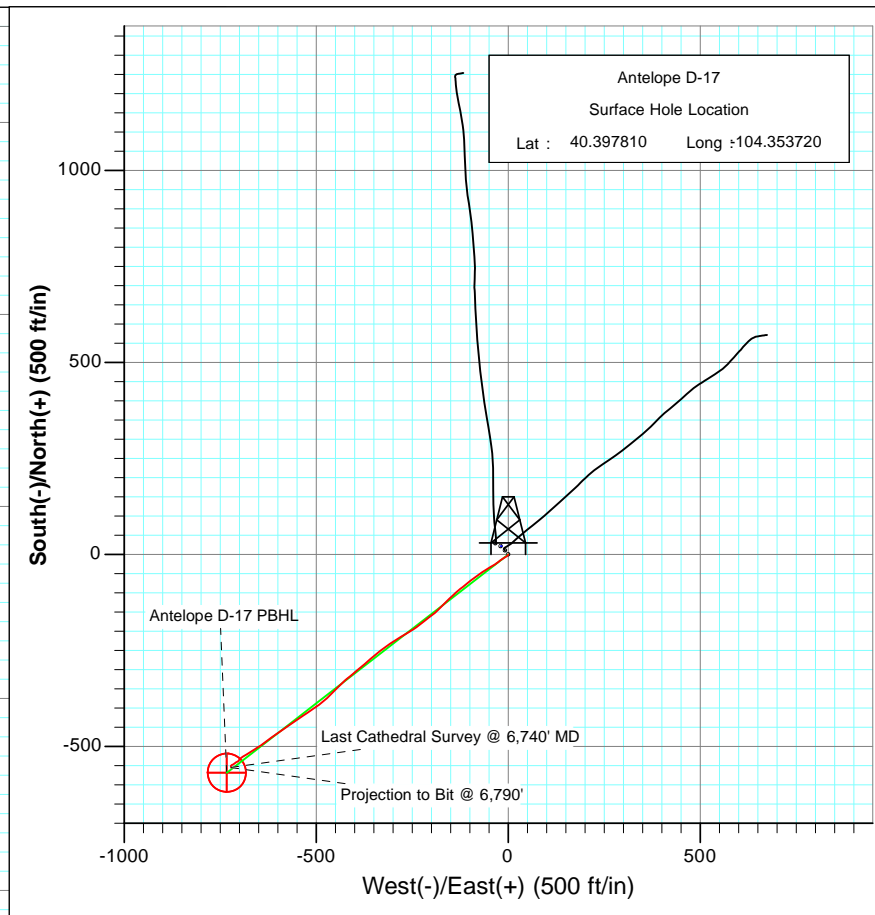
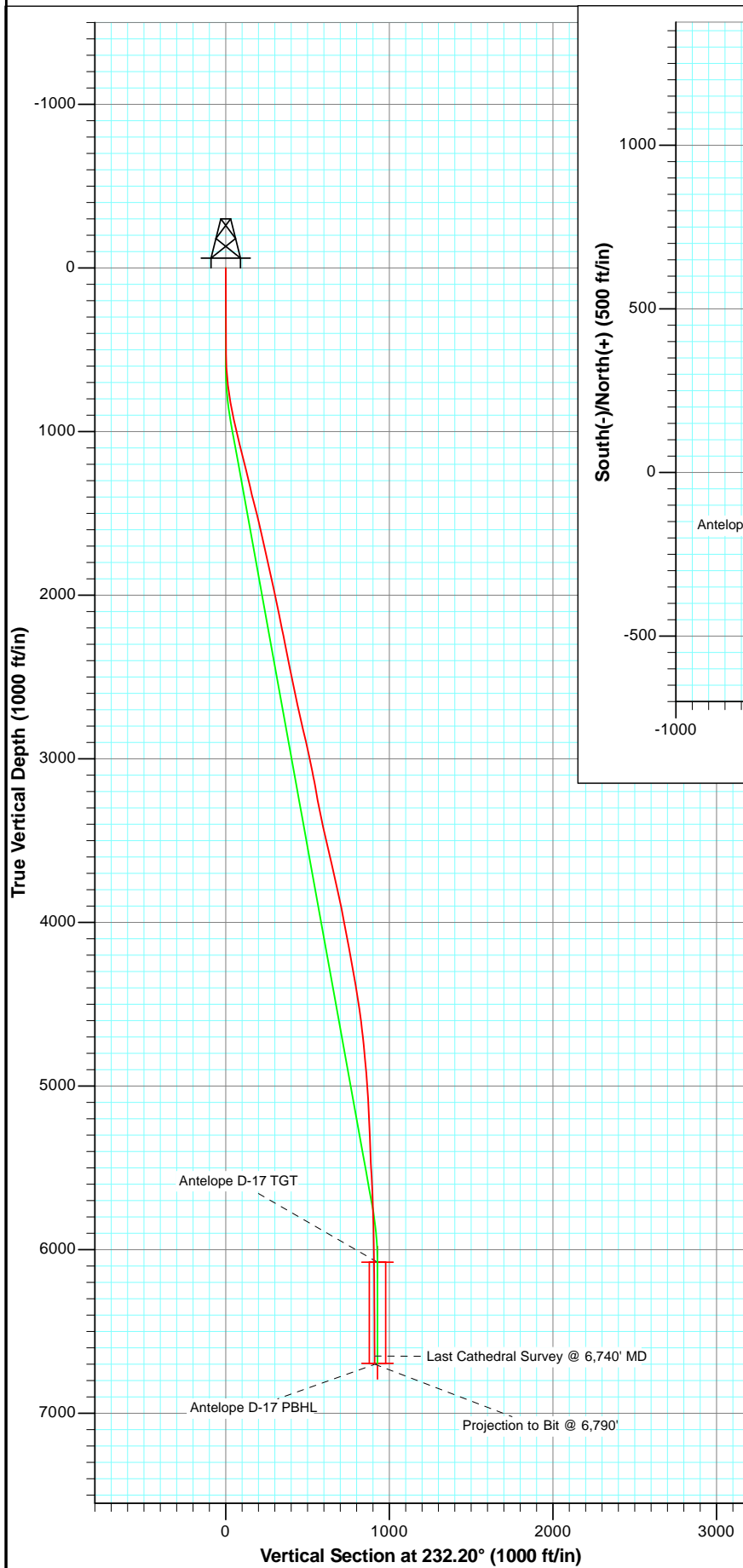




