

A Gyrodata Directional Survey

for

EOG RESOURCES

Location: McVay #10, Lea County, New Mexico

Well: R.H.N.U. No. 108, 4-1/2" Drillpipe

Job Number: MD0903GW267

Run Date: 9/11/2003 2:52:47 PM

Surveyor: Tom Morren James Butler

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 32.158320 deg. N Longitude: 103.518100 deg. E

Azimuth Correction:

Gyro: -0.43000 deg West to Grid North

Vertical Section Calculated from Well Head Location

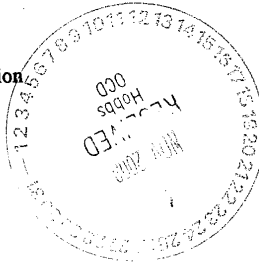
Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

SUR: L-1-25s-33e, 2000/S & 900/W

BHL: L-6-25s-34e, 2272/S & 872/W

API # 30-025-37310



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MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	N 0 0 E	0.00	0.00	0.0 0.0	0.00 N 0.00 E

0 - 11575 FT. RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 4-1/2" DRILLPIPE
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO MCVAY #10 R.K.B.

100.00	0.96	73.43	N 73 26 E	0.96	100.00	0.8 73.4	0.24 N 0.80 E
200.00	0.90	69.79	N 69 47 E	0.08	199.98	2.5 72.3	0.75 N 2.34 E
300.00	0.98	64.71	N 64 42 E	0.11	299.97	4.1 70.2	1.39 N 3.85 E
400.00	1.15	57.27	N 57 16 E	0.22	399.95	5.9 67.3	2.29 N 5.47 E
500.00	1.25	54.12	N 54 7 E	0.12	499.93	8.0 64.2	3.47 N 7.19 E
600.00	1.21	49.16	N 49 10 E	0.11	599.91	10.1 61.6	4.80 N 8.87 E
700.00	1.24	41.50	N 41 30 E	0.17	699.88	12.1 58.8	6.30 N 10.38 E
800.00	1.26	45.50	N 45 30 E	0.09	799.86	14.3 56.5	7.88 N 11.89 E
900.00	1.22	42.64	N 42 38 E	0.07	899.84	16.4 54.8	9.43 N 13.39 E
1000.00	1.14	37.33	N 37 20 E	0.13	999.82	18.4 53.2	11.01 N 14.71 E
1100.00	1.10	36.21	N 36 13 E	0.05	1099.80	20.3 51.6	12.57 N 15.88 E
1200.00	1.09	35.33	N 35 20 E	0.02	1199.78	22.1 50.3	14.12 N 17.00 E
1300.00	0.79	48.38	N 48 23 E	0.36	1299.76	23.7 49.6	15.35 N 18.06 E
1400.00	0.74	78.28	N 78 17 E	0.40	1399.76	25.0 50.3	15.94 N 19.21 E
1500.00	0.81	74.59	N 74 35 E	0.09	1499.75	26.2 51.6	16.26 N 20.52 E
1600.00	0.85	70.11	N 70 7 E	0.07	1599.74	27.5 52.7	16.70 N 21.89 E
1700.00	0.90	70.88	N 70 53 E	0.06	1699.73	29.0 53.6	17.20 N 23.33 E
1800.00	0.88	73.04	N 73 2 E	0.04	1799.71	30.5 54.5	17.69 N 24.81 E
1900.00	0.87	66.57	N 66 34 E	0.10	1899.70	31.9 55.2	18.21 N 26.24 E
2000.00	0.76	62.37	N 62 22 E	0.12	1999.69	33.3 55.6	18.82 N 27.53 E

