

# **BONANZA CREEK ENERGY INC.**

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

**SE SW SEC. 15 T5N R61W 6th P.M.**

**PRONGHORN J24-15-10XRLNC**

**JOB # 2015-014-25**

**24 April, 2015**

**Survey: FINAL SURVEYS**





Project: WELD COUNTY, COLORADO (NAD 83)  
 Site: SE SW SEC. 15 T5N R61W 6th P.M.  
 Well: PRONGHORN J24-15-10XRLNC  
 Wellbore: JOB # 2015-014-25  
 Design: FINAL SURVEYS

ANNOTATIONS

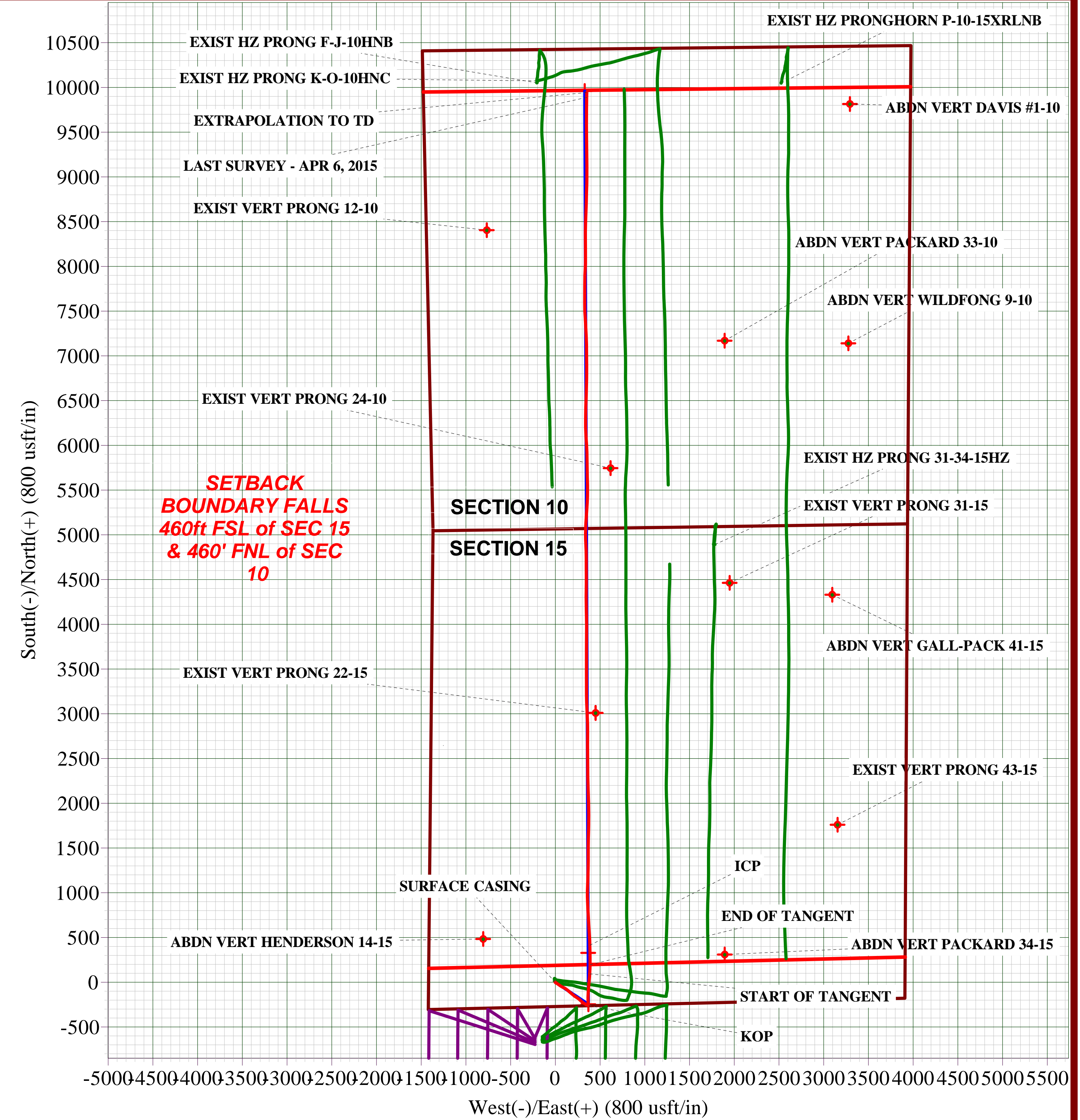
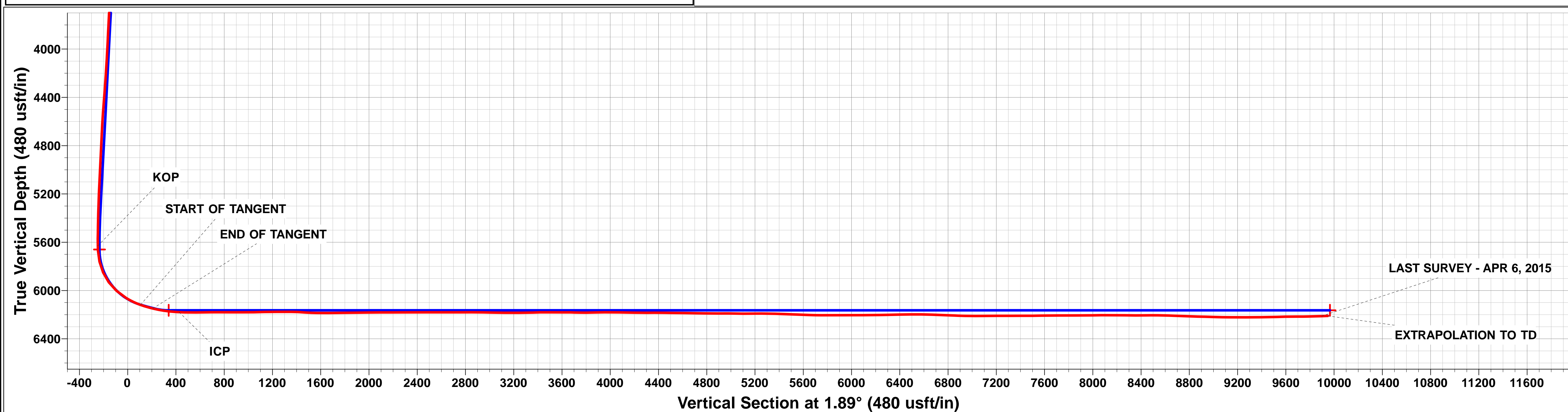
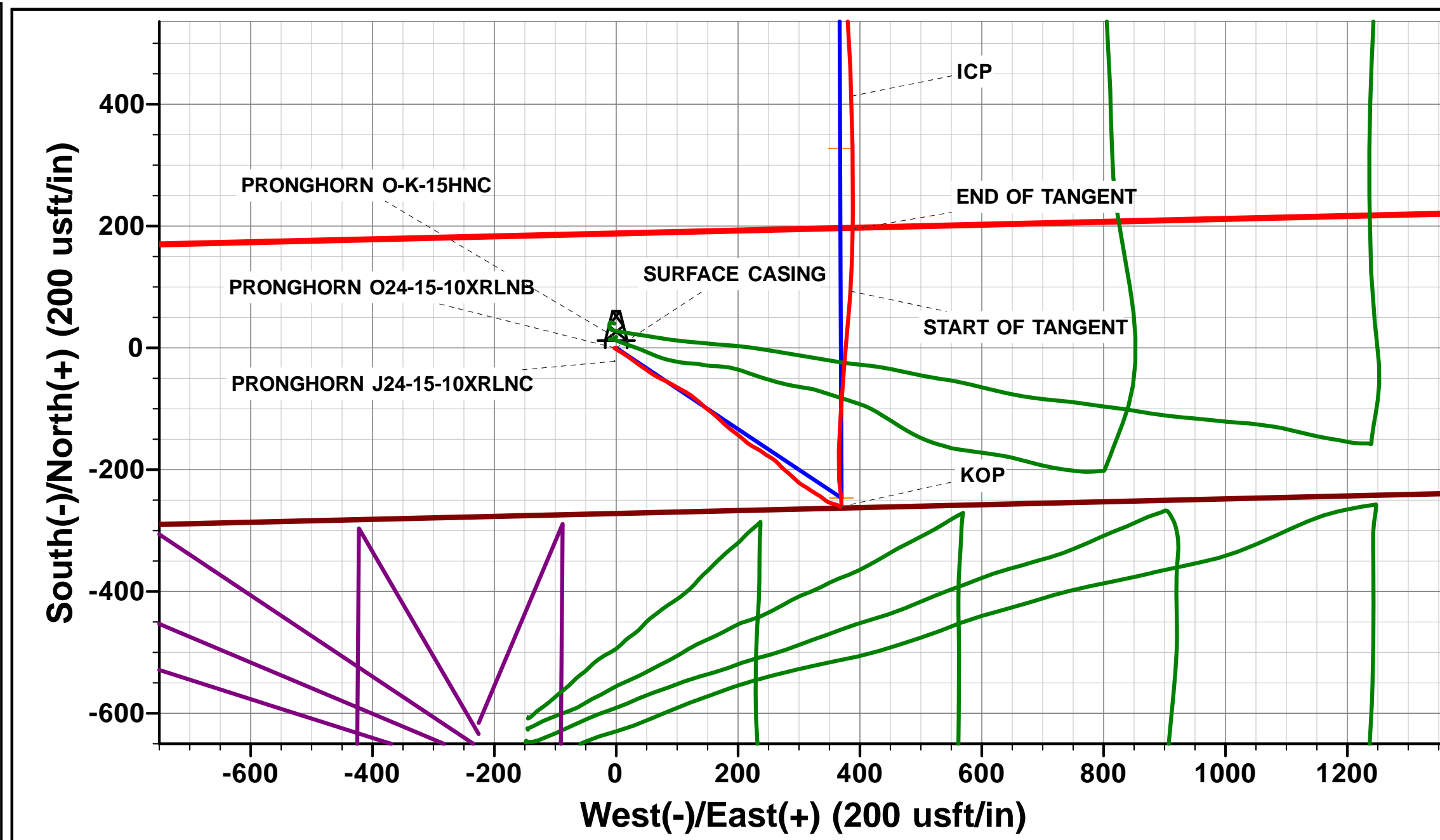
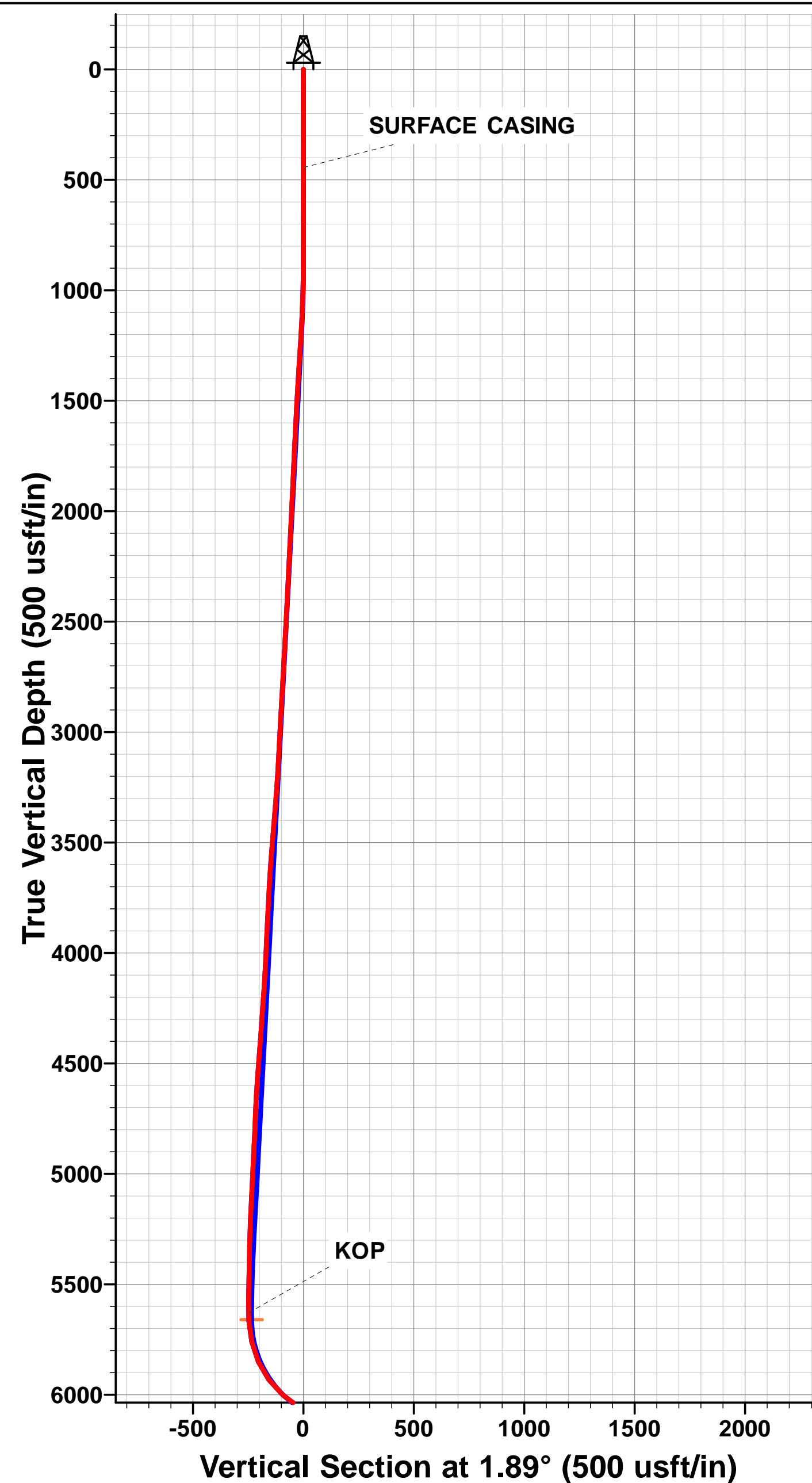
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation
445.0	445.0	0.17	235.70	-0.4	-0.6	-0.4	0.8	SURFACE CASING
5629.9	5653.0	1.78	35.19	-260.6	369.5	-248.3	463.1	KOP
6118.6	6301.0	69.89	3.54	93.4	384.4	106.0	818.9	START OF TANGENT
6148.5	6407.0	76.57	0.90	194.9	388.2	207.6	920.2	END OF TANGENT
6179.0	6628.0	86.93	358.13	413.4	386.2	425.9	1138.7	ICP
6212.2	16109.0	92.10	1.00	9889.1	350.5	9895.3	10618.0	LAST SURVEY - APR 6, 2015
6210.3	16162.0	92.10	1.00	9942.1	351.4	9948.3	10671.0	EXTRAPOLATION TO TD

