Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. DRILL REENTER 1a. Type of work: 1b. Type of Well: Oil Well Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing Single Zone Multiple Zone 2. Name of Operator 9. API Well No. 30-025-53677 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.\*) 11. Sec., T. R. M. or Blk. and Survey or Area At surface At proposed prod. zone 14. Distance in miles and direction from nearest town or post office\* 12. County or Parish 13. State 15. Distance from proposed\* 16. No of acres in lease 17. Spacing Unit dedicated to this well location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 18. Distance from proposed location\* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, applied for, on this lease, ft. 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. 4. Bond to cover the operations unless covered by an existing bond on file (see 2. A Drilling Plan. Item 20 above) 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. 6. Such other site specific information and/or plans as may be requested by the SUPO must be filed with the appropriate Forest Service Office). 25. Signature Name (Printed/Typed) Date Title Approved by (Signature) Date Name (Printed/Typed) 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

APPROVED WITH CONDITIONS

\*(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

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

District III

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

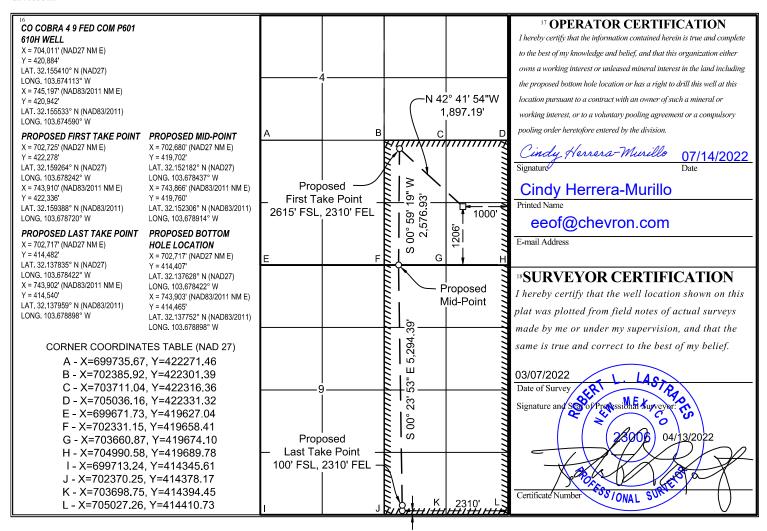
☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

	<sup>1</sup> API Num		<sup>2</sup> Pool Co	ode	<sup>3</sup> Pool Name										
30-02	<b>25-5367</b>	7	98270	JPPER WOLFCAN	OLFCAMP										
<sup>4</sup> Proper	ty Code		•	6	6 Well Number										
3363	45				610H										
7OGR1	ID No.			8 O	perator Name	<sup>9</sup> Elevation									
43:	23			CHEVR	ON U.S.A. IN	C.			3477'						
				10 Sur	face Locat	ion		•							
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County						
р	1	25 SOUTH	32 FAST NMPM		1206'	SOUTH	1000'	FAST	IFA						

Р	4		25 SOUTH	32 EAS1, N.M.P.M.		1206	SOUTH	1000	EASI	LEA					
	<sup>11</sup> Bottom Hole Location If Different From Surface														
UL or lot no.	Sect	tion	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County					
О	9		25 SOUTH	32 EAST, N.M.P.M.		25'	SOUTH	2310'	EAST	LEA					
<sup>12</sup> Dedicated Acres <sup>13</sup> Joint or Infill		t or Infill	<sup>14</sup> Consolidation Code <sup>1</sup>	<sup>15</sup> Order No.											
480		Π	NFILL												

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.



#### 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:Che	vron USA_		OGRID: _	4323		_ Date: _7 <u>/_25/_22</u>									
II. Type: ⊠ Original □ A	amendment	due to □ 19.15.2°	7.9.D(6)(a) NMA	C □ 19.15.27.9.D	(6)(b) NMAC □	Other.									
If Other, please describe: _															
	I. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed recompleted from a single well pad or connected to a central delivery point.  Well Name  API  ULSTR  Footages  Anticipated  Anticipated  Anticipated  Anticipated  Anticipated  Proposed to be drilled or proposed to be drilled o														
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D									
CO COBRA 4 33 FED P601 #501H	Pending	UL:P Sec 4, T25S-R32E	1204' FSL, 900' FEL	1500 BBL/D	2124 MCF/D	2000 BBL/D									
CO COBRA 4 33 FED P601 #503H	Pending	UL:P Sec 4, T25S-R32E	1204' FSL, 880' FEL	1500 BBL/D	2124 MCF/D	2000 BBL/D									
CO COBRA 4 33 FED P601 #601H	Pending	UL:P Sec 33, T25S-R32E	1206' FSL, 1020' FEL	1500 BBL/D	4419 MCF/D	2000 BBL/D									
CO COBRA 4 33 FED P601 #602H	Pending	UL:P Sec 4, T25S-R32E	1205' FSL, 980' FEL	1500 BBL/D	4419 MCF/D	2000 BBL/D									
CO COBRA 4 33 FED P601 #603H	Pending	UL:P Sec 4, T25S-R32E	1205' FSL, 940' FEL	1500 BBL/D	4419 MCF/D	2000 BBL/D									
CO COBRA 4 33 FED P601 #610H	Pending	UL:P Sec 4, T25S-R32E	1206' FSL, 1000' FEL	1500 BBL/D	4419 MCF/D	2000 BBL/D									
CO COBRA 4 33 FED P601 #611H	Pending	UL:P Sec 4, T25S-R32E	1205' FSL, 960' FEL	1500 BBL/D	4419 MCF/D	2000 BBL/D									
CO COBRA 4 33 FED P601 #612H	Pending	UL:P Sec 4, T25S-R32E	1205' FSL, 920' FEL	1500 BBL/D	4419 MCF/D	2000 BBL/D									
IV. Central Delivery Poin	t Name: _	CO COBRA	A_CTB_		[See 19.15.2	7.9(D)(1) NMAC]									
V. Anticipated Schedule: I proposed to be recompleted					vell or set of wells	proposed to be drilled or									

TD Reached

Date

Completion

Commencement Date

**Initial Flow** 

Back Date

First Production

Date

Page 1 of 4

API

Spud Date

Well Name

CO COBRA 4 33 FED P601 #501H	Pending	12/2023	N/A	N/A	N/A	N/A
CO COBRA 4 33 FED P601 #503H	Pending	12/2023	N/A	N/A	N/A	N/A
CO COBRA 4 33 FED P601 #601H	Pending	12/2023	N/A	N/A	N/A	N/A
CO COBRA 4 33 FED P601 #602H	Pending	12/2023	N/A	N/A	N/A	N/A
CO COBRA 4 33 FED P601 #603H	Pending	12/2023	N/A	N/A	N/A	N/A
CO COBRA 4 33 FED P601 #610H	Pending	12/2023	N/A	N/A	N/A	N/A
CO COBRA 4 33 FED P601 #611H	Pending	12/2023	N/A	N/A	N/A	N/A
CO COBRA 4 33 FED P601 #612H	Pending	12/2023	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	Available Maximum Daily Capacity
_			Start Date	of System Segment Tie-in

**XI. Map.**  $\square$  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 $\square$	] will □ will not have	e 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 $\square$ does $\square$ does not antici	pate that its existing well(s)	) connected to the same segme	ent, or portion, of th
natural gas gathering system(s) described above will cont	inue to meet anticipated inc	creases in line pressure caused	by the new well(s)

Ш	Attach	Op	erato	r's p	lan 1	to manag	e pro	ductio	n ın	resp	onse	to	the	ıncreased	line	pressure
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**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.

#### 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.

Well Name: CO COBRA 4 33 FED P601 Well Number: 610H

Pressure Rating (PSI): 5M Rating Depth: 12126

**Equipment:** Chevron respectfully request to vary from the Onshore Order 2 where it states: (A full BOP Test) shall be performed: when initially installed and whenever any seal subject to test pressure is broken. We propose to break test if able to finish the next hole section within 21 days of the previous full BOP test. No BOP components nor any break will ever surpass 21 days between testing. A break test will consist of a 250 psi low / 5,000 psi high for 10 min each test against the connection that was broken when skidding the rig. Upon the first nipple up of the pad a full BOP test will be performed. A full BOP test will be completed prior to drilling the production lateral sections unless the BOP connection was not broken prior to drilling that hole section (example: drilling straight from production into production liner hole section). A break test will only be performed on operations where BLM documentation states a 5M or less BOP can be utilized.

#### Requesting Variance? YES

Variance request: Chevron respectfully requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor on surface casing. BOPE will be nippled 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

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

#### **Choke Diagram Attachment:**

BLM 5M Choke Manifold Diagram 20220110065854.pdf

BLM\_Choke\_Hose\_Test\_Specs\_and\_Pressure\_Test\_Continental\_20220110065906.pdf

#### **BOP Diagram Attachment:**

NM\_Slim\_Hole\_Wellhead\_6650\_psi\_UH\_S\_20220110065919.pdf

BLM\_5M\_Annular\_10M\_Rams\_Stackup\_and\_Test\_Plan\_20220110065934.pdf

Sundry\_Break\_Testing\_and\_WOC\_500\_psi\_COBRA\_20220722074520.pdf

#### **Section 3 - Casing**

Casing ID	String Type	e Hole Size	Csg Size	Condition	Standard	Z Tapered String	Top Set MD	Bottom Set MD	O Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight 75	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
																				4		4
2	SURFACE	12.2 5	9.625	NEW	API	N	0	4701	0	4661	3479	-1182	4701	L-80	40	BUTT	2.21	2.03	BUOY	4.91	BUOY	4.91
3	PRODUCTI ON	8.75	7.0	NEW	API	N	0	11862	0	11553	3479	-8074	11862	OTH ER		OTHER - BLUE	2.39	2.32	BUOY	2.77	BUOY	2.77

Well Name: CO COBRA 4 33 FED P601

Well Number: 610H

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
4	PRODUCTI ON	6.12 5	5.0	NEW	API	N	11562	12312	11312	11953	-7833	-8474	750	P- 110	_	OTHER - W513	1.53	2.2	BUOY	1.71	BUOY	1.71
5	PRODUCTI ON	6.12 5	4.5	NEW	API	N	12312	20638	11953	12036	-8474	-8557	8326	P- 110		OTHER - W521	1.53	2.2	BUOY	1.71	BUOY	1.71

Casing A	Attachments
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**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

#### Casing Design Assumptions and Worksheet(s):

 $13.375\_54.5ppf\_J55\_BTC\_20220110070322.pdf$ 

Casing ID: 2 String SURFACE

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

### Casing Design Assumptions and Worksheet(s):

9.625\_40.0lb\_L80IC\_BTC\_20220721154102.pdf

Well Name: CO COBRA 4 33 FED P601 Well Number: 610H

Casing	<b>Attachments</b>
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Casing ID: 3

String

**PRODUCTION** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

7\_29ppf\_TN110SS\_TSH\_Blue\_20220801134136.pdf

Casing ID: 4

String

**PRODUCTION** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

5in\_18ppf\_TSH\_W513\_box\_x\_4.5in\_11.6ppf\_TSH\_W521\_pin\_\_Stewart\_Tubular\_May\_13\_\_2021\_\_20220801134714.p

Casing ID: 5

String

**PRODUCTION** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

4.5\_11.6ppf\_P110IC\_W521\_20220801134649.pdf

**Section 4 - Cement** 

Well Name: CO COBRA 4 33 FED P601 Well Number: 610H

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	0	NA	NA
SURFACE	Tail		0	1021	666	1.33	14.8	886	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
SURFACE	Lead		0	3701	582	2.49	11.9	1449	25	Class C	Extender, Antifoam, Retarder, Viscosifier
SURFACE	Tail		3701	4701	323	1.33	14.8	429	25	Class C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		0	1086 2	764	2.49	11.9	1903	25	Class C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Tail		1086 2	1186 2	141	1.33	14.8	188	25	CLASS C	Extender, Antifoam, Retarder, Viscosifier
PRODUCTION	Lead		1156 2	2063 8	803	1.33	14.8	1068	25	CLASS H	Extender, Antifoam, Retarder

## **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 by utilized 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 portatoilet 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.

