

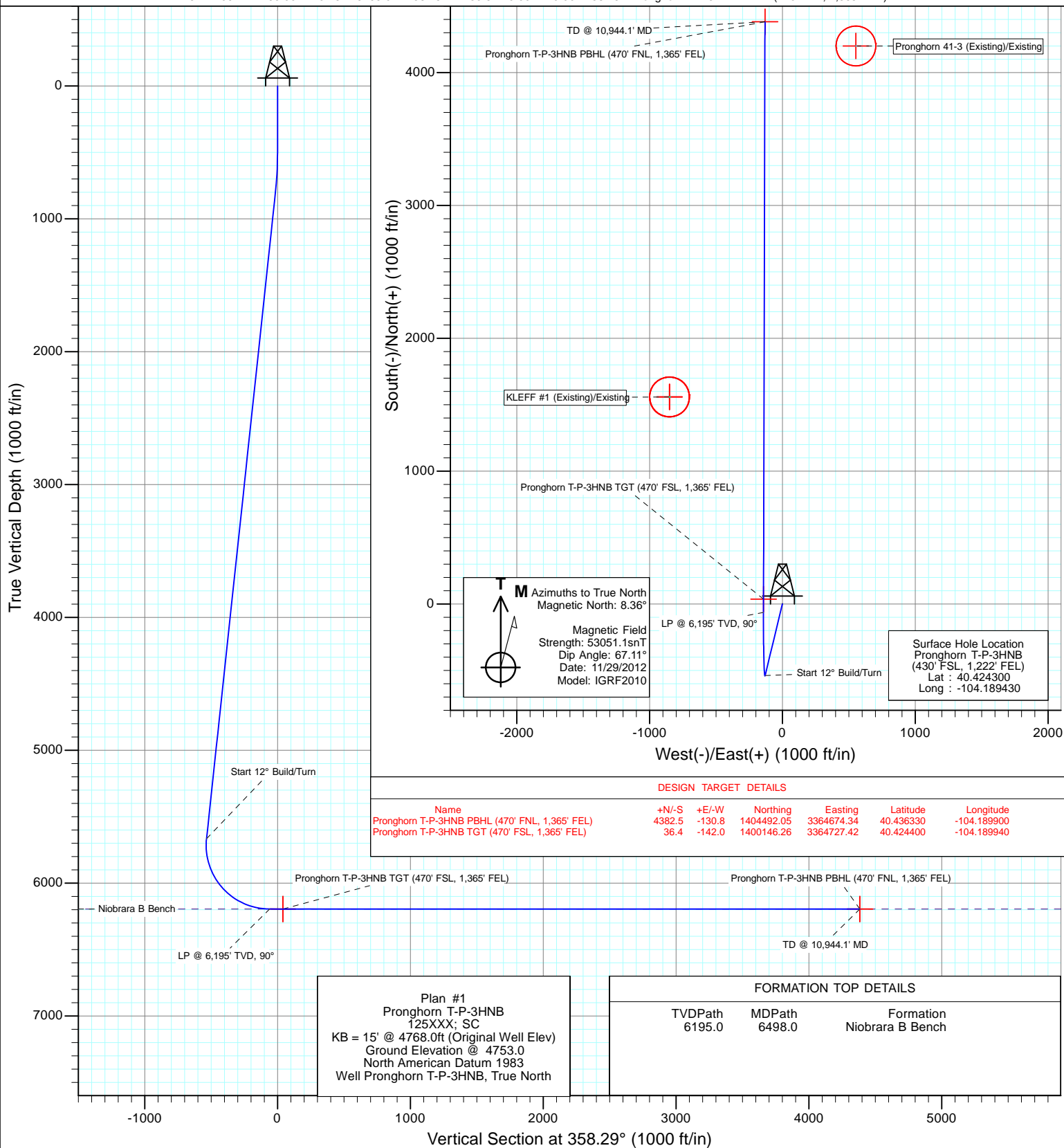


Project: Weld County  
Site: Pronghorn T-3 Pad  
Well: Pronghorn T-P-3HNB  
Wellbore: HZ  
Design: Plan #1



#### 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	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	815.4	6.31	193.57	814.8	-16.9	-4.1	2.00	193.57	-16.7	
4	5696.9	6.31	193.57	5666.7	-538.3	-129.9	0.00	0.00	-534.2	
5	6498.0	90.00	0.15	6195.0	-63.5	-142.2	12.00	166.50	-59.3	
6	10944.1	90.00	0.15	6195.0	4382.5	-130.8	0.00	0.00	4384.5	Pronghorn T-P-3HNB PBHL (470' FNL, 1,365' FEL)



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Pronghorn T-P-3HNB
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn T-3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn T-P-3HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<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 T-3 Pad			
Site Position:		Northing:	1,400,111.93 ft	Latitude:	40.424300
From:	Lat/Long	Easting:	3,364,869.93 ft	Longitude:	-104.189430
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.85 °

