

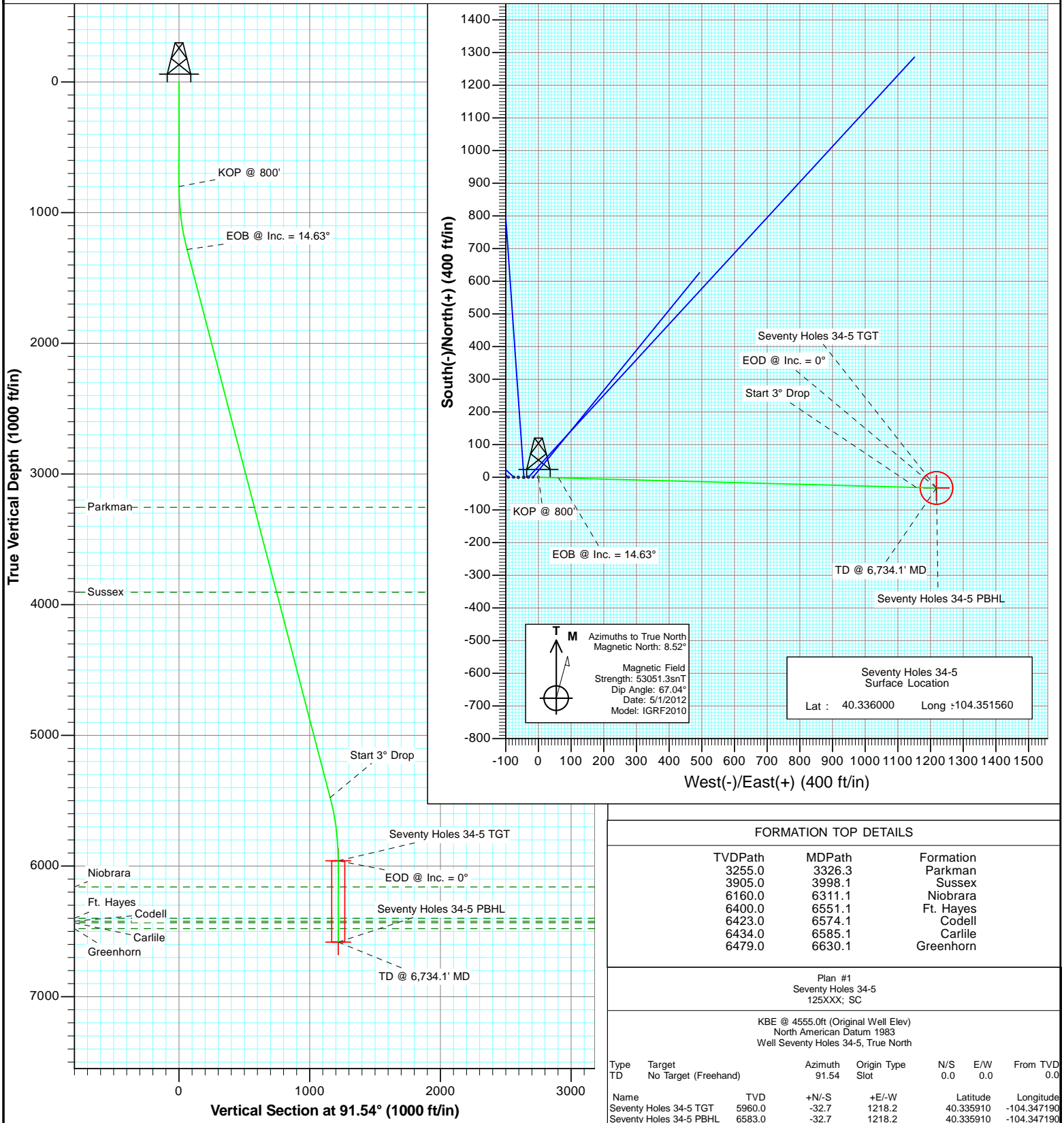


Project: Weld County  
 Site: Seventy Holes 24-5 Pad  
 Well: Seventy Holes 34-5  
 Wellbore: OH  
 Plan: Plan #1



SECTION DETAILS

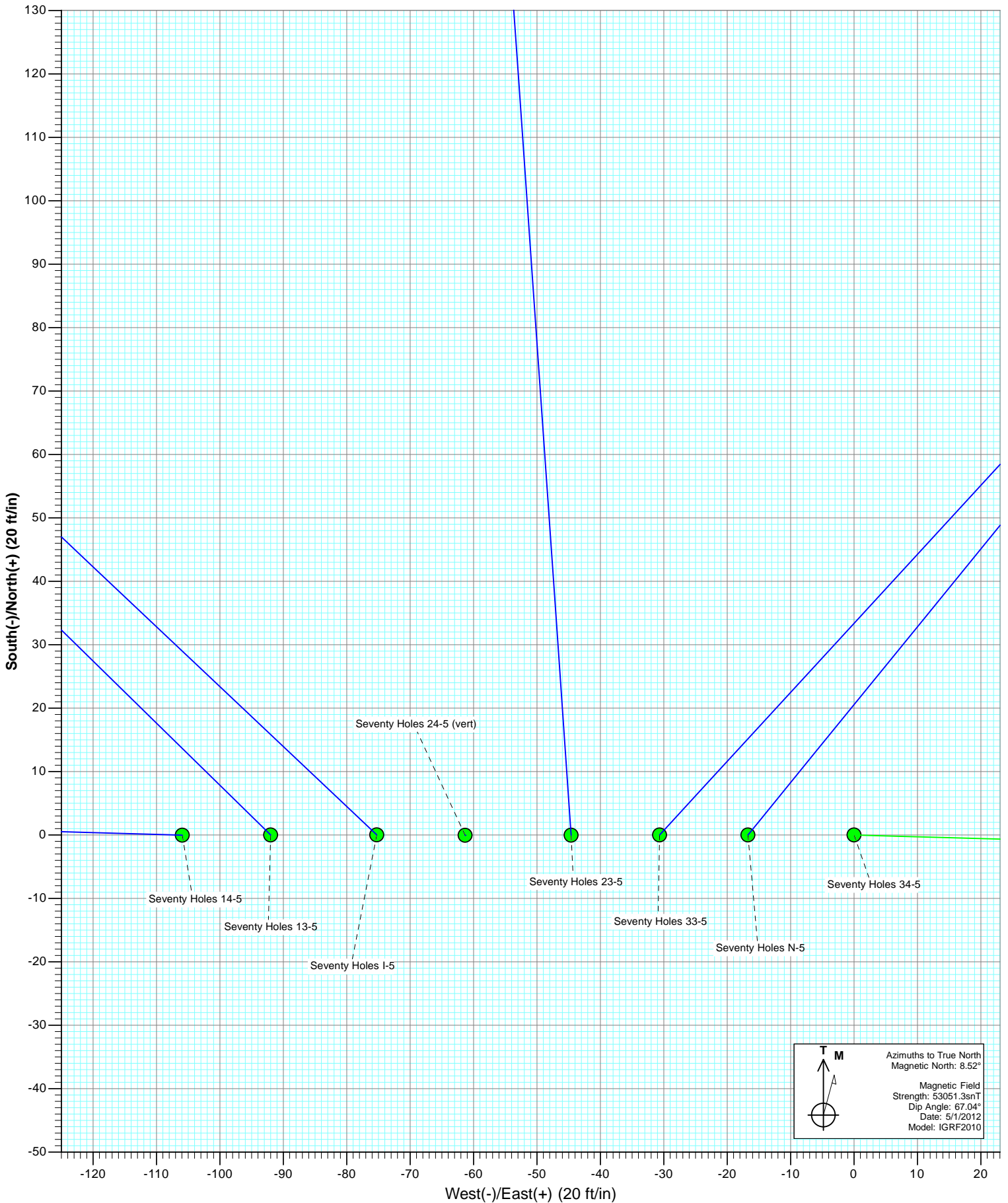
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1287.5	14.63	91.54	1282.3	-1.7	61.9	3.00	91.54	61.9	
4	5623.5	14.63	91.54	5477.7	-31.1	1156.4	0.00	0.00	1156.8	
5	6111.1	0.00	0.00	5960.0	-32.7	1218.2	3.00	180.00	1218.7	Seventy Holes 34-5 TGT
6	6734.1	0.00	0.00	6583.0	-32.7	1218.2	0.00	0.00	1218.7	Seventy Holes 34-5 PBHL



