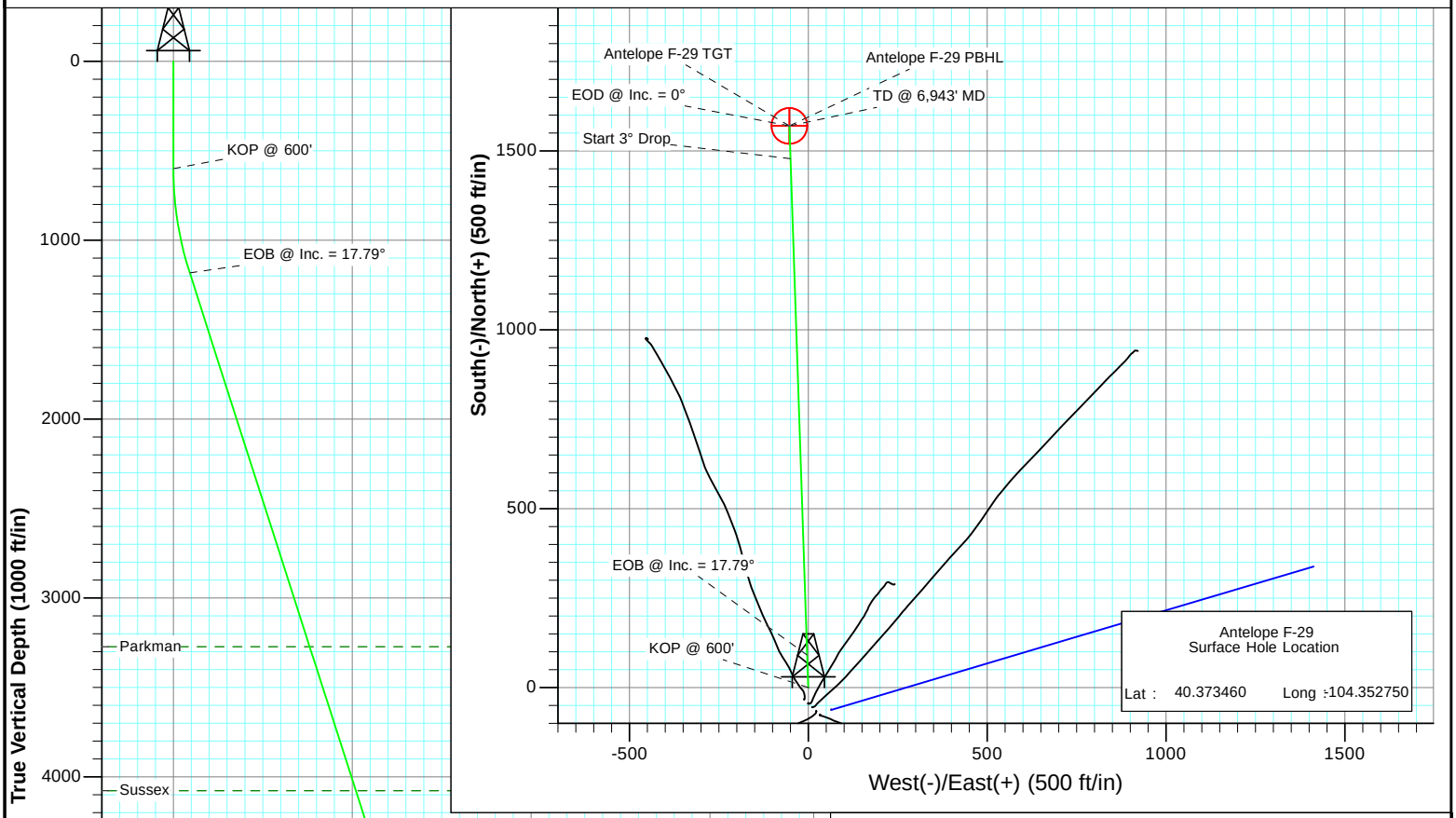
Project: Weld County
Site: Antelope G 29 Pad
Well: Antelope F-29
Wellbore: OH
Plan: Plan #1

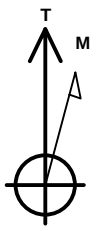
SECTION DETAILS

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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1193.1	17.79	358.07	1183.6	91.3	-3.1	3.00	358.07	91.4	
4	5736.2	17.79	358.07	5509.4	1478.8	-49.9	0.00	0.00	1479.7	
5	6329.3	0.00	0.00	6093.0	1570.1	-52.9	3.00	180.00	1571.0	Antelope F-29 TGT
6	6943.3	0.00	0.00	6707.0	1570.1	-52.9	0.00	0.00	1571.0	Antelope F-29 PBHL



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3273.0	3387.5	Parkman
4078.0	4232.9	Sussex
6293.0	6529.3	Niobrara
6523.0	6759.3	Ft. Hayes
6547.0	6783.3	Codell
6560.0	6796.3	Carlile
6598.0	6834.3	Greenhorn



Azimuths to True North
Magnetic North: 8.56°

Magnetic Field
Strength: 53100.3snT
Dip Angle: 67.08°
Date: 1/17/2012
Model: IGRF2010

