



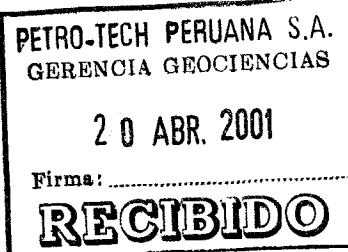
Gyrodata Incorporated
1682 W. Sam Houston Pkwy. N.
Houston, Texas 77043

713/461-3146
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SURVEY REPORT
PETRO-TECH PERUANA
LO-6-14
PEPESA-48
CAMPO LOBITOS, PERU
HT0301GME258

MARCH 16, 2001

CENTRAL FILE
GEOSCIENCES



A Gyrodata Directional Survey

for

PETRO-TECH PERUANA S.A.

Well: LO-6-14, PRODUCTION PIPE 2 7/8"

Location: PEPESA-48/LO-06, CAMPO LOBITOS

Job Number: HT0301GME258

Run Date: 3/16/01

Surveyor: Angel Cordozo

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 4.450000 deg. S

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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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
0.0	0.00	0.00	N 0 0 E	0.00	0.0	0.0 0.0	0.00 N 0.00 E

PROFUNDIDADES REFERIDAS A CABEZA DE POZO LO-14							
GYRO MULTISHOT CORRIDO EN CASING DE 5 1/2" DESDE 2500' HASTA SUPERFICIE							

100.0	0.44	188.11	S 8 7 W	0.44	100.0	0.4 188.1	0.38 S 0.05 W
200.0	0.51	120.82	S 59 11 E	0.53	200.0	1.0 164.6	1.00 S 0.28 E
300.0	1.24	94.28	S 85 43 E	0.82	300.0	2.2 126.9	1.31 S 1.74 E
400.0	1.15	85.84	N 85 51 E	0.20	400.0	4.0 109.0	1.32 S 3.82 E
500.0	1.07	81.50	N 81 30 E	0.12	499.9	5.8 100.9	1.11 S 5.74 E
600.0	1.53	185.95	S 5 57 W	2.07	599.9	6.9 109.4	2.30 S 6.52 E
700.0	4.26	181.95	S 1 57 W	2.73	699.8	9.6 139.5	7.33 S 6.25 E
800.0	4.37	182.37	S 2 22 W	0.12	799.5	16.0 158.1	14.84 S 5.97 E
900.0	3.96	184.00	S 4 0 W	0.42	899.2	22.8 165.8	22.09 S 5.57 E
1000.0	4.37	181.83	S 1 50 W	0.44	999.0	29.8 169.9	29.35 S 5.21 E
1100.0	6.28	179.07	S 0 56 E	1.92	1098.5	39.0 172.4	38.62 S 5.18 E
1200.0	7.37	186.35	S 6 21 W	1.40	1197.8	50.7 174.8	50.46 S 4.56 E
1300.0	7.63	189.89	S 9 53 W	0.53	1297.0	63.4 177.6	63.38 S 2.71 E
1400.0	7.85	187.98	S 7 59 W	0.34	1396.1	76.7 179.5	76.69 S 0.62 E
1500.0	10.78	178.70	S 1 18 E	3.28	1494.7	92.8 180.1	92.81 S 0.12 W
1600.0	15.19	179.50	S 0 30 E	4.41	1592.2	115.3 179.9	115.26 S 0.21 E
1700.0	18.04	181.26	S 1 16 W	2.90	1688.0	143.8 180.0	143.85 S 0.02 W
1800.0	20.50	185.25	S 5 15 W	2.79	1782.4	176.8 180.6	176.77 S 1.96 W
1900.0	21.42	189.09	S 9 5 W	1.65	1875.8	212.3 181.7	212.23 S 6.45 W
2000.0	21.76	189.71	S 9 43 W	0.41	1968.8	248.8 182.9	248.53 S 12.46 W

