

# **BONANZA CREEK ENERGY INC.**

**WELD COUNTY, COLORADO (NAD 83)**

**SE SE SEC. 4 T4N R63W 6th P.M.**

**PARK T-P-4HC**

**JOB #2009-299**

**30 April, 2014**

**Survey: FINAL SURVEYS**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SE SE SEC. 4 T4N R63W 6th P.M.  
Well: PARK T-P-4HC  
Wellbore: JOB #2009-299  
Design: FINAL SURVEYS

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation
787.0	787.0	0.11	44.37	-5.0	2.8	-5.0	6.1	SURFACE CASING
5996.0	6025.0	1.11	206.17	-395.5	-69.8	-396.1	480.1	KOP
6558.0	6858.0	85.32	353.51	98.0	-49.5	97.5	988.0	ICP
6557.9	11143.5	93.80	4.00	4379.5	35.0	4379.6	5272.6	LAST SURVEY - MAR 29, 2014
6555.1	11191.0	93.00	4.00	4426.8	38.3	4427.0	5320.0	EXTRAPOLATION TO TD

PROPOSED LOCAL COORDINATES:

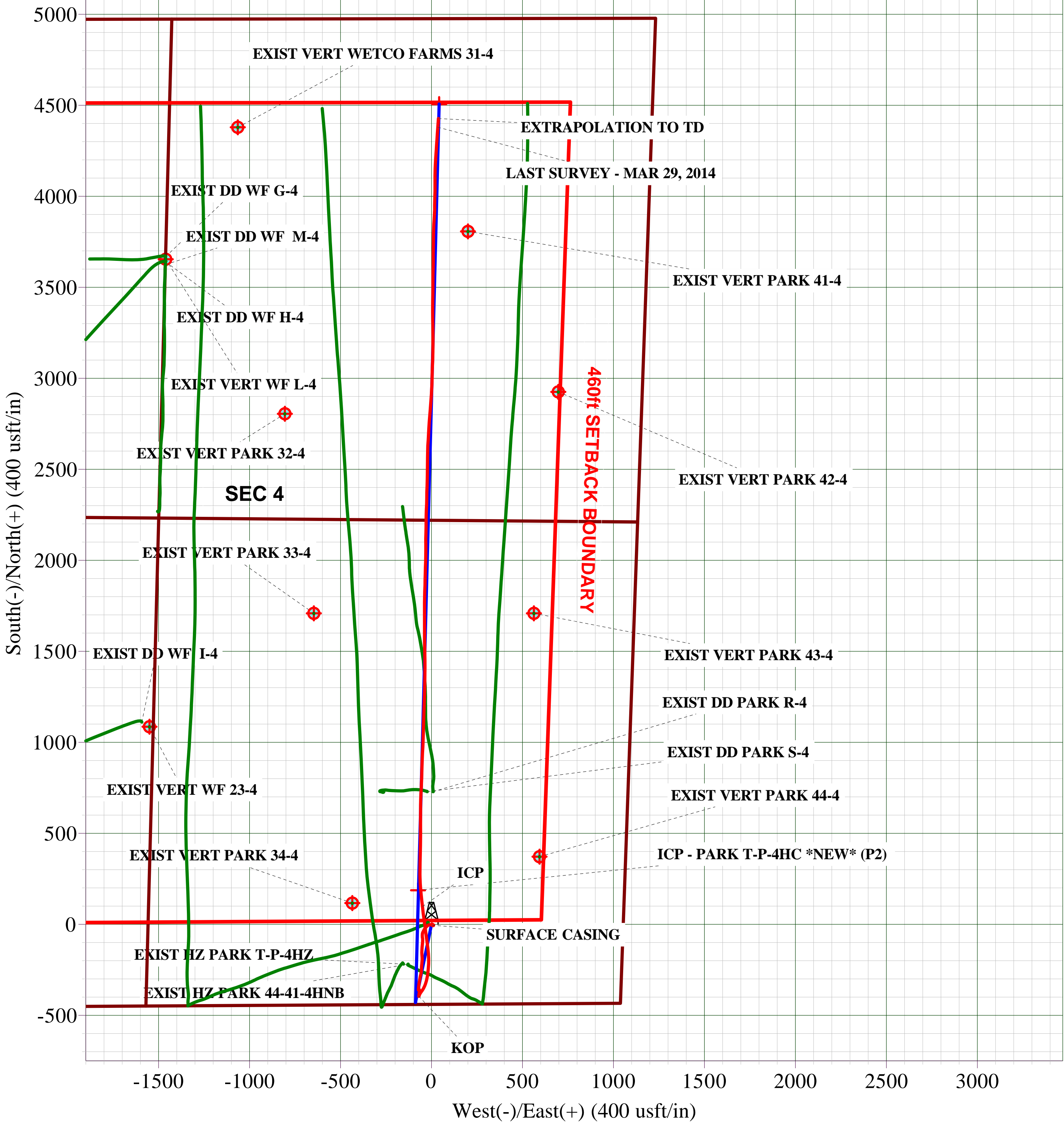
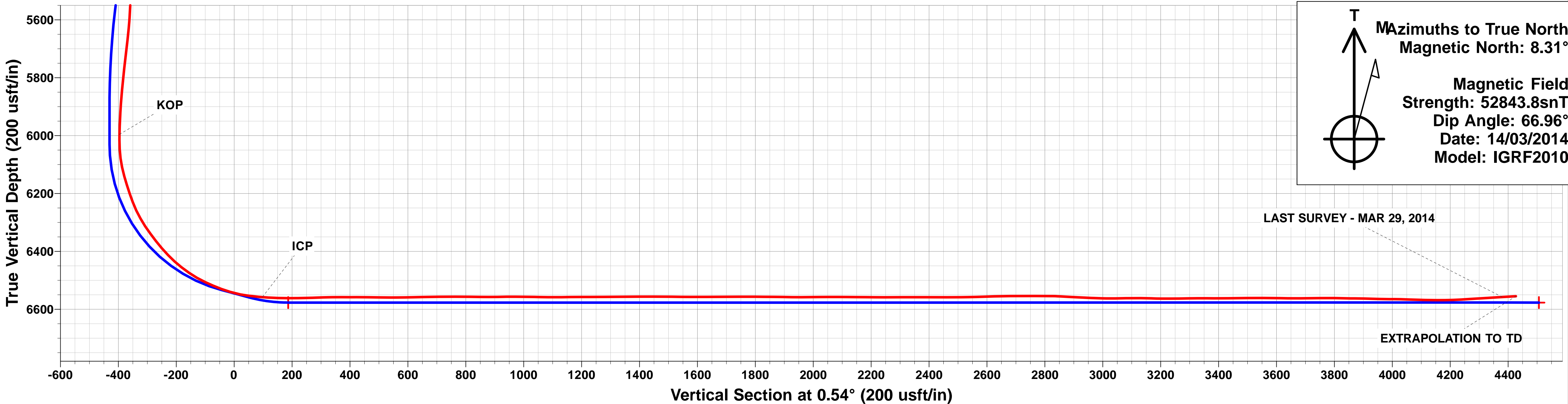
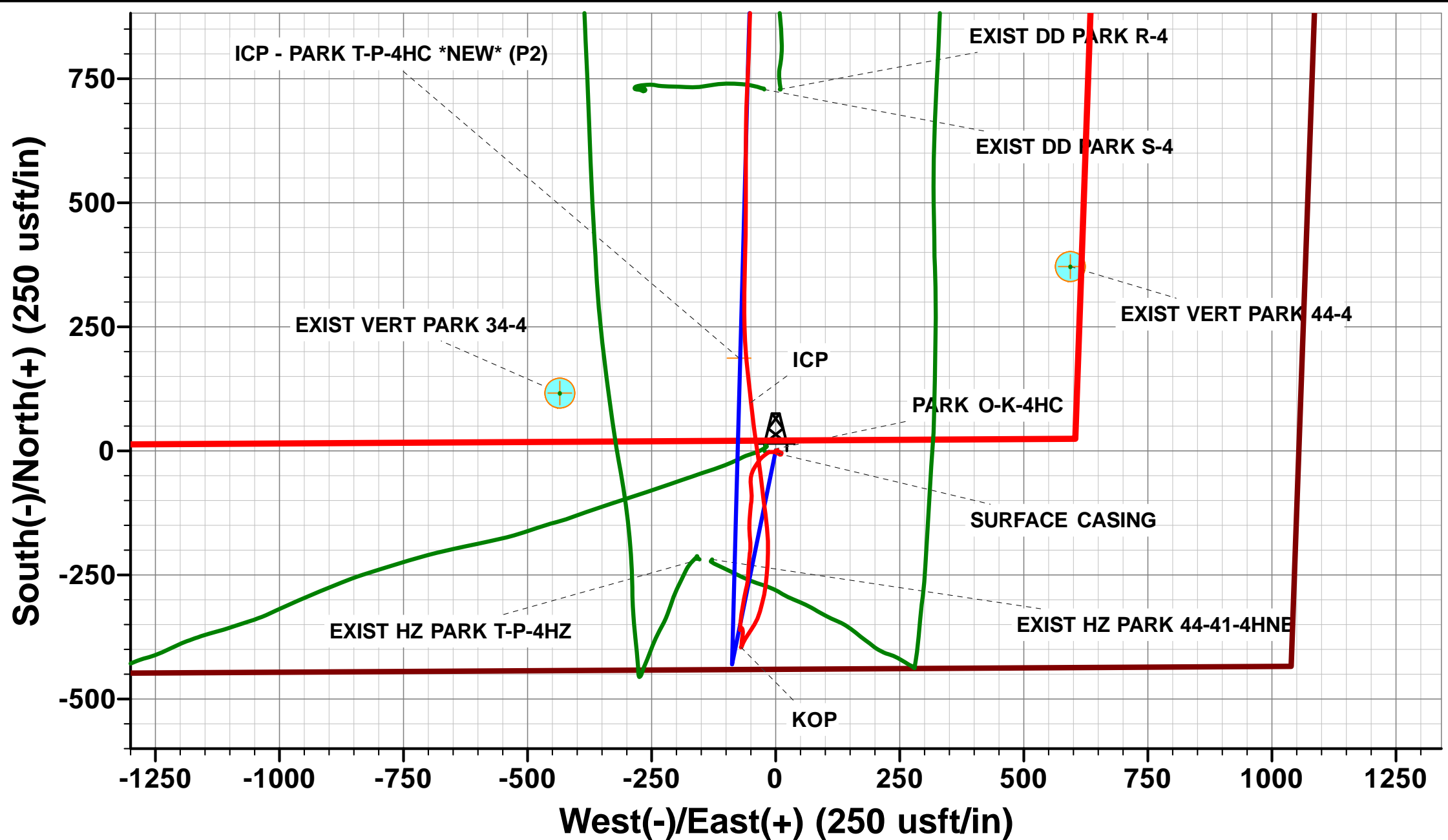
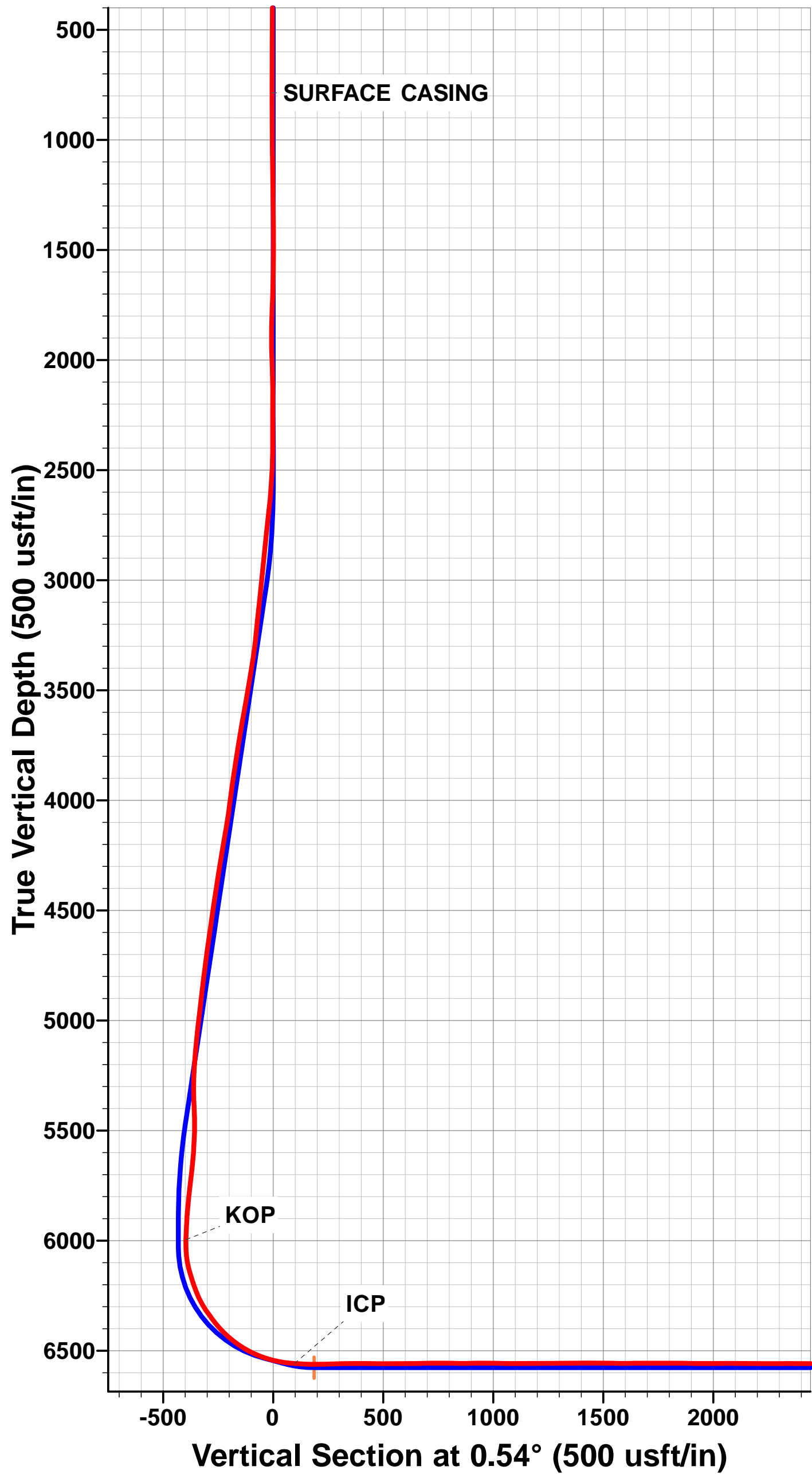
SHL: 439ft FSL & 1056ft FEL Sec 4

