

# Bonanza Creek Energy Inc.

# Archer

Bonanza Creek Energy Inc.  
Project: Weld Co., CO  
Site: Sec.32-T5N-R61W  
Well: State Pronghorn X44-32-31MRLNC  
Wellbore: Wellbore #1  
Design: Design #1  
Lat: 40° 21' 3.780 N  
Long: 104° 13' 38.748 W  
Pad GL: 4531.0  
KB: Well @ 4548.0usft

## PROJECT DETAILS: Weld Co., CO

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

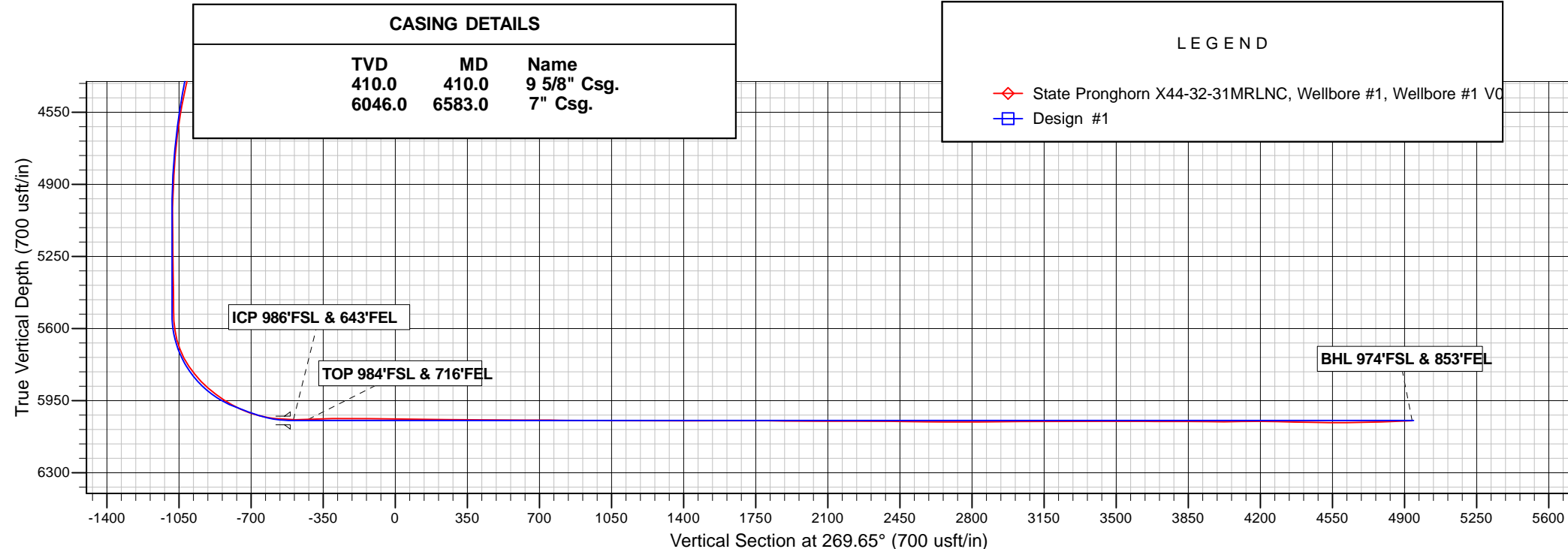
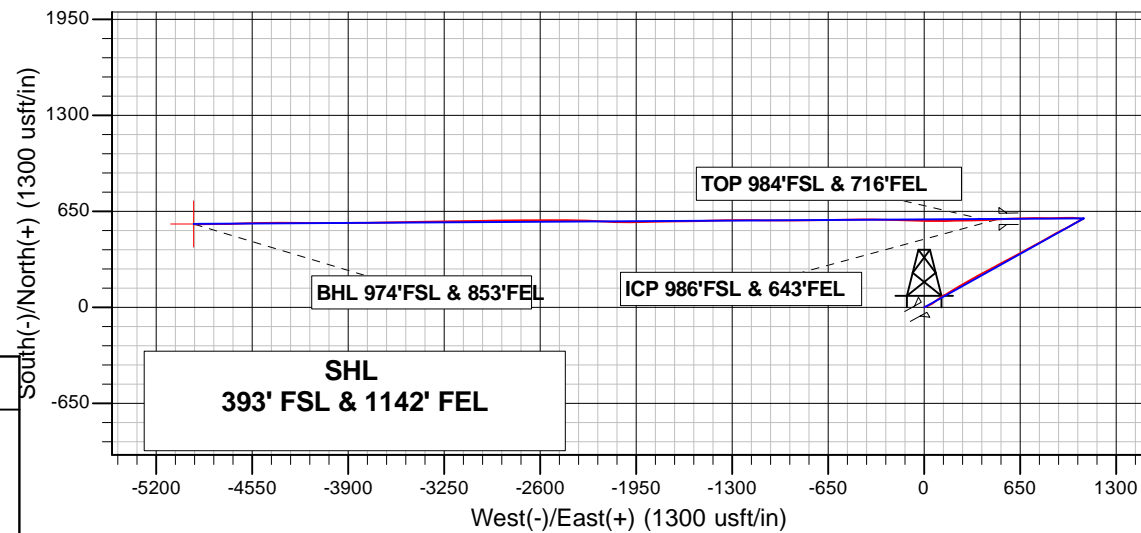
Projected Bottom Hole Location  
12016'MD 6047.2'TVD 562'N & 4940'W OF SHL  
92.10 degree Incl @ 269.30 degree AZM