Well	Pronghorn T-P-3HNB					
Well Position	+N/-S	0.0 ft	Northing:	1,400,111.92 ft	Latitude:	40.424300
	+E/-W	0.0 ft	Easting:	3,364,869.93 ft	Longitude:	-104.189430
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,753.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/29/2012	8.36	67.11	53,051

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	358.29

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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
815.4	6.31	193.57	814.8	-16.9	-4.1	2.00	2.00	0.00	193.57	
5,696.9	6.31	193.57	5,666.7	-538.3	-129.9	0.00	0.00	0.00	0.00	
6,498.0	90.00	0.15	6,195.0	-63.5	-142.2	12.00	10.45	20.79	166.50	
10,944.1	90.00	0.15	6,195.0	4,382.5	-130.8	0.00	0.00	0.00	0.00	Pronghorn T-P-3HNB

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Pronghorn T-P-3HNB
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn T-3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn T-P-3HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<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	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
600.0	2.00	193.57	600.0	-1.7	-0.4	-1.7	2.00	2.00	
700.0	4.00	193.57	699.8	-6.8	-1.6	-6.7	2.00	2.00	
800.0	6.00	193.57	799.5	-15.3	-3.7	-15.1	2.00	2.00	
815.4	6.31	193.57	814.8	-16.9	-4.1	-16.7	2.00	2.00	EOB @ Inc. = 6.31°
900.0	6.31	193.57	898.9	-25.9	-6.2	-25.7	0.00	0.00	
1,000.0	6.31	193.57	998.2	-36.6	-8.8	-36.3	0.00	0.00	
1,100.0	6.31	193.57	1,097.6	-47.3	-11.4	-46.9	0.00	0.00	
1,200.0	6.31	193.57	1,197.0	-57.9	-14.0	-57.5	0.00	0.00	
1,300.0	6.31	193.57	1,296.4	-68.6	-16.6	-68.1	0.00	0.00	
1,400.0	6.31	193.57	1,395.8	-79.3	-19.1	-78.7	0.00	0.00	
1,500.0	6.31	193.57	1,495.2	-90.0	-21.7	-89.3	0.00	0.00	
1,600.0	6.31	193.57	1,594.6	-100.7	-24.3	-99.9	0.00	0.00	
1,700.0	6.31	193.57	1,694.0	-111.4	-26.9	-110.5	0.00	0.00	
1,800.0	6.31	193.57	1,793.4	-122.0	-29.5	-121.1	0.00	0.00	
1,900.0	6.31	193.57	1,892.8	-132.7	-32.0	-131.7	0.00	0.00	
2,000.0	6.31	193.57	1,992.2	-143.4	-34.6	-142.3	0.00	0.00	
2,100.0	6.31	193.57	2,091.6	-154.1	-37.2	-152.9	0.00	0.00	
2,200.0	6.31	193.57	2,191.0	-164.8	-39.8	-163.5	0.00	0.00	
2,300.0	6.31	193.57	2,290.4	-175.4	-42.3	-174.1	0.00	0.00	
2,400.0	6.31	193.57	2,389.8	-186.1	-44.9	-184.7	0.00	0.00	
2,500.0	6.31	193.57	2,489.2	-196.8	-47.5	-195.3	0.00	0.00	
2,600.0	6.31	193.57	2,588.6	-207.5	-50.1	-205.9	0.00	0.00	
2,700.0	6.31	193.57	2,688.0	-218.2	-52.7	-216.5	0.00	0.00	
2,800.0	6.31	193.57	2,787.3	-228.9	-55.2	-227.1	0.00	0.00	
2,900.0	6.31	193.57	2,886.7	-239.5	-57.8	-237.7	0.00	0.00	
3,000.0	6.31	193.57	2,986.1	-250.2	-60.4	-248.3	0.00	0.00	
3,100.0	6.31	193.57	3,085.5	-260.9	-63.0	-258.9	0.00	0.00	
3,200.0	6.31	193.57	3,184.9	-271.6	-65.5	-269.5	0.00	0.00	
3,300.0	6.31	193.57	3,284.3	-282.3	-68.1	-280.1	0.00	0.00	
3,400.0	6.31	193.57	3,383.7	-293.0	-70.7	-290.7	0.00	0.00	
3,500.0	6.31	193.57	3,483.1	-303.6	-73.3	-301.3	0.00	0.00	
3,600.0	6.31	193.57	3,582.5	-314.3	-75.9	-311.9	0.00	0.00	
3,700.0	6.31	193.57	3,681.9	-325.0	-78.4	-322.5	0.00	0.00	
3,800.0	6.31	193.57	3,781.3	-335.7	-81.0	-333.1	0.00	0.00	
3,900.0	6.31	193.57	3,880.7	-346.4	-83.6	-343.7	0.00	0.00	
4,000.0	6.31	193.57	3,980.1	-357.0	-86.2	-354.3	0.00	0.00	
4,100.0	6.31	193.57	4,079.5	-367.7	-88.7	-364.9	0.00	0.00	
4,200.0	6.31	193.57	4,178.9	-378.4	-91.3	-375.5	0.00	0.00	
4,300.0	6.31	193.57	4,278.3	-389.1	-93.9	-386.1	0.00	0.00	
4,400.0	6.31	193.57	4,377.7	-399.8	-96.5	-396.7	0.00	0.00	
4,500.0	6.31	193.57	4,477.0	-410.5	-99.1	-407.3	0.00	0.00	
4,600.0	6.31	193.57	4,576.4	-421.1	-101.6	-417.9	0.00	0.00	
4,700.0	6.31	193.57	4,675.8	-431.8	-104.2	-428.5	0.00	0.00	
4,800.0	6.31	193.57	4,775.2	-442.5	-106.8	-439.1	0.00	0.00	
