

Form 3160-3  
(June 2015)FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. <b>30-025-53497</b>
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 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). | 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.

(Continued on page 2)

\*(Instructions on page 2)



Approval Date: 08/09/2024

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-025-53497</b>	<sup>2</sup> Pool Code 96715	<sup>3</sup> Pool Name WC-025 G-06 S253209L; BONE SPRING
<sup>4</sup> Property Code <b>336238</b>	<sup>5</sup> Property Name CO RAPTOR 4 9 FED COM	<sup>6</sup> Well Number 410H
<sup>7</sup> OGRID No. 4323	<sup>8</sup> Operator Name CHEVRON U.S.A. INC.	<sup>9</sup> Elevation 3490'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	4	25 SOUTH	32 EAST, N.M.P.M.		2269'	NORTH	1558'	EAST	LEA

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	9	25 SOUTH	32 EAST, N.M.P.M.		25'	SOUTH	2090'	EAST	LEA

<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. DEFINING WELL CO RAPTOR 4 9 FED COM 411H
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

<p><sup>16</sup> CO RAPTOR 4 9 FED COM 410H WELL</p> <p>X= 703.484' Y= 422.687' LAT. 32.160375° N LONG. 103.675781° W NAD 27</p> <p>X= 744.669' Y= 422.745' LAT. 32.160498° N LONG. 103.676258° W NAD83/2011</p> <p>ELEVATION +3490' NAVD 88</p>	<p>PROPOSED FIRST TAKE POINT</p> <p>X= 702.989' Y= 424.850' LAT. 32.166330° N LONG. 103.677337° W NAD 27</p> <p>X= 744.174' Y= 424.908' LAT. 32.166453° N LONG. 103.677815° W NAD83/2011</p>		<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Cindy Herrera-Murillo</i> 01/04/2022 Signature Date</p> <p>Cindy Herrera-Murillo Printed Name</p> <p>eeof@chevron.com E-mail Address</p>
<p>PROPOSED LAST TAKE POINT</p> <p>X= 702.937' Y= 414.485' LAT. 32.137838° N LONG. 103.677711° W NAD 27</p> <p>X= 744.122' Y= 414.543' LAT. 32.137962° N LONG. 103.678187° W NAD83/2011</p>	<p>PROPOSED BOTTOM HOLE LOCATION</p> <p>X= 702.937' Y= 414.410' LAT. 32.137632° N LONG. 103.677711° W NAD 27</p> <p>X= 744.123' Y= 414.468' LAT. 32.137756° N LONG. 103.678187° W NAD83/2011</p>		<p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>06/24/2021 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: <i>Robert L. Lastrapes</i> 11/18/2021 23006</p> <p>Certificate Number</p>
<p>CORNER COORDINATES TABLE (NAD 27)</p> <p>A - X= 699799.62, Y= 424915.87 B - X= 702440.68, Y= 424944.37 C - X= 703761.21, Y= 424958.61 D - X= 705081.74, Y= 424972.86 E - X= 699671.73, Y= 419627.04 F - X= 702331.15, Y= 419658.41 G - X= 703660.87, Y= 419674.10 H - X= 704990.58, Y= 419689.78 I - X= 699713.24, Y= 414345.61 J - X= 702370.25, Y= 414378.17 K - X= 703698.75, Y= 414394.45 L - X= 705027.26, Y= 414410.73</p>			

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:** Chevron USA Inc **OGRID:** 4323 **Date:** 1 / 14 / 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
CO RAPTOR 4 9 FED COM 410H	Pending	G-4-25S-32E	2269' FNL, 1558' FEL	1730 BBL/D	3330 MCF/D	2570 BBL/D
CO RAPTOR 4 9 FED COM 411H	Pending	G-4-25S-32E	2269' FNL, 1553' FEL	1730 BBL/D	3330 MCF/D	2570 BBL/D
CO RAPTOR 4 9 FED COM 412H	Pending	G-4-25S-32E	2270' FNL, 1508' FEL	1730 BBL/D	3330 MCF/D	2570 BBL/D

**IV. Central Delivery Point Name:** Cotton Draw Satellite 4 [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
CO RAPTOR 4 9 FED COM 410H	Pending	<u>11/13/2023</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
CO RAPTOR 4 9 FED COM 411H	Pending	<u>12/1/2023</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
CO RAPTOR 4 9 FED COM 412H	Pending	<u>12/19/2023</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

**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: <i>Cindy Herrera-Murillo</i>
Printed Name: Cindy Herrera-Murillo
Title: Senior HSE Regulatory Affairs Coordinator
E-mail Address: eeof@chevron.com
Date: 01/05/2022
Phone: 575-263-0431
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>
Approved By:
Title:
Approval Date:
Conditions of Approval:

**VI. Separation Equipment:**

Separation equipment installed at each Chevron facility is designed for maximum anticipated throughput and pressure to minimize waste. Separation equipment is designed and built according to ASME Sec VIII Div I to ensure gas is separated from liquid streams according to projected production.

**VII./VIII. Operational & Best Management Practices:****1. General Requirements for Venting and Flaring of Natural Gas:**

- In all circumstances, Chevron will flare rather than vent unless flaring is technically infeasible and venting of natural gas will avoid a risk of an immediate and substantial adverse impact on safety, public health, or the environment.
- Chevron installs and operates vapor recovery units (VRUs) in new facilities to minimize venting and flaring. If a VRU experiences operating issues, it is quickly assessed so that action can be taken to return the VRU to operation or, if necessary, facilities are shut-in to reduce the venting or flaring of natural gas.

**2. During Drilling Operations:**

- Flare stacks will be located a minimum of 110 feet from the nearest surface hole location.
- If an emergency or malfunction occurs, gas will be flared or vented to avoid a risk of an immediate and substantial adverse impact on public health, safety or the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Natural gas is captured or combusted if technically feasible using best industry practices and control technologies, such as the use of separators (e.g., Sand Commanders) during normal drilling and completions operations.

**3. During Completions:**

- Chevron typically does not complete traditional flowback, instead Chevron will flow produced oil, water, and gas to a centralized tank battery and continuously recover salable quality gas. If Chevron completes traditional flowback, Chevron conducts reduced emission completions as required by 40 CFR 60.5375a by routing gas to a gas flow line as soon as practicable once there is enough gas to operate a separator. Venting does not occur once there is enough gas to operate a separator
- Normally, during completions a flare is not on-site. A Snubbing Unit will have a flare on-site, and the flare volume will be estimated.
- If natural gas does not meet pipeline quality specification, the gas is sampled twice per week until the gas meets the specifications.

**4. During Production:**

- An audio, visual and olfactory (AVO) inspection will be performed daily (at minimum) for active wells and facilities to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC. Inactive, temporarily abandoned, or shut-in wells and facilities will be inspected weekly. Inspection records will be kept for a minimum of five years and will be available upon request by the division.
- Monitor manual liquid unloading for wells on-site, takes all reasonable actions to achieve a stabilized rate and pressure at the earliest practical time and takes reasonable actions to minimize venting to the maximum extent practicable.
- In all circumstances, Chevron will flare rather than vent unless flaring is technically infeasible and venting of natural gas will avoid a risk of an immediate and substantial adverse impact on safety, public health, or the environment.
- Chevron's design for new facilities utilizes air-activated pneumatic controllers and pumps.
- If natural gas does not meet pipeline quality specification, the gas is sampled twice per week until the gas meets the specifications.
- Chevron does not produce oil or gas until all flowlines, tank batteries, and oil/gas takeaway are installed, tested, and determined operational.

5. Performance Standards

- Equipment installed at each facility is designed for maximum anticipated throughput and pressure to minimize waste. Tank pressure relief systems utilize a soft seated or metal seated PSVs, as appropriate, which are both designed to not leak.
- Flare stack has been designed for proper size and combustion efficiency. New flares will have a continuous pilot and will be located at least 100 feet from the well and storage tanks and will be securely anchored.
- New tanks will be equipped with an automatic gauging system.
- An audio, visual and olfactory (AVO) inspection will be performed daily (at minimum) for active wells and facilities to confirm that all production equipment is operating properly and there are no leaks or releases except as allowed in Subsection D of 19.15.27.8 NMAC. Inactive, temporarily abandoned, or shut-in wells and facilities will be inspected weekly. Inspection records will be kept for a minimum of five years and will be available upon request by the division.

