

# **BONANZA CREEK ENERGY INC.**

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

**NE NW SEC. 5 T4N R62W 6th P.M.**

**STATE SEVENTY HOLES K21-5-17XRLC**

**ORIGINAL WELLBORE**

**11 November, 2015**

**Plan: PROPOSAL #1**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NE NW SEC. 5 T4N R62W 6th P.M.  
Well: STATE SEVENTY HOLES K21-5-17XRLC  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

ANNOTATIONS

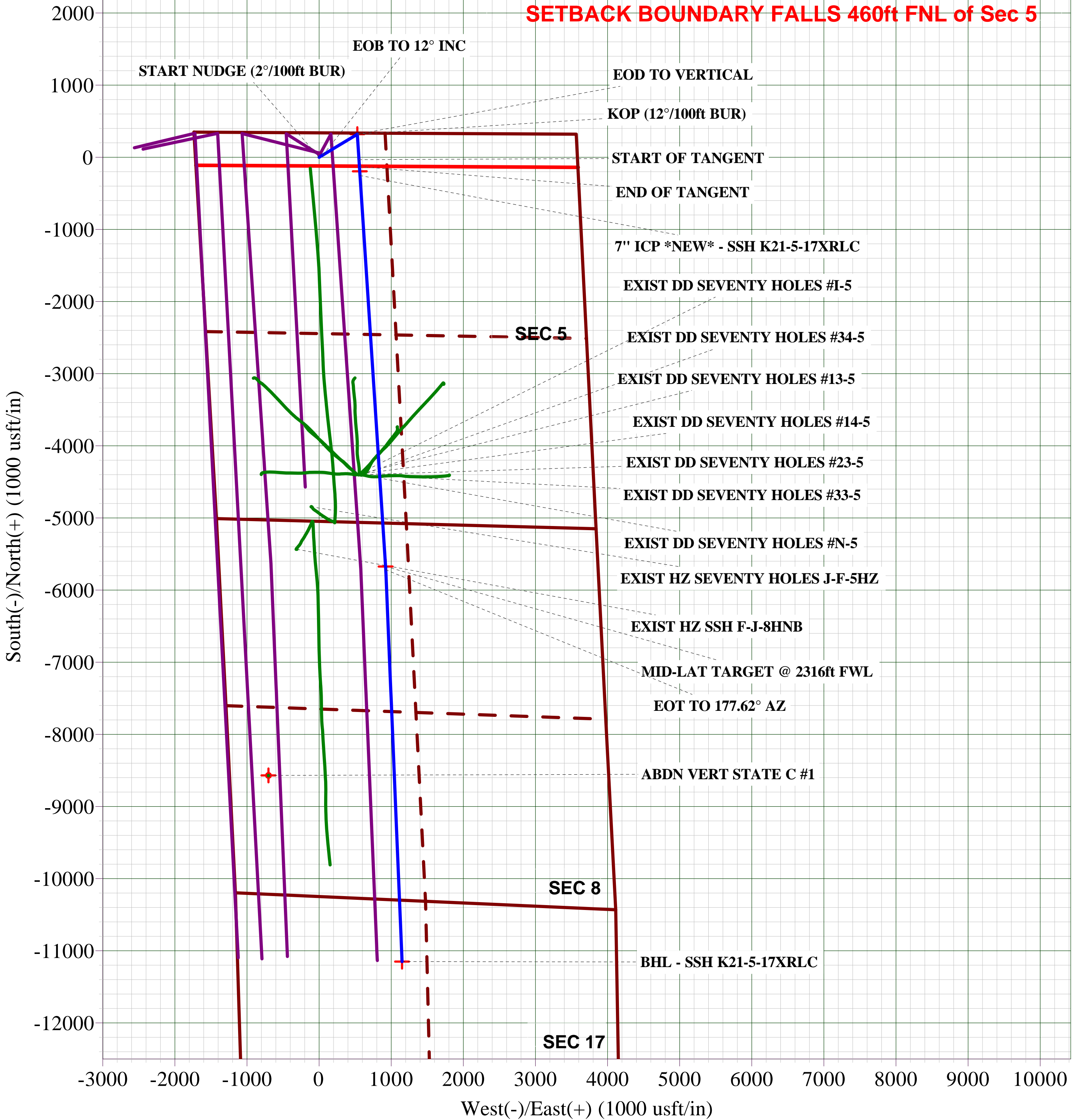
