

RECEIVED

JAN 27 2020

Form C-102

Revised August 1, 2011

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (505) 393-8161 Fax (505) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax (505) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Artesia, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170

DISTRICT IV
1226 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3468

State of New Mexico
Energy, Minerals and Natural Resources Department

EMNRD-OCD ARTESIA
OIL CONSERVATION DIVISION
1226 South St. Francis Dr.
Santa Fe, New Mexico 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-45796	Pool Code 50270	Pool Name Penasco Draw; SA-Yeso (Assoc.)
Property Code 325892	Property Name ROSE	Well Number 4H
OGRID No. 328947	Operator Name SPUR ENERGY PARTNERS, LLC	Elevation 3379'

Surface Location

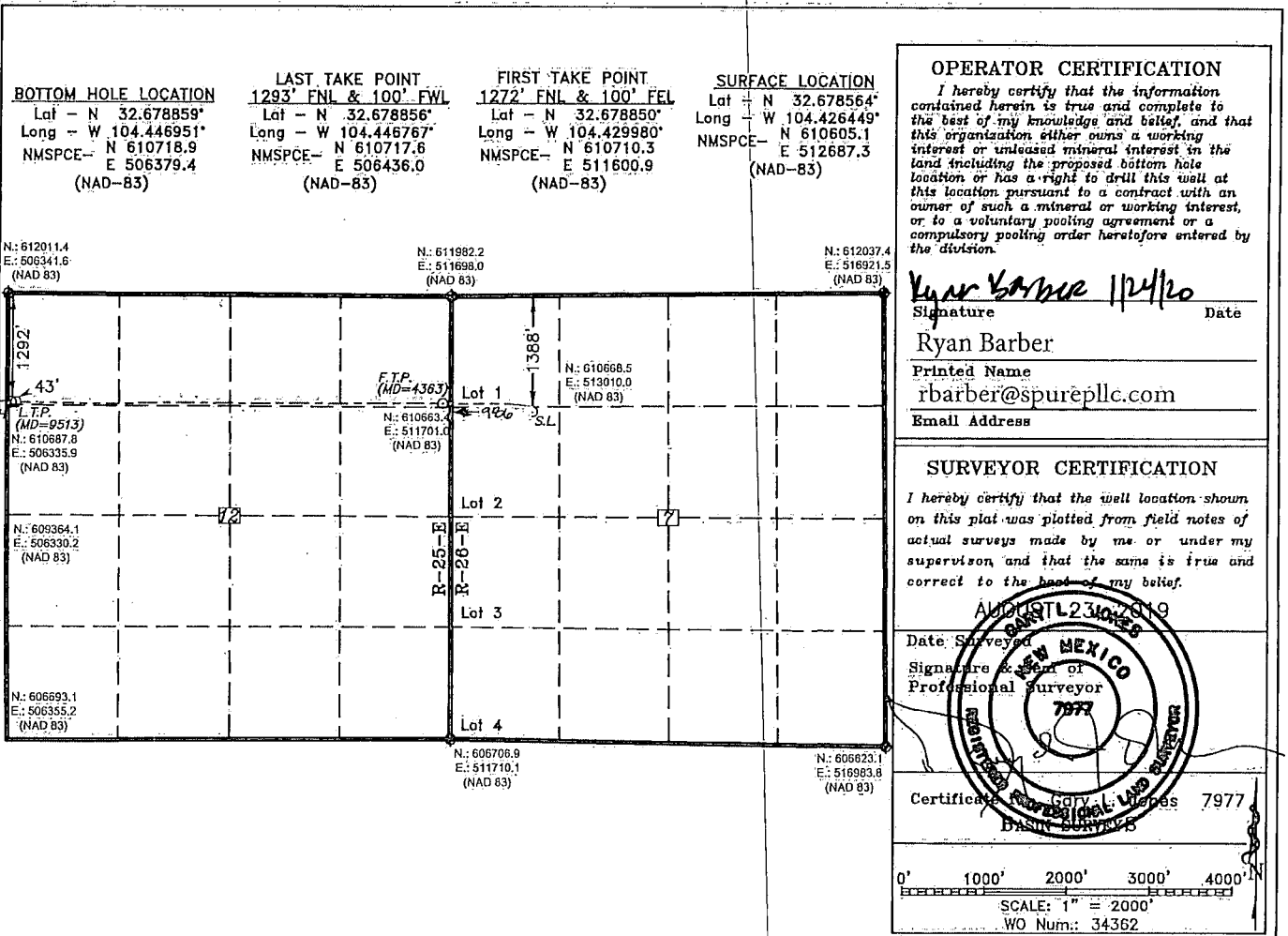
UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/South line	FEET from the	East/West line	County
LOT 2	7	19 S	26 E		1388	NORTH	986	WEST	EDDY

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
D	12	19 S	25 E		1292	NORTH	43	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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



Intent ☐ As Drilled ☒

API #
30-015-45796

Operator Name: SPUR ENERGY PARTNERS LLC	Property Name: ROSE	Well Number 4H
--	------------------------	-------------------

Kick Off Point (KOP)

UL 1	Section 7	Township 19S	Range 25E	Lot	Feet 1381	From N/S NORTH	Feet 982	From E/W WEST	County EDDY
Latitude 32.678584					Longitude -104.426436			NAD NAD83	

First Take Point (FTP)

UL A	Section 12	Township 19S	Range 25E	Lot	Feet 1272	From N/S NORTH	Feet 100	From E/W EAST	County EDDY
Latitude 32.678850					Longitude -104.429980			NAD NAD83	

Last Take Point (LTP)

UL D	Section 12	Township 19S	Range 25E	Lot	Feet 1293	From N/S NORTH	Feet 100	From E/W WEST	County EDDY
Latitude 32.678856					Longitude -104.446767			NAD NAD83	

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

Is this well an infill well? ☒

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

API #
30-015-45113

Operator Name: SPUR ENERGY PARTNERS LLC	Property Name: ROSE	Well Number 2H
--	------------------------	-------------------

KZ 06/29/2018



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EMNRD-OCD ARTESIA

I **Larry Wright**, certify that I am employed by **Wellbenders Directional Services**. That I did on the day(s) of **05/16/19** thru **05/31/19** conduct or supervise the taking of a **MWD Survey** from a depth of **134'** to a depth of **9590'**; that the data is true, correct, complete and within the limitations of the tool as set forth by **Wellbenders Directional Services**; that I am authorized and qualified to make this report; that this survey was conducted at the request of **Percussion Petroleum, LLC** for the **Rose 4H** API No. **30-015-45796** in **Eddy County, New Mexico**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by **Wellbenders Directional Services**.

Larry Wright

Larry

Wright

Digitally signed
by Larry Wright
Date:
2019.12.13
11:08:09 -06'00'

1125 Beach Airport Rd, Conroe, Texas

77301

PH 936-756-3225 FAX 936-756-3248



PERCUSSION
PETROLEUM
LLC

Percussion Petroleum, LLC

Eddy County, NM

Rose

#4H

OH

Design: OH

End Of Well Report

31 May, 2019



Wellbenders

End Of Well Report

Company: Percussion Petroleum, LLC Project: Eddy County, NM Site: Rose Well: #4H Wellbore: OH Design: OH	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:	Well #4H RKB=16' @ 3395.00usft (Akita 20) RKB=16' @ 3395.00usft (Akita 20) Grid: Minimum Curvature WBDS_SQL_2
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Project: Eddy County, NM	
Map System: US State Plane 1983 Geo Datum: North American Datum 1983 Map Zone: New Mexico Eastern Zone	System Datum: Mean Sea Level

Site: Rose							
Site Position: From: Map Position Uncertainty: 0.00 usft	<table style="width: 100%;"> <tr> <td style="width: 33%;">Northing: 611,332.70 usft</td> <td style="width: 33%;">Latitude: 32.680563</td> </tr> <tr> <td>Easting: 512,404.20 usft</td> <td>Longitude: -104.427371</td> </tr> <tr> <td>Slot Radius: 13.200 in</td> <td>Grid Convergence: -0.051 °</td> </tr> </table>	Northing: 611,332.70 usft	Latitude: 32.680563	Easting: 512,404.20 usft	Longitude: -104.427371	Slot Radius: 13.200 in	Grid Convergence: -0.051 °
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Easting: 512,404.20 usft	Longitude: -104.427371						
Slot Radius: 13.200 in	Grid Convergence: -0.051 °						

Well: #4H							
Well Position +N/-S 0.00 usft +E/-W 0.00 usft Position Uncertainty 0.00 usft	<table style="width: 100%;"> <tr> <td style="width: 33%;">Northing: 610,605.10 usft</td> <td style="width: 33%;">Latitude: 32.678563</td> </tr> <tr> <td>Easting: 512,687.30 usft</td> <td>Longitude: -104.426449</td> </tr> <tr> <td>Wellhead Elevation: usft</td> <td>Ground Level: 3,379.00 usft</td> </tr> </table>	Northing: 610,605.10 usft	Latitude: 32.678563	Easting: 512,687.30 usft	Longitude: -104.426449	Wellhead Elevation: usft	Ground Level: 3,379.00 usft
Northing: 610,605.10 usft	Latitude: 32.678563						
Easting: 512,687.30 usft	Longitude: -104.426449						
Wellhead Elevation: usft	Ground Level: 3,379.00 usft						

Wellbore: OH													
<table style="width: 100%;"> <tr> <th>Magnetics</th> <th>Model Name</th> <th>Sample Date</th> <th>Declination (°)</th> <th>Dip Angle (°)</th> <th>Field Strength (nT)</th> </tr> <tr> <td></td> <td>IGRF2015</td> <td>3/8/2019</td> <td>7.199</td> <td>60.320</td> <td>47,937.97301984</td> </tr> </table>	Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)		IGRF2015	3/8/2019	7.199	60.320	47,937.97301984	
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)								
	IGRF2015	3/8/2019	7.199	60.320	47,937.97301984								

Design: OH											
Audit Notes:											
Version: 1.0	Phase: ACTUAL										
Tie On Depth: 0.00											
<table style="width: 100%;"> <tr> <th>Vertical Section:</th> <th>Depth From (TVD) (usft)</th> <th>+N/-S (usft)</th> <th>+E/-W (usft)</th> <th>Direction (°)</th> </tr> <tr> <td></td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>270.26</td> </tr> </table>	Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)		0.00	0.00	0.00	270.26	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)							
	0.00	0.00	0.00	270.26							

Survey Program	Date 5/31/2019										
<table style="width: 100%;"> <tr> <th>From (usft)</th> <th>To (usft)</th> <th>Survey (Wellbore)</th> <th>Tool Name</th> <th>Description</th> </tr> <tr> <td>134.00</td> <td>9,590.00</td> <td>Survey #1 (OH)</td> <td>MWD+IGRF</td> <td>OWSG MWD + IGRF or WMM</td> </tr> </table>	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	134.00	9,590.00	Survey #1 (OH)	MWD+IGRF	OWSG MWD + IGRF or WMM	
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134.00	9,590.00	Survey #1 (OH)	MWD+IGRF	OWSG MWD + IGRF or WMM							



Wellbenders End Of Well Report

Company:	Percussion Petroleum, LLC	Local Co-ordinate/Reference:	Well #4H
Project:	Eddy County, NM	TVD Reference:	RKB=16' @ 3395.00usft (Akita-20)
Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	WBDS_SQL_2

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
134.00	0.09	126.43	134.00	-0.06	0.08	-0.08	134.00	126.43	0.07	
225.00	0.26	359.69	225.00	0.10	0.14	-0.14	91.00	18.97	0.35	
315.00	0.84	74.84	315.00	0.48	0.78	-0.77	90.00	59.35	0.90	
406.00	0.70	147.00	405.99	0.19	1.72	-1.72	91.00	107.13	1.00	
497.00	0.57	59.19	496.99	-0.05	2.41	-2.42	91.00	108.72	0.97	
588.00	0.13	43.46	587.98	0.26	2.87	-2.87	91.00	56.29	0.49	
679.00	0.75	34.76	678.98	0.82	3.29	-3.28	91.00	36.04	0.68	
770.00	0.97	25.62	769.97	2.01	3.96	-3.95	91.00	29.60	0.28	
861.00	0.97	22.37	860.96	3.41	4.58	-4.57	91.00	24.00	0.06	
951.00	0.88	24.04	950.95	4.75	5.16	-5.13	90.00	23.16	0.10	
1,043.00	0.88	348.00	1,042.94	6.09	5.30	-5.27	92.00	6.02	0.59	
1,134.00	1.54	304.67	1,133.92	7.46	4.15	-4.11	91.00	320.15	1.19	
1,186.00	1.85	291.49	1,185.89	8.17	2.79	-2.75	52.00	297.47	0.95	
1,268.00	1.89	295.71	1,267.85	9.24	0.34	-0.30	82.00	293.62	0.17	
1,362.00	2.46	304.06	1,361.78	11.04	-2.73	2.78	94.00	300.43	0.69	
1,456.00	3.08	310.12	1,455.67	13.80	-6.33	6.39	94.00	307.43	0.73	
1,551.00	3.08	309.86	1,550.53	17.08	-10.24	10.32	95.00	309.99	0.01	
1,645.00	2.99	311.70	1,644.40	20.33	-14.01	14.10	94.00	310.77	0.14	
1,739.00	3.60	310.03	1,738.25	23.86	-18.10	18.21	94.00	310.79	0.66	
1,833.00	4.09	311.09	1,832.04	27.96	-22.89	23.01	94.00	310.59	0.53	
1,927.00	4.18	309.68	1,925.79	32.35	-28.05	28.20	94.00	310.38	0.14	
2,022.00	4.13	310.47	2,020.54	36.78	-33.32	33.48	95.00	310.07	0.08	
2,117.00	4.48	301.59	2,115.27	40.95	-39.08	39.27	95.00	305.85	0.79	
2,211.00	4.66	299.40	2,208.98	44.74	-45.53	45.74	94.00	300.47	0.27	
2,305.00	4.31	303.35	2,302.69	48.56	-51.81	52.03	94.00	301.30	0.50	
2,400.00	4.31	305.81	2,397.42	52.61	-57.69	57.93	95.00	304.58	0.19	



Wellbenders End Of Well Report

Company:	Percussion Petroleum, LLC	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County, NM	TVD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	WBDS_SQL_2

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)	
2,494.00	4.35	308.36	2,491.15	56.89	-63.35	63.61	94.00	307.09	0.21	
2,589.00	4.35	308.54	2,585.88	61.37	-68.99	69.27	95.00	308.45	0.01	
2,683.00	4.44	309.77	2,679.60	65.92	-74.58	74.87	94.00	309.16	0.14	
2,777.00	4.48	309.77	2,773.32	70.60	-80.19	80.51	94.00	309.77	0.04	
2,824.00	4.66	304.41	2,820.17	72.85	-83.18	83.51	47.00	307.04	0.99	
2,872.00	5.89	287.80	2,867.97	74.70	-87.13	87.47	48.00	295.13	4.06	
2,919.00	8.00	283.31	2,914.62	76.19	-92.61	92.96	47.00	285.22	4.63	
2,966.00	10.46	283.67	2,961.01	77.96	-99.94	100.30	47.00	283.51	5.24	
3,013.00	13.36	283.31	3,006.99	80.22	-109.37	109.74	47.00	283.47	6.17	
3,060.00	16.84	282.61	3,052.36	82.95	-121.31	121.68	47.00	282.92	7.41	
3,109.00	20.18	281.03	3,098.82	86.12	-136.53	136.92	49.00	281.75	6.89	
3,155.00	22.68	279.71	3,141.64	89.13	-153.06	153.47	46.00	280.33	5.53	
3,202.00	25.58	278.66	3,184.52	92.19	-172.03	172.45	47.00	279.16	6.24	
3,249.00	28.13	278.57	3,226.45	95.37	-193.02	193.45	47.00	278.61	5.43	
3,296.00	30.81	277.42	3,267.37	98.58	-215.92	216.36	47.00	277.97	5.83	
3,342.00	33.05	274.61	3,306.41	101.11	-240.11	240.56	46.00	275.97	5.84	
3,389.00	35.56	271.36	3,345.23	102.46	-266.55	267.01	47.00	272.93	6.61	
3,435.00	37.85	270.22	3,382.11	102.83	-294.04	294.50	46.00	270.77	5.19	
3,482.00	40.44	268.99	3,418.56	102.62	-323.71	324.17	47.00	269.59	5.75	
3,530.00	43.74	270.31	3,454.17	102.43	-355.87	356.33	48.00	269.67	7.12	
3,577.00	46.11	271.01	3,487.45	102.82	-389.06	389.52	47.00	270.67	5.15	
3,624.00	49.01	271.36	3,519.16	103.54	-423.73	424.20	47.00	271.19	6.19	
3,671.00	52.70	271.62	3,548.83	104.49	-460.16	460.63	47.00	271.49	7.86	
3,716.00	55.82	271.36	3,575.11	105.44	-496.67	497.15	45.00	271.49	6.95	
3,763.00	58.37	270.04	3,600.64	105.91	-536.13	536.60	47.00	270.69	5.92	
3,809.00	59.43	269.69	3,624.40	105.82	-575.51	575.99	46.00	269.86	2.39	
3,856.00	60.00	269.43	3,648.10	105.51	-616.10	616.57	47.00	269.56	1.30	



Wellbenders End Of Well Report

Company:	Percussion Petroleum, LLC	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County, NM	TVD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	WBDS_SQL_2

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	D Leg (°/100ft)	
3,904.00	60.35	268.81	3,671.98	104.87	-657.73	658.20	48.00	269.12	1.34	
3,951.00	61.23	268.28	3,694.91	103.83	-698.74	699.21	47.00	268.54	2.12	
3,998.00	61.49	268.72	3,717.44	102.75	-739.98	740.44	47.00	268.50	0.99	
4,045.00	62.64	268.99	3,739.46	101.92	-781.49	781.95	47.00	268.86	2.50	
4,074.00	64.84	269.34	3,752.29	101.54	-807.50	807.95	29.00	269.17	7.66	
4,121.00	68.00	269.51	3,771.09	101.11	-850.56	851.01	47.00	269.43	6.73	
4,168.00	71.65	270.31	3,787.29	101.04	-894.67	895.12	47.00	269.91	7.93	
4,215.00	76.09	270.83	3,800.35	101.49	-939.81	940.26	47.00	270.57	9.51	
4,261.00	79.78	271.54	3,809.96	102.43	-984.77	985.23	46.00	271.19	8.16	
4,310.00	84.26	271.80	3,816.76	103.84	-1,033.27	1,033.73	49.00	271.67	9.16	
4,357.00	88.48	271.36	3,819.74	105.13	-1,080.14	1,080.61	47.00	271.58	9.03	
4,404.00	91.25	271.10	3,819.85	106.14	-1,127.13	1,127.60	47.00	271.23	5.92	
4,451.00	91.96	271.36	3,818.53	107.15	-1,174.10	1,174.57	47.00	271.23	1.61	
4,499.00	92.40	270.22	3,816.71	107.81	-1,222.06	1,222.54	48.00	270.79	2.54	
4,593.00	92.88	270.48	3,812.38	108.38	-1,315.96	1,316.44	94.00	270.35	0.58	
4,688.00	92.79	270.75	3,807.68	109.40	-1,410.84	1,411.32	95.00	270.62	0.30	
4,782.00	92.62	269.95	3,803.24	109.98	-1,504.73	1,505.21	94.00	270.35	0.87	
4,876.00	92.57	270.22	3,798.98	110.12	-1,598.63	1,599.11	94.00	270.09	0.29	
4,971.00	92.57	269.16	3,794.72	109.60	-1,693.53	1,694.01	95.00	269.69	1.11	
5,065.00	92.66	268.99	3,790.44	108.09	-1,787.42	1,787.90	94.00	269.08	0.20	
5,160.00	92.53	269.16	3,786.13	106.55	-1,882.31	1,882.78	95.00	269.08	0.23	
5,253.00	92.31	269.16	3,782.21	105.19	-1,975.22	1,975.68	93.00	269.16	0.24	
5,347.00	91.69	269.25	3,778.93	103.89	-2,069.15	2,069.60	94.00	269.21	0.67	
5,442.00	91.96	269.69	3,775.90	103.01	-2,164.10	2,164.55	95.00	269.47	0.54	
5,537.00	92.35	270.22	3,772.33	102.94	-2,259.03	2,259.48	95.00	269.95	0.69	
5,631.00	92.53	270.31	3,768.33	103.37	-2,352.95	2,353.39	94.00	270.26	0.21	
5,725.00	92.79	270.48	3,763.97	104.02	-2,446.84	2,447.29	94.00	270.39	0.33	



Wellbenders

End Of Well Report

Company:	Percussion Petroleum, LLC	Local Co-ordinate Reference:	Well #4H.
Project:	Eddy County, NM	TVD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#4H	North Reference:	Grid.
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	WBDS_SQL_2

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)	
5,819.00	92.48	270.92	3,759.64	105.16	-2,540.74	2,541.19	94.00	270.70	0.57	
5,914.00	92.53	270.92	3,755.49	106.69	-2,635.63	2,636.09	95.00	270.92	0.05	
6,008.00	91.69	270.39	3,752.03	107.76	-2,729.56	2,730.02	94.00	270.65	1.06	
6,103.00	93.01	269.25	3,748.14	107.46	-2,824.48	2,824.94	95.00	269.82	1.84	
6,197.00	92.88	269.34	3,743.31	106.31	-2,918.35	2,918.80	94.00	269.30	0.17	
6,291.00	92.40	269.34	3,738.98	105.23	-3,012.24	3,012.69	94.00	269.34	0.51	
6,385.00	92.75	269.34	3,734.75	104.15	-3,106.14	3,106.58	94.00	269.34	0.37	
6,480.00	93.05	269.60	3,729.95	103.27	-3,201.01	3,201.45	95.00	269.47	0.42	
6,575.00	93.32	269.51	3,724.67	102.53	-3,295.86	3,296.30	95.00	269.56	0.30	
6,666.00	92.09	269.95	3,720.37	102.10	-3,386.76	3,387.19	91.00	269.73	1.44	
6,757.00	91.56	270.39	3,717.48	102.37	-3,477.71	3,478.14	91.00	270.17	0.76	
6,847.00	91.25	270.92	3,715.27	103.40	-3,567.68	3,568.11	90.00	270.66	0.68	
6,938.00	91.12	271.01	3,713.39	104.93	-3,658.65	3,659.09	91.00	270.97	0.17	
7,029.00	91.25	270.83	3,711.51	106.40	-3,749.62	3,750.06	91.00	270.92	0.24	
7,120.00	91.87	270.66	3,709.03	107.58	-3,840.57	3,841.02	91.00	270.75	0.71	
7,211.00	92.13	270.75	3,705.85	108.70	-3,931.51	3,931.96	91.00	270.70	0.30	
7,302.00	92.22	270.39	3,702.40	109.60	-4,022.44	4,022.90	91.00	270.57	0.41	
7,393.00	92.84	270.57	3,698.38	110.36	-4,113.35	4,113.81	91.00	270.48	0.71	
7,483.00	92.88	270.48	3,693.89	111.19	-4,203.23	4,203.69	90.00	270.53	0.11	
7,575.00	92.75	270.13	3,689.37	111.68	-4,295.12	4,295.58	92.00	270.30	0.41	
7,665.00	93.23	269.60	3,684.68	111.46	-4,385.00	4,385.46	90.00	269.87	0.79	
7,756.00	93.10	269.16	3,679.65	110.48	-4,475.85	4,476.31	91.00	269.38	0.50	
7,847.00	92.84	268.99	3,674.94	109.01	-4,566.72	4,567.17	91.00	269.07	0.34	
7,940.00	92.22	268.55	3,670.83	107.02	-4,659.61	4,660.04	93.00	268.77	0.82	
8,030.00	92.40	266.61	3,667.21	103.22	-4,749.45	4,749.87	90.00	267.58	2.16	
8,120.00	92.35	267.58	3,663.48	98.67	-4,839.25	4,839.65	90.00	267.10	1.08	
8,212.00	91.82	269.43	3,660.13	96.27	-4,931.16	4,931.54	92.00	268.51	2.09	



Wellbenders

End Of Well Report

Company:	Percussion Petroleum, LLC	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County, NM	TVD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	WBDS_SQL_2

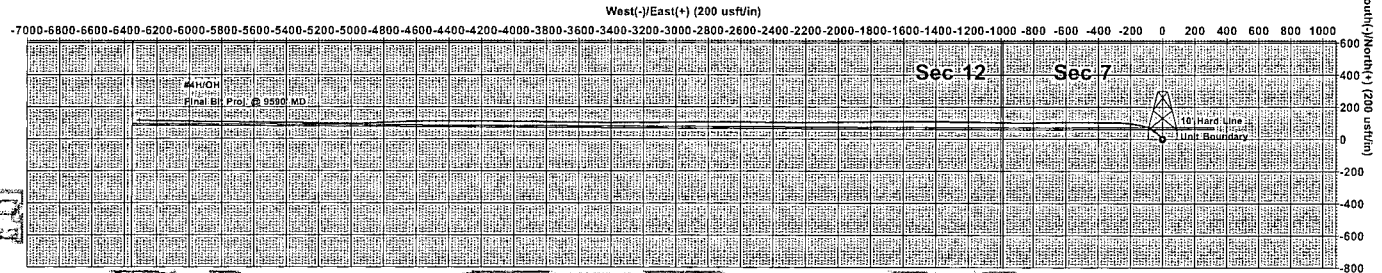
Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)	
8,303.00	91.78	270.13	3,657.27	95.92	-5,022.11	5,022.49	91.00	269.78	0.77	
8,394.00	92.09	270.75	3,654.20	96.62	-5,113.06	5,113.44	91.00	270.44	0.76	
8,485.00	92.35	271.10	3,650.67	98.08	-5,203.98	5,204.37	91.00	270.92	0.48	
8,575.00	92.88	270.75	3,646.57	99.54	-5,293.87	5,294.27	90.00	270.93	0.71	
8,686.00	92.84	270.62	3,641.03	100.86	-5,404.72	5,405.13	111.00	270.68	0.12	
8,781.00	92.20	270.53	3,636.85	101.81	-5,499.63	5,500.03	95.00	270.57	0.68	
8,875.00	91.30	270.80	3,633.98	102.90	-5,593.58	5,593.98	94.00	270.67	1.00	
8,969.00	91.38	270.71	3,631.78	104.14	-5,687.54	5,687.96	94.00	270.76	0.13	
9,064.00	91.16	270.62	3,629.68	105.24	-5,782.51	5,782.93	95.00	270.66	0.25	
9,159.00	89.80	270.53	3,628.88	106.20	-5,877.50	5,877.92	95.00	270.57	1.43	
9,253.00	88.84	270.71	3,630.00	107.22	-5,971.49	5,971.91	94.00	270.62	1.04	
9,347.00	88.18	270.97	3,632.44	108.59	-6,065.45	6,065.88	94.00	270.84	0.75	
9,441.00	86.68	271.24	3,636.66	110.40	-6,159.33	6,159.77	94.00	271.10	1.62	
9,517.00	85.41	271.32	3,641.90	112.10	-6,235.13	6,235.57	76.00	271.28	1.67	
9,590.00	85.41	271.32	3,647.74	113.77	-6,307.88	6,308.33	73.00	271.32	0.00	
Final Station Closure Distance= 6308.90 /Direction= 271.03 - Projection to Bit: 9590.00' MD/ 3647.74' TVD - TD: Latitude = 32.678859 / Longitude = -104.446951 - TD: Y= 610718.87 / X= 506379.42										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		
		+N/-S (usft)	+E/-W (usft)	Comment
9,590.00	3,647.74	113.77	-6,307.88	Final Station Closure Distance= 6308.90 /Direction= 271.03
9,590.00	3,647.74	113.77	-6,307.88	Projection to Bit: 9590.00' MD/ 3647.74' TVD
9,590.00	3,647.74	113.77	-6,307.88	TD: Latitude = 32.678859 / Longitude = -104.446951
9,590.00	3,647.74	113.77	-6,307.88	TD: Y= 610718.87 / X= 506379.42

