00	40.00				MinPts	
	2715.52	107.84	2643.20	2607.68	38.21	OSF1.50	2130.00	2130.00				MinPt-CtCt	
	2721.39	132.19	2632.83	2589.19	31.17	OSF1.50	2640.00	2639.94				MINPT-O-EOU	
	2726.67	138.56	2633.86	2588.11	29.78	OSF1.50	2770.00	2769.60				MinPt-O-ADP	
	2769.96	193.93	2640.24	2576.02	21.56	OSF1.50	3720.00	3704.21				MinPt-O-ADP	
	2866.54	260.65	2692.35	2605.90	16.57	OSF1.50	5050.00	5009.55				MinPt-O-ADP	
	2870.01	261.67	2695.13	2608.34	16.53	OSF1.50	5100.00	5058.63				MinPt-O-SF	
	4727.46	93.08	4664.98	4634.38	77.23	OSF1.50	12170.00	9600.00				MinPt-CtCt	
	4727.62	93.60	4664.79	4634.02	76.80	OSF1.50	12210.00	9600.00				MINPT-O-EOU	
	4727.97	94.03	4664.85	4633.94	76.45	OSF1.50	12240.00	9600.00				MinPt-O-ADP	
	6160.18	208.37	6020.84	5951.81	44.61	OSF1.50	16120.00	9600.00				MinPt-O-SF	
	8861.16	254.44	8691.11	8606.72	52.50	OSF1.50	19665.20	9600.00				TD	
Curtis Hankamer Gulf Hanagan Federal #3 (Offset) Plugged Oil Inc Only Off:5049ft (Def Survey)													
												Pass	
	3483.53	32.81	3482.24	3450.72	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3483.36	32.81	3482.05	3450.55	174539.98	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	3483.33	32.81	3482.03	3450.52	192212.92	MAS = 10.00 (m)	26.00	26.00				WRP	
	3473.46	40.02	3446.36	3433.45	134.48	OSF1.50	680.00	680.00				MinPt-CtCt	
	3472.68	107.22	3400.77	3365.46	49.16	OSF1.50	2070.00	2070.00				MinPt-CtCt	
	3067.70	264.55	2890.77	2803.15	17.50	OSF1.50	5380.00	5333.44				MinPt-O-SF	
	3059.29	262.82	2883.52	2796.47	17.56	OSF1.50	5570.00	5519.92				MinPt-O-ADP	
	3059.09	262.58	2883.49	2796.51	17.58	OSF1.50	5590.00	5539.55				MINPT-O-EOU	
	3059.02	262.33	2883.59	2796.69	17.59	OSF1.50	5610.00	5559.17				MinPt-CtCt	
	5054.68	129.13	4968.16	4925.55	59.29	OSF1.50	11180.00	9600.00				MinPt-CtCt	
	5054.77	129.38	4968.08	4925.38	59.17	OSF1.50	11210.00	9600.00				MINPT-O-EOU	
	5054.93	129.58	4968.12	4925.35	59.09	OSF1.50	11230.00	9600.00				MinPt-O-ADP	
	6317.78	217.10	6172.62	6100.68	43.98	OSF1.50	14970.00	9600.00				MinPt-O-SF	
	9876.72	270.63	9695.87	9606.08	55.00	OSF1.50	19665.20	9600.00				TD	
Continental Wimberly #8 (Offset) Plugged Oil Inc Only Off: 5070ft (Def Survey)													
												Pass	
	3462.02	32.81	3460.74	3429.21	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3461.89	32.81	3460.59	3429.08	269071.21	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	3461.87	32.81	3460.58	3429.07	390954.35	MAS = 10.00 (m)	26.00	26.00				WRP	
	3461.20	32.81	3453.19	3428.40	514.05	MAS = 10.00 (m)	340.00	340.00				MinPts	
	3459.12	68.13	3413.26	3390.98	77.59	OSF1.50	1400.00	1400.00				MinPt-CtCt	
	3275.69	259.56	3102.17	3016.13	19.03	OSF1.50	5270.00	5225.48				MinPt-O-SF	
	3274.42	259.30	3101.07	3015.11	19.04	OSF1.50	5350.00	5303.99				MinPts	
	3274.40	259.26	3101.08	3015.13	19.04	OSF1.50	5360.00	5313.81				MinPt-CtCt	
	4601.28	93.00	4538.85	4508.28	75.23	OSF1.50	12500.00	9600.00				MinPt-CtCt	
	4601.64	94.16	4538.44	4507.49	74.30	OSF1.50	12560.00	9600.00				MINPT-O-EOU	
	4602.32	94.99	4538.56	4507.33	73.66	OSF1.50	12600.00	9600.00				MinPt-O-ADP	
	5946.91	212.38	5804.89	5734.53	42.29	OSF1.50	16270.00	9600.00				MinPt-O-SF	
	8513.27	258.01	8340.83	8255.26	49.73	OSF1.50	19665.20	9600.00				TD	
Continental Wimberly #7 (Offset) Plugged Oil Inc Only Off: 5100ft (Def Survey)													
												Pass	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
4651.48	32.81	4650.20	4618.67	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4651.44	32.81	4650.04	4618.63		40188.35	MAS = 10.00 (m)	26.00	26.00				WRP	
4651.22	32.81	4644.47	4618.41		850.64	MAS = 10.00 (m)	290.00	290.00				MinPts	
4651.03	42.86	4622.03	4608.17		167.78	OSF1.50	930.00	930.00				MinPt-CtCt	
4649.89	82.07	4594.75	4567.82		86.32	OSF1.50	1680.00	1680.00				MinPt-CtCt	
4522.19	261.03	4347.70	4261.16		26.12	OSF1.50	5300.00	5254.92				MinPt-O-SF	
4521.68	260.95	4347.25	4260.73		26.12	OSF1.50	5360.00	5313.81				MinPts	
4521.68	260.93	4347.26	4260.75		26.12	OSF1.50	5370.00	5323.62				MinPt-CtCt	
4586.15	117.49	4507.40	4468.67		59.19	OSF1.50	13820.00	9600.00				MinPt-CtCt	
4586.67	118.97	4506.93	4467.70		58.45	OSF1.50	13890.00	9600.00				MINPT-O-EOU	
4587.45	119.86	4507.11	4467.58		58.02	OSF1.50	13930.00	9600.00				MinPt-O-ADP	
5702.42	219.16	5555.89	5483.26		39.29	OSF1.50	17210.00	9600.00				MinPt-O-SF	
7428.77	257.09	7256.95	7171.68		43.55	OSF1.50	19665.20	9600.00				TD	
Standind Wimberly A Unit B #1 Inc Only (Def Survey)													Pass
5655.19	32.81	5653.21	5622.38	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
5655.12	32.81	5653.13	5622.31	789196.21		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
5655.11	32.81	5653.12	5622.30	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
5571.50	553.98	5201.50	5017.52		15.14	OSF1.50	5050.00	5009.55				MinPt-O-SF	
5571.39	553.96	5201.41	5017.44		15.14	OSF1.50	5080.00	5039.00				MinPts	
6440.27	387.48	6181.29	6052.79		25.05	OSF1.50	10470.00	9600.00				MinPt-O-SF	
4527.07	127.40	4441.48	4399.67		54.12	OSF1.50	15050.00	9600.00				MinPt-CtCt	
4529.53	133.56	4439.84	4395.98		51.61	OSF1.50	15200.00	9600.00				MINPT-O-EOU	
4534.49	139.40	4440.90	4395.09		49.47	OSF1.50	15310.00	9600.00				MinPt-O-ADP	
6080.50	412.43	5804.89	5668.07		22.21	OSF1.50	19110.00	9600.00				MinPt-O-SF	
6464.38	435.31	6173.51	6029.07		22.37	OSF1.50	19665.20	9600.00				TD	
Westates Petroleum Wolley #1 (Offset) Plugged Oil Blind Off- 5063ft (Def Survey)													Pass
9633.67	32.81	9632.38	9600.86	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
9633.57	32.81	9632.28	9600.77	946306.29		MAS = 10.00 (m)	26.00	26.00				WRP	
9633.55	756.77	9128.61	8876.78		19.12	OSF1.50	2500.00	2500.00				MinPt-CtCt	
9706.83	1577.34	8654.85	8129.50		9.29	OSF1.50	5160.00	5117.52				MinPts	
6312.66	1113.01	5570.22	5199.64		8.52	OSF1.50	14970.00	9600.00				MinPt-O-SF	
4779.88	579.99	4392.80	4199.90		12.39	OSF1.50	19090.00	9600.00				MinPt-CtCt	
4780.11	580.54	4392.65	4199.57		12.37	OSF1.50	19140.00	9600.00				MINPT-O-EOU	
4782.45	583.19	4393.23	4199.26		12.32	OSF1.50	19250.00	9600.00				MinPt-O-ADP	
4813.96	609.85	4406.97	4204.11		11.88	OSF1.50	19665.20	9600.00				MinPt-O-SF	



