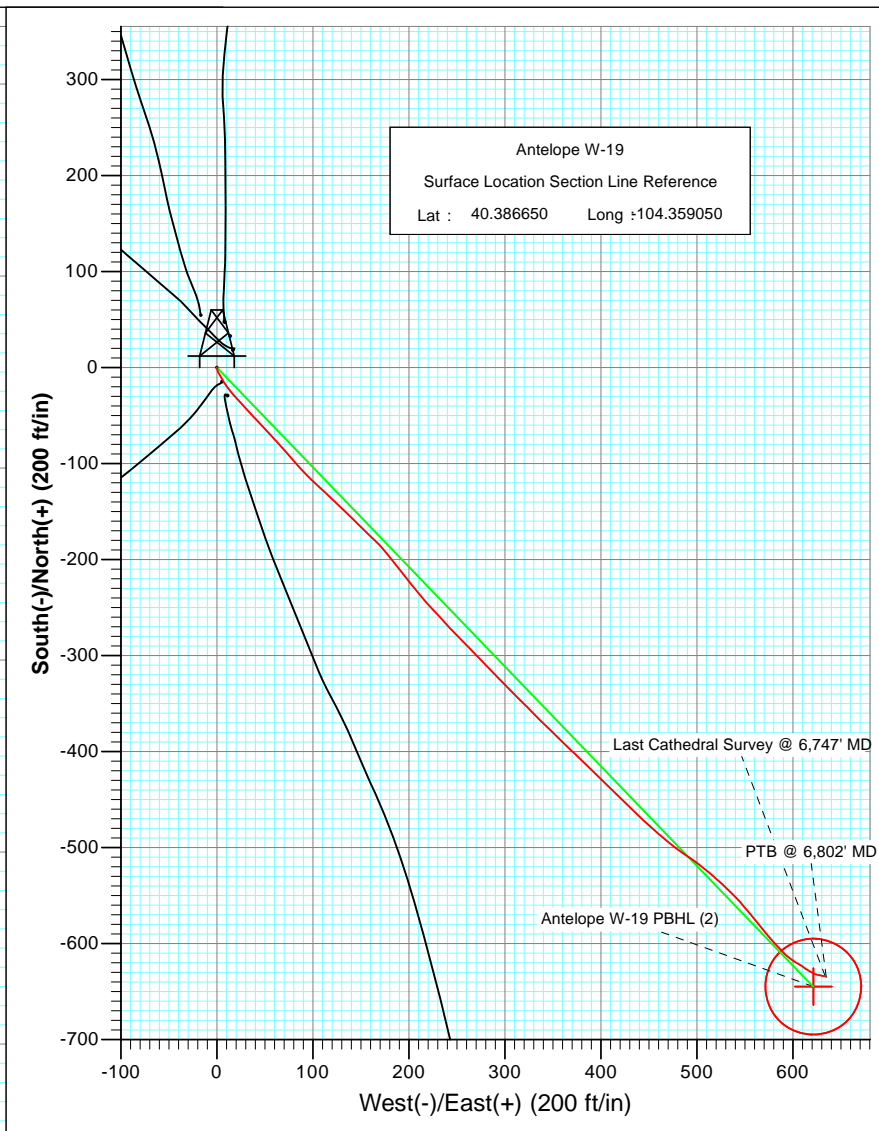
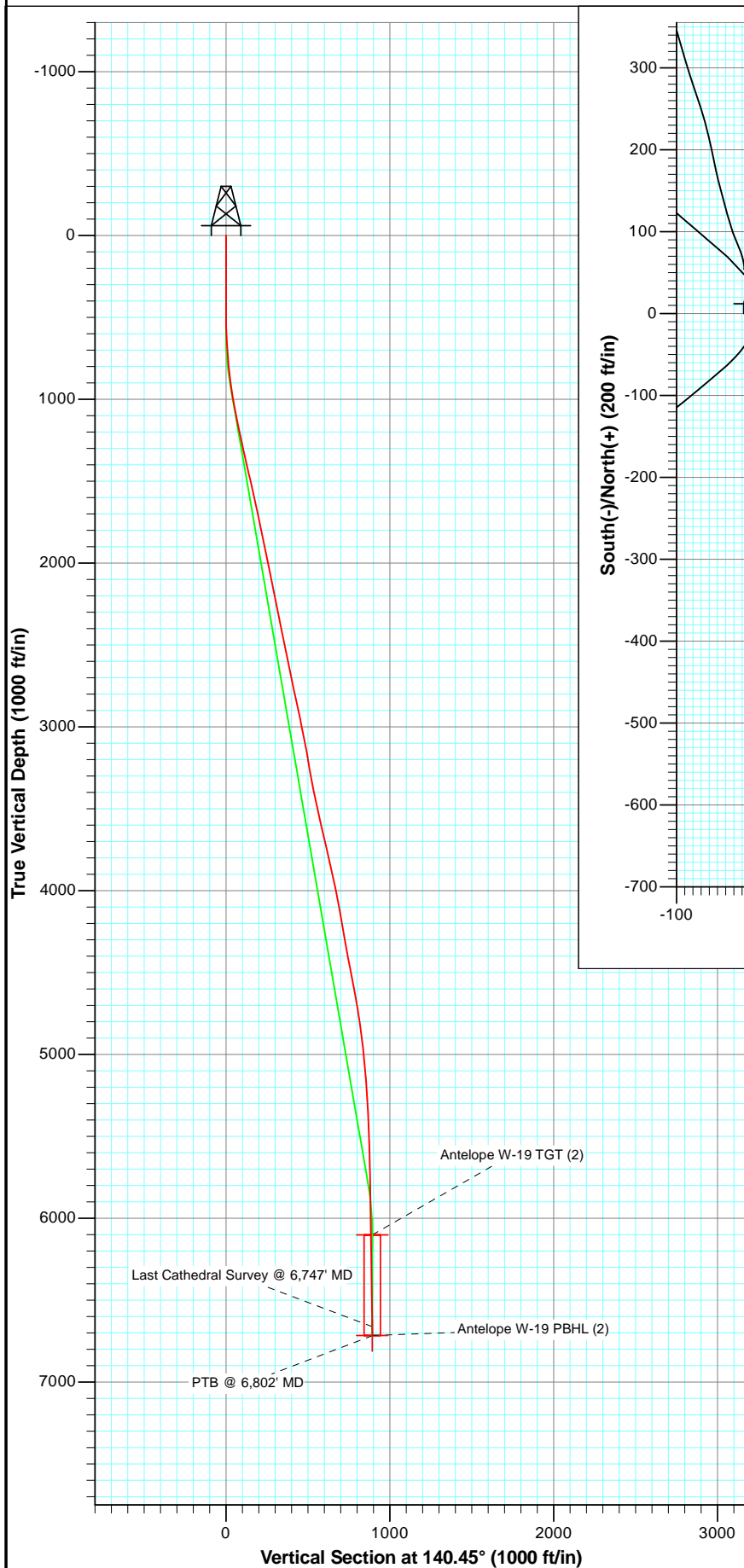




