

# Bonanza Creek Energy Inc.

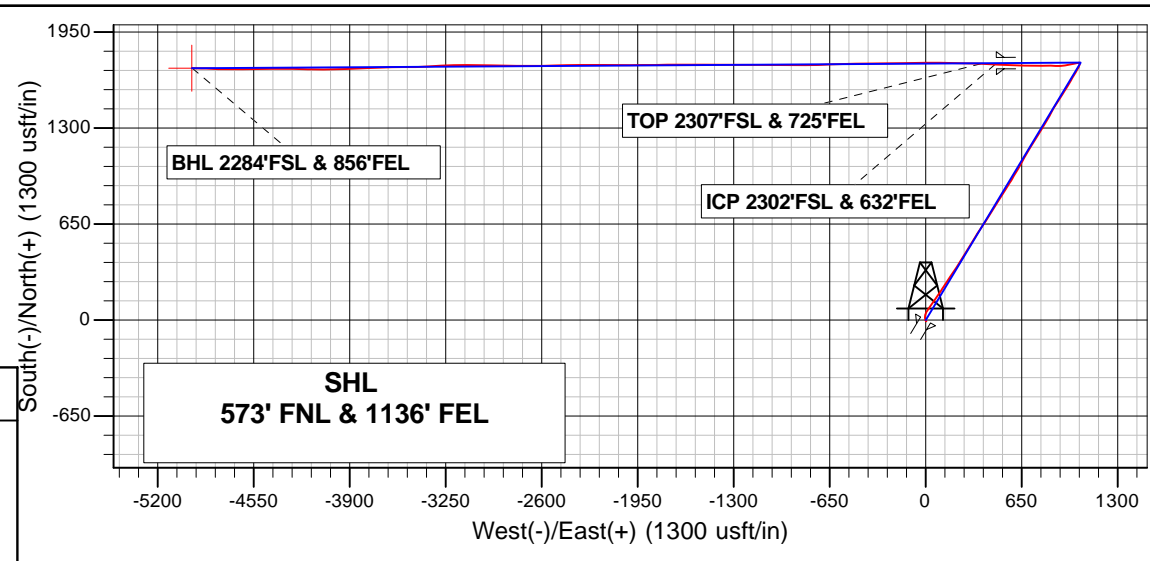
# Archer

Bonanza Creek Energy Inc.  
Project: Weld Co., CO  
Site: Sec.32-T5N-R61W  
Well: State Pronghorn W43-32-31MRLNC  
Wellbore: Wellbore #1  
Design: Design #2  
Lat: 40° 21' 5.544 N  
Long: 104° 13' 38.568 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



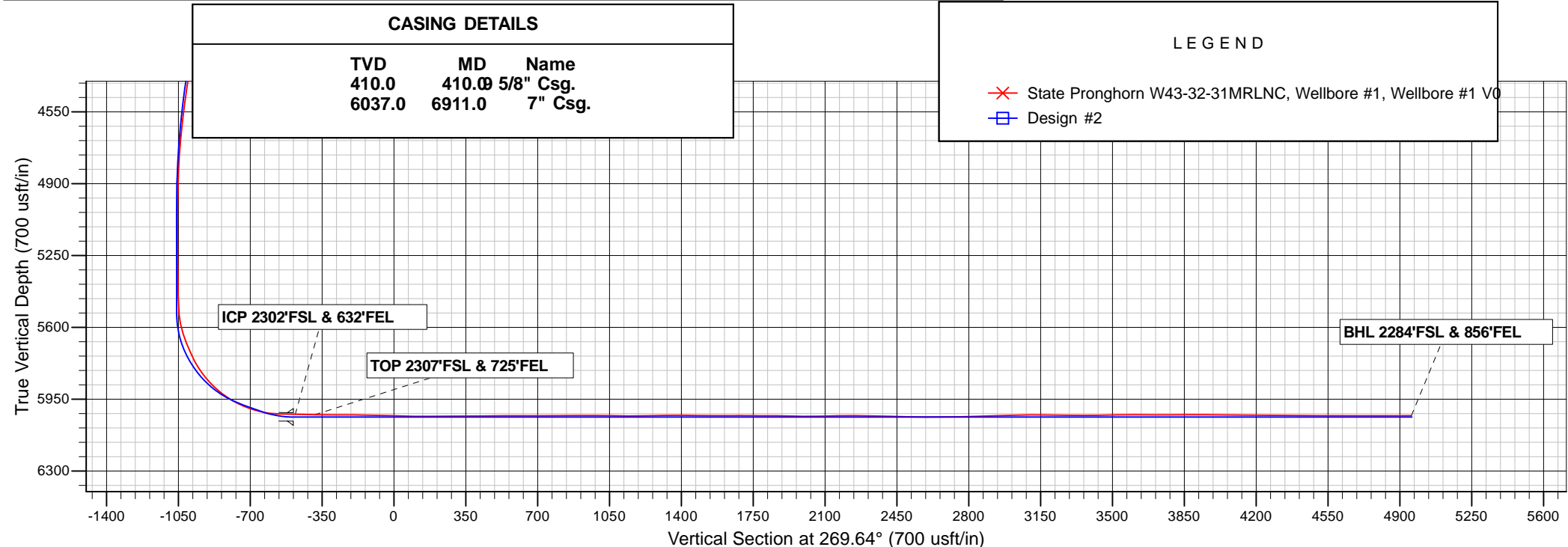
Projected Bottom Hole Location  
12350'MD 6030.2'TVD 1705.8'N & 4966.4'W OF SHL  
90.20 degree Incl @ 271.90 degree AZM

