

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

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

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. [326056]
2. Name of Operator [215099]		9. API Well No. 30-025-50125
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory [96674]
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish 13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

NGMP Rec 04/28/2022

SL

(Continued on page 2)



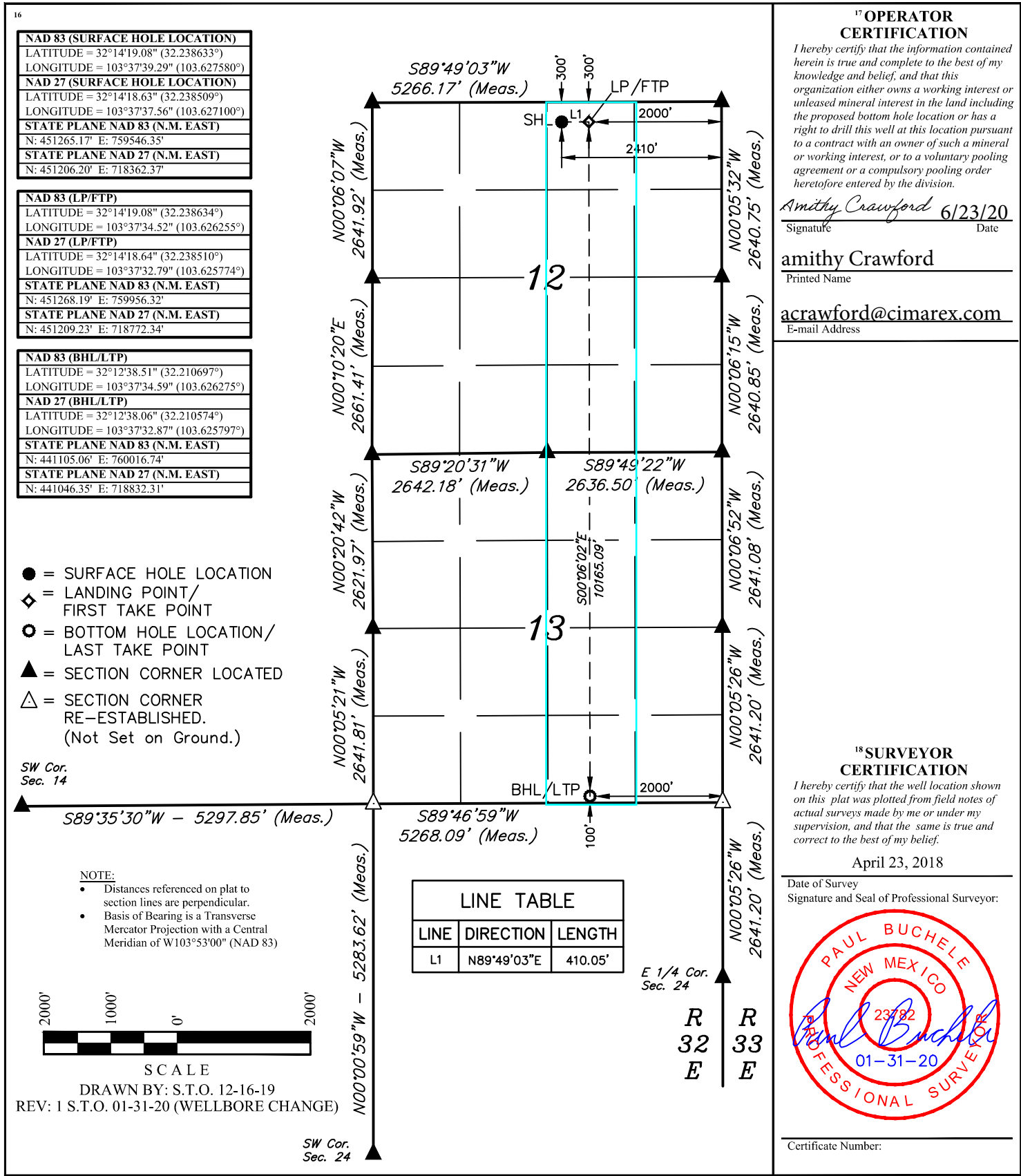
Approval Date: 10/22/2021

 KZ
 05/10/2022

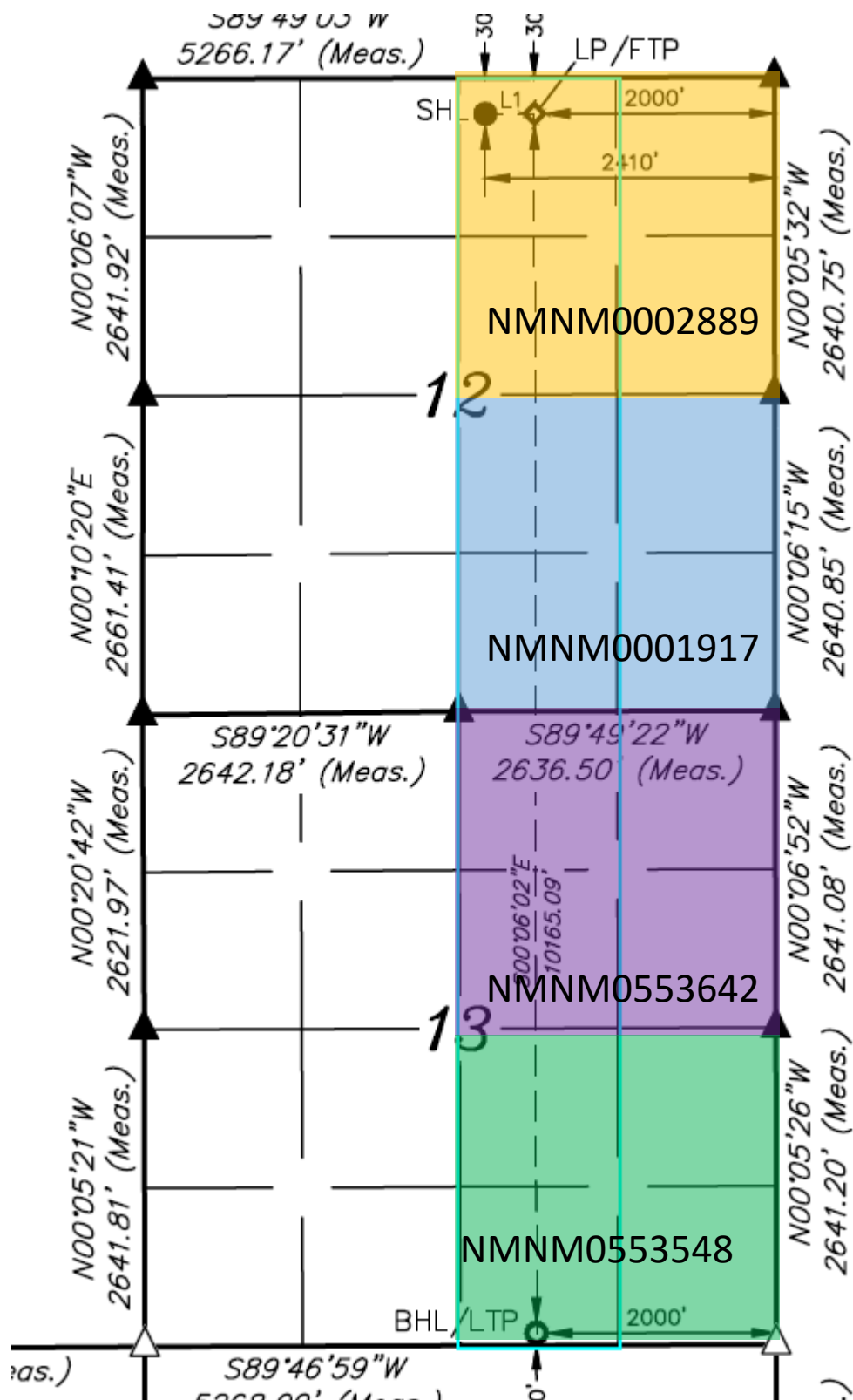
*(Instructions on page 2)

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

☐ AMENDED REPORT



Dos Equis 12-13 Fed Com W2E2 Pad 5 Lease Map



PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex
LEASE NO.:	NMNM002889
LOCATION:	Section 12, T.24 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Dos Equis 12-13 Fed Com 75H
SURFACE HOLE FOOTAGE:	300'/N & 2410'/E
BOTTOM HOLE FOOTAGE:	100'/S & 2000'/E

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1520** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - 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 ½ (50%) fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

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

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. **Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).**
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi**.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)**Communitization Agreement**

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

GENERAL REQUIREMENTS

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

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

☒ Eddy County

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

☒ Lea County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig

- Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall

have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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



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

Application for Permit to Drill

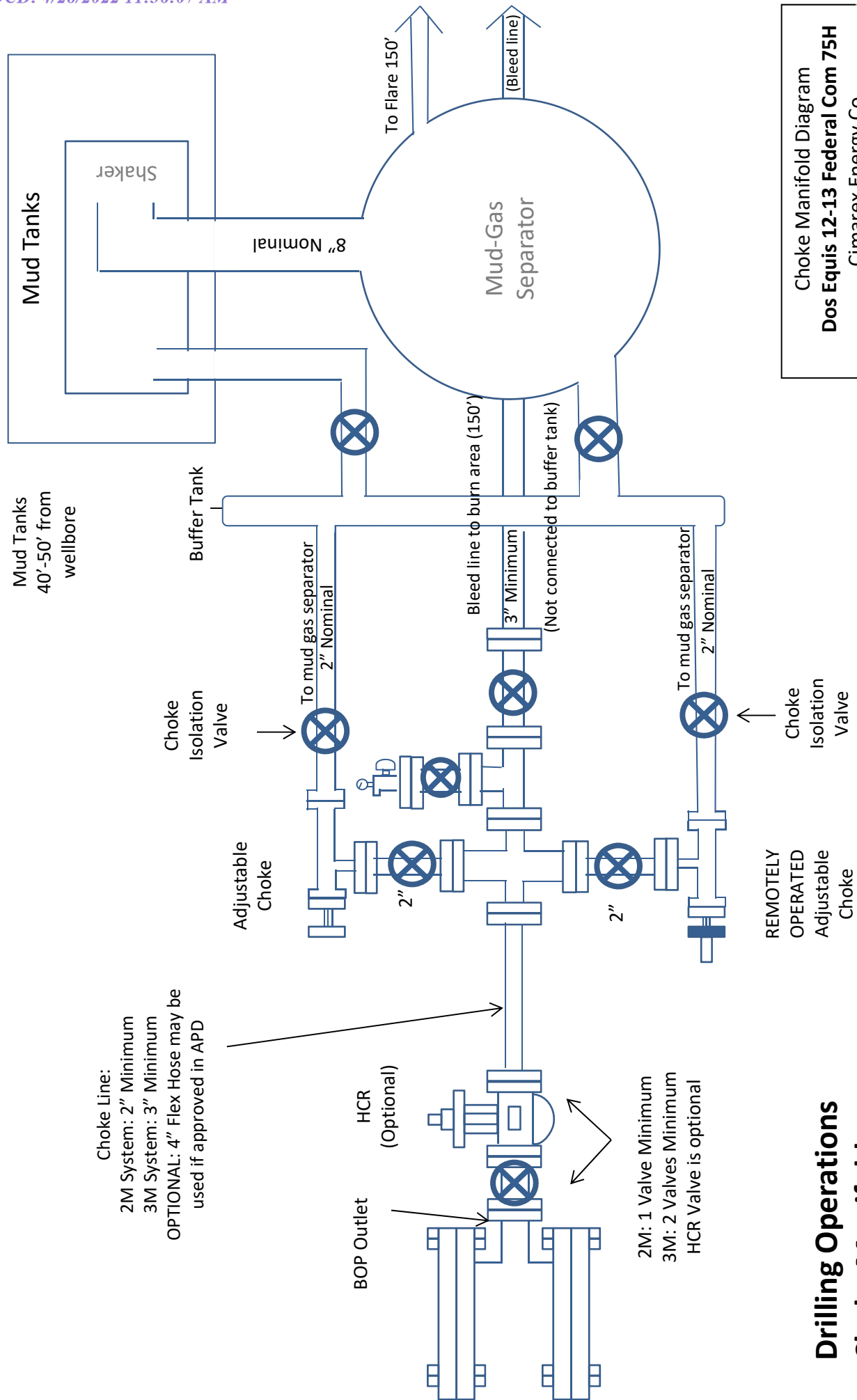
APD Package Report

Date Printed:

APD ID:	Well Status:
APD Received Date:	Well Name:
Operator:	Well Number:

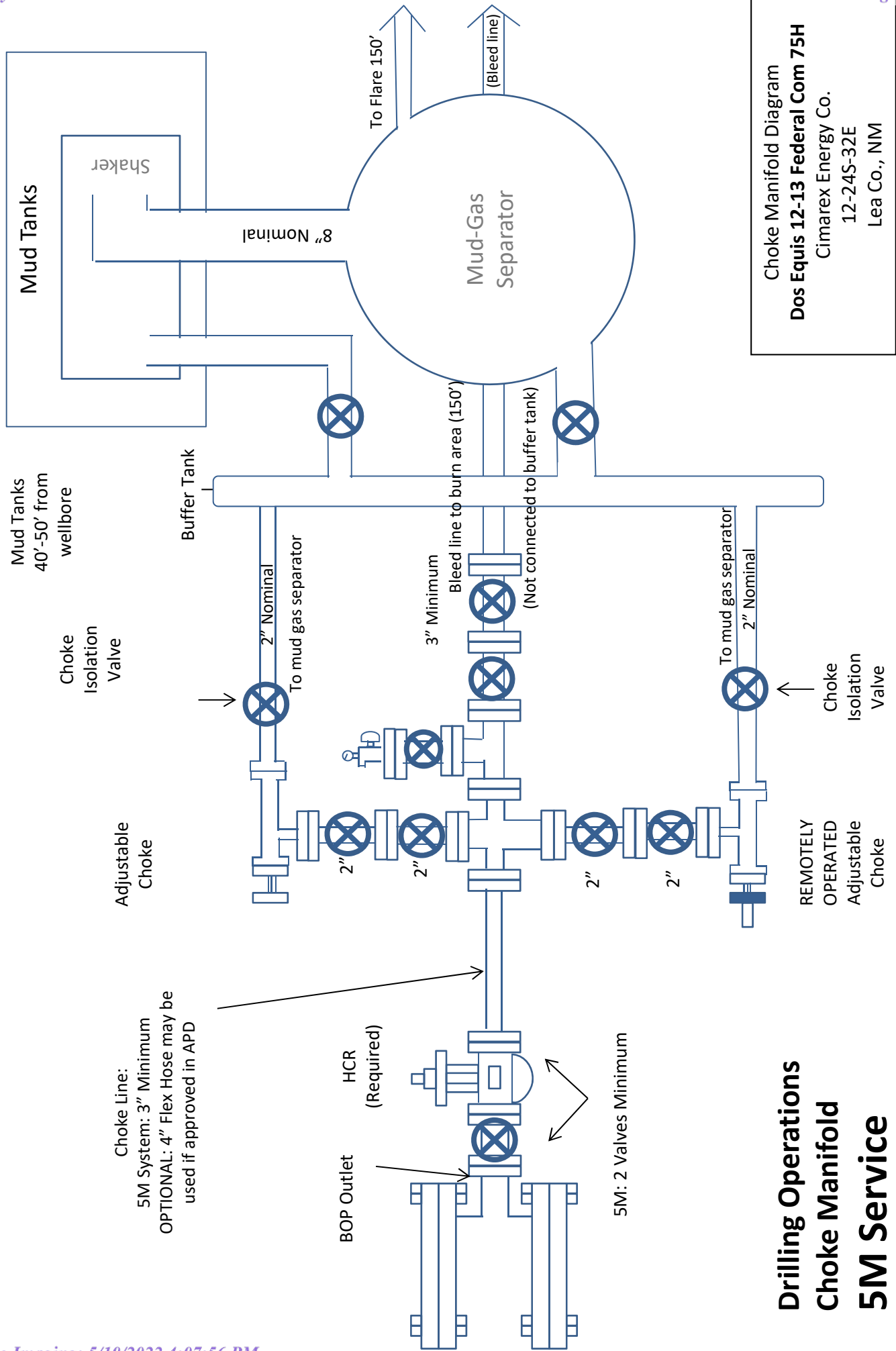
APD Package Report Contents

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

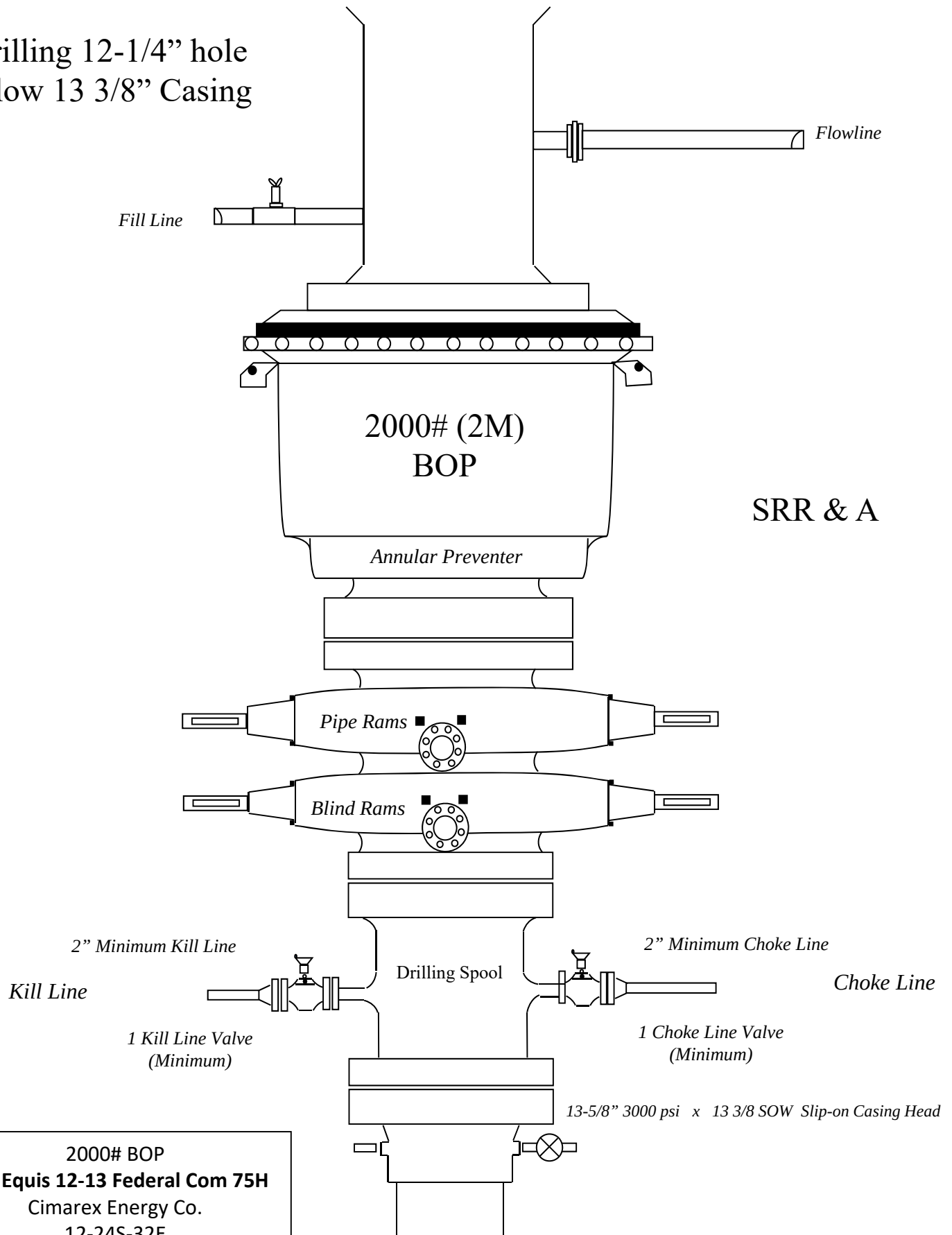


Choke Manifold Diagram
Dos Equis 12-13 Federal Com 75H
 Cimarex Energy Co.
 12-24S-32E
 Lea Co., NM