6. Measurement or Estimation of Vented and Flared Natural Gas

- Chevron estimates or measures the volume of natural gas that is vented, flared, or beneficially used during drilling, operations, regardless of the reason or authorization for such venting or flaring.
- Where technically practicable, Chevron will install meters on flares installed after May 25, 2021. Meters will conform to industry standards. Bypassing the meter will only occur for inspecting and servicing of the meter.

**Operator Name:** CHEVRON USA INCORPORATED**Well Name:** CO RAPTOR 4 9 FED COM**Well Number:** 410H

**Variance request:** Chevron requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor on surface casing. BOPE will be nipped up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC Technologies and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal. All tests performed by third party. A variance to use a CoFlex hose with a metal protective covering that will be utilized between the BOP and Choke manifold. Please refer to the attached testing and specification documents. - A variance from the Onshore Order 2 where it states: "A full BOP Test shall be performed: when initially installed and whenever any seal subject to test pressure is broken." We propose to break test if able to finish the next hole section within 21 days of the previous full BOP test. No BOP components nor any break will ever surpass 21 days between testing. A break test will consist of a 250 psi low / 5,000 psi high for 10 min each test against the connection that was broken when skidding the rig. Upon the first nipple up of the pad a full BOP test will be performed. A break test will NOT be performed on our last production section. A break test will only be performed on operations where BLM documentation states a 5M or less BOP can be utilized. We will test seals that have been broken individually between full BOP tests. Time between tests for a single test or full test will not exceed 21 days. - Authorization to follow Onshore Order 2 Section B - Casing and Cementing Requirements to wait to 500 psi comprehensive strength (CS) of the tail cement slurry, for primary cement operations in both the Surface and Intermediate casing string(s). WOC time is considered the time between bumping the plug (cement in place), until beginning to drill the shoe track. This will ensure that cement will be at sufficient strength prior to performing a shoe test and drilling ahead through the next hole section.

**Testing Procedure:** Stack will be tested as specified in the attached testing requirements, upon NU and not to exceed 30 days. Test BOP from 250 psi to 5000 psi in Ram and 250 psi to 3500 psi in annular. 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. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed unless approval from the BLM is received otherwise. Flex choke hose will be used for all wells on the pad. BOP test will be conducted by a third party.

**Choke Diagram Attachment:**

Choke\_Flex\_Hose\_2\_20200326061721.pdf

CoFlex\_Hose\_Variance\_Salanova\_20200326061802.pdf

BLM\_5M\_Choke\_Manifold\_Diagram\_20220106150741.pdf

**BOP Diagram Attachment:**

BLM\_5M\_Annular\_10M\_Rams\_Stackup\_and\_Test\_Plan\_20220104100851.pdf

Sundry\_Break\_Testing\_and\_WOC\_500\_psi\_Raptor\_20220104115222.pdf

NM\_Slim\_Hole\_Wellhead\_6650\_psi\_UH\_S\_20220106150718.pdf

**Section 3 - Casing**

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	16	13.375	NEW	API	N	0	1027	0	1027	3490	2463	1027	J-55	54.5	ST&C	3.6	1.95	BUOY	15.2 4	BUOY	15.2 4

Operator Name: CHEVRON USA INCORPORATED

Well Name: CO RAPTOR 4 9 FED COM

Well Number: 410H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4714	0	4674	3490	-1184	4714	L-80	40	BUTT	2.2	2.37	BUOY	4.9	BUOY	4.9
3	PRODUCTION	8.75	7.0	NEW	API	N	0	9837	0	9801	3490	-6311	9837	OTHER	29	OTHER - BLUE	2.82	4.01	BUOY	3.27	BUOY	3.27
4	PRODUCTION	6.125	5.0	NEW	API	N	9537	10287	9287	10201	-5797	-6711	750	P-110	18	OTHER - W513	2.2	3.79	BUOY	2	BUOY	2
5	PRODUCTION	6.125	4.5	NEW	API	N	10287	18611	10201	10287	-6711	-6797	8324	P-110	11.6	OTHER - W521	2.26	3.79	BUOY	2	BUOY	2

Casing Attachments

Casing ID: 1StringSURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

13\_3\_8\_casing\_spec\_sheet\_20210923070235.pdf

Casing ID: 2StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

9.625\_40.0lb\_L80IC\_BTC\_20210923070517.pdf

Operator Name: CHEVRON USA INCORPORATED

Well Name: CO RAPTOR 4 9 FED COM

Well Number: 410H

Casing Attachments

Casing ID: 3StringPRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

7in\_Blue\_vs\_BlueSD\_20210923070819.pdf

Casing ID: 4StringPRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5\_18ppf\_P110\_Flush\_W513\_20210923071351.pdf

Casing ID: 5StringPRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

4.5\_11.6ppf\_P110\_TSH\_W521\_20210923071642.pdf

Section 4 - Cement

**Operator Name:** CHEVRON USA INCORPORATED**Well Name:** CO RAPTOR 4 9 FED COM**Well Number:** 410H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	0	0	0	0	0	0	N/A	N/A
SURFACE	Tail		0	1027	671	1.33	14.8	892	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		0	0	0	0	0	0	0	N/A	N/A

INTERMEDIATE	Lead		0	3714	854	2.49	11.9	1454	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
INTERMEDIATE	Tail		3714	4714	323	1.33	14.8	429	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		0	8837	611	2.49	11.9	1522	25	Class C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Tail		8837	9837	141	1.33	14.8	188	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		9537	1861 1	803	1.33	14.8	1068	25	Class H	Extender, Antifoam, Retarder

### Section 5 - Circulating Medium

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

**Describe what will be on location to control well or mitigate other conditions:** Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume. A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

**Describe the mud monitoring system utilized:** A closed system will be used consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill. All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations. Transportation of E&P waste will follow EPA regulations and accompanying manifests. A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

### Circulating Medium Table

**Operator Name:** CHEVRON USA INCORPORATED**Well Name:** CO RAPTOR 4 9 FED COM**Well Number:** 410H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
9837	1861 1	OIL-BASED MUD	9.2	9.5							Viscosity: 50-70 Filtrate: 5-10
0	1027	SPUD MUD	8.3	8.9							Viscosity: 26-36 Filtrate: 15-25
1027	4714	SALT SATURATED	8.9	10							Viscosity: 26-36 Filtrate: 15-25
4714	9837	OTHER : WBM/BRINE	8.7	9							Viscosity: 26-36 Filtrate: 15-25  Due to wellbore stability in the lateral well, MW will be adjusted as needed to ensure the hole doesn't collapse.

## Section 6 - Test, Logging, Coring

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

Production tests are not planned.

Logs run include: Gamma Ray Log, Directional Survey

Coring Operations are not planned.

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

DIRECTIONAL SURVEY,GAMMA RAY LOG,

### Coring operation description for the well:

Conventional whole core samples are not planned, a directional survey will be run and logs will be submitted.

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 5125

**Anticipated Surface Pressure:** 2842

**Anticipated Bottom Hole Temperature(F):** 165

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards**

**Operator Name:** CHEVRON USA INCORPORATED

**Well Name:** CO RAPTOR 4 9 FED COM

**Well Number:** 410H

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations**

Chevron\_Standard\_H2S\_Contingency\_Plan\_20220104103953.pdf

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

3well\_rig\_layout\_patterson\_20220106151752.pdf

DefPlan100ft\_CORaptor49FedCom410H\_R2\_20221103095054.pdf

CO\_Raptor\_410H\_9pnt\_new\_20221206103701.pdf

**Other proposed operations facets description:**

Chevron formally requests the variances below:

- Authorization to use the spudder rig to spud the well and set surface casing. The drilling rig will move in less than 90 days to continue drilling operations. Rig layouts attached.

\*\*\*Drilling plan attached contains a contingency cement program.

