

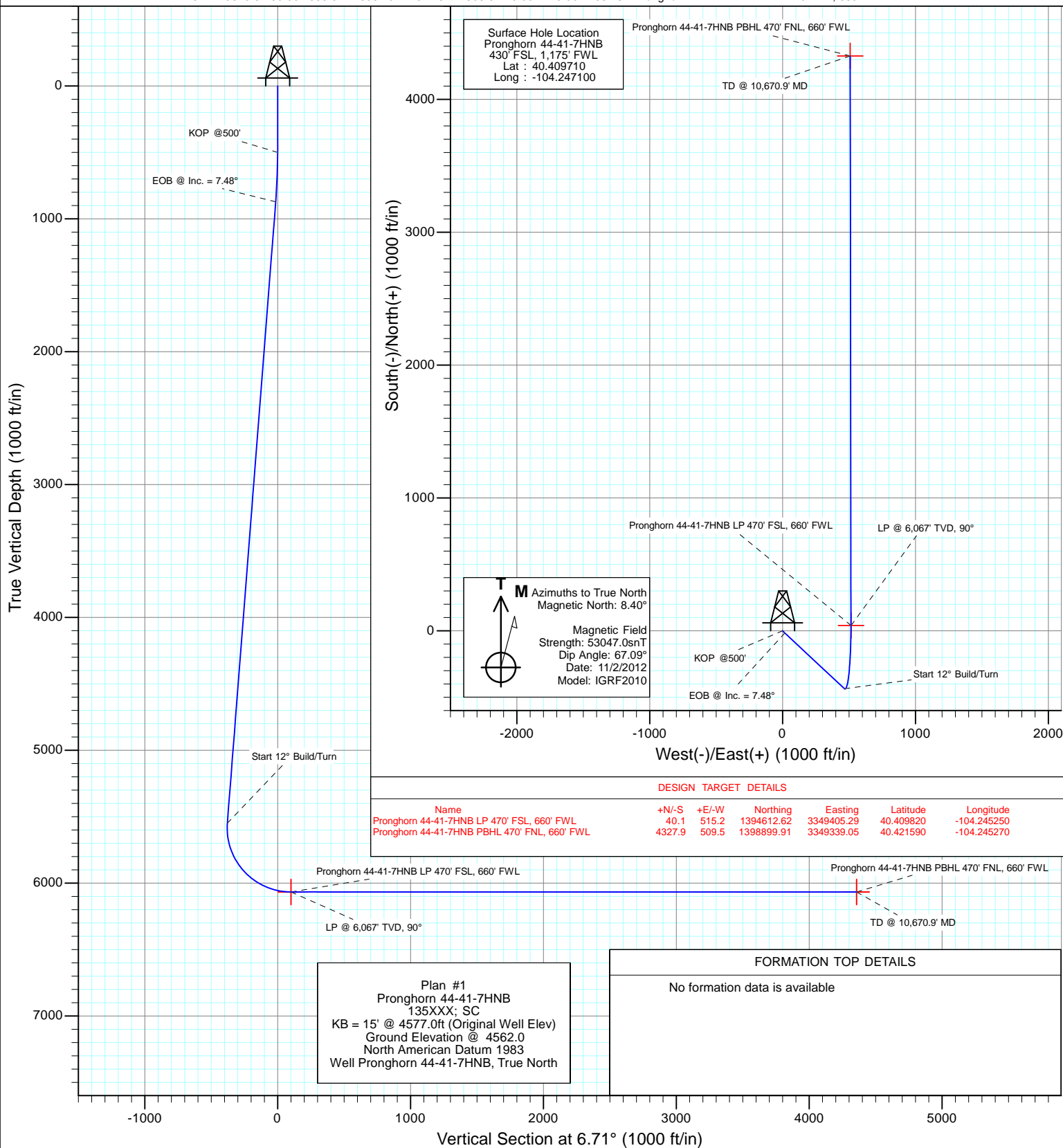


Project: Weld County  
Site: Pronghorn T-7 Pad  
Well: Pronghorn 44-41-7HNB  
Wellbore: HZ  
Design: Plan #1



