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. 30-015-55298 10. Field and Pool, or Exploratory 3a. Address 3b. Phone No. (include area code) 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. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the 25. Signature Name (Printed/Typed) Date Title Approved by (Signature) Name (Printed/Typed) Date Title Office Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction



(Continued on page 2)

\*(Instructions on page 2)

<u>District 1</u>
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
<u>District II</u>
811 S. First St., Artesia, NM 88210

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1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462 State of New Mexico

Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

Santa Fe, NM 87505

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

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

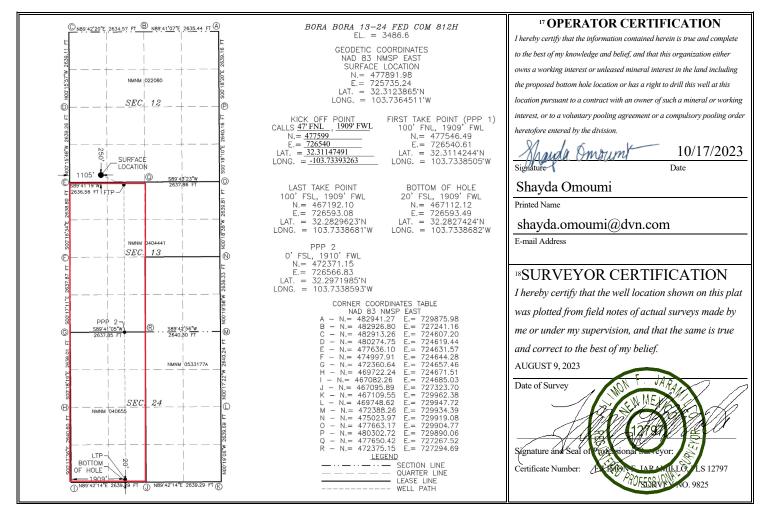
<sup>1</sup> API Number		<sup>2</sup> Pool Code	<sup>3</sup> Pool Name		
30-015-55298		98123	WC-015 G-08 S233102C; WOLFCAMP		
<sup>4</sup> Property Code		<sup>5</sup> Pr	operty Name	<sup>6</sup> Well Number	
325761		BORA BOR	812H		
<sup>7</sup> OGRID No.		8 O <sub>I</sub>	8 Operator Name		
6137		DEVON ENERGY PRO	ODUCTION COMPANY, L.P.	3486.6	

<sup>10</sup> Surface Location

Ul	L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	M	12	23 S	31 E		250	SOUTH	1105	WEST	EDDY
	<sup>11</sup> Bottom Hole Location If Different From Surface									
Ul	L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	N	24	23 S	31 E		20	SOUTH	1909	WEST	EDDY

12 Dedicated Acres 13 Joint or Infill 14 Consolidation Code 15 Order No.

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.



Inten	t X	As Dril	led										
API#	ļ												
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.				N	Propert BORA	•		24 FE	D C	OM		Well Number 812H	
Kick (	Off Point	(KOP)											
UL	Section	Township	Range	Lot	Feet	Fro	om N/S	Feet	t	From	n E/W	County	
С	13	23S	31E		47		NORTH	1909	9		WEST	EDDY	
Latitu 32.31	ude .147491				Longitu -103.73	ide 3393263						NAD 83	
First <sup>-</sup>	Take Poin	it (FTP)											
UL C	Section 13	Township 23S	Range 31E	Lot	Feet 100		om N/S ORTH	Feet		From	n E/W ST	County EDDY	
Latit			• • =		Longitu			1.00			<u>- ·                                     </u>	NAD 83	
Last 1 UL N	Section 24	t (LTP)  Township 23S	Range 31E	Lot	Feet 100	From N,	-		From WES		Count		
Latitu 32.2	ude 282962	3			Longitu 103.7	ude NAD 7338681 83							
		defining v infill well?	vell for th	e Horiz	zontal Sp	pacing U	nit?	N					
Spaci	ng Unit.	lease provi	ide API if a	availab	ole, Oper	rator Nar	me and	well n	number	for I	Definiı	ng well fo	r Horizontal
API #	: 015-4950	1											
	rator Nar		I			Propert	ty Name	e:					Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P				NY,	BORA	BORA 1	3-24 I	FED CO	M			622H	

KZ 06/29/2018

#### 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: Devon End	ergy Productio	n Company, L.P.	OGRID:	6137		Date:10	/10 / 2023
II. Type: ☑ Original □	Amendment	due to □ 19.15.27.	9.D(6)(a) NMA	C □ 19.15.27.9.D(	6)(b) N	MAC □ Othe	er.
If Other, please describe	:						
III. Well(s): Provide the be recompleted from a s					wells pro	oposed to be	drilled or proposed to
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D		cipated MCF/D	Anticipated Produced Water BBL/D
See Attached							
IV. Central Delivery Po V. Anticipated Schedul proposed to be recomple	e: Provide the		ion for each nev		ell or se		5.27.9(D)(1) NMAC] posed to be drilled or
proposed to be recomple	sted from a smy	gie wen pad of con	nected to a centi	ai denvery point.			
Well Name	API	Spud Date	TD Reached Date	Completion Commencement		Initial Flow Back Date	First Production Date
See Attached							
VI. Separation Equipm VII. Operational Pract Subsection A through F VIII. Best Management during active and planne	tices: 🗵 Attac of 19.15.27.8 I	h a complete descr NMAC.	iption of the ac	tions Operator wil	l take to	comply with	n the requirements of

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

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

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

#### IX. Anticipated Natural Gas Production:

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

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

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

XI. Map. $\square$ 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	□ will □ will r	not have capacity to	o gather 10	00% of the antic	ipated nat	tural gas
production volume from the well	prior to the date of firs	t production.					

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

l Attach (	Onerator's nla	an to manag	nroduction i	n response to	the increased	l line pressure

XIV. Confidentiality:   Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information pro	vided 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 inf	ormation
for which confidentiality is asserted and the basis for such assertion.	

(h)

(i)

# Section 3 - Certifications <u>Effective May 25, 2021</u>

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: power generation on lease; (a) power generation for grid; **(b)** (c) compression on lease; (d) liquids removal on lease; (e) reinjection for underground storage; **(f)** reinjection for temporary storage; reinjection for enhanced oil recovery; (g)

## **Section 4 - Notices**

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

other alternative beneficial uses approved by the division.

fuel cell production; and

- (a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or
- (b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- 2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

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

Signature:
Printed Name: Jeff Walla
Title: Surface Land and Regulatory Manager
E-mail Address:
Date:
Phone:
OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

#### NATURAL GAS MANAGEMENT PLAN

Section 1 - Plan Description

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

									Anticipated	Anticipated
								Anticipated	Gas	Produced Water
Well Name	API	UL	STR		FOOTA	AGES		Oil BBL/D	MCF/D	BBL/D
Bora Bora 13-24 Fed Com 301H			12-23S-31E	1075	FWL	250	FSL	(+/-) 1130bo	od/(+/-)2839mc	fd/(+/-)6074bwpd
Bora Bora 13-24 Fed Com 811H			12-23S-31E	1045	FWL	250	FSL	(+/-) 913bop	d/(+/-)4641mcfd	d/(+/-)3197bwpd
Bora Bora 13-24 Fed Com 812H			12-23S-31E	1105	FWL	250	FSL	(+/-) 913bop	d/(+/-)4641mcfd	d/(+/-)3197bwpd

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

				Completion		First
			TD Reached	Commence	Initial Flow	Production
Well Name	API	Spud Date	Date	ment Date	back Date	Date
Bora Bora 13-24 Fed Com 301H		6/1/2024	7/1/2024	10/29/2024	10/29/2024	10/29/2024
Bora Bora 13-24 Fed Com 811H		6/1/2024	7/1/2024	10/29/2024	10/29/2024	10/29/2024
Bora Bora 13-24 Fed Com 812H		6/1/2024	7/1/2024	10/29/2024	10/29/2024	10/29/2024

<sup>\*</sup>dates above are subject to change



#### VI. Separation Equipment

Devon Energy Production Company, L.P. utilizes a "stage separation" process in which oil and gas separation is carried out through a series of separators operating at successively reduced pressures. Hydrocarbon liquids are produced into a high-pressure inlet separator, then carried through one or more lower pressure separation vessels before entering the storage tanks. The purpose of this separation process is to attain maximum recovery of liquid hydrocarbons from the fluids and allow maximum capture of produced gas into the sales pipeline. Devon utilizes a series of Low-Pressure Compression units to capture gas off the staged separation and send it to the sales pipeline. This process minimizes the amount of flash gas that enters the end-stage storage tanks that is subsequently vented or flared.



#### VII. Operational Practices

Devon Energy Production Company, L. P. will employ best management practices and control technologies to maximize the recovery and minimize waste of natural gas through venting and flaring.

- During drilling operations, Devon will utilize flares and/or combustors to capture and control
  natural gas, where technically feasible. If flaring is deemed technically in-feasible, Devon will
  employ best management practices to minimize or reduce venting to the extent possible.
- During completions operations, Devon will utilize Green Completion methods to capture gas
  produced during well completions that is otherwise vented or flared. If capture is technically
  in-feasible, flares and/or combustors will be used to capture and control flow back fluids
  entering into frac tanks during initial flowback. Upon indication of first measurable hydrocarbon
  volumes, Devon will turn operations to onsite separation vessels and flow to the gathering
  pipeline.
- During production operations, Devon will take every practical effort to minimize waste of natural gas through venting and flaring by:
  - Designing and constructing facilities in a manner consistent to achieve maximum capture and control of hydrocarbon liquids & produced gas
  - Utilizing a closed-loop capture system to collect and route produced gas to sales line via low pressure compression, or to a flare/combustor
  - o Flaring in lieu of venting, where technically feasible
  - Utilizing auto-ignitors or continuous pilots, with thermocouples connected to Scada, to quickly detect and resolve issues related to malfunctioning flares/combustors
  - Employ the use of automatic tank gauging to minimize storage tank venting during loading events
  - Installing air-driven or electric-driven pneumatics & combustion engines, where technically feasible to minimize venting to the atmosphere
  - Confirm equipment is properly maintained and repaired through a preventative maintenance and repair program to ensure equipment meets all manufacturer specifications
  - Conduct and document AVO inspections on the frequency set forth in Part 27 to detect and repair any onsite leaks as quickly and efficiently as is feasible



VIII. Best Management Practices during Maintenance

Devon Energy Production Company, L.P. will utilize best management practices to minimize venting during active and planned maintenance activities. Devon is operating under guidance that production facilities permitted under NOI permits have no provisions to allow high pressure flaring and high pressure flaring is only allowed in disruption scenarios so long as the duration is less than eight hours. When technically feasible, flaring during maintenance activities will be utilized in lieu of venting to the atmosphere. Devon will work with third-party operators during scheduled maintenance of downstream pipeline or processing plants to address those events ahead of time to minimize venting. Actions considered include identifying alternative capture approaches or planning to temporarily reduce production or shut in the well to address these circumstances.

#### 1. Geologic Formations

TVD of target	12400	Pilot hole depth	N/A
MD at TD:	22762	Deepest expected fresh water	

#### Basin

	Depth	Water/Mineral	
Formation	(TVD)	Bearing/Target	Hazards*
	from KB	Zone?	
Rustler	1025		
Salt	1330		
Base of Salt	4280		
Delaware	4525		
Cherry Canyon	5460		
Brushy Canyon	6710		
1st Bone Spring Lime	8430		
Bone Spring 1st	9515		
Bone Spring 2nd	10090		
3rd Bone Spring Lime	10600		
Bone Spring 3rd	11320		
Wolfcamp	11750		
Salado, #126	2076		
	+		

<sup>\*</sup>H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program (Primary Design)

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Top (MD)	Bottom (MD)	Top (TVD)	Bottom (TVD)
17 1/2	13 3/8	54.5	J-55	ВТС	0.0	1050 MD	0	1050 TVD
12 1/4	10 3/4	45.5	J-55	BTC SCC	0.0	4380 MD	0	4380 TVD
9 7/8	8 5/8	32.0	P110	MOFXL	0	11847 MD	0	11847 TVD
7 7/8	5 1/2	20.0	P110HP	CDC-HTQ	0	22762 MD	0	12400 TVD

- •All casing strings will be tested in accordance with 43 CFR 3172. Must have table for contingency casing.
- The Rustler top will be validated via drilling parameters (i.e. reduction in ROP), and the surface casing setting depth will be revised accordingly. In addition, surface casing will be set a minimum of 25' above the top of the salt.

