

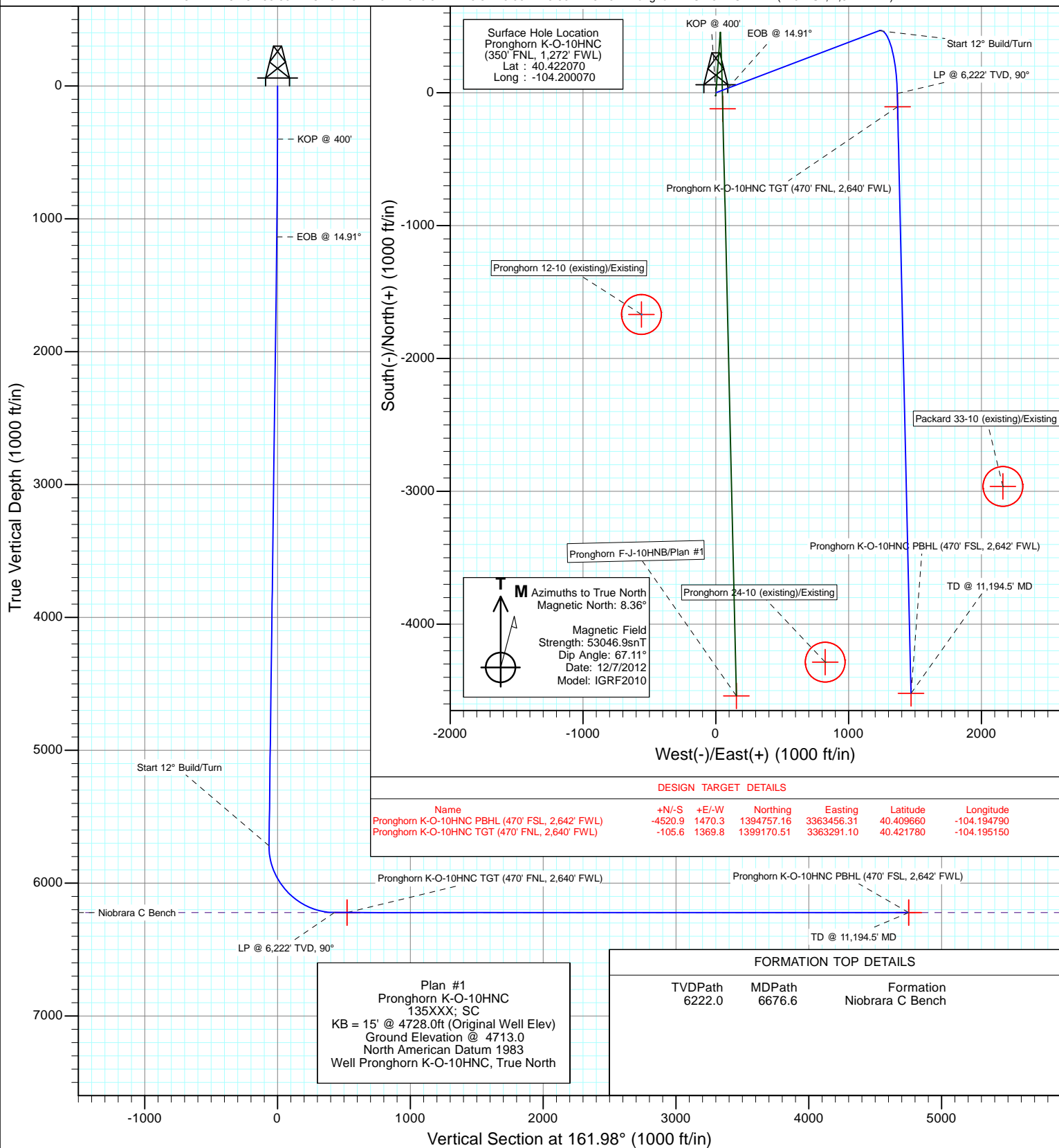


Project: Weld County  
Site: Pronghorn F-10 Pad  
Well: Pronghorn K-O-10HNC  
Wellbore: OH  
Design: Plan #1



#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1145.3	14.91	69.22	1137.0	34.2	90.1	2.00	69.22	-4.7	
4	5887.1	14.91	69.22	5719.2	467.0	1230.6	0.00	0.00	-63.5	
5	6678.1	90.00	178.70	6222.0	-5.7	1367.6	12.00	108.87	428.4	
6	11194.5	90.00	178.70	6222.0	-4520.9	1470.3	0.00	0.00	4754.0	Pronghorn K-O-10HNC PBHL (470' FSL, 2,642' FWL)



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn F-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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		Pronghorn F-10 Pad			
Site Position:		Northing:	1,399,256.02 ft	Latitude:	40.422070
From:	Lat/Long	Easting:	3,361,919.87 ft	Longitude:	-104.200070
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.84 °

Well	Pronghorn K-O-10HNC					
Well Position	+N/-S	0.0 ft	Northing:	1,399,256.02 ft	Latitude:	40.422070
	+E/-W	0.0 ft	Easting:	3,361,919.87 ft	Longitude:	-104.200070
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,713.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/7/2012	8.36	67.11	53,047

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	161.98

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,145.3	14.91	69.22	1,137.0	34.2	90.1	2.00	2.00	0.00	69.22	
5,887.1	14.91	69.22	5,719.2	467.0	1,230.6	0.00	0.00	0.00	0.00	
6,678.1	90.00	178.70	6,222.0	-5.7	1,367.6	12.00	9.49	13.84	108.87	
11,194.5	90.00	178.70	6,222.0	-4,520.9	1,470.3	0.00	0.00	0.00	0.00	Pronghorn K-O-10HN