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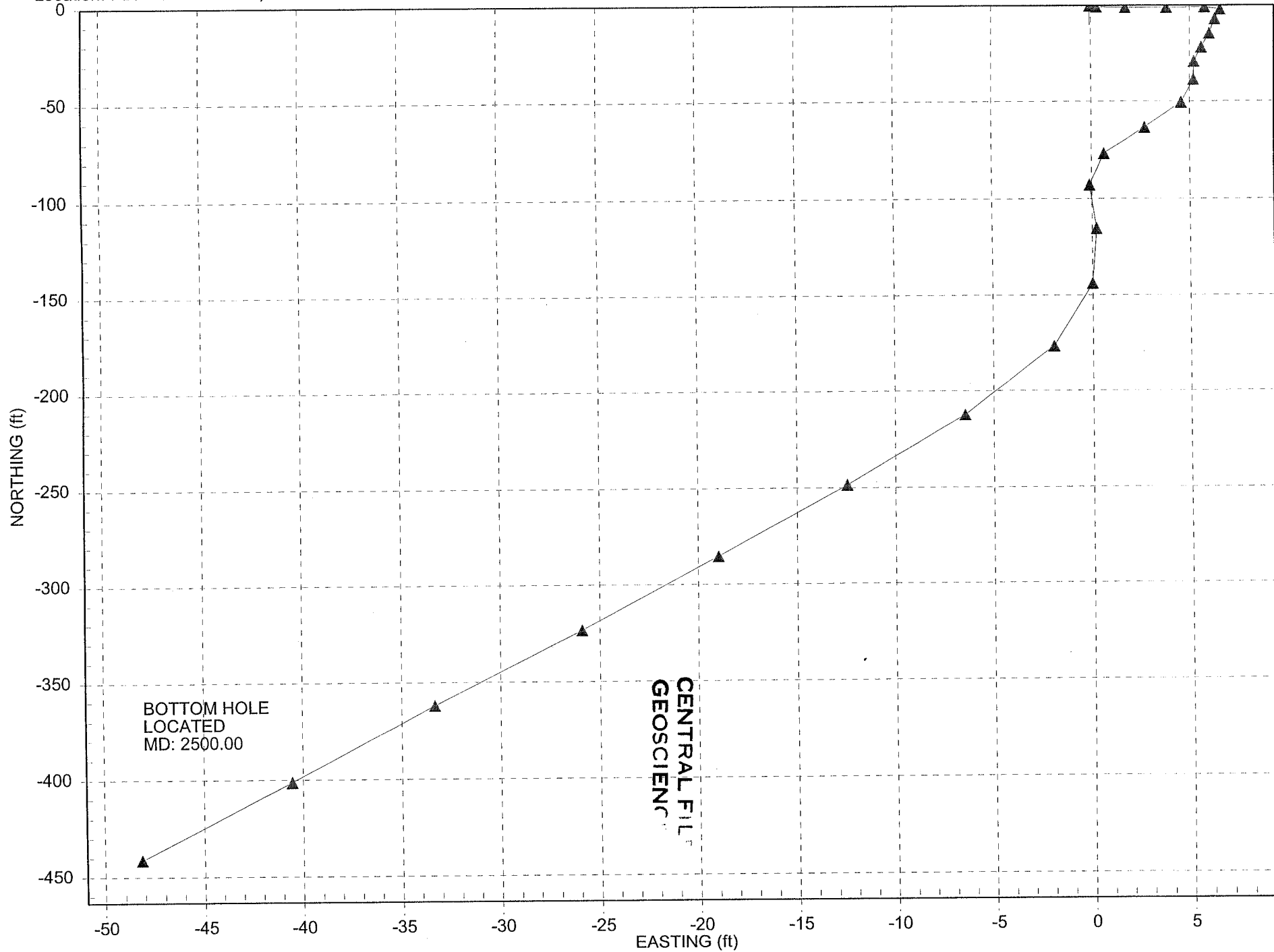
MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
2100.0	22.39	190.23	S 10 14 W	0.66	2061.4	286.2 183.8	285.53 S 18.97 W
2200.0	22.99	190.47	S 10 28 W	0.61	2153.7	324.5 184.6	323.48 S 25.90 W
2300.0	23.27	191.31	S 11 19 W	0.43	2245.6	363.6 185.3	362.05 S 33.32 W
2400.0	23.76	189.56	S 9 34 W	0.86	2337.3	403.3 185.8	401.29 S 40.54 W
2500.0	24.20	192.04	S 12 2 W	1.09	2428.7	443.8 186.2	441.20 S 48.16 W

Final Station Closure: Distance: 443.82 ft Az: 186.23 deg.

