



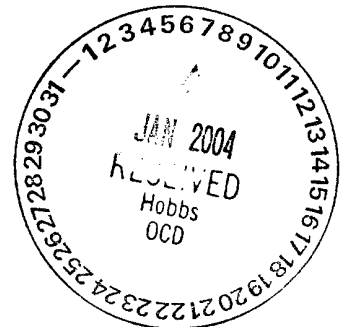
Gyrodata Incorporated
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SUR: N-32-15s-35e, 676/S & 1980W
BHL: N-32-15s-35e, 756/S & 1921W
API # 30-025-36234

SURVEY REPORT
EOG RESOURCES
BULE BAER DUNN 32 STATE NO.1
KEY # 17
LEA COUNTY, NEW MEXICO
MD0703GW241

JULY 21, 2003



A Gyrodata Directional Survey

for

EOG RESOURCES

Well: Bule Baer Dunn 32 State #1, 4-1/2" Drillpipe
Location: Key #17, Lea County, New Mexico

Job Number: MD0703GW241

Run Date: 7/21/2003 1:10:00 PM

Surveyor: Lee Adams

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 32.968320 deg. N Longitude: 103.431130 deg. W

Azimuth Correction:

Gyro: Bearings are Relative to True North

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

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Location: Key #17, Lea County, New Mexico

Job Number: MD0703GW241

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 - 12215 FT RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 4-1/2" DRILLPIPE							
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO KEY #17							

100.00	0.43	318.78	N 41 13 W	0.43	100.00	0.4 318.8	0.29 N 0.25 W
200.00	0.48	343.91	N 16 6 W	0.20	200.00	1.1 327.6	0.97 N 0.62 W
300.00	0.64	346.70	N 13 18 W	0.17	299.99	2.1 335.8	1.92 N 0.86 W
400.00	0.61	341.34	N 18 40 W	0.07	399.99	3.2 338.7	2.97 N 1.16 W
500.00	0.29	327.12	N 32 53 W	0.33	499.98	4.0 338.3	3.69 N 1.47 W
600.00	0.54	331.85	N 28 9 W	0.25	599.98	4.7 337.0	4.32 N 1.83 W
700.00	0.40	319.92	N 40 5 W	0.17	699.98	5.5 335.5	5.00 N 2.28 W
800.00	0.43	348.42	N 11 35 W	0.21	799.97	6.2 335.4	5.64 N 2.58 W
900.00	0.55	323.19	N 36 49 W	0.24	899.97	7.0 335.3	6.39 N 2.94 W
1000.00	0.37	342.52	N 17 29 W	0.23	999.97	7.8 334.9	7.08 N 3.32 W
1100.00	0.45	322.13	N 37 52 W	0.17	1099.96	8.5 334.6	7.71 N 3.67 W
1200.00	0.46	316.29	N 43 43 W	0.05	1199.96	9.3 333.3	8.31 N 4.19 W
1300.00	0.52	325.20	N 34 48 W	0.09	1299.96	10.1 332.2	8.97 N 4.73 W
1400.00	0.26	322.35	N 37 39 W	0.26	1399.95	10.8 331.7	9.52 N 5.12 W
1500.00	0.31	311.14	N 48 52 W	0.08	1499.95	11.3 331.1	9.88 N 5.47 W
1600.00	0.39	328.27	N 31 44 W	0.13	1599.95	11.9 330.5	10.35 N 5.85 W
1700.00	0.42	296.23	N 63 46 W	0.23	1699.95	12.5 329.5	10.80 N 6.36 W
1800.00	0.27	246.80	S 66 48 W	0.32	1799.95	12.9 327.6	10.87 N 6.90 W
1900.00	0.39	278.03	N 81 58 W	0.21	1899.95	13.1 325.4	10.82 N 7.45 W
2000.00	0.04	298.22	N 61 47 W	0.35	1999.95	13.4 324.3	10.89 N 7.82 W

