

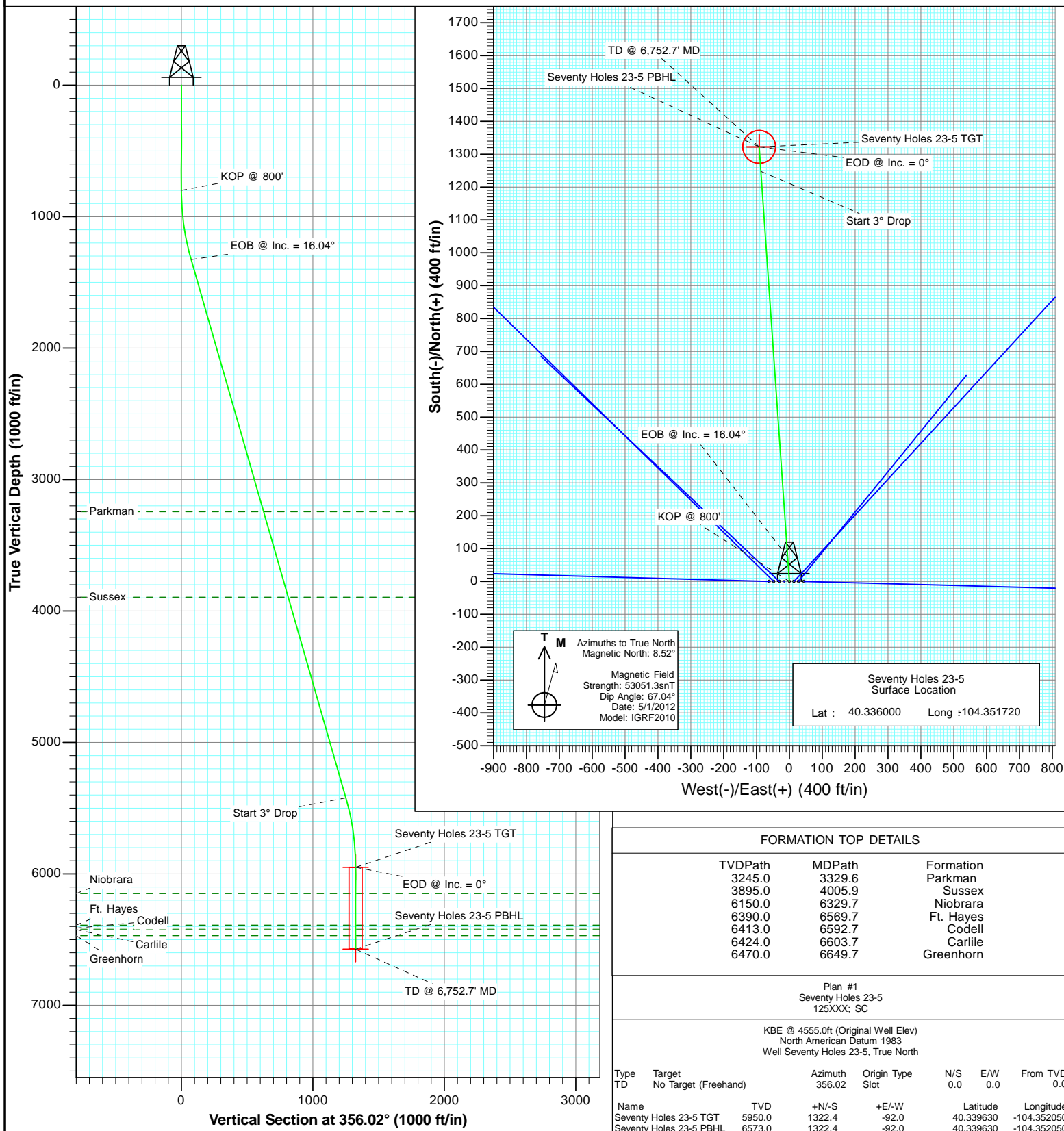


Project: Weld County  
 Site: Seventy Holes 24-5 Pad  
 Well: Seventy Holes 23-5  
 Wellbore: OH  
 Plan: Plan #1



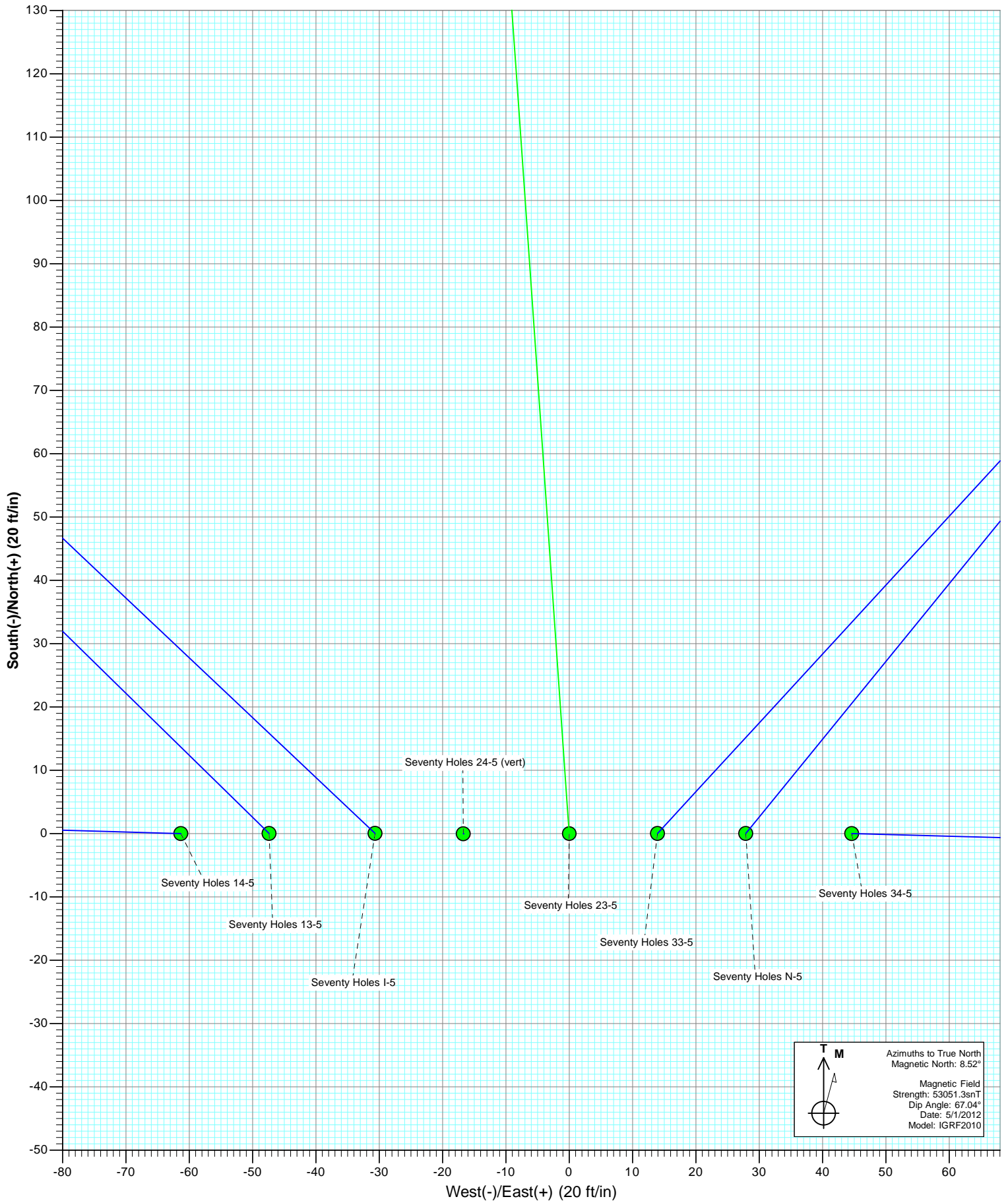
#### SECTION DETAILS

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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1334.5	16.04	356.02	1327.6	74.1	-5.2	3.00	356.02	74.3	
4	5595.2	16.04	356.02	5422.4	1248.3	-86.8	0.00	0.00	1251.3	
5	6129.7	0.00	0.00	5950.0	1322.4	-92.0	3.00	180.00	1325.6	Seventy Holes 23-5 TGT
6	6752.7	0.00	0.00	6573.0	1322.4	-92.0	0.00	0.00	1325.6	Seventy Holes 23-5 PBHL



