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

5. Lease Serial No.
NMNM116028

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER
1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other
1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.
NMNM 137168A

8. Lease Name and Well No.
CICADA UNIT
59H

2. Name of Operator
CHEVRON USA INCORPORATED

9. API Well No.
30-015-49472

3a. Address
P O BOX 1635, HOUSTON, TX 77251

3b. Phone No. *(include area code)*
(661) 654-7256

10. Field and Pool, or Exploratory
PURPLE SAGE/WOLFCAMP GAS

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NWNW / 270 FNL / 1172 FWL / LAT 32.048958 / LONG -104.148503
At proposed prod. zone NENW / 50 FNL / 2310 FWL / LAT 32.078792 / LONG -104.144924

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 13/T26S/R27E/NMP

14. Distance in miles and direction from nearest town or post office*
11 miles

12. County or Parish
EDDY

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
270 feet

16. No of acres in lease

17. Spacing Unit dedicated to this well
640.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
500 feet

19. Proposed Depth
9450 feet / 19938 feet

20. BLM/BIA Bond No. in file
FED: ES0022

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3180 feet

22. Approximate date work will start*
01/09/2022

23. Estimated duration
147 days

24. Attachments

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

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

25. Signature
(Electronic Submission)

Name *(Printed/Typed)*
KAYLA MCCONNELL / Ph: (432) 687-7866

Date
07/20/2021

Title
Permitting Specialist

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Cody Layton / Ph: (575) 234-5959

Date
04/14/2022

Title
Assistant Field Manager Lands & Minerals

Office
Carlsbad Field Office

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

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 04/14/2022

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-49472	98220	PURPLE SAGE WOLFCAMP (GAS)

[4] Property Code	[5] Property Name	[6] Well Number
325142	CICADA UNIT	59H

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON U.S.A. INC.	3180'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	13	26 SOUTH	27 EAST, N.M.P.M.		270'	NORTH	1172'	WEST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	1	26 SOUTH	27 EAST, N.M.P.M.		50'	NORTH	2310'	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640	INFILL		R-14459, NMNM 137168A

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]

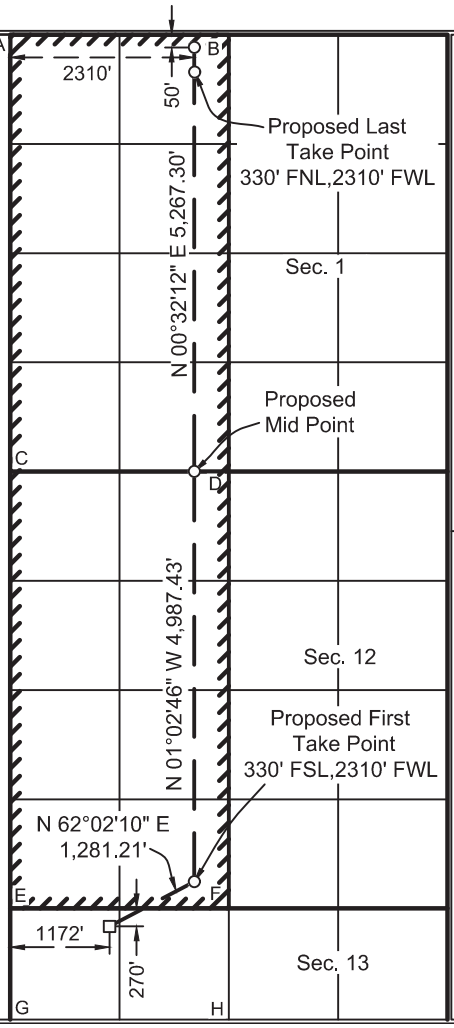
PROPOSED FIRST TAKE POINT		
X=	558,550'	NAD 27
Y=	382,142'	
LAT.	32.050482° N	
LONG.	104.144356° W	
X=	599,734'	NAD83/86
Y=	382,199'	
LAT.	32.050605° N	
LONG.	104.144847° W	
PROPOSED MID POINT		
X=	558,459'	NAD 27
Y=	387,128'	
LAT.	32.064191° N	
LONG.	104.144622° W	
X=	599,643'	NAD83/86
Y=	387,186'	
LAT.	32.064313° N	
LONG.	104.145113° W	
PROPOSED LAST TAKE POINT		
X=	558,505'	NAD 27
Y=	392,115'	
LAT.	32.077900° N	
LONG.	104.144443° W	
X=	599,689'	NAD83/86
Y=	392,173'	
LAT.	32.078023° N	
LONG.	104.144934° W	

CICADA UNIT NO. 59H WELL		
X=	557,418'	NAD 27
Y=	381,541'	
LAT.	32.048836° N	
LONG.	104.148012° W	
X=	598,602'	NAD83/86
Y=	381,598'	
LAT.	32.048958° N	
LONG.	104.148503° W	
ELEV.	+3180'	NAVD88

CORNER COORDINATES TABLE (NAD 27)

A-Y=392443.13,X=556198.44
B-Y=392445.78,X=558852.55
C-Y=387127.27,X=556148.39
D-Y=387128.55,X=558835.86
E-Y=381810.53,X=556245.48
F-Y=381811.95,X=558892.34
G-Y=380480.95,X=556247.03
H-Y=380482.26,X=558895.07

PROPOSED BOTTOM HOLE LOCATION		
X=	558,508'	NAD 27
Y=	392,395'	
LAT.	32.078670° N	
LONG.	104.144433° W	
X=	599,692'	NAD83/86
Y=	392,453'	
LAT.	32.078792° N	
LONG.	104.144924° W	



[17] OPERATOR CERTIFICATION

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

Kayla McConnell 7/7/2021
Signature Date

Kayla McConnell
Printed Name

gncv@chevron.com
E-mail Address

[18] 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.

06/21/2021
Date of Survey

Signature and Seal of Professional Surveyor:

STEVEN M. COLEMAN NEW MEXICO 22921 06/28/2021 PROFESSIONAL SURVEYOR

Certificate Number

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: Chevron USA Inc **OGRID:** 4323 **Date:** 03 / 17 / 2022

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
CICADA UNIT 56H	Pending	UL:D Sec 13, T26S – R27E	270' FNL, 1112' FWL	BBL/D	MCF/D	BBL/D
CICADA UNIT 57H	Pending	UL:D,Sec 13, T26S – R27E	270' FNL, 1132' FWL	BBL/D	MCF/D	BBL/D
CICADA UNIT 58H	Pending	UL:D,Sec 13, T26S – R27E	270' FNL, 1152' FWL	BBL/D	MCF/D	BBL/D
CICADA UNIT 59H	Pending	UL:D,Sec 13, T26S – R27E	270' FNL, 1172' FWL	BBL/D	MCF/D	BBL/D

IV. Central Delivery Point Name: _____ **HHNM CTB 12** _____ [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 56H	Pending		N/A	N/A	N/A	N/A
CICADA UNIT 57H	Pending		N/A	N/A	N/A	N.A
CICADA UNIT 58H	Pending		N/A	N/A	N/A	N/A
CICADA UNIT 59H	Pending		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:	Cindy Herrera-Murillo
Printed Name:	Cindy Herrera-Murillo
Title:	Sr HSE Regulatory affairs Coordinator
E-mail Address:	eeof@chevron.com
Date:	03/17/2022
Phone:	575-263-0431

