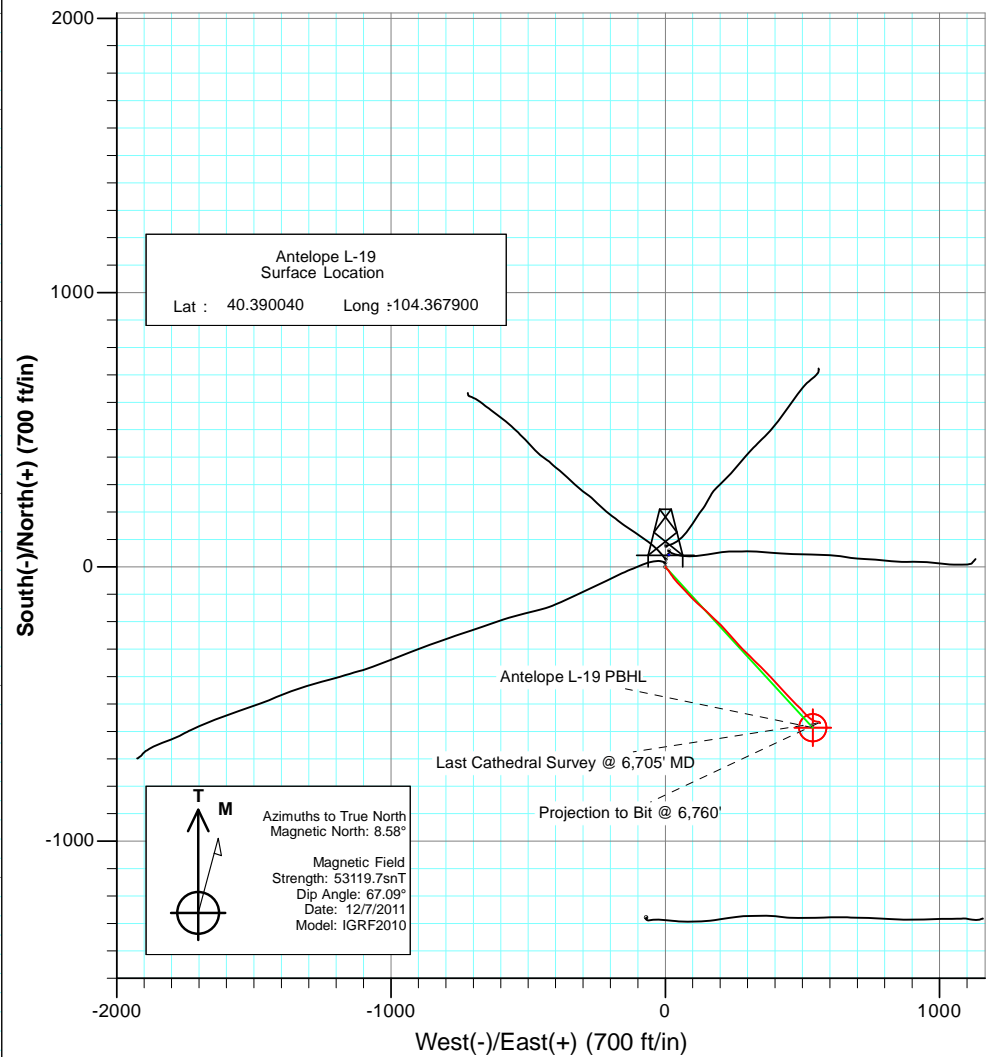
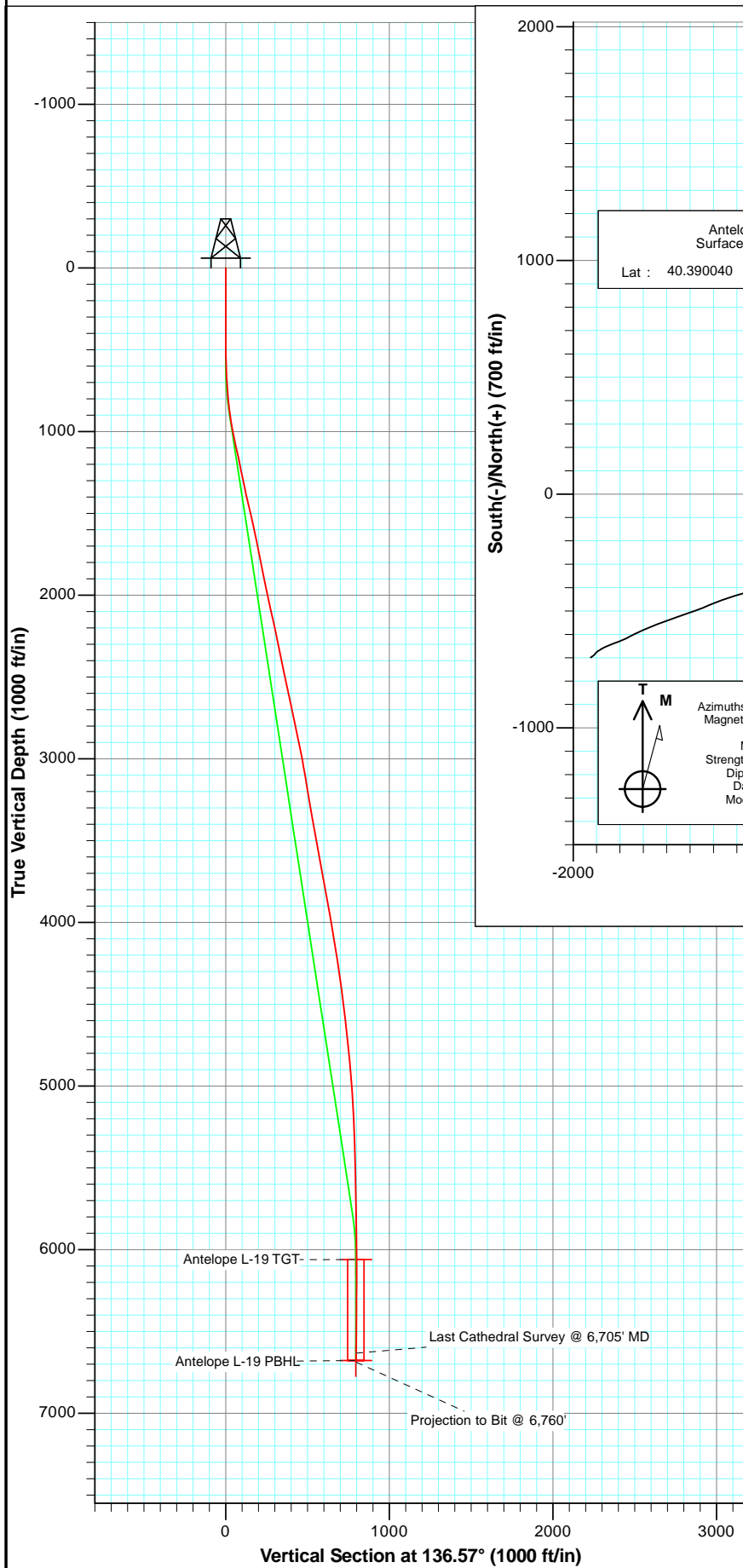