7" ICP: ft 531ft FSL & 1130ft FEL Sec 4

BHL: 470ft FNL & 1172ft FEL Sec 4

WELLBORE TARGET DETAILS (LAT/LONG)

	TVD	+N/-S	+E/-W	Latitude	Longitude
BHL - PARK T-P-4HC (P2)	6577.0	4506.1	42.1	40.347419	-104.437459
ICP - PARK T-P-4HC *NEW* (P2)	6577.0	187.1	-73.6	40.335564	-104.437874



## Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	WELD COUNTY, COLORADO (NAD 83)		
<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		Using geodetic scale factor

Site	SE SE SEC. 4 T4N R63W 6th P.M.				
Site Position:		Northing:	1,366,673.23 usft	Latitude:	40.335049
From:	Lat/Long	Easting:	3,296,160.78 usft	Longitude:	-104.437618
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft	Grid Convergence:	0.69 °

Well	PARK T-P-4HC					
Well Position	+N/-S	0.0 usft	Northing:	1,366,673.61 usft	Latitude:	40.335050
	+E/-W	0.0 usft	Easting:	3,296,163.01 usft	Longitude:	-104.437610
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,615.0 usft

<b>Wellbore</b>	JOB #2009-299				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	14/03/2014	8.31	66.96	52,844

<b>Design</b>	FINAL SURVEYS				
<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	0.54	

<b>Survey Program</b>	<b>Date</b>	30/04/2014			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
191.0	11,191.0	FINAL SURVEYS (JOB #2009-299)	MWD	MWD - Standard	

<b>Survey</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	4,632.0	0.0	0.0	0.0	0.00	0.00	0.00
191.0	0.90	141.10	191.0	4,441.0	-1.2	0.9	-1.2	0.47	0.47	0.00
376.0	0.60	147.30	376.0	4,256.0	-3.1	2.4	-3.1	0.17	-0.16	3.35
562.0	0.30	195.60	562.0	4,070.0	-4.4	2.8	-4.4	0.25	-0.16	25.97
751.5	0.10	134.80	751.4	3,880.6	-5.0	2.8	-5.0	0.14	-0.11	-32.09
<b>SURFACE CASING</b>										
787.0	0.11	44.37	787.0	3,845.0	-5.0	2.8	-5.0	0.42	0.03	-254.52
836.0	0.30	17.00	836.0	3,796.0	-4.8	2.9	-4.8	0.43	0.39	-55.86
926.0	0.30	50.80	926.0	3,706.0	-4.5	3.1	-4.4	0.19	0.00	37.56
1,018.0	0.70	332.40	1,018.0	3,614.0	-3.8	3.1	-3.8	0.77	0.43	-85.22
1,112.0	0.90	357.00	1,112.0	3,520.0	-2.6	2.7	-2.5	0.42	0.21	26.17
1,205.0	0.90	7.60	1,204.9	3,427.1	-1.1	2.8	-1.1	0.18	0.00	11.40
1,298.0	0.70	3.70	1,297.9	3,334.1	0.2	2.9	0.2	0.22	-0.22	-4.19

