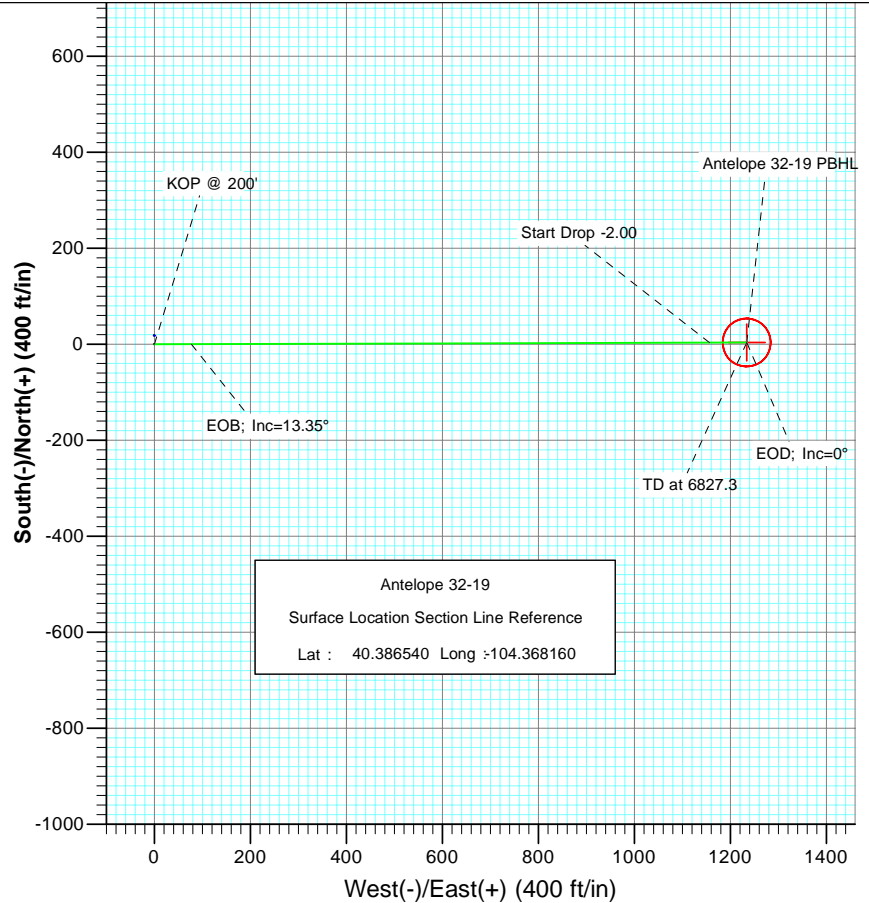


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	867.3	13.35	89.83	861.3	0.2	77.4	2.00	89.83	77.4	
4	5543.0	13.35	89.83	5410.7	3.4	1156.7	0.00	0.00	1156.7	
5	6210.3	0.00	0.00	6072.0	3.7	1234.0	2.00	180.00	1234.1	
6	6827.3	0.00	0.00	6689.0	3.7	1234.0	0.00	0.00	1234.1	Antelope 32-19 PBHL



FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
3385.0	3461.1	Parkman Ss:
4033.0	4127.1	Sussex Ss:
6272.0	6410.3	Niobrara:
6506.0	6644.3	Ft. Hays Ls:
6529.0	6667.3	Codell Ss:



Azimuths to True North
Magnetic North: 8.76°

Magnetic Field
Strength: 53257.7nT
Dip Angle: 67.13°
Date: 8/12/2010
Model: IGRF2010

Plan #1
Antelope 32-19

WELL @ 4627.5ft (Original Well Elev)
North American Datum 1983
Well Antelope 32-19, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From	TVD
TD	No Target (Freehand)	89.83	Slot	0.0	0.0	0.0	0.0
Name	Antelope 32-19 PBHL	TVD	+N/-S	+E/-W	Latitude	Longitude	
		6689.0	3.7	1234.0	40.386550	-104.363730	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Antelope 32-19
Company:	Bonanza Creek Energy Operating Company, LLC	TVD Reference:	WELL @ 4627.5ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 4627.5ft (Original Well Elev)
Site:	Antelope 22-19 Pad	North Reference:	True
Well:	Antelope 32-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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 22-19 Pad			
Site Position: From:		Northing:	1,385,671.89 ft	Latitude:	40.386540
	Lat/Long	Easting:	3,315,289.82 ft	Longitude:	-104.368160
	Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:

