

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. NMNM100549 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. KNOB CREEK 17 20 FED COM 33 4H 9. API Well No. 30-015-54977
2. Name of Operator CHEVRON USA INCORPORATED 3a. Address P O BOX 1635, HOUSTON, TX 77251 3b. Phone No. (include area code) (661) 654-7256		10. Field and Pool, or Exploratory WELCH/BONE SPRING 11. Sec., T. R. M. or Blk. and Survey or Area SEC 8/T26S/R27E/NMP
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSE / 136 FSL / 2576 FEL / LAT 32.050135 / LONG -104.212064 At proposed prod. zone SESE / 25 FSL / 1260 FEL / LAT 32.02053 / LONG -104.207567		12. County or Parish EDDY 13. State NM
14. Distance in miles and direction from nearest town or post office* 11.5 miles		15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 136 feet 16. No of acres in lease 17. Spacing Unit dedicated to this well 640.0
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 500 feet 19. Proposed Depth 7401 feet / 18504 feet 20. BLM/BIA Bond No. in file FED: ES0022		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3240 feet 22. Approximate date work will start* 12/01/2023 23. Estimated duration 147 days
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 (Electronic Submission) Title Sr Regulatory Affairs Coordinator	Name (Printed/Typed) CAROL ADLER / Ph: (432) 687-7866	Date 08/17/2022
Approved by (Signature) (Electronic Submission) Title Petroleum Engineer	Name (Printed/Typed) CHRISTOPHER WALLS / Ph: (575) 234-2234 Office Carlsbad Field Office	Date 04/12/2024

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)



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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-54977	² Pool Code 64010	³ Pool Name WELCH; BONE SPRING
⁴ Property Code 335853	⁵ Property Name KNOB CREEK 17 20 FED COM 33	⁶ Well Number 4H
⁷ OGRID No. 4323	⁸ Operator Name CHEVRON U.S.A. INC.	⁹ Elevation 3240'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	8	26 SOUTH	27 EAST, N.M.P.M.		136'	SOUTH	2576'	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	20	26 SOUTH	27 EAST, N.M.P.M.		25'	SOUTH	1260'	EAST	EDDY
¹² Dedicated Acres 640	¹³ Joint or Infill DEFINING	¹⁴ Consolidation Code	¹⁵ Order No.						

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.

¹⁶ PROPOSED FIRST TAKE POINT X= 539,045' Y= 381,702' NAD 27 LAT. 32.049351° N LONG. 104.207313° W X= 580,229' Y= 381,759' NAD83/86 LAT. 32.049473° N LONG. 104.207806° W PROPOSED MID POINT X= 539,094' Y= 376,476' NAD 27 LAT. 32.034985° N LONG. 104.207173° W X= 580,278' Y= 376,533' NAD83/86 LAT. 32.035107° N LONG. 104.207666° W PROPOSED LAST TAKE POINT X= 539,131' Y= 371,249' NAD 27 LAT. 32.020614° N LONG. 104.207075° W X= 580,314' Y= 371,306' NAD83/86 LAT. 32.020737° N LONG. 104.207568° W	KNOB CREEK 17 20 FED COM 33 NO. 4H WELL X= 537,726' Y= 381,941' NAD 27 LAT. 32.050013° N LONG. 104.211570° W X= 578,909' Y= 381,998' NAD83/86 LAT. 32.050135° N LONG. 104.212064° W ELEV. +3240' NAVD88 CORNER COORDINATES TABLE (NAD 27) A - X=534988.20', Y=381810.94' B - X=537646.07', Y=381805.09' C - X=538975.01', Y=381802.16' D - X=540303.95', Y=381799.23' E - X=535066.16', Y=376480.27' F - X=537710.13', Y=376477.58' G - X=539032.12', Y=376476.24' H - X=540354.10', Y=376474.90' I - X=535082.62', Y=371149.70' J - X=537736.96', Y=371149.15' K - X=539064.13', Y=371148.87' L - X=540391.30', Y=371148.59' PROPOSED BOTTOM HOLE LOCATION X= 539,131' Y= 371,174' NAD 27 LAT. 32.020408° N LONG. 104.207074° W X= 580,315' Y= 371,231' NAD83/86 LAT. 32.020530° N LONG. 104.207567° W		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Carol Adler</i> 8/3/2022 Signature Date Carol Adler Printed Name caroladler@chevron.com E-mail Address SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. 07/20/2021 Date of Survey Signature and Seal of Professional Surveyor <i>Robert L. Lastrapes</i> 10/22/2021 Certificate Number
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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 **OGRID:** 4323 **Date:** 04 / 29 / 22

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
KNOB CREEK 17 20 FED COM 33 1H	<i>Pending</i>	UL:O, Sec 8, T26S-R27E	211' FSL, 2574' FEL	1635 BBL/D	5841 MCF/D	2089 BBL/D
KNOB CREEK 17 20 FED COM 33 2H	<i>Pending</i>	UL:O, Sec 8, T26S-R27E	186' FSL, 2575' FEL	1635 BBL/D	5841 MCF/D	2089 BBL/D
KNOB CREEK 17 20 FED COM 33 3H	<i>Pending</i>	UL:O, Sec 8, T26S-R27E	161' FSL, 2575' FEL	1635 BBL/D	5841 MCF/D	2089 BBL/D
KNOB CREEK 17 20 FED COM 33 4H	<i>Pending</i>	UL:O, Sec 8, T26S-R27E	136' FSL, 2576' FEL	1635 BBL/D	5841 MCF/D	2089 BBL/D
KNOB CREEK 17 20 FED COM 33 5H	<i>Pending</i>	UL:O, Sec 8, T26S-R27E	111' FSL, 2576' FEL	1635 BBL/D	5841 MCF/D	2089 BBL/D

IV. Central Delivery Point Name: Hayhurst NM CTB 9 [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
KNOB CREEK 17 20 FED COM 33 1H	<i>Pending</i>	April 2024	N/A	N/A	N/A	N/A
KNOB CREEK 17 20 FED COM 33 2H	<i>Pending</i>	April 2024	N/A	N/A	N/A	N/A
KNOB CREEK 17 20 FED COM 33 3H	<i>Pending</i>	April 2024	N/A	N/A	N/A	N/A
KNOB CREEK 17 20 FED COM 33 4H	<i>Pending</i>	April 2024	N/A	N/A	N/A	N/A

KNOB CREEK 17 20 FED COM 33 5H	Pending	April 2024	N/A	N/A	N/A	N/A
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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>Carol Adler</i>
Printed Name: Carol Adler
Title: Sr. regulatory Affairs Coordinator
E-mail Address: caroladler@chevron.com
Date: 8/3/2022
Phone: (432) 687-7148
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
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.



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

Drilling Plan Data Report

04/15/2024

APD ID: 10400087426

Submission Date: 08/17/2022

Highlighted data
reflects the most
recent changes

Operator Name: CHEVRON USA INCORPORATED

Well Name: KNOB CREEK 17 20 FED COM 33

Well Number: 4H

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 Formation
13245859	SALADO	1111	28	28	ANHYDRITE, SALT	NONE	N
13245860	CASTILE	673	438	438	ANHYDRITE, SALT	NONE	N
13245877	LAMAR	-990	2101	2132	LIMESTONE, SHALE	NONE	N
13245861	BELL CANYON	-1027	2138	2171	LIMESTONE, SANDSTONE	NONE	N
13245863	CHERRY CANYON	-1858	2969	3045	LIMESTONE, SANDSTONE, SILTSTONE	NONE	N
13245864	BRUSHY CANYON	-2958	4069	4201	LIMESTONE, SANDSTONE, SHALE	NONE	N
13245865	BONE SPRING LIME	-4586	5697	5879	SHALE, SILTSTONE	NONE	N
13245875	AVALON SAND	-4737	5848	6421	SHALE	NONE	N
13245867	BONE SPRING 1ST	-5523	6634	7056	SANDSTONE, SHALE	NONE	N
13245868	BONE SPRING 2ND	-5803	6914	7099	SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 7460

Equipment: Chevron respectfully request to vary 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 full BOP test will be completed prior to drilling the production lateral sections unless the BOP connection was not broken prior to drilling that hole section (example: drilling straight from production into production liner hole section). A break test will only be performed on operations where BLM documentation states a 5M or less BOP can be utilized.

