

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: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No.  6. If Indian, Allottee or Tribe Name  7. If Unit or CA Agreement, Name and No.  8. Lease Name and Well No.
2. Name of Operator		9. API Well No. 30 015 48999
3a. Address	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.<br>2. A Drilling Plan.<br>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).<br>5. Operator certification.<br>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)

**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	<sup>2</sup> Pool Code 64010	<sup>3</sup> Pool Name WELCH; BONE SPRING
<sup>4</sup> Property Code	<sup>5</sup> Property Name CICADA UNIT	<sup>6</sup> Well Number 53H
<sup>7</sup> OGRID No. 4323	<sup>8</sup> Operator Name CHEVRON U.S.A. INC.	<sup>9</sup> Elevation 3280'

<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
M	3	26 SOUTH	27 EAST, N.M.P.M.		248'	SOUTH	1218'	WEST	EDDY

<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
M	15	26 SOUTH	27 EAST, N.M.P.M.		25'	SOUTH	1260'	WEST	EDDY

<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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><b>PROPOSED FIRST TAKE POINT</b></p> <p>X= 546,756' Y= 386,892' LAT. 32.063592° N LONG. 104.182400° W NAD 27</p> <p>X= 587,940' Y= 386,949' LAT. 32.063714° N LONG. 104.182893° W NAD83/86</p> <p><b>PROPOSED MID POINT</b></p> <p>X= 546,882' Y= 381,699' LAT. 32.049316° N LONG. 104.182017° W NAD 27</p> <p>X= 588,066' Y= 381,756' LAT. 32.049438° N LONG. 104.182509° W NAD83/86</p> <p><b>PROPOSED LAST TAKE POINT</b></p> <p>X= 546,913' Y= 376,507' LAT. 32.035041° N LONG. 104.181941° W NAD 27</p> <p>X= 588,097' Y= 376,564' LAT. 32.035164° N LONG. 104.182433° W NAD83/86</p>	<p><b>CICADA UNIT NO. 53H WELL</b></p> <p>X= 546,715' Y= 387,241' LAT. 32.064552° N LONG. 104.182533° W NAD 27</p> <p>X= 587,898' Y= 387,298' LAT. 32.064674° N LONG. 104.183026° W NAD83/86</p> <p>ELEV. +3280' NAVD88</p> <p><b>CORNER COORDINATES TABLE (NAD 27)</b></p> <p>A - Y=392447.75, X=545573.63 B - Y=387009.20, X=545492.91 C - Y=386937.82, X=550774.76 D - Y=384298.89, X=550859.19 E - Y=381711.59, X=545622.05 F - Y=381659.95, X=550943.63 G - Y=376414.09, X=545653.53 H - Y=376383.44, X=550941.76</p> <p><b>PROPOSED BOTTOM HOLE LOCATION</b></p> <p>X= 546,913' Y= 376,432' LAT. 32.034835° N LONG. 104.181940° W NAD 27</p> <p>X= 588,097' Y= 376,489' LAT. 32.034958° N LONG. 104.182432° W NAD83/86</p>		<p><b><sup>17</sup> OPERATOR CERTIFICATION</b></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> 2/20/2019 Signature Date</p> <p><b>Laura Becerra</b> Printed Name</p> <p><b>LBecerra@Chevron.com</b> E-mail Address</p> <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b></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>11/14/2019 Date of Survey</p> <p> 22921 Signature and Seal of Professional Surveyor Certificate Number</p> <p>12/04/2019</p>
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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:** 10 / 5 / 21

**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
CICADA UNIT 51H	<i>Pending</i>	UL:M, Sec 3, T26S-R27E	198' FSL, 1,218' FWL	1635 BBL/D	5841 MCF/D	2089 BBL/D
CICADA UNIT 52H	<i>Pending</i>	UL:M, Sec 3, T26S-R27E	223' FSL, 1,218' FWL	618 BBL/D	2350 MCF/D	4185 BBL/D
CICADA UNIT 53H	<i>Pending</i>	UL:M, Sec 3, T26S-R27E	248' FSL, 1,218' FWL	1635 BBL/D	5841 MCF/D	2089 BBL/D
CICADA UNIT 54H	<i>Pending</i>	UL:M, Sec 3, T26S-R27E	273' FSL, 1,218' FWL	618 BBL/D	2350 MCF/D	4185 BBL/D
CICADA UNIT 55H	<i>Pending</i>	UL:M, Sec 3, T26S-R27E	298' FSL, 1,218' FWL	1635 BBL/D	5841 MCF/D	2089 BBL/D

**IV. Central Delivery Point Name:** Hayhurst NM CTB 10 [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
CICADA UNIT 51H	<i>Pending</i>	November 2022	N/A	N/A	N/A	N/A
CICADA UNIT 52H	<i>Pending</i>	November 2022	N/A	N/A	N/A	N/A
CICADA UNIT 53H	<i>Pending</i>	November 2022	N/A	N/A	N/A	N/A
CICADA UNIT 54H	<i>Pending</i>	November 2022	N/A	N/A	N/A	N/A
CICADA UNIT 55H	<i>Pending</i>	November 2022	N/A	N/A	N/A	N/A

**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: Sr Regulatory Affairs Coordinator
E-mail Address: eeof@chevron.com
Date: 8/23/2021
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.





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

# Drilling Plan Data Report

09/29/2021

APD ID: 10400054489

Submission Date: 03/02/2020

Highlighted data  
reflects the most  
recent changes

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT

Well Number: 53H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
669712	SALADO	3230	726	728	ANHYDRITE, SALT	NONE	N
669729	LAMAR	947	2283	2290	LIMESTONE, SHALE	NONE	N
669713	BELL CANYON	917	2313	2320	LIMESTONE, SANDSTONE	NONE	N
669715	CHERRY CANYON	67	3163	3180	LIMESTONE, SANDSTONE, SILTSTONE	NONE	N
669716	BRUSHY CANYON	-1090	4320	4328	LIMESTONE, SANDSTONE, SHALE	NONE	N
669717	BONE SPRING LIME	-2726	5956	5970	SHALE, SILTSTONE	NONE	N
669727	AVALON SAND	-2840	6070	6080	SHALE	NONE	N
669719	BONE SPRING 1ST	-3614	6844	6850	SANDSTONE, SHALE	NONE	N
669720	BONE SPRING 2ND	-4176	7406	7435	SANDSTONE, SHALE	NONE	N
669723	BONE SPRING	-4428	7658	18264	SANDSTONE, SHALE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 7658

**Equipment:** Chevron will have a minimum of a 5,000 psi rig stack (see proposed schematic) 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

**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. Chevron also requests a variance to use a CoFlex hose with a metal protective covering that will be utilized

**Operator Name:** CHEVRON USA INCORPORATED**Well Name:** CICADA UNIT**Well Number:** 53H

between the BOP and Choke manifold. Please refer to the attached testing and specification documents.

**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:**

Continental\_Test\_Specs\_and\_Pressure\_Test\_20200219154019.pdf

**BOP Diagram Attachment:**

BLM\_5M\_Annular\_10M\_Stack\_BOP\_Choke\_Schematic\_20200219154531.pdf

BOP\_Testing\_Procedure\_20200224064832.pdf

10K\_UHS\_Wellhead\_Design\_20200224064857.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	3280	2830	450	J-55	54.5	BUTT	1.58	1.65	DRY	1.64	DRY	1.64
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	7540	0	7490		-4210	7540	L-80	43.5	BUTT	2.42	1.44	DRY	1.79	DRY	1.79
3	PRODUCTION	8.5	5.5	NEW	API	Y	0	18039	0	7658	3280	-4378	18039	OTHER	20	OTHER - TXP-BTC	1.75	1.29	DRY	2.16	DRY	2.16

**Casing Attachments**

**Operator Name:** CHEVRON USA INCORPORATED**Well Name:** CICADA UNIT**Well Number:** 53H**Casing Attachments**

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**Casing ID:** 1      **String Type:** SURFACE**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**13.375\_54.5ppf\_J55\_BTC\_20200219154725.pdf

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**Casing ID:** 2      **String Type:** INTERMEDIATE**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**9.625\_43.5ppf\_L80\_IC\_LTC\_20200219154928.pdf

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**Casing ID:** 3      **String Type:** PRODUCTION**Inspection Document:****Spec Document:****Tapered String Spec:**

5.500\_20lb\_P110IC\_TXP\_20200219155445.pdf

**Casing Design Assumptions and Worksheet(s):**Cicada\_Unit\_53H\_9\_Pt\_Drilling\_Plan\_20200226144437.pdf

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**Section 4 - Cement**

**Operator Name:** CHEVRON USA INCORPORATED**Well Name:** CICADA UNIT**Well Number:** 53H

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	450	1.33	14.8	654	50	CLASS C	Extender, Antifoam, Retarder
INTERMEDIATE	Lead		0	6540	1010	2.23	11.9	2253	10	Class C	Extender, Antifoam, Retarder, Viscosifier
INTERMEDIATE	Tail		6540	7540	287	1.33	14.8	382	10	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		7340	1703 9	2325	1.85	13.2	4302	10	CLASS H	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Tail		1703 9	1803 9	122	2.06	15	252	10	ACID SOL 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 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 portatilet 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 muddling 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 PVT, stroke counter, flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume in compliance with Onshore Order #2. A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

### 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
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**Operator Name:** CHEVRON USA INCORPORATED**Well Name:** CICADA UNIT**Well Number:** 53H

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	9.2							Viscosity: 28-30
450	7490	OTHER : BRINE/OBM	8.7	9.6							Viscosity: 26-36
7490	7658	OIL-BASED MUD	8.7	12							Viscosity: 50-70, Filtrate: 10-25 Due to wellbore stability, the mud program may exceed the MW weight window needed to maintain overburden of pore pressure.