3. Cementing Program (Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	798	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	292	Surf	9	3.27	Lead: Class C Cement + additives
IIIt I	101	3880	13.2	1.44	Tail: Class H / C + additives
Int 2					
mt 2	295	8430	13.2	1.44	Tail: Class H / C + additives
Int 2	400	3880	9	1.44	Squeeze Lead: Class C Cement + additives
Intermediate Squeeze, post					
Completion					
Production	117	9948	9	3.27	Lead: Class H /C + additives
Production	1431	11948	13.2	1.44	Tail: Class H / C + additives

- Devon will design around R111-Q: 4 String, Open 1st Int and 2nd Int Annulus, Figure D
- Int 2 TOC will be, prior to completion, brought up to the 1st Bone Lime, leaving an open annulus for pressure monitoring
- Following completion, a cement top out will be performed to bring TOC 500ft into Int 1, but below the POTASH
  interval
- The final cement top will be verified by Echo-meter. Devon will include the Echo-meter verified fluid top and the
  volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this
  cement program.
- Int 1 cement will adhere to R111-Q requirements

Casing String	% Excess
Surface	50%
Intermediate	30%
Intermediate 2	
Prod	10%

4. Pressure Control Equipment (Four String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Require d WP	Туре		<b>✓</b>	Tested to:							
			Anı	Annular		50% of rated working pressure							
Int	13-5/8"	5M	Bline	d Ram	X								
	13-3/6	JIVI	Pipe	Ram		5M							
			Doub	le Ram	X	J1V1							
			Other*			]							
	13-5/8"		Annular (5M)		X	100% of rated working pressure							
Int 2		5M	Blind Ram		X								
Int 2		13-3/6	13-3/8	SIVI	53/8 31VI	S SMI	3101	JIVI	JIVI	Pipe	Ram		5M
								Double Ram		X	JIVI		
			Other*			]							
			Annul	ar (5M)	X	100% of rated working pressure							
Production	13-5/8"	10M	Bline	d Ram	X								
Troduction	13-3/6	10111	Pipe	Ram		10M							
						Doub	le Ram	X	TOW				
			Other*										
N A variance is requested fo	r the use of a	diverter o	n the surface	casing. See	attached for	schematic.							
Y A variance is requested to	run a 5 M an	nular on a	10M system	1									

5. Mud Program (Four String Design)

Section	Туре	Weight (ppg)
Surface	WBM	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Intermediate 2	WBM	8.5-9
Production	OBM	10-10.5

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, C	Coring and Testing
	Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the
X	Completion Report and shumitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain.
	Coring? If yes, explain.

<b>Additional</b>	logs planned	Interval		
	Resistivity	Int. shoe to KOP		
	Density	Int. shoe to KOP		
X	CBL	Production casing		
X	Mud log	Intermediate shoe to TD		
	PEX			

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	6770
Abnormal temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogren Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of 43 CFR 3176. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.

I H2S is present

measured va	des and formations will be provided to the BEW.									
N	H2S is present									
Y	H2S plan attached.									

#### 8. Other facets of operation

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

#### Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
  - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR 3172, all COAs and NMOCD regulations).
- $^{3}$  The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachme	nts
X	Directional Plan
	Other describe

## Devon Energy APD VARIANCE DATA

**OPERATOR NAME:** Devon Energy

#### 1. SUMMARY OF Variance:

Devon Energy respectfully requests approval for the following additions to the drilling plan:

1. Potential utilization of a spudder rig to pre-set surface casing.

#### 2. Description of Operations

- 1. A spudder rig contractor may move in their rig to drill the surface hole section and pre-set surface casing on this well.
  - **a.** After drilling the surface hole section, the rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
  - **b.** Rig will utilize fresh water based mud to drill surface hole to TD.
- 2. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- **3.** A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
  - **a.** A means for intervention will be maintained while the drilling rig is not over the well.
- **4.** The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
- **5.** Drilling operation will be performed with the big rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
  - **a.** The BLM will be contacted / notified 24 hours before the big rig moves back on to the pad with the pre-set surface casing.
- **6.** Devon Energy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
- 7. Once the rig is removed, Devon Energy will secure the wellhead area by placing a guard rail around the cellar area.

Released to Imaging: 7/31/2024 3:00:02 PM



**APD ID:** 10400095941

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

# Drilling Plan Data Report

Submission Date: 11/26/2023

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: BORA BORA 13-24 FED COM Well Number: 812H

Well Type: OIL WELL Well Work Type: Drill

Highlighted data reflects the most recent changes

**Show Final Text** 

### **Section 1 - Geologic Formations**

Formation			True Vertical			Mineral Resources	Producing
ID	Formation Name	Elevation		Depth	Lithologies		Formatio
13828287	UNKNOWN	3487	0	0	ALLUVIUM	NONE	N
13828293	RUSTLER	2462	1025	1025	SANDSTONE	NONE	N
13828288	TOP SALT	2157	1330	1330	SALT	NONE	N
13828289	BASE OF SALT	-793	4280	4280	SALT	NONE	N
13828306	BELL CANYON	-1038	4525	4525	SANDSTONE	NATURAL GAS, OIL	N
13828307	CHERRY CANYON	-1973	5460	5460	SANDSTONE	NATURAL GAS, OIL	N
13828308	BRUSHY CANYON	-3223	6710	6710	SANDSTONE	NATURAL GAS, OIL	N
13828309	BONE SPRING 1ST	-4943	8430	8430	LIMESTONE	NATURAL GAS, OIL	N
13828310	BONE SPRING 1ST	-6028	9515	9515	SANDSTONE	NATURAL GAS, OIL	N
13828311	BONE SPRING 2ND	-6603	10090	10090	SANDSTONE	NATURAL GAS, OIL	N
13828316	BONE SPRING 3RD	-7113	10600	10600	LIMESTONE	NATURAL GAS, OIL	N
13828313	BONE SPRING 3RD	-7833	11320	11320	SANDSTONE	NATURAL GAS, OIL	N
13828314	WOLFCAMP	-8263	11750	11750	SHALE	NATURAL GAS, OIL	Y
13828315	STRAWN	-9938	13425	13425	LIMESTONE	NATURAL GAS, OIL	N

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



## Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems June 2010

#### I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

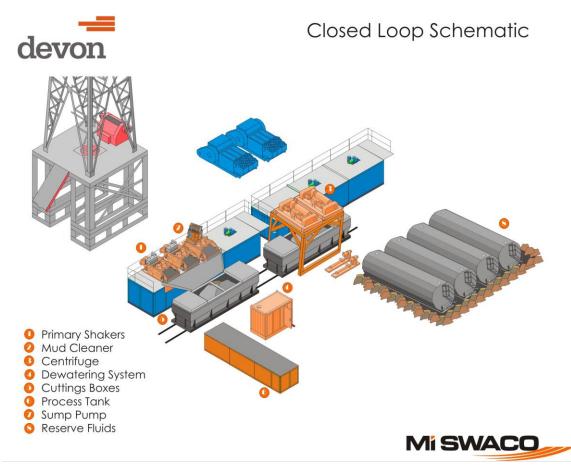
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

#### II. Operations and Maintenance Plan

*Primary Shakers:* The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

*Process Tank*: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

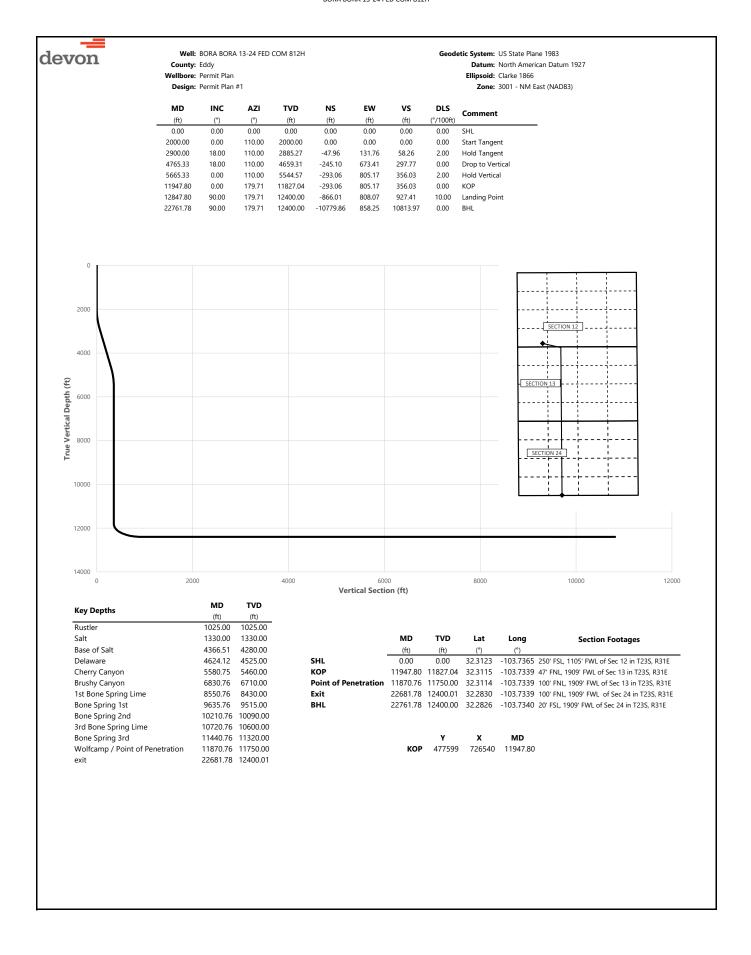
dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

#### III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.





County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983

Datum: North American Datum 1927

Ellipsoid: Clarke 1866 Zone: 3001 - NM East (NAD83)

Design: Permit Plan #1						<b>Zone:</b> 3001 - NM East (NAD83)				
MD	INC	AZI	TVD	NS	EW	vs	DLS	Command		
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL		
100.00	0.00	110.00	100.00	0.00	0.00	0.00	0.00			
200.00	0.00	110.00	200.00	0.00	0.00	0.00	0.00			
300.00 400.00	0.00	110.00 110.00	300.00 400.00	0.00	0.00	0.00	0.00			
500.00	0.00	110.00	500.00	0.00	0.00	0.00	0.00			
600.00	0.00	110.00	600.00	0.00	0.00	0.00	0.00			
700.00	0.00	110.00	700.00	0.00	0.00	0.00	0.00			
800.00	0.00	110.00	800.00	0.00	0.00	0.00	0.00			
900.00	0.00	110.00	900.00	0.00	0.00	0.00	0.00			
1000.00	0.00	110.00	1000.00	0.00	0.00	0.00	0.00			
1025.00	0.00	110.00	1025.00	0.00	0.00	0.00	0.00	Rustler		
1100.00	0.00	110.00	1100.00	0.00	0.00	0.00	0.00			
1200.00 1300.00	0.00	110.00 110.00	1200.00 1300.00	0.00	0.00	0.00	0.00			
1330.00	0.00	110.00	1330.00	0.00	0.00	0.00	0.00	Salt		
1400.00	0.00	110.00	1400.00	0.00	0.00	0.00	0.00	Sait		
1500.00	0.00	110.00	1500.00	0.00	0.00	0.00	0.00			
1600.00	0.00	110.00	1600.00	0.00	0.00	0.00	0.00			
1700.00	0.00	110.00	1700.00	0.00	0.00	0.00	0.00			
1800.00	0.00	110.00	1800.00	0.00	0.00	0.00	0.00			
1900.00	0.00	110.00	1900.00	0.00	0.00	0.00	0.00			
2000.00	0.00	110.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent		
2100.00	2.00	110.00	2099.98	-0.60	1.64	0.73	2.00			
2200.00 2300.00	4.00 6.00	110.00 110.00	2199.84 2299.45	-2.39 -5.37	6.56 14.75	2.90 6.52	2.00 2.00			
2400.00	8.00	110.00	2398.70	-9.54	26.20	11.58	2.00			
2500.00	10.00	110.00	2497.47	-14.89	40.90	18.08	2.00			
2600.00	12.00	110.00	2595.62	-21.41	58.83	26.01	2.00			
2700.00	14.00	110.00	2693.06	-29.10	79.96	35.36	2.00			
2800.00	16.00	110.00	2789.64	-37.96	104.28	46.11	2.00			
2900.00	18.00	110.00	2885.27	-47.96	131.76	58.26	2.00	Hold Tangent		
3000.00	18.00	110.00	2980.37	-58.52	160.79	71.10	0.00			
3100.00	18.00	110.00	3075.48	-69.09	189.83	83.94	0.00			
3200.00 3300.00	18.00	110.00 110.00	3170.59	-79.66 -90.23	218.87	96.78 109.62	0.00			
3400.00	18.00 18.00	110.00	3265.69 3360.80	-90.23	247.91 276.95	122.46	0.00			
3500.00	18.00	110.00	3455.90	-111.37	305.99	135.30	0.00			
3600.00	18.00	110.00	3551.01	-121.94	335.02	148.14	0.00			
3700.00	18.00	110.00	3646.11	-132.51	364.06	160.98	0.00			
3800.00	18.00	110.00	3741.22	-143.08	393.10	173.82	0.00			
3900.00	18.00	110.00	3836.33	-153.65	422.14	186.66	0.00			
4000.00	18.00	110.00	3931.43	-164.21	451.18	199.50	0.00			
4100.00	18.00	110.00	4026.54	-174.78	480.21	212.34	0.00			
4200.00 4300.00	18.00 18.00	110.00 110.00	4121.64 4216.75	-185.35 -195.92	509.25 538.29	225.18 238.02	0.00			
4366.51	18.00	110.00	4280.00	-202.95	557.60	246.56	0.00	Base of Salt		
4400.00	18.00	110.00	4311.85	-206.49	567.33	250.87	0.00	base of said		
4500.00	18.00	110.00	4406.96	-217.06	596.37	263.71	0.00			
4600.00	18.00	110.00	4502.06	-227.63	625.40	276.55	0.00			
4624.12	18.00	110.00	4525.00	-230.18	632.41	279.64	0.00	Delaware		
4700.00	18.00	110.00	4597.17	-238.20	654.44	289.39	0.00			
4765.33	18.00	110.00	4659.31	-245.10	673.41	297.77	0.00	Drop to Vertical		
4800.00 4900.00	17.31 15.31	110.00 110.00	4692.34 4788.31	-248.70 -258.30	683.29 709.68	302.14 313.81	2.00 2.00			
5000.00	15.31 13.31	110.00	4885.21	-258.30 -266.75	709.68	313.81 324.08	2.00			
5100.00	11.31	110.00	4982.90	-274.04	752.92	332.93	2.00			
5200.00	9.31	110.00	5081.28	-280.16	769.74	340.37	2.00			
5300.00	7.31	110.00	5180.23	-285.10	783.31	346.37	2.00			
5400.00	5.31	110.00	5279.62	-288.86	793.63	350.93	2.00			
5500.00	3.31	110.00	5379.33	-291.43	800.69	354.06	2.00			
5580.75	1.69	110.00	5460.00	-292.63	804.00	355.52	2.00	Cherry Canyon		
5600.00	1.31	110.00	5479.25	-292.80	804.47	355.73	2.00	Hald Vandaal		
5665.33 5700.00	0.00	110.00 179.71	5544.57 5579.24	-293.06 -293.06	805.17 805.17	356.03 356.04	2.00 0.00	Hold Vertical		
5800.00	0.00	179.71	5679.24	-293.06 -293.06	805.17	356.04	0.00			
5900.00	0.00	179.71	5779.24	-293.06	805.17	356.04	0.00			
6000.00	0.00	179.71	5879.24	-293.06	805.17	356.04	0.00			
6100.00	0.00	179.71	5979.24	-293.06	805.17	356.04	0.00			
6200.00	0.00	179.71	6079.24	-293.06	805.17	356.04	0.00			