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Job Number: MD0703GW241

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEC SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
2100.00	0.20	203.04	S 23 2 W	0.21	2099.95	13.3 323.6	10.74 N 7.92 W
2200.00	0.17	227.04	S 47 2 W	0.09	2199.94	13.2 322.3	10.47 N 8.09 W
2300.00	0.34	145.10	S 34 54 E	0.36	2299.94	12.9 321.6	10.13 N 8.03 W
2400.00	0.26	118.59	S 61 25 E	0.16	2399.94	12.4 321.9	9.78 N 7.66 W
2500.00	0.21	116.74	S 63 15 E	0.05	2499.94	12.1 322.7	9.59 N 7.30 W
2600.00	0.49	96.04	S 83 57 E	0.30	2599.94	11.6 324.7	9.46 N 6.71 W
2700.00	0.50	86.46	N 86 28 E	0.08	2699.94	11.1 328.2	9.44 N 5.85 W
2800.00	0.60	57.16	N 57 10 E	0.29	2799.93	10.9 333.0	9.75 N 4.97 W
2900.00	0.59	38.75	N 38 45 E	0.19	2899.93	11.3 338.0	10.44 N 4.21 W
3000.00	0.44	48.80	N 48 48 E	0.17	2999.92	11.7 342.1	11.10 N 3.59 W
3100.00	0.41	21.66	N 21 40 E	0.20	3099.92	12.1 344.8	11.68 N 3.17 W
3200.00	0.52	28.35	N 28 21 E	0.13	3199.92	12.7 347.2	12.42 N 2.82 W
3300.00	0.40	3.82	N 3 49 E	0.23	3299.91	13.4 348.9	13.17 N 2.58 W
3400.00	0.41	355.98	N 4 1 W	0.06	3399.91	14.1 349.5	13.88 N 2.58 W
3500.00	0.26	16.51	N 16 31 E	0.19	3499.91	14.7 350.0	14.45 N 2.54 W
3600.00	0.33	341.80	N 18 12 W	0.19	3599.91	15.2 350.2	14.94 N 2.57 W
3700.00	0.33	331.67	N 28 20 W	0.06	3699.91	15.7 349.7	15.47 N 2.80 W
3800.00	0.47	347.09	N 12 55 W	0.17	3799.90	16.4 349.4	16.12 N 3.03 W
3900.00	0.51	337.59	N 22 24 W	0.09	3899.90	17.2 349.0	16.93 N 3.29 W
4000.00	0.32	328.61	N 31 24 W	0.20	3999.90	17.9 348.4	17.58 N 3.60 W
4100.00	0.50	350.63	N 9 22 W	0.24	4099.89	18.6 348.2	18.24 N 3.82 W
4200.00	0.52	324.19	N 35 49 W	0.23	4199.89	19.5 347.7	19.04 N 4.15 W
4300.00	0.66	327.41	N 32 35 W	0.15	4299.89	20.5 346.6	19.90 N 4.73 W
4400.00	0.76	330.76	N 29 14 W	0.11	4399.88	21.6 345.6	20.96 N 5.36 W

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EOG Resources

Well: Bule Baer Dunn 32 State #1, 4-1/2" Drillpipe

Location: Key #17, Lea County, New Mexico

Job Number: MD0703GW241

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
4500.00	0.76	332.02	N 27 59 W	0.02	4499.87	22.9 344.8	22.13 N 6.00 W
4600.00	0.79	311.59	N 48 25 W	0.28	4599.86	24.2 343.6	23.17 N 6.83 W
4700.00	0.99	310.64	N 49 22 W	0.19	4699.85	25.5 341.7	24.19 N 8.00 W
4800.00	0.77	313.61	N 46 23 W	0.22	4799.84	26.8 340.1	25.21 N 9.14 W
4900.00	0.77	310.27	N 49 44 W	0.04	4899.83	28.0 338.8	26.11 N 10.13 W
5000.00	0.92	311.22	N 48 47 W	0.16	4999.82	29.3 337.4	27.07 N 11.25 W
5100.00	0.76	310.73	N 49 16 W	0.16	5099.81	30.6 336.2	28.03 N 12.36 W
5200.00	0.79	312.41	N 47 35 W	0.04	5199.80	31.9 335.2	28.93 N 13.37 W
5300.00	0.97	304.88	N 55 7 W	0.21	5299.78	33.2 334.0	29.88 N 14.58 W
5400.00	0.89	315.58	N 44 25 W	0.19	5399.77	34.7 332.9	30.92 N 15.81 W
5500.00	1.06	319.11	N 40 59 W	0.18	5499.76	36.4 332.2	32.17 N 16.96 W
5600.00	1.00	317.90	N 42 6 W	0.06	5599.74	38.1 331.6	33.52 N 18.15 W
5700.00	1.06	323.54	N 36 28 W	0.12	5699.72	39.9 331.1	34.91 N 19.29 W
5800.00	0.96	322.40	N 37 36 W	0.10	5799.71	41.6 330.7	36.32 N 20.35 W
5900.00	1.12	327.68	N 32 19 W	0.19	5899.69	43.4 330.5	37.81 N 21.38 W
6000.00	1.15	319.14	N 40 51 W	0.17	5999.67	45.4 330.2	39.39 N 22.56 W
6100.00	0.85	312.63	N 47 22 W	0.32	6099.66	47.1 329.7	40.65 N 23.76 W
6200.00	0.97	305.81	N 54 11 W	0.16	6199.65	48.6 329.0	41.65 N 24.99 W
6300.00	0.93	307.46	N 52 32 W	0.05	6299.63	50.1 328.3	42.64 N 26.32 W
6400.00	0.92	302.29	N 57 42 W	0.08	6399.62	51.6 327.6	43.55 N 27.64 W
6500.00	0.87	294.36	N 65 38 W	0.13	6499.61	53.0 326.8	44.30 N 29.01 W
6600.00	0.61	291.53	N 68 28 W	0.27	6599.60	54.0 326.0	44.81 N 30.20 W
6700.00	0.81	297.40	N 62 36 W	0.22	6699.59	55.1 325.3	45.33 N 31.33 W
6800.00	0.75	306.70	N 53 18 W	0.14	6799.58	56.4 324.8	46.05 N 32.49 W

A Gyrodata Directional Survey

EOG Resources

Well: Bule Baer Dunn 32 State #1, 4-1/2" Drillpipe

Location: Key #17, Lea County, New Mexico

Job Number: MD0703GW241

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
6900.00	0.68	308.63	N 51 22 W	0.08	6899.57	57.6 324.4	46.81 N 33.48 W
7000.00	0.54	307.16	N 52 51 W	0.14	6999.57	58.6 324.1	47.47 N 34.32 W
7100.00	0.50	301.77	N 58 14 W	0.06	7099.56	59.4 323.8	47.99 N 35.07 W
7200.00	0.50	290.50	N 69 30 W	0.10	7199.56	60.2 323.5	48.37 N 35.85 W
7300.00	0.61	288.26	N 71 44 W	0.12	7299.55	61.0 322.9	48.69 N 36.77 W
7400.00	0.64	306.62	N 53 23 W	0.20	7399.55	62.0 322.5	49.19 N 37.72 W
7500.00	0.50	307.25	N 52 45 W	0.14	7499.54	62.9 322.3	49.78 N 38.51 W
7600.00	0.56	303.90	N 56 6 W	0.07	7599.54	63.8 322.0	50.32 N 39.26 W
7700.00	0.74	290.75	N 69 15 W	0.24	7699.53	64.8 321.6	50.82 N 40.27 W
7800.00	0.75	308.36	N 51 39 W	0.23	7799.52	66.0 321.2	51.45 N 41.39 W
7900.00	0.75	308.87	N 51 8 W	0.01	7899.52	67.3 320.9	52.27 N 42.41 W
8000.00	0.66	302.29	N 57 42 W	0.12	7999.51	68.5 320.7	52.99 N 43.41 W
8100.00	0.67	325.82	N 34 11 W	0.27	8099.50	69.6 320.6	53.78 N 44.22 W
8200.00	0.72	336.35	N 23 39 W	0.14	8199.49	70.8 320.7	54.84 N 44.80 W
8300.00	0.62	347.81	N 12 11 W	0.16	8299.49	71.9 321.1	55.94 N 45.17 W
8400.00	0.73	343.71	N 16 17 W	0.12	8399.48	73.0 321.5	57.08 N 45.46 W
8500.00	0.71	351.30	N 8 42 W	0.10	8499.47	74.1 321.0	58.30 N 45.74 W
8600.00	0.68	351.35	N 8 39 W	0.03	8599.47	75.2 322.3	59.49 N 45.92 W
8700.00	0.57	334.18	N 25 49 W	0.21	8699.46	76.2 322.6	60.52 N 46.22 W
8800.00	0.64	348.30	N 11 42 W	0.16	8799.45	77.1 322.9	61.52 N 46.55 W
8900.00	0.61	330.75	N 29 14 W	0.19	8899.45	78.2 323.1	62.53 N 46.92 W
9000.00	0.55	345.75	N 14 20 W	0.16	8999.44	79.1 323.3	63.45 N 47.30 W
9100.00	0.54	334.10	N 25 54 W	0.11	9099.44	80.0 323.5	64.34 N 47.63 W
9200.00	0.36	309.61	N 50 23 W	0.26	9199.44	80.8 323.5	64.96 N 48.07 W

