



PERCUSSION
PETROLEUM
LLC

Percussion Petroleum, LLC

Eddy County, NM

Goodman 22

1H

OH

Plan: Plan #5

Standard Planning Report

02 August, 2017

WELLBENDERS
DIRECTIONAL SERVICES LLC





Company: Percussion Petroleum, LLC
Project: Eddy County, NM
Site: Goodman 22
Well: 1H
Wellbore: OH
Rig: NA
Design: Plan #5 / 10-08, August 02 2017



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

TOTAL CORRECTION
Magnetic North is 7.47° East of Grid North (Magnetic Convergence)

WELL DETAILS: 1H

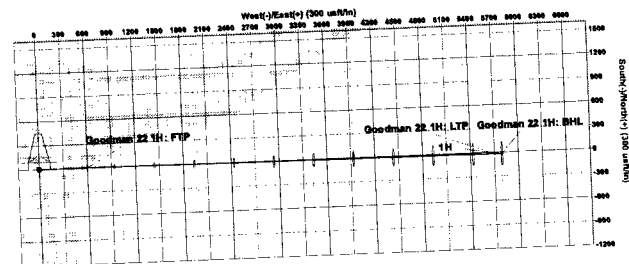
RKB=25' @ 3400.00usft (NA)				
		3471.00		
+N/-S	+E/-W	Northing	Easting	Latitude
0.00	0.00	691233.50	497968.90	32.652759
				-104.474246

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Diag	VSet
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1937.07	88.25	89.73	2509.76	2.61	555.47	10.00	555.45
3	2819.59	88.25	89.73	2511.90	3.90	588.16	0.00	588.08
4	2808.23	88.25	89.73	2511.79	2.81	621.86	2.00	621.84
5	2806.90	88.25	89.73	2511.79	-19.19	5714.90	0.00	5714.93
6	7963.56	88.25	89.73	2567.89	-19.19	5714.90	0.00	5714.93
7	8060.40	88.25	89.73	2669.44	-19.44	5794.90	0.00	5794.93



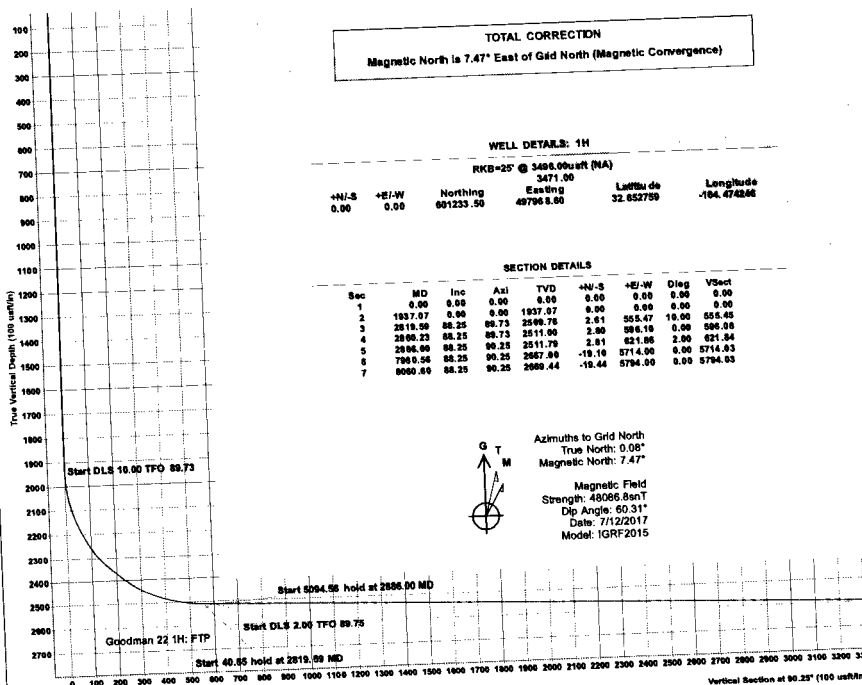
Azimuths to Grid North
True North: 0.08°
Magnetic North: 7.47°
Magnetic Field
Strength: 48086.8nT
Dip Angle: 50.31°
Date: 7/12/2017
Model: IGRF2015



WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Goodman 22 1H: FTP	2511.90	2.60	596.10	691238.30	498264.70	Point
Goodman 22 1H: LTP	2667.90	-19.19	5714.90	691214.40	503682.60	Point
Goodman 22 1H: BHL	2669.40	-19.44	5794.90	691215.10	503782.60	Point

Disclaimer:
All data is preliminary and subject to change without notice. This is provided as a guide only and is not to be used for any other purpose without the express written consent of the provider.