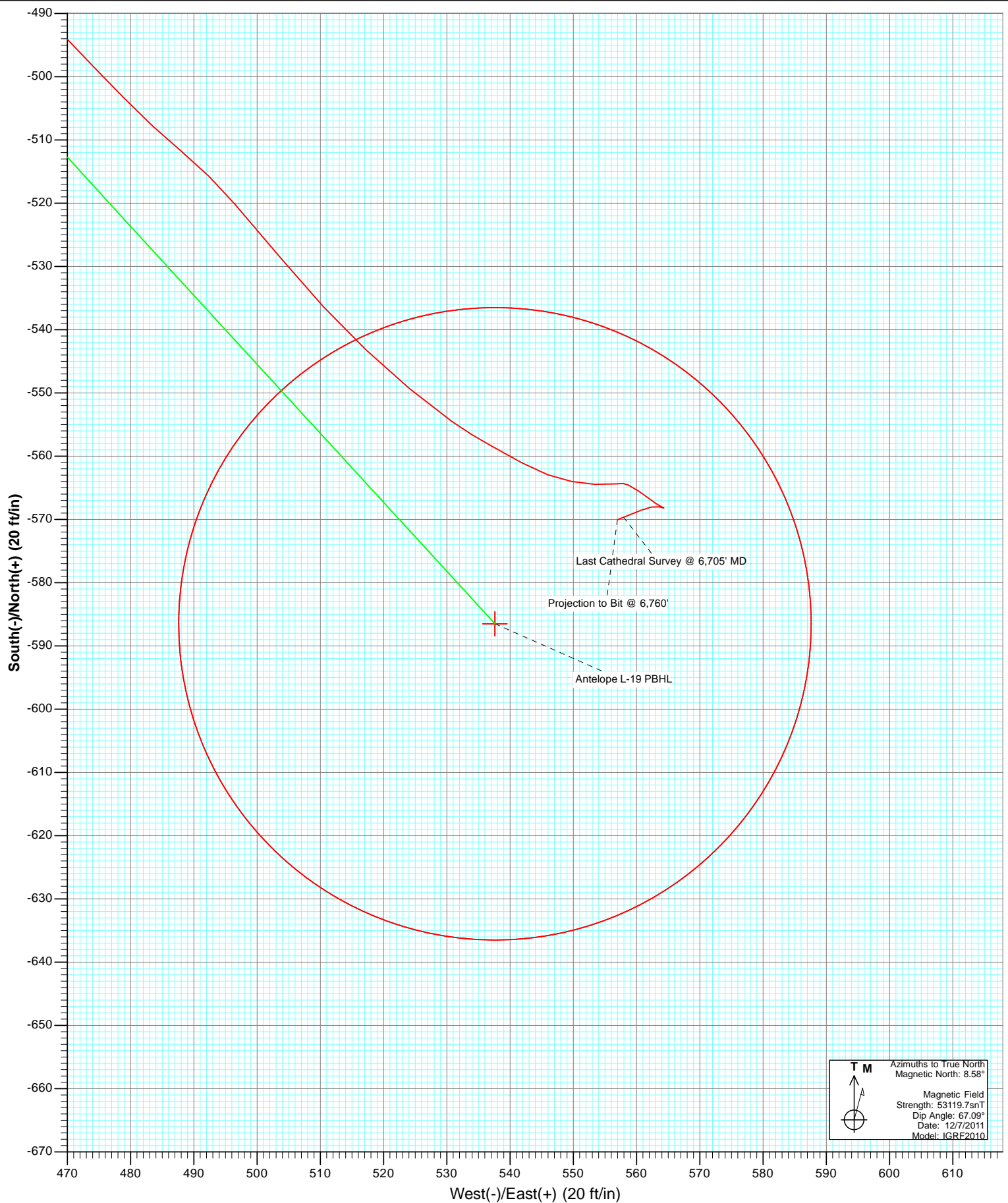
Project: Weld County
Site: Antelope 21-19 Pad
Well: Antelope L-19
Wellbore: OH
Plan: AB FINAL



