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**Gruy Petroleum Management Co.
New Mexico
Eddy County
Sec. 29-T24S-R26E
White City Penn Gas Com "29" Unit 1 # 4
MWD survey**

Sperry Drilling Services Survey Report

9 March, 2005

Survey Ref: svy8203

Prepared by: Dennis Cook
Checked by:
Approved by:

HALLIBURTON

Sperry Drilling Services

Survey Report for Sec. 29-T24S-R26E - White City Penn Gas Com "29" Unit 1 # 4

Measured Depth (ft)	Incl.	Grid Azim.	Sub-Sea Depth (ft)	Vertical Depth (ft)	Local Coordinates		Global Coordinates		Dogleg Rate (°/100ft)	Vertical Section	Comment
					Northings (ft)	Eastings (ft)	Northings (ft)	Eastings (ft)			
Gyro survey											
0.00	0.000	0.000	-3433.00	0.00	0.00 N	0.00 E	433809.90 N	505399.80 E		0.00	
100.00	0.170	31.440	-3333.00	100.00	0.13 N	0.08 E	433810.03 N	505399.88 E	0.17	-0.08	
200.00	0.310	75.700	-3233.00	200.00	0.32 N	0.42 E	433810.22 N	505400.22 E	0.22	-0.42	
300.00	0.760	108.560	-3133.01	299.99	0.18 N	1.31 E	433810.08 N	505401.11 E	0.53	-1.31	
400.00	0.690	104.600	-3033.01	399.99	0.19 S	2.52 E	433809.71 N	505402.32 E	0.09	-2.52	
500.00	0.490	105.030	-2933.02	499.98	0.45 S	3.51 E	433809.45 N	505403.31 E	0.20	-3.51	
600.00	0.300	63.340	-2833.02	599.98	0.44 S	4.16 E	433809.46 N	505403.96 E	0.33	-4.16	
700.00	0.380	7.630	-2733.02	699.98	0.00 N	4.44 E	433809.90 N	505404.24 E	0.33	-4.44	
800.00	1.090	345.880	-2633.03	799.97	1.25 N	4.25 E	433811.15 N	505404.05 E	0.75	-4.25	
900.00	2.410	337.530	-2533.08	899.92	4.12 N	3.22 E	433814.02 N	505403.02 E	1.34	-3.22	
1000.00	2.970	334.560	-2433.19	999.81	8.40 N	1.30 E	433818.30 N	505401.10 E	0.58	-1.30	
1100.00	3.320	335.240	-2333.34	1099.66	13.37 N	1.03 W	433823.27 N	505398.77 E	0.35	1.03	
1200.00	3.250	337.930	-2233.51	1199.49	18.63 N	3.30 W	433828.53 N	505396.50 E	0.17	3.30	
1300.00	2.950	341.330	-2133.65	1299.35	23.69 N	5.19 W	433833.59 N	505394.61 E	0.35	5.19	
1400.00	2.620	340.820	-2033.77	1399.23	28.29 N	6.77 W	433838.19 N	505393.03 E	0.33	6.77	
1500.00	1.990	334.890	-1933.85	1499.15	32.02 N	8.25 W	433841.92 N	505391.55 E	0.67	8.25	
1600.00	1.480	336.680	-1833.90	1599.10	34.78 N	9.50 W	433844.68 N	505390.30 E	0.51	9.50	
1700.00	1.440	333.990	-1733.93	1699.07	37.09 N	10.57 W	433846.99 N	505389.23 E	0.08	10.57	
1800.00	1.230	326.880	-1633.96	1799.04	39.12 N	11.70 W	433849.02 N	505388.10 E	0.27	11.70	
1900.00	1.010	323.140	-1533.98	1899.02	40.72 N	12.82 W	433850.62 N	505386.98 E	0.23	12.82	
2000.00	0.940	324.440	-1433.99	1999.01	42.10 N	13.82 W	433852.00 N	505385.98 E	0.07	13.82	
2100.00	0.870	329.140	-1334.00	2099.00	43.42 N	14.69 W	433853.32 N	505385.11 E	0.10	14.69	
2200.00	1.120	329.070	-1234.02	2198.98	44.91 N	15.58 W	433854.81 N	505384.22 E	0.25	15.58	
2300.00	1.120	328.090	-1134.04	2298.96	46.57 N	16.60 W	433856.47 N	505383.20 E	0.02	16.60	
2400.00	0.760	330.520	-1034.05	2398.95	47.98 N	17.44 W	433857.88 N	505382.36 E	0.36	17.44	

