

BONANZA CREEK ENERGY INC.

WELD COUNTY, COLORADO (NAD 83)

SW SE SEC. 36 T6N R62W 6th P.M.

**STATE WHITETAIL O-K-36HNB - Slot PROP HZ STATE
WHITETAIL O-K-36HNB**

13 June, 2014

Survey: FINAL SURVEYS





Project: WELD COUNTY, COLORADO (NAD 83)
Site: SW SE SEC. 36 T6N R62W 6th P.M.
Well: STATE WHITETAIL O-K-36HNB
Wellbore: JOB #: 2009-334
Design: FINAL SURVEYS

ANNOTATIONS

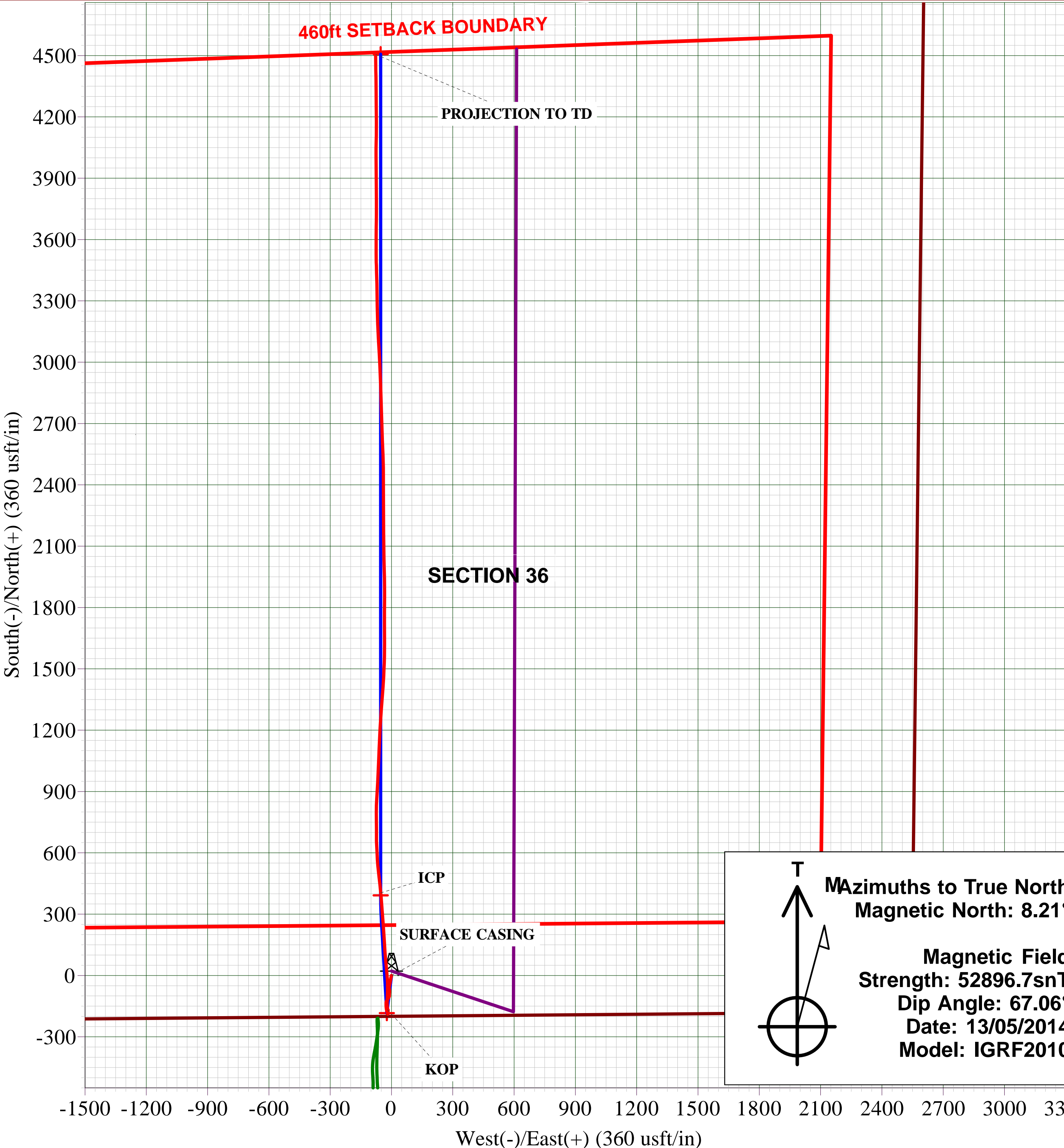