Well	Antelope 32-19					
Well Position	+N/-S	0.0 ft	Northing:	1,385,671.88 ft	Latitude:	40.386540
	+E/-W	0.0 ft	Easting:	3,315,289.82 ft	Longitude:	-104.368160
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,617.5 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	8/12/2010	8.76	67.13	53,258

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	89.83

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
867.3	13.35	89.83	861.3	0.2	77.4	2.00	2.00	0.00	89.83	
5,543.0	13.35	89.83	5,410.7	3.4	1,156.7	0.00	0.00	0.00	0.00	
6,210.3	0.00	0.00	6,072.0	3.7	1,234.0	2.00	-2.00	0.00	180.00	
6,827.3	0.00	0.00	6,689.0	3.7	1,234.0	0.00	0.00	0.00	0.00	Antelope 32-19 PBHL

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Antelope 32-19
Company:	Bonanza Creek Energy Operating Company, LLC	TVD Reference:	WELL @ 4627.5ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 4627.5ft (Original Well Elev)
Site:	Antelope 22-19 Pad	North Reference:	True
Well:	Antelope 32-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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	KOP @ 200'
300.0	2.00	89.83	300.0	0.0	1.7	1.7	2.00	2.00	
400.0	4.00	89.83	399.8	0.0	7.0	7.0	2.00	2.00	
500.0	6.00	89.83	499.5	0.0	15.7	15.7	2.00	2.00	
600.0	8.00	89.83	598.7	0.1	27.9	27.9	2.00	2.00	
700.0	10.00	89.83	697.5	0.1	43.5	43.5	2.00	2.00	
800.0	12.00	89.83	795.6	0.2	62.6	62.6	2.00	2.00	
867.3	13.35	89.83	861.3	0.2	77.4	77.4	2.00	2.00	EOB; Inc=13.35°
900.0	13.35	89.83	893.1	0.3	84.9	84.9	0.00	0.00	
1,000.0	13.35	89.83	990.4	0.3	108.0	108.0	0.00	0.00	
1,100.0	13.35	89.83	1,087.7	0.4	131.1	131.1	0.00	0.00	
1,200.0	13.35	89.83	1,185.0	0.5	154.2	154.2	0.00	0.00	
1,300.0	13.35	89.83	1,282.3	0.5	177.2	177.2	0.00	0.00	
1,400.0	13.35	89.83	1,379.6	0.6	200.3	200.3	0.00	0.00	
1,500.0	13.35	89.83	1,476.9	0.7	223.4	223.4	0.00	0.00	
1,600.0	13.35	89.83	1,574.2	0.7	246.5	246.5	0.00	0.00	
1,700.0	13.35	89.83	1,671.5	0.8	269.6	269.6	0.00	0.00	
1,800.0	13.35	89.83	1,768.8	0.9	292.7	292.7	0.00	0.00	
1,900.0	13.35	89.83	1,866.1	0.9	315.7	315.8	0.00	0.00	
2,000.0	13.35	89.83	1,963.4	1.0	338.8	338.8	0.00	0.00	
2,100.0	13.35	89.83	2,060.7	1.1	361.9	361.9	0.00	0.00	
2,200.0	13.35	89.83	2,158.0	1.1	385.0	385.0	0.00	0.00	
2,300.0	13.35	89.83	2,255.3	1.2	408.1	408.1	0.00	0.00	
2,400.0	13.35	89.83	2,352.6	1.3	431.2	431.2	0.00	0.00	
2,500.0	13.35	89.83	2,449.9	1.4	454.2	454.3	0.00	0.00	
2,600.0	13.35	89.83	2,547.2	1.4	477.3	477.3	0.00	0.00	
2,700.0	13.35	89.83	2,644.5	1.5	500.4	500.4	0.00	0.00	
2,800.0	13.35	89.83	2,741.8	1.6	523.5	523.5	0.00	0.00	
2,900.0	13.35	89.83	2,839.1	1.6	546.6	546.6	0.00	0.00	
3,000.0	13.35	89.83	2,936.4	1.7	569.7	569.7	0.00	0.00	
3,100.0	13.35	89.83	3,033.7	1.8	592.8	592.8	0.00	0.00	
3,200.0	13.35	89.83	3,131.0	1.8	615.8	615.8	0.00	0.00	
3,300.0	13.35	89.83	3,228.3	1.9	638.9	638.9	0.00	0.00	
3,400.0	13.35	89.83	3,325.6	2.0	662.0	662.0	0.00	0.00	
3,461.1	13.35	89.83	3,385.0	2.0	676.1	676.1	0.00	0.00	Parkman Ss:
3,500.0	13.35	89.83	3,422.9	2.0	685.1	685.1	0.00	0.00	
3,600.0	13.35	89.83	3,520.2	2.1	708.2	708.2	0.00	0.00	
3,700.0	13.35	89.83	3,617.5	2.2	731.3	731.3	0.00	0.00	
3,800.0	13.35	89.83	3,714.8	2.2	754.3	754.3	0.00	0.00	
3,900.0	13.35	89.83	3,812.1	2.3	777.4	777.4	0.00	0.00	
4,000.0	13.35	89.83	3,909.4	2.4	800.5	800.5	0.00	0.00	
4,100.0	13.35	89.83	4,006.7	2.5	823.6	823.6	0.00	0.00	
4,127.1	13.35	89.83	4,033.0	2.5	829.8	829.8	0.00	0.00	Sussex Ss:
4,200.0	13.35	89.83	4,104.0	2.5	846.7	846.7	0.00	0.00	
4,300.0	13.35	89.83	4,201.3	2.6	869.8	869.8	0.00	0.00	
4,400.0	13.35	89.83	4,298.6	2.7	892.8	892.8	0.00	0.00	
4,500.0	13.35	89.83	4,395.9	2.7	915.9	915.9	0.00	0.00	
4,600.0	13.35	89.83	4,493.2	2.8	939.0	939.0	0.00	0.00	
4,700.0	13.35	89.83	4,590.5	2.9	962.1	962.1	0.00	0.00	
4,800.0	13.35	89.83	4,687.8	2.9	985.2	985.2	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Antelope 32-19
Company:	Bonanza Creek Energy Operating Company, LLC	TVD Reference:	WELL @ 4627.5ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 4627.5ft (Original Well Elev)
Site:	Antelope 22-19 Pad	North Reference:	True
Well:	Antelope 32-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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
4,900.0	13.35	89.83	4,785.1	3.0	1,008.3	1,008.3	0.00	0.00	
5,000.0	13.35	89.83	4,882.4	3.1	1,031.3	1,031.3	0.00	0.00	
5,100.0	13.35	89.83	4,979.7	3.1	1,054.4	1,054.4	0.00	0.00	
5,200.0	13.35	89.83	5,077.0	3.2	1,077.5	1,077.5	0.00	0.00	
5,300.0	13.35	89.83	5,174.3	3.3	1,100.6	1,100.6	0.00	0.00	
5,400.0	13.35	89.83	5,271.6	3.3	1,123.7	1,123.7	0.00	0.00	
5,500.0	13.35	89.83	5,368.9	3.4	1,146.8	1,146.8	0.00	0.00	
5,543.0	13.35	89.83	5,410.7	3.4	1,156.7	1,156.7	0.00	0.00	Start Drop -2.00
5,600.0	12.21	89.83	5,466.3	3.5	1,169.3	1,169.3	2.00	-2.00	
5,700.0	10.21	89.83	5,564.4	3.5	1,188.7	1,188.7	2.00	-2.00	
5,800.0	8.21	89.83	5,663.1	3.6	1,204.7	1,204.7	2.00	-2.00	
5,900.0	6.21	89.83	5,762.3	3.6	1,217.3	1,217.3	2.00	-2.00	
6,000.0	4.21	89.83	5,861.9	3.7	1,226.3	1,226.3	2.00	-2.00	
6,100.0	2.21	89.83	5,961.7	3.7	1,231.9	1,231.9	2.00	-2.00	
6,200.0	0.21	89.83	6,061.7	3.7	1,234.0	1,234.0	2.00	-2.00	
6,210.3	0.00	0.00	6,072.0	3.7	1,234.0	1,234.1	2.00	-2.00	EOD; Inc=0°
6,300.0	0.00	0.00	6,161.7	3.7	1,234.0	1,234.1	0.00	0.00	
6,400.0	0.00	0.00	6,261.7	3.7	1,234.0	1,234.1	0.00	0.00	
6,410.3	0.00	0.00	6,272.0	3.7	1,234.0	1,234.1	0.00	0.00	Niobrara:
6,500.0	0.00	0.00	6,361.7	3.7	1,234.0	1,234.1	0.00	0.00	
6,600.0	0.00	0.00	6,461.7	3.7	1,234.0	1,234.1	0.00	0.00	
6,644.3	0.00	0.00	6,506.0	3.7	1,234.0	1,234.1	0.00	0.00	Ft. Hays Ls:
6,667.3	0.00	0.00	6,529.0	3.7	1,234.0	1,234.1	0.00	0.00	Codell Ss:
6,700.0	0.00	0.00	6,561.7	3.7	1,234.0	1,234.1	0.00	0.00	
6,800.0	0.00	0.00	6,661.7	3.7	1,234.0	1,234.1	0.00	0.00	
6,827.3	0.00	0.00	6,689.0	3.7	1,234.0	1,234.1	0.00	0.00	TD at 6827.3 - Antelope 32-19 PBHL

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 32-19 PBHL	0.00	0.00	6,689.0	3.7	1,234.0	1,385,691.31	3,316,523.72	40.386550	-104.363730
- plan hits target center									
- Circle (radius 50.0)									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,461.1	3,385.0	Parkman Ss:			
4,127.1	4,033.0	Sussex Ss:			
6,410.3	6,272.0	Niobrara:			
6,644.3	6,506.0	Ft. Hays Ls:			
6,667.3	6,529.0	Codell Ss:			

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Antelope 32-19
Company:	Bonanza Creek Energy Operating Company, LLC	TVD Reference:	WELL @ 4627.5ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 4627.5ft (Original Well Elev)
Site:	Antelope 22-19 Pad	North Reference:	True
Well:	Antelope 32-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
867.3	861.3	0.2	77.4	EOB; Inc=13.35°
5,543.0	5,410.7	3.4	1,156.7	Start Drop -2.00
6,210.3	6,072.0	3.7	1,234.0	EOD; Inc=0°
6,827.3	6,689.0	3.7	1,234.0	TD at 6827.3

Bonanza Creek Energy Operating Company, LLC

Weld County

Antelope 22-19 Pad

Antelope 32-19

DD

Plan #1

Anticollision Report

12 August, 2010

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope 32-19
Project:	Weld County	TVD Reference:	WELL @ 4627.5ft (Original Well Elev)
Reference Site:	Antelope 22-19 Pad	MD Reference:	WELL @ 4627.5ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 32-19	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 100.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	8/12/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	6,827.3	Plan #1 (DD)	MWD	MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Antelope 32-19 Pad						
Antelope 22-19 - VW - Plan #1	0.0	0.0	18.2			
Antelope 22-19 - VW - Plan #1	200.0	200.0	18.2	18.2	10,000.000	CC, ES

Antelope 32-19 Pad - Antelope 22-19 - VW - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	0.00	18.2	0.0	18.2				
100.0	100.0	100.0	100.0	0.0	0.0	0.00	18.2	0.0	18.2	18.2	0.00	N/A	
200.0	200.0	200.0	200.0	0.0	0.0	0.00	18.2	0.0	18.2	18.2	0.00	N/A	CC, ES
229.7	229.7	229.7	229.7	0.0	0.0	-90.31	18.2	0.0	18.2	18.2	0.00	N/A	
300.0	300.0	300.0	300.0	0.0	0.0	-95.30	18.2	0.0	18.3	18.3	0.00	N/A	
400.0	399.8	399.8	399.8	0.0	0.0	-110.77	18.2	0.0	19.5	19.5	0.00	N/A	
500.0	499.5	499.5	499.5	0.0	0.0	-130.50	18.2	0.0	24.0	24.0	0.00	N/A	
600.0	598.7	598.7	598.7	0.0	0.0	-146.54	18.2	0.0	33.3	33.3	0.00	N/A	
700.0	697.5	697.5	697.5	0.0	0.0	-156.95	18.2	0.0	47.1	47.1	0.00	N/A	
800.0	795.6	795.6	795.6	0.0	0.0	-163.42	18.2	0.0	65.1	65.1	0.00	N/A	
867.3	861.3	861.3	861.3	0.0	0.0	-166.39	18.2	0.0	79.4	79.4	0.00	N/A	
900.0	893.1	893.1	893.1	0.0	0.0	-167.56	18.2	0.0	86.8	86.8	0.00	N/A	