## Section 6 - Test, Logging, Coring

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

Drill stem tests are not planned

The logging program will be as follows:

Type: Mudlogs Logs: 2 man mudlog Interval: Surf csg shoe through Prod hole TD Timing: While drilling or circulating

Type: LWD Logs: MWD gamma Interval: Int & Prod Hole Timing: While drilling

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

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

**Coring operation description for the well:**

Conventional whole core samples are not planned; direction survey will be run - will send log(s) when run.

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 1716

**Anticipated Surface Pressure:** 31

**Anticipated Bottom Hole Temperature(F):** 160

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** NO

**Hydrogen sulfide drilling operations plan:**

**Operator Name:** CHEVRON USA INCORPORATED**Well Name:** CICADA UNIT**Well Number:** 53H

## Section 8 - Other Information

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

Cicada\_Unit\_51H\_55H\_GCP\_20200219160706.pdf

H2S\_Contingency\_Plan\_20200219160655.pdf

Rig\_Layout\_20200219160442.pdf

Cicada\_Unit\_53H\_Directional\_Survey\_20200224065736.pdf

CICADA\_UNIT\_53H\_C\_102\_Cert\_20200302090651.pdf

**Other proposed operations facets description:**

Chevron requests 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.

Chevron is also requesting a variance from the Onshore Order 2 to perform a break test on the BOP when able to finish the next hole section within 21 days of the previous full BOP test. 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 hole section. A break test will only be performed on operations where BLM documentation states a 5M or less BOP can be utilized. Summary with details attached below.

**Other proposed operations facets attachment:****Other Variance attachment:**

Break\_Testing\_500\_psi\_CS\_Tail\_\_Variance\_20200219160848.pdf

CUSA\_Spudder\_Rig\_Data\_20200219160835.pdf



# Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 53H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 53H PWB
Slot	Cicada Unit No. 53H		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Moyagusa
Scale	0.999912	Report Generated	04/Feb/2020 at 14:55
Convergence at slot	0.08° East	Database	WA_HOU_Midland_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	50.00	1.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W
Facility Reference Pt			546714.00	387191.00	32°03'51.8892"N	104°10'57.1260"W
Field Reference Pt			152400.30	0.00	30°59'42.8458"N	105°26'33.6593"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 257 (KB) to Facility Vertical Datum	3308.00ft
Horizontal Reference Pt	Slot	Patterson 257 (KB) to Mean Sea Level	3308.00ft
Vertical Reference Pt	Patterson 257 (KB)	Patterson 257 (KB) to Ground Level at Slot (Cicada Unit No. 53H)	28.00ft
MD Reference Pt	Patterson 257 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.67°



Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
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Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 53H PWB
Slot	Cicada Unit No. 53H		

WELLPATH DATA (198 stations) † = interpolated, ‡ = extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00†	0.000	73.598	0.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	
28.00	0.000	73.598	28.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	Tie On
128.00†	0.000	73.598	128.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	
228.00†	0.000	73.598	228.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	
328.00†	0.000	73.598	328.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	
428.00†	0.000	73.598	428.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	
528.00†	0.000	73.598	528.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	
628.00†	0.000	73.598	628.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	
728.00†	0.000	73.598	728.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	
750.00	0.000	73.598	750.00	0.00	0.00	0.00	546715.00	387241.00	32°03'52.3840"N	104°10'57.1135"W	0.00	0.00	0.00	Start Build
828.00†	1.170	73.598	827.99	-0.22	0.22	0.76	546715.76	387241.22	32°03'52.3862"N	104°10'57.1046"W	1.50	1.50	0.00	
928.00†	2.670	73.598	927.94	-1.15	1.17	3.98	546718.98	387242.17	32°03'52.3955"N	104°10'57.0673"W	1.50	1.50	0.00	
1028.00†	4.170	73.598	1027.75	-2.80	2.86	9.70	546724.70	387243.86	32°03'52.4121"N	104°10'57.0007"W	1.50	1.50	0.00	
1128.00†	5.670	73.598	1127.38	-5.17	5.28	17.93	546732.93	387246.28	32°03'52.4360"N	104°10'56.9051"W	1.50	1.50	0.00	
1216.67	7.000	73.598	1215.51	-7.88	8.04	27.31	546742.31	387249.04	32°03'52.4632"N	104°10'56.7960"W	1.50	1.50	0.00	End Build
1228.00†	7.000	73.598	1226.76	-8.26	8.43	28.64	546743.64	387249.43	32°03'52.4670"N	104°10'56.7806"W	0.00	0.00	0.00	
1328.00†	7.000	73.598	1326.01	-11.64	11.87	40.33	546755.33	387252.87	32°03'52.5009"N	104°10'56.6447"W	0.00	0.00	0.00	
1428.00†	7.000	73.598	1425.26	-15.01	15.31	52.02	546767.02	387256.31	32°03'52.5348"N	104°10'56.5088"W	0.00	0.00	0.00	
1528.00†	7.000	73.598	1524.52	-18.39	18.75	63.71	546778.71	387259.75	32°03'52.5687"N	104°10'56.3729"W	0.00	0.00	0.00	
1628.00†	7.000	73.598	1623.77	-21.76	22.19	75.40	546790.40	387263.19	32°03'52.6026"N	104°10'56.2370"W	0.00	0.00	0.00	
1714.87	7.000	73.598	1710.00	-24.69	25.18	85.56	546800.55	387266.18	32°03'52.6320"N	104°10'56.1189"W	0.00	0.00	0.00	Start Drop
1728.00†	6.803	73.598	1723.03	-25.13	25.63	87.07	546802.06	387266.63	32°03'52.6364"N	104°10'56.1013"W	1.50	-1.50	0.00	
1828.00†	5.303	73.598	1822.47	-28.05	28.61	97.19	546812.18	387269.60	32°03'52.6658"N	104°10'55.9837"W	1.50	-1.50	0.00	
1928.00†	3.803	73.598	1922.15	-30.24	30.85	104.80	546819.79	387271.85	32°03'52.6878"N	104°10'55.8952"W	1.50	-1.50	0.00	
2028.00†	2.303	73.598	2022.01	-31.72	32.35	109.91	546824.90	387273.35	32°03'52.7026"N	104°10'55.8358"W	1.50	-1.50	0.00	
2128.00†	0.803	73.598	2121.97	-32.47	33.12	112.51	546827.50	387274.12	32°03'52.7102"N	104°10'55.8056"W	1.50	-1.50	0.00	
2181.54	0.000	190.000	2175.51	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	1.50	-1.50	0.00	End Drop
2228.00†	0.000	190.000	2221.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
2328.00†	0.000	190.000	2321.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
2428.00†	0.000	190.000	2421.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	





Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION														
Operator	Chevron U.S.A. Inc.						Well	Cicada Unit No. 53H						
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27						API/Legal							
Facility	HNM Pkg 18						Wellbore	Cicada Unit No. 53H PWB						
Slot	Cicada Unit No. 53H													
WELLPATH DATA (198 stations) † = interpolated, ‡ = extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
2528.00†	0.000	190.000	2521.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
2628.00†	0.000	190.000	2621.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
2728.00†	0.000	190.000	2721.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
2828.00†	0.000	190.000	2821.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
2928.00†	0.000	190.000	2921.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3028.00†	0.000	190.000	3021.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3128.00†	0.000	190.000	3121.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3228.00†	0.000	190.000	3221.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3328.00†	0.000	190.000	3321.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3428.00†	0.000	190.000	3421.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3528.00†	0.000	190.000	3521.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3628.00†	0.000	190.000	3621.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3728.00†	0.000	190.000	3721.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3828.00†	0.000	190.000	3821.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
3928.00†	0.000	190.000	3921.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4028.00†	0.000	190.000	4021.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4128.00†	0.000	190.000	4121.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4228.00†	0.000	190.000	4221.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4328.00†	0.000	190.000	4321.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4428.00†	0.000	190.000	4421.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4528.00†	0.000	190.000	4521.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4628.00†	0.000	190.000	4621.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4728.00†	0.000	190.000	4721.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4828.00†	0.000	190.000	4821.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
4928.00†	0.000	190.000	4921.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5028.00†	0.000	190.000	5021.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5128.00†	0.000	190.000	5121.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5228.00†	0.000	190.000	5221.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5328.00†	0.000	190.000	5321.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5428.00†	0.000	190.000	5421.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	



Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION														
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Facility	HNM Pkg 18							Wellbore	Cicada Unit No. 53H PWB					
Slot	Cicada Unit No. 53H													