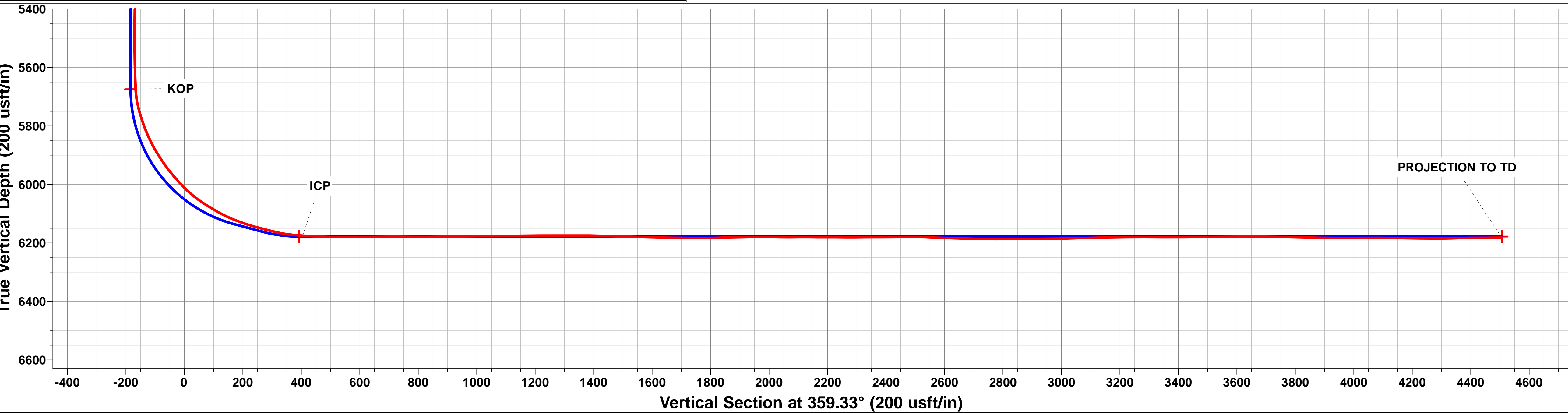
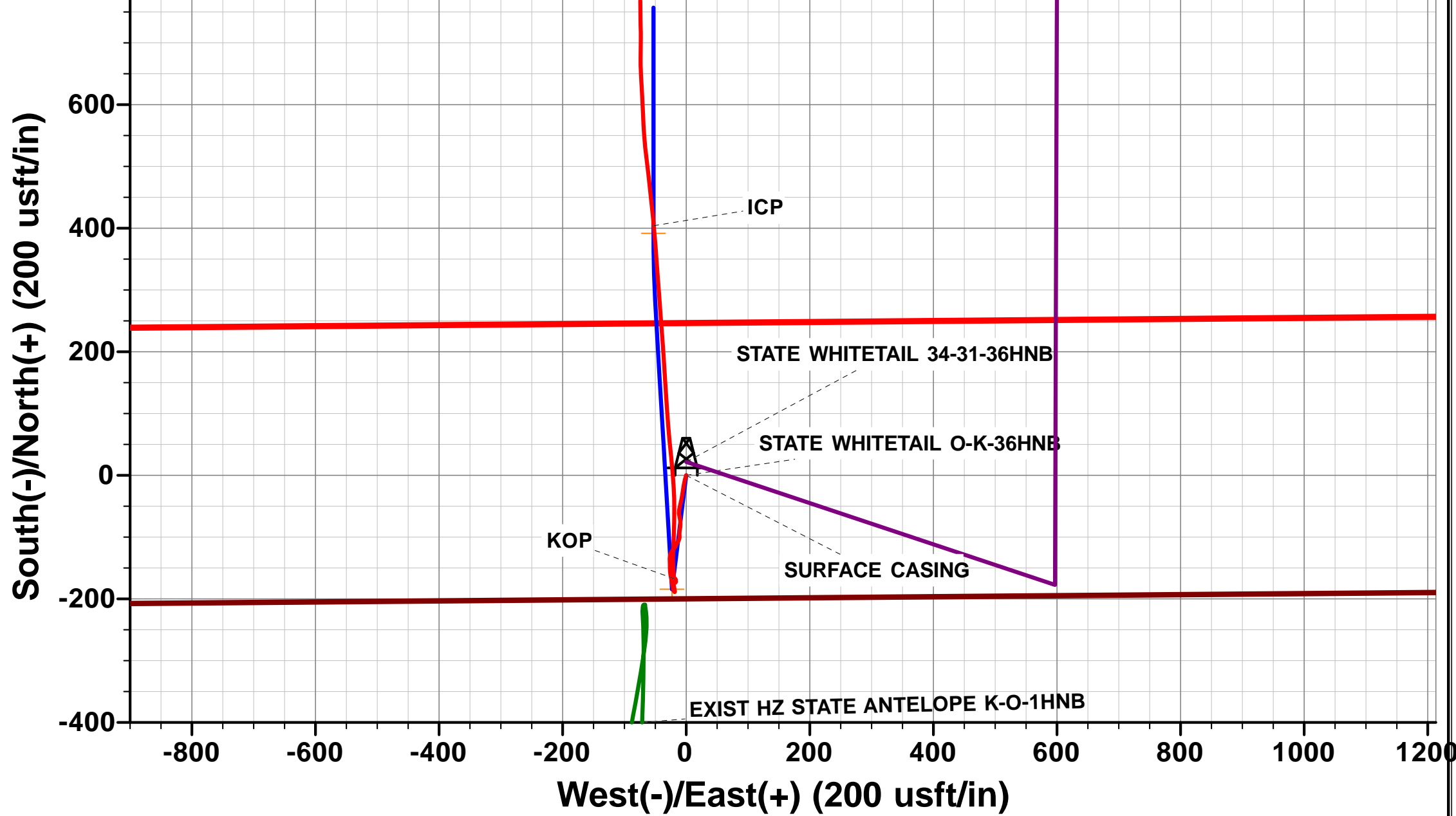
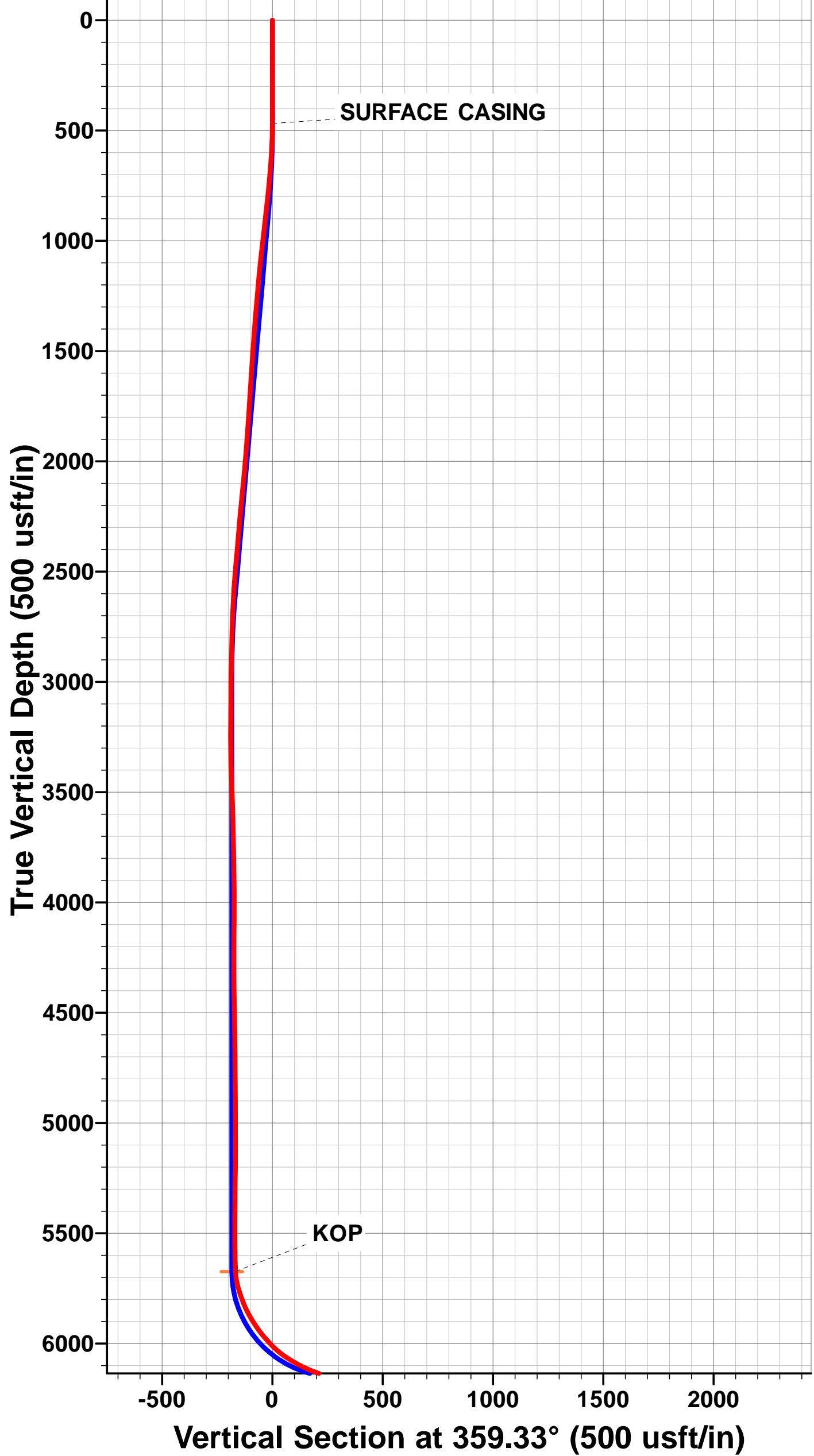
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation
468.0	468.0	0.00	0.00	0.0	0.0	0.0	0.0	SURFACE CASING
5673.2	5682.0	3.43	357.99	-167.1	-19.4	-166.9	235.9	KOP
6175.1	6513.0	86.25	354.95	404.1	-52.6	404.7	808.4	ICP
6181.7	10618.0	90.60	359.30	4458.0	-77.2	4458.6	4865.1	PROJECTION TO TD

