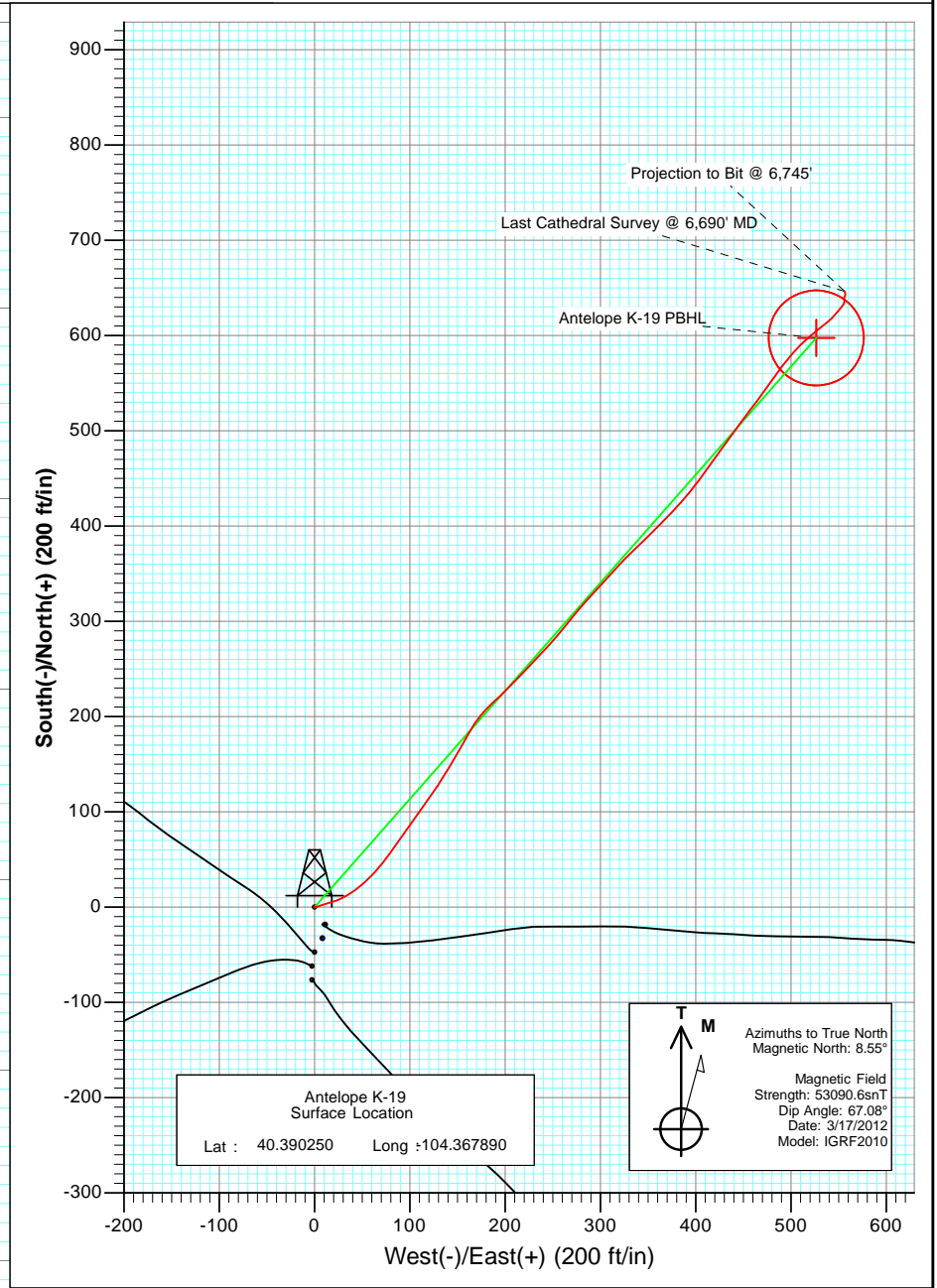
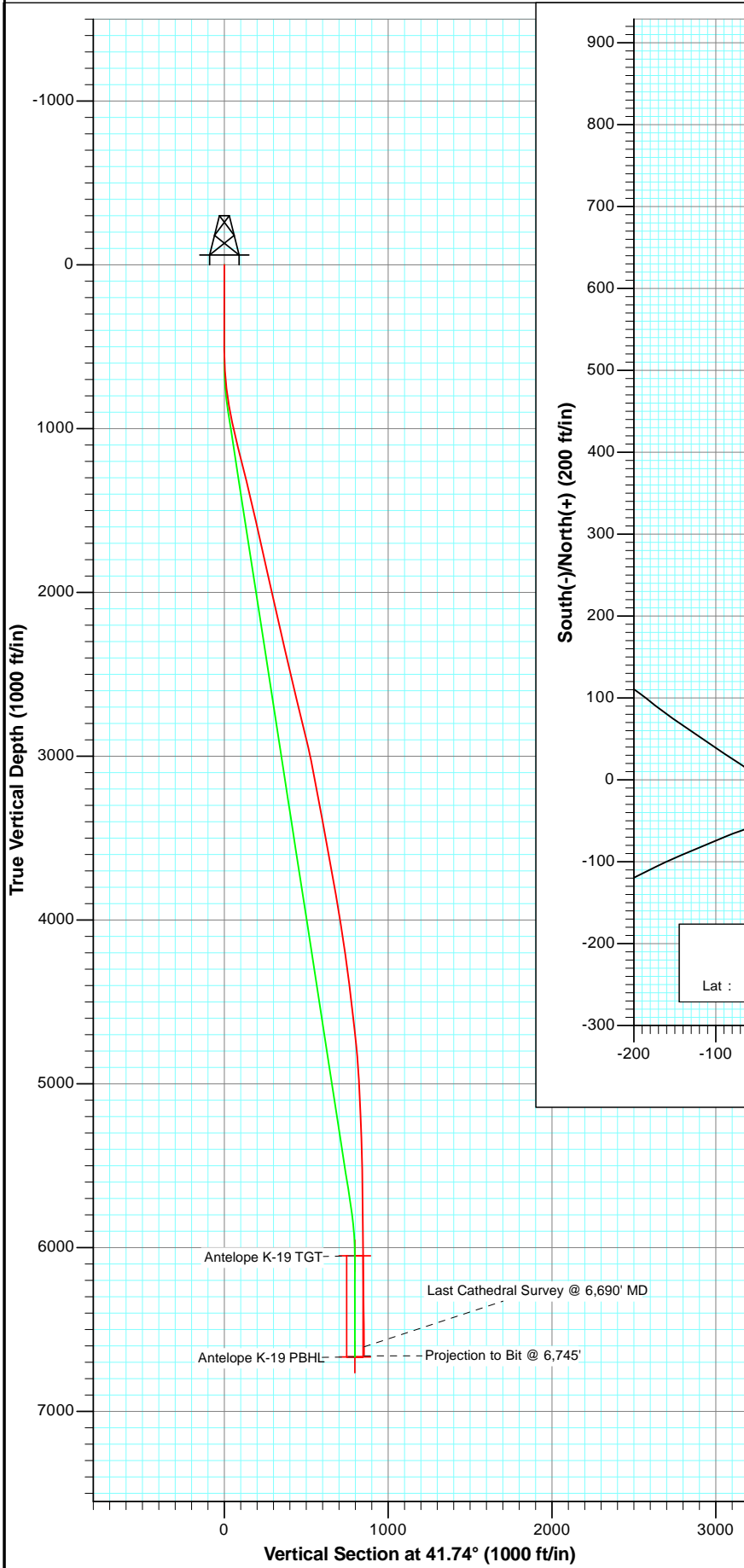