Project: Weld County
 Site: Antelope 13-17 Pad
 Well: Antelope D-17
 Wellbore: OH
 Plan: FINAL

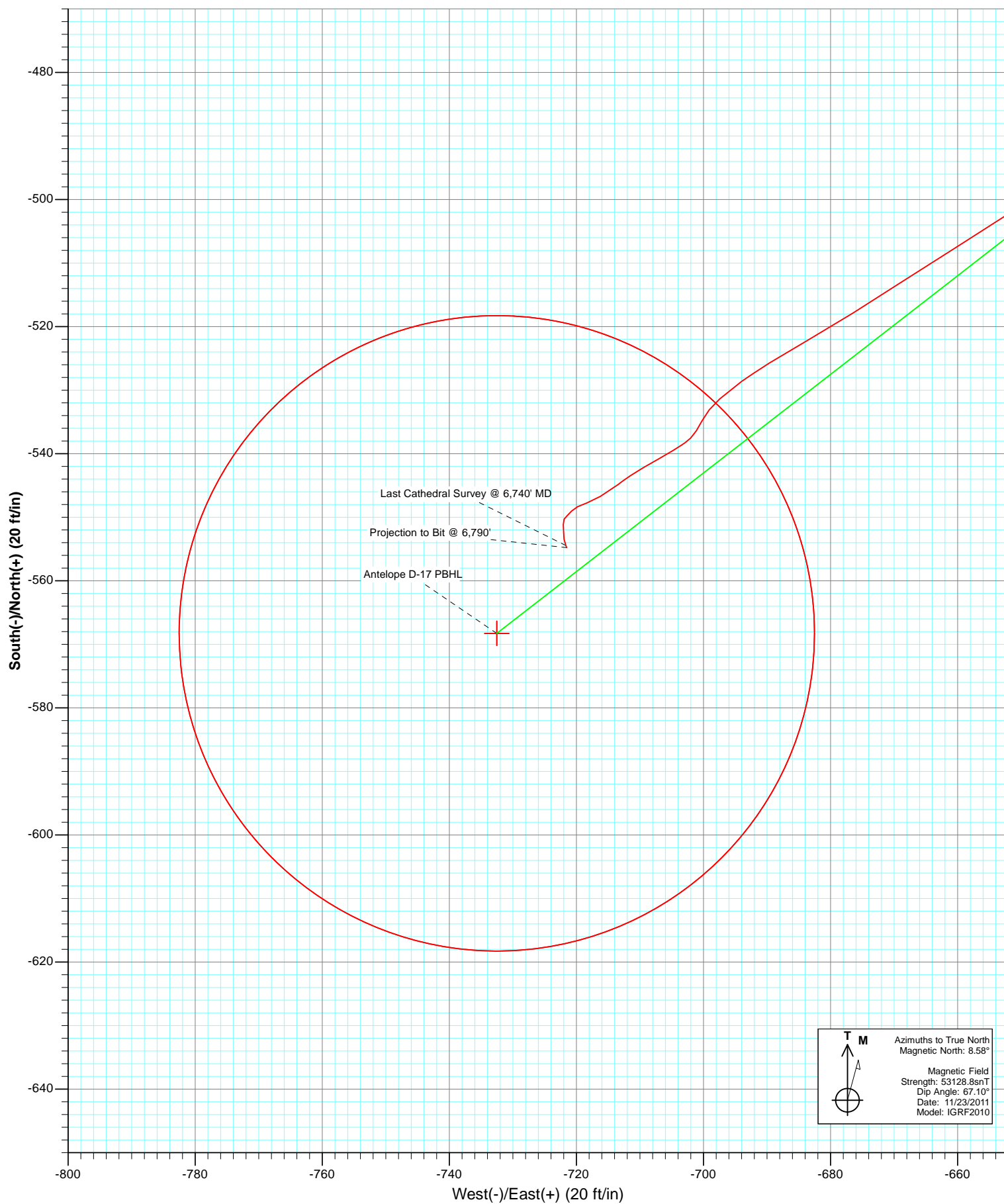


Azimuths to True North
 Magnetic North: 8.58°
 Magnetic Field
 Strength: 53128.8nT
 Dip Angle: 67.10°
 Date: 11/23/2011
 Model: IGRF2010

OH
 Antelope D-17
 125075/139955; SC

KBE @ 4682.0ft (Original Well Elev)
 North American Datum 1983
 Well Antelope D-17, True North

Type	Target	Antelope D-17 PBHL	Azimuth	Origin	Type	N/S	E/W	From	TVD
			232.20	Slot		0.0	0.0		0.0
Name		TVD	+N/-S	+E/-W		Latitude	Longitude		
Antelope D-17 TGT		6077.0	-568.3	-732.5		40.396250	-104.356350		
Antelope D-17 PBHL		6695.0	-568.3	-732.5		40.396250	-104.356350		



Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope D-17
Project:	Weld County	TVD Reference:	KBE @ 4682.0ft (Original Well Elev)
Site:	Antelope 13-17 Pad	MD Reference:	KBE @ 4682.0ft (Original Well Elev)
Well:	Antelope D-17	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		Antelope 13-17 Pad			
Site Position:		Northing:	1,389,850.45 ft	Latitude:	40.397870
From:	Lat/Long	Easting:	3,319,239.13 ft	Longitude:	-104.353790
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.74 °

Well	Antelope D-17					
Well Position	+N/-S	0.0 ft	Northing:	1,389,828.81 ft	Latitude:	40.397810
	+E/-W	0.0 ft	Easting:	3,319,258.91 ft	Longitude:	-104.353720
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,672.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/23/2011	8.58	67.10	53,129

