

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

State of New Mexico  
Energy, Minerals & Natural Resources  
Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Sante Fe, NM 87505

**OCT 07 2019**

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate  
District Office

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Sante Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

**RECEIVED**

☒ AMENDED REPORT

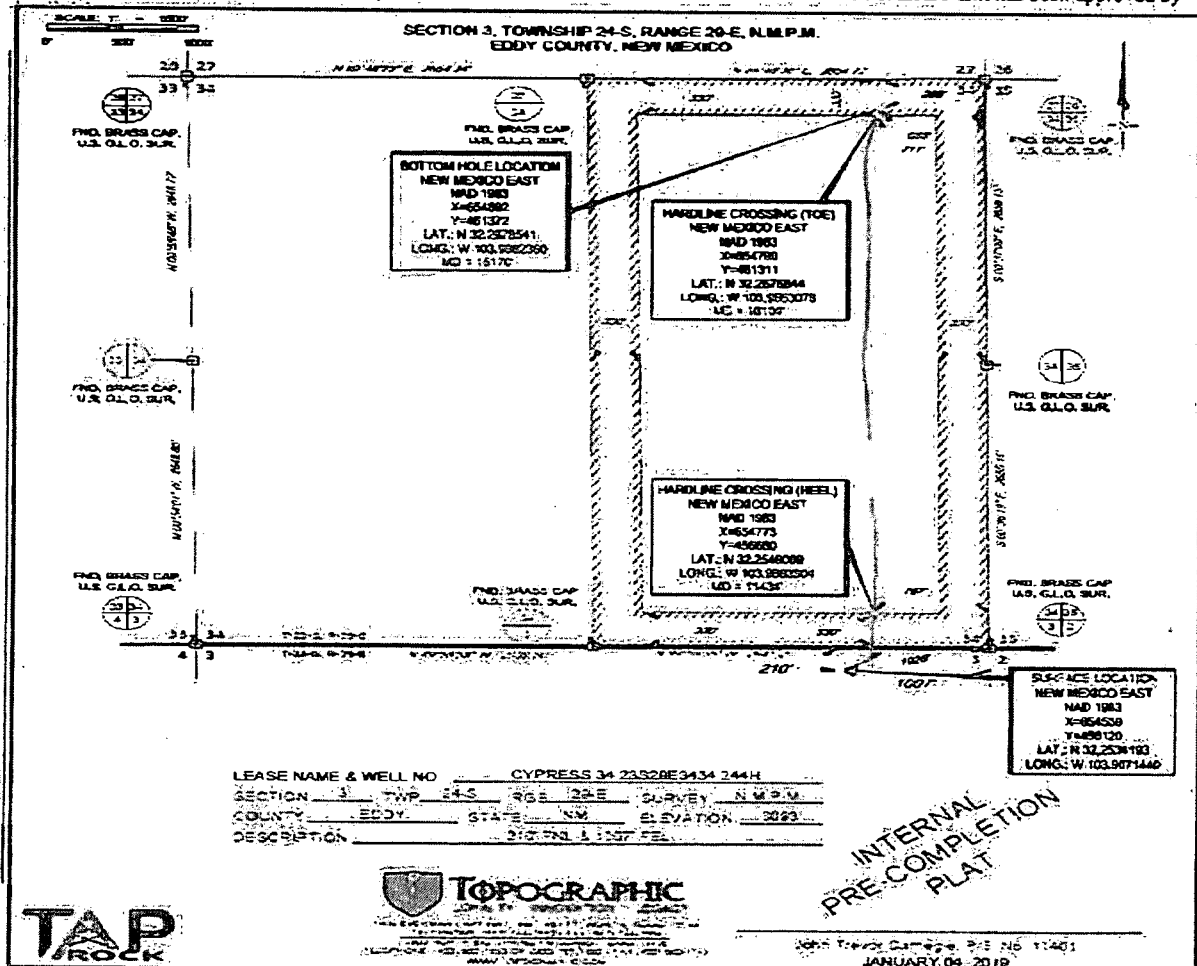
☒ AS DRILLED

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|                                   |                                                  |                                           |
|-----------------------------------|--------------------------------------------------|-------------------------------------------|
| API Number<br><b>30-015-45263</b> | Pool Code<br><b>98220</b>                        | Pool Name<br><b>PURPLE SAGE, WOLFCAMP</b> |
| Property Code<br><b>322450</b>    | Property Name<br><b>CYPRESS 34 23S29E3434</b>    |                                           |
| OCRID No.<br><b>372043</b>        | Operator Name<br><b>TAP ROCK OPERATING, LLC.</b> | Well Number<br><b>8244H</b>               |
|                                   |                                                  | Elevation<br><b>3093'</b>                 |

| 10 Surface Location             |                      |                         |                      |                     |                                   |                                  |                                   |                               |                       |
|---------------------------------|----------------------|-------------------------|----------------------|---------------------|-----------------------------------|----------------------------------|-----------------------------------|-------------------------------|-----------------------|
| UL or lot no.<br><b>A</b>       | Section<br><b>3</b>  | Township<br><b>24-S</b> | Range<br><b>29-E</b> | Lot No.<br><b>4</b> | Feet from the<br><b>210'</b>      | North/South Line<br><b>NORTH</b> | Feet from the<br><b>1007'</b>     | East/West Line<br><b>EAST</b> | County<br><b>EDDY</b> |
| <p align="center">100' 966'</p> |                      |                         |                      |                     |                                   |                                  |                                   |                               |                       |
| UL or lot no.<br><b>A</b>       | Section<br><b>34</b> | Township<br><b>23-S</b> | Range<br><b>29-E</b> | Lot No.<br><b>-</b> | Feet from the<br><b>280' 201'</b> | North/South Line<br><b>NORTH</b> | Feet from the<br><b>250' 330'</b> | East/West Line<br><b>EAST</b> | County<br><b>EDDY</b> |
| Dedicated Acres<br><b>320</b>   | Joint or Infill      | Consolidation Code      | Order No.            |                     |                                   |                                  |                                   |                               |                       |

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by





**PRO**DIRECTIONAL

RECEIVED

SEP 26 2019

DISTRICT 7 / ARTESIA O.C.D.

**TAP  
ROCK**

**Cypress 34 No. 244H(ST01)**  
Eddy County, NM

January 17, 2019

Job No. LNM5188218  
API No. 30-015-45263

# Survey Completion Report



PRODIRECTIONAL

## Survey Certification Letter

January 17, 2019



Operator Name: Tap Rock Operating  
Well Name: Cypress 34 No. 244H  
County/Parish: Eddy County,  
State: NM  
Rig Name: H&P 422  
Job Number: LNM5188218

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

| <u>Surveyor</u> | <u>Surveyed Depths</u>  | <u>Projection to Bit</u> | <u>Dates Performed</u> | <u>Type of Survey</u> |
|-----------------|-------------------------|--------------------------|------------------------|-----------------------|
| ProDirectional  | 10,844' MD – 16,171' MD | 16,234' MD               | 12/14/18 – 12/19/18    | MWD                   |

Sincerely,

Mike Coats  
Regulatory Specialist  
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

[prodirectional.com](http://prodirectional.com)

*The Standard of Excellence in Directional Supervision*



## **Tap Rock Operating, LLC**

Eddy County, NM

Cypress 34

No. 244H

ST01

Survey: ProDirectional

## **Survey Report**

16 January, 2019





ProDirectional  
Survey Report



|           |                               |                              |                                           |
|-----------|-------------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC       | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83)      | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34                    | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                          | North Reference:             | Grid                                      |
| Wellbore: | ST01                          | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | ST01 10844'-16171' PTB 16234' | Database:                    | WellPlanner1                              |

|             |                           |               |                |
|-------------|---------------------------|---------------|----------------|
| Project:    | Eddy County, NM (NAD 83)  |               |                |
| Map System: | US State Plane 1983       | System Datum: | Mean Sea Level |
| Geo Datum:  | North American Datum 1983 |               |                |
| Map Zone:   | New Mexico Eastern Zone   |               |                |

|                       |            |                   |                 |
|-----------------------|------------|-------------------|-----------------|
| Site:                 | Cypress 34 |                   |                 |
| Site Position:        |            | Northing:         | 456,089.00 usft |
| From:                 | Map        | Easting:          | 654,374.00 usft |
| Position Uncertainty: | 0.00 usft  | Slot Radius:      | 13-3/16 "       |
|                       |            | Latitude:         | 32.253335       |
|                       |            | Longitude:        | -103.967678     |
|                       |            | Grid Convergence: | 0.20 °          |

|                      |           |           |                     |                 |               |               |
|----------------------|-----------|-----------|---------------------|-----------------|---------------|---------------|
| Well                 | 244H      |           |                     |                 |               |               |
| Well Position        | +N/-S     | 0.00 usft | Northing:           | 456,120.00 usft | Latitude:     | 32.253419     |
|                      | +E/-W     | 0.00 usft | Easting:            | 654,539.00 usft | Longitude:    | -103.967143   |
| Position Uncertainty | 0.00 usft |           | Wellhead Elevation: | usft            | Ground Level: | 3,093.00 usft |

|           |            |             |                    |                  |                        |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Wellbore  | ST01       |             |                    |                  |                        |
| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | HDGM       | 12/6/2018   | 7.03               | 60.02            | 47,959.50              |

|                   |                               |        |        |               |           |
|-------------------|-------------------------------|--------|--------|---------------|-----------|
| Design            | ST01 10844'-16171' PTB 16234' |        |        |               |           |
| Audit Notes:      |                               |        |        |               |           |
| Version:          | 1.0                           | Phase: | ACTUAL | Tie On Depth: | 10,803.00 |
| Vertical Section: | Depth From (TVD)              | +N/-S  | +E/-W  | Direction     |           |
|                   | (usft)                        | (usft) | (usft) | (°)           |           |
|                   | 0.00                          | 0.00   | 0.00   | 359.39        |           |



