

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

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

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. [326056]
2. Name of Operator [215099]		9. API Well No. 30-025-50206
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory [96674] XXXXXX XXXX
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish 13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

NGMP Rec 05/09/2022

KZ
06/03/2022

SL

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 09/09/2021

Additional Operator Remarks

Location of Well

0. SHL: NWNE / 300 FNL / 1490 FEL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238635 / LONG: -103.624606 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 0 FNL / 330 FEL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.224947 / LONG: -103.620867 (TVD: 9600 feet, MD: 14524 feet)

PPP: NESE / 2640 FNL / 330 FEL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.232203 / LONG: -103.620858 (TVD: 9600 feet, MD: 11884 feet)

PPP: NENE / 300 FNL / 330 FEL / TWSP: 24S / RANGE: 32E / SECTION: 12 / LAT: 32.238637 / LONG: -103.620854 (TVD: 9283 feet, MD: 9382 feet)

BHL: SESE / 100 FSL / 330 FEL / TWSP: 24S / RANGE: 32E / SECTION: 13 / LAT: 32.210704 / LONG: -103.620877 (TVD: 9600 feet, MD: 19706 feet)

BLM Point of Contact

Name: JORDAN NAVARRETTE

Title: LIE

Phone: (575) 234-5972

Email: jnavarrette@blm.gov

CONFIDENTIAL

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 88H		B, Sec 12, T24S, R32E	800 FNL/1490 FEL	1200	1800	1300
30-025-50206						

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 88H		1/1/2024	3/1/2024	6/1/20024	8/1/2024	8/1/2024
30-025-50206						

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

07/13/2020

APD ID: 10400058470

Submission Date: 07/10/2020

Highlighted data
reflects the most
recent changes

Operator Name: CIMAREX ENERGY COMPANY

Well Name: DOS EQUIS 12-13 FEDERAL COM

Well Number: 88H

[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
771777	RUSTLER	3608	1185	1185	LIMESTONE	USEABLE WATER	N
771778	SALADO	2108	1500	1500	ANHYDRITE	NONE	N
771779	BASE OF SALT	-1042	4650	4650	ANHYDRITE	NONE	N
771780	BELL CANYON	-1339	4947	4947	SANDSTONE	NONE	N
771781	CHERRY CANYON	-2266	5874	5874	SANDSTONE	NONE	N
771782	BRUSHY CANYON	-3703	7311	7311	SANDSTONE	NONE	N
771783	BONE SPRING	-5237	8845	8845	LIMESTONE	NATURAL GAS, OIL	N
771784	AVALON SAND	-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 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, 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:** 88H

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_88H_Choke_2M3M_20200707120428.pdf

BOP Diagram Attachment:

Dos_Equis_12_13_Fed_Com_88H_BOP_2M_20200707120435.pdf

Pressure Rating (PSI): 5M**Rating Depth:** 19706

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 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, 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_88H_Choke_5M_20200707120523.pdf

BOP Diagram Attachment:

Dos_Equis_12_13_Fed_Com_88H_BOP_5M_20200707120531.pdf

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 88H**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	9218	0	9218	3608	-5618	9218	L-80	20	LT&C	2.05	2.13	BUOY	2.17	BUOY	2.17
4	PRODUCTION	8.75	5.5	NEW	API	N	9218	19706	9218	9600	-5618	-6000	10488	L-80	20	BUTT	1.97	2	BUOY	60.99	BUOY	60.99

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_88H_Casing_Assumptions_20200707120614.pdf

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 88H**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_88H_Casing_Assumptions_20200707120652.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_88H_Casing_Assumptions_20200707120729.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_88H_Casing_Assumptions_20200707120807.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 88H

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	1970 6	390	3.64	10.3	1419	25	Tuned Light	LCM
PRODUCTION	Tail		0	1970 6	2548	1.3	14.2	3312	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:** 88H

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	1970 6	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_88H_H2S_Plan_20200707121106.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: DOS EQUIS 12-13 FEDERAL COM

Well Number: 88H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Dos_Equis_12_13_Fed_Com_88H_AC_Report_20200707121122.pdf

Dos_Equis_12_13_Fed_Com_88H_Directional_20200707121130.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Dos_Equis_12_13_Fed_Com_88H_Drilling_Plan_20200707121228.pdf

Dos_Equis_12_13_Fed_Com_88H_Gas_Capture_Plan_20200707121235.pdf

Other Variance attachment:

Dos_Equis_12_13_Fed_Com_88H_Multibowl_Wellhead_20200707121245.pdf

Dos_Equis_12_13_Fed_Com_88H_Flex_Hose_20200707121257.pdf

1. Geological Formations

TVD of target 9,600

Pilot Hole TD N/A

MD at TD 19,706

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1185	N/A	
Salado	1500	N/A	
Base of Salt	4650	N/A	
Bell Canyon	4947	Hydrocarbons	
Cherry Canyon	4947	Hydrocarbons	
Brushy Canyon	7311	Hydrocarbons	
Bone Spring	8845	Hydrocarbons	
Avalon (Target)	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	9218	9218	5-1/2"	20.00	L-80	LT&C	2.05	2.13	2.17
8 3/4	9218	19706	9600	5-1/2"	20.00	L-80	BT&C	1.97	2.00	60.99
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	390	10.30	3.64	22.18		Lead: Tuned Light + LCM
	2548	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	50% of working pressure
			Blind Ram		2M
			Pipe Ram	X	
			Double Ram	X	
			Other		
8 3/4	13 5/8	5M	Annular	X	50% of working pressure
			Blind Ram		5M
			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 19706'	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
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6. Logging and Testing Procedures

Logging, Coring and Testing	
	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	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 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

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

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

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

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

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 #88H Rev1 RM 14Feb20 Anti-Collision Summary Report

Analysis Date-24hr Time: February 18, 2020 - 11:18

Client: Cimarex Energy

Field: NM Lea County (NAD 83)

Structure: Cimarex Dos Equis 12-13 Federal Com #88H

Slot: New Slot

Well: Dos Equis 12-13 Federal Com #88H

Borehole: Dos Equis 12-13 Federal Com #88H

Scan MD Range: 0.00ft ~ 19706.15ft

Analysis Method: 3D Least Distance

Reference Trajectory: Cimarex Dos Equis 12-13 Federal Com #88H 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 #88H Rev1 RM 14Feb20 (Def Plan)													
												Warning Alert	
20.00	16.26	18.71	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	42115.91		MAS = 4.96 (m)	26.00	26.00				WRP	
20.00	16.72	8.43	3.28	1.82		OSF1.50	1700.00	1700.00				MinPt-CtCt	
20.02	16.79	8.40	3.23	1.81		OSF1.50	1710.00	1710.00				MINPT-O-EQU	
20.07	16.86	8.40	3.21	1.81		OSF1.50	1720.00	1720.00				MinPt-O-ADP	
20.16	16.94	8.44	3.22	1.81		OSF1.50	1730.00	1730.00				MinPt-O-SF	
60.17	19.13	46.99	41.05	4.95		OSF1.50	2240.00	2236.90	OSF>5.00			Exit Alert	
130.82	40.16	103.61	90.66	5.00		OSF1.50	5170.00	5125.05	OSF<5.00			Enter Alert	
138.91	43.62	109.41	95.30	4.89		OSF1.50	5530.00	5479.90				MinPt-O-SF	
143.97	44.12	114.12	99.85	5.00		OSF1.50	5650.00	5598.19	OSF>5.00			Exit Alert	
662.05	66.74	617.13	595.32	15.14		OSF1.50	9218.71	9122.54				MinPts	
659.91	199.11	526.74	460.80	4.99		OSF1.50	15620.00	9600.00	OSF<5.00			Enter Alert	
659.90	327.54	441.12	332.37	3.03		OSF1.50	19706.15	9600.00				MinPts	

Cimarex Dos Equis 12-13 Federal Com #90H 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	87104.18		MAS = 9.83 (m)	26.00	26.00				WRP	
39.99	32.25	28.42	7.74	3.76		MAS = 9.83 (m)	1700.00	1700.00				MinPts	
40.01	32.25	28.39	7.76	3.75		MAS = 9.83 (m)	1710.00	1710.00				MINPT-O-EQU	
40.43	32.25	28.61	8.18	3.72		MAS = 9.83 (m)	1750.00	1750.00				MinPt-O-SF	
58.97	32.25	46.04	26.71	4.96		MAS = 9.83 (m)	2030.00	2029.27	OSF>5.00			Exit Alert	
1201.21	79.86	1147.54	1121.35	22.91		OSF1.50	9200.00	9103.83				MinPts	
1319.82	324.15	1103.29	995.67	6.13		OSF1.50	19706.15	9600.00				MinPts	

Cimarex Dos Equis 12 Federal Com #1H ST01 Gyro+MWD 10506ft to 15399ft MD (Def Survey)													
												Warning Alert	
687.09	32.81	685.11	654.28	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
687.09	32.81	685.11	654.28	922054.64		MAS = 10.00 (m)	10.00	10.00				MinPts	
687.10	32.81	685.11	654.29	43043.09		MAS = 10.00 (m)	26.00	26.00				WRP	
687.19	32.81	685.08	654.38	5322.34		MAS = 10.00 (m)	60.00	60.00				MINPT-O-EQU	
109.05	34.85	85.00	74.20	4.94		OSF1.50	5740.00	5686.91	OSF<5.00			Enter Alert	
61.50	40.42	33.90	21.09	2.32		OSF1.50	6330.00	6268.48				MinPt-CtCt	
61.61	40.71	33.82	20.91	2.31		OSF1.50	6350.00	6288.19				MINPT-O-EQU	
61.73	40.85	33.83	20.88	2.31		OSF1.50	6360.00	6298.05				MinPt-O-ADP	
62.07	41.14	33.98	20.93	2.30		OSF1.50	6380.00	6317.76				MinPt-O-SF	
155.30	48.11	122.57	107.19	4.99		OSF1.50	7230.00	7155.62	OSF>5.00			Exit Alert	
411.68	54.44	374.73	357.24	11.71		OSF1.50	9540.00	9420.12				MinPt-O-SF	
411.50	54.40	374.57	357.10	11.72		OSF1.50	9560.00	9435.50				MinPts	
1515.29	69.17	1468.52	1446.12	33.78		OSF1.50	11270.00	9600.00				MinPt-CtCt	
1516.41	74.67	1465.97	1441.74	31.25		OSF1.50	11460.00	9600.00				MinPt-CtCt	
1515.77	85.03	1458.43	1430.74	27.34		OSF1.50	11810.00	9600.00				MinPt-CtCt	
1514.59	93.06	1451.89	1421.53	24.91		OSF1.50	12080.00	9600.00				MinPt-CtCt	
1512.21	102.66	1443.12	1409.56	22.50		OSF1.50	12400.00	9600.00				MinPt-CtCt	
1513.10	105.21	1442.36	1407.89	21.96		OSF1.50	12500.00	9600.00				MINPT-O-EQU	
1513.55	116.11	1435.49	1397.44	19.87		OSF1.50	12840.00	9600.00				MinPt-CtCt	
1515.37	124.86	1431.46	1390.50	18.47		OSF1.50	13150.00	9600.00				MINPT-O-EQU	
1517.94	136.43	1426.33	1381.51	16.91		OSF1.50	13510.00	9600.00				MinPt-CtCt	
1526.56	160.08	1419.18	1366.47	14.46		OSF1.50	14200.00	9600.00				MinPts	
1530.35	161.04	1422.32	1369.30	14.41		OSF1.50	14290.00	9600.00				MinPt-O-SF	
5732.36	89.48	5672.04	5642.88	98.23		OSF1.50	19706.15	9600.00				TD	