TO at 5000.00
Start 80.64 hold at 7996.00 MD
Goodman 22 1H: LTP Goodman 22 1H: BHL
Plan: Plan #5 (1100H) NA
Created By: Daniel Benn Date: 10-08, August 02 2017



Wellbenders Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 1H
Company:	Percussion Petroleum, LLC	TVD Reference:	RKB=25' @ 3496.00usft (NA)
Project:	Eddy County, NM	MD Reference:	RKB=25' @ 3496.00usft (NA)
Site:	Goodman 22	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

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		Goodman 22			
Site Position:		Northing:	601,029.41 usft	Latitude:	32.652199
From:	Lat/Long	Easting:	498,211.10 usft	Longitude:	-104.473457
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-0.08 °

Well	1H					
Well Position	+N/-S	204.09 usft	Northing:	601,233.50 usft	Latitude:	32.652759
	+E/-W	-242.50 usft	Easting:	497,968.60 usft	Longitude:	-104.474246
Position Uncertainty	0.00 usft		Wellhead Elevation:	Ground Level:		3,471.00 usft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/12/2017	7.39	60.31	48,086.82297780

Design:	Plan #5			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	90.25

Plan Survey Tool Program		Date	8/2/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	8,060.60	Plan #5 (OH)	MWD+IGRF	
				OWSG MWD + IGRF or WH	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,937.07	0.00	0.00	1,937.07	0.00	0.00	0.00	0.00	0.00	0.00	
2,819.59	88.25	89.73	2,509.76	2.61	555.47	10.00	10.00	10.17	89.73	
2,860.23	88.25	89.73	2,511.00	2.80	596.10	0.00	0.00	0.00	0.00	Goodman 22 1H: F
2,886.00	88.25	90.25	2,511.79	2.81	621.86	2.00	0.01	2.00	89.75	
7,980.56	88.25	90.25	2,667.00	-19.10	5,714.00	0.00	0.00	0.00	0.00	Goodman 22 1H: L
8,060.60	88.25	90.25	2,669.44	-19.44	5,794.00	0.00	0.00	0.00	0.00	Goodman 22 1H: B



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Well: 1H
Wellbore: OH
Design: Plan #5