# ProDirectional Survey Report



|                  |                               |                                     |                                           |
|------------------|-------------------------------|-------------------------------------|-------------------------------------------|
| <b>Company:</b>  | Tap Rock Operating, LLC       | <b>Local Co-ordinate Reference:</b> | Well 244H                                 |
| <b>Project:</b>  | Eddy County, NM (NAD 83)      | <b>TVD Reference:</b>               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| <b>Site:</b>     | Cypress 34                    | <b>MD Reference:</b>                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| <b>Well:</b>     | 244H                          | <b>North Reference:</b>             | Grid                                      |
| <b>Wellbore:</b> | ST01                          | <b>Survey Calculation Method:</b>   | Minimum Curvature                         |
| <b>Design:</b>   | ST01 10844'-16171' PTB 16234' | <b>Database:</b>                    | WellPlanner1                              |

| Survey Program |           | Date              | 1/16/2019 |                 |  |
|----------------|-----------|-------------------|-----------|-----------------|--|
| From (usft)    | To (usft) | Survey (Wellbore) | Tool Name | Description     |  |
| 148.00         | 10,803.00 | Pro MWD (OH)      | MWD+HDGM  | OWSG MWD + HRGM |  |
| 10,844.00      | 16,234.00 | Pro MWD (ST01)    | MWD+HDGM  | OWSG MWD + HRGM |  |

| Survey    |         |                   |            |               |            |            |                         |                     |                 |                |  |
|-----------|---------|-------------------|------------|---------------|------------|------------|-------------------------|---------------------|-----------------|----------------|--|
| MD (usft) | Inc (") | Azi (azimuth) (°) | TVD (usft) | V. Sec (usft) | N/S (usft) | E/W (usft) | Closure Distance (usft) | Closure Azimuth (°) | Northing (usft) | Easting (usft) |  |
| 0.00      | 0.00    | 0.00              | 0.00       | 0.00          | 0.00       | 0.00       | 0.00                    | 0.00                | 456,120.00      | 654,539.00     |  |
| 148.00    | 0.20    | 335.20            | 148.00     | 0.24          | 0.23       | -0.11      | 0.26                    | 335.20              | 456,120.23      | 654,538.89     |  |
| 238.00    | 0.50    | 11.40             | 238.00     | 0.76          | 0.76       | -0.10      | 0.77                    | 352.77              | 456,120.76      | 654,538.90     |  |
| 329.00    | 1.30    | 24.00             | 328.99     | 2.09          | 2.09       | 0.40       | 2.13                    | 10.86               | 456,122.09      | 654,539.40     |  |
| 382.00    | 1.60    | 26.60             | 381.97     | 3.29          | 3.31       | 0.98       | 3.45                    | 16.48               | 456,123.31      | 654,539.98     |  |
| 576.00    | 1.20    | 41.90             | 575.91     | 7.20          | 7.24       | 3.55       | 8.06                    | 26.10               | 456,127.24      | 654,542.55     |  |
| 697.00    | 1.10    | 51.40             | 696.89     | 8.85          | 8.91       | 5.30       | 10.36                   | 30.76               | 456,128.91      | 654,544.30     |  |
| 877.00    | 0.70    | 75.10             | 876.87     | 10.18         | 10.27      | 7.71       | 12.84                   | 36.92               | 456,130.27      | 654,546.71     |  |
| 1,059.00  | 0.70    | 149.00            | 1,058.85   | 9.50          | 9.60       | 9.36       | 13.41                   | 44.28               | 456,129.60      | 654,548.36     |  |
| 1,240.00  | 1.30    | 163.90            | 1,239.83   | 6.57          | 6.68       | 10.50      | 12.44                   | 57.54               | 456,126.68      | 654,549.50     |  |
| 1,429.00  | 1.90    | 90.90             | 1,428.77   | 4.42          | 4.57       | 14.23      | 14.94                   | 72.19               | 456,124.57      | 654,553.23     |  |
| 1,618.00  | 4.90    | 71.50             | 1,617.42   | 6.82          | 7.08       | 25.02      | 26.00                   | 74.19               | 456,127.08      | 654,564.02     |  |
| 1,807.00  | 4.10    | 74.90             | 1,805.84   | 10.99         | 11.40      | 39.20      | 40.82                   | 73.78               | 456,131.40      | 654,578.20     |  |
| 1,996.00  | 5.10    | 62.80             | 1,994.23   | 16.44         | 17.00      | 53.19      | 55.84                   | 72.27               | 456,137.00      | 654,592.19     |  |
| 2,185.00  | 4.80    | 56.80             | 2,182.53   | 24.46         | 25.17      | 67.28      | 71.84                   | 69.49               | 456,145.17      | 654,606.28     |  |
| 2,374.00  | 3.90    | 53.00             | 2,370.98   | 32.53         | 33.37      | 79.03      | 85.79                   | 67.11               | 456,153.37      | 654,618.03     |  |
| 2,563.00  | 4.20    | 62.70             | 2,559.51   | 39.45         | 40.42      | 90.31      | 98.94                   | 65.89               | 456,160.42      | 654,629.31     |  |
| 2,752.00  | 4.70    | 64.40             | 2,747.94   | 45.83         | 46.94      | 103.45     | 113.60                  | 65.60               | 456,166.94      | 654,642.45     |  |
| 2,941.00  | 4.60    | 80.20             | 2,936.32   | 50.31         | 51.57      | 117.90     | 128.68                  | 66.37               | 456,171.57      | 654,656.90     |  |
| 3,130.00  | 5.70    | 59.60             | 3,124.58   | 56.19         | 57.61      | 133.46     | 145.37                  | 66.65               | 456,177.61      | 654,672.46     |  |
| 3,217.00  | 4.90    | 61.30             | 3,211.20   | 60.08         | 61.58      | 140.45     | 153.36                  | 66.32               | 456,181.58      | 654,679.45     |  |



# ProDirectional Survey Report



|                  |                               |                                     |                                           |
|------------------|-------------------------------|-------------------------------------|-------------------------------------------|
| <b>Company:</b>  | Tap Rock Operating, LLC       | <b>Local Co-ordinate Reference:</b> | Well 244H                                 |
| <b>Project:</b>  | Eddy County, NM (NAD 83)      | <b>TVD Reference:</b>               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| <b>Site:</b>     | Cypress 34                    | <b>MD Reference:</b>                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| <b>Well:</b>     | 244H                          | <b>North Reference:</b>             | Grid                                      |
| <b>Wellbore:</b> | ST01                          | <b>Survey Calculation Method:</b>   | Minimum Curvature                         |
| <b>Design:</b>   | ST01 10844'-16171' PTB 16234' | <b>Database:</b>                    | WellPlanner1                              |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 3,309.00     | 4.60       | 60.10                | 3,302.89      | 63.74            | 65.31         | 147.09        | 160.94                     | 66.06                  | 456,185.31         | 654,686.09        |  |
| 3,404.00     | 4.50       | 60.30                | 3,397.59      | 67.41            | 69.05         | 153.63        | 168.44                     | 65.80                  | 456,189.05         | 654,692.63        |  |
| 3,498.00     | 4.80       | 59.70                | 3,491.28      | 71.15            | 72.86         | 160.23        | 176.02                     | 65.55                  | 456,192.86         | 654,699.23        |  |
| 3,593.00     | 4.70       | 61.60                | 3,585.95      | 74.94            | 76.72         | 167.09        | 183.86                     | 65.34                  | 456,196.72         | 654,706.09        |  |
| 3,687.00     | 5.70       | 47.70                | 3,679.57      | 79.84            | 81.69         | 173.93        | 192.16                     | 64.84                  | 456,201.69         | 654,712.93        |  |
| 3,782.00     | 5.60       | 46.60                | 3,774.11      | 86.13            | 88.05         | 180.79        | 201.09                     | 64.03                  | 456,208.05         | 654,719.79        |  |
| 3,876.00     | 5.80       | 46.80                | 3,867.64      | 92.46            | 94.46         | 187.58        | 210.02                     | 63.27                  | 456,214.46         | 654,726.58        |  |
| 3,970.00     | 5.60       | 46.40                | 3,961.18      | 98.80            | 100.87        | 194.36        | 218.98                     | 62.57                  | 456,220.87         | 654,733.36        |  |
| 4,065.00     | 5.20       | 45.80                | 4,055.75      | 104.93           | 107.07        | 200.81        | 227.57                     | 61.93                  | 456,227.07         | 654,739.81        |  |
| 4,159.00     | 5.00       | 45.30                | 4,149.38      | 110.71           | 112.92        | 206.77        | 235.60                     | 61.36                  | 456,232.92         | 654,745.77        |  |
| 4,254.00     | 4.90       | 41.90                | 4,244.03      | 116.58           | 118.85        | 212.42        | 243.41                     | 60.77                  | 456,238.85         | 654,751.42        |  |
| 4,349.00     | 5.10       | 42.00                | 4,338.67      | 122.68           | 125.01        | 217.96        | 251.27                     | 60.16                  | 456,245.01         | 654,756.96        |  |
| 4,443.00     | 5.10       | 43.20                | 4,432.29      | 128.77           | 131.16        | 223.62        | 259.24                     | 59.61                  | 456,251.16         | 654,762.62        |  |
| 4,537.00     | 5.00       | 42.80                | 4,525.93      | 134.76           | 137.21        | 229.26        | 267.18                     | 59.10                  | 456,257.21         | 654,768.26        |  |
| 4,631.00     | 4.80       | 40.70                | 4,619.59      | 140.69           | 143.20        | 234.61        | 274.86                     | 58.60                  | 456,263.20         | 654,773.61        |  |
| 4,725.00     | 4.50       | 43.20                | 4,713.28      | 146.31           | 148.87        | 239.70        | 282.16                     | 58.16                  | 456,268.87         | 654,778.70        |  |
| 4,819.00     | 4.50       | 43.80                | 4,806.99      | 151.60           | 154.22        | 244.77        | 289.30                     | 57.79                  | 456,274.22         | 654,783.77        |  |
| 4,914.00     | 3.30       | 50.70                | 4,901.77      | 155.98           | 158.64        | 249.47        | 295.64                     | 57.55                  | 456,278.64         | 654,788.47        |  |
| 5,008.00     | 3.30       | 57.70                | 4,995.61      | 159.09           | 161.80        | 253.85        | 301.03                     | 57.49                  | 456,281.80         | 654,792.85        |  |
| 5,103.00     | 2.10       | 61.60                | 5,090.50      | 161.34           | 164.09        | 257.69        | 305.50                     | 57.51                  | 456,284.09         | 654,796.69        |  |
| 5,197.00     | 1.90       | 71.10                | 5,184.45      | 162.63           | 165.41        | 260.68        | 308.73                     | 57.60                  | 456,285.41         | 654,799.68        |  |
| 5,292.00     | 1.50       | 78.10                | 5,279.40      | 163.37           | 166.18        | 263.39        | 311.43                     | 57.75                  | 456,286.18         | 654,802.39        |  |
| 5,386.00     | 1.50       | 76.70                | 5,373.37      | 163.88           | 166.72        | 265.79        | 313.75                     | 57.90                  | 456,286.72         | 654,804.79        |  |
| 5,481.00     | 1.60       | 84.20                | 5,468.34      | 164.27           | 167.14        | 268.32        | 316.12                     | 58.08                  | 456,287.14         | 654,807.32        |  |
| 5,576.00     | 1.60       | 84.90                | 5,563.30      | 164.49           | 167.39        | 270.96        | 318.49                     | 58.29                  | 456,287.39         | 654,809.96        |  |
| 5,670.00     | 1.30       | 97.90                | 5,657.27      | 164.44           | 167.36        | 273.32        | 320.49                     | 58.52                  | 456,287.36         | 654,812.32        |  |
| 5,764.00     | 1.30       | 97.40                | 5,751.25      | 164.13           | 167.07        | 275.43        | 322.15                     | 58.76                  | 456,287.07         | 654,814.43        |  |



