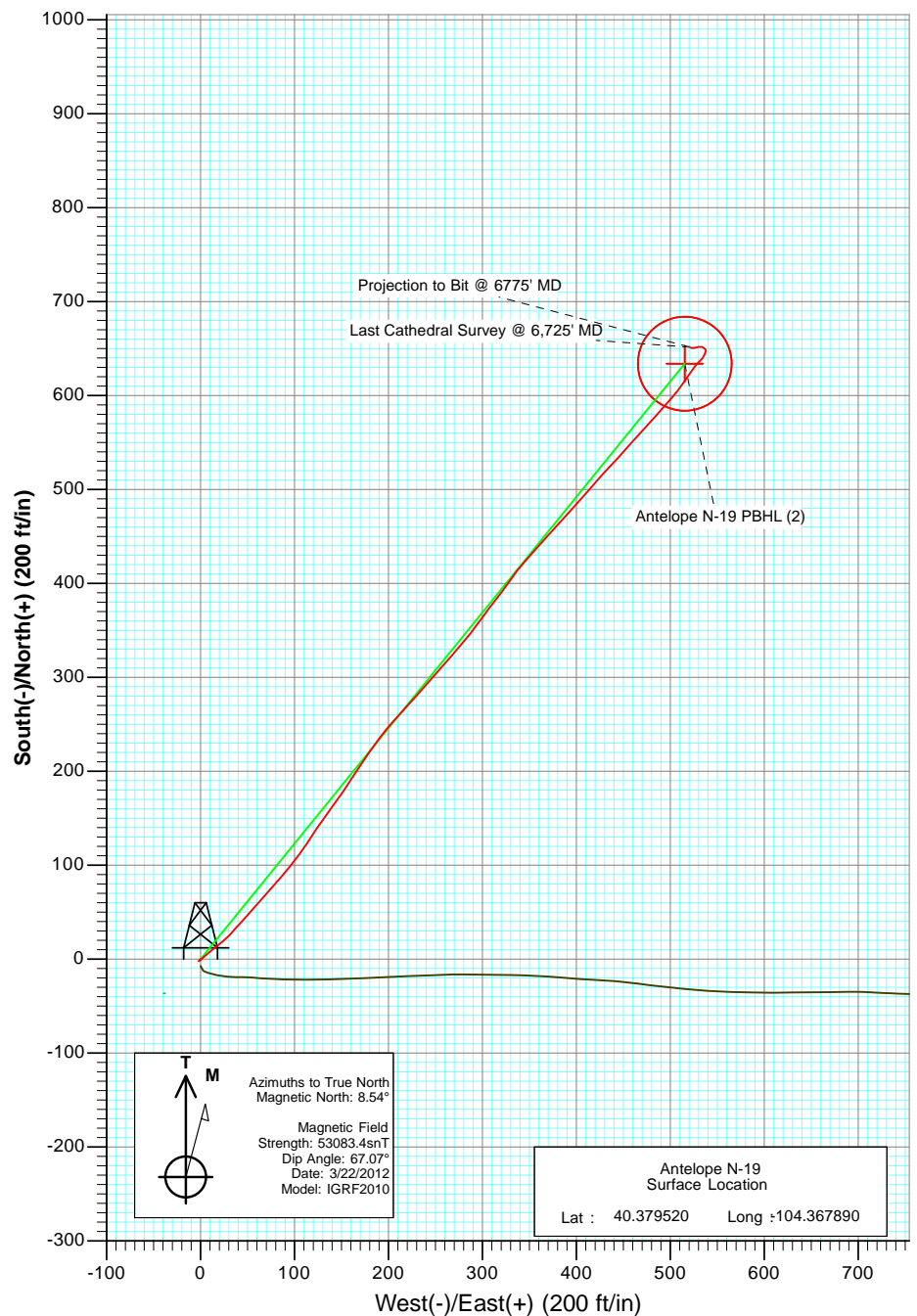
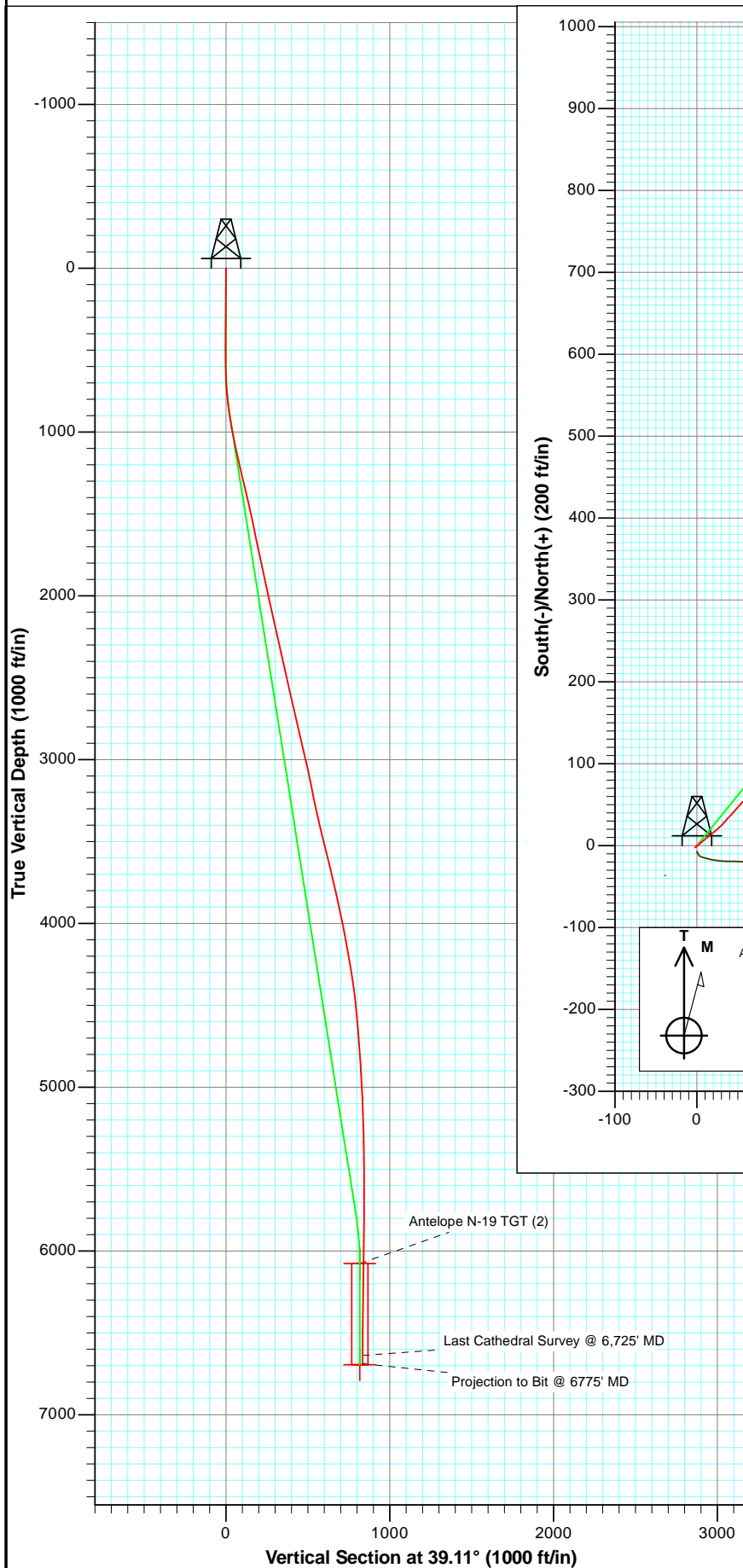