A Gyrodata Directional Survey

EOG Resources

Well: Bule Baer Dunn 32 State #1, 4-1/2" Drillpipe

Location: Key #17, Lea County, New Mexico

Job Number: MD0703GW241

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLE SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
9300.00	0.35	338.02	N 21 59 W	0.17	9299.43	81.4 323.5	65.44 N 48.42 W
9400.00	0.39	303.72	N 56 17 W	0.22	9399.43	82.0 323.5	65.91 N 48.82 W
9500.00	0.20	299.40	N 60 36 W	0.18	9499.43	82.5 323.3	66.18 N 49.25 W
9600.00	0.29	334.78	N 25 13 W	0.17	9599.43	82.9 323.3	66.50 N 49.52 W
9700.00	0.33	325.01	N 34 59 W	0.07	9699.43	83.4 323.4	66.97 N 49.79 W
9800.00	0.25	312.40	N 47 36 W	0.11	9799.43	84.0 323.3	67.35 N 50.12 W
9900.00	0.37	336.96	N 23 2 W	0.18	9899.43	84.5 323.4	67.80 N 50.41 W
10000.00	0.40	316.20	N 43 48 W	0.14	9999.42	85.2 323.4	68.35 N 50.78 W
10100.00	0.39	315.05	N 44 57 W	0.01	10099.42	85.8 323.3	68.85 N 51.26 W
10200.00	0.32	297.76	N 62 15 W	0.13	10199.42	86.4 323.2	69.22 N 51.75 W
10300.00	0.42	317.17	N 42 50 W	0.16	10299.42	87.0 323.1	69.62 N 52.24 W
10400.00	0.45	304.47	N 55 32 W	0.10	10399.41	87.8 323.0	70.11 N 52.82 W
10500.00	0.39	324.61	N 35 23 W	0.16	10499.41	88.5 322.9	70.61 N 53.34 W
10600.00	0.45	293.95	N 66 3 W	0.23	10599.41	89.2 322.8	71.05 N 53.90 W
10700.00	0.61	315.04	N 44 58 W	0.25	10699.40	90.1 322.6	71.59 N 54.64 W
10800.00	0.74	308.96	N 51 2 W	0.15	10799.40	91.2 322.5	72.37 N 55.51 W
10900.00	0.75	313.72	N 46 17 W	0.06	10899.39	92.5 322.4	73.23 N 56.49 W
11000.00	0.67	314.33	N 45 40 W	0.08	10999.38	93.7 322.2	74.09 N 57.38 W
11100.00	0.63	318.33	N 41 40 W	0.06	11099.38	94.8 322.2	74.91 N 58.16 W
11200.00	0.58	326.12	N 33 53 W	0.10	11199.37	95.9 322.2	75.74 N 58.81 W
11300.00	0.59	348.85	N 11 9 W	0.23	11299.36	96.9 322.3	76.66 N 59.19 W
11400.00	0.46	10.05	N 10 3 E	0.23	11399.36	97.6 322.6	77.56 N 59.22 W
11500.00	0.78	352.78	N 7 13 W	0.37	11499.35	98.5 323.0	78.64 N 59.23 W
11600.00	0.88	0.14	N 0 8 E	0.14	11599.34	99.7 323.5	80.08 N 59.32 W

A Gyrodata Directional Survey

EOG Resources

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Location: Key #17, Lea County, New Mexico

Job Number: MD0703GW241

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	
11700.00	0.88	357.30	N 2 42 W	0.04	11699.33	100.9	324.0	81.61 N	59.35 W
11800.00	0.75	13.86	N 13 52 E	0.27	11799.32	102.0	324.5	83.01 N	59.23 W
11900.00	0.50	23.79	N 23 47 E	0.27	11899.32	102.6	325.0	84.04 N	58.90 W
12000.00	0.15	80.05	N 80 3 E	0.43	11999.32	102.8	325.2	84.46 N	58.59 W
12100.00	0.21	151.31	S 28 41 E	0.22	12099.31	102.6	325.3	84.32 N	58.37 W
12200.00	0.30	204.00	S 24 0 W	0.24	12199.31	102.2	325.2	83.91 N	58.39 W
12220.00	0.35	186.22	S 6 13 W	0.57	12219.31	102.2	325.1	83.80 N	58.42 W

Final Station Closure: Distance: 102.16 ft Az: 325.12 deg.

