

# Noble Energy

Weld County, CO (NAD 83)

Sec. 36-T6N-R64W

State A36-99HZ

Plan #1

Plan: Plan #1 Proposal

## Sperry Drilling Services

### Proposal Report

12 August, 2010

Well Coordinates: 1,408,078.52 N, 3,276,671.06 E (40° 26' 57.55" N, 104° 30' 21.10" W)

Ground Level: 4,629.00 ft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Geodetic Scale Factor Applied

Version: 2003.16 Build: 431

Centered on Well State A36-99HZ

RKB 24' @ 4653.00ft (H&P 315)

N

Grid

API - US Survey Feet - Custom

**HALLIBURTON**

## Plan Report for State A36-99HZ - Plan #1 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
2,661.00	0.00	0.00	2,661.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pierre Silt</b>										
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
3,527.00	0.00	0.00	3,527.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Parkman</b>										
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
4,265.00	0.00	0.00	4,265.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Sussex</b>										
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
4,832.00	0.00	0.00	4,832.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Shannon</b>										
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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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 (°)
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,107.27	0.00	0.00	6,107.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Kickoff at 6107.27ft</b>										
6,200.00	7.42	120.00	6,199.74	-3.00	5.19	5.90	8.00	8.00	0.00	120.00
6,300.00	15.42	120.00	6,297.68	-12.89	22.32	25.36	8.00	8.00	0.00	0.00
6,400.00	23.42	120.00	6,391.92	-29.50	51.09	58.05	8.00	8.00	0.00	0.00
6,500.00	31.42	120.00	6,480.61	-52.50	90.94	103.33	8.00	8.00	0.00	0.00
6,538.61	34.51	120.00	6,513.00	-63.00	109.13	124.00	8.00	8.00	0.00	0.00
<b>Niobrara</b>										
6,560.69	36.27	120.00	6,531.00	-69.40	120.20	136.58	8.00	8.00	0.00	0.00
<b>Niobrara A Chalk</b>										
6,600.00	39.42	120.00	6,562.04	-81.46	141.09	160.31	8.00	8.00	0.00	0.00
6,650.00	43.42	120.00	6,599.53	-97.99	169.73	192.86	8.00	8.00	0.00	0.00
<b>Build Rate = 8.00°/100ft</b>										
6,691.75	46.76	120.00	6,629.00	-112.77	195.33	221.95	8.00	8.00	0.00	0.00
<b>Niobrara B Chalk</b>										
6,700.00	47.42	120.00	6,634.62	-115.79	200.56	227.89	8.00	8.00	0.00	0.00
6,800.00	55.42	120.00	6,696.93	-154.85	268.21	304.76	8.00	8.00	0.00	0.00
6,900.00	63.42	120.00	6,747.76	-197.86	342.70	389.41	8.00	8.00	0.00	0.00
7,000.00	71.42	120.00	6,786.13	-243.99	422.60	480.19	8.00	8.00	0.00	0.00
7,040.70	74.67	120.00	6,798.00	-263.45	456.32	518.50	8.00	8.00	0.00	0.00
<b>Fort Hayes</b>										
7,100.00	79.42	120.00	6,811.29	-292.34	506.35	575.35	8.00	8.00	0.00	0.00
7,169.77	85.00	120.00	6,820.74	-326.89	566.19	643.35	8.00	8.00	0.00	0.00
<b>End Build at 7169.77ft - 7" Casing Pt.</b>										
7,195.68	85.00	120.00	6,823.00	-339.79	588.54	668.74	0.00	0.00	0.00	0.00
<b>Codell Top</b>										
7,200.00	85.00	120.00	6,823.38	-341.95	592.27	672.98	0.00	0.00	0.00	0.00
7,208.00	85.00	120.00	6,824.07	-345.93	599.17	680.82	0.00	0.00	0.00	0.00
<b>Hold Angle at 85.00</b>										
7,244.77	85.00	120.00	6,827.28	-364.25	630.89	716.87	0.00	0.00	0.00	0.00
<b>Kickoff at 7244.77ft</b>										
7,275.00	87.42	120.00	6,829.28	-379.33	657.01	746.55	8.00	8.00	0.00	0.00
<b>Build Rate = 8.00°/100ft</b>										
7,300.00	89.42	120.00	6,829.97	-391.82	678.65	771.14	8.00	8.00	0.00	0.00
7,304.90	89.81	120.00	6,830.00	-394.27	682.90	775.96	8.00	8.00	0.00	0.00
<b>Codell Target @ Landing Point</b>										
7,307.27	90.00	120.00	6,830.00	-395.46	684.95	778.29	8.00	8.00	0.00	0.00
<b>End Build / Begin Turn at 7307.27ft</b>										
7,400.00	90.17	123.71	6,829.87	-444.38	763.70	870.01	4.00	0.18	4.00	87.41
7,460.00	90.28	126.10	6,829.64	-478.71	812.90	929.75	4.00	0.18	4.00	87.41
<b>Turn Rate = 4.00°/100ft</b>										
7,500.00	90.35	127.70	6,829.42	-502.73	844.89	969.68	4.00	0.18	4.00	87.42
7,600.00	90.53	131.70	6,828.66	-566.59	921.81	1,069.65	4.00	0.18	4.00	87.43
7,614.33	90.55	132.27	6,828.52	-576.18	932.46	1,083.97	4.00	0.18	4.00	87.46
<b>End Turn at 7614.33ft</b>										

