

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 07 2019

RECEIVED



PERCUSSION
PETROLEUM
LLC

Percussion Petroleum, LLC

Eddy County, NM
Ross Ranch 22 Unit
#14H
OH

30-015-45695

Plan: Plan #1

Standard Plan With Toolface

05 February, 2019





Wellbenders
Standard Plan With Toolface



Company: Percussion Petroleum, LLC
Project: Eddy County, NM
Site: Ross Ranch 22 Unit
Well: #14H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #14H
TVD Reference: RKB=16' @ 3488.00usft (Akita 20)
MD Reference: RKB=16' @ 3488.00usft (Akita 20)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS_SQL_2

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 Ross Ranch 22 Unit

Site Position:	Map	Northing:	595,580.00 usft	Latitude:	32.637213
From:		Easting:	496,397.80 usft	Longitude:	-104.479324
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-0.079 °

Well #14H

Well Position	+N-S	0.00 usft	Northing:	595,520.30 usft	Latitude:	32.637049
	+E-W	0.00 usft	Easting:	496,397.70 usft	Longitude:	-104.479324
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,472.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/5/2019	7.228	60.274	47,915.72902574

Design Plan #1

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	359.91

Survey Tool Program Date 2/5/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	9,314.86	Plan #1 (OH)	MWD+IGRF	OWSG MWD + IGRF or WMM



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TVD Reference: RKB=18' @ 3488.00usft (Akita 20)
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
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 (")
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
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
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,288.00	0.00	0.00	1,288.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,300.00	0.36	278.17	1,300.00	0.01	-0.04	0.01	3.00	3.00	0.00	278.171
1,400.00	3.36	278.17	1,399.94	0.47	-3.25	0.47	3.00	3.00	0.00	0.000
1,437.91	4.50	278.17	1,437.76	0.84	-5.82	0.84	3.00	3.00	0.00	0.000
1,500.00	4.50	278.17	1,499.85	1.53	-10.64	1.54	0.00	0.00	0.00	0.000
1,600.00	4.50	278.17	1,599.35	2.64	-18.40	2.67	0.00	0.00	0.00	0.000
1,700.00	4.50	278.17	1,699.04	3.76	-26.16	3.80	0.00	0.00	0.00	0.000
1,800.00	4.50	278.17	1,798.73	4.87	-33.93	4.92	0.00	0.00	0.00	0.000
1,900.00	4.50	278.17	1,898.42	5.99	-41.69	6.05	0.00	0.00	0.00	0.000
2,000.00	4.50	278.17	1,998.12	7.10	-49.45	7.18	0.00	0.00	0.00	0.000
2,100.00	4.50	278.17	2,097.81	8.21	-57.21	8.30	0.00	0.00	0.00	0.000
2,200.00	4.50	278.17	2,197.50	9.33	-64.97	9.43	0.00	0.00	0.00	0.000
2,300.00	4.50	278.17	2,297.19	10.44	-72.74	10.58	0.00	0.00	0.00	0.000
2,400.00	4.50	278.17	2,396.88	11.56	-80.50	11.68	0.00	0.00	0.00	0.000



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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 (°)
2,500.00	4.50	278.17	2,496.58	12.67	-88.26	12.81	0.00	0.00	0.00	0.000
2,600.00	4.50	278.17	2,596.27	13.79	-96.02	13.94	0.00	0.00	0.00	0.000
2,700.00	4.50	278.17	2,695.96	14.90	-103.78	15.06	0.00	0.00	0.00	0.000
2,800.00	4.50	278.17	2,795.65	16.02	-111.54	16.19	0.00	0.00	0.00	0.000
2,828.44	4.50	278.17	2,824.01	16.33	-113.75	16.51	0.00	0.00	0.00	0.000
2,850.00	4.97	298.38	2,845.49	16.90	-115.41	17.08	8.00	2.20	93.77	84.345
2,900.00	7.62	326.67	2,895.20	20.70	-119.14	20.88	8.00	5.29	56.57	64.200
2,950.00	11.10	338.99	2,944.53	27.96	-122.69	28.15	8.00	6.97	24.63	36.071
3,000.00	14.84	345.32	2,993.25	38.66	-126.04	38.85	8.00	7.49	12.67	23.910
3,050.00	18.69	349.12	3,041.11	52.73	-129.17	52.93	8.00	7.70	7.60	17.733
3,100.00	22.59	351.66	3,087.89	70.10	-132.08	70.31	8.00	7.80	5.07	14.091
3,150.00	26.52	353.48	3,133.36	90.71	-134.74	90.92	8.00	7.86	3.64	11.719
3,200.00	30.47	354.85	3,177.30	114.43	-137.15	114.65	8.00	7.89	2.76	10.064
3,250.00	34.43	355.94	3,219.49	141.17	-139.29	141.39	8.00	7.91	2.18	8.853
3,300.00	38.39	356.83	3,259.72	170.78	-141.15	171.00	8.00	7.93	1.78	7.934
3,350.00	42.36	357.58	3,297.80	203.12	-142.72	203.35	8.00	7.94	1.49	7.219
3,400.00	46.34	358.21	3,333.55	238.04	-144.00	238.27	8.00	7.95	1.28	6.650
3,450.00	50.31	358.78	3,368.79	275.37	-144.97	275.60	8.00	7.96	1.12	6.193
3,500.00	54.29	359.27	3,397.36	314.92	-145.64	315.15	8.00	7.96	1.00	5.820
3,550.00	58.28	359.73	3,425.10	356.50	-146.00	356.73	8.00	7.96	0.90	5.514
3,571.63	60.00	359.91	3,436.20	375.06	-146.06	375.29	8.00	7.97	0.85	5.264
3,600.00	60.00	359.91	3,450.38	399.64	-146.10	399.87	0.00	0.00	0.00	0.000
3,700.00	60.00	359.91	3,500.38	486.24	-146.23	486.47	0.00	0.00	0.00	0.000
3,800.00	60.00	359.91	3,550.38	572.84	-146.37	573.07	0.00	0.00	0.00	0.000
3,821.63	60.00	359.91	3,561.20	591.57	-146.40	591.80	0.00	0.00	0.00	0.000
3,825.00	60.40	359.91	3,562.87	594.50	-146.41	594.73	12.00	12.00	0.00	0.000
3,850.00	63.40	359.91	3,574.64	616.55	-146.44	616.78	12.00	12.00	0.00	0.000