4,900.0	6.31	193.57	4,874.6	-453.2	-109.4	-449.7	0.00	0.00	
5,000.0	6.31	193.57	4,974.0	-463.9	-111.9	-460.3	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 T-P-3HNB
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn T-3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn T-P-3HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<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	6.31	193.57	5,073.4	-474.5	-114.5	-470.9	0.00	0.00	
5,200.0	6.31	193.57	5,172.8	-485.2	-117.1	-481.5	0.00	0.00	
5,300.0	6.31	193.57	5,272.2	-495.9	-119.7	-492.1	0.00	0.00	
5,400.0	6.31	193.57	5,371.6	-506.6	-122.3	-502.7	0.00	0.00	
5,500.0	6.31	193.57	5,471.0	-517.3	-124.8	-513.3	0.00	0.00	
5,600.0	6.31	193.57	5,570.4	-528.0	-127.4	-523.9	0.00	0.00	
5,696.9	6.31	193.57	5,666.7	-538.3	-129.9	-534.2	0.00	0.00	Start 12° Build/Turn
5,700.0	5.94	194.41	5,669.8	-538.6	-130.0	-534.5	12.00	-11.65	
5,725.0	3.13	208.16	5,694.7	-540.5	-130.6	-536.3	12.00	-11.27	
5,750.0	1.49	279.40	5,719.7	-541.0	-131.3	-536.9	12.00	-6.55	
5,775.0	3.56	335.77	5,744.7	-540.3	-131.9	-536.1	12.00	8.27	
5,800.0	6.41	346.94	5,769.6	-538.2	-132.5	-534.0	12.00	11.41	
5,825.0	9.35	351.19	5,794.3	-534.8	-133.2	-530.6	12.00	11.78	
5,850.0	12.33	353.40	5,818.9	-530.2	-133.8	-526.0	12.00	11.89	
5,875.0	15.31	354.77	5,843.2	-524.2	-134.4	-520.0	12.00	11.93	
5,900.0	18.30	355.70	5,867.1	-517.0	-135.0	-512.8	12.00	11.95	
5,925.0	21.29	356.37	5,890.6	-508.6	-135.6	-504.3	12.00	11.97	
5,950.0	24.28	356.89	5,913.7	-498.9	-136.1	-494.6	12.00	11.97	
5,975.0	27.28	357.29	5,936.2	-488.1	-136.7	-483.8	12.00	11.98	
6,000.0	30.27	357.63	5,958.1	-476.1	-137.2	-471.7	12.00	11.98	
6,025.0	33.27	357.91	5,979.3	-462.9	-137.7	-458.6	12.00	11.99	
6,050.0	36.27	358.14	5,999.9	-448.7	-138.2	-444.3	12.00	11.99	
6,075.0	39.26	358.35	6,019.6	-433.4	-138.7	-429.0	12.00	11.99	
6,100.0	42.26	358.53	6,038.6	-417.0	-139.1	-412.7	12.00	11.99	
6,125.0	45.26	358.69	6,056.6	-399.8	-139.6	-395.4	12.00	11.99	
6,150.0	48.26	358.84	6,073.7	-381.6	-140.0	-377.2	12.00	11.99	
6,175.0	51.25	358.97	6,089.9	-362.5	-140.3	-358.1	12.00	11.99	
6,200.0	54.25	359.09	6,105.0	-342.6	-140.7	-338.2	12.00	11.99	
6,225.0	57.25	359.20	6,119.1	-321.9	-141.0	-317.6	12.00	11.99	
6,250.0	60.25	359.31	6,132.0	-300.5	-141.2	-296.2	12.00	11.99	
6,275.0	63.25	359.41	6,143.9	-278.5	-141.5	-274.2	12.00	11.99	
6,300.0	66.25	359.50	6,154.5	-255.9	-141.7	-251.6	12.00	12.00	
6,325.0	69.25	359.59	6,164.0	-232.8	-141.9	-228.5	12.00	12.00	
6,350.0	72.25	359.68	6,172.3	-209.2	-142.0	-204.9	12.00	12.00	
6,375.0	75.24	359.76	6,179.2	-185.2	-142.2	-180.9	12.00	12.00	
6,400.0	78.24	359.84	6,185.0	-160.9	-142.2	-156.5	12.00	12.00	
6,425.0	81.24	359.92	6,189.4	-136.3	-142.3	-132.0	12.00	12.00	
6,450.0	84.24	360.00	6,192.6	-111.5	-142.3	-107.2	12.00	12.00	
6,475.0	87.24	0.08	6,194.4	-86.5	-142.3	-82.3	12.00	12.00	
6,498.0	90.00	0.15	6,195.0	-63.5	-142.2	-59.3	12.00	12.00	LP @ 6,195' TVD, 90° - Niobrara B Bench
6,500.0	90.00	0.15	6,195.0	-61.5	-142.2	-57.3	0.00	0.00	
6,600.0	90.00	0.15	6,195.0	38.5	-142.0	42.7	0.00	0.00	
6,700.0	90.00	0.15	6,195.0	138.5	-141.7	142.6	0.00	0.00	
6,800.0	90.00	0.15	6,195.0	238.5	-141.5	242.6	0.00	0.00	
6,900.0	90.00	0.15	6,195.0	338.5	-141.2	342.5	0.00	0.00	
7,000.0	90.00	0.15	6,195.0	438.4	-141.0	442.5	0.00	0.00	
7,100.0	90.00	0.15	6,195.0	538.4	-140.7	542.4	0.00	0.00	
7,200.0	90.00	0.15	6,195.0	638.4	-140.4	642.4	0.00	0.00	
7,300.0	90.00	0.15	6,195.0	738.4	-140.2	742.3	0.00	0.00	
7,400.0	90.00	0.15	6,195.0	838.4	-139.9	842.3	0.00	0.00	
7,500.0	90.00	0.15	6,195.0	938.4	-139.7	942.2	0.00	0.00	
7,600.0	90.00	0.15	6,195.0	1,038.4	-139.4	1,042.1	0.00	0.00	

