

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 checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NMNM121473</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. <b>NMNM 137168X</b>
2. Name of Operator <b>CHEVRON USA INCORPORATED</b>		8. Lease Name and Well No. <b>CICADA UNIT</b> <b>52H</b>
3a. Address <b>6301 Deauville Blvd., Midland, TX 79706</b>	3b. Phone No. (include area code) <b>(432) 687-7866</b>	9. API Well No. <b>30 015 49000</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>SWSW / 223 FSL / 1218 FWL / LAT 32.064605 / LONG -104.183027</b> At proposed prod. zone <b>SWSW / 25 FSL / 792 FWL / LAT 32.034967 / LONG -104.183942</b>		10. Field and Pool, or Exploratory <b>WELCH/BONE SPRING</b>
11. Sec., T. R. M. or Blk. and Survey or Area <b>SEC 3/T26S/R27E/NMP</b>		
14. Distance in miles and direction from nearest town or post office* <b>12 miles</b>	12. County or Parish <b>EDDY</b>	13. State <b>NM</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>223 feet</b>	16. No of acres in lease <b>1920</b>	17. Spacing Unit dedicated to this well <b>640.0</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>385 feet</b>	19. Proposed Depth <b>8871 feet / 19743 feet</b>	20. BLM/BIA Bond No. in file <b>FED: ES0022</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3280 feet</b>	22. Approximate date work will start* <b>10/16/2020</b>	23. Estimated duration <b>147 days</b>

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)

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Well plat certified by a registered surveyor.</li> <li>2. A Drilling Plan.</li> <li>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).</li> </ul> | <ul style="list-style-type: none"> <li>4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).</li> <li>5. Operator certification.</li> <li>6. Such other site specific information and/or plans as may be requested by the BLM.</li> </ul> |
|---|---|

25. Signature (Electronic Submission)	Name (Printed/Typed) <b>Laura Becerra / Ph: (432) 687-7866</b>	Date <b>03/02/2020</b>
Title <b>Permitting Specialist</b>		
Approved by (Signature)	Name (Printed/Typed)	Date
Title <b>Office</b>		

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.

**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>7</sup> OGRID No. 4323	<sup>8</sup> Operator Name CHEVRON U.S.A. INC.	<sup>6</sup> Well Number 52H
		<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.		223'	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	792'	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.

PROPOSED FIRST TAKE POINT	
X= 546,288'	NAD 27
Y= 386,898'	
LAT. 32.063611° N	
LONG. 104.183912° W	
X= 587,472'	NAD83/86
Y= 386,956'	
LAT. 32.063733° N	
LONG. 104.184405° W	
PROPOSED MID POINT	
X= 546,414'	NAD 27
Y= 381,704'	
LAT. 32.049330° N	
LONG. 104.183528° W	
X= 587,598'	NAD83/86
Y= 381,761'	
LAT. 32.049453° N	
LONG. 104.184020° W	
PROPOSED LAST TAKE POINT	
X= 546,445'	NAD 27
Y= 376,510'	
LAT. 32.035051° N	
LONG. 104.183451° W	
X= 587,629'	NAD83/86
Y= 376,566'	
LAT. 32.035173° N	
LONG. 104.183943° W	

CICADA UNIT NO. 52H WELL	
X= 546,714'	NAD 27
Y= 387,216'	
LAT. 32.064483° N	
LONG. 104.182534° W	
X= 587,898'	NAD83/86
Y= 387,273'	
LAT. 32.064605° N	
LONG. 104.183027° W	
ELEV. +3280'	NAVD88

CORNER COORDINATES TABLE (NAD 27)	
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	

PROPOSED BOTTOM HOLE LOCATION	
X= 546,445'	NAD 27
Y= 376,434'	
LAT. 32.034844° N	
LONG. 104.183450° W	
X= 587,629'	NAD83/86
Y= 376,491'	
LAT. 32.034967° N	
LONG. 104.183942° W	

**<sup>17</sup> OPERATOR CERTIFICATION**

*I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.*

Signature 2/12/2020  
 Date

**Laura Becerra**  
 Printed Name  
**LBecerra@Chevron.com**  
 E-mail Address

**<sup>18</sup> SURVEYOR CERTIFICATION**

*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

11/14/2019  
Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number 12/04/2019

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: 10400054488

Submission Date: 03/02/2020

Highlighted data  
reflects the most  
recent changes

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT

Well Number: 52H

[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
669603	SALADO	3280	713	713	ANHYDRITE, SALT	NONE	N
669620	LAMAR	1007	2273	2280	LIMESTONE, SHALE	NONE	N
669604	BELL CANYON	977	2303	2312	LIMESTONE, SANDSTONE	NONE	N
669606	CHERRY CANYON	120	3160	3160	LIMESTONE, SANDSTONE, SILTSTONE	NONE	N
669607	BRUSHY CANYON	-1030	4310	4328	LIMESTONE, SANDSTONE, SHALE	NONE	N
669608	BONE SPRING LIME	-2667	5947	5970	SHALE, SILTSTONE	NONE	N
669618	AVALON SAND	-2780	6060	6080	SHALE	NONE	N
669610	BONE SPRING 1ST	-3555	6835	6855	SANDSTONE, SHALE	NONE	N
669611	BONE SPRING 2ND	-4016	7296	7310	SANDSTONE, SHALE	NONE	N
669614	BONE SPRING	-5591	8871	19743	SANDSTONE, SHALE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 8871

**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:** 52H

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

UHS\_Wellhead\_Design\_20200221125651.pdf

BOP\_Testing\_Procedure\_20200227065744.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	8370	0	8370		-5090	8370	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	19518	0	8871	3280	-5591	19518	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:** 52H

**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\_52H\_9Pt\_Drilling\_Plan\_20200226143814.pdf

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**Section 4 - Cement**

**Operator Name:** CHEVRON USA INCORPORATED

**Well Name:** CICADA UNIT

**Well Number:** 52H

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	492	1.33	14.8	654	50	CLASS C	Extender, Antifoam, Retarder
INTERMEDIATE	Lead		0	7370	1139	2.23	11.9	2539	10	Class C	Extender, Antifoam, Retarder, Viscosifier
INTERMEDIATE	Tail		7370	8370	287	1.33	14.8	382	10	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		8170	1851 8	2527	1.85	13.2	4676	10	CLASS H	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Tail		1851 8	1951 8	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

**Operator Name:** CHEVRON USA INCORPORATED

**Well Name:** CICADA UNIT

**Well Number:** 52H

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	8340	OTHER : BRINE/OBM	8.7	9.6							Viscosity: 26-36
8340	8871	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:** 2062

**Anticipated Surface Pressure:** 110

**Anticipated Bottom Hole Temperature(F):** 170

**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:** 52H

## 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\_52H\_Directional\_Survey\_20200221131209.pdf

CICADA\_UNIT\_52H\_C\_102\_Cert\_20200302085935.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. 52H Rev-A.0

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 52H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

## 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 14:35
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	25.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"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. 52H)	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. 52H Rev-A.0

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Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