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

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

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

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

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

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

5. Performance Standards

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

6. Measurement or Estimation of Vented and Flared Natural Gas

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

AFMSS

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

Drilling Plan Data Report
04/18/2022

APD ID: 10400077681 **Submission Date:** 07/20/2021

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT **Well Number:** 59H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
6629423	SALADO	3180	0	0	ANHYDRITE	NONE	N
6629428	BRUSHY CANYON	2700	480	4480	SHALE	NONE	N
6629435	CASTILE	2569	611	611	ANHYDRITE	NONE	N
6629425	LAMAR	834	2346	2346	SANDSTONE	NONE	N
6629426	BELL CANYON	799	2381	2381	SANDSTONE	NONE	N
6629427	CHERRY CANYON	-78	3258	3258	SANDSTONE	NONE	N
6629429	BONE SPRING LIME	-2893	6073	6073	SHALE	NONE	N
6629430	AVALON SAND	-2999	6179	6179	SHALE	NONE	N
6629431	BONE SPRING 1ST	-3782	6962	6962	SANDSTONE, SHALE	NONE	N
6629432	BONE SPRING 2ND	-4306	7486	7486	SANDSTONE, SHALE	NONE	N
6629433	BONE SPRING 3RD	-5368	8548	8548	SHALE	NONE	N
6629434	WOLFCAMP	-6270	9450	19938	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 9450

Equipment: Chevron will have a minimum of a 5,000 psi rig stack for drill out below surface casing. The stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, production, and production liner will take place. A full BOP test will be performed per hole section, unless approval from BLM is received otherwise (see variance request below). 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 is requesting the following variances: -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 nippled up and tested after cementing

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT **Well Number:** 59H

surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC Technologies and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal. All tests performed by third party. -A variance to use a CoFlex hose with a metal protective covering that will be utilized between the BOP and Choke manifold. Please refer to the attached testing and specification documents. -A variance from the Onshore Order 2 where it states: "(A full BOP Test) shall be performed: when initially installed and whenever any seal subject to test pressure is broken." We propose to break test if able to finish the next hole section within 21 days of the previous full BOP test. No BOP components nor any break will ever surpass 21 days between testing. A break test will consist of a 250 psi low / 5,000 psi high for 10 min each test against the connection that was broken when skidding the rig. Upon the first nipple up of the pad a full BOP test will be performed. A full BOP test will be completed prior to drilling the production liner hole sections, unless the BOP connection was not broken prior to drilling that hole section (example: drilling straight from production into production liner hole section). A break test will only be performed on operations where BLM documentation states a 5M or less BOP can be utilized.

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 a minimum of the high pressure indicated above. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed each hole section unless approval from the BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs). BOP test will be conducted by a third party.

Choke Diagram Attachment:

BLM_5M_Choke_Manifold_Diagram_20201023110238.pdf

BOP Diagram Attachment:

BLM_5M_Annular_10M_Rams_Stackup_and_Test_Plan_20201023110321.pdf

BLM_Choke_Hose_Test_Specs_and_Pressure_Test_Continental_20201023110337.pdf

NM_Slim_Hole_Wellhead_6650_psi_UH_S_20201023110414.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	3180	2730	450	J-55	54.5	BUTT	2.13	1.43	DRY	4.07	DRY	4.07
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2346	0	2346	3143	834	2346	L-80	40	OTHER - BTC/LTC	1.24	1.64	DRY	2.78	DRY	2.78
3	PRODUCTION	8.75	7.0	NEW	API	N	0	8548	0	8548	3143	-5368	8548	P-110	29	OTHER - BLUE	1.63	1.15	DRY	2.39	DRY	2.39
4	LINER	6.125	5.0	NEW	API	Y	8248	9048	8248	9048	-5068	-5868	800	P-110	18	OTHER - W513	1.39	1.1	DRY	1.32	DRY	1.32
5	LINER	6.125	4.5	NEW	API	N	9048	19938	9048	9048	-5868	-5868	10890	P-110	11.6	OTHER - W521	1.39	1.1	DRY	1.32	DRY	1.32

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT **Well Number:** 59H

Casing Attachments

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_20210719112510.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

9.625_40.0ppf_L80IC_BTC_20210719103701.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

7.0_29.0ppf_P110_TSH_Blue_20210719103743.pdf

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT **Well Number:** 59H

Casing Attachments

Casing ID: 4 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Cicada_Unit_No.59H_9pt_Drilling_Plan_20210720080612.pdf

Casing Design Assumptions and Worksheet(s):

5.0_18.0ppf_P110_W513_20210719103823.pdf

Casing ID: 5 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

4.5_11.6ppf_P110_TSH_W521_20210719103924.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	0	0	0	0	0		N/A	N/A
SURFACE	Tail		0	450	259	1.33	14.8	344	10	CLASS C	Extender, Antifoam, Retarder
INTERMEDIATE	Lead		0	1346	186	2.49	11.9	464	10	CLASS C	Extender, Antifoam, Retarder, Viscosifier
INTERMEDIATE	Tail		1346	2346	287	1.33	14.8	382	10	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		0	7548	560	2.2	11.9	1232	10	CLASS C	Extender, Antifoam, Retarder, Viscosifier

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT **Well Number:** 59H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		7548	8548	118	1.4	14.5	165	10	CLASS C	Extender, Antifoam, Retarder, Viscosifier
LINER	Lead		8348	19938	653	1.84	13.2	1201	10	CLASS C	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 porta-toilet and then hauled to an approved sanitary landfill. All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations. And transportating of E&P waste will follow EPA regulations and accompanying manifests.

Describe the mud monitoring system utilized: A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH. Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume. 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
0	450	SPUD MUD	8.3	9.1							VISCOSITY: 28-30 FILTRATE: N/C
450	2334	OTHER : BRINE	8.9	10.5							VISCOSITY: 26-36 FILTRATE: 15-25
2334	8534	OTHER : WBM/BRINE	8.7	9.6							VISCOSITY: 26-36 FILTRATE: 15-25

Operator Name: CHEVRON USA INCORPORATED

Well Name: CICADA UNIT **Well Number:** 59H

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
8534	19687	OIL-BASED MUD	8.7	13							VISCOSITY: 50-70 FILTRATE: 5-10 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:
Mudlogs Logs: 2 man mudlog Interval: Surf csg shoe through Prod hole TD Timing: While drilling or circulating
LWD Logs: MWD gamma Interval: Int. and Prod. Hole Timing: While drilling

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

GAMMA RAY 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: 4804 **Anticipated Surface Pressure:** 2725

Anticipated Bottom Hole Temperature(F): 150

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

Describe:

Contingency Plans geoharzards 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:** 59H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

CicadaUnit59H_Directional_20210720080957.pdf

Other proposed operations facets description:

Chevron formally requests authorization to use the spudder rig to spud the well and set surface and intermediate casing. The drilling rig will move in less than 90 days to continue drilling operations. Rig layouts attached.

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

Other proposed operations facets attachment:

H2S_Contingency_Plan_20201023121309.pdf

Rig_Layout_20201023120702.pdf

Other Variance attachment:

HHNM_Pkg_19___20___APD_Variance_20210719065839.pdf

CUSA_Spudder_Rig_Data_20201023121533.pdf

Schlumberger

Chevron

Cicada Unit 59H R0 mdv 09Jun21 Proposal Geodetic Report

(Def Plan)