## CASING DETAILS

TVD	MD	Name
410.0	410.0	5/8" Csg.
6037.0	6911.0	7" Csg.

## LEGEND

✕ State Pronghorn W43-32-31MRLNC, Wellbore #1, Wellbore #1 VO  
□ Design #2



# **Bonanza Creek Energy Inc.**

**Weld Co., CO**

**Sec.32-T5N-R61W**

**State Pronghorn W43-32-31MRLNC**

**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 W43-32-31MRLNC
<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 W43-32-31MRLNC	<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 W43-32-31MRLNC					
Well Position	+N/-S	0.0 usft	Northing:	1,373,451.79 usft	Latitude:	40° 21' 5.544 N
	+E/-W	0.0 usft	Easting:	3,354,679.03 usft	Longitude:	104° 13' 38.568 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>
	IGRF200510	2009/12/31	8.73	67.16	53,338

<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	269.64	

<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>	
526.0	12,350.0	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>										
526.0	1.30	147.20	526.0	-5.0	3.2	-3.2	0.25	0.25	0.00	
619.0	1.50	154.50	618.9	-7.0	4.3	-4.3	0.29	0.22	7.85	
712.0	1.70	290.30	711.9	-7.6	3.6	-3.5	3.19	0.22	146.02	
806.0	3.60	331.10	805.8	-4.6	0.8	-0.8	2.73	2.02	43.40	
900.0	6.90	341.20	899.4	3.4	-2.4	2.4	3.63	3.51	10.74	
995.0	9.60	355.80	993.4	16.7	-4.8	4.7	3.58	2.84	15.37	
1,089.0	10.50	11.80	1,086.0	32.9	-3.7	3.5	3.11	0.96	17.02	
1,181.0	12.00	28.90	1,176.3	49.5	2.7	-3.0	3.96	1.63	18.59	
1,276.0	15.20	30.10	1,268.6	68.9	13.7	-14.1	3.38	3.37	1.26	
1,369.0	17.70	36.40	1,357.8	90.8	28.2	-28.8	3.30	2.69	6.77	
1,463.0	20.40	34.90	1,446.6	115.8	46.1	-46.8	2.92	2.87	-1.60	