Requesting Variance? YES

Released to Imaging: 4/30/2024 2:28:59 PM

Variance request: Chevron respectfully requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor on surface casing. BOPF will be nipped down and tested after.

Operator Name: CHEVRON USA INCORPORATED

Well Name: KNOB CREEK 17 20 FED COM 33Well Number: 4H

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.

Testing Procedure: The stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, production, and production liner will take place. A full BOP test will be performed per hole section, unless approval from BLM is received otherwise (see variance request). Flex choke hose will be used for all wells on the pad (see attached specs and variance). BOP test pressures and other documented tests may be recorded and documented via utilization of the IPT 'Suretec' Digital BOP Test Method in lieu of the standard test chart. In the event the IPT system is unavailable, the standard test chart will be used.

Choke Diagram Attachment:

BLM_5M_Choke_Manifold_Diagram_20220816140644.pdf

BOP Diagram Attachment:

- NM_Slim_Hole_Wellhead_6650_psi_UH_S_20220816140914.pdf
- BLM_5M_Annular_10M_Rams_Stackup_and_Test_Plan_20220816140958.pdf
- BLM_Choke_Hose_Test_Specs_and_Pressure_Test_Continental_20220816141011.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	17.5	13.375	NEW	API	N	0	450	0	450	3240	2790	450	J-55	54.5	BUTT	5.43	4.37	BUOY	37.06	BUOY	34.78
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2112	0	2081		1159	2112	L-80	40	LT&C	3.26	3.05	BUOY	11.38	BUOY	11
3	INTERMEDIATE	8.75	7.0	NEW	API	N	0	7072	0	6887		-3647	7072	OTHER	29	OTHER - BLUE	2.51	5.53	BUOY	4.65	BUOY	4.65
4	PRODUCTION	6.125	5.0	NEW	API	N	6872	7522	6687	7287	-3447	-4047	650	P-110	18	OTHER - W513	2.11	5.27	BUOY	2.81	BUOY	4.42
5	PRODUCTION	6.125	4.5	NEW	API	N	7522	18504	7287	7401	-4047	-4161	10982	P-110	11.6	OTHER - W521	2.11	5.27	BUOY	2.81	BUOY	4.42

Casing Attachments

Operator Name: CHEVRON USA INCORPORATED

Well Name: KNOB CREEK 17 20 FED COM 33

Well Number: 4H

Casing Attachments

Casing ID: 1StringSURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

13.375_casing_spec_sheet_20220816141153.pdf

Casing ID: 2StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

9.625_40.0lb_L80IC_BTC_20191219114627.pdf

Casing ID: 3StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

7in_Blue_vs_BlueSD_20220816141438.pdf

Operator Name: CHEVRON USA INCORPORATED

Well Name: KNOB CREEK 17 20 FED COM 33Well Number: 4H

Casing Attachments

Casing ID: 4StringPRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5in_Tenaris_Collapse_14840_20220816141615.pdf

Casing ID: 5StringPRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

4.5_W521_Spec_Sheet_20220816141747.pdf

Section 4 - Cement

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		NONE	NONE
SURFACE	Tail		0	450	240	1.63	13.6	391	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
INTERMEDIATE	Lead		0	1112	202	2.29	11.5	463	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
INTERMEDIATE	Tail		1112	2112	263	1.63	12.6	429	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
INTERMEDIATE	Lead		0	6072	306	3.52	10.5	1079	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier

Operator Name: CHEVRON USA INCORPORATED**Well Name:** KNOB CREEK 17 20 FED COM 33**Well Number:** 4H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		6072	7072	124	1.52	12.6	188	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		6872	1850 4	901	1.52	12.6	1369	25	CLASS H	Extender, Antifoam, Retarder, Viscosifier

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: A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate. If an open reserve pit is not approved by OCD, a closed system will be used consisting of above ground steel tanks and 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. If an open reserve pit is in place, pit construction, operation, and closure will follow all applicable rules and regulation. 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. And transporting of E&P waste will follow EPA regulations and accompanying manifests.

Describe the mud monitoring system utilized: A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH. 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.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	450	SPUD MUD	8.3	8.9							Viscosity: 26-36 Filtrate: N/C
450	2112	SALT SATURATED	8.3	10							Viscosity: 26-36 Filtrate: 15-25
7072	1850 4	OIL BASED MUD	8.5	9.5							Viscosity: 50-70 Filtrate: 5-10

Operator Name: CHEVRON USA INCORPORATED**Well Name:** KNOB CREEK 17 20 FED COM 33**Well Number:** 4H

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
2112	7072	OTHER : WATER BASED MUD/BRINE	8.5	9.5							Due to wellbore stability, the mud program may exceed the MW weight window needed to maintain overburden of pore pressure.
											Viscosity: 26-36 Filtrate: 15-25

Section 6 - Test, Logging, Coring

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

- a. Production tests are not planned.
- b. Logs run include: Gamma Ray Log, Directional Survey

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

GAMMA RAY LOG,MUD LOG/GEOLOGIC LITHOLOGY LOG,DIRECTIONAL SURVEY,

Coring operation description for the well:

Coring Operations are not planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3685

Anticipated Surface Pressure: 2043

Anticipated Bottom Hole Temperature(F): 130

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

Describe:

Pressure ramp begins in the bottom of the Third Bone Spring formation

Contingency Plans geohazards description:

Hydrogen sulfide gas is not anticipated: However the H2S Contingency plan is attached with this APD in the event that H2S is encountered

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

H2S_Contingency_Plan_20220816142751.pdf

Operator Name: CHEVRON USA INCORPORATED

Well Name: KNOB CREEK 17 20 FED COM 33

Well Number: 4H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

CUSA_Spudder_Rig_Data_20220816143127.pdf

Rig_Layout_20220816143138.pdf

HHNM_P33_Gas_Management_Plan___NMOCD_20220816143223.pdf

Operational_Best_Management_Practices_V2_20220816143240.pdf

DefPlan100ft_KnobCreek1720FEDCOM334H_R0_20220816143323.pdf

9P___KNOB_CREEK_17_20_FED_COM_33_4H_20231018112814.pdf

Other proposed operations facets description:

- a. Batch drilling will be employed whereby the drilling rig may drill a specific hole section on all wells prior to moving to the next hole section.
- b. Shallow rig may be utilized to drill surface or intermediate sections. The production section will not be drilled by the shallow rig.
- c. Wait on cement duration for surface and intermediate string(s) will be based on time for tail slurry to develop 500 psi compressive strength and will follow rules as laid out in Onshore Order 2

Other proposed operations facets attachment:

Other Variance attachment:



Knob Creek 17 20 FED COM 33 4H R0 mdv 16Nov21 Proposal Geodetic Report (Def Plan)



