

Noble Energy

Weld County, CO (NAD 83)

Sec. 3-T11N-R66W

Lazy D ZN 3-15H

Plan #1

Plan: Plan #1 Proposal

Sperry Drilling Services

Proposal Report

28 May, 2010

Well Coordinates: 1,591,812.46 N, 3,201,594.16 E (40° 57' 20.20" N, 104° 46' 12.65" W)

Ground Level: 6,048.00 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 Lazy D ZN 3-15H

RKB 24' @ 6072.00ft (Original Well Elev)

N

True

API - US Survey Feet - Custom

HALLIBURTON

Plan Report for Lazy D ZN 3-15H - 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
4,400.00	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
4,531.00	0.00	0.00	4,531.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre Silt										
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
5,300.00	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
5,466.00	0.00	0.00	5,466.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Plan Report for Lazy D ZN 3-15H - 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 (°)
Parkman										
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
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,291.00	0.00	0.00	6,291.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sussex										
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
6,700.00	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
6,870.00	0.00	0.00	6,870.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shannon										
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
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,169.27	0.00	0.00	8,169.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kickoff at 8169.27ft										
8,200.00	2.46	135.44	8,199.99	-0.47	0.46	0.66	8.00	8.00	0.00	135.44
8,300.00	10.46	135.44	8,299.28	-8.48	8.35	11.90	8.00	8.00	0.00	0.00
8,400.00	18.46	135.44	8,396.03	-26.25	25.85	36.85	8.00	8.00	0.00	0.00
8,500.00	26.46	135.44	8,488.37	-53.45	52.64	75.02	8.00	8.00	0.00	0.00
8,600.00	34.46	135.44	8,574.50	-89.54	88.17	125.67	8.00	8.00	0.00	0.00
8,700.00	42.46	135.44	8,652.74	-133.82	131.78	187.81	8.00	8.00	0.00	0.00
Build Rate = 8.00°/100ft										
8,800.00	50.46	135.44	8,721.57	-185.42	182.60	260.24	8.00	8.00	0.00	0.00
8,900.00	58.46	135.44	8,779.66	-243.35	239.64	341.54	8.00	8.00	0.00	0.00
8,922.25	60.24	135.44	8,791.00	-256.99	253.08	360.68	8.00	8.00	0.00	0.00
Niobrara										
8,990.48	65.70	135.44	8,822.00	-300.28	295.71	421.44	8.00	8.00	0.00	0.00
Niobrara A										
9,000.00	66.46	135.44	8,825.86	-306.48	301.81	430.14	8.00	8.00	0.00	0.00
9,032.06	69.02	135.44	8,838.00	-327.62	322.62	459.80	8.00	8.00	0.00	0.00
Niobrara A Marl										
9,100.00	74.46	135.44	8,859.28	-373.57	367.88	524.30	8.00	8.00	0.00	0.00
9,110.42	75.29	135.44	8,862.00	-380.74	374.94	534.36	8.00	8.00	0.00	0.00
Niobrara B										
9,200.00	82.46	135.44	8,879.27	-443.33	436.57	622.20	8.00	8.00	0.00	0.00
9,231.77	85.00	135.44	8,882.74	-465.83	458.73	653.78	8.00	8.00	0.00	0.00
End Build at 9231.77ft - 7" Casing Pt.										
9,270.00	85.00	135.44	8,886.07	-492.96	485.45	691.86	0.00	0.00	0.00	0.00
Hold Angle at 85.00										

Plan Report for Lazy D ZN 3-15H - 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 (°)
9,300.00	85.00	135.44	8,888.69	-514.26	506.42	721.75	0.00	0.00	0.00	0.00
9,306.77	85.00	135.44	8,889.28	-519.06	511.15	728.49	0.00	0.00	0.00	0.00
Kickoff at 9306.77ft										
9,338.00	87.50	135.44	8,891.32	-541.26	533.01	759.65	8.00	8.00	0.01	0.04
Build Rate = 8.00°/100ft										
9,369.27	90.00	135.44	8,892.00	-563.54	554.95	790.91	8.00	8.00	0.01	0.04
End Build at 9369.27ft - Nio B Tgt top										
9,400.00	90.00	135.44	8,892.00	-585.44	576.51	821.64	0.00	0.00	0.00	0.04
9,500.00	90.00	135.44	8,892.00	-656.69	646.67	921.64	0.00	0.00	0.00	0.00
9,600.00	90.00	135.44	8,892.00	-727.95	716.83	1,021.64	0.00	0.00	0.00	0.00
9,700.00	90.00	135.44	8,892.00	-799.20	786.99	1,121.64	0.00	0.00	0.00	0.00
9,800.00	90.00	135.44	8,892.00	-870.46	857.15	1,221.64	0.00	0.00	0.00	0.00
9,900.00	90.00	135.44	8,892.00	-941.72	927.31	1,321.64	0.00	0.00	0.00	0.00
10,000.00	90.00	135.44	8,892.00	-1,012.97	997.47	1,421.64	0.00	0.00	0.00	0.00
10,100.00	90.00	135.44	8,892.00	-1,084.23	1,067.64	1,521.64	0.00	0.00	0.00	0.00
10,200.00	90.00	135.44	8,892.00	-1,155.48	1,137.80	1,621.64	0.00	0.00	0.00	0.00
10,300.00	90.00	135.44	8,892.00	-1,226.74	1,207.96	1,721.64	0.00	0.00	0.00	0.00
10,400.00	90.00	135.44	8,892.00	-1,298.00	1,278.12	1,821.64	0.00	0.00	0.00	0.00
10,500.00	90.00	135.44	8,892.00	-1,369.25	1,348.28	1,921.64	0.00	0.00	0.00	0.00
10,600.00	90.00	135.44	8,892.00	-1,440.51	1,418.44	2,021.64	0.00	0.00	0.00	0.00
10,700.00	90.00	135.44	8,892.00	-1,511.76	1,488.60	2,121.64	0.00	0.00	0.00	0.00
10,800.00	90.00	135.44	8,892.00	-1,583.02	1,558.76	2,221.64	0.00	0.00	0.00	0.00
10,900.00	90.00	135.44	8,892.00	-1,654.27	1,628.92	2,321.64	0.00	0.00	0.00	0.00
11,000.00	90.00	135.44	8,892.00	-1,725.53	1,699.09	2,421.64	0.00	0.00	0.00	0.00
11,100.00	90.00	135.44	8,892.00	-1,796.79	1,769.25	2,521.64	0.00	0.00	0.00	0.00
11,200.00	90.00	135.44	8,892.00	-1,868.04	1,839.41	2,621.64	0.00	0.00	0.00	0.00
11,300.00	90.00	135.44	8,892.00	-1,939.30	1,909.57	2,721.64	0.00	0.00	0.00	0.00
11,400.00	90.00	135.44	8,892.00	-2,010.55	1,979.73	2,821.64	0.00	0.00	0.00	0.00
11,500.00	90.00	135.44	8,892.00	-2,081.81	2,049.89	2,921.64	0.00	0.00	0.00	0.00
11,600.00	90.00	135.44	8,892.00	-2,153.07	2,120.05	3,021.64	0.00	0.00	0.00	0.00
11,700.00	90.00	135.44	8,892.00	-2,224.32	2,190.21	3,121.64	0.00	0.00	0.00	0.00
11,800.00	90.00	135.44	8,892.00	-2,295.58	2,260.38	3,221.64	0.00	0.00	0.00	0.00
11,900.00	90.00	135.44	8,892.00	-2,366.83	2,330.54	3,321.64	0.00	0.00	0.00	0.00
12,000.00	90.00	135.44	8,892.00	-2,438.09	2,400.70	3,421.64	0.00	0.00	0.00	0.00
Hold Angle at 90.00										
12,100.00	90.00	135.44	8,892.00	-2,509.35	2,470.86	3,521.64	0.00	0.00	0.00	0.00
12,200.00	90.00	135.44	8,892.00	-2,580.60	2,541.02	3,621.64	0.00	0.00	0.00	0.00
12,300.00	90.00	135.44	8,892.00	-2,651.86	2,611.18	3,721.64	0.00	0.00	0.00	0.00
12,400.00	90.00	135.44	8,892.00	-2,723.11	2,681.34	3,821.64	0.00	0.00	0.00	0.00
12,500.00	90.00	135.44	8,892.00	-2,794.37	2,751.50	3,921.64	0.00	0.00	0.00	0.00
12,600.00	90.00	135.44	8,892.00	-2,865.63	2,821.66	4,021.64	0.00	0.00	0.00	0.00
12,700.00	90.00	135.44	8,892.00	-2,936.88	2,891.83	4,121.64	0.00	0.00	0.00	0.00
12,800.00	90.00	135.44	8,892.00	-3,008.14	2,961.99	4,221.64	0.00	0.00	0.00	0.00
12,900.00	90.00	135.44	8,892.00	-3,079.39	3,032.15	4,321.64	0.00	0.00	0.00	0.00
13,000.00	90.00	135.44	8,892.00	-3,150.65	3,102.31	4,421.64	0.00	0.00	0.00	0.00
13,100.00	90.00	135.44	8,892.00	-3,221.91	3,172.47	4,521.64	0.00	0.00	0.00	0.00
13,200.00	90.00	135.44	8,892.00	-3,293.16	3,242.63	4,621.64	0.00	0.00	0.00	0.00
13,300.00	90.00	135.44	8,892.00	-3,364.42	3,312.79	4,721.64	0.00	0.00	0.00	0.00
13,400.00	90.00	135.44	8,892.00	-3,435.67	3,382.95	4,821.64	0.00	0.00	0.00	0.00
13,500.00	90.00	135.44	8,892.00	-3,506.93	3,453.12	4,921.64	0.00	0.00	0.00	0.00
13,600.00	90.00	135.44	8,892.00	-3,578.19	3,523.28	5,021.64	0.00	0.00	0.00	0.00
13,700.00	90.00	135.44	8,892.00	-3,649.44	3,593.44	5,121.64	0.00	0.00	0.00	0.00
13,800.00	90.00	135.44	8,892.00	-3,720.70	3,663.60	5,221.64	0.00	0.00	0.00	0.00
13,900.00	90.00	135.44	8,892.00	-3,791.95	3,733.76	5,321.64	0.00	0.00	0.00	0.00
14,000.00	90.00	135.44	8,892.00	-3,863.21	3,803.92	5,421.64	0.00	0.00	0.00	0.00
14,100.00	90.00	135.44	8,892.00	-3,934.46	3,874.08	5,521.64	0.00	0.00	0.00	0.00
14,200.00	90.00	135.44	8,892.00	-4,005.72	3,944.24	5,621.64	0.00	0.00	0.00	0.00
14,299.60	90.00	135.44	8,892.00	-4,076.99	4,014.12	5,721.24	0.00	0.00	0.00	0.00
Total Depth = 14299.60ft - Lazy D ZN 3-15H Plan #1 BH Tgt										

Plan Report for Lazy D ZN 3-15H - 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 (°)
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Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,169.27	8,169.27	0.00	0.00	Kickoff at 8169.27ft
8,700.00	8,652.74	-133.82	131.78	Build Rate = 8.00°/100ft
9,231.77	8,882.74	-465.83	458.73	End Build at 9231.77ft
9,270.00	8,886.07	-492.96	485.45	Hold Angle at 85.00
9,306.77	8,889.28	-519.06	511.15	Kickoff at 9306.77ft
9,338.00	8,891.32	-541.26	533.01	Build Rate = 8.00°/100ft
9,369.27	8,892.00	-563.54	554.95	End Build at 9369.27ft
12,000.00	8,892.00	-2,438.09	2,400.70	Hold Angle at 90.00
14,299.60	8,892.00	-4,076.69	4,014.12	Total Depth = 14299.60ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Lazy D ZN 3-15H Plan #1 BH Tgt	135.44	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	14,299.60	Plan #1 Proposal	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
9,231.77	8,882.74	7" Casing Pt.	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,531.00	4,531.00	Pierre Silt		0.00	0.00
5,466.00	5,466.00	Parkman		0.00	0.00
6,291.00	6,291.00	Sussex		0.00	0.00
6,870.00	6,870.00	Shannon		0.00	0.00
8,922.25	8,791.00	Niobrara		0.00	0.00
8,990.48	8,822.00	Niobrara A		0.00	0.00
9,032.06	8,838.00	Niobrara A Marl		0.00	0.00
9,110.42	8,862.00	Niobrara B		0.00	0.00
9,369.27	8,892.00	Nio B Tgt top		0.00	0.00

Plan Report for Lazy D ZN 3-15H - Plan #1 Proposal

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Lazy D ZN 3-15H S. 600' Setback	0.00	0.00	0.00	Polygon
Lazy D ZN 3-15H E. Section Line	0.00	0.00	0.00	Polygon
Lazy D ZN 3-15H N. Section Line	0.00	0.00	0.00	Polygon
Lazy D ZN 3-15H S. Section Line	0.00	0.00	0.00	Polygon
Lazy D ZN 3-15H N. 600' Setback	0.00	0.00	0.00	Polygon
Lazy D ZN 3-15H Plan #1 BH Tgt	8,892.00	-4,076.69	4,014.12	Point
Lazy D ZN 3-15H E. 600' Setback	0.00	0.00	0.00	Polygon
Lazy D ZN 3-15H W. Section Line	0.00	0.00	0.00	Polygon
Lazy D ZN 3-15H W. 600' Setback	0.00	0.00	0.00	Polygon

North Reference Sheet for Sec. 3-T11N-R66W - Lazy D ZN 3-15H - 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' @ 6072.00ft (Original Well Elev). Northing and Easting are relative to Lazy D ZN 3-15H

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: 1.00003250

Grid Coordinates of Well: 1,591,812.46 ft N, 3,201,594.16 ft E

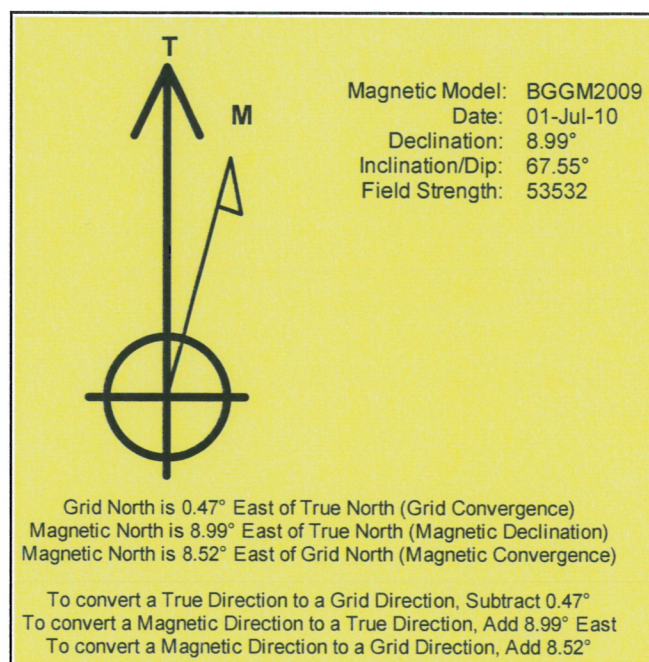
Geographical Coordinates of Well: 40° 57' 20.20" N, 104° 46' 12.65" W

Grid Convergence at Surface is: 0.47°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,299.60ft

the Bottom Hole Displacement is 5,721.24ft in the Direction of 135.44° (True).

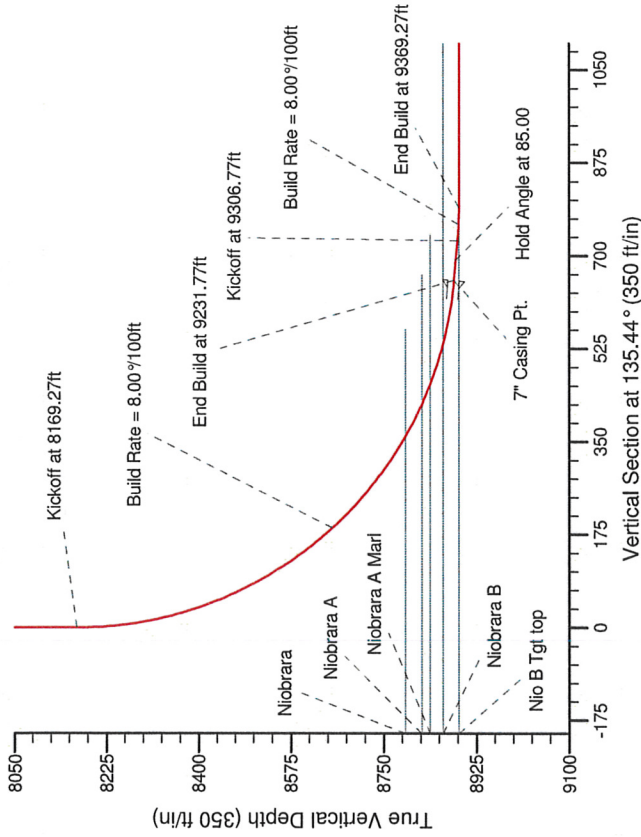
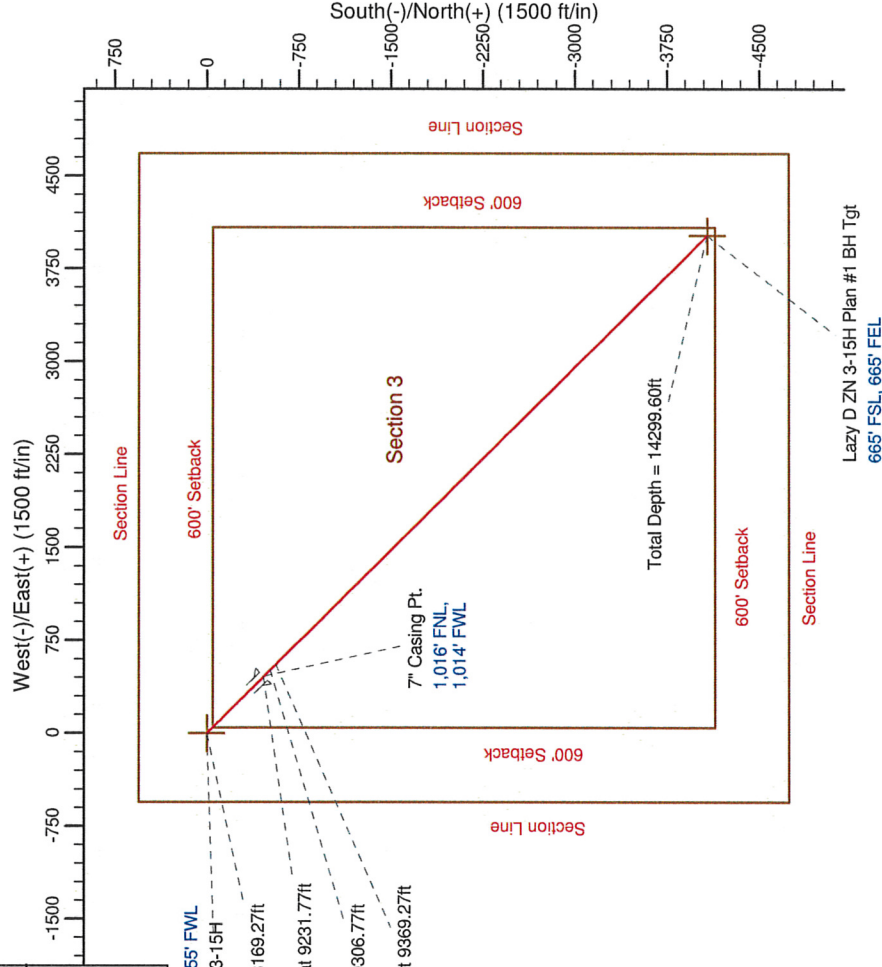
Magnetic Convergence at surface is: -8.52° (1 July 2010, , BGGM2009)



HALLIBURTON
Sperry Drilling

Project: Weld County, CO (NAD 83)
Site: Sec. 3-T11N-R66W
Well: Lazy D ZN 3-15H
Wellbore: Plan #1
Design: Plan #1 Proposal

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	8169.27	0.00	0.00	8169.27	0.00	0.00	0.00	0.00	0.00	
3	9231.77	85.00	135.44	8882.74	-465.83	458.73	8.00	135.44	653.78	
4	9321.77	85.00	135.44	8889.28	-519.06	511.15	0.00	0.00	728.49	
5	9369.27	90.00	135.44	8892.00	-563.54	554.95	8.00	0.04	790.91	
6	14299.60	90.00	135.44	8892.00	-4076.69	4014.12	0.00	0.00	5721.24	Lazy D ZN 3-15H Plan #1 BH Tgt



WELLS TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude Longitude Shape
Lazy D ZN 3-15H Plan #1 BH Tgt	8892.00	-4076.69	4014.12	1587768.81	3205641.83	40.9444420 -104.755850 Point

WELL DETAILS: Lazy D ZN 3-15H			
Northing	Ground Level:	6048.00	Longitude
1591812.46	Easting	3201594.16	-104.770180
Plan: Plan #1 Proposal (Lazy D ZN 3-15H/Plan #1)			
Created By: Paul A. Bitzan		Date: 16:21, May 28 2010	
Checked: _____		Date: _____	
Reviewed: _____		Date: _____	
Approved: _____		Date: _____	