#### SECTION DETAILS

| Sec | MD      | Inc   | Azi    | TVD    | +N/-S  | +E/-W | Dleg  | TFace   | VSec   | Target                                       |
|-----|---------|-------|--------|--------|--------|-------|-------|---------|--------|--|
| 1   | 0.0     | 0.00  | 0.00   | 0.0    | 0.0    | 0.0   | 0.00  | 0.00    | 0.0    |  |
| 2   | 500.0   | 0.00  | 0.00   | 500.0  | 0.0    | 0.0   | 0.00  | 0.00    | 0.0    |  |
| 3   | 873.8   | 7.48  | 133.05 | 872.7  | -16.6  | 17.8  | 2.00  | 133.05  | -14.4  |  |
| 4   | 5590.6  | 7.48  | 133.05 | 5549.4 | -435.6 | 466.2 | 0.00  | 0.00    | -378.1 |  |
| 5   | 6383.1  | 90.00 | 359.92 | 6067.0 | 40.1   | 515.2 | 12.00 | -132.88 | 100.0  | Pronghorn 44-41-7HNB LP 470' FSL, 660' FWL   |
| 6   | 10670.9 | 90.00 | 359.92 | 6067.0 | 4327.9 | 509.5 | 0.00  | 0.00    | 4357.8 | Pronghorn 44-41-7HNB PBHL 470' FNL, 660' FWL |



# Cathedral Energy Services

## Survey Report

|                  |   |                                     |  |
|------------------|---|-------------------------------------|--|
| <b>Company:</b>  | Bonanza Creek Energy Operating Company, LLC | <b>Local Co-ordinate Reference:</b> | Well Pronghorn 44-41-7HNB                |
| <b>Project:</b>  | Weld County                                 | <b>TVD Reference:</b>               | KB = 15' @ 4577.0ft (Original Well Elev) |
| <b>Site:</b>     | Pronghorn T-7 Pad                           | <b>MD Reference:</b>                | KB = 15' @ 4577.0ft (Original Well Elev) |
| <b>Well:</b>     | Pronghorn 44-41-7HNB                        | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | HZ  | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | Plan #1                                     | <b>Database:</b>                    | USA EDM 5000 Multi Users DB              |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Weld County               |                      |                |
| <b>Map System:</b> | US State Plane 1983       | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983 |                      |                |
| <b>Map Zone:</b>   | Colorado Northern Zone    |                      |                |

| Site                  |          | Pronghorn T-7 Pad |                 |                   |             |
|-----------------------|----------|-------------------|-----------------|-------------------|-------------|
| Site Position:        |          | Northing:         | 1,394,565.27 ft | Latitude:         | 40.409710   |
| From:                 | Lat/Long | Easting:          | 3,348,890.74 ft | Longitude:        | -104.247100 |
| Position Uncertainty: | 0.0 ft   | Slot Radius:      | 13.200 in       | Grid Convergence: | 0.81 °      |

|                      |                      |        |                     |                 |               |             |
|----------------------|----------------------|--------|---------------------|-----------------|---------------|-------------|
| Well                 | Pronghorn 44-41-7HNB |        |                     |                 |               |             |
| Well Position        | +N/-S                | 0.0 ft | Northing:           | 1,394,565.26 ft | Latitude:     | 40.409710   |
|                      | +E/-W                | 0.0 ft | Easting:            | 3,348,890.74 ft | Longitude:    | -104.247100 |
| Position Uncertainty |                      | 0.0 ft | Wellhead Elevation: | ft              | Ground Level: | 4,562.0 ft  |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | HZ                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 11/2/2012          | 8.40                   | 67.09                | 53,047                     |

|                          |                         |                   |                      |                      |
|--------------------------|-------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | Plan #1                 |                   |                      |                      |
| <b>Audit Notes:</b>      |                         |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>           | PLAN              | <b>Tie On Depth:</b> | 0.0                  |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.0                     | 0.0               | 0.0                  | 6.71                 |

|                            |                |                          |                  |                    |
|----------------------------|----------------|--------------------------|------------------|--------------------|
| <b>Survey Tool Program</b> | <b>Date</b>    | 11/2/2012                |                  |                    |
| <b>From (ft)</b>           | <b>To (ft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |
| 0.0                        | 10,670.9       | Plan #1 (HZ)             | MWD              | Geolink MWD        |