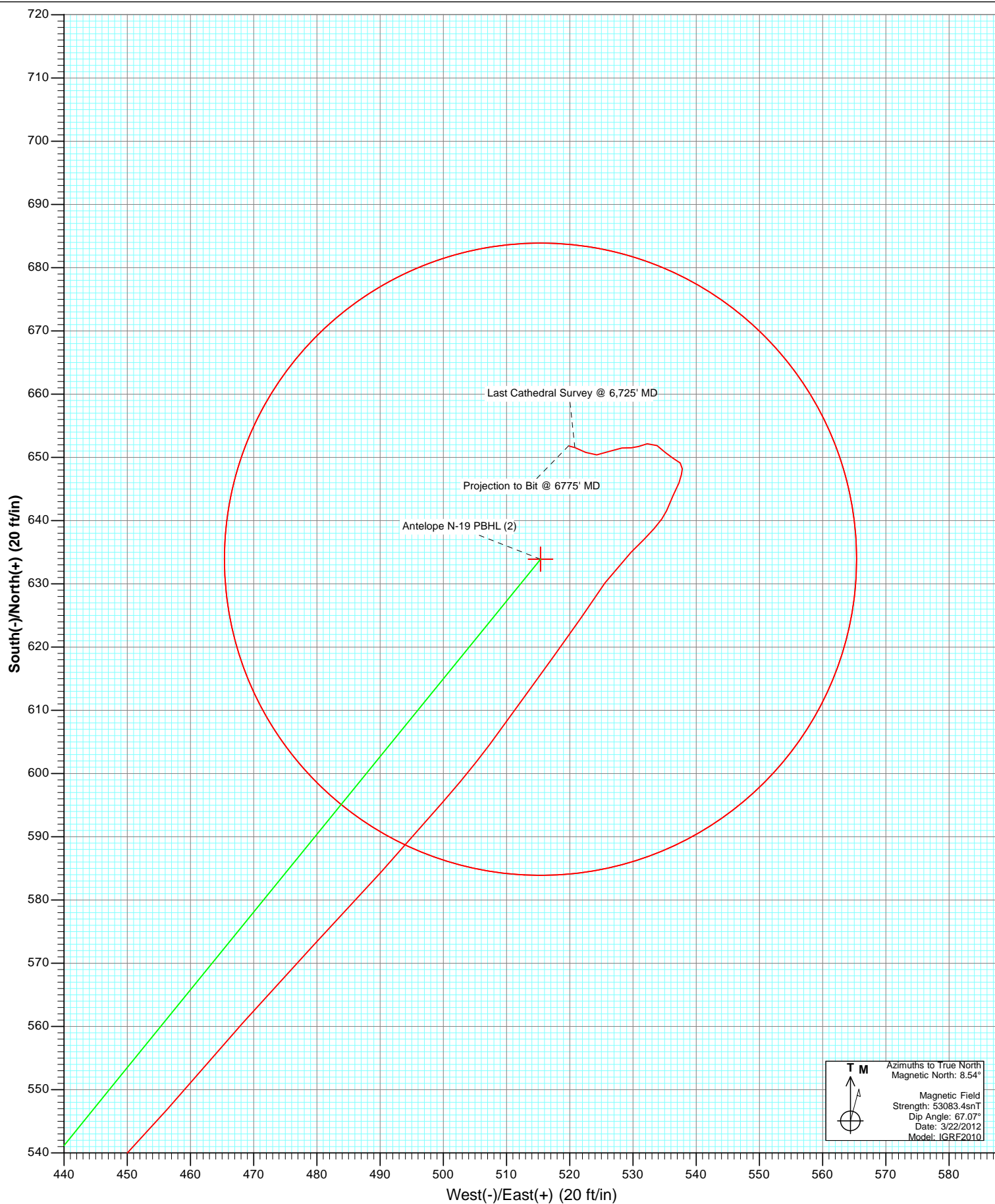
Project: Weld County
 Site: Antelope 24-19 Pad
 Well: Antelope N-19
 Wellbore: OH
 Plan: AB FINAL