**Other proposed operations facets attachment:**

Sundry\_Break\_Testing\_and\_WOC\_500\_psi\_Raptor\_20220104104738.pdf

CUSA\_Spudder\_Rig\_Data\_20220105100204.pdf

Gas\_Management\_Plan\_Pad\_410\_20220106151832.pdf

Operational\_Best\_Management\_Practices\_20220106151839.pdf

**Other Variance attachment:**



## CO Raptor 4 9 Fed Com 410H R2 mdv 20May22 Proposal Geodetic Report



(Def Plan)

**Report Date:** May 20, 2022 - 04:11 PM  
**Client:** Chevron  
**Field:** NM Lea County (NAD 27)  
**Structure / Slot:** Chevron CO Raptor 4 9 Fed Com Pad / 410H  
**Well:** CO Raptor 4 9 Fed Com 410H  
**Borehole:** CO Raptor 4 9 Fed Com 410H  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** CO Raptor 4 9 Fed Com 410H R2 mdv 20May22  
**Survey Date:** May 20, 2022  
**Tort / AHD / DDI / ERD Ratio:** 108.602 ° / 9001.337 ft / 6.244 / 0.868  
**Coordinate Reference System:** NAD27 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 32° 9' 37.34936", W 103° 40' 32.81268"  
**Location Grid N/E Y/X:** N 422687.000 ftUS, E 703484.000 ftUS  
**CRS Grid Convergence Angle:** 0.3500 °  
**Grid Scale Factor:** 0.99995651  
**Version / Patch:** 2.10.829.1

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 180.060 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB = 28ft  
**TVD Reference Elevation:** 3518.000 ft above MSL  
**Seabed / Ground Elevation:** 3490.000 ft above MSL  
**Magnetic Declination:** 6.360 °  
**Total Gravity Field Strength:** 998.4278mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 47541.523 nT  
**Magnetic Dip Angle:** 59.747 °  
**Declination Date:** May 20, 2022  
**Magnetic Declination Model:** HDGM 2021  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.3500 °  
**Total Corr Mag North->Grid North:** 6.0102 °  
**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 ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	422687.00	703484.00	N 32 9 37.35	W 103 40 32.81
	100.00	0.00	287.61	100.00	0.00	0.00	0.00	0.00	422687.00	703484.00	N 32 9 37.35	W 103 40 32.81
	200.00	0.00	287.61	200.00	0.00	0.00	0.00	0.00	422687.00	703484.00	N 32 9 37.35	W 103 40 32.81
	300.00	0.00	287.61	300.00	0.00	0.00	0.00	0.00	422687.00	703484.00	N 32 9 37.35	W 103 40 32.81
	400.00	0.00	287.61	400.00	0.00	0.00	0.00	0.00	422687.00	703484.00	N 32 9 37.35	W 103 40 32.81
Build 1.5"/100ft	500.00	0.00	287.61	500.00	0.00	0.00	0.00	0.00	422687.00	703484.00	N 32 9 37.35	W 103 40 32.81
	600.00	1.50	287.61	599.99	-0.39	0.40	-1.25	1.50	422687.40	703482.75	N 32 9 37.35	W 103 40 32.83
	700.00	3.00	287.61	699.91	-1.58	1.58	-4.99	1.50	422688.58	703479.01	N 32 9 37.37	W 103 40 32.87
	800.00	4.50	287.61	799.69	-3.55	3.56	-11.22	1.50	422690.56	703472.78	N 32 9 37.39	W 103 40 32.94
Rustler (RSLR)	804.32	4.56	287.61	804.00	-3.65	3.67	-11.55	1.50	422690.67	703472.45	N 32 9 37.39	W 103 40 32.95
	900.00	6.00	287.61	899.27	-6.31	6.33	-19.94	1.50	422693.33	703464.06	N 32 9 37.41	W 103 40 33.04
	1000.00	7.50	287.61	998.57	-9.85	9.89	-31.15	1.50	422696.88	703452.85	N 32 9 37.45	W 103 40 33.17
Rustler Los Medaños Member	1004.47	7.57	287.61	1003.00	-10.03	10.06	-31.71	1.50	422697.06	703452.30	N 32 9 37.45	W 103 40 33.18
Hold	1033.67	8.00	287.61	1031.93	-11.22	11.26	-35.48	1.50	422698.26	703448.53	N 32 9 37.46	W 103 40 33.22
Rustler Los Medaños M-1 siltstone unit	1034.74	8.00	287.61	1033.00	-11.27	11.30	-35.62	0.00	422698.30	703448.38	N 32 9 37.46	W 103 40 33.23
	1100.00	8.00	287.61	1097.62	-14.01	14.05	-44.28	0.00	422701.05	703439.72	N 32 9 37.49	W 103 40 33.33
Saldo (SLDO)	1132.70	8.00	287.61	1130.00	-15.38	15.43	-48.62	0.00	422702.43	703435.38	N 32 9 37.50	W 103 40 33.38
	1200.00	8.00	287.61	1196.64	-18.21	18.27	-57.55	0.00	422705.26	703426.45	N 32 9 37.53	W 103 40 33.48
	1300.00	8.00	287.61	1295.67	-22.40	22.48	-70.83	0.00	422709.48	703413.18	N 32 9 37.58	W 103 40 33.63
	1400.00	8.00	287.61	1394.70	-26.60	26.69	-84.10	0.00	422713.69	703399.90	N 32 9 37.62	W 103 40 33.79
	1500.00	8.00	287.61	1493.72	-30.80	30.90	-97.37	0.00	422717.90	703386.63	N 32 9 37.66	W 103 40 33.94
	1600.00	8.00	287.61	1592.75	-35.00	35.12	-110.65	0.00	422722.11	703373.36	N 32 9 37.70	W 103 40 34.10
	1700.00	8.00	287.61	1691.77	-39.20	39.33	-123.92	0.00	422726.33	703360.08	N 32 9 37.75	W 103 40 34.25
	1800.00	8.00	287.61	1790.80	-43.40	43.54	-137.20	0.00	422730.54	703346.81	N 32 9 37.79	W 103 40 34.41
	1900.00	8.00	287.61	1889.82	-47.60	47.75	-150.47	0.00	422734.75	703333.54	N 32 9 37.83	W 103 40 34.56
	2000.00	8.00	287.61	1988.85	-51.79	51.97	-163.74	0.00	422738.96	703320.27	N 32 9 37.87	W 103 40 34.71
	2100.00	8.00	287.61	2087.88	-55.99	56.18	-177.02	0.00	422743.18	703306.99	N 32 9 37.92	W 103 40 34.87
	2200.00	8.00	287.61	2186.90	-60.19	60.39	-190.29	0.00	422747.39	703293.72	N 32 9 37.96	W 103 40 35.02
	2300.00	8.00	287.61	2285.93	-64.39	64.60	-203.56	0.00	422751.60	703280.45	N 32 9 38.00	W 103 40 35.18
	2400.00	8.00	287.61	2384.95	-68.59	68.82	-216.84	0.00	422755.81	703267.17	N 32 9 38.04	W 103 40 35.33
	2500.00	8.00	287.61	2483.98	-72.79	73.03	-230.11	0.00	422760.03	703253.90	N 32 9 38.09	W 103 40 35.48
	2600.00	8.00	287.61	2583.00	-76.99	77.24	-243.38	0.00	422764.24	703240.63	N 32 9 38.13	W 103 40 35.64
	2700.00	8.00	287.61	2682.03	-81.18	81.45	-256.66	0.00	422768.45	703227.36	N 32 9 38.17	W 103 40 35.79
	2800.00	8.00	287.61	2781.05	-85.38	85.67	-269.93	0.00	422772.66	703214.08	N 32 9 38.21	W 103 40 35.95
	2900.00	8.00	287.61	2880.08	-89.58	89.88	-283.20	0.00	422776.87	703200.81	N 32 9 38.26	W 103 40 36.10
	3000.00	8.00	287.61	2979.11	-93.78	94.09	-296.48	0.00	422781.09	703187.54	N 32 9 38.30	W 103 40 36.25
	3100.00	8.00	287.61	3078.13	-97.98	98.30	-309.75	0.00	422785.30	703174.26	N 32 9 38.34	W 103 40 36.41
Castile (CSTL)	3196.81	8.00	287.61	3174.00	-102.04	102.38	-322.60	0.00	422789.38	703161.41	N 32 9 38.38	W 103 40 36.56
	3200.00	8.00	287.61	3177.16	-102.18	102.52	-323.02	0.00	422789.51	703160.99	N 32 9 38.38	W 103 40 36.56
	3300.00	8.00	287.61	3276.18	-106.38	106.73	-336.30	0.00	422793.72	703147.72	N 32 9 38.43	W 103 40 36.72
	3400.00	8.00	287.61	3375.21	-110.58	110.94	-349.57	0.00	422797.94	703134.44	N 32 9 38.47	W 103 40 36.87
	3500.00	8.00	287.61	3474.23	-114.77	115.15	-362.84	0.00	422802.15	703121.17	N 32 9 38.51	W 103 40 37.03
	3600.00	8.00	287.61	3573.26	-118.97	119.37	-376.12	0.00	422806.36	703107.90	N 32 9 38.55	W 103 40 37.18
	3700.00	8.00	287.61	3672.28	-123.17	123.58	-389.39	0.00	422810.57	703094.63	N 32 9 38.60	W 103 40 37.33
	3800.00	8.00	287.61	3771.31	-127.37	127.79	-402.67	0.00	422814.79	703081.35	N 32 9 38.64	W 103 40 37.49
	3900.00	8.00	287.61	3870.34	-131.57	132.00	-415.94	0.00	422819.00	703068.08	N 32 9 38.68	W 103 40 37.64
	4000.00	8.00	287.61	3969.36	-135.77	136.22	-429.21	0.00	422823.21	703054.81	N 32 9 38.72	W 103 40 37.80
	4100.00	8.00	287.61	4068.39	-139.97	140.43	-442.49	0.00	422827.42	703041.53	N 32 9 38.77	W 103 40 37.95
	4200.00	8.00	287.61	4167.41	-144.16	144.64	-455.76	0.00	422831.64	703028.26	N 32 9 38.81	W 103 40 38.10
Drop .75"/100ft	4219.96	8.00	287.61	4187.18	-145.00	145.48	-458.41	0.00	422832.48	703025.61	N 32 9 38.82	W 103 40 38.13
	4300.00	7.40	287.61	4266.50	-148.24	148.73	-468.64	0.75	422835.72	703015.38	N 32 9 38.85	W 103 40 38.25
	4400.00	6.65	287.61	4365.74	-151.93	152.43	-480.30	0.75	422839.42	703003.72	N 32 9 38.89	W 103 40 38.39
	4500.00	5.90	287.61	4465.14	-155.23	155.74	-490.73	0.75	422842.73	702993.30	N 32 9 38.92	W 103 40 38.51
	4600.00	5.15	287.61	4564.68	-158.13	158.65	-499.91	0.75	422845.65	702984.11	N 32 9 38.95	W 103 40 38.62
	4700.00	4.40	287.61	4664.33	-160.64	161.17	-507.85	0.75	422848.17	702976.17	N 32 9 38.97	W 103 40 38.71
Lamar (LMAR)	4732.76	4.16	287.61	4697.00	-161.38	161.91	-510.19	0.75	422848.91	702973.84	N 32 9 38.98	W 103 40 38.74
Bell Canyon (BLCN)	4769.86	3.88	287.61	4734.00	-162.16	162.70	-512.66	0.75	422849.69	702971.36	N 32 9 38.99	W 103 40 38.76
	4800.00	3.65	287.61	4764.08	-162.76	163.30	-514.55	0.75	422850.29	702969.47	N 32 9 39.00	W 103 40 38.79
	4900.00	2.90	287.61	4863.92	-164.49	165.03	-520.00	0.75	422852.02	702964.02	N 32 9 39.01	W 103 40 38.85
	5000.00	2.15	287.61	4963.82	-165.82	166.37	-524.21	0.75	422853.36	702959.81	N 32 9 39.03	W 103 40 38.90
	5100.00	1.40	287.61	5063.77	-166.75	167.31	-527.17	0.75	422854.30	702956.85	N 32 9 39.04	W 103 40 38.93
	5200.00	0.65	287.61	5163.75	-167.30	167.85	-528.88	0.75	422854.84	702955.14	N 32 9 39.04	W 103 40 38.95
Hold Vertical	5287.29	0.00	287.61	5251.04	-167.45	168.00	-529.36	0.75	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	5300.00	0.00	287.61	5263.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	5400.00	0.00	287.61	5363.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	5500.00	0.00	287.61	5463.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	5600.00	0.00	287.61	5563.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
Cherry Canyon (CRCN)	5659.25	0.00	287.61	5623.00	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	5700.00	0.00	287.61	5663.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	5800.00	0.00	287.61	5763.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	5900.00	0.00	287.61	5863.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	6000.00	0.00	287.61	5963.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04	W 103 40 38.96
	6100.00	0										