County: Eddy
Wellbore: Permit Plan
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Geodetic System: US State Plane 1983

Datum: North American Datum 1927 Ellipsoid: Clarke 1866

Zone: 3001 - NM East (NAD83)

Money   Mone	Design: Permit Plan #1						Design: Permit Plan #1 Zone: 3001 - NM East (NAD83)						
	MD	INC	AZI	TVD	NS	EW	vs	DLS					
60000 0.00 17971 67924 92906 8017 3504 000   60000 0.00 17971 67924 92906 8017 3504 0.00   600000 0.00 17971 67924 92906 8017 3504 0.00   600000 0.00 17971 67924 92906 8017 3504 0.00   600000 0.00 17971 67924 92906 8017 3504 0.00   600000 0.00 17971 67924 92906 8017 3504 0.00   600000 0.00 17971 67924 92906 8017 3504 0.00   600000 0.00 17971 67924 92906 8017 3504 0.00   600000 0.00 17971 67924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 77924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   600000 0.00 17971 87924 92906 8017 3504 0.00   6000000 0.00 17971 87924 92906 8017 3504 0.00   6000000 0.00 17971 87924 92									Comment				
650000         0.00         17971         67920         29306         805.17         350.40         0.00           670000         0.00         17971         67920         2930.6         805.17         350.40         0.00           6830.07         0.00         17971         67932.4         2930.6         805.17         350.40         0.00           6830.07         0.00         17971         67932.4         2930.6         805.17         350.00         0.00           7000.00         0.00         17971         67932.4         2930.6         805.17         350.00         0.00           7000.00         0.00         17971         67932.4         2930.6         805.17         350.00         0.00           7000.00         0.00         17971         77932.4         2930.6         805.17         350.00         0.00           7000.00         0.00         17971         77932.4         2930.6         805.17         350.00         0.00           7000.00         0.00         17971         77932.4         2930.6         805.17         350.00         0.00           7000.00         0.00         17971         77932.4         2930.6         805.17         350.00								0.00					
690000         00         17971         67924         29306         8017         35604         000         PSPRINGER         69934         29306         8017         35604         000         PSPRINGER         69934         29306         8017         35604         000         Residual Control         690000         00         17971         667934         29306         8017         35604         000         PSPRINGER         67934         29306         8017         35604         000         PSPRINGER         79744         29306         8017         35604         000         PSPRINGER         79744         29306         8017         35604         000         PSPRINGER         80000         00         17971         79744         29306         8017         35604         000         PSPRINGER         80000         00         17971         37974         29306         8017         35604	6400.00	0.00	179.71	6279.24	-293.06	805.17	356.04	0.00					
670000         00         79771         657924         29306         80171         35604         00         Residence         60         7971         67000         29306         20171         35604         00         Residence         60         19717         67100         29306         80117         35604         00         Permit Comment         60         19717         67100         29306         80117         35604         000         Permit Comment         60         70000         00         19717         67924         29306         80117         35604         000         Permit Comment         60         70000         00         19717         17724         29306         80117         35604         000         Permit Comment         80         60         00         19717         27724         29306         80117         35604         000         Permit Comment         80         00         00         19717         77724         29306         80171         35604         000         00         19717         77724         29306         80171         35604         000         Permit Comment         80         000         00         19717         87724         29306         80171         35604         000	6500.00	0.00	179.71	6379.24	-293.06	805.17	356.04	0.00					
680000         00         17971         67792         29306         05171         35644         000         Processor           680000         00         17971         677924         29306         80171         35644         000         Processor           700000         00         17971         679924         29306         80171         35604         000           700000         00         17971         679924         29306         80171         35604         000           730000         00         17971         77924         29306         80171         35604         000           730000         00         17971         77924         29306         80171         35604         000           730000         00         17971         77924         29306         80171         35604         000           730000         00         17971         77924         29306         80171         35604         000           80000         00         17971         779724         29306         80171         35604         000           80000         00         17971         379724         29306         80171         35604         000 <td>6600.00</td> <td>0.00</td> <td>179.71</td> <td>6479.24</td> <td>-293.06</td> <td>805.17</td> <td>356.04</td> <td>0.00</td> <td></td>	6600.00	0.00	179.71	6479.24	-293.06	805.17	356.04	0.00					
683076         QO         78771         67700         293.66         2017         350.44         QO         Promotine         American           700000         0.00         17971         67924         -293.66         801.71         350.44         0.00         17971         67924         -293.66         801.71         350.44         0.00         17971         787924         -293.66         801.71         350.44         0.00         17971         779724         -293.66         801.71         350.44         0.00         17971         779724         -293.66         801.71         350.44         0.00         17971         779724         -293.66         801.71         350.44         0.00         17971         779724         -293.66         801.71         350.44         0.00         17971         779724         -293.66         801.71         350.44         0.00         17971         779724         -293.66         801.71         350.44         0.00         17971         779724         -293.66         805.17         350.44         0.00         17971         789.74         -293.66         805.17         350.44         0.00         17971         789.74         -293.66         805.17         350.44         0.00         17971	6700.00	0.00	179.71	6579.24	-293.06	805.17	356.04	0.00					
690000         00         17971         6779.24         293.66         2017         356.04         0.00           710000         00         17971         6879.24         293.66         2017         356.04         0.00           710000         00         17971         6799.24         293.66         8017         356.04         0.00           730000         00         17971         1793.4         293.66         8017         356.04         0.00           730000         00         17971         1793.4         293.66         8017         356.04         0.00           750000         00         17971         1797.24         293.66         8017         356.04         0.00           770000         00         17971         1797.24         293.66         8017         356.04         0.00           770000         00         17971         1797.24         293.66         8017         356.04         0.00           800000         00         17971         3792.4         293.06         8017         356.04         0.00           800000         00         17971         3792.4         293.06         8017         356.04         0.00           <	6800.00	0.00	179.71	6679.24	-293.06	805.17	356.04	0.00					
700000         00         17971         687924         29306         805.17         356.04         0.00           720000         00         17971         707924         293.06         805.17         356.04         0.00           720000         00         17971         717924         293.06         805.17         356.04         0.00           740000         00         17971         727924         293.06         805.17         356.04         0.00           760000         00         17971         737924         293.06         805.17         356.04         0.00           760000         00         17971         737924         293.06         805.17         356.04         0.00           760000         00         17971         77924         293.06         805.17         356.04         0.00           760000         00         17971         77924         293.06         805.17         356.04         0.00           800000         00         17971         787924         293.06         805.17         356.04         0.00           800000         00         17971         87924         293.06         805.17         356.04         0.00	6830.76	0.00	179.71	6710.00	-293.06	805.17	356.04	0.00	Brushy Canyon				
700000         00         17971         79724         29306         805.17         356.04         0.00         797000         17971         77924         29306         805.17         356.04         0.00         797000         17971         77924         29306         805.17         356.04         0.00         797000         17971         727924         29306         805.17         356.04         0.00         797000         17971         737924         29306         805.17         356.04         0.00         770000         17971         737924         29306         805.17         356.04         0.00         770000         17971         737924         29306         805.17         356.04         0.00         790000         17971         737924         29306         805.17         356.04         0.00         17971         737924         29306         805.17         356.04         0.00         17971         179724         29306         805.17         356.04         0.00         17971         87924         29306         805.17         356.04         0.00         17971         87924         29306         805.17         356.04         0.00         17971         87924         29306         805.17         356.04         0.00         <	6900.00	0.00	179.71			805.17	356.04	0.00					
720000         00         1797         779242         29306         805.17         356.04         000           740000         00         1797         72924         29306         805.17         356.04         000           750000         00         1797         72924         29306         805.17         356.04         000           750000         00         1797         72924         29306         805.17         356.04         000           750000         00         1797         75924         29306         805.17         356.04         000           80000         00         1797         75924         29306         805.17         356.04         000           80000         00         1797         78924         29306         805.17         356.04         000           80000         00         17971         87924         29306         805.17         356.04         000           80000         00         17971         87924         29306         805.17         356.04         000           85507.6         00         17971         87924         29306         805.17         356.04         000           85000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>													
700000         00         17971         772924         29306         805.17         356.04         000         760000         00         17971         772924         29306         805.17         356.04         000         760000         00         17971         773924         29306         805.17         356.04         000         770000         00         17971         773924         29306         805.17         356.04         000         770000         00         17971         773924         29306         805.17         356.04         000         790000         10         17971         777924         29306         805.17         356.04         000         790000         10         17971         77924         29306         805.17         356.04         000         380000         10         17971         87924         29306         805.17         356.04         000         180000         17971         87924         29306         805.17         356.04         000         180000         17971         87924         29306         805.17         356.04         000         180000         19797         87924         29306         805.17         356.04         000         19797         87924         29306         805.17													
700000         00         17971         727924         23306         805.71         356.04         0.00           750000         00         17971         727924         23306         805.71         356.04         0.00           750000         00         17971         727924         239.06         805.71         356.04         0.00           780000         00         17971         727924         239.06         805.71         356.04         0.00           800000         10         17971         727924         239.06         805.71         356.04         0.00           800000         10         17971         737924         239.06         805.71         356.04         0.00           800000         10         17971         87924         239.06         805.71         356.04         0.00           800000         10         17971         87924         239.06         805.71         356.04         0.00           850000         10         17971         87924         239.06         805.71         356.04         0.00           850000         10         17971         87924         239.06         805.71         356.04         0.00													
7500000         00         17511         377324         293.06         805.17         356.04         0.00         7700000         00         17911         77924         293.06         805.17         356.04         0.00         7700000         00         17911         777924         293.06         805.17         356.04         0.00         790000         00         17911         779.724         293.06         805.17         356.04         0.00         790000         00         17911         879.24         293.06         805.17         356.04         0.00         800000         00         17911         879.24         293.06         805.17         356.04         0.00         800000         00         17911         879.24         293.06         805.17         356.04         0.00         800000         17911         879.24         293.06         805.17         356.04         0.00         17911         879.24         293.06         805.17         356.04         0.00         17911         879.24         293.06         805.17         356.04         0.00         1791         879.24         293.06         805.17         356.04         0.00         1791         879.24         293.06         805.17         356.04         0.00 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>													
700000         00         17971         7479.24         293.06         805.17         356.04         0.00           700000         00         17971         7579.24         293.06         805.17         356.04         0.00           800000         00         17971         779.24         293.06         805.17         356.04         0.00           800000         00         17971         7879.24         293.06         805.17         356.04         0.00           820000         00         17971         879.24         293.06         805.17         356.04         0.00           820000         10         17971         879.24         293.06         805.17         356.04         0.00           840000         10         17971         879.24         293.06         805.17         356.04         0.00           85000         10         17971         879.24         293.06         805.17         356.04         0.00           85000         10         17971         879.24         293.06         805.17         356.04         0.00           87000         10         17971         879.24         293.06         805.17         356.04         0.00													
700000         00         17-17         7579.24         293.06         805.17         356.04         0.00           790000         00         17-17         779.24         293.06         805.17         356.04         0.00           800000         00         17-17         779.24         293.06         805.17         356.04         0.00           810000         00         17-17         879.24         293.06         805.17         356.04         0.00           820000         00         17-17         879.24         293.06         805.17         356.04         0.00           850000         00         17-31         879.24         293.06         805.17         356.04         0.00           850000         00         17-31         879.24         293.06         805.17         356.04         0.00           850000         00         17-31         879.24         293.06         805.17         356.04         0.00           870000         00         17-31         879.24         293.06         805.17         356.04         0.00           890000         00         17-31         879.24         293.06         805.17         356.04         0.00													
780000         000         179-11         7679.24         293.06         805.17         356.04         0.00           800000         000         179-11         7879.24         293.06         805.17         356.04         0.00           800000         000         179-11         879.24         293.06         805.17         356.04         0.00           820000         000         179-11         879.24         293.06         805.17         356.04         0.00           840000         000         179-11         8279.24         293.06         805.17         356.04         0.00           850000         000         179-11         8379.24         293.06         805.17         356.04         0.00           85507.6         000         179-11         8479.24         293.06         805.17         356.04         0.00           870000         00         179-11         879.24         293.06         805.17         356.04         0.00           890000         00         179-11         879.24         293.06         805.17         356.04         0.00           990000         00         179-11         879.24         293.06         805.17         356.04         0													
790000         00         17971         77979.4         -293.06         80517         356.04         0.00         180000         100         17971         7879.24         -293.06         80517         356.04         0.00         180000         100         17971         8797.24         -293.06         80517         356.04         0.00         180000         100         17971         8797.24         -293.06         80517         356.04         0.00         180000         100         17971         8179.24         -293.06         80517         356.04         0.00         180000         19971         8479.24         -293.06         80517         356.04         0.00         180000         19971         8479.24         -293.06         80517         356.04         0.00         180000         19971         879.24         -293.06         80517         356.04         0.00         180000         19971         879.24         -293.06         80517         356.04         0.00         19971         879.24         -293.06         80517         356.04         0.00         19971         879.24         -293.06         80517         356.04         0.00         19971         879.24         -293.06         80517         356.04         0.00         1997													
800000         0.00         17971         787924         -293.06         805.17         586.04         0.00           820000         0.00         17971         807924         -293.06         805.17         586.04         0.00           840000         0.00         17971         817924         -293.06         805.17         586.04         0.00           840000         0.00         17971         87924         -293.06         805.17         356.04         0.00           8550.76         0.00         17971         847924         -293.06         805.17         356.04         0.00           8500.00         0.00         17971         847924         -293.06         805.17         356.04         0.00           8600.00         0.00         17971         87924         -293.06         805.17         356.04         0.00           8900.00         0.00         17971         87924         -293.06         805.17         356.04         0.00           9000.00         0.00         17971         87924         -293.06         805.17         356.04         0.00           9000.00         0.00         17971         87924         -293.06         805.17         356.04													
8100,00         0.00         17971         879724         293.06         805.17         356.04         0.00           8200,00         0.00         17971         817924         293.06         805.17         356.04         0.00           8500,00         0.00         17971         827924         293.06         805.17         356.04         0.00           8500,00         0.00         17971         827924         293.06         805.17         356.04         0.00           8500,00         0.00         17971         84300         293.06         805.17         356.04         0.00           8700,00         0.00         17971         87924         293.06         805.17         356.04         0.00           8900,00         0.00         17971         877924         293.06         805.17         356.04         0.00           8900,00         0.00         17971         877924         293.06         805.17         356.04         0.00           9000,00         0.00         17971         917924         293.06         805.17         356.04         0.00           9400,00         0.00         17971         917924         293.06         805.17         356.04													