|                            |                        |                    |                            |                   |                   |                              |                              |                             |                              |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|------------------------------|
| <b>Planned Survey</b>      |                        |                    |                            |                   |                   |                              |                              |                             |                              |
| <b>Measured Depth (ft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Vertical Section (ft)</b> | <b>Dogleg Rate (°/100ft)</b> | <b>Build Rate (°/100ft)</b> | <b>Formations / Comments</b> |
| 0.0                        | 0.00                   | 0.00               | 0.0                        | 0.0               | 0.0               | 0.0                          | 0.00                         | 0.00                        |                              |
| 100.0                      | 0.00                   | 0.00               | 100.0                      | 0.0               | 0.0               | 0.0                          | 0.00                         | 0.00                        |                              |
| 200.0                      | 0.00                   | 0.00               | 200.0                      | 0.0               | 0.0               | 0.0                          | 0.00                         | 0.00                        |                              |
| 300.0                      | 0.00                   | 0.00               | 300.0                      | 0.0               | 0.0               | 0.0                          | 0.00                         | 0.00                        |                              |
| 400.0                      | 0.00                   | 0.00               | 400.0                      | 0.0               | 0.0               | 0.0                          | 0.00                         | 0.00                        |                              |
| 500.0                      | 0.00                   | 0.00               | 500.0                      | 0.0               | 0.0               | 0.0                          | 0.00                         | 0.00                        | KOP @500'                    |
| 600.0                      | 2.00                   | 133.05             | 600.0                      | -1.2              | 1.3               | -1.0                         | 2.00                         | 2.00                        |                              |
| 700.0                      | 4.00                   | 133.05             | 699.8                      | -4.8              | 5.1               | -4.1                         | 2.00                         | 2.00                        |                              |
| 800.0                      | 6.00                   | 133.05             | 799.5                      | -10.7             | 11.5              | -9.3                         | 2.00                         | 2.00                        |                              |
| 873.8                      | 7.48                   | 133.05             | 872.7                      | -16.6             | 17.8              | -14.4                        | 2.00                         | 2.00                        | EOB @ Inc. = 7.48°           |
| 900.0                      | 7.48                   | 133.05             | 898.7                      | -19.0             | 20.3              | -16.4                        | 0.00                         | 0.00                        |                              |
| 1,000.0                    | 7.48                   | 133.05             | 997.9                      | -27.8             | 29.8              | -24.2                        | 0.00                         | 0.00                        |                              |
| 1,100.0                    | 7.48                   | 133.05             | 1,097.0                    | -36.7             | 39.3              | -31.9                        | 0.00                         | 0.00                        |                              |

# Cathedral Energy Services

## Survey Report

**Company:** Bonanza Creek Energy Operating Company, LLC  
**Project:** Weld County  
**Site:** Pronghorn T-7 Pad  
**Well:** Pronghorn 44-41-7HNB  
**Wellbore:** HZ  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Pronghorn 44-41-7HNB  
**TVD Reference:** KB = 15' @ 4577.0ft (Original Well Elev)  
**MVD Reference:** KB = 15' @ 4577.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** USA EDM 5000 Multi Users DB

### Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 1,200.0             | 7.48            | 133.05      | 1,196.2             | -45.6      | 48.8       | -39.6                 | 0.00                  | 0.00                 |                       |
| 1,300.0             | 7.48            | 133.05      | 1,295.3             | -54.5      | 58.3       | -47.3                 | 0.00                  | 0.00                 |                       |
| 1,400.0             | 7.48            | 133.05      | 1,394.5             | -63.4      | 67.8       | -55.0                 | 0.00                  | 0.00                 |                       |
| 1,500.0             | 7.48            | 133.05      | 1,493.6             | -72.2      | 77.3       | -62.7                 | 0.00                  | 0.00                 |                       |
| 1,600.0             | 7.48            | 133.05      | 1,592.8             | -81.1      | 86.8       | -70.4                 | 0.00                  | 0.00                 |                       |
| 1,700.0             | 7.48            | 133.05      | 1,691.9             | -90.0      | 96.3       | -78.1                 | 0.00                  | 0.00                 |                       |
| 1,800.0             | 7.48            | 133.05      | 1,791.1             | -98.9      | 105.9      | -85.8                 | 0.00                  | 0.00                 |                       |
| 1,900.0             | 7.48            | 133.05      | 1,890.2             | -107.8     | 115.4      | -93.5                 | 0.00                  | 0.00                 |                       |
| 2,000.0             | 7.48            | 133.05      | 1,989.4             | -116.6     | 124.9      | -101.3                | 0.00                  | 0.00                 |                       |
| 2,100.0             | 7.48            | 133.05      | 2,088.5             | -125.5     | 134.4      | -109.0                | 0.00                  | 0.00                 |                       |
| 2,200.0             | 7.48            | 133.05      | 2,187.7             | -134.4     | 143.9      | -116.7                | 0.00                  | 0.00                 |                       |
| 2,300.0             | 7.48            | 133.05      | 2,286.8             | -143.3     | 153.4      | -124.4                | 0.00                  | 0.00                 |                       |
| 2,400.0             | 7.48            | 133.05      | 2,386.0             | -152.2     | 162.9      | -132.1                | 0.00                  | 0.00                 |                       |
| 2,500.0             | 7.48            | 133.05      | 2,485.1             | -161.1     | 172.4      | -139.8                | 0.00                  | 0.00                 |                       |
| 2,600.0             | 7.48            | 133.05      | 2,584.3             | -169.9     | 181.9      | -147.5                | 0.00                  | 0.00                 |                       |
| 2,700.0             | 7.48            | 133.05      | 2,683.4             | -178.8     | 191.4      | -155.2                | 0.00                  | 0.00                 |                       |
| 2,800.0             | 7.48            | 133.05      | 2,782.6             | -187.7     | 200.9      | -162.9                | 0.00                  | 0.00                 |                       |
| 2,900.0             | 7.48            | 133.05      | 2,881.7             | -196.6     | 210.4      | -170.6                | 0.00                  | 0.00                 |                       |
| 3,000.0             | 7.48            | 133.05      | 2,980.9             | -205.5     | 219.9      | -178.3                | 0.00                  | 0.00                 |                       |
| 3,100.0             | 7.48            | 133.05      | 3,080.0             | -214.3     | 229.4      | -186.1                | 0.00                  | 0.00                 |                       |
| 3,200.0             | 7.48            | 133.05      | 3,179.2             | -223.2     | 239.0      | -193.8                | 0.00                  | 0.00                 |                       |
| 3,300.0             | 7.48            | 133.05      | 3,278.3             | -232.1     | 248.5      | -201.5                | 0.00                  | 0.00                 |                       |
| 3,400.0             | 7.48            | 133.05      | 3,377.5             | -241.0     | 258.0      | -209.2                | 0.00                  | 0.00                 |                       |
| 3,500.0             | 7.48            | 133.05      | 3,476.6             | -249.9     | 267.5      | -216.9                | 0.00                  | 0.00                 |                       |
| 3,600.0             | 7.48            | 133.05      | 3,575.8             | -258.8     | 277.0      | -224.6                | 0.00                  | 0.00                 |                       |
| 3,700.0             | 7.48            | 133.05      | 3,674.9             | -267.6     | 286.5      | -232.3                | 0.00                  | 0.00                 |                       |