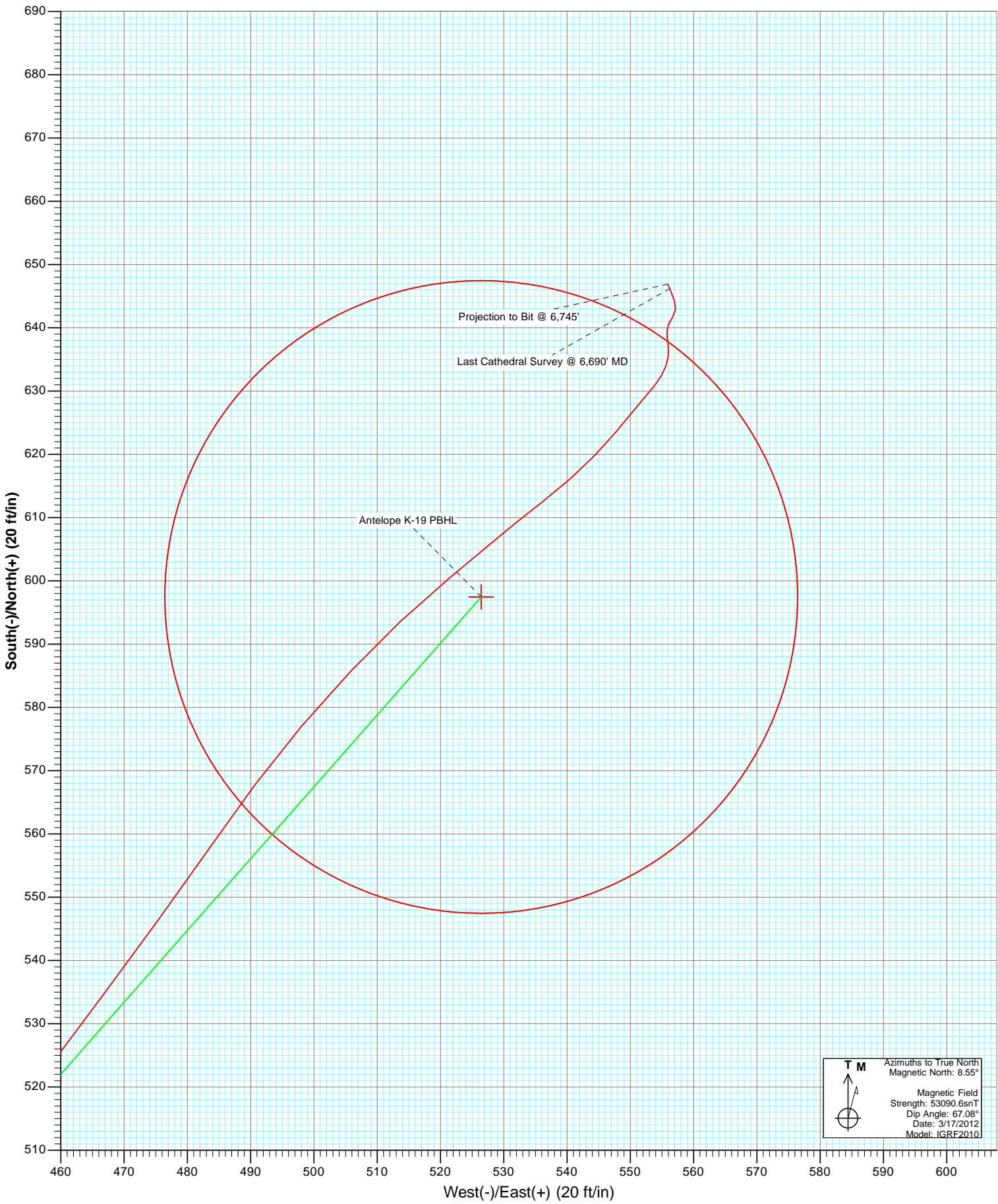
Project: Weld County
 Site: Antelope 21-19 Pad
 Well: Antelope K-19
 Wellbore: OH
 Plan: AB FINAL