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,390.0	0.50	359.40	1,389.9	3,242.1	1.1	3.0	1.2	0.22	-0.22	-4.67
1,482.0	0.50	74.70	1,481.9	3,150.1	1.6	3.4	1.7	0.66	0.00	81.85
1,574.0	1.20	160.60	1,573.9	3,058.1	0.8	4.1	0.9	1.38	0.76	93.37
1,667.0	1.80	150.90	1,666.9	2,965.1	-1.4	5.1	-1.3	0.70	0.65	-10.43
1,760.0	2.40	162.60	1,759.8	2,872.2	-4.5	6.4	-4.4	0.79	0.65	12.58
1,853.0	1.90	128.60	1,852.8	2,779.2	-7.3	8.2	-7.2	1.45	-0.54	-36.56
1,945.0	2.40	55.90	1,944.7	2,687.3	-7.2	11.0	-7.1	2.80	0.54	-79.02
2,040.0	2.80	342.80	2,039.6	2,592.4	-3.8	11.9	-3.7	3.28	0.42	-76.95
2,135.0	3.50	263.20	2,134.5	2,497.5	-2.0	8.4	-1.9	4.28	0.74	-83.79
2,231.0	3.50	273.80	2,230.4	2,401.6	-2.1	2.5	-2.1	0.67	0.00	11.04
2,326.3	4.30	268.00	2,325.4	2,306.6	-2.1	-4.0	-2.1	0.93	0.84	-6.09
2,420.0	4.00	268.90	2,418.9	2,213.1	-2.2	-10.7	-2.3	0.33	-0.32	0.96
2,515.8	5.50	234.00	2,514.4	2,117.6	-5.0	-17.8	-5.2	3.33	1.57	-36.43
2,610.5	7.00	229.80	2,608.5	2,023.5	-11.4	-25.9	-11.6	1.65	1.58	-4.43
2,705.2	8.40	215.40	2,702.4	1,929.6	-20.8	-34.3	-21.1	2.51	1.48	-15.20
2,801.0	6.60	208.30	2,797.4	1,834.6	-31.3	-40.9	-31.7	2.11	-1.88	-7.41
2,897.5	6.20	207.80	2,893.3	1,738.7	-40.8	-46.0	-41.2	0.42	-0.41	-0.52
2,991.9	5.80	193.30	2,987.1	1,644.9	-50.0	-49.5	-50.4	1.66	-0.42	-15.36
3,088.2	6.50	180.60	3,082.8	1,549.2	-60.1	-50.7	-60.6	1.59	0.73	-13.20
3,184.5	5.50	172.50	3,178.7	1,453.3	-70.2	-50.1	-70.6	1.36	-1.04	-8.41
3,279.5	6.40	171.20	3,273.2	1,358.8	-79.9	-48.7	-80.4	0.96	0.95	-1.37
3,374.3	8.90	184.30	3,367.1	1,264.9	-92.5	-48.4	-92.9	3.20	2.64	13.82
3,470.1	9.60	186.20	3,461.7	1,170.3	-107.8	-49.9	-108.2	0.80	0.73	1.98
3,564.3	10.10	184.90	3,554.5	1,077.5	-123.8	-51.4	-124.3	0.58	0.53	-1.38
3,658.0	9.90	184.40	3,646.8	985.2	-140.0	-52.7	-140.5	0.23	-0.21	-0.53
3,754.0	9.40	177.40	3,741.4	890.6	-156.1	-53.0	-156.6	1.33	-0.52	-7.29
3,847.7	8.90	175.50	3,833.9	798.1	-171.0	-52.1	-171.5	0.62	-0.53	-2.03
3,942.6	8.00	173.80	3,927.8	704.2	-184.9	-50.8	-185.3	0.98	-0.95	-1.79
4,039.2	7.40	187.60	4,023.5	608.5	-197.7	-50.9	-198.2	2.01	-0.62	14.29
4,134.6	9.80	186.00	4,117.8	514.2	-211.9	-52.6	-212.3	2.53	2.52	-1.68
4,230.1	9.60	184.50	4,211.9	420.1	-227.9	-54.0	-228.4	0.34	-0.21	-1.57
4,324.6	9.40	183.40	4,305.1	326.9	-243.4	-55.1	-244.0	0.29	-0.21	-1.16
4,420.9	7.90	182.90	4,400.3	231.7	-257.9	-55.9	-258.4	1.56	-1.56	-0.52
4,516.0	9.40	194.20	4,494.4	137.6	-272.0	-58.2	-272.5	2.38	1.58	11.88
4,611.5	8.30	192.10	4,588.8	43.2	-286.3	-61.5	-286.8	1.20	-1.15	-2.20
4,707.4	7.70	190.20	4,683.8	-51.8	-299.4	-64.1	-300.0	0.68	-0.63	-1.98
4,803.1	7.30	188.60	4,778.6	-146.6	-311.7	-66.2	-312.3	0.47	-0.42	-1.67
4,899.0	6.50	187.30	4,873.8	-241.8	-323.1	-67.8	-323.7	0.85	-0.83	-1.35
4,994.4	7.00	189.70	4,968.6	-336.6	-334.2	-69.4	-334.8	0.60	0.52	2.52
5,090.1	5.90	185.90	5,063.6	-431.6	-344.8	-70.9	-345.5	1.23	-1.15	-3.97
5,185.8	4.90	179.30	5,158.9	-526.9	-353.8	-71.4	-354.5	1.23	-1.05	-6.90
5,281.1	2.20	190.20	5,254.0	-622.0	-359.7	-71.6	-360.3	2.91	-2.83	11.44
5,344.2	0.10	144.80	5,317.1	-685.1	-360.9	-71.8	-361.6	3.37	-3.33	-71.89
5,407.5	3.40	28.00	5,380.3	-748.3	-359.3	-70.9	-359.9	5.45	5.22	-184.72
5,471.6	1.90	37.60	5,444.4	-812.4	-356.8	-69.4	-357.4	2.43	-2.34	14.97
5,535.4	1.90	146.60	5,508.1	-876.1	-356.8	-68.1	-357.4	4.85	0.00	170.95
5,599.0	3.40	158.50	5,571.7	-939.7	-359.5	-66.9	-360.1	2.50	2.36	18.70
5,662.9	5.40	178.10	5,635.4	-1,003.4	-364.2	-66.1	-364.8	3.87	3.13	30.66
5,726.1	7.10	189.40	5,698.2	-1,066.2	-371.1	-66.6	-371.7	3.31	2.69	17.88
5,821.6	5.90	185.60	5,793.2	-1,161.2	-381.8	-68.1	-382.4	1.33	-1.26	-3.98
5,917.8	4.40	180.90	5,889.0	-1,257.0	-390.4	-68.6	-391.0	1.62	-1.56	-4.89
5,980.0	2.50	198.10	5,951.0	-1,319.0	-394.1	-69.1	-394.7	3.45	-3.06	27.67
6,011.5	2.00	214.10	5,982.5	-1,350.5	-395.2	-69.6	-395.8	2.54	-1.59	50.83

