

NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 16 2018

RECEIVED



PERCUSSION
PETROLEUM
LLC

Percussion Petroleum, LLC

Eddy County, NM
Ross Ranch 22 Unit
#11H
OH

30-015-45448

Plan: Plan #2

Standard Plan With Toolface

02 November, 2018





Company: Percussion Petroleum, LLC
Project: Eddy County, NM
Site: Rose Ranch 22 Unit
Well: #11H
Rig:
Wellbore: OH
Design: Plan #2 / 6:56, November 02 2018



WELL DETAIL: #11H

ROSE - 17 @ 3458 Meter

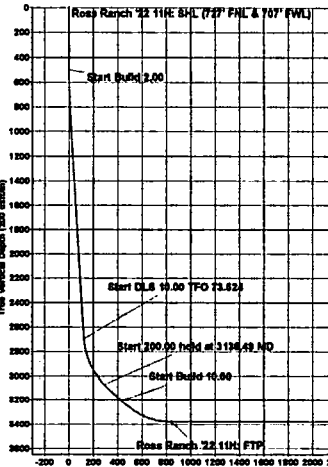
WOB	WOB	WOB	WOB	WOB	WOB
9.00	9.00	9.00	9.00	9.00	9.00

SECTION DETAILS

Sec	WOB	WOB	WOB	WOB	WOB	WOB	WOB	WOB	WOB
1	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
2	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
3	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
5	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
6	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
7	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
8	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00

DESIGN TARGET DETAILS

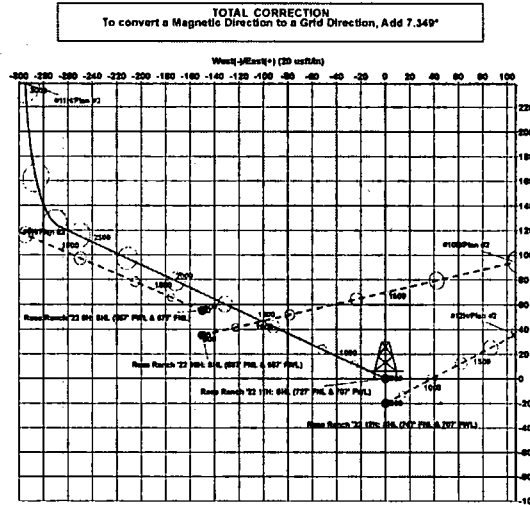
Name	WOB	WOB	WOB	WOB	WOB	WOB	WOB
Rose Ranch 22 11H: SHL (727' FHL & 707' FWL)	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Rose Ranch 22 11H: LTP	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Rose Ranch 22 11H: PBL (67' FHL & 67' FWL)	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Rose Ranch 22 11H: PBL (67' FHL & 67' FWL)	9.00	9.00	9.00	9.00	9.00	9.00	9.00



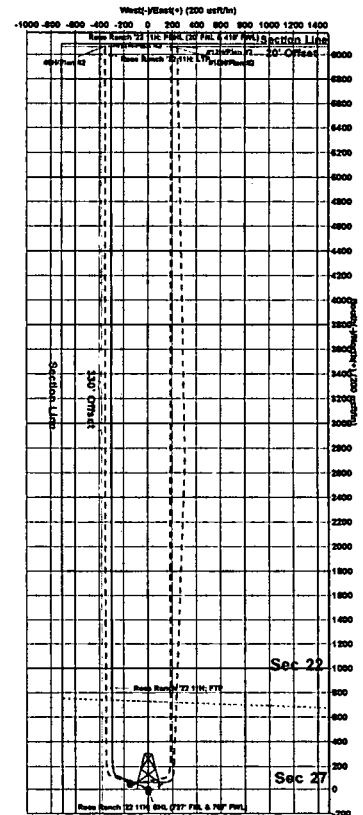
PROJECT DETAILS: Eddy County, NM
Geographic System: US State Plane 1983
Datum: North American Datum 1983
Elevation: 1000
Zone: North American Datum Zone
System Datum: Mean Sea Level



