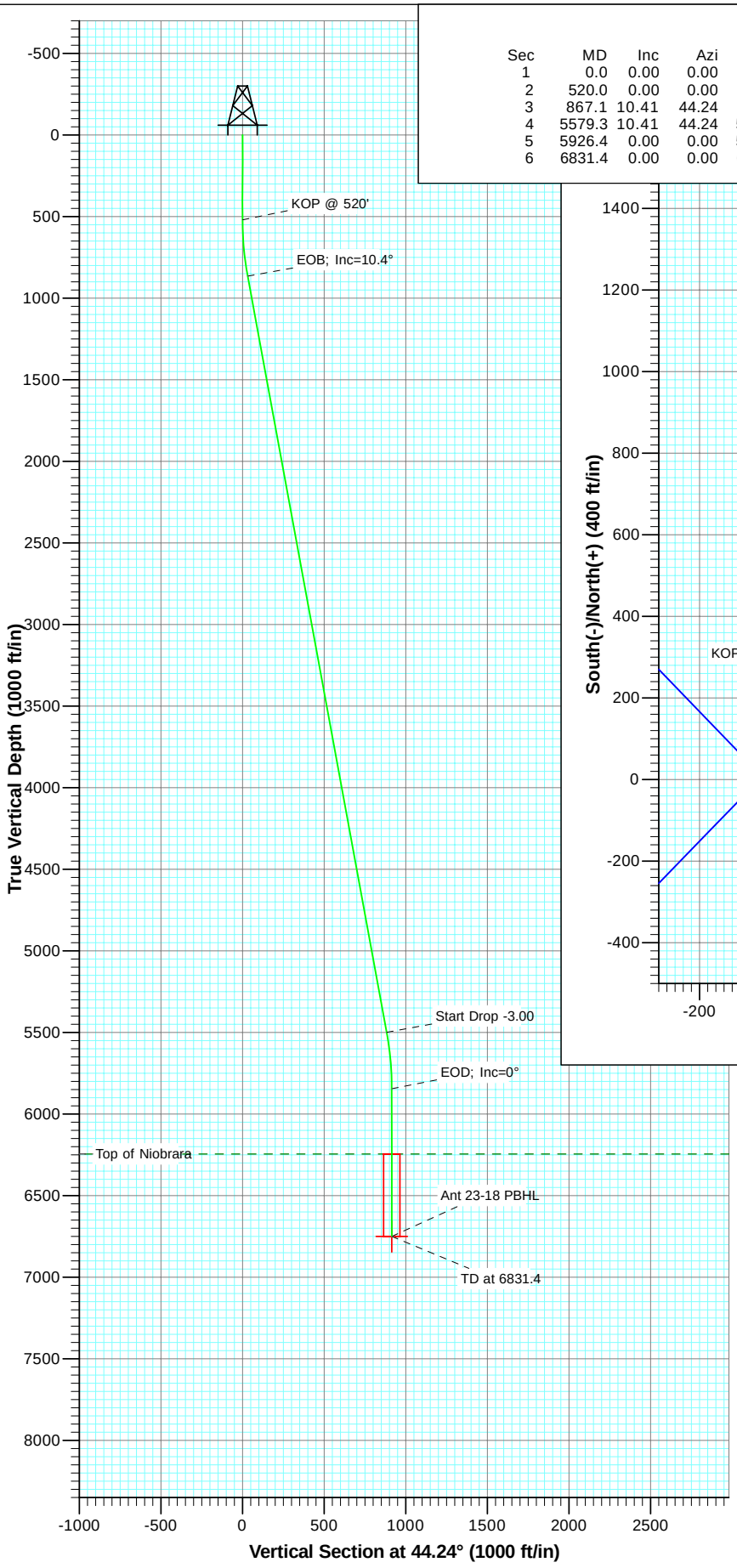
BONANZA CREEK ENERGY COMPANY

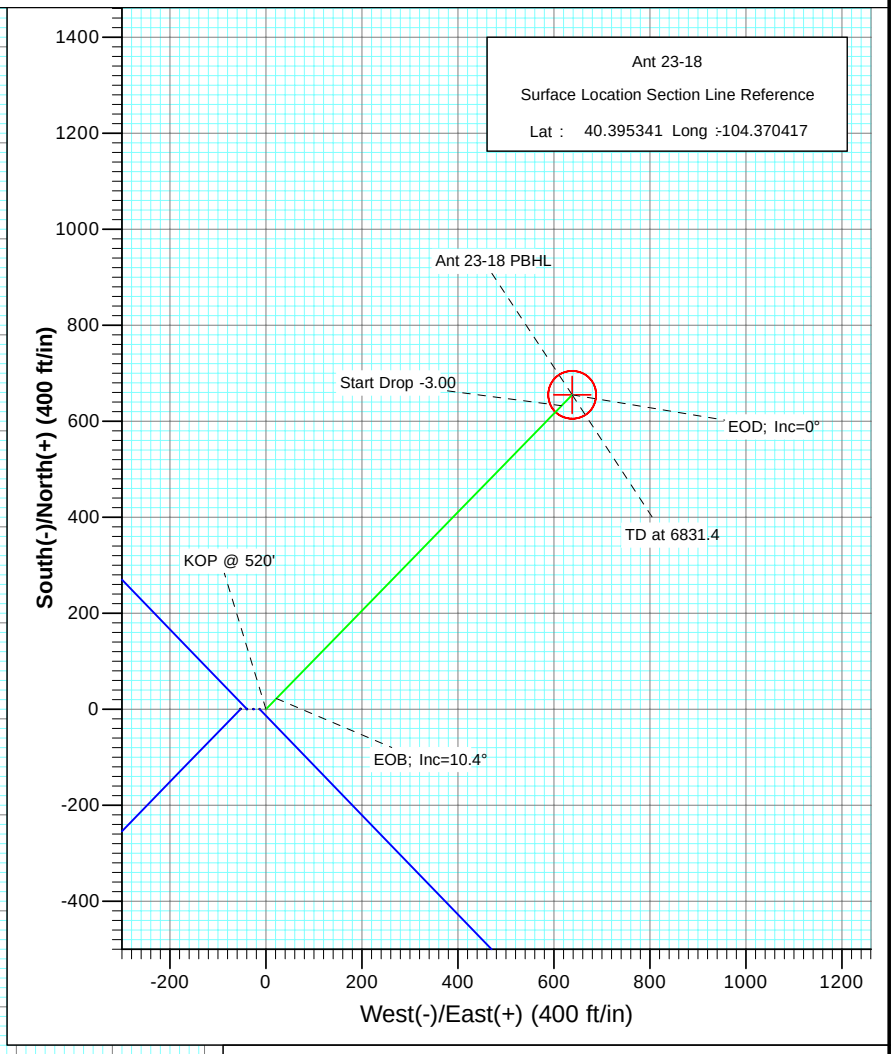
Project: Weld County
Site: Ant
Well: Ant 23-18
Wellbore: DD
Plan: Plan #1

CATHEDRAL

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	520.0	0.00	0.00	520.0	0.0	0.0	0.00	0.00	0.0	
3	867.1	10.41	44.24	865.2	22.5	21.9	3.00	44.24	31.5	
4	5579.3	10.41	44.24	5499.8	632.6	616.1	0.00	0.00	883.1	
5	5926.4	0.00	0.00	5845.0	655.2	638.1	3.00	180.00	914.5	
6	6831.4	0.00	0.00	6750.0	655.2	638.1	0.00	0.00	914.5	Ant 23-18 PBHL





FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6245.0	6326.4	Top of Niobrara

Azimuths to True North
Magnetic North: 8.79°

Magnetic Field
Strength: 53281.1snT
Dip Angle: 67.15°
Date: 6/8/2010
Model: IGRF2010

Plan #1
Ant 23-18

WELL @ 4615.0ft (Original Well Elev)
North American Datum 1983
Well Ant 23-18, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	44.24	Slot	0.0	0.0	0.0

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Ant 23-18 PBHL	6750.0	655.2	638.1	40.397140	-104.368126

