

# **BONANZA CREEK ENERGY INC.**

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

**NW NW SEC. 13 T5N R63W 6th P.M.**

**NORTH PLATTE F-J-13HNC**

**JOB #2009-407**

**31 October, 2014**

**Survey: FINAL SURVEYS**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NW NW SEC. 13 T5N R63W 6th P.M.  
Well: NORTH PLATTE F-J-13HNC  
Wellbore: JOB #2009-407  
Design: FINAL SURVEYS

ANNOTATIONS

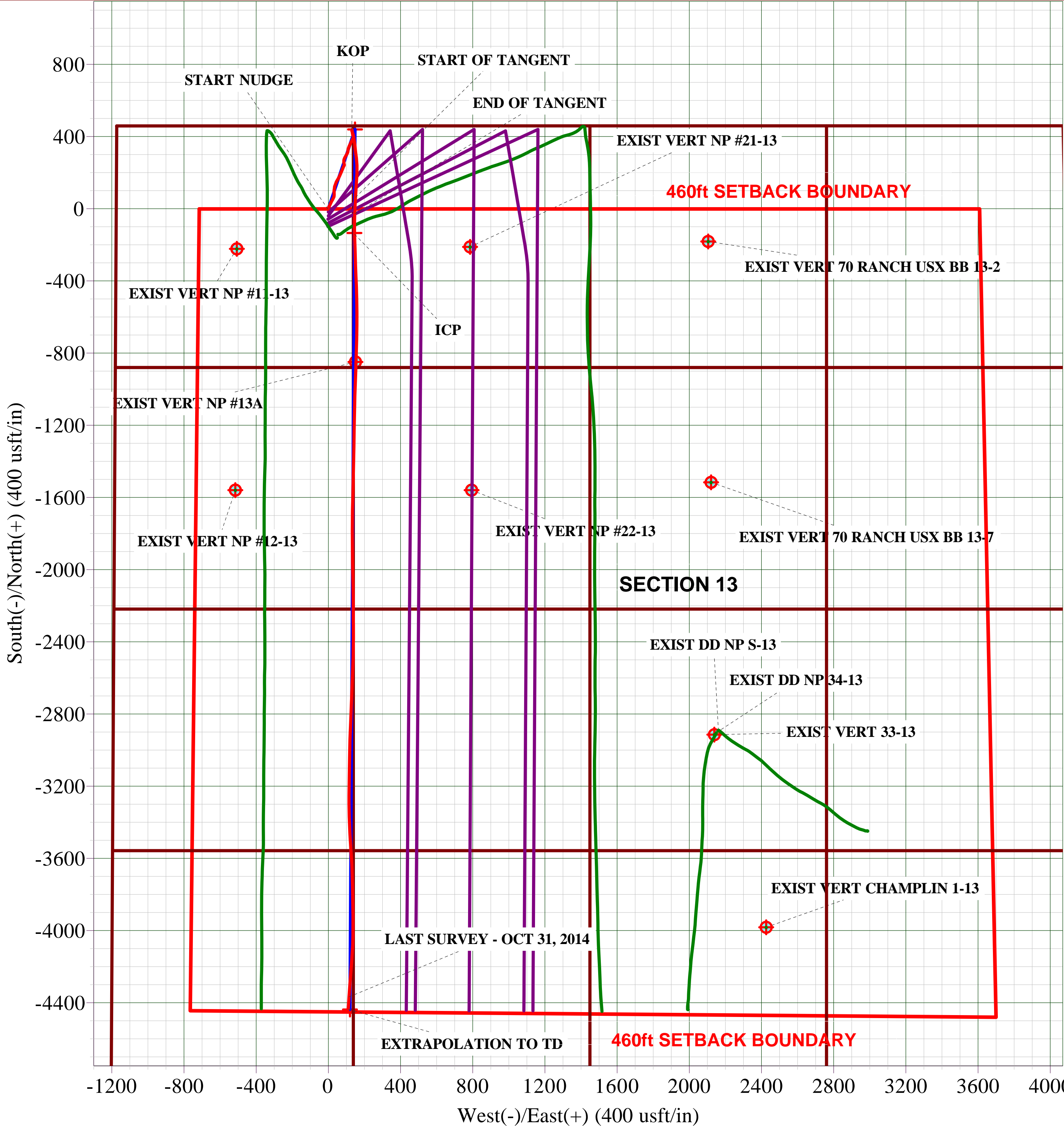
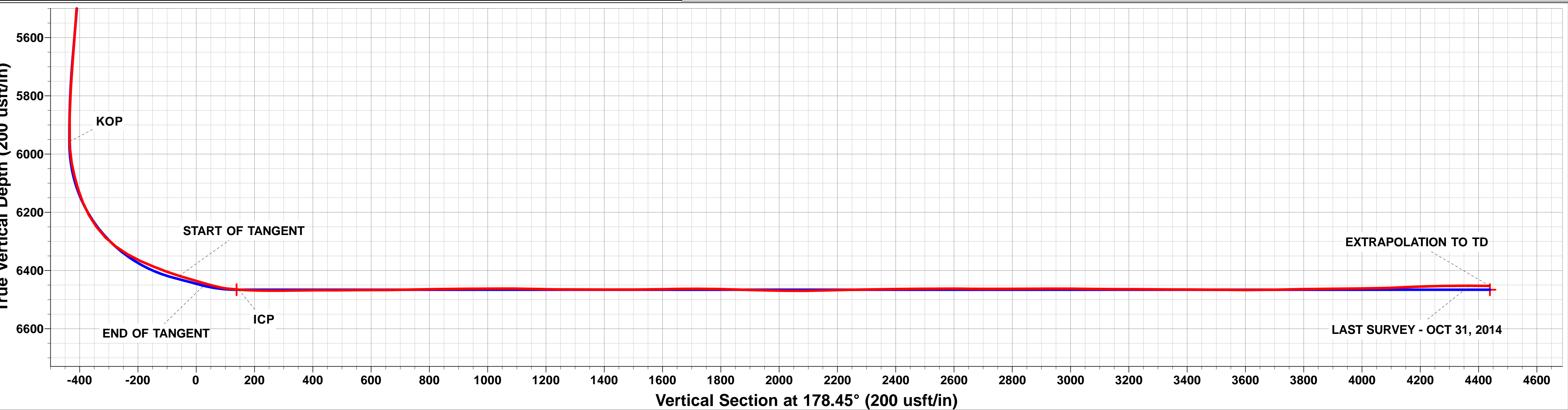
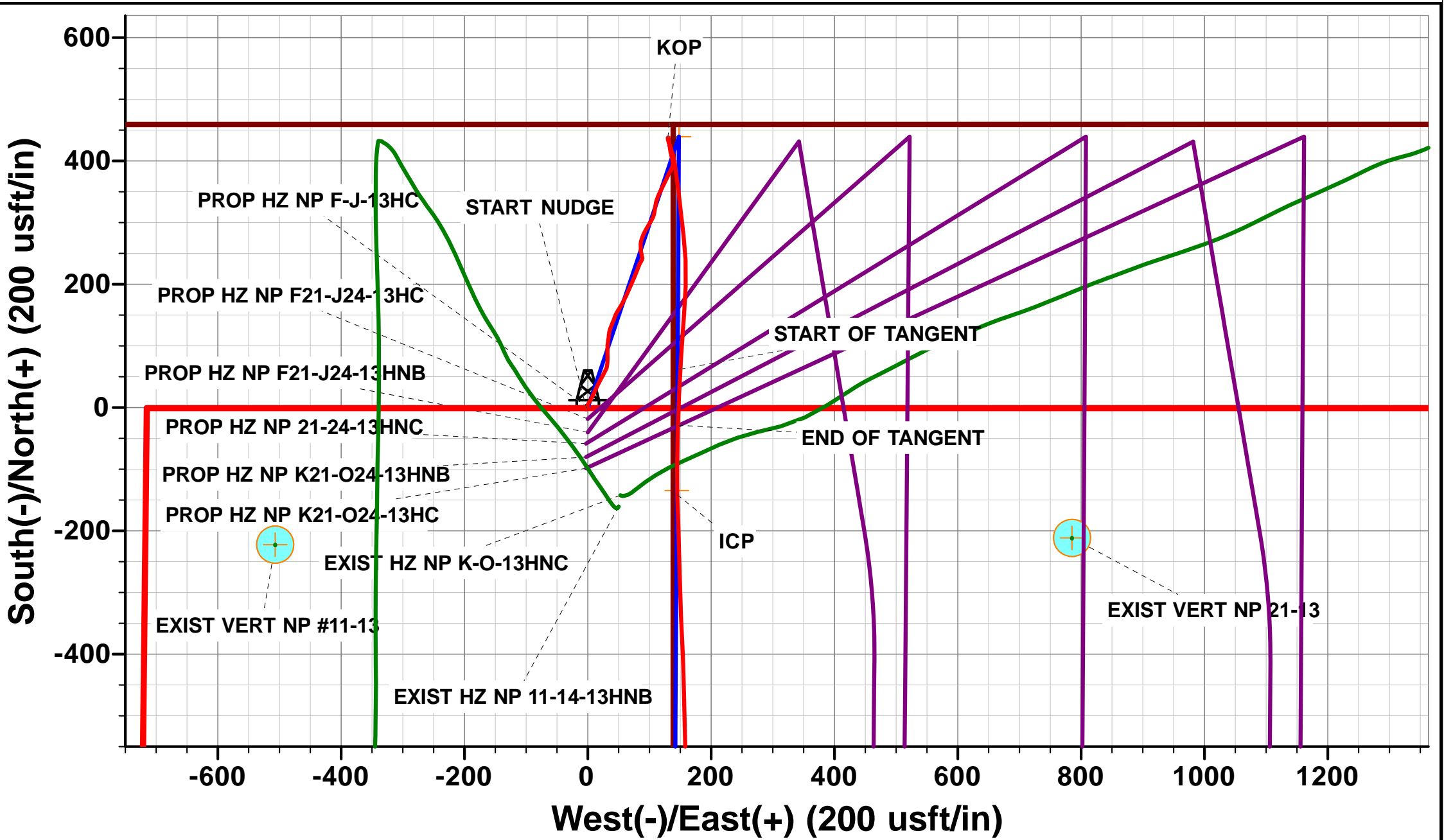