Adjusted to Grid North
True North: 0.00°
Magnetic North: 7.33°
Magnetic Declination: 7.33°
Magnetic Field
Strength: 17000 Gauss
Dip Angle: 60.20°
Date: 01/01/2018
Model: IGRF2015



Disclaimer:
This document is the property of Percussion Petroleum, LLC.
It is to be used for the purpose of the project only.
It is not to be used for any other purpose.
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Plan: Plan #2 (011H00H)
Created By: Derek Stephens Date: 6:57, November 02 2018



Wellbenders
Standard Plan With Toolface



Company: Percussion Petroleum, LLC
Project: Eddy County, NM
Site: Ross Ranch 22 Unit
Well: #11H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference:
TVD Reference: RKB = 17' @ 3488.00usft
MD Reference: RKB = 17' @ 3488.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS_SQL_2

Well #11H

RKB = 17' @ 3488.00usft

RKB = 17' @ 3488.00usft

Grid

Minimum Curvature

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: Northing: 595,580.00 usft Latitude: 32.837213
From: Map Easting: 496,397.90 usft Longitude: -104.478324
Position Uncertainty: 0.00 usft Slot Radius: 13.200 in Grid Convergence: -0.079 °

Well #11H

Well Position +N-S 0.00 usft Northing: 595,524.90 usft Latitude: 32.837063
+E-W 0.00 usft Easting: 496,547.80 usft Longitude: -104.478837
Position Uncertainty 0.00 usft Wellhead Elevation: usft Ground Level: 3,471.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/14/2018	7.270	60.279	47,956.31237881

Design Plan #2

Audit Notes:
Version: Phase: PLAN Tie On Depth: 0.00
Vertical Section: Depth From (TVD) +N-S +E-W Direction
(usft) (usft) (usft) (°)
0.00 0.00 0.00 359.91

Survey Tool Program Date 11/2/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	9,016.19	Plan #2 (OH)	MWD+IGRF	OWSG MWD + IGRF or WMM



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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)	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
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	2.00	294.70	599.98	0.73	-1.59	0.73	2.00	2.00	0.00	294.695
700.00	4.00	294.70	699.84	2.92	-6.34	2.93	2.00	2.00	0.00	0.000
800.00	6.00	294.70	799.45	6.56	-14.26	6.58	2.00	2.00	0.00	0.000
900.00	8.00	294.70	898.70	11.65	-25.33	11.69	2.00	2.00	0.00	0.000
920.40	8.41	294.70	918.89	12.86	-27.97	12.91	2.00	2.00	0.00	0.000
1,000.00	8.41	294.70	997.64	17.73	-38.55	17.79	0.00	0.00	0.00	0.000
1,100.00	8.41	294.70	1,098.56	23.84	-51.83	23.92	0.00	0.00	0.00	0.000
1,200.00	8.41	294.70	1,195.49	29.95	-65.12	30.05	0.00	0.00	0.00	0.000
1,300.00	8.41	294.70	1,294.41	36.05	-78.40	36.18	0.00	0.00	0.00	0.000
1,400.00	8.41	294.70	1,393.34	42.16	-91.69	42.31	0.00	0.00	0.00	0.000
1,500.00	8.41	294.70	1,492.26	48.27	-104.97	48.44	0.00	0.00	0.00	0.000
1,600.00	8.41	294.70	1,591.19	54.38	-118.26	54.57	0.00	0.00	0.00	0.000
1,700.00	8.41	294.70	1,690.11	60.49	-131.54	60.70	0.00	0.00	0.00	0.000
1,800.00	8.41	294.70	1,789.04	66.60	-144.83	66.83	0.00	0.00	0.00	0.000
1,900.00	8.41	294.70	1,887.96	72.71	-158.11	72.96	0.00	0.00	0.00	0.000
2,000.00	8.41	294.70	1,986.89	78.82	-171.40	79.09	0.00	0.00	0.00	0.000
2,100.00	8.41	294.70	2,085.81	84.93	-184.68	85.22	0.00	0.00	0.00	0.000
2,200.00	8.41	294.70	2,184.74	91.04	-197.97	91.35	0.00	0.00	0.00	0.000
2,300.00	8.41	294.70	2,283.66	97.14	-211.25	97.48	0.00	0.00	0.00	0.000
2,400.00	8.41	294.70	2,382.59	103.25	-224.54	103.61	0.00	0.00	0.00	0.000
2,500.00	8.41	294.70	2,481.52	109.36	-237.82	109.74	0.00	0.00	0.00	0.000



Wellbenders
Standard Plan With Toolface



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MD Reference: RKB = 17' @ 3488.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS_SQL_2

Planned Survey

MD (usft)	Inc (°)	Asl (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLog (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
2,600.00	8.41	294.70	2,580.44	115.47	-251.11	115.87	0.00	0.00	0.00	0.000
2,700.00	8.41	294.70	2,679.37	121.58	-264.39	122.00	0.00	0.00	0.00	0.000
2,716.24	8.41	294.70	2,695.43	122.57	-266.55	122.99	0.00	0.00	0.00	0.000
2,750.00	9.91	313.86	2,728.77	125.62	-270.89	126.04	10.00	4.44	58.76	73.524
2,800.00	13.43	331.67	2,777.74	133.71	-278.75	134.15	10.00	7.05	35.62	54.597
2,850.00	17.67	341.66	2,825.91	148.03	-281.89	146.48	10.00	8.48	19.97	37.139
2,900.00	22.22	347.77	2,872.90	162.49	-286.29	162.94	10.00	9.10	12.22	27.513
2,950.00	26.93	351.86	2,918.37	182.95	-289.89	183.40	10.00	9.41	8.18	21.763
3,000.00	31.71	354.80	2,961.95	207.26	-292.69	207.72	10.00	9.58	5.89	18.038
3,050.00	36.56	357.04	3,003.33	235.23	-294.65	235.70	10.00	9.68	4.47	15.470
3,100.00	41.43	358.82	3,042.18	266.66	-295.78	267.13	10.00	9.75	3.55	13.617
3,138.49	45.00	359.91	3,068.76	291.64	-296.03	292.10	10.00	9.79	2.99	12.234
3,200.00	45.00	359.91	3,113.68	336.55	-296.10	337.01	0.00	0.00	0.00	0.000
3,300.00	45.00	359.91	3,184.39	407.26	-296.22	407.72	0.00	0.00	0.00	0.000
3,338.49	45.00	359.91	3,210.18	433.06	-296.26	433.52	0.00	0.00	0.00	0.000
3,350.00	48.35	359.91	3,219.63	442.73	-296.27	443.19	10.00	10.00	0.00	0.000
3,400.00	51.35	359.91	3,252.52	480.37	-296.33	480.83	10.00	10.00	0.00	0.000
3,450.00	58.35	359.91	3,282.00	520.73	-296.40	521.19	10.00	10.00	0.00	0.000
3,500.00	61.35	359.91	3,307.86	563.50	-296.46	563.97	10.00	10.00	0.00	0.000
3,550.00	66.35	359.91	3,329.89	608.37	-296.54	608.84	10.00	10.00	0.00	0.000
3,600.00	71.35	359.91	3,347.92	654.99	-296.61	655.46	10.00	10.00	0.00	0.000
3,650.00	76.35	359.91	3,361.82	703.00	-296.69	703.47	10.00	10.00	0.00	0.000
3,700.00	81.35	359.91	3,371.49	752.04	-296.76	752.51	10.00	10.00	0.00	0.000
3,750.00	86.35	359.91	3,376.84	801.74	-296.84	802.21	10.00	10.00	0.00	0.000
3,788.48	90.00	359.91	3,378.00	838.20	-296.90	838.67	10.00	10.00	0.00	0.000
3,800.00	90.00	359.91	3,378.00	851.72	-296.92	852.18	0.00	0.00	0.00	0.000
3,900.00	90.00	359.91	3,378.00	951.72	-297.08	952.18	0.00	0.00	0.00	0.000



Wellbenders
Standard Plan With Toolface



Company: Percussion Petroleum, LLC
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Site: Ross Ranch 22 Unit
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Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #11H
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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)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
4,000.00	90.00	359.91	3,378.00	1,051.72	-297.24	1,052.18	0.00	0.00	0.00	0.000
4,100.00	90.00	359.91	3,378.00	1,151.71	-297.40	1,152.18	0.00	0.00	0.00	0.000
4,200.00	90.00	359.91	3,378.00	1,251.71	-297.56	1,252.18	0.00	0.00	0.00	0.000
4,300.00	90.00	359.91	3,378.00	1,351.71	-297.71	1,352.18	0.00	0.00	0.00	0.000
4,400.00	90.00	359.91	3,378.00	1,451.71	-297.87	1,452.18	0.00	0.00	0.00	0.000
4,500.00	90.00	359.91	3,378.00	1,551.71	-298.03	1,552.18	0.00	0.00	0.00	0.000
4,600.00	90.00	359.91	3,378.00	1,651.71	-298.19	1,652.18	0.00	0.00	0.00	0.000
4,700.00	90.00	359.91	3,378.00	1,751.71	-298.35	1,752.18	0.00	0.00	0.00	0.000
4,800.00	90.00	359.91	3,378.00	1,851.71	-298.51	1,852.18	0.00	0.00	0.00	0.000
4,900.00	90.00	359.91	3,378.00	1,951.71	-298.67	1,952.18	0.00	0.00	0.00	0.000
5,000.00	90.00	359.91	3,378.00	2,051.71	-298.83	2,052.18	0.00	0.00	0.00	0.000
5,100.00	90.00	359.91	3,378.00	2,151.71	-298.98	2,152.18	0.00	0.00	0.00	0.000
5,200.00	90.00	359.91	3,378.00	2,251.71	-299.14	2,252.18	0.00	0.00	0.00	0.000
5,300.00	90.00	359.91	3,378.00	2,351.71	-299.30	2,352.18	0.00	0.00	0.00	0.000
5,400.00	90.00	359.91	3,378.00	2,451.71	-299.46	2,452.18	0.00	0.00	0.00	0.000
5,500.00	90.00	359.91	3,378.00	2,551.71	-299.62	2,552.18	0.00	0.00	0.00	0.000
5,600.00	90.00	359.91	3,378.00	2,651.71	-299.78	2,652.18	0.00	0.00	0.00	0.000
5,700.00	90.00	359.91	3,378.00	2,751.71	-299.94	2,752.18	0.00	0.00	0.00	0.000
5,800.00	90.00	359.91	3,378.00	2,851.71	-300.10	2,852.18	0.00	0.00	0.00	0.000
5,900.00	90.00	359.91	3,378.00	2,951.71	-300.25	2,952.18	0.00	0.00	0.00	0.000
6,000.00	90.00	359.91	3,378.00	3,051.71	-300.41	3,052.18	0.00	0.00	0.00	0.000
6,100.00	90.00	359.91	3,378.00	3,151.71	-300.57	3,152.18	0.00	0.00	0.00	0.000
6,200.00	90.00	359.91	3,378.00	3,251.71	-300.73	3,252.18	0.00	0.00	0.00	0.000
6,300.00	90.00	359.91	3,378.00	3,351.71	-300.89	3,352.18	0.00	0.00	0.00	0.000
6,400.00	90.00	359.91	3,378.00	3,451.71	-301.05	3,452.18	0.00	0.00	0.00	0.000
6,500.00	90.00	359.91	3,378.00	3,551.71	-301.21	3,552.18	0.00	0.00	0.00	0.000
6,600.00	90.00	359.91	3,378.00	3,651.71	-301.37	3,652.18	0.00	0.00	0.00	0.000



