



Gyrodata Incorporated
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SURVEY REPORT

CONOCO

SAN JUAN 28-7 #225 F

KEY # 49

**SAN JUAN COUNTY, NEW MEXICO
MD0701GMO276**

JULY 7, 2001

30-034-26694

B-34-28N-7W
740/N 2170/E

COPY

BHL
781/N 2238/E

A Gyrodata Directional Survey

for

Conoco Inc.

Location: KEY #49, RIO ARRIBA, BASIN DAKOTA
Well: SAN JUAN 28-7 WELL NO. 225 F, 4-1/2" DRILLPIPE

Job Number: MD0701GMO276

Run Date: 7/24/01 10:23:57 AM

Surveyor: James Taylor

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 36.622850 deg. N

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 Local Horizontal Reference

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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
0.0	0.00	0.00	N 0 0 E	0.00	0.0	0.0 0.0	0.00 N 0.00 E
0 - 7165 FT RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 4 1/2" DRILLPIPE ALL MEASUREMENTS AND COORDINATES REFERENCED TO KEY #49 R.K.B.							
100.0	0.04	251.87	S 71 52 W	0.04	100.0	0.0 251.9	0.01 S 0.03 W
200.0	0.07	323.65	N 36 21 W	0.07	200.0	0.1 284.9	0.03 N 0.10 W
300.0	0.54	207.44	S 27 26 W	0.57	300.0	0.5 226.5	0.34 S 0.36 W
400.0	0.73	223.90	S 43 54 W	0.26	400.0	1.6 219.9	1.21 S 1.01 W
500.0	0.69	227.59	S 47 35 W	0.06	500.0	2.8 222.4	2.08 S 1.90 W
600.0	0.86	230.79	S 50 47 W	0.17	600.0	4.2 224.7	2.96 S 2.92 W
700.0	0.81	232.53	S 52 32 W	0.05	700.0	5.6 226.5	3.86 S 4.07 W
800.0	1.02	242.67	S 62 40 W	0.27	800.0	7.2 229.1	4.70 S 5.43 W
900.0	1.18	241.49	S 61 29 W	0.16	899.9	9.1 231.8	5.61 S 7.13 W
1000.0	1.04	249.50	S 69 30 W	0.21	999.9	11.0 234.2	6.42 S 8.89 W
1100.0	1.08	248.79	S 68 48 W	0.04	1099.9	12.8 236.3	7.08 S 10.62 W
1200.0	1.42	255.09	S 75 6 W	0.37	1199.9	14.9 238.6	7.74 S 12.70 W
1300.0	1.59	249.64	S 69 39 W	0.22	1299.8	17.4 240.7	8.54 S 15.20 W
1400.0	1.73	250.95	S 70 57 W	0.14	1399.8	20.3 242.0	9.52 S 17.93 W
1500.0	1.77	246.93	S 66 56 W	0.13	1499.8	23.3 242.9	10.61 S 20.77 W
1600.0	1.82	246.15	S 66 9 W	0.06	1599.7	26.4 243.4	11.86 S 23.64 W
1700.0	1.47	237.40	S 57 24 W	0.43	1699.7	29.3 243.2	13.19 S 26.17 W
1800.0	1.61	236.93	S 56 56 W	0.13	1799.6	32.0 242.7	14.65 S 28.43 W
1900.0	1.74	233.20	S 53 12 W	0.17	1899.6	34.9 242.1	16.32 S 30.82 W
2000.0	1.84	229.73	S 49 44 W	0.15	1999.5	37.9 241.2	18.27 S 33.26 W

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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
2100.0	1.95	226.27	S 46 16 W	0.16	2099.5	41.2 240.2	20.49 S 35.72 W
2200.0	2.03	226.34	S 46 21 W	0.08	2199.4	44.6 239.1	22.89 S 38.23 W
2300.0	1.64	230.33	S 50 20 W	0.41	2299.4	47.7 238.4	25.03 S 40.62 W
2400.0	1.25	245.31	S 65 19 W	0.54	2399.3	50.2 238.3	26.40 S 42.71 W
2500.0	1.19	250.62	S 70 37 W	0.13	2499.3	52.3 238.7	27.20 S 44.69 W
2600.0	0.80	253.59	S 73 35 W	0.40	2599.3	54.0 239.1	27.75 S 46.34 W
2700.0	0.73	280.18	N 79 49 W	0.36	2699.3	55.2 239.7	27.83 S 47.64 W
2800.0	0.68	281.46	N 78 33 W	0.04	2799.3	56.1 240.5	27.60 S 48.85 W
2900.0	0.52	274.16	N 85 50 W	0.18	2899.3	56.9 241.2	27.45 S 49.88 W
3000.0	0.62	248.76	S 68 45 W	0.27	2999.3	57.9 241.5	27.62 S 50.84 W
3100.0	1.34	253.23	S 73 14 W	0.73	3099.3	59.5 241.8	28.15 S 52.47 W
3200.0	1.42	265.52	S 85 31 W	0.30	3199.2	61.8 242.5	28.59 S 54.83 W
3300.0	0.85	269.63	S 89 38 W	0.57	3299.2	63.6 243.2	28.69 S 56.80 W
3400.0	0.68	268.97	S 88 58 W	0.17	3399.2	64.8 243.7	28.70 S 58.14 W
3500.0	0.61	266.25	S 86 15 W	0.08	3499.2	65.9 244.1	28.75 S 59.26 W
3600.0	0.48	254.90	S 74 54 W	0.16	3599.2	66.8 244.4	28.89 S 60.20 W
3700.0	0.47	251.74	S 71 44 W	0.03	3699.2	67.6 244.5	29.13 S 60.99 W
4000.0	0.32	244.27	S 64 16 W	0.05	3999.2	69.7 244.6	29.88 S 62.92 W
4500.0	0.55	195.77	S 15 46 W	0.08	4499.2	72.7 243.2	32.80 S 64.84 W
5000.0	0.46	25.92	N 25 55 E	0.20	4999.2	72.7 242.7	33.30 S 64.61 W
5500.0	0.33	215.52	S 35 31 W	0.16	5499.2	72.3 243.2	32.65 S 64.56 W
6000.0	0.60	250.12	S 70 7 W	0.08	5999.1	76.2 242.9	34.70 S 67.85 W
6500.0	0.24	117.54	S 62 28 E	0.16	6499.1	78.2 242.5	36.08 S 69.38 W
7000.0	1.09	171.16	S 8 51 E	0.19	6999.1	79.3 238.6	41.28 S 67.71 W

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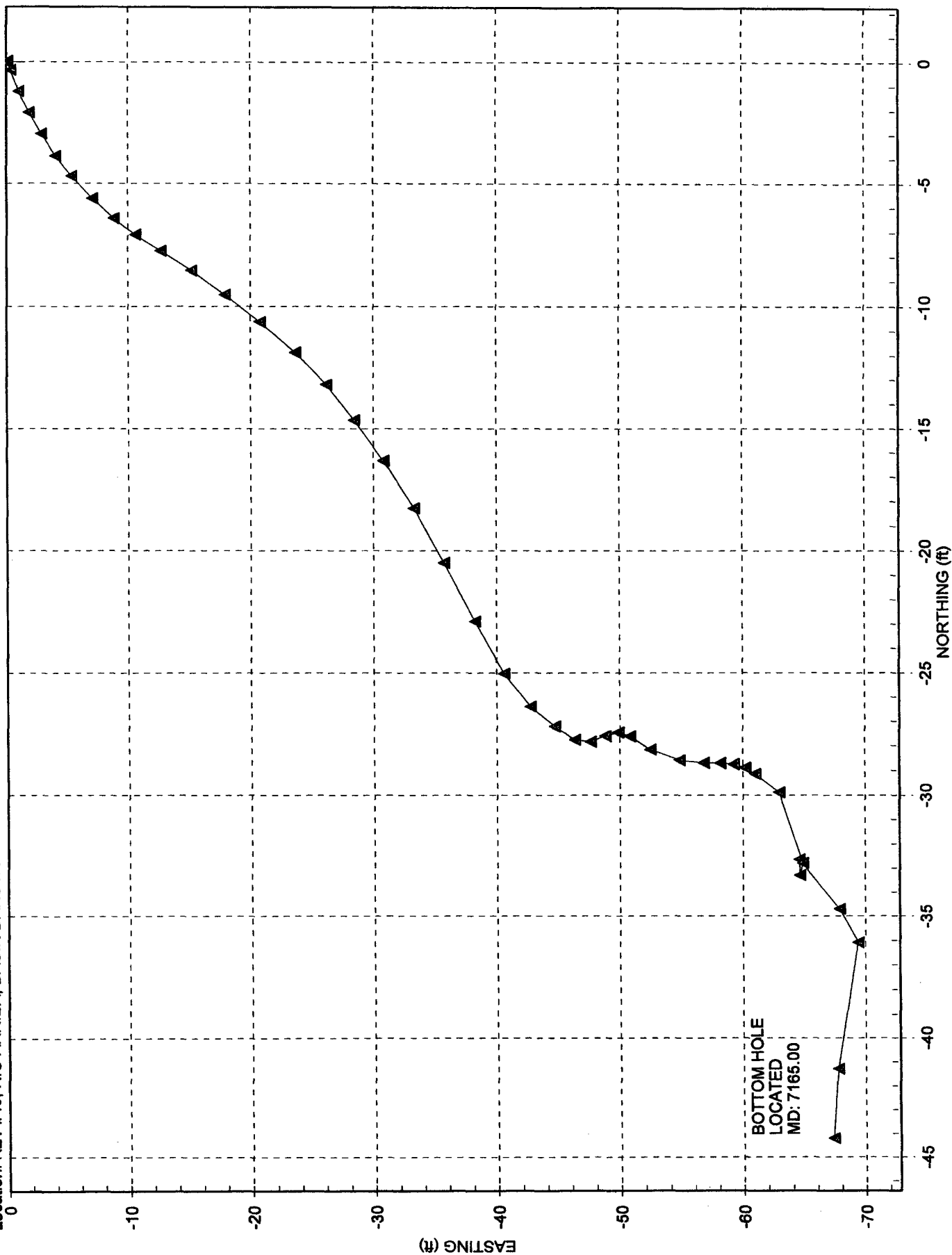
MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
7165.0	0.95	173.40	S 6 36 E	0.09	7164.1	80.5 236.7	44.20 S 67.31 W

Final Station Closure: Distance: 80.53 ft Az: 236.71 deg.

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Location: KEY #49, RIO ARRIBA, BASIN DAKOTA

Gyrodata, Inc.
MD0701GMO276 DEFINITIVE



BOTTOM HOLE
LOCATED
MD: 7165.00

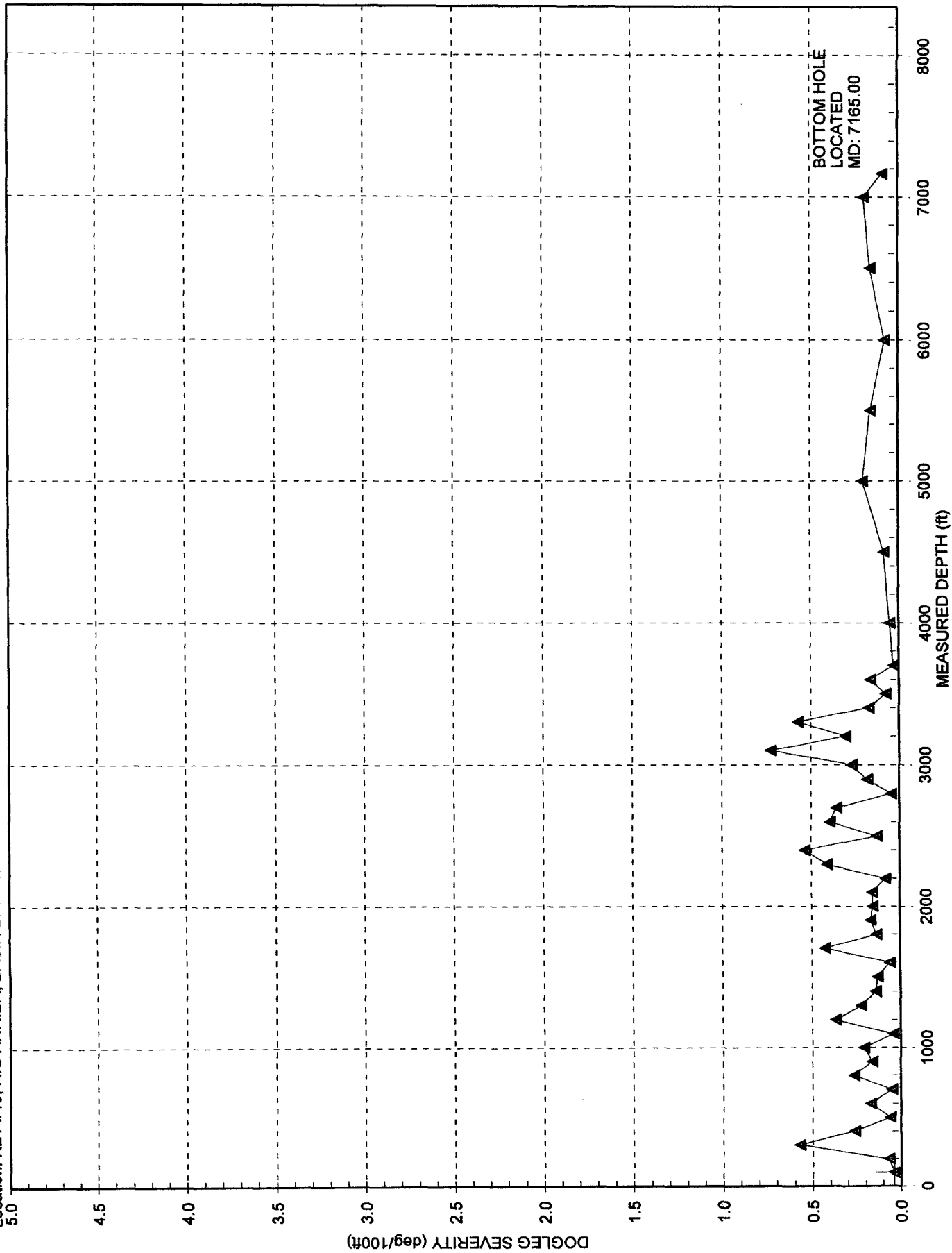
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Well: SAN JUAN 28-7 WELL NO. 225 F 4-1/2" DRILLPIPE

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