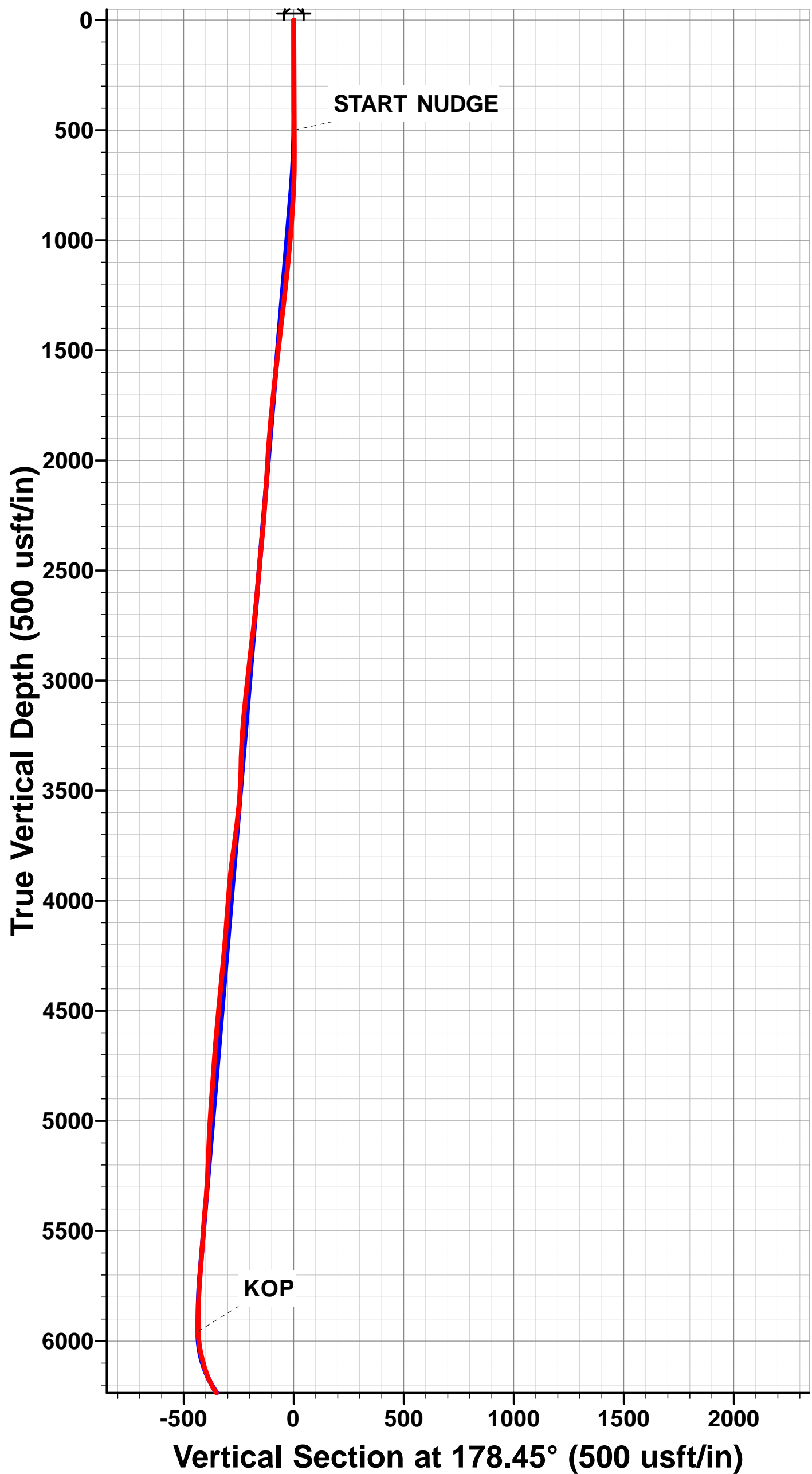
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation
500.0	500.0	0.70	225.90	-2.1	-2.2	2.1	3.1	START NUDGE
5956.6	5980.0	1.99	185.95	437.8	129.8	-434.2	482.3	KOP
6418.7	6629.0	73.30	183.10	62.6	150.2	-58.5	860.6	START OF TANGENT
6445.4	6724.0	73.50	181.80	-28.5	146.3	32.4	951.7	END OF TANGENT
6465.7	6839.0	85.76	178.90	-141.4	145.3	145.2	1064.6	ICP
6452.5	11068.0	89.60	183.70	-4367.5	114.7	4369.0	5293.0	LAST SURVEY - OCT 31, 2014
6453.0	11137.0	89.60	183.70	-4436.3	110.3	4437.7	5362.0	EXTRAPOLATION TO TD

