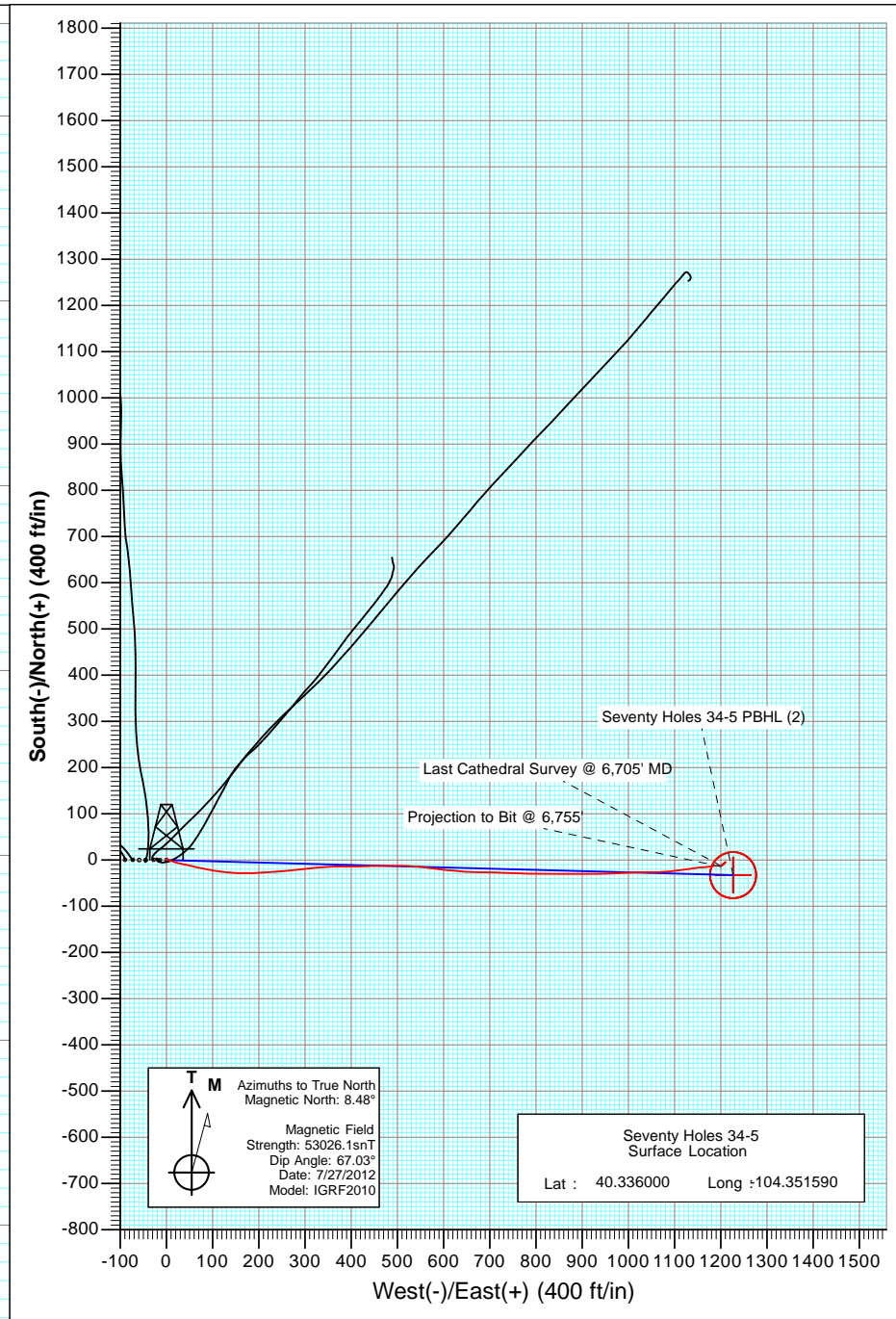