Cimarex Dos Equis 12 Federal Com #1H Gyro 0ft to 11268ft MD (Def Survey)													
												Warning Alert	
687.09	32.81	685.11	654.28	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
687.09	32.81	685.11	654.28	922054.64		MAS = 10.00 (m)	10.00	10.00				MinPts	
687.10	32.81	685.11	654.29	43043.09		MAS = 10.00 (m)	26.00	26.00				WRP	
687.19	32.81	685.08	654.38	5322.34		MAS = 10.00 (m)	60.00	60.00				MINPT-O-EQU	
109.05	34.85	85.00	74.20	4.94		OSF1.50	5740.00	5686.91	OSF<5.00			Enter Alert	
61.50	40.42	33.90	21.09	2.32		OSF1.50	6330.00	6268.48				MinPt-CtCt	
61.61	40.71	33.82	20.91	2.31		OSF1.50	6350.00	6288.19				MINPT-O-EQU	
61.73	40.85	33.83	20.88	2.31		OSF1.50	6360.00	6298.05				MinPt-O-ADP	
62.07	41.14	33.98	20.93	2.30		OSF1.50	6380.00	6317.76				MinPt-O-SF	
155.30	48.11	122.57	107.19	4.99		OSF1.50	7230.00	7155.62	OSF>5.00			Exit Alert	
411.68	54.44	374.73	357.24	11.71		OSF1.50	9540.00	9420.12				MinPt-O-SF	
411.50	54.40	374.57	357.10	11.72		OSF1.50	9560.00	9435.50				MinPts	
10083.96	52.24	10048.47	10031.72	300.90		OSF1.50	19706.15	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 12-13 Federal Com #87H Rev0 RM 13Sept19 (Non-Def Plan)													
												Warning Alert	
	72.10	32.81	70.81	39.29	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	72.10	32.81	70.81	39.29	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	61.76	32.81	48.33	28.95	4.98	MAS = 10.00 (m)	2150.00	2148.15	OSF<5.00			Enter Alert	
	61.73	32.81	48.26	28.92	4.96	MAS = 10.00 (m)	2160.00	2158.03				MinPts	
	61.74	32.81	48.22	28.93	4.94	MAS = 10.00 (m)	2170.00	2167.89				MINPT-O-EQU	
	62.23	32.81	48.54	29.42	4.91	MAS = 10.00 (m)	2210.00	2207.33				MinPt-O-SF	
	64.80	32.81	50.79	31.99	4.99	MAS = 10.00 (m)	2280.00	2276.33	OSF>5.00			Exit Alert	
	1119.93	81.30	1065.30	1038.63	20.97	OSF1.50	9560.00	9435.50				MinPts	
	1120.83	81.44	1066.11	1039.39	20.95	OSF1.50	9620.00	9478.22				MinPt-O-SF	
	2936.40	325.59	2718.91	2610.81	13.58	OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #86H Rev1 RM 03Dec19 (Def Plan)													
												Warning Alert	
	84.84	32.81	83.55	52.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	84.84	32.81	83.55	52.03	188022.38	MAS = 10.00 (m)	26.00	26.00				WRP	
	84.84	32.81	74.58	52.03	9.32	MAS = 10.00 (m)	1490.00	1490.00				MinPts	
	84.92	32.81	74.45	52.11	9.11	MAS = 10.00 (m)	1530.00	1530.00				MINPT-O-EQU	
	87.90	32.81	76.74	55.09	8.78	MAS = 10.00 (m)	1680.00	1680.00				MinPt-O-SF	
	77.78	32.81	61.15	44.97	4.99	MAS = 10.00 (m)	3190.00	3173.33	OSF<5.00			Enter Alert	
	62.70	37.79	37.07	24.91	2.52	OSF1.50	4630.00	4592.76				MinPt-CtCi	
	64.30	42.52	35.52	21.78	2.29	OSF1.50	5080.00	5036.33				MINPT-O-EQU	
	66.42	45.06	35.95	21.35	2.23	OSF1.50	5320.00	5272.90				MinPt-O-ADP	
	71.64	49.28	38.36	22.37	2.20	OSF1.50	5720.00	5667.19				MinPt-O-SF	
	147.64	75.97	96.56	71.67	2.94	OSF1.50	9218.71	9122.54				MinPt-CtCi	
	147.64	75.98	96.56	71.66	2.94	OSF1.50	9220.00	9123.83				MinPts	
	251.72	76.43	200.34	175.30	5.00	OSF1.50	9540.00	9420.12	OSF>5.00			Exit Alert	
	2759.80	323.60	2543.64	2436.20	12.84	OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #6H - Rev2 RM 03Dec19 (Def Plan)													
												Warning Alert	
	99.98	32.81	98.70	67.17	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	99.98	32.81	98.70	67.17	222105.39	MAS = 10.00 (m)	26.00	26.00				WRP	
	99.98	32.81	89.73	67.17	11.00	MAS = 10.00 (m)	1490.00	1490.00				MinPts	
	100.04	32.81	89.63	67.23	10.82	MAS = 10.00 (m)	1520.00	1520.00				MINPT-O-EQU	
	102.30	32.81	91.41	69.49	10.52	MAS = 10.00 (m)	1630.00	1630.00				MinPt-O-SF	
	88.73	32.81	69.89	55.92	4.98	MAS = 10.00 (m)	3720.00	3695.76	OSF<5.00			Enter Alert	
	82.24	36.26	57.63	45.97	3.47	OSF1.50	4640.00	4602.62				MinPt-CtCi	
	83.51	40.28	56.22	43.22	3.16	OSF1.50	5040.00	4996.90				MINPT-O-EQU	
	83.57	40.36	56.24	43.21	3.16	OSF1.50	5050.00	5006.76				MinPt-O-ADP	
	84.07	40.77	56.46	43.30	3.14	OSF1.50	5120.00	5075.76				MinPt-O-SF	
	143.87	44.29	113.92	99.58	4.97	OSF1.50	5880.00	5824.91	OSF>5.00			Exit Alert	
	609.72	67.35	564.39	542.37	13.81	OSF1.50	9550.00	9427.88				MinPts	
	609.72	67.35	564.39	542.37	13.81	OSF1.50	9560.00	9435.50				MinPt-O-SF	
	3330.33	322.75	3114.74	3007.58	15.53	OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 13 Federal #1H Pilot Hole Extreme Off to 11400ft (Def Survey)													
												Warning Alert	
	5364.76	32.81	5362.78	5331.95	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5364.72	32.81	5362.74	5331.91	N/A	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	5364.70	32.81	5362.72	5331.89	N/A	MAS = 10.00 (m)	20.00	20.00				MINPT-O-EQU	
	5364.70	32.81	5362.72	5331.89	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	5364.39	32.81	5361.89	5331.58	10316.59	MAS = 10.00 (m)	170.00	170.00				MinPts	
	5365.49	32.81	5361.42	5332.68	2570.44	MAS = 10.00 (m)	520.00	520.00				MINPT-O-EQU	
	5365.64	32.81	5360.98	5332.83	2003.25	MAS = 10.00 (m)	660.00	660.00				MinPts	
	5367.11	32.81	5360.39	5334.30	1130.43	MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EQU	
	5348.84	32.81	5330.36	5316.03	323.98	MAS = 10.00 (m)	4570.00	4533.62				MinPts	
	5349.25	32.81	5330.07	5316.44	310.84	MAS = 10.00 (m)	4720.00	4681.48				MINPT-O-EQU	
	5411.74	56.08	5373.69	5355.66	149.98	OSF1.50	8600.00	8506.05	OSF<5.00			MinPt-O-SF	
	385.47	120.51	303.34	264.96	4.95	OSF1.50	14660.00	9600.00				Enter Alert	
	285.07	133.09	195.68	151.98	3.24	OSF1.50	14890.00	9600.00				MinPt-O-SF	
	284.15	132.61	195.08	151.53	3.24	OSF1.50	14900.00	9600.00				MinPt-O-ADP	
	283.57	131.99	194.92	151.58	3.25	OSF1.50	14910.00	9600.00				MINPT-O-EQU	
	283.34	131.21	195.21	152.13	3.27	OSF1.50	14920.00	9600.00				MinPt-CtCi	
	329.71	102.74	260.56	226.97	4.88	OSF1.50	15090.00	9600.00	OSF>5.00			Exit Alert	
	4792.81	48.99	4759.49	4743.82	152.85	OSF1.50	19706.15	9600.00				TD	
Cimarex Dos Equis 13 Federal #1H ST01 Xem+MWD Off to 15250ft (Def Survey)													
												Warning Alert	
	5364.76	32.81	5362.78	5331.95	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5364.72	32.81	5362.74	5331.91	N/A	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	5364.70	32.81	5362.72	5331.89	N/A	MAS = 10.00 (m)	20.00	20.00				MINPT-O-EQU	
	5364.70	32.81	5362.72	5331.89	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	5364.39	32.81	5361.89	5331.58	10316.59	MAS = 10.00 (m)	170.00	170.00				MinPts	
	5365.49	32.81	5361.42	5332.68	2570.44	MAS = 10.00 (m)	520.00	520.00				MINPT-O-EQU	
	5365.64	32.81	5360.98	5332.83	2003.25	MAS = 10.00 (m)	660.00	660.00				MinPts	
	5367.11	32.81	5360.39	5334.30	1130.43	MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EQU	
	5348.84	32.81	5330.36	5316.03	323.98	MAS = 10.00 (m)	4570.00	4533.62				MinPts	
	5349.25	32.81	5330.07	5316.44	310.84	MAS = 10.00 (m)	4720.00	4681.48				MINPT-O-EQU	
	5411.74	56.08	5373.69	5355.66	149.98	OSF1.50	8600.00	8506.05	OSF<5.00			MinPt-O-SF	
	385.47	120.51	303.34	264.96	4.95	OSF1.50	14660.00	9600.00				Enter Alert	
	285.07	133.09	195.68	151.98	3.24	OSF1.50	14890.00	9600.00				MinPt-O-SF	
	284.15	132.61	195.08	151.53	3.24	OSF1.50	14900.00	9600.00				MinPt-O-ADP	
	283.57	131.99	194.92	151.58	3.25	OSF1.50	14910.00	9600.00				MINPT-O-EQU	
	283.34	131.21	195.21	152.13	3.27	OSF1.50	14920.00	9600.00				MinPt-CtCi	
	329.71	102.74	260.56	226.97	4.88	OSF1.50	15090.00	9600.00	OSF>5.00			Exit Alert	
	1400.26	227.54	1247.91	1172.72	9.30	OSF1.50	18570.00	9600.00				MinPt-CtCi	
	1400.65	228.64	1247.56	1172.01	9.26	OSF1.50	18620.00	9600.00				MINPT-O-EQU	
	1401.02	229.08	1247.64	1171.94	9.24	OSF1.50	18640.00	9600.00				MinPt-O-ADP	
	1446.18	255.01	1275.52	1191.18	8.56	OSF1.50	19510.00	9600.00				MinPt-O-ADP	
	1446.75	255.32	1275.87	1191.43	8.55	OSF1.50	19520.00	9600.00				MinPt-O-SF	
	1469.52	254.70	1299.06	1214.82	8.71	OSF1.50	19706.15	9600.00				TD	
Continental Wimberly #2 (Offset) Plugged Oil Inc Only Off: 5038ft (Def Survey)													
												Warning Alert	
	903.18	32.81	901.89	870.37	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		
902.91		32.81	901.59	870.10	24283.63	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
902.71		32.81	901.41	869.91	56014.48	MAS = 10.00 (m)	26.00	26.00				WRP	
902.71		32.81	901.41	869.90	54898.90	MAS = 10.00 (m)	30.00	30.00				MinPts	
896.35		74.34	846.36	822.01	18.38	OSF1.50	1530.00	1530.00				MinPt-CtCt	
633.34		191.65	505.09	441.70	4.98	OSF1.50	3830.00	3804.19	OSF<5.00			Enter Alert	
470.65		256.86	298.89	213.80	2.76	OSF1.50	5140.00	5095.48				MinPts	
470.36		256.47	298.86	213.89	2.76	OSF1.50	5150.00	5105.33				MINPT-O-EQU	
470.29		255.98	299.11	214.31	2.76	OSF1.50	5160.00	5115.19				MinPt-CtCt	
605.49		184.65	481.96	420.84	4.94	OSF1.50	5540.00	5489.76	OSF>5.00			Exit Alert	
6351.31		198.46	6218.57	6152.85	48.31	OSF1.50	14320.00	9600.00				MinPt-O-SF	
10823.09		254.77	10652.81	10568.32	64.04	OSF1.50	19706.15	9600.00				TD	

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

Warning Alert

3101.09	32.81	3099.81	3068.28	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
3100.68	32.81	3099.34	3067.87	58640.17	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
3064.27	920.44	2450.20	2143.82	5.00	OSF1.50	3050.00	3035.33	OSF<5.00				Enter Alert	
3025.66	1589.01	1965.88	1436.65	2.86	OSF1.50	5220.00	5174.33					MinPts	
3025.63	1588.96	1965.83	1436.66	2.86	OSF1.50	5230.00	5184.19					MinPts	
4008.01	1205.04	3204.22	2802.97	4.99	OSF1.50	7860.00	7776.62	OSF>5.00				Exit Alert	
4662.79	490.15	4335.60	4172.64	14.30	OSF1.50	11140.00	9600.00					MinPt-O-ADP	
4546.69	350.12	4312.85	4196.57	19.55	OSF1.50	11600.00	9600.00					MINPT-O-EQU	
4450.10	137.76	4357.83	4312.34	48.90	OSF1.50	12530.00	9600.00					MinPt-CtCt	
4547.83	359.18	4307.95	4188.65	19.06	OSF1.50	13470.00	9600.00					MINPT-O-EQU	
4661.47	496.29	4330.18	4165.17	14.12	OSF1.50	13920.00	9600.00					MinPt-O-ADP	
6263.53	1128.05	5511.06	5135.48	8.34	OSF1.50	16940.00	9600.00					MinPt-O-SF	
8442.07	1357.47	7536.66	7084.60	9.34	OSF1.50	19706.15	9600.00					TD	

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

Pass

59.99	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	66057.57	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-EQU	
61.11	32.81	49.15	28.30	5.60	MAS = 10.00 (m)	1780.00	1779.99					MinPt-O-SF	
1614.70	52.63	1579.18	1562.07	47.18	OSF1.50	6790.00	6721.91					MinPt-O-SF	
1938.93	66.34	1894.27	1872.59	44.68	OSF1.50	8593.86	8500.00					MinPt-O-SF	
1979.82	66.68	1934.95	1913.16	45.40	OSF1.50	9218.71	9122.54					MinPts	
1979.72	328.21	1760.45	1661.45	9.08	OSF1.50	19706.15	9600.00					MinPts	

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

Pass

483.42	32.81	481.44	450.61	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
483.42	32.81	481.44	450.61	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
483.42	32.81	481.43	450.61	37860.80	MAS = 10.00 (m)	26.00	26.00					WRP	
486.40	32.81	478.69	453.59	84.51	MAS = 10.00 (m)	920.00	920.00					MINPT-O-EQU	
491.55	32.81	480.37	458.74	53.24	MAS = 10.00 (m)	1710.00	1710.00					MinPts	
491.58	32.81	480.40	458.77	53.24	MAS = 10.00 (m)	1720.00	1720.00					MinPt-O-SF	
493.03	32.81	481.80	460.22	53.09	MAS = 10.00 (m)	1800.00	1799.98					MinPt-O-SF	
545.71	32.81	533.81	512.90	54.85	MAS = 10.00 (m)	2260.00	2256.62					MinPt-O-SF	
728.32	32.81	713.36	695.51	55.95	MAS = 10.00 (m)	3320.00	3301.47					MinPt-O-SF	
1610.75	54.87	1573.51	1555.88	45.62	OSF1.50	8593.86	8500.00					MinPt-O-SF	
1658.94	52.80	1623.08	1606.14	48.94	OSF1.50	9218.71	9122.54					MinPt-O-SF	
2223.11	202.68	2087.32	2020.42	16.60	OSF1.50	12220.00	9600.00					MinPts	
2223.78	202.83	2087.90	2020.95	16.59	OSF1.50	12270.00	9600.00					MinPt-O-SF	
7813.72	88.96	7753.76	7724.76	134.71	OSF1.50	19706.15	9600.00					TD	

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

Pass

483.42	32.81	481.44	450.61	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
483.42	32.81	481.44	450.61	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
483.42	32.81	481.43	450.61	37860.80	MAS = 10.00 (m)	26.00	26.00					WRP	
486.40	32.81	478.69	453.59	84.51	MAS = 10.00 (m)	920.00	920.00					MINPT-O-EQU	
491.55	32.81	480.37	458.74	53.24	MAS = 10.00 (m)	1710.00	1710.00					MinPts	
491.58	32.81	480.40	458.77	53.24	MAS = 10.00 (m)	1720.00	1720.00					MinPt-O-SF	
493.03	32.81	481.80	460.22	53.09	MAS = 10.00 (m)	1800.00	1799.98					MinPt-O-SF	
545.71	32.81	533.81	512.90	54.85	MAS = 10.00 (m)	2260.00	2256.62					MinPt-O-SF	
728.32	32.81	713.36	695.51	55.95	MAS = 10.00 (m)	3320.00	3301.47					MinPt-O-SF	
1610.75	54.87	1573.51	1555.88	45.62	OSF1.50	8593.86	8500.00					MinPt-O-SF	
1658.94	52.80	1623.08	1606.14	48.94	OSF1.50	9218.71	9122.54					MinPt-O-SF	
10263.48	45.43	10232.53	10218.05	354.23	OSF1.50	19706.15	9600.00					TD	

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

Pass

483.42	32.81	481.44	450.61	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
483.42	32.81	481.44	450.61	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
483.42	32.81	481.43	450.61	37860.80	MAS = 10.00 (m)	26.00	26.00					WRP	
486.40	32.81	478.69	453.59	84.51	MAS = 10.00 (m)	920.00	920.00					MINPT-O-EQU	
491.55	32.81	480.37	458.74	53.24	MAS = 10.00 (m)	1710.00	1710.00					MinPts	
491.58	32.81	480.40	458.77	53.24	MAS = 10.00 (m)	1720.00	1720.00					MinPt-O-SF	
493.03	32.81	481.80	460.22	53.09	MAS = 10.00 (m)	1800.00	1799.98					MinPt-O-SF	
545.71	32.81	533.81	512.90	54.85	MAS = 10.00 (m)	2260.00	2256.62					MinPt-O-SF	
728.32	32.81	713.36	695.51	55.95	MAS = 10.00 (m)	3320.00	3301.47					MinPt-O-SF	
1610.75	54.87	1573.51	1555.88	45.62	OSF1.50	8593.86	8500.00					MinPt-O-SF	
1658.94	52.80	1623.08	1606.14	48.94	OSF1.50	9218.71	9122.54					MinPt-O-SF	
2179.67	171.91	2064.40	2007.76	19.22	OSF1.50	12930.00	9600.00					MinPt-CtCt	
2154.34	273.01	1971.67	1881.33	11.91	OSF1.50	14170.00	9600.00					MinPts	
2154.37	273.06	1971.69	1881.32	11.91	OSF1.50	14180.00	9600.00					MinPt-O-ADP	
2154.75	273.16	1971.98	1881.59	11.91	OSF1.50	14210.00	9600.00					MinPt-O-SF	
5942.47	123.84	5859.25	5818.63	73.12	OSF1.50	19706.15	9600.00					TD	

Cimarex Dos Equis 12-13
Federal Com #5H Rev5 RM
19Dec19 (Def Plan)

Pass

842.03	32.81	840.74	809.22	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
842.03	32.81	840.73	809.22	102270.33	MAS = 10.00 (m)	26.00	26.00					WRP	
842.03	32.81	830.44	809.22	81.63	MAS = 10.00 (m)	1700.00	1700.00					MinPts	