Report Date: November 16, 2021 - 08:01 PM
Client: Chevron
Field: NM, Eddy County (NAD 27 EZ)
Structure / Slot: Chevron HNM Pkg 33 Knob Creek Pad / 4H
Well: Knob Creek 17 20 FED COM 33 4H
Borehole: Knob Creek 17 20 FED COM 33 4H
UWI / API#: Unknown / Unknown
Survey Name: Knob Creek 17 20 FED COM 33 4H R0 mdv 16Nov21
Survey Date: November 16, 2021
Tort / AHD / DDI / ERD Ratio: 126.462 ° / 12461.747 ft / 6.592 / 1.671
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 3' 0.04424", W 104° 12' 41.64614"
Location Grid N/E Y/X: N 381941.000 ftUS, E 537726.000 ftUS
CRS Grid Convergence Angle: 0.0646 °
Grid Scale Factor: 0.99991072
Version / Patch: 2.10.826.8

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.530 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3268.000 ft above MSL
Seabed / Ground Elevation: 3240.000 ft above MSL
Magnetic Declination: 6.939 °
Total Gravity Field Strength: 998.4316mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47533.273 nT
Magnetic Dip Angle: 59.608 °
Declination Date: November 16, 2021
Magnetic Declination Model: HDGM 2021
North Reference: Grid North
Grid Convergence Used: 0.0646 °
Total Corr Mag North->Grid North: 6.8740 °
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	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
	100.00	0.00	75.61	100.00	0.00	0.00	0.00	0.00	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
	200.00	0.00	75.61	200.00	0.00	0.00	0.00	0.00	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
	300.00	0.00	75.61	300.00	0.00	0.00	0.00	0.00	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
	400.00	0.00	75.61	400.00	0.00	0.00	0.00	0.00	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
Castile (CSTL)	437.76	0.00	75.61	437.76	0.00	0.00	0.00	0.00	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
	500.00	0.00	75.61	500.00	0.00	0.00	0.00	0.00	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
	600.00	0.00	75.61	600.00	0.00	0.00	0.00	0.00	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
Build 1.5"/100ft	700.00	0.00	75.61	700.00	0.00	0.00	0.00	0.00	381941.00	537726.00	N 32 3 0.04 W 104 12 41.65	
	800.00	1.50	75.61	799.99	-0.31	0.33	1.27	1.50	381941.33	537727.27	N 32 3 0.05 W 104 12 41.63	
	900.00	3.00	75.61	899.91	-1.26	1.30	5.07	1.50	381942.30	537731.07	N 32 3 0.06 W 104 12 41.59	
	1000.00	4.50	75.61	999.69	-2.83	2.93	11.41	1.50	381943.93	537737.40	N 32 3 0.07 W 104 12 41.51	
	1100.00	6.00	75.61	1099.27	-5.03	5.20	20.27	1.50	381946.20	537746.27	N 32 3 0.10 W 104 12 41.41	
	1200.00	7.50	75.61	1198.57	-7.86	8.12	31.65	1.50	381949.12	537757.65	N 32 3 0.12 W 104 12 41.28	
	1300.00	9.00	75.61	1297.54	-11.31	11.69	45.55	1.50	381952.69	537771.55	N 32 3 0.16 W 104 12 41.12	
	1400.00	10.50	75.61	1396.09	-15.39	15.90	61.95	1.50	381956.90	537787.95	N 32 3 0.20 W 104 12 40.93	
	1500.00	12.00	75.61	1494.16	-20.08	20.75	80.85	1.50	381961.74	537806.84	N 32 3 0.25 W 104 12 40.71	
	1600.00	13.50	75.61	1591.70	-25.39	26.23	102.23	1.50	381967.23	537828.22	N 32 3 0.30 W 104 12 40.46	
	1700.00	15.00	75.61	1688.62	-31.31	32.35	126.07	1.50	381973.35	537852.06	N 32 3 0.36 W 104 12 40.18	
	1800.00	16.50	75.61	1784.86	-37.84	39.10	152.36	1.50	381980.09	537878.35	N 32 3 0.43 W 104 12 39.88	
	1900.00	18.00	75.61	1880.36	-44.98	46.47	181.08	1.50	381987.46	537907.07	N 32 3 0.50 W 104 12 39.54	
Hold	1900.24	18.00	75.61	1880.59	-45.00	46.48	181.16	1.50	381987.48	537907.14	N 32 3 0.50 W 104 12 39.54	
	2000.00	18.00	75.61	1975.46	-52.42	54.15	211.02	0.00	381995.14	537937.00	N 32 3 0.58 W 104 12 39.19	
	2100.00	18.00	75.61	2070.57	-59.85	61.83	240.96	0.00	382002.82	537966.94	N 32 3 0.65 W 104 12 38.85	
Lamar (LMAR)	2132.08	18.00	75.61	2101.07	-62.24	64.29	250.56	0.00	382005.29	537976.54	N 32 3 0.68 W 104 12 38.73	
Bell Canyon (BLCN)	2171.39	18.00	75.61	2138.46	-65.16	67.31	262.33	0.00	382008.31	537988.31	N 32 3 0.71 W 104 12 38.60	
	2200.00	18.00	75.61	2165.67	-67.29	69.51	270.90	0.00	382010.51	537996.87	N 32 3 0.73 W 104 12 38.50	
	2300.00	18.00	75.61	2260.77	-74.72	77.19	300.83	0.00	382018.19	538026.81	N 32 3 0.80 W 104 12 38.15	
	2400.00	18.00	75.61	2355.88	-82.16	84.88	330.77	0.00	382025.87	538056.74	N 32 3 0.88 W 104 12 37.80	
	2500.00	18.00	75.61	2450.98	-89.60	92.56	360.71	0.00	382033.55	538086.68	N 32 3 0.96 W 104 12 37.45	
	2600.00	18.00	75.61	2546.08	-97.03	100.24	390.65	0.00	382041.23	538116.61	N 32 3 1.03 W 104 12 37.11	
	2700.00	18.00	75.61	2641.19	-104.47	107.92	420.59	0.00	382048.91	538146.55	N 32 3 1.11 W 104 12 36.76	
	2800.00	18.00	75.61	2736.29	-111.90	115.60	450.52	0.00	382056.59	538176.48	N 32 3 1.18 W 104 12 36.41	
	2900.00	18.00	75.61	2831.40	-119.34	123.29	480.46	0.00	382064.28	538206.42	N 32 3 1.26 W 104 12 36.06	
	3000.00	18.00	75.61	2926.50	-126.78	130.97	510.40	0.00	382071.96	538236.35	N 32 3 1.33 W 104 12 35.71	
Cherry Canyon (CRCN)	3044.50	18.00	75.61	2968.82	-130.09	134.39	523.72	0.00	382075.37	538249.67	N 32 3 1.37 W 104 12 35.56	
	3100.00	18.00	75.61	3021.60	-134.21	138.65	540.34	0.00	382079.64	538266.29	N 32 3 1.41 W 104 12 35.37	
	3200.00	18.00	75.61	3116.71	-141.65	146.33	570.28	0.00	382087.32	538296.22	N 32 3 1.49 W 104 12 35.02	
	3300.00	18.00	75.61	3211.81	-149.09	154.01	600.21	0.00	382095.00	538326.16	N 32 3 1.56 W 104 12 34.67	
	3400.00	18.00	75.61	3306.91	-156.52	161.70	630.15	0.00	382102.68	538356.09	N 32 3 1.64 W 104 12 34.32	
	3500.00	18.00	75.61	3402.02	-163.96	169.38	660.09	0.00	382110.36	538386.03	N 32 3 1.71 W 104 12 33.97	
	3600.00	18.00	75.61	3497.12	-171.39	177.06	690.03	0.00	382118.04	538415.96	N 32 3 1.79 W 104 12 33.63	
	3700.00	18.00	75.61	3592.22	-178.83	184.74	719.96	0.00	382125.73	538445.90	N 32 3 1.86 W 104 12 33.28	
	3800.00	18.00	75.61	3687.33	-186.27	192.42	749.90	0.00	382133.41	538475.83	N 32 3 1.94 W 104 12 32.93	
	3900.00	18.00	75.61	3782.43	-193.70	200.11	779.84	0.00	382141.09	538505.77	N 32 3 2.02 W 104 12 32.58	
	4000.00	18.00	75.61	3877.54	-201.14	207.79	809.78	0.00	382148.77	538535.70	N 32 3 2.09 W 104 12 32.24	
	4100.00	18.00	75.61	3972.64	-208.58	215.47	839.72	0.00	382156.45	538565.64	N 32 3 2.17 W 104 12 31.89	
	4200.00	18.00	75.61	4067.74	-216.01	223.15	869.65	0.00	382164.13	538595.57	N 32 3 2.24 W 104 12 31.54	
Brushy Canyon (BCN)	4200.86	18.00	75.61	4068.56	-216.08	223.22	869.91	0.00	382164.20	538595.83	N 32 3 2.24 W 104 12 31.54	
	4300.00	18.00	75.61	4162.85	-223.45	230.83	899.59	0.00	382171.81	538625.51	N 32 3 2.32 W 104 12 31.19	
	4400.00	18.00	75.61	4257.95	-230.88	238.52	929.53	0.00	382179.49	538655.44	N 32 3 2.39 W 104 12 30.84	
Drop .75"/100ft	4473.08	18.00	75.61	4327.46	-236.32	244.13	951.41	0.00	382185.11	538677.32	N 32 3 2.45 W 104 12 30.59	
	4500.00	17.80	75.61	4353.07	-238.31	246.19	959.42	0.75	382187.16	538685.34	N 32 3 2.47 W 104 12 30.50	
	4600.00	17.05	75.61	4448.48	-245.51	253.63	988.43	0.75	382194.61	538714.34	N 32 3 2.54 W 104 12 30.16	
	4700.00	16.30	75.61	4544.27	-252.42	260.76	1016.23	0.75	382201.74	538742.13	N 32 3 2.61 W 104 12 29.84	
	4800.00	15.55	75.61	4640.43	-259.02	267.58	1042.81	0.75	382208.56	538768.71	N 32 3 2.68 W 104 12 29.53	
	4900.00	14.80	75.61	4736.94	-265.32	274.09	1068.17	0.75	382215.07	538794.07	N 32 3 2.74 W 104 12 29.23	
	5000.00	14.05	75.61	4833.79	-271.31	280.28	1092.30	0.75	382221.26	538818.20	N 32 3 2.81 W 104 12 28.95	
	5100.00	13.30	75.61	4930.95	-277.00	286.16	1115.20	0.75	382227.13	538841.10	N 32 3 2.86 W 104 12 28.69	
	5200.00	12.55	75.61	5028.42	-282.38	291.72	1136.87	0.75	382232.69	538862.76	N 32 3 2.92 W 104 12 28.43	
	5300.00	11.80	75.61	5126.17	-287.46	296.96	1157.30	0.75	382237.94	538883.19	N 32 3 2.97 W 104 12 28.20	
	5400.00	11.05	75.61	5224.19	-292.23	301.89	1176.49	0.75	382242.86	538902.38	N 32 3 3.02 W 104 12 27.97	
	5500.00	10.30	75.61	5322.45	-296.68	306.49	1194.43	0.75	382247.46	538920.32	N 32 3 3.06 W 104 12 27.76	
	5600.00	9.55	75.61	5420.96	-300.83	310.78	1211.13	0.75	382251.75	538937.02	N 32 3 3.11 W 104 12 27.57	
	5700.00	8.80	75.61	5519.67	-304.67	314.74	1226.58	0.75	382255.71	538952.47	N 32 3 3.14 W 104 12 27.39	
	5800.00	8.05	75.61	5618.59	-308.19	318.38	1240.77	0.75	382259.35	538966.66	N 32 3 3.18 W 104 12 27.23	
Bone Spring Lime (BSGL)	5879.47	7.46	75.61	5697.34	-310.77	321.05	1251.16	0.75	382262.02	538977.04	N 32 3 3.21 W 104 12 27.11	
	5900.00	7.30	75.61	5717.70	-311.41	321.70	1253.71	0.75	382262.67	538979.60	N 32 3 3.21 W 104 12 27.08	
	6000.00	6.55	75.61	5816.97	-314.31	324.70	1265.39	0.75	382265.67	538991.28	N 32 3 3.24 W 104 12 26.94	
Avalon Upper (AVU)	6031.08	6.32	75.61	5847.85	-315.15	325.57	1268.77	0.75	382266.54	538994.65	N 32 3 3.25 W 104 12 26.90	
	6100.00	5.80	75.61	5916.39	-316.90	327.37	1275.82	0.75	382268.34	539001.70	N 32 3 3.27 W 104 12 26.82	
	6200.00	5.05	75.61	6015.94	-319.17	329.72	1284.98	0.75	382270.69	539010.86	N 32 3 3.29 W 104 12 26.71	
	6300.00	4.30	75.61	6115.60	-321.13	331.75	1292.87	0.75	382272.72	539018.76	N 32 3 3.31 W 104 12 26.62	
	644											