## Survey Report



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<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>KOP</b>										
6,025.0	1.11	206.17	5,996.0	-1,364.0	-395.5	-69.8	-396.1	6.73	-6.56	-58.67
6,043.9	0.40	101.40	6,014.9	-1,382.9	-395.7	-69.8	-396.3	6.73	-3.77	-552.89
6,075.6	4.00	46.10	6,046.5	-1,414.5	-394.9	-68.9	-395.5	11.98	11.39	-174.89
6,107.9	7.90	14.50	6,078.7	-1,446.7	-392.0	-67.5	-392.6	15.32	12.06	-97.68
6,139.5	12.80	21.00	6,109.8	-1,477.8	-386.6	-65.7	-387.2	15.93	15.52	20.58
6,171.7	18.20	32.70	6,140.8	-1,508.8	-379.0	-61.7	-379.6	19.27	16.75	36.29
6,203.2	20.80	33.80	6,170.5	-1,538.5	-370.2	-55.9	-370.8	8.35	8.27	3.50
6,234.8	22.00	33.50	6,199.9	-1,567.9	-360.6	-49.6	-361.1	3.81	3.80	-0.95
6,267.3	23.60	30.90	6,229.9	-1,597.9	-350.0	-42.8	-350.4	5.81	4.92	-7.99
6,299.5	27.20	23.60	6,258.9	-1,626.9	-337.7	-36.6	-338.0	14.83	11.20	-22.71
6,331.0	30.20	15.90	6,286.6	-1,654.6	-323.5	-31.5	-323.8	15.09	9.52	-24.43
6,362.5	34.10	13.70	6,313.3	-1,681.3	-307.3	-27.3	-307.5	12.91	12.37	-6.98
6,394.2	37.20	12.50	6,339.0	-1,707.0	-289.3	-23.1	-289.5	10.04	9.79	-3.79
6,425.7	37.70	5.10	6,364.0	-1,732.0	-270.4	-20.2	-270.6	14.35	1.59	-23.47
6,457.9	40.70	6.10	6,389.0	-1,757.0	-250.1	-18.2	-250.3	9.52	9.32	3.11
6,490.1	43.90	3.00	6,412.8	-1,780.8	-228.6	-16.5	-228.7	11.88	9.95	-9.64
6,522.2	48.10	1.80	6,435.1	-1,803.1	-205.5	-15.5	-205.6	13.36	13.08	-3.74
6,553.6	51.80	358.10	6,455.3	-1,823.3	-181.5	-15.6	-181.6	14.83	11.78	-11.78
6,585.7	55.70	354.30	6,474.3	-1,842.3	-155.6	-17.3	-155.8	15.44	12.14	-11.83
6,617.3	60.20	352.20	6,491.1	-1,859.1	-129.0	-20.5	-129.2	15.28	14.21	-6.63
6,648.8	64.40	353.10	6,505.7	-1,873.7	-101.4	-24.0	-101.6	13.59	13.35	2.86
6,680.3	67.20	353.50	6,518.6	-1,886.6	-72.9	-27.4	-73.1	8.97	8.90	1.27
6,711.9	70.00	352.80	6,530.1	-1,898.1	-43.7	-30.9	-44.0	9.10	8.86	-2.22
6,744.0	73.80	351.70	6,540.1	-1,908.1	-13.4	-35.0	-13.8	12.28	11.84	-3.43
6,776.3	78.00	351.70	6,547.9	-1,915.9	17.6	-39.5	17.2	13.00	13.00	0.00
6,807.9	83.00	352.70	6,553.2	-1,921.2	48.4	-43.8	48.0	16.14	15.83	3.17
6,817.0	84.00	353.30	6,554.2	-1,922.2	57.4	-44.9	57.0	12.74	10.94	6.56
<b>ICP</b>										
6,858.0	85.32	353.51	6,558.0	-1,926.0	98.0	-49.5	97.5	3.26	3.22	0.51
6,876.4	85.90	353.60	6,559.4	-1,927.4	116.2	-51.6	115.8	3.18	3.14	0.49
6,908.1	87.70	353.60	6,561.2	-1,929.2	147.7	-55.1	147.1	5.69	5.69	0.00
6,939.7	89.80	354.60	6,561.9	-1,929.9	179.1	-58.4	178.6	7.35	6.64	3.16
6,971.3	90.90	356.60	6,561.7	-1,929.7	210.6	-60.8	210.0	7.23	3.48	6.34
7,003.2	91.50	357.60	6,561.0	-1,929.0	242.5	-62.4	241.9	3.65	1.88	3.13
7,035.6	91.90	359.20	6,560.1	-1,928.1	274.8	-63.3	274.2	5.09	1.24	4.94
7,068.0	91.50	0.70	6,559.1	-1,927.1	307.2	-63.4	306.6	4.79	-1.23	4.63
7,099.6	90.80	1.70	6,558.5	-1,926.5	338.8	-62.7	338.2	3.86	-2.21	3.16
7,131.8	89.50	0.80	6,558.4	-1,926.4	371.0	-62.0	370.4	4.91	-4.04	-2.80
7,164.2	90.40	1.60	6,558.4	-1,926.4	403.4	-61.3	402.8	3.72	2.78	2.47
7,195.8	89.40	0.70	6,558.5	-1,926.5	435.0	-60.7	434.4	4.26	-3.16	-2.85
7,227.4	89.40	0.70	6,558.8	-1,926.8	466.5	-60.3	466.0	0.00	0.00	0.00
7,258.8	89.40	359.60	6,559.1	-1,927.1	497.9	-60.2	497.4	3.50	0.00	-3.50
7,290.7	89.40	0.40	6,559.5	-1,927.5	529.9	-60.2	529.3	2.51	0.00	2.51
7,322.2	90.60	359.70	6,559.5	-1,927.5	561.4	-60.2	560.8	4.41	3.81	-2.22
7,353.8	90.90	0.40	6,559.0	-1,927.0	593.0	-60.2	592.4	2.41	0.95	2.22
7,385.9	91.00	0.50	6,558.5	-1,926.5	625.1	-59.9	624.5	0.44	0.31	0.31
7,417.5	91.20	0.20	6,557.9	-1,925.9	656.6	-59.7	656.0	1.14	0.63	-0.95
7,449.7	90.90	2.00	6,557.3	-1,925.3	688.8	-59.1	688.2	5.66	-0.93	5.59
7,481.1	90.90	2.80	6,556.8	-1,924.8	720.2	-57.8	719.6	2.55	0.00	2.55
7,512.8	89.70	2.50	6,556.7	-1,924.7	751.9	-56.3	751.3	3.89	-3.78	-0.94
7,544.4	89.50	3.00	6,556.9	-1,924.9	783.5	-54.8	782.9	1.70	-0.63	1.58
7,575.7	89.40	1.40	6,557.2	-1,925.2	814.6	-53.6	814.1	5.13	-0.32	-5.12



# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,608.1	89.10	1.10	6,557.6	-1,925.6	847.0	-52.9	846.5	1.31	-0.93	-0.93
7,639.7	90.40	2.40	6,557.7	-1,925.7	878.6	-51.9	878.1	5.82	4.11	4.11
7,671.3	90.80	2.20	6,557.4	-1,925.4	910.2	-50.7	909.7	1.41	1.27	-0.63
7,703.0	90.70	2.80	6,557.0	-1,925.0	941.9	-49.3	941.4	1.92	-0.32	1.89
7,734.9	89.70	3.50	6,556.9	-1,924.9	973.7	-47.5	973.2	3.83	-3.14	2.20
7,766.5	89.50	2.00	6,557.1	-1,925.1	1,005.3	-46.0	1,004.8	4.79	-0.63	-4.75
7,798.1	88.80	1.70	6,557.6	-1,925.6	1,036.9	-45.0	1,036.4	2.41	-2.22	-0.95
7,829.6	88.90	0.50	6,558.2	-1,926.2	1,068.3	-44.4	1,067.9	3.82	0.32	-3.81
7,860.6	90.20	2.10	6,558.4	-1,926.4	1,099.4	-43.7	1,098.9	6.64	4.19	5.15
7,892.1	90.50	2.10	6,558.2	-1,926.2	1,130.9	-42.5	1,130.4	0.95	0.95	0.00
7,924.6	90.40	1.10	6,558.0	-1,926.0	1,163.4	-41.6	1,162.9	3.09	-0.31	-3.08
7,956.4	90.40	1.90	6,557.8	-1,925.8	1,195.2	-40.8	1,194.7	2.52	0.00	2.52
7,987.8	90.20	2.00	6,557.6	-1,925.6	1,226.5	-39.7	1,226.1	0.71	-0.64	0.32
8,018.4	90.20	2.30	6,557.5	-1,925.5	1,257.1	-38.6	1,256.7	0.98	0.00	0.98
8,050.0	90.30	1.20	6,557.4	-1,925.4	1,288.6	-37.6	1,288.2	3.50	0.32	-3.48
8,081.8	90.50	0.70	6,557.1	-1,925.1	1,320.5	-37.1	1,320.1	1.69	0.63	-1.57
8,113.7	90.50	1.20	6,556.9	-1,924.9	1,352.4	-36.5	1,352.0	1.57	0.00	1.57
8,146.1	90.40	0.10	6,556.6	-1,924.6	1,384.7	-36.2	1,384.3	3.41	-0.31	-3.40
8,177.7	90.20	0.90	6,556.4	-1,924.4	1,416.4	-35.9	1,416.0	2.61	-0.63	2.53
8,210.2	89.80	359.00	6,556.4	-1,924.4	1,448.8	-35.9	1,448.4	5.98	-1.23	-5.85
8,242.0	89.50	358.50	6,556.6	-1,924.6	1,480.7	-36.6	1,480.3	1.83	-0.94	-1.57
8,273.6	89.50	359.60	6,556.9	-1,924.9	1,512.3	-37.1	1,511.9	3.48	0.00	3.48
8,305.7	89.40	358.30	6,557.2	-1,925.2	1,544.4	-37.7	1,543.9	4.06	-0.31	-4.05
8,337.2	89.50	359.70	6,557.5	-1,925.5	1,575.8	-38.3	1,575.4	4.46	0.32	4.45
8,369.4	90.30	0.10	6,557.6	-1,925.6	1,608.0	-38.3	1,607.6	2.78	2.49	1.24
8,402.0	90.50	0.60	6,557.4	-1,925.4	1,640.7	-38.1	1,640.2	1.65	0.61	1.53
8,434.3	90.20	359.70	6,557.2	-1,925.2	1,672.9	-38.1	1,672.5	2.94	-0.93	-2.79
8,466.0	90.00	359.30	6,557.1	-1,925.1	1,704.6	-38.3	1,704.1	1.41	-0.63	-1.26
8,497.6	90.60	359.80	6,556.9	-1,924.9	1,736.2	-38.6	1,735.8	2.47	1.89	1.58
8,528.8	89.80	0.60	6,556.8	-1,924.8	1,767.4	-38.5	1,767.0	3.63	-2.56	2.56
8,561.1	89.80	1.50	6,556.9	-1,924.9	1,799.7	-37.9	1,799.2	2.79	0.00	2.79
8,593.0	89.60	2.90	6,557.1	-1,925.1	1,831.6	-36.7	1,831.1	4.43	-0.63	4.39
8,624.6	89.40	1.20	6,557.4	-1,925.4	1,863.2	-35.5	1,862.7	5.41	-0.63	-5.37
8,656.2	89.10	0.60	6,557.8	-1,925.8	1,894.8	-35.0	1,894.4	2.12	-0.95	-1.90
8,687.8	89.10	1.90	6,558.3	-1,926.3	1,926.4	-34.3	1,926.0	4.11	0.00	4.12
8,719.8	90.50	1.90	6,558.4	-1,926.4	1,958.4	-33.3	1,958.0	4.37	4.37	0.00
8,751.6	90.60	2.10	6,558.1	-1,926.1	1,990.1	-32.2	1,989.7	0.70	0.32	0.63
8,783.2	90.30	1.00	6,557.8	-1,925.8	2,021.7	-31.3	2,021.3	3.60	-0.95	-3.47
8,815.6	90.10	0.30	6,557.7	-1,925.7	2,054.1	-30.9	2,053.7	2.25	-0.62	-2.16
8,847.2	90.00	358.80	6,557.7	-1,925.7	2,085.7	-31.2	2,085.3	4.75	-0.32	-4.74
8,879.5	89.50	0.80	6,557.8	-1,925.8	2,117.9	-31.3	2,117.5	6.39	-1.55	6.20
8,911.6	89.60	1.80	6,558.1	-1,926.1	2,150.1	-30.6	2,149.7	3.13	0.31	3.11
8,943.2	89.50	1.60	6,558.4	-1,926.4	2,181.7	-29.6	2,181.3	0.71	-0.32	-0.63
8,975.0	89.30	359.90	6,558.7	-1,926.7	2,213.5	-29.2	2,213.1	5.38	-0.63	-5.35
9,007.4	90.20	0.80	6,558.8	-1,926.8	2,245.8	-29.0	2,245.4	3.94	2.78	2.78
9,039.7	90.40	2.50	6,558.7	-1,926.7	2,278.1	-28.1	2,277.7	5.30	0.62	5.26
9,071.8	90.10	2.60	6,558.5	-1,926.5	2,310.2	-26.7	2,309.9	0.98	-0.93	0.31
9,104.0	90.00	1.10	6,558.5	-1,926.5	2,342.4	-25.6	2,342.1	4.67	-0.31	-4.66
9,136.2	89.80	0.40	6,558.5	-1,926.5	2,374.6	-25.2	2,374.2	2.26	-0.62	-2.17
9,168.5	89.70	2.30	6,558.7	-1,926.7	2,406.9	-24.4	2,406.6	5.88	-0.31	5.88
9,200.2	90.20	1.50	6,558.7	-1,926.7	2,438.5	-23.4	2,438.2	2.98	1.58	-2.53
9,232.5	89.70	1.80	6,558.7	-1,926.7	2,470.8	-22.5	2,470.5	1.81	-1.55	0.93
9,264.0	90.60	0.10	6,558.7	-1,926.7	2,502.3	-21.9	2,502.0	6.11	2.86	-5.40

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,295.6	91.10	0.70	6,558.2	-1,926.2	2,534.0	-21.7	2,533.6	2.47	1.58	1.89
9,327.2	91.70	359.90	6,557.4	-1,925.4	2,565.6	-21.6	2,565.2	3.16	1.90	-2.53
9,359.4	91.40	1.10	6,556.5	-1,924.5	2,597.7	-21.3	2,597.4	3.85	-0.93	3.73
9,391.7	91.70	3.00	6,555.7	-1,923.7	2,630.0	-20.1	2,629.7	5.94	0.93	5.87
9,423.4	91.40	4.80	6,554.8	-1,922.8	2,661.5	-18.0	2,661.3	5.77	-0.95	5.69
9,454.9	90.30	2.30	6,554.3	-1,922.3	2,693.0	-16.0	2,692.8	8.66	-3.49	-7.92
9,487.1	89.80	2.80	6,554.3	-1,922.3	2,725.2	-14.6	2,724.9	2.20	-1.55	1.55
9,519.0	89.80	4.20	6,554.4	-1,922.4	2,757.0	-12.6	2,756.8	4.38	0.00	4.38
9,550.6	90.00	4.30	6,554.5	-1,922.5	2,788.6	-10.3	2,788.3	0.71	0.63	0.32
9,582.5	89.40	6.20	6,554.7	-1,922.7	2,820.3	-7.4	2,820.1	6.26	-1.89	5.97
9,615.0	87.20	4.00	6,555.6	-1,923.6	2,852.7	-4.5	2,852.5	9.56	-6.76	-6.76
9,646.8	87.00	4.30	6,557.2	-1,925.2	2,884.3	-2.2	2,884.2	1.13	-0.63	0.94
9,679.2	86.70	2.80	6,559.0	-1,927.0	2,916.6	-0.2	2,916.5	4.72	-0.93	-4.63
9,711.0	87.70	2.60	6,560.6	-1,928.6	2,948.3	1.3	2,948.2	3.20	3.14	-0.63
9,742.8	87.80	2.00	6,561.8	-1,929.8	2,980.1	2.6	2,980.0	1.91	0.31	-1.89
9,774.6	89.00	1.50	6,562.7	-1,930.7	3,011.9	3.6	3,011.8	4.09	3.77	-1.57
9,806.3	90.90	1.50	6,562.7	-1,930.7	3,043.5	4.4	3,043.4	6.01	6.01	0.00
9,838.4	91.10	2.30	6,562.2	-1,930.2	3,075.7	5.5	3,075.6	2.56	0.62	2.49
9,869.8	90.70	1.20	6,561.7	-1,929.7	3,107.0	6.4	3,107.0	3.73	-1.27	-3.50
9,901.0	88.60	2.10	6,561.9	-1,929.9	3,138.2	7.3	3,138.2	7.32	-6.73	2.88
9,932.7	88.40	0.60	6,562.7	-1,930.7	3,169.8	8.1	3,169.8	4.78	-0.63	-4.74
9,963.9	89.50	359.70	6,563.3	-1,931.3	3,201.1	8.1	3,201.0	4.55	3.52	-2.88
9,995.8	90.20	359.80	6,563.3	-1,931.3	3,233.0	8.0	3,232.9	2.22	2.20	0.31
10,027.7	91.00	359.50	6,563.0	-1,931.0	3,264.8	7.8	3,264.8	2.68	2.51	-0.94
10,059.9	91.00	359.50	6,562.4	-1,930.4	3,297.0	7.5	3,297.0	0.00	0.00	0.00
10,091.5	90.20	359.00	6,562.1	-1,930.1	3,328.7	7.1	3,328.6	2.98	-2.53	-1.58
10,123.6	89.80	359.20	6,562.1	-1,930.1	3,360.8	6.6	3,360.7	1.39	-1.25	0.62
10,155.9	89.70	0.60	6,562.3	-1,930.3	3,393.1	6.5	3,393.0	4.35	-0.31	4.34
10,187.3	90.20	1.10	6,562.3	-1,930.3	3,424.4	7.0	3,424.3	2.25	1.59	1.59
10,219.1	91.00	0.90	6,562.0	-1,930.0	3,456.3	7.6	3,456.2	2.59	2.51	-0.63
10,251.1	90.60	359.90	6,561.5	-1,929.5	3,488.2	7.8	3,488.2	3.37	-1.25	-3.13
10,283.0	90.40	0.60	6,561.2	-1,929.2	3,520.2	7.9	3,520.1	2.28	-0.63	2.19
10,314.7	89.80	0.30	6,561.2	-1,929.2	3,551.8	8.2	3,551.7	2.12	-1.90	-0.95
10,346.5	89.20	1.70	6,561.5	-1,929.5	3,583.6	8.7	3,583.5	4.79	-1.89	4.40
10,378.8	89.10	1.10	6,561.9	-1,929.9	3,615.9	9.5	3,615.8	1.89	-0.31	-1.86
10,410.4	89.50	359.40	6,562.3	-1,930.3	3,647.5	9.7	3,647.5	5.51	1.26	-5.37
10,442.2	90.50	0.30	6,562.3	-1,930.3	3,679.3	9.6	3,679.2	4.23	3.15	2.83
10,474.7	90.60	1.20	6,562.0	-1,930.0	3,711.8	10.0	3,711.7	2.79	0.31	2.77
10,506.9	90.40	1.10	6,561.7	-1,929.7	3,744.0	10.6	3,743.9	0.69	-0.62	-0.31
10,538.7	90.50	0.20	6,561.5	-1,929.5	3,775.8	11.0	3,775.8	2.84	0.31	-2.83
10,570.6	88.70	1.10	6,561.7	-1,929.7	3,807.7	11.4	3,807.6	6.32	-5.65	2.82
10,602.5	88.80	3.00	6,562.4	-1,930.4	3,839.6	12.5	3,839.5	5.96	0.31	5.95
10,634.1	89.90	4.20	6,562.8	-1,930.8	3,871.1	14.5	3,871.1	5.14	3.48	3.79
10,665.6	88.60	2.90	6,563.2	-1,931.2	3,902.5	16.4	3,902.5	5.84	-4.13	-4.13
10,697.1	88.10	0.80	6,564.1	-1,932.1	3,934.0	17.5	3,934.0	6.85	-1.59	-6.66
10,728.8	89.20	0.30	6,564.8	-1,932.8	3,965.7	17.8	3,965.7	3.82	3.47	-1.58
10,760.5	89.90	2.40	6,565.1	-1,933.1	3,997.3	18.5	3,997.3	6.99	2.21	6.63
10,792.7	88.30	0.80	6,565.6	-1,933.6	4,029.6	19.4	4,029.6	7.01	-4.96	-4.96
10,824.7	88.00	359.50	6,566.6	-1,934.6	4,061.6	19.5	4,061.6	4.17	-0.94	-4.06
10,856.3	88.60	0.60	6,567.5	-1,935.5	4,093.1	19.5	4,093.1	3.97	1.90	3.49
10,888.6	89.00	0.10	6,568.2	-1,936.2	4,125.4	19.7	4,125.5	1.98	1.24	-1.54
10,921.0	89.60	2.30	6,568.6	-1,936.6	4,157.8	20.4	4,157.8	7.04	1.85	6.79
10,952.7	90.90	3.80	6,568.5	-1,936.5	4,189.5	22.1	4,189.5	6.26	4.10	4.73

## Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,984.2	93.10	3.70	6,567.4	-1,935.4	4,220.8	24.1	4,220.9	7.01	7.00	-0.32
11,015.8	93.20	3.70	6,565.6	-1,933.6	4,252.3	26.2	4,252.4	0.32	0.32	0.00
11,048.0	93.50	3.60	6,563.8	-1,931.8	4,284.4	28.2	4,284.5	0.98	0.93	-0.31
11,079.6	93.50	4.50	6,561.8	-1,929.8	4,315.9	30.5	4,316.0	2.84	0.00	2.84
11,111.1	93.40	3.90	6,559.9	-1,927.9	4,347.3	32.8	4,347.4	1.92	-0.32	-1.90
<b>LAST SURVEY - MAR 29, 2014</b>										
<b>11,143.5</b>	<b>93.80</b>	<b>4.00</b>	<b>6,557.9</b>	<b>-1,925.9</b>	<b>4,379.5</b>	<b>35.0</b>	<b>4,379.6</b>	<b>1.27</b>	<b>1.24</b>	<b>0.31</b>
<b>EXTRAPOLATION TO TD</b>										
<b>11,191.0</b>	<b>93.00</b>	<b>4.00</b>	<b>6,555.1</b>	<b>-1,923.1</b>	<b>4,426.8</b>	<b>38.3</b>	<b>4,427.0</b>	<b>1.68</b>	<b>-1.68</b>	<b>0.00</b>



# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Targets									
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
									Latitude Longitude
EXIST VERT PARK 3		0.00	0.00	7,434.0	2,805.2	-805.6	1,369,468.82	3,295,323.89	40.342750 -104.440500
- survey misses target center by 1185.2usft at 9519.0usft MD (6554.4 TVD, 2757.0 N, -12.6 E)									
- Circle (radius 30.0)									
BHL - PARK T-P-4HC		0.00	0.00	6,561.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419 -104.437459
- survey misses target center by 79.6usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E)									
- Point									
BHL - PARK T-P-4HC		0.00	0.00	6,577.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419 -104.437459
- survey misses target center by 82.4usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E)									
- Point									
EXIST VERT WETCC		0.00	0.00	7,204.0	4,444.6	-2,124.0	1,371,092.30	3,293,986.01	40.347250 -104.445230
- survey misses target center by 2251.1usft at 11033.4usft MD (6564.6 TVD, 4269.9 N, 27.3 E)									
- Circle (radius 30.0)									
ICP - PARK T-P-4HC		0.00	0.00	6,561.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564 -104.437874
- survey misses target center by 14.5usft at 6948.9usft MD (6561.9 TVD, 188.3 N, -59.2 E)									
- Point									
EXIST VERT PARK 3		0.00	0.00	7,202.0	116.6	-434.9	1,366,784.97	3,295,726.75	40.335370 -104.439170
- survey misses target center by 745.1usft at 6930.2usft MD (6561.8 TVD, 169.6 N, -57.5 E)									
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,212.0	1,085.7	-1,550.0	1,367,740.60	3,294,600.18	40.338030 -104.443170
- survey misses target center by 1641.5usft at 7829.6usft MD (6558.2 TVD, 1068.3 N, -44.4 E)									
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,207.0	371.6	593.8	1,367,052.28	3,296,752.30	40.336070 -104.435480
- survey misses target center by 922.3usft at 7146.7usft MD (6558.5 TVD, 385.9 N, -61.7 E)									
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,442.0	11.0	-2,018.4	1,366,660.44	3,294,144.67	40.335080 -104.444850
- survey misses target center by 2155.1usft at 6939.7usft MD (6561.9 TVD, 179.1 N, -58.4 E)									
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,213.0	2,925.4	696.9	1,369,607.03	3,296,824.77	40.343080 -104.435110
- survey misses target center by 953.5usft at 9741.6usft MD (6561.8 TVD, 2978.9 N, 2.5 E)									
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,079.0	4,379.0	-1,064.8	1,371,039.36	3,295,045.88	40.347070 -104.441430
- survey misses target center by 1212.0usft at 11042.6usft MD (6564.1 TVD, 4279.1 N, 27.9 E)									
- Circle (radius 30.0)									
ICP - PARK T-P-4HC		0.00	0.00	6,577.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564 -104.437874
- survey misses target center by 20.9usft at 6948.8usft MD (6561.9 TVD, 188.2 N, -59.2 E)									
- Point									
EXIST VERT PARK 4		0.00	0.00	7,193.0	1,708.6	563.1	1,368,388.77	3,296,705.59	40.339740 -104.435590
- survey misses target center by 875.3usft at 8463.6usft MD (6557.1 TVD, 1702.2 N, -38.3 E)									
- Circle (radius 30.0)									
EXIST VERT PARK 3		0.00	0.00	7,199.0	1,708.6	-646.7	1,368,374.28	3,295,495.87	40.339740 -104.439930
- survey misses target center by 884.4usft at 8471.4usft MD (6557.1 TVD, 1710.0 N, -38.4 E)									
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	6,718.0	3,654.0	-1,460.6	1,370,309.74	3,294,658.76	40.345080 -104.442850
- survey misses target center by 1478.4usft at 10420.8usft MD (6562.4 TVD, 3657.9 N, 9.6 E)									
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,172.0	3,807.0	200.7	1,370,482.60	3,296,318.07	40.345500 -104.436890
- survey misses target center by 638.7usft at 10590.0usft MD (6562.1 TVD, 3827.1 N, 11.9 E)									
- Circle (radius 30.0)									

