

NM OIL CONSERVATION  
ARTESIA DISTRICT

FEB 07 2019

RECEIVED



**PERCUSSION**  
PETROLEUM  
LLC

**Percussion Petroleum, LLC**

Eddy County, NM  
Ross Ranch 22 Unit  
#13H  
OH

*30.015-45694*

Plan: Plan #1

**Standard Plan With Toolface**

06 February, 2019





Company: Percussion Petroleum, LLC  
Project: Eddy County, NM  
Site: Ross Ranch 22 Unit  
Well: #133H  
Wellbore: OH  
Rig: Alpha 20  
Design: Plan #1 / 8:39, February 06 2018



WELL DETAILS: #133H

ROD-17 @ 3452 Depth (Alpha 20)

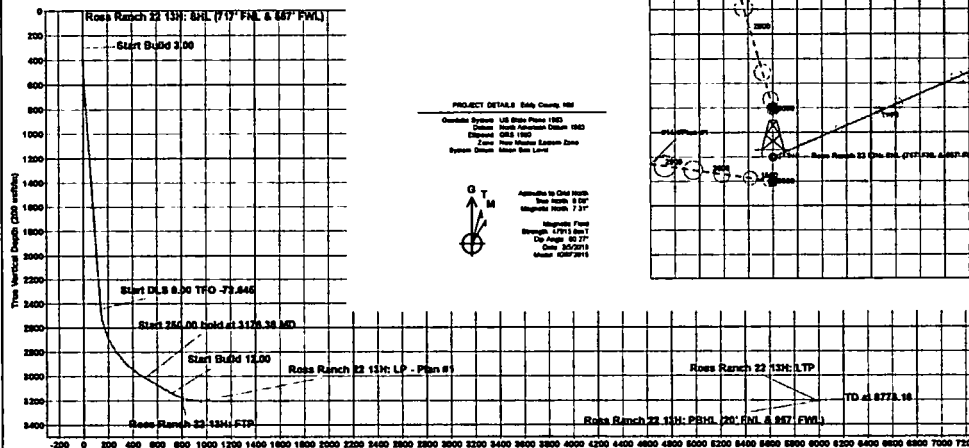
| WD   | WD   | WD   | WD   | WD   | WD   |
|------|------|------|------|------|------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

SECTION DETAILS

| Sec | WD      | WD    | WD   | WD      | WD    | WD   | WD   |
|-----|---------|-------|------|---------|-------|------|------|
| 1   | 0.00    | 0.00  | 0.00 | 0.00    | 0.00  | 0.00 | 0.00 |
| 2   | 300.00  | 0.00  | 0.00 | 300.00  | 0.00  | 0.00 | 0.00 |
| 3   | 527.72  | 10.15 | 0.00 | 537.87  | 10.15 | 0.00 | 0.00 |
| 4   | 5279.47 | 10.15 | 0.00 | 5289.62 | 10.15 | 0.00 | 0.00 |
| 5   | 5179.36 | 00.00 | 0.00 | 5169.21 | 00.00 | 0.00 | 0.00 |
| 6   | 5426.36 | 00.00 | 0.00 | 5416.21 | 00.00 | 0.00 | 0.00 |
| 7   | 5279.36 | 00.00 | 0.00 | 5269.21 | 00.00 | 0.00 | 0.00 |
| 8   | 5779.15 | 00.00 | 0.00 | 5769.00 | 00.00 | 0.00 | 0.00 |

DESIGN TARGET DETAILS

| Name                                          | WD      | WD   | WD   | WD      | WD   | WD   | WD   |
|-----------------------------------------------|---------|------|------|---------|------|------|------|
| Ross Ranch 22 133H: BHL (7'0" FWL & 867' FWL) | 0.00    | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00 |
| Ross Ranch 22 133H: LTP                       | 2280.00 | 0.00 | 0.00 | 2280.00 | 0.00 | 0.00 | 0.00 |
| Ross Ranch 22 133H: LTP - Plan #1             | 2280.00 | 0.00 | 0.00 | 2280.00 | 0.00 | 0.00 | 0.00 |
| Ross Ranch 22 133H: LTP                       | 2280.00 | 0.00 | 0.00 | 2280.00 | 0.00 | 0.00 | 0.00 |
| Ross Ranch 22 133H: PBL (20' FWL & 867' FWL)  | 2280.00 | 0.00 | 0.00 | 2280.00 | 0.00 | 0.00 | 0.00 |