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Hold Vertical	6873.57	0.00	75.61	6688.63	-326.31	337.10	1313.72	0.75	382278.07	539039.60	N 32 3 3.37	W 104 12 26.38
	6900.00	0.00	75.61	6715.06	-326.31	337.10	1313.72	0.00	382278.07	539039.60	N 32 3 3.37	W 104 12 26.38
	7000.00	0.00	75.61	6815.06	-326.31	337.10	1313.72	0.00	382278.07	539039.60	N 32 3 3.37	W 104 12 26.38
	7055.93	0.00	75.61	6870.99	-326.31	337.10	1313.72	0.00	382278.07	539039.60	N 32 3 3.37	W 104 12 26.38
	7071.57	0.00	75.61	6886.63	-326.31	337.10	1313.72	0.00	382278.07	539039.60	N 32 3 3.37	W 104 12 26.38
	7100.00	2.84	179.46	6915.05	-325.61	336.39	1313.73	10.00	382277.36	539039.61	N 32 3 3.36	W 104 12 26.38
	7200.00	12.84	179.46	7013.99	-311.98	322.77	1313.85	10.00	382263.74	539039.73	N 32 3 3.22	W 104 12 26.38
	7300.00	22.84	179.46	7109.06	-281.37	292.16	1314.14	10.00	382233.14	539040.02	N 32 3 2.92	W 104 12 26.37
	7400.00	32.84	179.46	7197.37	-234.73	245.52	1314.58	10.00	382186.50	539040.46	N 32 3 2.46	W 104 12 26.37
	7500.00	42.84	179.46	7276.24	-173.46	184.25	1315.15	10.00	382125.23	539041.03	N 32 3 1.85	W 104 12 26.36
First Bone Spring Lower (FBL)	7600.00	52.84	179.46	7343.27	-99.42	110.22	1315.85	10.00	382051.21	539041.73	N 32 3 1.12	W 104 12 26.36
	7700.00	62.84	179.46	7396.43	-14.87	25.67	1316.64	10.00	381966.66	539042.52	N 32 3 0.28	W 104 12 26.35
	7800.00	72.84	179.46	7434.09	77.63	-66.83	1317.51	10.00	381874.18	539043.39	N 32 2 59.37	W 104 12 26.34
	7900.00	82.84	179.46	7455.12	175.27	-164.46	1318.42	10.00	381776.56	539044.30	N 32 2 58.40	W 104 12 26.33
	7974.74	90.32	179.46	7459.58	249.82	-239.01	1319.12	10.00	381702.01	539045.00	N 32 2 57.66	W 104 12 26.32
	8000.00	90.32	179.46	7459.44	275.08	-264.27	1319.36	0.00	381676.76	539045.24	N 32 2 57.41	W 104 12 26.32
	8100.00	90.32	179.46	7458.88	375.08	-364.26	1320.30	0.00	381576.77	539046.18	N 32 2 56.42	W 104 12 26.31
	8200.00	90.32	179.46	7458.33	475.08	-464.25	1321.23	0.00	381476.79	539047.11	N 32 2 55.44	W 104 12 26.30
	8300.00	90.32	179.46	7457.78	575.07	-564.25	1322.17	0.00	381376.80	539048.05	N 32 2 54.45	W 104 12 26.29
	8400.00	90.32	179.46	7457.22	675.07	-664.24	1323.11	0.00	381276.82	539048.99	N 32 2 53.46	W 104 12 26.28
Build 10"/100ft	8500.00	90.32	179.46	7456.67	775.07	-764.24	1324.05	0.00	381176.83	539049.93	N 32 2 52.47	W 104 12 26.27
	8600.00	90.32	179.46	7456.11	875.07	-864.23	1324.98	0.00	381076.85	539050.86	N 32 2 51.48	W 104 12 26.26
	8700.00	90.32	179.46	7455.56	975.07	-964.22	1325.92	0.00	380976.86	539051.80	N 32 2 50.49	W 104 12 26.25
	8800.00	90.32	179.46	7455.00	1075.07	-1064.22	1326.86	0.00	380876.88	539052.74	N 32 2 49.50	W 104 12 26.24
	8900.00	90.32	179.46	7454.45	1175.06	-1164.21	1327.80	0.00	380776.89	539053.68	N 32 2 48.51	W 104 12 26.24
	9000.00	90.32	179.46	7453.89	1275.06	-1264.21	1328.73	0.00	380676.91	539054.61	N 32 2 47.52	W 104 12 26.23
	9100.00	90.32	179.46	7453.34	1375.06	-1364.20	1329.67	0.00	380576.92	539055.55	N 32 2 46.53	W 104 12 26.22
	9200.00	90.32	179.46	7452.79	1475.06	-1464.19	1330.61	0.00	380476.94	539056.49	N 32 2 45.54	W 104 12 26.21
	9300.00	90.32	179.46	7452.23	1575.06	-1564.19	1331.55	0.00	380376.95	539057.42	N 32 2 44.55	W 104 12 26.20
	9400.00	90.32	179.46	7451.68	1675.06	-1664.18	1332.48	0.00	380276.97	539058.36	N 32 2 43.56	W 104 12 26.19
F.L. Cross Landline Point	9500.00	90.32	179.46	7451.12	1775.06	-1764.18	1333.42	0.00	380176.98	539059.30	N 32 2 42.57	W 104 12 26.18
	9600.00	90.32	179.46	7450.57	1875.05	-1864.17	1334.36	0.00	380077.00	539060.24	N 32 2 41.58	W 104 12 26.17
	9700.00	90.32	179.46	7450.01	1975.05	-1964.16	1335.30	0.00	379977.01	539061.17	N 32 2 40.59	W 104 12 26.16
	9800.00	90.32	179.46	7449.46	2075.05	-2064.16	1336.23	0.00	379877.03	539062.11	N 32 2 39.60	W 104 12 26.15
	9900.00	90.32	179.46	7448.90	2175.05	-2164.15	1337.17	0.00	379777.04	539063.05	N 32 2 38.61	W 104 12 26.14
	10000.00	90.32	179.46	7448.35	2275.05	-2264.15	1338.11	0.00	379677.06	539063.99	N 32 2 37.62	W 104 12 26.13
	10100.00	90.32	179.46	7447.80	2375.05	-2364.14	1339.05	0.00	379577.07	539064.92	N 32 2 36.63	W 104 12 26.12
	10200.00	90.32	179.46	7447.24	2475.04	-2464.14	1339.98	0.00	379477.09	539065.86	N 32 2 35.64	W 104 12 26.11
	10300.00	90.32	179.46	7446.69	2575.04	-2564.13	1340.92	0.00	379377.10	539066.80	N 32 2 34.65	W 104 12 26.10
	10400.00	90.32	179.46	7446.13	2675.04	-2664.12	1341.86	0.00	379277.12	539067.74	N 32 2 33.67	W 104 12 26.09
MP, Turn 2"/100ft	10500.00	90.32	179.46	7445.58	2775.04	-2764.12	1342.80	0.00	379177.14	539068.67	N 32 2 32.68	W 104 12 26.08
	10600.00	90.32	179.46	7445.02	2875.04	-2864.11	1343.73	0.00	379077.15	539069.61	N 32 2 31.69	W 104 12 26.07
	10700.00	90.32	179.46	7444.47	2975.04	-2964.11	1344.67	0.00	378977.17	539070.55	N 32 2 30.70	W 104 12 26.06
	10800.00	90.32	179.46	7443.91	3075.03	-3064.10	1345.61	0.00	378877.18	539071.49	N 32 2 29.71	W 104 12 26.05
	10900.00	90.32	179.46	7443.36	3175.03	-3164.09	1346.55	0.00	378777.20	539072.42	N 32 2 28.72	W 104 12 26.04
	11000.00	90.32	179.46	7442.81	3275.03	-3264.09	1347.48	0.00	378677.21	539073.36	N 32 2 27.73	W 104 12 26.03
	11100.00	90.32	179.46	7442.25	3375.03	-3364.08	1348.42	0.00	378577.23	539074.30	N 32 2 26.74	W 104 12 26.03
	11200.00	90.32	179.46	7441.70	3475.03	-3464.08	1349.36	0.00	378477.24	539075.24	N 32 2 25.75	W 104 12 26.02
	11300.00	90.32	179.46	7441.14	3575.03	-3564.07	1350.30	0.00	378377.26	539076.17	N 32 2 24.76	W 104 12 26.01
	11400.00	90.32	179.46	7440.59	3675.02	-3664.06	1351.23	0.00	378277.27	539077.11	N 32 2 23.77	W 104 12 26.00
Hold to TD	11500.00	90.32	179.46	7440.03	3775.02	-3764.06	1352.17	0.00	378177.29	539078.05	N 32 2 22.78	W 104 12 25.99
	11600.00	90.32	179.46	7439.48	3875.02	-3864.05	1353.11	0.00	378077.30	539078.99	N 32 2 21.79	W 104 12 25.98
	11700.00	90.32	179.46	7438.93	3975.02	-3964.05	1354.05	0.00	377977.32	539079.92	N 32 2 20.80	W 104 12 25.97
	11800.00	90.32	179.46	7438.37	4075.02	-4064.04	1354.98	0.00	377877.33	539080.86	N 32 2 19.81	W 104 12 25.96
	11900.00	90.32	179.46	7437.82	4175.02	-4164.03	1355.92	0.00	377777.35	539081.80	N 32 2 18.82	W 104 12 25.95
	12000.00	90.32	179.46	7437.26	4275.02	-4264.03	1356.86	0.00	377677.36	539082.74	N 32 2 17.83	W 104 12 25.94
	12100.00	90.32	179.46	7436.71	4375.01	-4364.02	1357.80	0.00	377577.38	539083.67	N 32 2 16.84	W 104 12 25.93
	12200.00	90.32	179.46	7436.15	4475.01	-4464.02	1358.74	0.00	377477.39	539084.61	N 32 2 15.85	W 104 12 25.92
	12300.00	90.32	179.46	7435.60	4575.01	-4564.01	1359.67	0.00	377377.41	539085.55	N 32 2 14.86	W 104 12 25.91
	12400.00	90.32	179.46	7435.04	4675.01	-4664.00	1360.61	0.00	377277.42	539086.49	N 32 2 13.87	W 104 12 25.90
MP, Turn 2"/100ft	12500.00	90.32	179.46	7434.49	4775.01	-4764.00	1361.55	0.00	377177.44	539087.42	N 32 2 12.89	W 104 12 25.89
	12600.00	90.32	179.46	7433.94	4875.01	-4863.99	1362.49	0.00	377077.45	539088.36	N 32 2 11.90	W 104 12 25.88
	12700.00	90.32	179.46	7433.38	4975.00	-4963.99	1363.42	0.00	376977.47	539089.30	N 32 2 10.91	W 104 12 25.87
	12800.00	90.32	179.46	7432.83	5075.00	-5063.98	1364.36	0.00	376877.48	539090.24	N 32 2 9.92	W 104 12 25.86
	12900.00	90.32	179.46	7432.27	5175.00	-5163.97	1365.30	0.00	376777.50	539091.17	N 32 2 8.93	W 104 12 25.85
	13000.00	90.32	179.46	7431.72	5275.00	-5263.97	1366.24	0.00	376677.51	539092.11	N 32 2 7.94	W 104 12 25.84
	13100.00	90.32	179.46	7431.16	5375.00	-5363.96	1367.17	0.00	376577.53	539093.05	N 32 2 6.95	W 104 12 25.83
	13200.00	90.32	179.46	7430.61	5475.00	-5463.96	1368.11	0.00	376477.54	539093.99	N 32 2 5.96	W 104 12 25.83
	13201.54	90.32	179.46	7430.06	5574.99	-5563.95	1368.12	0.00	376476.00	539094.00	N 32 2 5.94	W 104 12 25.83
	13208.41	90.32	179.60	7430.56	5483.41	-5472.37	1368.18	2.00	376469.13	539094.06	N 32 2 5.88	W 104 12 25.82
Hold to TD	13300.00	90.32	179.60	7430.06	5574.99	-5563.95	1368.82	0.00	376377.55	539094.70	N 32 2 4.97	W 104 12 25.82
	13400.00	90.32	179.60	7429.51	5674.99	-5663.95	1369.52	0.00	376277.57	539095.39	N 32 2 3.98	W 104 12 25.81
	13500.00	90.32	179.60	7428.96	5774.99	-5763.95	1370.22	0.00	376177.58	539096.09	N 32 2 2.99	W 104 1