EOG Resources

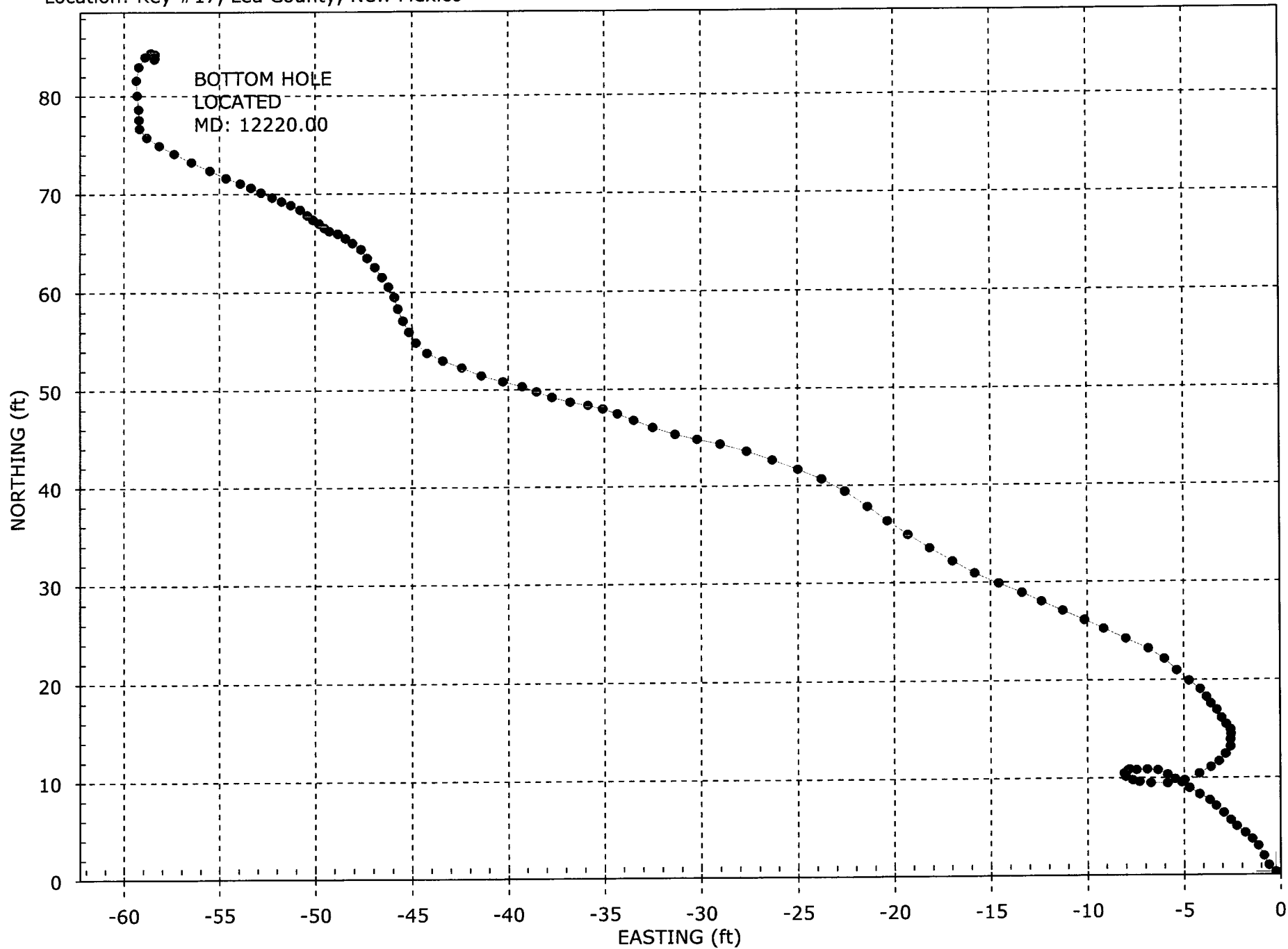
Well: Bule Baer Dunn 32 State #1 4-1/2" Drillpipe

Location: Key #17, Lea County, New Mexico

Inrun

Gyrodata

MD0703GW241 DEFINITIVE



EOG Resources

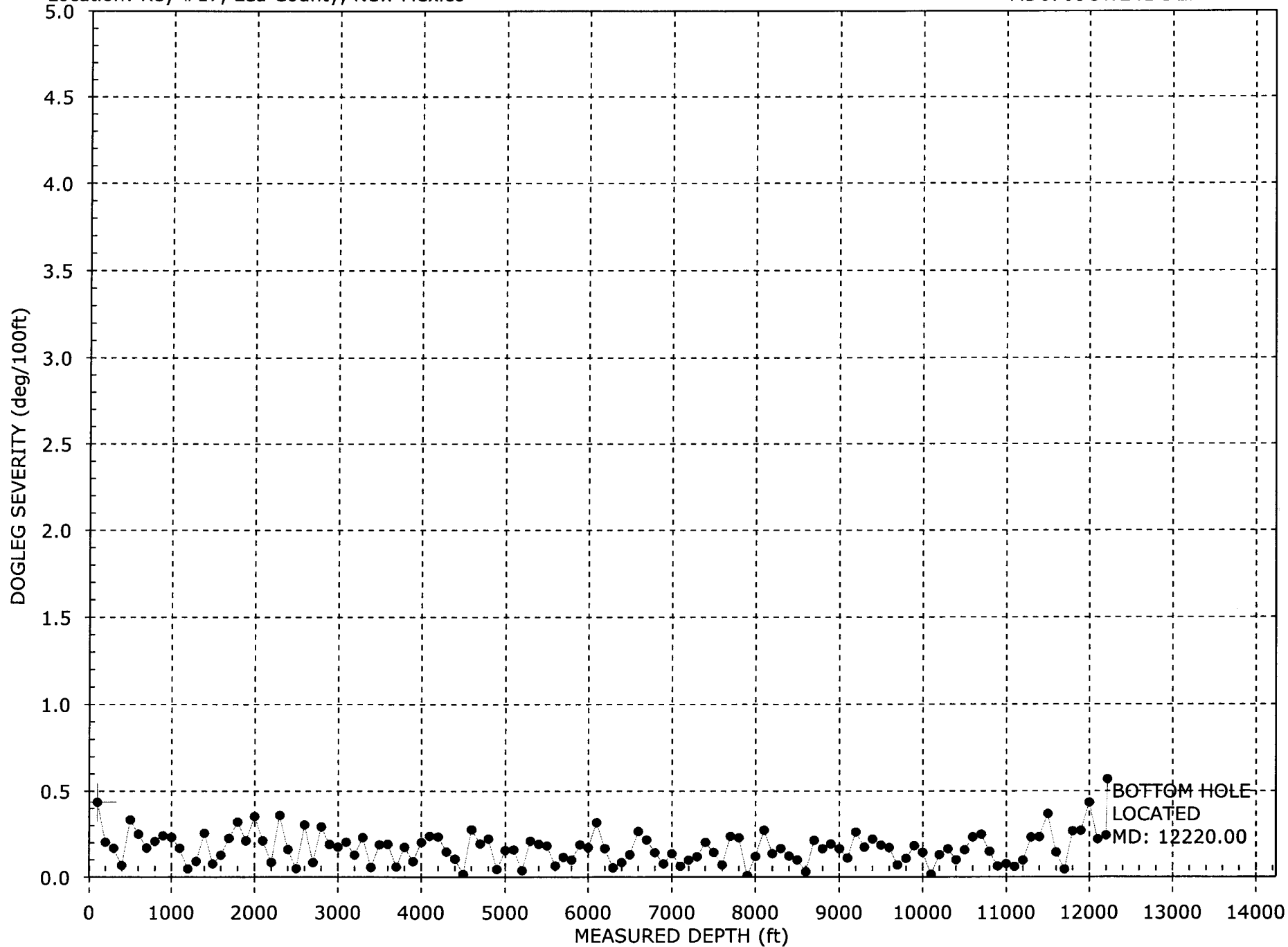
Well: Bule Baer Dunn 32 State #1 4-1/2" Drillpipe

Location: Key #17, Lea County, New Mexico

Inrun

Gyrodata

MD0703GW241 DEFINITIVE



EOG Resources
Well: Bule Baer Dunn 32 State #1 4-1/2" Drillpipe
Location: Key #17, Lea County, New Mexico

Inrun
Gyrodata
MD0703GW241 DEFINITIVE