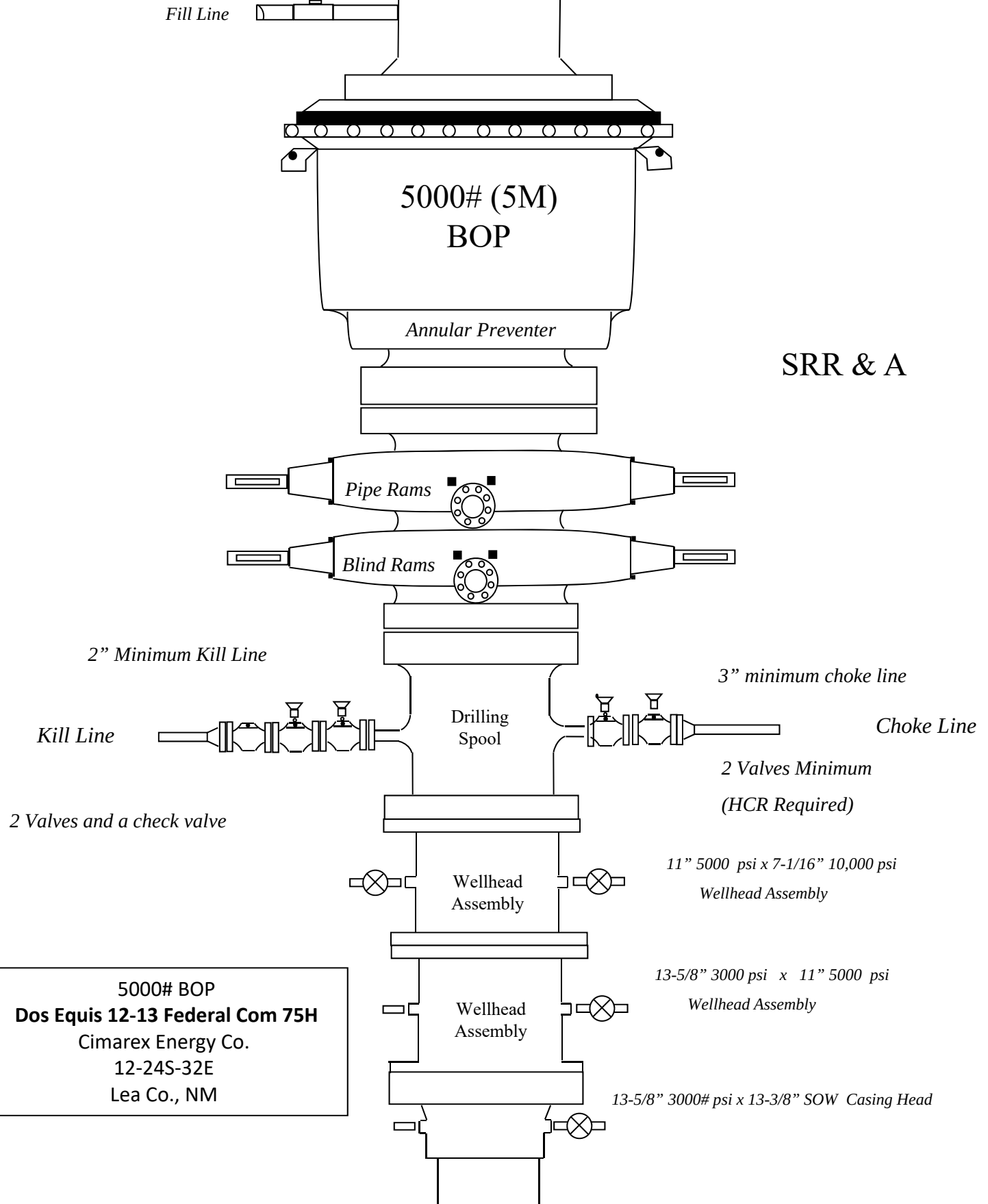
Drilling Operations
Choke Manifold
2M/3M Service



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



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



Dos Equis 12-13 Fed Com 75H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	36.00	J-55	ST&C	1.21	1.38	2.23
8 3/4	0	9150	9150	5-1/2"	20.00	L-80	LT&C	2.18	2.27	2.17
8 3/4	9150	19511	9600	5-1/2"	20.00	L-80	BT&C	2.08	2.12	51.78
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

Dos Equis 12-13 Fed Com 75H
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Dos Equis 12-13 Fed Com 75H

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Dos Equis 12-13 Fed Com 75H

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BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

Hydrogen Sulfide Drilling Operations Plan

Dos Equis 12-13 Federal Com 75H

Cimarex Energy Co.

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

Lea Co., NM

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

H₂S Detection and Alarm Systems:

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

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

H₂S Contingency Plan
Dos Equis 12-13 Federal Com 75H
Cimarex Energy Co.
UL: C, Sec. 12, 24S, 32E
Lea Co., NM

Emergency Procedures

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

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

Ignition of Gas Source

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

Characteristics of H₂S and SO₂

Please see attached International Chemical Safety Cards.

Contacting Authorities

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

H₂S Contingency Plan Emergency Contact
 t s **Dos Equis 12-13 Federal Com 75H**
 Cimarex Energy Co.
 UL: C, Sec. 12, 24S, 32E
 Lea Co., NM

Company Office

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

Key Personnel

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

Artesia

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

Carlsbad

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

Santa Fe

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

National

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

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

Other

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



Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20 Anti-Collision Summary Report

Analysis Date-24hr Time: February 18, 2020 - 10:02

Client: Cimarex Energy

Field: NM Lea County (NAD 83)

Structure: Cimarex Dos Equis 12-13 Federal Com #75H

Slot: New Slot

Well: Dos Equis 12-13 Federal Com #75H

Borehole: Dos Equis 12-13 Federal Com #75H

Scan MD Range: 0.00ft ~ 19510.94ft

Analysis Method: 3D Least Distance

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

Depth Interval: Every 10.00 Measured Depth (ft)

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

Min Pts: All local minima indicated.

Version / Patch: 2.10.787.0

Database \ Project: us1153APP452.DIR.SLB.COMIDRILLING-NM Lea County 2.10

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

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan: Restricted within 60521.44 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 #76H Rev1 RM 17Feb20 (Def Plan)													Fail Major
19.99	16.25	18.70	3.74	N/A		MAS = 4.95 (m)	0.00	0.00	CtCt<=15m<15.00				Enter Alert
19.99	16.25	18.70	3.74	84186.84		MAS = 4.95 (m)	26.00	26.00					WRP
19.99	20.02	6.22	-0.03	1.50		OSF1.50	2050.00	2050.00					Enter Minor
19.99	24.45	3.26	-4.46	1.21		OSF1.50	2540.00	2540.00		OSF<1.50			MinPt-CtCt
20.00	24.71	3.08	-4.73	1.21		OSF1.50	2600.00	2599.98					MinPts
24.92	25.10	7.76	-0.18	1.49		OSF1.50	2960.00	2958.13		OSF>1.50			Exit Minor
108.97	33.60	86.14	75.36	5.00		OSF1.50	4640.00	4622.12		OSF>5.00			Exit Alert
179.39	54.77	142.46	124.63	5.00		OSF1.50	8180.00	8152.42		OSF<5.00			Enter Alert
179.39	62.94	137.01	116.46	4.39		OSF1.50	9150.12	9122.54					MinPts
100.12	58.15	60.92	41.97	2.61		OSF1.50	9830.00	9594.86					MinPt-O-SF
100.06	58.10	60.88	41.95	2.61		OSF1.50	9840.00	9596.22					MinPt-O-ADP
100.02	58.06	60.85	41.97	2.61		OSF1.50	9850.00	9597.37					MINPT-O-EQU
99.99	57.94	60.94	42.05	2.61		OSF1.50	9890.00	9599.89					MinPt-CtCt
99.99	100.08	32.84	-0.09	1.50		OSF1.50	12360.00	9600.00		OSF<1.50			Enter Minor
99.99	149.63	-0.19	-49.64	1.00		OSF1.50	14090.00	9600.00			OSF<1.00		Enter Major
99.99	319.45	-113.41	-219.47	0.47		OSF1.50	19510.94	9600.00					MinPts

Cimarex Dos Equis 13 Federal #2H XEM + MWD 0ft to 15311 (Def Survey)													Fail Major
5260.35	32.81	5258.37	5227.54	N/A		MAS = 10.00 (m)	0.00	0.00					Surface
5260.34	32.81	5258.36	5227.53	N/A		MAS = 10.00 (m)	10.00	10.00					MinPts
5260.34	32.81	5258.36	5227.53	N/A		MAS = 10.00 (m)	20.00	20.00					MinPts
5260.34	32.81	5258.36	5227.53	N/A		MAS = 10.00 (m)	26.00	26.00					WRP
5263.39	32.81	5255.80	5230.59	937.79		MAS = 10.00 (m)	1000.00	1000.00					MINPT-O-EQU
5280.64	32.81	5265.26	5247.84	393.79		MAS = 10.00 (m)	2750.00	2749.68					MinPt-O-SF
5278.24	32.81	5262.72	5245.43	389.79		MAS = 10.00 (m)	3050.00	3047.27					MinPt-O-SF
5276.03	32.81	5260.12	5243.22	378.51		MAS = 10.00 (m)	3360.00	3354.32					MinPt-O-SF
5275.35	32.81	5259.31	5242.54	375.17		MAS = 10.00 (m)	3560.00	3552.41					MinPts
5275.19	32.81	5259.10	5242.38	373.64		MAS = 10.00 (m)	3600.00	3592.03					MinPt-O-SF
5253.25	32.81	5243.16	5220.44	290.14		MAS = 10.00 (m)	5600.00	5573.10					MinPt-O-SF
5252.08	32.81	5232.32	5219.27	295.45		MAS = 10.00 (m)	5750.00	5722.52					MINPT-O-EQU
5251.91	32.81	5232.44	5219.10	300.28		MAS = 10.00 (m)	5840.00	5812.43					MinPts
5284.72	44.51	5254.39	5240.22	186.33		OSF1.50	9200.00	9172.33					MinPt-O-SF
177.00	62.12	132.73	114.87	4.72		OSF1.50	14540.00	9600.00		OSF<5.00			Enter Alert
73.23	86.40	13.05	-13.16	1.25		OSF1.50	14650.00	9600.00			OSF<1.50		Enter Minor
56.94	98.88	-11.31	-41.94	0.82		OSF1.50	14670.00	9600.00				OSF<1.00	Enter Major
37.43	121.64	-44.38	-94.21	0.44		OSF1.50	14710.00	9600.00					MinPts
52.53	83.23	-3.62	-30.70	0.93		OSF1.50	14750.00	9600.00				OSF>1.00	Exit Major
59.99	73.96	10.02	-13.97	1.21		OSF1.50	14760.00	9600.00					Exit Minor
141.97	45.56	110.94	96.41	4.82		OSF1.50	14850.00	9600.00		OSF>5.00			Exit Alert
1362.38	165.96	1251.08	1196.42	12.44		OSF1.50	16700.00	9600.00					MinPt-CtCt
1351.16	235.79	1193.30	1115.37	8.66		OSF1.50	19260.00	9600.00					MinPt-CtCt
1351.23	235.96	1193.24	1115.24	8.65		OSF1.50	19270.00	9600.00					MINPT-O-EQU
1351.37	236.18	1193.26	1115.19	8.64		OSF1.50	19280.00	9600.00					MinPt-O-ADP
1353.78	237.05	1195.09	1116.74	8.63		OSF1.50	19340.00	9600.00					MinPt-O-SF
1375.07	237.14	1216.31	1137.93	8.76		OSF1.50	19510.94	9600.00					TD

Cimarex Dos Equis 12-13 Federal Com #91H Rev1 RM 14Feb20 (Def Plan)													Fail Minor
859.89	32.81	858.61	827.09	N/A		MAS = 10.00 (m)	0.00	0.00					Surface
859.89	32.81	858.60	827.08	N/A		MAS = 10.00 (m)	26.00	26.00					WRP
115.43	36.44	90.54	79.00	4.92		OSF1.50	5110.00	5087.64		OSF<5.00			Enter Alert
89.63	38.51	63.55	51.14	3.56		OSF1.50	5330.00	5305.55					MinPt-CtCt
89.66	38.60	63.50	51.06	3.55		OSF1.50	5340.00	5315.45					MinPts
89.79	38.70	63.56	51.09	3.54		OSF1.50	5350.00	5325.36					MinPt-O-SF
129.88	40.16	102.68	89.72	4.96		OSF1.50	5630.00	5602.92		OSF>5.00			Exit Alert
329.26	58.89	289.62	270.44	8.59		OSF1.50	9150.12	9122.54					MinPts
329.15	58.47	289.74	270.68	8.60		OSF1.50	9200.00	9172.33					MINPT-O-EQU
309.97	94.14	246.78	215.83	4.99		OSF1.50	12120.00	9600.00		OSF<5.00			Enter Alert
309.97	309.96	102.89	0.00	1.50		OSF1.50	19150.00	9600.00			OSF<1.50		Enter Minor
309.97	321.52	95.18	-11.55	1.45		OSF1.50	19510.94	9600.00					MinPts

Cimarex Dos Equis 12-13 Federal Com #77H Rev1 RM 17Feb20 (Def Plan)													Warning Alert
39.99	32.25	38.71	7.74	N/A		MAS = 9.83 (m)	0.00	0.00	CtCt<=15m<15.00				Enter Alert
39.99	32.25	38.71	7.74	58069.59		MAS = 9.83 (m)	26.00	26.00					WRP
39.99	32.25	23.39	7.74	2.53		MAS = 9.83 (m)	2500.00	2500.00					MinPts
40.01	32.25	23.36	7.76	2.52		MAS = 9.83 (m)	2510.00	2510.00					MINPT-O-EQU
40.15	32.25	23.41	7.90	2.52		MAS = 9.83 (m)	2530.00	2530.00					MinPt-O-SF