| 3,800.0             | 7.48            | 133.05      | 3,774.1             | -276.5     | 296.0      | -240.0                | 0.00                  | 0.00                 |                       |
| 3,900.0             | 7.48            | 133.05      | 3,873.2             | -285.4     | 305.5      | -247.7                | 0.00                  | 0.00                 |                       |
| 4,000.0             | 7.48            | 133.05      | 3,972.4             | -294.3     | 315.0      | -255.4                | 0.00                  | 0.00                 |                       |
| 4,100.0             | 7.48            | 133.05      | 4,071.5             | -303.2     | 324.5      | -263.1                | 0.00                  | 0.00                 |                       |
| 4,200.0             | 7.48            | 133.05      | 4,170.7             | -312.0     | 334.0      | -270.9                | 0.00                  | 0.00                 |                       |
| 4,300.0             | 7.48            | 133.05      | 4,269.8             | -320.9     | 343.5      | -278.6                | 0.00                  | 0.00                 |                       |
| 4,400.0             | 7.48            | 133.05      | 4,369.0             | -329.8     | 353.0      | -286.3                | 0.00                  | 0.00                 |                       |
| 4,500.0             | 7.48            | 133.05      | 4,468.1             | -338.7     | 362.5      | -294.0                | 0.00                  | 0.00                 |                       |
| 4,600.0             | 7.48            | 133.05      | 4,567.3             | -347.6     | 372.1      | -301.7                | 0.00                  | 0.00                 |                       |
| 4,700.0             | 7.48            | 133.05      | 4,666.4             | -356.5     | 381.6      | -309.4                | 0.00                  | 0.00                 |                       |
| 4,800.0             | 7.48            | 133.05      | 4,765.6             | -365.3     | 391.1      | -317.1                | 0.00                  | 0.00                 |                       |
| 4,900.0             | 7.48            | 133.05      | 4,864.7             | -374.2     | 400.6      | -324.8                | 0.00                  | 0.00                 |                       |
| 5,000.0             | 7.48            | 133.05      | 4,963.9             | -383.1     | 410.1      | -332.5                | 0.00                  | 0.00                 |                       |
| 5,100.0             | 7.48            | 133.05      | 5,063.0             | -392.0     | 419.6      | -340.2                | 0.00                  | 0.00                 |                       |
| 5,200.0             | 7.48            | 133.05      | 5,162.2             | -400.9     | 429.1      | -347.9                | 0.00                  | 0.00                 |                       |
| 5,300.0             | 7.48            | 133.05      | 5,261.3             | -409.7     | 438.6      | -355.7                | 0.00                  | 0.00                 |                       |
| 5,400.0             | 7.48            | 133.05      | 5,360.5             | -418.6     | 448.1      | -363.4                | 0.00                  | 0.00                 |                       |
| 5,500.0             | 7.48            | 133.05      | 5,459.6             | -427.5     | 457.6      | -371.1                | 0.00                  | 0.00                 |                       |
| 5,590.6             | 7.48            | 133.05      | 5,549.4             | -435.6     | 466.2      | -378.1                | 0.00                  | 0.00                 | Start 12° Build/Turn  |
| 5,600.0             | 6.76            | 126.00      | 5,558.8             | -436.3     | 467.1      | -378.7                | 12.00                 | -7.63                |                       |
| 5,625.0             | 5.56            | 100.03      | 5,583.6             | -437.4     | 469.5      | -379.5                | 12.00                 | -4.81                |                       |
| 5,650.0             | 5.83            | 69.56       | 5,608.5             | -437.1     | 471.9      | -379.0                | 12.00                 | 1.11                 |                       |
| 5,675.0             | 7.42            | 47.23       | 5,633.4             | -435.6     | 474.3      | -377.2                | 12.00                 | 6.37                 |                       |
| 5,700.0             | 9.70            | 33.98       | 5,658.1             | -432.8     | 476.6      | -374.1                | 12.00                 | 9.12                 |                       |
| 5,725.0             | 12.29           | 25.99       | 5,682.6             | -428.6     | 479.0      | -369.7                | 12.00                 | 10.36                |                       |
| 5,750.0             | 15.04           | 20.81       | 5,706.9             | -423.2     | 481.3      | -364.0                | 12.00                 | 10.97                |                       |
| 5,775.0             | 17.86           | 17.22       | 5,730.9             | -416.5     | 483.6      | -357.1                | 12.00                 | 11.29                |                       |