WELLPATH DATA (210 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	330.727	0.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	
28.00	0.000	330.727	28.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	Tie On
128.00†	0.000	330.727	128.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	
228.00†	0.000	330.727	228.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	
328.00†	0.000	330.727	328.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	
428.00†	0.000	330.727	428.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	
528.00†	0.000	330.727	528.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	
628.00†	0.000	330.727	628.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	
650.00	0.000	330.727	650.00	0.00	0.00	0.00	546714.00	387216.00	32°03'52.1366"N	104°10'57.1255"W	0.00	0.00	0.00	Start Build
728.00†	1.170	330.727	727.99	-0.70	0.69	-0.39	546713.61	387216.69	32°03'52.1435"N	104°10'57.1301"W	1.50	1.50	0.00	
828.00†	2.670	330.727	827.94	-3.63	3.62	-2.03	546711.97	387219.62	32°03'52.1724"N	104°10'57.1490"W	1.50	1.50	0.00	
928.00†	4.170	330.727	927.75	-8.85	8.82	-4.94	546709.06	387224.82	32°03'52.2240"N	104°10'57.1829"W	1.50	1.50	0.00	
1028.00†	5.670	330.727	1027.38	-16.35	16.30	-9.14	546704.86	387232.30	32°03'52.2980"N	104°10'57.2315"W	1.50	1.50	0.00	
1116.67	7.000	330.727	1115.51	-24.92	24.84	-13.92	546700.08	387240.83	32°03'52.3826"N	104°10'57.2869"W	1.50	1.50	0.00	End Build
1128.00†	7.000	330.727	1126.76	-26.12	26.04	-14.60	546699.40	387242.04	32°03'52.3945"N	104°10'57.2947"W	0.00	0.00	0.00	
1228.00†	7.000	330.727	1226.01	-36.79	36.67	-20.56	546693.45	387252.67	32°03'52.4998"N	104°10'57.3638"W	0.00	0.00	0.00	
1328.00†	7.000	330.727	1325.26	-47.45	47.30	-26.52	546687.49	387263.30	32°03'52.6051"N	104°10'57.4329"W	0.00	0.00	0.00	
1428.00†	7.000	330.727	1424.52	-58.12	57.93	-32.47	546681.53	387273.93	32°03'52.7103"N	104°10'57.5020"W	0.00	0.00	0.00	
1528.00†	7.000	330.727	1523.77	-68.78	68.56	-38.43	546675.57	387284.56	32°03'52.8156"N	104°10'57.5710"W	0.00	0.00	0.00	
1628.00†	7.000	330.727	1623.03	-79.45	79.19	-44.39	546669.61	387295.19	32°03'52.9209"N	104°10'57.6401"W	0.00	0.00	0.00	
1728.00†	7.000	330.727	1722.28	-90.11	89.82	-50.35	546663.65	387305.82	32°03'53.0262"N	104°10'57.7092"W	0.00	0.00	0.00	
1828.00†	7.000	330.727	1821.54	-100.78	100.45	-56.31	546657.69	387316.45	32°03'53.1315"N	104°10'57.7783"W	0.00	0.00	0.00	
1928.00†	7.000	330.727	1920.79	-111.44	111.09	-62.27	546651.74	387327.08	32°03'53.2367"N	104°10'57.8473"W	0.00	0.00	0.00	
2028.00†	7.000	330.727	2020.05	-122.11	121.72	-68.23	546645.78	387337.70	32°03'53.3420"N	104°10'57.9164"W	0.00	0.00	0.00	
2128.00†	7.000	330.727	2119.30	-132.77	132.35	-74.19	546639.82	387348.33	32°03'53.4473"N	104°10'57.9855"W	0.00	0.00	0.00	
2228.00†	7.000	330.727	2218.56	-143.44	142.98	-80.15	546633.86	387358.96	32°03'53.5526"N	104°10'58.0546"W	0.00	0.00	0.00	
2328.00†	7.000	330.727	2317.81	-154.10	153.61	-86.11	546627.90	387369.59	32°03'53.6579"N	104°10'58.1236"W	0.00	0.00	0.00	
2428.00†	7.000	330.727	2417.07	-164.77	164.24	-92.07	546621.94	387380.22	32°03'53.7631"N	104°10'58.1927"W	0.00	0.00	0.00	
2528.00†	7.000	330.727	2516.32	-175.43	174.87	-98.03	546615.98	387390.85	32°03'53.8684"N	104°10'58.2618"W	0.00	0.00	0.00	
2628.00†	7.000	330.727	2615.57	-186.10	185.50	-103.98	546610.02	387401.48	32°03'53.9737"N	104°10'58.3309"W	0.00	0.00	0.00	



# Planned Wellpath Report

Cicada Unit No. 52H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 52H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

WELLPATH DATA (210 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
2728.00†	7.000	330.727	2714.83	-196.76	196.13	-109.94	546604.07	387412.11	32°03'54.0790"N	104°10'58.3999"W	0.00	0.00	0.00	
2828.00†	7.000	330.727	2814.08	-207.42	206.76	-115.90	546598.11	387422.74	32°03'54.1843"N	104°10'58.4690"W	0.00	0.00	0.00	
2928.00†	7.000	330.727	2913.34	-218.09	217.39	-121.86	546592.15	387433.37	32°03'54.2895"N	104°10'58.5381"W	0.00	0.00	0.00	
3028.00†	7.000	330.727	3012.59	-228.75	228.02	-127.82	546586.19	387444.00	32°03'54.3948"N	104°10'58.6072"W	0.00	0.00	0.00	
3128.00†	7.000	330.727	3111.85	-239.42	238.65	-133.78	546580.23	387454.63	32°03'54.5001"N	104°10'58.6762"W	0.00	0.00	0.00	
3228.00†	7.000	330.727	3211.10	-250.08	249.28	-139.74	546574.27	387465.26	32°03'54.6054"N	104°10'58.7453"W	0.00	0.00	0.00	
3272.80	7.000	330.727	3255.57	-254.86	254.05	-142.41	546571.60	387470.02	32°03'54.6525"N	104°10'58.7762"W	0.00	0.00	0.00	Start Drop
3328.00†	6.172	330.727	3310.40	-260.40	259.57	-145.50	546568.51	387475.54	32°03'54.7072"N	104°10'58.8121"W	1.50	-1.50	0.00	
3428.00†	4.672	330.727	3409.95	-268.67	267.81	-150.13	546563.89	387483.79	32°03'54.7889"N	104°10'58.8657"W	1.50	-1.50	0.00	
3528.00†	3.172	330.727	3509.72	-274.66	273.78	-153.47	546560.54	387489.75	32°03'54.8479"N	104°10'58.9045"W	1.50	-1.50	0.00	
3628.00†	1.672	330.727	3609.62	-278.35	277.46	-155.54	546558.48	387493.44	32°03'54.8844"N	104°10'58.9284"W	1.50	-1.50	0.00	
3728.00†	0.172	330.727	3709.61	-279.76	278.87	-156.32	546557.69	387494.84	32°03'54.8983"N	104°10'58.9375"W	1.50	-1.50	0.00	
3739.47	0.000	228.550	3721.07	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	1.50	-1.50	0.00	End Drop
3828.00†	0.000	228.550	3809.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
3928.00†	0.000	228.550	3909.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4028.00†	0.000	228.550	4009.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4128.00†	0.000	228.550	4109.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4228.00†	0.000	228.550	4209.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4328.00†	0.000	228.550	4309.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4428.00†	0.000	228.550	4409.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4528.00†	0.000	228.550	4509.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4628.00†	0.000	228.550	4609.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4728.00†	0.000	228.550	4709.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4828.00†	0.000	228.550	4809.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
4928.00†	0.000	228.550	4909.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5028.00†	0.000	228.550	5009.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5128.00†	0.000	228.550	5109.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5228.00†	0.000	228.550	5209.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5328.00†	0.000	228.550	5309.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5428.00†	0.000	228.550	5409.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	