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Cimarex Dos Equis 12-13 Federal Com #73H Rev5 RM 19Dec19 (Def Plan)													
86.41	32.25	68.08	54.16	4.99		MAS = 9.83 (m)	3240.00	3235.46	OSF>5.00			Exit Alert	
234.74	64.33	191.43	170.41	5.55		OSF1.50	9150.12	9122.54				MinPts	
234.83	64.38	191.48	170.45	5.55		OSF1.50	9160.00	9132.42				MinPt-O-SF	
3302.26	315.41	3091.56	2986.85	15.78		OSF1.50	19510.94	9600.00				MinPts	
Warning Alert													
84.84	32.81	83.56	52.04	N/A		MAS = 10.00 (m)	0.00	0.00	OSF<5.00			Surface	
84.84	32.81	83.56	52.04	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
80.74	32.81	63.49	47.93	4.98		MAS = 10.00 (m)	2670.00	2669.90				Enter Alert	
48.16	32.81	29.10	15.35	2.64		MAS = 10.00 (m)	3200.00	3195.84				MinPts	
48.16	32.81	29.06	15.35	2.63		MAS = 10.00 (m)	3210.00	3205.75	OSF>5.00			MINPT-O-EOU	
48.28	32.81	29.11	15.47	2.63		MAS = 10.00 (m)	3230.00	3225.56				MinPt-O-SF	
103.50	32.81	81.60	70.69	4.96		MAS = 10.00 (m)	3870.00	3859.46				Exit Alert	
289.81	43.91	260.10	245.90	10.19		OSF1.50	5600.00	5573.10				MinPt-O-SF	
202.50	47.79	170.21	154.71	6.43		OSF1.50	6920.00	6892.42	OSF<5.00			MinPt-O-SF	
202.48	61.72	160.91	140.77	4.99		OSF1.50	8650.00	8622.42				Enter Alert	
202.48	66.06	158.01	136.42	4.66		OSF1.50	9150.12	9122.54				MinPts	
202.52	66.11	158.01	136.40	4.66		OSF1.50	9160.00	9132.42				MinPt-O-ADP	
202.63	66.17	158.09	136.46	4.63		OSF1.50	9170.00	9142.41	OSF>5.00			MinPt-O-SF	
218.60	66.61	173.76	151.99	4.99		OSF1.50	9340.00	9307.45				Exit Alert	
2807.11	312.96	2598.04	2494.15	13.50		OSF1.50	19510.94	9600.00				MinPts	
Warning Alert													
437.11	32.81	435.13	404.30	N/A		MAS = 10.00 (m)	0.00	0.00	OSF<5.00			Surface	
437.08	32.81	435.10	404.27	158145.70		MAS = 10.00 (m)	26.00	26.00				WRP	
429.53	32.81	418.75	396.73	48.53		MAS = 10.00 (m)	1620.00	1620.00				MinPts	
429.61	32.81	418.67	396.80	47.72		MAS = 10.00 (m)	1680.00	1680.00				MINPT-O-EOU	
429.60	32.81	417.87	396.79	43.87		MAS = 10.00 (m)	1950.00	1950.00	OSF>5.00			MinPts	
428.90	32.81	415.27	396.09	36.64		MAS = 10.00 (m)	2350.00	2350.00				MinPts	
428.98	32.81	415.20	396.17	36.20		MAS = 10.00 (m)	2400.00	2400.00				MINPT-O-EOU	
429.52	32.81	415.52	396.71	35.59		MAS = 10.00 (m)	2500.00	2500.00				MinPt-O-SF	
428.41	32.81	414.42	395.60	35.49		MAS = 10.00 (m)	2600.00	2599.98	OSF<5.00			MinPt-O-SF	
86.71	32.81	67.47	53.91	4.96		MAS = 10.00 (m)	5470.00	5444.21				Enter Alert	
75.33	32.81	56.20	42.52	4.29		MAS = 10.00 (m)	5720.00	5692.59				MinPt-O-SF	
74.90	32.81	55.96	42.09	4.31		MAS = 10.00 (m)	5780.00	5752.48				MINPT-O-EOU	
74.86	32.81	56.02	42.05	4.33		MAS = 10.00 (m)	5810.00	5782.45	OSF>5.00			MinPts	
51.26	42.77	22.07	8.49	1.81		OSF1.50	9160.00	9132.42				MinPts	
130.91	41.80	102.38	89.11	4.86		OSF1.50	9440.00	9394.93				Exit Alert	
519.85	41.59	491.47	478.26	19.61		OSF1.50	9900.12	9600.00				MinPt-O-SF	
10130.23	44.03	10100.22	10086.20	361.30		OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12 Federal Com #2H ST02 Gyro+MWD 13330ft to 15399ft MD (Def Survey)													
437.11	32.81	435.13	404.30	N/A		MAS = 10.00 (m)	0.00	0.00	OSF<5.00			Surface	
437.08	32.81	435.10	404.27	158145.70		MAS = 10.00 (m)	26.00	26.00				WRP	
429.53	32.81	418.75	396.73	48.53		MAS = 10.00 (m)	1620.00	1620.00				MinPts	
429.61	32.81	418.67	396.80	47.72		MAS = 10.00 (m)	1680.00	1680.00				MINPT-O-EOU	
429.60	32.81	417.87	396.79	43.87		MAS = 10.00 (m)	1950.00	1950.00	OSF>5.00			MinPts	
428.90	32.81	415.27	396.09	36.64		MAS = 10.00 (m)	2350.00	2350.00				MinPts	
428.98	32.81	415.20	396.17	36.20		MAS = 10.00 (m)	2400.00	2400.00				MINPT-O-EOU	
429.52	32.81	415.52	396.71	35.59		MAS = 10.00 (m)	2500.00	2500.00				MinPt-O-SF	
428.41	32.81	414.42	395.60	35.49		MAS = 10.00 (m)	2600.00	2599.98	OSF<5.00			MinPt-O-SF	
86.71	32.81	67.47	53.91	4.96		MAS = 10.00 (m)	5470.00	5444.21				Enter Alert	
75.33	32.81	56.20	42.52	4.29		MAS = 10.00 (m)	5720.00	5692.59				MinPt-O-SF	
74.90	32.81	55.96	42.09	4.31		MAS = 10.00 (m)	5780.00	5752.48				MINPT-O-EOU	
74.86	32.81	56.02	42.05	4.33		MAS = 10.00 (m)	5810.00	5782.45	OSF>5.00			MinPts	
51.26	42.77	22.07	8.49	1.81		OSF1.50	9160.00	9132.42				MinPts	
130.91	41.80	102.38	89.11	4.86		OSF1.50	9440.00	9394.93				Exit Alert	
519.85	41.59	491.47	478.26	19.61		OSF1.50	9900.12	9600.00				MinPt-O-SF	
1445.31	49.01	1411.97	1396.30	46.03		OSF1.50	10830.00	9600.00	OSF<5.00			MinPt-O-ADP	
1444.69	80.02	1390.68	1364.67	27.73		OSF1.50	11940.00	9600.00				MinPt-CtCt	
1441.64	92.36	1379.41	1349.29	23.89		OSF1.50	12370.00	9600.00				MinPt-CtCt	
1444.46	100.44	1376.84	1344.02	21.97		OSF1.50	12660.00	9600.00				MINPT-O-EOU	
1445.07	101.19	1376.95	1343.88	21.82		OSF1.50	12690.00	9600.00	OSF>5.00			MinPt-O-ADP	
1434.00	128.06	1347.97	1305.94	17.04		OSF1.50	13580.00	9600.00				MinPt-CtCt	
1434.21	132.81	1345.01	1301.40	16.42		OSF1.50	13740.00	9600.00				MinPt-CtCt	
1432.96	139.98	1338.98	1292.98	15.55		OSF1.50	13970.00	9600.00				MinPt-CtCt	
1433.11	140.33	1338.90	1292.78	15.52		OSF1.50	13990.00	9600.00	OSF<5.00			MinPts	
1439.85	141.95	1344.56	1297.91	15.41		OSF1.50	14110.00	9600.00				MinPt-O-SF	
5723.89	80.46	5669.60	5643.44	109.37		OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12 Federal Com #2H ST01 Gyro+MWD 10486ft to 13433ft MD (Def Survey)													
437.11	32.81	435.13	404.30	N/A		MAS = 10.00 (m)	0.00	0.00	OSF<5.00			Surface	
437.08	32.81	435.10	404.27	158145.70		MAS = 10.00 (m)	26.00	26.00				WRP	
429.53	32.81	418.75	396.73	48.53		MAS = 10.00 (m)	1620.00	1620.00				MinPts	
429.61	32.81	418.67	396.80	47.72		MAS = 10.00 (m)	1680.00	1680.00				MINPT-O-EOU	
429.60	32.81	417.87	396.79	43.87		MAS = 10.00 (m)	1950.00	1950.00	OSF>5.00			MinPts	
428.90	32.81	415.27	396.09	36.64		MAS = 10.00 (m)	2350.00	2350.00				MinPts	
428.98	32.81	415.20	396.17	36.20		MAS = 10.00 (m)	2400.00	2400.00				MINPT-O-EOU	
429.52	32.81	415.52	396.71	35.59		MAS = 10.00 (m)	2500.00	2500.00				MinPt-O-SF	
428.41	32.81	414.42	395.60	35.49		MAS = 10.00 (m)	2600.00	2599.98	OSF<5.00			MinPt-O-SF	
86.71	32.81	67.47	53.91	4.96		MAS = 10.00 (m)	5470.00	5444.21				Enter Alert	
75.33	32.81	56.20	42.52	4.29		MAS = 10.00 (m)	5720.00	5692.59				MinPt-O-SF	
74.90	32.81	55.96	42.09	4.31		MAS = 10.00 (m)	5780.00	5752.48				MINPT-O-EOU	
74.86	32.81	56.02	42.05	4.33		MAS = 10.00 (m)	5810.00	5782.45	OSF>5.00			MinPts	
51.26	42.77	22.07	8.49	1.81		OSF1.50	9160.00	9132.42				MinPts	
130.91	41.80	102.38	89.11	4.86		OSF1.50	9440.00	9394.93				Exit Alert	
519.85	41.59	491.47	478.26	19.61		OSF1.50	9900.12	9600.00				MinPt-O-SF	
1445.31	49.01	1411.97	1396.30	46.03		OSF1.50	10830.00	9600.00	OSF<5.00			MinPt-O-ADP	
1440.52	83.01	1384.52	1357.51	26.63		OSF1.50	12020.00	9600.00				MinPt-CtCt	
1440.58	83.19	1384.46	1357.39	26.57		OSF1.50	12030.00	9600.00				MINPT-O-EOU	
1440.71	83.36	1384.47	1357.34	26.52		OSF1.50	12040.00	9600.00				MinPt-O-ADP	
1464.38	86.73	1405.90	1377.65	25.89		OSF1.50	12280.00	9600.00	OSF>5.00			MinPt-O-SF	
7631.41	67.06	7586.04	7564.35	175.85		OSF1.50	19510.94	9600.00				TD	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Cimarex Dos Equis 12-13 Federal Com #5H Rev5 RM 19Dec19 (Def Plan)													
												Warning Alert	
99.99	32.81	98.70	67.18	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
99.99	32.81	98.70	67.18	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
82.32	32.81	64.69	49.51	4.96		MAS = 10.00 (m)	2850.00	2849.13	OSF<5.00			Enter Alert	
57.60	32.81	39.44	24.79	3.34		MAS = 10.00 (m)	3310.00	3304.80				MinPts	
57.64	32.81	39.46	24.83	3.34		MAS = 10.00 (m)	3320.00	3314.70				MinPt-O-SF	
88.70	32.81	69.80	55.90	4.96		MAS = 10.00 (m)	3720.00	3710.89	OSF>5.00			Exit Alert	
780.28	59.94	739.89	720.34	19.92		OSF1.50	9160.00	9132.42				MinPts	
780.69	60.08	740.21	720.61	19.89		OSF1.50	9200.00	9172.33				MinPt-O-SF	
2933.05	310.14	2725.86	2622.91	14.24		OSF1.50	19510.94	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #90H Rev1 RM 14Feb20 (Def Plan)													
												Warning Alert	
879.90	32.81	878.61	847.09	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
879.89	32.81	878.60	847.08	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
475.78	73.75	426.04	402.03	9.87		OSF1.50	9140.00	9112.42				MinPt-O-SF	
350.03	69.61	302.96	280.42	7.72		OSF1.50	9840.00	9596.22				MinPt-O-SF	
350.00	69.59	302.93	280.40	7.72		OSF1.50	9860.00	9598.32				MinPt-O-ADP	
349.99	69.58	302.93	280.40	7.72		OSF1.50	9870.00	9599.05				MINPT-O-EQU	
349.97	106.51	278.30	243.46	4.99		OSF1.50	12460.00	9600.00	OSF<5.00			Enter Alert	
349.97	317.97	137.33	32.01	1.65		OSF1.50	19510.00	9600.00				MinPt-CtCt	
349.97	318.00	137.31	31.97	1.65		OSF1.50	19510.94	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #89H Rev1 RM 14Feb20 (Def Plan)													
												Warning Alert	
899.89	32.81	898.60	867.08	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
899.88	32.81	898.59	867.07	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
899.88	32.81	886.43	867.07	73.89		MAS = 10.00 (m)	2000.00	2000.00				MinPts	
899.91	32.81	886.37	867.11	73.32		MAS = 10.00 (m)	2020.00	2020.00				MINPT-O-EQU	
932.45	32.81	917.20	899.64	66.69		MAS = 10.00 (m)	2500.00	2500.00				MinPt-O-SF	
944.94	32.81	929.53	912.13	66.81		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
1002.10	39.22	975.53	962.89	39.58		OSF1.50	5670.00	5642.74				MinPt-O-SF	
1012.79	58.69	973.24	954.11	26.43		OSF1.50	9160.00	9132.42				MinPts	
1009.87	55.03	972.76	954.84	28.15		OSF1.50	9900.12	9600.00				MinPt-CtCt	
1009.88	304.11	806.71	705.77	5.00		OSF1.50	18990.00	9600.00	OSF<5.00			Enter Alert	
1009.88	320.77	795.60	689.11	4.74		OSF1.50	19510.94	9600.00				MinPts	
Gulf Oil Hanagan D Federal #2 (Offset) Plugged Oil Blind Off- 5100ft (Def Survey)													
												Warning Alert	
3461.79	32.81	3460.51	3428.98	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3461.39	32.81	3460.05	3428.59	65955.21		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
3401.47	1022.62	2719.27	2378.85	4.99		OSF1.50	3370.00	3364.22	OSF<5.00			Enter Alert	
3239.72	1587.85	2180.65	1651.86	3.06		OSF1.50	5320.00	5295.64				MinPt-O-SF	
3238.05	1586.70	2179.76	1651.36	3.06		OSF1.50	5370.00	5345.17				MinPt-O-ADP	
3237.60	1586.13	2179.69	1651.48	3.06		OSF1.50	5390.00	5364.97				MINPT-O-EQU	
3237.00	1584.06	2180.46	1652.94	3.07		OSF1.50	5450.00	5424.40				MinPt-CtCt	
4118.28	1236.90	3293.26	2881.39	5.00		OSF1.50	7780.00	7752.42	OSF>5.00			Exit Alert	
4632.22	465.85	4321.22	4166.37	14.95		OSF1.50	12330.00	9600.00				MinPt-CtCt	
4632.36	466.14	4321.17	4166.22	14.94		OSF1.50	12370.00	9600.00				MINPT-O-EQU	
4666.72	502.99	4330.96	4163.73	13.95		OSF1.50	12900.00	9600.00				MinPt-O-ADP	
6257.10	1128.37	5504.42	5128.72	8.33		OSF1.50	16540.00	9600.00				MinPt-O-SF	
8542.34	1364.53	7632.23	7177.81	9.40		OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12-13 Federal Com #87H Rev0 RM 13Sept19 (Non-Def Plan)													
												Pass	
961.75	32.81	960.46	928.94	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
961.74	32.81	960.46	928.94	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
550.09	73.92	500.23	476.17	11.40		OSF1.50	9150.12	9122.54				MinPt-CtCt	
550.17	74.20	500.13	475.98	11.35		OSF1.50	9200.00	9172.33				MinPts	
551.06	74.41	500.88	476.66	11.34		OSF1.50	9290.00	9260.43				MinPt-O-SF	
2811.74	308.93	2605.36	2502.81	13.70		OSF1.50	19510.00	9600.00				MinPt-CtCt	
2811.74	308.94	2605.35	2502.80	13.70		OSF1.50	19510.94	9600.00				MinPts	
Cimarex Dos Equis 12 Federal Com #3H Gyro+MWD Off to 15227ft MD (Def Survey)													
												Pass	
869.29	32.81	867.32	836.49	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
869.24	32.81	867.22	836.43	21291.86		MAS = 10.00 (m)	26.00	26.00				WRP	
865.79	32.81	861.87	832.98	446.77		MAS = 10.00 (m)	400.00	400.00				MinPts	
866.49	32.81	861.47	833.68	284.90		MAS = 10.00 (m)	670.00	670.00				MINPT-O-EQU	
872.80	32.81	860.04	839.99	80.85		MAS = 10.00 (m)	2470.00	2470.00				MinPts	
872.81	32.81	859.92	840.00	79.79		MAS = 10.00 (m)	2500.00	2500.00				MINPT-O-EQU	
874.77	32.81	861.64	841.96	78.31		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
981.86	32.81	968.22	949.06	84.01		MAS = 10.00 (m)	3480.00	3473.18				MinPt-O-SF	
1045.87	32.81	1031.47	1013.06	84.09		MAS = 10.00 (m)	3950.00	3938.70				MinPt-O-SF	
1111.73	32.81	1096.14	1078.92	81.50		MAS = 10.00 (m)	4440.00	4424.03				MinPt-O-SF	
1259.96	32.81	1240.87	1227.15	73.51		MAS = 10.00 (m)	5526.32	5500.00				MinPt-O-SF	
1338.28	42.43	1309.34	1295.86	49.56		OSF1.50	9150.12	9122.54				MinPt-O-SF	
1425.60	39.49	1398.61	1386.11	56.93		OSF1.50	9900.12	9600.00				MinPt-O-SF	
1929.54	78.99	1876.22	1850.55	37.55		OSF1.50	10950.00	9600.00				MinPt-CtCt	
1932.27	106.26	1860.76	1826.00	27.76		OSF1.50	11630.00	9600.00				MinPt-CtCt	
1926.86	134.46	1836.56	1792.40	21.79		OSF1.50	12310.00	9600.00				MinPt-CtCt	
1927.74	137.01	1835.74	1790.73	21.39		OSF1.50	12400.00	9600.00				MINPT-O-EQU	
1924.48	150.59	1823.42	1773.89	19.40		OSF1.50	12690.00	9600.00				MinPt-CtCt	
1924.99	152.18	1822.86	1772.83	19.21		OSF1.50	12750.00	9600.00				MINPT-O-EQU	
1925.82	153.17	1823.05	1772.65	19.09		OSF1.50	12790.00	9600.00				MinPt-O-ADP	
1924.06	172.18	1808.62	1751.88	16.94		OSF1.50	13200.00	9600.00				MinPt-CtCt	
1905.55	219.78	1758.37	1685.77	13.11		OSF1.50	13990.00	9600.00				MinPt-CtCt	
1905.57	219.87	1758.33	1685.70	13.10		OSF1.50	14000.00	9600.00				MINPT-O-EQU	
1905.65	219.95	1758.35	1685.69	13.10		OSF1.50	14010.00	9600.00				MinPt-O-ADP	
1907.20	220.35	1759.64	1686.85	13.09		OSF1.50	14070.00	9600.00				MinPt-O-SF	
5839.99	105.13	5769.24	5734.85	84.89		OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12-13 Federal Com #88H Rev1 RM 14Feb20 (Def Plan)													
												Pass	
919.89	32.81	918.60	887.08	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
919.88		32.81	918.59	887.07	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
919.88		32.81	908.32	887.07	89.40	MAS = 10.00 (m)	1700.00	1700.00				MinPts	
919.91		32.81	908.26	887.11	88.58	MAS = 10.00 (m)	1720.00	1720.00				MINPT-O-EQU	
1014.97		32.81	1000.04	982.16	74.30	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
1141.38		40.75	1113.78	1100.62	43.33	OSF1.50	5690.00	5662.67				MinPt-O-SF	
1657.50		66.25	1612.90	1591.25	38.24	OSF1.50	8810.00	8782.42				MinPt-O-SF	
1674.83		65.48	1630.75	1609.35	39.11	OSF1.50	9150.12	9122.54				MinPts	
1674.80		65.41	1630.76	1609.39	39.15	OSF1.50	9200.00	9172.33				MinPts	
1669.78		326.67	1451.57	1343.11	7.69	OSF1.50	19500.00	9600.00				MinPt-CtCt	
1669.78		327.03	1451.33	1342.75	7.68	OSF1.50	19510.94	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #86H Rev1 RM 03Dec19 (Def Plan)													Pass
981.71		32.81	980.43	948.91	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
981.71		32.81	980.42	948.90	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
981.71		32.81	971.40	948.90	108.71	MAS = 10.00 (m)	1500.00	1500.00				MinPts	
981.74		32.81	971.34	948.93	107.53	MAS = 10.00 (m)	1520.00	1520.00				MINPT-O-EQU	
1196.78		42.53	1167.99	1154.25	43.48	OSF1.50	5740.00	5712.54				MinPt-O-SF	
1677.78		67.89	1632.09	1609.88	37.76	OSF1.50	8800.00	8772.42				MinPt-O-SF	
1692.71		67.18	1647.51	1625.56	38.52	OSF1.50	9150.12	9122.54				MINPT-O-EQU	
1692.73		67.17	1647.51	1625.55	38.51	OSF1.50	9160.00	9132.42				MinPt-O-ADP	
1693.14		67.26	1647.87	1625.88	38.47	OSF1.50	9200.00	9172.33				MinPt-O-SF	
3228.96		304.30	3025.66	2924.66	15.98	OSF1.50	19500.00	9600.00				MinPt-CtCt	
3228.96		304.59	3025.47	2924.37	15.96	OSF1.50	19510.94	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #6H - Rev2 RM 03Dec19 (Def Plan)													Pass
1001.67		32.81	1000.38	968.86	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
1001.66		32.81	1000.38	968.85	N/A	MAS = 10.00 (m)	26.00	26.00				WRP	
1001.66		32.81	991.36	968.85	110.92	MAS = 10.00 (m)	1500.00	1500.00				MinPts	
1001.70		32.81	991.30	968.89	109.78	MAS = 10.00 (m)	1520.00	1520.00				MINPT-O-EQU	
1111.36		32.81	1096.62	1078.55	82.49	MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
1118.20		36.98	1093.12	1081.23	46.94	OSF1.50	5220.00	5196.59				MinPt-O-SF	
1060.38		36.87	1035.36	1023.50	44.67	OSF1.50	5890.00	5862.42				MinPt-O-SF	
1060.26		58.61	1020.69	1001.59	27.72	OSF1.50	9150.12	9122.54				MinPt-CtCt	
1060.24		58.81	1020.60	1001.43	27.63	OSF1.50	9200.00	9172.33				MinPts	
3521.71		305.72	3317.47	3215.99	17.35	OSF1.50	19500.00	9600.00				MinPt-CtCt	
3521.71		306.01	3317.27	3215.70	17.33	OSF1.50	19510.94	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #49H Rev1 RM 17Feb20 (Def Plan)													Pass
1320.11		32.81	1318.83	1287.30	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
1320.11		32.81	1318.82	1287.30	144774.92	MAS = 10.00 (m)	26.00	26.00				WRP	
1150.22		40.88	1122.47	1109.34	43.73	OSF1.50	6410.00	6382.42				MinPt-O-SF	
1150.09		58.56	1110.57	1091.54	30.18	OSF1.50	9150.12	9122.54				MinPt-CtCt	
1150.11		58.59	1110.56	1091.52	30.17	OSF1.50	9160.00	9132.42				MinPts	
1150.50		58.73	1110.85	1091.77	30.10	OSF1.50	9200.00	9172.33				MinPt-O-SF	
2926.21		324.30	2709.58	2601.91	13.58	OSF1.50	19510.94	9600.00				MinPts	
Cimarex Dos Equis 12 Federal Com #1H Gyro Off to 11268ft MD (Def Survey)													Pass
1606.84		32.81	1604.86	1574.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
1606.83		32.81	1604.85	1574.02	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
1606.84		32.81	1604.85	1574.03	303606.45	MAS = 10.00 (m)	26.00	26.00				WRP	
1606.91		32.81	1604.81	1574.10	13979.98	MAS = 10.00 (m)	60.00	60.00				MINPT-O-EQU	
1611.97		32.81	1601.54	1579.16	190.50	MAS = 10.00 (m)	1820.00	1820.00				MinPts	
1611.43		32.81	1597.46	1578.62	134.29	MAS = 10.00 (m)	2610.00	2609.97				MinPt-O-SF	
1605.94		32.81	1592.01	1573.13	134.31	MAS = 10.00 (m)	2710.00	2709.81				MinPt-O-SF	
1263.66		32.81	1243.63	1230.85	71.31	MAS = 10.00 (m)	5600.00	5573.10				MinPt-O-SF	
1250.49		32.81	1230.88	1217.68	72.37	MAS = 10.00 (m)	5870.00	5842.42				MINPT-O-EQU	
1250.49		32.81	1230.89	1217.68	72.44	MAS = 10.00 (m)	5880.00	5852.42				MinPts	
1267.71		45.81	1236.29	1221.90	43.96	OSF1.50	9200.00	9172.33				MinPt-O-SF	
1261.40		44.51	1230.78	1216.89	45.31	OSF1.50	9440.00	9394.93				MinPt-O-ADP	
1261.36		44.45	1230.77	1216.90	45.37	OSF1.50	9450.00	9403.09				MINPT-O-EQU	
1261.35		44.39	1230.81	1216.96	45.43	OSF1.50	9460.00	9411.12				MinPt-CtCt	
1333.41		43.18	1303.78	1290.23	49.10	OSF1.50	9900.12	9600.00				MinPt-O-SF	
10156.30		59.86	10115.74	10096.45	283.17	OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12 Federal Com #1H ST01 Gyro+MWD 10506ft to 15399ft MD (Def Survey)													Pass
1606.84		32.81	1604.86	1574.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
1606.83		32.81	1604.85	1574.02	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
1606.84		32.81	1604.85	1574.03	303606.45	MAS = 10.00 (m)	26.00	26.00				WRP	
1606.91		32.81	1604.81	1574.10	13979.98	MAS = 10.00 (m)	60.00	60.00				MINPT-O-EQU	
1611.97		32.81	1601.54	1579.16	190.50	MAS = 10.00 (m)	1820.00	1820.00				MinPts	
1611.43		32.81	1597.46	1578.62	134.29	MAS = 10.00 (m)	2610.00	2609.97				MinPt-O-SF	
1605.94		32.81	1592.01	1573.13	134.31	MAS = 10.00 (m)	2710.00	2709.81				MinPt-O-SF	
1263.66		32.81	1243.63	1230.85	71.31	MAS = 10.00 (m)	5600.00	5573.10				MinPt-O-SF	
1250.49		32.81	1230.88	1217.68	72.37	MAS = 10.00 (m)	5870.00	5842.42				MINPT-O-EQU	
1250.49		32.81	1230.89	1217.68	72.44	MAS = 10.00 (m)	5880.00	5852.42				MinPts	
1267.71		45.81	1236.29	1221.90	43.96	OSF1.50	9200.00	9172.33				MinPt-O-SF	
1261.40		44.51	1230.78	1216.89	45.31	OSF1.50	9440.00	9394.93				MinPt-O-ADP	
1261.36		44.45	1230.77	1216.90	45.37	OSF1.50	9450.00	9403.09				MINPT-O-EQU	
1261.35		44.39	1230.81	1216.96	45.43	OSF1.50	9460.00	9411.12				MinPt-CtCt	
1333.41		43.18	1303.78	1290.23	49.10	OSF1.50	9900.12	9600.00				MinPt-O-SF	
1984.63		94.85	1920.74	1889.78	32.02	OSF1.50	11570.00	9600.00				MinPt-CtCt	
1992.47		138.79	1899.28	1853.68	21.82	OSF1.50	12610.00	9600.00				MinPt-CtCt	
2001.63		167.65	1889.40	1834.18	18.11	OSF1.50	13290.00	9600.00				MinPt-CtCt	
1999.18		210.81	1857.97	1788.36	14.35	OSF1.50	13980.00	9600.00				MinPt-CtCt	
1999.25		211.06	1857.87	1788.17	14.33	OSF1.50	14000.00	9600.00				MINPT-O-EQU	
1999.37		211.22	1857.90	1788.15	14.32	OSF1.50	14010.00	9600.00				MinPt-O-ADP	
2003.92		212.33	1861.71	1791.60	14.28	OSF1.50	14120.00	9600.00				MinPt-O-SF	
5879.15		117.92	5799.87	5761.22	76.03	OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12-13 Federal Com #48H Rev0 RM 13Sept19 (Non-Def Plan)													Pass
1276.72		32.81	1275.44	1243.92	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
1276.72		32.81	1275.43	1243.92	220788.09	MAS = 10.00 (m)	26.00	26.00				WRP	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Cl (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
	1276.72	32.81	1260.12	1243.92	83.24	MAS = 10.00 (m)	2500.00	2500.00				MinPts	
	1276.74	32.81	1260.09	1243.93	83.00	MAS = 10.00 (m)	2510.00	2510.00				MinPt-O-EOU	
	1690.29	73.65	1640.76	1616.63	35.01	OSF1.50	9180.00	9152.40				MinPt-O-EOU	
	1690.34	73.71	1640.77	1616.63	34.98	OSF1.50	9190.00	9162.37				MinPt-O-ADP	
	1694.88	74.17	1645.00	1620.71	34.85	OSF1.50	9380.00	9343.64				MinPt-O-SF	
	3321.83	318.28	3109.25	3003.60	15.72	OSF1.50	19510.94	9600.00				MinPts	