OH Antelope N-19 125243/154155; SC							
Kbe @ 4632.0ft North American Datum 1983 Well Antelope N-19, True North							
Type	Target	Target	Azimuth	Origin Type	N/S	E/W	From TVD
		Antelope N-19 PBHL (2)	39.11	Slot	0.0	0.0	0.0
Name		TVD	+N/-S	+E/-W	Latitude		Longitude
Antelope N-19 TGT (2)		6077.0	633.9	515.4	40.381260		-104.366040
Antelope N-19 PBHL (2)		6694.0	633.9	515.4	40.381260		-104.366040



Project: Weld County
Site: Antelope 24-19 Pad
Well: Antelope N-19
Wellbore: OH
Plan: AB FINAL



Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope N-19
Project:	Weld County	TVD Reference:	Kbe @ 4632.0ft
Site:	Antelope 24-19 Pad	MD Reference:	Kbe @ 4632.0ft
Well:	Antelope N-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 24-19 Pad			
Site Position:		Northing:	1,383,096.99 ft	Latitude:	40.379470
From:	Lat/Long	Easting:	3,315,358.91 ft	Longitude:	-104.368030
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.73 °

Well	Antelope N-19					
Well Position	+N/-S	0.0 ft	Northing:	1,383,115.67 ft	Latitude:	40.379520
	+E/-W	0.0 ft	Easting:	3,315,397.67 ft	Longitude:	-104.367890
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,622.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/22/2012	8.54	67.07	53,083

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	39.11	

Survey Program	Date	5/4/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
494.0	6,775.0	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		
494.0	0.70	217.50	494.0	-2.4	-1.8	-3.0	0.14	0.14		
589.0	0.80	21.40	589.0	-2.2	-1.9	-3.0	1.56	0.11		
683.0	3.50	55.60	682.9	0.0	0.7	0.4	3.06	2.87		
777.0	5.50	45.80	776.6	4.8	6.3	7.6	2.27	2.13		
872.0	8.10	53.70	870.9	11.9	14.9	18.6	2.90	2.74		
966.0	9.40	47.70	963.9	21.0	25.9	32.6	1.69	1.38		
1,061.0	11.60	41.00	1,057.3	33.4	37.9	49.9	2.64	2.32		
1,156.0	13.80	42.00	1,149.9	49.0	51.8	70.7	2.33	2.32		
1,250.0	13.30	41.70	1,241.3	65.4	66.5	92.7	0.54	-0.53		
1,344.0	13.00	42.00	1,332.8	81.4	80.7	114.1	0.33	-0.32		
1,439.0	12.80	37.90	1,425.5	97.6	94.4	135.3	0.99	-0.21		
1,533.0	12.60	36.00	1,517.2	114.1	106.8	155.9	0.49	-0.21		

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope N-19
Project:	Weld County	TVD Reference:	Kbe @ 4632.0ft
Site:	Antelope 24-19 Pad	MD Reference:	Kbe @ 4632.0ft
Well:	Antelope N-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
1,627.0	11.00	32.60	1,609.2	130.0	117.6	175.1	1.86	-1.70	
1,721.0	12.60	36.00	1,701.2	145.8	128.5	194.2	1.86	1.70	
1,815.0	11.60	35.20	1,793.1	161.9	140.0	213.9	1.08	-1.06	
1,909.0	12.80	35.30	1,885.0	178.1	151.4	233.7	1.28	1.28	
2,004.0	12.00	31.80	1,977.7	195.1	162.7	254.0	1.16	-0.84	
2,099.0	13.00	35.60	2,070.5	212.1	174.2	274.5	1.36	1.05	