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					Northings (ft)	Eastings (ft)	Northings (ft)	Eastings (ft)			
2500.00	0.610	333.250	-934.06	2498.94	49.03 N	18.01 W	433858.93 N	505381.79 E	0.15	18.01	
2600.00	0.640	334.070	-834.06	2598.94	50.01 N	18.49 W	433859.91 N	505381.31 E	0.03	18.49	
2700.00	0.510	321.890	-734.07	2698.93	50.86 N	19.01 W	433860.76 N	505380.79 E	0.18	19.01	
2800.00	0.490	314.850	-634.07	2798.93	51.52 N	19.59 W	433861.42 N	505380.21 E	0.06	19.59	
2900.00	0.880	281.050	-534.08	2898.92	51.96 N	20.65 W	433861.86 N	505379.15 E	0.55	20.65	
3000.00	0.860	283.680	-434.09	2998.91	52.29 N	22.13 W	433862.19 N	505377.67 E	0.04	22.13	
3100.00	0.800	273.340	-334.10	3098.90	52.51 N	23.56 W	433862.41 N	505376.24 E	0.16	23.56	
3200.00	0.800	268.000	-234.11	3198.89	52.52 N	24.95 W	433862.42 N	505374.85 E	0.07	24.95	
3300.00	0.480	231.130	-134.12	3298.88	52.24 N	25.97 W	433862.14 N	505373.83 E	0.51	25.97	
3400.00	0.600	176.020	-34.12	3398.88	51.45 N	26.26 W	433861.35 N	505373.54 E	0.51	26.26	
3500.00	0.390	175.160	65.87	3498.87	50.59 N	26.20 W	433860.49 N	505373.60 E	0.21	26.20	
3600.00	0.520	217.030	165.87	3598.87	49.89 N	26.44 W	433859.79 N	505373.36 E	0.35	26.44	
3700.00	0.720	234.700	265.87	3698.87	49.16 N	27.23 W	433859.06 N	505372.57 E	0.27	27.23	
3800.00	0.780	224.720	365.86	3798.86	48.32 N	28.22 W	433858.22 N	505371.58 E	0.14	28.22	
3900.00	0.730	235.840	465.85	3898.85	47.47 N	29.23 W	433857.37 N	505370.57 E	0.15	29.23	
4000.00	0.670	236.010	565.84	3998.84	46.79 N	30.24 W	433856.69 N	505369.56 E	0.06	30.24	
4100.00	0.690	221.730	665.83	4098.83	46.01 N	31.12 W	433855.91 N	505368.68 E	0.17	31.12	
4200.00	0.630	224.330	765.83	4198.83	45.17 N	31.91 W	433855.07 N	505367.89 E	0.07	31.91	
4300.00	0.550	238.550	865.82	4298.82	44.53 N	32.70 W	433854.43 N	505367.10 E	0.17	32.70	
4400.00	0.590	237.060	965.82	4398.82	44.00 N	33.55 W	433853.90 N	505366.25 E	0.04	33.55	
4500.00	0.640	241.640	1065.81	4498.81	43.45 N	34.47 W	433853.35 N	505365.33 E	0.07	34.47	
4600.00	0.610	227.550	1165.81	4598.81	42.83 N	35.35 W	433852.73 N	505364.45 E	0.16	35.35	
4700.00	0.630	216.440	1265.80	4698.80	42.03 N	36.07 W	433851.93 N	505363.73 E	0.12	36.07	
4800.00	0.590	230.070	1365.79	4798.79	41.25 N	36.79 W	433851.15 N	505363.01 E	0.15	36.79	
4900.00	0.670	214.870	1465.79	4898.79	40.44 N	37.52 W	433850.34 N	505362.28 E	0.18	37.52	