820000         0.00         17971         817924         -293.06         805.17         356.04         0.00           840000         0.00         17971         817924         -293.06         805.17         356.04         0.00           850000         0.00         17971         847924         -293.06         805.17         356.04         0.00           85507.6         0.00         17971         847924         -293.06         805.17         356.04         0.00           8700.00         0.00         17971         847924         -293.06         805.17         356.04         0.00           8700.00         0.00         17971         867924         -293.06         805.17         356.04         0.00           9000.00         0.00         17971         897924         -293.06         805.17         356.04         0.00           9000.00         0.00         17971         997924         -293.06         805.17         356.04         0.00           9000.00         0.00         17971         997924         -293.06         805.17         356.04         0.00           9000.00         0.00         17971         997924         -293.06         805.17         356.04													
8300,00         00         17971         817924         233.06         80517         356.04         0.00           8500,00         00         17971         837924         233.06         80517         356.04         0.00           8500,00         0.00         17971         84300         239.06         805.17         356.04         0.00           8600,00         0.00         17971         87924         233.06         805.17         356.04         0.00           8700,00         0.00         17971         87924         233.06         805.17         356.04         0.00           8900,00         0.00         17971         87924         233.06         805.17         356.04         0.00           9000,00         0.00         17971         87924         233.06         805.17         356.04         0.00           9000,00         0.00         17971         97924         233.06         805.17         356.04         0.00           9300,00         0.00         17971         97924         233.06         805.17         356.04         0.00           9400,00         0.00         17971         97924         233.06         805.17         356.04         0.00 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>													
8400.00         0.00         17971         8279.24         293.06         805.17         356.04         0.00         8550.76         0.00         17971         8439.04         293.06         805.17         356.04         0.00         1850.00         0.00         17971         8479.24         293.06         805.17         356.04         0.00         1890.00         0.00         17971         8679.24         293.06         805.17         356.04         0.00         0.00         1897.11         8679.24         293.06         805.17         356.04         0.00         0.00         19717         8792.4         293.06         805.17         356.04         0.00         0.00         19717         8792.4         293.06         805.17         356.04         0.00         0.00         19717         8792.4         293.06         805.17         356.04         0.00         0.00         19717         8792.4         293.06         805.17         356.04         0.00         0.00         19717         8979.4         293.06         805.17         356.04         0.00         9.00         0.00         17971         9479.24         293.06         805.17         356.04         0.00         9.00         0.00         17971         9479.24         293.06 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>													
850000         0.00         17971         8379.04         293.06         805.17         356.04         0.00         188000         1797.17         8479.24         -293.06         805.17         356.04         0.00         188000         1797.17         8479.24         -293.06         805.17         356.04         0.00         1797.18         8579.24         -293.06         805.17         356.04         0.00         1890000         1797.11         8579.24         -293.06         805.17         356.04         0.00         1990000         1797.11         8779.24         -293.06         805.17         356.04         0.00         1990000         1797.11         8979.24         -293.06         805.17         356.04         0.00         1900000         1797.11         8979.24         -293.06         805.17         356.04         0.00         1900000         1797.11         9179.24         -293.06         805.17         356.04         0.00         1900000         1797.11         9379.24         -293.06         805.17         356.04         0.00         1900000         1797.11         9479.24         -293.06         805.17         356.04         0.00         1900000         0.00         1797.11         9479.24         -293.06         805.17         356.04													
855076         0.00         17971         8430.00         29316         80517         35604         0.00         1spring lime           8700.00         0.00         17971         8579.24         293.06         80517         356.04         0.00           8700.00         0.00         17971         8579.24         293.06         80517         356.04         0.00           9000.00         0.00         17971         8879.24         293.06         80517         356.04         0.00           9000.00         0.00         17971         8879.24         293.06         80517         356.04         0.00           9200.00         0.00         17971         9979.24         293.06         80517         356.04         0.00           9200.00         0.00         17971         9979.24         293.06         80517         356.04         0.00           9600.00         0.00         17971         9479.24         293.06         80517         356.04         0.00           9600.00         0.00         17971         9579.24         293.06         80517         356.04         0.00           9600.00         0.00         17971         9579.24         293.06         80517													
860000         0.00         17971         8479.24         -293.06         805.17         356.04         0.00           8700.00         0.00         17971         8679.24         -293.06         805.17         356.04         0.00           8900.00         0.00         17971         8779.24         -293.06         805.17         356.04         0.00           9000.00         0.00         17971         8879.24         -293.06         805.17         356.04         0.00           9100.00         0.00         17971         8879.24         -293.06         805.17         356.04         0.00           9300.00         0.00         17971         9179.24         -293.06         805.17         356.04         0.00           9400.00         0.00         17971         9179.24         -293.06         805.17         356.04         0.00           9500.00         0.00         17971         9479.24         -293.06         805.17         356.04         0.00           9500.00         0.00         17971         9479.24         -293.06         805.17         356.04         0.00           9900.00         0.00         17971         9579.24         -293.06         805.17 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1st Page Coring Lines</td></th<>									1st Page Coring Lines				
870000         0.00         17971         8579.24         -293.06         805.17         356.04         0.00           890000         0.00         17971         8779.24         -293.06         805.17         356.04         0.00           900000         0.00         17971         8879.24         -293.06         805.17         356.04         0.00           900000         0.00         17971         8879.24         -293.06         805.17         356.04         0.00           920000         0.00         17971         9079.24         -293.06         805.17         356.04         0.00           940000         0.00         17971         9379.24         -293.06         805.17         356.04         0.00           950000         0.00         17971         9379.24         -293.06         805.17         356.04         0.00           963576         0.00         17971         9579.24         -293.06         805.17         356.04         0.00           9900.00         0.00         17971         9679.24         -293.06         805.17         356.04         0.00           10000.00         0.00         17971         9679.24         -293.06         805.17         356.0									ist bone spring time				
880000         0.00         17971         867924         -293.06         805.17         356.04         0.00           990000         0.00         17971         877924         -293.06         805.17         356.04         0.00           910000         0.00         17971         887924         -293.06         805.17         356.04         0.00           920000         0.00         17971         917924         -293.06         805.17         356.04         0.00           930000         0.00         17971         917924         -293.06         805.17         356.04         0.00           950000         0.00         17971         937924         -293.06         805.17         356.04         0.00           960000         0.00         17971         947924         -293.06         805.17         356.04         0.00           970000         0.00         17971         957924         -293.06         805.17         356.04         0.00           990000         0.00         17971         977924         -293.06         805.17         356.04         0.00           1000000         0.00         17971         977924         -293.06         805.17         356.04													
8900.00         0.00         179.71         879.24         -293.06         805.17         356.04         0.00           9100.00         0.00         179.71         8879.24         -293.06         805.17         356.04         0.00           9200.00         0.00         179.71         8979.24         -293.06         805.17         356.04         0.00           9300.00         0.00         179.71         979.24         -293.06         805.17         356.04         0.00           9400.00         0.00         179.71         9379.24         -293.06         805.17         356.04         0.00           9500.00         0.00         179.71         9479.24         -293.06         805.17         356.04         0.00           960.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           990.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9900.00         0.00         179.71         9679.24         -293.06         805.17         356.04         0.00           1000.00         0.00         179.71         1007.92         -293.06         805.17													
900000         0.00         179.71         8879.24         -293.06         805.17         356.04         0.00           910000         0.00         179.71         9079.24         -293.06         805.17         356.04         0.00           930000         0.00         179.71         9079.24         -293.06         805.17         356.04         0.00           940000         0.00         179.71         9379.24         -293.06         805.17         356.04         0.00           9500.00         0.00         179.71         9379.24         -293.06         805.17         356.04         0.00           963.576         0.00         179.71         9575.00         -293.06         805.17         356.04         0.00           9700.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9900.00         0.00         179.71         9679.24         -293.06         805.17         356.04         0.00           10000.00         0.00         179.71         9879.24         -293.06         805.17         356.04         0.00           10100.00         0.00         179.71         10099.24         -293.06         805.17													
910000         0.00         179.71         8979.24         -293.06         805.17         356.04         0.00           920000         0.00         179.71         9179.24         -293.06         805.17         356.04         0.00           940000         0.00         179.71         9279.24         -293.06         805.17         356.04         0.00           9500.00         0.00         179.71         9479.24         -293.06         805.17         356.04         0.00           9600.00         0.00         179.71         9479.24         -293.06         805.17         356.04         0.00           9600.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9800.00         0.00         179.71         9679.24         -293.06         805.17         356.04         0.00           1000.00         0.00         179.71         9679.24         -293.06         805.17         356.04         0.00           1000.00         0.00         179.71         1079.24         -293.06         805.17         356.04         0.00           1000.00         0.00         179.71         10079.24         -293.06         805.17													
920000         0.00         179.71         9079.24         -293.06         805.17         356.04         0.00           930000         0.00         179.71         9179.24         -293.06         805.17         356.04         0.00           950000         0.00         179.71         9379.24         -293.06         805.17         356.04         0.00           9600.00         0.00         179.71         9479.24         -293.06         805.17         356.04         0.00           9635.76         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9900.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9900.00         0.00         179.71         979.24         -293.06         805.17         356.04         0.00           10000.00         0.00         179.71         1009.24         -293.06         805.17         356.04         0.00           1020.00         0.00         179.71         1009.90         -293.06         805.17         356.04         0.00           1020.00         0.00         179.71         1009.90         -293.06         805.17													
930000         0,00         179,71         9179,24         -293,06         805,17         356,04         0,00           950000         0,00         179,71         9379,24         -293,06         805,17         356,04         0,00           9600,00         0,00         179,71         9479,24         -293,06         805,17         356,04         0,00           960,00         0,00         179,71         9579,24         -293,06         805,17         356,04         0,00           970,00         0,00         179,71         9579,24         -293,06         805,17         356,04         0,00           990,00         0,00         179,71         9679,24         -293,06         805,17         356,04         0,00           1000,00         0,00         179,71         979,24         -293,06         805,17         356,04         0,00           1000,00         0,00         179,71         10079,24         -293,06         805,17         356,04         0,00           1021,076         0,00         179,71         10079,24         -293,06         805,17         356,04         0,00           1020,00         0,00         179,71         10479,24         -293,06         805,17													
940000         0.00         179.71         927.24         -293.06         805.17         356.04         0.00           950000         0.00         179.71         9479.24         -293.06         805.17         356.04         0.00           9635.76         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9800.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9800.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9900.00         0.00         179.71         979.24         -293.06         805.17         356.04         0.00           1000.00         0.00         179.71         1079.24         -293.06         805.17         356.04         0.00           1020.00         0.00         179.71         1009.00         293.06         805.17         356.04         0.00           1020.00         0.00         179.71         10379.24         -293.06         805.17         356.04         0.00           1030.00         0.00         179.71         10379.24         -293.06         805.17													
950000         0.00         179.71         9379.24         -293.06         805.17         356.04         0.00           9600.00         0.00         179.71         9479.24         -293.06         805.17         356.04         0.00           9700.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00           9800.00         0.00         179.71         9679.24         -293.06         805.17         356.04         0.00           9900.00         0.00         179.71         9679.24         -293.06         805.17         356.04         0.00           10000.00         0.00         179.71         979.24         -293.06         805.17         356.04         0.00           10200.00         0.00         179.71         10079.24         -293.06         805.17         356.04         0.00           10200.00         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00           10300.00         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00           10400.00         10.00         179.71         10379.24         -293.06         805.													
9603.07         0.00         179.71         9479.24         -293.06         805.17         356.04         0.00         Porgonome         179.71         9515.00         -293.06         805.17         356.04         0.00         Porgonome         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00         1990.00         0.00         179.71         9779.24         -293.06         805.17         356.04         0.00         1900.00         0.00         179.71         979.24         -293.06         805.17         356.04         0.00         1000.00         0.00         179.71         9979.24         -293.06         805.17         356.04         0.00         1000.00         100         179.71         10079.24         -293.06         805.17         356.04         0.00         1000.00         179.71         10079.24         -293.06         805.17         356.04         0.00         1000.00         179.71         1009.00         -293.06         805.17         356.04         0.00         1000.00         179.71         10279.24         -293.06         805.17         356.04         0.00         1000.00         179.71         10379.24         -293.06         805.17         356.04         0.00         1000.00         1													
9635.76         0.00         179.71         9515.00         -293.06         805.17         356.04         0.00         Bone Spring 1st           9700.00         0.00         179.71         96792.4         -293.06         805.17         356.04         0.00           990.00         0.00         179.71         96792.4         -293.06         805.17         356.04         0.00           1000.00         1.00         179.71         9879.24         -293.06         805.17         356.04         0.00           1020.00         0.00         179.71         19979.24         -293.06         805.17         356.04         0.00           1020.00         0.00         179.71         10090.00         -293.06         805.17         356.04         0.00           1021.076         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00           1040.00         1.00         179.71         10179.24         -293.06         805.17         356.04         0.00           10500.00         1.00         179.71         10479.24         -293.06         805.17         356.04         0.00           10720.06         0.00         179.71         10679.24													
9700.00         0.00         179.71         9579.24         -293.06         805.17         356.04         0.00         980.00         100         179.71         979.24         -293.06         805.17         356.04         0.00         990.00         0.00         179.71         9779.24         -293.06         805.17         356.04         0.00         1000.00         179.71         9879.24         -293.06         805.17         356.04         0.00         1000.00         179.71         10079.24         -293.06         805.17         356.04         0.00         1020.00         0.00         179.71         10079.24         -293.06         805.17         356.04         0.00         1020.00         0.00         179.71         10090.00         -293.06         805.17         356.04         0.00         1000.00         179.71         10179.24         -293.06         805.17         356.04         0.00         1000.00         179.71         10379.24         -293.06         805.17         356.04         0.00         1000.00         179.71         10479.24         -293.06         805.17         356.04         0.00         1000.00         179.71         10579.24         -293.06         805.17         356.04         0.00         1000.00         179.71         10									Bone Spring 1st				
9800.00         0.00         179.71         9679.24         -293.06         805.17         356.04         0.00           990.00         0.00         179.71         9879.24         -293.06         805.17         356.04         0.00           10100.00         0.00         179.71         9879.24         -293.06         805.17         356.04         0.00           1020.00         0.00         179.71         10079.24         -293.06         805.17         356.04         0.00           1030.00         0.00         179.71         10079.24         -293.06         805.17         356.04         0.00           10300.00         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00           10400.00         0.00         179.71         10379.24         -293.06         805.17         356.04         0.00           10500.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00           10700.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           10720.6         0.00         179.71         10679.24         -293.06         8													
990.00         0.00         179.71         979.24         -293.06         805.17         356.04         0.00           1000.00         0.00         179.71         9879.24         -293.06         805.17         356.04         0.00           1020.00         0.00         179.71         10090.00         -293.06         805.17         356.04         0.00           10210.76         0.00         179.71         10090.00         -293.06         805.17         356.04         0.00           10300.00         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00           10400.00         0.00         179.71         10279.24         -293.06         805.17         356.04         0.00           10500.00         0.00         179.71         10379.24         -293.06         805.17         356.04         0.00           10700.00         0.00         179.71         10579.24         -293.06         805.17         356.04         0.00           10720.76         0.00         179.71         10600.00         -293.06         805.17         356.04         0.00           10900.00         0.00         179.71         1079.24         -293.06													