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		
	842.04	32.81	830.42	809.24	81.25	MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
	675.61	59.94	635.11	615.67	17.34	OSF1.50	7200.00	7126.05				MinPt-CtCt	
	675.61	59.96	635.08	615.63	17.33	OSF1.50	7210.00	7135.91				MINPT-O-EQU	
	675.64	60.03	635.08	615.62	17.31	OSF1.50	7220.00	7145.76				MinPt-O-ADP	
	678.63	60.52	637.74	618.11	17.25	OSF1.50	7350.00	7273.91				MinPt-O-SF	
	899.88	67.80	854.25	832.08	20.26	OSF1.50	9270.00	9173.73				MinPt-CtCt	
	899.89	67.89	854.20	832.00	20.24	OSF1.50	9300.00	9203.44				MINPT-O-EQU	
	899.90	67.90	854.20	832.00	20.24	OSF1.50	9310.00	9213.27				MinPt-O-ADP	
	900.54	68.01	854.78	832.53	20.22	OSF1.50	9410.00	9308.75				MinPt-O-SF	
	2966.10	335.36	2742.10	2630.74	13.31	OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #73H Rev5 RM 19Dec19 (Def Plan)													Pass
	861.98	32.81	860.69	829.17	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	861.98	32.81	860.68	829.17	101942.14	MAS = 10.00 (m)	26.00	26.00				WRP	
	861.98	32.81	850.39	829.17	83.57	MAS = 10.00 (m)	1700.00	1700.00				MinPts	
	862.00	32.81	850.36	829.19	83.18	MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
	1502.63	55.58	1465.15	1447.06	41.48	OSF1.50	6650.00	6583.91				MinPt-O-SF	
	1818.84	71.84	1770.52	1747.00	38.64	OSF1.50	8593.86	8500.00				MinPt-O-SF	
	1858.87	74.10	1809.04	1784.77	38.27	OSF1.50	9460.00	9353.69				MinPt-CtCt	
	1858.88	74.12	1809.03	1784.75	38.25	OSF1.50	9468.71	9361.27				MINPT-O-EQU	
	1858.90	74.15	1809.04	1784.75	38.24	OSF1.50	9480.00	9370.98				MinPt-O-ADP	
	1862.51	74.53	1812.39	1787.98	38.12	OSF1.50	9640.00	9491.25				MinPt-O-SF	
	3328.70	332.39	3106.68	2996.31	15.07	OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20 (Def Plan)													Pass
	919.88	32.81	918.59	887.07	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	919.88	32.81	918.58	887.07	106010.34	MAS = 10.00 (m)	26.00	26.00				WRP	
	919.88	32.81	908.29	887.07	89.19	MAS = 10.00 (m)	1700.00	1700.00				MinPts	
	919.90	32.81	908.26	887.09	88.77	MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
	1024.43	32.81	1009.14	991.62	73.09	MAS = 10.00 (m)	2570.00	2562.19				MinPt-O-SF	
	1147.91	41.38	1119.90	1106.53	42.90	OSF1.50	5640.00	5588.33				MinPt-O-SF	
	1633.93	64.98	1590.18	1568.95	38.45	OSF1.50	8593.86	8500.00				MinPt-O-SF	
	1674.83	65.48	1630.75	1609.35	39.11	OSF1.50	9218.71	9122.54				MinPts	
	1674.81	65.43	1630.75	1609.35	39.13	OSF1.50	9270.00	9173.73				MinPt-O-ADP	
	1674.80	65.42	1630.75	1609.35	39.14	OSF1.50	9280.00	9183.66				MINPT-O-EQU	
	1669.78	326.91	1451.41	1342.87	7.69	OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #76H Rev1 RM 17Feb20 (Def Plan)													Pass
	939.87	32.81	938.58	907.06	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	939.87	32.81	938.58	907.06	105609.50	MAS = 10.00 (m)	26.00	26.00				WRP	
	939.87	32.81	928.28	907.06	91.13	MAS = 10.00 (m)	1700.00	1700.00				MinPts	
	939.89	32.81	928.25	907.08	90.70	MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
	1152.31	39.40	1125.62	1112.91	45.30	OSF1.50	5070.00	5026.48				MinPt-O-SF	
	1729.01	68.96	1682.61	1660.05	38.29	OSF1.50	8593.86	8500.00				MinPt-O-SF	
	1769.86	70.03	1722.74	1699.83	38.55	OSF1.50	9260.00	9163.78				MinPts	
	1769.78	67.37	1724.42	1702.39	40.14	OSF1.50	9860.00	9587.68				MinPt-CtCt	
	1769.78	326.18	1551.91	1443.63	8.17	OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #77H Rev1 RM 17Feb20 (Def Plan)													Pass
	959.87	32.81	958.59	927.06	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	959.87	32.81	958.58	927.06	102723.85	MAS = 10.00 (m)	26.00	26.00				WRP	
	959.87	32.81	948.29	927.06	93.06	MAS = 10.00 (m)	1700.00	1700.00				MinPts	
	959.89	32.81	948.25	927.08	92.63	MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
	1262.01	44.52	1231.90	1217.49	43.73	OSF1.50	5520.00	5470.05				MinPt-O-SF	
	1760.17	70.10	1713.00	1690.07	38.34	OSF1.50	8593.86	8500.00				MinPt-O-SF	
	1801.01	71.45	1752.95	1729.57	38.48	OSF1.50	9260.00	9163.78				MINPT-O-EQU	
	1801.05	71.49	1752.96	1729.56	38.46	OSF1.50	9270.00	9173.73				MinPt-O-ADP	
	1807.16	72.20	1758.59	1734.96	38.20	OSF1.50	9530.00	9412.24				MinPt-O-SF	
	3755.18	334.28	3531.90	3420.90	16.91	OSF1.50	19706.15	9600.00				MinPts	
Continental Wimberly #4 (Offset) Plugged Oil Inc Only Off: 5030ft (Def Survey)													Pass
	1670.00	32.81	1668.71	1637.19	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1669.74	32.81	1668.43	1636.93	71229.27	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	1669.71	32.81	1668.41	1636.91	118008.83	MAS = 10.00 (m)	26.00	26.00				WRP	
	1669.55	32.81	1655.14	1636.74	127.18	MAS = 10.00 (m)	450.00	450.00				MinPts	
	1669.75	71.24	1621.83	1598.51	35.78	OSF1.50	1420.00	1420.00				MinPt-CtCt	
	1881.31	119.54	1601.18	1561.76	21.31	OSF1.50	2360.00	2355.19				MINPT-O-EQU	
	1708.31	159.93	1601.23	1548.38	16.14	OSF1.50	3130.00	3114.19				MINPT-O-EQU	
	1721.02	176.55	1602.80	1544.48	14.72	OSF1.50	3460.00	3439.47				MinPt-O-ADP	
	1729.53	184.20	1606.25	1545.32	14.17	OSF1.50	3620.00	3597.19				MINPT-O-EQU	
	1739.74	197.76	1607.47	1541.98	13.27	OSF1.50	3850.00	3823.90				MINPT-O-EQU	
	1750.99	210.68	1610.11	1540.31	12.53	OSF1.50	4110.00	4080.19				MinPt-O-ADP	
	1815.75	254.65	1645.56	1561.11	10.74	OSF1.50	4960.00	4918.05				MinPt-O-ADP	
	1825.13	260.62	1650.96	1564.51	10.55	OSF1.50	5110.00	5065.90				MinPt-O-SF	
	4726.64	81.73	4671.73	4644.91	88.11	OSF1.50	11210.00	9600.00				MinPt-CtCt	
	4726.74	81.98	4671.65	4644.75	87.83	OSF1.50	11240.00	9600.00				MINPT-O-EQU	
	4726.81	82.08	4671.67	4644.74	87.74	OSF1.50	11250.00	9600.00				MinPt-O-ADP	
	6303.31	202.96	6167.57	6100.34	46.87	OSF1.50	15380.00	9600.00				MinPt-O-SF	
	9722.61	253.56	9553.14	9469.04	57.80	OSF1.50	19706.15	9600.00				TD	
Cimarex Dos Equis 13 Federal #2H XEM + MWD Off to 15311 (Def Survey)													Pass
	5283.19	32.81	5281.21	5250.39	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5283.19	32.81	5281.21	5250.38	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
	5283.19	32.81	5281.21	5250.38	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
	5285.91	32.81	5279.00	5253.10	1071.63	MAS = 10.00 (m)	890.00	890.00				MINPT-O-EQU	
	5381.55	32.81	5364.78	5348.74	363.61	MAS = 10.00 (m)	3620.00	3597.19				MinPt-O-SF	
	5653.40	57.56	5614.37	5595.84	152.52	OSF1.50	8600.00	8506.05				MinPt-O-SF	
	5676.48	55.87	5638.57	5620.61	157.93	OSF1.50	9218.71	9122.54				MinPt-O-SF	
	5671.31	55.87	5633.40	5615.44	157.80	OSF1.50	9300.00	9203.44				MinPt-O-SF	
	1706.69	131.66	1618.26	1575.03	19.72	OSF1.50	14910.00	9600.00				MinPts	
	1706.71	131.69	1618.26	1575.02	19.71	OSF1.50	14920.00	9600.00				MinPt-O-ADP	
	1707.12	131.75	1618.63	1575.37	19.71	OSF1.50	14950.00	9600.00				MinPt-O-SF	
	2108.70	190.00	1981.38	1918.70	16.81	OSF1.50	16430.00	9600.00				MINPT-O-EQU	

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		
2127.73		224.86	1977.15	1902.85	14.31	OSF1.50	17380.00	9600.00				MINPT-O-EOU	
2142.78		260.28	1968.62	1882.52	12.43	OSF1.50	18230.00	9600.00				MinPt-CtCt	
2107.78		326.94	1889.17	1780.85	9.72	OSF1.50	19450.00	9600.00				MinPt-CtCt	
2107.79		327.06	1889.13	1780.79	9.72	OSF1.50	19460.00	9600.00				MINPT-O-EOU	
2107.84		327.06	1889.14	1780.78	9.72	OSF1.50	19470.00	9600.00				MinPt-O-ADP	
2108.28		327.19	1889.49	1781.09	9.72	OSF1.50	19500.00	9600.00				MinPt-O-SF	
2122.78		326.39	1904.52	1796.39	9.81	OSF1.50	19706.15	9600.00				TD	

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

1858.09	32.81	1856.80	1825.28	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	Pass
1857.48	32.81	1856.12	1824.67	25148.39	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
1857.24	32.81	1855.85	1824.43	18327.02	MAS = 10.00 (m)	60.00	60.00					MinPts	
1856.32	65.74	1812.07	1790.58	43.17	OSF1.50	1410.00	1410.00					MinPt-CtCt	
1723.94	250.95	1556.19	1472.99	10.35	OSF1.50	5010.00	4967.33					MinPt-CtCt	
1724.82	262.67	1549.25	1462.14	9.89	OSF1.50	5200.00	5154.62					MinPt-O-SF	
1724.86	262.66	1549.24	1462.14	9.89	OSF1.50	5210.00	5164.48					MinPts	
4485.45	47.32	4453.52	4438.17	146.12	OSF1.50	11220.00	9600.00					MinPt-CtCt	
4485.93	48.48	4453.17	4437.44	142.53	OSF1.50	11280.00	9600.00					MINPT-O-EOU	
4486.90	49.65	4453.37	4437.25	139.12	OSF1.50	11330.00	9600.00					MinPt-O-ADP	
6132.91	205.05	5995.78	5927.86	45.14	OSF1.50	15400.00	9600.00					MinPt-O-SF	
9600.84	257.17	9428.97	9343.67	56.27	OSF1.50	19706.15	9600.00					TD	

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

1789.09	32.81	1787.11	1756.28	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	Pass
1789.00	32.81	1786.95	1756.19	25753.75	MAS = 10.00 (m)	26.00	26.00					WRP	
1785.58	32.81	1781.66	1752.77	921.04	MAS = 10.00 (m)	400.00	400.00					MinPts	
1786.28	32.81	1781.27	1753.48	588.05	MAS = 10.00 (m)	670.00	670.00					MINPT-O-EOU	
1794.52	32.81	1784.95	1761.72	235.98	MAS = 10.00 (m)	1700.00	1700.00					MinPts	
1794.53	32.81	1784.94	1761.72	235.53	MAS = 10.00 (m)	1710.00	1710.00					MINPT-O-EOU	
1796.19	32.81	1786.47	1763.39	231.62	MAS = 10.00 (m)	1800.00	1799.98					MinPt-O-SF	
2956.47	55.10	2919.08	2901.39	83.43	OSF1.50	8593.86	8500.00					MinPt-O-SF	
3010.70	53.04	2974.68	2957.66	88.39	OSF1.50	9218.71	9122.54					MinPt-O-SF	
3013.56	52.60	2977.84	2960.96	89.24	OSF1.50	9590.00	9457.52					MinPt-O-SF	
3013.52	52.57	2977.81	2960.95	89.29	OSF1.50	9610.00	9471.48					MinPts	
3305.04	103.99	3235.06	3201.05	48.57	OSF1.50	11150.00	9600.00					MinPt-CtCt	
3303.76	137.64	3211.34	3166.13	36.51	OSF1.50	11880.00	9600.00					MinPt-CtCt	
3294.34	168.37	3181.44	3125.98	29.68	OSF1.50	12510.00	9600.00					MinPt-CtCt	
3292.13	187.24	3166.64	3104.89	26.64	OSF1.50	12890.00	9600.00					MinPt-CtCt	
3293.15	190.57	3165.44	3102.58	26.18	OSF1.50	13010.00	9600.00					MINPT-O-EOU	
3289.56	213.68	3146.45	3075.88	23.29	OSF1.50	13420.00	9600.00					MinPt-CtCt	
3274.57	271.95	3092.61	3002.62	18.18	OSF1.50	14190.00	9600.00					MinPt-CtCt	
3274.59	272.01	3092.59	3002.58	18.18	OSF1.50	14200.00	9600.00					MINPT-O-EOU	
3274.64	272.07	3092.60	3002.56	18.18	OSF1.50	14210.00	9600.00					MinPt-O-ADP	
3277.18	272.59	3094.79	3004.59	18.15	OSF1.50	14320.00	9600.00					MinPt-O-SF	
6415.56	168.36	6302.66	6247.20	57.82	OSF1.50	19706.15	9600.00					TD	

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

2196.27	32.81	2194.99	2163.46	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	Pass
2196.27	32.81	2194.97	2163.46	151987.48	MAS = 10.00 (m)	26.00	26.00					WRP	
2196.27	32.81	2184.68	2163.46	212.94	MAS = 10.00 (m)	1700.00	1700.00					MinPts	
2196.29	32.81	2184.65	2163.48	211.95	MAS = 10.00 (m)	1710.00	1710.00					MINPT-O-EOU	
3316.04	78.21	3263.47	3237.83	64.63	OSF1.50	8600.00	8506.05					MinPt-O-SF	
3355.87	80.52	3301.76	3275.35	63.50	OSF1.50	9330.00	9232.82					MinPt-CtCt	
3355.95	80.78	3301.67	3275.17	63.30	OSF1.50	9400.00	9299.50					MINPT-O-EOU	
3356.01	80.85	3301.68	3275.16	63.25	OSF1.50	9420.00	9317.92					MinPt-O-ADP	
3366.19	81.78	3311.24	3284.40	62.70	OSF1.50	9760.00	9555.11					MinPt-O-SF	
4481.72	333.21	4259.15	4148.50	20.25	OSF1.50	19706.15	9600.00					MinPts	

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

2238.27	32.81	2236.99	2205.47	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	Pass
2238.27	32.81	2236.97	2205.47	125852.90	MAS = 10.00 (m)	26.00	26.00					WRP	
2238.27	32.81	2226.68	2205.47	216.92	MAS = 10.00 (m)	1700.00	1700.00					MinPts	
2238.29	32.81	2226.64	2205.48	215.91	MAS = 10.00 (m)	1710.00	1710.00					MINPT-O-EOU	
2256.83	32.81	2243.73	2224.03	190.92	MAS = 10.00 (m)	2120.00	2118.50					MinPts	
2256.85	32.81	2243.73	2224.04	190.65	MAS = 10.00 (m)	2130.00	2128.39					MINPT-O-EOU	
2387.04	48.68	2354.16	2338.36	75.51	OSF1.50	6330.00	6268.48					MinPt-O-SF	
2398.94	48.92	2365.89	2350.02	75.53	OSF1.50	6410.00	6347.33					MinPt-O-SF	
2766.50	66.12	2721.99	2700.38	63.93	OSF1.50	8600.00	8506.05					MinPt-O-SF	
2806.36	66.56	2761.56	2739.80	64.46	OSF1.50	9270.00	9173.73					MINPT-O-EOU	
2806.41	66.62	2761.57	2739.79	64.40	OSF1.50	9290.00	9193.56					MinPt-O-ADP	
2811.59	67.05	2766.47	2744.55	64.10	OSF1.50	9580.00	9450.32					MinPt-O-SF	
2813.03	67.08	2767.88	2745.95	64.10	OSF1.50	9610.00	9471.48					MinPt-O-SF	
3889.72	342.61	3660.88	3547.11	17.09	OSF1.50	19706.15	9600.00					MinPts	

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

2258.24	32.81	2256.96	2225.44	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	Pass
2258.24	32.81	2256.94	2225.44	126976.40	MAS = 10.00 (m)	26.00	26.00					WRP	
2258.24	32.81	2246.65	2225.44	218.86	MAS = 10.00 (m)	1700.00	1700.00					MinPts	
2258.26	32.81	2246.61	2225.45	217.84	MAS = 10.00 (m)	1710.00	1710.00					MINPT-O-EOU	
2410.86	32.81	2393.35	2378.06	148.48	MAS = 10.00 (m)	3050.00	3035.33					MinPt-O-SF	
3338.52	75.59	3287.70	3262.93	67.37	OSF1.50	8600.00	8506.05					MinPt-O-SF	
3372.72	76.06	3321.58	3296.65	67.63	OSF1.50	8900.00	8803.94					MinPt-O-SF	
3378.33	77.41	3326.26	3300.89	66.52	OSF1.50	9260.00	9163.78					MINPT-O-EOU	
3378.42	77.54	3326.30	3300.88	66.43	OSF1.50	9280.00	9183.66					MinPt-O-ADP	
3392.38	78.77	3339.44	3313.61	65.64	OSF1.50	9680.00	9515.34					MinPt-O-SF	
3394.96	78.83	3341.98	3316.13	65.63	OSF1.50	9710.00	9531.61					MinPt-O-SF	
4716.51	335.81	4492.21	4380.70	21.14	OSF1.50	19706.15	9600.00					MinPts	

