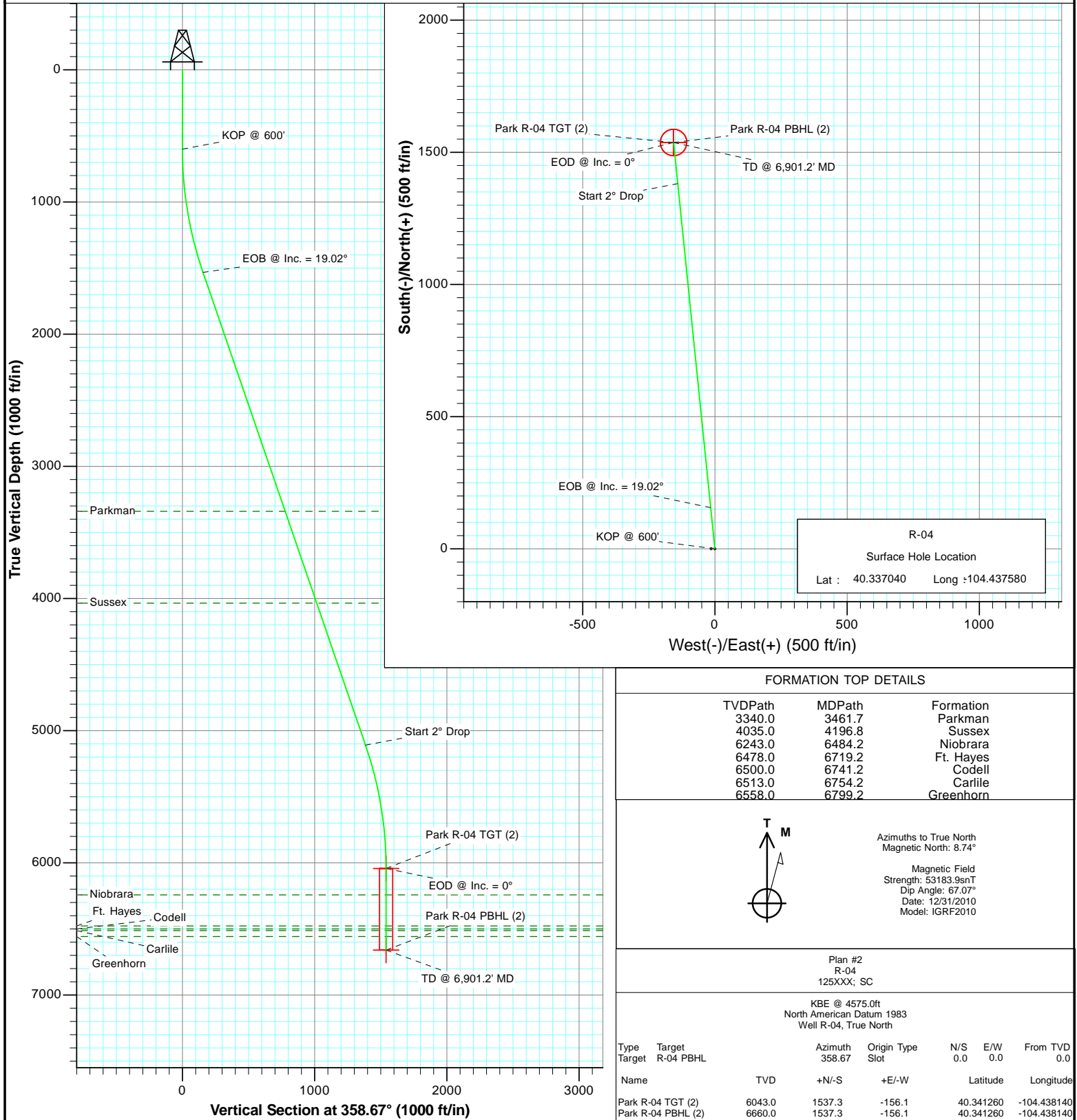
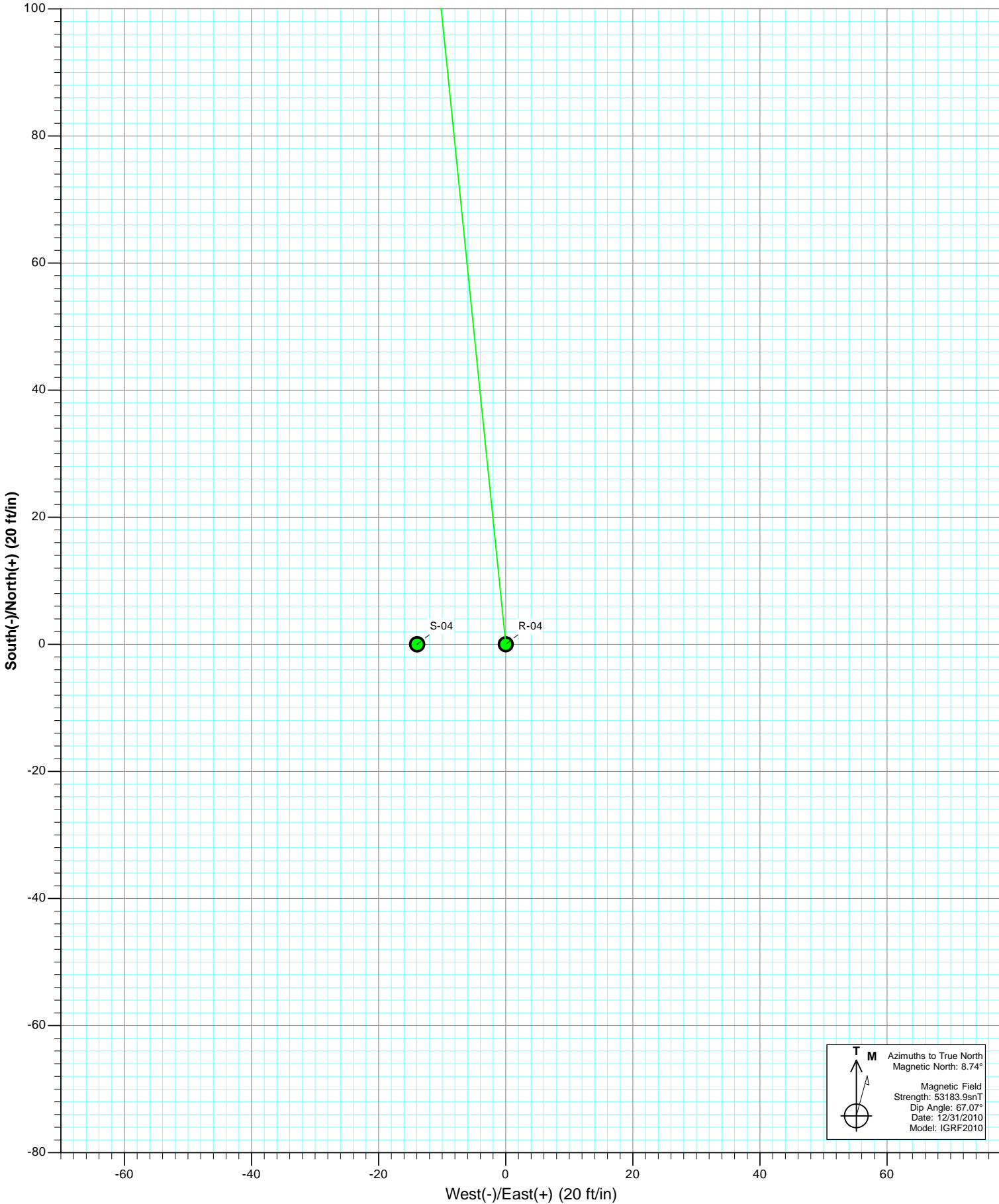