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 ° ' ")
	17000.00	90.32	179.60	7409.69	9274.94	-9263.81	1394.63	0.00	372678.04	539120.51	N 32 1 28.36	W 104 12 25.57
	17100.00	90.32	179.60	7409.14	9374.93	-9363.80	1395.33	0.00	372578.05	539121.20	N 32 1 27.37	W 104 12 25.56
	17200.00	90.32	179.60	7408.59	9474.93	-9463.80	1396.03	0.00	372478.06	539121.90	N 32 1 26.38	W 104 12 25.56
	17300.00	90.32	179.60	7408.04	9574.93	-9563.80	1396.73	0.00	372378.08	539122.60	N 32 1 25.39	W 104 12 25.55
	17400.00	90.32	179.60	7407.49	9674.93	-9663.79	1397.42	0.00	372278.09	539123.30	N 32 1 24.40	W 104 12 25.54
	17500.00	90.32	179.60	7406.94	9774.93	-9763.79	1398.12	0.00	372178.10	539123.99	N 32 1 23.41	W 104 12 25.53
	17600.00	90.32	179.60	7406.39	9874.93	-9863.78	1398.82	0.00	372078.12	539124.69	N 32 1 22.42	W 104 12 25.53
	17700.00	90.32	179.60	7405.83	9974.92	-9963.78	1399.52	0.00	371978.13	539125.39	N 32 1 21.43	W 104 12 25.52
	17800.00	90.32	179.60	7405.28	10074.92	-10063.78	1400.22	0.00	371878.14	539126.09	N 32 1 20.44	W 104 12 25.51
	17900.00	90.32	179.60	7404.73	10174.92	-10163.77	1400.91	0.00	371778.16	539126.78	N 32 1 19.45	W 104 12 25.51
	18000.00	90.32	179.60	7404.18	10274.92	-10263.77	1401.61	0.00	371678.17	539127.48	N 32 1 18.46	W 104 12 25.50
	18100.00	90.32	179.60	7403.63	10374.92	-10363.76	1402.31	0.00	371578.18	539128.18	N 32 1 17.47	W 104 12 25.49
	18200.00	90.32	179.60	7403.08	10474.92	-10463.76	1403.01	0.00	371478.20	539128.88	N 32 1 16.48	W 104 12 25.49
	18300.00	90.32	179.60	7402.53	10574.91	-10563.76	1403.70	0.00	371378.21	539129.58	N 32 1 15.49	W 104 12 25.48
	18400.00	90.32	179.60	7401.98	10674.91	-10663.75	1404.40	0.00	371278.22	539130.27	N 32 1 14.50	W 104 12 25.47
LTP Cross	18429.15	90.32	179.60	7401.82	10704.06	-10692.90	1404.60	0.00	371249.08	539130.48	N 32 1 14.21	W 104 12 25.47
	18500.00	90.32	179.60	7401.43	10774.91	-10763.75	1405.10	0.00	371178.23	539130.97	N 32 1 13.51	W 104 12 25.47
Knob Creek 17 20 FED COM 33 4H BHL	18504.24	90.32	179.60	7401.41	10779.15	-10767.98	1405.13	0.00	371174.00	539131.00	N 32 1 13.47	W 104 12 25.47

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	Knob Creek 17 20 FED COM 33 4H / Knob Creek 17 20 FED COM 33 4H R0 mdv 16Nov21
	1	28.000	18504.235	1/100.000	30.000	30.000		B001Mb_MWD+HRGM	Knob Creek 17 20 FED COM 33 4H / Knob Creek 17 20 FED COM

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CHEVRON USA INCORPORATED
WELL NAME & NO.:	KNOB CREEK 17 20 FED COM 33 4H
SURFACE HOLE FOOTAGE:	136'/S & 2576'/E
BOTTOM HOLE FOOTAGE:	25'/S & 1260'/E
LOCATION:	Section 8, T.26 S., R.27 E., NMP
COUNTY:	Eddy County, New Mexico

COA

H2S	☒ Yes	☐ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☐ Low	☐ Medium	☒ High
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	☐ Both
Wellhead Variance	☐ Diverter		
Other	☐ 4 String	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Pilot Hole	☐ Open Annulus
Cementing	☐ Contingency Cement Squeeze	☐ EchoMeter	☐ Primary Cement Squeeze
Special Requirements	☐ Water Disposal	☒ COM	☐ Unit
Special Requirements	☐ Batch Sundry		
Special Requirements Variance	☒ Break Testing	☐ Offline Cementing	☐ Casing Clearance

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet 43 CFR part 3170 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

Primary Casing Design:

1. The 13-3/8 inch surface casing shall be set at approximately **450 feet** (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be **17 1/2** inch in diameter.