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

2278.22	32.81	2276.94	2245.42	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	Pass
2278.22	32.81	2276.92	2245.42	128100.46	MAS = 10.00 (m)	26.00	26.00					WRP	
2278.22	32.81	2266.63	2245.42	220.79	MAS = 10.00 (m)	1700.00	1700.00					MinPts	

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		
2278.24	32.81	2266.59	2245.43	219.77		MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
3396.46	78.20	3343.90	3318.26	66.24		OSF1.50	8600.00	8506.05				MinPt-O-SF	
3436.29	79.56	3382.82	3356.73	65.83		OSF1.50	9150.00	9053.83				MinPts	
3429.99	78.58	3377.17	3351.41	66.54		OSF1.50	9218.71	9122.54				MinPt-O-SF	
3395.89	76.70	3344.28	3319.12	67.46		OSF1.50	9920.00	9597.52				MinPts	
3397.61	325.85	3179.95	3071.76	15.70		OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #52H Rev1 RM 17Feb20 (Def Plan)													
2298.19	32.81	2296.91	2265.39	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	Pass
2298.19	32.81	2296.89	2265.39	130859.73		MAS = 10.00 (m)	26.00	26.00				WRP	
2298.19	32.81	2286.60	2265.39	222.74		MAS = 10.00 (m)	1700.00	1700.00				MinPts	
2298.21	32.81	2286.56	2265.40	221.70		MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
2561.17	32.81	2540.55	2528.36	132.41		MAS = 10.00 (m)	3590.00	3567.62				MinPt-O-SF	
3400.09	75.89	3349.06	3324.19	68.33		OSF1.50	8600.00	8506.05				MinPt-O-SF	
3439.84	77.51	3387.73	3362.33	67.67		OSF1.50	9210.00	9113.83				MinPts	
3415.89	74.25	3366.00	3341.69	70.25		OSF1.50	9830.00	9579.99				MinPts	
3415.89	74.13	3366.03	3341.75	70.31		OSF1.50	9870.00	9589.83				MinPt-CiCt	
3417.61	326.47	3199.53	3091.14	15.76		OSF1.50	19706.15	9600.00				MinPts	
Jubilee Energy Gulf Federal #1 (Offset) Plugged Oil Inc Only Off: 5020ft (Def Survey)													
2703.98	32.81	2702.69	2671.17	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	Pass
2703.76	32.81	2702.45	2670.95	109549.00		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
2703.73	32.81	2702.42	2670.92	122861.53		MAS = 10.00 (m)	26.00	26.00				WRP	
2703.69	32.81	2702.37	2670.89	77858.36		MAS = 10.00 (m)	40.00	40.00				MinPts	
2694.50	129.08	2608.02	2565.42	31.61		OSF1.50	2590.00	2581.90				MinPt-CiCt	
2679.31	213.74	2536.39	2465.57	18.91		OSF1.50	4190.00	4159.05				MinPt-CiCt	
2688.53	240.48	2527.78	2448.04	16.85		OSF1.50	4780.00	4740.62				MINPT-O-EQU	
2695.26	261.74	2520.34	2433.52	15.52		OSF1.50	5100.00	5056.05				MINPT-O-EQU	
2695.38	261.87	2520.37	2433.51	15.51		OSF1.50	5110.00	5065.90				MinPts	
4590.50	72.95	4541.43	4517.54	96.05		OSF1.50	12220.00	9600.00				MinPt-CiCt	
4590.82	73.83	4541.17	4516.99	94.90		OSF1.50	12270.00	9600.00				MINPT-O-EQU	
4591.47	74.60	4541.30	4516.86	93.91		OSF1.50	12310.00	9600.00				MinPt-O-ADP	
6104.89	207.33	5966.24	5897.56	44.43		OSF1.50	16240.00	9600.00				MinPt-O-SF	
8785.40	253.43	8616.02	8531.97	52.26		OSF1.50	19706.15	9600.00				TD	
Final Surveys - Cimarex Dos Equis 13 Federal Com #9H MWD Off-15788ft (Surcon Corrected) (Def Survey)													
5774.48	32.81	5773.17	5741.65	N/A		MAS = 10.00 (m)	0.00	0.00				MinPts	Pass
5774.46	32.81	5773.13	5741.65	121122.39		MAS = 10.00 (m)	26.00	26.00				WRP	
5775.15	32.81	5770.37	5742.34	1651.01		MAS = 10.00 (m)	790.00	790.00				MinPts	
5774.64	32.81	5768.27	5741.83	1136.18		MAS = 10.00 (m)	1150.00	1150.00				MINPT-O-EQU	
5770.58	32.81	5761.87	5737.77	761.21		MAS = 10.00 (m)	1750.00	1750.00				MinPts	
5770.60	32.81	5761.84	5737.79	756.60		MAS = 10.00 (m)	1770.00	1769.99				MINPT-O-EQU	
6041.84	32.81	6021.48	6009.03	312.53		MAS = 10.00 (m)	5090.00	5046.19				MinPts	
6028.22	37.88	6002.63	5990.34	245.30		OSF1.50	6160.00	6100.91				MinPt-CiCt	
6028.73	39.58	6002.00	5989.15	234.47		OSF1.50	6390.00	6327.62				MINPT-O-EQU	
6030.30	41.37	6002.38	5988.93	224.16		OSF1.50	6620.00	6554.33				MinPt-O-ADP	
6074.81	56.99	6036.48	6017.82	162.77		OSF1.50	8600.00	8506.05				MinPt-O-SF	
2970.62	128.94	2884.32	2841.68	34.82		OSF1.50	14770.00	9600.00				MinPt-CiCt	
2970.67	129.15	2884.23	2841.53	34.77		OSF1.50	14790.00	9600.00				MINPT-O-EQU	
2970.75	129.25	2884.25	2841.50	34.74		OSF1.50	14800.00	9600.00				MinPt-O-ADP	
2995.92	132.11	2907.51	2863.81	34.27		OSF1.50	15160.00	9600.00				MinPt-O-SF	
3276.07	190.95	3148.43	3085.12	25.86		OSF1.50	16850.00	9600.00				MinPt-CiCt	
3276.99	193.77	3147.47	3083.22	25.49		OSF1.50	16980.00	9600.00				MINPT-O-EQU	
3278.02	195.04	3147.65	3082.98	25.33		OSF1.50	17040.00	9600.00				MinPt-O-ADP	
3290.81	234.95	3133.84	3055.86	21.09		OSF1.50	18470.00	9600.00				MinPt-CiCt	
3301.66	263.22	3125.84	3038.44	18.88		OSF1.50	19510.00	9600.00				MINPT-O-EQU	
3305.79	268.19	3126.65	3037.59	18.55		OSF1.50	19706.15	9600.00				MinPts	
Cimarex Dos Equis 12 Federal Com #4H Gyro Off to 11189ft MD (Def Survey)													
3108.76	32.81	3106.78	3075.96	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	Pass
3108.76	32.81	3106.76	3075.95	134462.92		MAS = 10.00 (m)	26.00	26.00				WRP	
3108.72	32.81	3105.92	3075.91	3780.00		MAS = 10.00 (m)	200.00	200.00				MinPts	
3110.91	32.81	3104.04	3078.10	636.35		MAS = 10.00 (m)	1030.00	1030.00				MINPT-O-EQU	
3111.38	32.81	3104.05	3078.57	581.51		MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EQU	
3111.15	32.81	3101.78	3078.34	420.57		MAS = 10.00 (m)	1700.00	1700.00				MinPts	
3111.17	32.81	3101.77	3078.36	419.22		MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
4223.41	54.88	4186.16	4168.53	119.70		OSF1.50	8600.00	8506.05				MinPt-O-SF	
4267.66	53.18	4231.55	4214.49	124.99		OSF1.50	9218.71	9122.54				MinPt-O-SF	
4267.76	52.74	4231.94	4215.02	126.04		OSF1.50	9500.00	9387.84				MinPt-O-ADP	
4267.75	52.73	4231.93	4215.02	126.07		OSF1.50	9510.00	9396.09				MINPT-O-EQU	
4267.75	52.72	4231.94	4215.02	126.10		OSF1.50	9520.00	9404.23				MinPt-CiCt	
4297.26	52.58	4261.55	4244.69	127.34		OSF1.50	10120.00	9600.00				MinPt-O-SF	
4311.01	52.71	4275.22	4258.31	127.42		OSF1.50	10230.00	9600.00				MinPt-O-SF	
4327.52	52.88	4291.60	4274.64	127.47		OSF1.50	10340.00	9600.00				MinPt-O-SF	
4344.88	53.07	4308.84	4291.81	127.50		OSF1.50	10440.00	9600.00				MinPt-O-SF	
4366.55	53.32	4330.34	4313.22	127.51		OSF1.50	10550.00	9600.00				MinPt-O-SF	
4390.86	53.61	4354.46	4337.25	127.50		OSF1.50	10660.00	9600.00				MinPt-O-SF	
4415.22	53.91	4378.63	4361.32	127.49		OSF1.50	10760.00	9600.00				MinPt-O-SF	
4441.70	54.23	4404.89	4387.48	127.49		OSF1.50	10860.00	9600.00				MinPt-O-SF	
4470.26	54.57	4433.22	4415.69	127.44		OSF1.50	10960.00	9600.00				MinPt-O-SF	
4500.86	54.94	4463.58	4445.92	127.42		OSF1.50	11060.00	9600.00				MinPt-O-SF	
4530.11	55.29	4492.59	4474.82	127.41		OSF1.50	11150.00	9600.00				MinPt-O-SF	
4560.95	55.65	4523.19	4505.30	127.41		OSF1.50	11240.00	9600.00				MinPt-O-SF	
4593.34	56.02	4555.33	4537.32	127.43		OSF1.50	11330.00	9600.00				MinPt-O-SF	
4627.26	56.41	4588.99	4570.85	127.47		OSF1.50	11420.00	9600.00				MinPt-O-SF	
10935.55	77.68	10883.10	10857.86	216.64		OSF1.50	19706.15	9600.00				TD	
Cimarex Dos Equis 12 Fed 4H Gyro-MWD 10305ft to 15240ft MD (Def Survey)													
3108.76	32.81	3106.78	3075.96	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	Pass
3108.76	32.81	3106.76	3075.95	134462.92		MAS = 10.00 (m)	26.00	26.00				WRP	
3108.72	32.81	3105.92	3075.91	3780.00		MAS = 10.00 (m)	200.00	200.00				MinPts	
3110.91	32.81	3104.04	3078.10	636.35		MAS = 10.00 (m)	1030.00	1030.00				MINPT-O-EQU	

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		
3111.36	32.81	3104.05	3078.57	581.51		MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EQU	
3111.15	32.81	3101.76	3078.34	420.57		MAS = 10.00 (m)	1700.00	1700.00				MinPts	
3111.17	32.81	3101.77	3078.36	419.22		MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
4223.41	54.88	4186.16	4168.53	119.70		OSF1.50	8600.00	8506.05				MinPt-O-SF	
4267.66	53.18	4231.55	4214.49	124.98		OSF1.50	9218.71	9122.54				MinPt-O-SF	
4267.76	52.74	4231.94	4215.02	126.04		OSF1.50	9500.00	9387.84				MinPt-O-ADP	
4267.75	52.75	4231.93	4215.02	126.07		OSF1.50	9510.00	9396.09				MINPT-O-EQU	
4267.75	52.72	4231.94	4215.02	126.10		OSF1.50	9520.00	9404.23				MinPt-CiCt	
4297.26	52.58	4261.55	4244.69	127.34		OSF1.50	10120.00	9600.00				MinPt-O-SF	
4311.01	52.71	4275.22	4258.31	127.42		OSF1.50	10230.00	9600.00				MinPt-O-SF	
4327.52	52.88	4291.60	4274.64	127.47		OSF1.50	10340.00	9600.00				MinPt-O-SF	
4344.88	53.07	4308.84	4291.81	127.55		OSF1.50	10440.00	9600.00				MinPt-O-SF	
4366.55	53.32	4330.34	4313.22	127.59		OSF1.50	10550.00	9600.00				MinPt-O-SF	
4390.86	53.61	4354.46	4337.25	127.50		OSF1.50	10660.00	9600.00				MinPt-O-SF	
4415.22	53.91	4378.63	4361.32	127.49		OSF1.50	10760.00	9600.00				MinPt-O-SF	
4441.70	54.23	4404.89	4387.48	127.48		OSF1.50	10860.00	9600.00				MinPt-O-SF	
4468.45	92.93	4405.84	4375.52	73.66		OSF1.50	10980.00	9600.00				MINPT-O-EQU	
4469.14	93.94	4405.86	4375.21	72.87		OSF1.50	11030.00	9600.00				MINPT-O-EQU	
4471.09	96.29	4406.24	4374.81	71.08		OSF1.50	11120.00	9600.00				MinPt-O-ADP	
4471.79	107.99	4399.13	4363.80	63.24		OSF1.50	11270.00	9600.00				MinPt-CiCt	
4472.59	115.41	4394.96	4357.17	59.12		OSF1.50	11470.00	9600.00				MINPT-O-EQU	
4472.83	115.71	4395.03	4357.12	58.97		OSF1.50	11490.00	9600.00				MinPt-O-ADP	
4441.00	195.72	4309.86	4245.28	34.37		OSF1.50	13030.00	9600.00				MinPt-CiCt	
4429.17	229.86	4275.27	4199.31	29.14		OSF1.50	13680.00	9600.00				MinPt-CiCt	
4432.11	239.81	4271.56	4192.27	27.94		OSF1.50	13960.00	9600.00				MINPT-O-EQU	
4438.17	247.16	4272.73	4191.00	27.14		OSF1.50	14160.00	9600.00				MinPt-O-ADP	
4448.92	310.01	4241.56	4138.87	21.65		OSF1.50	14400.00	9600.00				MinPts	
4450.32	310.16	4242.89	4140.17	21.65		OSF1.50	14430.00	9600.00				MinPt-O-SF	
7071.27	227.95	6918.65	6843.33	46.93		OSF1.50	19706.15	9600.00				TD	

Cimarex Dos Equis 12-13
Federal Com #9H Rev0 RM
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Pass

3445.76	32.81	3444.47	3412.95	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3445.76	32.81	3444.45	3412.95	212367.99		MAS = 10.00 (m)	26.00	26.00				WRP	
3445.76	32.81	3434.16	3412.95	334.08		MAS = 10.00 (m)	1700.00	1700.00				MinPts	
3445.77	32.81	3434.13	3412.97	332.52		MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
3451.09	32.81	3437.87	3418.28	289.12		MAS = 10.00 (m)	2130.00	2128.39				MinPts	
3667.01	69.51	3620.25	3597.50	80.60		OSF1.50	8593.86	8500.00				MinPt-O-SF	
3705.80	69.05	3659.34	3636.75	82.00		OSF1.50	9570.00	9442.98				MinPts	
3705.81	69.05	3659.34	3636.76	82.00		OSF1.50	9580.00	9450.32				MinPt-O-SF	
3706.23	69.07	3659.76	3637.16	81.99		OSF1.50	9650.00	9497.52				MinPt-O-SF	
3707.56	69.08	3661.08	3638.48	82.00		OSF1.50	9720.00	9536.68				MinPt-O-SF	
4598.12	345.82	4367.15	4252.31	20.01		OSF1.50	19706.15	9600.00				MinPts	