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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 (°)
3,875.00	66.40	359.91	3,585.25	639.19	-146.48	639.42	12.00	12.00	0.00	0.000
3,900.00	69.40	359.91	3,594.65	662.35	-146.51	662.58	12.00	12.00	0.00	0.000
3,925.00	72.40	359.91	3,602.83	685.97	-146.55	686.20	12.00	12.00	0.00	0.000
3,950.00	75.40	359.91	3,609.76	709.99	-146.59	710.22	12.00	12.00	0.00	0.000
3,975.00	78.40	359.91	3,615.42	734.33	-146.63	734.56	12.00	12.00	0.00	0.000
4,000.00	81.40	359.91	3,619.80	758.94	-146.67	759.17	12.00	12.00	0.00	0.000
4,025.00	84.40	359.91	3,622.89	783.75	-146.71	783.98	12.00	12.00	0.00	0.000
4,050.00	87.40	359.91	3,624.67	808.68	-146.75	808.91	12.00	12.00	0.00	0.000
4,075.00	90.40	359.91	3,625.15	833.68	-146.79	833.91	12.00	12.00	0.00	0.000
4,084.13	91.50	359.91	3,625.00	842.80	-146.80	843.03	12.00	12.00	0.00	0.000
4,100.00	91.50	359.91	3,624.58	858.67	-146.83	858.90	0.00	0.00	0.00	0.000
4,200.00	91.50	359.91	3,621.97	958.63	-146.98	958.86	0.00	0.00	0.00	0.000
4,300.00	91.50	359.91	3,619.35	1,058.60	-147.14	1,058.83	0.00	0.00	0.00	0.000
4,400.00	91.50	359.91	3,616.73	1,158.57	-147.30	1,158.80	0.00	0.00	0.00	0.000
4,500.00	91.50	359.91	3,614.11	1,258.53	-147.46	1,258.76	0.00	0.00	0.00	0.000
4,600.00	91.50	359.91	3,611.50	1,358.50	-147.62	1,358.73	0.00	0.00	0.00	0.000
4,700.00	91.50	359.91	3,608.88	1,458.46	-147.78	1,458.69	0.00	0.00	0.00	0.000
4,800.00	91.50	359.91	3,606.26	1,558.43	-147.94	1,558.66	0.00	0.00	0.00	0.000
4,900.00	91.50	359.91	3,603.64	1,658.39	-148.09	1,658.62	0.00	0.00	0.00	0.000
5,000.00	91.50	359.91	3,601.03	1,758.36	-148.25	1,758.59	0.00	0.00	0.00	0.000
5,100.00	91.50	359.91	3,598.41	1,858.32	-148.41	1,858.56	0.00	0.00	0.00	0.000
5,200.00	91.50	359.91	3,595.79	1,958.29	-148.57	1,958.52	0.00	0.00	0.00	0.000
5,300.00	91.50	359.91	3,593.17	2,058.26	-148.73	2,058.49	0.00	0.00	0.00	0.000
5,400.00	91.50	359.91	3,590.56	2,158.22	-148.89	2,158.45	0.00	0.00	0.00	0.000
5,500.00	91.50	359.91	3,587.94	2,258.19	-149.05	2,258.42	0.00	0.00	0.00	0.000
5,600.00	91.50	359.91	3,585.32	2,358.15	-149.21	2,358.38	0.00	0.00	0.00	0.000
5,700.00	91.50	359.91	3,582.70	2,458.12	-149.36	2,458.35	0.00	0.00	0.00	0.000



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5,800.00	91.50	359.91	3,580.09	2,558.08	-149.52	2,558.32	0.00	0.00	0.00	0.000
5,900.00	91.50	359.91	3,577.47	2,658.05	-149.68	2,658.28	0.00	0.00	0.00	0.000
6,000.00	91.50	359.91	3,574.85	2,758.02	-149.84	2,758.25	0.00	0.00	0.00	0.000
6,100.00	91.50	359.91	3,572.23	2,857.98	-150.00	2,858.21	0.00	0.00	0.00	0.000
6,200.00	91.50	359.91	3,569.61	2,957.95	-150.16	2,958.18	0.00	0.00	0.00	0.000
6,300.00	91.50	359.91	3,567.00	3,057.91	-150.32	3,058.14	0.00	0.00	0.00	0.000
6,400.00	91.50	359.91	3,564.38	3,157.88	-150.47	3,158.11	0.00	0.00	0.00	0.000
6,500.00	91.50	359.91	3,561.76	3,257.84	-150.63	3,258.08	0.00	0.00	0.00	0.000
6,600.00	91.50	359.91	3,559.14	3,357.81	-150.79	3,358.04	0.00	0.00	0.00	0.000
6,700.00	91.50	359.91	3,556.53	3,457.77	-150.95	3,458.01	0.00	0.00	0.00	0.000
6,800.00	91.50	359.91	3,553.91	3,557.74	-151.11	3,557.97	0.00	0.00	0.00	0.000
6,900.00	91.50	359.91	3,551.29	3,657.71	-151.27	3,657.94	0.00	0.00	0.00	0.000
7,000.00	91.50	359.91	3,548.67	3,757.67	-151.43	3,757.90	0.00	0.00	0.00	0.000
7,100.00	91.50	359.91	3,546.06	3,857.64	-151.58	3,857.87	0.00	0.00	0.00	0.000
7,200.00	91.50	359.91	3,543.44	3,957.60	-151.74	3,957.84	0.00	0.00	0.00	0.000
7,300.00	91.50	359.91	3,540.82	4,057.57	-151.90	4,057.80	0.00	0.00	0.00	0.000
7,400.00	91.50	359.91	3,538.20	4,157.53	-152.06	4,157.77	0.00	0.00	0.00	0.000
7,500.00	91.50	359.91	3,535.59	4,257.50	-152.22	4,257.73	0.00	0.00	0.00	0.000
7,600.00	91.50	359.91	3,532.97	4,357.47	-152.38	4,357.70	0.00	0.00	0.00	0.000
7,700.00	91.50	359.91	3,530.35	4,457.43	-152.54	4,457.68	0.00	0.00	0.00	0.000
7,800.00	91.50	359.91	3,527.73	4,557.40	-152.70	4,557.63	0.00	0.00	0.00	0.000
7,900.00	91.50	359.91	3,525.12	4,657.36	-152.85	4,657.60	0.00	0.00	0.00	0.000
8,000.00	91.50	359.91	3,522.50	4,757.33	-153.01	4,757.56	0.00	0.00	0.00	0.000
8,100.00	91.50	359.91	3,519.88	4,857.29	-153.17	4,857.53	0.00	0.00	0.00	0.000
8,200.00	91.50	359.91	3,517.26	4,957.26	-153.33	4,957.49	0.00	0.00	0.00	0.000
8,300.00	91.50	359.91	3,514.65	5,057.22	-153.49	5,057.48	0.00	0.00	0.00	0.000
8,400.00	91.50	359.91	3,512.03	5,157.19	-153.65	5,157.43	0.00	0.00	0.00	0.000



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8,500.00	91.50	359.91	3,509.41	5,257.18	-153.81	5,257.39	0.00	0.00	0.00	0.000
8,600.00	91.50	359.91	3,506.79	5,357.12	-153.98	5,357.36	0.00	0.00	0.00	0.000
8,700.00	91.50	359.91	3,504.17	5,457.09	-154.12	5,457.32	0.00	0.00	0.00	0.000
8,800.00	91.50	359.91	3,501.56	5,557.05	-154.28	5,557.29	0.00	0.00	0.00	0.000
8,900.00	91.50	359.91	3,498.94	5,657.02	-154.44	5,657.25	0.00	0.00	0.00	0.000
9,000.00	91.50	359.91	3,496.32	5,756.98	-154.60	5,757.22	0.00	0.00	0.00	0.000
9,100.00	91.50	359.91	3,493.70	5,856.95	-154.76	5,857.19	0.00	0.00	0.00	0.000
9,200.00	91.50	359.91	3,491.09	5,956.91	-154.92	5,957.15	0.00	0.00	0.00	0.000
9,300.00	91.50	359.91	3,488.47	6,056.88	-155.08	6,057.12	0.00	0.00	0.00	0.000
9,315.62	91.50	359.91	3,488.06	6,072.50	-155.10	6,072.74	0.00	0.00	0.00	0.000

Checked By: _____ Approved By: _____ Date: _____