ProDirectional  
Survey Report



|           |                               |                              |                                           |
|-----------|-------------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC       | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83)      | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34                    | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                          | North Reference:             | Grid                                      |
| Wellbore: | ST01                          | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | ST01 10844'-16171' PTB 16234' | Database:                    | WellPlanner1                              |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |
| 5,859.00     | 1.50       | 85.30                | 5,846.22      | 164.07           | 167.04        | 277.74        | 324.10                     | 58.98                  | 456,287.04         | 654,816.74        |
| 5,953.00     | 0.60       | 159.80               | 5,940.20      | 163.70           | 166.68        | 279.14        | 325.11                     | 59.16                  | 456,286.68         | 654,818.14        |
| 6,048.00     | 1.20       | 218.80               | 6,035.19      | 162.46           | 165.43        | 278.69        | 324.09                     | 59.31                  | 456,285.43         | 654,817.69        |
| 6,142.00     | 1.40       | 211.30               | 6,129.17      | 160.72           | 163.69        | 277.47        | 322.16                     | 59.46                  | 456,283.69         | 654,816.47        |
| 6,237.00     | 1.40       | 213.70               | 6,224.14      | 158.78           | 161.73        | 276.23        | 320.09                     | 59.65                  | 456,281.73         | 654,815.23        |
| 6,332.00     | 1.50       | 198.20               | 6,319.11      | 156.64           | 159.58        | 275.20        | 318.12                     | 59.89                  | 456,279.58         | 654,814.20        |
| 6,426.00     | 1.60       | 192.30               | 6,413.08      | 154.20           | 157.13        | 274.53        | 316.32                     | 60.21                  | 456,277.13         | 654,813.53        |
| 6,521.00     | 1.40       | 190.30               | 6,508.04      | 151.77           | 154.69        | 274.04        | 314.69                     | 60.56                  | 456,274.69         | 654,813.04        |
| 6,615.00     | 1.10       | 184.80               | 6,602.02      | 149.74           | 152.66        | 273.76        | 313.45                     | 60.85                  | 456,272.66         | 654,812.76        |
| 6,710.00     | 1.20       | 182.90               | 6,697.00      | 147.84           | 150.76        | 273.63        | 312.42                     | 61.15                  | 456,270.76         | 654,812.63        |
| 6,805.00     | 1.40       | 193.70               | 6,791.98      | 145.72           | 148.64        | 273.31        | 311.11                     | 61.46                  | 456,268.64         | 654,812.31        |
| 6,899.00     | 1.40       | 185.40               | 6,885.95      | 143.47           | 146.38        | 272.93        | 309.71                     | 61.79                  | 456,266.38         | 654,811.93        |
| 6,993.00     | 1.60       | 187.70               | 6,979.92      | 141.03           | 143.94        | 272.64        | 308.31                     | 62.17                  | 456,263.94         | 654,811.64        |
| 7,088.00     | 1.00       | 245.00               | 7,074.90      | 139.37           | 142.27        | 271.72        | 306.71                     | 62.36                  | 456,262.27         | 654,810.72        |
| 7,182.00     | 1.20       | 259.60               | 7,168.88      | 138.87           | 141.75        | 270.00        | 304.95                     | 62.30                  | 456,261.75         | 654,809.00        |
| 7,276.00     | 1.00       | 268.40               | 7,262.86      | 138.69           | 141.55        | 268.22        | 303.28                     | 62.18                  | 456,261.55         | 654,807.22        |
| 7,371.00     | 1.40       | 299.10               | 7,357.84      | 139.25           | 142.09        | 266.37        | 301.90                     | 61.92                  | 456,262.09         | 654,805.37        |
| 7,465.00     | 1.40       | 285.20               | 7,451.81      | 140.13           | 142.95        | 264.26        | 300.45                     | 61.59                  | 456,262.95         | 654,803.26        |
| 7,560.00     | 1.00       | 287.90               | 7,546.79      | 140.71           | 143.51        | 262.35        | 299.04                     | 61.32                  | 456,263.51         | 654,801.35        |
| 7,654.00     | 1.30       | 276.70               | 7,640.77      | 141.10           | 143.89        | 260.51        | 297.61                     | 61.09                  | 456,263.89         | 654,799.51        |
| 7,749.00     | 1.80       | 269.30               | 7,735.74      | 141.24           | 143.99        | 257.95        | 295.42                     | 60.83                  | 456,263.99         | 654,796.95        |
| 7,843.00     | 0.90       | 263.20               | 7,829.71      | 141.16           | 143.89        | 255.74        | 293.44                     | 60.64                  | 456,263.89         | 654,794.74        |
| 7,937.00     | 1.00       | 228.90               | 7,923.70      | 140.54           | 143.26        | 254.39        | 291.96                     | 60.61                  | 456,263.26         | 654,793.39        |
| 8,032.00     | 1.20       | 206.30               | 8,018.68      | 139.12           | 141.82        | 253.33        | 290.32                     | 60.76                  | 456,261.82         | 654,792.33        |
| 8,126.00     | 0.90       | 183.50               | 8,112.67      | 137.51           | 140.20        | 252.84        | 289.12                     | 60.99                  | 456,260.20         | 654,791.84        |
| 8,220.00     | 0.80       | 205.00               | 8,206.66      | 136.18           | 138.87        | 252.52        | 288.19                     | 61.19                  | 456,258.87         | 654,791.52        |
| 8,315.00     | 0.80       | 247.90               | 8,301.65      | 135.34           | 138.02        | 251.63        | 287.00                     | 61.25                  | 456,258.02         | 654,790.63        |



# ProDirectional Survey Report



|           |                               |                              |                                           |
|-----------|-------------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC       | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83)      | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34                    | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                          | North Reference:             | Grid                                      |
| Wellbore: | ST01                          | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | ST01 10844'-16171' PTB 16234' | Database:                    | WellPlanner1                              |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |
| 8,409.00     | 0.80       | 234.40               | 8,395.64      | 134.72           | 137.39        | 250.49        | 285.69                     | 61.25                  | 456,257.39         | 654,789.49        |
| 8,504.00     | 1.20       | 252.20               | 8,490.63      | 134.05           | 136.70        | 249.00        | 284.06                     | 61.23                  | 456,256.70         | 654,788.00        |
| 8,598.00     | 2.20       | 281.00               | 8,584.58      | 134.12           | 136.75        | 246.29        | 281.71                     | 60.96                  | 456,256.75         | 654,785.29        |
| 8,693.00     | 2.30       | 285.70               | 8,679.51      | 135.02           | 137.61        | 242.67        | 278.97                     | 60.44                  | 456,257.61         | 654,781.67        |
| 8,787.00     | 2.50       | 270.40               | 8,773.43      | 135.59           | 138.14        | 238.80        | 275.87                     | 59.95                  | 456,258.14         | 654,777.80        |
| 8,882.00     | 0.80       | 294.40               | 8,868.39      | 135.90           | 138.42        | 236.12        | 273.71                     | 59.62                  | 456,258.42         | 654,775.12        |
| 8,977.00     | 0.00       | 152.10               | 8,963.38      | 136.18           | 138.70        | 235.52        | 273.32                     | 59.51                  | 456,258.70         | 654,774.52        |
| 9,071.00     | 0.70       | 154.90               | 9,057.38      | 135.66           | 138.18        | 235.76        | 273.27                     | 59.63                  | 456,258.18         | 654,774.76        |
| 9,166.00     | 1.00       | 205.90               | 9,152.37      | 134.39           | 136.91        | 235.65        | 272.53                     | 59.84                  | 456,256.91         | 654,774.65        |
| 9,260.00     | 0.80       | 198.30               | 9,246.36      | 133.04           | 135.55        | 235.08        | 271.36                     | 60.03                  | 456,255.55         | 654,774.08        |
| 9,355.00     | 1.00       | 183.60               | 9,341.35      | 131.58           | 134.09        | 234.82        | 270.41                     | 60.27                  | 456,254.09         | 654,773.82        |
| 9,450.00     | 0.60       | 214.60               | 9,436.34      | 130.35           | 132.85        | 234.49        | 269.51                     | 60.47                  | 456,252.85         | 654,773.49        |
| 9,544.00     | 0.80       | 206.60               | 9,530.33      | 129.36           | 131.86        | 233.91        | 268.52                     | 60.59                  | 456,251.86         | 654,772.91        |
| 9,639.00     | 1.10       | 213.00               | 9,625.32      | 128.01           | 130.50        | 233.12        | 267.16                     | 60.76                  | 456,250.50         | 654,772.12        |
| 9,734.00     | 0.80       | 219.30               | 9,720.31      | 126.74           | 129.22        | 232.20        | 265.74                     | 60.90                  | 456,249.22         | 654,771.20        |
| 9,828.00     | 0.70       | 218.40               | 9,814.30      | 125.80           | 128.27        | 231.43        | 264.60                     | 61.00                  | 456,248.27         | 654,770.43        |
| 9,923.00     | 0.80       | 206.80               | 9,909.29      | 124.76           | 127.22        | 230.77        | 263.52                     | 61.13                  | 456,247.22         | 654,769.77        |
| 10,017.00    | 1.00       | 211.60               | 10,003.28     | 123.48           | 125.94        | 230.05        | 262.26                     | 61.30                  | 456,245.94         | 654,769.05        |
| 10,112.00    | 1.30       | 203.70               | 10,098.26     | 121.80           | 124.24        | 229.18        | 260.69                     | 61.54                  | 456,244.24         | 654,768.18        |
| 10,206.00    | 1.10       | 201.50               | 10,192.24     | 119.99           | 122.43        | 228.42        | 259.16                     | 61.81                  | 456,242.43         | 654,767.42        |
| 10,301.00    | 1.30       | 201.30               | 10,287.22     | 118.14           | 120.57        | 227.69        | 257.65                     | 62.10                  | 456,240.57         | 654,766.69        |
| 10,395.00    | 1.30       | 211.60               | 10,381.19     | 116.25           | 118.67        | 226.75        | 255.93                     | 62.37                  | 456,238.67         | 654,765.75        |
| 10,490.00    | 1.20       | 200.90               | 10,476.17     | 114.41           | 116.83        | 225.83        | 254.26                     | 62.65                  | 456,236.83         | 654,764.83        |
| 10,585.00    | 1.00       | 208.60               | 10,571.15     | 112.77           | 115.17        | 225.08        | 252.83                     | 62.90                  | 456,235.17         | 654,764.08        |
| 10,616.00    | 1.20       | 212.30               | 10,602.15     | 112.26           | 114.66        | 224.77        | 252.33                     | 62.97                  | 456,234.66         | 654,763.77        |
| 10,756.00    | 1.50       | 265.10               | 10,742.11     | 110.89           | 113.26        | 222.16        | 249.37                     | 62.99                  | 456,233.26         | 654,761.16        |
| 10,803.00    | 7.00       | 4.10                 | 10,789.00     | 113.70           | 116.07        | 221.76        | 250.30                     | 62.37                  | 456,236.07         | 654,760.76        |