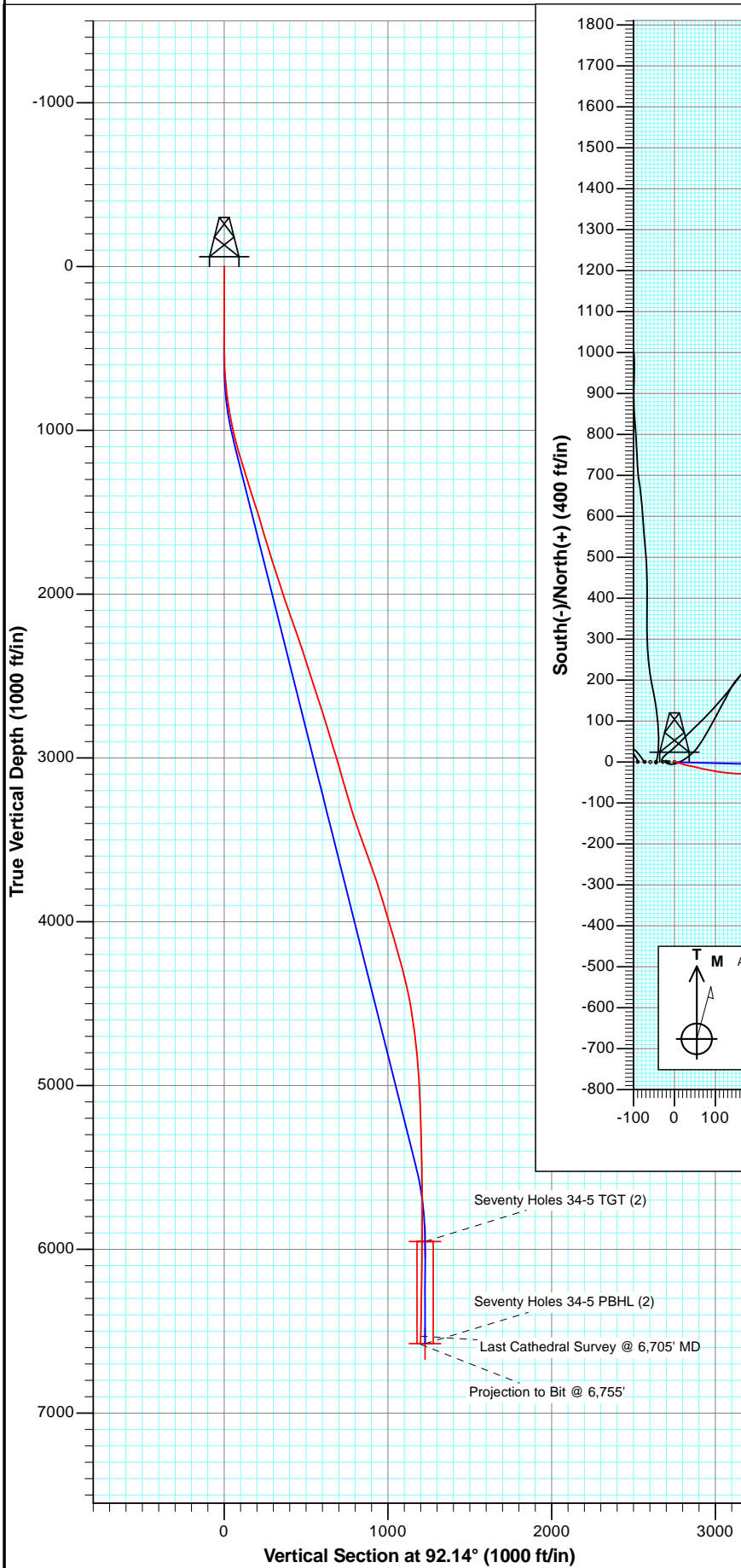