# Cathedral Energy Services

## Planning Report

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<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn T-3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn T-P-3HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<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
7,700.0	90.00	0.15	6,195.0	1,138.4	-139.2	1,142.1	0.00	0.00	
7,800.0	90.00	0.15	6,195.0	1,238.4	-138.9	1,242.0	0.00	0.00	
7,900.0	90.00	0.15	6,195.0	1,338.4	-138.6	1,342.0	0.00	0.00	
8,000.0	90.00	0.15	6,195.0	1,438.4	-138.4	1,441.9	0.00	0.00	
8,100.0	90.00	0.15	6,195.0	1,538.4	-138.1	1,541.9	0.00	0.00	
8,200.0	90.00	0.15	6,195.0	1,638.4	-137.9	1,641.8	0.00	0.00	
8,300.0	90.00	0.15	6,195.0	1,738.4	-137.6	1,741.8	0.00	0.00	
8,400.0	90.00	0.15	6,195.0	1,838.4	-137.4	1,841.7	0.00	0.00	
8,500.0	90.00	0.15	6,195.0	1,938.4	-137.1	1,941.7	0.00	0.00	
8,600.0	90.00	0.15	6,195.0	2,038.4	-136.8	2,041.6	0.00	0.00	
8,700.0	90.00	0.15	6,195.0	2,138.4	-136.6	2,141.6	0.00	0.00	
8,800.0	90.00	0.15	6,195.0	2,238.4	-136.3	2,241.5	0.00	0.00	
8,900.0	90.00	0.15	6,195.0	2,338.4	-136.1	2,341.5	0.00	0.00	
9,000.0	90.00	0.15	6,195.0	2,438.4	-135.8	2,441.4	0.00	0.00	
9,100.0	90.00	0.15	6,195.0	2,538.4	-135.6	2,541.4	0.00	0.00	
9,200.0	90.00	0.15	6,195.0	2,638.4	-135.3	2,641.3	0.00	0.00	
9,300.0	90.00	0.15	6,195.0	2,738.4	-135.1	2,741.3	0.00	0.00	
9,400.0	90.00	0.15	6,195.0	2,838.4	-134.8	2,841.2	0.00	0.00	
9,500.0	90.00	0.15	6,195.0	2,938.4	-134.5	2,941.1	0.00	0.00	
9,600.0	90.00	0.15	6,195.0	3,038.4	-134.3	3,041.1	0.00	0.00	
9,700.0	90.00	0.15	6,195.0	3,138.4	-134.0	3,141.0	0.00	0.00	
9,800.0	90.00	0.15	6,195.0	3,238.4	-133.8	3,241.0	0.00	0.00	
9,900.0	90.00	0.15	6,195.0	3,338.4	-133.5	3,340.9	0.00	0.00	
10,000.0	90.00	0.15	6,195.0	3,438.4	-133.3	3,440.9	0.00	0.00	
10,100.0	90.00	0.15	6,195.0	3,538.4	-133.0	3,540.8	0.00	0.00	
10,200.0	90.00	0.15	6,195.0	3,638.4	-132.7	3,640.8	0.00	0.00	
10,300.0	90.00	0.15	6,195.0	3,738.4	-132.5	3,740.7	0.00	0.00	
10,400.0	90.00	0.15	6,195.0	3,838.4	-132.2	3,840.7	0.00	0.00	
10,500.0	90.00	0.15	6,195.0	3,938.4	-132.0	3,940.6	0.00	0.00	
10,600.0	90.00	0.15	6,195.0	4,038.4	-131.7	4,040.6	0.00	0.00	
10,700.0	90.00	0.15	6,195.0	4,138.4	-131.5	4,140.5	0.00	0.00	
10,800.0	90.00	0.15	6,195.0	4,238.4	-131.2	4,240.5	0.00	0.00	
10,900.0	90.00	0.15	6,195.0	4,338.4	-130.9	4,340.4	0.00	0.00	
10,944.1	90.00	0.15	6,195.0	4,382.5	-130.8	4,384.5	0.00	0.00	TD @ 10,944.1' 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
Pronghorn T-P-3HNB P1 - plan hits target center - Point	0.00	0.00	6,195.0	4,382.5	-130.8	1,404,492.05	3,364,674.34	40.436330	-104.189900
Pronghorn T-P-3HNB TC - plan hits target center - Point	0.00	0.00	6,195.0	36.4	-142.0	1,400,146.26	3,364,727.42	40.424400	-104.189940