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn F-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	KOP @ 400'
500.0	2.00	69.22	500.0	0.6	1.6	-0.1	2.00	2.00	
600.0	4.00	69.22	599.8	2.5	6.5	-0.3	2.00	2.00	
700.0	6.00	69.22	699.5	5.6	14.7	-0.8	2.00	2.00	
800.0	8.00	69.22	798.7	9.9	26.1	-1.3	2.00	2.00	
900.0	10.00	69.22	897.5	15.4	40.7	-2.1	2.00	2.00	
1,000.0	12.00	69.22	995.6	22.2	58.5	-3.0	2.00	2.00	
1,100.0	14.00	69.22	1,093.1	30.2	79.6	-4.1	2.00	2.00	
1,145.3	14.91	69.22	1,137.0	34.2	90.1	-4.7	2.00	2.00	EOB @ 14.91°
1,200.0	14.91	69.22	1,189.8	39.2	103.3	-5.3	0.00	0.00	
1,300.0	14.91	69.22	1,286.4	48.3	127.3	-6.6	0.00	0.00	
1,400.0	14.91	69.22	1,383.0	57.5	151.4	-7.8	0.00	0.00	
1,500.0	14.91	69.22	1,479.7	66.6	175.4	-9.1	0.00	0.00	
1,600.0	14.91	69.22	1,576.3	75.7	199.5	-10.3	0.00	0.00	
1,700.0	14.91	69.22	1,673.0	84.8	223.5	-11.5	0.00	0.00	
1,800.0	14.91	69.22	1,769.6	94.0	247.6	-12.8	0.00	0.00	
1,900.0	14.91	69.22	1,866.2	103.1	271.6	-14.0	0.00	0.00	
2,000.0	14.91	69.22	1,962.9	112.2	295.7	-15.3	0.00	0.00	
2,100.0	14.91	69.22	2,059.5	121.4	319.7	-16.5	0.00	0.00	
2,200.0	14.91	69.22	2,156.1	130.5	343.8	-17.8	0.00	0.00	
2,300.0	14.91	69.22	2,252.8	139.6	367.8	-19.0	0.00	0.00	
2,400.0	14.91	69.22	2,349.4	148.7	391.9	-20.2	0.00	0.00	
2,500.0	14.91	69.22	2,446.0	157.9	415.9	-21.5	0.00	0.00	
2,600.0	14.91	69.22	2,542.7	167.0	440.0	-22.7	0.00	0.00	
2,700.0	14.91	69.22	2,639.3	176.1	464.0	-24.0	0.00	0.00	
2,800.0	14.91	69.22	2,735.9	185.2	488.1	-25.2	0.00	0.00	
2,900.0	14.91	69.22	2,832.6	194.4	512.1	-26.4	0.00	0.00	
3,000.0	14.91	69.22	2,929.2	203.5	536.2	-27.7	0.00	0.00	
3,100.0	14.91	69.22	3,025.8	212.6	560.2	-28.9	0.00	0.00	
3,200.0	14.91	69.22	3,122.5	221.8	584.3	-30.2	0.00	0.00	
3,300.0	14.91	69.22	3,219.1	230.9	608.3	-31.4	0.00	0.00	
3,400.0	14.91	69.22	3,315.7	240.0	632.4	-32.7	0.00	0.00	
3,500.0	14.91	69.22	3,412.4	249.1	656.5	-33.9	0.00	0.00	
3,600.0	14.91	69.22	3,509.0	258.3	680.5	-35.1	0.00	0.00	
3,700.0	14.91	69.22	3,605.6	267.4	704.6	-36.4	0.00	0.00	
3,800.0	14.91	69.22	3,702.3	276.5	728.6	-37.6	0.00	0.00	
3,900.0	14.91	69.22	3,798.9	285.7	752.7	-38.9	0.00	0.00	
4,000.0	14.91	69.22	3,895.5	294.8	776.7	-40.1	0.00	0.00	
4,100.0	14.91	69.22	3,992.2	303.9	800.8	-41.3	0.00	0.00	
4,200.0	14.91	69.22	4,088.8	313.0	824.8	-42.6	0.00	0.00	
4,300.0	14.91	69.22	4,185.5	322.2	848.9	-43.8	0.00	0.00	
4,400.0	14.91	69.22	4,282.1	331.3	872.9	-45.1	0.00	0.00	
4,500.0	14.91	69.22	4,378.7	340.4	897.0	-46.3	0.00	0.00	
4,600.0	14.91	69.22	4,475.4	349.6	921.0	-47.6	0.00	0.00	
4,700.0	14.91	69.22	4,572.0	358.7	945.1	-48.8	0.00	0.00	
4,800.0	14.91	69.22	4,668.6	367.8	969.1	-50.0	0.00	0.00	
4,900.0	14.91	69.22	4,765.3	376.9	993.2	-51.3	0.00	0.00	
5,000.0	14.91	69.22	4,861.9	386.1	1,017.2	-52.5	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 Pronghorn K-O-10HNC
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn F-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
5,100.0	14.91	69.22	4,958.5	395.2	1,041.3	-53.8	0.00	0.00	
5,200.0	14.91	69.22	5,055.2	404.3	1,065.3	-55.0	0.00	0.00	
5,300.0	14.91	69.22	5,151.8	413.4	1,089.4	-56.3	0.00	0.00	
5,400.0	14.91	69.22	5,248.4	422.6	1,113.4	-57.5	0.00	0.00	
5,500.0	14.91	69.22	5,345.1	431.7	1,137.5	-58.7	0.00	0.00	
5,600.0	14.91	69.22	5,441.7	440.8	1,161.5	-60.0	0.00	0.00	
5,700.0	14.91	69.22	5,538.3	450.0	1,185.6	-61.2	0.00	0.00	
5,800.0	14.91	69.22	5,635.0	459.1	1,209.6	-62.5	0.00	0.00	
5,887.1	14.91	69.22	5,719.2	467.0	1,230.6	-63.5	0.00	0.00	Start 12° Build/Turn
5,900.0	14.48	75.07	5,731.6	468.0	1,233.7	-63.5	12.00	-3.32	
5,925.0	14.09	87.15	5,755.9	469.0	1,239.7	-62.6	12.00	-1.54	
5,950.0	14.33	99.36	5,780.1	468.6	1,245.8	-60.4	12.00	0.93	
5,975.0	15.15	110.72	5,804.3	467.0	1,251.9	-56.9	12.00	3.29	
6,000.0	16.47	120.62	5,828.3	464.0	1,258.0	-52.2	12.00	5.30	
6,025.0	18.19	128.89	5,852.2	459.8	1,264.1	-46.3	12.00	6.87	
6,050.0	20.20	135.68	5,875.8	454.2	1,270.2	-39.1	12.00	8.04	
6,075.0	22.42	141.23	5,899.1	447.4	1,276.2	-30.8	12.00	8.89	
6,100.0	24.80	145.80	5,922.0	439.4	1,282.1	-21.3	12.00	9.52	
6,125.0	27.30	149.60	5,944.5	430.1	1,288.0	-10.6	12.00	9.98	
6,150.0	29.88	152.79	5,966.4	419.6	1,293.7	1.1	12.00	10.33	
6,175.0	32.53	155.52	5,987.8	407.9	1,299.4	13.9	12.00	10.59	
6,200.0	35.22	157.88	6,008.6	395.1	1,304.9	27.8	12.00	10.79	
6,225.0	37.96	159.93	6,028.6	381.2	1,310.2	42.7	12.00	10.95	
6,250.0	40.73	161.75	6,048.0	366.3	1,315.4	58.5	12.00	11.08	
6,275.0	43.53	163.38	6,066.5	350.3	1,320.4	75.3	12.00	11.18	
6,300.0	46.34	164.84	6,084.2	333.3	1,325.3	92.9	12.00	11.26	
6,325.0	49.18	166.17	6,101.0	315.4	1,329.9	111.4	12.00	11.33	
6,350.0	52.02	167.40	6,116.9	296.6	1,334.3	130.7	12.00	11.39	
6,375.0	54.88	168.53	6,131.8	276.9	1,338.5	150.6	12.00	11.44	
6,400.0	57.75	169.59	6,145.6	256.5	1,342.4	171.3	12.00	11.47	
6,425.0	60.63	170.58	6,158.4	235.4	1,346.1	192.5	12.00	11.51	
6,450.0	63.51	171.51	6,170.1	213.5	1,349.5	214.3	12.00	11.54	
6,475.0	66.40	172.40	6,180.7	191.1	1,352.7	236.6	12.00	11.56	
6,500.0	69.30	173.25	6,190.1	168.1	1,355.6	259.4	12.00	11.58	
6,525.0	72.19	174.07	6,198.4	144.7	1,358.2	282.5	12.00	11.59	
6,550.0	75.10	174.87	6,205.4	120.8	1,360.5	305.9	12.00	11.61	
6,575.0	78.00	175.64	6,211.2	96.6	1,362.5	329.6	12.00	11.62	
6,600.0	80.91	176.39	6,215.8	72.1	1,364.2	353.4	12.00	11.63	
6,625.0	83.82	177.14	6,219.1	47.3	1,365.6	377.4	12.00	11.63	
6,650.0	86.72	177.87	6,221.2	22.4	1,366.7	401.4	12.00	11.64	
6,675.0	89.63	178.60	6,222.0	-2.5	1,367.5	425.3	12.00	11.64	
6,676.6	89.63	178.60	6,222.0	-4.1	1,367.5	426.9	0.00	0.00	Niobrara C Bench
6,678.1	90.00	178.70	6,222.0	-5.7	1,367.6	428.4	23.99	23.27	LP @ 6,222' TVD, 90°
6,700.0	90.00	178.70	6,222.0	-27.5	1,368.1	449.3	0.00	0.00	
6,800.0	90.00	178.70	6,222.0	-127.5	1,370.3	545.1	0.00	0.00	
6,900.0	90.00	178.70	6,222.0	-227.5	1,372.6	640.8	0.00	0.00	
7,000.0	90.00	178.70	6,222.0	-327.4	1,374.9	736.6	0.00	0.00	
7,100.0	90.00	178.70	6,222.0	-427.4	1,377.2	832.4	0.00	0.00	
7,200.0	90.00	178.70	6,222.0	-527.4	1,379.4	928.2	0.00	0.00	
7,300.0	90.00	178.70	6,222.0	-627.4	1,381.7	1,023.9	0.00	0.00	
7,400.0	90.00	178.70	6,222.0	-727.3	1,384.0	1,119.7	0.00	0.00	
7,500.0	90.00	178.70	6,222.0	-827.3	1,386.3	1,215.5	0.00	0.00	