OH Antelope K-19 125207/149255; SC							
KBE @ 4610.0ft (Original Well Elev) North American Datum 1983 Well Antelope K-19, True North							
Type	Target		Azimuth	Origin Type	N/S	E/W	From TVD
	No Target (Freehand)		41.74	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
Antelope K-19 TGT	6050.0	597.5	526.4	40.391890	-104.366000		
Antelope K-19 PBHL	6668.0	597.5	526.4	40.391890	-104.366000		



Project: Weld County
Site: Antelope 21-19 Pad
Well: Antelope K-19
Wellbore: OH
Plan: AB FINAL



Cathedral Energy Services

Survey Report

Company: Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference: Well Antelope K-19
Project: Weld County	TVD Reference: KBE @ 4610.0ft (Original Well Elev)
Site: Antelope 21-19 Pad	MD Reference: KBE @ 4610.0ft (Original Well Elev)
Well: Antelope K-19	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 21-19 Pad					
Site Position:		Northing: 1,386,991.60 ft	Latitude: 40.390160		
From: Lat/Long		Easting: 3,315,356.54 ft	Longitude: -104.367860		
Position Uncertainty: 0.0 ft		Slot Radius: 13.200 in	Grid Convergence: 0.73 °		

Well Antelope K-19					
Well Position	+N/-S 0.0 ft	Northing: 1,387,024.27 ft	Latitude: 40.390250		
	+E/-W 0.0 ft	Easting: 3,315,347.77 ft	Longitude: -104.367890		
Position Uncertainty	0.0 ft	Wellhead Elevation: ft	Ground Level: 4,600.0 ft		