Report Date:	June 17, 2021 - 04:47 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chevron	**Vertical Section Azimuth:**	359.770 ° (Grid North)
Field:	NM, Eddy County (NAD 27 EZ)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chevron Cicada Unit Pkg 19 / 59H	**TVD Reference Datum:**	RKB
Well:	Cicada Unit 59H	**TVD Reference Elevation:**	3208.000 ft above MSL
Borehole:	Cicada Unit 59H	**Seabed / Ground Elevation:**	3180.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.860 °
Survey Name:	Cicada Unit 59H R0 mdv 09Jun21	**Total Gravity Field Strength:**	998.4346mgn (9.80665 Based)
Survey Date:	June 10, 2021	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	121.827 ° / 11968.891 ft / 6.493 / 1.267	**Total Magnetic Field Strength:**	47592.490 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.633 °
Location Lat / Long:	N 32° 2' 55.80845", W 104° 8' 52.84555"	**Declination Date:**	June 10, 2021
Location Grid N/E Y/X:	N 381541.000 ftUS, E 557418.000 ftUS	**Magnetic Declination Model:**	HDGM 2021
CRS Grid Convergence Angle:	0.0983 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99991287	**Grid Convergence Used:**	0.0983 °
Version / Patch:	2.10.825.0	**Total Corr Mag North->Grid North:**	6.7619 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	381541.00	557418.00	N 32 2 55.81	W 104 8 52.85
	100.00	0.00	88.49	100.00	0.00	0.00	0.00	0.00	381541.00	557418.00	N 32 2 55.81	W 104 8 52.85
	200.00	0.00	88.49	200.00	0.00	0.00	0.00	0.00	381541.00	557418.00	N 32 2 55.81	W 104 8 52.85
	300.00	0.00	88.49	300.00	0.00	0.00	0.00	0.00	381541.00	557418.00	N 32 2 55.81	W 104 8 52.85
	400.00	0.00	88.49	400.00	0.00	0.00	0.00	0.00	381541.00	557418.00	N 32 2 55.81	W 104 8 52.85
Build 1.5°/100ft	500.00	0.00	88.49	500.00	0.00	0.00	0.00	0.00	381541.00	557418.00	N 32 2 55.81	W 104 8 52.85
	600.00	1.50	88.49	599.99	0.03	0.03	1.31	1.50	381541.03	557419.31	N 32 2 55.81	W 104 8 52.83
Castile (CSTL)	*639.03*	*2.09*	*88.49*	*639.00*	*0.06*	*0.07*	*2.53*	*1.50*	*381541.07*	*557420.53*	*N 32 2 55.81*	*W 104 8 52.82*
	700.00	3.00	88.49	699.91	0.12	0.14	5.23	1.50	381541.14	557423.23	N 32 2 55.81	W 104 8 52.78
	800.00	4.50	88.49	799.69	0.26	0.31	11.77	1.50	381541.31	557429.77	N 32 2 55.81	W 104 8 52.71
	900.00	6.00	88.49	899.27	0.47	0.55	20.92	1.50	381541.55	557438.92	N 32 2 55.81	W 104 8 52.60
	1000.00	7.50	88.49	998.57	0.73	0.86	32.67	1.50	381541.86	557450.66	N 32 2 55.82	W 104 8 52.47
	1100.00	9.00	88.49	1097.54	1.05	1.24	47.01	1.50	381542.24	557465.01	N 32 2 55.82	W 104 8 52.30
	1200.00	10.50	88.49	1196.09	1.43	1.69	63.94	1.50	381542.69	557481.93	N 32 2 55.82	W 104 8 52.10
	1300.00	12.00	88.49	1294.16	1.87	2.21	83.44	1.50	381543.21	557501.43	N 32 2 55.83	W 104 8 51.88
	1400.00	13.50	88.49	1391.70	2.37	2.79	105.50	1.50	381543.79	557523.49	N 32 2 55.83	W 104 8 51.62
	1500.00	15.00	88.49	1488.62	2.92	3.44	130.11	1.50	381544.44	557548.10	N 32 2 55.84	W 104 8 51.33
Hold	1500.05	15.00	88.49	1488.67	2.92	3.44	130.12	1.50	381544.44	557548.11	N 32 2 55.84	W 104 8 51.33
	1600.00	15.00	88.49	1585.21	3.50	4.12	155.98	0.00	381545.12	557573.97	N 32 2 55.85	W 104 8 51.03
	1700.00	15.00	88.49	1681.80	4.08	4.81	181.86	0.00	381545.81	557599.84	N 32 2 55.85	W 104 8 50.73
	1800.00	15.00	88.49	1778.39	4.66	5.49	207.73	0.00	381546.49	557625.71	N 32 2 55.86	W 104 8 50.43
	1900.00	15.00	88.49	1874.98	5.24	6.17	233.61	0.00	381547.17	557651.58	N 32 2 55.87	W 104 8 50.13
	2000.00	15.00	88.49	1971.58	5.82	6.86	259.48	0.00	381547.86	557677.46	N 32 2 55.87	W 104 8 49.83
	2100.00	15.00	88.49	2068.17	6.40	7.54	285.35	0.00	381548.54	557703.33	N 32 2 55.88	W 104 8 49.53
	2200.00	15.00	88.49	2164.76	6.98	8.23	311.23	0.00	381549.23	557729.20	N 32 2 55.88	W 104 8 49.23
	2300.00	15.00	88.49	2261.35	7.56	8.91	337.10	0.00	381549.91	557755.07	N 32 2 55.89	W 104 8 48.93
Lamar (LMAR)	*2364.76*	*15.00*	*88.49*	*2323.91*	*7.93*	*9.35*	*353.86*	*0.00*	*381550.35*	*557771.83*	*N 32 2 55.89*	*W 104 8 48.73*
	2400.00	15.00	88.49	2357.95	8.14	9.59	362.98	0.00	381550.59	557780.94	N 32 2 55.90	W 104 8 48.63
Bell Canyon (BLCN)	*2400.82*	*15.00*	*88.49*	*2358.74*	*8.14*	*9.60*	*363.19*	*0.00*	*381550.60*	*557781.16*	*N 32 2 55.90*	*W 104 8 48.63*
	2500.00	15.00	88.49	2454.54	8.72	10.28	388.85	0.00	381551.28	557806.82	N 32 2 55.90	W 104 8 48.33
	2600.00	15.00	88.49	2551.13	9.30	10.96	414.72	0.00	381551.96	557832.69	N 32 2 55.91	W 104 8 48.03
	2700.00	15.00	88.49	2647.72	9.88	11.65	440.60	0.00	381552.64	557858.56	N 32 2 55.92	W 104 8 47.73
	2800.00	15.00	88.49	2744.31	10.46	12.33	466.47	0.00	381553.33	557884.43	N 32 2 55.92	W 104 8 47.43
	2900.00	15.00	88.49	2840.91	11.04	13.01	492.35	0.00	381554.01	557910.30	N 32 2 55.93	W 104 8 47.13
	3000.00	15.00	88.49	2937.50	11.62	13.70	518.22	0.00	381554.70	557936.18	N 32 2 55.94	W 104 8 46.82
	3100.00	15.00	88.49	3034.09	12.20	14.38	544.10	0.00	381555.38	557962.05	N 32 2 55.94	W 104 8 46.52
	3200.00	15.00	88.49	3130.68	12.78	15.07	569.97	0.00	381556.06	557987.92	N 32 2 55.95	W 104 8 46.22
	3300.00	15.00	88.49	3227.28	13.36	15.75	595.84	0.00	381556.75	558013.79	N 32 2 55.95	W 104 8 45.92
Cherry Canyon (CRCN)	*3309.44*	*15.00*	*88.49*	*3236.39*	*13.41*	*15.81*	*598.29*	*0.00*	*381556.81*	*558016.23*	*N 32 2 55.95*	*W 104 8 45.89*
	3400.00	15.00	88.49	3323.87	13.94	16.43	621.72	0.00	381557.43	558039.66	N 32 2 55.96	W 104 8 45.62
	3500.00	15.00	88.49	3420.46	14.52	17.12	647.59	0.00	381558.12	558065.54	N 32 2 55.97	W 104 8 45.32
	3600.00	15.00	88.49	3517.05	15.10	17.80	673.47	0.00	381558.80	558091.41	N 32 2 55.97	W 104 8 45.02
	3700.00	15.00	88.49	3613.64	15.68	18.48	699.34	0.00	381559.48	558117.28	N 32 2 55.98	W 104 8 44.72
	3800.00	15.00	88.49	3710.24	16.26	19.17	725.22	0.00	381560.17	558143.15	N 32 2 55.99	W 104 8 44.42
	3900.00	15.00	88.49	3806.83	16.84	19.85	751.09	0.00	381560.85	558169.02	N 32 2 55.99	W 104 8 44.12
	4000.00	15.00	88.49	3903.42	17.42	20.54	776.96	0.00	381561.53	558194.89	N 32 2 56.00	W 104 8 43.82
	4100.00	15.00	88.49	4000.01	18.00	21.22	802.84	0.00	381562.22	558220.77	N 32 2 56.00	W 104 8 43.52
	4200.00	15.00	88.49	4096.61	18.58	21.90	828.71	0.00	381562.90	558246.64	N 32 2 56.01	W 104 8 43.22
	4300.00	15.00	88.49	4193.20	19.16	22.59	854.59	0.00	381563.59	558272.51	N 32 2 56.02	W 104 8 42.92
	4400.00	15.00	88.49	4289.79	19.74	23.27	880.46	0.00	381564.27	558298.38	N 32 2 56.02	W 104 8 42.62
Drop .75°/100ft	4407.17	15.00	88.49	4296.71	19.78	23.32	882.32	0.00	381564.32	558300.24	N 32 2 56.02	W 104 8 42.59
	4500.00	14.30	88.49	4386.53	20.31	23.94	905.79	0.75	381564.94	558323.71	N 32 2 56.03	W 104 8 42.32
Brushy Canyon (BCN)	*4573.51*	*13.75*	*88.49*	*4457.84*	*20.70*	*24.41*	*923.60*	*0.75*	*381565.41*	*558341.52*	*N 32 2 56.03*	*W 104 8 42.11*
	4600.00	13.55	88.49	4483.58	20.84	24.58	929.85	0.75	381565.58	558347.77	N 32 2 56.04	W 104 8 42.04
	4700.00	12.80	88.49	4580.95	21.36	25.18	952.65	0.75	381566.18	558370.56	N 32 2 56.04	W 104 8 41.78