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 (BCN)	6900.00	0.00	287.61	6863.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7000.00	0.00	287.61	6963.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7083.25	0.00	287.61	7047.00	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7100.00	0.00	287.61	7063.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7200.00	0.00	287.61	7163.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7300.00	0.00	287.61	7263.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7400.00	0.00	287.61	7363.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7500.00	0.00	287.61	7463.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7600.00	0.00	287.61	7563.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7700.00	0.00	287.61	7663.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7800.00	0.00	287.61	7763.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	7900.00	0.00	287.61	7863.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8000.00	0.00	287.61	7963.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8100.00	0.00	287.61	8063.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8200.00	0.00	287.61	8163.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
Bone Spring (BSGL)	8300.00	0.00	287.61	8263.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8400.00	0.00	287.61	8363.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8500.00	0.00	287.61	8463.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8600.00	0.00	287.61	8563.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8648.25	0.00	287.61	8612.00	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
Upper Avalon (AVU)	8700.00	0.00	287.61	8663.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8760.25	0.00	287.61	8724.00	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8800.00	0.00	287.61	8763.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	8900.00	0.00	287.61	8863.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9000.00	0.00	287.61	8963.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
Lower Avalon (AVL)	9100.00	0.00	287.61	9063.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9191.25	0.00	287.61	9155.00	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9200.00	0.00	287.61	9163.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9300.00	0.00	287.61	9263.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9400.00	0.00	287.61	9363.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
First Bone Spring Upper (FBS)	9500.00	0.00	287.61	9463.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9600.00	0.00	287.61	9563.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9700.00	0.00	287.61	9663.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9721.25	0.00	287.61	9685.00	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9800.00	0.00	287.61	9763.75	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
Build 10"/100ft	9837.29	0.00	287.61	9801.04	-167.45	168.00	-529.36	0.00	422854.99	702954.66	N 32 9 39.04 W	103 40 38.96
	9900.00	6.27	180.96	9863.62	-164.02	164.57	-529.42	10.00	422851.56	702954.61	N 32 9 39.01 W	103 40 38.96
	9991.09	15.38	180.96	9953.00	-146.93	147.48	-529.71	10.00	422834.48	702954.32	N 32 9 38.84 W	103 40 38.96
First Bone Spring Lower (FBL)	10000.00	16.27	180.96	9961.57	-144.50	145.05	-529.75	10.00	422832.05	702954.28	N 32 9 38.82 W	103 40 38.96
	10100.00	26.27	180.96	10054.64	-108.27	108.83	-530.36	10.00	422795.82	702953.67	N 32 9 38.46 W	103 40 38.97
	10200.00	36.27	180.96	10140.00	-56.44	56.99	-531.23	10.00	422743.99	702952.80	N 32 9 37.95 W	103 40 38.99
	10300.00	46.27	180.96	10215.07	9.43	-8.88	-532.34	10.00	422678.12	702951.69	N 32 9 37.29 W	103 40 39.01
	10400.00	56.27	180.96	10277.55	87.34	-86.78	-533.65	10.00	422600.23	702950.38	N 32 9 36.52 W	103 40 39.03
	10411.79	57.45	180.96	10284.00	97.21	-96.65	-533.81	10.00	422590.35	702950.21	N 32 9 36.43 W	103 40 39.03
	10500.00	66.27	180.96	10325.56	174.90	-174.34	-535.12	10.00	422512.66	702948.91	N 32 9 35.66 W	103 40 39.05
	10600.00	76.27	180.96	10357.63	269.48	-268.92	-536.71	10.00	422418.10	702947.31	N 32 9 34.72 W	103 40 39.07
	10700.00	86.27	180.96	10372.78	368.18	-367.62	-538.37	10.00	422319.40	702945.65	N 32 9 33.74 W	103 40 39.10
	10738.38	90.11	180.96	10374.00	406.53	-405.97	-539.02	10.00	422281.05	702945.01	N 32 9 33.36 W	103 40 39.11
Landing Point FTP Cross	10738.41	90.11	180.96	10374.00	406.56	-406.00	-539.02	0.00	422281.02	702945.01	N 32 9 33.36 W	103 40 39.11
	10800.00	90.11	180.96	10373.88	468.14	-467.58	-540.05	0.00	422219.44	702943.97	N 32 9 32.76 W	103 40 39.13
	10900.00	90.11	180.96	10373.69	568.13	-567.56	-541.73	0.00	422119.46	702942.29	N 32 9 31.77 W	103 40 39.15
	11000.00	90.11	180.96	10373.50	668.12	-667.55	-543.42	0.00	422019.48	702940.61	N 32 9 30.78 W	103 40 39.18
	11100.00	90.11	180.96	10373.31	768.10	-767.53	-545.10	0.00	421919.50	702938.93	N 32 9 29.79 W	103 40 39.21
	11200.00	90.11	180.96	10373.12	868.09	-867.52	-546.78	0.00	421819.52	702937.24	N 32 9 28.80 W	103 40 39.23
	11300.00	90.11	180.96	10372.92	968.08	-967.51	-548.46	0.00	421719.54	702935.56	N 32 9 27.81 W	103 40 39.26
	11400.00	90.11	180.96	10372.73	1068.07	-1067.49	-550.14	0.00	421619.56	702933.88	N 32 9 26.82 W	103 40 39.29
	11500.00	90.11	180.96	10372.54	1168.05	-1167.48	-551.83	0.00	421519.58	702932.20	N 32 9 25.83 W	103 40 39.31
	11600.00	90.11	180.96	10372.35	1268.04	-1267.46	-553.51	0.00	421419.60	702930.52	N 32 9 24.84 W	103 40 39.34
MP, Turn 2°/100ft	11700.00	90.11	180.96	10372.16	1368.03	-1367.45	-555.19	0.00	421319.61	702928.83	N 32 9 23.85 W	103 40 39.37
	11800.00	90.11	180.96	10371.97	1468.02	-1467.43	-556.87	0.00	421219.63	702927.15	N 32 9 22.86 W	103 40 39.39
	11900.00	90.11	180.96	10371.78	1568.00	-1567.42	-558.55	0.00	421119.65	702925.47	N 32 9 21.87 W	103 40 39.42
	12000.00	90.11	180.96	10371.59	1667.99	-1667.41	-560.24	0.00	421019.67	702923.79	N 32 9 20.88 W	103 40 39.45
	12100.00	90.11	180.96	10371.40	1767.98	-1767.39	-561.92	0.00	420919.69	702922.11	N 32 9 19.89 W	103 40 39.47
	12200.00	90.11	180.96	10371.21	1867.97	-1867.38	-563.60	0.00	420819.71	702920.43	N 32 9 18.90 W	103 40 39.50
	12300.00	90.11	180.96	10371.01	1967.95	-1967.36	-565.28	0.00	420719.73	702918.74	N 32 9 17.92 W	103 40 39.53
	12400.00	90.11	180.96	10370.82	20.							