Local Co-ordinate Reference: Well 1H
TVD Reference: RKB=25' @ 3496.00usft (NA)
MD Reference: RKB=25' @ 3496.00usft (NA)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,937.07	0.00	0.00	1,937.07	0.00	0.00	0.00	0.00	0.00	0.00
1,950.00	1.29	89.73	1,950.00	0.00	0.15	0.15	10.00	10.00	0.00
2,000.00	6.29	89.73	1,999.87	0.02	3.45	3.45	10.00	10.00	0.00
2,050.00	11.29	89.73	2,049.27	0.05	11.09	11.09	10.00	10.00	0.00
2,100.00	16.29	89.73	2,097.81	0.11	23.01	23.01	10.00	10.00	0.00
2,150.00	21.29	89.73	2,145.13	0.18	39.11	39.11	10.00	10.00	0.00
2,200.00	26.29	89.73	2,190.87	0.28	59.28	59.28	10.00	10.00	0.00
2,250.00	31.29	89.73	2,234.67	0.39	83.35	83.35	10.00	10.00	0.00
2,300.00	36.29	89.73	2,276.21	0.52	111.15	111.15	10.00	10.00	0.00
2,350.00	41.29	89.73	2,315.17	0.67	142.47	142.46	10.00	10.00	0.00
2,400.00	46.29	89.73	2,351.25	0.83	177.06	177.05	10.00	10.00	0.00
2,450.00	51.29	89.73	2,384.18	1.01	214.66	214.66	10.00	10.00	0.00
2,500.00	56.29	89.73	2,413.71	1.20	254.99	254.99	10.00	10.00	0.00
2,550.00	61.29	89.73	2,439.60	1.40	297.75	297.74	10.00	10.00	0.00
2,600.00	66.29	89.73	2,461.68	1.61	342.59	342.58	10.00	10.00	0.00
2,650.00	71.29	89.73	2,479.76	1.83	389.19	389.18	10.00	10.00	0.00
2,700.00	76.29	89.73	2,493.71	2.05	437.19	437.17	10.00	10.00	0.00
2,750.00	81.29	89.73	2,503.42	2.28	486.22	486.20	10.00	10.00	0.00
2,800.00	86.29	89.73	2,508.83	2.52	535.91	535.89	10.00	10.00	0.00
2,819.59	88.25	89.73	2,509.76	2.61	555.47	555.45	10.00	10.00	0.00
2,860.23	88.25	89.73	2,511.00	2.80	596.10	596.08	0.00	0.00	0.00
2,886.00	88.25	90.25	2,511.79	2.81	621.86	621.84	2.00	0.01	2.00
2,900.00	88.25	90.25	2,512.21	2.74	635.85	635.83	0.00	0.00	0.00
3,000.00	88.25	90.25	2,515.26	2.31	735.80	735.78	0.00	0.00	0.00
3,100.00	88.25	90.25	2,518.31	1.88	835.75	835.74	0.00	0.00	0.00
3,200.00	88.25	90.25	2,521.35	1.45	935.70	935.69	0.00	0.00	0.00
3,300.00	88.25	90.25	2,524.40	1.03	1,035.66	1,035.64	0.00	0.00	0.00
3,400.00	88.25	90.25	2,527.45	0.60	1,135.61	1,135.60	0.00	0.00	0.00
3,500.00	88.25	90.25	2,530.49	0.17	1,235.56	1,235.55	0.00	0.00	0.00
3,600.00	88.25	90.25	2,533.54	-0.26	1,335.52	1,335.50	0.00	0.00	0.00
3,700.00	88.25	90.25	2,536.59	-0.69	1,435.47	1,435.46	0.00	0.00	0.00
3,800.00	88.25	90.25	2,539.63	-1.12	1,535.42	1,535.41	0.00	0.00	0.00
3,900.00	88.25	90.25	2,542.68	-1.55	1,635.37	1,635.36	0.00	0.00	0.00
4,000.00	88.25	90.25	2,545.73	-1.98	1,735.33	1,735.32	0.00	0.00	0.00



Wellbenders Planning Report



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Site: Goodman 22
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Design: Plan #5