# Planned Wellpath Report

Cicada Unit No. 52H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
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Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

**WELLPATH DATA (210 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	228.550	5509.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5628.00†	0.000	228.550	5609.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5728.00†	0.000	228.550	5709.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5828.00†	0.000	228.550	5809.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
5928.00†	0.000	228.550	5909.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6028.00†	0.000	228.550	6009.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6128.00†	0.000	228.550	6109.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6228.00†	0.000	228.550	6209.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6328.00†	0.000	228.550	6309.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6428.00†	0.000	228.550	6409.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6528.00†	0.000	228.550	6509.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6628.00†	0.000	228.550	6609.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6728.00†	0.000	228.550	6709.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6768.39	0.000	228.550	6750.00	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	9 5/8" Casing
6828.00†	0.000	228.550	6809.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
6928.00†	0.000	228.550	6909.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7028.00†	0.000	228.550	7009.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7128.00†	0.000	228.550	7109.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7228.00†	0.000	228.550	7209.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7328.00†	0.000	228.550	7309.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7428.00†	0.000	228.550	7409.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7528.00†	0.000	228.550	7509.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7628.00†	0.000	228.550	7609.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7728.00†	0.000	228.550	7709.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7828.00†	0.000	228.550	7809.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
7928.00†	0.000	228.550	7909.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
8028.00†	0.000	228.550	8009.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
8128.00†	0.000	228.550	8109.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
8228.00†	0.000	228.550	8209.61	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	
8238.84	0.000	228.550	8220.45	-279.78	278.88	-156.33	546557.68	387494.86	32°03'54.8985"N	104°10'58.9376"W	0.00	0.00	0.00	Curve KOP



# Planned Wellpath Report

Cicada Unit No. 52H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 52H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

WELLPATH DATA (210 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
8328.00†	8.916	228.550	8309.25	-275.22	274.30	-161.52	546552.49	387490.27	32°03'54.8532"N	104°10'58.9980"W	10.00	10.00	0.00	
8428.00†	18.916	228.550	8406.19	-259.43	258.40	-179.52	546534.49	387474.38	32°03'54.6961"N	104°10'59.2075"W	10.00	10.00	0.00	
8528.00†	28.916	228.550	8497.49	-232.80	231.60	-209.87	546504.15	387447.58	32°03'54.4313"N	104°10'59.5605"W	10.00	10.00	0.00	
8628.00†	38.916	228.550	8580.37	-196.15	194.71	-251.64	546462.38	387410.69	32°03'54.0668"N	104°11'0.0465"W	10.00	10.00	0.00	
8638.84	40.000	228.550	8588.74	-191.62	190.15	-256.80	546457.22	387406.13	32°03'54.0218"N	104°11'0.1066"W	10.00	10.00	0.00	Cont. Build/Start Turn
8728.00†	45.345	217.996	8654.35	-147.81	146.10	-297.89	546416.14	387362.09	32°03'53.5865"N	104°11'0.5847"W	10.00	5.99	-11.84	
8828.00†	52.278	208.396	8720.26	-85.07	83.12	-338.69	546375.34	387299.11	32°03'52.9638"N	104°11'1.0599"W	10.00	6.93	-9.60	
8928.00†	59.852	200.511	8776.10	-9.79	7.64	-372.74	546341.30	387223.64	32°03'52.2174"N	104°11'1.4567"W	10.00	7.57	-7.89	
9028.00†	67.829	193.782	8820.19	75.74	-78.04	-398.98	546315.05	387137.96	32°03'51.3698"N	104°11'1.7631"W	10.00	7.98	-6.73	
9128.00†	76.052	187.789	8851.19	168.92	-171.33	-416.64	546297.40	387044.69	32°03'50.4469"N	104°11'1.9697"W	10.00	8.22	-5.99	
9228.00†	84.411	182.214	8868.16	266.93	-269.38	-425.16	546288.88	386946.64	32°03'49.4768"N	104°11'2.0702"W	10.00	8.36	-5.58	
9294.47	90.000	178.610	8871.40	333.28	-335.73	-425.63	546288.41	386880.30	32°03'48.8201"N	104°11'2.0768"W	10.00	8.41	-5.42	End Build/Turn - Landing
9328.00†	90.000	178.610	8871.40	366.80	-369.25	-424.81	546289.22	386846.78	32°03'48.4884"N	104°11'2.0679"W	0.00	0.00	0.00	
9428.00†	90.000	178.610	8871.40	466.78	-469.22	-422.39	546291.65	386746.82	32°03'47.4991"N	104°11'2.0413"W	0.00	0.00	0.00	
9528.00†	90.000	178.610	8871.40	566.76	-569.19	-419.96	546294.08	386646.86	32°03'46.5098"N	104°11'2.0147"W	0.00	0.00	0.00	
9628.00†	90.000	178.610	8871.40	666.75	-669.16	-417.54	546296.50	386546.90	32°03'45.5205"N	104°11'1.9882"W	0.00	0.00	0.00	
9728.00†	90.000	178.610	8871.40	766.73	-769.13	-415.11	546298.93	386446.94	32°03'44.5312"N	104°11'1.9616"W	0.00	0.00	0.00	
9828.00†	90.000	178.610	8871.40	866.71	-869.10	-412.69	546301.35	386346.97	32°03'43.5419"N	104°11'1.9350"W	0.00	0.00	0.00	
9928.00†	90.000	178.610	8871.40	966.70	-969.08	-410.26	546303.78	386247.01	32°03'42.5526"N	104°11'1.9084"W	0.00	0.00	0.00	
10028.00†	90.000	178.610	8871.40	1066.68	-1069.05	-407.84	546306.20	386147.05	32°03'41.5633"N	104°11'1.8819"W	0.00	0.00	0.00	
10128.00†	90.000	178.610	8871.40	1166.66	-1169.02	-405.41	546308.63	386047.09	32°03'40.5739"N	104°11'1.8553"W	0.00	0.00	0.00	
10228.00†	90.000	178.610	8871.40	1266.64	-1268.99	-402.98	546311.05	385947.13	32°03'39.5846"N	104°11'1.8287"W	0.00	0.00	0.00	
10328.00†	90.000	178.610	8871.40	1366.63	-1368.96	-400.56	546313.48	385847.17	32°03'38.5953"N	104°11'1.8021"W	0.00	0.00	0.00	
10428.00†	90.000	178.610	8871.40	1466.61	-1468.93	-398.13	546315.90	385747.20	32°03'37.6060"N	104°11'1.7756"W	0.00	0.00	0.00	
10528.00†	90.000	178.610	8871.40	1566.59	-1568.90	-395.71	546318.33	385647.24	32°03'36.6167"N	104°11'1.7490"W	0.00	0.00	0.00	
10628.00†	90.000	178.610	8871.40	1666.58	-1668.87	-393.28	546320.75	385547.28	32°03'35.6274"N	104°11'1.7224"W	0.00	0.00	0.00	
10728.00†	90.000	178.610	8871.40	1766.56	-1768.84	-390.86	546323.18	385447.32	32°03'34.6381"N	104°11'1.6958"W	0.00	0.00	0.00	
10828.00†	90.000	178.610	8871.40	1866.54	-1868.81	-388.43	546325.60	385347.36	32°03'33.6487"N	104°11'1.6693"W	0.00	0.00	0.00	
10928.00†	90.000	178.610	8871.40	1966.52	-1968.78	-386.01	546328.03	385247.40	32°03'32.6594"N	104°11'1.6427"W	0.00	0.00	0.00	
11028.00†	90.000	178.610	8871.40	2066.51	-2068.75	-383.58	546330.45	385147.44	32°03'31.6701"N	104°11'1.6161"W	0.00	0.00	0.00	