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



Report Date: February 18, 2020 - 01:59 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #91H / New Slot
Well: Dos Equis 12-13 Federal Com #91H
Borehole: Dos Equis 12-13 Federal Com #91H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #91H Rev1 RM 14Feb20
Survey Date: December 27, 2019
Tort / AHD / DDI / ERD Ratio: 112.098 ° / 10960.550 ft / 6.401 / 1.142
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 19.0858", W 103° 37' 29.27834"
Location Grid N/E Y/X: N 451271.510 ftUS, E 760406.180 ftUS
CRS Grid Convergence Angle: 0.3780 °
Grid Scale Factor: 0.99996405
Version / Patch: 2.10.787.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.660 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3626.600 ft above MSL
Seabed / Ground Elevation: 3600.600 ft above MSL
Magnetic Declination: 6.613 °
Total Gravity Field Strength: 998.4390mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47842.041 nT
Magnetic Dip Angle: 59.879 °
Declination Date: February 18, 2020
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3780 °
Total Corr Mag North->Grid North: 6.2354 °
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 [300' FNL, 1550' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	100.00	0.00	272.30	100.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	200.00	0.00	272.30	200.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	300.00	0.00	272.30	300.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	400.00	0.00	272.30	400.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	500.00	0.00	272.30	500.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	600.00	0.00	272.30	600.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	700.00	0.00	272.30	700.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	800.00	0.00	272.30	800.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	900.00	0.00	272.30	900.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1000.00	0.00	272.30	1000.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1100.00	0.00	272.30	1100.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
Rustler	1185.00	0.00	272.30	1185.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1200.00	0.00	272.30	1200.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1300.00	0.00	272.30	1300.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1400.00	0.00	272.30	1400.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
Salado (Top Salt)	1500.00	0.00	272.30	1500.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1600.00	0.00	272.30	1600.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1700.00	0.00	272.30	1700.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1800.00	0.00	272.30	1800.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	1900.00	0.00	272.30	1900.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	2000.00	0.00	272.30	2000.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	2100.00	0.00	272.30	2100.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	2200.00	0.00	272.30	2200.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	2300.00	0.00	272.30	2300.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	2400.00	0.00	272.30	2400.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
Nudge 2"/100' DLS	2500.00	0.00	272.30	2500.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
	2600.00	2.00	272.30	2599.98	-0.08	0.07	-1.74	2.00	451271.58	760404.44	N 32 14 19.09	W 103 37 29.30
	2700.00	4.00	272.30	2699.84	-0.32	0.28	-6.97	2.00	451271.79	760399.21	N 32 14 19.09	W 103 37 29.36
	2800.00	6.00	272.30	2799.45	-0.72	0.63	-15.68	2.00	451272.14	760390.50	N 32 14 19.09	W 103 37 29.46
	2900.00	8.00	272.30	2898.70	-1.28	1.12	-27.86	2.00	451272.63	760378.32	N 32 14 19.10	W 103 37 29.60
	3000.00	10.00	272.30	2997.47	-2.00	1.75	-43.49	2.00	451273.26	760362.69	N 32 14 19.11	W 103 37 29.78
Hold Nudge	3052.45	11.05	272.30	3049.03	-2.45	2.13	-53.06	2.00	451273.64	760353.12	N 32 14 19.11	W 103 37 29.90
	3100.00	11.05	272.30	3095.70	-2.87	2.50	-62.17	0.00	451274.01	760344.02	N 32 14 19.11	W 103 37 30.00
	3200.00	11.05	272.30	3193.85	-3.75	3.27	-81.31	0.00	451274.78	760324.87	N 32 14 19.12	W 103 37 30.22
	3300.00	11.05	272.30	3291.99	-4.63	4.04	-100.46	0.00	451275.54	760305.72	N 32 14 19.13	W 103 37 30.45
	3400.00	11.05	272.30	3390.14	-5.51	4.80	-119.61	0.00	451276.31	760286.57	N 32 14 19.14	W 103 37 30.67
	3500.00	11.05	272.30	3488.29	-6.40	5.57	-138.76	0.00	451277.08	760267.42	N 32 14 19.15	W 103 37 30.89
	3600.00	11.05	272.30	3586.43	-7.28	6.34	-157.91	0.00	451277.85	760248.27	N 32 14 19.16	W 103 37 31.12
	3700.00	11.05	272.30	3684.58	-8.16	7.11	-177.06	0.00	451278.62	760229.12	N 32 14 19.17	W 103 37 31.34
	3800.00	11.05	272.30	3782.73	-9.04	7.88	-196.21	0.00	451279.39	760209.98	N 32 14 19.18	W 103 37 31.56
	3900.00	11.05	272.30	3880.87	-9.93	8.65	-215.36	0.00	451280.16	760190.83	N 32 14 19.19	W 103 37 31.78
	4000.00	11.05	272.30	3979.02	-10.81	9.42	-234.51	0.00	451280.93	760171.68	N 32 14 19.19	W 103 37 32.01
	4100.00	11.05	272.30	4077.16	-11.69	10.19	-253.66	0.00	451281.70	760152.53	N 32 14 19.20	W 103 37 32.23
	4200.00	11.05	272.30	4175.31	-12.58	10.96	-272.81	0.00	451282.47	760133.38	N 32 14 19.21	W 103 37 32.45
	4300.00	11.05	272.30	4273.46	-13.46	11.73	-291.96	0.00	451283.24	760114.23	N 32 14 19.22	W 103 37 32.68
	4400.00	11.05	272.30	4371.60	-14.34	12.50	-311.11	0.00	451284.00	760095.08	N 32 14 19.23	W 103 37 32.90
	4500.00	11.05	272.30	4469.75	-15.22	13.26	-330.26	0.00	451284.77	760075.94	N 32 14 19.24	W 103 37 33.12
	4600.00	11.05	272.30	4567.90	-16.11	14.03	-349.41	0.00	451285.54	760056.79	N 32 14 19.25	W 103 37 33.35
Base fo Salt	4683.65	11.05	272.30	4650.00	-16.85	14.68	-365.43	0.00	451286.19	760040.77	N 32 14 19.25	W 103 37 33.53
	4700.00	11.05	272.30	4666.04	-16.99	14.80	-368.56	0.00	451286.31	760037.64	N 32 14 19.26	W 103 37 33.57
	4800.00	11.05	272.30	4764.19	-17.87	15.57	-387.71	0.00	451287.08	760018.49	N 32 14 19.26	W 103 37 33.79
	4900.00	11.05	272.30	4862.34	-18.75	16.34	-406.85	0.00	451287.85	759999.34	N 32 14 19.27	W 103 37 34.01
Bell Canyon	4986.26	11.05	272.30	4947.00	-19.52	17.00	-423.37	0.00	451288.51	759982.82	N 32 14 19.28	W 103 37 34.21
	5000.00	11.05	272.30	4960.48	-19.64	17.11	-426.00	0.00	451288.62	759980.19	N 32 14 19.28	W 103 37 34.24
	5100.00	11.05	272.30	5058.63	-20.52	17.88	-445.15	0.00	451289.39	759961.04	N 32 14 19.29	W 103 37 34.46
	5200.00	11.05	272.30	5156.77	-21.40	18.65	-464.30	0.00	451290.16	759941.89	N 32 14 19.30	W 103 37 34.68
	5300.00	11.05	272.30	5254.92	-22.29	19.42	-483.45	0.00	451290.93	759922.75	N 32 14 19.31	W 103 37 34.91
	5400.00	11.05	272.30	5353.07	-23.17	20.19	-502.60	0.00	451291.70	759903.60	N 32 14 19.32	W 103 37 35.13
	5500.00	11.05	272.30	5451.21	-24.05	20.96	-521.75	0.00	451292.46	759884.45	N 32 14 19.33	W 103 37 35.35
	5600.00	11.05	272.30	5549.36	-24.93	21.72	-540.90	0.00	451293.23	759865.30	N 32 14 19.34	W 103 37 35.57
	5700.00	11.05	272.30	5647.51	-25.82	22.49	-560.05	0.00	451294.00	759846.15	N 32 14 19.35	W 103 37 35.80
	5800.00	11.05	272.30	5745.65	-26.70	23.26	-579.20	0.00	451294.77	759827.00	N 32 14 19.36	W 103 37 36.02
	5900.00	11.05	272.30	5843.80	-27.58	24.03	-598.35	0.00	451295.54	759807.85	N 32 14 19.36	W 103 37 36.24
Cherry Canyon	5930.77	11.05	272.30	5874.00	-27.85	24.27	-604.24	0.00	451295.78	759801.96	N 32 14 19.37	W 103 37 36.31
	6000.00	11.05	272.30	5941.95	-28.47	24.80	-617.50	0.00	451296.31	759788.71	N 32 14 19.37	W 103 37 36.47
	6100.00	11.05	272.30	6040.09	-29.35	25.57	-636.65	0.00	451297.08	759769.56	N 32 14 19.38	W 103 37 36.69
	6200.00	11.05	272.30	6138.24	-30.23	26.34	-655.80	0.00	451297.85	759750.41	N 32 14 19.39	W 103 37 36.91
	6300.00	11.05	272.30	6236.38	-31.11	27.11	-674.95	0.00	451298.62	759731.26	N 32 14 19.40	W 103 37 37.13
	6400.00	11.05	272.30	6334.53	-32.00	27.88	-694.10	0.00	451299.39	759712.11	N 32 14 19.41	W 103 37 37.36
Drop to Vertical 2"/100' DLS	6466.71	11.05	272.30	6400.00	-32.58	28.39	-706.87	0.00	451299.90	759699.34	N 32 14 19.41	W 103 37 37.51