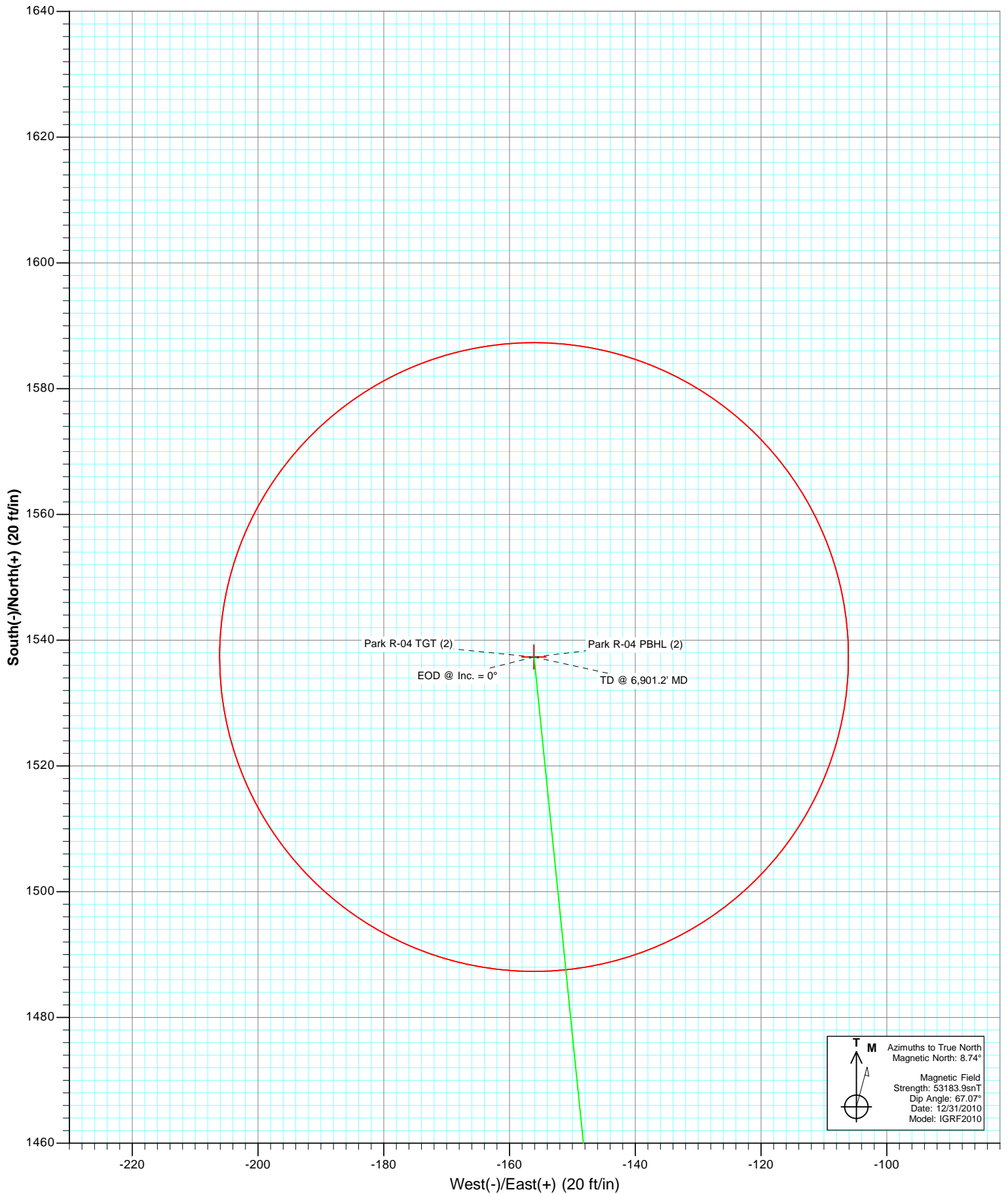