PROPOSED LOCAL COORDINATES:

SHL: 453ft FNL & 1174ft FWL Sec 13  
7" ICP \*NEW\*: 589ft FNL & 1320ft FWL Sec 13  
BHL: 470ft FSL & 1320ft FWL Sec 13

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
7" ICP - NP F-J-13HNC *NEW* (P3)	6466.0	-134.5	144.5	40.405021	-104.389551
BHL - NP F-J-13HNC (P3)	6466.0	-4437.3	119.8	40.393210	-104.389640



# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well NORTH PLATTE F-J-13HNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Site:</b>	NW NW SEC. 13 T5N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Well:</b>	NORTH PLATTE F-J-13HNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-407	<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	NW NW SEC. 13 T5N R63W 6th P.M.				
Site Position:		Northing:	1,392,344.59 usft	Latitude:	40.405076
From:	Lat/Long	Easting:	3,309,139.22 usft	Longitude:	-104.389914
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft	Grid Convergence:	0.72 °

Well	NORTH PLATTE F-J-13HNC					
Well Position	+N/-S	0.0 usft	Northing:	1,392,458.41 usft	Latitude:	40.405390
	+E/-W	0.0 usft	Easting:	3,309,094.35 usft	Longitude:	-104.390070
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,641.0 usft

<b>Wellbore</b>	JOB #2009-407				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	24/06/2014	8.25	67.01	52,856

<b>Design</b>	FINAL SURVEYS				
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<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	178.45

Survey Program		Date	31/10/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
500.0	11,137.0	FINAL SURVEYS (JOB #2009-407)	MWD	MWD - Standard	

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	4,658.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE</b>										
500.0	0.70	225.90	500.0	4,158.0	-2.1	-2.2	2.1	0.14	0.14	0.00
593.0	0.60	227.30	593.0	4,065.0	-2.9	-3.0	2.8	0.11	-0.11	1.51
685.0	1.20	357.90	685.0	3,973.0	-2.2	-3.3	2.1	1.80	0.65	141.96
777.0	3.10	28.50	776.9	3,881.1	0.9	-2.2	-1.0	2.34	2.07	33.26
869.0	4.30	31.50	868.7	3,789.3	6.1	0.8	-6.0	1.32	1.30	3.26
960.0	5.40	29.20	959.4	3,698.6	12.7	4.7	-12.6	1.23	1.21	-2.53
1,050.0	6.30	24.10	1,048.9	3,609.1	20.9	8.7	-20.7	1.15	1.00	-5.67
1,142.0	6.90	24.80	1,140.3	3,517.7	30.5	13.1	-30.2	0.66	0.65	0.76
1,235.0	7.20	28.50	1,232.6	3,425.4	40.7	18.2	-40.2	0.59	0.32	3.98
1,327.0	7.50	29.20	1,323.9	3,334.1	51.0	23.9	-50.4	0.34	0.33	0.76
1,419.0	6.90	24.10	1,415.1	3,242.9	61.3	29.1	-60.5	0.95	-0.65	-5.54