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Pronghorn T-P-3HNB
<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site:</b>	Pronghorn T-3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Pronghorn T-P-3HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,498.0	6,195.0	Niobrara B Bench		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
500.0	500.0	0.0	0.0	KOP @ 500'	
815.4	814.8	-16.9	-4.1	EOB @ Inc. = 6.31°	
5,696.9	5,666.7	-538.3	-129.9	Start 12° Build/Turn	
6,498.0	6,195.0	-63.5	-142.2	LP @ 6,195' TVD, 90°	
10,944.1	6,195.0	4,382.5	-130.8	TD @ 10,944.1' MD	

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

**Weld County**

**Pronghorn T-3 Pad**

**Pronghorn T-P-3HNB**

**HZ**

**Plan #1**

## **Anticollision Report**

**29 November, 2012**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn T-P-3HNB
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn T-3 Pad	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn T-P-3HNB	<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>	HZ	<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:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
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 1,294.4ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	11/29/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	10,944.1	Plan #1 (HZ)	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 T-3 Pad						
KLEFF #1 (Existing) - Existing - Existing						Out of range
KLEFF #1 (Existing) - Existing - Existing	8,117.8	1,427.0	712.1	712.1	10,000.000	CC, ES
KLEFF #1 (Existing) - Existing - Plan #1						Out of range
KLEFF #1 (Existing) - Existing - Plan #1	8,117.8	1,427.0	712.1	712.1	10,000.000	CC, ES
Pronghorn 41-3 (Existing) - Existing - Existing						Out of range
Pronghorn 41-3 (Existing) - Existing - Existing	10,763.7	6,212.0	685.2	685.2	10,000.000	CC, ES
Pronghorn 41-3 (Existing) - Existing - Plan #1						Out of range
Pronghorn 41-3 (Existing) - Existing - Plan #1	10,763.7	6,212.0	685.2	685.2	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 T-P-3HNB
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn T-3 Pad	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn T-P-3HNB	<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>	HZ	<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: 6945-MWD													Offset Well Error:	0.0 ft
Reference														
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	
7,100.0	6,195.0	1,427.0	1,427.0	15.8	2.5	-90.00	1,558.1	-850.2	1,242.2	1,242.2	0.00	N/A		
7,200.0	6,195.0	1,427.0	1,427.0	17.1	2.5	-90.00	1,558.1	-850.2	1,161.7	1,161.7	0.00	N/A		
7,300.0	6,195.0	1,427.0	1,427.0	18.4	2.5	-90.00	1,558.1	-850.2	1,084.4	1,084.4	0.00	N/A		
7,400.0	6,195.0	1,427.0	1,427.0	19.8	2.5	-90.00	1,558.1	-850.2	1,011.1	1,011.1	0.00	N/A		
7,500.0	6,195.0	1,427.0	1,427.0	21.2	2.5	-90.00	1,558.1	-850.2	942.8	942.8	0.00	N/A		
7,600.0	6,195.0	1,427.0	1,427.0	22.7	2.5	-90.00	1,558.1	-850.2	880.5	880.5	0.00	N/A		
7,700.0	6,195.0	1,427.0	1,427.0	24.2	2.5	-90.00	1,558.1	-850.2	825.7	825.7	0.00	N/A		
7,800.0	6,195.0	1,427.0	1,427.0	25.8	2.5	-90.00	1,558.1	-850.2	779.8	779.8	0.00	N/A		
7,900.0	6,195.0	1,427.0	1,427.0	27.4	2.5	-90.00	1,558.1	-850.2	744.7	744.7	0.00	N/A		
8,000.0	6,195.0	1,427.0	1,427.0	28.9	2.5	-90.00	1,558.1	-850.2	721.8	721.8	0.00	N/A		
8,100.0	6,195.0	1,427.0	1,427.0	30.6	2.5	-90.00	1,558.1	-850.2	712.4	712.4	0.00	N/A		
8,117.8	6,195.0	1,427.0	1,427.0	30.9	2.5	-90.00	1,558.1	-850.2	712.1	712.1	0.00	N/A CC, ES		
8,200.0	6,195.0	1,427.0	1,427.0	32.2	2.5	-90.00	1,558.1	-850.2	716.9	716.9	0.00	N/A		
8,300.0	6,195.0	1,427.0	1,427.0	33.8	2.5	-90.00	1,558.1	-850.2	735.1	735.1	0.00	N/A		
8,400.0	6,195.0	1,427.0	1,427.0	35.5	2.5	-90.00	1,558.1	-850.2	766.0	766.0	0.00	N/A		
8,500.0	6,195.0	1,427.0	1,427.0	37.1	2.5	-90.00	1,558.1	-850.2	808.2	808.2	0.00	N/A		
8,600.0	6,195.0	1,427.0	1,427.0	38.8	2.5	-90.00	1,558.1	-850.2	860.0	860.0	0.00	N/A		
8,700.0	6,195.0	1,427.0	1,427.0	40.5	2.5	-90.00	1,558.1	-850.2	919.8	919.8	0.00	N/A		
8,800.0	6,195.0	1,427.0	1,427.0	42.2	2.5	-90.00	1,558.1	-850.2	986.1	986.1	0.00	N/A		
8,900.0	6,195.0	1,427.0	1,427.0	43.9	2.5	-90.00	1,558.1	-850.2	1,057.8	1,057.8	0.00	N/A		
9,000.0	6,195.0	1,427.0	1,427.0	45.6	2.5	-90.00	1,558.1	-850.2	1,133.7	1,133.7	0.00	N/A		
9,100.0	6,195.0	1,427.0	1,427.0	47.3	2.5	-90.00	1,558.1	-850.2	1,213.2	1,213.2	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 T-P-3HNB
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn T-3 Pad	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn T-P-3HNB	<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>	HZ	<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 T-3 Pad - KLEFF #1 (Existing) - Existing - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
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		
7,100.0	6,195.0	1,427.0	1,427.0	15.8	2.5	-90.00	1,558.1	-850.2	1,242.2	1,242.2	0.00	N/A		
7,200.0	6,195.0	1,427.0	1,427.0	17.1	2.5	-90.00	1,558.1	-850.2	1,161.7	1,161.7	0.00	N/A		
7,300.0	6,195.0	1,427.0	1,427.0	18.4	2.5	-90.00	1,558.1	-850.2	1,084.4	1,084.4	0.00	N/A		
7,400.0	6,195.0	1,427.0	1,427.0	19.8	2.5	-90.00	1,558.1	-850.2	1,011.1	1,011.1	0.00	N/A		
7,500.0	6,195.0	1,427.0	1,427.0	21.2	2.5	-90.00	1,558.1	-850.2	942.8	942.8	0.00	N/A		
7,600.0	6,195.0	1,427.0	1,427.0	22.7	2.5	-90.00	1,558.1	-850.2	880.5	880.5	0.00	N/A		
7,700.0	6,195.0	1,427.0	1,427.0	24.2	2.5	-90.00	1,558.1	-850.2	825.7	825.7	0.00	N/A		
7,800.0	6,195.0	1,427.0	1,427.0	25.8	2.5	-90.00	1,558.1	-850.2	779.8	779.8	0.00	N/A		
7,900.0	6,195.0	1,427.0	1,427.0	27.4	2.5	-90.00	1,558.1	-850.2	744.7	744.7	0.00	N/A		
8,000.0	6,195.0	1,427.0	1,427.0	28.9	2.5	-90.00	1,558.1	-850.2	721.8	721.8	0.00	N/A		
8,100.0	6,195.0	1,427.0	1,427.0	30.6	2.5	-90.00	1,558.1	-850.2	712.4	712.4	0.00	N/A		
8,117.8	6,195.0	1,427.0	1,427.0	30.9	2.5	-90.00	1,558.1	-850.2	712.1	712.1	0.00	N/A CC, ES		
8,200.0	6,195.0	1,427.0	1,427.0	32.2	2.5	-90.00	1,558.1	-850.2	716.9	716.9	0.00	N/A		
8,300.0	6,195.0	1,427.0	1,427.0	33.8	2.5	-90.00	1,558.1	-850.2	735.1	735.1	0.00	N/A		
8,400.0	6,195.0	1,427.0	1,427.0	35.5	2.5	-90.00	1,558.1	-850.2	766.0	766.0	0.00	N/A		
8,500.0	6,195.0	1,427.0	1,427.0	37.1	2.5	-90.00	1,558.1	-850.2	808.2	808.2	0.00	N/A		
8,600.0	6,195.0	1,427.0	1,427.0	38.8	2.5	-90.00	1,558.1	-850.2	860.0	860.0	0.00	N/A		
8,700.0	6,195.0	1,427.0	1,427.0	40.5	2.5	-90.00	1,558.1	-850.2	919.8	919.8	0.00	N/A		
8,800.0	6,195.0	1,427.0	1,427.0	42.2	2.5	-90.00	1,558.1	-850.2	986.1	986.1	0.00	N/A		
8,900.0	6,195.0	1,427.0	1,427.0	43.9	2.5	-90.00	1,558.1	-850.2	1,057.8	1,057.8	0.00	N/A		
9,000.0	6,195.0	1,427.0	1,427.0	45.6	2.5	-90.00	1,558.1	-850.2	1,133.7	1,133.7	0.00	N/A		
9,100.0	6,195.0	1,427.0	1,427.0	47.3	2.5	-90.00	1,558.1	-850.2	1,213.2	1,213.2	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 T-P-3HNB
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn T-3 Pad	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn T-P-3HNB	<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>	HZ	<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 T-3 Pad - Pronghorn 41-3 (Existing) - Existing - Existing													Offset Well Error:	0.0 ft
Survey Program: 6980-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	
9,700.0	6,195.0	6,212.0	6,212.0	57.5	10.8	90.00	4,200.4	553.9	1,265.3	1,265.3	0.00	N/A		
9,800.0	6,195.0	6,212.0	6,212.0	59.2	10.8	90.00	4,200.4	553.9	1,182.5	1,182.5	0.00	N/A		
9,900.0	6,195.0	6,212.0	6,212.0	61.0	10.8	90.00	4,200.4	553.9	1,102.5	1,102.5	0.00	N/A		
10,000.0	6,195.0	6,212.0	6,212.0	62.7	10.8	90.00	4,200.4	553.9	1,026.1	1,026.1	0.00	N/A		
10,100.0	6,195.0	6,212.0	6,212.0	64.4	10.8	90.00	4,200.4	553.9	954.0	954.0	0.00	N/A		
10,200.0	6,195.0	6,212.0	6,212.0	66.1	10.8	90.00	4,200.4	553.9	887.3	887.3	0.00	N/A		
10,300.0	6,195.0	6,212.0	6,212.0	67.9	10.8	90.00	4,200.4	553.9	827.4	827.4	0.00	N/A		
10,400.0	6,195.0	6,212.0	6,212.0	69.6	10.8	90.00	4,200.4	553.9	775.8	775.8	0.00	N/A		
10,500.0	6,195.0	6,212.0	6,212.0	71.3	10.8	90.00	4,200.4	553.9	734.2	734.2	0.00	N/A		
10,600.0	6,195.0	6,212.0	6,212.0	73.0	10.8	90.00	4,200.4	553.9	704.5	704.5	0.00	N/A		
10,700.0	6,195.0	6,212.0	6,212.0	74.8	10.8	90.00	4,200.4	553.9	688.2	688.2	0.00	N/A		
10,763.7	6,195.0	6,212.0	6,212.0	75.9	10.8	90.00	4,200.4	553.9	685.2	685.2	0.00	N/A CC, ES		
10,800.0	6,195.0	6,212.0	6,212.0	76.5	10.8	90.00	4,200.4	553.9	686.2	686.2	0.00	N/A		
10,900.0	6,195.0	6,212.0	6,212.0	78.2	10.8	90.00	4,200.4	553.9	698.7	698.7	0.00	N/A		
10,944.1	6,195.0	6,212.0	6,212.0	79.0	10.8	90.00	4,200.4	553.9	708.6	708.6	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 T-P-3HNB
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn T-3 Pad	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn T-P-3HNB	<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>	HZ	<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 T-3 Pad - Pronghorn 41-3 (Existing) - Existing - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
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		
9,700.0	6,195.0	6,212.0	6,212.0	57.5	10.8	90.00	4,200.4	553.9	1,265.3	1,265.3	0.00	N/A		
9,800.0	6,195.0	6,212.0	6,212.0	59.2	10.8	90.00	4,200.4	553.9	1,182.5	1,182.5	0.00	N/A		
9,900.0	6,195.0	6,212.0	6,212.0	61.0	10.8	90.00	4,200.4	553.9	1,102.5	1,102.5	0.00	N/A		
10,000.0	6,195.0	6,212.0	6,212.0	62.7	10.8	90.00	4,200.4	553.9	1,026.1	1,026.1	0.00	N/A		
10,100.0	6,195.0	6,212.0	6,212.0	64.4	10.8	90.00	4,200.4	553.9	954.0	954.0	0.00	N/A		
10,200.0	6,195.0	6,212.0	6,212.0	66.1	10.8	90.00	4,200.4	553.9	887.3	887.3	0.00	N/A		
10,300.0	6,195.0	6,212.0	6,212.0	67.9	10.8	90.00	4,200.4	553.9	827.4	827.4	0.00	N/A		
10,400.0	6,195.0	6,212.0	6,212.0	69.6	10.8	90.00	4,200.4	553.9	775.8	775.8	0.00	N/A		
10,500.0	6,195.0	6,212.0	6,212.0	71.3	10.8	90.00	4,200.4	553.9	734.2	734.2	0.00	N/A		
10,600.0	6,195.0	6,212.0	6,212.0	73.0	10.8	90.00	4,200.4	553.9	704.5	704.5	0.00	N/A		
10,700.0	6,195.0	6,212.0	6,212.0	74.8	10.8	90.00	4,200.4	553.9	688.2	688.2	0.00	N/A		
10,763.7	6,195.0	6,212.0	6,212.0	75.9	10.8	90.00	4,200.4	553.9	685.2	685.2	0.00	N/A CC, ES		
10,800.0	6,195.0	6,212.0	6,212.0	76.5	10.8	90.00	4,200.4	553.9	686.2	686.2	0.00	N/A		
10,900.0	6,195.0	6,212.0	6,212.0	78.2	10.8	90.00	4,200.4	553.9	698.7	698.7	0.00	N/A		
10,944.1	6,195.0	6,212.0	6,212.0	79.0	10.8	90.00	4,200.4	553.9	708.6	708.6	0.00	N/A		

# Cathedral Energy Services

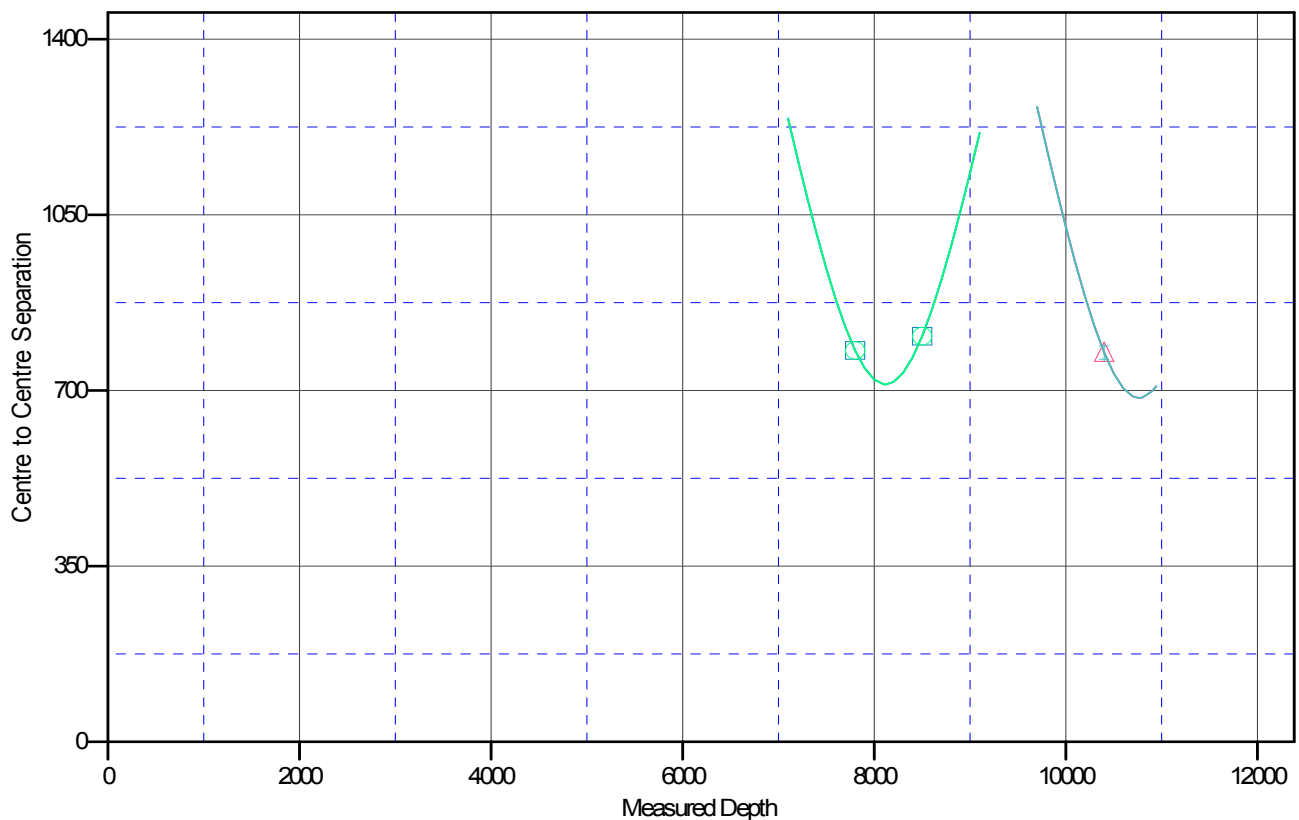
## Anticollision Report

<b>Company:</b>	Bonanza Creek Energy Operating Company, LLC	<b>Local Co-ordinate Reference:</b>	Well Pronghorn T-P-3HNB
<b>Project:</b>	Weld County	<b>TVD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Reference Site:</b>	Pronghorn T-3 Pad	<b>MD Reference:</b>	KB = 15' @ 4768.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Pronghorn T-P-3HNB	<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>	HZ	<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' @ 4768.0ft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Pronghorn T-P-3HNB  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.85°

### Ladder Plot



### LEGEND

- Pronghorn 41-3 (Existing), Existing, Plan #1 V0
- KLEFF #1 (Existing), Existing, Existing V0
- Pronghorn 41-3 (Existing), Existing, Existing V0
- KLEFF #1 (Existing), Existing, Plan #1 V0