Local Co-ordinate Reference: Well 1H
TVD Reference: RKB=25' @ 3496.00usft (NA)
MD Reference: RKB=25' @ 3496.00usft (NA)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,100.00	88.25	90.25	2,548.77	-2.41	1,835.28	1,835.27	0.00	0.00	0.00
4,200.00	88.25	90.25	2,551.82	-2.84	1,935.23	1,935.23	0.00	0.00	0.00
4,300.00	88.25	90.25	2,554.87	-3.27	2,035.18	2,035.18	0.00	0.00	0.00
4,400.00	88.25	90.25	2,557.91	-3.70	2,135.14	2,135.13	0.00	0.00	0.00
4,500.00	88.25	90.25	2,560.96	-4.13	2,235.09	2,235.09	0.00	0.00	0.00
4,600.00	88.25	90.25	2,564.01	-4.56	2,335.04	2,335.04	0.00	0.00	0.00
4,700.00	88.25	90.25	2,567.05	-4.99	2,434.99	2,434.99	0.00	0.00	0.00
4,800.00	88.25	90.25	2,570.10	-5.42	2,534.95	2,534.95	0.00	0.00	0.00
4,900.00	88.25	90.25	2,573.15	-5.85	2,634.90	2,634.90	0.00	0.00	0.00
5,000.00	88.25	90.25	2,576.19	-6.28	2,734.85	2,734.85	0.00	0.00	0.00
5,100.00	88.25	90.25	2,579.24	-6.71	2,834.81	2,834.81	0.00	0.00	0.00
5,200.00	88.25	90.25	2,582.29	-7.14	2,934.76	2,934.76	0.00	0.00	0.00
5,300.00	88.25	90.25	2,585.33	-7.57	3,034.71	3,034.71	0.00	0.00	0.00
5,400.00	88.25	90.25	2,588.38	-8.00	3,134.66	3,134.67	0.00	0.00	0.00
5,500.00	88.25	90.25	2,591.43	-8.43	3,234.62	3,234.62	0.00	0.00	0.00
5,600.00	88.25	90.25	2,594.47	-8.86	3,334.57	3,334.58	0.00	0.00	0.00
5,700.00	88.25	90.25	2,597.52	-9.29	3,434.52	3,434.53	0.00	0.00	0.00
5,800.00	88.25	90.25	2,600.57	-9.72	3,534.47	3,534.48	0.00	0.00	0.00
5,900.00	88.25	90.25	2,603.61	-10.15	3,634.43	3,634.44	0.00	0.00	0.00
6,000.00	88.25	90.25	2,606.66	-10.58	3,734.38	3,734.39	0.00	0.00	0.00
6,100.00	88.25	90.25	2,609.71	-11.01	3,834.33	3,834.34	0.00	0.00	0.00
6,200.00	88.25	90.25	2,612.75	-11.44	3,934.28	3,934.30	0.00	0.00	0.00
6,300.00	88.25	90.25	2,615.80	-11.87	4,034.24	4,034.25	0.00	0.00	0.00
6,400.00	88.25	90.25	2,618.85	-12.30	4,134.19	4,134.20	0.00	0.00	0.00
6,500.00	88.25	90.25	2,621.89	-12.73	4,234.14	4,234.16	0.00	0.00	0.00
6,600.00	88.25	90.25	2,624.94	-13.16	4,334.10	4,334.11	0.00	0.00	0.00
6,700.00	88.25	90.25	2,627.99	-13.59	4,434.05	4,434.07	0.00	0.00	0.00
6,800.00	88.25	90.25	2,631.03	-14.02	4,534.00	4,534.02	0.00	0.00	0.00
6,900.00	88.25	90.25	2,634.08	-14.45	4,633.95	4,633.97	0.00	0.00	0.00
7,000.00	88.25	90.25	2,637.13	-14.88	4,733.91	4,733.93	0.00	0.00	0.00
7,100.00	88.25	90.25	2,640.17	-15.31	4,833.86	4,833.88	0.00	0.00	0.00
7,200.00	88.25	90.25	2,643.22	-15.74	4,933.81	4,933.83	0.00	0.00	0.00
7,300.00	88.25	90.25	2,646.27	-16.17	5,033.76	5,033.79	0.00	0.00	0.00
7,400.00	88.25	90.25	2,649.31	-16.60	5,133.72	5,133.74	0.00	0.00	0.00
7,500.00	88.25	90.25	2,652.36	-17.03	5,233.67	5,233.69	0.00	0.00	0.00
7,600.00	88.25	90.25	2,655.41	-17.46	5,333.62	5,333.65	0.00	0.00	0.00
7,700.00	88.25	90.25	2,658.45	-17.89	5,433.57	5,433.60	0.00	0.00	0.00
7,800.00	88.25	90.25	2,661.50	-18.32	5,533.53	5,533.55	0.00	0.00	0.00
7,900.00	88.25	90.25	2,664.55	-18.75	5,633.48	5,633.51	0.00	0.00	0.00
7,980.56	88.25	90.25	2,667.00	-19.10	5,714.00	5,714.03	0.00	0.00	0.00
8,000.00	88.25	90.25	2,667.59	-19.18	5,733.43	5,733.46	0.00	0.00	0.00
8,060.60	88.25	90.25	2,669.44	-19.44	5,794.00	5,794.03	0.00	0.00	0.00



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Site: Goodman 22
Well: 1H
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Local Co-ordinate Reference: Well 1H
TVD Reference: RKB=25' @ 3496.00usft (NA)
MD Reference: RKB=25' @ 3496.00usft (NA)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Goodman 22 1H: FTP - plan hits target center - Point	0.00	360.00	2,511.00	2.80	596.10	601,236.30	498,564.70	32.652769	-104.472309
Goodman 22 1H: LTP - plan hits target center - Point	0.00	360.00	2,667.00	-19.10	5,714.00	601,214.40	503,682.60	32.652726	-104.455680
Goodman 22 1H: BHL - plan misses target center by 0.06usft at 8060.60usft MD (2669.44 TVD, -19.44 N, 5794.00 E) - Point	0.00	0.01	2,669.40	-19.40	5,794.00	601,214.10	503,762.60	32.652726	-104.455420