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	232.20

Survey Program	Date	2/15/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
493.0	6,790.0	Survey #1 (OH)	MWD	Geolink MWD	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
493.0	0.40	205.70	493.0	-1.6	-0.7	1.5	0.08	0.08	
588.0	2.40	224.90	588.0	-3.3	-2.3	3.8	2.13	2.11	
682.0	5.30	238.00	681.7	-7.0	-7.4	10.1	3.20	3.09	
777.0	8.10	236.40	776.1	-13.0	-16.7	21.1	2.95	2.95	
871.0	11.40	232.10	868.7	-22.4	-29.5	37.0	3.59	3.51	
966.0	12.30	242.00	961.7	-32.9	-45.9	56.4	2.34	0.95	
1,060.0	14.90	237.20	1,053.1	-44.1	-64.9	78.3	3.01	2.77	
1,155.0	14.40	232.30	1,145.0	-58.0	-84.5	102.3	1.41	-0.53	
1,249.0	13.40	231.00	1,236.2	-72.0	-102.2	124.9	1.11	-1.06	
1,343.0	12.80	233.10	1,327.8	-85.1	-119.0	146.2	0.81	-0.64	
1,438.0	14.70	227.80	1,420.1	-99.5	-136.3	168.7	2.40	2.00	
1,532.0	13.70	225.50	1,511.2	-115.3	-153.1	191.6	1.22	-1.06	

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope D-17
Project:	Weld County	TVD Reference:	KBE @ 4682.0ft (Original Well Elev)
Site:	Antelope 13-17 Pad	MD Reference:	KBE @ 4682.0ft (Original Well Elev)
Well:	Antelope D-17	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
1,626.0	12.50	224.30	1,602.7	-130.4	-168.1	212.8	1.31	-1.28	
1,721.0	13.10	226.20	1,695.4	-145.2	-183.1	233.7	0.77	0.63	
1,814.0	13.40	233.80	1,785.9	-158.9	-199.4	254.9	1.90	0.32	
1,908.0	12.40	231.20	1,877.5	-171.6	-216.1	275.9	1.23	-1.06	
2,003.0	11.20	230.80	1,970.5	-183.8	-231.2	295.3	1.27	-1.26	
2,098.0	11.90	239.70	2,063.6	-194.6	-246.8	314.3	2.01	0.74	
2,192.0	11.20	236.50	2,155.7	-204.5	-262.7	333.0	1.01	-0.74	
2,287.0	12.30	238.80	2,248.7	-214.9	-279.1	352.2	1.26	1.16	
2,382.0	10.90	239.70	2,341.8	-224.7	-295.5	371.2	1.49	-1.47	
2,476.0	11.90	234.10	2,433.9	-234.8	-311.0	389.7	1.59	1.06	
2,570.0	10.90	234.60	2,526.1	-245.7	-326.1	408.3	1.07	-1.06	
2,665.0	11.70	228.50	2,619.2	-257.2	-340.7	426.8	1.51	0.84	
2,759.0	13.80	229.50	2,710.9	-270.8	-356.3	447.6	2.25	2.23	
2,853.0	13.40	230.00	2,802.3	-285.1	-373.2	469.6	0.44	-0.43	
2,948.0	12.40	230.60	2,894.9	-298.7	-389.5	490.8	1.06	-1.05	
3,042.0	11.30	229.30	2,986.9	-311.1	-404.3	510.1	1.20	-1.17	
3,136.0	12.30	231.90	3,078.9	-323.3	-419.2	529.3	1.20	1.06	