WELLPATH DATA (198 stations) † = interpolated, ‡ = extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
5528.00†	0.000	190.000	5521.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5628.00†	0.000	190.000	5621.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5728.00†	0.000	190.000	5721.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5828.00†	0.000	190.000	5821.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
5928.00†	0.000	190.000	5921.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6028.00†	0.000	190.000	6021.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6128.00†	0.000	190.000	6121.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6228.00†	0.000	190.000	6221.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6328.00†	0.000	190.000	6321.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6428.00†	0.000	190.000	6421.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6528.00†	0.000	190.000	6521.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6628.00†	0.000	190.000	6621.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6728.00†	0.000	190.000	6721.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6756.03	0.000	190.000	6750.00	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	9 5/8" Casing
6828.00†	0.000	190.000	6821.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
6928.00†	0.000	190.000	6921.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
7028.00†	0.000	190.000	7021.97	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	
7087.10	0.000	190.000	7081.07	-32.57	33.22	112.87	546827.86	387274.22	32°03'52.7112"N	104°10'55.8014"W	0.00	0.00	0.00	Curve KOP
7128.00†	4.090	190.000	7121.93	-31.14	31.79	112.62	546827.61	387272.78	32°03'52.6970"N	104°10'55.8044"W	10.00	10.00	0.00	
7228.00†	14.090	190.000	7220.55	-15.62	16.25	109.88	546824.87	387257.25	32°03'52.5433"N	104°10'55.8365"W	10.00	10.00	0.00	
7328.00†	24.090	190.000	7314.93	16.52	-15.92	104.21	546819.20	387225.08	32°03'52.2250"N	104°10'55.9029"W	10.00	10.00	0.00	
7428.00†	34.090	190.000	7402.21	64.29	-63.74	95.77	546810.77	387177.27	32°03'51.7520"N	104°10'56.0016"W	10.00	10.00	0.00	
7487.10	40.000	190.000	7449.36	99.30	-98.79	89.59	546804.59	387142.22	32°03'51.4052"N	104°10'56.0740"W	10.00	10.00	0.00	Cont. Build/Start Turn
7528.00†	43.965	188.503	7479.76	126.27	-125.78	85.21	546800.20	387115.23	32°03'51.1381"N	104°10'56.1254"W	10.00	9.70	-3.66	
7628.00†	53.725	185.595	7545.49	200.85	-200.42	76.13	546791.12	387040.60	32°03'50.3997"N	104°10'56.2322"W	10.00	9.76	-2.91	
7728.00†	63.539	183.341	7597.49	285.83	-285.44	69.57	546784.56	386955.59	32°03'49.5584"N	104°10'56.3097"W	10.00	9.81	-2.25	
7828.00†	73.383	181.445	7634.16	378.63	-378.25	65.74	546780.74	386862.78	32°03'48.6400"N	104°10'56.3557"W	10.00	9.84	-1.90	
7928.00†	83.242	179.735	7654.39	476.42	-476.05	64.76	546779.76	386764.99	32°03'47.6722"N	104°10'56.3687"W	10.00	9.86	-1.71	
7996.51	90.000	178.610	7658.43	544.76	-544.39	65.75	546780.75	386696.66	32°03'46.9960"N	104°10'56.3583"W	10.00	9.86	-1.64	End Build/Cont. Turn - Landing
8028.00†	90.000	179.240	7658.43	576.25	-575.88	66.34	546781.34	386665.17	32°03'46.6844"N	104°10'56.3520"W	2.00	0.00	2.00	



Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 53H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 53H PWB
Slot	Cicada Unit No. 53H		

WELLPATH DATA (198 stations) † = interpolated, ‡ = extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
8128.00†	90.000	181.240	7658.43	676.24	-675.87	65.92	546780.92	386565.19	32°03'45.6949"N	104°10'56.3585"W	2.00	0.00	2.00	
8165.84	90.000	181.997	7658.43	714.06	-713.70	64.86	546779.85	386527.37	32°03'45.3206"N	104°10'56.3715"W	2.00	0.00	2.00	End Turn
8228.00†	90.000	181.997	7658.43	776.17	-775.82	62.69	546777.68	386465.25	32°03'44.7059"N	104°10'56.3977"W	0.00	0.00	0.00	
8328.00†	90.000	181.997	7658.43	876.09	-875.76	59.21	546774.20	386365.32	32°03'43.7169"N	104°10'56.4398"W	0.00	0.00	0.00	
8335.17	90.000	181.997	7658.43	883.25	-882.92	58.96	546773.95	386358.16	32°03'43.6461"N	104°10'56.4428"W	0.00	0.00	0.00	Start Turn
8428.00†	90.000	180.140	7658.43	976.05	-975.73	57.22	546772.22	386265.35	32°03'42.7276"N	104°10'56.4644"W	2.00	0.00	-2.00	
8504.50	90.000	178.610	7658.43	1052.54	-1052.23	58.06	546773.05	386188.87	32°03'41.9707"N	104°10'56.4560"W	2.00	0.00	-2.00	End Turn
8528.00†	90.000	178.610	7658.43	1076.04	-1075.72	58.63	546773.62	386165.38	32°03'41.7382"N	104°10'56.4497"W	0.00	0.00	0.00	
8628.00†	90.000	178.610	7658.43	1176.02	-1175.69	61.06	546776.05	386065.42	32°03'40.7489"N	104°10'56.4232"W	0.00	0.00	0.00	
8728.00†	90.000	178.610	7658.43	1276.01	-1275.66	63.48	546778.48	385965.45	32°03'39.7596"N	104°10'56.3966"W	0.00	0.00	0.00	
8828.00†	90.000	178.610	7658.43	1375.99	-1375.63	65.91	546780.90	385865.49	32°03'38.7702"N	104°10'56.3700"W	0.00	0.00	0.00	
8928.00†	90.000	178.610	7658.43	1475.97	-1475.60	68.33	546783.33	385765.53	32°03'37.7809"N	104°10'56.3435"W	0.00	0.00	0.00	
9028.00†	90.000	178.610	7658.43	1575.95	-1575.57	70.76	546785.75	385665.57	32°03'36.7916"N	104°10'56.3169"W	0.00	0.00	0.00	
9128.00†	90.000	178.610	7658.43	1675.94	-1675.54	73.18	546788.18	385565.61	32°03'35.8023"N	104°10'56.2904"W	0.00	0.00	0.00	
9228.00†	90.000	178.610	7658.43	1775.92	-1775.51	75.61	546790.60	385465.65	32°03'34.8130"N	104°10'56.2638"W	0.00	0.00	0.00	
9328.00†	90.000	178.610	7658.43	1875.90	-1875.49	78.04	546793.03	385365.68	32°03'33.8237"N	104°10'56.2372"W	0.00	0.00	0.00	
9428.00†	90.000	178.610	7658.43	1975.89	-1975.46	80.46	546795.45	385265.72	32°03'32.8344"N	104°10'56.2107"W	0.00	0.00	0.00	
9528.00†	90.000	178.610	7658.43	2075.87	-2075.43	82.89	546797.88	385165.76	32°03'31.8450"N	104°10'56.1841"W	0.00	0.00	0.00	
9628.00†	90.000	178.610	7658.43	2175.85	-2175.40	85.31	546800.31	385065.80	32°03'30.8557"N	104°10'56.1575"W	0.00	0.00	0.00	
9728.00†	90.000	178.610	7658.43	2275.84	-2275.37	87.74	546802.73	384965.84	32°03'29.8664"N	104°10'56.1310"W	0.00	0.00	0.00	
9828.00†	90.000	178.610	7658.43	2375.82	-2375.34	90.16	546805.16	384865.88	32°03'28.8771"N	104°10'56.1044"W	0.00	0.00	0.00	
9928.00†	90.000	178.610	7658.43	2475.80	-2475.31	92.59	546807.58	384765.92	32°03'27.8878"N	104°10'56.0779"W	0.00	0.00	0.00	
10028.00†	90.000	178.610	7658.43	2575.78	-2575.28	95.02	546810.01	384665.95	32°03'26.8985"N	104°10'56.0513"W	0.00	0.00	0.00	
10128.00†	90.000	178.610	7658.43	2675.77	-2675.25	97.44	546812.43	384565.99	32°03'25.9092"N	104°10'56.0247"W	0.00	0.00	0.00	
10228.00†	90.000	178.610	7658.43	2775.75	-2775.22	99.87	546814.86	384466.03	32°03'24.9198"N	104°10'55.9982"W	0.00	0.00	0.00	
10328.00†	90.000	178.610	7658.43	2875.73	-2875.19	102.29	546817.28	384366.07	32°03'23.9305"N	104°10'55.9716"W	0.00	0.00	0.00	
10428.00†	90.000	178.610	7658.43	2975.72	-2975.16	104.72	546819.71	384266.11	32°03'22.9412"N	104°10'55.9451"W	0.00	0.00	0.00	
10528.00†	90.000	178.610	7658.43	3075.70	-3075.13	107.14	546822.14	384166.15	32°03'21.9519"N	104°10'55.9185"W	0.00	0.00	0.00	
10628.00†	90.000	178.610	7658.43	3175.68	-3175.10	109.57	546824.56	384066.18	32°03'20.9626"N	104°10'55.8920"W	0.00	0.00	0.00	
10728.00†	90.000	178.610	7658.43	3275.66	-3275.07	112.00	546826.99	383966.22	32°03'19.9733"N	104°10'55.8654"W	0.00	0.00	0.00	



# Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 53H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 53H PWB
Slot	Cicada Unit No. 53H		