Wellbore OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/17/2012	8.55	67.08	53,091

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	41.74	

Survey Program Date 3/23/2012					
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
499.0	6,745.0	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	
499.0	0.20	234.30	499.0	-0.5	-0.7	-0.9	0.04	0.04	
594.0	2.90	72.70	594.0	0.1	1.5	1.0	3.25	2.84	
689.0	5.80	72.40	688.7	2.3	8.3	7.2	3.05	3.05	
782.0	8.20	73.20	781.0	5.6	19.2	16.9	2.58	2.58	
877.0	10.10	60.80	874.8	11.6	32.9	30.6	2.87	2.00	
971.0	12.30	50.40	967.0	22.0	47.8	48.3	3.17	2.34	
1,066.0	14.20	42.20	1,059.5	37.1	63.5	69.9	2.81	2.00	
1,161.0	14.10	36.00	1,151.6	55.1	78.1	93.1	1.60	-0.11	
1,257.0	13.90	35.00	1,244.7	74.0	91.6	116.2	0.33	-0.21	
1,351.0	13.70	35.40	1,336.0	92.4	104.5	138.5	0.24	-0.21	
1,446.0	13.40	35.20	1,428.4	110.5	117.4	160.6	0.32	-0.32	
1,540.0	12.70	34.00	1,519.9	128.0	129.4	181.7	0.80	-0.74	

