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

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

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

District IV

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

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

Form C-101 August 1, 2011

Permit 369670

	APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD	A ZONE
0 1 11 1411		0 00DID N

		,
Operator Name and Address	2. OGRID Number	
DEVON ENERGY PRODUCTION	6137	
333 West Sheridan Ave.	3. API Number	
Oklahoma City, OK 73102	30-015-55302	
4. Property Code	5. Property Name	6. Well No.
333760	MIMOSA 18-16 STATE COM	001H

7. Surface Location

Ī	UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
	D	18	20S	30E	1	1115	N	1066	W	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
Α	16	20S	30E	Α	720	N	20	E	Eddv

9. Pool Information

WC-015 G-07 \$203032G;WOLFCAMP	97963

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3306
16. Multiple	17. Proposed Depth	18. Formation	19. Contractor	20. Spud Date
N	26051	Wolfcamp		8/1/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☑ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.38	54.5	329	277	0
Int1	12.25	10.75	45.5	1205	191	0
Int2	9.88	8.63	32	3754	194	0
Prod	7.88	5.5	20	26052	2244	7981

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Туре	Working Pressure	Test Pressure	Manufacturer
Annular	5000	2500	
Blind	5000	2500	
Double Ram	5000	2500	
Annular	5000	5000	
Blind	5000	5000	
Double Ram	5000	5000	
Annular	5000	5000	
Blind	5000	5000	
Double Ram	5000	5000	

knowledge and b	elief.	true and complete to the best of my NMAC ⊠ and/or 19.15.14.9 (B) NMAC		OIL CONSERVATIO	N DIVISION
Printed Name:	Printed Name: Electronically filed by Jeff Walla			Ward Rikala	
Title:	Supervisor Land		Title:	Petroleum Specialist Supervi	sor
Email Address:	Jeff.Walla@dvn.com		Approved Date:	8/1/2024	Expiration Date: 8/1/2026
Date:	7/10/2024	Phone: 575-748-9925	Conditions of Appr	oval Attached	

State of New Mexico Form C-102 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 Energy, Minerals & Natural Resources Department Revised August 1, 2011 11 S. First St., Artesia, NM 88210 **OIL CONSERVATION DIVISION** Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM 87410 Submit one copy to 1220 South St. Francis Dr. Phone: (505) 334-6178 Fax: (505) 334-6170 appropriate District Office Santa Fe, NM 87505 1220 S. St. Francis Dr., Santa Fe, NM 87505 ☐ AMENDED REPORT Phone: (505) 476-3460 Fax: (505) 476-3462 WELL LOCATION AND ACREAGE DEDICATION PLAT API Number Pool Code Pool Name WC-015 G-07 S203032G; Wolfcamp 97963 30-015-55302 ⁴ Property Code ⁶ Well Number Property Name 333760 MIMOSA 18-16 STATE COM 001H ⁷OGRID No. ⁸ Operator Name Elevation 3306.5 DEVON ENERGY PRODUCTION COMPANY, L.P. 6137 10 Surface Location North/South line Feet from the East/West line UL or lot no. Section Township Range Lot Idn Feet from the County 20-S LOT 1 **NORTH** 1066 WEST **EDDY** D 18 30-E 1115 ¹¹Bottom Hole Location If Different From Surface UL or lot no. Lot Idn Feet from the North/South line Feet from the East/West line Section Township Range County 16 20-S 30-E 720 NORTH 20 **EAST EDDY** ²Dedicated Acres 13 Joint or Infill Consolidation Code ⁵Order No. 479.20 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. LEASE LINE FOUND USGLO B.C.
"UNLESS OTHERWISE NOTED' WELL PATH SECTION LINE 1/4 SECTION LINE LEGEND VB123456001 LEASE ID NUMBER 1/16 SECTION LIN N:575110.68 E:637889.65 N:575115.93 E:640502.22 N:575154.77 E:648416.35 N:575120.79 - 643140 48 S 89°53'06" W 2613.19' S 89°53'40" W N 89°50'15" E N 89°25'32" E S 89°46'03" E FTP LTP PPP4 PPP2 PPP5 PPP6-VB24160003 VC10450001 21, 00°02'0 2643.3 00°11'1 00°13' 2642. -SHL 00 козо970003 LOT 2 N:572477.65 E:643131.85 E:648412.45 E:637888.10 V053910003 **MIMOSA 18-16** LOT 3 STATE COM 001H 1115' FNL 1066' FWL SEC. 18, T20S, R30E N 00°02'07" **EL: 3319.2** N: 573998.08 B023860009 N 00°05' 2640. MIN 641 0 8 E: 638954.75 LAT: 32.5775757 00 N B023860009 LON: -104.0164249 KICK OFF POINT S 89°54'50" W S 89°51'43" W S 89°31'58" W S 89°42'12" W S 89°57'51" E S 89°35'35" I 721__F N L - _48F W 2599.73 2651.58' 2628.14 2642.28' 2655.76 2648.55 N:569872.14 E:648408.82 N: 574389 N:569826.75 E:637889.72 E:637937 LAT: 32.57856364 LON: -104.01980622 PPP5 18 SURVEYOR CERTIFICATION ¹⁷OPERATOR CERTIFICATION FIRST TAKE POINT PPP1 749' FNL - 0' FEL SEC. 17, T20S, R30E I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by 720' FNL - 100' FWL I hereby certify that the information contained herein is true N: 574405.74 E: 648415.24 LAT: 32.5786150° LON: -103.9857081° SEC. 18, T20S, R30E N: 574391.05 and complete to the best of my knowledge and belief, and me or under my supervision, and that the same is true and correct to the best of my belief. that this organization either owns a working interest or unleased mineral interest in the land including the proposed F: 637989 21 LAT: 32.5786637° LON: -104.0195556° 05/29/24 bottom hole location or has a right to drill this well at this location, pursuant to a contract with an owner of such a Date of Survey mineral or working interest, or to a voluntary pooling PPP2 712' FNL - 2647' FWL SEC. 16, T20S, R30E N: 574409.47 E: 651061.68 Signature and Seal of Professional Surveyor: 722' FNL - 2612' FWL SEC. 18, T20S, R30E agreement or a compulsory pooling order heretofore entered by the division. N: 574394.59 E: 640500.39 LAT: 32.5786528° LON: -104.0114032° OHN E. ALLED 7/10/24 Arianna Evans Signature LON: -103.9771166° MEXICO LAST TAKE POINT Arianna Evans 720' FNL - 100' FEL 723' FNL - 0' FEL SEC. 18, T20S, R30E N: 574398.31 E: 643138.12 SEC. 16, T20S, R30E N: 574413.04 **Printed Name** arianna.evans@dvn.com E: 653600.14 LAT: 32 5786408 LAT: 32.5785874 E-mail Address BOTTSS/ONAL SURVEYOR LON: -104.0028400° LON: -103.9688756° **BOTTOM HOLE LOCATION** PPP4 1. BEARINGS SHOWN ARE GRID BASED ON THE NEW MEXICO STATE PLANE EAST ZONE COORDINATE SYSTEM (3001), NAD 83 (2011), BASED 726' FNL - 2635' FWL SEC. 17, T20S, R30E 720' FNL - 20' FEL SEC. 16, T20S, R30E PLANE EAST ZONE CUORDINA IE SYSTEM (30UJ), NAD 33 (ZUT1), BASED FROM GPS OBSERVATIONS, OCCUPYING A WHS CONTROL POINT (5/8° REBAR), LOCATED AT AT N:556917.441 E:633268.606 ORTHO:3349.52. DETERMINED BY AN OPUS SOLUTION ON SEPTEMBER 5TH, 2019.

2. DISTANCES DEPICTED HEREON ARE REPORTED AS GROUND DISTANCE IN US SURVEY FEET USING A COMBINED SCALE FACTOR OF 1.000237768

3. ELEVATIONS ARE EXISTING GROUND ELEVATIONS UNLESS NOTED. N: 574402.02 E: 645772.78 LAT: 32.5786282° LON: -103.9942867°

Certificate No. 20250

Drawn by: JEB

John E. Allen

Date: 05/30/24

Checked by: JEA

F: 653680 12

LAT: 32.5785876° LON: -103.9686160

	#					<u>, </u>				T
	rator Namo ON ENE)DUCTI	ION C	COMPANY,		erty Name: 1OSA 18-16 ST	ГАТЕ СОМ		Well Number 001H
(ick	Off Poin	nt (KOP)								•
UL	Section 18	Township 20S	Range 30E	Lot	Feet 721	From N/S NORTH	Feet 48	From E/W WEST	County	DDY
Latit			<u> </u>		Longitude	1	1	I WEST	NAD	
	32.5785	66364				-104.019806	522		83	
D Latitu 32.!	18 ^{Ide} 5786637	20-S 7°	30-E		720 Longitude -104.0195	NORTH 5556°	100	WEST	EDDY NAD 83	
.ast	Take Po	int (LTP)								
UL A	Section 16	Township 20-S	Range 30-E	Lot	Feet 720	From N/S NORTH	Feet 100	From E/W EAST	County EDDY	
Latitu 32.	ide 5785874	l°			Longitude -103.9688	3756°			NAD 83	
s th				for t	he Horizon	tal Spacing	Unit? YE	S		
		n infill we	ell?	[NO		a descall	(anta ant 1
s th		market 1	V D1 . C			or name ai	nd well numb	er for Defin	iing well for H	orizontal
s th			API if a	vaila	ole, Operat					
s th	ill is yes ing Unit		API if a	ivaila	oie, Operat					

Form APD Conditions

Permit 369670

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240

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

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
DEVON ENERGY PRODUCTION COMPANY, LP [6137]	30-015-55302
333 West Sheridan Ave.	Well:
Oklahoma City, OK 73102	MIMOSA 18-16 STATE COM #001H

OCD Reviewer	Condition
ward.rikala	Notify OCD 24 hours prior to casing & cement
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104
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
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing
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
ward.rikala	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

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:07_/	9 / 2024		
II. Type: ☐ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.									
If Other, please describe:									
III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.									
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Gas MCF/D Produced		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		vell or se		27.9(D)(1) NMAC] osed to be drilled or		
Well Name	API	Spud Date	TD Reached Date	Completion Commencement		Initial Flow Back Date	First Production Date		
See Attached									
VI. Separation Equipment: ☐ Attach a complete description of how Operator will size separation equipment to optimize gas capture. VII. Operational Practices: ☐ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC. VIII. Best Management Practices: ☐ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.									

Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

XI. Map. \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 n	ot have capacity to	gather 100	0% of the anticip	ated natural gas
production volume from the well	prior to the date of first	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
natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

A 440 ala 4	Onerator's nlar			:	4-41		1:
 - A Hach t	Operator's plan	i io manage	nroanchon	in response	TO THE	increased	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.	

Section 3 - Certifications Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal: 🗵 Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or ☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. If Operator checks this box, Operator will select one of the following: Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or Venting and Flaring Plan.

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

- (g) reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

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

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

Signature:
Printed Name: Jeff Walla
Title: Surface Land and Regulatory Manager
E-mail Address:
Date: 7/15/24
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 infor	mation for each ne	w or recompleted wel	I or set of we	ells proposed t	o be drilled	or proposed t	o be reco	mpleted from a sir	igle well pad or		
connected to a central delivery point.											
										Anticipated	
								Anticipated Oil	Anticipated Gas	Produced Water	Central Delivery Poin
Well Name	API	UL	STR		FOOTA	GES		BBL/D	MCF/D	BBL/D	Name:
MIMOSA 18-16 STATE COM 001H			18-20S-30E	1115	FNL	1066	FWL	(+/-)626bopd	(+/-)6778mcfd	(+/-)2539bwpd	MIMOSA 18 CTB 1
V. Anticipated Schedule: Provide the fo	ollowing information	on for each new or rec	ompleted we	II or set of we	lls proposed	to be drilled	or propos	sed to be recomple	ted from a single		
well pad or connected to a central deli	ery point.										
				Completion		First					
			TD Dbd	Completion	terital flam						
Well Name	API	Court Date		Commence	Initial Flow						
			Date	ment Date		Date					
MIMOSA 18-16 STATE COM 332H	n/a	8/10/2024	9/9/2024	1/7/2025	1/7/2025	1/7/2025					
				+							
* Dates subject to change											
parez zanlerr in rugula											



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.



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

Hydrogen Sulfide (H₂S) Contingency Plan

For

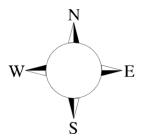
Mimosa 18-16 State Com 001H

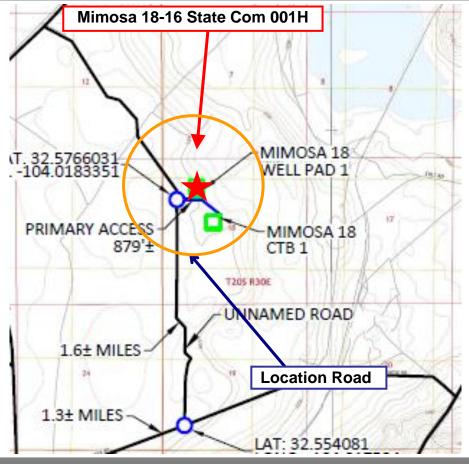
Sec-18 T-20S R-30E 1115' FNL & 1066' FWL LAT. = 32.5775757' N (NAD83) LONG = 104.0164249' W

Eddy County NM

Mimosa 18-16 State Com 001H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S , including warning signs, wind indicators and H_2S 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 H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, 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
 - Detection of H₂S, and
 - Measures for protection against the gas,
 - o 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 (SO₂). 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 H₂S and SO₂

Common	Chemical	Specific	Threshold	Hazardous Limit	Lethal
Name	Formula	Gravity	Limit	nazaruous Liinit	Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air = 1	2 ppm	N/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 (H₂S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H₂S 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 H₂S 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 H₂S Drilling Operations Plan.

There will be weekly H₂S and well control drills for all personnel in each crew.

II. HYDROGEN SULFIDE TRAINING

Note: All H₂S 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 H₂S.

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. H₂S detection and monitoring equipment:

Portable H₂S monitors positioned on location for best coverage and response. These units have warning lights which activate when H₂S levels reach 10 ppm and audible sirens which activate at 10 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 H₂S circulated to surface. Proper mud weight, safe drilling practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

5. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H₂S trim.
- B. All elastomers used for packing and seals shall be H₂S trim.

6. Communication:

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

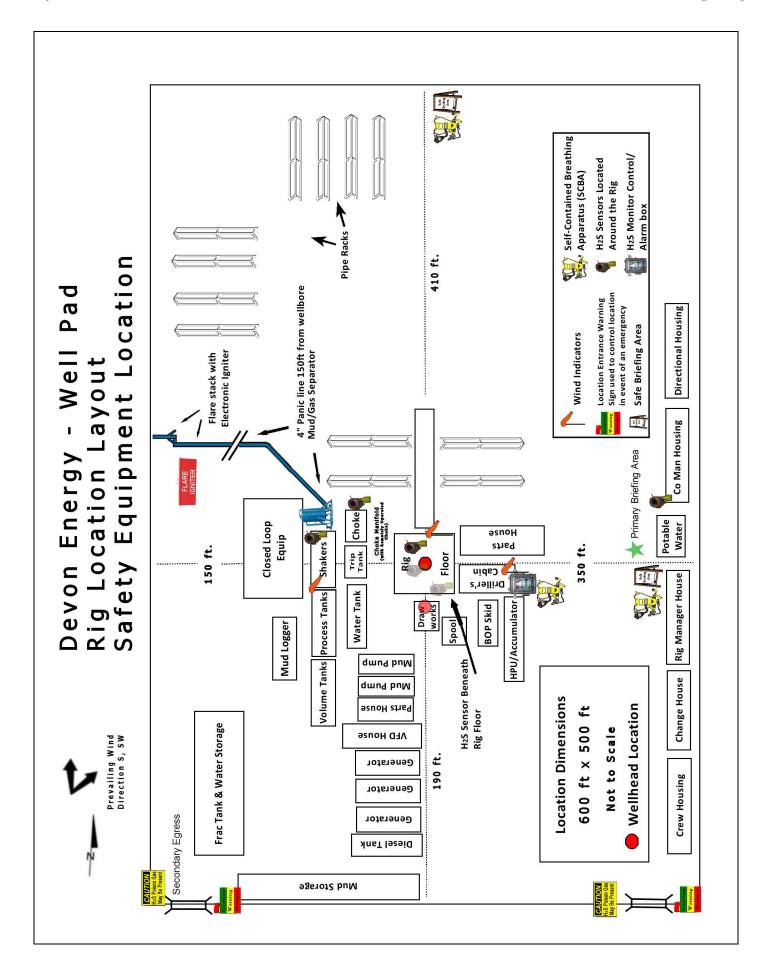
7. Well testing:

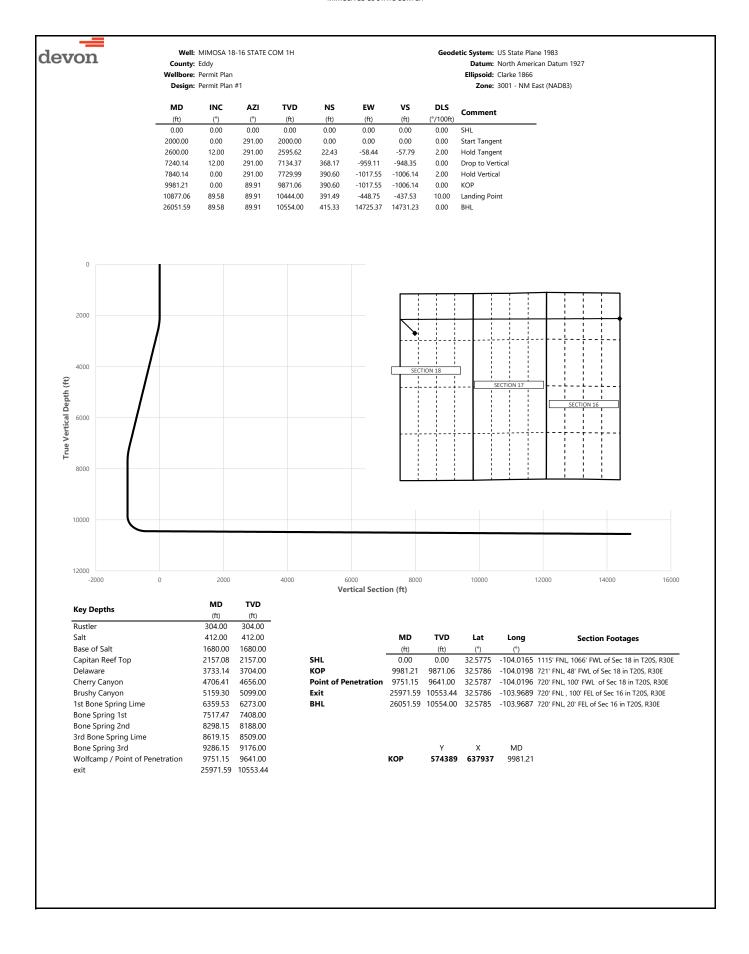
- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H₂S 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					

Agency	Call List	
<u>Lea</u>	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
(575)	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

Prepared in conjunction with Dave Small







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 - NIM Fast (NAD83)

		Permit Plan						Zone: 3001 - NM East (NAD83)
	Design.	i cirilici idi						Zone. 3001 NW East (NAD03)
MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
(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	291.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	291.00	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	291.00	300.00	0.00	0.00	0.00	0.00	
304.00	0.00	291.00	304.00	0.00	0.00	0.00	0.00	Rustler
400.00	0.00	291.00	400.00	0.00	0.00	0.00	0.00	Call
412.00	0.00	291.00	412.00	0.00	0.00	0.00	0.00	Salt
500.00 600.00	0.00	291.00	500.00 600.00	0.00	0.00	0.00	0.00	
700.00	0.00	291.00 291.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	291.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	291.00	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	291.00	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	291.00	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	291.00	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	291.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	291.00	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	291.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	291.00	1600.00	0.00	0.00	0.00	0.00	
1680.00	0.00	291.00	1680.00	0.00	0.00	0.00	0.00	Base of Salt
1700.00	0.00	291.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	291.00	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	291.00	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	291.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	291.00	2099.98	0.63	-1.63	-1.61	2.00	
2157.08	3.14	291.00	2157.00	1.54	-4.02	-3.97	2.00	Capitan Reef Top
2200.00	4.00	291.00	2199.84	2.50	-6.51	-6.44	2.00	
2300.00	6.00	291.00	2299.45	5.62	-14.65	-14.49	2.00	
2400.00	8.00	291.00	2398.70	9.99	-26.03	-25.74	2.00	
2500.00	10.00	291.00	2497.47	15.60	-40.63	-40.18	2.00	
2600.00	12.00	291.00	2595.62	22.43	-58.44	-57.79	2.00	Hold Tangent
2700.00	12.00	291.00	2693.44	29.89	-77.85	-76.98	0.00	
2800.00	12.00	291.00	2791.25	37.34	-97.26	-96.17	0.00	
2900.00	12.00	291.00	2889.07	44.79	-116.68	-115.37	0.00	
3000.00	12.00	291.00	2986.88	52.24	-136.09	-134.56	0.00	
3100.00	12.00	291.00	3084.70	59.69	-155.50	-153.75	0.00	
3200.00	12.00	291.00	3182.51	67.14	-174.91	-172.94	0.00	
3300.00	12.00	291.00	3280.33	74.59	-194.32	-192.14	0.00	
3400.00 3500.00	12.00 12.00	291.00	3378.14 3475.96	82.04 89.49	-213.73 -233.14	-211.33 -230.52	0.00	
3600.00	12.00	291.00 291.00	3573.77	96.94	-253.14	-230.32	0.00	
3700.00	12.00	291.00	3671.59	104.39	-232.33	-249.71	0.00	
3733.14	12.00	291.00	3704.00	106.86	-278.39	-275.27	0.00	Delaware
3800.00	12.00	291.00	3769.40	111.84	-291.37	-288.10	0.00	belaware
3900.00	12.00	291.00	3867.22	119.30	-310.78	-307.29	0.00	
4000.00	12.00	291.00	3965.03	126.75	-330.19	-326.48	0.00	
4100.00	12.00	291.00	4062.84	134.20	-349.60	-345.68	0.00	
4200.00	12.00	291.00	4160.66	141.65	-369.01	-364.87	0.00	
4300.00	12.00	291.00	4258.47	149.10	-388.42	-384.06	0.00	
4400.00	12.00	291.00	4356.29	156.55	-407.83	-403.25	0.00	
4500.00	12.00	291.00	4454.10	164.00	-427.24	-422.45	0.00	
4600.00	12.00	291.00	4551.92	171.45	-446.65	-441.64	0.00	
4700.00	12.00	291.00	4649.73	178.90	-466.06	-460.83	0.00	
4706.41	12.00	291.00	4656.00	179.38	-467.30	-462.06	0.00	Cherry Canyon
4800.00	12.00	291.00	4747.55	186.35	-485.47	-480.02	0.00	
4900.00	12.00	291.00	4845.36	193.80	-504.88	-499.22	0.00	
5000.00	12.00	291.00	4943.18	201.25	-524.29	-518.41	0.00	
5100.00	12.00	291.00	5040.99	208.70	-543.70	-537.60	0.00	
5159.30	12.00	291.00	5099.00	213.12	-555.21	-548.98	0.00	Brushy Canyon
5200.00	12.00	291.00	5138.81	216.16	-563.11	-556.79	0.00	
5300.00	12.00	291.00	5236.62	223.61	-582.52	-575.99	0.00	
5400.00	12.00	291.00	5334.44	231.06	-601.93	-595.18	0.00	
5500.00	12.00	291.00	5432.25	238.51	-621.34	-614.37	0.00	
5600.00	12.00	291.00	5530.07	245.96	-640.75	-633.56	0.00	
5700.00	12.00	291.00	5627.88	253.41	-660.16	-652.76	0.00	
5800.00	12.00	291.00	5725.70	260.86	-679.57	-671.95	0.00	
5900.00	12.00	291.00	5823.51	268.31	-698.98	-691.14	0.00	
6000.00	12.00	291.00	5921.33	275.76	-718.39	-710.33	0.00	
6100.00	12.00	291.00	6019.14	283.21	-737.80	-729.53	0.00	
6200.00	12.00	291.00	6116.95	290.66	-757.21	-748.72	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)

	Design:	Permit Plan	ı #1				Zone: 3001 - NM East (NAD83)				
MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment			
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)				
6300.00	12.00	291.00	6214.77	298.11	-776.62	-767.91	0.00	Ast Book Codes House			
6359.53 6400.00	12.00 12.00	291.00 291.00	6273.00 6312.58	302.55 305.57	-788.18 -796.03	-779.34 -787.10	0.00	1st Bone Spring Lime			
6500.00	12.00	291.00	6410.40	313.02	-815.44	-806.30	0.00				
6600.00	12.00	291.00	6508.21	320.47	-834.85	-825.49	0.00				
6700.00	12.00	291.00	6606.03	327.92	-854.26	-844.68	0.00				
6800.00	12.00	291.00	6703.84	335.37	-873.67	-863.87	0.00				
6900.00	12.00	291.00	6801.66	342.82	-893.08	-883.07	0.00				
7000.00	12.00	291.00	6899.47	350.27	-912.50	-902.26	0.00				
7100.00	12.00	291.00	6997.29	357.72	-931.91	-921.45	0.00				
7200.00	12.00	291.00	7095.10	365.17	-951.32	-940.64	0.00	B W			
7240.14 7300.00	12.00 10.80	291.00 291.00	7134.37 7193.04	368.17 372.41	-959.11 -970.15	-948.35 -959.27	0.00 2.00	Drop to Vertical			
7400.00	8.80	291.00	7193.04	378.51	-986.05	-939.27 -974.99	2.00				
7500.00	6.80	291.00	7390.65	383.37	-998.72	-987.52	2.00				
7517.47	6.45	291.00	7408.00	384.10	-1000.60	-989.38	2.00	Bone Spring 1st			
7600.00	4.80	291.00	7490.13	387.00	-1008.16	-996.85	2.00				
7700.00	2.80	291.00	7589.90	389.37	-1014.35	-1002.97	2.00				
7800.00	0.80	291.00	7689.85	390.50	-1017.29	-1005.88	2.00				
7840.14	0.00	291.00	7729.99	390.60	-1017.55	-1006.14	2.00	Hold Vertical			
7900.00	0.00	89.91	7789.85	390.60	-1017.55	-1006.14	0.00				
8000.00	0.00	89.91	7889.85	390.60	-1017.55	-1006.14	0.00				
8100.00 8200.00	0.00	89.91 89.91	7989.85 8089.85	390.60 390.60	-1017.55 -1017.55	-1006.14 -1006.14	0.00				
8298.15	0.00	89.91	8188.00	390.60	-1017.55	-1006.14	0.00	Bone Spring 2nd			
8300.00	0.00	89.91	8189.85	390.60	-1017.55	-1006.14	0.00	bone spring and			
8400.00	0.00	89.91	8289.85	390.60	-1017.55	-1006.14	0.00				
8500.00	0.00	89.91	8389.85	390.60	-1017.55	-1006.14	0.00				
8600.00	0.00	89.91	8489.85	390.60	-1017.55	-1006.14	0.00				
8619.15	0.00	89.91	8509.00	390.60	-1017.55	-1006.14	0.00	3rd Bone Spring Lime			
8700.00	0.00	89.91	8589.85	390.60	-1017.55	-1006.14	0.00				
8800.00	0.00	89.91	8689.85	390.60	-1017.55	-1006.14	0.00				
8900.00 9000.00	0.00	89.91 89.91	8789.85 8889.85	390.60 390.60	-1017.55 -1017.55	-1006.14 -1006.14	0.00				
9100.00	0.00	89.91	8989.85	390.60	-1017.55	-1006.14	0.00				
9200.00	0.00	89.91	9089.85	390.60	-1017.55	-1006.14	0.00				
9286.15	0.00	89.91	9176.00	390.60	-1017.55	-1006.14	0.00	Bone Spring 3rd			
9300.00	0.00	89.91	9189.85	390.60	-1017.55	-1006.14	0.00				
9400.00	0.00	89.91	9289.85	390.60	-1017.55	-1006.14	0.00				
9500.00	0.00	89.91	9389.85	390.60	-1017.55	-1006.14	0.00				
9600.00	0.00	89.91	9489.85	390.60	-1017.55	-1006.14	0.00				
9700.00 9751.15	0.00	89.91	9589.85 9641.00	390.60 390.60	-1017.55	-1006.14	0.00	Wolfcamp / Point of Penetration			
9800.00	0.00	89.91 89.91	9689.85	390.60	-1017.55 -1017.55	-1006.14 -1006.14	0.00	Wollcamp / Point of Penetration			
9900.00	0.00	89.91	9789.85	390.60	-1017.55	-1006.14	0.00				
9981.21	0.00	89.91	9871.06	390.60	-1017.55	-1006.14	0.00	KOP			
10000.00	1.88	89.91	9889.84	390.60	-1017.24	-1005.83	10.00				
10100.00	11.88	89.91	9989.00	390.62	-1005.28	-993.87	10.00				
10200.00	21.88	89.91	10084.57	390.67	-976.28	-964.88	10.00				
10300.00	31.88	89.91	10173.65	390.74	-931.13	-919.74	10.00				
10400.00 10500.00	41.88	89.91	10253.54	390.83 390.95	-871.19	-859.83 -786.96	10.00 10.00				
10600.00	51.88 61.88	89.91 89.91	10321.81 10376.38	390.95	-798.29 -714.65	-700.96 -703.34	10.00				
10700.00	71.88	89.91	10376.36	391.00	-622.80	-611.52	10.00				
10800.00	81.88	89.91	10438.27	391.37	-525.53	-514.29	10.00				
10877.06	89.58	89.91	10444.00	391.49	-448.75	-437.53	10.00	Landing Point			
10900.00	89.58	89.91	10444.17	391.53	-425.80	-414.60	0.00				
11000.00	89.58	89.91	10444.89	391.69	-325.81	-314.63	0.00				
11100.00	89.58	89.91	10445.62	391.85	-225.81	-214.67	0.00				
11200.00	89.58	89.91	10446.34	392.00	-125.81	-114.71	0.00				
11300.00	89.58	89.91	10447.07	392.16	-25.81	-14.75	0.00				
11400.00 11500.00	89.58 89.58	89.91 89.91	10447.79 10448.52	392.32 392.47	74.18 174.18	85.21 185.18	0.00				
11600.00	89.58	89.91	10448.52	392.47	274.18	285.14	0.00				
11700.00	89.58	89.91	10449.97	392.79	374.17	385.10	0.00				
11800.00	89.58	89.91	10450.69	392.95	474.17	485.06	0.00				
11900.00	89.58	89.91	10451.42	393.10	574.17	585.02	0.00				
12000.00	89.58	89.91	10452.14	393.26	674.17	684.99	0.00				
12100.00	89.58	89.91	10452.87	393.42	774.16	784.95	0.00				
12200.00	89.58	89.91	10453.59	393.57	874.16	884.91	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

	Design: Permit Plan #1							Zone: 3001 - NM East (NAD83)
MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12300.00	89.58	89.91	10454.32	393.73	974.16	984.87	0.00	
12400.00	89.58	89.91	10455.04	393.89	1074.15	1084.83	0.00	
12500.00	89.58	89.91	10455.77	394.05	1174.15	1184.80	0.00	
12600.00	89.58	89.91	10456.49	394.20	1274.15	1284.76	0.00	
12700.00	89.58	89.91	10457.22	394.36	1374.15	1384.72	0.00	
12800.00 12900.00	89.58 89.58	89.91 89.91	10457.94	394.52 394.68	1474.14	1484.68	0.00	
13000.00	89.58	89.91	10458.67 10459.39	394.83	1574.14 1674.14	1584.64 1684.60	0.00	
13100.00	89.58	89.91	10460.12	394.99	1774.14	1784.57	0.00	
13200.00	89.58	89.91	10460.84	395.15	1874.13	1884.53	0.00	
13300.00	89.58	89.91	10461.57	395.30	1974.13	1984.49	0.00	
13400.00	89.58	89.91	10462.29	395.46	2074.13	2084.45	0.00	
13500.00	89.58	89.91	10463.02	395.62	2174.12	2184.41	0.00	
13600.00	89.58	89.91	10463.74	395.78	2274.12	2284.38	0.00	
13700.00	89.58	89.91	10464.47	395.93	2374.12	2384.34	0.00	
13800.00 13900.00	89.58 89.58	89.91 89.91	10465.19 10465.92	396.09 396.25	2474.12 2574.11	2484.30 2584.26	0.00	
14000.00	89.58	89.91	10465.92	396.40	2674.11	2684.22	0.00	
14100.00	89.58	89.91	10467.37	396.56	2774.11	2784.19	0.00	
14200.00	89.58	89.91	10468.09	396.72	2874.11	2884.15	0.00	
14300.00	89.58	89.91	10468.82	396.88	2974.10	2984.11	0.00	
14400.00	89.58	89.91	10469.54	397.03	3074.10	3084.07	0.00	
14500.00	89.58	89.91	10470.27	397.19	3174.10	3184.03	0.00	
14600.00	89.58	89.91	10470.99	397.35	3274.09	3284.00	0.00	
14700.00	89.58	89.91	10471.72	397.50	3374.09	3383.96	0.00	
14800.00 14900.00	89.58 89.58	89.91 89.91	10472.44 10473.17	397.66 397.82	3474.09 3574.09	3483.92 3583.88	0.00	
15000.00	89.58	89.91	10473.17	397.82	3674.09	3683.84	0.00	
15100.00	89.58	89.91	10474.62	398.13	3774.08	3783.81	0.00	
15200.00	89.58	89.91	10475.34	398.29	3874.08	3883.77	0.00	
15300.00	89.58	89.91	10476.07	398.45	3974.08	3983.73	0.00	
15400.00	89.58	89.91	10476.79	398.61	4074.07	4083.69	0.00	
15500.00	89.58	89.91	10477.52	398.76	4174.07	4183.65	0.00	
15600.00	89.58	89.91	10478.24	398.92	4274.07	4283.61	0.00	
15700.00	89.58	89.91	10478.97	399.08	4374.06	4383.58	0.00	
15800.00 15900.00	89.58	89.91	10479.69 10480.42	399.23	4474.06	4483.54 4583.50	0.00	
16000.00	89.58 89.58	89.91 89.91	10480.42	399.39 399.55	4574.06 4674.06	4583.46	0.00	
16100.00	89.58	89.91	10481.87	399.71	4774.05	4783.42	0.00	
16200.00	89.58	89.91	10482.59	399.86	4874.05	4883.39	0.00	
16300.00	89.58	89.91	10483.32	400.02	4974.05	4983.35	0.00	
16400.00	89.58	89.91	10484.04	400.18	5074.04	5083.31	0.00	
16500.00	89.58	89.91	10484.77	400.33	5174.04	5183.27	0.00	
16600.00	89.58	89.91	10485.49	400.49	5274.04	5283.23	0.00	
16700.00	89.58	89.91	10486.22	400.65	5374.04	5383.20	0.00	
16800.00 16900.00	89.58 89.58	89.91 89.91	10486.94 10487.67	400.81 400.96	5474.03 5574.03	5483.16 5583.12	0.00	
17000.00	89.58 89.58	89.91 89.91	10487.67	400.96	5574.03 5674.03	5583.12	0.00	
17100.00	89.58	89.91	10489.12	401.12	5774.03	5783.04	0.00	
17200.00	89.58	89.91	10489.84	401.44	5874.02	5883.01	0.00	
17300.00	89.58	89.91	10490.57	401.59	5974.02	5982.97	0.00	
17400.00	89.58	89.91	10491.29	401.75	6074.02	6082.93	0.00	
17500.00	89.58	89.91	10492.02	401.91	6174.01	6182.89	0.00	
17600.00	89.58	89.91	10492.74	402.06	6274.01	6282.85	0.00	
17700.00	89.58	89.91	10493.47	402.22	6374.01	6382.82	0.00	
17800.00	89.58	89.91	10494.19	402.38	6474.01	6482.78	0.00	
17900.00 18000.00	89.58 89.58	89.91 89.91	10494.92 10495.64	402.54 402.69	6574.00 6674.00	6582.74 6682.70	0.00	
18100.00	89.58	89.91	10495.64	402.85	6774.00	6782.66	0.00	
18200.00	89.58	89.91	10497.09	403.01	6874.00	6882.63	0.00	
18300.00	89.58	89.91	10497.82	403.16	6973.99	6982.59	0.00	
18400.00	89.58	89.91	10498.54	403.32	7073.99	7082.55	0.00	
18500.00	89.58	89.91	10499.27	403.48	7173.99	7182.51	0.00	
18600.00	89.58	89.91	10499.99	403.64	7273.98	7282.47	0.00	
18700.00	89.58	89.91	10500.72	403.79	7373.98	7382.43	0.00	
18800.00	89.58	89.91	10501.44	403.95	7473.98	7482.40	0.00	
18900.00 19000.00	89.58 89.58	89.91 89.91	10502.17 10502.89	404.11 404.26	7573.98 7673.97	7582.36 7682.32	0.00	
19100.00	89.58	89.91	10502.69	404.42	7773.97	7782.28	0.00	
19200.00	89.58	89.91	10504.34	404.58	7873.97	7882.24	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)

	Design.	Permit Pla						Zone: 3001 - NM East (NAD83)
MD	INC	AZI	TVD	NS	EW	vs	DLS	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
19300.00	89.58	89.91	10505.07	404.74	7973.97	7982.21	0.00	
19400.00	89.58	89.91	10505.79	404.89	8073.96	8082.17	0.00	
19500.00	89.58	89.91	10506.52	405.05	8173.96	8182.13	0.00	
19600.00	89.58	89.91	10507.24	405.21	8273.96	8282.09	0.00	
19700.00	89.58	89.91	10507.97	405.37	8373.95	8382.05	0.00	
19800.00	89.58	89.91	10508.69	405.52	8473.95	8482.02	0.00	
19900.00	89.58	89.91	10509.42	405.68	8573.95	8581.98	0.00	
20000.00	89.58	89.91	10510.14	405.84	8673.95	8681.94	0.00	
20100.00	89.58	89.91	10510.17	405.99	8773.94	8781.90	0.00	
20200.00	89.58	89.91	10511.59	406.15	8873.94	8881.86	0.00	
20300.00	89.58	89.91	10511.33	406.31	8973.94	8981.83	0.00	
20400.00	89.58	89.91	10513.04	406.47	9073.93	9081.79	0.00	
20500.00	89.58	89.91	10513.77	406.62	9173.93	9181.75	0.00	
20600.00	89.58	89.91	10514.49	406.78	9273.93	9281.71	0.00	
20700.00	89.58	89.91	10515.22	406.94	9373.93	9381.67	0.00	
20800.00	89.58	89.91	10515.22	407.09	9473.92	9481.64	0.00	
20900.00	89.58	89.91	10515.54	407.03	9573.92	9581.60		
21000.00	89.58	89.91	10516.67	407.23	9673.92	9681.56	0.00	
21100.00	89.58	89.91	10518.12	407.57	9773.92	9781.52	0.00	
21200.00	89.58	89.91	10518.84	407.72	9873.91	9881.48	0.00	
21300.00	89.58	89.91	10519.57	407.88	9973.91	9981.44	0.00	
21400.00	89.58	89.91	10520.29	408.04	10073.91	10081.41	0.00	
21500.00	89.58	89.91	10521.02	408.19	10173.90	10181.37	0.00	
21600.00	89.58	89.91	10521.74	408.35	10273.90	10281.33	0.00	
21700.00	89.58	89.91	10522.47	408.51	10373.90	10381.29	0.00	
21800.00	89.58	89.91	10523.19	408.67	10473.90	10481.25	0.00	
21900.00	89.58	89.91	10523.92	408.82	10573.89	10581.22	0.00	
22000.00	89.58	89.91	10524.64	408.98	10673.89	10681.18	0.00	
22100.00	89.58	89.91	10525.37	409.14	10773.89	10781.14	0.00	
22200.00	89.58	89.91	10526.09	409.30	10873.89	10881.10	0.00	
22300.00	89.58	89.91	10526.82	409.45	10973.88	10981.06	0.00	
22400.00	89.58	89.91	10527.54	409.61	11073.88	11081.03	0.00	
22500.00	89.58	89.91	10528.27	409.77	11173.88	11180.99	0.00	
22600.00	89.58	89.91	10528.99	409.92	11273.87		0.00	
22700.00	89.58	89.91	10529.72	410.08	11373.87		0.00	
22800.00	89.58	89.91	10530.45	410.24	11473.87		0.00	
22900.00	89.58	89.91	10531.17	410.40		11580.84	0.00	
23000.00	89.58	89.91	10531.90	410.55	11673.86	11680.80	0.00	
23100.00	89.58	89.91	10532.62	410.71	11773.86	11780.76	0.00	
23200.00	89.58	89.91	10533.35	410.87	11873.86	11880.72	0.00	
23300.00	89.58	89.91	10534.07	411.02		11980.68	0.00	
23400.00	89.58	89.91	10534.80	411.18	12073.85	12080.65	0.00	
23500.00	89.58	89.91	10535.52	411.34	12173.85	12180.61	0.00	
23600.00	89.58	89.91	10536.25	411.50	12273.85	12280.57	0.00	
23700.00	89.58	89.91	10536.97	411.65	12373.84	12380.53	0.00	
23800.00	89.58	89.91	10537.70	411.81	12473.84	12480.49	0.00	
23900.00	89.58	89.91	10538.42	411.97	12573.84	12580.45	0.00	
24000.00	89.58	89.91	10539.15	412.13	12673.84		0.00	
24100.00	89.58	89.91	10539.87	412.28		12780.38	0.00	
24200.00	89.58	89.91	10540.60	412.44	12873.83		0.00	
24300.00	89.58	89.91	10541.32	412.60	12973.83		0.00	
24400.00	89.58	89.91	10542.05	412.75	13073.82		0.00	
24500.00	89.58	89.91	10542.77	412.91	13173.82		0.00	
24600.00	89.58	89.91	10543.50	413.07		13280.19	0.00	
24700.00	89.58	89.91	10544.22	413.23	13373.82		0.00	
24800.00	89.58	89.91	10544.95	413.38	13473.81	13480.11	0.00	
24900.00	89.58	89.91	10545.67	413.54	13573.81	13580.07	0.00	
25000.00	89.58	89.91	10546.40	413.70	13673.81	13680.04	0.00	
25100.00	89.58	89.91	10547.12	413.85	13773.81	13780.00	0.00	
25200.00	89.58	89.91	10547.85	414.01	13873.80	13879.96	0.00	
25300.00	89.58	89.91	10548.57	414.17	13973.80	13979.92	0.00	
25400.00	89.58	89.91	10549.30	414.33	14073.80	14079.88	0.00	
25500.00	89.58	89.91	10550.02	414.48	14173.79	14179.85	0.00	
25600.00	89.58	89.91	10550.75	414.64	14273.79	14279.81	0.00	
25700.00	89.58	89.91	10551.47	414.80		14379.77	0.00	
25800.00	89.58	89.91	10552.20	414.95	14473.79		0.00	
25900.00	89.58	89.91	10552.92	415.11		14579.69	0.00	
25971.59	89.58	89.91	10553.44	415.22	14645.37		0.00	exit exit
26000.00	89.58	89.91	10553.65	415.27	14673.78		0.00	
26051.59	89.58	89.91	10554.00	415.33	14725.37		0.00	BHL BHL

1. Geologic Formations

TVD of target	10553	Pilot hole depth	N/A
MD at TD:	26052	Deepest expected fresh water	

Basin

Formation	Depth (TVD)	Water/Mineral Bearing/Target	Hazards*
	from KB	Zone?	
Rustler	304		
Salt	412		
Base of Salt	1680		
Capitan Reef Top	2157		
Delaware	3704		
Cherry Canyon	4656		
Brushy Canyon	5099		
1st Bone Spring Lime	6273		
Bone Spring 1st	7408		
Bone Spring 2nd	8188		
3rd Bone Spring Lime	8509		
Bone Spring 3rd	9176		
Wolfcamp	9641		
		_	
*HOG . C 1 . C . 1			

^{*}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	BTC	0.0	329 MD	0	329 TVD
12 1/4	10 3/4	45.5	J-55	BTC SCC	0.0	1705 MD	0	1705 TVD
9 7/8	8 5/8	32.0	P110EC	MOFXL	0	3754 MD	0	3754 TVD
7 7/8	5 1/2	20.0	P110	DWC/C IS+	0	26052 MD	0	10553 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	277	0	13.2	2 1.44 Lead: Class C Cement + additiv	
Int	91	0	9	3.27	Lead: Class C Cement + additives
Int	101	1205	13.2	1.44	Tail: Class H / C + additives
Int 1	127	0	9	3.27	Lead: Class C Cement + additives
IIIt I	67	3254	13.2	1.44	Tail: Class H / C + additives
Production	117	7981	9	3.27	Lead: Class H /C + additives
Production	2127	9981	13.2	1.44	Tail: Class H / C + additives

Assuming no returns are established while drilling, Devon requests to pump a two stage cement job on the intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Capitan and the second stage performed as a bradenhead squeeze with planned cement from the Capitan to surface. Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures 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.

Casing String	% Excess
Surface	50%
Intermediate and Intermediate 1	30%
Intermediate 1 (Two Stage)	25%
Prod	10%

4. Pressure Control Equipment (Fou	r String Des	ign)					
BOP installed and tested before drilling which hole?	Size?	Min. Require d WP	T	Туре		Tested to:	
			Anı	nular	X	50% of rated working pressure	
Int	13-5/8"	5M	Bline	l Ram	X		
Int	13-3/6	JIVI	Pipe	Ram		5M	
			Doub	le Ram	X	3101	
			Other*			1	
			Annular (5M)		X	100% of rated working pressure	
Int 1	13-5/8"	5M	Blind Ram		X	5M	
IIIt I		JIVI	Pipe Ram				
			Doub	le Ram	X	3101	
			Other*				
			Annul	ar (5M)	X	100% of rated working pressure	
Production	13-5/8"	5M	Blind	l Ram	X		
Floduction	13-3/6	JIVI	Pipe Ram			514	
			Double Ram		X	5M	
			Other*				
N A variance is requested fo	r the use of a	diverter or	the surface	casing. See	attached for	schematic.	
N A variance is requested to	run a 5 M an	nular on a	10M system				

5. Mud Program (Four String Design)

Section	Туре	Weight (ppg)
Surface	WBM	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Intermediate 1	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
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6. Logging and Testing Procedures

01 2088 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
Logging, 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.	

Additional	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	5762
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.

N H2S is present

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.

Attachments	
X	Directional Plan
	Other, describe