# Cathedral Energy Services

## Survey Report

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**Wellbore:** HZ  
**Design:** Plan #1

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**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
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### Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 5,800.0             | 20.73           | 14.58       | 5,754.5             | -408.6     | 485.8      | -348.9                | 12.00                 | 11.49                |                       |
| 5,825.0             | 23.63           | 12.57       | 5,777.6             | -399.4     | 488.0      | -339.6                | 12.00                 | 11.61                |                       |
| 5,850.0             | 26.56           | 10.97       | 5,800.3             | -389.0     | 490.2      | -329.0                | 12.00                 | 11.69                |                       |
| 5,875.0             | 29.49           | 9.67        | 5,822.3             | -377.4     | 492.3      | -317.3                | 12.00                 | 11.75                |                       |
| 5,900.0             | 32.44           | 8.59        | 5,843.8             | -364.7     | 494.3      | -304.4                | 12.00                 | 11.79                |                       |
| 5,925.0             | 35.40           | 7.67        | 5,864.5             | -350.9     | 496.3      | -290.5                | 12.00                 | 11.82                |                       |
| 5,950.0             | 38.36           | 6.87        | 5,884.5             | -336.1     | 498.2      | -275.5                | 12.00                 | 11.85                |                       |
| 5,975.0             | 41.33           | 6.18        | 5,903.7             | -320.1     | 500.0      | -259.5                | 12.00                 | 11.87                |                       |
| 6,000.0             | 44.30           | 5.56        | 5,922.0             | -303.2     | 501.7      | -242.5                | 12.00                 | 11.88                |                       |
| 6,025.0             | 47.27           | 5.00        | 5,939.5             | -285.4     | 503.4      | -224.6                | 12.00                 | 11.89                |                       |
| 6,050.0             | 50.25           | 4.49        | 5,955.9             | -266.7     | 504.9      | -205.8                | 12.00                 | 11.90                |                       |
| 6,075.0             | 53.22           | 4.03        | 5,971.4             | -247.1     | 506.4      | -186.2                | 12.00                 | 11.91                |                       |
| 6,100.0             | 56.20           | 3.60        | 5,985.9             | -226.7     | 507.8      | -165.8                | 12.00                 | 11.92                |                       |
| 6,125.0             | 59.18           | 3.20        | 5,999.2             | -205.6     | 509.0      | -144.7                | 12.00                 | 11.92                |                       |
| 6,150.0             | 62.17           | 2.82        | 6,011.5             | -183.9     | 510.1      | -123.0                | 12.00                 | 11.93                |                       |
| 6,175.0             | 65.15           | 2.47        | 6,022.6             | -161.5     | 511.2      | -100.6                | 12.00                 | 11.93                |                       |
| 6,200.0             | 68.13           | 2.13        | 6,032.5             | -138.6     | 512.1      | -77.8                 | 12.00                 | 11.94                |                       |
| 6,225.0             | 71.12           | 1.80        | 6,041.2             | -115.2     | 512.9      | -54.4                 | 12.00                 | 11.94                |                       |
| 6,250.0             | 74.10           | 1.49        | 6,048.6             | -91.3      | 513.6      | -30.6                 | 12.00                 | 11.94                |                       |
| 6,275.0             | 77.09           | 1.18        | 6,054.9             | -67.1      | 514.2      | -6.5                  | 12.00                 | 11.94                |                       |
| 6,300.0             | 80.07           | 0.88        | 6,059.8             | -42.6      | 514.6      | 17.8                  | 12.00                 | 11.94                |                       |
| 6,325.0             | 83.06           | 0.59        | 6,063.5             | -17.9      | 514.9      | 42.4                  | 12.00                 | 11.94                |                       |
| 6,350.0             | 86.04           | 0.30        | 6,065.9             | 7.0        | 515.1      | 67.2                  | 12.00                 | 11.94                |                       |
| 6,375.0             | 89.03           | 0.02        | 6,066.9             | 32.0       | 515.2      | 92.0                  | 12.00                 | 11.95                |                       |
| 6,383.1             | 90.00           | 359.92      | 6,067.0             | 40.1       | 515.2      | 100.0                 | 12.00                 | 11.95                | LP @ 6,067' TVD, 90°  |
| 6,400.0             | 90.00           | 359.92      | 6,067.0             | 57.0       | 515.1      | 116.8                 | 0.00                  | 0.00                 |                       |