# Cathedral Energy Services

## Planning Report

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<b>Site:</b>	Pronghorn F-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
7,600.0	90.00	178.70	6,222.0	-927.3	1,388.5	1,311.3	0.00	0.00	
7,700.0	90.00	178.70	6,222.0	-1,027.3	1,390.8	1,407.1	0.00	0.00	
7,800.0	90.00	178.70	6,222.0	-1,127.2	1,393.1	1,502.8	0.00	0.00	
7,900.0	90.00	178.70	6,222.0	-1,227.2	1,395.4	1,598.6	0.00	0.00	
8,000.0	90.00	178.70	6,222.0	-1,327.2	1,397.6	1,694.4	0.00	0.00	
8,100.0	90.00	178.70	6,222.0	-1,427.2	1,399.9	1,790.2	0.00	0.00	
8,200.0	90.00	178.70	6,222.0	-1,527.1	1,402.2	1,885.9	0.00	0.00	
8,300.0	90.00	178.70	6,222.0	-1,627.1	1,404.5	1,981.7	0.00	0.00	
8,400.0	90.00	178.70	6,222.0	-1,727.1	1,406.7	2,077.5	0.00	0.00	
8,500.0	90.00	178.70	6,222.0	-1,827.1	1,409.0	2,173.3	0.00	0.00	
8,600.0	90.00	178.70	6,222.0	-1,927.0	1,411.3	2,269.0	0.00	0.00	
8,700.0	90.00	178.70	6,222.0	-2,027.0	1,413.6	2,364.8	0.00	0.00	
8,800.0	90.00	178.70	6,222.0	-2,127.0	1,415.8	2,460.6	0.00	0.00	
8,900.0	90.00	178.70	6,222.0	-2,227.0	1,418.1	2,556.4	0.00	0.00	
9,000.0	90.00	178.70	6,222.0	-2,326.9	1,420.4	2,652.1	0.00	0.00	
9,100.0	90.00	178.70	6,222.0	-2,426.9	1,422.7	2,747.9	0.00	0.00	
9,200.0	90.00	178.70	6,222.0	-2,526.9	1,424.9	2,843.7	0.00	0.00	
9,300.0	90.00	178.70	6,222.0	-2,626.9	1,427.2	2,939.5	0.00	0.00	
9,400.0	90.00	178.70	6,222.0	-2,726.8	1,429.5	3,035.2	0.00	0.00	
9,500.0	90.00	178.70	6,222.0	-2,826.8	1,431.8	3,131.0	0.00	0.00	
9,600.0	90.00	178.70	6,222.0	-2,926.8	1,434.0	3,226.8	0.00	0.00	
9,700.0	90.00	178.70	6,222.0	-3,026.7	1,436.3	3,322.6	0.00	0.00	
9,800.0	90.00	178.70	6,222.0	-3,126.7	1,438.6	3,418.4	0.00	0.00	
9,900.0	90.00	178.70	6,222.0	-3,226.7	1,440.9	3,514.1	0.00	0.00	
10,000.0	90.00	178.70	6,222.0	-3,326.7	1,443.1	3,609.9	0.00	0.00	
10,100.0	90.00	178.70	6,222.0	-3,426.6	1,445.4	3,705.7	0.00	0.00	
10,200.0	90.00	178.70	6,222.0	-3,526.6	1,447.7	3,801.5	0.00	0.00	
10,300.0	90.00	178.70	6,222.0	-3,626.6	1,450.0	3,897.2	0.00	0.00	
10,400.0	90.00	178.70	6,222.0	-3,726.6	1,452.2	3,993.0	0.00	0.00	
10,500.0	90.00	178.70	6,222.0	-3,826.5	1,454.5	4,088.8	0.00	0.00	
10,600.0	90.00	178.70	6,222.0	-3,926.5	1,456.8	4,184.6	0.00	0.00	
10,700.0	90.00	178.70	6,222.0	-4,026.5	1,459.1	4,280.3	0.00	0.00	
10,800.0	90.00	178.70	6,222.0	-4,126.5	1,461.4	4,376.1	0.00	0.00	
10,900.0	90.00	178.70	6,222.0	-4,226.4	1,463.6	4,471.9	0.00	0.00	
11,000.0	90.00	178.70	6,222.0	-4,326.4	1,465.9	4,567.7	0.00	0.00	
11,100.0	90.00	178.70	6,222.0	-4,426.4	1,468.2	4,663.4	0.00	0.00	
11,194.5	90.00	178.70	6,222.0	-4,520.9	1,470.3	4,754.0	0.00	0.00	TD @ 11,194.5' 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									
Pronghorn K-O-10HNC I - plan hits target center - Point	0.00	0.00	6,222.0	-4,520.9	1,470.3	1,394,757.16	3,363,456.31	40.409660	-104.194790
Pronghorn K-O-10HNC ` - plan hits target center - Point	0.00	0.00	6,222.0	-105.6	1,369.8	1,399,170.51	3,363,291.10	40.421780	-104.195150

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn F-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,676.6	6,222.0	Niobrara C Bench		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400'	
1,145.3	1,137.0	34.2	90.1	EOB @ 14.91°	
5,887.1	5,719.2	467.0	1,230.6	Start 12° Build/Turn	
6,678.1	6,222.0	-5.7	1,367.6	LP @ 6,222' TVD, 90°	
11,194.5	6,222.0	-4,520.9	1,470.3	TD @ 11,194.5' MD	

# **Bonanza Creek Energy Operating Company, LLC**

**Weld County**

**Pronghorn F-10 Pad**

**Pronghorn K-O-10HNC**

**OH**

**Plan #1**

## **Anticollision Report**

**07 December, 2012**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	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 1,500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	12/7/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,194.5	Plan #1 (OH)	MWD	Geolink 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						
Pronghorn F-10 Pad						
Packard 33-10 (existing) - Existing - Existing						Out of range
Packard 33-10 (existing) - Existing - Existing	9,652.6	6,194.0	727.4	727.4	10,000.000	CC, ES
Packard 33-10 (existing) - Existing - Plan #1						Out of range
Packard 33-10 (existing) - Existing - Plan #1	9,652.6	6,194.0	727.4	727.4	10,000.000	CC, ES
Pronghorn 12-10 (existing) - Existing - Existing						Out of range
Pronghorn 12-10 (existing) - Existing - Plan #1						Out of range
Pronghorn 24-10 (existing) - Existing - Existing						Out of range
Pronghorn 24-10 (existing) - Existing - Existing	10,944.2	1,494.0	640.5	640.5	10,000.000	CC, ES
Pronghorn 24-10 (existing) - Existing - Plan #1						Out of range
Pronghorn 24-10 (existing) - Existing - Plan #1	10,944.2	1,494.0	640.5	640.5	10,000.000	CC, ES
Pronghorn F-J-10HNB - OH - Plan #1	0.0	0.0	21.9			
Pronghorn F-J-10HNB - OH - Plan #1	400.0	400.0	21.9	21.9	10,000.000	CC, ES



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Pronghorn F-10 Pad - Packard 33-10 (existing) - Existing - Existing													Offset Well Error:	0.0 ft
Survey Program: 6865-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
8,400.0	6,222.0	6,194.0	6,194.0	41.9	10.8	-90.00	-2,962.8	2,162.5	1,448.5	1,448.5	0.00	N/A		
8,500.0	6,222.0	6,194.0	6,194.0	43.3	10.8	-90.00	-2,962.8	2,162.5	1,362.9	1,362.9	0.00	N/A		
8,600.0	6,222.0	6,194.0	6,194.0	44.6	10.8	-90.00	-2,962.8	2,162.5	1,279.5	1,279.5	0.00	N/A		
8,700.0	6,222.0	6,194.0	6,194.0	46.0	10.8	-90.00	-2,962.8	2,162.5	1,198.5	1,198.5	0.00	N/A		
8,800.0	6,222.0	6,194.0	6,194.0	47.5	10.8	-90.00	-2,962.8	2,162.5	1,120.7	1,120.7	0.00	N/A		
8,900.0	6,222.0	6,194.0	6,194.0	48.9	10.8	-90.00	-2,962.8	2,162.5	1,046.6	1,046.6	0.00	N/A		
9,000.0	6,222.0	6,194.0	6,194.0	50.4	10.8	-90.00	-2,962.8	2,162.5	977.2	977.2	0.00	N/A		
9,100.0	6,222.0	6,194.0	6,194.0	51.9	10.8	-90.00	-2,962.8	2,162.5	913.5	913.5	0.00	N/A		
9,200.0	6,222.0	6,194.0	6,194.0	53.4	10.8	-90.00	-2,962.8	2,162.5	856.7	856.7	0.00	N/A		
9,300.0	6,222.0	6,194.0	6,194.0	54.9	10.8	-90.00	-2,962.8	2,162.5	808.4	808.4	0.00	N/A		
9,400.0	6,222.0	6,194.0	6,194.0	56.5	10.8	-90.00	-2,962.8	2,162.5	770.0	770.0	0.00	N/A		
9,500.0	6,222.0	6,194.0	6,194.0	58.0	10.8	-90.00	-2,962.8	2,162.5	743.2	743.2	0.00	N/A		
9,600.0	6,222.0	6,194.0	6,194.0	59.6	10.8	-90.00	-2,962.8	2,162.5	729.3	729.3	0.00	N/A		
9,652.6	6,222.0	6,194.0	6,194.0	60.4	10.8	-90.00	-2,962.8	2,162.5	727.4	727.4	0.00	N/A CC, ES		
9,700.0	6,222.0	6,194.0	6,194.0	61.1	10.8	-90.00	-2,962.8	2,162.5	729.0	729.0	0.00	N/A		
9,800.0	6,222.0	6,194.0	6,194.0	62.7	10.8	-90.00	-2,962.8	2,162.5	742.2	742.2	0.00	N/A		
9,900.0	6,222.0	6,194.0	6,194.0	64.3	10.8	-90.00	-2,962.8	2,162.5	768.4	768.4	0.00	N/A		
10,000.0	6,222.0	6,194.0	6,194.0	65.9	10.8	-90.00	-2,962.8	2,162.5	806.1	806.1	0.00	N/A		
10,100.0	6,222.0	6,194.0	6,194.0	67.5	10.8	-90.00	-2,962.8	2,162.5	854.0	854.0	0.00	N/A		
10,200.0	6,222.0	6,194.0	6,194.0	69.1	10.8	-90.00	-2,962.8	2,162.5	910.4	910.4	0.00	N/A		
10,300.0	6,222.0	6,194.0	6,194.0	70.7	10.8	-90.00	-2,962.8	2,162.5	973.8	973.8	0.00	N/A		
10,400.0	6,222.0	6,194.0	6,194.0	72.4	10.8	-90.00	-2,962.8	2,162.5	1,043.0	1,043.0	0.00	N/A		
10,500.0	6,222.0	6,194.0	6,194.0	74.0	10.8	-90.00	-2,962.8	2,162.5	1,116.8	1,116.8	0.00	N/A		
10,600.0	6,222.0	6,194.0	6,194.0	75.6	10.8	-90.00	-2,962.8	2,162.5	1,194.5	1,194.5	0.00	N/A		
10,700.0	6,222.0	6,194.0	6,194.0	77.3	10.8	-90.00	-2,962.8	2,162.5	1,275.3	1,275.3	0.00	N/A		
10,800.0	6,222.0	6,194.0	6,194.0	78.9	10.8	-90.00	-2,962.8	2,162.5	1,358.6	1,358.6	0.00	N/A		
10,900.0	6,222.0	6,194.0	6,194.0	80.6	10.8	-90.00	-2,962.8	2,162.5	1,444.0	1,444.0	0.00	N/A		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Pronghorn F-10 Pad - Packard 33-10 (existing) - Existing - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
8,400.0	6,222.0	6,194.0	6,194.0	41.9	10.8	-90.00	-2,962.8	2,162.5	1,448.5	1,448.5	0.00	N/A		
8,500.0	6,222.0	6,194.0	6,194.0	43.3	10.8	-90.00	-2,962.8	2,162.5	1,362.9	1,362.9	0.00	N/A		
8,600.0	6,222.0	6,194.0	6,194.0	44.6	10.8	-90.00	-2,962.8	2,162.5	1,279.5	1,279.5	0.00	N/A		
8,700.0	6,222.0	6,194.0	6,194.0	46.0	10.8	-90.00	-2,962.8	2,162.5	1,198.5	1,198.5	0.00	N/A		
8,800.0	6,222.0	6,194.0	6,194.0	47.5	10.8	-90.00	-2,962.8	2,162.5	1,120.7	1,120.7	0.00	N/A		
8,900.0	6,222.0	6,194.0	6,194.0	48.9	10.8	-90.00	-2,962.8	2,162.5	1,046.6	1,046.6	0.00	N/A		
9,000.0	6,222.0	6,194.0	6,194.0	50.4	10.8	-90.00	-2,962.8	2,162.5	977.2	977.2	0.00	N/A		
9,100.0	6,222.0	6,194.0	6,194.0	51.9	10.8	-90.00	-2,962.8	2,162.5	913.5	913.5	0.00	N/A		
9,200.0	6,222.0	6,194.0	6,194.0	53.4	10.8	-90.00	-2,962.8	2,162.5	856.7	856.7	0.00	N/A		
9,300.0	6,222.0	6,194.0	6,194.0	54.9	10.8	-90.00	-2,962.8	2,162.5	808.4	808.4	0.00	N/A		
9,400.0	6,222.0	6,194.0	6,194.0	56.5	10.8	-90.00	-2,962.8	2,162.5	770.0	770.0	0.00	N/A		
9,500.0	6,222.0	6,194.0	6,194.0	58.0	10.8	-90.00	-2,962.8	2,162.5	743.2	743.2	0.00	N/A		
9,600.0	6,222.0	6,194.0	6,194.0	59.6	10.8	-90.00	-2,962.8	2,162.5	729.3	729.3	0.00	N/A		
9,652.6	6,222.0	6,194.0	6,194.0	60.4	10.8	-90.00	-2,962.8	2,162.5	727.4	727.4	0.00	N/A CC, ES		
9,700.0	6,222.0	6,194.0	6,194.0	61.1	10.8	-90.00	-2,962.8	2,162.5	729.0	729.0	0.00	N/A		
9,800.0	6,222.0	6,194.0	6,194.0	62.7	10.8	-90.00	-2,962.8	2,162.5	742.2	742.2	0.00	N/A		
9,900.0	6,222.0	6,194.0	6,194.0	64.3	10.8	-90.00	-2,962.8	2,162.5	768.4	768.4	0.00	N/A		
10,000.0	6,222.0	6,194.0	6,194.0	65.9	10.8	-90.00	-2,962.8	2,162.5	806.1	806.1	0.00	N/A		
10,100.0	6,222.0	6,194.0	6,194.0	67.5	10.8	-90.00	-2,962.8	2,162.5	854.0	854.0	0.00	N/A		
10,200.0	6,222.0	6,194.0	6,194.0	69.1	10.8	-90.00	-2,962.8	2,162.5	910.4	910.4	0.00	N/A		
10,300.0	6,222.0	6,194.0	6,194.0	70.7	10.8	-90.00	-2,962.8	2,162.5	973.8	973.8	0.00	N/A		
10,400.0	6,222.0	6,194.0	6,194.0	72.4	10.8	-90.00	-2,962.8	2,162.5	1,043.0	1,043.0	0.00	N/A		
10,500.0	6,222.0	6,194.0	6,194.0	74.0	10.8	-90.00	-2,962.8	2,162.5	1,116.8	1,116.8	0.00	N/A		
10,600.0	6,222.0	6,194.0	6,194.0	75.6	10.8	-90.00	-2,962.8	2,162.5	1,194.5	1,194.5	0.00	N/A		
10,700.0	6,222.0	6,194.0	6,194.0	77.3	10.8	-90.00	-2,962.8	2,162.5	1,275.3	1,275.3	0.00	N/A		
10,800.0	6,222.0	6,194.0	6,194.0	78.9	10.8	-90.00	-2,962.8	2,162.5	1,358.6	1,358.6	0.00	N/A		
10,900.0	6,222.0	6,194.0	6,194.0	80.6	10.8	-90.00	-2,962.8	2,162.5	1,444.0	1,444.0	0.00	N/A		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Pronghorn F-10 Pad - Pronghorn 24-10 (existing) - Existing - Existing											Offset Site Error: 0.0 ft	
Survey Program: 6864-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
9,600.0	6,222.0	1,494.0	1,494.0	59.6	2.6	90.00	-4,285.2	824.3	1,489.0	1,489.0	0.00	N/A		
9,700.0	6,222.0	1,494.0	1,494.0	61.1	2.6	90.00	-4,285.2	824.3	1,399.4	1,399.4	0.00	N/A		
9,800.0	6,222.0	1,494.0	1,494.0	62.7	2.6	90.00	-4,285.2	824.3	1,311.3	1,311.3	0.00	N/A		
9,900.0	6,222.0	1,494.0	1,494.0	64.3	2.6	90.00	-4,285.2	824.3	1,225.0	1,225.0	0.00	N/A		
10,000.0	6,222.0	1,494.0	1,494.0	65.9	2.6	90.00	-4,285.2	824.3	1,141.0	1,141.0	0.00	N/A		
10,100.0	6,222.0	1,494.0	1,494.0	67.5	2.6	90.00	-4,285.2	824.3	1,059.7	1,059.7	0.00	N/A		
10,200.0	6,222.0	1,494.0	1,494.0	69.1	2.6	90.00	-4,285.2	824.3	981.9	981.9	0.00	N/A		
10,300.0	6,222.0	1,494.0	1,494.0	70.7	2.6	90.00	-4,285.2	824.3	908.5	908.5	0.00	N/A		
10,400.0	6,222.0	1,494.0	1,494.0	72.4	2.6	90.00	-4,285.2	824.3	840.5	840.5	0.00	N/A		
10,500.0	6,222.0	1,494.0	1,494.0	74.0	2.6	90.00	-4,285.2	824.3	779.5	779.5	0.00	N/A		
10,600.0	6,222.0	1,494.0	1,494.0	75.6	2.6	90.00	-4,285.2	824.3	727.2	727.2	0.00	N/A		
10,700.0	6,222.0	1,494.0	1,494.0	77.3	2.6	90.00	-4,285.2	824.3	685.5	685.5	0.00	N/A		
10,800.0	6,222.0	1,494.0	1,494.0	78.9	2.6	90.00	-4,285.2	824.3	656.6	656.6	0.00	N/A		
10,900.0	6,222.0	1,494.0	1,494.0	80.6	2.6	90.00	-4,285.2	824.3	642.1	642.1	0.00	N/A		
10,944.2	6,222.0	1,494.0	1,494.0	81.3	2.6	90.00	-4,285.2	824.3	640.5	640.5	0.00	N/A	CC, ES	
11,000.0	6,222.0	1,494.0	1,494.0	82.2	2.6	90.00	-4,285.2	824.3	643.0	643.0	0.00	N/A		
11,100.0	6,222.0	1,494.0	1,494.0	83.9	2.6	90.00	-4,285.2	824.3	659.2	659.2	0.00	N/A		
11,194.5	6,222.0	1,494.0	1,494.0	85.5	2.6	90.00	-4,285.2	824.3	687.7	687.7	0.00	N/A		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Pronghorn F-10 Pad - Pronghorn 24-10 (existing) - Existing - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
9,600.0	6,222.0	1,494.0	1,494.0	59.6	2.6	90.00	-4,285.2	824.3	1,489.0	1,489.0	0.00	N/A	
9,700.0	6,222.0	1,494.0	1,494.0	61.1	2.6	90.00	-4,285.2	824.3	1,399.4	1,399.4	0.00	N/A	
9,800.0	6,222.0	1,494.0	1,494.0	62.7	2.6	90.00	-4,285.2	824.3	1,311.3	1,311.3	0.00	N/A	
9,900.0	6,222.0	1,494.0	1,494.0	64.3	2.6	90.00	-4,285.2	824.3	1,225.0	1,225.0	0.00	N/A	
10,000.0	6,222.0	1,494.0	1,494.0	65.9	2.6	90.00	-4,285.2	824.3	1,141.0	1,141.0	0.00	N/A	
10,100.0	6,222.0	1,494.0	1,494.0	67.5	2.6	90.00	-4,285.2	824.3	1,059.7	1,059.7	0.00	N/A	
10,200.0	6,222.0	1,494.0	1,494.0	69.1	2.6	90.00	-4,285.2	824.3	981.9	981.9	0.00	N/A	
10,300.0	6,222.0	1,494.0	1,494.0	70.7	2.6	90.00	-4,285.2	824.3	908.5	908.5	0.00	N/A	
10,400.0	6,222.0	1,494.0	1,494.0	72.4	2.6	90.00	-4,285.2	824.3	840.5	840.5	0.00	N/A	
10,500.0	6,222.0	1,494.0	1,494.0	74.0	2.6	90.00	-4,285.2	824.3	779.5	779.5	0.00	N/A	
10,600.0	6,222.0	1,494.0	1,494.0	75.6	2.6	90.00	-4,285.2	824.3	727.2	727.2	0.00	N/A	
10,700.0	6,222.0	1,494.0	1,494.0	77.3	2.6	90.00	-4,285.2	824.3	685.5	685.5	0.00	N/A	
10,800.0	6,222.0	1,494.0	1,494.0	78.9	2.6	90.00	-4,285.2	824.3	656.6	656.6	0.00	N/A	
10,900.0	6,222.0	1,494.0	1,494.0	80.6	2.6	90.00	-4,285.2	824.3	642.1	642.1	0.00	N/A	
10,944.2	6,222.0	1,494.0	1,494.0	81.3	2.6	90.00	-4,285.2	824.3	640.5	640.5	0.00	N/A	CC, ES
11,000.0	6,222.0	1,494.0	1,494.0	82.2	2.6	90.00	-4,285.2	824.3	643.0	643.0	0.00	N/A	
11,100.0	6,222.0	1,494.0	1,494.0	83.9	2.6	90.00	-4,285.2	824.3	659.2	659.2	0.00	N/A	
11,194.5	6,222.0	1,494.0	1,494.0	85.5	2.6	90.00	-4,285.2	824.3	687.7	687.7	0.00	N/A	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Pronghorn F-10 Pad - Pronghorn F-J-10HNB - OH - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: O-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-21.9	0.0	21.9					
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-21.9	0.0	21.9	21.9	0.00	N/A		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-21.9	0.0	21.9	21.9	0.00	N/A		
300.0	300.0	300.0	300.0	0.5	0.5	-180.00	-21.9	0.0	21.9	21.9	0.00	N/A		
400.0	400.0	400.0	400.0	0.7	0.7	-180.00	-21.9	0.0	21.9	21.9	0.00	N/A	CC, ES	
500.0	500.0	500.0	500.0	0.8	0.8	114.92	-21.9	0.0	22.5	22.5	0.00	N/A		