10100.00         0.00         179.71         9979.24         -293.06         805.17         356.04         0.00         1900.00         179.71         10079.24         -293.06         805.17         356.04         0.00         1900.00         179.71         10070.00         -293.06         805.17         356.04         0.00         1900.00         100.00         179.71         10179.24         -293.06         805.17         356.04         0.00         100.00         179.71         10279.24         -293.06         805.17         356.04         0.00         100.00         179.71         10279.24         -293.06         805.17         356.04         0.00         100.00         179.71         10479.24         -293.06         805.17         356.04         0.00         100.00         100.00         179.71         10579.24         -293.06         805.17         356.04         0.00         100.00         100.00         179.71         10600.00         805.17         356.04         0.00         100.00         179.71         10600.00         805.17         356.04         0.00         199.71         1079.24         -293.06         805.17         356.04         0.00         1900.00         179.71         10879.24         -293.06         805.17         356.04	9900.00	0.00	179.71	9779.24	-293.06		356.04	0.00					
10200,00         0.00         179.71         10079.24         -293.06         805.17         356.04         0.00         179.71         10090.00         293.06         805.17         356.04         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00         10400.00         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00         10500.00         0.00         179.71         10379.24         -293.06         805.17         356.04         0.00         10600.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00         10700.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00         10700.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00         10000         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00         10000         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00         10000         0.00         179.71         1079.24         -293.06         805.17         356.04         0.00         1000 <td>10000.00</td> <td>0.00</td> <td>179.71</td> <td>9879.24</td> <td>-293.06</td> <td>805.17</td> <td>356.04</td> <td>0.00</td> <td></td>	10000.00	0.00	179.71	9879.24	-293.06	805.17	356.04	0.00					
10210.76         0.00         179.71         10090.00         -293.06         805.17         356.04         0.00         Bone Spring 2nd           10300.00         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00           10500.00         0.00         179.71         10379.24         -293.06         805.17         356.04         0.00           10500.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00           10700.00         0.00         179.71         10579.24         -293.06         805.17         356.04         0.00           10720.76         0.00         179.71         10600.00         -293.06         805.17         356.04         0.00           10800.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           19000.0         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11000.0         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         11179.24 <td>10100.00</td> <td>0.00</td> <td>179.71</td> <td>9979.24</td> <td>-293.06</td> <td>805.17</td> <td>356.04</td> <td>0.00</td> <td></td>	10100.00	0.00	179.71	9979.24	-293.06	805.17	356.04	0.00					
10300.00         0.00         179.71         10179.24         -293.06         805.17         356.04         0.00           10400.00         0.00         179.71         10279.24         -293.06         805.17         356.04         0.00           10500.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00           10700.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00           10720.76         0.00         179.71         10600.00         -293.06         805.17         356.04         0.00           10800.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           10900.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           11000.00         0.00         179.71         10779.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11400.00         0.00         179.71         11179.24         -293.06	10200.00	0.00	179.71	10079.24	-293.06	805.17	356.04	0.00					
10400.00         0.00         179.71         10279.24         -293.06         805.17         356.04         0.00           10500.00         0.00         179.71         10379.24         -293.06         805.17         356.04         0.00           10700.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00           10720.76         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           10800.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           10900.00         0.00         179.71         10779.24         -293.06         805.17         356.04         0.00           11000.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11100.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11400.0         0.00         179.71         11320.00         -293.06	10210.76	0.00	179.71	10090.00	-293.06	805.17	356.04	0.00	Bone Spring 2nd				
10500.00         0.00         179.71         10379.24         -293.06         805.17         356.04         0.00           10600.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00           10720.76         0.00         179.71         10579.24         -293.06         805.17         356.04         0.00           10800.00         0.00         179.71         10600.00         -293.06         805.17         356.04         0.00           10900.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           11000.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         1079.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11300.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11400.0         0.00         179.71         11379.24         -293.06	10300.00	0.00	179.71	10179.24	-293.06	805.17	356.04	0.00					
10600.00         0.00         179.71         10479.24         -293.06         805.17         356.04         0.00           10720.76         0.00         179.71         10600.00         -293.06         805.17         356.04         0.00         3rd Bone Spring Lime           10800.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           10900.00         0.00         179.71         10779.24         -293.06         805.17         356.04         0.00           11000.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11100.00         0.00         179.71         10979.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         1079.24         -293.06         805.17         356.04         0.00           11300.00         0.00         179.71         11279.24         -293.06         805.17         356.04         0.00           11440.76         0.00         179.71         11279.24         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11479.		0.00	179.71	10279.24	-293.06	805.17	356.04	0.00					
10700.00         0.00         179.71         10579.24         -293.06         805.17         356.04         0.00         3rd Bone Spring Lime           10800.00         0.00         179.71         10609.24         -293.06         805.17         356.04         0.00         199.00         10900.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00         11000.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00         11100.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00         11100.00         0.00         179.71         10979.24         -293.06         805.17         356.04         0.00         11200.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00         11300.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00         11400.00         0.00         179.71         11320.00         293.06         805.17         356.04         0.00         11500.00         179.71         11320.00         293.06         805.17         356.04         0.00         1179.71         11479.24 <td>10500.00</td> <td>0.00</td> <td>179.71</td> <td>10379.24</td> <td>-293.06</td> <td>805.17</td> <td>356.04</td> <td>0.00</td> <td></td>	10500.00	0.00	179.71	10379.24	-293.06	805.17	356.04	0.00					
10720.76         0.00         179.71         10600.00         -293.06         805.17         356.04         0.00         3rd Bone Spring Lime           10800.00         0.00         179.71         10779.24         -293.06         805.17         356.04         0.00           11000.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11100.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11300.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11440.76         0.00         179.71         11329.00         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11600.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11679	10600.00	0.00	179.71	10479.24	-293.06	805.17	356.04	0.00					
10800.00         0.00         179.71         10679.24         -293.06         805.17         356.04         0.00           10900.00         0.00         179.71         10779.24         -293.06         805.17         356.04         0.00           1100.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11300.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11400.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11440.76         0.00         179.71         11320.00         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11579.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11679.24         -293.06													
10900.00         0.00         179.71         10779.24         -293.06         805.17         356.04         0.00           11000.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         10979.24         -293.06         805.17         356.04         0.00           11300.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11400.00         0.00         179.71         11279.24         -293.06         805.17         356.04         0.00           11400.00         0.00         179.71         113279.24         -293.06         805.17         356.04         0.00           11440.76         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11779.24         -293.06									3rd Bone Spring Lime				
11000.00         0.00         179.71         10879.24         -293.06         805.17         356.04         0.00           11100.00         0.00         179.71         10979.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11400.00         0.00         179.71         11279.24         -293.06         805.17         356.04         0.00           11440.76         0.00         179.71         11320.00         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11750.00         -293.06         805.17         356.04         0.00           11870.76         0.00         179.71         11750.00         -293.06													
11100.00         0.00         179.71         10979.24         -293.06         805.17         356.04         0.00           11200.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11300.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11440.76         0.00         179.71         11320.00         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11600.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11579.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11750.00         -293.06         805.17         356.04         0.00           11870.76         0.00         179.71         11779.24         -293.06													
11200.00         0.00         179.71         11079.24         -293.06         805.17         356.04         0.00           11300.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11400.00         0.00         179.71         11279.24         -293.06         805.17         356.04         0.00           11440.76         0.00         179.71         11320.00         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11579.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11679.24         -293.06         805.17         356.04         0.00           11870.76         0.00         179.71         11750.00         -293.06         805.17         356.04         0.00           11947.80         0.00         179.71         11827.04         -293.06													
11300.00         0.00         179.71         11179.24         -293.06         805.17         356.04         0.00           11400.00         0.00         179.71         11279.24         -293.06         805.17         356.04         0.00           11440.76         0.00         179.71         11320.00         -293.06         805.17         356.04         0.00           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11579.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11579.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11679.24         -293.06         805.17         356.04         0.00           11870.76         0.00         179.71         11750.00         -293.06         805.17         356.04         0.00           11947.80         0.00         179.71         11879.04         -293.06         805.17         356.04         0.00           12000.00         5.22         179.71         11879.17         -295.43													
11400.00         0.00         179.71         11279.24         -293.06         805.17         356.04         0.00         Bone Spring 3rd           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00         Bone Spring 3rd           11600.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11679.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11679.24         -293.06         805.17         356.04         0.00           11870.76         0.00         179.71         11750.00         -293.06         805.17         356.04         0.00           11900.00         0.00         179.71         11779.24         -293.06         805.17         356.04         0.00           11947.80         0.00         179.71         11827.04         -293.06         805.18         358.41         10.00           1200.00         5.22         1													
11440.76         0.00         179.71         11320.00         -293.06         805.17         356.04         0.00         Bone Spring 3rd           11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11600.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11679.24         -293.06         805.17         356.04         0.00           11870.76         0.00         179.71         11750.00         -293.06         805.17         356.04         0.00           11900.00         0.00         179.71         11775.00         -293.06         805.17         356.04         0.00           11900.00         0.00         179.71         11779.24         -293.06         805.17         356.04         0.00           11947.80         0.00         179.71         11827.04         -293.06         805.17         356.04         0.00           12000.00         5.22         179.71         11879.17         -293.06         805.17         356.03         0.00         KOP           12000.00         5.22         179.71													
11500.00         0.00         179.71         11379.24         -293.06         805.17         356.04         0.00           11600.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11579.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11750.00         -293.06         805.17         356.04         0.00           11870.76         0.00         179.71         11779.24         -293.06         805.17         356.04         0.00           11900.00         0.00         179.71         11779.24         -293.06         805.17         356.04         0.00           12000.00         0.00         179.71         11879.42         -293.06         805.17         356.04         0.00           12000.00         0.00         179.71         11879.42         -293.06         805.17         356.04         0.00           12000.00         5.22         179.71         11879.17         -293.06         805.17         356.03         0.00         KOP           12100.00         5.22         179.71         11879.44													
11600.00         0.00         179.71         11479.24         -293.06         805.17         356.04         0.00           11700.00         0.00         179.71         11579.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11679.24         -293.06         805.17         356.04         0.00           11870.76         0.00         179.71         11779.24         -293.06         805.17         356.04         0.00         Wolfcamp / Point of Penetration           11900.00         0.00         179.71         11879.24         -293.06         805.17         356.04         0.00         Wolfcamp / Point of Penetration           11947.80         0.00         179.71         11879.17         -293.06         805.17         356.03         0.00         KOP           12000.00         5.22         179.71         11879.17         -295.43         805.18         358.41         10.00           12100.00         15.22         179.71         12071.18         -347.67         805.45         410.50         10.00           12300.00         35.22         179.71         12157.48         -397.94         805.70         460.63         10.00									Bone Spring 3rd				
11700.00         0.00         179.71         11579.24         -293.06         805.17         356.04         0.00           11800.00         0.00         179.71         11679.24         -293.06         805.17         356.04         0.00         Wolfcamp / Point of Penetration           11870.76         0.00         179.71         11779.24         -293.06         805.17         356.04         0.00         Wolfcamp / Point of Penetration           11947.80         0.00         179.71         11827.04         -293.06         805.17         356.03         0.00         KOP           12000.00         5.22         179.71         11879.17         -295.43         805.18         358.41         10.00           12100.00         15.22         179.71         11977.46         -313.15         805.27         376.08         10.00           12200.00         25.22         179.71         12071.18         -347.67         805.45         410.50         10.00           12300.00         35.22         179.71         12157.48         -397.94         805.70         460.63         10.00													
11800.00       0.00       179.71       11679.24       -293.06       805.17       356.04       0.00       Wolfcamp / Point of Penetration         11870.76       0.00       179.71       11779.24       -293.06       805.17       356.04       0.00       Wolfcamp / Point of Penetration         11947.80       0.00       179.71       11827.04       -293.06       805.17       356.03       0.00       KOP         12000.00       5.22       179.71       11879.17       -295.43       805.18       358.41       10.00         12100.00       15.22       179.71       11977.46       -313.15       805.27       376.08       10.00         12200.00       25.22       179.71       12071.18       -347.67       805.45       410.50       10.00         12300.00       35.22       179.71       12157.48       -397.94       805.70       460.63       10.00													
11870.76       0.00       179.71       11750.00       -293.06       805.17       356.04       0.00       Wolfcamp / Point of Penetration         11900.00       0.00       179.71       1179.24       -293.06       805.17       356.04       0.00       KOP         11947.80       0.00       179.71       11879.17       -295.43       805.18       358.41       10.00         12000.00       5.22       179.71       11879.17       -295.43       805.18       358.41       10.00         12100.00       15.22       179.71       11977.46       -313.15       805.27       376.08       10.00         12200.00       25.22       179.71       12071.18       -347.67       805.45       410.50       10.00         12300.00       35.22       179.71       12157.48       -397.94       805.70       460.63       10.00													
11900.00         0.00         179.71         11779.24         -293.06         805.17         356.04         0.00           11947.80         0.00         179.71         11827.04         -293.06         805.17         356.03         0.00         KOP           12000.00         5.22         179.71         11879.17         -295.43         805.18         358.41         10.00           12100.00         15.22         179.71         11977.46         -313.15         805.27         376.08         10.00           12200.00         25.22         179.71         12071.18         -347.67         805.45         410.50         10.00           12300.00         35.22         179.71         12157.48         -397.94         805.70         460.63         10.00									Welfer of Point of Process				
11947.80         0.00         179.71         11827.04         -293.06         805.17         356.03         0.00         KOP           12000.00         5.22         179.71         11879.17         -295.43         805.18         358.41         10.00           12100.00         15.22         179.71         11977.46         -313.15         805.27         376.08         10.00           12200.00         25.22         179.71         12071.18         -347.67         805.45         410.50         10.00           12300.00         35.22         179.71         12157.48         -397.94         805.70         460.63         10.00									Wolfcamp / Point of Penetration				
12000.00         5.22         179.71         11879.17         -295.43         805.18         358.41         10.00           12100.00         15.22         179.71         11977.46         -313.15         805.27         376.08         10.00           12200.00         25.22         179.71         12071.18         -347.67         805.45         410.50         10.00           12300.00         35.22         179.71         12157.48         -397.94         805.70         460.63         10.00									KOD				
12100.00     15.22     179.71     11977.46     -313.15     805.27     376.08     10.00       12200.00     25.22     179.71     12071.18     -347.67     805.45     410.50     10.00       12300.00     35.22     179.71     12157.48     -397.94     805.70     460.63     10.00									KUP				
12200.00     25.22     179.71     12071.18     -347.67     805.45     410.50     10.00       12300.00     35.22     179.71     12157.48     -397.94     805.70     460.63     10.00													
12300.00 35.22 179.71 12157.48 -397.94 805.70 460.63 10.00													
12400.00 45.22 179./1 12255./4 -462.43 806.03 524.94 10.00													
	12400.00	45.22	179.71	12233.74	-402.43	80.003	524.94	10.00					