FORMATION TOP DETAILS						
TVDPPath	MDPath	Formation				
3255.0	3326.3	Parkman				
3905.0	3998.1	Sussex				
6160.0	6311.1	Niobrara				
6400.0	6551.1	Ft. Hayes				
6423.0	6574.1	Codell				
6434.0	6585.1	Carlile				
6479.0	6630.1	Greenhorn				
Plan #1 Seventy Holes 34-5 125XXX; SC						
KBE @ 4555.0ft (Original Well Elev) North American Datum 1983 Well Seventy Holes 34-5, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
TD	No Target (Freehand)	91.54	Slot		0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
Seventy Holes 34-5 TGT	5960.0	-32.7	1218.2	40.335910	-104.347190	
Seventy Holes 34-5 PBHL	6583.0	-32.7	1218.2	40.335910	-104.347190	

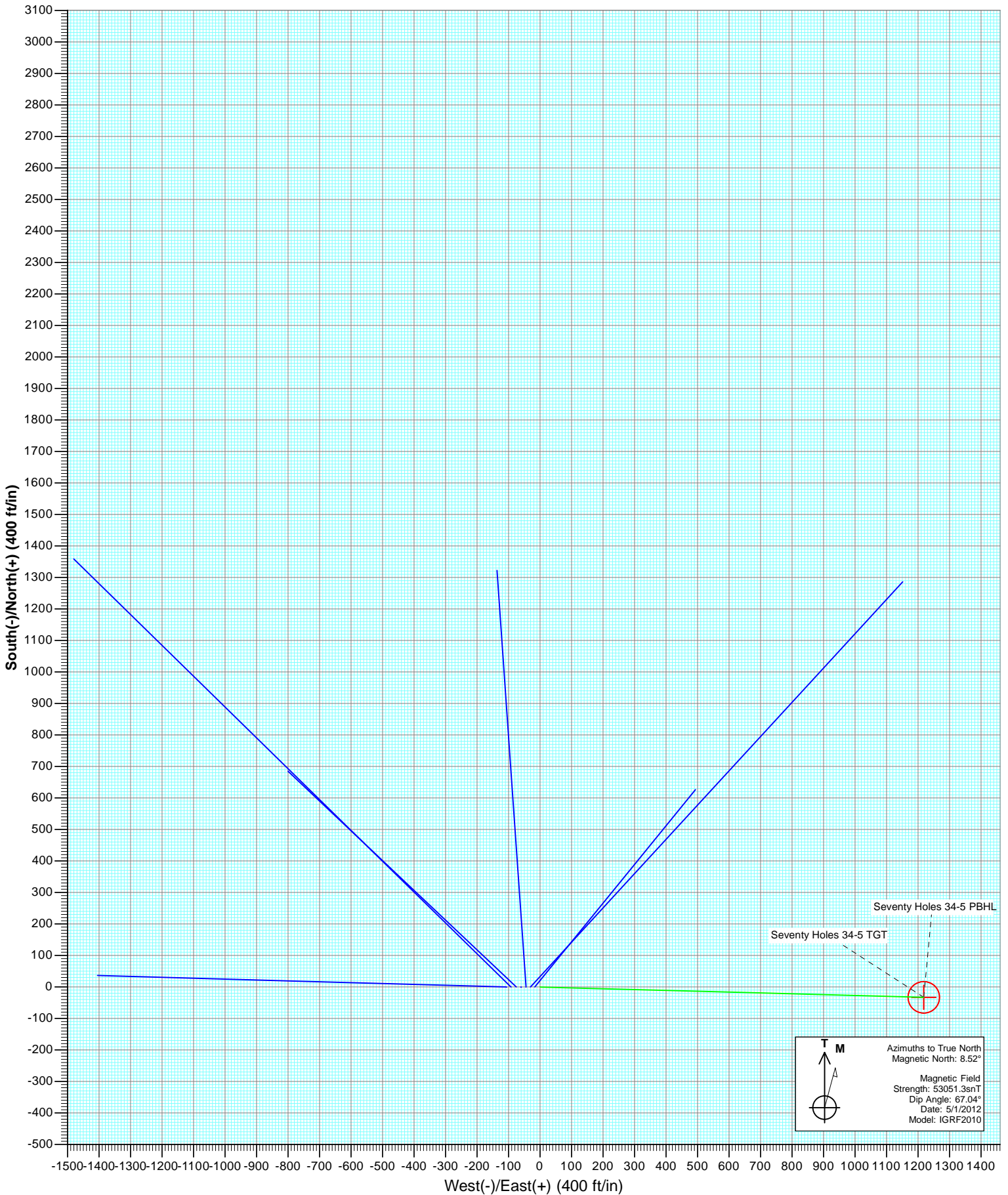


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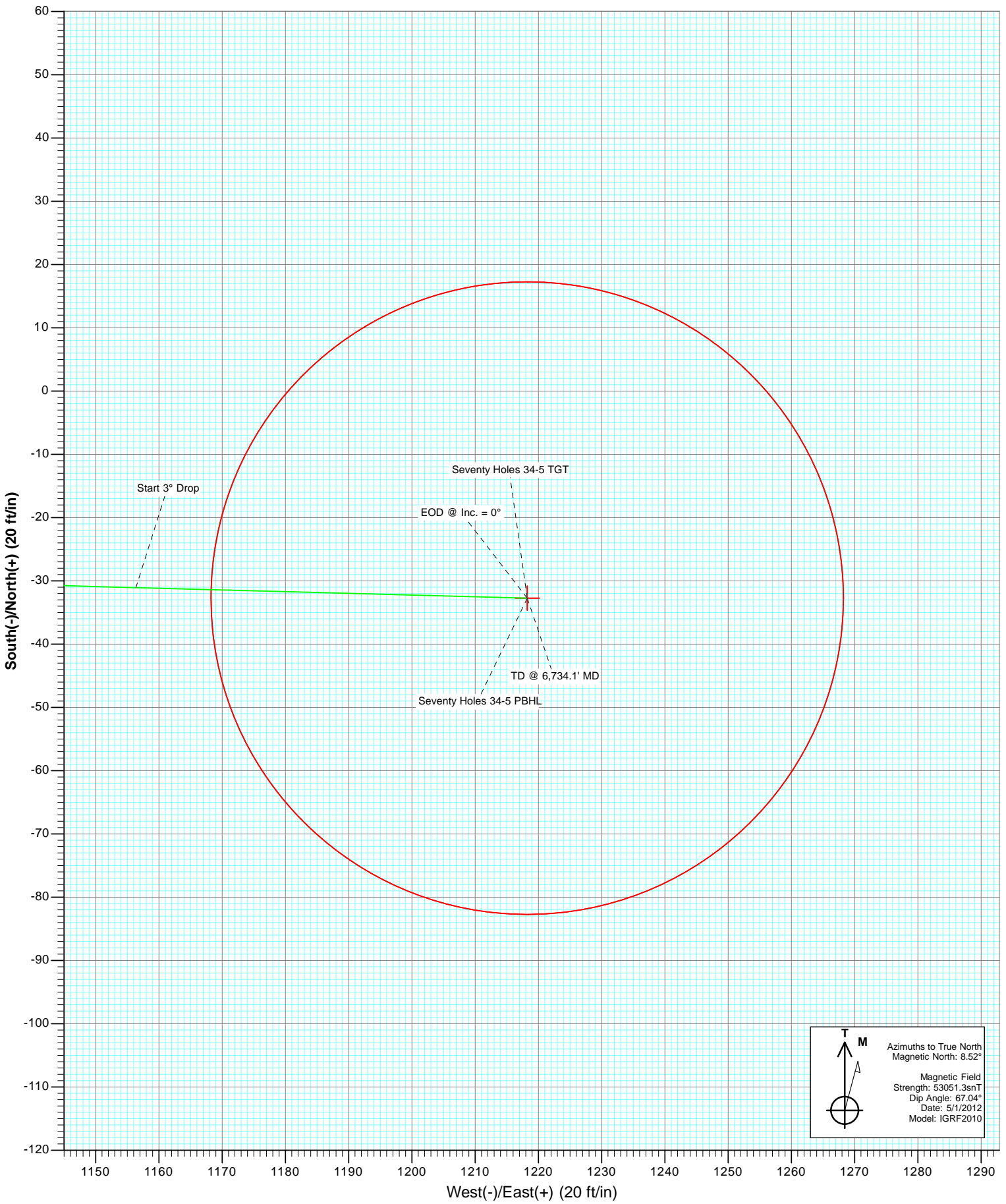


Project: Weld County  
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Project: Weld County  
Site: Seventy Holes 24-5 Pad  
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Azimuths to True North  
Magnetic North: 8.52°

Magnetic Field  
Strength: 53051.3snT  
Dip Angle: 67.04°  
Date: 5/1/2012  
Model: IGRF2010

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 34-5
<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 34-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<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		

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

<b>Well</b>	Seventy Holes 34-5					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,367,321.40 ft	<b>Latitude:</b>	40.336000
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,320,152.08 ft	<b>Longitude:</b>	-104.351560
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,545.0 ft

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

<b>Design</b>	Plan #1			
<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>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	91.54

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	
1,287.5	14.63	91.54	1,282.3	-1.7	61.9	3.00	3.00	0.00	91.54	
5,623.5	14.63	91.54	5,477.7	-31.1	1,156.4	0.00	0.00	0.00	0.00	
6,111.1	0.00	0.00	5,960.0	-32.7	1,218.2	3.00	-3.00	0.00	180.00	Seventy Holes 34-5 T
6,734.1	0.00	0.00	6,583.0	-32.7	1,218.2	0.00	0.00	0.00	0.00	Seventy Holes 34-5 P