2,193.0	11.80	34.10	2,162.3	228.7	185.7	294.6	1.32	-1.28	
2,288.0	12.30	39.70	2,255.2	244.5	197.6	314.4	1.34	0.53	
2,382.0	13.60	43.20	2,346.8	260.3	211.6	335.4	1.61	1.38	
2,477.0	13.00	41.10	2,439.3	276.5	226.2	357.2	0.81	-0.63	
2,571.0	11.90	42.70	2,531.1	291.6	239.8	377.5	1.23	-1.17	
2,665.0	13.60	40.80	2,622.7	307.1	253.6	398.2	1.86	1.81	
2,759.0	12.90	40.30	2,714.2	323.4	267.6	419.7	0.75	-0.74	
2,854.0	12.60	40.50	2,806.9	339.4	281.2	440.7	0.32	-0.32	
2,948.0	12.80	35.60	2,898.6	355.7	293.9	461.3	1.17	0.21	
3,043.0	13.90	37.40	2,991.0	373.3	306.9	483.3	1.24	1.16	
3,137.0	12.00	38.10	3,082.6	389.9	319.8	504.3	2.03	-2.02	
3,232.0	11.80	33.80	3,175.6	405.8	331.3	523.9	0.96	-0.21	
3,326.0	11.60	41.70	3,267.6	420.8	343.0	542.9	1.72	-0.21	
3,420.0	12.00	41.00	3,359.7	435.3	355.7	562.1	0.45	0.43	
3,515.0	13.80	42.80	3,452.3	451.0	369.8	583.3	1.94	1.89	
3,610.0	14.30	41.90	3,544.4	468.1	385.4	606.3	0.57	0.53	
3,704.0	14.20	41.70	3,635.5	485.3	400.8	629.4	0.12	-0.11	
3,799.0	13.30	40.60	3,727.8	502.3	415.6	652.0	0.99	-0.95	
3,893.0	12.40	42.70	3,819.4	518.0	429.5	672.8	1.08	-0.96	
3,988.0	11.90	43.70	3,912.3	532.5	443.2	692.8	0.57	-0.53	
4,083.0	11.70	41.10	4,005.3	546.9	456.3	712.2	0.60	-0.21	
4,177.0	10.60	41.30	4,097.5	560.5	468.3	730.3	1.17	-1.17	
4,271.0	9.80	43.50	4,190.0	572.8	479.5	747.0	0.95	-0.85	
4,366.0	9.30	41.80	4,283.7	584.4	490.2	762.7	0.60	-0.53	
4,460.0	8.50	41.00	4,376.6	595.3	499.8	777.2	0.86	-0.85	
4,555.0	5.90	36.60	4,470.8	604.6	507.3	789.1	2.80	-2.74	
4,649.0	5.20	35.30	4,564.4	611.9	512.7	798.2	0.76	-0.74	
4,743.0	4.90	36.60	4,658.0	618.6	517.5	806.5	0.34	-0.32	
4,838.0	4.00	33.90	4,752.7	624.6	521.8	813.8	0.97	-0.95	
4,932.0	4.20	35.10	4,846.5	630.2	525.6	820.5	0.23	0.21	
5,025.0	3.70	46.20	4,939.3	635.0	529.7	826.9	0.98	-0.54	
5,120.0	2.60	42.00	5,034.1	638.7	533.4	832.1	1.18	-1.16	
5,215.0	1.60	22.70	5,129.1	641.6	535.3	835.5	1.28	-1.05	
5,311.0	1.50	24.30	5,225.0	643.9	536.4	838.0	0.11	-0.10	
5,405.0	1.20	26.30	5,319.0	646.0	537.3	840.2	0.32	-0.32	
5,499.0	0.50	351.20	5,413.0	647.2	537.7	841.4	0.90	-0.74	
5,593.0	0.70	20.10	5,507.0	648.2	537.8	842.2	0.38	0.21	
5,688.0	0.80	308.10	5,602.0	649.1	537.5	842.7	0.93	0.11	
5,783.0	0.80	297.20	5,697.0	649.9	536.4	842.6	0.16	0.00	
5,877.0	1.10	313.60	5,791.0	650.8	535.1	842.5	0.43	0.32	
5,971.0	1.00	306.00	5,885.0	651.9	533.8	842.6	0.18	-0.11	
6,065.0	1.10	256.60	5,978.9	652.2	532.3	841.8	0.94	0.11	
6,159.0	0.70	247.80	6,072.9	651.7	530.9	840.6	0.45	-0.43	
6,254.0	0.70	272.50	6,167.9	651.5	529.8	839.7	0.32	0.00	
6,348.0	1.10	265.60	6,261.9	651.5	528.3	838.8	0.44	0.43	
6,442.0	1.40	246.70	6,355.9	651.0	526.3	837.1	0.54	0.32	
6,536.0	1.20	264.30	6,449.9	650.4	524.3	835.4	0.47	-0.21	

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope N-19
Project:	Weld County	TVD Reference:	Kbe @ 4632.0ft
Site:	Antelope 24-19 Pad	MD Reference:	Kbe @ 4632.0ft
Well:	Antelope N-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
6,630.0	1.10	302.30	6,543.9	650.8	522.5	834.6	0.80	-0.11	
6,725.0	1.20	285.70	6,638.8	651.6	520.8	834.1	0.36	0.11	Last Cathedral Survey @ 6,725' MD
6,775.0	1.20	285.70	6,688.8	651.8	519.8	833.7	0.00	0.00	Projection to Bit @ 6775' MD

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 N-19 PBHL (2) - actual wellpath misses target center by 19.2ft at 6775.0ft MD (6688.8 TVD, 651.8 N, 519.8 E) - Circle (radius 50.0)	0.00	0.00	6,694.0	633.9	515.4	1,383,756.11	3,315,904.93	40.381260	-104.366040
Antelope N-19 TGT (2) - actual wellpath misses target center by 23.6ft at 6163.3ft MD (6077.2 TVD, 651.7 N, 530.8 E) - Point	0.00	0.00	6,077.0	633.9	515.4	1,383,756.11	3,315,904.93	40.381260	-104.366040

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
6,725.0	6,638.8	651.6	520.8	Last Cathedral Survey @ 6,725' MD
6,775.0	6,688.8	651.8	519.8	Projection to Bit @ 6775' MD

Checked By: _____ Approved By: _____ Date: _____