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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 (°)
7,700.00	90.55	132.27	6,827.70	-633.80	995.85	1,169.59	0.00	0.00	0.00	87.47
7,800.00	90.55	132.27	6,826.73	-701.06	1,069.85	1,269.52	0.00	0.00	0.00	0.00
7,900.00	90.55	132.27	6,825.77	-768.32	1,143.84	1,369.45	0.00	0.00	0.00	0.00
8,000.00	90.55	132.27	6,824.81	-835.58	1,217.84	1,469.38	0.00	0.00	0.00	0.00
8,100.00	90.55	132.27	6,823.85	-902.84	1,291.83	1,569.32	0.00	0.00	0.00	0.00
8,200.00	90.55	132.27	6,822.89	-970.10	1,365.83	1,669.25	0.00	0.00	0.00	0.00
8,300.00	90.55	132.27	6,821.92	-1,037.36	1,439.82	1,769.18	0.00	0.00	0.00	0.00
8,400.00	90.55	132.27	6,820.96	-1,104.62	1,513.82	1,869.12	0.00	0.00	0.00	0.00
8,500.00	90.55	132.27	6,820.00	-1,171.88	1,587.81	1,969.05	0.00	0.00	0.00	0.00
8,600.00	90.55	132.27	6,819.04	-1,239.14	1,661.80	2,068.98	0.00	0.00	0.00	0.00
8,700.00	90.55	132.27	6,818.08	-1,306.40	1,735.80	2,168.92	0.00	0.00	0.00	0.00
8,800.00	90.55	132.27	6,817.11	-1,373.66	1,809.79	2,268.85	0.00	0.00	0.00	0.00
8,900.00	90.55	132.27	6,816.15	-1,440.92	1,883.79	2,368.78	0.00	0.00	0.00	0.00
9,000.00	90.55	132.27	6,815.19	-1,508.18	1,957.78	2,468.72	0.00	0.00	0.00	0.00
9,100.00	90.55	132.27	6,814.23	-1,575.44	2,031.78	2,568.65	0.00	0.00	0.00	0.00
9,200.00	90.55	132.27	6,813.27	-1,642.70	2,105.77	2,668.58	0.00	0.00	0.00	0.00
9,300.00	90.55	132.27	6,812.30	-1,709.96	2,179.77	2,768.52	0.00	0.00	0.00	0.00
9,400.00	90.55	132.27	6,811.34	-1,777.22	2,253.76	2,868.45	0.00	0.00	0.00	0.00
9,500.00	90.55	132.27	6,810.38	-1,844.48	2,327.76	2,968.38	0.00	0.00	0.00	0.00
9,600.00	90.55	132.27	6,809.42	-1,911.74	2,401.75	3,068.31	0.00	0.00	0.00	0.00
9,700.00	90.55	132.27	6,808.45	-1,979.00	2,475.74	3,168.25	0.00	0.00	0.00	0.00
9,800.00	90.55	132.27	6,807.49	-2,046.26	2,549.74	3,268.18	0.00	0.00	0.00	0.00
9,900.00	90.55	132.27	6,806.53	-2,113.52	2,623.73	3,368.11	0.00	0.00	0.00	0.00
10,000.00	90.55	132.27	6,805.57	-2,180.78	2,697.73	3,468.05	0.00	0.00	0.00	0.00
Hold Angle at 90.55										
10,100.00	90.55	132.27	6,804.61	-2,248.04	2,771.72	3,567.98	0.00	0.00	0.00	0.00
10,200.00	90.55	132.27	6,803.64	-2,315.29	2,845.72	3,667.91	0.00	0.00	0.00	0.00
10,300.00	90.55	132.27	6,802.68	-2,382.55	2,919.71	3,767.85	0.00	0.00	0.00	0.00
10,400.00	90.55	132.27	6,801.72	-2,449.81	2,993.71	3,867.78	0.00	0.00	0.00	0.00
10,500.00	90.55	132.27	6,800.76	-2,517.07	3,067.70	3,967.71	0.00	0.00	0.00	0.00
10,600.00	90.55	132.27	6,799.80	-2,584.33	3,141.70	4,067.65	0.00	0.00	0.00	0.00
10,700.00	90.55	132.27	6,798.83	-2,651.59	3,215.69	4,167.58	0.00	0.00	0.00	0.00
10,800.00	90.55	132.27	6,797.87	-2,718.85	3,289.68	4,267.51	0.00	0.00	0.00	0.00
10,900.00	90.55	132.27	6,796.91	-2,786.11	3,363.68	4,367.44	0.00	0.00	0.00	0.00
11,000.00	90.55	132.27	6,795.95	-2,853.37	3,437.67	4,467.38	0.00	0.00	0.00	0.00
11,100.00	90.55	132.27	6,794.98	-2,920.63	3,511.67	4,567.31	0.00	0.00	0.00	0.00
11,200.00	90.55	132.27	6,794.02	-2,987.89	3,585.66	4,667.24	0.00	0.00	0.00	0.00
11,300.00	90.55	132.27	6,793.06	-3,055.15	3,659.66	4,767.18	0.00	0.00	0.00	0.00
11,400.00	90.55	132.27	6,792.10	-3,122.41	3,733.65	4,867.11	0.00	0.00	0.00	0.00
11,500.00	90.55	132.27	6,791.14	-3,189.67	3,807.65	4,967.04	0.00	0.00	0.00	0.00
11,600.00	90.55	132.27	6,790.17	-3,256.93	3,881.64	5,066.98	0.00	0.00	0.00	0.00
11,700.00	90.55	132.27	6,789.21	-3,324.19	3,955.63	5,166.91	0.00	0.00	0.00	0.00
11,800.00	90.55	132.27	6,788.25	-3,391.45	4,029.63	5,266.84	0.00	0.00	0.00	0.00
11,900.00	90.55	132.27	6,787.29	-3,458.71	4,103.62	5,366.78	0.00	0.00	0.00	0.00
12,000.00	90.55	132.27	6,786.33	-3,525.97	4,177.62	5,466.71	0.00	0.00	0.00	0.00
12,100.00	90.55	132.27	6,785.36	-3,593.23	4,251.61	5,566.64	0.00	0.00	0.00	0.00
12,200.00	90.55	132.27	6,784.40	-3,660.49	4,325.61	5,666.58	0.00	0.00	0.00	0.00
12,226.15	90.55	132.27	6,784.15	-3,678.08	4,344.95	5,692.71	0.00	0.00	0.00	0.00
State A36-99HZ Plan #1 BH Tgt										