# ProDirectional Survey Report



|           |                               |                              |                                           |
|-----------|-------------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC       | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83)      | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34                    | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                          | North Reference:             | Grid                                      |
| Wellbore: | ST01                          | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | ST01 10844'-16171' PTB 16234' | Database:                    | WellPlanner1                              |

| Survey                                         |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|------------------------------------------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft)                                   | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 10,844.00                                      | 10.30      | 1.80                 | 10,829.52     | 119.85           | 122.23        | 222.05        | 253.47                     | 61.17                  | 456,242.23         | 654,761.05        |  |
| First ST01 Survey, 10844.00' MD, 10829.52' TVD |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
| 10,891.00                                      | 19.00      | 6.20                 | 10,874.95     | 131.67           | 134.05        | 223.01        | 260.20                     | 58.99                  | 456,254.05         | 654,762.01        |  |
| 10,937.00                                      | 27.90      | 5.80                 | 10,917.11     | 149.84           | 152.24        | 224.91        | 271.59                     | 55.91                  | 456,272.24         | 654,763.91        |  |
| 10,984.00                                      | 35.30      | 3.00                 | 10,957.12     | 174.36           | 176.78        | 226.73        | 287.51                     | 52.06                  | 456,296.78         | 654,765.73        |  |
| 11,031.00                                      | 37.20      | 358.40               | 10,995.03     | 202.12           | 204.55        | 227.05        | 305.60                     | 47.98                  | 456,324.55         | 654,766.05        |  |
| 11,078.00                                      | 43.00      | 356.20               | 11,030.96     | 232.36           | 234.77        | 225.59        | 325.59                     | 43.86                  | 456,354.77         | 654,764.59        |  |
| 11,125.00                                      | 51.50      | 357.20               | 11,062.84     | 266.80           | 269.20        | 223.62        | 349.96                     | 39.72                  | 456,389.20         | 654,762.62        |  |
| 11,171.00                                      | 56.40      | 359.40               | 11,089.90     | 303.97           | 306.36        | 222.54        | 378.66                     | 36.00                  | 456,426.36         | 654,761.54        |  |
| 11,219.00                                      | 56.60      | 0.50                 | 11,116.40     | 343.99           | 346.38        | 222.51        | 411.69                     | 32.72                  | 456,466.38         | 654,761.51        |  |
| 11,266.00                                      | 59.30      | 2.80                 | 11,141.34     | 383.79           | 386.19        | 223.67        | 446.29                     | 30.08                  | 456,506.19         | 654,762.67        |  |
| 11,313.00                                      | 62.60      | 2.90                 | 11,164.16     | 424.80           | 427.23        | 225.71        | 483.18                     | 27.85                  | 456,547.23         | 654,764.71        |  |
| 11,359.00                                      | 65.40      | 4.30                 | 11,184.32     | 466.03           | 468.48        | 228.31        | 521.16                     | 25.98                  | 456,588.48         | 654,767.31        |  |
| 11,406.00                                      | 72.70      | 5.30                 | 11,201.11     | 509.69           | 512.19        | 231.99        | 562.28                     | 24.37                  | 456,632.19         | 654,770.99        |  |
| 11,496.00                                      | 81.40      | 3.90                 | 11,221.27     | 596.96           | 599.53        | 239.00        | 645.42                     | 21.73                  | 456,719.53         | 654,778.00        |  |
| 11,591.00                                      | 83.90      | 0.80                 | 11,233.42     | 691.03           | 693.66        | 242.86        | 734.94                     | 19.30                  | 456,813.66         | 654,781.86        |  |
| 11,685.00                                      | 88.90      | 359.90               | 11,239.32     | 784.80           | 787.44        | 243.43        | 824.21                     | 17.18                  | 456,907.44         | 654,782.43        |  |
| 11,780.00                                      | 90.10      | 0.30                 | 11,240.15     | 879.79           | 882.43        | 243.59        | 915.44                     | 15.43                  | 457,002.43         | 654,782.59        |  |
| 11,874.00                                      | 88.90      | 0.40                 | 11,240.97     | 973.77           | 976.42        | 244.17        | 1,006.49                   | 14.04                  | 457,096.42         | 654,783.17        |  |
| 11,968.00                                      | 89.60      | 0.30                 | 11,242.20     | 1,067.75         | 1,070.41      | 244.74        | 1,098.04                   | 12.88                  | 457,190.41         | 654,783.74        |  |
| 12,063.00                                      | 90.60      | 1.50                 | 11,242.04     | 1,162.71         | 1,165.40      | 246.23        | 1,191.13                   | 11.93                  | 457,285.40         | 654,785.23        |  |
| 12,156.00                                      | 92.00      | 358.90               | 11,239.92     | 1,255.67         | 1,258.36      | 246.56        | 1,282.29                   | 11.09                  | 457,378.36         | 654,785.56        |  |
| 12,249.00                                      | 88.90      | 354.70               | 11,239.19     | 1,348.54         | 1,351.18      | 241.37        | 1,372.57                   | 10.13                  | 457,471.18         | 654,780.37        |  |
| 12,344.00                                      | 89.10      | 351.50               | 11,240.85     | 1,442.94         | 1,445.47      | 229.96        | 1,463.65                   | 9.04                   | 457,565.47         | 654,768.96        |  |
| 12,438.00                                      | 90.90      | 351.90               | 11,240.85     | 1,536.09         | 1,538.48      | 216.39        | 1,553.62                   | 8.01                   | 457,658.48         | 654,755.39        |  |
| 12,532.00                                      | 91.70      | 357.60               | 11,238.72     | 1,629.72         | 1,632.02      | 207.79        | 1,645.20                   | 7.26                   | 457,752.02         | 654,746.79        |  |
| 12,626.00                                      | 92.40      | 1.20                 | 11,235.35     | 1,723.64         | 1,725.94      | 206.81        | 1,738.29                   | 6.83                   | 457,845.94         | 654,745.81        |  |



ProDirectional  
Survey Report



|           |                               |                              |                                           |
|-----------|-------------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC       | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83)      | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34                    | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                          | North Reference:             | Grid                                      |
| Wellbore: | ST01                          | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | ST01 10844'-16171' PTB 16234' | Database:                    | WellPlanner1                              |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |
| 12,720.00    | 89.90      | 1.30                 | 11,233.47     | 1,817.57         | 1,819.89      | 208.86        | 1,831.84                   | 6.55                   | 457,939.89         | 654,747.86        |
| 12,814.00    | 90.50      | 358.30               | 11,233.14     | 1,911.55         | 1,913.88      | 208.53        | 1,925.21                   | 6.22                   | 458,033.88         | 654,747.53        |
| 12,908.00    | 89.20      | 357.10               | 11,233.39     | 2,005.51         | 2,007.80      | 204.76        | 2,018.21                   | 5.82                   | 458,127.80         | 654,743.76        |
| 13,002.00    | 88.00      | 354.70               | 11,235.68     | 2,099.30         | 2,101.52      | 198.04        | 2,110.83                   | 5.38                   | 458,221.52         | 654,737.04        |
| 13,096.00    | 90.00      | 356.80               | 11,237.32     | 2,193.08         | 2,195.24      | 191.08        | 2,203.54                   | 4.97                   | 458,315.24         | 654,730.08        |
| 13,190.00    | 88.60      | 358.70               | 11,238.47     | 2,287.03         | 2,289.15      | 187.39        | 2,296.81                   | 4.68                   | 458,409.15         | 654,726.39        |
| 13,285.00    | 91.30      | 357.70               | 11,238.56     | 2,382.00         | 2,384.10      | 184.40        | 2,391.22                   | 4.42                   | 458,504.10         | 654,723.40        |
| 13,379.00    | 91.60      | 357.10               | 11,236.18     | 2,475.91         | 2,477.97      | 180.14        | 2,484.51                   | 4.16                   | 458,597.97         | 654,719.14        |
| 13,473.00    | 91.00      | 355.90               | 11,234.04     | 2,569.77         | 2,571.77      | 174.40        | 2,577.68                   | 3.88                   | 458,691.77         | 654,713.40        |
| 13,566.00    | 89.40      | 354.10               | 11,233.72     | 2,662.49         | 2,664.41      | 166.30        | 2,669.59                   | 3.57                   | 458,784.41         | 654,705.30        |
| 13,590.00    | 86.10      | 353.70               | 11,234.66     | 2,686.35         | 2,688.25      | 163.75        | 2,693.23                   | 3.49                   | 458,808.25         | 654,702.75        |
| 13,660.00    | 88.60      | 354.50               | 11,237.90     | 2,755.98         | 2,757.80      | 156.57        | 2,762.24                   | 3.25                   | 458,877.80         | 654,695.57        |
| 13,754.00    | 90.50      | 358.80               | 11,238.64     | 2,849.84         | 2,851.61      | 151.07        | 2,855.61                   | 3.03                   | 458,971.61         | 654,690.07        |
| 13,849.00    | 91.30      | 0.70                 | 11,237.14     | 2,944.82         | 2,946.59      | 150.66        | 2,950.44                   | 2.93                   | 459,066.59         | 654,689.66        |
| 13,943.00    | 89.70      | 2.60                 | 11,236.32     | 3,038.74         | 3,040.54      | 153.37        | 3,044.41                   | 2.89                   | 459,160.54         | 654,692.37        |
| 14,037.00    | 90.90      | 5.30                 | 11,235.83     | 3,132.43         | 3,134.31      | 159.84        | 3,138.38                   | 2.92                   | 459,254.31         | 654,698.84        |
| 14,132.00    | 89.90      | 3.70                 | 11,235.17     | 3,227.04         | 3,229.01      | 167.29        | 3,233.34                   | 2.97                   | 459,349.01         | 654,706.29        |
| 14,226.00    | 91.00      | 3.40                 | 11,234.43     | 3,320.79         | 3,322.82      | 173.11        | 3,327.33                   | 2.98                   | 459,442.82         | 654,712.11        |
| 14,320.00    | 85.70      | 1.30                 | 11,237.14     | 3,414.59         | 3,416.67      | 176.97        | 3,421.25                   | 2.97                   | 459,536.67         | 654,715.97        |
| 14,414.00    | 87.70      | 1.00                 | 11,242.55     | 3,508.38         | 3,510.49      | 178.85        | 3,515.04                   | 2.92                   | 459,630.49         | 654,717.85        |
| 14,508.00    | 88.60      | 0.80                 | 11,245.58     | 3,602.30         | 3,604.42      | 180.33        | 3,608.93                   | 2.86                   | 459,724.42         | 654,719.33        |
| 14,602.00    | 89.90      | 0.60                 | 11,246.81     | 3,696.27         | 3,698.41      | 181.47        | 3,702.86                   | 2.81                   | 459,818.41         | 654,720.47        |
| 14,696.00    | 91.50      | 1.00                 | 11,245.66     | 3,790.23         | 3,792.39      | 182.79        | 3,796.79                   | 2.76                   | 459,912.39         | 654,721.79        |
| 14,790.00    | 92.40      | 0.10                 | 11,242.46     | 3,884.15         | 3,886.33      | 183.69        | 3,890.67                   | 2.71                   | 460,006.33         | 654,722.69        |
| 14,884.00    | 94.10      | 0.10                 | 11,237.14     | 3,977.99         | 3,980.17      | 183.85        | 3,984.42                   | 2.64                   | 460,100.17         | 654,722.85        |
| 14,978.00    | 92.70      | 1.00                 | 11,231.56     | 4,071.80         | 4,074.00      | 184.75        | 4,078.19                   | 2.60                   | 460,194.00         | 654,723.75        |
| 15,073.00    | 86.90      | 359.30               | 11,231.89     | 4,166.75         | 4,168.95      | 185.00        | 4,173.06                   | 2.54                   | 460,288.95         | 654,724.00        |



# ProDirectional Survey Report



|                  |                               |                                     |                                           |
|------------------|-------------------------------|-------------------------------------|-------------------------------------------|
| <b>Company:</b>  | Tap Rock Operating, LLC       | <b>Local Co-ordinate Reference:</b> | Well 244H                                 |
| <b>Project:</b>  | Eddy County, NM (NAD 83)      | <b>TVD Reference:</b>               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| <b>Site:</b>     | Cypress 34                    | <b>MD Reference:</b>                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| <b>Well:</b>     | 244H                          | <b>North Reference:</b>             | Grid                                      |
| <b>Wellbore:</b> | ST01                          | <b>Survey Calculation Method:</b>   | Minimum Curvature                         |
| <b>Design:</b>   | ST01 10844'-16171' PTB 16234' | <b>Database:</b>                    | WellPlanner1                              |

| MD<br>(usft)                                     | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |
|--------------------------------------------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|
| 15,167.00                                        | 90.20      | 358.20               | 11,234.27     | 4,260.70         | 4,262.89      | 182.95        | 4,266.81                   | 2.46                   | 460,382.89         | 654,721.95        |
| 15,261.00                                        | 89.20      | 353.70               | 11,234.76     | 4,354.50         | 4,356.63      | 176.32        | 4,360.19                   | 2.32                   | 460,476.63         | 654,715.32        |
| 15,355.00                                        | 88.80      | 355.50               | 11,236.40     | 4,448.16         | 4,450.19      | 167.47        | 4,453.34                   | 2.16                   | 460,570.19         | 654,706.47        |
| 15,449.00                                        | 91.00      | 357.10               | 11,236.57     | 4,542.01         | 4,543.99      | 161.41        | 4,546.85                   | 2.03                   | 460,663.99         | 654,700.41        |
| 15,543.00                                        | 93.00      | 355.30               | 11,233.29     | 4,635.80         | 4,637.71      | 155.18        | 4,640.31                   | 1.92                   | 460,757.71         | 654,694.18        |
| 15,637.00                                        | 89.80      | 1.90                 | 11,230.99     | 4,729.70         | 4,731.59      | 152.89        | 4,734.06                   | 1.85                   | 460,851.59         | 654,691.89        |
| 15,731.00                                        | 89.20      | 6.50                 | 11,231.81     | 4,823.34         | 4,825.31      | 159.77        | 4,827.96                   | 1.90                   | 460,945.31         | 654,698.77        |
| 15,825.00                                        | 88.70      | 11.50                | 11,233.53     | 4,915.97         | 4,918.11      | 174.47        | 4,921.20                   | 2.03                   | 461,038.11         | 654,713.47        |
| 15,920.00                                        | 91.50      | 11.70                | 11,233.37     | 5,008.81         | 5,011.16      | 193.57        | 5,014.90                   | 2.21                   | 461,131.16         | 654,732.57        |
| 16,013.00                                        | 90.70      | 14.60                | 11,231.58     | 5,099.12         | 5,101.69      | 214.72        | 5,106.21                   | 2.41                   | 461,221.69         | 654,753.72        |
| 16,108.00                                        | 90.10      | 18.10                | 11,230.92     | 5,189.97         | 5,192.83      | 241.46        | 5,198.45                   | 2.66                   | 461,312.83         | 654,780.46        |
| 16,171.00                                        | 90.70      | 21.40                | 11,230.48     | 5,249.02         | 5,252.12      | 262.74        | 5,258.69                   | 2.86                   | 461,372.12         | 654,801.74        |
| <b>Final Survey, 16171.00' MD, 11230.48' TVD</b> |            |                      |               |                  |               |               |                            |                        |                    |                   |
| 16,234.00                                        | 90.70      | 21.40                | 11,229.71     | 5,307.43         | 5,310.77      | 285.73        | 5,318.45                   | 3.08                   | 461,430.77         | 654,824.73        |
| <b>PTB, 16234.00' MD, 11229.71' TVD</b>          |            |                      |               |                  |               |               |                            |                        |                    |                   |

| Design Annotations          |                             |                   |                 |                                                |
|-----------------------------|-----------------------------|-------------------|-----------------|------------------------------------------------|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                                        |
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                                |
| 10,844.00                   | 10,829.52                   | 122.23            | 222.05          | First ST01 Survey, 10844.00' MD, 10829.52' TVD |
| 16,171.00                   | 11,230.48                   | 5,252.12          | 262.74          | Final Survey, 16171.00' MD, 11230.48' TVD      |
| 16,234.00                   | 11,229.71                   | 5,310.77          | 285.73          | PTB, 16234.00' MD, 11229.71' TVD               |



**PRODIRECTIONAL**

RECEIVED

SEP 26 2019

DISTRICT II-ARTESIA O.C.D.

**TAP  
ROCK**

**Cypress 34 No. 244H(OH)**  
Eddy County, NM

January 17, 2019

Job No. LNM5188218  
API No. 30-015-45263

# Survey Completion Report



**PRODIRECTIONAL**

## *Survey Certification Letter*

January 17, 2019



Operator Name: Tap Rock Operating  
Well Name: Cypress 34 No. 244H  
County/Parish: Eddy County,  
State: NM  
Rig Name: H&P 422  
Job Number: LNM5188218

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

| <u>Surveyor</u> | <u>Surveyed Depths</u> | <u>Projection to Bit</u> | <u>Dates Performed</u> | <u>Type of Survey</u> |
|-----------------|------------------------|--------------------------|------------------------|-----------------------|
| ProDirectional  | 148' MD – 15,265' MD   | 15,417' MD               | 10/02/18 – 10/17/18    | MWD                   |

Sincerely,

Mike Coats  
Regulatory Specialist  
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

[prodirectional.com](http://prodirectional.com)

*The Standard of Excellence in Directional Supervision*



## **Tap Rock Operating, LLC**

Eddy County, NM

Cypress 34

No. 244H

OH

Survey: ProDirectional

## **Survey Report**

16 January, 2019





ProDirectional  
Survey Report



|           |                          |                              |                                           |
|-----------|--------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC  | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34               | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                     | North Reference:             | Grid                                      |
| Wellbore: | OH                       | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | OH 148'-15417'           | Database:                    | WellPlanner1                              |

|             |                           |               |                |
|-------------|---------------------------|---------------|----------------|
| Project:    | Eddy County, NM (NAD 83)  |               |                |
| Map System: | US State Plane 1983       | System Datum: | Mean Sea Level |
| Geo Datum:  | North American Datum 1983 |               |                |
| Map Zone:   | New Mexico Eastern Zone   |               |                |

|                       |            |                   |                 |
|-----------------------|------------|-------------------|-----------------|
| Site:                 | Cypress 34 |                   |                 |
| Site Position:        |            | Northing:         | 456,089.00 usft |
| From:                 | Map        | Easting:          | 654,374.00 usft |
| Position Uncertainty: | 0.00 usft  | Slot Radius:      | 13-3/16 "       |
|                       |            | Latitude:         | 32.253335       |
|                       |            | Longitude:        | -103.967678     |
|                       |            | Grid Convergence: | 0.20 °          |

|                      |           |                     |           |                 |               |             |
|----------------------|-----------|---------------------|-----------|-----------------|---------------|-------------|
| Well:                |           | 244H                |           |                 |               |             |
| Well Position        | +N/-S     | 0.00 usft           | Northing: | 456,120.00 usft | Latitude:     | 32.253419   |
|                      | +E/-W     | 0.00 usft           | Easting:  | 654,539.00 usft | Longitude:    | -103.967143 |
| Position Uncertainty | 0.00 usft | Wellhead Elevation: | usft      | Ground Level:   | 3,093.00 usft |             |

|           |            |             |                    |                  |                        |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Wellbore  | OH         |             |                    |                  |                        |
| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | HDGM       | 9/24/2018   | 7.05               | 60.03            | 47,982.80              |

|                   |                  |        |        |               |      |
|-------------------|------------------|--------|--------|---------------|------|
| Design:           | OH 148'-15417'   |        |        |               |      |
| Audit Notes:      |                  |        |        |               |      |
| Version:          | 1.0              | Phase: | ACTUAL | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) | +N/-S  | +E/-W  | Direction     |      |
|                   | (usft)           | (usft) | (usft) | (°)           |      |
|                   | 0.00             | 0.00   | 0.00   | 359.39        |      |

|                 |           |                   |           |                 |
|-----------------|-----------|-------------------|-----------|-----------------|
| Survey Program: | Date      | 1/16/2019         |           |                 |
| From            | To        | Survey (Wellbore) | Tool Name | Description     |
| (usft)          | (usft)    |                   |           |                 |
| 148.00          | 15,417.00 | Pro MWD (OH)      | MWD+HDGM  | OWSG MWD + HRGM |