WELLPATH DATA (198 stations) † = interpolated, ‡ = extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
10828.00†	90.000	178.610	7658.43	3375.65	-3375.04	114.42	546829.41	383866.26	32°03'18.9840"N	104°10'55.8388"W	0.00	0.00	0.00	
10928.00†	90.000	178.610	7658.43	3475.63	-3475.01	116.85	546831.84	383766.30	32°03'17.9946"N	104°10'55.8123"W	0.00	0.00	0.00	
11028.00†	90.000	178.610	7658.43	3575.61	-3574.98	119.27	546834.26	383666.34	32°03'17.0053"N	104°10'55.7857"W	0.00	0.00	0.00	
11128.00†	90.000	178.610	7658.43	3675.60	-3674.96	121.70	546836.69	383566.38	32°03'16.0160"N	104°10'55.7592"W	0.00	0.00	0.00	
11228.00†	90.000	178.610	7658.43	3775.58	-3774.93	124.13	546839.11	383466.42	32°03'15.0267"N	104°10'55.7326"W	0.00	0.00	0.00	
11328.00†	90.000	178.610	7658.43	3875.56	-3874.90	126.55	546841.54	383366.45	32°03'14.0374"N	104°10'55.7060"W	0.00	0.00	0.00	
11428.00†	90.000	178.610	7658.43	3975.54	-3974.87	128.98	546843.97	383266.49	32°03'13.0481"N	104°10'55.6795"W	0.00	0.00	0.00	
11528.00†	90.000	178.610	7658.43	4075.53	-4074.84	131.40	546846.39	383166.53	32°03'12.0588"N	104°10'55.6529"W	0.00	0.00	0.00	
11628.00†	90.000	178.610	7658.43	4175.51	-4174.81	133.83	546848.82	383066.57	32°03'11.0694"N	104°10'55.6264"W	0.00	0.00	0.00	
11728.00†	90.000	178.610	7658.43	4275.49	-4274.78	136.25	546851.24	382966.61	32°03'10.0801"N	104°10'55.5998"W	0.00	0.00	0.00	
11828.00†	90.000	178.610	7658.43	4375.48	-4374.75	138.68	546853.67	382866.65	32°03'9.0908"N	104°10'55.5733"W	0.00	0.00	0.00	
11928.00†	90.000	178.610	7658.43	4475.46	-4474.72	141.11	546856.09	382766.68	32°03'8.1015"N	104°10'55.5467"W	0.00	0.00	0.00	
12028.00†	90.000	178.610	7658.43	4575.44	-4574.69	143.53	546858.52	382666.72	32°03'7.1122"N	104°10'55.5201"W	0.00	0.00	0.00	
12128.00†	90.000	178.610	7658.43	4675.42	-4674.66	145.96	546860.94	382566.76	32°03'6.1229"N	104°10'55.4936"W	0.00	0.00	0.00	
12228.00†	90.000	178.610	7658.43	4775.41	-4774.63	148.38	546863.37	382466.80	32°03'5.1335"N	104°10'55.4670"W	0.00	0.00	0.00	
12328.00†	90.000	178.610	7658.43	4875.39	-4874.60	150.81	546865.80	382366.84	32°03'4.1442"N	104°10'55.4405"W	0.00	0.00	0.00	
12428.00†	90.000	178.610	7658.43	4975.37	-4974.57	153.23	546868.22	382266.88	32°03'3.1549"N	104°10'55.4139"W	0.00	0.00	0.00	
12528.00†	90.000	178.610	7658.43	5075.36	-5074.54	155.66	546870.65	382166.92	32°03'2.1656"N	104°10'55.3874"W	0.00	0.00	0.00	
12628.00†	90.000	178.610	7658.43	5175.34	-5174.51	158.09	546873.07	382066.95	32°03'1.1763"N	104°10'55.3608"W	0.00	0.00	0.00	
12728.00†	90.000	178.610	7658.43	5275.32	-5274.48	160.51	546875.50	381966.99	32°03'0.1870"N	104°10'55.3342"W	0.00	0.00	0.00	
12828.00†	90.000	178.610	7658.43	5375.30	-5374.46	162.94	546877.92	381867.03	32°02'59.1977"N	104°10'55.3077"W	0.00	0.00	0.00	
12928.00†	90.000	178.610	7658.43	5475.29	-5474.43	165.36	546880.35	381767.07	32°02'58.2083"N	104°10'55.2811"W	0.00	0.00	0.00	
12996.10	90.000	178.610	7658.43†	5543.37	-5542.50	167.02	546882.00	381699.00	32°02'57.5347"N	104°10'55.2631"W	0.00	0.00	0.00	Start Turn
13028.00†	90.000	179.248	7658.43	5575.27	-5574.40	167.61	546882.60	381667.10	32°02'57.2190"N	104°10'55.2566"W	2.00	0.00	2.00	
13049.00	90.000	179.668	7658.43	5596.27	-5595.40	167.81	546882.79	381646.11	32°02'57.0112"N	104°10'55.2547"W	2.00	0.00	2.00	End Turn
13128.00†	90.000	179.668	7658.43	5675.27	-5674.40	168.27	546883.25	381567.12	32°02'56.2294"N	104°10'55.2506"W	0.00	0.00	0.00	
13228.00†	90.000	179.668	7658.43	5775.27	-5774.40	168.85	546883.83	381467.13	32°02'55.2399"N	104°10'55.2455"W	0.00	0.00	0.00	
13328.00†	90.000	179.668	7658.43	5875.27	-5874.39	169.43	546884.41	381367.14	32°02'54.2503"N	104°10'55.2404"W	0.00	0.00	0.00	
13428.00†	90.000	179.668	7658.43	5975.27	-5974.39	170.01	546884.99	381267.15	32°02'53.2607"N	104°10'55.2353"W	0.00	0.00	0.00	
13528.00†	90.000	179.668	7658.43	6075.27	-6074.39	170.58	546885.57	381167.16	32°02'52.2712"N	104°10'55.2302"W	0.00	0.00	0.00	





Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 53H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 53H PWB
Slot	Cicada Unit No. 53H		

WELLPATH DATA (198 stations) † = interpolated, ‡ = extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
13628.00†	90.000	179.668	7658.43	6175.27	-6174.39	171.16	546886.15	381067.17	32°02'51.2816"N	104°10'55.2251"W	0.00	0.00	0.00	
13728.00†	90.000	179.668	7658.43	6275.27	-6274.39	171.74	546886.73	380967.18	32°02'50.2920"N	104°10'55.2200"W	0.00	0.00	0.00	
13828.00†	90.000	179.668	7658.43	6375.27	-6374.39	172.32	546887.31	380867.19	32°02'49.3025"N	104°10'55.2149"W	0.00	0.00	0.00	
13928.00†	90.000	179.668	7658.43	6475.27	-6474.38	172.90	546887.89	380767.20	32°02'48.3129"N	104°10'55.2098"W	0.00	0.00	0.00	
14028.00†	90.000	179.668	7658.43	6575.27	-6574.38	173.48	546888.47	380667.21	32°02'47.3233"N	104°10'55.2047"W	0.00	0.00	0.00	
14128.00†	90.000	179.668	7658.43	6675.27	-6674.38	174.06	546889.04	380567.22	32°02'46.3338"N	104°10'55.1996"W	0.00	0.00	0.00	
14228.00†	90.000	179.668	7658.43	6775.27	-6774.38	174.64	546889.62	380467.23	32°02'45.3442"N	104°10'55.1945"W	0.00	0.00	0.00	
14328.00†	90.000	179.668	7658.43	6875.27	-6874.38	175.22	546890.20	380367.24	32°02'44.3547"N	104°10'55.1894"W	0.00	0.00	0.00	
14428.00†	90.000	179.668	7658.43	6975.27	-6974.38	175.80	546890.78	380267.25	32°02'43.3651"N	104°10'55.1843"W	0.00	0.00	0.00	
14528.00†	90.000	179.668	7658.43	7075.27	-7074.37	176.38	546891.36	380167.27	32°02'42.3755"N	104°10'55.1792"W	0.00	0.00	0.00	
14628.00†	90.000	179.668	7658.43	7175.27	-7174.37	176.96	546891.94	380067.28	32°02'41.3860"N	104°10'55.1741"W	0.00	0.00	0.00	
14728.00†	90.000	179.668	7658.43	7275.27	-7274.37	177.54	546892.52	379967.29	32°02'40.3964"N	104°10'55.1690"W	0.00	0.00	0.00	
14828.00†	90.000	179.668	7658.43	7375.27	-7374.37	178.12	546893.10	379867.30	32°02'39.4068"N	104°10'55.1639"W	0.00	0.00	0.00	
14928.00†	90.000	179.668	7658.43	7475.27	-7474.37	178.69	546893.68	379767.31	32°02'38.4173"N	104°10'55.1588"W	0.00	0.00	0.00	
15028.00†	90.000	179.668	7658.43	7575.27	-7574.37	179.27	546894.26	379667.32	32°02'37.4277"N	104°10'55.1537"W	0.00	0.00	0.00	
15128.00†	90.000	179.668	7658.43	7675.27	-7674.36	179.85	546894.84	379567.33	32°02'36.4381"N	104°10'55.1486"W	0.00	0.00	0.00	
15228.00†	90.000	179.668	7658.43	7775.27	-7774.36	180.43	546895.42	379467.34	32°02'35.4486"N	104°10'55.1435"W	0.00	0.00	0.00	
15328.00†	90.000	179.668	7658.43	7875.27	-7874.36	181.01	546896.00	379367.35	32°02'34.4590"N	104°10'55.1384"W	0.00	0.00	0.00	
15428.00†	90.000	179.668	7658.43	7975.27	-7974.36	181.59	546896.57	379267.36	32°02'33.4694"N	104°10'55.1333"W	0.00	0.00	0.00	
15528.00†	90.000	179.668	7658.43	8075.27	-8074.36	182.17	546897.15	379167.37	32°02'32.4799"N	104°10'55.1282"W	0.00	0.00	0.00	
15628.00†	90.000	179.668	7658.43	8175.27	-8174.36	182.75	546897.73	379067.38	32°02'31.4903"N	104°10'55.1231"W	0.00	0.00	0.00	
15728.00†	90.000	179.668	7658.43	8275.27	-8274.35	183.33	546898.31	378967.39	32°02'30.5007"N	104°10'55.1180"W	0.00	0.00	0.00	
15828.00†	90.000	179.668	7658.43	8375.27	-8374.35	183.91	546898.89	378867.40	32°02'29.5112"N	104°10'55.1129"W	0.00	0.00	0.00	
15928.00†	90.000	179.668	7658.43	8475.27	-8474.35	184.49	546899.47	378767.42	32°02'28.5216"N	104°10'55.1078"W	0.00	0.00	0.00	
16028.00†	90.000	179.668	7658.43	8575.27	-8574.35	185.07	546900.05	378667.43	32°02'27.5320"N	104°10'55.1027"W	0.00	0.00	0.00	
16128.00†	90.000	179.668	7658.43	8675.27	-8674.35	185.65	546900.63	378567.44	32°02'26.5425"N	104°10'55.0976"W	0.00	0.00	0.00	
16228.00†	90.000	179.668	7658.43	8775.27	-8774.35	186.23	546901.21	378467.45	32°02'25.5529"N	104°10'55.0925"W	0.00	0.00	0.00	
16328.00†	90.000	179.668	7658.43	8875.27	-8874.34	186.80	546901.79	378367.46	32°02'24.5633"N	104°10'55.0874"W	0.00	0.00	0.00	
16428.00†	90.000	179.668	7658.43	8975.27	-8974.34	187.38	546902.37	378267.47	32°02'23.5738"N	104°10'55.0823"W	0.00	0.00	0.00	
16528.00†	90.000	179.668	7658.43	9075.27	-9074.34	187.96	546902.95	378167.48	32°02'22.5842"N	104°10'55.0772"W	0.00	0.00	0.00	



Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 53H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 53H PWB
Slot	Cicada Unit No. 53H		

WELLPATH DATA (198 stations) † = interpolated, ‡ = extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
16628.00†	90.000	179.668	7658.43	9175.27	-9174.34	188.54	546903.53	378067.49	32°02'21.5946"N	104°10'55.0721"W	0.00	0.00	0.00	
16728.00†	90.000	179.668	7658.43	9275.27	-9274.34	189.12	546904.10	377967.50	32°02'20.6051"N	104°10'55.0670"W	0.00	0.00	0.00	
16828.00†	90.000	179.668	7658.43	9375.27	-9374.34	189.70	546904.68	377867.51	32°02'19.6155"N	104°10'55.0619"W	0.00	0.00	0.00	
16928.00†	90.000	179.668	7658.43	9475.27	-9474.33	190.28	546905.26	377767.52	32°02'18.6259"N	104°10'55.0568"W	0.00	0.00	0.00	
17028.00†	90.000	179.668	7658.43	9575.27	-9574.33	190.86	546905.84	377667.53	32°02'17.6364"N	104°10'55.0517"W	0.00	0.00	0.00	
17128.00†	90.000	179.668	7658.43	9675.27	-9674.33	191.44	546906.42	377567.54	32°02'16.6468"N	104°10'55.0466"W	0.00	0.00	0.00	
17228.00†	90.000	179.668	7658.43	9775.27	-9774.33	192.02	546907.00	377467.55	32°02'15.6572"N	104°10'55.0415"W	0.00	0.00	0.00	
17328.00†	90.000	179.668	7658.43	9875.27	-9874.33	192.60	546907.58	377367.57	32°02'14.6677"N	104°10'55.0364"W	0.00	0.00	0.00	
17428.00†	90.000	179.668	7658.43	9975.27	-9974.33	193.18	546908.16	377267.58	32°02'13.6781"N	104°10'55.0313"W	0.00	0.00	0.00	
17528.00†	90.000	179.668	7658.43	10075.27	-10074.32	193.76	546908.74	377167.59	32°02'12.6885"N	104°10'55.0262"W	0.00	0.00	0.00	
17628.00†	90.000	179.668	7658.43	10175.27	-10174.32	194.34	546909.32	377067.60	32°02'11.6990"N	104°10'55.0211"W	0.00	0.00	0.00	
17728.00†	90.000	179.668	7658.43	10275.27	-10274.32	194.91	546909.90	376967.61	32°02'10.7094"N	104°10'55.0160"W	0.00	0.00	0.00	
17828.00†	90.000	179.668	7658.43	10375.27	-10374.32	195.49	546910.48	376867.62	32°02'9.7198"N	104°10'55.0109"W	0.00	0.00	0.00	
17928.00†	90.000	179.668	7658.43	10475.27	-10474.32	196.07	546911.06	376767.63	32°02'8.7303"N	104°10'55.0058"W	0.00	0.00	0.00	
18028.00†	90.000	179.668	7658.43	10575.27	-10574.32	196.65	546911.63	376667.64	32°02'7.7407"N	104°10'55.0007"W	0.00	0.00	0.00	
18128.00†	90.000	179.668	7658.43	10675.27	-10674.31	197.23	546912.21	376567.65	32°02'6.7511"N	104°10'54.9956"W	0.00	0.00	0.00	
18228.00†	90.000	179.668	7658.43	10775.27	-10774.31	197.81	546912.79	376467.66	32°02'5.7616"N	104°10'54.9905"W	0.00	0.00	0.00	
18263.67	90.000	179.668	7658.43‡	10810.94	-10809.98	198.02	546913.00	376432.00	32°02'5.4086"N	104°10'54.9886"W	0.00	0.00	0.00	PBHL (25' FSBL)

HOLE & CASING SECTIONS - Ref Wellbore: Cicada Unit No. 53H PWB      Ref Wellpath: Cicada Unit No. 53H Rev-A.0									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.375in Casing	28.00	450.00	422.00	28.00	450.00	0.00	0.00	0.00	0.00
9.625in Casing	28.00	6756.03	6728.03	28.00	6750.00	0.00	0.00	33.22	112.87
5.5in Casing	28.00	18263.67	18235.67	28.00	7658.43	0.00	0.00	-10809.98	198.02



Planned Wellpath Report

Cicada Unit No. 53H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 53H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 53H PWB
Slot	Cicada Unit No. 53H		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Cicada Unit No. 53H FTP	N/A	7658.43	-349.03	41.00	546756.00	386892.00	32°03'48.9295"N	104°10'56.6427"W	point
Cicada Unit No. 53H LTP	N/A	7658.43	-10734.97	198.02	546913.00	376507.00	32°02'6.1509"N	104°10'54.9874"W	point
1) Cicada Unit No. 53H MP	12996.10	7658.43	-5542.50	167.02	546882.00	381699.00	32°02'57.5347"N	104°10'55.2631"W	point
2) Cicada Unit No. 53H PBHL	18263.67	7658.43	-10809.98	198.02	546913.00	376432.00	32°02'5.4086"N	104°10'54.9886"W	point

SURVEY PROGRAM - Ref Wellbore: Cicada Unit No. 53H PWB    Ref Wellpath: Cicada Unit No. 53H Rev-A.0				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
28.00	450.00	OWSG MWD rev2 + HRGM		Cicada Unit No. 53H PWB
450.00	6800.00	OWSG MWD rev2 + HRGM		Cicada Unit No. 53H PWB
6800.00	18264.12	OWSG MWD rev2 + HRGM		Cicada Unit No. 53H PWB

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: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No.  6. If Indian, Allottee or Tribe Name  7. If Unit or CA Agreement, Name and No.  8. Lease Name and Well No.
2. Name of Operator		9. API Well No.
3a. Address	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.<br>2. A Drilling Plan.<br>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).<br>5. Operator certification.<br>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)



## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM I:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48( d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to an evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

0. SHL: SWSW / 248 FSL / 1218 FWL / TWSP: 26S / RANGE: 27E / SECTION: 3 / LAT: 32.064674 / LONG: -104.183026 ( TVD: 0 feet, MD: 0 feet )

PPP: NWNW / 100 FNL / 1260 FWL / TWSP: 26S / RANGE: 27E / SECTION: 10 / LAT: 32.063714 / LONG: -104.182893 ( TVD: 7658 feet, MD: 7996 feet )

BHL: SWSW / 25 FSL / 1260 FWL / TWSP: 26S / RANGE: 27E / SECTION: 15 / LAT: 32.034958 / LONG: -104.182432 ( TVD: 7658 feet, MD: 18264 feet )