# Planned Wellpath Report

Cicada Unit No. 52H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 52H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

WELLPATH DATA (210 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
11128.00†	90.000	178.610	8871.40	2166.49	-2168.72	-381.15	546332.88	385047.47	32°03'30.6808"N	104°11'1.5895"W	0.00	0.00	0.00	
11228.00†	90.000	178.610	8871.40	2266.47	-2268.69	-378.73	546335.31	384947.51	32°03'29.6915"N	104°11'1.5630"W	0.00	0.00	0.00	
11328.00†	90.000	178.610	8871.40	2366.46	-2368.66	-376.30	546337.73	384847.55	32°03'28.7022"N	104°11'1.5364"W	0.00	0.00	0.00	
11428.00†	90.000	178.610	8871.40	2466.44	-2468.63	-373.88	546340.16	384747.59	32°03'27.7129"N	104°11'1.5098"W	0.00	0.00	0.00	
11528.00†	90.000	178.610	8871.40	2566.42	-2568.60	-371.45	546342.58	384647.63	32°03'26.7235"N	104°11'1.4832"W	0.00	0.00	0.00	
11628.00†	90.000	178.610	8871.40	2666.41	-2668.57	-369.03	546345.01	384547.67	32°03'25.7342"N	104°11'1.4567"W	0.00	0.00	0.00	
11728.00†	90.000	178.610	8871.40	2766.39	-2768.55	-366.60	546347.43	384447.70	32°03'24.7449"N	104°11'1.4301"W	0.00	0.00	0.00	
11828.00†	90.000	178.610	8871.40	2866.37	-2868.52	-364.18	546349.86	384347.74	32°03'23.7556"N	104°11'1.4035"W	0.00	0.00	0.00	
11928.00†	90.000	178.610	8871.40	2966.35	-2968.49	-361.75	546352.28	384247.78	32°03'22.7663"N	104°11'1.3770"W	0.00	0.00	0.00	
12028.00†	90.000	178.610	8871.40	3066.34	-3068.46	-359.33	546354.71	384147.82	32°03'21.7770"N	104°11'1.3504"W	0.00	0.00	0.00	
12128.00†	90.000	178.610	8871.40	3166.32	-3168.43	-356.90	546357.13	384047.86	32°03'20.7877"N	104°11'1.3238"W	0.00	0.00	0.00	
12228.00†	90.000	178.610	8871.40	3266.30	-3268.40	-354.47	546359.56	383947.90	32°03'19.7984"N	104°11'1.2972"W	0.00	0.00	0.00	
12328.00†	90.000	178.610	8871.40	3366.29	-3368.37	-352.05	546361.98	383847.94	32°03'18.8090"N	104°11'1.2707"W	0.00	0.00	0.00	
12428.00†	90.000	178.610	8871.40	3466.27	-3468.34	-349.62	546364.41	383747.97	32°03'17.8197"N	104°11'1.2441"W	0.00	0.00	0.00	
12528.00†	90.000	178.610	8871.40	3566.25	-3568.31	-347.20	546366.83	383648.01	32°03'16.8304"N	104°11'1.2175"W	0.00	0.00	0.00	
12628.00†	90.000	178.610	8871.40	3666.23	-3668.28	-344.77	546369.26	383548.05	32°03'15.8411"N	104°11'1.1910"W	0.00	0.00	0.00	
12728.00†	90.000	178.610	8871.40	3766.22	-3768.25	-342.35	546371.68	383448.09	32°03'14.8518"N	104°11'1.1644"W	0.00	0.00	0.00	
12828.00†	90.000	178.610	8871.40	3866.20	-3868.22	-339.92	546374.11	383348.13	32°03'13.8625"N	104°11'1.1378"W	0.00	0.00	0.00	
12928.00†	90.000	178.610	8871.40	3966.18	-3968.19	-337.50	546376.54	383248.17	32°03'12.8731"N	104°11'1.1112"W	0.00	0.00	0.00	
13028.00†	90.000	178.610	8871.40	4066.17	-4068.16	-335.07	546378.96	383148.20	32°03'11.8838"N	104°11'1.0847"W	0.00	0.00	0.00	
13128.00†	90.000	178.610	8871.40	4166.15	-4168.13	-332.64	546381.39	383048.24	32°03'10.8945"N	104°11'1.0581"W	0.00	0.00	0.00	
13228.00†	90.000	178.610	8871.40	4266.13	-4268.10	-330.22	546383.81	382948.28	32°03'9.9052"N	104°11'1.0315"W	0.00	0.00	0.00	
13328.00†	90.000	178.610	8871.40	4366.11	-4368.07	-327.79	546386.24	382848.32	32°03'8.9159"N	104°11'1.0050"W	0.00	0.00	0.00	
13428.00†	90.000	178.610	8871.40	4466.10	-4468.05	-325.37	546388.66	382748.36	32°03'7.9266"N	104°11'0.9784"W	0.00	0.00	0.00	
13528.00†	90.000	178.610	8871.40	4566.08	-4568.02	-322.94	546391.09	382648.40	32°03'6.9373"N	104°11'0.9518"W	0.00	0.00	0.00	
13628.00†	90.000	178.610	8871.40	4666.06	-4667.99	-320.52	546393.51	382548.44	32°03'5.9479"N	104°11'0.9252"W	0.00	0.00	0.00	
13728.00†	90.000	178.610	8871.40	4766.05	-4767.96	-318.09	546395.94	382448.47	32°03'4.9586"N	104°11'0.8987"W	0.00	0.00	0.00	
13828.00†	90.000	178.610	8871.40	4866.03	-4867.93	-315.67	546398.36	382348.51	32°03'3.9693"N	104°11'0.8721"W	0.00	0.00	0.00	
13928.00†	90.000	178.610	8871.40	4966.01	-4967.90	-313.24	546400.79	382248.55	32°03'2.9800"N	104°11'0.8455"W	0.00	0.00	0.00	
14028.00†	90.000	178.610	8871.40	5065.99	-5067.87	-310.81	546403.21	382148.59	32°03'1.9907"N	104°11'0.8190"W	0.00	0.00	0.00	