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 34-5
<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 34-5	<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	91.54	900.0	-0.1	2.6	2.6	3.00	3.00	
1,000.0	6.00	91.54	999.6	-0.3	10.5	10.5	3.00	3.00	
1,100.0	9.00	91.54	1,098.8	-0.6	23.5	23.5	3.00	3.00	
1,200.0	12.00	91.54	1,197.1	-1.1	41.7	41.7	3.00	3.00	
1,287.5	14.63	91.54	1,282.3	-1.7	61.9	61.9	3.00	3.00	EOB @ Inc. = 14.63°
1,300.0	14.63	91.54	1,294.3	-1.7	65.0	65.0	0.00	0.00	
1,400.0	14.63	91.54	1,391.1	-2.4	90.3	90.3	0.00	0.00	
1,500.0	14.63	91.54	1,487.8	-3.1	115.5	115.5	0.00	0.00	
1,600.0	14.63	91.54	1,584.6	-3.8	140.7	140.8	0.00	0.00	
1,700.0	14.63	91.54	1,681.4	-4.5	166.0	166.0	0.00	0.00	
1,800.0	14.63	91.54	1,778.1	-5.1	191.2	191.3	0.00	0.00	
1,900.0	14.63	91.54	1,874.9	-5.8	216.5	216.5	0.00	0.00	
2,000.0	14.63	91.54	1,971.6	-6.5	241.7	241.8	0.00	0.00	
2,100.0	14.63	91.54	2,068.4	-7.2	267.0	267.0	0.00	0.00	
2,200.0	14.63	91.54	2,165.2	-7.8	292.2	292.3	0.00	0.00	
2,300.0	14.63	91.54	2,261.9	-8.5	317.4	317.6	0.00	0.00	
2,400.0	14.63	91.54	2,358.7	-9.2	342.7	342.8	0.00	0.00	
2,500.0	14.63	91.54	2,455.4	-9.9	367.9	368.1	0.00	0.00	
2,600.0	14.63	91.54	2,552.2	-10.6	393.2	393.3	0.00	0.00	
2,700.0	14.63	91.54	2,648.9	-11.2	418.4	418.6	0.00	0.00	
2,800.0	14.63	91.54	2,745.7	-11.9	443.6	443.8	0.00	0.00	
2,900.0	14.63	91.54	2,842.5	-12.6	468.9	469.1	0.00	0.00	
3,000.0	14.63	91.54	2,939.2	-13.3	494.1	494.3	0.00	0.00	
3,100.0	14.63	91.54	3,036.0	-14.0	519.4	519.6	0.00	0.00	
3,200.0	14.63	91.54	3,132.7	-14.6	544.6	544.8	0.00	0.00	
3,300.0	14.63	91.54	3,229.5	-15.3	569.9	570.1	0.00	0.00	
3,326.3	14.63	91.54	3,255.0	-15.5	576.5	576.7	0.00	0.00	Parkman
3,400.0	14.63	91.54	3,326.3	-16.0	595.1	595.3	0.00	0.00	
3,500.0	14.63	91.54	3,423.0	-16.7	620.3	620.6	0.00	0.00	
3,600.0	14.63	91.54	3,519.8	-17.3	645.6	645.8	0.00	0.00	
3,700.0	14.63	91.54	3,616.5	-18.0	670.8	671.1	0.00	0.00	
3,800.0	14.63	91.54	3,713.3	-18.7	696.1	696.3	0.00	0.00	
3,900.0	14.63	91.54	3,810.1	-19.4	721.3	721.6	0.00	0.00	
3,998.1	14.63	91.54	3,905.0	-20.0	746.1	746.4	0.00	0.00	Sussex
4,000.0	14.63	91.54	3,906.8	-20.1	746.6	746.8	0.00	0.00	
4,100.0	14.63	91.54	4,003.6	-20.7	771.8	772.1	0.00	0.00	
4,200.0	14.63	91.54	4,100.3	-21.4	797.0	797.3	0.00	0.00	
4,300.0	14.63	91.54	4,197.1	-22.1	822.3	822.6	0.00	0.00	
4,400.0	14.63	91.54	4,293.9	-22.8	847.5	847.8	0.00	0.00	
4,500.0	14.63	91.54	4,390.6	-23.4	872.8	873.1	0.00	0.00	
4,600.0	14.63	91.54	4,487.4	-24.1	898.0	898.3	0.00	0.00	
4,700.0	14.63	91.54	4,584.1	-24.8	923.3	923.6	0.00	0.00	
4,800.0	14.63	91.54	4,680.9	-25.5	948.5	948.8	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 34-5
<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 34-5	<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	14.63	91.54	4,777.7	-26.2	973.7	974.1	0.00	0.00	
5,000.0	14.63	91.54	4,874.4	-26.8	999.0	999.3	0.00	0.00	
5,100.0	14.63	91.54	4,971.2	-27.5	1,024.2	1,024.6	0.00	0.00	
5,200.0	14.63	91.54	5,067.9	-28.2	1,049.5	1,049.8	0.00	0.00	
5,300.0	14.63	91.54	5,164.7	-28.9	1,074.7	1,075.1	0.00	0.00	
5,400.0	14.63	91.54	5,261.5	-29.5	1,099.9	1,100.3	0.00	0.00	
5,500.0	14.63	91.54	5,358.2	-30.2	1,125.2	1,125.6	0.00	0.00	
5,600.0	14.63	91.54	5,455.0	-30.9	1,150.4	1,150.8	0.00	0.00	
5,623.5	14.63	91.54	5,477.7	-31.1	1,156.4	1,156.8	0.00	0.00	Start 3° Drop
5,700.0	12.33	91.54	5,552.1	-31.5	1,174.2	1,174.6	3.00	-3.00	
5,800.0	9.33	91.54	5,650.3	-32.0	1,193.0	1,193.4	3.00	-3.00	
5,900.0	6.33	91.54	5,749.4	-32.4	1,206.6	1,207.0	3.00	-3.00	
6,000.0	3.33	91.54	5,849.0	-32.6	1,215.0	1,215.5	3.00	-3.00	
6,100.0	0.33	91.54	5,948.9	-32.7	1,218.2	1,218.7	3.00	-3.00	
6,111.1	0.00	0.00	5,960.0	-32.7	1,218.2	1,218.7	3.00	-3.00	EOD @ Inc. = 0°
6,200.0	0.00	0.00	6,048.9	-32.7	1,218.2	1,218.7	0.00	0.00	
6,300.0	0.00	0.00	6,148.9	-32.7	1,218.2	1,218.7	0.00	0.00	
6,311.1	0.00	0.00	6,160.0	-32.7	1,218.2	1,218.7	0.00	0.00	Niobrara
6,400.0	0.00	0.00	6,248.9	-32.7	1,218.2	1,218.7	0.00	0.00	
6,500.0	0.00	0.00	6,348.9	-32.7	1,218.2	1,218.7	0.00	0.00	
6,551.1	0.00	0.00	6,400.0	-32.7	1,218.2	1,218.7	0.00	0.00	Ft. Hayes
6,574.1	0.00	0.00	6,423.0	-32.7	1,218.2	1,218.7	0.00	0.00	Codell
6,585.1	0.00	0.00	6,434.0	-32.7	1,218.2	1,218.7	0.00	0.00	Carlile
6,600.0	0.00	0.00	6,448.9	-32.7	1,218.2	1,218.7	0.00	0.00	
6,630.1	0.00	0.00	6,479.0	-32.7	1,218.2	1,218.7	0.00	0.00	Greenhorn
6,700.0	0.00	0.00	6,548.9	-32.7	1,218.2	1,218.7	0.00	0.00	
6,734.1	0.00	0.00	6,583.0	-32.7	1,218.2	1,218.7	0.00	0.00	TD @ 6,734.1' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Seventy Holes 34-5 PBH - hit/miss target - Shape	0.00	0.00	6,583.0	-32.7	1,218.2	1,367,304.46	3,321,370.64	40.335910	-104.347190
Seventy Holes 34-5 TG1 - plan hits target center - Point	0.00	0.00	5,960.0	-32.7	1,218.2	1,367,304.46	3,321,370.64	40.335910	-104.347190

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 34-5
<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 34-5	<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 (°)	
3,326.3	3,255.0	Parkman				
3,998.1	3,905.0	Sussex				
6,311.1	6,160.0	Niobrara				
6,551.1	6,400.0	Ft. Hayes				
6,574.1	6,423.0	Codell				
6,585.1	6,434.0	Carlile				
6,630.1	6,479.0	Greenhorn				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
800.0	800.0	0.0	0.0		KOP @ 800'
1,287.5	1,282.3	-1.7	61.9		EOB @ Inc. = 14.63°
5,623.5	5,477.7	-31.1	1,156.4		Start 3° Drop
6,111.1	5,960.0	-32.7	1,218.2		EOD @ Inc. = 0°
6,734.1	6,583.0	-32.7	1,218.2		TD @ 6,734.1' MD

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

**Weld County**

**Seventy Holes 24-5 Pad**

**Seventy Holes 34-5**

**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 34-5
<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 34-5	<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

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

<b>Survey Tool Program</b>	<b>Date</b>	5/1/2012		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	6,734.1	Plan #1 (OH)	MWD	Geolink MWD

