

# Bonanza Creek Energy, Inc.

Weld County, CO  
Sec. 2-T5N-R62W  
Antelope 11-2HZ

Plan A - Rev 0

Plan: Plan A - Rev 0 Proposal

## Sperry Drilling Services Proposal Report

10 March, 2011

Well Coordinates: 1,403,762.89 N, 3,334,478.08 E (40° 26' 07.84" N, 104° 17' 54.17" W)

Ground Level: 4,655.00 ft

Local Coordinate Origin:

Centered on Well Antelope 11-2HZ

Viewing Datum:

GL @ 4655.00ft (Ground Level)

TVDs to System:

N

North Reference:

True

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 431

**HALLIBURTON**

**Plan Report for Antelope 11-2HZ - Plan A - Rev 0 Proposal**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,049.42	0.00	0.00	5,049.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>KOP - Begin 4.87°/100ft Build at 5049.42ft</b>										
5,100.00	2.47	123.54	5,099.98	-0.60	0.91	1.09	4.87	4.87	0.00	123.54
5,200.00	7.34	123.54	5,199.59	-5.32	8.03	9.62	4.87	4.87	0.00	0.00
5,300.00	12.21	123.54	5,298.11	-14.70	22.17	26.57	4.87	4.87	0.00	0.00
5,400.00	17.09	123.54	5,394.83	-28.67	43.25	51.82	4.87	4.87	0.00	0.00
5,500.00	21.96	123.54	5,489.05	-47.13	71.09	85.18	4.87	4.87	0.00	0.00