AS DRILLED LOCAL COORDINATES:

SHL: 270ft FSL & 1419ft FWL Sec 15  
 TOP PRODUCTION: 2ft FSL & 1791ft FWL Sec 15  
 ICP: 722ft FSL & 1798ft FWL Sec 15  
 BHL: 490ft FNL & 1828ft FWL Sec 10

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - PRONGHORN J24-15-10XRLNC (P2)	5660.2	-246.4	369.8	40.393744	-104.198002
7" ICP *NEW* - PRONGHORN J24-15-10XRLNC (P2)	6163.5	327.7	367.5	40.395320	-104.198011
BHL - PRONGHORN J24-15-10XRLNC (P2)	6163.5	9960.3	328.5	40.421760	-104.198150



# Survey Report



<b>Company:</b> BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b> Well PRONGHORN J24-15-10XRLNC
<b>Project:</b> WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b> KB @ 4685.5usft (CADE 25)
<b>Site:</b> SE SW SEC. 15 T5N R61W 6th P.M.	<b>MD Reference:</b> KB @ 4685.5usft (CADE 25)
<b>Well:</b> PRONGHORN J24-15-10XRLNC	<b>North Reference:</b> True
<b>Wellbore:</b> JOB # 2015-014-25	<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		

<b>Site</b> SE SW SEC. 15 T5N R61W 6th P.M.					
<b>Site Position:</b>		<b>Northing:</b> 1,389,184.46 usft	<b>Latitude:</b> 40.394420		
<b>From:</b> Lat/Long		<b>Easting:</b> 3,362,264.11 usft	<b>Longitude:</b> -104.199340		
<b>Position Uncertainty:</b> 0.0 usft		<b>Slot Radius:</b> 1.10000ft	<b>Grid Convergence:</b> 0.84 °		

<b>Well</b> PRONGHORN J24-15-10XRLNC					
<b>Well Position</b>	<b>+N-S</b> 0.0 usft	<b>Northing:</b> 1,389,184.50 usft	<b>Latitude:</b> 40.394420		
	<b>+E-W</b> 0.0 usft	<b>Easting:</b> 3,362,266.89 usft	<b>Longitude:</b> -104.199330		
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b> usft	<b>Ground Level:</b> 4,669.0 usft		

<b>Wellbore</b> JOB # 2015-014-25					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/11/2014	8.10	67.02	52,828

<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			
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.0	0.0	0.0	1.89	

<b>Survey Program</b>		<b>Date</b> 20/04/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
509.0	16,162.0	FINAL SURVEYS (JOB # 2015-014-25)	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	4,685.5	0.0	0.0	0.0	0.00	0.00	0.00
<b>SURFACE CASING</b>										
445.0	0.17	235.70	445.0	4,240.5	-0.4	-0.6	-0.4	0.04	0.04	0.00
509.0	0.20	235.70	509.0	4,176.5	-0.5	-0.7	-0.5	0.04	0.04	0.00
601.0	0.40	275.50	601.0	4,084.5	-0.6	-1.2	-0.6	0.30	0.22	43.26
694.0	0.40	300.60	694.0	3,991.5	-0.4	-1.8	-0.4	0.19	0.00	26.99
786.0	0.40	271.90	786.0	3,899.5	-0.2	-2.4	-0.3	0.22	0.00	-31.20
879.0	0.30	300.80	879.0	3,806.5	-0.1	-2.9	-0.2	0.21	-0.11	31.08
971.0	2.50	127.80	971.0	3,714.5	-1.2	-1.5	-1.2	3.04	2.39	-188.04
1,063.0	4.30	119.10	1,062.8	3,622.7	-4.1	3.1	-4.0	2.03	1.96	-9.46
1,156.0	6.30	121.00	1,155.4	3,530.1	-8.4	10.5	-8.0	2.16	2.15	2.04
1,247.0	6.30	126.00	1,245.8	3,439.7	-13.9	18.8	-13.3	0.60	0.00	5.49
1,340.0	6.40	126.00	1,338.3	3,347.2	-19.9	27.1	-19.0	0.11	0.11	0.00