# Archer

## Survey Report

<b>Company:</b>	Bonanza Creek Energy Inc.	<b>Local Co-ordinate Reference:</b>	Well State Pronghorn W43-32-31MRLNC
<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 W43-32-31MRLNC	<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)	
1,558.0	22.50	34.30	1,535.0	144.4	65.8	-66.7	2.22	2.21	-0.63	
1,651.0	26.00	34.70	1,619.8	175.8	87.4	-88.5	3.77	3.76	0.43	
1,746.0	28.80	33.50	1,704.1	212.0	111.9	-113.2	3.00	2.95	-1.26	
1,840.0	31.50	33.70	1,785.4	251.4	138.0	-139.6	2.87	2.87	0.21	
1,934.0	34.40	34.20	1,864.3	293.8	166.6	-168.4	3.10	3.09	0.53	
2,028.0	33.60	32.50	1,942.2	337.7	195.5	-197.6	1.32	-0.85	-1.81	
2,123.0	35.40	31.80	2,020.5	383.2	224.1	-226.5	1.94	1.89	-0.74	
2,217.0	36.40	32.50	2,096.7	429.9	253.5	-256.1	1.15	1.06	0.74	
2,311.0	35.70	32.00	2,172.7	476.7	283.0	-286.0	0.81	-0.74	-0.53	
2,405.0	34.90	31.80	2,249.4	522.8	311.7	-315.0	0.86	-0.85	-0.21	
2,500.0	34.20	30.40	2,327.6	568.9	339.5	-343.1	1.11	-0.74	-1.47	
2,594.0	35.30	34.00	2,404.9	614.2	368.1	-371.9	2.48	1.17	3.83	
2,689.0	34.70	33.70	2,482.7	659.5	398.4	-402.6	0.66	-0.63	-0.32	
2,784.0	33.90	32.90	2,561.2	704.2	427.8	-432.2	0.97	-0.84	-0.84	
2,878.0	33.30	32.40	2,639.5	748.0	455.9	-460.6	0.70	-0.64	-0.53	
2,972.0	35.30	31.50	2,717.1	793.0	483.9	-488.9	2.19	2.13	-0.96	
3,067.0	33.40	30.80	2,795.5	838.8	511.6	-516.9	2.04	-2.00	-0.74	
3,162.0	35.50	32.70	2,873.9	884.5	539.9	-545.5	2.48	2.21	2.00	
3,257.0	33.20	32.20	2,952.3	929.7	568.7	-574.5	2.44	-2.42	-0.53	
3,351.0	35.00	30.60	3,030.1	974.7	596.1	-602.2	2.14	1.91	-1.70	
3,446.0	34.10	29.80	3,108.4	1,021.3	623.2	-629.6	1.06	-0.95	-0.84	
3,541.0	34.40	29.40	3,186.9	1,067.8	649.6	-656.3	0.39	0.32	-0.42	
3,635.0	35.40	28.60	3,264.0	1,114.8	675.7	-682.7	1.17	1.06	-0.85	
3,729.0	34.70	32.20	3,341.0	1,161.4	703.0	-710.3	2.32	-0.74	3.83	
3,824.0	35.40	31.80	3,418.7	1,207.6	731.9	-739.5	0.78	0.74	-0.42	
3,918.0	33.80	31.80	3,496.1	1,253.0	760.0	-767.9	1.70	-1.70	0.00	
