

Form 3160-3  
(June 2015)FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No.  6. If Indian, Allottee or Tribe Name  7. If Unit or CA Agreement, Name and No.  8. Lease Name and Well No.
2. Name of Operator		9. API Well No. <b>30-015-49153</b>
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
13. State		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

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

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



Dean R. Mollure 12/7/2021

(Continued on page 2)

\*(Instructions on page 2)

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-49153	<sup>2</sup> Pool Code 13367	<sup>3</sup> Pool Name COTTON DRAW; BONE SPRING
<sup>4</sup> Property Code 331850	<sup>5</sup> Property Name SND 12 01 FED COM 001 P306	
<sup>7</sup> OGRID No. 4323	<sup>8</sup> Operator Name CHEVRON U.S.A. INC.	<sup>6</sup> Well Number 437H
		<sup>9</sup> Elevation 3582'

## <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
P	12	24 SOUTH	31 EAST, N.M.P.M.		522'	SOUTH	820'	EAST	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
B	1	24 SOUTH	31 EAST, N.M.P.M.		25'	NORTH	2310'	EAST	EDDY

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
640			

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

SND 12 01 FED COM 001 P306 437H WELL		PROPOSED FIRST TAKE POINT	
X= 688,069		X= 686,582	
Y= 446,448	NAD 27	Y= 446,019	NAD 27
LAT. 32.225940 N		LAT. 32.224783 N	
LONG. 103.725157 W		LONG. 103.729975 W	
X= 729,253		X= 727,766	
Y= 446,507	NAD83/2011	Y= 446,078	NAD83/2011
LAT. 32.226063 N		LAT. 32.224907 N	
LONG. 103.725639 W		LONG. 103.730458 W	
ELEV. +3582'	NAVD88		

PROPOSED LAST TAKE POINT		PROPOSED BOTTOM HOLE LOCATION	
X= 686,525		X= 686,525	
Y= 456,382	NAD 27	Y= 456,457	NAD 27
LAT. 32.253271 N		LAT. 32.253477 N	
LONG. 103.729968 W		LONG. 103.729968 W	
X= 727,709		X= 727,709	
Y= 456,441	NAD83/2011	Y= 456,516	NAD83/2011
LAT. 32.253394 N		LAT. 32.253600 N	
LONG. 103.730453 W		LONG. 103.730452 W	

CORNER COORDINATES TABLE (NAD 27)

A - Y=456465.72, X=683556.77  
B - Y=451187.99, X=683583.61  
C - Y=445905.30, X=683610.86  
D - Y=456494.87, X=688834.92  
E - Y=451211.26, X=688862.56  
F - Y=445929.75, X=688892.05

Proposed Last Take Point  
100' FNL, 2310' FE

Proposed First Take Point  
100' FSL, 2310' FEL

2310'

25'

N 00°18'35" W 10,438.21'

S 73°54'30" W  
1,548.51'

820'

522'

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.

Cindy Herrera-Murillo 11/4/2022

Signature Date

Cindy Herrera-Murillo

Printed Name

eeof@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.

05/20/2020

Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT L. LASTRAPES  
NEW MEXICO  
23006  
06/22/2020  
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:** 11 / 2 / 2021

**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
SND 12 01 Fed Com 001 P306 437H	Pending	P-12-24S-31E	522' FSL, 820' FEL	2136BBL/D	3800MCF/D	3100BBL/D
SND 12 01 Fed Com 001 P306 438H	Pending	P-12-24S-31E	522' FSL, 795' FEL	2136BBL/D	3800MCF/D	3100BBL/D
SND 12 01 Fed Com 001 P306 439H	Pending	P-12-24S-31E	522' FSL, 770' FEL	2136BBL/D	3800MCF/D	3100BBL/D
SND 12 01 Fed Com 001 P306 440H	Pending	P-12-24S-31E	523' FSL, 745' FEL	2136BBL/D	3800MCF/D	3100BBL/D

**IV. Central Delivery Point Name:** Sand Dunes 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
SND 12 01 Fed Com 001 P306 437H	Pending	<u>1/5/2023</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
SND 12 01 Fed Com 001 P306 438H	Pending	<u>1/23/2023</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
SND 12 01 Fed Com 001 P306 439H	Pending	<u>2/10/2023</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
SND 12 01 Fed Com 001 P306 440H	Pending	<u>2/28/2023</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

## **Section 2 – Enhanced Plan** **EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☐ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

### **IX. Anticipated Natural Gas Production:**

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

### **X. Natural Gas Gathering System (NGGS):**

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

### **Section 3 - Certifications**

**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### **Section 4 - Notices**

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: <i>Cindy Herrera-Murillo</i>
Printed Name: Cindy Herrera-Murillo
Title: Sr HSE Regulatory affairs Coordinator
E-mail Address: eeof@chevron.com
Date: 11/4/2021
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.



ONSHORE ORDER NO. 1

Chevron

SND 12 01 FED COM 001 P306 438H

Eddy County, NM

CONFIDENTIAL -- TIGHT HOLE

DRILLING PLAN

PAGE: 1

**Pad Summary: SND P306**

The table below lists all the wells for the given pad and their respective name and TVD's (ft) for their production target intervals:

Well Name(s)	Target TVD	Formation Desc.
SND 12 01 FED COM 001 P306 437H	10,638	Bone Spring
SND 12 01 FED COM 001 P306 438H	10,221	Bone Spring
SND 12 01 FED COM 001 P306 439H	10,656	Bone Spring
SND 12 01 FED COM 001 P306 440H	10,223	Bone Spring

**1. FORMATION TOPS**

The estimated tops of important geologic markers are as follows:

Elevation: 3583 ft

FORMATION	TVDSS	TVD	MD	LITHOLOGIES	MIN. RESOURCES	PROD. FORMATION
Rustler (RSLR)	2738	845	845	Dolomite	N/A	
Salado (Top of Salt)	2383	1,200	1,200	Salt	N/A	
Castile (CSTL)	506	3,077	3,117	Anhydrite	N/A	
Lamar (LMAR)	-1037	4,620	4,701	Limestone	N/A	
Bell Canyon (BLCN)	-1072	4,655	4,737	Sandstone	N/A	
Cherry Canyon (CRCN)	-1954	5,537	5,642	Sandstone	N/A	
Brushy Canyon (BCN)	-3171	6,754	6,891	Sandstone	N/A	
Bone Spring (BSGL)	-4890	8,473	8,614	Limestone	Oil	
Upper Avalon (AVN)	-4945	8,528	8,669	Limestone/Shale/Sandstone	Oil	
Top First Bone Spring (FBS)	-5886	9,469	9,610	Sandstone	Oil	
Top Second Bone Spring (SBU)	-6562	10,145	10,300	Sandstone	Oil	
Second Bone Spring Target 1	-6626	10,209	10,352	Sandstone	Oil	
Second Bone Spring Carbonate	-6853	10,436	10,611	Sandstone	Oil	
Top Bone Spring 2 (SBU)	-7021	10,604	20,561	Sandstone	Oil	yes

WELLBORE LOCATIONS	SUB-SEA TVD	RKB TVD	MD
SHL	3583	-	-
KOP	-6065	9,648	9,744
FTP	-6298	9,881	9,985
LTP	-6565	10,148	20,486

**2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS**

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
	Deepest Expected Base of Fresh Water	500
Water	Cherry Canyon	5,537
Oil/Gas	Bone Spring (BSGL)	8,473
Oil/Gas	Avalon	8,528
Oil/Gas	Top First Bone Spring (FBS)	9,469

All shows of fresh water and minerals will be reported and protected.