# Survey Report



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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVL Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Site:</b>	SE SW SEC. 15 T5N R61W 6th P.M.	<b>MD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Well:</b>	PRONGHORN J24-15-10XRLNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2015-014-25	<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)
1,431.0	6.30	126.10	1,428.7	3,256.8	-25.9	35.3	-24.7	0.11	-0.11	0.11
1,523.0	5.70	124.70	1,520.2	3,165.3	-31.4	43.1	-30.0	0.67	-0.65	-1.52
1,615.0	4.80	123.90	1,611.8	3,073.7	-36.2	50.0	-34.5	0.98	-0.98	-0.87
1,707.0	5.80	126.30	1,703.4	2,982.1	-41.1	57.0	-39.2	1.11	1.09	2.61
1,799.0	5.60	118.70	1,795.0	2,890.5	-46.0	64.7	-43.8	0.85	-0.22	-8.26
1,892.0	6.40	116.90	1,887.5	2,798.0	-50.5	73.3	-48.1	0.88	0.86	-1.94
1,987.0	6.30	115.80	1,981.9	2,703.6	-55.2	82.7	-52.4	0.17	-0.11	-1.16
2,081.0	6.60	118.80	2,075.3	2,610.2	-60.0	92.1	-57.0	0.48	0.32	3.19
2,175.0	5.60	122.70	2,168.8	2,516.7	-65.1	100.7	-61.8	1.15	-1.06	4.15
2,271.0	5.90	115.90	2,264.3	2,421.2	-69.8	109.0	-66.2	0.77	0.31	-7.08
2,367.0	5.80	121.50	2,359.8	2,325.7	-74.5	117.6	-70.6	0.60	-0.10	5.83
2,460.0	5.10	126.70	2,452.4	2,233.1	-79.4	124.9	-75.3	0.92	-0.75	5.59
2,555.0	5.40	131.00	2,547.0	2,138.5	-84.9	131.7	-80.5	0.52	0.32	4.53
2,651.0	5.40	131.00	2,642.5	2,043.0	-90.8	138.5	-86.2	0.00	0.00	0.00
2,745.0	5.10	133.20	2,736.1	1,949.4	-96.6	144.9	-91.7	0.38	-0.32	2.34
2,836.0	5.50	126.10	2,826.8	1,858.7	-101.9	151.4	-96.9	0.84	0.44	-7.80
2,932.0	5.20	127.60	2,922.3	1,763.2	-107.3	158.5	-102.0	0.34	-0.31	1.56
3,026.0	4.30	132.00	3,016.0	1,669.5	-112.2	164.5	-106.7	1.03	-0.96	4.68
3,121.0	4.40	137.80	3,110.7	1,574.8	-117.3	169.6	-111.6	0.47	0.11	6.11
3,216.0	5.80	131.30	3,205.4	1,480.1	-123.2	175.7	-117.3	1.59	1.47	-6.84
3,311.0	6.90	131.20	3,299.8	1,385.7	-130.1	183.6	-124.0	1.16	1.16	-0.11
3,405.0	8.00	127.00	3,393.0	1,292.5	-137.8	193.0	-131.3	1.31	1.17	-4.47
3,501.0	8.00	128.60	3,488.0	1,197.5	-145.9	203.6	-139.2	0.23	0.00	1.67
3,596.0	7.20	132.50	3,582.2	1,103.3	-154.1	213.2	-147.0	1.00	-0.84	4.11
3,691.0	6.60	119.40	3,676.5	1,009.0	-160.8	222.3	-153.4	1.77	-0.63	-13.79
3,788.0	6.30	117.10	3,772.9	912.6	-166.0	231.9	-158.2	0.41	-0.31	-2.37
3,883.0	5.40	127.40	3,867.4	818.1	-171.0	240.1	-163.0	1.45	-0.95	10.84
3,977.0	4.10	124.60	3,961.1	724.4	-175.6	246.4	-167.4	1.40	-1.38	-2.98
4,072.0	6.20	118.20	4,055.7	629.8	-180.0	253.7	-171.5	2.29	2.21	-6.74
4,169.0	6.20	135.20	4,152.2	533.3	-186.2	262.0	-177.4	1.89	0.00	17.53
4,265.0	5.50	135.40	4,247.6	437.9	-193.1	268.9	-184.2	0.73	-0.73	0.21
4,360.0	6.80	130.10	4,342.1	343.4	-200.0	276.4	-190.8	1.49	1.37	-5.58
4,455.0	6.90	132.10	4,436.4	249.1	-207.5	284.9	-197.9	0.27	0.11	2.11
4,550.0	6.20	133.70	4,530.8	154.7	-214.8	292.9	-205.0	0.76	-0.74	1.68
4,645.0	5.80	129.60	4,625.3	60.2	-221.4	300.3	-211.4	0.62	-0.42	-4.32
4,740.0	4.90	116.60	4,719.9	-34.4	-226.3	307.6	-216.0	1.58	-0.95	-13.68
4,835.0	5.30	128.00	4,814.5	-129.0	-230.8	314.7	-220.3	1.14	0.42	12.00
4,930.0	5.90	119.80	4,909.0	-223.5	-235.9	322.4	-225.2	1.05	0.63	-8.63
5,025.0	5.10	124.30	5,003.6	-318.1	-240.8	330.1	-229.7	0.96	-0.84	4.74
5,119.0	4.70	121.90	5,097.3	-411.8	-245.1	336.8	-233.9	0.48	-0.43	-2.55
5,215.0	5.10	130.90	5,192.9	-507.4	-250.0	343.4	-238.6	0.90	0.42	9.37
5,310.0	5.10	109.30	5,287.5	-602.0	-254.2	350.6	-242.5	2.01	0.00	-22.74
5,405.0	3.90	102.50	5,382.3	-696.8	-256.3	357.7	-244.3	1.38	-1.26	-7.16
5,500.0	3.90	113.40	5,477.0	-791.5	-258.3	363.8	-246.1	0.78	0.00	11.47
5,595.0	2.10	129.70	5,571.9	-886.4	-260.6	368.1	-248.4	2.08	-1.89	17.16
<b>KOP</b>										
<b>5,653.0</b>	<b>1.78</b>	<b>35.19</b>	<b>5,629.9</b>	<b>-944.4</b>	<b>-260.6</b>	<b>369.5</b>	<b>-248.3</b>	<b>4.92</b>	<b>-0.55</b>	<b>-162.95</b>
5,690.0	3.30	11.30	5,666.8	-981.3	-259.1	370.0	-246.7	4.92	4.11	-64.56
5,784.0	13.00	352.30	5,759.8	-1,074.3	-245.9	369.1	-233.6	10.57	10.32	-20.21
5,880.0	23.90	354.90	5,850.7	-1,165.2	-215.8	365.9	-203.6	11.38	11.35	2.71
5,974.0	36.30	2.60	5,931.9	-1,246.4	-168.8	365.5	-156.6	13.79	13.19	8.19
6,069.0	48.40	3.20	6,002.0	-1,316.5	-105.0	368.8	-92.8	12.74	12.74	0.63
6,164.0	57.90	5.10	6,058.9	-1,373.4	-29.3	374.3	-16.9	10.13	10.00	2.00