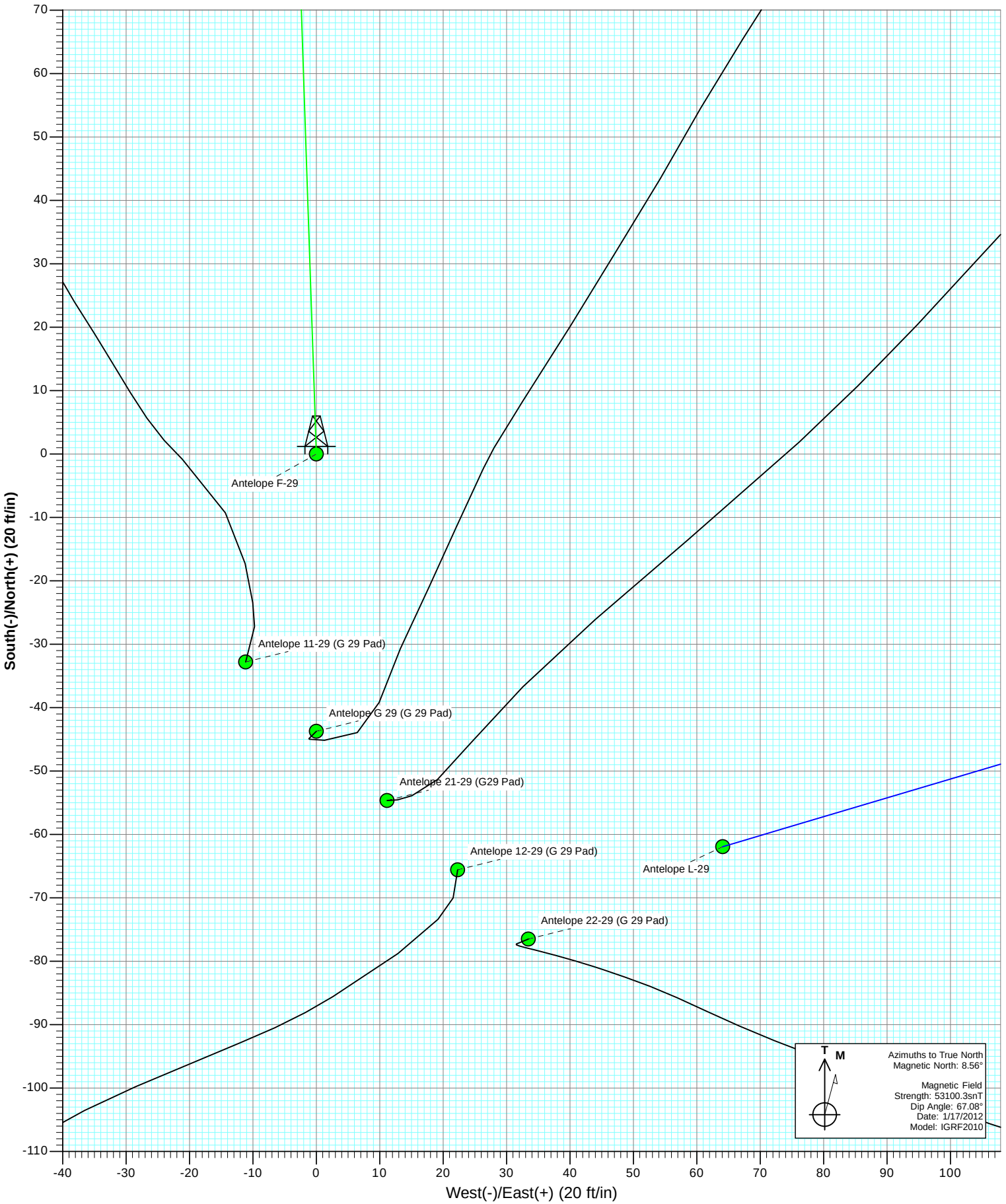
Plan #1
Antelope F-29
125XXX; SC

KBE @ 4668.0ft (Original Well Elev)
North American Datum 1983
Well Antelope F-29, True North

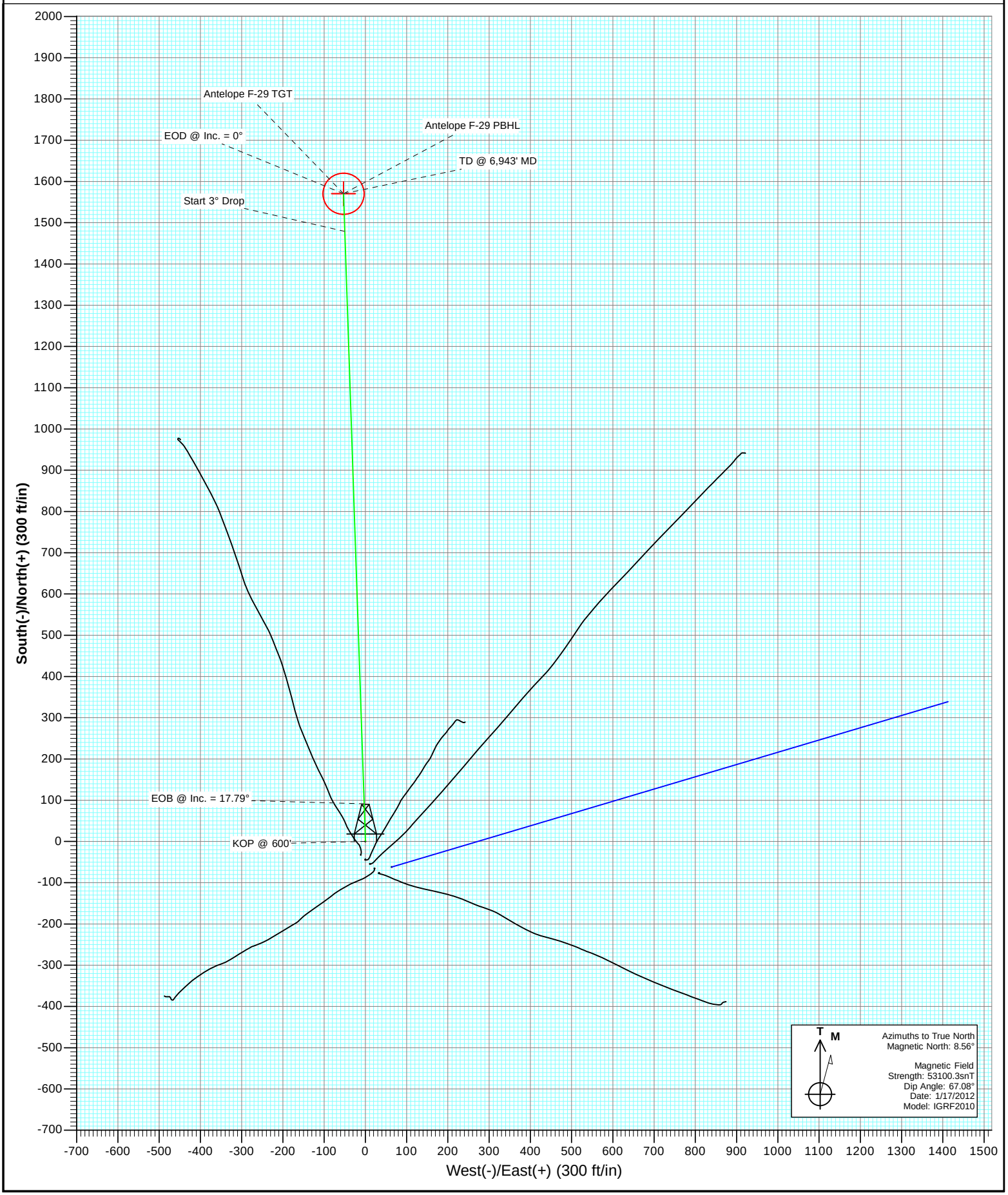
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	358.07	Slot	0.0	0.0	0.0

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Antelope F-29 TGT	6093.0	1570.1	-52.9	40.377770	-104.352940
Antelope F-29 PBHL	6707.0	1570.1	-52.9	40.377770	-104.352940

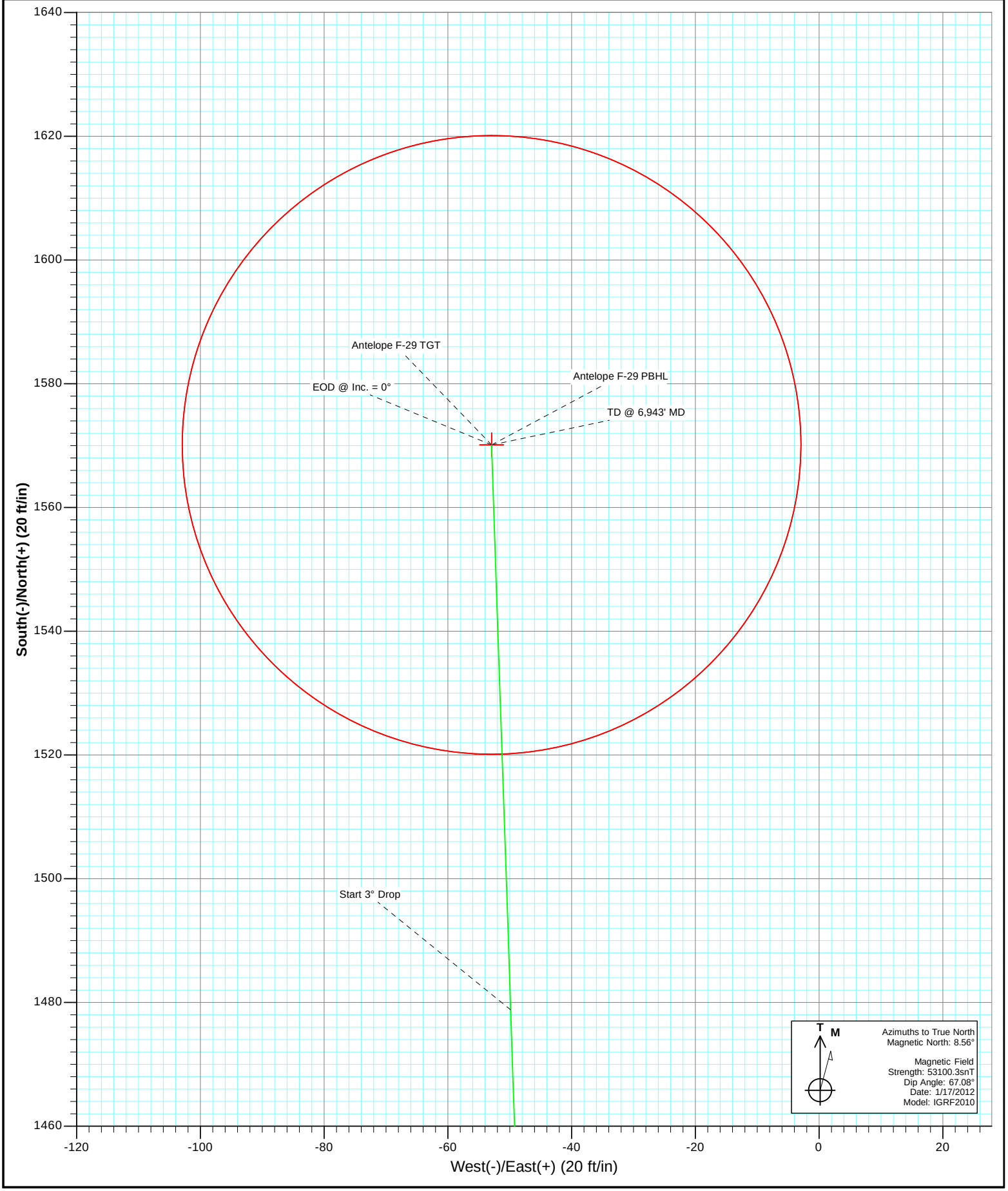
Project: Weld County
Site: Antelope G 29 Pad
Well: Antelope F-29
Wellbore: OH
Plan: Plan #1



Project: Weld County
Site: Antelope G 29 Pad
Well: Antelope F-29
Wellbore: OH
Plan: Plan #1



Project: Weld County
Site: Antelope G 29 Pad
Well: Antelope F-29
Wellbore: OH
Plan: Plan #1



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Antelope F-29
Company:	Bonanza Creek Energy Operating Company, LLC	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Project:	Weld County	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site:	Antelope G 29 Pad	**North Reference:**	True
Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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 G 29 Pad				
Site Position:		**Northing:**	1,380,957.95 ft	**Latitude:**	40.373450
From:	Lat/Long	**Easting:**	3,319,577.00 ft	**Longitude:**	-104.352990
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.74 °

Well	Antelope F-29					
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,380,962.45 ft	**Latitude:**	40.373460
	+E/-W	0.0 ft	**Easting:**	3,319,643.82 ft	**Longitude:**	-104.352750
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,658.0 ft

Wellbore	OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	1/17/2012	8.56	67.08	53,100

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.0	0.0	0.0	358.07	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,193.1	17.79	358.07	1,183.6	91.3	-3.1	3.00	3.00	0.00	358.07	
5,736.2	17.79	358.07	5,509.4	1,478.8	-49.9	0.00	0.00	0.00	0.00	
6,329.3	0.00	0.00	6,093.0	1,570.1	-52.9	3.00	-3.00	0.00	180.00	Antelope F-29 TGT
6,943.3	0.00	0.00	6,707.0	1,570.1	-52.9	0.00	0.00	0.00	0.00	Antelope F-29 PBHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Antelope F-29
Company:	Bonanza Creek Energy Operating Company, LLC	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Project:	Weld County	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site:	Antelope G 29 Pad	**North Reference:**	True
Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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	
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	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	3.00	358.07	700.0	2.6	-0.1	2.6	3.00	3.00	
800.0	6.00	358.07	799.6	10.5	-0.4	10.5	3.00	3.00	
900.0	9.00	358.07	898.8	23.5	-0.8	23.5	3.00	3.00	
1,000.0	12.00	358.07	997.1	41.7	-1.4	41.7	3.00	3.00	
1,100.0	15.00	358.07	1,094.3	65.0	-2.2	65.1	3.00	3.00	
1,193.1	17.79	358.07	1,183.6	91.3	-3.1	91.4	3.00	3.00	EOB @ Inc. = 17.79°
1,200.0	17.79	358.07	1,190.2	93.4	-3.1	93.5	0.00	0.00	
1,300.0	17.79	358.07	1,285.4	124.0	-4.2	124.0	0.00	0.00	
1,400.0	17.79	358.07	1,380.6	154.5	-5.2	154.6	0.00	0.00	
1,500.0	17.79	358.07	1,475.8	185.0	-6.2	185.1	0.00	0.00	
1,600.0	17.79	358.07	1,571.0	215.6	-7.3	215.7	0.00	0.00	
1,700.0	17.79	358.07	1,666.3	246.1	-8.3	246.3	0.00	0.00	
1,800.0	17.79	358.07	1,761.5	276.7	-9.3	276.8	0.00	0.00	
1,900.0	17.79	358.07	1,856.7	307.2	-10.4	307.4	0.00	0.00	
2,000.0	17.79	358.07	1,951.9	337.7	-11.4	337.9	0.00	0.00	
2,100.0	17.79	358.07	2,047.1	368.3	-12.4	368.5	0.00	0.00	
2,200.0	17.79	358.07	2,142.3	398.8	-13.4	399.0	0.00	0.00	
2,300.0	17.79	358.07	2,237.6	429.4	-14.5	429.6	0.00	0.00	
2,400.0	17.79	358.07	2,332.8	459.9	-15.5	460.2	0.00	0.00	
2,500.0	17.79	358.07	2,428.0	490.4	-16.5	490.7	0.00	0.00	
2,600.0	17.79	358.07	2,523.2	521.0	-17.6	521.3	0.00	0.00	
2,700.0	17.79	358.07	2,618.4	551.5	-18.6	551.8	0.00	0.00	
2,800.0	17.79	358.07	2,713.6	582.1	-19.6	582.4	0.00	0.00	
2,900.0	17.79	358.07	2,808.9	612.6	-20.7	613.0	0.00	0.00	
3,000.0	17.79	358.07	2,904.1	643.2	-21.7	643.5	0.00	0.00	
3,100.0	17.79	358.07	2,999.3	673.7	-22.7	674.1	0.00	0.00	
3,200.0	17.79	358.07	3,094.5	704.2	-23.7	704.6	0.00	0.00	
3,300.0	17.79	358.07	3,189.7	734.8	-24.8	735.2	0.00	0.00	
3,387.5	17.79	358.07	3,273.0	761.5	-25.7	761.9	0.00	0.00	Parkman
3,400.0	17.79	358.07	3,284.9	765.3	-25.8	765.8	0.00	0.00	
3,500.0	17.79	358.07	3,380.2	795.9	-26.8	796.3	0.00	0.00	
3,600.0	17.79	358.07	3,475.4	826.4	-27.9	826.9	0.00	0.00	
3,700.0	17.79	358.07	3,570.6	856.9	-28.9	857.4	0.00	0.00	
3,800.0	17.79	358.07	3,665.8	887.5	-29.9	888.0	0.00	0.00	
3,900.0	17.79	358.07	3,761.0	918.0	-30.9	918.5	0.00	0.00	
4,000.0	17.79	358.07	3,856.2	948.6	-32.0	949.1	0.00	0.00	
4,100.0	17.79	358.07	3,951.5	979.1	-33.0	979.7	0.00	0.00	
4,200.0	17.79	358.07	4,046.7	1,009.6	-34.0	1,010.2	0.00	0.00	
4,232.9	17.79	358.07	4,078.0	1,019.7	-34.4	1,020.3	0.00	0.00	Sussex
4,300.0	17.79	358.07	4,141.9	1,040.2	-35.1	1,040.8	0.00	0.00	
4,400.0	17.79	358.07	4,237.1	1,070.7	-36.1	1,071.3	0.00	0.00	
4,500.0	17.79	358.07	4,332.3	1,101.3	-37.1	1,101.9	0.00	0.00	
4,600.0	17.79	358.07	4,427.5	1,131.8	-38.2	1,132.5	0.00	0.00	
4,700.0	17.79	358.07	4,522.8	1,162.4	-39.2	1,163.0	0.00	0.00	
4,800.0	17.79	358.07	4,618.0	1,192.9	-40.2	1,193.6	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Antelope F-29
Company:	Bonanza Creek Energy Operating Company, LLC	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Project:	Weld County	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site:	Antelope G 29 Pad	**North Reference:**	True
Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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	17.79	358.07	4,713.2	1,223.4	-41.2	1,224.1	0.00	0.00	
5,000.0	17.79	358.07	4,808.4	1,254.0	-42.3	1,254.7	0.00	0.00	
5,100.0	17.79	358.07	4,903.6	1,284.5	-43.3	1,285.3	0.00	0.00	
5,200.0	17.79	358.07	4,998.8	1,315.1	-44.3	1,315.8	0.00	0.00	
5,300.0	17.79	358.07	5,094.1	1,345.6	-45.4	1,346.4	0.00	0.00	
5,400.0	17.79	358.07	5,189.3	1,376.1	-46.4	1,376.9	0.00	0.00	
5,500.0	17.79	358.07	5,284.5	1,406.7	-47.4	1,407.5	0.00	0.00	
5,600.0	17.79	358.07	5,379.7	1,437.2	-48.5	1,438.0	0.00	0.00	
5,700.0	17.79	358.07	5,474.9	1,467.8	-49.5	1,468.6	0.00	0.00	
5,736.2	17.79	358.07	5,509.4	1,478.8	-49.9	1,479.7	0.00	0.00	Start 3° Drop
5,800.0	15.88	358.07	5,570.5	1,497.3	-50.5	1,498.1	3.00	-3.00	
5,900.0	12.88	358.07	5,667.3	1,522.1	-51.3	1,523.0	3.00	-3.00	
6,000.0	9.88	358.07	5,765.3	1,541.8	-52.0	1,542.7	3.00	-3.00	
6,100.0	6.88	358.07	5,864.3	1,556.4	-52.5	1,557.3	3.00	-3.00	
6,200.0	3.88	358.07	5,963.8	1,565.8	-52.8	1,566.6	3.00	-3.00	
6,300.0	0.88	358.07	6,063.7	1,569.9	-52.9	1,570.8	3.00	-3.00	
6,329.3	0.00	0.00	6,093.0	1,570.1	-52.9	1,571.0	3.00	-3.00	EOD @ Inc. = 0°
6,400.0	0.00	0.00	6,163.7	1,570.1	-52.9	1,571.0	0.00	0.00	
6,500.0	0.00	0.00	6,263.7	1,570.1	-52.9	1,571.0	0.00	0.00	
6,529.3	0.00	0.00	6,293.0	1,570.1	-52.9	1,571.0	0.00	0.00	Niobrara
6,600.0	0.00	0.00	6,363.7	1,570.1	-52.9	1,571.0	0.00	0.00	
6,700.0	0.00	0.00	6,463.7	1,570.1	-52.9	1,571.0	0.00	0.00	
6,759.3	0.00	0.00	6,523.0	1,570.1	-52.9	1,571.0	0.00	0.00	Ft. Hayes
6,783.3	0.00	0.00	6,547.0	1,570.1	-52.9	1,571.0	0.00	0.00	Codell
6,796.3	0.00	0.00	6,560.0	1,570.1	-52.9	1,571.0	0.00	0.00	Carlile
6,800.0	0.00	0.00	6,563.7	1,570.1	-52.9	1,571.0	0.00	0.00	
6,834.3	0.00	0.00	6,598.0	1,570.1	-52.9	1,571.0	0.00	0.00	Greenhorn
6,900.0	0.00	0.00	6,663.7	1,570.1	-52.9	1,571.0	0.00	0.00	
6,943.3	0.00	0.00	6,707.0	1,570.1	-52.9	1,571.0	0.00	0.00	TD @ 6,943' 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 F-29 TGT - plan hits target center - Point	0.00	0.00	6,093.0	1,570.1	-52.9	1,382,531.76	3,319,570.57	40.377770	-104.352940
Antelope F-29 PBHL - plan hits target center - Circle (radius 50.0)	0.00	0.00	6,707.0	1,570.1	-52.9	1,382,531.76	3,319,570.57	40.377770	-104.352940

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Antelope F-29
Company:	Bonanza Creek Energy Operating Company, LLC	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Project:	Weld County	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site:	Antelope G 29 Pad	**North Reference:**	True
Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,387.5	3,273.0	Parkman			
4,232.9	4,078.0	Sussex			
6,529.3	6,293.0	Niobrara			
6,759.3	6,523.0	Ft. Hayes			
6,783.3	6,547.0	Codell			
6,796.3	6,560.0	Carlile			
6,834.3	6,598.0	Greenhorn			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
600.0	600.0	0.0	0.0	KOP @ 600'
1,193.1	1,183.6	91.3	-3.1	EOB @ Inc. = 17.79°
5,736.2	5,509.4	1,478.8	-49.9	Start 3° Drop
6,329.3	6,093.0	1,570.1	-52.9	EOD @ Inc. = 0°
6,943.3	6,707.0	1,570.1	-52.9	TD @ 6,943' MD

Bonanza Creek Energy Operating Company, LLC

Weld County
Antelope G 29 Pad
Antelope F-29
OH
Plan #1

Anticollision Report

17 January, 2012

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
Project:	Weld County	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 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:	MD Interval 100.0ft	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 1/17/2012

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	6,943.3	Plan #1 (OH)	MWD	Geolink MWD

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Antelope G 29 Pad						
Antelope 11-29 (G 29 Pad) - DD - DD	0.0	0.0	34.6			
Antelope 11-29 (G 29 Pad) - DD - DD	714.1	714.5	20.5	20.5	10,000.000	CC, ES
Antelope 12-29 (G 29 Pad) - DD - DD	0.0	0.0	69.3			
Antelope 21-29 (G29 Pad) - DD - DD	0.0	0.0	55.8			
Antelope 21-29 (G29 Pad) - DD - DD	634.5	634.6	55.6	55.6	10,000.000	CC, ES
Antelope 22-29 (G 29 Pad) - DD - DD	0.0	0.0	83.5			
Antelope 22-29 (G 29 Pad) - DD - DD	454.3	453.3	83.5	83.5	10,000.000	CC, ES
Antelope G 29 (G 29 Pad) - DD - DD	0.0	0.0	43.7			
Antelope L-29 - OH - Plan #1	0.0	0.0	89.1			
Antelope L-29 - OH - Plan #1	600.0	600.0	89.1	89.1	10,000.000	CC, ES

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
Project:	Weld County	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope G 29 Pad - Antelope 11-29 (G 29 Pad) - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 470-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-161.22	-32.8	-11.1	34.6				
100.0	100.0	99.2	99.2	0.2	0.2	-161.19	-32.5	-11.1	34.4	34.4	0.00	N/A	
200.0	200.0	199.4	199.3	0.3	0.4	-161.08	-31.8	-10.9	33.6	33.6	0.00	N/A	
300.0	300.0	299.5	299.5	0.5	0.5	-160.88	-30.5	-10.6	32.3	32.3	0.00	N/A	
400.0	400.0	399.7	399.6	0.7	0.7	-160.57	-28.8	-10.1	30.5	30.5	0.00	N/A	
500.0	500.0	500.0	499.9	0.9	0.9	-159.86	-26.3	-9.7	28.1	28.1	0.00	N/A	
600.0	600.0	600.4	600.2	1.0	1.1	-153.78	-21.3	-10.5	23.7	23.7	0.00	N/A	
700.0	700.0	700.4	700.0	1.2	1.3	-142.22	-14.0	-12.1	20.6	20.6	0.00	N/A	
714.1	714.0	714.5	714.0	1.2	1.3	-140.56	-12.8	-12.6	20.5	20.5	0.00	N/A	CC, ES
800.0	799.6	799.8	798.8	1.4	1.5	-130.58	-5.1	-17.2	22.9	22.9	0.00	N/A	
900.0	898.8	899.6	897.8	1.6	1.8	-125.35	4.3	-25.7	31.5	31.5	0.00	N/A	
1,000.0	997.1	999.8	996.6	2.0	2.1	-123.34	18.0	-34.4	40.6	40.6	0.00	N/A	
1,100.0	1,094.3	1,100.2	1,095.1	2.3	2.4	-123.15	35.0	-44.2	51.7	51.7	0.00	N/A	
1,200.0	1,190.2	1,199.3	1,192.2	2.8	2.8	-126.77	53.0	-52.3	63.7	63.7	0.00	N/A	
1,300.0	1,285.4	1,296.9	1,287.1	3.3	3.2	-128.05	72.5	-63.7	78.7	78.7	0.00	N/A	
1,400.0	1,380.6	1,397.8	1,384.5	3.8	3.7	-126.92	94.8	-77.7	94.0	94.0	0.00	N/A	
1,500.0	1,475.8	1,500.6	1,483.5	4.4	4.2	-125.92	120.1	-89.4	105.8	105.8	0.00	N/A	
1,600.0	1,571.0	1,597.9	1,577.1	4.9	4.7	-125.19	144.6	-99.6	116.6	116.6	0.00	N/A	
1,700.0	1,666.3	1,696.5	1,671.9	5.4	5.2	-124.38	168.8	-111.4	129.0	129.0	0.00	N/A	
1,800.0	1,761.5	1,796.9	1,768.2	6.0	5.7	-123.15	194.7	-124.0	141.2	141.2	0.00	N/A	
1,900.0	1,856.7	1,899.0	1,866.0	6.5	6.2	-122.19	221.7	-135.4	151.8	151.8	0.00	N/A	
2,000.0	1,951.9	1,995.9	1,959.2	7.1	6.7	-121.95	246.0	-145.5	162.7	162.7	0.00	N/A	
2,100.0	2,047.1	2,098.3	2,057.4	7.6	7.2	-121.41	272.5	-156.6	173.5	173.5	0.00	N/A	
2,200.0	2,142.3	2,201.5	2,156.3	8.2	7.7	-120.83	300.9	-165.9	181.8	181.8	0.00	N/A	
2,300.0	2,237.6	2,301.0	2,252.1	8.7	8.2	-120.96	326.6	-173.5	190.0	190.0	0.00	N/A	
2,400.0	2,332.8	2,402.9	2,350.3	9.3	8.7	-121.32	352.9	-179.9	197.0	197.0	0.00	N/A	
2,500.0	2,428.0	2,500.5	2,444.0	9.8	9.2	-121.19	379.4	-187.0	204.1	204.1	0.00	N/A	
2,600.0	2,523.2	2,599.4	2,539.3	10.4	9.7	-121.39	404.6	-194.5	212.5	212.5	0.00	N/A	
2,700.0	2,618.4	2,697.4	2,633.6	11.0	10.2	-121.36	430.3	-202.3	220.7	220.7	0.00	N/A	
2,800.0	2,713.6	2,794.2	2,726.6	11.5	10.7	-121.16	455.4	-211.7	230.4	230.4	0.00	N/A	
2,900.0	2,808.9	2,892.9	2,821.5	12.1	11.2	-121.03	480.5	-221.5	240.8	240.8	0.00	N/A	
3,000.0	2,904.1	2,988.5	2,913.8	12.6	11.7	-121.11	503.8	-231.2	251.9	251.9	0.00	N/A	
3,100.0	2,999.3	3,082.6	3,004.6	13.2	12.1	-121.13	525.8	-242.4	264.9	264.9	0.00	N/A	
3,200.0	3,094.5	3,183.3	3,101.7	13.7	12.6	-121.10	549.0	-255.4	279.0	279.0	0.00	N/A	
3,300.0	3,189.7	3,280.6	3,195.5	14.3	13.1	-121.09	571.7	-267.2	292.3	292.3	0.00	N/A	
3,400.0	3,284.9	3,382.4	3,294.4	14.9	13.5	-121.62	593.0	-278.6	306.1	306.1	0.00	N/A	
3,500.0	3,380.2	3,487.6	3,396.6	15.4	14.0	-122.12	615.9	-288.8	318.3	318.3	0.00	N/A	
3,600.0	3,475.4	3,598.6	3,503.3	16.0	14.6	-121.96	644.8	-299.1	327.7	327.7	0.00	N/A	
3,700.0	3,570.6	3,698.5	3,598.2	16.5	15.2	-121.26	674.4	-308.7	335.3	335.3	0.00	N/A	
3,800.0	3,665.8	3,797.8	3,692.2	17.1	15.8	-120.46	704.5	-318.6	342.9	342.9	0.00	N/A	
3,900.0	3,761.0	3,891.1	3,781.1	17.7	16.3	-119.89	731.4	-328.4	351.8	351.8	0.00	N/A	
4,000.0	3,856.2	3,990.4	3,876.1	18.2	16.8	-119.58	758.3	-338.6	361.5	361.5	0.00	N/A	
4,100.0	3,951.5	4,089.4	3,971.3	18.8	17.3	-119.56	783.8	-347.8	371.1	371.1	0.00	N/A	
4,200.0	4,046.7	4,183.3	4,062.0	19.3	17.8	-119.71	806.5	-356.7	381.6	381.6	0.00	N/A	
4,300.0	4,141.9	4,276.4	4,151.9	19.9	18.2	-119.84	828.3	-366.9	393.8	393.8	0.00	N/A	
4,400.0	4,237.1	4,373.0	4,245.6	20.5	18.6	-120.16	849.4	-377.5	407.0	407.0	0.00	N/A	
4,500.0	4,332.3	4,468.8	4,339.0	21.0	19.0	-120.73	868.2	-387.6	420.9	420.9	0.00	N/A	
4,600.0	4,427.5	4,565.9	4,434.1	21.6	19.4	-121.52	885.4	-397.3	435.6	435.6	0.00	N/A	
4,700.0	4,522.8	4,665.5	4,531.9	22.1	19.7	-122.53	901.6	-406.1	450.3	450.3	0.00	N/A	
4,800.0	4,618.0	4,760.9	4,626.0	22.7	20.0	-123.66	915.5	-413.6	465.3	465.3	0.00	N/A	
4,900.0	4,713.2	4,856.1	4,720.2	23.3	20.3	-124.93	927.5	-420.9	481.4	481.4	0.00	N/A	
5,000.0	4,808.4	4,954.4	4,817.6	23.8	20.6	-126.30	938.9	-427.5	497.8	497.8	0.00	N/A	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
Project:	Weld County	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
Project:	Weld County	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope G 29 Pad - Antelope 12-29 (G 29 Pad) - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 469-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	161.22	-65.6	22.3	69.3				
100.0	100.0	98.8	98.8	0.2	0.2	161.30	-65.8	22.3	69.4	69.4	0.00	N/A	
200.0	200.0	198.5	198.5	0.3	0.3	161.53	-66.4	22.2	70.0	70.0	0.00	N/A	
300.0	300.0	298.2	298.2	0.5	0.5	161.92	-67.4	22.0	70.9	70.9	0.00	N/A	
400.0	400.0	398.0	398.0	0.7	0.7	162.44	-68.8	21.8	72.1	72.1	0.00	N/A	
500.0	500.0	497.3	497.3	0.9	0.9	163.24	-70.7	21.3	73.8	73.8	0.00	N/A	
600.0	600.0	596.1	595.9	1.0	1.1	166.90	-75.1	17.5	77.2	77.2	0.00	N/A	
700.0	700.0	694.8	694.1	1.2	1.3	175.48	-81.2	9.4	84.5	84.5	0.00	N/A	
800.0	799.6	792.3	790.5	1.4	1.6	-176.58	-88.7	-2.8	99.5	99.5	0.00	N/A	
900.0	898.8	889.0	885.5	1.6	1.9	-168.99	-95.8	-19.2	121.4	121.4	0.00	N/A	
1,000.0	997.1	983.0	977.8	2.0	2.2	-164.07	-103.0	-35.5	149.8	149.8	0.00	N/A	
1,100.0	1,094.3	1,075.0	1,068.2	2.3	2.5	-161.44	-111.6	-50.8	184.9	184.9	0.00	N/A	
1,200.0	1,190.2	1,166.0	1,157.5	2.8	2.9	-160.02	-120.1	-65.6	224.7	224.7	0.00	N/A	
1,300.0	1,285.4	1,254.3	1,244.2	3.3	3.2	-159.77	-129.6	-79.2	267.5	267.5	0.00	N/A	
1,400.0	1,380.6	1,346.1	1,334.4	3.8	3.5	-159.75	-139.8	-92.5	310.3	310.3	0.00	N/A	
1,500.0	1,475.8	1,439.0	1,425.9	4.4	3.8	-159.75	-149.6	-105.8	352.5	352.5	0.00	N/A	
1,600.0	1,571.0	1,533.4	1,518.9	4.9	4.1	-159.78	-158.8	-118.9	394.0	394.0	0.00	N/A	
1,700.0	1,666.3	1,627.9	1,612.2	5.4	4.4	-159.91	-167.6	-131.1	434.8	434.8	0.00	N/A	
1,800.0	1,761.5	1,722.5	1,705.8	6.0	4.7	-160.07	-175.7	-142.7	474.8	474.8	0.00	N/A	

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
Project:	Weld County	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope G 29 Pad - Antelope 21-29 (G29 Pad) - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 470-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	168.47	-54.6	11.1	55.8				
100.0	100.0	99.0	99.0	0.2	0.2	168.40	-54.6	11.2	55.8	55.8	0.00	N/A	
200.0	200.0	199.0	199.0	0.3	0.3	168.17	-54.6	11.4	55.8	55.8	0.00	N/A	
300.0	300.0	299.0	299.0	0.5	0.5	167.80	-54.6	11.8	55.9	55.9	0.00	N/A	
400.0	400.0	398.9	398.9	0.7	0.7	167.27	-54.6	12.3	55.9	55.9	0.00	N/A	
500.0	500.0	499.0	499.0	0.9	0.9	166.44	-54.5	13.1	56.0	56.0	0.00	N/A	
600.0	600.0	599.6	599.6	1.0	1.0	162.73	-53.2	16.5	55.7	55.7	0.00	N/A	
634.5	634.5	634.6	634.5	1.1	1.1	162.97	-52.2	18.0	55.6	55.6	0.00	N/A	CC, ES
700.0	700.0	701.1	700.9	1.2	1.2	159.64	-49.2	21.2	56.1	56.1	0.00	N/A	
800.0	799.6	801.8	801.0	1.4	1.5	153.05	-41.2	28.1	59.1	59.1	0.00	N/A	
900.0	898.8	901.1	899.1	1.6	1.7	145.89	-31.0	38.5	67.2	67.2	0.00	N/A	
1,000.0	997.1	999.4	995.8	2.0	2.1	139.70	-18.9	52.3	81.0	81.0	0.00	N/A	
1,100.0	1,094.3	1,097.7	1,091.3	2.3	2.5	134.61	-4.0	69.6	99.6	99.6	0.00	N/A	
1,200.0	1,190.2	1,196.8	1,186.9	2.8	2.9	131.03	14.2	88.8	121.4	121.4	0.00	N/A	
1,300.0	1,285.4	1,295.1	1,280.7	3.3	3.5	128.31	35.4	108.7	143.5	143.5	0.00	N/A	
1,400.0	1,380.6	1,391.7	1,371.8	3.8	4.0	124.97	59.3	130.4	165.9	165.9	0.00	N/A	
1,500.0	1,475.8	1,488.8	1,462.6	4.4	4.6	121.82	84.6	153.5	189.1	189.1	0.00	N/A	
1,600.0	1,571.0	1,586.9	1,554.8	4.9	5.2	119.66	109.5	175.9	212.2	212.2	0.00	N/A	
1,700.0	1,666.3	1,686.0	1,648.5	5.4	5.8	118.25	133.8	197.3	234.9	234.9	0.00	N/A	
1,800.0	1,761.5	1,784.7	1,742.3	6.0	6.3	117.44	157.0	217.3	256.9	256.9	0.00	N/A	
1,900.0	1,856.7	1,880.1	1,832.9	6.5	6.9	116.70	179.8	237.0	279.1	279.1	0.00	N/A	
2,000.0	1,951.9	1,982.0	1,929.4	7.1	7.5	115.92	204.7	257.9	301.1	301.1	0.00	N/A	
2,100.0	2,047.1	2,071.8	2,014.4	7.6	8.0	115.28	226.8	276.8	323.5	323.5	0.00	N/A	
2,200.0	2,142.3	2,171.9	2,108.8	8.2	8.6	114.52	251.6	298.9	346.9	346.9	0.00	N/A	
2,300.0	2,237.6	2,270.7	2,202.6	8.7	9.2	114.12	275.1	319.5	369.5	369.5	0.00	N/A	
2,400.0	2,332.8	2,367.6	2,294.4	9.3	9.8	113.71	298.5	339.8	392.0	392.0	0.00	N/A	
2,500.0	2,428.0	2,466.8	2,388.3	9.8	10.4	113.30	322.8	360.4	414.3	414.3	0.00	N/A	
2,600.0	2,523.2	2,559.1	2,475.5	10.4	10.9	112.91	345.5	380.0	437.1	437.1	0.00	N/A	
2,700.0	2,618.4	2,649.5	2,560.3	11.0	11.5	112.33	369.0	401.1	461.2	461.2	0.00	N/A	
2,800.0	2,713.6	2,747.3	2,651.9	11.5	12.2	111.75	394.1	424.4	486.0	486.0	0.00	N/A	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
Project:	Weld County	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope G 29 Pad - Antelope 22-29 (G 29 Pad) - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 470-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	156.39	-76.5	33.4	83.5				
100.0	100.0	99.0	99.0	0.2	0.2	156.45	-76.5	33.4	83.5	83.5	0.00	N/A	
200.0	200.0	199.0	199.0	0.3	0.3	156.64	-76.6	33.1	83.5	83.5	0.00	N/A	
300.0	300.0	299.0	299.0	0.5	0.5	156.96	-76.8	32.7	83.5	83.5	0.00	N/A	
400.0	400.0	399.0	399.0	0.7	0.7	157.40	-77.1	32.1	83.5	83.5	0.00	N/A	
454.3	454.3	453.3	453.3	0.8	0.8	157.70	-77.2	31.7	83.5	83.5	0.00	N/A	CC, ES
500.0	500.0	498.4	498.4	0.9	0.9	157.84	-77.4	31.5	83.6	83.6	0.00	N/A	
600.0	600.0	596.0	595.9	1.0	1.0	156.08	-78.3	34.7	85.7	85.7	0.00	N/A	
700.0	700.0	692.7	692.3	1.2	1.2	154.77	-80.4	42.3	93.4	93.4	0.00	N/A	
800.0	799.6	787.7	786.6	1.4	1.4	152.06	-84.1	53.0	109.2	109.2	0.00	N/A	
900.0	898.8	880.0	877.7	1.6	1.7	150.25	-90.2	66.7	133.8	133.8	0.00	N/A	
1,000.0	997.1	972.4	968.1	2.0	2.0	148.67	-97.1	84.1	165.4	165.4	0.00	N/A	
1,100.0	1,094.3	1,065.0	1,058.7	2.3	2.4	147.99	-104.2	102.3	201.9	201.9	0.00	N/A	
1,200.0	1,190.2	1,157.2	1,148.5	2.8	2.7	147.47	-110.4	122.1	242.6	242.6	0.00	N/A	
1,300.0	1,285.4	1,252.0	1,240.9	3.3	3.1	147.67	-115.3	142.6	284.0	284.0	0.00	N/A	
1,400.0	1,380.6	1,342.7	1,329.6	3.8	3.5	147.89	-119.5	161.5	324.7	324.7	0.00	N/A	
1,500.0	1,475.8	1,425.5	1,409.9	4.4	3.8	147.80	-123.8	180.7	366.8	366.8	0.00	N/A	
1,600.0	1,571.0	1,511.1	1,492.8	4.9	4.2	147.64	-129.1	201.6	410.4	410.4	0.00	N/A	
1,700.0	1,666.3	1,600.4	1,579.3	5.4	4.6	147.64	-135.6	222.9	454.5	454.5	0.00	N/A	
1,800.0	1,761.5	1,684.9	1,661.2	6.0	5.0	147.82	-142.9	242.1	499.1	499.1	0.00	N/A	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
Project:	Weld County	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope G 29 Pad - Antelope G 29 (G 29 Pad) - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 470-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-43.7	0.0	43.7				
100.0	100.0	99.0	99.0	0.2	0.2	-179.93	-43.8	-0.1	43.8	43.8	0.00	N/A	
200.0	200.0	198.9	198.9	0.3	0.3	-179.73	-43.9	-0.2	43.9	43.9	0.00	N/A	
300.0	300.0	298.9	298.9	0.5	0.5	-179.38	-44.2	-0.5	44.2	44.2	0.00	N/A	
400.0	400.0	398.8	398.8	0.7	0.7	-178.91	-44.6	-0.8	44.6	44.6	0.00	N/A	
500.0	500.0	498.9	498.8	0.9	0.9	-178.67	-45.0	-1.0	45.0	45.0	0.00	N/A	
600.0	600.0	599.3	599.2	1.0	1.0	175.82	-45.0	3.3	45.1	45.1	0.00	N/A	
618.1	618.1	617.7	617.5	1.1	1.1	176.47	-44.8	4.3	45.1	45.1	0.00	N/A	
700.0	700.0	701.1	700.8	1.2	1.2	171.35	-42.4	8.3	45.8	45.8	0.00	N/A	
800.0	799.6	802.9	802.4	1.4	1.4	167.62	-35.2	11.3	47.2	47.2	0.00	N/A	
900.0	898.8	903.2	902.0	1.6	1.6	162.92	-25.0	15.9	51.5	51.5	0.00	N/A	
1,000.0	997.1	1,002.6	1,000.8	2.0	1.9	160.63	-14.9	20.6	60.9	60.9	0.00	N/A	
1,100.0	1,094.3	1,101.3	1,098.9	2.3	2.1	160.51	-5.1	25.0	75.5	75.5	0.00	N/A	
1,200.0	1,190.2	1,200.3	1,197.2	2.8	2.4	160.76	5.1	30.4	94.9	94.9	0.00	N/A	
1,300.0	1,285.4	1,298.7	1,294.5	3.3	2.6	159.83	17.4	38.3	115.2	115.2	0.00	N/A	
1,400.0	1,380.6	1,396.8	1,391.6	3.8	2.9	159.35	29.6	45.8	135.4	135.4	0.00	N/A	
1,500.0	1,475.8	1,494.0	1,487.7	4.4	3.2	159.04	41.6	53.1	155.8	155.8	0.00	N/A	
1,600.0	1,571.0	1,591.9	1,584.7	4.9	3.5	159.13	53.0	59.8	176.4	176.4	0.00	N/A	
1,700.0	1,666.3	1,689.0	1,680.9	5.4	3.7	159.15	64.3	66.5	197.2	197.2	0.00	N/A	
1,800.0	1,761.5	1,786.0	1,777.1	6.0	4.0	159.13	75.3	73.5	218.4	218.4	0.00	N/A	
1,900.0	1,856.7	1,883.0	1,873.4	6.5	4.3	159.51	85.4	79.2	239.8	239.8	0.00	N/A	
2,000.0	1,951.9	1,977.8	1,967.7	7.1	4.5	160.16	94.1	83.5	262.0	262.0	0.00	N/A	
2,100.0	2,047.1	2,075.3	2,064.7	7.6	4.7	160.65	102.7	88.4	284.7	284.7	0.00	N/A	
2,200.0	2,142.3	2,170.5	2,159.2	8.2	5.0	160.84	111.3	94.5	307.7	307.7	0.00	N/A	
2,300.0	2,237.6	2,266.0	2,254.3	8.7	5.2	161.12	119.0	100.2	331.4	331.4	0.00	N/A	
2,400.0	2,332.8	2,361.0	2,348.9	9.3	5.4	161.50	125.8	105.2	355.6	355.6	0.00	N/A	
2,500.0	2,428.0	2,455.0	2,442.6	9.8	5.6	161.92	132.1	109.9	380.3	380.3	0.00	N/A	
2,600.0	2,523.2	2,550.3	2,537.6	10.4	5.8	162.33	137.8	114.4	405.6	405.6	0.00	N/A	
2,700.0	2,618.4	2,651.7	2,638.7	11.0	6.1	162.75	144.1	119.0	430.5	430.5	0.00	N/A	
2,800.0	2,713.6	2,748.2	2,734.9	11.5	6.3	163.12	150.4	123.1	455.2	455.2	0.00	N/A	
2,900.0	2,808.9	2,848.2	2,834.5	12.1	6.5	163.31	157.8	128.4	479.4	479.4	0.00	N/A	

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
Project:	Weld County	**TVD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Antelope G 29 Pad - Antelope L-29 - OH - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	134.02	-61.9	64.1	89.1				
100.0	100.0	100.0	100.0	0.2	0.2	134.02	-61.9	64.1	89.1	89.1	0.00	N/A	
200.0	200.0	200.0	200.0	0.3	0.3	134.02	-61.9	64.1	89.1	89.1	0.00	N/A	
300.0	300.0	300.0	300.0	0.5	0.5	134.02	-61.9	64.1	89.1	89.1	0.00	N/A	
400.0	400.0	400.0	400.0	0.7	0.7	134.02	-61.9	64.1	89.1	89.1	0.00	N/A	
500.0	500.0	500.0	500.0	0.9	0.9	134.02	-61.9	64.1	89.1	89.1	0.00	N/A	
600.0	600.0	600.0	600.0	1.0	1.0	134.02	-61.9	64.1	89.1	89.1	0.00	N/A	CC, ES
700.0	700.0	697.7	697.6	1.2	1.2	135.64	-61.2	66.5	92.3	92.3	0.00	N/A	
800.0	799.6	794.7	794.4	1.4	1.4	134.80	-59.1	73.6	101.7	101.7	0.00	N/A	
900.0	898.8	890.7	889.6	1.6	1.6	133.67	-55.6	85.2	117.3	117.3	0.00	N/A	
1,000.0	997.1	985.0	982.4	2.0	1.9	132.44	-50.9	101.2	139.0	139.0	0.00	N/A	
1,100.0	1,094.3	1,077.1	1,072.2	2.3	2.3	131.22	-45.0	120.9	166.6	166.6	0.00	N/A	
1,200.0	1,190.2	1,169.0	1,160.7	2.8	2.7	130.21	-38.1	144.3	199.8	199.8	0.00	N/A	
1,300.0	1,285.4	1,262.7	1,250.8	3.3	3.1	130.30	-30.8	168.8	234.7	234.7	0.00	N/A	
1,400.0	1,380.6	1,356.4	1,341.0	3.8	3.5	130.37	-23.5	193.4	269.6	269.6	0.00	N/A	
1,500.0	1,475.8	1,450.1	1,431.1	4.4	4.0	130.43	-16.2	217.9	304.5	304.5	0.00	N/A	
1,600.0	1,571.0	1,543.8	1,521.3	4.9	4.5	130.47	-8.9	242.4	339.4	339.4	0.00	N/A	
1,700.0	1,666.3	1,637.5	1,611.4	5.4	4.9	130.50	-1.6	266.9	374.4	374.4	0.00	N/A	
1,800.0	1,761.5	1,731.2	1,701.6	6.0	5.4	130.53	5.6	291.5	409.3	409.3	0.00	N/A	
1,900.0	1,856.7	1,824.9	1,791.7	6.5	5.9	130.56	12.9	316.0	444.2	444.2	0.00	N/A	
2,000.0	1,951.9	1,918.6	1,881.8	7.1	6.4	130.58	20.2	340.5	479.1	479.1	0.00	N/A	

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Antelope F-29
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Reference Site:	Antelope G 29 Pad	**MD Reference:**	KBE @ 4668.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Antelope F-29	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KBE @ 4668.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Antelope F-29
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.74°