

**District I**

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

**District II**

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

**District III**

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

**District IV**

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

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

Form C-101

August 1, 2011

Permit 287447

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

1. Operator Name and Address DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102		2. OGRID Number 6137
		3. API Number 30-015-47572
4. Property Code 320827	5. Property Name SPUD MUFFIN 31 30	6. Well No. 235H

**7. Surface Location**

UL - Lot O	Section 31	Township 23S	Range 29E	Lot Idn O	Feet From 625	N/S Line S	Feet From 1835	E/W Line E	County Eddy
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**8. Proposed Bottom Hole Location**

UL - Lot B	Section 30	Township 23S	Range 29E	Lot Idn B	Feet From 20	N/S Line N	Feet From 1320	E/W Line E	County Eddy
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**9. Pool Information**

CEDAR CANYON;BONE SPRING	11520
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 2959
16. Multiple N	17. Proposed Depth 18860	18. Formation Bone Spring	19. Contractor	20. Spud Date 6/1/2021
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	13.375	48	139	139	0
Int1	12.25	9.625	40	2644	420	0
Prod	8.75	5.5	17	18860	2591	2144

**Casing/Cement Program: Additional Comments**

Int 1 Intermediate Squeeze Sks - As Needed TOC @ Surf WT 9.0 YLD 3.3 Slurry Description - Squeeze Lead: Class C Cement + additives SkS - 266 TOC @ Surf WT 9.0 YLD 3.3 Slurry Description - Lead: Class C Cement + additives SkS - 154 TOC @ 500' above shoe WT 13.2 YLD 1.4 Slurry Description - Tail: Class H / C + additives

**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	5000	
Double Ram	5000	5000	
Annular	5000	5000	
Double Ram	5000	5000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.  
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

**OIL CONSERVATION DIVISION**

Signature:			
Printed Name:	Electronically filed by Jeff Walla	Approved By:	Scott Cox
Title:	Supervisor Land	Title:	Petroleum Engineer Supervisor
Email Address:	Jeff.Walla@dmv.com	Approved Date:	10/27/2020
Date:	10/13/2020	Expiration Date:	10/27/2022
Phone:	575-748-9925	Conditions of Approval Attached	

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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 <b>11520</b>	<sup>3</sup> Pool Name <b>CEDAR CANYON;BONE SPRING</b>
<sup>4</sup> Property Code	<sup>5</sup> Property Name <b>SPUD MUFFIN 31-30</b>	<sup>6</sup> Well Number <b>235H</b>
<sup>7</sup> OGRID No. <b>6137</b>	<sup>8</sup> Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>	<sup>9</sup> Elevation <b>2958.8</b>

<sup>10</sup> Surface Location

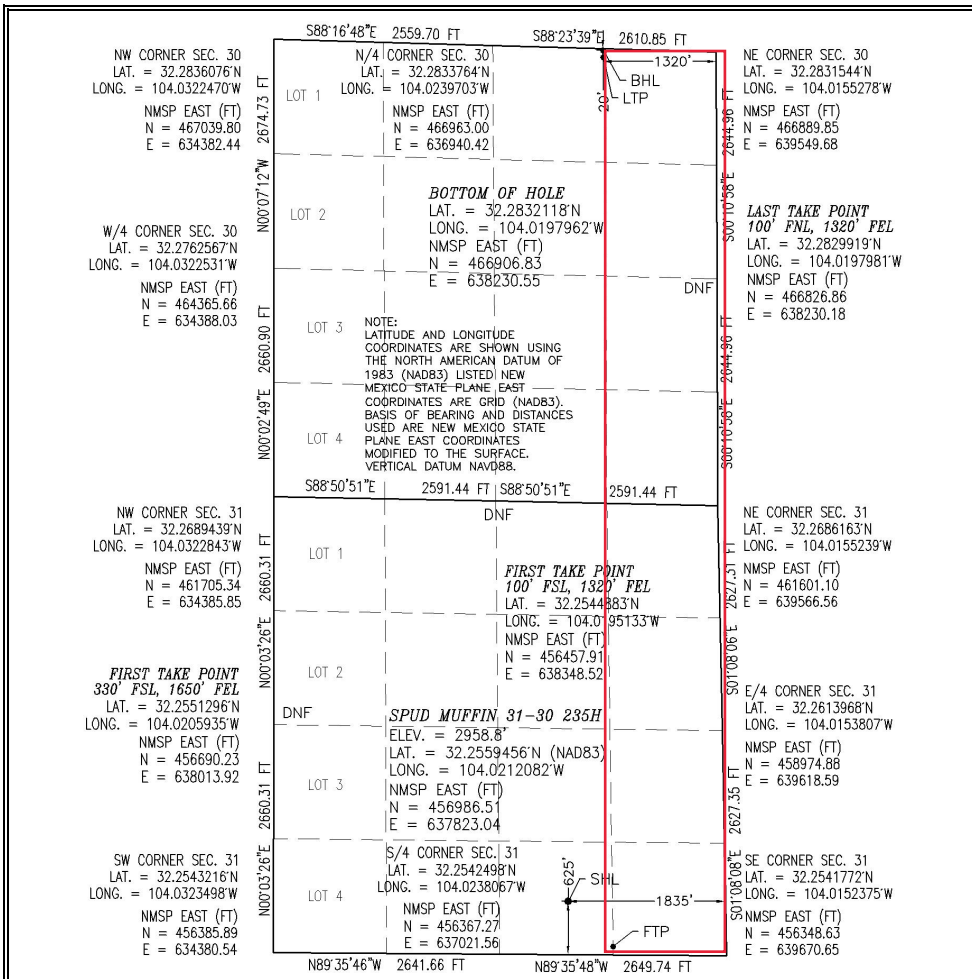
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>O</b>	<b>31</b>	<b>23 S</b>	<b>29 E</b>		<b>625</b>	<b>SOUTH</b>	<b>1835</b>	<b>EAST</b>	<b>EDDY</b>

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>B</b>	<b>30</b>	<b>23 S</b>	<b>29 E</b>		<b>20</b>	<b>NORTH</b>	<b>1320</b>	<b>EAST</b>	<b>EDDY</b>

<sup>12</sup> Dedicated Acres <b>320</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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.