4,013.0	33.00	30.80	3,575.4	1,297.7	787.2	-795.4	1.02	-0.84	-1.05	
4,107.0	32.20	30.50	3,654.6	1,341.2	813.0	-821.4	0.87	-0.85	-0.32	
4,201.0	30.60	29.60	3,734.8	1,383.6	837.6	-846.2	1.77	-1.70	-0.96	
4,295.0	28.60	28.40	3,816.6	1,424.2	860.1	-869.0	2.22	-2.13	-1.28	
4,389.0	28.40	34.00	3,899.2	1,462.6	883.3	-892.5	2.85	-0.21	5.96	
4,483.0	26.90	32.70	3,982.5	1,499.0	907.3	-916.7	1.72	-1.60	-1.38	
4,577.0	25.50	31.90	4,066.8	1,534.1	929.5	-939.1	1.54	-1.49	-0.85	
4,671.0	23.60	30.40	4,152.3	1,567.5	949.7	-959.5	2.13	-2.02	-1.60	
4,766.0	19.80	31.10	4,240.5	1,597.7	967.6	-977.6	4.01	-4.00	0.74	
4,860.0	18.30	30.30	4,329.4	1,624.0	983.3	-993.5	1.62	-1.60	-0.85	
4,954.0	15.30	31.80	4,419.4	1,647.3	997.3	-1,007.6	3.22	-3.19	1.60	
5,048.0	14.00	30.20	4,510.3	1,667.7	1,009.5	-1,020.0	1.45	-1.38	-1.70	
5,143.0	12.70	29.70	4,602.7	1,686.7	1,020.5	-1,031.1	1.37	-1.37	-0.53	
5,237.0	10.30	32.50	4,694.9	1,702.8	1,030.1	-1,040.8	2.62	-2.55	2.98	
5,332.0	7.70	19.40	4,788.7	1,715.9	1,036.8	-1,047.6	3.47	-2.74	-13.79	
5,426.0	6.50	15.80	4,882.0	1,727.0	1,040.3	-1,051.2	1.36	-1.28	-3.83	
5,521.0	4.50	16.90	4,976.5	1,735.7	1,042.9	-1,053.8	2.11	-2.11	1.16	
5,615.0	1.80	25.90	5,070.4	1,740.6	1,044.6	-1,055.5	2.91	-2.87	9.57	
5,709.0	0.90	272.10	5,164.4	1,741.9	1,044.5	-1,055.4	2.46	-0.96	-121.06	
5,803.0	0.70	270.20	5,258.3	1,742.0	1,043.2	-1,054.1	0.21	-0.21	-2.02	
5,896.0	0.70	276.90	5,351.3	1,742.0	1,042.1	-1,053.0	0.09	0.00	7.20	
5,990.0	1.00	298.80	5,445.3	1,742.5	1,040.8	-1,051.7	0.46	0.32	23.30	
6,084.0	5.10	259.80	5,539.2	1,742.2	1,035.9	-1,046.9	4.65	4.36	-41.49	
6,131.0	12.30	258.30	5,585.6	1,740.8	1,029.0	-1,039.9	15.33	15.32	-3.19	
6,178.0	18.60	259.00	5,630.9	1,738.3	1,016.7	-1,027.6	13.41	13.40	1.49	
6,225.0	22.20	259.70	5,674.9	1,735.3	1,000.6	-1,011.5	7.68	7.66	1.49	
6,272.0	23.40	259.40	5,718.3	1,732.0	982.7	-993.6	2.57	2.55	-0.64	
6,319.0	27.30	257.40	5,760.7	1,727.9	963.0	-973.8	8.49	8.30	-4.26	