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 ° ' ")
	16200.00	91.23	179.60	10338.64	5867.43	-5866.85	-563.89	0.00	416820.42	702920.14	N 32 8 39.33 W 103 40 39.79	
	16300.00	91.23	179.60	10336.50	5967.41	-5966.82	-563.19	0.00	416720.45	702920.84	N 32 8 38.34 W 103 40 39.79	
	16400.00	91.23	179.60	10334.35	6067.38	-6066.80	-562.49	0.00	416620.48	702921.54	N 32 8 37.35 W 103 40 39.79	
	16500.00	91.23	179.60	10332.21	6167.36	-6166.77	-561.79	0.00	416520.51	702922.24	N 32 8 36.36 W 103 40 39.78	
	16600.00	91.23	179.60	10330.07	6267.33	-6266.74	-561.09	0.00	416420.54	702922.94	N 32 8 35.37 W 103 40 39.78	
	16700.00	91.23	179.60	10327.93	6367.30	-6366.72	-560.39	0.00	416320.57	702923.64	N 32 8 34.38 W 103 40 39.78	
	16800.00	91.23	179.60	10325.79	6467.28	-6466.69	-559.69	0.00	416220.60	702924.33	N 32 8 33.39 W 103 40 39.78	
	16900.00	91.23	179.60	10323.65	6567.25	-6566.67	-558.99	0.00	416120.63	702925.03	N 32 8 32.40 W 103 40 39.78	
	17000.00	91.23	179.60	10321.50	6667.22	-6666.64	-558.29	0.00	416020.66	702925.73	N 32 8 31.41 W 103 40 39.78	
	17100.00	91.23	179.60	10319.36	6767.20	-6766.62	-557.59	0.00	415920.69	702926.43	N 32 8 30.42 W 103 40 39.78	
	17200.00	91.23	179.60	10317.22	6867.17	-6866.59	-556.89	0.00	415820.72	702927.13	N 32 8 29.44 W 103 40 39.78	
	17300.00	91.23	179.60	10315.08	6967.15	-6966.57	-556.19	0.00	415720.75	702927.83	N 32 8 28.45 W 103 40 39.78	
	17400.00	91.23	179.60	10312.94	7067.12	-7066.54	-555.49	0.00	415620.78	702928.53	N 32 8 27.46 W 103 40 39.77	
	17500.00	91.23	179.60	10310.80	7167.09	-7166.52	-554.80	0.00	415520.81	702929.23	N 32 8 26.47 W 103 40 39.77	
	17600.00	91.23	179.60	10308.66	7267.07	-7266.49	-554.10	0.00	415420.84	702929.93	N 32 8 25.48 W 103 40 39.77	
	17700.00	91.23	179.60	10306.51	7367.04	-7366.47	-553.40	0.00	415320.87	702930.63	N 32 8 24.49 W 103 40 39.77	
	17800.00	91.23	179.60	10304.37	7467.02	-7466.44	-552.70	0.00	415220.90	702931.33	N 32 8 23.50 W 103 40 39.77	
	17900.00	91.23	179.60	10302.23	7566.99	-7566.41	-552.00	0.00	415120.93	702932.03	N 32 8 22.51 W 103 40 39.77	
	18000.00	91.23	179.60	10300.09	7666.96	-7666.39	-551.30	0.00	415020.96	702932.73	N 32 8 21.52 W 103 40 39.77	
	18100.00	91.23	179.60	10297.95	7766.94	-7766.36	-550.60	0.00	414920.99	702933.43	N 32 8 20.53 W 103 40 39.77	
	18200.00	91.23	179.60	10295.81	7866.91	-7866.34	-549.90	0.00	414821.02	702934.12	N 32 8 19.54 W 103 40 39.77	
	18300.00	91.23	179.60	10293.66	7966.88	-7966.31	-549.20	0.00	414721.05	702934.82	N 32 8 18.55 W 103 40 39.77	
	18400.00	91.23	179.60	10291.52	8066.86	-8066.29	-548.50	0.00	414621.08	702935.52	N 32 8 17.56 W 103 40 39.76	
	18500.00	91.23	179.60	10289.38	8166.83	-8166.26	-547.80	0.00	414521.11	702936.22	N 32 8 16.57 W 103 40 39.76	
LTP Cross	18535.95	91.23	179.60	10288.61	8202.77	-8202.20	-547.55	0.00	414485.17	702936.47	N 32 8 16.22 W 103 40 39.76	
	18600.00	91.23	179.60	10287.24	8266.81	-8266.24	-547.10	0.00	414421.14	702936.92	N 32 8 15.58 W 103 40 39.76	
CO Raptor 4 9 Fed Com 410H - BHL	18611.14	91.23	179.60	10287.00	8277.94	-8277.38	-547.02	0.00	414410.00	702937.00	N 32 8 15.47 W 103 40 39.76	