# ProDirectional Survey Report



|           |                          |                              |                                           |
|-----------|--------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC  | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34               | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                     | North Reference:             | Grid                                      |
| Wellbore: | OH                       | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | OH 148'-15417'           | Database:                    | WellPlanner1                              |

| Survey:      |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 0.00         | 0.00       | 0.00                 | 0.00          | 0.00             | 0.00          | 0.00          | 0.00                       | 0.00                   | 456,120.00         | 654,539.00        |  |
| 148.00       | 0.20       | 335.20               | 148.00        | 0.24             | 0.23          | -0.11         | 0.26                       | 335.20                 | 456,120.23         | 654,538.89        |  |
| 238.00       | 0.50       | 11.40                | 238.00        | 0.76             | 0.76          | -0.10         | 0.77                       | 352.77                 | 456,120.76         | 654,538.90        |  |
| 329.00       | 1.30       | 24.00                | 328.99        | 2.09             | 2.09          | 0.40          | 2.13                       | 10.86                  | 456,122.09         | 654,539.40        |  |
| 382.00       | 1.60       | 26.60                | 381.97        | 3.29             | 3.31          | 0.98          | 3.45                       | 16.48                  | 456,123.31         | 654,539.98        |  |
| 576.00       | 1.20       | 41.90                | 575.91        | 7.20             | 7.24          | 3.55          | 8.06                       | 26.10                  | 456,127.24         | 654,542.55        |  |
| 697.00       | 1.10       | 51.40                | 696.89        | 8.85             | 8.91          | 5.30          | 10.36                      | 30.76                  | 456,128.91         | 654,544.30        |  |
| 877.00       | 0.70       | 75.10                | 876.87        | 10.18            | 10.27         | 7.71          | 12.84                      | 36.92                  | 456,130.27         | 654,546.71        |  |
| 1,059.00     | 0.70       | 149.00               | 1,058.85      | 9.50             | 9.60          | 9.36          | 13.41                      | 44.28                  | 456,129.60         | 654,548.36        |  |
| 1,240.00     | 1.30       | 163.90               | 1,239.83      | 6.57             | 6.68          | 10.50         | 12.44                      | 57.54                  | 456,126.68         | 654,549.50        |  |
| 1,429.00     | 1.90       | 90.90                | 1,428.77      | 4.42             | 4.57          | 14.23         | 14.94                      | 72.19                  | 456,124.57         | 654,553.23        |  |
| 1,618.00     | 4.90       | 71.50                | 1,617.42      | 6.82             | 7.08          | 25.02         | 26.00                      | 74.19                  | 456,127.08         | 654,564.02        |  |
| 1,807.00     | 4.10       | 74.90                | 1,805.84      | 10.99            | 11.40         | 39.20         | 40.82                      | 73.78                  | 456,131.40         | 654,578.20        |  |
| 1,996.00     | 5.10       | 62.80                | 1,994.23      | 16.44            | 17.00         | 53.19         | 55.84                      | 72.27                  | 456,137.00         | 654,592.19        |  |
| 2,185.00     | 4.80       | 56.80                | 2,182.53      | 24.46            | 25.17         | 67.28         | 71.84                      | 69.49                  | 456,145.17         | 654,606.28        |  |
| 2,374.00     | 3.90       | 53.00                | 2,370.98      | 32.53            | 33.37         | 79.03         | 85.79                      | 67.11                  | 456,153.37         | 654,618.03        |  |
| 2,563.00     | 4.20       | 62.70                | 2,559.51      | 39.45            | 40.42         | 90.31         | 98.94                      | 65.89                  | 456,160.42         | 654,629.31        |  |
| 2,752.00     | 4.70       | 64.40                | 2,747.94      | 45.83            | 46.94         | 103.45        | 113.60                     | 65.60                  | 456,166.94         | 654,642.45        |  |
| 2,941.00     | 4.60       | 80.20                | 2,936.32      | 50.31            | 51.57         | 117.90        | 128.68                     | 66.37                  | 456,171.57         | 654,656.90        |  |
| 3,130.00     | 5.70       | 59.60                | 3,124.58      | 56.19            | 57.61         | 133.46        | 145.37                     | 66.65                  | 456,177.61         | 654,672.46        |  |
| 3,217.00     | 4.90       | 61.30                | 3,211.20      | 60.08            | 61.58         | 140.45        | 153.36                     | 66.32                  | 456,181.58         | 654,679.45        |  |
| 3,309.00     | 4.60       | 60.10                | 3,302.89      | 63.74            | 65.31         | 147.09        | 160.94                     | 66.06                  | 456,185.31         | 654,686.09        |  |
| 3,404.00     | 4.50       | 60.30                | 3,397.59      | 67.41            | 69.05         | 153.63        | 168.44                     | 65.80                  | 456,189.05         | 654,692.63        |  |
| 3,498.00     | 4.80       | 59.70                | 3,491.28      | 71.15            | 72.86         | 160.23        | 176.02                     | 65.55                  | 456,192.86         | 654,699.23        |  |
| 3,593.00     | 4.70       | 61.60                | 3,585.95      | 74.94            | 76.72         | 167.09        | 183.86                     | 65.34                  | 456,196.72         | 654,706.09        |  |
| 3,687.00     | 5.70       | 47.70                | 3,679.57      | 79.84            | 81.69         | 173.93        | 192.16                     | 64.84                  | 456,201.69         | 654,712.93        |  |
| 3,782.00     | 5.60       | 46.60                | 3,774.11      | 86.13            | 88.05         | 180.79        | 201.09                     | 64.03                  | 456,208.05         | 654,719.79        |  |



ProDirectional  
Survey Report



|           |                          |                              |                                           |
|-----------|--------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC  | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34               | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                     | North Reference:             | Grid                                      |
| Wellbore: | OH                       | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | OH 148'-15417'           | Database:                    | WellPlanner1                              |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 3,876.00     | 5.80       | 46.80                | 3,867.64      | 92.46            | 94.46         | 187.58        | 210.02                     | 63.27                  | 456,214.46         | 654,726.58        |  |
| 3,970.00     | 5.60       | 46.40                | 3,961.18      | 98.80            | 100.87        | 194.36        | 218.98                     | 62.57                  | 456,220.87         | 654,733.36        |  |
| 4,065.00     | 5.20       | 45.80                | 4,055.75      | 104.93           | 107.07        | 200.81        | 227.57                     | 61.93                  | 456,227.07         | 654,739.81        |  |
| 4,159.00     | 5.00       | 45.30                | 4,149.38      | 110.71           | 112.92        | 206.77        | 235.60                     | 61.36                  | 456,232.92         | 654,745.77        |  |
| 4,254.00     | 4.90       | 41.90                | 4,244.03      | 116.58           | 118.85        | 212.42        | 243.41                     | 60.77                  | 456,238.85         | 654,751.42        |  |
| 4,349.00     | 5.10       | 42.00                | 4,338.67      | 122.68           | 125.01        | 217.96        | 251.27                     | 60.16                  | 456,245.01         | 654,756.96        |  |
| 4,443.00     | 5.10       | 43.20                | 4,432.29      | 128.77           | 131.16        | 223.62        | 259.24                     | 59.61                  | 456,251.16         | 654,762.62        |  |
| 4,537.00     | 5.00       | 42.80                | 4,525.93      | 134.76           | 137.21        | 229.26        | 267.18                     | 59.10                  | 456,257.21         | 654,768.26        |  |
| 4,631.00     | 4.80       | 40.70                | 4,619.59      | 140.69           | 143.20        | 234.61        | 274.86                     | 58.60                  | 456,263.20         | 654,773.61        |  |
| 4,725.00     | 4.50       | 43.20                | 4,713.28      | 146.31           | 148.87        | 239.70        | 282.16                     | 58.16                  | 456,268.87         | 654,778.70        |  |
| 4,819.00     | 4.50       | 43.80                | 4,806.99      | 151.60           | 154.22        | 244.77        | 289.30                     | 57.79                  | 456,274.22         | 654,783.77        |  |
| 4,914.00     | 3.30       | 50.70                | 4,901.77      | 155.98           | 158.64        | 249.47        | 295.64                     | 57.55                  | 456,278.64         | 654,788.47        |  |
| 5,008.00     | 3.30       | 57.70                | 4,995.61      | 159.09           | 161.80        | 253.85        | 301.03                     | 57.49                  | 456,281.80         | 654,792.85        |  |
| 5,103.00     | 2.10       | 61.60                | 5,090.50      | 161.34           | 164.09        | 257.69        | 305.50                     | 57.51                  | 456,284.09         | 654,796.69        |  |
| 5,197.00     | 1.90       | 71.10                | 5,184.45      | 162.63           | 165.41        | 260.68        | 308.73                     | 57.60                  | 456,285.41         | 654,799.68        |  |
| 5,292.00     | 1.50       | 78.10                | 5,279.40      | 163.37           | 166.18        | 263.39        | 311.43                     | 57.75                  | 456,286.18         | 654,802.39        |  |
| 5,386.00     | 1.50       | 76.70                | 5,373.37      | 163.88           | 166.72        | 265.79        | 313.75                     | 57.90                  | 456,286.72         | 654,804.79        |  |
| 5,481.00     | 1.60       | 84.20                | 5,468.34      | 164.27           | 167.14        | 268.32        | 316.12                     | 58.08                  | 456,287.14         | 654,807.32        |  |
| 5,576.00     | 1.60       | 84.90                | 5,563.30      | 164.49           | 167.39        | 270.96        | 318.49                     | 58.29                  | 456,287.39         | 654,809.96        |  |
| 5,670.00     | 1.30       | 97.90                | 5,657.27      | 164.44           | 167.36        | 273.32        | 320.49                     | 58.52                  | 456,287.36         | 654,812.32        |  |
| 5,764.00     | 1.30       | 97.40                | 5,751.25      | 164.13           | 167.07        | 275.43        | 322.15                     | 58.76                  | 456,287.07         | 654,814.43        |  |
| 5,859.00     | 1.50       | 85.30                | 5,846.22      | 164.07           | 167.04        | 277.74        | 324.10                     | 58.98                  | 456,287.04         | 654,816.74        |  |
| 5,953.00     | 0.60       | 159.80               | 5,940.20      | 163.70           | 166.68        | 279.14        | 325.11                     | 59.16                  | 456,286.68         | 654,818.14        |  |
| 6,048.00     | 1.20       | 218.80               | 6,035.19      | 162.46           | 165.43        | 278.69        | 324.09                     | 59.31                  | 456,285.43         | 654,817.69        |  |
| 6,142.00     | 1.40       | 211.30               | 6,129.17      | 160.72           | 163.69        | 277.47        | 322.16                     | 59.46                  | 456,283.69         | 654,816.47        |  |
| 6,237.00     | 1.40       | 213.70               | 6,224.14      | 158.78           | 161.73        | 276.23        | 320.09                     | 59.65                  | 456,281.73         | 654,815.23        |  |
| 6,332.00     | 1.50       | 198.20               | 6,319.11      | 156.64           | 159.58        | 275.20        | 318.12                     | 59.89                  | 456,279.58         | 654,814.20        |  |