BONANZA CREEK ENERGY COMPANY

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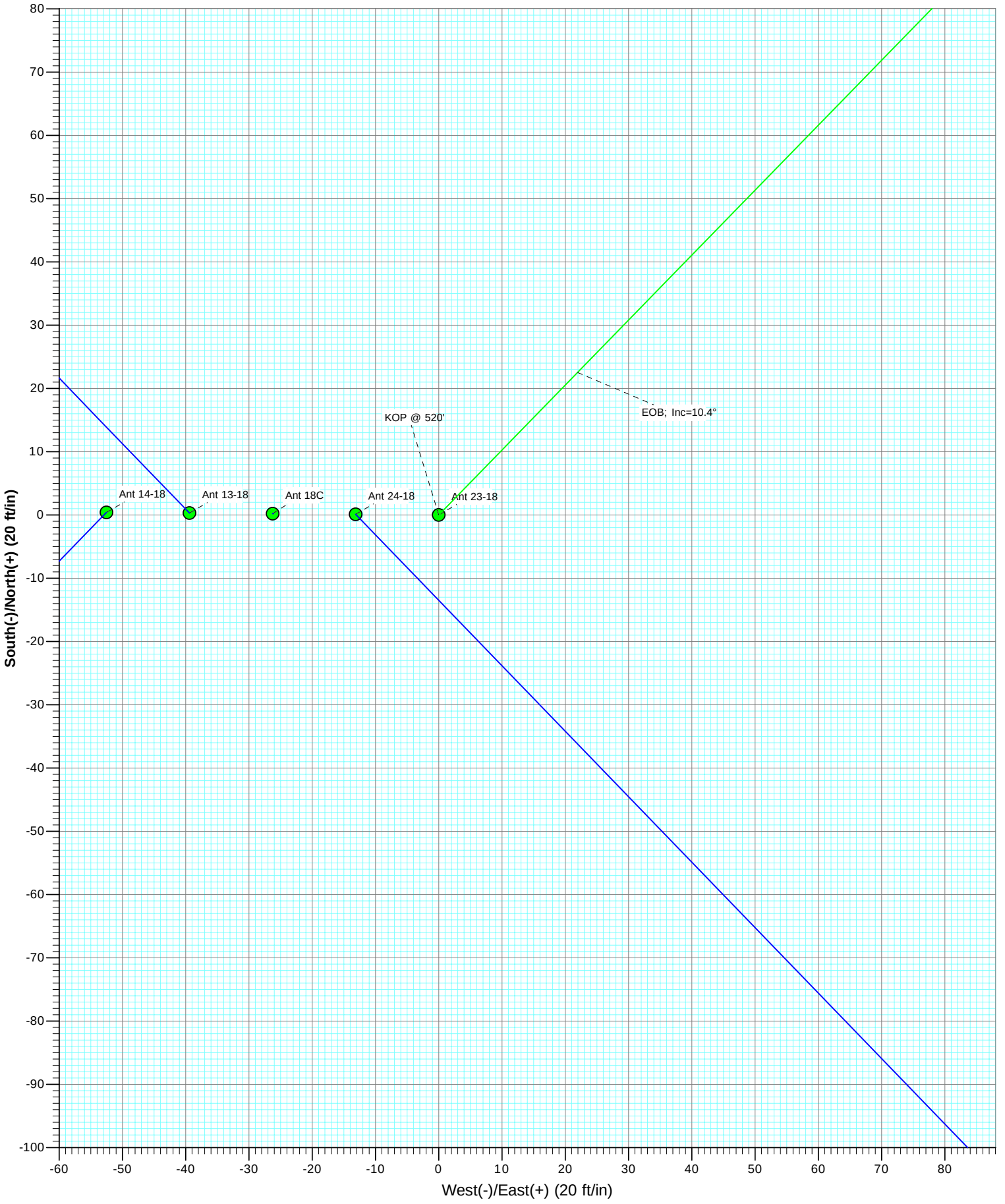
CATHEDRAL



Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	**Local Co-ordinate Reference:**	Well Ant 23-18
Company:	Bonanza Creek Energy Operating Company, LLC	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Project:	Weld County	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site:	Ant	**North Reference:**	True
Well:	Ant 23-18	**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	Ant				
Site Position:		**Northing:**	1,388,869.66 ft	**Latitude:**	40.395342
From:	Lat/Long	**Easting:**	3,314,567.85 ft	**Longitude:**	-104.370605
Position Uncertainty:	0.0 ft	**Slot Radius:**	0.000 in	**Grid Convergence:**	0.73 °

Well	Ant 23-18				
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,388,869.93 ft	**Latitude:**	40.395341
	+E/-W	0.0 ft	**Easting:**	3,314,620.36 ft	**Longitude:**	-104.370417
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,605.0 ft

Wellbore	DD			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	6/8/2010	8.79	67.15	53,281

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	44.24

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	
520.0	0.00	0.00	520.0	0.0	0.0	0.00	0.00	0.00	0.00	
867.1	10.41	44.24	865.2	22.5	21.9	3.00	3.00	0.00	44.24	
5,579.3	10.41	44.24	5,499.8	632.6	616.1	0.00	0.00	0.00	0.00	
5,926.4	0.00	0.00	5,845.0	655.2	638.1	3.00	-3.00	0.00	180.00	
6,831.4	0.00	0.00	6,750.0	655.2	638.1	0.00	0.00	0.00	0.00	Ant 21-18 PBHL

Database:	EDM 5000.1 US Multi Users DB	**Local Co-ordinate Reference:**	Well Ant 23-18
Company:	Bonanza Creek Energy Operating Company, LLC	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Project:	Weld County	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site:	Ant	**North Reference:**	True
Well:	Ant 23-18	**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	
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	
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	KOP @ 520'
600.0	2.40	44.24	600.0	1.2	1.2	1.7	3.00	3.00	
700.0	5.40	44.24	699.7	6.1	5.9	8.5	3.00	3.00	
800.0	8.40	44.24	799.0	14.7	14.3	20.5	3.00	3.00	
867.1	10.41	44.24	865.2	22.5	21.9	31.5	3.00	3.00	EOB; Inc=10.4°
900.0	10.41	44.24	897.6	26.8	26.1	37.4	0.00	0.00	
1,000.0	10.41	44.24	995.9	39.7	38.7	55.5	0.00	0.00	
1,100.0	10.41	44.24	1,094.3	52.7	51.3	73.5	0.00	0.00	
1,200.0	10.41	44.24	1,192.6	65.6	63.9	91.6	0.00	0.00	
1,300.0	10.41	44.24	1,291.0	78.6	76.5	109.7	0.00	0.00	
1,400.0	10.41	44.24	1,389.3	91.5	89.1	127.8	0.00	0.00	
1,500.0	10.41	44.24	1,487.7	104.5	101.8	145.8	0.00	0.00	
1,600.0	10.41	44.24	1,586.0	117.4	114.4	163.9	0.00	0.00	
1,700.0	10.41	44.24	1,684.4	130.4	127.0	182.0	0.00	0.00	
1,800.0	10.41	44.24	1,782.7	143.3	139.6	200.1	0.00	0.00	
1,900.0	10.41	44.24	1,881.1	156.3	152.2	218.1	0.00	0.00	
2,000.0	10.41	44.24	1,979.4	169.2	164.8	236.2	0.00	0.00	
2,100.0	10.41	44.24	2,077.8	182.2	177.4	254.3	0.00	0.00	
2,200.0	10.41	44.24	2,176.1	195.1	190.0	272.4	0.00	0.00	
2,300.0	10.41	44.24	2,274.5	208.1	202.6	290.4	0.00	0.00	
2,400.0	10.41	44.24	2,372.8	221.0	215.2	308.5	0.00	0.00	
2,500.0	10.41	44.24	2,471.2	233.9	227.8	326.6	0.00	0.00	
2,600.0	10.41	44.24	2,569.6	246.9	240.5	344.6	0.00	0.00	
2,700.0	10.41	44.24	2,667.9	259.8	253.1	362.7	0.00	0.00	
2,800.0	10.41	44.24	2,766.3	272.8	265.7	380.8	0.00	0.00	
2,900.0	10.41	44.24	2,864.6	285.7	278.3	398.9	0.00	0.00	
3,000.0	10.41	44.24	2,963.0	298.7	290.9	416.9	0.00	0.00	
3,100.0	10.41	44.24	3,061.3	311.6	303.5	435.0	0.00	0.00	
3,200.0	10.41	44.24	3,159.7	324.6	316.1	453.1	0.00	0.00	
3,300.0	10.41	44.24	3,258.0	337.5	328.7	471.2	0.00	0.00	
3,400.0	10.41	44.24	3,356.4	350.5	341.3	489.2	0.00	0.00	
3,500.0	10.41	44.24	3,454.7	363.4	353.9	507.3	0.00	0.00	
3,600.0	10.41	44.24	3,553.1	376.4	366.6	525.4	0.00	0.00	
3,700.0	10.41	44.24	3,651.4	389.3	379.2	543.4	0.00	0.00	
3,800.0	10.41	44.24	3,749.8	402.3	391.8	561.5	0.00	0.00	
3,900.0	10.41	44.24	3,848.1	415.2	404.4	579.6	0.00	0.00	
4,000.0	10.41	44.24	3,946.5	428.2	417.0	597.7	0.00	0.00	
4,100.0	10.41	44.24	4,044.9	441.1	429.6	615.7	0.00	0.00	
4,200.0	10.41	44.24	4,143.2	454.1	442.2	633.8	0.00	0.00	
4,300.0	10.41	44.24	4,241.6	467.0	454.8	651.9	0.00	0.00	
4,400.0	10.41	44.24	4,339.9	479.9	467.4	670.0	0.00	0.00	
4,500.0	10.41	44.24	4,438.3	492.9	480.0	688.0	0.00	0.00	
4,600.0	10.41	44.24	4,536.6	505.8	492.7	706.1	0.00	0.00	
4,700.0	10.41	44.24	4,635.0	518.8	505.3	724.2	0.00	0.00	
4,800.0	10.41	44.24	4,733.3	531.7	517.9	742.2	0.00	0.00	
4,900.0	10.41	44.24	4,831.7	544.7	530.5	760.3	0.00	0.00	