**Plan Report for Antelope 11-2HZ - Plan A - Rev 0 Proposal**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
5,600.00	26.83	123.54	5,580.09	-69.95	105.51	126.42	4.87	4.87	0.00	0.00
5,700.00	31.71	123.54	5,667.30	-96.96	146.24	175.24	4.87	4.87	0.00	0.00
5,800.00	36.58	123.54	5,750.04	-127.97	193.01	231.28	4.87	4.87	0.00	0.00
5,900.00	41.45	123.54	5,827.71	-162.74	245.47	294.13	4.87	4.87	0.00	0.00
6,000.00	46.33	123.54	5,899.75	-201.04	303.23	363.35	4.87	4.87	0.00	0.00
6,100.00	51.20	123.54	5,965.65	-242.58	365.89	438.43	4.87	4.87	0.00	0.00
6,200.00	56.08	123.54	6,024.92	-287.07	432.99	518.83	4.87	4.87	0.00	0.00
6,300.00	60.95	123.54	6,077.13	-334.18	504.04	603.97	4.87	4.87	0.00	0.00
6,400.00	65.82	123.54	6,121.91	-383.57	578.53	693.23	4.87	4.87	0.00	0.00
6,500.00	70.70	123.54	6,158.94	-434.88	655.93	785.97	4.87	4.87	0.00	0.00
6,600.00	75.57	123.54	6,187.95	-487.74	735.67	881.52	4.87	4.87	0.00	0.00
6,700.00	80.44	123.54	6,208.72	-541.78	817.17	979.18	4.87	4.87	0.00	0.00
6,800.00	85.32	123.54	6,221.11	-596.59	899.85	1,078.25	4.87	4.87	0.00	0.00
6,900.00	90.19	123.54	6,225.02	-651.79	983.10	1,178.01	4.87	4.87	0.00	0.00
6,904.51	90.41	123.54	6,225.00	-654.29	986.86	1,182.52	4.87	4.87	0.00	0.00
<b>End of Build - Begin 3.0°/100ft Turn at 6904.51ft - 7" Csg</b>										
7,000.00	90.41	126.41	6,224.31	-709.02	1,065.10	1,277.96	3.00	0.00	3.00	89.98
7,031.37	90.41	127.35	6,224.09	-727.84	1,090.19	1,309.33	3.00	0.00	3.00	90.01
<b>End of Turn at 7031.37ft</b>										
7,100.00	90.41	127.35	6,223.59	-769.48	1,144.74	1,377.95	0.00	0.00	0.00	0.00
7,200.00	90.41	127.35	6,222.88	-830.14	1,224.24	1,477.94	0.00	0.00	0.00	0.00
7,300.00	90.41	127.35	6,222.16	-890.81	1,303.73	1,577.92	0.00	0.00	0.00	0.00
7,400.00	90.41	127.35	6,221.44	-951.48	1,383.22	1,677.91	0.00	0.00	0.00	0.00
7,500.00	90.41	127.35	6,220.72	-1,012.14	1,462.71	1,777.89	0.00	0.00	0.00	0.00
7,600.00	90.41	127.35	6,220.00	-1,072.81	1,542.21	1,877.88	0.00	0.00	0.00	0.00
7,700.00	90.41	127.35	6,219.28	-1,133.48	1,621.70	1,977.86	0.00	0.00	0.00	0.00
7,800.00	90.41	127.35	6,218.56	-1,194.14	1,701.19	2,077.85	0.00	0.00	0.00	0.00
7,900.00	90.41	127.35	6,217.84	-1,254.81	1,780.68	2,177.84	0.00	0.00	0.00	0.00
8,000.00	90.41	127.35	6,217.12	-1,315.48	1,860.18	2,277.82	0.00	0.00	0.00	0.00
8,100.00	90.41	127.35	6,216.41	-1,376.14	1,939.67	2,377.81	0.00	0.00	0.00	0.00
8,200.00	90.41	127.35	6,215.69	-1,436.81	2,019.16	2,477.79	0.00	0.00	0.00	0.00
8,300.00	90.41	127.35	6,214.97	-1,497.48	2,098.65	2,577.78	0.00	0.00	0.00	0.00
8,400.00	90.41	127.35	6,214.25	-1,558.14	2,178.15	2,677.76	0.00	0.00	0.00	0.00
8,500.00	90.41	127.35	6,213.53	-1,618.81	2,257.64	2,777.75	0.00	0.00	0.00	0.00
8,600.00	90.41	127.35	6,212.81	-1,679.48	2,337.13	2,877.73	0.00	0.00	0.00	0.00
8,700.00	90.41	127.35	6,212.09	-1,740.14	2,416.62	2,977.72	0.00	0.00	0.00	0.00
8,800.00	90.41	127.35	6,211.37	-1,800.81	2,496.12	3,077.70	0.00	0.00	0.00	0.00
8,900.00	90.41	127.35	6,210.65	-1,861.48	2,575.61	3,177.69	0.00	0.00	0.00	0.00
9,000.00	90.41	127.35	6,209.94	-1,922.14	2,655.10	3,277.68	0.00	0.00	0.00	0.00
9,050.00	90.41	127.35	6,209.58	-1,952.48	2,694.85	3,327.67	0.00	0.00	0.00	0.00
<b>Hold Angle at 90.41°</b>										
9,100.00	90.41	127.35	6,209.22	-1,982.81	2,734.59	3,377.66	0.00	0.00	0.00	0.00
9,200.00	90.41	127.35	6,208.50	-2,043.48	2,814.09	3,477.65	0.00	0.00	0.00	0.00
9,300.00	90.41	127.35	6,207.78	-2,104.14	2,893.58	3,577.63	0.00	0.00	0.00	0.00
9,400.00	90.41	127.35	6,207.06	-2,164.81	2,973.07	3,677.62	0.00	0.00	0.00	0.00
9,500.00	90.41	127.35	6,206.34	-2,225.48	3,052.56	3,777.60	0.00	0.00	0.00	0.00
9,600.00	90.41	127.35	6,205.62	-2,286.14	3,132.06	3,877.59	0.00	0.00	0.00	0.00
9,700.00	90.41	127.35	6,204.90	-2,346.81	3,211.55	3,977.57	0.00	0.00	0.00	0.00
9,800.00	90.41	127.35	6,204.19	-2,407.47	3,291.04	4,077.56	0.00	0.00	0.00	0.00
9,900.00	90.41	127.35	6,203.47	-2,468.14	3,370.53	4,177.54	0.00	0.00	0.00	0.00
10,000.00	90.41	127.35	6,202.75	-2,528.81	3,450.02	4,277.53	0.00	0.00	0.00	0.00
10,100.00	90.41	127.35	6,202.03	-2,589.47	3,529.52	4,377.52	0.00	0.00	0.00	0.00
10,200.00	90.41	127.35	6,201.31	-2,650.14	3,609.01	4,477.50	0.00	0.00	0.00	0.00
10,300.00	90.41	127.35	6,200.59	-2,710.81	3,688.50	4,577.49	0.00	0.00	0.00	0.00
10,400.00	90.41	127.35	6,199.87	-2,771.47	3,767.99	4,677.47	0.00	0.00	0.00	0.00
10,500.00	90.41	127.35	6,199.15	-2,832.14	3,847.49	4,777.46	0.00	0.00	0.00	0.00
10,600.00	90.41	127.35	6,198.43	-2,892.81	3,926.98	4,877.44	0.00	0.00	0.00	0.00
10,700.00	90.41	127.35	6,197.72	-2,953.47	4,006.47	4,977.43	0.00	0.00	0.00	0.00
10,800.00	90.41	127.35	6,197.00	-3,014.14	4,085.96	5,077.41	0.00	0.00	0.00	0.00