	4800.00	12.05	88.49	4678.61	21.84	25.75	974.16	0.75	381566.75	558392.08	N 32 2 56.05	W 104 8 41.53
	4900.00	11.30	88.49	4776.53	22.29	26.28	994.40	0.75	381567.28	558412.31	N 32 2 56.05	W 104 8 41.29
	5000.00	10.55	88.49	4874.72	22.72	26.78	1013.35	0.75	381567.78	558431.26	N 32 2 56.06	W 104 8 41.07
	5100.00	9.80	88.49	4973.14	23.11	27.25	1031.02	0.75	381568.25	558448.93	N 32 2 56.06	W 104 8 40.87
	5200.00	9.05	88.49	5071.79	23.48	27.68	1047.40	0.75	381568.68	558465.30	N 32 2 56.06	W 104 8 40.68
	5300.00	8.30	88.49	5170.65	23.82	28.08	1062.48	0.75	381569.08	558480.39	N 32 2 56.07	W 104 8 40.50
	5400.00	7.55	88.49	5269.69	24.13	28.45	1076.27	0.75	381569.45	558494.18	N 32 2 56.07	W 104 8 40.34
	5500.00	6.80	88.49	5368.91	24.41	28.78	1088.77	0.75	381569.78	558506.67	N 32 2 56.07	W 104 8 40.20
	5600.00	6.05	88.49	5468.28	24.66	29.07	1099.96	0.75	381570.07	558517.86	N 32 2 56.08	W 104 8 40.07
	5700.00	5.30	88.49	5567.78	24.88	29.34	1109.85	0.75	381570.33	558527.76	N 32 2 56.08	W 104 8 39.95
	5800.00	4.55	88.49	5667.41	25.07	29.56	1118.44	0.75	381570.56	558536.34	N 32 2 56.08	W 104 8 39.85
	5900.00	3.80	88.49	5767.15	25.24	29.76	1125.73	0.75	381570.75	558543.63	N 32 2 56.08	W 104 8 39.77
	6000.00	3.05	88.49	5866.97	25.37	29.91	1131.71	0.75	381570.91	558549.61	N 32 2 56.09	W 104 8 39.70
	6100.00	2.30	88.49	5966.86	25.47	30.04	1136.38	0.75	381571.03	558554.28	N 32 2 56.09	W 104 8 39.64
Bone Spring Lime (BSGL)	*6183.84*	*1.68*	*88.49*	*6050.65*	*25.54*	*30.11*	*1139.29*	*0.75*	*381571.11*	*558557.19*	*N 32 2 56.09*	*W 104 8 39.61*
	6200.00	1.55	88.49	6066.80	25.55	30.13	1139.75	0.75	381571.12	558557.65	N 32 2 56.09	W 104 8 39.60
Avalon Upper (AVU)	*6290.59*	*0.88*	*88.49*	*6157.37*	*25.59*	*30.18*	*1141.67*	*0.75*	*381571.17*	*558559.57*	*N 32 2 56.09*	*W 104 8 39.58*
	6300.00	0.80	88.49	6166.78	25.60	30.18	1141.81	0.75	381571.18	558559.71	N 32 2 56.09	W 104 8 39.58
	6400.00	0.05	88.49	6266.77	25.61	30.20	1142.56	0.75	381571.20	558560.45	N 32 2 56.09	W 104 8 39.57
Hold Vertical	6407.28	0.00	88.49	6274.05	25.61	30.20	1142.56	0.75	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	6500.00	0.00	88.49	6366.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	6600.00	0.00	88.49	6466.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
Avalon Lower (AVL)	*6693.15*	*0.00*	*88.49*	*6559.92*	*25.61*	*30.20*	*1142.56*	*0.00*	*381571.20*	*558560.46*	*N 32 2 56.09*	*W 104 8 39.57*
	6700.00	0.00	88.49	6566.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	6800.00	0.00	88.49	6666.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6900.00	0.00	88.49	6766.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	7000.00	0.00	88.49	6866.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
First Bone Spring (FBS)	*7073.06*	*0.00*	*88.49*	*6939.83*	*25.61*	*30.20*	*1142.56*	*0.00*	*381571.20*	*558560.46*	*N 32 2 56.09*	*W 104 8 39.57*
	7100.00	0.00	88.49	6966.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	7200.00	0.00	88.49	7066.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
First Bone Spring Shale (FBS_SH)	*7296.07*	*0.00*	*88.49*	*7162.84*	*25.61*	*30.20*	*1142.56*	*0.00*	*381571.20*	*558560.46*	*N 32 2 56.09*	*W 104 8 39.57*
	7300.00	0.00	88.49	7166.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	7400.00	0.00	88.49	7266.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	7500.00	0.00	88.49	7366.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
Second Bone Spring Upper (SBU)	*7597.05*	*0.00*	*88.49*	*7463.82*	*25.61*	*30.20*	*1142.56*	*0.00*	*381571.20*	*558560.46*	*N 32 2 56.09*	*W 104 8 39.57*
	7600.00	0.00	88.49	7466.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	7700.00	0.00	88.49	7566.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	7800.00	0.00	88.49	7666.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	7900.00	0.00	88.49	7766.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	8000.00	0.00	88.49	7866.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
Second Bone Spring Lower (SBL)	*8082.69*	*0.00*	*88.49*	*7949.46*	*25.61*	*30.20*	*1142.56*	*0.00*	*381571.20*	*558560.46*	*N 32 2 56.09*	*W 104 8 39.57*
	8100.00	0.00	88.49	7966.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	8200.00	0.00	88.49	8066.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	8300.00	0.00	88.49	8166.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	8400.00	0.00	88.49	8266.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	8500.00	0.00	88.49	8366.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	8600.00	0.00	88.49	8466.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
Third Bone Spring First Carb (TB1C)	*8659.29*	*0.00*	*88.49*	*8526.06*	*25.61*	*30.20*	*1142.56*	*0.00*	*381571.20*	*558560.46*	*N 32 2 56.09*	*W 104 8 39.57*
	8700.00	0.00	88.49	8566.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	8800.00	0.00	88.49	8666.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
Third Bone Spring (TBS)	*8871.17*	*0.00*	*88.49*	*8737.94*	*25.61*	*30.20*	*1142.56*	*0.00*	*381571.20*	*558560.46*	*N 32 2 56.09*	*W 104 8 39.57*
	8900.00	0.00	88.49	8766.77	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
KOP, Build 10°/100ft	8985.28	0.00	88.49	8852.05	25.61	30.20	1142.56	0.00	381571.20	558560.46	N 32 2 56.09	W 104 8 39.57
	9000.00	1.47	358.95	8866.77	25.80	30.39	1142.56	10.00	381571.39	558560.45	N 32 2 56.09	W 104 8 39.57
	9100.00	11.47	358.95	8966.01	37.06	41.65	1142.35	10.00	381582.64	558560.25	N 32 2 56.20	W 104 8 39.57
	9200.00	21.47	358.95	9061.78	65.38	69.96	1141.83	10.00	381610.95	558559.73	N 32 2 56.48	W 104 8 39.58
Wolfcamp A (WCA)	*9231.71*	*24.64*	*358.95*	*9090.96*	*77.79*	*82.38*	*1141.61*	*10.00*	*381623.37*	*558559.51*	*N 32 2 56.60*	*W 104 8 39.58*
	9300.00	31.47	358.95	9151.18	109.89	114.47	1141.02	10.00	381655.46	558558.92	N 32 2 56.92	W 104 8 39.59
	9400.00	41.47	358.95	9231.50	169.25	173.83	1139.94	10.00	381714.82	558557.84	N 32 2 57.51	W 104 8 39.60
Wolfcamp A Target 4	*9461.15*	*47.59*	*358.95*	*9275.07*	*212.11*	*216.69*	*1139.16*	*10.00*	*381757.67*	*558557.05*	*N 32 2 57.93*	*W 104 8 39.61*
	9500.00	51.47	358.95	9300.28	241.66	246.23	1138.62	10.00	381787.21	558556.51	N 32 2 58.23	W 104 8 39.61
Wolfcamp A1 (WCA1)	*9506.81*	*52.15*	*358.95*	*9304.49*	*247.01*	*251.58*	*1138.52*	*10.00*	*381792.56*	*558556.42*	*N 32 2 58.28*	*W 104 8 39.61*
	9600.00	61.47	358.95	9355.44	324.91	329.47	1137.10	10.00	381870.44	558554.99	N 32 2 59.05	W 104 8 39.63
	9700.00	71.47	358.95	9395.31	416.47	421.03	1135.42	10.00	381961.99	558553.32	N 32 2 59.96	W 104 8 39.65
	9800.00	81.47	358.95	9418.67	513.56	518.12	1133.65	10.00	382059.07	558551.55	N 32 3 0.92	W 104 8 39.66
FTP Cross	*9883.21*	*89.79*	*358.95*	*9425.00*	*596.45*	*601.00*	*1132.14*	*10.00*	*382141.95*	*558550.04*	*N 32 3 1.74*	*W 104 8 39.68*
Landing Point	9883.29	89.80	358.95	9425.00	596.53	601.08	1132.14	10.00	382142.02	558550.04	N 32 3 1.74	W 104 8 39.68
	9900.00	89.80	358.95	9425.06	613.24	617.78	1131.83	0.00	382158.73	558549.73	N 32 3 1.90	W 104 8 39.68