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					Northings (ft)	Eastings (ft)	Northings (ft)	Eastings (ft)			
5000.00	0.700	203.950	1565.78	4998.78	39.41 N	38.10 W	433849.31 N	505361.70 E	0.13	38.10	
5100.00	1.160	229.490	1665.77	5098.77	38.19 N	39.12 W	433848.09 N	505360.68 E	0.61	39.12	
5200.00	1.200	229.800	1765.75	5198.75	36.86 N	40.69 W	433846.76 N	505359.11 E	0.04	40.69	
5300.00	1.300	227.260	1865.72	5298.72	35.41 N	42.32 W	433845.31 N	505357.48 E	0.11	42.32	
5400.00	1.190	230.950	1965.70	5398.70	33.99 N	43.96 W	433843.89 N	505355.84 E	0.14	43.96	
5500.00	0.480	180.840	2065.69	5498.69	32.91 N	44.78 W	433842.81 N	505355.02 E	0.96	44.78	
5600.00	0.420	179.690	2165.69	5598.69	32.13 N	44.78 W	433842.03 N	505355.02 E	0.06	44.78	
5700.00	0.680	240.690	2265.68	5698.68	31.47 N	45.30 W	433841.37 N	505354.50 E	0.60	45.30	
5800.00	1.170	232.090	2365.67	5798.67	30.55 N	46.62 W	433840.45 N	505353.18 E	0.51	46.62	
5900.00	1.610	264.190	2465.64	5898.64	29.78 N	48.82 W	433839.68 N	505350.98 E	0.88	48.82	
6000.00	1.030	243.470	2565.61	5998.61	29.24 N	51.02 W	433839.14 N	505348.78 E	0.74	51.02	
6100.00	0.580	229.570	2665.60	6098.60	28.51 N	52.21 W	433838.41 N	505347.59 E	0.49	52.21	
6200.00	0.410	207.810	2765.60	6198.60	27.87 N	52.77 W	433837.77 N	505347.03 E	0.25	52.77	
6300.00	0.530	209.050	2865.60	6298.60	27.14 N	53.16 W	433837.04 N	505346.64 E	0.12	53.16	
6400.00	1.570	193.100	2965.58	6398.58	25.41 N	53.69 W	433835.31 N	505346.11 E	1.07	53.69	
6500.00	1.710	173.500	3065.54	6498.54	22.59 N	53.83 W	433832.49 N	505345.97 E	0.58	53.83	
6600.00	1.240	160.510	3165.51	6598.51	20.09 N	53.30 W	433829.99 N	505346.50 E	0.57	53.30	
6700.00	0.690	135.670	3265.49	6698.49	18.64 N	52.52 W	433828.54 N	505347.28 E	0.68	52.52	
6800.00	0.560	111.510	3365.49	6798.49	18.03 N	51.65 W	433827.93 N	505348.15 E	0.29	51.65	
6900.00	0.520	98.190	3465.48	6898.48	17.78 N	50.74 W	433827.68 N	505349.06 E	0.13	50.74	
7000.00	0.930	99.070	3565.47	6998.47	17.59 N	49.49 W	433827.49 N	505350.31 E	0.41	49.49	
7100.00	1.700	118.250	3665.45	7098.45	16.76 N	47.38 W	433826.66 N	505352.42 E	0.88	47.38	
7200.00	3.160	141.510	3765.36	7198.36	13.90 N	44.36 W	433823.80 N	505355.44 E	1.73	44.36	
7300.00	3.240	165.250	3865.20	7298.20	9.01 N	41.93 W	433818.91 N	505357.87 E	1.32	41.93	
7400.00	3.070	164.890	3965.05	7398.05	3.69 N	40.51 W	433813.59 N	505359.29 E	0.17	40.51	

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					Northings (ft)	Eastings (ft)	Northings (ft)	Eastings (ft)			
7500.00	3.150	171.240	4064.91	7497.91	1.61 S	39.39 W	433808.29 N	505360.41 E	0.35	39.39	
7600.00	2.370	166.310	4164.79	7597.79	6.33 S	38.49 W	433803.57 N	505361.31 E	0.81	38.49	
7700.00	2.230	163.970	4264.71	7697.71	10.21 S	37.46 W	433799.69 N	505362.34 E	0.17	37.46	
7800.00	1.720	165.270	4364.65	7797.65	13.53 S	36.54 W	433796.37 N	505363.26 E	0.51	36.54	deepest gyro