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	
Hold Vertical	6800.00	4.38	272.30	6730.09	-34.64	30.19	-751.56	2.00	451301.69	759654.65	N 32 14 19.43	W 103 37 38.03	
	6900.00	2.38	272.30	6829.91	-34.92	30.42	-757.45	2.00	451301.93	759648.75	N 32 14 19.44	W 103 37 38.09	
	7000.00	0.38	272.30	6929.88	-35.03	30.52	-759.87	2.00	451302.03	759646.34	N 32 14 19.44	W 103 37 38.12	
	7019.16	0.00	272.30	6949.03	-35.03	30.52	-759.93	2.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7100.00	0.00	272.30	7029.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7200.00	0.00	272.30	7129.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7300.00	0.00	272.30	7229.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7381.12	0.00	272.30	7311.00	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7400.00	0.00	272.30	7329.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7500.00	0.00	272.30	7429.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
Brushy Canyon	7600.00	0.00	272.30	7529.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7700.00	0.00	272.30	7629.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7800.00	0.00	272.30	7729.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	7900.00	0.00	272.30	7829.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8000.00	0.00	272.30	7929.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8100.00	0.00	272.30	8029.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8200.00	0.00	272.30	8129.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8300.00	0.00	272.30	8229.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8400.00	0.00	272.30	8329.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8500.00	0.00	272.30	8429.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
Bone Spring	8600.00	0.00	272.30	8529.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8700.00	0.00	272.30	8629.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8800.00	0.00	272.30	8729.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8900.00	0.00	272.30	8829.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	8915.12	0.00	272.30	8845.00	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	9000.00	0.00	272.30	8929.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	9100.00	0.00	272.30	9029.88	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12	
	KOP - Build 12"/100' DLS	9192.66	0.00	272.30	9122.54	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12
	Avalon	9200.00	0.88	179.66	9129.88	-34.97	30.47	-759.93	12.00	451301.97	759646.28	N 32 14 19.44	W 103 37 38.12
		9300.00	12.88	179.66	9228.97	-23.02	18.51	-759.86	12.00	451290.02	759646.35	N 32 14 19.32	W 103 37 38.12
9356.31		19.64	179.66	9283.00	-7.26	2.75	-759.76	12.00	451274.26	759646.44	N 32 14 19.16	W 103 37 38.12	
9400.00		24.88	179.66	9323.42	9.29	-13.79	-759.67	12.00	451257.72	759646.54	N 32 14 19.00	W 103 37 38.12	
9500.00		36.88	179.66	9409.09	60.52	-65.02	-759.36	12.00	451206.49	759646.85	N 32 14 18.49	W 103 37 38.12	
9600.00		48.88	179.66	9482.23	128.44	-132.95	-758.96	12.00	451138.57	759647.25	N 32 14 17.82	W 103 37 38.12	
9700.00		60.88	179.66	9539.65	210.09	-214.59	-758.47	12.00	451056.93	759647.73	N 32 14 17.01	W 103 37 38.13	
9800.00		72.88	179.66	9578.85	301.89	-306.39	-757.93	12.00	450965.13	759648.28	N 32 14 16.10	W 103 37 38.13	
9900.00		84.88	179.66	9598.10	399.83	-404.33	-757.35	12.00	450867.19	759648.86	N 32 14 15.13	W 103 37 38.13	
Landing Point		9942.66	90.00	179.66	9600.00	442.43	-446.93	-757.10	12.00	450824.59	759649.11	N 32 14 14.71	W 103 37 38.13
	10000.00	90.00	179.66	9600.00	499.78	-504.28	-756.76	0.00	450767.25	759649.45	N 32 14 14.15	W 103 37 38.13	
	10100.00	90.00	179.66	9600.00	599.78	-604.27	-756.16	0.00	450667.26	759650.05	N 32 14 13.16	W 103 37 38.13	
	10200.00	90.00	179.66	9600.00	699.78	-704.27	-755.57	0.00	450567.27	759650.64	N 32 14 12.17	W 103 37 38.13	
	10300.00	90.00	179.66	9600.00	799.78	-804.27	-754.98	0.00	450467.27	759651.23	N 32 14 11.18	W 103 37 38.13	
	10400.00	90.00	179.66	9600.00	899.78	-904.27	-754.38	0.00	450367.28	759651.83	N 32 14 10.19	W 103 37 38.13	
	10500.00	90.00	179.66	9600.00	999.78	-1004.27	-753.79	0.00	450267.28	759652.42	N 32 14 9.20	W 103 37 38.13	
	10600.00	90.00	179.66	9600.00	1099.78	-1104.26	-753.19	0.00	450167.29	759653.01	N 32 14 8.21	W 103 37 38.13	
	10700.00	90.00	179.66	9600.00	1199.78	-1204.26	-752.60	0.00	450067.29	759653.61	N 32 14 7.22	W 103 37 38.13	
	10800.00	90.00	179.66	9600.00	1299.78	-1304.26	-752.01	0.00	449967.30	759654.20	N 32 14 6.23	W 103 37 38.13	
	10900.00	90.00	179.66	9600.00	1399.78	-1404.26	-751.41	0.00	449867.30	759654.79	N 32 14 5.24	W 103 37 38.13	
	11000.00	90.00	179.66	9600.00	1499.78	-1504.26	-750.82	0.00	449767.31	759655.39	N 32 14 4.25	W 103 37 38.13	
	11100.00	90.00	179.66	9600.00	1599.78	-1604.26	-750.23	0.00	449667.32	759655.98	N 32 14 3.26	W 103 37 38.14	
	11200.00	90.00	179.66	9600.00	1699.78	-1704.25	-749.63	0.00	449567.32	759656.57	N 32 14 2.27	W 103 37 38.14	
	11300.00	90.00	179.66	9600.00	1799.78	-1804.25	-749.04	0.00	449467.33	759657.17	N 32 14 1.28	W 103 37 38.14	
	11400.00	90.00	179.66	9600.00	1899.78	-1904.25	-748.45	0.00	449367.33	759657.76	N 32 14 0.29	W 103 37 38.14	
	11500.00	90.00	179.66	9600.00	1999.78	-2004.25	-747.85	0.00	449267.34	759658.35	N 32 13 59.30	W 103 37 38.14	
	11600.00	90.00	179.66	9600.00	2099.78	-2104.25	-747.26	0.00	449167.34	759658.95	N 32 13 58.31	W 103 37 38.14	
	11700.00	90.00	179.66	9600.00	2199.78	-2204.25	-746.67	0.00	449067.35	759659.54	N 32 13 57.32	W 103 37 38.14	
	11800.00	90.00	179.66	9600.00	2299.78	-2304.24	-746.07	0.00	448967.35	759660.13	N 32 13 56.33	W 103 37 38.14	
	11900.00	90.00	179.66	9600.00	2399.78	-2404.24	-745.48	0.00	448867.36	759660.73	N 32 13 55.34	W 103 37 38.14	
Lease NMNM0002889 - NMNM00001917 Crossing	11957.70	90.00	179.66	9600.00	2457.48	-2461.94	-745.14	0.00	448809.66	759661.07	N 32 13 54.77	W 103 37 38.14	
	12000.00	90.00	179.66	9600.00	2499.78	-2504.24	-744.89	0.00	448767.37	759661.32	N 32 13 54.35	W 103 37 38.14	
	12100.00	90.00	179.66	9600.00	2599.78	-2604.24	-744.29	0.00	448667.37	759661.92	N 32 13 53.37	W 103 37 38.14	
	12200.00	90.00	179.66	9600.00	2699.78	-2704.24	-743.70	0.00	448567.38	759662.51	N 32 13 52.38	W 103 37 38.14	
	12300.00	90.00	179.66	9600.00	2799.78	-2804.23	-743.11	0.00	448467.38	759663.10	N 32 13 51.39	W 103 37 38.14	
	12400.00	90.00	179.66	9600.00	2899.78	-2904.23	-742.51	0.00	448367.39	759663.70	N 32 13 50.40	W 103 37 38.15	
	12500.00	90.00	179.66	9600.00	2999.78	-3004.23	-741.92	0.00	448267.39	75			