**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 in compliance with Onshore Order # 2. A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

## **Circulating Medium Table**

Well Name: CO COBRA 4 33 FED P601 Well Number: 610H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	РН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1021	SPUD MUD	8.3	8.9							VIS: 26-36 FILTRATE: 15-25
1021	4701	OTHER : BRINE	8.9	10							VIS: 26-36 FILTRATE: 15-25 NO LESS THAN 10.0 WILL BE USED IN SALT ZONE
4701	1186 2	OTHER : WBM/Brine	8.7	9							Viscosity: 26-36 Filtrate: 15-25
1186 2	2063 8	OIL-BASED MUD	10	12							Viscosity: 50-70 Filtrate: 5-10

## **Section 6 - Test, Logging, Coring**

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

Production tests are not planned.

Logs run include: Gamma Ray Log, Directional Survey

Coring Operations are not planned.

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

GAMMA RAY LOG, DIRECTIONAL SURVEY,

#### Coring operation description for the well:

Conventional whole core samples are not planned. A Directional Survey will be run.

#### **Section 7 - Pressure**

Anticipated Bottom Hole Pressure: 7567 Anticipated Surface Pressure: 4899

Anticipated Bottom Hole Temperature(F): 165

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

#### Describe:

Pressure ramp begins in the bottom of the thirdbone spring. PP increases to approximately 12.0 ppg once into the wolfcamp.

#### **Contingency Plans geoharzards description:**

- "- Casing design accounts for pressure ramp.
- Mud weighting agents available on location to increase drilling fluid density.
- BOP, choke, and well control drills.
- BOP functioned and pressure tested"

#### Contingency Plans geohazards

Chevron\_Standard\_H2S\_Contingency\_Plan\_2022\_20220727154440.pdf

Hydrogen Sulfide drilling operations plan required? NO

Hydrogen sulfide drilling operations

Well Name: CO COBRA 4 33 FED P601 Well Number: 610H

#### **Section 8 - Other Information**

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

9point\_CO\_Cobra\_P601\_610H\_20220801141614.pdf

DefPlan100ft\_COCobra49FEDCOMP601610H\_R0\_20220801152639.pdf

#### Other proposed operations facets description:

- 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 casing and cement program.

Batch drilling will be employed whereby the drilling rig may drill a specific hole section on all wells prior to moving to the next hole section.

Shallow rig may be utilized to drill surface or intermediate sections. The production section will not be drilled by the shallow rig.

Wait on cement time will use the tail slurry and will follow rules as laid out in Onshore Order 2 (if sundry approved)

#### Other proposed operations facets attachment:

8\_well\_rig\_layout\_patterson2\_20220722074159.pdf

CUSA\_Spudder\_Rig\_Data\_20220722074244.pdf

Operational\_Best\_Management\_Practices\_20220110074724.pdf

CO P601 Gas Management Plan NMOCD 20220803105007.pdf

#### Other Variance attachment:

#### Schlumberger

#### CO Cobra 4 9 FED COM P601 610H R0 mdv 09May22 Proposal Geodetic Report

(Def Plan)

Report Date: Client: Field: Structure / Slot: Borehole: UWI / API#: Survey Name:

Survey Date: Tort / AHD / DDI / ERD Ratio: Coordinate Reference System Location Lat / Long: Location Grid N/E Y/X: CRS Grid Convergence Angle: Grid Scale Factor: Version / Patch:

May 12, 2022 - 12:01 PM Chevron NM Lea County (NAD 27) Chevron CO 601 Cobra Pad / 610H CO Cobra 4 9 FED COM P601 610H CO Cobra 4 9 FED COM P601 610H Unknown / Unknow

CO Cobra 4 9 FED COM P601 610H R0 mdv 09May22 May 10, 2022

124.295 \* / 10796.652 ft / 6.359 / 0.890 NAD27 New Mexico State Plane, Eastern Zone, US Feet N 32° 9' 19.47528", W 103° 40' 26.81073" N 420884.000 ftUS, E 704011.000 ftUS 0.3509 °

0.99995676 2.10.829.1

Survey / DLS Computation: Vertical Section Azimuth: Vertical Section Origin: TVD Reference Datum: TVD Reference Elevation: Seabed / Ground Elevation: Magnetic Declination:

Total Gravity Field Strength: **Gravity Model:** Total Magnetic Field Strength: Magnetic Dip Angle: Declination Date: Magnetic Declination Model: North Reference: Grid Convergence Used: Total Corr Mag North->Grid