# ProDirectional Survey Report



|           |                          |                              |                                           |
|-----------|--------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC  | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34               | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                     | North Reference:             | Grid                                      |
| Wellbore: | OH                       | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | OH 148'-15417'           | Database:                    | WellPlanner1                              |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 6,426.00     | 1.60       | 192.30               | 6,413.08      | 154.20           | 157.13        | 274.53        | 316.32                     | 60.21                  | 456,277.13         | 654,813.53        |  |
| 6,521.00     | 1.40       | 190.30               | 6,508.04      | 151.77           | 154.69        | 274.04        | 314.69                     | 60.56                  | 456,274.69         | 654,813.04        |  |
| 6,615.00     | 1.10       | 184.80               | 6,602.02      | 149.74           | 152.66        | 273.76        | 313.45                     | 60.85                  | 456,272.66         | 654,812.76        |  |
| 6,710.00     | 1.20       | 182.90               | 6,697.00      | 147.84           | 150.76        | 273.63        | 312.42                     | 61.15                  | 456,270.76         | 654,812.63        |  |
| 6,805.00     | 1.40       | 193.70               | 6,791.98      | 145.72           | 148.64        | 273.31        | 311.11                     | 61.46                  | 456,268.64         | 654,812.31        |  |
| 6,899.00     | 1.40       | 185.40               | 6,885.95      | 143.47           | 146.38        | 272.93        | 309.71                     | 61.79                  | 456,266.38         | 654,811.93        |  |
| 6,993.00     | 1.60       | 187.70               | 6,979.92      | 141.03           | 143.94        | 272.64        | 308.31                     | 62.17                  | 456,263.94         | 654,811.64        |  |
| 7,088.00     | 1.00       | 245.00               | 7,074.90      | 139.37           | 142.27        | 271.72        | 306.71                     | 62.36                  | 456,262.27         | 654,810.72        |  |
| 7,182.00     | 1.20       | 259.60               | 7,168.88      | 138.87           | 141.75        | 270.00        | 304.95                     | 62.30                  | 456,261.75         | 654,809.00        |  |
| 7,276.00     | 1.00       | 268.40               | 7,262.86      | 138.69           | 141.55        | 268.22        | 303.28                     | 62.18                  | 456,261.55         | 654,807.22        |  |
| 7,371.00     | 1.40       | 299.10               | 7,357.84      | 139.25           | 142.09        | 266.37        | 301.90                     | 61.92                  | 456,262.09         | 654,805.37        |  |
| 7,465.00     | 1.40       | 285.20               | 7,451.81      | 140.13           | 142.95        | 264.26        | 300.45                     | 61.59                  | 456,262.95         | 654,803.26        |  |
| 7,560.00     | 1.00       | 287.90               | 7,546.79      | 140.71           | 143.51        | 262.35        | 299.04                     | 61.32                  | 456,263.51         | 654,801.35        |  |
| 7,654.00     | 1.30       | 276.70               | 7,640.77      | 141.10           | 143.89        | 260.51        | 297.61                     | 61.09                  | 456,263.89         | 654,799.51        |  |
| 7,749.00     | 1.80       | 269.30               | 7,735.74      | 141.24           | 143.99        | 257.95        | 295.42                     | 60.83                  | 456,263.99         | 654,796.95        |  |
| 7,843.00     | 0.90       | 263.20               | 7,829.71      | 141.16           | 143.89        | 255.74        | 293.44                     | 60.64                  | 456,263.89         | 654,794.74        |  |
| 7,937.00     | 1.00       | 228.90               | 7,923.70      | 140.54           | 143.26        | 254.39        | 291.96                     | 60.61                  | 456,263.26         | 654,793.39        |  |
| 8,032.00     | 1.20       | 206.30               | 8,018.68      | 139.12           | 141.82        | 253.33        | 290.32                     | 60.76                  | 456,261.82         | 654,792.33        |  |
| 8,126.00     | 0.90       | 183.50               | 8,112.67      | 137.51           | 140.20        | 252.84        | 289.12                     | 60.99                  | 456,260.20         | 654,791.84        |  |
| 8,220.00     | 0.80       | 205.00               | 8,206.66      | 136.18           | 138.87        | 252.52        | 288.19                     | 61.19                  | 456,258.87         | 654,791.52        |  |
| 8,315.00     | 0.80       | 247.90               | 8,301.65      | 135.34           | 138.02        | 251.63        | 287.00                     | 61.25                  | 456,258.02         | 654,790.63        |  |
| 8,409.00     | 0.80       | 234.40               | 8,395.64      | 134.72           | 137.39        | 250.49        | 285.69                     | 61.25                  | 456,257.39         | 654,789.49        |  |
| 8,504.00     | 1.20       | 252.20               | 8,490.63      | 134.05           | 136.70        | 249.00        | 284.06                     | 61.23                  | 456,256.70         | 654,788.00        |  |
| 8,598.00     | 2.20       | 281.00               | 8,584.58      | 134.12           | 136.75        | 246.29        | 281.71                     | 60.96                  | 456,256.75         | 654,785.29        |  |
| 8,693.00     | 2.30       | 285.70               | 8,679.51      | 135.02           | 137.61        | 242.67        | 278.97                     | 60.44                  | 456,257.61         | 654,781.67        |  |
| 8,787.00     | 2.50       | 270.40               | 8,773.43      | 135.59           | 138.14        | 238.80        | 275.87                     | 59.95                  | 456,258.14         | 654,777.80        |  |
| 8,882.00     | 0.80       | 294.40               | 8,868.39      | 135.90           | 138.42        | 236.12        | 273.71                     | 59.62                  | 456,258.42         | 654,775.12        |  |



ProDirectional  
Survey Report



|           |                          |                              |                                           |
|-----------|--------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC  | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34               | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                     | North Reference:             | Grid                                      |
| Wellbore: | OH                       | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | OH 148'-15417'           | Database:                    | WellPlanner1                              |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 8,977.00     | 0.00       | 152.10               | 8,963.38      | 136.18           | 138.70        | 235.52        | 273.32                     | 59.51                  | 456,258.70         | 654,774.52        |  |
| 9,071.00     | 0.70       | 154.90               | 9,057.38      | 135.66           | 138.18        | 235.76        | 273.27                     | 59.63                  | 456,258.18         | 654,774.76        |  |
| 9,166.00     | 1.00       | 205.90               | 9,152.37      | 134.39           | 136.91        | 235.65        | 272.53                     | 59.84                  | 456,256.91         | 654,774.65        |  |
| 9,260.00     | 0.80       | 198.30               | 9,246.36      | 133.04           | 135.55        | 235.08        | 271.36                     | 60.03                  | 456,255.55         | 654,774.08        |  |
| 9,355.00     | 1.00       | 183.60               | 9,341.35      | 131.58           | 134.09        | 234.82        | 270.41                     | 60.27                  | 456,254.09         | 654,773.82        |  |
| 9,450.00     | 0.60       | 214.60               | 9,436.34      | 130.35           | 132.85        | 234.49        | 269.51                     | 60.47                  | 456,252.85         | 654,773.49        |  |
| 9,544.00     | 0.80       | 206.60               | 9,530.33      | 129.36           | 131.86        | 233.91        | 268.52                     | 60.59                  | 456,251.86         | 654,772.91        |  |
| 9,639.00     | 1.10       | 213.00               | 9,625.32      | 128.01           | 130.50        | 233.12        | 267.16                     | 60.76                  | 456,250.50         | 654,772.12        |  |
| 9,734.00     | 0.80       | 219.30               | 9,720.31      | 126.74           | 129.22        | 232.20        | 265.74                     | 60.90                  | 456,249.22         | 654,771.20        |  |
| 9,828.00     | 0.70       | 218.40               | 9,814.30      | 125.80           | 128.27        | 231.43        | 264.60                     | 61.00                  | 456,248.27         | 654,770.43        |  |
| 9,923.00     | 0.80       | 206.80               | 9,909.29      | 124.76           | 127.22        | 230.77        | 263.52                     | 61.13                  | 456,247.22         | 654,769.77        |  |
| 10,017.00    | 1.00       | 211.60               | 10,003.28     | 123.48           | 125.94        | 230.05        | 262.26                     | 61.30                  | 456,245.94         | 654,769.05        |  |
| 10,112.00    | 1.30       | 203.70               | 10,098.26     | 121.80           | 124.24        | 229.18        | 260.69                     | 61.54                  | 456,244.24         | 654,768.18        |  |
| 10,206.00    | 1.10       | 201.50               | 10,192.24     | 119.99           | 122.43        | 228.42        | 259.16                     | 61.81                  | 456,242.43         | 654,767.42        |  |
| 10,301.00    | 1.30       | 201.30               | 10,287.22     | 118.14           | 120.57        | 227.69        | 257.65                     | 62.10                  | 456,240.57         | 654,766.69        |  |
| 10,395.00    | 1.30       | 211.60               | 10,381.19     | 116.25           | 118.67        | 226.75        | 255.93                     | 62.37                  | 456,238.67         | 654,765.75        |  |
| 10,490.00    | 1.20       | 200.90               | 10,476.17     | 114.41           | 116.83        | 225.83        | 254.26                     | 62.65                  | 456,236.83         | 654,764.83        |  |
| 10,585.00    | 1.00       | 208.60               | 10,571.15     | 112.77           | 115.17        | 225.08        | 252.83                     | 62.90                  | 456,235.17         | 654,764.08        |  |
| 10,616.00    | 1.20       | 212.30               | 10,602.15     | 112.26           | 114.66        | 224.77        | 252.33                     | 62.97                  | 456,234.66         | 654,763.77        |  |
| 10,756.00    | 1.50       | 265.10               | 10,742.11     | 110.89           | 113.26        | 222.16        | 249.37                     | 62.99                  | 456,233.26         | 654,761.16        |  |
| 10,803.00    | 7.00       | 4.10                 | 10,789.00     | 113.70           | 116.07        | 221.76        | 250.30                     | 62.37                  | 456,236.07         | 654,760.76        |  |
| 10,850.00    | 11.70      | 8.10                 | 10,835.36     | 121.27           | 123.65        | 222.63        | 254.66                     | 60.95                  | 456,243.65         | 654,761.63        |  |
| 10,897.00    | 14.00      | 15.40                | 10,881.18     | 131.45           | 133.85        | 224.81        | 261.64                     | 59.23                  | 456,253.85         | 654,763.81        |  |
| 10,943.00    | 19.50      | 12.90                | 10,925.21     | 144.27           | 146.71        | 228.01        | 271.13                     | 57.24                  | 456,266.71         | 654,767.01        |  |
| 11,037.00    | 29.80      | 2.70                 | 11,010.57     | 182.97           | 185.45        | 232.63        | 297.50                     | 51.44                  | 456,305.45         | 654,771.63        |  |
| 11,131.00    | 37.70      | 359.50               | 11,088.67     | 235.11           | 237.61        | 233.48        | 333.12                     | 44.50                  | 456,357.61         | 654,772.48        |  |
| 11,225.00    | 40.90      | 358.80               | 11,161.41     | 294.64           | 297.13        | 232.58        | 377.34                     | 38.05                  | 456,417.13         | 654,771.58        |  |