**3. BOP 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, 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.

Chevron respectfully request to vary from the Onshore Order 2 where it states:

"(A full BOP Test) shall be performed: when initially installed and whenever any seal subject to test pressure is broken."

**We propose to break test** if able to finish the next hole section within 21 days of the previous full BOP test. No BOP components nor any break will ever surpass 21 days between testing. A break test will consist of a 250 psi low / ≥ 5,000 psi high for 10 min each test against the connection that was broken

when skidding the rig. Upon the first nipple up of the pad a full BOP test will be performed. A full BOP test will be completed prior to drilling the production 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. Break Tests **will not be performed on Production hole sections.**

**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.

ONSHORE ORDER NO. 1

Chevron

SND 12 01 FED COM 001 P306 438H

Eddy County, NM

CONFIDENTIAL -- TIGHT HOLE

DRILLING PLAN

PAGE: 2

**4. CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	(TVD)	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	1,110'	1,110'	16"	13-3/8"	54.5 #	J-55	STC	New
Intermediate	0'	4,701'	4,620'	12-1/4"	9-5/8"	40#	L-80	BTC	New
Prod/Intermediate 2	0'	9,744'	9,648'	8-3/4"	7"	29.0 #	P/TN-110	BLUE	New
Production Liner	9,444'	10,244'	10,148'	6-1/8"	5"	18.0 #	P-110	W513	New
	10,244'	20,561'		6-1/8"	4-1/2"	11.6 #	P-110	W521	New

\*\*5" casing ran from TOL to 45 deg. Max OD at connection is 5.00 inches

Chevron will keep casing fluid filled at all times and while RIH. Chevron will check casing at a minimum of every 20 jts (~840') while running intermediate and production casing in order to maintain collapse SF. (and never to surpass 1/3 of casing)

**SF Calculations based on the following "Worst Case" casing design:**

Surface	1,500'	ftTVD	max depths
Intermediate	5,500'	ftTVD	max depths
Prod/Intermediate 2	11,000'	ftTVD	max depths
Production Liner	22,500'	ftMD	max depths

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.43	2.13	4.07	1.53
Intermediate	1.64	1.24	2.78	1.99
Prod/Intermediate 2	1.15	1.63	2.39	1.18
Production Liner	1.10	1.39	1.32	1.16

The following worst case load cases were considered for calculation of the above Min. Safety Factors:

Burst Design	Surf	Int	Int 2	Prod Lnr
Pressure Test- Surface, Prod Csg, Prod Liner P external: Mud weight above TOC, PP below P internal: Test psi + next section heaviest mud in csg	X	X	X	X
Displace to Gas P external: Mud weight above TOC, PP below P internal: Dry Gas from Next Csg Point	X	X	X	X
Gas over mud (60/40) - Prod Csg P external: Mud weight above TOC, PP below P internal: 60% gas over 40% mud from hole TD PP		X	X	X
Stimulation (Frac) Pressures- P external: Mud weight above TOC, PP below P internal: Max inj pressure w/ heaviest injected fluid			X	X
Tubing leak- Prod Csg (packer at KOP) P external: Mud weight above TOC, PP below P internal: Leak just below surf, 8.45 ppg packer fluid		X	X	X
Collapse Design	Surf	Prod	Prod	Prod
Full Evacuation P external: Mud weight gradient P internal: none	X	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: displacement fluid - water	X	X	X	X
Tension Design	Surf	Prod	Prod	Prod
50-100k lb overpull	X	X	X	X



# Chevron SND 12 01 FED COM 001 P306 437H Rev0 RM 23Jul20 Proposal

## Geodetic Report

(Def Plan)



**Report Date:** July 30, 2020 - 03:22 PM  
**Client:** Chevron  
**Field:** NM Eddy County (NAD 27)  
**Structure / Slot:** Chevron SND 12 01 FED COM 001 P306 / 437H  
**Well:** SND 12 01 FED COM 001 P306 437H  
**Borehole:** SND 12 01 FED COM 001 P306 437H  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Chevron SND 12 01 FED COM 001 P306 437H Rev0 RM 23Jul20  
**Survey Date:** July 23, 2020  
**Tort / AHD / DDI / ERD Ratio:** 131.715 ° / 11832.319 ft / 6.489 / 1.112  
**Coordinate Reference System:** NAD27 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 32° 13' 33.3818", W 103° 43' 30.56755"  
**Location Grid N/E Y/X:** N 446448.000 ftUS, E 688069.000 ftUS  
**CRS Grid Convergence Angle:** 0.3243 °  
**Grid Scale Factor:** 0.9999496  
**Version / Patch:** 2.10.818.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 359.690 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB = 30 TBD  
**TVD Reference Elevation:** 3612.000 ft above MSL  
**Seabed / Ground Elevation:** 3582.000 ft above MSL  
**Magnetic Declination:** 6.599 °  
**Total Gravity Field Strength:** 998.4296mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 47787.308 nT  
**Magnetic Dip Angle:** 59.873 °  
**Declination Date:** July 27, 2020  
**Magnetic Declination Model:** HDGM 2020  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.3243 °  
**Total Corr Mag North->Grid North:** 6.2751 °  
**Local Coord Referenced To:** Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	100.00	0.00	257.12	100.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	200.00	0.00	257.12	200.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	300.00	0.00	257.12	300.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	400.00	0.00	257.12	400.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	500.00	0.00	257.12	500.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	600.00	0.00	257.12	600.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	700.00	0.00	257.12	700.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	800.00	0.00	257.12	800.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
Rustler (RSLR)	845.00	0.00	257.12	845.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
9 5/8" Casing	850.00	0.00	257.12	850.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	900.00	0.00	257.12	900.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
Build 1.5"/100ft	950.00	0.00	257.12	950.00	0.00	0.00	0.00	0.00	446448.00	688069.00	N 32 13 33.38	W 103 43 30.57
	1000.00	0.75	257.12	1000.00	-0.07	-0.07	-0.32	1.50	446447.93	688068.68	N 32 13 33.38	W 103 43 30.57
	1100.00	2.25	257.12	1099.96	-0.64	-0.66	-2.87	1.50	446447.34	688066.13	N 32 13 33.38	W 103 43 30.60
	1200.00	3.75	257.12	1199.82	-1.78	-1.82	-7.97	1.50	446446.18	688061.03	N 32 13 33.38	W 103 43 30.66
	1300.00	5.25	257.12	1299.51	-3.49	-3.57	-15.62	1.50	446444.43	688053.38	N 32 13 33.38	W 103 43 30.75
	1400.00	6.75	257.12	1398.96	-5.76	-5.90	-25.81	1.50	446442.10	688043.19	N 32 13 33.38	W 103 43 30.87
	1500.00	8.25	257.12	1498.10	-8.60	-8.81	-38.53	1.50	446439.19	688030.47	N 32 13 33.38	W 103 43 31.02
	1600.00	9.75	257.12	1596.87	-12.01	-12.30	-53.78	1.50	446435.70	688015.22	N 32 13 33.38	W 103 43 31.19
	1700.00	11.25	257.12	1695.19	-15.97	-16.36	-71.55	1.50	446431.64	687997.46	N 32 13 33.38	W 103 43 31.40
	1800.00	12.75	257.12	1793.00	-20.50	-20.99	-91.82	1.50	446427.01	687977.19	N 32 13 33.38	W 103 43 31.64
Hold	1816.67	13.00	257.12	1809.25	-21.31	-21.82	-95.44	1.50	446426.18	687973.57	N 32 13 33.38	W 103 43 31.68
	1900.00	13.00	257.12	1890.45	-25.39	-26.00	-113.71	0.00	446422.00	687955.30	N 32 13 33.38	W 103 43 31.89
	2000.00	13.00	257.12	1987.88	-30.28	-31.02	-135.64	0.00	446416.99	687933.37	N 32 13 33.08	W 103 43 32.15
	2100.00	13.00	257.12	2085.32	-35.18	-36.03	-157.57	0.00	446411.97	687911.44	N 32 13 33.03	W 103 43 32.40
	2200.00	13.00	257.12	2182.76	-40.07	-41.04	-179.50	0.00	446406.96	687889.51	N 32 13 32.99	W 103 43 32.66
	2300.00	13.00	257.12	2280.20	-44.97	-46.06	-201.43	0.00	446401.94	687867.58	N 32 13 32.94	W 103 43 32.92
	2400.00	13.00	257.12	2377.63	-49.86	-51.07	-223.36	0.00	446396.93	687845.66	N 32 13 32.89	W 103 43 33.17
	2500.00	13.00	257.12	2475.07	-54.76	-56.09	-245.28	0.00	446391.92	687823.73	N 32 13 32.84	W 103 43 33.43
	2600.00	13.00	257.12	2572.51	-59.66	-61.10	-267.21	0.00	446386.90	687801.80	N 32 13 32.79	W 103 43 33.68
	2700.00	13.00	257.12	2669.94	-64.55	-66.12	-289.14	0.00	446381.89	687779.87	N 32 13 32.74	W 103 43 33.94
	2800.00	13.00	257.12	2767.38	-69.45	-71.13	-311.07	0.00	446376.87	687757.94	N 32 13 32.70	W 103 43 34.19
	2900.00	13.00	257.12	2864.82	-74.34	-76.15	-333.00	0.00	446371.86	687736.02	N 32 13 32.65	W 103 43 34.45
	3000.00	13.00	257.12	2962.25	-79.24	-81.16	-354.93	0.00	446366.84	687714.09	N 32 13 32.60	W 103 43 34.70
	3100.00	13.00	257.12	3059.69	-84.13	-86.17	-376.86	0.00	446361.83	687692.16	N 32 13 32.55	W 103 43 34.96
Castile (CSTL)	3117.76	13.00	257.12	3077.00	-85.00	-87.06	-380.75	0.00	446360.94	687688.27	N 32 13 32.54	W 103 43 35.01
	3200.00	13.00	257.12	3157.13	-89.03	-91.19	-398.79	0.00	446356.82	687670.23	N 32 13 32.50	W 103 43 35.22
	3300.00	13.00	257.12	3254.57	-93.92	-96.20	-420.72	0.00	446351.80	687648.30	N 32 13 32.45	W 103 43 35.47
	3400.00	13.00	257.12	3352.00	-98.82	-101.22	-442.65	0.00	446346.79	687626.38	N 32 13 32.41	W 103 43 35.73
Turn 1.5"/100ft	3500.00	13.00	257.12	3449.44	-103.72	-106.23	-464.58	0.00	446341.77	687604.45	N 32 13 32.36	W 103 43 35.98
	3600.00	12.91	250.44	3546.90	-109.85	-112.48	-486.07	1.50	446335.53	687582.96	N 32 13 32.30	W 103 43 36.23
	3700.00	12.98	243.75	3644.36	-118.44	-121.19	-506.67	1.50	446326.82	687562.36	N 32 13 32.21	W 103 43 36.47
Hold	3709.15	13.00	243.14	3653.28	-119.35	-122.11	-508.51	1.50	446325.90	687560.52	N 32 13 32.20	W 103 43 36.49
	3800.00	13.00	243.14	3741.80	-128.49	-131.34	-526.74	0.00	446316.67	687542.29	N 32 13 32.11	W 103 43 36.71
	3900.00	13.00	243.14	3839.24	-138.54	-141.50	-546.81	0.00	446306.50	687522.22	N 32 13 32.01	W 103 43 36.94
	4000.00	13.00	243.14	3936.68	-148.60	-151.67	-566.87	0.00	446296.34	687502.16	N 32 13 31.91	W 103 43 37.18
	4100.00	13.00	243.14	4034.11	-158.65	-161.83	-586.94	0.00	446286.18	687482.09	N 32 13 31.81	W 103 43 37.41
	4200.00	13.00	243.14	4131.55	-168.71	-171.99	-607.01	0.00	446276.01	687462.02	N 32 13 31.71	W 103 43 37.64
	4300.00	13.00	243.14	4228.99	-178.76	-182.16	-627.08	0.00	446265.85	687441.95	N 32 13 31.61	W 103 43 37.88
	4400.00	13.00	243.14	4326.42	-188.82	-192.32	-647.15	0.00	446255.69	687421.89	N 32 13 31.51	W 103 43 38.11
	4500.00	13.00	243.14	4423.86	-198.87	-202.48	-667.22	0.00	446245.53	687401.82	N 32 13 31.42	W 103 43 38.35
	4600.00	13.00	243.14	4521.30	-208.93	-212.65	-687.28	0.00	446235.36	687381.75	N 32 13 31.32	W 103 43 38.58
	4700.00	13.00	243.14	4618.73	-218.98	-222.81	-707.35	0.00	446225.20	687361.68	N 32 13 31.22	W 103 43 38.82
Lamar (LMAR)	4701.30	13.00	243.14	4620.00	-219.11	-222.94	-707.61	0.00	446225.07	687361.42	N 32 13 31.22	W 103 43 38.82
Bell Canyon (BLCN)	4737.22	13.00	243.14	4655.00	-222.72	-226.59	-714.82	0.00	446221.42	687354.22	N 32 13 31.18	W 103 43 38.90
	4800.00	13.00	243.14	4716.17	-229.03	-232.97	-727.42	0.00	446215.04	687341.62	N 32 13 31.12	W 103 43 39.05
	4900.00	13.00	243.14	4813.61	-239.09	-243.14	-747.49	0.00	446204.88	687321.55	N 32 13 31.02	W 103 43 39.28
	5000.00	13.00	243.14	4911.05	-249.14	-253.30	-767.56	0.00	446194.71	687301.48	N 32 13 30.92	W 103 43 39.52
	5100.00	13.00	243.14	5008.48	-259.20	-263.46	-787.63	0.00	446184.55	687281.42	N 32 13 30.82	W 103 43 39.75
	5200.00	13.00	243.14	5105.92	-269.25	-273.63	-807.69	0.00	446174.39	687261.35	N 32 13 30.72	W 103 43 39.99
	5300.00	13.00	243.14	5203.36	-279.31	-283.79	-827.76	0.00	446164.22	687241.28	N 32 13 30.62	W 103 43 40.22
	5400.00	13.00	243.14	5300.79	-289.36	-293.95	-847.83	0.00	446154.06	687221.21	N 32 13 30.52	W 103 43 40.46
	5500.00	13.00	243.14	5398.23	-299.42	-304.12	-867.90	0.00	446143.90	687201.15	N 32 13 30.42	W 103 43 40.69
	5600.00	13.00	243.14	5495.67	-309.47	-314.28	-887.97	0.00	446133.74	687181.08	N 32 13 30.32	W 103 43 40.92
Cherry Canyon (CRCN)	5642.42	13.00	243.14	5537.00	-313.74	-318.59	-896.48	0.00	446129.43	687172.57	N 32 13 30.28	W 103 43 41.02
	5700.00	13.00	243.14	5593.10	-319.53	-324.44	-908.04	0.00	446123.57	687161.01	N 32 13 30.22	W 103 43 41.16
	5800.00	13.00	243.14	5690.54	-329.58	-334.61	-928.10	0.00	446113.41	687140.94	N 32 13 30.12	W 103 43 41.39
	5900.00	13.00	243.14	5787.98	-339.64	-344.77	-948.17	0.00	446103.25	687120.88	N 32 13 30.02	W 103 43 41.63
	6000.00	13.00	243.14	5885.42	-349.69	-354.93	-968.24	0.00	446093.09	687100.81	N 32 13 29.92	W 103 43 41.86
	6100.00	13.00	243.14	5982.85	-359.74	-365.10	-988.31	0.00	446082.92	687080.74	N 32 13 29.82	W 103 43 42.10
	6200.00	13.00	243.14	6080.29	-369.80	-375.26	-1008.38	0.00	446072.76	687060.67	N 32 13 29.72	W 103 43 42.33
	6300.00	13.00	243.14	6177.73	-379.85	-385.42	-1028.45					

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 ° ' ")
	6400.00	13.00	243.14	6275.16	-389.91	-395.59	-1048.51	0.00	446052.43	687020.54	N 32 13 29.53	W 103 43 42.80
	6500.00	13.00	243.14	6372.60	-399.96	-405.75	-1068.58	0.00	446042.27	687000.47	N 32 13 29.43	W 103 43 43.03
	6600.00	13.00	243.14	6470.04	-410.02	-415.91	-1088.65	0.00	446032.11	686980.41	N 32 13 29.33	W 103 43 43.27
	6700.00	13.00	243.14	6567.47	-420.07	-426.08	-1108.72	0.00	446021.95	686960.34	N 32 13 29.23	W 103 43 43.50
Drop 1.5°/100ft	6774.51	13.00	243.14	6640.07	-427.56	-433.65	-1123.67	0.00	446014.37	686945.39	N 32 13 29.15	W 103 43 43.68
	6800.00	12.62	243.14	6664.93	-430.09	-436.20	-1128.71	1.50	446011.82	686940.35	N 32 13 29.13	W 103 43 43.73
Brushy Canyon (BCN)	6891.04	11.25	243.14	6754.00	-438.50	-444.71	-1145.51	1.50	446003.32	686923.55	N 32 13 29.05	W 103 43 43.93
	6900.00	11.12	243.14	6762.79	-439.28	-445.49	-1147.06	1.50	446002.53	686922.00	N 32 13 29.04	W 103 43 43.95
	7000.00	9.62	243.14	6861.15	-447.32	-453.62	-1163.11	1.50	445994.40	686905.95	N 32 13 28.96	W 103 43 44.14
	7100.00	8.12	243.14	6959.96	-454.21	-460.59	-1176.87	1.50	445987.44	686892.20	N 32 13 28.89	W 103 43 44.30
	7200.00	6.62	243.14	7059.13	-459.95	-466.38	-1188.31	1.50	445981.64	686880.76	N 32 13 28.83	W 103 43 44.43
	7300.00	5.12	243.14	7158.60	-464.52	-471.00	-1197.43	1.50	445977.02	686871.64	N 32 13 28.79	W 103 43 44.54
	7400.00	3.62	243.14	7258.31	-467.92	-474.44	-1204.22	1.50	445973.58	686864.84	N 32 13 28.75	W 103 43 44.62
	7500.00	2.12	243.14	7358.18	-470.15	-476.70	-1208.68	1.50	445971.32	686860.38	N 32 13 28.73	W 103 43 44.67
Hold Vertical	7600.00	0.62	243.14	7458.15	-471.22	-477.78	-1210.81	1.50	445970.25	686858.25	N 32 13 28.72	W 103 43 44.69
	7641.18	0.00	243.14	7499.32	-471.32	-477.88	-1211.01	1.50	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	7700.00	0.00	243.14	7558.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	7800.00	0.00	243.14	7658.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	7900.00	0.00	243.14	7758.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8000.00	0.00	243.14	7858.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8100.00	0.00	243.14	7958.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8200.00	0.00	243.14	8058.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8300.00	0.00	243.14	8158.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8400.00	0.00	243.14	8258.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8500.00	0.00	243.14	8358.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8600.00	0.00	243.14	8458.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
Bone Spring (BSGL)	8614.85	0.00	243.14	8473.00	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
7" Casing	8641.85	0.00	243.14	8500.00	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
Upper Avalon (AVN)	8669.85	0.00	243.14	8528.00	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8700.00	0.00	243.14	8558.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8800.00	0.00	243.14	8658.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	8900.00	0.00	243.14	8758.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9000.00	0.00	243.14	8858.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9100.00	0.00	243.14	8958.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9200.00	0.00	243.14	9058.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9300.00	0.00	243.14	9158.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9400.00	0.00	243.14	9258.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9500.00	0.00	243.14	9358.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9600.00	0.00	243.14	9458.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
Top First Bone Spring (FBS)	9610.85	0.00	243.14	9469.00	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9700.00	0.00	243.14	9558.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9800.00	0.00	243.14	9658.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	9900.00	0.00	243.14	9758.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	10000.00	0.00	243.14	9858.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	10100.00	0.00	243.14	9958.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
	10200.00	0.00	243.14	10058.15	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
KOP, Build 10"/100ft	10202.98	0.00	243.14	10061.12	-471.32	-477.88	-1211.01	0.00	445970.15	686858.05	N 32 13 28.72	W 103 43 44.70
Top Second Bone Spring (SBU)	10287.15	8.42	338.69	10145.00	-465.56	-472.13	-1213.25	10.00	445975.90	686855.81	N 32 13 28.78	W 103 43 44.72
	10300.00	9.70	338.69	10157.68	-463.67	-470.24	-1213.99	10.00	445977.78	686855.08	N 32 13 28.80	W 103 43 44.73
Second Bone Spring Target 1	10352.55	14.96	338.69	10209.00	-453.20	-459.80	-1218.06	10.00	445988.23	686851.00	N 32 13 28.90	W 103 43 44.78
	10400.00	19.70	338.69	10254.29	-440.01	-446.63	-1223.20	10.00	446001.39	686845.86	N 32 13 29.03	W 103 43 44.84
FTP Cross	10453.17	25.02	338.69	10303.44	-421.13	-427.79	-1230.55	10.00	446020.23	686838.52	N 32 13 29.22	W 103 43 44.92
	10500.00	29.70	338.69	10345.02	-401.04	-407.75	-1238.37	10.00	446040.27	686830.70	N 32 13 29.42	W 103 43 45.01
	10600.00	39.70	338.69	10427.13	-347.96	-354.77	-1259.03	10.00	446093.24	686810.03	N 32 13 29.94	W 103 43 45.25
Build & Turn 10"/100ft	10602.98	40.00	338.69	10429.41	-346.18	-353.00	-1259.72	10.00	446095.02	686809.34	N 32 13 29.96	W 103 43 45.25
Second Bone Spring Carbonate	10611.63	40.84	339.01	10436.00	-340.94	-347.77	-1261.75	10.00	446100.25	686807.32	N 32 13 30.01	W 103 43 45.28
	10700.00	49.46	341.78	10498.27	-281.83	-288.78	-1282.64	10.00	446159.24	686786.43	N 32 13 30.60	W 103 43 45.52
	10800.00	59.27	344.15	10556.47	-204.07	-211.14	-1306.32	10.00	446236.87	686762.75	N 32 13 31.37	W 103 43 45.79
	10900.00	69.12	346.09	10599.95	-117.04	-124.23	-1329.35	10.00	446323.78	686739.72	N 32 13 32.23	W 103 43 46.05
Second Bone Spring Target 2	10911.67	70.27	346.29	10604.00	-106.39	-113.60	-1331.96	10.00	446334.41	686737.11	N 32 13 32.33	W 103 43 46.08
	11000.00	78.99	347.78	10627.39	-23.37	-30.68	-1351.03	10.00	446417.32	686718.04	N 32 13 33.15	W 103 43 46.30
	11100.00	88.86	349.36	10637.96	74.08	66.66	-1370.70	10.00	446514.66	686698.37	N 32 13 34.12	W 103 43 46.52
Landing Point	11121.17	90.95	349.69	10638.00	94.91	87.48	-1374.55	10.00	446535.47	686694.52	N 32 13 34.32	W 103 43 46.56
	11200.00	90.95	349.69	10636.69	172.54	165.03	-1388.66	0.00	446613.02	686680.42	N 32 13 35.09	W 103 43 46.72
	11300.00	90.95	349.69	10635.02	271.00	263.40	-1406.55	0.00	446711.38	686662.52	N 32 13 36.07	W 103 43 46.92
	11400.00	90.95	349.69	10633.36	369.47	361.77	-1424.45	0.00	446809.75	686644.63	N 32 13 37.04	W 103 43 47.13
	11500.00	90.95	349.69	10631.69	467.94	460.14	-1442.34	0.00	446908.12	686626.73	N 32 13 38.02	W 103 43 47.33
Turn 2"/100ft	11534.10	90.95	349.69	10631.13	501.52	493.69	-1448.44	0.00	446941.66	686620.63	N 32 13 38.35	W 103 43 47.40
	11600.00	90.95	351.01	10630.03	566.53	558.64	-1459.49	2.00	447006.61	686609.59	N 32 13 38.99	W 103 43 47.52
	11700.00	90.96	353.01	10628.36	665.62	657.65	-1473.39	2.00	447105.62	686595.69	N 32 13 39.87	W 103 43 47.68
	11800.00	90.96	355.01	10626.69	765.11	757.09	-1483.83	2.00	447205.05	686585.25	N 32 13 40.96	W 103 43 47.79
	11900.00	90.96	357.01	10625.02	864.88	856.83	-1490.78	2.00	447304.78	686578.29	N 32 13 41.94	W 103 43 47.86
	12000.00	90.95	359.01	10623.36	964.82	956.75	-1494.26	2.00	447404.70	686574.82	N 32 13 42.93	W 103 43 47.90
Hold	12034.03	90.95	359.69	10622.79	998.84	990.77	-1494.64	2.00	447438.72	686574.4		

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 ° ' ")
	13600.00	90.46	359.69	10599.88	2564.63	2556.54	-1503.10	0.00	449004.41	686555.98	N 32 13 58.76	W 103 43 47.90
	13700.00	90.46	359.69	10599.08	2664.63	2656.54	-1503.63	0.00	449104.40	686555.44	N 32 13 59.75	W 103 43 47.90
	13800.00	90.46	359.69	10598.28	2764.63	2756.53	-1504.17	0.00	449204.39	686554.91	N 32 14 0.74	W 103 43 47.90
	13900.00	90.46	359.69	10597.48	2864.63	2856.53	-1504.71	0.00	449304.38	686554.37	N 32 14 1.73	W 103 43 47.90
	14000.00	90.46	359.69	10596.68	2964.62	2956.52	-1505.24	0.00	449404.37	686553.84	N 32 14 2.72	W 103 43 47.90
	14100.00	90.46	359.69	10595.88	3064.62	3056.52	-1505.78	0.00	449504.36	686553.30	N 32 14 3.71	W 103 43 47.90
	14200.00	90.46	359.69	10595.08	3164.62	3156.51	-1506.32	0.00	449604.35	686552.76	N 32 14 4.70	W 103 43 47.90
	14300.00	90.46	359.69	10594.28	3264.61	3256.51	-1506.85	0.00	449704.34	686552.23	N 32 14 5.69	W 103 43 47.90
	14400.00	90.46	359.69	10593.48	3364.61	3356.50	-1507.39	0.00	449804.33	686551.69	N 32 14 6.68	W 103 43 47.89
	14500.00	90.46	359.69	10592.68	3464.61	3456.50	-1507.93	0.00	449904.32	686551.15	N 32 14 7.67	W 103 43 47.89
	14600.00	90.46	359.69	10591.88	3564.60	3556.49	-1508.46	0.00	450004.31	686550.62	N 32 14 8.66	W 103 43 47.89
	14700.00	90.46	359.69	10591.08	3664.60	3656.49	-1509.00	0.00	450104.30	686550.08	N 32 14 9.65	W 103 43 47.89
	14800.00	90.46	359.69	10590.27	3764.60	3756.48	-1509.53	0.00	450204.29	686559.54	N 32 14 10.64	W 103 43 47.89
	14900.00	90.46	359.69	10589.47	3864.59	3856.48	-1510.07	0.00	450304.28	686559.01	N 32 14 11.63	W 103 43 47.89
	15000.00	90.46	359.69	10588.67	3964.59	3956.47	-1510.61	0.00	450404.27	686558.47	N 32 14 12.62	W 103 43 47.89
	15100.00	90.46	359.69	10587.87	4064.59	4056.47	-1511.14	0.00	450504.26	686557.94	N 32 14 13.61	W 103 43 47.89
	15200.00	90.46	359.69	10587.07	4164.58	4156.47	-1511.68	0.00	450604.25	686557.40	N 32 14 14.60	W 103 43 47.89
	15300.00	90.46	359.69	10586.27	4264.58	4256.46	-1512.22	0.00	450704.24	686556.86	N 32 14 15.59	W 103 43 47.89
	15400.00	90.46	359.69	10585.47	4364.58	4356.46	-1512.75	0.00	450804.23	686556.33	N 32 14 16.57	W 103 43 47.89
	15500.00	90.46	359.69	10584.67	4464.57	4456.45	-1513.29	0.00	450904.22	686555.79	N 32 14 17.56	W 103 43 47.89
	15600.00	90.46	359.69	10583.87	4564.57	4556.45	-1513.83	0.00	451004.21	686555.25	N 32 14 18.55	W 103 43 47.89
	15700.00	90.46	359.69	10583.07	4664.57	4656.44	-1514.36	0.00	451104.20	686554.72	N 32 14 19.54	W 103 43 47.89
	15800.00	90.46	359.69	10582.27	4764.56	4756.44	-1514.90	0.00	451204.19	686554.18	N 32 14 20.53	W 103 43 47.89
IFP2, Drop 2"/100ft Hold	15833.81	90.46	359.69	10582.00	4798.38	4790.25	-1515.08	0.00	451238.00	686554.00	N 32 14 20.87	W 103 43 47.89
	15841.47	90.31	359.67	10581.95	4806.03	4797.90	-1515.12	2.00	451245.65	686553.96	N 32 14 20.94	W 103 43 47.89
	15900.00	90.31	359.67	10581.64	4864.56	4856.43	-1515.46	0.00	451304.18	686553.62	N 32 14 21.52	W 103 43 47.89
	16000.00	90.31	359.67	10581.10	4964.56	4956.43	-1516.03	0.00	451404.17	686553.05	N 32 14 22.51	W 103 43 47.89
	16100.00	90.31	359.67	10580.56	5064.56	5056.43	-1516.61	0.00	451504.16	686552.47	N 32 14 23.50	W 103 43 47.89
	16200.00	90.31	359.67	10580.03	5164.56	5156.42	-1517.18	0.00	451604.15	686551.90	N 32 14 24.49	W 103 43 47.89
	16300.00	90.31	359.67	10579.49	5264.56	5256.42	-1517.76	0.00	451704.15	686551.32	N 32 14 25.48	W 103 43 47.89
	16400.00	90.31	359.67	10578.95	5364.56	5356.42	-1518.33	0.00	451804.14	686550.75	N 32 14 26.47	W 103 43 47.89
	16500.00	90.31	359.67	10578.42	5464.55	5456.42	-1518.91	0.00	451904.13	686550.17	N 32 14 27.46	W 103 43 47.89
	16600.00	90.31	359.67	10577.88	5564.55	5556.41	-1519.48	0.00	452004.12	686549.60	N 32 14 28.45	W 103 43 47.89
	16700.00	90.31	359.67	10577.35	5664.55	5656.41	-1520.06	0.00	452104.11	686549.02	N 32 14 29.44	W 103 43 47.89
	16800.00	90.31	359.67	10576.81	5764.55	5756.41	-1520.63	0.00	452204.10	686548.45	N 32 14 30.43	W 103 43 47.89
	16900.00	90.31	359.67	10576.27	5864.55	5856.40	-1521.21	0.00	452304.10	686547.87	N 32 14 31.42	W 103 43 47.89
	17000.00	90.31	359.67	10575.74	5964.55	5956.40	-1521.78	0.00	452404.09	686547.30	N 32 14 32.41	W 103 43 47.89
	17100.00	90.31	359.67	10575.20	6064.54	6056.40	-1522.36	0.00	452504.08	686546.72	N 32 14 33.40	W 103 43 47.89
	17200.00	90.31	359.67	10574.66	6164.54	6156.39	-1522.93	0.00	452604.07	686546.15	N 32 14 34.39	W 103 43 47.89
	17300.00	90.31	359.67	10574.13	6264.54	6256.39	-1523.51	0.00	452704.06	686545.57	N 32 14 35.38	W 103 43 47.89
	17400.00	90.31	359.67	10573.59	6364.54	6356.39	-1524.08	0.00	452804.05	686545.00	N 32 14 36.37	W 103 43 47.89
	17500.00	90.31	359.67	10573.06	6464.54	6456.38	-1524.66	0.00	452904.05	686544.42	N 32 14 37.35	W 103 43 47.89
	17600.00	90.31	359.67	10572.52	6564.54	6556.38	-1525.23	0.00	453004.04	686543.85	N 32 14 38.34	W 103 43 47.89
	17700.00	90.31	359.67	10571.98	6664.54	6656.38	-1525.81	0.00	453104.03	686543.27	N 32 14 39.33	W 103 43 47.89
	17800.00	90.31	359.67	10571.45	6764.53	6756.38	-1526.38	0.00	453204.02	686542.70	N 32 14 40.32	W 103 43 47.89
	17900.00	90.31	359.67	10570.91	6864.53	6856.37	-1526.96	0.00	453304.01	686542.12	N 32 14 41.31	W 103 43 47.89
	18000.00	90.31	359.67	10570.38	6964.53	6956.37	-1527.53	0.00	453404.00	686541.55	N 32 14 42.30	W 103 43 47.89
	18100.00	90.31	359.67	10569.84	7064.53	7056.37	-1528.11	0.00	453504.00	686540.97	N 32 14 43.29	W 103 43 47.89
	18200.00	90.31	359.67	10569.30	7164.53	7156.36	-1528.68	0.00	453603.99	686540.40	N 32 14 44.28	W 103 43 47.89
	18300.00	90.31	359.67	10568.77	7264.53	7256.36	-1529.26	0.00	453703.98	686539.82	N 32 14 45.27	W 103 43 47.89
IFP3, Drop 2"/100ft Hold	18400.00	90.31	359.67	10568.23	7364.53	7356.36	-1529.83	0.00	453803.97	686539.25	N 32 14 46.26	W 103 43 47.89
	18443.03	90.31	359.67	10568.00	7407.56	7399.39	-1530.08	0.00	453847.00	686539.00	N 32 14 46.69	W 103 43 47.89
	18448.63	90.20	359.69	10567.98	7413.16	7404.99	-1530.11	2.00	453852.60	686538.97	N 32 14 46.74	W 103 43 47.89
	18500.00	90.20	359.69	10567.80	7464.53	7456.35	-1530.39	0.00	453903.96	686538.69	N 32 14 47.25	W 103 43 47.89
	18600.00	90.20	359.69	10567.45	7564.52	7556.35	-1530.92	0.00	454003.96	686538.16	N 32 14 48.24	W 103 43 47.89
	18700.00	90.20	359.69	10567.11	7664.52	7656.35	-1531.46	0.00	454103.95	686537.62	N 32 14 49.23	W 103 43 47.89
	18800.00	90.20	359.69	10566.76	7764.52	7756.35	-1532.00	0.00	454203.94	686537.08	N 32 14 50.22	W 103 43 47.89
	18900.00	90.20	359.69	10566.42	7864.52	7856.35	-1532.53	0.00	454303.93	686536.55	N 32 14 51.21	W 103 43 47.89
	19000.00	90.20	359.69	10566.08	7964.52	7956.34	-1533.07	0.00	454403.93	686536.01	N 32 14 52.20	W 103 43 47.89
	19100.00	90.20	359.69	10565.73	8064.52	8056.34	-1533.60	0.00	454503.92	686535.48	N 32 14 53.19	W 103 43 47.89
	19200.00	90.20	359.69	10565.39	8164.52	8156.34	-1534.14	0.00	454603.91	686534.94	N 32 14 54.18	W 103 43 47.89
	19300.00	90.20	359.69	10565.04	8264.52	8256.34	-1534.68	0.00	454703.91	686534.40	N 32 14 55.17	W 103 43 47.89
	19400.00	90.20	359.69	10564.70	8364.52	8356.34	-1535.21	0.00	454803.90	686533.87	N 32 14 56.16	W 103 43 47.89
	19500.00	90.20	359.69	10564.35	8464.52	8456.33	-1535.75	0.00	454903.89	686533.33	N 32 14 57.15	W 103 43 47.89
	19600.00	90.20	359.69	10564.01	8564.52	8556.33	-1536.29	0.00	455003.88	686532.79	N 32 14 58.13	W 103 43 47.89
	19700.00	90.20	359.69	10563.66	8664.52	8656.33	-1536.82	0.00	455103.88	686532.26	N 32 14 59.12	W 103 43 47.89
	19800.00	90.20	359.69	10563.32	8764.52	8756.33	-1537.36	0.00	455203.87	686531.72	N 32 15 0.11	W 103 43 47.89
	19900.00	90.20	359.69	10562.97	8864.52	8856.33	-1537.90	0.00	455303.86	686531.18	N 32 15 1.10	W 103 43 47.89
	20000.00	90.20	359.69	10562.63	8964.52	8956.32	-1538.43	0.00	455403.85	686530.65	N 32 15 2.09	W 103 43 47.89
	20100.00	90.20	359.69	10562.28	9064.52	9056.32	-1538.97	0.00	455503.85	686530.11	N 32 15 3.08	W 103 43 47.89
	20200.00	90.20	359.69	10561.94	9164.52	9156.32	-1539.50	0.00	455603.84	686529.58	N 32 15 4.07	W 103 43 47.89
	20300.00	90.20	359.69	10561.60	9264.51	9256.32	-1540.04	0.00	455703.83	686529.04	N 32 15 5.06	W 103 43 47.89
	20400.00	90.20	359.69	10561.25	9364.51	9356.32	-1540.58	0.00	455803.83	686528.50	N 32 15 6.05	W 103 43 47.89
	20500.00	90.20	359.69	10560.91								



## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Chervon</b>
<b>LEASE NO.:</b>	<b>NMNM120901</b>
<b>WELL NAME &amp; NO.:</b>	<b>SND 12 01 Fed Com 001 P306 437H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>522'/S &amp; 820'/E</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>25'/N &amp; 2310'/E</b>
<b>LOCATION:</b>	<b>Section 12, T.24 S., R.31 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

COA

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

Break Testing	<input checked="" type="radio"/> Yes	<input type="radio"/> No
---------------	--------------------------------------	--------------------------

### 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

1. The **13-3/8** inch surface casing shall be set at approximately **1110** 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 **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
    - Cement to surface. If cement does not circulate see B.1.a, c-d above.

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

- ❖ In Secretary Potash 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.

### **Contingency**

**Operator has proposed to pump down 13-3/8" X 9-5/8" annulus. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to BLM.**

3. The minimum required fill of cement behind the **7** inch production casing is:
  - Cement should tie-back at least **500 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. 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. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - a. 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.



- b. Manufacturer representative shall install the test plug for the initial BOP test.
- c. 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.
- d. 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)**

##### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

##### **BOPE Break Testing Variance (Note: For 5M BOPE or less)**

- 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 (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.

## 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. **Operator is approve 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

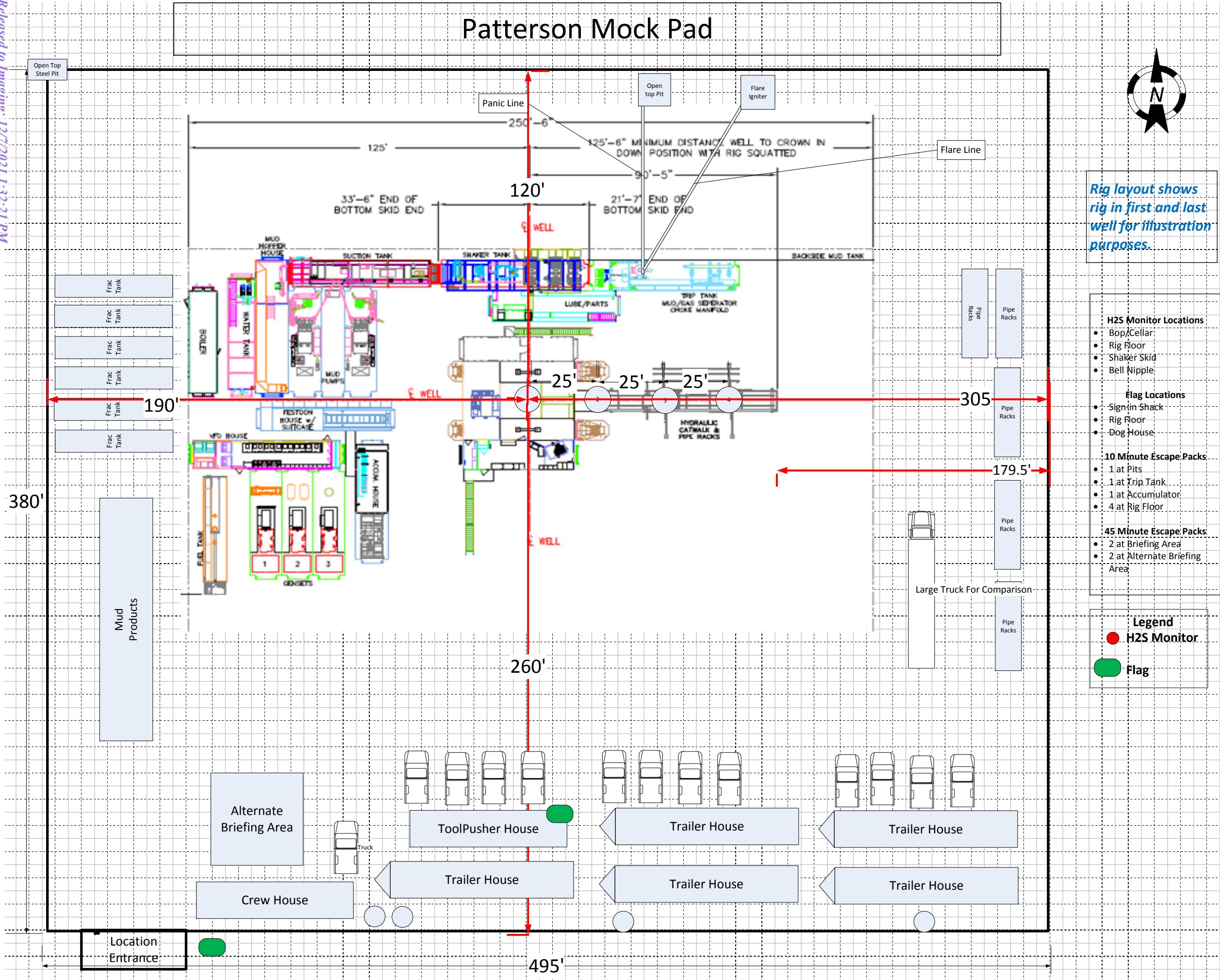
Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

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.

