

Noble Energy

Weld County, CO (NAD 83)

Sec. 3-T11N-R66W

Laxy D ZN 3-73H

Plan #1

Plan: Plan #1 Proposal

Sperry Drilling Services Proposal Report

28 May, 2010

Well Coordinates: 1,587,648.30 N, 3,201,664.35 E (40° 56' 39.05" N, 104° 46' 12.18" W)

Ground Level: 5,861.00 ft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Geodetic Scale Factor Applied

Version: 2003.16 Build: 43I

Centered on Well Laxy D ZN 3-73H

RKB 24' @ 5885.00ft (Original Well Elev)

N

True

API - US Survey Feet - Custom

HALLIBURTON

Plan Report for Laxy D ZN 3-73H - 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
2,700.00	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
4,344.00	0.00	0.00	4,344.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre Silt										
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
5,100.00	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
5,279.00	0.00	0.00	5,279.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parkman										
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Plan Report for Laxy D ZN 3-73H - 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 (°)
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
6,104.00	0.00	0.00	6,104.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sussex										
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,683.00	0.00	0.00	6,683.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shannon										
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,982.27	0.00	0.00	7,982.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kickoff at 7982.27ft										
8,000.00	1.42	44.69	8,000.00	0.16	0.15	0.22	8.00	8.00	0.00	44.69
8,100.00	9.42	44.69	8,099.47	6.86	6.79	9.65	8.00	8.00	0.00	0.00
8,200.00	17.42	44.69	8,196.66	23.35	23.10	32.84	8.00	8.00	0.00	0.00
8,300.00	25.42	44.69	8,289.68	49.29	48.76	69.33	8.00	8.00	0.00	0.00
8,400.00	33.42	44.69	8,376.71	84.18	83.27	118.41	8.00	8.00	0.00	0.00
8,500.00	41.42	44.69	8,456.07	127.35	125.97	179.12	8.00	8.00	0.00	0.00
Build Rate = 8.00°/100ft										
8,600.00	49.42	44.69	8,526.21	177.94	176.01	250.29	8.00	8.00	0.00	0.00
8,700.00	57.42	44.69	8,585.76	234.99	232.44	330.52	8.00	8.00	0.00	0.00
8,735.25	60.24	44.69	8,604.00	256.43	253.65	360.68	8.00	8.00	0.00	0.00
Niobrara										
8,800.00	65.42	44.69	8,633.56	297.37	294.14	418.27	8.00	8.00	0.00	0.00
8,803.48	65.70	44.69	8,635.00	299.62	296.38	421.44	8.00	8.00	0.00	0.00
Niobrara A										
8,845.06	69.02	44.69	8,651.00	326.89	323.35	459.80	8.00	8.00	0.00	0.00
Niobrara A Marl										
8,900.00	73.42	44.69	8,668.68	363.87	359.93	511.81	8.00	8.00	0.00	0.00
8,923.42	75.29	44.69	8,675.00	379.90	375.79	534.36	8.00	8.00	0.00	0.00
Niobrara B										
9,000.00	81.42	44.69	8,690.45	433.20	428.51	609.33	8.00	8.00	0.00	0.00
9,044.77	85.00	44.69	8,695.74	464.80	459.77	653.78	8.00	8.00	0.00	0.00
End Build at 9044.77ft - 7" Casing Pt.										
9,080.00	85.00	44.69	8,698.81	489.75	484.45	688.87	0.00	0.00	0.00	0.00
Hold Angle at 85.00										
9,100.00	85.00	44.69	8,700.56	503.92	498.46	708.80	0.00	0.00	0.00	0.00
9,119.77	85.00	44.69	8,702.28	517.92	512.31	728.49	0.00	0.00	0.00	0.00