County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983

Datum: North American Datum 1927 Ellipsoid: Clarke 1866

Zone: 3001 - NM East (NAD83)

Design: Permit Plan #1					Zone: 3001 - NM East (NAD83)					
MD	INC	AZI	TVD	NS	EW	vs	DLS			
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment		
2500.00	55.22	179.71	12297.64	-539.18	806.42	601.48	10.00			
2600.00	65.22	179.71	12347.24	-625.86	806.86	687.93	10.00			
2700.00	75.22	179.71	12381.04	-719.84	807.33	781.65	10.00			
2800.00	85.22	179.71	12398.01	-818.26	807.83	879.80	10.00			
2847.80	90.00	179.71	12400.00	-866.01	808.07	927.41	10.00	Landing Point		
2900.00	90.00	179.71	12400.00	-918.21	808.34	979.47	0.00			
3000.00	90.00	179.71	12400.00	-1018.21	808.84	1079.19	0.00			
3100.00	90.00	179.71	12400.00	-1118.20	809.35	1178.91	0.00			
3200.00	90.00	179.71	12400.00	-1218.20	809.85	1278.64	0.00			
3300.00	90.00	179.71	12400.00		810.36	1378.36	0.00			
3400.00	90.00	179.71	12400.00		810.87	1478.08	0.00			
3500.00	90.00	179.71	12400.00		811.37	1577.81	0.00			
3600.00	90.00	179.71	12400.00		811.88	1677.53	0.00			
3700.00	90.00	179.71	12400.00		812.39	1777.25	0.00			
3800.00	90.00	179.71		-1818.20	812.89	1876.98	0.00			
3900.00	90.00	179.71	12400.00	-1918.19	813.40	1976.70	0.00			
4000.00	90.00 90.00	179.71 179.71	12400.00 12400.00	-2018.19 -2118.19	813.91 814.41	2076.42 2176.15	0.00			
4200.00	90.00	179.71	12400.00	-2218.19	814.92	2275.87	0.00			
4300.00	90.00	179.71	12400.00	-2318.19	815.42	2375.59	0.00			
4400.00	90.00	179.71	12400.00	-2418.19	815.93	2475.32	0.00			
4500.00	90.00	179.71	12400.00	-2518.19	816.44	2575.04	0.00			
4600.00	90.00	179.71	12400.00	-2618.19	816.94	2674.76	0.00			
4700.00	90.00	179.71	12400.00	-2718.18	817.45	2774.49	0.00			
4800.00	90.00	179.71	12400.00	-2818.18	817.96	2874.21	0.00			
4900.00	90.00	179.71	12400.00	-2918.18	818.46	2973.93	0.00			
5000.00	90.00	179.71	12400.00	-3018.18	818.97	3073.66	0.00			
5100.00	90.00	179.71	12400.00	-3118.18	819.48	3173.38	0.00			
5200.00	90.00	179.71	12400.00	-3218.18	819.98	3273.11	0.00			
5300.00	90.00	179.71	12400.00	-3318.18	820.49	3372.83	0.00			
5400.00	90.00	179.71	12400.00	-3418.18	821.00	3472.55	0.00			
5500.00	90.00	179.71	12400.00	-3518.17	821.50	3572.28	0.00			
5600.00	90.00	179.71	12400.00	-3618.17	822.01	3672.00	0.00			
5700.00	90.00	179.71	12400.00	-3718.17	822.51	3771.72	0.00			
5800.00	90.00	179.71	12400.00	-3818.17	823.02	3871.45	0.00			
5900.00	90.00	179.71	12400.00	-3918.17	823.53	3971.17	0.00			
6000.00	90.00	179.71	12400.00	-4018.17	824.03	4070.89	0.00			
6100.00	90.00	179.71	12400.00	-4118.17	824.54	4170.62	0.00			
6200.00 6300.00	90.00 90.00	179.71 179.71	12400.00 12400.00	-4218.17 -4318.16	825.05 825.55	4270.34 4370.06	0.00			
6400.00	90.00	179.71	12400.00	-4318.16 -4418.16	826.06	4469.79	0.00			
6500.00	90.00	179.71	12400.00	-4518.16	826.57	4569.51	0.00			
6600.00	90.00	179.71	12400.00	-4618.16	827.07	4669.23	0.00			
6700.00	90.00	179.71	12400.00	-4718.16	827.58	4768.96	0.00			
6800.00	90.00	179.71	12400.01	-4818.16	828.09	4868.68	0.00			
6900.00	90.00	179.71	12400.01	-4918.16	828.59	4968.40	0.00			
7000.00	90.00	179.71	12400.01	-5018.15	829.10	5068.13	0.00			
7100.00	90.00	179.71	12400.01		829.60	5167.85	0.00			
7200.00	90.00	179.71	12400.01	-5218.15	830.11	5267.57	0.00			
7300.00	90.00	179.71	12400.01		830.62	5367.30	0.00			
7400.00	90.00	179.71	12400.01		831.12	5467.02	0.00			
7500.00	90.00	179.71	12400.01		831.63	5566.74	0.00			
7600.00	90.00	179.71	12400.01		832.14	5666.47	0.00			
7700.00	90.00	179.71	12400.01	-5718.15	832.64	5766.19	0.00			
7800.00	90.00	179.71	12400.01	-5818.14	833.15	5865.92	0.00			
7900.00	90.00	179.71	12400.01	-5918.14	833.66	5965.64	0.00			
8000.00	90.00	179.71	12400.01	-6018.14	834.16	6065.36	0.00			
8100.00	90.00	179.71	12400.01	-6118.14	834.67	6165.09	0.00			
8200.00	90.00	179.71	12400.01	-6218.14	835.17	6264.81	0.00			
8300.00	90.00	179.71	12400.01		835.68	6364.53	0.00			
8400.00	90.00	179.71	12400.01		836.19	6464.26	0.00			
8500.00	90.00	179.71	12400.01	-6518.14	836.69	6563.98	0.00			
8600.00	90.00	179.71	12400.01	-6618.13	837.20	6663.70	0.00			
8700.00	90.00	179.71	12400.01	-6718.13	837.71	6763.43	0.00			
8800.00	90.00	179.71	12400.01	-6818.13	838.21	6863.15	0.00			
8900.00	90.00	179.71	12400.01		838.72	6962.87	0.00			
	90.00	179.71	12400.01		839.23	7062.60	0.00			
9000.00		4-0-	40							
9100.00	90.00	179.71	12400.01		839.73	7162.32	0.00			
		179.71 179.71 179.71	12400.01 12400.01 12400.01	-7218.13	839.73 840.24 840.75	7162.32 7262.04 7361.77	0.00			