# Planned Wellpath Report

Cicada Unit No. 52H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 52H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

WELLPATH DATA (210 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
14128.00†	90.000	178.610	8871.40	5165.98	-5167.84	-308.39	546405.64	382048.63	32°03'1.0014"N	104°11'0.7924"W	0.00	0.00	0.00	
14228.00†	90.000	178.610	8871.40	5265.96	-5267.81	-305.96	546408.06	381948.67	32°03'0.0121"N	104°11'0.7658"W	0.00	0.00	0.00	
14328.00†	90.000	178.610	8871.40	5365.94	-5367.78	-303.54	546410.49	381848.70	32°02'59.0227"N	104°11'0.7393"W	0.00	0.00	0.00	
14428.00†	90.000	178.610	8871.40	5465.93	-5467.75	-301.11	546412.91	381748.74	32°02'58.0334"N	104°11'0.7127"W	0.00	0.00	0.00	
14472.76	90.000	178.610	8871.40†	5510.68	-5512.50	-300.03	546414.00	381704.00	32°02'57.5906"N	104°11'0.7008"W	0.00	0.00	0.00	Start Turn
14525.67	90.000	179.668	8871.40	5563.58	-5565.40	-299.23	546414.79	381651.10	32°02'57.0671"N	104°11'0.6924"W	2.00	0.00	2.00	End Turn
14528.00†	90.000	179.668	8871.40	5565.92	-5567.73	-299.22	546414.81	381648.77	32°02'57.0440"N	104°11'0.6923"W	0.00	0.00	0.00	
14628.00†	90.000	179.668	8871.40	5665.92	-5667.73	-298.64	546415.39	381548.78	32°02'56.0545"N	104°11'0.6872"W	0.00	0.00	0.00	
14728.00†	90.000	179.668	8871.40	5765.92	-5767.73	-298.06	546415.97	381448.79	32°02'55.0649"N	104°11'0.6821"W	0.00	0.00	0.00	
14828.00†	90.000	179.668	8871.40	5865.92	-5867.73	-297.48	546416.54	381348.80	32°02'54.0753"N	104°11'0.6770"W	0.00	0.00	0.00	
14928.00†	90.000	179.668	8871.40	5965.92	-5967.72	-296.90	546417.12	381248.82	32°02'53.0858"N	104°11'0.6718"W	0.00	0.00	0.00	
15028.00†	90.000	179.668	8871.40	6065.92	-6067.72	-296.32	546417.70	381148.83	32°02'52.0962"N	104°11'0.6667"W	0.00	0.00	0.00	
15128.00†	90.000	179.668	8871.40	6165.92	-6167.72	-295.75	546418.28	381048.84	32°02'51.1066"N	104°11'0.6616"W	0.00	0.00	0.00	
15228.00†	90.000	179.668	8871.40	6265.92	-6267.72	-295.17	546418.86	380948.85	32°02'50.1171"N	104°11'0.6565"W	0.00	0.00	0.00	
15328.00†	90.000	179.668	8871.40	6365.92	-6367.72	-294.59	546419.44	380848.86	32°02'49.1275"N	104°11'0.6514"W	0.00	0.00	0.00	
15428.00†	90.000	179.668	8871.40	6465.92	-6467.72	-294.01	546420.02	380748.87	32°02'48.1379"N	104°11'0.6463"W	0.00	0.00	0.00	
15528.00†	90.000	179.668	8871.40	6565.92	-6567.71	-293.43	546420.60	380648.88	32°02'47.1484"N	104°11'0.6412"W	0.00	0.00	0.00	
15628.00†	90.000	179.668	8871.40	6665.92	-6667.71	-292.85	546421.18	380548.89	32°02'46.1588"N	104°11'0.6360"W	0.00	0.00	0.00	
15728.00†	90.000	179.668	8871.40	6765.92	-6767.71	-292.27	546421.76	380448.90	32°02'45.1692"N	104°11'0.6309"W	0.00	0.00	0.00	
15828.00†	90.000	179.668	8871.40	6865.92	-6867.71	-291.69	546422.33	380348.91	32°02'44.1797"N	104°11'0.6258"W	0.00	0.00	0.00	
15928.00†	90.000	179.668	8871.40	6965.92	-6967.71	-291.11	546422.91	380248.92	32°02'43.1901"N	104°11'0.6207"W	0.00	0.00	0.00	
16028.00†	90.000	179.668	8871.40	7065.92	-7067.71	-290.53	546423.49	380148.93	32°02'42.2006"N	104°11'0.6156"W	0.00	0.00	0.00	
16128.00†	90.000	179.668	8871.40	7165.92	-7167.70	-289.96	546424.07	380048.94	32°02'41.2110"N	104°11'0.6105"W	0.00	0.00	0.00	
16228.00†	90.000	179.668	8871.40	7265.92	-7267.70	-289.38	546424.65	379948.95	32°02'40.2214"N	104°11'0.6054"W	0.00	0.00	0.00	
16328.00†	90.000	179.668	8871.40	7365.92	-7367.70	-288.80	546425.23	379848.97	32°02'39.2319"N	104°11'0.6002"W	0.00	0.00	0.00	
16428.00†	90.000	179.668	8871.40	7465.92	-7467.70	-288.22	546425.81	379748.98	32°02'38.2423"N	104°11'0.5951"W	0.00	0.00	0.00	
16528.00†	90.000	179.668	8871.40	7565.92	-7567.70	-287.64	546426.39	379648.99	32°02'37.2527"N	104°11'0.5900"W	0.00	0.00	0.00	
16628.00†	90.000	179.668	8871.40	7665.92	-7667.70	-287.06	546426.97	379549.00	32°02'36.2632"N	104°11'0.5849"W	0.00	0.00	0.00	
16728.00†	90.000	179.668	8871.40	7765.92	-7767.69	-286.48	546427.54	379449.01	32°02'35.2736"N	104°11'0.5798"W	0.00	0.00	0.00	
16828.00†	90.000	179.668	8871.40	7865.92	-7867.69	-285.90	546428.12	379349.02	32°02'34.2840"N	104°11'0.5747"W	0.00	0.00	0.00	



# Planned Wellpath Report

Cicada Unit No. 52H Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 52H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