Cathedral Energy Services

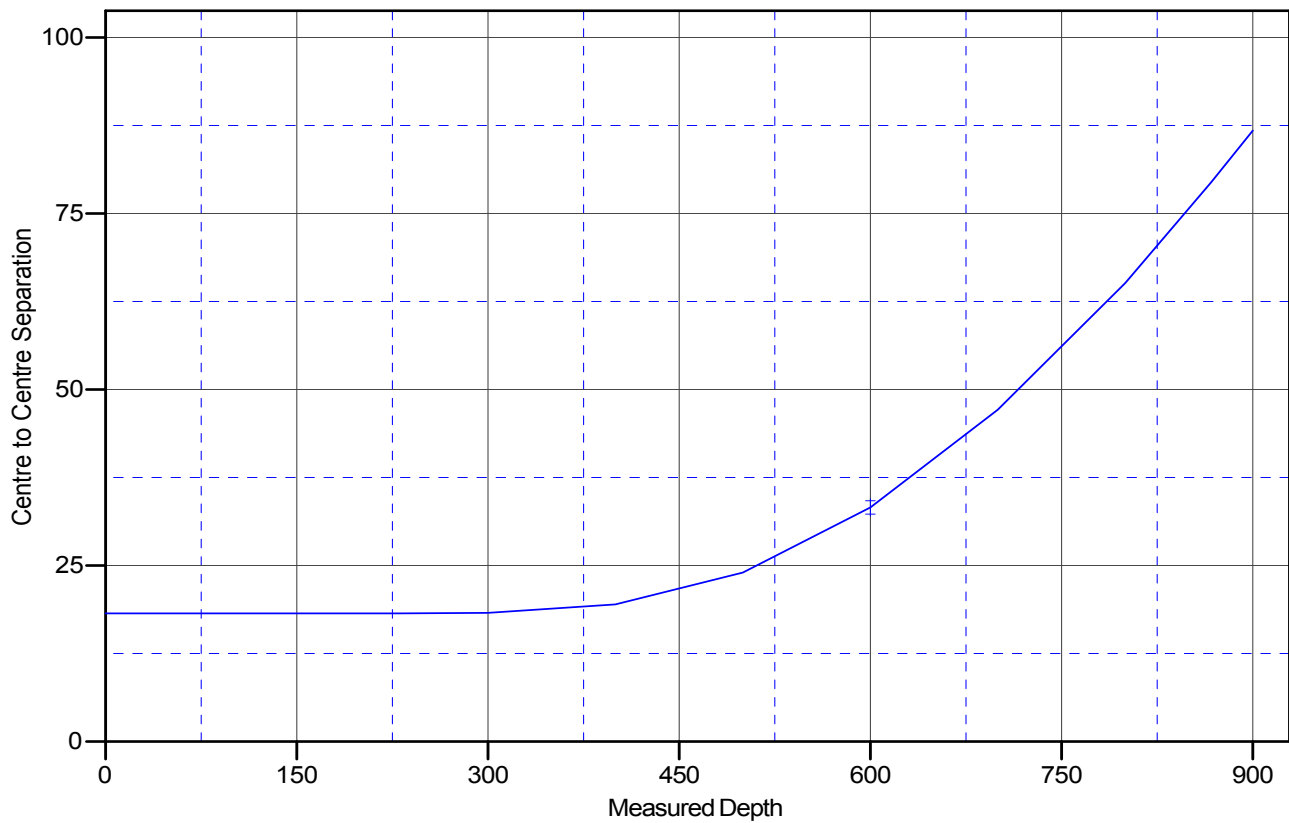
Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Antelope 32-19
Project:	Weld County	TVD Reference:	WELL @ 4627.5ft (Original Well Elev)
Reference Site:	Antelope 22-19 Pad	MD Reference:	WELL @ 4627.5ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope 32-19	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 5000.1 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4627.5ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Antelope 32-19
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.73°

Ladder Plot



LEGEND

— Antelope 22-19, VW, Plan #1 V0