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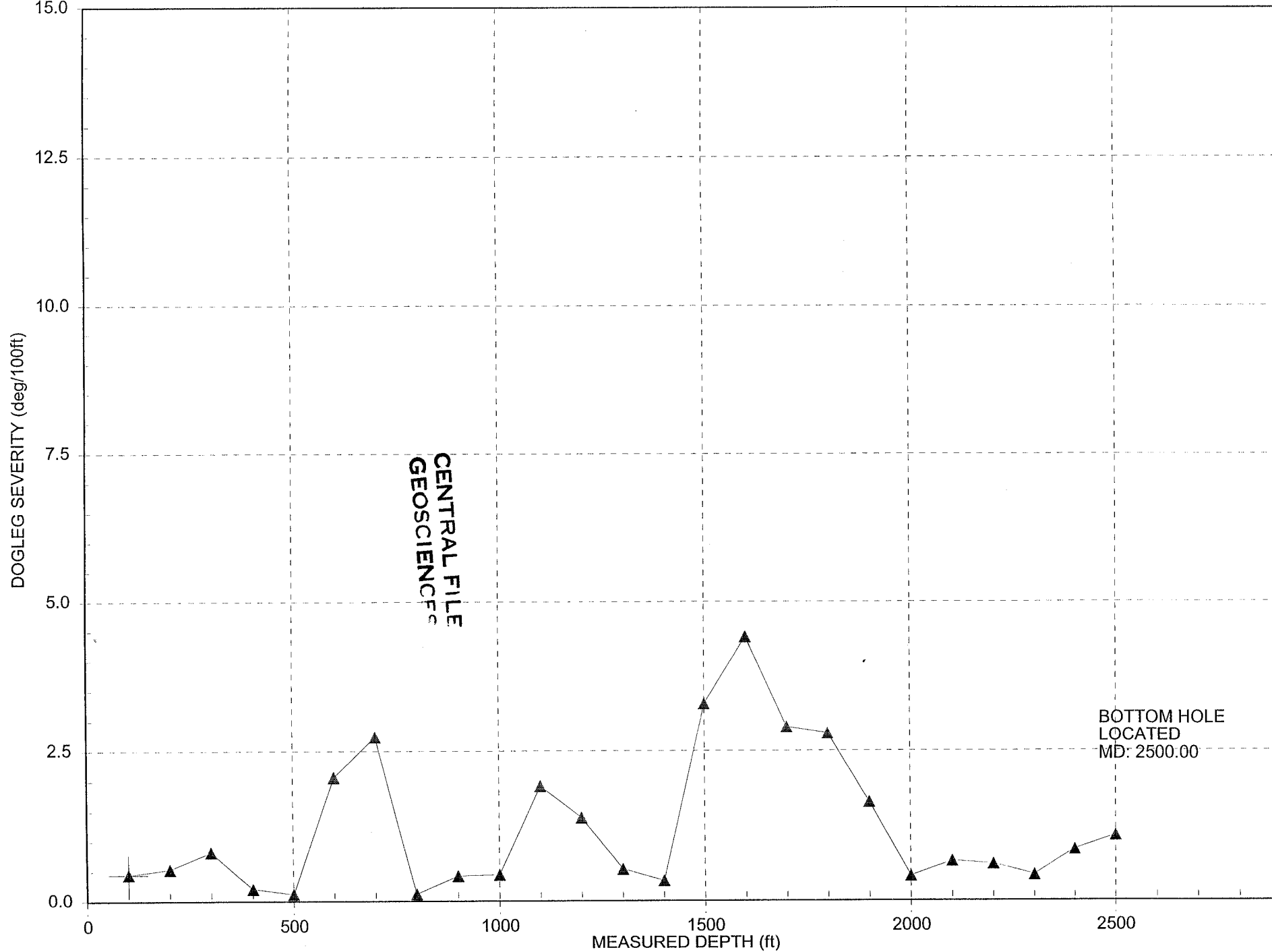
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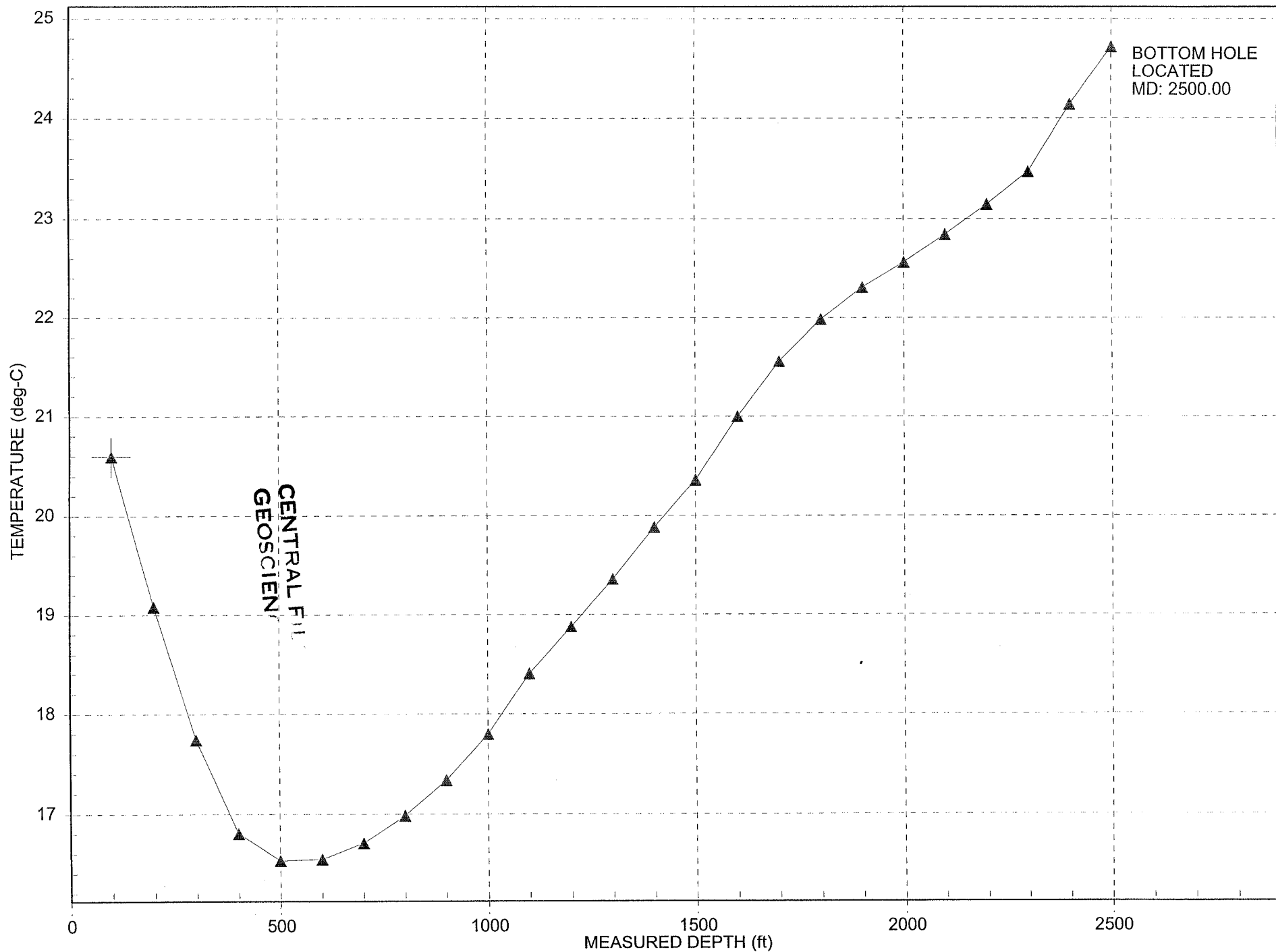
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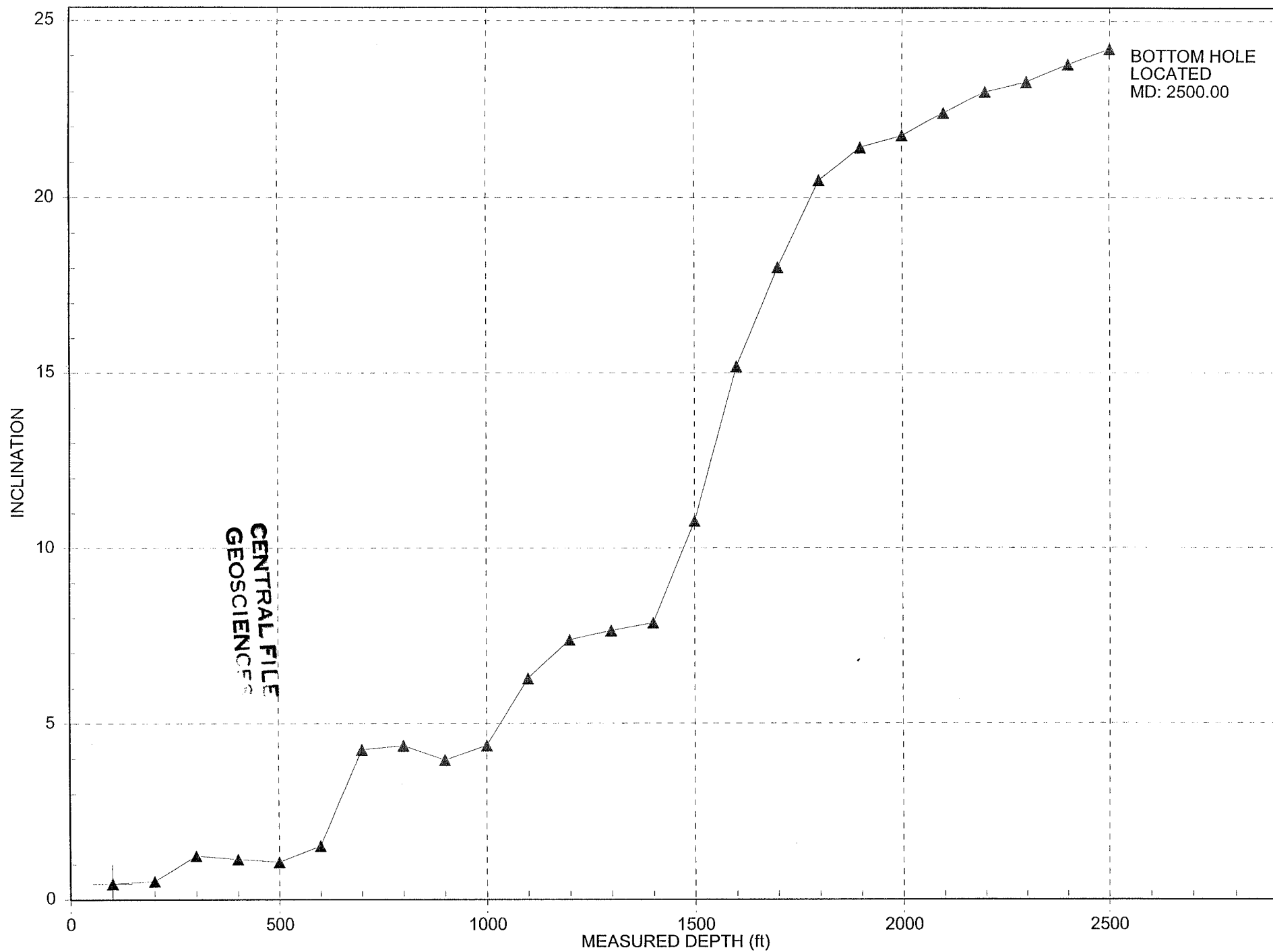
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