### BLM Point of Contact

Name: Candy Vigil

Title: LIE

Phone: (575) 234-5982

Email: cvigil@blm.gov

### **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

**OPERATOR'S NAME: CHEVRON USA INCORPORATED  
Lease Number: NMNM107369**

**CICADA UNIT 51H**

**Surface Hole Location: Sec. 3, T. 26 S., R. 27 E., 198' FSL & 1218' FWL**

**Bottom Hole Location: Sec. 15, T. 23 S., R. 27 E., 25' FSL & 330' FWL**

**CICADA UNIT 52H**

**Surface Hole Location: Sec. 3, T. 26 S., R. 27 E., 223' FSL & 1218' FWL**

**Bottom Hole Location: Sec. 15, T. 23 S., R. 27 E., 25' FSL & 792' FWL**

**CICADA UNIT 53H**

**Surface Hole Location: Sec. 3, T. 26 S., R. 27 E., 248' FSL & 1218' FWL**

**Bottom Hole Location: Sec. 15, T. 23 S., R. 27 E., 25' FSL & 1260' FWL**

**CICADA UNIT 54H**

**Surface Hole Location: Sec. 3, T. 26 S., R. 27 E., 273' FSL & 1218' FWL**

**Bottom Hole Location: Sec. 15, T. 23 S., R. 27 E., 25' FSL & 1716' FWL**

**CICADA UNIT 55H**

**Surface Hole Location: Sec. 3, T. 26 S., R. 27 E., 298' FSL & 1218' FWL**

**Bottom Hole Location: Sec. 15, T. 23 S., R. 27 E., 25' FSL & 2310' FWL**

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Cave/Karst
  - Watershed
  - Wildlife
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for

acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. SPECIAL REQUIREMENT(S)**

### **Cave and Karst Conditions of Approval for APDs**

\*\* Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

#### **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production:

##### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

##### **No Blasting:**

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

##### **Pad Berming:**

- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.
- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g., caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)
- Following a rain event, all fluids will vacuumed off of the pad and hauled off-site and disposed at a proper disposal facility.

##### **Tank Battery Liners and Berms:**

Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

**Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

**Automatic Shut-off Systems:**

Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

**Cave/Karst Subsurface Mitigation**

The following stipulations will be applied to protect cave/karst and ground water concerns:

**Rotary Drilling with Fresh Water:**

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

**Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

**Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

**Abandonment Cementing:**

Upon well abandonment in cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.



**Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

**FLOWLINES (SURFACE):**

- Flowlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize the possibility of leaks and spills from entering karst systems.
- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

**Watershed**

The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method could incorporate gauges

to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

## **F. EXCLOSURE FENCING (CELLARS & PITS)**

### **Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

## **G. ON LEASE ACCESS ROADS**

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### Turnouts

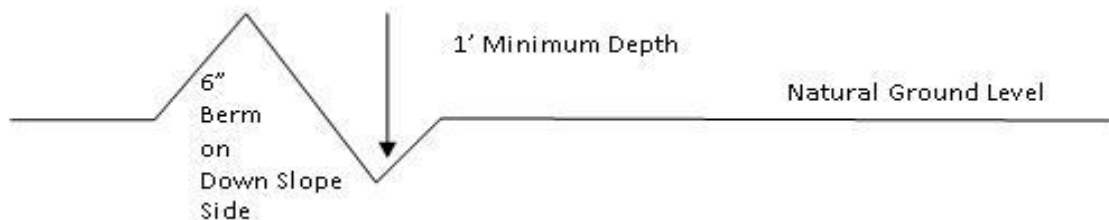
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

**Cross Section of a Typical Lead-off Ditch**



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

### Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

**Fence Requirement**

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

**Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

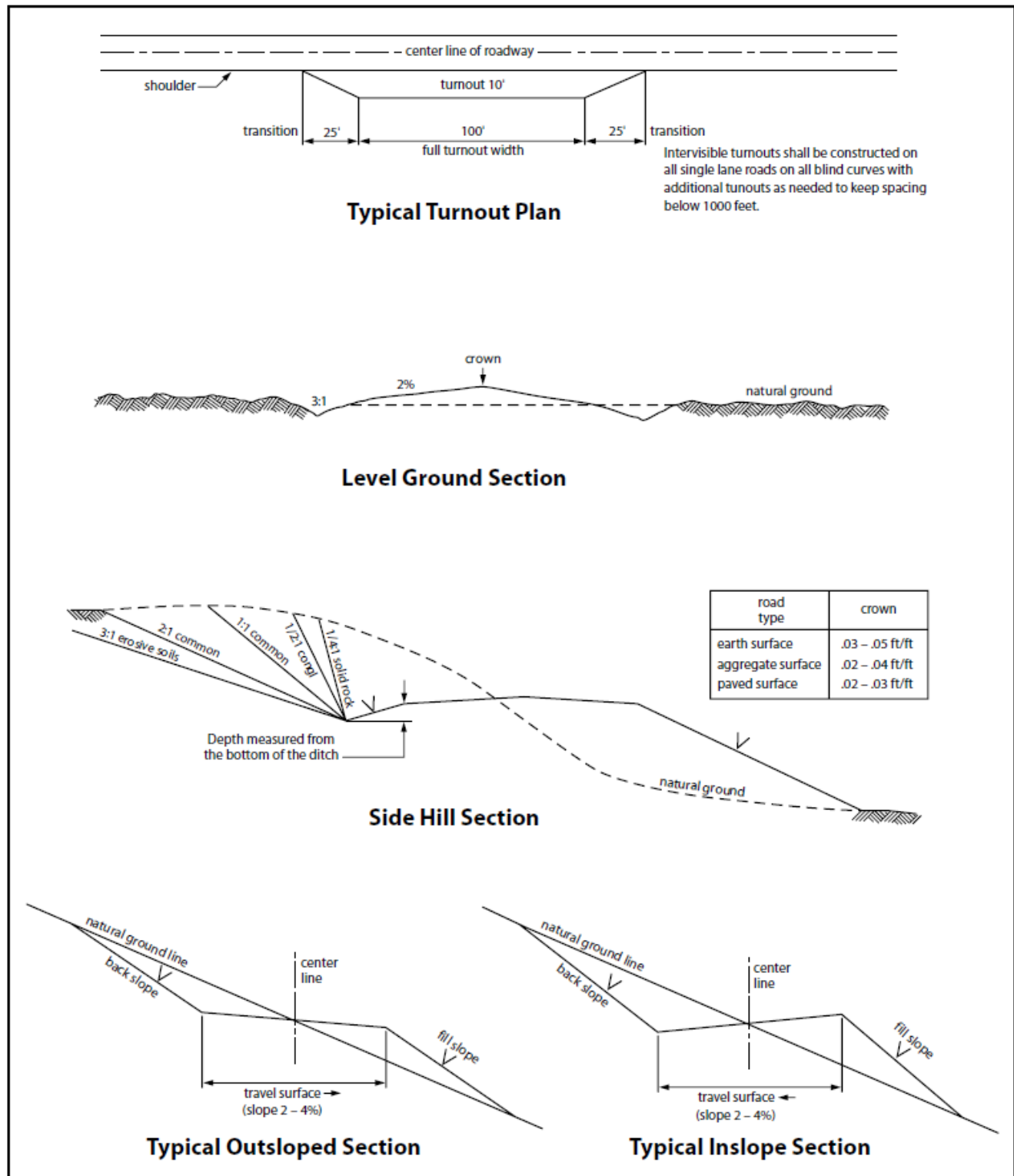


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VII. PRODUCTION (POST DRILLING)

### A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production



equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

## **B. PIPELINES**

### **STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq.* (1982) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (see 40 CFR, Part 702-799 and in particular, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms



are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way Holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way Holder on the Right-of-Way. This provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing
  - (2) Earth-disturbing and earth-moving work
  - (3) Blasting
  - (4) Vandalism and sabotage;

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized

right-of-way width of 20 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.

8. Holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than

routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

#### **STANDARD STIPULATIONS FOR BURIED PIPELINE STIPULATIONS**

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the

Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.)*)

*intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.)*

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- |                        |                             |
|------------------------|-----------------------------|
| (X) seed mixture 1     | ( ) seed mixture 3          |
| ( ) seed mixture 2     | ( ) seed mixture 4          |
| ( ) seed mixture 2/LPC | ( ) Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.



## STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.
5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy

Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation



measures will be made by the Authorized Officer after consulting with the holder.

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 11 for more information.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

11. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

12. Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

13. Special Stipulations:

For reclamation remove poles, lines, transformer, etc. and dispose of properly. Fill in any holes from the poles removed.

Oil and Gas Zone D - CCA Boundary requirements.

- Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization ("RAPPS")
- Comply with SPCC requirements in accordance with 40 CFR Part 112;
- Comply with the United States Army Corp of Engineers (USACE) Nationwide 12 General Permit, where applicable;
- Utilize technologies (like underground borings for pipelines), where feasible;
- Educate personnel, agents, contractors, and subcontractors about the requirements of conservation measures, COAs, Stips and provide direction in accordance with the Permit.