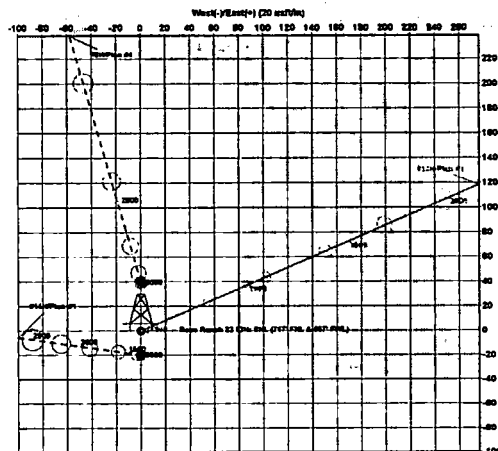
PROJECT DETAILS: Eddy County, NM

Coordinate System: US State Plane 1283  
Datum: North American Datum 1983  
Zone: 12N  
System: UTM  
Units: Meter Sea Level

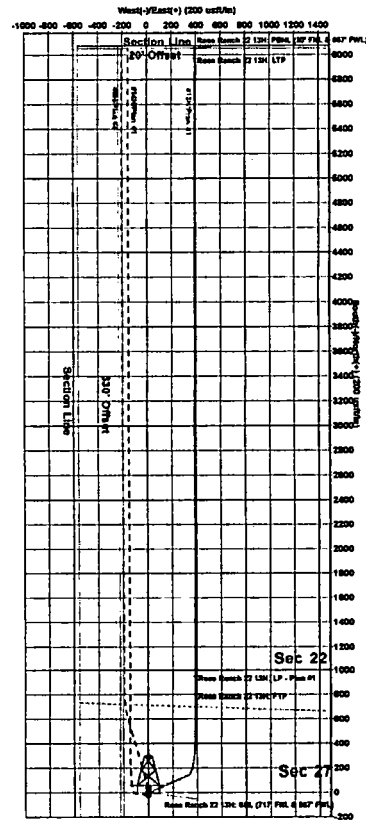


Accuracy to Grid North:  
True North: 0.00°  
Magnetic North: 7.30°  
Magnetic Declination: 7.30°  
Grid Angle: 10.77°  
Grid: GCS 2011  
Datum: GRS 1911

TOTAL CORRECTION  
To convert a Magnetic Direction to a Grid Direction, Add 7.30°



Disclaimer:  
This document is the property of Percussion Petroleum, LLC. It is to be used for the purpose of the project only and is not to be distributed outside the project. It is to be kept confidential and secure.



Plan: Plan #1 (P13600N) Alpha 20

Created By: Derek Stephens Date: 8:39, February 06 2018



**Wellbenders**  
Standard Plan With Toolface



Company: Percussion Petroleum, LLC  
Project: Eddy County, NM  
Site: Ross Ranch 22 Unit  
Well: #13H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #13H  
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:        |           | Northing:    | 595,580.00 usft | Latitude:         | 32.637213   |
| From:                 | Map       | Easting:     | 496,397.90 usft | Longitude:        | -104.479324 |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13.200 in       | Grid Convergence: | -0.079 °    |

Well: #13H

|                      |           |           |                     |                 |               |               |
|----------------------|-----------|-----------|---------------------|-----------------|---------------|---------------|
| Well Position        | +N-S      | 0.00 usft | Northing:           | 595,540.30 usft | Latitude:     | 32.637104     |
|                      | +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<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|-----------|------------|-------------|--------------------|------------------|------------------------|
|           | IGRF2015   | 2/5/2019    | 7.228              | 60.274           | 47,915.76140081        |

Design: Plan #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.00

| Vertical Section: | Depth From (TVD)<br>(usft) | +N-S<br>(usft) | +E-W<br>(usft) | Direction<br>(°) |
|-------------------|----------------------------|----------------|----------------|------------------|
|                   | 0.00                       | 0.00           | 0.00           | 0.06             |

Survey Tool Program Date 2/6/2019

| From<br>(usft) | To<br>(usft) | Survey (Wellbore) | Tool Name | Description            |
|----------------|--------------|-------------------|-----------|------------------------|
| 0.00           | 8,776.16     | Plan #1 (OH)      | MWD+IGRF  | OWSG MWD + IGRF or WMM |



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North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: WBDS\_SQL\_2

Planned Survey

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | V. Sec<br>(usft) | DLeg<br>(°/100ft) | Buile<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|------------------|-------------------|--------------------|-------------------|--------------|
| 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       | 3.00       | 66.80                | 399.95        | 1.03          | 2.41          | 1.03             | 3.00              | 3.00               | 0.00              | 66.799       |
| 500.00       | 6.00       | 66.80                | 499.83        | 4.12          | 9.62          | 4.13             | 3.00              | 3.00               | 0.00              | 0.000        |
| 600.00       | 9.00       | 66.80                | 598.77        | 9.26          | 21.61         | 9.29             | 3.00              | 3.00               | 0.00              | 0.000        |
| 637.72       | 10.13      | 66.80                | 635.96        | 11.73         | 27.37         | 11.76            | 3.00              | 3.00               | 0.00              | 0.000        |
| 700.00       | 10.13      | 66.80                | 697.27        | 16.05         | 37.44         | 16.09            | 0.00              | 0.00               | 0.00              | 0.000        |
| 800.00       | 10.13      | 66.80                | 795.71        | 22.98         | 53.61         | 23.03            | 0.00              | 0.00               | 0.00              | 0.000        |
| 900.00       | 10.13      | 66.80                | 894.15        | 29.91         | 69.78         | 29.98            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,000.00     | 10.13      | 66.80                | 992.59        | 36.84         | 85.95         | 36.93            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,100.00     | 10.13      | 66.80                | 1,091.03      | 43.77         | 102.12        | 43.88            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,200.00     | 10.13      | 66.80                | 1,189.47      | 50.70         | 118.28        | 50.82            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,300.00     | 10.13      | 66.80                | 1,287.92      | 57.63         | 134.45        | 57.77            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,400.00     | 10.13      | 66.80                | 1,386.36      | 64.56         | 150.62        | 64.72            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,500.00     | 10.13      | 66.80                | 1,484.80      | 71.49         | 166.79        | 71.66            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,600.00     | 10.13      | 66.80                | 1,583.24      | 78.42         | 182.96        | 78.61            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,700.00     | 10.13      | 66.80                | 1,681.68      | 85.35         | 199.13        | 85.56            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,800.00     | 10.13      | 66.80                | 1,780.12      | 92.28         | 215.29        | 92.50            | 0.00              | 0.00               | 0.00              | 0.000        |
| 1,900.00     | 10.13      | 66.80                | 1,878.56      | 99.21         | 231.46        | 99.45            | 0.00              | 0.00               | 0.00              | 0.000        |
| 2,000.00     | 10.13      | 66.80                | 1,977.00      | 106.14        | 247.63        | 106.40           | 0.00              | 0.00               | 0.00              | 0.000        |
| 2,100.00     | 10.13      | 66.80                | 2,075.44      | 113.07        | 263.80        | 113.34           | 0.00              | 0.00               | 0.00              | 0.000        |
| 2,200.00     | 10.13      | 66.80                | 2,173.88      | 120.00        | 279.97        | 120.29           | 0.00              | 0.00               | 0.00              | 0.000        |
| 2,300.00     | 10.13      | 66.80                | 2,272.32      | 126.93        | 296.14        | 127.24           | 0.00              | 0.00               | 0.00              | 0.000        |
| 2,400.00     | 10.13      | 66.80                | 2,370.76      | 133.86        | 312.30        | 134.18           | 0.00              | 0.00               | 0.00              | 0.000        |
| 2,470.47     | 10.13      | 66.80                | 2,440.14      | 138.74        | 323.70        | 139.08           | 0.00              | 0.00               | 0.00              | 0.000        |



Wellbenders  
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|--------------|------------|----------------------|---------------|---------------|---------------|------------------|-------------------|--------------------|-------------------|--------------|
| 2,500.00     | 11.07      | 54.97                | 2,489.18      | 141.39        | 328.41        | 141.73           | 8.00              | 3.18               | -40.06            | -72.845      |
| 2,550.00     | 13.46      | 39.78                | 2,518.03      | 148.82        | 336.06        | 148.97           | 8.00              | 4.79               | -30.39            | -61.018      |
| 2,600.00     | 16.48      | 29.56                | 2,568.34      | 159.27        | 343.29        | 159.63           | 8.00              | 6.04               | -20.43            | -46.160      |
| 2,650.00     | 19.84      | 22.57                | 2,613.85      | 173.28        | 350.05        | 173.64           | 8.00              | 6.72               | -13.97            | -36.288      |
| 2,700.00     | 23.40      | 17.59                | 2,660.32      | 190.59        | 356.31        | 190.96           | 8.00              | 7.11               | -9.97             | -29.845      |
| 2,750.00     | 27.07      | 13.88                | 2,705.55      | 211.11        | 362.04        | 211.48           | 8.00              | 7.35               | -7.43             | -25.009      |
| 2,800.00     | 30.83      | 11.00                | 2,749.29      | 234.74        | 367.21        | 235.12           | 8.00              | 7.50               | -5.76             | -21.647      |
| 2,850.00     | 34.63      | 8.69                 | 2,791.35      | 261.37        | 371.80        | 261.75           | 8.00              | 7.60               | -4.61             | -19.127      |
| 2,900.00     | 38.48      | 6.79                 | 2,831.51      | 290.86        | 375.79        | 291.26           | 8.00              | 7.67               | -3.80             | -17.186      |
| 2,950.00     | 42.33      | 5.19                 | 2,869.59      | 323.08        | 379.16        | 323.48           | 8.00              | 7.73               | -3.20             | -15.660      |
| 3,000.00     | 46.21      | 3.81                 | 2,905.38      | 357.87        | 381.88        | 358.27           | 8.00              | 7.78               | -2.78             | -14.439      |
| 3,050.00     | 50.11      | 2.60                 | 2,938.73      | 395.05        | 383.95        | 395.45           | 8.00              | 7.79               | -2.42             | -13.449      |
| 3,100.00     | 54.01      | 1.52                 | 2,969.47      | 434.45        | 385.35        | 434.85           | 8.00              | 7.82               | -2.16             | -12.641      |
| 3,150.00     | 57.93      | 0.54                 | 2,997.44      | 475.87        | 386.09        | 476.28           | 8.00              | 7.83               | -1.96             | -11.976      |
| 3,176.36     | 60.00      | 0.06                 | 3,011.03      | 488.46        | 386.20        | 488.87           | 8.00              | 7.84               | -1.83             | -11.428      |
| 3,200.00     | 60.00      | 0.06                 | 3,022.85      | 518.93        | 386.22        | 519.34           | 0.00              | 0.00               | 0.00              | 0.000        |
| 3,300.00     | 60.00      | 0.06                 | 3,072.85      | 605.53        | 386.31        | 605.94           | 0.00              | 0.00               | 0.00              | 0.000        |
| 3,400.00     | 60.00      | 0.06                 | 3,122.85      | 692.14        | 386.39        | 692.54           | 0.00              | 0.00               | 0.00              | 0.000        |
| 3,426.36     | 60.00      | 0.06                 | 3,136.03      | 714.97        | 386.41        | 715.37           | 0.00              | 0.00               | 0.00              | 0.000        |
| 3,450.00     | 62.84      | 0.06                 | 3,147.34      | 735.72        | 386.43        | 736.13           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,475.00     | 65.84      | 0.06                 | 3,158.17      | 758.25        | 386.46        | 758.66           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,500.00     | 68.84      | 0.06                 | 3,167.80      | 781.32        | 386.48        | 781.73           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,525.00     | 71.84      | 0.06                 | 3,176.21      | 804.86        | 386.50        | 805.26           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,550.00     | 74.84      | 0.06                 | 3,183.38      | 828.81        | 386.52        | 829.21           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,575.00     | 77.84      | 0.06                 | 3,189.28      | 853.10        | 386.55        | 853.50           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,600.00     | 80.84      | 0.06                 | 3,193.91      | 877.66        | 386.57        | 878.07           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,625.00     | 83.84      | 0.06                 | 3,197.24      | 902.44        | 386.60        | 902.84           | 12.00             | 12.00              | 0.00              | 0.000        |



# **Wellbenders** Standard Plan With Toolface



Company: Percussion Petroleum, LLC  
Project: Eddy County, NM  
Site: Ross Ranch 22 Unit  
Well: #13H  
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Local Co-ordinate Reference: Well #13H  
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## **Planned Survey**

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | V. Sec<br>(usft) | DLeg<br>(°/100ft) | Bulld<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|------------------|-------------------|--------------------|-------------------|--------------|
| 3,650.00     | 88.84      | 0.06                 | 3,199.27      | 927.35        | 386.62        | 927.76           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,676.36     | 90.00      | 0.06                 | 3,200.00      | 953.70        | 386.65        | 954.10           | 12.00             | 12.00              | 0.00              | 0.000        |
| 3,700.00     | 90.00      | 0.06                 | 3,200.00      | 977.34        | 386.67        | 977.74           | 0.00              | 0.00               | 0.00              | 0.000        |
| 3,800.00     | 90.00      | 0.06                 | 3,200.00      | 1,077.34      | 386.77        | 1,077.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 3,900.00     | 90.00      | 0.06                 | 3,200.00      | 1,177.34      | 386.86        | 1,177.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,000.00     | 90.00      | 0.06                 | 3,200.00      | 1,277.34      | 386.98        | 1,277.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,100.00     | 90.00      | 0.06                 | 3,200.00      | 1,377.34      | 387.06        | 1,377.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,200.00     | 90.00      | 0.06                 | 3,200.00      | 1,477.34      | 387.15        | 1,477.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,300.00     | 90.00      | 0.06                 | 3,200.00      | 1,577.34      | 387.25        | 1,577.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,400.00     | 90.00      | 0.06                 | 3,200.00      | 1,677.34      | 387.35        | 1,677.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,500.00     | 90.00      | 0.06                 | 3,200.00      | 1,777.34      | 387.45        | 1,777.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,600.00     | 90.00      | 0.06                 | 3,200.00      | 1,877.34      | 387.54        | 1,877.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,700.00     | 90.00      | 0.06                 | 3,200.00      | 1,977.34      | 387.64        | 1,977.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,800.00     | 90.00      | 0.06                 | 3,200.00      | 2,077.34      | 387.74        | 2,077.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 4,900.00     | 90.00      | 0.06                 | 3,200.00      | 2,177.34      | 387.83        | 2,177.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,000.00     | 90.00      | 0.06                 | 3,200.00      | 2,277.34      | 387.93        | 2,277.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,100.00     | 90.00      | 0.06                 | 3,200.00      | 2,377.34      | 388.03        | 2,377.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,200.00     | 90.00      | 0.06                 | 3,200.00      | 2,477.34      | 388.13        | 2,477.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,300.00     | 90.00      | 0.06                 | 3,200.00      | 2,577.34      | 388.22        | 2,577.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,400.00     | 90.00      | 0.06                 | 3,200.00      | 2,677.34      | 388.32        | 2,677.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,500.00     | 90.00      | 0.06                 | 3,200.00      | 2,777.34      | 388.42        | 2,777.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,600.00     | 90.00      | 0.06                 | 3,200.00      | 2,877.34      | 388.51        | 2,877.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,700.00     | 90.00      | 0.06                 | 3,200.00      | 2,977.34      | 388.61        | 2,977.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,800.00     | 90.00      | 0.06                 | 3,200.00      | 3,077.34      | 388.71        | 3,077.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 5,900.00     | 90.00      | 0.06                 | 3,200.00      | 3,177.34      | 388.81        | 3,177.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,000.00     | 90.00      | 0.06                 | 3,200.00      | 3,277.34      | 388.90        | 3,277.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,100.00     | 90.00      | 0.06                 | 3,200.00      | 3,377.34      | 389.00        | 3,377.74         | 0.00              | 0.00               | 0.00              | 0.000        |



Wellbenders  
Standard Plan With Toolface



Company: Percussion Petroleum, LLC  
Project: Eddy County, NM  
Site: Ross Ranch 22 Unit  
Well: #13H  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference: Well #13H  
TVD Reference: RKB=16' @ 3488.00usft (Akita 20)  
MD Reference: RKB=16' @ 3486.00usft (Akita 20)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: WBS\_SQL\_2

Planned Survey

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | V. Sec<br>(usft) | DLeg<br>(°/100ft) | Build<br>(°/100ft) | Turn<br>(°/100ft) | TFace<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|------------------|-------------------|--------------------|-------------------|--------------|
| 6,200.00     | 90.00      | 0.06                 | 3,200.00      | 3,477.34      | 389.10        | 3,477.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,300.00     | 90.00      | 0.06                 | 3,200.00      | 3,577.34      | 389.19        | 3,577.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,400.00     | 90.00      | 0.06                 | 3,200.00      | 3,677.34      | 389.29        | 3,677.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,500.00     | 90.00      | 0.06                 | 3,200.00      | 3,777.34      | 389.39        | 3,777.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,600.00     | 90.00      | 0.06                 | 3,200.00      | 3,877.34      | 389.49        | 3,877.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,700.00     | 90.00      | 0.06                 | 3,200.00      | 3,977.34      | 389.58        | 3,977.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,800.00     | 90.00      | 0.06                 | 3,200.00      | 4,077.34      | 389.68        | 4,077.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 6,900.00     | 90.00      | 0.06                 | 3,200.00      | 4,177.34      | 389.78        | 4,177.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,000.00     | 90.00      | 0.06                 | 3,200.00      | 4,277.34      | 389.87        | 4,277.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,100.00     | 90.00      | 0.06                 | 3,200.00      | 4,377.34      | 389.97        | 4,377.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,200.00     | 90.00      | 0.06                 | 3,200.00      | 4,477.34      | 390.07        | 4,477.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,300.00     | 90.00      | 0.06                 | 3,200.00      | 4,577.34      | 390.17        | 4,577.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,400.00     | 90.00      | 0.06                 | 3,200.00      | 4,677.34      | 390.26        | 4,677.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,500.00     | 90.00      | 0.06                 | 3,200.00      | 4,777.34      | 390.36        | 4,777.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,600.00     | 90.00      | 0.06                 | 3,200.00      | 4,877.34      | 390.46        | 4,877.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,700.00     | 90.00      | 0.06                 | 3,200.00      | 4,977.34      | 390.55        | 4,977.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,800.00     | 90.00      | 0.06                 | 3,200.00      | 5,077.34      | 390.65        | 5,077.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 7,900.00     | 90.00      | 0.06                 | 3,200.00      | 5,177.34      | 390.75        | 5,177.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,000.00     | 90.00      | 0.06                 | 3,200.00      | 5,277.34      | 390.85        | 5,277.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,100.00     | 90.00      | 0.06                 | 3,200.00      | 5,377.34      | 390.94        | 5,377.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,200.00     | 90.00      | 0.06                 | 3,200.00      | 5,477.34      | 391.04        | 5,477.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,300.00     | 90.00      | 0.06                 | 3,200.00      | 5,577.34      | 391.14        | 5,577.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,400.00     | 90.00      | 0.06                 | 3,200.00      | 5,677.34      | 391.23        | 5,677.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,500.00     | 90.00      | 0.06                 | 3,200.00      | 5,777.34      | 391.33        | 5,777.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,600.00     | 90.00      | 0.06                 | 3,200.00      | 5,877.34      | 391.43        | 5,877.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,700.00     | 90.00      | 0.06                 | 3,200.00      | 5,977.34      | 391.53        | 5,977.74         | 0.00              | 0.00               | 0.00              | 0.000        |
| 8,776.16     | 90.00      | 0.06                 | 3,200.00      | 6,053.50      | 391.60        | 6,053.91         | 0.00              | 0.00               | 0.00              | 0.000        |



**Wellbenders**  
Standard Plan With Toolface



**Company:** Percussion Petroleum, LLC  
**Project:** Eddy County, NM  
**Site:** Ross Ranch 22 Unit  
**Well:** #13H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well #13H  
**TVD Reference:** RKB=18' @ 3488.00usft (Akita 20)  
**MD Reference:** RKB=18' @ 3488.00usft (Akita 20)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** WBDS\_SQL\_2

|                   |                    |             |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|