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 ° ' ")
	16000.00	90.00	179.66	9600.00	6499.78	-6504.17	-721.15	0.00	444767.59	759685.06	N 32 13 14.77	W 103 37 38.17
	16100.00	90.00	179.66	9600.00	6599.78	-6604.17	-720.55	0.00	444667.59	759685.65	N 32 13 13.78	W 103 37 38.17
	16200.00	90.00	179.66	9600.00	6699.78	-6704.17	-719.96	0.00	444567.60	759686.25	N 32 13 12.80	W 103 37 38.17
	16300.00	90.00	179.66	9600.00	6799.78	-6804.16	-719.37	0.00	444467.60	759686.84	N 32 13 11.81	W 103 37 38.17
	16400.00	90.00	179.66	9600.00	6899.78	-6904.16	-718.77	0.00	444367.61	759687.43	N 32 13 10.82	W 103 37 38.17
	16500.00	90.00	179.66	9600.00	6999.78	-7004.16	-718.18	0.00	444267.62	759688.03	N 32 13 9.83	W 103 37 38.18
	16600.00	90.00	179.66	9600.00	7099.78	-7104.16	-717.59	0.00	444167.62	759688.62	N 32 13 8.84	W 103 37 38.18
	16700.00	90.00	179.66	9600.00	7199.78	-7204.16	-716.99	0.00	444067.63	759689.21	N 32 13 7.85	W 103 37 38.18
	16800.00	90.00	179.66	9600.00	7299.78	-7304.16	-716.40	0.00	443967.63	759689.81	N 32 13 6.86	W 103 37 38.18
	16900.00	90.00	179.66	9600.00	7399.78	-7404.15	-715.81	0.00	443867.64	759690.40	N 32 13 5.87	W 103 37 38.18
	17000.00	90.00	179.66	9600.00	7499.78	-7504.15	-715.21	0.00	443767.64	759690.99	N 32 13 4.88	W 103 37 38.18
	17100.00	90.00	179.66	9600.00	7599.78	-7604.15	-714.62	0.00	443667.65	759691.59	N 32 13 3.89	W 103 37 38.18
Lease NMNM0553642 - NMNM0553548 Crossing	17124.10	90.00	179.66	9600.00	7623.88	-7628.25	-714.48	0.00	443643.55	759691.73	N 32 13 3.65	W 103 37 38.18
	17200.00	90.00	179.66	9600.00	7699.78	-7704.15	-714.03	0.00	443567.65	759692.18	N 32 13 2.90	W 103 37 38.18
	17300.00	90.00	179.66	9600.00	7799.78	-7804.15	-713.43	0.00	443467.66	759692.77	N 32 13 1.91	W 103 37 38.18
	17400.00	90.00	179.66	9600.00	7899.78	-7904.14	-712.84	0.00	443367.67	759693.37	N 32 13 0.92	W 103 37 38.18
	17500.00	90.00	179.66	9600.00	7999.78	-8004.14	-712.25	0.00	443267.67	759693.96	N 32 12 59.93	W 103 37 38.18
	17600.00	90.00	179.66	9600.00	8099.78	-8104.14	-711.65	0.00	443167.68	759694.55	N 32 12 58.94	W 103 37 38.18
	17700.00	90.00	179.66	9600.00	8199.78	-8204.14	-711.06	0.00	443067.68	759695.15	N 32 12 57.95	W 103 37 38.18
	17800.00	90.00	179.66	9600.00	8299.78	-8304.14	-710.47	0.00	442967.69	759695.74	N 32 12 56.96	W 103 37 38.19
	17900.00	90.00	179.66	9600.00	8399.78	-8404.14	-709.87	0.00	442867.69	759696.33	N 32 12 55.97	W 103 37 38.19
	18000.00	90.00	179.66	9600.00	8499.78	-8504.13	-709.28	0.00	442767.70	759696.93	N 32 12 54.98	W 103 37 38.19
	18100.00	90.00	179.66	9600.00	8599.78	-8604.13	-708.69	0.00	442667.70	759697.52	N 32 12 53.99	W 103 37 38.19
	18200.00	90.00	179.66	9600.00	8699.78	-8704.13	-708.09	0.00	442567.71	759698.11	N 32 12 53.00	W 103 37 38.19
	18300.00	90.00	179.66	9600.00	8799.78	-8804.13	-707.50	0.00	442467.72	759698.71	N 32 12 52.02	W 103 37 38.19
	18400.00	90.00	179.66	9600.00	8899.78	-8904.13	-706.91	0.00	442367.72	759699.30	N 32 12 51.03	W 103 37 38.19
	18500.00	90.00	179.66	9600.00	8999.78	-9004.13	-706.31	0.00	442267.73	759699.90	N 32 12 50.04	W 103 37 38.19
	18600.00	90.00	179.66	9600.00	9099.78	-9104.12	-705.72	0.00	442167.73	759700.49	N 32 12 49.05	W 103 37 38.19
	18700.00	90.00	179.66	9600.00	9199.78	-9204.12	-705.12	0.00	442067.74	759701.08	N 32 12 48.06	W 103 37 38.19
	18800.00	90.00	179.66	9600.00	9299.78	-9304.12	-704.53	0.00	441967.74	759701.68	N 32 12 47.07	W 103 37 38.19
	18900.00	90.00	179.66	9600.00	9399.78	-9404.12	-703.94	0.00	441867.75	759702.27	N 32 12 46.08	W 103 37 38.19
	19000.00	90.00	179.66	9600.00	9499.78	-9504.12	-703.34	0.00	441767.75	759702.86	N 32 12 45.09	W 103 37 38.19
	19100.00	90.00	179.66	9600.00	9599.78	-9604.11	-702.75	0.00	441667.76	759703.46	N 32 12 44.10	W 103 37 38.19
	19200.00	90.00	179.66	9600.00	9699.78	-9704.11	-702.16	0.00	441567.77	759704.05	N 32 12 43.11	W 103 37 38.20
	19300.00	90.00	179.66	9600.00	9799.78	-9804.11	-701.56	0.00	441467.77	759704.64	N 32 12 42.12	W 103 37 38.20
	19400.00	90.00	179.66	9600.00	9899.78	-9904.11	-700.97	0.00	441367.78	759705.24	N 32 12 41.13	W 103 37 38.20
	19500.00	90.00	179.66	9600.00	9999.78	-10004.11	-700.38	0.00	441267.78	759705.83	N 32 12 40.14	W 103 37 38.20
	19600.00	90.00	179.66	9600.00	10099.78	-10104.11	-699.78	0.00	441167.79	759706.42	N 32 12 39.15	W 103 37 38.20
Cimarex Dos Equis 12-13 Federal Com #91H - PBHL [100' FSL, 2310' FEL]	19665.20	90.00	179.66	9600.00	10164.98	-10169.31	-699.40	0.00	441102.59	759706.81	N 32 12 38.51	W 103 37 38.20

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #91H / Cimarex Dos Equis 12-13
	1	26.000	19665.201	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Federal Com #91H Rev1 RM Dos Equis 12-13 Federal Com #91H / Cimarex Dos Equis 12-13



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



Report Date: February 18, 2020 - 01:59 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #91H / New Slot
Well: Dos Equis 12-13 Federal Com #91H
Borehole: Dos Equis 12-13 Federal Com #91H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #91H Rev1 RM 14Feb20
Survey Date: December 27, 2019
Tort / AHD / DDI / ERD Ratio: 112.098 ° / 10960.550 ft / 6.401 / 1.142
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 19.08558", W 103° 37' 29.27834"
Location Grid N/E Y/X: N 451271.510 ftUS, E 760406.180 ftUS
CRS Grid Convergence Angle: 0.3780 °
Grid Scale Factor: 0.99996405
Version / Patch: 2.10.787.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.660 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3626.600 ft above MSL
Seabed / Ground Elevation: 3600.600 ft above MSL
Magnetic Declination: 6.613 °
Total Gravity Field Strength: 998.4390mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47842.041 nT
Magnetic Dip Angle: 59.879 °
Declination Date: February 18, 2020
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3780 °
Total Corr Mag North->Grid North: 6.2354 °
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 [300' FNL, 1550' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
Nudge 2"/100'	2500.00	0.00	272.30	2500.00	0.00	0.00	0.00	0.00	451271.51	760406.18	N 32 14 19.09	W 103 37 29.28
Hold Nudge	3052.45	11.05	272.30	3049.03	-2.45	2.13	-53.06	2.00	451273.64	760353.12	N 32 14 19.11	W 103 37 29.90
Drop to Vertical	6466.71	11.05	272.30	6400.00	-32.58	28.39	-706.87	0.00	451299.90	759699.34	N 32 14 19.41	W 103 37 37.51
2"/100' DLS	7019.16	0.00	272.30	6949.03	-35.03	30.52	-759.93	2.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12
Hold Vertical	9192.66	0.00	272.30	9122.54	-35.03	30.52	-759.93	0.00	451302.03	759646.28	N 32 14 19.44	W 103 37 38.12
KOP - Build	9942.66	90.00	179.66	9600.00	442.43	-446.93	-757.10	12.00	450824.59	759649.11	N 32 14 14.71	W 103 37 38.13
Landing Point												
Cimarex Dos Equis 12-13 Federal Com #91H - PBHL [100' FSL, 2310' FEL]	19665.20	90.00	179.66	9600.00	10164.98	-10169.31	-699.40	0.00	441102.59	759706.81	N 32 12 38.51	W 103 37 38.20

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #91H / Cimarex Dos Equis 12-13 Federal Com #91H Rev1 RM
	1	26.000	19665.201	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #91H / Cimarex Dos Equis 12-13



Cimarex Energy

Rev 1



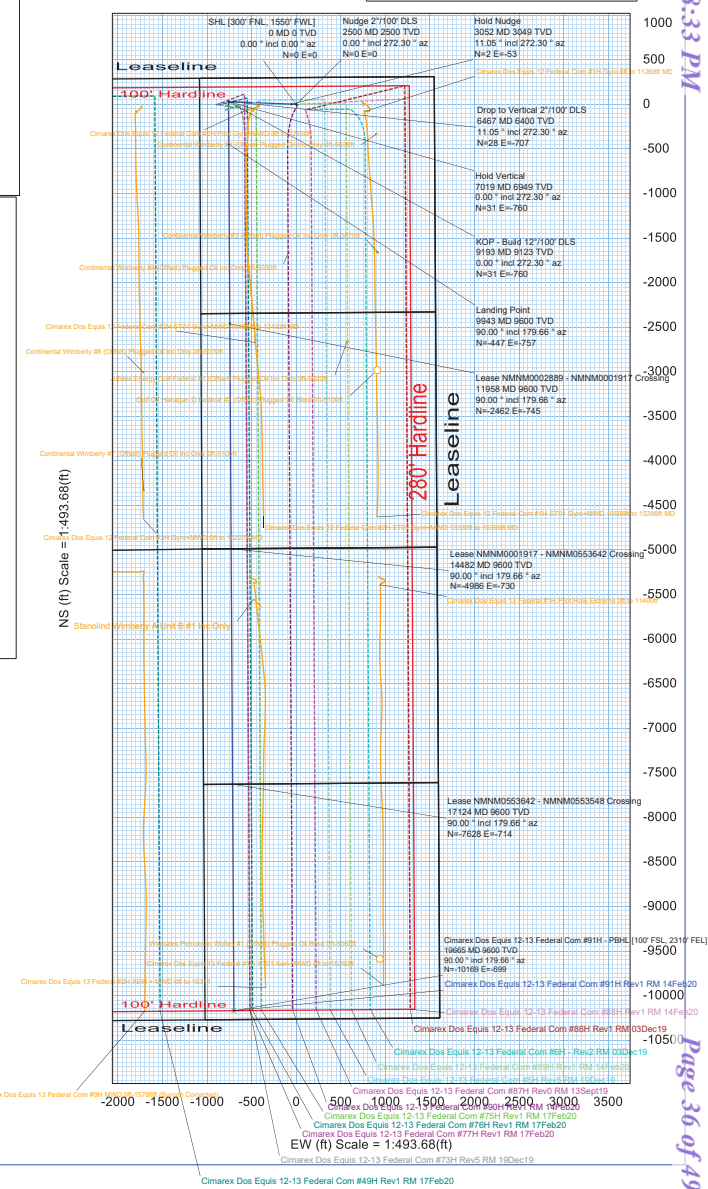
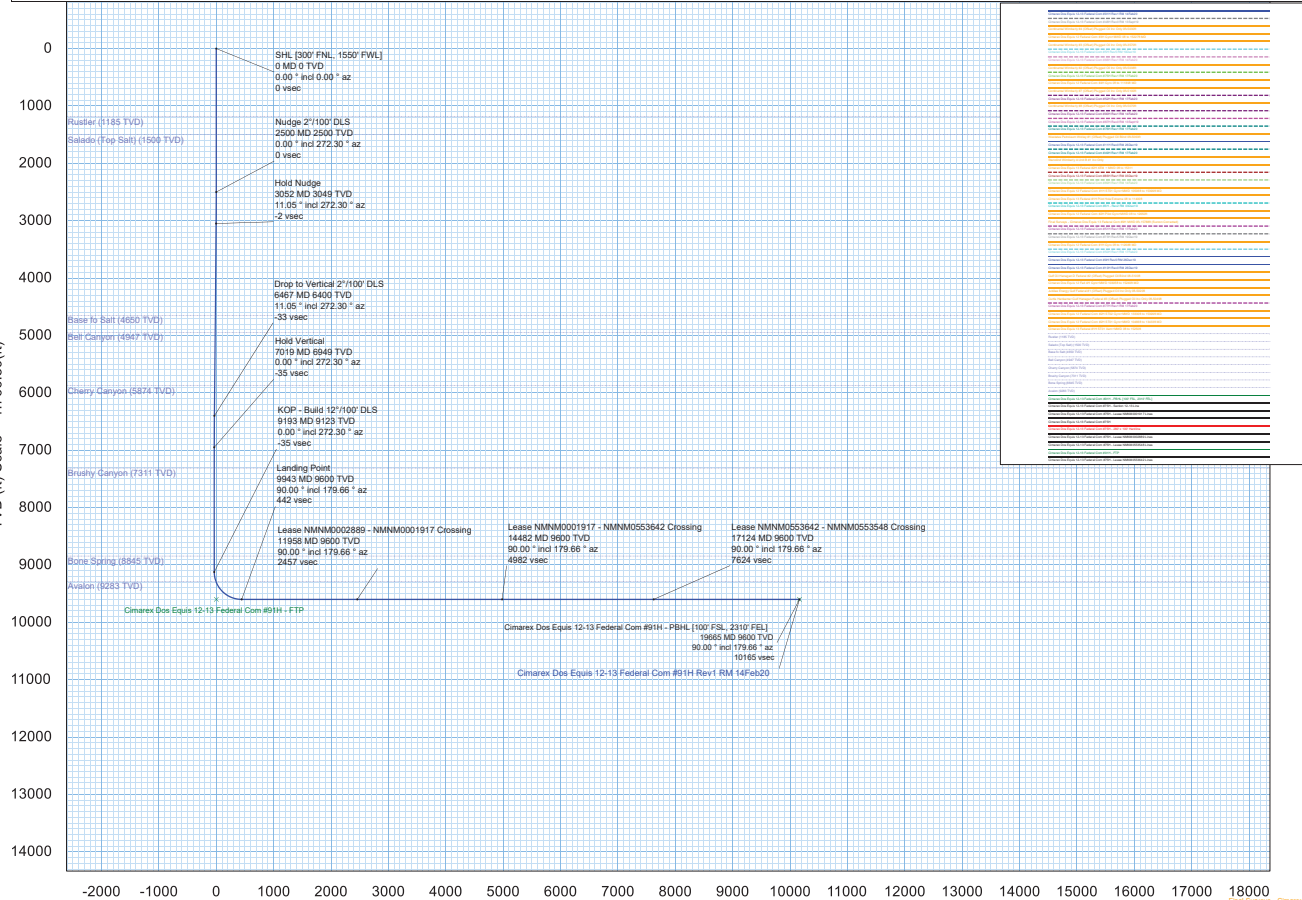
Borehole:	Well:	Field:	Structure:
Dos Equis 12-13 Federal Com #91H	Dos Equis 12-13 Federal Com #91H	NM Lea County (NAD 83)	Cimarex Dos Equis 12-13 Federal Com #91H

Gravity & Magnetic Parameters	Dip:	59.879°	Date:	18-Feb-2020	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Grid Conv:	0.378°	Miscellaneous
Model: HDGM 2019	FS:	47842.041N	Gravity FS:	998.439mgm (8.80665 Based)	Lat: N 32 14 18.09	Northing: 451271.51NUS	Scale Fact:	0.99996405	Slot: New Slot
MagDec: 6.613°					Long: W 103 37 29.28	Easting: 760406.18NUS			TVD Ref: RKB(3626.6ft above MSL)
									Cimarex Dos Equis 12-13 Federal Com #91H Rev1 RM 14Feb20

Critical Point	MD	INCL	AZIM	Critical Points	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [300' FNL, 1550' FWL]	0.00	0.00	0.00	TVD	0.00	0.00	0.00	0.00
Rustler	1185.00	0.00	272.30	1185.00	0.00	0.00	0.00	0.00
Salado (Top Salt)	1500.00	0.00	272.30	1500.00	0.00	0.00	0.00	0.00
Nudge 2'100' DLS	2500.00	0.00	272.30	2500.00	0.00	0.00	0.00	0.00
Hold Nudge	3052.45	11.05	272.30	3049.03	-2.45	2.13	-53.06	2.00
Base to Salt	4683.65	11.05	272.30	4650.00	-16.85	14.68	-365.43	0.00
Bell Canyon	4886.26	11.05	272.30	4847.00	-19.52	17.00	-423.37	0.00
Cherry Canyon	5930.77	11.05	272.30	5874.00	-27.85	24.27	-604.24	0.00
Drop to Vertical 2'100' DLS	6465.71	11.05	272.30	6400.00	-32.58	28.39	-708.97	0.00
Hold Vertical	7019.16	0.00	272.30	6949.03	-35.03	30.52	-759.93	2.00
Brushy Canyon	7381.12	0.00	272.30	7311.00	-35.03	30.52	-759.93	0.00
Bone Spring	8915.12	0.00	272.30	8845.00	-35.03	30.52	-759.93	0.00
KOP - Build 12'100' DLS	9192.66	0.00	272.30	9122.54	-35.03	30.52	-759.93	0.00
Avallon	9358.31	19.64	179.66	9283.00	-7.26	2.75	-759.76	12.00
Landing Point	9942.66	90.00	179.66	9600.00	442.43	-446.93	-757.10	12.00
Lease NMNM0002889 - NMNM0001917 Crossing	11957.70	90.00	179.66	9600.00	2457.48	-2461.94	-745.14	0.00
Lease NMNM0001917 - NMNM0553642 Crossing	14482.00	90.00	179.66	9600.00	4981.78	-4986.20	-730.16	0.00
Lease NMNM0553642 - NMNM0553548 Crossing	17124.10	90.00	179.66	9600.00	7628.25	-7628.25	-714.48	0.00
Cimarex Dos Equis 12-13 Federal Com #91H - PBHL [100' FSL, 2310' FEL]	19665.20	90.00	179.66	9600.00	10164.98	-10169.31	-699.40	0.00
2nd Bone Spring Sand	NaN	NaN	NaN	9680.00				
Wolfcamp Y Target	NaN	NaN	NaN	12390.00				
Wolfcamp A1	NaN	NaN	NaN	10640.00				
3rd Bone Spring Sand	NaN	NaN	NaN	12417.00				
3rd Bone Spring Carb	NaN	NaN	NaN	11825.00				
Wolfcamp	NaN	NaN	NaN	11090.00				
				12235.00				

Grid North
Tot Corr (M->G 6.235")
Mag Dec (6.613")
Grid Conv (0.378")

CONTROLLED
Drawing of
Copy number
Date
18-Feb-2020
1 of 3
Client
Office
Copy number



PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex
LEASE NO.:	NMNM02889
LOCATION:	Section 12, T.24 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Dos Equis 12-13 Fed Com 91H
SURFACE HOLE FOOTAGE:	300'/N & 1550'/E
BOTTOM HOLE FOOTAGE:	100'/S & 2310'/E

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** 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 **13-3/8** inch surface casing shall be set at approximately **1235** 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 **9-5/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

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** 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 **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 072021

Dos Equis 12-13 Federal Com 91H

Cimarex Energy Co.

UL: C, Sec. 12, 24S, 32E

Lea Co., NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:
 - A. Characteristics of H₂S
 - B. Physical effects and hazards
 - C. Principal and operation of H₂S detectors, warning system and briefing areas.
 - D. Evacuation procedure, routes and first aid.
 - E. Proper use of safety equipment & life support systems
 - F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

H₂S Detection and Alarm Systems:

 - A. H₂S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H₂S detectors may be placed as deemed necessary.
 - B. An audio alarm system will be installed on the derrick floor and in the top doghouse.
- 3 Windsock and/or wind streamers:
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock on the rig floor and / or top doghouse should be high enough to be visible.
- 4 Condition Flags and Signs
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H₂S present in dangerous concentration). Only H₂S trained and certified personnel admitted to location.
- 5 Well control equipment:
 - A. See exhibit "E-1"
- 6 Communication:
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
- 7 Drillstem Testing:

No DSTs or cores are planned at this time.
- 8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

H₂S Contingency Plan
Dos Equis 12-13 Federal Com 91H
Cimarex Energy Co.
UL: C, Sec. 12, 24S, 32E
Lea Co., NM

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- « Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- « Evacuate any public places encompassed by the 100 ppm ROE.
- « Be equipped with H₂S monitors and air packs in order to control the release.
- « Use the "buddy system" to ensure no injuries occur during the 432-620-1975
- « Take precautions to avoid personal injury during this operation.
- « Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- « Have received training in the:
 - Detection of H₂S, and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

Please see attached International Chemical Safety Cards.

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S Contingency Plan Emergency Contact
 s Dos Equis 12-13 Federal Com 91H
 Cimarex Energy Co.
 UL: C, Sec. 12, 24S, 32E
 Lea Co., NM

Company Office

Cimarex Energy Co. of Colorado	800-969-4789
Co. Office and After-Hours Menu	

Key Personnel

Name	Title	Office	Mobile
Larry Seigrist	Drilling Manager	432-620-1934	580-243-8485
Charlie Pritchard	Drilling Superintendent	432-620-1975	432-238-7084
Roy Shirley	Construction Superintendent		432-634-2136