<sup>17</sup> OPERATOR CERTIFICATION

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

*Jenny Harms* 10-12-2020  
Signature Date

JENNY HARMS

Printed Name

JENNY.HARMS@DVN.COM

E-mail Address

<sup>18</sup> SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

SEPTEMBER 14, 2020

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: 12797

Surveyor No. 8479

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

## GAS CAPTURE PLAN

Date: 10/27/2020

☒ Original

Operator & OGRID No.: [6137] DEVON ENERGY PRODUCTION COMPANY, LP

☐ Amended - Reason for  
Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
SPUD MUFFIN 31 30 #235H	30-015-47572	O-31-23S-29E	0625S 1835E	3	None	

### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to DCP OPERATING COMPANY, LP and will be connected to DCP OPERATING COMPANY, LP High/Low Pressure gathering system located in Lea County, New Mexico. It will require 2000' of pipeline to connect the facility to High/Low Pressure gathering system. DEVON ENERGY PRODUCTION COMPANY, LP provides (periodically) to DCP OPERATING COMPANY, LP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, DEVON ENERGY PRODUCTION COMPANY, LP and DCP OPERATING COMPANY, LP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP OPERATING COMPANY, LP Processing Plant located in Sec. 05 Twn. 21S, Rng. 36E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DCP OPERATING COMPANY, LP system at that time. Based on current information, it is DEVON ENERGY PRODUCTION COMPANY, LP's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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Form APD Comments

Permit 287447

PERMIT COMMENTS

Operator Name and Address: DEVON ENERGY PRODUCTION COMPANY, LP [6137] 333 West Sheridan Ave. Oklahoma City, OK 73102		API Number: 30-015-47572
		Well: SPUD MUFFIN 31 30 #235H
Created By	Comment	Comment Date
drebecca	C-102, Plats, Drilling Plan, Directional Plan, GCP & H2S Plan attached in Sec 7 - Forms.	10/12/2020

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Form APD Conditions

Permit 287447

**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address: DEVON ENERGY PRODUCTION COMPANY, LP [6137] 333 West Sheridan Ave. Oklahoma City, OK 73102	API Number: 30-015-47572
	Well: SPUD MUFFIN 31 30 #235H

OCD Reviewer	Condition
ksimmons	Will require a directional survey with the C-104
ksimmons	Cement is required to circulate on both surface and intermediate 1 strings of casing
kpickford	Will require a administrative order for non-standard location prior to placing the well on production.
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system

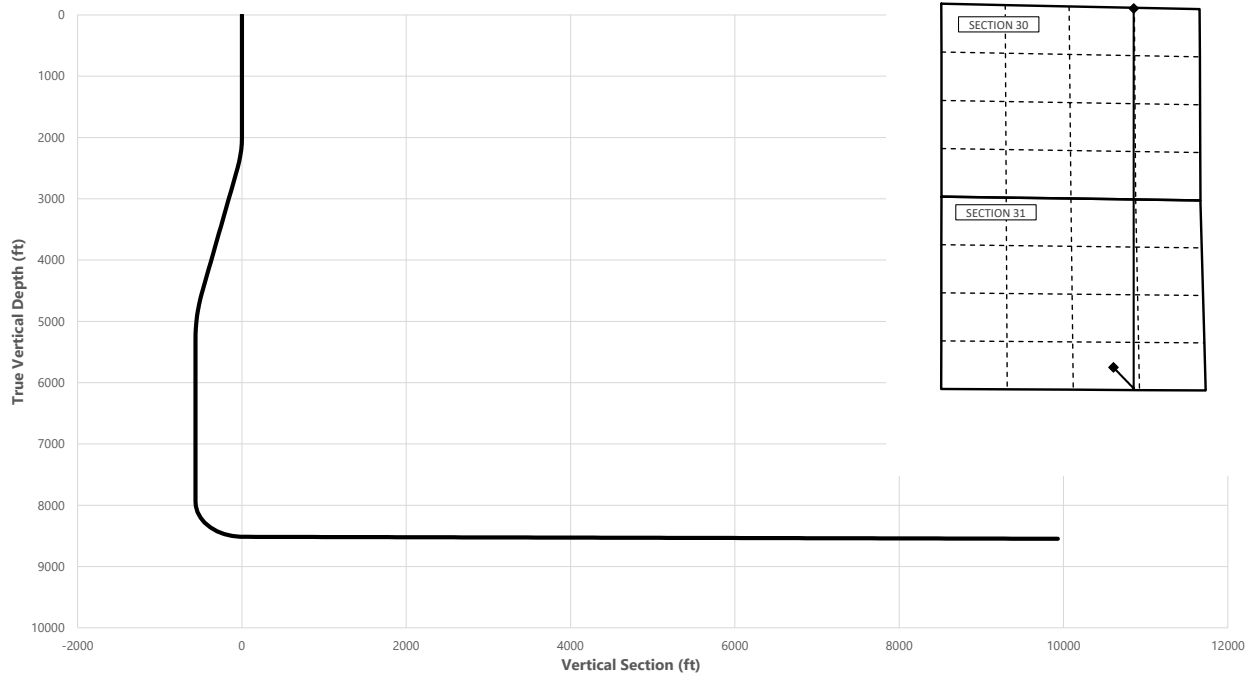
SPUD MUFFIN 31-30 235H



Well: SPUD MUFFIN 31-30 235H  
 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 (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	145.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	15.00	145.00	2494.31	-53.31	37.33	-51.73	1.00	Hold Tangent
4617.05	15.00	145.00	4539.22	-502.15	351.61	-487.29	0.00	Drop to Vertical
5367.05	0.00	145.00	5280.68	-582.11	407.60	-564.89	2.00	Hold Vertical
8028.41	0.00	0.00	7942.04	-582.11	407.60	-564.89	0.00	KOP
8926.57	89.82	0.00	8515.00	-11.00	407.60	5.74	10.00	Landing Point
18860.11	89.82	0.00	8547.00	9922.49	407.60	9930.86	0.00	BHL



## Key Depths

	MD (ft)	TVD (ft)
Rustler	0.00	0.00
Top of Salt	469.00	469.00
Base of Salt	2551.44	2544.00
Lamar	2799.91	2784.00
Bell Canyon	2799.91	2784.00
Cherry Canyon	3721.31	3674.00
Brushy Canyon	5310.36	5224.00
1st Bone Spring Lime	6570.37	6484.00
1st Bone Spring Sand	7555.37	7469.00
BONE SPRING 2ND / Point of Penetr	8376.36	8269.00
Exit	18780.11	8546.76