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

Pass

5449.10	32.81	5447.81	5416.29	N/A	MAS = 10.00 (m)	0.00	0.00					MinPts	
5449.10	32.81	5447.78	5416.29	141942.26	MAS = 10.00 (m)	26.00	26.00					WRP	
5450.16	32.81	5445.41	5417.35	1574.91	MAS = 10.00 (m)	780.00	780.00					MinPts	
5449.79	32.81	5443.38	5416.98	1063.43	MAS = 10.00 (m)	1160.00	1160.00					MinPt-O-EOU	
5441.28	32.81	5429.37	5408.47	504.96	MAS = 10.00 (m)	2460.00	2460.00					MinPts	
5441.31	32.81	5429.23	5408.51	496.91	MAS = 10.00 (m)	2500.00	2500.00					MinPt-O-EOU	
5441.66	32.81	5429.39	5408.85	488.68	MAS = 10.00 (m)	2600.00	2599.98					MinPt-O-SF	
5479.67	32.81	5461.02	5446.86	310.83	MAS = 10.00 (m)	5600.00	5573.10					MinPt-O-SF	
5315.28	44.08	5285.46	5271.20	196.29	OSF1.50	9200.00	9172.33					MinPt-O-SF	
1300.99	118.15	1221.65	1182.84	16.74	OSF1.50	14570.00	9600.00					MinPt-CtCt	
1301.01	118.21	1221.64	1182.80	16.72	OSF1.50	14580.00	9600.00					MinPts	
1303.90	118.49	1224.49	1185.41	16.67	OSF1.50	14660.00	9600.00					MinPt-O-SF	
1916.69	158.87	1810.43	1757.82	18.20	OSF1.50	16060.00	9600.00					MinPt-CtCt	
1916.26	163.04	1807.23	1753.22	17.73	OSF1.50	16220.00	9600.00					MinPt-CtCt	
1915.48	170.38	1801.55	1745.09	16.96	OSF1.50	16500.00	9600.00					MinPt-CtCt	
1916.62	173.48	1800.66	1743.19	16.67	OSF1.50	16630.00	9600.00					MinPt-O-EOU	
1918.98	176.11	1801.23	1742.86	16.43	OSF1.50	16740.00	9600.00					MinPt-O-ADP	
1938.09	217.84	1792.52	1720.25	13.40	OSF1.50	18230.00	9600.00					MinPt-CtCt	
1937.54	241.30	1776.33	1696.24	12.09	OSF1.50	19050.00	9600.00					MinPt-CtCt	
1939.81	249.36	1773.24	1690.46	11.71	OSF1.50	19350.00	9600.00					MinPt-O-EOU	
1943.43	253.60	1774.02	1689.83	11.54	OSF1.50	19510.94	9600.00					MinPts	

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

Pass

1340.04	32.81	1338.76	1307.23	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1340.04	32.81	1338.75	1307.23	146962.68	MAS = 10.00 (m)	26.00	26.00					WRP	
1325.67	32.81	1308.68	1292.86	84.37	MAS = 10.00 (m)	2590.00	2589.99					MinPts	
1325.69	32.81	1308.66	1292.88	84.14	MAS = 10.00 (m)	2600.00	2599.98					MinPt-O-EOU	
1349.27	32.81	1331.21	1316.47	80.34	MAS = 10.00 (m)	2960.00	2958.13					MinPt-O-SF	
1725.59	70.56	1678.12	1655.03	37.34	OSF1.50	9160.00	9132.42					MinPt-O-EOU	
1725.64	70.61	1678.13	1655.02	37.31	OSF1.50	9170.00	9142.41					MinPt-O-ADP	
1729.23	70.99	1681.48	1658.25	37.19	OSF1.50	9300.00	9269.97					MinPt-O-SF	
3712.10	320.24	3498.17	3391.85	17.45	OSF1.50	19510.94	9600.00					MinPts	

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

Pass

1359.98	32.81	1358.70	1327.17	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1359.98	32.81	1358.69	1327.17	149151.67	MAS = 10.00 (m)	26.00	26.00					WRP	
1359.98	32.81	1343.37	1327.17	88.64	MAS = 10.00 (m)	2500.00	2500.00					MinPts	
1360.00	32.81	1343.34	1327.19	88.39	MAS = 10.00 (m)	2510.00	2510.00					MinPt-O-EOU	
1775.11	73.41	1725.75	1701.71	36.89	OSF1.50	9140.00	9112.42					MinPts	
1766.32	71.27	1718.38	1695.05	37.83	OSF1.50	9200.00	9172.33					MinPt-O-SF	
1726.20	68.77	1679.92	1657.43	38.34	OSF1.50	9760.00	9579.59					MinPt-O-ADP	
1726.17	68.74	1679.92	1657.43	38.36	OSF1.50	9770.00	9582.38					MinPt-O-EOU	
1726.13	68.61	1679.96	1657.52	38.43	OSF1.50	9820.00	9593.29					MinPt-CtCt	
1727.83	319.14	1514.64	1408.68	8.15	OSF1.50	19510.94	9600.00					MinPts	

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

Pass

1379.92	32.81	1378.63	1347.11	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1379.92	32.81	1378.62	1347.11	155123.25	MAS = 10.00 (m)	26.00	26.00					WRP	
1379.91	32.81	1363.30	1347.11	89.94	MAS = 10.00 (m)	2500.00	2500.00					MinPts	
1379.97	32.81	1363.26	1347.16	89.40	MAS = 10.00 (m)	2520.00	2520.00					MinPt-O-EOU	
1480.34	32.81	1460.17	1447.53	78.34	MAS = 10.00 (m)	3490.00	3483.08					MinPt-O-SF	
1786.93	70.83	1739.28	1716.10	38.52	OSF1.50	9150.00	9122.42					MinPt-O-SF	
1786.93	70.83	1739.28	1716.10	38.52	OSF1.50	9150.00	9122.54					MinPt-O-ADP	
1746.23	65.79	1701.94	1680.43	40.58	OSF1.50	9750.00	9576.59					MinPt-O-ADP	
1746.16	65.74	1701.92	1680.44	40.62	OSF1.50	9780.00	9584.97					MinPt-O-EOU	
1746.13	65.64	1701.94	1680.49	40.67	OSF1.50	9820.00	9593.29					MinPt-CtCt	
1747.83	319.78	1534.22	1428.05	8.23	OSF1.50	19510.94	9600.00					MinPts	

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

Pass

5581.37	32.81	5579.39	5548.56	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
5581.33	32.81	5579.34	5548.52	933747.17	MAS = 10.00 (m)	10.00	10.00					MinPt-O-SF	
5581.29	32.81	5579.31	5548.49	N/A	MAS = 10.00 (m)	26.00	26.00					WRP	
5581.11	32.81	5578.61	5548.21	10742.53	MAS = 10.00 (m)	170.00	170.00					MinPts	
5582.24	32.81	5578.23	5549.45	2739.83	MAS = 10.00 (m)	510.00	510.00					MinPt-O-EOU	
5582.49	32.81	5577.84	5549.68	2084.17	MAS = 10.00 (m)	660.00	660.00					MinPts	
5584.00	32.81	5577.19	5551.20	1153.86	MAS = 10.00 (m)	1140.00	1140.00					MinPt-O-EOU	
5593.65	32.81	5580.82	5560.84	515.28	MAS = 10.00 (m)	2500.00	2500.00					MinPt-O-EOU	
5593.15	32.81	5580.14	5560.34	506.73	MAS = 10.00 (m)	2600.00	2599.98					MinPt-O-SF	
5581.90	32.81	5568.97	5549.09	509.97	MAS = 10.00 (m)	2890.00	2888.80					MinPt-O-SF	
5432.87	32.81	5413.76	5400.06	320.01	MAS = 10.00 (m)	5600.00	5573.10					MinPt-O-SF	
5430.04	32.81	5411.34	5397.24	327.73	MAS = 10.00 (m)	5770.00	5742.49					MinPt-O-EOU	
5430.03	32.81	5411.38	5397.22	328.69	MAS = 10.00 (m)	5790.00	5762.46					MinPts	
5470.90	42.55	5441.85	5428.36	202.61	OSF1.50	9200.00	9172.33					MinPt-O-SF	
1386.04	120.73	1304.75	1265.31	17.54	OSF1.50	14720.00	9600.00					MinPt-CtCt	
1386.14	121.24	1304.54	1264.90	17.45	OSF1.50	14740.00	9600.00					MinPt-O-EOU	
1386.53	121.72	1304.64	1264.80	17.37	OSF1.50	14760.00	9600.00					MinPt-O-ADP	
1409.63	126.40	1324.70	1283.23	16.97	OSF1.50	14980.00	9600.00					MinPt-O-SF	
4984.13	86.09	4926.08	4898.04	88.85	OSF1.50	19510.94	9600.00					TD	