# Survey Report



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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Site:</b>	SE SW SEC. 15 T5N R61W 6th P.M.	<b>MD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Well:</b>	PRONGHORN J24-15-10XRLNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2015-014-25	<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)
6,259.0	66.70	4.80	6,103.0	-1,417.5	54.4	381.6	67.0	9.27	9.26	-0.32
<b>START OF TANGENT</b>										
<b>6,301.0</b>	<b>69.89</b>	<b>3.54</b>	<b>6,118.6</b>	<b>-1,433.1</b>	<b>93.4</b>	<b>384.4</b>	<b>106.0</b>	<b>8.08</b>	<b>7.59</b>	<b>-2.99</b>
6,355.0	74.00	2.00	6,135.3	-1,449.8	144.6	386.9	157.3	8.08	7.61	-2.86
<b>END OF TANGENT</b>										
<b>6,407.0</b>	<b>76.57</b>	<b>0.90</b>	<b>6,148.5</b>	<b>-1,463.0</b>	<b>194.9</b>	<b>388.2</b>	<b>207.6</b>	<b>5.35</b>	<b>4.94</b>	<b>-2.12</b>
6,450.0	78.70	0.00	6,157.7	-1,472.2	236.9	388.5	249.6	5.35	4.95	-2.08
6,545.0	83.70	359.40	6,172.2	-1,486.7	330.7	388.0	343.4	5.30	5.26	-0.63
<b>ICP</b>										
<b>6,628.0</b>	<b>86.93</b>	<b>358.13</b>	<b>6,179.0</b>	<b>-1,493.5</b>	<b>413.4</b>	<b>386.2</b>	<b>425.9</b>	<b>4.18</b>	<b>3.89</b>	<b>-1.53</b>
6,676.0	88.80	357.40	6,180.8	-1,495.3	461.4	384.3	473.8	4.18	3.89	-1.52
6,771.0	90.60	356.30	6,181.3	-1,495.8	556.2	379.1	568.4	2.22	1.89	-1.16
6,867.0	90.90	357.10	6,180.0	-1,494.5	652.0	373.6	664.0	0.89	0.31	0.83
6,962.0	89.70	356.50	6,179.5	-1,494.0	746.9	368.3	758.6	1.41	-1.26	-0.63
7,058.0	90.10	357.10	6,179.7	-1,494.2	842.7	362.9	854.3	0.75	0.42	0.62
7,153.0	89.50	358.40	6,180.0	-1,494.5	937.7	359.2	949.0	1.51	-0.63	1.37
7,249.0	91.40	2.20	6,179.3	-1,493.8	1,033.6	359.7	1,044.9	4.43	1.98	3.96
7,343.0	91.20	1.60	6,177.2	-1,491.7	1,127.6	362.8	1,138.9	0.67	-0.21	-0.64
7,440.0	89.60	1.20	6,176.5	-1,491.0	1,224.5	365.2	1,235.9	1.70	-1.65	-0.41
7,536.0	90.50	1.30	6,176.4	-1,490.9	1,320.5	367.3	1,331.9	0.94	0.94	0.10
7,631.0	86.20	359.40	6,179.1	-1,493.6	1,415.4	367.9	1,426.8	4.95	-4.53	-2.00
7,726.0	87.90	0.40	6,184.0	-1,498.5	1,510.3	367.7	1,521.6	2.08	1.79	1.05
7,821.0	89.80	1.20	6,185.9	-1,500.4	1,605.3	369.0	1,616.6	2.17	2.00	0.84
7,916.0	91.00	1.90	6,185.3	-1,499.8	1,700.2	371.6	1,711.6	1.46	1.26	0.74
8,012.0	90.10	359.70	6,184.3	-1,498.8	1,796.2	372.9	1,807.5	2.48	-0.94	-2.29
8,107.0	91.00	0.20	6,183.4	-1,497.9	1,891.2	372.8	1,902.5	1.08	0.95	0.53
8,203.0	91.10	358.80	6,181.7	-1,496.2	1,987.2	372.0	1,998.4	1.46	0.10	-1.46
8,299.0	89.30	357.60	6,181.3	-1,495.8	2,083.1	369.0	2,094.2	2.25	-1.87	-1.25
8,393.0	90.60	358.30	6,181.4	-1,495.9	2,177.1	365.6	2,187.9	1.57	1.38	0.74
8,488.0	90.30	359.20	6,180.7	-1,495.2	2,272.0	363.6	2,282.8	1.00	-0.32	0.95
8,582.0	89.80	359.80	6,180.6	-1,495.1	2,366.0	362.7	2,376.7	0.83	-0.53	0.64
8,676.0	90.10	359.40	6,180.7	-1,495.2	2,460.0	362.1	2,470.6	0.53	0.32	-0.43
8,770.0	90.60	359.60	6,180.1	-1,494.6	2,554.0	361.3	2,564.6	0.57	0.53	0.21
8,866.0	89.10	359.40	6,180.4	-1,494.9	2,650.0	360.4	2,660.5	1.58	-1.56	-0.21
8,961.0	90.80	1.20	6,180.4	-1,494.9	2,745.0	360.9	2,755.4	2.61	1.79	1.89
9,057.0	89.80	359.30	6,179.9	-1,494.4	2,841.0	361.3	2,851.4	2.24	-1.04	-1.98
9,151.0	89.10	357.40	6,180.8	-1,495.3	2,935.0	358.6	2,945.2	2.15	-0.74	-2.02
9,246.0	89.20	357.50	6,182.2	-1,496.7	3,029.9	354.4	3,039.9	0.15	0.11	0.11
9,340.0	88.20	357.70	6,184.4	-1,498.9	3,123.7	350.5	3,133.6	1.08	-1.06	0.21
9,435.0	91.30	359.70	6,184.8	-1,499.3	3,218.7	348.3	3,228.4	3.88	3.26	2.11
9,530.0	91.50	0.20	6,182.5	-1,497.0	3,313.7	348.2	3,323.4	0.57	0.21	0.53
9,625.0	90.80	359.60	6,180.6	-1,495.1	3,408.7	348.1	3,418.3	0.97	-0.74	-0.63
9,721.0	89.30	0.10	6,180.5	-1,495.0	3,504.7	347.8	3,514.2	1.65	-1.56	0.52
9,816.0	90.40	0.10	6,180.7	-1,495.2	3,599.7	348.0	3,609.2	1.16	1.16	0.00
9,911.0	88.40	0.20	6,181.7	-1,496.2	3,694.6	348.2	3,704.1	2.11	-2.11	0.11
10,006.0	89.90	0.10	6,183.1	-1,497.6	3,789.6	348.5	3,799.1	1.58	1.58	-0.11
10,101.0	92.00	0.90	6,181.6	-1,496.1	3,884.6	349.3	3,894.0	2.37	2.21	0.84
10,195.0	89.40	359.50	6,180.4	-1,494.9	3,978.6	349.6	3,988.0	3.14	-2.77	-1.49
10,290.0	89.50	359.10	6,181.3	-1,495.8	4,073.6	348.5	4,082.8	0.43	0.11	-0.42
10,384.0	89.10	358.50	6,182.5	-1,497.0	4,167.5	346.5	4,176.7	0.77	-0.43	-0.64
10,479.0	89.00	359.50	6,184.0	-1,498.5	4,262.5	344.8	4,271.6	1.06	-0.11	1.05
10,574.0	91.10	1.20	6,184.0	-1,498.5	4,357.5	345.4	4,366.5	2.84	2.21	1.79
10,667.0	88.60	0.20	6,184.2	-1,498.7	4,450.5	346.6	4,459.5	2.90	-2.69	-1.08