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope K-19
Project:	Weld County	TD Reference:	KBE @ 4610.0ft (Original Well Elev)
Site:	Antelope 21-19 Pad	MVD Reference:	KBE @ 4610.0ft (Original Well Elev)
Well:	Antelope K-19	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
1,634.0	13.80	31.00	1,611.4	146.2	141.0	202.9	1.38	1.17	
1,730.0	13.40	29.60	1,704.8	165.6	152.4	225.0	0.54	-0.42	
1,824.0	12.50	29.80	1,796.4	183.9	162.8	245.6	0.96	-0.96	
1,919.0	12.20	38.10	1,889.2	200.8	174.1	265.7	1.89	-0.32	
2,013.0	12.00	48.60	1,981.1	215.0	187.6	285.3	2.35	-0.21	
2,108.0	13.50	44.20	2,073.8	229.5	202.7	306.2	1.88	1.58	
2,203.0	12.30	44.10	2,166.4	244.7	217.5	327.4	1.26	-1.26	
2,296.0	13.30	43.20	2,257.0	259.7	231.7	348.0	1.10	1.08	
2,392.0	12.50	42.40	2,350.6	275.4	246.3	369.4	0.85	-0.83	
2,487.0	14.10	39.00	2,443.1	292.0	260.5	391.3	1.87	1.68	
2,582.0	13.10	39.60	2,535.4	309.3	274.6	413.6	1.06	-1.05	
2,676.0	14.00	43.00	2,626.8	325.8	289.2	435.6	1.28	0.96	
2,771.0	13.30	42.10	2,719.1	342.3	304.3	458.0	0.77	-0.74	
2,865.0	12.90	42.70	2,810.7	358.0	318.7	479.3	0.45	-0.43	
2,960.0	13.80	46.00	2,903.1	373.7	334.0	501.2	1.24	0.95	
3,054.0	12.70	45.30	2,994.6	388.7	349.4	522.7	1.18	-1.17	
3,147.0	10.70	45.20	3,085.6	402.0	362.8	541.5	2.15	-2.15	
3,242.0	11.20	43.00	3,178.9	415.0	375.4	559.6	0.69	0.53	
3,337.0	9.40	41.90	3,272.4	427.5	386.9	576.5	1.91	-1.89	
3,432.0	10.60	36.90	3,365.9	440.3	397.3	593.0	1.56	1.26	
3,527.0	10.40	36.30	3,459.3	454.2	407.6	610.3	0.24	-0.21	
3,621.0	10.50	36.20	3,551.8	467.9	417.7	627.2	0.11	0.11	
3,716.0	10.80	36.20	3,645.2	482.1	428.1	644.7	0.32	0.32	
3,811.0	10.50	35.70	3,738.5	496.3	438.4	662.2	0.33	-0.32	
3,905.0	9.90	36.30	3,831.0	509.8	448.1	678.7	0.65	-0.64	
4,000.0	9.60	37.20	3,924.7	522.7	457.8	694.8	0.35	-0.32	
4,095.0	8.90	36.50	4,018.4	534.9	466.9	710.0	0.75	-0.74	
4,189.0	8.50	36.10	4,111.3	546.3	475.4	724.1	0.43	-0.43	
4,283.0	8.00	35.00	4,204.4	557.3	483.2	737.5	0.56	-0.53	
4,378.0	7.50	36.10	4,298.5	567.7	490.6	750.3	0.55	-0.53	
4,471.0	7.20	41.00	4,390.7	577.0	498.0	762.1	0.75	-0.32	
4,566.0	7.00	42.90	4,485.0	585.8	505.9	773.9	0.32	-0.21	
4,659.0	6.50	47.00	4,577.4	593.5	513.6	784.8	0.75	-0.54	
4,754.0	6.20	50.00	4,671.8	600.5	521.5	795.2	0.47	-0.32	
4,848.0	6.10	50.30	4,765.2	606.9	529.2	805.2	0.11	-0.11	
4,943.0	4.10	52.80	4,859.9	612.2	535.8	813.5	2.12	-2.11	
5,038.0	3.40	47.40	4,954.7	616.2	540.6	819.6	0.82	-0.74	
5,133.0	3.10	44.60	5,049.5	619.9	544.4	825.0	0.36	-0.32	
5,228.0	2.70	39.60	5,144.4	623.4	547.7	829.8	0.50	-0.42	
5,322.0	2.10	39.50	5,238.3	626.5	550.2	833.7	0.64	-0.64	
5,417.0	1.70	40.50	5,333.2	628.9	552.2	836.9	0.42	-0.42	
5,512.0	1.30	39.40	5,428.2	630.8	553.8	839.4	0.42	-0.42	
5,607.0	1.10	29.10	5,523.2	632.4	554.9	841.3	0.31	-0.21	
5,702.0	0.90	19.40	5,618.2	633.9	555.6	842.9	0.28	-0.21	
5,797.0	0.80	10.30	5,713.2	635.3	556.0	844.2	0.18	-0.11	
5,891.0	0.70	356.20	5,807.2	636.5	556.1	845.1	0.22	-0.11	
5,987.0	0.70	353.10	5,903.2	637.7	555.9	845.9	0.04	0.00	
6,082.0	0.50	353.10	5,998.1	638.7	555.8	846.6	0.21	-0.21	
6,177.0	0.60	6.50	6,093.1	639.6	555.8	847.3	0.17	0.11	
6,272.0	0.70	19.00	6,188.1	640.6	556.1	848.2	0.18	0.11	
6,365.0	0.80	40.50	6,281.1	641.6	556.7	849.4	0.32	0.11	
6,460.0	0.90	2.30	6,376.1	642.9	557.1	850.6	0.59	0.11	
6,554.0	0.90	343.30	6,470.1	644.3	557.0	851.6	0.32	0.00	

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope K-19
Project:	Weld County	TVD Reference:	KBE @ 4610.0ft (Original Well Elev)
Site:	Antelope 21-19 Pad	MD Reference:	KBE @ 4610.0ft (Original Well Elev)
Well:	Antelope K-19	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
6,690.0	0.80	334.00	6,606.1	646.2	556.2	852.5	0.13	-0.07	Last Cathedral Survey @ 6,690' MD
6,745.0	0.80	334.00	6,661.1	646.9	555.9	852.8	0.00	0.00	Projection to Bit @ 6,745'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Antelope K-19 PBHL - hit/miss target - Shape	0.00	0.00	6,668.0	597.5	526.4	1,387,628.40	3,315,866.55	40.391890	-104.366000
- actual wellpath misses target center by 58.0ft at 6745.0ft MD (6661.1 TVD, 646.9 N, 555.9 E)									
- Circle (radius 50.0)									
Antelope K-19 TGT - hit/miss target - Shape	0.00	0.00	6,050.0	597.5	526.4	1,387,628.40	3,315,866.55	40.391890	-104.366000
- actual wellpath misses target center by 51.0ft at 6133.5ft MD (6049.6 TVD, 639.1 N, 555.8 E)									
- Point									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
6,690.0	6,606.1	646.2	556.2	Last Cathedral Survey @ 6,690' MD	
6,745.0	6,661.1	646.9	555.9	Projection to Bit @ 6,745'	

Checked By: _____ Approved By: _____ Date: _____