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
Seventy Holes 24-5 Pad						
Seventy Holes 13-5 - OH - Plan #1	0.0	0.0	92.0			
Seventy Holes 13-5 - OH - Plan #1	600.0	600.0	92.0	92.0	10,000.000	CC, ES
Seventy Holes 14-5 - OH - Plan #1	0.0	5.0	105.9			
Seventy Holes 14-5 - OH - Plan #1	764.9	769.9	105.9	105.9	10,000.000	CC, ES
Seventy Holes 23-5 - OH - Plan #1	0.0	0.0	44.6			
Seventy Holes 23-5 - OH - Plan #1	800.0	800.0	44.6	44.6	10,000.000	CC, ES
Seventy Holes 24-5 (vert) - OH - Plan #1	0.0	15.0	61.3			
Seventy Holes 24-5 (vert) - OH - Plan #1	800.0	815.0	61.3	61.3	10,000.000	CC, ES
Seventy Holes 33-5 - OH - Plan #1	0.0	0.0	30.7			
Seventy Holes 33-5 - OH - Plan #1	800.0	800.0	30.7	30.7	10,000.000	CC, ES
Seventy Holes I-5 - OH - Plan #1	0.0	0.0	75.3			
Seventy Holes I-5 - OH - Plan #1	800.0	800.0	75.3	75.3	10,000.000	CC, ES
Seventy Holes N-5 - OH - Plan #1	0.0	15.0	16.7			
Seventy Holes N-5 - OH - Plan #1	800.0	815.0	16.7	16.7	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 34-5
<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 34-5	<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						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)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.99	0.0	-92.0	92.0					
100.0	100.0	100.0	100.0	0.2	0.2	-89.99	0.0	-92.0	92.0	92.0	0.00	N/A		
200.0	200.0	200.0	200.0	0.3	0.3	-89.99	0.0	-92.0	92.0	92.0	0.00	N/A		
300.0	300.0	300.0	300.0	0.5	0.5	-89.99	0.0	-92.0	92.0	92.0	0.00	N/A		
400.0	400.0	400.0	400.0	0.7	0.7	-89.99	0.0	-92.0	92.0	92.0	0.00	N/A		
500.0	500.0	500.0	500.0	0.9	0.9	-89.99	0.0	-92.0	92.0	92.0	0.00	N/A		
600.0	600.0	600.0	600.0	1.0	1.0	-89.99	0.0	-92.0	92.0	92.0	0.00	N/A	CC, ES	
700.0	700.0	696.6	696.5	1.2	1.2	-88.95	1.7	-93.7	93.8	93.8	0.00	N/A		
800.0	800.0	792.7	792.4	1.4	1.4	-86.06	6.8	-98.9	99.5	99.5	0.00	N/A		
900.0	900.0	887.5	886.4	1.6	1.6	-173.63	15.1	-107.4	111.9	111.9	0.00	N/A		
1,000.0	999.6	979.8	977.3	1.7	1.9	-169.67	26.3	-118.9	133.9	133.9	0.00	N/A		
1,100.0	1,098.8	1,068.4	1,063.7	2.0	2.2	-166.35	40.0	-132.8	165.3	165.3	0.00	N/A		
1,200.0	1,197.1	1,152.5	1,144.8	2.3	2.6	-163.76	55.5	-148.7	205.4	205.4	0.00	N/A		
1,300.0	1,294.3	1,231.3	1,219.9	2.6	3.0	-161.80	72.3	-165.9	253.7	253.7	0.00	N/A		
1,400.0	1,391.1	1,305.9	1,290.0	3.0	3.5	-160.61	90.2	-184.2	306.8	306.8	0.00	N/A		
1,500.0	1,487.8	1,379.1	1,357.7	3.5	3.9	-159.54	109.6	-204.0	362.9	362.9	0.00	N/A		
1,600.0	1,584.6	1,461.0	1,433.1	3.9	4.5	-158.58	132.0	-226.8	420.1	420.1	0.00	N/A		
1,700.0	1,681.4	1,542.8	1,508.4	4.3	5.0	-157.85	154.3	-249.6	477.3	477.3	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 34-5
<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 34-5	<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 14-5 - OH - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance						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)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	5.0	5.0	0.0	0.0	-90.00	0.0	-105.9	105.9					
100.0	100.0	105.0	105.0	0.2	0.2	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A		
200.0	200.0	205.0	205.0	0.3	0.3	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A		
300.0	300.0	305.0	305.0	0.5	0.5	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A		
400.0	400.0	405.0	405.0	0.7	0.7	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A		
500.0	500.0	505.0	505.0	0.9	0.9	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A		
600.0	600.0	605.0	605.0	1.0	1.0	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A		
700.0	700.0	705.0	705.0	1.2	1.2	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A		
764.9	764.9	769.9	769.9	1.3	1.3	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A CC, ES		
800.0	800.0	804.7	804.7	1.4	1.4	-90.00	0.0	-105.9	105.9	105.9	0.00	N/A		
900.0	900.0	900.0	900.0	1.6	1.6	178.53	0.1	-108.6	111.3	111.3	0.00	N/A		
1,000.0	999.6	992.2	991.9	1.7	1.7	178.69	0.3	-115.6	126.7	126.7	0.00	N/A		
1,100.0	1,098.8	1,082.4	1,081.4	2.0	1.9	178.88	0.6	-126.8	151.9	151.9	0.00	N/A		
1,200.0	1,197.1	1,168.6	1,166.3	2.3	2.2	179.06	1.0	-141.4	186.6	186.6	0.00	N/A		
1,300.0	1,294.3	1,249.8	1,245.6	2.6	2.5	179.21	1.5	-158.6	230.0	230.0	0.00	N/A		