| 6,500.0             | 90.00           | 359.92      | 6,067.0             | 157.0      | 515.0      | 216.1                 | 0.00                  | 0.00                 |                       |
| 6,600.0             | 90.00           | 359.92      | 6,067.0             | 257.0      | 514.9      | 315.4                 | 0.00                  | 0.00                 |                       |
| 6,700.0             | 90.00           | 359.92      | 6,067.0             | 357.0      | 514.8      | 414.7                 | 0.00                  | 0.00                 |                       |
| 6,800.0             | 90.00           | 359.92      | 6,067.0             | 457.0      | 514.6      | 514.0                 | 0.00                  | 0.00                 |                       |
| 6,900.0             | 90.00           | 359.92      | 6,067.0             | 557.0      | 514.5      | 613.3                 | 0.00                  | 0.00                 |                       |
| 7,000.0             | 90.00           | 359.92      | 6,067.0             | 657.0      | 514.4      | 712.6                 | 0.00                  | 0.00                 |                       |
| 7,100.0             | 90.00           | 359.92      | 6,067.0             | 757.0      | 514.2      | 811.9                 | 0.00                  | 0.00                 |                       |
| 7,200.0             | 90.00           | 359.92      | 6,067.0             | 857.0      | 514.1      | 911.2                 | 0.00                  | 0.00                 |                       |
| 7,300.0             | 90.00           | 359.92      | 6,067.0             | 957.0      | 514.0      | 1,010.5               | 0.00                  | 0.00                 |                       |
| 7,400.0             | 90.00           | 359.92      | 6,067.0             | 1,057.0    | 513.8      | 1,109.8               | 0.00                  | 0.00                 |                       |
| 7,500.0             | 90.00           | 359.92      | 6,067.0             | 1,157.0    | 513.7      | 1,209.1               | 0.00                  | 0.00                 |                       |
| 7,600.0             | 90.00           | 359.92      | 6,067.0             | 1,257.0    | 513.6      | 1,308.4               | 0.00                  | 0.00                 |                       |
| 7,700.0             | 90.00           | 359.92      | 6,067.0             | 1,357.0    | 513.4      | 1,407.7               | 0.00                  | 0.00                 |                       |
| 7,800.0             | 90.00           | 359.92      | 6,067.0             | 1,457.0    | 513.3      | 1,507.0               | 0.00                  | 0.00                 |                       |
| 7,900.0             | 90.00           | 359.92      | 6,067.0             | 1,557.0    | 513.2      | 1,606.3               | 0.00                  | 0.00                 |                       |
| 8,000.0             | 90.00           | 359.92      | 6,067.0             | 1,657.0    | 513.0      | 1,705.6               | 0.00                  | 0.00                 |                       |
| 8,100.0             | 90.00           | 359.92      | 6,067.0             | 1,757.0    | 512.9      | 1,804.9               | 0.00                  | 0.00                 |                       |
| 8,200.0             | 90.00           | 359.92      | 6,067.0             | 1,857.0    | 512.8      | 1,904.2               | 0.00                  | 0.00                 |                       |
| 8,300.0             | 90.00           | 359.92      | 6,067.0             | 1,957.0    | 512.6      | 2,003.5               | 0.00                  | 0.00                 |                       |
| 8,400.0             | 90.00           | 359.92      | 6,067.0             | 2,057.0    | 512.5      | 2,102.8               | 0.00                  | 0.00                 |                       |
| 8,500.0             | 90.00           | 359.92      | 6,067.0             | 2,157.0    | 512.4      | 2,202.1               | 0.00                  | 0.00                 |                       |
| 8,600.0             | 90.00           | 359.92      | 6,067.0             | 2,257.0    | 512.2      | 2,301.4               | 0.00                  | 0.00                 |                       |
| 8,700.0             | 90.00           | 359.92      | 6,067.0             | 2,357.0    | 512.1      | 2,400.7               | 0.00                  | 0.00                 |                       |
| 8,800.0             | 90.00           | 359.92      | 6,067.0             | 2,457.0    | 512.0      | 2,500.0               | 0.00                  | 0.00                 |                       |
| 8,900.0             | 90.00           | 359.92      | 6,067.0             | 2,557.0    | 511.8      | 2,599.3               | 0.00                  | 0.00                 |                       |
| 9,000.0             | 90.00           | 359.92      | 6,067.0             | 2,657.0    | 511.7      | 2,698.6               | 0.00                  | 0.00                 |                       |
| 9,100.0             | 90.00           | 359.92      | 6,067.0             | 2,757.0    | 511.6      | 2,797.9               | 0.00                  | 0.00                 |                       |

