

A Gyrodata Directional Survey

for

Conoco Inc.

Location: KEY #49, SAN JUAN COUNTY, N.M.
Well: SAN JUAN 28-7 #190-F, 4-1/2" CASING

30-039-26693

B-34-28N-7W
1755/N 2145/E

BHL 265/S 2238/E

Job Number: MD0701GME290

Run Date: 7/24/01 10:35:21 AM

Surveyor: Mike Shepherd

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 36.622640 deg. N

Azimuth Correction:

Gyro: Bearings are Relative to True North

Proposed Well Direction: 354.670 deg

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

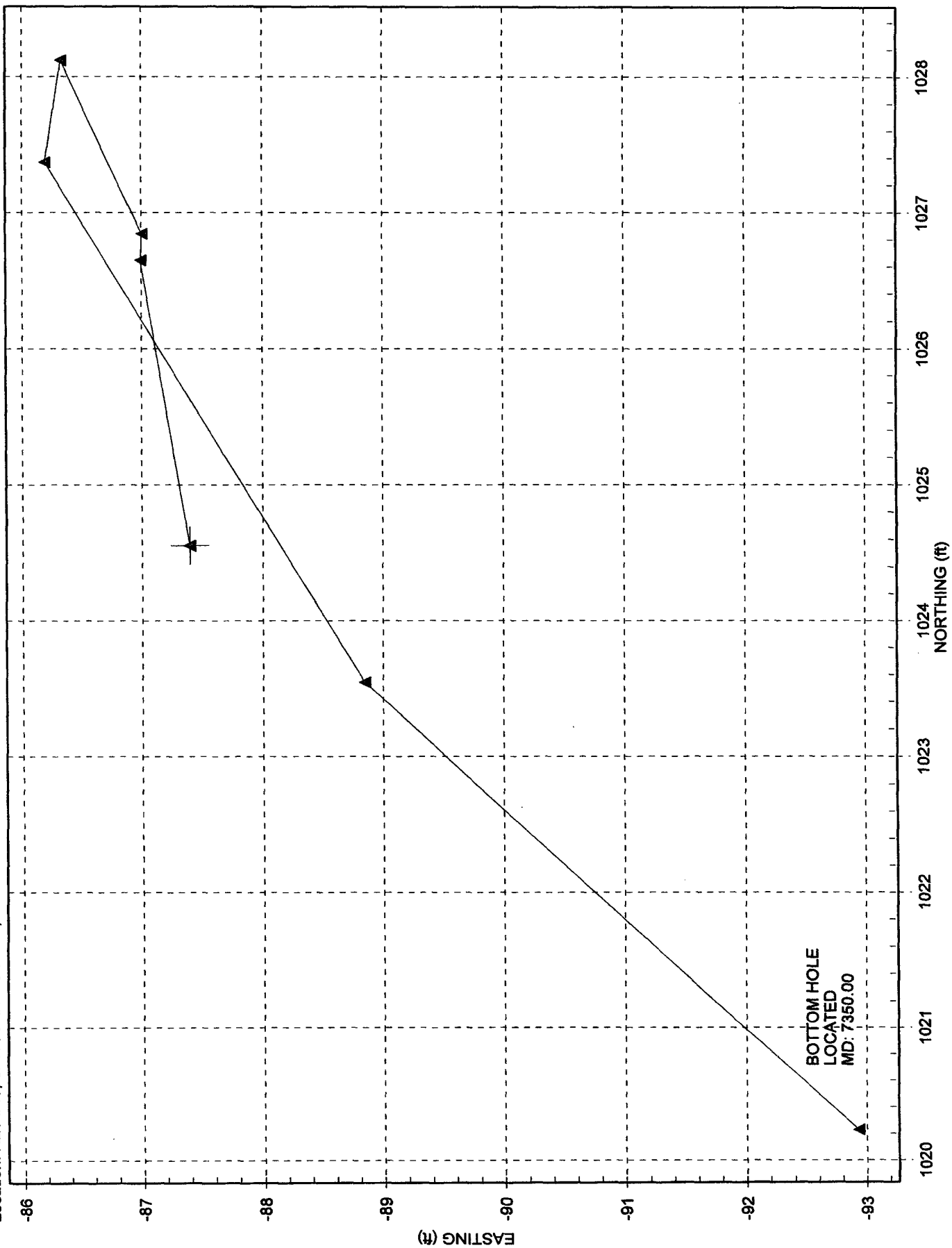
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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	VERTICAL SECTION feet	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
3870.0	2.20	354.90	1016.9	0.00	3668.0	1016.9 355.1	1013.24 N 86.55 W
----- 4350 - 7350 FT RATE GYROSCOPIC MULTISHOT SURVRY RUN INSIDE 4-1/2" CASING ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO KEY #49 R.K.B. -----							
4350.0	0.51	359.23	1028.2	0.35	4147.9	1028.3 355.1	1024.56 N 87.40 W
4850.0	0.10	107.57	1030.3	0.11	4647.9	1030.3 355.2	1026.65 N 86.99 W
5350.0	0.13	306.93	1030.5	0.05	5147.9	1030.5 355.2	1026.84 N 87.01 W
5850.0	0.33	49.88	1031.7	0.08	5647.9	1031.7 355.2	1028.12 N 86.33 W
6350.0	0.45	210.13	1030.9	0.15	6147.9	1031.0 355.2	1027.37 N 86.20 W
6850.0	0.62	218.03	1027.4	0.04	6647.8	1027.4 355.0	1023.54 N 88.85 W
7350.0	0.62	243.95	1024.4	0.06	7147.8	1024.5 354.8	1020.23 N 92.93 W

Final Station Closure: Distance: 1024.45 ft Az: 354.80 deg.

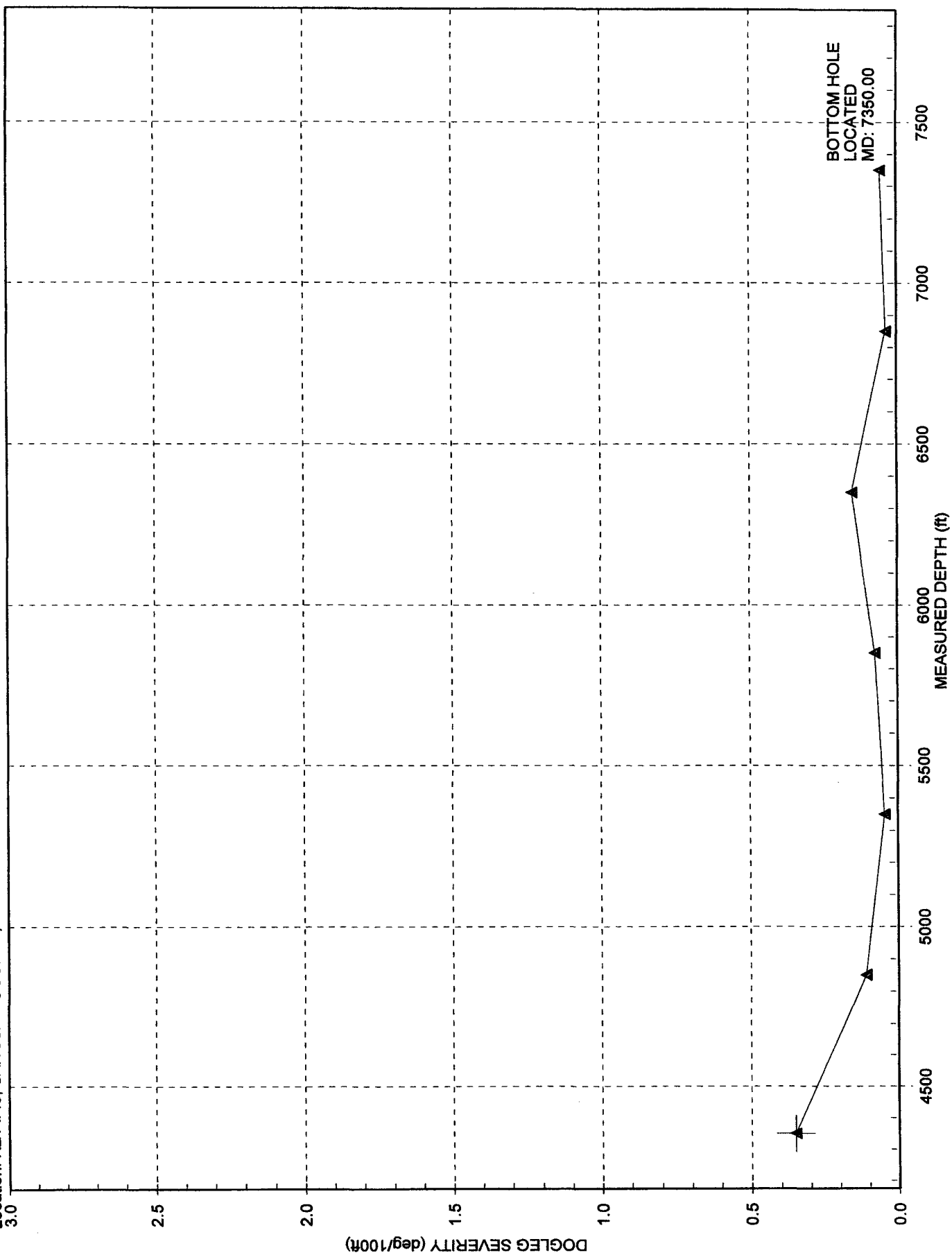
Conoco Inc.
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Location: KEY #48, SAN JUAN COUNTY, N.M.

Gyrodata, Inc.
MD0701GME290 DEFINITIVE



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