

Noble Energy

Weld County, CO (NAD 83)

Sec. 12-T4N-R65W

Hanscome G11-99HZ

Plan #1

Plan: Plan #1 Proposal

Sperry Drilling Services

Proposal Report

11 August, 2010

Well Coordinates: 1,364,379.08 N, 3,245,328.78 E (40° 19' 49.01" N, 104° 37' 12.11" W)

Ground Level: 4,742.00 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 Hanscome G11-99HZ

RKB 24' @ 4766.00ft (H&P 315)

N

Grid

API - US Survey Feet - Custom

HALLIBURTON

Plan Report for Hanscome G11-99HZ - 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
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,752.00	0.00	0.00	2,752.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre Silt										
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
3,730.00	0.00	0.00	3,730.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parkman										
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
4,439.00	0.00	0.00	4,439.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sussex										
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
4,930.00	0.00	0.00	4,930.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shannon										

Plan Report for Hanscome G11-99HZ - 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 (°)
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
6,058.86	0.00	0.00	6,058.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kickoff at 6058.86ft										
6,100.00	2.88	283.43	6,099.98	0.24	-1.01	1.00	7.00	7.00	0.00	283.43
6,200.00	9.88	283.43	6,199.30	2.82	-11.81	11.75	7.00	7.00	0.00	0.00
6,300.00	16.88	283.43	6,296.53	8.19	-34.30	34.12	7.00	7.00	0.00	0.00
6,400.00	23.88	283.43	6,390.21	16.28	-68.15	67.80	7.00	7.00	0.00	0.00
6,500.00	30.88	283.43	6,478.95	26.95	-112.85	112.27	7.00	7.00	0.00	0.00
6,600.00	37.88	283.43	6,561.43	40.06	-167.74	166.88	7.00	7.00	0.00	0.00
6,660.00	42.08	283.43	6,607.40	49.01	-205.23	204.18	7.00	7.00	0.00	0.00
Build Rate = 7.00°/100ft										
6,700.00	44.88	283.43	6,636.42	55.40	-232.00	230.81	7.00	7.00	0.00	0.00
6,800.00	51.88	283.43	6,702.80	72.76	-304.67	303.10	7.00	7.00	0.00	0.00
6,868.69	56.69	283.43	6,742.88	85.71	-358.90	357.05	7.00	7.00	0.00	0.00
Sharon Springs Mrkr										
6,896.36	58.62	283.43	6,757.69	91.14	-381.63	379.67	7.00	7.00	0.00	0.00
Niobrara										
6,900.00	58.88	283.43	6,759.58	91.86	-384.66	382.68	7.00	7.00	0.00	0.00
6,927.64	60.81	283.43	6,773.46	97.41	-407.90	405.81	7.00	7.00	0.00	0.00
Niobrara A										
6,965.56	63.47	283.43	6,791.18	105.20	-440.51	438.24	7.00	7.00	0.00	0.00
Niobrara A Base										
7,000.00	65.88	283.43	6,805.91	112.43	-470.79	468.37	7.00	7.00	0.00	0.00
7,100.00	72.88	283.43	6,841.10	134.16	-561.76	558.88	7.00	7.00	0.00	0.00
7,187.80	79.03	283.43	6,862.40	153.93	-644.57	641.26	7.00	7.00	0.00	0.00
Niobrara B										
7,200.00	79.88	283.43	6,864.64	156.72	-656.23	652.86	7.00	7.00	0.00	0.00
7,273.15	85.00	283.43	6,874.26	173.56	-726.74	723.01	7.00	7.00	0.00	0.00
End Build at 7273.15ft - 7" Casing Pt.										
7,300.00	85.00	283.43	6,876.60	179.77	-752.76	748.89	0.00	0.00	0.00	0.00
7,309.08	85.00	283.43	6,877.39	181.87	-761.55	757.64	0.00	0.00	0.00	0.00
Nio B Target Top										
7,310.00	85.00	283.43	6,877.47	182.08	-762.45	758.53	0.00	0.00	0.00	0.00
Hold Angle at 85.00										
7,348.15	85.00	283.43	6,880.79	190.91	-799.41	795.30	0.00	0.00	0.00	0.00
Kickoff at 7348.15ft										
7,385.00	87.95	283.43	6,883.06	199.45	-835.18	830.89	8.00	8.00	0.00	0.00
Build Rate = 8.00°/100ft										
7,400.00	89.15	283.43	6,883.44	202.94	-849.77	845.40	8.00	8.00	0.00	0.00
7,410.65	90.00	283.43	6,883.52	205.41	-860.12	855.70	8.00	8.00	0.00	0.00
7,412.60	90.16	283.43	6,883.52	205.86	-862.02	857.59	8.00	8.00	0.00	0.00
Nio B Target										
7,416.90	90.50	283.43	6,883.49	206.86	-866.20	861.75	7.99	7.99	0.00	0.00
End Build at 7416.90ft										
7,500.00	90.50	283.43	6,882.77	226.16	-947.03	942.16	0.00	0.00	0.00	0.00
7,600.00	90.50	283.43	6,881.89	249.39	-1,044.29	1,038.92	0.00	0.00	0.00	0.00
7,616.90	90.50	283.43	6,881.75	253.32	-1,060.73	1,055.28	0.00	0.00	0.00	0.00

Plan Report for Hanscome G11-99HZ - 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 (°)
Begin Turn at 7616.90ft										
7,700.00	90.50	280.52	6,881.02	270.56	-1,142.01	1,136.18	3.50	0.01	-3.50	-89.90
7,800.00	90.51	277.02	6,880.13	285.81	-1,240.82	1,234.66	3.50	0.00	-3.50	-89.93
7,900.00	90.51	273.52	6,879.25	294.99	-1,340.37	1,334.00	3.50	0.00	-3.50	-89.96
Turn Rate = 3.50°/100ft										
8,000.00	90.51	270.02	6,878.36	298.09	-1,440.31	1,433.85	3.50	0.00	-3.50	-89.99
8,100.00	90.51	266.52	6,877.47	295.07	-1,540.24	1,533.83	3.50	0.00	-3.50	-90.02
8,186.96	90.50	263.48	6,876.70	287.49	-1,626.86	1,620.58	3.50	0.00	-3.50	-90.05
End Turn at 8186.96ft										
8,200.00	90.50	263.48	6,876.59	286.01	-1,639.81	1,633.56	0.00	0.00	0.00	0.00
8,300.00	90.50	263.48	6,875.71	274.66	-1,739.16	1,733.13	0.00	0.00	0.00	0.00
8,400.00	90.50	263.48	6,874.83	263.30	-1,838.51	1,832.69	0.00	0.00	0.00	0.00
8,500.00	90.50	263.48	6,873.95	251.94	-1,937.86	1,932.25	0.00	0.00	0.00	0.00
8,600.00	90.50	263.48	6,873.07	240.58	-2,037.21	2,031.81	0.00	0.00	0.00	0.00
8,700.00	90.50	263.48	6,872.19	229.23	-2,136.56	2,131.37	0.00	0.00	0.00	0.00
8,800.00	90.50	263.48	6,871.31	217.87	-2,235.91	2,230.94	0.00	0.00	0.00	0.00
8,900.00	90.50	263.48	6,870.43	206.51	-2,335.26	2,330.50	0.00	0.00	0.00	0.00
9,000.00	90.50	263.48	6,869.56	195.15	-2,434.61	2,430.06	0.00	0.00	0.00	0.00
9,100.00	90.50	263.48	6,868.68	183.80	-2,533.95	2,529.62	0.00	0.00	0.00	0.00
9,200.00	90.50	263.48	6,867.80	172.44	-2,633.30	2,629.19	0.00	0.00	0.00	0.00
9,300.00	90.50	263.48	6,866.92	161.08	-2,732.65	2,728.75	0.00	0.00	0.00	0.00
9,400.00	90.50	263.48	6,866.04	149.73	-2,832.00	2,828.31	0.00	0.00	0.00	0.00
9,500.00	90.50	263.48	6,865.16	138.37	-2,931.35	2,927.87	0.00	0.00	0.00	0.00
9,600.00	90.50	263.48	6,864.28	127.01	-3,030.70	3,027.43	0.00	0.00	0.00	0.00
9,700.00	90.50	263.48	6,863.40	115.65	-3,130.05	3,127.00	0.00	0.00	0.00	0.00
9,800.00	90.50	263.48	6,862.52	104.30	-3,229.40	3,226.56	0.00	0.00	0.00	0.00
9,900.00	90.50	263.48	6,861.64	92.94	-3,328.75	3,326.12	0.00	0.00	0.00	0.00
10,000.00	90.50	263.48	6,860.77	81.58	-3,428.10	3,425.68	0.00	0.00	0.00	0.00
Hold Angle at 90.50										
10,100.00	90.50	263.48	6,859.89	70.23	-3,527.45	3,525.25	0.00	0.00	0.00	0.00
10,200.00	90.50	263.48	6,859.01	58.87	-3,626.79	3,624.81	0.00	0.00	0.00	0.00
10,300.00	90.50	263.48	6,858.13	47.51	-3,726.14	3,724.37	0.00	0.00	0.00	0.00
10,400.00	90.50	263.48	6,857.25	36.15	-3,825.49	3,823.93	0.00	0.00	0.00	0.00
10,500.00	90.50	263.48	6,856.37	24.80	-3,924.84	3,923.50	0.00	0.00	0.00	0.00
10,600.00	90.50	263.48	6,855.49	13.44	-4,024.19	4,023.06	0.00	0.00	0.00	0.00
10,700.00	90.50	263.48	6,854.61	2.08	-4,123.54	4,122.62	0.00	0.00	0.00	0.00
10,800.00	90.50	263.48	6,853.73	-9.28	-4,222.89	4,222.18	0.00	0.00	0.00	0.00
10,900.00	90.50	263.48	6,852.85	-20.63	-4,322.24	4,321.74	0.00	0.00	0.00	0.00
11,000.00	90.50	263.48	6,851.98	-31.99	-4,421.59	4,421.31	0.00	0.00	0.00	0.00
11,100.00	90.50	263.48	6,851.10	-43.35	-4,520.94	4,520.87	0.00	0.00	0.00	0.00
11,200.00	90.50	263.48	6,850.22	-54.70	-4,620.29	4,620.43	0.00	0.00	0.00	0.00
11,300.00	90.50	263.48	6,849.34	-66.06	-4,719.63	4,719.99	0.00	0.00	0.00	0.00
11,400.00	90.50	263.48	6,848.46	-77.42	-4,818.98	4,819.56	0.00	0.00	0.00	0.00
11,500.00	90.50	263.48	6,847.58	-88.78	-4,918.33	4,919.12	0.00	0.00	0.00	0.00
11,600.00	90.50	263.48	6,846.70	-100.13	-5,017.68	5,018.68	0.00	0.00	0.00	0.00
11,636.58	90.50	263.48	6,846.38	-104.29	-5,054.02	5,055.10	0.00	0.00	0.00	0.00
Total Depth = 11636.58ft - Hanscome G11-99HZ Plan #1 BH Tgt										

Plan Report for Hanscome G11-99HZ - Plan #1 Proposal

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,058.86	6,058.86	0.00	0.00	Kickoff at 6058.86ft
6,660.00	6,607.40	49.01	-205.23	Build Rate = 7.00°/100ft
7,273.15	6,874.26	173.56	-726.74	End Build at 7273.15ft
7,310.00	6,877.47	182.08	-762.45	Hold Angle at 85.00
7,348.15	6,880.79	190.91	-799.41	Kickoff at 7348.15ft
7,385.00	6,883.06	199.45	-835.18	Build Rate = 8.00°/100ft
7,416.90	6,883.49	206.86	-866.20	End Build at 7416.90ft
7,616.90	6,881.75	253.32	-1,060.73	Begin Turn at 7616.90ft
7,900.00	6,879.25	294.99	-1,340.37	Turn Rate = 3.50°/100ft
8,186.96	6,876.70	287.49	-1,626.86	End Turn at 8186.96ft
10,000.00	6,860.77	81.58	-3,428.10	Hold Angle at 90.50
11,636.58	6,846.38	-104.29	-5,054.02	Total Depth = 11636.58ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Hanscome G11-99HZ Plan #1 BH Tgt	268.82	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	11,636.27	Plan #1 Proposal	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,273.15	6,874.26	7" Casing Pt.	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,752.00	2,752.00	Pierre Silt		-0.50	268.82
3,730.00	3,730.00	Parkman		-0.50	268.82
4,439.00	4,439.00	Sussex		-0.50	268.82
4,930.00	4,930.00	Shannon		-0.50	268.82
6,868.69	6,746.00	Sharon Springs Mrkr		-0.50	268.82
6,896.36	6,761.00	Niobrara		-0.50	268.82
6,927.64	6,777.00	Niobrara A		-0.50	268.82
6,965.56	6,795.00	Niobrara A Base		-0.50	268.82
7,187.80	6,868.00	Niobrara B		-0.50	268.82
7,309.08	6,884.00	Nio B Target Top		-0.50	268.82
7,412.60	6,891.00	Nio B Target		-0.50	268.82

Plan Report for Hanscome G11-99HZ - Plan #1 Proposal

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Hanscome No. 3	0.00	558.69	-3,568.81	Circle
Hanscome G11-99HZ N. 460' Setback	0.00	0.00	0.00	Polygon
Easton 12-1	0.00	-558.36	1,734.28	Circle
Hanscome No. 1	0.00	-575.64	-4,820.80	Circle
Hanscome G11-4	0.00	937.42	-5,080.88	Circle
Hanscome No. 6	0.00	-557.68	-2,239.03	Circle
Hanscome 11-7	0.00	649.34	-1,018.54	Circle
Hanscome No. 5	0.00	761.11	-2,246.43	Circle
Easton No. 2	0.00	762.62	485.93	Circle
Klein 12-1	0.00	-649.59	257.39	Circle
Hanscome No. 4	0.00	-581.24	-3,526.99	Circle
Hanscome G11-99HZ S. Section Line	0.00	0.00	0.00	Polygon
Hanscome G11-99HZ W. Section Line	0.00	0.00	0.00	Polygon
Easton G12-19	0.00	4.37	805.75	Circle
Hanscome G11-99HZ Plan #1 BH Tgt	6,846.38	-104.29	-5,054.02	Point
Hanscome G11-99HZ E. 460' Setback	0.00	0.00	0.00	Polygon
Hanscome No. 2	0.00	-42.22	-1,321.20	Circle
Hanscome G11-99HZ W. 460' Setback	0.00	0.00	0.00	Polygon
Hanscome G11-99HZ S. 460' Setback	0.00	0.00	0.00	Polygon
Easton 12-3/5	0.00	541.01	1,645.22	Circle
Hanscome G11-99HZ N. Section Line	0.00	0.00	0.00	Polygon
Hanscome 11-415	0.00	284.08	-4,455.55	Circle
Hanscome G11-99HZ Center Section Line	0.00	0.00	0.00	Polygon

North Reference Sheet for Sec. 12-T4N-R65W - Hanscome G11-99HZ - 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' @ 4766.00ft (H&P 315). Northing and Easting are relative to Hanscome G11-99HZ

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: 0.99995781

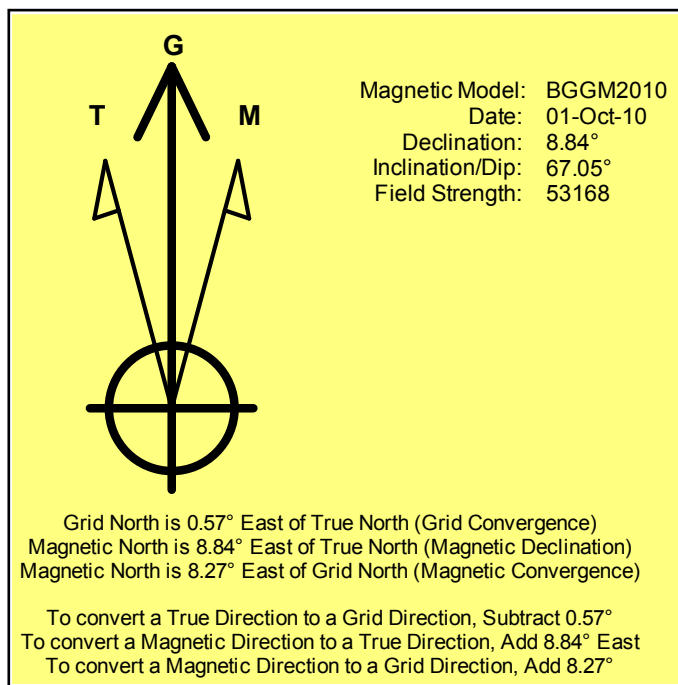
Grid Coordinates of Well: 1,364,379.08 ft N, 3,245,328.78 ft E

Geographical Coordinates of Well: 40° 19' 49.01" N, 104° 37' 12.11" W

Grid Convergence at Surface is: 0.57°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,636.58ft
the Bottom Hole Displacement is 5,055.10ft in the Direction of 268.82° (Grid).

Magnetic Convergence at surface is: -8.27° (1 October 2010, , BGGM2010)



Noble Energy

Hanscome No. 6
Klein 12-1