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

Pass

3485.64	32.81	3484.36	3452.84	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3485.64	32.81	3484.34	3452.84	224034.18		MAS = 10.00 (m)	26.00	26.00				WRP	
3485.64	32.81	3474.05	3452.84	337.98		MAS = 10.00 (m)	1700.00	1700.00				MinPts	
3485.66	32.81	3474.02	3452.85	336.41		MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
3495.38	32.81	3482.28	3462.57	295.70		MAS = 10.00 (m)	2050.00	2049.13				MinPts	
4115.95	66.23	4071.36	4049.71	95.03		OSF1.50	8600.00	8506.05				MinPt-O-SF	
4155.72	66.94	4110.66	4088.78	94.92		OSF1.50	9380.00	9280.78				MinPt-CiCt	
4155.73	66.98	4110.64	4088.74	94.85		OSF1.50	9410.00	9308.75				MINPT-O-EQU	
4155.76	67.02	4110.65	4088.74	94.81		OSF1.50	9430.00	9327.00				MinPt-O-ADP	
4163.62	67.47	4118.21	4096.15	94.34		OSF1.50	9770.00	9559.25				MinPt-O-SF	
4166.75	67.51	4121.32	4099.24	94.35		OSF1.50	9820.00	9577.03				MinPt-O-SF	
5303.64	340.71	5076.07	4962.93	23.43		OSF1.50	19706.15	9600.00				MinPts	

Continental Wimberly #8
(Offset) Plugged Oil Inc Only Off:
5070ft (Def Survey)

Pass

3492.59	32.81	3491.30	3459.78	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3492.46	32.81	3491.16	3459.66	282713.98		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3492.44	32.81	3491.15	3459.63	422953.99		MAS = 10.00 (m)	26.00	26.00				WRP	
3491.75	32.81	3483.71	3458.94	516.86		MAS = 10.00 (m)	340.00	340.00				MinPts	
3489.57	68.18	3443.68	3421.39	78.22		OSF1.50	1400.00	1400.00				MinPt-CiCt	
3499.13	98.45	3433.06	3400.68	54.00		OSF1.50	1960.00	1959.64				MINPT-O-EQU	
3500.74	100.23	3433.49	3400.51	53.05		OSF1.50	2000.00	1999.45				MinPt-O-ADP	
3829.67	259.71	3656.11	3569.97	22.22		OSF1.50	5230.00	5184.19				MinPt-O-SF	
5379.25	153.03	5276.80	5226.22	53.16		OSF1.50	12550.00	9600.00				MINPT-O-EQU	
5379.29	153.16	5276.76	5226.14	53.12		OSF1.50	12570.00	9600.00				MINPT-O-EQU	
5379.34	153.22	5276.77	5226.12	53.10		OSF1.50	12580.00	9600.00				MinPt-O-ADP	
6354.33	209.35	6214.33	6144.98	45.80		OSF1.50	15930.00	9600.00				MinPt-O-SF	
8954.46	253.06	8785.33	8701.40	53.34		OSF1.50	19706.15	9600.00				TD	

Cimarex Dos Equis 12-13
Federal Com #11H Rev0 RM
26Dec19 (Non-Def Plan)

Pass

3505.71	32.81	3504.42	3472.90	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3505.71	32.81	3504.40	3472.90	231951.20		MAS = 10.00 (m)	26.00	26.00				WRP	
3505.71	32.81	3494.11	3472.90	339.95		MAS = 10.00 (m)	1700.00	1700.00				MinPts	
3505.72	32.81	3494.08	3472.91	338.36		MAS = 10.00 (m)	1710.00	1710.00				MINPT-O-EQU	
4625.84	78.22	4573.27	4547.63	90.17		OSF1.50	8600.00	8506.05				MinPt-O-SF	
4665.62	80.75	4611.36	4584.87	88.05		OSF1.50	9390.00	9290.18				MinPt-CiCt	
4665.67	80.91	4611.29	4584.74	87.85		OSF1.50	9440.00	9335.99				MINPT-O-EQU	
4665.72	80.99	4611.29	4584.72	87.78		OSF1.50	9460.00	9353.69				MinPt-O-ADP	
4678.06	81.98	4622.97	4596.07	86.93		OSF1.50	9860.00	9587.68				MinPt-O-SF	
5350.51	333.71	5127.61	5016.81	24.14		OSF1.50	19706.15	9600.00				MinPts	

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

Pass

3536.33	32.81	3535.05	3503.52	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3536.17	32.81	3534.86	3503.36	183562.68		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3536.14	32.81	3534.83	3503.33	203955.31		MAS = 10.00 (m)	26.00	26.00				WRP	
3526.22	40.04	3499.10	3486.18	136.42		OSF1.50	680.00	680.00				MinPt-CiCt	
3528.07	90.68	3467.19	3437.40	59.18		OSF1.50	1730.00	1730.00				MinPt-CiCt	
3529.82	96.95	3464.76	3432.88	55.33		OSF1.50	1840.00	1839.94				MINPT-O-EQU	
3530.97	98.26	3465.04	3432.71	54.60		OSF1.50	1870.00	1869.90				MinPt-O-ADP	

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		
4031.58	265.07	3854.44	3766.51	22.92		OSF1.50	5230.00	5184.19				MinPt-O-SF	
6204.50	183.63	6081.66	6020.87	51.03		OSF1.50	11220.00	9600.00				MinPt-CtCt	
6204.50	183.66	6081.64	6020.86	51.02		OSF1.50	11230.00	9600.00				MINPT-O-EQU	
6204.52	183.67	6081.66	6020.85	51.02		OSF1.50	11240.00	9600.00				MinPt-O-ADP	
6872.28	211.79	6730.66	6660.50	48.98		OSF1.50	14180.00	9600.00				MinPt-O-SF	
10508.42	263.20	10332.53	10245.22	60.17		OSF1.50	19706.15	9600.00				TD	
Westates Petroleum Wolley #1 (Offset) Plugged Oil Blind Off- 5063ft (Def Survey)													
												Pass	
9628.45	32.81	9627.16	9595.64	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
9628.35	32.81	9627.06	9595.55	963116.53		MAS = 10.00 (m)	26.00	26.00				WRP	
9621.02	1272.15	8772.49	8348.87	11.35		OSF1.50	4170.00	4139.33				MinPt-CtCt	
9622.47	1577.36	8570.47	8045.11	9.18		OSF1.50	5160.00	5115.19				MinPts	
6315.35	1113.25	5572.76	5202.10	8.52		OSF1.50	14710.00	9600.00				MinPt-O-SF	
4672.43	472.81	4356.79	4199.61	14.86		OSF1.50	17890.00	9600.00				MinPt-O-ADP	
4554.88	330.61	4334.06	4224.28	20.74		OSF1.50	18450.00	9600.00				MINPT-O-EQU	
4502.57	243.92	4339.53	4258.65	27.83		OSF1.50	19140.00	9600.00				MinPt-CtCt	
4538.22	320.69	4324.06	4217.53	21.31		OSF1.50	19706.15	9600.00				MinPts	
Continental Wimberly #7 (Offset) Plugged Oil Inc Only Off- 5100ft (Def Survey)													
												Pass	
4674.32	32.81	4673.03	4641.51	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4674.28	32.81	4672.87	4641.47	37947.28		MAS = 10.00 (m)	26.00	26.00				WRP	
4674.06	32.81	4667.28	4641.25	852.06		MAS = 10.00 (m)	290.00	290.00				MinPts	
4673.86	42.89	4644.84	4630.97	168.47		OSF1.50	930.00	930.00				MinPt-CtCt	
4672.70	82.11	4617.53	4590.59	86.70		OSF1.50	1680.00	1680.00				MinPt-CtCt	
4673.95	86.43	4615.90	4587.52	82.32		OSF1.50	1800.00	1799.98				MINPT-O-EQU	
4675.73	88.56	4616.27	4587.18	80.35		OSF1.50	1860.00	1859.92				MinPt-O-ADP	
4683.14	96.22	4618.57	4586.92	73.97		OSF1.50	2010.00	2009.40				MinPt-O-ADP	
4699.92	115.38	4622.61	4584.59	61.80		OSF1.50	2260.00	2256.62				MINPT-O-EQU	
4700.50	116.09	4622.68	4584.41	61.40		OSF1.50	2270.00	2266.47				MinPt-O-ADP	
4773.59	166.30	4662.30	4607.30	43.38		OSF1.50	3230.00	3212.76				MINPT-O-EQU	
4774.18	166.93	4662.47	4607.25	43.22		OSF1.50	3240.00	3222.62				MinPt-O-ADP	
4866.72	225.23	4716.14	4641.49	32.59		OSF1.50	4360.00	4326.62				MinPts	
4942.22	261.18	4767.67	4681.04	28.52		OSF1.50	5240.00	5194.05				MinPt-O-SF	
6048.37	179.78	5928.09	5868.59	50.82		OSF1.50	11080.00	9600.00				MinPt-O-SF	
6034.61	179.38	5914.60	5855.24	50.82		OSF1.50	11110.00	9600.00				MinPt-O-SF	
5368.49	166.93	5256.77	5201.56	48.60		OSF1.50	13870.00	9600.00				MinPt-CtCt	
5368.59	167.21	5256.68	5201.39	48.52		OSF1.50	13900.00	9600.00				MINPT-O-EQU	
5368.76	167.39	5256.73	5201.36	48.47		OSF1.50	13920.00	9600.00				MinPt-O-ADP	
6161.56	217.39	6016.20	5944.17	42.78		OSF1.50	16890.00	9600.00				MinPt-O-SF	
7932.67	253.20	7763.44	7679.47	47.23		OSF1.50	19706.15	9600.00				TD	
Standind Wimberly A Unit B #1 Inc Only (Def Survey)													
												Pass	
5660.08	32.81	5658.11	5627.28	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
5660.01	32.81	5658.02	5627.20	818797.24		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
5660.00	32.81	5658.02	5627.19	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
5644.51	132.40	5555.59	5512.11	64.90		OSF1.50	2010.00	2009.40				MinPt-CtCt	
5680.72	553.97	5310.75	5126.75	15.43		OSF1.50	5010.00	4967.33				MinPts	
5680.94	554.02	5310.93	5126.92	15.43		OSF1.50	5020.00	4977.19				MinPt-O-SF	
6334.56	386.41	6076.30	5948.15	24.71		OSF1.50	11010.00	9600.00				MinPt-O-SF	
4840.87	240.01	4680.20	4600.85	30.49		OSF1.50	15100.00	9600.00				MinPt-CtCt	
4841.17	240.80	4679.97	4600.37	30.39		OSF1.50	15150.00	9600.00				MINPT-O-EQU	
4841.60	241.33	4680.06	4600.27	30.33		OSF1.50	15180.00	9600.00				MinPt-O-ADP	
6101.65	412.55	5825.96	5689.10	22.28		OSF1.50	18810.00	9600.00				MinPt-O-SF	
6685.09	445.06	6387.73	6240.03	22.62		OSF1.50	19706.15	9600.00				TD	



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



Report Date:	February 18, 2020 - 11:17 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex Energy	Vertical Section Azimuth:	179.660 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Dos Equis 12-13 Federal Com #88H / New Slot	TVD Reference Datum:	RKB
Well:	Dos Equis 12-13 Federal Com #88H	TVD Reference Elevation:	3626.200 ft above MSL
Borehole:	Dos Equis 12-13 Federal Com #88H	Seabed / Ground Elevation:	3600.200 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.613 °
Survey Name:	Cimarex Dos Equis 12-13 Federal Com #88H Rev1 RM 14Feb20	Total Gravity Field Strength:	998.4391mgn (9.80665 Based)
Survey Date:	December 27, 2019	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	109.392 ° / 11376.162 ft / 6.407 / 1.185	Total Magnetic Field Strength:	47842.046 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.879 °
Location Lat / Long:	N 32° 14' 19.08601", W 103° 37' 28.57986"	Declination Date:	February 18, 2020
Location Grid N/E Y/X:	N 451271.950 ftUS, E 760466.170 ftUS	Magnetic Declination Model:	HDGM 2019
CRS Grid Convergence Angle:	0.3781 °	North Reference:	Grid North
Grid Scale Factor:	0.99996409	Grid Convergence Used:	0.3781 °
Version / Patch:	2.10.787.0	Total Corr Mag North->Grid North:	6.2352 °
		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, 1490' FEL]	0.00	0.00	164.72	0.00	0.00	0.00	0.00	N/A	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	100.00	0.00	87.00	100.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	200.00	0.00	87.00	200.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	300.00	0.00	87.00	300.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	400.00	0.00	87.00	400.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	500.00	0.00	87.00	500.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	600.00	0.00	87.00	600.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	700.00	0.00	87.00	700.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	800.00	0.00	87.00	800.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	900.00	0.00	87.00	900.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	1000.00	0.00	87.00	1000.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	1100.00	0.00	87.00	1100.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
Rustler	1185.00	0.00	87.00	1185.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	1200.00	0.00	87.00	1200.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	1300.00	0.00	87.00	1300.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	1400.00	0.00	87.00	1400.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
Salado (Top Salt)	1500.00	0.00	87.00	1500.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	1600.00	0.00	87.00	1600.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
Nudge 2"/100' DLS	1700.00	0.00	87.00	1700.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
	1800.00	2.00	87.00	1799.98	-0.08	0.09	1.74	2.00	451272.04	760467.91	N 32 14 19.09	W 103 37 28.56
	1900.00	4.00	87.00	1899.84	-0.32	0.37	6.97	2.00	451272.32	760473.14	N 32 14 19.09	W 103 37 28.50
	2000.00	6.00	87.00	1999.45	-0.73	0.82	15.67	2.00	451272.77	760481.84	N 32 14 19.09	W 103 37 28.40
	2100.00	8.00	87.00	2098.70	-1.29	1.46	27.84	2.00	451273.41	760494.01	N 32 14 19.10	W 103 37 28.26
Hold Nudge	2184.80	9.70	87.00	2182.48	-1.90	2.14	40.87	2.00	451274.09	760507.03	N 32 14 19.10	W 103 37 28.10
	2200.00	9.70	87.00	2197.47	-2.02	2.28	43.42	0.00	451274.23	760509.59	N 32 14 19.11	W 103 37 28.07
	2300.00	9.70	87.00	2296.04	-2.80	3.16	60.24	0.00	451275.11	760526.41	N 32 14 19.11	W 103 37 27.88
	2400.00	9.70	87.00	2394.62	-3.58	4.04	77.06	0.00	451275.99	760543.23	N 32 14 19.12	W 103 37 27.68
	2500.00	9.70	87.00	2493.19	-4.36	4.92	93.88	0.00	451276.87	760560.05	N 32 14 19.13	W 103 37 27.49
	2600.00	9.70	87.00	2591.76	-5.14	5.80	110.70	0.00	451277.75	760576.86	N 32 14 19.14	W 103 37 27.29
	2700.00	9.70	87.00	2690.33	-5.93	6.68	127.52	0.00	451278.63	760593.68	N 32 14 19.14	W 103 37 27.09
	2800.00	9.70	87.00	2788.90	-6.71	7.56	144.34	0.00	451279.51	760610.50	N 32 14 19.15	W 103 37 26.90
	2900.00	9.70	87.00	2887.47	-7.49	8.45	161.15	0.00	451280.40	760627.32	N 32 14 19.16	W 103 37 26.70
	3000.00	9.70	87.00	2986.04	-8.27	9.33	177.97	0.00	451281.28	760644.14	N 32 14 19.17	W 103 37 26.51
	3100.00	9.70	87.00	3084.62	-9.05	10.21	194.79	0.00	451282.16	760660.96	N 32 14 19.17	W 103 37 26.31
	3200.00	9.70	87.00	3183.19	-9.83	11.09	211.61	0.00	451283.04	760677.77	N 32 14 19.18	W 103 37 26.12
	3300.00	9.70	87.00	3281.76	-10.62	11.97	228.43	0.00	451283.92	760694.59	N 32 14 19.19	W 103 37 25.92
	3400.00	9.70	87.00	3380.33	-11.40	12.85	245.25	0.00	451284.80	760711.41	N 32 14 19.20	W 103 37 25.72
	3500.00	9.70	87.00	3478.90	-12.18	13.73	262.07	0.00	451285.68	760728.23	N 32 14 19.20	W 103 37 25.53
	3600.00	9.70	87.00	3577.47	-12.96	14.62	278.89	0.00	451286.57	760745.05	N 32 14 19.21	W 103 37 25.33
	3700.00	9.70	87.00	3676.05	-13.74	15.50	295.71	0.00	451287.45	760761.86	N 32 14 19.22	W 103 37 25.14
	3800.00	9.70	87.00	3774.62	-14.52	16.38	312.52	0.00	451288.33	760778.68	N 32 14 19.23	W 103 37 24.94
	3900.00	9.70	87.00	3873.19	-15.31	17.26	329.34	0.00	451289.21	760795.50	N 32 14 19.24	W 103 37 24.74
	4000.00	9.70	87.00	3971.76	-16.09	18.14	346.16	0.00	451290.09	760812.32	N 32 14 19.24	W 103 37 24.55
	4100.00	9.70	87.00	4070.33	-16.87	19.02	362.98	0.00	451290.97	760829.14	N 32 14 19.25	W 103 37 24.35
	4200.00	9.70	87.00	4168.90	-17.65	19.90	379.80	0.00	451291.85	760845.95	N 32 14 19.26	W 103 37 24.16
	4300.00	9.70	87.00	4267.47	-18.43	20.79	396.62	0.00	451292.74	760862.77	N 32 14 19.27	W 103 37 23.96
	4400.00	9.70	87.00	4366.05	-19.21	21.67	413.44	0.00	451293.62	760879.59	N 32 14 19.27	W 103 37 23.76
	4500.00	9.70	87.00	4464.62	-20.00	22.55	430.26	0.00	451294.50	760896.41	N 32 14 19.28	W 103 37 23.57
	4600.00	9.70	87.00	4563.19	-20.78	23.43	447.07	0.00	451295.38	760913.23	N 32 14 19.29	W 103 37 23.37
Base fo Salt	4688.07	9.70	87.00	4650.00	-21.47	24.21	461.89	0.00	451296.16	760928.04	N 32 14 19.30	W 103 37 23.20
	4700.00	9.70	87.00	4661.76	-21.56	24.31	463.89	0.00	451296.26	760930.05	N 32 14 19.30	W 103 37 23.18
	4800.00	9.70	87.00	4760.33	-22.34	25.19	480.71	0.00	451297.14	760946.86	N 32 14 19.30	W 103 37 22.98
	4900.00	9.70	87.00	4858.90	-23.12	26.07	497.53	0.00	451298.02	760963.68	N 32 14 19.31	W 103 37 22.79
Bell Canyon	4989.37	9.70	87.00	4947.00	-23.82	26.86	512.56	0.00	451298.81	760978.71	N 32 14 19.32	W 103 37 22.61
	5000.00	9.70	87.00	4957.48	-23.90	26.96	514.35	0.00	451298.90	760980.50	N 32 14 19.32	W 103 37 22.59
	5100.00	9.70	87.00	5056.05	-24.68	27.84	531.17	0.00	451299.79	760997.32	N 32 14 19.33	W 103 37 22.39
	5200.00	9.70	87.00	5154.62	-25.47	28.72	547.99	0.00	451300.67	761014.14	N 32 14 19.33	W 103 37 22.20
	5300.00	9.70	87.00	5253.19	-26.25	29.60	564.81	0.00	451301.55	761030.95	N 32 14 19.34	W 103 37 22.00
	5400.00	9.70	87.00	5351.76	-27.03	30.48	581.62	0.00	451302.43	761047.77	N 32 14 19.35	W 103 37 21.81
	5500.00	9.70	87.00	5450.33	-27.81	31.36	598.44	0.00	451303.31	761064.59	N 32 14 19.36	W 103 37 21.61
	5600.00	9.70	87.00	5548.91	-28.59	32.24	615.26	0.00	451304.19	761081.41	N 32 14 19.36	W 103 37 21.41
	5700.00	9.70	87.00	5647.48	-29.37	33.13	632.08	0.00	451305.07	761098.23	N 32 14 19.37	W 103 37 21.22
	5800.00	9.70	87.00	5746.05	-30.16	34.01	648.90	0.00	451305.96	761115.05	N 32 14 19.38	W 103 37 21.02
	5900.00	9.70	87.00	5844.62	-30.94	34.89	665.72	0.00	451306.84	761131.86	N 32 14 19.39	W 103 37 20.83
Cherry Canyon	5929.81	9.70	87.00	5874.00	-31.17	35.15	670.73	0.00	451307.10	761136.88	N 32 14 19.39	W 103 37 20.77
	6000.00	9.70	87.00	5943.19	-31.72	35.77	682.54	0.00	451307.72	761148.68	N 32 14 19.40	W 103 37 20.63
	6100.00	9.70	87.00	6041.76	-32.50	36.65	699.36	0.00	451308.60	761165.50	N 32 14 19.40	W 103 37 20.43
	6200.00	9.70	87.00	6140.33	-33.28	37.53	716.18	0.00	451309.48	761182.32	N 32 14 19.41	W 103 37 20.24
	6300.00	9.70	87.00	6238.91	-34.06	38.41	732.99	0.00	451310.36	761199.14	N 32 14 19.42	W 103 37 20.04
	6400.00	9.70	87.00	6337.48	-34.85	39.30	749.81	0.00	451311.24	761215.95	N 32 14 19.43	W 103 37 19.85
	6500.00	9.70	87.00	6436.05	-35.63	40.18	766.63	0.00	451312.13	761232.77	N 32 14 19.43	W 103 37 19.65
	6600.00	9.70	87.00	6534.62	-36.41	41.06	783.45	0.00	451313.01	761249.59	N 32 14 19.44	W 103 37 19.46
	6700.00	9.70	87.00	6633.19	-37.19	41.94	800.27	0.00	451313.89	761266.41	N 32 14 19.45	W 103 37 19.26
	6800.00	9.70	87.00	6731.76	-37.97	42.82	817.09	0.00	451314.77	761283.23	N 32 14 19.46	W 103 37 19.06
	6900.00	9.70	87.00	6830.34	-38.75	43.70	833.91	0.00	451315.65	761300.05	N 32 14 19.46	W 103 37 18.87