PROPOSED LOCAL COORDINATES:

SHL: 200ft FSL & 2546ft FWL Sec 36
7" ICP *NEW*: 591.5ft FSL & 2602ft FWL Sec 36
BHL: 470ft FNL & 2655ft FWL Sec 36

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
KOP - STATE WHITETAIL O-K-36HNB	5674.3	-184.1	-22.9	40.437385	-104.271442	Point
7" ICP - STATE WHITETAIL O-K-36HNB *NEW*	6178.0	392.0	-52.9	40.438966	-104.271550	Point
BHL - STATE WHITETAIL O-K-36HNB	6178.0	4506.6	-52.9	40.450260	-104.271550	Point



Mazimuths to True North
Magnetic North: 8.21°
Magnetic Field
Strength: 52896.7snT
Dip Angle: 67.06°
Date: 13/05/2014
Model: IGRF2010

Survey Report



Company:	BONANZA CREEK ENERGY INC.	Local Co-ordinate Reference:	Well STATE WHITETAIL O-K-36HNB - Slot PROP HZ S
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4670.0usft (CADE 21)
Site:	SW SE SEC. 36 T6N R62W 6th P.M.	MD Reference:	KB @ 4670.0usft (CADE 21)
Well:	STATE WHITETAIL O-K-36HNB	North Reference:	True
Wellbore:	JOB #: 2009-334	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Project	WELD COUNTY, COLORADO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	SW SE SEC. 36 T6N R62W 6th P.M.				
Site Position:		Northing:	1,404,732.91 usft	Latitude:	40.437890
From:	Lat/Long	Easting:	3,341,986.77 usft	Longitude:	-104.271360
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000 ft	Grid Convergence:	0.79 °

Well	STATE WHITETAIL O-K-36HNB - Slot PROP HZ STATE WHITETAIL O-K-36HNB					
Well Position	+N/-S	0.0 usft	Northing:	1,404,732.91 usft	Latitude:	40.437890
	+E/-W	0.0 usft	Easting:	3,341,986.77 usft	Longitude:	-104.271360
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,653.0 usft

Wellbore	JOB #: 2009-334				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	13/05/2014	8.21	67.06	52,897

Design	FINAL SURVEYS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)		+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0		0.0	0.0	359.33

Survey Program	Date	13/06/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
478.0	10,618.0	FINAL SURVEYS (JOB #: 2009-334)	MWD	MWD - Standard	

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)
0.0	0.00	0.00	0.0	4,670.0	0.0	0.0	0.0	0.00	0.00	0.00
SURFACE CASING										
468.0	0.00	0.00	468.0	4,202.0	0.0	0.0	0.0	0.00	0.00	0.00
478.0	0.00	0.00	478.0	4,192.0	0.0	0.0	0.0	0.00	0.00	0.00
497.7	0.70	232.80	497.7	4,172.3	-0.1	-0.1	-0.1	3.55	3.55	0.00
559.1	2.40	187.80	559.0	4,111.0	-1.6	-0.6	-1.6	3.21	2.77	-73.35
620.2	3.70	200.30	620.1	4,049.9	-4.7	-1.4	-4.7	2.38	2.13	20.45
681.7	5.20	190.80	681.4	3,988.6	-9.3	-2.6	-9.3	2.71	2.44	-15.44
743.9	5.80	189.20	743.3	3,926.7	-15.2	-3.7	-15.1	1.00	0.96	-2.57
805.9	6.20	189.00	805.0	3,865.0	-21.6	-4.7	-21.5	0.65	0.64	-0.32
867.3	6.40	191.30	866.1	3,803.9	-28.2	-5.9	-28.1	0.52	0.33	3.75
928.7	6.60	190.50	927.0	3,743.0	-35.0	-7.2	-34.9	0.36	0.33	-1.30
990.2	6.80	191.80	988.1	3,681.9	-42.1	-8.6	-42.0	0.41	0.33	2.11