600.0	599.8	600.7	600.6	1.0	1.0	126.65	-20.1	0.1	23.5	23.5	0.00	N/A		
700.0	699.5	701.1	701.0	1.3	1.2	145.62	-14.8	0.5	24.9	24.9	0.00	N/A		
800.0	798.7	801.0	800.4	1.5	1.4	167.85	-6.2	1.1	29.7	29.7	0.00	N/A		
900.0	897.5	899.9	898.9	1.8	1.6	-176.75	3.1	1.8	40.8	40.8	0.00	N/A		
1,000.0	995.6	998.4	996.9	2.1	1.8	-168.88	12.5	2.5	56.9	56.9	0.00	N/A		
1,100.0	1,093.1	1,096.3	1,094.4	2.6	2.1	-165.15	21.8	3.2	76.9	76.9	0.00	N/A		
1,200.0	1,189.8	1,193.6	1,191.3	3.0	2.3	-163.46	31.0	3.8	99.8	99.8	0.00	N/A		
1,300.0	1,286.4	1,290.8	1,288.0	3.5	2.5	-162.49	40.2	4.5	123.1	123.1	0.00	N/A		
1,400.0	1,383.0	1,388.0	1,384.8	3.9	2.7	-161.83	49.4	5.2	146.4	146.4	0.00	N/A		
1,500.0	1,479.7	1,485.3	1,481.6	4.4	3.0	-161.36	58.7	5.9	169.8	169.8	0.00	N/A		
1,600.0	1,576.3	1,582.5	1,578.4	4.9	3.2	-160.99	67.9	6.5	193.1	193.1	0.00	N/A		
1,700.0	1,673.0	1,679.7	1,675.2	5.4	3.4	-160.71	77.1	7.2	216.5	216.5	0.00	N/A		
1,800.0	1,769.6	1,776.9	1,772.0	5.8	3.7	-160.48	86.3	7.9	239.8	239.8	0.00	N/A		
1,900.0	1,866.2	1,874.2	1,868.8	6.3	3.9	-160.29	95.6	8.5	263.2	263.2	0.00	N/A		
2,000.0	1,962.9	1,971.4	1,965.6	6.8	4.1	-160.13	104.8	9.2	286.6	286.6	0.00	N/A		
2,100.0	2,059.5	2,068.6	2,062.3	7.3	4.3	-160.00	114.0	9.9	309.9	309.9	0.00	N/A		
2,200.0	2,156.1	2,165.9	2,159.1	7.8	4.6	-159.88	123.2	10.6	333.3	333.3	0.00	N/A		
2,300.0	2,252.8	2,263.1	2,255.9	8.3	4.8	-159.78	132.5	11.2	356.7	356.7	0.00	N/A		
2,400.0	2,349.4	2,360.3	2,352.7	8.8	5.0	-159.69	141.7	11.9	380.1	380.1	0.00	N/A		
2,500.0	2,446.0	2,457.5	2,449.5	9.3	5.3	-159.62	150.9	12.6	403.4	403.4	0.00	N/A		
2,600.0	2,542.7	2,554.8	2,546.3	9.7	5.5	-159.55	160.1	13.3	426.8	426.8	0.00	N/A		
2,700.0	2,639.3	2,652.0	2,643.1	10.2	5.7	-159.49	169.4	13.9	450.2	450.2	0.00	N/A		
2,800.0	2,735.9	2,749.2	2,739.9	10.7	6.0	-159.43	178.6	14.6	473.6	473.6	0.00	N/A		
2,900.0	2,832.6	2,846.5	2,836.6	11.2	6.2	-159.38	187.8	15.3	496.9	496.9	0.00	N/A		
3,000.0	2,929.2	2,943.7	2,933.4	11.7	6.4	-159.33	197.0	15.9	520.3	520.3	0.00	N/A		
3,100.0	3,025.8	3,040.9	3,030.2	12.2	6.7	-159.29	206.2	16.6	543.7	543.7	0.00	N/A		
3,200.0	3,122.5	3,138.1	3,127.0	12.7	6.9	-159.25	215.5	17.3	567.1	567.1	0.00	N/A		
3,300.0	3,219.1	3,235.4	3,223.8	13.2	7.1	-159.22	224.7	18.0	590.4	590.4	0.00	N/A		
3,400.0	3,315.7	3,332.6	3,320.6	13.7	7.4	-159.18	233.9	18.6	613.8	613.8	0.00	N/A		
3,500.0	3,412.4	3,429.8	3,417.4	14.2	7.6	-159.15	243.1	19.3	637.2	637.2	0.00	N/A		
3,600.0	3,509.0	3,527.1	3,514.2	14.7	7.8	-159.13	252.4	20.0	660.6	660.6	0.00	N/A		
3,700.0	3,605.6	3,624.3	3,610.9	15.2	8.1	-159.10	261.6	20.6	684.0	684.0	0.00	N/A		
3,800.0	3,702.3	3,721.5	3,707.7	15.6	8.3	-159.07	270.8	21.3	707.3	707.3	0.00	N/A		
3,900.0	3,798.9	3,818.7	3,804.5	16.1	8.5	-159.05	280.0	22.0	730.7	730.7	0.00	N/A		
4,000.0	3,895.5	3,916.0	3,901.3	16.6	8.8	-159.03	289.3	22.7	754.1	754.1	0.00	N/A		
4,100.0	3,992.2	4,013.2	3,998.1	17.1	9.0	-159.01	298.5	23.3	777.5	777.5	0.00	N/A		
4,200.0	4,088.8	4,110.4	4,094.9	17.6	9.2	-158.99	307.7	24.0	800.9	800.9	0.00	N/A		
4,300.0	4,185.5	4,207.7	4,191.7	18.1	9.5	-158.97	316.9	24.7	824.2	824.2	0.00	N/A		
4,400.0	4,282.1	4,304.9	4,288.5	18.6	9.7	-158.96	326.2	25.3	847.6	847.6	0.00	N/A		
4,500.0	4,378.7	4,402.1	4,385.2	19.1	9.9	-158.94	335.4	26.0	871.0	871.0	0.00	N/A		
4,600.0	4,475.4	4,499.3	4,482.0	19.6	10.2	-158.92	344.6	26.7	894.4	894.4	0.00	N/A		
4,700.0	4,572.0	4,596.6	4,578.8	20.1	10.4	-158.91	353.8	27.4	917.7	917.7	0.00	N/A		
4,800.0	4,668.6	4,693.8	4,675.6	20.6	10.6	-158.90	363.0	28.0	941.1	941.1	0.00	N/A		
4,900.0	4,765.3	4,791.0	4,772.4	21.1	10.9	-158.88	372.3	28.7	964.5	964.5	0.00	N/A		
5,000.0	4,861.9	4,888.3	4,869.2	21.6	11.1	-158.87	381.5	29.4	987.9	987.9	0.00	N/A		
5,100.0	4,958.5	4,985.5	4,966.0	22.0	11.3	-158.86	390.7	30.0	1,011.3	1,011.3	0.00	N/A		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Pronghorn F-10 Pad - Pronghorn F-J-10HNB - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,055.2	5,082.7	5,062.8	22.5	11.6	-158.85	399.9	30.7	1,034.6	1,034.6	0.00	N/A		
5,300.0	5,151.8	5,179.9	5,159.5	23.0	11.8	-158.84	409.2	31.4	1,058.0	1,058.0	0.00	N/A		
5,400.0	5,248.4	5,277.2	5,256.3	23.5	12.0	-158.83	418.4	32.1	1,081.4	1,081.4	0.00	N/A		
5,500.0	5,345.1	5,374.4	5,353.1	24.0	12.3	-158.82	427.6	32.7	1,104.8	1,104.8	0.00	N/A		
5,600.0	5,441.7	5,471.6	5,449.9	24.5	12.5	-158.81	436.8	33.4	1,128.2	1,128.2	0.00	N/A		
5,700.0	5,538.3	5,568.9	5,546.7	25.0	12.7	-158.80	446.1	34.1	1,151.5	1,151.5	0.00	N/A		
5,800.0	5,635.0	5,666.4	5,643.8	25.5	13.0	-158.79	455.3	34.7	1,174.9	1,174.9	0.00	N/A		
5,900.0	5,731.6	5,767.1	5,744.3	26.0	13.1	-165.38	453.1	35.7	1,198.1	1,198.1	0.00	N/A		
6,000.0	5,828.3	5,863.5	5,838.1	26.4	12.9	146.83	431.3	37.1	1,221.4	1,221.4	0.00	N/A		
6,100.0	5,922.0	5,957.1	5,923.1	26.7	12.6	119.62	392.6	38.8	1,244.2	1,244.2	0.00	N/A		