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Brushy Canyon	7000.00	9.70	87.00	6928.91	-39.54	44.58	850.73	0.00	451316.53	761316.86	N 32 14 19.47	W 103 37 18.67
	7100.00	9.70	87.00	7027.48	-40.32	45.47	867.54	0.00	451317.41	761333.68	N 32 14 19.48	W 103 37 18.48
	7200.00	9.70	87.00	7126.05	-41.10	46.35	884.36	0.00	451318.30	761350.50	N 32 14 19.49	W 103 37 18.28
	7300.00	9.70	87.00	7224.62	-41.88	47.23	901.18	0.00	451319.18	761367.32	N 32 14 19.49	W 103 37 18.08
	7387.63	9.70	87.00	7311.00	-42.57	48.00	915.92	0.00	451319.95	761382.06	N 32 14 19.50	W 103 37 17.91
	7400.00	9.70	87.00	7323.19	-42.66	48.11	918.00	0.00	451320.06	761384.14	N 32 14 19.50	W 103 37 17.89
	7500.00	9.70	87.00	7421.76	-43.44	48.99	934.82	0.00	451320.94	761400.95	N 32 14 19.51	W 103 37 17.69
	7600.00	9.70	87.00	7520.34	-44.23	49.87	951.64	0.00	451321.82	761417.77	N 32 14 19.52	W 103 37 17.50
	7700.00	9.70	87.00	7618.91	-45.01	50.75	968.46	0.00	451322.70	761434.59	N 32 14 19.52	W 103 37 17.30
	7800.00	9.70	87.00	7717.48	-45.79	51.64	985.28	0.00	451323.58	761451.41	N 32 14 19.53	W 103 37 17.11
	7900.00	9.70	87.00	7816.05	-46.57	52.52	1002.10	0.00	451324.47	761468.23	N 32 14 19.54	W 103 37 16.91
	8000.00	9.70	87.00	7914.62	-47.35	53.40	1018.91	0.00	451325.35	761485.05	N 32 14 19.55	W 103 37 16.71
	8100.00	9.70	87.00	8013.19	-48.13	54.28	1035.73	0.00	451326.23	761501.86	N 32 14 19.56	W 103 37 16.52
	8200.00	9.70	87.00	8111.77	-48.91	55.16	1052.55	0.00	451327.11	761518.68	N 32 14 19.56	W 103 37 16.32
	8300.00	9.70	87.00	8210.34	-49.70	56.04	1069.37	0.00	451327.99	761535.50	N 32 14 19.57	W 103 37 16.13
8400.00	9.70	87.00	8308.91	-50.48	56.92	1086.19	0.00	451328.87	761552.32	N 32 14 19.58	W 103 37 15.93	
8500.00	9.70	87.00	8407.48	-51.26	57.81	1103.01	0.00	451329.75	761569.14	N 32 14 19.59	W 103 37 15.73	
Drop to Vertical 2°/100' DLS	8593.86	9.70	87.00	8500.00	-51.99	58.63	1118.79	0.00	451330.58	761584.92	N 32 14 19.59	W 103 37 15.55
Bone Spring	8600.00	9.57	87.00	8506.05	-52.04	58.69	1119.82	2.00	451330.64	761585.95	N 32 14 19.59	W 103 37 15.54
	8700.00	7.57	87.00	8604.93	-52.73	59.47	1134.71	2.00	451331.42	761600.83	N 32 14 19.60	W 103 37 15.36
	8800.00	5.57	87.00	8704.27	-53.26	60.07	1146.14	2.00	451332.01	761612.26	N 32 14 19.61	W 103 37 15.23
	8900.00	3.57	87.00	8803.94	-53.63	60.48	1154.10	2.00	451332.43	761620.22	N 32 14 19.61	W 103 37 15.14
	8941.12	2.75	87.00	8845.00	-53.74	60.60	1156.36	2.00	451332.55	761622.49	N 32 14 19.61	W 103 37 15.11
Hold Vertical	9000.00	1.57	87.00	8903.84	-53.84	60.72	1158.58	2.00	451332.67	761624.71	N 32 14 19.61	W 103 37 15.09
	9078.66	0.00	87.00	8982.48	-53.89	60.78	1159.66	2.00	451332.72	761625.79	N 32 14 19.61	W 103 37 15.07
KOP - Build 12°/100' DLS	9100.00	0.00	87.00	9003.83	-53.89	60.78	1159.66	0.00	451332.72	761625.79	N 32 14 19.61	W 103 37 15.07
	9200.00	0.00	87.00	9103.83	-53.89	60.78	1159.66	0.00	451332.72	761625.79	N 32 14 19.61	W 103 37 15.07
Avalon	9218.71	0.00	87.00	9122.54	-53.89	60.78	1159.66	0.00	451332.72	761625.79	N 32 14 19.61	W 103 37 15.07
	9300.00	9.76	179.66	9203.44	-46.99	53.87	1159.70	12.00	451325.82	761625.83	N 32 14 19.54	W 103 37 15.07
Landing Point	9382.36	19.64	179.66	9283.00	-26.12	33.00	1159.82	12.00	451304.95	761625.95	N 32 14 19.34	W 103 37 15.07
	9400.00	21.76	179.66	9299.50	-19.89	26.77	1159.86	12.00	451298.72	761625.99	N 32 14 19.27	W 103 37 15.07
	9500.00	33.76	179.66	9387.84	26.60	-19.71	1160.14	12.00	451252.24	761626.26	N 32 14 18.81	W 103 37 15.07
	9600.00	45.76	179.66	9464.57	90.43	-83.55	1160.52	12.00	451188.41	761626.64	N 32 14 18.18	W 103 37 15.08
	9700.00	57.76	179.66	9526.36	168.83	-161.94	1160.98	12.00	451110.02	761627.11	N 32 14 17.41	W 103 37 15.08
	9800.00	69.76	179.66	9570.50	258.35	-251.47	1161.51	12.00	451020.49	761627.64	N 32 14 16.52	W 103 37 15.08
	9900.00	81.76	179.66	9595.07	355.10	-348.21	1162.09	12.00	450923.75	761628.21	N 32 14 15.56	W 103 37 15.08
	9968.71	90.00	179.66	9600.00	423.57	-416.68	1162.49	12.00	450855.28	761628.62	N 32 14 14.89	W 103 37 15.08
	10000.00	90.00	179.66	9600.00	454.87	-447.97	1162.68	0.00	450823.99	761628.80	N 32 14 14.58	W 103 37 15.08
	10100.00	90.00	179.66	9600.00	554.87	-547.97	1163.27	0.00	450724.00	761629.40	N 32 14 13.59	W 103 37 15.08
	10200.00	90.00	179.66	9600.00	654.87	-647.97	1163.87	0.00	450624.00	761629.99	N 32 14 12.60	W 103 37 15.08
	10300.00	90.00	179.66	9600.00	754.87	-747.97	1164.46	0.00	450524.01	761630.59	N 32 14 11.61	W 103 37 15.08
	10400.00	90.00	179.66	9600.00	854.87	-847.97	1165.05	0.00	450424.01	761631.18	N 32 14 10.62	W 103 37 15.08
	10500.00	90.00	179.66	9600.00	954.87	-947.97	1165.65	0.00	450324.02	761631.77	N 32 14 9.63	W 103 37 15.08
	10600.00	90.00	179.66	9600.00	1054.87	-1047.96	1166.24	0.00	450224.03	761632.37	N 32 14 8.64	W 103 37 15.08
	10700.00	90.00	179.66	9600.00	1154.87	-1147.96	1166.83	0.00	450124.03	761632.96	N 32 14 7.65	W 103 37 15.08
	10800.00	90.00	179.66	9600.00	1254.87	-1247.96	1167.43	0.00	450024.04	761633.55	N 32 14 6.66	W 103 37 15.08
	10900.00	90.00	179.66	9600.00	1354.87	-1347.96	1168.02	0.00	449924.04	761634.15	N 32 14 5.67	W 103 37 15.09
	11000.00	90.00	179.66	9600.00	1454.87	-1447.96	1168.61	0.00	449824.05	761634.74	N 32 14 4.68	W 103 37 15.09
	11100.00	90.00	179.66	9600.00	1554.87	-1547.95	1169.21	0.00	449724.05	761635.33	N 32 14 3.69	W 103 37 15.09
	11200.00	90.00	179.66	9600.00	1654.87	-1647.95	1169.80	0.00	449624.06	761635.93	N 32 14 2.70	W 103 37 15.09
	11300.00	90.00	179.66	9600.00	1754.87	-1747.95	1170.39	0.00	449524.06	761636.52	N 32 14 1.71	W 103 37 15.09
	11400.00	90.00	179.66	9600.00	1854.87	-1847.95	1170.99	0.00	449424.07	761637.11	N 32 14 0.72	W 103 37 15.09
	11500.00	90.00	179.66	9600.00	1954.87	-1947.95	1171.58	0.00	449324.08	761637.71	N 32 13 59.73	W 103 37 15.09
	11600.00	90.00	179.66	9600.00	2054.87	-2047.95	1172.17	0.00	449224.08	761638.30	N 32 13 58.75	W 103 37 15.09
	11700.00	90.00	179.66	9600.00	2154.87	-2147.94	1172.77	0.00	449124.09	761638.89	N 32 13 57.76	W 103 37 15.09
11800.00	90.00	179.66	9600.00	2254.87	-2247.94	1173.36	0.00	449024.09	761639.49	N 32 13 56.77	W 103 37 15.09	
Lease NMNM0002889 - NMNM0001917 Crossing	11884.00	90.00	179.66	9600.00	2338.87	-2331.94	1173.86	0.00	448940.10	761639.98	N 32 13 55.93	W 103 37 15.09
Landing Point	11900.00	90.00	179.66	9600.00	2354.87	-2347.94	1173.95	0.00	448924.10	761640.08	N 32 13 55.78	W 103 37 15.09
	12000.00	90.00	179.66	9600.00	2454.87	-2447.94	1174.55	0.00	448824.10	761640.67	N 32 13 54.79	W 103 37 15.09
	12100.00	90.00	179.66	9600.00	2554.87	-2547.94	1175.14	0.00	448724.11	761641.27	N 32 13 53.80	W 103 37 15.10
	12200.00	90.00	179.66	9600.00	2654.87	-2647.94	1175.73	0.00	448624.11	761641.86	N 32 13 52.81	W 103 37 15.10
	12300.00	90.00	179.66	9600.00	2754.87	-2747.93	1176.33	0.00	448524.12	761642.45	N 32 13 51.82	W 103 37 15.10
	12400.00	90.00	179.66	9600.00	2854.87	-2847.93	1176.92	0.00	448424.13	761643.05	N 32 13 50.83	W 103 37 15.10
	12500.00	90.00	179.66	9600.00	2954.87	-2947.93	1177.51	0.00	448324.13	761643.64	N 32 13 49.84	W 103 37