1,400.0	1,391.1	1,327.5	1,320.9	3.0	2.8	179.34	2.0	-178.3	278.9	278.9	0.00	N/A		
1,500.0	1,487.8	1,413.9	1,404.0	3.5	3.1	179.45	2.7	-201.6	329.3	329.3	0.00	N/A		
1,600.0	1,584.6	1,500.3	1,487.2	3.9	3.5	179.53	3.3	-224.9	379.7	379.7	0.00	N/A		
1,700.0	1,681.4	1,586.6	1,570.3	4.3	3.9	179.59	4.0	-248.1	430.1	430.1	0.00	N/A		
1,800.0	1,778.1	1,673.0	1,653.5	4.8	4.3	179.63	4.6	-271.4	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 34-5
<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 34-5	<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 23-5 - OH - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance						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)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.02	0.0	-44.6	44.6					
100.0	100.0	100.0	100.0	0.2	0.2	-90.02	0.0	-44.6	44.6	44.6	0.00	N/A		
200.0	200.0	200.0	200.0	0.3	0.3	-90.02	0.0	-44.6	44.6	44.6	0.00	N/A		
300.0	300.0	300.0	300.0	0.5	0.5	-90.02	0.0	-44.6	44.6	44.6	0.00	N/A		
400.0	400.0	400.0	400.0	0.7	0.7	-90.02	0.0	-44.6	44.6	44.6	0.00	N/A		
500.0	500.0	500.0	500.0	0.9	0.9	-90.02	0.0	-44.6	44.6	44.6	0.00	N/A		
600.0	600.0	600.0	600.0	1.0	1.0	-90.02	0.0	-44.6	44.6	44.6	0.00	N/A		
700.0	700.0	700.0	700.0	1.2	1.2	-90.02	0.0	-44.6	44.6	44.6	0.00	N/A		
800.0	800.0	800.0	800.0	1.4	1.4	-90.02	0.0	-44.6	44.6	44.6	0.00	N/A CC, ES		
900.0	900.0	899.7	899.6	1.6	1.6	-178.34	2.6	-44.8	47.5	47.5	0.00	N/A		
1,000.0	999.6	998.5	998.1	1.7	1.7	-170.76	10.3	-45.3	56.8	56.8	0.00	N/A		
1,100.0	1,098.8	1,095.6	1,094.4	2.0	2.0	-162.63	22.8	-46.2	73.6	73.6	0.00	N/A		
1,200.0	1,197.1	1,190.1	1,187.4	2.3	2.2	-156.03	39.6	-47.4	98.4	98.4	0.00	N/A		
1,300.0	1,294.3	1,281.5	1,276.4	2.6	2.6	-151.22	60.2	-48.8	130.8	130.8	0.00	N/A		
1,400.0	1,391.1	1,371.8	1,363.4	3.0	2.9	-147.72	84.4	-50.5	167.7	167.7	0.00	N/A		
1,500.0	1,487.8	1,464.1	1,452.1	3.5	3.3	-145.24	109.8	-52.2	205.3	205.3	0.00	N/A		
1,600.0	1,584.6	1,556.4	1,540.8	3.9	3.7	-143.52	135.3	-54.0	243.3	243.3	0.00	N/A		
1,700.0	1,681.4	1,648.7	1,629.6	4.3	4.2	-142.27	160.7	-55.8	281.3	281.3	0.00	N/A		
1,800.0	1,778.1	1,741.1	1,718.3	4.8	4.6	-141.32	186.2	-57.6	319.5	319.5	0.00	N/A		
1,900.0	1,874.9	1,833.4	1,807.0	5.3	5.1	-140.57	211.6	-59.3	357.7	357.7	0.00	N/A		
2,000.0	1,971.6	1,925.7	1,895.8	5.7	5.5	-139.96	237.0	-61.1	395.9	395.9	0.00	N/A		
2,100.0	2,068.4	2,018.0	1,984.5	6.2	6.0	-139.46	262.5	-62.9	434.2	434.2	0.00	N/A		
2,200.0	2,165.2	2,110.4	2,073.2	6.7	6.4	-139.04	287.9	-64.6	472.5	472.5	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 34-5
<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 34-5	<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						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)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	15.0	15.0	0.0	0.0	-90.02	0.0	-61.3	61.3					
100.0	100.0	115.0	115.0	0.2	0.2	-90.02	0.0	-61.3	61.3	61.3	0.00	N/A		
200.0	200.0	215.0	215.0	0.3	0.4	-90.02	0.0	-61.3	61.3	61.3	0.00	N/A		
300.0	300.0	315.0	315.0	0.5	0.5	-90.02	0.0	-61.3	61.3	61.3	0.00	N/A		
400.0	400.0	415.0	415.0	0.7	0.7	-90.02	0.0	-61.3	61.3	61.3	0.00	N/A		
500.0	500.0	515.0	515.0	0.9	0.9	-90.02	0.0	-61.3	61.3	61.3	0.00	N/A		
600.0	600.0	615.0	615.0	1.0	1.1	-90.02	0.0	-61.3	61.3	61.3	0.00	N/A		
700.0	700.0	715.0	715.0	1.2	1.2	-90.02	0.0	-61.3	61.3	61.3	0.00	N/A		
800.0	800.0	815.0	815.0	1.4	1.4	-90.02	0.0	-61.3	61.3	61.3	0.00	N/A CC, ES		
900.0	900.0	915.0	915.0	1.6	1.6	178.50	0.0	-61.3	63.9	63.9	0.00	N/A		
1,000.0	999.6	1,014.6	1,014.6	1.7	1.8	178.66	0.0	-61.3	71.8	71.8	0.00	N/A		
1,100.0	1,098.8	1,113.8	1,113.8	2.0	1.9	178.86	0.0	-61.3	84.8	84.8	0.00	N/A		
1,200.0	1,197.1	1,212.1	1,212.1	2.3	2.1	179.05	0.0	-61.3	103.1	103.1	0.00	N/A		
1,300.0	1,294.3	1,309.3	1,309.3	2.6	2.3	179.22	0.0	-61.3	126.4	126.4	0.00	N/A		
1,400.0	1,391.1	1,406.1	1,406.1	3.0	2.4	179.35	0.0	-61.3	151.6	151.6	0.00	N/A		
1,500.0	1,487.8	1,502.8	1,502.8	3.5	2.6	179.44	0.0	-61.3	176.9	176.9	0.00	N/A		
1,600.0	1,584.6	1,599.6	1,599.6	3.9	2.8	179.51	0.0	-61.3	202.1	202.1	0.00	N/A		
1,700.0	1,681.4	1,696.4	1,696.4	4.3	2.9	179.56	0.0	-61.3	227.4	227.4	0.00	N/A		