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 3 \*\*\* 3-D 97.071% Confidence 3.0000 sigma  
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	28.000	1/100.000	30.000	30.000		B001Mb_MWD+HRGM-Depth Only	CO Raptor 4 9 Fed Com 410H / CO Raptor 4 9 Fed Com 410H R2 mdv 20May22
	1	28.000	18611.142	1/100.000	30.000	30.000		B001Mb_MWD+HRGM	CO Raptor 4 9 Fed Com 410H / CO Raptor 4 9 Fed Com 410H R2

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Chevron
<b>LEASE NO.:</b>	NMNM054031
<b>LOCATION:</b>	Sec. 4, T.25 S, R 32 E
<b>COUNTY:</b>	Lea County, New Mexico ▼
<b>WELL NAME &amp; NO.:</b>	CO Raptor 4 9 Fed Com 410H
<b>SURFACE HOLE FOOTAGE:</b>	2269'/S & 1533'/E
<b>BOTTOM HOLE FOOTAGE:</b>	25'/S & 1210'/E

<b>WELL NAME &amp; NO.:</b>	CO Raptor 4 9 Fed Com 411H
<b>SURFACE HOLE FOOTAGE:</b>	2269'/S & 1533'/E
<b>BOTTOM HOLE FOOTAGE:</b>	25'/S & 1210'/E

<b>WELL NAME &amp; NO.:</b>	CO Raptor 4 9 Fed Com 412H
<b>SURFACE HOLE FOOTAGE:</b>	2270'/S & 1508'/E
<b>BOTTOM HOLE FOOTAGE:</b>	25'/S & 330'/E

**Operator must not drill until Cotton Draw Unit contraction is approved by the BLM**

COA

H <sub>2</sub> S	<input checked="" type="radio"/> No	<input type="radio"/> Yes
<b>Potash / WIPP</b>	<input checked="" type="radio"/> None <input type="radio"/> Secretary <input type="radio"/> R-111-Q <input type="checkbox"/> Open Annulus <span style="color: red;">Choose an option (including blank option.)</span>	<input type="checkbox"/> WIPP
<b>Cave / Karst</b>	<input checked="" type="radio"/> Low <input type="radio"/> Medium <input type="radio"/> High <input type="radio"/> Critical	
<b>Wellhead</b>	<input type="radio"/> Conventional <input checked="" type="radio"/> Multibowl <input type="radio"/> Both <input type="radio"/> Diverter	
<b>Cementing</b>	<input type="checkbox"/> Primary Squeeze <input type="checkbox"/> Cont. Squeeze <input type="checkbox"/> EchoMeter <input type="checkbox"/> DV Tool	
<b>Special Req</b>	<input type="checkbox"/> Capitan Reef <input type="checkbox"/> Water Disposal <input checked="" type="checkbox"/> COM <input type="checkbox"/> Unit	
<b>Waste Prev.</b>	<input type="radio"/> Self-Certification <input type="radio"/> Waste Min. Plan <input checked="" type="radio"/> APD Submitted prior to 06/10/2024	
<b>Additional Language</b>	<input checked="" type="checkbox"/> Flex Hose <input type="checkbox"/> Casing Clearance <input type="checkbox"/> Pilot Hole <input checked="" type="checkbox"/> Break Testing <input type="checkbox"/> Four-String <input type="checkbox"/> Offline Cementing <input type="checkbox"/> Fluid-Filled	

## A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

## B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1072** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) 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.
2. The minimum required fill of cement behind the **9-5/8** inch 1<sup>st</sup> intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess calculates to 23%. Additional cement maybe required.****Wait on cement (WOC) time for a primary cement job is to include the tail cement slurry due to cave/karst.**
3. The minimum required fill of cement behind the **7** inch 2<sup>nd</sup> Intermediate casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification. **Excess calculates to 13%. Additional cement maybe required.****Wait on cement (WOC) time for a primary cement job is to include the tail cement slurry due to cave/karst.**
4. The minimum required fill of cement behind the **5 x 4-1/2** inch production liner is:
  - Cement should tie-back **100 feet** into the previous casing. 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. 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 43 CFR 3172 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.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- 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.

**BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted **(575-689-5981 Lea County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

## 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)

### Contact Lea County Petroleum Engineering Inspection Staff:

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

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
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

### 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 of both lead and tail cement, 2) until cement has been in place at least 8 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-Q 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 **43 CFR 3172**.
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:
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. 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.
  - iii. Manufacturer representative shall install the test plug for the initial BOP test.
  - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - v. 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.
  - i. 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 cement), 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).
  - ii. 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve

- open. (only applies to single stage cement jobs, prior to the cement setting up.)
- iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - iv. 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.
  - v. The results of the test shall be reported to the appropriate BLM office.
  - vi. 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.
  - vii. 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.
  - viii. 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 **43 CFR 3172**.

### **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.

**Approved by Zota Stevens on 8/5/2024**  
575-234-5998 / zstevens@blm.gov



# H<sub>2</sub>S Preparedness and Contingency Plan Summary

## Training

MCBU Drilling and Completions H<sub>2</sub>S training requirements are intended to define the minimum level of training required for employees, contractors and visitors to enter or perform work at MCBU Drilling and Completions locations that have known concentrations of H<sub>2</sub>S.

## Awareness Level

Employees and visitors to MCBU Drilling and Completions locations that have known concentrations of H<sub>2</sub>S, who are not required to perform work in H<sub>2</sub>S areas, will be provided with an awareness level of H<sub>2</sub>S training prior to entering any H<sub>2</sub>S areas. At a minimum, awareness level training will include:

1. Physical and chemical properties of H<sub>2</sub>S
2. Health hazards of H<sub>2</sub>S
3. Personal protective equipment
4. Information regarding potential sources of H<sub>2</sub>S
5. Alarms and emergency evacuation procedures

Awareness level training will be developed and conducted by personnel who are qualified either by specific training, educational experience and/or work-related background.

## Advanced Level H<sub>2</sub>S Training

Employees and contractors required to work in areas that may contain H<sub>2</sub>S will be provided with Advanced Level H<sub>2</sub>S training prior to initial assignment. In addition to the Awareness Level requirements, Advanced Level H<sub>2</sub>S training will include:

1. H<sub>2</sub>S safe work practice procedures;
2. Emergency contingency plan procedures;
3. Methods to detect the presence or release of H<sub>2</sub>S (e.g., alarms, monitoring equipment), including hands-on training with direct reading and personal monitoring H<sub>2</sub>S equipment.
4. Basic overview of respiratory protective equipment suitable for use in H<sub>2</sub>S environments. Note: Employees who work at sites that participate in the Chevron Respirator User program will require separate respirator training as required by the MCBU Respiratory Protection Program;
5. Basic overview of emergency rescue techniques, first aid, CPR and medical evaluation procedures. Employees who may be required to perform "standby" duties are required to receive additional first aid and CPR training, which is not covered in the Advanced Level H<sub>2</sub>S training;
6. Proficiency examination covering all course material.

Advanced H<sub>2</sub>S training courses will be instructed by personnel who have successfully completed an appropriate H<sub>2</sub>S train-the-trainer development course (ANSI/ASSE Z390.1-2006) or who possess significant past experience through educational or work-related background.

# H<sub>2</sub>S Preparedness and Contingency Plan Summary

## H<sub>2</sub>S Training Certification

All employees and visitors will be issued an H<sub>2</sub>S training certification card (or certificate) upon successful completion of the appropriate H<sub>2</sub>S training course. Personnel working in an H<sub>2</sub>S environment will carry a current H<sub>2</sub>S training certification card as proof of having received the proper training on their person at all times.

## Briefing Area

A minimum of two briefing areas will be established in locations that at least one area will be upwind from the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated upwind briefing areas for instructions.