## **VIII. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **IX. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

### **Seed Mixture 1 for Loamy Sites**

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed shall be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	CHEVRON USA INCORPORATED
<b>LEASE NO.:</b>	NMNM121473
<b>LOCATION:</b>	Section 3, T.26 S., R.27 E., NMP
<b>COUNTY:</b>	Eddy County, New Mexico

<b>WELL NAME &amp; NO.:</b>	CICADA UNIT 51H
<b>SURFACE HOLE FOOTAGE:</b>	198'/S & 1218'/W
<b>BOTTOM HOLE FOOTAGE:</b>	25'/S & 330'/W

<b>WELL NAME &amp; NO.:</b>	CICADA UNIT 52H
<b>SURFACE HOLE FOOTAGE:</b>	223'/S & 1218'/W
<b>BOTTOM HOLE FOOTAGE:</b>	25'/S & 792'/W

<b>WELL NAME &amp; NO.:</b>	CICADA UNIT 53H
<b>SURFACE HOLE FOOTAGE:</b>	248'/S & 1218'/W
<b>BOTTOM HOLE FOOTAGE:</b>	25'/S & 1260'/W

<b>WELL NAME &amp; NO.:</b>	CICADA UNIT 54H
<b>SURFACE HOLE FOOTAGE:</b>	273'/S & 1218'/W
<b>BOTTOM HOLE FOOTAGE:</b>	25'/S & 1716'/W

<b>WELL NAME &amp; NO.:</b>	CICADA UNIT 55H
<b>SURFACE HOLE FOOTAGE:</b>	298'/S & 1218'/W
<b>BOTTOM HOLE FOOTAGE:</b>	25'/S & 2310'/W

COA

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

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen

Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

## **B. CASING**

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

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

2. The **9-5/8** inch intermediate casing shall be set at approximately **6540** feet. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

### **Option 1 (Single Stage):**

- 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.**

### **Option 2:**

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

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
  - b. Second stage above DV tool:
    - Cement to surface. If cement does not circulate, contact the appropriate BLM office.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
- ❖ In **Medium 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 **5-1/2** inch production casing is:

**Option 1 (Single Stage):**

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

**Option 2:**

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

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**C. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2.

**Option 1:**

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

**Option 2:**

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

**D. SPECIAL REQUIREMENT (S)**

**Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

**Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months.



## GENERAL REQUIREMENTS

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

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

☒ Eddy County

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

☒ Lea County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.



## A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

**B. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including

lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

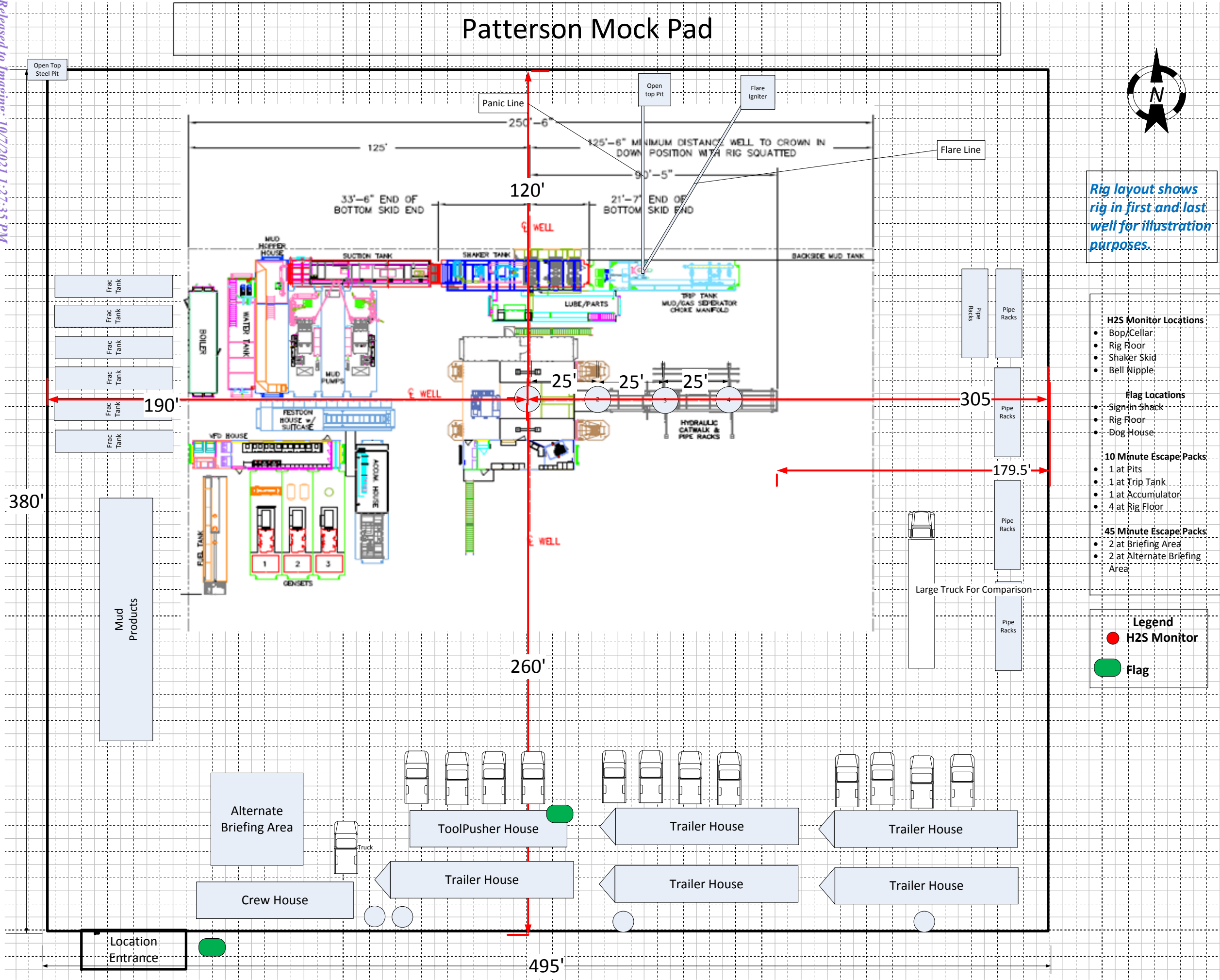
Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

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

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

**NMK01222021**





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

# Drilling Plan Data Report

09/29/2021

APD ID: 10400054489

Submission Date: 03/02/2020

Highlighted data  
reflects the most  
recent changes

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT

Well Number: 53H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
669712	SALADO	3230	726	728	ANHYDRITE, SALT	NONE	N
669729	LAMAR	947	2283	2290	LIMESTONE, SHALE	NONE	N
669713	BELL CANYON	917	2313	2320	LIMESTONE, SANDSTONE	NONE	N
669715	CHERRY CANYON	67	3163	3180	LIMESTONE, SANDSTONE, SILTSTONE	NONE	N
669716	BRUSHY CANYON	-1090	4320	4328	LIMESTONE, SANDSTONE, SHALE	NONE	N
669717	BONE SPRING LIME	-2726	5956	5970	SHALE, SILTSTONE	NONE	N
669727	AVALON SAND	-2840	6070	6080	SHALE	NONE	N
669719	BONE SPRING 1ST	-3614	6844	6850	SANDSTONE, SHALE	NONE	N
669720	BONE SPRING 2ND	-4176	7406	7435	SANDSTONE, SHALE	NONE	N
669723	BONE SPRING	-4428	7658	18264	SANDSTONE, SHALE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 7658

**Equipment:** Chevron will have a minimum of a 5,000 psi rig stack (see proposed schematic) 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

**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. Chevron also requests a variance to use a CoFlex hose with a metal protective covering that will be utilized



# BLOWOUT PREVENTER SCHEMATIC

Operation:

Intermediate &amp; Production Drilling Operations

Minimum System operation pressure

5,000 psi

## BOP Stack

Part	Size	Pressure Rating	Description
<b>A</b>	13-5/8"	N/A	Rotating Head/Bell nipple
<b>B</b>	13-5/8"	5,000	Annular
<b>C</b>	13-5/8"	10,000	Blind Ram
<b>D</b>	13-5/8"	10,000	Pipe Ram
<b>E</b>	13-5/8"	10,000	Mud Cross
<b>F</b>	13-5/8"	10,000	Pipe Ram