# Cathedral Energy Services

## Survey Report

**Company:** Bonanza Creek Energy Operating Company, LLC  
**Project:** Weld County  
**Site:** Pronghorn T-7 Pad  
**Well:** Pronghorn 44-41-7HNB  
**Wellbore:** HZ  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Pronghorn 44-41-7HNB  
**TVD Reference:** KB = 15' @ 4577.0ft (Original Well Elev)  
**MD Reference:** KB = 15' @ 4577.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** USA EDM 5000 Multi Users DB

### Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 9,200.0             | 90.00           | 359.92      | 6,067.0             | 2,857.0    | 511.5      | 2,897.2               | 0.00                  | 0.00                 |                       |
| 9,300.0             | 90.00           | 359.92      | 6,067.0             | 2,957.0    | 511.3      | 2,996.5               | 0.00                  | 0.00                 |                       |
| 9,400.0             | 90.00           | 359.92      | 6,067.0             | 3,057.0    | 511.2      | 3,095.8               | 0.00                  | 0.00                 |                       |
| 9,500.0             | 90.00           | 359.92      | 6,067.0             | 3,157.0    | 511.1      | 3,195.1               | 0.00                  | 0.00                 |                       |
| 9,600.0             | 90.00           | 359.92      | 6,067.0             | 3,257.0    | 510.9      | 3,294.4               | 0.00                  | 0.00                 |                       |
| 9,700.0             | 90.00           | 359.92      | 6,067.0             | 3,357.0    | 510.8      | 3,393.7               | 0.00                  | 0.00                 |                       |
| 9,800.0             | 90.00           | 359.92      | 6,067.0             | 3,457.0    | 510.7      | 3,493.0               | 0.00                  | 0.00                 |                       |
| 9,900.0             | 90.00           | 359.92      | 6,067.0             | 3,557.0    | 510.5      | 3,592.3               | 0.00                  | 0.00                 |                       |
| 10,000.0            | 90.00           | 359.92      | 6,067.0             | 3,657.0    | 510.4      | 3,691.6               | 0.00                  | 0.00                 |                       |
| 10,100.0            | 90.00           | 359.92      | 6,067.0             | 3,757.0    | 510.3      | 3,790.9               | 0.00                  | 0.00                 |                       |
| 10,200.0            | 90.00           | 359.92      | 6,067.0             | 3,857.0    | 510.1      | 3,890.2               | 0.00                  | 0.00                 |                       |
| 10,300.0            | 90.00           | 359.92      | 6,067.0             | 3,957.0    | 510.0      | 3,989.5               | 0.00                  | 0.00                 |                       |
| 10,400.0            | 90.00           | 359.92      | 6,067.0             | 4,057.0    | 509.9      | 4,088.8               | 0.00                  | 0.00                 |                       |
| 10,500.0            | 90.00           | 359.92      | 6,067.0             | 4,157.0    | 509.7      | 4,188.1               | 0.00                  | 0.00                 |                       |
| 10,600.0            | 90.00           | 359.92      | 6,067.0             | 4,257.0    | 509.6      | 4,287.4               | 0.00                  | 0.00                 |                       |
| 10,670.9            | 90.00           | 359.92      | 6,067.0             | 4,327.9    | 509.5      | 4,357.8               | 0.00                  | 0.00                 | TD @ 10,670.9' MD     |

### Targets

#### Target Name

| - hit/miss target<br>- Shape                                 | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude  | Longitude   |
|--|---------------|--------------|----------|------------|------------|---------------|--------------|-----------|-------------|
| Pronghorn 44-41-7HNB<br>- plan hits target center<br>- Point | 0.00          | 0.00         | 6,067.0  | 40.1       | 515.2      | 1,394,612.62  | 3,349,405.29 | 40.409820 | -104.245250 |
| Pronghorn 44-41-7HNB<br>- plan hits target center<br>- Point | 0.00          | 0.00         | 6,067.0  | 4,327.9    | 509.5      | 1,398,899.91  | 3,349,339.05 | 40.421590 | -104.245270 |

### Plan Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment              |
|---------------------|---------------------|-------------------|------------|----------------------|
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                      |
| 500.0               | 500.0               | 0.0               | 0.0        | KOP @500'            |
| 873.8               | 872.7               | -16.6             | 17.8       | EOB @ Inc. = 7.48°   |
| 5,590.6             | 5,549.4             | -435.6            | 466.2      | Start 12° Build/Turn |
| 6,383.1             | 6,067.0             | 40.1              | 515.2      | LP @ 6,067' TVD, 90° |
| 10,670.9            | 6,067.0             | 4,327.9           | 509.5      | TD @ 10,670.9' MD    |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_