Project: Weld County
 Site: Seventy Holes 24-5 Pad
 Well: Seventy Holes 34-5
 Wellbore: OH
 Plan: AB FINAL



T M
 Azimuths to True North
 Magnetic North: 8.48°
 Magnetic Field
 Strength: 53026.1snT
 Dip Angle: 67.03°
 Date: 7/27/2012
 Model: IGRF2010

Seventy Holes 34-5
 Surface Location
 Lat : 40.336000 Long :104.351590

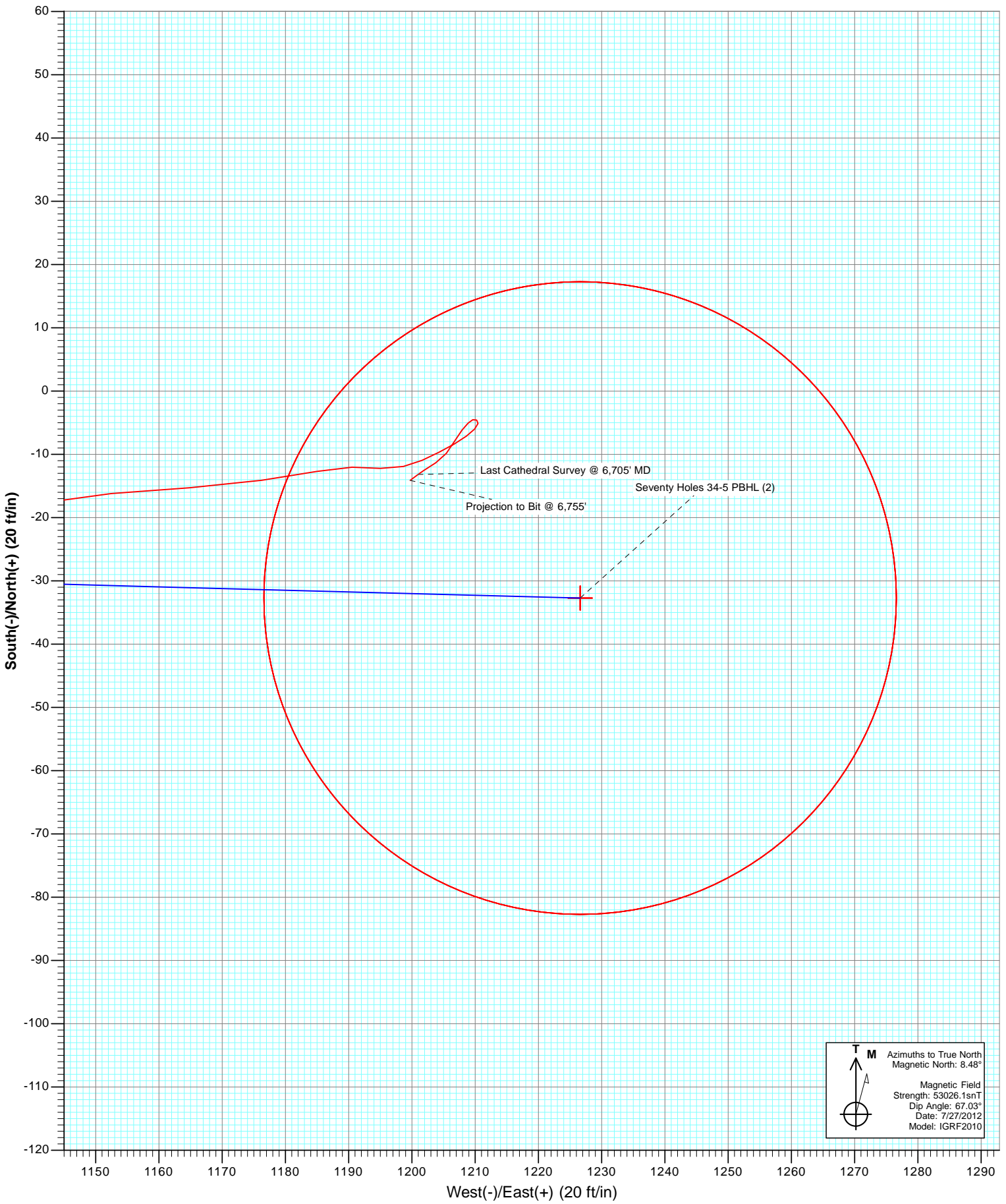
Type	Target	Azimuth	Origin	Type	N/S	E/W	From TVD
User	No Target (Freehand)	92.14	Slot		0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
Seventy Holes 34-5 TGT (2)	5953.0	-32.7	1226.6	40.335910	-104.347190		
Seventy Holes 34-5 PBHL (2)	6576.0	-32.7	1226.6	40.335910	-104.347190		