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## Survey Report

<b>Company:</b>	Bonanza Creek Energy Inc.	<b>Local Co-ordinate Reference:</b>	Well State Pronghorn W43-32-31MRLNC
<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 W43-32-31MRLNC	<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)	
6,366.0	33.40	260.90	5,801.3	1,723.5	939.7	-950.5	13.51	12.98	7.45	
6,413.0	40.10	269.20	5,838.9	1,721.3	911.7	-922.5	17.72	14.26	17.66	
6,460.0	44.10	272.30	5,873.8	1,721.7	880.2	-891.0	9.59	8.51	6.60	
6,507.0	47.90	271.50	5,906.4	1,722.8	846.4	-857.3	8.18	8.09	-1.70	
6,554.0	54.70	270.30	5,935.8	1,723.4	809.8	-820.6	14.60	14.47	-2.55	
6,600.0	61.60	268.00	5,960.1	1,722.8	770.8	-781.6	15.59	15.00	-5.00	
6,647.0	66.80	269.60	5,980.5	1,721.9	728.5	-739.3	11.48	11.06	3.40	
6,694.0	71.00	271.20	5,997.4	1,722.2	684.6	-695.4	9.48	8.94	3.40	
6,741.0	76.50	272.40	6,010.6	1,723.6	639.5	-650.4	11.96	11.70	2.55	
6,787.0	83.90	273.30	6,018.4	1,725.9	594.3	-605.1	16.20	16.09	1.96	
6,834.0	88.00	273.40	6,021.7	1,728.6	547.5	-558.4	8.73	8.72	0.21	
ICP 2302'FSL & 632'FEL										
6,911.0	88.52	272.48	6,024.1	1,732.6	470.6	-481.5	1.37	0.68	-1.19	
TOP 2307'FSL & 725'FEL										
7,006.0	89.17	271.35	6,026.0	1,735.8	375.7	-386.6	1.37	0.68	-1.19	
7,010.0	89.20	271.30	6,026.0	1,735.9	371.7	-382.6	1.37	0.68	-1.19	
7,101.0	90.60	272.60	6,026.2	1,738.9	280.8	-291.7	2.10	1.54	1.43	
7,192.0	89.30	270.70	6,026.3	1,741.6	189.8	-200.8	2.53	-1.43	-2.09	
7,284.0	88.90	270.60	6,027.7	1,742.6	97.8	-108.8	0.45	-0.43	-0.11	
7,376.0	88.50	269.10	6,029.8	1,742.4	5.9	-16.8	1.69	-0.43	-1.63	
7,467.0	87.80	269.10	6,032.7	1,740.9	-85.1	74.1	0.77	-0.77	0.00	
7,559.0	91.00	269.90	6,033.7	1,740.1	-177.1	166.1	3.59	3.48	0.87	
7,651.0	90.20	269.60	6,032.7	1,739.7	-269.0	258.1	0.93	-0.87	-0.33	
7,743.0	90.50	268.80	6,032.2	1,738.5	-361.0	350.1	0.93	0.33	-0.87	
7,836.0	90.70	268.60	6,031.2	1,736.3	-454.0	443.1	0.30	0.22	-0.22	
7,927.0	90.30	268.70	6,030.4	1,734.2	-545.0	534.1	0.45	-0.44	0.11	
8,019.0	89.50	268.10	6,030.6	1,731.6	-636.9	626.0	1.09	-0.87	-0.65	
8,111.0	90.00	267.70	6,031.0	1,728.3	-728.9	718.0	0.70	0.54	-0.43	
8,196.0	91.30	270.60	6,030.0	1,727.0	-813.8	803.0	3.74	1.53	3.41	
8,280.0	89.80	270.40	6,029.2	1,727.7	-897.8	887.0	1.80	-1.79	-0.24	
8,365.0	89.80	270.00	6,029.5	1,728.0	-982.8	972.0	0.47	0.00	-0.47	
8,450.0	89.20	269.90	6,030.2	1,728.0	-1,067.8	1,057.0	0.72	-0.71	-0.12	
8,535.0	89.50	270.10	6,031.2	1,728.0	-1,152.8	1,141.9	0.42	0.35	0.24	
8,622.0	91.00	270.80	6,030.8	1,728.6	-1,239.8	1,228.9	1.90	1.72	0.80	
8,707.0	92.00	270.90	6,028.6	1,729.9	-1,324.8	1,313.9	1.18	1.18	0.12	
8,792.0	89.00	269.20	6,027.9	1,730.0	-1,409.8	1,398.9	4.06	-3.53	-2.00	
8,877.0	89.30	269.90	6,029.1	1,729.3	-1,494.8	1,483.9	0.90	0.35	0.82	
8,961.0	89.70	270.20	6,029.9	1,729.4	-1,578.8	1,567.9	0.60	0.48	0.36	
9,046.0	90.50	270.60	6,029.7	1,730.0	-1,663.7	1,652.8	1.05	0.94	0.47	
9,131.0	88.90	269.10	6,030.1	1,729.8	-1,748.7	1,737.8	2.58	-1.88	-1.76	
9,216.0	90.20	269.40	6,030.8	1,728.6	-1,833.7	1,822.8	1.57	1.53	0.35	
9,301.0	88.80	269.20	6,031.6	1,727.6	-1,918.7	1,907.8	1.66	-1.65	-0.24	
9,386.0	88.90	269.80	6,033.3	1,726.9	-2,003.7	1,992.8	0.72	0.12	0.71	
9,471.0	91.40	271.30	6,033.0	1,727.7	-2,088.7	2,077.8	3.43	2.94	1.76	
9,556.0	91.60	269.90	6,030.8	1,728.6	-2,173.6	2,162.7	1.66	0.24	-1.65	
9,641.0	89.30	269.40	6,030.1	1,728.0	-2,258.6	2,247.7	2.77	-2.71	-0.59	
9,726.0	88.90	269.90	6,031.5	1,727.5	-2,343.6	2,332.7	0.75	-0.47	0.59	
9,811.0	88.40	268.50	6,033.5	1,726.3	-2,428.6	2,417.7	1.75	-0.59	-1.65	
9,896.0	88.60	268.90	6,035.7	1,724.4	-2,513.5	2,502.7	0.53	0.24	0.47	
9,981.0	89.90	268.50	6,036.8	1,722.5	-2,598.5	2,587.6	1.60	1.53	-0.47	
10,066.0	90.50	269.90	6,036.5	1,721.3	-2,683.5	2,672.6	1.79	0.71	1.65	
10,150.0	91.00	270.60	6,035.4	1,721.7	-2,767.5	2,756.6	1.02	0.60	0.83	
10,235.0	91.80	271.50	6,033.4	1,723.2	-2,852.4	2,841.6	1.42	0.94	1.06	
10,322.0	92.20	271.60	6,030.3	1,725.6	-2,939.4	2,928.5	0.47	0.46	0.11	