Plan Report for Laxy D ZN 3-73H - 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 (°)
Kickoff at 9119.77ft										
9,150.00	87.42	44.69	8,704.28	539.36	533.52	758.65	8.00	8.00	0.00	0.00
Build Rate = 8.00°/100ft										
9,182.27	90.00	44.69	8,705.00	562.30	556.21	790.91	8.00	8.00	0.00	0.00
End Build at 9182.27ft - Nio B Tgt top										
9,200.00	90.00	44.69	8,705.00	574.90	568.67	808.64	0.00	0.00	0.00	0.00
9,300.00	90.00	44.69	8,705.00	646.00	639.00	908.64	0.00	0.00	0.00	0.00
9,400.00	90.00	44.69	8,705.00	717.09	709.32	1,008.64	0.00	0.00	0.00	0.00
9,500.00	90.00	44.69	8,705.00	788.19	779.65	1,108.64	0.00	0.00	0.00	0.00
9,600.00	90.00	44.69	8,705.00	859.28	849.97	1,208.64	0.00	0.00	0.00	0.00
9,700.00	90.00	44.69	8,705.00	930.38	920.30	1,308.64	0.00	0.00	0.00	0.00
9,800.00	90.00	44.69	8,705.00	1,001.47	990.62	1,408.64	0.00	0.00	0.00	0.00
9,900.00	90.00	44.69	8,705.00	1,072.56	1,060.95	1,508.64	0.00	0.00	0.00	0.00
10,000.00	90.00	44.69	8,705.00	1,143.66	1,131.27	1,608.64	0.00	0.00	0.00	0.00
10,100.00	90.00	44.69	8,705.00	1,214.75	1,201.59	1,708.64	0.00	0.00	0.00	0.00
10,200.00	90.00	44.69	8,705.00	1,285.85	1,271.92	1,808.64	0.00	0.00	0.00	0.00
10,300.00	90.00	44.69	8,705.00	1,356.94	1,342.24	1,908.64	0.00	0.00	0.00	0.00
10,400.00	90.00	44.69	8,705.00	1,428.04	1,412.57	2,008.64	0.00	0.00	0.00	0.00
10,500.00	90.00	44.69	8,705.00	1,499.13	1,482.89	2,108.64	0.00	0.00	0.00	0.00
10,600.00	90.00	44.69	8,705.00	1,570.23	1,553.22	2,208.64	0.00	0.00	0.00	0.00
10,700.00	90.00	44.69	8,705.00	1,641.32	1,623.54	2,308.64	0.00	0.00	0.00	0.00
10,800.00	90.00	44.69	8,705.00	1,712.42	1,693.87	2,408.64	0.00	0.00	0.00	0.00
10,900.00	90.00	44.69	8,705.00	1,783.51	1,764.19	2,508.64	0.00	0.00	0.00	0.00
11,000.00	90.00	44.69	8,705.00	1,854.61	1,834.51	2,608.64	0.00	0.00	0.00	0.00
11,100.00	90.00	44.69	8,705.00	1,925.70	1,904.84	2,708.64	0.00	0.00	0.00	0.00
11,200.00	90.00	44.69	8,705.00	1,996.80	1,975.16	2,808.64	0.00	0.00	0.00	0.00
11,300.00	90.00	44.69	8,705.00	2,067.89	2,045.49	2,908.64	0.00	0.00	0.00	0.00
11,400.00	90.00	44.69	8,705.00	2,138.99	2,115.81	3,008.64	0.00	0.00	0.00	0.00
11,500.00	90.00	44.69	8,705.00	2,210.08	2,186.14	3,108.64	0.00	0.00	0.00	0.00
11,600.00	90.00	44.69	8,705.00	2,281.18	2,256.46	3,208.64	0.00	0.00	0.00	0.00
11,700.00	90.00	44.69	8,705.00	2,352.27	2,326.79	3,308.64	0.00	0.00	0.00	0.00
11,800.00	90.00	44.69	8,705.00	2,423.37	2,397.11	3,408.64	0.00	0.00	0.00	0.00
11,900.00	90.00	44.69	8,705.00	2,494.46	2,467.43	3,508.64	0.00	0.00	0.00	0.00
12,000.00	90.00	44.69	8,705.00	2,565.56	2,537.76	3,608.64	0.00	0.00	0.00	0.00
Hold Angle at 90.00										
12,100.00	90.00	44.69	8,705.00	2,636.65	2,608.08	3,708.64	0.00	0.00	0.00	0.00
12,200.00	90.00	44.69	8,705.00	2,707.75	2,678.41	3,808.64	0.00	0.00	0.00	0.00
12,300.00	90.00	44.69	8,705.00	2,778.84	2,748.73	3,908.64	0.00	0.00	0.00	0.00
12,400.00	90.00	44.69	8,705.00	2,849.93	2,819.06	4,008.64	0.00	0.00	0.00	0.00
12,500.00	90.00	44.69	8,705.00	2,921.03	2,889.38	4,108.64	0.00	0.00	0.00	0.00
12,600.00	90.00	44.69	8,705.00	2,992.12	2,959.71	4,208.64	0.00	0.00	0.00	0.00
12,700.00	90.00	44.69	8,705.00	3,063.22	3,030.03	4,308.64	0.00	0.00	0.00	0.00
12,800.00	90.00	44.69	8,705.00	3,134.31	3,100.35	4,408.64	0.00	0.00	0.00	0.00
12,900.00	90.00	44.69	8,705.00	3,205.41	3,170.68	4,508.64	0.00	0.00	0.00	0.00
13,000.00	90.00	44.69	8,705.00	3,276.50	3,241.00	4,608.64	0.00	0.00	0.00	0.00
13,100.00	90.00	44.69	8,705.00	3,347.60	3,311.33	4,708.64	0.00	0.00	0.00	0.00
13,200.00	90.00	44.69	8,705.00	3,418.69	3,381.65	4,808.64	0.00	0.00	0.00	0.00
13,300.00	90.00	44.69	8,705.00	3,489.79	3,451.98	4,908.64	0.00	0.00	0.00	0.00
13,400.00	90.00	44.69	8,705.00	3,560.88	3,522.30	5,008.64	0.00	0.00	0.00	0.00
13,500.00	90.00	44.69	8,705.00	3,631.98	3,592.63	5,108.64	0.00	0.00	0.00	0.00
13,600.00	90.00	44.69	8,705.00	3,703.07	3,662.95	5,208.64	0.00	0.00	0.00	0.00
13,700.00	90.00	44.69	8,705.00	3,774.17	3,733.27	5,308.64	0.00	0.00	0.00	0.00
13,800.00	90.00	44.69	8,705.00	3,845.26	3,803.60	5,408.64	0.00	0.00	0.00	0.00
13,900.00	90.00	44.69	8,705.00	3,916.36	3,873.92	5,508.64	0.00	0.00	0.00	0.00
14,000.00	90.00	44.69	8,705.00	3,987.45	3,944.25	5,608.64	0.00	0.00	0.00	0.00
14,090.60	90.00	44.69	8,705.00	4,051.86	4,007.96	5,699.24	0.00	0.00	0.00	0.00
Lazy D ZN 3-73H Plan #1 BH Tgt										

Plan Report for Laxy D ZN 3-73H - Plan #1 Proposal

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,982.27	7,982.27	0.00	0.00	Kickoff at 7982.27ft
8,500.00	8,456.07	127.35	125.97	Build Rate = 8.00°/100ft
9,044.77	8,695.74	464.80	459.77	End Build at 9044.77ft
9,080.00	8,698.81	489.75	484.45	Hold Angle at 85.00
9,119.77	8,702.28	517.92	512.31	Kickoff at 9119.77ft
9,150.00	8,704.28	539.36	533.52	Build Rate = 8.00°/100ft
9,182.27	8,705.00	562.30	556.21	End Build at 9182.27ft
12,000.00	8,705.00	2,565.56	2,537.76	Hold Angle at 90.00
14,090.60	8,705.00	4,051.86	4,007.96	Total Depth = 14090.60ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Lazy D ZN 3-73H Plan #1 BH Tgt	44.69	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	14,090.60	Plan #1 Proposal	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
9,044.77	8,695.74	7" Casing Pt.	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,344.00	4,344.00	Pierre Silt		0.00	0.00
5,279.00	5,279.00	Parkman		0.00	0.00
6,104.00	6,104.00	Sussex		0.00	0.00
6,683.00	6,683.00	Shannon		0.00	0.00
8,735.25	8,604.00	Niobrara		0.00	0.00
8,803.48	8,635.00	Niobrara A		0.00	0.00
8,845.06	8,651.00	Niobrara A Marl		0.00	0.00
8,923.42	8,675.00	Niobrara B		0.00	0.00
9,182.27	8,705.00	Nio B Tgt top		0.00	0.00

Plan Report for Laxy D ZN 3-73H - Plan #1 Proposal

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Lazy D ZN 3-73H N. 600' Setback	0.00	0.00	0.00	Polygon
Lazy D ZN 3-73H Plan #1 BH Tgt	8,705.00	4,051.86	4,007.96	Point
Lazy D ZN 3-73H E. Section Line	0.00	0.00	0.00	Polygon
Lazy D ZN 3-73H W. Section Line	0.00	0.00	0.00	Polygon
Lazy D ZN 3-73H S. 600' Setback	0.00	0.00	0.00	Polygon
Lazy D ZN 3-73H S. Section Line	0.00	0.00	0.00	Polygon
Lazy D ZN 3-73H E. 600' Setback	0.00	0.00	0.00	Polygon
Lazy D ZN 3-73H W. 600' Setback	0.00	0.00	0.00	Polygon
Lazy D ZN 3-73H N. Section Line	0.00	0.00	0.00	Polygon

North Reference Sheet for Sec. 3-T11N-R66W - Laxy D ZN 3-73H - Plan #1

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

Vertical Depths are relative to RKB 24' @ 5885.00ft (Original Well Elev). Northing and Easting are relative to Laxy D ZN 3-73H

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: 1.00003006

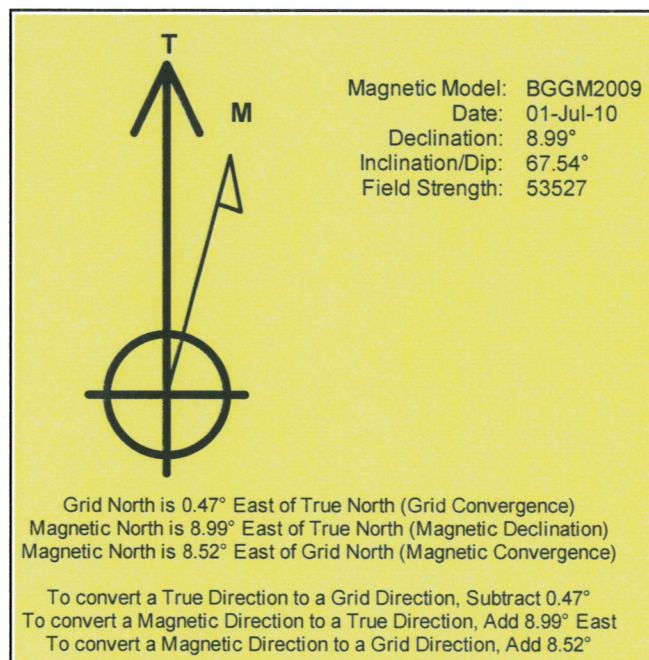
Grid Coordinates of Well: 1,587,648.30 ft N, 3,201,664.35 ft E

Geographical Coordinates of Well: 40° 56' 39.05" N, 104° 46' 12.18" W

Grid Convergence at Surface is: 0.47°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,090.60ft
the Bottom Hole Displacement is 5,699.24ft in the Direction of 44.69° (True).

Magnetic Convergence at surface is: -8.52° (1 July 2010, , BGGM2009)



Project: Weld County, CO (NAD 83)
Site: Sec. 3-T11N-R66W
Well: Lazy D ZN 3-73H
Wellbore: Plan #1
Design: Plan #1 Proposal

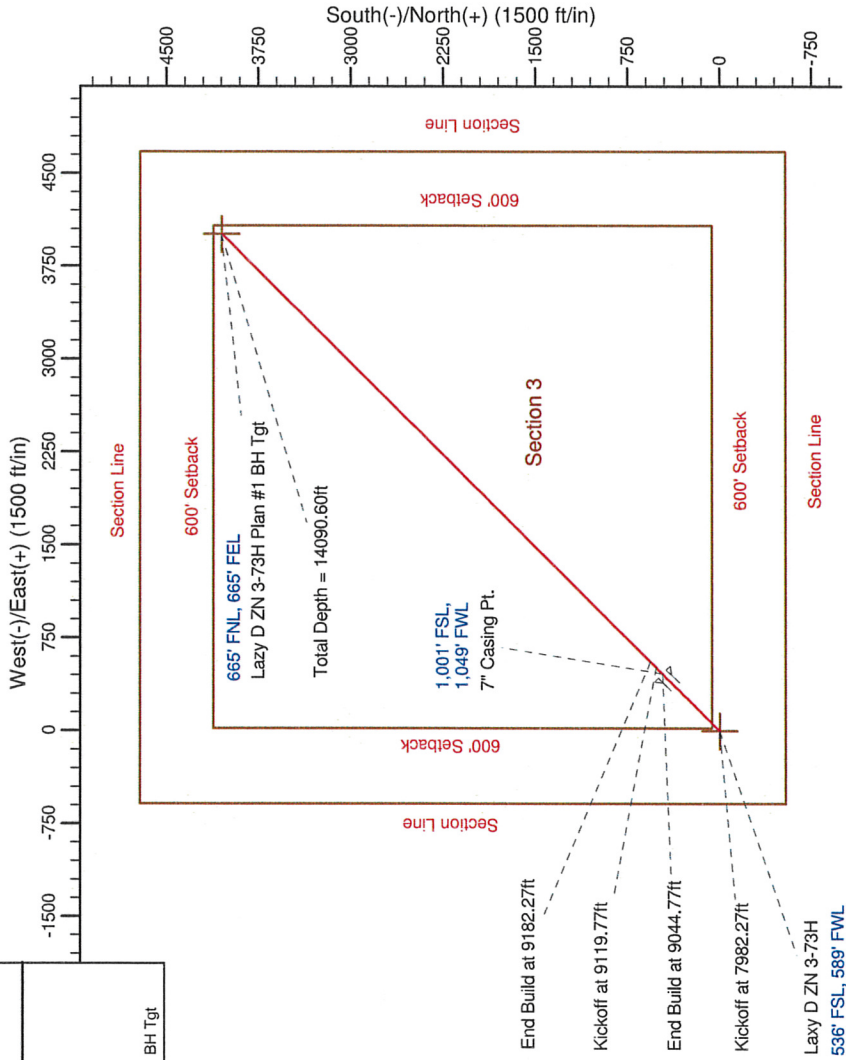
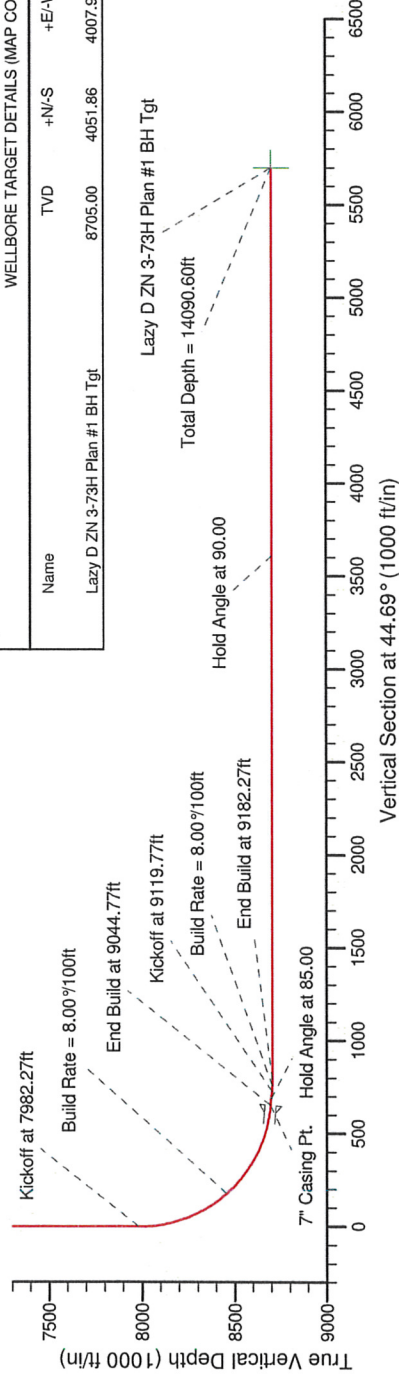
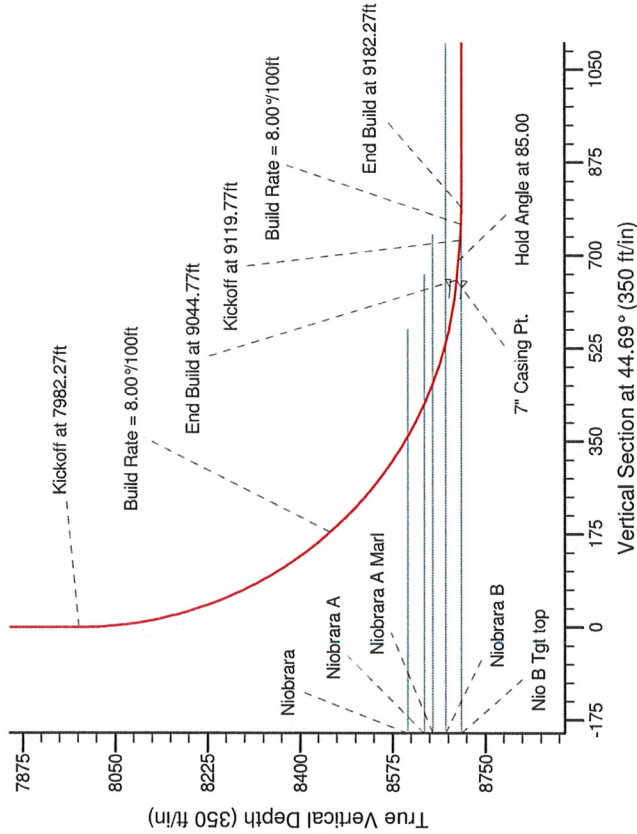
Noble Energy



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	0.00
2	7982.27	0.00	0.00	7982.27	0.00	0.00	0.00	0.00	0.00	0.00
3	9044.77	85.00	44.69	8695.74	464.80	459.77	8.00	44.69	653.78	0.00
4	9119.77	85.00	44.69	8702.28	517.92	512.31	0.00	0.00	728.49	0.00
5	9182.27	90.00	44.69	8705.00	562.30	556.21	8.00	0.00	790.91	0.00
6	14090.60	90.00	44.69	8705.00	4051.86	4007.96	0.00	0.00	5699.24	0.00

Lazy D ZN 3-73H Plan #1 BH Tgt



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	Point
Lazy D ZN 3-73H Plan #1 BH Tgt	8705.00	4051.86	4007.96	1591793.14	3205638.94	40.955300	-104.755540		

WELL DETAILS: Lazy D ZN 3-73H

Ground Level:	5861.00	Longitude	-104.770050
Northing	1587648.30	Latitude	40.944180
Easting	3201664.35		

Plan: Plan #1 Proposal (Lazy D ZN 3-73H/Plan #1)

Created By:	Paul A. Bitzan	Date:	15:59, May 28 2010
Checked:		Date:	
Reviewed:		Date:	
Approved:		Date:	