



PERCUSSION
PETROLEUM
LLC

**NM OIL CONSERVATION
ARTESIA DISTRICT**

MAR 19 2019

RECEIVED

Percussion Petroleum, LLC

Eddy County, NM

Rose

#6H

OH

30-015-45803

Plan: Plan #1

Standard Plan With Toolface

11 March, 2019



Wellbenders Standard Plan With Toolface

Company:	Percussion Petroleum, LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM	TVD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	WBDS_SQL_2

Project	Eddy County, NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Rose		
Site Position:		Northing:	611,332.70 usft
From:	Map	Easting:	512,404.20 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	32.680563
		Longitude:	-104.427371
		Grid Convergence:	-0.051 °

Well	#6H		
Well Position	+N-S	0.00 usft	Latitude: 32.678453
	+E-W	0.00 usft	Longitude: -104.426449
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Ground Level:	3,379.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	3/8/2019	(°)
			7.199
			Dip Angle
			(°)
			60.320
			Field Strength
			(nT)
			47,937.90778146

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			270.26

Survey Tool Program	Date 3/11/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
0.00	8,875.64	Plan #1 (OH)	MWD+IGRF
			Description
			OWSG MWD + IGRF or WMM



Wellbenders

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	WBDS_SQL_2

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
Rose 6H: SHL (1428° FNL & 986° FWL)											
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
353.00	0.00	0.00	353.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
400.00	2.82	255.48	399.98	-0.29	-1.12	1.12	6.00	6.00	0.00	255.476	
450.00	5.82	255.48	449.83	-1.23	-4.77	4.76	6.00	6.00	0.00	0.000	
469.64	7.00	255.48	469.35	-1.78	-6.89	6.88	6.00	6.00	0.00	0.000	
500.00	7.00	255.48	499.48	-2.71	-10.47	10.46	0.00	0.00	0.00	0.000	
600.00	7.00	255.48	598.74	-5.77	-22.26	22.24	0.00	0.00	0.00	0.000	
700.00	7.00	255.48	697.99	-8.82	-34.06	34.02	0.00	0.00	0.00	0.000	
800.00	7.00	255.48	797.25	-11.88	-45.85	45.80	0.00	0.00	0.00	0.000	
900.00	7.00	255.48	896.50	-14.93	-57.65	57.58	0.00	0.00	0.00	0.000	
1,000.00	7.00	255.48	995.76	-17.99	-69.44	69.36	0.00	0.00	0.00	0.000	
1,100.00	7.00	255.48	1,095.01	-21.05	-81.24	81.14	0.00	0.00	0.00	0.000	
1,200.00	7.00	255.48	1,194.27	-24.10	-93.03	92.92	0.00	0.00	0.00	0.000	
1,300.00	7.00	255.48	1,293.52	-27.16	-104.83	104.70	0.00	0.00	0.00	0.000	
1,400.00	7.00	255.48	1,392.78	-30.21	-116.62	116.48	0.00	0.00	0.00	0.000	
1,500.00	7.00	255.48	1,492.03	-33.27	-128.42	128.26	0.00	0.00	0.00	0.000	
1,600.00	7.00	255.48	1,591.29	-36.32	-140.21	140.04	0.00	0.00	0.00	0.000	
1,700.00	7.00	255.48	1,690.54	-39.38	-152.01	151.83	0.00	0.00	0.00	0.000	
1,800.00	7.00	255.48	1,789.80	-42.44	-163.80	163.61	0.00	0.00	0.00	0.000	
1,900.00	7.00	255.48	1,889.05	-45.49	-175.60	175.39	0.00	0.00	0.00	0.000	
2,000.00	7.00	255.48	1,988.31	-48.55	-187.39	187.17	0.00	0.00	0.00	0.000	
2,100.00	7.00	255.48	2,087.56	-51.60	-199.19	198.95	0.00	0.00	0.00	0.000	
2,200.00	7.00	255.48	2,186.82	-54.66	-210.98	210.73	0.00	0.00	0.00	0.000	



Wellbenders

Standard Plan With Toolface

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Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	WBDS_SQL_2