6,200.0	6,008.6	6,048.6	5,997.3	26.9	12.3	105.93	339.5	40.7	1,265.4	1,265.4	0.00	N/A		
6,300.0	6,084.2	6,138.4	6,059.1	27.0	11.8	97.91	274.4	42.8	1,284.1	1,284.1	0.00	N/A		
6,400.0	6,145.6	6,227.1	6,107.1	27.1	11.5	92.80	200.0	44.9	1,299.3	1,299.3	0.00	N/A		
6,500.0	6,190.1	6,315.0	6,140.3	27.1	11.3	89.58	118.8	47.1	1,310.3	1,310.3	0.00	N/A		
6,600.0	6,215.8	6,402.3	6,158.0	27.2	11.2	87.82	33.5	49.3	1,316.8	1,316.8	0.00	N/A		
6,700.0	6,222.0	6,494.1	6,161.0	27.3	11.4	87.35	-58.2	51.5	1,318.4	1,318.4	0.00	N/A		
6,800.0	6,222.0	6,594.1	6,161.0	27.5	11.8	87.35	-158.2	53.8	1,318.3	1,318.3	0.00	N/A		
6,900.0	6,222.0	6,694.1	6,161.0	27.8	12.5	87.35	-258.2	56.1	1,318.3	1,318.3	0.00	N/A		
7,000.0	6,222.0	6,794.1	6,161.0	28.2	13.3	87.35	-358.1	58.4	1,318.2	1,318.2	0.00	N/A		
7,100.0	6,222.0	6,894.1	6,161.0	28.7	14.3	87.35	-458.1	60.8	1,318.1	1,318.1	0.00	N/A		
7,200.0	6,222.0	6,994.1	6,161.0	29.3	15.5	87.35	-558.1	63.1	1,318.1	1,318.1	0.00	N/A		
7,300.0	6,222.0	7,094.1	6,161.0	30.0	16.8	87.35	-658.1	65.4	1,318.0	1,318.0	0.00	N/A		
7,400.0	6,222.0	7,194.1	6,161.0	30.7	18.1	87.35	-758.0	67.8	1,318.0	1,318.0	0.00	N/A		
7,500.0	6,222.0	7,294.1	6,161.0	31.6	19.5	87.35	-858.0	70.1	1,317.9	1,317.9	0.00	N/A		
7,600.0	6,222.0	7,394.1	6,161.0	32.5	21.0	87.35	-958.0	72.4	1,317.9	1,317.9	0.00	N/A		
7,700.0	6,222.0	7,494.1	6,161.0	33.5	22.5	87.35	-1,058.0	74.8	1,317.8	1,317.8	0.00	N/A		
7,800.0	6,222.0	7,594.1	6,161.0	34.6	24.0	87.35	-1,157.9	77.1	1,317.8	1,317.8	0.00	N/A		
7,900.0	6,222.0	7,694.1	6,161.0	35.7	25.6	87.35	-1,257.9	79.4	1,317.7	1,317.7	0.00	N/A		
8,000.0	6,222.0	7,794.1	6,161.0	36.8	27.2	87.35	-1,357.9	81.8	1,317.6	1,317.6	0.00	N/A		
8,100.0	6,222.0	7,894.1	6,161.0	38.0	28.8	87.35	-1,457.8	84.1	1,317.6	1,317.6	0.00	N/A		
8,200.0	6,222.0	7,994.1	6,161.0	39.3	30.4	87.35	-1,557.8	86.4	1,317.5	1,317.5	0.00	N/A		
8,300.0	6,222.0	8,094.1	6,161.0	40.6	32.0	87.35	-1,657.8	88.8	1,317.5	1,317.5	0.00	N/A		
8,400.0	6,222.0	8,194.1	6,161.0	41.9	33.7	87.35	-1,757.8	91.1	1,317.4	1,317.4	0.00	N/A		
8,500.0	6,222.0	8,294.1	6,161.0	43.3	35.3	87.35	-1,857.7	93.4	1,317.4	1,317.4	0.00	N/A		
8,600.0	6,222.0	8,394.1	6,161.0	44.6	37.0	87.35	-1,957.7	95.7	1,317.3	1,317.3	0.00	N/A		
8,700.0	6,222.0	8,494.1	6,161.0	46.0	38.7	87.35	-2,057.7	98.1	1,317.3	1,317.3	0.00	N/A		
8,800.0	6,222.0	8,594.1	6,161.0	47.5	40.4	87.35	-2,157.7	100.4	1,317.2	1,317.2	0.00	N/A		
8,900.0	6,222.0	8,694.1	6,161.0	48.9	42.1	87.35	-2,257.6	102.7	1,317.1	1,317.1	0.00	N/A		
9,000.0	6,222.0	8,794.1	6,161.0	50.4	43.8	87.35	-2,357.6	105.1	1,317.1	1,317.1	0.00	N/A		
9,100.0	6,222.0	8,894.1	6,161.0	51.9	45.4	87.35	-2,457.6	107.4	1,317.0	1,317.0	0.00	N/A		
9,200.0	6,222.0	8,994.1	6,161.0	53.4	47.2	87.35	-2,557.5	109.7	1,317.0	1,317.0	0.00	N/A		
9,300.0	6,222.0	9,094.1	6,161.0	54.9	48.9	87.35	-2,657.5	112.1	1,316.9	1,316.9	0.00	N/A		
9,400.0	6,222.0	9,194.1	6,161.0	56.5	50.6	87.34	-2,757.5	114.4	1,316.9	1,316.9	0.00	N/A		
9,500.0	6,222.0	9,294.1	6,161.0	58.0	52.3	87.34	-2,857.5	116.7	1,316.8	1,316.8	0.00	N/A		
9,600.0	6,222.0	9,394.1	6,161.0	59.6	54.0	87.34	-2,957.4	119.1	1,316.8	1,316.8	0.00	N/A		
9,700.0	6,222.0	9,494.1	6,161.0	61.1	55.7	87.34	-3,057.4	121.4	1,316.7	1,316.7	0.00	N/A		
9,800.0	6,222.0	9,594.1	6,161.0	62.7	57.4	87.34	-3,157.4	123.7	1,316.6	1,316.6	0.00	N/A		
9,900.0	6,222.0	9,694.1	6,161.0	64.3	59.2	87.34	-3,257.4	126.1	1,316.6	1,316.6	0.00	N/A		
10,000.0	6,222.0	9,794.1	6,161.0	65.9	60.9	87.34	-3,357.3	128.4	1,316.5	1,316.5	0.00	N/A		
10,100.0	6,222.0	9,894.1	6,161.0	67.5	62.6	87.34	-3,457.3	130.7	1,316.5	1,316.5	0.00	N/A		
10,200.0	6,222.0	9,994.1	6,161.0	69.1	64.3	87.34	-3,557.3	133.0	1,316.4	1,316.4	0.00	N/A		
10,300.0	6,222.0	10,094.1	6,161.0	70.7	66.1	87.34	-3,657.2	135.4	1,316.4	1,316.4	0.00	N/A		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,400.0	6,222.0	10,194.1	6,161.0	72.4	67.8	87.34	-3,757.2	137.7	1,316.3	1,316.3	0.00	N/A		
10,500.0	6,222.0	10,294.1	6,161.0	74.0	69.5	87.34	-3,857.2	140.0	1,316.3	1,316.3	0.00	N/A		
10,600.0	6,222.0	10,394.1	6,161.0	75.6	71.2	87.34	-3,957.2	142.4	1,316.2	1,316.2	0.00	N/A		
10,700.0	6,222.0	10,494.1	6,161.0	77.3	73.0	87.34	-4,057.1	144.7	1,316.1	1,316.1	0.00	N/A		
10,800.0	6,222.0	10,594.1	6,161.0	78.9	74.7	87.34	-4,157.1	147.0	1,316.1	1,316.1	0.00	N/A		
10,900.0	6,222.0	10,694.1	6,161.0	80.6	76.5	87.34	-4,257.1	149.4	1,316.0	1,316.0	0.00	N/A		
11,000.0	6,222.0	10,794.1	6,161.0	82.2	78.2	87.34	-4,357.1	151.7	1,316.0	1,316.0	0.00	N/A		
11,100.0	6,222.0	10,894.1	6,161.0	83.9	79.9	87.34	-4,457.0	154.0	1,315.9	1,315.9	0.00	N/A		
11,166.6	6,222.0	10,960.7	6,161.0	85.0	81.1	87.34	-4,523.6	155.6	1,315.9	1,315.9	0.00	N/A		
11,194.5	6,222.0	10,976.3	6,161.0	85.5	81.4	87.34	-4,539.2	155.9	1,315.9	1,315.9	0.00	N/A		

# Cathedral Energy Services

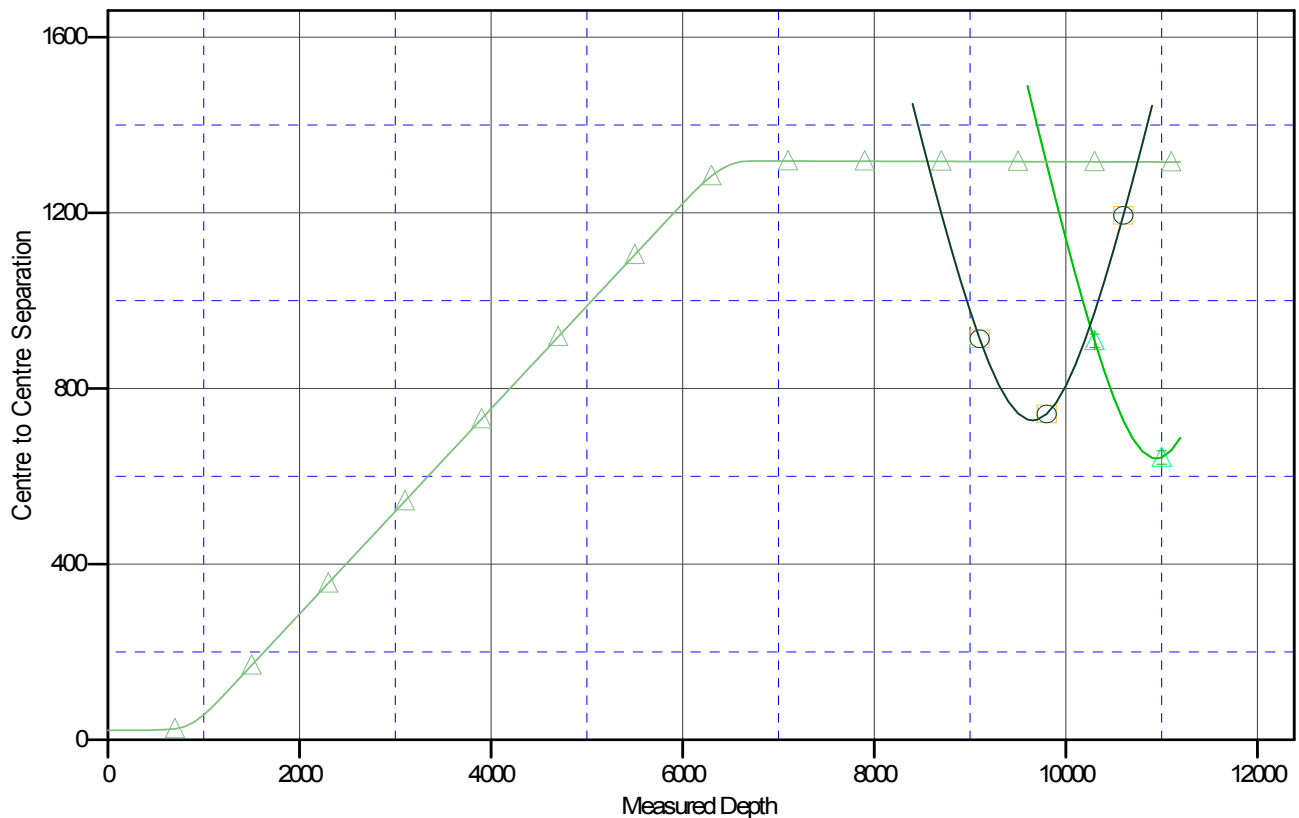
## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn K-O-10HNC
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn F-10 Pad	<b>MD Reference:</b>	KB = 15' @ 4728.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn K-O-10HNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB = 15' @ 4728.0ft (Original Well Ele)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Pronghorn K-O-10HNC  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.84°

### Ladder Plot



### LEGEND

- Pronghorn 24-10 (existing), Existing, Existing V0
- Pronghorn F-J-10HNB, OH, Plan #1 V0
- Packard 33-10 (existing), Existing, Plan #1 V0
- Pronghorn 24-10 (existing), Existing, Plan #1 V0
- Packard 33-10 (existing), Existing, Existing V0