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	6454.87	-6447.87	1198.28	0.00	444824.33	761664.41	N 32 13 15.21	W 103 37 15.13
	16100.00	90.00	179.66	9600.00	6554.87	-6547.87	1198.88	0.00	444724.33	761665.00	N 32 13 14.22	W 103 37 15.13
	16200.00	90.00	179.66	9600.00	6654.87	-6647.87	1199.47	0.00	444624.34	761665.59	N 32 13 13.23	W 103 37 15.13
	16300.00	90.00	179.66	9600.00	6754.87	-6747.86	1200.06	0.00	444524.34	761666.19	N 32 13 12.24	W 103 37 15.13
	16400.00	90.00	179.66	9600.00	6854.87	-6847.86	1200.66	0.00	444424.35	761666.78	N 32 13 11.25	W 103 37 15.13
	16500.00	90.00	179.66	9600.00	6954.87	-6947.86	1201.25	0.00	444324.35	761667.38	N 32 13 10.26	W 103 37 15.13
	16600.00	90.00	179.66	9600.00	7054.87	-7047.86	1201.84	0.00	444224.36	761667.97	N 32 13 9.27	W 103 37 15.13
	16700.00	90.00	179.66	9600.00	7154.87	-7147.86	1202.44	0.00	444124.36	761668.56	N 32 13 8.28	W 103 37 15.13
	16800.00	90.00	179.66	9600.00	7254.87	-7247.85	1203.03	0.00	444024.37	761669.16	N 32 13 7.29	W 103 37 15.13
	16900.00	90.00	179.66	9600.00	7354.87	-7347.85	1203.62	0.00	443924.38	761669.75	N 32 13 6.30	W 103 37 15.13
	17000.00	90.00	179.66	9600.00	7454.87	-7447.85	1204.22	0.00	443824.38	761670.34	N 32 13 5.31	W 103 37 15.14
	17100.00	90.00	179.66	9600.00	7554.87	-7547.85	1204.81	0.00	443724.39	761670.94	N 32 13 4.32	W 103 37 15.14
Lease NMNM0553642 - NMNM0553548 Crossing	17165.30	90.00	179.66	9600.00	7620.17	-7613.15	1205.20	0.00	443659.09	761671.32	N 32 13 3.68	W 103 37 15.14
	17200.00	90.00	179.66	9600.00	7654.87	-7647.85	1205.40	0.00	443624.39	761671.53	N 32 13 3.33	W 103 37 15.14
	17300.00	90.00	179.66	9600.00	7754.87	-7747.85	1206.00	0.00	443524.40	761672.12	N 32 13 2.34	W 103 37 15.14
	17400.00	90.00	179.66	9600.00	7854.87	-7847.84	1206.59	0.00	443424.40	761672.72	N 32 13 1.35	W 103 37 15.14
	17500.00	90.00	179.66	9600.00	7954.87	-7947.84	1207.18	0.00	443324.41	761673.31	N 32 13 0.36	W 103 37 15.14
	17600.00	90.00	179.66	9600.00	8054.87	-8047.84	1207.78	0.00	443224.41	761673.90	N 32 12 59.37	W 103 37 15.14
	17700.00	90.00	179.66	9600.00	8154.87	-8147.84	1208.37	0.00	443124.42	761674.50	N 32 12 58.38	W 103 37 15.14
	17800.00	90.00	179.66	9600.00	8254.87	-8247.84	1208.96	0.00	443024.43	761675.09	N 32 12 57.40	W 103 37 15.14
	17900.00	90.00	179.66	9600.00	8354.87	-8347.84	1209.56	0.00	442924.43	761675.68	N 32 12 56.41	W 103 37 15.14
	18000.00	90.00	179.66	9600.00	8454.87	-8447.83	1210.15	0.00	442824.44	761676.28	N 32 12 55.42	W 103 37 15.14
	18100.00	90.00	179.66	9600.00	8554.87	-8547.83	1210.75	0.00	442724.44	761676.87	N 32 12 54.43	W 103 37 15.14
	18200.00	90.00	179.66	9600.00	8654.87	-8647.83	1211.34	0.00	442624.45	761677.46	N 32 12 53.44	W 103 37 15.14
	18300.00	90.00	179.66	9600.00	8754.87	-8747.83	1211.93	0.00	442524.45	761678.06	N 32 12 52.45	W 103 37 15.15
	18400.00	90.00	179.66	9600.00	8854.87	-8847.83	1212.53	0.00	442424.46	761678.65	N 32 12 51.46	W 103 37 15.15
	18500.00	90.00	179.66	9600.00	8954.87	-8947.82	1213.12	0.00	442324.46	761679.24	N 32 12 50.47	W 103 37 15.15
	18600.00	90.00	179.66	9600.00	9054.87	-9047.82	1213.71	0.00	442224.47	761679.84	N 32 12 49.48	W 103 37 15.15
	18700.00	90.00	179.66	9600.00	9154.87	-9147.82	1214.31	0.00	442124.48	761680.43	N 32 12 48.49	W 103 37 15.15
	18800.00	90.00	179.66	9600.00	9254.87	-9247.82	1214.90	0.00	442024.48	761681.02	N 32 12 47.50	W 103 37 15.15
	18900.00	90.00	179.66	9600.00	9354.87	-9347.82	1215.49	0.00	441924.49	761681.62	N 32 12 46.51	W 103 37 15.15
	19000.00	90.00	179.66	9600.00	9454.87	-9447.82	1216.09	0.00	441824.49	761682.21	N 32 12 45.52	W 103 37 15.15
	19100.00	90.00	179.66	9600.00	9554.87	-9547.81	1216.68	0.00	441724.50	761682.80	N 32 12 44.53	W 103 37 15.15
	19200.00	90.00	179.66	9600.00	9654.87	-9647.81	1217.27	0.00	441624.50	761683.40	N 32 12 43.54	W 103 37 15.15
	19300.00	90.00	179.66	9600.00	9754.87	-9747.81	1217.87	0.00	441524.51	761683.99	N 32 12 42.55	W 103 37 15.15
	19400.00	90.00	179.66	9600.00	9854.87	-9847.81	1218.46	0.00	441424.51	761684.58	N 32 12 41.56	W 103 37 15.15
	19500.00	90.00	179.66	9600.00	9954.87	-9947.81	1219.05	0.00	441324.52	761685.18	N 32 12 40.57	W 103 37 15.16
	19600.00	90.00	179.66	9600.00	10054.87	-10047.81	1219.65	0.00	441224.53	761685.77	N 32 12 39.58	W 103 37 15.16
	19700.00	90.00	179.66	9600.00	10154.87	-10147.80	1220.24	0.00	441124.53	761686.36	N 32 12 38.59	W 103 37 15.16
Cimarex Dos Equis 12-13 Federal Com #88H - PBHL [100' FSL, 330' FEL]	19706.15	90.00	179.66	9600.00	10161.02	-10153.95	1220.28	0.00	441118.38	761686.40	N 32 12 38.53	W 103 37 15.16

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 #88H / Cimarex Dos Equis 12-13 Federal Com #88H Rev1 RM
	1	26.000	19706.152	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #88H / Cimarex Dos Equis 12-13



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



Report Date: February 18, 2020 - 11:17 AM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #88H / New Slot
Well: Dos Equis 12-13 Federal Com #88H
Borehole: Dos Equis 12-13 Federal Com #88H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #88H Rev1 RM 14Feb20
Survey Date: December 27, 2019
Tort / AHD / DDI / ERD Ratio: 109.392 ° / 11376.162 ft / 6.407 / 1.185
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 19.08601", W 103° 37' 28.57986"
Location Grid N/E Y/X: N 451271.950 ftUS, E 760466.170 ftUS
CRS Grid Convergence Angle: 0.3781 °
Grid Scale Factor: 0.99996409
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: 3626.200 ft above MSL
Seabed / Ground Elevation: 3600.200 ft above MSL
Magnetic Declination: 6.613 °
Total Gravity Field Strength: 998.4391mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47842.046 nT
Magnetic Dip Angle: 59.879 °
Declination Date: February 18, 2020
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3781 °
Total Corr Mag North->Grid North: 6.2352 °
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, 1490' FEL]	0.00	0.00	164.72	0.00	0.00	0.00	0.00	N/A	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
Nudge 2"/100'	1700.00	0.00	87.00	1700.00	0.00	0.00	0.00	0.00	451271.95	760466.17	N 32 14 19.09	W 103 37 28.58
Hold Nudge	2184.80	9.70	87.00	2182.48	-1.90	2.14	40.87	2.00	451274.09	760507.03	N 32 14 19.10	W 103 37 28.10
Drop to Vertical	8593.86	9.70	87.00	8500.00	-51.99	58.63	1118.79	0.00	451330.58	761584.92	N 32 14 19.59	W 103 37 15.55
2"/100' DLS	9078.66	0.00	87.00	8982.48	-53.89	60.78	1159.66	2.00	451332.72	761625.79	N 32 14 19.61	W 103 37 15.07
Hold Vertical	9218.71	0.00	87.00	9122.54	-53.89	60.78	1159.66	0.00	451332.72	761625.79	N 32 14 19.61	W 103 37 15.07
KOP - Build	9968.71	90.00	179.66	9600.00	423.57	-416.68	1162.49	12.00	450855.28	761628.62	N 32 14 14.89	W 103 37 15.08
12"/100' DLS												
Landing Point												
Cimarex Dos Equis 12-13 Federal Com #88H - PBHL [100' FSL, 330' FEL]	19706.15	90.00	179.66	9600.00	10161.02	-10153.95	1220.28	0.00	441118.38	761686.40	N 32 12 38.53	W 103 37 15.16

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 #88H / Cimarex Dos Equis 12-13 Federal Com #88H Rev1 RM
	1	26.000	19706.152	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #88H / Cimarex Dos Equis 12-13



Cimarex Energy

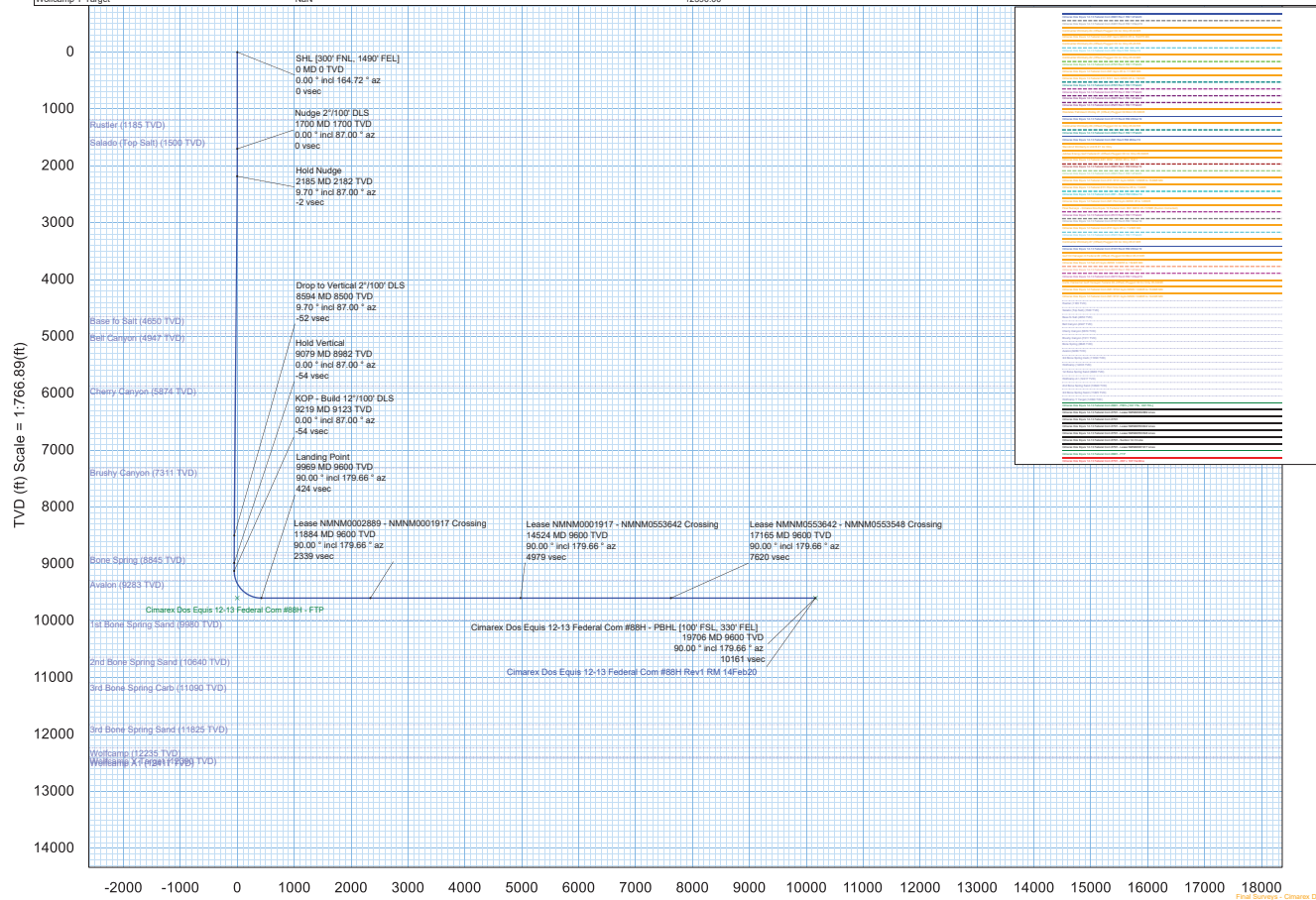
Rev 1



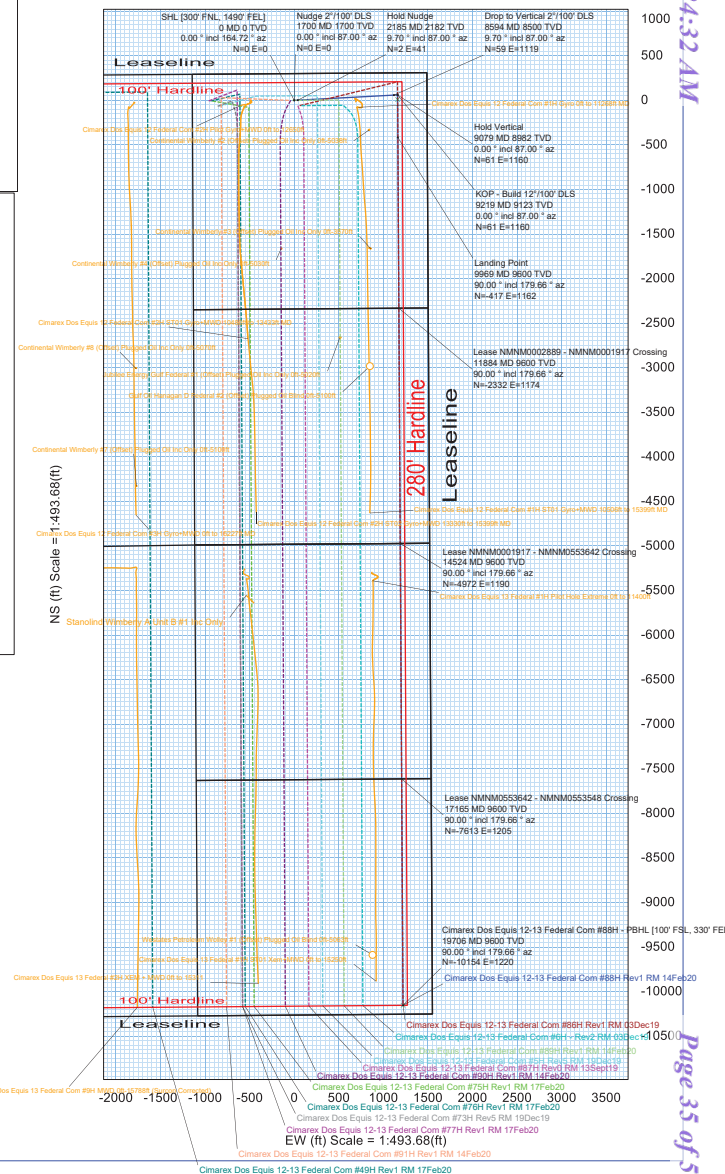
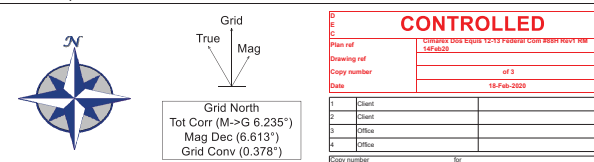
Borehole:	Well:	Field:	Structure:
Dos Equis 12-13 Federal Com #88H	Dos Equis 12-13 Federal Com #88H	NM Lea County (NAD 83)	Cimarex Dos Equis 12-13 Federal Com #88H