Project: Weld County
Site: Antelope 42-19 Pad
Well: Antelope W-19
Wellbore: DD
Plan: FINAL



Azimuths to True North
Magnetic North: 8.54°

Magnetic Field
Strength: 53088.6snT
Dip Angle: 67.08°
Date: 3/19/2012
Model: IGRF2010

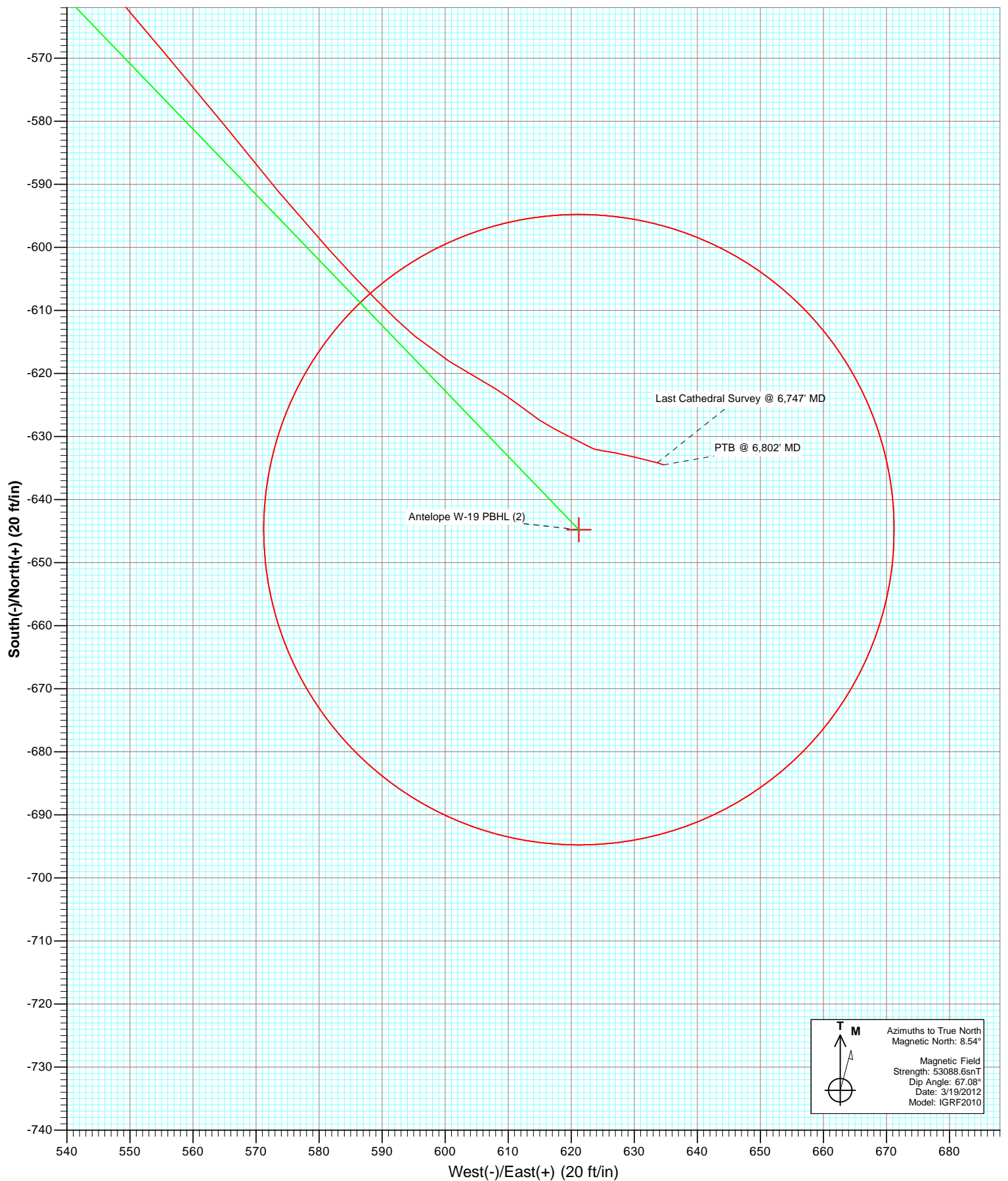
DD
Antelope W-19
125227/152855; SC

kbe @ 4662.0ft (Mid Continent #1)
North American Datum 1983
Well Antelope W-19, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
User	No Target (Freehand)	140.45	Slot		0.0	0.0		0.0
Name								
Antelope W-19 TGT (2)	TVD	+N/-S	+E/-W	Latitude	Longitude			
Antelope W-19 PBHL (2)	6102.0	-644.8	621.2	40.384880	-104.356820			
	6716.0	-644.8	621.2	40.384880	-104.356820			



Project: Weld County
Site: Antelope 42-19 Pad
Well: Antelope W-19
Wellbore: DD
Plan: FINAL



Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope W-19
Project:	Weld County	TVD Reference:	kbe @ 4662.0ft (Mid Continent #1)
Site:	Antelope 42-19 Pad	MD Reference:	kbe @ 4662.0ft (Mid Continent #1)
Well:	Antelope W-19	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	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 42-19 Pad			
Site Position:		Northing:	1,385,777.44 ft	Latitude:	40.386740
From:	Lat/Long	Easting:	3,317,840.34 ft	Longitude:	-104.359000
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.74 °

Well	Antelope W-19					
Well Position	+N/-S	0.0 ft	Northing:	1,385,744.45 ft	Latitude:	40.386650
	+E/-W	0.0 ft	Easting:	3,317,826.83 ft	Longitude:	-104.359050
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,652.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/19/2012	8.54	67.08	53,089

Design	DD			
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	140.45

Survey Program	Date	5/8/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
492.0	6,802.0	Survey #1 (DD)	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		
492.0	0.00	195.70	492.0	0.0	0.0	0.0	0.00	0.00		
586.0	2.60	170.00	586.0	-2.1	0.4	1.9	2.77	2.77		
680.0	4.00	145.90	679.8	-6.9	2.6	7.0	2.07	1.49		
775.0	4.70	154.00	774.5	-13.2	6.1	14.1	0.98	0.74		
869.0	7.30	142.20	868.0	-21.3	11.5	23.8	3.05	2.77		
964.0	8.70	137.30	962.1	-31.4	20.1	37.0	1.64	1.47		
1,059.0	10.70	137.90	1,055.7	-43.2	30.9	53.0	2.11	2.11		
1,153.0	12.10	136.60	1,147.9	-56.8	43.5	71.5	1.51	1.49		
1,247.0	11.70	137.50	1,239.9	-71.0	56.7	90.9	0.47	-0.43		
1,342.0	13.10	138.30	1,332.6	-86.2	70.3	111.2	1.48	1.47		
1,436.0	12.40	139.10	1,424.3	-101.8	84.0	132.0	0.77	-0.74		
1,531.0	13.90	133.10	1,516.8	-117.3	99.1	153.5	2.13	1.58		

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope W-19
Project:	Weld County	TVD Reference:	kbe @ 4662.0ft (Mid Continent #1)
Site:	Antelope 42-19 Pad	MD Reference:	kbe @ 4662.0ft (Mid Continent #1)
Well:	Antelope W-19	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	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
1,624.0	12.70	133.50	1,607.3	-131.9	114.6	174.7	1.29	-1.29	
1,719.0	11.50	133.10	1,700.2	-145.6	129.1	194.5	1.27	-1.26	
1,813.0	12.30	135.20	1,792.2	-159.1	143.0	213.7	0.97	0.85	
1,907.0	10.80	133.40	1,884.3	-172.3	156.5	232.5	1.64	-1.60	
2,001.0	11.40	135.30	1,976.5	-184.9	169.4	250.4	0.75	0.64	
2,096.0	12.10	143.30	2,069.6	-199.6	182.0	269.7	1.86	0.74	
2,191.0	11.10	141.90	2,162.6	-214.7	193.6	288.8	1.09	-1.05	
2,286.0	12.00	139.80	2,255.7	-229.5	205.6	307.9	1.05	0.95	
2,380.0	11.00	139.50	2,347.8	-243.8	217.7	326.6	1.07	-1.06	
2,474.0	12.00	136.80	2,439.9	-257.7	230.2	345.3	1.21	1.06	
2,569.0	11.10	137.40	2,533.0	-271.6	243.2	364.3	0.96	-0.95	
2,663.0	12.00	134.90	2,625.1	-285.2	256.2	383.1	1.10	0.96	
2,757.0	11.30	136.60	2,717.1	-298.8	269.5	402.0	0.83	-0.74	
2,852.0	13.00	135.70	2,810.0	-313.2	283.3	421.9	1.80	1.79	
2,946.0	12.10	135.70	2,901.8	-327.8	297.6	442.3	0.96	-0.96	
3,040.0	10.70	134.90	2,993.9	-341.0	310.6	460.8	1.50	-1.49	
3,135.0	11.70	135.50	3,087.1	-354.1	323.6	479.1	1.06	1.05	
3,229.0	9.60	134.80	3,179.5	-366.5	335.9	496.4	2.24	-2.23	
3,323.0	10.20	134.30	3,272.1	-377.8	347.4	512.5	0.64	0.64	
3,418.0	10.90	134.40	3,365.5	-389.9	359.8	529.8	0.74	0.74	
3,512.0	12.50	133.00	3,457.5	-403.1	373.6	548.7	1.73	1.70	
3,607.0	12.70	134.40	3,550.2	-417.4	388.6	569.3	0.38	0.21	
3,702.0	12.90	134.40	3,642.9	-432.1	403.7	590.2	0.21	0.21	
3,796.0	12.80	134.50	3,734.5	-446.8	418.6	611.0	0.11	-0.11	
3,891.0	13.00	134.20	3,827.1	-461.6	433.7	632.1	0.22	0.21	
3,985.0	12.40	132.00	3,918.8	-475.7	448.8	652.6	0.82	-0.64	
4,080.0	11.90	130.50	4,011.7	-488.9	463.9	672.4	0.62	-0.53	
4,174.0	11.00	127.00	4,103.8	-500.6	478.4	690.6	1.21	-0.96	
4,269.0	9.80	122.70	4,197.3	-510.4	492.4	707.1	1.50	-1.26	
4,364.0	9.90	129.40	4,290.9	-520.0	505.5	722.9	1.21	0.11	
4,458.0	11.10	132.40	4,383.3	-531.2	518.5	739.8	1.40	1.28	
4,552.0	11.30	131.10	4,475.5	-543.4	532.1	757.8	0.34	0.21	
4,646.0	10.70	140.60	4,567.8	-556.2	544.6	775.6	2.03	-0.64	
4,741.0	9.60	139.30	4,661.3	-569.0	555.3	792.4	1.18	-1.16	
4,836.0	8.80	141.50	4,755.1	-580.7	565.0	807.5	0.92	-0.84	
4,929.0	8.00	140.00	4,847.1	-591.2	573.6	821.1	0.89	-0.86	
5,023.0	7.10	137.70	4,940.2	-600.5	581.7	833.5	1.01	-0.96	
5,118.0	5.80	135.40	5,034.6	-608.3	589.1	844.1	1.39	-1.37	
5,213.0	4.40	130.60	5,129.3	-614.1	595.2	852.5	1.54	-1.47	
5,308.0	3.80	121.20	5,224.0	-618.1	600.6	859.0	0.95	-0.63	
5,403.0	3.30	119.80	5,318.8	-621.1	605.7	864.6	0.53	-0.53	
5,497.0	2.30	124.60	5,412.7	-623.5	609.6	868.9	1.09	-1.06	
5,591.0	1.90	128.10	5,506.7	-625.5	612.4	872.3	0.45	-0.43	
5,685.0	1.90	124.00	5,600.6	-627.3	614.9	875.3	0.14	0.00	
5,780.0	1.50	116.90	5,695.6	-628.8	617.3	877.9	0.48	-0.42	
5,874.0	1.30	116.60	5,789.5	-629.8	619.4	880.0	0.21	-0.21	
5,969.0	1.10	117.20	5,884.5	-630.7	621.2	881.9	0.21	-0.21	
6,063.0	0.80	119.10	5,978.5	-631.5	622.5	883.3	0.32	-0.32	
6,156.0	0.80	111.30	6,071.5	-632.0	623.7	884.5	0.12	0.00	
6,251.0	1.00	92.30	6,166.5	-632.3	625.1	885.6	0.38	0.21	
6,345.0	1.10	105.30	6,260.5	-632.6	626.8	886.9	0.27	0.11	
6,530.0	0.90	98.50	6,445.4	-633.2	630.0	889.4	0.13	-0.11	
6,747.0	1.10	108.60	6,662.4	-634.2	633.6	892.5	0.12	0.09	Last Cathedral Survey @ 6,747' MD

Cathedral Energy Services

Survey Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope W-19
Project:	Weld County	TVD Reference:	kbe @ 4662.0ft (Mid Continent #1)
Site:	Antelope 42-19 Pad	MD Reference:	kbe @ 4662.0ft (Mid Continent #1)
Well:	Antelope W-19	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	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
6,802.0	1.10	108.60	6,717.4	-634.5	634.6	893.4	0.00	0.00	PTB @ 6,802' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Antelope W-19 PBHL (2)	0.00	0.00	6,716.0	-644.8	621.2	1,385,107.73	3,318,456.30	40.384880	-104.356820
- actual wellpath misses target center by 16.9ft at 6800.4ft MD (6715.8 TVD, -634.5 N, 634.6 E)									
- Circle (radius 50.0)									
Antelope W-19 TGT (2)	0.00	0.00	6,102.0	-644.8	621.2	1,385,107.73	3,318,456.30	40.384880	-104.356820
- actual wellpath misses target center by 13.0ft at 6186.5ft MD (6102.0 TVD, -632.1 N, 624.1 E)									
- Point									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
6,747.0	6,662.4	-634.2	633.6	Last Cathedral Survey @ 6,747' MD	
6,802.0	6,717.4	-634.5	634.6	PTB @ 6,802' MD	

Checked By: _____ Approved By: _____ Date: _____