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1550.9	19.02	354.20	1533.5	155.6	-15.8	2.00	354.20	155.9	
4	5333.3	19.02	354.20	5109.5	1381.8	-140.3	0.00	0.00	1384.7	
5	6284.2	0.00	0.00	6043.0	1537.3	-156.1	2.00	180.00	1540.5	Park R-04 TGT (2)
6	6901.2	0.00	0.00	6660.0	1537.3	-156.1	0.00	0.00	1540.5	Park R-04 PBHL (2)







# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well R-04
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KBE @ 4575.0ft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KBE @ 4575.0ft
<b>Site:</b>	Park S-04 Pad	<b>North Reference:</b>	True
<b>Well:</b>	R-04	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #2		

<b>Project</b>	Weld County		
<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		

Site		Park S-04 Pad			
Site Position:		Northing:	1,367,725.34 ft	Latitude:	40.337930
From:	Lat/Long	Easting:	3,296,148.67 ft	Longitude:	-104.437640
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.69 °

Well	R-04					
Well Position	+N/-S	0.0 ft	Northing:	1,367,401.33 ft	Latitude:	40.337040
	+E/-W	0.0 ft	Easting:	3,296,169.28 ft	Longitude:	-104.437580
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,565.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b> (°)	<b>Dip Angle</b> (°)	<b>Field Strength</b> (nT)
	IGRF2010	12/31/2010	8.74	67.07	53,184

<b>Design</b>	Plan #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b> (ft)	<b>+N/-S</b> (ft)	<b>+E/-W</b> (ft)	<b>Direction</b> (°)
	0.0	0.0	0.0	358.67

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,550.9	19.02	354.20	1,533.5	155.6	-15.8	2.00	2.00	0.00	354.20	
5,333.3	19.02	354.20	5,109.5	1,381.8	-140.3	0.00	0.00	0.00	0.00	
6,284.2	0.00	0.00	6,043.0	1,537.3	-156.1	2.00	-2.00	0.00	180.00	Park R-04 TGT (2)
6,901.2	0.00	0.00	6,660.0	1,537.3	-156.1	0.00	0.00	0.00	0.00	Park R-04 PBHL (2)