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

## Targets

### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
EXIST VERT PARK 3 - survey misses target center by 1185.2usft at 9519.0usft MD (6554.4 TVD, 2757.0 N, -12.6 E) - Circle (radius 30.0)	0.00	0.00	7,434.0	2,805.2	-805.6	1,369,468.82	3,295,323.89	40.342750	-104.440500
BHL - PARK T-P-4HC - survey misses target center by 79.6usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E) - Point	0.00	0.00	6,561.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419	-104.437459
BHL - PARK T-P-4HC - survey misses target center by 82.4usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E) - Point	0.00	0.00	6,577.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419	-104.437459
EXIST VERT WETCC - survey misses target center by 2251.1usft at 11033.4usft MD (6564.6 TVD, 4269.9 N, 27.3 E) - Circle (radius 30.0)	0.00	0.00	7,204.0	4,444.6	-2,124.0	1,371,092.30	3,293,986.01	40.347250	-104.445230
ICP - PARK T-P-4HC - survey misses target center by 14.5usft at 6948.9usft MD (6561.9 TVD, 188.3 N, -59.2 E) - Point	0.00	0.00	6,561.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564	-104.437874
EXIST VERT PARK 3 - survey misses target center by 745.1usft at 6930.2usft MD (6561.8 TVD, 169.6 N, -57.5 E) - Circle (radius 30.0)	0.00	0.00	7,202.0	116.6	-434.9	1,366,784.97	3,295,726.75	40.335370	-104.439170
EXIST VERT WETCC - survey misses target center by 1641.5usft at 7829.6usft MD (6558.2 TVD, 1068.3 N, -44.4 E) - Circle (radius 30.0)	0.00	0.00	7,212.0	1,085.7	-1,550.0	1,367,740.60	3,294,600.18	40.338030	-104.443170
EXIST VERT PARK 4 - survey misses target center by 922.3usft at 7146.7usft MD (6558.5 TVD, 385.9 N, -61.7 E) - Circle (radius 30.0)	0.00	0.00	7,207.0	371.6	593.8	1,367,052.28	3,296,752.30	40.336070	-104.435480
EXIST VERT WETCC - survey misses target center by 2155.1usft at 6939.7usft MD (6561.9 TVD, 179.1 N, -58.4 E) - Circle (radius 30.0)	0.00	0.00	7,442.0	11.0	-2,018.4	1,366,660.44	3,294,144.67	40.335080	-104.444850
EXIST VERT PARK 4 - survey misses target center by 953.5usft at 9741.6usft MD (6561.8 TVD, 2978.9 N, 2.5 E) - Circle (radius 30.0)	0.00	0.00	7,213.0	2,925.4	696.9	1,369,607.03	3,296,824.77	40.343080	-104.435110
EXIST VERT WETCC - survey misses target center by 1212.0usft at 11042.6usft MD (6564.1 TVD, 4279.1 N, 27.9 E) - Circle (radius 30.0)	0.00	0.00	7,079.0	4,379.0	-1,064.8	1,371,039.36	3,295,045.88	40.347070	-104.441430
ICP - PARK T-P-4HC - survey misses target center by 20.9usft at 6948.8usft MD (6561.9 TVD, 188.2 N, -59.2 E) - Point	0.00	0.00	6,577.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564	-104.437874
EXIST VERT PARK 4 - survey misses target center by 875.3usft at 8463.6usft MD (6557.1 TVD, 1702.2 N, -38.3 E) - Circle (radius 30.0)	0.00	0.00	7,193.0	1,708.6	563.1	1,368,388.77	3,296,705.59	40.339740	-104.435590
EXIST VERT PARK 3 - survey misses target center by 884.4usft at 8471.4usft MD (6557.1 TVD, 1710.0 N, -38.4 E) - Circle (radius 30.0)	0.00	0.00	7,199.0	1,708.6	-646.7	1,368,374.28	3,295,495.87	40.339740	-104.439930
EXIST VERT WETCC - survey misses target center by 1478.4usft at 10420.8usft MD (6562.4 TVD, 3657.9 N, 9.6 E) - Circle (radius 30.0)	0.00	0.00	6,718.0	3,654.0	-1,460.6	1,370,309.74	3,294,658.76	40.345080	-104.442850
EXIST VERT PARK 4 - survey misses target center by 638.7usft at 10590.0usft MD (6562.1 TVD, 3827.1 N, 11.9 E) - Circle (radius 30.0)	0.00	0.00	7,172.0	3,807.0	200.7	1,370,482.60	3,296,318.07	40.345500	-104.436890

## Survey Annotations

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

## Targets

### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
EXIST VERT PARK 3 - survey misses target center by 1185.2usft at 9519.0usft MD (6554.4 TVD, 2757.0 N, -12.6 E) - Circle (radius 30.0)	0.00	0.00	7,434.0	2,805.2	-805.6	1,369,468.82	3,295,323.89	40.342750	-104.440500
BHL - PARK T-P-4HC - survey misses target center by 79.6usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E) - Point	0.00	0.00	6,561.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419	-104.437459
BHL - PARK T-P-4HC - survey misses target center by 82.4usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E) - Point	0.00	0.00	6,577.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419	-104.437459
EXIST VERT WETCC - survey misses target center by 2251.1usft at 11033.4usft MD (6564.6 TVD, 4269.9 N, 27.3 E) - Circle (radius 30.0)	0.00	0.00	7,204.0	4,444.6	-2,124.0	1,371,092.30	3,293,986.01	40.347250	-104.445230
ICP - PARK T-P-4HC - survey misses target center by 14.5usft at 6948.9usft MD (6561.9 TVD, 188.3 N, -59.2 E) - Point	0.00	0.00	6,561.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564	-104.437874
EXIST VERT PARK 3 - survey misses target center by 745.1usft at 6930.2usft MD (6561.8 TVD, 169.6 N, -57.5 E) - Circle (radius 30.0)	0.00	0.00	7,202.0	116.6	-434.9	1,366,784.97	3,295,726.75	40.335370	-104.439170
EXIST VERT WETCC - survey misses target center by 1641.5usft at 7829.6usft MD (6558.2 TVD, 1068.3 N, -44.4 E) - Circle (radius 30.0)	0.00	0.00	7,212.0	1,085.7	-1,550.0	1,367,740.60	3,294,600.18	40.338030	-104.443170
EXIST VERT PARK 4 - survey misses target center by 922.3usft at 7146.7usft MD (6558.5 TVD, 385.9 N, -61.7 E) - Circle (radius 30.0)	0.00	0.00	7,207.0	371.6	593.8	1,367,052.28	3,296,752.30	40.336070	-104.435480
EXIST VERT WETCC - survey misses target center by 2155.1usft at 6939.7usft MD (6561.9 TVD, 179.1 N, -58.4 E) - Circle (radius 30.0)	0.00	0.00	7,442.0	11.0	-2,018.4	1,366,660.44	3,294,144.67	40.335080	-104.444850
EXIST VERT PARK 4 - survey misses target center by 953.5usft at 9741.6usft MD (6561.8 TVD, 2978.9 N, 2.5 E) - Circle (radius 30.0)	0.00	0.00	7,213.0	2,925.4	696.9	1,369,607.03	3,296,824.77	40.343080	-104.435110
EXIST VERT WETCC - survey misses target center by 1212.0usft at 11042.6usft MD (6564.1 TVD, 4279.1 N, 27.9 E) - Circle (radius 30.0)	0.00	0.00	7,079.0	4,379.0	-1,064.8	1,371,039.36	3,295,045.88	40.347070	-104.441430
ICP - PARK T-P-4HC - survey misses target center by 20.9usft at 6948.8usft MD (6561.9 TVD, 188.2 N, -59.2 E) - Point	0.00	0.00	6,577.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564	-104.437874
EXIST VERT PARK 4 - survey misses target center by 875.3usft at 8463.6usft MD (6557.1 TVD, 1702.2 N, -38.3 E) - Circle (radius 30.0)	0.00	0.00	7,193.0	1,708.6	563.1	1,368,388.77	3,296,705.59	40.339740	-104.435590
EXIST VERT PARK 3 - survey misses target center by 884.4usft at 8471.4usft MD (6557.1 TVD, 1710.0 N, -38.4 E) - Circle (radius 30.0)	0.00	0.00	7,199.0	1,708.6	-646.7	1,368,374.28	3,295,495.87	40.339740	-104.439930
EXIST VERT WETCC - survey misses target center by 1478.4usft at 10420.8usft MD (6562.4 TVD, 3657.9 N, 9.6 E) - Circle (radius 30.0)	0.00	0.00	6,718.0	3,654.0	-1,460.6	1,370,309.74	3,294,658.76	40.345080	-104.442850
EXIST VERT PARK 4 - survey misses target center by 638.7usft at 10590.0usft MD (6562.1 TVD, 3827.1 N, 11.9 E) - Circle (radius 30.0)	0.00	0.00	7,172.0	3,807.0	200.7	1,370,482.60	3,296,318.07	40.345500	-104.436890

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
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# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Targets									
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
EXIST VERT PARK 3		0.00	0.00	7,434.0	2,805.2	-805.6	1,369,468.82	3,295,323.89	40.342750
- survey misses target center by 1185.2usft at 9519.0usft MD (6554.4 TVD, 2757.0 N, -12.6 E)									-104.440500
- Circle (radius 30.0)									
BHL - PARK T-P-4HC		0.00	0.00	6,561.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419
- survey misses target center by 79.6usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E)									-104.437459
- Point									
BHL - PARK T-P-4HC		0.00	0.00	6,577.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419
- survey misses target center by 82.4usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E)									-104.437459
- Point									
EXIST VERT WETCC		0.00	0.00	7,204.0	4,444.6	-2,124.0	1,371,092.30	3,293,986.01	40.347250
- survey misses target center by 2251.1usft at 11033.4usft MD (6564.6 TVD, 4269.9 N, 27.3 E)									-104.445230
- Circle (radius 30.0)									
ICP - PARK T-P-4HC		0.00	0.00	6,561.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564
- survey misses target center by 14.5usft at 6948.9usft MD (6561.9 TVD, 188.3 N, -59.2 E)									-104.437874
- Point									
EXIST VERT PARK 3		0.00	0.00	7,202.0	116.6	-434.9	1,366,784.97	3,295,726.75	40.335370
- survey misses target center by 745.1usft at 6930.2usft MD (6561.8 TVD, 169.6 N, -57.5 E)									-104.439170
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,212.0	1,085.7	-1,550.0	1,367,740.60	3,294,600.18	40.338030
- survey misses target center by 1641.5usft at 7829.6usft MD (6558.2 TVD, 1068.3 N, -44.4 E)									-104.443170
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,207.0	371.6	593.8	1,367,052.28	3,296,752.30	40.336070
- survey misses target center by 922.3usft at 7146.7usft MD (6558.5 TVD, 385.9 N, -61.7 E)									-104.435480
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,442.0	11.0	-2,018.4	1,366,660.44	3,294,144.67	40.335080
- survey misses target center by 2155.1usft at 6939.7usft MD (6561.9 TVD, 179.1 N, -58.4 E)									-104.444850
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,213.0	2,925.4	696.9	1,369,607.03	3,296,824.77	40.343080
- survey misses target center by 953.5usft at 9741.6usft MD (6561.8 TVD, 2978.9 N, 2.5 E)									-104.435110
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,079.0	4,379.0	-1,064.8	1,371,039.36	3,295,045.88	40.347070
- survey misses target center by 1212.0usft at 11042.6usft MD (6564.1 TVD, 4279.1 N, 27.9 E)									-104.441430
- Circle (radius 30.0)									
ICP - PARK T-P-4HC		0.00	0.00	6,577.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564
- survey misses target center by 20.9usft at 6948.8usft MD (6561.9 TVD, 188.2 N, -59.2 E)									-104.437874
- Point									
EXIST VERT PARK 4		0.00	0.00	7,193.0	1,708.6	563.1	1,368,388.77	3,296,705.59	40.339740
- survey misses target center by 875.3usft at 8463.6usft MD (6557.1 TVD, 1702.2 N, -38.3 E)									-104.435590
- Circle (radius 30.0)									
EXIST VERT PARK 3		0.00	0.00	7,199.0	1,708.6	-646.7	1,368,374.28	3,295,495.87	40.339740
- survey misses target center by 884.4usft at 8471.4usft MD (6557.1 TVD, 1710.0 N, -38.4 E)									-104.439930
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	6,718.0	3,654.0	-1,460.6	1,370,309.74	3,294,658.76	40.345080
- survey misses target center by 1478.4usft at 10420.8usft MD (6562.4 TVD, 3657.9 N, 9.6 E)									-104.442850
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,172.0	3,807.0	200.7	1,370,482.60	3,296,318.07	40.345500
- survey misses target center by 638.7usft at 10590.0usft MD (6562.1 TVD, 3827.1 N, 11.9 E)									-104.436890
- Circle (radius 30.0)									

787.0	787.0	-5.0	2.8	SURFACE CASING
6,025.0	5,996.0	-395.5	-69.8	KOP
6,858.0	6,558.0	98.0	-49.5	ICP

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Targets									
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
EXIST VERT PARK 3		0.00	0.00	7,434.0	2,805.2	-805.6	1,369,468.82	3,295,323.89	40.342750
- survey misses target center by 1185.2usft at 9519.0usft MD (6554.4 TVD, 2757.0 N, -12.6 E)									-104.440500
- Circle (radius 30.0)									
BHL - PARK T-P-4HC		0.00	0.00	6,561.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419
- survey misses target center by 79.6usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E)									-104.437459
- Point									
BHL - PARK T-P-4HC		0.00	0.00	6,577.0	4,506.1	42.1	1,371,179.73	3,296,151.11	40.347419
- survey misses target center by 82.4usft at 11191.0usft MD (6555.1 TVD, 4426.8 N, 38.3 E)									-104.437459
- Point									
EXIST VERT WETCC		0.00	0.00	7,204.0	4,444.6	-2,124.0	1,371,092.30	3,293,986.01	40.347250
- survey misses target center by 2251.1usft at 11033.4usft MD (6564.6 TVD, 4269.9 N, 27.3 E)									-104.445230
- Circle (radius 30.0)									
ICP - PARK T-P-4HC		0.00	0.00	6,561.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564
- survey misses target center by 14.5usft at 6948.9usft MD (6561.9 TVD, 188.3 N, -59.2 E)									-104.437874
- Point									
EXIST VERT PARK 3		0.00	0.00	7,202.0	116.6	-434.9	1,366,784.97	3,295,726.75	40.335370
- survey misses target center by 745.1usft at 6930.2usft MD (6561.8 TVD, 169.6 N, -57.5 E)									-104.439170
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,212.0	1,085.7	-1,550.0	1,367,740.60	3,294,600.18	40.338030
- survey misses target center by 1641.5usft at 7829.6usft MD (6558.2 TVD, 1068.3 N, -44.4 E)									-104.443170
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,207.0	371.6	593.8	1,367,052.28	3,296,752.30	40.336070
- survey misses target center by 922.3usft at 7146.7usft MD (6558.5 TVD, 385.9 N, -61.7 E)									-104.435480
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,442.0	11.0	-2,018.4	1,366,660.44	3,294,144.67	40.335080
- survey misses target center by 2155.1usft at 6939.7usft MD (6561.9 TVD, 179.1 N, -58.4 E)									-104.444850
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,213.0	2,925.4	696.9	1,369,607.03	3,296,824.77	40.343080
- survey misses target center by 953.5usft at 9741.6usft MD (6561.8 TVD, 2978.9 N, 2.5 E)									-104.435110
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	7,079.0	4,379.0	-1,064.8	1,371,039.36	3,295,045.88	40.347070
- survey misses target center by 1212.0usft at 11042.6usft MD (6564.1 TVD, 4279.1 N, 27.9 E)									-104.441430
- Circle (radius 30.0)									
ICP - PARK T-P-4HC		0.00	0.00	6,577.0	187.1	-73.6	1,366,859.85	3,296,087.14	40.335564
- survey misses target center by 20.9usft at 6948.8usft MD (6561.9 TVD, 188.2 N, -59.2 E)									-104.437874
- Point									
EXIST VERT PARK 4		0.00	0.00	7,193.0	1,708.6	563.1	1,368,388.77	3,296,705.59	40.339740
- survey misses target center by 875.3usft at 8463.6usft MD (6557.1 TVD, 1702.2 N, -38.3 E)									-104.435590
- Circle (radius 30.0)									
EXIST VERT PARK 3		0.00	0.00	7,199.0	1,708.6	-646.7	1,368,374.28	3,295,495.87	40.339740
- survey misses target center by 884.4usft at 8471.4usft MD (6557.1 TVD, 1710.0 N, -38.4 E)									-104.439930
- Circle (radius 30.0)									
EXIST VERT WETCC		0.00	0.00	6,718.0	3,654.0	-1,460.6	1,370,309.74	3,294,658.76	40.345080
- survey misses target center by 1478.4usft at 10420.8usft MD (6562.4 TVD, 3657.9 N, 9.6 E)									-104.442850
- Circle (radius 30.0)									
EXIST VERT PARK 4		0.00	0.00	7,172.0	3,807.0	200.7	1,370,482.60	3,296,318.07	40.345500
- survey misses target center by 638.7usft at 10590.0usft MD (6562.1 TVD, 3827.1 N, 11.9 E)									-104.436890
- Circle (radius 30.0)									

11,143.5 6,557.9 4,379.5 35.0 LAST SURVEY - MAR 29, 2014  
11,191.0 6,555.1 4,426.8 38.3 EXTRAPOLATION TO TD



# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PARK T-P-4HC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Site:</b>	SE SE SEC. 4 T4N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4632.0usft (CADE 21)
<b>Well:</b>	PARK T-P-4HC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-299	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

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