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PRONGHORN J24-15-10XRLNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD)	<b>TVD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Site:</b>	SE SW SEC. 15 T5N R61W 6th P.M.	<b>MD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Well:</b>	PRONGHORN J24-15-10XRLNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2015-014-25	<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)
10,759.0	89.60	359.90	6,185.6	-1,500.1	4,542.5	346.6	4,551.4	1.13	1.09	-0.33
10,853.0	89.10	359.40	6,186.7	-1,501.2	4,636.5	346.1	4,645.4	0.75	-0.53	-0.53
10,943.0	89.40	0.50	6,187.9	-1,502.4	4,726.5	346.0	4,735.3	1.27	0.33	1.22
11,035.0	88.80	357.20	6,189.3	-1,503.8	4,818.4	344.1	4,827.1	3.65	-0.65	-3.59
11,127.0	90.80	358.60	6,189.7	-1,504.2	4,910.3	340.8	4,918.9	2.65	2.17	1.52
11,219.0	88.70	359.00	6,190.1	-1,504.6	5,002.3	338.9	5,010.8	2.32	-2.28	0.43
11,311.0	89.60	1.80	6,191.4	-1,505.9	5,094.3	339.5	5,102.7	3.20	0.98	3.04
11,404.0	90.90	5.30	6,191.0	-1,505.5	5,187.1	345.2	5,195.7	4.01	1.40	3.76
11,496.0	89.40	3.10	6,190.8	-1,505.3	5,278.8	352.0	5,287.6	2.89	-1.63	-2.39
11,589.0	88.30	3.20	6,192.6	-1,507.1	5,371.7	357.1	5,380.5	1.19	-1.18	0.11
11,681.0	87.60	0.20	6,195.9	-1,510.4	5,463.6	359.8	5,472.5	3.35	-0.76	-3.26
11,773.0	87.70	359.20	6,199.7	-1,514.2	5,555.5	359.3	5,564.3	1.09	0.11	-1.09
11,865.0	88.30	358.40	6,202.9	-1,517.4	5,647.4	357.4	5,656.1	1.09	0.65	-0.87
11,958.0	89.80	359.60	6,204.5	-1,519.0	5,740.4	355.8	5,749.0	2.07	1.61	1.29
12,050.0	90.30	359.50	6,204.4	-1,518.9	5,832.4	355.1	5,840.9	0.55	0.54	-0.11
12,141.0	90.20	358.20	6,204.0	-1,518.5	5,923.4	353.2	5,931.8	1.43	-0.11	-1.43
12,234.0	89.80	355.90	6,204.0	-1,518.5	6,016.2	348.5	6,024.5	2.51	-0.43	-2.47
12,327.0	90.60	356.80	6,203.7	-1,518.2	6,109.0	342.5	6,117.0	1.29	0.86	0.97
12,418.0	90.30	358.90	6,202.9	-1,517.4	6,200.0	339.1	6,207.8	2.33	-0.33	2.31
12,511.0	91.90	0.50	6,201.2	-1,515.7	6,292.9	338.6	6,300.7	2.43	1.72	1.72
12,603.0	90.60	0.60	6,199.2	-1,513.7	6,384.9	339.5	6,392.6	1.42	-1.41	0.11
12,696.0	91.20	2.50	6,197.7	-1,512.2	6,477.9	342.0	6,485.6	2.14	0.65	2.04
12,789.0	88.80	1.90	6,197.7	-1,512.2	6,570.8	345.6	6,578.6	2.66	-2.58	-0.65
12,882.0	88.10	1.50	6,200.2	-1,514.7	6,663.7	348.4	6,671.6	0.87	-0.75	-0.43
12,975.0	87.70	0.90	6,203.6	-1,518.1	6,756.6	350.3	6,764.5	0.78	-0.43	-0.65
13,066.0	88.30	359.70	6,206.8	-1,521.3	6,847.6	350.8	6,855.4	1.47	0.66	-1.32
13,159.0	88.30	359.30	6,209.6	-1,524.1	6,940.5	350.0	6,948.3	0.43	0.00	-0.43
13,252.0	90.10	359.70	6,210.8	-1,525.3	7,033.5	349.2	7,041.2	1.98	1.94	0.43
13,345.0	91.00	359.00	6,210.0	-1,524.5	7,126.5	348.1	7,134.1	1.23	0.97	-0.75
13,438.0	89.80	357.10	6,209.3	-1,523.8	7,219.4	344.9	7,226.9	2.42	-1.29	-2.04
13,530.0	90.60	357.60	6,209.0	-1,523.5	7,311.3	340.7	7,318.6	1.03	0.87	0.54
13,622.0	89.60	356.00	6,208.8	-1,523.3	7,403.2	335.6	7,410.2	2.05	-1.09	-1.74
13,716.0	90.30	357.50	6,208.9	-1,523.4	7,497.0	330.2	7,503.9	1.76	0.74	1.60
13,809.0	91.30	0.70	6,207.6	-1,522.1	7,590.0	328.8	7,596.7	3.60	1.08	3.44
13,904.0	90.50	359.80	6,206.1	-1,520.6	7,685.0	329.2	7,691.7	1.27	-0.84	-0.95
13,998.0	89.80	0.70	6,205.9	-1,520.4	7,779.0	329.6	7,785.6	1.21	-0.74	0.96
14,093.0	89.40	0.70	6,206.5	-1,521.0	7,874.0	330.8	7,880.6	0.42	-0.42	0.00
14,189.0	91.90	3.30	6,205.4	-1,519.9	7,969.9	334.1	7,976.6	3.76	2.60	2.71
14,284.0	89.90	0.40	6,204.0	-1,518.5	8,064.8	337.2	8,071.6	3.71	-2.11	-3.05
14,379.0	89.80	359.90	6,204.2	-1,518.7	8,159.8	337.4	8,166.5	0.54	-0.11	-0.53
14,475.0	89.40	358.90	6,204.9	-1,519.4	8,255.8	336.4	8,262.4	1.12	-0.42	-1.04
14,569.0	89.40	359.70	6,205.9	-1,520.4	8,349.8	335.3	8,356.3	0.85	0.00	0.85
14,665.0	91.00	2.00	6,205.5	-1,520.0	8,445.8	336.7	8,452.3	2.92	1.67	2.40
14,760.0	89.40	2.40	6,205.2	-1,519.7	8,540.7	340.3	8,547.3	1.74	-1.68	0.42
14,857.0	87.70	1.70	6,207.6	-1,522.1	8,637.6	343.8	8,644.2	1.90	-1.75	-0.72
14,952.0	88.10	1.40	6,211.1	-1,525.6	8,732.5	346.4	8,739.2	0.53	0.42	-0.32
15,047.0	88.10	1.30	6,214.3	-1,528.8	8,827.4	348.6	8,834.1	0.11	0.00	-0.11
15,142.0	88.50	1.90	6,217.1	-1,531.6	8,922.3	351.3	8,929.1	0.76	0.42	0.63
15,237.0	88.30	0.20	6,219.7	-1,534.2	9,017.3	353.0	9,024.0	1.80	-0.21	-1.79
15,333.0	89.70	359.50	6,221.4	-1,535.9	9,113.3	352.7	9,120.0	1.63	1.46	-0.73
15,428.0	89.90	359.50	6,221.8	-1,536.3	9,208.3	351.9	9,214.9	0.21	0.21	0.00
15,524.0	90.20	359.50	6,221.7	-1,536.2	9,304.3	351.1	9,310.8	0.31	0.31	0.00
15,620.0	90.80	359.30	6,220.8	-1,535.3	9,400.3	350.1	9,406.7	0.66	0.62	-0.21

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PRONGHORN J24-15-10XRLNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Site:</b>	SE SW SEC. 15 T5N R61W 6th P.M.	<b>MD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Well:</b>	PRONGHORN J24-15-10XRLNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2015-014-25	<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)
15,714.0	91.70	359.00	6,218.8	-1,533.3	9,494.2	348.7	9,500.6	1.01	0.96	-0.32
15,809.0	91.00	0.10	6,216.5	-1,531.0	9,589.2	347.9	9,595.5	1.37	-0.74	1.16
15,905.0	90.20	0.40	6,215.5	-1,530.0	9,685.2	348.4	9,691.4	0.89	-0.83	0.31
15,958.0	90.20	0.40	6,215.4	-1,529.9	9,738.2	348.7	9,744.4	0.00	0.00	0.00
16,001.0	90.80	0.50	6,215.0	-1,529.5	9,781.2	349.1	9,787.4	1.41	1.40	0.23
<b>LAST SURVEY - APR 6, 2015</b>										
<b>16,109.0</b>	<b>92.10</b>	<b>1.00</b>	<b>6,212.2</b>	<b>-1,526.7</b>	<b>9,889.1</b>	<b>350.5</b>	<b>9,895.3</b>	<b>1.29</b>	<b>1.20</b>	<b>0.46</b>
<b>EXTRAPOLATION TO TD</b>										
<b>16,162.0</b>	<b>92.10</b>	<b>1.00</b>	<b>6,210.3</b>	<b>-1,524.8</b>	<b>9,942.1</b>	<b>351.4</b>	<b>9,948.3</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 PRONGHORN J24-15-10XRLNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Site:</b>	SE SW SEC. 15 T5N R61W 6th P.M.	<b>MD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Well:</b>	PRONGHORN J24-15-10XRLNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2015-014-25	<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
ABDN VERT PACKAF - survey misses target center by 1673.5usft at 13345.0usft MD (6210.0 TVD, 7126.5 N, 348.1 E) - Circle (radius 30.0)	0.00	0.00	6,850.5	7,169.7	1,893.6	1,396,380.94	3,364,055.01	40.414100	-104.192530
ABDN VERT PACKAF - survey misses target center by 1633.2usft at 6545.0usft MD (6172.2 TVD, 330.7 N, 388.0 E) - Circle (radius 30.0)	0.00	0.00	6,803.5	309.7	1,894.1	1,389,521.97	3,364,156.15	40.395270	-104.192530
ABDN VERT GALLOV - survey misses target center by 2827.2usft at 10563.5usft MD (6184.1 TVD, 4347.0 N, 345.2 E) - Circle (radius 30.0)	0.00	0.00	6,836.5	4,330.8	3,096.0	1,393,560.03	3,365,298.95	40.406307	-104.188213
EXIST VERT PRONG - survey misses target center by 692.7usft at 11960.2usft MD (6204.5 TVD, 5742.6 N, 355.8 E) - Circle (radius 30.0)	0.00	0.00	6,845.5	5,745.2	618.2	1,394,937.92	3,362,800.76	40.410190	-104.197110
EXIST VERT PRONG - survey misses target center by 1286.2usft at 14605.2usft MD (6206.0 TVD, 8386.0 N, 335.3 E) - Circle (radius 30.0)	0.00	0.00	6,870.5	8,404.7	-765.7	1,397,576.71	3,361,378.00	40.417490	-104.202080
KOP - PRONGHORN - survey misses target center by 12.7usft at 5692.1usft MD (5669.0 TVD, -259.0 N, 370.0 E) - Point	0.00	0.00	5,667.2	-246.4	369.8	1,388,943.57	3,362,640.27	40.393744	-104.198002
EXIST VERT WELD C - survey misses target center by 666.5usft at 9230.9usft MD (6182.0 TVD, 3014.7 N, 355.1 E) - Circle (radius 30.0)	0.00	0.00	6,841.5	3,009.2	451.2	1,392,199.88	3,362,673.88	40.402680	-104.197710
ABDN VERT DAVIS # - survey misses target center by 3012.5usft at 16057.0usft MD (6213.9 TVD, 9837.2 N, 349.7 E) - Circle (radius 30.0)	0.00	0.00	6,851.5	9,814.8	3,293.9	1,399,046.15	3,365,416.33	40.421360	-104.187500
7" ICP *NEW* - PRON - survey misses target center by 20.6usft at 6541.8usft MD (6171.9 TVD, 327.6 N, 388.0 E) - Point	0.00	0.00	6,170.5	327.7	367.5	1,389,517.55	3,362,629.55	40.395320	-104.198011
EXIST VERT PRONG - survey misses target center by 1736.0usft at 10691.3usft MD (6184.7 TVD, 4474.8 N, 346.6 E) - Circle (radius 30.0)	0.00	0.00	6,851.5	4,462.9	1,949.5	1,393,675.32	3,364,150.61	40.406670	-104.192330
BHL - PRONGHORN - survey misses target center by 55.2usft at 16162.0usft MD (6210.3 TVD, 9942.1 N, 351.4 E) - Point	0.00	0.00	6,163.5	9,960.3	328.5	1,399,148.15	3,362,449.31	40.421760	-104.198150
ABDN VERT WILDFC - survey misses target center by 2997.8usft at 13318.8usft MD (6210.4 TVD, 7100.3 N, 348.5 E) - Circle (radius 30.0)	0.00	0.00	6,851.5	7,139.6	3,276.7	1,396,371.14	3,365,438.38	40.414017	-104.187563
EXIST VERT PRONG - survey misses target center by 689.2usft at 9231.2usft MD (6182.0 TVD, 3015.1 N, 355.1 E) - Circle (radius 30.0)	0.00	0.00	6,864.5	3,009.2	451.2	1,392,199.88	3,362,673.88	40.402680	-104.197710
KOP - PRONGHORN - survey misses target center by 13.0usft at 5683.9usft MD (5660.7 TVD, -259.4 N, 369.9 E) - Point	0.00	0.00	5,660.2	-246.4	369.8	1,388,943.57	3,362,640.27	40.393744	-104.198002
ABDN VERT HENDEI - survey misses target center by 1351.4usft at 6766.9usft MD (6181.3 TVD, 552.1 N, 379.4 E) - Circle (radius 30.0)	0.00	0.00	6,826.5	483.5	-806.1	1,389,656.06	3,361,453.83	40.395747	-104.202224
EXIST VERT PRONG - survey misses target center by 2859.2usft at 8008.2usft MD (6184.4 TVD, 1792.4 N, 372.9 E) - Circle (radius 30.0)	0.00	0.00	6,840.5	1,759.8	3,155.7	1,390,990.34	3,365,396.30	40.399250	-104.188000
7" ICP *NEW* - PRON - survey misses target center by 22.1usft at 6540.8usft MD (6171.8 TVD, 326.5 N, 388.0 E) - Point	0.00	0.00	6,163.5	327.7	367.5	1,389,517.55	3,362,629.55	40.395320	-104.198011

# Survey Report



<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>Local Co-ordinate Reference:</b>	Well PRONGHORN J24-15-10XRLNC
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Site:</b>	SE SW SEC. 15 T5N R61W 6th P.M.	<b>MD Reference:</b>	KB @ 4685.5usft (CADE 25)
<b>Well:</b>	PRONGHORN J24-15-10XRLNC	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2015-014-25	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

BHL - PRONGHORN      0.00      0.00      6,170.5      9,960.3      328.5      1,399,148.15      3,362,449.31      40.421760      -104.198150  
 - survey misses target center by 49.4usft at 16162.0usft MD (6210.3 TVD, 9942.1 N, 351.4 E)  
 - Point

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
445.0	445.0	-0.4	-0.6	SURFACE CASING
5,653.0	5,629.9	-260.6	369.5	KOP
6,301.0	6,118.6	93.4	384.4	START OF TANGENT
6,407.0	6,148.5	194.9	388.2	END OF TANGENT
6,628.0	6,179.0	413.4	386.2	ICP
16,109.0	6,212.2	9,889.1	350.5	LAST SURVEY - APR 6, 2015
16,162.0	6,210.3	9,942.1	351.4	EXTRAPOLATION TO TD

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