

Form 3160-5
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.5. Lease Serial No.
NMNM02889

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
DOS EQUIS 12-13 FEDERAL COM 5H9. API Well No.
30-025-46320-00-X110. Field and Pool or Exploratory Area
TRISTE DRAW-BONE SPRING11. County or Parish, State
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

CIMAREX ENERGY COMPANY

Contact: AMITHY E CRAWFORD

E-Mail: acrawford@cimarex.com

3a. Address

600 N. MARIENFELD STREET STE 600
MIDLAND, TX 79701

3b. Phone No. (include area code)

Ph: 432-620-1909

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 12 T24S R32E NWNE 360FNL 2330FEL
32.238468 N Lat, 103.627319 W Lon

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Cimarex Energy Co respectfully requests to change the BHL and Formation to Wolfcamp thereby changing the drilling plan.

No Additional Surface Disturbance

Proposed Formation-
Wolfcamp

Proposed BHL-
100' FSL & 1230' FEL Section 13 24S 32E

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #496925 verified by the BLM Well Information System**For CIMAREX ENERGY COMPANY, sent to the Hobbs****Committed to AFMSS for processing by PRISCILLA PEREZ on 01/08/2020 (20PP0786SE)**

Name (Printed/Typed) AMITHY E CRAWFORD

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 12/23/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JEROMY PORTER

Title PETROLEUM ENGINEER

Date 01/30/2020

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

Office Hobbs

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

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #496925 that would not fit on the form

32. Additional remarks, continued

Please see attached- Wellsite Layout, Updated C102, Updated Directional Surveys, Updated Drilling Plan, BOPS, Casing Specs.

Revisions to Operator-Submitted EC Data for Sundry Notice #496925

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM02889	NMNM02889
Agreement:		
Operator:	CIMAREX ENERGY CO. 600 N. MARIENFELD, SUITE 600 MIDLAND, TX 79701 Ph: 432-620-1909	CIMAREX ENERGY COMPANY 600 N. MARIENFELD STREET STE 600 MIDLAND, TX 79701 Ph: 432.620.1938
Admin Contact:	AMITHY E CRAWFORD REGULATORY ANALYST E-Mail: acrawford@cimarex.com Ph: 432-620-1909	AMITHY E CRAWFORD REGULATORY ANALYST E-Mail: acrawford@cimarex.com Ph: 432-620-1909
Tech Contact:	AMITHY E CRAWFORD REGULATORY ANALYST E-Mail: acrawford@cimarex.com Ph: 432-620-1909	AMITHY E CRAWFORD REGULATORY ANALYST E-Mail: acrawford@cimarex.com Ph: 432-620-1909
Location:		
State:	NM	NM
County:	LEA	LEA
Field/Pool:	WOLFCAMP	TRISTE DRAW-BONE SPRING
Well/Facility:	DOS EQUIS 12-13 FEDERAL COM 5H Sec 12 T24S R32E 360FNL 2330FEL	DOS EQUIS 12-13 FEDERAL COM 5H Sec 12 T24S R32E NWNE 360FNL 2330FEL 32.238468 N Lat, 103.627319 W Lon

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-25-46320	² Pool Code 98309	³ Pool Name WC-025 G-08 S243213C; Wolfcamp
⁴ Property Code 326056	⁵ Property Name DOS EQUIS 12-13 FEDERAL COM	⁶ Well Number 5H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.	⁹ Elevation 3603.9'

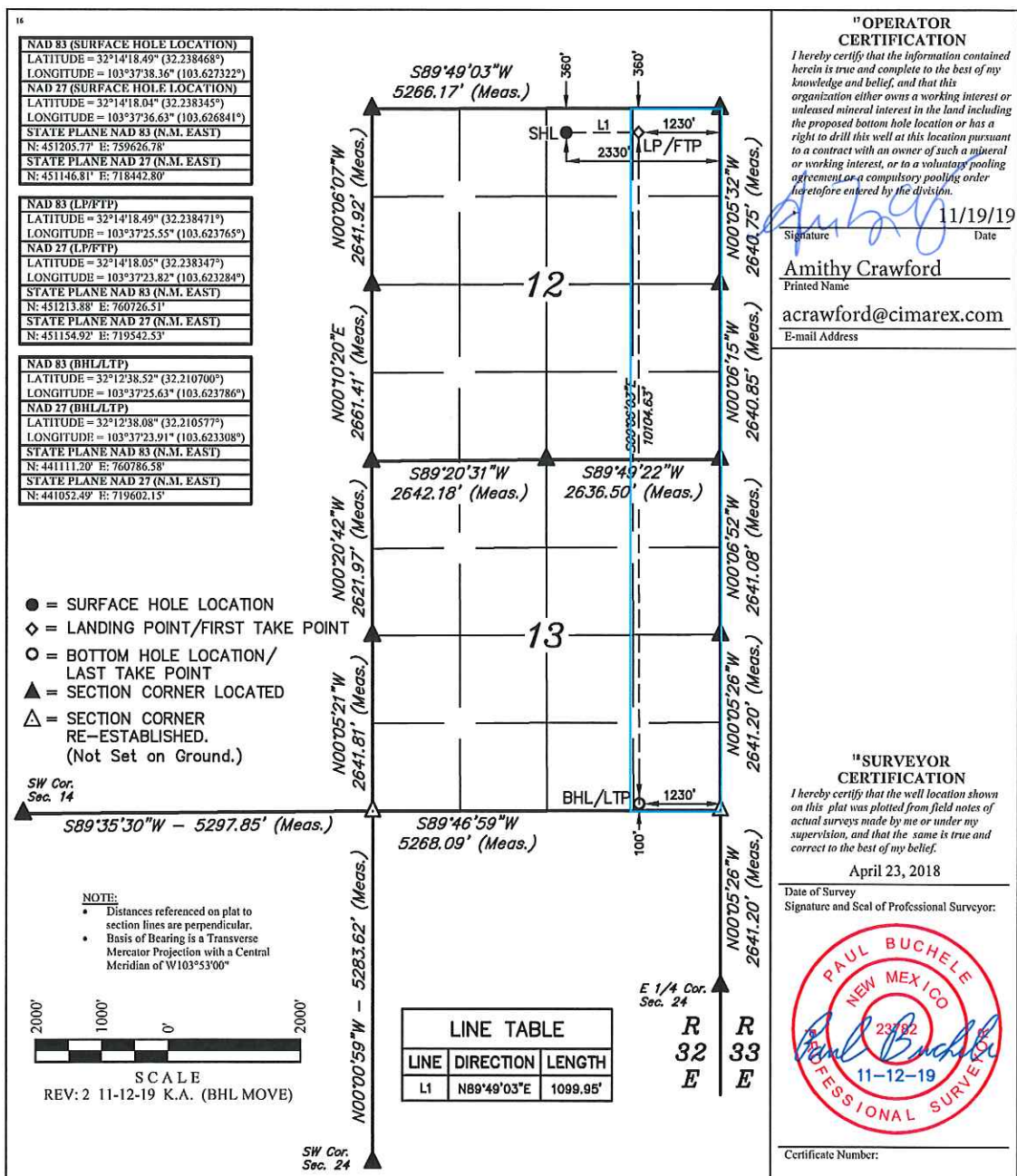
"Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	12	24S	32E		360	NORTH	2330	EAST	LEA

"Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	13	24S	32E		100	SOUTH	1230	EAST	LEA
¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.	NSL- Pending					

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



PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CIMAREX ENERGY COMPANY
LEASE NO.:	NMNM02889
WELL NAME & NO.:	DOS EQUIS 12-13 FED COM 5H
SURFACE HOLE FOOTAGE:	360'/N & 2330'/E
BOTTOM HOLE FOOTAGE:	100'/S & 1230'/E
LOCATION:	Section 12, T.24 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

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

All previous COAs still apply, except for the following:

A. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1235** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that

string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

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

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

B. 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. 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
3. 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 intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

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

C. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, 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.

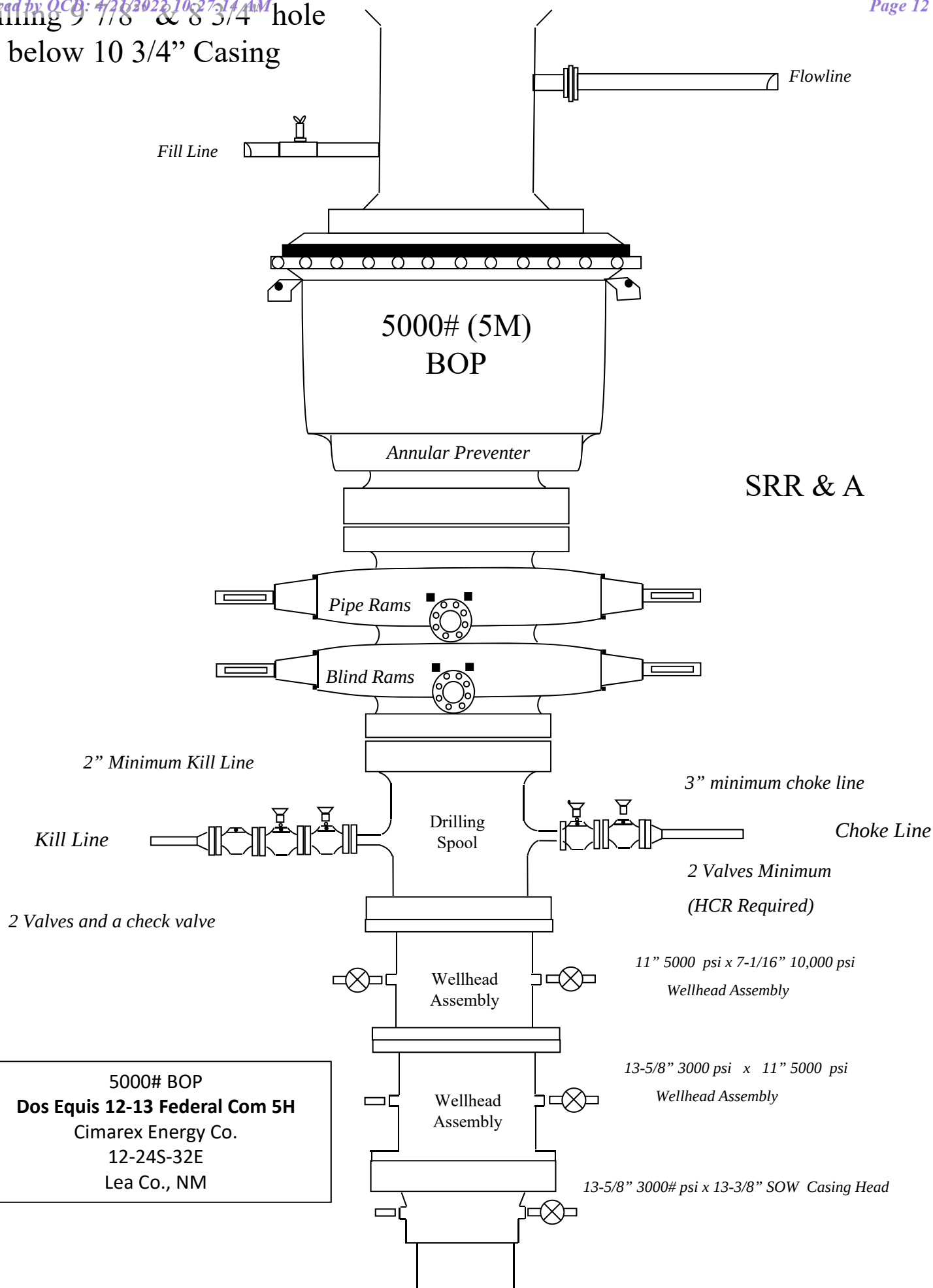
D. WASTE MATERIAL AND FLUIDS

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.

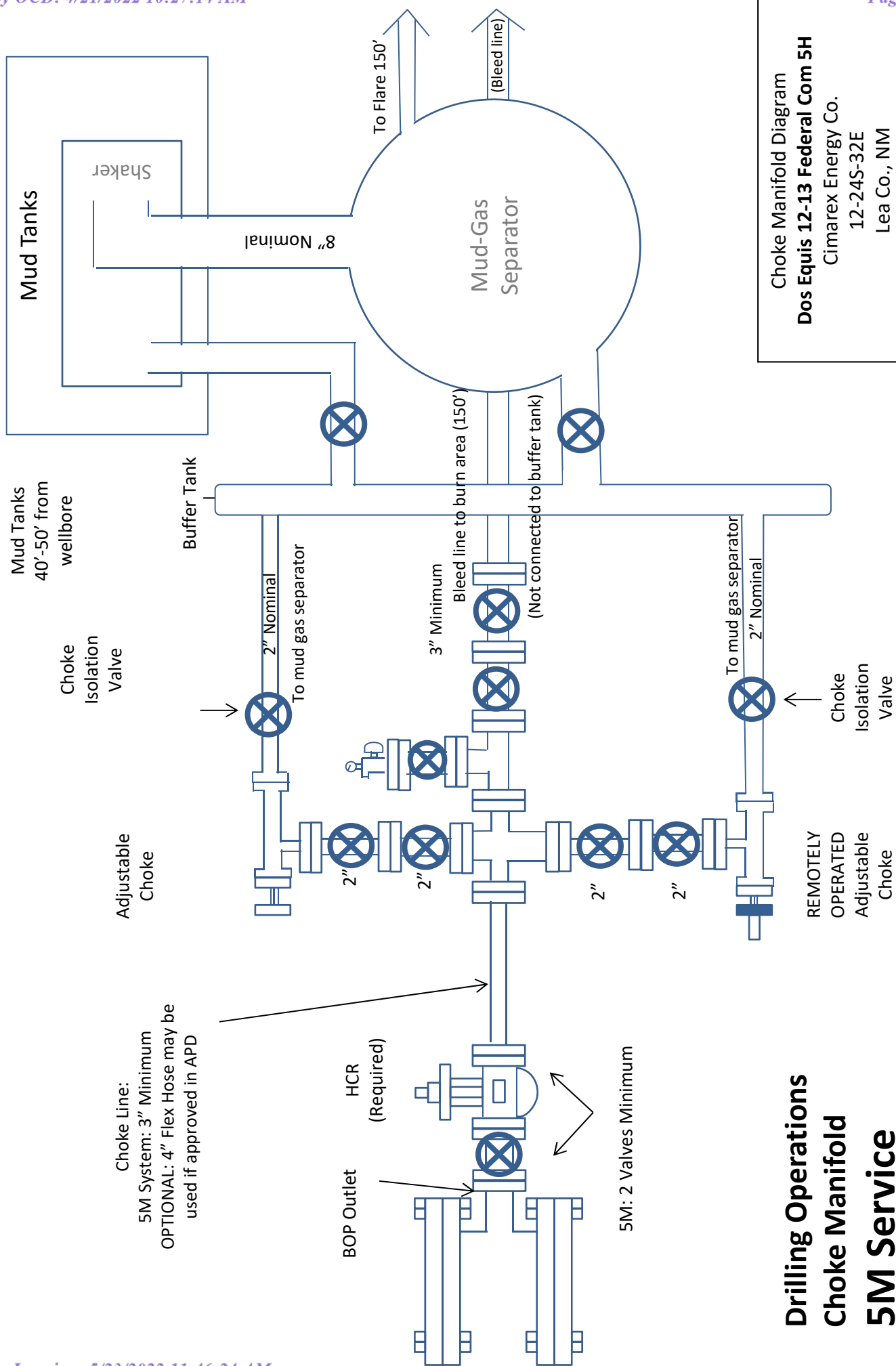
JJP01302020

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



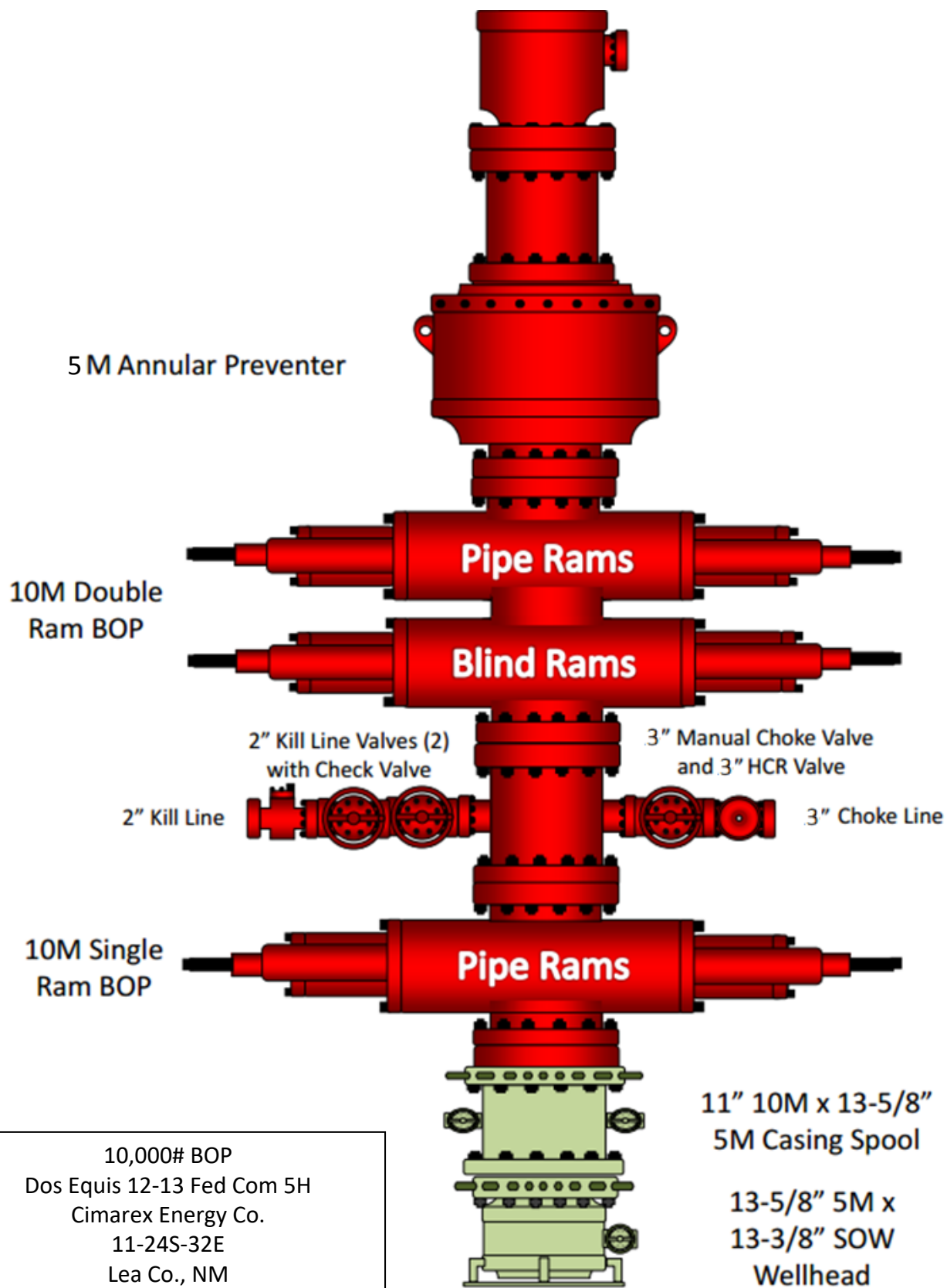
SRR & A

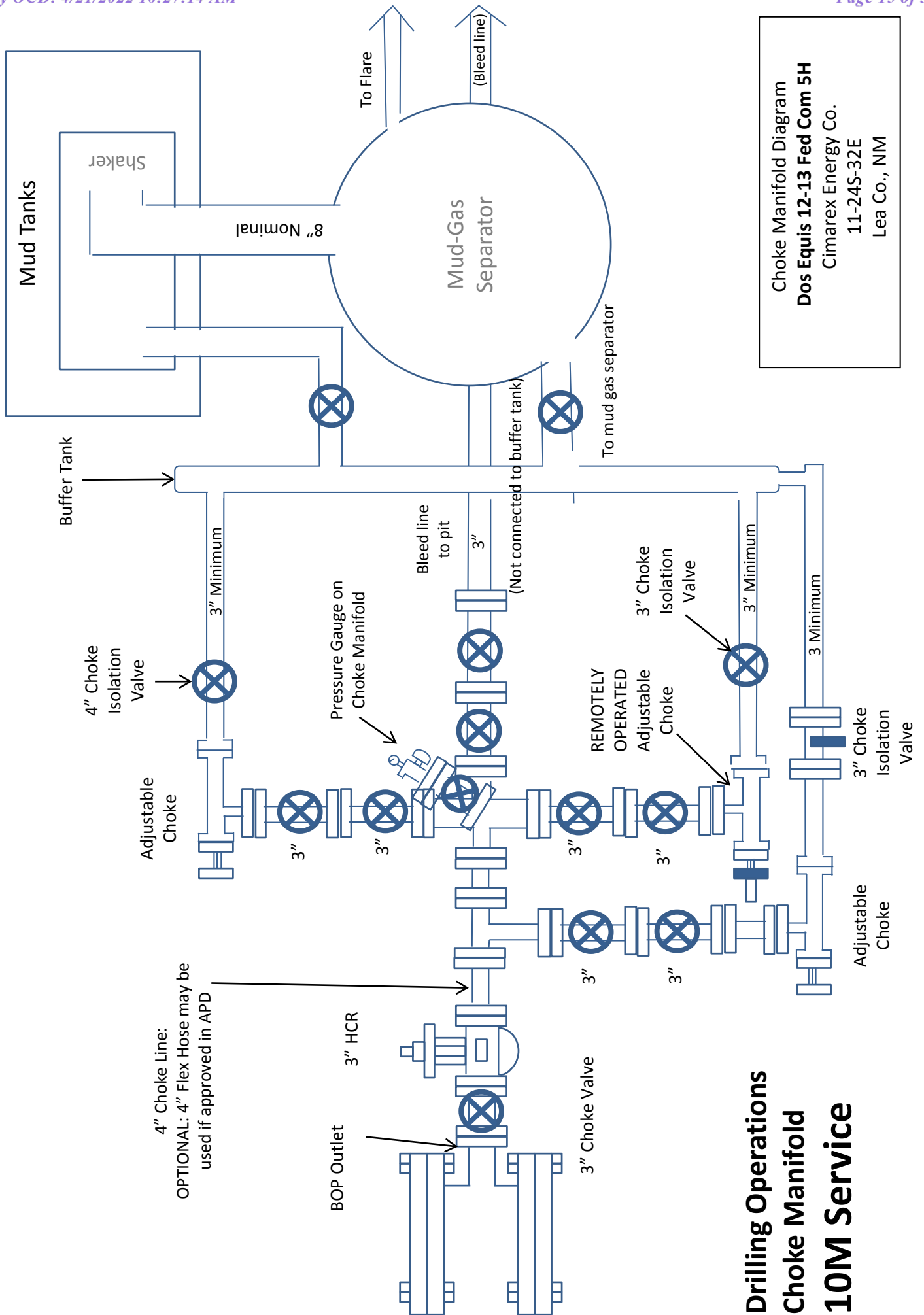
5000# BOP
Dos Equis 12-13 Federal Com 5H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM



Choke Manifold Diagram
Dos Equis 12-13 Federal Com 5H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM

Drilling 8 3/4" Hole
Below 7 5/8" Casing







Cimarex 10M Well Control Plan

Version 1.0

BOPE Preventer Utilization

The table below displays all BHA components, drill pipe, casing, or open hole that could be present during a required shut in and the associated preventer component that would provide a barrier to flow. It is specific to the hole section that requires a 10M system. The mud system being utilized in the hole will always assumed to be the first barrier to flow. The below table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Drill String Element	OD	Preventer	RWP
4" Drillpipe	4"	Lower Ram 3 1/2" - 5 1/2" VBR* Upper Ram 3 1/2" - 5 1/2" VBR*	10M
4.5" Drillpipe	4.5"	Lower Ram 3 1/2" - 5 1/2" VBR* Upper Ram 3 1/2" - 5 1/2" VBR*	10M
4" HWDP Drillpipe	4"	Lower Ram 3 1/2" - 5 1/2" VBR* Upper Ram 3 1/2" - 5 1/2" VBR*	10M
4.5" HWDP Drillpipe	4.5"	Lower Ram 3 1/2" - 5 1/2" VBR* Upper Ram 3 1/2" - 5 1/2" VBR*	10M
Drill Collars (including non-magnetic)	4.75-5.25"	Lower Ram 3 1/2" - 5 1/2" VBR* Upper Ram 3 1/2" - 5 1/2" VBR*	10M
Production Casing	5.5"	Lower Ram 3 1/2" - 5 1/2" VBR* Upper Ram 3 1/2" - 5 1/2" VBR*	10M
Production Casing	5"	Lower Ram 3 1/2" - 5 1/2" VBR* Upper Ram 3 1/2" - 5 1/2" VBR*	10M
Production Casing	4.5"	Lower Ram 3 1/2" - 5 1/2" VBR* Upper Ram 3 1/2" - 5 1/2" VBR*	10M
ALL	0-13 5/8"	Annular	5M
Open Hole		Blind Rams	10M

*VBR – Variable Bore Ram

Well Control Procedures

Proper well control response is highly specific to current well conditions and must be adapted based on environment as needed. The procedures below are given in “common” operating conditions to cover the basic and most necessary operations required during the wellbore construction. These include drilling ahead, tripping pipe, tripping BHA, running casing, and pipe out of the hole/open hole. In some of the procedures below, there will be a switch of control from the lesser RWP annular to the appropriate 10M RWP ram. The pressure at which this is done is variable based on overall well conditions that must be evaluated situationally. The pressure that control is switched may be equal to or less than the RWP but at no time will the pressure on the annular preventer exceed the RWP of the annular. The annular will be tested to 5,000 psi. This will be the RWP of the annular preventer.

Shutting In While Drilling

1. Sound alarm to alert crew
2. Space out drill string
3. Shut down pumps
4. Shut in uppermost BOPE preventer (typically the annular preventer) and open HCR.
5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold pre-job safety meeting and discuss kill procedure

9. If pressure is anticipated to climb to the RWP of the annular preventer during kill procedure, swap control of the well to the upper pipe ram

Shutting In While Tripping

1. Sound alarm and alert crew
2. Install open, full open safety valve and close valve
3. Shut in uppermost BOPE preventer (typically the annular preventer) and open HCR.
4. Verify well is shut-in and flow has stopped
5. Notify supervisory personnel
6. Record data (SIDP, SICP, Pit Gain, and Time)
7. Hold pre-job safety meeting and discuss kill procedure
8. If pressure is anticipated to climb to the RWP of the annular preventer during kill procedure, swap control of the well to the upper pipe ram

Shutting In While Running Casing

1. Sound alarm and alert crew
2. Install circulating swedge. Close high pressure, low torque valves.
3. Shut in uppermost BOPE preventer (typically the annular preventer) and open HCR.
4. Verify well is shut-in and flow has stopped
5. Notify supervisory personnel
6. Record data (SIDP, SICP, Pit Gain, and Time)
7. Hold Pre-job safety meeting and discuss kill procedure
8. If pressure is anticipated to climb to the RWP of the annular preventer during kill procedure, swap control of the well to the upper pipe ram

Shutting in while out of hole

1. Sound alarm
2. Shut-in well: close blind rams
3. Verify well is shut-in and monitor pressures
4. Notify supervisory personnel
5. Record data (SIDP, SICP, Pit Gain, and Time)
6. Hold Pre-job safety meeting and discuss kill procedure

Shutting in prior to pulling BHA through stack

1. Prior to pulling last joint of drill pipe thru the stack space out and check flow. If flowing see steps below.
2. Sound alarm and alert crew
3. Install open, full open safety valve and close valve
4. Shut in upper pipe ram and open HCR.

5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold pre-job safety meeting and discuss kill procedure

Shutting in while BHA is in the stack and ram preventer and combo immediately available

1. Sound alarm and alert crew
2. Stab Crossover and install open, full open safety valve and close valve
3. Space out drill string with upset just beneath the compatible pipe ram.
4. Shut in upper compatible pipe ram and open HCR.
5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold pre-job safety meeting and discuss kill procedure

Shutting in while BHA is in the stack and no ram preventer or combo immediately available

1. Sound alarm and alert crew
2. If possible pick up high enough, to pull string clear and follow "Open Hole" scenario
3. If not possible to pick up high enough:
 1. Stab Crossover, make up one joint/stand of drill pipe, and install open, full open safety valve and close valve
4. Space out drill string with upset just beneath the compatible pipe ram.
5. Shut in upper compatible pipe ram and open HCR.
6. Verify well is shut-in and flow has stopped
7. Notify supervisory personnel
8. Record data (SIDP, SICP, Pit Gain, and Time)
9. Hold pre-job safety meeting and discuss kill procedure

Cimarex Energy Co., Dos Equis 12-13 Federal Com 5H

1. Geological Formations

TVD of target 12,360

Pilot Hole TD N/A

MD at TD 22,587

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1185	N/A	
Salado (Top Salt)	1500	N/A	
Base of Salt	4650	N/A	
Delaware Sands	4920	N/A	
Bone Spring	8815	Hydrocarbons	
Bone Spring Target	9600	Hydrocarbons	
1st Bone Spring Sand	9910	Hydrocarbons	
2nd Bone Spring Sand	10635	Hydrocarbons	
3rd Bone Spring Sand	11835	Hydrocarbons	
Wolfcamp	12245	Hydrocarbons	

2. Casing Program

Dos Equis 12-13 Federal Com 5H -- Sundry Casing Data											
Type	Hole Size	Top Setting Depth MD	Setting Depth MD	Setting Depth TVD	Csg Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
Surface	14 3/4"	0	1,235	1,235	10-3/4"	45.5	J-55	BTC	2.80	5.54	12.58
Intermediate	9 7/8"	0	11,916	11,760	7-5/8"	29.7	L-80	BTC	2.50	1.20	1.81
Intermediate	8 3/4"	11,916	12,581	12,278	7-5/8"	29.7	L-80 HC	TMK UP Ultra FJ	3.03	1.20	22.60
Production	6 3/4"	0	11,906	11,758	5-1/2"	20	L-80	LTC	1.40	1.19	1.79
Production	6 3/4"	11,906	22,591	12,377	5"	18	P-110	BTC	1.60	1.62	30.69
						BLM Minimum Safety Factor			1.125	1.00	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

Cimarex Energy Co., Dos Equis 12-13 Federal Com 5H

	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?	N

3. Cementing Program

Dos Equis 12-13 Federal Com 5H -- Sundry Cement Data						
Casing	Number of Sacks	Weight (lb/gal)	Yield (cuft/sk)	H2O (gal/sk)	500# comp. strength	Slurry Description
Surface	480	13.5	1.72	9.15	15.5	Lead: Class C + Bentonite
	128	14.8	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate Stage 1	592	10.3	3.64	22.18		Lead: Tuned Light + LCM
	200	14.8	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate Stage 2	782	12.9	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
Production	1,013	14.2	1.3	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

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

Casing String	TOC	% Excess
Surface	0	45
Intermediate Stage 1	4900	47
Intermediate Stage 2	0	37
Production	11906	25

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

4. Pressure Control Equipment

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

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

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

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'	FW Spud Mud	8.30 - 8.80	30-32	N/C
1235' to 12581'	Brine Diesel Emulsion	8.50 - 9.00	30-35	N/C
12581' to 22591'	OBM	10.00 - 10.50	50-70	N/C

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

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

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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6. Logging and Testing Procedures

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

Additional Logs Planned	Interval
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7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	6748 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.

X	H ₂ S is present
X	H ₂ S plan is attached

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

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 10000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

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

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

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

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

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

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



Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM 20Nov19 Proposal

Geodetic Report

(Non-Def Plan)



Report Date:	November 20, 2019 - 02:52 PM	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 #5H / New Slot	TVD Reference Datum:	RKB
Well:	Dos Equis 12-13 Federal Com #5H	TVD Reference Elevation:	3629.900 ft above MSL
Borehole:	Dos Equis 12-13 Federal Com #5H	Seabed / Ground Elevation:	3603.900 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.640 °
Survey Name:	Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM 20Nov19	Total Gravity Field Strength:	998.4386mgn (9.80665 Based)
Survey Date:	January 02, 2019	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	111.340 ° / 11488.423 ft / 6.369 / 0.929	Total Magnetic Field Strength:	47868.521 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.889 °
Location Lat / Long:	N 32° 14' 18.48585", W 103° 37' 38.35770"	Declination Date:	November 20, 2019
Location Grid N/E Y/X:	N 451205.770 ftUS, E 759626.780 ftUS	Magnetic Declination Model:	HDGM 2019
CRS Grid Convergence Angle:	0.3766 °	North Reference:	Grid North
Grid Scale Factor:	0.99996366	Grid Convergence Used:	0.3766 °
Version / Patch:	2.10.782.0	Total Corr Mag North->Grid North:	6.2630 °
		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 [360° FNL, 2330° FEL]	0.00	0.00	177.68	0.00	0.00	0.00	0.00	N/A	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
Rustler	100.00	0.00	76.50	100.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	200.00	0.00	76.50	200.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	300.00	0.00	76.50	300.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	400.00	0.00	76.50	400.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	500.00	0.00	76.50	500.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	600.00	0.00	76.50	600.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	700.00	0.00	76.50	700.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	800.00	0.00	76.50	800.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	900.00	0.00	76.50	900.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	1000.00	0.00	76.50	1000.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	1100.00	0.00	76.50	1100.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	1185.00	0.00	76.50	1185.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	1200.00	0.00	76.50	1200.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
	1300.00	0.00	76.50	1300.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
1400.00	0.00	76.50	1400.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36	
Salado (Top Salt) Nudge 2"/100' DLS	1500.00	0.00	76.50	1500.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
Hold Nudge	1600.00	2.00	76.50	1599.98	-0.40	0.41	1.70	2.00	451206.18	759628.48	N 32 14 18.49	W 103 37 38.34
	1700.00	4.00	76.50	1699.84	-1.59	1.63	6.79	2.00	451207.40	759633.57	N 32 14 18.50	W 103 37 38.28
	1800.00	6.00	76.50	1799.45	-3.57	3.66	15.26	2.00	451209.43	759642.04	N 32 14 18.52	W 103 37 38.18
	1900.00	8.00	76.50	1898.70	-6.35	6.51	27.11	2.00	451212.28	759653.89	N 32 14 18.55	W 103 37 38.04
	2000.00	10.00	76.50	1997.47	-9.91	10.16	42.32	2.00	451215.93	759669.10	N 32 14 18.58	W 103 37 37.86
	2033.50	10.67	76.50	2030.42	-11.28	11.56	48.16	2.00	451217.33	759674.94	N 32 14 18.60	W 103 37 37.80
	2100.00	10.67	76.50	2095.77	-14.08	14.44	60.14	0.00	451220.21	759686.91	N 32 14 18.62	W 103 37 37.66
	2200.00	10.67	76.50	2194.04	-18.30	18.76	78.14	0.00	451224.53	759704.92	N 32 14 18.67	W 103 37 37.45
	2300.00	10.67	76.50	2292.31	-22.51	23.08	96.14	0.00	451228.85	759722.92	N 32 14 18.71	W 103 37 37.24
	2400.00	10.67	76.50	2390.58	-26.73	27.40	114.15	0.00	451233.17	759740.92	N 32 14 18.75	W 103 37 37.03
	2500.00	10.67	76.50	2488.86	-30.94	31.73	132.15	0.00	451237.50	759758.93	N 32 14 18.79	W 103 37 36.82
	2600.00	10.67	76.50	2587.13	-35.16	36.05	150.15	0.00	451241.82	759776.93	N 32 14 18.83	W 103 37 36.61
	2700.00	10.67	76.50	2685.40	-39.37	40.37	168.16	0.00	451246.14	759794.93	N 32 14 18.87	W 103 37 36.40
	2800.00	10.67	76.50	2783.67	-43.59	44.69	186.16	0.00	451250.46	759812.93	N 32 14 18.92	W 103 37 36.19
Base of Salt	2900.00	10.67	76.50	2881.94	-47.80	49.02	204.17	0.00	451254.78	759830.94	N 32 14 18.96	W 103 37 35.98
	3000.00	10.67	76.50	2980.21	-52.02	53.34	222.17	0.00	451259.11	759848.94	N 32 14 19.00	W 103 37 35.77
	3100.00	10.67	76.50	3078.48	-56.23	57.66	240.17	0.00	451263.43	759866.94	N 32 14 19.04	W 103 37 35.56
	3200.00	10.67	76.50	3176.75	-60.45	61.98	258.18	0.00	451267.75	759884.95	N 32 14 19.08	W 103 37 35.35
	3300.00	10.67	76.50	3275.02	-64.66	66.30	276.18	0.00	451272.07	759902.95	N 32 14 19.12	W 103 37 35.14
	3400.00	10.67	76.50	3373.29	-68.88	70.63	294.18	0.00	451276.39	759920.95	N 32 14 19.17	W 103 37 34.93
	3500.00	10.67	76.50	3471.57	-73.10	74.95	312.19	0.00	451280.72	759938.96	N 32 14 19.21	W 103 37 34.72
	3600.00	10.67	76.50	3569.84	-77.31	79.27	330.19	0.00	451285.04	759956.96	N 32 14 19.25	W 103 37 34.51
	3700.00	10.67	76.50	3668.11	-81.53	83.59	348.19	0.00	451289.36	759974.96	N 32 14 19.29	W 103 37 34.30
	3800.00	10.67	76.50	3766.38	-85.74	87.92	366.20	0.00	451293.68	759992.96	N 32 14 19.33	W 103 37 34.09
	3900.00	10.67	76.50	3864.65	-89.96	92.24	384.20	0.00	451298.01	760010.97	N 32 14 19.37	W 103 37 33.88
	4000.00	10.67	76.50	3962.92	-94.17	96.56	402.21	0.00	451302.33	760028.97	N 32 14 19.42	W 103 37 33.67
	4100.00	10.67	76.50	4061.19	-98.39	100.88	420.21	0.00	451306.65	760046.97	N 32 14 19.46	W 103 37 33.46
	4200.00	10.67	76.50	4159.46	-102.60	105.21	438.21	0.00	451310.97	760064.98	N 32 14 19.50	W 103 37 33.25
Delaware Sands	4300.00	10.67	76.50	4257.73	-106.82	109.53	456.22	0.00	451315.29	760082.98	N 32 14 19.54	W 103 37 33.04
	4400.00	10.67	76.50	4356.00	-111.03	113.85	474.22	0.00	451319.62	760100.98	N 32 14 19.58	W 103 37 32.83
	4500.00	10.67	76.50	4454.28	-115.25	118.17	492.22	0.00	451323.94	760118.98	N 32 14 19.62	W 103 37 32.62
	4600.00	10.67	76.50	4552.55	-119.46	122.49	510.23	0.00	451328.26	760136.99	N 32 14 19.66	W 103 37 32.41
	4699.17	10.67	76.50	4650.00	-123.65	126.78	528.08	0.00	451332.55	760154.84	N 32 14 19.71	W 103 37 32.20
	4700.00	10.67	76.50	4650.82	-123.68	126.82	528.23	0.00	451332.58	760154.99	N 32 14 19.71	W 103 37 32.20
Delaware Sands	4800.00	10.67	76.50	4749.09	-127.90	131.14	546.23	0.00	451336.90	760172.99	N 32 14 19.75	W 103 37 31.99
	4900.00	10.67	76.50	4847.36	-132.11	135.46	564.24	0.00	451341.23	760191.00	N 32 14 19.79	W 103 37 31.78
	4973.92	10.67	76.50	4920.00	-135.23	138.66	577.55	0.00	451344.42	760204.30	N 32 14 19.82	W 103 37 31.62
	5000.00	10.67	76.50	4945.63	-136.33	139.78	582.24	0.00	451345.55	760209.00	N 32 14 19.83	W 103 37 31.57
	5100.00	10.67	76.50	5043.90	-140.54	144.11	600.25	0.00	451349.87	760227.00	N 32 14 19.87	W 103 37 31.36
	5200.00	10.67	76.50	5142.17	-144.76	148.43	618.25	0.00	451354.19	760245.01	N 32 14 19.91	W 103 37 31.15
	5300.00	10.67	76.50	5240.44	-148.97	152.75	636.25	0.00	451358.51	760263.01	N 32 14 19.96	W 103 37 30.94
	5400.00	10.67	76.50	5338.71	-153.19	157.07	654.26	0.00	451362.84	760281.01	N 32 14 20.00	W 103 37 30.73
	5500.00	10.67	76.50	5436.99	-157.40	161.40	672.26	0.00	451367.16	760299.01	N 32 14 20.04	W 103 37 30.52
	5600.00	10.67	76.50	5535.26	-161.62	165.72	690.26	0.00	451371.48	760317.02	N 32 14 20.08	W 103 37 30.31
	5700.00	10.67	76.50	5633.53	-165.83	170.04	708.27	0.00	451375.80	760335.02	N 32 14 20.12	W 103 37 30.10
	5800.00	10.67	76.50	5731.80	-170.05	174.36	726.27	0.00	451380.13	760353.02	N 32 14 20.16	W 103 37 29.89
	5900.00	10.67	76.50	5830.07	-174.26	178.68	744.27	0.00	451384.45	760371.03	N 32 14 20.21	W 103 37 29.68
	6000.00	10.67	76.50	5928.34	-178.48	183.01	762.28	0.00	451388.77	760389.03	N 32 14 20.25	W 103 37 29.47
6100.00	10.67	76.50	6026.61	-182.70	187.33	780.28	0.00	451393.09	760407.03	N 32 14 20.29	W 103 37 29.26	
6200.00	10.67	76.50	6124.88	-186.91	191.65	798.29	0.00	451397.41	760425.03	N 32 14 20.33	W 103 37 29.05	
6300.00	10.67	76.50	6223.15	-191.13	195.97	816.29	0.00	451401.74	760443.04	N 32 14 20.37	W 103 37 28.84	
6400.00	10.67	76.50	6321.42	-195.34	200.30	834.29	0.00	451406.06	760461.04	N 32 14 20.41	W 103 37 28.63	
6500.00	10.67	76.50	6419.70	-199.56	204.62	852.30	0.00	451410.38	760479.04	N 32 14 20.45	W 103 37 28.42	
6600.00	10.67	76.50	6517.97	-203.77	208.94	870.30	0.00	451414.70	760497.05	N 32 14 20.50	W 103 37 28.21	
6700.00	10.67	76.50	6616.24	-207.99	213.26	888.30	0.00	451419.02	760515.05	N 32 14 20.54	W 103 37 28.00	
6800.00	10.67	76.50	6714.51	-212.20	217.59	906.31	0.00	451423.35	760533.05	N 32 14 20.58	W 103 37 27.78	

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 ° ' '')
	6900.00	10.67	76.50	6812.78	-216.42	221.91	924.31	0.00	451427.67	760551.06	N 32 14 20.62	W 103 37 27.58
	7000.00	10.67	76.50	6911.05	-220.63	226.23	942.31	0.00	451431.99	760569.06	N 32 14 20.66	W 103 37 27.37
	7100.00	10.67	76.50	7009.32	-224.85	230.55	960.32	0.00	451436.31	760587.06	N 32 14 20.70	W 103 37 27.16
	7200.00	10.67	76.50	7107.59	-229.06	234.87	978.32	0.00	451440.64	760605.06	N 32 14 20.75	W 103 37 26.95
	7300.00	10.67	76.50	7205.86	-233.28	239.20	996.33	0.00	451444.96	760623.07	N 32 14 20.79	W 103 37 26.74
	7400.00	10.67	76.50	7304.13	-237.50	243.52	1014.33	0.00	451449.28	760641.07	N 32 14 20.83	W 103 37 26.53
	7500.00	10.67	76.50	7402.41	-241.71	247.84	1032.33	0.00	451453.60	760659.07	N 32 14 20.87	W 103 37 26.32
Drop to Vertical 2°/100' DLS	7599.31	10.67	76.50	7500.00	-245.90	252.13	1050.21	0.00	451457.89	760676.95	N 32 14 20.91	W 103 37 26.11
	7600.00	10.66	76.50	7500.68	-245.93	252.16	1050.34	2.00	451457.92	760677.08	N 32 14 20.91	W 103 37 26.11
	7700.00	8.66	76.50	7599.25	-249.74	256.08	1066.65	2.00	451461.84	760693.38	N 32 14 20.95	W 103 37 25.92
	7800.00	6.66	76.50	7698.36	-252.78	259.19	1079.60	2.00	451464.95	760706.34	N 32 14 20.98	W 103 37 25.77
	7900.00	4.66	76.50	7797.87	-255.02	261.49	1089.18	2.00	451467.25	760715.92	N 32 14 21.00	W 103 37 25.66
	8000.00	2.66	76.50	7897.66	-256.47	262.98	1095.38	2.00	451468.74	760722.12	N 32 14 21.02	W 103 37 25.58
	8100.00	0.66	76.50	7997.61	-257.13	263.65	1098.19	2.00	451469.41	760724.93	N 32 14 21.02	W 103 37 25.55
Hold Vertical	8132.81	0.00	76.50	8030.42	-257.17	263.70	1098.38	2.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	8200.00	0.00	76.50	8097.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	8300.00	0.00	76.50	8197.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	8400.00	0.00	76.50	8297.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	8500.00	0.00	76.50	8397.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	8600.00	0.00	76.50	8497.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	8700.00	0.00	76.50	8597.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	8800.00	0.00	76.50	8697.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	8900.00	0.00	76.50	8797.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
Bone Spring	8917.39	0.00	76.50	8815.00	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9000.00	0.00	76.50	8897.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9100.00	0.00	76.50	8997.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9200.00	0.00	76.50	9097.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9300.00	0.00	76.50	9197.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9400.00	0.00	76.50	9297.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9500.00	0.00	76.50	9397.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9600.00	0.00	76.50	9497.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9700.00	0.00	76.50	9597.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9800.00	0.00	76.50	9697.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	9900.00	0.00	76.50	9797.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10000.00	0.00	76.50	9897.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
1st Bone Spring Sand	10012.39	0.00	76.50	9910.00	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10100.00	0.00	76.50	9997.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10200.00	0.00	76.50	10097.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10300.00	0.00	76.50	10197.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10400.00	0.00	76.50	10297.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10500.00	0.00	76.50	10397.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10600.00	0.00	76.50	10497.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10700.00	0.00	76.50	10597.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
2nd Bone Spring Sand	10737.39	0.00	76.50	10635.00	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10800.00	0.00	76.50	10697.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	10900.00	0.00	76.50	10797.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11000.00	0.00	76.50	10897.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11100.00	0.00	76.50	10997.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
3rd Bone Spring Carb	11187.39	0.00	76.50	11085.00	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11200.00	0.00	76.50	11097.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11300.00	0.00	76.50	11197.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11400.00	0.00	76.50	11297.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11500.00	0.00	76.50	11397.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11600.00	0.00	76.50	11497.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11700.00	0.00	76.50	11597.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11800.00	0.00	76.50	11697.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	11900.00	0.00	76.50	11797.61	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
3rd Bone Spring Sand	11937.39	0.00	76.50	11835.00	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
KOP - Build 12°/100' DLS	11952.39	0.00	76.50	11850.00	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
	12000.00	5.71	179.66	11897.53	-254.80	261.32	1098.39	12.00	451467.08	760725.13	N 32 14 21.00	W 103 37 25.55
	12100.00	17.71	179.66	11995.27	-234.54	241.06	1098.51	12.00	451446.82	760725.25	N 32 14 20.80	W 103 37 25.55
	12200.00	29.71	179.66	12086.66	-194.39	200.92	1098.75	12.00	451406.68	760725.49	N 32 14 20.40	W 103 37 25.55
	12300.00	41.71	179.66	12167.71	-136.13	142.65	1099.09	12.00	451348.42	760725.83	N 32 14 19.83	W 103 37 25.55
	12400.00	53.71	179.66	12234.87	-62.28	68.81	1099.53	12.00	451274.58	760726.27	N 32 14 19.10	W 103 37 25.55
Wolfcamp	12417.57	55.82	179.66	12245.00	-47.94	54.46	1099.62	12.00	451260.23	760726.36	N 32 14 18.95	W 103 37 25.55
	12500.00	65.71	179.66	12285.21	23.91	-17.38	1100.04	12.00	451188.39	760726.78	N 32 14 18.24	W 103 37 25.55
Build 4°/100' DLS	12577.39	75.00	179.66	12311.19	96.71	-90.18	1100.48	12.00	451115.59	760727.21	N 32 14 17.52	W 103 37 25.55
	12600.00	75.90	179.66	12316.87	118.60	-112.07	1100.61	4.00	451093.70	760727.34	N 32 14 17.31	W 103 37 25.55
	12700.00	79.90	179.66	12337.82	216.36	-209.83	1101.19	4.00	450995.95	760727.92	N 32 14 16.34	W 103 37 25.55
	12800.00	83.90	179.66	12351.90	315.34	-308.81	1101.77	4.00	450896.97	760728.51	N 32 14 15.36	W 103 37 25.55
	12900.00	87.90	179.66	12359.04	415.07	-408.53	1102.37	4.00	450797.25	760729.10	N 32 14 14.37	W 103 37 25.56
	12952.39	90.00	179.66	12360.00	467.44	-460.91	1102.68	4.00	450744.88	760729.41	N 32 14 13.85	W 103 37 25.56
	13000.00	90.00	179.66	12360.00	515.06	-508.52	1102.96	0.00	450697.27	760729.70	N 32 14 13.38	W 103 37 25.56
	13100.00	90.00	179.66	12360.00	615.06	-608.52	1103.55	0.00	450597.27	760730.29	N 32 14 12.39	W 103 37 25.56
	13200.00	90.00	179.66	12360.00	715.06	-708.52	1104.15	0.00	450497.28	760730.88	N 32 14 11.40	W 103 37 2

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	12360.00	3515.06	-3508.47	1120.76	0.00	447697.44	760747.50	N 32 13 43.70	W 103 37 25.58
	16100.00	90.00	179.66	12360.00	3615.06	-3608.47	1121.35	0.00	447597.44	760748.09	N 32 13 42.71	W 103 37 25.58
	16200.00	90.00	179.66	12360.00	3715.06	-3708.47	1121.95	0.00	447497.45	760748.68	N 32 13 41.72	W 103 37 25.58
	16300.00	90.00	179.66	12360.00	3815.06	-3808.46	1122.54	0.00	447397.45	760749.28	N 32 13 40.73	W 103 37 25.58
	16400.00	90.00	179.66	12360.00	3915.06	-3908.46	1123.13	0.00	447297.46	760749.87	N 32 13 39.74	W 103 37 25.58
	16500.00	90.00	179.66	12360.00	4015.06	-4008.46	1123.73	0.00	447197.46	760750.46	N 32 13 38.75	W 103 37 25.58
	16600.00	90.00	179.66	12360.00	4115.06	-4108.46	1124.32	0.00	447097.47	760751.06	N 32 13 37.76	W 103 37 25.58
	16700.00	90.00	179.66	12360.00	4215.06	-4208.46	1124.91	0.00	446997.47	760751.65	N 32 13 36.77	W 103 37 25.58
	16800.00	90.00	179.66	12360.00	4315.06	-4308.45	1125.51	0.00	446897.48	760752.24	N 32 13 35.78	W 103 37 25.59
	16900.00	90.00	179.66	12360.00	4415.06	-4408.45	1126.10	0.00	446797.49	760752.84	N 32 13 34.79	W 103 37 25.59
	17000.00	90.00	179.66	12360.00	4515.06	-4508.45	1126.69	0.00	446697.49	760753.43	N 32 13 33.80	W 103 37 25.59
	17100.00	90.00	179.66	12360.00	4615.06	-4608.45	1127.29	0.00	446597.50	760754.02	N 32 13 32.81	W 103 37 25.59
	17200.00	90.00	179.66	12360.00	4715.06	-4708.45	1127.88	0.00	446497.50	760754.62	N 32 13 31.82	W 103 37 25.59
	17300.00	90.00	179.66	12360.00	4815.06	-4808.45	1128.47	0.00	446397.51	760755.21	N 32 13 30.83	W 103 37 25.59
	17400.00	90.00	179.66	12360.00	4915.06	-4908.44	1129.07	0.00	446297.51	760755.80	N 32 13 29.84	W 103 37 25.59
	17500.00	90.00	179.66	12360.00	5015.06	-5008.44	1129.66	0.00	446197.52	760756.40	N 32 13 28.85	W 103 37 25.59
	17600.00	90.00	179.66	12360.00	5115.06	-5108.44	1130.25	0.00	446097.53	760756.99	N 32 13 27.86	W 103 37 25.59
	17700.00	90.00	179.66	12360.00	5215.06	-5208.44	1130.85	0.00	445997.53	760757.58	N 32 13 26.88	W 103 37 25.59
	17800.00	90.00	179.66	12360.00	5315.06	-5308.44	1131.44	0.00	445897.54	760758.18	N 32 13 25.89	W 103 37 25.59
	17900.00	90.00	179.66	12360.00	5415.06	-5408.44	1132.03	0.00	445797.54	760758.77	N 32 13 24.90	W 103 37 25.59
	18000.00	90.00	179.66	12360.00	5515.06	-5508.43	1132.63	0.00	445697.55	760759.36	N 32 13 23.91	W 103 37 25.59
	18100.00	90.00	179.66	12360.00	5615.06	-5608.43	1133.22	0.00	445597.55	760759.96	N 32 13 22.92	W 103 37 25.60
	18200.00	90.00	179.66	12360.00	5715.06	-5708.43	1133.81	0.00	445497.56	760760.55	N 32 13 21.93	W 103 37 25.60
	18300.00	90.00	179.66	12360.00	5815.06	-5808.43	1134.41	0.00	445397.56	760761.14	N 32 13 20.94	W 103 37 25.60
	18400.00	90.00	179.66	12360.00	5915.06	-5908.43	1135.00	0.00	445297.57	760761.74	N 32 13 19.95	W 103 37 25.60
	18500.00	90.00	179.66	12360.00	6015.06	-6008.42	1135.60	0.00	445197.58	760762.33	N 32 13 18.96	W 103 37 25.60
	18600.00	90.00	179.66	12360.00	6115.06	-6108.42	1136.19	0.00	445097.58	760762.92	N 32 13 17.97	W 103 37 25.60
	18700.00	90.00	179.66	12360.00	6215.06	-6208.42	1136.78	0.00	444997.59	760763.52	N 32 13 16.98	W 103 37 25.60
	18800.00	90.00	179.66	12360.00	6315.06	-6308.42	1137.38	0.00	444897.59	760764.11	N 32 13 15.99	W 103 37 25.60
	18900.00	90.00	179.66	12360.00	6415.06	-6408.42	1137.97	0.00	444797.60	760764.70	N 32 13 15.00	W 103 37 25.60
	19000.00	90.00	179.66	12360.00	6515.06	-6508.42	1138.56	0.00	444697.60	760765.30	N 32 13 14.01	W 103 37 25.60
	19100.00	90.00	179.66	12360.00	6615.06	-6608.41	1139.16	0.00	444597.61	760765.89	N 32 13 13.02	W 103 37 25.60
	19200.00	90.00	179.66	12360.00	6715.06	-6708.41	1139.75	0.00	444497.61	760766.49	N 32 13 12.03	W 103 37 25.60
	19300.00	90.00	179.66	12360.00	6815.06	-6808.41	1140.34	0.00	444397.62	760767.08	N 32 13 11.04	W 103 37 25.61
	19400.00	90.00	179.66	12360.00	6915.06	-6908.41	1140.94	0.00	444297.63	760767.67	N 32 13 10.05	W 103 37 25.61
	19500.00	90.00	179.66	12360.00	7015.06	-7008.41	1141.53	0.00	444197.63	760768.27	N 32 13 9.06	W 103 37 25.61
	19600.00	90.00	179.66	12360.00	7115.06	-7108.41	1142.12	0.00	444097.64	760768.86	N 32 13 8.07	W 103 37 25.61
	19700.00	90.00	179.66	12360.00	7215.06	-7208.40	1142.72	0.00	443997.64	760769.45	N 32 13 7.08	W 103 37 25.61
	19800.00	90.00	179.66	12360.00	7315.06	-7308.40	1143.31	0.00	443897.65	760770.05	N 32 13 6.10	W 103 37 25.61
	19900.00	90.00	179.66	12360.00	7415.06	-7408.40	1143.90	0.00	443797.65	760770.64	N 32 13 5.11	W 103 37 25.61
	20000.00	90.00	179.66	12360.00	7515.06	-7508.40	1144.50	0.00	443697.66	760771.23	N 32 13 4.12	W 103 37 25.61
	20100.00	90.00	179.66	12360.00	7615.06	-7608.40	1145.09	0.00	443597.67	760771.83	N 32 13 3.13	W 103 37 25.61
	20200.00	90.00	179.66	12360.00	7715.06	-7708.39	1145.68	0.00	443497.67	760772.42	N 32 13 2.14	W 103 37 25.61
	20300.00	90.00	179.66	12360.00	7815.06	-7808.39	1146.28	0.00	443397.68	760773.01	N 32 13 1.15	W 103 37 25.61
	20400.00	90.00	179.66	12360.00	7915.06	-7908.39	1146.87	0.00	443297.68	760773.61	N 32 13 0.16	W 103 37 25.61
	20500.00	90.00	179.66	12360.00	8015.06	-8008.39	1147.46	0.00	443197.69	760774.20	N 32 12 59.17	W 103 37 25.61
	20600.00	90.00	179.66	12360.00	8115.06	-8108.39	1148.06	0.00	443097.69	760774.79	N 32 12 58.18	W 103 37 25.62
	20700.00	90.00	179.66	12360.00	8215.06	-8208.39	1148.65	0.00	442997.70	760775.39	N 32 12 57.19	W 103 37 25.62
	20800.00	90.00	179.66	12360.00	8315.06	-8308.38	1149.24	0.00	442897.70	760775.98	N 32 12 56.20	W 103 37 25.62
	20900.00	90.00	179.66	12360.00	8415.06	-8408.38	1149.84	0.00	442797.71	760776.57	N 32 12 55.21	W 103 37 25.62
	21000.00	90.00	179.66	12360.00	8515.06	-8508.38	1150.43	0.00	442697.72	760777.17	N 32 12 54.22	W 103 37 25.62
	21100.00	90.00	179.66	12360.00	8615.06	-8608.38	1151.02	0.00	442597.72	760777.76	N 32 12 53.23	W 103 37 25.62
	21200.00	90.00	179.66	12360.00	8715.06	-8708.38	1151.62	0.00	442497.73	760778.35	N 32 12 52.24	W 103 37 25.62
	21300.00	90.00	179.66	12360.00	8815.06	-8808.38	1152.21	0.00	442397.73	760778.95	N 32 12 51.25	W 103 37 25.62
	21400.00	90.00	179.66	12360.00	8915.06	-8908.37	1152.80	0.00	442297.74	760779.54	N 32 12 50.26	W 103 37 25.62
	21500.00	90.00	179.66	12360.00	9015.06	-9008.37	1153.40	0.00	442197.74	760780.13	N 32 12 49.27	W 103 37 25.62
	21600.00	90.00	179.66	12360.00	9115.06	-9108.37	1153.99	0.00	442097.75	760780.73	N 32 12 48.28	W 103 37 25.62
	21700.00	90.00	179.66	12360.00	9215.06	-9208.37	1154.58	0.00	441997.75	760781.32	N 32 12 47.29	W 103 37 25.62
	21800.00	90.00	179.66	12360.00	9315.06	-9308.37	1155.18	0.00	441897.76	760781.91	N 32 12 46.30	W 103 37 25.62
	21900.00	90.00	179.66	12360.00	9415.06	-9408.36	1155.77	0.00	441797.77	760782.51	N 32 12 45.32	W 103 37 25.63
	22000.00	90.00	179.66	12360.00	9515.06	-9508.36	1156.36	0.00	441697.77	760783.10	N 32 12 44.33	W 103 37 25.63
	22100.00	90.00	179.66	12360.00	9615.06	-9608.36	1156.96	0.00	441597.78	760783.69	N 32 12 43.34	W 103 37 25.63
	22200.00	90.00	179.66	12360.00	9715.06	-9708.36	1157.55	0.00	441497.78	760784.29	N 32 12 42.35	W 103 37 25.63
	22300.00	90.00	179.66	12360.00	9815.06	-9808.36	1158.14	0.00	441397.79	760784.88	N 32 12 41.36	W 103 37 25.63
	22400.00	90.00	179.66	12360.00	9915.06	-9908.36	1158.74	0.00	441297.79	760785.47	N 32 12 40.37	W 103 37 25.63
	22500.00	90.00	179.66	12360.00	10015.06	-10008.35	1159.33	0.00	441197.80	760786.07	N 32 12 39.38	W 103 37 25.63
Cimarex Dos Equis 12-13 Federal Com #5H - PBHL [100' FSL, 1230' FEL]	22586.60	90.00	179.66	12360.00	10101.66	-10094.96	1159.84	0.00	441111.20	760786.58	N 32 12 38.52	W 103 37 25.63

Survey Type: Non-Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #5H / Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM
	1	26.000	22586.604	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #5H / Cimarex Dos Equis 12-13



Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM 20Nov19 Proposal Geodetic Report (Non-Def Plan)



Report Date: November 20, 2019 - 02:53 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #5H / New Slot
Well: Dos Equis 12-13 Federal Com #5H
Borehole: Dos Equis 12-13 Federal Com #5H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM 20Nov19
Survey Date: January 02, 2019
Tort / AHD / DDI / ERD Ratio: 111.340 ° / 11488.423 ft / 6.369 / 0.929
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 18.48585", W 103° 37' 38.35770"
Location Grid N/E Y/X: N 451205.770 ftUS, E 759626.780 ftUS
CRS Grid Convergence Angle: 0.3766 °
Grid Scale Factor: 0.99996366
Version / Patch: 2.10.782.0

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: 3629.900 ft above MSL
Seabed / Ground Elevation: 3603.900 ft above MSL
Magnetic Declination: 6.640 °
Total Gravity Field Strength: 998.4386mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47868.521 nT
Magnetic Dip Angle: 59.889 °
Declination Date: November 20, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3766 °
Total Corr Mag North->Grid North: 6.2630 °
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 [360' FNL, 2330' FEL]	0.00	0.00	177.68	0.00	0.00	0.00	0.00	N/A	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
Nudge 2"/100'	1500.00	0.00	76.50	1500.00	0.00	0.00	0.00	0.00	451205.77	759626.78	N 32 14 18.49	W 103 37 38.36
DLS	2033.50	10.67	76.50	2030.42	-11.28	11.56	48.16	2.00	451217.33	759674.94	N 32 14 18.60	W 103 37 37.80
Hold Nudae	7599.31	10.67	76.50	7500.00	-245.90	252.13	1050.21	0.00	451457.89	760676.95	N 32 14 20.91	W 103 37 26.11
Drop to Vertical	8132.81	0.00	76.50	8030.42	-257.17	263.70	1098.38	2.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
2"/100' DLS	11952.39	0.00	76.50	11850.00	-257.17	263.70	1098.38	0.00	451469.46	760725.11	N 32 14 21.02	W 103 37 25.55
Hold Vertical	12577.39	75.00	179.66	12311.19	96.71	-90.18	1100.48	12.00	451115.59	760727.21	N 32 14 17.52	W 103 37 25.55
KOP - Build	12952.39	90.00	179.66	12360.00	467.44	-460.91	1102.68	4.00	450744.88	760729.41	N 32 14 13.85	W 103 37 25.56
12"/100' DLS												
Build 4"/100'												
DLS												
Landing Point												
Cimarex Dos												
Equis 12-13												
Federal Com												
#5H - PBHL	22586.60	90.00	179.66	12360.00	10101.66	-10094.96	1159.84	0.00	441111.20	760786.58	N 32 12 38.52	W 103 37 25.63
[100' FSL, 1230' FEL]												

Survey Type: Non-Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #5H / Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM
	1	26.000	22586.604	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #5H / Cimarex Dos Equis 12-13



Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM 20Nov19 Anti-Collision Summary Report

Analysis Date-24hr Time: November 20, 2019 - 14:53

Client: Cimarex Energy

Field: NM Lea County (NAD 83)

Structure: Cimarex Dos Equis 12-13 Federal Com #5H

Slot: New Slot

Well: Dos Equis 12-13 Federal Com #5H

Borehole: Dos Equis 12-13 Federal Com #5H

Scan MD Range: 0.00ft ~ 22586.60ft

Analysis Method: 3D Least Distance

Reference Trajectory: Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM 20Nov19 (Non-Def Plan)

Depth Interval: Every 10.00 Measured Depth (ft)

Rule Set: NAL Procedure: D&M AntiCollision Standard S002

Min Pts: All local minima indicated.

Version / Patch: 2.10.782.0

Database \ Project: US1153APP452.dir.slb.com\drilling-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: Restricted within 63328.21 ft

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 #87H Rev0 RM 13Sept19 (Non-Def Plan)													
	879.89	32.81	878.60	847.08	N/A	MAS = 10.00 (m)	0.00	0.00					Fail Major
	879.88	32.81	878.59	847.07	N/A	MAS = 10.00 (m)	26.00	26.00					Surface
	199.09	59.39	159.06	139.70	5.11	OSF1.50	6390.00	6311.60					WRP
	199.26	59.92	158.89	139.34	5.06	OSF1.50	6440.00	6360.73					MinPt-CtCt
	199.45	60.13	158.93	139.32	5.05	OSF1.50	6460.00	6380.39					MINPT-O-EQU
	202.68	61.61	161.18	141.07	5.04	OSF1.50	6600.00	6517.97					MinPt-O-SF
	331.31	100.33	264.00	230.99	5.00	OSF1.50	12060.00	11956.70	OSF<5.00				Enter Alert
	155.97	94.91	92.27	61.06	2.48	OSF1.50	12900.00	12359.04					MinPt-CtCt
	155.97	94.91	92.24	61.02	2.48	OSF1.50	12910.00	12359.37					MINPT-O-EQU
	155.99	94.98	92.25	61.02	2.49	OSF1.50	12920.00	12359.63					MinPts
	156.54	156.75	51.61	-0.21	1.50	OSF1.50	17030.00	12360.00		OSF<1.50			Enter Minor
	155.91	224.85	5.64	-68.88	1.04	OSF1.50	19530.00	12360.00					MinPt-CtCt
	155.98	233.49	-0.11	-77.51	1.00	OSF1.50	19830.00	12360.00					Enter Major
	156.82	315.25	-53.77	-158.43	0.74	OSF1.50	22586.60	12360.00			OSF<1.00		MinPts

Cimarex Dos Equis 12-13 Federal Com #73H Rev0 RM 2Jan19 (Non-Def Plan)													
	20.00	16.40	18.02	3.60	N/A	MAS = 5.00 (m)	0.00	0.00			CtCt<=15m<15.00		Warning Alert
	20.00	16.40	18.02	3.60	81114.11	MAS = 5.00 (m)	26.00	26.00					Enter Alert
	20.00	16.40	8.99	3.60	2.00	MAS = 5.00 (m)	1500.00	1500.00					WRP
	20.17	16.40	8.80	3.77	1.94	MAS = 5.00 (m)	1580.00	1579.99					MinPts
	20.27	16.40	8.82	3.87	1.93	MAS = 5.00 (m)	1600.00	1599.98					MINPT-O-EQU
	61.55	19.95	47.59	41.60	4.97	OSF1.50	2270.00	2262.83	OSF>5.00				MinPt-O-SF
	749.89	92.11	687.83	657.79	12.45	OSF1.50	11950.00	11847.61					Exit Alert
	749.89	92.11	687.82	657.78	12.45	OSF1.50	11952.39	11850.00					MinPt-CtCt
	752.30	227.29	600.11	525.01	5.00	OSF1.50	19640.00	12360.00	OSF<5.00				MinPts
	752.30	318.23	539.49	434.07	3.59	OSF1.50	22586.60	12360.00					Enter Alert

Cimarex Dos Equis 12 Federal Com #2H ST01 Gyro+MWD 10486ft to 13433ft MD (Def Survey)													
	359.39	32.81	357.41	326.58	N/A	MAS = 10.00 (m)	0.00	0.00					Warning Alert
	359.35	32.81	357.37	326.55	105193.56	MAS = 10.00 (m)	26.00	26.00					Surface
	67.50	32.81	52.29	34.69	5.00	MAS = 10.00 (m)	3340.00	3314.33	OSF<5.00				WRP
	44.11	32.81	28.00	11.30	2.98	MAS = 10.00 (m)	3630.00	3599.32					Enter Alert
	44.14	32.81	27.93	11.34	2.96	MAS = 10.00 (m)	3640.00	3609.15					MinPts
	44.66	32.81	28.16	11.85	2.94	MAS = 10.00 (m)	3670.00	3638.63					MINPT-O-EQU
	83.78	32.81	65.37	50.97	4.98	MAS = 10.00 (m)	4030.00	3992.40	OSF>5.00				MinPt-O-SF
	776.17	48.65	743.08	727.52	24.88	OSF1.50	8210.00	8107.61					Exit Alert
	807.10	53.81	770.57	753.29	23.30	OSF1.50	9890.00	9787.61					MinPt-O-SF
	837.68	56.89	799.09	780.79	22.83	OSF1.50	10640.00	10537.61					MinPt-O-SF
	1584.42	41.97	1555.78	1542.45	59.36	OSF1.50	13140.00	12360.00					MinPt-CtCt
	1584.90	43.76	1555.07	1541.14	56.83	OSF1.50	13230.00	12360.00					MINPT-O-EQU
	1585.57	44.55	1555.21	1541.02	55.79	OSF1.50	13270.00	12360.00					MinPt-O-ADP
	1589.24	49.58	1555.53	1539.66	50.02	OSF1.50	13460.00	12360.00					MINPT-O-EQU
	1590.01	53.82	1553.47	1536.19	45.95	OSF1.50	13590.00	12360.00					MinPt-CtCt
	1540.33	97.74	1474.51	1442.59	24.10	OSF1.50	14920.00	12360.00					MinPt-CtCt
	1542.06	143.18	1445.94	1398.88	16.39	OSF1.50	15120.00	12360.00					MinPts
	7649.64	80.68	7595.19	7568.96	145.76	OSF1.50	22586.60	12360.00					TD

Cimarex Dos Equis 12 Federal Com #2H ST02 Gyro+MWD 13330ft to 15399ft MD (Def Survey)													
	359.39	32.81	357.41	326.58	N/A	MAS = 10.00 (m)	0.00	0.00					Warning Alert
	359.35	32.81	357.37	326.55	105193.56	MAS = 10.00 (m)	26.00	26.00					Surface
	67.50	32.81	52.29	34.69	5.00	MAS = 10.00 (m)	3340.00	3314.33	OSF<5.00				WRP
	44.11	32.81	28.00	11.30	2.98	MAS = 10.00 (m)	3630.00	3599.32					Enter Alert
	44.14	32.81	27.93	11.34	2.96	MAS = 10.00 (m)	3640.00	3609.15					MinPts
	44.66	32.81	28.16	11.85	2.94	MAS = 10.00 (m)	3670.00	3638.63					MINPT-O-EQU
	83.78	32.81	65.37	50.97	4.98	MAS = 10.00 (m)	4030.00	3992.40	OSF>5.00				MinPt-O-SF
	776.17	48.65	743.08	727.52	24.88	OSF1.50	8210.00	8107.61					Exit Alert
	807.10	53.81	770.57	753.29	23.30	OSF1.50	9890.00	9787.61					MinPt-O-SF
	837.68	56.89	799.09	780.79	22.83	OSF1.50	10640.00	10537.61					MinPt-O-SF
	1584.42	41.97	1555.78	1542.45	59.36	OSF1.50	13140.00	12360.00					MinPt-CtCt
	1584.90	43.76	1555.07	1541.14	56.83	OSF1.50	13230.00	12360.00					MINPT-O-EQU
	1585.57	44.55	1555.21	1541.02	55.79	OSF1.50	13270.00	12360.00					MinPt-O-ADP
	1589.24	49.58	1555.53	1539.66	50.02	OSF1.50	13460.00	12360.00					MINPT-O-EQU
	1590.01	53.82	1553.47	1536.19	45.95	OSF1.50	13590.00	12360.00					MinPt-CtCt
	1540.33	97.74	1474.51	1442.59	24.10	OSF1.50	14920.00	12360.00					MinPt-CtCt

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
1497.71	135.96	1406.41	1361.75	16.75		OSF1.50	16040.00	12360.00				MinPt-CtCt	
1502.15	146.88	1403.58	1355.28	15.53		OSF1.50	16370.00	12360.00				MINPT-O-EOU	
1504.98	150.38	1404.07	1354.60	15.19		OSF1.50	16480.00	12360.00				MinPt-O-ADP	
1507.53	167.96	1394.90	1339.57	13.61		OSF1.50	16940.00	12360.00				MinPt-CtCt	
1507.73	196.36	1376.17	1311.38	11.62		OSF1.50	17050.00	12360.00				MinPts	
1508.10	196.49	1376.45	1311.61	11.61		OSF1.50	17080.00	12360.00				MinPt-O-SF	
5741.55	94.86	5677.65	5646.69	92.69		OSF1.50	22586.60	12360.00				TD	

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

Warning Alert

359.39	32.81	357.41	326.58	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
359.35	32.81	357.37	326.55	105193.56	MAS = 10.00 (m)	26.00	26.00					WRP	
67.50	32.81	52.29	34.69	5.00	MAS = 10.00 (m)	3340.00	3314.33	OSF<5.00				Enter Alert	
44.11	32.81	28.00	11.30	2.98	MAS = 10.00 (m)	3630.00	3599.32					MinPts	
44.14	32.81	27.93	11.34	2.96	MAS = 10.00 (m)	3640.00	3609.15					MINPT-O-EOU	
44.66	32.81	28.16	11.85	2.94	MAS = 10.00 (m)	3670.00	3638.63	OSF>5.00				MinPt-O-SF	
83.78	32.81	65.37	50.97	4.98	MAS = 10.00 (m)	4030.00	3992.40					Exit Alert	
776.17	48.65	743.08	727.52	24.88	OSF1.50	8210.00	8107.61					MinPt-O-ADP	
807.10	53.81	770.57	753.29	23.34	OSF1.50	9890.00	9787.61					MinPt-O-SF	
867.03	62.80	824.50	804.23	21.34	OSF1.50	11952.39	11850.00					MinPt-O-SF	
849.09	60.21	808.26	788.83	21.80	OSF1.50	12430.00	12251.85					MinPts	
10146.37	57.48	10107.39	10088.89	274.19	OSF1.50	22586.60	12360.00					TD	

Cimarex Dos Equis 12-13
Federal Com #86H Rev0 RM
2Jan19 (Non-Def Plan)

Warning Alert

899.89	32.81	897.91	867.08	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
899.88	32.81	897.90	867.07	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
745.33	69.76	698.11	675.57	16.49	OSF1.50	7670.00	7569.62					MinPt-CtCt	
745.33	69.78	698.06	675.55	16.49	OSF1.50	7680.00	7579.49					MinPts	
746.05	69.91	698.73	676.15	16.47	OSF1.50	7740.00	7638.84					MinPt-O-SF	
899.89	88.19	840.43	811.70	15.62	OSF1.50	11952.39	11850.00					MinPts	
899.88	88.13	840.47	811.75	15.63	OSF1.50	11970.00	11867.61					MinPt-CtCt	
901.65	271.98	719.67	629.67	5.00	OSF1.50	20780.00	12360.00	OSF<5.00				Enter Alert	
901.65	328.11	682.25	573.54	4.14	OSF1.50	22580.00	12360.00					MinPt-CtCt	
901.65	328.38	682.08	573.28	4.13	OSF1.50	22586.60	12360.00					MinPts	

Cimarex Dos Equis 12-13
Federal Com #6H - Rev1 RM
20Nov19 (Def Plan)

Warning Alert

919.88	32.81	918.59	887.07	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
919.87	32.81	918.58	887.06	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
851.99	67.35	806.67	784.66	19.33	OSF1.50	7610.00	7510.51					MinPts	
852.01	67.35	806.67	784.65	19.32	OSF1.50	7620.00	7520.34					MinPt-O-ADP	
853.22	67.51	807.78	785.71	19.30	OSF1.50	7700.00	7599.25					MinPt-O-SF	
937.34	78.54	884.58	858.84	18.19	OSF1.50	11080.00	10977.61					MINPT-O-EOU	
937.37	78.54	884.58	858.83	18.18	OSF1.50	11090.00	10987.61					MinPt-O-ADP	
939.57	78.93	886.52	860.63	18.13	OSF1.50	11230.00	11127.61					MinPt-O-SF	
899.88	80.83	845.57	819.05	16.95	OSF1.50	13620.00	12360.00	OSF<5.00				MinPt-CtCt	
899.89	270.93	718.84	628.96	5.00	OSF1.50	20850.00	12360.00					Enter Alert	
899.89	325.21	682.65	574.67	4.16	OSF1.50	22580.00	12360.00					MinPt-CtCt	
899.89	325.48	682.48	574.41	4.16	OSF1.50	22586.60	12360.00					MinPts	

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

Warning Alert

3369.87	32.81	3368.58	3337.06	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
3369.46	32.81	3368.12	3336.65	62811.79	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF	
3299.88	991.58	2638.39	2308.30	5.00	OSF1.50	3290.00	3265.20	OSF<5.00				Enter Alert	
3244.87	1589.06	2185.05	1655.81	3.06	OSF1.50	5250.00	5191.31					MinPt-O-SF	
3244.78	1589.01	2184.99	1655.77	3.06	OSF1.50	5260.00	5201.14					MinPt-O-ADP	
3244.73	1588.96	2184.93	1655.77	3.06	OSF1.50	5270.00	5210.96					MINPT-O-EOU	
3244.70	1588.88	2185.00	1655.82	3.06	OSF1.50	5280.00	5220.79					MinPt-CtCt	
4137.77	1242.26	3309.17	2895.51	5.00	OSF1.50	7850.00	7748.07	OSF>5.00				Exit Alert	
7345.84	325.74	7128.25	7020.10	33.96	OSF1.50	14040.00	12360.00					MinPt-O-ADP	
7257.85	219.78	7110.93	7038.12	49.83	OSF1.50	14640.00	12360.00					MINPT-O-EOU	
7216.80	149.37	7116.79	7067.43	73.09	OSF1.50	15410.00	12360.00					MinPt-CtCt	
7263.14	240.14	7102.61	7022.99	45.60	OSF1.50	16230.00	12360.00					MINPT-O-EOU	
7347.40	341.76	7119.13	7005.64	32.36	OSF1.50	16790.00	12360.00					MinPt-O-ADP	
10137.29	1134.08	9380.81	9003.21	13.42	OSF1.50	22530.00	12360.00					MinPt-O-SF	
10177.12	1138.50	9417.69	9038.62	13.42	OSF1.50	22586.60	12360.00					TD	

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

Pass

1527.31	32.81	1525.33	1494.50	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1527.29	32.81	1525.31	1494.48	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
1527.30	32.81	1525.32	1494.49	273553.18	MAS = 10.00 (m)	26.00	26.00					WRP	
1527.37	32.81	1525.28	1494.56	13238.90	MAS = 10.00 (m)	60.00	60.00					MINPT-O-EOU	
1527.72	32.81	1525.33	1494.91	3688.26	MAS = 10.00 (m)	130.00	130.00					MINPT-O-EOU	
1532.57	32.81	1526.57	1499.76	380.57	MAS = 10.00 (m)	760.00	760.00					MINPT-O-EOU	
1531.01	32.81	1521.47	1498.20	202.37	MAS = 10.00 (m)	1600.00	1599.98					MinPt-O-SF	
564.44	51.99	528.79	512.45	17.13	OSF1.50	7900.00	7797.87					MinPt-O-SF	
560.47	51.34	525.27	509.13	17.28	OSF1.50	8050.00	7947.62					MinPt-O-ADP	
560.44	51.30	525.26	509.15	17.29	OSF1.50	8060.00	7957.62					MINPT-O-EOU	
560.44	51.25	525.29	509.19	17.31	OSF1.50	8070.00	7967.61					MinPt-CtCt	
518.61	59.27	478.10	459.34	13.74	OSF1.50	10560.00	10457.61					MinPts	
537.44	63.42	494.30	474.02	13.18	OSF1.50	11390.00	11287.61					MinPt-O-SF	
1425.10	60.16	1384.33	1364.94	36.69	OSF1.50	13300.00	12360.00					MinPt-O-SF	
10150.31	79.26	10096.81	10071.05	196.98	OSF1.50	22586.60	12360.00					TD	

Cimarex Dos Equis 12 Federal
Com #1H ST01 Gyro+MWD
10500ft to 15399ft MD (Def
Survey)

Pass

1527.31	32.81	1525.33	1494.50	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1527.29	32.81	1525.31	1494.48	N/A	MAS = 10.00 (m)	10.00	10.00					MinPts	
1527.30	32.81	1525.32	1494.49	273553.18	MAS = 10.00 (m)	26.00	26.00					WRP	
1527.37	32.81	1525.28	1494.56	13238.90	MAS = 10.00 (m)	60.00	60.00					MINPT-O-EOU	
1527.72	32.81	1525.33	1494.91	3688.26	MAS = 10.00 (m)	130.00	130.00					MINPT-O-EOU	
1532.57	32.81	1526.57	1499.76	380.57	MAS = 10.00 (m)	760.00	760.00					MINPT-O-EOU	
1531.01	32.81	1521.47	1498.20	202.37	MAS = 10.00 (m)	1600.00	1599.98					MinPt-O-SF	
564.44	51.99	528.79	512.45	17.13	OSF1.50	7900.00	7797.87					MinPt-O-SF	

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		
560.47	51.34	525.27	509.13	17.28		OSF1.50	8050.00	7947.62				MinPt-O-ADP	
560.44	51.30	525.26	509.15	17.29		OSF1.50	8060.00	7957.62				MINPT-O-EOU	
560.44	51.25	525.29	509.19	17.31		OSF1.50	8070.00	7967.61				MinPt-CiCt	
518.61	59.27	478.10	459.34	13.74		OSF1.50	10560.00	10457.61				MinPts	
520.03	59.20	479.73	460.83	13.69		OSF1.50	10660.00	10557.61				MinPt-O-SF	
1383.04	47.26	1350.87	1335.78	45.75		OSF1.50	13020.00	12360.00				MinPt-CiCt	
1383.41	48.20	1350.61	1335.21	44.83		OSF1.50	13060.00	12360.00				MINPT-O-EOU	
1383.81	48.68	1350.70	1335.13	44.38		OSF1.50	13080.00	12360.00				MinPt-O-ADP	
1390.76	55.29	1353.24	1335.47	39.08		OSF1.50	13340.00	12360.00				MinPt-CiCt	
1391.75	70.51	1344.08	1321.23	30.42		OSF1.50	13850.00	12360.00				MinPt-CiCt	
1393.80	84.67	1336.69	1309.13	25.25		OSF1.50	14300.00	12360.00				MinPt-CiCt	
1392.76	91.74	1330.95	1301.03	23.24		OSF1.50	14520.00	12360.00				MinPt-CiCt	
1393.67	94.50	1329.98	1299.14	22.56		OSF1.50	14610.00	12360.00				MINPT-O-EOU	
1395.08	98.00	1329.08	1297.08	21.76		OSF1.50	14710.00	12360.00				MinPt-CiCt	
1396.81	107.69	1324.36	1289.12	19.79		OSF1.50	15000.00	12360.00				MinPt-CiCt	
1397.36	126.89	1312.11	1270.48	16.76		OSF1.50	15560.00	12360.00				MinPt-CiCt	
1399.22	134.84	1308.66	1264.37	15.77		OSF1.50	15790.00	12360.00				MinPt-CiCt	
1395.19	150.73	1294.04	1244.46	14.05		OSF1.50	16240.00	12360.00				MinPt-CiCt	
1386.43	184.44	1262.81	1201.99	11.38		OSF1.50	17060.00	12360.00				MinPt-CiCt	
1386.58	184.89	1262.66	1201.69	11.35		OSF1.50	17080.00	12360.00				MINPT-O-EOU	
1386.77	185.10	1262.71	1201.67	11.34		OSF1.50	17090.00	12360.00				MinPt-O-ADP	
1392.57	186.78	1267.39	1205.79	11.29		OSF1.50	17190.00	12360.00				MinPt-O-SF	
5698.46	108.92	5625.18	5589.54	79.90		OSF1.50	22586.60	12360.00				TD	

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

Pass

950.10	32.81	948.12	917.29	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
950.04	32.81	948.02	917.24	22228.84	MAS = 10.00 (m)	26.00	26.00	WRP
946.57	32.81	942.61	913.76	476.55	MAS = 10.00 (m)	410.00	410.00	MinPts
947.22	32.81	942.25	914.41	316.21	MAS = 10.00 (m)	660.00	660.00	MINPT-O-EOU
956.10	32.81	947.23	923.29	138.44	MAS = 10.00 (m)	1500.00	1500.00	MinPts
956.11	32.81	947.22	923.30	138.03	MAS = 10.00 (m)	1510.00	1510.00	MINPT-O-EOU
960.78	32.81	951.64	927.97	133.90	MAS = 10.00 (m)	1670.00	1669.90	MinPt-O-SF
2040.79	50.88	2006.21	1989.91	62.54	OSF1.50	7599.31	7500.00	MinPt-O-SF
2128.92	54.46	2091.95	2074.46	60.79	OSF1.50	9990.00	9887.61	MinPt-CiCt
2128.96	54.60	2091.90	2074.37	60.63	OSF1.50	10030.00	9927.61	MINPT-O-EOU
2129.02	54.67	2091.92	2074.36	60.56	OSF1.50	10050.00	9947.61	MinPt-O-ADP
2171.94	58.78	2132.09	2113.16	57.31	OSF1.50	11010.00	10907.61	MinPt-O-SF
2495.66	82.75	2439.84	2412.91	46.31	OSF1.50	13910.00	12360.00	MinPt-CiCt
2495.26	91.47	2433.62	2403.79	41.79	OSF1.50	14130.00	12360.00	MinPt-CiCt
2472.54	153.67	2369.43	2318.87	24.43	OSF1.50	15520.00	12360.00	MinPt-CiCt
2464.15	198.43	2331.21	2265.72	18.80	OSF1.50	16460.00	12360.00	MinPt-CiCt
2466.58	205.27	2329.07	2261.31	18.19	OSF1.50	16650.00	12360.00	MINPT-O-EOU
2467.80	206.74	2329.32	2261.06	18.06	OSF1.50	16700.00	12360.00	MinPt-O-ADP
2469.68	244.85	2305.75	2224.84	15.24	OSF1.50	17070.00	12360.00	MinPts
2469.71	244.88	2305.80	2224.83	15.24	OSF1.50	17080.00	12360.00	MinPt-O-ADP
2470.23	244.98	2306.25	2225.25	15.24	OSF1.50	17120.00	12360.00	MinPt-O-SF
6046.18	129.85	5958.95	5916.33	70.90	OSF1.50	22586.60	12360.00	TD

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

Pass

5499.63	32.81	5497.65	5466.82	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
5499.59	32.81	5497.60	5466.78	916186.98	MAS = 10.00 (m)	10.00	10.00	MinPt-O-SF
5499.56	32.81	5497.57	5466.75	N/A	MAS = 10.00 (m)	26.00	26.00	WRP
5499.37	32.81	5496.87	5466.56	10584.57	MAS = 10.00 (m)	170.00	170.00	MinPts
5500.49	32.81	5496.48	5467.68	2699.34	MAS = 10.00 (m)	510.00	510.00	MINPT-O-EOU
5500.74	32.81	5496.08	5467.93	2053.64	MAS = 10.00 (m)	660.00	660.00	MinPts
5502.21	32.81	5495.44	5469.40	1147.89	MAS = 10.00 (m)	1130.00	1130.00	MINPT-O-EOU
5495.60	32.81	5476.92	5462.79	329.09	MAS = 10.00 (m)	4280.00	4238.08	MinPts
5495.86	32.81	5476.66	5463.05	319.12	MAS = 10.00 (m)	4390.00	4346.18	MINPT-O-EOU
5568.36	51.92	5533.09	5516.45	167.29	OSF1.50	7600.00	7500.68	MinPt-O-SF
5606.68	55.47	5569.02	5551.19	157.16	OSF1.50	9960.00	9857.61	MinPt-CiCt
5606.71	55.63	5568.90	5551.08	156.71	OSF1.50	10000.00	9897.61	MINPT-O-EOU
5606.77	55.71	5568.98	5551.07	156.48	OSF1.50	10020.00	9917.61	MinPt-O-ADP
5621.30	61.67	5579.52	5559.63	141.21	OSF1.50	11440.00	11337.61	MinPt-CiCt
5621.58	62.86	5579.01	5558.72	138.45	OSF1.50	11550.00	11447.61	MinPts
5637.48	64.27	5593.97	5573.21	135.71	OSF1.50	11952.39	11850.00	MinPt-O-SF
1102.05	142.94	1006.10	959.11	11.71	OSF1.50	17820.00	12360.00	MinPt-CiCt
1102.49	144.17	1005.72	958.32	11.61	OSF1.50	17850.00	12360.00	MINPT-O-EOU
1102.82	144.56	1005.78	958.26	11.58	OSF1.50	17860.00	12360.00	MinPt-O-ADP
1118.52	149.20	1018.40	969.32	11.38	OSF1.50	18010.00	12360.00	MinPt-O-SF
4893.59	98.92	4826.98	4794.67	75.69	OSF1.50	22586.60	12360.00	TD

Continental Wimberly 12 #1
(Offset) Plugged Inc Only Off-
5038ft (Def Survey)

Pass

1700.08	32.81	1698.79	1667.27	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
1699.33	32.81	1697.95	1666.52	17705.17	MAS = 10.00 (m)	26.00	26.00	MinPt-O-SF
1698.95	32.81	1697.46	1666.14	10047.90	MAS = 10.00 (m)	70.00	70.00	MinPts
1136.06	257.11	964.07	878.90	6.66	OSF1.50	5250.00	5191.31	MinPt-O-SF
1133.60	256.01	962.35	877.59	6.68	OSF1.50	5300.00	5240.44	MinPt-O-ADP
1133.38	255.73	962.31	877.64	6.68	OSF1.50	5310.00	5250.27	MINPT-O-EOU
1133.19	255.12	962.53	878.07	6.70	OSF1.50	5330.00	5269.92	MinPt-CiCt
10079.82	226.50	9928.40	9853.33	67.13	OSF1.50	19730.00	12360.00	MinPt-O-SF
12229.92	259.82	12056.28	11970.10	70.95	OSF1.50	22586.60	12360.00	TD

Cimarex Dos Equis 12-13
Federal Com #3H Rev0 smk
20Dec18 (Def Plan)

Pass

1320.11	32.81	1318.13	1287.31	N/A	MAS = 10.00 (m)	0.00	0.00	Surface
1320.11	32.81	1318.12	1287.31	137968.76	MAS = 10.00 (m)	26.00	26.00	WRP
1314.23	32.81	1302.62	1281.42	136.19	MAS = 10.00 (m)	1760.00	1759.64	MinPts
1314.24	32.81	1302.61	1281.44	135.94	MAS = 10.00 (m)	1770.00	1769.60	MINPT-O-EOU
1665.81	47.45	1633.51	1618.35	54.89	OSF1.50	5650.00	5584.39	MinPt-O-SF
2013.00	61.18	1971.56	1951.82	50.99	OSF1.50	7599.31	7500.00	MinPt-O-SF
2061.94	66.24	2017.12	1995.70	48.08	OSF1.50	9230.00	9127.61	MINPT-O-EOU
2061.96	66.26	2017.12	1995.70	48.07	OSF1.50	9240.00	9137.61	MinPt-O-ADP
2062.42	66.38	2017.51	1996.04	47.93	OSF1.50	9310.00	9207.61	MinPt-O-SF
3446.13	368.81	3199.60	3077.32	14.09	OSF1.50	22586.60	12360.00	MinPts

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Cimarex Dos Equis 12-13 Federal Com #47H Rev0 smk 20Dec18 (Def Plan)													
	1340.05	32.81	1338.07	1307.24	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	1340.05	32.81	1338.06	1307.24	146887.73	MAS = 10.00 (m)	26.00	26.00					Surface
	1330.68	32.81	1318.28	1297.87	127.44	MAS = 10.00 (m)	1870.00	1868.97					WRP
	1330.72	32.81	1318.24	1297.91	126.61	MAS = 10.00 (m)	1890.00	1888.80					MinPts
	1470.97	38.86	1444.40	1432.11	59.72	OSF1.50	4510.00	4464.10					MINPT-O-EQU
	2007.88	63.76	1964.72	1944.13	48.70	OSF1.50	7599.31	7500.00					MinPt-O-SF
	2056.09	90.67	1994.98	1965.41	34.74	OSF1.50	11952.39	11850.00					MinPts
	2058.78	470.67	1744.34	1588.11	6.58	OSF1.50	22586.60	12360.00					MinPts
Cimarex Dos Equis 12-13 Federal Com #48H Rev0 RM 13Sept19 (Non-Def Plan)													
	1359.98	32.81	1358.70	1327.17	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	1359.98	32.81	1358.69	1327.17	218400.65	MAS = 10.00 (m)	26.00	26.00					Surface
	1359.98	32.81	1349.66	1327.17	150.31	MAS = 10.00 (m)	1500.00	1500.00					WRP
	1360.05	32.81	1349.62	1327.24	148.64	MAS = 10.00 (m)	1520.00	1520.00					MinPts
	2412.12	70.57	2364.65	2341.55	52.20	OSF1.50	7600.00	7500.68					MINPT-O-EQU
	2460.84	99.85	2393.84	2360.99	37.43	OSF1.50	11890.00	11787.61					MinPt-O-SF
	2461.63	99.95	2394.57	2361.68	37.40	OSF1.50	11952.39	11850.00					MinPts
	2651.80	318.79	2438.84	2333.01	12.52	OSF1.50	22586.60	12360.00					MinPts
Cimarex Dos Equis 13 Federal #1H ST01 Xem+MWD Offt to 15250ft (Def Survey)													
	5499.63	32.81	5497.65	5466.82	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	5499.59	32.81	5497.60	5466.78	916186.96	MAS = 10.00 (m)	10.00	10.00					Surface
	5499.56	32.81	5497.57	5466.75	N/A	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF
	5499.37	32.81	5496.87	5466.56	10584.57	MAS = 10.00 (m)	170.00	170.00					WRP
	5500.49	32.81	5496.48	5467.68	2699.34	MAS = 10.00 (m)	510.00	510.00					MinPts
	5500.74	32.81	5496.08	5467.93	2053.64	MAS = 10.00 (m)	660.00	660.00					MINPT-O-EQU
	5502.21	32.81	5495.44	5469.40	1147.89	MAS = 10.00 (m)	1130.00	1130.00					MinPts
	5495.60	32.81	5476.92	5462.79	329.09	MAS = 10.00 (m)	4280.00	4238.08					MINPT-O-EQU
	5495.86	32.81	5476.66	5463.05	319.12	MAS = 10.00 (m)	4390.00	4346.18					MinPts
	5568.36	51.92	5533.09	5516.45	167.20	OSF1.50	7600.00	7500.68					MINPT-O-EQU
	5606.66	55.47	5569.02	5551.19	157.16	OSF1.50	9960.00	9857.61					MinPt-O-SF
	5606.71	55.63	5568.96	5551.08	156.71	OSF1.50	10000.00	9897.61					MinPt-CtCt
	5606.77	55.71	5568.98	5551.07	156.48	OSF1.50	10020.00	9917.61					MINPT-O-EQU
	5754.86	61.80	5713.00	5693.06	144.26	OSF1.50	11890.00	11787.61					MinPt-O-SF
	1455.76	160.34	1348.21	1295.42	13.77	OSF1.50	18660.00	12360.00					MinPt-CtCt
	1456.91	163.97	1346.93	1292.93	13.47	OSF1.50	18790.00	12360.00					MINPT-O-EQU
	1458.31	165.66	1347.21	1292.65	13.35	OSF1.50	18850.00	12360.00					MinPt-O-ADP
	1459.78	190.12	1332.38	1269.66	11.62	OSF1.50	19760.00	12360.00					MinPt-CtCt
	1464.68	203.90	1328.09	1260.79	10.87	OSF1.50	20220.00	12360.00					MINPT-O-EQU
	1475.00	220.77	1327.16	1254.23	10.10	OSF1.50	20770.00	12360.00					MinPts
	1476.78	222.90	1327.52	1253.88	10.01	OSF1.50	20840.00	12360.00					MinPt-O-ADP
	1471.58	277.75	1285.75	1193.83	7.99	OSF1.50	22310.00	12360.00					MinPt-CtCt
	1471.82	278.61	1285.42	1193.21	7.97	OSF1.50	22340.00	12360.00					MINPT-O-EQU
	1472.03	278.87	1285.46	1193.16	7.96	OSF1.50	22350.00	12360.00					MinPt-O-ADP
	1476.19	280.54	1288.51	1195.65	7.94	OSF1.50	22430.00	12360.00					MinPt-O-SF
	1496.74	281.60	1308.34	1215.13	8.02	OSF1.50	22586.60	12360.00					TD
Cimarex Dos Equis 13 Federal #2H XEM + MWD Offt to 15311 (Def Survey)													
	5196.03	32.81	5194.05	5163.22	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	5196.01	32.81	5194.03	5163.21	N/A	MAS = 10.00 (m)	10.00	10.00					Surface
	5196.01	32.81	5194.03	5163.21	N/A	MAS = 10.00 (m)	20.00	20.00					MinPts
	5196.01	32.81	5194.03	5163.21	N/A	MAS = 10.00 (m)	26.00	26.00					MinPts
	5199.05	32.81	5191.52	5166.24	936.54	MAS = 10.00 (m)	990.00	990.00					WRP
	5575.36	53.23	5539.22	5522.14	163.12	OSF1.50	7600.00	7500.68					MINPT-O-EQU
	5621.12	57.15	5582.36	5563.97	152.78	OSF1.50	10000.00	9897.61					MinPt-O-SF
	5621.16	57.29	5582.31	5563.87	152.40	OSF1.50	10040.00	9937.61					MinPt-CtCt
	5621.21	57.36	5582.32	5563.86	152.21	OSF1.50	10060.00	9957.61					MINPT-O-EQU
	5620.80	59.36	5580.57	5561.44	146.88	OSF1.50	10620.00	10517.61					MinPts
	5620.81	59.38	5580.56	5561.42	146.80	OSF1.50	10630.00	10527.61					MinPt-O-ADP
	5620.84	59.43	5580.56	5561.41	146.71	OSF1.50	10640.00	10537.61					MINPT-O-EQU
	5737.33	62.66	5694.90	5674.67	141.77	OSF1.50	11830.00	11727.61					MinPt-O-SF
	1562.47	149.60	1462.08	1412.87	15.86	OSF1.50	19130.00	12360.00					MinPt-CtCt
	1565.26	155.66	1460.82	1409.59	15.26	OSF1.50	19350.00	12360.00					MINPT-O-EQU
	1570.20	161.74	1461.72	1408.46	14.72	OSF1.50	19560.00	12360.00					MinPt-O-ADP
	1577.28	174.88	1460.04	1402.40	13.67	OSF1.50	19970.00	12360.00					MinPt-CtCt
	1577.79	234.13	1421.04	1343.65	10.18	OSF1.50	21760.00	12360.00					MinPt-CtCt
	1584.17	259.96	1410.20	1324.21	9.20	OSF1.50	22360.00	12360.00					MinPts
	1584.97	260.21	1410.84	1324.77	9.20	OSF1.50	22390.00	12360.00					MinPt-O-SF
	1604.14	259.72	1430.33	1344.42	9.32	OSF1.50	22586.60	12360.00					TD
Continental Wimberly #4 (Offset) Plugged Oil Inc Only Offt: 5030ft (Def Survey)													
	1741.33	32.81	1740.04	1708.52	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	1741.04	32.81	1739.73	1708.28	58213.41	MAS = 10.00 (m)	20.00	20.00					Surface
	1741.00	32.81	1739.69	1708.19	74964.47	MAS = 10.00 (m)	26.00	26.00					MinPt-O-SF
	1740.98	32.81	1739.60	1708.17	18832.26	MAS = 10.00 (m)	40.00	40.00					WRP
	1741.58	67.92	1695.87	1673.66	39.18	OSF1.50	1360.00	1360.00					MinPts
	1712.88	171.57	1598.06	1541.30	15.08	OSF1.50	3380.00	3353.64					MinPt-CtCt
	1713.61	203.67	1577.40	1509.94	12.69	OSF1.50	3980.00	3943.27					MinPt-CtCt
	1718.81	221.51	1570.71	1497.30	11.70	OSF1.50	4360.00	4316.70					MINPT-O-EQU
	1723.50	227.13	1571.65	1496.37	11.44	OSF1.50	4490.00	4444.45					MinPt-O-ADP
	1745.04	258.88	1572.04	1486.19	10.16	OSF1.50	5070.00	5014.42					MINPT-O-EQU
	1746.58	260.90	1572.22	1485.68	10.08	OSF1.50	5120.00	5063.56					MinPts
	1730.54	51.03	1723.09	1726.51	220.34	OSF1.50	14090.00	12360.00					MinPt-CtCt
	1730.39	53.43	1722.34	1725.96	210.21	OSF1.50	14200.00	12360.00					MINPT-O-EQU
	1730.79	55.11	1722.62	1725.68	203.68	OSF1.50	14270.00	12360.00					MinPt-O-ADP
	9881.48	232.32	9726.18	9649.16	64.15	OSF1.50	20740.00	12360.00					MinPt-O-SF
	11208.00	256.37	11036.66	10951.63	65.90	OSF1.50	22586.60	12360.00					TD
Continental Wimberly 12 #3 (Offset) Plugged Inc Only Offt: 5070ft (Def Survey)													
	2314.42	32.81	2313.14	2281.61	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	2313.90	32.81	2312.54	2281.09	34770.80	MAS = 10.00 (m)	26.00	26.00					Surface
													MinPt-O-SF

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
2313.65		32.81	2312.28	2280.84	30602.21	MAS = 10.00 (m)	60.00	60.00				MinPts	
2311.92		63.51	2269.15	2248.41	55.70	OSF1.50	1370.00	1370.00				MinPt-CtCt	
2054.66		263.03	1878.83	1791.63	11.77	OSF1.50	5260.00	5201.14				MinPt-O-SF	
2054.16		262.87	1878.43	1791.28	11.78	OSF1.50	5300.00	5240.44				MinPts	
2054.15		262.82	1878.46	1791.33	11.78	OSF1.50	5310.00	5250.27				MinPt-CtCt	
7255.14		58.28	7215.86	7196.86	190.90	OSF1.50	14100.00	12360.00				MinPt-CtCt	
7255.89		60.34	7215.23	7195.55	184.27	OSF1.50	14200.00	12360.00				MINPT-O-EQU	
7256.99		61.69	7215.44	7195.30	180.19	OSF1.50	14260.00	12360.00				MinPt-O-ADP	
9763.62		235.23	9606.37	9528.39	62.60	OSF1.50	20630.00	12360.00				MinPt-O-SF	
11168.03		260.87	10993.69	10907.16	64.53	OSF1.50	22586.60	12360.00				TD	

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

2269.20	32.81	2267.22	2236.39	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2269.20	32.81	2267.20	2236.39	145618.18	MAS = 10.00 (m)	26.00	26.00					WRP	
2269.13	32.81	2266.29	2236.32	2649.43	MAS = 10.00 (m)	210.00	210.00					MinPts	
2271.24	32.81	2264.41	2238.44	467.08	MAS = 10.00 (m)	1030.00	1030.00					MINPT-O-EQU	
2271.70	32.81	2264.40	2238.89	426.97	MAS = 10.00 (m)	1120.00	1120.00					MINPT-O-EQU	
2271.59	32.81	2263.01	2238.78	344.06	MAS = 10.00 (m)	1500.00	1500.00					MinPts	
2271.59	32.81	2263.00	2238.78	343.16	MAS = 10.00 (m)	1510.00	1510.00					MINPT-O-EQU	
3315.16	50.58	3280.78	3264.58	102.28	OSF1.50	7599.31	7500.00					MinPt-O-SF	
3371.82	49.17	3338.38	3322.65	107.11	OSF1.50	8490.00	8387.61					MINPT-O-EQU	
3372.17	49.60	3338.44	3322.57	106.16	OSF1.50	8610.00	8507.61					MinPt-O-ADP	
3411.02	57.90	3371.76	3353.12	91.45	OSF1.50	10680.00	10577.61					MinPts	
3460.95	60.61	3419.88	3400.33	88.49	OSF1.50	11330.00	11227.61					MinPt-O-SF	
3559.39	62.24	3517.24	3497.15	88.56	OSF1.50	11830.00	11727.61					MinPt-O-SF	
3687.22	58.14	3647.80	3629.08	98.43	OSF1.50	13070.00	12360.00					MinPt-CtCt	
3687.22	58.15	3647.80	3629.07	98.41	OSF1.50	13080.00	12360.00					MinPts	
3658.62	81.71	3603.48	3576.91	68.79	OSF1.50	13810.00	12360.00					MinPt-CtCt	
3659.38	83.55	3603.02	3575.83	67.26	OSF1.50	13910.00	12360.00					MINPT-O-EQU	
3660.46	84.86	3603.22	3575.60	66.21	OSF1.50	13970.00	12360.00					MinPt-O-ADP	
3664.85	102.58	3595.83	3562.30	54.63	OSF1.50	14350.00	12360.00					MinPts	
3623.65	212.77	3481.14	3410.88	25.77	OSF1.50	16560.00	12360.00					MinPt-CtCt	
3626.72	221.98	3478.07	3404.74	24.71	OSF1.50	16820.00	12360.00					MINPT-O-EQU	
3632.55	229.22	3479.08	3403.33	23.97	OSF1.50	17010.00	12360.00					MinPt-O-ADP	
3643.41	291.25	3448.59	3352.16	18.88	OSF1.50	17250.00	12360.00					MinPts	
6596.59	191.45	6468.30	6405.14	52.21	OSF1.50	22586.60	12360.00					TD	

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

2269.20	32.81	2267.22	2236.39	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2269.20	32.81	2267.20	2236.39	145618.18	MAS = 10.00 (m)	26.00	26.00					WRP	
2269.13	32.81	2266.29	2236.32	2649.43	MAS = 10.00 (m)	210.00	210.00					MinPts	
2271.24	32.81	2264.41	2238.44	467.08	MAS = 10.00 (m)	1030.00	1030.00					MINPT-O-EQU	
2271.70	32.81	2264.40	2238.89	426.97	MAS = 10.00 (m)	1120.00	1120.00					MINPT-O-EQU	
2271.59	32.81	2263.01	2238.78	344.06	MAS = 10.00 (m)	1500.00	1500.00					MinPts	
2271.59	32.81	2263.00	2238.78	343.16	MAS = 10.00 (m)	1510.00	1510.00					MINPT-O-EQU	
3315.16	50.58	3280.78	3264.58	102.28	OSF1.50	7599.31	7500.00					MinPt-O-SF	
3371.82	49.17	3338.38	3322.65	107.11	OSF1.50	8490.00	8387.61					MINPT-O-EQU	
3372.17	49.60	3338.44	3322.57	106.16	OSF1.50	8610.00	8507.61					MinPt-O-ADP	
3444.60	61.80	3402.74	3382.80	86.32	OSF1.50	11590.00	11487.61					MinPt-O-SF	
10679.62	77.29	10627.44	10602.33	212.68	OSF1.50	22586.60	12360.00					TD	

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

5414.70	32.81	5413.41	5381.89	N/A	MAS = 10.00 (m)	0.00	0.00					MinPts	
5414.70	32.81	5413.37	5381.89	139094.14	MAS = 10.00 (m)	26.00	26.00					WRP	
5415.72	32.81	5410.97	5382.91	1565.00	MAS = 10.00 (m)	780.00	780.00					MinPts	
5415.33	32.81	5408.92	5382.52	1056.65	MAS = 10.00 (m)	1160.00	1160.00					MINPT-O-EQU	
5412.91	32.81	5405.11	5380.10	811.29	MAS = 10.00 (m)	1530.00	1530.00					MinPts	
5412.93	32.81	5405.10	5380.12	807.96	MAS = 10.00 (m)	1540.00	1540.00					MINPT-O-EQU	
5855.43	52.31	5820.22	5803.12	171.22	OSF1.50	7600.00	7500.68					MinPt-O-SF	
5803.43	56.38	5765.50	5747.04	157.21	OSF1.50	9880.00	9777.61					MinPt-CtCt	
5803.50	56.60	5765.43	5746.90	156.60	OSF1.50	9940.00	9837.61					MINPT-O-EQU	
5803.79	57.15	5765.35	5746.63	155.07	OSF1.50	10100.00	9997.61					MINPT-O-EQU	
5804.02	57.45	5765.39	5746.57	154.27	OSF1.50	10170.00	10067.61					MinPt-O-ADP	
5920.90	62.67	5878.78	5858.23	144.03	OSF1.50	11810.00	11707.61					MinPt-O-SF	
2464.95	124.57	2381.57	2340.39	29.92	OSF1.50	18400.00	12360.00					MinPt-CtCt	
2441.67	162.07	2333.28	2279.60	22.73	OSF1.50	19930.00	12360.00					MinPt-CtCt	
2442.20	163.68	2332.74	2278.52	22.51	OSF1.50	20010.00	12360.00					MINPT-O-EQU	
2444.02	165.67	2333.23	2278.35	22.26	OSF1.50	20100.00	12360.00					MinPt-O-ADP	
2438.37	200.91	2304.09	2237.46	18.29	OSF1.50	21370.00	12360.00					MinPt-CtCt	
2439.56	203.53	2303.53	2236.03	18.06	OSF1.50	21490.00	12360.00					MINPT-O-EQU	
2446.20	211.63	2304.77	2234.56	17.41	OSF1.50	21790.00	12360.00					MinPt-O-ADP	
2462.11	224.94	2311.81	2237.17	16.49	OSF1.50	22250.00	12360.00					MINPT-O-EQU	
2467.26	234.59	2310.53	2232.67	15.84	OSF1.50	22586.60	12360.00					MinPts	

Cimarex Dos Equis 13 Federal
Com #9H Rev2 RM 12Mar19
(Non-Def Plan)

5414.70	32.81	5412.72	5381.89	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
5414.70	32.81	5412.68	5381.89	133123.16	MAS = 10.00 (m)	26.00	26.00					WRP	
5414.70	32.81	5403.63	5381.89	595.58	MAS = 10.00 (m)	1500.00	1500.00					MinPts	
5414.77	32.81	5403.55	5381.97	585.68	MAS = 10.00 (m)	1530.00	1530.00					MINPT-O-EQU	
5864.24	66.66	5819.13	5797.56	135.91	OSF1.50	7600.00	7500.68					MinPt-O-SF	
5801.49	77.02	5749.48	5724.46	115.92	OSF1.50	10630.00	10527.61					MinPt-CtCt	
5801.50	77.10	5749.45	5724.41	115.81	OSF1.50	10650.00	10547.61					MinPts	
5829.32	78.03	5776.64	5751.29	114.94	OSF1.50	11230.00	11127.61					MinPt-O-SF	
2459.51	123.60	2376.44	2335.90	30.31	OSF1.50	18130.00	12360.00					MinPt-CtCt	
2460.16	237.71	2301.02	2222.45	15.64	OSF1.50	22586.60	12360.00					MinPts	

Cimarex Dos Equis 12-13
Federal Com #1H Rev1 smk
20Dec18 (Def Plan)

2565.95	32.81	2563.97	2533.14	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
2565.95	32.81	2563.97	2533.14	329712.14	MAS = 10.00 (m)	26.00	26.00					WRP	
2565.95	32.81	2554.93	2533.14	283.58	MAS = 10.00 (m)	1500.00	1500.00					MinPts	
2566.02	32.81	2554.90	2533.21	280.41	MAS = 10.00 (m)	1520.00	1520.00					MINPT-O-EQU	
3624.29	71.27	3576.12	3553.02	78.42	OSF1.50	7600.00	7500.68					MinPt-O-SF	
3673.00	79.76	3619.17	3593.24	70.80	OSF1.50	9220.00	9117.61					MINPT-O-EQU	

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

3673.01	79.77	3619.17	3593.24	70.79		OSF1.50	9230.00	9127.61				MinPt-O-ADP	
3677.87	80.02	3623.86	3597.85	70.63		OSF1.50	9450.00	9347.61				MinPt-O-SF	
4624.17	412.41	4348.58	4211.77	16.89		OSF1.50	22586.60	12360.00				MinPts	

Cimarex Dos Equis 12-13
Federal Com #8H Rev0 smk
20Dec18 (Def Plan)

2585.95	32.81	2583.97	2553.14	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2585.95	32.81	2583.97	2553.14	323053.90		MAS = 10.00 (m)	26.00	26.00				WRP	
2585.95	32.81	2574.93	2553.14	285.78		MAS = 10.00 (m)	1500.00	1500.00				MinPts	
2586.02	32.81	2574.90	2553.21	282.59		MAS = 10.00 (m)	1520.00	1520.00				MINPT-O-EOU	
3652.82	71.29	3604.63	3581.53	79.01		OSF1.50	7600.00	7500.68				MinPt-O-SF	
3706.35	84.32	3649.48	3622.03	67.48		OSF1.50	9820.00	9717.61				MINPT-O-EOU	
3706.44	100.19	3638.98	3606.25	56.58		OSF1.50	11900.00	11797.61				MinPts	
3708.11	468.37	3395.20	3239.74	11.92		OSF1.50	22586.60	12360.00				MinPts	