SHL  
 KOP  
 Point of Penetration  
 Exit  
 BHL

MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
0.00	0.00	32.2559	-104.0213	625' FSL, 1835' FEL of Sec 31 in T23S, R29E
8028.41	7942.04	32.2542	-104.0200	46' FSL, 1320' FEL of Sec 31 in T23S, R29E
8376.36	8269.00	32.2545	-104.0195	100' FSL, 1320' FEL of Sec 31 in T23S, R29E
18780.11	8546.76	32.2830	-104.0198	100' FNL, 1320' FEL of Sec 30 in T23S, R29E
18860.11	8547.00	32.2831	-104.0199	20' FNL, 1319' FEL of Sec 30 in T23S, R29E

SPUD MUFFIN 31-30 235H



Well: SPUD MUFFIN 31-30 235H  
 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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	145.00	100.00	0.00	0.00	0.00	0.00	
114.00	0.00	145.00	114.00	0.00	0.00	0.00	0.00	Rustler
200.00	0.00	145.00	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	145.00	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	145.00	400.00	0.00	0.00	0.00	0.00	
469.00	0.00	145.00	469.00	0.00	0.00	0.00	0.00	Top of Salt
500.00	0.00	145.00	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	145.00	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	145.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	145.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	145.00	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	145.00	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	145.00	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	145.00	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	145.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	145.00	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	145.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	145.00	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	145.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	145.00	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	145.00	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	145.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	3.00	145.00	2099.95	-2.14	1.50	-2.08	3.00	
2200.00	6.00	145.00	2199.63	-8.57	6.00	-8.32	3.00	
2300.00	9.00	145.00	2298.77	-19.26	13.49	-18.69	3.00	
2400.00	12.00	145.00	2397.08	-34.19	23.94	-33.18	3.00	
2500.00	15.00	145.00	2494.31	-53.31	37.33	-51.73	1.00	Hold Tangent
2551.44	15.00	145.00	2544.00	-64.21	44.96	-62.32	0.00	Base of Salt
2600.00	15.00	145.00	2590.90	-74.51	52.17	-72.30	0.00	
2700.00	15.00	145.00	2687.49	-95.71	67.02	-92.88	0.00	
2799.91	15.00	145.00	2784.00	-116.89	81.85	-113.43	0.00	Lamar, Bell Canyon
2800.00	15.00	145.00	2784.09	-116.91	81.86	-113.45	0.00	
2900.00	15.00	145.00	2880.68	-138.11	96.71	-134.03	0.00	
3000.00	15.00	145.00	2977.27	-159.31	111.55	-154.60	0.00	
3100.00	15.00	145.00	3073.86	-180.51	126.40	-175.17	0.00	
3200.00	15.00	145.00	3170.46	-201.72	141.24	-195.75	0.00	
3300.00	15.00	145.00	3267.05	-222.92	156.09	-216.32	0.00	
3400.00	15.00	145.00	3363.64	-244.12	170.93	-236.90	0.00	
3500.00	15.00	145.00	3460.23	-265.32	185.78	-257.47	0.00	
3600.00	15.00	145.00	3556.83	-286.52	200.62	-278.04	0.00	
3700.00	15.00	145.00	3653.42	-307.72	215.47	-298.62	0.00	
3721.31	15.00	145.00	3674.00	-312.24	218.63	-303.00	0.00	Cherry Canyon
3800.00	15.00	145.00	3750.01	-328.92	230.32	-319.19	0.00	
3900.00	15.00	145.00	3846.60	-350.12	245.16	-339.77	0.00	
4000.00	15.00	145.00	3943.20	-371.33	260.01	-360.34	0.00	
4100.00	15.00	145.00	4039.79	-392.53	274.85	-380.91	0.00	
4200.00	15.00	145.00	4136.38	-413.73	289.70	-401.49	0.00	
4300.00	15.00	145.00	4232.97	-434.93	304.54	-422.06	0.00	
4400.00	15.00	145.00	4329.57	-456.13	319.39	-442.64	0.00	
4500.00	15.00	145.00	4426.16	-477.33	334.23	-463.21	0.00	
4600.00	15.00	145.00	4522.75	-498.53	349.08	-483.78	0.00	
4617.05	15.00	145.00	4539.22	-502.15	351.61	-487.29	0.00	Drop to Vertical
4700.00	13.34	145.00	4619.64	-518.78	363.26	-503.44	2.00	
4800.00	11.34	145.00	4717.33	-536.29	375.51	-520.42	2.00	
4900.00	9.34	145.00	4815.70	-550.99	385.81	-534.69	2.00	
5000.00	7.34	145.00	4914.64	-562.87	394.13	-546.22	2.00	
5100.00	5.34	145.00	5014.02	-571.92	400.46	-555.00	2.00	
5200.00	3.34	145.00	5113.73	-578.12	404.81	-561.02	2.00	
5300.00	1.34	145.00	5213.64	-581.47	407.15	-564.27	2.00	
5310.36	1.13	145.00	5224.00	-581.65	407.28	-564.44	2.00	Brushy Canyon
5367.05	0.00	145.00	5280.68	-582.11	407.60	-564.89	2.00	Hold Vertical
5400.00	0.00	0.00	5313.63	-582.11	407.60	-564.89	0.00	
5500.00	0.00	0.00	5413.63	-582.11	407.60	-564.89	0.00	
5600.00	0.00	0.00	5513.63	-582.11	407.60	-564.89	0.00	
5700.00	0.00	0.00	5613.63	-582.11	407.60	-564.89	0.00	
5800.00	0.00	0.00	5713.63	-582.11	407.60	-564.89	0.00	
5900.00	0.00	0.00	5813.63	-582.11	407.60	-564.89	0.00	
6000.00	0.00	0.00	5913.63	-582.11	407.60	-564.89	0.00	
6100.00	0.00	0.00	6013.63	-582.11	407.60	-564.89	0.00	

SPUD MUFFIN 31-30 235H



**Well:** SPUD MUFFIN 31-30 235H  
**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 (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6200.00	0.00	0.00	6113.63	-582.11	407.60	-564.89	0.00	
6300.00	0.00	0.00	6213.63	-582.11	407.60	-564.89	0.00	
6400.00	0.00	0.00	6313.63	-582.11	407.60	-564.89	0.00	
6500.00	0.00	0.00	6413.63	-582.11	407.60	-564.89	0.00	
6570.37	0.00	0.00	6484.00	-582.11	407.60	-564.89	0.00	1st Bone Spring Lime
6600.00	0.00	0.00	6513.63	-582.11	407.60	-564.89	0.00	
6700.00	0.00	0.00	6613.63	-582.11	407.60	-564.89	0.00	
6800.00	0.00	0.00	6713.63	-582.11	407.60	-564.89	0.00	
6900.00	0.00	0.00	6813.63	-582.11	407.60	-564.89	0.00	
7000.00	0.00	0.00	6913.63	-582.11	407.60	-564.89	0.00	
7100.00	0.00	0.00	7013.63	-582.11	407.60	-564.89	0.00	
7200.00	0.00	0.00	7113.63	-582.11	407.60	-564.89	0.00	
7300.00	0.00	0.00	7213.63	-582.11	407.60	-564.89	0.00	
7400.00	0.00	0.00	7313.63	-582.11	407.60	-564.89	0.00	
7500.00	0.00	0.00	7413.63	-582.11	407.60	-564.89	0.00	
7555.37	0.00	0.00	7469.00	-582.11	407.60	-564.89	0.00	1st Bone Spring Sand
7600.00	0.00	0.00	7513.63	-582.11	407.60	-564.89	0.00	
7700.00	0.00	0.00	7613.63	-582.11	407.60	-564.89	0.00	
7800.00	0.00	0.00	7713.63	-582.11	407.60	-564.89	0.00	
7900.00	0.00	0.00	7813.63	-582.11	407.60	-564.89	0.00	
8000.00	0.00	0.00	7913.63	-582.11	407.60	-564.89	0.00	
8028.41	0.00	0.00	7942.04	-582.11	407.60	-564.89	0.00	KOP
8100.00	7.16	0.00	8013.45	-577.64	407.60	-560.43	10.00	
8200.00	17.16	0.00	8111.08	-556.61	407.60	-539.41	10.00	
8300.00	27.16	0.00	8203.58	-518.94	407.60	-501.77	10.00	
8376.36	34.80	0.00	8269.00	-479.66	407.60	-462.53	10.00	BONE SPRING 2ND / Point of Penetration
8400.00	37.16	0.00	8288.13	-465.78	407.60	-448.66	10.00	
8500.00	47.16	0.00	8362.16	-398.75	407.60	-381.68	10.00	
8600.00	57.16	0.00	8423.43	-319.87	407.60	-302.88	10.00	
8700.00	67.16	0.00	8470.07	-231.56	407.60	-214.64	10.00	
8800.00	77.16	0.00	8500.67	-136.49	407.60	-119.65	10.00	
8900.00	87.16	0.00	8514.30	-37.55	407.60	-20.79	10.00	
8926.57	89.82	0.00	8515.00	-11.00	407.60	5.74	10.00	Landing Point
9000.00	89.82	0.00	8515.24	62.44	407.60	79.11	0.00	
9100.00	89.82	0.00	8515.56	162.44	407.60	179.03	0.00	
9200.00	89.82	0.00	8515.88	262.43	407.60	278.94	0.00	
9300.00	89.82	0.00	8516.20	362.43	407.60	378.86	0.00	
9400.00	89.82	0.00	8516.53	462.43	407.60	478.77	0.00	
9500.00	89.82	0.00	8516.85	562.43	407.60	578.69	0.00	
9600.00	89.82	0.00	8517.17	662.43	407.60	678.60	0.00	
9700.00	89.82	0.00	8517.49	762.43	407.60	778.52	0.00	
9800.00	89.82	0.00	8517.81	862.43	407.60	878.43	0.00	
9900.00	89.82	0.00	8518.14	962.43	407.60	978.35	0.00	
10000.00	89.82	0.00	8518.46	1062.43	407.60	1078.27	0.00	
10100.00	89.82	0.00	8518.78	1162.43	407.60	1178.18	0.00	
10200.00	89.82	0.00	8519.10	1262.43	407.60	1278.10	0.00	
10300.00	89.82	0.00	8519.43	1362.43	407.60	1378.01	0.00	
10400.00	89.82	0.00	8519.75	1462.43	407.60	1477.93	0.00	
10500.00	89.82	0.00	8520.07	1562.43	407.60	1577.84	0.00	
10600.00	89.82	0.00	8520.39	1662.43	407.60	1677.76	0.00	
10700.00	89.82	0.00	8520.72	1762.43	407.60	1777.67	0.00	
10800.00	89.82	0.00	8521.04	1862.43	407.60	1877.59	0.00	
10900.00	89.82	0.00	8521.36	1962.43	407.60	1977.50	0.00	
11000.00	89.82	0.00	8521.68	2062.43	407.60	2077.42	0.00	
11100.00	89.82	0.00	8522.00	2162.42	407.60	2177.33	0.00	
11200.00	89.82	0.00	8522.33	2262.42	407.60	2277.25	0.00	
11300.00	89.82	0.00	8522.65	2362.42	407.60	2377.16	0.00	
11400.00	89.82	0.00	8522.97	2462.42	407.60	2477.08	0.00	
11500.00	89.82	0.00	8523.29	2562.42	407.60	2576.99	0.00	
11600.00	89.82	0.00	8523.62	2662.42	407.60	2676.91	0.00	
11700.00	89.82	0.00	8523.94	2762.42	407.60	2776.82	0.00	
11800.00	89.82	0.00	8524.26	2862.42	407.60	2876.74	0.00	
11900.00	89.82	0.00	8524.58	2962.42	407.60	2976.65	0.00	
12000.00	89.82	0.00	8524.90	3062.42	407.60	3076.57	0.00	
12100.00	89.82	0.00	8525.23	3162.42	407.60	3176.48	0.00	
12200.00	89.82	0.00	8525.55	3262.42	407.60	3276.40	0.00	
12300.00	89.82	0.00	8525.87	3362.42	407.60	3376.31	0.00	
12400.00	89.82	0.00	8526.19	3462.42	407.60	3476.23	0.00	
12500.00	89.82	0.00	8526.52	3562.42	407.60	3576.15	0.00	
12600.00	89.82	0.00	8526.84	3662.42	407.60	3676.06	0.00	



SPUD MUFFIN 31-30 235H



Well: SPUD MUFFIN 31-30 235H  
 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 (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12700.00	89.82	0.00	8527.16	3762.42	407.60	3775.98	0.00	
12800.00	89.82	0.00	8527.48	3862.42	407.60	3875.89	0.00	
12900.00	89.82	0.00	8527.81	3962.42	407.60	3975.81	0.00	
13000.00	89.82	0.00	8528.13	4062.41	407.60	4075.72	0.00	
13100.00	89.82	0.00	8528.45	4162.41	407.60	4175.64	0.00	
13200.00	89.82	0.00	8528.77	4262.41	407.60	4275.55	0.00	
13300.00	89.82	0.00	8529.09	4362.41	407.60	4375.47	0.00	
13400.00	89.82	0.00	8529.42	4462.41	407.60	4475.38	0.00	
13500.00	89.82	0.00	8529.74	4562.41	407.60	4575.30	0.00	
13600.00	89.82	0.00	8530.06	4662.41	407.60	4675.21	0.00	
13700.00	89.82	0.00	8530.38	4762.41	407.60	4775.13	0.00	
13800.00	89.82	0.00	8530.71	4862.41	407.60	4875.04	0.00	
13900.00	89.82	0.00	8531.03	4962.41	407.60	4974.96	0.00	
14000.00	89.82	0.00	8531.35	5062.41	407.60	5074.87	0.00	
14100.00	89.82	0.00	8531.67	5162.41	407.60	5174.79	0.00	
14200.00	89.82	0.00	8531.99	5262.41	407.60	5274.70	0.00	
14300.00	89.82	0.00	8532.32	5362.41	407.60	5374.62	0.00	
14400.00	89.82	0.00	8532.64	5462.41	407.60	5474.53	0.00	
14500.00	89.82	0.00	8532.96	5562.41	407.60	5574.45	0.00	
14600.00	89.82	0.00	8533.28	5662.41	407.60	5674.36	0.00	
14700.00	89.82	0.00	8533.61	5762.41	407.60	5774.28	0.00	
14800.00	89.82	0.00	8533.93	5862.41	407.60	5874.20	0.00	
14900.00	89.82	0.00	8534.25	5962.41	407.60	5974.11	0.00	
15000.00	89.82	0.00	8534.57	6062.40	407.60	6074.03	0.00	
15100.00	89.82	0.00	8534.90	6162.40	407.60	6173.94	0.00	
15200.00	89.82	0.00	8535.22	6262.40	407.60	6273.86	0.00	
15300.00	89.82	0.00	8535.54	6362.40	407.60	6373.77	0.00	
15400.00	89.82	0.00	8535.86	6462.40	407.60	6473.69	0.00	
15500.00	89.82	0.00	8536.18	6562.40	407.60	6573.60	0.00	
15600.00	89.82	0.00	8536.51	6662.40	407.60	6673.52	0.00	
15700.00	89.82	0.00	8536.83	6762.40	407.60	6773.43	0.00	
15800.00	89.82	0.00	8537.15	6862.40	407.60	6873.35	0.00	
15900.00	89.82	0.00	8537.47	6962.40	407.60	6973.26	0.00	
16000.00	89.82	0.00	8537.80	7062.40	407.60	7073.18	0.00	
16100.00	89.82	0.00	8538.12	7162.40	407.60	7173.09	0.00	
16200.00	89.82	0.00	8538.44	7262.40	407.60	7273.01	0.00	
16300.00	89.82	0.00	8538.76	7362.40	407.60	7372.92	0.00	
16400.00	89.82	0.00	8539.08	7462.40	407.60	7472.84	0.00	
16500.00	89.82	0.00	8539.41	7562.40	407.60	7572.75	0.00	
16600.00	89.82	0.00	8539.73	7662.40	407.60	7672.67	0.00	
16700.00	89.82	0.00	8540.05	7762.40	407.60	7772.58	0.00	
16800.00	89.82	0.00	8540.37	7862.40	407.60	7872.50	0.00	
16900.00	89.82	0.00	8540.70	7962.39	407.60	7972.41	0.00	
17000.00	89.82	0.00	8541.02	8062.39	407.60	8072.33	0.00	
17100.00	89.82	0.00	8541.34	8162.39	407.60	8172.25	0.00	
17200.00	89.82	0.00	8541.66	8262.39	407.60	8272.16	0.00	
17300.00	89.82	0.00	8541.99	8362.39	407.60	8372.08	0.00	
17400.00	89.82	0.00	8542.31	8462.39	407.60	8471.99	0.00	
17500.00	89.82	0.00	8542.63	8562.39	407.60	8571.91	0.00	
17600.00	89.82	0.00	8542.95	8662.39	407.60	8671.82	0.00	
17700.00	89.82	0.00	8543.27	8762.39	407.60	8771.74	0.00	
17800.00	89.82	0.00	8543.60	8862.39	407.60	8871.65	0.00	
17900.00	89.82	0.00	8543.92	8962.39	407.60	8971.57	0.00	
18000.00	89.82	0.00	8544.24	9062.39	407.60	9071.48	0.00	
18100.00	89.82	0.00	8544.56	9162.39	407.60	9171.40	0.00	
18200.00	89.82	0.00	8544.89	9262.39	407.60	9271.31	0.00	
18300.00	89.82	0.00	8545.21	9362.39	407.60	9371.23	0.00	
18400.00	89.82	0.00	8545.53	9462.39	407.60	9471.14	0.00	
18500.00	89.82	0.00	8545.85	9562.39	407.60	9571.06	0.00	
18600.00	89.82	0.00	8546.17	9662.39	407.60	9670.97	0.00	
18700.00	89.82	0.00	8546.50	9762.39	407.60	9770.89	0.00	
18780.11	89.82	0.00	8546.76	9842.49	407.60	9850.93	0.00	Exit
18800.00	89.82	0.00	8546.82	9862.38	407.60	9870.80	0.00	
18860.11	89.82	0.00	8547.00	9922.49	407.60	9930.86	0.00	BHL

SPUD MUFFIN 31-30 235H



**Well:** SPUD MUFFIN 31-30 235H  
**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)	

## SPUD MUFFIN 31-30 235H

**1. Geologic Formations**

TVD of target	8547	Pilot hole depth	N/A
MD at TD:	18860	Deepest expected fresh water	

**Basin**

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	114		
Top of Salt	469		
Base of Salt	2544		
Lamar	2784		
Bell Canyon	2784		
Cherry Canyon	3674		
Brushy Canyon	5224		
1st Bone Spring Lime	6484		
1st Bone Spring Sand	7469		
BONE SPRING 2ND	8269		
#REF!	#REF!		

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

## SPUD MUFFIN 31-30 235H

**2. Casing Program**

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
17 1/2	13 3/8	48	H40	BTC	0	139	0	139
12 1/4	9 5/8	40	J-55	BTC	0	2644	0	2644
8 3/4	5 1/2	17	P110	BTC	0	18860	0	8547

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.

## SPUD MUFFIN 31-30 235H

**3. Cementing Program (3-String Primary Design)**

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft <sup>3</sup> /sack)	Slurry Description
Surface	139	Surf	13.2	1.4	Lead: Class C Cement + additives
Int 1	266	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	266	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Production	501	500' tieback	9.0	3.3	Lead: Class H / C + additives
	2090	KOP	13.2	1.4	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	50%
Intermediate	30%
Production	10%

## SPUD MUFFIN 31-30 235H

**4. Pressure Control Equipment (Three String Design)**

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-58"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

## SPUD MUFFIN 31-30 235H

**5. Mud Program (Three String Design)**

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Production	WBM	8.5-9

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, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the Completion Report and submitted 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	
	Density	
X	CBL	Production casing
X	Mud log	KOP to TD
	PEX	

**7. Drilling Conditions**

Condition	Specify what type and where?
BH pressure at deepest TVD	4000
Abnormal temperature	No

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

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.

N	H <sub>2</sub> S is present
Y	H <sub>2</sub> S plan attached.

## SPUD MUFFIN 31-30 235H

**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 (OnShore Order 2, 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 pad.
- 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. At that time an approved BOP stack will be nipped 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





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

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

**For**

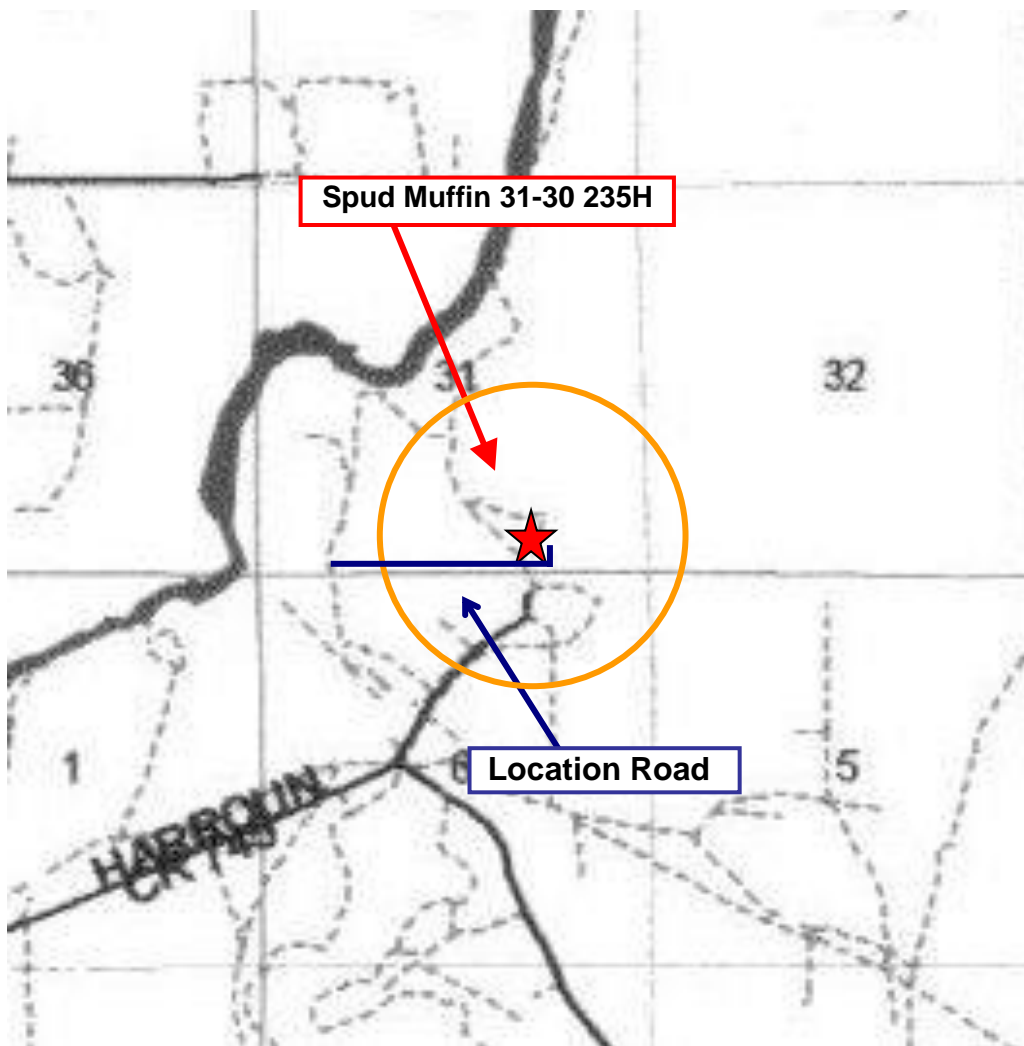
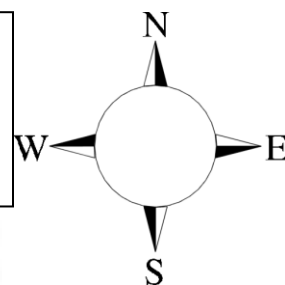
**Spud Muffin 31-30 235H**

**Sec-31 T-23S R-29E  
625' FSL & 1835' FEL  
LAT. = 32.2559456' N (NAD83)  
LONG = 104.0212082' W**

**Eddy County NM**

## Spud Muffin 31-30 235H

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 H<sub>2</sub>S 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 H<sub>2</sub>S 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 H<sub>2</sub>S, 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>**

<b>Common Name</b>	<b>Chemical Formula</b>	<b>Specific Gravity</b>	<b>Threshold Limit</b>	<b>Hazardous Limit</b>	<b>Lethal Concentration</b>
<b>Hydrogen Sulfide</b>	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
<b>Sulfur Dioxide</b>	SO <sub>2</sub>	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 (H<sub>2</sub>S) 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 and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

### 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:**

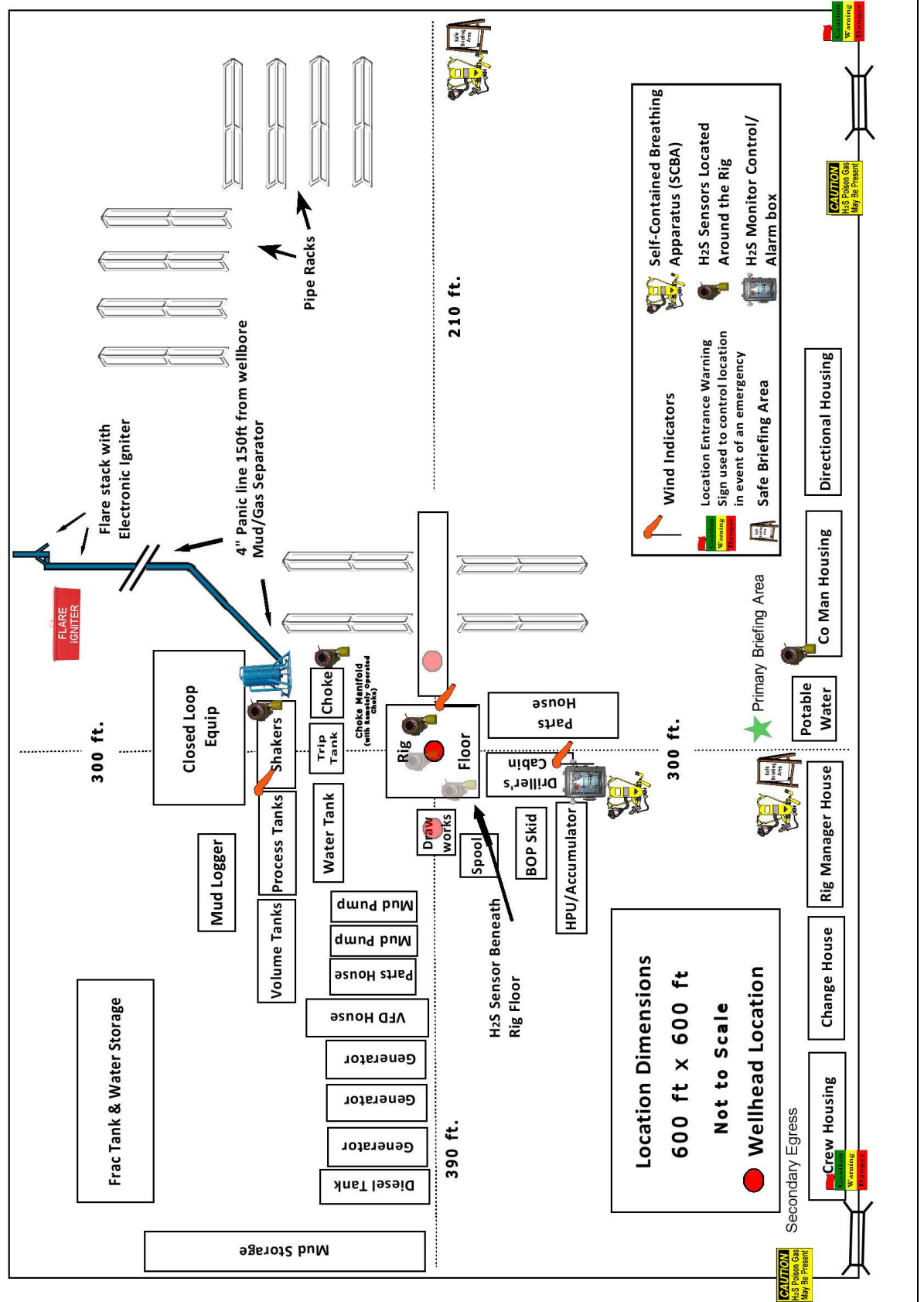
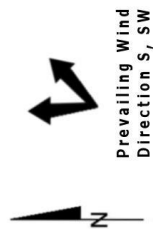
- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing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

<b><u>Devon Energy Corp. Company Call List</u></b>		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
EHS Professional – Laura Wright		405-439-8129
<b><u>Agency Call List</u></b>		
<b><u>Lea County (575)</u></b>	<b>Hobbs</b>	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	<b>Ambulance</b>	<b>911</b>
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
<b><u>Eddy County (575)</u></b>	<b>Carlsbad</b>	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	<b>Ambulance</b>	<b>911</b>
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	887-6544
	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
	<b>Emergency Services</b>	
	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
<b><u>Give GPS position:</u></b>	Native Air – Emergency Helicopter – Hobbs (TX & NM)	(800) 642-7828
	Flight For Life - Lubbock, TX	(806) 743-9911
	Aerocare - Lubbock, TX	(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM	(800) 222-1222
	Poison Control (24/7)	(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - <a href="http://www.nhc.noaa.gov">www.nhc.noaa.gov</a>	

Prepared in conjunction with  
Dave Small



# Devon Energy - Well Pad Rig Location Layout Safety Equipment Location







District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Submit Original  
to Appropriate  
District Office

## GAS CAPTURE PLAN

Date: October 8, 2020

☒ Original Devon & OGRID No.: Devon Energy Production Co., L.P. 6137  
☐ Amended - Reason for Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Devon to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	SHL FOOTAGES					Expected MCF/D	Flared or Vented	CTB
SPUD MUFFIN 31-30 FED COM 231H		23S-29E-31	195	FSL	1353	FWL			Spud Muffin 31 CTB 1
SPUD MUFFIN 31-30 FED COM 232H		23S-29E-31	195	FSL	1383	FWL			Spud Muffin 31 CTB 1
SPUD MUFFIN 31-30 233H		23S-29E-31	195	FSL	1413	FWL			Spud Muffin 31 CTB 1
SPUD MUFFIN 31-30 234H		23S-29E-31	625	FSL	1865	FEL			Spud Muffin 31 CTB 2
SPUD MUFFIN 31-30 235H		23S-29E-31	625	FSL	1835	FEL			Spud Muffin 31 CTB 2
SPUD MUFFIN 31-30 236H		23S-29E-31	625	FSL	1805	FEL			Spud Muffin 31 CTB 2

### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if DCP system is in place. The gas produced from production facility is dedicated to DCP and will be connected to DCP low/high pressure gathering system located in Lea County, New Mexico. It will require 1000' to DCP lateral for the Spud Muffin 31 CTB 1, and 2000' for the Spud Muffin 31 CTB 2 to DCP pipeline to connect the facility to low/high pressure gathering system. Devon will build the line to DCP and then after the line is ready for service, Devon give the to DCP for operations. Devon provides (periodically) to DCP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Devon and DCP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP Processing Plant located in the reference table. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DCP system at that time. Based on current information, it is Devon's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

**Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

**Reference Table:**

DCP Plant locations

Artesia Sec. 7, T18S, R28E,

Eunice Sec. 5, T21S, R36E

Linam Sec. 6, T19S, R37E

Zia II Sec. 19, T19S, R32E

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

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

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

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number	<sup>2</sup> Pool Code <b>11520</b>	<sup>3</sup> Pool Name <b>CEDAR CANYON;BONE SPRING</b>
<sup>4</sup> Property Code	<sup>5</sup> Property Name <b>SPUD MUFFIN 31-30</b>	<sup>6</sup> Well Number <b>235H</b>
<sup>7</sup> OGRID No. <b>6137</b>	<sup>8</sup> Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>	<sup>9</sup> Elevation <b>2958.8</b>

<sup>10</sup> Surface Location

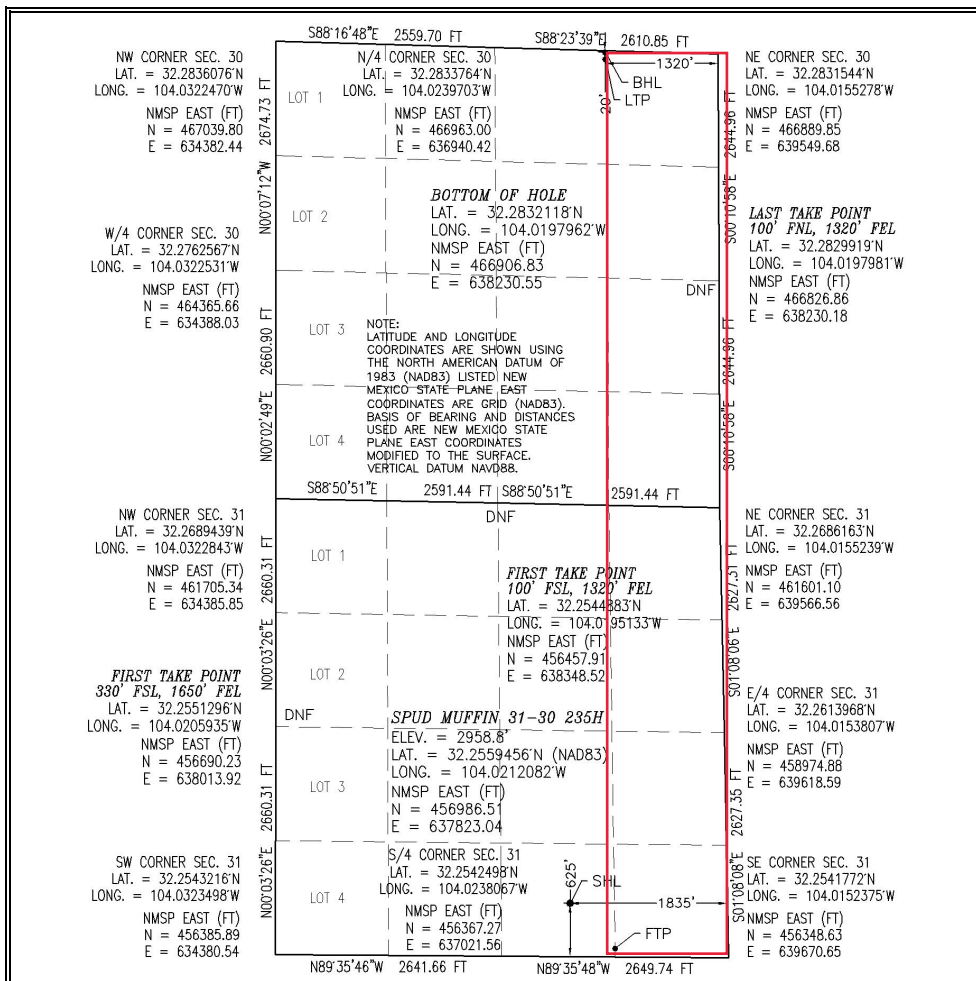
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>O</b>	<b>31</b>	<b>23 S</b>	<b>29 E</b>		<b>625</b>	<b>SOUTH</b>	<b>1835</b>	<b>EAST</b>	<b>EDDY</b>

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>B</b>	<b>30</b>	<b>23 S</b>	<b>29 E</b>		<b>20</b>	<b>NORTH</b>	<b>1320</b>	<b>EAST</b>	<b>EDDY</b>

<sup>12</sup> Dedicated Acres <b>320</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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.



<sup>17</sup> OPERATOR CERTIFICATION

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

*Jenny Harms* 10-12-2020  
Signature Date

JENNY HARMS

Printed Name

JENNY.HARMS@DVN.COM

E-mail Address

<sup>18</sup> SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

SEPTEMBER 14, 2020

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: 12797  
Surveyor No. 8479

Intent ☒ As Drilled ☐

API #

Operator Name:	Property Name:	Well Number
<b>DEVON ENERGY PRODUCTION CO., L.P.</b>	<b>SPUD MUFFIN 31-30</b>	<b>235H</b>

Kick Off Point (KOP)

UL	Section 31	Township 23S	Range 29E	Lot	Feet 46 FSL	From N/S	Feet 1320 FEL	From E/W	County EDDY
Latitude 32.2542					Longitude -104.0200			NAD 83	

First Take Point (FTP)

UL P	Section 31	Township 23S	Range 29E	Lot	Feet 100	From N/S SOUTH	Feet 1320	From E/W EAST	County EDDY
Latitude <b>32.2544883</b>					Longitude <b>104.0195133</b>			NAD <b>83</b>	

Last Take Point (LTP)

UL B	Section 30	Township 23S	Range 29E	Lot	Feet 100	From N/S NORTH	Feet 1320	From E/W EAST	County EDDY
Latitude <b>32.2829919</b>					Longitude <b>104.0197981</b>			NAD <b>83</b>	

Is this well the defining well for the Horizontal Spacing Unit?

☐ NO

Is this well an infill well?

☐ YES

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018