## CASING DETAILS

| TVD    | MD     | Name        |
|--------|--------|-------------|
| 410.0  | 410.0  | 9 5/8" Csg. |
| 6046.0 | 6583.0 | 7" Csg.     |

## LEGEND

- State Pronghorn X44-32-31MRLNC, Wellbore #1, Wellbore #1 VO
- Design #1



# **Bonanza Creek Energy Inc.**

**Weld Co., CO**

**Sec.32-T5N-R61W**

**State Pronghorn X44-32-31MRLNC**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**29 July, 2015**

# Archer

## Survey Report

|                  |                                |                                     |                                     |
|------------------|--------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | Bonanza Creek Energy Inc.      | <b>Local Co-ordinate Reference:</b> | Well State Pronghorn X44-32-31MRLNC |
| <b>Project:</b>  | Weld Co., CO                   | <b>TVD Reference:</b>               | Well @ 4548.0usft                   |
| <b>Site:</b>     | Sec.32-T5N-R61W                | <b>MD Reference:</b>                | Well @ 4548.0usft                   |
| <b>Well:</b>     | State Pronghorn X44-32-31MRLNC | <b>North Reference:</b>             | True                                |
| <b>Wellbore:</b> | Wellbore #1                    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | Wellbore #1                    | <b>Database:</b>                    | EDMDBBW                             |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Weld Co., CO              |                      |                |
| <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                  |          | Sec.32-T5N-R61W |                   |                   |                   |
| Site Position:        |          | Northing:       | 1,373,452.07 usft | Latitude:         | 40° 21' 5.544 N   |
| From:                 | Lat/Long | Easting:        | 3,354,698.54 usft | Longitude:        | 104° 13' 38.316 W |
| Position Uncertainty: | 0.0 usft | Slot Radius:    | 13-3/16 "         | Grid Convergence: | 0.82 °            |

|                      |                                |          |                     |                   |               |                   |
|----------------------|--------------------------------|----------|---------------------|-------------------|---------------|-------------------|
| Well                 | State Pronghorn X44-32-31MRLNC |          |                     |                   |               |                   |
| Well Position        | +N/-S                          | 0.0 usft | Northing:           | 1,373,273.10 usft | Latitude:     | 40° 21' 3.780 N   |
|                      | +E/-W                          | 0.0 usft | Easting:            | 3,354,667.66 usft | Longitude:    | 104° 13' 38.748 W |
| Position Uncertainty |                                | 0.0 usft | Wellhead Elevation: | 0.0 usft          | Ground Level: | 4,531.0 usft      |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 2015/05/14         | 8.04                   | 66.96                | 52,751                     |

|                          |                                |                     |                     |                      |     |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|-----|
| <b>Design</b>            | Wellbore #1                    |                     |                     |                      |     |
| <b>Audit Notes:</b>      |                                |                     |                     |                      |     |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>       | ACTUAL              | <b>Tie On Depth:</b> | 0.0 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Direction (°)</b> |     |
|                          | 0.0                            | 0.0                 | 0.0                 | 269.65               |     |