3,231.0	9.80	226.50	3,172.1	-335.1	-433.0	547.5	2.85	-2.63	
3,325.0	10.60	223.20	3,264.6	-346.9	-444.7	564.0	1.05	0.85	
3,420.0	11.80	223.10	3,357.8	-360.3	-457.3	582.2	1.26	1.26	
3,514.0	13.20	228.10	3,449.6	-374.5	-471.9	602.4	1.88	1.49	
3,609.0	12.70	234.80	3,542.2	-387.8	-488.5	623.7	1.66	-0.53	
3,703.0	13.10	233.10	3,633.8	-400.2	-505.5	644.6	0.59	0.43	
3,798.0	13.10	236.50	3,726.3	-412.6	-523.0	666.1	0.81	0.00	
3,893.0	12.10	234.50	3,819.0	-424.3	-540.1	686.8	1.15	-1.05	
3,987.0	11.50	235.80	3,911.1	-435.3	-555.9	706.0	0.70	-0.64	
4,082.0	10.70	237.90	4,004.3	-445.3	-571.2	724.3	0.94	-0.84	
4,176.0	10.80	235.70	4,096.6	-454.9	-585.9	741.7	0.45	0.11	
4,271.0	10.90	234.10	4,189.9	-465.2	-600.5	759.6	0.33	0.11	
4,365.0	10.00	232.20	4,282.4	-475.4	-614.1	776.6	1.03	-0.96	
4,460.0	8.90	233.30	4,376.1	-484.8	-626.6	792.2	1.17	-1.16	
4,554.0	9.30	235.70	4,468.9	-493.5	-638.7	807.1	0.59	0.43	
4,648.0	7.90	237.30	4,561.8	-501.2	-650.4	821.1	1.51	-1.49	
4,742.0	6.70	237.60	4,655.1	-507.6	-660.4	833.0	1.28	-1.28	
4,837.0	5.60	237.60	4,749.5	-513.1	-669.0	843.1	1.16	-1.16	
4,931.0	5.20	237.30	4,843.1	-517.9	-676.5	851.9	0.43	-0.43	
5,025.0	4.80	240.80	4,936.8	-522.1	-683.5	860.1	0.53	-0.43	
5,119.0	3.90	237.30	5,030.5	-525.7	-689.6	867.1	1.00	-0.96	
5,215.0	2.30	235.50	5,126.3	-528.6	-694.0	872.3	1.67	-1.67	
5,310.0	3.10	228.30	5,221.2	-531.4	-697.5	876.8	0.91	0.84	
5,404.0	2.40	206.40	5,315.1	-534.8	-700.2	881.1	1.33	-0.74	
5,499.0	1.60	224.40	5,410.1	-537.6	-702.0	884.2	1.06	-0.84	
5,593.0	3.70	240.90	5,504.0	-540.0	-705.6	888.5	2.35	2.23	
5,687.0	2.60	237.80	5,597.8	-542.6	-710.1	893.6	1.18	-1.17	
5,782.0	2.30	234.10	5,692.7	-544.8	-713.4	897.7	0.36	-0.32	
5,876.0	1.80	239.20	5,786.7	-546.7	-716.2	901.0	0.57	-0.53	
5,970.0	1.10	251.50	5,880.6	-547.7	-718.3	903.3	0.81	-0.74	
6,064.0	0.80	244.20	5,974.6	-548.3	-719.8	904.8	0.34	-0.32	
6,158.0	0.70	221.40	6,068.6	-549.0	-720.8	906.0	0.33	-0.11	
6,253.0	0.50	228.50	6,163.6	-549.7	-721.5	907.0	0.22	-0.21	
6,347.0	0.40	211.70	6,257.6	-550.3	-721.9	907.7	0.18	-0.11	
6,441.0	0.70	175.00	6,351.6	-551.1	-722.1	908.3	0.48	0.32	
6,535.0	0.70	180.20	6,445.6	-552.3	-722.0	909.0	0.07	0.00	