## H<sub>2</sub>S Equipment

### Respiratory Protection

- a) Six 30 minute SCBAs – 2 at each briefing area and 2 in the Safety Trailer.
- b) Eight 5 minute EBAs – 5 in the dog house at the rig floor, 1 at the accumulator, 1 at the shale shakers and 1 at the mud pits.

## Visual Warning System

- a) One color code sign, displaying all possible conditions, will be placed at the entrance to the location with a flag displaying the current condition.
- b) Two windsocks will be on location, one on the dog house and one on the Drill Site Manager's Trailer.

## H<sub>2</sub>S Detection and Monitoring System

- a) H<sub>2</sub>S monitoring system (sensor head, warning light and siren) placed throughout rig.
  - Drilling Rig Locations: at a minimum, in the area of the Shale shaker, rig floor, and bell nipple.
  - Workover Rig Locations: at a minimum, in the area of the Cellar, rig floor and circulating tanks or shale shaker.

# H<sub>2</sub>S Preparedness and Contingency Plan Summary

## Well Control Equipment

- a) Flare Line 150’ from wellhead with igniter.
- b) Choke manifold with a remotely operated choke.
- c) Mud / gas separator

## Mud Program

In the event of drilling, completions, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater the following shall be considered:

- 1. Use of a degasser
- 2. Use of a zinc based mud treatment
- 3. Increasing mud weight

## Public Safety - Emergency Assistance

<u>Agency</u>	<u>Telephone Number</u>
Lea County Sheriff’s Department	575-396-3611
Fire Department:	
Carlsbad	575-885-3125
Artesia	575-746-5050
Lea County Regional Medical Center	575-492-5000
Jal Community Hospital	505-395-2511
Lea County Emergency Management	575-396-8602
Poison Control Center	800-222-1222



## H<sub>2</sub>S Preparedness and Contingency Plan Summary

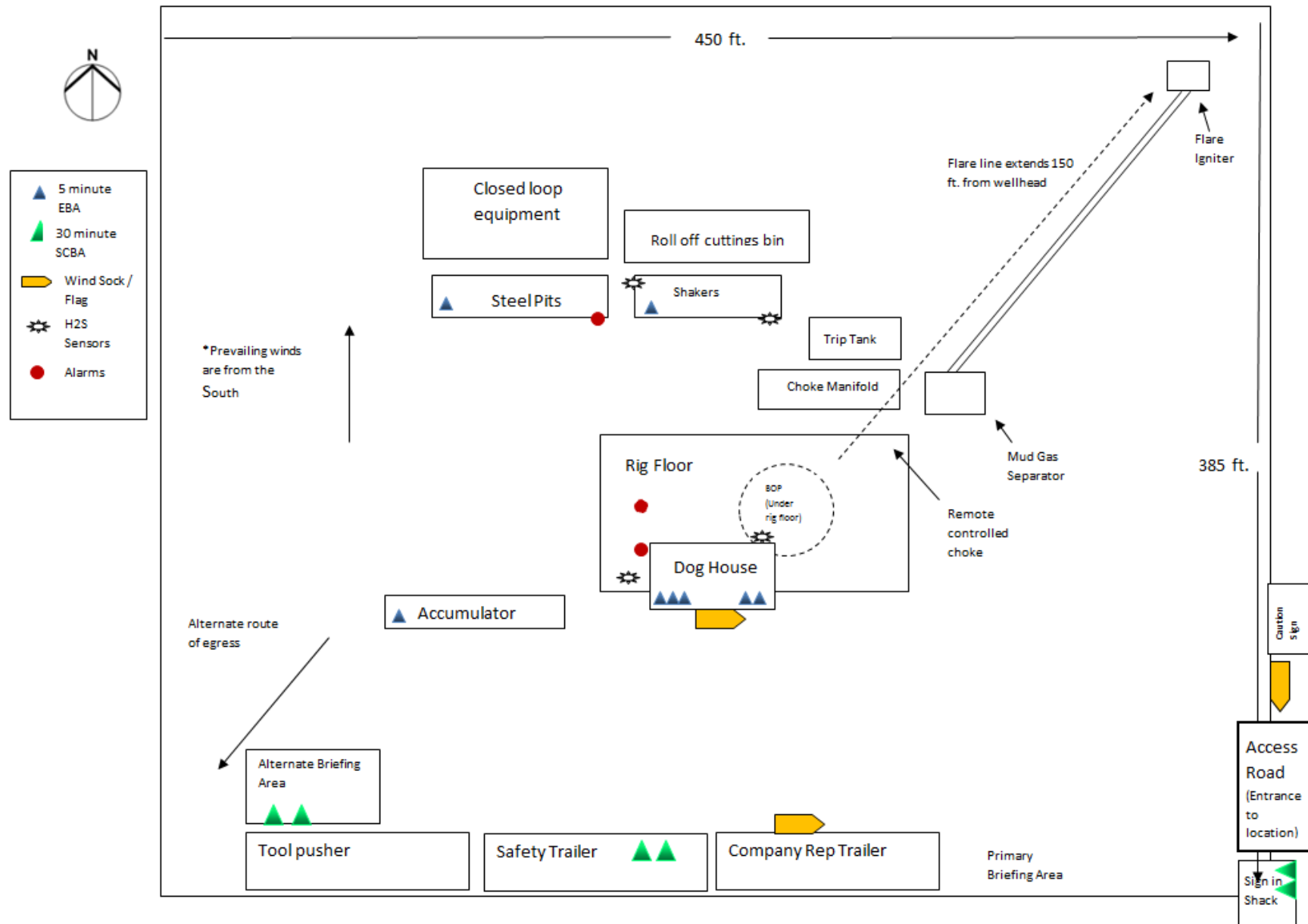
### Chevron MCBU D&C Emergency Notifications

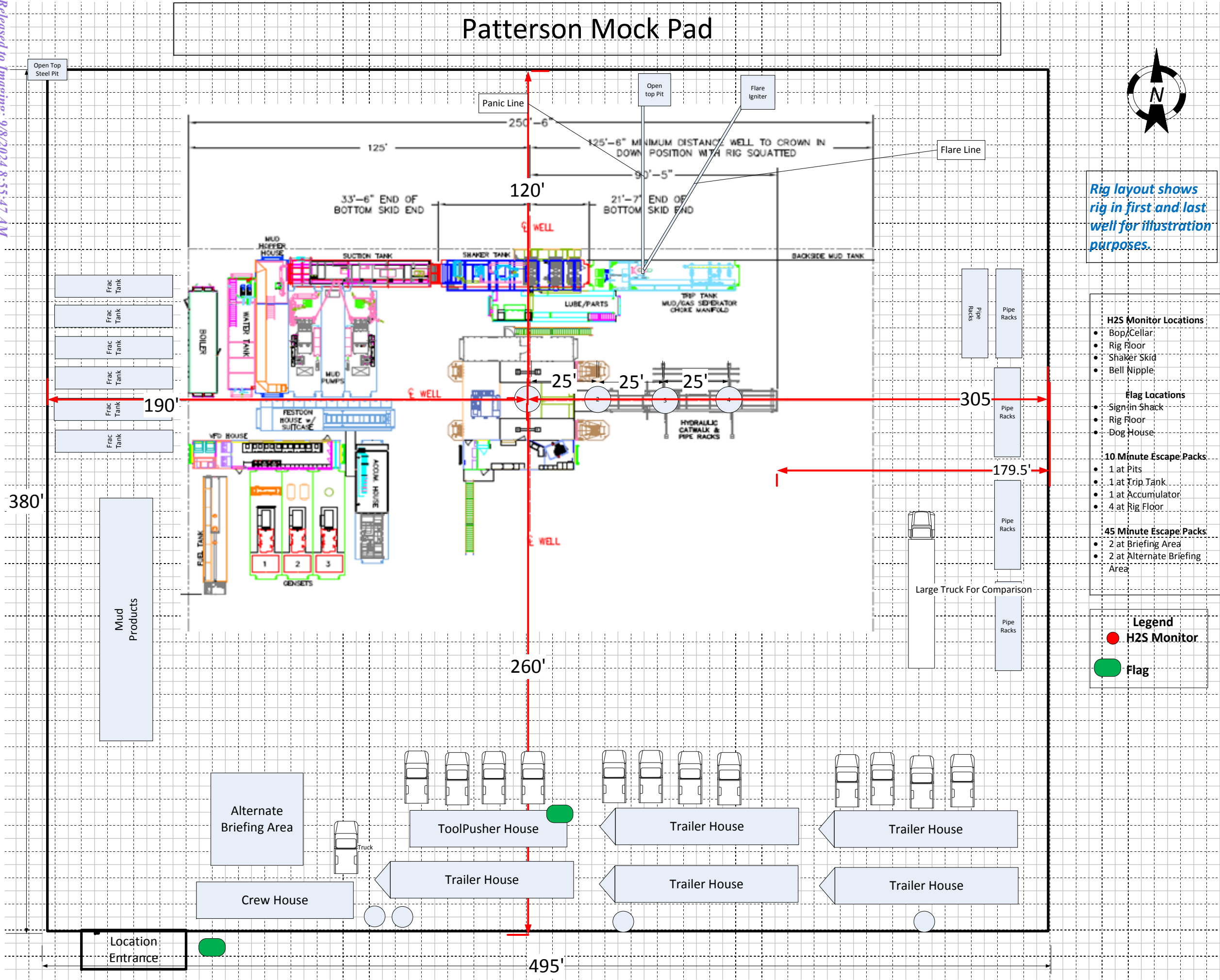
Below are lists of contacts to be used in emergency situations.