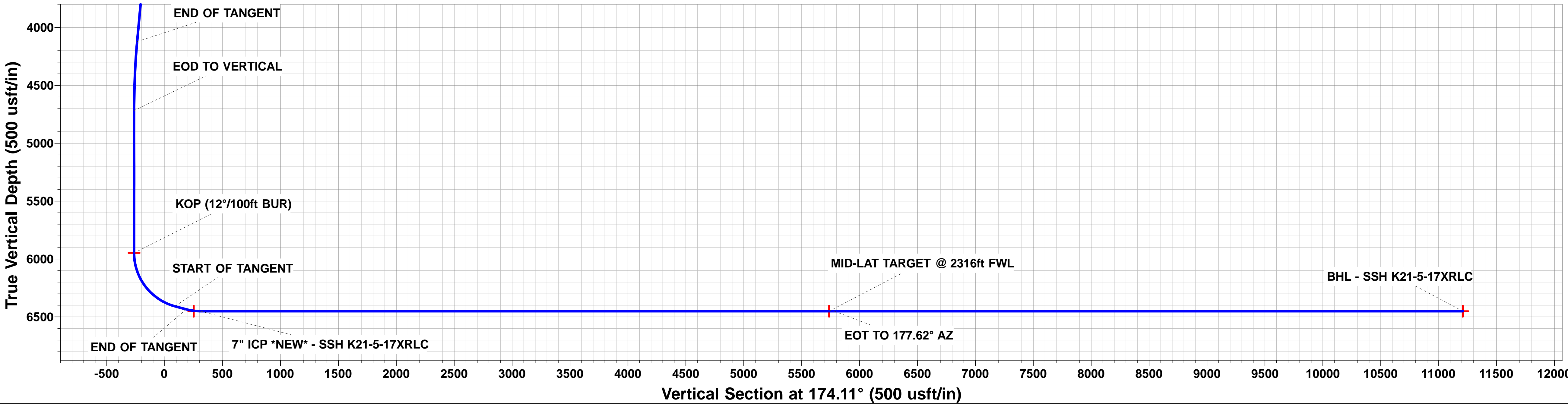
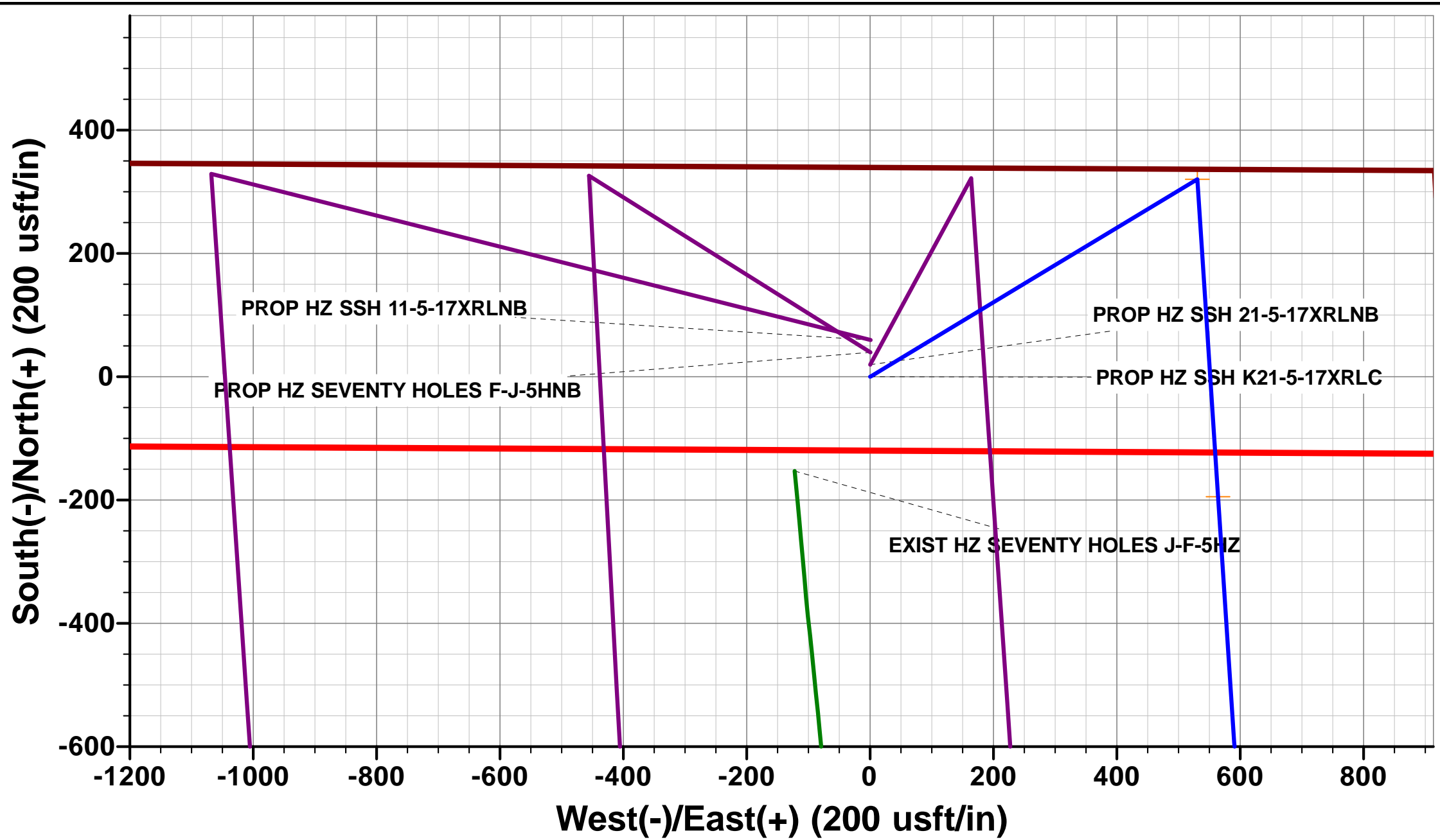
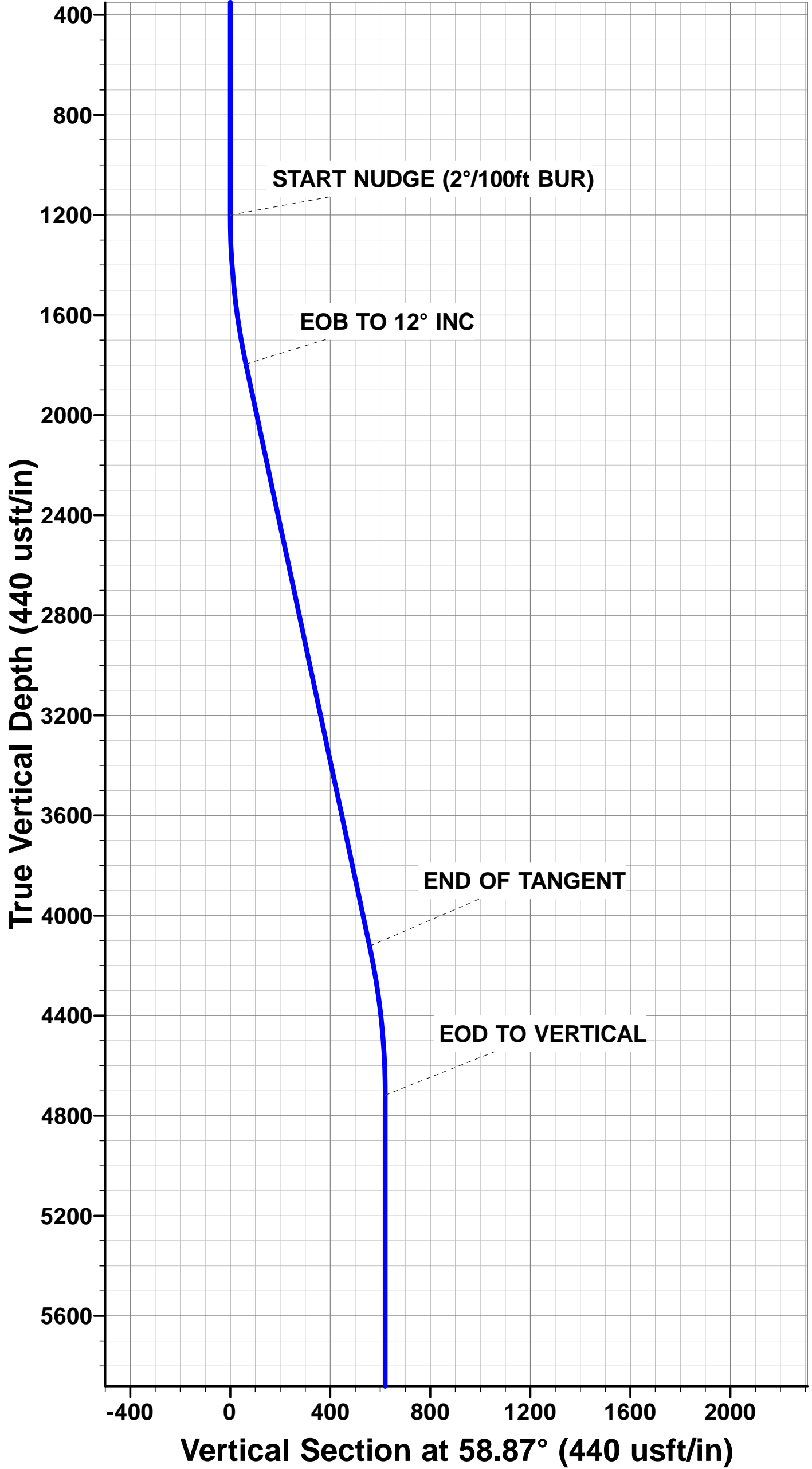
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation
1200.0	1200.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1795.6	1800.0	12.00	58.87	32.4	53.6	-26.7	62.6	EOB TO 12° INC
4122.2	4178.5	12.00	58.87	288.0	476.9	-237.6	557.1	END OF TANGENT
4717.8	4778.5	0.00	0.00	320.4	530.5	-264.3	619.7	EOD TO VERTICAL
5947.8	6008.5	0.00	0.00	320.4	530.5	-264.3	619.7	KOP (12°/100ft BUR)
6409.0	6633.5	75.00	176.26	-32.7	553.6	89.4	973.6	START OF TANGENT
6434.9	6733.5	75.00	176.26	-129.1	559.9	185.9	1070.2	END OF TANGENT
6451.1	6858.5	90.00	176.26	-252.4	567.9	309.4	1193.8	7" ICP *NEW* - SSH K21-5-17XRLC
6451.1	12289.8	90.00	176.26	-5672.1	922.3	5736.8	6625.0	MID-LAT TARGET @ 2316ft FWL
6451.1	12335.1	90.00	177.62	-5717.4	924.7	5782.1	6670.4	EOT TO 177.62° AZ
6451.1	17772.0	90.00	177.62	-11149.6	1150.6	11208.8	12107.3	BHL - SSH K21-5-17XRLC