Checked By: _____	Approved By: _____	Date: _____
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Company: Percussion Petroleum, LLC
Project: Eddy County, NM
Site: Rose
Well: #4H
Wellbore: OH
Rig: Akita 20
Design: OH / 10:06, May 31 2019



DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
Final Bit Proj. @ 9590' MD	3647.74	113.77	-6307.88	610718.87	506379.42	32.678859	-104.446951

TOTAL CORRECTION
To convert a Magnetic Direction to a Grid Direction, Add 7.249°

WELL DETAILS: #4H

RKB=16' @ 3395.00usft (Akita 20)
3379.00

+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	610605.10	512687.30	32.678563	-104.426449

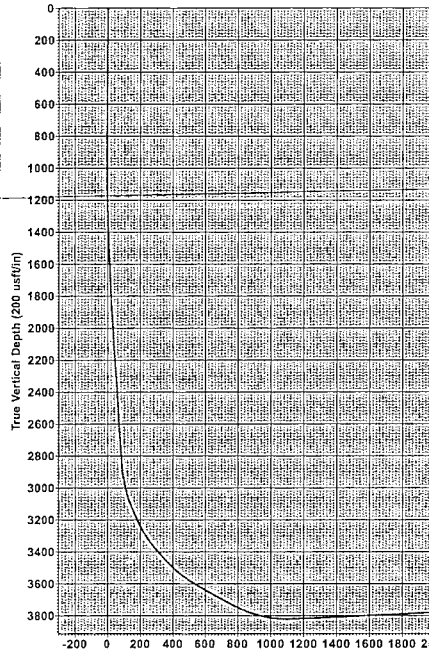
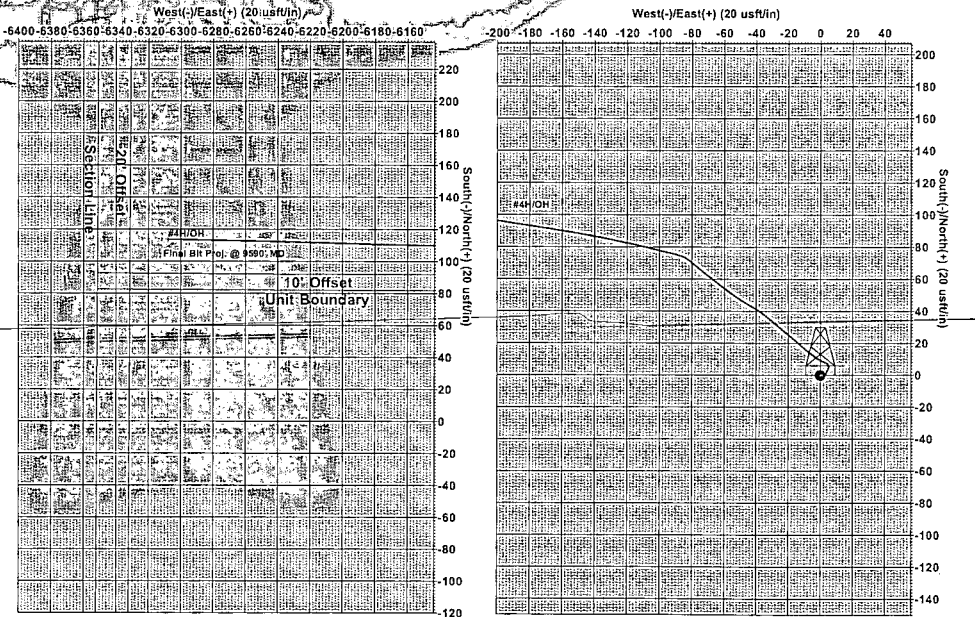
ANNOTATION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Vsect	Departure	Annotation
9590.00	85.41	271.32	3647.74	113.77	-6307.88	6308.33	6350.27	Final Station Closure Distance= 6308.90 / Direction= 271.03
9590.00	85.41	271.32	3647.74	113.77	-6307.88	6308.33	6350.27	Projection to Bit: 9590.00' MD/ 3647.74' TVD
9590.00	85.41	271.32	3647.74	113.77	-6307.88	6308.33	6350.27	TD: Latitude = 32.678859 / Longitude = -104.446951
9590.00	85.41	271.32	3647.74	113.77	-6307.88	6308.33	6350.27	TD: Y= 610718.87 / X= 506379.42



Azimuths to Grid North
True North: 0.00°
Magnetic North: 7.25°
Magnetic Field
Strength: 47038 Oer/T
Dip Angle: 60.32°
Date: 3/8/2019
Model: IGRF2015

PROJECT DETAILS: Eddy County, NM
Geocentric System: US State Plane 1983
Datum: North American Datum 1983
Elevation: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level



Vertical Section at 270.25° (200 usft/in)

Final Station Closure Distance= 6308.90 / Direction= 271.03
Projection to Bit: 9590.00' MD/ 3647.74' TVD
TD: Latitude = 32.678859 / Longitude = -104.446951
TD: Y= 610718.87 / X= 506379.42



Disclaimer:
All Plan and Log, well trajectory
stems and offset well
location survey data is
provided by customer and
subject to customer
approval.

Design: OH (#4H/OH) Akita 20

Created By: Derek Stephens Date: 10:06, May 31 2019

API #	30-015-45796
Operator	Spur Energy Partners, LLC
Field	PENASCO DRAW, SA-YESO (ASSOC)
Spud Date	5/16/2019

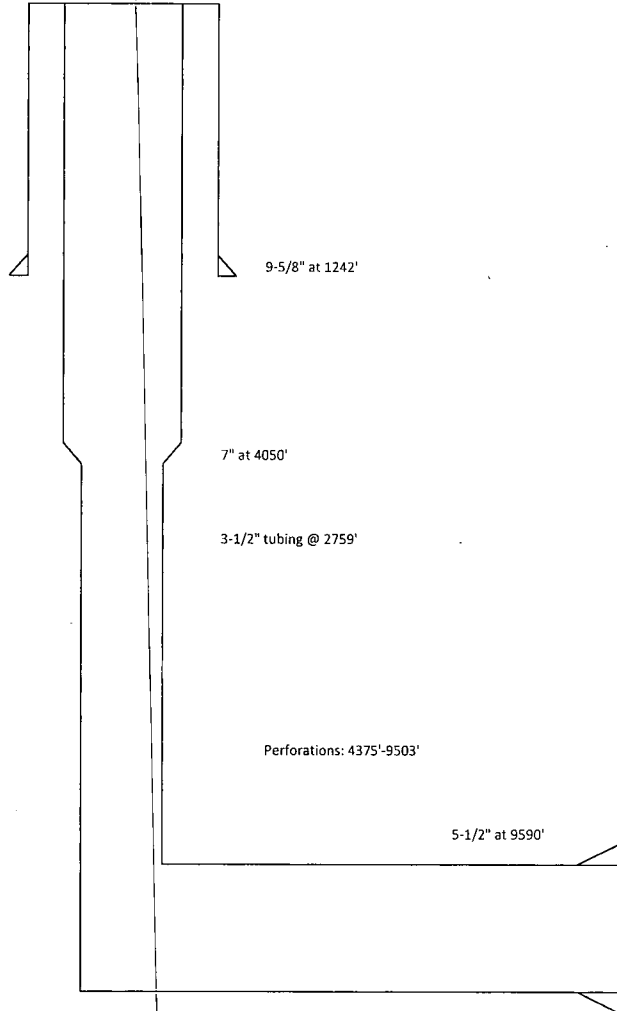
ROSE 4H

County, ST	Eddy, NM
Sec-Twn-Rng	7-19S-25E
Footage	1388' FNL 986' FWL
Survey	

GL	3379'
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Hole Size	12-1/4"
TOC	Surf
Method	Circ Returns

Csg Depth	1242'
Size	9-5/8"
Weight	36#
Grade	J-55
Connections	BTC
Cement	surface



Hole Size	8-3/4"
TOC	Surf
Method	Circ Returns

Csg Depth	9590'	4050'
Size	5-1/2"	7"
Weight	20ppf	32ppf
Grade	L-80	L-80
Connections	BTC	BTC
Cement	surface	

PBTD	9565'
TD MD	9590'
TD TVD	3648'