Gravity & Magnetic Parameters	Dip:	59.879°	Date:	18-Feb-2020	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Grid Conv:	0.3791°	Miscellaneous	New Slot	TVD Ref:	RKB(3626.2ft above MSL)
Model: HDGM 2019	FS:	47842.046T	Gravity FS:	998.439mgm (9.80665 Based)	Lat: N 32 14 18.09	451271.95HUS	Scale Fact:	0.99996409	Slot: Cimarex Dos Equis 12-13 Federal Com #88H Rev1 RM 14Feb20			
MagDec:					Long: W 103 37 28.58	Northing: 760466.17HUS						

Critical Point	MD	INCL	AZIM	Critical Points	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [300' FNL, 1490' FEL]	0.00	0.00	164.72	0.00	0.00	0.00	0.00	0.00
Rustler	1185.00	0.00	87.00	1185.00	0.00	0.00	0.00	0.00
Salado (Top Salt)	1500.00	0.00	87.00	1500.00	0.00	0.00	0.00	0.00
Nudge 2'1100' DLS	1700.00	0.00	87.00	1700.00	0.00	0.00	0.00	0.00
Hold Nudge	2184.80	9.70	87.00	2182.48	-1.90	2.14	40.87	2.00
Base to Salt	4688.07	9.70	87.00	4650.00	-21.47	24.21	461.89	0.00
Bel Canyon	4989.37	9.70	87.00	4947.00	-23.82	26.86	512.56	0.00
Cherry Canyon	5929.81	9.70	87.00	5874.00	-31.17	35.15	670.73	0.00
Brushy Canyon	7387.63	9.70	87.00	7311.00	-42.57	48.00	915.92	0.00
Drop to Vertical 2'1100' DLS	8593.86	9.70	87.00	8500.00	-51.99	58.63	1118.79	0.00
Hold Vertical	8941.12	2.75	87.00	8845.00	-53.74	60.60	1156.36	2.00
Bone Spring	9078.66	0.00	87.00	8982.48	-53.89	60.78	1159.66	2.00
KOP - Build 12'1100' DLS	9218.71	0.00	87.00	9122.54	-53.89	60.78	1159.66	0.00
Avalon	9382.36	19.64	179.66	9283.00	-26.12	33.00	1159.82	12.00
Landing Point	9968.71	90.00	179.66	9600.00	423.57	-416.68	1162.49	12.00
Lease NMNM0002889 - NMNM0001917 Crossing	11884.00	90.00	179.66	9600.00	2338.87	-2331.94	1173.86	0.00
Lease NMNM0001917 - NMNM0553642 Crossing	14524.30	90.00	179.66	9600.00	4979.17	-4972.19	1189.53	0.00
Lease NMNM0553642 - NMNM0553548 Crossing	17166.30	90.00	179.66	9600.00	7620.17	-7613.15	1205.20	0.00
Cimarex Dos Equis 12-13 Federal Com #88H - PBHL [100' FSL, 330' FEL]	19706.15	90.00	179.66	9600.00	10161.02	-10153.95	1220.28	0.00
3rd Bone Spring Carb	NaN			11090.00				
Wolfcamp	NaN			12235.00				
1st Bone Spring Sand	NaN			9960.00				
Wolfcamp A1	NaN			12417.00				
2nd Bone Spring Sand	NaN			10640.00				
3rd Bone Spring Sand	NaN			11825.00				
Wolfcamp Y Target	NaN			12390.00				



Vertical Section (ft) Azim = 179.66° Scale = 1:766.89(ft) Origin = 0N/-S, 0E/-W



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 88H
SURFACE HOLE FOOTAGE:	300'/N & 1490'/E
BOTTOM HOLE FOOTAGE:	100'/S & 330'/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 Group** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1520** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface. **Excess calculates to 18%. Additional cement maybe required.**
 - 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.

ZS081021



U.S. Department of the Interior
Bureau of Land Management

Application for Permit to Drill

APD Package Report

Date Printed:

APD ID:
APD Received Date:
Operator:

Well Status:
Well Name:
Well Number:

APD Package Report Contents

- Form 3160-3 : Error Generating Form
- Operator Certification Report
- Application Report
- Application Attachments
 - Well Plat: 2 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
 - Blowout Prevention Choke Diagram Attachment: 2 file(s)
 - Blowout Prevention BOP Diagram Attachment: 2 file(s)
 - Casing Design Assumptions and Worksheet(s): 4 file(s)
 - Hydrogen sulfide drilling operations plan: 1 file(s)
 - Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
 - Other Facets: 2 file(s)
 - Other Variances: 2 file(s)
- SUPO Report
- SUPO Attachments
 - Existing Road Map: 1 file(s)
 - Attach Well map: 1 file(s)
 - Production Facilities map: 4 file(s)
 - Water source and transportation map: 1 file(s)
 - Well Site Layout Diagram: 2 file(s)
 - Recontouring attachment: 1 file(s)
- PWD Report
- PWD Attachments
 - None
- Bond Report
- Bond Attachments

-- None



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

Operator Certification Data Report

07/13/2020

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Amithy Crawford**Signed on:** 07/07/2020**Title:** Regulatory Analyst**Street Address:** 600 N MARIENFELD STE 600**City:** MIDLAND**State:** TX**Zip:** 79701**Phone:** (432)620-1909**Email address:** acrawford@cimarex.com

Field Representative

Representative Name:**Street Address:****City:****State:****Zip:****Phone:****Email address:**



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

Application Data Report

07/13/2020

APD ID: 10400058470

Submission Date: 07/10/2020

Highlighted data
reflects the most
recent changes

Operator Name: CIMAREX ENERGY COMPANY

Well Name: DOS EQUIS 12-13 FEDERAL COM

Well Number: 88H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400058470

Tie to previous NOS? Y

Submission Date: 07/10/2020

BLM Office: CARLSBAD

User: Amithy Crawford

Title: Regulatory Analyst

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM0002889

Lease Acres: 680

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO

APD Operator: CIMAREX ENERGY COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: CIMAREX ENERGY COMPANY

Operator Address: 600 N. Marienfeld St., Suite 600

Zip: 79701

Operator PO Box:

Operator City: Midland

State: TX

Operator Phone: (432)620-1936

Operator Internet Address: tstathem@cimarex.com

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: DOS EQUIS 12-13 FEDERAL COM

Well Number: 88H

Well API Number: x1Y2z

Field/Pool or Exploratory? Field and Pool

Field Name: TRISTE DRAW
BONE SPRING

Pool Name: TRISTE DRAW
BONE SPRING

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 88H**Is the proposed well in an area containing other mineral resources?** USEABLE WATER,NATURAL GAS,OIL**Is the proposed well in a Helium production area?** N**Use Existing Well Pad?** Y**New surface disturbance?** N**Type of Well Pad:** MULTIPLE WELL**Multiple Well Pad Name:** Dos**Number:** W2E2 Pad 6

Equis 12-13 Fed Com

Well Class: HORIZONTAL**Number of Legs:** 1**Well Work Type:** Drill**Well Type:** OIL WELL**Describe Well Type:****Well sub-Type:** INFILL**Describe sub-type:****Distance to town:** 28 Miles**Distance to nearest well:** 20 FT**Distance to lease line:** 300 FT**Reservoir well spacing assigned acres Measurement:** 320 Acres**Well plat:** Dos_Equis_12_13_Fed_Com_88H_C102_20200707114942.pdf

Dos_Equis_12_13_Fed_Com_88H_Lease_Map_20200707114949.pdf

Well work start Date: 11/30/2020**Duration:** 30 DAYS**Section 3 - Well Location Table****Survey Type:** RECTANGULAR**Describe Survey Type:****Datum:** NAD83**Vertical Datum:** NAVD88**Survey number:****Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	300	FNL	1490	FEL	24S	32E	12	Aliquot NWNE	32.238635	-103.624606	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 0002889	3600	0	0	Y
KOP Leg #1	300	FNL	330	FEL	24S	32E	12	Aliquot NENE	32.238637	-103.620854	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 0002889	-5522	9218	9122	Y

Operator Name: CIMAREX ENERGY COMPANY**Well Name:** DOS EQUIS 12-13 FEDERAL COM**Well Number:** 88H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	300	FNL	330	FEL	24S	32E	12	Aliquot NENE	32.238637	- 103.620854	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0002889	- 5683	9382	9283	Y
PPP Leg #1-2	2640	FNL	330	FEL	24S	32E	12	Aliquot NESE	32.232203	- 103.620858	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0001917	- 6000	11884	9600	Y
PPP Leg #1-3	0	FNL	330	FEL	24S	32E	13	Aliquot NENE	32.224947	- 103.620867	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0553642	- 6000	14524	9600	Y
EXIT Leg #1	100	FSL	330	FEL	24S	32E	13	Aliquot SESE	32.210704	- 103.620877	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0553548	- 6000	19706	9600	Y
BHL Leg #1	100	FSL	330	FEL	24S	32E	13	Aliquot SESE	32.210704	- 103.620877	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0553548	- 6000	19706	9600	Y

Dos Equis 12-13 Federal Com 88H

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
Dosquis 12-13 Federal Com 88H
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
 t s **Dos Equis 12-13 Federal Com 88H**
 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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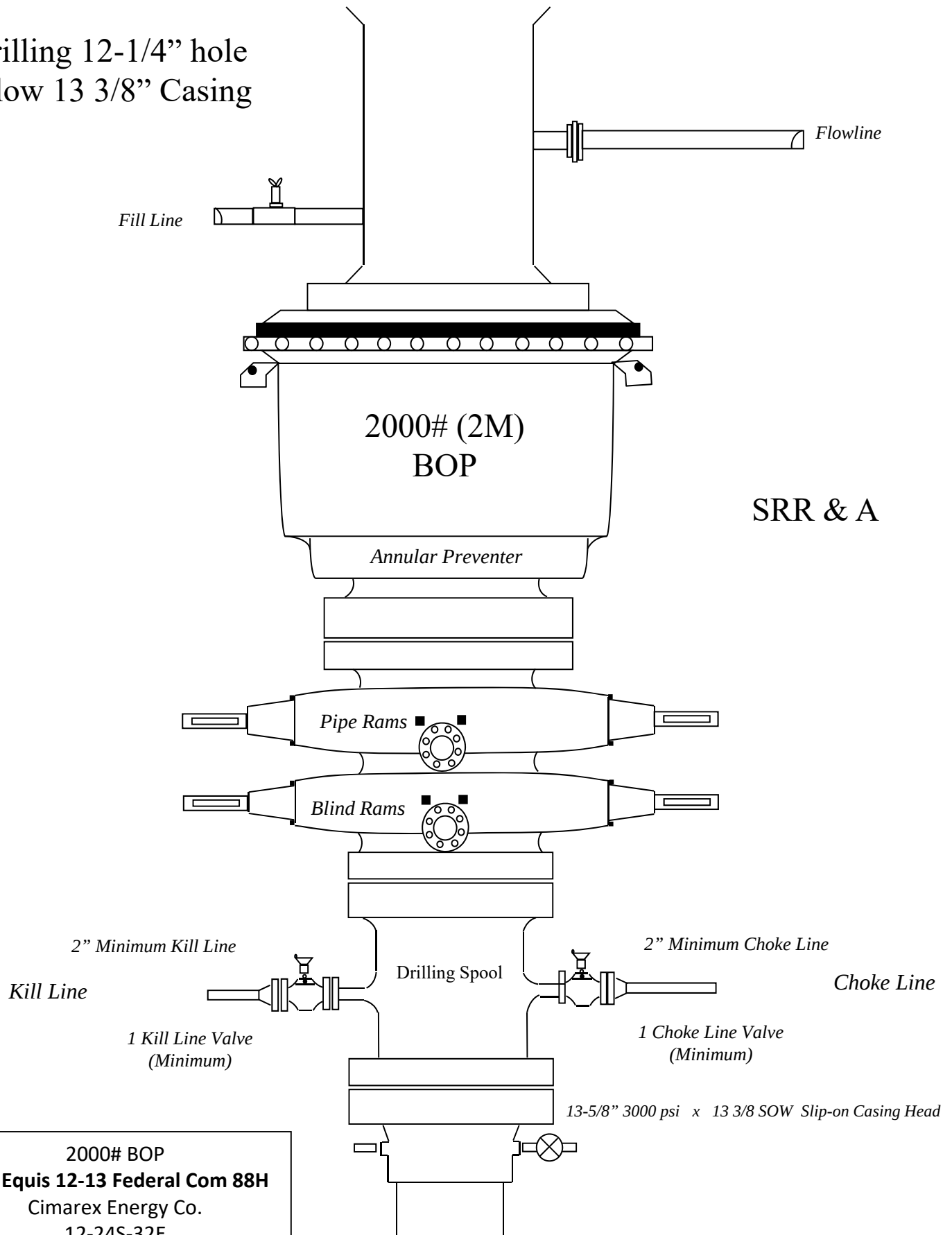
Medical

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

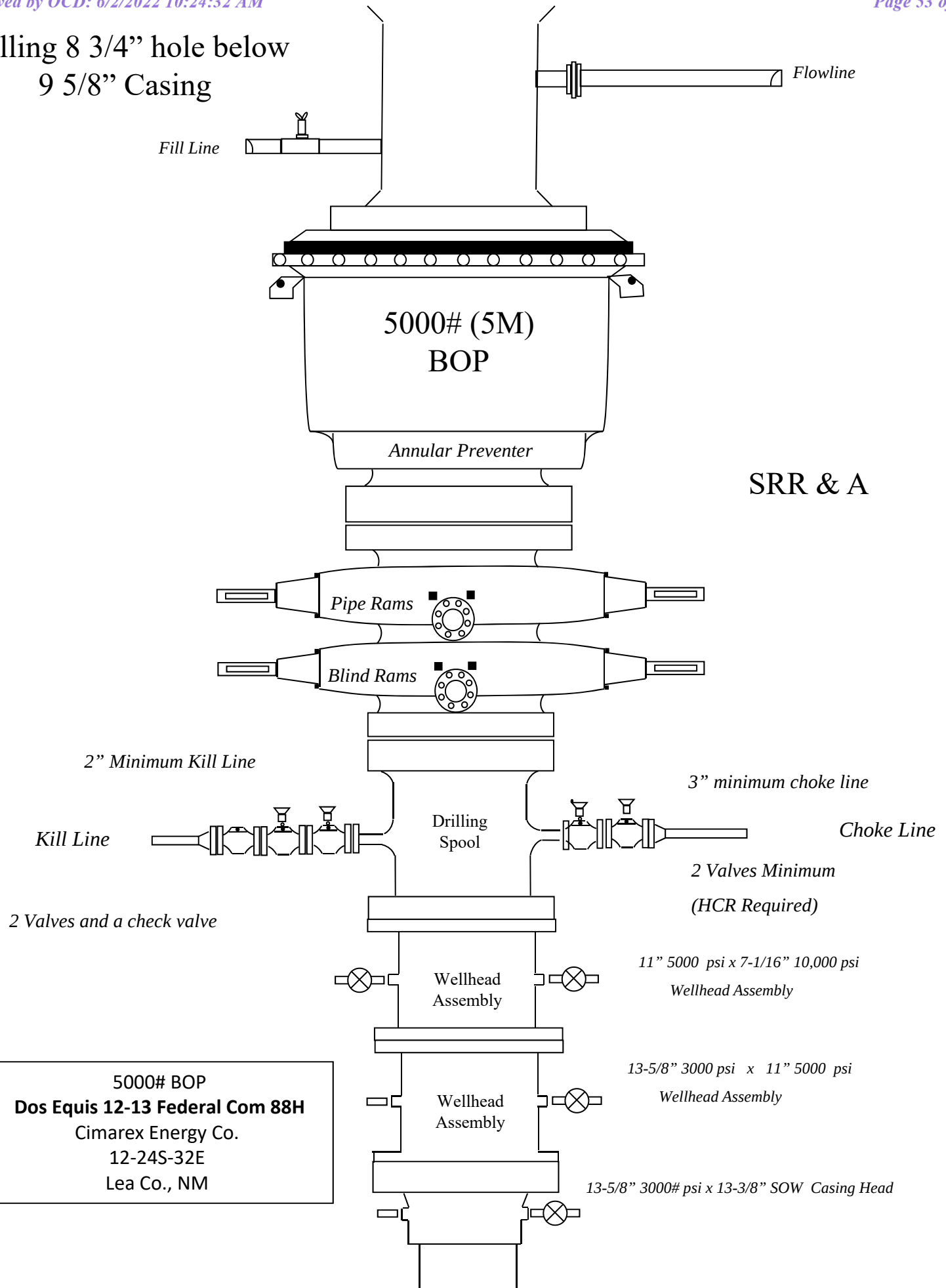
Other

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



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



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 113066

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 113066
	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	6/3/2022
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	6/3/2022
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	6/3/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	6/3/2022