PROPOSED LOCAL COORDINATES:

SHL: 340ft FNL & 1712ft FWL Sec 5  
7" ICP \*NEW\*: 588.9ft FNL & 2264ft FWL Sec 5  
BHL: 850ft FNL & 2280ft FWL Sec 17

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SSH K21-5-17XRLC	5947.8	320.4	530.5	40.348957	-104.351827
MID-LAT TARGET @ 2316ft FWL	6451.1	-5672.1	922.3	40.332508	-104.350422
BHL - SSH K21-5-17XRLC	6451.1	-11149.6	1150.6	40.317473	-104.349604
7" ICP - SSH K21-5-17XRLC	6451.1	-194.5	564.2	40.347544	-104.351706



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well STATE SEVENTY HOLES K21-5-17XRLC
<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>TVD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 5 T4N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE SEVENTY HOLES K21-5-17XRLC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<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	NE NW SEC. 5 T4N R62W 6th P.M.				
Site Position:		Northing:	1,371,770.18 usft	Latitude:	40.348242
From:	Lat/Long	Easting:	3,319,483.74 usft	Longitude:	-104.353727
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft	Grid Convergence:	0.74 °

Well	STATE SEVENTY HOLES K21-5-17XRLC					
Well Position	+N/-S	-59.8 usft	Northing:	1,371,710.42 usft	Latitude:	40.348078
	+E/-W	-0.8 usft	Easting:	3,319,483.68 usft	Longitude:	-104.353730
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,544.1 usft

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	10/11/2015	8.16	66.92	52,593

<b>Design</b>	PROPOSAL #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<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	174.11	

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,561.1	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	-3,361.1	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.0	12.00	58.87	1,795.6	-2,765.5	32.4	53.6	2.00	2.00	0.00	58.87	
4,178.5	12.00	58.87	4,122.2	-438.9	288.0	476.9	0.00	0.00	0.00	0.00	
4,778.5	0.00	0.00	4,717.8	156.7	320.4	530.5	2.00	-2.00	0.00	180.00	
6,008.5	0.00	0.00	5,947.8	1,386.7	320.4	530.5	0.00	0.00	0.00	0.00	KOP - SSH K21-5-1
6,633.5	75.00	176.26	6,409.0	1,847.9	-32.7	553.6	12.00	12.00	0.00	176.26	
6,733.5	75.00	176.26	6,434.9	1,873.8	-129.1	559.9	0.00	0.00	0.00	0.00	
6,858.5	90.00	176.26	6,451.1	1,890.0	-252.4	567.9	12.00	12.00	0.00	0.00	
12,289.8	90.00	176.26	6,451.1	1,890.0	-5,672.1	922.3	0.00	0.00	0.00	-59.84	MID-LAT TARGET
12,335.1	90.00	177.62	6,451.1	1,890.0	-5,717.4	924.7	3.00	0.00	3.00	90.04	
17,772.0	90.00	177.62	6,451.1	1,890.0	-11,149.6	1,150.6	0.00	0.00	0.00	0.00	BHL - SSH K21-5-1

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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 5 T4N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE SEVENTY HOLES K21-5-17XRLC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (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	4,561.10	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,461.10	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,361.10	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,261.10	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,161.10	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,061.10	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	3,961.10	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,861.10	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,761.10	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,661.10	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,561.10	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,461.10	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,200.0	0.00	0.00	1,200.0	3,361.10	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	2.00	58.87	1,300.0	3,261.12	0.9	1.5	-0.7	2.00	2.00	0.00
1,400.0	4.00	58.87	1,399.8	3,161.26	3.6	6.0	-3.0	2.00	2.00	0.00
1,500.0	6.00	58.87	1,499.5	3,061.65	8.1	13.4	-6.7	2.00	2.00	0.00
1,600.0	8.00	58.87	1,598.7	2,962.40	14.4	23.9	-11.9	2.00	2.00	0.00
1,700.0	10.00	58.87	1,697.5	2,863.63	22.5	37.3	-18.6	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
1,800.0	12.00	58.87	1,795.6	2,765.46	32.4	53.6	-26.7	2.00	2.00	0.00
1,900.0	12.00	58.87	1,893.4	2,667.66	43.1	71.4	-35.6	0.00	0.00	0.00
2,000.0	12.00	58.87	1,991.3	2,569.85	53.9	89.2	-44.4	0.00	0.00	0.00
2,100.0	12.00	58.87	2,089.1	2,472.03	64.6	107.0	-53.3	0.00	0.00	0.00
2,200.0	12.00	58.87	2,186.9	2,374.22	75.4	124.8	-62.2	0.00	0.00	0.00
2,300.0	12.00	58.87	2,284.7	2,276.40	86.1	142.6	-71.0	0.00	0.00	0.00
2,400.0	12.00	58.87	2,382.5	2,178.59	96.9	160.4	-79.9	0.00	0.00	0.00
2,500.0	12.00	58.87	2,480.3	2,080.77	107.6	178.2	-88.8	0.00	0.00	0.00
2,600.0	12.00	58.87	2,578.1	1,982.96	118.4	196.0	-97.6	0.00	0.00	0.00
2,700.0	12.00	58.87	2,676.0	1,885.15	129.1	213.8	-106.5	0.00	0.00	0.00
2,800.0	12.00	58.87	2,773.8	1,787.33	139.9	231.6	-115.3	0.00	0.00	0.00
2,900.0	12.00	58.87	2,871.6	1,689.52	150.6	249.4	-124.2	0.00	0.00	0.00
3,000.0	12.00	58.87	2,969.4	1,591.70	161.4	267.2	-133.1	0.00	0.00	0.00
3,100.0	12.00	58.87	3,067.2	1,493.89	172.1	285.0	-141.9	0.00	0.00	0.00
3,200.0	12.00	58.87	3,165.0	1,396.07	182.9	302.8	-150.8	0.00	0.00	0.00
3,300.0	12.00	58.87	3,262.8	1,298.26	193.6	320.6	-159.7	0.00	0.00	0.00
3,400.0	12.00	58.87	3,360.7	1,200.44	204.4	338.4	-168.5	0.00	0.00	0.00
3,500.0	12.00	58.87	3,458.5	1,102.63	215.1	356.1	-177.4	0.00	0.00	0.00
3,600.0	12.00	58.87	3,556.3	1,004.81	225.8	373.9	-186.3	0.00	0.00	0.00
3,700.0	12.00	58.87	3,654.1	907.00	236.6	391.7	-195.1	0.00	0.00	0.00
3,800.0	12.00	58.87	3,751.9	809.18	247.3	409.5	-204.0	0.00	0.00	0.00
3,900.0	12.00	58.87	3,849.7	711.37	258.1	427.3	-212.9	0.00	0.00	0.00
4,000.0	12.00	58.87	3,947.5	613.56	268.8	445.1	-221.7	0.00	0.00	0.00
4,100.0	12.00	58.87	4,045.4	515.74	279.6	462.9	-230.6	0.00	0.00	0.00
<b>END OF TANGENT</b>										
4,178.5	12.00	58.87	4,122.2	438.94	288.0	476.9	-237.6	0.00	0.00	0.00
4,200.0	11.57	58.87	4,143.2	417.91	290.3	480.7	-239.4	2.00	-2.00	0.00
4,300.0	9.57	58.87	4,241.5	319.61	299.8	496.4	-247.2	2.00	-2.00	0.00
4,400.0	7.57	58.87	4,340.4	220.73	307.5	509.1	-253.6	2.00	-2.00	0.00
4,500.0	5.57	58.87	4,439.7	121.40	313.4	518.9	-258.5	2.00	-2.00	0.00
4,600.0	3.57	58.87	4,539.4	21.72	317.5	525.7	-261.9	2.00	-2.00	0.00
4,700.0	1.57	58.87	4,639.3	-78.18	319.8	529.6	-263.8	2.00	-2.00	0.00



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<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>EOD TO VERTICAL</b>										
4,778.5	0.00	0.00	4,717.8	-156.70	320.4	530.5	-264.3	2.00	-2.00	-74.96
4,800.0	0.00	0.00	4,739.3	-178.17	320.4	530.5	-264.3	0.00	0.00	0.00
4,900.0	0.00	0.00	4,839.3	-278.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,000.0	0.00	0.00	4,939.3	-378.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,100.0	0.00	0.00	5,039.3	-478.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,200.0	0.00	0.00	5,139.3	-578.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,300.0	0.00	0.00	5,239.3	-678.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,339.3	-778.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,439.3	-878.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,539.3	-978.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,639.3	-1,078.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,739.3	-1,178.17	320.4	530.5	-264.3	0.00	0.00	0.00
5,900.0	0.00	0.00	5,839.3	-1,278.17	320.4	530.5	-264.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,939.3	-1,378.17	320.4	530.5	-264.3	0.00	0.00	0.00
<b>KOP (12°/100ft BUR)</b>										
6,008.5	0.00	0.00	5,947.8	-1,386.70	320.4	530.5	-264.3	0.00	0.00	0.00
6,100.0	10.98	176.26	6,038.7	-1,477.61	311.7	531.1	-255.5	12.00	12.00	0.00
6,200.0	22.98	176.26	6,134.2	-1,573.08	282.6	533.0	-226.4	12.00	12.00	0.00
6,300.0	34.98	176.26	6,221.5	-1,660.40	234.4	536.1	-178.1	12.00	12.00	0.00
6,400.0	46.98	176.26	6,296.9	-1,735.76	169.0	540.4	-112.7	12.00	12.00	0.00
6,500.0	58.98	176.26	6,357.0	-1,795.86	89.5	545.6	-33.0	12.00	12.00	0.00
6,600.0	70.98	176.26	6,399.2	-1,838.09	-0.7	551.5	57.3	12.00	12.00	0.00
<b>START OF TANGENT</b>										
6,633.5	75.00	176.26	6,409.0	-1,847.90	-32.7	553.6	89.4	12.00	12.00	0.00
6,700.0	75.00	176.26	6,426.2	-1,865.10	-96.8	557.8	153.5	0.00	0.00	0.00
<b>END OF TANGENT</b>										
6,733.5	75.00	176.26	6,434.9	-1,873.78	-129.1	559.9	185.9	0.00	0.00	0.00
6,800.0	82.98	176.26	6,447.6	-1,886.46	-194.2	564.1	251.1	12.00	12.00	0.00
<b>7" ICP *NEW* - SSH K21-5-17XRLC</b>										
6,858.5	90.00	176.26	6,451.1	-1,890.05	-252.4	567.9	309.4	12.00	12.00	0.00
6,900.0	90.00	176.26	6,451.1	-1,890.05	-293.8	570.7	350.8	0.00	0.00	0.00
7,000.0	90.00	176.26	6,451.1	-1,890.05	-393.6	577.2	450.8	0.00	0.00	0.00
7,100.0	90.00	176.26	6,451.1	-1,890.05	-493.4	583.7	550.7	0.00	0.00	0.00
7,200.0	90.00	176.26	6,451.1	-1,890.05	-593.2	590.2	650.6	0.00	0.00	0.00
7,300.0	90.00	176.26	6,451.1	-1,890.05	-693.0	596.7	750.6	0.00	0.00	0.00
7,400.0	90.00	176.26	6,451.1	-1,890.05	-792.7	603.3	850.5	0.00	0.00	0.00
7,500.0	90.00	176.26	6,451.1	-1,890.05	-892.5	609.8	950.4	0.00	0.00	0.00
7,600.0	90.00	176.26	6,451.1	-1,890.05	-992.3	616.3	1,050.3	0.00	0.00	0.00
7,700.0	90.00	176.26	6,451.1	-1,890.05	-1,092.1	622.8	1,150.3	0.00	0.00	0.00
7,800.0	90.00	176.26	6,451.1	-1,890.05	-1,191.9	629.4	1,250.2	0.00	0.00	0.00
7,900.0	90.00	176.26	6,451.1	-1,890.05	-1,291.7	635.9	1,350.1	0.00	0.00	0.00
8,000.0	90.00	176.26	6,451.1	-1,890.04	-1,391.5	642.4	1,450.1	0.00	0.00	0.00
8,100.0	90.00	176.26	6,451.1	-1,890.04	-1,491.3	648.9	1,550.0	0.00	0.00	0.00
8,200.0	90.00	176.26	6,451.1	-1,890.04	-1,591.0	655.5	1,649.9	0.00	0.00	0.00
8,300.0	90.00	176.26	6,451.1	-1,890.04	-1,690.8	662.0	1,749.9	0.00	0.00	0.00
8,400.0	90.00	176.26	6,451.1	-1,890.04	-1,790.6	668.5	1,849.8	0.00	0.00	0.00
8,500.0	90.00	176.26	6,451.1	-1,890.04	-1,890.4	675.0	1,949.7	0.00	0.00	0.00
8,600.0	90.00	176.26	6,451.1	-1,890.04	-1,990.2	681.5	2,049.6	0.00	0.00	0.00
8,700.0	90.00	176.26	6,451.1	-1,890.04	-2,090.0	688.1	2,149.6	0.00	0.00	0.00
8,800.0	90.00	176.26	6,451.1	-1,890.04	-2,189.8	694.6	2,249.5	0.00	0.00	0.00
8,900.0	90.00	176.26	6,451.1	-1,890.04	-2,289.6	701.1	2,349.4	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well STATE SEVENTY HOLES K21-5-17XRLC
<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>TVD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 5 T4N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE SEVENTY HOLES K21-5-17XRLC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,000.0	90.00	176.26	6,451.1	-1,890.04	-2,389.3	707.6	2,449.4	0.00	0.00	0.00
9,100.0	90.00	176.26	6,451.1	-1,890.04	-2,489.1	714.2	2,549.3	0.00	0.00	0.00
9,200.0	90.00	176.26	6,451.1	-1,890.04	-2,588.9	720.7	2,649.2	0.00	0.00	0.00
9,300.0	90.00	176.26	6,451.1	-1,890.04	-2,688.7	727.2	2,749.1	0.00	0.00	0.00
9,400.0	90.00	176.26	6,451.1	-1,890.04	-2,788.5	733.7	2,849.1	0.00	0.00	0.00
9,500.0	90.00	176.26	6,451.1	-1,890.04	-2,888.3	740.3	2,949.0	0.00	0.00	0.00
9,600.0	90.00	176.26	6,451.1	-1,890.03	-2,988.1	746.8	3,048.9	0.00	0.00	0.00
9,700.0	90.00	176.26	6,451.1	-1,890.03	-3,087.8	753.3	3,148.9	0.00	0.00	0.00
9,800.0	90.00	176.26	6,451.1	-1,890.03	-3,187.6	759.8	3,248.8	0.00	0.00	0.00
9,900.0	90.00	176.26	6,451.1	-1,890.03	-3,287.4	766.4	3,348.7	0.00	0.00	0.00
10,000.0	90.00	176.26	6,451.1	-1,890.03	-3,387.2	772.9	3,448.7	0.00	0.00	0.00
10,100.0	90.00	176.26	6,451.1	-1,890.03	-3,487.0	779.4	3,548.6	0.00	0.00	0.00
10,200.0	90.00	176.26	6,451.1	-1,890.03	-3,586.8	785.9	3,648.5	0.00	0.00	0.00
10,300.0	90.00	176.26	6,451.1	-1,890.03	-3,686.6	792.5	3,748.4	0.00	0.00	0.00
10,400.0	90.00	176.26	6,451.1	-1,890.03	-3,786.4	799.0	3,848.4	0.00	0.00	0.00
10,500.0	90.00	176.26	6,451.1	-1,890.03	-3,886.1	805.5	3,948.3	0.00	0.00	0.00
10,600.0	90.00	176.26	6,451.1	-1,890.02	-3,985.9	812.0	4,048.2	0.00	0.00	0.00
10,700.0	90.00	176.26	6,451.1	-1,890.02	-4,085.7	818.6	4,148.2	0.00	0.00	0.00
10,800.0	90.00	176.26	6,451.1	-1,890.02	-4,185.5	825.1	4,248.1	0.00	0.00	0.00
10,900.0	90.00	176.26	6,451.1	-1,890.02	-4,285.3	831.6	4,348.0	0.00	0.00	0.00
11,000.0	90.00	176.26	6,451.1	-1,890.02	-4,385.1	838.1	4,447.9	0.00	0.00	0.00
11,100.0	90.00	176.26	6,451.1	-1,890.02	-4,484.9	844.7	4,547.9	0.00	0.00	0.00
11,200.0	90.00	176.26	6,451.1	-1,890.02	-4,584.7	851.2	4,647.8	0.00	0.00	0.00
11,300.0	90.00	176.26	6,451.1	-1,890.02	-4,684.4	857.7	4,747.7	0.00	0.00	0.00
11,400.0	90.00	176.26	6,451.1	-1,890.01	-4,784.2	864.2	4,847.7	0.00	0.00	0.00
11,500.0	90.00	176.26	6,451.1	-1,890.01	-4,884.0	870.8	4,947.6	0.00	0.00	0.00
11,600.0	90.00	176.26	6,451.1	-1,890.01	-4,983.8	877.3	5,047.5	0.00	0.00	0.00
11,700.0	90.00	176.26	6,451.1	-1,890.01	-5,083.6	883.8	5,147.5	0.00	0.00	0.00
11,800.0	90.00	176.26	6,451.1	-1,890.01	-5,183.4	890.3	5,247.4	0.00	0.00	0.00
11,900.0	90.00	176.26	6,451.1	-1,890.01	-5,283.2	896.9	5,347.3	0.00	0.00	0.00