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well NORTH PLATTE F-J-13HNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Site:</b>	NW NW SEC. 13 T5N R63W 6th P.M	<b>MD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Well:</b>	NORTH PLATTE F-J-13HNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-407	<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)
1,511.0	6.70	4.00	1,506.5	3,151.5	71.7	31.7	-70.8	2.58	-0.22	-21.85
1,604.0	6.50	358.90	1,598.9	3,059.1	82.4	32.0	-81.5	0.67	-0.22	-5.48
1,697.0	6.00	0.50	1,691.3	2,966.7	92.5	32.0	-91.6	0.57	-0.54	1.72
1,793.0	5.50	3.50	1,786.8	2,871.2	102.1	32.3	-101.2	0.61	-0.52	3.12
1,889.0	4.50	11.80	1,882.5	2,775.5	110.4	33.3	-109.5	1.28	-1.04	8.65
1,983.0	3.60	359.50	1,976.2	2,681.8	117.0	34.1	-116.0	1.33	-0.96	-13.09
2,078.0	4.00	13.20	2,071.0	2,587.0	123.2	34.8	-122.2	1.04	0.42	14.42
2,174.0	4.70	24.80	2,166.8	2,491.2	130.0	37.2	-129.0	1.17	0.73	12.08
2,268.0	4.60	20.40	2,260.4	2,397.6	137.0	40.1	-135.9	0.39	-0.11	-4.68
2,364.0	6.00	18.60	2,356.0	2,302.0	145.4	43.1	-144.2	1.47	1.46	-1.87
2,460.0	6.00	30.80	2,451.5	2,206.5	154.5	47.3	-153.1	1.33	0.00	12.71
2,555.0	5.70	32.30	2,546.0	2,112.0	162.7	52.3	-161.3	0.35	-0.32	1.58
2,651.0	6.90	26.90	2,641.4	2,016.6	171.9	57.5	-170.3	1.39	1.25	-5.62
2,746.0	7.00	25.30	2,735.7	1,922.3	182.2	62.5	-180.5	0.23	0.11	-1.68
2,842.0	7.20	23.90	2,831.0	1,827.0	193.0	67.5	-191.1	0.28	0.21	-1.46
2,936.0	7.10	23.70	2,924.3	1,733.7	203.7	72.2	-201.7	0.11	-0.11	-0.21
3,032.0	6.90	22.50	3,019.6	1,638.4	214.5	76.8	-212.3	0.26	-0.21	-1.25
3,128.0	6.20	19.10	3,114.9	1,543.1	224.7	80.7	-222.4	0.83	-0.73	-3.54
3,223.0	5.20	27.20	3,209.5	1,448.5	233.4	84.3	-231.0	1.35	-1.05	8.53
3,318.0	2.50	31.80	3,304.2	1,353.8	239.0	87.4	-236.5	2.86	-2.84	4.84
3,413.0	1.70	357.90	3,399.2	1,258.8	242.1	88.4	-239.7	1.52	-0.84	-35.68
3,509.0	3.30	347.00	3,495.1	1,162.9	246.2	87.8	-243.8	1.73	1.67	-11.35
3,605.0	5.70	346.60	3,590.8	1,067.2	253.6	86.0	-251.2	2.50	2.50	-0.42
3,700.0	8.10	6.00	3,685.1	972.9	264.8	85.6	-262.4	3.49	2.53	20.42
3,796.0	8.30	23.00	3,780.1	877.9	277.9	89.1	-275.4	2.53	0.21	17.71
3,892.0	6.80	29.90	3,875.3	782.7	289.2	94.6	-286.6	1.82	-1.56	7.19
3,987.0	5.70	31.60	3,969.7	688.3	298.1	99.9	-295.3	1.17	-1.16	1.79
4,082.0	5.10	28.80	4,064.3	593.7	305.9	104.4	-302.9	0.69	-0.63	-2.95
4,178.0	4.50	13.20	4,160.0	498.0	313.3	107.3	-310.3	1.49	-0.62	-16.25
4,275.0	5.40	7.40	4,256.6	401.4	321.5	108.7	-318.4	1.06	0.93	-5.98
4,371.0	5.90	10.40	4,352.1	305.9	330.8	110.2	-327.7	0.60	0.52	3.12
4,467.0	5.70	22.80	4,447.7	210.3	340.1	113.0	-336.9	1.32	-0.21	12.92
4,562.0	5.70	24.40	4,542.2	115.8	348.7	116.7	-345.4	0.17	0.00	1.68
4,657.0	5.30	25.50	4,636.8	21.2	357.0	120.6	-353.6	0.44	-0.42	1.16
4,753.0	4.80	27.10	4,732.4	-74.4	364.6	124.3	-361.1	0.54	-0.52	1.67
4,848.0	4.90	25.10	4,827.0	-169.0	371.8	127.8	-368.2	0.21	0.11	-2.11
4,944.0	4.60	27.10	4,922.7	-264.7	378.9	131.3	-375.2	0.36	-0.31	2.08
5,040.0	3.50	27.90	5,018.5	-360.5	384.9	134.5	-381.2	1.15	-1.15	0.83
5,135.0	2.50	26.40	5,113.3	-455.3	389.3	136.7	-385.5	1.06	-1.05	-1.58
5,229.0	2.50	4.60	5,207.3	-549.3	393.2	137.8	-389.4	1.01	0.00	-23.19
5,324.0	4.00	354.40	5,302.1	-644.1	398.6	137.7	-394.7	1.69	1.58	-10.74
5,420.0	5.50	345.80	5,397.8	-739.8	406.4	136.2	-402.6	1.73	1.56	-8.96
5,515.0	4.00	347.90	5,492.4	-834.4	414.0	134.4	-410.3	1.59	-1.58	2.21
5,612.0	4.00	351.90	5,589.2	-931.2	420.7	133.2	-416.9	0.29	0.00	4.12
5,707.0	4.60	353.80	5,683.9	-1,025.9	427.8	132.3	-424.0	0.65	0.63	2.00
5,802.0	3.20	351.50	5,778.7	-1,120.7	434.2	131.5	-430.5	1.48	-1.47	-2.42
5,896.0	1.80	335.40	5,872.6	-1,214.6	438.1	130.5	-434.4	1.65	-1.49	-17.13
<b>KOP</b>										
<b>5,980.0</b>	<b>1.99</b>	<b>185.95</b>	<b>5,956.6</b>	<b>-1,298.6</b>	<b>437.8</b>	<b>129.8</b>	<b>-434.2</b>	<b>4.35</b>	<b>0.23</b>	<b>-177.92</b>
6,006.0	3.10	180.70	5,982.6	-1,324.6	436.7	129.8	-433.0	4.36	4.27	-20.19
6,054.0	10.60	164.50	6,030.2	-1,372.2	431.1	130.9	-427.4	15.98	15.62	-33.75
6,100.0	14.40	157.80	6,075.1	-1,417.1	421.8	134.2	-418.0	8.83	8.26	-14.57
6,148.0	17.70	165.80	6,121.2	-1,463.2	409.2	138.3	-405.3	8.26	6.87	16.67