	Name	Title	Office Number	Cell Phone
1.	<b>TBD</b>	Drilling Engineer		
2.	Sergio Hernandez	Superintendent	713 372 1402	
5.	Dennis Mchugh	Drilling Manager	(713) 372-4496	
6.	Kyle Eastman	Operations Manager	713-372-5863	
7.	TBD	D&C HES		
8.	TBD	Completion Engineer		



## H<sub>2</sub>S Preparedness and Contingency Plan Summary





Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

## First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

## Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018



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

# Drilling Plan Data Report

08/12/2024

APD ID: 10400082527

Submission Date: 01/06/2022

Highlighted data  
reflects the most  
recent changes

Operator Name: CHEVRON USA INCORPORATED

Well Name: CO RAPTOR 4 9 FED COM

Well Number: 410H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13930998	RUSTLER	3474	804	804	DOLOMITE	NONE	N
13930999	RUSTLER	2472	1002	1002	MUDSTONE, SANDSTONE	NONE	N
13931000	SALADO	2345	1129	1129	HALITE	NONE	N
13931001	CASTILE	297	3177	3177	ANHYDRITE	NONE	N
13931002	LAMAR	-1225	4699	4739	LIMESTONE	NONE	N
13931004	BELL CANYON	-1261	4735	4775	SANDSTONE	NONE	N
13931005	CHERRY CANYON	-2154	5628	5668	SANDSTONE	NONE	N
13931009	BRUSHY CANYON	-3582	7056	7131	SANDSTONE	NONE	N
13931010	BONE SPRING	-5145	8619	8655	LIMESTONE	NONE	N
13931011	UPPER AVALON SHALE	-5261	8735	8771	LIMESTONE, SHALE	NATURAL GAS, OIL	Y
13931012	BONE SPRING 1ST	-6225	9699	9735	SANDSTONE	NATURAL GAS, OIL	Y
13931013	BONE SPRING 2ND	-6827	10301	10337	SANDSTONE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 10374

**Equipment:** Chevron will have a minimum of a 5,000 psi rig stack for drill out below surface casing. The stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed per hole section, unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs and variance). BOP test will be conducted by a third party.

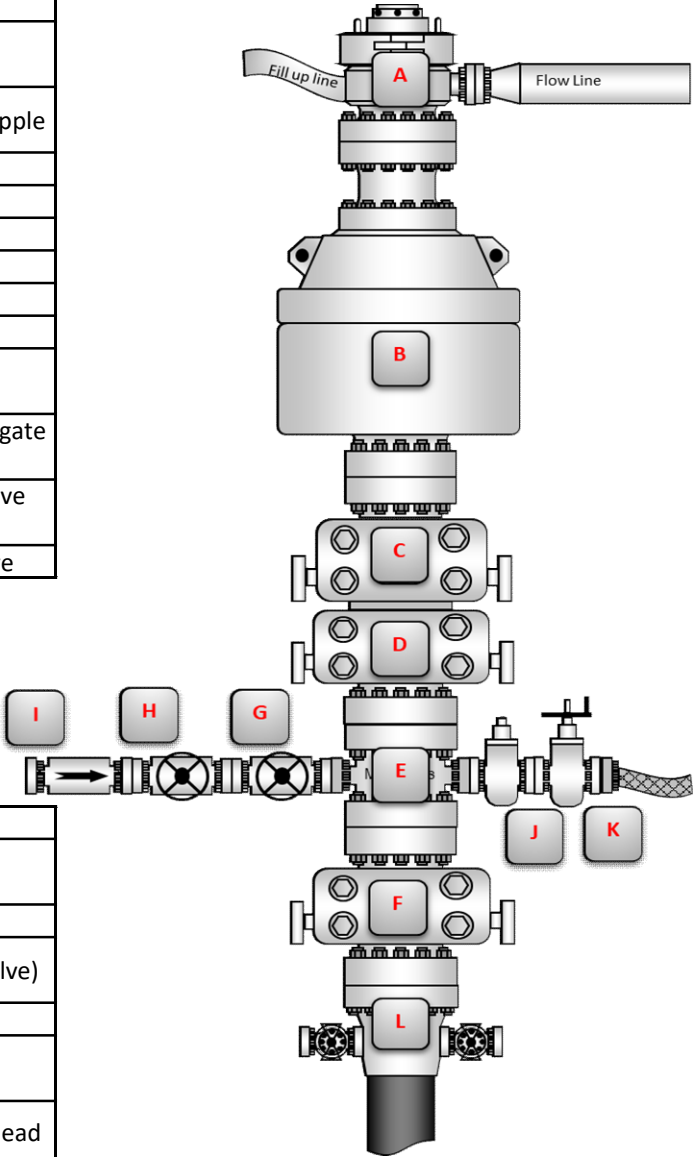
Requesting Variance? YES

BLOWOUT PREVENTER SCHEMATIC

Operation:	Intermediate & Production Drilling Operations
Minimum System operation pressure	5,000 psi

BOP Stack			
Part	Size	Pressure Rating	Description
A	13-5/8"	N/A	Rotating Head/Bell nipple
B	13-5/8"	5,000	Annular
C	13-5/8"	10,000	Blind Ram
D	13-5/8"	10,000	Pipe Ram
E	13-5/8"	10,000	Mud Cross
F	13-5/8"	10,000	Pipe Ram
Kill Line			
Part	Size	Pressure Rating	Description
G	2"	10,000	Inside Kill Line Valve (gate valve)
H	2"	10,000	Outside Kill Line Valve (gate valve)
I	2"	10,000	Kill Line Check valve

Choke line			
Part	Size	Pressure Rating	Description
J	3"	10,000	HCR (gate valve)
K	3"	10,000	Manual HCR (gate valve)
Wellhead			
Part	Size	Pressure Rating	Description
L	13-5/8"	5,000	FMC Multibowl wellhead



<b>BOP Installation Checklist:</b> The following items must be verified and checked off prior to pressure testing BOP equipment
The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.
All valves on the kill line and choke line will be full opening and will allow straight flow through.
Manual (hand wheels) or automatic locking devices will be installed on all ram preventers. Hand wheels will also be install on all manual valves on the choke and kill line.
A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will remain open unless accumulator is inoperative.
Upper kelly cock valve with handle will be available on rig floor along with saved valve and subs to fit all drill string connections in use.

**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 376151

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:
	4323
	Action Number: 376151
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	9/8/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	9/8/2024
ward.rikala	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	9/8/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	9/8/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	9/8/2024
ward.rikala	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	9/8/2024
ward.rikala	Submit C-102 on new form.	9/8/2024