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6,700.00	90.00	359.91	3,378.00	3,751.71	-301.52	3,752.18	0.00	0.00	0.00	0.000
6,800.00	90.00	359.91	3,378.00	3,851.71	-301.68	3,852.18	0.00	0.00	0.00	0.000
6,900.00	90.00	359.91	3,378.00	3,951.71	-301.84	3,952.18	0.00	0.00	0.00	0.000
7,000.00	90.00	359.91	3,378.00	4,051.71	-302.00	4,052.18	0.00	0.00	0.00	0.000
7,100.00	90.00	359.91	3,378.00	4,151.71	-302.16	4,152.18	0.00	0.00	0.00	0.000
7,200.00	90.00	359.91	3,378.00	4,251.71	-302.32	4,252.18	0.00	0.00	0.00	0.000
7,300.00	90.00	359.91	3,378.00	4,351.71	-302.48	4,352.18	0.00	0.00	0.00	0.000
7,400.00	90.00	359.91	3,378.00	4,451.71	-302.63	4,452.18	0.00	0.00	0.00	0.000
7,500.00	90.00	359.91	3,378.00	4,551.71	-302.79	4,552.18	0.00	0.00	0.00	0.000
7,600.00	90.00	359.91	3,378.00	4,651.71	-302.95	4,652.18	0.00	0.00	0.00	0.000
7,700.00	90.00	359.91	3,378.00	4,751.71	-303.11	4,752.18	0.00	0.00	0.00	0.000
7,800.00	90.00	359.91	3,378.00	4,851.71	-303.27	4,852.18	0.00	0.00	0.00	0.000
7,900.00	90.00	359.91	3,378.00	4,951.71	-303.43	4,952.18	0.00	0.00	0.00	0.000
8,000.00	90.00	359.91	3,378.00	5,051.71	-303.59	5,052.18	0.00	0.00	0.00	0.000
8,100.00	90.00	359.91	3,378.00	5,151.71	-303.75	5,152.18	0.00	0.00	0.00	0.000
8,200.00	90.00	359.91	3,378.00	5,251.71	-303.90	5,252.18	0.00	0.00	0.00	0.000
8,300.00	90.00	359.91	3,378.00	5,351.71	-304.06	5,352.18	0.00	0.00	0.00	0.000
8,400.00	90.00	359.91	3,378.00	5,451.71	-304.22	5,452.18	0.00	0.00	0.00	0.000
8,500.00	90.00	359.91	3,378.00	5,551.71	-304.38	5,552.18	0.00	0.00	0.00	0.000
8,600.00	90.00	359.91	3,378.00	5,651.71	-304.54	5,652.18	0.00	0.00	0.00	0.000
8,700.00	90.00	359.91	3,378.00	5,751.71	-304.70	5,752.18	0.00	0.00	0.00	0.000
8,800.00	90.00	359.91	3,378.00	5,851.71	-304.86	5,852.18	0.00	0.00	0.00	0.000
8,900.00	90.00	359.91	3,378.00	5,951.71	-305.02	5,952.18	0.00	0.00	0.00	0.000
9,000.00	90.00	359.91	3,378.00	6,051.71	-305.17	6,052.18	0.00	0.00	0.00	0.000
9,016.19	90.00	359.91	3,378.00	6,067.90	-305.20	6,068.37	0.00	0.00	0.00	0.000



Wellbenders
Standard Plan With Toolface



Company:	Percussion Petroleum, LLC	Local Co-ordinate Reference:	Well #11H
Project:	Eddy County, NM	TVD Reference:	RKB = 17' @ 3488.00usft
Site:	Ross Ranch 22 Unit	MD Reference:	RKB = 17' @ 3488.00usft
Well:	#11H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	WBDS_SQL_2

Checked By: _____ Approved By: _____ Date: _____