## Survey Report



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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Site:</b>	NW NW SEC. 13 T5N R63W 6th P.M	<b>MD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Well:</b>	NORTH PLATTE F-J-13HNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-407	<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)
6,197.0	22.50	171.40	6,167.2	-1,509.2	392.7	141.5	-388.7	10.54	9.80	11.43
6,245.0	29.40	173.00	6,210.4	-1,552.4	371.9	144.3	-367.8	14.45	14.37	3.33
6,292.0	35.90	173.00	6,249.9	-1,591.9	346.7	147.4	-342.6	13.83	13.83	0.00
6,340.0	45.00	173.00	6,286.4	-1,628.4	315.8	151.2	-311.6	18.96	18.96	0.00
6,388.0	52.80	174.00	6,317.9	-1,659.9	279.9	155.3	-275.6	16.33	16.25	2.08
6,436.0	60.00	176.60	6,344.5	-1,686.5	240.1	158.5	-235.7	15.66	15.00	5.42
6,485.0	65.30	182.60	6,367.0	-1,709.0	196.6	158.8	-192.3	15.33	10.82	12.24
6,533.0	68.20	183.90	6,386.0	-1,728.0	152.6	156.2	-148.3	6.53	6.04	2.71
6,581.0	69.40	184.20	6,403.3	-1,745.3	108.0	153.1	-103.8	2.57	2.50	0.62
<b>START OF TANGENT</b>										
6,629.0	73.30	183.10	6,418.7	-1,760.7	62.6	150.2	-58.5	8.41	8.12	-2.29
6,676.0	73.90	182.40	6,431.9	-1,773.9	17.5	148.0	-13.5	1.92	1.28	-1.49
<b>END OF TANGENT</b>										
6,724.0	73.50	181.80	6,445.4	-1,787.4	-28.5	146.3	32.4	1.46	-0.83	-1.25
6,771.0	77.10	181.20	6,457.3	-1,799.3	-73.9	145.2	77.8	7.76	7.66	-1.28
6,803.0	84.20	179.80	6,462.5	-1,804.5	-105.5	144.9	109.4	22.60	22.19	-4.37
<b>ICP</b>										
6,839.0	85.76	178.90	6,465.7	-1,807.7	-141.4	145.3	145.2	5.01	4.34	-2.51
6,879.0	87.50	177.90	6,468.0	-1,810.0	-181.3	146.4	185.1	5.01	4.34	-2.50
6,974.0	91.20	178.60	6,469.1	-1,811.1	-276.2	149.3	280.1	3.96	3.89	0.74
7,069.0	89.50	177.20	6,468.5	-1,810.5	-371.1	152.8	375.1	2.32	-1.79	-1.47
7,165.0	91.10	178.80	6,468.0	-1,810.0	-467.1	156.1	471.1	2.36	1.67	1.67
7,260.0	89.80	178.60	6,467.3	-1,809.3	-562.0	158.3	566.1	1.38	-1.37	-0.21
7,354.0	90.50	181.40	6,467.0	-1,809.0	-656.0	158.3	660.1	3.07	0.74	2.98
7,450.0	91.60	181.40	6,465.3	-1,807.3	-752.0	156.0	755.9	1.15	1.15	0.00
7,544.0	90.40	181.40	6,463.6	-1,805.6	-845.9	153.7	849.8	1.28	-1.28	0.00
7,640.0	90.50	182.60	6,462.9	-1,804.9	-941.9	150.3	945.6	1.25	0.10	1.25
7,735.0	90.30	181.40	6,462.2	-1,804.2	-1,036.8	147.0	1,040.4	1.28	-0.21	-1.26
7,830.0	88.60	181.20	6,463.1	-1,805.1	-1,131.8	144.8	1,135.3	1.80	-1.79	-0.21
7,925.0	89.30	181.00	6,464.9	-1,806.9	-1,226.7	143.0	1,230.2	0.77	0.74	-0.21
8,020.0	90.20	181.00	6,465.3	-1,807.3	-1,321.7	141.4	1,325.1	0.95	0.95	0.00
8,114.0	89.40	181.20	6,465.6	-1,807.6	-1,415.7	139.5	1,419.0	0.88	-0.85	0.21
8,210.0	90.70	181.40	6,465.5	-1,807.5	-1,511.7	137.4	1,514.8	1.37	1.35	0.21
8,305.0	90.80	181.20	6,464.3	-1,806.3	-1,606.6	135.2	1,609.7	0.24	0.11	-0.21
8,400.0	90.70	180.90	6,463.0	-1,805.0	-1,701.6	133.5	1,704.6	0.33	-0.11	-0.32
8,496.0	88.00	179.80	6,464.1	-1,806.1	-1,797.6	132.9	1,800.5	3.04	-2.81	-1.15
8,592.0	88.80	179.60	6,466.8	-1,808.8	-1,893.6	133.4	1,896.5	0.86	0.83	-0.21
8,688.0	88.50	178.60	6,469.1	-1,811.1	-1,989.5	134.9	1,992.4	1.09	-0.31	-1.04
8,783.0	90.40	179.30	6,470.0	-1,812.0	-2,084.5	136.6	2,087.4	2.13	2.00	0.74
8,877.0	92.20	179.30	6,467.8	-1,809.8	-2,178.5	137.8	2,181.4	1.91	1.91	0.00
8,972.0	90.30	180.00	6,465.8	-1,807.8	-2,273.4	138.4	2,276.3	2.13	-2.00	0.74
9,068.0	91.40	179.80	6,464.4	-1,806.4	-2,369.4	138.5	2,372.3	1.16	1.15	-0.21
9,163.0	90.00	180.50	6,463.2	-1,805.2	-2,464.4	138.3	2,467.2	1.65	-1.47	0.74
9,258.0	90.60	183.30	6,462.7	-1,804.7	-2,559.3	135.1	2,562.1	3.01	0.63	2.95
9,354.0	89.00	181.60	6,463.0	-1,805.0	-2,655.3	131.0	2,657.8	2.43	-1.67	-1.77
9,449.0	90.70	182.30	6,463.3	-1,805.3	-2,750.2	127.8	2,752.6	1.94	1.79	0.74
9,545.0	89.80	182.40	6,462.9	-1,804.9	-2,846.1	123.9	2,848.4	0.94	-0.94	0.10
9,640.0	90.40	182.40	6,462.7	-1,804.7	-2,941.0	119.9	2,943.2	0.63	0.63	0.00
9,736.0	89.10	180.30	6,463.1	-1,805.1	-3,037.0	117.6	3,039.1	2.57	-1.35	-2.19
9,831.0	89.70	181.20	6,464.1	-1,806.1	-3,132.0	116.4	3,134.0	1.14	0.63	0.95
9,926.0	89.80	180.70	6,464.5	-1,806.5	-3,227.0	114.8	3,228.9	0.54	0.11	-0.53
10,020.0	89.60	179.10	6,465.0	-1,807.0	-3,321.0	115.0	3,322.8	1.72	-0.21	-1.70
10,115.0	89.70	177.90	6,465.6	-1,807.6	-3,415.9	117.5	3,417.8	1.27	0.11	-1.26



# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well NORTH PLATTE F-J-13HNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Site:</b>	NW NW SEC. 13 T5N R63W 6th P.M	<b>MD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Well:</b>	NORTH PLATTE F-J-13HNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-407	<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)
10,210.0	89.50	176.10	6,466.3	-1,808.3	-3,510.8	122.4	3,512.8	1.91	-0.21	-1.89
10,305.0	89.50	176.50	6,467.1	-1,809.1	-3,605.6	128.6	3,607.7	0.42	0.00	0.42
10,400.0	91.90	178.90	6,465.9	-1,807.9	-3,700.5	132.4	3,702.7	3.57	2.53	2.53
10,495.0	90.20	178.60	6,464.2	-1,806.2	-3,795.4	134.4	3,797.7	1.82	-1.79	-0.32
10,591.0	91.40	179.60	6,462.8	-1,804.8	-3,891.4	136.0	3,893.7	1.63	1.25	1.04
10,685.0	89.80	179.30	6,461.9	-1,803.9	-3,985.4	136.9	3,987.6	1.73	-1.70	-0.32
10,782.0	92.20	183.00	6,460.2	-1,802.2	-4,082.3	134.9	4,084.5	4.55	2.47	3.81
10,877.0	92.60	184.20	6,456.2	-1,798.2	-4,177.1	128.9	4,179.0	1.33	0.42	1.26
10,973.0	91.10	184.60	6,453.1	-1,795.1	-4,272.7	121.6	4,274.5	1.62	-1.56	0.42
<b>LAST SURVEY - OCT 31, 2014</b>										
<b>11,068.0</b>	<b>89.60</b>	<b>183.70</b>	<b>6,452.5</b>	<b>-1,794.5</b>	<b>-4,367.5</b>	<b>114.7</b>	<b>4,369.0</b>	<b>1.84</b>	<b>-1.58</b>	<b>-0.95</b>
<b>EXTRAPOLATION TO TD</b>										
<b>11,137.0</b>	<b>89.60</b>	<b>183.70</b>	<b>6,453.0</b>	<b>-1,795.0</b>	<b>-4,436.3</b>	<b>110.3</b>	<b>4,437.7</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well NORTH PLATTE F-J-13HNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Site:</b>	NW NW SEC. 13 T5N R63W 6th P.M	<b>MD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Well:</b>	NORTH PLATTE F-J-13HNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-407	<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	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
KOP - NP F-J-13HNC	0.00	0.00	5,963.7	439.5	147.8	1,392,899.71	3,309,236.63	40.406596	-104.389539
- survey misses target center by 18.1usft at 5987.0usft MD (5963.6 TVD, 437.6 N, 129.8 E)									
- Point									
EXIST VERT NORTH	0.00	0.00	6,858.0	-848.8	150.4	1,391,611.55	3,309,255.35	40.403060	-104.389530
- survey misses target center by 394.4usft at 7540.1usft MD (6463.7 TVD, -842.0 N, 153.8 E)									
- Circle (radius 30.0)									
EXIST VERT NORTH	0.00	0.00	6,702.0	-1,559.2	-515.3	1,390,892.90	3,308,598.67	40.401110	-104.391920
- survey misses target center by 693.2usft at 8269.3usft MD (6464.8 TVD, -1570.9 N, 136.0 E)									
- Circle (radius 30.0)									
EXIST VERT 33-13	0.00	0.00	6,739.0	-2,914.4	2,139.1	1,389,571.13	3,311,269.70	40.397390	-104.382390
- survey misses target center by 2035.2usft at 9529.4usft MD (6462.8 TVD, -2830.5 N, 124.5 E)									
- Circle (radius 30.0)									
7" ICP - NP F-J-13HNC	0.00	0.00	6,466.0	-134.5	144.5	1,392,325.74	3,309,240.52	40.405021	-104.389551
- survey misses target center by 1.1usft at 6832.2usft MD (6465.2 TVD, -134.6 N, 145.2 E)									
- Point									
BHL - NP F-J-13HNC	0.00	0.00	6,466.0	-4,437.3	119.8	1,388,023.13	3,309,269.65	40.393210	-104.389640
- survey misses target center by 16.1usft at 11137.0usft MD (6453.0 TVD, -4436.3 N, 110.3 E)									
- Point									
BHL - NP F-J-13HNC	0.00	0.00	6,467.0	-4,437.3	119.8	1,388,023.13	3,309,269.65	40.393210	-104.389640
- survey misses target center by 17.0usft at 11137.0usft MD (6453.0 TVD, -4436.3 N, 110.3 E)									
- Point									
EXIST VERT NORTH	0.00	0.00	7,159.0	-1,559.2	793.8	1,390,909.29	3,309,907.55	40.401110	-104.387220
- survey misses target center by 955.8usft at 8233.6usft MD (6465.2 TVD, -1535.2 N, 136.8 E)									
- Circle (radius 30.0)									
KOP - NP F-J-13HNC	0.00	0.00	5,962.7	439.5	147.8	1,392,899.71	3,309,236.63	40.406596	-104.389539
- survey misses target center by 18.1usft at 5986.0usft MD (5962.6 TVD, 437.6 N, 129.8 E)									
- Point									
EXIST VERT NORTH	0.00	0.00	6,727.0	-222.2	-506.9	1,392,229.87	3,308,590.32	40.404780	-104.391890
- survey misses target center by 703.4usft at 6902.9usft MD (6468.9 TVD, -205.2 N, 147.2 E)									
- Circle (radius 30.0)									
EXIST VERT CHAMP	0.00	0.00	7,155.0	-3,981.8	2,426.1	1,388,507.45	3,311,570.02	40.394460	-104.381360
- survey misses target center by 2391.9usft at 10685.0usft MD (6461.9 TVD, -3985.4 N, 136.9 E)									
- Circle (radius 30.0)									
EXIST VERT 70 RAN	0.00	0.00	6,745.0	-181.3	2,104.9	1,392,303.44	3,311,201.29	40.404892	-104.382512
- survey misses target center by 1976.8usft at 6942.0usft MD (6469.4 TVD, -244.2 N, 148.5 E)									
- Circle (radius 30.0)									
EXIST VERT 70 RAN	0.00	0.00	6,749.0	-1,516.2	2,120.9	1,390,968.96	3,311,233.98	40.401228	-104.382455
- survey misses target center by 2003.2usft at 8169.2usft MD (6465.8 TVD, -1470.9 N, 138.3 E)									
- Circle (radius 30.0)									
7" ICP - NP F-J-13HNC	0.00	0.00	6,467.0	-134.5	144.5	1,392,325.74	3,309,240.52	40.405021	-104.389551
- survey misses target center by 2.0usft at 6832.3usft MD (6465.2 TVD, -134.6 N, 145.2 E)									
- Point									
EXIST VERT NORTH	0.00	0.00	6,770.0	-211.3	785.4	1,392,256.98	3,309,882.28	40.404810	-104.387250
- survey misses target center by 704.9usft at 6931.9usft MD (6469.4 TVD, -234.2 N, 148.2 E)									
- Circle (radius 30.0)									

## Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well NORTH PLATTE F-J-13HNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Site:</b>	NW NW SEC. 13 T5N R63W 6th P.M	<b>MD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Well:</b>	NORTH PLATTE F-J-13HNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-407	<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	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
KOP - NP F-J-13HNC	0.00	0.00	5,963.7	439.5	147.8	1,392,899.71	3,309,236.63	40.406596	-104.389539
- survey misses target center by 18.1usft at 5987.0usft MD (5963.6 TVD, 437.6 N, 129.8 E)									
- Point									
EXIST VERT NORTH	0.00	0.00	6,858.0	-848.8	150.4	1,391,611.55	3,309,255.35	40.403060	-104.389530
- survey misses target center by 394.4usft at 7540.1usft MD (6463.7 TVD, -842.0 N, 153.8 E)									
- Circle (radius 30.0)									
EXIST VERT NORTH	0.00	0.00	6,702.0	-1,559.2	-515.3	1,390,892.90	3,308,598.67	40.401110	-104.391920
- survey misses target center by 693.2usft at 8269.3usft MD (6464.8 TVD, -1570.9 N, 136.0 E)									
- Circle (radius 30.0)									
EXIST VERT 33-13	0.00	0.00	6,739.0	-2,914.4	2,139.1	1,389,571.13	3,311,269.70	40.397390	-104.382390
- survey misses target center by 2035.2usft at 9529.4usft MD (6462.8 TVD, -2830.5 N, 124.5 E)									
- Circle (radius 30.0)									
7" ICP - NP F-J-13HNC	0.00	0.00	6,466.0	-134.5	144.5	1,392,325.74	3,309,240.52	40.405021	-104.389551
- survey misses target center by 1.1usft at 6832.2usft MD (6465.2 TVD, -134.6 N, 145.2 E)									
- Point									
BHL - NP F-J-13HNC	0.00	0.00	6,466.0	-4,437.3	119.8	1,388,023.13	3,309,269.65	40.393210	-104.389640
- survey misses target center by 16.1usft at 11137.0usft MD (6453.0 TVD, -4436.3 N, 110.3 E)									
- Point									
BHL - NP F-J-13HNC	0.00	0.00	6,467.0	-4,437.3	119.8	1,388,023.13	3,309,269.65	40.393210	-104.389640
- survey misses target center by 17.0usft at 11137.0usft MD (6453.0 TVD, -4436.3 N, 110.3 E)									
- Point									
EXIST VERT NORTH	0.00	0.00	7,159.0	-1,559.2	793.8	1,390,909.29	3,309,907.55	40.401110	-104.387220
- survey misses target center by 955.8usft at 8233.6usft MD (6465.2 TVD, -1535.2 N, 136.8 E)									
- Circle (radius 30.0)									
KOP - NP F-J-13HNC	0.00	0.00	5,962.7	439.5	147.8	1,392,899.71	3,309,236.63	40.406596	-104.389539
- survey misses target center by 18.1usft at 5986.0usft MD (5962.6 TVD, 437.6 N, 129.8 E)									
- Point									
EXIST VERT NORTH	0.00	0.00	6,727.0	-222.2	-506.9	1,392,229.87	3,308,590.32	40.404780	-104.391890
- survey misses target center by 703.4usft at 6902.9usft MD (6468.9 TVD, -205.2 N, 147.2 E)									
- Circle (radius 30.0)									
EXIST VERT CHAMP	0.00	0.00	7,155.0	-3,981.8	2,426.1	1,388,507.45	3,311,570.02	40.394460	-104.381360
- survey misses target center by 2391.9usft at 10685.0usft MD (6461.9 TVD, -3985.4 N, 136.9 E)									
- Circle (radius 30.0)									
EXIST VERT 70 RAN	0.00	0.00	6,745.0	-181.3	2,104.9	1,392,303.44	3,311,201.29	40.404892	-104.382512
- survey misses target center by 1976.8usft at 6942.0usft MD (6469.4 TVD, -244.2 N, 148.5 E)									
- Circle (radius 30.0)									
EXIST VERT 70 RAN	0.00	0.00	6,749.0	-1,516.2	2,120.9	1,390,968.96	3,311,233.98	40.401228	-104.382455
- survey misses target center by 2003.2usft at 8169.2usft MD (6465.8 TVD, -1470.9 N, 138.3 E)									
- Circle (radius 30.0)									
7" ICP - NP F-J-13HNC	0.00	0.00	6,467.0	-134.5	144.5	1,392,325.74	3,309,240.52	40.405021	-104.389551
- survey misses target center by 2.0usft at 6832.3usft MD (6465.2 TVD, -134.6 N, 145.2 E)									
- Point									
EXIST VERT NORTH	0.00	0.00	6,770.0	-211.3	785.4	1,392,256.98	3,309,882.28	40.404810	-104.387250
- survey misses target center by 704.9usft at 6931.9usft MD (6469.4 TVD, -234.2 N, 148.2 E)									
- Circle (radius 30.0)									

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



# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well NORTH PLATTE F-J-13HNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Site:</b>	NW NW SEC. 13 T5N R63W 6th P.M.	<b>MD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Well:</b>	NORTH PLATTE F-J-13HNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-407	<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)	
KOP - NP F-J-13HNC		0.00	0.00	5,963.7	439.5	147.8	1,392,899.71	3,309,236.63	40.406596
- survey misses target center by 18.1usft at 5987.0usft MD (5963.6 TVD, 437.6 N, 129.8 E)									-104.389539
- Point									
EXIST VERT NORTH		0.00	0.00	6,858.0	-848.8	150.4	1,391,611.55	3,309,255.35	40.403060
- survey misses target center by 394.4usft at 7540.1usft MD (6463.7 TVD, -842.0 N, 153.8 E)									-104.389530
- Circle (radius 30.0)									
EXIST VERT NORTH		0.00	0.00	6,702.0	-1,559.2	-515.3	1,390,892.90	3,308,598.67	40.401110
- survey misses target center by 693.2usft at 8269.3usft MD (6464.8 TVD, -1570.9 N, 136.0 E)									-104.391920
- Circle (radius 30.0)									
EXIST VERT 33-13		0.00	0.00	6,739.0	-2,914.4	2,139.1	1,389,571.13	3,311,269.70	40.397390
- survey misses target center by 2035.2usft at 9529.4usft MD (6462.8 TVD, -2830.5 N, 124.5 E)									-104.382390
- Circle (radius 30.0)									
7" ICP - NP F-J-13HNC		0.00	0.00	6,466.0	-134.5	144.5	1,392,325.74	3,309,240.52	40.405021
- survey misses target center by 1.1usft at 6832.2usft MD (6465.2 TVD, -134.6 N, 145.2 E)									-104.389551
- Point									
BHL - NP F-J-13HNC		0.00	0.00	6,466.0	-4,437.3	119.8	1,388,023.13	3,309,269.65	40.393210
- survey misses target center by 16.1usft at 11137.0usft MD (6453.0 TVD, -4436.3 N, 110.3 E)									-104.389640
- Point									
BHL - NP F-J-13HNC		0.00	0.00	6,467.0	-4,437.3	119.8	1,388,023.13	3,309,269.65	40.393210
- survey misses target center by 17.0usft at 11137.0usft MD (6453.0 TVD, -4436.3 N, 110.3 E)									-104.389640
- Point									
EXIST VERT NORTH		0.00	0.00	7,159.0	-1,559.2	793.8	1,390,909.29	3,309,907.55	40.401110
- survey misses target center by 955.8usft at 8233.6usft MD (6465.2 TVD, -1535.2 N, 136.8 E)									-104.387220
- Circle (radius 30.0)									
KOP - NP F-J-13HNC		0.00	0.00	5,962.7	439.5	147.8	1,392,899.71	3,309,236.63	40.406596
- survey misses target center by 18.1usft at 5986.0usft MD (5962.6 TVD, 437.6 N, 129.8 E)									-104.389539
- Point									
EXIST VERT NORTH		0.00	0.00	6,727.0	-222.2	-506.9	1,392,229.87	3,308,590.32	40.404780
- survey misses target center by 703.4usft at 6902.9usft MD (6468.9 TVD, -205.2 N, 147.2 E)									-104.391890
- Circle (radius 30.0)									
EXIST VERT CHAMP		0.00	0.00	7,155.0	-3,981.8	2,426.1	1,388,507.45	3,311,570.02	40.394460
- survey misses target center by 2391.9usft at 10685.0usft MD (6461.9 TVD, -3985.4 N, 136.9 E)									-104.381360
- Circle (radius 30.0)									
EXIST VERT 70 RAN		0.00	0.00	6,745.0	-181.3	2,104.9	1,392,303.44	3,311,201.29	40.404892
- survey misses target center by 1976.8usft at 6942.0usft MD (6469.4 TVD, -244.2 N, 148.5 E)									-104.382512
- Circle (radius 30.0)									
EXIST VERT 70 RAN		0.00	0.00	6,749.0	-1,516.2	2,120.9	1,390,968.96	3,311,233.98	40.401228
- survey misses target center by 2003.2usft at 8169.2usft MD (6465.8 TVD, -1470.9 N, 138.3 E)									-104.382455
- Circle (radius 30.0)									
7" ICP - NP F-J-13HNC		0.00	0.00	6,467.0	-134.5	144.5	1,392,325.74	3,309,240.52	40.405021
- survey misses target center by 2.0usft at 6832.3usft MD (6465.2 TVD, -134.6 N, 145.2 E)									-104.389551
- Point									
EXIST VERT NORTH		0.00	0.00	6,770.0	-211.3	785.4	1,392,256.98	3,309,882.28	40.404810
- survey misses target center by 704.9usft at 6931.9usft MD (6469.4 TVD, -234.2 N, 148.2 E)									-104.387250
- Circle (radius 30.0)									