County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983

Datum: North American Datum 1927

Ellipsoid: Clarke 1866

Zone: 3001 - NM East (NAD83)

MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
19400.00	90.00	179.71	12400.01	-7418.12	841.25	7461.49	0.00	
19500.00	90.00	179.71	12400.01	-7518.12	841.76	7561.21	0.00	
19600.00	90.00	179.71	12400.01	-7618.12	842.26	7660.94	0.00	
19700.00	90.00	179.71	12400.01	-7718.12	842.77	7760.66	0.00	
19800.00	90.00	179.71	12400.01	-7818.12	843.28	7860.38	0.00	
19900.00	90.00	179.71	12400.01	-7918.12	843.78	7960.11	0.00	
20000.00	90.00	179.71	12400.01	-8018.12	844.29	8059.83	0.00	
20100.00	90.00	179.71	12400.01	-8118.12	844.80	8159.56	0.00	
20200.00	90.00	179.71	12400.01	-8218.11	845.30	8259.28	0.00	
20300.00	90.00	179.71	12400.01	-8318.11	845.81	8359.00	0.00	
20400.00	90.00	179.71	12400.01	-8418.11	846.32	8458.73	0.00	
20500.00	90.00	179.71	12400.01	-8518.11	846.82	8558.45	0.00	
20600.00	90.00	179.71	12400.01	-8618.11	847.33	8658.17	0.00	
20700.00	90.00	179.71	12400.01	-8718.11	847.84	8757.90	0.00	
20800.00	90.00	179.71	12400.01	-8818.11	848.34	8857.62	0.00	
20900.00	90.00	179.71	12400.01	-8918.10	848.85	8957.34	0.00	
21000.00	90.00	179.71	12400.01	-9018.10	849.35	9057.07	0.00	
21100.00	90.00	179.71	12400.01	-9118.10	849.86	9156.79	0.00	
21200.00	90.00	179.71	12400.01	-9218.10	850.37	9256.51	0.00	
21300.00	90.00	179.71	12400.01	-9318.10	850.87	9356.24	0.00	
21400.00	90.00	179.71	12400.01	-9418.10	851.38	9455.96	0.00	
21500.00	90.00	179.71	12400.01	-9518.10	851.89	9555.68	0.00	
21600.00	90.00	179.71	12400.01	-9618.10	852.39	9655.41	0.00	
21700.00	90.00	179.71	12400.01	-9718.09	852.90	9755.13	0.00	
21800.00	90.00	179.71	12400.01	-9818.09	853.41	9854.85	0.00	
21900.00	90.00	179.71	12400.01	-9918.09	853.91	9954.58	0.00	
22000.00	90.00	179.71	12400.01	-10018.09	854.42	10054.30	0.00	
22100.00	90.00	179.71	12400.01	-10118.09	854.92	10154.02	0.00	
22200.00	90.00	179.71	12400.01	-10218.09	855.43	10253.75	0.00	
22300.00	90.00	179.71		-10318.09	855.94	10353.47	0.00	
22400.00	90.00	179.71		-10418.09	856.44	10453.19	0.00	
22500.00	90.00	179.71		-10518.08	856.95	10552.92	0.00	
22600.00	90.00	179.71		-10618.08	857.46	10652.64	0.00	
22681.78	90.00	179.71		-10699.86	857.87	10734.19	0.00	exit
22700.00	90.00	179.71		-10718.08	857.96	10752.37	0.00	
22761.78	90.00	179.71		-10779.86	858.25	10813.97	0.00	BHL
	50.00				330.23	.00.0.57	0.00	=::=

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using 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 5000 (5M) psi.

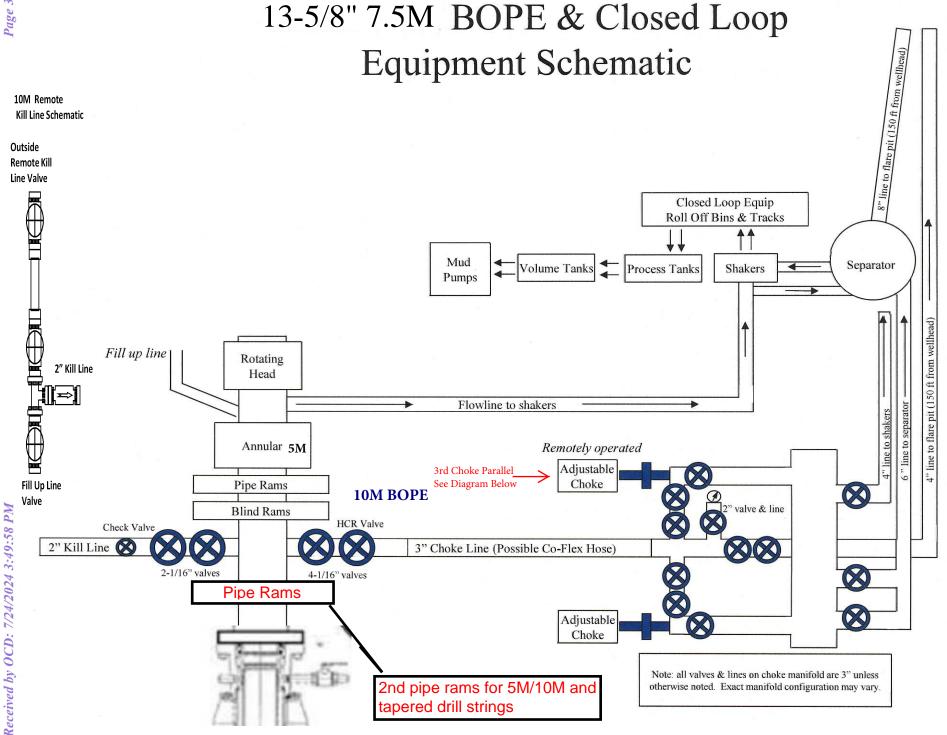
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 5M, as shown on the attached schematic.
   Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

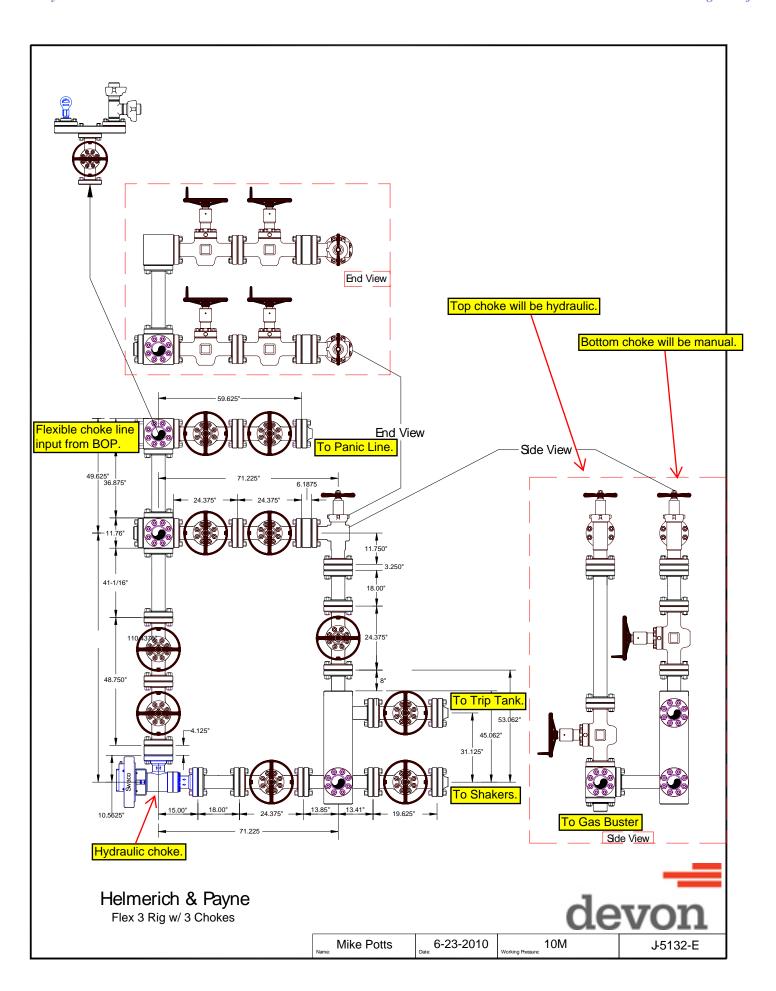
After running the surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

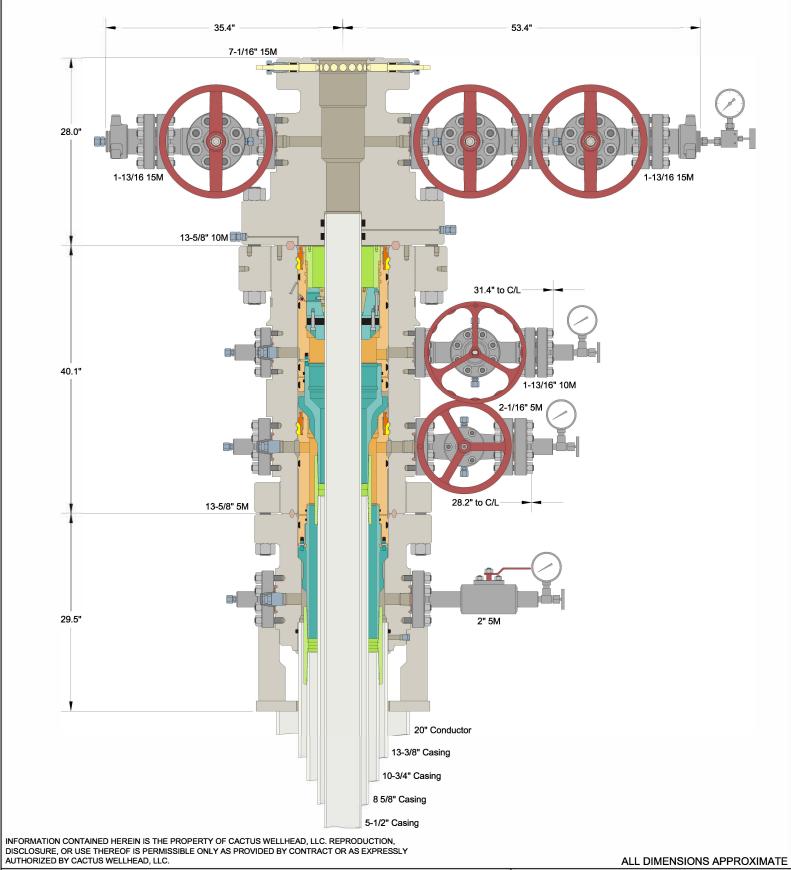
After running the intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 10M will be installed and tested, with 5M annular being tested to 100% of rated working pressure.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 10,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.







## CACTUS WELLHEAD LLC

20" x 13-3/8" x 10-3/4" x 8-5/8" x 5-1/2" MBU-4T-SOW Wellhead With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head, 10-3/4" & 8-5/8" Mandrel Hangers And 5-1/2" Slip Casing Hanger

MATADOR RESOURCES WOLFCAMP A WELLS (TEXAS)

DRAWN DLE 09AUG19
APPRV

DRAWING NO. HBE0000156

#### Section 2 - Blowout Preventer Testing Procedure

Variance Request

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of the 10M BOPE to 5M for 10 minutes. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow 43 CFR 3172, and subsequent tests following a skid will only test connections that are broken. The annular preventer will be tested to 100% working pressure. This variance will meet or exceed 43 CFR 3172 per the following: Devon Energy will perform a full BOP test per 43 CFR 3172 before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. Break test will be a 14 day interval and not a 30 day full BOPE test interval. If in the event break testing is not utilized, then a full BOPE test would be conducted.