6.0217 Local Coord Referenced To: Well Head

Minimum Curvature / Lubinski

998.4279mgn (9.80665 Based) GARM

180.060 ° (Grid North) 0.000 ft, 0.000 ft

3505.000 ft above MSL 3477.000 ft above MSL

RKB = 28ft

47541.356 nT 47541.356 n1 59.736 ° May 10, 2022 HDGM 2022 Grid North

6.373°

0.3509°



	MD	Incl	Azim Grid	TVD	VSEC	NS	EW	DLS	Northing	Easting Latitude Longitude
Comments	(ft)	(°)	Azim Grid (°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(ftUS)	Easting Latitude Longitude (ftUS) (N/S ° ' ") (E/W ° ' "
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	420884.00	704011.00 N 32 9 19.48 W 103 40 26.8°
	100.00	0.00	327.08	100.00	0.00	0.00	0.00	0.00	420884.00	704011.00 N 32 9 19.48 W 103 40 26.8
	200.00	0.00	327.08	200.00	0.00	0.00	0.00	0.00	420884.00 420884.00	704011.00 N 32 9 19.48 W 103 40 26.8
	300.00 400.00	0.00 0.00	327.08 327.08	300.00 400.00	0.00	0.00	0.00 0.00	0.00	420884.00	704011.00 N 32 9 19.48 W 103 40 26.8° 704011.00 N 32 9 19.48 W 103 40 26.8°
	500.00	0.00	327.08	500.00	0.00	0.00	0.00	0.00	420884.00	704011.00 N 32 9 19.48 W 103 40 20.6
Build 1.5°/100ft	600.00	0.00	327.08	600.00	0.00	0.00	0.00	0.00	420884.00	704011.00 N 32 9 19.48 W 103 40 26.8
	700.00	1.50	327.08	699.99	-1.10	1.10	-0.71	1.50	420885.10	704010.29 N 32 9 19.49 W 103 40 26.82
Rustler (RSLR)	793.49	2.90	327.08	793.41	-4.11	4.11	-2.66	1.50	420888.11	704008.34 N 32 9 19.52 W 103 40 26.84
	800.00	3.00	327.08	799.91	-4.39	4.39	-2.84	1.50	420888.39	704008.16 N 32 9 19.52 W 103 40 26.84
	900.00	4.50	327.08	899.69	-9.88	9.88	-6.40	1.50	420893.88	704004.60 N 32 9 19.57 W 103 40 26.88
Rustler Los Medaños Member	995.30	5.93	327.08	994.59	-17.14	17.15	-11.11	1.50	420901.15	703999.89 N 32 9 19.65 W 103 40 26.94
Rustler Los Medaños M-1 Unit	1000.00 1026.25	6.00 6.39	327.08 327.08	999.27 1025.37	-17.55 -19.93	17.56 19.94	-11.37 -12.91	1.50 1.50	420901.56 420903.94	703999.63 N 32 9 19.65 W 103 40 26.94 703998.09 N 32 9 19.67 W 103 40 26.96
Nasier Los wedanos w-1 Orie	1100.00	7.50	327.08	1098.57	-27.41	27.43	-17.76	1.50	420911.43	703993.24 N 32 9 19 75 W 103 40 27 02
Saldo (SLDO)	1130.75	7.96	327.08	1129.04	-30.88	30.90	-20.01	1.50	420914.90	703990.99 N 32 9 19.78 W 103 40 27.04
, ,	1200.00	9.00	327.08	1197.54	-39.45	39.48	-25.56	1.50	420923.47	703985.44 N 32 9 19.87 W 103 40 27.11
	1300.00	10.50	327.08	1296.09	-53.65	53.69	-34.76	1.50	420937.69	703976.24 N 32 9 20.01 W 103 40 27.2°
	1400.00	12.00	327.08	1394.16	-70.02	70.07	-45.36	1.50	420954.06	703965.64 N 32 9 20.17 W 103 40 27.33
	1500.00	13.50	327.08	1491.70	-88.53	88.59	-57.36	1.50	420972.59	703953.65 N 32 9 20.36 W 103 40 27.47
Hold	1600.00 1666.73	15.00 16.00	327.08 327.08	1588.62 1652.92	-109.18 -124.14	109.25 124.22	-70.73 -80.43	1.50 1.50	420993.25 421008.22	703940.27 N 32 9 20.56 W 103 40 27.65 703930.58 N 32 9 20.71 W 103 40 27.74
Hold	1700.00	16.00	327.08	1684.90	-124.14 -131.83	131.92	-80.43 -85.41	0.00	421008.22	703930.58 N 32 9 20.71 W 103 40 27.72 703925.59 N 32 9 20.79 W 103 40 27.79
	1800.00	16.00	327.08	1781.02	-151.65	155.06	-100.39	0.00	421039.05	703910.61 N 32 9 21.02 W 103 40 27.75
	1900.00	16.00	327.08	1877.15	-178.08	178.20	-115.37	0.00	421062.19	703895.63 N 32 9 21.25 W 103 40 28.14
	2000.00	16.00	327.08	1973.28	-201.20	201.34	-130.35	0.00	421085.33	703880.65 N 32 9 21.48 W 103 40 28.3
	2100.00	16.00	327.08	2069.40	-224.33	224.48	-145.33	0.00	421108.47	703865.67 N 32 9 21.71 W 103 40 28.49
	2200.00	16.00	327.08	2165.53	-247.45	247.62	-160.32	0.00	421131.61	703850.69 N 32 9 21.94 W 103 40 28.66
	2300.00	16.00	327.08	2261.65	-270.57	270.76	-175.30	0.00	421154.75	703835.71 N 32 9 22.17 W 103 40 28.83
	2400.00	16.00	327.08	2357.78	-293.70	293.90	-190.28	0.00	421177.88	703820.73 N 32 9 22.40 W 103 40 29.00
	2500.00 2600.00	16.00 16.00	327.08 327.08	2453.90 2550.03	-316.82 -339.94	317.04 340.17	-205.26 -220.24	0.00	421201.02 421224.16	703805.75 N 32 9 22.62 W 103 40 29.18 703790.77 N 32 9 22.85 W 103 40 29.38
	2700.00	16.00	327.08	2646.16	-363.07	363.31	-235.22	0.00	421247.30	703775.79 N 32 9 23.08 W 103 40 29.52
	2800.00	16.00	327.08	2742.28	-386.19	386.45	-250.20	0.00	421270.44	703760.81 N 32 9 23.31 W 103 40 29.69
	2900.00	16.00	327.08	2838.41	-409.31	409.59	-265.18	0.00	421293.57	703745.83 N 32 9 23.54 W 103 40 29.87
	3000.00	16.00	327.08	2934.53	-432.44	432.73	-280.16	0.00	421316.71	703730.85 N 32 9 23.77 W 103 40 30.04
	3100.00	16.00	327.08	3030.66	-455.56	455.87	-295.14	0.00	421339.85	703715.87 N 32 9 24.00 W 103 40 30.2
	3200.00	16.00	327.08	3126.78	-478.68	479.01	-310.13	0.00	421362.99	703700.89 N 32 9 24.23 W 103 40 30.38
Castile (CSTL)	3238.17 3300.00	16.00 16.00	327.08 327.08	3163.48 3222.91	-487.51 -501.81	487.84 502.15	-315.84	0.00 0.00	421371.82 421386.13	703695.17 N 32 9 24.32 W 103 40 30.45 703685.91 N 32 9 24.46 W 103 40 30.56
	3400.00	16.00	327.08	3319.04	-524.93	502.15	-325.11 -340.09	0.00	421386.13	703670.93 N 32 9 24.69 W 103 40 30.50
	3500.00	16.00	327.08	3415.16	-548.06	548.43	-355.07	0.00	421432.40	703655.95 N 32 9 24.92 W 103 40 30.90
	3600.00	16.00	327.08	3511.29	-571.18	571.57	-370.05	0.00	421455.54	703640.97 N 32 9 25.15 W 103 40 31.07
	3700.00	16.00	327.08	3607.41	-594.30	594.71	-385.03	0.00	421478.68	703625.99 N 32 9 25.38 W 103 40 31.25
	3800.00	16.00	327.08	3703.54	-617.43	617.84	-400.01	0.00	421501.82	703611.01 N 32 9 25.61 W 103 40 31.42
	3900.00	16.00	327.08	3799.66	-640.55	640.98	-414.99	0.00	421524.95	703596.03 N 32 9 25.84 W 103 40 31.59
	4000.00	16.00	327.08	3895.79	-663.67	664.12	-429.97	0.00	421548.09	703581.05 N 32 9 26.07 W 103 40 31.76
	4100.00 4200.00	16.00 16.00	327.08 327.08	3991.92 4088.04	-686.80 -709.92	687.26 710.40	-444.95 -459.93	0.00	421571.23 421594.37	703566.07 N 32 9 26.30 W 103 40 31.94 703551.09 N 32 9 26.53 W 103 40 32.11
	4300.00	16.00	327.08	4184.17	-733.04	710.40	-459.93 -474.92	0.00	421617.51	703536.11 N 32 9 26.76 W 103 40 32.1
	4400.00	16.00	327.08	4280.29	-756.17	756.68	-489.90	0.00	421640.65	703521.13 N 32 9 26.99 W 103 40 32.46
	4500.00	16.00	327.08	4376.42	-779.29	779.82	-504.88	0.00	421663.78	703506.15 N 32 9 27.22 W 103 40 32.63
	4600.00	16.00	327.08	4472.54	-802.41	802.96	-519.86	0.00	421686.92	703491.16 N 32 9 27.45 W 103 40 32.80
	4700.00	16.00	327.08	4568.67	-825.54	826.10	-534.84	0.00	421710.06	703476.18 N 32 9 27.68 W 103 40 32.97
	4800.00	16.00	327.08	4664.80	-848.66	849.24	-549.82	0.00	421733.20	703461.20 N 32 9 27.91 W 103 40 33.15
Lamar (LMAR)	4815.58	16.00	327.08	4679.77	-852.26	852.84	-552.15	0.00	421736.80	703458.87 N 32 9 27.95 W 103 40 33.17
Bell Canyon (BLCN)	4851.21 4900.00	16.00 16.00	327.08 327.08	4714.02 4760.92	-860.50 -871.78	861.09 872.38	-557.49 -564.80	0.00 0.00	421745.05 421756.34	703453.53 N 32 9 28.03 W 103 40 33.23 703446.22 N 32 9 28.14 W 103 40 33.32
	5000.00	16.00	327.08	4857.05	-894.91	895.51	-579.78	0.00	421779.47	703440.22 N 32 9 28.14 W 103 40 33.32 703431.24 N 32 9 28.37 W 103 40 33.49
	5100.00	16.00	327.08	4953.17	-918.03	918.65	-594.76	0.00	421802.61	703416.26 N 32 9 28.60 W 103 40 33.66
	5200.00	16.00	327.08	5049.30	-941.15	941.79	-609.74	0.00	421825.75	703401.28 N 32 9 28.83 W 103 40 33.84
	5300.00	16.00	327.08	5145.42	-964.28	964.93	-624.73	0.00	421848.89	703386.30 N 32 9 29.06 W 103 40 34.0
	5400.00	16.00	327.08	5241.55	-987.40	988.07	-639.71	0.00	421872.03	703371.32 N 32 9 29.29 W 103 40 34.18
	5500.00	16.00	327.08	5337.68	-1010.52	1011.21	-654.69	0.00	421895.16	703356.34 N 32 9 29.52 W 103 40 34.35
	5600.00	16.00	327.08	5433.80	-1033.65	1034.35	-669.67	0.00	421918.30	703341.36 N 32 9 29.75 W 103 40 34.53
Charma Canuan (CBCAII)	5700.00	16.00	327.08	5529.93	-1056.77	1057.49	-684.65	0.00	421941.44	703326.38 N 32 9 29.98 W 103 40 34.70
Cherry Canyon (CRCN)	5787.83 5800.00	16.00 16.00	327.08 327.08	5614.35 5626.05	-1077.08 -1079.89	1077.81 1080.63	-697.81 -699.63	0.00 0.00	421961.76 421964.58	703313.23 N 32 9 30.18 W 103 40 34.85 703311.40 N 32 9 30.21 W 103 40 34.85
	5900.00	16.00	327.08	5722.18	-11079.89	1103.77	-699.63 -714.61	0.00	421964.58	703311.40 N 32 9 30.21 W 103 40 34.87 703296.42 N 32 9 30.44 W 103 40 35.04
	6000.00	16.00	327.08	5818.30	-1126.14	1126.91	-714.01	0.00	422010.85	703281.44 N 32 9 30.67 W 103 40 35.04 703281.44 N 32 9 30.67 W 103 40 35.22
	6100.00	16.00	327.08	5914.43	-1149.26	1150.04	-744.57	0.00	422033.99	703266.46 N 32 9 30.90 W 103 40 35.39
	6200.00	16.00	327.08	6010.56	-1172.39	1173.18	-759.55	0.00	422057.13	703251.48 N 32 9 31.13 W 103 40 35.56
	6300.00	16.00	327.08	6106.68	-1195.51	1196.32	-774.54	0.00	422080.27	703236.50 N 32 9 31.36 W 103 40 35.73
	6400.00	16.00	327.08	6202.81	-1218.63	1219.46	-789.52	0.00	422103.41	703221.52 N 32 9 31.59 W 103 40 35.91
	6500.00	16.00	327.08	6298.93	-1241.76	1242.60	-804.50	0.00	422126.55	703206.54 N 32 9 31.82 W 103 40 36.08
	6600.00	16.00	327.08	6395.06	-1264.88	1265.74	-819.48	0.00	422149.68	703191.56 N 32 9 32.05 W 103 40 36.25
	6700.00	16.00	327.08	6491.18	-1288.01	1288.88	-834.46	0.00	422172.82	703176.58 N 32 9 32.28 W 103 40 36.43

-1311.13

-1334.25

-1357.38

1312.02

1335.16

1358.30

-849.44

-864.42

0.00

0.00

422195.96

422219.10

422242.24

703176.58 N 32 9 32.28 W 103 40 36.28 703176.58 N 32 9 32.28 W 103 40 36.43 703161.60 N 32 9 32.51 W 103 40 36.60 703146.62 N 32 9 32.74 W 103 40 36.77 703131.64 N 32 9 32.97 W 103 40 36.94