500.0	500.0	-2.1	-2.2	START NUDGE
5,980.0	5,956.6	437.8	129.8	KOP
6,629.0	6,418.7	62.6	150.2	START OF TANGENT
6,724.0	6,445.4	-28.5	146.3	END OF TANGENT
6,839.0	6,465.7	-141.4	145.3	ICP
11,068.0	6,452.5	-4,367.5	114.7	LAST SURVEY - OCT 31, 2014
11,137.0	6,453.0	-4,436.3	110.3	EXTRAPOLATION TO TD

## Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well NORTH PLATTE F-J-13HNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Site:</b>	NW NW SEC. 13 T5N R63W 6th P.M	<b>MD Reference:</b>	KB @ 4658.0usft (CADE 25)
<b>Well:</b>	NORTH PLATTE F-J-13HNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2009-407	<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
KOP - NP F-J-13HNC - survey misses target center by 18.1usft at 5987.0usft MD (5963.6 TVD, 437.6 N, 129.8 E) - Point	0.00	0.00	5,963.7	439.5	147.8	1,392,899.71	3,309,236.63	40.406596	-104.389539
EXIST VERT NORTH - survey misses target center by 394.4usft at 7540.1usft MD (6463.7 TVD, -842.0 N, 153.8 E) - Circle (radius 30.0)	0.00	0.00	6,858.0	-848.8	150.4	1,391,611.55	3,309,255.35	40.403060	-104.389530
EXIST VERT NORTH - survey misses target center by 693.2usft at 8269.3usft MD (6464.8 TVD, -1570.9 N, 136.0 E) - Circle (radius 30.0)	0.00	0.00	6,702.0	-1,559.2	-515.3	1,390,892.90	3,308,598.67	40.401110	-104.391920
EXIST VERT 33-13 - survey misses target center by 2035.2usft at 9529.4usft MD (6462.8 TVD, -2830.5 N, 124.5 E) - Circle (radius 30.0)	0.00	0.00	6,739.0	-2,914.4	2,139.1	1,389,571.13	3,311,269.70	40.397390	-104.382390
7" ICP - NP F-J-13HNC - survey misses target center by 1.1usft at 6832.2usft MD (6465.2 TVD, -134.6 N, 145.2 E) - Point	0.00	0.00	6,466.0	-134.5	144.5	1,392,325.74	3,309,240.52	40.405021	-104.389551
BHL - NP F-J-13HNC - survey misses target center by 16.1usft at 11137.0usft MD (6453.0 TVD, -4436.3 N, 110.3 E) - Point	0.00	0.00	6,466.0	-4,437.3	119.8	1,388,023.13	3,309,269.65	40.393210	-104.389640
BHL - NP F-J-13HNC - survey misses target center by 17.0usft at 11137.0usft MD (6453.0 TVD, -4436.3 N, 110.3 E) - Point	0.00	0.00	6,467.0	-4,437.3	119.8	1,388,023.13	3,309,269.65	40.393210	-104.389640
EXIST VERT NORTH - survey misses target center by 955.8usft at 8233.6usft MD (6465.2 TVD, -1535.2 N, 136.8 E) - Circle (radius 30.0)	0.00	0.00	7,159.0	-1,559.2	793.8	1,390,909.29	3,309,907.55	40.401110	-104.387220
KOP - NP F-J-13HNC - survey misses target center by 18.1usft at 5986.0usft MD (5962.6 TVD, 437.6 N, 129.8 E) - Point	0.00	0.00	5,962.7	439.5	147.8	1,392,899.71	3,309,236.63	40.406596	-104.389539
EXIST VERT NORTH - survey misses target center by 703.4usft at 6902.9usft MD (6468.9 TVD, -205.2 N, 147.2 E) - Circle (radius 30.0)	0.00	0.00	6,727.0	-222.2	-506.9	1,392,229.87	3,308,590.32	40.404780	-104.391890
EXIST VERT CHAMP - survey misses target center by 2391.9usft at 10685.0usft MD (6461.9 TVD, -3985.4 N, 136.9 E) - Circle (radius 30.0)	0.00	0.00	7,155.0	-3,981.8	2,426.1	1,388,507.45	3,311,570.02	40.394460	-104.381360
EXIST VERT 70 RAN - survey misses target center by 1976.8usft at 6942.0usft MD (6469.4 TVD, -244.2 N, 148.5 E) - Circle (radius 30.0)	0.00	0.00	6,745.0	-181.3	2,104.9	1,392,303.44	3,311,201.29	40.404892	-104.382512
EXIST VERT 70 RAN - survey misses target center by 2003.2usft at 8169.2usft MD (6465.8 TVD, -1470.9 N, 138.3 E) - Circle (radius 30.0)	0.00	0.00	6,749.0	-1,516.2	2,120.9	1,390,968.96	3,311,233.98	40.401228	-104.382455
7" ICP - NP F-J-13HNC - survey misses target center by 2.0usft at 6832.3usft MD (6465.2 TVD, -134.6 N, 145.2 E) - Point	0.00	0.00	6,467.0	-134.5	144.5	1,392,325.74	3,309,240.52	40.405021	-104.389551
EXIST VERT NORTH - survey misses target center by 704.9usft at 6931.9usft MD (6469.4 TVD, -234.2 N, 148.2 E) - Circle (radius 30.0)	0.00	0.00	6,770.0	-211.3	785.4	1,392,256.98	3,309,882.28	40.404810	-104.387250

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