# Archer Survey Report

<b>Company:</b>	Bonanza Creek Energy Inc.	<b>Local Co-ordinate Reference:</b>	Well State Pronghorn W43-32-31MRLNC
<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 W43-32-31MRLNC	<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)	
10,407.0	91.30	270.60	6,027.7	1,727.2	-3,024.3	3,013.4	1.58	-1.06	-1.18	
10,492.0	90.10	269.90	6,026.7	1,727.6	-3,109.3	3,098.4	1.63	-1.41	-0.82	
10,579.0	89.70	268.80	6,026.8	1,726.6	-3,196.3	3,185.4	1.35	-0.46	-1.26	
10,664.0	89.30	266.70	6,027.6	1,723.2	-3,281.2	3,270.3	2.51	-0.47	-2.47	
10,749.0	89.30	266.00	6,028.6	1,717.8	-3,366.0	3,355.2	0.82	0.00	-0.82	
10,833.0	91.70	269.30	6,027.9	1,714.4	-3,449.9	3,439.1	4.86	2.86	3.93	
10,918.0	90.50	270.20	6,026.2	1,714.0	-3,534.9	3,524.1	1.76	-1.41	1.06	
11,003.0	89.80	268.50	6,026.0	1,713.1	-3,619.9	3,609.1	2.16	-0.82	-2.00	
11,087.0	89.80	267.40	6,026.3	1,710.1	-3,703.9	3,693.0	1.31	0.00	-1.31	
11,172.0	90.00	267.30	6,026.5	1,706.1	-3,788.8	3,778.0	0.26	0.24	-0.12	
11,257.0	90.50	267.90	6,026.1	1,702.6	-3,873.7	3,862.9	0.92	0.59	0.71	
11,342.0	89.50	267.60	6,026.1	1,699.2	-3,958.6	3,947.9	1.23	-1.18	-0.35	
11,427.0	90.20	270.30	6,026.3	1,697.7	-4,043.6	4,032.9	3.28	0.82	3.18	
11,512.0	88.80	269.90	6,027.1	1,697.8	-4,128.6	4,117.8	1.71	-1.65	-0.47	
11,597.0	89.80	271.70	6,028.1	1,699.0	-4,213.6	4,202.8	2.42	1.18	2.12	
11,664.0	89.70	271.30	6,028.4	1,700.8	-4,280.6	4,269.8	0.62	-0.15	-0.60	
11,749.0	89.50	270.60	6,029.0	1,702.2	-4,365.5	4,354.8	0.86	-0.24	-0.82	
11,834.0	89.60	269.80	6,029.7	1,702.5	-4,450.5	4,439.8	0.95	0.12	-0.94	
11,919.0	90.30	268.70	6,029.7	1,701.4	-4,535.5	4,524.7	1.53	0.82	-1.29	
12,003.0	89.30	268.60	6,030.0	1,699.4	-4,619.5	4,608.7	1.20	-1.19	-0.12	
12,088.0	89.90	269.90	6,030.6	1,698.3	-4,704.5	4,693.7	1.68	0.71	1.53	
12,173.0	90.10	272.10	6,030.6	1,699.7	-4,789.5	4,778.7	2.60	0.24	2.59	
12,258.0	90.10	271.90	6,030.5	1,702.7	-4,874.4	4,863.6	0.24	0.00	-0.24	
Last Archer Survey										
12,287.0	90.20	271.90	6,030.4	1,703.7	-4,903.4	4,892.6	0.34	0.34	0.00	
BHL 2284'FSL & 856'FEL - State Pronghorn W43-32-31MRLNC tgt										
12,350.0	90.20	271.90	6,030.2	1,705.8	-4,966.4	4,955.6	0.00	0.00	0.00	

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
526.0	526.0	-5.0	3.2	First Archer Survey	
6,911.0	6,024.1	1,732.6	470.6	ICP 2302'FSL & 632'FEL	
7,006.0	6,026.0	1,735.8	375.7	TOP 2307'FSL & 725'FEL	
12,287.0	6,030.4	1,703.7	-4,903.4	Last Archer Survey	
12,350.0	6,030.2	1,705.8	-4,966.4	BHL 2284'FSL & 856'FEL	

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