6800.00

6900.00

7000.00

16.00

16.00

327.08

327.08

6587.31

6683.44

omments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting Latitude Long (ftUS) (N/S ° ' ") (E/M
	(ft) 7100.00	16.00	327.08	(ft) 6875.69	-1380.50	(ft) 1381.44	-894.38	0.00	422265.37	703116.66 N 32 9 33.20 W 103 40
	7200.00	16.00	327.08	6971.81	-1403.62	1404.58	-909.36	0.00	422288.51	703101.68 N 32 9 33.43 W 103 40
rushy Canyon (BCN)	7255.46	16.00	327.08	7025.12	-1416.45	1417.41	-917.67	0.00	422301.34	703093.37 N 32 9 33.56 W 103 40 3
	7300.00 7400.00	16.00 16.00	327.08 327.08	7067.94 7164.06	-1426.75 -1449.87	1427.71 1450.85	-924.34 -939.33	0.00 0.00	422311.65 422334.79	703086.70 N 32 9 33.66 W 103 40 703071.72 N 32 9 33.89 W 103 40
	7500.00	16.00	327.08	7260.19	-1472.99	1473.99	-954.31	0.00	422357.93	703056.74 N 32 9 34.12 W 103 40
	7600.00	16.00	327.08	7356.32	-1496.12	1497.13	-969.29	0.00	422381.06	703041.76 N 32 9 34.35 W 103 40
	7700.00	16.00	327.08	7452.44	-1519.24	1520.27	-984.27	0.00	422404.20	703026.78 N 32 9 34.58 W 103 40
	7800.00 7900.00	16.00 16.00	327.08 327.08	7548.57 7644.69	-1542.36 -1565.49	1543.41 1566.55	-999.25 -1014.23	0.00 0.00	422427.34 422450.48	703011.80 N 32 9 34.81 W 103 40 702996.82 N 32 9 35.04 W 103 40
	8000.00	16.00	327.08	7740.82	-1588.61	1589.69	-1029.21	0.00	422473.62	702981.83 N 32 9 35.04 W 103 40
	8100.00	16.00	327.08	7836.94	-1611.73	1612.83	-1044.19	0.00	422496.75	702966.85 N 32 9 35.50 W 103 40
	8200.00	16.00	327.08	7933.07	-1634.86	1635.97	-1059.17	0.00	422519.89	702951.87 N 32 9 35.73 W 103 40
	8300.00	16.00	327.08	8029.20	-1657.98	1659.11	-1074.15	0.00	422543.03	702936.89 N 32 9 35.96 W 103 40
	8400.00 8500.00	16.00 16.00	327.08 327.08	8125.32 8221.45	-1681.10 -1704.23	1682.24 1705.38	-1089.14 -1104.12	0.00	422566.17 422589.31	702921.91 N 32 9 36.19 W 103 40 702906.93 N 32 9 36.42 W 103 40
rop .75°/100ft	8573.63	16.00	327.08	8292.22	-1721.25	1722.42	-1115.15	0.00	422606.34	702895.90 N 32 9 36.59 W 103 40
	8600.00	15.80	327.08	8317.59	-1727.31	1728.49	-1119.07	0.75	422612.41	702891.98 N 32 9 36.65 W 103 40
	8700.00	15.05	327.08	8413.98	-1749.63	1750.82	-1133.53	0.75	422634.74	702877.52 N 32 9 36.87 W 103 40
0 / (000)	8800.00	14.30	327.08	8510.72	-1770.89	1772.09	-1147.30	0.75	422656.01	702863.75 N 32 9 37.08 W 103 40
one Spring (BSGL)	8893.55 8900.00	13.60 13.55	327.08 327.08	8601.51 8607.78	-1789.81 -1791.08	1791.02 1792.29	-1159.56 -1160.38	0.75 0.75	422674.94 422676.21	702851.49 N 32 9 37.27 W 103 40 4 702850.67 N 32 9 37.28 W 103 40
	9000.00	12.80	327.08	8705.14	-1810.20	1811.43	-1172.77	0.75	422695.35	702838.28 N 32 9 37.47 W 103 40
pper Avalon (AVU)	9007.91	12.74	327.08	8712.86	-1811.67	1812.90	-1173.72	0.75	422696.82	702837.33 N 32 9 37.49 W 103 40
	9100.00	12.05	327.08	8802.80	-1828.25	1829.50	-1184.47	0.75	422713.41	702826.58 N 32 9 37.65 W 103 40
	9200.00	11.30	327.08	8900.73	-1845.23	1846.49	-1195.47	0.75	422730.40	702815.58 N 32 9 37.82 W 103 40
	9300.00 9400.00	10.55	327.08 327.08	8998.91 9097.34	-1861.14 -1875.96	1862.40 1877.23	-1205.77 -1215.38	0.75 0.75	422746.32 422761.15	702805.28 N 32 9 37.98 W 103 40 702795.68 N 32 9 38.12 W 103 40
ower Avalon (AVL)	9444.02	9.80 9.47	327.08	9140.74	-1882.14	1883.42	-1219.38	0.75	422767.34	702791.67 N 32 9 38.19 W 103 40
, , , ,	9500.00	9.47	327.08	9195.99	-1889.70	1890.98	-1219.36	0.75	422774.90	702786.78 N 32 9 38.26 W 103 40
	9600.00	8.30	327.08	9294.84	-1902.36	1903.65	-1232.48	0.75	422787.56	702778.58 N 32 9 38.39 W 103 40
	9700.00	7.55	327.08	9393.88	-1913.93	1915.23	-1239.98	0.75	422799.14	702771.08 N 32 9 38.50 W 103 40
	9800.00	6.80	327.08	9493.10	-1924.41	1925.72	-1246.77	0.75	422809.63	702764.29 N 32 9 38.61 W 103 40
ret Bone Spring Hanny (EDO)	9900.00	6.05	327.08	9592.47	-1933.80	1935.12	-1252.85	0.75 0.75	422819.03	702758.21 N 32 9 38.70 W 103 40
st Bone Spring Upper (FBS)	9978.23 10000.00	5.47 5.30	327.08 327.08	9670.31 9691.98	-1940.39 -1942.10	1941.71 1943.42	-1257.12 -1258.23	0.75 0.75	422825.62 422827.33	702753.94 N 32 9 38.77 W 103 40 4 702752.83 N 32 9 38.78 W 103 40
	10100.00	4.55	327.08	9791.61	-1949.31	1950.63	-1262.90	0.75	422834.54	702748.16 N 32 9 38.85 W 103 40
	10200.00	3.80	327.08	9891.34	-1955.42	1956.75	-1266.86	0.75	422840.66	702744.20 N 32 9 38.91 W 103 40
rst Bone Spring Lower (FBL)	10246.92	3.45	327.08	9938.17	-1957.91	1959.24	-1268.47	0.75	422843.15	702742.59 N 32 9 38.94 W 103 40
	10300.00	3.05	327.08	9991.16	-1960.44	1961.77	-1270.11	0.75	422845.68	702740.95 N 32 9 38.96 W 103 40
	10400.00	2.30	327.08	10091.05	-1964.36	1965.69	-1272.65	0.75	422849.60	702738.41 N 32 9 39.00 W 103 40 702736.58 N 32 9 39.03 W 103 40
econd Bone Spring Upper (SBU)	10500.00 10578.91	1.55 0.96	327.08 327.08	10191.00 10269.89	-1967.18 -1968.63	1968.51 1969.97	-1274.47 -1275.42	0.75 0.75	422852.42 422853.88	702736.58 N 32 9 39.03 W 103 40 702735.64 N 32 9 39.05 W 103 40
cond bone spring opper (350)	10600.00	0.80	327.08	10299.97	-1968.90	1970.24	-1275.59	0.75	422854.15	702735.47 N 32 9 39.05 W 103 40
	10700.00	0.05	327.08	10390.97	-1969.53	1970.87	-1276.00	0.75	422854.78	702735.06 N 32 9 39.05 W 103 40
old	10707.09	0.00	327.08	10398.06	-1969.53	1970.87	-1276.00	0.75	422854.78	702735.06 N 32 9 39.05 W 103 40
	10800.00	0.00	327.08	10490.97	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
	10900.00	0.00	327.08	10590.97	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
	11000.00 11100.00	0.00	327.08 327.08	10690.97 10790.97	-1969.53 -1969.53	1970.87 1970.87	-1276.00 -1276.00	0.00 0.00	422854.78 422854.78	702735.06 N 32 9 39.05 W 103 40 702735.06 N 32 9 39.05 W 103 40
econd Bone Spring Lower (SBL)	11104.54	0.00	327.08	10795.51	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
soona Bono Opinig Lower (CBL)	11200.00	0.00	327.08	10890.97	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
	11300.00	0.00	327.08	10990.97	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
	11400.00	0.00	327.08	11090.97	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
	11500.00	0.00	327.08	11190.97	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
	11600.00 11700.00	0.00	327.08 327.08	11290.97 11390.97	-1969.53 -1969.53	1970.87 1970.87	-1276.00 -1276.00	0.00 0.00	422854.78 422854.78	702735.06 N 32 9 39.05 W 103 40 702735.06 N 32 9 39.05 W 103 40
	11800.00	0.00	327.08	11490.97	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
nird Bone Spring (TBS)	11819.97	0.00	327.08	11510.94	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
OP, Build 10°/100ft	11862.09	0.00	327.08	11553.06	-1969.53	1970.87	-1276.00	0.00	422854.78	702735.06 N 32 9 39.05 W 103 40
	11900.00	3.79	181.00	11590.94	-1968.28	1969.62	-1276.02	10.00	422853.53	702735.04 N 32 9 39.04 W 103 40
	12000.00	13.79	181.00	11689.64	-1953.02	1954.36	-1276.29	10.00	422838.27	702734.77 N 32 9 38.89 W 103 40
	12100.00 12200.00	23.79 33.79	181.00 181.00	11784.19 11871.72	-1920.85 -1872.76	1922.19 1874.10	-1276.85 -1277.69	10.00 10.00	422806.10 422758.01	702734.21 N 32 9 38.57 W 103 40 702733.37 N 32 9 38.10 W 103 40
	12300.00	43.79	181.00	11949.56	-1810.20	1811.54	-1278.78	10.00	422695.45	702732.28 N 32 9 37.48 W 103 40
olfcamp A (WCA)	12342.67	48.06	181.00	11979.24	-1779.55	1780.89	-1279.32	10.00	422664.81	702731.74 N 32 9 37.18 W 103 40
	12400.00	53.79	181.00	12015.36	-1735.07	1736.41	-1280.09	10.00	422620.33	702730.96 N 32 9 36.74 W 103 40
	12500.00	63.79	181.00	12067.11	-1649.66	1651.01	-1281.59	10.00	422534.93	702729.47 N 32 9 35.89 W 103 40
	12600.00	73.79	181.00	12103.24	-1556.57	1557.91	-1283.21	10.00	422441.84	702727.85 N 32 9 34.97 W 103 40
P Cross	12700.00 12765.99	83.79 90.39	181.00 181.00	12122.66 12126.00	-1458.61 -1392.75	1459.96 1394.10	-1284.92 -1286.07	10.00 10.00	422343.89 422278.04	702726.14 N 32 9 34.00 W 103 40 702724.99 N 32 9 33.35 W 103 40
nding Point	12766.03	90.39	181.00	12126.00	-1392.75	1394.06	-1286.07	10.00	422278.00	702724.99 N 32 9 33.35 W 103 40 702724.99 N 32 9 33.35 W 103 40
~	12800.00	90.39	181.00	12125.77	-1358.75	1360.10	-1286.67	0.00	422244.03	702724.39 N 32 9 33.01 W 103 40
	12900.00	90.39	181.00	12125.08	-1258.76	1260.11	-1288.41	0.00	422144.06	702722.65 N 32 9 32.02 W 103 40
	13000.00	90.39	181.00	12124.40	-1158.78	1160.13	-1290.16	0.00	422044.08	702720.90 N 32 9 31.03 W 103 40
	13100.00	90.39	181.00	12123.71	-1058.80	1060.15	-1291.90 1202.65	0.00	421944.10	702719.15 N 32 9 30.04 W 103 40
	13200.00 13300.00	90.39 90.39	181.00 181.00	12123.02 12122.34	-958.81 -858.83	960.17 860.18	-1293.65 -1295.40	0.00 0.00	421844.12 421744.14	702717.41 N 32 9 29.05 W 103 40 702715.66 N 32 9 28.07 W 103 40
	13400.00	90.39	181.00	12122.34	-758.84	760.20	-1297.14	0.00	421644.17	702713.90 N 32 9 26.07 W 103 40 702713.92 N 32 9 27.08 W 103 40
	13500.00	90.39	181.00	12120.96	-658.86	660.22	-1298.89	0.00	421544.19	702712.17 N 32 9 26.09 W 103 40
	13600.00	90.39	181.00	12120.27	-558.87	560.24	-1300.63	0.00	421444.21	702710.42 N 32 9 25.10 W 103 40
	13700.00	90.39	181.00	12119.59	-458.89	460.25	-1302.38	0.00	421344.23	702708.68 N 32 9 24.11 W 103 40
			181.00	12118.90	-358.91	360.27	-1304.13	0.00	421244.26	702706.93 N 32 9 23.12 W 103 40
	13800.00	90.39	10100	12118.21	-258.92	260.29 160.31	-1305.87 -1307.62	0.00 0.00	421144.28 421044.30	702705.19 N 32 9 22.13 W 103 40 702703.44 N 32 9 21.14 W 103 40
	13800.00 13900.00	90.39	181.00		159.04					
	13800.00 13900.00 14000.00	90.39 90.39	181.00	12117.53	-158.94 -58.95			0.00	420944 32	702701 69 N 32 9 20 15 W 103 40
	13800.00 13900.00	90.39			-158.94 -58.95 41.03	60.32 -39.66	-1309.36 -1311.11	0.00 0.00	420944.32 420844.34	
	13800.00 13900.00 14000.00 14100.00	90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00	12117.53 12116.84	-58.95 41.03 141.01	60.32 -39.66 -139.64	-1309.36 -1311.11 -1312.86	0.00 0.00		702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14400.00	90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78	-58.95 41.03 141.01 241.00	60.32 -39.66 -139.64 -239.62	-1309.36 -1311.11 -1312.86 -1314.60	0.00 0.00 0.00	420844.34 420744.37 420644.39	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702696.46 N 32 9 17.18 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14400.00 14500.00	90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09	-58.95 41.03 141.01 241.00 340.98	60.32 -39.66 -139.64 -239.62 -339.60	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35	0.00 0.00 0.00 0.00	420844.34 420744.37 420644.39 420544.41	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702696.46 N 32 9 17.18 W 103 40 702694.71 N 32 9 16.19 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14400.00 14500.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40	-58.95 41.03 141.01 241.00 340.98 440.97	60.32 -39.66 -139.64 -239.62 -339.60 -439.59	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09	0.00 0.00 0.00 0.00 0.00	420844.34 420744.37 420644.39 420544.41 420444.43	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702696.46 N 32 9 17.18 W 103 40 702694.71 N 32 9 16.19 W 103 40 702692.97 N 32 9 15.21 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14400.00 14500.00 14600.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72	-58.95 41.03 141.01 241.00 340.98 440.97 540.95	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84	0.00 0.00 0.00 0.00 0.00 0.00	420844.34 420744.37 420644.39 420544.41 420444.43 420344.45	702699.95 N 32 9 19.16 W 103.40 702698.20 N 32 9 18.17 W 103.40 702696.46 N 32 9 17.18 W 103.40 702694.71 N 32 9 16.19 W 103.40 702692.97 N 32 9 15.21 W 103.40 702691.22 N 32 9 14.22 W 103.40