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

Santa Fe

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National

National Emergency Response Center (Washington, D.C.)	800-424-8802
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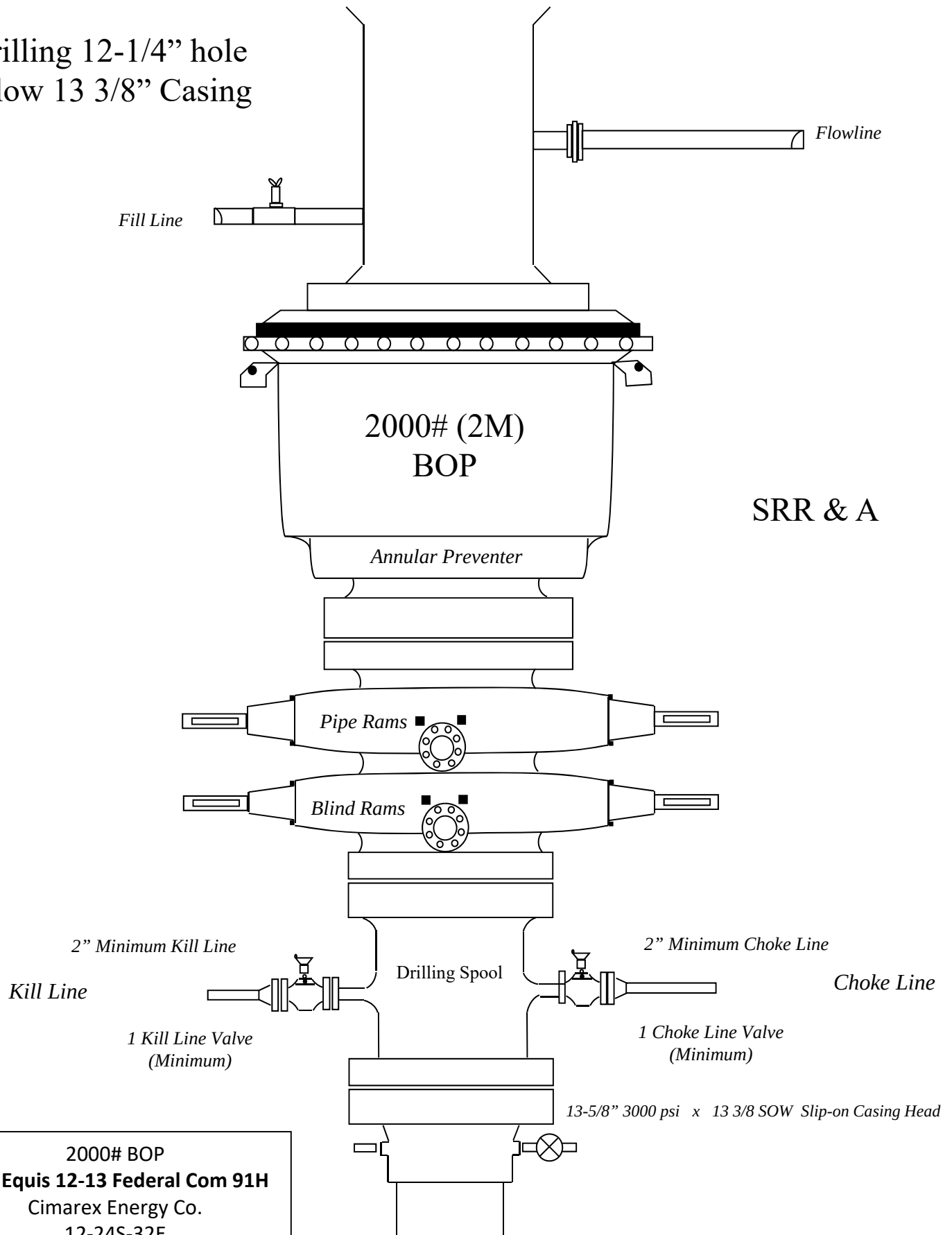
Medical

Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other

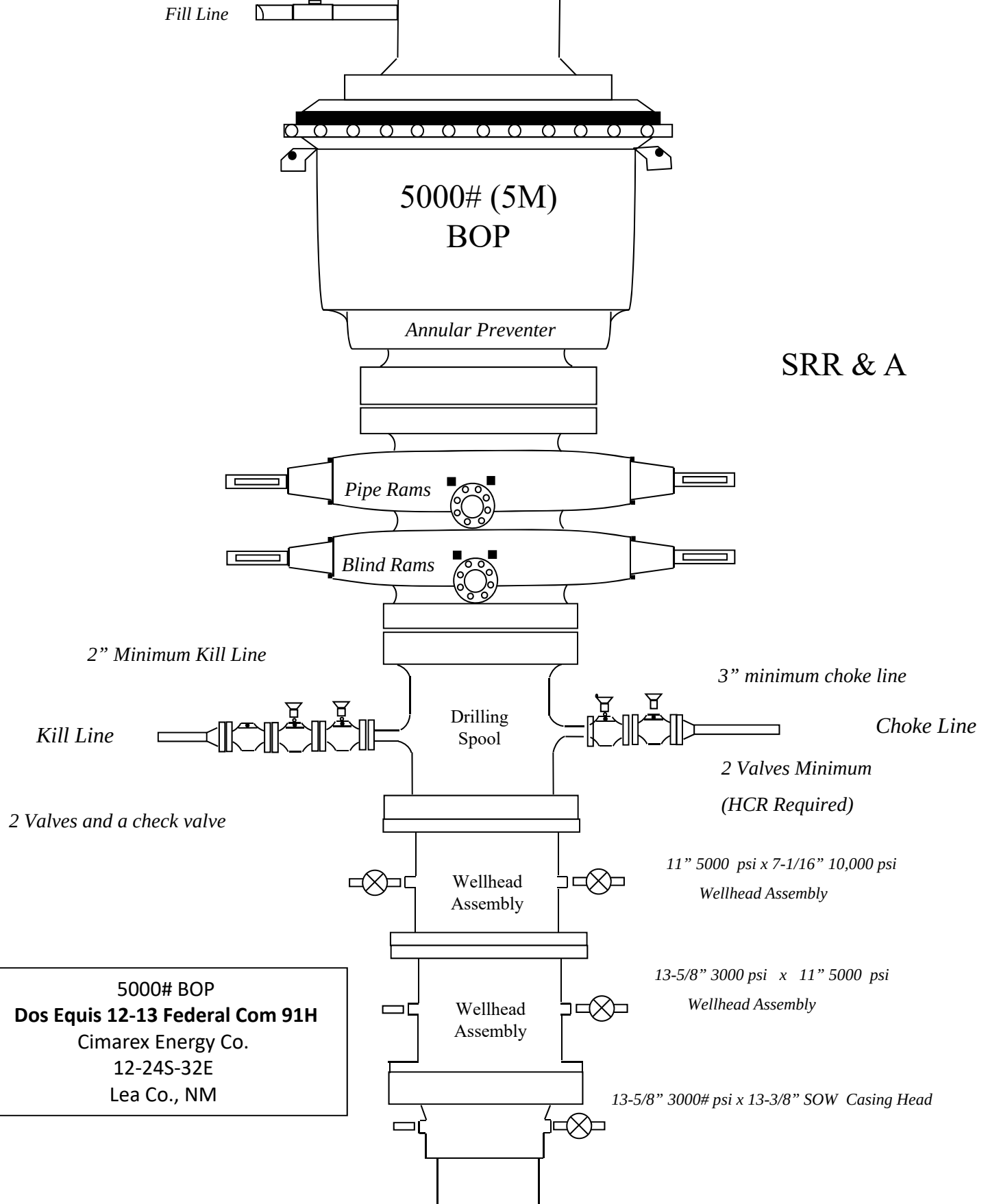
Boots & Coots IWC	800-256-9688	or	281-931-8884
Cudd Pressure Control	432-699-0139	or	432-563-3356
Halliburton	575-746-2757		
B.J. Services	575-746-3569		

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



2000# BOP
Dos Equis 12-13 Federal Com 91H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM

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



SRR & A

5000# BOP
Dos Equis 12-13 Federal Com 91H
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 104588

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 104588
	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	5/31/2022
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	5/31/2022
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	5/31/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	5/31/2022