# ProDirectional Survey Report



|                  |                          |                                     |                                           |
|------------------|--------------------------|-------------------------------------|-------------------------------------------|
| <b>Company:</b>  | Tap Rock Operating, LLC  | <b>Local Co-ordinate Reference:</b> | Well 244H                                 |
| <b>Project:</b>  | Eddy County, NM (NAD 83) | <b>TVD Reference:</b>               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| <b>Site:</b>     | Cypress 34               | <b>MD Reference:</b>                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| <b>Well:</b>     | 244H                     | <b>North Reference:</b>             | Grid                                      |
| <b>Wellbore:</b> | OH                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                         |
| <b>Design:</b>   | OH 148'-15417'           | <b>Database:</b>                    | WellPlanner1                              |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |
| 11,318.00    | 48.00      | 0.00                 | 11,227.75     | 359.72           | 362.21        | 231.94        | 430.11                     | 32.63                  | 456,482.21         | 654,770.94        |
| 11,406.00    | 59.60      | 2.50                 | 11,279.64     | 430.57           | 433.08        | 233.60        | 492.06                     | 28.34                  | 456,553.08         | 654,772.60        |
| 11,507.00    | 77.30      | 6.20                 | 11,316.61     | 523.74           | 526.34        | 240.88        | 578.84                     | 24.59                  | 456,646.34         | 654,779.88        |
| 11,601.00    | 84.10      | 1.80                 | 11,331.79     | 616.13           | 618.80        | 247.32        | 666.39                     | 21.79                  | 456,738.80         | 654,786.32        |
| 11,696.00    | 91.10      | 358.50               | 11,335.77     | 710.97           | 713.65        | 247.56        | 755.36                     | 19.13                  | 456,833.65         | 654,786.56        |
| 11,790.00    | 89.90      | 357.70               | 11,334.95     | 804.94           | 807.59        | 244.44        | 843.77                     | 16.84                  | 456,927.59         | 654,783.44        |
| 11,884.00    | 89.40      | 354.60               | 11,335.53     | 898.78           | 901.36        | 238.13        | 932.29                     | 14.80                  | 457,021.36         | 654,777.13        |
| 11,973.00    | 88.40      | 347.90               | 11,337.24     | 986.81           | 989.26        | 224.60        | 1,014.44                   | 12.79                  | 457,109.26         | 654,763.60        |
| 12,067.00    | 92.10      | 354.40               | 11,336.83     | 1,079.77         | 1,082.07      | 210.15        | 1,102.29                   | 10.99                  | 457,202.07         | 654,749.15        |
| 12,160.00    | 90.50      | 353.70               | 11,334.72     | 1,172.34         | 1,174.55      | 200.51        | 1,191.54                   | 9.69                   | 457,294.55         | 654,739.51        |
| 12,254.00    | 89.60      | 358.00               | 11,334.63     | 1,266.14         | 1,268.28      | 193.71        | 1,282.98                   | 8.68                   | 457,388.28         | 654,732.71        |
| 12,348.00    | 88.10      | 354.70               | 11,336.52     | 1,359.97         | 1,362.05      | 187.73        | 1,374.93                   | 7.85                   | 457,482.05         | 654,726.73        |
| 12,442.00    | 90.70      | 357.80               | 11,337.51     | 1,453.81         | 1,455.82      | 181.58        | 1,467.11                   | 7.11                   | 457,575.82         | 654,720.58        |
| 12,536.00    | 91.40      | 358.70               | 11,335.78     | 1,547.77         | 1,549.76      | 178.71        | 1,560.03                   | 6.58                   | 457,669.76         | 654,717.71        |
| 12,630.00    | 90.70      | 0.30                 | 11,334.06     | 1,641.75         | 1,643.74      | 177.89        | 1,653.34                   | 6.18                   | 457,763.74         | 654,716.89        |
| 12,724.00    | 91.20      | 359.50               | 11,332.50     | 1,735.74         | 1,737.73      | 177.73        | 1,746.79                   | 5.84                   | 457,857.73         | 654,716.73        |
| 12,818.00    | 92.10      | 4.00                 | 11,329.79     | 1,829.59         | 1,831.62      | 180.60        | 1,840.50                   | 5.63                   | 457,951.62         | 654,719.60        |
| 12,913.00    | 88.70      | 0.10                 | 11,329.13     | 1,924.46         | 1,926.52      | 183.99        | 1,935.29                   | 5.46                   | 458,046.52         | 654,722.99        |
| 13,006.00    | 92.30      | 5.20                 | 11,328.32     | 2,017.26         | 2,019.37      | 188.29        | 2,028.13                   | 5.33                   | 458,139.37         | 654,727.29        |
| 13,101.00    | 91.70      | 7.20                 | 11,325.00     | 2,111.52         | 2,113.76      | 198.54        | 2,123.06                   | 5.37                   | 458,233.76         | 654,737.54        |
| 13,195.00    | 90.90      | 5.10                 | 11,322.87     | 2,204.84         | 2,207.18      | 208.61        | 2,217.02                   | 5.40                   | 458,327.18         | 654,747.61        |
| 13,289.00    | 89.60      | 2.10                 | 11,322.46     | 2,298.57         | 2,300.99      | 214.51        | 2,310.96                   | 5.33                   | 458,420.99         | 654,753.51        |
| 13,383.00    | 92.10      | 3.10                 | 11,321.06     | 2,392.41         | 2,394.87      | 218.78        | 2,404.84                   | 5.22                   | 458,514.87         | 654,757.78        |
| 13,476.00    | 92.30      | 4.10                 | 11,317.49     | 2,485.08         | 2,487.62      | 224.61        | 2,497.74                   | 5.16                   | 458,607.62         | 654,763.61        |
| 13,571.00    | 89.50      | 3.10                 | 11,316.00     | 2,579.81         | 2,582.41      | 230.57        | 2,592.68                   | 5.10                   | 458,702.41         | 654,769.57        |
| 13,665.00    | 92.00      | 8.00                 | 11,314.77     | 2,673.22         | 2,675.92      | 239.66        | 2,686.63                   | 5.12                   | 458,795.92         | 654,778.66        |
| 13,760.00    | 89.80      | 6.00                 | 11,313.28     | 2,767.36         | 2,770.19      | 251.23        | 2,781.56                   | 5.18                   | 458,890.19         | 654,790.23        |



# ProDirectional Survey Report



|           |                          |                              |                                           |
|-----------|--------------------------|------------------------------|-------------------------------------------|
| Company:  | Tap Rock Operating, LLC  | Local Co-ordinate Reference: | Well 244H                                 |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Site:     | Cypress 34               | MD Reference:                | Well @ 3119.50usft (GL: 3093' + KB: 26.5) |
| Well:     | 244H                     | North Reference:             | Grid                                      |
| Wellbore: | OH                       | Survey Calculation Method:   | Minimum Curvature                         |
| Design:   | OH 148'-15417'           | Database:                    | WellPlanner1                              |

| Survey                                       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|----------------------------------------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft)                                 | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 13,853.00                                    | 90.10      | 4.00                 | 11,313.36     | 2,859.91         | 2,862.83      | 259.34        | 2,874.56                   | 5.18                   | 458,982.83         | 654,798.34        |  |
| 13,948.00                                    | 89.20      | 2.70                 | 11,313.94     | 2,954.68         | 2,957.67      | 264.89        | 2,969.50                   | 5.12                   | 459,077.67         | 654,803.89        |  |
| 14,042.00                                    | 89.70      | 1.50                 | 11,314.84     | 3,048.57         | 3,051.60      | 268.33        | 3,063.37                   | 5.03                   | 459,171.60         | 654,807.33        |  |
| 14,136.00                                    | 92.00      | 2.10                 | 11,313.45     | 3,142.47         | 3,145.53      | 271.29        | 3,157.21                   | 4.93                   | 459,265.53         | 654,810.29        |  |
| 14,230.00                                    | 92.00      | 2.90                 | 11,310.17     | 3,236.27         | 3,239.39      | 275.38        | 3,251.07                   | 4.86                   | 459,359.39         | 654,814.38        |  |
| 14,325.00                                    | 86.40      | 3.90                 | 11,311.49     | 3,330.99         | 3,334.17      | 281.02        | 3,345.99                   | 4.82                   | 459,454.17         | 654,820.02        |  |
| 14,418.00                                    | 90.90      | 5.00                 | 11,313.68     | 3,423.58         | 3,426.84      | 288.23        | 3,438.94                   | 4.81                   | 459,546.84         | 654,827.23        |  |
| 14,513.00                                    | 88.80      | 0.20                 | 11,313.93     | 3,518.39         | 3,521.71      | 292.54        | 3,533.84                   | 4.75                   | 459,641.71         | 654,831.54        |  |
| 14,606.00                                    | 89.30      | 355.40               | 11,315.48     | 3,611.32         | 3,614.60      | 288.97        | 3,626.13                   | 4.57                   | 459,734.60         | 654,827.97        |  |
| 14,700.00                                    | 92.30      | 353.20               | 11,314.16     | 3,704.92         | 3,708.11      | 279.63        | 3,718.64                   | 4.31                   | 459,828.11         | 654,818.63        |  |
| 14,794.00                                    | 91.30      | 352.70               | 11,311.21     | 3,798.28         | 3,801.35      | 268.10        | 3,810.79                   | 4.03                   | 459,921.35         | 654,807.10        |  |
| 14,889.00                                    | 88.90      | 354.10               | 11,311.05     | 3,892.75         | 3,895.71      | 257.18        | 3,904.19                   | 3.78                   | 460,015.71         | 654,796.18        |  |
| 14,983.00                                    | 90.80      | 354.00               | 11,311.29     | 3,986.34         | 3,989.20      | 247.44        | 3,996.87                   | 3.55                   | 460,109.20         | 654,786.44        |  |
| 15,077.00                                    | 91.00      | 352.70               | 11,309.81     | 4,079.80         | 4,082.55      | 236.56        | 4,089.40                   | 3.32                   | 460,202.55         | 654,775.56        |  |
| 15,171.00                                    | 91.70      | 355.40               | 11,307.60     | 4,173.36         | 4,176.01      | 226.82        | 4,182.17                   | 3.11                   | 460,296.01         | 654,765.82        |  |
| 15,265.00                                    | 92.20      | 356.60               | 11,304.40     | 4,267.14         | 4,269.73      | 220.26        | 4,275.41                   | 2.95                   | 460,389.73         | 654,759.26        |  |
| Final OH Survey, 15265.00' MD, 11304.40' TVD |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
| 15,417.00                                    | 92.20      | 356.60               | 11,298.57     | 4,418.85         | 4,421.35      | 211.26        | 4,426.39                   | 2.74                   | 460,541.35         | 654,750.26        |  |
| PTB: 15417' MD                               |            |                      |               |                  |               |               |                            |                        |                    |                   |  |

| Design Annotations          |                             |                   |                 |                                              |
|-----------------------------|-----------------------------|-------------------|-----------------|----------------------------------------------|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                                      |
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                              |
| 15,265.00                   | 11,304.40                   | 4,269.73          | 220.26          | Final OH Survey, 15265.00' MD, 11304.40' TVD |
| 15,417.00                   | 11,298.57                   | 4,421.35          | 211.26          | PTB: 15417' MD                               |