	13800.00 13900.00 14900.00 14100.00 14200.00 14300.00 14400.00 14500.00 14700.00 14800.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84 -1321.59	0.00 0.00 0.00 0.00 0.00 0.00 0.00	420844.34 420744.37 420644.39 420544.41 420444.43 420344.45 420244.48	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702696.46 N 32 9 17.18 W 103 40 702694.71 N 32 9 16.19 W 103 40 702692.97 N 32 9 15.21 W 103 40 702692.97 N 32 9 13.23 W 103 40 702689.47 N 32 9 13.23 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14400.00 14500.00 14600.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72	-58.95 41.03 141.01 241.00 340.98 440.97 540.95	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84	0.00 0.00 0.00 0.00 0.00 0.00	420844.34 420744.37 420644.39 420544.41 420444.43 420344.45	702701.69 N 32 9 20.15 W 103 40 7026998.20 N 32 9 18.17 W 103 40 702698.20 N 32 9 18.17 W 103 40 702698.40 N 32 9 17.18 W 103 40 702698.71 N 32 9 16.19 W 103 40 702699.71 N 32 9 15.21 W 103 40 702699.72 N 32 9 13.23 W 103 40 702689.47 N 32 9 13.23 W 103 40 702687.73 N 32 9 12.24 W 103 40 702687.73 N 32 9 12.24 W 103 40 702685.98 N 32 9 11.25 W 103 40 702685.98 N 32 9 11.25 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14500.00 14500.00 14700.00 14800.00 14900.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03 12111.34	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55 -739.53	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84 -1321.59 -1323.33	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.39 420544.41 420444.43 420344.45 420244.48 420144.50	702699.95 N 32 919.16 W 103 40 702698.20 N 32 918.17 W 103 40 702696.46 N 32 917.18 W 103 40 702694.71 N 32 916.19 W 103 40 702691.22 N 32 914.22 W 103 40 702695.12 N 32 914.22 W 103 40 702695.73 N 32 913.23 W 103 40 702685.98 N 32 912.24 W 103 40 702685.98 N 32 911.25 W 103 40 702685.98 N 32 911.25 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14400.00 14500.00 14700.00 14800.00 15000.00 15000.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03 12111.34 12110.65 12109.97 12109.28	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92 840.90 940.89 1040.87	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55 -739.53 -839.52 -939.50 -1039.48	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84 -1321.59 -1323.33 -1325.08 -1326.82 -1328.57	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.39 420544.41 420444.43 420344.45 420144.50 420044.52 419944.54 419844.57	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702698.46 N 32 9 17.18 W 103 40 702694.71 N 32 9 16.19 W 103 40 702694.72 N 32 9 15.21 W 103 40 702691.22 N 32 9 14.22 W 103 40 702694.73 N 32 9 12.24 W 103 40 702685.98 N 32 9 11.25 W 103 40 702684.24 N 32 9 910.26 W 103 40 702684.24 N 32 9 910.26 W 103 40 702684.24 N 32 9 910.26 W 103 40 702684.24 N 32 9 9.27 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14500.00 14500.00 14700.00 14800.00 14900.00 15000.00 15100.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03 12111.34 12110.65 12109.97 12109.28 12108.59	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92 840.90 940.89 1040.87 1140.86	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55 -739.53 -839.52 -939.50 -1039.48 -1139.46	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84 -1321.59 -1323.33 -1325.08 -1326.82 -1326.82 -1328.57 -1330.32	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.39 420544.41 420344.45 420244.48 420144.50 420044.52 419944.57 419944.57	702699.95 N 32 919.16 W 103 40 702698.20 N 32 918.17 W 103 40 702696.46 N 32 917.18 W 103 40 702696.47 N 32 916.19 W 103 40 702691.22 N 32 914.22 W 103 40 702691.24 N 32 914.22 W 103 40 702695.73 N 32 913.23 W 103 40 702685.94 N 32 911.25 W 103 40 702685.49 N 32 911.25 W 103 40 702684.24 N 32 910.26 W 103 40 702685.49 N 32 9 9.27 W 103 40 702680.74 N 32 9 9.27 W 103 40 702680.74 N 32 9 8.28 W 103 40
, Turn 2°/100ft	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14500.00 14500.00 14600.00 14900.00 15000.00 15100.00 15200.00 15300.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03 12111.34 12110.65 12109.97 12109.28 12108.59 12108.59	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92 840.99 940.89 1040.87 1140.88 1183.45	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55 -739.53 -839.52 -939.50 -1039.48 -1139.46 -1182.05	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84 -1321.59 -1323.33 -1325.08 -1326.82 -1328.57 -1330.32 -1331.06	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.39 420544.41 420444.43 420344.45 420244.48 420144.50 420044.52 419944.54 419844.57 419742.00	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702696.46 N 32 9 17.18 W 103 40 702696.47 N 32 9 16.19 W 103 40 702694.71 N 32 9 16.19 W 103 40 702691.22 N 32 9 14.22 W 103 40 702691.22 N 32 9 14.22 W 103 40 702695.73 N 32 9 12.24 W 103 40 702695.73 N 32 9 12.24 W 103 40 702695.44 N 32 9 10.26 W 103 40 702692.44 N 32 9 10.26 W 103 40 702692.49 N 32 9 9.27 W 103 40 702690.74 N 32 9 8.27 W 103 40 702690.74 N 32 9 8.28 W 103 40 702690.00 N 32 9 7.56 W 103 40 702690.00 N 32 9 7.56 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14200.00 14300.00 14500.00 14700.00 14700.00 14900.00 15000.00 15200.00 15300.00 15342.60	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03 12111.34 12110.65 12109.97 12109.92 12108.59 12108.30 12107.91	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92 840.90 940.89 140.87 1140.86 1183.45 1240.85	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55 -739.53 -839.52 -939.50 -1039.48 -1139.46 -1182.05 -1239.45	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84 -1321.59 -1323.33 -1325.08 -1326.82 -1328.57 -1330.32 -1331.06 -1331.06	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.39 420544.41 420444.43 420344.45 420244.48 420144.50 420044.52 419944.54 419844.57 419744.59 419702.00 419644.60	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702694.71 N 32 9 17.18 W 103 40 702694.71 N 32 9 16.19 W 103 40 702692.97 N 32 9 15.21 W 103 40 702691.22 N 32 9 14.22 W 103 40 702689.47 N 32 9 13.23 W 103 40 702689.47 N 32 9 12.24 W 103 40 702685.98 N 32 9 11.25 W 103 40 702684.24 N 32 9 9.27 W 103 40 702680.74 N 32 9 9.27 W 103 40 702680.74 N 32 9 8.28 W 103 40 702680.74 N 32 9 8.28 W 103 40 702680.74 N 32 9 8.28 W 103 40 702680.75 N 32 9 7.89 W 103 40 702679.57 N 32 9 7.29 W 103 40 702679.57 N 32 9 7.29 W 103 40
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14500.00 14500.00 14600.00 14700.00 14900.00 15000.00 15200.00 15300.00 15300.00 15342.60 15400.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03 12111.34 12110.65 12109.97 12109.28 12108.30 12107.91 12107.81	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92 840.99 940.89 1040.87 1140.86 1183.45 1240.85	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55 -739.53 -839.52 -939.50 -1039.48 -1182.05 -1239.45 -1252.65	-1309.36 -1311.11 -1312.86 -1314.60 -1314.63 -1318.09 -1319.84 -1321.59 -1323.33 -1325.08 -1326.82 -1328.57 -1330.32 -1331.09 -1331.49 -1331.49	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.49 420544.41 420444.43 420244.48 420144.50 420044.52 419944.54 419844.57 419702.00 419644.60 419631.40	702699.95 N 32 919.16 W 103 40 702698.20 N 32 918.17 W 103 40 702696.46 N 32 917.18 W 103 40 702694.77 N 32 916.19 W 103 40 702691.22 N 32 914.22 W 103 40 702691.24 N 32 914.22 W 103 40 702695.95 N 32 914.24 W 103 40 702685.96 N 32 911.25 W 103 40 702684.24 N 32 910.26 W 103 40 702685.47 N 32 9 9.27 W 103 40 702685.74 N 32 9 8.28 W 103 40 702685.75 N 32 9 7.26 W 103 40 702695.75 N 32 9 7.26 W 103 40 702695.75 N 32 9 7.26 W 103 40 702695.75 N 32 9 7.28 W 103 40 702695.75 N 32 9 7.28 W 103 40 702679.64 N 32 9 7.28 W 103 40 702679.64 N 32 9 7.28 W 103 40 702679.64 N 32 9 7.26 W 103 40
	13800.00 13900.00 14000.00 14100.00 14100.00 14200.00 14300.00 14500.00 14500.00 14700.00 14500.00 15000.00 15000.00 15200.00 15300.00 15300.00 15400.00 15400.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03 12111.34 12110.65 12109.29 12108.59 12108.30 12107.91 12107.81 12107.81	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92 840.90 940.89 1040.87 1140.86 1183.45 1240.85 1254.05	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55 -739.53 -839.52 -339.50 -1039.48 -1139.46 -1122.05 -1252.65	-1309.36 -1311.11 -1312.86 -1314.60 -1316.35 -1318.09 -1319.84 -1321.59 -1323.33 -1325.08 -1326.82 -1328.57 -1330.32 -1331.49 -1331.42 -1331.42	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.43 420544.41 420444.43 420244.48 420144.50 420044.52 419944.54 419844.57 419702.00 419644.60 419631.40	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702698.47 N 32 9 17.18 W 103 40 702694.71 N 32 9 16.19 W 103 40 702694.72 N 32 9 16.21 W 103 40 702691.22 N 32 9 14.22 W 103 40 702691.22 N 32 9 14.22 W 103 40 702697.73 N 32 9 12.24 W 103 40 702697.74 N 32 9 12.24 W 103 40 702685.98 N 32 9 11.25 W 103 40 702680.74 N 32 9 9.27 W 103 40 702680.74 N 32 9 8.28 W 103 40 702680.75 N 32 9 7.29 W 103 40 702680.76 N 32 9 7.29 W 103 40 702690.76 N 32 9 7.29 W 103 40 702679.57 N 32 9 7.29 W 103 40 702679.57 N 32 9 7.29 W 103 40 702679.67 N 32 9 7.29 W 103 40 702679.64 N 32 9 7.29 W 103 40 702679.65 N 32 9 7.16 W 103 40 702680.26 N 32 9 6.30 W 103 40 702680.26 N 32 9 6.30 W 103 40
, Turn 2°/100ft d	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14500.00 14500.00 14600.00 14700.00 14900.00 15000.00 15200.00 15300.00 15300.00 15342.60 15400.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00 181.00	12117.53 12116.84 12116.15 12115.46 12114.78 12114.09 12113.40 12112.72 12112.03 12111.34 12110.65 12109.97 12109.28 12108.30 12107.91 12107.81	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92 840.99 940.89 1040.87 1140.86 1183.45 1240.85	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -639.55 -739.53 -839.52 -939.50 -1039.48 -1182.05 -1239.45 -1252.65	-1309.36 -1311.11 -1312.86 -1314.60 -1314.63 -1318.09 -1319.84 -1321.59 -1323.33 -1325.08 -1326.82 -1328.57 -1330.32 -1331.09 -1331.49 -1331.49	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.49 420544.41 420444.43 420244.48 420144.50 420044.52 419944.54 419844.57 419702.00 419644.60 419631.40	702699.95 N 32 9 19.16 W 103 40 702698.20 N 32 9 18.17 W 103 40 702696.46 N 32 9 17.18 W 103 40 702694.71 N 32 9 16.19 W 103 40 702692.97 N 32 9 15.21 W 103 40 702692.97 N 32 9 14.22 W 103 40 702695.22 N 32 9 14.22 W 103 40 702689.47 N 32 9 13.23 W 103 40 702689.48 N 32 9 10.26 W 103 40 702684.24 N 32 9 10.26 W 103 40 702680.74 N 32 9 8.28 W 103 40 702680.74 N 32 9 7.27 W 103 40 702680.74 N 32 9 7.28 W 103 40 702680.74 N 32 9 7.29 W 103 40 702679.64 N 32 9 7.29 W 103 40 702679.64 N 32 9 7.16 W 103 40 702679.64 N 32 9 7.16 W 103 40 702680.26 N 32 9 7.30 W 103 40 702680.26 N 32 9 7.30 W 103 40 702680.26 N 32 9 5.31 W 103 40 702680.88 N 32 9 5.31
	13800.00 13900.00 14000.00 14100.00 14200.00 14300.00 14500.00 14500.00 14700.00 14800.00 15000.00 15100.00 15200.00 15322.60 1542.60 15413.20 15500.00	90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39 90.39	181.00 181.00	12117. 53 12116. 84 12116. 15 12115. 46 12114. 78 12114. 09 12113. 40 12112. 72 12112. 03 12111. 34 12110. 65 12109. 97 12109. 28 12108. 59 12107. 81 12107. 81 12107. 22 12107. 82	-58.95 41.03 141.01 241.00 340.98 440.97 540.95 640.94 740.92 840.90 940.89 1040.87 1140.86 1183.45 1240.85 1254.05	60.32 -39.66 -139.64 -239.62 -339.60 -439.59 -539.57 -739.53 -839.52 -939.50 -1039.48 -1182.05 -1239.45 -1252.65 -1339.45	-1309.36 -1311.11 -1312.86 -1314.60 -1314.60 -1316.35 -1318.09 -1319.84 -1321.59 -1323.33 -1325.08 -1326.82 -1328.57 -1330.32 -1331.06 -1331.49 -1331.42 -1330.80	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	420844.34 420744.37 420644.43 420544.41 420444.43 420244.45 420244.52 419944.52 419944.54 419844.57 419702.00 419631.40 419531.40 419544.61	702699.95 N 32 919.16 W 103 40 702698.20 N 32 918.17 W 103 40 702696.46 N 32 917.18 W 103 40 702696.47 N 32 916.19 W 103 40 702691.22 N 32 914.22 W 103 40 702691.24 N 32 914.22 W 103 40 702695.73 N 32 913.23 W 103 40 702685.94 N 32 911.25 W 103 40 702685.49 N 32 911.25 W 103 40 702684.24 N 32 910.26 W 103 40 702685.49 N 32 9 9.27 W 103 40 702680.74 N 32 9 9.27 W 103 40 702680.74 N 32 9 8.28 W 103 40