WELLPATH DATA (210 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
16928.00†	90.000	179.668	8871.40	7965.92	-7967.69	-285.32	546428.70	379249.03	32°02'33.2945"N	104°11'0.5696"W	0.00	0.00	0.00	
17028.00†	90.000	179.668	8871.40	8065.92	-8067.69	-284.74	546429.28	379149.04	32°02'32.3049"N	104°11'0.5644"W	0.00	0.00	0.00	
17128.00†	90.000	179.668	8871.40	8165.92	-8167.69	-284.17	546429.86	379049.05	32°02'31.3153"N	104°11'0.5593"W	0.00	0.00	0.00	
17228.00†	90.000	179.668	8871.40	8265.92	-8267.69	-283.59	546430.44	378949.06	32°02'30.3258"N	104°11'0.5542"W	0.00	0.00	0.00	
17328.00†	90.000	179.668	8871.40	8365.92	-8367.68	-283.01	546431.02	378849.07	32°02'29.3362"N	104°11'0.5491"W	0.00	0.00	0.00	
17428.00†	90.000	179.668	8871.40	8465.92	-8467.68	-282.43	546431.60	378749.08	32°02'28.3466"N	104°11'0.5440"W	0.00	0.00	0.00	
17528.00†	90.000	179.668	8871.40	8565.92	-8567.68	-281.85	546432.18	378649.09	32°02'27.3571"N	104°11'0.5389"W	0.00	0.00	0.00	
17628.00†	90.000	179.668	8871.40	8665.92	-8667.68	-281.27	546432.75	378549.10	32°02'26.3675"N	104°11'0.5338"W	0.00	0.00	0.00	
17728.00†	90.000	179.668	8871.40	8765.92	-8767.68	-280.69	546433.33	378449.12	32°02'25.3779"N	104°11'0.5286"W	0.00	0.00	0.00	
17828.00†	90.000	179.668	8871.40	8865.92	-8867.68	-280.11	546433.91	378349.13	32°02'24.3884"N	104°11'0.5235"W	0.00	0.00	0.00	
17928.00†	90.000	179.668	8871.40	8965.92	-8967.67	-279.53	546434.49	378249.14	32°02'23.3988"N	104°11'0.5184"W	0.00	0.00	0.00	
18028.00†	90.000	179.668	8871.40	9065.92	-9067.67	-278.96	546435.07	378149.15	32°02'22.4092"N	104°11'0.5133"W	0.00	0.00	0.00	
18128.00†	90.000	179.668	8871.40	9165.92	-9167.67	-278.38	546435.65	378049.16	32°02'21.4197"N	104°11'0.5082"W	0.00	0.00	0.00	
18228.00†	90.000	179.668	8871.40	9265.92	-9267.67	-277.80	546436.23	377949.17	32°02'20.4301"N	104°11'0.5031"W	0.00	0.00	0.00	
18328.00†	90.000	179.668	8871.40	9365.92	-9367.67	-277.22	546436.81	377849.18	32°02'19.4405"N	104°11'0.4980"W	0.00	0.00	0.00	
18428.00†	90.000	179.668	8871.40	9465.92	-9467.67	-276.64	546437.39	377749.19	32°02'18.4510"N	104°11'0.4928"W	0.00	0.00	0.00	
18528.00†	90.000	179.668	8871.40	9565.92	-9567.66	-276.06	546437.96	377649.20	32°02'17.4614"N	104°11'0.4877"W	0.00	0.00	0.00	
18628.00†	90.000	179.668	8871.40	9665.92	-9667.66	-275.48	546438.54	377549.21	32°02'16.4718"N	104°11'0.4826"W	0.00	0.00	0.00	
18728.00†	90.000	179.668	8871.40	9765.92	-9767.66	-274.90	546439.12	377449.22	32°02'15.4823"N	104°11'0.4775"W	0.00	0.00	0.00	
18828.00†	90.000	179.668	8871.40	9865.92	-9867.66	-274.32	546439.70	377349.23	32°02'14.4927"N	104°11'0.4724"W	0.00	0.00	0.00	
18928.00†	90.000	179.668	8871.40	9965.92	-9967.66	-273.74	546440.28	377249.24	32°02'13.5031"N	104°11'0.4673"W	0.00	0.00	0.00	
19028.00†	90.000	179.668	8871.40	10065.92	-10067.66	-273.17	546440.86	377149.25	32°02'12.5136"N	104°11'0.4622"W	0.00	0.00	0.00	
19128.00†	90.000	179.668	8871.40	10165.92	-10167.65	-272.59	546441.44	377049.27	32°02'11.5240"N	104°11'0.4570"W	0.00	0.00	0.00	
19228.00†	90.000	179.668	8871.40	10265.92	-10267.65	-272.01	546442.02	376949.28	32°02'10.5344"N	104°11'0.4519"W	0.00	0.00	0.00	
19328.00†	90.000	179.668	8871.40	10365.92	-10367.65	-271.43	546442.60	376849.29	32°02'9.5449"N	104°11'0.4468"W	0.00	0.00	0.00	
19428.00†	90.000	179.668	8871.40	10465.92	-10467.65	-270.85	546443.17	376749.30	32°02'8.5553"N	104°11'0.4417"W	0.00	0.00	0.00	
19528.00†	90.000	179.668	8871.40	10565.92	-10567.65	-270.27	546443.75	376649.31	32°02'7.5657"N	104°11'0.4366"W	0.00	0.00	0.00	
19628.00†	90.000	179.668	8871.40	10665.92	-10667.65	-269.69	546444.33	376549.32	32°02'6.5762"N	104°11'0.4315"W	0.00	0.00	0.00	
19728.00†	90.000	179.668	8871.40	10765.92	-10767.64	-269.11	546444.91	376449.33	32°02'5.5866"N	104°11'0.4264"W	0.00	0.00	0.00	
19743.33	90.000	179.668	8871.40 <sup>‡</sup>	10781.25	-10782.97	-269.02	546445.00	376434.00	32°02'5.4349"N	104°11'0.4256"W	0.00	0.00	0.00	PBHL (25' FSBL)

HOLE & CASING SECTIONS - Ref Wellbore: Cicada Unit No. 52H PWB Ref Wellpath: Cicada Unit No. 52H 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	6768.39	6740.39	28.00	6750.00	0.00	0.00	278.88	-156.33
5.5in Casing	28.00	19743.33	19715.33	28.00	8871.40	0.00	0.00	-10782.97	-269.02

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Cicada Unit No. 52H FTP	N/A	8871.40	-318.03	-426.04	546288.00	386898.00	32°03'48.9953"N	104°11'2.0813"W	point
Cicada Unit No. 52H LTP	N/A	8871.40	-10706.97	-269.02	546445.00	376510.00	32°02'6.1870"N	104°11'0.4244"W	point
1) Cicada Unit No. 52H MP	14472.76	8871.40	-5512.50	-300.03	546414.00	381704.00	32°02'57.5906"N	104°11'0.7008"W	point
2) Cicada Unit No. 52H PBHL	19743.33	8871.40	-10782.97	-269.02	546445.00	376434.00	32°02'5.4349"N	104°11'0.4256"W	point



# Planned Wellpath Report

Cicada Unit No. 52H Rev-A.0

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	Chevron U.S.A. Inc.	Well	Cicada Unit No. 52H
Field	Purple Sage, Wolfcamp (Eddy Co., NM) NAD 27	API/Legal	
Facility	HNM Pkg 18	Wellbore	Cicada Unit No. 52H PWB
Slot	Cicada Unit No. 52H		