OH
 Seventy Holes 34-5
 125456/177255; SC

KB @ 4558.0ft
 North American Datum 1983
 Well Seventy Holes 34-5, True North



Project: Weld County
Site: Seventy Holes 24-5 Pad
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Wellbore: OH
Plan: AB FINAL



T M Azimuths to True North
Magnetic North: 8.48°

Magnetic Field
Strength: 53026.1nT
Dip Angle: 67.03°
Date: 7/27/2012
Model: IGRF2010

Cathedral Energy Services

Survey Report

Company: Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference: Well Seventy Holes 34-5
Project: Weld County	TVD Reference: KB @ 4558.0ft
Site: Seventy Holes 24-5 Pad	MD Reference: KB @ 4558.0ft
Well: Seventy Holes 34-5	North Reference: True
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: OH	Database: USA EDM 5000 Multi Users DB

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 34-5				
Well Position	+N/-S	0.0 ft	Northing:	1,367,321.28 ft
	+E/-W	0.0 ft	Easting:	3,320,143.72 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Latitude:	40.336000
			Longitude:	-104.351590
			Ground Level:	4,532.0 ft

Wellbore OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/27/2012	8.49	67.03	53,026

Design OH				
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	92.14

Survey Program		Date 8/30/2012
From (ft)	To (ft)	Survey (Wellbore)
525.0	6,755.0	Survey #1 (OH)
		Tool Name MWD
		Description Geolink MWD

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
525.0	0.30	43.20	525.0	1.0	0.9	0.9	0.06	0.06	
619.0	2.40	105.40	619.0	0.7	3.0	3.0	2.42	2.23	
713.0	5.60	110.00	712.7	-1.4	9.2	9.3	3.42	3.40	
807.0	8.00	108.10	806.1	-5.0	19.7	19.9	2.56	2.55	
902.0	10.10	100.10	899.9	-8.5	34.2	34.5	2.57	2.21	
997.0	12.50	103.00	993.0	-12.3	52.5	52.9	2.60	2.53	
1,093.0	15.40	103.80	1,086.2	-17.7	75.0	75.6	3.03	3.02	
1,187.0	16.40	97.80	1,176.6	-22.5	100.2	101.0	2.05	1.06	
1,281.0	18.30	97.00	1,266.3	-26.1	128.0	128.9	2.04	2.02	
1,374.0	17.30	93.00	1,354.9	-28.6	156.3	157.3	1.70	-1.08	
1,468.0	18.10	87.80	1,444.4	-28.8	184.9	185.8	1.88	0.85	
1,563.0	17.00	85.30	1,535.0	-27.1	213.5	214.3	1.40	-1.16	

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Seventy Holes 34-5
Project:	Weld County	TVD Reference:	KB @ 4558.0ft
Site:	Seventy Holes 24-5 Pad	MD Reference:	KB @ 4558.0ft
Well:	Seventy Holes 34-5	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,657.0	16.10	86.00	1,625.1	-25.0	240.2	240.9	0.98	-0.96	
1,751.0	17.60	84.80	1,715.1	-22.8	267.3	268.0	1.64	1.60	
1,846.0	18.00	81.40	1,805.5	-19.3	296.1	296.7	1.17	0.42	
1,940.0	17.40	85.70	1,895.1	-16.1	324.5	324.9	1.53	-0.64	
2,035.0	19.20	89.30	1,985.3	-14.8	354.3	354.6	2.24	1.89	
2,129.0	18.30	89.00	2,074.3	-14.4	384.5	384.8	0.96	-0.96	
2,223.0	19.60	88.40	2,163.2	-13.7	415.0	415.3	1.40	1.38	
2,318.0	18.70	88.40	2,252.9	-12.8	446.2	446.4	0.95	-0.95	
2,413.0	19.00	90.40	2,342.8	-12.5	476.9	477.0	0.75	0.32	
2,506.0	17.90	89.60	2,431.0	-12.5	506.3	506.4	1.21	-1.18	
2,601.0	17.40	93.90	2,521.6	-13.4	535.1	535.2	1.47	-0.53	
2,695.0	18.60	98.00	2,611.0	-16.4	563.9	564.2	1.86	1.28	
2,790.0	17.90	96.60	2,701.2	-20.2	593.5	593.8	0.87	-0.74	
2,885.0	16.80	95.30	2,791.9	-23.2	621.6	622.1	1.23	-1.16	
2,979.0	16.60	93.50	2,881.9	-25.2	648.6	649.0	0.59	-0.21	
3,075.0	17.80	92.00	2,973.6	-26.6	676.9	677.4	1.33	1.25	
3,169.0	15.60	89.30	3,063.7	-26.9	703.9	704.4	2.48	-2.34	
3,264.0	16.00	93.70	3,155.1	-27.6	729.7	730.3	1.33	0.42	
3,359.0	16.70	91.10	3,246.2	-28.7	756.5	757.0	1.07	0.74	
3,454.0	17.40	91.60	3,337.0	-29.4	784.3	784.9	0.75	0.74	
3,549.0	19.30	90.40	3,427.2	-29.9	814.2	814.8	2.04	2.00	
3,644.0	20.00	89.90	3,516.7	-30.0	846.2	846.7	0.76	0.74	
3,738.0	19.90	89.40	3,605.0	-29.8	878.2	878.7	0.21	-0.11	
3,833.0	18.70	90.70	3,694.7	-29.8	909.6	910.1	1.34	-1.26	
3,927.0	18.10	89.40	3,783.9	-29.8	939.3	939.8	0.77	-0.64	
4,022.0	17.00	87.60	3,874.5	-29.1	967.9	968.3	1.29	-1.16	
4,116.0	16.30	86.40	3,964.5	-27.7	994.8	995.2	0.83	-0.74	
4,211.0	16.20	89.00	4,055.7	-26.6	1,021.4	1,021.7	0.77	-0.11	
4,306.0	16.90	88.70	4,146.8	-26.1	1,048.4	1,048.7	0.74	0.74	
4,401.0	15.40	87.60	4,238.0	-25.2	1,074.8	1,075.0	1.61	-1.58	
4,495.0	13.80	84.70	4,329.0	-23.7	1,098.5	1,098.6	1.87	-1.70	
4,590.0	12.70	81.80	4,421.5	-21.1	1,120.1	1,120.1	1.35	-1.16	
4,684.0	9.80	78.80	4,513.7	-18.1	1,138.2	1,138.1	3.15	-3.09	
4,778.0	7.90	86.80	4,606.5	-16.2	1,152.5	1,152.3	2.40	-2.02	
4,872.0	7.30	84.60	4,699.7	-15.3	1,164.9	1,164.6	0.71	-0.64	
4,966.0	6.70	83.60	4,793.0	-14.1	1,176.3	1,176.0	0.65	-0.64	
5,061.0	4.00	76.30	4,887.6	-12.7	1,185.0	1,184.6	2.93	-2.84	
5,155.0	2.90	92.80	4,981.4	-12.0	1,190.6	1,190.2	1.57	-1.17	
5,250.0	2.50	92.00	5,076.3	-12.2	1,195.0	1,194.6	0.42	-0.42	
5,344.0	2.00	76.90	5,170.3	-11.9	1,198.7	1,198.3	0.82	-0.53	
5,438.0	1.80	66.20	5,264.2	-10.9	1,201.6	1,201.2	0.43	-0.21	
5,532.0	1.80	62.30	5,358.2	-9.7	1,204.3	1,203.8	0.13	0.00	
5,627.0	1.50	60.80	5,453.1	-8.4	1,206.7	1,206.2	0.32	-0.32	
5,722.0	1.30	52.30	5,548.1	-7.1	1,208.6	1,208.0	0.30	-0.21	
5,816.0	0.80	44.40	5,642.1	-6.0	1,209.9	1,209.3	0.55	-0.53	
5,911.0	0.50	10.80	5,737.1	-5.1	1,210.5	1,209.8	0.50	-0.32	
6,005.0	0.40	294.00	5,831.1	-4.6	1,210.2	1,209.6	0.60	-0.11	
6,100.0	0.40	252.40	5,926.1	-4.5	1,209.6	1,208.9	0.30	0.00	
6,194.0	0.70	223.60	6,020.1	-5.0	1,208.9	1,208.3	0.42	0.32	
6,287.0	1.10	219.90	6,113.0	-6.1	1,207.9	1,207.3	0.43	0.43	
6,381.0	1.40	209.20	6,207.0	-7.8	1,206.8	1,206.3	0.40	0.32	
6,477.0	1.50	218.60	6,303.0	-9.8	1,205.5	1,205.0	0.27	0.10	
6,570.0	1.30	238.80	6,396.0	-11.3	1,203.8	1,203.4	0.57	-0.22	

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Seventy Holes 34-5
Project:	Weld County	TVD Reference:	KB @ 4558.0ft
Site:	Seventy Holes 24-5 Pad	MD Reference:	KB @ 4558.0ft
Well:	Seventy Holes 34-5	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
6,665.0	1.40	236.60	6,490.9	-12.5	1,201.9	1,201.5	0.12	0.11	
6,705.0	1.80	233.60	6,530.9	-13.2	1,201.0	1,200.6	1.02	1.00	Last Cathedral Survey @ 6,705' MD
6,755.0	1.80	233.60	6,580.9	-14.1	1,199.7	1,199.4	0.00	0.00	Projection to Bit @ 6,755'

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Seventy Holes 34-5 TG1 - actual wellpath misses target center by 32.9ft at 6127.0ft MD (5953.0 TVD, -4.6 N, 1209.4 E) - Point	0.00	0.00	5,953.0	-32.7	1,226.6	1,367,304.46	3,321,370.64	40.335910	-104.347190
Seventy Holes 34-5 PB† - actual wellpath misses target center by 32.6ft at 6749.8ft MD (6575.7 TVD, -14.0 N, 1199.9 E) - Circle (radius 50.0)	0.00	0.00	6,576.0	-32.7	1,226.6	1,367,304.46	3,321,370.64	40.335910	-104.347190
Seventy Holes 34-5 PB† - actual wellpath misses target center by 33.1ft at 6755.0ft MD (6580.9 TVD, -14.1 N, 1199.7 E) - Circle (radius 50.0)	0.00	0.00	6,586.0	-32.7	1,226.6	1,367,304.46	3,321,370.64	40.335910	-104.347190
Seventy Holes 34-5 TG1 - actual wellpath misses target center by 32.9ft at 6137.0ft MD (5963.0 TVD, -4.7 N, 1209.4 E) - Point	0.00	0.00	5,963.0	-32.7	1,226.6	1,367,304.46	3,321,370.64	40.335910	-104.347190

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
6,705.0	6,530.9	-13.2	1,201.0	Last Cathedral Survey @ 6,705' MD	
6,755.0	6,580.9	-14.1	1,199.7	Projection to Bit @ 6,755'	

Checked By: _____	Approved By: _____	Date: _____
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