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7854.00	2.240	168.160	4418.62	7851.62	15.35 S	36.12 W	433794.55 N	505363.68 E	0.98	36.12	
7885.00	1.490	154.860	4449.60	7882.60	16.31 S	35.82 W	433793.59 N	505363.98 E	2.78	35.82	
7917.00	1.410	188.250	4481.59	7914.59	17.07 S	35.70 W	433792.83 N	505364.10 E	2.61	35.70	
7948.00	1.490	199.330	4512.58	7945.58	17.83 S	35.89 W	433792.07 N	505363.91 E	0.94	35.89	
7979.00	2.290	229.400	4543.56	7976.56	18.62 S	36.49 W	433791.28 N	505363.31 E	4.03	36.49	
8011.00	3.520	251.180	4575.52	8008.52	19.35 S	37.91 W	433790.55 N	505361.89 E	5.10	37.91	
8043.00	4.390	253.120	4607.45	8040.45	20.02 S	40.01 W	433789.88 N	505359.79 E	2.75	40.01	
8074.00	5.100	257.690	4638.34	8071.34	20.66 S	42.49 W	433789.24 N	505357.31 E	2.59	42.49	
8106.00	5.710	262.790	4670.20	8103.20	21.16 S	45.46 W	433788.74 N	505354.34 E	2.42	45.46	
8138.00	6.240	267.000	4702.02	8135.02	21.45 S	48.78 W	433788.45 N	505351.02 E	2.15	48.78	
8169.00	6.860	269.470	4732.82	8165.82	21.56 S	52.31 W	433788.34 N	505347.49 E	2.20	52.31	
8201.00	7.290	274.740	4764.58	8197.58	21.41 S	56.25 W	433788.49 N	505343.55 E	2.43	56.25	
8233.00	7.820	276.670	4796.30	8229.30	20.99 S	60.43 W	433788.91 N	505339.37 E	1.84	60.43	
8264.00	7.910	276.500	4827.01	8260.01	20.50 S	64.65 W	433789.40 N	505335.15 E	0.30	64.65	
8295.00	8.530	278.610	4857.69	8290.69	19.92 S	69.04 W	433789.98 N	505330.76 E	2.22	69.04	
8327.00	8.790	276.500	4889.33	8322.33	19.28 S	73.81 W	433790.62 N	505325.99 E	1.28	73.81	
8359.00	9.670	278.250	4920.91	8353.91	18.62 S	78.90 W	433791.28 N	505320.90 E	2.89	78.90	
8390.00	10.550	278.610	4951.43	8384.43	17.82 S	84.29 W	433792.08 N	505315.51 E	2.85	84.29	
8422.00	11.430	279.310	4982.84	8415.84	16.87 S	90.31 W	433793.03 N	505309.49 E	2.78	90.31	
8453.00	11.780	278.250	5013.21	8446.21	15.92 S	96.47 W	433793.98 N	505303.33 E	1.32	96.47	

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8485.00	12.390	279.310	5044.50	8477.50	14.90 S	103.09 W	433795.00 N	505296.71 E	2.03	103.09	
8517.00	12.830	278.780	5075.73	8508.73	13.80 S	109.99 W	433796.10 N	505289.81 E	1.42	109.99	
8549.00	12.570	277.020	5106.95	8539.95	12.83 S	116.96 W	433797.07 N	505282.84 E	1.46	116.96	
8580.00	12.480	275.790	5137.21	8570.21	12.08 S	123.64 W	433797.82 N	505276.16 E	0.91	123.64	
8612.00	12.130	276.150	5168.47	8601.47	11.37 S	130.42 W	433798.53 N	505269.38 E	1.12	130.42	
8643.00	12.220	274.210	5198.78	8631.78	10.78 S	136.93 W	433799.12 N	505262.87 E	1.35	136.93	
8675.00	11.640	272.740	5230.08	8663.08	10.38 S	143.54 W	433799.52 N	505256.26 E	2.05	143.54	
8707.00	11.590	273.230	5261.43	8694.43	10.04 S	149.97 W	433799.86 N	505249.83 E	0.35	149.97	
8737.00	11.250	272.980	5290.83	8723.83	9.72 S	155.90 W	433800.18 N	505243.90 E	1.15	155.90	
8768.00	11.250	272.280	5321.24	8754.24	9.44 S	161.94 W	433800.46 N	505237.86 E	0.44	161.94	
8800.00	11.340	273.680	5352.62	8785.62	9.12 S	168.20 W	433800.78 N	505231.60 E	0.90	168.20	
8832.00	11.870	272.630	5383.96	8816.96	8.76 S	174.63 W	433801.14 N	505225.17 E	1.78	174.63	
8863.00	12.040	272.270	5414.29	8847.29	8.49 S	181.04 W	433801.41 N	505218.76 E	0.60	181.04	
8895.00	12.510	272.070	5445.56	8878.56	8.23 S	187.84 W	433801.67 N	505211.96 E	1.47	187.84	
8927.00	12.600	271.910	5476.80	8909.80	7.99 S	194.79 W	433801.91 N	505205.01 E	0.30	194.79	
8958.00	12.950	270.700	5507.03	8940.03	7.84 S	201.65 W	433802.06 N	505198.15 E	1.42	201.65	
8990.00	13.520	271.460	5538.18	8971.18	7.70 S	208.97 W	433802.20 N	505190.83 E	1.86	208.97	
9021.00	14.120	270.860	5568.28	9001.28	7.55 S	216.38 W	433802.35 N	505183.42 E	1.99	216.38	
9086.00	15.270	270.090	5631.15	9064.15	7.42 S	232.86 W	433802.48 N	505166.94 E	1.79	232.86	
9149.00	15.490	269.170	5691.90	9124.90	7.52 S	249.57 W	433802.38 N	505150.23 E	0.52	249.57	
9212.00	15.100	269.260	5752.67	9185.67	7.75 S	266.19 W	433802.15 N	505133.61 E	0.62	266.19	
9275.00	14.260	267.570	5813.61	9246.61	8.19 S	282.15 W	433801.71 N	505117.65 E	1.50	282.15	
9338.00	13.880	267.480	5874.72	9307.72	8.85 S	297.45 W	433801.05 N	505102.35 E	0.60	297.45	
9401.00	14.560	269.580	5935.79	9368.79	9.24 S	312.92 W	433800.66 N	505086.88 E	1.35	312.92	
9465.00	14.530	269.660	5997.74	9430.74	9.35 S	328.99 W	433800.55 N	505070.81 E	0.06	328.99	

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9529.00	14.810	270.160	6059.65	9492.65	9.37 S	345.20 W	433800.53 N	505054.60 E	0.48	345.20	
9592.00	14.670	268.130	6120.58	9553.58	9.61 S	361.22 W	433800.29 N	505038.58 E	0.85	361.22	
9655.00	14.770	268.930	6181.51	9614.51	10.02 S	377.22 W	433799.88 N	505022.58 E	0.36	377.22	
9719.00	14.630	267.980	6243.42	9676.42	10.46 S	393.46 W	433799.44 N	505006.34 E	0.44	393.46	
9782.00	15.040	267.480	6304.32	9737.32	11.10 S	409.57 W	433798.80 N	504990.23 E	0.68	409.57	
9845.00	14.850	265.520	6365.19	9798.19	12.09 S	425.79 W	433797.81 N	504974.01 E	0.86	425.79	
9909.00	14.870	263.890	6427.04	9860.04	13.60 S	442.13 W	433796.30 N	504957.67 E	0.65	442.13	
9972.00	15.090	265.250	6487.90	9920.90	15.14 S	458.34 W	433794.76 N	504941.46 E	0.66	458.34	
10035.00	16.090	266.580	6548.59	9981.59	16.34 S	475.23 W	433793.56 N	504924.57 E	1.69	475.23	
10098.00	17.030	268.330	6608.97	10041.97	17.13 S	493.17 W	433792.77 N	504906.63 E	1.69	493.17	
10161.00	16.990	267.810	6669.22	10102.22	17.75 S	511.59 W	433792.15 N	504888.21 E	0.25	511.59	
10224.00	17.620	272.520	6729.37	10162.37	17.68 S	530.31 W	433792.22 N	504869.49 E	2.44	530.31	
10286.00	17.440	275.250	6788.49	10221.49	16.42 S	548.94 W	433793.48 N	504850.86 E	1.36	548.94	
10352.00	18.010	275.090	6851.36	10284.36	14.61 S	568.95 W	433795.29 N	504830.85 E	0.87	568.95	
10414.00	18.980	275.280	6910.15	10343.15	12.83 S	588.54 W	433797.07 N	504811.26 E	1.57	588.54	
10477.00	19.900	273.690	6969.56	10402.56	11.20 S	609.44 W	433798.70 N	504790.36 E	1.68	609.44	
10540.00	21.190	271.810	7028.55	10461.55	10.15 S	631.52 W	433799.75 N	504768.28 E	2.30	631.52	
10604.00	21.890	270.390	7088.08	10521.08	9.70 S	655.01 W	433800.20 N	504744.79 E	1.36	655.01	
10667.00	22.680	270.390	7146.38	10579.38	9.54 S	678.90 W	433800.36 N	504720.90 E	1.25	678.90	
10730.00	23.700	271.010	7204.29	10637.29	9.23 S	703.71 W	433800.67 N	504696.09 E	1.66	703.71	
10793.00	24.870	270.880	7261.71	10694.71	8.81 S	729.61 W	433801.09 N	504670.19 E	1.86	729.61	
10856.00	24.110	269.780	7319.04	10752.04	8.65 S	755.73 W	433801.25 N	504644.07 E	1.41	755.73	
10920.00	23.540	267.350	7377.59	10810.59	9.29 S	781.57 W	433800.61 N	504618.23 E	1.77	781.57	
10923.00	23.120	266.480	7380.35	10813.35	9.36 S	782.75 W	433800.54 N	504617.05 E	18.11	782.75	
11047.00	22.410	268.240	7494.69	10927.69	11.58 S	830.68 W	433798.32 N	504569.12 E	0.79	830.68	

Survey Report for Sec. 29-T24S-R26E - White City Penn Gas Com "29" Unit 1 # 4

Measured Depth (ft)	Incl.	Grid Azim.	Sub-Sea Depth (ft)	Vertical Depth (ft)	Local Coordinates		Global Coordinates		Dogleg Rate (°/100ft)	Vertical Section	Comment
					Northings (ft)	Eastings (ft)	Northings (ft)	Eastings (ft)			
11110.00	22.590	268.940	7552.89	10985.89	12.17 S	854.78 W	433797.73 N	504545.02 E	0.51	854.78	
11173.00	21.470	267.170	7611.29	11044.29	12.96 S	878.39 W	433796.94 N	504521.41 E	2.07	878.39	
11236.00	19.980	266.280	7670.21	11103.21	14.23 S	900.65 W	433795.67 N	504499.15 E	2.42	900.65	
11300.00	17.350	269.760	7730.84	11163.84	14.98 S	921.11 W	433794.92 N	504478.69 E	4.46	921.11	
11363.00	15.190	272.690	7791.32	11224.32	14.63 S	938.75 W	433795.27 N	504461.05 E	3.67	938.75	
11426.00	13.320	276.480	7852.38	11285.38	13.43 S	954.21 W	433796.47 N	504445.59 E	3.32	954.21	
11489.00	11.330	279.870	7913.92	11346.92	11.55 S	967.51 W	433798.35 N	504432.29 E	3.36	967.51	
11552.00	7.910	290.560	7976.03	11409.03	8.96 S	977.67 W	433800.94 N	504422.13 E	6.10	977.67	
11616.00	5.270	306.910	8039.61	11472.61	5.65 S	984.15 W	433804.25 N	504415.65 E	5.02	984.15	
11679.00	3.080	338.900	8102.45	11535.45	2.33 S	987.07 W	433807.57 N	504412.73 E	4.95	987.07	
11742.00	2.550	27.590	8165.38	11598.38	0.49 N	987.03 W	433810.39 N	504412.77 E	3.76	987.03	
11774.00	2.900	49.390	8197.34	11630.34	1.65 N	986.09 W	433811.55 N	504413.71 E	3.39	986.09	last MWD survey
11824.00	2.900	49.390	8247.28	11680.28	3.29 N	984.17 W	433813.19 N	504415.63 E	0.00	984.17	projection to TD

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to RKB(3410'+23'KB). Northings and Eastings are relative to 1020' FNL/2340' FWL.
Global Northings and Eastings are relative to NAD27 New Mexico State Planes, Eastern Zone.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from 1020' FNL/2340' FWL and calculated along an Azimuth of 270.000° (Grid).