**SURVEY PROGRAM - Ref Wellbore: Cicada Unit No. 52H PWB Ref Wellpath: Cicada Unit No. 52H 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. 52H PWB
450.00	6800.00	OWSG MWD rev2 + HRGM		Cicada Unit No. 52H PWB
6800.00	19743.33	OWSG MWD rev2 + HRGM		Cicada Unit No. 52H PWB

## 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 **7370** 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

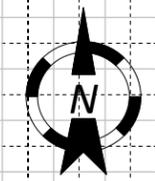
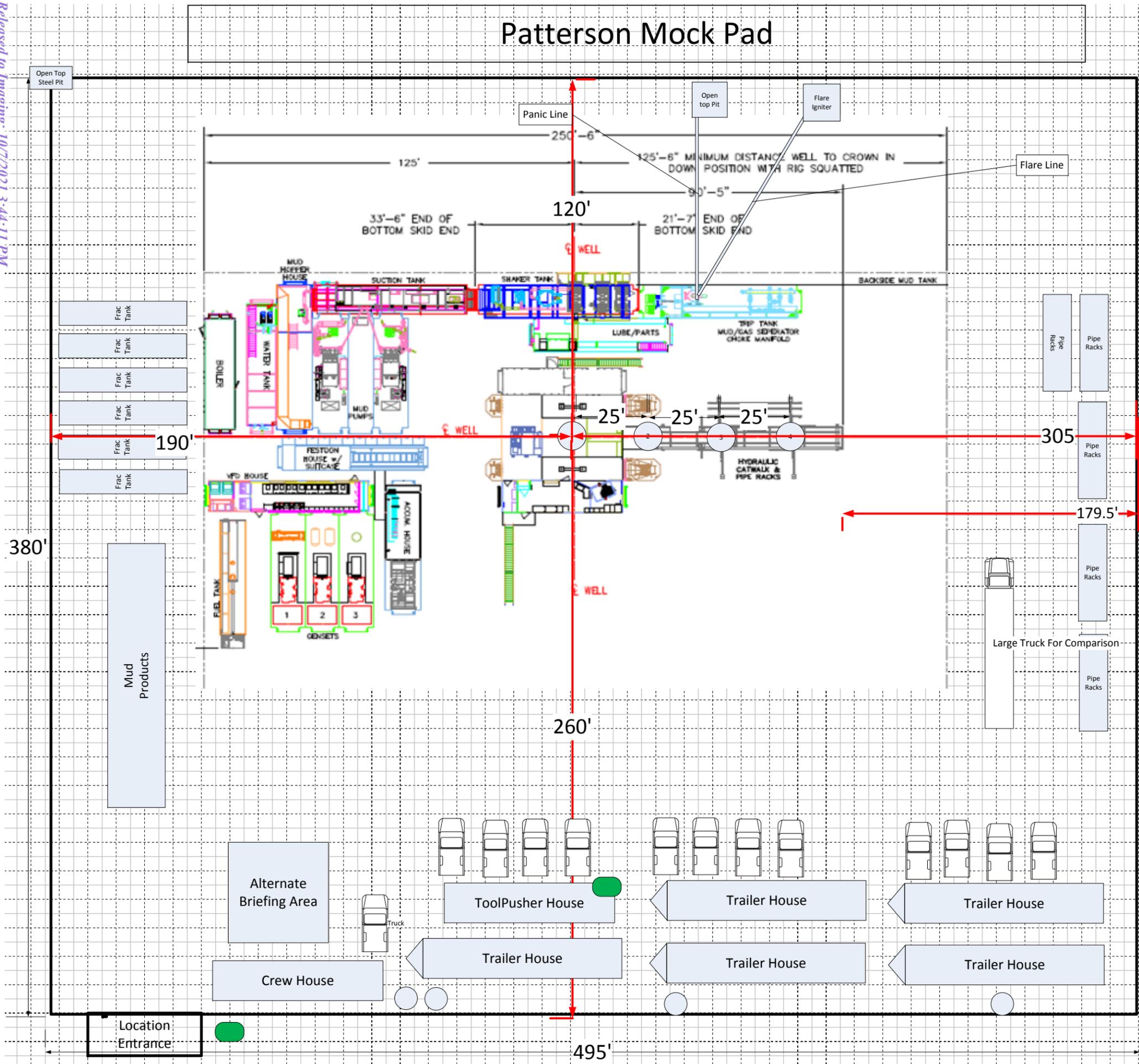
Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

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**



*Rig layout shows rig in first and last well for illustration purposes.*

- H2S Monitor Locations**
- Bop/Cellar
  - Rig Floor
  - Shaker Skid
  - Bell Nipple
- Flag Locations**
- Sign in Shack
  - Rig Floor
  - Dog House
- 10 Minute Escape Packs**
- 1 at Pits
  - 1 at Trip Tank
  - 1 at Accumulator
  - 4 at Rig Floor
- 45 Minute Escape Packs**
- 2 at Briefing Area
  - 2 at Alternate Briefing Area

**Legend**

- H2S Monitor
- Flag



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

# Drilling Plan Data Report

09/29/2021

APD ID: 10400054488

Submission Date: 03/02/2020

Highlighted data  
reflects the most  
recent changes

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT

Well Number: 52H

[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
669603	SALADO	3280	713	713	ANHYDRITE, SALT	NONE	N
669620	LAMAR	1007	2273	2280	LIMESTONE, SHALE	NONE	N
669604	BELL CANYON	977	2303	2312	LIMESTONE, SANDSTONE	NONE	N
669606	CHERRY CANYON	120	3160	3160	LIMESTONE, SANDSTONE, SILTSTONE	NONE	N
669607	BRUSHY CANYON	-1030	4310	4328	LIMESTONE, SANDSTONE, SHALE	NONE	N
669608	BONE SPRING LIME	-2667	5947	5970	SHALE, SILTSTONE	NONE	N
669618	AVALON SAND	-2780	6060	6080	SHALE	NONE	N
669610	BONE SPRING 1ST	-3555	6835	6855	SANDSTONE, SHALE	NONE	N
669611	BONE SPRING 2ND	-4016	7296	7310	SANDSTONE, SHALE	NONE	N
669614	BONE SPRING	-5591	8871	19743	SANDSTONE, SHALE	NATURAL GAS, OIL	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 8871

**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:** 52H

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

UHS\_Wellhead\_Design\_20200221125651.pdf

BOP\_Testing\_Procedure\_20200227065744.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	8370	0	8370		-5090	8370	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	19518	0	8871	3280	-5591	19518	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:** 52H

**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\_52H\_9Pt\_Drilling\_Plan\_20200226143814.pdf

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**Section 4 - Cement**

**Operator Name:** CHEVRON USA INCORPORATED

**Well Name:** CICADA UNIT

**Well Number:** 52H

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	492	1.33	14.8	654	50	CLASS C	Extender, Antifoam, Retarder
INTERMEDIATE	Lead		0	7370	1139	2.23	11.9	2539	10	Class C	Extender, Antifoam, Retarder, Viscosifier
INTERMEDIATE	Tail		7370	8370	287	1.33	14.8	382	10	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		8170	1851 8	2527	1.85	13.2	4676	10	CLASS H	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Tail		1851 8	1951 8	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

**Operator Name:** CHEVRON USA INCORPORATED

**Well Name:** CICADA UNIT

**Well Number:** 52H

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	8340	OTHER : BRINE/OBM	8.7	9.6							Viscosity: 26-36
8340	8871	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:** 2062

**Anticipated Surface Pressure:** 110

**Anticipated Bottom Hole Temperature(F):** 170

**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:** 52H

## 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\_52H\_Directional\_Survey\_20200221131209.pdf

CICADA\_UNIT\_52H\_C\_102\_Cert\_20200302085935.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

# BLOWOUT PREVENTER SCHEMATIC

Operation: Intermediate & Production Drilling Operations

Minimum System operation pressure 5,000 psi

### BOP Stack

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

### Kill Line

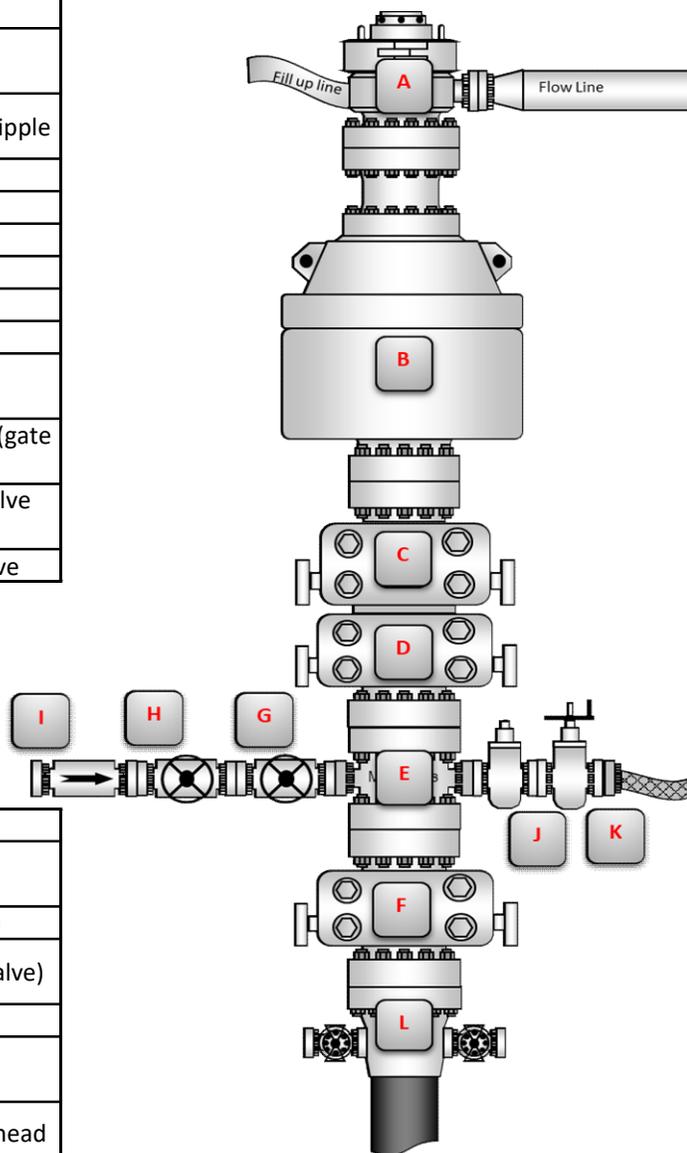
Part	Size	Pressure Rating	Description
G	2"	10,000	Inside Kill Line Valve (gate valve)
H	2"	10,000	Outside Kill Line Valve (gate valve)
I	2"	10,000	Kill Line Check valve

### Choke line

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

### Wellhead

Part	Size	Pressure Rating	Description
L	13-5/8"	5,000	FMC Multibowl wellhead



**BOP Installation Checklist:** *The following items must be verified and checked off prior to pressure testing BOP equipment*

The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.

All valves on the kill line and choke line will be full opening and will allow straight flow through.

Manual (hand wheels) or automatic locking devices will be installed on all ram preventers. Hand wheels will also be install on all manual valves on the choke and kill line.

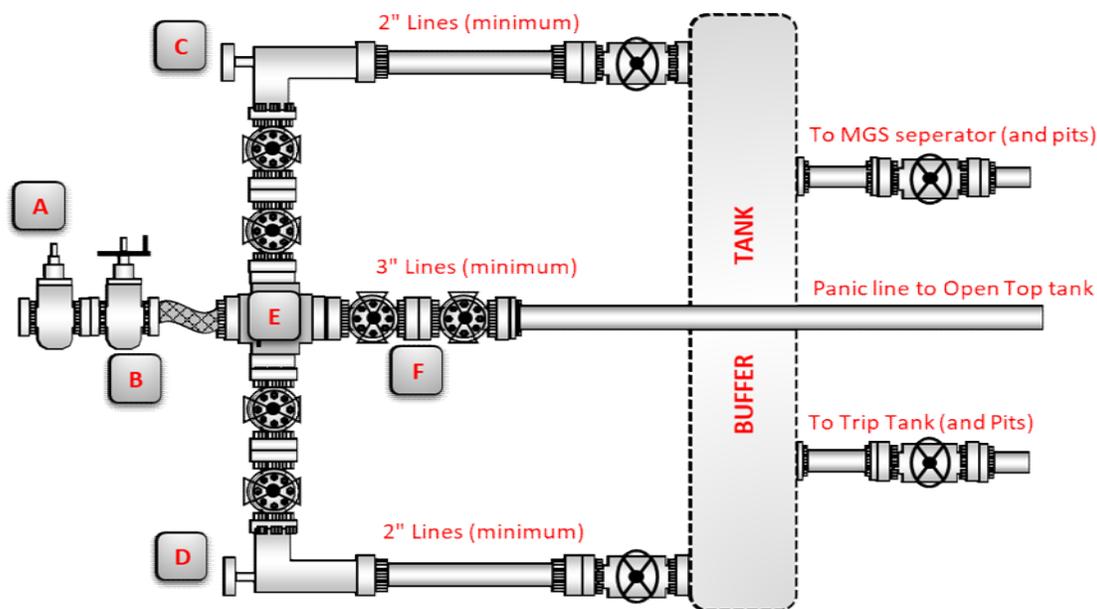
A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will remain open unless accumulator is inoperative.

Upper kelly cock valve with handle will be available on rig floor along with saved valve and subs to fit all drill string connections in use.

# CHOKE MANIFOLD SCHEMATIC

<b>Operation:</b>	<b>Intermediate &amp; Production</b>
<b>Minimum System operation pressure</b>	<b>5,000 psi</b>

<b>Choke Manifold</b>			
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



<b>Choke Manifold Installation Checklist:</b> <i>The following items must be verified and checked off prior to pressure testing BOP equipment</i>
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.

<b>BLOWOUT PREVENTER SCHEMATIC</b>	
Operation:	<b>Intermediate &amp; Production</b>
Minimum System operation pressure	<b>5,000 psi</b>

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

COMMENTS

Action 54058

**COMMENTS**

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 54058
	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  
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**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