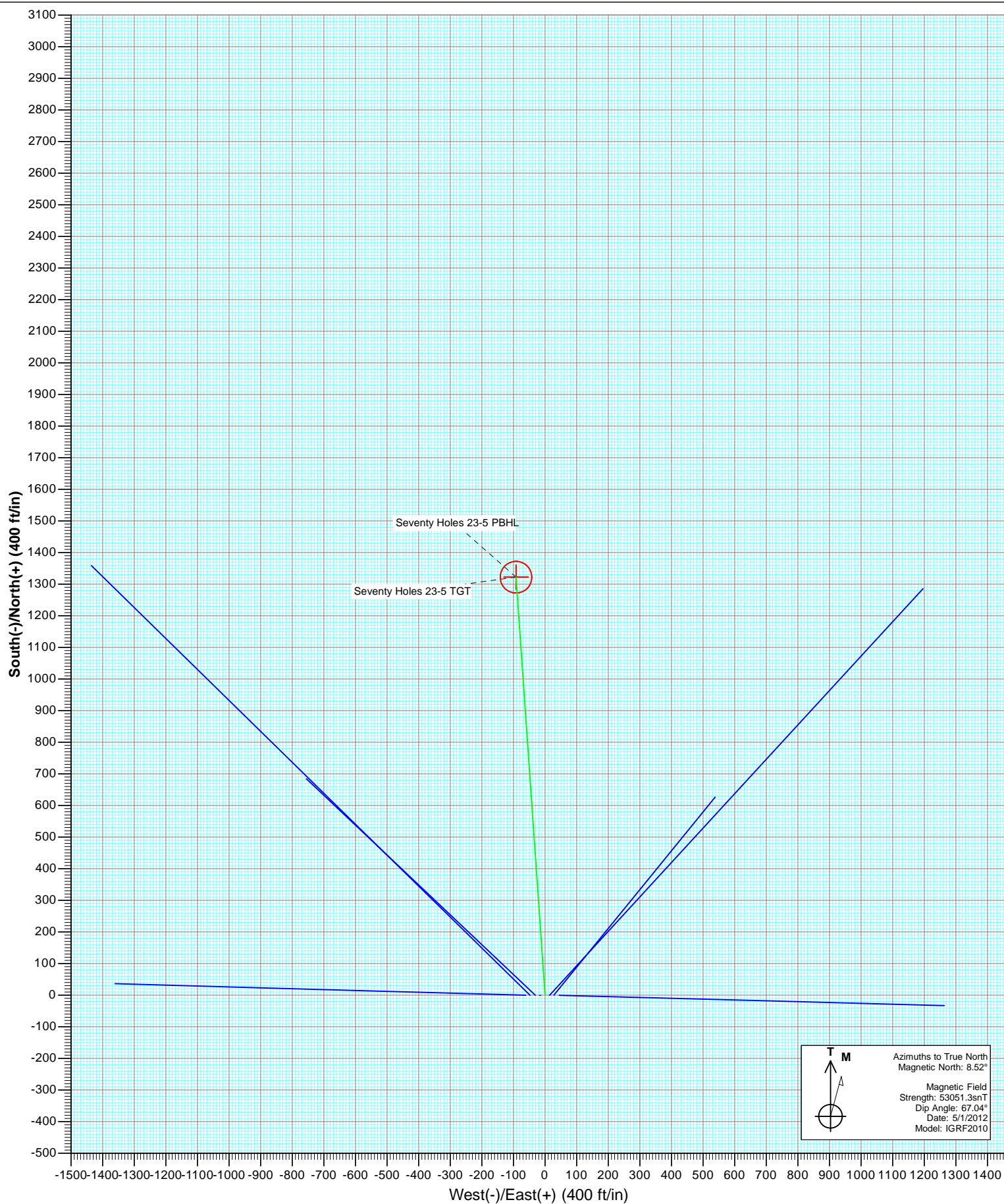


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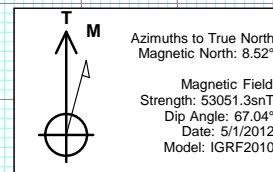
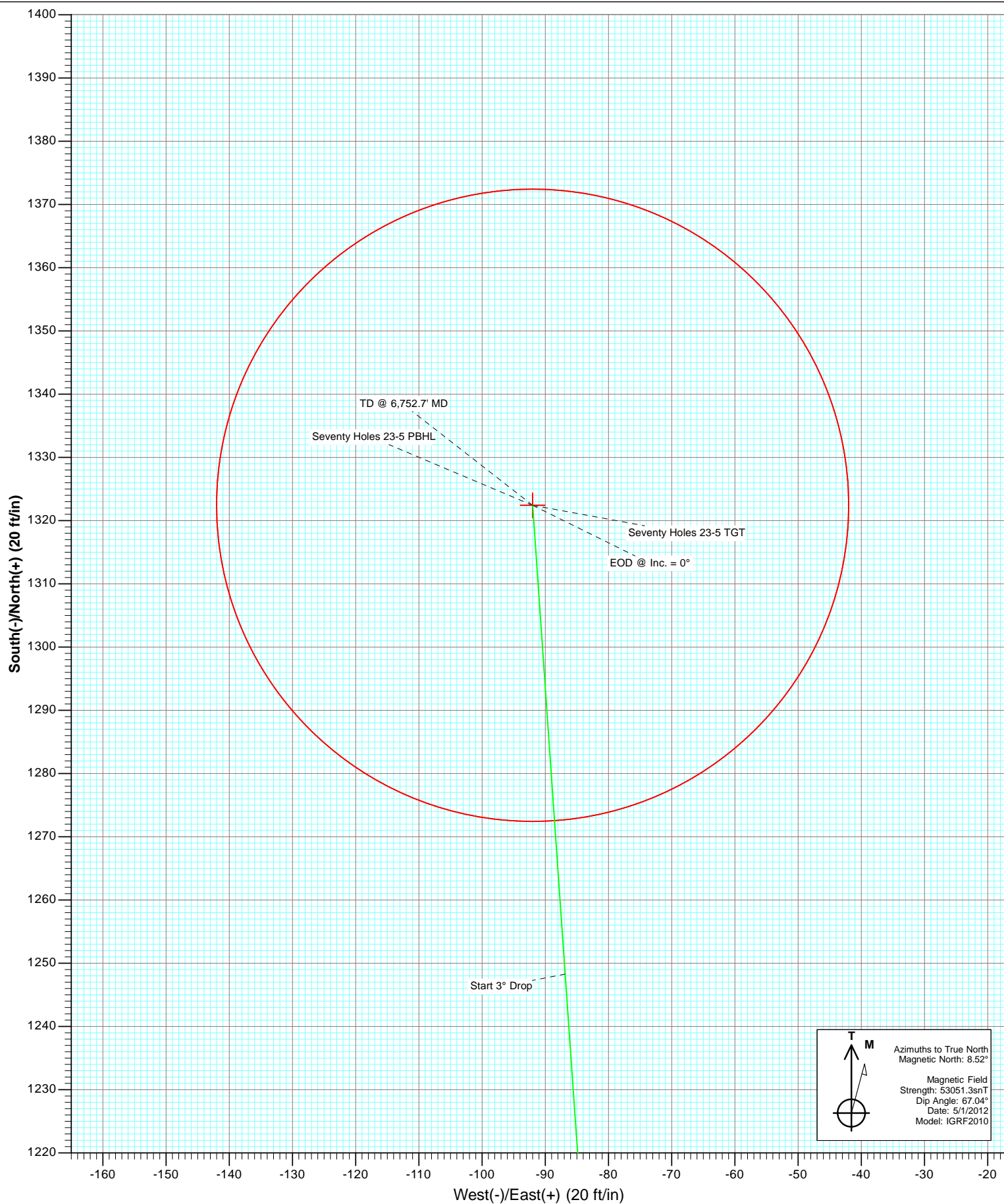