Based upon Minimum Curvature type calculations, at a Measured Depth of 11824.00ft.,
The Bottom Hole Displacement is 984.17ft., in the Direction of 270.192° (Grid).

Survey Report for Sec. 29-T24S-R26E - White City Penn Gas Com "29" Unit 1 # 4

Comments

Measured Depth (ft)	Station Coordinates			Comment
	TVD (ft)	Northings (ft)	Eastings (ft)	
7800.00	7797.65	13.53 S	36.54 W	deepest gyro
11774.00	11630.34	1.65 N	986.09 W	last MWD survey
11824.00	11680.28	3.29 N	984.17 W	projection to TD

North Reference Sheet for Sec. 29-T24S-R26E - White City Penn Gas Com "29" Unit 1 # 4

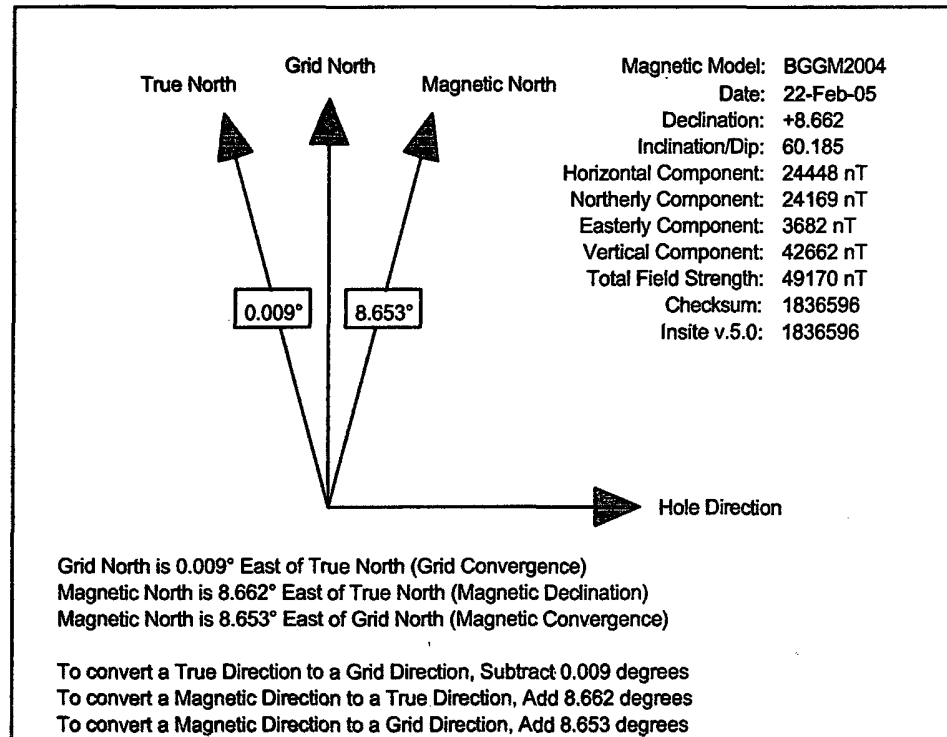
Coordinate System is NAD27 New Mexico State Planes, Eastern Zone, US Foot
Source: Snyder, J.P., 1987, Map Projections - A Working Manual

Datum is North American Datum of 1927 (US48, AK, HI, and Canada)