|                       |                  |                          |                  |                    |  |
|-----------------------|------------------|--------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date</b>      | 2015/07/29               |                  |                    |  |
| <b>From (usft)</b>    | <b>To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |  |
| 529.0                 | 12,016.0         | Survey #1 (Wellbore #1)  | MWD              | MWD - Standard     |  |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| <b>Survey</b>                |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |  |
| 0.0                          | 0.00                   | 0.00               | 0.0                          | 0.0                 | 0.0                 | 0.0                            | 0.00                           | 0.00                          | 0.00                         |  |
| <b>First Archer Survey</b>   |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| 529.0                        | 0.10                   | 101.80             | 529.0                        | -0.1                | 0.5                 | -0.5                           | 0.02                           | 0.02                          | 0.00                         |  |
| 623.0                        | 2.00                   | 46.40              | 623.0                        | 1.0                 | 1.7                 | -1.7                           | 2.07                           | 2.02                          | -58.94                       |  |
| 717.0                        | 4.60                   | 72.70              | 716.8                        | 3.3                 | 6.5                 | -6.5                           | 3.13                           | 2.77                          | 27.98                        |  |
| 811.0                        | 6.90                   | 66.30              | 810.3                        | 6.7                 | 15.3                | -15.3                          | 2.54                           | 2.45                          | -6.81                        |  |
| 905.0                        | 7.20                   | 66.20              | 903.6                        | 11.3                | 25.8                | -25.9                          | 0.32                           | 0.32                          | -0.11                        |  |
| 1,000.0                      | 9.30                   | 62.00              | 997.6                        | 17.3                | 38.1                | -38.2                          | 2.30                           | 2.21                          | -4.42                        |  |
| 1,094.0                      | 9.20                   | 62.50              | 1,090.4                      | 24.4                | 51.4                | -51.6                          | 0.14                           | -0.11                         | 0.53                         |  |
| 1,188.0                      | 10.70                  | 52.10              | 1,183.0                      | 33.2                | 65.0                | -65.2                          | 2.48                           | 1.60                          | -11.06                       |  |
| 1,281.0                      | 13.80                  | 51.70              | 1,273.9                      | 45.4                | 80.5                | -80.8                          | 3.33                           | 3.33                          | -0.43                        |  |
| 1,376.0                      | 16.10                  | 54.00              | 1,365.7                      | 60.1                | 100.1               | -100.4                         | 2.50                           | 2.42                          | 2.42                         |  |
| 1,471.0                      | 17.10                  | 61.30              | 1,456.7                      | 74.6                | 123.0               | -123.4                         | 2.43                           | 1.05                          | 7.68                         |  |

# Archer

## Survey Report

|                  |                                |                                     |                                     |
|------------------|--------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | Bonanza Creek Energy Inc.      | <b>Local Co-ordinate Reference:</b> | Well State Pronghorn X44-32-31MRLNC |
| <b>Project:</b>  | Weld Co., CO                   | <b>TVD Reference:</b>               | Well @ 4548.0usft                   |
| <b>Site:</b>     | Sec.32-T5N-R61W                | <b>MD Reference:</b>                | Well @ 4548.0usft                   |
| <b>Well:</b>     | State Pronghorn X44-32-31MRLNC | <b>North Reference:</b>             | True                                |
| <b>Wellbore:</b> | Wellbore #1                    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | Wellbore #1                    | <b>Database:</b>                    | EDMDBBW                             |