1,800.0	1,778.1	1,793.1	1,793.1	4.8	3.1	179.61	0.0	-61.3	252.6	252.6	0.00	N/A		
1,900.0	1,874.9	1,889.9	1,889.9	5.3	3.3	179.64	0.0	-61.3	277.9	277.9	0.00	N/A		
2,000.0	1,971.6	1,986.6	1,986.6	5.7	3.4	179.67	0.0	-61.3	303.1	303.1	0.00	N/A		
2,100.0	2,068.4	2,083.4	2,083.4	6.2	3.6	179.70	0.0	-61.3	328.4	328.4	0.00	N/A		
2,200.0	2,165.2	2,180.2	2,180.2	6.7	3.8	179.72	0.0	-61.3	353.6	353.6	0.00	N/A		
2,300.0	2,261.9	2,276.9	2,276.9	7.1	4.0	179.74	0.0	-61.3	378.9	378.9	0.00	N/A		
2,400.0	2,358.7	2,373.7	2,373.7	7.6	4.1	179.76	0.0	-61.3	404.1	404.1	0.00	N/A		
2,500.0	2,455.4	2,470.4	2,470.4	8.1	4.3	179.77	0.0	-61.3	429.4	429.4	0.00	N/A		
2,600.0	2,552.2	2,567.2	2,567.2	8.6	4.5	179.78	0.0	-61.3	454.6	454.6	0.00	N/A		
2,700.0	2,648.9	2,663.9	2,663.9	9.0	4.6	179.79	0.0	-61.3	479.9	479.9	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 34-5
<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 34-5	<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						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)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-30.7	30.7					
100.0	100.0	100.0	100.0	0.2	0.2	-89.98	0.0	-30.7	30.7	30.7	0.00	N/A		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-30.7	30.7	30.7	0.00	N/A		
300.0	300.0	300.0	300.0	0.5	0.5	-89.98	0.0	-30.7	30.7	30.7	0.00	N/A		
400.0	400.0	400.0	400.0	0.7	0.7	-89.98	0.0	-30.7	30.7	30.7	0.00	N/A		
500.0	500.0	500.0	500.0	0.9	0.9	-89.98	0.0	-30.7	30.7	30.7	0.00	N/A		
600.0	600.0	600.0	600.0	1.0	1.0	-89.98	0.0	-30.7	30.7	30.7	0.00	N/A		
700.0	700.0	700.0	700.0	1.2	1.2	-89.98	0.0	-30.7	30.7	30.7	0.00	N/A		
800.0	800.0	800.0	800.0	1.4	1.4	-89.98	0.0	-30.7	30.7	30.7	0.00	N/A CC, ES		
900.0	900.0	901.0	901.0	1.6	1.6	-177.82	2.0	-28.9	31.6	31.6	0.00	N/A		
1,000.0	999.6	1,001.8	1,001.4	1.7	1.8	-168.06	7.9	-23.5	34.9	34.9	0.00	N/A		
1,100.0	1,098.8	1,102.0	1,100.7	2.0	2.0	-155.90	17.6	-14.5	42.2	42.2	0.00	N/A		
1,200.0	1,197.1	1,201.3	1,198.4	2.3	2.3	-145.00	30.9	-2.2	54.4	54.4	0.00	N/A		
1,300.0	1,294.3	1,299.6	1,293.9	2.6	2.6	-136.74	47.8	13.3	71.7	71.7	0.00	N/A		
1,400.0	1,391.1	1,396.7	1,387.1	3.0	3.1	-129.72	68.1	31.9	91.6	91.6	0.00	N/A		
1,500.0	1,487.8	1,492.5	1,477.4	3.5	3.6	-122.85	91.4	53.4	113.6	113.6	0.00	N/A		
1,600.0	1,584.6	1,588.2	1,566.5	3.9	4.2	-116.81	117.2	77.0	137.9	137.9	0.00	N/A		
1,700.0	1,681.4	1,684.3	1,655.9	4.3	4.8	-112.52	143.1	100.8	163.3	163.3	0.00	N/A		
1,800.0	1,778.1	1,780.4	1,745.4	4.8	5.4	-109.39	169.0	124.7	189.3	189.3	0.00	N/A		
1,900.0	1,874.9	1,876.5	1,834.8	5.3	6.0	-107.01	194.9	148.5	215.7	215.7	0.00	N/A		
2,000.0	1,971.6	1,972.6	1,924.2	5.7	6.6	-105.15	220.9	172.3	242.4	242.4	0.00	N/A		
2,100.0	2,068.4	2,068.7	2,013.6	6.2	7.3	-103.66	246.8	196.2	269.3	269.3	0.00	N/A		
2,200.0	2,165.2	2,164.8	2,103.0	6.7	7.9	-102.44	272.7	220.0	296.3	296.3	0.00	N/A		
2,300.0	2,261.9	2,260.9	2,192.5	7.1	8.5	-101.42	298.7	243.8	323.4	323.4	0.00	N/A		
2,400.0	2,358.7	2,357.0	2,281.9	7.6	9.2	-100.56	324.6	267.6	350.6	350.6	0.00	N/A		
2,500.0	2,455.4	2,453.1	2,371.3	8.1	9.8	-99.83	350.5	291.5	377.9	377.9	0.00	N/A		
2,600.0	2,552.2	2,549.2	2,460.7	8.6	10.5	-99.19	376.4	315.3	405.2	405.2	0.00	N/A		
2,700.0	2,648.9	2,645.3	2,550.1	9.0	11.1	-98.63	402.4	339.1	432.6	432.6	0.00	N/A		
2,800.0	2,745.7	2,741.5	2,639.6	9.5	11.8	-98.14	428.3	363.0	460.0	460.0	0.00	N/A		
2,900.0	2,842.5	2,837.6	2,729.0	10.0	12.4	-97.71	454.2	386.8	487.4	487.4	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 34-5
<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 34-5	<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						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)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-75.3	75.3					
100.0	100.0	100.0	100.0	0.2	0.2	-89.98	0.0	-75.3	75.3	75.3	0.00	N/A		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-75.3	75.3	75.3	0.00	N/A		
300.0	300.0	300.0	300.0	0.5	0.5	-89.98	0.0	-75.3	75.3	75.3	0.00	N/A		
400.0	400.0	400.0	400.0	0.7	0.7	-89.98	0.0	-75.3	75.3	75.3	0.00	N/A		
500.0	500.0	500.0	500.0	0.9	0.9	-89.98	0.0	-75.3	75.3	75.3	0.00	N/A		
600.0	600.0	600.0	600.0	1.0	1.0	-89.98	0.0	-75.3	75.3	75.3	0.00	N/A		