Pass

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

2788.40	32.81	2787.11	2755.59	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2788.16	32.81	2786.85	2755.35	95906.97		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
2788.12	32.81	2786.80	2755.31	99508.89		MAS = 10.00 (m)	26.00	26.00				WRP	
2779.02	39.71	2752.12	2739.31	108.45		OSF1.50	680.00	680.00				MinPt-CtCt	
2782.32	79.02	2729.21	2703.30	53.67		OSF1.50	1530.00	1530.00				MinPt-CtCt	
2784.37	84.92	2727.33	2699.46	49.92		OSF1.50	1640.00	1639.94				MINPT-O-EOU	
2787.11	88.21	2727.87	2698.90	48.07		OSF1.50	1700.00	1699.84				MinPt-O-ADP	
3381.40	265.37	3204.06	3116.03	19.20		OSF1.50	5230.00	5171.65				MinPt-O-SF	
8007.03	116.79	7928.74	7890.24	103.97		OSF1.50	14100.00	12360.00				MinPt-CtCt	
8007.11	117.02	7928.66	7890.08	103.76		OSF1.50	14140.00	12360.00				MINPT-O-EOU	
8007.16	117.09	7928.67	7890.07	103.70		OSF1.50	14150.00	12360.00				MinPt-O-ADP	
10374.28	234.83	10217.30	10139.46	66.62		OSF1.50	20700.00	12360.00				MinPt-O-SF	
11665.11	257.77	11492.84	11407.34	68.21		OSF1.50	22586.60	12360.00				TD	

Pass

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

2921.61	32.81	2920.33	2888.80	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2921.39	32.81	2920.08	2888.58	107143.17		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
2921.35	32.81	2920.04	2888.54	111849.64		MAS = 10.00 (m)	26.00	26.00				WRP	
2921.30	32.81	2919.88	2888.49	22134.58		MAS = 10.00 (m)	50.00	50.00				MinPts	
2943.13	225.70	2692.22	2617.43	19.00		OSF1.50	4480.00	4434.62				MinPt-CtCt	
2945.30	262.18	2670.08	2583.12	16.35		OSF1.50	5130.00	5073.38				MinPts	
2945.31	262.19	2670.08	2583.12	16.35		OSF1.50	5140.00	5083.21				MinPts	
7301.86	72.24	7253.27	7229.63	154.35		OSF1.50	15090.00	12360.00				MinPt-CtCt	
7302.78	75.01	7252.35	7227.78	148.58		OSF1.50	15210.00	12360.00				MINPT-O-EOU	
7304.23	76.72	7252.65	7227.51	145.22		OSF1.50	15280.00	12360.00				MinPt-O-ADP	
9628.33	239.47	9468.25	9388.88	60.63		OSF1.50	21370.00	12360.00				MinPt-O-SF	
10462.10	256.72	10290.52	10205.38	61.43		OSF1.50	22586.60	12360.00				TD	

Pass

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

3085.76	32.81	3084.47	3052.95	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3085.59	32.81	3084.28	3052.78	169797.48		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3085.56	32.81	3084.26	3052.75	208588.17		MAS = 10.00 (m)	26.00	26.00				WRP	
3085.17	32.81	3077.98	3052.38	522.63		MAS = 10.00 (m)	320.00	320.00				MinPts	
3084.45	66.22	3039.88	3018.24	71.23		OSF1.50	1370.00	1370.00				MinPt-CtCt	
3088.33	79.05	3035.21	3009.28	59.55		OSF1.50	1640.00	1639.94				MINPT-O-EOU	
3093.14	84.76	3036.20	3008.38	55.56		OSF1.50	1750.00	1749.68				MinPt-O-ADP	
3105.54	97.45	3040.15	3008.09	48.42		OSF1.50	1950.00	1948.15				MinPt-O-ADP	
3463.51	258.80	3290.55	3204.71	20.17		OSF1.50	5210.00	5152.00				MinPt-O-ADP	
3464.87	260.05	3291.08	3204.82	20.08		OSF1.50	5220.00	5161.83				MinPt-O-SF	
7538.63	98.32	7472.66	7440.32	116.52		OSF1.50	15430.00	12360.00				MinPt-CtCt	
7539.10	99.51	7472.30	7439.55	115.06		OSF1.50	15510.00	12360.00				MINPT-O-EOU	
7539.65	100.21	7472.42	7439.45	114.31		OSF1.50	15950.00	12360.00				MinPt-O-ADP	
9744.11	236.91	9585.75	9507.21	62.02		OSF1.50	21600.00	12360.00				MinPt-O-SF	
10397.28	250.62	10229.77	10146.66	62.54		OSF1.50	22586.60	12360.00				TD	

Pass

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

4359.90	32.81	4358.62	4327.09	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4359.86	32.81	4358.57	4327.05	843663.49		MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
4359.84	32.81	4358.50	4327.03	78895.01		MAS = 10.00 (m)	26.00	26.00				WRP	
4359.72	32.81	4353.44	4326.91	872.91		MAS = 10.00 (m)	280.00	280.00				MinPts	
4359.58	42.10	4331.08	4317.47	160.16		OSF1.50	920.00	920.00				MinPt-CtCt	
4359.23	75.78	4308.29	4283.45	87.75		OSF1.50	1540.00	1540.00				MinPt-CtCt	
4360.65	80.77	4306.38	4279.89	82.27		OSF1.50	1660.00	1659.92				MINPT-O-EOU	
4362.51	83.02	4306.74	4279.50	80.04		OSF1.50	1720.00	1719.78				MinPt-O-ADP	
4403.69	115.56	4326.22	4288.13	57.79		OSF1.50	2270.00	2262.83				MinPt-O-ADP	
4487.54	166.43	4376.15	4321.11	40.75		OSF1.50	3240.00	3216.06				MinPt-O-ADP	
4595.74	225.31	4445.05	4370.40	30.76		OSF1.50	4370.00	4326.52				MinPts	
4680.96	261.51	4506.19	4419.45	26.97		OSF1.50	5230.00	5171.65				MinPt-O-SF	
7524.12	119.74	7443.86	7404.38	95.27		OSF1.50	16740.00	12360.00				MinPt-CtCt	
7524.72	121.54	7443.27	7403.18	93.85		OSF1.50	16840.00	12360.00				MINPT-O-EOU	
7525.52	122.47	7443.44	7403.05	93.13		OSF1.50	16890.00	12360.00				MinPt-O-ADP	
9418.50	245.44	9254.45	9173.06	57.88		OSF1.50	22410.00	12360.00				MinPt-O-SF	
9525.78	248.15	9359.92	9277.63	57.87		OSF1.50	22586.60	12360.00				TD	

Pass

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

5589.56	32.81	5587.59	5556.76	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
5589.48	32.81	5587.49	5556.67	600224.86		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
5589.46	32.81	5587.48	5556.65	772974.03		MAS = 10.00 (m)	26.00	26.00				WRP	
5575.27	113.83	5498.72	5461.44	74.74		OSF1.50	1820.00	1819.33				MinPt-CtCt	
5636.42	554.15	5266.33	5082.28	15.31		OSF1.50	5010.00	4955.46				MinPts	
7324.31	149.14	7224.22	7175.16	74.64		OSF1.50	17970.00	12360.00				MinPt-CtCt	
7325.75	153.31	7222.87	7172.41	72.58		OSF1.50	18120.00	12360.00				MINPT-O-EOU	
7328.42	156.54	7223.40	7171.88	71.10		OSF1.50	18220.00	12360.00				MinPt-O-ADP	
8655.57	370.35	8408.01	8285.22	35.24		OSF1.50	22586.60	12360.00				MinPt-O-SF	

Pass

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Westates Petroleum Woley #1 (Offset) Plugged Oil Blind Off- 5063ft (Def Survey)													
	9675.82	32.81	9674.53	9643.01	N/A	MAS = 10.00 (m)	0.00	0.00					Pass
	9675.72	32.81	9674.42	9642.91	828090.56	MAS = 10.00 (m)	26.00	26.00					Surface
	9675.69	441.37	9381.01	9234.32	32.97	OSF1.50	1500.00	1500.00					WRP
	9732.29	1577.42	8680.25	8154.87	9.26	OSF1.50	5180.00	5122.52					MinPt-CtCt
	10221.24	1114.02	9478.13	9107.22	13.78	OSF1.50	14830.00	12360.00					MinPts
	7300.19	280.39	7112.83	7019.79	39.23	OSF1.50	21330.00	12360.00					MinPt-O-SF
	7267.79	252.89	7098.77	7014.90	43.32	OSF1.50	22020.00	12360.00					MinPt-O-ADP
	7281.89	279.62	7095.05	7002.27	39.24	OSF1.50	22470.00	12360.00					MinPt-CtCt
	7290.08	291.37	7095.40	6998.70	37.69	OSF1.50	22586.60	12360.00					MINPT-O-EOU
													MinPts

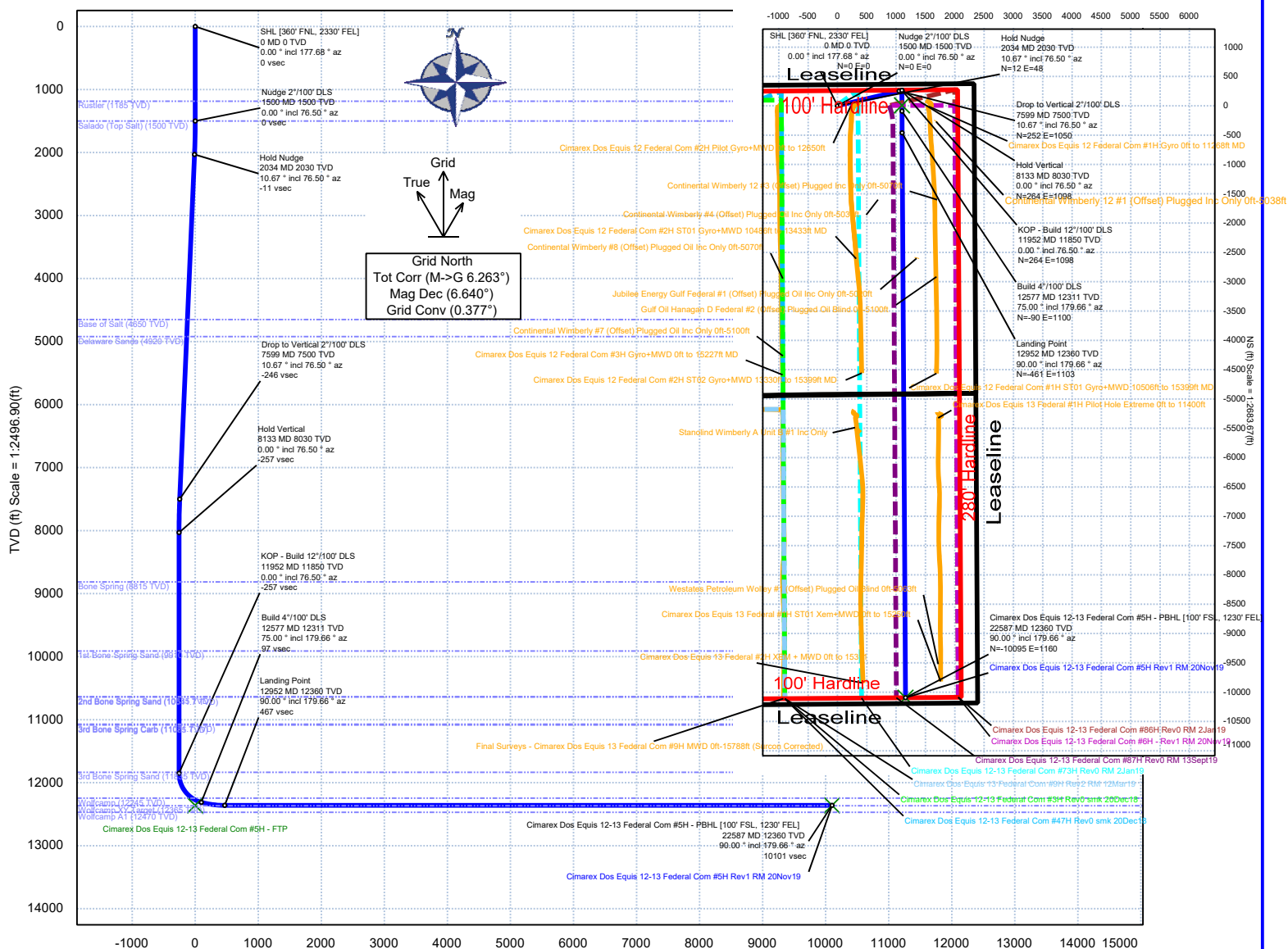


Cimarex Energy

Rev 1



Borehole: Dos Equis 12-13 Federal Com #5H				Well: Dos Equis 12-13 Federal Com #5H				Field: NM Lea County (NAD 83)				Structure: Cimarex Dos Equis 12-13 Federal Com #5H							
Gravity & Magnetic Parameters								Surface Location				NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model: HDGM 2019		Dip: 59.889°		Date: 20-Nov-2019				Lat: N 32 14 18.49		Northing: 451205.77NUS		Grid Conv: 0.3766°		Slot: New Slot		TVD Ref: RKB(3629.9ft above MSL)			
MagDec: 6.64°		FS: 47868.521nT		Gravity FS: 998.439mgn (9.80665 Based)				Lon: W 103 37 38.36		Easting: 799626.78NUS		Scale Fact: 0.99996366		Plan: Cimarex Dos Equis 12-13 Federal Com #5H Rev1 RM 20Nov19					



Vertical Section (ft) Azim = 179.67° Scale = 1:2496.90(ft) Origin = 0N/-S, 0E/-W

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [360° FNL, 2330° FEL]	0.00	0.00	177.68	0.00	0.00	0.00	0.00	0.00
Rustler	1185.00	0.00	76.50	1185.00	0.00	0.00	0.00	0.00
Nudge 2°/100° DLS	1500.00	0.00	76.50	1500.00	0.00	0.00	0.00	0.00
Salado (Top Salt)	1500.00	0.00	76.50	1500.00	0.00	0.00	0.00	0.00
Hold Nudge	2033.50	10.67	76.50	2030.42	-11.28	11.56	48.16	2.00
Base of Salt	4699.17	10.67	76.50	4650.00	-123.65	126.78	528.08	0.00
Delaware Sands	4973.92	10.67	76.50	4920.00	-135.23	138.66	577.55	0.00
Drop to Vertical 2°/100° DLS	7599.31	10.67	76.50	7500.00	-245.90	252.13	1050.21	0.00
Hold Vertical	8132.81	0.00	76.50	8030.42	-257.17	263.70	1098.38	2.00
Bone Spring	8917.39	0.00	76.50	8815.00	-257.17	263.70	1098.38	0.00
1st Bone Spring Sand	10012.39	0.00	76.50	9910.00	-257.17	263.70	1098.38	0.00
2nd Bone Spring Sand	10737.39	0.00	76.50	10635.00	-257.17	263.70	1098.38	0.00
3rd Bone Spring Sand	11187.39	0.00	76.50	11085.00	-257.17	263.70	1098.38	0.00
3rd Bone Spring Sand	11937.39	0.00	76.50	11835.00	-257.17	263.70	1098.38	0.00
KOP - Build 12°/100° DLS	11952.39	0.00	76.50	11850.00	-257.17	263.70	1098.38	0.00
Wolfcamp	12417.57	55.82	179.66	12245.00	-47.94	54.46	1099.62	12.00
Build 4°/100° DLS	12577.39	75.00	179.66	12311.19	96.71	-90.18	1100.48	12.00
Landing Point	12952.39	90.00	179.66	12360.00	467.44	-460.91	1102.68	4.00
Cimarex Dos Equis 12-13 Federal Com #5H - PBHL [100° FSL, 1230° FEL]	22586.60	90.00	179.66	12360.00	10101.66	-10094.96	1159.84	0.00
Wolfcamp A1	NaN			12470.00				
Wolfcamp XY Target	NaN			12365.00				

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
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1000 Rio Brazos Rd., Aztec, NM 87410
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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 100549

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 100549
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	5/23/2022