| Survey                |                 |             |                       |              |              |                         |                         |                        |                       |  |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 1,565.0               | 15.50           | 60.50       | 1,546.9               | 87.4         | 146.0        | -146.6                  | 1.72                    | -1.70                  | -0.85                 |  |
| 1,660.0               | 17.90           | 58.40       | 1,637.9               | 101.3        | 169.5        | -170.1                  | 2.60                    | 2.53                   | -2.21                 |  |
| 1,754.0               | 18.90           | 62.20       | 1,727.1               | 116.0        | 195.3        | -196.0                  | 1.66                    | 1.06                   | 4.04                  |  |
| 1,848.0               | 17.50           | 54.30       | 1,816.4               | 131.3        | 220.2        | -221.0                  | 3.01                    | -1.49                  | -8.40                 |  |
| 1,942.0               | 19.30           | 58.30       | 1,905.6               | 147.7        | 244.9        | -245.8                  | 2.34                    | 1.91                   | 4.26                  |  |
| 2,037.0               | 21.20           | 61.70       | 1,994.7               | 164.1        | 273.4        | -274.4                  | 2.35                    | 2.00                   | 3.58                  |  |
| 2,131.0               | 20.40           | 59.00       | 2,082.6               | 180.6        | 302.4        | -303.5                  | 1.33                    | -0.85                  | -2.87                 |  |
| 2,225.0               | 20.90           | 63.20       | 2,170.6               | 196.6        | 331.4        | -332.6                  | 1.66                    | 0.53                   | 4.47                  |  |
| 2,320.0               | 19.90           | 60.10       | 2,259.6               | 212.3        | 360.6        | -361.9                  | 1.55                    | -1.05                  | -3.26                 |  |
| 2,414.0               | 20.90           | 62.50       | 2,347.7               | 228.1        | 389.3        | -390.7                  | 1.39                    | 1.06                   | 2.55                  |  |
| 2,509.0               | 19.80           | 62.80       | 2,436.8               | 243.2        | 418.7        | -420.1                  | 1.16                    | -1.16                  | 0.32                  |  |
| 2,603.0               | 18.80           | 60.10       | 2,525.5               | 258.1        | 446.0        | -447.5                  | 1.43                    | -1.06                  | -2.87                 |  |
| 2,698.0               | 20.80           | 62.60       | 2,614.9               | 273.5        | 474.2        | -475.9                  | 2.29                    | 2.11                   | 2.63                  |  |
| 2,792.0               | 19.50           | 61.70       | 2,703.1               | 288.6        | 502.8        | -504.6                  | 1.42                    | -1.38                  | -0.96                 |  |
| 2,886.0               | 17.40           | 58.40       | 2,792.3               | 303.4        | 528.6        | -530.5                  | 2.49                    | -2.23                  | -3.51                 |  |
| 2,981.0               | 17.80           | 64.30       | 2,882.9               | 317.1        | 553.8        | -555.7                  | 1.92                    | 0.42                   | 6.21                  |  |
| 3,074.0               | 19.10           | 62.30       | 2,971.1               | 330.4        | 580.1        | -582.1                  | 1.55                    | 1.40                   | -2.15                 |  |
| 3,168.0               | 19.20           | 63.60       | 3,059.9               | 344.4        | 607.6        | -609.6                  | 0.47                    | 0.11                   | 1.38                  |  |
| 3,262.0               | 18.10           | 62.90       | 3,149.0               | 357.9        | 634.4        | -636.6                  | 1.19                    | -1.17                  | -0.74                 |  |
| 3,356.0               | 20.00           | 61.80       | 3,237.8               | 372.2        | 661.6        | -663.8                  | 2.06                    | 2.02                   | -1.17                 |  |
| 3,450.0               | 21.20           | 61.60       | 3,325.8               | 387.8        | 690.7        | -693.0                  | 1.28                    | 1.28                   | -0.21                 |  |
| 3,543.0               | 21.60           | 59.70       | 3,412.4               | 404.5        | 720.3        | -722.7                  | 0.86                    | 0.43                   | -2.04                 |  |
| 3,637.0               | 21.30           | 58.70       | 3,499.9               | 422.1        | 749.8        | -752.3                  | 0.50                    | -0.32                  | -1.06                 |  |
| 3,732.0               | 20.80           | 62.40       | 3,588.5               | 438.8        | 779.5        | -782.1                  | 1.49                    | -0.53                  | 3.89                  |  |
| 3,826.0               | 19.40           | 61.60       | 3,676.8               | 454.0        | 808.0        | -810.8                  | 1.52                    | -1.49                  | -0.85                 |  |
| 3,919.0               | 17.60           | 59.30       | 3,765.0               | 468.5        | 833.7        | -836.5                  | 2.09                    | -1.94                  | -2.47                 |  |
| 4,014.0               | 17.40           | 61.70       | 3,855.6               | 482.6        | 858.5        | -861.5                  | 0.79                    | -0.21                  | 2.53                  |  |
| 4,107.0               | 18.10           | 62.30       | 3,944.2               | 495.9        | 883.6        | -886.6                  | 0.78                    | 0.75                   | 0.65                  |  |
| 4,201.0               | 18.80           | 59.70       | 4,033.3               | 510.3        | 909.6        | -912.7                  | 1.15                    | 0.74                   | -2.77                 |  |
| 4,296.0               | 18.30           | 63.90       | 4,123.4               | 524.6        | 936.2        | -939.4                  | 1.50                    | -0.53                  | 4.42                  |  |
| 4,390.0               | 17.80           | 66.10       | 4,212.8               | 536.9        | 962.6        | -965.8                  | 0.90                    | -0.53                  | 2.34                  |  |
| 4,484.0               | 15.60           | 56.40       | 4,302.8               | 549.8        | 986.2        | -989.6                  | 3.77                    | -2.34                  | -10.32                |  |
| 4,578.0               | 14.60           | 60.60       | 4,393.6               | 562.6        | 1,007.1      | -1,010.5                | 1.58                    | -1.06                  | 4.47                  |  |
| 4,672.0               | 12.40           | 64.40       | 4,485.0               | 572.7        | 1,026.5      | -1,030.0                | 2.52                    | -2.34                  | 4.04                  |  |
| 4,766.0               | 10.40           | 61.00       | 4,577.1               | 581.2        | 1,043.0      | -1,046.6                | 2.24                    | -2.13                  | -3.62                 |  |
| 4,860.0               | 8.20            | 56.60       | 4,669.9               | 589.0        | 1,056.1      | -1,059.6                | 2.46                    | -2.34                  | -4.68                 |  |
| 4,955.0               | 4.60            | 72.10       | 4,764.3               | 593.9        | 1,065.4      | -1,069.0                | 4.17                    | -3.79                  | 16.32                 |  |
| 5,049.0               | 3.90            | 60.60       | 4,858.0               | 596.7        | 1,071.7      | -1,075.3                | 1.17                    | -0.74                  | -12.23                |  |
| 5,143.0               | 2.70            | 53.90       | 4,951.9               | 599.5        | 1,076.3      | -1,079.9                | 1.34                    | -1.28                  | -7.13                 |  |
| 5,237.0               | 0.40            | 310.20      | 5,045.8               | 601.0        | 1,077.8      | -1,081.5                | 3.00                    | -2.45                  | -110.32               |  |
| 5,331.0               | 0.50            | 291.10      | 5,139.8               | 601.4        | 1,077.2      | -1,080.9                | 0.19                    | 0.11                   | -20.32                |  |
| 5,426.0               | 0.50            | 281.70      | 5,234.8               | 601.6        | 1,076.4      | -1,080.1                | 0.09                    | 0.00                   | -9.89                 |  |
| 5,519.0               | 0.90            | 249.30      | 5,327.8               | 601.5        | 1,075.3      | -1,079.0                | 0.59                    | 0.43                   | -34.84                |  |
| 5,614.0               | 0.80            | 226.70      | 5,422.8               | 600.7        | 1,074.2      | -1,077.8                | 0.37                    | -0.11                  | -23.79                |  |
| 5,707.0               | 0.80            | 212.50      | 5,515.8               | 599.7        | 1,073.3      | -1,077.0                | 0.21                    | 0.00                   | -15.27                |  |
| 5,754.0               | 4.00            | 255.00      | 5,562.8               | 599.0        | 1,071.6      | -1,075.2                | 7.35                    | 6.81                   | 90.43                 |  |
| 5,801.0               | 9.10            | 276.90      | 5,609.4               | 599.1        | 1,066.3      | -1,069.9                | 11.89                   | 10.85                  | 46.60                 |  |
| 5,848.0               | 14.40           | 278.70      | 5,655.4               | 600.4        | 1,056.8      | -1,060.5                | 11.30                   | 11.28                  | 3.83                  |  |
| 5,895.0               | 21.30           | 278.60      | 5,700.2               | 602.6        | 1,042.6      | -1,046.2                | 14.68                   | 14.68                  | -0.21                 |  |
| 5,942.0               | 27.80           | 276.00      | 5,742.9               | 605.0        | 1,023.2      | -1,026.9                | 14.02                   | 13.83                  | -5.53                 |  |
| 5,989.0               | 34.10           | 271.90      | 5,783.2               | 606.6        | 999.1        | -1,002.8                | 14.13                   | 13.40                  | -8.72                 |  |
| 6,036.0               | 38.90           | 267.00      | 5,821.0               | 606.2        | 971.2        | -974.9                  | 11.94                   | 10.21                  | -10.43                |  |
| 6,084.0               | 44.20           | 268.80      | 5,856.9               | 605.1        | 939.4        | -943.1                  | 11.32                   | 11.04                  | 3.75                  |  |
| 6,131.0               | 49.10           | 268.90      | 5,889.1               | 604.4        | 905.2        | -908.9                  | 10.43                   | 10.43                  | 0.21                  |  |

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## Survey Report

|                  |                                |                                     |                                     |
|------------------|--------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | Bonanza Creek Energy Inc.      | <b>Local Co-ordinate Reference:</b> | Well State Pronghorn X44-32-31MRLNC |
| <b>Project:</b>  | Weld Co., CO                   | <b>TVD Reference:</b>               | Well @ 4548.0usft                   |
| <b>Site:</b>     | Sec.32-T5N-R61W                | <b>MD Reference:</b>                | Well @ 4548.0usft                   |
| <b>Well:</b>     | State Pronghorn X44-32-31MRLNC | <b>North Reference:</b>             | True                                |
| <b>Wellbore:</b> | Wellbore #1                    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | Wellbore #1                    | <b>Database:</b>                    | EDMDBBW                             |

| Survey                |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 6,178.0               | 52.90           | 270.00      | 5,918.7               | 604.1        | 868.7        | -872.4                  | 8.29                    | 8.09                   | 2.34                  |
| 6,224.0               | 56.90           | 269.80      | 5,945.1               | 604.0        | 831.1        | -834.8                  | 8.70                    | 8.70                   | -0.43                 |
| 6,271.0               | 61.20           | 271.10      | 5,969.3               | 604.3        | 790.8        | -794.5                  | 9.45                    | 9.15                   | 2.77                  |
| 6,318.0               | 64.40           | 269.90      | 5,990.8               | 604.7        | 749.0        | -752.7                  | 7.18                    | 6.81                   | -2.55                 |
| 6,366.0               | 70.80           | 268.80      | 6,009.1               | 604.2        | 704.7        | -708.3                  | 13.50                   | 13.33                  | -2.29                 |
| 6,413.0               | 75.90           | 267.90      | 6,022.5               | 602.9        | 659.7        | -663.3                  | 11.00                   | 10.85                  | -1.91                 |
| 6,460.0               | 80.60           | 267.00      | 6,032.1               | 600.8        | 613.7        | -617.4                  | 10.17                   | 10.00                  | -1.91                 |
| 6,493.0               | 83.70           | 266.60      | 6,036.6               | 599.0        | 581.1        | -584.7                  | 9.47                    | 9.39                   | -1.21                 |
| ICP 986'FSL & 643'FEL |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,583.0               | 89.01           | 267.86      | 6,042.3               | 594.7        | 491.4        | -495.0                  | 6.06                    | 5.90                   | 1.40                  |
| 6,593.0               | 89.60           | 268.00      | 6,042.4               | 594.3        | 481.4        | -485.0                  | 6.06                    | 5.90                   | 1.39                  |
| 6,609.0               | 92.40           | 267.50      | 6,042.2               | 593.7        | 465.4        | -469.0                  | 17.78                   | 17.50                  | -3.12                 |
| TOP 984'FSL & 716'FEL |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,656.0               | 92.01           | 267.37      | 6,040.4               | 591.6        | 418.5        | -422.1                  | 0.88                    | -0.83                  | -0.28                 |
| 6,681.0               | 91.80           | 267.30      | 6,039.5               | 590.4        | 393.5        | -397.1                  | 0.88                    | -0.83                  | -0.28                 |
| 6,772.0               | 91.30           | 269.20      | 6,037.1               | 587.6        | 302.6        | -306.2                  | 2.16                    | -0.55                  | 2.09                  |
| 6,864.0               | 88.90           | 269.10      | 6,036.9               | 586.3        | 210.6        | -214.2                  | 2.61                    | -2.61                  | -0.11                 |
| 6,955.0               | 89.20           | 269.10      | 6,038.4               | 584.8        | 119.7        | -123.2                  | 0.33                    | 0.33                   | 0.00                  |
| 7,047.0               | 90.20           | 271.00      | 6,038.9               | 584.9        | 27.7         | -31.2                   | 2.33                    | 1.09                   | 2.07                  |
| 7,139.0               | 90.20           | 271.70      | 6,038.6               | 587.1        | -64.3        | 60.7                    | 0.76                    | 0.00                   | 0.76                  |
| 7,231.0               | 88.70           | 271.80      | 6,039.5               | 589.9        | -156.3       | 152.7                   | 1.63                    | -1.63                  | 0.11                  |
| 7,323.0               | 88.30           | 271.50      | 6,041.9               | 592.5        | -248.2       | 244.6                   | 0.54                    | -0.43                  | -0.33                 |
| 7,415.0               | 89.90           | 270.20      | 6,043.3               | 593.9        | -340.2       | 336.5                   | 2.24                    | 1.74                   | -1.41                 |
| 7,507.0               | 90.00           | 269.90      | 6,043.4               | 594.0        | -432.2       | 428.5                   | 0.34                    | 0.11                   | -0.33                 |
| 7,599.0               | 89.50           | 269.20      | 6,043.8               | 593.3        | -524.2       | 520.5                   | 0.94                    | -0.54                  | -0.76                 |
| 7,691.0               | 89.50           | 269.30      | 6,044.6               | 592.1        | -616.2       | 612.5                   | 0.11                    | 0.00                   | 0.11                  |
| 7,783.0               | 90.30           | 269.50      | 6,044.8               | 591.1        | -708.1       | 704.5                   | 0.90                    | 0.87                   | 0.22                  |
| 7,874.0               | 89.00           | 268.70      | 6,045.3               | 589.7        | -799.1       | 795.5                   | 1.68                    | -1.43                  | -0.88                 |
| 7,966.0               | 90.10           | 269.30      | 6,046.0               | 588.1        | -891.1       | 887.5                   | 1.36                    | 1.20                   | 0.65                  |
| 8,059.0               | 89.50           | 270.60      | 6,046.4               | 588.0        | -984.1       | 980.5                   | 1.54                    | -0.65                  | 1.40                  |
| 8,150.0               | 89.20           | 270.60      | 6,047.4               | 588.9        | -1,075.1     | 1,071.5                 | 0.33                    | -0.33                  | 0.00                  |
| 8,242.0               | 90.00           | 270.60      | 6,048.0               | 589.9        | -1,167.1     | 1,163.5                 | 0.87                    | 0.87                   | 0.00                  |
| 8,334.0               | 90.50           | 269.90      | 6,047.6               | 590.3        | -1,259.1     | 1,255.5                 | 0.94                    | 0.54                   | -0.76                 |
| 8,426.0               | 89.20           | 268.20      | 6,047.9               | 588.8        | -1,351.1     | 1,347.4                 | 2.33                    | -1.41                  | -1.85                 |
| 8,517.0               | 90.30           | 268.60      | 6,048.3               | 586.2        | -1,442.0     | 1,438.4                 | 1.29                    | 1.21                   | 0.44                  |
| 8,608.0               | 90.50           | 269.00      | 6,047.6               | 584.3        | -1,533.0     | 1,529.4                 | 0.49                    | 0.22                   | 0.44                  |
| 8,700.0               | 89.90           | 269.70      | 6,047.3               | 583.3        | -1,625.0     | 1,621.4                 | 1.00                    | -0.65                  | 0.76                  |
| 8,791.0               | 89.80           | 268.30      | 6,047.6               | 581.7        | -1,716.0     | 1,712.4                 | 1.54                    | -0.11                  | -1.54                 |
| 8,884.0               | 90.60           | 269.10      | 6,047.2               | 579.6        | -1,809.0     | 1,805.4                 | 1.22                    | 0.86                   | 0.86                  |
| 8,976.0               | 88.30           | 268.10      | 6,048.1               | 577.3        | -1,900.9     | 1,897.4                 | 2.73                    | -2.50                  | -1.09                 |
| 9,060.0               | 88.90           | 269.70      | 6,050.2               | 575.7        | -1,984.9     | 1,981.3                 | 2.03                    | 0.71                   | 1.90                  |
| 9,145.0               | 90.60           | 271.90      | 6,050.5               | 576.9        | -2,069.9     | 2,066.3                 | 3.27                    | 2.00                   | 2.59                  |
| 9,232.0               | 90.50           | 272.80      | 6,049.7               | 580.5        | -2,156.8     | 2,153.2                 | 1.04                    | -0.11                  | 1.03                  |
| 9,317.0               | 89.60           | 273.10      | 6,049.6               | 584.9        | -2,241.7     | 2,238.1                 | 1.12                    | -1.06                  | 0.35                  |
| 9,401.0               | 90.20           | 271.30      | 6,049.8               | 588.1        | -2,325.6     | 2,322.0                 | 2.26                    | 0.71                   | -2.14                 |
| 9,488.0               | 89.20           | 270.60      | 6,050.2               | 589.5        | -2,412.6     | 2,408.9                 | 1.40                    | -1.15                  | -0.80                 |
| 9,573.0               | 89.30           | 270.80      | 6,051.3               | 590.6        | -2,497.6     | 2,493.9                 | 0.26                    | 0.12                   | 0.24                  |
| 9,658.0               | 89.40           | 269.50      | 6,052.3               | 590.8        | -2,582.6     | 2,578.9                 | 1.53                    | 0.12                   | -1.53                 |
| 9,744.0               | 89.80           | 269.20      | 6,052.9               | 589.8        | -2,668.6     | 2,664.9                 | 0.58                    | 0.47                   | -0.35                 |
| 9,898.0               | 90.10           | 269.20      | 6,053.0               | 587.7        | -2,822.5     | 2,818.9                 | 0.19                    | 0.19                   | 0.00                  |
| 9,914.0               | 90.40           | 269.20      | 6,053.0               | 587.4        | -2,838.5     | 2,834.9                 | 1.87                    | 1.87                   | 0.00                  |
| 9,998.0               | 90.50           | 269.10      | 6,052.3               | 586.2        | -2,922.5     | 2,918.9                 | 0.17                    | 0.12                   | -0.12                 |
| 10,084.0              | 90.70           | 269.00      | 6,051.4               | 584.8        | -3,008.5     | 3,004.9                 | 0.26                    | 0.23                   | -0.12                 |
| 10,168.0              | 90.80           | 269.40      | 6,050.3               | 583.6        | -3,092.5     | 3,088.9                 | 0.49                    | 0.12                   | 0.48                  |

# Archer

## Survey Report

|                  |                                |                                     |                                     |
|------------------|--------------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | Bonanza Creek Energy Inc.      | <b>Local Co-ordinate Reference:</b> | Well State Pronghorn X44-32-31MRLNC |
| <b>Project:</b>  | Weld Co., CO                   | <b>TVD Reference:</b>               | Well @ 4548.0usft                   |
| <b>Site:</b>     | Sec.32-T5N-R61W                | <b>MD Reference:</b>                | Well @ 4548.0usft                   |
| <b>Well:</b>     | State Pronghorn X44-32-31MRLNC | <b>North Reference:</b>             | True                                |
| <b>Wellbore:</b> | Wellbore #1                    | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | Wellbore #1                    | <b>Database:</b>                    | EDMDBBW                             |

| Survey   |                 |             |                       |              |              |                         |                         |                        |                       |  |
|--|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft)                                      | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 10,253.0   | 89.50           | 269.50      | 6,050.1               | 582.8        | -3,177.5     | 3,173.9                 | 1.53                    | -1.53                  | 0.12                  |  |
| 10,338.0   | 89.70           | 269.40      | 6,050.7               | 582.0        | -3,262.5     | 3,258.9                 | 0.26                    | 0.24                   | -0.12                 |  |
| 10,423.0   | 90.20           | 268.90      | 6,050.8               | 580.7        | -3,347.5     | 3,343.9                 | 0.83                    | 0.59                   | -0.59                 |  |
| 10,508.0   | 90.90           | 267.80      | 6,049.9               | 578.3        | -3,432.4     | 3,428.8                 | 1.53                    | 0.82                   | -1.29                 |  |
| 10,593.0   | 90.00           | 269.00      | 6,049.3               | 575.9        | -3,517.4     | 3,513.8                 | 1.76                    | -1.06                  | 1.41                  |  |
| 10,678.0   | 89.00           | 269.10      | 6,050.0               | 574.5        | -3,602.4     | 3,598.8                 | 1.18                    | -1.18                  | 0.12                  |  |
| 10,763.0   | 90.20           | 269.40      | 6,050.6               | 573.4        | -3,687.4     | 3,683.8                 | 1.46                    | 1.41                   | 0.35                  |  |
| 10,848.0   | 89.70           | 269.90      | 6,050.7               | 572.8        | -3,772.4     | 3,768.8                 | 0.83                    | -0.59                  | 0.59                  |  |
| 10,933.0   | 89.80           | 269.10      | 6,051.1               | 572.1        | -3,857.4     | 3,853.8                 | 0.95                    | 0.12                   | -0.94                 |  |
| 11,017.0   | 89.10           | 269.70      | 6,051.9               | 571.2        | -3,941.4     | 3,937.8                 | 1.10                    | -0.83                  | 0.71                  |  |
| 11,102.0   | 90.70           | 270.40      | 6,052.0               | 571.3        | -4,026.3     | 4,022.8                 | 2.05                    | 1.88                   | 0.82                  |  |
| 11,187.0   | 90.60           | 270.00      | 6,051.0               | 571.6        | -4,111.3     | 4,107.8                 | 0.49                    | -0.12                  | -0.47                 |  |
| 11,272.0   | 90.10           | 270.40      | 6,050.5               | 571.9        | -4,196.3     | 4,192.8                 | 0.75                    | -0.59                  | 0.47                  |  |
| 11,357.0   | 88.40           | 270.30      | 6,051.6               | 572.4        | -4,281.3     | 4,277.7                 | 2.00                    | -2.00                  | -0.12                 |  |
| 11,442.0   | 88.80           | 270.30      | 6,053.7               | 572.8        | -4,366.3     | 4,362.7                 | 0.47                    | 0.47                   | 0.00                  |  |
| 11,526.0   | 89.10           | 269.10      | 6,055.3               | 572.4        | -4,450.3     | 4,446.7                 | 1.47                    | 0.36                   | -1.43                 |  |
| 11,611.0   | 89.50           | 268.20      | 6,056.3               | 570.4        | -4,535.3     | 4,531.7                 | 1.16                    | 0.47                   | -1.06                 |  |
| 11,697.0   | 90.50           | 267.70      | 6,056.3               | 567.3        | -4,621.2     | 4,617.6                 | 1.30                    | 1.16                   | -0.58                 |  |
| 11,781.0   | 90.90           | 269.30      | 6,055.3               | 565.1        | -4,705.2     | 4,701.6                 | 1.96                    | 0.48                   | 1.90                  |  |
| 11,866.0   | 92.30           | 269.10      | 6,052.9               | 563.9        | -4,790.1     | 4,786.6                 | 1.66                    | 1.65                   | -0.24                 |  |
| Last Archer Survey   |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 11,953.0   | 92.10           | 269.30      | 6,049.6               | 562.7        | -4,877.0     | 4,873.5                 | 0.32                    | -0.23                  | 0.23                  |  |
| BHL 974'FSL & 853'FEL - State Pronghorn X44-32-31MRLNC tgt |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 12,016.0   | 92.10           | 269.30      | 6,047.2               | 562.0        | -4,940.0     | 4,936.5                 | 0.00                    | 0.00                   | 0.00                  |  |

| Survey Annotations    |                       |                   |              |                       |  |
|-----------------------|-----------------------|-------------------|--------------|-----------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              |                       |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) | Comment               |  |
| 529.0                 | 529.0                 | -0.1              | 0.5          | First Archer Survey   |  |
| 6,583.0               | 6,042.3               | 594.7             | 491.4        | ICP 986'FSL & 643'FEL |  |
| 6,656.0               | 6,040.4               | 591.6             | 418.5        | TOP 984'FSL & 716'FEL |  |
| 11,953.0              | 6,049.6               | 562.7             | -4,877.0     | Last Archer Survey    |  |
| 12,016.0              | 6,047.2               | 562.0             | -4,940.0     | BHL 974'FSL & 853'FEL |  |

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