**ZS100121**





ONSHORE ORDER NO. 1

Chevron

SND 12 01 FED COM 001 P306 438H

Eddy County, NM

CONFIDENTIAL -- TIGHT HOLE

DRILLING PLAN

PAGE: 1

**Pad Summary: SND P306**

The table below lists all the wells for the given pad and their respective name and TVD's (ft) for their production target intervals:

Well Name(s)	Target TVD	Formation Desc.
SND 12 01 FED COM 001 P306 437H	10,638	Bone Spring
SND 12 01 FED COM 001 P306 438H	10,221	Bone Spring
SND 12 01 FED COM 001 P306 439H	10,656	Bone Spring
SND 12 01 FED COM 001 P306 440H	10,223	Bone Spring

**1. FORMATION TOPS**

The estimated tops of important geologic markers are as follows:

Elevation: 3583 ft

FORMATION	TVDSS	TVD	MD	LITHOLOGIES	MIN. RESOURCES	PROD. FORMATION
Rustler (RSLR)	2738	845	845	Dolomite	N/A	
Salado (Top of Salt)	2383	1,200	1,200	Salt	N/A	
Castile (CSTL)	506	3,077	3,117	Anhydrite	N/A	
Lamar (LMAR)	-1037	4,620	4,701	Limestone	N/A	
Bell Canyon (BLCN)	-1072	4,655	4,737	Sandstone	N/A	
Cherry Canyon (CRCN)	-1954	5,537	5,642	Sandstone	N/A	
Brushy Canyon (BCN)	-3171	6,754	6,891	Sandstone	N/A	
Bone Spring (BSGL)	-4890	8,473	8,614	Limestone	Oil	
Upper Avalon (AVN)	-4945	8,528	8,669	Limestone/Shale/Sandstone	Oil	
Top First Bone Spring (FBS)	-5886	9,469	9,610	Sandstone	Oil	
Top Second Bone Spring (SBU)	-6562	10,145	10,300	Sandstone	Oil	
Second Bone Spring Target 1	-6626	10,209	10,352	Sandstone	Oil	
Second Bone Spring Carbonate	-6853	10,436	10,611	Sandstone	Oil	
Top Bone Spring 2 (SBU)	-7021	10,604	20,561	Sandstone	Oil	yes

WELLBORE LOCATIONS	SUB-SEA TVD	RKB TVD	MD
SHL	3583	-	-
KOP	-6065	9,648	9,744
FTP	-6298	9,881	9,985
LTP	-6565	10,148	20,486

**2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS**

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
	Deepest Expected Base of Fresh Water	500
Water	Cherry Canyon	5,537
Oil/Gas	Bone Spring (BSGL)	8,473
Oil/Gas	Avalon	8,528
Oil/Gas	Top First Bone Spring (FBS)	9,469

All shows of fresh water and minerals will be reported and protected.

**3. BOP 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, 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.

Chevron respectfully request to vary from the Onshore Order 2 where it states:

"(A full BOP Test) shall be performed: when initially installed and whenever any seal subject to test pressure is broken."

**We propose to break test** if able to finish the next hole section within 21 days of the previous full BOP test. No BOP components nor any break will ever surpass 21 days between testing. A break test will consist of a 250 psi low / ≥ 5,000 psi high for 10 min each test against the connection that was broken



# BLOWOUT PREVENTER SCHEMATIC

Operation:

Intermediate &amp; Production Drilling Operations

Minimum System operation pressure

5,000 psi

## BOP Stack

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

## Kill Line

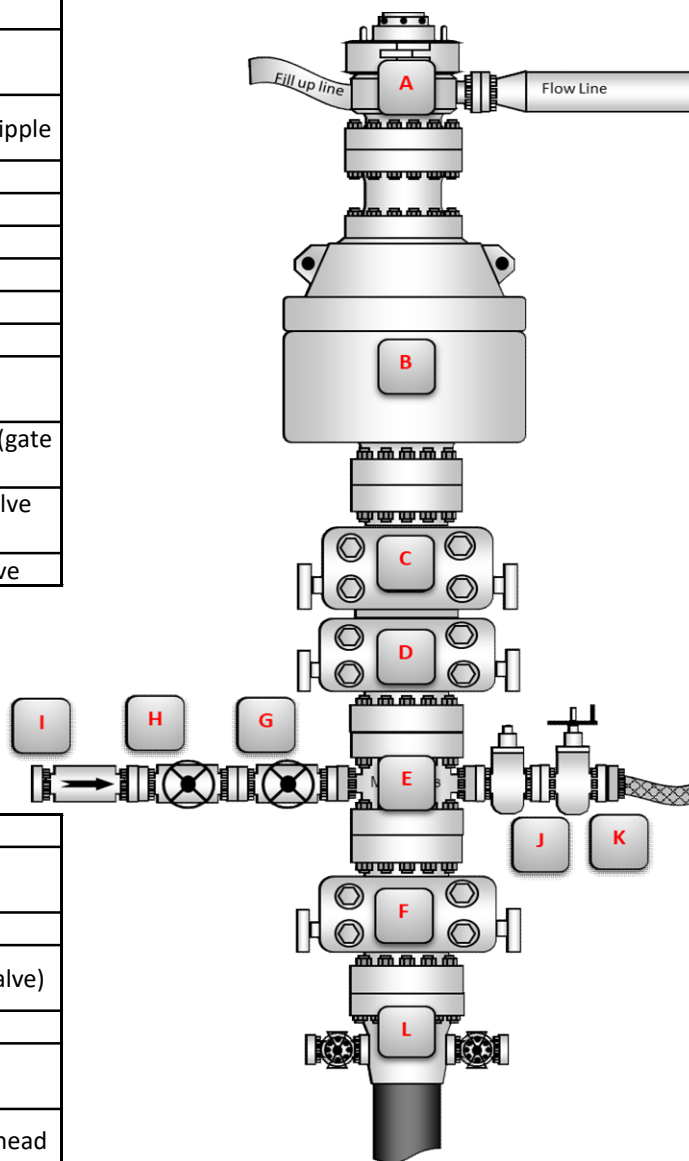
Part	Size	Pressure Rating	Description
<b>G</b>	2"	10,000	Inside Kill Line Valve (gate valve)
<b>H</b>	2"	10,000	Outside Kill Line Valve (gate valve)
<b>I</b>	2"	10,000	Kill Line Check valve

## Choke line

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

## Wellhead

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



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

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

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

Manual (hand wheels) or automatic locking devices will be installed on all ram preventers. Hand wheels will also be installed 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 63837

**CONDITIONS**

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 63837
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**CONDITIONS**

Created By	Condition	Condition Date
dmccclure	Notify OCD 24 hours prior to casing & cement	12/7/2021
dmccclure	Notify OCD 24 hours prior to spudding	12/7/2021
dmccclure	Will require a File As Drilled C-102 and a Directional Survey with the C-104	12/7/2021
dmccclure	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	12/7/2021
dmccclure	Cement is required to circulate on both surface and intermediate1 strings of casing	12/7/2021
dmccclure	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	12/7/2021