## Plan Report for State A36-99HZ - Plan #1 Proposal

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,107.27	6,107.27	0.00	0.00	Kickoff at 6107.27ft
6,650.00	6,599.53	-97.99	169.73	Build Rate = 8.00°/100ft
7,169.77	6,820.74	-326.89	566.19	End Build at 7169.77ft
7,208.00	6,824.07	-345.93	599.17	Hold Angle at 85.00
7,244.77	6,827.28	-364.25	630.89	Kickoff at 7244.77ft
7,275.00	6,829.28	-379.33	657.01	Build Rate = 8.00°/100ft
7,307.27	6,830.00	-395.46	684.95	End Build / Begin Turn at 7307.27ft
7,460.00	6,829.64	-478.71	812.90	Turn Rate = 4.00°/100ft
7,614.33	6,828.52	-576.18	932.46	End Turn at 7614.33ft
10,000.00	6,805.57	-2,180.78	2,697.73	Hold Angle at 90.55
12,226.15	6,784.15	-3,678.08	4,344.96	Total Depth = 12226.15ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	State A36-99HZ Plan #1 BH Tgt	130.25	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	12,226.15	Plan #1 Proposal	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,169.77	6,820.74	7" Casing Pt.	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	6,836.00	Codell Base		0.00	0.00
2,661.00	2,661.00	Pierre Silt		0.00	0.00
3,527.00	3,527.00	Parkman		0.00	0.00
4,265.00	4,265.00	Sussex		0.00	0.00
4,832.00	4,832.00	Shannon		0.00	0.00
6,538.61	6,513.00	Niobrara		0.00	0.00
6,560.69	6,531.00	Niobrara A Chalk		0.00	0.00
6,691.75	6,629.00	Niobrara B Chalk		0.00	0.00
7,040.70	6,798.00	Fort Hayes		0.00	0.00
7,195.68	6,823.00	Codell Top		0.00	0.00
7,304.90	6,830.00	Codell Target @ Landing Point		0.00	0.00