**Plan Report for Antelope 11-2HZ - Plan A - Rev 0 Proposal**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
10,900.00	90.41	127.35	6,196.28	-3,074.81	4,165.46	5,177.40	0.00	0.00	0.00	0.00
11,000.00	90.41	127.35	6,195.56	-3,135.47	4,244.95	5,277.38	0.00	0.00	0.00	0.00
11,077.73	90.41	127.35	6,195.00	-3,182.63	4,306.74	5,355.10	0.00	0.00	0.00	0.00

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,049.42	5,049.42	0.00	0.00	KOP - Begin 4.87°/100ft Build at 5049.42ft
6,904.51	6,225.00	-654.29	986.86	End of Build - Begin 3.0°/100ft Turn at 6904.51ft
7,031.37	6,224.09	-727.84	1,090.19	End of Turn at 7031.37ft
9,050.00	6,209.58	-1,952.48	2,694.85	Hold Angle at 90.41°
11,077.73	6,195.00	-3,182.63	4,306.74	Total Depth at 11077.73ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
TD	No Target (Freehand)	126.46	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	11,077.73	Plan A - Rev 0 Proposal	MWD

**Casing Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,904.51	6,225.00	7" Csg	7	8-3/4

**Targets associated with this wellbore**

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Antelope 11-2HZ__PlanA - Rev0_Sec. Lines	0.00	0.00	0.00	Polygon
Antelope 11-2HZ_PlanA - Rev0_Csg Pt.	6,225.00	-654.29	986.87	Point
Antelope 11-2HZ_PlanA - Rev0_BHL Tgt	6,195.00	-3,182.63	4,306.74	Point

**North Reference Sheet for Sec. 2-T5N-R62W - Antelope 11-2HZ - Plan A - Rev 0**

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to GL @ 4655.00ft (Ground Level). Northing and Easting are relative to Antelope 11-2HZ

Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is -105.50°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°

False Easting: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99996203

Grid Coordinates of Well: 1,403,762.89 ft N, 3,334,478.08 ft E

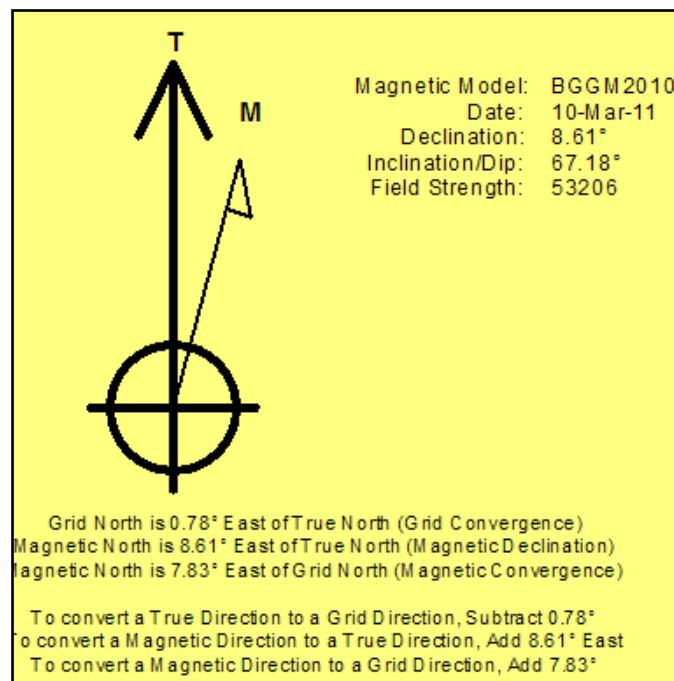
Geographical Coordinates of Well: 40° 26' 07.84" N, 104° 17' 54.17" W

Grid Convergence at Surface is: 0.78°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,077.73ft

the Bottom Hole Displacement is 5,355.10ft in the Direction of 126.46° (True).

Magnetic Convergence at surface is: -7.83° (10 March 2011, , BGGM2010)



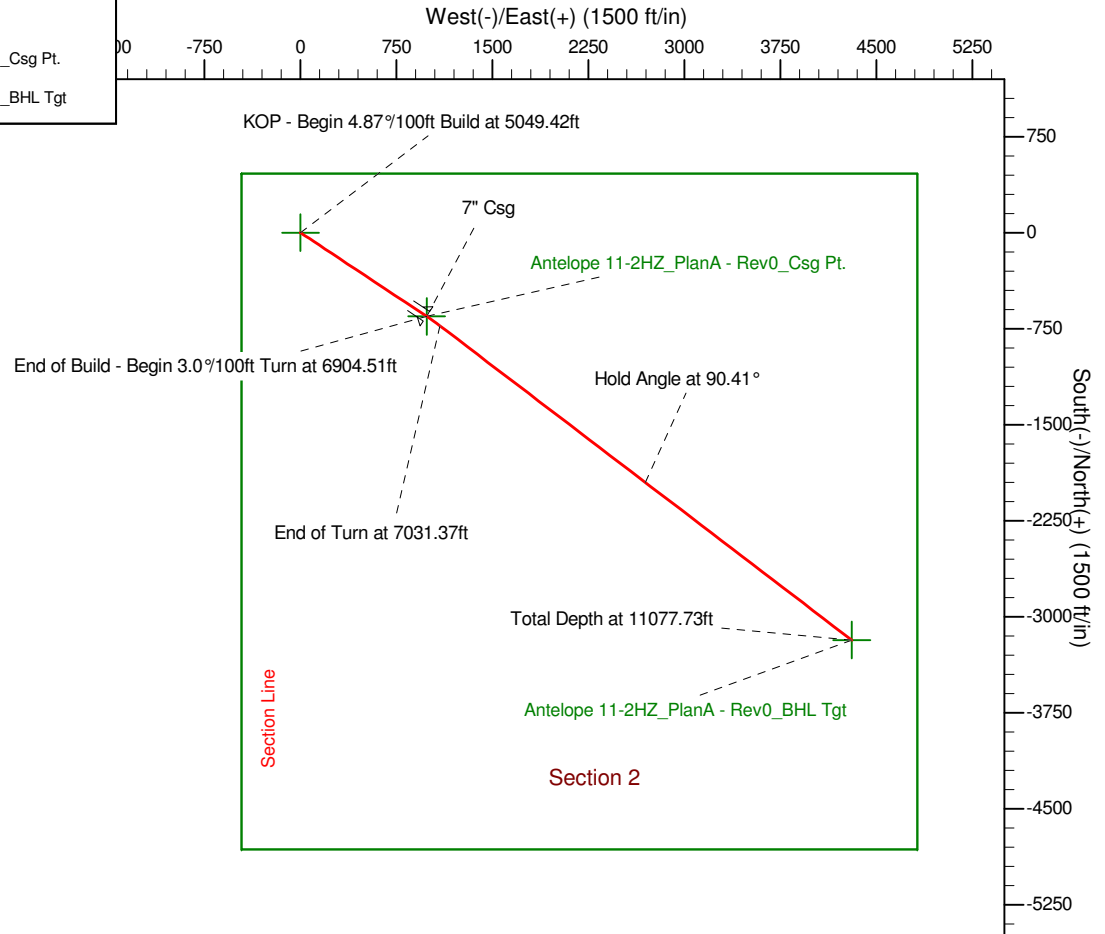
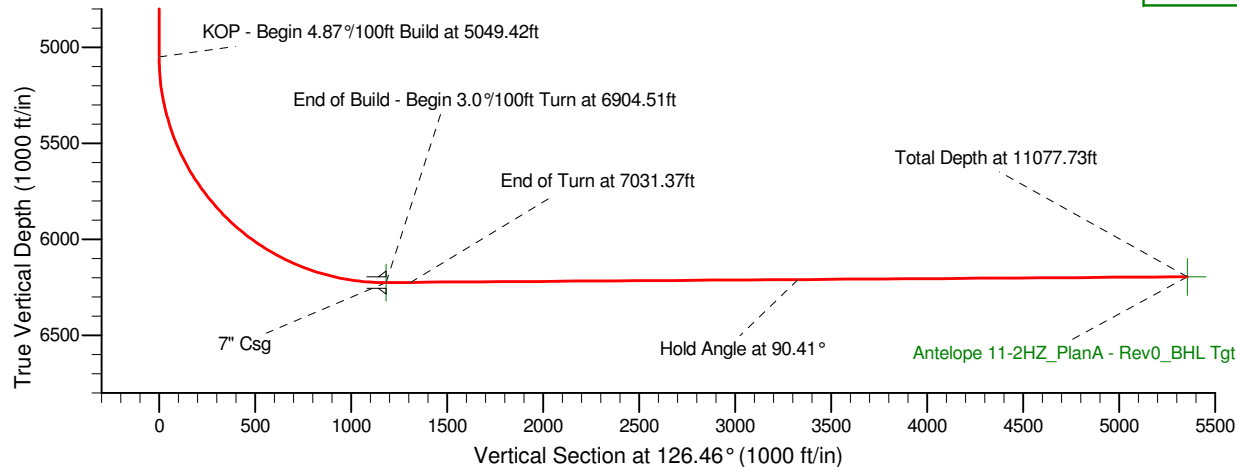
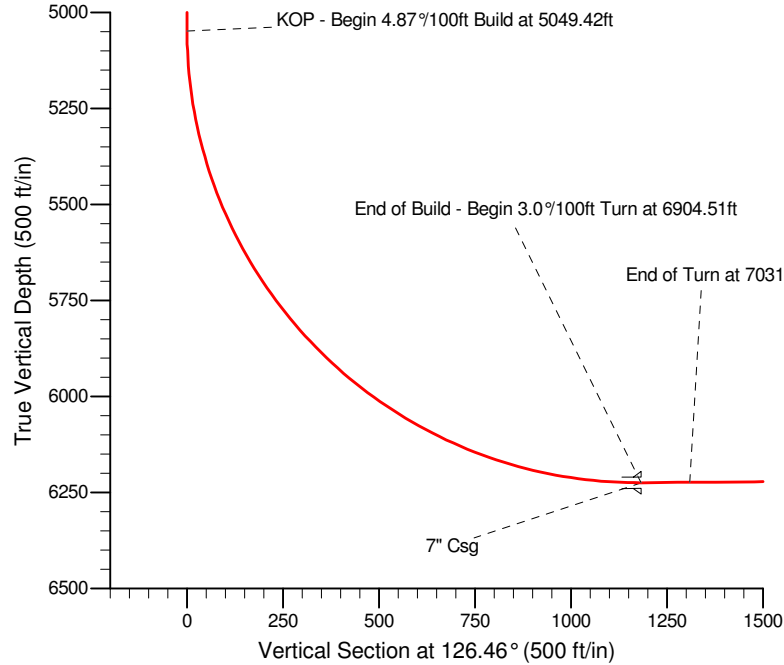
Project: Weld County, CO  
Site: Sec. 2-T5N-R62W  
Well: Antelope 11-2HZ  
Wellbore: Plan A - Rev 0  
Design: Plan A - Rev 0 Proposal

# Bonanza Creek Energy, Inc.

**HALLIBURTON**  
Sperry Drilling

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5049.42	0.00	0.00	5049.42	0.00	0.00	0.00	0.00	0.00	
3	6904.51	90.41	123.54	6225.00	-654.29	986.87	4.87	123.54	1182.52	Antelope 11-2HZ_PlanA - Rev0_Csg Pt.
4	7031.37	90.41	127.35	6224.09	-727.84	1090.19	3.00	89.99	1309.33	
5	11077.73	90.41	127.35	6195.00	-3182.63	4306.74	0.00	0.00	5355.10	Antelope 11-2HZ_PlanA - Rev0_BHL Tgt



## WELL DETAILS: Antelope 11-2HZ

Ground Level: 4655.00			
Northing	Easting	Latitude	Longitude
1403762.89	3334478.08	40° 26' 7.836 N	104° 17' 54.168 W

Plan: Plan A - Rev 0 Proposal (Antelope 11-2HZ/Plan A - Rev 0)

Created By: Jay Lantz Date: 12:10, March 10 2011

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_