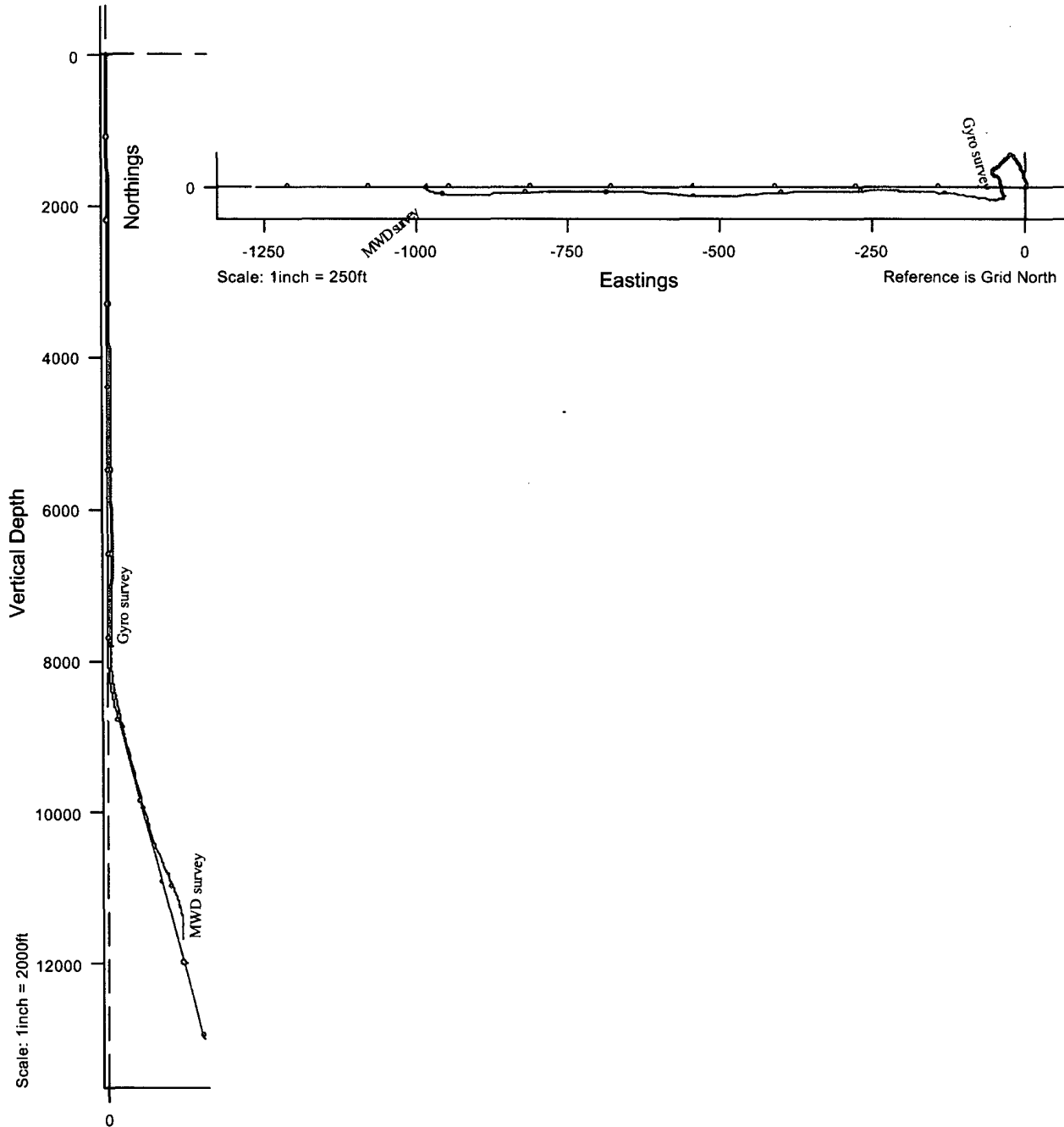
Spheroid is Clarke - 1866
Equatorial Radius: 6378206.400m.
Polar Radius: 6356583.800m.
Inverse Flattening: 294.978698213901

Projection method is Transverse Mercator or Gauss Kruger Projection
Central Meridian is -104.333°
Longitude Origin: 0.000°
Latitude Origin: 31.000°
False Easting: 152400.00m
False Northing: 0.00m
Scale Reduction: 0.99990909

Grid Coordinates of Well: 433809.90 N, 505399.80 E
Geographical Coordinates of Well: 32° 11' 33.5734" N, 104° 18' 57.1598" W
Surface Elevation of Well: 3433.00ft
Grid Convergence at Surface is +0.009°
Magnetic Convergence at Surface is -8.653° (22 February, 2005)



New Mexico
Eddy County
Sec. 29-T24S-R26E
White City Penn Gas Com "29" Unit 1 # 4



Section Azimuth: 270.000° (Grid North)

Vertical Section

Prepared by:
Dennis Cook

Date/Time:
9 March, 2005 - 9:20

Checked:

Approved: