

# EOG Resources, Inc.

Weld County, CO  
Sec. 36-T12N-R63W  
Longhorn B5-36H - A3

Plan #2

Design: Scientific Gyro and Sperry MWD Survey

## Sperry Drilling Services Standard Report

25 June, 2010

Well Coordinates: 594,716.89 N, 2,309,075.43 E (40° 57' 37.92" N, 104° 22' 51.61" W)  
Ground Level: 5,343.00 ft

Local Coordinate Origin:	Centered on Well Longhorn B5-36H - Slot A3
Viewing Datum:	RKB 22' @ 5365.00ft (SST 56 (modified))
TVDs to System:	N
North Reference:	True
Unit System:	API - US Survey Feet - Custom
Geodetic Scale Factor Applied	
Version: 2003.16 Build: 43I	

**HALLIBURTON**

**Design Report for Longhorn B5-36H - Scientific Gyro and Sperry MWD Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.00	0.16	215.82	30.00	-0.03	-0.02	-0.03	0.53
<b>Surveys from 30.00ft to 1400.20ft are Scientific Gyro Surveys</b>							
60.00	0.32	215.54	60.00	-0.14	-0.10	-0.13	0.53
90.00	0.23	197.60	90.00	-0.26	-0.16	-0.25	0.41
120.00	0.16	149.70	120.00	-0.36	-0.16	-0.34	0.57
150.00	0.14	201.53	150.00	-0.43	-0.15	-0.41	0.44
180.00	0.20	210.71	180.00	-0.50	-0.19	-0.49	0.22
210.00	0.10	136.22	210.00	-0.57	-0.20	-0.55	0.66
240.00	0.10	76.80	240.00	-0.58	-0.16	-0.56	0.33
270.00	0.35	73.62	270.00	-0.55	-0.05	-0.54	0.83
300.00	0.35	67.64	300.00	-0.49	0.13	-0.50	0.12
330.00	0.34	86.90	330.00	-0.45	0.30	-0.47	0.39
360.00	0.40	75.36	360.00	-0.42	0.49	-0.46	0.32
390.00	0.45	83.50	390.00	-0.38	0.71	-0.44	0.26
420.00	0.22	44.27	420.00	-0.32	0.87	-0.40	1.04
450.00	0.20	56.78	450.00	-0.25	0.95	-0.34	0.17
480.00	0.26	80.61	480.00	-0.21	1.06	-0.31	0.37
510.00	0.34	107.03	509.99	-0.23	1.21	-0.34	0.53
540.00	0.35	96.79	539.99	-0.27	1.39	-0.39	0.21
570.00	0.31	91.74	569.99	-0.28	1.56	-0.42	0.16
600.00	0.31	75.44	599.99	-0.26	1.72	-0.41	0.29
630.00	0.34	80.74	629.99	-0.23	1.89	-0.40	0.14
660.00	0.44	84.07	659.99	-0.20	2.09	-0.39	0.34
690.00	0.46	86.96	689.99	-0.18	2.33	-0.39	0.10
720.00	0.46	99.29	719.99	-0.19	2.56	-0.42	0.33
750.00	0.38	91.46	749.99	-0.22	2.78	-0.47	0.33
780.00	0.37	98.83	779.99	-0.23	2.98	-0.50	0.16
810.00	0.56	108.20	809.99	-0.29	3.21	-0.58	0.68
840.00	0.82	107.44	839.99	-0.41	3.56	-0.72	0.87
870.00	0.66	107.04	869.98	-0.52	3.93	-0.87	0.53
900.00	0.59	108.48	899.98	-0.62	4.24	-1.00	0.24
930.00	0.60	121.57	929.98	-0.75	4.52	-1.15	0.45
960.00	0.56	109.79	959.98	-0.88	4.79	-1.31	0.42
990.00	0.62	116.29	989.98	-1.00	5.07	-1.46	0.30
1,020.00	0.55	122.45	1,019.97	-1.15	5.34	-1.63	0.31
1,050.00	0.27	130.42	1,049.97	-1.28	5.52	-1.77	0.95
1,080.00	0.24	130.29	1,079.97	-1.36	5.62	-1.86	0.10
1,110.00	0.21	134.65	1,109.97	-1.44	5.71	-1.95	0.12
1,140.00	0.17	149.43	1,139.97	-1.52	5.77	-2.03	0.21
1,170.00	0.04	126.03	1,169.97	-1.56	5.80	-2.08	0.45
1,200.00	0.16	235.31	1,199.97	-1.59	5.77	-2.11	0.59
1,230.00	0.25	250.02	1,229.97	-1.64	5.68	-2.14	0.35
1,260.00	0.19	261.11	1,259.97	-1.67	5.57	-2.16	0.24
1,290.00	0.35	275.66	1,289.97	-1.67	5.42	-2.15	0.58
1,320.00	0.33	270.87	1,319.97	-1.66	5.25	-2.12	0.12
1,350.00	0.21	246.68	1,349.97	-1.68	5.11	-2.13	0.54
1,380.00	0.30	176.79	1,379.97	-1.78	5.06	-2.23	1.00
1,400.20	0.35	150.54	1,400.17	-1.89	5.10	-2.34	0.77
<b>Tie-On to Scientific Gyro Survey</b>							



## Design Report for Longhorn B5-36H - Scientific Gyro and Sperry MWD Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
1,510.00	0.31	8.96	1,509.97	-1.88	5.31	-2.35	0.57
<b>First Sperry MWD Survey</b>							
1,542.00	0.16	328.79	1,541.97	-1.76	5.30	-2.23	0.67
1,606.00	0.72	54.70	1,605.97	-1.45	5.58	-1.95	1.13
1,701.00	0.50	69.32	1,700.96	-0.96	6.46	-1.54	0.28
1,796.00	0.61	89.87	1,795.96	-0.81	7.35	-1.47	0.24
1,890.00	0.35	37.10	1,889.96	-0.58	8.02	-1.30	0.52
1,985.00	0.71	73.14	1,984.95	-0.18	8.76	-0.97	0.50
2,081.00	0.85	82.19	2,080.94	0.09	10.04	-0.81	0.19
2,176.00	0.67	67.29	2,175.93	0.40	11.25	-0.61	0.28
2,271.00	0.85	61.40	2,270.93	0.95	12.38	-0.17	0.21
2,461.00	0.64	81.48	2,460.91	1.78	14.66	0.46	0.17
2,556.00	0.53	87.44	2,555.91	1.88	15.63	0.47	0.13
2,650.00	0.54	64.81	2,649.90	2.09	16.46	0.60	0.22
2,745.00	0.76	64.82	2,744.90	2.55	17.44	0.97	0.23
2,840.00	0.87	57.32	2,839.89	3.21	18.62	1.52	0.16
2,935.00	0.83	62.63	2,934.88	3.91	19.83	2.11	0.09
3,030.00	1.04	50.46	3,029.86	4.78	21.11	2.86	0.30
3,126.00	1.02	51.48	3,125.85	5.86	22.45	3.82	0.03
3,220.00	0.75	55.92	3,219.84	6.73	23.61	4.58	0.30
3,315.00	1.32	55.56	3,314.82	7.70	25.03	5.41	0.60
3,410.00	0.94	55.42	3,409.80	8.76	26.58	6.33	0.40
3,505.00	1.09	62.30	3,504.79	9.62	28.02	7.06	0.20
3,600.00	0.80	38.67	3,599.77	10.56	29.23	7.89	0.51
3,696.00	0.92	68.67	3,695.76	11.36	30.37	8.58	0.48
3,790.00	0.90	65.15	3,789.75	11.95	31.74	9.04	0.06
3,885.00	1.16	53.30	3,884.74	12.83	33.19	9.80	0.35
3,980.00	0.85	65.55	3,979.72	13.70	34.60	10.53	0.40
4,075.00	0.91	56.45	4,074.71	14.41	35.87	11.12	0.16
4,170.00	0.82	10.83	4,169.70	15.49	36.63	12.14	0.71
4,265.00	0.99	33.00	4,264.69	16.85	37.20	13.43	0.41
4,360.00	0.93	28.10	4,359.68	18.22	38.01	14.72	0.11
4,455.00	0.94	11.16	4,454.66	19.66	38.53	16.12	0.29
4,550.00	1.40	4.68	4,549.64	21.58	38.77	18.01	0.50
4,645.00	0.98	10.02	4,644.62	23.54	39.01	19.94	0.46
4,741.00	0.80	14.74	4,740.61	25.00	39.32	21.36	0.20
4,835.00	0.37	331.63	4,834.61	25.90	39.34	22.25	0.62
4,930.00	0.19	192.27	4,929.61	26.01	39.17	22.39	0.56
5,025.00	0.45	298.95	5,024.60	26.04	38.81	22.45	0.56
5,120.00	0.80	276.10	5,119.60	26.29	37.82	22.78	0.45
5,215.00	0.65	259.15	5,214.59	26.26	36.63	22.86	0.27
5,311.00	0.58	265.70	5,310.59	26.12	35.61	22.81	0.10
5,405.00	0.65	346.73	5,404.58	26.61	35.02	23.35	0.85
5,500.00	0.19	138.94	5,499.58	27.01	34.99	23.75	0.87
5,595.00	0.28	72.56	5,594.58	26.96	35.32	23.68	0.28
5,691.00	0.22	105.64	5,690.58	26.98	35.72	23.66	0.16
5,786.00	0.32	92.94	5,785.58	26.92	36.16	23.56	0.12
5,880.00	0.04	145.31	5,879.58	26.88	36.44	23.49	0.32
5,975.00	0.43	333.79	5,974.58	27.17	36.30	23.80	0.49
6,070.00	0.33	142.95	6,069.58	27.27	36.31	23.90	0.80
6,165.00	0.14	3.82	6,164.58	27.17	36.48	23.78	0.47

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6,260.00	0.20	212.21	6,259.57	27.15	36.40	23.76	0.35
6,355.00	0.13	151.56	6,354.57	26.91	36.37	23.53	0.19
6,450.00	0.41	100.04	6,449.57	26.76	36.75	23.34	0.36
6,546.00	0.43	122.77	6,545.57	26.50	37.39	23.03	0.17
6,641.00	0.26	118.53	6,640.57	26.21	37.88	22.69	0.18
6,736.00	0.33	119.37	6,735.57	25.97	38.31	22.42	0.07
6,831.00	0.19	128.56	6,830.57	25.74	38.67	22.15	0.15
6,862.00	0.25	81.70	6,861.57	25.71	38.78	22.12	0.59
6,894.00	2.49	9.80	6,893.56	26.41	38.97	22.80	7.57
6,925.00	7.82	2.60	6,924.42	29.18	39.18	25.54	17.29
6,957.00	13.56	1.42	6,955.85	35.11	39.37	31.43	17.95
6,989.00	16.69	0.15	6,986.74	43.46	39.47	39.73	9.84
7,021.00	20.34	357.38	7,017.08	53.61	39.23	49.87	11.73
7,053.00	24.12	357.99	7,046.69	65.71	38.75	61.96	11.83
7,084.00	29.28	357.91	7,074.38	79.62	38.25	75.86	16.65
7,116.00	34.43	358.12	7,101.55	96.50	37.67	92.72	16.10
7,148.00	39.40	356.09	7,127.13	115.68	36.68	111.92	15.99
7,179.00	42.97	354.59	7,150.46	136.02	35.01	132.32	11.95
7,211.00	45.94	354.24	7,173.29	158.33	32.83	154.73	9.31
7,243.00	48.82	354.50	7,194.96	181.76	30.52	178.28	9.02
7,274.00	51.13	355.87	7,214.90	205.41	28.53	202.01	8.18
7,306.00	53.33	356.25	7,234.50	230.64	26.79	227.30	6.94
7,338.00	56.22	355.95	7,252.95	256.72	25.01	253.43	9.06
7,370.00	59.76	355.24	7,269.91	283.77	22.93	280.56	11.22
7,401.00	62.40	355.60	7,284.90	310.82	20.76	307.69	8.58
7,433.00	64.37	355.91	7,299.24	339.34	18.64	336.29	6.22
7,465.00	67.30	354.14	7,312.33	368.43	16.11	365.48	10.45
7,497.00	72.16	352.87	7,323.42	398.24	12.71	395.48	15.64
7,528.00	75.42	352.41	7,332.07	427.76	8.89	425.23	10.61
7,560.00	76.85	351.86	7,339.74	458.53	4.64	456.26	4.77
7,592.00	79.40	352.50	7,346.32	489.55	0.38	487.54	8.21
7,624.00	82.35	352.73	7,351.40	520.88	-3.68	519.10	9.25
7,670.00	85.22	352.60	7,356.38	566.23	-9.51	564.80	6.25
<b>Interpolated Azimuth Due to Magnetic Interference</b>							
7,687.00	85.38	352.55	7,357.77	583.04	-11.70	581.73	0.99
7,718.00	85.62	352.38	7,360.20	613.67	-15.76	612.60	0.95
7,750.00	87.01	351.98	7,362.26	645.31	-20.10	644.50	4.52
7,781.00	87.81	352.47	7,363.66	675.99	-24.29	675.44	3.03
7,813.00	89.11	353.34	7,364.52	707.73	-28.24	707.41	4.89
7,845.00	91.23	353.40	7,364.42	739.52	-31.94	739.39	6.63
7,876.00	91.33	352.87	7,363.73	770.29	-35.64	770.37	1.74
7,908.00	91.76	353.14	7,362.87	802.04	-39.54	802.34	1.59
7,940.00	90.68	353.16	7,362.19	833.80	-43.35	834.32	3.38
7,972.00	89.88	353.34	7,362.03	865.58	-47.11	866.31	2.56
8,003.00	88.58	354.63	7,362.45	896.41	-50.36	897.30	5.91
8,035.00	88.37	354.47	7,363.30	928.25	-53.40	929.29	0.82
8,066.00	88.24	354.39	7,364.22	959.09	-56.41	960.28	0.49
8,097.00	88.31	354.45	7,365.15	989.93	-59.42	991.26	0.30
8,130.00	89.48	355.36	7,365.79	1,022.79	-62.35	1,024.25	4.49
8,161.00	90.28	356.49	7,365.85	1,053.71	-64.55	1,055.25	4.47
8,193.00	90.40	357.16	7,365.66	1,085.66	-66.33	1,087.23	2.13

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8,224.00	90.25	356.09	7,365.49	1,116.61	-68.15	1,118.21	3.49
8,256.00	90.28	355.14	7,365.34	1,148.51	-70.60	1,150.21	2.97
8,288.00	90.15	354.20	7,365.22	1,180.37	-73.57	1,182.21	2.97
8,351.00	91.17	351.86	7,364.49	1,242.90	-81.21	1,245.17	4.05
8,383.00	90.19	351.97	7,364.11	1,274.58	-85.71	1,277.12	3.08
8,445.00	90.03	352.85	7,363.99	1,336.03	-93.90	1,339.07	1.44
8,508.00	92.10	352.34	7,362.82	1,398.50	-102.02	1,402.00	3.38
8,540.00	92.22	352.27	7,361.62	1,430.18	-106.30	1,433.95	0.43
8,604.00	90.89	354.10	7,359.88	1,493.70	-113.89	1,497.89	3.53
8,636.00	90.71	354.24	7,359.43	1,525.54	-117.14	1,529.89	0.71
8,667.00	89.57	353.32	7,359.36	1,556.35	-120.50	1,560.88	4.73
8,699.00	89.60	353.22	7,359.59	1,588.13	-124.25	1,592.87	0.33
8,762.00	90.31	353.33	7,359.64	1,650.70	-131.63	1,655.85	1.14
8,794.00	89.66	352.41	7,359.65	1,682.45	-135.60	1,687.83	3.52
8,826.00	89.82	353.02	7,359.79	1,714.19	-139.66	1,719.80	1.97
8,889.00	91.08	354.69	7,359.30	1,776.82	-146.40	1,782.79	3.32
8,920.00	90.86	355.48	7,358.77	1,807.70	-149.06	1,813.78	2.65
8,952.00	90.86	355.23	7,358.29	1,839.60	-151.65	1,845.78	0.78
8,984.00	90.86	354.93	7,357.81	1,871.47	-154.39	1,877.78	0.94
9,016.00	88.92	353.58	7,357.87	1,903.31	-157.60	1,909.77	7.39
9,047.00	89.81	354.02	7,358.22	1,934.13	-160.94	1,940.76	3.20
9,079.00	90.65	354.29	7,358.09	1,965.96	-164.20	1,972.76	2.76
9,110.00	89.38	354.48	7,358.08	1,996.81	-167.24	2,003.76	4.14
9,142.00	90.25	355.01	7,358.18	2,028.68	-170.17	2,035.76	3.18
9,205.00	89.66	357.21	7,358.23	2,091.53	-174.44	2,098.74	3.62
9,269.00	89.94	359.32	7,358.46	2,155.49	-176.38	2,162.62	3.33
9,332.00	90.03	1.89	7,358.47	2,218.48	-175.71	2,225.30	4.08
9,395.00	89.66	2.87	7,358.64	2,281.43	-173.10	2,287.75	1.66
9,458.00	89.72	3.27	7,358.98	2,344.34	-169.72	2,350.10	0.64
9,521.00	90.06	2.15	7,359.10	2,407.27	-166.74	2,412.51	1.86
9,584.00	89.82	356.60	7,359.17	2,470.24	-167.43	2,475.29	8.82
9,647.00	89.78	358.23	7,359.39	2,533.17	-170.27	2,538.22	2.59
9,710.00	89.66	358.49	7,359.70	2,596.14	-172.07	2,601.10	0.45
9,774.00	88.98	353.97	7,360.46	2,659.98	-176.28	2,665.06	7.14
9,837.00	89.57	353.98	7,361.26	2,722.63	-182.89	2,728.05	0.94
9,900.00	89.72	353.77	7,361.65	2,785.27	-189.61	2,791.04	0.41
9,995.00	88.30	353.17	7,363.29	2,879.64	-200.42	2,885.99	1.62
10,058.00	90.34	352.63	7,364.03	2,942.15	-208.20	2,948.95	3.35
10,090.00	90.03	350.95	7,363.93	2,973.82	-212.77	2,980.90	5.34
10,154.00	90.80	350.95	7,363.47	3,037.02	-222.84	3,044.75	1.20
10,185.00	92.22	351.66	7,362.65	3,067.65	-227.52	3,075.68	5.12
10,217.00	92.23	351.40	7,361.41	3,099.28	-232.23	3,107.60	0.81
10,280.00	90.68	351.83	7,359.81	3,161.58	-241.42	3,170.48	2.55
10,312.00	90.37	351.65	7,359.52	3,193.25	-246.01	3,202.43	1.12
10,344.00	89.10	351.27	7,359.66	3,224.89	-250.77	3,234.38	4.14
10,407.00	90.28	351.74	7,360.00	3,287.20	-260.07	3,297.27	2.02
10,471.00	89.41	351.27	7,360.18	3,350.50	-269.53	3,361.16	1.55
10,534.00	90.43	352.10	7,360.27	3,412.83	-278.64	3,424.06	2.09
10,598.00	89.94	351.04	7,360.06	3,476.14	-288.02	3,487.96	1.82
10,693.00	90.09	350.91	7,360.03	3,569.96	-302.92	3,582.74	0.21
10,788.00	90.12	351.28	7,359.86	3,663.82	-317.63	3,677.54	0.39

**Design Report for Longhorn B5-36H - Scientific Gyro and Sperry MWD Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
10,884.00	90.03	352.37	7,359.73	3,758.84	-331.28	3,773.40	1.14
10,979.00	90.03	353.48	7,359.68	3,853.12	-342.98	3,868.35	1.17
11,073.00	89.91	352.97	7,359.73	3,946.46	-354.07	3,962.31	0.56
11,137.00	90.12	353.58	7,359.72	4,010.02	-361.56	4,026.29	1.01
<b>Final Sperry MWD Survey</b>							
11,187.00	90.12	353.58	7,359.61	4,059.70	-367.15	4,076.27	0.00
<b>Survey Projection to TD</b>							

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
30.00	30.00	-0.03	-0.02	Surveys from 30.00ft to 1400.20ft are Scientific Gyro Surveys
1,400.20	1,400.17	-1.89	5.10	Tie-On to Scientific Gyro Survey
1,510.00	1,509.97	-1.88	5.31	First Sperry MWD Survey
7,670.00	7,356.38	566.23	-9.51	Interpolated Azimuth Due to Magnetic Interference
11,137.00	7,359.72	4,010.02	-361.56	Final Sperry MWD Survey
11,187.00	7,359.61	4,059.70	-367.15	Survey Projection to TD

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/_S (ft)	+E/-W (ft)	
Target	Longhorn B5-36H Plan #2 BH Tgt	354.84	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
30.00	1,400.20	Scientific Gyro Surveys	NS-GYRO-MS
1,510.00	11,187.00	Sperry MWD Surveys	MWD

**Design Report for Longhorn B5-36H - Scientific Gyro and Sperry MWD Survey****Targets**

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Longhorn C5-36H E. - actual wellpath hits target center - Polygon	0.00	0.00	2.00	0.00	0.00	594,716.89	2,309,075.43	40° 57' 37.923 N	104° 22' 51.609 W
Point 1				2,067.00	4,090.00	598,832.79	2,311,090.72		
Point 2				2,067.00	-67.00	594,675.98	2,311,143.18		
Longhorn C5-36H S. - actual wellpath hits target center - Polygon	0.00	0.00	2.00	0.00	0.00	594,716.89	2,309,075.43	40° 57' 37.923 N	104° 22' 51.609 W
Point 1				-1,955.00	-67.00	594,625.22	2,307,121.37		
Point 2				2,067.00	-67.00	594,675.98	2,311,143.18		
Longhorn C5-36H N. - actual wellpath hits target center - Polygon	0.00	0.00	2.00	0.00	0.00	594,716.89	2,309,075.43	40° 57' 37.923 N	104° 22' 51.609 W
Point 1				-2,555.00	4,690.00	599,374.43	2,306,461.36		
Point 2				2,667.00	4,690.00	599,440.33	2,311,683.12		
Bevo 4-36M - actual wellpath misses target center by 2788.65ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E) - Circle (radius 100.00)	0.00	0.00	2.00	2,684.76	-754.05	597,392.01	2,308,287.53	40° 58' 4.451 N	104° 23' 1.439 W
Longhorn C5-36H W. - actual wellpath hits target center - Polygon	0.00	0.00	2.00	0.00	0.00	594,716.89	2,309,075.43	40° 57' 37.923 N	104° 22' 51.609 W
Point 1				-2,555.00	4,690.00	599,374.43	2,306,461.36		
Point 2				-2,555.00	-667.00	594,017.68	2,306,528.96		
Longhorn C5-36H W. - actual wellpath hits target center - Polygon	0.00	0.00	2.00	0.00	0.00	594,716.89	2,309,075.43	40° 57' 37.923 N	104° 22' 51.609 W
Point 1				-1,955.00	4,090.00	598,782.03	2,307,068.91		
Point 2				-1,955.00	-67.00	594,625.22	2,307,121.37		
Longhorn C5-36H S. - actual wellpath hits target center - Polygon	0.00	0.00	2.00	0.00	0.00	594,716.89	2,309,075.43	40° 57' 37.923 N	104° 22' 51.609 W
Point 1				-2,555.00	-667.00	594,017.68	2,306,528.96		
Point 2				2,667.00	-667.00	594,083.58	2,311,750.72		
Longhorn C5-36H E. - actual wellpath hits target center - Polygon	0.00	0.00	2.00	0.00	0.00	594,716.89	2,309,075.43	40° 57' 37.923 N	104° 22' 51.609 W
Point 1				2,667.00	4,690.00	599,440.33	2,311,683.12		
Point 2				2,667.00	-667.00	594,083.58	2,311,750.72		
Longhorn C5-36H N. - actual wellpath hits target center - Polygon	0.00	0.00	2.00	0.00	0.00	594,716.89	2,309,075.43	40° 57' 37.923 N	104° 22' 51.609 W
Point 1				-1,955.00	4,090.00	598,782.03	2,307,068.91		
Point 2				2,067.00	4,090.00	598,832.79	2,311,090.72		
Longhorn B5-36H - actual wellpath misses target center by 30.28ft at 11187.00ft MD (7359.61 TVD, 4059.70 N, -367.15 E) - Point	0.00	0.00	7,359.00	4,089.90	-369.33	598,801.94	2,308,654.51	40° 58' 18.335 N	104° 22' 56.424 W

**North Reference Sheet for Sec. 36-T12N-R63W - Longhorn B5-36H - Plan #2**

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

Vertical Depths are relative to RKB 22' @ 5365.00ft (SST 56 (modified)). Northing and Easting are relative to Longhorn B5-36H - Slot A3

Coordinate System is US State Plane 1927 (Exact solution), Colorado North 501 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 105° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°

False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 1.00003356

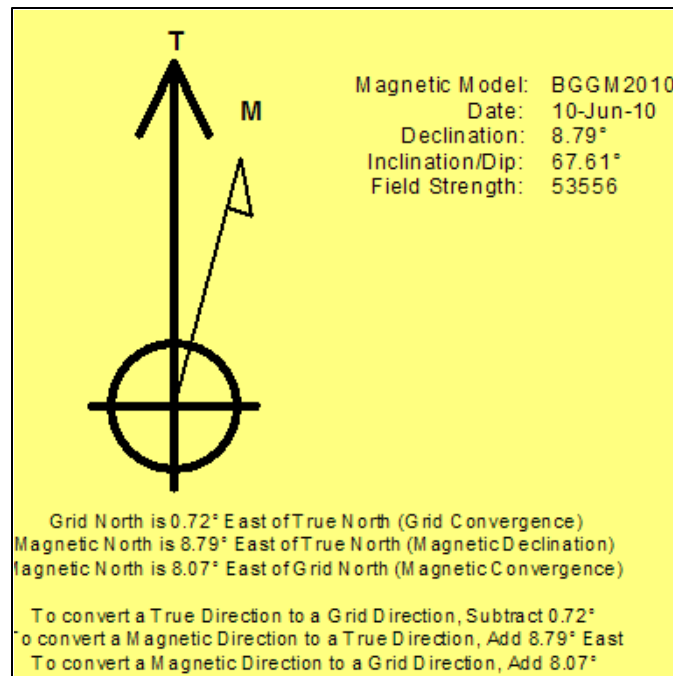
Grid Coordinates of Well: 594,716.89 ft N, 2,309,075.43 ft E

Geographical Coordinates of Well: 40° 57' 37.92" N, 104° 22' 51.61" W

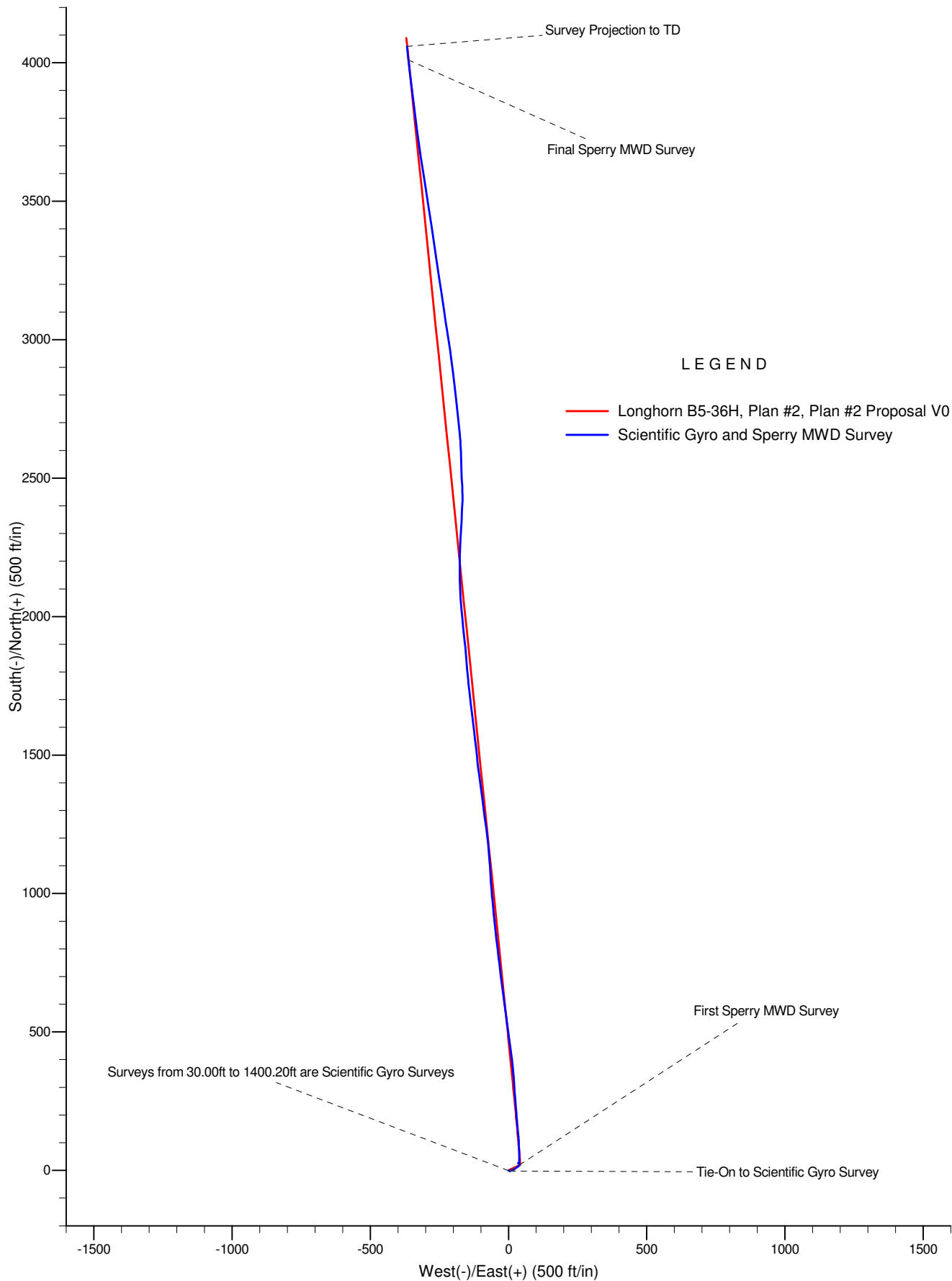
Grid Convergence at Surface is: 0.72°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,187.00ft  
the Bottom Hole Displacement is 4,076.27ft in the Direction of 354.83° (True).

Magnetic Convergence at surface is: -8.07° (10 June 2010, , BGGM2010)

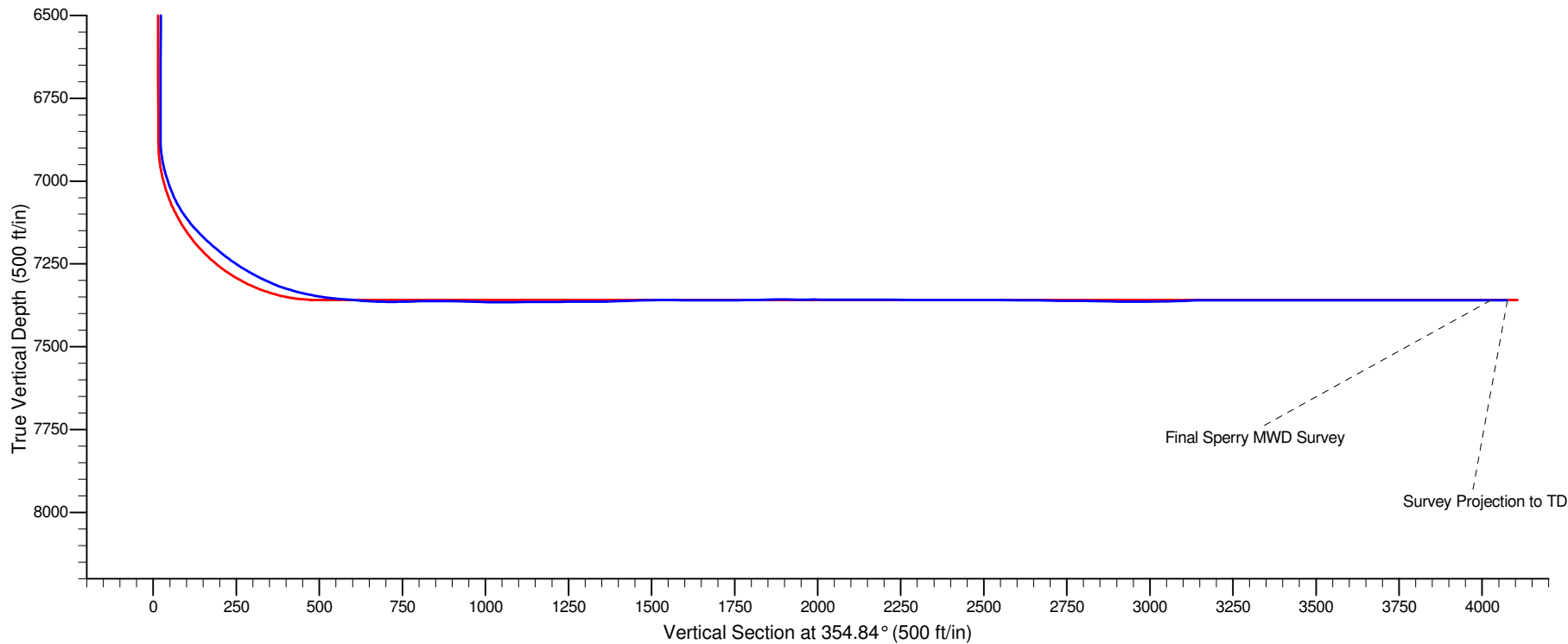






Project: Weld County, CO  
Site: Sec. 36-T12N-R63W  
Well: Longhorn B5-36H

# EOG Resources, Inc.



## LEGEND

- Longhorn B5-36H, Plan #2, Plan #2 Proposal V0
- Scientific Gyro and Sperry MWD Survey