Survey Report



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Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4670.0usft (CADE 21)
Site:	SW SE SEC. 36 T6N R62W 6th P.M.	MD Reference:	KB @ 4670.0usft (CADE 21)
Well:	STATE WHITETAIL O-K-36HNB	North Reference:	True
Wellbore:	JOB #: 2009-334	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	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)
1,052.6	6.10	191.10	1,050.1	3,619.9	-48.9	-10.0	-48.8	1.13	-1.12	-1.12
1,113.5	6.00	192.10	1,110.6	3,559.4	-55.2	-11.3	-55.1	0.24	-0.16	1.64
1,174.9	5.40	174.30	1,171.7	3,498.3	-61.2	-11.7	-61.1	3.03	-0.98	-29.00
1,237.3	5.20	167.40	1,233.9	3,436.1	-66.9	-10.7	-66.8	1.07	-0.32	-11.05
1,299.0	5.40	170.00	1,295.3	3,374.7	-72.5	-9.6	-72.4	0.51	0.32	4.22
1,360.3	4.80	181.70	1,356.4	3,313.6	-77.9	-9.2	-77.8	1.95	-0.98	19.06
1,421.5	4.30	187.00	1,417.4	3,252.6	-82.7	-9.6	-82.6	1.07	-0.82	8.67
1,482.9	3.70	187.60	1,478.7	3,191.3	-87.0	-10.1	-86.9	0.98	-0.98	0.98
1,544.0	3.40	189.10	1,539.6	3,130.4	-90.7	-10.7	-90.6	0.51	-0.49	2.46
1,605.7	3.90	178.00	1,601.2	3,068.8	-94.6	-10.9	-94.5	1.40	0.81	-17.97
1,667.4	3.90	175.60	1,662.8	3,007.2	-98.8	-10.6	-98.7	0.26	0.00	-3.89
1,729.6	4.40	200.30	1,724.8	2,945.2	-103.2	-11.3	-103.0	2.96	0.80	39.70
1,791.2	4.20	210.50	1,786.3	2,883.7	-107.3	-13.3	-107.2	1.28	-0.32	16.56
1,853.7	4.70	209.70	1,848.5	2,821.5	-111.5	-15.7	-111.3	0.81	0.80	-1.28
1,915.4	4.90	208.40	1,910.1	2,759.9	-116.0	-18.2	-115.8	0.37	0.32	-2.10
1,977.7	5.50	221.40	1,972.0	2,698.0	-120.6	-21.4	-120.4	2.12	0.96	20.89
2,041.8	5.50	206.30	2,035.9	2,634.1	-125.7	-24.8	-125.4	2.25	0.00	-23.53
2,106.0	6.10	183.40	2,099.8	2,570.2	-131.8	-26.4	-131.5	3.70	0.93	-35.68
2,169.5	5.70	180.50	2,162.9	2,507.1	-138.4	-26.6	-138.0	0.79	-0.63	-4.57
2,233.0	5.10	178.30	2,226.1	2,443.9	-144.3	-26.6	-144.0	1.00	-0.95	-3.47
2,295.6	5.20	178.40	2,288.5	2,381.5	-150.0	-26.4	-149.6	0.16	0.16	0.16
2,359.8	5.00	175.30	2,352.5	2,317.5	-155.7	-26.1	-155.3	0.53	-0.31	-4.83
2,423.9	4.90	170.80	2,416.3	2,253.7	-161.1	-25.4	-160.8	0.63	-0.16	-7.02
2,487.1	4.80	169.20	2,479.3	2,190.7	-166.4	-24.5	-166.1	0.27	-0.16	-2.53
2,551.2	4.60	170.90	2,543.2	2,126.8	-171.6	-23.6	-171.3	0.38	-0.31	2.65
2,614.3	3.30	166.10	2,606.1	2,063.9	-175.8	-22.8	-175.6	2.12	-2.06	-7.61
2,678.6	2.90	162.00	2,670.3	1,999.7	-179.2	-21.8	-178.9	0.71	-0.62	-6.38
2,742.2	1.80	175.30	2,733.9	1,936.1	-181.7	-21.2	-181.4	1.92	-1.73	20.90
2,805.0	1.50	179.40	2,796.6	1,873.4	-183.5	-21.1	-183.2	0.51	-0.48	6.53
2,868.8	1.10	167.20	2,860.4	1,809.6	-184.9	-21.0	-184.7	0.76	-0.63	-19.12
2,932.7	1.00	155.90	2,924.3	1,745.7	-186.0	-20.6	-185.8	0.36	-0.16	-17.68
2,996.9	0.90	133.10	2,988.5	1,681.5	-186.9	-20.0	-186.7	0.60	-0.16	-35.52
3,060.0	0.80	131.80	3,051.6	1,618.4	-187.5	-19.3	-187.3	0.16	-0.16	-2.06
3,123.9	0.40	133.50	3,115.5	1,554.5	-188.0	-18.9	-187.8	0.63	-0.63	2.66
3,187.7	0.40	164.20	3,179.2	1,490.8	-188.4	-18.6	-188.1	0.33	0.00	48.17
3,251.8	0.60	185.60	3,243.4	1,426.6	-188.9	-18.6	-188.7	0.42	0.31	33.35
3,314.6	1.00	10.00	3,306.2	1,363.8	-188.7	-18.5	-188.5	2.55	0.64	-279.71
3,377.8	1.40	353.40	3,369.3	1,300.7	-187.4	-18.5	-187.2	0.83	0.63	-26.29
3,441.0	1.90	354.30	3,432.5	1,237.5	-185.6	-18.7	-185.3	0.79	0.79	1.42
3,504.6	2.10	346.20	3,496.1	1,173.9	-183.4	-19.1	-183.2	0.54	0.31	-12.73
3,568.7	2.40	353.50	3,560.2	1,109.8	-180.9	-19.5	-180.7	0.65	0.47	11.38
3,633.0	1.20	343.70	3,624.4	1,045.6	-178.9	-19.9	-178.7	1.92	-1.87	-15.25
3,696.8	1.30	331.10	3,688.2	981.8	-177.7	-20.4	-177.4	0.46	0.16	-19.74
3,761.0	1.10	328.90	3,752.3	917.7	-176.5	-21.1	-176.2	0.32	-0.31	-3.43
3,824.5	1.30	327.60	3,815.9	854.1	-175.4	-21.8	-175.1	0.32	0.31	-2.04
3,888.1	1.10	327.90	3,879.5	790.5	-174.2	-22.5	-174.0	0.31	-0.31	0.47
3,951.6	0.20	33.50	3,942.9	727.1	-173.6	-22.8	-173.3	1.63	-1.42	103.37
4,016.3	0.30	110.40	4,007.7	662.3	-173.6	-22.5	-173.3	0.50	0.15	118.80
4,080.3	0.50	100.10	4,071.6	598.4	-173.7	-22.1	-173.4	0.33	0.31	-16.10
4,143.3	0.80	126.20	4,134.6	535.4	-174.0	-21.5	-173.7	0.66	0.48	41.44
4,206.6	0.80	102.70	4,198.0	472.0	-174.4	-20.7	-174.1	0.51	0.00	-37.10
4,269.8	0.60	89.90	4,261.1	408.9	-174.5	-19.9	-174.2	0.40	-0.32	-20.27
4,332.9	0.80	89.10	4,324.3	345.7	-174.5	-19.2	-174.2	0.32	0.32	-1.27