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well R-04
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KBE @ 4575.0ft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KBE @ 4575.0ft
<b>Site:</b>	Park S-04 Pad	<b>North Reference:</b>	True
<b>Well:</b>	R-04	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #2		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	2.00	354.20	700.0	1.7	-0.2	1.7	2.00	2.00	
800.0	4.00	354.20	799.8	6.9	-0.7	7.0	2.00	2.00	
900.0	6.00	354.20	899.5	15.6	-1.6	15.6	2.00	2.00	
1,000.0	8.00	354.20	998.7	27.7	-2.8	27.8	2.00	2.00	
1,100.0	10.00	354.20	1,097.5	43.3	-4.4	43.4	2.00	2.00	
1,200.0	12.00	354.20	1,195.6	62.3	-6.3	62.4	2.00	2.00	
1,300.0	14.00	354.20	1,293.1	84.7	-8.6	84.8	2.00	2.00	
1,400.0	16.00	354.20	1,389.6	110.4	-11.2	110.6	2.00	2.00	
1,500.0	18.00	354.20	1,485.3	139.5	-14.2	139.8	2.00	2.00	
1,550.9	19.02	354.20	1,533.5	155.6	-15.8	155.9	2.00	2.00	EOB @ Inc. = 19.02°
1,600.0	19.02	354.20	1,580.0	171.5	-17.4	171.8	0.00	0.00	
1,700.0	19.02	354.20	1,674.5	203.9	-20.7	204.3	0.00	0.00	
1,800.0	19.02	354.20	1,769.0	236.3	-24.0	236.8	0.00	0.00	
1,900.0	19.02	354.20	1,863.6	268.7	-27.3	269.3	0.00	0.00	
2,000.0	19.02	354.20	1,958.1	301.2	-30.6	301.8	0.00	0.00	
2,100.0	19.02	354.20	2,052.7	333.6	-33.9	334.3	0.00	0.00	
2,200.0	19.02	354.20	2,147.2	366.0	-37.2	366.8	0.00	0.00	
2,300.0	19.02	354.20	2,241.7	398.4	-40.5	399.2	0.00	0.00	
2,400.0	19.02	354.20	2,336.3	430.8	-43.7	431.7	0.00	0.00	
2,500.0	19.02	354.20	2,430.8	463.3	-47.0	464.2	0.00	0.00	
2,600.0	19.02	354.20	2,525.4	495.7	-50.3	496.7	0.00	0.00	
2,700.0	19.02	354.20	2,619.9	528.1	-53.6	529.2	0.00	0.00	
2,800.0	19.02	354.20	2,714.5	560.5	-56.9	561.7	0.00	0.00	
2,900.0	19.02	354.20	2,809.0	592.9	-60.2	594.2	0.00	0.00	
3,000.0	19.02	354.20	2,903.5	625.3	-63.5	626.7	0.00	0.00	
3,100.0	19.02	354.20	2,998.1	657.8	-66.8	659.1	0.00	0.00	
3,200.0	19.02	354.20	3,092.6	690.2	-70.1	691.6	0.00	0.00	
3,300.0	19.02	354.20	3,187.2	722.6	-73.4	724.1	0.00	0.00	
3,400.0	19.02	354.20	3,281.7	755.0	-76.7	756.6	0.00	0.00	
3,461.7	19.02	354.20	3,340.0	775.0	-78.7	776.6	0.00	0.00	Parkman
3,500.0	19.02	354.20	3,376.3	787.4	-80.0	789.1	0.00	0.00	
3,600.0	19.02	354.20	3,470.8	819.9	-83.2	821.6	0.00	0.00	
3,700.0	19.02	354.20	3,565.3	852.3	-86.5	854.1	0.00	0.00	
3,800.0	19.02	354.20	3,659.9	884.7	-89.8	886.5	0.00	0.00	
3,900.0	19.02	354.20	3,754.4	917.1	-93.1	919.0	0.00	0.00	
4,000.0	19.02	354.20	3,849.0	949.5	-96.4	951.5	0.00	0.00	
4,100.0	19.02	354.20	3,943.5	982.0	-99.7	984.0	0.00	0.00	
4,196.8	19.02	354.20	4,035.0	1,013.3	-102.9	1,015.4	0.00	0.00	Sussex
4,200.0	19.02	354.20	4,038.0	1,014.4	-103.0	1,016.5	0.00	0.00	
4,300.0	19.02	354.20	4,132.6	1,046.8	-106.3	1,049.0	0.00	0.00	
4,400.0	19.02	354.20	4,227.1	1,079.2	-109.6	1,081.5	0.00	0.00	
4,500.0	19.02	354.20	4,321.7	1,111.6	-112.9	1,113.9	0.00	0.00	
4,600.0	19.02	354.20	4,416.2	1,144.0	-116.2	1,146.4	0.00	0.00	
4,700.0	19.02	354.20	4,510.8	1,176.5	-119.5	1,178.9	0.00	0.00	
4,800.0	19.02	354.20	4,605.3	1,208.9	-122.8	1,211.4	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well R-04
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KBE @ 4575.0ft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KBE @ 4575.0ft
<b>Site:</b>	Park S-04 Pad	<b>North Reference:</b>	True
<b>Well:</b>	R-04	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #2		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	19.02	354.20	4,699.8	1,241.3	-126.0	1,243.9	0.00	0.00	
5,000.0	19.02	354.20	4,794.4	1,273.7	-129.3	1,276.4	0.00	0.00	
5,100.0	19.02	354.20	4,888.9	1,306.1	-132.6	1,308.9	0.00	0.00	
5,200.0	19.02	354.20	4,983.5	1,338.6	-135.9	1,341.3	0.00	0.00	
5,300.0	19.02	354.20	5,078.0	1,371.0	-139.2	1,373.8	0.00	0.00	
5,333.3	19.02	354.20	5,109.5	1,381.8	-140.3	1,384.7	0.00	0.00	Start 2° Drop
5,400.0	17.68	354.20	5,172.8	1,402.7	-142.4	1,405.6	2.00	-2.00	
5,500.0	15.68	354.20	5,268.6	1,431.2	-145.3	1,434.2	2.00	-2.00	
5,600.0	13.68	354.20	5,365.3	1,456.4	-147.9	1,459.5	2.00	-2.00	
5,700.0	11.68	354.20	5,462.9	1,478.3	-150.1	1,481.4	2.00	-2.00	
5,800.0	9.68	354.20	5,561.1	1,496.7	-152.0	1,499.8	2.00	-2.00	
5,900.0	7.68	354.20	5,660.0	1,511.7	-153.5	1,514.9	2.00	-2.00	
6,000.0	5.68	354.20	5,759.3	1,523.3	-154.7	1,526.5	2.00	-2.00	
6,100.0	3.68	354.20	5,859.0	1,531.4	-155.5	1,534.6	2.00	-2.00	
6,200.0	1.68	354.20	5,958.8	1,536.1	-156.0	1,539.3	2.00	-2.00	
6,284.2	0.00	0.00	6,043.0	1,537.3	-156.1	1,540.5	2.00	-2.00	EOD @ Inc. = 0°
6,300.0	0.00	0.00	6,058.8	1,537.3	-156.1	1,540.5	0.00	0.00	
6,400.0	0.00	0.00	6,158.8	1,537.3	-156.1	1,540.5	0.00	0.00	
6,484.2	0.00	0.00	6,243.0	1,537.3	-156.1	1,540.5	0.00	0.00	Niobrara
6,500.0	0.00	0.00	6,258.8	1,537.3	-156.1	1,540.5	0.00	0.00	
6,600.0	0.00	0.00	6,358.8	1,537.3	-156.1	1,540.5	0.00	0.00	
6,700.0	0.00	0.00	6,458.8	1,537.3	-156.1	1,540.5	0.00	0.00	
6,719.2	0.00	0.00	6,478.0	1,537.3	-156.1	1,540.5	0.00	0.00	Ft. Hayes
6,741.2	0.00	0.00	6,500.0	1,537.3	-156.1	1,540.5	0.00	0.00	Codell
6,754.2	0.00	0.00	6,513.0	1,537.3	-156.1	1,540.5	0.00	0.00	Carlile
6,799.2	0.00	0.00	6,558.0	1,537.3	-156.1	1,540.5	0.00	0.00	Greenhorn
6,800.0	0.00	0.00	6,558.8	1,537.3	-156.1	1,540.5	0.00	0.00	
6,901.2	0.00	0.00	6,660.0	1,537.3	-156.1	1,540.5	0.00	0.00	TD @ 6,901.2' MD

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Park R-04 TGT (2)	0.00	0.00	6,043.0	1,537.3	-156.1	1,368,936.68	3,295,994.77	40.341260	-104.438140
- plan hits target center									
- Point									
Park R-04 PBHL (2)	0.00	0.00	6,660.0	1,537.3	-156.1	1,368,936.68	3,295,994.77	40.341260	-104.438140
- plan hits target center									
- Circle (radius 50.0)									
R-04 TGT	0.00	0.00	5,772.0	1,659.7	-38.5	1,369,060.48	3,296,110.93	40.341596	-104.437718
- plan misses target center by 178.0ft at 6022.8ft MD (5782.0 TVD, 1525.5 N, -154.9 E)									
- Point									
R-04 PBHL	0.00	0.00	6,672.0	1,659.7	-38.5	1,369,060.48	3,296,110.93	40.341596	-104.437718
- plan misses target center by 170.2ft at 6901.2ft MD (6660.0 TVD, 1537.3 N, -156.1 E)									
- Circle (radius 50.0)									

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well R-04
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KBE @ 4575.0ft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KBE @ 4575.0ft
<b>Site:</b>	Park S-04 Pad	<b>North Reference:</b>	True
<b>Well:</b>	R-04	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,461.7	3,340.0	Parkman				
4,196.8	4,035.0	Sussex				
6,484.2	6,243.0	Niobrara				
6,719.2	6,478.0	Ft. Hayes				
6,741.2	6,500.0	Codell				
6,754.2	6,513.0	Carlile				
6,799.2	6,558.0	Greenhorn				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.0	600.0	0.0	0.0	KOP @ 600'
1,550.9	1,533.5	155.6	-15.8	EOB @ Inc. = 19.02°
5,333.3	5,109.5	1,381.8	-140.3	Start 2° Drop
6,284.2	6,043.0	1,537.3	-156.1	EOD @ Inc. = 0°
6,901.2	6,660.0	1,537.3	-156.1	TD @ 6,901.2' MD

# **Bonanza Creek Energy Operating Company, LLC**

**Weld County  
Park S-04 Pad  
R-04  
DD  
Plan #2**

## **Anticollision Report**

**21 December, 2011**



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well R-04
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4575.0ft
<b>Reference Site:</b>	Park S-04 Pad	<b>MD Reference:</b>	KBE @ 4575.0ft
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	R-04	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #2
<b>Filter type:</b>	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference
<b>Interpolation Method:</b>	MD Interval 100.0ft
<b>Depth Range:</b>	Unlimited
<b>Results Limited by:</b>	Maximum center-center distance of 500.0ft
<b>Warning Levels Evaluated at:</b>	2.00 Sigma
<b>Error Model:</b>	Systematic Ellipse
<b>Scan Method:</b>	Closest Approach 3D
<b>Error Surface:</b>	Elliptical Conic

Survey Tool Program		Date	12/21/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	6,901.2	Plan #2 (DD)	MWD	Geolink MWD	

Summary						
Site Name	Reference	Offset	Distance		Separation	Warning
	Measured	Measured	Between	Between		
Offset Well - Wellbore - Design	Depth	Depth	Centres	Ellipses	Factor	
	(ft)	(ft)	(ft)	(ft)		
Park S-04 Pad						
S-04 - VH - Plan #1	0.0	0.0	13.9			
S-04 - VH - Plan #1	689.8	689.8	13.9	13.9	10,000.000	CC, ES

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well R-04
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4575.0ft
<b>Reference Site:</b>	Park S-04 Pad	<b>MD Reference:</b>	KBE @ 4575.0ft
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	R-04	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Park S-04 Pad - S-04 - VH - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-13.9	13.9						
100.0	100.0	100.0	100.0	0.2	0.2	-90.00	0.0	-13.9	13.9	13.9	0.00	N/A			
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-13.9	13.9	13.9	0.00	N/A			
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-13.9	13.9	13.9	0.00	N/A			
400.0	400.0	400.0	400.0	0.7	0.7	-90.00	0.0	-13.9	13.9	13.9	0.00	N/A			
500.0	500.0	500.0	500.0	0.9	0.9	-90.00	0.0	-13.9	13.9	13.9	0.00	N/A			
600.0	600.0	600.0	600.0	1.0	1.0	-90.00	0.0	-13.9	13.9	13.9	0.00	N/A			
689.8	689.8	689.8	689.8	1.2	1.2	-90.00	0.0	-13.9	13.9	13.9	0.00	N/A CC, ES			
700.0	700.0	700.0	700.0	1.2	1.2	-91.39	0.0	-13.9	13.9	13.9	0.00	N/A			
800.0	799.8	799.8	799.8	1.4	1.4	-111.84	0.0	-13.9	14.9	14.9	0.00	N/A			
900.0	899.5	899.5	899.5	1.6	1.6	-135.69	0.0	-13.9	19.9	19.9	0.00	N/A			
1,000.0	998.7	998.7	998.7	1.8	1.7	-152.12	0.0	-13.9	29.9	29.9	0.00	N/A			
1,100.0	1,097.5	1,097.5	1,097.5	2.1	1.9	-161.51	0.0	-13.9	44.3	44.3	0.00	N/A			
1,200.0	1,195.6	1,195.6	1,195.6	2.4	2.1	-166.96	0.0	-13.9	62.7	62.7	0.00	N/A			
1,300.0	1,293.1	1,293.1	1,293.1	2.8	2.2	-170.31	0.0	-13.9	84.8	84.8	0.00	N/A			
1,400.0	1,389.6	1,389.6	1,389.6	3.3	2.4	-172.50	0.0	-13.9	110.4	110.4	0.00	N/A			
1,500.0	1,485.3	1,485.3	1,485.3	3.8	2.6	-174.00	0.0	-13.9	139.5	139.5	0.00	N/A			
1,600.0	1,580.0	1,580.0	1,580.0	4.3	2.7	-175.10	0.0	-13.9	171.5	171.5	0.00	N/A			
1,700.0	1,674.5	1,674.5	1,674.5	4.9	2.9	-175.88	0.0	-13.9	204.0	204.0	0.00	N/A			
1,800.0	1,769.0	1,769.0	1,769.0	5.4	3.1	-176.45	0.0	-13.9	236.5	236.5	0.00	N/A			
1,900.0	1,863.6	1,863.6	1,863.6	6.0	3.2	-176.88	0.0	-13.9	269.1	269.1	0.00	N/A			
2,000.0	1,958.1	1,958.1	1,958.1	6.6	3.4	-177.21	0.0	-13.9	301.6	301.6	0.00	N/A			
2,100.0	2,052.7	2,052.7	2,052.7	7.1	3.6	-177.48	0.0	-13.9	334.2	334.2	0.00	N/A			
2,200.0	2,147.2	2,147.2	2,147.2	7.7	3.7	-177.71	0.0	-13.9	366.7	366.7	0.00	N/A			
2,300.0	2,241.7	2,241.7	2,241.7	8.3	3.9	-177.89	0.0	-13.9	399.3	399.3	0.00	N/A			
2,400.0	2,336.3	2,336.3	2,336.3	8.9	4.1	-178.05	0.0	-13.9	431.9	431.9	0.00	N/A			
2,500.0	2,430.8	2,430.8	2,430.8	9.5	4.2	-178.19	0.0	-13.9	464.4	464.4	0.00	N/A			
2,600.0	2,525.4	2,525.4	2,525.4	10.1	4.4	-178.31	0.0	-13.9	497.0	497.0	0.00	N/A			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well R-04
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4575.0ft
<b>Reference Site:</b>	Park S-04 Pad	<b>MD Reference:</b>	KBE @ 4575.0ft
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	R-04	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KBE @ 4575.0ft

Offset Depths are relative to Offset Datum

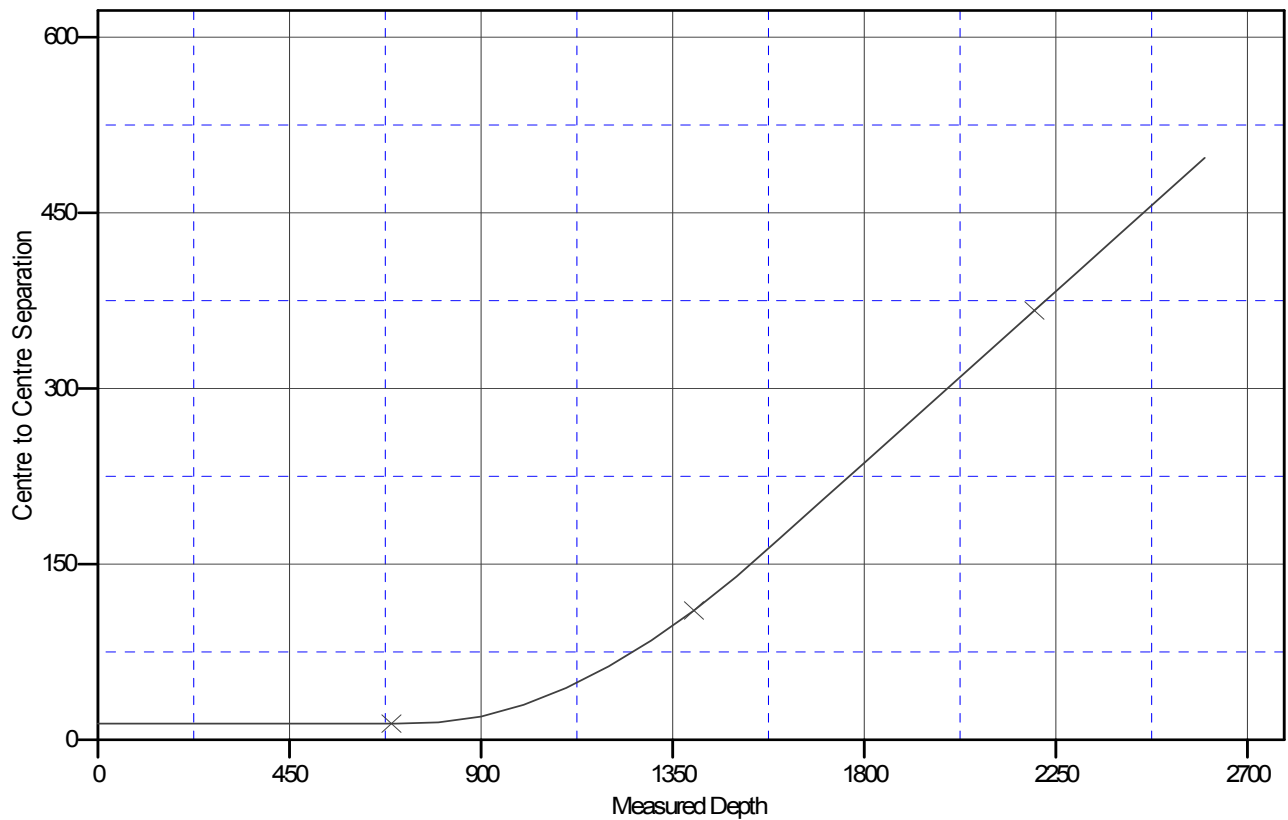
Central Meridian is -105.500000 °

Coordinates are relative to: R-04

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.69°

### Ladder Plot



### LEGEND

✕ S-04, VH, Plan #1 V0