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

Pass

5581.37	32.81	5579.39	5548.56	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
5581.33	32.81	5579.34	5548.52	933747.17	MAS = 10.00 (m)	10.00	10.00					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		
5581.29	32.81	5579.31	5548.49	N/A		MAS = 10.00 (m)	26.00	26.00				WRP	
5581.11	32.81	5578.61	5548.31	10742.53		MAS = 10.00 (m)	170.00	170.00				MinPts	
5582.24	32.81	5578.23	5549.43	2739.83		MAS = 10.00 (m)	510.00	510.00				MINPT-O-EQU	
5582.49	32.81	5577.84	5549.68	2084.17		MAS = 10.00 (m)	660.00	660.00				MinPts	
5584.00	32.81	5577.19	5551.20	1153.86		MAS = 10.00 (m)	1140.00	1140.00				MINPT-O-EQU	
5593.65	32.81	5580.82	5560.84	515.28		MAS = 10.00 (m)	2500.00	2500.00				MINPT-O-EQU	
5593.15	32.81	5580.14	5560.34	506.73		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
5581.90	32.81	5568.97	5549.09	509.97		MAS = 10.00 (m)	2890.00	2888.80				MinPt-O-SF	
5432.87	32.81	5413.76	5400.06	320.01		MAS = 10.00 (m)	5600.00	5573.10				MinPt-O-SF	
5430.04	32.81	5411.34	5397.24	327.73		MAS = 10.00 (m)	5770.00	5742.49				MINPT-O-EQU	
5430.03	32.81	5411.39	5397.22	328.69		MAS = 10.00 (m)	5790.00	5762.46				MinPts	
5470.90	42.55	5441.85	5428.39	202.61		OSF1.50	9200.00	9172.33				MinPt-O-SF	
1386.04	120.73	1304.75	1265.31	17.54		OSF1.50	14720.00	9600.00				MinPt-CtCt	
1386.14	121.24	1304.54	1264.90	17.45		OSF1.50	14740.00	9600.00				MINPT-O-EQU	
1386.53	121.72	1304.64	1264.80	17.37		OSF1.50	14760.00	9600.00				MinPt-O-ADP	
1409.63	126.40	1324.70	1283.23	16.97		OSF1.50	14980.00	9600.00				MinPt-O-SF	
1962.84	173.02	1846.83	1789.82	17.20		OSF1.50	16670.00	9600.00				MinPt-CtCt	
1962.94	177.49	1843.96	1785.45	16.76		OSF1.50	16790.00	9600.00				MinPt-CtCt	
1967.74	189.22	1840.94	1778.53	15.75		OSF1.50	17120.00	9600.00				MINPT-O-EQU	
1969.76	191.59	1841.38	1778.17	15.57		OSF1.50	17190.00	9600.00				MinPt-O-ADP	
1938.55	240.85	1777.32	1697.70	12.16		OSF1.50	18380.00	9600.00				MinPt-CtCt	
1939.43	243.26	1776.60	1696.18	12.04		OSF1.50	18460.00	9600.00				MINPT-O-EQU	
1940.43	244.47	1776.80	1695.97	11.99		OSF1.50	18500.00	9600.00				MinPt-O-ADP	
1957.04	257.81	1784.51	1699.23	11.46		OSF1.50	18840.00	9600.00				MINPT-O-EQU	
1959.36	261.41	1784.42	1697.95	11.32		OSF1.50	18920.00	9600.00				MINPT-O-EQU	
1969.54	272.95	1786.91	1696.59	10.89		OSF1.50	19230.00	9600.00				MinPt-O-ADP	
1972.61	299.22	1772.47	1673.40	9.94		OSF1.50	19310.00	9600.00				MINPT-O-EQU	
1973.01	299.72	1772.54	1673.29	9.93		OSF1.50	19320.00	9600.00				MinPt-O-ADP	
1975.12	300.18	1774.34	1674.94	9.93		OSF1.50	19360.00	9600.00				MinPt-O-SF	
1990.30	300.86	1789.06	1689.43	9.98		OSF1.50	19510.94	9600.00				TD	
Continental Wimberly #2 (Offset) Plugged Oil Inc Only Off: 5038ft (Def Survey)													Pass
1788.68	32.81	1787.39	1755.87	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1788.42	32.81	1787.11	1755.61	69866.18		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
1788.39	32.81	1787.08	1755.58	99156.25		MAS = 10.00 (m)	26.00	26.00				WRP	
1788.37	32.81	1786.96	1755.56	14734.77		MAS = 10.00 (m)	40.00	40.00				MinPts	
1782.31	72.05	1733.85	1710.26	37.76		OSF1.50	1490.00	1490.00				MinPt-CtCt	
1446.84	256.22	1275.49	1190.63	8.52		OSF1.50	5200.00	5176.79				MinPt-O-SF	
1444.22	255.25	1273.51	1188.97	8.53		OSF1.50	5260.00	5236.21				MinPt-O-ADP	
1444.02	255.04	1273.45	1188.98	8.54		OSF1.50	5270.00	5246.12				MINPT-O-EQU	
1443.84	254.59	1273.57	1189.24	8.55		OSF1.50	5290.00	5265.93				MinPt-CtCt	
4730.08	78.48	4677.33	4651.60	91.89		OSF1.50	9900.00	9600.00				MinPt-O-SF	
6398.93	200.52	6264.82	6198.41	48.17		OSF1.50	14000.00	9600.00				MinPt-O-SF	
10903.01	257.31	10731.04	10645.70	63.87		OSF1.50	19510.94	9600.00				TD	
Continental Wimberly #4 (Offset) Plugged Oil Inc Only Off: 5030ft (Def Survey)													Pass
1828.51	32.81	1827.23	1795.71	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
1828.24	32.81	1826.92	1795.43	63342.52		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
1828.20	32.81	1826.89	1795.39	80847.88		MAS = 10.00 (m)	26.00	26.00				WRP	
1828.18	32.81	1826.80	1795.37	20517.96		MAS = 10.00 (m)	40.00	40.00				MinPts	
1828.80	67.90	1783.11	1760.90	41.15		OSF1.50	1360.00	1360.00				MinPt-CtCt	
1828.39	109.62	1754.88	1718.77	25.30		OSF1.50	2160.00	2160.00				MinPt-CtCt	
1660.85	260.11	1486.97	1400.74	9.62		OSF1.50	5140.00	5117.36				MinPt-O-SF	
1660.29	259.93	1486.53	1400.36	9.63		OSF1.50	5170.00	5147.07				MinPt-O-ADP	
1660.23	259.85	1486.51	1400.37	9.63		OSF1.50	5180.00	5156.98				MINPT-O-EQU	
1660.22	259.77	1486.57	1400.45	9.63		OSF1.50	5190.00	5166.88				MinPt-CtCt	
4692.76	68.93	4636.38	4613.83	103.81		OSF1.50	9900.12	9600.00				MinPt-O-SF	
4549.05	45.46	4518.31	4503.59	154.44		OSF1.50	11010.00	9600.00				MinPt-CtCt	
4549.57	46.91	4517.83	4502.66	149.54		OSF1.50	11080.00	9600.00				MINPT-O-EQU	
4550.60	48.16	4518.06	4502.44	145.60		OSF1.50	11130.00	9600.00				MinPt-O-ADP	
6224.65	204.63	6087.80	6020.02	45.91		OSF1.50	15260.00	9600.00				MinPt-O-SF	
9640.53	255.72	9469.62	9384.81	56.83		OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12-13 Federal Com #9H Rev0 RM 26Dec19 (Non-Def Plan)													Pass
2525.93	32.81	2524.64	2493.12	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2525.93	32.81	2524.63	2493.12	334202.64		MAS = 10.00 (m)	26.00	26.00				WRP	
2036.04	61.95	1994.05	1974.09	50.96		OSF1.50	9150.12	9122.54				MinPt-CtCt	
2036.04	62.04	1993.99	1974.01	50.89		OSF1.50	9200.00	9172.33				MinPts	
3401.55	330.70	3180.66	3070.86	15.48		OSF1.50	19510.94	9600.00				MinPts	
Continental Wimberly #3 (Offset) Plugged Oil Inc Only Off: 3570ft (Def Survey)													Pass
2413.68	32.81	2412.40	2380.88	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2413.18	32.81	2411.83	2380.37	37597.67		MAS = 10.00 (m)	26.00	26.00				MinPt-O-SF	
2412.94	32.81	2411.57	2380.13	31924.45		MAS = 10.00 (m)	60.00	60.00				MinPts	
2411.20	63.50	2368.44	2347.70	58.10		OSF1.50	1370.00	1370.00				MinPt-CtCt	
2410.44	121.30	2329.14	2289.14	30.11		OSF1.50	2480.00	2480.00				MinPt-CtCt	
2148.69	262.03	1973.49	1886.66	12.38		OSF1.50	5280.00	5256.02				MinPt-O-SF	
2146.21	261.38	1971.44	1884.83	12.38		OSF1.50	5360.00	5335.26				MinPt-O-ADP	
2146.11	261.27	1971.41	1884.84	12.39		OSF1.50	5370.00	5345.17				MINPT-O-EQU	
2146.05	261.04	1971.51	1885.01	12.40		OSF1.50	5390.00	5364.97				MinPt-CtCt	
4805.27	101.39	4737.24	4703.88	71.98		OSF1.50	9900.12	9600.00				MinPt-O-SF	
4673.21	89.63	4613.03	4583.58	79.33		OSF1.50	11020.00	9600.00				MinPt-CtCt	
4673.31	89.98	4612.93	4583.39	79.06		OSF1.50	11050.00	9600.00				MINPT-O-EQU	
4673.49	90.14	4612.96	4583.35	78.87		OSF1.50	11070.00	9600.00				MinPt-O-ADP	
6165.06	207.93	6026.02	5957.14	44.74		OSF1.50	15040.00	9600.00				MinPt-O-SF	
9692.95	260.65	9518.76	9432.31	56.05		OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12 Fed 4H Gyro-MWD 10305ft to 15240ft MD (Def Survey)													Pass
2188.91	32.81	2186.93	2156.10	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2188.91	32.81	2186.91	2156.10	148047.85		MAS = 10.00 (m)	26.00	26.00				WRP	
2188.87	32.81	2186.03	2156.06	2555.75		MAS = 10.00 (m)	210.00	210.00				MinPts	
2191.06	32.81	2184.19	2158.25	447.60		MAS = 10.00 (m)	1030.00	1030.00				MINPT-O-EQU	
2191.52	32.81	2184.19	2158.72	409.11		MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EQU	
2191.26	32.81	2181.05	2158.47	265.60		MAS = 10.00 (m)	1890.00	1890.00				MinPts	
2193.04	32.81	2179.81	2160.23	194.72		MAS = 10.00 (m)	2500.00	2500.00				MINPT-O-EQU	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Cl (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
2195.12	32.81	2181.67	2162.31	191.22		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
2221.52	32.81	2208.07	2188.71	193.50		MAS = 10.00 (m)	2900.00	2898.70				MinPt-O-SF	
2250.29	32.81	2236.70	2217.48	193.73		MAS = 10.00 (m)	3110.00	3106.70				MinPt-O-SF	
2567.49	32.81	2548.82	2534.68	153.75		MAS = 10.00 (m)	5526.32	5500.00				MinPt-O-SF	
2583.47	32.81	2562.85	2550.67	138.48		MAS = 10.00 (m)	6930.00	6902.42				MinPts	
2583.94	32.81	2562.39	2551.13	131.88		MAS = 10.00 (m)	7210.00	7182.42				MINPT-O-EOU	
2585.74	33.40	2562.81	2552.33	123.34		OSF1.50	7590.00	7562.42				MinPt-O-ADP	
2591.49	37.69	2565.70	2553.80	108.76		OSF1.50	8370.00	8342.42				MinPt-CtCt	
2592.01	39.37	2565.11	2552.64	103.90		OSF1.50	8630.00	8602.42				MINPT-O-EOU	
2592.81	40.32	2565.27	2552.49	101.37		OSF1.50	8780.00	8752.42				MinPt-O-ADP	
2595.74	42.53	2566.73	2553.21	95.94		OSF1.50	9150.12	9122.54				MinPt-O-SF	
2917.96	78.38	2865.04	2839.57	57.24		OSF1.50	10770.00	9600.00				MINPT-O-EOU	
2918.95	80.00	2864.95	2838.95	56.08		OSF1.50	10830.00	9600.00				MINPT-O-EOU	
2920.90	95.99	2856.24	2824.90	46.57		OSF1.50	11120.00	9600.00				MinPt-CtCt	
2921.29	101.15	2853.20	2820.14	44.15		OSF1.50	11260.00	9600.00				MINPT-O-EOU	
2921.73	101.70	2853.27	2820.03	43.92		OSF1.50	11290.00	9600.00				MinPt-O-ADP	
2890.85	179.35	2770.62	2711.50	24.43		OSF1.50	12830.00	9600.00				MinPt-CtCt	
2880.69	212.56	2738.32	2668.13	20.51		OSF1.50	13490.00	9600.00				MinPt-CtCt	
2883.75	223.12	2734.35	2660.63	19.55		OSF1.50	13760.00	9600.00				MINPT-O-EOU	
2884.80	224.70	2734.33	2660.09	19.42		OSF1.50	13800.00	9600.00				MINPT-O-EOU	
2888.98	229.94	2735.03	2659.04	19.00		OSF1.50	13930.00	9600.00				MinPt-O-ADP	
2897.04	287.83	2704.50	2609.21	15.19		OSF1.50	14120.00	9600.00				MinPts	
2897.44	287.87	2704.87	2609.58	15.19		OSF1.50	14130.00	9600.00				MinPt-O-SF	
6218.15	167.38	6105.90	6050.76	56.37		OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12 Federal Com #4H Gyro Off to 11189ft MD (Def Survey)													Pass
2188.91	32.81	2186.93	2156.10	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2188.91	32.81	2186.91	2156.10	149047.85		MAS = 10.00 (m)	26.00	26.00				WRP	
2188.91	32.81	2186.03	2156.06	2555.75		MAS = 10.00 (m)	210.00	210.00				MinPts	
2191.06	32.81	2184.19	2158.25	447.60		MAS = 10.00 (m)	1030.00	1030.00				MINPT-O-EOU	
2191.52	32.81	2184.19	2158.72	409.11		MAS = 10.00 (m)	1120.00	1120.00				MINPT-O-EOU	
2191.28	32.81	2181.05	2158.47	265.60		MAS = 10.00 (m)	1890.00	1890.00				MinPts	
2193.04	32.81	2179.81	2160.23	194.72		MAS = 10.00 (m)	2500.00	2500.00				MINPT-O-EOU	
2195.12	32.81	2181.67	2162.31	191.22		MAS = 10.00 (m)	2600.00	2599.98				MinPt-O-SF	
2221.52	32.81	2208.07	2188.71	193.50		MAS = 10.00 (m)	2900.00	2898.70				MinPt-O-SF	
2250.29	32.81	2236.70	2217.48	193.73		MAS = 10.00 (m)	3110.00	3106.70				MinPt-O-SF	
2567.49	32.81	2548.82	2534.68	153.75		MAS = 10.00 (m)	5526.32	5500.00				MinPt-O-SF	
2583.47	32.81	2562.85	2550.67	138.48		MAS = 10.00 (m)	6930.00	6902.42				MinPts	
2583.94	32.81	2562.39	2551.13	131.88		MAS = 10.00 (m)	7210.00	7182.42				MINPT-O-EOU	
2585.74	33.40	2562.81	2552.33	123.34		OSF1.50	7590.00	7562.42				MinPt-O-ADP	
2591.49	37.69	2565.70	2553.80	108.76		OSF1.50	8370.00	8342.42				MinPt-CtCt	
2592.01	39.37	2565.11	2552.64	103.90		OSF1.50	8630.00	8602.42				MINPT-O-EOU	
2592.81	40.32	2565.27	2552.49	101.37		OSF1.50	8780.00	8752.42				MinPt-O-ADP	
2595.74	42.53	2566.73	2553.21	95.94		OSF1.50	9150.12	9122.54				MinPt-O-SF	
10400.69	63.01	10358.02	10337.68	255.58		OSF1.50	19510.94	9600.00				TD	
Cimarex Dos Equis 12-13 Federal Com #10H Rev0 RM 26Dec19 (Non-Def Plan)													Pass
2565.81	32.81	2564.53	2533.00	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2565.81	32.81	2564.52	2533.00	372335.97		MAS = 10.00 (m)	26.00	26.00				WRP	
2485.31	32.81	2469.06	2452.50	166.65		MAS = 10.00 (m)	2850.00	2849.13				MinPts	
2485.31	32.81	2469.07	2452.51	166.48		MAS = 10.00 (m)	2860.00	2859.05				MINPT-O-EOU	
2520.65	41.05	2492.86	2479.61	95.09		OSF1.50	5720.00	5692.59				MinPt-O-SF	
2488.04	58.61	2448.51	2429.43	65.17		OSF1.50	9150.12	9122.54				MinPt-CtCt	
2488.07	58.72	2448.47	2429.36	65.04		OSF1.50	9180.00	9152.40				MINPT-O-EOU	
2488.10	58.75	2448.48	2429.35	65.00		OSF1.50	9190.00	9162.37				MinPt-O-ADP	
2488.14	58.79	2448.49	2429.35	64.99		OSF1.50	9200.00	9172.33				MinPt-O-SF	
4130.17	326.09	3912.40	3804.15	19.07		OSF1.50	19510.94	9600.00				MinPts	
Cimarex Dos Equis 12-13 Federal Com #11H Rev0 RM 26Dec19 (Non-Def Plan)													Pass
2585.87	32.81	2584.59	2553.06	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2585.87	32.81	2584.58	2553.06	401127.65		MAS = 10.00 (m)	26.00	26.00				WRP	
2585.87	32.81	2569.26	2553.06	168.66		MAS = 10.00 (m)	2500.00	2500.00				MinPts	
2585.89	32.81	2569.24	2553.08	168.18		MAS = 10.00 (m)	2510.00	2510.00				MINPT-O-EOU	
2997.64	73.77	2948.04	2923.87	62.01		OSF1.50	9200.00	9172.33				MinPts	
3007.03	74.49	2956.94	2932.54	61.59		OSF1.50	9550.00	9477.28				MinPt-O-SF	
4006.32	320.31	3792.33	3685.98	18.83		OSF1.50	19510.94	9600.00				MinPts	
Curtis Hankamer Gulf Hanagan Federal #3 (Offset) Plugged Oil Inc Only Off-5049ft (Def Survey)													Pass
2759.18	32.81	2757.90	2726.38	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
2758.94	32.81	2757.63	2726.13	93106.19		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
2758.90	32.81	2757.58	2726.09	96313.66		MAS = 10.00 (m)	26.00	26.00				WRP	
2750.06	39.65	2723.19	2710.41	107.48		OSF1.50	680.00	680.00				MinPt-CtCt	
2749.00	106.00	2677.91	2643.00	39.36		OSF1.50	2050.00	2050.00				MinPt-CtCt	
2753.83	136.36	2662.50	2617.48	30.57		OSF1.50	2650.00	2649.93				MINPT-O-EOU	
2757.83	141.23	2663.25	2616.60	29.55		OSF1.50	2740.00	2739.72				MinPt-O-ADP	
2990.79	264.54	2814.00	2726.25	17.03		OSF1.50	5180.00	5156.98				MinPt-O-SF	
5319.33	141.54	5224.54	5177.79	56.87		OSF1.50	9900.12	9600.00				MinPt-O-SF	
5198.75	135.41	5108.05	5063.35	58.13		OSF1.50	11030.00	9600.00				MinPt-CtCt	
5198.77	135.48	5108.04	5063.32	58.11		OSF1.50	11040.00	9600.00				MINPT-O-EOU	
5198.81	135.49	5108.05	5063.31	58.09		OSF1.50	11050.00	9600.00				MinPt-O-ADP	
6441.67	209.35	6301.68	6232.32	48.43		OSF1.50	14830.00	9600.00				MinPt-O-SF	
9950.68	261.41	9775.98	9689.27	57.37		OSF1.50	19510.94	9600.00				TD	
Jubilee Energy Gulf Federal #1 (Offset) Plugged Oil Inc Only Off-5020ft (Def Survey)													Pass
3011.86	32.81	3010.58	2979.06	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3011.65	32.81	3010.33	2978.84	112877.20		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3011.61	32.81	3010.29	2978.80	117470.90		MAS = 10.00 (m)	26.00	26.00				WRP	
3011.56	32.81	3010.14	2978.75	23398.61		MAS = 10.00 (m)	50.00	50.00				MinPts	
3011.44	103.53	2941.99	2907.91	44.16		OSF1.50	2050.00	2050.00				MinPt-CtCt	
2822.10	261.36	2647.37	2560.74	16.28		OSF1.50	5200.00	5176.79				MinPt-O-SF	
2820.50	261.02	2646.00	2559.48	16.29		OSF1.50	5280.00	5256.02				MinPt-O-ADP	

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Cl (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
2820.46	260.96	2646.00	2559.50	16.29		OSF1.50	5290.00	5265.93				MINPT-O-EQU	
2820.46	260.90	2646.04	2559.56	16.30		OSF1.50	5300.00	5275.83				MinPt-CtCt	
5106.82	123.26	5024.22	4983.56	62.79		OSF1.50	9900.12	9600.00				MinPt-O-SF	
4647.49	84.24	4590.90	4563.25	84.02		OSF1.50	12020.00	9600.00				MinPt-CtCt	
4647.79	85.07	4590.65	4562.72	83.18		OSF1.50	12070.00	9600.00				MINPT-O-EQU	
4648.42	85.81	4590.79	4562.61	82.47		OSF1.50	12110.00	9600.00				MinPt-O-ADP	
6101.38	210.18	5960.83	5891.20	43.89		OSF1.50	15970.00	9600.00				MinPt-O-SF	
8818.22	256.91	8646.52	8561.31	51.74		OSF1.50	19510.94	9600.00				TD	

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

												Pass	
3119.26	32.81	3117.97	3086.45	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
3119.09	32.81	3117.79	3086.28	171370.42		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
3119.07	32.81	3117.77	3086.26	208984.90		MAS = 10.00 (m)	26.00	26.00				WRP	
3118.71	32.81	3111.55	3085.90	530.76		MAS = 10.00 (m)	320.00	320.00				MinPts	
3118.19	66.14	3073.67	3052.06	72.10		OSF1.50	1370.00	1370.00				MinPt-CtCt	
3117.35	124.46	3033.89	2992.83	37.95		OSF1.50	2510.00	2510.00				MinPt-CtCt	
3124.35	164.73	3014.11	2959.63	28.66		OSF1.50	3250.00	3245.37				MinPt-CtCt	
3129.46	182.16	3007.53	2947.30	25.94		OSF1.50	3660.00	3651.46				MINPT-O-EQU	
3152.94	236.30	2994.98	2916.64	20.12		OSF1.50	4680.00	4661.74				MINPT-O-EQU	
3155.46	239.31	2995.49	2916.15	19.88		OSF1.50	4770.00	4750.88				MinPt-O-ADP	
3177.60	259.15	3004.40	2918.44	18.48		OSF1.50	5170.00	5147.07				MinPts	
5275.83	138.11	5183.32	5137.71	57.82		OSF1.50	9900.12	9600.00				MinPt-O-SF	
4673.10	94.98	4609.35	4578.12	74.79		OSF1.50	12350.00	9600.00				MinPt-CtCt	
4673.38	95.70	4609.15	4577.68	74.23		OSF1.50	12400.00	9600.00				MINPT-O-EQU	
4673.64	96.01	4609.20	4577.63	73.99		OSF1.50	12420.00	9600.00				MinPt-O-ADP	
6055.49	207.61	5916.65	5847.87	44.09		OSF1.50	16200.00	9600.00				MinPt-O-SF	
8551.77	251.81	8383.47	8299.96	51.20		OSF1.50	19510.94	9600.00				TD	

Continental Wimberly #7
(Offset) Plugged Oil Inc Only Off:
5100ft (Def Survey)

												Pass	
4401.64	32.81	4400.36	4368.83	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
4401.60	32.81	4400.31	4368.79	846759.13		MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
4401.58	32.81	4400.24	4368.77	85273.66		MAS = 10.00 (m)	26.00	26.00				WRP	
4401.47	32.81	4395.21	4368.67	884.18		MAS = 10.00 (m)	280.00	280.00				MinPts	
4401.34	42.07	4372.86	4359.27	161.84		OSF1.50	920.00	920.00				MinPt-CtCt	
4400.50	80.78	4346.22	4319.72	83.01		OSF1.50	1660.00	1660.00				MinPt-CtCt	
4400.82	129.87	4313.82	4270.96	51.33		OSF1.50	2600.00	2599.98				MinPt-CtCt	
4402.71	179.33	4282.72	4223.38	37.08		OSF1.50	3540.00	3532.60				MinPt-CtCt	
4409.21	198.91	4276.17	4210.29	33.46		OSF1.50	4030.00	4017.93				MINPT-O-EQU	
4415.42	233.73	4259.18	4181.70	28.49		OSF1.50	4580.00	4562.69				MinPt-CtCt	
4418.59	244.31	4255.29	4174.28	27.26		OSF1.50	4880.00	4859.83				MINPT-O-EQU	
4422.27	248.67	4256.06	4173.60	26.81		OSF1.50	5010.00	4988.60				MinPt-O-ADP	
4427.59	260.47	4253.52	4167.12	25.62		OSF1.50	5180.00	5156.98				MinPts	
4427.82	260.61	4253.64	4167.20	25.60		OSF1.50	5190.00	5166.88				MinPt-O-SF	
5991.27	175.39	5873.92	5815.88	51.69		OSF1.50	9900.12	9600.00				MinPt-O-SF	
4658.61	116.25	4580.68	4542.36	60.77		OSF1.50	13670.00	9600.00				MinPt-CtCt	
4658.90	117.11	4580.40	4541.79	60.32		OSF1.50	13720.00	9600.00				MINPT-O-EQU	
4659.34	117.65	4580.47	4541.69	60.04		OSF1.50	13750.00	9600.00				MinPt-O-ADP	
5822.42	213.96	5679.35	5608.46	41.06		OSF1.50	17160.00	9600.00				MinPt-O-SF	
7473.22	249.98	7306.14	7223.24	45.07		OSF1.50	19510.94	9600.00				TD	

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

												Pass	
5654.94	32.81	5652.96	5622.13	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
5654.85	32.81	5652.86	5622.04	606212.29		MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
5654.83	32.81	5652.85	5622.03	773775.49		MAS = 10.00 (m)	26.00	26.00				WRP	
5489.39	553.78	5119.50	4935.62	14.92		OSF1.50	5120.00	5097.55				MinPt-O-SF	
5488.04	553.47	5118.35	4934.57	14.92		OSF1.50	5220.00	5196.59				MinPt-O-ADP	
5488.01	553.43	5118.33	4934.57	14.93		OSF1.50	5230.00	5206.50				MINPT-O-EQU	
5487.93	553.39	5118.36	4934.60	14.93		OSF1.50	5240.00	5216.40				MinPt-CtCt	
5430.73	387.60	6171.66	6043.12	25.09		OSF1.50	10320.00	9600.00				MinPt-O-SF	
4517.18	123.97	4433.87	4393.21	55.52		OSF1.50	14900.00	9600.00				MinPt-CtCt	
4519.44	129.76	4432.27	4389.68	53.03		OSF1.50	15040.00	9600.00				MINPT-O-EQU	
4525.41	136.80	4433.55	4388.61	50.33		OSF1.50	15170.00	9600.00				MinPt-O-ADP	
6082.25	412.08	5806.87	5670.17	22.24		OSF1.50	18970.00	9600.00				MinPt-O-SF	
6457.00	434.41	6166.74	6022.59	22.39		OSF1.50	19510.94	9600.00				TD	

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

												Pass	
9748.80	32.81	9747.51	9715.99	N/A		MAS = 10.00 (m)	0.00	0.00				Surface	
9748.70	32.81	9747.40	9715.89	833931.91		MAS = 10.00 (m)	26.00	26.00				WRP	
9628.36	1577.03	8576.54	8051.34	9.18		OSF1.50	5350.00	5325.36				MinPt-O-SF	
9626.21	1576.31	8574.86	8049.89	9.17		OSF1.50	5500.00	5473.93				MinPt-O-ADP	
9626.09	1576.19	8574.84	8049.91	9.17		OSF1.50	5520.00	5493.74				MINPT-O-EQU	
9626.04	1576.06	8574.87	8049.98	9.17		OSF1.50	5540.00	5513.55				MinPt-CtCt	
6307.58	1112.57	5565.44	5195.01	8.51		OSF1.50	14710.00	9600.00				MinPt-O-SF	
4679.18	496.89	4347.49	4182.30	14.16		OSF1.50	18940.00	9600.00				MinPt-CtCt	
4680.05	498.62	4347.21	4181.43	14.11		OSF1.50	19030.00	9600.00				MINPT-O-EQU	
4702.75	523.50	4353.32	4179.25	13.50		OSF1.50	19410.00	9600.00				MinPt-O-ADP	
4713.91	534.39	4357.22	4179.52	13.29		OSF1.50	19510.94	9600.00				MinPt-O-SF	



Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20 Proposal

Geodetic Report

(Def Plan)



Report Date: February 18, 2020 - 10:02 AM Client: Cimarex Energy Field: NM Lea County (NAD 83) Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #75H / New Slot Well: Dos Equis 12-13 Federal Com #75H Borehole: Dos Equis 12-13 Federal Com #75H UWI / API#: Unknown / Unknown Survey Name: Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20 Survey Date: December 27, 2019 Tort / AHD / DDI / ERD Ratio: 105.832 ° / 10505.164 ft / 6.354 / 1.094 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 14' 19.07886", W 103° 37' 39.28958" Location Grid N/E Y/X: N 451265.170 ftUS, E 759546.350 ftUS CRS Grid Convergence Angle: 0.3765 ° Grid Scale Factor: 0.99996362 Version / Patch: 2.10.787.0	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 179.660 ° (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: RKB TVD Reference Elevation: 3630.100 ft above MSL Seabed / Ground Elevation: 3604.100 ft above MSL Magnetic Declination: 6.615 ° Total Gravity Field Strength: 998.4386mgn (9.80665 Based) Gravity Model: GARM Total Magnetic Field Strength: 47841.990 nT Magnetic Dip Angle: 59.879 ° Declination Date: February 18, 2020 Magnetic Declination Model: HDGM 2019 North Reference: Grid North Grid Convergence Used: 0.3765 ° Total Corr Mag North->Grid North: 6.2381 ° Local Coord Referenced To: Well Head
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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [300' FNL, 2410' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	100.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	200.00	0.00	100.00	200.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	300.00	0.00	100.00	300.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	400.00	0.00	100.00	400.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	500.00	0.00	100.00	500.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	600.00	0.00	100.00	600.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	700.00	0.00	100.00	700.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	800.00	0.00	100.00	800.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	900.00	0.00	100.00	900.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1000.00	0.00	100.00	1000.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1100.00	0.00	100.00	1100.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
Rustler	1185.00	0.00	100.00	1185.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1200.00	0.00	100.00	1200.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1300.00	0.00	100.00	1300.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1400.00	0.00	100.00	1400.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
Salado (Top Salt)	1500.00	0.00	100.00	1500.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1600.00	0.00	100.00	1600.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1700.00	0.00	100.00	1700.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1800.00	0.00	100.00	1800.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	1900.00	0.00	100.00	1900.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	2000.00	0.00	100.00	2000.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	2100.00	0.00	100.00	2100.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	2200.00	0.00	100.00	2200.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	2300.00	0.00	100.00	2300.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	2400.00	0.00	100.00	2400.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
Nudge 2"/100' DLS	2500.00	0.00	100.00	2500.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
	2600.00	2.00	100.00	2599.98	0.31	-0.30	1.72	2.00	451264.87	759548.07	N 32 14 19.08	W 103 37 39.27
	2700.00	4.00	100.00	2699.84	1.25	-1.21	6.87	2.00	451263.96	759553.22	N 32 14 19.07	W 103 37 39.21
Hold Nudge	2800.00	6.00	100.00	2799.45	2.82	-2.73	15.46	2.00	451262.44	759561.80	N 32 14 19.05	W 103 37 39.11
	2895.80	7.92	100.00	2894.54	4.90	-4.74	26.88	2.00	451260.43	759573.23	N 32 14 19.03	W 103 37 38.98
	2900.00	7.92	100.00	2898.70	5.00	-4.84	27.45	0.00	451260.33	759573.80	N 32 14 19.03	W 103 37 38.97
	3000.00	7.92	100.00	2997.75	7.48	-7.23	41.02	0.00	451257.94	759587.36	N 32 14 19.00	W 103 37 38.81
	3100.00	7.92	100.00	3096.80	9.95	-9.62	54.58	0.00	451255.55	759600.93	N 32 14 18.98	W 103 37 38.65
	3200.00	7.92	100.00	3195.84	12.42	-12.02	68.14	0.00	451253.16	759614.49	N 32 14 18.96	W 103 37 38.50
	3300.00	7.92	100.00	3294.89	14.89	-14.41	81.70	0.00	451250.76	759628.05	N 32 14 18.93	W 103 37 38.34
	3400.00	7.92	100.00	3393.94	17.36	-16.80	95.27	0.00	451248.37	759641.61	N 32 14 18.91	W 103 37 38.18
	3500.00	7.92	100.00	3492.98	19.84	-19.19	108.83	0.00	451245.98	759655.18	N 32 14 18.88	W 103 37 38.02
	3600.00	7.92	100.00	3592.03	22.31	-21.58	122.39	0.00	451243.59	759668.74	N 32 14 18.86	W 103 37 37.87
	3700.00	7.92	100.00	3691.08	24.78	-23.97	135.96	0.00	451241.20	759682.30	N 32 14 18.83	W 103 37 37.71
	3800.00	7.92	100.00	3790.13	27.25	-26.36	149.52	0.00	451238.81	759695.86	N 32 14 18.81	W 103 37 37.55
	3900.00	7.92	100.00	3889.17	29.72	-28.76	163.08	0.00	451236.42	759709.43	N 32 14 18.78	W 103 37 37.39
	4000.00	7.92	100.00	3988.22	32.19	-31.15	176.65	0.00	451234.02	759722.99	N 32 14 18.76	W 103 37 37.24
	4100.00	7.92	100.00	4087.27	34.67	-33.54	190.21	0.00	451231.63	759736.55	N 32 14 18.73	W 103 37 37.08
	4200.00	7.92	100.00	4186.31	37.14	-35.93	203.77	0.00	451229.24	759750.11	N 32 14 18.71	W 103 37 36.92
	4300.00	7.92	100.00	4285.36	39.61	-38.32	217.33	0.00	451226.85	759763.68	N 32 14 18.69	W 103 37 36.76
	4400.00	7.92	100.00	4384.41	42.08	-40.71	230.90	0.00	451224.46	759777.24	N 32 14 18.66	W 103 37 36.60
	4500.00	7.92	100.00	4483.46	44.55	-43.10	244.46	0.00	451222.07	759790.80	N 32 14 18.64	W 103 37 36.45
	4600.00	7.92	100.00	4582.50	47.03	-45.50	258.02	0.00	451219.68	759804.36	N 32 14 18.61	W 103 37 36.29
Base fo Salt	4668.15	7.92	100.00	4650.00	48.71	-47.13	267.27	0.00	451218.05	759813.60	N 32 14 18.60	W 103 37 36.18
	4700.00	7.92	100.00	4681.55	49.50	-47.89	271.59	0.00	451217.28	759817.92	N 32 14 18.59	W 103 37 36.13
	4800.00	7.92	100.00	4780.60	51.97	-50.28	285.15	0.00	451214.89	759831.49	N 32 14 18.56	W 103 37 35.97
Bell Canyon	4900.00	7.92	100.00	4879.64	54.44	-52.67	298.71	0.00	451212.50	759845.05	N 32 14 18.54	W 103 37 35.82
	4968.00	7.92	100.00	4947.00	56.12	-54.30	307.93	0.00	451210.87	759854.27	N 32 14 18.52	W 103 37 35.71
	5000.00	7.92	100.00	4978.69	56.91	-55.06	312.27	0.00	451210.11	759858.61	N 32 14 18.51	W 103 37 35.66
	5100.00	7.92	100.00	5077.74	59.39	-57.45	325.84	0.00	451207.72	759872.17	N 32 14 18.49	W 103 37 35.50
	5200.00	7.92	100.00	5176.79	61.86	-59.85	339.40	0.00	451205.33	759885.74	N 32 14 18.46	W 103 37 35.34
	5300.00	7.92	100.00	5275.83	64.33	-62.24	352.96	0.00	451202.94	759899.30	N 32 14 18.44	W 103 37 35.19
	5400.00	7.92	100.00	5374.88	66.80	-64.63	366.53	0.00	451200.54	759912.86	N 32 14 18.42	W 103 37 35.03
	5500.00	7.92	100.00	5473.93	69.27	-67.02	380.09	0.00	451198.15	759926.42	N 32 14 18.39	W 103 37 34.87
Drop to Vertical 2"/100' DLS	5526.32	7.92	100.00	5500.00	69.92	-67.65	383.66	0.00	451197.52	759929.99	N 32 14 18.38	W 103 37 34.83
	5600.00	6.44	100.00	5573.10	71.58	-69.25	392.73	2.00	451195.92	759939.06	N 32 14 18.37	W 103 37 34.72
	5700.00	4.44	100.00	5672.64	73.28	-70.90	402.07	2.00	451194.28	759948.40	N 32 14 18.35	W 103 37 34.61
	5800.00	2.44	100.00	5772.45	74.36	-71.94	407.98	2.00	451193.24	759954.31	N 32 14 18.34	W 103 37 34.55
	5900.00	0.44	100.00	5872.42	74.81	-72.37	410.46	2.00	451192.80	759956.79	N 32 14 18.34	W 103 37 34.52
Cherry Canyon	5901.58	0.41	100.00	5874.00	74.81	-72.38	410.47	2.00	451192.80	759956.80	N 32 14 18.34	W 103 37 34.52
Hold Vertical	5922.12	0.00	100.00	5894.54	74.82	-72.39	410.54	2.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	6000.00	0.00	100.00	5972.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	6100.00	0.00	100.00	6072.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	6200.00	0.00	100.00	6172.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	6300.00	0.00	100.00	6272.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	6400.00	0.00	100.00	6372.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	6500.00	0.00	100.00	6472.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
Brushy Canyon	6700.00	0.00	100.00	6672.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	6800.00	0.00	100.00	6772.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	6900.00	0.00	100.00	6872.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7000.00	0.00	100.00	6972.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7100.00	0.00	100.00	7072.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7200.00	0.00	100.00	7172.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7300.00	0.00	100.00	7272.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7338.58	0.00	100.00	7311.00	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7400.00	0.00	100.00	7372.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7500.00	0.00	100.00	7472.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7600.00	0.00	100.00	7572.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7700.00	0.00	100.00	7672.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7800.00	0.00	100.00	7772.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	7900.00	0.00	100.00	7872.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8000.00	0.00	100.00	7972.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8100.00	0.00	100.00	8072.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8200.00	0.00	100.00	8172.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8300.00	0.00	100.00	8272.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8400.00	0.00	100.00	8372.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8500.00	0.00	100.00	8472.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
Bone Spring	8600.00	0.00	100.00	8572.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8700.00	0.00	100.00	8672.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8800.00	0.00	100.00	8772.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8872.58	0.00	100.00	8845.00	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	8900.00	0.00	100.00	8872.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	9000.00	0.00	100.00	8972.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
KOP - Build 12"/100' DLS	9100.00	0.00	100.00	9072.42	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
Avalon	9150.12	0.00	100.00	9122.54	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
	9200.00	5.99	179.66	9172.33	77.43	-74.99	410.56	12.00	451190.18	759956.89	N 32 14 18.31	W 103 37 34.52
	9300.00	17.99	179.66	9269.97	98.16	-95.72	410.68	12.00	451169.45	759957.02	N 32 14 18.10	W 103 37 34.52
	9313.77	19.64	179.66	9283.00	102.60	-100.16	410.71	12.00	451165.01	759957.04	N 32 14 18.06	W 103 37 34.52
	9400.00	29.99	179.66	9361.17	138.73	-136.30	410.92	12.00	451128.88	759957.26	N 32 14 17.70	W 103 37 34.52
	9500.00	41.99	179.66	9441.93	197.39	-194.95	411.27	12.00	451070.23	759957.60	N 32 14 17.12	W 103 37 34.52
	9600.00	53.99	179.66	9508.74	271.55	-269.11	411.71	12.00	450996.07	759958.04	N 32 14 16.39	W 103 37 34.52
	9700.00	65.99	179.66	9558.67	357.98	-355.54	412.22	12.00	450909.64	759958.56	N 32 14 15.53	W 103 37 34.52
	9800.00	77.99	179.66	9589.54	452.90	-450.46	412.79	12.00	450814.72	759959.12	N 32 14 14.59	W 103 37 34.52
	9900.00	89.99	179.66	9600.00	552.17	-549.73	413.38	12.00	450715.46	759959.71	N 32 14 13.61	W 103 37 34.52
Landing Point	9900.12	90.00	179.66	9600.00	552.29	-549.85	413.38	12.00	450715.34	759959.71	N 32 14 13.61	W 103 37 34.52
	10000.00	90.00	179.66	9600.00	652.17	-649.73	413.97	0.00	450615.47	759960.30	N 32 14 12.62	W 103 37 34.52
	10100.00	90.00	179.66	9600.00	752.17	-749.73	414.56	0.00	450515.47	759960.90	N 32 14 11.63	W 103 37 34.52
	10200.00	90.00	179.66	9600.00	852.17	-849.72	415.16	0.00	450415.48	759961.49	N 32 14 10.64	W 103 37 34.52
	10300.00	90.00	179.66	9600.00	952.17	-949.72	415.75	0.00	450315.48	759962.08	N 32 14 9.65	W 103 37 34.52
	10400.00	90.00	179.66	9600.00	1052.17	-1049.72	416.34	0.00	450215.49	759962.68	N 32 14 8.66	W 103 37 34.52
	10500.00	90.00	179.66	9600.00	1152.17	-1149.72	416.94	0.00	450115.50	759963.27	N 32 14 7.68	W 103 37 34.52
	10600.00	90.00	179.66	9600.00	1252.17	-1249.72	417.53	0.00	450015.50	759963.86	N 32 14 6.69	W 103 37 34.52
	10700.00	90.00	179.66	9600.00	1352.17	-1349.71	418.12	0.00	449915.51	759964.46	N 32 14 5.70	W 103 37 34.53
	10800.00	90.00	179.66	9600.00	1452.17	-1449.71	418.72	0.00	449815.51	759965.05	N 32 14 4.71	W 103 37 34.53
	10900.00	90.00	179.66	9600.00	1552.17	-1549.71	419.31	0.00	449715.52	759965.64	N 32 14 3.72	W 103 37 34.53
	11000.00	90.00	179.66	9600.00	1652.17	-1649.71	419.90	0.00	449615.52	759966.24	N 32 14 2.73	W 103 37 34.53
	11100.00	90.00	179.66	9600.00	1752.17	-1749.71	420.50	0.00	449515.53	759966.83	N 32 14 1.74	W 103 37 34.53
	11200.00	90.00	179.66	9600.00	1852.17	-1849.71	421.09	0.00	449415.54	759967.42	N 32 14 0.75	W 103 37 34.53
	11300.00	90.00	179.66	9600.00	1952.17	-1949.70	421.68	0.00	449315.54	759968.02	N 32 13 59.76	W 103 37 34.53
	11400.00	90.00	179.66	9600.00	2052.17	-2049.70	422.28	0.00	449215.55	759968.61	N 32 13 58.77	W 103 37 34.53
	11500.00	90.00	179.66	9600.00	2152.17	-2149.70	422.87	0.00	449115.55	759969.20	N 32 13 57.78	W 103 37 34.53
	11600.00	90.00	179.66	9600.00	2252.17	-2249.70	423.46	0.00	449015.56	759969.80	N 32 13 56.79	W 103 37 34.53
Lease NMNM0002889 - NMNM0001917 Crossing	11688.10	90.00	179.66	9600.00	2340.27	-2337.80	423.99	0.00	448927.46	759970.32	N 32 13 55.92	W 103 37 34.53
	11700.00	90.00	179.66	9600.00	2352.17	-2349.70	424.06	0.00	448915.56	759970.39	N 32 13 55.80	W 103 37 34.53
	11800.00	90.00	179.66	9600.00	2452.17	-2449.70	424.65	0.00	448815.57	759970.98	N 32 13 54.81	W 103 37 34.53
	11900.00	90.00	179.66	9600.00	2552.17	-2549.69	425.24	0.00	448715.57	759971.58	N 32 13 53.82	W 103 37 34.53
	12000.00	90.00	179.66	9600.00	2652.17	-2649.69	425.84	0.00	448615.58	759972.17	N 32 13 52.83	W 103 37 34.53
	12100.00	90.00	179.66	9600.00	2752.17	-2749.69	426.43	0.00	448515.59	759972.76	N 32 13 51.84	W 103 37 34.54
	12200.00	90.00	179.66	9600.00	2852.17	-2849.69	427.02	0.00	448415.59	759973.36	N 32 13 50.85	W 103 37 34.54
	12300.00	90.00	179.66	9600.00	2952.17	-2949.69	427.62	0.00	448315.60	759973.95	N 32 13 49.86	W 103 37 34.54
	12400.00	90.00	179.66	9600.00	3052.17	-3049.68	428.21	0.00	448215.60	759974.54	N 32 13 48.87	W 103 37 34.54
	12500.00	90.00	179.66	9600.00	3152.17	-3149.68	428.80	0.00	448115.6			

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Lease NMNM0553642 - NMNM0553548 Crossing	16000.00	90.00	179.66	9600.00	6652.17	-6649.62	449.57	0.00	444615.80	759995.91	N 32 13 13.25	W 103 37 34.57
	16100.00	90.00	179.66	9600.00	6752.17	-6749.62	450.17	0.00	444515.81	759996.50	N 32 13 12.26	W 103 37 34.57
	16200.00	90.00	179.66	9600.00	6852.17	-6849.62	450.76	0.00	444415.81	759997.09	N 32 13 11.27	W 103 37 34.57
	16300.00	90.00	179.66	9600.00	6952.17	-6949.62	451.35	0.00	444315.82	759997.69	N 32 13 10.28	W 103 37 34.57
	16400.00	90.00	179.66	9600.00	7052.17	-7049.61	451.95	0.00	444215.83	759998.28	N 32 13 9.29	W 103 37 34.57
	16500.00	90.00	179.66	9600.00	7152.17	-7149.61	452.54	0.00	444115.83	759998.87	N 32 13 8.30	W 103 37 34.57
	16600.00	90.00	179.66	9600.00	7252.17	-7249.61	453.13	0.00	444015.84	759999.47	N 32 13 7.32	W 103 37 34.57
	16700.00	90.00	179.66	9600.00	7352.17	-7349.61	453.73	0.00	443915.84	760000.06	N 32 13 6.33	W 103 37 34.57
	16800.00	90.00	179.66	9600.00	7452.17	-7449.61	454.32	0.00	443815.85	760000.65	N 32 13 5.34	W 103 37 34.57
	16900.00	90.00	179.66	9600.00	7552.17	-7549.61	454.91	0.00	443715.85	760001.25	N 32 13 4.35	W 103 37 34.57
	16969.90	90.00	179.66	9600.00	7622.07	-7619.50	455.33	0.00	443645.96	760001.66	N 32 13 3.65	W 103 37 34.57
	17000.00	90.00	179.66	9600.00	7652.17	-7649.60	455.51	0.00	443615.86	760001.84	N 32 13 3.36	W 103 37 34.57
	17100.00	90.00	179.66	9600.00	7752.17	-7749.60	456.10	0.00	443515.87	760002.43	N 32 13 2.37	W 103 37 34.57
	17200.00	90.00	179.66	9600.00	7852.17	-7849.60	456.69	0.00	443415.87	760003.03	N 32 13 1.38	W 103 37 34.57
	17300.00	90.00	179.66	9600.00	7952.17	-7949.60	457.29	0.00	443315.88	760003.62	N 32 13 0.39	W 103 37 34.57
Cimarex Dos Equis 12-13 Federal Com #75H - PBHL [100' FSL, 2000' FEL]	17400.00	90.00	179.66	9600.00	8052.17	-8049.60	457.88	0.00	443215.88	760004.21	N 32 12 59.40	W 103 37 34.58
	17500.00	90.00	179.66	9600.00	8152.17	-8149.60	458.47	0.00	443115.89	760004.81	N 32 12 58.41	W 103 37 34.58
	17600.00	90.00	179.66	9600.00	8252.17	-8249.59	459.07	0.00	443015.89	760005.40	N 32 12 57.42	W 103 37 34.58
	17700.00	90.00	179.66	9600.00	8352.17	-8349.59	459.66	0.00	442915.90	760005.99	N 32 12 56.43	W 103 37 34.58
	17800.00	90.00	179.66	9600.00	8452.17	-8449.59	460.26	0.00	442815.90	760006.59	N 32 12 55.44	W 103 37 34.58
	17900.00	90.00	179.66	9600.00	8552.17	-8549.59	460.85	0.00	442715.91	760007.18	N 32 12 54.45	W 103 37 34.58
	18000.00	90.00	179.66	9600.00	8652.17	-8649.59	461.44	0.00	442615.92	760007.77	N 32 12 53.46	W 103 37 34.58
	18100.00	90.00	179.66	9600.00	8752.17	-8749.58	462.04	0.00	442515.92	760008.37	N 32 12 52.47	W 103 37 34.58
	18200.00	90.00	179.66	9600.00	8852.17	-8849.58	462.63	0.00	442415.93	760008.96	N 32 12 51.48	W 103 37 34.58
	18300.00	90.00	179.66	9600.00	8952.17	-8949.58	463.22	0.00	442315.93	760009.55	N 32 12 50.49	W 103 37 34.58
	18400.00	90.00	179.66	9600.00	9052.17	-9049.58	463.82	0.00	442215.94	760010.15	N 32 12 49.50	W 103 37 34.58
	18500.00	90.00	179.66	9600.00	9152.17	-9149.58	464.41	0.00	442115.94	760010.74	N 32 12 48.51	W 103 37 34.58
	18600.00	90.00	179.66	9600.00	9252.17	-9249.58	465.00	0.00	442015.95	760011.33	N 32 12 47.52	W 103 37 34.58
	18700.00	90.00	179.66	9600.00	9352.17	-9349.57	465.60	0.00	441915.95	760011.93	N 32 12 46.54	W 103 37 34.59
	18800.00	90.00	179.66	9600.00	9452.17	-9449.57	466.19	0.00	441815.96	760012.52	N 32 12 45.55	W 103 37 34.59
	18900.00	90.00	179.66	9600.00	9552.17	-9549.57	466.78	0.00	441715.97	760013.11	N 32 12 44.56	W 103 37 34.59
	19000.00	90.00	179.66	9600.00	9652.17	-9649.57	467.38	0.00	441615.97	760013.71	N 32 12 43.57	W 103 37 34.59
	19100.00	90.00	179.66	9600.00	9752.17	-9749.57	467.97	0.00	441515.98	760014.30	N 32 12 42.58	W 103 37 34.59
	19200.00	90.00	179.66	9600.00	9852.17	-9849.57	468.56	0.00	441415.98	760014.89	N 32 12 41.59	W 103 37 34.59
	19300.00	90.00	179.66	9600.00	9952.17	-9949.56	469.16	0.00	441315.99	760015.49	N 32 12 40.60	W 103 37 34.59
	19400.00	90.00	179.66	9600.00	10052.17	-10049.56	469.75	0.00	441215.99	760016.08	N 32 12 39.61	W 103 37 34.59
	19500.00	90.00	179.66	9600.00	10152.17	-10149.56	470.34	0.00	441116.00	760016.68	N 32 12 38.62	W 103 37 34.59
	19510.94	90.00	179.66	9600.00	10163.11	-10160.50	470.41	0.00	441105.06	760016.74	N 32 12 38.51	W 103 37 34.59

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #75H / Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM
	1	26.000	19510.940	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #75H / Cimarex Dos Equis 12-13



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



Report Date: February 18, 2020 - 10:02 AM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Dos Equis 12-13 Federal Com #75H / New Slot
Well: Dos Equis 12-13 Federal Com #75H
Borehole: Dos Equis 12-13 Federal Com #75H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20
Survey Date: December 27, 2019
Tort / AHD / DDI / ERD Ratio: 105.832 ° / 10505.164 ft / 6.354 / 1.094
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 14' 19.07886", W 103° 37' 39.28958"
Location Grid N/E Y/X: N 451265.170 ftUS, E 759546.350 ftUS
CRS Grid Convergence Angle: 0.3765 °
Grid Scale Factor: 0.99996362
Version / Patch: 2.10.787.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.660 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3630.100 ft above MSL
Seabed / Ground Elevation: 3604.100 ft above MSL
Magnetic Declination: 6.615 °
Total Gravity Field Strength: 998.4386mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47841.990 nT
Magnetic Dip Angle: 59.879 °
Declination Date: February 18, 2020
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3765 °
Total Corr Mag North->Grid North: 6.2381 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [300' FNL, 2410' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
Nudge 2"/100'	2500.00	0.00	100.00	2500.00	0.00	0.00	0.00	0.00	451265.17	759546.35	N 32 14 19.08	W 103 37 39.29
DLS	2895.80	7.92	100.00	2894.54	4.90	-4.74	26.88	2.00	451260.43	759573.23	N 32 14 19.03	W 103 37 38.98
Hold Nudae	5526.32	7.92	100.00	5500.00	69.92	-67.65	383.66	0.00	451197.52	759929.99	N 32 14 18.38	W 103 37 34.83
Drop to Vertical	5922.12	0.00	100.00	5894.54	74.82	-72.39	410.54	2.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
2"/100' DLS	9150.12	0.00	100.00	9122.54	74.82	-72.39	410.54	0.00	451192.78	759956.88	N 32 14 18.34	W 103 37 34.52
Hold Vertical	9900.12	90.00	179.66	9600.00	552.29	-549.85	413.38	12.00	450715.34	759959.71	N 32 14 13.61	W 103 37 34.52
KOP - Build												
12"/100' DLS												
Landing Point												
Cimarex Dos Equis 12-13 Federal Com #75H - PBHL [100' FSL, 2000' FEL]	19510.94	90.00	179.66	9600.00	10163.11	-10160.50	470.41	0.00	441105.06	760016.74	N 32 12 38.51	W 103 37 34.59

Survey Type: Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Dos Equis 12-13 Federal Com #75H / Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM
	1	26.000	19510.940	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Dos Equis 12-13 Federal Com #75H / Cimarex Dos Equis 12-13



Borehole:	Dos Equis 12-13 Federal Com #75H	Well:	Dos Equis 12-13 Federal Com #75H	Field:	NM Lea County (NAD 83)	Structure:	Cimarex Dos Equis 12-13 Federal Com #75H
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Gravity & Magnetic Parameters	Dip: 59.879°	Date: 18-Feb-2020	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Grid Conv: 0.3765°	Miscellaneous	TVD Ref: RKB(3630.1ft above MSL)
Model: HDGM 2019	FS: 47841.99NT	Gravity FS: 998.439mgm (8.80665 Based)	Lat: N 32 14 19.08	Northings: 451265.17HUS	Scale Fact: 0.99996362	Slot: New Slot	Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20
MagDec: 6.615°			Long: W 103 37 39.29	Easting: 759546.35HUS		Plan: Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20	

Critical Point	MD	INCL	AZIM	Critical Points	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [300' FNL, 2410' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler	1185.00	0.00	100.00	1185.00	0.00	0.00	0.00	0.00	0.00
Salado (Top Salt)	1500.00	0.00	100.00	1500.00	0.00	0.00	0.00	0.00	0.00
Nudge 2'1100' DLS	2500.00	0.00	100.00	2500.00	0.00	0.00	0.00	0.00	0.00
Hold Nudge	2895.80	7.92	100.00	2894.54	4.90	-4.74	26.88	2.00	2.00
Base to Salt	4668.15	7.92	100.00	4650.00	48.71	-47.13	267.27	0.00	0.00
Bell Canyon	4968.00	7.92	100.00	4947.00	56.12	-54.30	307.93	0.00	0.00
Drop to Vertical 2'1100' DLS	5526.32	7.92	100.00	5500.00	69.92	-67.65	383.06	0.00	0.00
Cherry Canyon	5901.58	0.41	100.00	5874.00	74.81	-72.38	410.47	2.00	2.00
Hold Vertical	5922.12	0.00	100.00	5894.54	74.82	-72.39	410.54	2.00	2.00
Brushy Canyon	7338.58	0.00	100.00	7311.00	74.82	-72.39	410.54	0.00	0.00
Bone Spring	8872.58	0.00	100.00	8845.00	74.82	-72.39	410.54	0.00	0.00
KOP - Build 12'1100' DLS	9150.12	0.00	100.00	9122.54	74.82	-72.39	410.54	0.00	0.00
Avallon	9313.77	19.64	179.66	9283.00	102.60	-100.16	410.71	12.00	12.00
Landing Point	9900.12	90.00	179.66	9600.00	552.29	-549.85	413.38	12.00	12.00
Lease NMNM0002889 - NMNM0001917 Crossing	11688.10	90.00	179.66	9600.00	2340.27	-2337.80	423.99	0.00	0.00
Lease NMNM0001917 - NMNM0553642 Crossing	14328.00	90.00	179.66	9600.00	4980.17	-4977.65	439.65	0.00	0.00
Lease NMNM0553642 - NMNM0553548 Crossing	16869.90	90.00	179.66	9600.00	7619.90	-7619.90	455.33	0.00	0.00
Cimarex Dos Equis 12-13 Federal Com #75H - PBHL [100' FSL, 2000' FEL]	19510.94	90.00	179.66	9600.00	10163.11	-10160.50	470.41	0.00	0.00
1st Bone Spring Sand	NaN			11825.00					
Wolfcamp	NaN			12235.00					
Wolfcamp Y Target	NaN			12390.00					
3rd Bone Spring Carb	NaN			11090.00					
2nd Bone Spring Sand	NaN			10640.00					
1st Bone Spring Sand	NaN			9980.00					
Wolfcamp A1	NaN			12417.00					

Grid North
Tot Corr (M->G 6.238")
Mag Dec (6.615")
Grid Conv (0.376")

CONTROLLED

Plan ref: Cimarex Dos Equis 12-13 Federal Com #75H Rev1 RM 17Feb20

Drawing ref: [Blank]