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Comments	MD	Incl	Azim Grid	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
Comments	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(ftUS)	(ftUS)	(N/S ° ' ")	(E/W ° ' ")
	16100.00	90.39	179.59	12103.09	1940.81	-1939.42	-1326.49	0.00	418944.67	702684.57 N		
	16200.00	90.39	179.59	12102.41	2040.80	-2039.41	-1325.77	0.00	418844.68	702685.29 N		
	16300.00	90.39	179.59	12101.72	2140.79	-2139.41	-1325.05	0.00	418744.69	702686.01 N		
	16400.00	90.39	179.59	12101.03	2240.79	-2239.40	-1324.33	0.00	418644.70	702686.73 N		
IFP1, Build 2°/100ft	16404.70	90.39	179.59	12101.00	2245.49	-2244.10	-1324.30	0.00	418640.00	702686.76 N	32 8 57.35 V	V 103 40 42.37
Hold	16429.06	90.88	179.59	12100.73	2269.85	-2268.46	-1324.13	2.00	418615.64	702686.93 N		
	16500.00	90.88	179.59	12099.64	2340.78	-2339.39	-1323.62	0.00	418544.72	702687.44 N		
	16600.00	90.88	179.59	12098.10	2440.76	-2439.38	-1322.90	0.00	418444.73	702688.16 N		
	16700.00	90.88	179.59	12096.56	2540.75	-2539.36	-1322.19	0.00	418344.75	702688.87 N	32 8 54.43 V	V 103 40 42.37
	16800.00	90.88	179.59	12095.02	2640.73	-2639.35	-1321.48	0.00	418244.77	702689.58 N		
	16900.00	90.88	179.59	12093.49	2740.71	-2739.33	-1320.76	0.00	418144.79	702690.30 N		
	17000.00	90.88	179.59	12091.95	2840.70	-2839.32	-1320.05	0.00	418044.81	702691.01 N		
	17100.00	90.88	179.59	12090.41	2940.68	-2939.30	-1319.33	0.00	417944.83	702691.73 N		
	17200.00	90.88	179.59	12088.87	3040.67	-3039.29	-1318.62	0.00	417844.85	702692.44 N		
	17300.00	90.88	179.59	12087.34	3140.65	-3139.28	-1317.90	0.00	417744.87	702693.16 N		
	17400.00	90.88	179.59	12085.80	3240.64	-3239.26	-1317.19	0.00	417644.89	702693.87 N		
	17500.00	90.88	179.59	12084.26	3340.62	-3339.25	-1316.48	0.00	417544.90	702694.58 N		
	17600.00	90.88	179.59	12082.72	3440.61	-3439.23	-1315.76	0.00	417444.92	702695.30 N		
	17700.00	90.88	179.59	12081.19	3540.59	-3539.22	-1315.05	0.00	417344.94	702696.01 N		
	17800.00	90.88	179.59	12079.65	3640.58	-3639.20	-1314.33	0.00	417244.96	702696.73 N		
	17900.00	90.88	179.59	12078.11	3740.56	-3739.19	-1313.62	0.00	417144.98	702697.44 N		
	18000.00	90.88	179.59	12076.57	3840.55	-3839.18	-1312.90	0.00	417045.00	702698.15 N		
	18100.00	90.88	179.59	12075.03	3940.53	-3939.16	-1312.19	0.00	416945.02	702698.87 N		
	18200.00	90.88	179.59	12073.50	4040.52	-4039.15	-1311.48	0.00	416845.04	702699.58 N		
	18300.00	90.88	179.59	12071.96	4140.50	-4139.13	-1310.76	0.00	416745.06	702700.30 N		
	18400.00	90.88	179.59	12070.42	4240.49	-4239.12	-1310.05	0.00	416645.07	702701.01 N		
	18500.00	90.88	179.59	12068.88	4340.47	-4339.10	-1309.33	0.00	416545.09	702701.73 N		
	18600.00	90.88	179.59	12067.35	4440.46	-4439.09	-1308.62	0.00	416445.11	702702.44 N		
	18700.00	90.88	179.59	12065.81	4540.44	-4539.07	-1307.90	0.00	416345.13	702703.15 N		
	18800.00	90.88	179.59	12064.27	4640.43	-4639.06	-1307.19	0.00	416245.15	702703.87 N		
	18900.00	90.88	179.59	12062.73	4740.41	-4739.05	-1306.48	0.00	416145.17	702704.58 N		
	19000.00	90.88	179.59	12061.20	4840.40	-4839.03	-1305.76	0.00	416045.19	702705.30 N		
	19100.00	90.88	179.59	12059.66	4940.38	-4939.02	-1305.05	0.00	415945.21	702706.01 N		
	19200.00	90.88	179.59	12058.12	5040.37	-5039.00	-1304.33	0.00	415845.23	702706.73 N		
	19300.00	90.88	179.59	12056.58	5140.35	-5138.99	-1303.62	0.00	415745.24	702707.44 N		
	19400.00	90.88	179.59	12055.04	5240.34	-5238.97	-1302.90	0.00	415645.26	702708.15 N		
	19500.00	90.88	179.59	12053.51	5340.32	-5338.96	-1302.19	0.00	415545.28	702708.87 N		
	19600.00	90.88	179.59	12051.97	5440.31	-5438.95	-1301.48	0.00	415445.30	702709.58 N		
	19700.00	90.88	179.59	12050.43	5540.29	-5538.93	-1300.76	0.00	415345.32	702710.30 N		
	19800.00	90.88	179.59	12048.89	5640.27	-5638.92	-1300.05	0.00	415245.34	702711.01 N		
	19900.00	90.88	179.59	12047.36	5740.26	-5738.90	-1299.33	0.00	415145.36	702711.73 N		
	20000.00	90.88	179.59	12045.82	5840.24	-5838.89	-1298.62	0.00	415045.38	702712.44 N		
	20100.00	90.88	179.59	12044.28	5940.23	-5938.87	-1297.90	0.00	414945.40	702713.15 N		
	20200.00	90.88	179.59	12042.74	6040.21	-6038.86	-1297.19	0.00	414845.41	702713.87 N		
	20300.00	90.88	179.59	12041.21	6140.20	-6138.84	-1296.48	0.00	414745.43	702714.58 N		
	20400.00	90.88	179.59	12039.67	6240.18	-6238.83	-1295.76	0.00	414645.45	702715.30 N		
	20500.00	90.88	179.59	12038.13	6340.17	-6338.82	-1295.05	0.00	414545.47	702716.01 N		
LTP Cross	20563.44	90.88	179.59	12037.15	6403.60	-6402.25	-1294.59	0.00	414482.04	702716.46 N		
00 0-b 4 0 FED 00M D004 0101 511	20600.00	90.88	179.59	12036.59	6440.15	-6438.80	-1294.33	0.00	414445.49	702716.73 N		
CO Cobra 4 9 FED COM P601 610H BHL	20638.50	90.88	179.59	12036.00	6478.64	-6477.29	-1294.06	0.00	414407.00	702717.00 N	3∠ 8 15.46 V	103 40 42.32