Project: Weld County  
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Project: Weld County  
Site: Seventy Holes 24-5 Pad  
Well: Seventy Holes 23-5  
Wellbore: OH  
Plan: Plan #1



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 23-5
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site:</b>	Seventy Holes 24-5 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Seventy Holes 23-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Project	Weld County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Seventy Holes 24-5 Pad			
Site Position:		Northing:	1,367,320.25 ft	Latitude:	40.336000
From:	Lat/Long	Easting:	3,320,060.09 ft	Longitude:	-104.351890
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.74 °

Well	Seventy Holes 23-5					
Well Position	+N/-S	0.0 ft	Northing:	1,367,320.81 ft	Latitude:	40.336000
	+E/-W	0.0 ft	Easting:	3,320,107.48 ft	Longitude:	-104.351720
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,545.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/1/2012	8.52	67.04	53,051

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	356.02

Plan Sections										
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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,334.5	16.04	356.02	1,327.6	74.1	-5.2	3.00	3.00	0.00	356.02	
5,595.2	16.04	356.02	5,422.4	1,248.3	-86.8	0.00	0.00	0.00	0.00	
6,129.7	0.00	0.00	5,950.0	1,322.4	-92.0	3.00	-3.00	0.00	180.00	Seventy Holes 23-5 T
6,752.7	0.00	0.00	6,573.0	1,322.4	-92.0	0.00	0.00	0.00	0.00	Seventy Holes 23-5 P

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 23-5
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site:</b>	Seventy Holes 24-5 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Seventy Holes 23-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

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	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	KOP @ 800'
900.0	3.00	356.02	900.0	2.6	-0.2	2.6	3.00	3.00	
1,000.0	6.00	356.02	999.6	10.4	-0.7	10.5	3.00	3.00	
1,100.0	9.00	356.02	1,098.8	23.5	-1.6	23.5	3.00	3.00	
1,200.0	12.00	356.02	1,197.1	41.6	-2.9	41.7	3.00	3.00	
1,300.0	15.00	356.02	1,294.3	64.9	-4.5	65.1	3.00	3.00	
1,334.5	16.04	356.02	1,327.6	74.1	-5.2	74.3	3.00	3.00	EOB @ Inc. = 16.04°
1,400.0	16.04	356.02	1,390.5	92.2	-6.4	92.4	0.00	0.00	
1,500.0	16.04	356.02	1,486.6	119.7	-8.3	120.0	0.00	0.00	
1,600.0	16.04	356.02	1,582.7	147.3	-10.2	147.7	0.00	0.00	
1,700.0	16.04	356.02	1,678.8	174.9	-12.2	175.3	0.00	0.00	
1,800.0	16.04	356.02	1,774.9	202.4	-14.1	202.9	0.00	0.00	
1,900.0	16.04	356.02	1,871.0	230.0	-16.0	230.5	0.00	0.00	
2,000.0	16.04	356.02	1,967.2	257.5	-17.9	258.2	0.00	0.00	
2,100.0	16.04	356.02	2,063.3	285.1	-19.8	285.8	0.00	0.00	
2,200.0	16.04	356.02	2,159.4	312.6	-21.7	313.4	0.00	0.00	
2,300.0	16.04	356.02	2,255.5	340.2	-23.7	341.0	0.00	0.00	
2,400.0	16.04	356.02	2,351.6	367.8	-25.6	368.7	0.00	0.00	
2,500.0	16.04	356.02	2,447.7	395.3	-27.5	396.3	0.00	0.00	
2,600.0	16.04	356.02	2,543.8	422.9	-29.4	423.9	0.00	0.00	
2,700.0	16.04	356.02	2,639.9	450.4	-31.3	451.5	0.00	0.00	
2,800.0	16.04	356.02	2,736.0	478.0	-33.3	479.1	0.00	0.00	
2,900.0	16.04	356.02	2,832.1	505.6	-35.2	506.8	0.00	0.00	
3,000.0	16.04	356.02	2,928.2	533.1	-37.1	534.4	0.00	0.00	
3,100.0	16.04	356.02	3,024.3	560.7	-39.0	562.0	0.00	0.00	
3,200.0	16.04	356.02	3,120.5	588.2	-40.9	589.6	0.00	0.00	
3,300.0	16.04	356.02	3,216.6	615.8	-42.8	617.3	0.00	0.00	
3,329.6	16.04	356.02	3,245.0	623.9	-43.4	625.4	0.00	0.00	Parkman
3,400.0	16.04	356.02	3,312.7	643.3	-44.8	644.9	0.00	0.00	
3,500.0	16.04	356.02	3,408.8	670.9	-46.7	672.5	0.00	0.00	
3,600.0	16.04	356.02	3,504.9	698.5	-48.6	700.1	0.00	0.00	
3,700.0	16.04	356.02	3,601.0	726.0	-50.5	727.8	0.00	0.00	
3,800.0	16.04	356.02	3,697.1	753.6	-52.4	755.4	0.00	0.00	
3,900.0	16.04	356.02	3,793.2	781.1	-54.3	783.0	0.00	0.00	
4,000.0	16.04	356.02	3,889.3	808.7	-56.3	810.6	0.00	0.00	
4,005.9	16.04	356.02	3,895.0	810.3	-56.4	812.3	0.00	0.00	Sussex
4,100.0	16.04	356.02	3,985.4	836.3	-58.2	838.3	0.00	0.00	
4,200.0	16.04	356.02	4,081.5	863.8	-60.1	865.9	0.00	0.00	
4,300.0	16.04	356.02	4,177.7	891.4	-62.0	893.5	0.00	0.00	
4,400.0	16.04	356.02	4,273.8	918.9	-63.9	921.1	0.00	0.00	
4,500.0	16.04	356.02	4,369.9	946.5	-65.8	948.8	0.00	0.00	
4,600.0	16.04	356.02	4,466.0	974.0	-67.8	976.4	0.00	0.00	
4,700.0	16.04	356.02	4,562.1	1,001.6	-69.7	1,004.0	0.00	0.00	
4,800.0	16.04	356.02	4,658.2	1,029.2	-71.6	1,031.6	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 Seventy Holes 23-5
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site:</b>	Seventy Holes 24-5 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Seventy Holes 23-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