700.0	700.0	700.0	700.0	1.2	1.2	-89.98	0.0	-75.3	75.3	75.3	0.00	N/A		
800.0	800.0	800.0	800.0	1.4	1.4	-89.98	0.0	-75.3	75.3	75.3	0.00	N/A CC, ES		
900.0	900.0	897.0	896.9	1.6	1.6	179.74	1.7	-77.1	79.8	79.8	0.00	N/A		
1,000.0	999.6	992.7	992.3	1.7	1.7	-177.20	6.7	-82.3	93.3	93.3	0.00	N/A		
1,100.0	1,098.8	1,085.7	1,084.7	2.0	1.9	-173.71	14.7	-90.8	116.2	116.2	0.00	N/A		
1,200.0	1,197.1	1,175.1	1,172.7	2.3	2.2	-170.61	25.2	-102.0	148.1	148.1	0.00	N/A		
1,300.0	1,294.3	1,265.5	1,261.1	2.6	2.5	-168.24	37.9	-115.4	187.6	187.6	0.00	N/A		
1,400.0	1,391.1	1,356.3	1,350.1	3.0	2.8	-166.91	50.7	-128.9	229.2	229.2	0.00	N/A		
1,500.0	1,487.8	1,447.1	1,439.0	3.5	3.1	-165.98	63.5	-142.4	270.8	270.8	0.00	N/A		
1,600.0	1,584.6	1,538.0	1,527.9	3.9	3.4	-165.30	76.3	-156.0	312.5	312.5	0.00	N/A		
1,700.0	1,681.4	1,628.8	1,616.8	4.3	3.7	-164.78	89.1	-169.5	354.2	354.2	0.00	N/A		
1,800.0	1,778.1	1,719.7	1,705.7	4.8	4.1	-164.37	101.9	-183.1	396.0	396.0	0.00	N/A		
1,900.0	1,874.9	1,810.5	1,794.6	5.3	4.4	-164.04	114.7	-196.6	437.7	437.7	0.00	N/A		
2,000.0	1,971.6	1,901.4	1,883.5	5.7	4.8	-163.77	127.5	-210.1	479.5	479.5	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 34-5
<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 34-5	<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						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)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	15.0	15.0	0.0	0.0	-89.94	0.0	-16.7	16.7					
100.0	100.0	115.0	115.0	0.2	0.2	-89.94	0.0	-16.7	16.7	16.7	0.00	N/A		
200.0	200.0	215.0	215.0	0.3	0.4	-89.94	0.0	-16.7	16.7	16.7	0.00	N/A		
300.0	300.0	315.0	315.0	0.5	0.5	-89.94	0.0	-16.7	16.7	16.7	0.00	N/A		
400.0	400.0	415.0	415.0	0.7	0.7	-89.94	0.0	-16.7	16.7	16.7	0.00	N/A		
500.0	500.0	515.0	515.0	0.9	0.9	-89.94	0.0	-16.7	16.7	16.7	0.00	N/A		
600.0	600.0	615.0	615.0	1.0	1.1	-89.94	0.0	-16.7	16.7	16.7	0.00	N/A		
700.0	700.0	715.0	715.0	1.2	1.2	-89.94	0.0	-16.7	16.7	16.7	0.00	N/A		
800.0	800.0	815.0	815.0	1.4	1.4	-89.94	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	178.72	0.0	-16.7	19.3	19.3	0.00	N/A		
1,000.0	999.6	1,014.8	1,014.8	1.7	1.8	179.18	0.1	-16.7	27.2	27.2	0.00	N/A		
1,100.0	1,098.8	1,115.1	1,115.1	2.0	1.9	-176.50	2.7	-14.5	38.2	38.2	0.00	N/A		
1,200.0	1,197.1	1,215.2	1,214.8	2.3	2.1	-169.71	9.4	-9.1	51.9	51.9	0.00	N/A		
1,300.0	1,294.3	1,314.8	1,313.4	2.6	2.4	-162.80	20.1	-0.4	69.1	69.1	0.00	N/A		
1,400.0	1,391.1	1,413.0	1,410.1	3.0	2.6	-157.17	33.1	10.2	87.7	87.7	0.00	N/A		
1,500.0	1,487.8	1,510.9	1,506.6	3.5	2.9	-153.50	46.2	20.9	106.8	106.8	0.00	N/A		
1,600.0	1,584.6	1,608.9	1,603.1	3.9	3.2	-150.95	59.3	31.5	126.2	126.2	0.00	N/A		
1,700.0	1,681.4	1,706.9	1,699.6	4.3	3.5	-149.08	72.3	42.1	145.7	145.7	0.00	N/A		
1,800.0	1,778.1	1,804.8	1,796.1	4.8	3.8	-147.66	85.4	52.8	165.4	165.4	0.00	N/A		
1,900.0	1,874.9	1,902.8	1,892.6	5.3	4.1	-146.53	98.5	63.4	185.2	185.2	0.00	N/A		
2,000.0	1,971.6	2,000.8	1,989.1	5.7	4.4	-145.63	111.5	74.0	205.0	205.0	0.00	N/A		
2,100.0	2,068.4	2,098.7	2,085.6	6.2	4.7	-144.88	124.6	84.7	224.9	224.9	0.00	N/A		
2,200.0	2,165.2	2,196.7	2,182.2	6.7	5.0	-144.25	137.6	95.3	244.8	244.8	0.00	N/A		
2,300.0	2,261.9	2,294.7	2,278.7	7.1	5.3	-143.72	150.7	106.0	264.7	264.7	0.00	N/A		
2,400.0	2,358.7	2,392.6	2,375.2	7.6	5.7	-143.27	163.8	116.6	284.7	284.7	0.00	N/A		
2,500.0	2,455.4	2,490.6	2,471.7	8.1	6.0	-142.87	176.8	127.2	304.6	304.6	0.00	N/A		
2,600.0	2,552.2	2,588.6	2,568.2	8.6	6.3	-142.52	189.9	137.9	324.6	324.6	0.00	N/A		
2,700.0	2,648.9	2,686.5	2,664.7	9.0	6.7	-142.21	203.0	148.5	344.6	344.6	0.00	N/A		
2,800.0	2,745.7	2,784.5	2,761.2	9.5	7.0	-141.94	216.0	159.1	364.6	364.6	0.00	N/A		
2,900.0	2,842.5	2,882.5	2,857.7	10.0	7.3	-141.69	229.1	169.8	384.6	384.6	0.00	N/A		
3,000.0	2,939.2	2,980.4	2,954.2	10.5	7.6	-141.47	242.1	180.4	404.6	404.6	0.00	N/A		
3,100.0	3,036.0	3,078.4	3,050.7	11.0	8.0	-141.27	255.2	191.0	424.6	424.6	0.00	N/A		
3,200.0	3,132.7	3,176.4	3,147.2	11.5	8.3	-141.09	268.3	201.7	444.6	444.6	0.00	N/A		
3,300.0	3,229.5	3,274.4	3,243.8	11.9	8.6	-140.92	281.3	212.3	464.6	464.6	0.00	N/A		
3,400.0	3,326.3	3,372.3	3,340.3	12.4	9.0	-140.77	294.4	222.9	484.6	484.6	0.00	N/A		