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope D-17
Project:	Weld County	TVD Reference:	KBE @ 4682.0ft (Original Well Elev)
Site:	Antelope 13-17 Pad	MD Reference:	KBE @ 4682.0ft (Original Well Elev)
Well:	Antelope D-17	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
6,629.0	0.70	172.70	6,539.6	-553.4	-721.9	909.7	0.10	0.00	
6,740.0	0.40	152.80	6,650.6	-554.5	-721.7	910.1	0.32	-0.27	Last Cathedral Survey @ 6,740' MD
6,790.0	0.40	152.80	6,700.6	-554.8	-721.5	910.1	0.00	0.00	Projection to Bit @ 6,790'

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
Antelope D-17 PBHL - survey misses target center by 17.4ft at 6784.5ft MD (6695.0 TVD, -554.7 N, -721.5 E) - Circle (radius 50.0)	0.00	0.00	6,695.0	-568.3	-732.5	1,389,251.13	3,318,533.79	40.396250	-104.356350
Antelope D-17 TGT - survey misses target center by 22.4ft at 6166.6ft MD (6077.2 TVD, -549.1 N, -720.8 E) - Point	0.00	0.00	6,077.0	-568.3	-732.5	1,389,251.13	3,318,533.79	40.396250	-104.356350

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
6,740.0	6,650.6	-554.5	-721.7	Last Cathedral Survey @ 6,740' MD	
6,790.0	6,700.6	-554.8	-721.5	Projection to Bit @ 6,790'	

Checked By: _____ Approved By: _____ Date: _____