	10000.00	89.80	358.95	9425.41	713.22	717.77	1130.01	0.00	382258.70	558547.91	N 32 3 2.89	W 104 8 39.70
	10100.00	89.80	358.95	9425.76	813.21	817.75	1128.18	0.00	382358.68	558546.08	N 32 3 3.88	W 104 8 39.72
	10200.00	89.80	358.95	9426.10	913.20	917.73	1126.36	0.00	382458.65	558544.25	N 32 3 4.87	W 104 8 39.74
	10300.00	89.80	358.95	9426.45	1013.19	1017.71	1124.53	0.00	382558.62	558542.43	N 32 3 5.86	W 104 8 39.76
	10400.00	89.80	358.95	9426.80	1113.18	1117.70	1122.70	0.00	382658.60	558540.60	N 32 3 6.85	W 104 8 39.78
	10500.00	89.80	358.95	9427.14	1213.17	1217.68	1120.88	0.00	382758.57	558538.78	N 32 3 7.84	W 104 8 39.80
	10600.00	89.80	358.95	9427.49	1313.16	1317.66	1119.05	0.00	382858.55	558536.95	N 32 3 8.83	W 104 8 39.82
	10700.00	89.80	358.95	9427.84	1413.15	1417.65	1117.23	0.00	382958.52	558535.13	N 32 3 9.82	W 104 8 39.84
	10800.00	89.80	358.95	9428.18	1513.14	1517.63	1115.40	0.00	383058.49	558533.30	N 32 3 10.81	W 104 8 39.86
	10900.00	89.80	358.95	9428.53	1613.13	1617.61	1113.58	0.00	383158.47	558531.48	N 32 3 11.80	W 104 8 39.87
	11000.00	89.80	358.95	9428.88	1713.12	1717.59	1111.75	0.00	383258.44	558529.65	N 32 3 12.79	W 104 8 39.89
	11100.00	89.80	358.95	9429.22	1813.11	1817.58	1109.93	0.00	383358.41	558527.83	N 32 3 13.78	W 104 8 39.91
	11200.00	89.80	358.95	9429.57	1913.10	1917.56	1108.10	0.00	383458.39	558526.00	N 32 3 14.77	W 104 8 39.93
	11300.00	89.80	358.95	9429.92	2013.09	2017.54	1106.27	0.00	383558.36	558524.18	N 32 3 15.75	W 104 8 39.95
	11400.00	89.80	358.95	9430.26	2113.07	2117.52	1104.45	0.00	383658.34	558522.35	N 32 3 16.74	W 104 8 39.97
	11500.00	89.80	358.95	9430.61	2213.06	2217.51	1102.62	0.00	383758.31	558520.53	N 32 3 17.73	W 104 8 39.99
	11600.00	89.80	358.95	9430.96	2313.05	2317.49	1100.80	0.00	383858.28	558518.70	N 32 3 18.72	W 104 8 40.01
	11700.00	89.80	358.95	9431.30	2413.04	2417.47	1098.97	0.00	383958.26	558516.87	N 32 3 19.71	W 104 8 40.03
	11800.00	89.80	358.95	9431.65	2513.03	2517.46	1097.15	0.00	384058.23	558515.05	N 32 3 20.70	W 104 8 40.05
	11900.00	89.80	358.95	9432.00	2613.02	2617.44	1095.32	0.00	384158.21	558513.22	N 32 3 21.69	W 104 8 40.07
	12000.00	89.80	358.95	9432.34	2713.01	2717.42	1093.50	0.00	384258.18	558511.40	N 32 3 22.68	W 104 8 40.09
	12100.00	89.80	358.95	9432.69	2813.00	2817.40	1091.67	0.00	384358.15	558509.57	N 32 3 23.67	W 104 8 40.11
	12200.00	89.80	358.95	9433.04	2912.99	2917.39	1089.84	0.00	384458.13	558507.75	N 32 3 24.66	W 104 8 40.12
	12300.00	89.80	358.95	9433.39	3012.98	3017.37	1088.02	0.00	384558.10	558505.92	N 32 3 25.65	W 104 8 40.14
	12400.00	89.80	358.95	9433.73	3112.97	3117.35	1086.19	0.00	384658.07	558504.10	N 32 3 26.64	W 104 8 40.16
	12500.00	89.80	358.95	9434.08	3212.96	3217.34	1084.37	0.00	384758.05	558502.27	N 32 3 27.63	W 104 8 40.18
	12600.00	89.80	358.95	9434.43	3312.95	3317.32	1082.54	0.00	384858.02	558500.45	N 32 3 28.62	W 104 8 40.20
	12700.00	89.80	358.95	9434.77	3412.93	3417.30	1080.72	0.00	384958.00	558498.62	N 32 3 29.61	W 104 8 40.22
	12800.00	89.80	358.95	9435.12	3512.92	3517.28	1078.89	0.00	385057.97	558496.80	N 32 3 30.60	W 104 8 40.24
	12900.00	89.80	358.95	9435.47	3612.91	3617.27	1077.07	0.00	385157.94	558494.97	N 32 3 31.59	W 104 8 40.26
	13000.00	89.80	358.95	9435.81	3712.90	3717.25	1075.24	0.00	385257.92	558493.14	N 32 3 32.57	W 104 8 40.28
	13100.00	89.80	358.95	9436.16	3812.89	3817.23	1073.41	0.00	385357.89	558491.32	N 32 3 33.56	W 104 8 40.30
	13200.00	89.80	358.95	9436.51	3912.88	3917.21	1071.59	0.00	385457.87	558489.49	N 32 3 34.55	W 104 8 40.32
	13300.00	89.80	358.95	9436.85	4012.87	4017.20	1069.76	0.00	385557.84	558487.67	N 32 3 35.54	W 104 8 40.34
	13400.00	89.80	358.95	9437.20	4112.86	4117.18	1067.94	0.00	385657.81	558485.84	N 32 3 36.53	W 104 8 40.35
	13500.00	89.80	358.95	9437.55	4212.85	4217.16	1066.11	0.00	385757.79	558484.02	N 32 3 37.52	W 104 8 40.37
	13600.00	89.80	358.95	9437.89	4312.84	4317.15	1064.29	0.00	385857.76	558482.19	N 32 3 38.51	W 104 8 40.39
	13700.00	89.80	358.95	9438.24	4412.83	4417.13	1062.46	0.00	385957.73	558480.37	N 32 3 39.50	W 104 8 40.41
	13800.00	89.80	358.95	9438.59	4512.82	4517.11	1060.64	0.00	386057.71	558478.54	N 32 3 40.49	W 104 8 40.43
	13900.00	89.80	358.95	9438.93	4612.81	4617.09	1058.81	0.00	386157.68	558476.72	N 32 3 41.48	W 104 8 40.45
	14000.00	89.80	358.95	9439.28	4712.80	4717.08	1056.99	0.00	386257.66	558474.89	N 32 3 42.47	W 104 8 40.47
	14100.00	89.80	358.95	9439.63	4812.78	4817.06	1055.16	0.00	386357.63	558473.07	N 32 3 43.46	W 104 8 40.49
	14200.00	89.80	358.95	9439.97	4912.77	4917.04	1053.33	0.00	386457.60	558471.24	N 32 3 44.45	W 104 8 40.51
	14300.00	89.80	358.95	9440.32	5012.76	5017.02	1051.51	0.00	386557.58	558469.41	N 32 3 45.44	W 104 8 40.53
	14400.00	89.80	358.95	9440.67	5112.75	5117.01	1049.68	0.00	386657.55	558467.59	N 32 3 46.43	W 104 8 40.55
	14500.00	89.80	358.95	9441.01	5212.74	5216.99	1047.86	0.00	386757.52	558465.76	N 32 3 47.42	W 104 8 40.57
	14600.00	89.80	358.95	9441.36	5312.73	5316.97	1046.03	0.00	386857.50	558463.94	N 32 3 48.41	W 104 8 40.58
	14700.00	89.80	358.95	9441.71	5412.72	5416.96	1044.21	0.00	386957.47	558462.11	N 32 3 49.40	W 104 8 40.60
	14800.00	89.80	358.95	9442.06	5512.71	5516.94	1042.38	0.00	387057.45	558460.29	N 32 3 50.38	W 104 8 40.62
MP, Turn 2°/100ft	14870.57	89.80	358.95	9442.30	5583.27	5587.50	1041.09	0.00	387128.00	558459.00	N 32 3 51.08	W 104 8 40.64
	14900.00	89.80	359.54	9442.40	5612.70	5616.92	1040.71	2.00	387157.42	558458.61	N 32 3 51.37	W 104 8 40.64
Hold	14950.27	89.80	0.55	9442.58	5662.97	5667.19	1040.75	2.00	387207.69	558458.65	N 32 3 51.87	W 104 8 40.64
	15000.00	89.80	0.55	9442.75	5712.69	5716.92	1041.22	0.00	387257.41	558459.13	N 32 3 52.36	W 104 8 40.63
	15100.00	89.80	0.55	9443.09	5812.68	5816.91	1042.18	0.00	387357.40	558460.09	N 32 3 53.35	W 104 8 40.62
	15200.00	89.80	0.55	9443.44	5912.67	5916.91	1043.13	0.00	387457.38	558461.04	N 32 3 54.34	W 104 8 40.61
	15300.00	89.80	0.55	9443.78	6012.66	6016.90	1044.09	0.00	387557.37	558462.00	N 32 3 55.33	W 104 8 40.59
IFP1, Build 2°/100ft	15363.64	89.80	0.55	9444.00	6076.30	6080.54	1044.70	0.00	387621.00	558462.61	N 32 3 55.96	W 104 8 40.58
Hold	15380.15	90.13	0.54	9444.01	6092.81	6097.05	1044.86	2.00	387637.51	558462.76	N 32 3 56.13	W 104 8 40.58
	15400.00	90.13	0.54	9443.96	6112.65	6116.90	1045.04	0.00	387657.35	558462.95	N 32 3 56.32	W 104 8 40.58
	15500.00	90.13	0.54	9443.73	6212.65	6216.89	1045.99	0.00	387757.34	558463.90	N 32 3 57.31	W 104 8 40.57
	15600.00	90.13	0.54	9443.50	6312.64	6316.89	1046.94	0.00	387857.33	558464.84	N 32 3 58.30	W 104 8 40.55
	15700.00	90.13	0.54	9443.27	6412.63	6416.88	1047.88	0.00	387957.31	558465.79	N 32 3 59.29	W 104 8 40.54
	15800.00	90.13	0.54	9443.04	6512.62	6516.88	1048.83	0.00	388057.30	558466.74	N 32 4 0.28	W 104 8 40.53
	15900.00	90.13	0.54	9442.81	6612.61	6616.88	1049.78	0.00	388157.29	558467.68	N 32 4 1.27	W 104 8 40.51

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	16000.00	90.13	0.54	9442.57	6712.60	6716.87	1050.72	0.00	388257.27	558468.63	N 32 4 2.26	W 104 8 40.50
	16100.00	90.13	0.54	9442.34	6812.59	6816.87	1051.67	0.00	388357.26	558469.58	N 32 4 3.25	W 104 8 40.49
	16200.00	90.13	0.54	9442.11	6912.58	6916.86	1052.62	0.00	388457.24	558470.52	N 32 4 4.24	W 104 8 40.48
	16300.00	90.13	0.54	9441.88	7012.57	7016.86	1053.56	0.00	388557.23	558471.47	N 32 4 5.23	W 104 8 40.46
	16400.00	90.13	0.54	9441.65	7112.56	7116.85	1054.51	0.00	388657.22	558472.41	N 32 4 6.22	W 104 8 40.45
	16500.00	90.13	0.54	9441.42	7212.55	7216.85	1055.45	0.00	388757.20	558473.36	N 32 4 7.21	W 104 8 40.44
	16600.00	90.13	0.54	9441.18	7312.54	7316.84	1056.40	0.00	388857.19	558474.31	N 32 4 8.20	W 104 8 40.42
	16700.00	90.13	0.54	9440.95	7412.53	7416.84	1057.35	0.00	388957.18	558475.25	N 32 4 9.19	W 104 8 40.41
	16800.00	90.13	0.54	9440.72	7512.52	7516.83	1058.29	0.00	389057.16	558476.20	N 32 4 10.17	W 104 8 40.40
	16900.00	90.13	0.54	9440.49	7612.51	7616.83	1059.24	0.00	389157.15	558477.14	N 32 4 11.16	W 104 8 40.38
	17000.00	90.13	0.54	9440.26	7712.50	7716.82	1060.19	0.00	389257.14	558478.09	N 32 4 12.15	W 104 8 40.37
	17100.00	90.13	0.54	9440.03	7812.50	7816.82	1061.13	0.00	389357.12	558479.04	N 32 4 13.14	W 104 8 40.36
	17200.00	90.13	0.54	9439.80	7912.49	7916.81	1062.08	0.00	389457.11	558479.98	N 32 4 14.13	W 104 8 40.35
	17300.00	90.13	0.54	9439.56	8012.48	8016.81	1063.02	0.00	389557.09	558480.93	N 32 4 15.12	W 104 8 40.33
	17400.00	90.13	0.54	9439.33	8112.47	8116.80	1063.97	0.00	389657.08	558481.88	N 32 4 16.11	W 104 8 40.32
	17500.00	90.13	0.54	9439.10	8212.46	8216.80	1064.92	0.00	389757.07	558482.82	N 32 4 17.10	W 104 8 40.31
	17600.00	90.13	0.54	9438.87	8312.45	8316.79	1065.86	0.00	389857.05	558483.77	N 32 4 18.09	W 104 8 40.29
	17700.00	90.13	0.54	9438.64	8412.44	8416.79	1066.81	0.00	389957.04	558484.71	N 32 4 19.08	W 104 8 40.28
	17800.00	90.13	0.54	9438.41	8512.43	8516.79	1067.76	0.00	390057.03	558485.66	N 32 4 20.07	W 104 8 40.27
	17900.00	90.13	0.54	9438.17	8612.42	8616.78	1068.70	0.00	390157.01	558486.61	N 32 4 21.06	W 104 8 40.25
	18000.00	90.13	0.54	9437.94	8712.41	8716.78	1069.65	0.00	390257.00	558487.55	N 32 4 22.05	W 104 8 40.24
	18100.00	90.13	0.54	9437.71	8812.40	8816.77	1070.59	0.00	390356.98	558488.50	N 32 4 23.04	W 104 8 40.23
	18200.00	90.13	0.54	9437.48	8912.39	8916.77	1071.54	0.00	390456.97	558489.45	N 32 4 24.03	W 104 8 40.21
	18300.00	90.13	0.54	9437.25	9012.38	9016.76	1072.49	0.00	390556.96	558490.39	N 32 4 25.02	W 104 8 40.20
	18400.00	90.13	0.54	9437.02	9112.37	9116.76	1073.43	0.00	390656.94	558491.34	N 32 4 26.01	W 104 8 40.19
Cicada Unit 59H IFP2	18407.06	90.13	0.54	9437.00	9119.43	9123.81	1073.50	0.00	390664.00	558491.40	N 32 4 26.08	W 104 8 40.19
EOC (Curve-Hold)	18412.06	90.03	0.55	9436.99	9124.43	9128.81	1073.55	2.00	390669.00	558491.45	N 32 4 26.13	W 104 8 40.19
	18500.00	90.03	0.55	9436.94	9212.36	9216.75	1074.39	0.00	390756.93	558492.29	N 32 4 27.00	W 104 8 40.18
	18600.00	90.03	0.55	9436.88	9312.36	9316.75	1075.35	0.00	390856.92	558493.25	N 32 4 27.99	W 104 8 40.16
	18700.00	90.03	0.55	9436.83	9412.35	9416.74	1076.31	0.00	390956.90	558494.21	N 32 4 28.98	W 104 8 40.15
	18800.00	90.03	0.55	9436.77	9512.34	9516.74	1077.27	0.00	391056.89	558495.17	N 32 4 29.96	W 104 8 40.14
	18900.00	90.03	0.55	9436.71	9612.33	9616.73	1078.23	0.00	391156.88	558496.13	N 32 4 30.95	W 104 8 40.12
	19000.00	90.03	0.55	9436.65	9712.32	9716.73	1079.18	0.00	391256.86	558497.09	N 32 4 31.94	W 104 8 40.11
	19100.00	90.03	0.55	9436.60	9812.31	9816.72	1080.14	0.00	391356.85	558498.05	N 32 4 32.93	W 104 8 40.10
	19200.00	90.03	0.55	9436.54	9912.30	9916.72	1081.10	0.00	391456.84	558499.01	N 32 4 33.92	W 104 8 40.08
	19300.00	90.03	0.55	9436.48	10012.29	10016.72	1082.06	0.00	391556.82	558499.96	N 32 4 34.91	W 104 8 40.07
	19400.00	90.03	0.55	9436.42	10112.28	10116.71	1083.02	0.00	391656.81	558500.92	N 32 4 35.90	W 104 8 40.06
	19500.00	90.03	0.55	9436.37	10212.27	10216.71	1083.98	0.00	391756.80	558501.88	N 32 4 36.89	W 104 8 40.04
	19600.00	90.03	0.55	9436.31	10312.26	10316.70	1084.94	0.00	391856.78	558502.84	N 32 4 37.88	W 104 8 40.03
	19700.00	90.03	0.55	9436.25	10412.25	10416.70	1085.90	0.00	391956.77	558503.80	N 32 4 38.87	W 104 8 40.02
	19800.00	90.03	0.55	9436.19	10512.24	10516.69	1086.85	0.00	392056.75	558504.76	N 32 4 39.86	W 104 8 40.00
LTP Cross	*19858.21*	*90.03*	*0.55*	*9436.16*	*10570.45*	*10574.90*	*1087.41*	*0.00*	*392114.96*	*558505.32*	*N 32 4 40.44*	*W 104 8 40.00*
	19900.00	90.03	0.55	9436.14	10612.24	10616.69	1087.81	0.00	392156.74	558505.72	N 32 4 40.85	W 104 8 39.99
	20000.00	90.03	0.55	9436.08	10712.23	10716.68	1088.77	0.00	392256.73	558506.67	N 32 4 41.84	W 104 8 39.98
	20100.00	90.03	0.55	9436.02	10812.22	10816.68	1089.73	0.00	392356.71	558507.63	N 32 4 42.83	W 104 8 39.96
Cicada Unit 59H BHL	20138.29	90.03	0.55	9436.00	10850.50	10854.97	1090.10	0.00	392395.00	558508.00	N 32 4 43.21	W 104 8 39.96

Survey Type: Def Plan

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

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	28.000	1/100.000	17.500	13.375		B001Mb_MWD+HRGM-Depth Only	Cicada Unit 59H / Cicada Unit 59H R0 mdv 09Jun21
	1	28.000	450.000	1/100.000	17.500	13.375		B001Mb_MWD+HRGM	Cicada Unit 59H / Cicada Unit 59H R0 mdv 09Jun21
	1	450.000	2236.482	1/100.000	12.250	9.625		B001Mb_MWD+HRGM	Cicada Unit 59H / Cicada Unit 59H R0 mdv 09Jun21
	1	2236.482	9310.394	1/100.000	8.750	7.000		B001Mb_MWD+HRGM	Cicada Unit 59H / Cicada Unit 59H R0 mdv 09Jun21
	1	9310.394	20138.291	1/100.000	6.125	4.500		B001Mb_MWD+HRGM	Cicada Unit 59H / Cicada Unit 59H R0 mdv 09Jun21

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CHEVRON USA INCORPORATED
LEASE NO.:	NMNM116028
LOCATION:	Section 13, T.26 S., R.27 E., NMP
COUNTY:	Eddy County, New Mexico

WELL NAME & NO.:	CICADA UNIT 56H
SURFACE HOLE FOOTAGE:	270'/N & 1112'/W
BOTTOM HOLE FOOTAGE	50'/N & 330'/W

WELL NAME & NO.:	CICADA UNIT 57H
SURFACE HOLE FOOTAGE:	270'/N & 1132'/W
BOTTOM HOLE FOOTAGE	50'/N & 990'/W

WELL NAME & NO.:	CICADA UNIT 58H
SURFACE HOLE FOOTAGE:	270'/N & 1152'/W
BOTTOM HOLE FOOTAGE	50'/N & 1650'/W

WELL NAME & NO.:	CICADA UNIT 59H
SURFACE HOLE FOOTAGE:	270'/N & 1172'/W
BOTTOM HOLE FOOTAGE	50'/N & 2310'/W

COA

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

A. HYDROGEN SULFIDE

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.