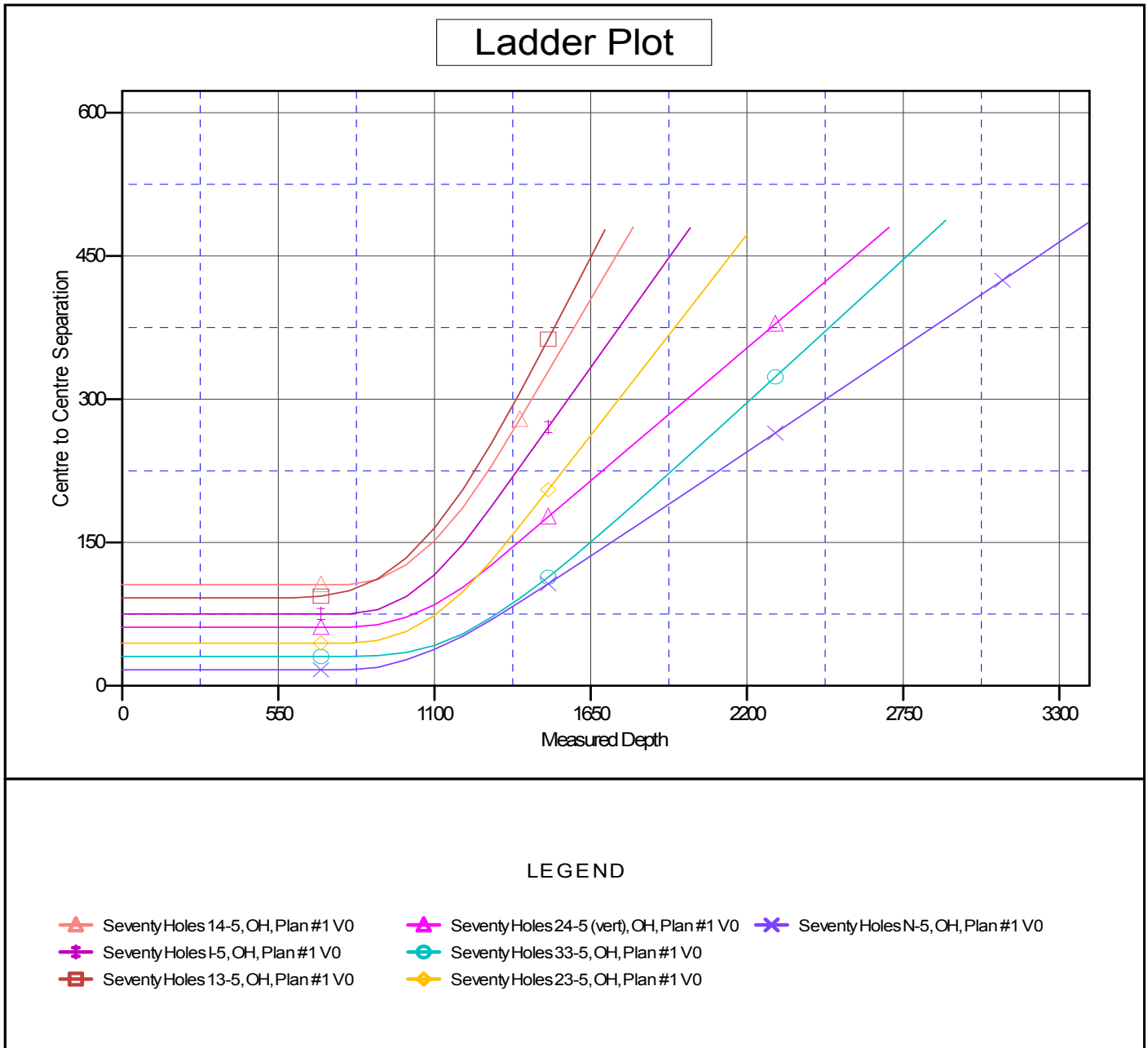
# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Seventy Holes 34-5
<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 34-5	<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 34-5  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.74°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation