

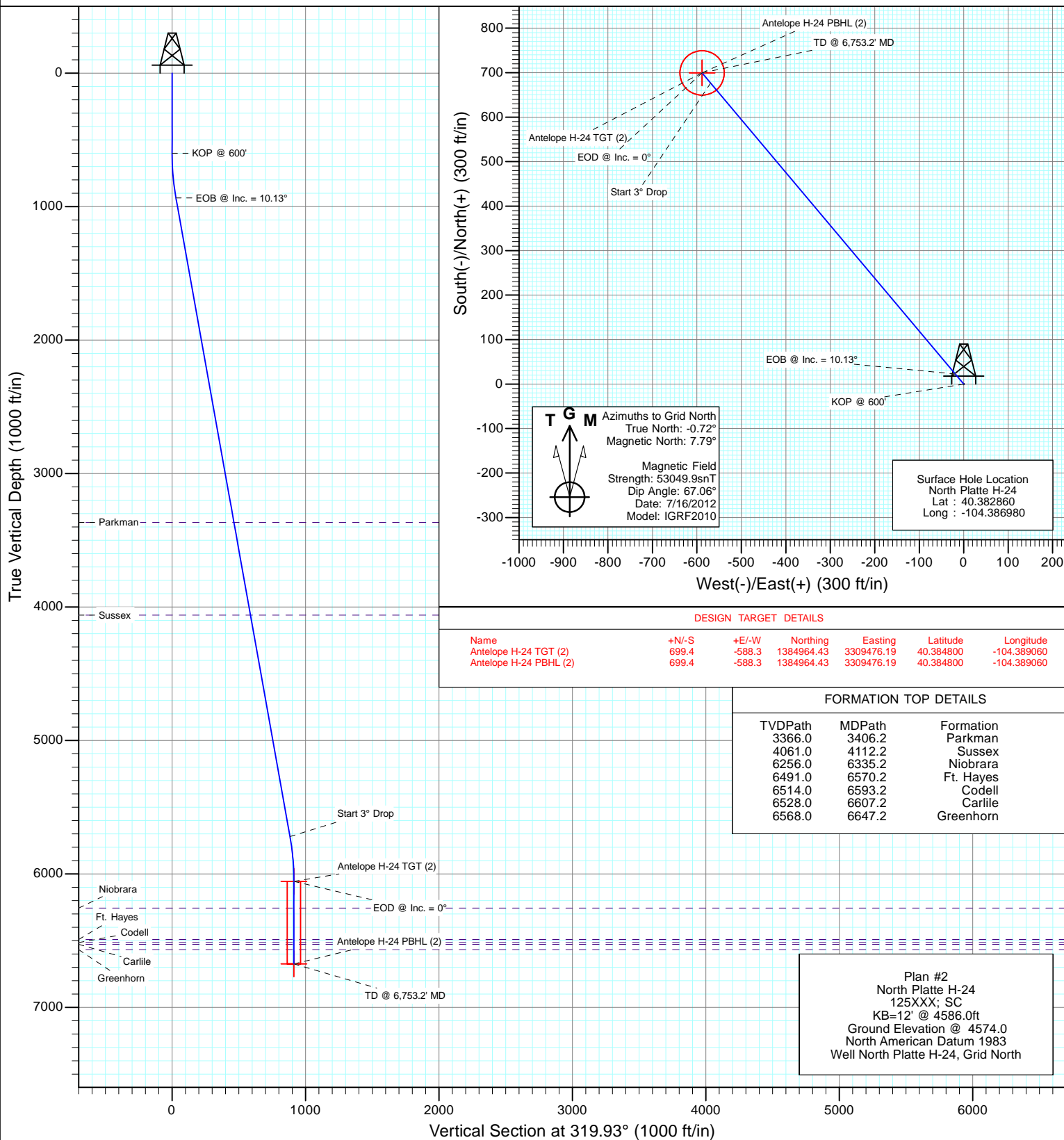


Project: Weld County  
Site: North Platte 23-24 Pad  
Well: North Platte H-24  
Wellbore: OH  
Design: Plan #2



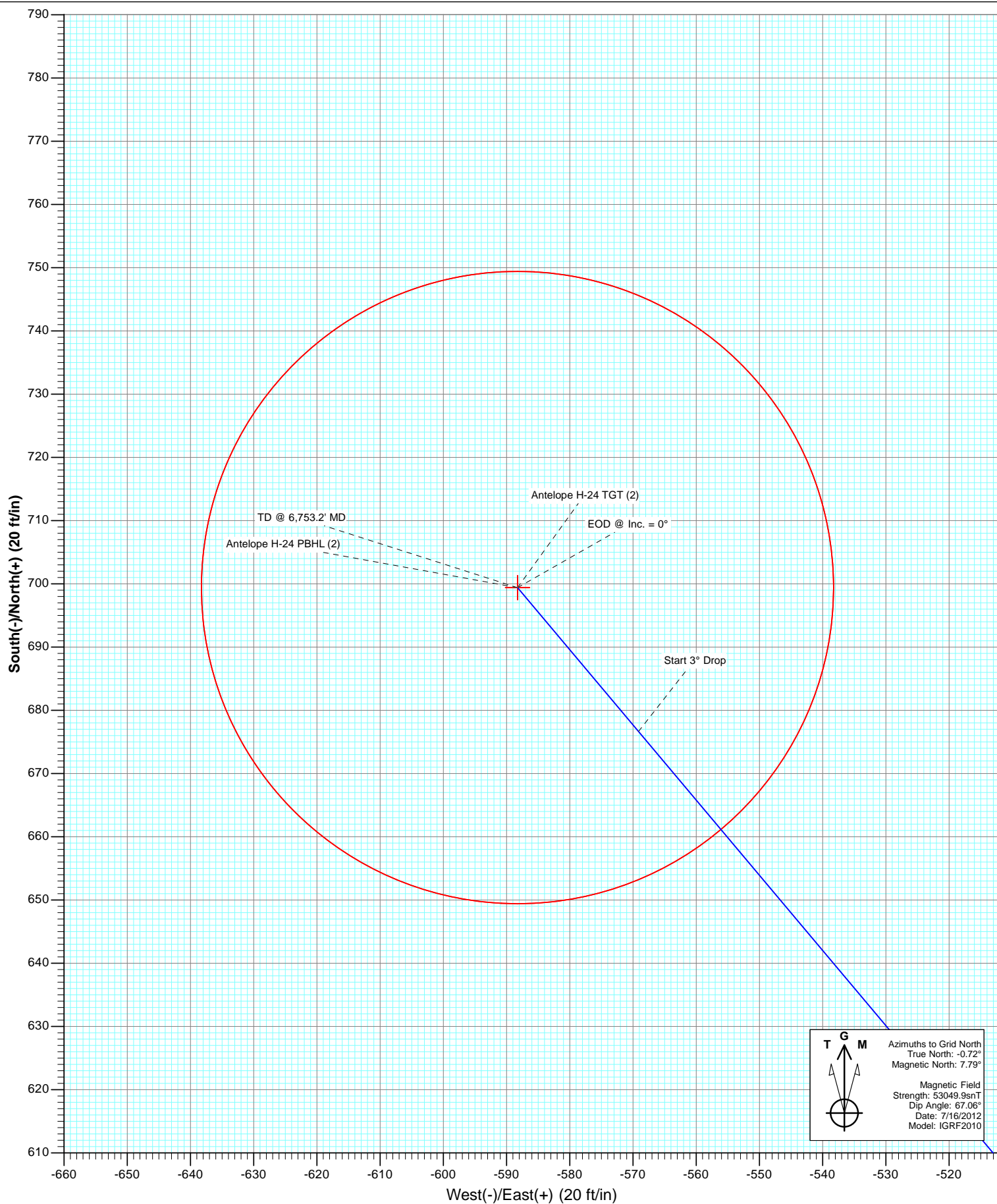
#### SECTION DETAILS

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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	937.5	10.13	319.93	935.8	22.8	-19.1	3.00	319.93	29.7	
4	5797.7	10.13	319.93	5720.2	676.7	-569.1	0.00	0.00	884.2	
5	6135.2	0.00	0.00	6056.0	699.4	-588.3	3.00	180.00	913.9	Antelope H-24 TGT (2)
6	6753.2	0.00	0.00	6674.0	699.4	-588.3	0.00	0.00	913.9	Antelope H-24 PBHL (2)





Project: Weld County  
Site: North Platte 23-24 Pad  
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Wellbore: OH  
Plan: Plan #2



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well North Platte H-24
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB=12' @ 4586.0ft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB=12' @ 4586.0ft
<b>Site:</b>	North Platte 23-24 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	North Platte H-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

<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		North Platte 23-24 Pad			
Site Position:		Northing:	1,384,257.32 ft	Latitude:	40.382840
From:	Lat/Long	Easting:	3,310,031.11 ft	Longitude:	-104.387100
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.72 °

Well	North Platte H-24					
Well Position	+N/-S	0.0 ft	Northing:	1,384,265.02 ft	Latitude:	40.382860
	+E/-W	0.0 ft	Easting:	3,310,064.45 ft	Longitude:	-104.386980
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,574.0 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010	7/16/2012	8.51	67.06	53,050

<b>Design</b>	Plan #2			
<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	319.93

<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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
937.5	10.13	319.93	935.8	22.8	-19.1	3.00	3.00	0.00	319.93	
5,797.7	10.13	319.93	5,720.2	676.7	-569.1	0.00	0.00	0.00	0.00	
6,135.2	0.00	0.00	6,056.0	699.4	-588.3	3.00	-3.00	0.00	180.00	Antelope H-24 TGT (2
6,753.2	0.00	0.00	6,674.0	699.4	-588.3	0.00	0.00	0.00	0.00	Antelope H-24 PBHL

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## Planning Report

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<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB=12' @ 4586.0ft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB=12' @ 4586.0ft
<b>Site:</b>	North Platte 23-24 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	North Platte H-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

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	319.93	700.0	2.0	-1.7	2.6	3.00	3.00	
800.0	6.00	319.93	799.6	8.0	-6.7	10.5	3.00	3.00	
900.0	9.00	319.93	898.8	18.0	-15.1	23.5	3.00	3.00	
937.5	10.13	319.93	935.8	22.8	-19.1	29.7	3.00	3.00	EOB @ Inc. = 10.13°
1,000.0	10.13	319.93	997.3	31.2	-26.2	40.7	0.00	0.00	
1,100.0	10.13	319.93	1,095.7	44.6	-37.5	58.3	0.00	0.00	
1,200.0	10.13	319.93	1,194.2	58.1	-48.8	75.9	0.00	0.00	
1,300.0	10.13	319.93	1,292.6	71.5	-60.2	93.5	0.00	0.00	
1,400.0	10.13	319.93	1,391.0	85.0	-71.5	111.1	0.00	0.00	
1,500.0	10.13	319.93	1,489.5	98.4	-82.8	128.6	0.00	0.00	
1,600.0	10.13	319.93	1,587.9	111.9	-94.1	146.2	0.00	0.00	
1,700.0	10.13	319.93	1,686.4	125.3	-105.4	163.8	0.00	0.00	
1,800.0	10.13	319.93	1,784.8	138.8	-116.7	181.4	0.00	0.00	
1,900.0	10.13	319.93	1,883.3	152.3	-128.1	199.0	0.00	0.00	
2,000.0	10.13	319.93	1,981.7	165.7	-139.4	216.5	0.00	0.00	
2,100.0	10.13	319.93	2,080.1	179.2	-150.7	234.1	0.00	0.00	
2,200.0	10.13	319.93	2,178.6	192.6	-162.0	251.7	0.00	0.00	
2,300.0	10.13	319.93	2,277.0	206.1	-173.3	269.3	0.00	0.00	
2,400.0	10.13	319.93	2,375.5	219.5	-184.6	286.9	0.00	0.00	
2,500.0	10.13	319.93	2,473.9	233.0	-196.0	304.4	0.00	0.00	
2,600.0	10.13	319.93	2,572.4	246.4	-207.3	322.0	0.00	0.00	
2,700.0	10.13	319.93	2,670.8	259.9	-218.6	339.6	0.00	0.00	
2,800.0	10.13	319.93	2,769.2	273.3	-229.9	357.2	0.00	0.00	
2,900.0	10.13	319.93	2,867.7	286.8	-241.2	374.8	0.00	0.00	
3,000.0	10.13	319.93	2,966.1	300.3	-252.5	392.3	0.00	0.00	
3,100.0	10.13	319.93	3,064.6	313.7	-263.8	409.9	0.00	0.00	
3,200.0	10.13	319.93	3,163.0	327.2	-275.2	427.5	0.00	0.00	
3,300.0	10.13	319.93	3,261.5	340.6	-286.5	445.1	0.00	0.00	
3,400.0	10.13	319.93	3,359.9	354.1	-297.8	462.7	0.00	0.00	
3,406.2	10.13	319.93	3,366.0	354.9	-298.5	463.7	0.00	0.00	Parkman
3,500.0	10.13	319.93	3,458.3	367.5	-309.1	480.2	0.00	0.00	
3,600.0	10.13	319.93	3,556.8	381.0	-320.4	497.8	0.00	0.00	
3,700.0	10.13	319.93	3,655.2	394.4	-331.7	515.4	0.00	0.00	
3,800.0	10.13	319.93	3,753.7	407.9	-343.1	533.0	0.00	0.00	
3,900.0	10.13	319.93	3,852.1	421.3	-354.4	550.6	0.00	0.00	
4,000.0	10.13	319.93	3,950.6	434.8	-365.7	568.1	0.00	0.00	
4,100.0	10.13	319.93	4,049.0	448.2	-377.0	585.7	0.00	0.00	
4,112.2	10.13	319.93	4,061.0	449.9	-378.4	587.9	0.00	0.00	Sussex
4,200.0	10.13	319.93	4,147.4	461.7	-388.3	603.3	0.00	0.00	
4,300.0	10.13	319.93	4,245.9	475.2	-399.6	620.9	0.00	0.00	
4,400.0	10.13	319.93	4,344.3	488.6	-411.0	638.5	0.00	0.00	
4,500.0	10.13	319.93	4,442.8	502.1	-422.3	656.0	0.00	0.00	
4,600.0	10.13	319.93	4,541.2	515.5	-433.6	673.6	0.00	0.00	
4,700.0	10.13	319.93	4,639.6	529.0	-444.9	691.2	0.00	0.00	
4,800.0	10.13	319.93	4,738.1	542.4	-456.2	708.8	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well North Platte H-24
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB=12' @ 4586.0ft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB=12' @ 4586.0ft
<b>Site:</b>	North Platte 23-24 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	North Platte H-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

### 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	10.13	319.93	4,836.5	555.9	-467.5	726.4	0.00	0.00	
5,000.0	10.13	319.93	4,935.0	569.3	-478.8	743.9	0.00	0.00	
5,100.0	10.13	319.93	5,033.4	582.8	-490.2	761.5	0.00	0.00	
5,200.0	10.13	319.93	5,131.9	596.2	-501.5	779.1	0.00	0.00	
5,300.0	10.13	319.93	5,230.3	609.7	-512.8	796.7	0.00	0.00	
5,400.0	10.13	319.93	5,328.7	623.1	-524.1	814.3	0.00	0.00	
5,500.0	10.13	319.93	5,427.2	636.6	-535.4	831.8	0.00	0.00	
5,600.0	10.13	319.93	5,525.6	650.1	-546.7	849.4	0.00	0.00	
5,700.0	10.13	319.93	5,624.1	663.5	-558.1	867.0	0.00	0.00	
5,797.7	10.13	319.93	5,720.2	676.7	-569.1	884.2	0.00	0.00	Start 3° Drop
5,800.0	10.06	319.93	5,722.5	677.0	-569.4	884.6	3.00	-3.00	
5,900.0	7.06	319.93	5,821.4	688.3	-578.9	899.4	3.00	-3.00	
6,000.0	4.06	319.93	5,920.9	695.8	-585.2	909.1	3.00	-3.00	
6,100.0	1.06	319.93	6,020.8	699.2	-588.0	913.6	3.00	-3.00	
6,135.2	0.00	0.00	6,056.0	699.4	-588.3	913.9	3.00	-3.00	EOD @ Inc. = 0°
6,200.0	0.00	0.00	6,120.8	699.4	-588.3	913.9	0.00	0.00	
6,300.0	0.00	0.00	6,220.8	699.4	-588.3	913.9	0.00	0.00	
6,335.2	0.00	0.00	6,256.0	699.4	-588.3	913.9	0.00	0.00	Niobrara
6,400.0	0.00	0.00	6,320.8	699.4	-588.3	913.9	0.00	0.00	
6,500.0	0.00	0.00	6,420.8	699.4	-588.3	913.9	0.00	0.00	
6,570.2	0.00	0.00	6,491.0	699.4	-588.3	913.9	0.00	0.00	Ft. Hayes
6,593.2	0.00	0.00	6,514.0	699.4	-588.3	913.9	0.00	0.00	Codell
6,600.0	0.00	0.00	6,520.8	699.4	-588.3	913.9	0.00	0.00	
6,607.2	0.00	0.00	6,528.0	699.4	-588.3	913.9	0.00	0.00	Carlile
6,647.2	0.00	0.00	6,568.0	699.4	-588.3	913.9	0.00	0.00	Greenhorn
6,700.0	0.00	0.00	6,620.8	699.4	-588.3	913.9	0.00	0.00	
6,753.2	0.00	0.00	6,674.0	699.4	-588.3	913.9	0.00	0.00	TD @ 6,753.2' 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 H-24 TGT	0.00	0.00	6,056.0	699.1	-613.3	1,384,964.12	3,309,451.12	40.384800	-104.389150
- plan misses target center by 25.1ft at 6135.2ft MD (6056.0 TVD, 699.4 N, -588.3 E)									
- Point									
Antelope H-24 PBHL	0.00	0.00	6,674.0	699.1	-613.3	1,384,964.12	3,309,451.12	40.384800	-104.389150
- plan misses target center by 25.1ft at 6753.2ft MD (6674.0 TVD, 699.4 N, -588.3 E)									
- Circle (radius 50.0)									
Antelope H-24 PBHL (2)	0.00	0.00	6,674.0	699.4	-588.3	1,384,964.43	3,309,476.19	40.384800	-104.389060
- plan hits target center									
- Circle (radius 50.0)									
Antelope H-24 TGT (2)	0.00	0.00	6,056.0	699.4	-588.3	1,384,964.43	3,309,476.19	40.384800	-104.389060
- plan hits target center									
- Point									

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<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB=12' @ 4586.0ft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB=12' @ 4586.0ft
<b>Site:</b>	North Platte 23-24 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	North Platte H-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,406.2	3,366.0	Parkman				
4,112.2	4,061.0	Sussex				
6,335.2	6,256.0	Niobrara				
6,570.2	6,491.0	Ft. Hayes				
6,593.2	6,514.0	Codell				
6,607.2	6,528.0	Carlile				
6,647.2	6,568.0	Greenhorn				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.0	600.0	0.0	0.0	KOP @ 600'
937.5	935.8	22.8	-19.1	EOB @ Inc. = 10.13°
5,797.7	5,720.2	676.7	-569.1	Start 3° Drop
6,135.2	6,056.0	699.4	-588.3	EOD @ Inc. = 0°
6,753.2	6,674.0	699.4	-588.3	TD @ 6,753.2' MD