Survey Type:

Def Plan

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

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size Casi (in)	ing Diameter (in)	Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	28.000	1/100.000	30.000	30.000		B001Mb_MWD+HRGM-Depth Only	CO Cobra 4 9 FED COM P601 610H / CO Cobra 4 9 FED COM P601 610H R0 mdv 09May22
	1	28.000	20638.497	1/100.000	30.000	30.000		B001Mb_MWD+HRGM	CO Cobra 4 9 FED COM P601

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

**OPERATOR'S NAME:** Chevron

LEASE NO.: NMNM054031

**LOCATION:** Sec. 04, T.25 S, R 32 E

COUNTY: Lea County. New Mexico

**WELL NAME & NO.:** CO Cobra 4 33 Fed P601 501H

**SURFACE HOLE FOOTAGE:** 1204'/S & 900'/E **BOTTOM HOLE FOOTAGE:** 25'/N & 660'/E

**WELL NAME & NO.:** CO Cobra 4 33 Fed P601 503H

**SURFACE HOLE FOOTAGE:** 1204'/S & 800'/E **BOTTOM HOLE FOOTAGE:** 25'/S & 660'/E

**WELL NAME & NO.:** CO Cobra 4 33 Fed P601 601H

**SURFACE HOLE FOOTAGE:** 1206'/S & 1020'/E **BOTTOM HOLE FOOTAGE:** 25'/N & 2310'/E

**WELL NAME & NO.:** CO Cobra 4 33 Fed P601 602H

**SURFACE HOLE FOOTAGE:** 1205'/S & 980'/E **BOTTOM HOLE FOOTAGE:** 25'/N & 1430'/E

**WELL NAME & NO.:** CO Cobra 4 33 Fed P601 603H

**SURFACE HOLE FOOTAGE:** 1205'/S & 940'/E **BOTTOM HOLE FOOTAGE:** 25'/N & 550'/E

**WELL NAME & NO.:** CO Cobra 4 33 Fed P601 610H

**SURFACE HOLE FOOTAGE:** 1206'/S & 1000'/E **BOTTOM HOLE FOOTAGE:** 25'/S & 2310'/E

**WELL NAME & NO.:** CO Cobra 4 33 Fed P601 611H

**SURFACE HOLE FOOTAGE:** 1205'/S & 1960'/E **BOTTOM HOLE FOOTAGE:** 25'/S & 1430'/E

WELL NAME & NO.: CO Cobra 4 33 Fed P601 612H

**SURFACE HOLE FOOTAGE:** 1205'/S & 920'/E **BOTTOM HOLE FOOTAGE:** 25'/S & 550'/E

Operator must not drill until Cotton Draw Unit contraction is approved by the BLM

COA

H <sub>2</sub> S	•	No	0	Yes
Potash /	None	Secretary	© R-111-Q	☐ Open Annulus
WIPP	Choose	e an option (including bla	nk option.)	$\square$ WIPP
Cave / Karst	• Low	Medium	High	Critical
Wellhead	Conventional	• Multibowl	O Both	O Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☐ EchoMeter	□ DV Tool
Special Req	☐ Capitan Reef	☐ Water Disposal	$\square$ COM	Unit
Waste Prev.	© Self-Certification	C Waste Min. Plan	APD Submitted p	prior to 06/10/2024
Additional	▼ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	Break Testing
Language	☐ Four-String	☐ Offline Cementing	☐ Fluid-Filled	

#### 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 43 CFR 3176 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 1021 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) 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 minimum required fill of cement behind the 9-5/8 inch 1<sup>st</sup> Intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Excess calculates to 23%. Additional cement maybe required.

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

- 3. The minimum required fill of cement behind the 7 inch 2<sup>nd</sup> Intermediate casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

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

- 4. The minimum required fill of cement behind the  $5 \times 4-1/2$  inch production liner is:
  - Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification. **Excess calculates to 13%. Additional cement maybe required.**

#### 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

#### D. SPECIAL REQUIREMENT(S)

#### **BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. (Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.

- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 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 **43 CFR 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

## **GENERAL REQUIREMENTS**

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

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

#### **Contact Lea County Petroleum Engineering Inspection Staff:**

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
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. 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.
    - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

#### 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 of both lead and tail cement, 2) until cement has been in place at least 8 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-Q potash area, the NMOCD requirements shall be followed.

#### B. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR 3172.
- 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:
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. 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.
  - iii. Manufacturer representative shall install the test plug for the initial BOP test.
  - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - v. 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.
  - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi

- compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
- ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- iv. 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.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. 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.
- vii. 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.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR 3172.

#### C. DRILLING MUD

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

#### D. WASTE MATERIAL AND FLUIDS

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

Approved by Zota Stevens on 8/5/2024 575-234-5998 / zstevens@blm.gov



## **Training**

MCBU Drilling and Completions H<sub>2</sub>S training requirements are intended to define the minimum level of training required for employees, contractors and visitors to enter or perform work at MCBU Drilling and Completions locations that have known concentrations of H<sub>2</sub>S.

#### **Awareness Level**

Employees and visitors to MCBU Drilling and Completions locations that have known concentrations of H<sub>2</sub>S, who are not required to perform work in H<sub>2</sub>S areas, will be provided with an awareness level of H<sub>2</sub>S training prior to entering any H<sub>2</sub>S areas. At a minimum, awareness level training will include:

- 1. Physical and chemical properties of H<sub>2</sub>S
- 2. Health hazards of H<sub>2</sub>S
- 3. Personal protective equipment
- 4. Information regarding potential sources of H<sub>2</sub>S
- 5. Alarms and emergency evacuation procedures

Awareness level training will be developed and conducted by personnel who are qualified either by specific training, educational experience and/or work-related background.

## Advanced Level H<sub>2</sub>S Training

Employees and contractors required to work in areas that may contain H<sub>2</sub>S will be provided with Advanced Level H<sub>2</sub>S training prior to initial assignment. In addition to the Awareness Level requirements, Advanced Level H<sub>2</sub>S training will include:

- 1. H<sub>2</sub>S safe work practice procedures;
- 2. Emergency contingency plan procedures;
- 3. Methods to detect the presence or release of H<sub>2</sub>S (e.g., alarms, monitoring equipment), including hands-on training with direct reading and personal monitoring H<sub>2</sub>S equipment.
- 4. Basic overview of respiratory protective equipment suitable for use in H<sub>2</sub>S environments. Note: Employees who work at sites that participate in the Chevron Respirator User program will require separate respirator training as required by the MCBU Respiratory Protection Program;
- 5. Basic overview of emergency rescue techniques, first aid, CPR and medical evaluation procedures. Employees who may be required to perform "standby" duties are required to receive additional first aid and CPR training, which is not covered in the Advanced Level H<sub>2</sub>S training;
- 6. Proficiency examination covering all course material.

Advanced H<sub>2</sub>S training courses will be instructed by personnel who have successfully completed an appropriate H<sub>2</sub>S train-the-trainer development course (ANSI/ASSE Z390.1-2006) or who possess significant past experience through educational or work-related background.



## H<sub>2</sub>S Training Certification

All employees and visitors will be issued an  $H_2S$  training certification card (or certificate) upon successful completion of the appropriate  $H_2S$  training course. Personnel working in an  $H_2S$  environment will carry a current  $H_2S$  training certification card as proof of having received the proper training on their person at all times.

## **Briefing Area**

A minimum of two briefing areas will be established in locations that at least one area will be upwind from the well at all times. Upon recognition of an emergency situation, all personnel should assemble at the designated upwind briefing areas for instructions.

## H<sub>2</sub>S Equipment

## **Respiratory Protection**

- a) Six 30 minute SCBAs 2 at each briefing area and 2 in the Safety Trailer.
- b) Eight 5 minute EBAs 5 in the dog house at the rig floor, 1 at the accumulator, 1 at the shale shakers and 1 at the mud pits.

## **Visual Warning System**

- a) One color code sign, displaying all possible conditions, will be placed at the entrance to the location with a flag displaying the current condition.
- b) Two windsocks will be on location, one on the dog house and one on the Drill Site Manager's Trailer.

## H<sub>2</sub>S Detection and Monitoring System

- a) H<sub>2</sub>S monitoring system (sensor head, warning light and siren) placed throughout rig.
  - Drilling Rig Locations: at a minimum, in the area of the Shale shaker, rig floor, and bell nipple.
  - Workover Rig Locations: at a minimum, in the area of the Cellar, rig floor and circulating tanks or shale shaker.