- 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.

Operator is approved to use contingency cementing for the Intermediate and Production section. Operator shall notify the BLM before proceeding with contingency operation.

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.

❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **7** inch intermediate casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

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.

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

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 **13-3/8** inch 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 **43 CFR 3172.6(b)(9)** 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 3170.
- 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.

(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system))

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 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 (575-361-2822 Eddy 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 3170.
- 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)

☒ Eddy County

EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

BLM_NM_CFO_DrillingNotifications@BLM.GOV
(575) 361-2822

☒ Lea County

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
 - 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 **43 CFR part 3170 Subpart 3172** 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 **43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
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 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).
 - 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 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.)
 - c. 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 part 3170 Subpart 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 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 **43 CFR part 3170 Subpart 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.

JS 10/26/2023



H₂S Preparedness and Contingency Plan Summary

Training

MCBU Drilling and Completions H₂S 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 H₂S.

Awareness Level

Employees and visitors to MCBU Drilling and Completions locations that have known concentrations of H₂S, who are not required to perform work in H₂S areas, will be provided with an awareness level of H₂S training prior to entering any H₂S areas. At a minimum, awareness level training will include:

1. Physical and chemical properties of H₂S
2. Health hazards of H₂S
3. Personal protective equipment
4. Information regarding potential sources of H₂S
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 H₂S Training

Employees and contractors required to work in areas that may contain H₂S will be provided with Advanced Level H₂S training prior to initial assignment. In addition to the Awareness Level requirements, Advanced Level H₂S training will include:

1. H₂S safe work practice procedures;
2. Emergency contingency plan procedures;
3. Methods to detect the presence or release of H₂S (e.g., alarms, monitoring equipment), including hands-on training with direct reading and personal monitoring H₂S equipment.
4. Basic overview of respiratory protective equipment suitable for use in H₂S 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 H₂S training;
6. Proficiency examination covering all course material.

Advanced H₂S training courses will be instructed by personnel who have successfully completed an appropriate H₂S train-the-trainer development course (ANSI/ASSE Z390.1-2006) or who possess significant past experience through educational or work-related background.

H₂S Preparedness and Contingency Plan Summary

H₂S Training Certification

All employees and visitors will be issued an H₂S training certification card (or certificate) upon successful completion of the appropriate H₂S training course. Personnel working in an H₂S environment will carry a current H₂S 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.

H₂S 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.

H₂S Detection and Monitoring System

- a) H₂S 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.



H₂S 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



H₂S Preparedness and Contingency Plan Summary

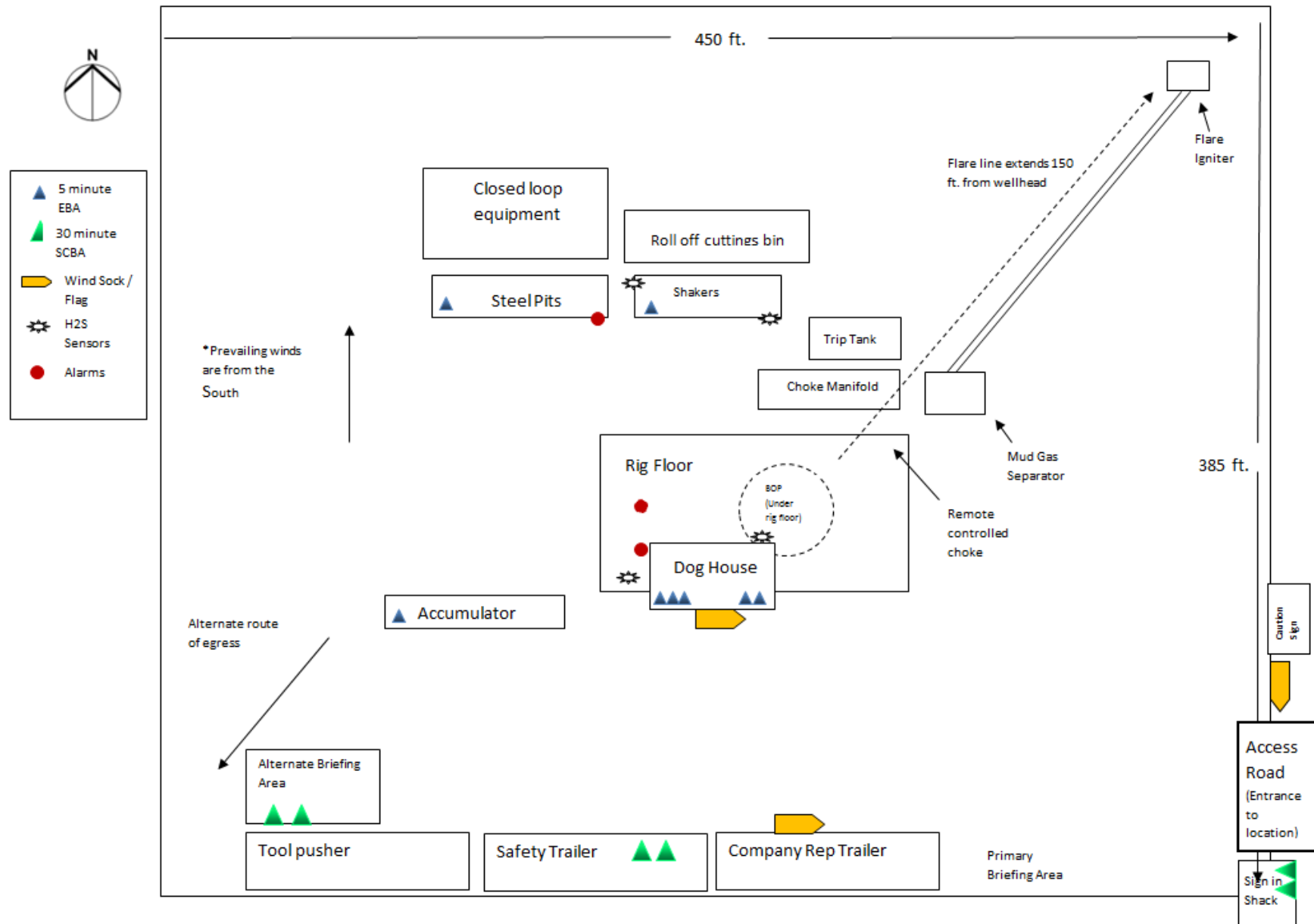
Chevron MCBU D&C Emergency Notifications

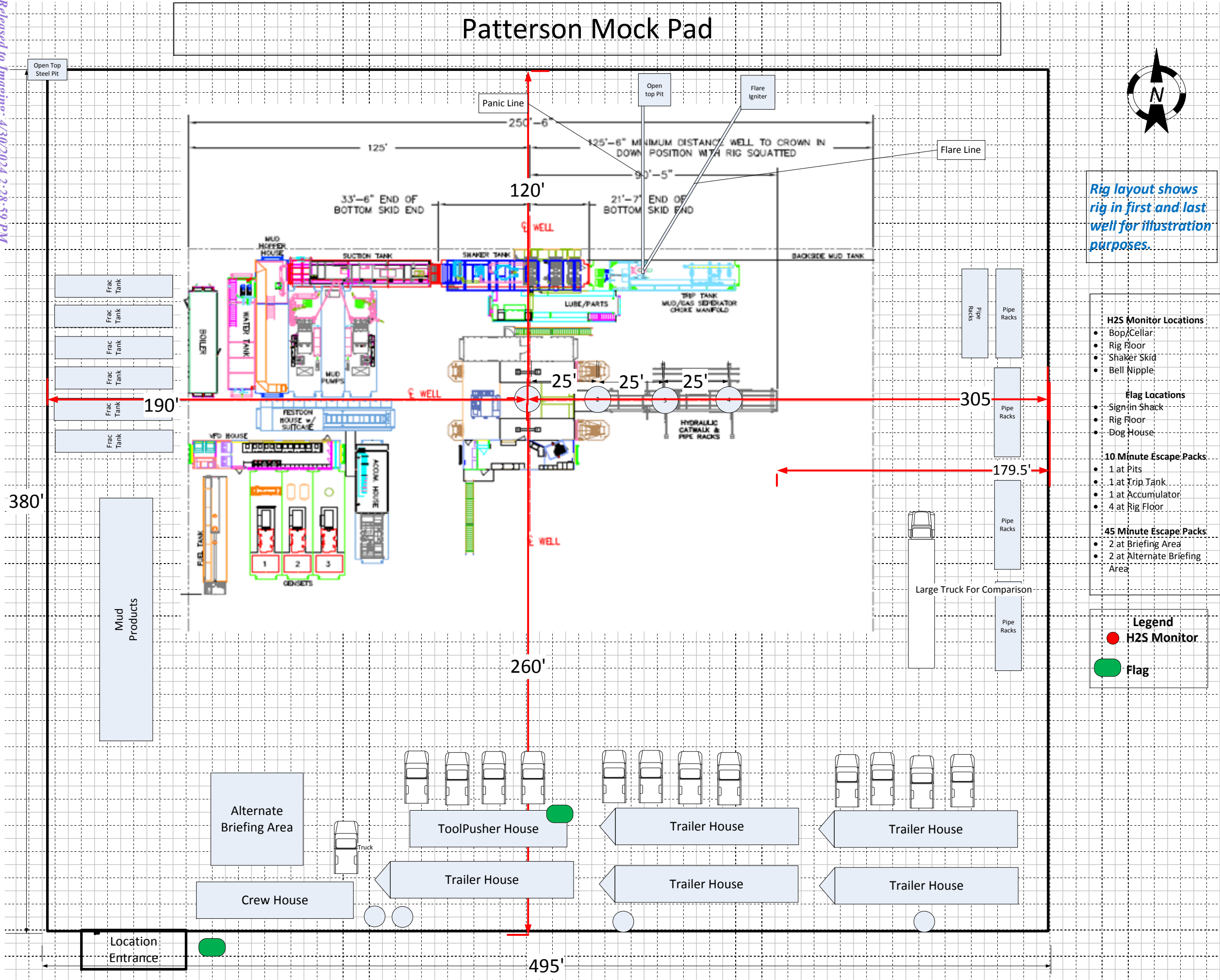
Below are lists of contacts to be used in emergency situations.

	Name	Title	Office Number	Cell Phone
1.	TBD	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		



H₂S 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

04/15/2024

APD ID: 10400087426

Submission Date: 08/17/2022

Highlighted data
reflects the most
recent changes

Operator Name: CHEVRON USA INCORPORATED

Well Name: KNOB CREEK 17 20 FED COM 33

Well Number: 4H

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 Formation
13245859	SALADO	1111	28	28	ANHYDRITE, SALT	NONE	N
13245860	CASTILE	673	438	438	ANHYDRITE, SALT	NONE	N
13245877	LAMAR	-990	2101	2132	LIMESTONE, SHALE	NONE	N
13245861	BELL CANYON	-1027	2138	2171	LIMESTONE, SANDSTONE	NONE	N
13245863	CHERRY CANYON	-1858	2969	3045	LIMESTONE, SANDSTONE, SILTSTONE	NONE	N
13245864	BRUSHY CANYON	-2958	4069	4201	LIMESTONE, SANDSTONE, SHALE	NONE	N
13245865	BONE SPRING LIME	-4586	5697	5879	SHALE, SILTSTONE	NONE	N
13245875	AVALON SAND	-4737	5848	6421	SHALE	NONE	N
13245867	BONE SPRING 1ST	-5523	6634	7056	SANDSTONE, SHALE	NONE	N
13245868	BONE SPRING 2ND	-5803	6914	7099	SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 7460

Equipment: Chevron respectfully request to vary 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 full BOP test will be completed prior to drilling the production lateral sections unless the BOP connection was not broken prior to drilling that hole section (example: drilling straight from production into production liner hole section). A break test will only be performed on operations where BLM documentation states a 5M or less BOP can be utilized.

Requesting Variance? YES

Released to Imaging: 4/30/2024 2:28:59 PM

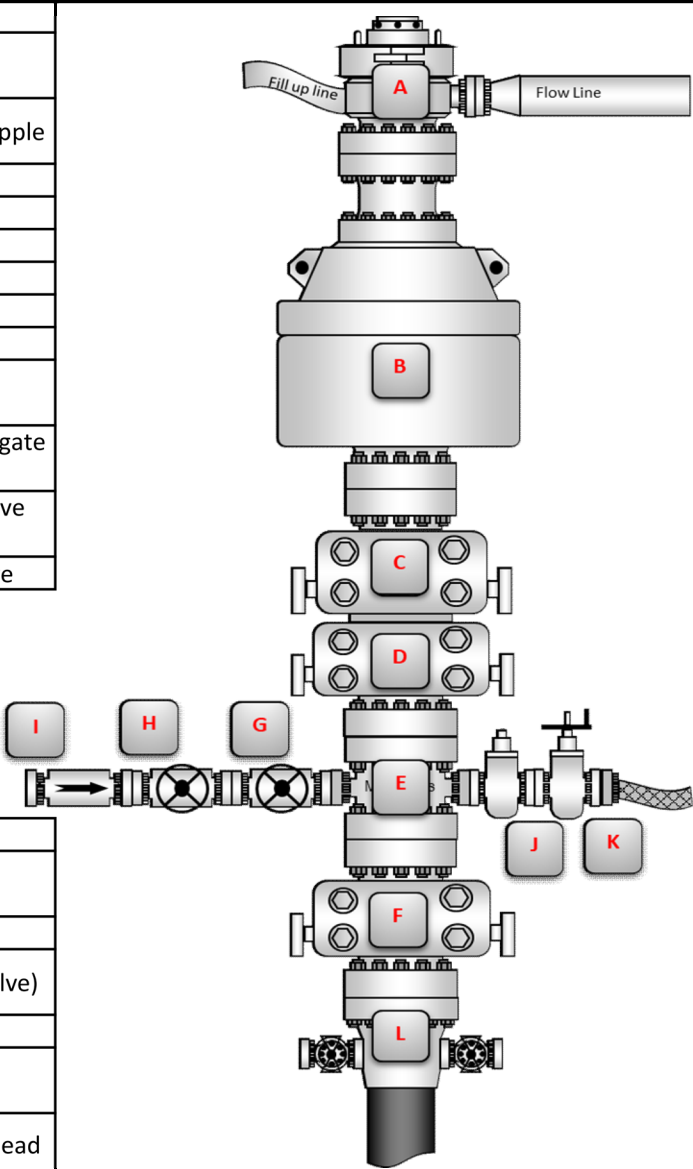
Variance request: Chevron respectfully requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor on surface casing. BOPF will be nipped down and tested after.

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



BOP Installation Checklist: 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 333415

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 333415
	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	4/30/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	4/30/2024
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	4/30/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	4/30/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	4/30/2024
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	4/30/2024