Approval Date: 04/14/2022

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.

2. The **9-5/8** inch intermediate casing shall be set at approximately **2346** 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 **High Cave/Karst Areas** if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **7** inch 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.

4. The minimum required fill of cement behind the **5 X 4-1/2** inch production liner is:

- Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

2.

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.

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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.

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less.
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOPE Break Testing operations.

- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required.
- The BLM is to be contacted **(575-393-3612 Lea County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.

Approval Date: 04/14/2022

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) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per 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 intergrity 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 intergrity 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

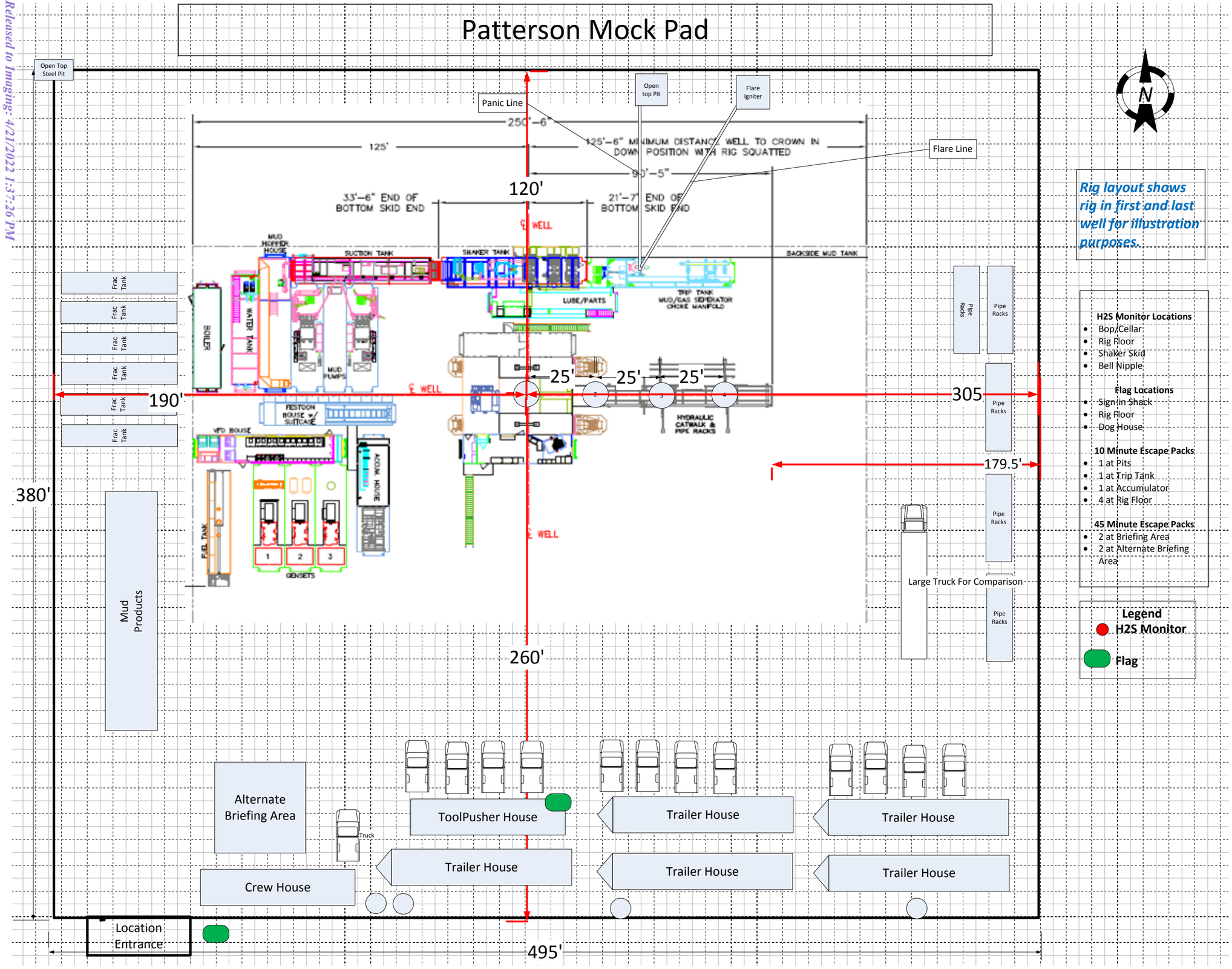
All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location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

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

NMK-2-18-2022

Approval Date: 04/14/2022

Patterson Mock Pad



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**

BLOWOUT PREVENTER SCHEMATIC

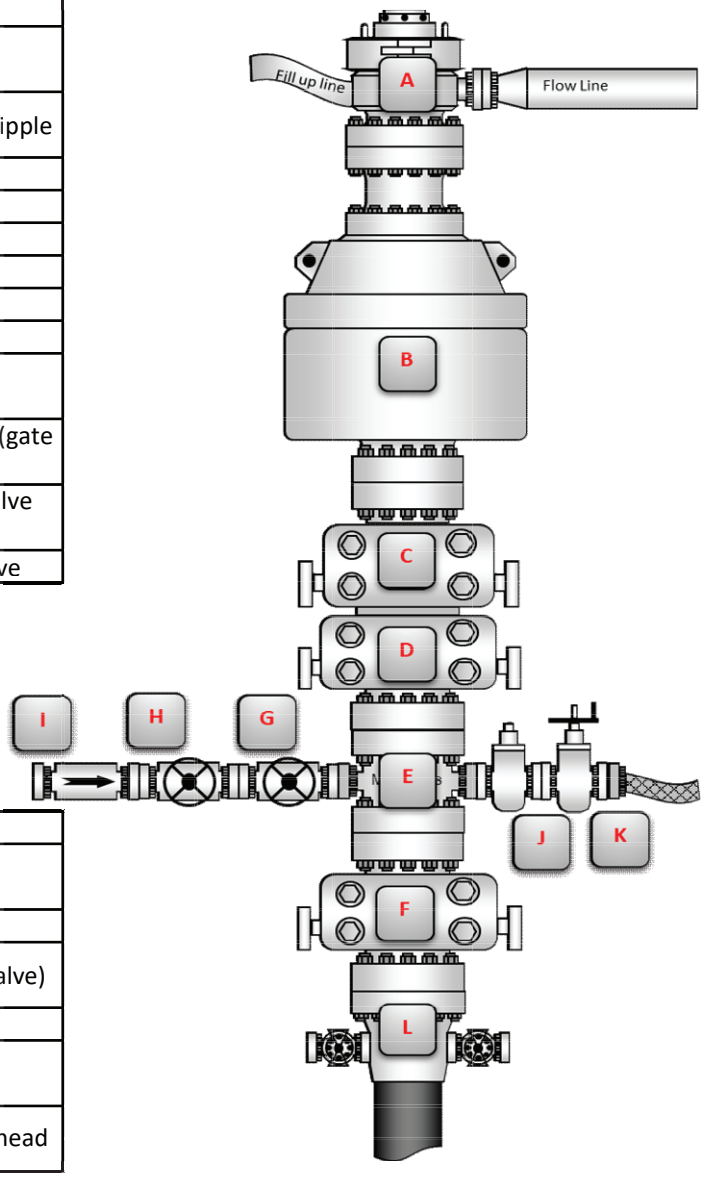
Operation:	Intermediate & Production Drilling Operations
Minimum System operation pressure	5,000 psi

BOP Stack

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

Kill Line

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



Choke line

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

Wellhead

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

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 99725

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 99725
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	4/21/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	4/21/2022
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	4/21/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	4/21/2022
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	4/21/2022