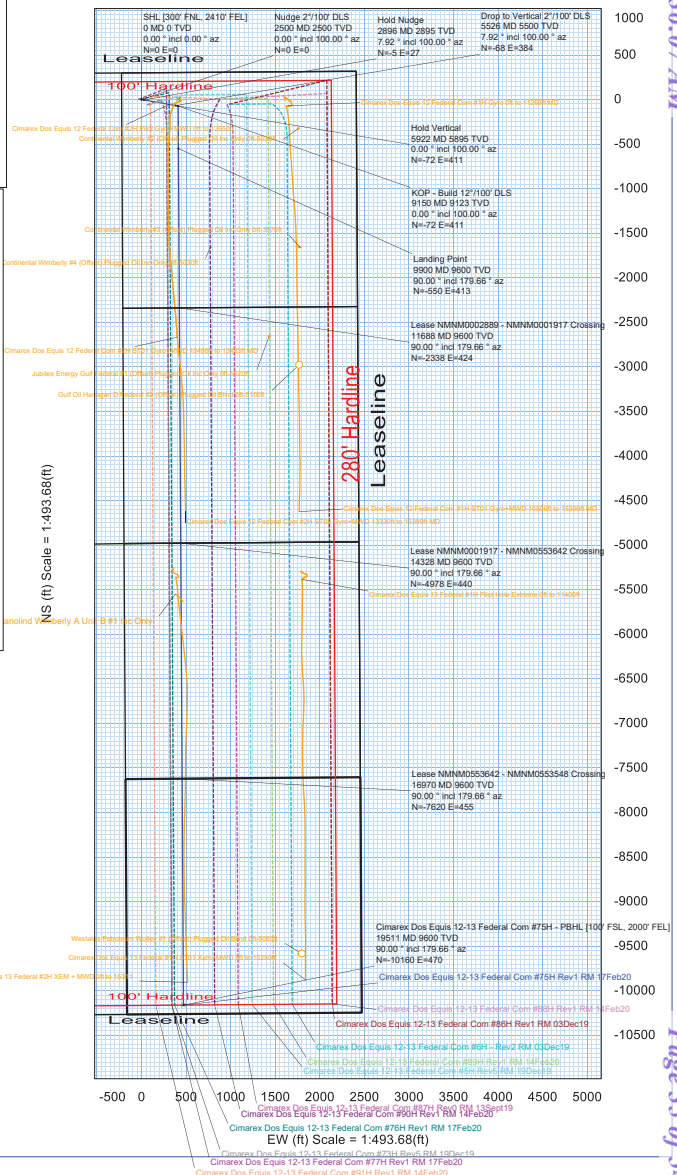
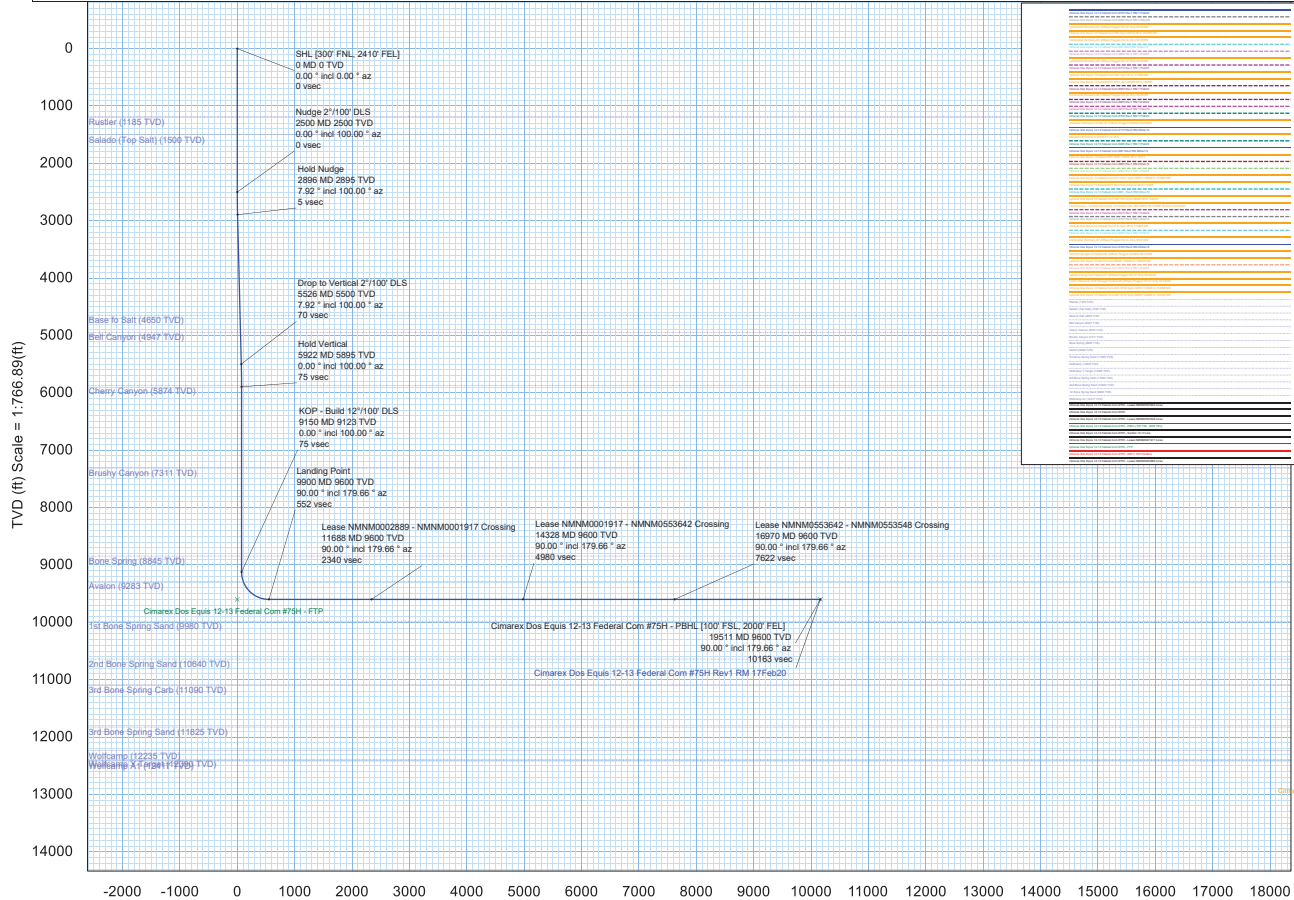
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Date: 18-Feb-2020

of 3

1	Client	
2	Client	
3	Office	
4	Office	

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1. Geological Formations

TVD of target 9,600

Pilot Hole TD N/A

MD at TD 19,511

Deepest expected fresh water

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

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	36.00	J-55	ST&C	1.21	1.38	2.23
8 3/4	0	9150	9150	5-1/2"	20.00	L-80	LT&C	2.18	2.27	2.17
8 3/4	9150	19511	9600	5-1/2"	20.00	L-80	BT&C	2.08	2.12	51.78
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

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

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

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	599	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	160	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	919	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	286	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	812	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	2442	14.80	1.34	6.32	9.5	Tail: Class C + LCM

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	51
Production	4700	25

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

4. Pressure Control Equipment

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	2M
			Blind Ram		
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	5M	Annular	X	5M
			Blind Ram		
			Pipe Ram		
			Double Ram	X	
			Other		

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

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

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

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1235'	Fresh Water	7.83 - 8.33	28	N/C
1235' to 4900'	Brine Water	9.50 - 10.00	30-32	N/C
4900' to 19511'	Cut Brine or OBM	8.00 - 8.50	27-70	N/C

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

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

6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	4243 psi
Abnormal Temperature	No

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

	H ₂ S is present
	H ₂ S plan is attached

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

A multi-bowl wellhead system will be utilized.

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

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

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

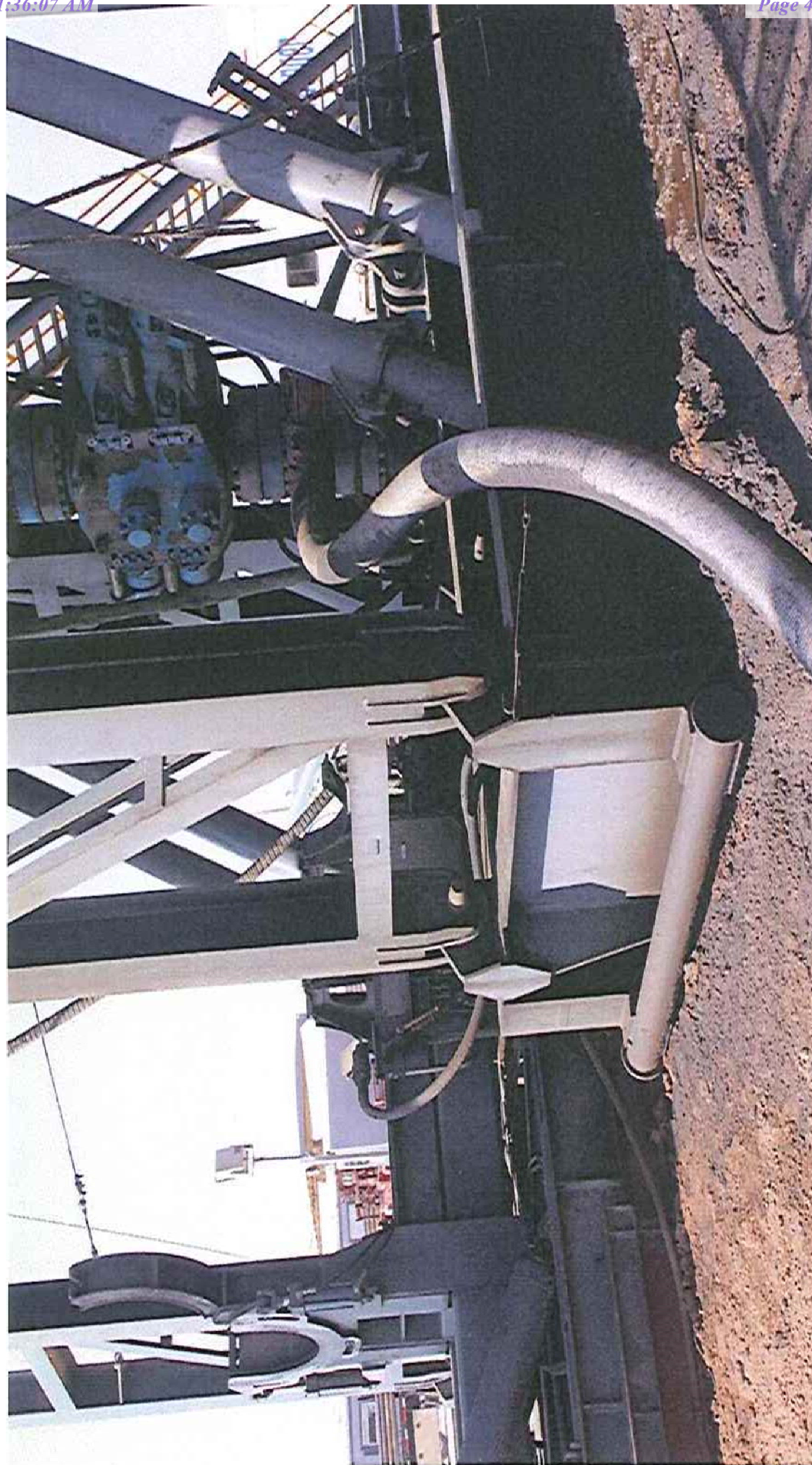
All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

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

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

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

Co-Flex Hose
Dos Equis 12-13 Federal Com 75H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM



Co-Flex Hose Hydrostatic Test
Dos Equis 12-13 Federal Com 75H
 Cimarex Energy Co.
 12-24S-32E
 Lea Co., NM



Midwest Hose & Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT			
Customer:		P.O. Number:	
Oderco Inc		odyd-271	
HOSE SPECIFICATIONS			
Type: Stainless Steel Armor Choke & Kill Hose		Hose Length: 45'ft.	
I.D. 4 INCHES		O.D. 9 INCHES	
WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE	
10,000 PSI	15,000 PSI	0 PSI	
COUPLINGS			
Stem Part No.		Ferrule No.	
OKC OKC		OKC OKC	
Type of Coupling: Swage-It			
PROCEDURE			
<u>Hose assembly pressure tested with water at ambient temperature.</u>			
TIME HELD AT TEST PRESSURE		ACTUAL BURST PRESSURE:	
15 MIN.		0 PSI	
Hose Assembly Serial Number: 79793		Hose Serial Number: OKC	
Comments:			
Date:	Tested:	Approved:	
3/8/2011	<i>A. Joins</i>	<i>Kevin</i>	

Co-Flex Hose Hydrostatic Test
 Dos Equis 12-13 Federal Com 75H
 Cimarex Energy Co.
 12-24S-32E
 Lea Co., NM

March 3, 2011

Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260



Midwest Hose
& Specialty, Inc.

Hose Specifications

Hose Type

C & K

Length

45'

Verification

Type of Fitting

4 1/16 10K

Coupling Method

Swage

I.D.

4"

O.D.

6.09"

Die Size

6.38"

Final O.D.

6.25"

Working Pressure

10000 PSI

Burst Pressure

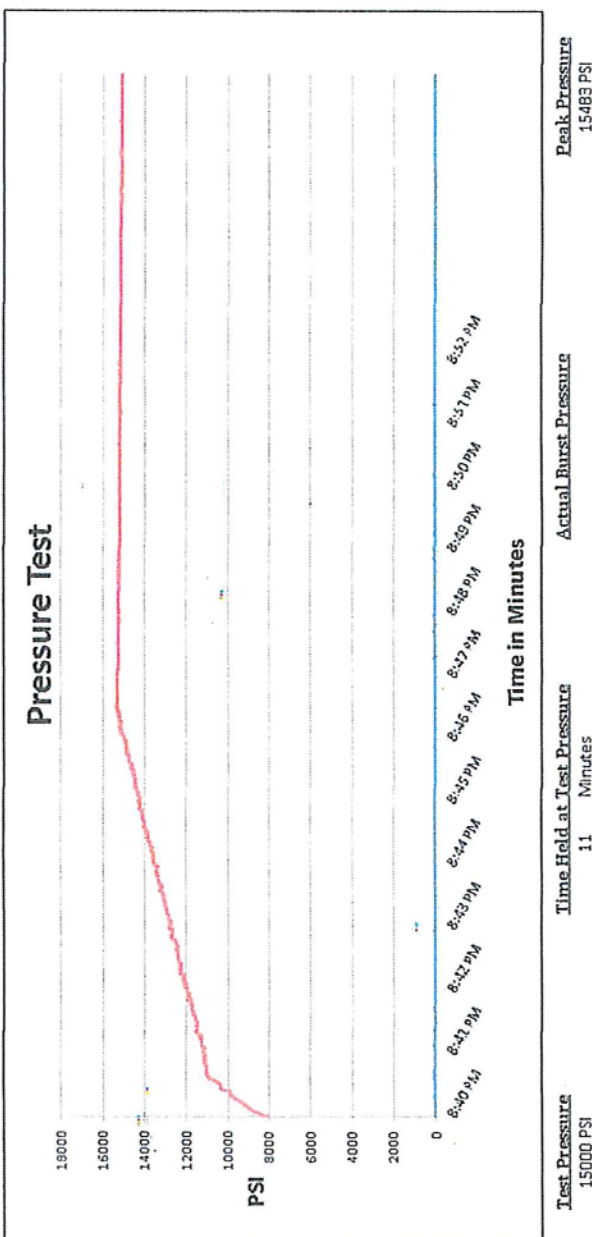
Standard Safety Multiplier Applies

Hose Serial #

5544

Hose Assembly Serial #

79793

Test Pressure
15000 PSITime Held at Test Pressure
11 Minutes

Actual Burst Pressure

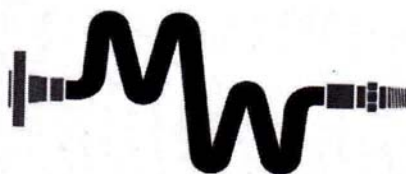
Peak Pressure
15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Zac McConnell

Approved By: Kim Thomas

Co-Flex Hose
Dos Equis 12-13 Federal Com 75H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM



Midwest Hose & Specialty, Inc.

Certificate of Conformity

Customer:

DEM

PO

ODYD-271

SPECIFICATIONS

Sales Order

79793

Dated:

3/8/2011

We hereby certify that the material supplied
for the referenced purchase order to be true
according to the requirements of the purchase
order and current industry standards

Supplier:
Midwest Hose & Specialty, Inc.
10640 Tanner Road
Houston, Texas 77041

Comments:

Approved:

Samuel Garcia

Date:

3/8/2011



Co-Flex Hose
Dos Equis 12-13 Federal Com 75H
Cimarex Energy Co.
12-24S-32E
Lea Co., NM

Specification Sheet Choke & Kill Hose

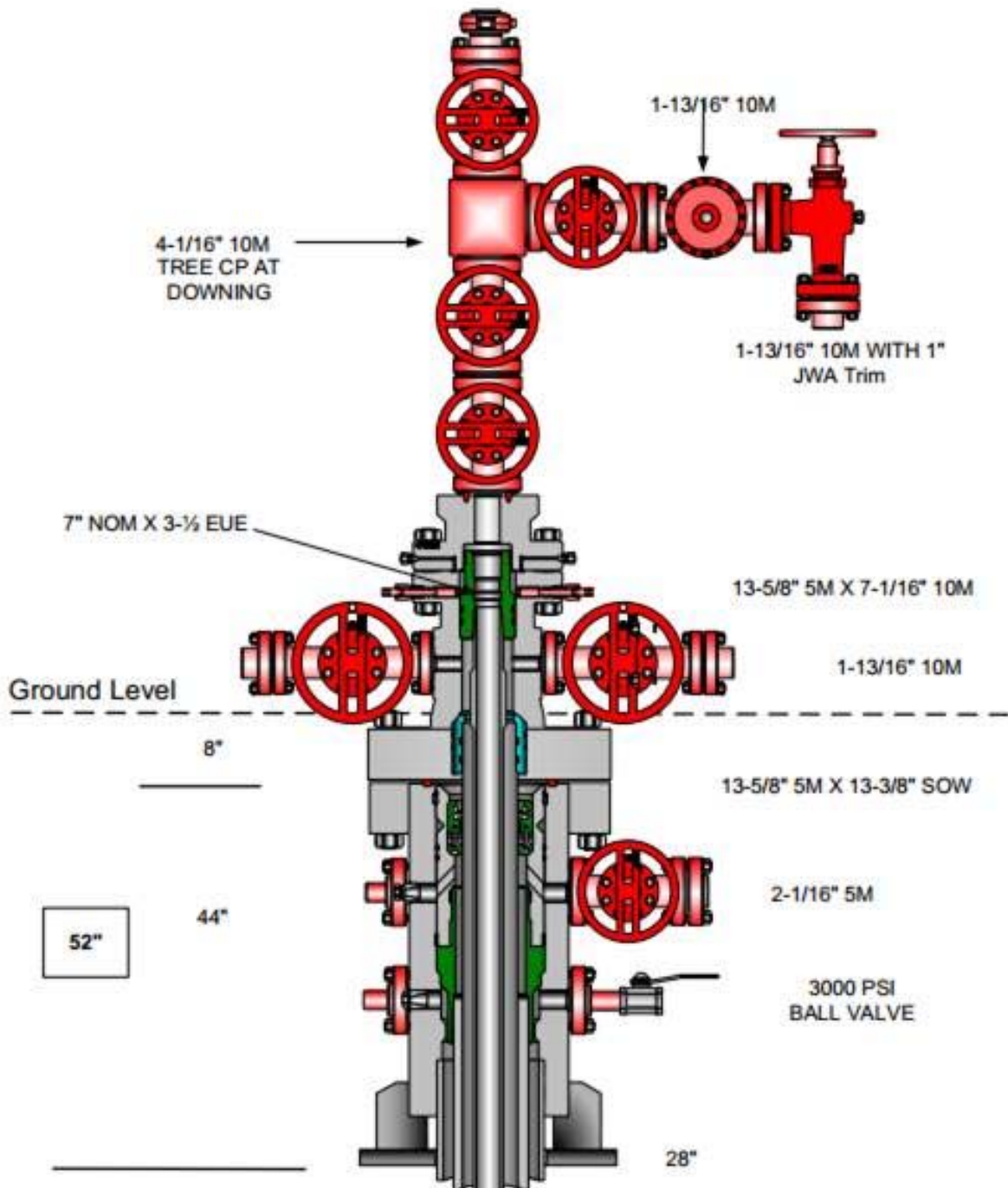
The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2", 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

P.O. Box 96558 - 1421 S.E. 29th St. Oklahoma City, OK 73143 * (405) 670-6718 * Fax: (405) 670-6816

Multi-bowl Wellhead Diagram

Dos Equis 12-13 Fed Com 75H



Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1235	1235	13-3/8"	48.00	H-40	ST&C	1.38	3.23	5.43
12 1/4	0	4900	4900	9-5/8"	36.00	J-55	ST&C	1.21	1.38	2.23
8 3/4	0	9150	9150	5-1/2"	20.00	L-80	LT&C	2.18	2.27	2.17
8 3/4	9150	19511	9600	5-1/2"	20.00	L-80	BT&C	2.08	2.12	51.78
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Cimarex Energy Company **OGRID:** 215099 **Date:** 4 / 28 / 2022

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Dos Equis 12-13 Fed Com 75H		B, Seec 12, T24S, R32E	300 FNL/2410 FBL	1200	1800	1300
30-025-50125						

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

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Dos Equis 12-13 Fed Com 75H		1/1/2024	3/1/2024	6/1/2024	8/12024	8/1/2024
30-025-50125						

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature: 
Printed Name: Sarah Jordan
Title: Regulatory Analyst
E-mail Address: sarah.jordan@coterra.com
Date: 4/28/2022
Phone: 432/620-1909
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

From State of New Mexico, Natural Gas Management Plan

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

XEC Standard Response

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

Cimarex

VII. Operational Practices

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

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

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

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

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

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

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

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

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 102429

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 102429
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	5/10/2022
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	5/10/2022
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	5/10/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	5/10/2022