## Kill Line

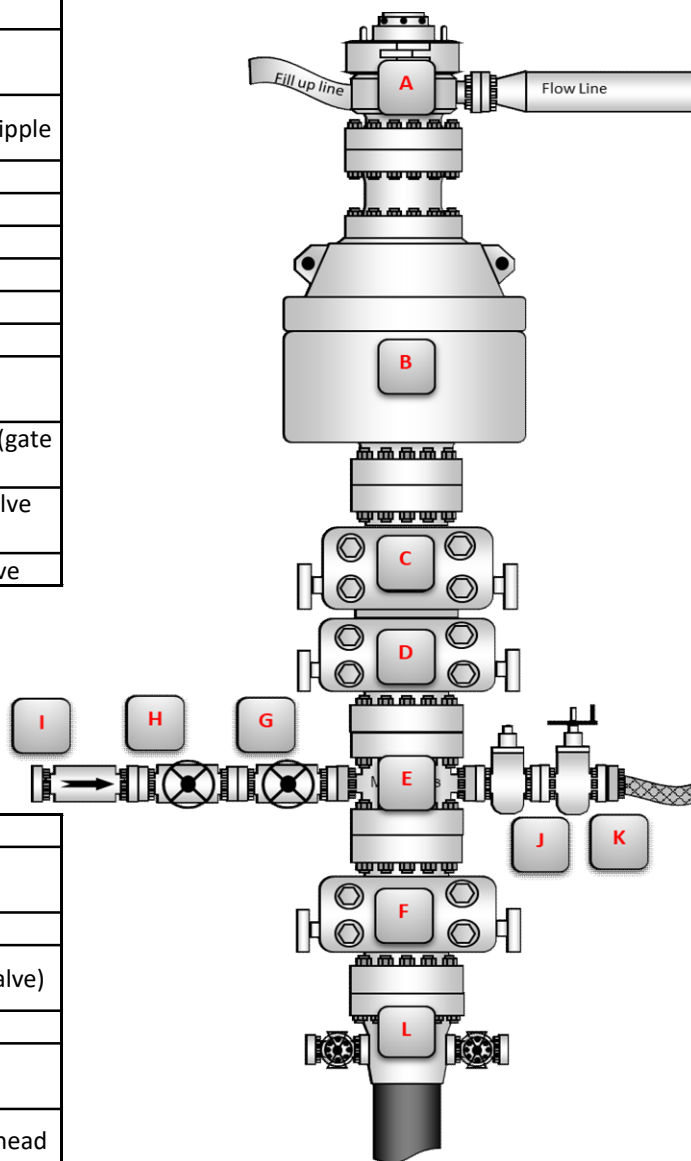
Part	Size	Pressure Rating	Description
<b>G</b>	2"	10,000	Inside Kill Line Valve (gate valve)
<b>H</b>	2"	10,000	Outside Kill Line Valve (gate valve)
<b>I</b>	2"	10,000	Kill Line Check valve

## Choke line

Part	Size	Pressure Rating	Description
<b>J</b>	3"	10,000	HCR (gate valve)
<b>K</b>	3"	10,000	Manual HCR (gate valve)

## Wellhead

Part	Size	Pressure Rating	Description
<b>L</b>	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.

# CHOKE MANIFOLD SCHEMATIC

Operation:

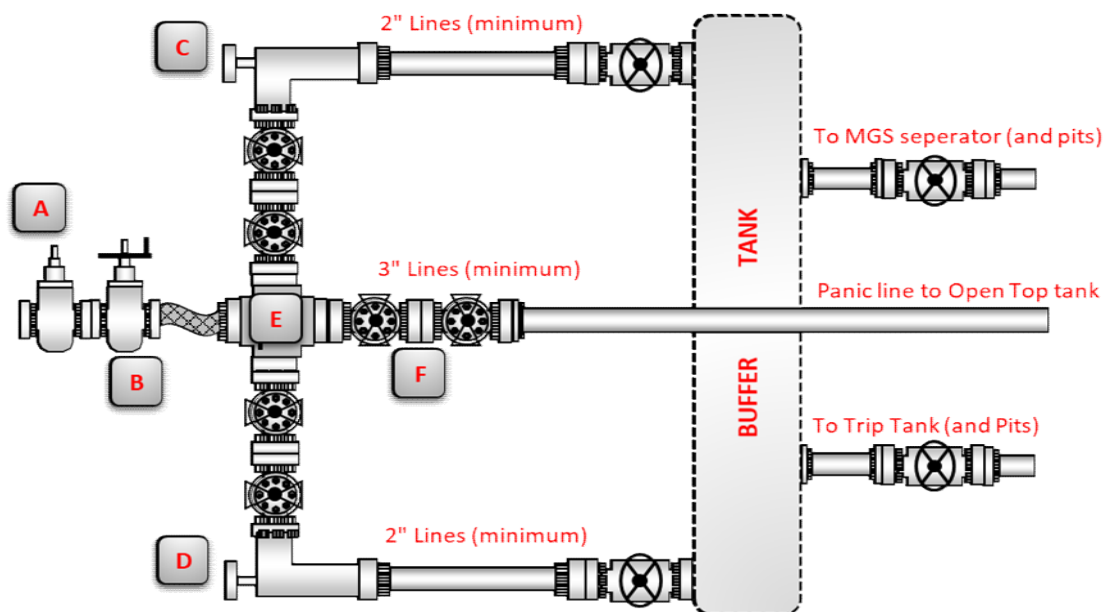
Intermediate &amp; Production

Minimum System operation pressure

5,000 psi

## Choke Manifold

Part	Size	Pressure Rating	Description
<b>A</b>	3"	10,000	HCR (remotely operated)
<b>B</b>	3"	10,000	HCR (manually operated)
<b>C</b>	2"	10,000	Remotely operated choke
<b>D</b>	2"	10,000	Adjustable choke
<b>E</b>	3"	10,000	Crown valve with pressure gage
<b>F</b>	3"	10,000	Panic line valves



### Choke Manifold 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.

Adjustable chokes may be remotely operated but will have backup hand pump for hydraulic actuation in case of loss of rig air or power.

Flare and panic lines will terminate a minimum of 150' from the wellhead. These lines will terminate at a location as per approved APD.

All valves (except chokes) on choke line, kill line and choke manifold will be full opening and will allow straight through flow. This excludes any valves between the mud gas separator and shale shakers.

All manual valves will have hand wheels installed.

Flare systems will have an effective method for ignition.

All connections will be flanged, welded or clamped

If buffer tank is used, a valve will be used on all lines at any entry or exit point to or from the buffer tank.



# BLOWOUT PREVENTER SCHEMATIC

Operation:

Intermediate &amp; Production

Minimum System operation pressure

5,000 psi

## Minimum Requirements

### Closing Unit and Accumulator Checklist

The following item must be performed, verified, and checked off at least once per well prior to low/high pressure testing of BOP equipment. This must be repeated after 6 months on the same well.

- ☐ Precharge pressure for each accumulator bottle must fall within the range below. Bottles may be further charged with nitrogen gas only. Tested precharge pressures must be recorded for each individual bottle and kept on location through the end of the well. Test will be conducted prior to connecting unit to BOP stack.

Check one that applies	Accumulator working pressure rating	Minimum acceptable operating pressure	Desired precharge pressure	Maximum acceptable precharge pressure	Minimum acceptable precharge pressure
<input type="checkbox"/>	1500 psi	1500 psi	750 psi	800 psi	700 psi
<input type="checkbox"/>	2000 psi	2000 psi	1000 psi	1100 psi	900 psi
<input type="checkbox"/>	3000 psi	3000 psi	1000 psi	1100 psi	900 psi

- ☐ Accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if used), close all rams, close the annular preventer, and retain a minimum of 200 psi above the maximum acceptable precharge pressure (see table above) on the closing manifold without the use of the closing pumps. This test will be performed with test pressure recorded and kept on location through the end of the well
- ☐ Accumulator fluid reservoir will be double the usable fluid volume of the accumulator system capacity. Fluid level will be maintained at manufacturer's recommendations. Usable fluid volume will be recorded. Reservoir capacity will be recorded. Reservoir fluid level will be recorded along with manufacturer's recommendation. All will be kept on location through the end of the well.
- ☐ Closing unit system will have two independent power sources (not counting accumulator bottles) to close the preventers.
- ☐ Power for the closing unit pumps will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure decreases to the pre-set level. It is recommended to check that air line to accumulator pump is "ON" during each tour change.
- ☐ With accumulator bottles isolated, closing unit will be capable of opening the hydraulically-operated choke line valve (if used) plus close the annular preventer on the smallest size drill pipe within 2 minutes and obtain a minimum of 200 psi above maximum acceptable precharge pressure (see table above) on the closing manifold. Test pressure and closing time will be recorded and kept on location through the end of the well.
- ☐ Master controls for the BOPE system will be located at the accumulator and will be capable of opening and closing all preventer and the choke line valve (if used)
- ☐ Remote controls for the BOPE system will be readily accessible (clear path) to the driller and located on the rig floor (not in the dog house). Remote controls will be capable of closing all preventers.
- ☐ Record accumulator tests in drilling reports and IADC sheet

### BOPE 5K Test Checklist

The following items must be checked off prior to beginning test:

- ☐ BLM will be given at least 4 hour notice prior to beginning BOPE testing.
- ☐ Valve on casing head below test plug will be open.
- ☐ Test will be performed using clear water.

The following items must be performed during the BOPE testing:

- ☐ BOPE will be pressure tested when initially installed, whenever any seal subject to test pressure is broken, following related repairs, and at a minimum of 30 day intervals. **Test pressure and times will be recorded by a 3<sup>rd</sup> party on a test charge and kept on location through the end of the well.**
- ☐ Test plug will be used.
- ☐ Ram type preventer and all related well control equipment will be tested to 250 psi (low) and 5,000 psi (high).
- ☐ Annular type preventer will be tested to 250 psi (low) and 3,500 psi (high).
- ☐ Valves will be tested from the working pressure side with all downstream valves open. The check valve will be held open to test the kill line valve(s).
- ☐ Each pressure test will be held for 10 minutes with no allowable leak off.
- ☐ Master controls and remote controls to the closing unit (accumulator) must be function tested as part of the BOPE test.
- ☐ Record BOP tests and pressures in drilling reports and IADC sheet.

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

COMMENTS  
  
Action 54070

COMMENTS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:
	4323
	Action Number:
	54070
Action Type:	
[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)	

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 10/7/2021	10/7/2021

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CONDITIONS

Action 54070

**CONDITIONS**

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 54070
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**CONDITIONS**

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	10/7/2021
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	10/7/2021
kpickford	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	10/7/2021
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	10/7/2021
kpickford	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	10/7/2021