OH Antelope L-19 125210/149555; SC						
kbe @ 4616.0ft (Forte #5) North American Datum 1983 Well Antelope L-19, True North						
Type	Target No Target (Freehand)	Azimuth 136.57	Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
Antelope L-19 TGT	6061.0	-586.5	537.6	40.388430	-104.365970	
Antelope L-19 PBHL	6678.0	-586.5	537.6	40.388430	-104.365970	



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



Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope L-19
Project:	Weld County	TVD Reference:	kbe @ 4616.0ft (Forte #5)
Site:	Antelope 21-19 Pad	MD Reference:	kbe @ 4616.0ft (Forte #5)
Well:	Antelope L-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 L-19					
Well Position	+N/-S	0.0 ft	Northing:	1,386,947.73 ft	Latitude:	40.390040
	+E/-W	0.0 ft	Easting:	3,315,345.96 ft	Longitude:	-104.367900
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,605.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/7/2011	8.58	67.09	53,120

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	136.57	

Survey Program	Date	4/4/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
499.0	6,760.0	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	0.30	65.60	499.0	0.5	1.2	0.4	0.06	0.06		
593.0	2.30	169.30	593.0	-1.2	1.8	2.1	2.54	2.13		
688.0	3.20	138.80	687.9	-5.1	3.9	6.3	1.78	0.95		
783.0	5.40	134.20	782.6	-10.2	8.8	13.5	2.34	2.32		
877.0	7.10	147.60	876.0	-18.2	15.1	23.6	2.37	1.81		
972.0	10.10	147.00	970.0	-30.1	22.8	37.5	3.16	3.16		
1,066.0	12.50	141.50	1,062.1	-45.0	33.6	55.8	2.80	2.55		
1,161.0	12.30	136.40	1,154.9	-60.4	47.0	76.2	1.17	-0.21		
1,255.0	11.90	137.00	1,246.8	-74.7	60.5	95.9	0.45	-0.43		
1,350.0	11.60	135.70	1,339.8	-88.7	73.9	115.2	0.42	-0.32		
1,444.0	13.10	139.20	1,431.7	-103.5	87.4	135.3	1.78	1.60		
1,540.0	12.80	133.70	1,525.2	-119.1	102.2	156.8	1.32	-0.31		

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope L-19
Project:	Weld County	TVD Reference:	kbe @ 4616.0ft (Forte #5)
Site:	Antelope 21-19 Pad	MD Reference:	kbe @ 4616.0ft (Forte #5)
Well:	Antelope L-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	12.20	132.30	1,617.0	-133.0	117.1	177.1	0.72	-0.64	
1,729.0	11.70	131.00	1,709.9	-146.1	131.8	196.7	0.60	-0.53	
1,824.0	11.20	130.10	1,803.0	-158.3	146.1	215.4	0.56	-0.53	
1,917.0	11.20	137.40	1,894.3	-170.8	159.1	233.4	1.52	0.00	
2,012.0	12.00	132.60	1,987.3	-184.3	172.6	252.5	1.32	0.84	
2,107.0	12.50	131.60	2,080.2	-197.8	187.6	272.6	0.57	0.53	
2,201.0	12.60	136.30	2,171.9	-212.0	202.3	293.0	1.09	0.11	
2,296.0	11.40	135.20	2,264.9	-226.1	216.1	312.8	1.29	-1.26	
2,389.0	12.10	142.40	2,355.9	-240.4	228.5	331.6	1.75	0.75	
2,484.0	12.10	138.40	2,448.8	-255.7	241.2	351.5	0.88	0.00	
2,579.0	11.30	137.90	2,541.8	-270.1	254.0	370.8	0.85	-0.84	
2,673.0	12.70	136.10	2,633.8	-284.3	267.4	390.3	1.54	1.49	
2,767.0	12.00	136.20	2,725.6	-298.8	281.3	410.4	0.75	-0.74	
2,862.0	11.50	133.80	2,818.6	-312.5	295.0	429.7	0.74	-0.53	
2,955.0	11.70	135.50	2,909.7	-325.7	308.3	448.4	0.43	0.22	
3,050.0	11.00	135.20	3,002.8	-339.0	321.4	467.1	0.74	-0.74	
3,145.0	9.60	132.00	3,096.3	-350.7	333.7	484.1	1.59	-1.47	
3,239.0	10.10	135.90	3,188.9	-361.9	345.2	500.1	0.89	0.53	
3,334.0	8.70	133.70	3,282.7	-372.8	356.2	515.6	1.52	-1.47	
3,427.0	10.30	136.10	3,374.4	-383.6	367.1	531.0	1.77	1.72	
3,522.0	10.50	137.50	3,467.8	-396.2	378.8	548.1	0.34	0.21	
3,618.0	10.40	137.50	3,562.2	-409.0	390.6	565.5	0.10	-0.10	
3,712.0	10.20	137.00	3,654.7	-421.3	402.0	582.3	0.23	-0.21	
3,807.0	9.80	135.60	3,748.3	-433.3	413.4	598.8	0.49	-0.42	
3,902.0	10.60	139.10	3,841.8	-445.6	424.8	615.6	1.06	0.84	
3,996.0	10.20	136.60	3,934.2	-458.2	436.1	632.6	0.64	-0.43	
4,090.0	9.30	136.00	4,026.9	-469.7	447.1	648.5	0.96	-0.96	
4,184.0	9.90	137.40	4,119.5	-481.1	457.9	664.2	0.68	0.64	
4,279.0	9.40	136.50	4,213.2	-492.8	468.8	680.1	0.55	-0.53	
4,374.0	8.20	135.50	4,307.1	-503.2	478.8	694.7	1.27	-1.26	
4,468.0	7.20	129.90	4,400.2	-511.8	488.1	707.2	1.33	-1.06	
4,563.0	7.10	139.40	4,494.5	-520.1	496.5	719.0	1.25	-0.11	
4,658.0	6.50	139.90	4,588.8	-528.7	503.7	730.2	0.63	-0.63	
4,752.0	6.00	137.50	4,682.3	-536.3	510.5	740.4	0.60	-0.53	
4,846.0	5.80	133.00	4,775.8	-543.2	517.3	750.1	0.54	-0.21	
4,940.0	5.40	130.50	4,869.3	-549.3	524.1	759.2	0.50	-0.43	
5,036.0	4.80	124.50	4,964.9	-554.5	530.9	767.7	0.84	-0.62	
5,130.0	3.90	118.70	5,058.7	-558.3	536.9	774.5	1.06	-0.96	
5,224.0	3.00	119.20	5,152.5	-561.0	541.9	779.9	0.96	-0.96	
5,319.0	2.50	109.70	5,247.4	-562.9	546.0	784.2	0.71	-0.53	
5,415.0	2.20	100.80	5,343.3	-564.0	549.8	787.5	0.49	-0.31	
5,510.0	2.20	93.70	5,438.2	-564.4	553.4	790.3	0.29	0.00	
5,604.0	1.80	82.20	5,532.2	-564.4	556.6	792.5	0.60	-0.43	
5,698.0	1.00	121.50	5,626.2	-564.6	558.8	794.2	1.28	-0.85	
5,793.0	1.20	120.30	5,721.1	-565.5	560.4	795.9	0.21	0.21	
5,888.0	1.00	131.50	5,816.1	-566.6	561.8	797.7	0.31	-0.21	
5,982.0	0.80	120.70	5,910.1	-567.5	563.0	799.1	0.28	-0.21	
6,077.0	0.50	116.90	6,005.1	-568.0	564.0	800.2	0.32	-0.32	
6,172.0	0.00	124.40	6,100.1	-568.2	564.3	800.6	0.53	-0.53	
6,266.0	0.20	279.60	6,194.1	-568.1	564.2	800.4	0.21	0.21	
6,360.0	0.60	283.50	6,288.1	-568.0	563.5	799.9	0.43	0.43	
6,454.0	0.90	257.10	6,382.1	-568.0	562.3	799.1	0.48	0.32	
6,548.0	1.10	249.10	6,476.1	-568.5	560.8	798.4	0.26	0.21	

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope L-19
Project:	Weld County	TVD Reference:	kbe @ 4616.0ft (Forte #5)
Site:	Antelope 21-19 Pad	MD Reference:	kbe @ 4616.0ft (Forte #5)
Well:	Antelope L-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
6,705.0	1.10	247.60	6,633.0	-569.6	558.0	797.3	0.02	0.00	Last Cathedral Survey @ 6,705' MD
6,760.0	1.10	247.60	6,688.0	-570.1	557.0	796.9	0.00	0.00	Projection to Bit @ 6,760'

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 L-19 TGT - actual wellpath misses target center by 32.4ft at 6132.8ft MD (6060.9 TVD, -568.1 N, 564.3 E) - Point	0.00	0.00	6,061.0	-586.5	537.6	1,386,368.15	3,315,891.02	40.388430	-104.365970
Antelope L-19 PBHL - actual wellpath misses target center by 25.6ft at 6750.4ft MD (6678.5 TVD, -570.0 N, 557.2 E) - Circle (radius 50.0)	0.00	0.00	6,678.0	-586.5	537.6	1,386,368.15	3,315,891.02	40.388430	-104.365970

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
6,705.0	6,633.0	-569.6	558.0	Last Cathedral Survey @ 6,705' MD
6,760.0	6,688.0	-570.1	557.0	Projection to Bit @ 6,760'

Checked By: _____ Approved By: _____ Date: _____