## **Well Control Equipment**

- a) Flare Line 150' from wellhead with igniter.
- b) Choke manifold with a remotely operated choke.
- c) Mud / gas separator

## **Mud Program**

In the event of drilling, completions, workover and well servicing operations involving a hydrogen sulfide concentration of 100 ppm or greater the following shall be considered:

- 1. Use of a degasser
- 2. Use of a zinc based mud treatment
- 3. Increasing mud weight

## **Public Safety - Emergency Assistance**

<u>Agency</u>	Telephone Number
Lea County Sheriff's Department	575-396-3611
Fire Department:	
Carlsbad	575-885-3125
Artesia	575-746-5050
Lea County Regional Medical Center	575-492-5000
Jal Community Hospital	505-395-2511
Lea County Emergency Management	575-396-8602
Poison Control Center	800-222-1222

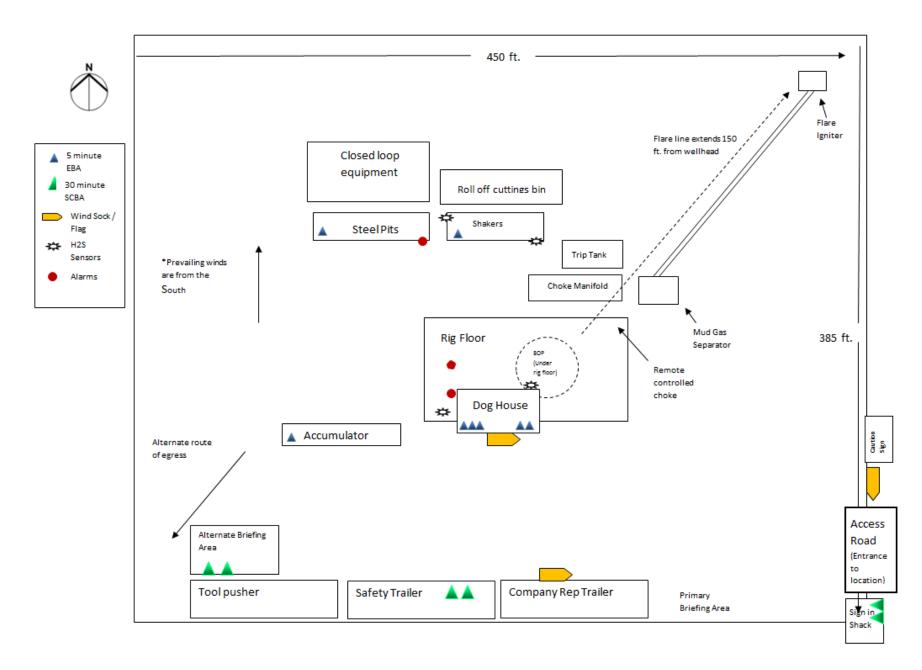


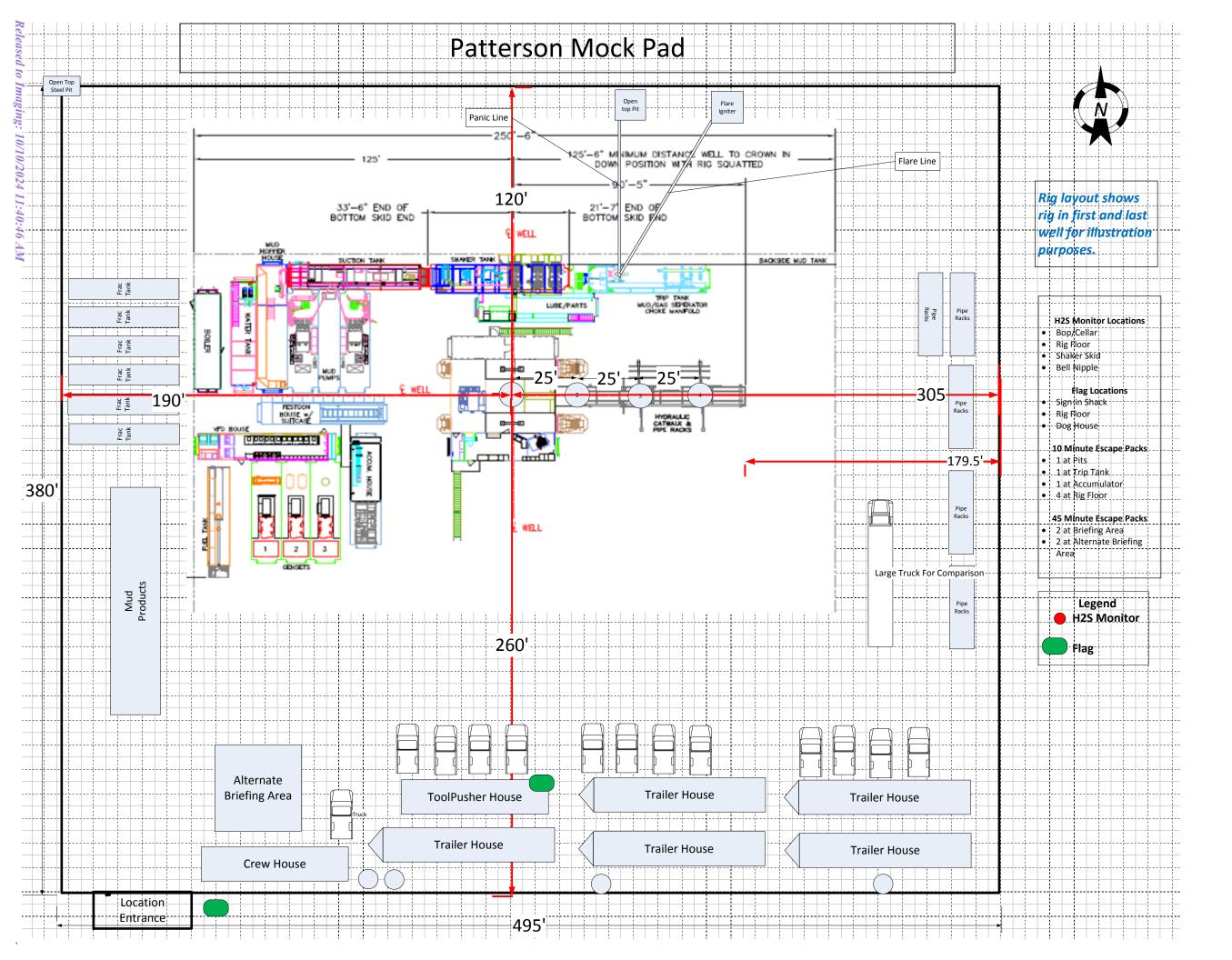
## **Chevron MCBU D&C Emergency Notifications**

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

	Name	Title	Office Number	Cell Phone
1.	TBD	Drilling Engineer		
2.	Sergio Hernandez	Superintendent	713 372 1402	
5.	Dennis Mchugh	Drilling Manager	(713) 372-4496	
6.	Kyle Eastman	Operations Manager	713-372-5863	
7.	TBD	D&C HES		
8.	TBD	Completion Engineer		







	rator Nar	mo:				Droporty N	ama	i				Wall Number
Operator Name:						Property N	ame.					Well Number
(ick (	Off Point	(KOP)										
UL	Section	Township	Range	Lot	Feet	From N	I/S	Feet	Fro	m E/W	County	
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irst i	Гake Poin	it (FTP)										
UL	Section	Township	Range	Lot	Feet	From N	/S	Feet	Fro	m E/W	County	
Latit	ıde				Longitu	de					NAD	
.ast ٦	ake Poin	t (LTP)										
UL	Section	Township	Range	Lot	Feet	From N/S	Feet		From E/W	Count	ty	
Latit	ıde				Longitu	Longitude NAD						
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KZ 06/29/2018



**APD ID:** 10400086997

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

## Drilling Plan Data Report

**Submission Date:** 08/08/2022

Operator Name: CHEVRON USA INCORPORATED

Well Name: CO COBRA 4 33 FED P601 Well Number: 610H

Well Type: OIL 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	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13931245	RUSTLER	3479	795	996	ANHYDRITE, DOLOMITE	NONE	N
13931261	TOP SALT	2349	1130	1130	HALITE, SALT	NONE	N
13931246	CASTILE	308	3171	3171	ANHYDRITE	NONE	N
13931247	LAMAR	-1207	4686	4726	LIMESTONE	NONE	N
13931248	BELL CANYON	-1240	4719	4759	SANDSTONE	NONE	N
13931249	CHERRY CANYON	-2146	5625	5665	SANDSTONE	NONE	N
13931250	BRUSHY CANYON	-3563	7042	7117	SILTSTONE	NONE	N
13931251	BONE SPRING	-5136	8615	8924	LIMESTONE	NONE	N
13931252	UPPER AVALON SHALE	-5254	8733	9042	LIMESTONE, SHALE	NATURAL GAS, OIL	N
13931253	BONE SPRING 1ST	-6217	9696	10005	SANDSTONE	NATURAL GAS, OIL	N
13931254	BONE SPRING 2ND	-6822	10301	10610	SANDSTONE	NATURAL GAS, OIL	Y
13931262	BONE SPRING 3RD	-8063	11542	11851	SANDSTONE	NATURAL GAS, OIL	N
13931244	WOLFCAMP	-8531	12010	12319	SANDSTONE	NATURAL GAS, OIL	Y

#### **Section 2 - Blowout Prevention**

## **BLOWOUT PREVENTER SCHEMATIC**

Operation: Intermediate & Production Drilling Operations

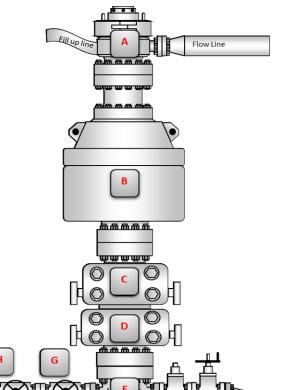
# BOP Stack Part Size Pressure Rating Description A 13-5/8" N/A Rotating Head/Bell nipple B 13-5/8" 5,000 Annular C 13-5/8" 10,000 Plind Page

Minimum System operation pressure

13-5/8" C 10,000 Blind Ram 13-5/8" 10,000 D Pipe Ram Ē 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)
Н	2"	10,000	Outside Kill Line Valve (gate valve)
	2"	10,000	Kill Line Check valve





<u>Choke line</u>							
Part	Size	Pressure	Do o o o instituto o o				
		Rating	Description				
٦	3"	10,000	HCR (gate valve)				
K	3"	10,000	Manual HCR (gate valve				
	<u>Wellhead</u>						
Part	Size	Pressure Rating	Description				
L	13-5/8"	5,000	FMC Multibowl wellhead				



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

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

CONDITIONS

Action 386103

#### **CONDITIONS**

Operator:	OGRID:
CHEVRON U S A INC	4323
6301 Deauville Blvd	Action Number:
Midland, TX 79706	386103
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

#### CONDITIONS

Created By	Condition	Condition Date
pkautz	EFFECTIVE DATE FOR SUBMITTING TO OCD THE NEW FORM C-102 WAS 08/01/2024. MUST SUBMIT C-102 ON NEW FORM.	10/10/2024
pkautz	REQUIRES NAME CHANGE	10/10/2024
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	10/10/2024
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	10/10/2024
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	10/10/2024
pkautz	Cement is required to circulate on both surface and production strings of casing	10/10/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	10/10/2024