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100ft)	Bulld (°/100ft)	Turn (°/100ft)	TFace (°)	
2,281.20	7.00	255.48	2,267.41	-57.14	-220.56	220.30	0.00	0.00	0.00	0.000	
2,300.00	8.08	257.81	2,286.05	-57.71	-222.96	222.69	6.00	5.78	12.43	16.940	
2,350.00	11.01	261.78	2,335.35	-59.13	-231.12	230.85	6.00	5.86	7.93	14.623	
2,400.00	13.97	264.09	2,384.16	-60.44	-241.86	241.58	6.00	5.92	4.62	10.710	
2,450.00	16.94	265.60	2,432.35	-61.62	-255.13	254.85	6.00	5.95	3.03	8.456	
2,500.00	19.93	266.67	2,479.78	-62.67	-270.90	270.61	6.00	5.96	2.14	6.997	
2,550.00	22.91	267.48	2,526.32	-63.59	-289.13	288.84	6.00	5.97	1.60	5.979	
2,600.00	25.90	268.10	2,571.85	-64.39	-309.78	309.48	6.00	5.98	1.25	5.232	
2,650.00	28.89	268.61	2,616.24	-65.04	-332.77	332.47	6.00	5.98	1.01	4.662	
2,700.00	31.88	269.02	2,659.36	-65.56	-358.06	357.75	6.00	5.99	0.83	4.214	
2,750.00	34.88	269.38	2,701.11	-65.94	-385.56	385.26	6.00	5.99	0.70	3.854	
2,800.00	37.87	269.68	2,741.36	-66.18	-415.21	414.90	6.00	5.99	0.61	3.560	
2,850.00	40.87	269.94	2,780.01	-66.29	-446.92	446.62	6.00	5.99	0.53	3.315	
2,900.00	43.86	270.18	2,816.95	-66.25	-480.61	480.30	6.00	5.99	0.47	3.110	
2,918.97	45.00	270.26	2,830.50	-66.20	-493.89	493.58	6.00	5.99	0.43	2.937	
3,000.00	45.00	270.26	2,887.79	-65.94	-551.19	550.88	0.00	0.00	0.00	0.000	
3,100.00	45.00	270.26	2,958.50	-65.61	-621.90	621.59	0.00	0.00	0.00	0.000	
3,168.97	45.00	270.26	3,007.27	-65.39	-670.66	670.36	0.00	0.00	0.00	0.000	
3,200.00	48.10	270.26	3,028.61	-65.29	-693.19	692.89	10.00	10.00	0.00	0.000	
3,250.00	53.10	270.26	3,060.33	-65.11	-731.81	731.51	10.00	10.00	0.00	0.000	
3,300.00	58.10	270.26	3,088.57	-64.92	-773.06	772.76	10.00	10.00	0.00	0.000	
3,350.00	63.10	270.26	3,113.11	-64.73	-816.61	816.30	10.00	10.00	0.00	0.000	
3,400.00	68.10	270.26	3,133.75	-64.52	-862.13	861.82	10.00	10.00	0.00	0.000	
3,450.00	73.10	270.26	3,150.35	-64.30	-909.27	908.97	10.00	10.00	0.00	0.000	
3,500.00	78.10	270.26	3,162.78	-64.08	-957.69	957.39	10.00	10.00	0.00	0.000	
3,550.00	83.10	270.26	3,170.94	-63.86	-1,007.00	1,006.70	10.00	10.00	0.00	0.000	
3,600.00	88.10	270.26	3,174.77	-63.63	-1,056.84	1,056.54	10.00	10.00	0.00	0.000	



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Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	WBDS_SQL_2

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)	
3,628.97	91.00	270.26	3,175.00	-63.50	-1,085.80	1,085.50	10.00	10.00	0.00	0.000	
Rose 6H: FTP (1481' FNL & 100' FEL)											
3,700.00	91.00	270.26	3,173.76	-63.18	-1,156.82	1,156.52	0.00	0.00	0.00	0.000	
3,800.00	91.00	270.26	3,172.02	-62.72	-1,256.80	1,256.51	0.00	0.00	0.00	0.000	
3,900.00	91.00	270.26	3,170.27	-62.27	-1,356.79	1,356.49	0.00	0.00	0.00	0.000	
4,000.00	91.00	270.26	3,168.52	-61.81	-1,456.77	1,456.48	0.00	0.00	0.00	0.000	
4,100.00	91.00	270.26	3,166.78	-61.35	-1,556.76	1,556.46	0.00	0.00	0.00	0.000	
4,200.00	91.00	270.26	3,165.03	-60.90	-1,656.74	1,656.45	0.00	0.00	0.00	0.000	
4,300.00	91.00	270.26	3,163.29	-60.44	-1,756.72	1,756.43	0.00	0.00	0.00	0.000	
4,400.00	91.00	270.26	3,161.54	-59.99	-1,856.71	1,856.41	0.00	0.00	0.00	0.000	
4,500.00	91.00	270.26	3,159.80	-59.53	-1,956.69	1,956.40	0.00	0.00	0.00	0.000	
4,600.00	91.00	270.26	3,158.05	-59.08	-2,056.67	2,056.38	0.00	0.00	0.00	0.000	
4,700.00	91.00	270.26	3,156.31	-58.62	-2,156.66	2,156.37	0.00	0.00	0.00	0.000	
4,800.00	91.00	270.26	3,154.56	-58.17	-2,256.64	2,256.35	0.00	0.00	0.00	0.000	
4,900.00	91.00	270.26	3,152.82	-57.71	-2,356.62	2,356.34	0.00	0.00	0.00	0.000	
5,000.00	91.00	270.26	3,151.07	-57.26	-2,456.61	2,456.32	0.00	0.00	0.00	0.000	
5,100.00	91.00	270.26	3,149.33	-56.80	-2,556.59	2,556.31	0.00	0.00	0.00	0.000	
5,200.00	91.00	270.26	3,147.58	-56.34	-2,656.58	2,656.29	0.00	0.00	0.00	0.000	
5,300.00	91.00	270.26	3,145.84	-55.89	-2,756.56	2,756.28	0.00	0.00	0.00	0.000	
5,400.00	91.00	270.26	3,144.09	-55.43	-2,856.54	2,856.26	0.00	0.00	0.00	0.000	
5,500.00	91.00	270.26	3,142.35	-54.98	-2,956.53	2,956.25	0.00	0.00	0.00	0.000	
5,600.00	91.00	270.26	3,140.60	-54.52	-3,056.51	3,056.23	0.00	0.00	0.00	0.000	
5,700.00	91.00	270.26	3,138.86	-54.07	-3,156.49	3,156.22	0.00	0.00	0.00	0.000	
5,800.00	91.00	270.26	3,137.11	-53.61	-3,256.48	3,256.20	0.00	0.00	0.00	0.000	
5,900.00	91.00	270.26	3,135.37	-53.16	-3,356.46	3,356.19	0.00	0.00	0.00	0.000	
6,000.00	91.00	270.26	3,133.62	-52.70	-3,456.45	3,456.17	0.00	0.00	0.00	0.000	
6,100.00	91.00	270.26	3,131.88	-52.24	-3,556.43	3,556.16	0.00	0.00	0.00	0.000	



Wellbenders Standard Plan With Toolface

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Site:	Rose	MD Reference:	RKB=16' @ 3395.00usft (Akita 20)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	WBDS_SQL_2

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)	
6,200.00	91.00	270.26	3,130.13	-51.79	-3,656.41	3,656.14	0.00	0.00	0.00	0.000	
6,300.00	91.00	270.26	3,128.39	-51.33	-3,756.40	3,756.13	0.00	0.00	0.00	0.000	
6,400.00	91.00	270.26	3,126.64	-50.88	-3,856.38	3,856.11	0.00	0.00	0.00	0.000	
6,500.00	91.00	270.26	3,124.90	-50.42	-3,956.36	3,956.10	0.00	0.00	0.00	0.000	
6,600.00	91.00	270.26	3,123.15	-49.97	-4,056.35	4,056.08	0.00	0.00	0.00	0.000	
6,700.00	91.00	270.26	3,121.41	-49.51	-4,156.33	4,156.06	0.00	0.00	0.00	0.000	
6,800.00	91.00	270.26	3,119.66	-49.06	-4,256.32	4,256.05	0.00	0.00	0.00	0.000	
6,900.00	91.00	270.26	3,117.91	-48.60	-4,356.30	4,356.03	0.00	0.00	0.00	0.000	
7,000.00	91.00	270.26	3,116.17	-48.15	-4,456.28	4,456.02	0.00	0.00	0.00	0.000	
7,100.00	91.00	270.26	3,114.42	-47.69	-4,556.27	4,556.00	0.00	0.00	0.00	0.000	
7,200.00	91.00	270.26	3,112.68	-47.23	-4,656.25	4,655.99	0.00	0.00	0.00	0.000	
7,300.00	91.00	270.26	3,110.93	-46.78	-4,756.23	4,755.97	0.00	0.00	0.00	0.000	
7,400.00	91.00	270.26	3,109.19	-46.32	-4,856.22	4,855.96	0.00	0.00	0.00	0.000	
7,500.00	91.00	270.26	3,107.44	-45.87	-4,956.20	4,955.94	0.00	0.00	0.00	0.000	
7,600.00	91.00	270.26	3,105.70	-45.41	-5,056.19	5,055.93	0.00	0.00	0.00	0.000	
7,700.00	91.00	270.26	3,103.95	-44.96	-5,156.17	5,155.91	0.00	0.00	0.00	0.000	
7,800.00	91.00	270.26	3,102.21	-44.50	-5,256.15	5,255.90	0.00	0.00	0.00	0.000	
7,900.00	91.00	270.26	3,100.46	-44.05	-5,356.14	5,355.88	0.00	0.00	0.00	0.000	
8,000.00	91.00	270.26	3,098.72	-43.59	-5,456.12	5,455.87	0.00	0.00	0.00	0.000	
8,100.00	91.00	270.26	3,096.97	-43.13	-5,556.10	5,555.85	0.00	0.00	0.00	0.000	
8,200.00	91.00	270.26	3,095.23	-42.68	-5,656.09	5,655.84	0.00	0.00	0.00	0.000	
8,300.00	91.00	270.26	3,093.48	-42.22	-5,756.07	5,755.82	0.00	0.00	0.00	0.000	
8,400.00	91.00	270.26	3,091.74	-41.77	-5,856.06	5,855.81	0.00	0.00	0.00	0.000	
8,500.00	91.00	270.26	3,089.99	-41.31	-5,956.04	5,955.79	0.00	0.00	0.00	0.000	
8,600.00	91.00	270.26	3,088.25	-40.86	-6,056.02	6,055.78	0.00	0.00	0.00	0.000	
8,700.00	91.00	270.26	3,086.50	-40.40	-6,156.01	6,155.76	0.00	0.00	0.00	0.000	



Wellbenders
Standard Plan With Toolface

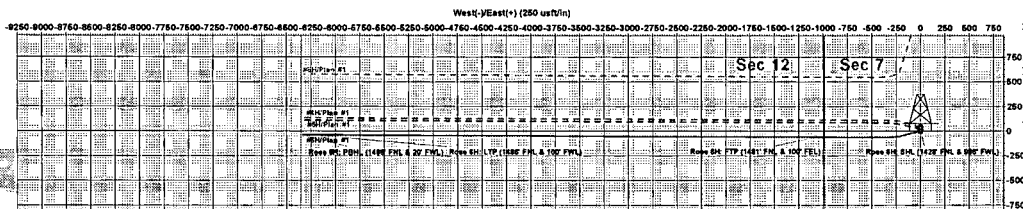
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8,796.01	91.00	270.26	3,084.83	-39.96	-6,252.00	6,251.75	0.00	0.00	0.00	0.000	
Rose 6H: LTP (1486' FNL & 100' FWL)											
8,800.00	91.00	270.26	3,084.76	-39.95	-6,255.99	6,255.74	0.00	0.00	0.00	0.000	
8,876.02	91.00	270.26	3,083.43	-39.60	-6,332.00	6,331.76	0.00	0.00	0.00	0.000	
Rose 6H: PBHL (1486' FNL & 20' FWL)											

Checked By: _____	Approved By: _____	Date: _____
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Company: Percussion Petroleum, LLC
Project: Eddy County, NM
Site: Rose
Well: RSH
Wellbore: OH
Rig: Akita 20
Design: Plan #1 / 13:28, March 11 2019



DESIGN TARGET DETAILS

None	TVD	+N/S	+E/W	North/South	East/West	Latitude	Longitude
Rose 6H: SHL (1428' FNL & 988' FWL)	0.00	0.00	0.00	0.00	0.00	32.878453	104.428648
Rose 6H: PBNL (1488' FNL & 20' FWL)	3083.43	-39.80	-8332.00	819535.20	508355.20	32.878327	104.447028
Rose 6H: LTP (1488' FNL & 100' FWL)	3084.82	-40.80	-8332.00	819535.80	508355.20	32.878278	104.448188
Rose 6H: PTP (1488' FNL & 100' FWL)	3175.80	-43.30	-1051.00	819531.00	511601.00	32.878278	104.428818

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

WELL DETAILS: #6H

RSD-1F @ 3395.00usft (Antis 20)						
3379.00						
+N/S	+E/W	North/South	East/West	Latitude	Longitude	
0.00	0.00	819541.00	512887.20	32.878453	104.428648	

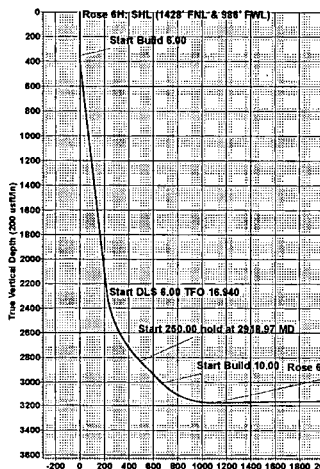
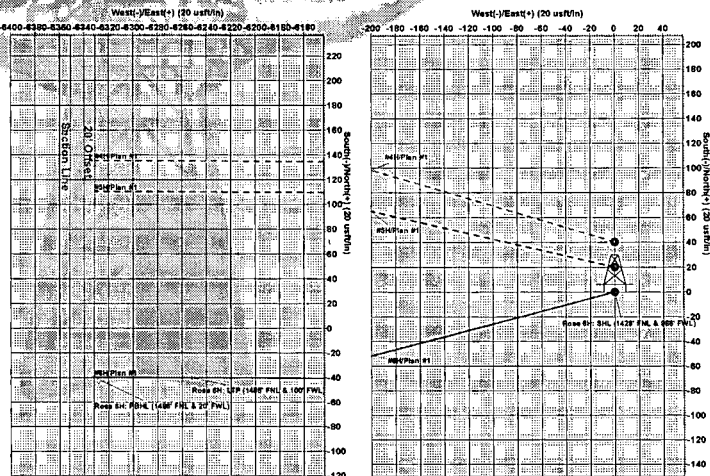
SECTION DETAILS

Sec	WD	Inc	Asz	TVD	+N/S	+E/W	Orig	VShel
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	353.00	0.00	0.00	353.00	0.00	0.00	0.00	0.00
3	469.64	7.00	255.48	469.35	-1.78	-8.89	6.00	6.88
4	2281.20	7.50	265.48	2287.41	-57.14	-226.56	0.00	226.30
5	2918.97	45.00	279.26	2930.50	-48.20	-493.29	0.00	493.58
6	3168.37	45.00	279.26	3007.27	-45.20	-470.06	0.00	870.26
7	3623.87	91.00	279.26	3173.00	-43.30	-1085.80	10.00	1085.50
8	8786.91	91.00	279.26	3084.83	-39.90	-8352.00	0.00	6251.75
9	8878.82	91.00	279.26	3083.43	-39.90	-8322.00	0.00	6231.75



Antenna to Grid North
True North: 0° 25'
Magnetic North: 7° 25'
Magnetic Field
Strength: 47813.0e-1
On Angle: 85.32°
Date: 3/6/2019
Model: 1001015

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



Vertical Section at 270.28° (200 usft/in)



Disclaimer:
This is a directional survey
and does not constitute a
guarantee of results. The
operator is responsible for
the accuracy of the data
and the results of the survey.

Plan: Plan #1 (RSH/OH) Akita 20

Created By: Derek Stephens Date: 13:28, March 11 2019