Survey Report



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Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4670.0usft (CADE 21)
Site:	SW SE SEC. 36 T6N R62W 6th P.M.	MD Reference:	KB @ 4670.0usft (CADE 21)
Well:	STATE WHITETAIL O-K-36HNB	North Reference:	True
Wellbore:	JOB #: 2009-334	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	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)
4,394.5	1.10	54.10	4,385.8	284.2	-174.1	-18.3	-173.9	1.04	0.49	-56.85
4,457.5	1.60	47.20	4,448.8	221.2	-173.1	-17.1	-172.9	0.83	0.79	-10.95
4,520.8	1.00	357.80	4,512.1	157.9	-172.0	-16.5	-171.8	1.92	-0.95	-78.08
4,584.1	1.20	341.30	4,575.4	94.6	-170.8	-16.7	-170.6	0.59	0.32	-26.06
4,647.1	0.60	13.70	4,638.3	31.7	-169.9	-16.9	-169.7	1.21	-0.95	51.44
4,709.9	0.60	29.80	4,701.2	-31.2	-169.3	-16.6	-169.1	0.27	0.00	25.62
4,771.4	0.30	268.10	4,762.6	-92.6	-169.0	-16.6	-168.8	1.30	-0.49	-197.98
4,834.9	0.60	284.90	4,826.2	-156.2	-168.9	-17.1	-168.7	0.51	0.47	26.45
4,898.6	0.50	327.90	4,889.9	-219.9	-168.6	-17.6	-168.4	0.65	-0.16	67.45
4,962.9	0.40	346.30	4,954.2	-284.2	-168.1	-17.8	-167.9	0.27	-0.16	28.62
5,027.2	1.00	21.50	5,018.4	-348.4	-167.4	-17.6	-167.2	1.11	0.93	54.79
5,091.6	0.70	243.00	5,082.8	-412.8	-167.1	-17.8	-166.8	2.47	-0.47	-215.06
5,153.6	0.20	211.40	5,144.8	-474.8	-167.3	-18.2	-167.1	0.87	-0.81	-50.94
5,217.4	0.90	206.10	5,208.6	-538.6	-167.9	-18.4	-167.6	1.10	1.10	-8.31
5,281.0	0.90	196.60	5,272.3	-602.3	-168.8	-18.8	-168.6	0.23	0.00	-14.92
5,344.0	0.40	180.20	5,335.2	-665.2	-169.5	-19.0	-169.2	0.84	-0.79	-26.06
5,407.1	0.60	193.60	5,398.4	-728.4	-170.0	-19.0	-169.8	0.36	0.32	21.21
5,470.7	0.30	194.20	5,462.0	-792.0	-170.5	-19.1	-170.3	0.47	-0.47	0.94
5,534.3	0.40	317.60	5,525.6	-855.6	-170.5	-19.3	-170.3	0.97	0.16	194.03
5,597.3	1.30	348.70	5,588.5	-918.5	-169.6	-19.6	-169.4	1.56	1.43	49.37
5,629.4	1.50	8.20	5,620.6	-950.6	-168.9	-19.6	-168.6	1.60	0.62	60.80
5,661.6	1.70	15.30	5,652.8	-982.8	-168.0	-19.5	-167.8	0.87	0.62	22.02
KOP										
5,682.0	3.43	357.99	5,673.2	-1,003.2	-167.1	-19.4	-166.9	9.20	8.49	-84.96
5,694.0	4.50	354.20	5,685.1	-1,015.1	-166.3	-19.5	-166.0	9.20	8.94	-31.67
5,725.8	10.10	352.40	5,716.7	-1,046.7	-162.3	-19.9	-162.0	17.62	17.60	-5.66
5,757.3	15.80	355.40	5,747.3	-1,077.3	-155.2	-20.7	-155.0	18.23	18.11	9.53
5,789.7	18.60	358.00	5,778.3	-1,108.3	-145.7	-21.2	-145.4	8.94	8.63	8.01
5,821.3	20.50	359.00	5,808.1	-1,138.1	-135.1	-21.5	-134.8	6.10	6.01	3.16
5,853.7	24.70	2.80	5,838.0	-1,168.0	-122.7	-21.2	-122.4	13.75	13.00	11.76
5,885.1	28.30	3.50	5,866.1	-1,196.1	-108.7	-20.5	-108.4	11.48	11.44	2.22
5,917.5	31.40	1.20	5,894.2	-1,224.2	-92.5	-19.8	-92.3	10.20	9.57	-7.10
5,948.7	34.50	0.70	5,920.4	-1,250.4	-75.6	-19.5	-75.3	9.97	9.93	-1.60
5,980.6	37.40	0.50	5,946.2	-1,276.2	-56.9	-19.3	-56.6	9.10	9.09	-0.63
6,012.1	40.00	358.20	5,970.8	-1,300.8	-37.2	-19.6	-36.9	9.43	8.25	-7.30
6,044.2	42.50	356.70	5,995.0	-1,325.0	-16.0	-20.5	-15.8	8.38	7.79	-4.67
6,075.8	46.30	355.00	6,017.5	-1,347.5	6.0	-22.1	6.2	12.64	12.06	-5.40
6,107.8	51.10	354.30	6,038.6	-1,368.6	29.9	-24.4	30.2	15.09	15.00	-2.19
6,139.9	55.50	354.40	6,057.8	-1,387.8	55.6	-26.9	55.9	13.67	13.67	0.31
6,172.3	58.40	355.30	6,075.5	-1,405.5	82.6	-29.3	82.9	9.26	8.96	2.78
6,204.4	61.00	356.20	6,091.7	-1,421.7	110.2	-31.4	110.6	8.45	8.09	2.80
6,236.1	63.40	356.50	6,106.4	-1,436.4	138.2	-33.2	138.5	7.64	7.59	0.95
6,267.4	67.70	356.80	6,119.4	-1,449.4	166.6	-34.8	167.0	13.75	13.72	0.96
6,298.9	70.70	356.20	6,130.6	-1,460.6	196.0	-36.6	196.4	9.69	9.52	-1.90
6,330.7	74.00	355.40	6,140.2	-1,470.2	226.2	-38.9	226.7	10.65	10.37	-2.51
6,362.4	75.20	355.60	6,148.6	-1,478.6	256.7	-41.3	257.2	3.84	3.79	0.63
6,394.0	75.80	356.10	6,156.5	-1,486.5	287.2	-43.5	287.7	2.44	1.90	1.58
6,425.7	76.90	355.80	6,164.0	-1,494.0	317.9	-45.6	318.4	3.60	3.48	-0.95
6,457.4	81.80	355.30	6,169.9	-1,499.9	349.0	-48.1	349.5	15.51	15.43	-1.57
6,482.0	85.00	355.60	6,172.7	-1,502.7	373.3	-50.0	373.9	13.08	13.02	1.22
ICP										
6,513.0	86.25	354.95	6,175.1	-1,505.1	404.1	-52.6	404.7	4.53	4.02	-2.10
6,539.2	87.30	354.40	6,176.5	-1,506.5	430.2	-55.0	430.8	4.53	4.02	-2.09

Survey Report



Company:	BONANZA CREEK ENERGY INC.	Local Co-ordinate Reference:	Well STATE WHITETAIL O-K-36HNB - Slot PROP HZ S
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4670.0usft (CADE 21)
Site:	SW SE SEC. 36 T6N R62W 6th P.M.	MD Reference:	KB @ 4670.0usft (CADE 21)
Well:	STATE WHITETAIL O-K-36HNB	North Reference:	True
Wellbore:	JOB #: 2009-334	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	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)
6,570.3	87.30	353.20	6,178.0	-1,508.0	461.0	-58.3	461.7	3.86	0.00	-3.87
6,601.1	87.40	353.40	6,179.4	-1,509.4	491.6	-61.9	492.3	0.73	0.32	0.65
6,631.3	89.40	353.60	6,180.3	-1,510.3	521.6	-65.3	522.3	6.65	6.62	0.66
6,661.9	90.30	356.00	6,180.3	-1,510.3	552.1	-68.1	552.9	8.37	2.94	7.83
6,693.0	90.90	357.80	6,180.0	-1,510.0	583.2	-69.8	584.0	6.09	1.93	5.78
6,724.1	90.20	357.00	6,179.7	-1,509.7	614.3	-71.2	615.1	3.42	-2.25	-2.57
6,754.7	90.10	356.50	6,179.6	-1,509.6	644.8	-72.9	645.6	1.67	-0.33	-1.63
6,785.7	91.20	0.80	6,179.3	-1,509.3	675.8	-73.7	676.6	14.33	3.55	13.88
6,817.0	90.80	0.00	6,178.7	-1,508.7	707.0	-73.5	707.8	2.86	-1.28	-2.56
6,847.9	88.90	358.70	6,178.8	-1,508.8	737.9	-73.8	738.8	7.44	-6.14	-4.20
6,878.5	89.20	359.30	6,179.3	-1,509.3	768.6	-74.3	769.4	2.19	0.98	1.96
6,910.7	89.90	0.80	6,179.6	-1,509.6	800.7	-74.3	801.5	5.15	2.18	4.67
6,941.8	90.50	1.50	6,179.5	-1,509.5	831.8	-73.7	832.6	2.96	1.93	2.25
6,972.8	91.00	3.40	6,179.1	-1,509.1	862.7	-72.4	863.5	6.34	1.61	6.13
7,003.6	91.30	3.30	6,178.5	-1,508.5	893.5	-70.6	894.3	1.03	0.97	-0.32
7,034.2	91.80	3.50	6,177.6	-1,507.6	924.1	-68.7	924.8	1.76	1.63	0.65
7,065.6	90.20	2.40	6,177.1	-1,507.1	955.4	-67.1	956.2	6.18	-5.09	-3.50
7,097.4	90.10	2.60	6,177.0	-1,507.0	987.2	-65.7	987.9	0.70	-0.31	0.63
7,129.2	90.40	2.80	6,176.9	-1,506.9	1,019.0	-64.2	1,019.6	1.13	0.94	0.63
7,161.2	90.40	2.30	6,176.6	-1,506.6	1,050.9	-62.8	1,051.6	1.56	0.00	-1.56
7,192.7	90.50	2.50	6,176.4	-1,506.4	1,082.4	-61.5	1,083.1	0.71	0.32	0.63
7,224.6	90.60	2.50	6,176.1	-1,506.1	1,114.3	-60.1	1,114.9	0.31	0.31	0.00
7,256.0	90.80	2.30	6,175.7	-1,505.7	1,145.7	-58.8	1,146.3	0.90	0.64	-0.64
7,288.1	91.10	2.60	6,175.2	-1,505.2	1,177.7	-57.4	1,178.3	1.32	0.94	0.94
7,320.3	90.00	3.60	6,174.9	-1,504.9	1,209.8	-55.7	1,210.4	4.62	-3.42	3.11
7,352.5	89.90	3.50	6,174.9	-1,504.9	1,242.0	-53.7	1,242.5	0.44	-0.31	-0.31
7,384.1	90.20	4.00	6,174.9	-1,504.9	1,273.5	-51.6	1,274.0	1.85	0.95	1.58
7,415.9	89.80	3.90	6,174.9	-1,504.9	1,305.2	-49.4	1,305.7	1.30	-1.26	-0.31
7,447.8	90.00	4.20	6,174.9	-1,504.9	1,337.1	-47.2	1,337.5	1.13	0.63	0.94
7,480.4	90.20	4.40	6,174.9	-1,504.9	1,369.6	-44.7	1,370.0	0.87	0.61	0.61
7,511.9	88.70	4.30	6,175.2	-1,505.2	1,400.9	-42.4	1,401.3	4.78	-4.76	-0.32
7,543.5	88.30	4.00	6,176.0	-1,506.0	1,432.5	-40.1	1,432.8	1.58	-1.27	-0.95
7,575.8	88.50	2.80	6,176.9	-1,506.9	1,464.7	-38.1	1,465.0	3.77	0.62	-3.72
7,607.8	88.50	2.50	6,177.7	-1,507.7	1,496.7	-36.7	1,497.0	0.94	0.00	-0.94
7,639.4	87.80	1.70	6,178.7	-1,508.7	1,528.3	-35.5	1,528.6	3.36	-2.21	-2.53
7,671.7	87.70	1.30	6,180.0	-1,510.0	1,560.5	-34.7	1,560.8	1.28	-0.31	-1.24
7,703.9	89.00	0.20	6,180.9	-1,510.9	1,592.7	-34.2	1,593.0	5.29	4.04	-3.42
7,735.4	88.90	359.60	6,181.5	-1,511.5	1,624.2	-34.3	1,624.5	1.93	-0.32	-1.90
7,766.5	89.10	0.00	6,182.1	-1,512.1	1,655.3	-34.4	1,655.6	1.44	0.64	1.29
7,798.6	89.30	359.90	6,182.5	-1,512.5	1,687.3	-34.4	1,687.6	0.70	0.62	-0.31
7,830.4	89.20	359.60	6,182.9	-1,512.9	1,719.1	-34.6	1,719.4	0.99	-0.31	-0.94
7,862.2	89.60	0.00	6,183.3	-1,513.3	1,751.0	-34.7	1,751.3	1.77	1.25	1.25
7,894.6	91.00	0.60	6,183.1	-1,513.1	1,783.4	-34.5	1,783.7	4.70	4.32	1.85
7,926.8	91.30	0.80	6,182.4	-1,512.4	1,815.5	-34.1	1,815.8	1.12	0.93	0.62
7,959.1	91.40	0.40	6,181.7	-1,511.7	1,847.9	-33.8	1,848.1	1.27	0.31	-1.24
7,991.0	90.70	359.40	6,181.1	-1,511.1	1,879.8	-33.8	1,880.0	3.82	-2.19	-3.13
8,022.4	91.00	359.30	6,180.6	-1,510.6	1,911.2	-34.2	1,911.4	1.01	0.96	-0.32
8,054.8	90.60	358.90	6,180.2	-1,510.2	1,943.5	-34.7	1,943.8	1.75	-1.23	-1.23
8,087.1	90.30	358.50	6,179.9	-1,509.9	1,975.8	-35.4	1,976.1	1.55	-0.93	-1.24
8,118.8	88.80	358.60	6,180.2	-1,510.2	2,007.5	-36.2	2,007.8	4.73	-4.72	0.31
8,150.8	89.40	359.30	6,180.7	-1,510.7	2,039.5	-36.8	2,039.8	2.88	1.88	2.19
8,183.0	90.10	359.20	6,180.8	-1,510.8	2,071.6	-37.2	2,071.9	2.20	2.18	-0.31
8,214.3	90.80	359.60	6,180.6	-1,510.6	2,103.0	-37.6	2,103.3	2.57	2.23	1.28

Survey Report



Company:	BONANZA CREEK ENERGY INC.	Local Co-ordinate Reference:	Well STATE WHITETAIL O-K-36HNB - Slot PROP HZ S
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4670.0usft (CADE 21)
Site:	SW SE SEC. 36 T6N R62W 6th P.M.	MD Reference:	KB @ 4670.0usft (CADE 21)
Well:	STATE WHITETAIL O-K-36HNB	North Reference:	True
Wellbore:	JOB #: 2009-334	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	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)
8,245.9	89.10	358.50	6,180.6	-1,510.6	2,134.6	-38.1	2,134.9	6.41	-5.38	-3.48
8,277.4	89.60	359.30	6,181.0	-1,511.0	2,166.1	-38.7	2,166.4	3.00	1.59	2.54
8,308.8	90.40	359.90	6,181.0	-1,511.0	2,197.5	-38.9	2,197.8	3.18	2.55	1.91
8,341.1	89.50	359.30	6,181.0	-1,511.0	2,229.7	-39.1	2,230.1	3.35	-2.79	-1.86
8,372.7	90.20	359.70	6,181.1	-1,511.1	2,261.4	-39.4	2,261.7	2.55	2.21	1.26
8,404.4	89.90	0.00	6,181.0	-1,511.0	2,293.0	-39.5	2,293.3	1.34	-0.95	0.95
8,436.0	90.70	0.30	6,180.9	-1,510.9	2,324.7	-39.4	2,325.0	2.70	2.53	0.95
8,467.6	89.80	359.80	6,180.7	-1,510.7	2,356.3	-39.4	2,356.6	3.26	-2.85	-1.58
8,499.3	90.30	0.10	6,180.7	-1,510.7	2,387.9	-39.4	2,388.2	1.84	1.58	0.95
8,531.2	90.20	359.80	6,180.6	-1,510.6	2,419.8	-39.5	2,420.1	0.99	-0.31	-0.94
8,563.4	90.90	359.70	6,180.3	-1,510.3	2,452.1	-39.6	2,452.4	2.19	2.17	-0.31
8,595.2	90.10	358.70	6,180.0	-1,510.0	2,483.9	-40.0	2,484.2	4.03	-2.51	-3.14
8,627.6	89.10	358.30	6,180.2	-1,510.2	2,516.3	-40.9	2,516.6	3.32	-3.09	-1.23
8,659.2	87.90	358.00	6,181.0	-1,511.0	2,547.8	-41.9	2,548.1	3.92	-3.80	-0.95
8,691.0	88.00	357.90	6,182.2	-1,512.2	2,579.6	-43.0	2,579.9	0.44	0.31	-0.31
8,722.6	88.30	358.00	6,183.2	-1,513.2	2,611.2	-44.2	2,611.5	1.00	0.95	0.32
8,754.3	88.20	358.00	6,184.2	-1,514.2	2,642.8	-45.3	2,643.1	0.32	-0.32	0.00
8,785.9	88.00	357.30	6,185.2	-1,515.2	2,674.4	-46.6	2,674.7	2.30	-0.63	-2.21
8,818.2	89.30	357.30	6,186.0	-1,516.0	2,706.6	-48.1	2,707.0	4.02	4.02	0.00
8,850.6	89.40	358.80	6,186.3	-1,516.3	2,739.0	-49.2	2,739.4	4.65	0.31	4.64
8,882.7	89.80	358.70	6,186.6	-1,516.6	2,771.1	-49.9	2,771.5	1.28	1.24	-0.31
8,915.1	90.30	359.20	6,186.5	-1,516.5	2,803.5	-50.5	2,803.9	2.19	1.55	1.55
8,947.5	90.40	358.50	6,186.3	-1,516.3	2,835.8	-51.1	2,836.2	2.18	0.31	-2.16
8,979.0	90.10	358.00	6,186.2	-1,516.2	2,867.4	-52.1	2,867.8	1.85	-0.95	-1.58
9,010.6	90.10	357.70	6,186.1	-1,516.1	2,899.0	-53.3	2,899.4	0.95	0.00	-0.95
9,042.3	90.60	357.30	6,185.9	-1,515.9	2,930.6	-54.7	2,931.0	2.02	1.58	-1.26
9,074.6	90.70	357.20	6,185.6	-1,515.6	2,962.9	-56.2	2,963.4	0.44	0.31	-0.31
9,106.5	91.10	357.20	6,185.1	-1,515.1	2,994.7	-57.8	2,995.2	1.26	1.26	0.00
9,138.2	91.30	357.00	6,184.4	-1,514.4	3,026.3	-59.4	3,026.8	0.89	0.63	-0.63
9,169.6	91.60	357.00	6,183.6	-1,513.6	3,057.7	-61.0	3,058.2	0.95	0.95	0.00
9,201.4	91.80	356.80	6,182.7	-1,512.7	3,089.5	-62.7	3,090.0	0.89	0.63	-0.63
9,233.7	90.70	357.20	6,182.0	-1,512.0	3,121.7	-64.4	3,122.3	3.62	-3.40	1.24
9,266.1	90.70	357.00	6,181.6	-1,511.6	3,154.1	-66.1	3,154.6	0.62	0.00	-0.62
9,297.5	90.70	358.10	6,181.2	-1,511.2	3,185.4	-67.4	3,186.0	3.50	0.00	3.50
9,329.2	90.60	357.80	6,180.8	-1,510.8	3,217.1	-68.5	3,217.6	1.00	-0.32	-0.95
9,360.8	90.60	358.80	6,180.5	-1,510.5	3,248.7	-69.5	3,249.3	3.16	0.00	3.16
9,392.8	89.80	359.60	6,180.4	-1,510.4	3,280.7	-69.9	3,281.3	3.53	-2.50	2.50
9,424.4	89.80	359.30	6,180.5	-1,510.5	3,312.3	-70.2	3,312.9	0.95	0.00	-0.95
9,456.3	89.60	358.80	6,180.7	-1,510.7	3,344.2	-70.8	3,344.8	1.69	-0.63	-1.57
9,488.5	90.00	358.50	6,180.8	-1,510.8	3,376.3	-71.5	3,376.9	1.55	1.24	-0.93
9,520.7	90.50	358.90	6,180.6	-1,510.6	3,408.6	-72.3	3,409.2	1.99	1.55	1.24
9,552.4	90.40	358.50	6,180.4	-1,510.4	3,440.2	-73.0	3,440.8	1.30	-0.32	-1.26
9,584.9	90.60	357.90	6,180.1	-1,510.1	3,472.7	-74.0	3,473.3	1.95	0.62	-1.85
9,616.5	90.50	359.40	6,179.8	-1,509.8	3,504.3	-74.7	3,504.9	4.75	-0.32	4.74
9,646.3	90.60	359.20	6,179.5	-1,509.5	3,534.1	-75.1	3,534.7	0.75	0.34	-0.67
9,678.2	90.30	0.20	6,179.3	-1,509.3	3,566.0	-75.3	3,566.6	3.27	-0.94	3.13
9,710.3	90.70	0.60	6,179.0	-1,509.0	3,598.2	-75.0	3,598.8	1.76	1.24	1.24
9,742.3	90.70	0.00	6,178.6	-1,508.6	3,630.1	-74.9	3,630.7	1.88	0.00	-1.88
9,774.5	89.60	0.90	6,178.5	-1,508.5	3,662.4	-74.6	3,663.0	4.40	-3.41	2.79
9,806.0	89.60	0.60	6,178.7	-1,508.7	3,693.8	-74.2	3,694.4	0.95	0.00	-0.95
9,838.2	88.70	0.30	6,179.2	-1,509.2	3,726.0	-74.0	3,726.6	2.94	-2.79	-0.93
9,870.1	88.60	359.90	6,180.0	-1,510.0	3,757.9	-73.9	3,758.5	1.29	-0.31	-1.25
9,901.8	88.90	359.90	6,180.7	-1,510.7	3,789.5	-74.0	3,790.1	0.95	0.95	0.00

Survey Report



Company:	BONANZA CREEK ENERGY INC.	Local Co-ordinate Reference:	Well STATE WHITETAIL O-K-36HNB - Slot PROP HZ S
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4670.0usft (CADE 21)
Site:	SW SE SEC. 36 T6N R62W 6th P.M.	MD Reference:	KB @ 4670.0usft (CADE 21)
Well:	STATE WHITETAIL O-K-36HNB	North Reference:	True
Wellbore:	JOB #: 2009-334	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	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)
9,934.3	88.80	359.70	6,181.3	-1,511.3	3,822.0	-74.1	3,822.7	0.69	-0.31	-0.62
9,966.6	89.10	359.50	6,181.9	-1,511.9	3,854.4	-74.3	3,855.0	1.11	0.93	-0.62
9,998.2	89.10	359.50	6,182.4	-1,512.4	3,886.0	-74.6	3,886.6	0.00	0.00	0.00
10,030.1	89.40	359.50	6,182.8	-1,512.8	3,917.9	-74.9	3,918.5	0.94	0.94	0.00
10,062.6	89.80	359.70	6,183.0	-1,513.0	3,950.3	-75.1	3,950.9	1.38	1.23	0.62
10,094.2	90.10	359.40	6,183.1	-1,513.1	3,982.0	-75.3	3,982.6	1.34	0.95	-0.95
10,125.6	90.40	359.50	6,182.9	-1,512.9	4,013.4	-75.6	4,014.0	1.01	0.96	0.32
10,157.3	90.00	1.00	6,182.8	-1,512.8	4,045.0	-75.5	4,045.6	4.91	-1.27	4.74
10,189.6	90.00	1.30	6,182.8	-1,512.8	4,077.4	-74.8	4,078.0	0.93	0.00	0.93
10,221.5	89.40	0.40	6,183.0	-1,513.0	4,109.3	-74.4	4,109.9	3.39	-1.88	-2.82
10,253.0	89.50	0.10	6,183.3	-1,513.3	4,140.7	-74.2	4,141.3	1.01	0.32	-0.96
10,285.1	89.40	0.00	6,183.6	-1,513.6	4,172.9	-74.2	4,173.4	0.44	-0.31	-0.31
10,316.8	89.30	0.00	6,184.0	-1,514.0	4,204.5	-74.2	4,205.1	0.32	-0.32	0.00
10,348.1	89.10	359.30	6,184.4	-1,514.4	4,235.8	-74.4	4,236.4	2.32	-0.64	-2.23
10,379.9	89.20	359.10	6,184.9	-1,514.9	4,267.6	-74.8	4,268.2	0.70	0.31	-0.63
10,412.2	91.10	359.90	6,184.8	-1,514.8	4,299.9	-75.1	4,300.5	6.39	5.89	2.48
10,443.8	91.40	359.70	6,184.1	-1,514.1	4,331.5	-75.2	4,332.1	1.14	0.95	-0.63
10,475.8	91.60	359.30	6,183.3	-1,513.3	4,363.5	-75.5	4,364.1	1.39	0.62	-1.25
10,507.4	90.60	358.80	6,182.6	-1,512.6	4,395.1	-76.0	4,395.7	3.54	-3.16	-1.58
10,538.7	90.20	358.90	6,182.4	-1,512.4	4,426.4	-76.7	4,427.0	1.32	-1.28	0.32
10,570.3	90.60	359.30	6,182.2	-1,512.2	4,458.0	-77.2	4,458.6	1.79	1.27	1.27
PROJECTION TO TD										
10,618.0	90.60	359.30	6,181.7	-1,511.7	4,505.7	-77.7	4,506.3	0.00	0.00	0.00

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
7" ICP - STATE WHITET - survey misses target center by 4.0usft at 6501.2usft MD (6174.2 TVD, 392.4 N, -51.5 E) - Point	0.00	0.00	6,178.0	392.0	-52.9	1,405,124.12	3,341,928.46	40.438966	-104.271550
KOP - STATE WHITETA - survey misses target center by 17.4usft at 5682.0usft MD (5673.2 TVD, -167.1 N, -19.4 E) - Point	0.00	0.00	5,674.3	-184.1	-22.9	1,404,548.51	3,341,966.42	40.437385	-104.271442
BHL - STATE WHITETAI - survey misses target center by 25.2usft at 10618.0usft MD (6181.7 TVD, 4505.7 N, -77.7 E) - Point	0.00	0.00	6,178.0	4,506.6	-52.9	1,409,238.14	3,341,871.46	40.450260	-104.271550

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
468.0	468.0	0.0	0.0	SURFACE CASING	
5,682.0	5,673.2	-167.1	-19.4	KOP	
6,513.0	6,175.1	404.1	-52.6	ICP	
10,618.0	6,181.7	4,458.0	-77.2	PROJECTION TO TD	

Checked By: _____	Approved By: _____	Date: _____
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