12,000.0	90.00	176.26	6,451.1	-1,890.00	-5,382.9	903.4	5,447.2	0.00	0.00	0.00
12,100.0	90.00	176.26	6,451.1	-1,890.00	-5,482.7	909.9	5,547.2	0.00	0.00	0.00
12,200.0	90.00	176.26	6,451.1	-1,890.00	-5,582.5	916.4	5,647.1	0.00	0.00	0.00
<b>MID-LAT TARGET @ 2316ft FWL</b>										
<b>12,289.8</b>	<b>90.00</b>	<b>176.26</b>	<b>6,451.1</b>	<b>-1,890.00</b>	<b>-5,672.1</b>	<b>922.3</b>	<b>5,736.8</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
12,300.0	90.00	176.57	6,451.1	-1,890.00	-5,682.3	922.9	5,747.0	3.00	0.00	3.00
<b>EOT TO 177.62° AZ</b>										
<b>12,335.1</b>	<b>90.00</b>	<b>177.62</b>	<b>6,451.1</b>	<b>-1,890.00</b>	<b>-5,717.4</b>	<b>924.7</b>	<b>5,782.1</b>	<b>3.00</b>	<b>0.00</b>	<b>3.00</b>
12,400.0	90.00	177.62	6,451.1	-1,890.00	-5,782.2	927.4	5,846.9	0.00	0.00	0.00
12,500.0	90.00	177.62	6,451.1	-1,890.00	-5,882.1	931.6	5,946.7	0.00	0.00	0.00
12,600.0	90.00	177.62	6,451.1	-1,890.00	-5,982.0	935.7	6,046.5	0.00	0.00	0.00
12,700.0	90.00	177.62	6,451.1	-1,890.00	-6,081.9	939.9	6,146.3	0.00	0.00	0.00
12,800.0	90.00	177.62	6,451.1	-1,890.00	-6,181.9	944.0	6,246.1	0.00	0.00	0.00
12,900.0	90.00	177.62	6,451.1	-1,890.00	-6,281.8	948.2	6,345.9	0.00	0.00	0.00
13,000.0	90.00	177.62	6,451.1	-1,890.00	-6,381.7	952.3	6,445.7	0.00	0.00	0.00
13,100.0	90.00	177.62	6,451.1	-1,890.00	-6,481.6	956.5	6,545.5	0.00	0.00	0.00
13,200.0	90.00	177.62	6,451.1	-1,890.00	-6,581.5	960.7	6,645.4	0.00	0.00	0.00
13,300.0	90.00	177.62	6,451.1	-1,890.00	-6,681.4	964.8	6,745.2	0.00	0.00	0.00
13,400.0	90.00	177.62	6,451.1	-1,890.00	-6,781.3	969.0	6,845.0	0.00	0.00	0.00
13,500.0	90.00	177.62	6,451.1	-1,890.00	-6,881.3	973.1	6,944.8	0.00	0.00	0.00
13,600.0	90.00	177.62	6,451.1	-1,890.00	-6,981.2	977.3	7,044.6	0.00	0.00	0.00
13,700.0	90.00	177.62	6,451.1	-1,890.00	-7,081.1	981.4	7,144.4	0.00	0.00	0.00
13,800.0	90.00	177.62	6,451.1	-1,890.00	-7,181.0	985.6	7,244.2	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well STATE SEVENTY HOLES K21-5-17XRLC
<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>TVD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 5 T4N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE SEVENTY HOLES K21-5-17XRLC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,900.0	90.00	177.62	6,451.1	-1,890.00	-7,280.9	989.7	7,344.0	0.00	0.00	0.00
14,000.0	90.00	177.62	6,451.1	-1,890.00	-7,380.8	993.9	7,443.9	0.00	0.00	0.00
14,100.0	90.00	177.62	6,451.1	-1,890.00	-7,480.7	998.0	7,543.7	0.00	0.00	0.00
14,200.0	90.00	177.62	6,451.1	-1,890.00	-7,580.7	1,002.2	7,643.5	0.00	0.00	0.00
14,300.0	90.00	177.62	6,451.1	-1,890.00	-7,680.6	1,006.3	7,743.3	0.00	0.00	0.00
14,400.0	90.00	177.62	6,451.1	-1,890.00	-7,780.5	1,010.5	7,843.1	0.00	0.00	0.00
14,500.0	90.00	177.62	6,451.1	-1,890.00	-7,880.4	1,014.7	7,942.9	0.00	0.00	0.00
14,600.0	90.00	177.62	6,451.1	-1,890.00	-7,980.3	1,018.8	8,042.7	0.00	0.00	0.00
14,700.0	90.00	177.62	6,451.1	-1,890.00	-8,080.2	1,023.0	8,142.5	0.00	0.00	0.00
14,800.0	90.00	177.62	6,451.1	-1,890.00	-8,180.1	1,027.1	8,242.4	0.00	0.00	0.00
14,900.0	90.00	177.62	6,451.1	-1,890.00	-8,280.0	1,031.3	8,342.2	0.00	0.00	0.00
15,000.0	90.00	177.62	6,451.1	-1,890.00	-8,380.0	1,035.4	8,442.0	0.00	0.00	0.00