### 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	16.04	356.02	4,754.3	1,056.7	-73.5	1,059.3	0.00	0.00	
5,000.0	16.04	356.02	4,850.4	1,084.3	-75.4	1,086.9	0.00	0.00	
5,100.0	16.04	356.02	4,946.5	1,111.8	-77.3	1,114.5	0.00	0.00	
5,200.0	16.04	356.02	5,042.6	1,139.4	-79.3	1,142.1	0.00	0.00	
5,300.0	16.04	356.02	5,138.7	1,167.0	-81.2	1,169.8	0.00	0.00	
5,400.0	16.04	356.02	5,234.8	1,194.5	-83.1	1,197.4	0.00	0.00	
5,500.0	16.04	356.02	5,331.0	1,222.1	-85.0	1,225.0	0.00	0.00	
5,595.2	16.04	356.02	5,422.4	1,248.3	-86.8	1,251.3	0.00	0.00	Start 3° Drop
5,600.0	15.89	356.02	5,427.1	1,249.6	-86.9	1,252.6	3.00	-3.00	
5,700.0	12.89	356.02	5,523.9	1,274.4	-88.7	1,277.5	3.00	-3.00	
5,800.0	9.89	356.02	5,621.9	1,294.1	-90.0	1,297.2	3.00	-3.00	
5,900.0	6.89	356.02	5,720.9	1,308.7	-91.0	1,311.8	3.00	-3.00	
6,000.0	3.89	356.02	5,820.4	1,318.0	-91.7	1,321.2	3.00	-3.00	
6,100.0	0.89	356.02	5,920.3	1,322.2	-92.0	1,325.4	3.00	-3.00	
6,129.7	0.00	0.00	5,950.0	1,322.4	-92.0	1,325.6	3.00	-3.00	EOD @ Inc. = 0°
6,200.0	0.00	0.00	6,020.3	1,322.4	-92.0	1,325.6	0.00	0.00	
6,300.0	0.00	0.00	6,120.3	1,322.4	-92.0	1,325.6	0.00	0.00	
6,329.7	0.00	0.00	6,150.0	1,322.4	-92.0	1,325.6	0.00	0.00	Niobrara
6,400.0	0.00	0.00	6,220.3	1,322.4	-92.0	1,325.6	0.00	0.00	
6,500.0	0.00	0.00	6,320.3	1,322.4	-92.0	1,325.6	0.00	0.00	
6,569.7	0.00	0.00	6,390.0	1,322.4	-92.0	1,325.6	0.00	0.00	Ft. Hayes
6,592.7	0.00	0.00	6,413.0	1,322.4	-92.0	1,325.6	0.00	0.00	Codell
6,600.0	0.00	0.00	6,420.3	1,322.4	-92.0	1,325.6	0.00	0.00	
6,603.7	0.00	0.00	6,424.0	1,322.4	-92.0	1,325.6	0.00	0.00	Carlile
6,649.7	0.00	0.00	6,470.0	1,322.4	-92.0	1,325.6	0.00	0.00	Greenhorn
6,700.0	0.00	0.00	6,520.3	1,322.4	-92.0	1,325.6	0.00	0.00	
6,752.7	0.00	0.00	6,573.0	1,322.4	-92.0	1,325.6	0.00	0.00	TD @ 6,752.7' 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									
Seventy Holes 23-5 PBH	0.00	0.00	6,573.0	1,322.4	-92.0	1,368,641.94	3,319,998.37	40.339630	-104.352050
- plan hits target center									
- Circle (radius 50.0)									
Seventy Holes 23-5 TG1	0.00	0.00	5,950.0	1,322.4	-92.0	1,368,641.94	3,319,998.37	40.339630	-104.352050
- plan hits target center									
- Point									

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 23-5
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site:</b>	Seventy Holes 24-5 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Seventy Holes 23-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,329.6	3,245.0	Parkman				
4,005.9	3,895.0	Sussex				
6,329.7	6,150.0	Niobrara				
6,569.7	6,390.0	Ft. Hayes				
6,592.7	6,413.0	Codell				
6,603.7	6,424.0	Carlile				
6,649.7	6,470.0	Greenhorn				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
800.0	800.0	0.0	0.0	KOP @ 800'	
1,334.5	1,327.6	74.1	-5.2	EOB @ Inc. = 16.04°	
5,595.2	5,422.4	1,248.3	-86.8	Start 3° Drop	
6,129.7	5,950.0	1,322.4	-92.0	EOD @ Inc. = 0°	
6,752.7	6,573.0	1,322.4	-92.0	TD @ 6,752.7' MD	



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

**Weld County**

**Seventy Holes 24-5 Pad**

**Seventy Holes 23-5**

**OH**

**Plan #1**

## **Anticollision Report**

**01 May, 2012**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	5/1/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	6,752.7	Plan #1 (OH)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Seventy Holes 24-5 Pad						
Seventy Holes 13-5 - OH - Plan #1	0.0	0.0	47.4			
Seventy Holes 13-5 - OH - Plan #1	600.0	600.0	47.4	47.4	10,000.000	CC, ES
Seventy Holes 14-5 - OH - Plan #1	0.0	5.0	61.3			
Seventy Holes 14-5 - OH - Plan #1	764.9	769.9	61.3	61.3	10,000.000	CC, ES
Seventy Holes 24-5 (vert) - OH - Plan #1	0.0	15.0	16.7			
Seventy Holes 24-5 (vert) - OH - Plan #1	866.4	881.3	16.7	16.7	10,000.000	CC, ES
Seventy Holes 33-5 - OH - Plan #1	0.0	0.0	13.9			
Seventy Holes 33-5 - OH - Plan #1	800.0	800.0	13.9	13.9	10,000.000	CC, ES
Seventy Holes 34-5 - OH - Plan #1	0.0	0.0	44.6			
Seventy Holes 34-5 - OH - Plan #1	800.0	800.0	44.6	44.6	10,000.000	CC, ES
Seventy Holes I-5 - OH - Plan #1	0.0	0.0	30.7			
Seventy Holes I-5 - OH - Plan #1	800.0	800.0	30.7	30.7	10,000.000	CC, ES
Seventy Holes N-5 - OH - Plan #1	0.0	15.0	27.9			
Seventy Holes N-5 - OH - Plan #1	800.0	815.0	27.9	27.9	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 Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Seventy Holes 24-5 Pad - Seventy Holes 13-5 - OH - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	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)				
0.0	0.0	0.0	0.0	0.0	0.0	-89.96	0.0	-47.4	47.4					
100.0	100.0	100.0	100.0	0.2	0.2	-89.96	0.0	-47.4	47.4	47.4	0.00	N/A		
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-47.4	47.4	47.4	0.00	N/A		
300.0	300.0	300.0	300.0	0.5	0.5	-89.96	0.0	-47.4	47.4	47.4	0.00	N/A		
400.0	400.0	400.0	400.0	0.7	0.7	-89.96	0.0	-47.4	47.4	47.4	0.00	N/A		
500.0	500.0	500.0	500.0	0.9	0.9	-89.96	0.0	-47.4	47.4	47.4	0.00	N/A		
600.0	600.0	600.0	600.0	1.0	1.0	-89.96	0.0	-47.4	47.4	47.4	0.00	N/A CC, ES		
700.0	700.0	698.2	698.1	1.2	1.2	-87.91	1.8	-49.2	49.3	49.3	0.00	N/A		
800.0	800.0	795.8	795.5	1.4	1.4	-82.64	7.0	-54.6	55.2	55.2	0.00	N/A		
900.0	900.0	892.7	891.6	1.6	1.6	-73.97	15.7	-63.4	65.1	65.1	0.00	N/A		
1,000.0	999.6	988.8	986.1	1.7	1.9	-72.17	27.6	-75.6	78.0	78.0	0.00	N/A		
1,100.0	1,098.8	1,083.9	1,078.8	2.0	2.3	-72.19	42.7	-91.0	93.5	93.5	0.00	N/A		
1,200.0	1,197.1	1,177.9	1,169.1	2.3	2.7	-73.20	60.7	-109.4	111.8	111.8	0.00	N/A		
1,300.0	1,294.3	1,270.7	1,257.0	2.6	3.2	-74.68	81.6	-130.7	132.6	132.6	0.00	N/A		
1,400.0	1,390.5	1,362.1	1,342.1	3.0	3.8	-76.40	105.0	-154.6	156.5	156.5	0.00	N/A		
1,500.0	1,486.6	1,458.4	1,430.7	3.5	4.5	-77.52	131.3	-181.5	182.3	182.3	0.00	N/A		
1,600.0	1,582.7	1,555.0	1,519.6	3.9	5.1	-78.36	157.6	-208.4	208.2	208.2	0.00	N/A		
1,700.0	1,678.8	1,651.5	1,608.5	4.4	5.8	-79.02	184.0	-235.3	234.1	234.1	0.00	N/A		
1,800.0	1,774.9	1,748.1	1,697.4	4.9	6.5	-79.55	210.3	-262.2	260.1	260.1	0.00	N/A		
1,900.0	1,871.0	1,844.6	1,786.3	5.4	7.2	-79.98	236.7	-289.2	286.1	286.1	0.00	N/A		
2,000.0	1,967.2	1,941.2	1,875.2	5.9	7.9	-80.34	263.0	-316.1	312.1	312.1	0.00	N/A		
2,100.0	2,063.3	2,037.7	1,964.1	6.4	8.5	-80.64	289.4	-343.0	338.1	338.1	0.00	N/A		
2,200.0	2,159.4	2,134.3	2,053.0	6.9	9.2	-80.90	315.7	-369.9	364.1	364.1	0.00	N/A		
2,300.0	2,255.5	2,230.8	2,141.9	7.4	9.9	-81.13	342.1	-396.8	390.1	390.1	0.00	N/A		
2,400.0	2,351.6	2,327.4	2,230.8	7.9	10.6	-81.33	368.4	-423.8	416.1	416.1	0.00	N/A		
2,500.0	2,447.7	2,423.9	2,319.7	8.4	11.3	-81.50	394.8	-450.7	442.1	442.1	0.00	N/A		
2,600.0	2,543.8	2,520.5	2,408.6	8.9	12.0	-81.66	421.2	-477.6	468.1	468.1	0.00	N/A		
2,700.0	2,639.9	2,617.0	2,497.5	9.4	12.7	-81.80	447.5	-504.5	494.2	494.2	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 Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Seventy Holes 24-5 Pad - Seventy Holes 14-5 - OH - Plan #1		Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance										
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)	Total Uncertainty Axis	Separation Factor	Warning				
0.0	0.0	5.0	5.0	0.0	0.0	-89.99	0.0	-61.3	61.3								
100.0	100.0	105.0	105.0	0.2	0.2	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A					
200.0	200.0	205.0	205.0	0.3	0.3	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A					
300.0	300.0	305.0	305.0	0.5	0.5	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A					
400.0	400.0	405.0	405.0	0.7	0.7	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A					
500.0	500.0	505.0	505.0	0.9	0.9	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A					
600.0	600.0	605.0	605.0	1.0	1.0	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A					
700.0	700.0	705.0	705.0	1.2	1.2	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A					
764.9	764.9	769.9	769.9	1.3	1.3	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A	CC, ES				
800.0	800.0	804.8	804.8	1.4	1.4	-89.99	0.0	-61.3	61.3	61.3	0.00	N/A					
900.0	900.0	900.0	900.0	1.6	1.6	-88.06	0.1	-63.9	64.0	64.0	0.00	N/A					
1,000.0	999.6	997.7	997.3	1.7	1.7	-93.54	0.3	-71.5	71.9	71.9	0.00	N/A					
1,100.0	1,098.8	1,092.4	1,091.2	2.0	2.0	-100.13	0.6	-83.7	86.1	86.1	0.00	N/A					
1,200.0	1,197.1	1,185.1	1,182.5	2.3	2.2	-106.16	1.1	-100.0	107.0	107.0	0.00	N/A					
1,300.0	1,294.3	1,275.3	1,270.4	2.6	2.6	-110.90	1.7	-120.1	134.9	134.9	0.00	N/A					
1,400.0	1,390.5	1,365.8	1,357.7	3.0	2.9	-114.87	2.3	-144.0	168.6	168.6	0.00	N/A					
1,500.0	1,486.6	1,459.1	1,447.5	3.5	3.3	-117.83	3.0	-169.1	203.5	203.5	0.00	N/A					
1,600.0	1,582.7	1,552.3	1,537.3	3.9	3.8	-119.93	3.7	-194.3	238.8	238.8	0.00	N/A					
1,700.0	1,678.8	1,645.6	1,627.1	4.4	4.2	-121.49	4.5	-219.4	274.2	274.2	0.00	N/A					
1,800.0	1,774.9	1,738.9	1,717.0	4.9	4.6	-122.69	5.2	-244.6	309.8	309.8	0.00	N/A					
1,900.0	1,871.0	1,832.2	1,806.8	5.4	5.1	-123.64	5.9	-269.7	345.5	345.5	0.00	N/A					
2,000.0	1,967.2	1,925.4	1,896.6	5.9	5.6	-124.42	6.6	-294.9	381.3	381.3	0.00	N/A					
2,100.0	2,063.3	2,018.7	1,986.4	6.4	6.0	-125.06	7.3	-320.0	417.1	417.1	0.00	N/A					
2,200.0	2,159.4	2,112.0	2,076.2	6.9	6.5	-125.61	8.0	-345.2	453.0	453.0	0.00	N/A					
2,300.0	2,255.5	2,205.2	2,166.0	7.4	6.9	-126.07	8.7	-370.3	488.9	488.9	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 Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Seventy Holes 24-5 Pad - Seventy Holes 24-5 (vert) - OH - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
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)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	15.0	15.0	0.0	0.0	-90.03	0.0	-16.7	16.7					
100.0	100.0	115.0	115.0	0.2	0.2	-90.03	0.0	-16.7	16.7	16.7	0.00	N/A		
200.0	200.0	215.0	215.0	0.3	0.4	-90.03	0.0	-16.7	16.7	16.7	0.00	N/A		
300.0	300.0	315.0	315.0	0.5	0.5	-90.03	0.0	-16.7	16.7	16.7	0.00	N/A		
400.0	400.0	415.0	415.0	0.7	0.7	-90.03	0.0	-16.7	16.7	16.7	0.00	N/A		
500.0	500.0	515.0	515.0	0.9	0.9	-90.03	0.0	-16.7	16.7	16.7	0.00	N/A		
600.0	600.0	615.0	615.0	1.0	1.1	-90.03	0.0	-16.7	16.7	16.7	0.00	N/A		
700.0	700.0	715.0	715.0	1.2	1.2	-90.03	0.0	-16.7	16.7	16.7	0.00	N/A		
800.0	800.0	815.0	815.0	1.4	1.4	-90.03	0.0	-16.7	16.7	16.7	0.00	N/A		
866.4	866.3	881.3	881.3	1.5	1.5	-90.00	0.0	-16.7	16.7	16.7	0.00	N/A CC, ES		
900.0	900.0	915.0	915.0	1.6	1.6	-95.01	0.0	-16.7	16.8	16.8	0.00	N/A		
1,000.0	999.6	1,014.6	1,014.6	1.7	1.8	-119.02	0.0	-16.7	19.1	19.1	0.00	N/A		
1,100.0	1,098.8	1,113.8	1,113.8	2.0	1.9	-142.93	0.0	-16.7	27.9	27.9	0.00	N/A		
1,200.0	1,197.1	1,212.1	1,212.1	2.3	2.1	-157.20	0.0	-16.7	43.9	43.9	0.00	N/A		
1,300.0	1,294.3	1,309.3	1,309.3	2.6	2.3	-164.88	0.0	-16.7	66.1	66.1	0.00	N/A		
1,400.0	1,390.5	1,405.5	1,405.5	3.0	2.4	-169.23	0.0	-16.7	92.8	92.8	0.00	N/A		
1,500.0	1,486.6	1,501.6	1,501.6	3.5	2.6	-171.69	0.0	-16.7	120.0	120.0	0.00	N/A		
1,600.0	1,582.7	1,597.7	1,597.7	3.9	2.8	-173.24	0.0	-16.7	147.4	147.4	0.00	N/A		
1,700.0	1,678.8	1,693.8	1,693.8	4.4	2.9	-174.31	0.0	-16.7	174.9	174.9	0.00	N/A		
1,800.0	1,774.9	1,789.9	1,789.9	4.9	3.1	-175.08	0.0	-16.7	202.4	202.4	0.00	N/A		
1,900.0	1,871.0	1,886.0	1,886.0	5.4	3.3	-175.67	0.0	-16.7	230.0	230.0	0.00	N/A		
2,000.0	1,967.2	1,982.2	1,982.2	5.9	3.4	-176.14	0.0	-16.7	257.5	257.5	0.00	N/A		
2,100.0	2,063.3	2,078.3	2,078.3	6.4	3.6	-176.51	0.0	-16.7	285.1	285.1	0.00	N/A		
2,200.0	2,159.4	2,174.4	2,174.4	6.9	3.8	-176.82	0.0	-16.7	312.7	312.7	0.00	N/A		
2,300.0	2,255.5	2,270.5	2,270.5	7.4	3.9	-177.08	0.0	-16.7	340.3	340.3	0.00	N/A		
2,400.0	2,351.6	2,366.6	2,366.6	7.9	4.1	-177.30	0.0	-16.7	367.9	367.9	0.00	N/A		
2,500.0	2,447.7	2,462.7	2,462.7	8.4	4.3	-177.48	0.0	-16.7	395.5	395.5	0.00	N/A		
2,600.0	2,543.8	2,558.8	2,558.8	8.9	4.4	-177.65	0.0	-16.7	423.1	423.1	0.00	N/A		
2,700.0	2,639.9	2,654.9	2,654.9	9.4	4.6	-177.79	0.0	-16.7	450.7	450.7	0.00	N/A		
2,800.0	2,736.0	2,751.0	2,751.0	9.9	4.8	-177.92	0.0	-16.7	478.3	478.3	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 Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Seventy Holes 24-5 Pad - Seventy Holes 33-5 - OH - Plan #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis		Distance									
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)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	89.90	0.0	13.9	13.9						
100.0	100.0	100.0	100.0	0.2	0.2	89.90	0.0	13.9	13.9	13.9	0.00	N/A			
200.0	200.0	200.0	200.0	0.3	0.3	89.90	0.0	13.9	13.9	13.9	0.00	N/A			
300.0	300.0	300.0	300.0	0.5	0.5	89.90	0.0	13.9	13.9	13.9	0.00	N/A			
400.0	400.0	400.0	400.0	0.7	0.7	89.90	0.0	13.9	13.9	13.9	0.00	N/A			
500.0	500.0	500.0	500.0	0.9	0.9	89.90	0.0	13.9	13.9	13.9	0.00	N/A			
600.0	600.0	600.0	600.0	1.0	1.0	89.90	0.0	13.9	13.9	13.9	0.00	N/A			
700.0	700.0	700.0	700.0	1.2	1.2	89.90	0.0	13.9	13.9	13.9	0.00	N/A			
800.0	800.0	800.0	800.0	1.4	1.4	89.90	0.0	13.9	13.9	13.9	0.00	N/A CC, ES			
900.0	900.0	899.5	899.4	1.6	1.6	96.32	1.9	15.7	15.9	15.9	0.00	N/A			
1,000.0	999.6	998.7	998.3	1.7	1.7	100.96	7.6	20.9	21.9	21.9	0.00	N/A			
1,100.0	1,098.8	1,097.4	1,096.2	2.0	2.0	104.72	17.0	29.6	32.0	32.0	0.00	N/A			
1,200.0	1,197.1	1,195.4	1,192.6	2.3	2.3	107.09	30.0	41.5	46.1	46.1	0.00	N/A			
1,300.0	1,294.3	1,292.4	1,287.0	2.6	2.6	108.46	46.5	56.7	64.3	64.3	0.00	N/A			
1,400.0	1,390.5	1,388.4	1,379.1	3.0	3.0	108.92	66.2	74.8	86.0	86.0	0.00	N/A			
1,500.0	1,486.6	1,483.2	1,468.7	3.5	3.6	107.17	89.0	95.8	110.0	110.0	0.00	N/A			
1,600.0	1,582.7	1,578.7	1,557.7	3.9	4.1	104.60	114.6	119.2	135.9	135.9	0.00	N/A			
1,700.0	1,678.8	1,675.1	1,647.4	4.4	4.7	102.74	140.6	143.1	162.1	162.1	0.00	N/A			
1,800.0	1,774.9	1,771.5	1,737.0	4.9	5.3	101.40	166.6	167.0	188.5	188.5	0.00	N/A			
1,900.0	1,871.0	1,867.9	1,826.7	5.4	5.9	100.39	192.6	190.9	214.9	214.9	0.00	N/A			
2,000.0	1,967.2	1,964.2	1,916.4	5.9	6.6	99.60	218.6	214.8	241.4	241.4	0.00	N/A			
2,100.0	2,063.3	2,060.6	2,006.1	6.4	7.2	98.96	244.6	238.7	267.9	267.9	0.00	N/A			
2,200.0	2,159.4	2,157.0	2,095.8	6.9	7.8	98.44	270.6	262.6	294.4	294.4	0.00	N/A			
2,300.0	2,255.5	2,253.4	2,185.4	7.4	8.5	98.01	296.6	286.5	321.0	321.0	0.00	N/A			
2,400.0	2,351.6	2,349.8	2,275.1	7.9	9.1	97.64	322.6	310.4	347.6	347.6	0.00	N/A			
2,500.0	2,447.7	2,446.2	2,364.8	8.4	9.8	97.32	348.6	334.3	374.1	374.1	0.00	N/A			
2,600.0	2,543.8	2,542.5	2,454.5	8.9	10.4	97.05	374.7	358.2	400.7	400.7	0.00	N/A			
2,700.0	2,639.9	2,638.9	2,544.2	9.4	11.1	96.81	400.7	382.1	427.3	427.3	0.00	N/A			
2,800.0	2,736.0	2,735.3	2,633.8	9.9	11.7	96.60	426.7	406.0	453.9	453.9	0.00	N/A			
2,900.0	2,832.1	2,831.7	2,723.5	10.4	12.4	96.41	452.7	429.9	480.6	480.6	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 Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Seventy Holes 24-5 Pad - Seventy Holes 34-5 - OH - Plan #1		Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)						
0.0	0.0	0.0	0.0	0.0	0.0	89.98	0.0	44.6	44.6							
100.0	100.0	100.0	100.0	0.2	0.2	89.98	0.0	44.6	44.6	44.6	0.00	N/A				
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	44.6	44.6	44.6	0.00	N/A				
300.0	300.0	300.0	300.0	0.5	0.5	89.98	0.0	44.6	44.6	44.6	0.00	N/A				
400.0	400.0	400.0	400.0	0.7	0.7	89.98	0.0	44.6	44.6	44.6	0.00	N/A				
500.0	500.0	500.0	500.0	0.9	0.9	89.98	0.0	44.6	44.6	44.6	0.00	N/A				
600.0	600.0	600.0	600.0	1.0	1.0	89.98	0.0	44.6	44.6	44.6	0.00	N/A				
700.0	700.0	700.0	700.0	1.2	1.2	89.98	0.0	44.6	44.6	44.6	0.00	N/A				
800.0	800.0	800.0	800.0	1.4	1.4	89.98	0.0	44.6	44.6	44.6	0.00	N/A CC, ES				
900.0	900.0	897.6	897.5	1.6	1.6	97.04	-0.1	47.1	47.4	47.4	0.00	N/A				
1,000.0	999.6	994.3	994.0	1.7	1.7	104.27	-0.2	54.5	56.5	56.5	0.00	N/A				
1,100.0	1,098.8	1,089.4	1,088.3	2.0	2.0	111.94	-0.6	66.5	73.0	73.0	0.00	N/A				
1,200.0	1,197.1	1,182.0	1,179.5	2.3	2.2	117.97	-1.0	82.7	97.2	97.2	0.00	N/A				
1,300.0	1,294.3	1,271.7	1,266.9	2.6	2.5	122.11	-1.5	102.5	128.9	128.9	0.00	N/A				
1,400.0	1,390.5	1,363.1	1,355.4	3.0	2.9	125.60	-2.2	125.6	166.0	166.0	0.00	N/A				
1,500.0	1,486.6	1,455.5	1,444.7	3.5	3.3	128.12	-2.8	148.9	203.6	203.6	0.00	N/A				
1,600.0	1,582.7	1,547.8	1,534.1	3.9	3.7	129.86	-3.4	172.2	241.6	241.6	0.00	N/A				
1,700.0	1,678.8	1,640.1	1,623.4	4.4	4.1	131.13	-4.0	195.5	279.6	279.6	0.00	N/A				
1,800.0	1,774.9	1,732.4	1,712.7	4.9	4.5	132.10	-4.7	218.8	317.8	317.8	0.00	N/A				
1,900.0	1,871.0	1,824.8	1,802.1	5.4	4.9	132.85	-5.3	242.1	356.0	356.0	0.00	N/A				
2,000.0	1,967.2	1,917.1	1,891.4	5.9	5.3	133.47	-5.9	265.4	394.2	394.2	0.00	N/A				
2,100.0	2,063.3	2,009.4	1,980.7	6.4	5.8	133.97	-6.5	288.7	432.5	432.5	0.00	N/A				
2,200.0	2,159.4	2,101.7	2,070.1	6.9	6.2	134.39	-7.2	312.0	470.8	470.8	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 Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Seventy Holes 24-5 Pad - Seventy Holes I-5 - OH - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
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)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-89.92	0.0	-30.7	30.7					
100.0	100.0	100.0	100.0	0.2	0.2	-89.92	0.0	-30.7	30.7	30.7	0.00	N/A		
200.0	200.0	200.0	200.0	0.3	0.3	-89.92	0.0	-30.7	30.7	30.7	0.00	N/A		
300.0	300.0	300.0	300.0	0.5	0.5	-89.92	0.0	-30.7	30.7	30.7	0.00	N/A		
400.0	400.0	400.0	400.0	0.7	0.7	-89.92	0.0	-30.7	30.7	30.7	0.00	N/A		
500.0	500.0	500.0	500.0	0.9	0.9	-89.92	0.0	-30.7	30.7	30.7	0.00	N/A		
600.0	600.0	600.0	600.0	1.0	1.0	-89.92	0.0	-30.7	30.7	30.7	0.00	N/A		
700.0	700.0	700.0	700.0	1.2	1.2	-89.92	0.0	-30.7	30.7	30.7	0.00	N/A		
800.0	800.0	800.0	800.0	1.4	1.4	-89.92	0.0	-30.7	30.7	30.7	0.00	N/A CC, ES		
900.0	900.0	898.8	898.8	1.6	1.6	-87.36	1.8	-32.5	32.4	32.4	0.00	N/A		
1,000.0	999.6	997.4	997.1	1.7	1.7	-90.80	7.0	-38.1	37.6	37.6	0.00	N/A		
1,100.0	1,098.8	1,095.6	1,094.4	2.0	2.0	-94.74	15.7	-47.3	46.5	46.5	0.00	N/A		
1,200.0	1,197.1	1,193.2	1,190.4	2.3	2.2	-98.15	27.7	-60.0	59.1	59.1	0.00	N/A		
1,300.0	1,294.3	1,291.8	1,287.0	2.6	2.6	-102.47	41.6	-74.7	74.3	74.3	0.00	N/A		
1,400.0	1,390.5	1,390.1	1,383.2	3.0	2.9	-107.95	55.5	-89.3	91.0	91.0	0.00	N/A		
1,500.0	1,486.6	1,488.3	1,479.3	3.5	3.2	-111.99	69.3	-104.0	108.4	108.4	0.00	N/A		
1,600.0	1,582.7	1,586.6	1,575.4	3.9	3.6	-114.91	83.2	-118.6	126.1	126.1	0.00	N/A		
1,700.0	1,678.8	1,684.8	1,671.6	4.4	4.0	-117.10	97.0	-133.3	144.2	144.2	0.00	N/A		
1,800.0	1,774.9	1,783.0	1,767.7	4.9	4.3	-118.80	110.8	-147.9	162.3	162.3	0.00	N/A		
1,900.0	1,871.0	1,881.3	1,863.9	5.4	4.7	-120.17	124.7	-162.5	180.6	180.6	0.00	N/A		
2,000.0	1,967.2	1,979.5	1,960.0	5.9	5.1	-121.28	138.5	-177.2	199.0	199.0	0.00	N/A		
2,100.0	2,063.3	2,077.7	2,056.2	6.4	5.5	-122.20	152.3	-191.8	217.4	217.4	0.00	N/A		
2,200.0	2,159.4	2,176.0	2,152.3	6.9	5.8	-122.98	166.2	-206.5	235.9	235.9	0.00	N/A		
2,300.0	2,255.5	2,274.2	2,248.5	7.4	6.2	-123.64	180.0	-221.1	254.4	254.4	0.00	N/A		
2,400.0	2,351.6	2,372.4	2,344.6	7.9	6.6	-124.22	193.8	-235.8	272.9	272.9	0.00	N/A		
2,500.0	2,447.7	2,470.7	2,440.8	8.4	7.0	-124.72	207.7	-250.4	291.4	291.4	0.00	N/A		
2,600.0	2,543.8	2,568.9	2,536.9	8.9	7.4	-125.16	221.5	-265.0	310.0	310.0	0.00	N/A		
2,700.0	2,639.9	2,667.1	2,633.0	9.4	7.8	-125.56	235.4	-279.7	328.6	328.6	0.00	N/A		
2,800.0	2,736.0	2,765.4	2,729.2	9.9	8.1	-125.91	249.2	-294.3	347.2	347.2	0.00	N/A		
2,900.0	2,832.1	2,863.6	2,825.3	10.4	8.5	-126.22	263.0	-309.0	365.8	365.8	0.00	N/A		
3,000.0	2,928.2	2,961.8	2,921.5	10.9	8.9	-126.51	276.9	-323.6	384.5	384.5	0.00	N/A		
3,100.0	3,024.3	3,060.1	3,017.6	11.4	9.3	-126.76	290.7	-338.3	403.1	403.1	0.00	N/A		
3,200.0	3,120.5	3,158.3	3,113.8	11.9	9.7	-127.00	304.5	-352.9	421.7	421.7	0.00	N/A		
3,300.0	3,216.6	3,256.5	3,209.9	12.4	10.1	-127.21	318.4	-367.5	440.4	440.4	0.00	N/A		
3,400.0	3,312.7	3,354.8	3,306.1	12.9	10.5	-127.41	332.2	-382.2	459.0	459.0	0.00	N/A		
3,500.0	3,408.8	3,453.0	3,402.2	13.4	10.9	-127.59	346.0	-396.8	477.7	477.7	0.00	N/A		
3,600.0	3,504.9	3,551.2	3,498.4	13.9	11.3	-127.76	359.9	-411.5	496.3	496.3	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 Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Seventy Holes 24-5 Pad - Seventy Holes N-5 - OH - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
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	15.0	15.0	0.0	0.0	89.93	0.0	27.9	27.9					
100.0	100.0	115.0	115.0	0.2	0.2	89.93	0.0	27.9	27.9	27.9	0.00	N/A		
200.0	200.0	215.0	215.0	0.3	0.4	89.93	0.0	27.9	27.9	27.9	0.00	N/A		
300.0	300.0	315.0	315.0	0.5	0.5	89.93	0.0	27.9	27.9	27.9	0.00	N/A		
400.0	400.0	415.0	415.0	0.7	0.7	89.93	0.0	27.9	27.9	27.9	0.00	N/A		
500.0	500.0	515.0	515.0	0.9	0.9	89.93	0.0	27.9	27.9	27.9	0.00	N/A		
600.0	600.0	615.0	615.0	1.0	1.1	89.93	0.0	27.9	27.9	27.9	0.00	N/A		
700.0	700.0	715.0	715.0	1.2	1.2	89.93	0.0	27.9	27.9	27.9	0.00	N/A		
800.0	800.0	815.0	815.0	1.4	1.4	89.93	0.0	27.9	27.9	27.9	0.00	N/A CC, ES		
900.0	900.0	915.0	915.0	1.6	1.6	99.22	0.0	27.9	28.2	28.2	0.00	N/A		
1,000.0	999.6	1,014.6	1,014.6	1.7	1.8	113.74	0.1	27.9	30.5	30.5	0.00	N/A		
1,100.0	1,098.8	1,113.6	1,113.5	2.0	1.9	126.92	2.7	30.0	37.9	37.9	0.00	N/A		
1,200.0	1,197.1	1,212.6	1,212.2	2.3	2.1	133.67	9.2	35.3	50.1	50.1	0.00	N/A		
1,300.0	1,294.3	1,311.4	1,310.1	2.6	2.3	136.18	19.7	43.9	66.2	66.2	0.00	N/A		
1,400.0	1,390.5	1,409.7	1,406.8	3.0	2.6	137.34	32.7	54.5	85.1	85.1	0.00	N/A		
1,500.0	1,486.6	1,507.8	1,503.5	3.5	2.9	138.23	45.8	65.1	104.2	104.2	0.00	N/A		
1,600.0	1,582.7	1,606.0	1,600.2	3.9	3.2	138.85	58.9	75.8	123.4	123.4	0.00	N/A		
1,700.0	1,678.8	1,704.1	1,696.9	4.4	3.4	139.30	72.0	86.4	142.5	142.5	0.00	N/A		
1,800.0	1,774.9	1,802.2	1,793.6	4.9	3.7	139.64	85.1	97.1	161.7	161.7	0.00	N/A		
1,900.0	1,871.0	1,900.4	1,890.3	5.4	4.1	139.91	98.1	107.8	180.9	180.9	0.00	N/A		
2,000.0	1,967.2	1,998.5	1,986.9	5.9	4.4	140.13	111.2	118.4	200.0	200.0	0.00	N/A		
2,100.0	2,063.3	2,096.7	2,083.6	6.4	4.7	140.31	124.3	129.1	219.2	219.2	0.00	N/A		
2,200.0	2,159.4	2,194.8	2,180.3	6.9	5.0	140.46	137.4	139.7	238.4	238.4	0.00	N/A		
2,300.0	2,255.5	2,293.0	2,277.0	7.4	5.3	140.59	150.5	150.4	257.5	257.5	0.00	N/A		
2,400.0	2,351.6	2,391.1	2,373.7	7.9	5.7	140.70	163.6	161.0	276.7	276.7	0.00	N/A		
2,500.0	2,447.7	2,489.2	2,470.3	8.4	6.0	140.80	176.7	171.7	295.9	295.9	0.00	N/A		
2,600.0	2,543.8	2,587.4	2,567.0	8.9	6.3	140.89	189.8	182.3	315.0	315.0	0.00	N/A		
2,700.0	2,639.9	2,685.5	2,663.7	9.4	6.6	140.96	202.8	193.0	334.2	334.2	0.00	N/A		
2,800.0	2,736.0	2,783.7	2,760.4	9.9	7.0	141.03	215.9	203.6	353.4	353.4	0.00	N/A		
2,900.0	2,832.1	2,881.8	2,857.1	10.4	7.3	141.09	229.0	214.3	372.6	372.6	0.00	N/A		
3,000.0	2,928.2	2,980.0	2,953.8	10.9	7.6	141.14	242.1	225.0	391.7	391.7	0.00	N/A		
3,100.0	3,024.3	3,078.1	3,050.4	11.4	8.0	141.19	255.2	235.6	410.9	410.9	0.00	N/A		
3,200.0	3,120.5	3,176.3	3,147.1	11.9	8.3	141.24	268.3	246.3	430.1	430.1	0.00	N/A		
3,300.0	3,216.6	3,274.4	3,243.8	12.4	8.6	141.28	281.4	256.9	449.3	449.3	0.00	N/A		
3,400.0	3,312.7	3,372.5	3,340.5	12.9	9.0	141.31	294.5	267.6	468.4	468.4	0.00	N/A		
3,500.0	3,408.8	3,470.7	3,437.2	13.4	9.3	141.35	307.5	278.2	487.6	487.6	0.00	N/A		

# Cathedral Energy Services

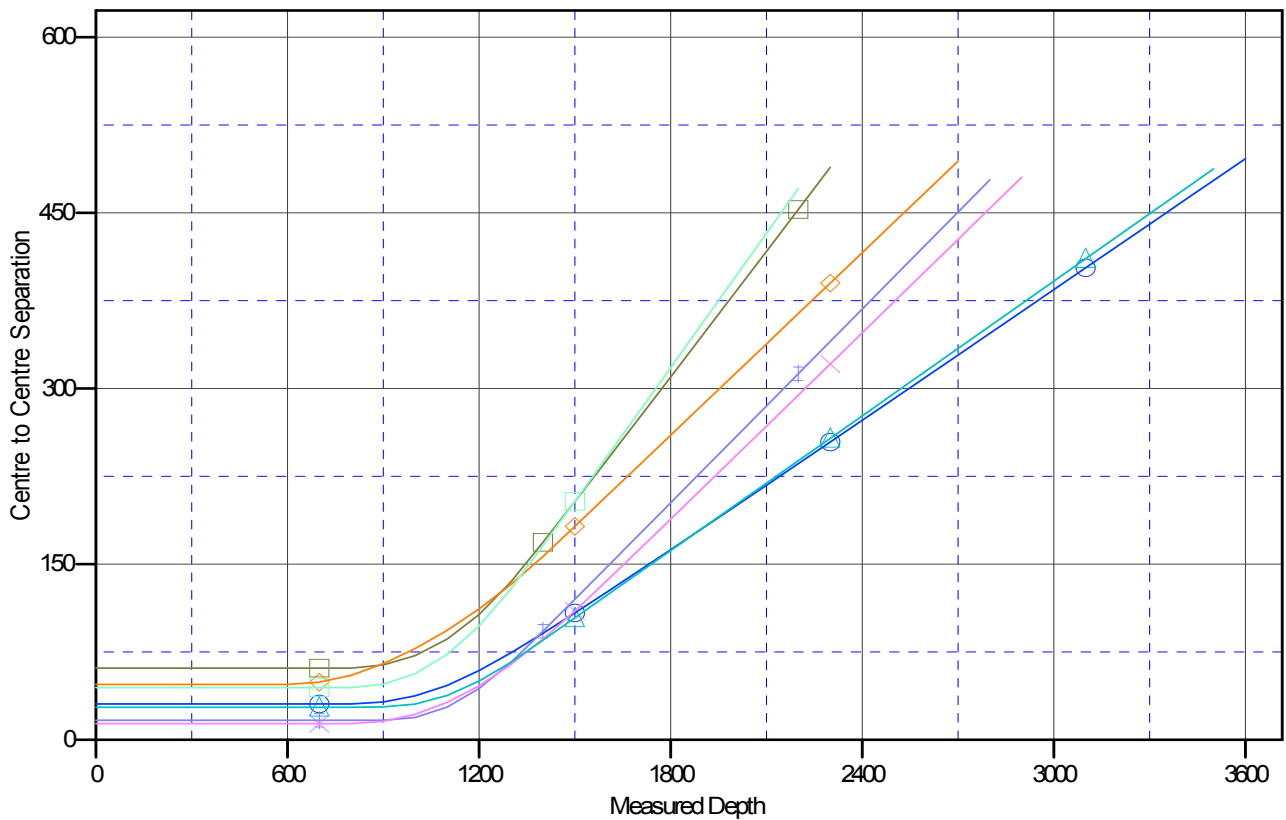
## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 23-5
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Reference Site:</b>	Seventy Holes 24-5 Pad	<b>MD Reference:</b>	KBE @ 4555.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Seventy Holes 23-5	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KBE @ 4555.0ft (Original Well Elev)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: Seventy Holes 23-5  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.74°

### Ladder Plot



### LEGEND

- Seventy Holes 14-5, OH, Plan #1 V0
- Seventy Holes 24-5 (vert), OH, Plan #1 V0
- Seventy Holes N-5, OH, Plan #1 V0
- Seventy Holes I-5, OH, Plan #1 V0
- Seventy Holes 34-5, OH, Plan #1 V0
- Seventy Holes 13-5, OH, Plan #1 V0
- Seventy Holes 33-5, OH, Plan #1 V0