- 1. Well Control Response:
- 1. Primary barrier remains fluid
- 2. In the event of an influx due to being underbalanced and after a realized gain or flow, the order of closing BOPE is as follows:
  - a) Annular first
  - b) If annular were to not hold, Upper pipe rams second (which were tested on the skid BOP test)
  - c) If the Upper Pipe Rams were to not hold, Lower Pipe Rams would be third

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

**OPERATOR'S NAME:** Devon Energy Production Company LP

LEASE NO.: | NMNM0404441

**LOCATION:** Section 12, T.23 S., R.31 E., NMPM

COUNTY: Eddy County, New Mexico

WELL NAME & NO.: | Bora Bora 13-24 Fed Com 811H

**BOTTOM HOLE FOOTAGE** 20'/S & 660'/W

ATS/API ID: ATS-24-406

APD ID: 10400095939

Sundry ID: N/a
Date APD Submitted: N/a

WELL NAME & NO.: | Bora Bora 13-24 Fed Com 812H

**BOTTOM HOLE FOOTAGE** | 20'/S & 1909'/W

ATS/API ID: ATS-24-407 APD ID: 10400095941

Sundry ID: N/a

Date APD Submitted: N/a

COA

H2S	Yes ▼		
Potash	R-111-Q •	R111 Figure D	
Cave/Karst Potential	Low		
Cave/Karst Potential	☐ Critical		
Variance	■ None	Flex Hose	C Other
Wellhead	Conventional and Multibov	vl 🔽	
Other	▼ 4 String	Capitan Reef None	□WIPP
Other	Pilot Hole  None	Open Annulus	
Cementing	Contingency Squeeze None	Echo-Meter Int 2	Primary Cement Squeeze None
Special Requirements	☐ Water Disposal/Injection	<b>☑</b> COM	Unit
Special Requirements	☐ Batch Sundry	Waste Prevention None	
Special Requirements Variance	▼ Break Testing	☐ Offline Cementing	☐ Casing Clearance

#### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

#### **B. CASING**

- 1. The 13-3/8 inch surface casing shall be set at approximately 1050 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be 17 1/2 inch in diameter.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

- 2. The minimum required fill of cement behind the 10-3/4 inch intermediate casing shall be set at approximately 4380 feet is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

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

- 3. The minimum required fill of cement behind the 8-5/8 inch intermediate casing shall be set at approximately **11750 feet** is:
  - The top of cement in the annulus between the 1<sup>st</sup> intermediate and the 2<sup>nd</sup> intermediate casing strings shall stand un-cemented at least 500 feet below the 1<sup>st</sup> intermediate shoe. Zero percent excess shall be pumped on the production cement slurry. (290 sxs)
  - After hydraulic fracturing operations have been concluded and no longer than 180 days after the well is brought online, the operator shall bradenhead cement at least 500 feet tie-back into the previous casing but not higher than USGS Marker Bed No. 126. (Squeeze 420 sxs Class C and 93 bbls Displacement Fluid) Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Operator has proposed to pump down 10-3/4" X 8-5/8" annulus post completion. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore. Report the amount of fluid utilized to pump the cement slurry and the calculated top of cement slurry to the BLM. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure and ensure cement tie-back requirement.

Operator has proposed an open annulus completion in R-111-Q. Submit results to the BLM. Pressure monitoring device and Pressure Safety Valves must be installed at surface on the 10-3/4" x 8 5/8" annulus for the life of the well.

In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and (575-361-2822 Eddy County).

- 4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back 500 feet into the previous casing but not higher than USGS Marker Bed No. 126. Operator must run a CBL from TD of the production casing to surface to verify top of cement. Submit results to the BLM.

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

Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

#### C. PRESSURE CONTROL

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

2.

#### Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi. Annular which shall be tested to 2100 (70% Working Pressure) psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 10-3/4 intermediate casing shoe shall be 5000 (5M) psi. Annular which shall be tested to 3500 (70% Working Pressure) psi.
- c. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 8-5/8 inch intermediate casing shoe shall be 5000 (5M) psi.

#### Option 2:

- a. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8 inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

#### D. SPECIAL REQUIREMENT (S)

#### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR part 3170 Subpart 3171
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

#### **BOPE Break Testing Variance (Approved)**

- BOPE Break Testing is ONLY permitted for 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 (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR part 3170 Subpart 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)

#### **☑** Eddy County

**EMAIL** or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

**BLM\_NM\_CFO\_DrillingNotifications@BLM.GOV** (575) 361-2822

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43** CFR part **3170** Subpart **3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

#### 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-P potash area, the NMOCD requirements shall be followed.
- B. PRESSURE CONTROL
- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.

- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead 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).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been

done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the 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.)

- c. 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 part 3170 Subpart 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).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR part 3170 Subpart 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.

#### WASTE MATERIAL AND FLUIDS D.

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.

Long Vo (LVO) 7/18/2024



Devon Energy Center 333 West Sheridan Avenue Oklahoma City, Oklahoma 73102-5015

# Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan

For

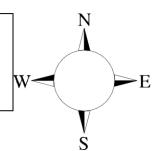
Bora Bora 13-24 Fed Com 812H

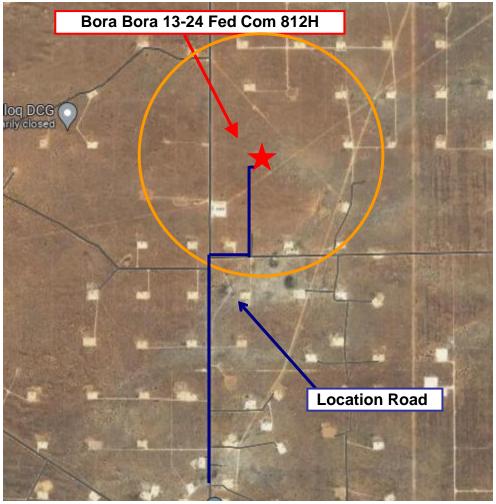
Sec-12 T-23S R-31E 250' FSL & 1105' FWL LAT. = 32.3123865° N (NAD83) LONG = 103.7364511° W

**Eddy County NM** 

# Bora Bora 13-24 Fed Com 812H

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H<sub>2</sub>S, including warning signs, wind indicators and H<sub>2</sub>S monitor.





Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H2S concentration shall trigger activation of this plan.

#### **Escape**

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

## **Assumed 100 ppm ROE = 3000'**

100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

#### **Emergency Procedures**

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - o Detection of H₂S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

#### **Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

#### Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

Common	Chemical	Specific	Threshold	Hazardous Limit	Lethal
Name	Formula	Gravity	Limit	nazardous Liiilit	Concentration
Hydrogen Sulfide	H₂S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur	50	2.21	2 nnm	N/A	1000 nnm
Dioxide	SO <sub>2</sub>	Air = 1	2 ppm	IN/A	1000 ppm

## **Contacting Authorities**

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

## **Hydrogen Sulfide Drilling Operation Plan**

## I. HYDROGEN SULFIDE (H2S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- 1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- 1. The effects of H<sub>2</sub>S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan.

There will be weekly H<sub>2</sub>S and well control drills for all personnel in each crew.

#### II. HYDROGEN SULFIDE TRAINING

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

#### 1. Well Control Equipment

- A. Flare line
- B. Choke manifold Remotely Operated
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.
- E. Mud/Gas Separator

#### 2. Protective equipment for essential personnel:

30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

## 3. H<sub>2</sub>S detection and monitoring equipment:

Portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights which activate when H<sub>2</sub>S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

- Bell nipple
- Possum Belly/Shale shaker
- Rig floor
- Choke manifold
- Cellar

#### Visual warning systems:

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

#### 4. Mud program:

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

#### 5. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H<sub>2</sub>S trim.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

#### 6. Communication:

- A. Company personnel have/use cellular telephones in the field.
- B. Land line (telephone) communications at Office

## 7. Well testing:

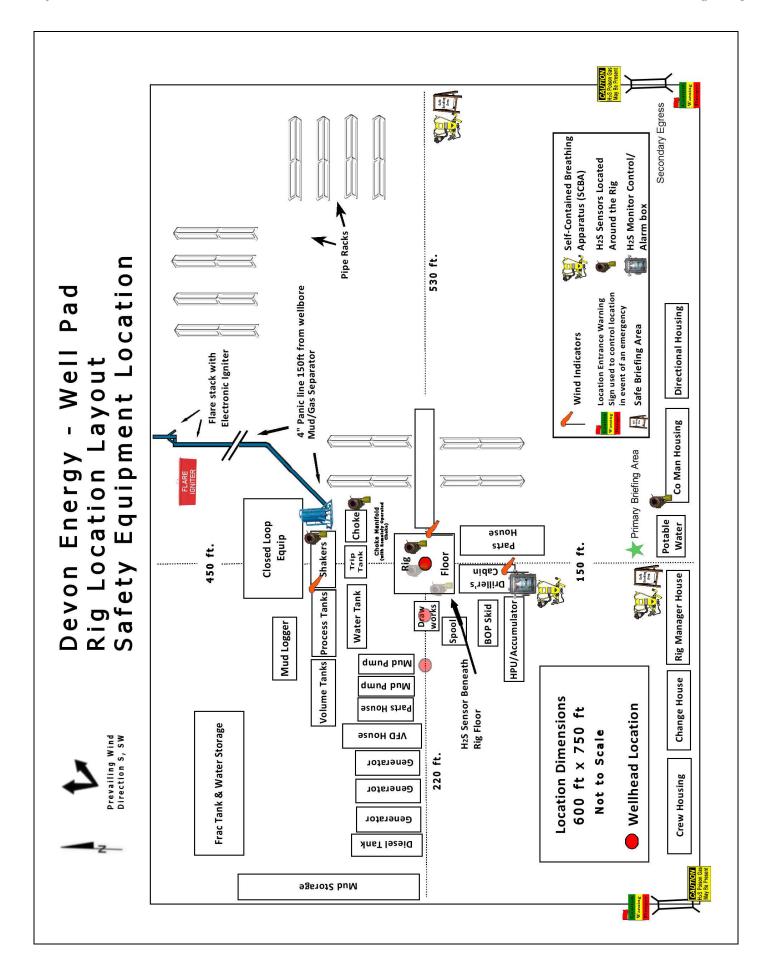
- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

Devon Energy Corp. Company Call List					
Employee/Company Contact Representative	Position	Phone Number	After Hours Number		
Jonathan Fisher (North)	Drilling Manager	832-967-7912			
Jason Hildebrand (South)	Drilling Manager	405-552-6514			
Rich Downey	Drilling VP	405-228-2415			
Josh Harvey	EHS Manager	405-228-2440	918-500-5536		
Laura Wright	EHS Supervisor	405-552-5334	832-969-8145		
Robert Glover	EHS Professional	575-703-5712	575-703-5712		
Lane Frank	Lead EHS	580-579-7052	580-579-7052		
Rickey Porter	Lead EHS	903-720-8315	903-720-8315		
Ronnie Handy	Lead EHS	918-839-2046	918-839-2046		
Brock Vise	Lead EHS	918-413-3291	918-413-3291		

<b>Agency</b>	Call List		

Lea	Hobbs				
County	Lea County Communication Authority	397-9265			
<u>(575)</u>	State Police	885-3138			
	City Police	397-9265			
	Sheriff's Office	396-3611			
	Ambulance	911			
	Fire Department	397-9308			
	LEPC (Local Emergency Planning Committee)	393-2870			
	NMOCD	393-6161			
	US Bureau of Land Management (Closed)	393-0002			
Eddy	Carlsbad				
County	State Police	885-3137			
<u>(575)</u>	City Police	885-2111			
	Sheriff's Office	887-7551			
	Ambulance	911			
	Fire Department	885-3125			
	LEPC (Local Emergency Planning Committee)	887-3798			
	US Bureau of Land Management	234-5972			
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600			
	24 HR	(505) 827-9126			
	National Emergency Response Center	(800) 424-8802			
	National Pollution Control Center: Direct	(703) 872-6000			
	For Oil Spills	(800) 280-7118			
	Emergency Services				
	Wild Well Control	(281) 784-4700			
	Cudd Pressure Control (915) 699-0139	(915) 563-3356			
	Halliburton	(575) 746-2757			
	B. J. Services	(575) 746-3569			
Give	Native Air – Emergency Helicopter – Hobbs	(575) 347-9836			
GPS	For Air Ambulance - Eddy County Dispatch	(575)-616-7155			
position:	For Air Ambulance - Lea County (LCCA)	(575)-397-9265			
-	Poison Control (24/7)	(800) 222-1222			
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366			
	NOAA – Website - www.nhc.noaa.gov				
	National Pollution Control Center	202-795-6958			
	NPCC – Oil Spills	800-280-7118			
	•				
<u> </u>					

Prepared in conjunction with Dave Small



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

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 367060

#### **CONDITIONS**

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	Action Number:
Oklahoma City, OK 73102	367060
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

#### CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	7/31/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/31/2024
ward.rikala	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	7/31/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	7/31/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	7/31/2024
ward.rikala	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	7/31/2024
ward.rikala	Must comply with all R-111-Q requirements.	7/31/2024