## Plan Report for State A36-99HZ - Plan #1 Proposal

### Targets associated with this wellbore

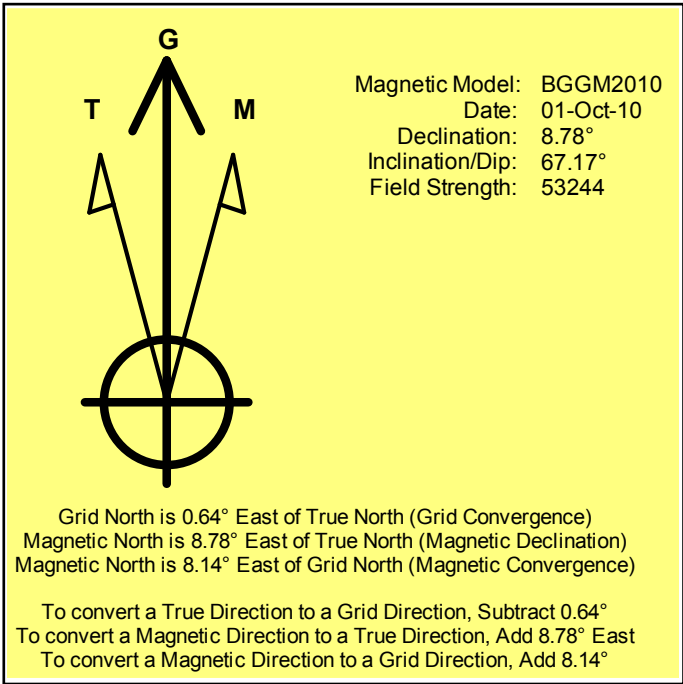
Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
State A36-99HZ S. Section Line	0.00	0.00	0.00	Polygon
State A36-99HZ Plan #1 BH Tgt	6,784.15	-3,678.08	4,344.95	Point
State A36-9	0.00	-2,930.02	4,127.66	Circle
State A36-99HZ N. Section Line	0.00	0.00	0.00	Polygon
State A36-16	0.00	-4,281.44	4,151.39	Circle
State A36-6	0.00	-1,714.74	1,411.00	Circle
Devries State A36-23	0.00	-3,541.63	3,527.76	Circle
State A36-3	0.00	-372.93	1,504.43	Circle
Scholfield State A36-4X	0.00	-233.15	2.61	Circle
Scholfield A36-19	0.00	-1,009.31	640.38	Circle
State A36-99HZ N. 460' Setback	0.00	0.00	0.00	Polygon
State A36-99HZ W. Section Line	0.00	0.00	0.00	Polygon
State A36-99HZ S. 460' Setback	0.00	0.00	0.00	Polygon
Devries State A36-21	0.00	-2,483.18	2,084.95	Circle
State A36-10	0.00	-2,952.21	2,814.01	Circle
State A36-7	0.00	-1,447.79	2,788.62	Circle
State A36-99HZ E. 460' Setback	0.00	0.00	0.00	Polygon
State A36-99HZ E. Section Line	0.00	0.00	0.00	Polygon
State A36-99HZ W. 460' Setback	0.00	0.00	0.00	Polygon

**North Reference Sheet for Sec. 36-T6N-R64W - State A36-99HZ - Plan #1**

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.  
 Vertical Depths are relative to RKB 24' @ 4653.00ft (H&P 315). Northing and Easting are relative to State A36-99HZ  
 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:0.000000°, Latitude Origin:40.783333°  
 False Easting: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99996284

Grid Coordinates of Well: 1,408,078.52 ft N, 3,276,671.06 ft E  
 Geographical Coordinates of Well: 40° 26' 57.55" N, 104° 30' 21.10" W  
 Grid Convergence at Surface is: 0.64°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,226.15ft  
 the Bottom Hole Displacement is 5,692.71ft in the Direction of 130.25° (Grid).  
 Magnetic Convergence at surface is: -8.14° ( 1 October 2010, , BGGM2010)



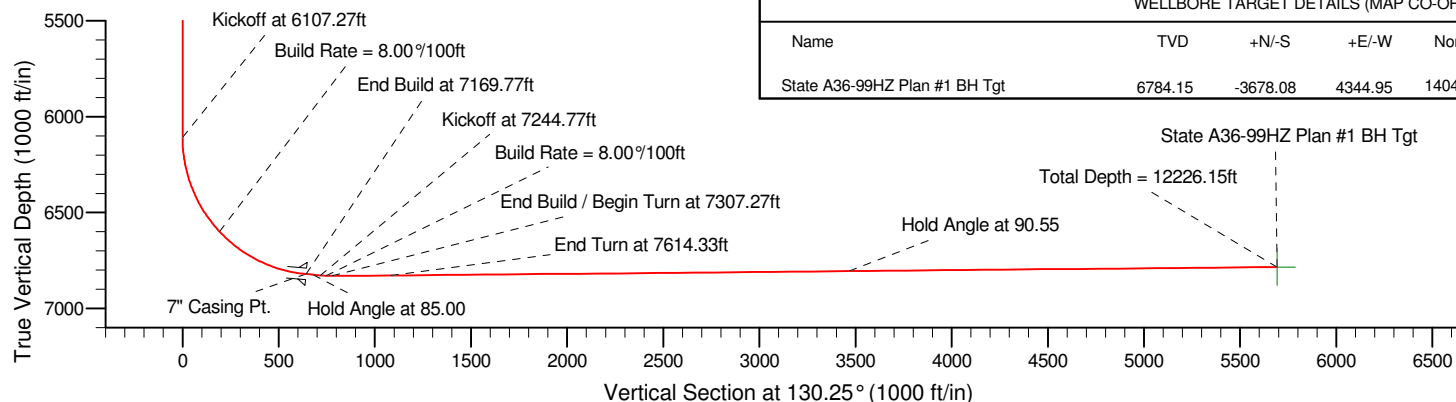
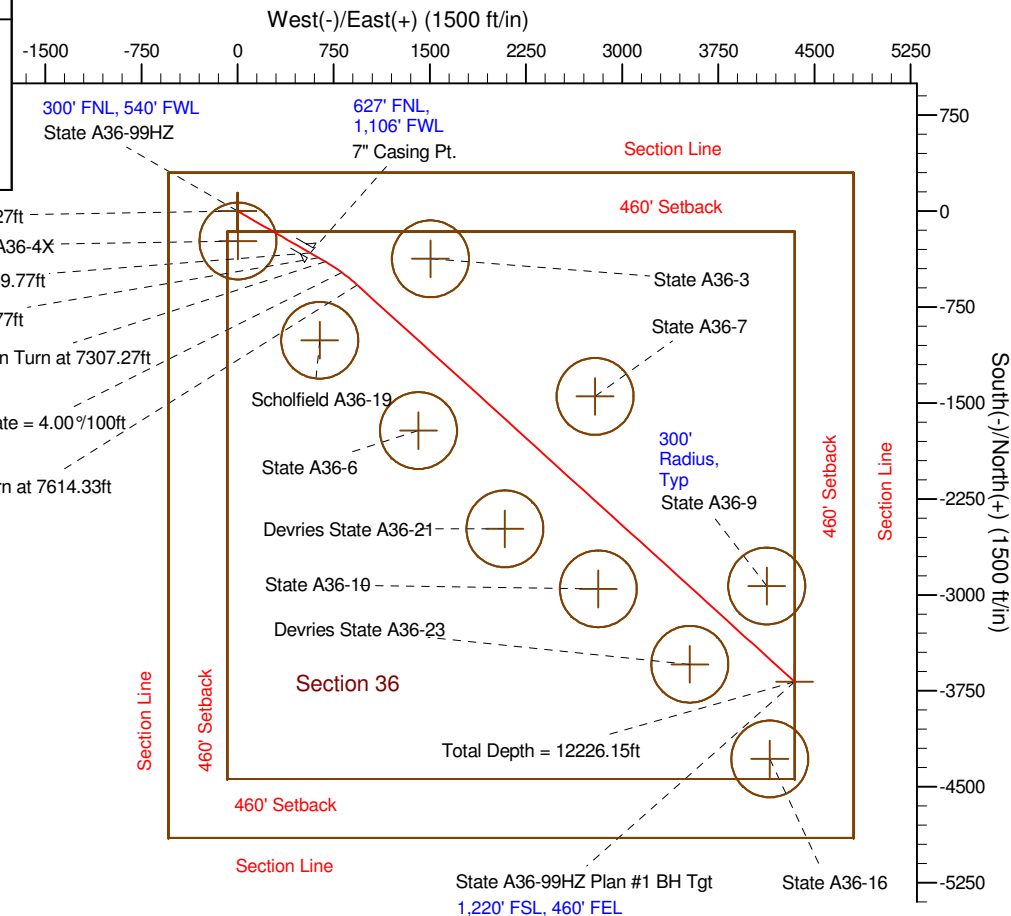
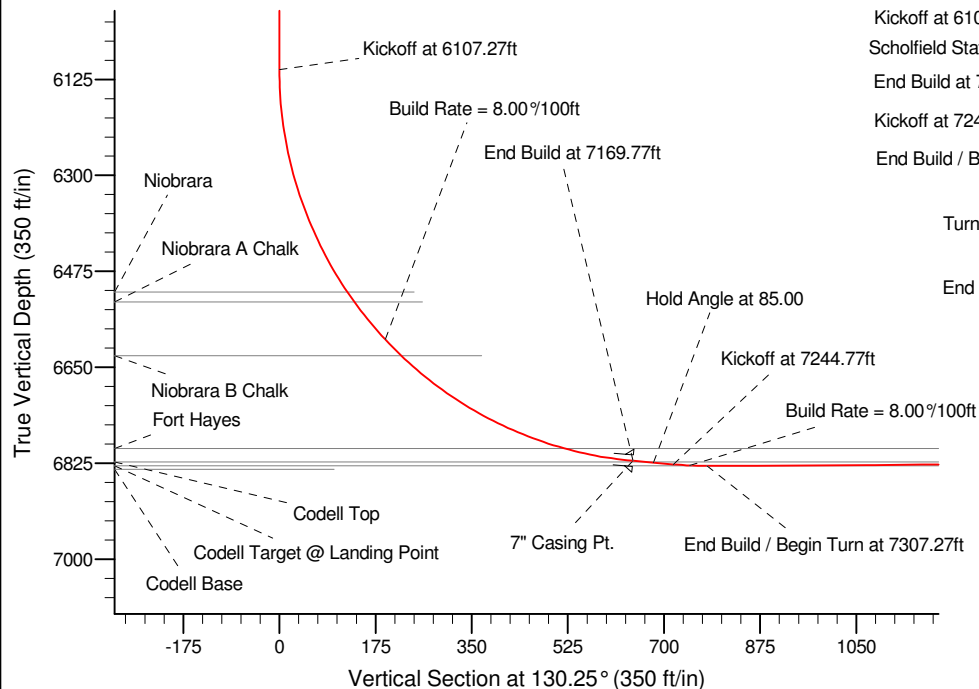
Project: Weld County, CO (NAD 83)  
Site: Sec. 36-T6N-R64W  
Well: State A36-99HZ  
Wellbore: Plan #1  
Design: Plan #1 Proposal

# Noble Energy

**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	6107.27	0.00	0.00	6107.27	0.00	0.00	0.00	0.00	0.00	
3	7169.77	85.00	120.00	6820.74	-326.89	566.19	8.00	120.00	643.35	
4	7244.77	85.00	120.00	6827.28	-364.25	630.89	0.00	0.00	716.87	
5	7307.27	90.00	120.00	6830.00	-395.46	684.95	8.00	0.00	778.29	
6	7614.33	90.55	132.27	6828.52	-576.18	932.47	4.00	87.41	1083.98	
7	12226.15	90.55	132.27	6784.15	-3678.08	4344.95	0.00	0.00	5692.71	State A36-99HZ Plan #1 BH Tgt



## WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
State A36-99HZ Plan #1 BH Tgt	6784.15	-3678.08	4344.95	1404400.58	3281015.85	40.439090	-104.490400	Point

## State A36-99HZ Plan #1 BH Tgt

## WELL DETAILS: State A36-99HZ

Ground Level:		4629.00	
Northing	Easting	Latitude	Longitude
1408078.52	3276671.06	40.449320	-104.505860

## Plan: Plan #1 Proposal (State A36-99HZ/Plan #1)

Created By: Paul A. Bitzan	Date: 16:13, August 12 2010
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____