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2100.00	0.72	50.87	N 50 52 E	0.15	2099.68	34.6 55.7	19.53 N 28.60 E
2200.00	0.82	48.60	N 48 36 E	0.11	2199.67	36.0 55.5	20.40 N 29.63 E
2300.00	0.94	39.10	N 39 6 E	0.18	2299.66	37.5 55.0	21.50 N 30.68 E
2400.00	0.99	30.54	N 30 32 E	0.16	2399.65	39.0 54.1	22.88 N 31.63 E
2500.00	1.26	28.94	N 28 56 E	0.27	2499.63	40.8 53.0	24.59 N 32.61 E
2600.00	1.56	26.00	N 26 0 E	0.31	2599.60	43.1 51.6	26.78 N 33.74 E
2700.00	1.59	31.56	N 31 33 E	0.16	2699.56	45.6 50.2	29.18 N 35.06 E
2800.00	1.86	35.15	N 35 9 E	0.29	2799.52	48.5 49.2	31.69 N 36.72 E
2900.00	2.17	38.26	N 38 16 E	0.33	2899.45	51.9 48.4	34.50 N 38.82 E
3000.00	2.29	41.53	N 41 32 E	0.18	2999.38	55.8 47.8	37.48 N 41.32 E
3100.00	2.33	45.06	N 45 3 E	0.15	3099.30	59.8 47.5	40.41 N 44.08 E
3200.00	2.60	44.99	N 44 59 E	0.27	3199.20	64.1 47.3	43.45 N 47.12 E
3300.00	2.49	50.63	N 50 38 E	0.27	3299.11	68.5 47.3	46.43 N 50.41 E
3400.00	2.56	50.92	N 50 55 E	0.07	3399.01	72.9 47.6	49.22 N 53.82 E
3500.00	2.56	51.21	N 51 13 E	0.01	3498.91	77.4 47.8	52.03 N 57.30 E
3600.00	2.45	56.01	N 56 1 E	0.24	3598.81	81.7 48.1	54.63 N 60.81 E
3700.00	2.42	57.94	N 57 56 E	0.09	3698.72	85.9 48.5	56.94 N 64.38 E
3800.00	2.39	59.20	N 59 12 E	0.06	3798.63	90.1 49.0	59.13 N 67.96 E
3900.00	1.84	59.87	N 59 52 E	0.55	3898.57	93.7 49.4	61.01 N 71.14 E
4000.00	1.57	62.94	N 62 57 E	0.28	3998.52	96.6 49.7	62.44 N 73.75 E
4100.00	1.40	70.76	N 70 45 E	0.27	4098.49	99.1 50.2	63.47 N 76.13 E
4200.00	1.36	70.98	N 70 59 E	0.05	4198.46	101.4 50.7	64.25 N 78.40 E
4300.00	1.55	75.33	N 75 20 E	0.22	4298.43	103.7 51.2	64.98 N 80.83 E
4400.00	1.77	76.39	N 76 23 E	0.22	4398.38	106.3 51.9	65.69 N 83.64 E
4500.00	2.00	85.04	N 85 2 E	0.37	4498.33	109.2 52.7	66.20 N 86.88 E

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4600.00	1.99	83.84	N 83 50 E	0.04	4598.27	112.2 53.6	66.54 N 90.34 E
4700.00	2.54	92.68	S 87 19 E	0.65	4698.19	115.4 54.8	66.62 N 94.28 E
4800.00	3.28	100.06	S 79 56 E	0.82	4798.06	119.3 56.4	66.02 N 99.32 E
4900.00	3.99	98.79	S 81 12 E	0.72	4897.86	124.0 58.4	64.99 N 105.57 E
5000.00	4.15	100.07	S 79 56 E	0.19	4997.61	129.4 60.4	63.82 N 112.57 E
5100.00	3.47	104.64	S 75 22 E	0.74	5097.39	134.4 62.3	62.42 N 119.06 E
5200.00	3.22	107.23	S 72 46 E	0.30	5197.22	138.7 64.0	60.83 N 124.68 E
5300.00	3.24	106.24	S 73 46 E	0.06	5297.06	142.9 65.5	59.21 N 130.07 E
5400.00	3.17	102.91	S 77 5 E	0.20	5396.90	147.3 66.9	57.80 N 135.49 E
5500.00	3.24	103.75	S 76 15 E	0.08	5496.74	151.8 68.2	56.51 N 140.93 E
5600.00	3.17	104.93	S 75 4 E	0.09	5596.59	156.4 69.4	55.12 N 146.35 E
5700.00	3.11	105.88	S 74 7 E	0.09	5696.44	160.9 70.5	53.67 N 151.63 E
5800.00	2.92	106.07	S 73 56 E	0.19	5796.30	165.2 71.6	52.22 N 156.69 E
5900.00	2.94	105.97	S 74 2 E	0.02	5896.17	169.4 72.5	50.81 N 161.60 E
6000.00	2.91	105.05	S 74 57 E	0.06	5996.04	173.7 73.5	49.44 N 166.52 E
6100.00	2.85	105.97	S 74 2 E	0.08	6095.91	178.0 74.3	48.10 N 171.36 E
6200.00	2.88	103.85	S 76 9 E	0.11	6195.79	182.3 75.1	46.82 N 176.18 E
6300.00	2.66	107.94	S 72 4 E	0.29	6295.67	186.5 75.9	45.50 N 180.83 E
6400.00	2.37	105.45	S 74 33 E	0.31	6395.57	190.2 76.6	44.24 N 185.02 E
6500.00	2.47	104.07	S 75 56 E	0.12	6495.49	194.0 77.1	43.16 N 189.10 E
6600.00	2.66	102.71	S 77 17 E	0.20	6595.38	198.0 77.7	42.13 N 193.46 E
6700.00	2.61	104.95	S 75 3 E	0.12	6695.28	202.1 78.3	41.03 N 197.92 E
6800.00	2.70	102.41	S 77 36 E	0.15	6795.17	206.3 78.8	39.94 N 202.41 E
6900.00	2.55	100.08	S 79 55 E	0.18	6895.07	210.6 79.3	39.04 N 206.90 E
7000.00	2.67	106.40	S 73 36 E	0.31	6994.96	214.7 79.8	38.00 N 211.33 E

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7100.00	2.60	106.49	S 73 30 E	0.07	7094.86	218.8 80.3	36.70 N 215.73 E
7200.00	2.66	103.16	S 76 51 E	0.17	7194.75	223.0 80.8	35.53 N 220.16 E
7300.00	2.81	104.45	S 75 33 E	0.16	7294.64	227.4 81.3	34.39 N 224.80 E
7400.00	2.62	105.48	S 74 31 E	0.19	7394.53	231.8 81.8	33.16 N 229.38 E
7500.00	2.52	106.98	S 73 1 E	0.12	7494.43	235.9 82.2	31.91 N 233.69 E
7600.00	2.82	112.85	S 67 9 E	0.40	7594.32	240.0 82.7	30.31 N 238.06 E
7700.00	2.92	114.22	S 65 47 E	0.12	7694.19	244.3 83.3	28.31 N 242.65 E
7800.00	3.11	115.37	S 64 38 E	0.19	7794.05	248.8 84.0	26.11 N 247.42 E
7900.00	3.23	115.28	S 64 43 E	0.13	7893.90	253.5 84.6	23.74 N 252.42 E
8000.00	3.26	120.02	S 59 59 E	0.27	7993.74	258.3 85.3	21.12 N 257.43 E
8100.00	3.31	123.65	S 56 21 E	0.21	8093.58	262.9 86.1	18.10 N 262.30 E
8200.00	3.64	125.55	S 54 27 E	0.35	8193.39	267.7 86.9	14.65 N 267.28 E
8300.00	3.75	127.30	S 52 42 E	0.16	8293.18	272.7 87.7	10.82 N 272.47 E
8400.00	3.84	127.73	S 52 16 E	0.10	8392.96	277.8 88.6	6.79 N 277.72 E
8500.00	4.03	129.91	S 50 5 E	0.24	8492.73	283.1 89.5	2.48 N 283.07 E
8600.00	4.23	131.11	S 48 54 E	0.21	8592.47	288.6 90.4	2.20 S 288.54 E
8700.00	4.11	129.93	S 50 4 E	0.15	8692.20	294.1 91.3	6.92 S 294.07 E
8800.00	4.41	129.38	S 50 37 E	0.30	8791.93	300.0 92.2	11.66 S 299.78 E
8900.00	4.19	131.87	S 48 8 E	0.28	8891.65	305.9 93.1	16.54 S 305.48 E
9000.00	3.56	127.67	S 52 20 E	0.70	8991.42	311.4 93.8	20.87 S 310.65 E
9100.00	2.58	125.68	S 54 19 E	0.98	9091.27	315.9 94.4	24.08 S 314.94 E
9200.00	1.49	130.13	S 49 52 E	1.11	9191.21	318.8 94.7	26.23 S 317.76 E
9300.00	0.78	128.58	S 51 25 E	0.71	9291.19	320.5 94.9	27.49 S 319.28 E
9400.00	0.86	129.73	S 50 16 E	0.09	9391.18	321.6 95.1	28.39 S 320.39 E
9500.00	0.87	133.38	S 46 37 E	0.06	9491.17	322.9 95.2	29.40 S 321.52 E

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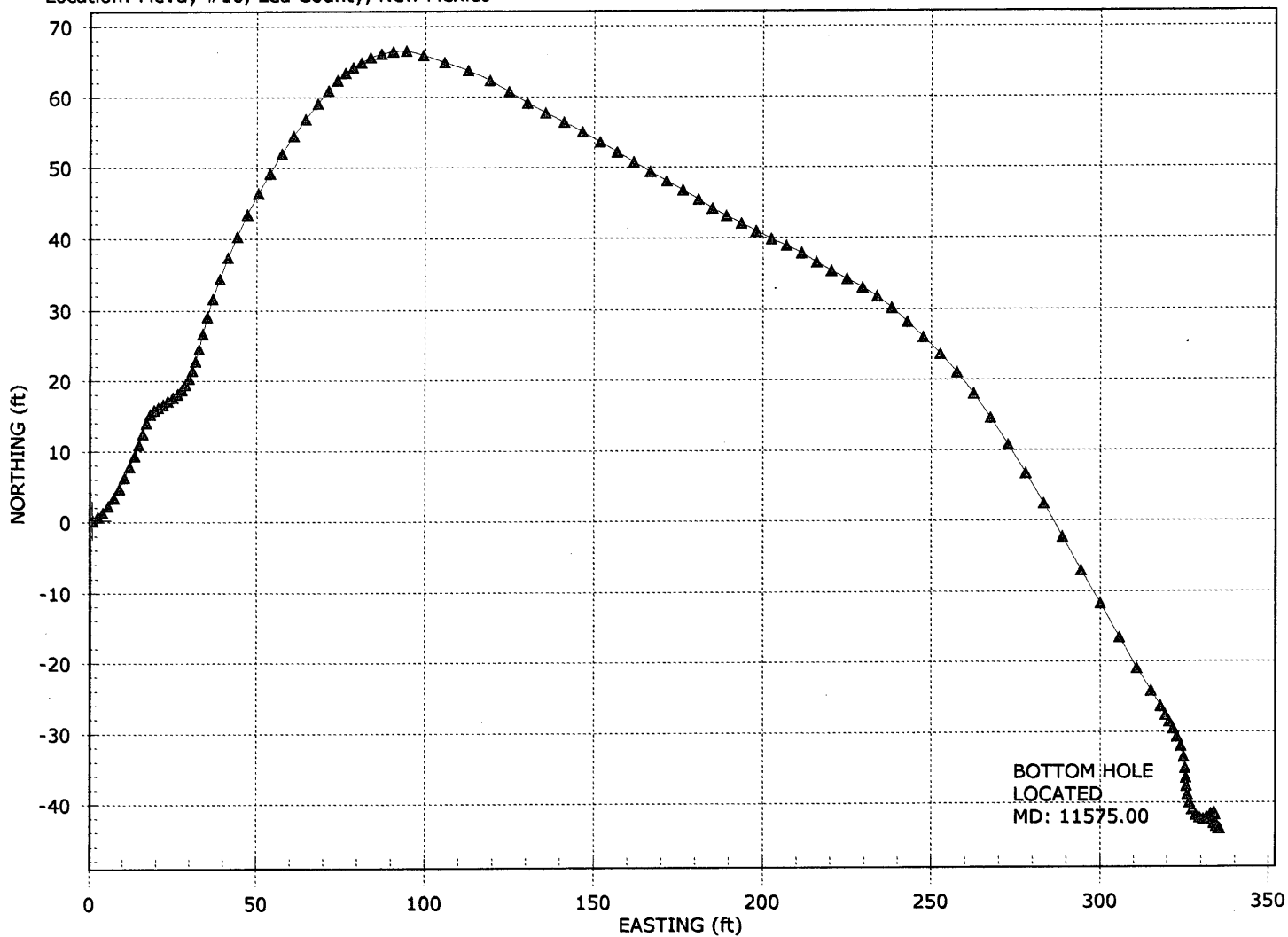
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9600.00	0.95	138.58	S 41 25 E	0.11	9591.15	324.1 95.4	30.55 S 322.63 E
9700.00	1.10	140.32	S 39 41 E	0.15	9691.14	325.4 95.6	31.91 S 323.79 E
9800.00	0.96	162.65	S 17 21 E	0.42	9791.12	326.4 95.9	33.44 S 324.65 E
9900.00	0.90	169.30	S 10 42 E	0.12	9891.11	326.9 96.1	35.01 S 325.05 E
10000.00	0.70	171.46	S 8 33 E	0.20	9991.10	327.3 96.4	36.38 S 325.28 E
10100.00	0.65	169.27	S 10 44 E	0.06	10091.09	327.6 96.6	37.54 S 325.48 E
10200.00	0.76	158.86	S 21 8 E	0.17	10191.08	328.1 96.8	38.72 S 325.82 E
10300.00	0.71	149.12	S 30 53 E	0.13	10291.08	328.8 97.0	39.87 S 326.38 E
10400.00	0.83	132.66	S 47 20 E	0.25	10391.07	329.8 97.1	40.89 S 327.23 E
10500.00	0.69	115.91	S 64 5 E	0.26	10491.06	330.9 97.2	41.65 S 328.31 E
10600.00	0.65	105.50	S 74 30 E	0.13	10591.05	332.1 97.3	42.07 S 329.40 E
10700.00	0.66	95.24	S 84 45 E	0.12	10691.05	333.2 97.3	42.27 S 330.53 E
10800.00	0.64	56.31	N 56 19 E	0.44	10791.04	334.2 97.2	42.01 S 331.57 E
10900.00	0.78	70.95	N 70 57 E	0.22	10891.03	335.3 97.1	41.48 S 332.68 E
11000.00	0.45	96.12	S 83 53 E	0.42	10991.03	336.3 97.1	41.30 S 333.71 E
11100.00	0.40	210.63	S 30 38 W	0.71	11091.02	336.5 97.1	41.64 S 333.93 E
11200.00	0.48	206.28	S 26 17 W	0.09	11191.02	336.2 97.2	42.31 S 333.57 E
11300.00	0.36	125.33	S 54 40 E	0.55	11291.02	336.4 97.3	42.86 S 333.64 E
11400.00	0.57	122.70	S 57 18 E	0.21	11391.02	337.1 97.4	43.31 S 334.31 E
11500.00	0.37	91.11	S 88 54 E	0.32	11491.01	337.9 97.4	43.58 S 335.05 E
11575.00	0.10	160.84	S 19 10 E	0.47	11566.01	338.1 97.4	43.65 S 335.31 E

Final Station Closure: Distance: 338.14 ft Az: 97.42 deg.

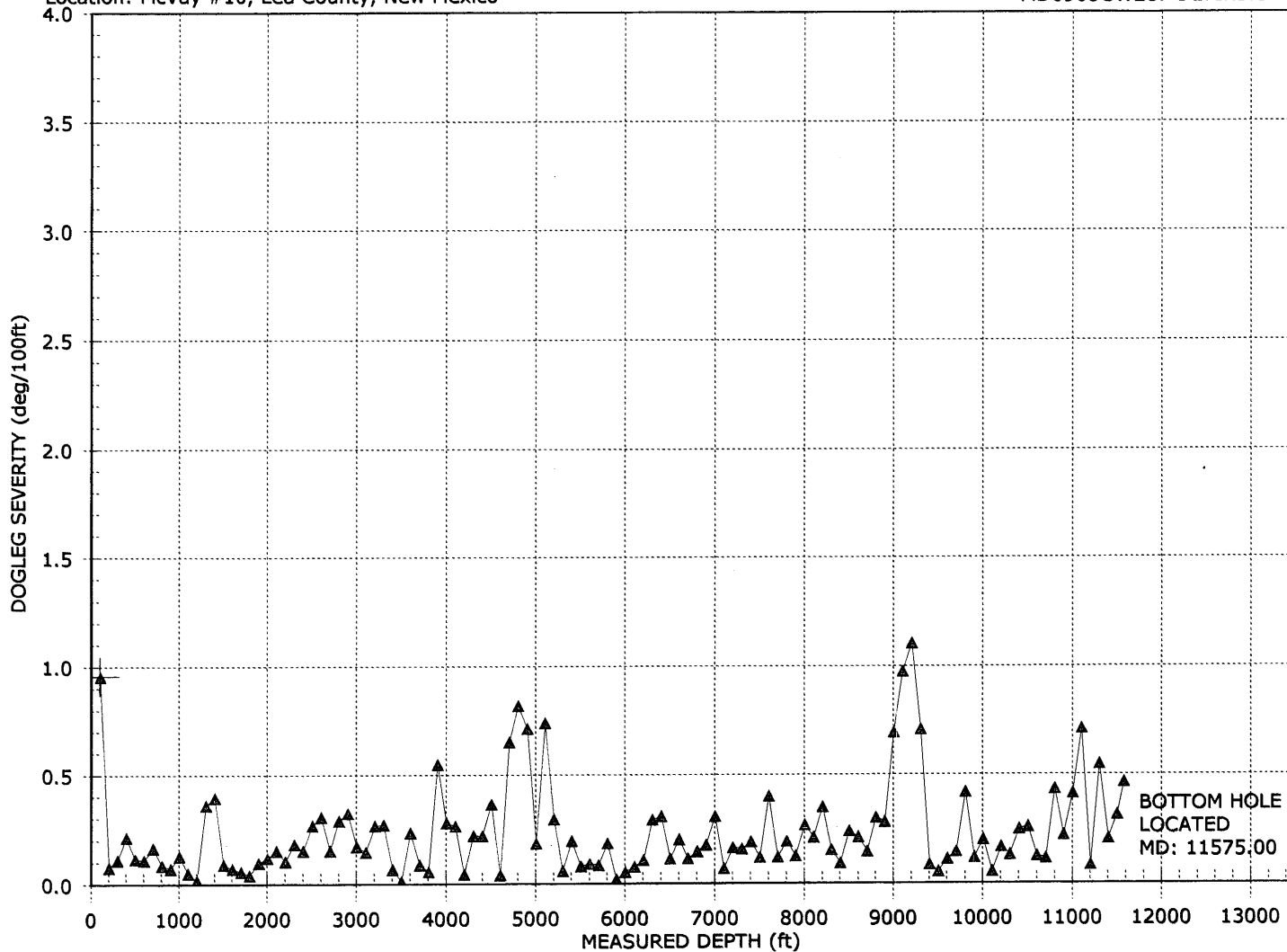
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