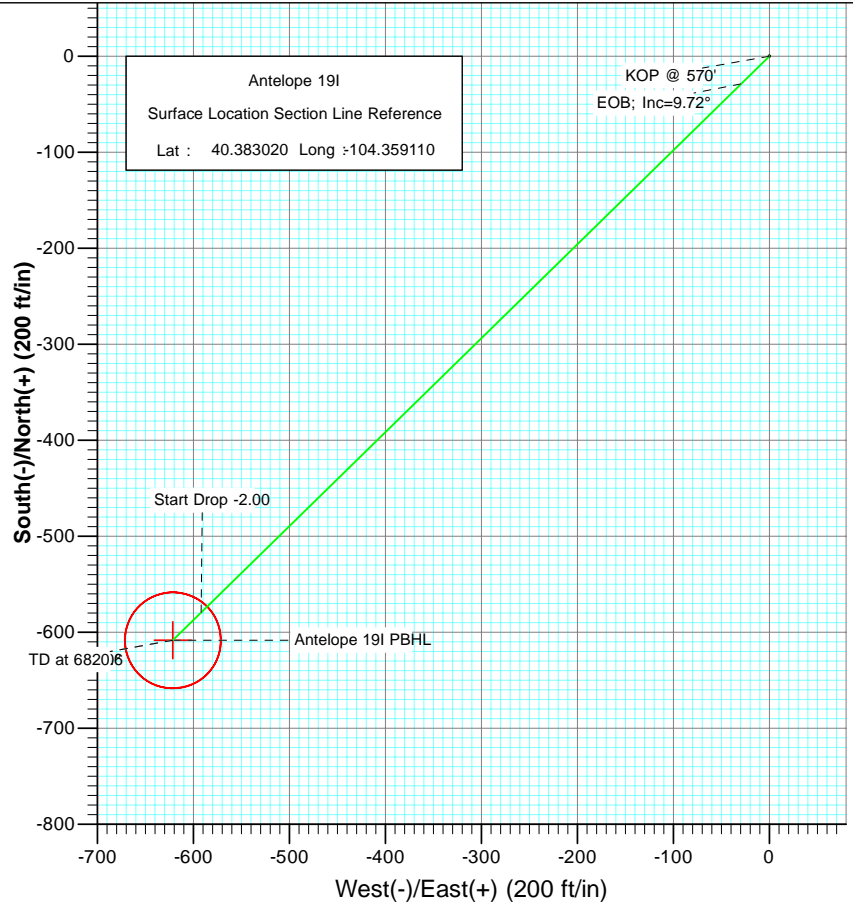


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	570.0	0.00	0.00	570.0	0.0	0.0	0.00	0.00	0.0	
3	1056.1	9.72	225.60	1053.8	-28.8	-29.4	2.00	225.60	41.1	
4	5717.5	9.72	225.60	5648.2	-579.6	-591.9	0.00	0.00	828.4	
5	6203.6	0.00	0.00	6132.0	-608.4	-621.3	2.00	180.00	869.5	
6	6820.6	0.00	0.00	6749.0	-608.4	-621.3	0.00	0.00	869.5	Antelope 19I PBHL



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3445.0	3482.2	Parkman Ss:
4093.0	4139.6	Sussex Ss:
6332.0	6403.6	Niobrara:
6566.0	6637.6	Ft. Hays Ls:
6589.0	6660.6	Codell Ss:



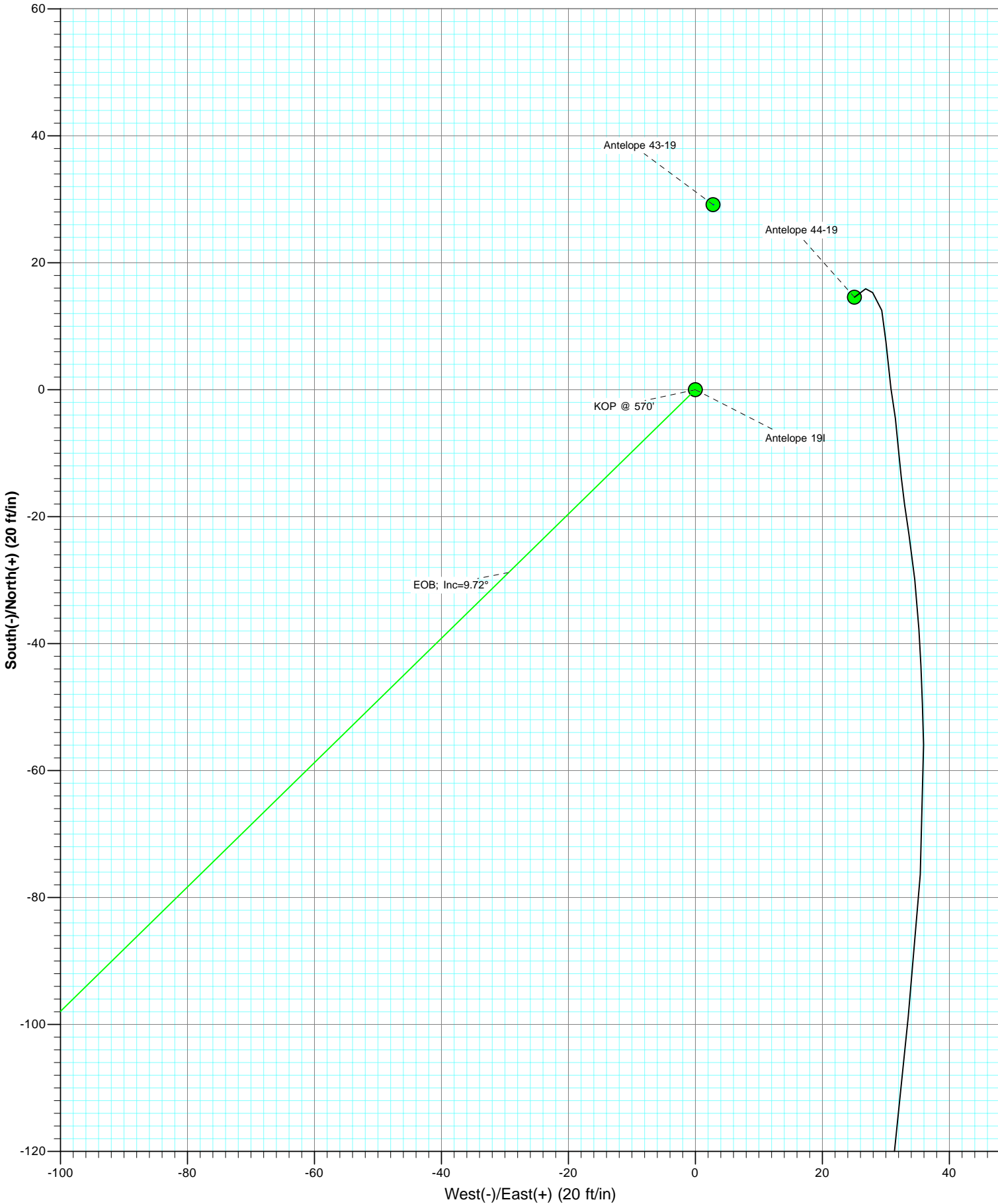
Azimuths to True North  
Magnetic North: 8.76°

Magnetic Field  
Strength: 53256.7nT  
Dip Angle: 67.13°  
Date: 8/11/2010  
Model: IGRF2010

Plan #3  
Antelope 19I

WELL @ 4677.0ft (Original Well Elev)  
North American Datum 1983  
Well Antelope 19I, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From	TVD
Target	Antelope 19I PBHL	225.60	Slot	0.0	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
Antelope 19I PBHL	6749.0	-608.4	-621.3	40.381350	104.361340		



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Antelope 19I
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	WELL @ 4677.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	WELL @ 4677.0ft (Original Well Elev)
<b>Site:</b>	Antelope 43-19 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 19I	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #3		

<b>Project</b>	Weld County		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		Antelope 43-19 Pad			
Site Position:		Northing:	1,384,451.15 ft	Latitude:	40.383100
From:	Lat/Long	Easting:	3,317,829.54 ft	Longitude:	-104.359100
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.74 °

Well	Antelope 19I					
Well Position	+N/-S	0.0 ft	Northing:	1,384,421.97 ft	Latitude:	40.383020
	+E/-W	0.0 ft	Easting:	3,317,827.13 ft	Longitude:	-104.359110
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,667.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010	8/11/2010	8.76	67.13	53,257

<b>Design</b>	Plan #3				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	225.60	

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
570.0	0.00	0.00	570.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,056.1	9.72	225.60	1,053.8	-28.8	-29.4	2.00	2.00	0.00	225.60	
5,717.5	9.72	225.60	5,648.2	-579.6	-591.9	0.00	0.00	0.00	0.00	
6,203.6	0.00	0.00	6,132.0	-608.4	-621.3	2.00	-2.00	0.00	180.00	
6,820.6	0.00	0.00	6,749.0	-608.4	-621.3	0.00	0.00	0.00	0.00	Antelope 19I PBHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Antelope 19I
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	WELL @ 4677.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	WELL @ 4677.0ft (Original Well Elev)
<b>Site:</b>	Antelope 43-19 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 19I	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #3		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
570.0	0.00	0.00	570.0	0.0	0.0	0.0	0.00	0.00	KOP @ 570'
600.0	0.60	225.60	600.0	-0.1	-0.1	0.2	2.00	2.00	
700.0	2.60	225.60	700.0	-2.1	-2.1	2.9	2.00	2.00	
800.0	4.60	225.60	799.8	-6.5	-6.6	9.2	2.00	2.00	
900.0	6.60	225.60	899.3	-13.3	-13.6	19.0	2.00	2.00	
1,000.0	8.60	225.60	998.4	-22.5	-23.0	32.2	2.00	2.00	
1,056.1	9.72	225.60	1,053.8	-28.8	-29.4	41.1	2.00	2.00	EOB; Inc=9.72°
1,100.0	9.72	225.60	1,097.0	-34.0	-34.7	48.6	0.00	0.00	
1,200.0	9.72	225.60	1,195.6	-45.8	-46.8	65.4	0.00	0.00	
1,300.0	9.72	225.60	1,294.2	-57.6	-58.8	82.3	0.00	0.00	
1,400.0	9.72	225.60	1,392.7	-69.4	-70.9	99.2	0.00	0.00	
1,500.0	9.72	225.60	1,491.3	-81.2	-83.0	116.1	0.00	0.00	
1,600.0	9.72	225.60	1,589.9	-93.1	-95.0	133.0	0.00	0.00	
1,700.0	9.72	225.60	1,688.4	-104.9	-107.1	149.9	0.00	0.00	
1,800.0	9.72	225.60	1,787.0	-116.7	-119.2	166.8	0.00	0.00	
1,900.0	9.72	225.60	1,885.5	-128.5	-131.2	183.7	0.00	0.00	
2,000.0	9.72	225.60	1,984.1	-140.3	-143.3	200.5	0.00	0.00	
2,100.0	9.72	225.60	2,082.7	-152.1	-155.4	217.4	0.00	0.00	
2,200.0	9.72	225.60	2,181.2	-163.9	-167.4	234.3	0.00	0.00	
2,300.0	9.72	225.60	2,279.8	-175.8	-179.5	251.2	0.00	0.00	
2,400.0	9.72	225.60	2,378.4	-187.6	-191.6	268.1	0.00	0.00	
2,500.0	9.72	225.60	2,476.9	-199.4	-203.6	285.0	0.00	0.00	
2,600.0	9.72	225.60	2,575.5	-211.2	-215.7	301.9	0.00	0.00	
2,700.0	9.72	225.60	2,674.1	-223.0	-227.8	318.8	0.00	0.00	
2,800.0	9.72	225.60	2,772.6	-234.8	-239.8	335.7	0.00	0.00	
2,900.0	9.72	225.60	2,871.2	-246.7	-251.9	352.5	0.00	0.00	
3,000.0	9.72	225.60	2,969.7	-258.5	-264.0	369.4	0.00	0.00	
3,100.0	9.72	225.60	3,068.3	-270.3	-276.0	386.3	0.00	0.00	
3,200.0	9.72	225.60	3,166.9	-282.1	-288.1	403.2	0.00	0.00	
3,300.0	9.72	225.60	3,265.4	-293.9	-300.2	420.1	0.00	0.00	
3,400.0	9.72	225.60	3,364.0	-305.7	-312.2	437.0	0.00	0.00	
3,482.2	9.72	225.60	3,445.0	-315.4	-322.1	450.9	0.00	0.00	Parkman Ss:
3,500.0	9.72	225.60	3,462.6	-317.6	-324.3	453.9	0.00	0.00	
3,600.0	9.72	225.60	3,561.1	-329.4	-336.3	470.8	0.00	0.00	
3,700.0	9.72	225.60	3,659.7	-341.2	-348.4	487.6	0.00	0.00	
3,800.0	9.72	225.60	3,758.3	-353.0	-360.5	504.5	0.00	0.00	
3,900.0	9.72	225.60	3,856.8	-364.8	-372.5	521.4	0.00	0.00	
4,000.0	9.72	225.60	3,955.4	-376.6	-384.6	538.3	0.00	0.00	
4,100.0	9.72	225.60	4,053.9	-388.4	-396.7	555.2	0.00	0.00	
4,139.6	9.72	225.60	4,093.0	-393.1	-401.5	561.9	0.00	0.00	Sussex Ss:
4,200.0	9.72	225.60	4,152.5	-400.3	-408.7	572.1	0.00	0.00	
4,300.0	9.72	225.60	4,251.1	-412.1	-420.8	589.0	0.00	0.00	
4,400.0	9.72	225.60	4,349.6	-423.9	-432.9	605.9	0.00	0.00	
4,500.0	9.72	225.60	4,448.2	-435.7	-444.9	622.8	0.00	0.00	
4,600.0	9.72	225.60	4,546.8	-447.5	-457.0	639.6	0.00	0.00	
4,700.0	9.72	225.60	4,645.3	-459.3	-469.1	656.5	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Antelope 19I
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	WELL @ 4677.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	WELL @ 4677.0ft (Original Well Elev)
<b>Site:</b>	Antelope 43-19 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 19I	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	9.72	225.60	4,743.9	-471.2	-481.1	673.4	0.00	0.00	
4,900.0	9.72	225.60	4,842.5	-483.0	-493.2	690.3	0.00	0.00	
5,000.0	9.72	225.60	4,941.0	-494.8	-505.3	707.2	0.00	0.00	
5,100.0	9.72	225.60	5,039.6	-506.6	-517.3	724.1	0.00	0.00	
5,200.0	9.72	225.60	5,138.1	-518.4	-529.4	741.0	0.00	0.00	
5,300.0	9.72	225.60	5,236.7	-530.2	-541.5	757.9	0.00	0.00	
5,400.0	9.72	225.60	5,335.3	-542.1	-553.5	774.7	0.00	0.00	
5,500.0	9.72	225.60	5,433.8	-553.9	-565.6	791.6	0.00	0.00	
5,600.0	9.72	225.60	5,532.4	-565.7	-577.7	808.5	0.00	0.00	
5,700.0	9.72	225.60	5,631.0	-577.5	-589.7	825.4	0.00	0.00	
5,717.5	9.72	225.60	5,648.2	-579.6	-591.9	828.4	0.00	0.00	Start Drop -2.00
5,800.0	8.07	225.60	5,729.7	-588.5	-601.0	841.1	2.00	-2.00	
5,900.0	6.07	225.60	5,829.0	-597.1	-609.8	853.4	2.00	-2.00	
6,000.0	4.07	225.60	5,928.6	-603.3	-616.1	862.3	2.00	-2.00	
6,100.0	2.07	225.60	6,028.4	-607.0	-619.9	867.6	2.00	-2.00	
6,200.0	0.07	225.60	6,128.4	-608.4	-621.2	869.5	2.00	-2.00	
6,203.6	0.00	0.00	6,132.0	-608.4	-621.3	869.5	2.00	-2.00	EOD; Inc=0°
6,300.0	0.00	0.00	6,228.4	-608.4	-621.3	869.5	0.00	0.00	
6,400.0	0.00	0.00	6,328.4	-608.4	-621.3	869.5	0.00	0.00	
6,403.6	0.00	0.00	6,332.0	-608.4	-621.3	869.5	0.00	0.00	Niobrara:
6,500.0	0.00	0.00	6,428.4	-608.4	-621.3	869.5	0.00	0.00	
6,600.0	0.00	0.00	6,528.4	-608.4	-621.3	869.5	0.00	0.00	
6,637.6	0.00	0.00	6,566.0	-608.4	-621.3	869.5	0.00	0.00	Ft. Hays Ls:
6,660.6	0.00	0.00	6,589.0	-608.4	-621.3	869.5	0.00	0.00	Codell Ss:
6,700.0	0.00	0.00	6,628.4	-608.4	-621.3	869.5	0.00	0.00	
6,800.0	0.00	0.00	6,728.4	-608.4	-621.3	869.5	0.00	0.00	
6,820.6	0.00	0.00	6,749.0	-608.4	-621.3	869.5	0.00	0.00	TD at 6820.6 - Antelope 19I PBHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Antelope 19I PBHL	0.00	0.00	6,749.0	-608.4	-621.3	1,383,805.67	3,317,213.76	40.381350	-104.361340
- hit/miss target									
- Shape									
- plan hits target center									
- Circle (radius 50.0)									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,482.2	3,445.0	Parkman Ss:				
4,139.6	4,093.0	Sussex Ss:				
6,403.6	6,332.0	Niobrara:				
6,637.6	6,566.0	Ft. Hays Ls:				
6,660.6	6,589.0	Codell Ss:				

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Antelope 19I
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	WELL @ 4677.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	WELL @ 4677.0ft (Original Well Elev)
<b>Site:</b>	Antelope 43-19 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Antelope 19I	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #3		

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
570.0	570.0	0.0	0.0	KOP @ 570'
1,056.1	1,053.8	-28.8	-29.4	EOB; Inc=9.72°
5,717.5	5,648.2	-579.6	-591.9	Start Drop -2.00
6,203.6	6,132.0	-608.4	-621.3	EOD; Inc=0°
6,820.6	6,749.0	-608.4	-621.3	TD at 6820.6