Database:	EDM 5000.1 US Multi Users DB	**Local Co-ordinate Reference:**	Well Ant 23-18
Company:	Bonanza Creek Energy Operating Company, LLC	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Project:	Weld County	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site:	Ant	**North Reference:**	True
Well:	Ant 23-18	**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
5,000.0	10.41	44.24	4,930.0	557.6	543.1	778.4	0.00	0.00	
5,100.0	10.41	44.24	5,028.4	570.6	555.7	796.5	0.00	0.00	
5,200.0	10.41	44.24	5,126.7	583.5	568.3	814.5	0.00	0.00	
5,300.0	10.41	44.24	5,225.1	596.5	580.9	832.6	0.00	0.00	
5,400.0	10.41	44.24	5,323.4	609.4	593.5	850.7	0.00	0.00	
5,500.0	10.41	44.24	5,421.8	622.4	606.1	868.8	0.00	0.00	
5,579.3	10.41	44.24	5,499.8	632.6	616.1	883.1	0.00	0.00	Start Drop -3.00
5,600.0	9.79	44.24	5,520.2	635.2	618.7	886.7	3.00	-3.00	
5,700.0	6.79	44.24	5,619.1	645.6	628.7	901.1	3.00	-3.00	
5,800.0	3.79	44.24	5,718.7	652.2	635.2	910.4	3.00	-3.00	
5,900.0	0.79	44.24	5,818.6	655.0	638.0	914.4	3.00	-3.00	
5,926.4	0.00	0.00	5,845.0	655.2	638.1	914.5	3.00	-3.00	EOD; Inc=0°
6,000.0	0.00	0.00	5,918.6	655.2	638.1	914.5	0.00	0.00	
6,100.0	0.00	0.00	6,018.6	655.2	638.1	914.5	0.00	0.00	
6,200.0	0.00	0.00	6,118.6	655.2	638.1	914.5	0.00	0.00	
6,300.0	0.00	0.00	6,218.6	655.2	638.1	914.5	0.00	0.00	
6,326.4	0.00	0.00	6,245.0	655.2	638.1	914.5	0.00	0.00	Top of Niobrara
6,400.0	0.00	0.00	6,318.6	655.2	638.1	914.5	0.00	0.00	
6,500.0	0.00	0.00	6,418.6	655.2	638.1	914.5	0.00	0.00	
6,600.0	0.00	0.00	6,518.6	655.2	638.1	914.5	0.00	0.00	
6,700.0	0.00	0.00	6,618.6	655.2	638.1	914.5	0.00	0.00	
6,800.0	0.00	0.00	6,718.6	655.2	638.1	914.5	0.00	0.00	
6,831.4	0.00	0.00	6,750.0	655.2	638.1	914.5	0.00	0.00	TD at 6831.4 - Ant 21-18 PBHL

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
Ant 21-18 PBHL - plan hits target center - Point	0.00	0.00	6,750.0	655.2	638.1	1,389,533.17	3,315,250.05	40.397140	-104.368126

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,326.4	6,245.0	Top of Niobrara		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
520.0	520.0	0.0	0.0	KOP @ 520'
867.1	865.2	22.5	21.9	EOB; Inc=10.4°
5,579.3	5,499.8	632.6	616.1	Start Drop -3.00
5,926.4	5,845.0	655.2	638.1	EOD; Inc=0°
6,831.4	6,750.0	655.2	638.1	TD at 6831.4

Bonanza Creek Energy Operating Company, LLC

Weld County
Ant
Ant 23-18
DD
Plan #1

Anticollision Report

08 June, 2010

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Ant 23-18
Project:	Weld County	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Reference Site:	Ant	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ant 23-18	**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** 6/8/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	6,831.4	Plan #1 (DD)	MWD	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
Ant						
Ant 13-18 - DD - Plan #1	0.0	0.0	39.4			
Ant 13-18 - DD - Plan #1	520.0	520.0	39.4	39.4	10,000.000	CC, ES
Ant 14-18 - DD - Plan #1	0.0	0.0	52.5			
Ant 14-18 - DD - Plan #1	520.0	520.0	52.5	52.5	10,000.000	CC, ES
Ant 18C - DD - Plan #1	0.0	0.0	26.3			
Ant 18C - DD - Plan #1	520.0	520.0	26.3	26.3	10,000.000	CC, ES
Ant 24-18 - DD - Plan #1	0.0	0.0	13.1			
Ant 24-18 - DD - Plan #1	543.3	543.4	13.1	13.1	10,000.000	CC, ES

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Ant 23-18
Project:	Weld County	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Reference Site:	Ant	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ant 23-18	**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

Offset Design Ant - Ant 13-18 - DD - 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	-89.56	0.3	-39.4	39.4				
100.0	100.0	100.0	100.0	0.0	0.0	-89.56	0.3	-39.4	39.4	39.4	0.00	N/A	
200.0	200.0	200.0	200.0	0.0	0.0	-89.56	0.3	-39.4	39.4	39.4	0.00	N/A	
300.0	300.0	300.0	300.0	0.0	0.0	-89.56	0.3	-39.4	39.4	39.4	0.00	N/A	
400.0	400.0	400.0	400.0	0.0	0.0	-89.56	0.3	-39.4	39.4	39.4	0.00	N/A	
500.0	500.0	500.0	500.0	0.0	0.0	-89.56	0.3	-39.4	39.4	39.4	0.00	N/A	
520.0	520.0	520.0	520.0	0.0	0.0	-89.56	0.3	-39.4	39.4	39.4	0.00	N/A	CC, ES
600.0	600.0	598.8	598.8	0.0	0.0	-133.79	1.5	-40.5	41.7	41.7	0.00	N/A	
700.0	699.7	696.7	696.4	0.0	0.0	-133.74	6.2	-45.1	51.1	51.1	0.00	N/A	
800.0	799.0	793.2	792.3	0.0	0.0	-133.62	14.3	-52.9	67.6	67.6	0.00	N/A	
867.1	865.2	856.9	855.1	0.0	0.0	-133.48	21.6	-60.0	82.5	82.5	0.00	N/A	
900.0	897.6	888.3	886.1	0.0	0.0	-133.49	25.7	-63.9	90.8	90.8	0.00	N/A	

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Ant 23-18
Project:	Weld County	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Reference Site:	Ant	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ant 23-18	**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

Offset Design Ant - Ant 14-18 - DD - 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	-89.56	0.4	-52.5	52.5				
100.0	100.0	100.0	100.0	0.0	0.0	-89.56	0.4	-52.5	52.5	52.5	0.00	N/A	
200.0	200.0	200.0	200.0	0.0	0.0	-89.56	0.4	-52.5	52.5	52.5	0.00	N/A	
300.0	300.0	300.0	300.0	0.0	0.0	-89.56	0.4	-52.5	52.5	52.5	0.00	N/A	
400.0	400.0	400.0	400.0	0.0	0.0	-89.56	0.4	-52.5	52.5	52.5	0.00	N/A	
500.0	500.0	500.0	500.0	0.0	0.0	-89.56	0.4	-52.5	52.5	52.5	0.00	N/A	
520.0	520.0	520.0	520.0	0.0	0.0	-89.56	0.4	-52.5	52.5	52.5	0.00	N/A	CC, ES
600.0	600.0	598.4	598.3	0.0	0.0	-136.21	-0.7	-53.6	54.9	54.9	0.00	N/A	
700.0	699.7	695.1	694.9	0.0	0.0	-144.00	-5.3	-58.1	65.2	65.2	0.00	N/A	
800.0	799.0	789.1	788.2	0.0	0.0	-152.69	-13.2	-65.7	85.4	85.4	0.00	N/A	

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Ant 23-18
Project:	Weld County	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Reference Site:	Ant	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ant 23-18	**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

Offset Design Ant - Ant 18C - DD - 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	-89.55	0.2	-26.3	26.3				
100.0	100.0	100.0	100.0	0.0	0.0	-89.55	0.2	-26.3	26.3	26.3	0.00	N/A	
200.0	200.0	200.0	200.0	0.0	0.0	-89.55	0.2	-26.3	26.3	26.3	0.00	N/A	
300.0	300.0	300.0	300.0	0.0	0.0	-89.55	0.2	-26.3	26.3	26.3	0.00	N/A	
400.0	400.0	400.0	400.0	0.0	0.0	-89.55	0.2	-26.3	26.3	26.3	0.00	N/A	
500.0	500.0	500.0	500.0	0.0	0.0	-89.55	0.2	-26.3	26.3	26.3	0.00	N/A	
520.0	520.0	520.0	520.0	0.0	0.0	-89.55	0.2	-26.3	26.3	26.3	0.00	N/A	CC, ES
600.0	600.0	600.0	600.0	0.0	0.0	-136.29	0.2	-26.3	27.4	27.4	0.00	N/A	
700.0	699.7	699.7	699.7	0.0	0.0	-144.45	0.2	-26.3	32.7	32.7	0.00	N/A	
800.0	799.0	799.0	799.0	0.0	0.0	-153.64	0.2	-26.3	43.1	43.1	0.00	N/A	
867.1	865.2	865.2	865.2	0.0	0.0	-158.77	0.2	-26.3	53.1	53.1	0.00	N/A	
900.0	897.6	897.6	897.6	0.0	0.0	-160.87	0.2	-26.3	58.7	58.7	0.00	N/A	
1,000.0	995.9	995.9	995.9	0.0	0.0	-165.33	0.2	-26.3	76.0	76.0	0.00	N/A	
1,100.0	1,094.3	1,094.3	1,094.3	0.0	0.0	-168.13	0.2	-26.3	93.7	93.7	0.00	N/A	

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Ant 23-18
Project:	Weld County	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Reference Site:	Ant	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ant 23-18	**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

Offset Design Ant - Ant 24-18 - DD - 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	-89.52	0.1	-13.1	13.1				
100.0	100.0	100.0	100.0	0.0	0.0	-89.52	0.1	-13.1	13.1	13.1	0.00	N/A	
200.0	200.0	200.0	200.0	0.0	0.0	-89.52	0.1	-13.1	13.1	13.1	0.00	N/A	
300.0	300.0	300.0	300.0	0.0	0.0	-89.52	0.1	-13.1	13.1	13.1	0.00	N/A	
400.0	400.0	400.0	400.0	0.0	0.0	-89.52	0.1	-13.1	13.1	13.1	0.00	N/A	
500.0	500.0	500.0	500.0	0.0	0.0	-89.52	0.1	-13.1	13.1	13.1	0.00	N/A	
520.0	520.0	520.0	520.0	0.0	0.0	-89.52	0.1	-13.1	13.1	13.1	0.00	N/A	
543.3	543.3	543.4	543.4	0.0	0.0	-134.66	0.0	-13.0	13.1	13.1	0.00	N/A	CC, ES
600.0	600.0	600.3	600.3	0.0	0.0	-144.21	-1.1	-12.0	13.3	13.3	0.00	N/A	
700.0	699.7	700.0	699.8	0.0	0.0	-176.75	-6.0	-7.2	17.8	17.8	0.00	N/A	
800.0	799.0	798.3	797.3	0.0	0.0	160.06	-14.4	0.9	32.1	32.1	0.00	N/A	
867.1	865.2	862.9	861.1	0.0	0.0	152.09	-22.0	8.2	46.8	46.8	0.00	N/A	
900.0	897.6	894.6	892.3	0.0	0.0	149.53	-26.1	12.2	55.0	55.0	0.00	N/A	
1,000.0	995.9	991.2	987.2	0.0	0.0	144.93	-38.8	24.5	80.3	80.3	0.00	N/A	

Company:	Bonanza Creek Energy Operating Company, LLC	**Local Co-ordinate Reference:**	Well Ant 23-18
Project:	Weld County	**TVD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Reference Site:	Ant	**MD Reference:**	WELL @ 4615.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ant 23-18	**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 @ 4615.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °
Coordinates are relative to: Ant 23-18
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.73°