15,100.0	90.00	177.62	6,451.1	-1,890.00	-8,479.9	1,039.6	8,541.8	0.00	0.00	0.00
15,200.0	90.00	177.62	6,451.1	-1,890.00	-8,579.8	1,043.7	8,641.6	0.00	0.00	0.00
15,300.0	90.00	177.62	6,451.1	-1,890.00	-8,679.7	1,047.9	8,741.4	0.00	0.00	0.00
15,400.0	90.00	177.62	6,451.1	-1,890.00	-8,779.6	1,052.0	8,841.2	0.00	0.00	0.00
15,500.0	90.00	177.62	6,451.1	-1,890.00	-8,879.5	1,056.2	8,941.0	0.00	0.00	0.00
15,600.0	90.00	177.62	6,451.1	-1,890.00	-8,979.4	1,060.4	9,040.9	0.00	0.00	0.00
15,700.0	90.00	177.62	6,451.1	-1,890.00	-9,079.4	1,064.5	9,140.7	0.00	0.00	0.00
15,800.0	90.00	177.62	6,451.1	-1,890.00	-9,179.3	1,068.7	9,240.5	0.00	0.00	0.00
15,900.0	90.00	177.62	6,451.1	-1,890.00	-9,279.2	1,072.8	9,340.3	0.00	0.00	0.00
16,000.0	90.00	177.62	6,451.1	-1,890.00	-9,379.1	1,077.0	9,440.1	0.00	0.00	0.00
16,100.0	90.00	177.62	6,451.1	-1,890.00	-9,479.0	1,081.1	9,539.9	0.00	0.00	0.00
16,200.0	90.00	177.62	6,451.1	-1,890.00	-9,578.9	1,085.3	9,639.7	0.00	0.00	0.00
16,300.0	90.00	177.62	6,451.1	-1,890.00	-9,678.8	1,089.4	9,739.5	0.00	0.00	0.00
16,400.0	90.00	177.62	6,451.1	-1,890.00	-9,778.7	1,093.6	9,839.4	0.00	0.00	0.00
16,500.0	90.00	177.62	6,451.1	-1,890.00	-9,878.6	1,097.7	9,939.2	0.00	0.00	0.00
16,600.0	90.00	177.62	6,451.1	-1,890.00	-9,978.5	1,101.9	10,039.0	0.00	0.00	0.00
16,700.0	90.00	177.62	6,451.1	-1,890.00	-10,078.4	1,106.0	10,138.8	0.00	0.00	0.00
16,800.0	90.00	177.62	6,451.1	-1,890.00	-10,178.3	1,110.2	10,238.6	0.00	0.00	0.00
16,900.0	90.00	177.62	6,451.1	-1,890.00	-10,278.2	1,114.4	10,338.4	0.00	0.00	0.00
17,000.0	90.00	177.62	6,451.1	-1,890.00	-10,378.1	1,118.5	10,438.2	0.00	0.00	0.00
17,100.0	90.00	177.62	6,451.1	-1,890.00	-10,478.0	1,122.7	10,538.0	0.00	0.00	0.00
17,200.0	90.00	177.62	6,451.1	-1,890.00	-10,577.9	1,126.8	10,637.9	0.00	0.00	0.00
17,300.0	90.00	177.62	6,451.1	-1,890.00	-10,677.8	1,131.0	10,737.7	0.00	0.00	0.00
17,400.0	90.00	177.62	6,451.1	-1,890.00	-10,777.7	1,135.1	10,837.5	0.00	0.00	0.00
17,500.0	90.00	177.62	6,451.1	-1,890.00	-10,877.6	1,139.3	10,937.3	0.00	0.00	0.00
17,600.0	90.00	177.62	6,451.1	-1,890.00	-10,977.5	1,143.4	11,037.1	0.00	0.00	0.00
17,700.0	90.00	177.62	6,451.1	-1,890.00	-11,077.4	1,147.6	11,136.9	0.00	0.00	0.00
<b>BHL - SSH K21-5-17XRLC</b>										
17,772.0	90.00	177.62	6,451.1	-1,890.00	-11,149.6	1,150.6	11,208.8	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well STATE SEVENTY HOLES K21-5-17XRLC
<b>Company:</b>	BONANZA CREEK ENERGY INC.	<b>TVD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4561.1usft (Original Well Elev)
<b>Site:</b>	NE NW SEC. 5 T4N R62W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	STATE SEVENTY HOLES K21-5-17XRLC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,200.0	1,200.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,800.0	1,795.6	32.4	53.6	EOB TO 12° INC
4,178.5	4,122.2	288.0	476.9	END OF TANGENT
4,778.5	4,717.8	320.4	530.5	EOD TO VERTICAL
6,008.5	5,947.8	320.4	530.5	KOP (12°/100ft BUR)
6,633.5	6,409.0	-32.7	553.6	START OF TANGENT
6,733.5	6,434.9	-129.1	559.9	END OF TANGENT
6,858.5	6,451.1	-252.4	567.9	7" ICP *NEW* - SSH K21-5-17XRLC
12,289.8	6,451.1	-5,672.1	922.3	MID-LAT TARGET @ 2316ft FWL
12,335.1	6,451.1	-5,717.4	924.7	EOT TO 177.62° AZ
17,772.0	6,451.1	-11,149.6	1,150.6	BHL - SSH K21-5-17XRLC