QUINTETTE COAL LIMITED
1989 GEOLOGICAL REPORT
TRANSFER AND GRIZZLY, AND MESA NORTH EXTENSION AREAS
ADDENDUM #1

CONFIDENTIAL

Prepared by Technical Services Department
Quintette Coal Limited

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1989 GEOLOGICAL REPORT
TRANSFER AND GRIZZLY, AND
MESA NORTH EXTENSION AREAS

ADDENDUM III

Addendum III Survey Control Maps - 1989 Data:

AREA	DRAWING NUMBER
Transfer	87-903-79-003 (Rev 4) 88-903-79-001 (Rev 3)
Hermann-Gething Area (Transfer)	86-605-79-002 (Rev 9)
Grizzly	86-905-79-001 (Rev 1) 89-905-79-001 (Rev 0) – missing
Wolverine Area (Mesa North Extension)	89-100-79-001 (Rev 0) 89-100-79-002 (Rev 2)

Note: The three Addenda are supplied to the Ministry of Energy, Mines and Petroleum Resources, Victoria, B.C., only (2 copies of each). Other copies and originals are on file at the Administration Building, Quintette Coal Limited, Tumbler Ridge, B.C.

SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
	"A"	6094977.48	622880.81	[illegible]	
QHR 88015		6095021.67	623106.08	1068.53	
QHR 88016		6094992.16	622876.22	1112.54	
QHR 88017		6095037.25	622921.52	1117.09	
QHD 88005		6094924.77	623402.79	987.16	
	1317 B	6094921.81	623664.36	887.32	
	1319 A	6094811.78	623779.69	850.85	
QHR 89002		6094814.20	623778.94	851.55	
QHR 89003		6094787.61	623764.35	850.90	
QHR 89004		6094816.65	623689.39	876.44	

SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	U.T.M. CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
[illegible]		6095218.97	622288.57	[illegible]	
	[illegible]	6095198.12	622363.35	[illegible]	
	[illegible]	6095168.33	622458.75	1296.06	
	2209	6095149.06	622428.61	[illegible]	
	[illegible]	[illegible]	622468.77	1281.68	
	[illegible]	6095015.07	622396.07	[illegible]	
	[illegible]	6095009.69	622335.69	[illegible]	
	[illegible]	6094990.66	622288.92	[illegible]	
	[illegible]	6095011.47	622202.18	1240.93	
	[illegible]	6095021.47	622115.26	[illegible]	
	[illegible]	6094974.62	622066.61	[illegible]	
	[illegible]	6094904.73	622214.10	[illegible]	
	[illegible]	6094881.82	622301.42	[illegible]	
		6094838.56	622334.42	[illegible]	
	[illegible]	6094831.88	622429.15	1172.04	
	[illegible]	6094849.05	622562.14	[illegible]	
	[illegible]	6094824.32	622667.42	[illegible]	
	[illegible]	6094856.45	622733.09	[illegible]	
	[illegible]	[illegible]	622790.52	1134.45	
	[illegible]	6094983.91	622868.18	[illegible]	
	[illegible]	6095039.83	622926.14	[illegible]	
QHR 87009		6095088.70	[illegible]	1108.43	
	[illegible]	6094925.29	622942.81	1103.65	
	[illegible]	6094971.89	623068.60	1087.24	
	[illegible]	6094975.11	623108.25	1073.24	
	[illegible]	6094848.52	[illegible]	[illegible]	
	[illegible]	6094825.00	[illegible]	[illegible]	
	[illegible]	6094678.17	[illegible]	1042.08	
	[illegible]	6094793.64	623282.38	1019.26	
	[illegible]	6094833.84	623367.42	[illegible]	
	[illegible]	6094845.92	623402.13	[illegible]	
	[illegible]	[illegible]	623386.40	[illegible]	
	[illegible]	6094636.84	[illegible]	[illegible]	
	[illegible]	6094716.70	623489.62	[illegible]	
	[illegible]	6094754.38	623580.42	[illegible]	
QHR 87010		6094879.67	623642.35	[illegible]	
	[illegible]	6094977.61	623699.19	[illegible]	
	[illegible]	6095041.95	623701.02	[illegible]	
	[illegible]	6095135.00	623757.18	[illegible]	
	2042	6095229.57	623839.38	[illegible]	
	2043	6095344.73	623875.50	[illegible]	
	2044	6095477.82	623940.67	878.43	
	2045	[illegible]	624132.42	882.62	
	2046	[illegible]	624197.62	885.51	
	2047	[illegible]	624277.43	884.25	
	2048	6095366.60	[illegible]	878.71	
	2049	[illegible]	[illegible]	874.75	
	2050	[illegible]	624445.20	865.07	
	2051	6095301.32	624538.12	857.13	
	[illegible]	6095532.32	625301.09	772.98	
	1529	6095492.32	[illegible]	773.80	
QHR 87041		6095150.74	623801.94	[illegible]	
QHR 87042		6095081.35	623748.75	891.10	
QHR 87043		6094827.36	623622.99	902.11	
QHD 87011		6095267.55	623875.17	[illegible]	
QHR 87040		6095283.74	622166.77	1361.19	
QHR 87044		6094992.35	623705.19	880.04	
QHR 87045		6094837.80	623932.43	838.09	
QHR 87047		6094922.28	623977.78	838.73	
QHR 87048		6095005.91	624037.45	836.82	
QHR 87049		6094780.33	623876.65	841.24	
QHR 87050		6095263.27	624327.41	844.50	

No	REVISIONS	DATE
4	Added QHR 89002, 89003 & 89004	27/06/89
3	Added QHD 88005 And QHR 88015, 88016 And 88017 And TH "A"	22/09/88
2	Added QHR 87040, 87044, 87045, 87047, 87048, 87049 And 87050	7/10/87
1	Added QHR 87041, 87042, 87043 And QHD 87011	4/03/87

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

SCALE 1:2500

METRES

87-903-79-003 Rev.4

STABLES, TRYON AND ASSOCIATES

B.C. LAND SURVEYORS

DAWSON CREEK, B.C.

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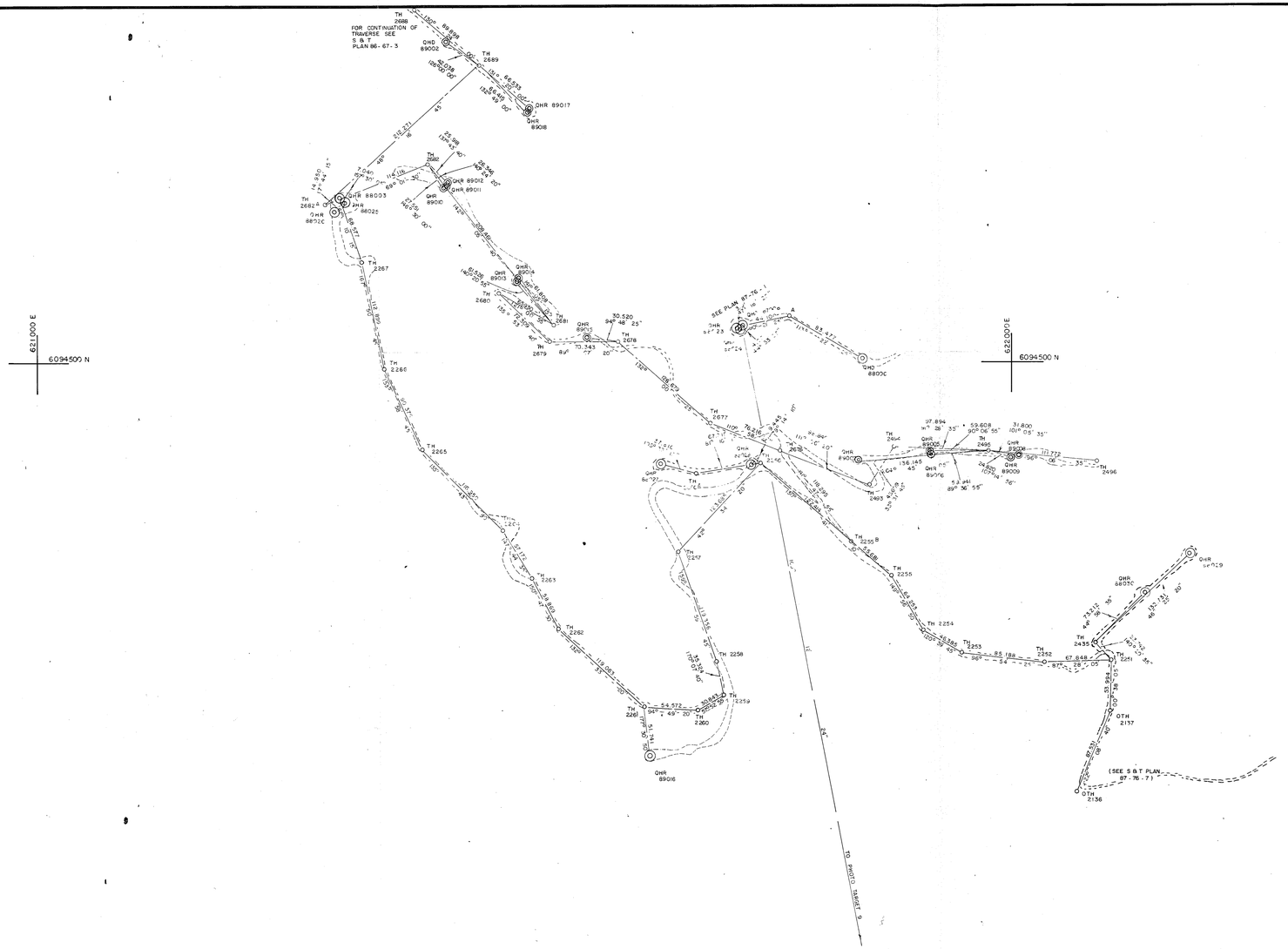

PHOTO TARGET OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF IRON BAR OR CASING	GROUND
	2136	6094059.38	622067.11	1033.75	
	2137	6094140.45	622100.09	1041.28	
	2251	6094194.42	622100.69	1047.81	
	2252	6094191.42	622032.93	1061.58	
	2253	6094201.66	621948.40	1074.02	
	2254	6094225.31	621908.51	1077.64	
	2255	6094280.90	621876.35	1081.53	
	2256	6094396.96	621741.35	1088.95	
	2257	6094305.91	621657.71	1071.47	
	2258	6094193.80	621698.52	1077.95	
	2259	6094159.01	62170458	1078.33	
	2260	6094142.62	621678.46	1085.80	
	2261	6094147.21	621624.11	1099.79	
	2262	6094227.70	621536.44	1128.67	
	2263	6094279.06	621507.72	1132.38	
	2264	6094327.39	621477.22	1151.93	
	2265	6094411.10	621395.61	1159.67	
	2266	6094492.60	621355.82	1163.91	
	2267	6094602.93	621332.06	1166.79	
QHR 88003		6094667.81	621309.94	1171.43	
	A	6094538.56	621771.27	1165.15	
QHD 88006		6094505.45	621847.87	1168.49	
QHD 87008		6094536.93	621727.19	1167.00	
QHR 88023		6094536.19	621724.33	1166.96	
QHR 88024		6094535.45	621723.86	1167.16	
QHR 88025		6094661.31	621312.63	1170.74	
QHR 88026		6094653.58	621305.39	1171.61	
QHR 88027		6094396.88	621638.42	1081.14	
QHR 88028		6094395.20	621732.08	1087.83	
QHR 88029		6094304.15	621818.67	1072.37	
QHR 88030		6094264.46	622137.27	1059.79	
	2435	6094212.69	622085.54	1050.03	
	2256A	6094386.75	621674.84	1088.33	
	2255B	6094317.15	621834.26	1082.75	
	2493	6094374.44	621853.47	1110.10	
	2494	6094412.44	621878.65	1127.80	
	2495	6094409.92	621976.47	1129.20	
	2496	6094398.03	622087.56	1132.73	
	2676	6094410.03	621761.26	1100.11	
	2677	6094437.27	621690.23	1109.32	
	2678	6094521.97	621596.26	1131.75	
	2679	6094520.85	621526.07	1137.38	
	2680	6094572.71	621475.88	1147.94	
	2681	6094538.71	621532.48	1150.27	
	2682	6094703.13	621404.62	1183.21	
	2682A	6094662.25	621298.23	1177.57	
	2689	6094803.42	621456.73	1253.79	
	2688	6094861.62	621388.40	1265.92	
QHD 89002		6094828.12	621422.73	1256.73	
QHR 89005		6094410.04	621916.89	1126.23	
QHR 89006		6094409.52	621916.55	1126.45	
QHR 89007		6094397.47	621840.95	1121.83	
QHR 89008		6094403.80	622007.66	1123.31	
QHR 89009		6094402.56	622000.16	1123.34	
QHR 89010		6094680.17	621419.82	1175.30	
QHR 89011		6094682.84	621421.40	1175.37	
QHR 89012		6094683.96	621422.05	1175.44	
QHR 89013		6094586.06	621493.24	1160.79	
QHR 89014		6094586.78	621493.67	1160.88	
QHR 89015		6094524.53	621565.86	1134.85	
QHR 89016		6094095.54	621626.35	1078.01	
QHR 89017		6094759.50	621506.67	1245.80	
QHR 89018		6094758.30	621505.43	1245.71	

SURVEYED : June 29th, 1988

T. TRYON BCLS

No.	REVISIONS	DATE
3	Added Drill Holes QHD 89002 And QHR 89005 To 89018 Inclusive	27 / 06 / 89
2	Added Drill Holes QHR 88023 To 88030 Inclusive	27 / 10 / 88
1	Added Drill Holes QHD 88006, QHD 87008 And TH A	22 / 09 / 88

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

SCALE 1 : 2500

25 0 25 50 100 METRES

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88-903-79-001 Rev.3

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS DAWSON CREEK, B.C.

PNG Map Sheet 93-P/3 -
File No. 88-14-5

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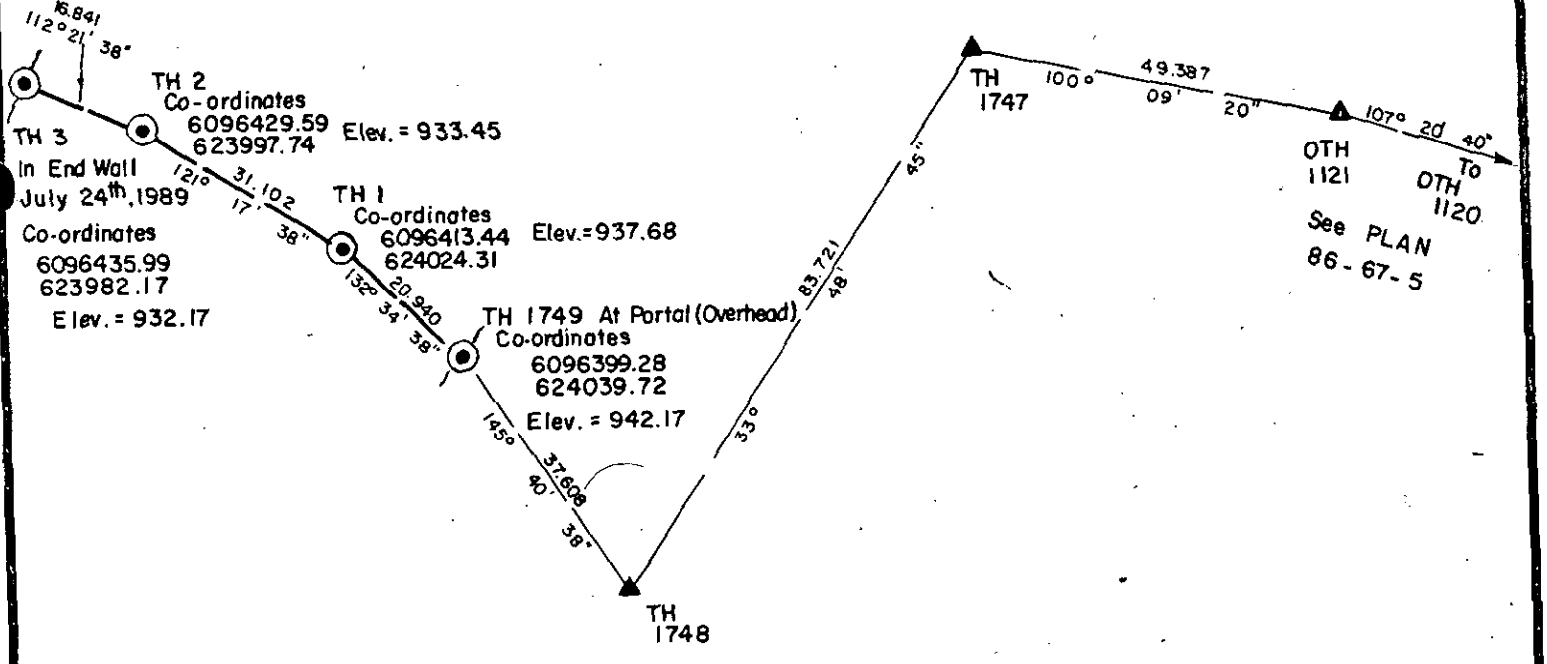


SURVEYED : July 24th, 1989

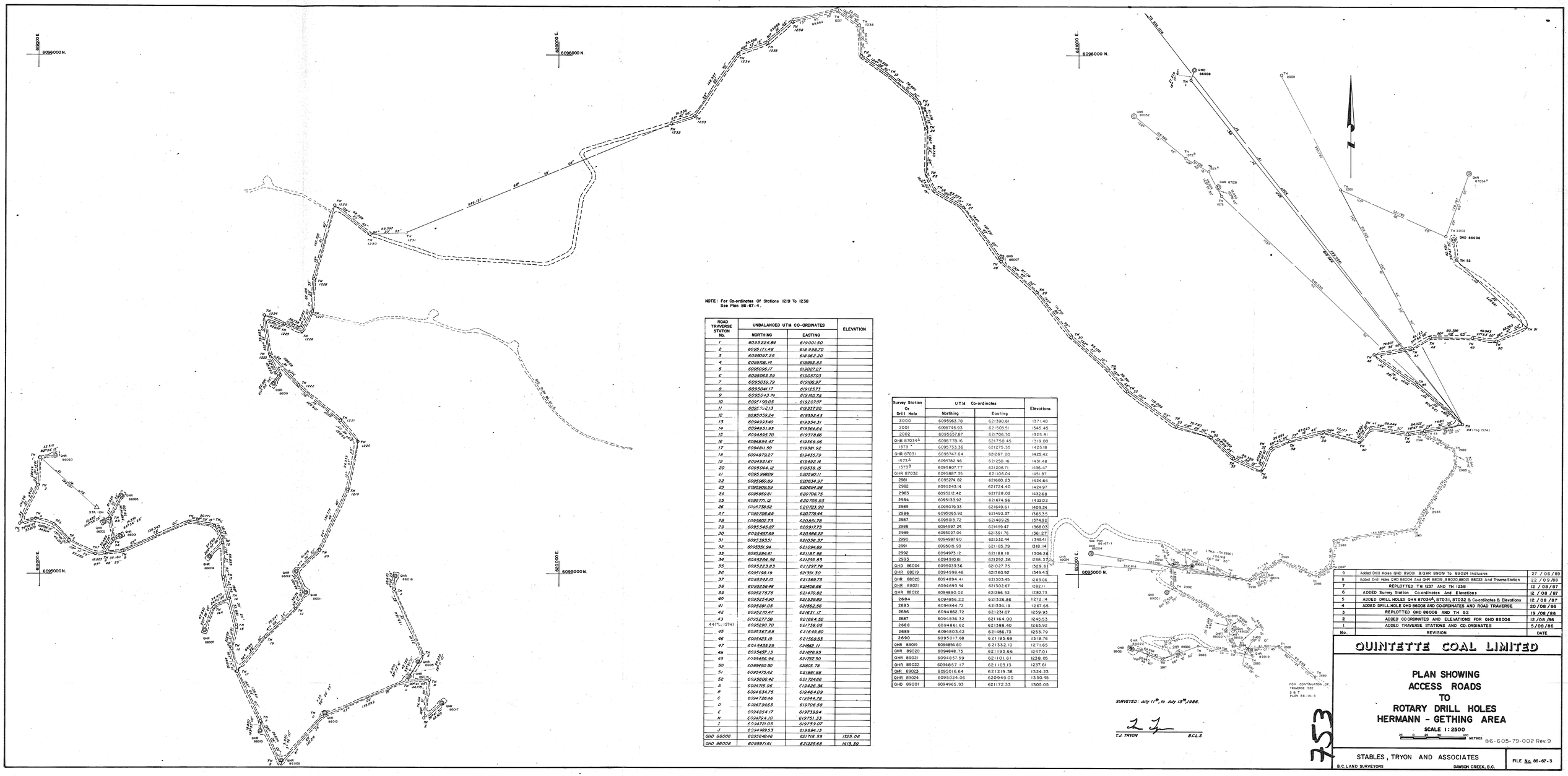
NOTE : Elevations Are Existing Ground.

T.J. TRYON BCLS

89-905-79-001 Rev 0

#753

Stables Tryon & Associates
File No. 89-39a



NOTE: For Co-ordinates Of Stations 1219 To 1238 See Plan 86-67-4.

ROAD TRAVERSE STATION No.	UNBALANCED UTM CO-ORDINATES		ELEVATION
	NORTHING	EASTING	
1	6095224.86	619001.50	
2	6095171.48	618998.70	
3	6095097.25	618962.20	
4	6095105.14	618993.83	
5	6095096.17	619027.27	
6	6095063.39	619057.03	
7	6095039.79	619106.97	
8	6095041.17	619125.73	
9	6095043.76	619160.79	
10	6095100.05	619228.07	
11	6095104.13	619337.20	
12	6095059.24	619352.43	
13	6094933.40	619334.31	
14	6094951.93	619304.64	
15	6094935.70	619378.66	
16	6094854.47	619368.96	
17	6094811.90	619381.92	
18	6094878.27	619435.79	
19	6094931.61	619492.14	
20	6095044.12	619518.15	
21	6095198.09	620580.11	
22	6095960.89	620634.97	
23	6095909.59	620694.98	
24	6095859.81	620706.75	
25	6095771.12	620705.93	
26	6095738.52	620723.90	
27	6095706.65	620778.44	
28	6095602.73	620851.78	
29	6095545.87	620917.73	
30	6095457.69	620986.22	
31	6095393.51	621056.37	
32	6095351.94	621094.69	
33	6095284.61	621187.98	
34	6095266.54	621255.83	
35	6095223.83	621297.76	
36	6095198.19	621351.30	
37	6095242.10	621369.73	
38	6095256.48	621406.66	
39	6095257.75	621470.62	
40	6095254.90	621539.69	
41	6095281.05	621562.56	
42	6095270.47	621631.17	
43	6095277.08	621664.52	
44 (TH 1574)	6095290.70	621736.05	
45	6095367.62	621645.80	
46	6095403.19	621568.53	
47	6095435.29	621662.11	
48	6095457.13	621676.95	
49	6095456.94	621757.30	
50	6095450.50	62805.79	
51	6095475.42	621861.88	
52	6095606.42	621.724.66	
A	6094715.96	619426.36	
B	6094634.75	619464.09	
C	6094726.46	619544.78	
D	6094749.63	619706.58	
E	6094854.17	619739.84	
H	6094754.10	619751.33	
I	6094721.05	619753.07	
J	6094969.53	619684.13	
QHD 86006	6095646.46	621718.59	1325.06
QHD 86008	6095971.61	621225.68	1413.39

Survey Station Or Drill Hole	UTM Co-ordinates		Elevations
	Northing	Easting	
2000	6095963.78	621390.61	1371.40
2001	6095745.93	621503.51	1345.45
2002	6095657.87	621706.30	1325.81
QHR 87034A	6095778.16	621750.45	1319.00
1573 "	6095733.36	621275.35	1425.18
QHR 87031	6095747.64	621267.20	1425.42
1573A	6095782.96	621250.16	1431.48
1573B	6095807.77	621206.71	1436.47
QHR 87032	6095887.35	621106.04	1451.87
2981	6095274.82	621660.23	1424.64
2982	6095243.14	621724.40	1424.97
2983	6095212.42	621728.02	1432.68
2984	6095133.92	621674.96	1422.02
2985	6095079.33	621649.61	1409.24
2986	6095065.92	621493.57	1385.35
2987	6095013.72	621489.25	1374.92
2988	6094997.24	621459.47	1368.03
2989	6095027.04	621391.76	1361.27
2990	6094987.80	621332.44	1345.41
2991	6095015.93	621185.79	1318.14
2992	6094973.12	621188.18	1306.26
2993	6094910.61	621292.26	1288.37
QHD 86004	6095039.36	621027.75	1329.61
QHR 88019	6094998.48	621360.92	1349.43
QHR 88020	6094894.41	621303.45	1283.06
QHR 88021	6094893.54	621302.67	1282.11
QHR 88022	6094890.02	621286.52	1282.73
2684	6094856.22	621326.86	1272.14
2685	6094844.72	621334.19	1267.65
2686	6094862.72	621231.07	1259.93
2687	6094836.32	621164.00	1245.53
2688	6094861.62	621388.40	1265.92
2689	6094803.42	621456.73	1253.79
2690	6095017.68	621185.69	1318.76
QHR 89019	6094854.80	621332.10	1271.65
QHR 89020	6094848.75	621193.66	1247.01
QHR 89021	6094857.59	621101.61	1238.05
QHR 89022	6094857.17	621103.15	1237.81
QHR 89023	6095016.64	621219.38	1324.23
QHR 89024	6095024.06	620949.00	1350.45
QHD 89001	6094965.93	621172.33	1305.05

SURVEYED: July 11th, to July 13th 1986.

T.J. TRYON B.C.L.S.

No.	REVISION	DATE
9	Added Drill Holes QHD 89001 &QHR 89019 To 89024 Inclusive	27 / 06 / 89
8	Added Drill Holes QHD 86004 And QHR 88019,88020,88021 88022 And Traverse Station	22 / 09 /88
7	REPLOTTED TH 1237 AND TH 1238	12 / 08 / 87
6	ADDED Survey Station Co-ordinates And Elevations	12 / 08 / 87
5	ADDED DRILL HOLES QHR 87034A, 87031, 87032 & Co-ordinates & Elevations	12 / 08 / 87
4	ADDED DRILL HOLE QHD 86008 AND CO-ORDINATES AND ROAD TRAVERSE	20/08/86
3	REPLOTTED QHD 86006 AND TH 52	19 /08/86
2	ADDED CO-ORDINATES AND ELEVATIONS FOR QHD 86006	12/08/86
1	ADDED TRAVERSE STATIONS AND CO-ORDINATES	5/08/86

QUINTETTE COAL LIMITED

PLAN SHOWING ACCESS ROADS TO ROTARY DRILL HOLES HERMANN - GETHING AREA

SCALE 1:2500

0 25 50 100 METRES

86-605-79-002 Rev.9

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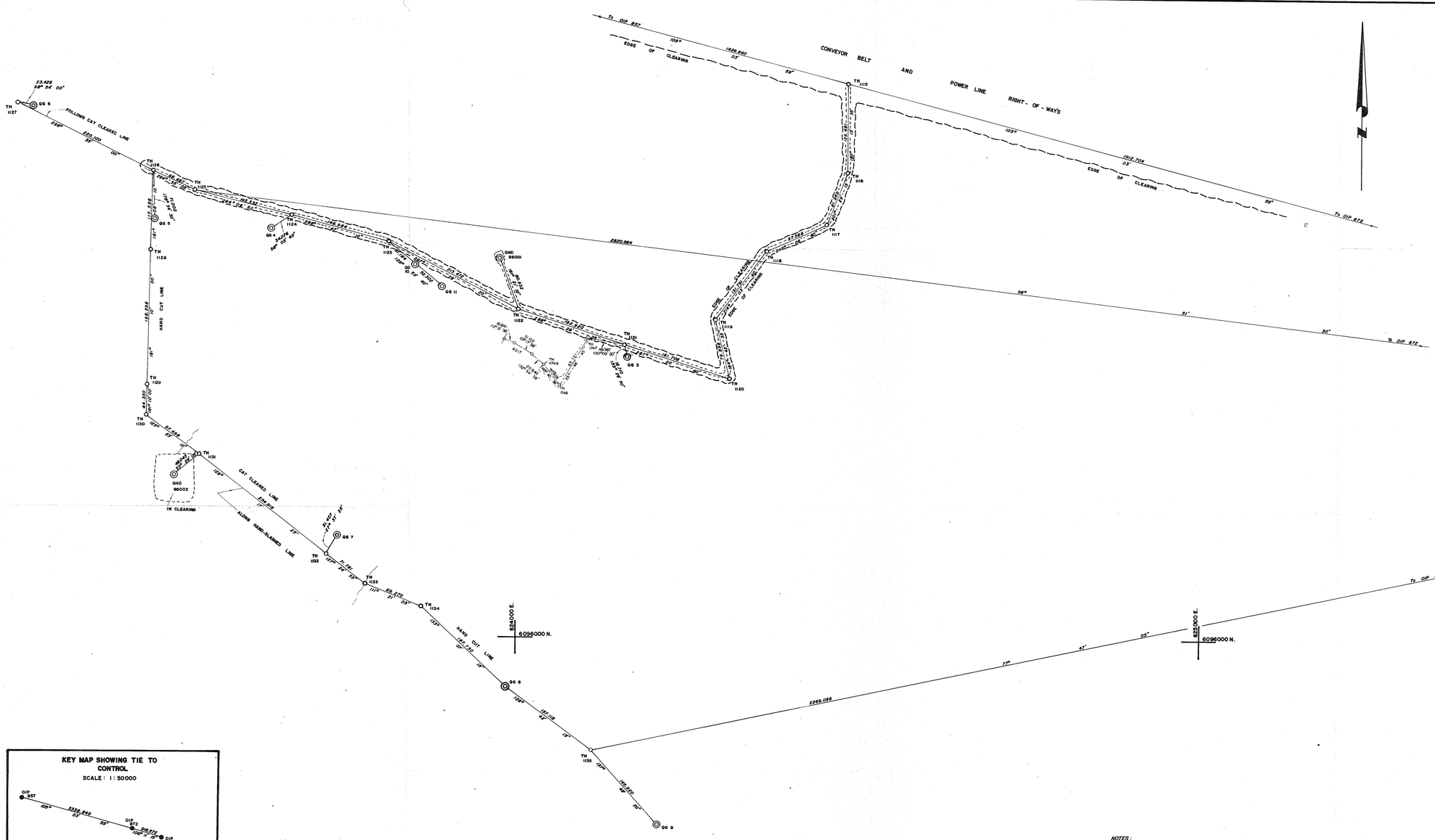
STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS
DAWSON CREEK, B.C.

FILE No. 86-67-3



SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	U.T.M. CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
OIP 857		6097182.94	623105.77		
	1115	6096812.23	624482.90	859.84	
OIP 872		6096315.21	625329.19	830.34	
	1116	6096682.80	624462.31	867.88	
	1117	6096606.55	624452.29	872.21	
	1118	6096567.06	624363.11	879.57	
	1119	6096457.91	624289.72	888.11	
	1120	6096380.87	624310.38	893.56	
	1121	6096429.06	624156.09	928.30	
	1122	6096480.67	624001.62	959.54	
	1123	6096579.11	623812.30	989.99	
	1124	6096616.61	623670.24	1022.86	
	1125	6096651.95	623529.34	1044.84	
	1126	6096680.42	623467.10	1050.25	
	1127	6096776.86	623270.34	1061.69	
	1128	6096564.87	623464.81	1071.00	
	1129	6096366.35	623480.77	1097.00	
	1130	6096322.02	623459.87	1101.65	
	1131	6096265.57	623539.35	1091.86	
	1132	6096120.03	623723.84	1069.55	
	1133	6096076.44	623780.62	1059.04	
	1134	6096043.95	623863.73	1055.31	
	1135	6095835.40	624112.11	1003.45	
GG 1		6096601.02	624420.00	877.76	877.59
GG 2		6096403.28	624295.71	893.84	893.84
GG 3		6096413.42	624161.95	927.84	927.84
GG 4		6096533.84	623664.90	1029.75	
GG 5		6096608.47	623468.87	1055.48	
GG 6		6096775.26	623293.48	1060.35	
GG 7		6096147.85	623736.40	1074.35	
GG 8		6095928.33	623986.12	1021.04	
GG 9		6095727.33	624210.08	970.02	
GG 10		6096546.92	623852.07	984.69	
GG 11		6096514.02	623892.70	982.38	
GHD 86001		6096557.33	623975.75	953.93	
GHD 86002		6096236.98	623500.76		1095.53
OIP 851		6096059.11	627211.25		
	1747	6096437.77	624107.49		936.69
	1748	6096368.23	624060.92		941.22
	1749	6096399.28	624039.72		942.17

KEY MAP SHOWING TIE TO CONTROL
SCALE: 1:50000

NOTES:

1) Co-ordinates and Bearings are derived from McElhanny Co-ordinates for Stations 851 and 857.
2) Elevations are derived from McElhanny Bench Mark 1003, Elevation = 830.31
3) GG Points are Marked by 0.61 x 0.01 Rebar.

Surveyed:
July 22nd to July 25th, 1986.

T.J.TRYON B.C.L.S.

753

No.	REVISION	DATE
1	Added TH 1747, 1748 And 1749	02/08/89

QUINTETTE COAL LIMITED

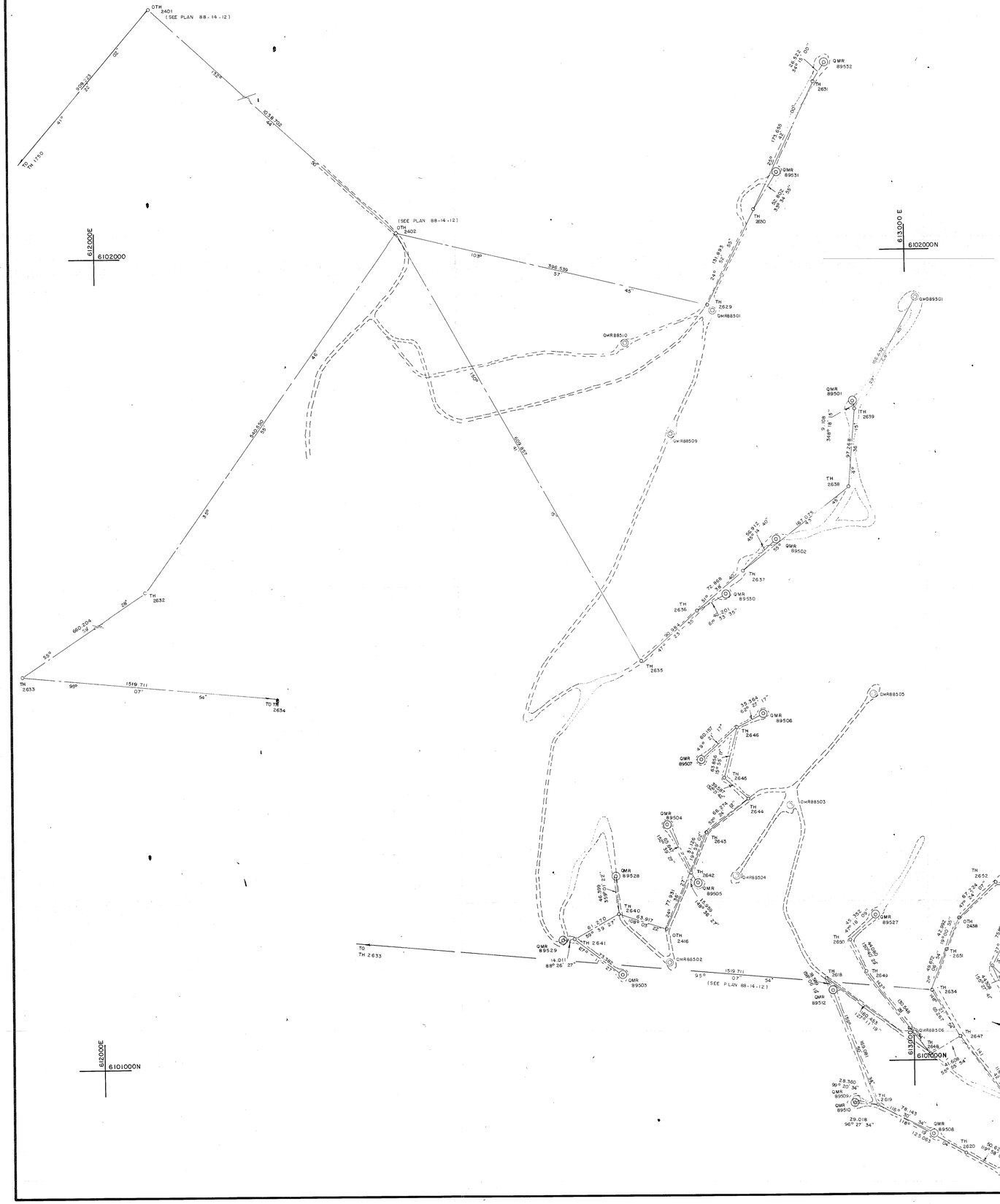
PLAN SHOWING SURVEY CONTROL AND ROTARY DRILL HOLES GRIZZLY AREA

SCALE 1:2500

25 0 25 50 100 METRES

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS
DAWSON CREEK, B.C.

86-905-79-001 Rev1
FILE No. 86-67-5



SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
	2401	6102733.94	611611.88	844.59	
	2402	6102029.17	612374.36	835.74	
	2629	6101933.53	612759.04	865.55	
	2630	6102053.13	612814.51	856.57	
	2631	6102209.55	612889.79	853.77	
	2632	6101591.56	612057.32	851.36	
	2633	6101222.35	611510.29	841.58	
	2634	6101086.47	613023.41	1138.75	
	2635	6101497.60	612672.81	941.27	
	2636	6101559.17	612739.75	950.79	
	2637	6101604.37	612796.87	953.38	
	2638	6101708.01	612927.84	962.42	
	2639	6101804.92	612935.64	958.10	
	2416	6101166.82	612897.25	1016.13	
	2640	6101186.62	612636.51	1001.84	
	2641	6101155.68	612583.65	980.48	
	2642	6101237.65	612729.69	1028.26	
	2643	6101285.67	612747.15	1031.76	
	2644	6101326.09	612799.64	1041.14	
	2645	6101352.75	612770.40	1032.89	
	2646	6101414.14	612787.91	1022.32	
	2618	6101104.57	612895.40	1085.13	
	2619	6100945.91	612953.64	1073.76	
	2620	6100886.61	613063.10	1083.52	
	2649	6101111.13	612943.70	1110.54	
	2650	6101149.54	612922.12	1105.40	
	2647	6101030.92	613057.63	1135.65	
	2648	6101007.62	613023.18	1111.88	
	2651	6101132.78	613041.30	1139.55	
	2438	6101173.40	613055.30	1133.05	
	2652	6101218.89	613104.76	1137.01	
	2653	6101202.57	613170.82	1149.44	
	2654	6101182.30	613133.08	1155.15	
	2655	6101115.28	613097.65	1169.08	
	2656	6101036.50	613180.02	1201.00	
	2657	6101005.62	613218.17	1210.55	
	2658	6100985.15	613258.13	1216.25	
	2659	6100953.47	613299.93	1208.87	
	2660	6100856.06	613492.80	1250.84	
QMR 89501		6101813.84	612933.80	957.87	
QMR 89502		6101644.43	612837.27	947.79	
QMR 89503		6101111.34	612642.05	993.07	
QMR 89504		6101295.93	612699.55	1018.82	
QMR 89505		6101224.03	612738.00	1031.69	
QMR 89506		6101430.48	612819.26	1023.02	
QMR 89507		6101374.97	612742.29	1020.48	
QMR 89508		6100911.04	613023.54	1079.76	
QMR 89509		6100950.51	612925.67	1066.56	
QMR 89510		6100949.17	612924.82	1066.62	
QMR 89511		6100861.33	613107.54	1083.47	
QMR 89512		6101087.33	612902.33	1083.88	
QMR 89513		6100937.81	613131.13	1131.51	
QMR 89522		6100967.97	613255.90	1216.05	
QMR 89526		6101074.99	613116.04	1177.40	
QMR 89527		6101180.28	612955.44	1103.92	
QMR 89528		6101233.00	612635.71	993.85	
QMR 89529		6101155.30	612569.65	975.25	
QMR 89530		6101578.31	612775.09	951.99	
QMR 89531		6102097.10	612843.71	852.63	
QMR 89532		6102231.46	612904.71	851.85	
QMD 89501		6101941.72	613011.93	947.17	
QMD 89502		6101189.97	613205.96	1153.94	
	1750	6102051.69	611011.23	844.57	

SURVEYED : July 24th To July 31st, 1989.

T. J. TRYON BCLS

No.	REVISIONS	DATE

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS WOLVERINE AREA

SCALE 1 : 2500

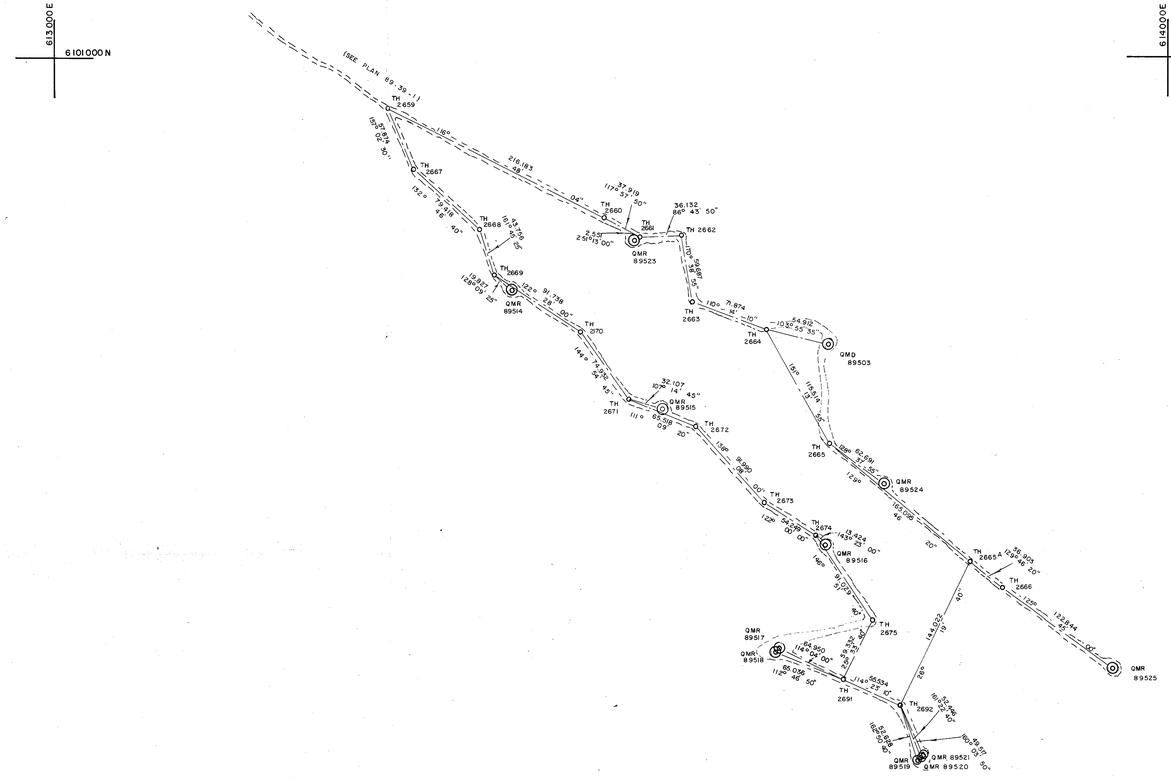
25 0 25 50 100 Metres

89-100-79-001 Rev. 0

753

STABLES, TRYON AND ASSOCIATES
B.C. Land Surveyors Dawson Creek, B.C.

FILE No. 89-39-1



SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
	2659	6100953.47	613299.93	1208.87	
	2660	6100856.06	613492.80	1250.84	
	2661	6100838.29	613526.28	1252.25	
	2662	6100840.35	613562.34	1251.40	
	2663	6100781.48	613572.03	1252.25	
	2664	6100756.63	613639.44	1258.07	
	2665	6100655.42	613695.01	1259.44	
	2665A	6100549.85	613821.84	1270.12	
	2666	6100526.25	613850.20	1274.46	
	2667	6100900.24	613322.48	1196.06	
	2668	6100846.33	613380.74	1189.67	
	2669	6100804.79	613394.44	1185.26	
	2670	6100755.57	613471.80	1196.80	
	2671	6100694.29	613514.86	1198.50	
	2672	6100670.64	613575.93	1201.78	
	2673	6100602.17	613637.30	1216.24	
	2674	6100573.43	613683.29	1221.60	
	2675	6100497.24	613733.03	1210.50	
	2691	6100443.74	613707.44	1223.93	
	2692	6100420.82	613758.00	1232.95	
QMD 89503		6100743.42	613692.71	1261.44	
QMR 89514		6100792.55	613410.02	1188.16	
QMR 89515		6100684.76	613545.51	1202.09	
QMR 89516		6100562.66	613691.29	1221.61	
QMR 89517		6100470.22	613648.16	1215.72	
QMR 89518		6100468.91	613647.50	1215.88	
QMR 89519		6100370.56	613773.52	1243.32	
QMR 89520		6100371.14	613774.74	1242.81	
QMR 89521		6100374.29	613774.87	1242.69	
QMR 89523		6100837.47	613523.87	1252.46	
QMR 89524		6100616.30	613743.96	1264.72	
QMR 89525		6100454.51	613949.85	1285.64	

SURVEYED : July 24th, To July 31st, 1989

T.J.TRYON B.C.L.S.

No.	REVISIONS	DATE

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS WOLVERINE AREA

SCALE 1 : 2500

25 0 25 50 100 Metres

89-100-79-002 Rev.02

753

STABLES, TRYON AND ASSOCIATES
B.C. Land Surveyors Dawson Creek, B.C.

FILE No. 89-39-2

Quintette Coal Ltd.
1989 Geological Report
Drill core Analyses

753

The 222 pages following this page contain coal quality data and remain confidential under the terms of the *Coal Act Regulation*, Section 2(1). They have been removed from the public version.

http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/10_251_2004

Addendum I

PART 1 OF 2

1989 TRANSFER AREA

DRILL HOLE GEOPHYSICAL LOGS

(Copy 2 of 2)

753

TRANSFER AREA

DIAMOND DRILL HOLES

Century

QHD89001 GAM-DEN-RES-CAL

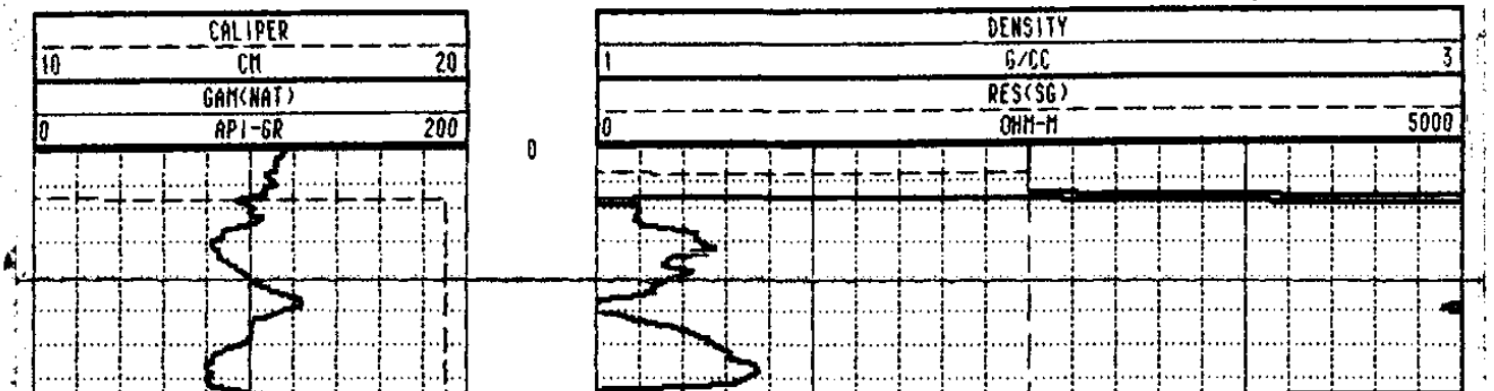
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHD89001 GAM-DEN-RES-CAL				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/02/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 311	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 308.66	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -.30	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 9	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

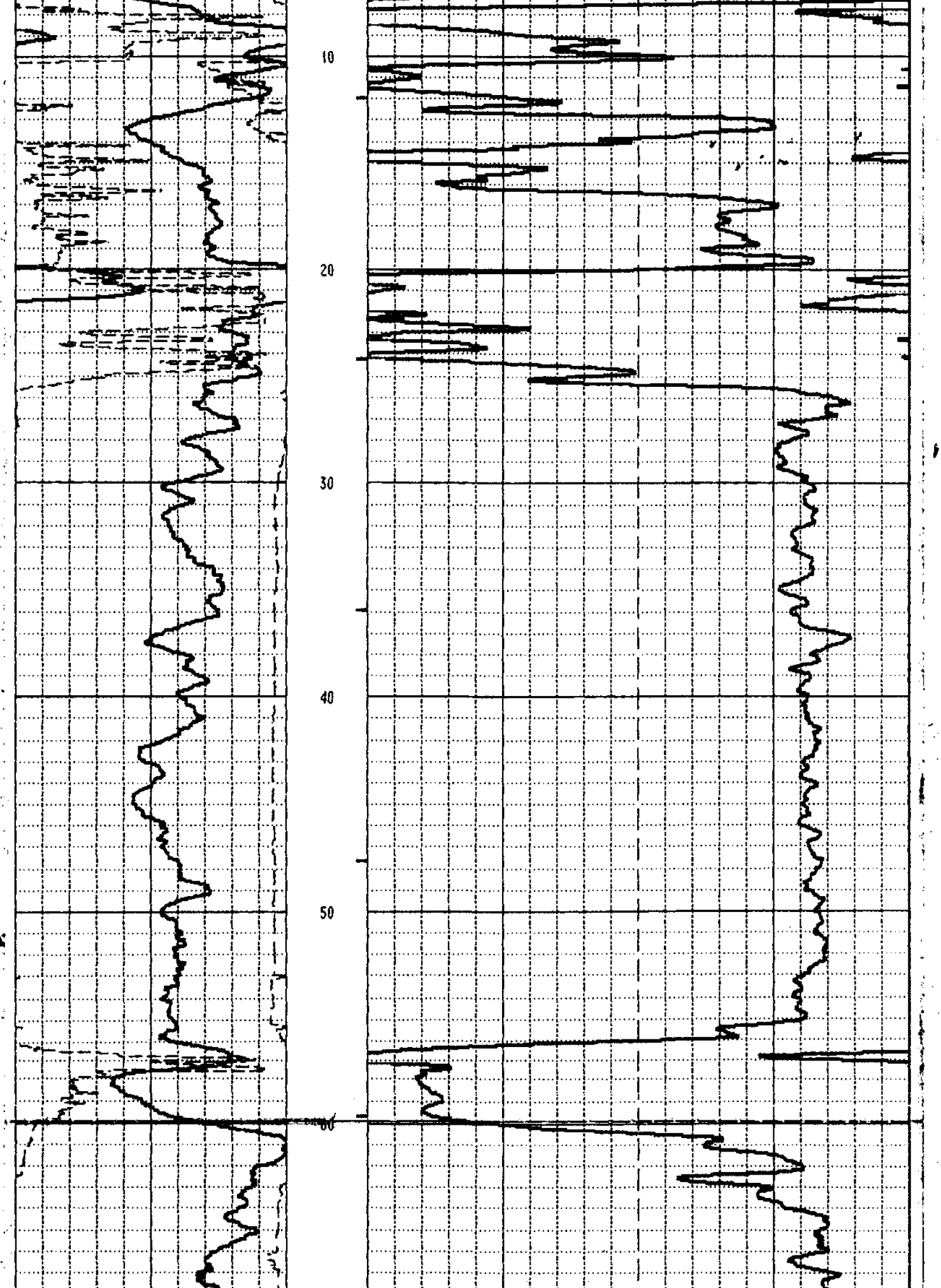
REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE

OTHER SERVICES:
SCALE
1:200

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753

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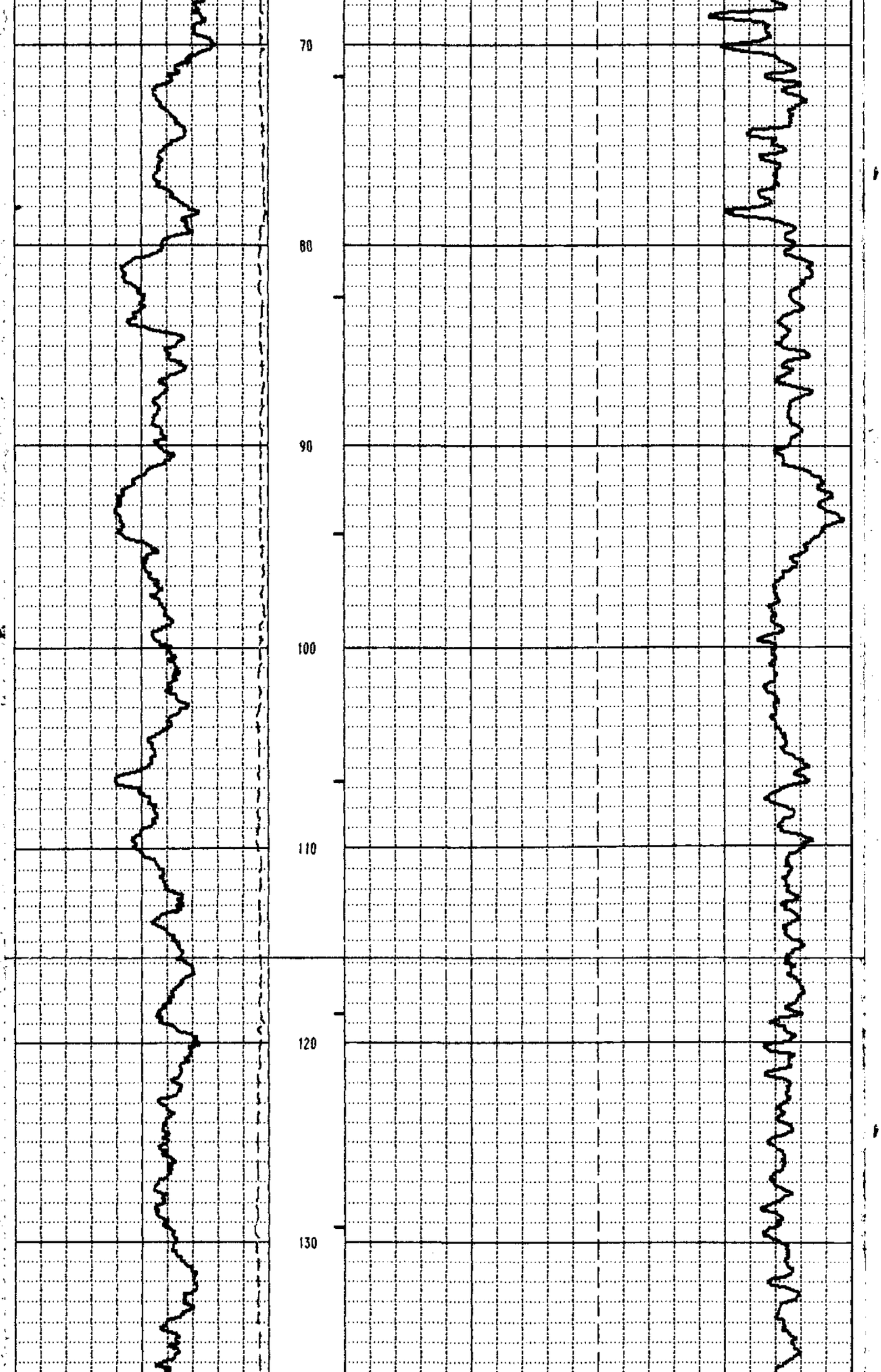
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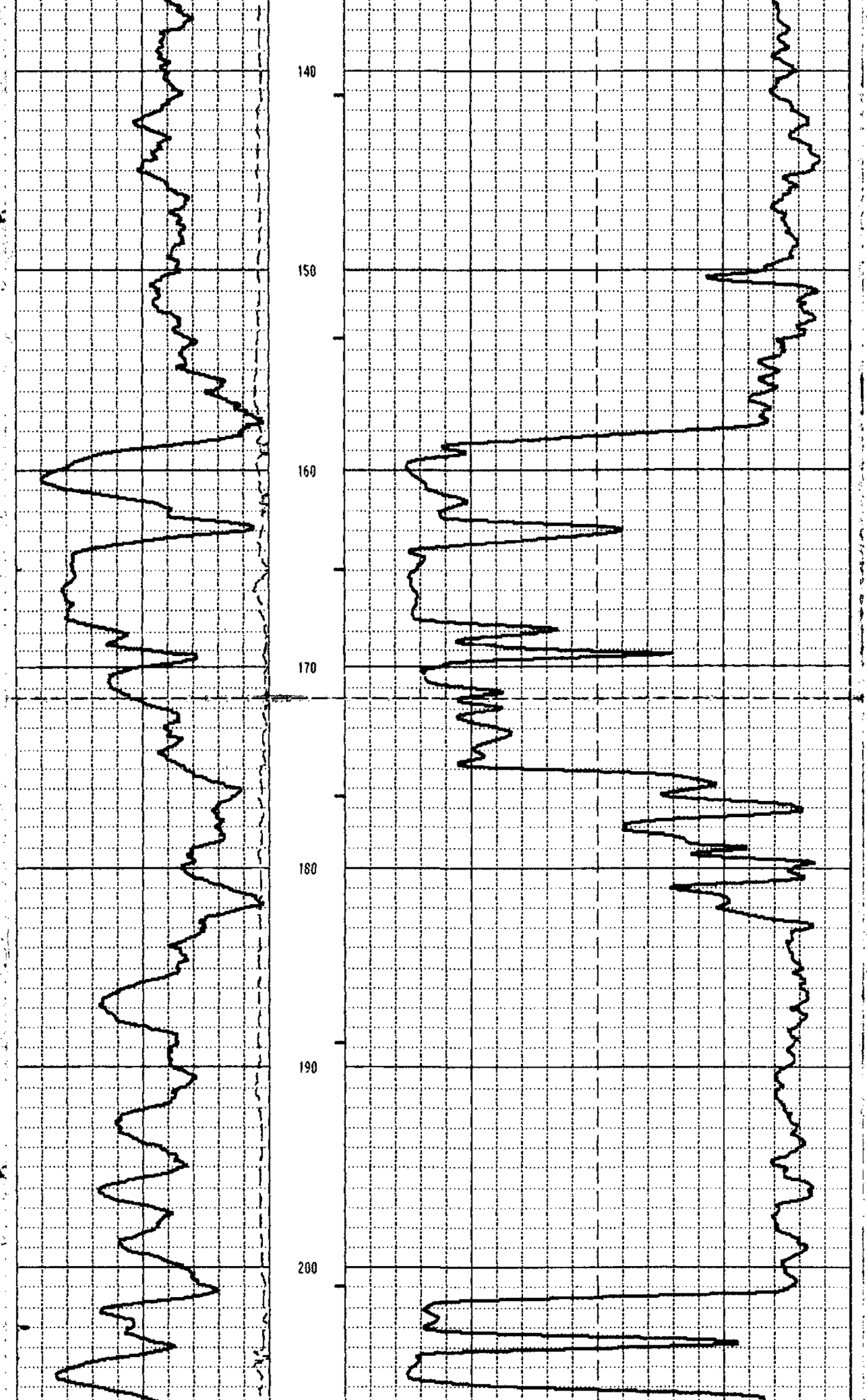
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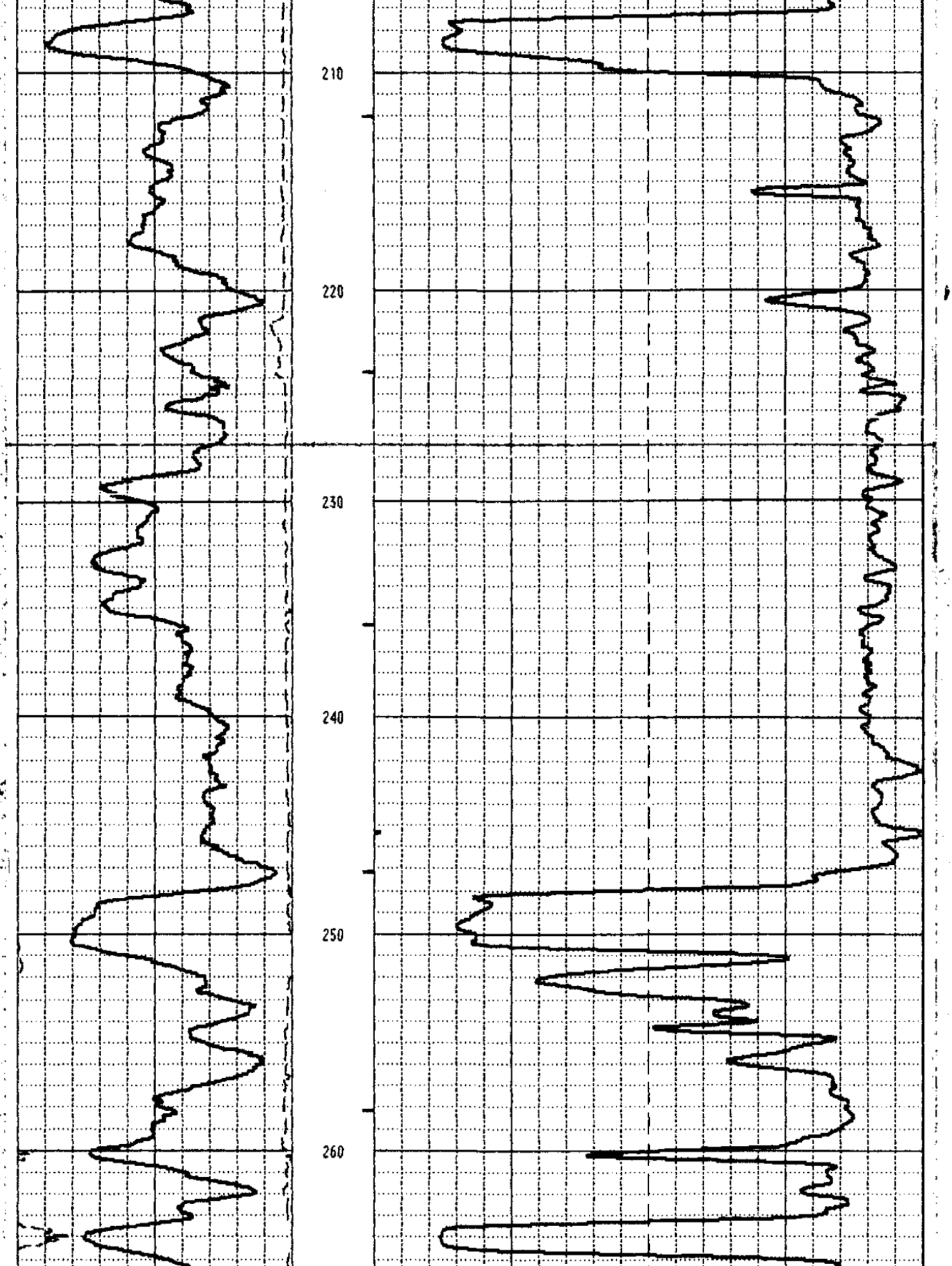
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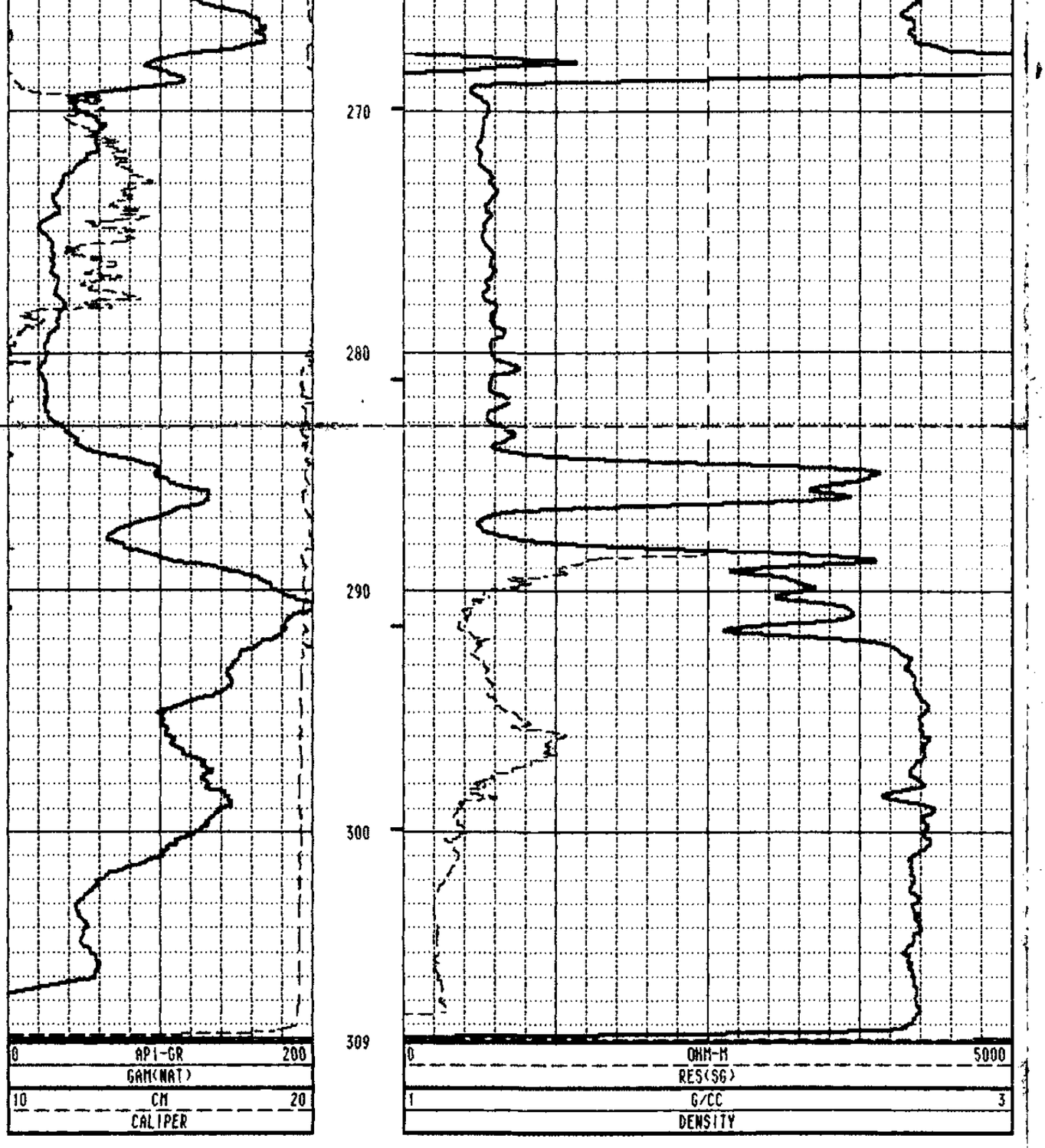
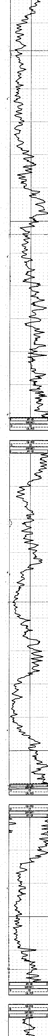
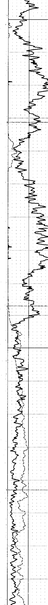


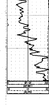
TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

753







CGC Century

QHD89001 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHD89001 GAMMA-NEUTRON				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/02/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 311	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 309.10	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.30	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 9	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

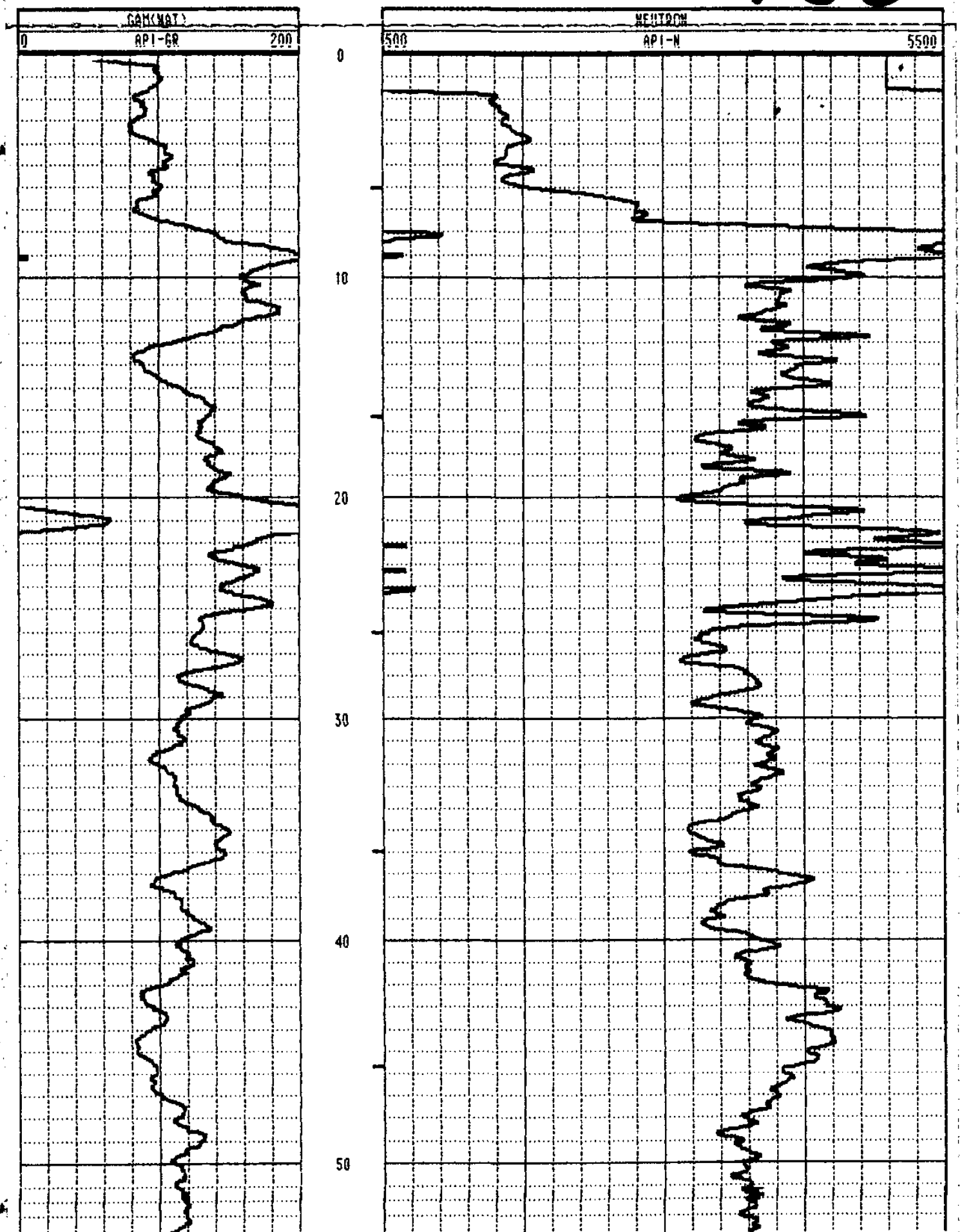
OTHER SERVICES:

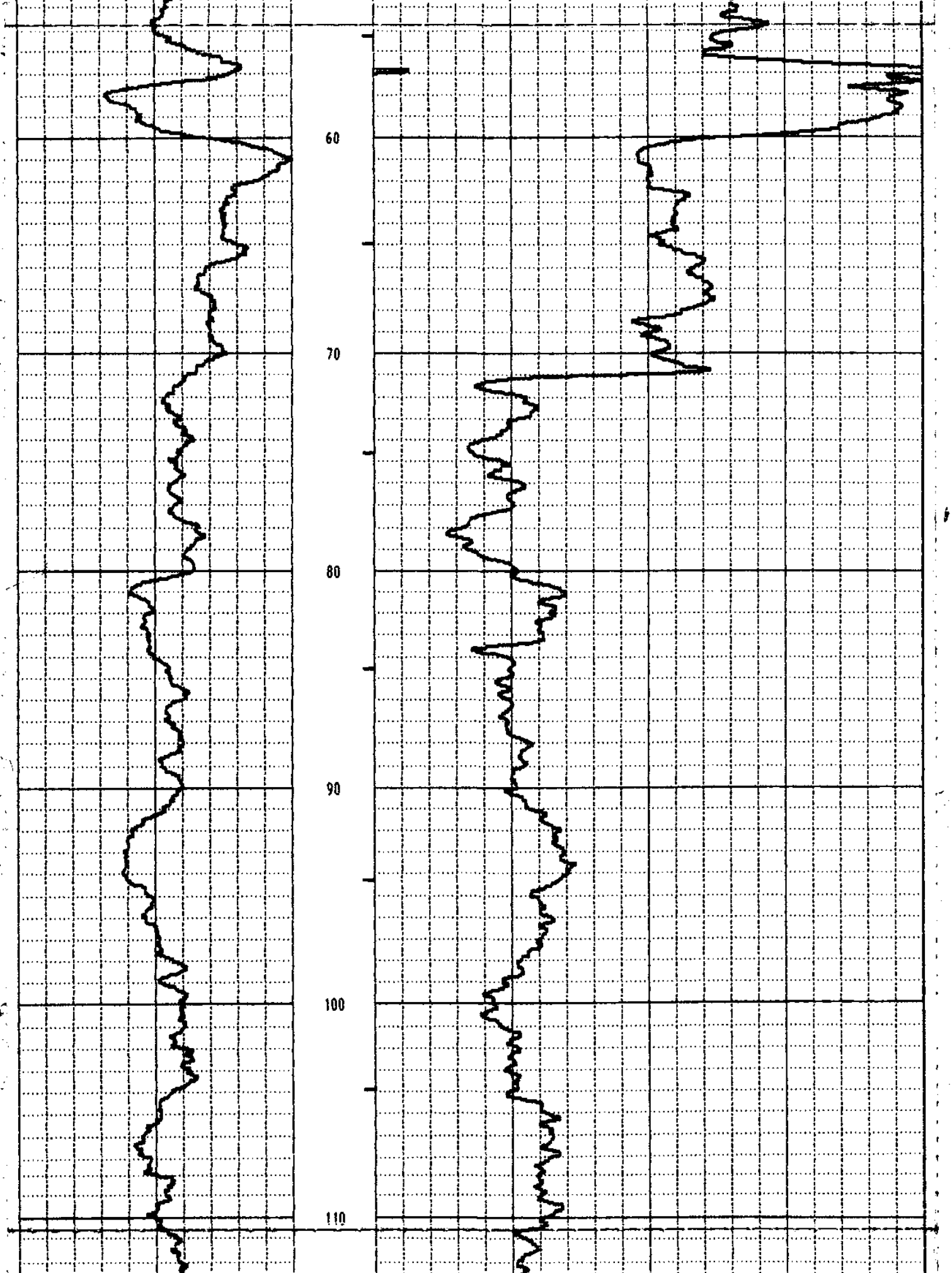
SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753

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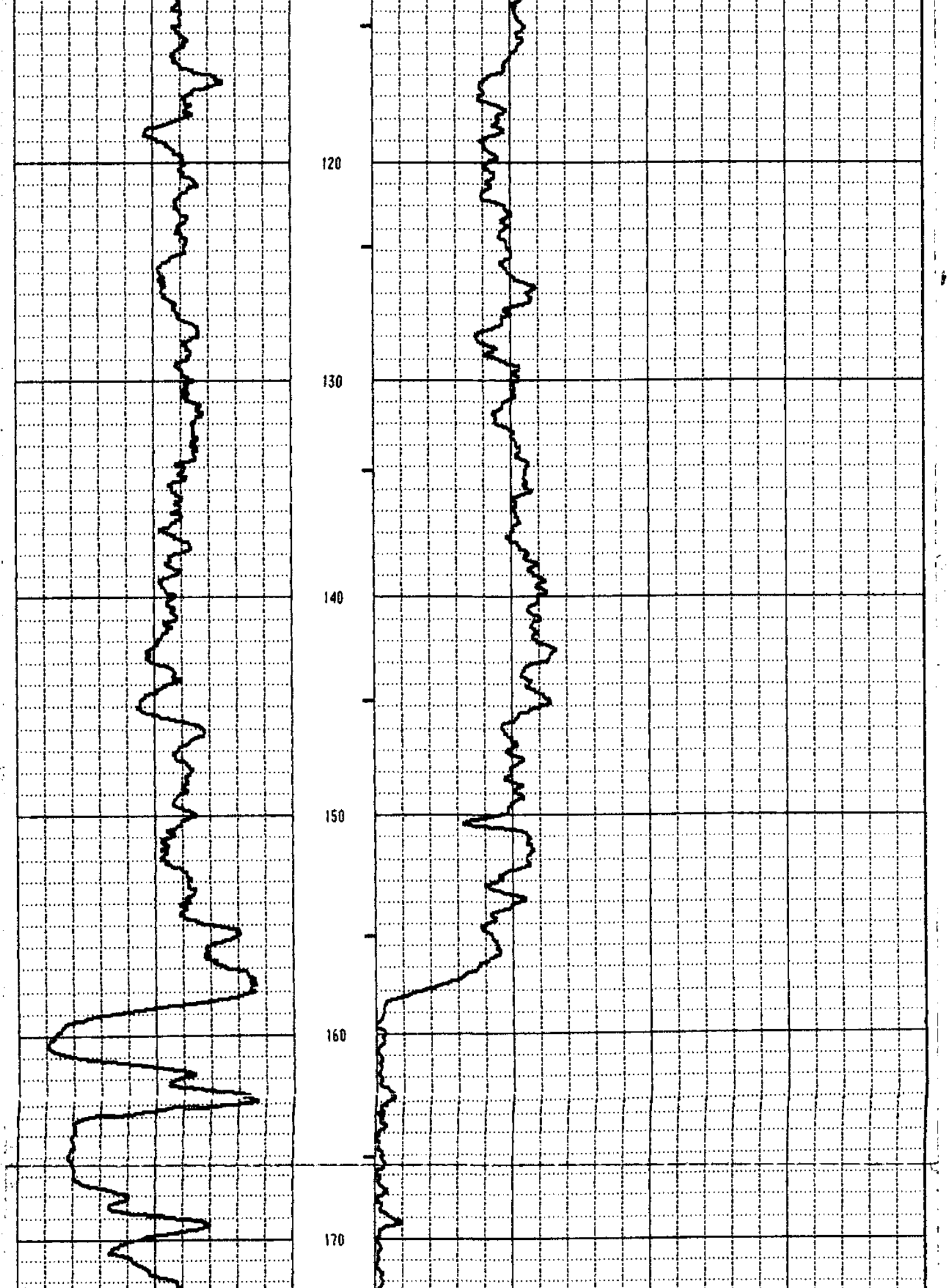
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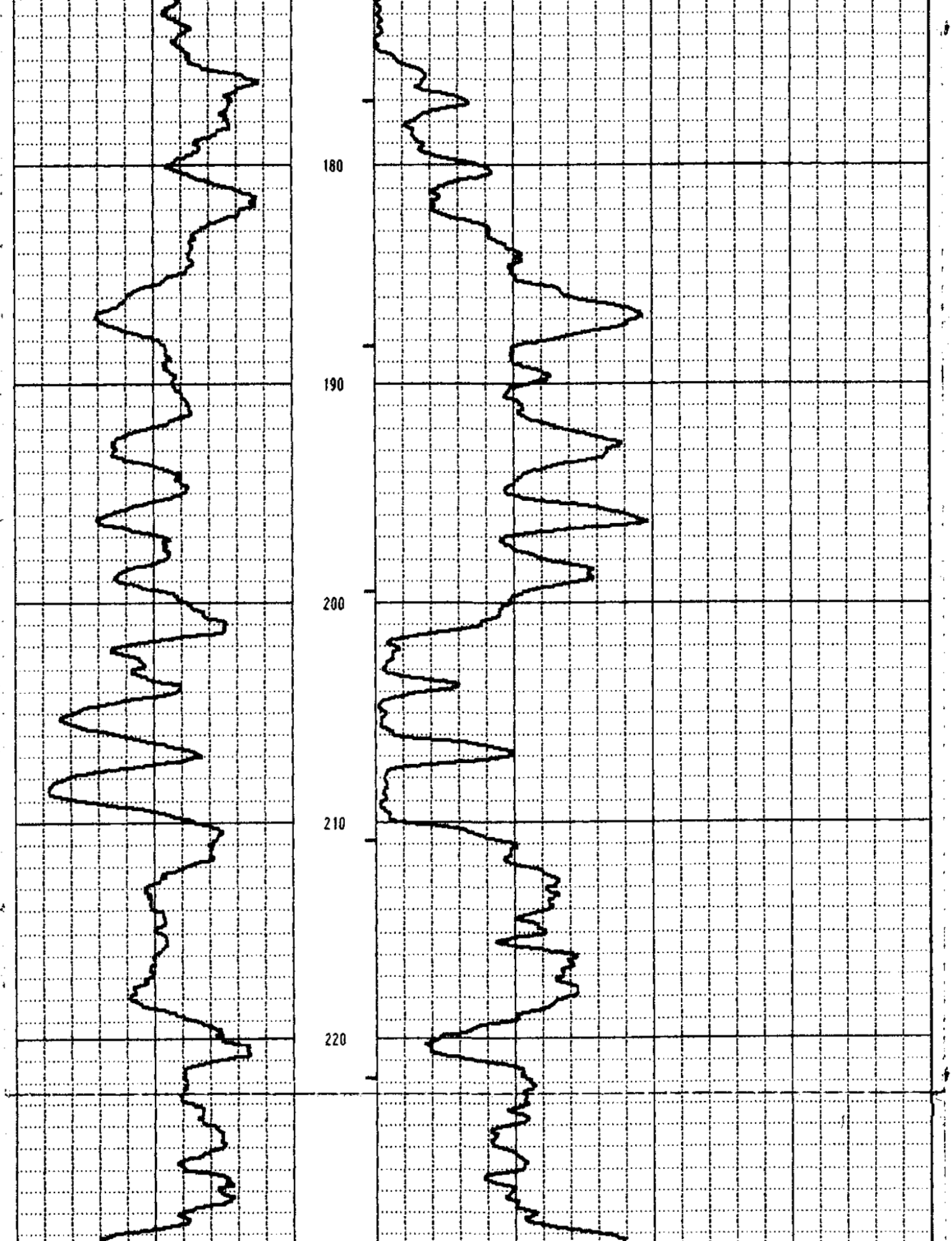
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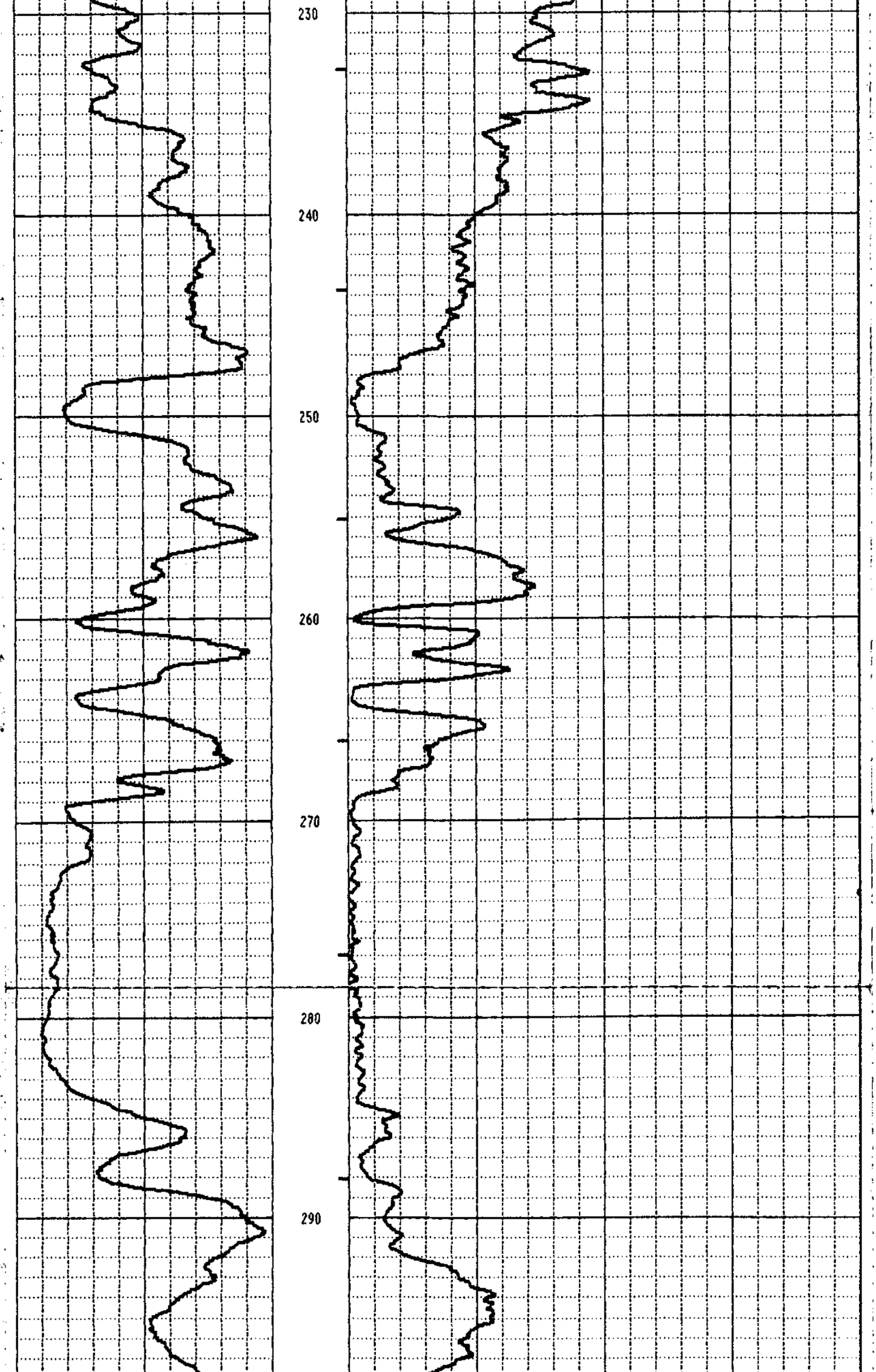
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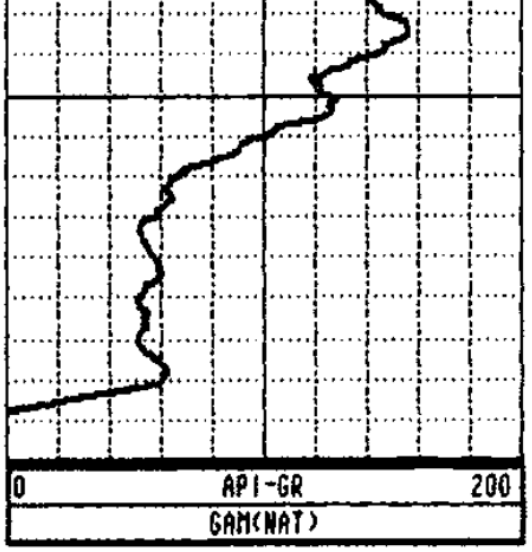

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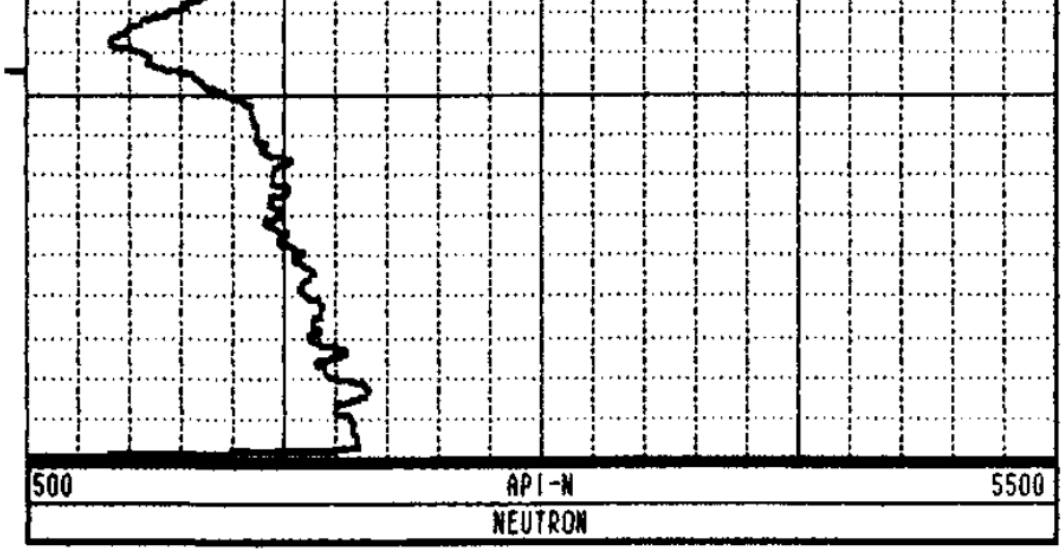

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
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1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

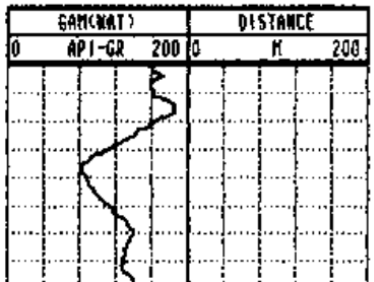
QHD89001 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHD89001 DEVIATION			SCALE 1:200	
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/03/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 311	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 309.10	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.30	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 9	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



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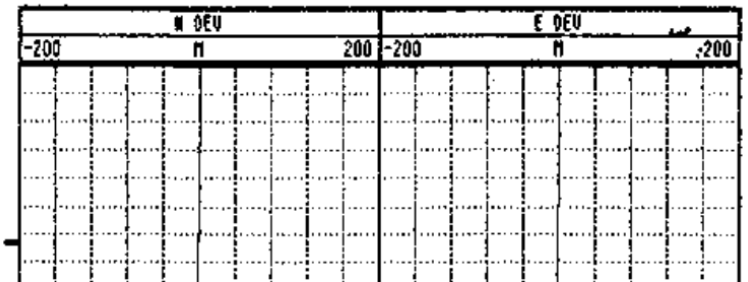

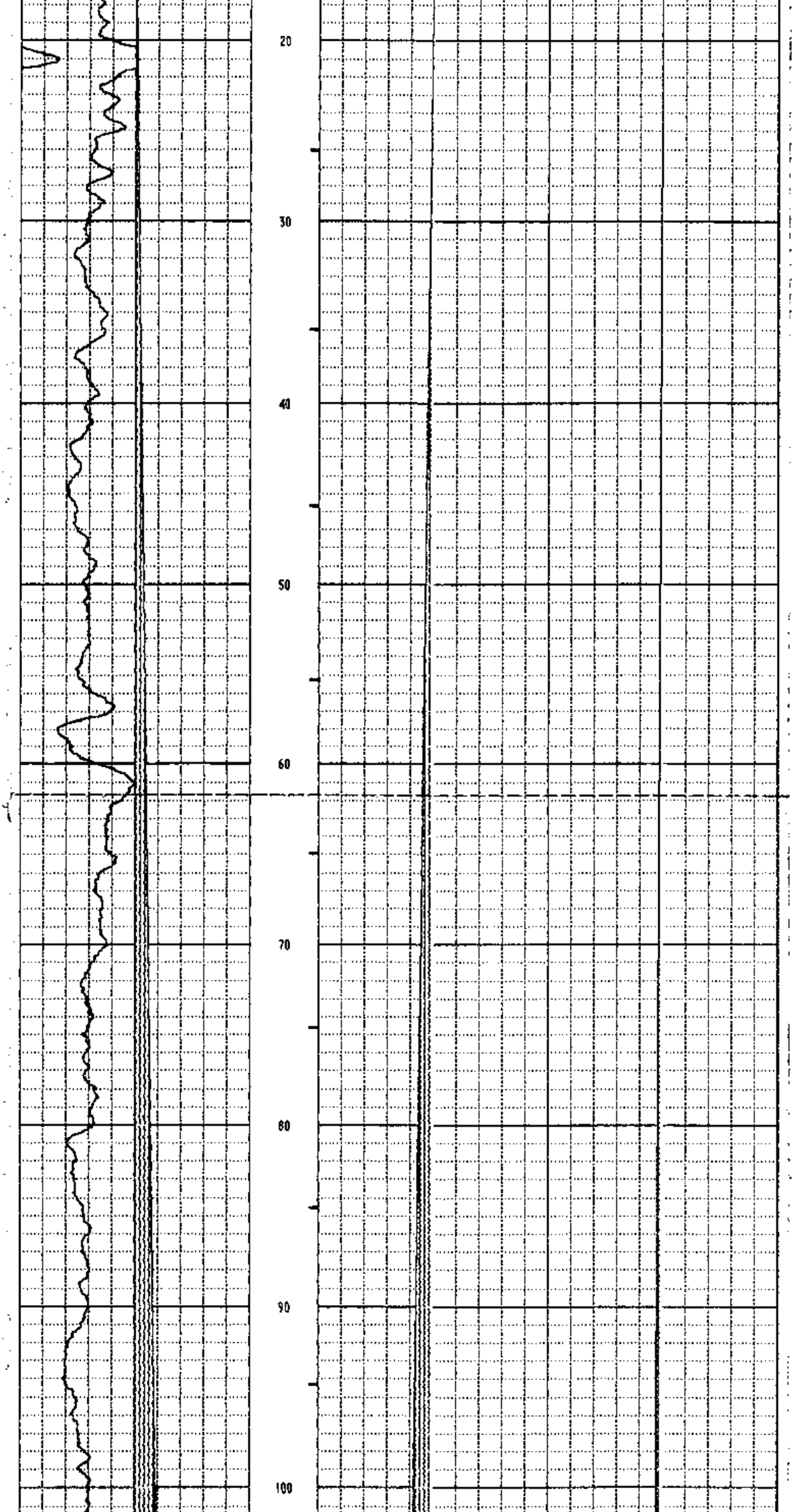
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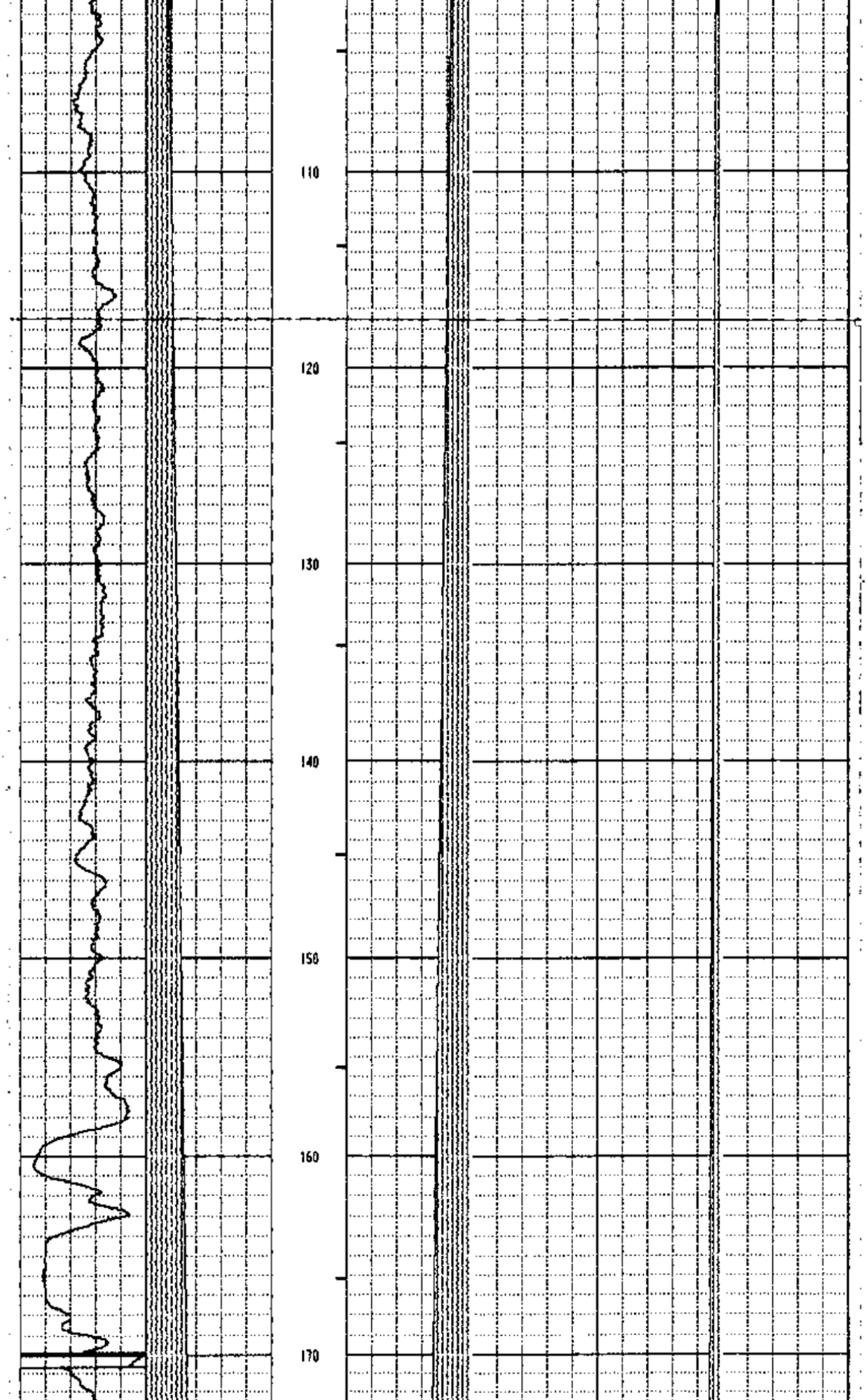
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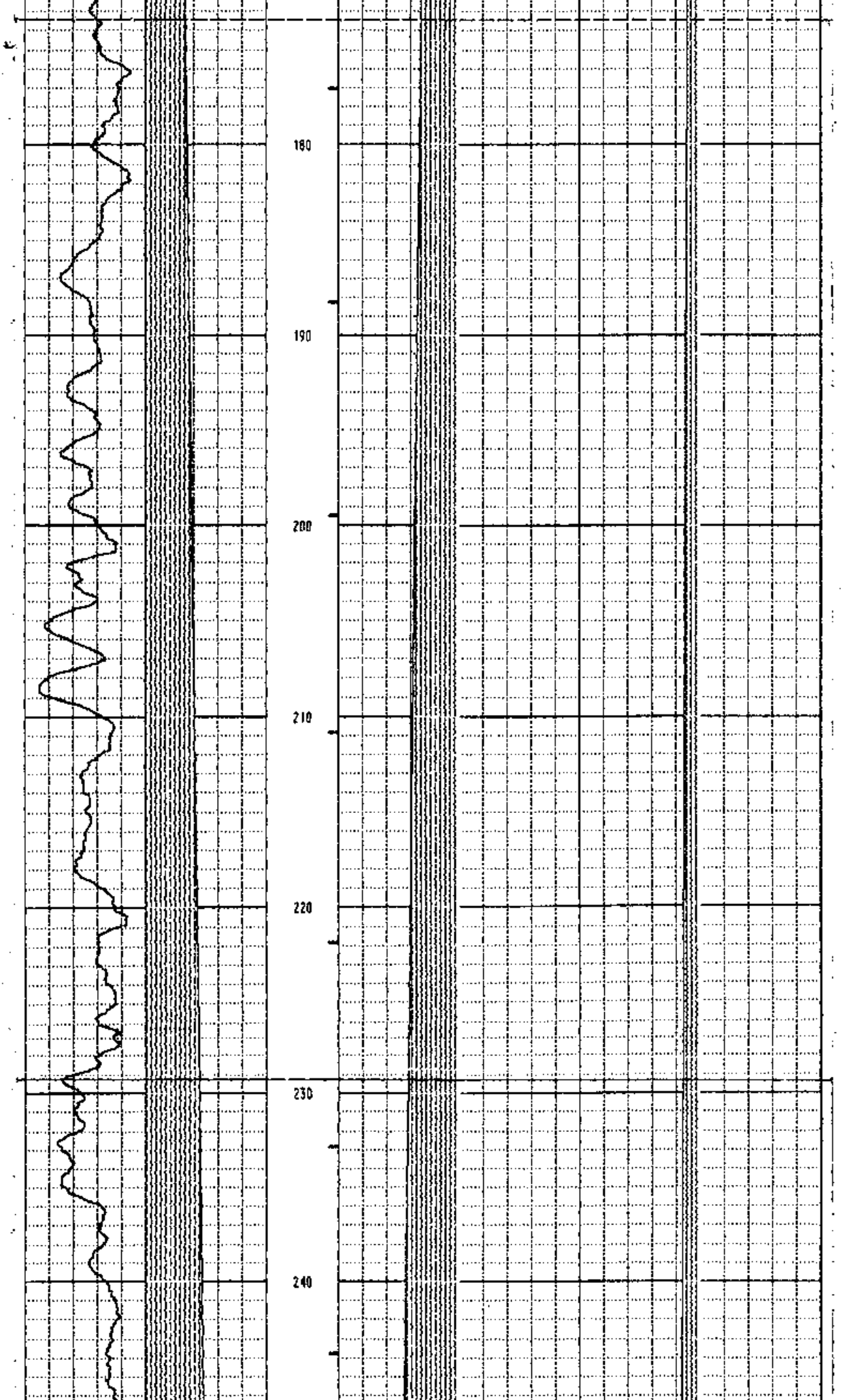
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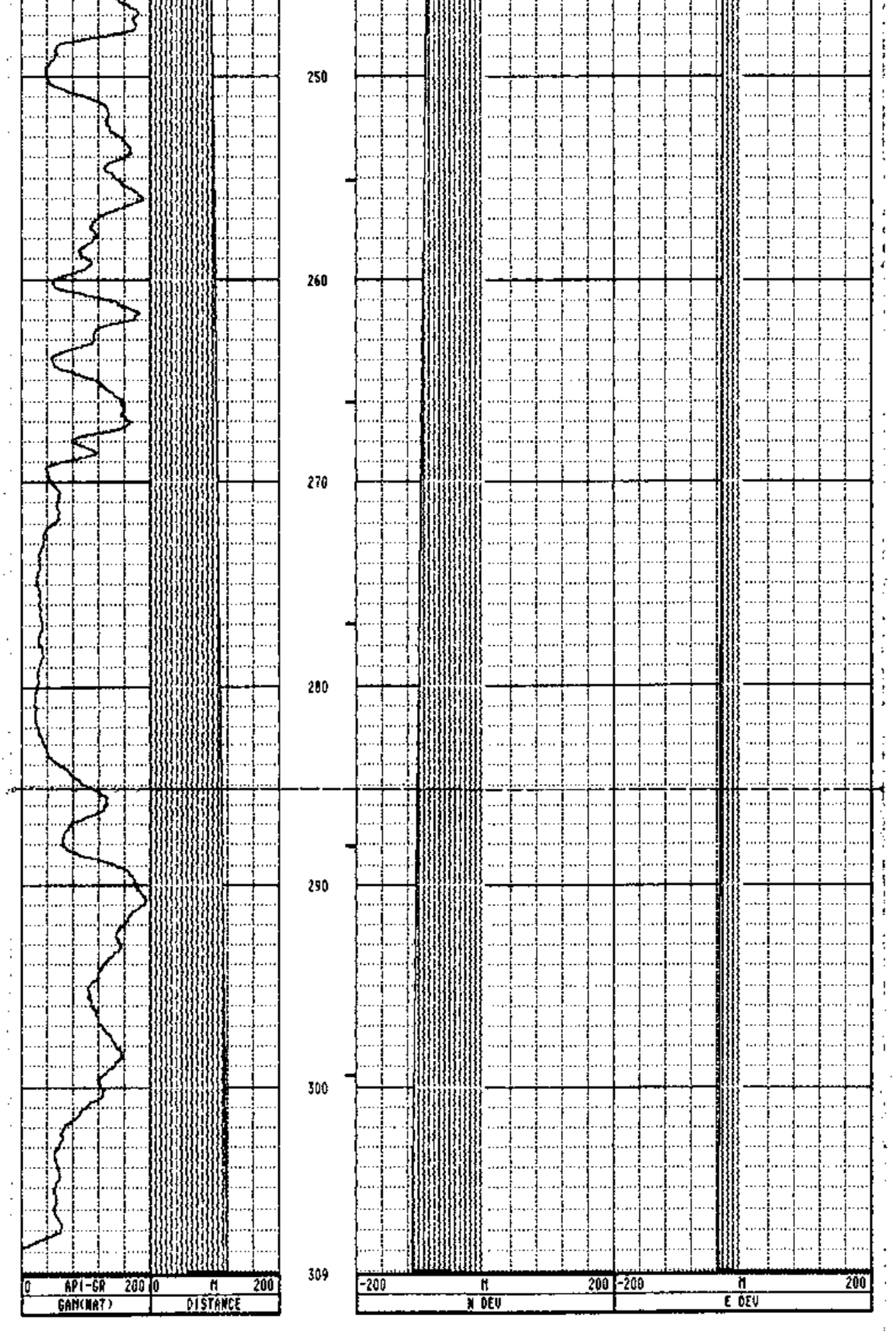


TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : DHD89001 BAMM
FIELD OFFICE : CALGARY DATE OF LOG : 06/03/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 1

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANB	SANBB
10.0	9.29	1.66	0.08	1.7	2.9	24.3	197.3
20.0	18.41	-2.10	-1.23	2.4	210.3	24.5	198.8
30.0	27.47	-5.84	-2.22	6.2	200.8	25.0	201.5
40.0	36.54	-9.88	-3.44	10.5	199.2	24.9	197.8
50.0	45.61	-13.90	-4.66	14.7	198.5	24.8	197.6
60.0	54.69	-17.83	-5.87	18.8	198.2	24.6	199.9
70.0	63.76	-21.71	-7.20	22.9	198.3	24.8	198.9
80.0	72.85	-25.66	-8.51	27.0	198.3	24.9	199.6
90.0	81.93	-29.62	-9.81	31.2	198.3	25.1	197.8
100.0	91.01	-33.61	-11.06	35.4	198.2	25.1	195.0
110.0	100.09	-37.59	-12.37	39.6	198.2	24.7	198.2
120.0	109.16	-41.56	-13.70	43.8	198.2	24.7	196.0
130.0	118.24	-45.50	-15.15	48.0	198.4	24.3	198.9
140.0	127.31	-49.47	-16.54	52.2	198.5	25.0	200.3
150.0	136.38	-53.43	-17.95	56.4	198.6	24.6	197.2
160.0	145.45	-57.40	-19.32	60.6	198.6	24.8	204.0
170.0	154.54	-61.26	-20.70	64.7	198.7	24.4	191.3
180.0	163.62	-65.16	-22.09	68.8	198.7	25.0	199.1
190.0	172.70	-69.05	-23.49	72.9	198.8	24.7	199.9
200.0	181.80	-72.95	-24.88	77.1	198.8	24.4	199.0
210.0	190.91	-76.83	-26.14	81.2	198.8	23.7	207.6
220.0	200.05	-80.68	-27.42	85.2	198.8	23.8	194.6
230.0	209.22	-84.49	-28.61	89.2	198.7	23.4	198.7
240.0	218.39	-88.28	-29.75	93.2	198.6	23.1	192.2
250.0	227.58	-92.05	-30.90	97.1	198.6	23.2	196.2
260.0	236.79	-95.79	-32.00	101.0	198.5	22.8	195.3
270.0	246.03	-99.42	-33.08	104.8	198.4	22.0	189.5
280.0	255.26	-103.02	-34.18	108.5	198.4	22.7	194.9
290.0	264.50	-106.57	-35.25	112.2	198.3	22.6	204.4
300.0	273.75	-110.17	-36.36	116.0	198.3	22.4	190.3
309.1	282.17	-113.47	-37.30	119.4	198.2	0.0	0.0

Century

QHD89002 GAMMA-DENSITY

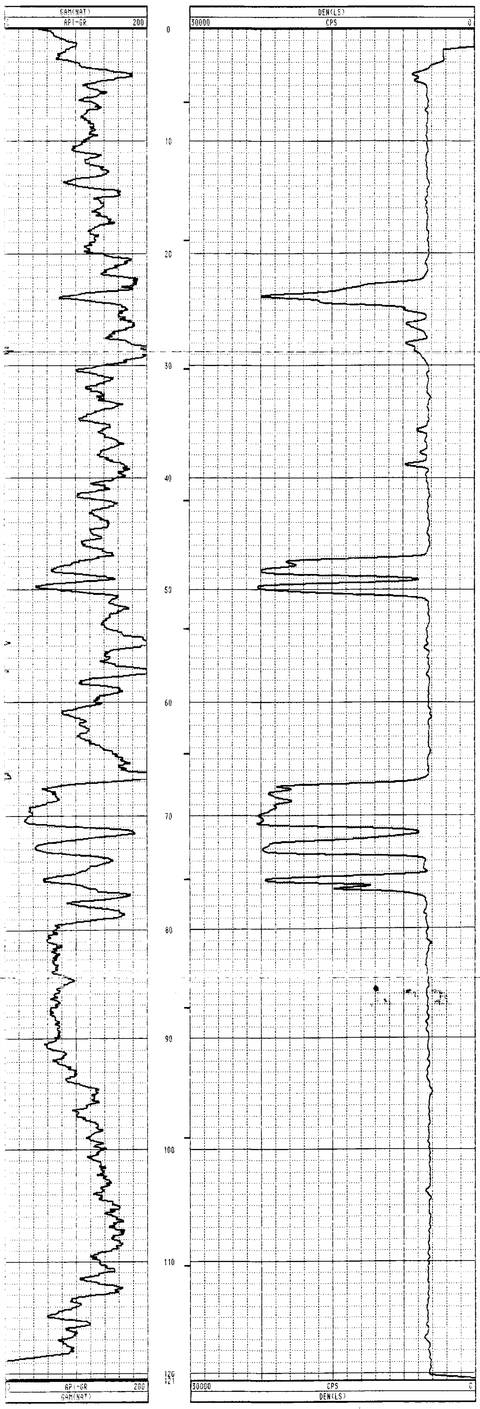
COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHD89002 GAMMA-DENSITY	OTHER SERVICES:	
LOCATION/FIELD	:		
COUNTY	: TRANSFER	SCALE	
STATE	: BRITISH COLUMBIA	1:200	
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 06/06/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 120	ELEV. PERM. DATUM: 00		KB	: 00
LOG BOTTOM	: 120.62	LOG MEASURED FROM: GL		DF	: 00
LOG TOP	: 0.00	DRL MEASURED FROM: GL		GL	: 00
CASING DRILLER	: 18	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZAHKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9069A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIK II
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	50000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9069A SERIAL NUMBER = 1029

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	12:56:21	0	GAMMA(*)	0.000 CPS	0.000 API-GR
1	05/04/89	12:57:04	0	GAMMA(*)	0.000 CPS	0.000 API-GR

Century

QHD89002 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHD89002 EXP DENSITY				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:2	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/06/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 120	ELEV. PERM. DATUM:	GD	KB	: 00
LOG BOTTOM	: 120.62	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 0.00	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 18	LOGGING UNIT	: 3902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9069A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 0IN 1S
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 620	THRESH:	50000
REMARKS	:				
LOGGED OPEN HOLE					
ANGLE HOLE					

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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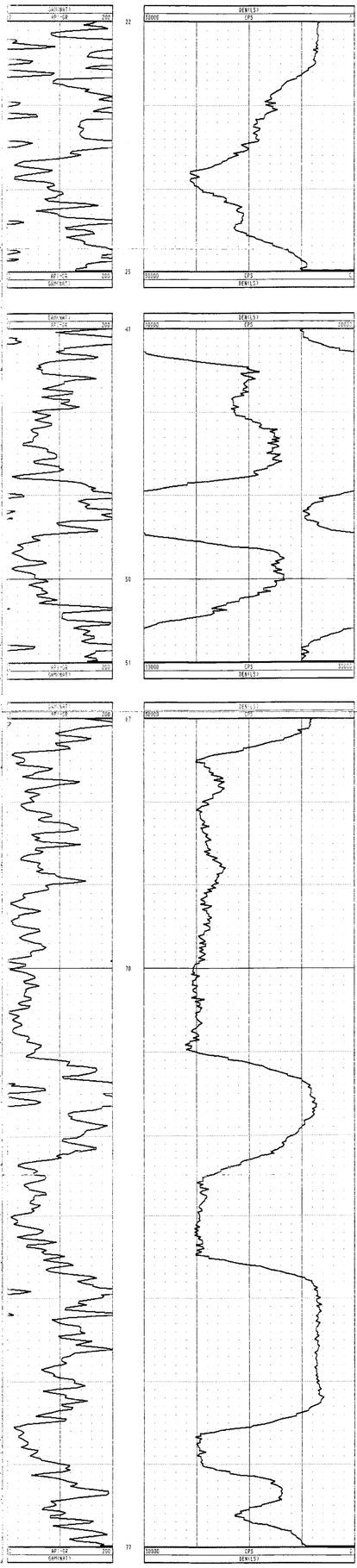

QHD89002 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHD89002 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/04/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 120	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 120.68	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 5.54	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 22	LOGGING UNIT	: 8903		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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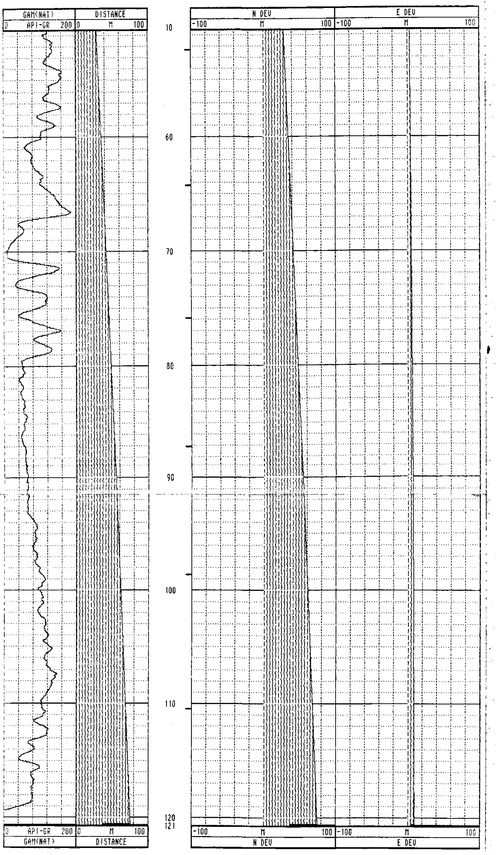

TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHD89002 DEVI
FIELD OFFICE : CALGARY DATE OF LOG : 06/04/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG I

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.0	9.25	1.95	0.16	2.0	4.6	41.7	6.2
15.0	12.98	5.26	0.57	5.3	6.2	41.7	7.2
20.0	16.72	8.55	1.02	8.6	6.8	41.7	8.3
25.0	20.46	11.84	1.49	11.9	7.2	41.5	9.2
30.0	24.19	15.12	1.97	15.2	7.4	41.7	8.0
35.0	27.93	18.41	2.45	18.6	7.6	41.6	8.9
40.0	31.67	21.70	2.93	21.9	7.7	41.6	7.3
45.0	35.41	24.98	3.39	25.2	7.7	41.5	6.3
50.0	39.15	28.26	3.84	28.5	7.7	41.5	9.0
55.0	42.90	31.55	4.27	31.8	7.7	41.5	7.3
60.0	46.64	34.84	4.71	35.2	7.7	41.4	7.0
65.0	50.38	38.12	5.14	38.5	7.7	41.5	6.9
70.0	54.12	41.42	5.54	41.8	7.6	41.6	7.5
75.0	57.87	44.70	5.93	45.1	7.6	41.7	7.0
80.0	61.61	47.98	6.37	48.4	7.6	41.3	8.7
85.0	65.27	51.26	6.75	51.7	7.5	40.9	5.8
90.0	69.13	54.54	7.11	55.0	7.4	41.2	4.2
95.0	72.89	57.81	7.50	58.3	7.4	41.2	5.8
100.0	76.66	61.08	7.85	61.6	7.3	41.0	6.0
105.0	80.43	64.34	8.19	64.9	7.3	41.1	5.3
110.0	84.20	67.61	8.54	68.1	7.2	41.0	6.2
115.0	87.96	70.88	8.84	71.4	7.1	41.2	4.4
120.0	91.73	74.14	9.15	74.7	7.0	41.0	3.1
120.7	92.26	74.54	9.20	75.1	7.0	0.0	0.0

QHD89002 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHD89002 GAMMA-NEUTRON		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 06/03/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 120	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 120.68	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 5.54	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 22	LOGGING UNIT	: 8903		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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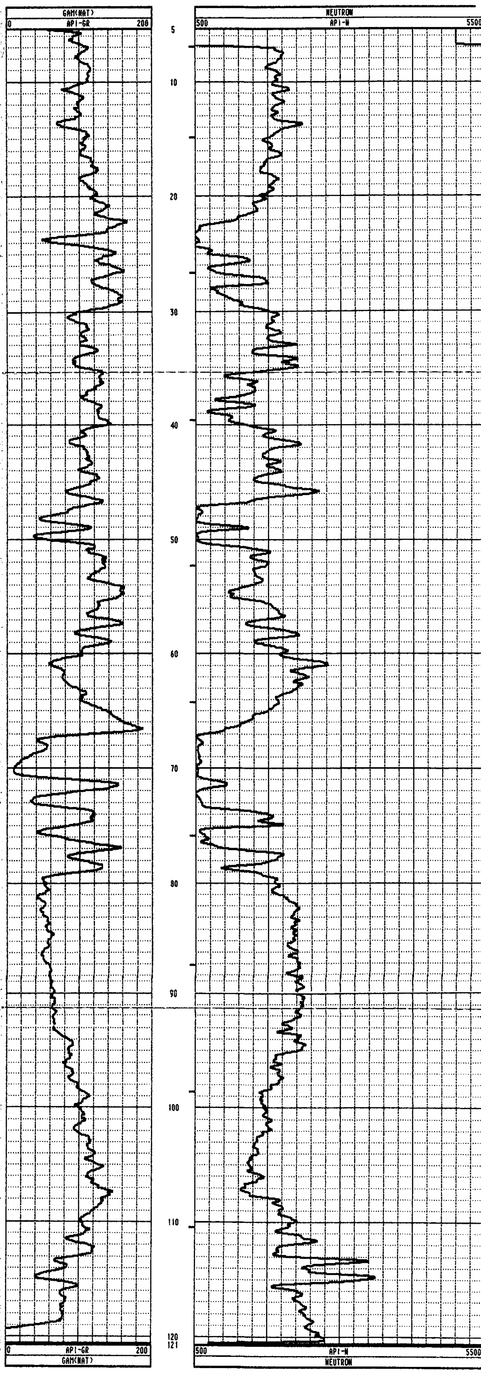

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:56	0	GAM(BAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(BAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

TRANSFER AREA

ROTARY DRILL HOLES

Century

QHR-89001 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89001 GAMMA-NEUTRON				
LOCATION/FIELD	: SL26300/BL21750			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/13/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 122	ELEV. PERM. DATUM	: GD	KB	: 00
LOG BOTTOM	: 119.70	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.04	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 3.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D. ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9067A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED THROUGH RODS

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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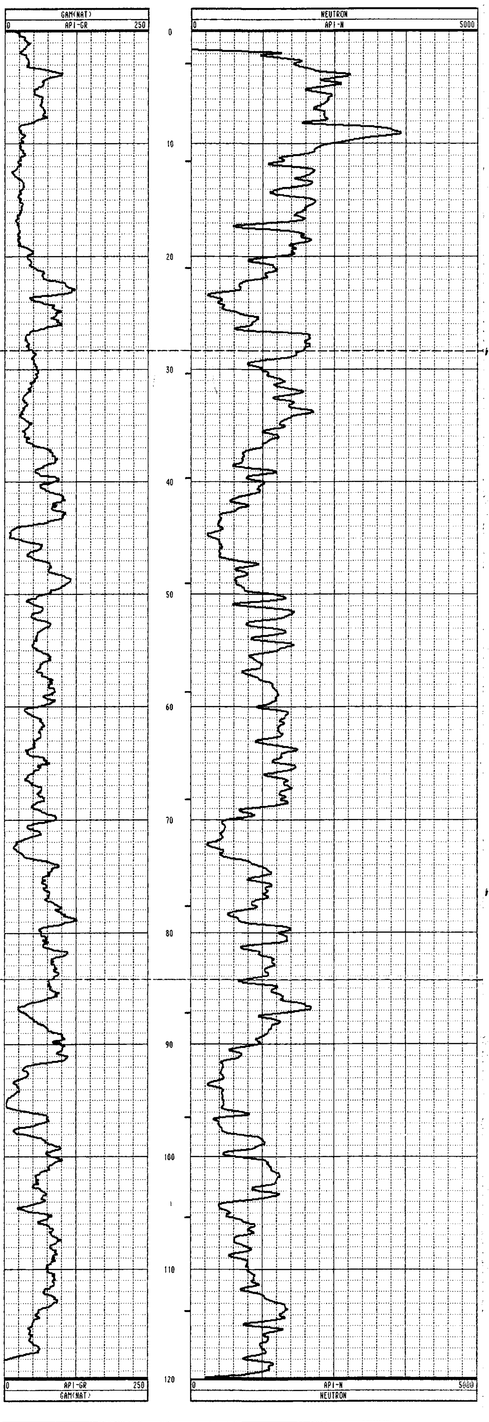


TOOL CALIBRATION TOOL : 9067A SERIAL NUMBER : 515

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	13:32:05	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	13:32:05	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/04/89	13:32:05	0	NEUTRON	0.000 CPS	0.000 API-N
3	05/04/89	13:36:12	0	NEUTRON	205.000 CPS	271.000 API-N

Century

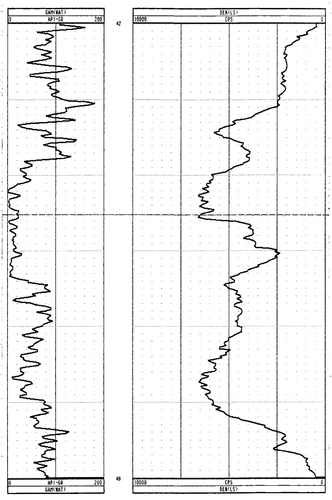
QHR-89001 EXP DENSITY

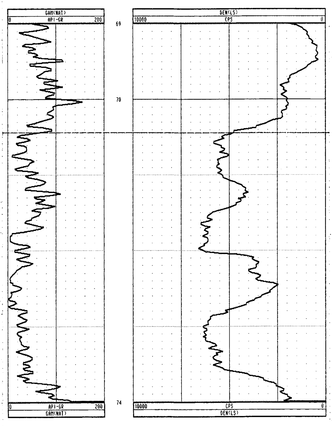
COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89001 EXP DENSITY				
LOCATION/FIELD	: SL26300/BL21350			SCALE	
COUNTY	: TRANSFER			1:120	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 05/13/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 122	ELEV. PERM. DATUM:	GD	KB : 00	
LOG BOTTOM	: 120.00	LOG MEASURED FROM:	GL	DF : 00	
LOG TOP	: -.40	DRL MEASURED FROM:	GL	GL : 00	
CASING DRILLER	: 3.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D. JANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 90674
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: D
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 15
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000
REMARKS	:				

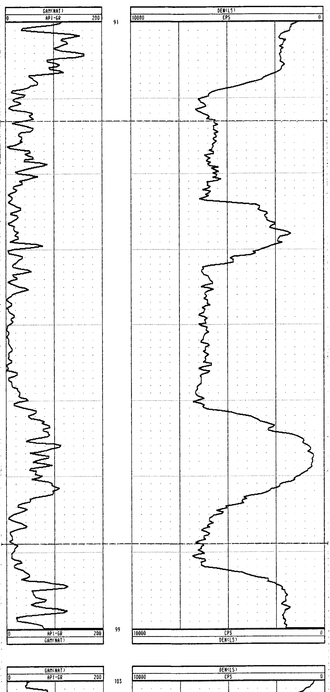
LOGGED THROUGH RODS - DRILL PIPE JOINTS CAUSE DENSITY SPIKES EVERY 3.05 METERS

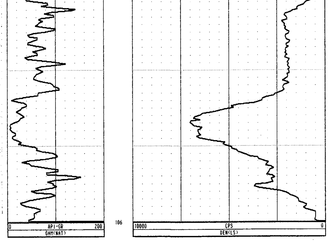
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753









Century

QHR-89001 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89001 GAMMA-DENSITY				
LOCATION/FIELD	: SL26300/BL21750			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/13/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 122	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 120.00	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -.40	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 3.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D. ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9067A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 11
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000
REMARKS	:				

LOGGED THROUGH RODS

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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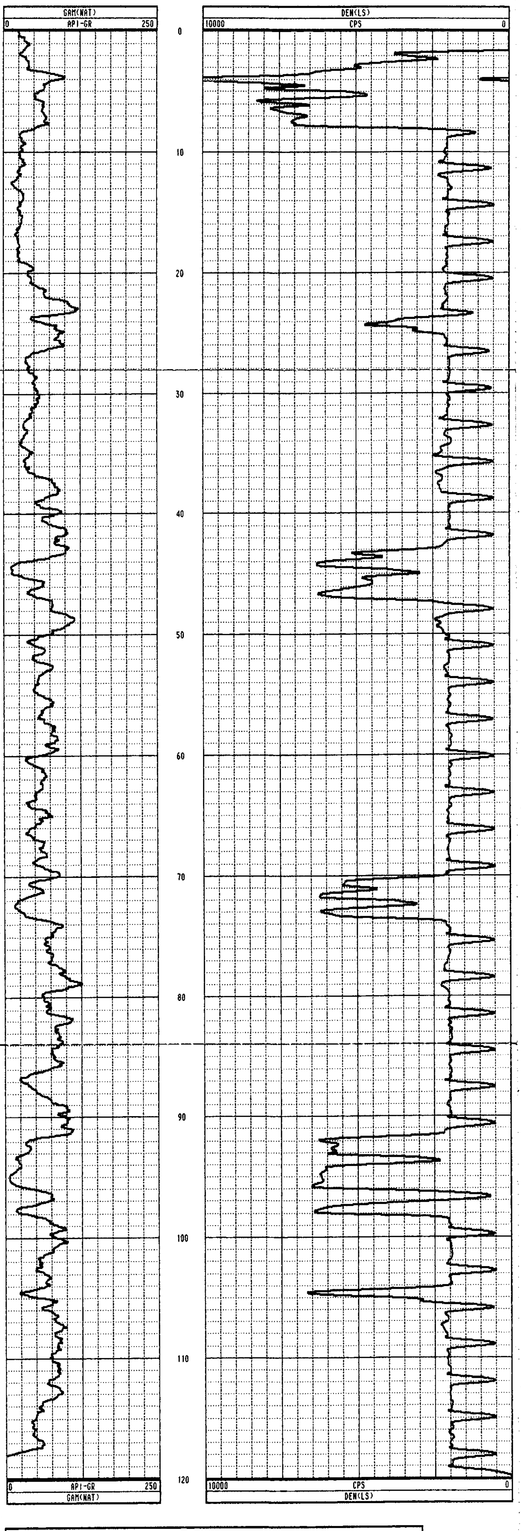

TOOL CALIBRATION TOOL = 9067A SERIAL NUMBER = 513

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	13:52:05	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	13:52:05	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	13:52:05	0	NEUTRON	0.000 CPS	0.000 API-N
3	05/04/89	13:56:12	0	NEUTRON	205.000 CPS	271.000 API-N

Century

QHR-89002 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR-89002 EXP DENSITY		
LOCATION/FIELD	: SL263500/BL21750	SCALE	
COUNTY	: TRANSFER	1:120	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 05/14/89	PERMANENT DATUM : GD	ELEVATIONS
DEPTH DRILLER	: 153	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 22.02	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: -2.46	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 6.1	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05		RECORDED BY : D. ZANNEL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 00	TYPE : 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 20000

REMARKS
LOGGED OPEN HOLE
ANGLE HOLE - AS RECORDED FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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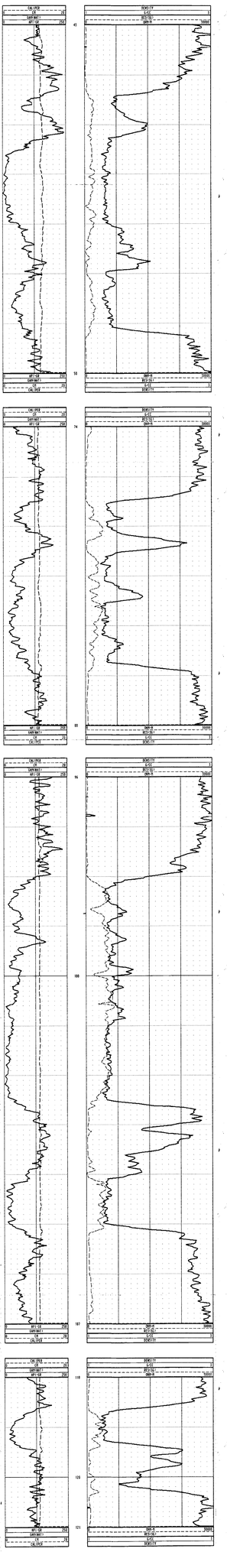


Century

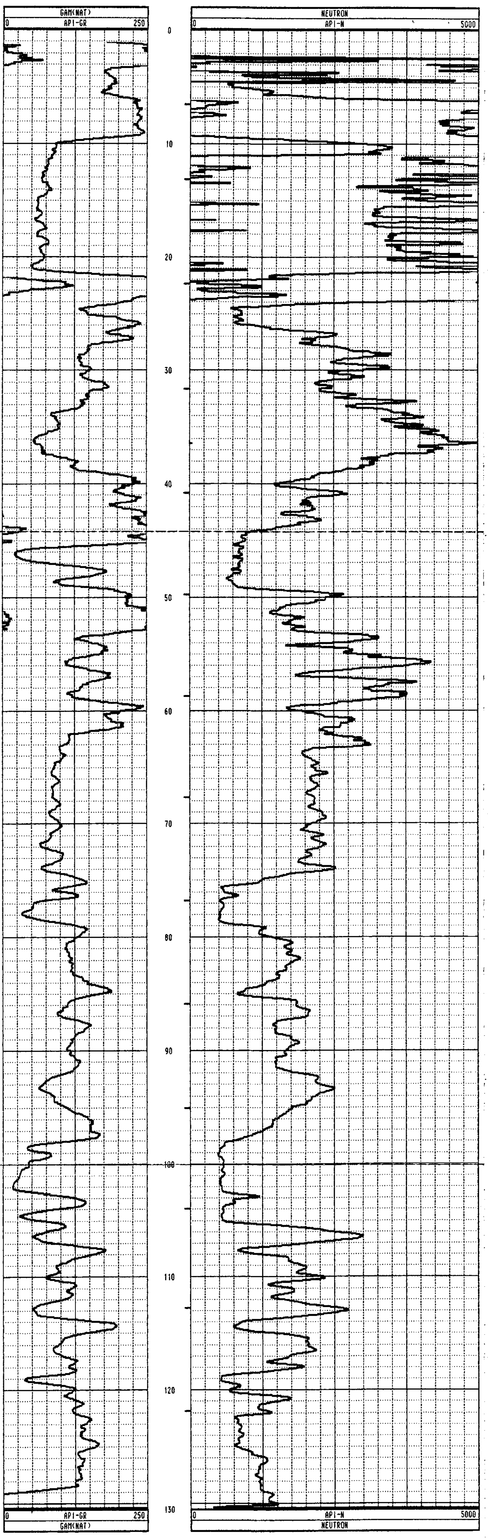
QHR-89002 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89002 GAMMA-NEUTRON				
LOCATION/FIELD	: SL26300/BL21750			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/14/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 133	ELEV. PERM. DATUM	: GD	KB	: 00
LOG BOTTOM	: 130.46	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 1.10	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 6.1	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D. ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 66 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA?	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA?	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

QHR-89002 GAM-DEN-RES-CA

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR-89002 GAM-DEN-RES-CAL		
LOCATION/FIELD	: SL26300/BL21750	SCALE	
COUNTY	: TRANSPER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 05/14/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 133	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 22.02	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: -2.46	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 6.1	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D. ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 8
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 66 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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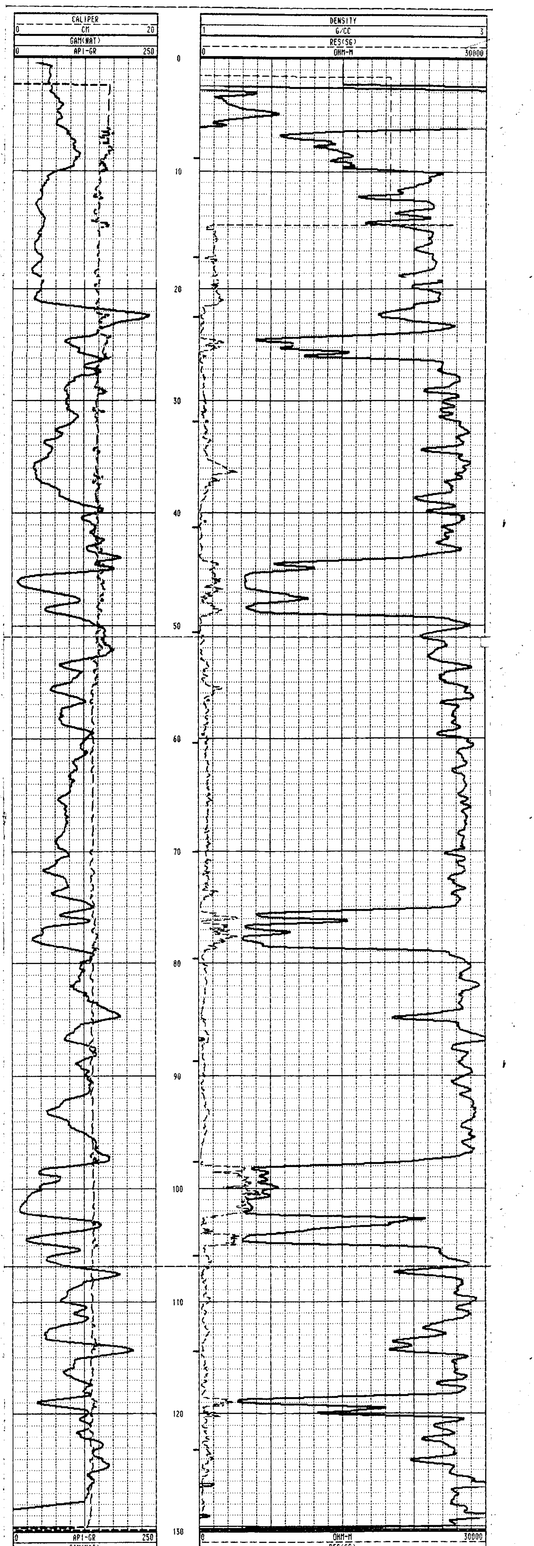

TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 972

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	09:42:55	0	GAM(MAT)	0.000 CPS	0.000 API-GR
1	05/04/89	09:42:55	0	GAM(MAT)	0.000 CPS	0.000 API-GR
2	05/04/89	14:28:05	0	DENSITY	6341.000 CPS	1.106 G/CC
3	05/04/89	14:28:05	0	DENSITY	2639.000 CPS	2.120 G/CC
4	05/04/89	16:08:12	0	RES(SG)	82.000 CPS	0.000 OHM-M
5	05/04/89	16:08:12	0	RES(SG)	30390.000 CPS	178.500 OHM-M
6	05/04/89	09:50:40	0	CALIPER	344.000 CPS	7.620 CM
7	05/04/89	09:50:40	0	CALIPER	2025.000 CPS	17.800 CM
8	05/04/89	09:42:55	0	DENSITYW	0.000 CPS	0.000 G/CC
9	05/04/89	09:42:55	0	DENSITYW	0.000 CPS	0.000 G/CC
10	05/04/89	09:42:55	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	09:42:55	0	CALIPERL	0.000 CPS	0.000 CM

QHR-89002 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89002 DEVIATION				
LOCATION/FIELD	: SL26300/BL21750			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/14/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 133	ELEV. PERM. DATUM: 00		KB	: 00
LOG BOTTOM	: 130.46	LOG MEASURED FROM: GL		DF	: 00
LOG TOP	: 1.10	DRL MEASURED FROM: GL		GL	: 00
CASING DRILLER	: 6.1	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: .05		RECORDED BY	: D. ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 9
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 66 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753

TOOL CALIBRATION	TOOL : 9055A	SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:56	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:56	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:56	0	NEUTRON	0.000 CPS	0.000 API-M
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-M

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR-89002 DEV		
FIELD OFFICE	: CALGARY	DATE OF LOG	: 05/14/89		
DATA FROM	:	PROBE	: 9055A	,	14
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET	LOG	9

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
5.0	4.48	0.66	0.64	0.9	44.3	0.0	114.5
10.0	7.91	3.02	1.34	3.3	24.0	60.2	16.6
15.0	11.58	4.22	0.96	4.3	12.8	24.9	224.0
20.0	15.36	4.84	0.21	4.8	2.5	0.0	294.5
25.0	19.18	5.49	-.49	5.5	354.9	23.8	214.4
30.0	23.11	6.03	-1.26	6.2	348.2	24.9	238.6
35.0	27.02	6.62	-2.03	6.9	343.0	24.1	217.2
40.0	30.89	7.40	-2.79	7.9	339.3	23.6	234.0
45.0	34.81	8.25	-3.54	9.0	336.8	50.8	12.7
50.0	38.79	8.90	-4.27	9.9	334.4	0.0	294.5
55.0	42.82	9.59	-5.08	10.9	332.1	22.7	230.3
60.0	46.92	10.08	-5.77	11.6	330.2	22.8	234.7
65.0	51.18	10.00	-6.73	12.1	326.1	21.5	216.7
70.0	55.82	8.68	-7.94	11.8	317.5	21.4	223.5
75.0	60.47	7.37	-9.12	11.7	308.9	21.3	229.8
80.0	65.14	6.07	-10.34	12.0	300.4	21.1	204.3
85.0	69.81	4.76	-11.53	12.5	292.4	20.6	219.1
90.0	74.49	3.53	-12.75	13.2	285.5	20.5	225.6
95.0	79.18	2.27	-13.93	14.1	279.2	20.2	226.3
100.0	83.88	1.03	-15.10	15.1	273.9	19.8	233.7
105.0	88.58	-.18	-16.25	16.3	269.4	21.5	237.2
110.0	93.28	-1.38	-17.43	17.5	265.5	19.7	230.4
115.0	97.99	-2.55	-18.58	18.8	262.2	18.6	230.5
120.0	102.71	-3.75	-19.71	20.1	259.2	19.8	226.6
125.0	107.42	-4.99	-20.80	21.4	256.5	19.5	214.7
130.0	112.14	-6.20	-21.90	22.8	254.2	14.0	215.1
130.5	112.58	-6.29	-21.98	22.9	254.0	0.0	0.0

Century

QHR-89003 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR-89003 EXP DENSITY		
LOCATION/FIELD	: SL26300/BL21710	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/15/89	PERMANENT DATUM : GD	ELEVATIONS
DEPTH DRILLER	: 105	ELEV. PERM. DATUM: GD	KB : 00
LOG BOTTOM	: 105.04	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 0.28	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 6.1	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: .05	RECORDED BY : D. ZANKL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 00	TYPE : 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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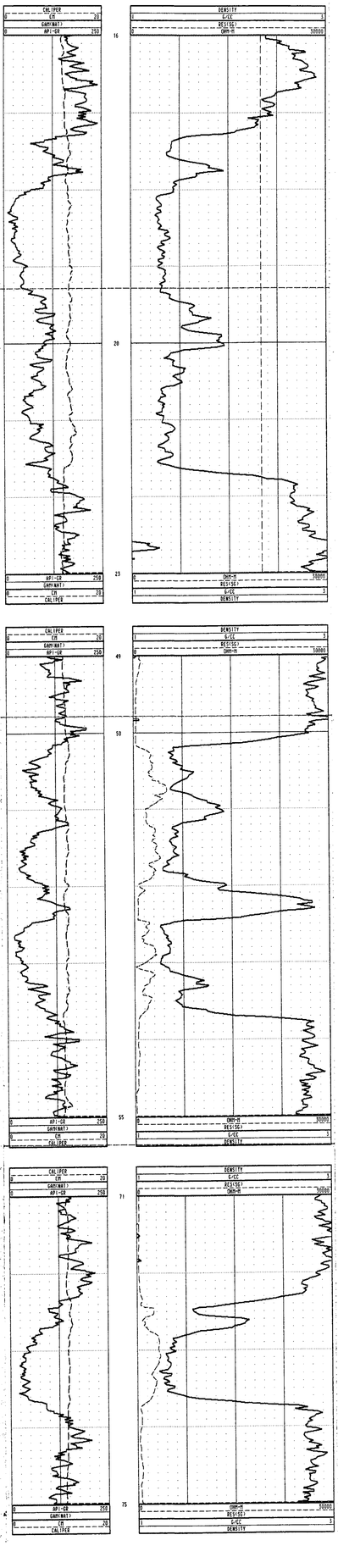


Century

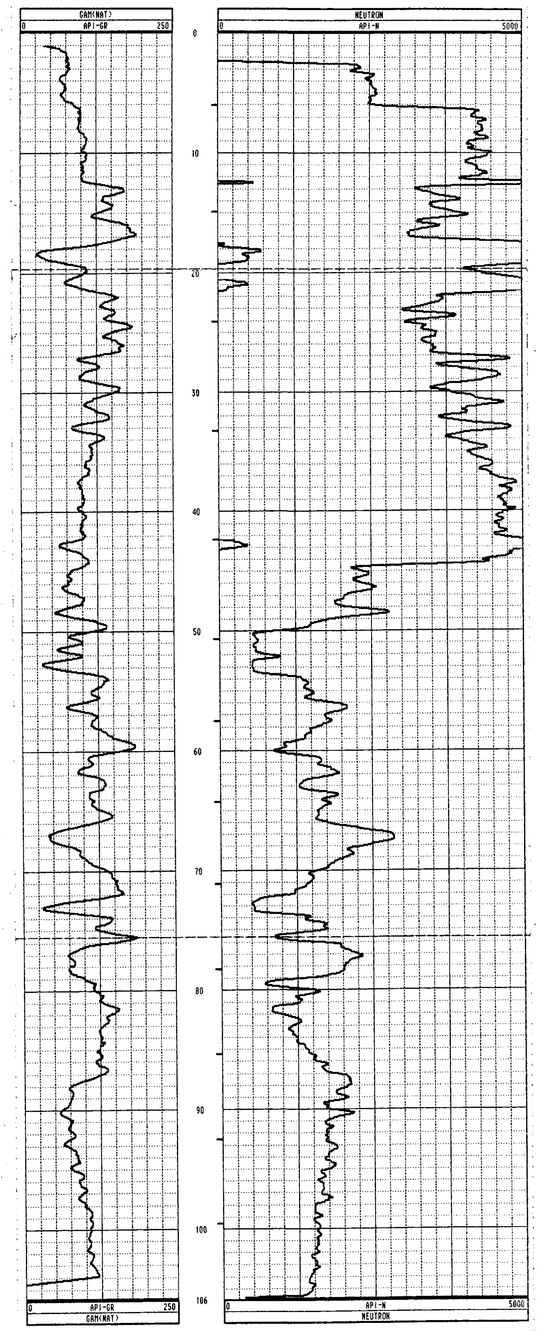
QHR-89003 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89003 GAMMA-NEUTRON				
LOCATION/FIELD	: SL26300/BL21710			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 05/15/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 105	ELEV. PERM. DATUM	: 00	KB : 00	
LOG BOTTOM	: 105.70	LOG MEASURED FROM	: GL	DF : 00	
LOG TOP	: 0.90	DRL MEASURED FROM	: GL	GL : 00	
CASING DRILLER	: 6.1	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D. ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG : 2	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 10	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000	

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

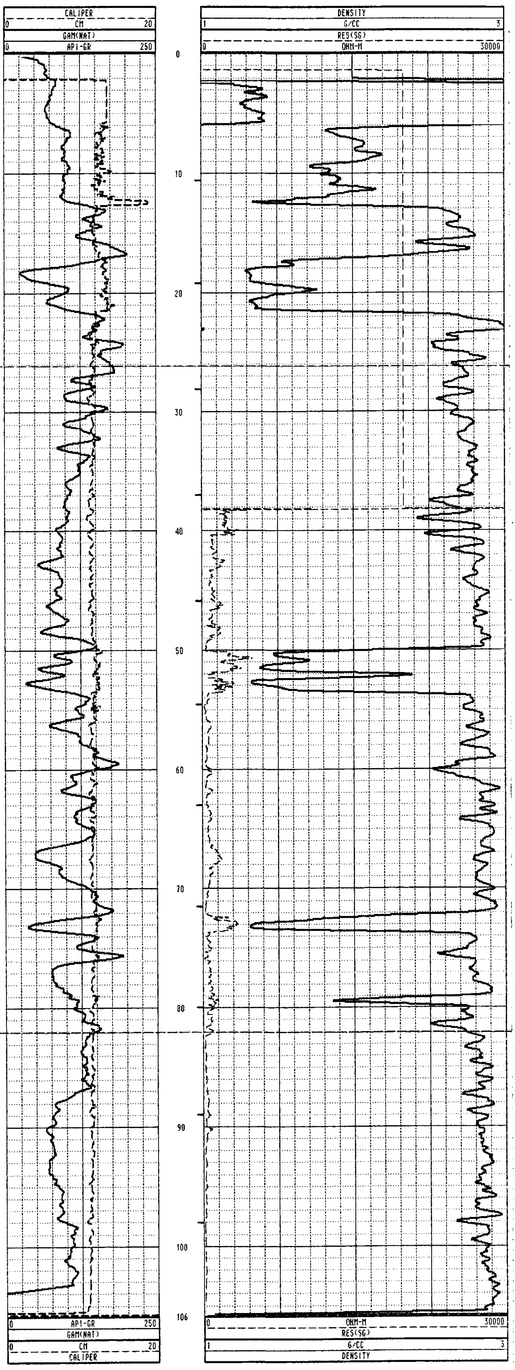
QHR-89003 GAM-DEN-RES-CA

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89003 GAM-DEN-RES-CAL				
LOCATION/FIELD	: SL26300/BL21710			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 05/15/89	PERMANENT DATUM	: OD	ELEVATIONS	
DEPTH DRILLER	: 105	ELEV. PERM. DATUM:	00	KB : 00	
LOG BOTTOM	: 105.84	LOG MEASURED FROM:	GL	DF : 00	
LOG TOP	: 0.28	DRL MEASURED FROM:	GL	GL : 00	
CASING DRILLER	: 6.1	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D. ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE : 9032AC	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG : 3	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 12	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000	

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 972

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	09:42:55	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	09:42:55	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	14:20:05	0	DENSITY	6341.000 CPS	1.106 G/CC
3	05/04/89	14:20:05	0	DENSITY	2639.000 CPS	2.120 G/CC
4	05/04/89	16:08:12	0	RES(SG)	82.000 CPS	0.000 OHM-M
5	05/04/89	16:08:12	0	RES(SG)	30390.000 CPS	178.500 OHM-M
6	05/04/89	09:50:40	0	CALIPER	344.000 CPS	7.620 CM
7	05/04/89	09:50:40	0	CALIPER	2025.000 CPS	17.800 CM
8	05/04/89	09:42:55	0	DENSITYH	0.000 CPS	0.000 G/CC
9	05/04/89	09:42:55	0	DENSITYH	0.000 CPS	0.000 G/CC
10	05/04/89	09:42:55	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	09:42:55	0	CALIPERL	0.000 CPS	0.000 CM

Century

GHR-89003 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: GHR-89003 DEVIATION				
LOCATION/FIELD	: SL26300/BL21710			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/15/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 105	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 105.70	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 0.90	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 6.1	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D. ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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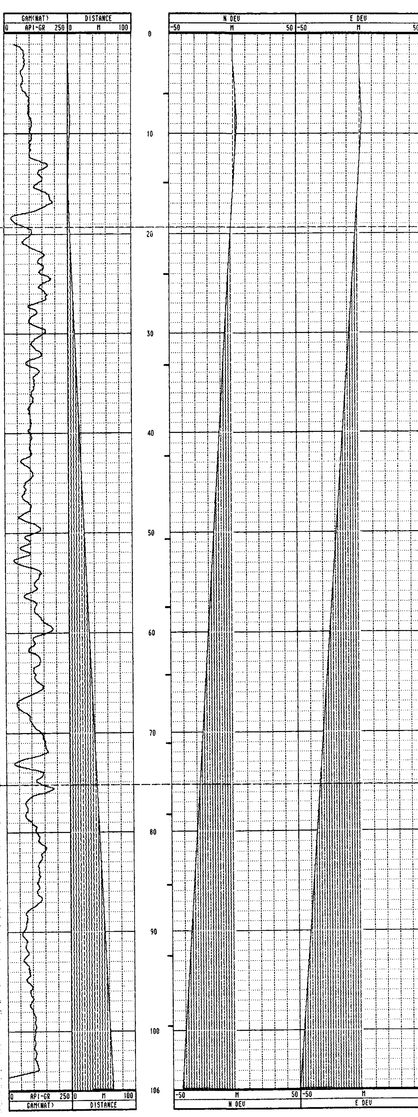

TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:18	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:18	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: GHR-89003 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 05/15/89
DATA FROM	:	PROBE	: 9055A 14
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 7

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
5.0	4.43	1.69	0.68	1.8	22.0	45.6	40.9
10.0	7.98	2.88	1.34	3.2	24.9	47.1	189.5
15.0	11.53	0.53	-.87	1.0	301.2	45.4	251.6
20.0	15.08	-1.85	-3.39	3.9	241.4	45.7	232.2
25.0	18.61	-4.21	-5.87	7.2	234.3	45.3	234.7
30.0	22.15	-6.50	-8.49	10.7	232.6	45.6	229.8
35.0	25.67	-8.74	-11.18	14.2	232.0	45.5	235.1
40.0	29.19	-11.02	-13.84	17.7	231.5	44.2	232.9
45.0	32.71	-13.36	-16.46	21.2	230.9	45.4	227.8
50.0	36.21	-15.69	-19.11	24.7	230.6	46.0	225.9
55.0	39.70	-17.97	-21.83	28.3	230.5	45.5	229.0
60.0	43.15	-20.33	-24.53	31.9	230.4	47.3	232.7
65.0	46.58	-22.71	-27.23	35.5	230.2	46.8	229.2
70.0	50.00	-25.02	-29.96	39.0	230.1	46.1	234.5
75.0	53.40	-27.43	-32.66	42.6	230.0	47.3	234.4
80.0	56.78	-29.92	-35.32	46.3	229.7	48.8	232.9
85.0	60.08	-32.29	-38.09	49.9	229.7	49.6	217.6
90.0	63.32	-34.81	-40.87	53.7	229.6	49.7	226.2
95.0	66.54	-37.25	-43.75	57.5	229.6	49.7	224.7
100.0	69.79	-39.80	-46.55	61.2	229.5	48.4	225.5
105.0	73.03	-42.25	-49.39	65.0	229.5	50.1	236.4
105.7	73.50	-42.57	-49.76	65.5	229.4	0.0	0.0

Century

QHR-89004 GAM-DEN-RES-CA

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89004 GAM-DEN-RES-CAL				
LOCATION/FIELD	: SL26400/BL21680			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/16/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85.5	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 84.90	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -.22	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 3	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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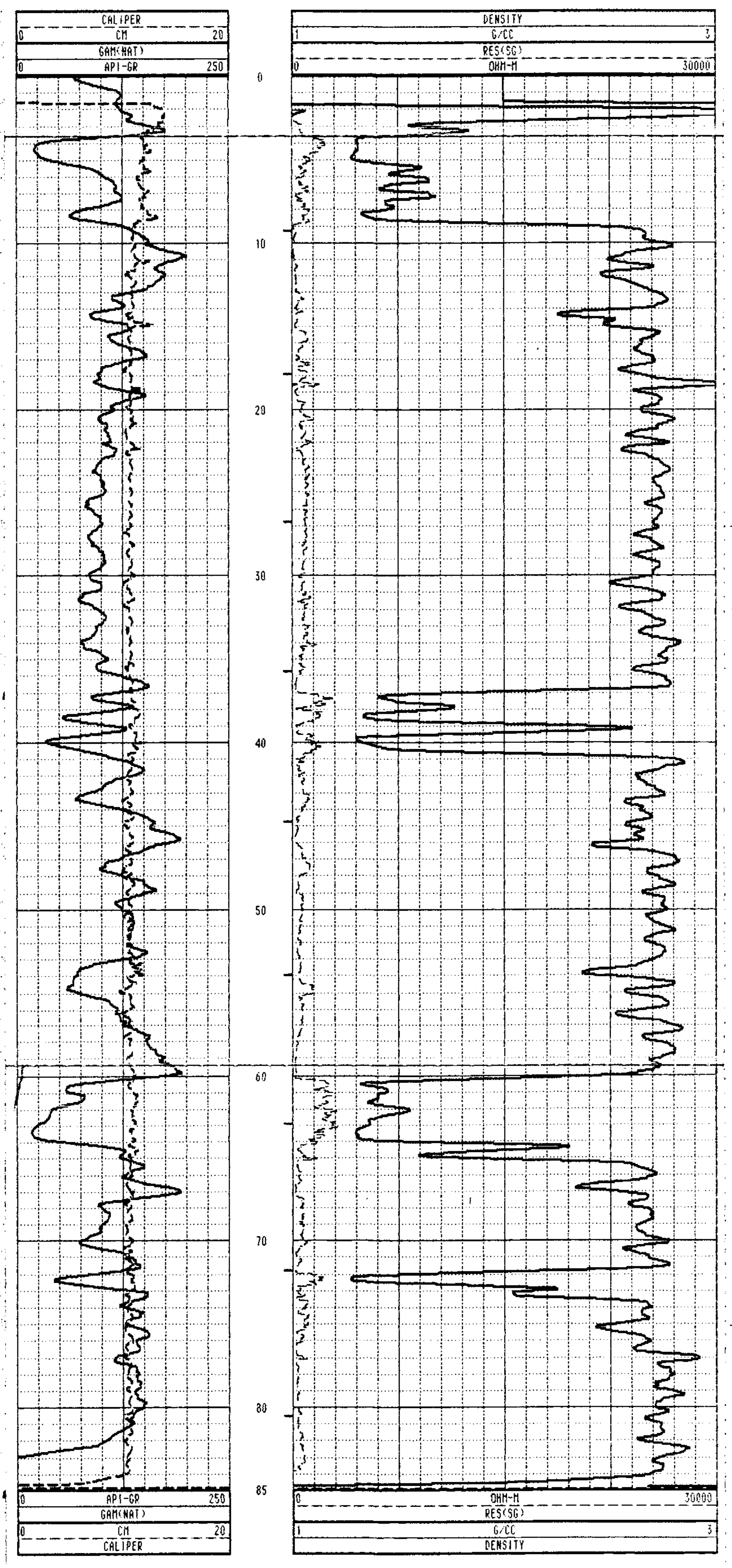

TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR-89004 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89004 EXP DENSITY				
LOCATION/FIELD	: SL26400/BL21680			SCHLE	
COUNTY	: TRANSFER			1:20	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/16/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85.5	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 84.90	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -.22	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 3	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZAWALL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9052HC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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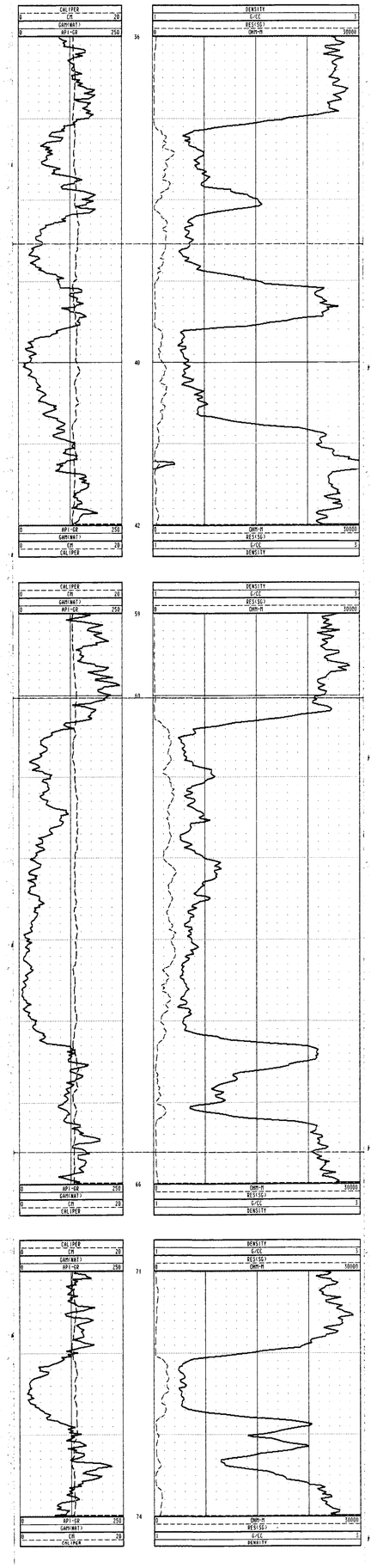

Century

QHR-89004 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR-89004 GAMMA-NEUTRON				
LOCATION/FIELD	: SL26400/BL21680				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/16/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85.5	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 84.96	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 1.24	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 3	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

OTHER SERVICES:

SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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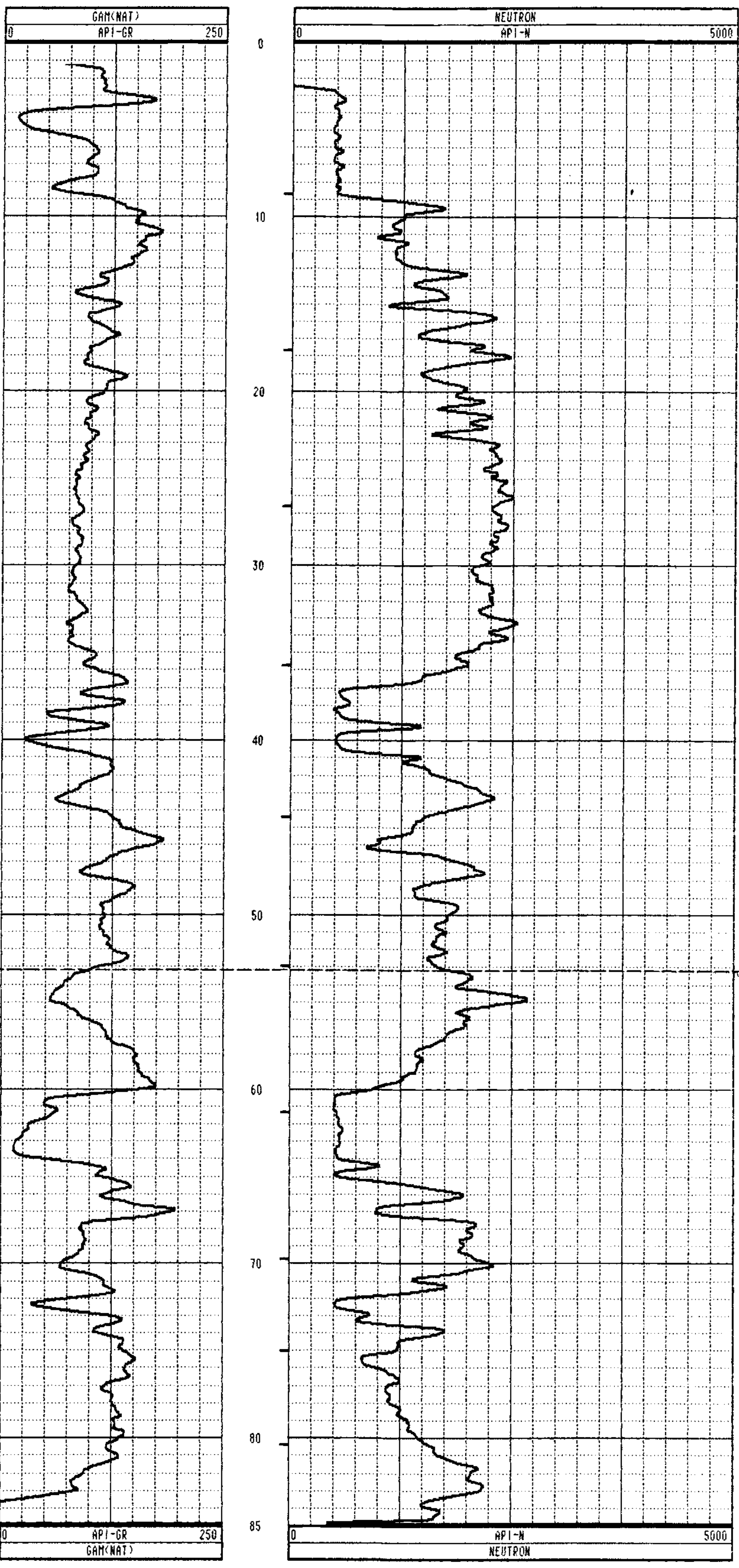

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

QHR-89004 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR-89004 DEVIATION		
LOCATION/FIELD	: SL26400/BL21680	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/16/89 PERMANENT DATUM : 00	ELEVATIONS	
DEPTH DRILLER	: 85.5 ELEV. PERM. DATUM: 00	KB : 00	
LOG BOTTOM	: 84.96 LOG MEASURED FROM: GL	DF : 00	
LOG TOP	: 1.24 DRL MEASURED FROM: GL	GL : 00	
CASING DRILLER	: 3 LOGGING UNIT : 8902		
CASING TYPE	: STEEL FIELD OFFICE : CALGARY		
CASING THICKNESS	: .05 RECORDED BY : D.ZANKL		
BIT SIZE	: 12.1 BOREHOLE FLUID : WATER	FILE : PROCESSED	
MAGNETIC DECL.	: 24.500 RM : 00	TYPE : 9055A	
MATRIX DENSITY	: 2.68 RM TEMPERATURE : 00	LOG : 8	
FLUID DENSITY	: 1.0 MATRIX DELTA T : 173	PLOT : QUIN 13	
NEUTRON MATRIX	: SANDSTONE FLUID DELTA T : 690	THRESH: 20000	
REMARKS	:		

LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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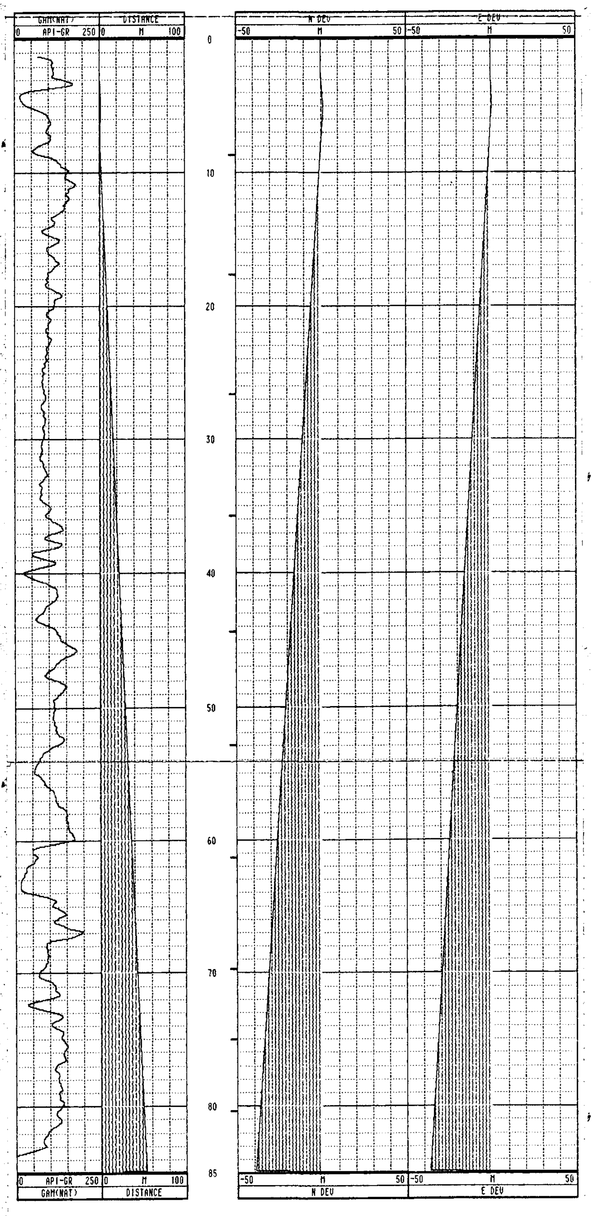

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(WAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(WAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR-89004 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 05/16/89
DATA FROM	:	PROBE	: 9055A , 14
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 8

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
5.0	4.37	1.43	0.56	1.5	21.5	43.3	326.6
10.0	7.97	-.90	-1.63	1.9	241.2	44.4	220.9
15.0	11.55	-3.41	-4.04	5.3	229.8	44.4	224.3
20.0	15.14	-5.92	-6.39	8.7	227.2	44.0	224.4
25.0	18.74	-8.39	-8.77	12.1	226.2	44.1	222.1
30.0	22.33	-10.94	-11.03	15.5	225.2	44.3	228.7
35.0	25.95	-13.49	-13.29	18.9	224.6	43.2	228.4
40.0	29.56	-15.96	-15.63	22.3	224.4	43.7	223.9
45.0	33.17	-18.46	-17.94	25.7	224.2	44.0	219.7
50.0	36.77	-21.07	-20.15	29.1	223.7	40.3	231.7
55.0	40.36	-23.60	-22.47	32.6	223.6	44.4	222.5
60.0	43.94	-26.15	-24.74	36.0	223.4	44.4	204.2
65.0	47.51	-28.64	-27.05	39.4	223.4	44.4	222.3
70.0	51.08	-31.24	-29.30	42.8	223.2	44.4	227.9
75.0	54.63	-33.80	-31.65	46.3	223.1	45.2	222.1
80.0	58.14	-36.41	-34.01	49.8	223.1	45.8	221.8
85.0	61.59	-39.01	-36.37	53.3	223.0	0.0	0.0

Century

QHR-89005 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89005 GAMMA-DENSITY				
LOCATION/FIELD	: 6L20270/5L22550			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/16/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 111	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 108.16	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.10	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 1.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9069A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 00IN 11
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000
REMARKS	:				

LOGGED THROUGH RODS
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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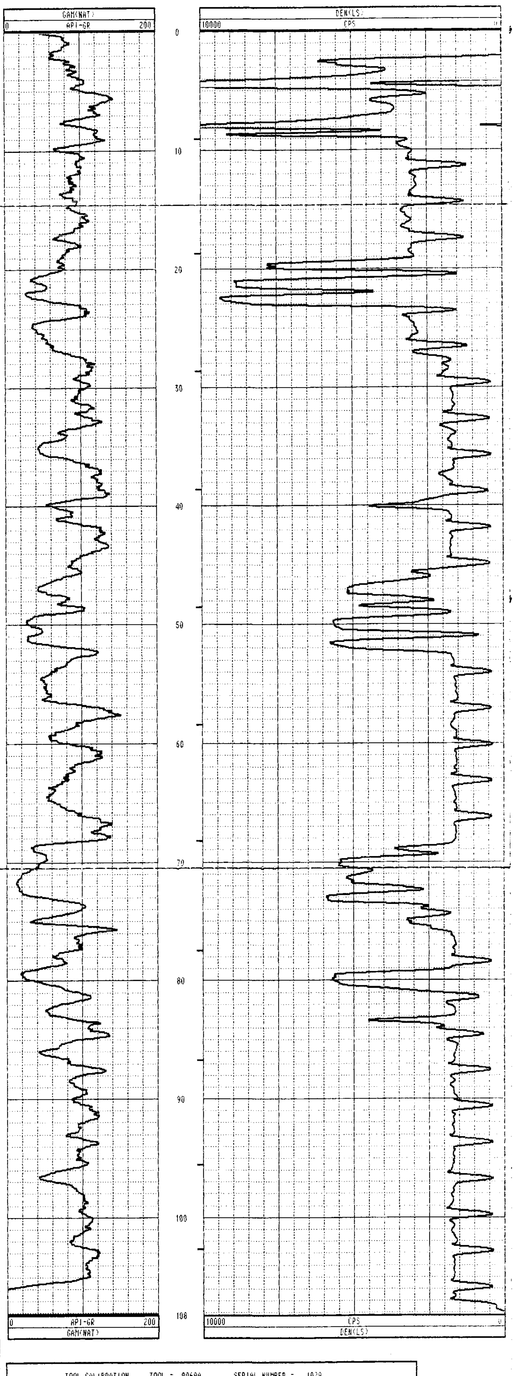

TOOL CALIBRATION TOOL = 9069A SERIAL NUMBER = 1029

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	12:58:21	0	GAMMA(?)	0.000 CPS	0.000 API-GR
1	05/04/89	12:57:04	0	GAMMA(?)	0.000 CPS	0.000 API-GR

Century

QHR89014 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89014 GAM-DEN-RES-CAL				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/24/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 81.38	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.12	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

OTHER SERVICES:

SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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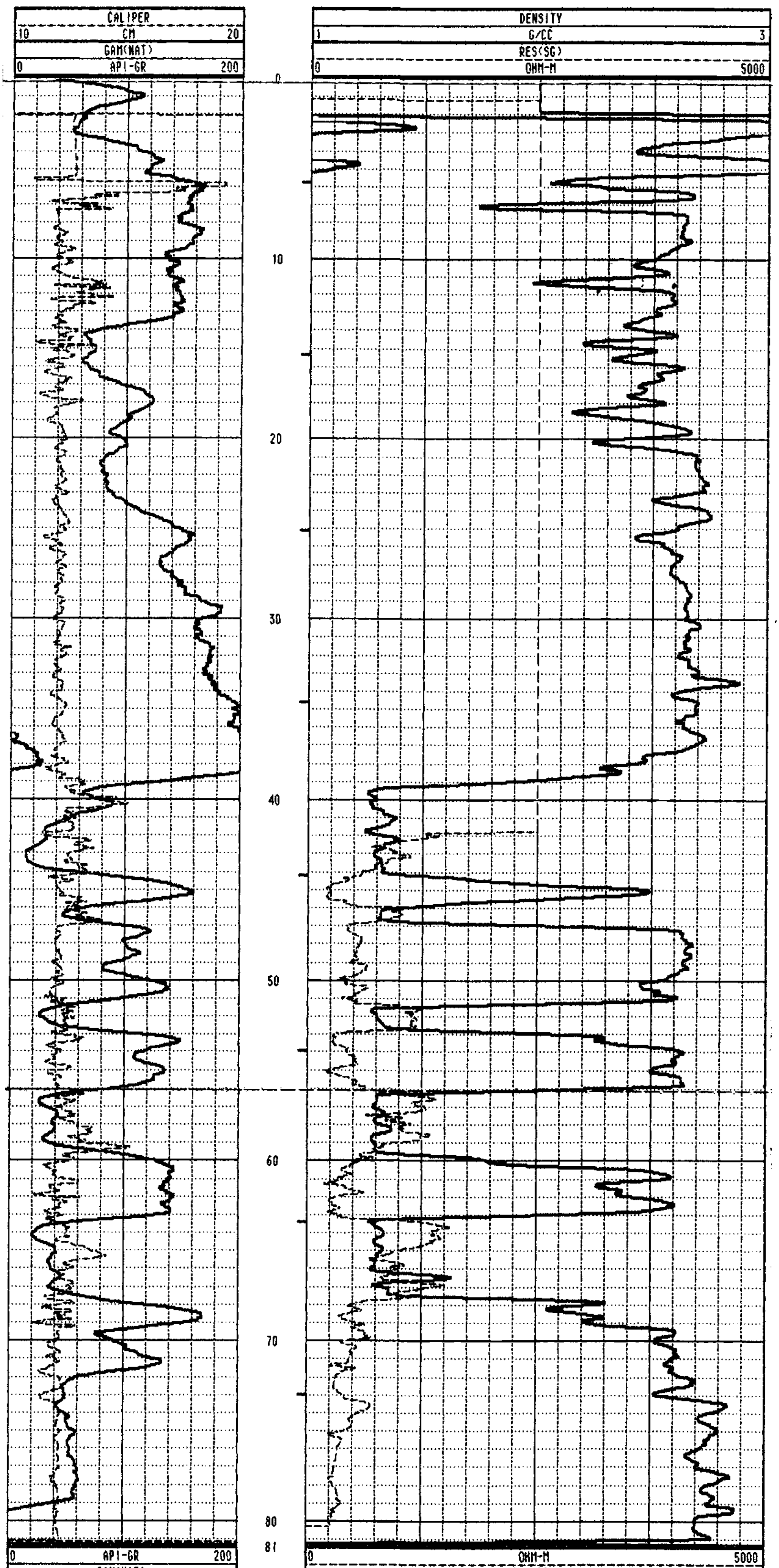

TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR-89005 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR-89005 EXP DENSITY				
LOCATION/FIELD	: BL20270/SL27550				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/16/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 111	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 108.16	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.10	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 1.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9069A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 15
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

OTHER SERVICES:

SCALE
1:20

REMARKS :

LOGGED THROUGH RODS - DRILL PIPE JOINTS CAUSE DENSITY SPIKES EVERY 3.05 METERS
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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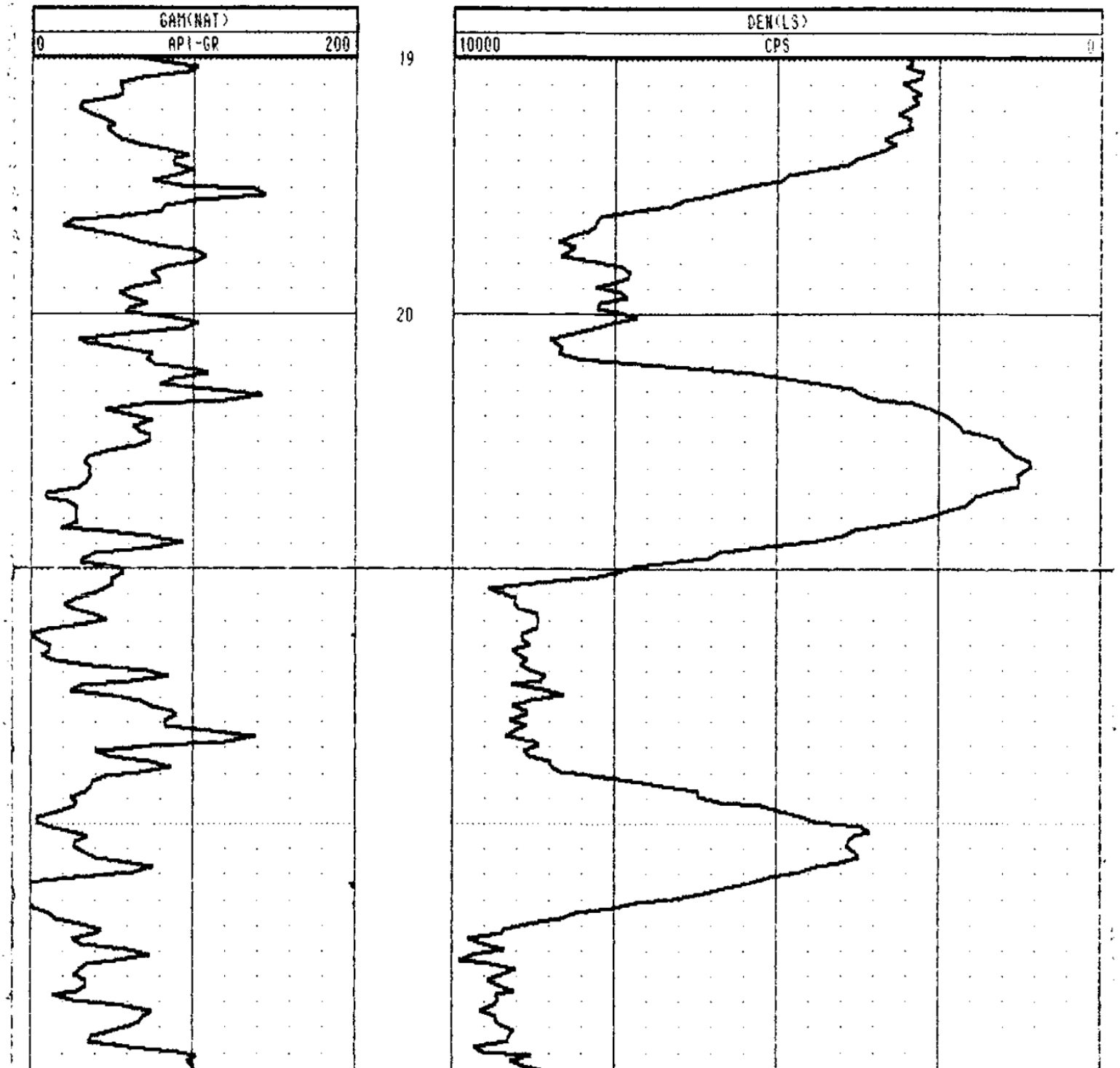
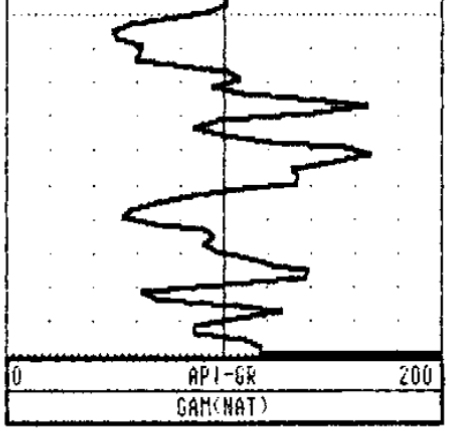

GAM(NAT)
0
API-GR
200
19
20
DEN(LS)
10000
CPS
0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API-GR
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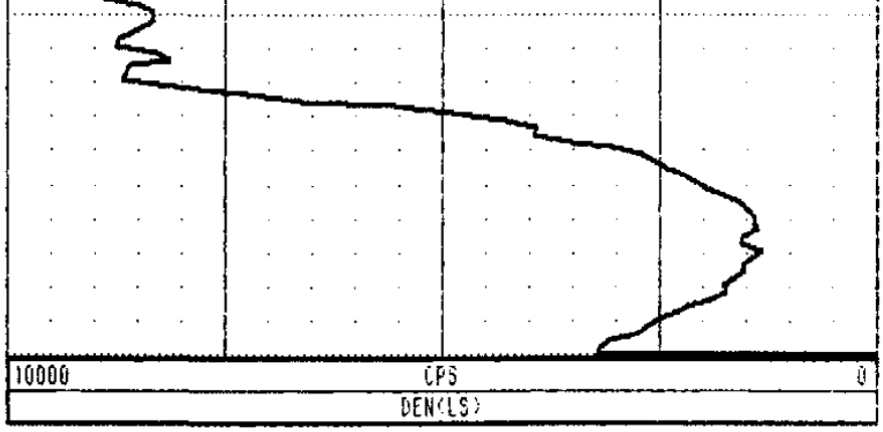
GAM(NAT)

24


10000
CPS
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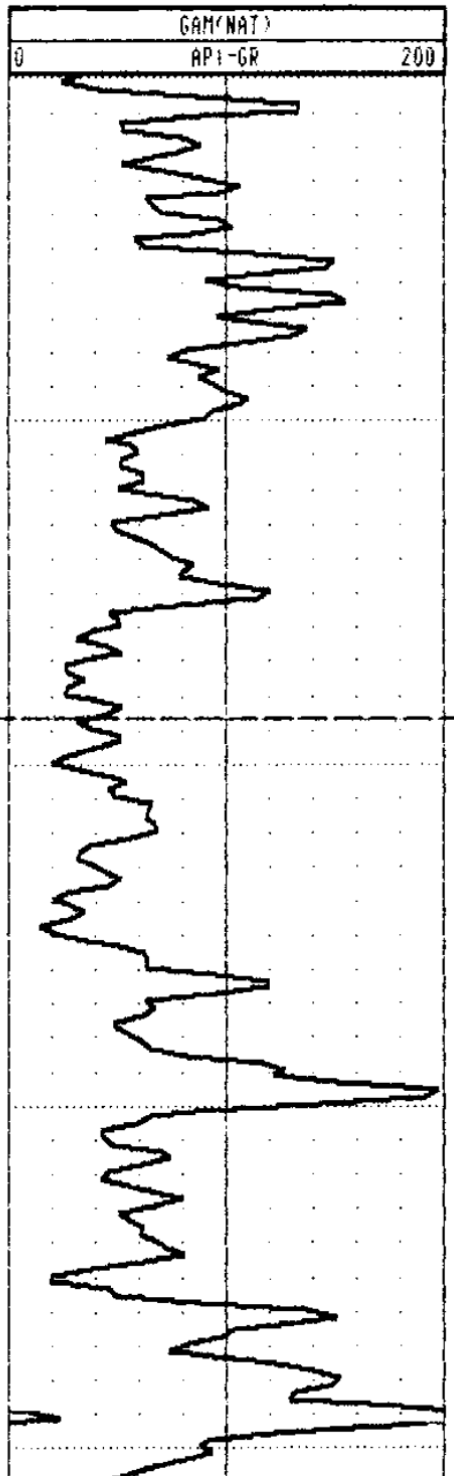
DEN(LS)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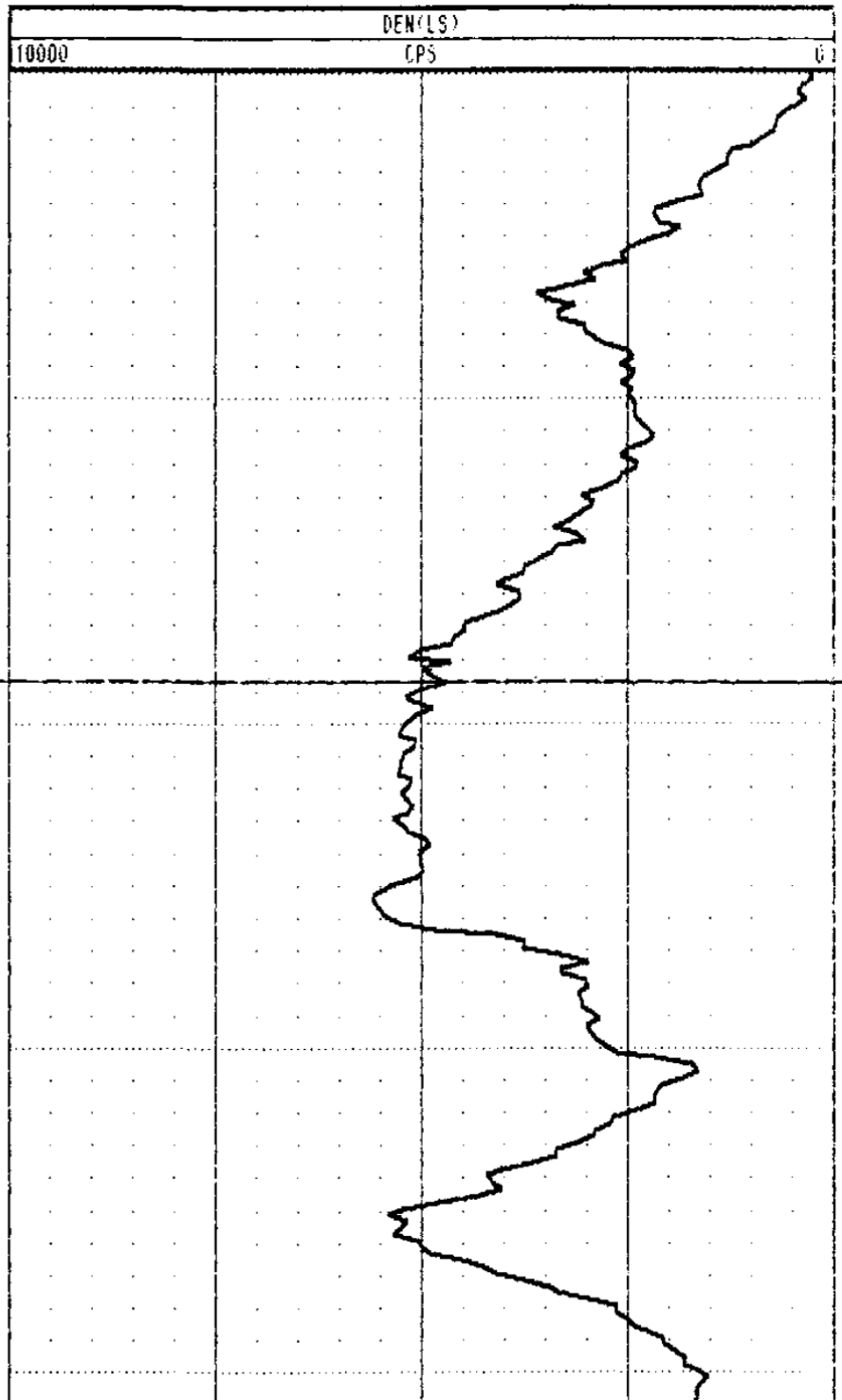
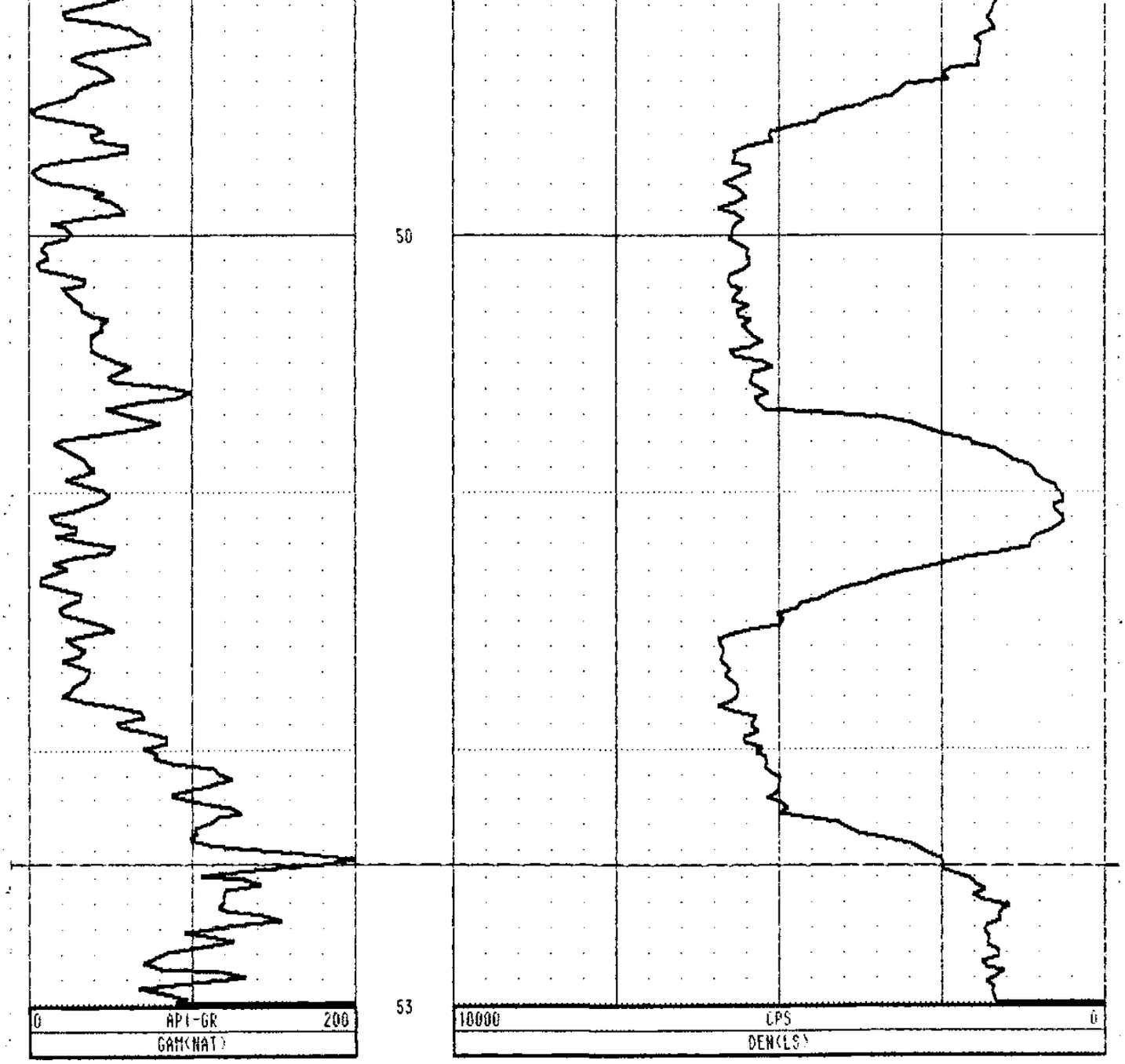
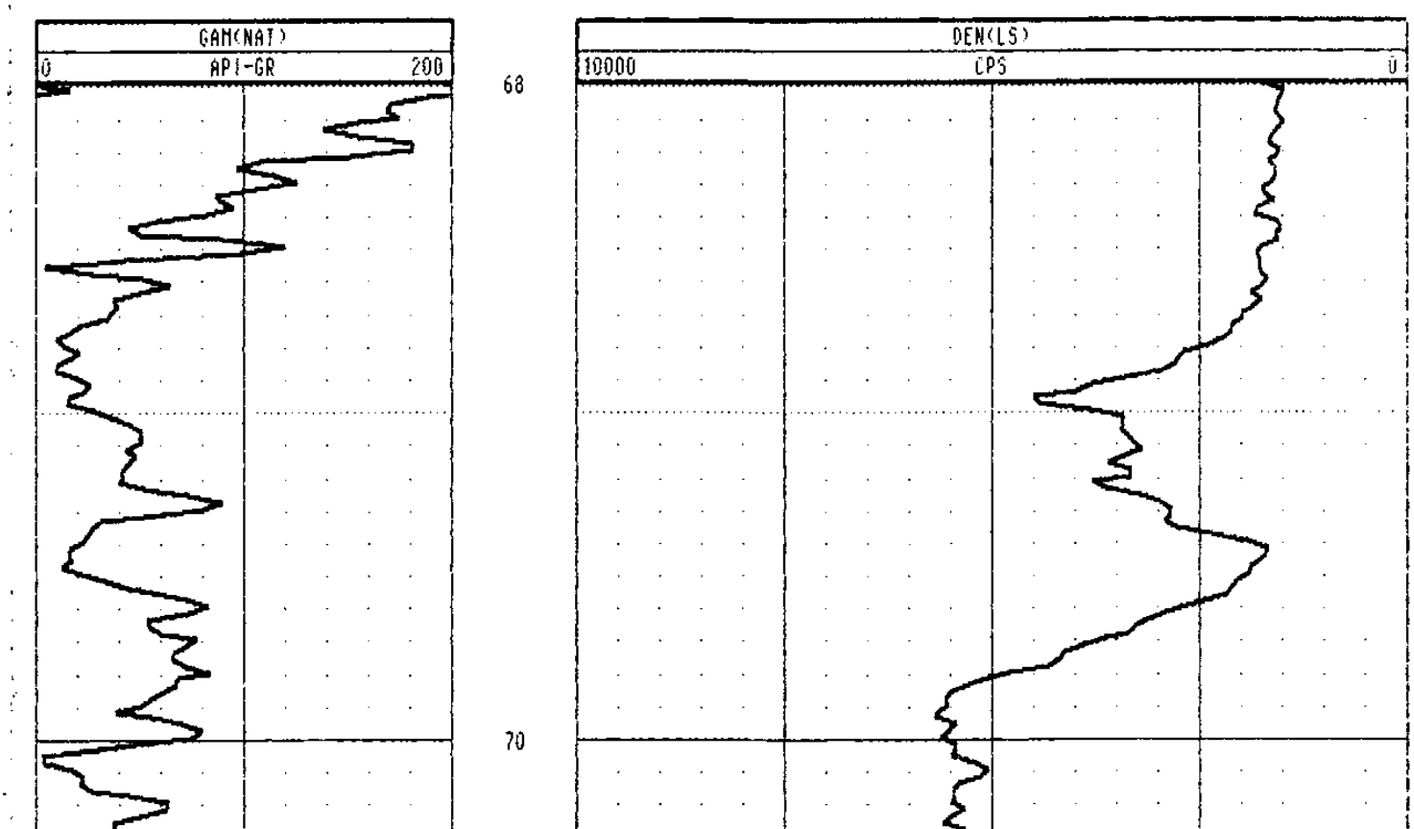
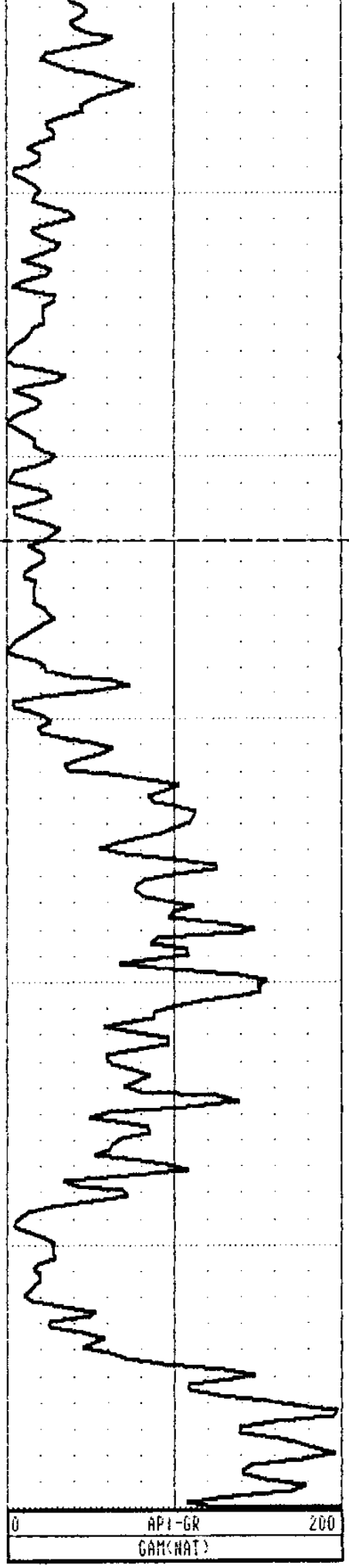
API-GR
200

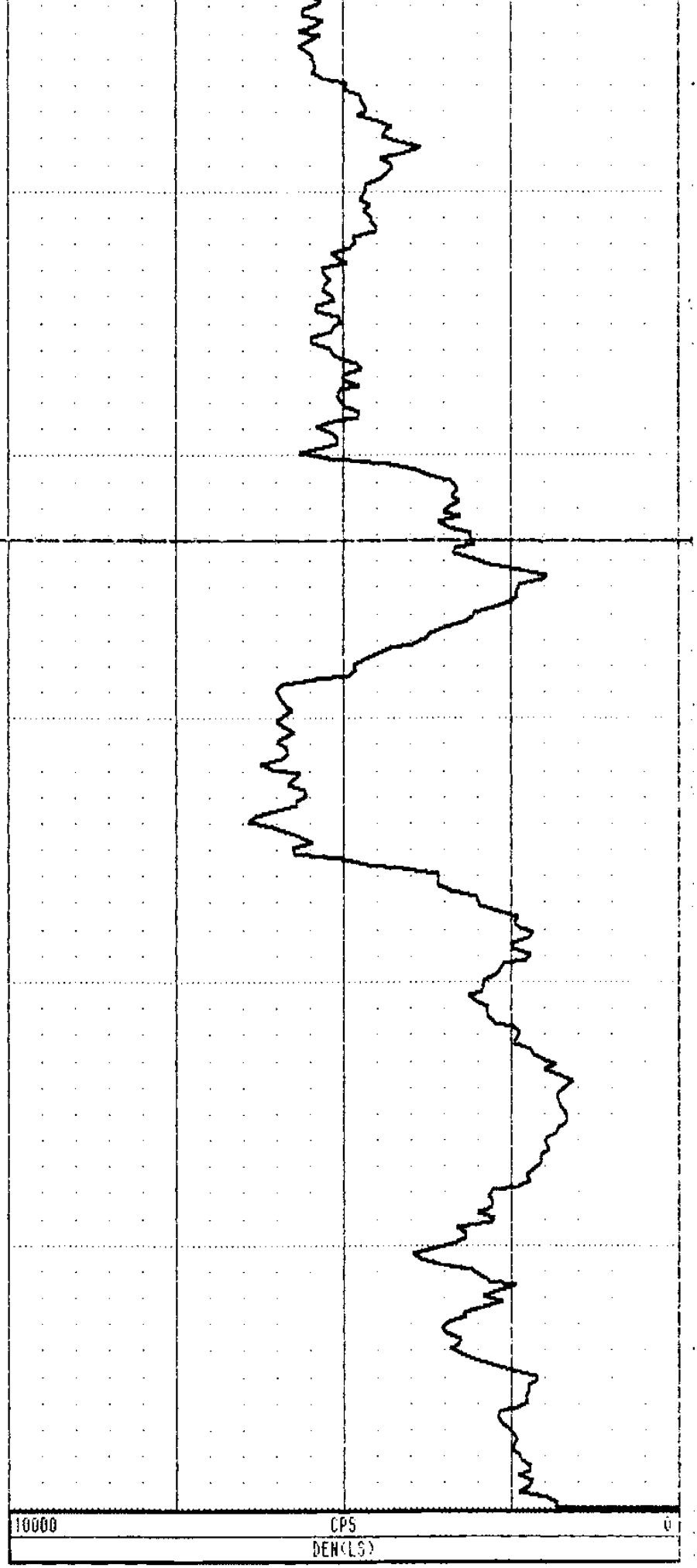
45


DEN(LS)
10000
CPS
0


50
53
0
API-GR
200
GAM(NAT)
10000
CPS
0
DEN(LS)


GAM(NAT)
0
API-GR
200
68
70
DEN(LS)
10000
CPS
0


0
API-GR
200
GAM(NAT)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CPS
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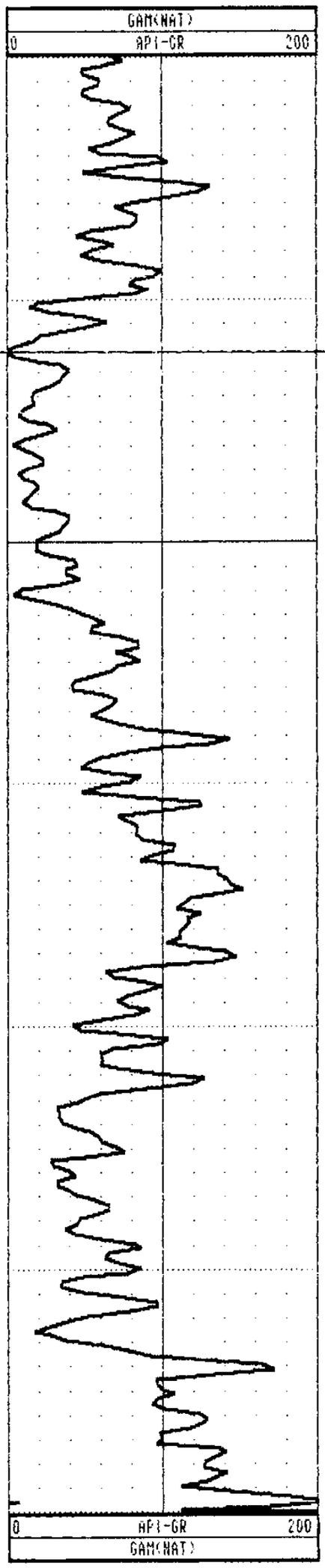
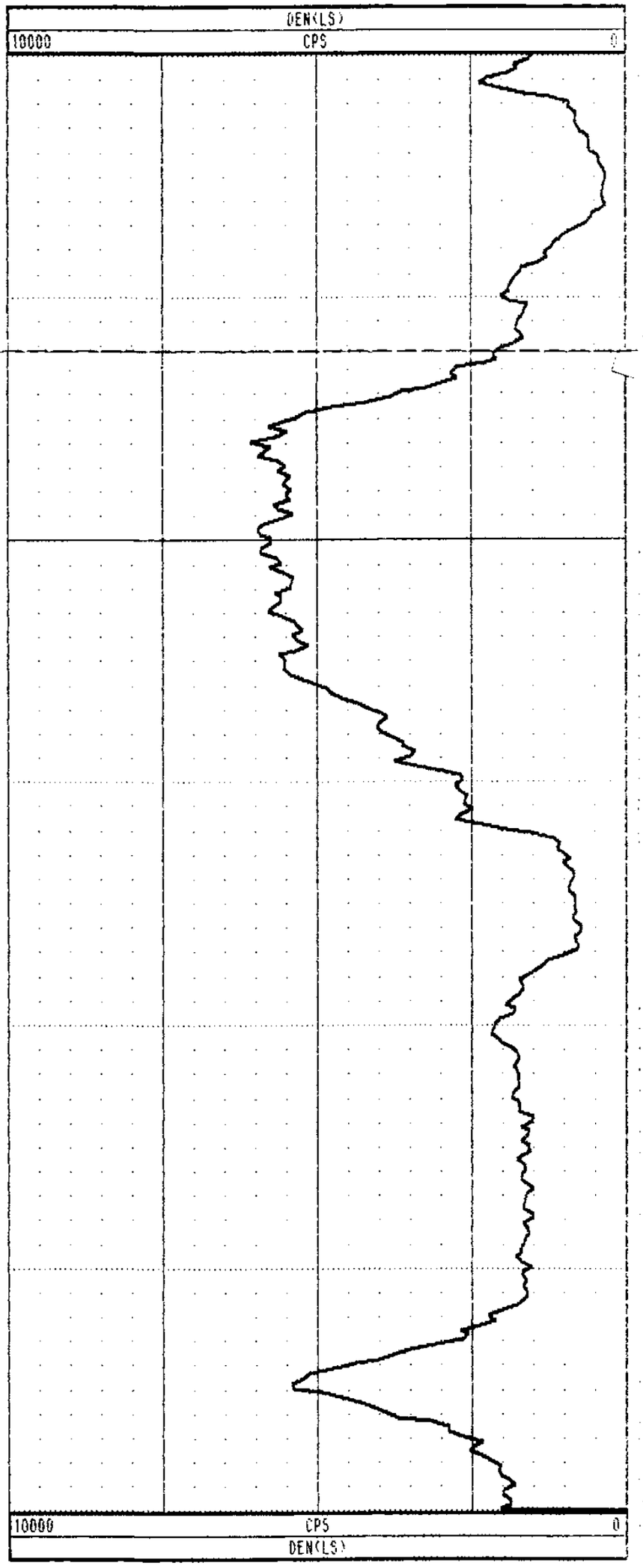
DEN(LS)


GAM(NAT)
0
API-GR
200
0
API-GR
200
GAM(NAT)

78

80

84


DEN(LS)
10000
CPS
0
10000
CPS
0
DEN(LS)

Century

QHR-89005 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89005 GAMMA-NEUTRON				
LOCATION/FIELD	: 6L20270/5L27550			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 05/16/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 111	ELEV. PERM. DATUM:	00	KB : 00	
LOG BOTTOM	: 107.44	LOG MEASURED FROM:	GL	DF : 00	
LOG TOP	: 0.02	DRL MEASURED FROM:	GL	GL : 00	
CASING DRILLER	: 1.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZAHKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE : 9067A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG : 6	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 0	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000	

REMARKS :
LOGGED THROUGH RODS
ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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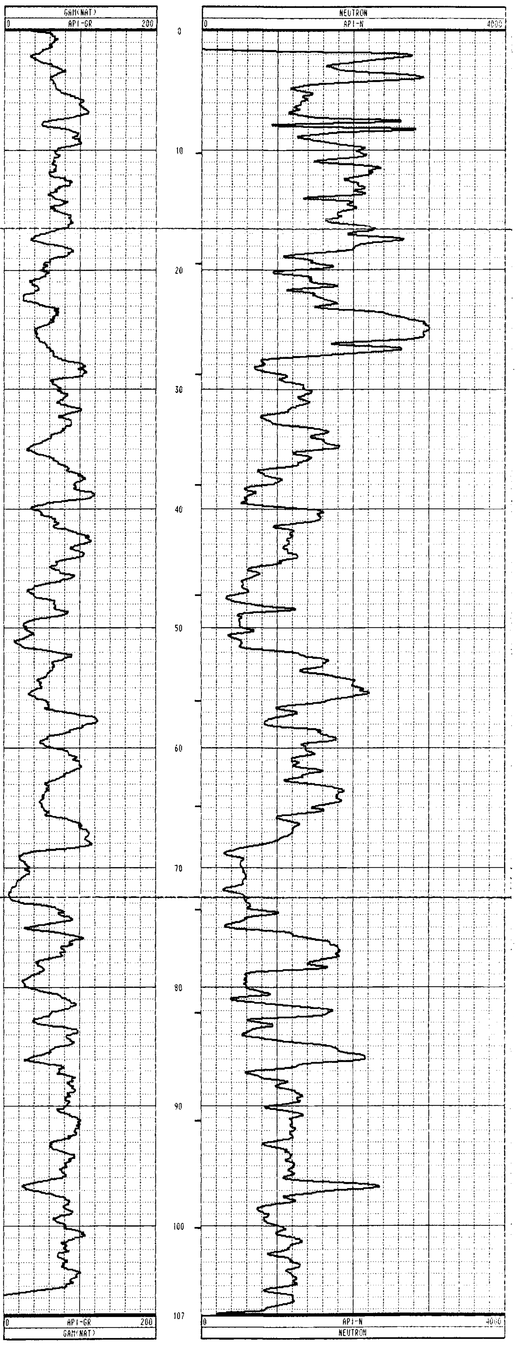

TOOL CALIBRATION TOOL = 9067A SERIAL NUMBER = 513

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	13:32:05	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	13:32:05	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	13:32:05	0	NEUTRON	0.000 CPS	0.000 API-N
3	05/04/89	13:36:12	0	NEUTRON	205.000 CPS	271.000 API-N

QHR-89006 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89006 GAMMA-DENSITY				
LOCATION/FIELD	: BL20270/SL27550			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/17/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 120	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 117.66	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.16	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 1.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9069A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 11
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED THROUGH RODS
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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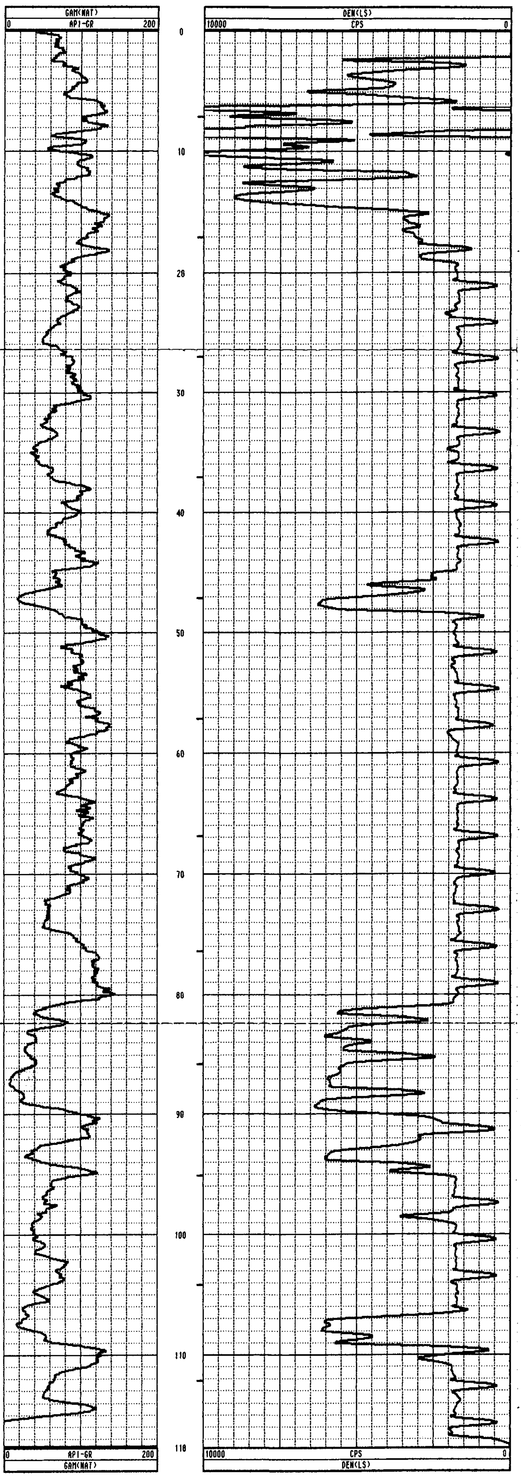

TOOL CALIBRATION	TOOL = 9069A	SERIAL NUMBER = 1029		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0 05/04/89	12:58:21	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1 05/04/89	12:57:04	0	GAM(NAT)	0.000 CPS	0.000 API-GR

Century

QHR-89006 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89006 GAMMA-NEUTRON				
LOCATION/FIELD	: BL20270/SL27550			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/17/89	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 120	ELEV. PERM. DATUM	: GL	KB	: 00
LOG BOTTOM	: 117.10	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.20	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 1.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9067A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000
REMARKS	:				

LOGGED THROUGH RODS
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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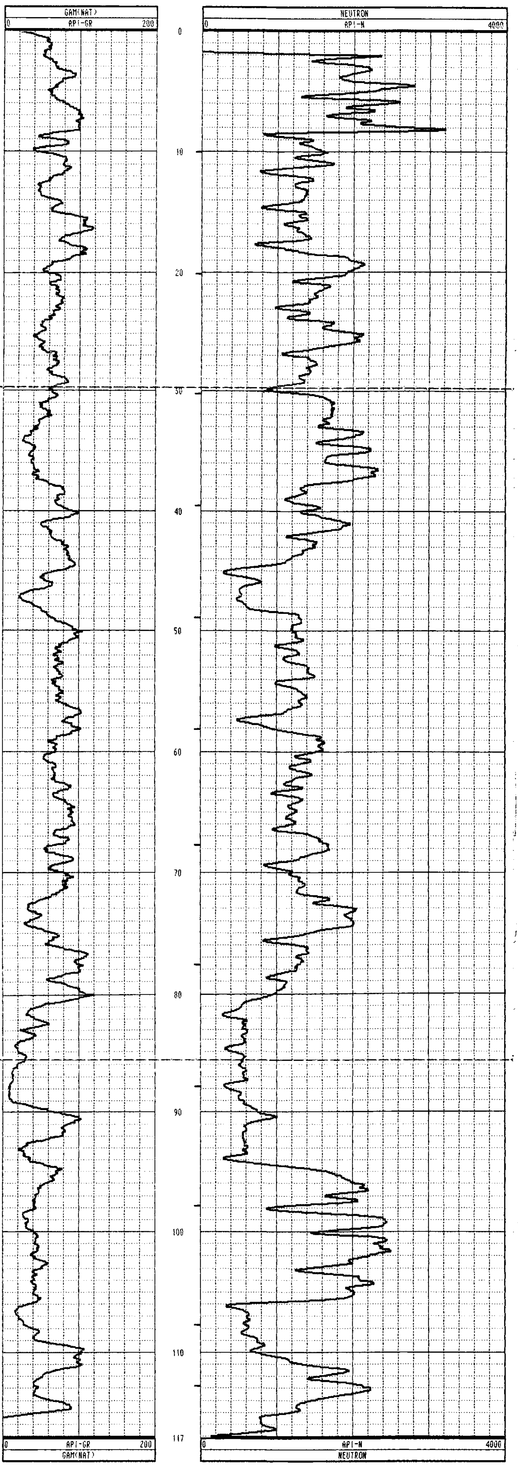


TOOL CALIBRATION TOOL = 90678 SERIAL NUMBER = 515

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	13:32:05	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	13:32:05	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	13:32:05	0	NEUTRON	0.000 CPS	0.000 API-N
3	05/04/89	15:36:12	0	NEUTRON	205.000 CPS	271.000 API-N

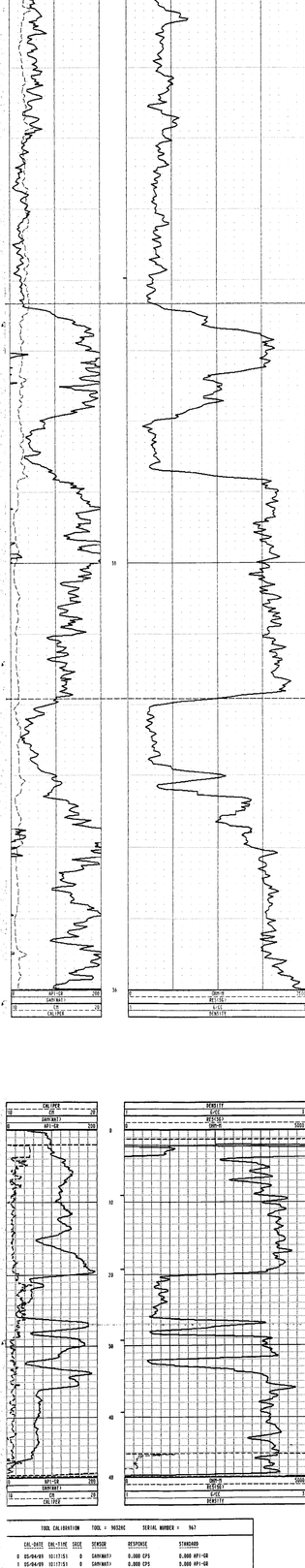
Century

QHR-89007 GAM-DEN-RES-CA

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR-89007 GAM-DEN-RES-CAL	SCALE	
LOCATION-FIELD	: BL2002S-SL2760E	1:20	
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP : RANGE :		
DATE	: 05-17-89	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER	: 40	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 40.32	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 0.20	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 4.5	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: .05	RECORDED BY : D.JAMES	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 00	TYPE : 9812MF
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 177	PLOT : QUIK 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 20000
REMARKS	:		
LOGGED OPEN HOLE			
ANGLE HOLE - 40 DEGREES FROM THE HORIZONTAL			

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION	TOOL = 9032HC	SERIAL NUMBER = 947	

CAL-DATE	CAL-TIME	SEQ#	SENSOR	RESPONSE	STANDARD
0	05-04-89	10:17:51	0	GAMMARAY	0.000 CPS	0.000 API-GR
1	05-04-89	10:17:51	0	GAMMARAY	0.000 CPS	0.000 API-GR
2	05-04-89	12:11:56	0	DENSITY	1166.000 CPS	1.184 G-CC
3	05-04-89	12:11:56	0	DENSITY	2439.000 CPS	2.320 G-CC
4	05-04-89	10:17:51	0	RESISTIVITY	0.000 CPS	0.000 OHM-M
5	05-04-89	10:25:07	0	RESISTIVITY	30275.000 CPS	170.520 OHM-M
6	05-04-89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05-04-89	10:46:11	0	CALIPER	1556.000 CPS	17.800 CM
8	05-04-89	10:17:51	0	DENSITYFB	0.000 CPS	0.000 G-CC
9	05-04-89	10:17:51	0	DENSITYFB	0.000 CPS	0.000 G-CC
10	05-04-89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05-04-89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR89007 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89007 GAMMA-NEUTRON				
LOCATION/FIELD	: BL20225/SL27600			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/17/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 48	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 46.42	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 1.16	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 4.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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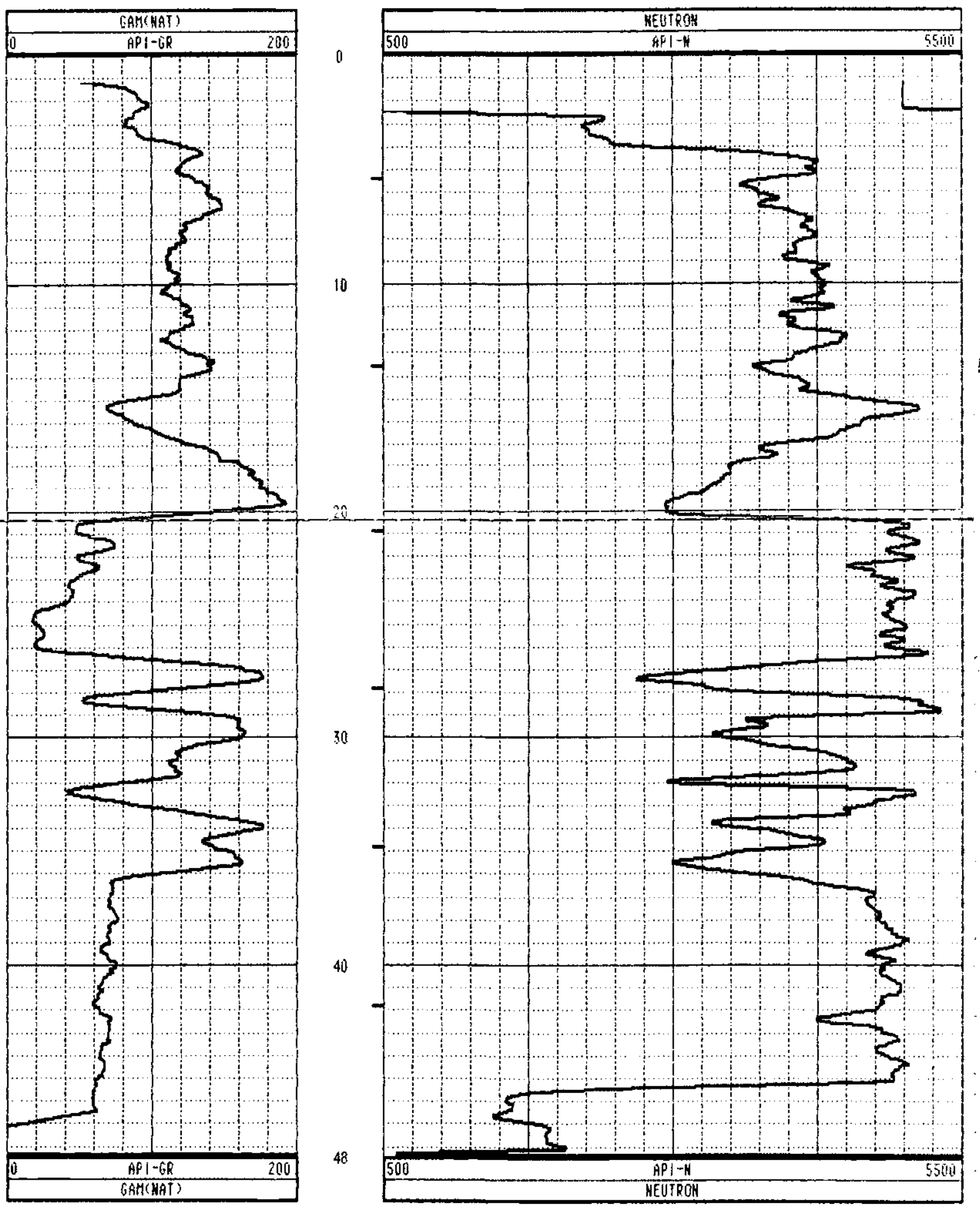

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

QHR-89007 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR-89007 DEVIATION		
LOCATION/FIELD	: BL20225/SL27600	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/18/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER	: 48	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 48.42	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 1.16	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 4.5	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: .05	RECORDED BY : D.ZANKL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM : 00	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 3
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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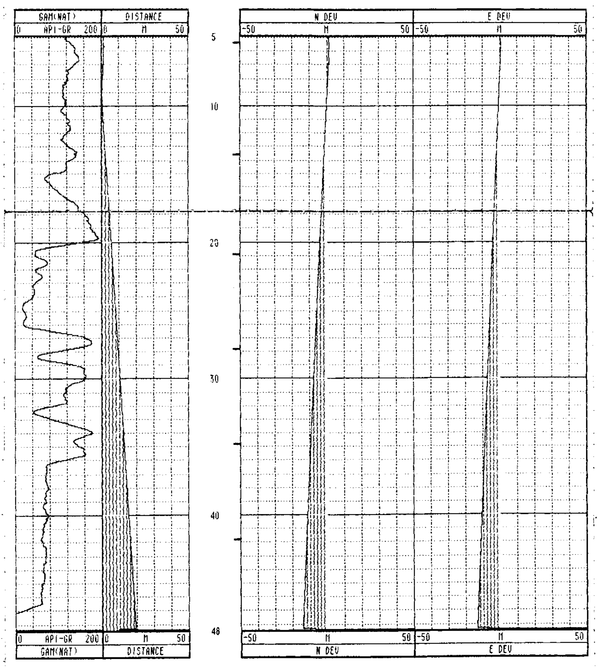

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR-89007 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 05/18/89
DATA FROM	:	PROBE	: 9055A , 14
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 3

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
5.0	4.68	1.08	0.44	1.2	22.0	28.6	22.0
10.0	8.98	-.02	-.64	0.6	268.4	31.0	218.3
15.0	13.27	-1.98	-2.30	3.0	229.2	30.6	213.7
20.0	17.57	-3.91	-3.95	5.5	225.3	30.2	223.7
25.0	21.90	-5.78	-5.60	8.0	224.1	29.9	221.8
30.0	26.24	-7.68	-7.24	10.5	223.5	29.9	220.5
35.0	30.59	-9.46	-8.88	13.0	223.2	29.9	203.3
40.0	34.94	-11.22	-10.51	15.4	223.1	29.1	223.1
45.0	39.30	-12.95	-12.21	17.8	223.3	29.1	227.3
48.4	42.29	-14.15	-13.32	19.4	223.3	0.0	0.0

Century

QHR-89008 GAM-DEN-RES-CA

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR-89008 GAM-DEN-RES-CAL		
LOCATION/FIELD	: SL27470/BL20350		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

OTHER SERVICES:

SCALE
1:200

DATE	: 05/18/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 100	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 99.54	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 0.24	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 4.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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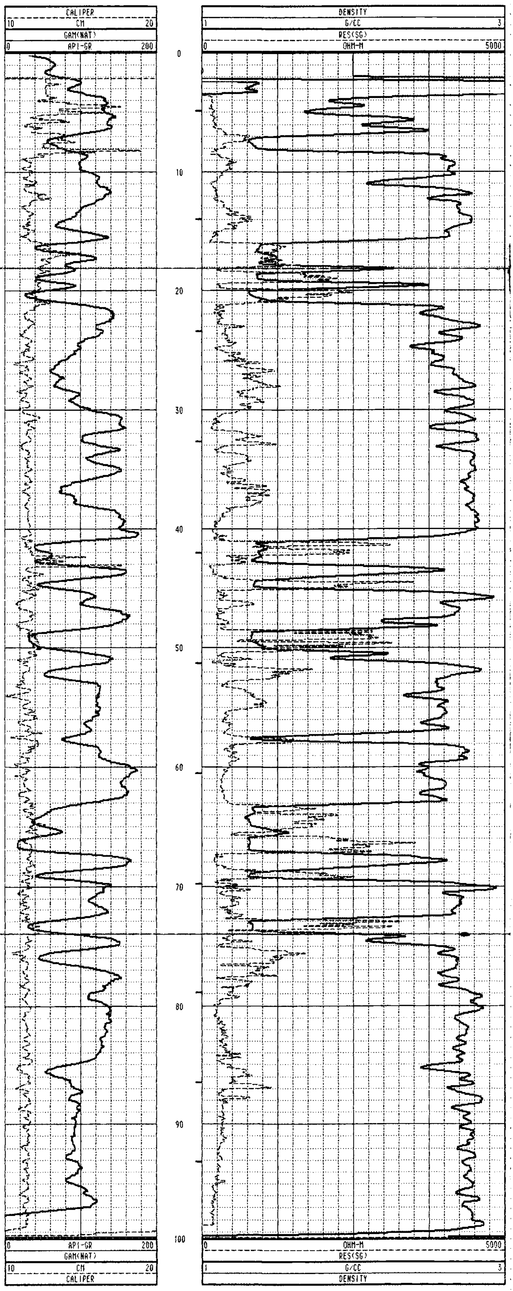


TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.129 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	176.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

753

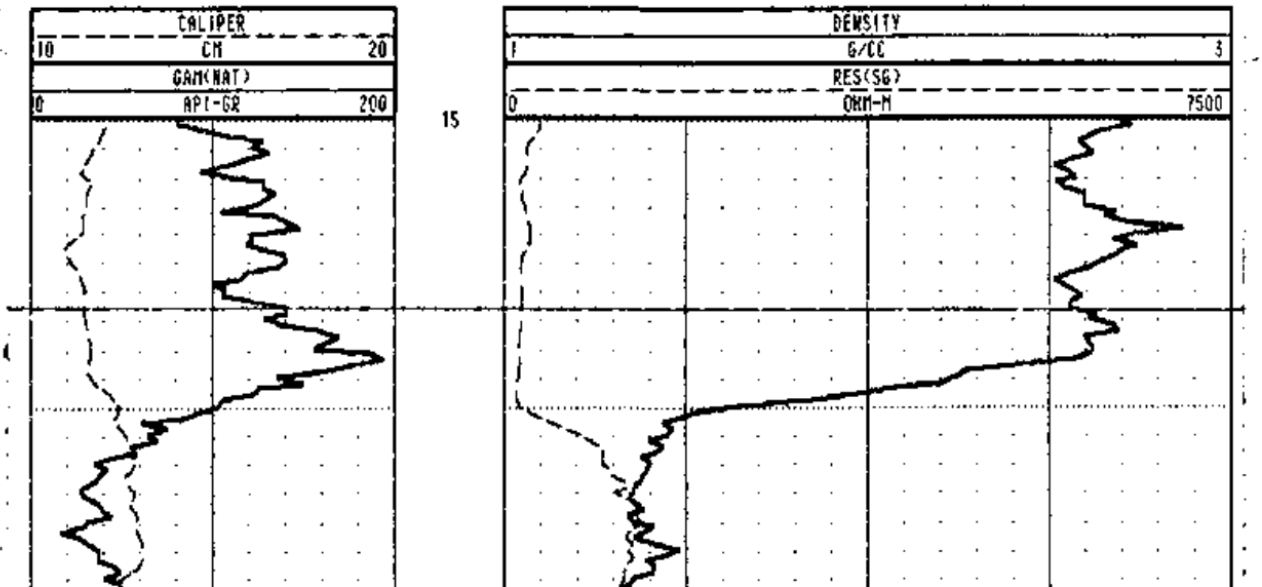
Century

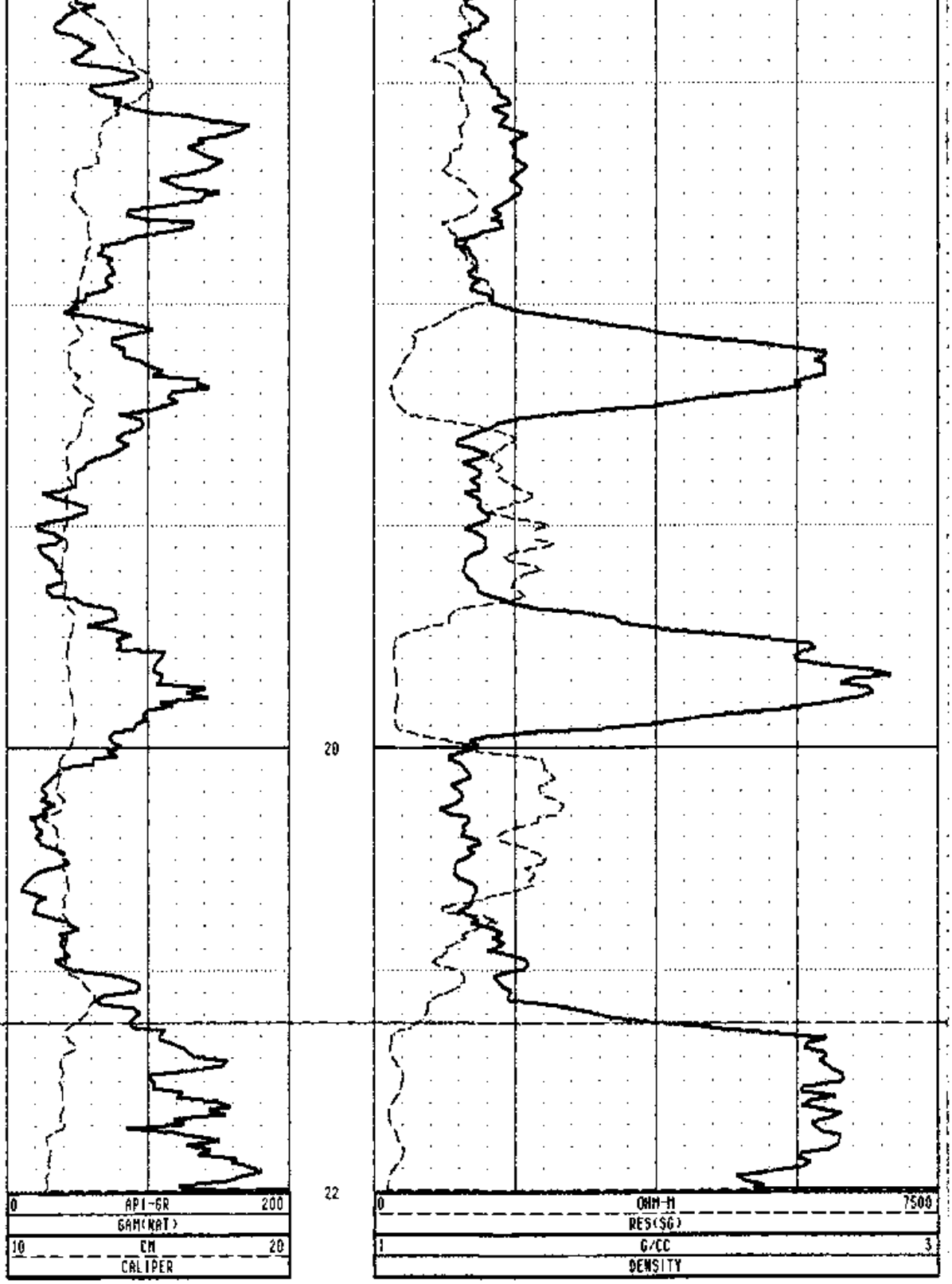
QHR-89008 EXP DENSITY

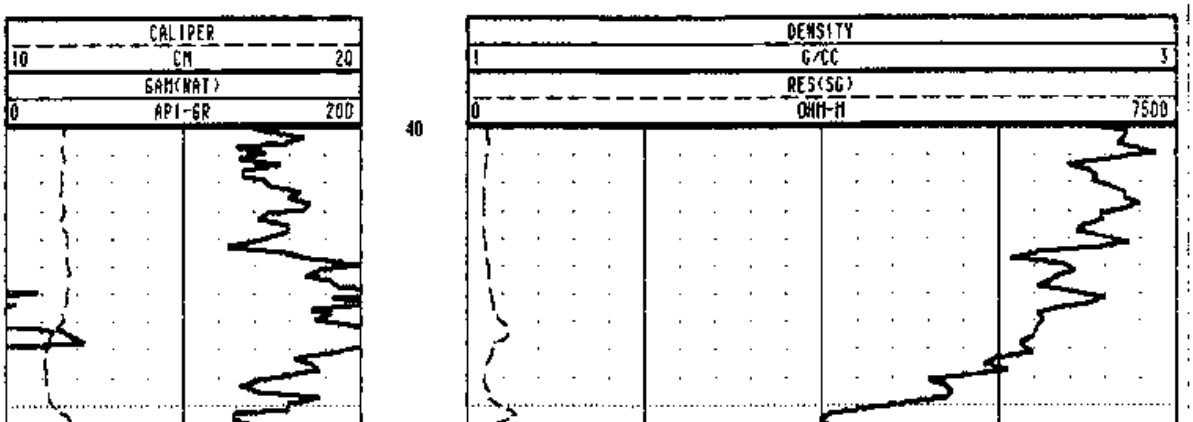
COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89008 EXP DENSITY				
LOCATION/FIELD	: SL27470/BL20350			SCALE	
COUNTY	: TRANSFER			1:20	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/18/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 100	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 99.54	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.24	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 4.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

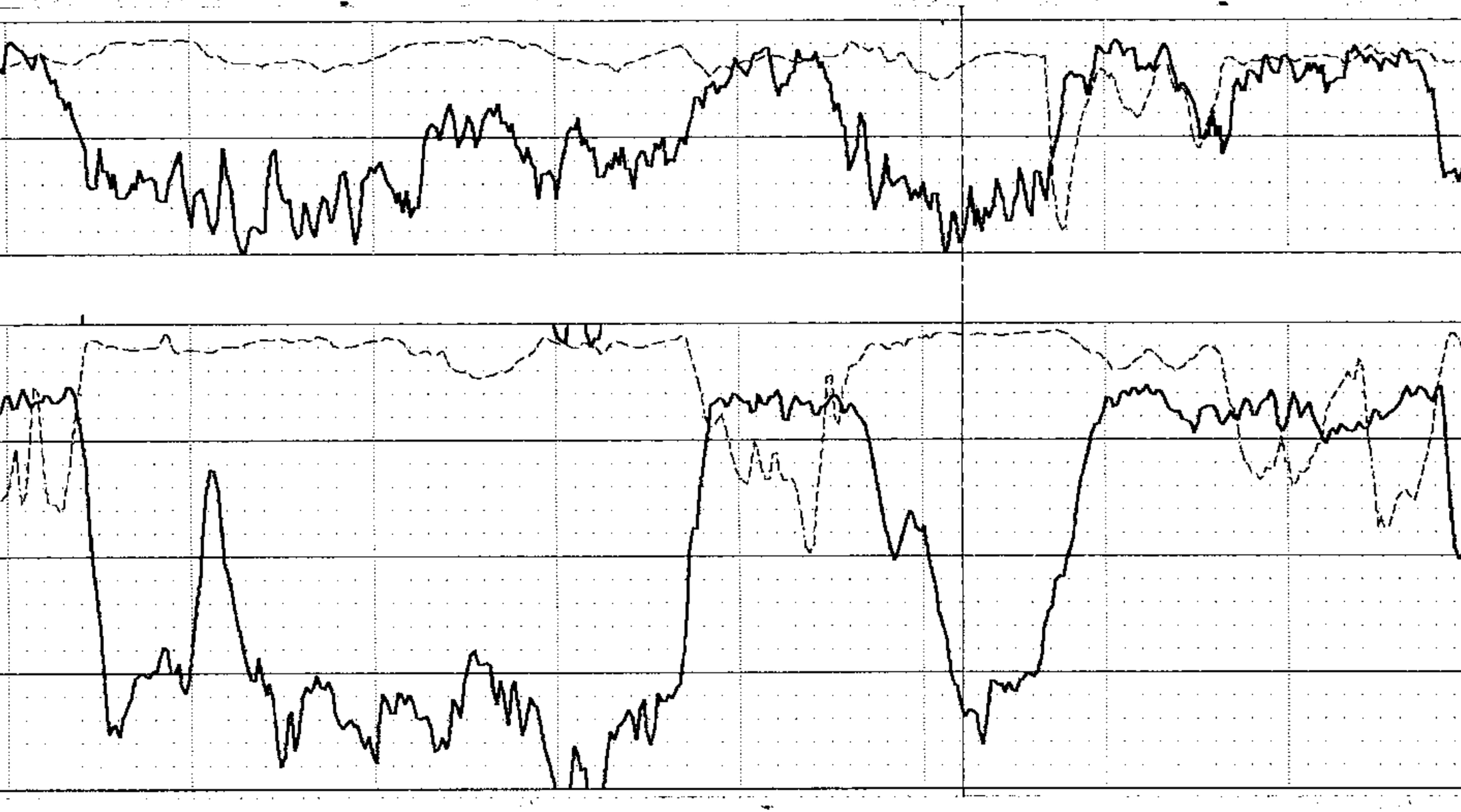
REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

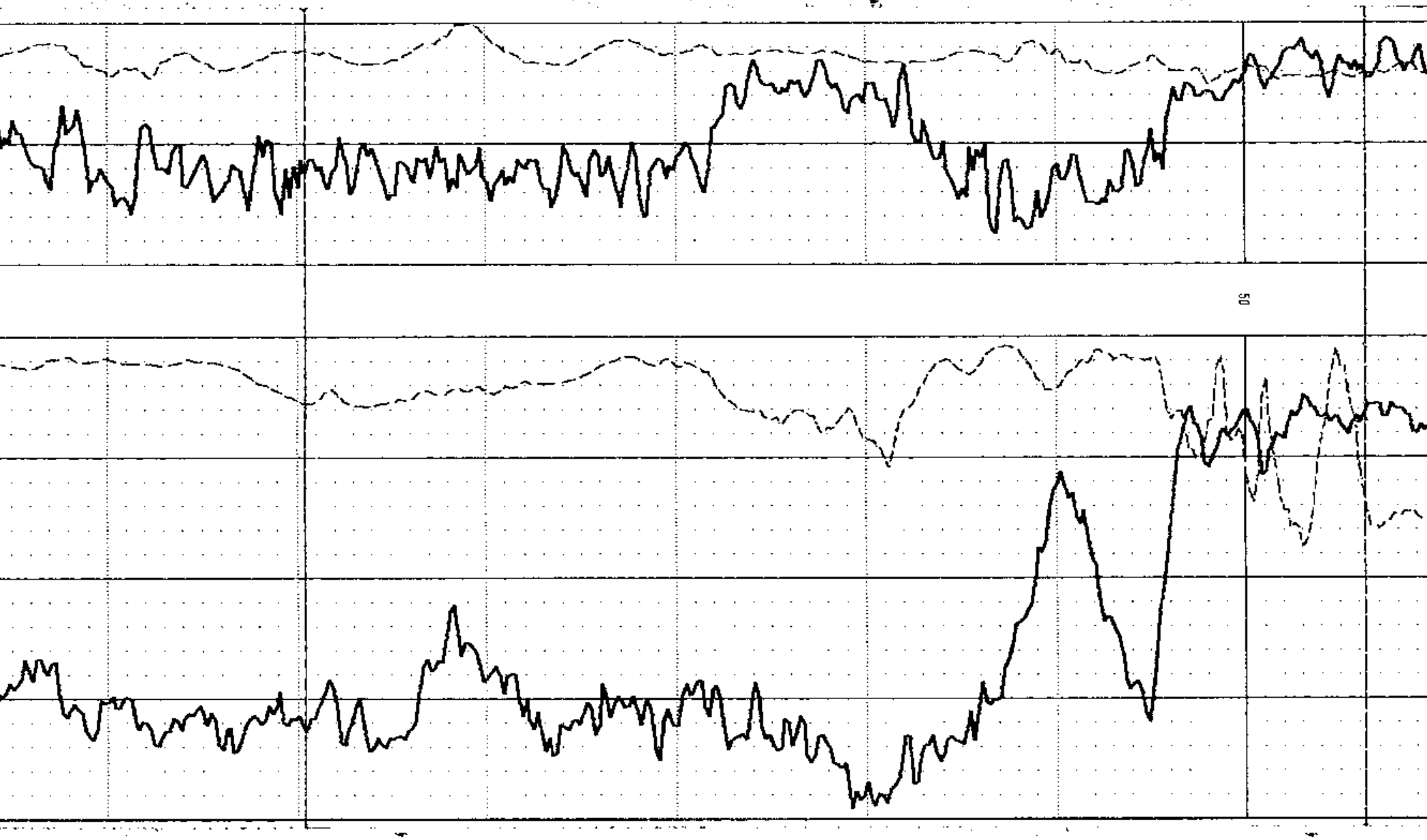
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS




20
22
0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER
0
OHM-M
7500
RES(SG)
1
G/CC
3
DENSITY


CALIPER
10
CM
20
GAM(NAT)
0
API-GR
200
40
DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
7500

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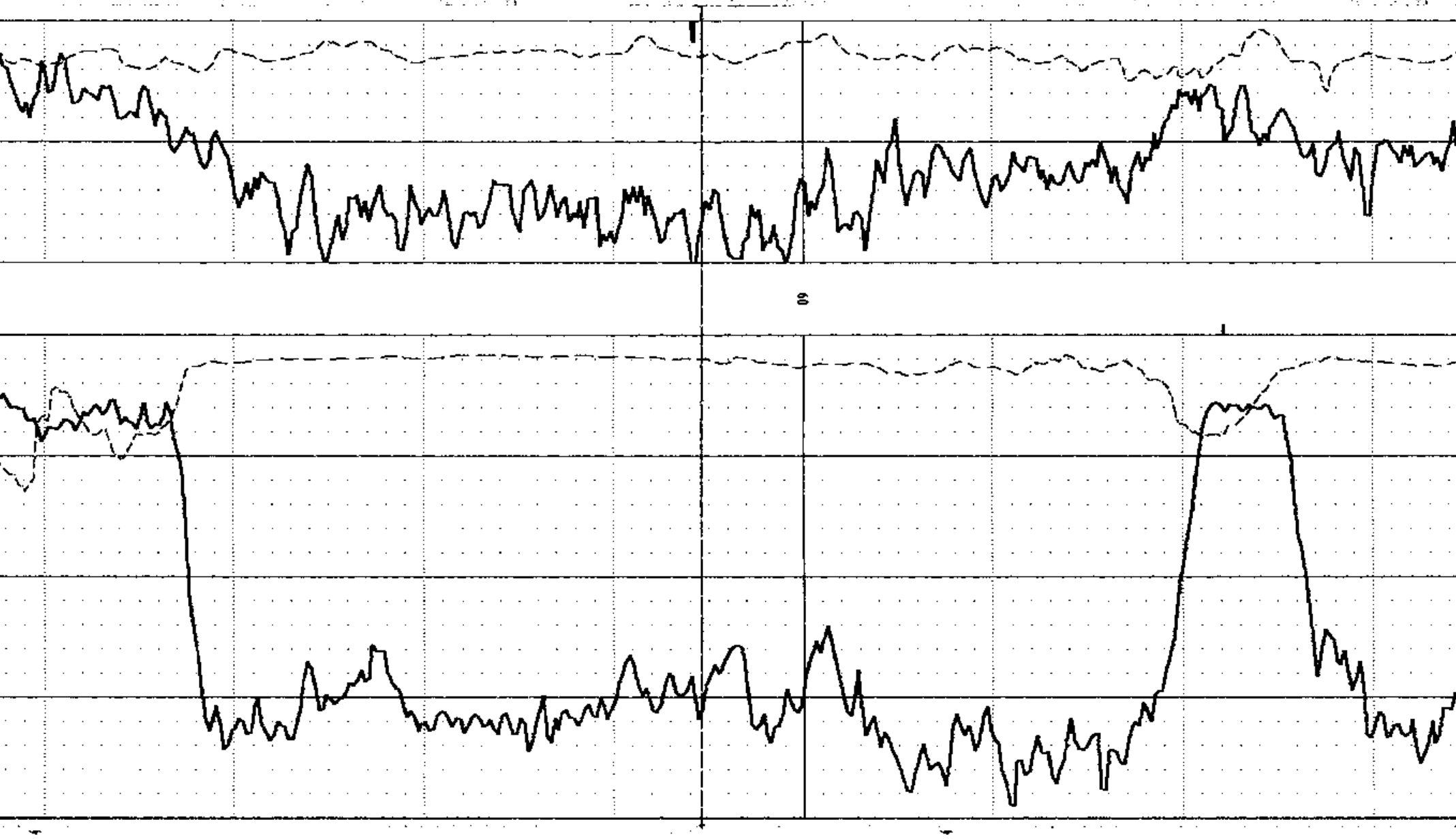
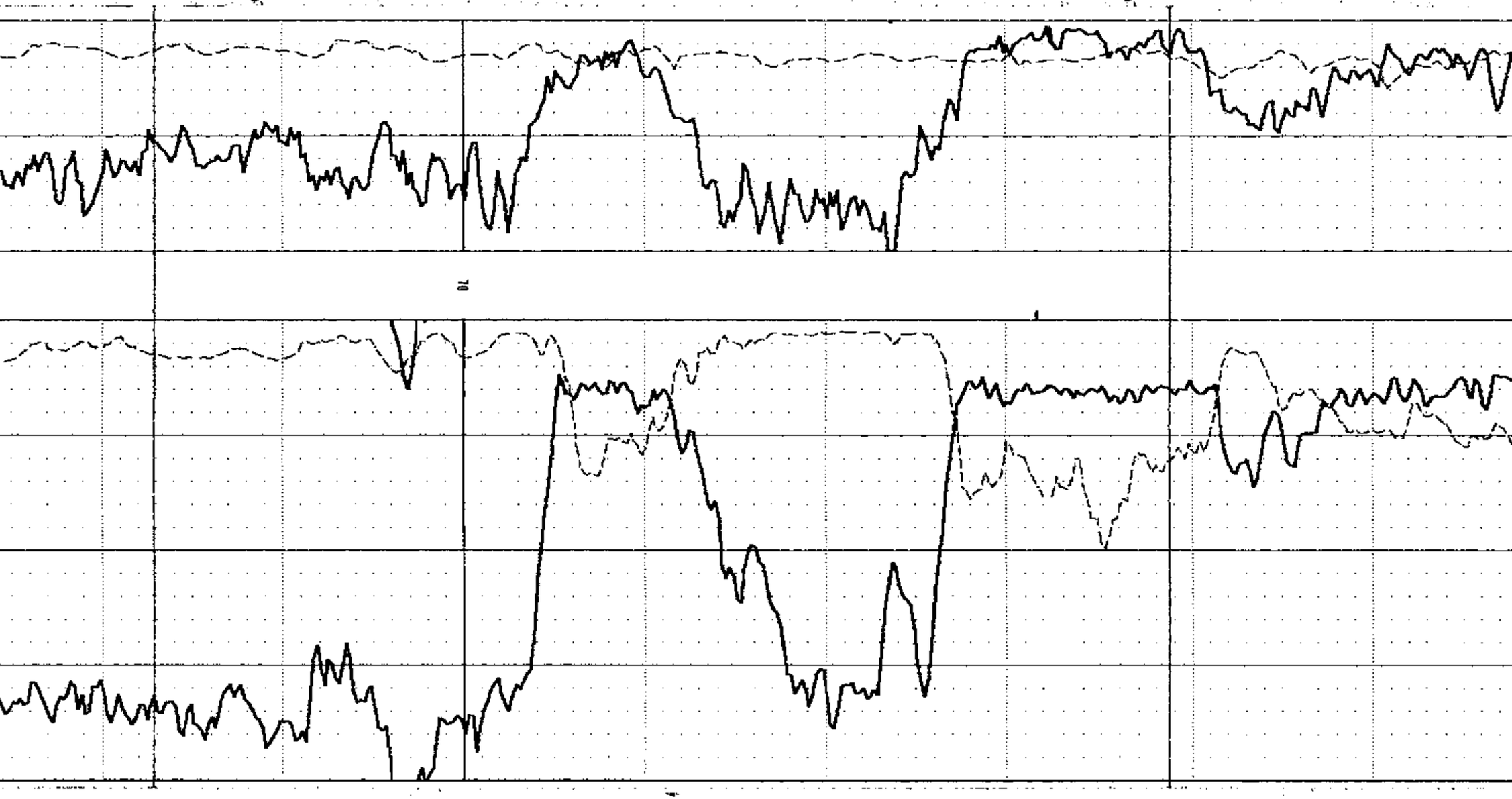
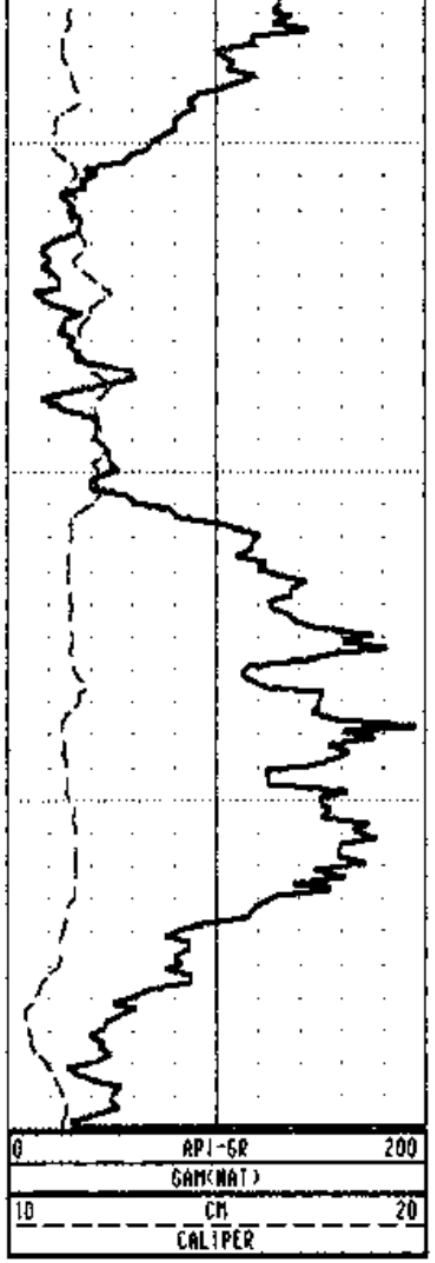
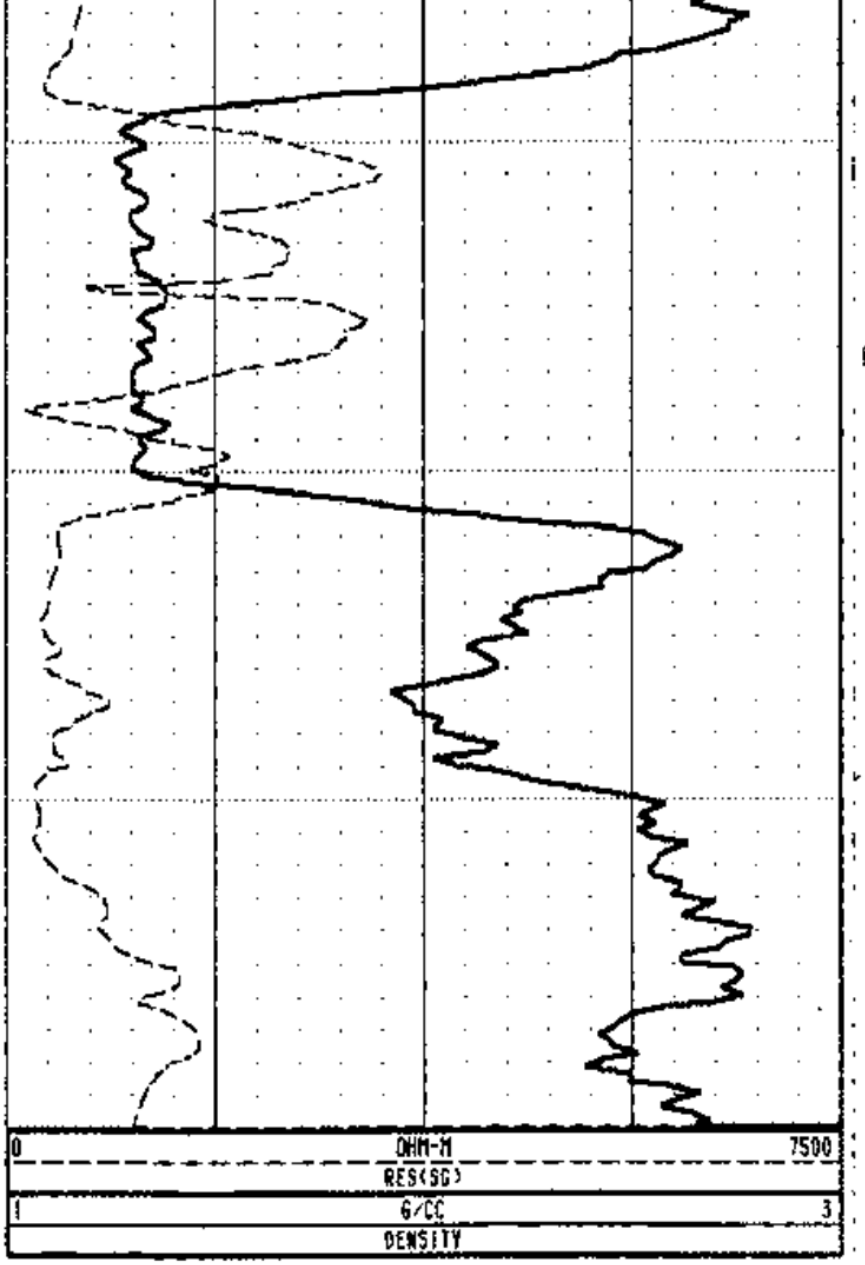





0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER


0
OHM-M
7500
RES(SG)
1
G/CC
3
DENSITY

Century

QHR-89008 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR-89008 GAMMA-NEUTRON				
LOCATION/FIELD	: SL27470/BL20350			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/18/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 100	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 99.62	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 1.10	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 4.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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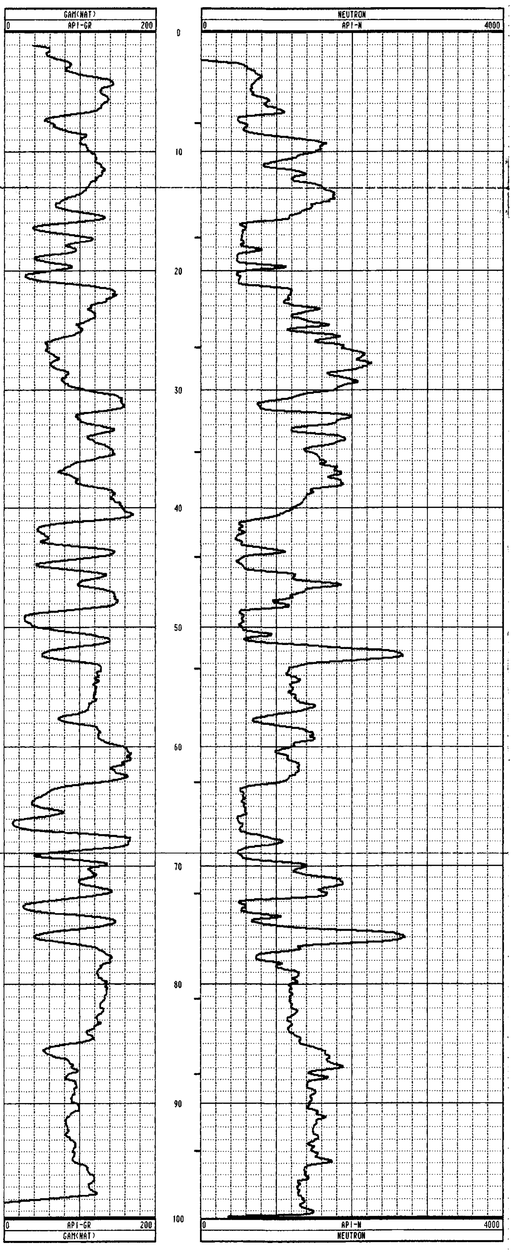

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

753

QHR-89008 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR-89008 DEVIATION		
LOCATION/FIELD	: SL27470/BL20350	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/18/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER	: 100	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 99.62	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 1.10	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 4.5	LOGGING UNIT	: 8902
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 00
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		

FILE : PROCESSED
TYPE : 9055A
LOG : 6
PLOT : QUIN 13
THRESH: 20000

LOGGED OPEN HOLE
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:56	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:56	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

********** COMPU-LOG II - VERTICAL DEVIATION **********

CLIENT : QUINTETTE COAL LTD.
FIELD OFFICE : CALGARY
DATA FROM :
MAG. DECL. : 24.500

HOLE ID. : QHR-89008 GAM
DATE OF LOG : 05/18/89
PROBE : 9055A , 14
DEPTH UNITS : METER LOG 6

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
5.0	4.44	-.38	-1.06	1.1	250.4	40.9	213.6
10.0	8.30	1.30	-.11	1.3	355.3	40.1	34.4
15.0	12.17	3.79	1.82	4.2	25.7	39.1	44.8
20.0	16.06	6.25	3.77	7.3	31.1	38.9	34.3
25.0	19.94	8.75	5.68	10.4	33.0	39.2	35.2
30.0	23.83	11.19	7.62	13.5	34.3	38.6	43.9
35.0	27.74	13.62	9.56	16.6	35.1	38.3	38.4
40.0	31.67	16.04	11.47	19.7	35.6	37.6	38.9
45.0	35.57	18.46	13.41	22.8	36.0	39.1	38.6
50.0	39.47	20.93	15.33	25.9	36.2	37.8	36.2
55.0	43.36	23.40	17.24	29.1	36.4	38.4	45.1
60.0	47.29	25.82	19.17	32.2	36.6	37.8	36.4
65.0	51.23	28.24	21.05	35.2	36.7	37.7	33.1
70.0	55.18	30.68	22.88	38.3	36.7	37.6	39.3
75.0	59.12	33.12	24.73	41.3	36.7	38.8	23.8
80.0	63.05	35.63	26.52	44.4	36.7	37.4	38.2
85.0	66.97	38.11	28.37	47.5	36.7	39.0	38.9
90.0	70.87	40.60	30.26	50.6	36.7	38.3	36.7
95.0	74.80	43.08	32.09	53.7	36.7	38.1	36.3
99.6	78.46	45.32	33.77	56.5	36.7	0.0	0.0

QHR89009 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89009 EXP DENSITY		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:20	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/19/89	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER	: 131	ELEV. PERM. DATUM: GL	KB : 00
LOG BOTTOM	: 130.82	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 0.24	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 4.5	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05		RECORDED BY : D.ZANKL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 00	TYPE : 9032HC
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 1
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 00IN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 20000
REMARKS	:		
LOGGED OPEN HOLE			
VERTICAL HOLE			

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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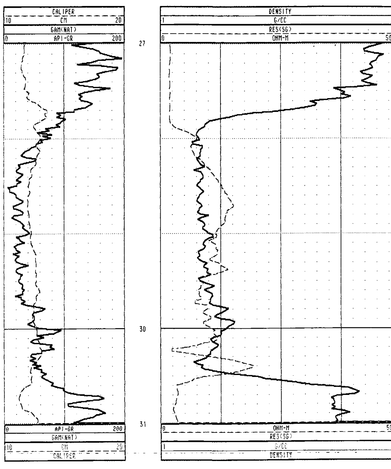
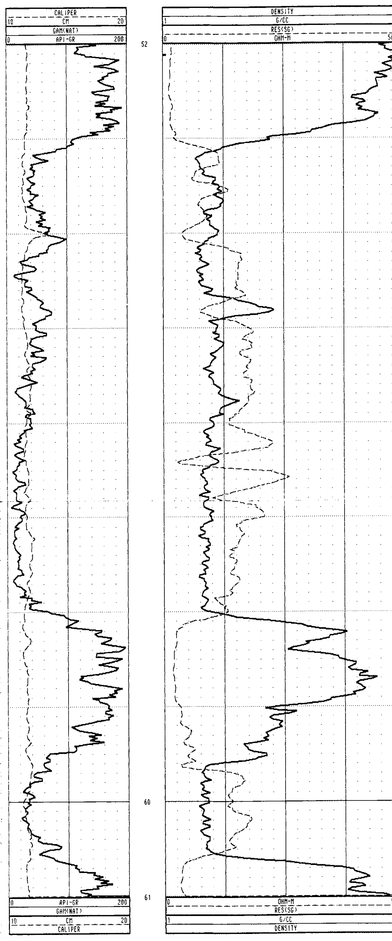
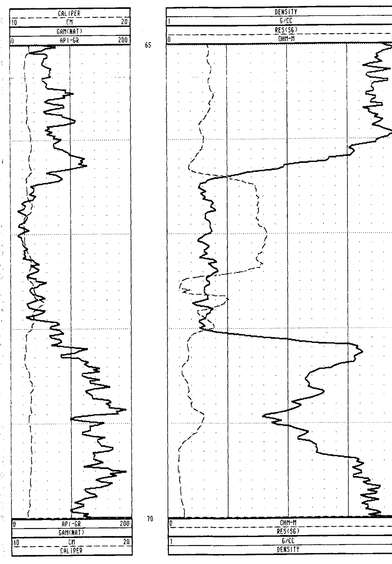






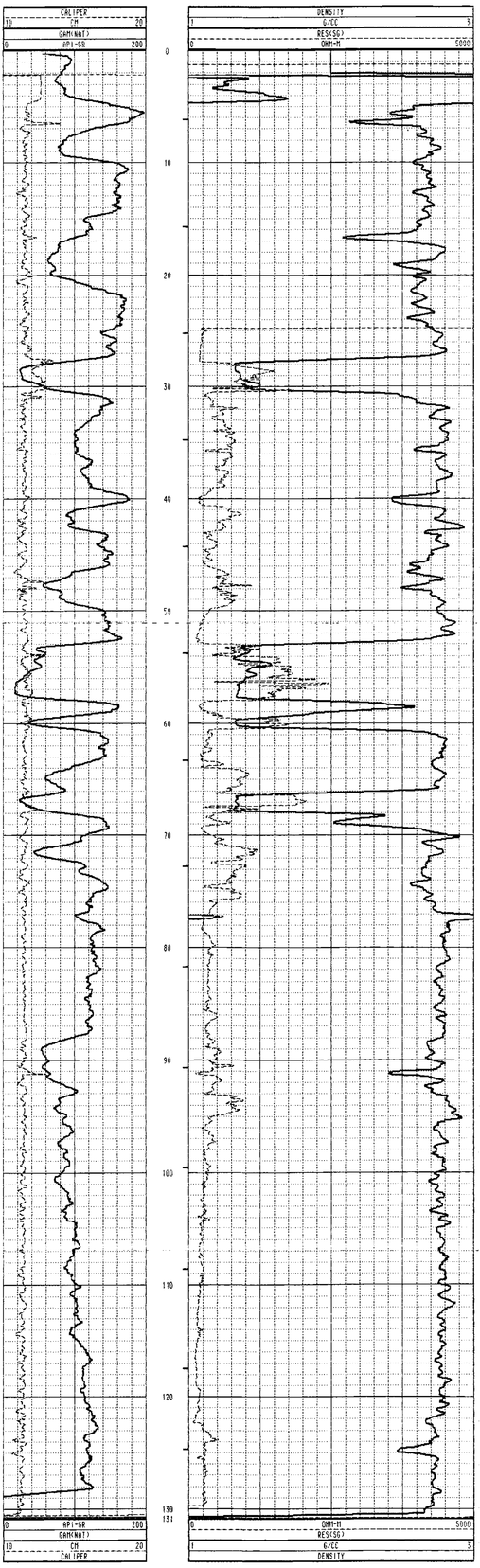
QHR89009 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89009 GAM-DEN-RES-CAL				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/19/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 131	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 130.82	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 0.24	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 4.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000
REMARKS	:				

LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(WAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(WAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	170.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

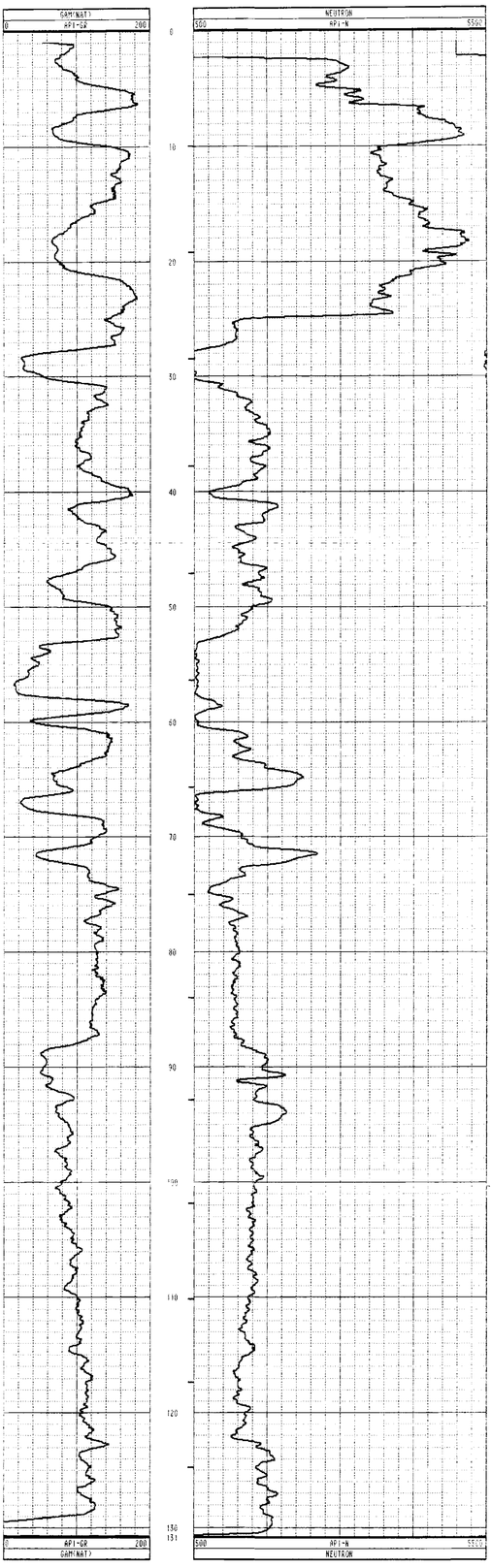
QHR89009 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89009 GAMMA-NEUTRON		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/19/89 PERMANENT DATUM : 00	ELEVATIONS	
DEPTH DRILLER	: 131 ELEV. PERM. DATUM: 00	KB : 00	
LOG BOTTOM	: 130.82 LOG MEASURED FROM: GL	DF : 00	
LOG TOP	: 0.92 DRL MEASURED FROM: GL	GL : 00	
CASING DRILLER	: 4.5 LOGGING UNIT : 8902		
CASING TYPE	: STEEL FIELD OFFICE : CALGARY		
CASING THICKNESS	: .05 RECORDED BY : D.ZIANKL		
BIT SIZE	: 12.1 BOREHOLE FLUID : WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.500 RM : 00	TYPE : 9055A	
MATRIX DENSITY	: 2.68 RM TEMPERATURE : 00	LOG : 0	
FLUID DENSITY	: 1.0 MATRIX DELTA T : 173	PLOT : OVER 0	
NEUTRON MATRIX	: SANDSTONE FLUID DELTA T : 690	THRESH: 20000	

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

QHR89009 DEVIATION

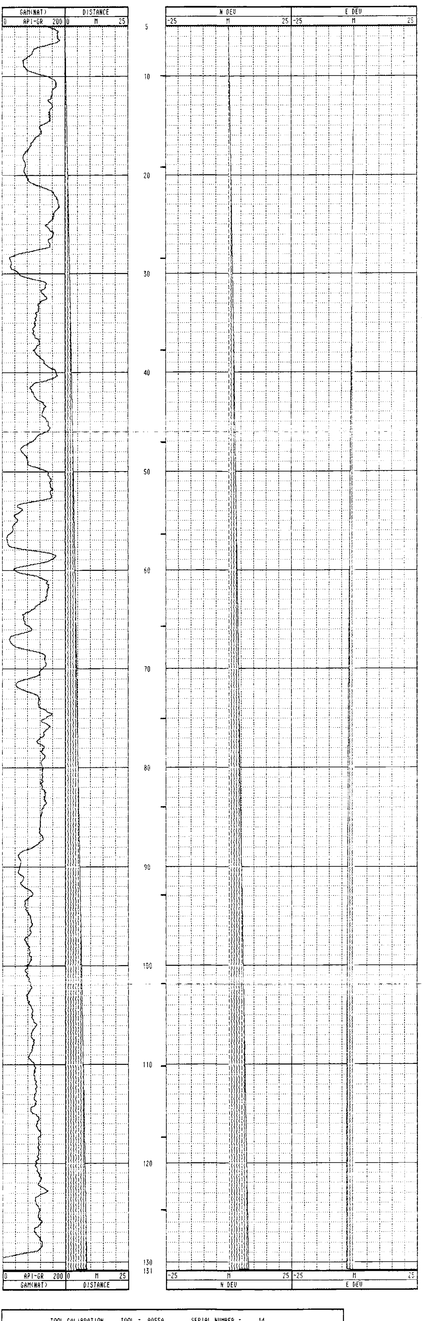
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89009 DEVIATION		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/19/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER	: 131	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 130.82	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 0.92	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 4.5	LOGGING UNIT	: 9902
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS: .05		RECORDED BY	: D.ZANKL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 00
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		

FILE : PROCESSED
TYPE : 9055A
LOG : 2
PLOT : QUIN 13
THRESH: 20000

LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5242.000 CPS	1000.000 OHM
5	05/04/89	08:15:14	0	SP	+0.000 CPS	0.000 MV
6	05/04/89	08:15:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR89009 GAMM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 05/19/89
DATA FROM	:	PROBE	: 9055A , 14
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 2

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
5.0	4.99	0.07	-.01	0.1	349.4	4.1	323.5
10.0	9.98	0.37	-.06	0.4	350.2	4.2	339.2
15.0	14.96	0.70	-.23	0.7	341.8	4.1	341.2
20.0	19.95	1.04	-.41	1.1	336.5	4.3	338.0
25.0	24.94	1.37	-.59	1.5	336.7	4.6	326.5
30.0	29.92	1.70	-.78	1.9	335.4	4.3	323.8
35.0	34.91	2.00	-.97	2.2	334.1	4.2	326.0
40.0	39.90	2.28	-1.18	2.6	332.7	3.5	314.9
45.0	44.88	2.56	-1.38	2.9	331.6	3.6	320.3
50.0	49.87	2.84	-1.58	3.2	330.9	3.4	305.6
55.0	54.86	3.11	-1.75	3.6	330.6	3.6	316.0
60.0	59.85	3.39	-1.91	3.9	330.6	3.5	330.2
65.0	64.84	3.67	-2.07	4.2	330.6	3.5	323.7
70.0	69.83	3.94	-2.21	4.5	329.7	3.6	338.9
75.0	74.82	4.21	-2.34	4.8	330.9	3.4	327.9
80.0	79.81	4.48	-2.46	5.1	331.2	3.7	342.8
85.0	84.80	4.78	-2.57	5.4	331.8	3.8	342.1
90.0	89.79	5.09	-2.67	5.8	332.3	3.9	342.3
95.0	94.78	5.42	-2.77	6.1	332.9	4.0	342.6
100.0	99.77	5.75	-2.85	6.4	333.6	3.6	350.5
105.0	104.76	6.07	-2.94	6.7	334.2	3.7	354.2
110.0	109.74	6.40	-3.02	7.1	334.7	4.0	346.7
115.0	114.73	6.72	-3.09	7.4	335.3	3.9	356.4
120.0	119.72	7.05	-3.14	7.7	336.0	3.8	355.6
125.0	124.71	7.40	-3.18	8.0	336.8	4.2	349.0
130.0	129.70	7.73	-3.20	8.4	337.5	3.9	357.4
130.8	130.52	7.79	-3.20	8.4	337.6	0.0	0.0

Century

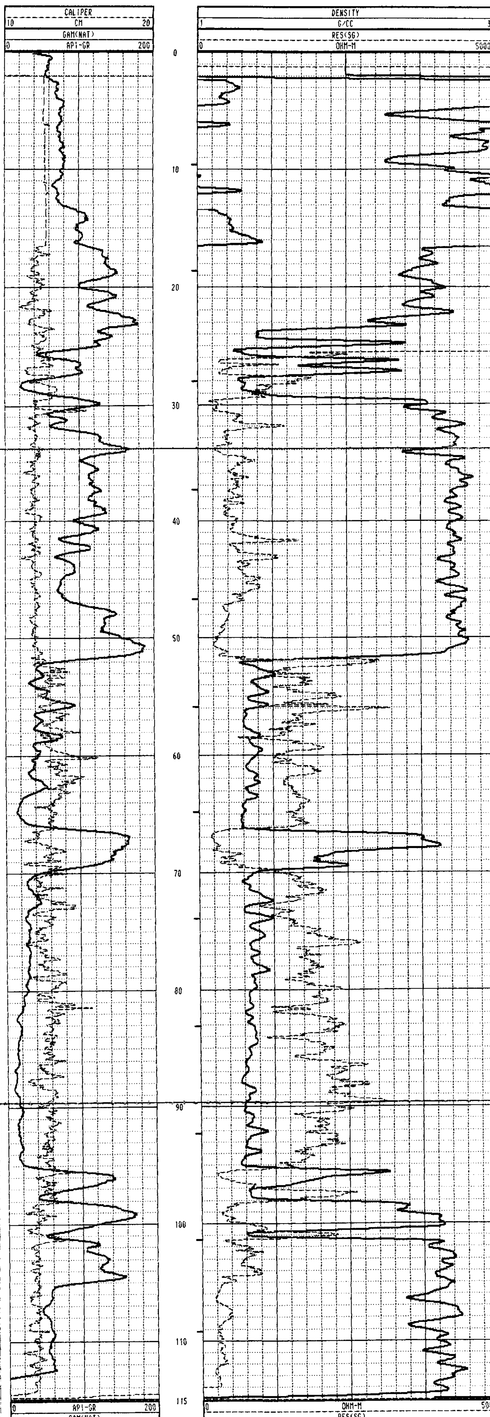
QHR89010 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89010 GAM-DEN-RES-CAL				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/20/89	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 115	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 115.06	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.18	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 16.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

703



TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.166 G/CC
3	05/04/89	12:11:56	0	DENSITY	2459.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

753

Century

QHR89010 EXP DENSITY

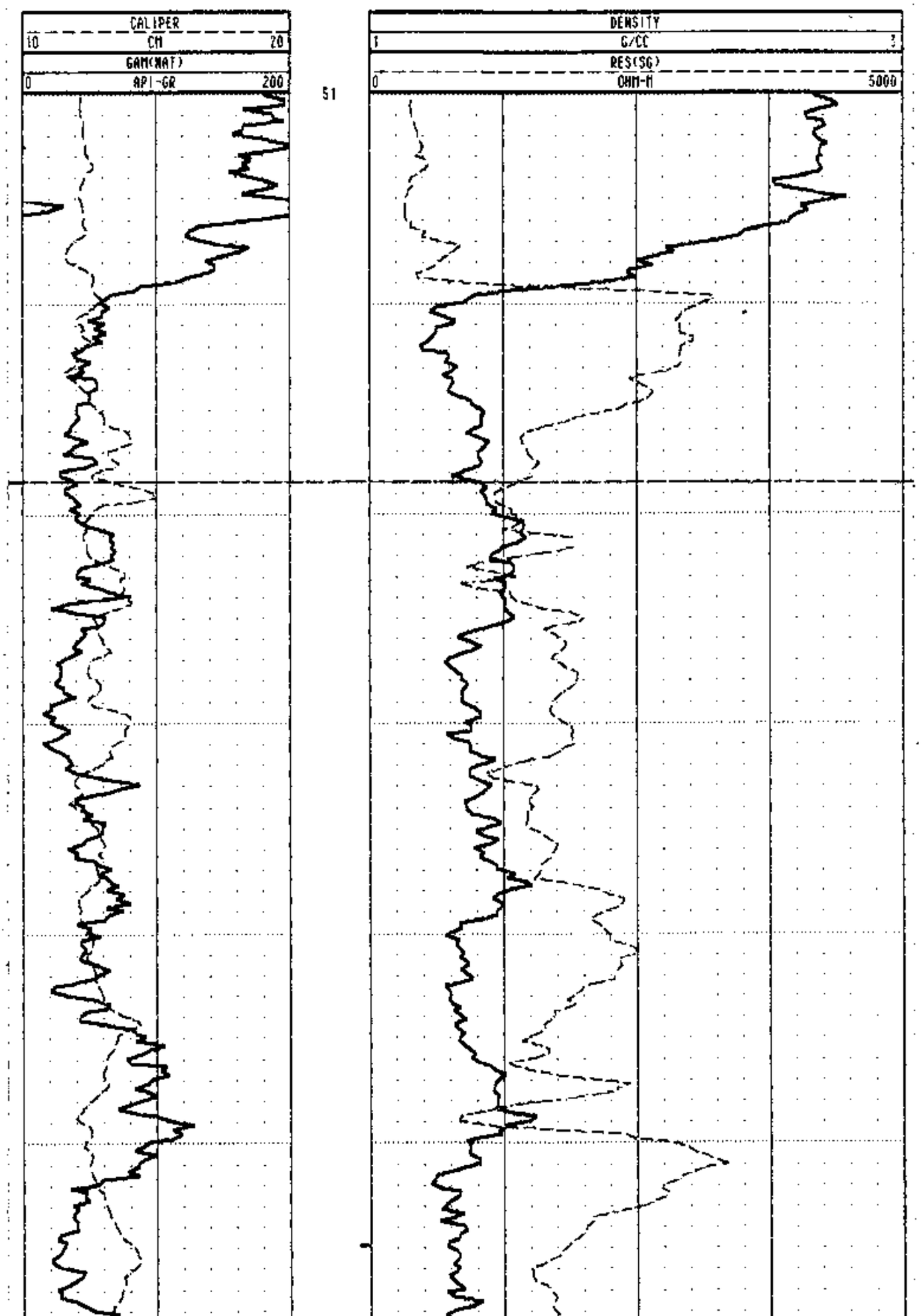
OTHER SERVICES:

SCALE
1:200

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89010 EXP DENSITY				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/20/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 115	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 115.06	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.18	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 16.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS


CALIPER
10
CM
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GAM(NAT)
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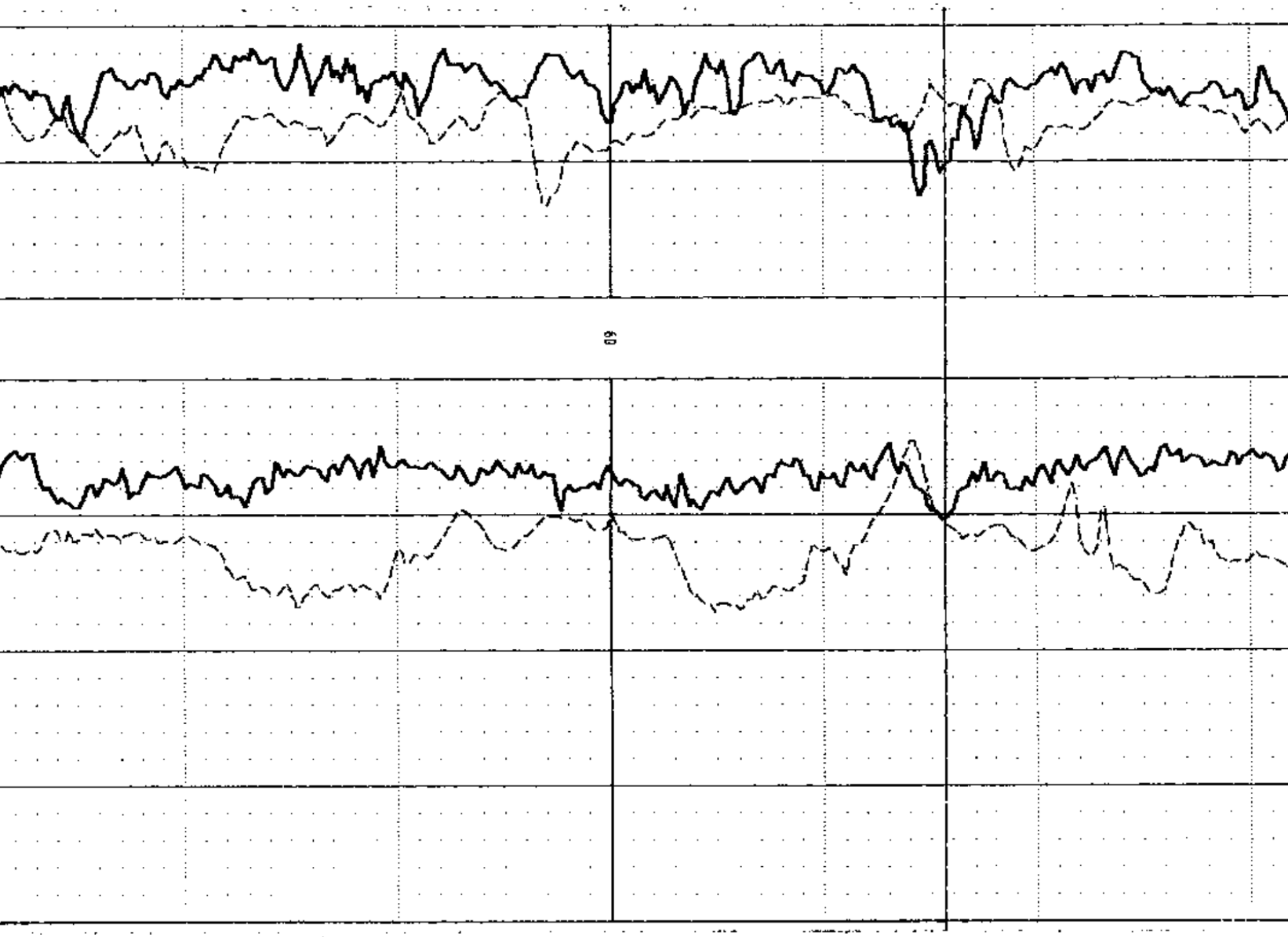
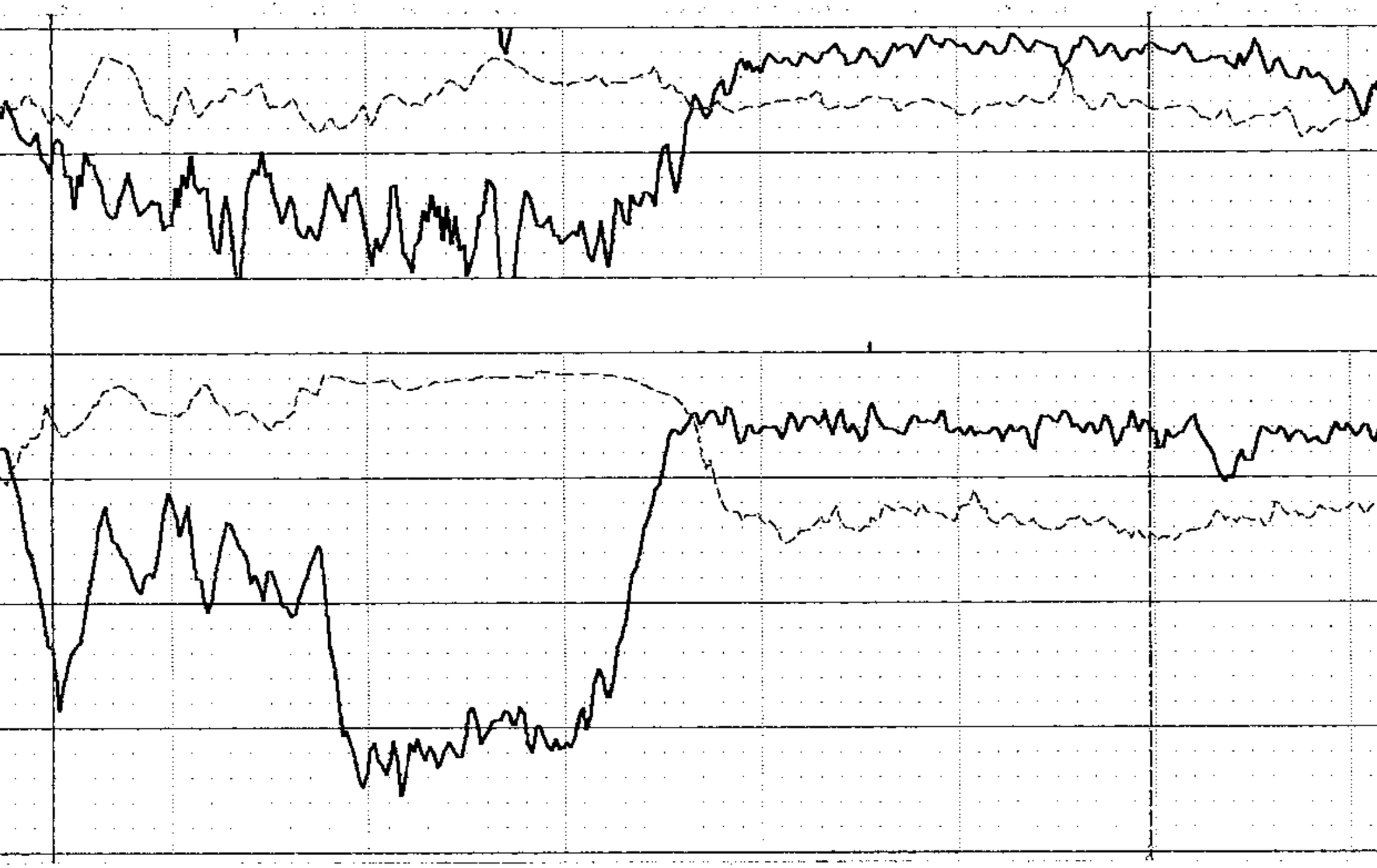
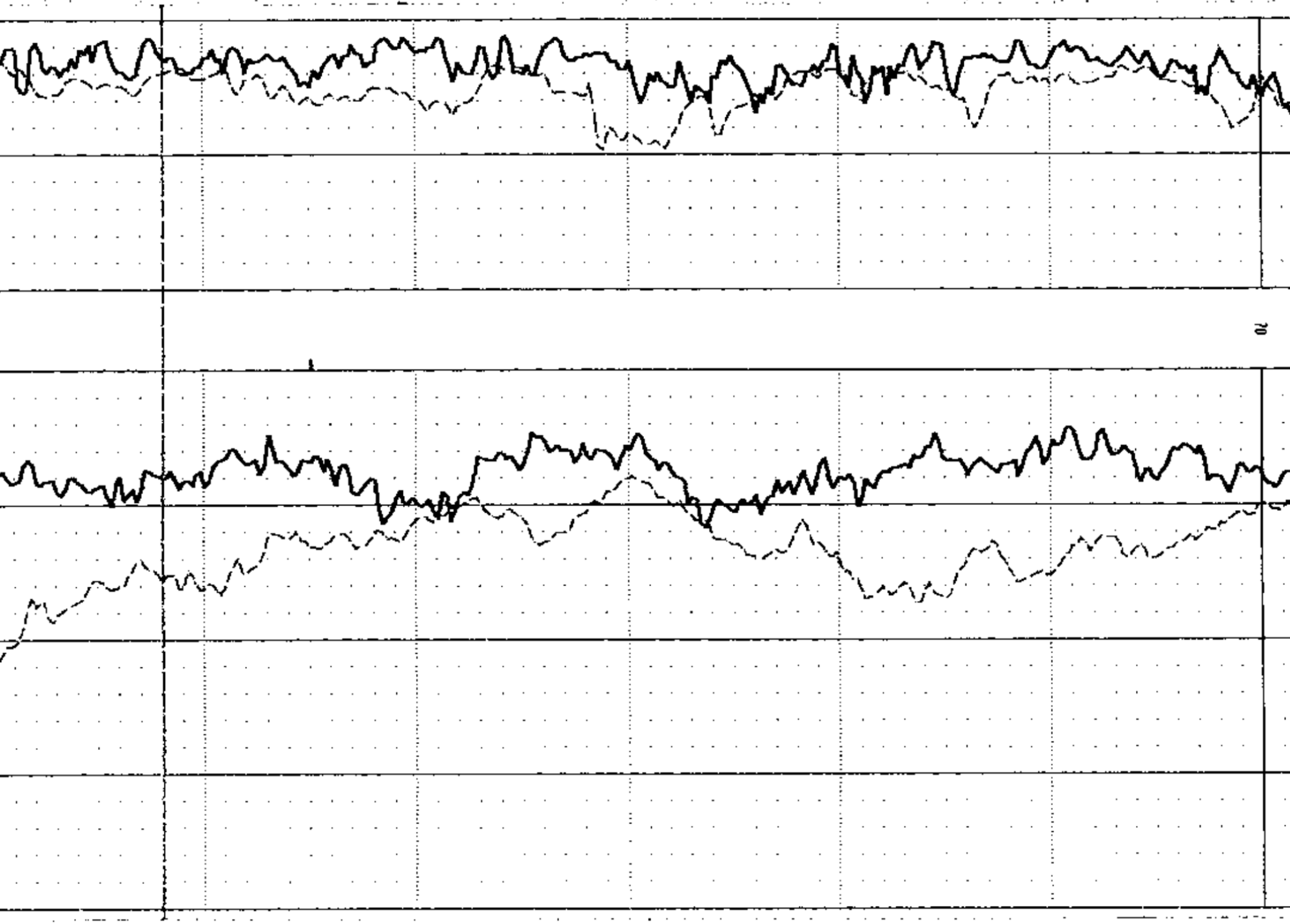
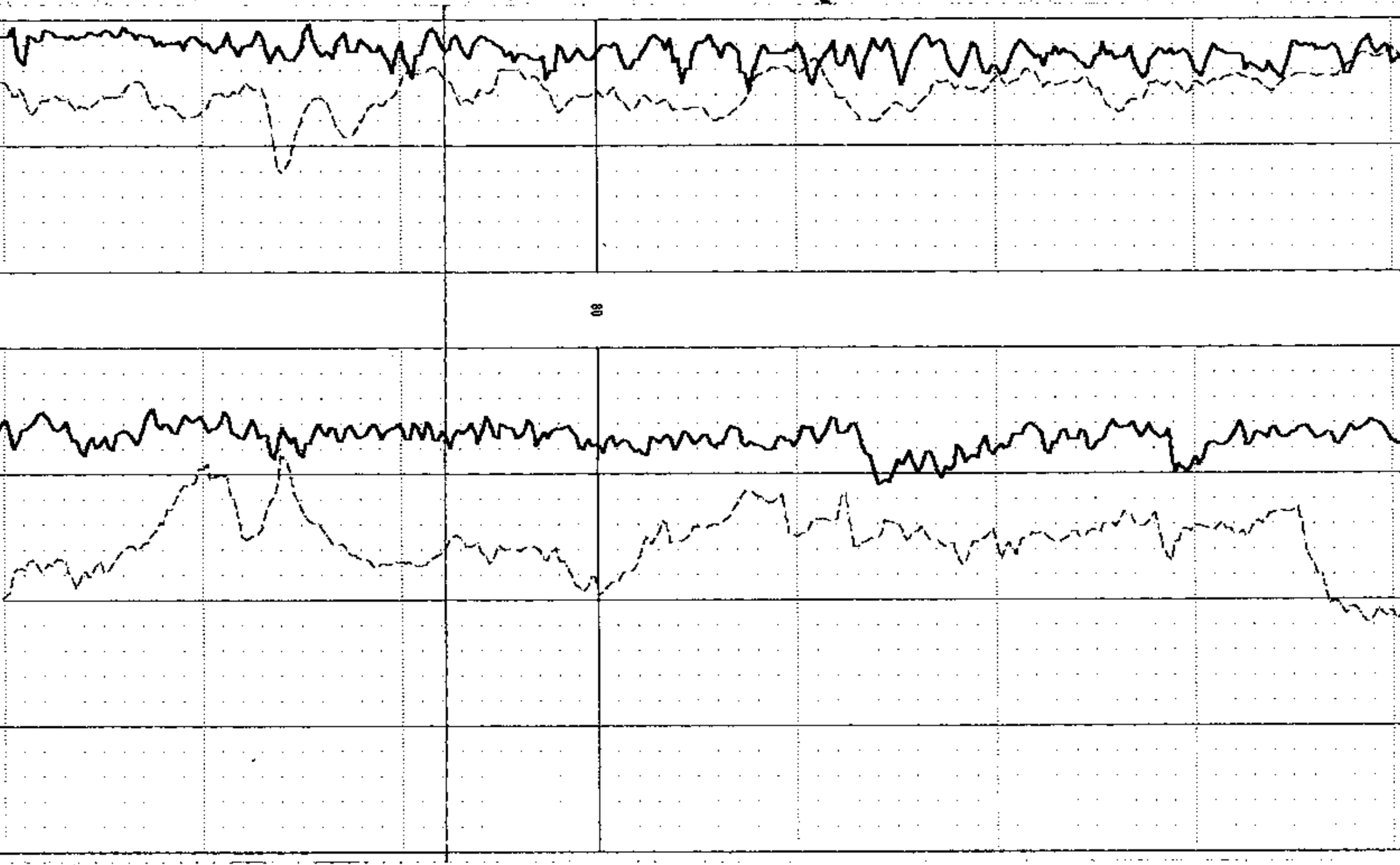
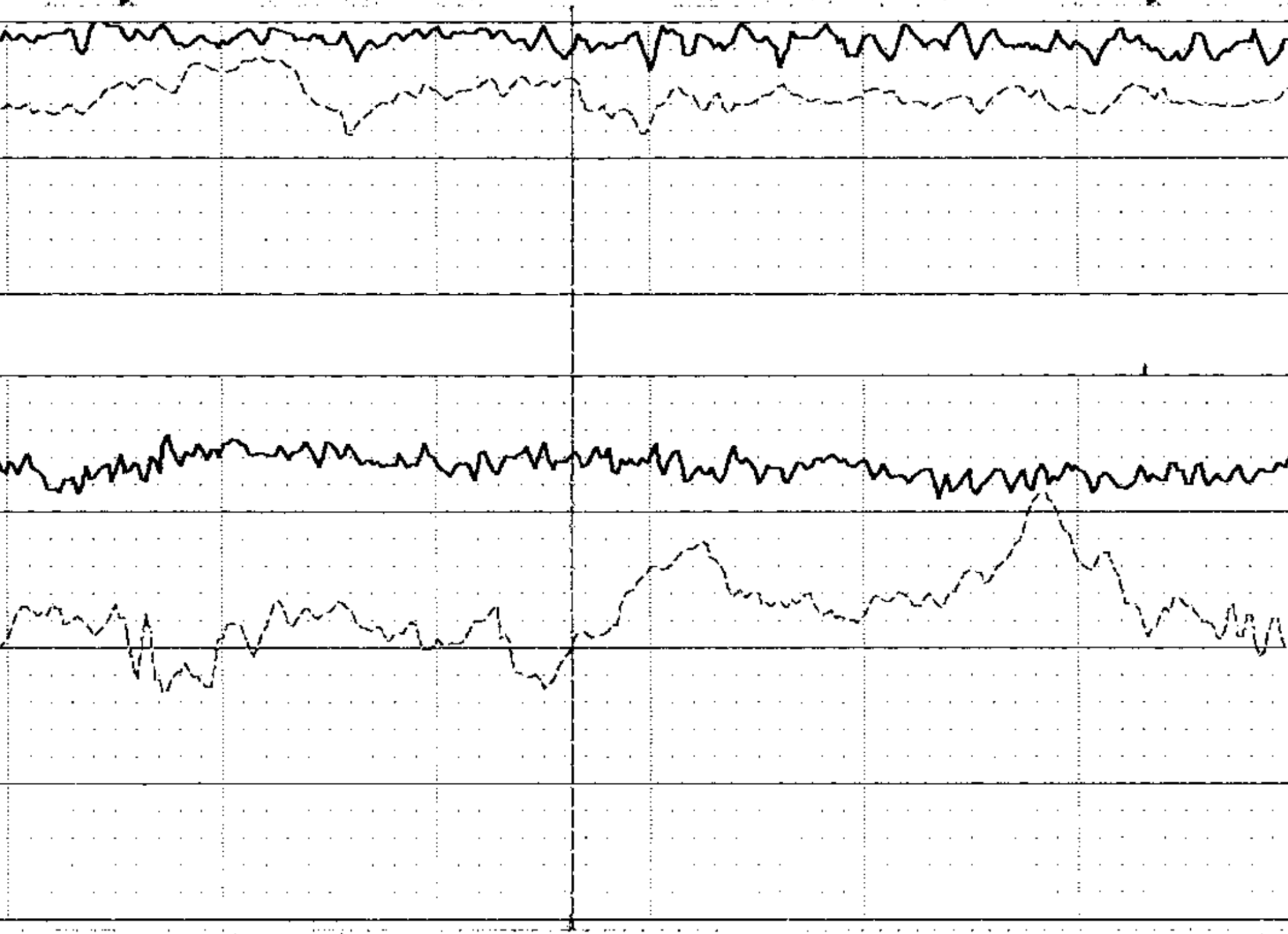
API-GR
200
51
DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000

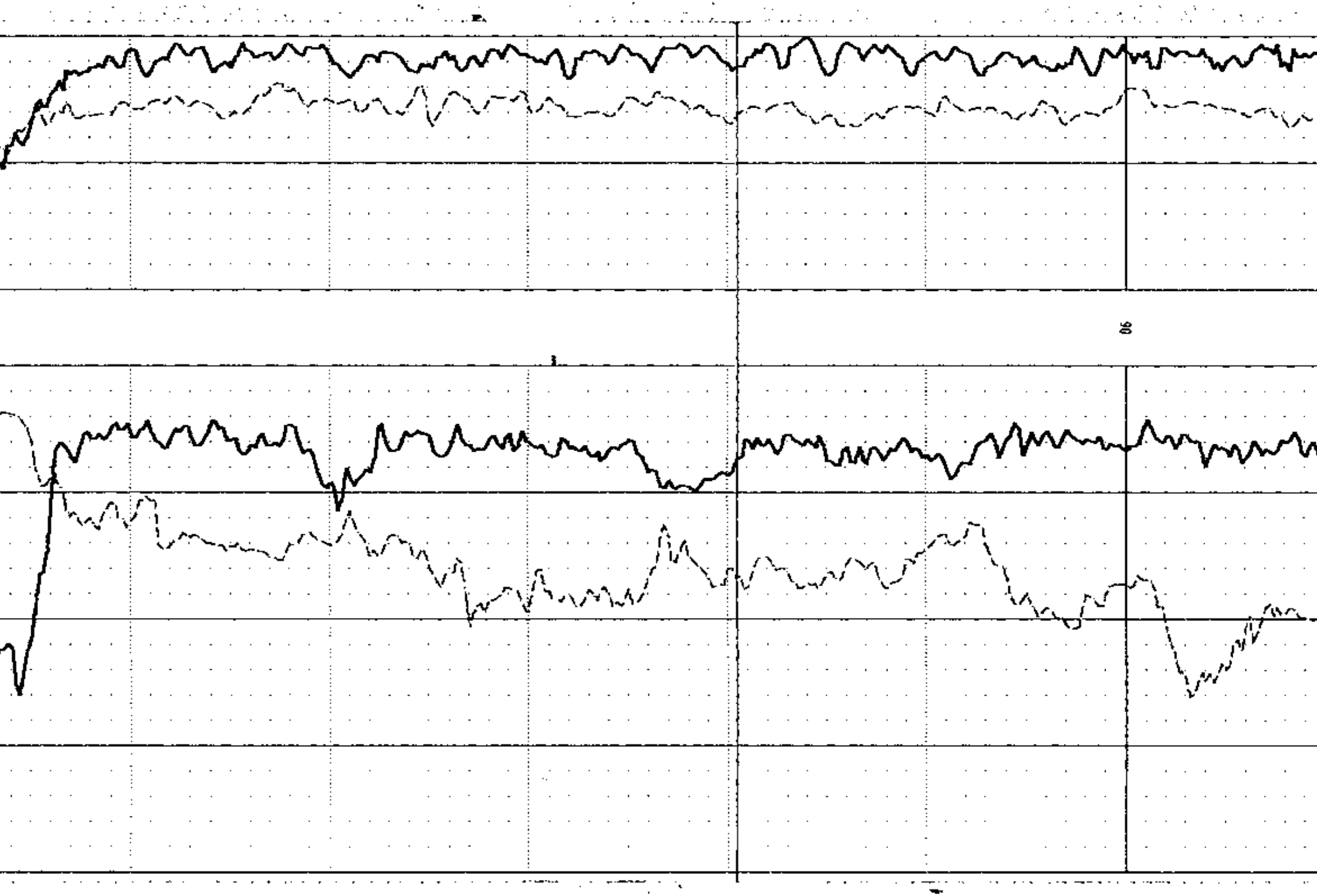


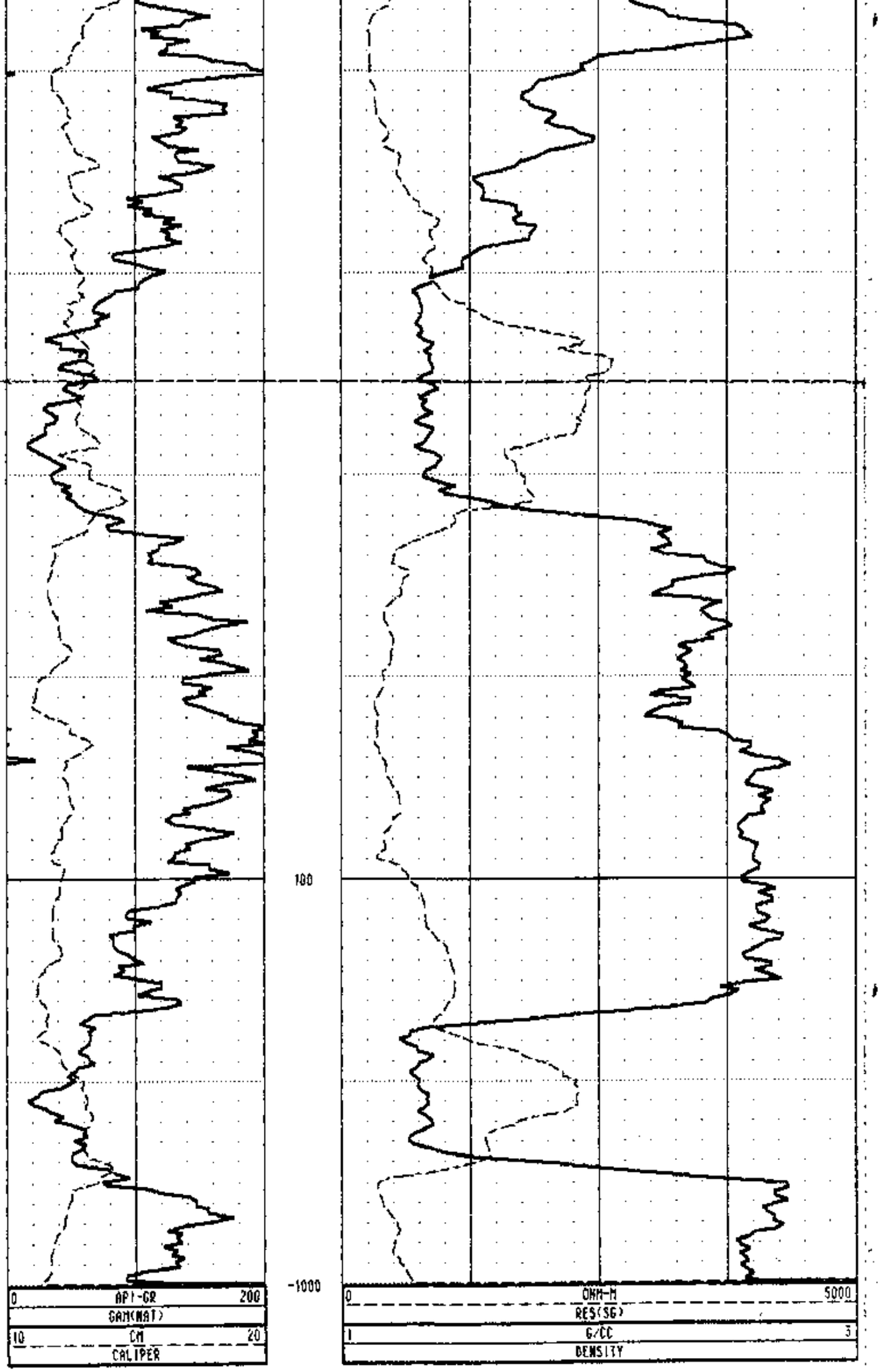











100
-1000
0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER
0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY

Century

QHR89010 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89010 GAMMA-NEUTRON		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/20/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER	: 115	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 115.18	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 1.18	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 16.5	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: .05	RECORDED BY : D.ZANKL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 00	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 001N 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 620	THRESH: 20000
REMARKS	:		

LOGGED OPEN HOLE
ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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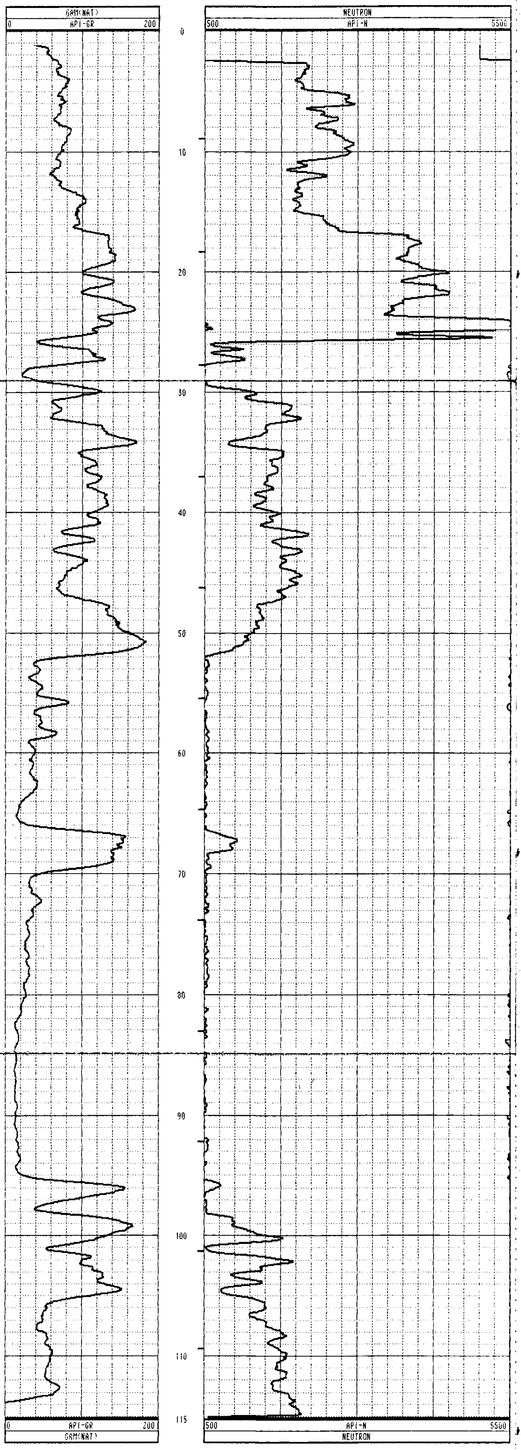


TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

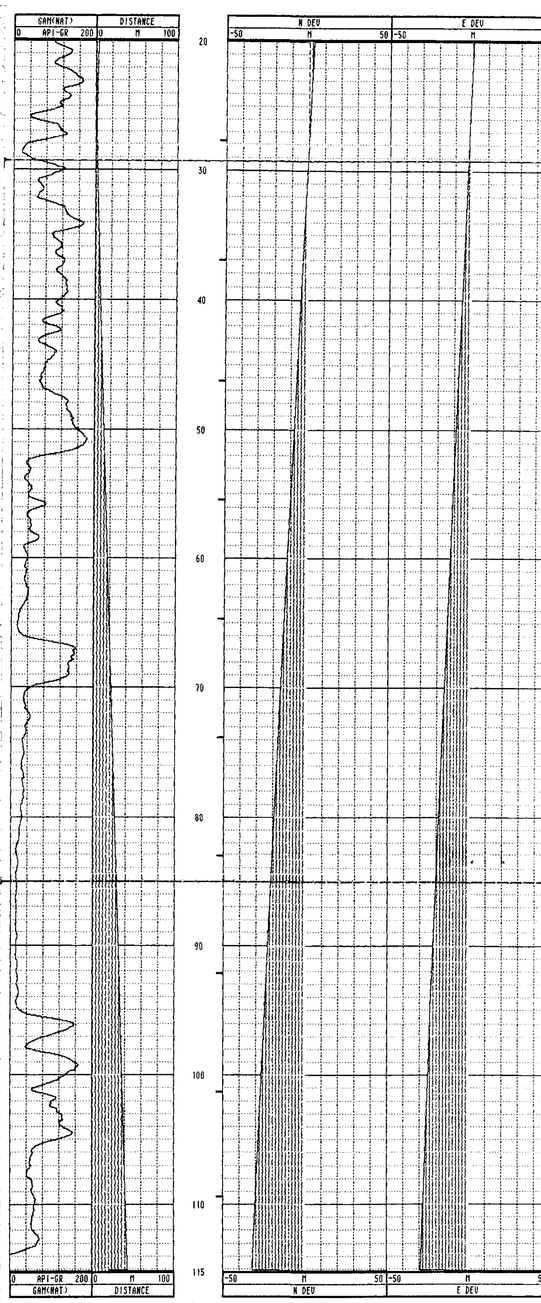
Century

QHR89010 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89010 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 05/20/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 115	ELEV. PERM. DATUM:	00	KB : 00	
LOG BOTTOM	: 115.18	LOG MEASURED FROM:	GL	DF : 00	
LOG TOP	: 1.18	DRL MEASURED FROM:	GL	GL : 00	
CASING DRILLER	: 16.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE : PROCESSED	
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG : 0	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 13	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000	

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89010 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 05/20/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
20.0	17.64	3.34	0.88	3.4	14.8	32.5	227.7
25.0	21.96	1.43	-.73	1.6	333.0	29.9	221.2
30.0	26.29	-.43	-2.29	2.3	259.3	29.4	221.1
35.0	30.62	-2.29	-3.84	4.5	239.2	30.7	199.7
40.0	34.91	-4.15	-5.39	6.8	232.4	31.3	230.5
45.0	39.17	-5.96	-7.13	9.3	230.1	31.1	227.3
50.0	43.45	-7.82	-8.79	11.8	228.3	31.1	227.5
55.0	47.71	-9.69	-10.52	14.3	227.4	31.4	229.5
60.0	51.97	-11.66	-12.05	16.8	225.9	31.2	218.9
65.0	56.25	-13.52	-13.68	19.2	225.4	31.7	217.2
70.0	60.52	-15.44	-15.33	21.8	224.8	30.9	224.4
75.0	64.80	-17.21	-17.03	24.2	224.7	31.5	229.0
80.0	69.07	-19.14	-18.58	26.7	224.1	31.2	205.4
85.0	73.35	-21.04	-20.26	29.2	223.9	31.2	215.6
90.0	77.65	-22.90	-21.91	31.7	223.7	30.7	220.9
95.0	81.95	-24.67	-23.64	34.2	223.8	30.1	183.1
100.0	86.26	-26.56	-24.81	36.3	223.0	31.1	227.3
105.0	90.59	-28.45	-26.31	38.7	222.8	30.4	220.2
110.0	94.93	-30.21	-27.77	41.0	222.6	29.4	249.0
115.0	99.29	-32.08	-29.28	43.4	222.4	28.8	221.9
115.2	99.46	-32.13	-29.32	43.5	222.4	0.0	0.0

Century

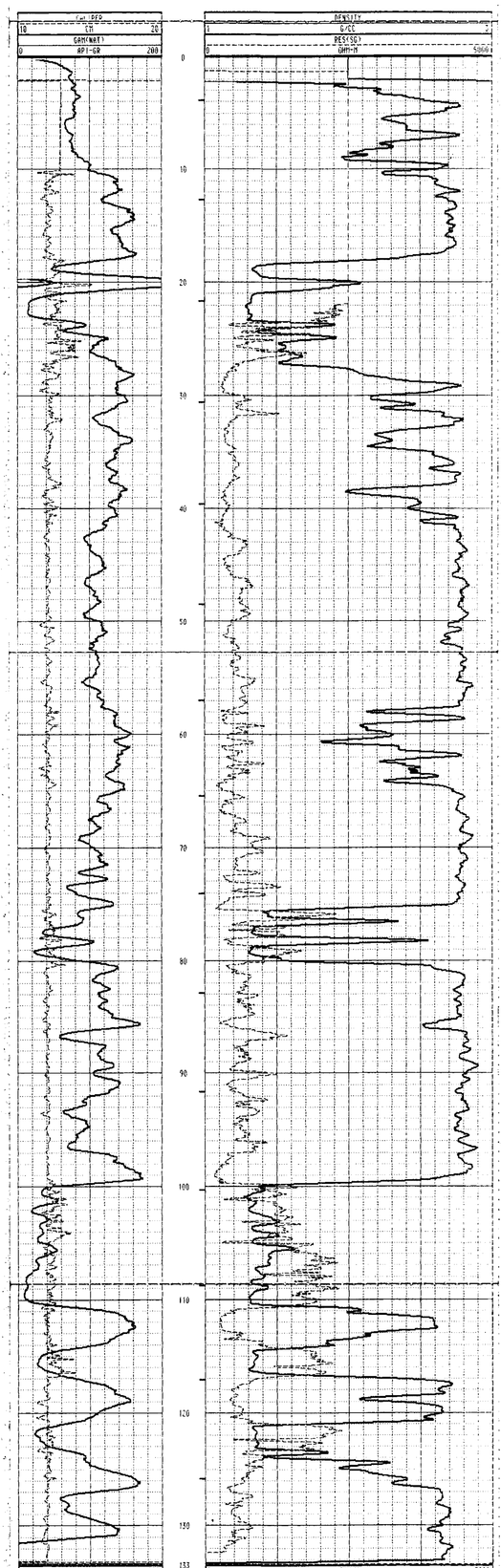
QHR89011 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89011 GAM-DEN-RES-CAL				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/21/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 134	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 133.46	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.24	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 10.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	PH	: 00	TYPE	: 9032MC
MATRIX DENSITY	: 2.68	PH TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000
REMARKS	:				

LOGGED OPEN HOLE
VERTICAL HOLE

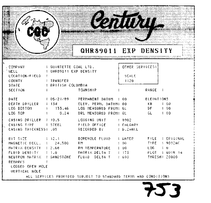
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6186.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	355.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM



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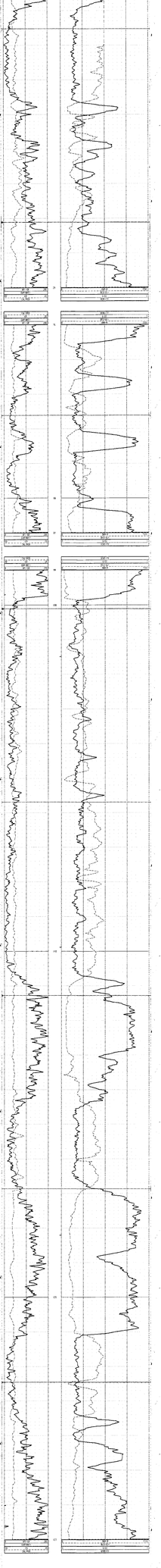


Century

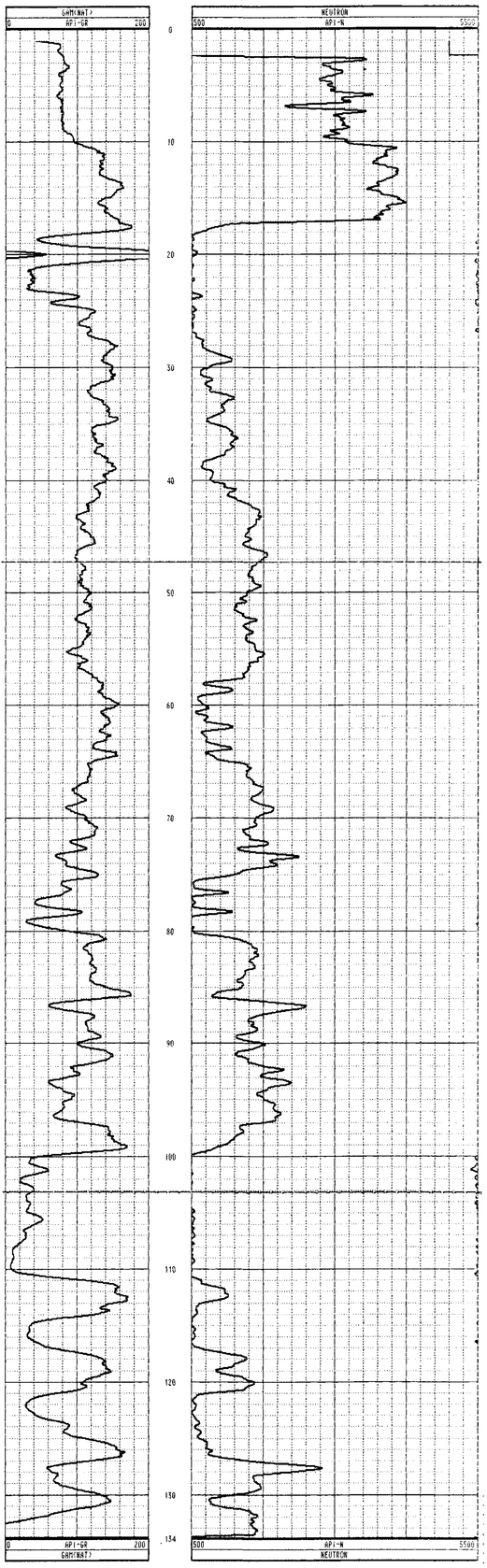
QHR89011 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89011 GAMMA-NEUTRON				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 05/22/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 134	ELEV. PERM. DATUM: GD		KB	: GD
LOG BOTTOM	: 133.88	LOG MEASURED FROM: GL		DF	: GD
LOG TOP	: 1.08	DRL MEASURED FROM: GL		GL	: GD
CASING DRILLER	: 10.5	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: GD	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: GD	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: GUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000
REMARKS	:				

LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

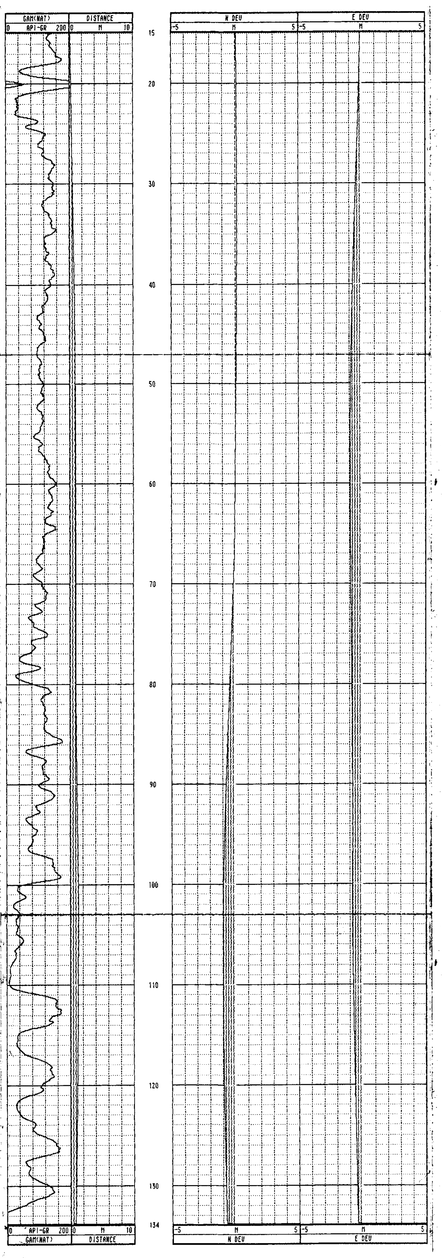
QHR89011 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89011 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/22/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 134	ELEV. PERM. DATUM: 00		KB	: 00
LOG BOTTOM	: 133.88	LOG MEASURED FROM: GL		DF	: 00
LOG TOP	: 1.08	DRL MEASURED FROM: GL		GL	: 00
CASING DRILLER	: 10.5	LOGGING UNIT	: 6902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: .05		RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000	
REMARKS	:				

LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA?	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA?	0.000 CPS	0.000 API-GR
2	05/04/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89011 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 05/22/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 6

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
15.0	15.00	0.09	-.12	0.1	308.3	1.2	300.9
20.0	19.99	0.13	-.21	0.2	301.6	1.6	288.3
25.0	24.99	0.15	-.33	0.4	293.9	1.6	277.5
30.0	29.99	0.16	-.48	0.5	288.4	1.5	266.6
35.0	34.99	0.16	-.61	0.6	284.4	1.7	263.2
40.0	39.99	0.14	-.74	0.7	281.1	1.1	223.7
45.0	44.99	0.12	-.83	0.8	278.0	1.1	247.3
50.0	49.99	0.08	-.89	0.9	275.1	1.0	239.6
55.0	54.99	0.03	-.93	0.9	271.9	0.8	201.2
60.0	59.99	-.00	-.94	0.9	269.7	0.4	168.4
65.0	64.99	-.04	-.92	0.9	267.4	0.9	164.8
70.0	69.98	-.15	-.90	0.9	260.5	1.6	168.6
75.0	74.98	-.29	-.86	0.9	251.4	1.7	168.9
80.0	79.98	-.44	-.83	0.9	242.1	1.9	159.6
85.0	84.98	-.59	-.79	1.0	233.5	1.6	163.3
90.0	89.97	-.73	-.78	1.1	226.9	1.5	185.1
95.0	94.97	-.87	-.78	1.2	222.0	1.2	178.1
100.0	99.97	-.95	-.80	1.2	220.0	0.7	202.8
105.0	104.97	-.97	-.80	1.3	219.5	0.7	52.9
110.0	109.97	-.97	-.74	1.2	217.4	0.6	79.5
115.0	114.97	-.96	-.68	1.2	215.4	0.8	47.1
120.0	119.97	-.92	-.60	1.1	213.4	0.9	73.3
125.0	124.97	-.86	-.52	1.0	211.4	1.2	52.7
130.0	129.97	-.78	-.45	0.9	209.9	1.6	38.1
133.9	133.84	-.71	-.39	0.8	209.0	0.0	0.0

753

Century

GHR89011 DIPMETER

COMPANY : SOUTHSTITE COAL LTD.
WELL : GHR89011 DIPMETER
FIELD/OBS/PFIELD :
COUNTY : TRANQUITE
STATE : BRITISH COLUMBIA
SECTION : TOWNSHIP : RANGE :

DATE : 2 JUL/1 JUN
LOG DRILLER : 11,74
LOG BOTTOM : 11,71
LOG TOP : 11,47

CASING DRILLER : 10,5
CASING TYPE : STEEL
CASING THICKNESS: .05

BIT SIZE : 10,5
MAGNETIC DECL. : 24,500
FLUID LOSS : 0,0
FLUID DENSITY : 0,0
NEUTRON MATRIX : 1 SANDSTONE
SOURCE :
1 CURVES OPEN HOLE
VERTICAL HOLE

PERMANENT DATUM : 20
LOG MEASURED FROM: GL
LOG MEASURED FROM: GL

FIELD PRINT :
RECORDED BY : J.CAHILL

BOREHOLE FLUID : WATER
PH : 0,0
RM @ TEMPERATURE :
RMFE @ BHT : ,115
FLUID SALTS T : 650

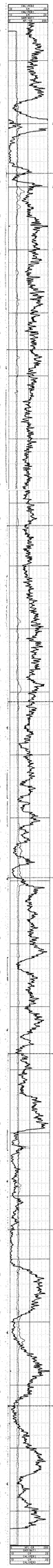
STATE SERVICES?

SCALE
1"/60

ELEVATIONS
KB : 0,0
DF : 0,0
GL : 0,0

FILE : ORIGINAL
TAPE : 54006
RUN : 1
PLOT : 0 0400 0
TAPE#: 20002

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



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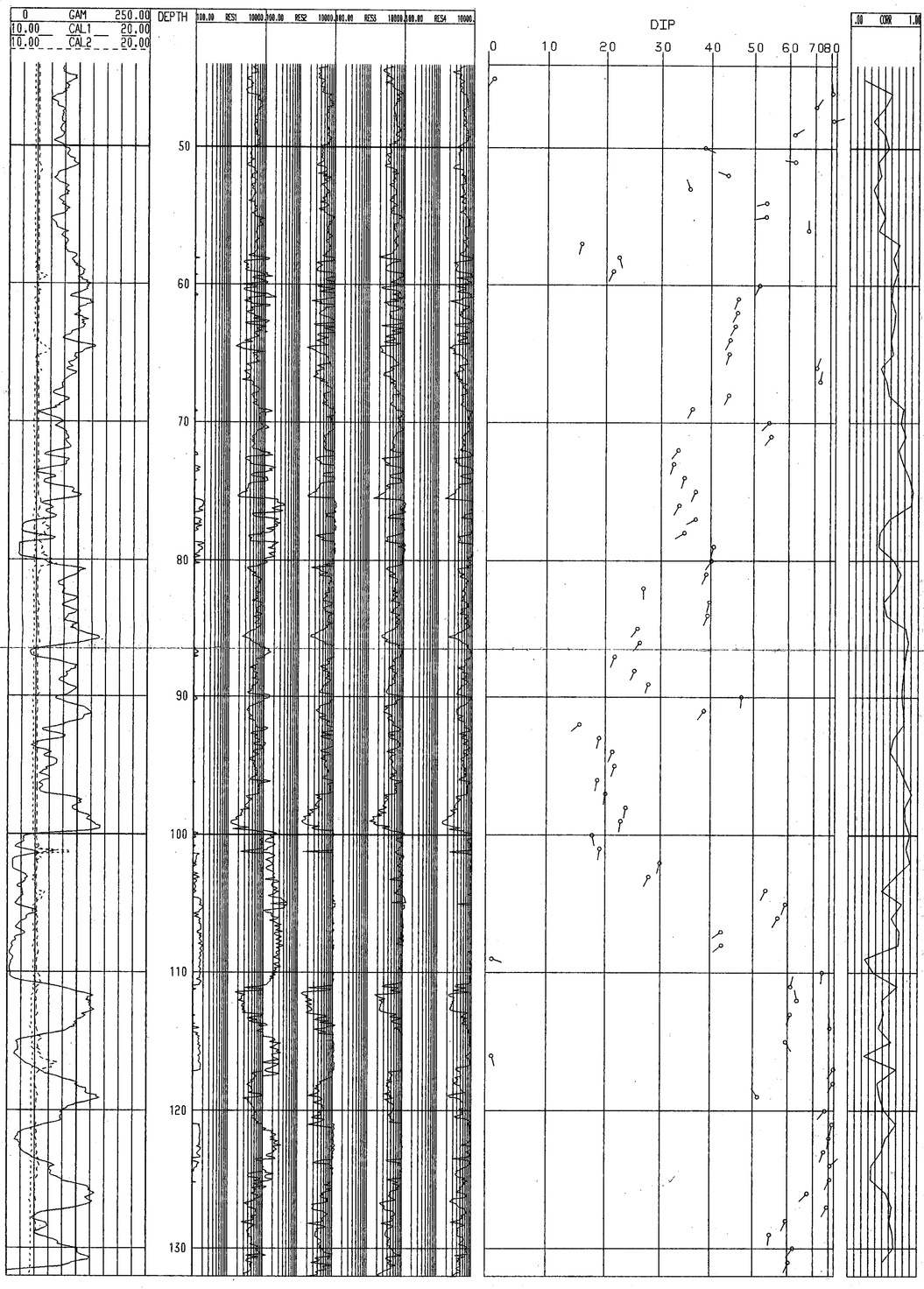
Century GEOPHYSICAL CORP.

QHR89011 DIPMETER

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89011 DIPMETER				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/21/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 134	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 132.8	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 44	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 11	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9400A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9400 4
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
logged open hole vertical
Window: 2m Step: 1m Search Angle:80deg Method-2

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



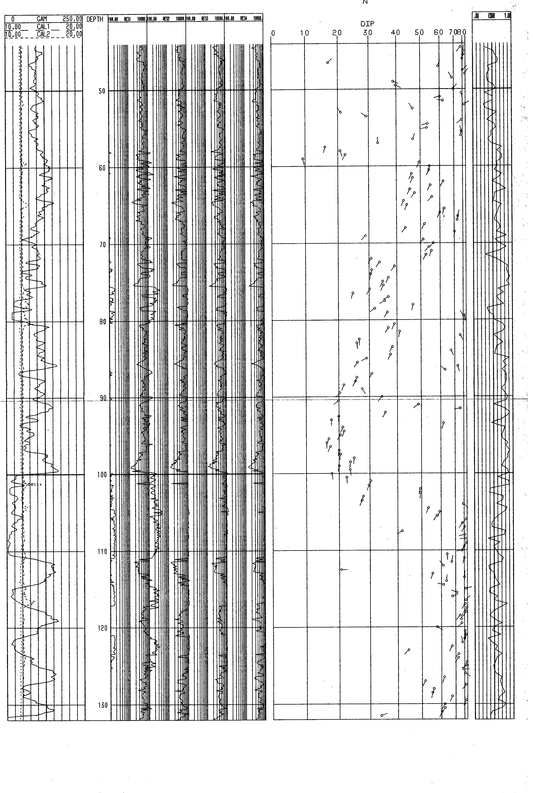
753

Century GEOPHYSICAL CORP.

QHR89011 DIPMETER

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89011 DIPMETER			SCALE	
LOCATION/FIELD	:			1:200	
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/21/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 134	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 132.75	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 44	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 11	LOGGING UNIT	: 8002		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZINKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9-0008
MATRIX DENSITY	: 2.60	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9-000 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 600	THRESH:	20000
REMARKS					
logged open hole vertical					
Window: 1m Step: .5m Search Angle:00deg Method-2					

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



DIPMETER LIST FOR:QHR-89011
WINDOW:1m
STEP:.5m
SEARCH ANGLE:00deg
MAGNETIC DECLINATION:24.5

DEPTH	DIP	AZIM	CORR COEFF	HOLE DEV.	HOLE AZIM	PAD1 AZIM
44.500	77.1	218.	.368	1.4	284.	40.
45.000	82.1	2.	.523	.8	265.	38.
45.500	81.4	352.	.567	1.2	288.	39.
46.000	79.7	12.	.637	1.5	282.	40.
46.500	76.7	46.	.634	2.0	290.	40.
47.000	59.2	17.	.584	1.7	263.	37.
47.500	80.5	49.	.434	1.5	271.	36.
48.000	85.5	35.	.366	1.4	279.	38.
48.500	68.3	331.	.361	1.8	278.	39.
49.000	78.8	112.	.385	1.6	255.	32.
49.500	39.8	117.	.534	2.5	282.	32.
50.000	69.5	88.	.589	1.7	283.	33.
50.500	74.8	168.	.594	1.9	249.	31.
51.000	60.2	295.	.508	1.5	252.	34.
51.500	62.0	279.	.495	.7	280.	34.
52.000	81.1	61.	.272	1.4	268.	33.
52.500	46.6	326.	.526	1.1	256.	30.
53.000	20.9	326.	.610	2.0	259.	31.
53.500	29.2	303.	.471	1.8	262.	31.
54.000	78.4	253.	.360	1.5	258.	30.
54.500	53.5	257.	.550	1.4	257.	29.
55.000	53.1	258.	.564	1.7	258.	30.
55.500	78.1	347.	.459	1.7	273.	30.
56.000	77.2	8.	.471	1.4	279.	29.
56.500	46.7	20.	.383	1.3	268.	28.
57.000	13.2	180.	.554	1.8	271.	28.
57.500	7.1	192.	.734	1.5	277.	29.
58.000	20.7	161.	.619	.8	216.	23.
58.500	22.3	298.	.729	.6	279.	24.
59.000	9.3	170.	.735	1.3	192.	20.
59.500	49.5	203.	.604	.9	249.	25.
60.000	54.4	187.	.626	1.2	256.	28.
60.500	54.2	206.	.546	1.8	284.	31.
61.000	46.1	203.	.750	1.2	239.	23.
61.500	46.6	202.	.655	.6	259.	21.
62.000	62.1	208.	.489	2.0	263.	25.
62.500	54.8	207.	.693	1.6	305.	25.
63.000	45.4	206.	.633	1.4	263.	23.
63.500	47.4	218.	.556	1.9	271.	23.
64.000	55.6	223.	.734	1.5	277.	21.
64.500	53.1	203.	.567	1.8	254.	20.
65.000	44.1	201.	.725	1.7	246.	13.
65.500	42.6	195.	.648	1.9	243.	9.
66.000	60.9	205.	.624	2.0	251.	11.
66.500	73.4	14.	.565	2.6	245.	7.
67.000	72.8	19.	.542	1.9	245.	2.
67.500	51.9	208.	.659	2.6	245.	0.
68.000	43.5	219.	.609	2.6	241.	359.
68.500	70.3	195.	.599	3.0	240.	357.
69.000	78.8	222.	.592	3.0	254.	356.
69.500	51.2	219.	.558	2.5	254.	354.
70.000	54.2	222.	.543	2.7	253.	352.
70.500	54.6	223.	.643	2.7	255.	350.
71.000	55.2	198.	.673	2.9	230.	348.
71.500	52.5	208.	.758	2.9	231.	346.
72.000	30.7	206.	.556	2.5	232.	344.
72.500	31.6	216.	.736	2.4	234.	342.
73.000	39.1	213.	.875	2.1	234.	339.
73.500	39.9	195.	.845	3.1	234.	340.
74.000	30.5	187.	.890	3.0	210.	333.
74.500	36.8	203.	.933	3.0	222.	334.
75.000	34.8	206.	.866	3.3	223.	333.
75.500	35.0	207.	.720	3.2	232.	336.
76.000	30.2	210.	.675	6.0	241.	339.
76.500	34.6	197.	.777	4.0	226.	332.
77.000	38.8	192.	.696	4.2	227.	330.
77.500	36.5	196.	.771	5.2	242.	327.
78.000	31.9	214.	.344	3.9	215.	322.
78.500	36.4	213.	.388	5.3	219.	323.
79.000	39.7	222.	.514	3.4	210.	316.
79.500	80.6	0.	.515	4.6	234.	325.
80.000	39.0	204.	.738	3.7	210.	319.
80.500	36.7	209.	.805	4.1	228.	320.
81.000	41.0	190.	.750	4.1	219.	318.
81.500	75.5	151.	.512	5.2	217.	314.
82.000	26.6	178.	.620	3.7	223.	314.
82.500	25.8	176.	.751	4.2	210.	316.
83.000	30.2	209.	.509	3.8	218.	310.
83.500	57.5	206.	.531	3.0	215.	308.
84.000	57.2	206.	.531	3.2	215.	308.
84.500	29.6	245.	.905	3.2	220.	305.
85.000	24.0	215.	.745	3.4	214.	301.
85.500	72.7	164.	.837	3.2	221.	301.
86.000	62.8	304.	.725	3.4	216.	298.
86.500	30.8	207.	.820	3.3	207.	294.
87.000	25.8	201.	.853	3.0	209.	292.
87.500	25.3	208.	.824	3.7	202.	288.
88.000	21.6	202.	.793	3.4	208.	288.
88.500	27.5	148.	.701	3.1	203.	284.
89.000	20.3	222.	.778	3.3	193.	280.
89.500	34.3	221.	.867	2.8	203.	277.
90.000	19.8	231.	.824	3.2	196.	274.
90.500	48.7	235.	.585	2.8	194.	270.
91.000	31.1	225.	.810	3.0	194.	267.
91.500	25.3	208.	.913	2.8	200.	266.
92.000	19.9	182.	.840	3.4	194.	263.
92.500	17.6	190.	.686	3.7	183.	259.
93.000	41.6	193.	.447	2.0	194.	260.
93.500	21.2	204.	.788	3.0	183.	257.
94.000	21.6	199.	.758	3.0	184.	255.
94.500	20.4	212.	.712	2.4	185.	247.
95.000	16.0	201.	.722	2.8	180.	243.
95.500	16.2	180.	.858	2.6	179.	241.
96.000	17.3	205.	.822	2.6	175.	237.
96.500	20.0	190.	.914	2.5	175.	234.
97.000	20.4	186.	.865	2.1	169.	230.
97.500	24.0	187.	.869	2.3	167.	226.
98.000	23.6	191.	.760	2.1	156.	223.
98.500	25.6	196.	.713	1.7	159.	221.
99.000	23.2	173.	.855	1.8	171.	218.
99.500	17.7	169.	.879	1.7	157.	214.
100.000	22.4	176.	.693	2.1	179.	207.
100.500	30.3	196.	.804	1.5	175.	206.
101.000	29.7	199.	.898	1.7	179.	205.
101.500	49.4	182.	.812	1.7	180.	207.
102.000	49.6	187.	.295	1.7	190.	204.
102.500	27.8	207.	.737	.5	177.	207.
103.000	27.4	204.	.739	1.9	175.	203.
103.500	78.8	150.	.572	1.6	123.	198.
104.000	70.0	151.	.592	.7	133.	195.
104.500	59.2	206.	.772	2.0	111.	192.
105.000	57.2	200.	.752	1.5	82.	185.
105.500	34.1	222.	.518	1.7	98.	181.
106.000	17.2	213.	.446	2.0	75.	179.
106.500	66.9	212.	.448	3.6	129.	173.
107.000	41.7	239.	.793	1.8	139.	177.
107.500	81.9	257.	.767	1.5	87.	171.
108.000	82.2	266.	.544	1.3	74.	171.
108.500	84.8	269.	.655	2.4	66.	164.
109.000	79.7	266.	.488	1.6	67.	164.
109.500	77.1	261.	.554	2.2	132.	158.
110.000	63.7	176.	.612	1.4	76.	155.
110.500	80.2	197.	.737	2.1	91.	151.
111.000	66.9	10.	.697	2.3	63.	146.
111.500	61.2	332.	.578	2.5	65.	142.
112.000	20.6	3.	.526	2.5	45.	142.
112.500	30.1	192.	.505	2.6	46.	141.
113.000	80.2	4.	.515	2.5	53.	137.
113.500	63.2	5.	.571	2.5	66.	134.
114.000	61.4	205.	.647	2.3	54.	136.
114.500	83.1	76.	.390	1.5	60.	136.
115.000	71.1	290.	.380	1.8	101.	141.
115.500	67.5	69.	.582	1.9	62.	135.
116.000	82.8	64.	.492	2.3	57.	129.
116.500	81.1	212.	.823	1.6	74.	126.
117.000	85.5	213.	.623	1.7	54.	126.
117.500	84.2	214.	.471	2.5	39.	124.
118.000	74.2	219.	.508	2.1	34.	119.
118.500	75.5	15.	.592	2.1	31.	119.
119.000	78.8	223.	.564	2.2	69.	115.
119.500	57.6	121.	.498	2.0	39.	112.
120.000	80.9	176.	.445	1.1	11.	113.
120.500	83.4	197.	.664	2.7	32.	110.
121.000	80.2	360.	.336	2.1	35.	109.
121.500	77.0	350.	.427	2.3	32.	106.
122.000	67.0	207.	.574	2.0	45.	102.
122.500	64.2	227.	.528	2.4	30.	101.
123.000	72.7	221.	.691	2.6	25.	99.
123.500	72.6	215.	.557	2.2	24.	94.
124.000	85.7	206.	.530	2.4	15.	93.
124.500	86.7	241.	.477	2.3	19.	91.
125.000	78.4	90.	.491	1.7	29.	88.
125.500	80.4	170.	.478	2.2	7.	92.
126.000	81.8	196.	.688	1.7	19.	86.
126.500	81.5	207.	.650	2.2	26.	84.
127.000	85.0	230.	.677	1.7	12.	83.
128.000	55.8	194.	.713	2.8	23.	81.
128.500	65.1	191.	.767	2.0	8.	79.
129.000	67.2	203.	.647	2.3	19.	76.
129.500	84.0	208.	.606	2.3	13.	74.
130.000	62.1	211.	.805	2.3	10.	73.
130.500	62.2	216.	.706	2.7	12.	74.
131.000	60.3	204.	.446	2.2	13.	70.
131.500	35.8	70.	.792	2.4	18.	68.

Century

QHR89012 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.
WELL	: QHR89012 GAM-DEN-RES-CAL
LOCATION/FIELD	:
COUNTY	: TRANSFER
STATE	: BRITISH COLUMBIA
SECTION	: TOWNSHIP : RANGE :

OTHER SERVICES:
SCALE
1:200

DATE	: 05/23/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 131	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 129.42	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: -.70	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 10	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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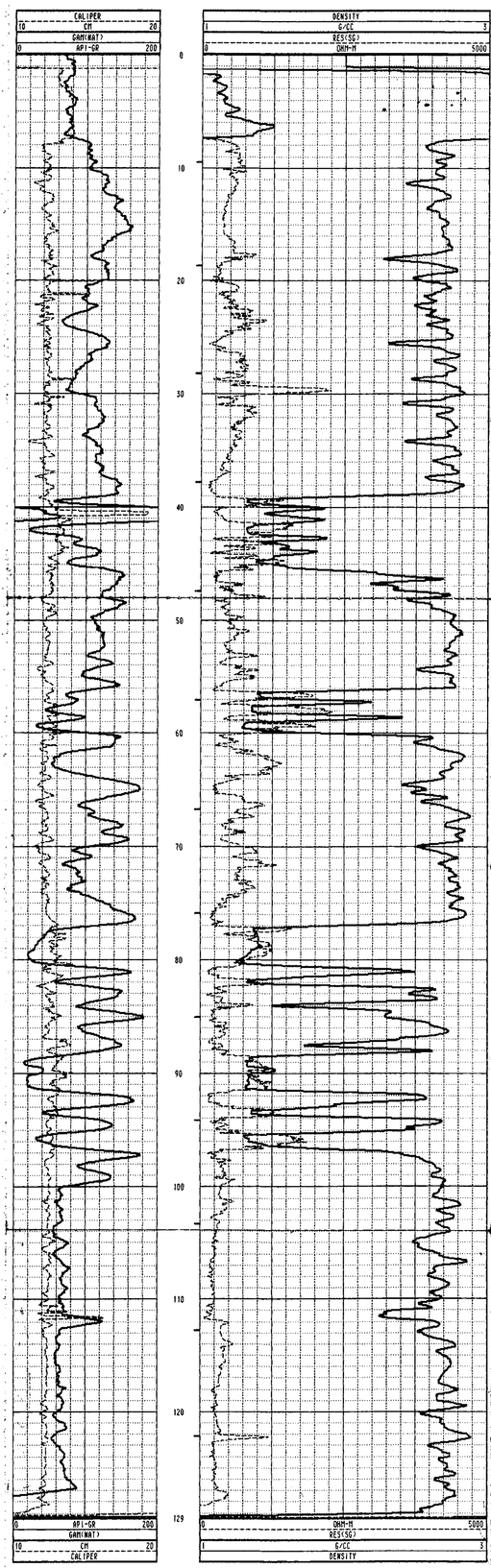

TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	365.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR89012 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89012 EXP DENSITY				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:20	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/23/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 131	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 129.42	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -.70	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 10	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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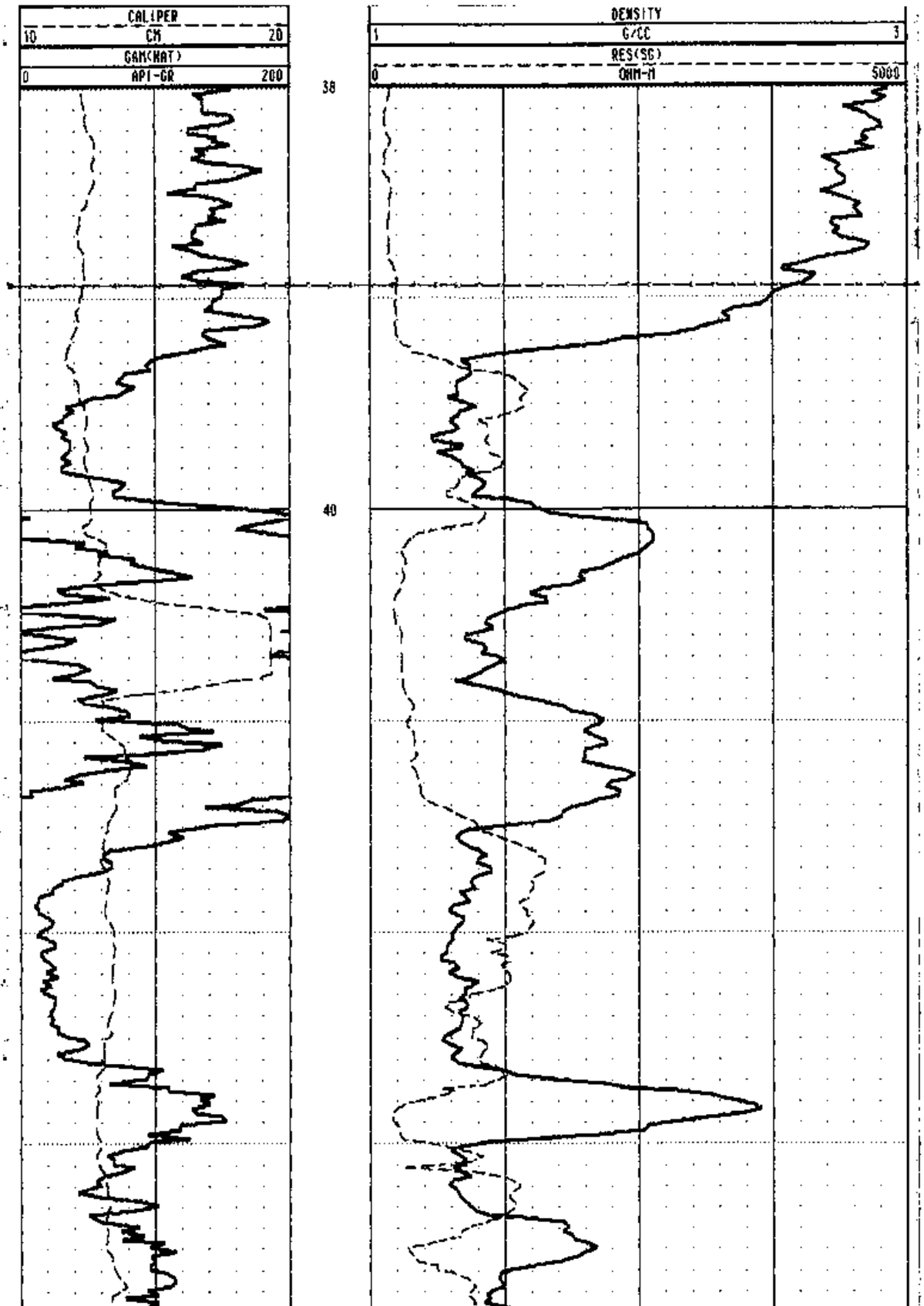
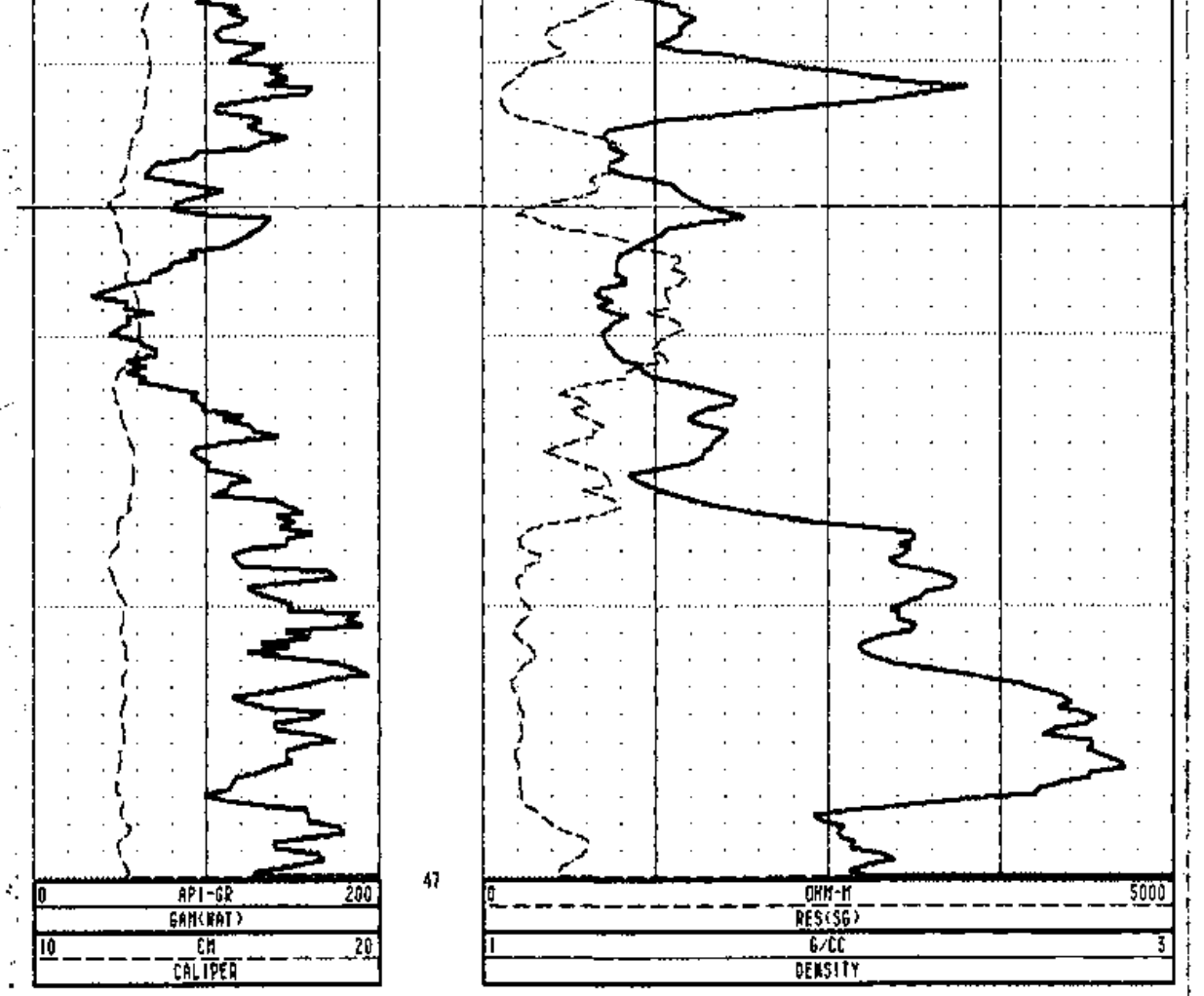

CALIPER
10
CM
20
GAM(MAT)
0
API-GR
200
38
40
DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000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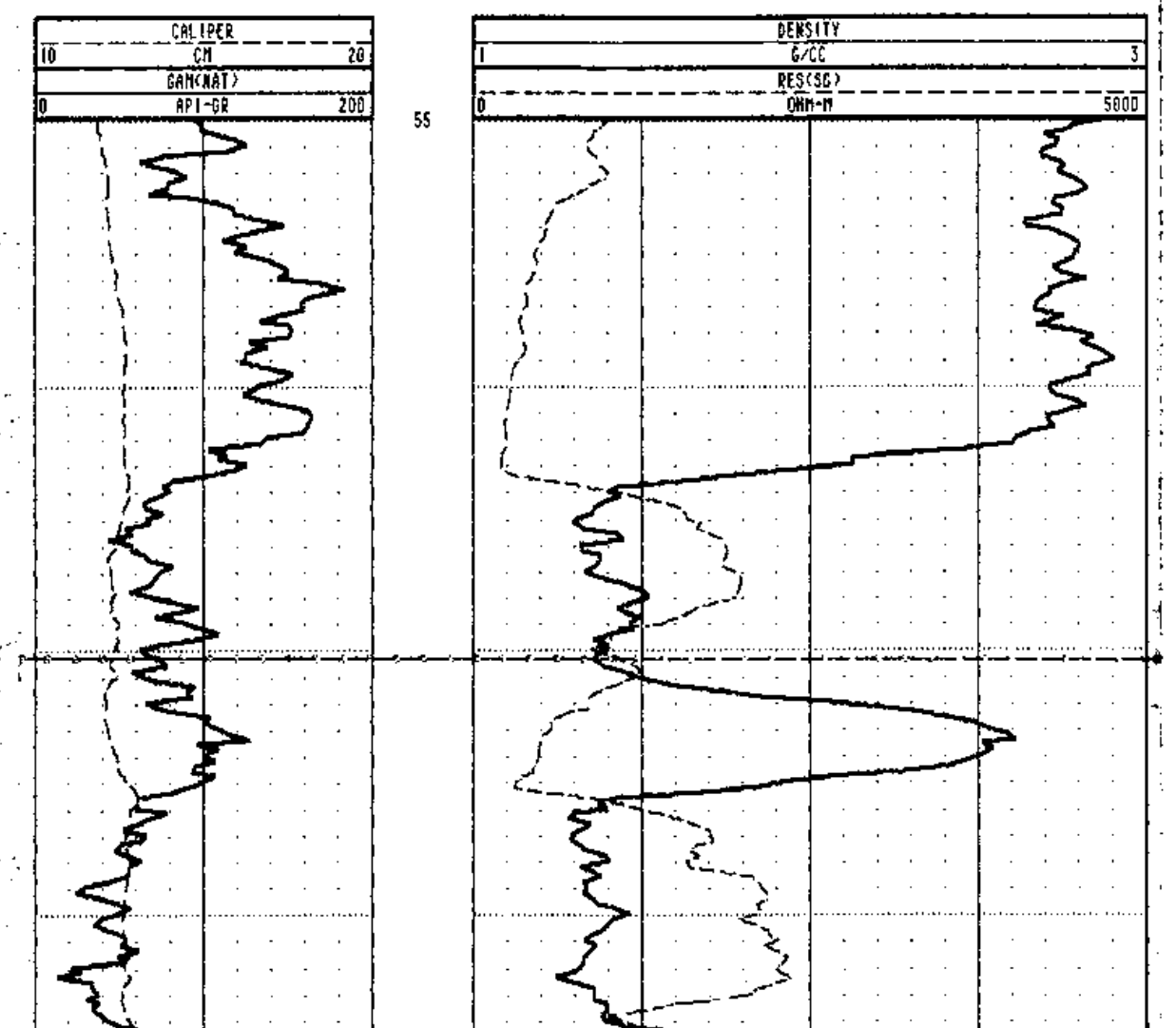
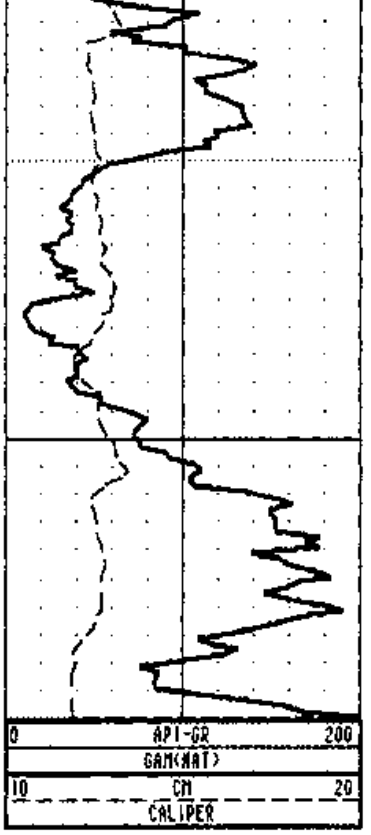
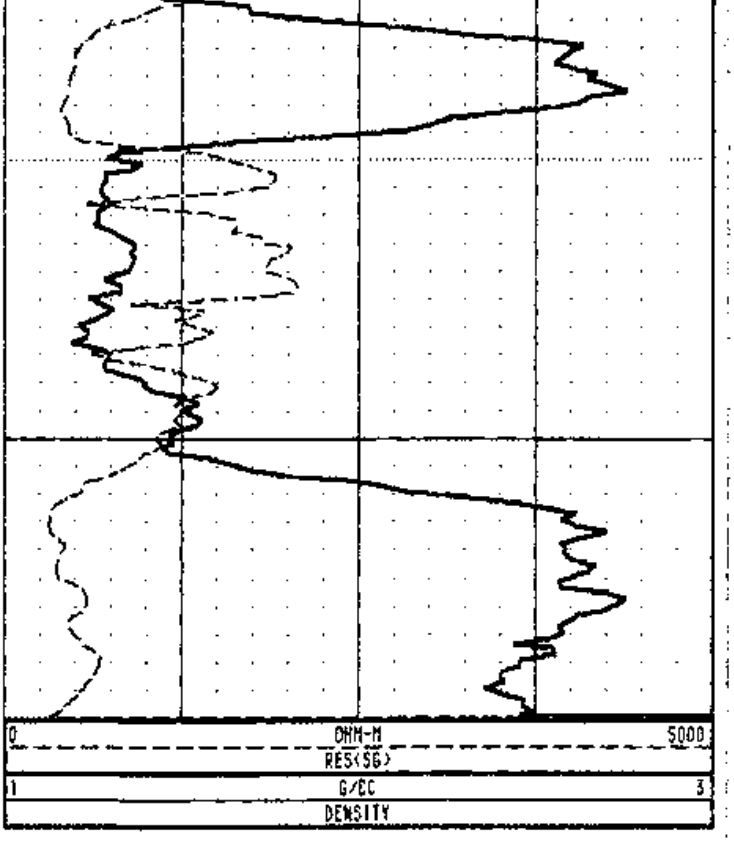
GAM(NAT)
10 CM 20
CALIPER
47
0 OHM-M 5000
RES(SG)
1 G/CC 3
DENSITY

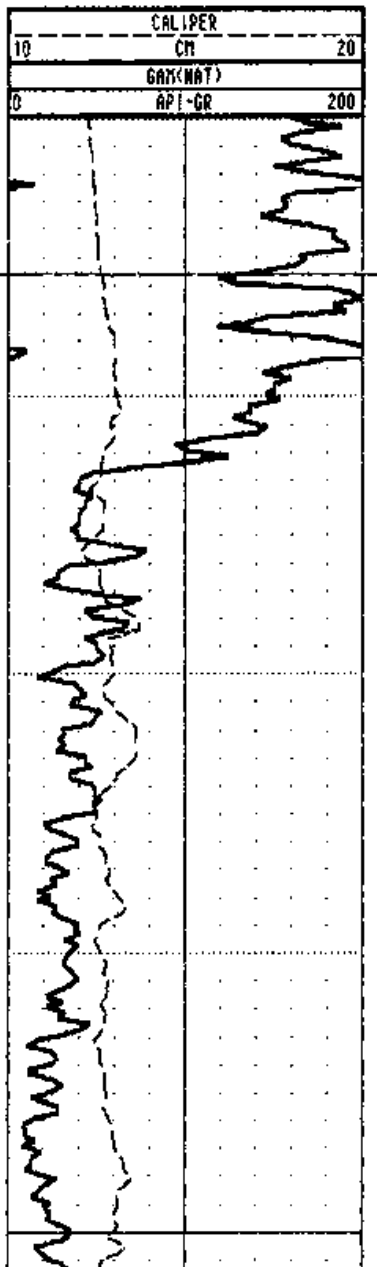

CALIPER
10 CM 20
GAM(NAT)
0 API-GR 200
55
DENSITY
1 G/CC 3
RES(SG)
0 OHM-M 5000


0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER

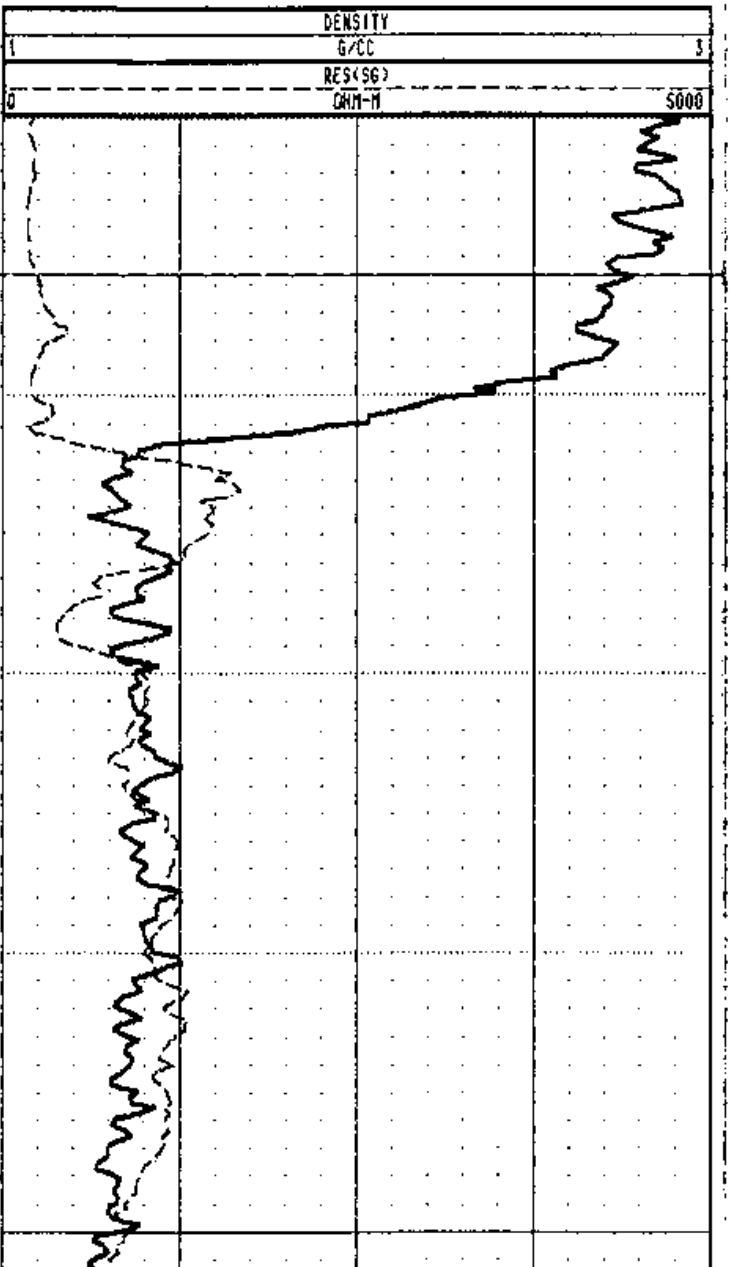
60

61

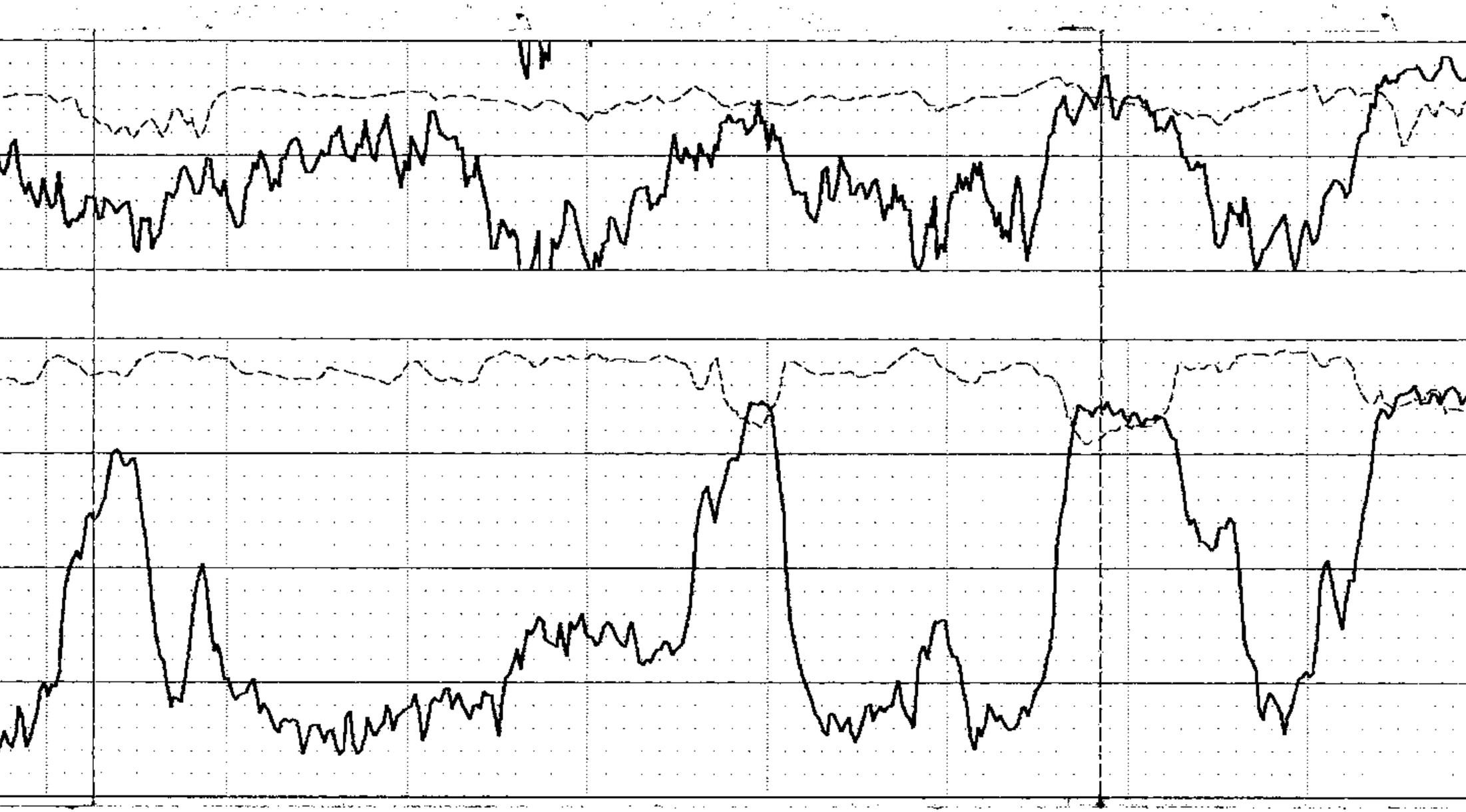

0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY

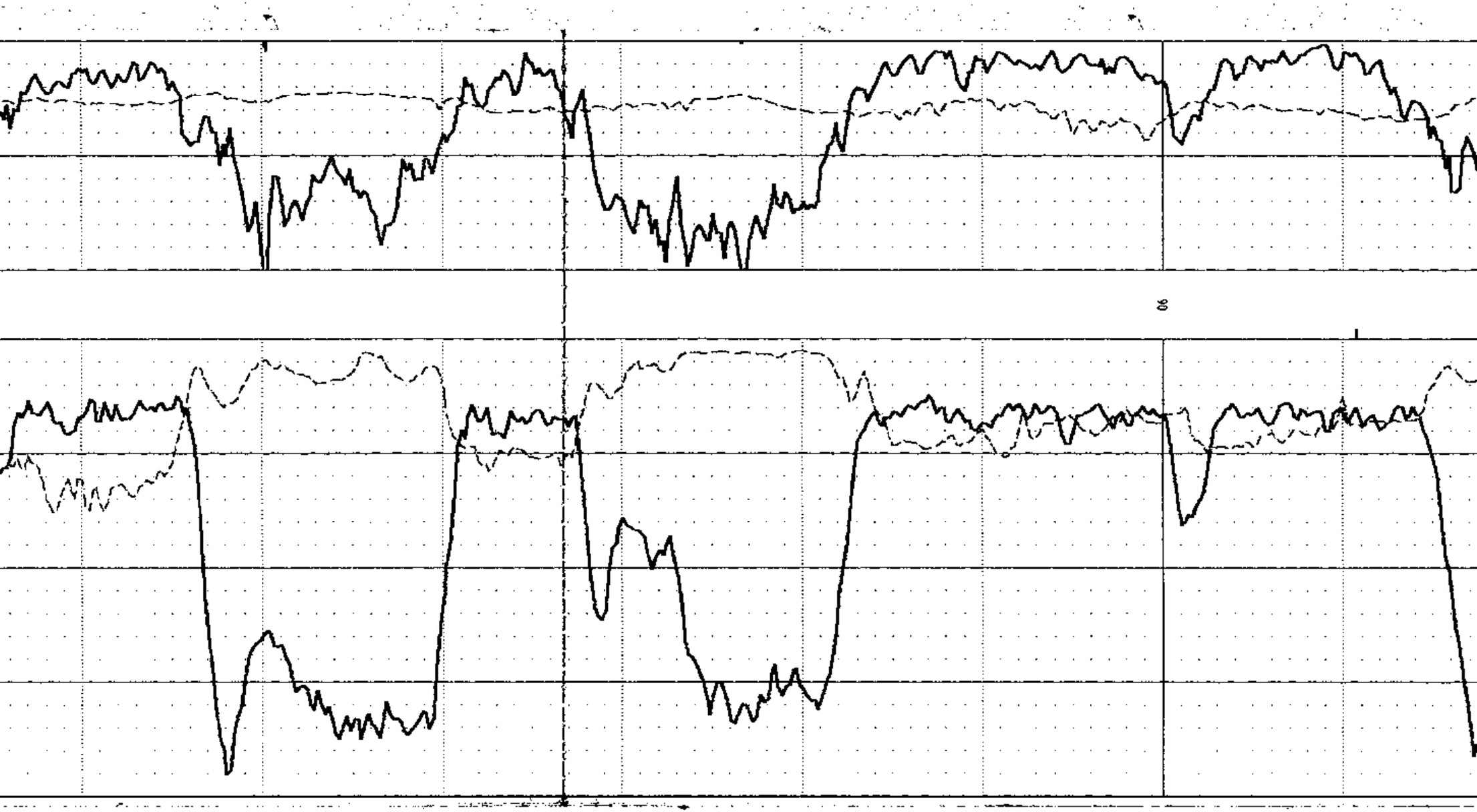

CALIPER
10
CM
20
GAM(NAT)
0
API-GR
200

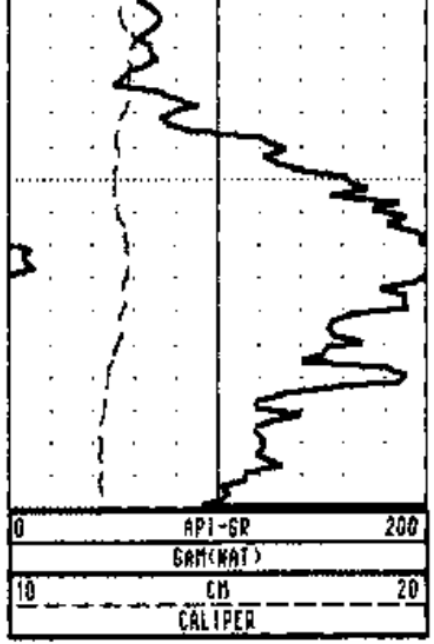
76


DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000

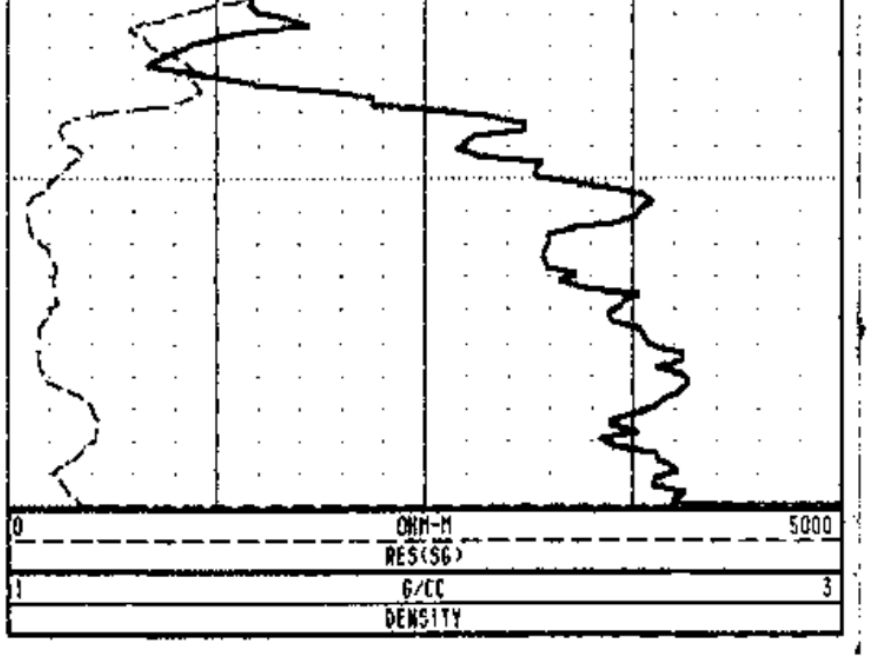
80






0
API-GR
200
GAM(KAT)
10
CM
20
CALIPER

98


0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY

Century

QHR89012 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89012 GAMMA-NEUTRON				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 05/23/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 131	ELEV. PERM. DATUM: 00		KB : 00	
LOG BOTTOM	: 129.73	LOG MEASURED FROM: GL		DF : 00	
LOG TOP	: 0.85	DRL MEASURED FROM: GL		GL : 00	
CASING DRILLER	: 10	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG : 8	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN D	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000	
REMARKS	:				

LOGGED OPEN HOLE
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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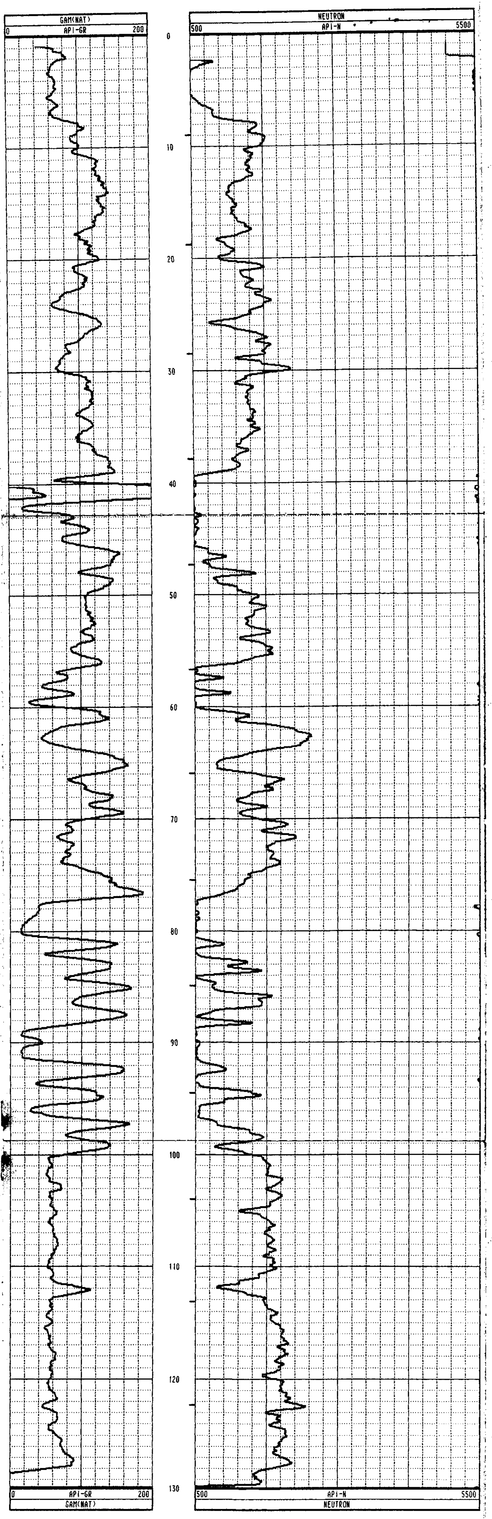


TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

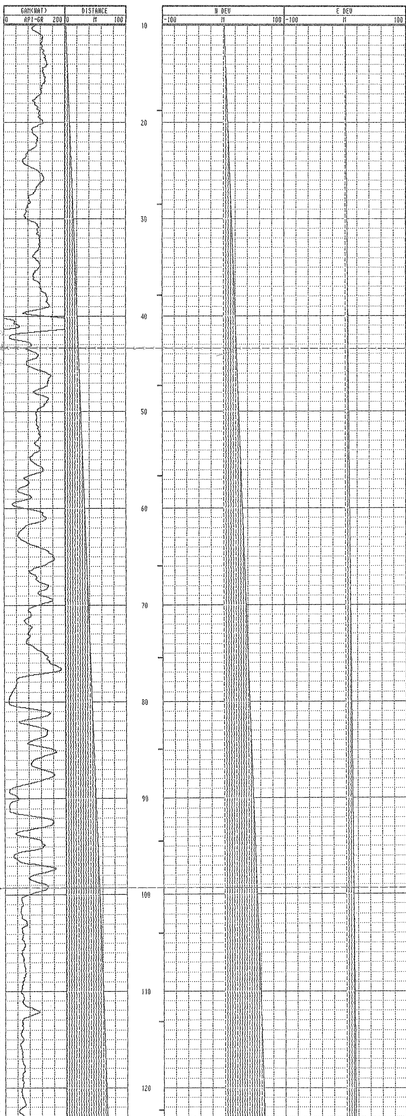
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(MAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(MAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

QHR89012 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89012 DEVIATION		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/24/89	PERMANENT DATUM	: 00	ELEVATIONS
DEPTH DRILLER	: 131	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 129.73	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 0.85	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 10	LOGGING UNIT	: 8902	
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY	
CASING THICKNESS: .05		RECORDED BY	: D.ZANKL	
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG : 9
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000
REMARKS	:		
LOGGED OPEN HOLE			
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL			

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR89012 GAMM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 05/24/89
DATA FROM	:	PROBE	: 9055A , 14
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 9

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.0	8.23	2.27	0.62	2.4	15.3	39.6	170.2
15.0	12.11	4.70	1.47	4.9	17.3	38.7	13.5
20.0	16.01	7.75	2.17	8.0	15.7	38.7	11.9
25.0	19.92	10.77	2.87	11.2	14.9	38.3	17.9
30.0	23.86	13.76	3.60	14.2	14.7	38.8	24.9
35.0	27.81	16.73	4.32	17.3	14.5	38.4	11.5
40.0	31.78	19.67	5.03	20.3	14.3	37.0	6.4
45.0	35.77	22.56	5.65	23.3	14.1	36.3	8.5
50.0	39.78	25.48	6.32	26.2	13.9	36.7	13.3
55.0	43.79	28.38	6.98	29.2	13.8	36.4	12.5
60.0	47.81	31.27	7.64	32.2	13.7	37.0	15.5
65.0	51.83	34.16	8.29	35.1	13.6	36.1	12.0
70.0	55.88	37.02	8.91	38.1	13.5	35.8	13.0
75.0	59.94	39.84	9.58	41.0	13.5	35.6	17.7
80.0	64.03	42.65	10.19	43.9	13.4	35.7	12.8
85.0	68.12	45.45	10.84	46.7	13.4	35.1	9.5
90.0	72.22	48.23	11.48	49.6	13.4	34.7	11.1
95.0	76.34	51.00	12.10	52.4	13.3	34.3	16.2
100.0	80.49	53.72	12.69	55.2	13.3	33.7	17.1
105.0	84.67	56.40	13.31	57.9	13.3	32.9	16.0
110.0	88.88	59.01	13.92	60.6	13.3	32.1	12.5
115.0	93.12	61.59	14.49	63.3	13.2	31.7	12.6
120.0	97.39	64.13	15.08	65.9	13.2	31.2	13.7
125.0	101.68	66.63	15.68	68.4	13.2	30.6	13.8
129.7	105.75	68.94	16.21	70.8	13.2	0.0	0.0

753

Century

QHR89012 DIPMETER

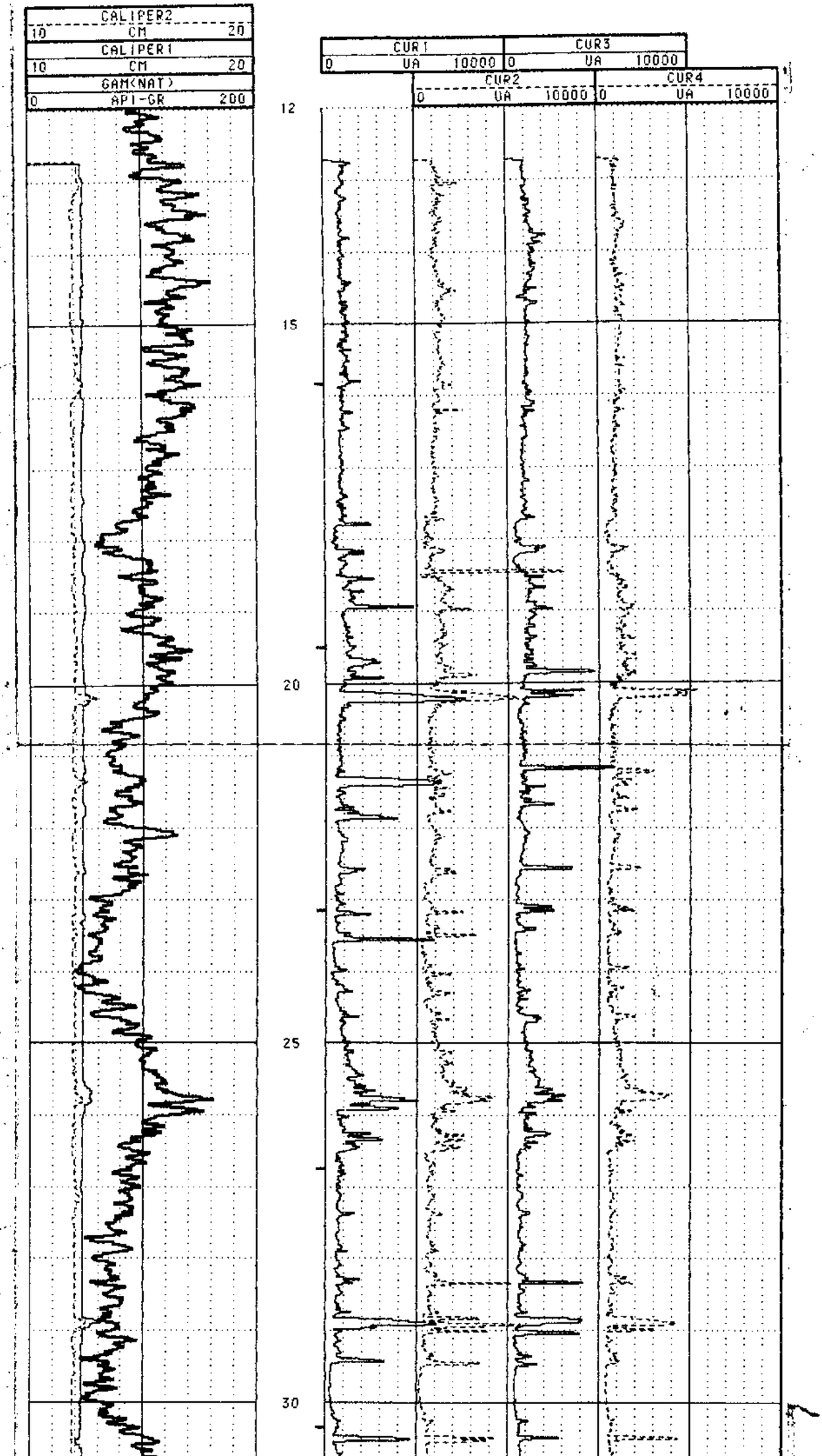
COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89012 DIPMETER				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:50	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/23/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 131	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 129.50	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 11.44	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 10	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9400A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9400 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :

LOGGED OPEN HOLE

ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS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CALIPER1
10 CM 20
GAM(NAT)
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CUR1
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CUR3
0 UA 10000
CUR2
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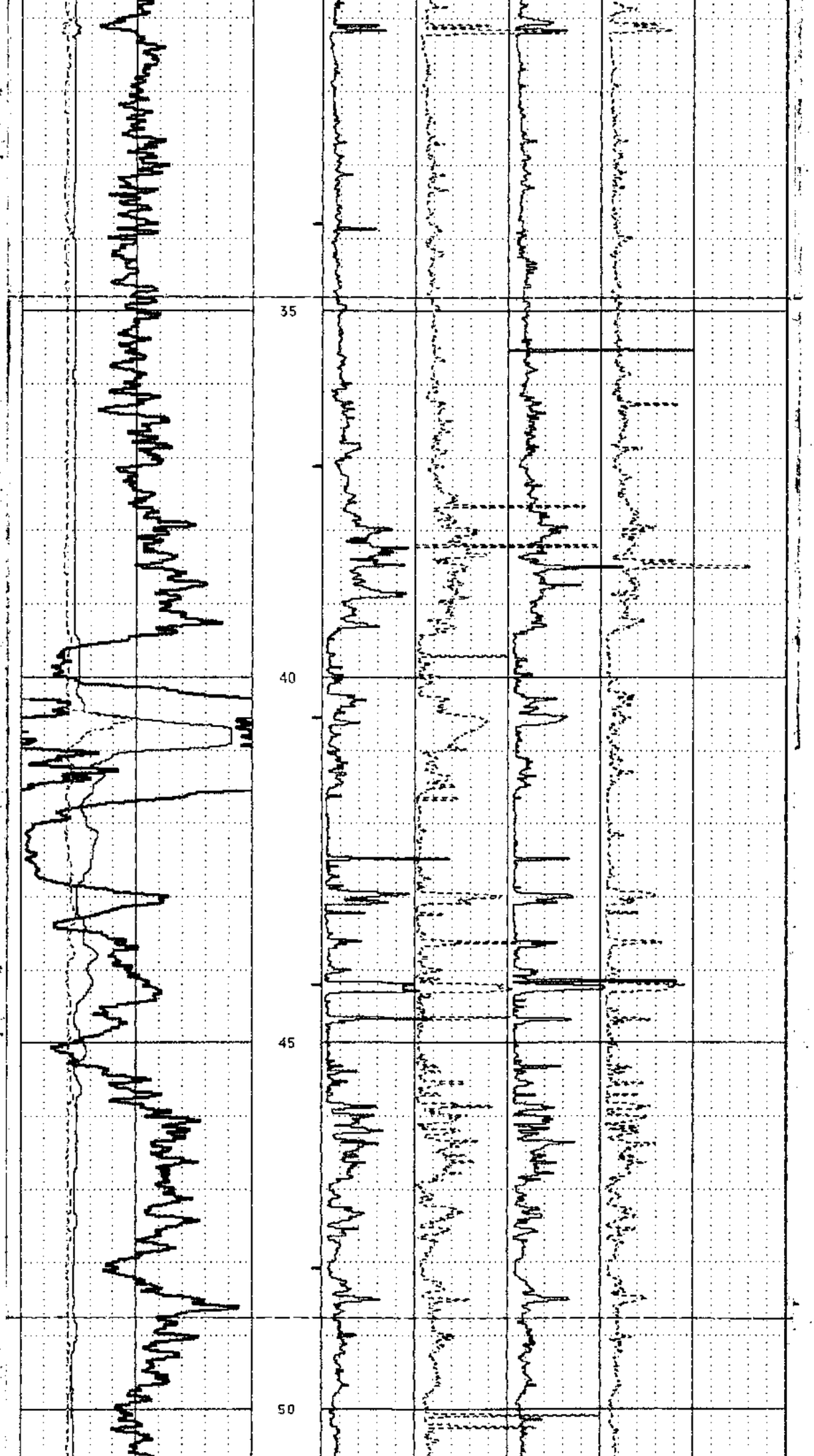
CUR4
0 UA 10000
12
15
20
25
30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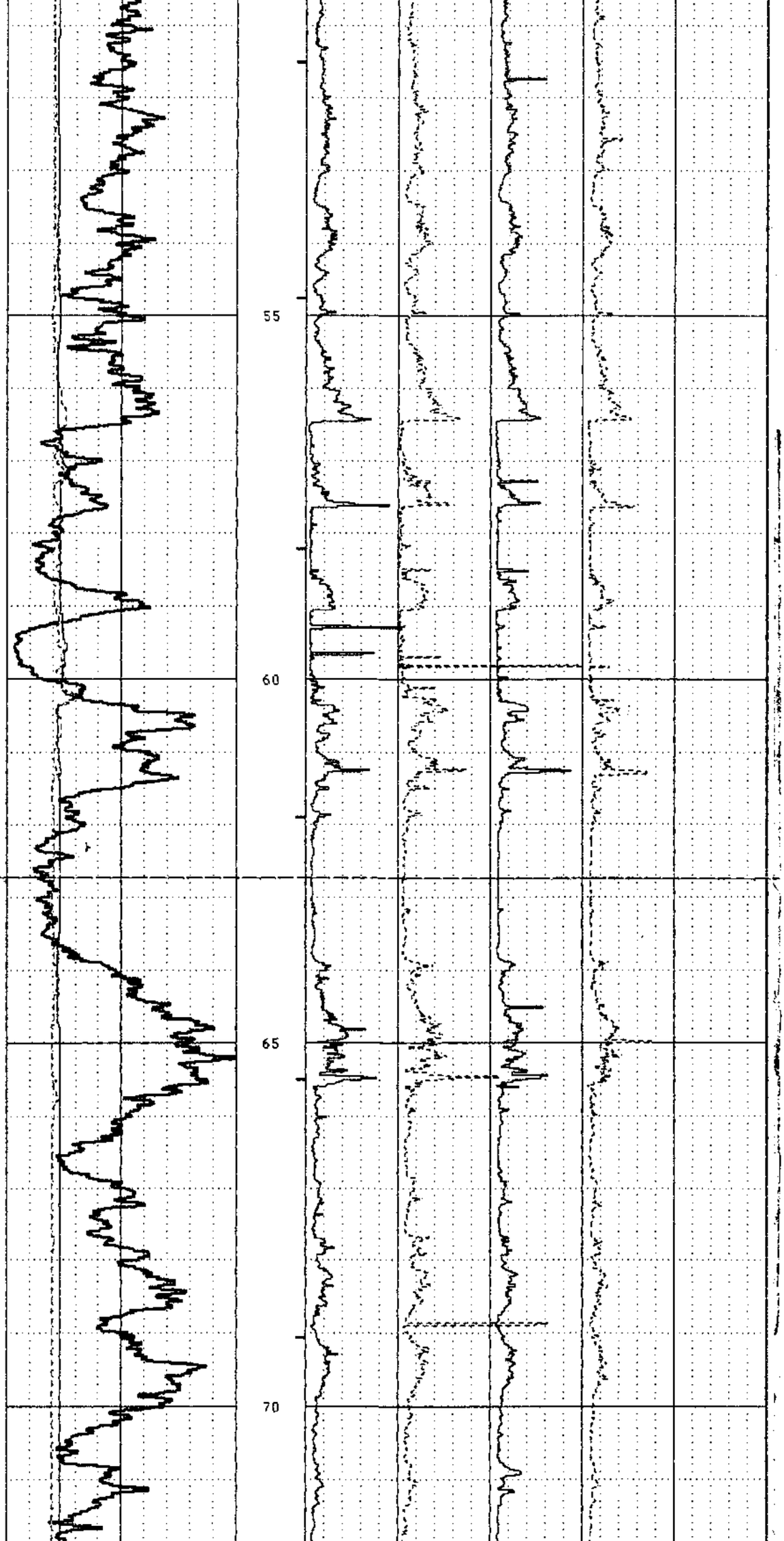
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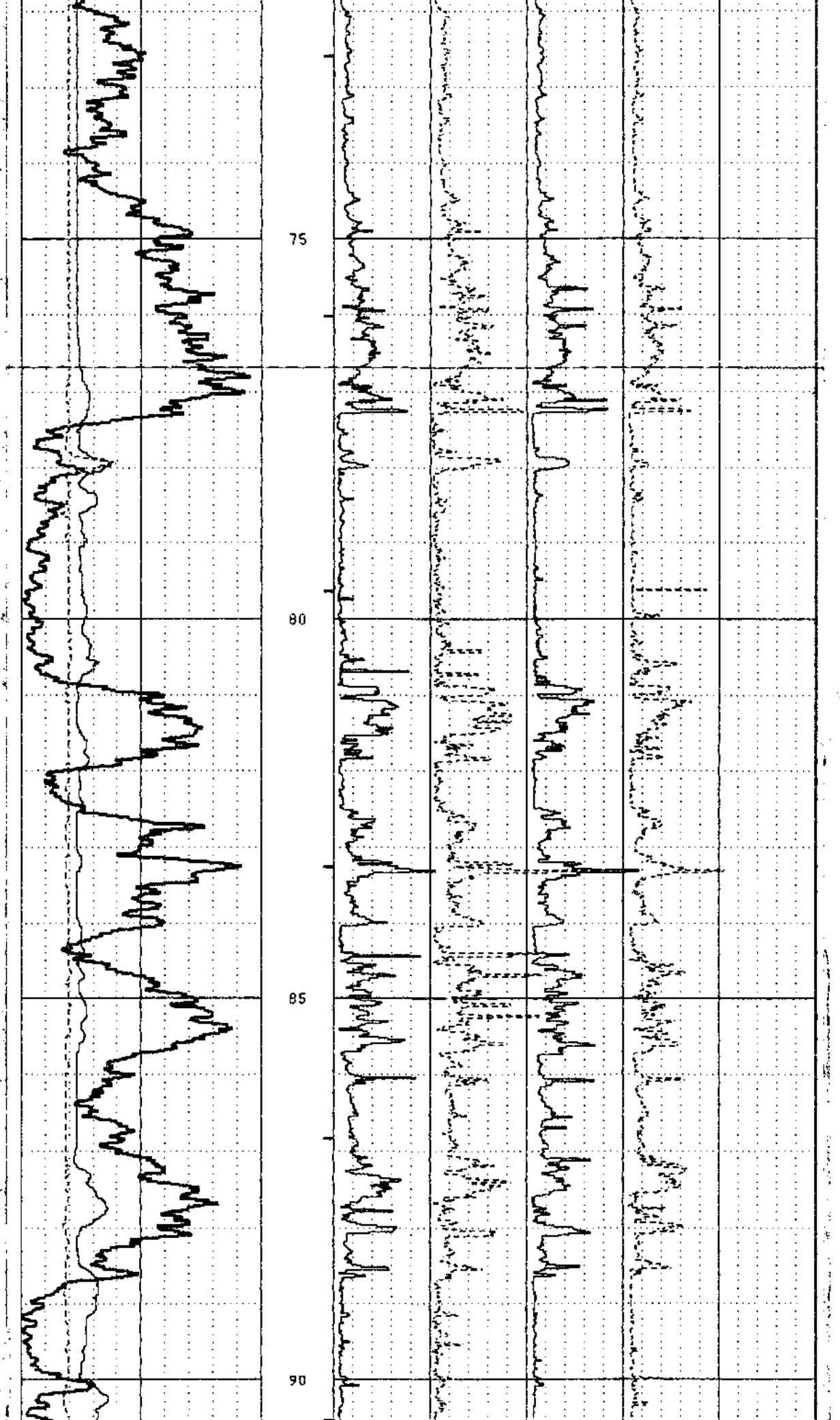
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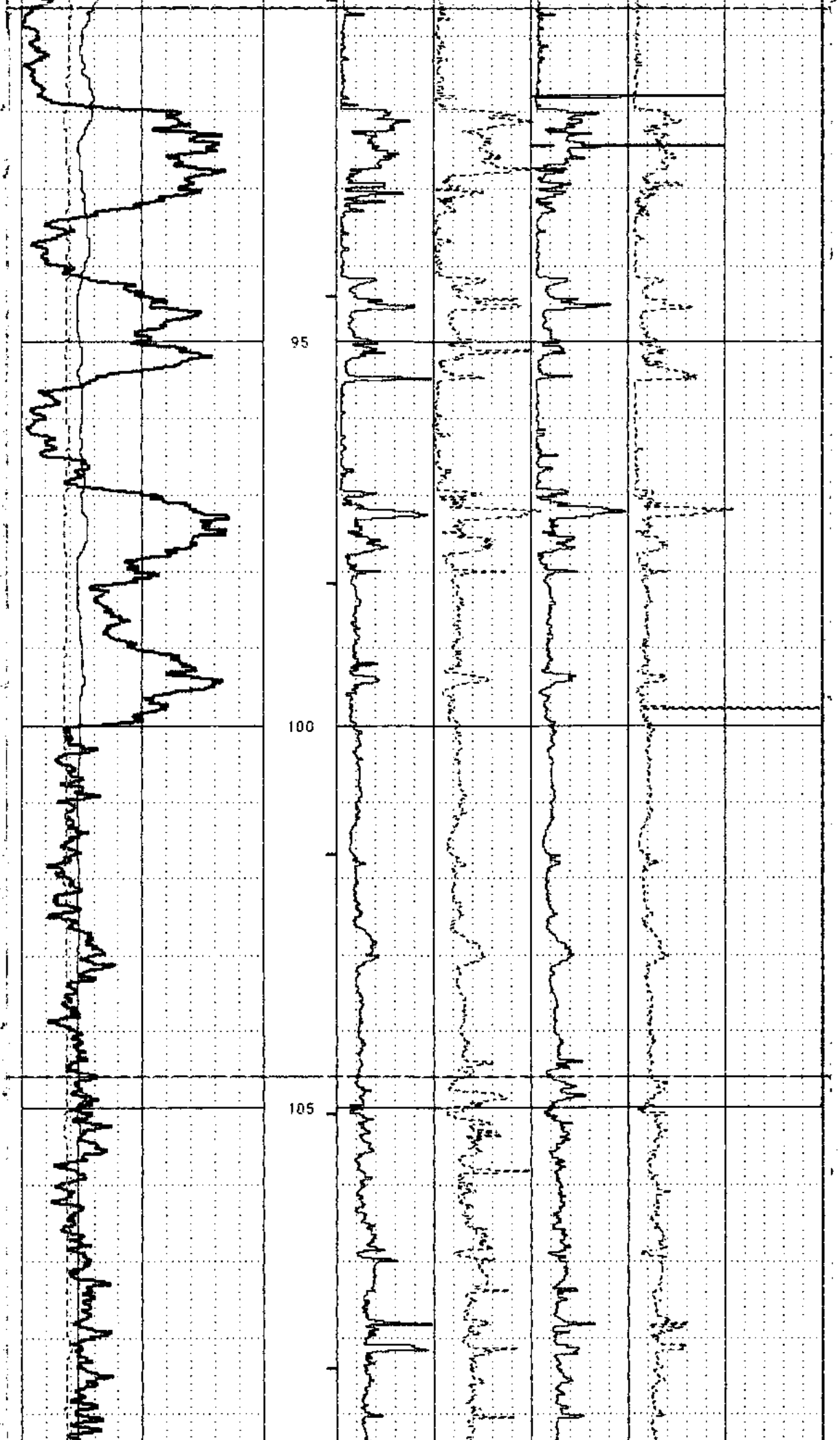
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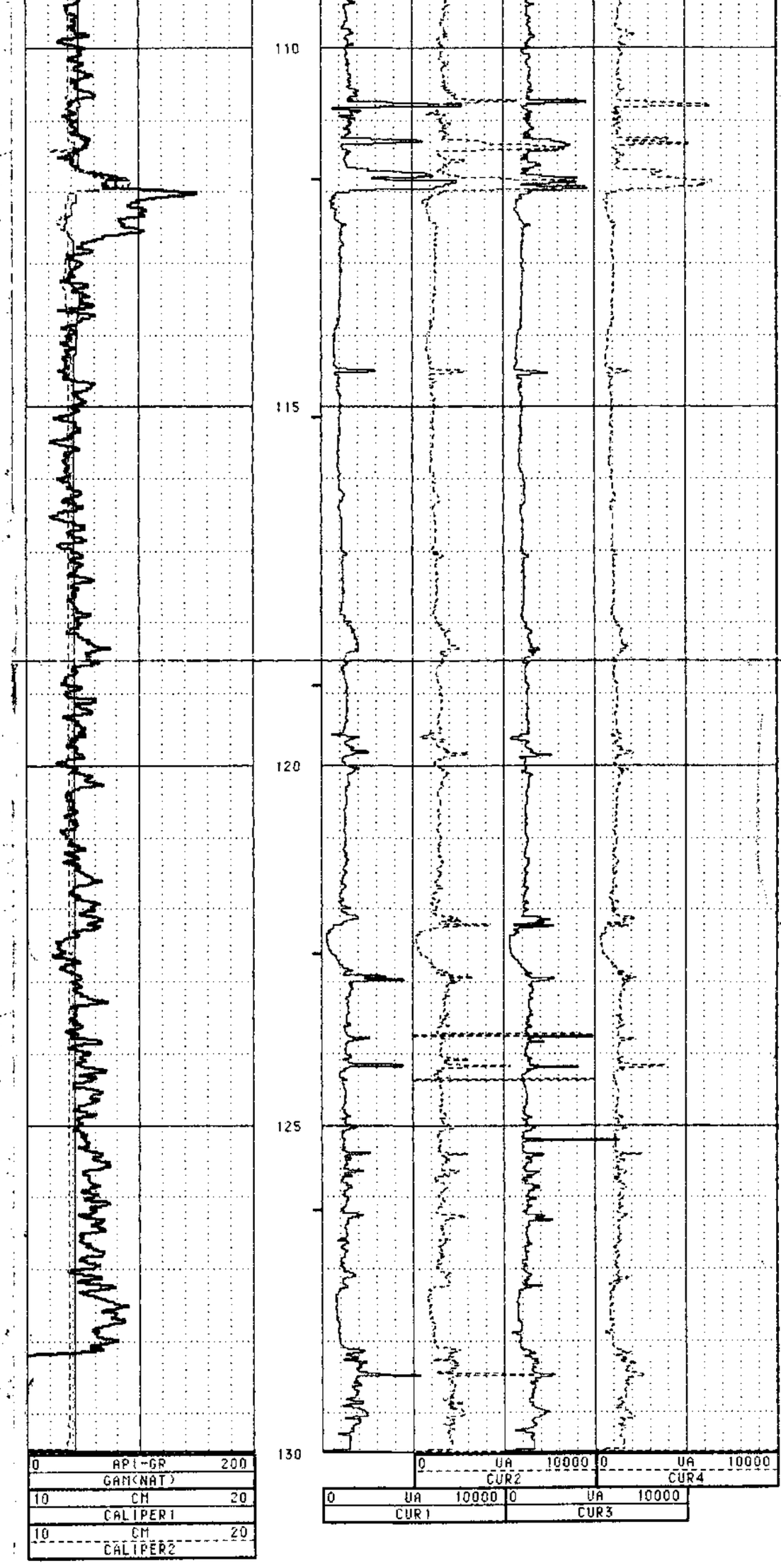
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CALIPER1
10 CM 20
CALIPER2
0 UA 10000
CUR1
0 UA 10000
CUR2
0 UA 10000
CUR3
0 UA 10000
CUR4

753

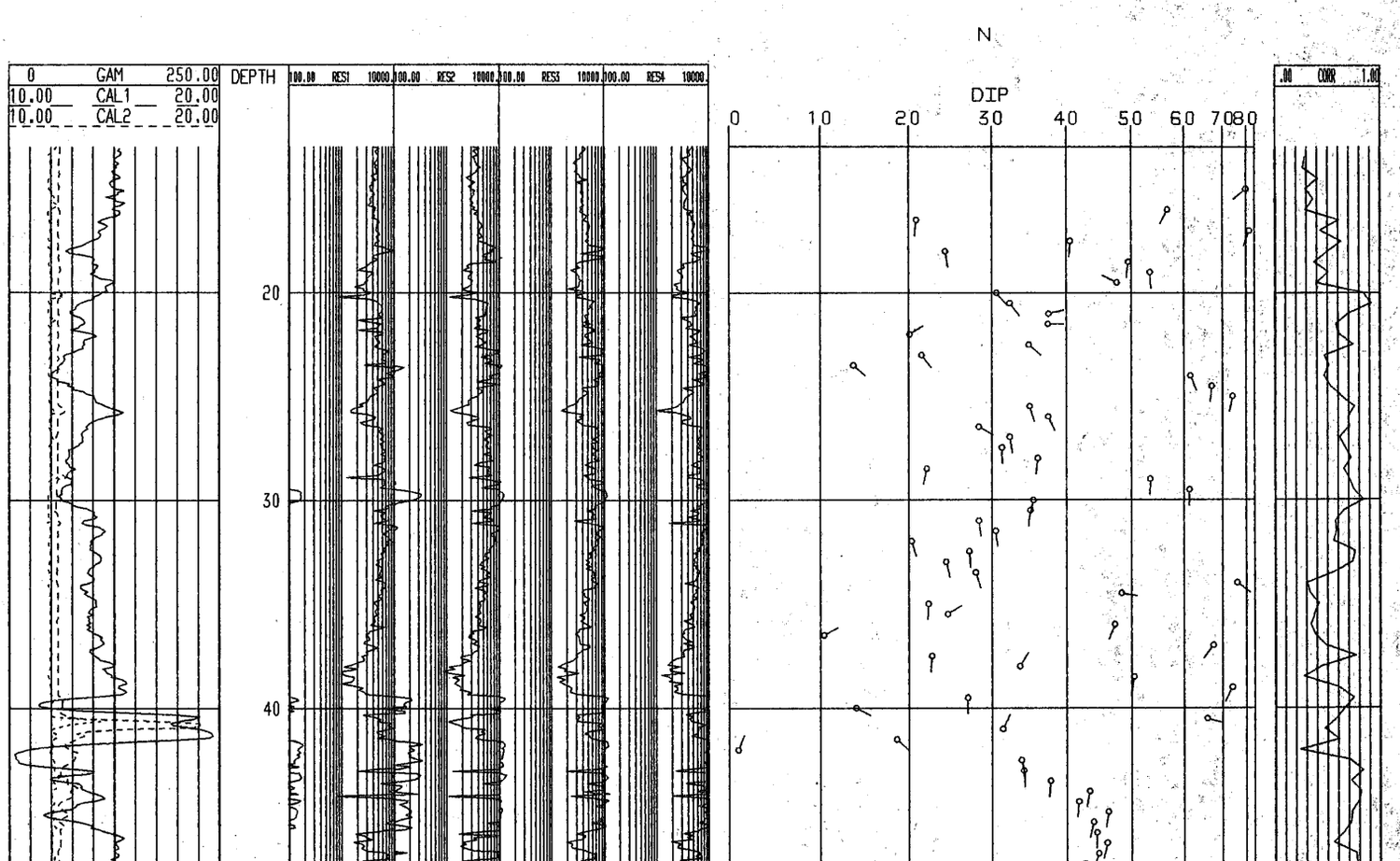
Century GEOPHYSICAL CORP.

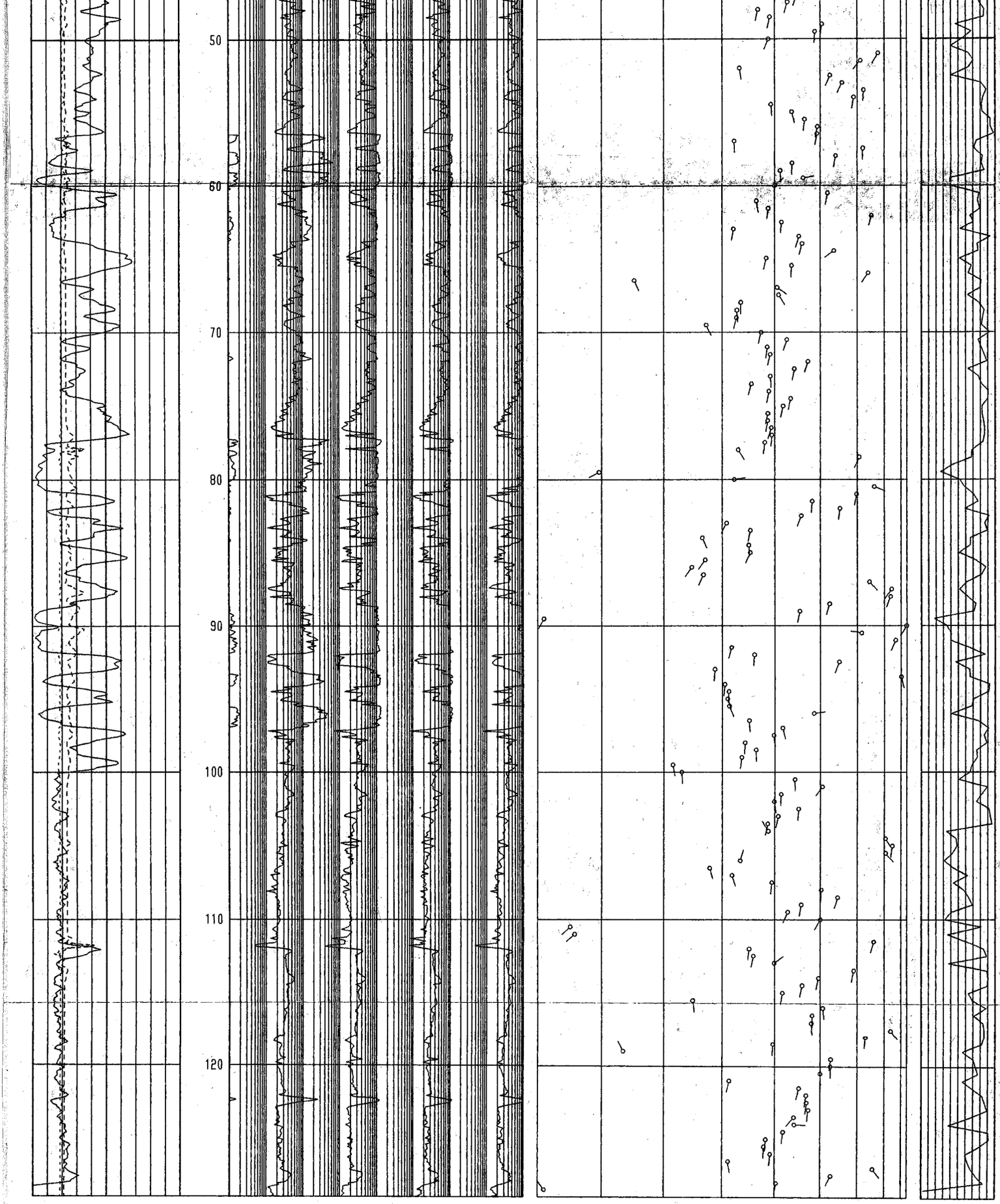
QHR89012 DIPMETER

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89012 DIPMETER			SCALE 1:200	
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/23/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 131	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 129.50	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 11.44	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 10	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9400A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9400 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000
REMARKS	:				

logged open hole 50deg from horizontal
Window: 1m Step: .5m Search Angle: 60deg Method-2

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS




50
60
70
80
90
100
110
120

DIPMETER LIST FOR:OHR-89012
WINDOW:1m
STEP:.5m
SEARCH ANGLE:60deg
MAGNETIC DECLINATION:24.5

DEPTH	DIP	AZIM	CORR COEFF	HOLE DEV.	HOLE AZIM	PAD1 AZIM
13.500	91.9	138.	.282	39.0	13.	28.
14.000	95.3	211.	.268	39.3	9.	22.
14.500	95.0	213.	.407	39.2	11.	25.
15.000	79.7	229.	.292	39.2	12.	25.
15.500	91.3	228.	.363	38.8	13.	31.
16.000	56.6	207.	.292	38.8	13.	34.
16.500	20.9	186.	.607	39.4	4.	16.
17.000	82.2	200.	.428	39.0	13.	33.
17.500	40.5	184.	.630	39.8	16.	34.
18.000	24.3	169.	.496	38.6	12.	28.
18.500	49.5	187.	.375	38.5	13.	30.
19.000	53.3	177.	.509	39.0	7.	21.
19.500	47.6	296.	.397	38.7	15.	37.
20.000	30.6	139.	.843	38.6	13.	32.
20.500	32.3	143.	.913	38.1	14.	29.
21.000	37.5	76.	.699	38.6	8.	18.
21.500	37.4	90.	.580	38.3	18.	35.
22.000	20.1	59.	.615	38.6	13.	26.
22.500	34.8	130.	.743	38.2	13.	24.
23.000	21.5	142.	.470	38.6	16.	26.
23.500	13.7	132.	.512	38.3	10.	13.
24.000	61.4	157.	.467	38.4	15.	24.
24.500	66.7	184.	.524	38.6	10.	12.
25.000	73.4	190.	.636	38.5	14.	18.
25.500	34.9	162.	.754	38.0	11.	11.
26.000	37.4	154.	.695	38.1	13.	12.
26.500	28.4	120.	.704	37.7	17.	19.
27.000	32.3	170.	.613	38.3	11.	7.
27.500	31.3	179.	.668	38.4	11.	5.
28.000	36.0	187.	.722	38.6	10.	3.
28.500	22.1	192.	.654	38.1	11.	1.
29.000	53.3	181.	.710	38.3	13.	3.
29.500	61.2	180.	.745	38.0	12.	1.
30.000	35.4	193.	.840	38.1	16.	6.
30.500	35.0	186.	.656	38.0	9.	350.
31.000	28.4	173.	.577	37.3	12.	354.
31.500	30.5	174.	.585	38.5	18.	3.
32.000	20.3	162.	.558	37.9	11.	352.
32.500	27.2	176.	.761	38.6	13.	354.
33.000	24.4	167.	.739	38.2	15.	354.
33.500	28.0	163.	.572	37.6	15.	353.
34.000	75.2	126.	.305	37.6	13.	349.
34.500	48.3	100.	.334	37.7	11.	342.
35.000	22.3	183.	.417	37.9	6.	331.
35.500	24.6	58.	.376	38.3	16.	345.
36.000	47.2	202.	.343	37.5	19.	346.
36.500	10.4	63.	.382	37.4	14.	336.
37.000	67.2	217.	.478	37.4	17.	340.
37.500	22.7	185.	.768	37.2	11.	329.
38.000	33.6	33.	.444	37.3	19.	33[illegible].
38.500	50.4	188.	.274	37.3	12.	326.
39.000	73.3	206.	.601	37.0	14.	325.
39.500	27.0	181.	.747	37.0	13.	322.
40.000	14.0	116.	.665	37.2	11.	318.
40.500	65.5	107.	.584	36.9	16.	325.
41.000	31.4	26.	.471	37.0	13.	313.
41.500	18.6	132.	.607	37.4	15.	303.
42.000	37.0	21.	.235	37.8	5.	283.
42.500	33.8	167.	.710	37.5	13.	295.
43.000	34.1	176.	.834	37.1	9.	287.
43.500	37.7	184.	.7[illegible]1	37.0	11.	287.
44.000	43.3	190.	.814	40.8	26.	303.
44.500	41.7	185.	.796	36.7	12.	283.
45.000	46.2	189.	.730	36.7	12.	282.
45.500	43.9	193.	.723	36.[illegible]	19.	292.
46.000	44.4	181.	.654	36.8	14.	283.
46.500	46.0	192.	.557	36.6	13.	279.
47.000	44.7	200.	.773	37.[illegible]	14.	280.
47.500	42.6	196.	.780	37.[illegible]	10.	270.
48.000	36.7	193.	.850	36.7	13.	272.
48.500	39.0	193.	.844	36.7	14.	269.

49.000	50.4	188.	.464	36.9	13.	266.
49.500	48.7	184.	.677	36.0	13.	263.
50.000	38.7	201.	.554	36.8	14.	262.
50.500	95.2	216.	.394	36.8	13.	259.
51.000	67.3	211.	.639	37.0	17.	255.
51.500	61.0	220.	.706	36.6	13.	251.
52.000	33.2	171.	.633	36.6	15.	251.
52.500	52.4	203.	.406	36.7	13.	245.
53.000	55.6	206.	.802	36.8	9.	252.
53.500	62.0	184.	.882	36.9	13.	236.
54.000	58.9	190.	.835	36.5	16.	243.
54.500	39.2	176.	.815	36.5	14.	236.
55.000	43.5	165.	.821	36.4	10.	236.
55.500	46.3	185.	.935	36.7	8.	21[illegible].
56.000	49.3	191.	.973	36.5	14.	229.
56.500	49.2	189.	.979	36.5	12.	226.
57.000	32.2	177.	.743	36.3	7.	215.
57.500	61.8	180.	.708	36.8	15.	228.
58.000	53.9	192.	.347	36.5	15.	225.
58.500	43.6	182.	.808	36.4	9.	212.
59.000	41.1	178.	.850	36.3	11.	217.
59.500	46.0	81.	.389	38.8	24.	240.
60.000	40.0	50.	.394	36.2	10.	213.
60.500	51.8	190.	.784	35.6	13.	219.
61.000	36.4	170.	.764	36.0	3.	199.
61.500	38.7	186.	.791	37.0	18.	224.
62.000	64.8	194.	.660	37.2	7.	191.
62.500	41.4	185.	.706	36.3	7.	198.
63.000	32.1	191.	.526	36.2	17.	205.
63.500	45.1	197.	.929	36.9	8.	180.
64.000	45.8	195.	.760	36.5	60.	173.
64.500	53.4	234.	.769	35.2	13.	193.
65.000	38.3	194.	.517	36.0	14.	192.
65.500	43.5	183.	.682	36.7	6.	171.
66.000	63.6	214.	.633	36.0	14.	182.
66.500	15.2	156.	.808	35.9	12.	175.
67.000	40.5	124.	.797	35.9	10.	169.
67.500	40.8	148.	.628	37.2	14.	174.
68.000	33.4	180.	.774	35.7	12.	169.
68.500	32.7	177.	.850	35.7	13.	168.
69.000	32.6	194.	.829	37.9	14.	164.
69.500	27.2	154.	.815	35.6	16.	169.
70.000	37.3	194.	.926	35.8	11.	155.
70.500	42.5	198.	.771	36.1	11.	154.
71.000	38.5	187.	.809	36.1	15.	157.
71.500	39.1	194.	.852	35.8	13.	153
72.000	47.1	197.	.889	35.6	13.	152.
72.500	44.1	191.	.634	35.8	13.	149.
73.000	39.1	176.	.771	35.8	57.	121.
73.500	35.4	196.	.814	35.4	15.	150.
74.000	38.8	190.	.904	35.4	10.	129.
74.500	43.3	193.	.903	35.1	16.	148.
75.000	41.7	192.	.822	35.1	12.	141.
75.500	38.6	192.	.820	35.3	13.	141.
76.000	38.6	190.	.844	35.3	11.	137.
76.500	39.3	197.	.857	36.0	17.	145.
77.000	39.4	184.	.856	35.4	13.	136.
77.500	38.0	187.	.834	35.2	13.	138.
78.000	32.9	147.	.687	35.2	15.	139.
78.500	60.6	205.	.681	35.2	6.	127.
79.000	100.6	169.	.423	35.2	14.	140.
79.500	9.6	244.	.261	35.1	12.	136.
80.000	32.2	81.	.517	35.0	12.	137.
80.500	65.8	111.	.584	35.1	12.	136.
81.000	59.8	191.	.707	34.[illegible]	9.	129.
81.500	48.1	184.	.768	34.[illegible]	11.	130.
82.000	55.0	187.	.592	35.1	15.	135.
82.500	45.6	201.	.917	35.1	13.	132.
83.000	30.8	208.	.861	35.5	24.	150.
83.500	35.2	192.	.892	35.2	12.	132.
84.000	26.5	156.	.665	35.2	11.	131.
84.500	34.9	177.	.665	35.0	12.	130.
85.000	35.2	205.	.511	35.3	17.	139.
85.500	27.0	216.	.731	34.9	4.	139.
86.000	24.7	216.	.873	34.8	14.	138.
86.500	26.7	205.	.819	34.8	12.	131.
87.000	64.0	136.	.6.7	34.7	13.	137.
87.500	73.5	216.	.517	34.8	11.	128.
88.000	73.0	201.	.626	34.8	11.	125.
88.500	52.3	197.	.739	34.7	15.	132.
89.000	45.3	193.	.715	34.9	14.	128.
89.500	80.5	209.	.179	34.9	12.	126.
90.000	88.2	211.	.347	34.7	15.	128.
90.500	61.4	230.	.405	34.6	9.	117.
91.000	75.9	204.	.397	34.6	11.	120.
91.500	31.7	195.	.646	34.7	13.	123.
92.000	36.0	185.	.865	35.5	17.	12[illegible].
92.500	54.8	201.	.452	34.7	14.	120.
93.000	38.7	184.	.654	34.6	13.	120.
93.500	80.1	166.	.661	34.6	13.	118.
94.000	30.5	186.	.721	34.4	13.	116.
94.500	31.2	182.	.713	34.4	13.	116.
95.000	31.0	162.	.779	34.3	12.	113.
95.500	31.3	157.	.833	34.3	10.	108.
96.000	48.5	83.	.4[illegible]	34.2	13.	111.
96.500	35.0	176.	.772	34.2	8.	100.
97.000	41.6	166.	.911	34.3	10.	99.
97.500	39.8	174.	.852	33.[illegible]	12.	100.
98.000	34.1	182.	.888	33.[illegible]	14.	102.
98.500	36.3	177.	.753	34.0	11.	95.
99.000	33.6	188.	.759	33.7	17.	103.
99.500	21.5	169.	.689	33.7	12.	91.
100.000	23.0	176.	.657	33.6	13.	89.
100.500	44.2	179.	.510	33.7	11.	83.
101.000	50.5	217.	.896	33.7	13.	83.
101.500	41.3	182.	.812	33.4	14.	83.
102.000	39.9	171.	.746	33.5	13.	80.
102.500	45.0	184.	.920	33.3	9.	70.
103.000	40.7	191.	.936	33.3	13.	75.
103.500	38.6	191.	.956	33.3	11.	71.
104.000	38.7	329.	.340	33.3	14.	74.
104.500	70.5	147.	.469	32.9	15.	74.

105.000	74.0	188.	.483	32.8	12.	71.
105.500	70.6	138.	.420	33.4	15.	74.
106.000	33.3	17.	.307	32.2	13.	69.
106.500	27.8	165.	.432	33.1	15.	73.
107.000	31.8	163.	.626	33.0	14.	70.
107.500	39.4	185.	.435	32.3	10.	59.
108.000	50.2	182.	.575	32.4	13.	64.
108.500	54.4	197.	.640	32.2	15.	66.
109.000	45.6	189.	.693	32.1	13.	61.
109.500	42.7	206.	.400	32.0	12.	57.
110.000	50.0	209.	.315	32.4	13.	56.
110.500	5.1	228.	.806	31.8	12.	52.
111.000	5.8	230.	.355	32.2	13.	51.
111.500	65.6	195.	.619	32.3	14.	46.
112.000	35.0	187.	.844	32.4	15.	44.
112.500	35.8	190.	.883	32.5	12.	36.
113.000	39.9	52.	.368	32.3	13.	23.
113.500	59.0	193.	.888	30.9	13.	22.
114.000	49.6	194.	.905	31.6	11.	19.
114.500	45.8	192.	.891	31.9	11.	16.
115.000	41.6	191.	.637	32.1	13.	18.
115.500	24.9	173.	.696	31.0	11.	10.
116.000	50.6	173.	.881	32.7	14.	14.
116.500	48.1	180.	.710	31.7	13.	10.
117.000	47.9	177.	.839	31.5	14.	9.
117.500	73.0	143.	.850	31.3	9.	358.
118.000	62.7	186.	.850	31.3	15.	8.
118.500	39.6	182.	.814	30.9	9.	355.
119.000	13.4	333.	.559	31.1	13.	360.
119.500	52.6	186.	.705	30.8	16.	6.
120.000	52.5	179.	.733	31.4	12.	355.
120.500	50.0	178.	.768	31.2	12.	353.
121.000	31.3	193.	.559	31.3	13.	353.
121.500	45.1	194.	.694	31.1	17.	358.
122.000	46.7	188.	.825	30.9	14.	350.
122.500	46.8	187.	.858	31.2	15.	347.
123.000	47.2	187.	.893	30.9	13.	342.
123.500	44.0	222.	.643	31.1	8.	330.
124.000	44.1	92.	.365	31.0	15.	342.
124.500	41.7	187.	.904	30.6	14.	338.
125.000	38.2	184.	.916	30.6	13.	334.
125.500	37.8	182.	.771	30.5	13.	329.
126.000	39.1	186.	.595	30.5	13.	328.
126.500	31.1	172.	.624	30.6	12.	322.
127.000	65.2	142.	.672	30.8	13.	321.
127.500	52.6	207.	.743	29.6	11.	316.
128.000	40.3	191.	.838	30.4	14.	318.
128.500	37.9	324.	.031	30.1	13.	312.

Century

QHR89013 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89013 GAMMA-DENSITY				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/27/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 125	ELEV. PERM. DATUM: 00		KB	: 00
LOG BOTTOM	: 113.98	LOG MEASURED FROM: GL		DF	: 00
LOG TOP	: -.02	DRL MEASURED FROM: GL		GL	: 00
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 650	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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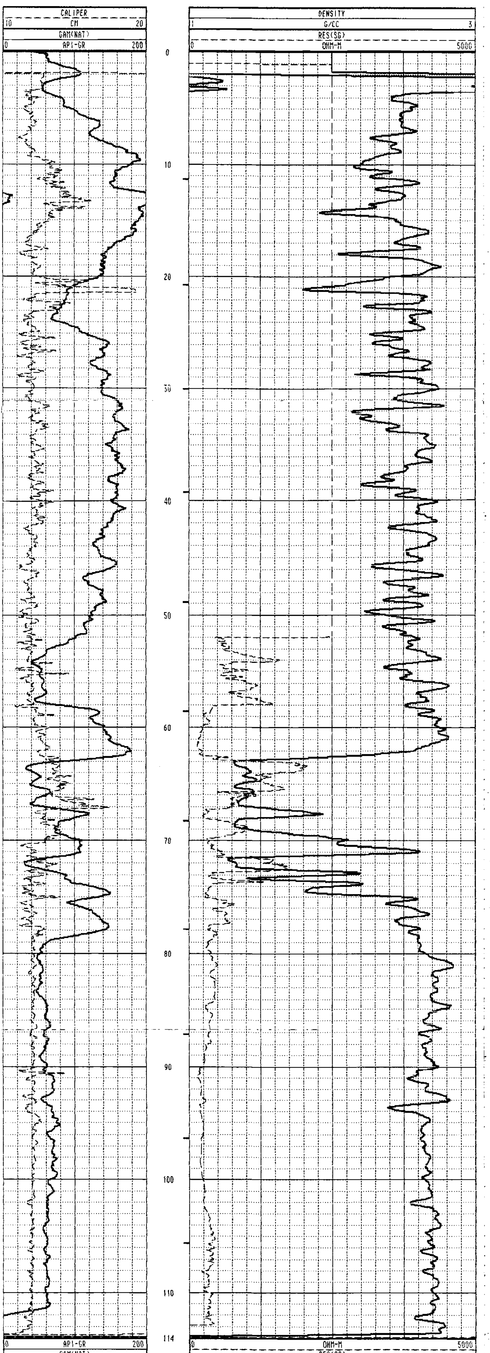

TOOL CALIBRATION TOOL : 9032AC SERIAL NUMBER : 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAMMAAT	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAMMAAT	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2495.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.980 CM
8	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR89013 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89013 EXP DENSITY				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	: TOWNSHIP	:	RANGE :		
DATE	: 05/27/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 125	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 113.96	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -.02	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032WC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000
REMARKS	:				

LOGGED OPEN HOLE
ANGLE HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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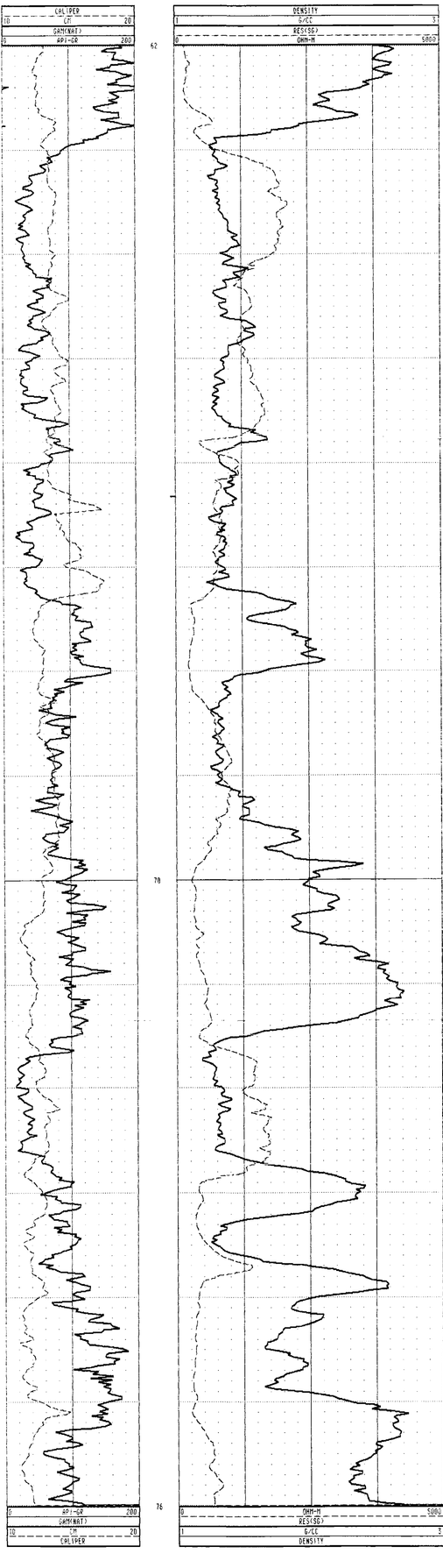


Century

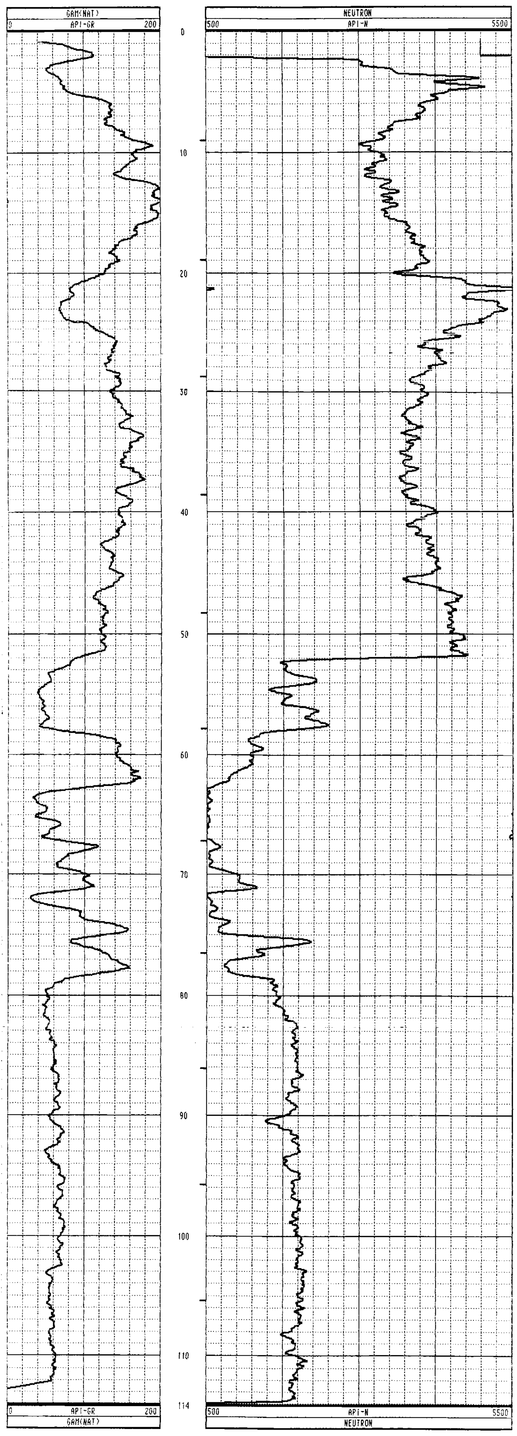
QHR89013 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89013 GAMMA-NEUTRON				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:50	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 05/27/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 125	ELEV. PERM. DATUM:	00	KB : 00	
LOG BOTTOM	: 114.10	LOG MEASURED FROM:	GL	DF : 00	
LOG TOP	: 0.84	DRL MEASURED FROM:	GL	GL : 00	
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG : 1	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 10	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000	
REMARKS	:				

LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SECT	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

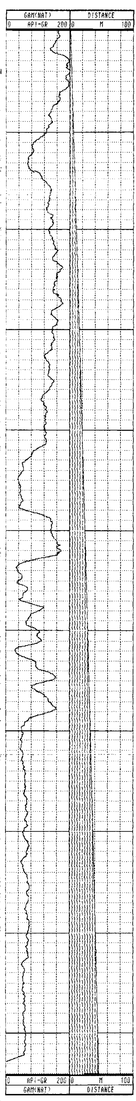
QHR89013 DEVIATION

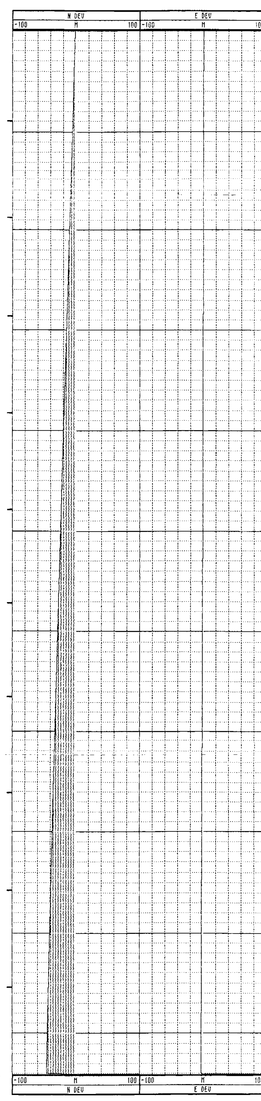
COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89013 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/31/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 125	ELEV. PERM. DATUM: GD		KB	: 00
LOG BOTTOM	: 114.10	LOG MEASURED FROM: GL		DF	: 00
LOG TOP	: 0.84	DRL MEASURED FROM: GL		GL	: 00
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: .05		RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: JUN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000
REMARKS	:				

LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753





TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	221.100 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89013 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 05/31/89
DATA FROM : PROBE : 9055A 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 3

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.0	9.92	-1.20	0.44	1.4	161.5	28.5	202.7
15.0	13.43	-3.57	0.30	3.6	175.2	27.6	180.0
20.0	17.83	-5.81	0.24	5.8	179.6	28.2	181.6
25.0	22.24	-8.13	0.02	8.1	179.8	27.9	182.5
30.0	26.64	-10.46	-.12	10.5	180.6	28.0	176.8
35.0	31.05	-12.73	-.21	12.7	180.9	28.1	167.6
40.0	35.46	-15.04	-.37	15.0	181.4	27.5	199.9
45.0	39.85	-17.36	-.58	17.4	181.9	28.3	184.2
50.0	44.26	-19.68	-.78	19.7	182.3	28.4	182.7
55.0	48.67	-21.91	-.95	21.9	182.5	26.8	221.2
60.0	53.09	-24.13	-.96	24.1	182.3	27.7	177.8
65.0	57.53	-26.42	-1.04	26.4	182.3	27.1	163.6
70.0	62.00	-28.55	-1.22	28.6	182.4	25.9	182.3
75.0	66.49	-30.66	-1.37	30.7	182.6	26.7	184.6
80.0	70.96	-32.81	-1.41	32.8	182.8	26.9	150.7
85.0	75.47	-34.91	-1.81	35.0	183.0	25.6	196.1
90.0	80.00	-36.96	-2.06	37.0	183.2	24.6	173.4
95.0	84.55	-38.95	-2.24	39.0	183.4	24.1	186.7
100.0	89.12	-40.90	-2.49	41.0	183.5	23.4	200.6
105.0	93.72	-42.79	-2.83	42.9	183.8	23.0	195.7
110.0	98.33	-44.67	-3.16	44.8	184.0	22.3	198.2
114.1	102.12	-46.15	-3.41	46.3	184.2	0.0	0.0

Century

CGC

QHR89014 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES	
WELL	: QHR89014 EXP DENSITY		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:120	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 05/24/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV.: PERM. DATUM: GD		KB	: 00
LOG BOTTOM	: 81.58	LOG MEASURED FROM: GL		DF	: 00
LOG TOP	: 9.12	DRL MEASURED FROM: GL		GL	: 00
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: .05		RECORDED BY	: D.ZANKL		

BIT SIZE	: 12.0	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: GD	TYPE	: 9032MC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: GD	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 193	PLOT	: GAIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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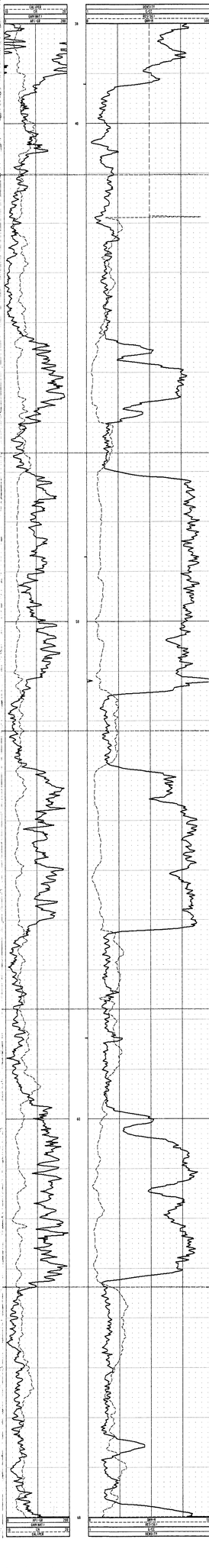


Century

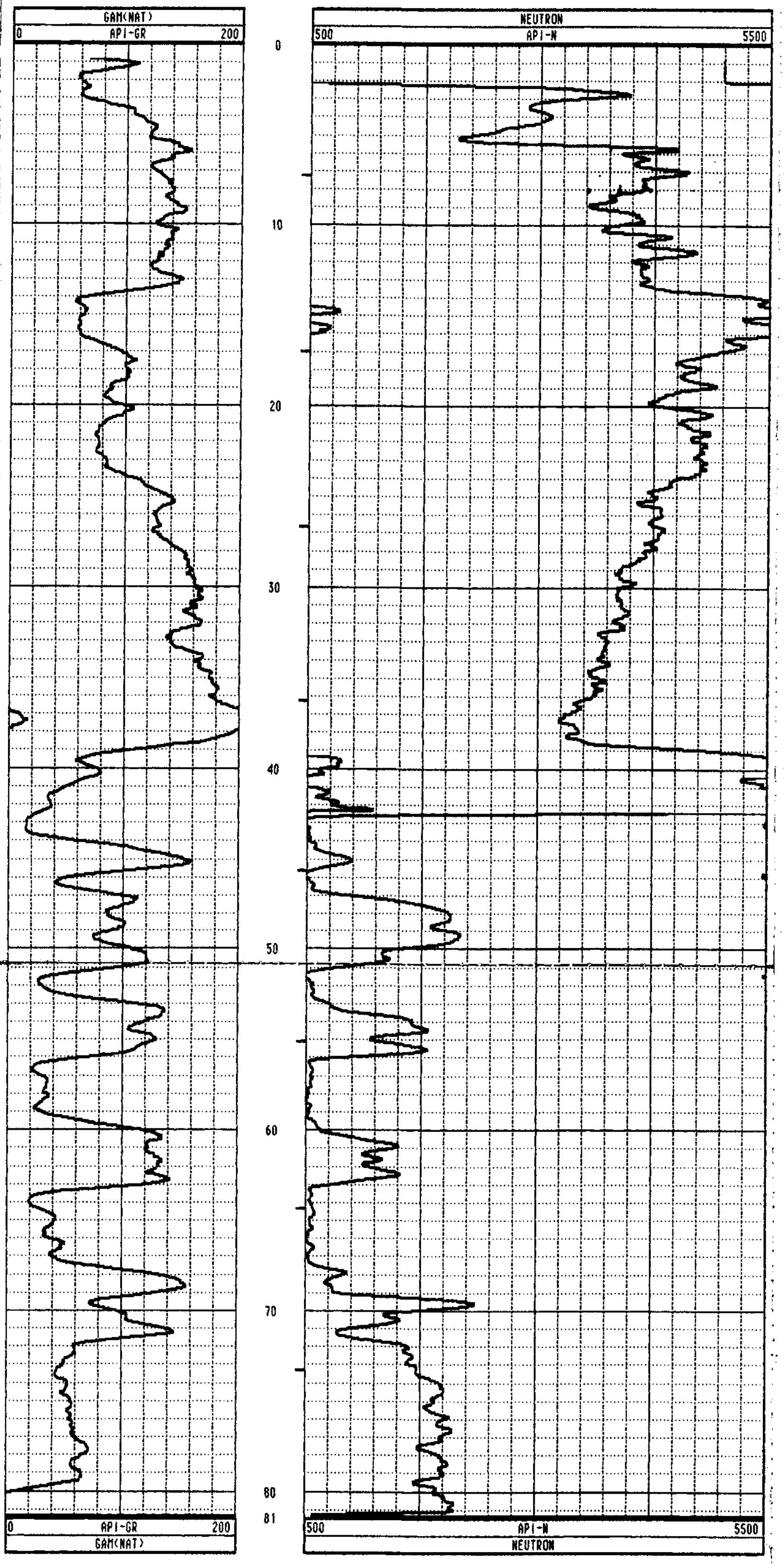
QHR89014 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89014 GAMMA-NEUTRON				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/24/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 81.40	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.86	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

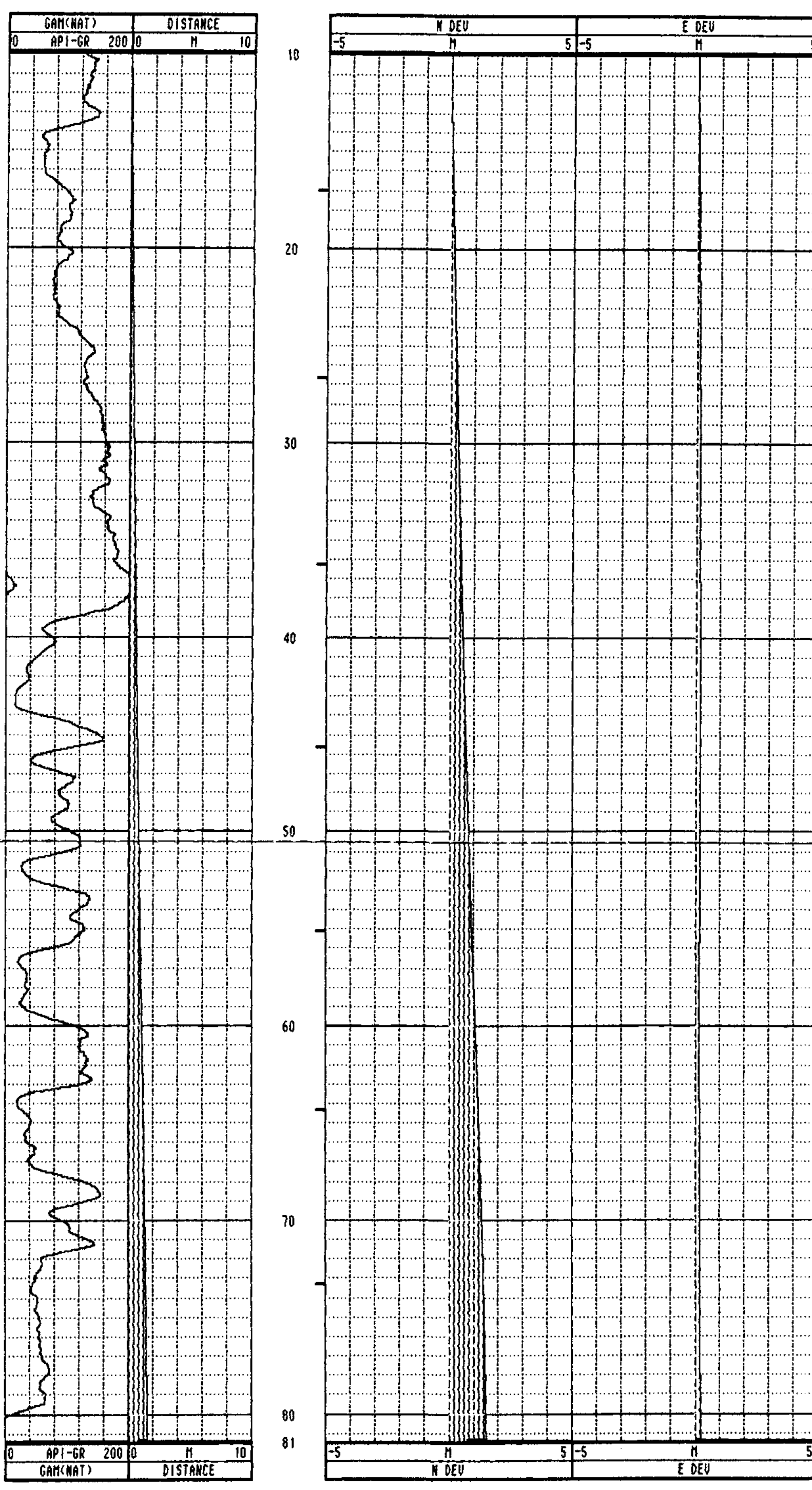
QHR89014 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89014 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/24/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: GD	KB	: GD
LOG BOTTOM	: 81.40	LOG MEASURED FROM	: GL	DF	: GD
LOG TOP	: 0.86	DRL MEASURED FROM	: GL	GL	: GD
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: GD	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: GD	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(API)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(API)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-M
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-M

********** COMPU-LOG II - VERTICAL DEVIATION **********

CLIENT : QUINTETTE COAL LTD.
FIELD OFFICE : CALGARY
DATA FROM :
MAG. DECL. : 24.500

HOLE ID. : QHR89014 GAMM
DATE OF LOG : 05/24/89
PROBE : 9055A , 14
DEPTH UNITS : METER LOG 0

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.0	10.00	-.01	0.03	0.0	108.3	0.5	151.6
15.0	15.00	0.04	0.07	0.1	57.8	1.1	28.4
20.0	20.00	0.13	0.10	0.2	38.0	1.1	21.0
25.0	25.00	0.23	0.14	0.3	30.7	1.4	26.9
30.0	30.00	0.33	0.16	0.4	25.9	1.2	2.1
35.0	34.99	0.44	0.18	0.5	22.2	1.0	16.9
40.0	39.99	0.55	0.19	0.6	19.1	1.4	354.2
45.0	44.99	0.66	0.19	0.7	16.0	1.0	8.6
50.0	49.99	0.79	0.19	0.8	13.5	1.8	356.2
55.0	54.99	0.92	0.18	0.9	11.4	1.7	0.8
60.0	59.99	1.07	0.18	1.1	9.5	1.7	359.3
65.0	64.98	1.21	0.18	1.2	8.7	1.4	345.7
70.0	69.98	1.34	0.20	1.4	8.3	1.3	11.1
75.0	74.98	1.44	0.21	1.4	8.2	0.9	23.8
80.0	79.98	1.50	0.22	1.5	8.4	0.2	43.0
81.4	81.38	1.52	0.23	1.5	8.5	0.0	0.0

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Century GEOPHYSICAL CORP.

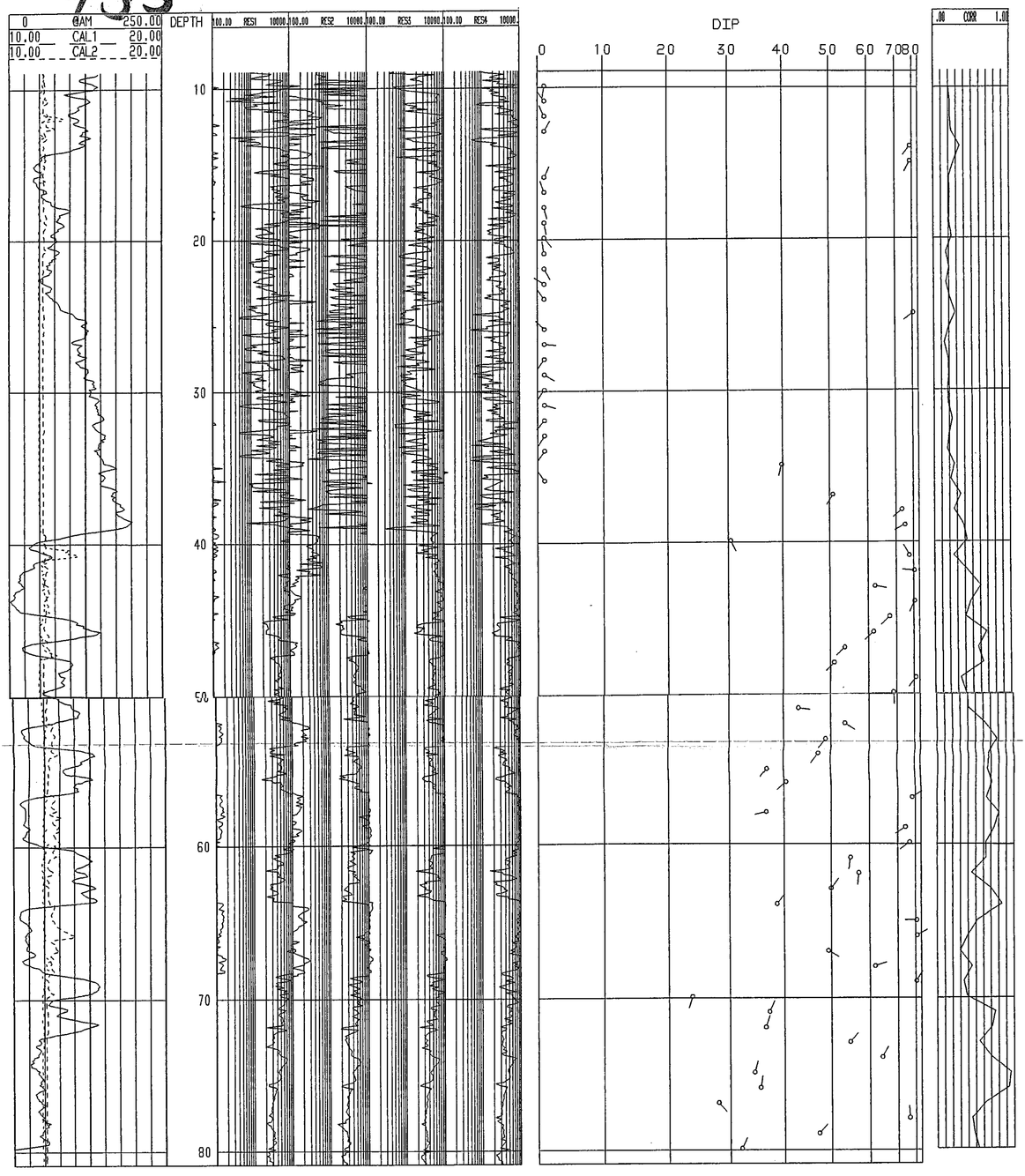
QHR89014 DIPMETER

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89014 DIPMETER				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/24/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 81.00	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 7.57	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 6	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9400A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9400 4
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
logged open hole vertical
Window: 2m Step: 1m Search Angle: 80deg Method-2

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



QHR89015 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89015 GAM-DEN-RES-CAL				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/28/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 68.06	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.20	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

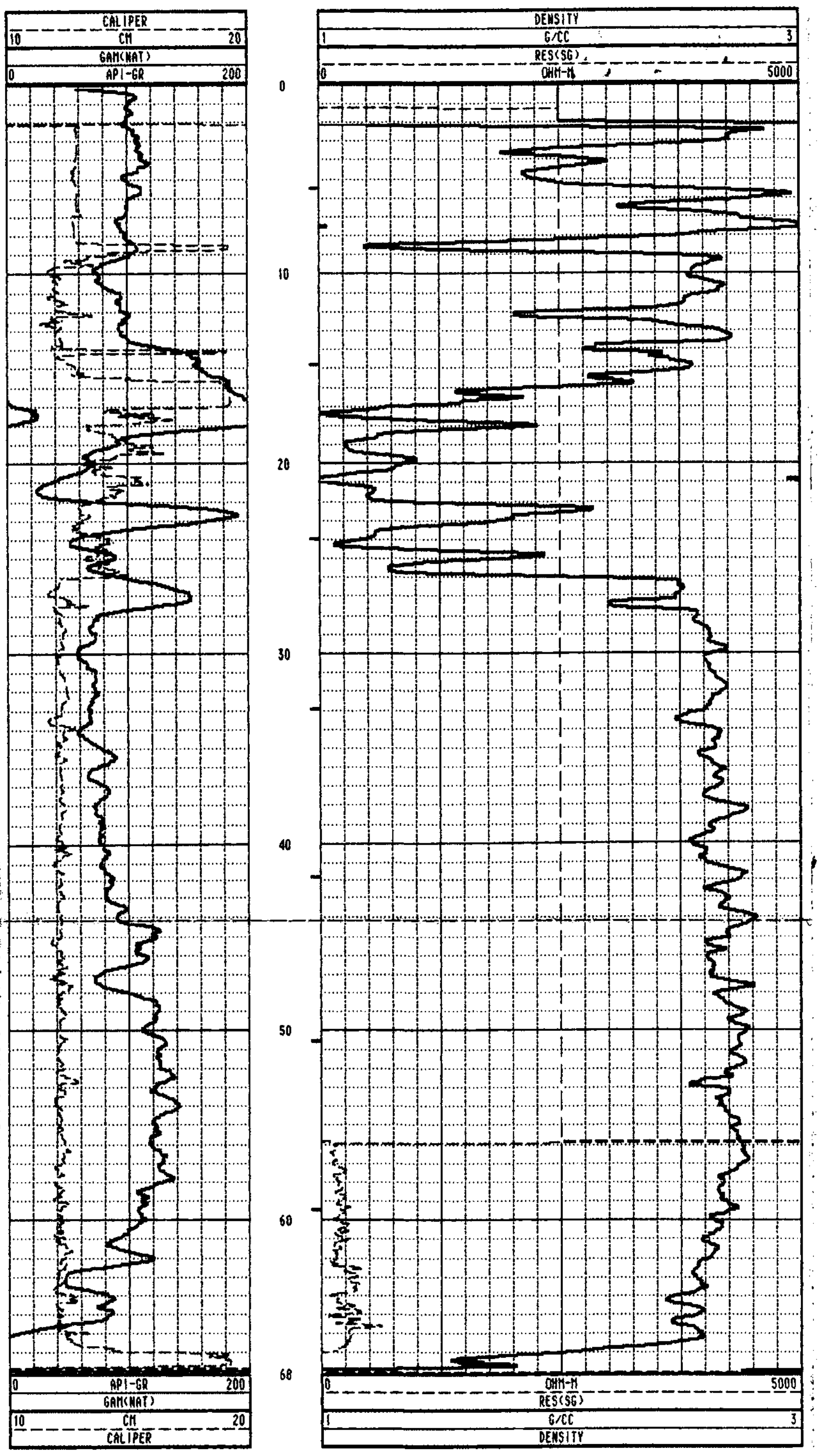
OTHER SERVICES:

SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

CGC

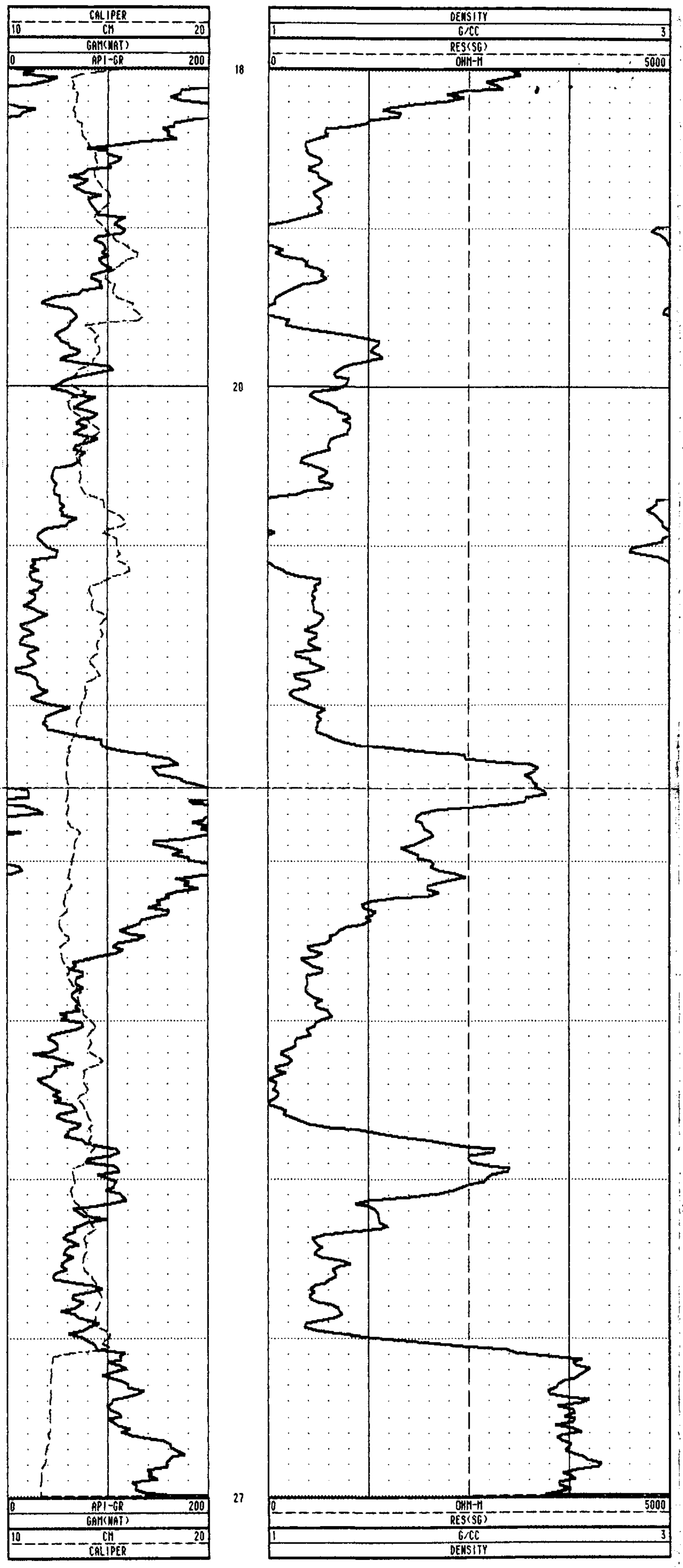
QHR89015 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89015 EXP DENSITY				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:20	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/28/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 68.06	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.20	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



Century

QHR89015 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89015 GAMMA-NEUTRON				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/28/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 68.14	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.70	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

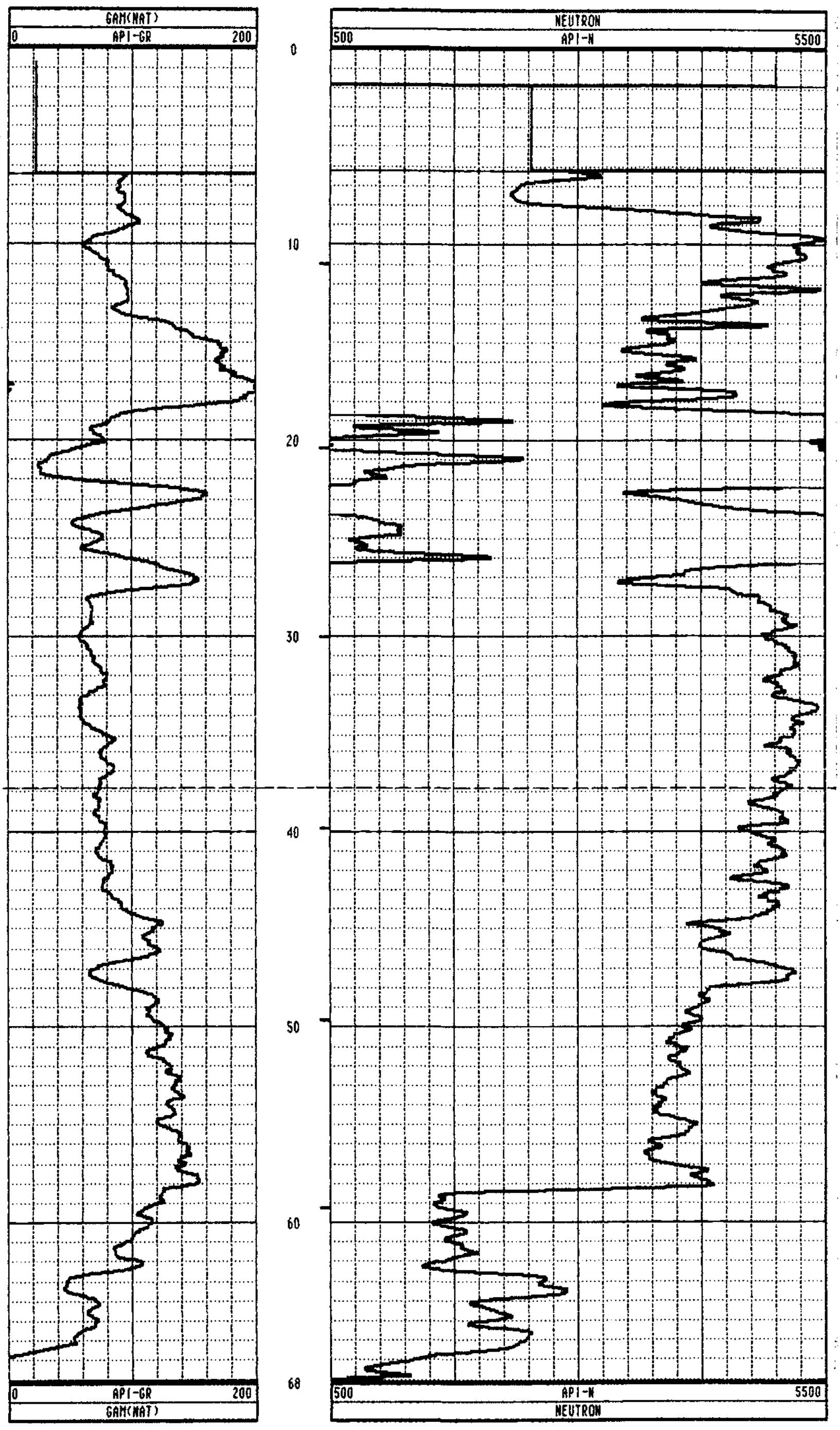
OTHER SERVICES:

SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

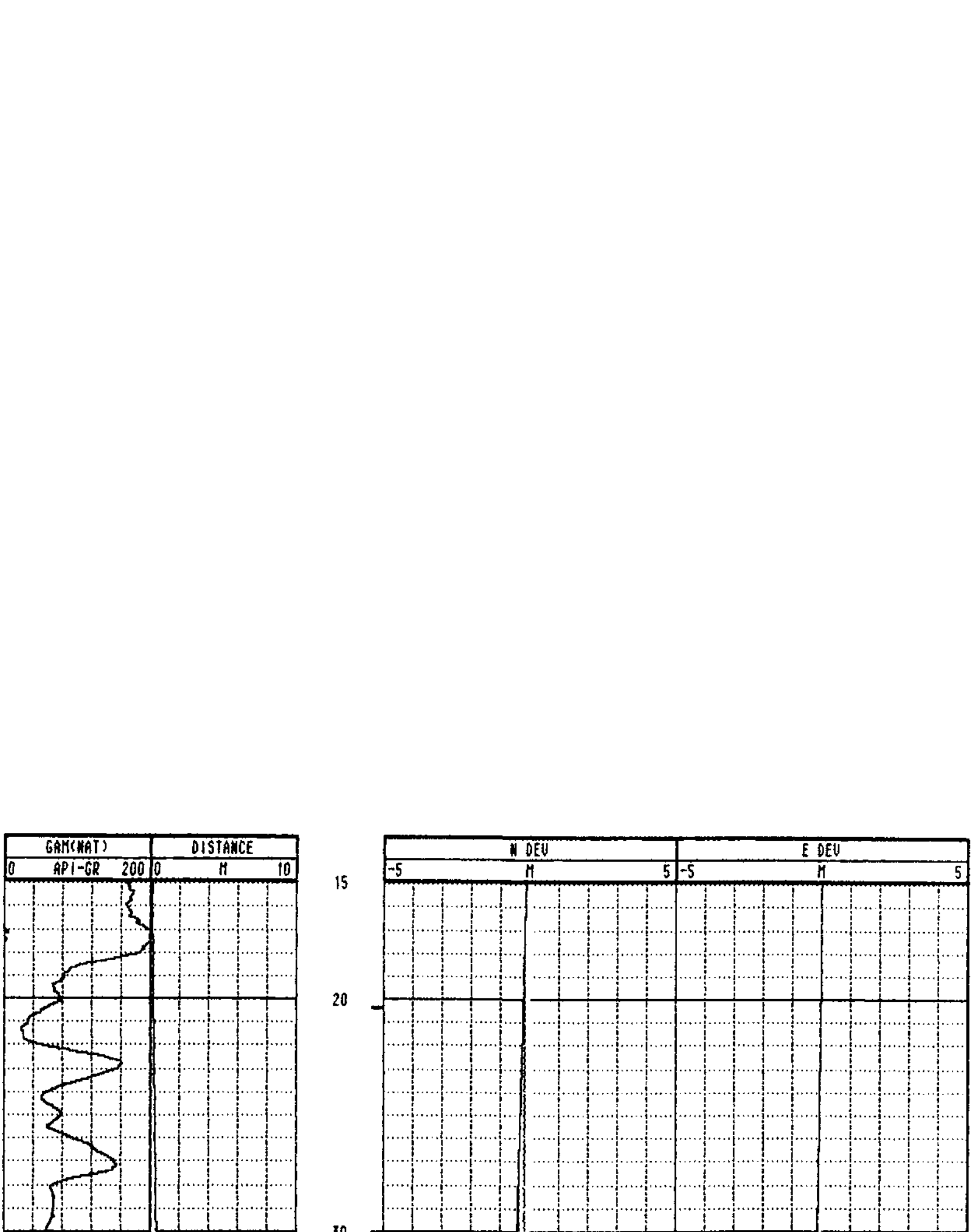
QHR89015 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89015 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/01/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 68.14	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.70	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 8
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89015 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 06/01/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 8

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
15.0	15.00	-.11	0.02	0.1	170.6	1.9	187.9
20.0	19.99	-.21	-.01	0.2	183.8	1.2	218.4
25.0	24.99	-.32	-.07	0.3	192.7	1.4	209.1
30.0	29.99	-.42	-.13	0.4	196.8	1.5	211.0
35.0	34.99	-.54	-.19	0.6	199.6	1.7	204.9
40.0	39.99	-.67	-.23	0.7	198.9	1.6	189.0
45.0	44.99	-.82	-.24	0.9	196.3	1.5	183.2
50.0	49.98	-.98	-.22	1.0	192.7	1.4	169.2
55.0	54.98	-1.14	-.17	1.2	188.5	2.3	141.8
60.0	59.98	-1.31	-.08	1.3	183.4	2.2	143.3
65.0	64.97	-1.46	0.00	1.5	180.0	1.8	153.8
68.1	68.11	-1.56	0.04	1.6	178.6	0.0	0.0

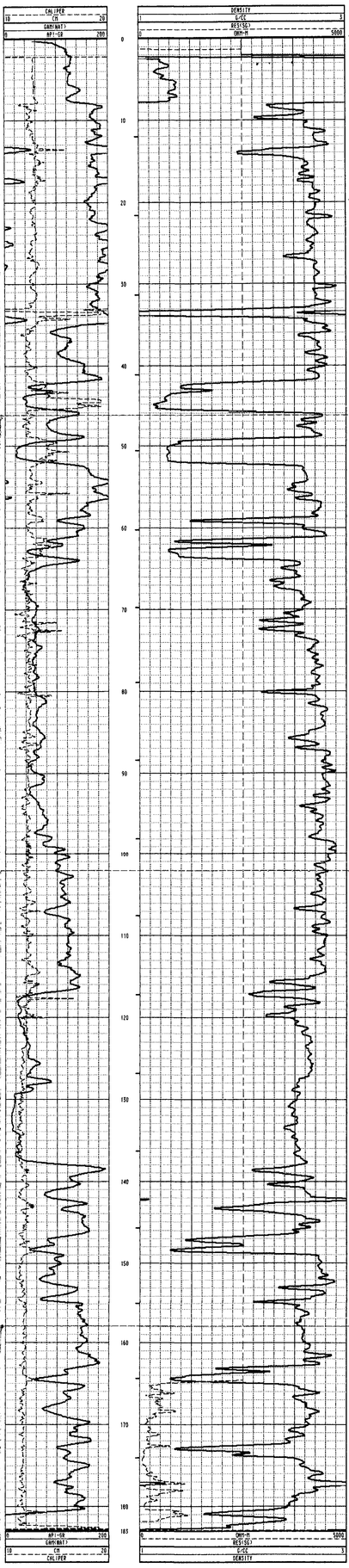
Century

QHR89016 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89016 GAM-DEN-RES-CAL	SCALE 1:200	
LOCATION/FIELD	:		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/28/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER	: 192	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 182.96	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 0.28	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 8	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05		RECORDED BY : D.ZANKL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 00	TYPE : 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 4
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 20000
REMARKS	:		

LOGGED OPEN HOLE - HOLE BRIDGED AT 183 METERS AFTER RUNNING 9055 TOOL
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



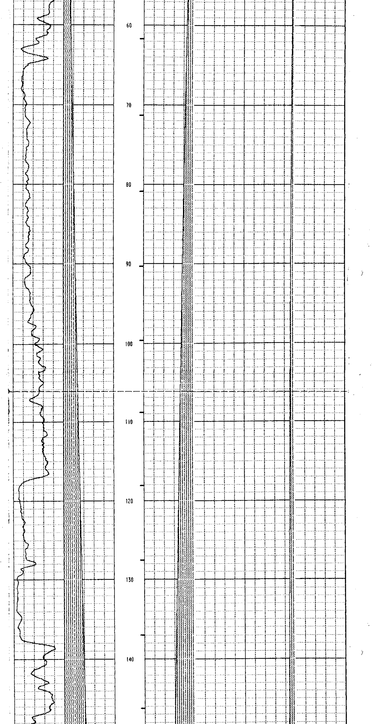
TOOL CALIBRATION		TOOL : 9032AC		SERIAL NUMBER : 967	
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	170.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYK	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYK	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR89016 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89016 DEVIATION		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/31/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER	: 192	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 191.24	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 1.00	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 8	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: .05	RECORDED BY : D.ZIMMEL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : PROCESSED
MAGNETIC DECL.	: 24.500	PH : 00	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 620	THRESH: 20000
REMARKS	:		
LOGGED OPEN HOLE			
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL			
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS			

753



TOOL CALIBRATION	TOOL # 9055A	SERIAL NUMBER # 14

	CAL-DATE	CAL-TIME	SECS	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:18:36	0	GAMMA RAY	0.000 CPS	0.000 API-GR
1	05/04/89	08:18:56	0	GAMMA RAY	0.000 CPS	0.000 API-GR
2	05/05/89	16:15:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:18	0	RES	9701.000 CPS	0.000 OHM
4	05/04/89	08:15:18	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:15:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:15:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:18:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:15:24	0	NEUTRON	145.000 CPS	271.000 API-N

COMPU-LOG II - VERTICAL DEVIATION

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR89016 GAMM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 05/31/89
DATA FROM	:	PHONE	: 9055A 14
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 5

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGR
15.0	17.98	-.68	-1.83	2.0	249.7	40.5	193.5
20.0	15.93	-3.72	-2.60	4.5	215.0	38.4	220.3
25.0	19.79	-6.77	-3.37	7.6	206.5	39.2	195.6
30.0	23.64	-9.84	-4.17	10.7	202.8	39.8	195.5
35.0	27.48	-12.93	-4.96	13.8	200.9	39.6	197.7
40.0	31.33	-16.00	-5.72	17.0	199.7	39.6	195.1
45.0	35.20	-19.03	-6.61	20.1	199.2	39.2	223.0
50.0	39.06	-21.76	-7.54	23.0	199.1	38.5	196.8
55.0	42.93	-24.70	-8.58	26.1	198.7	39.2	194.7
60.0	46.82	-27.69	-9.29	29.2	198.5	39.0	197.1
65.0	50.72	-30.64	-10.25	32.3	198.5	38.4	197.9
70.0	54.59	-33.63	-11.14	35.4	198.5	38.4	212.1
75.0	58.50	-36.60	-11.89	38.5	198.0	38.5	195.6
80.0	62.42	-39.55	-12.75	41.6	197.9	38.1	171.6
85.0	66.38	-42.45	-13.60	44.6	197.8	37.2	201.6
90.0	70.37	-45.28	-14.55	47.6	197.8	37.4	189.8
95.0	74.37	-48.15	-15.35	50.6	197.7	37.4	197.2
100.0	78.38	-51.09	-16.17	53.7	197.6	38.0	204.2
105.0	82.35	-53.97	-16.95	56.8	197.6	37.2	175.9
110.0	86.29	-56.80	-18.08	59.3	197.8	39.0	166.5
115.0	90.27	-59.63	-19.23	62.4	197.8	40.6	202.5
120.0	94.88	-62.52	-19.98	65.4	197.7	41.3	194.5
125.0	97.67	-65.56	-20.87	68.8	197.7	40.7	194.1
130.0	101.45	-68.65	-21.72	72.0	197.6	41.0	198.5
135.0	105.20	-71.76	-22.57	75.2	197.5	41.6	193.0
140.0	108.96	-74.91	-23.33	78.5	197.3	41.2	199.4
145.0	112.69	-78.02	-24.19	81.7	197.2	40.3	194.2
150.0	116.41	-81.11	-25.12	84.9	197.2	42.3	197.5
155.0	120.11	-84.21	-26.07	88.2	197.2	42.7	202.4
160.0	123.79	-87.49	-27.15	91.6	197.2	42.9	200.7
165.0	127.45	-90.62	-28.24	94.9	197.3	40.2	189.9
170.0	131.06	-93.76	-29.24	98.3	197.3	44.4	215.8
175.0	134.66	-96.89	-30.93	101.7	197.7	44.6	228.7
180.0	138.20	-100.10	-32.34	105.2	197.9	45.2	205.7
185.0	141.72	-103.19	-33.85	108.6	198.2	46.4	212.7
190.0	145.13	-105.96	-35.18	111.6	198.4	47.8	230.6
191.2	145.98	-106.70	-35.40	112.5	198.5	0.0	0.0

Century

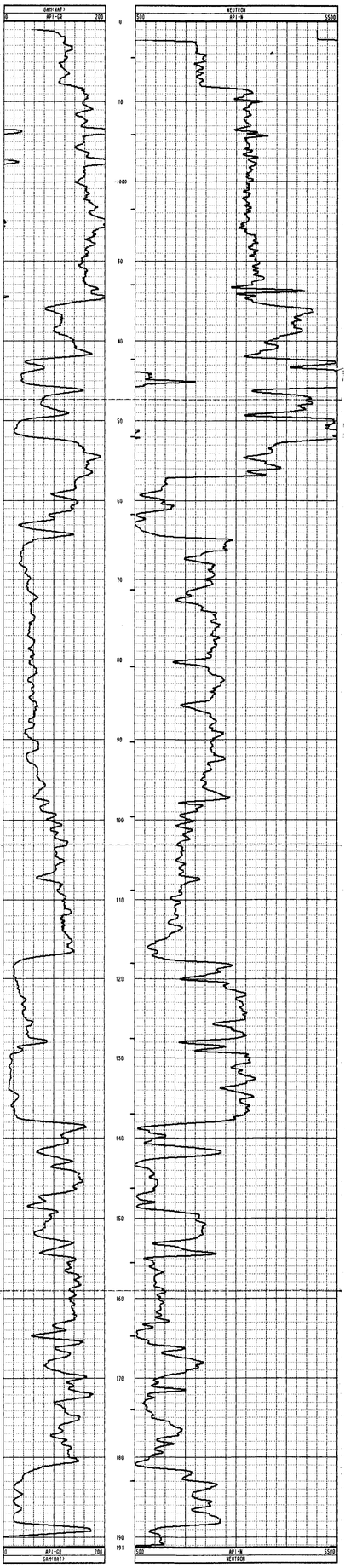
QHR89016 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89016 GAMMA-NEUTRON		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/28/89 PERMANENT DATUM : 00	ELEVATIONS	
DEPTH DRILLER	: 192 ELEV. PERM. DATUM: 00	KB : 00	
LOG BOTTOM	: 191.24 LOG MEASURED FROM: GL	DF : 00	
LOG TOP	: 1.00 DRL MEASURED FROM: GL	GL : 00	
CASING DRILLER	: 8 LOGGING UNIT : 8902		
CASING TYPE	: STEEL FIELD OFFICE : CALGARY		
CASING THICKNESS	: .05 RECORDED BY : D.ZANKL		
BIT SIZE	: 12.1 BOREHOLE FLUID : WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.500 RM : 00	TYPE : 90558	
MATRIX DENSITY	: 2.68 RM TEMPERATURE : 00	LOG : 3	
FLUID DENSITY	: 1.0 MATRIX DELTA T : 173	PLOT : QUIN 10	
NEUTRON MATRIX	: SANDSTONE FLUID DELTA T : 690	THRESH: 20000	

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL : 90554 SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:56	0	GAMMA?	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:56	0	GAMMA?	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.800 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:15:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

QHR89016 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89016 EXP DENSITY		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSPEK	1:120	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:

DATE	: 05/28/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 787	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 782.96	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.20	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 0	LOGGING UNIT	: 6902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .95	RECORDED BY	: D.JANKL		

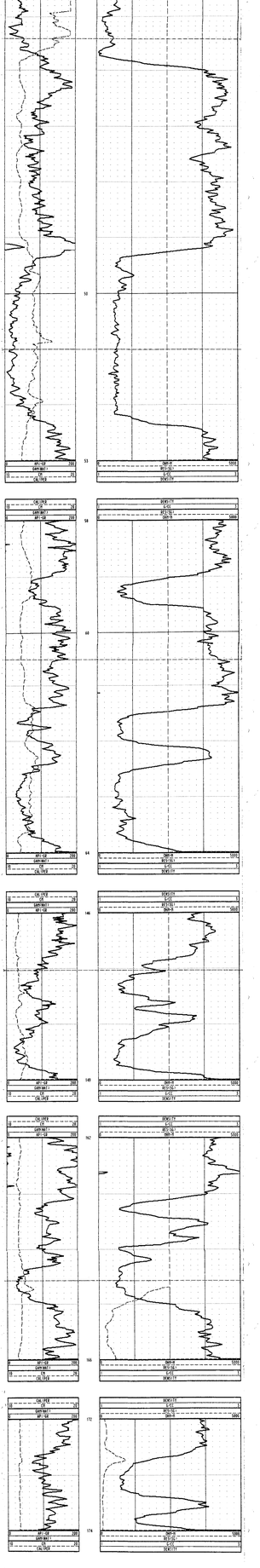
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 000	RUN	: 2018.14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	TIMESTAMP	: 20000

REMARKS :

LOGGED OPEN HOLE - HOLE BRIDGED AT 183 METERS AFTER RUNNING 9055 TOOL
ANGLE HOLE - 50 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



Century

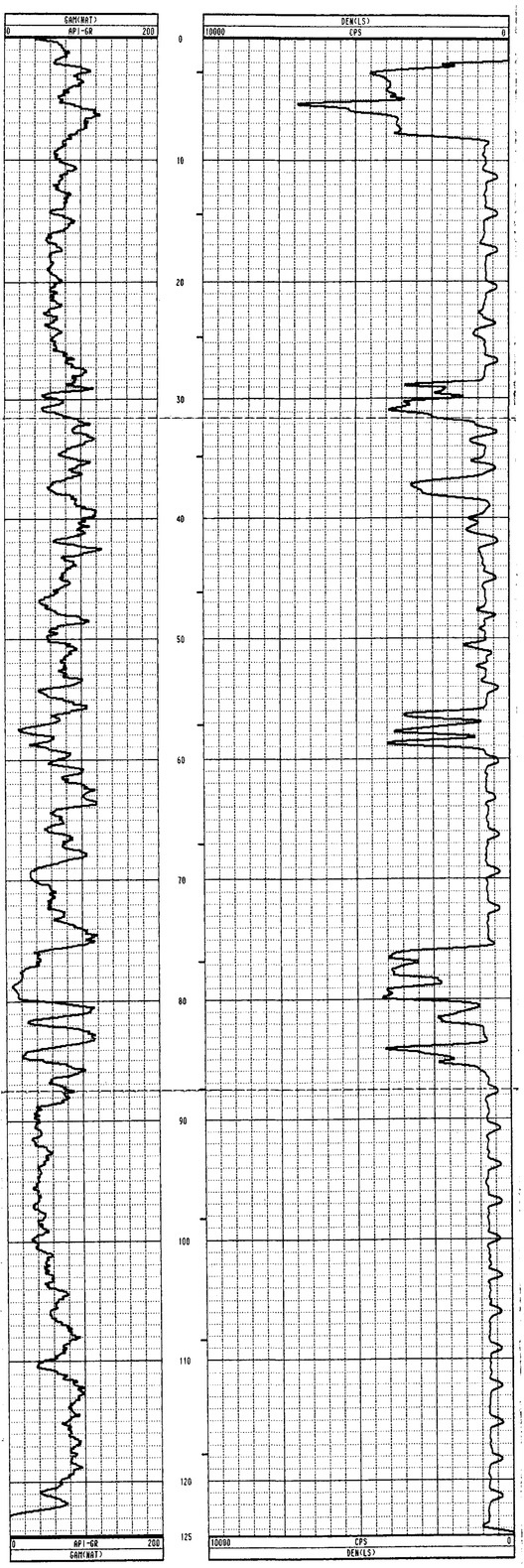
QHR89017 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89017 GAMMA-DENSITY				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 06/02/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 125	ELEV. PERM. DATUM:	00	KB : 00	
LOG BOTTOM	: 124.54	LOG MEASURED FROM:	GL	DF : 00	
LOG TOP	: 0.16	DRL MEASURED FROM:	GL	GL : 00	
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE : 9069A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG : 1	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 11	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 20000	

REMARKS :
LOGGED THROUGH RODS
ANGLE HOLE - 45 DEGREES

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9069A SERIAL NUMBER = 1029

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	12:58:21	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	12:57:04	0	GAM(NAT)	0.000 CPS	0.000 API-GR

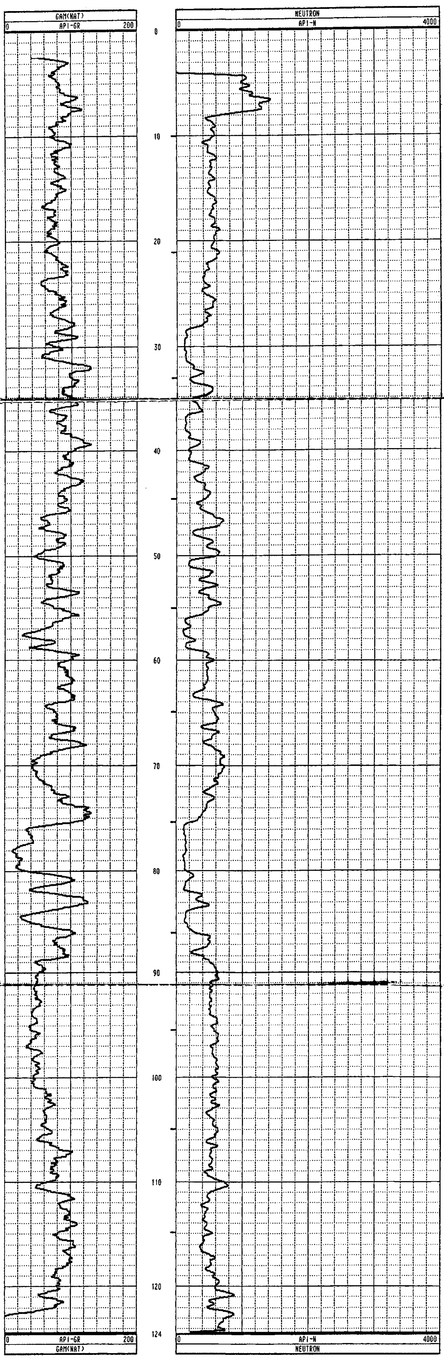
Century

GHR89017 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: GHR89017 GAMMA-NEUTRON				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/02/89	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 125	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 124.46	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 2.42	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9067A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED THROUGH RODS
ANGLE HOLE - 45 DEGREES
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9067A SERIAL NUMBER = 520

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	13:47:58	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	13:47:58	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/04/89	13:47:58	0	NEUTRON	0.000 CPS	0.000 API-N
3	05/04/89	13:49:52	0	NEUTRON	134.000 CPS	271.000 API-N

* * * * * * * * * COMPUTING II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : GHR89017 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 06/05/89
DATA FROM : TAPE : 90556 , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 7

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANSD
0.9	0.92	0.00	0.00	0.0	0.0	0.0	0.0
1.9	1.92	0.00	0.00	0.0	0.0	0.0	0.0
2.9	2.77	0.22	0.17	0.4	38.6	44.7	19.5
3.9	3.48	0.98	0.46	1.1	21.9	44.3	34.9
4.9	4.39	1.42	0.68	1.6	25.6	44.8	5.2
5.9	4.92	2.11	0.74	2.2	19.5	45.2	10.1
6.9	5.64	2.80	0.74	2.9	14.7	45.4	347.6
7.2	9.88	2.97	0.66	3.0	12.6	0.0	0.0

753

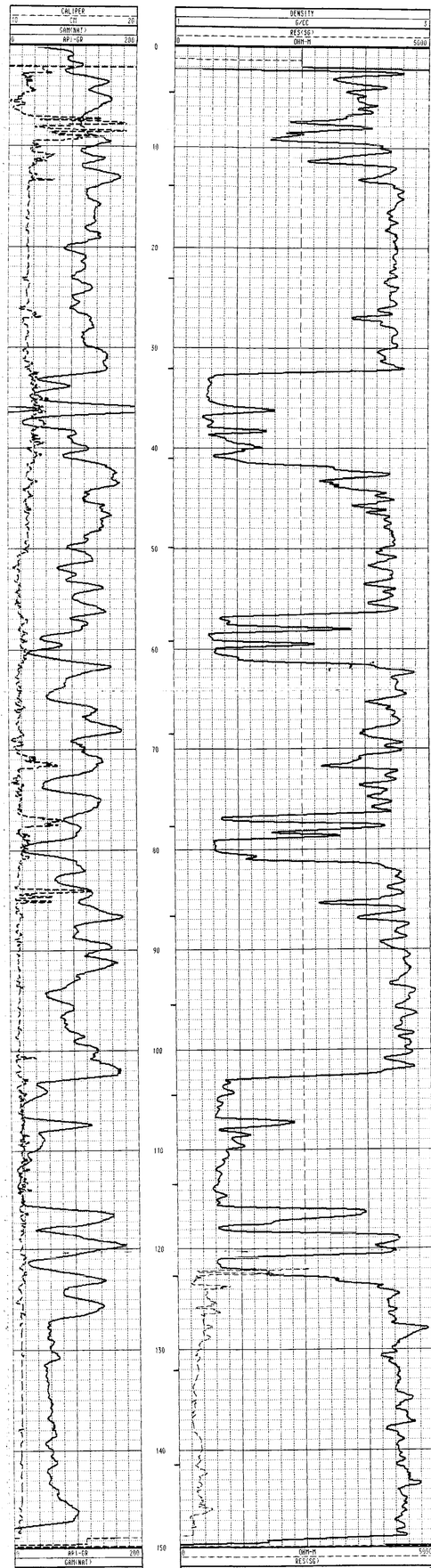
Century

QHR89018 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89018 GAM-DEN-RES-CAL				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	: TOWNSHIP	:	RANGE :		
DATE	: 05/30/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 150	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 149.66	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.20	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL : 9032AC SERIAL NUMBER : 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	50275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	953.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.806 CM
8	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR89018 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89018 EXP DENSITY				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/30/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 150	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 149.66	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.20	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

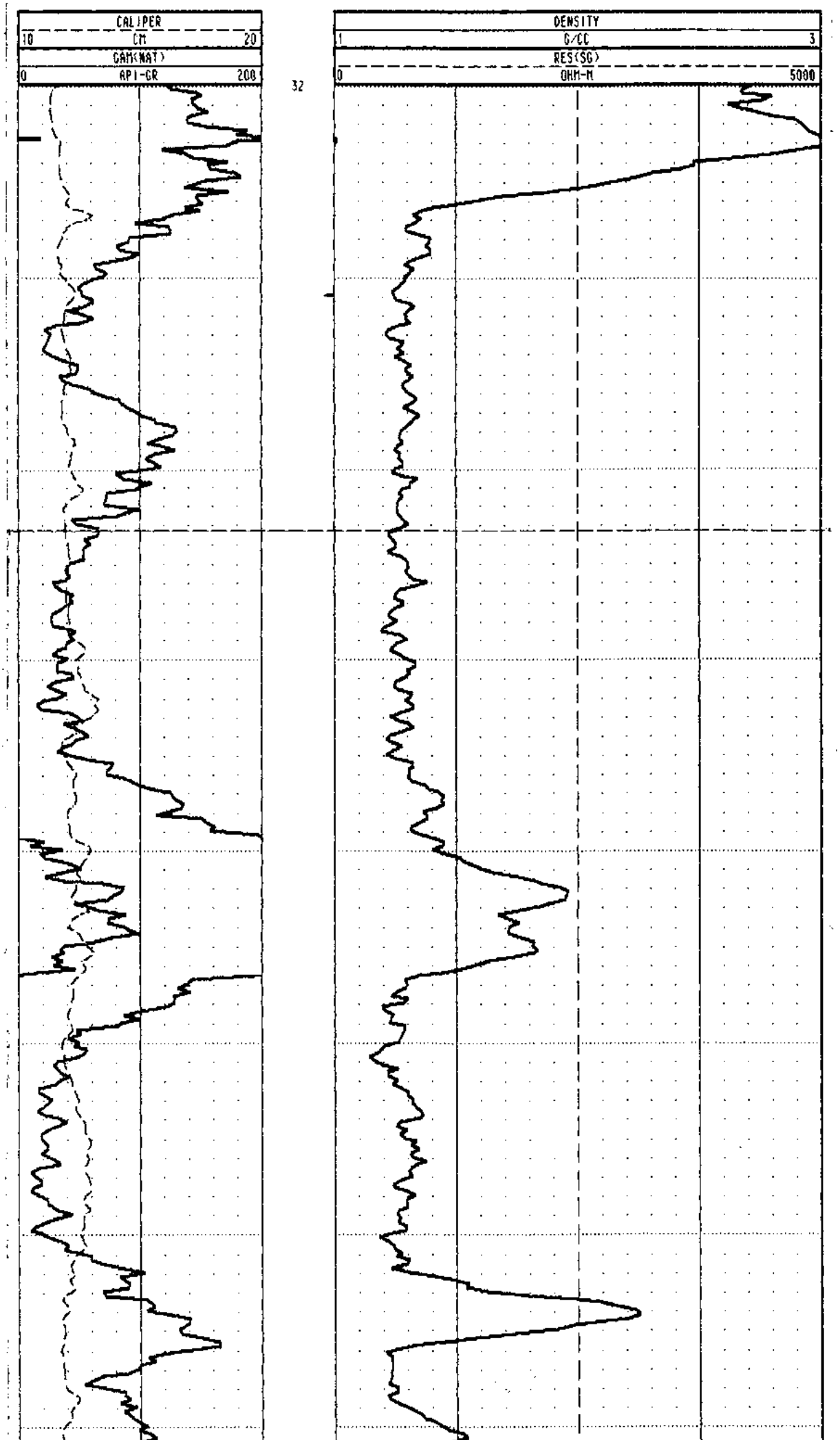
REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

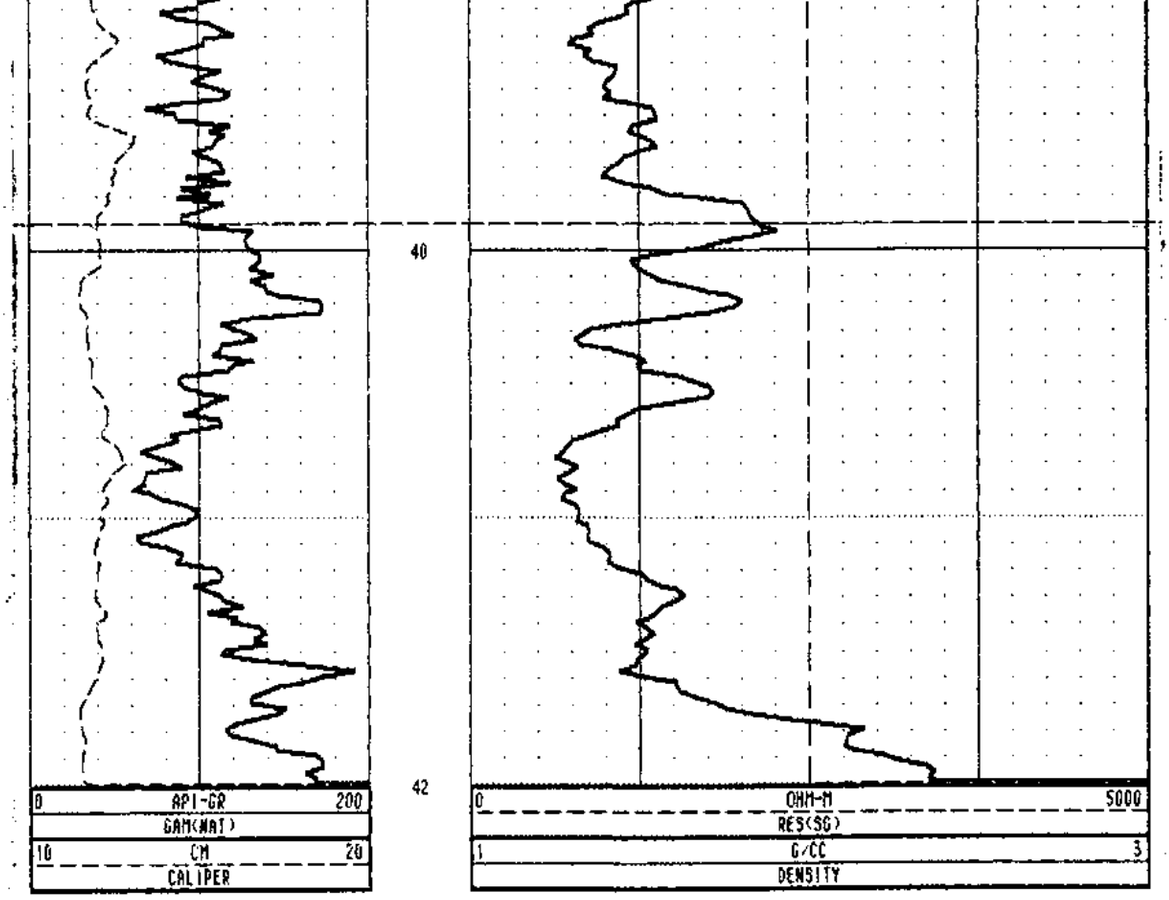
OTHER SERVICES:

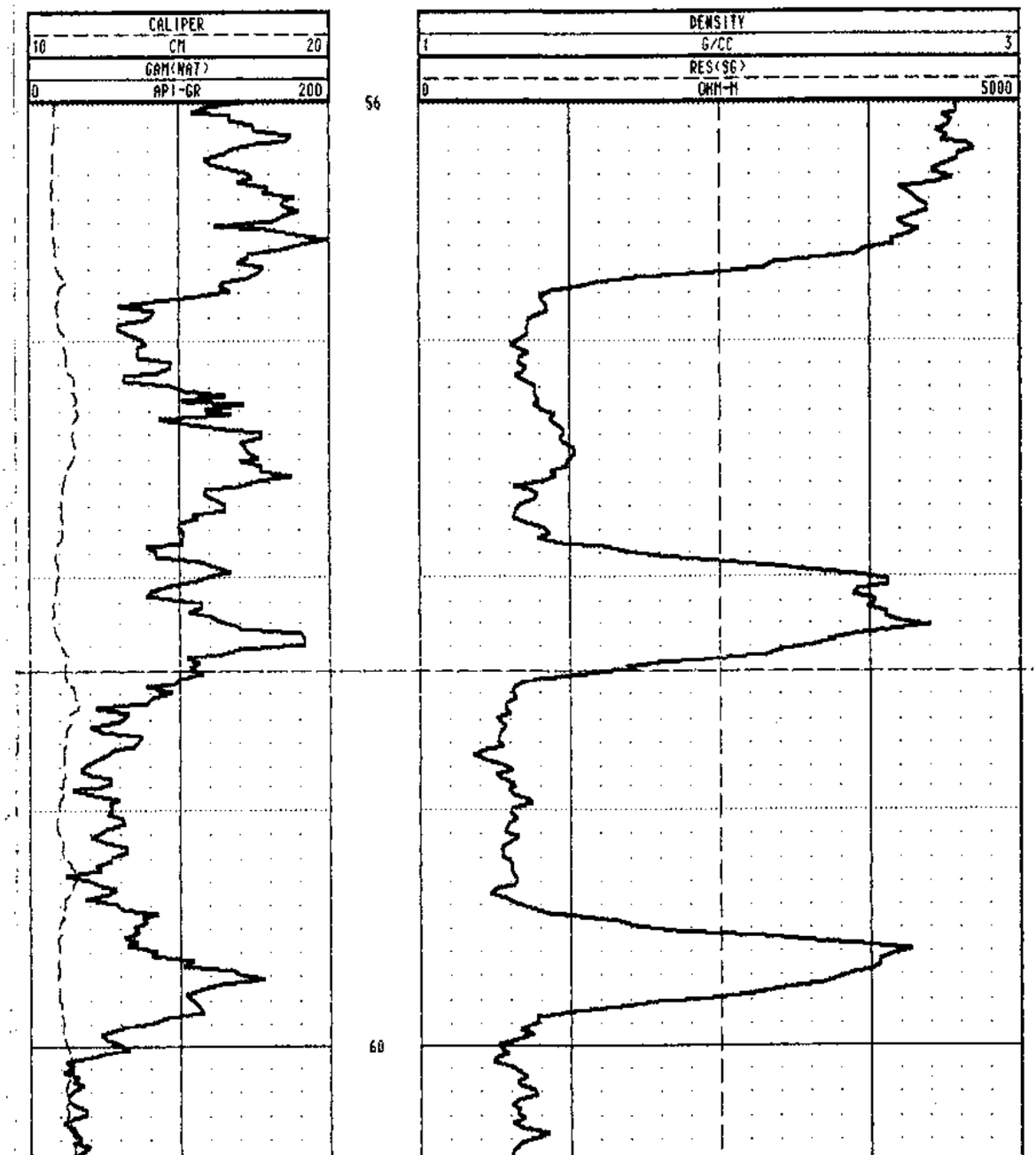
SCALE
1:200

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753


CALIPER
10 CM 20
GAM(NAT)
0 API-GR 200
32
DENSITY
1 G/CC 3
RES(SG)
0 OHM-M 5000


40
42
0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER
0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY


CALIPER
10
CM
20
GAM(NAT)
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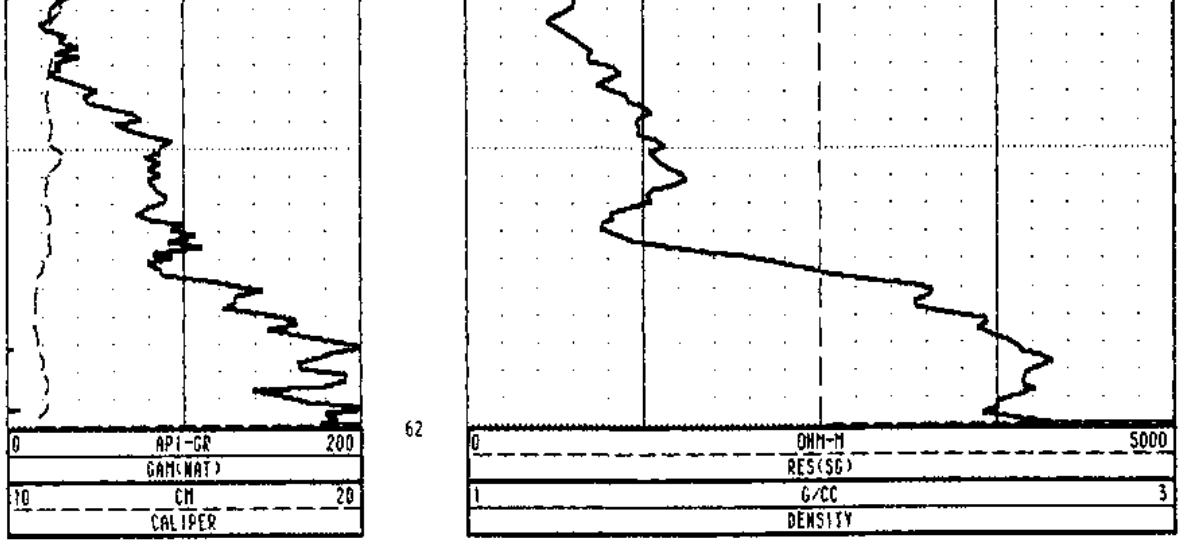
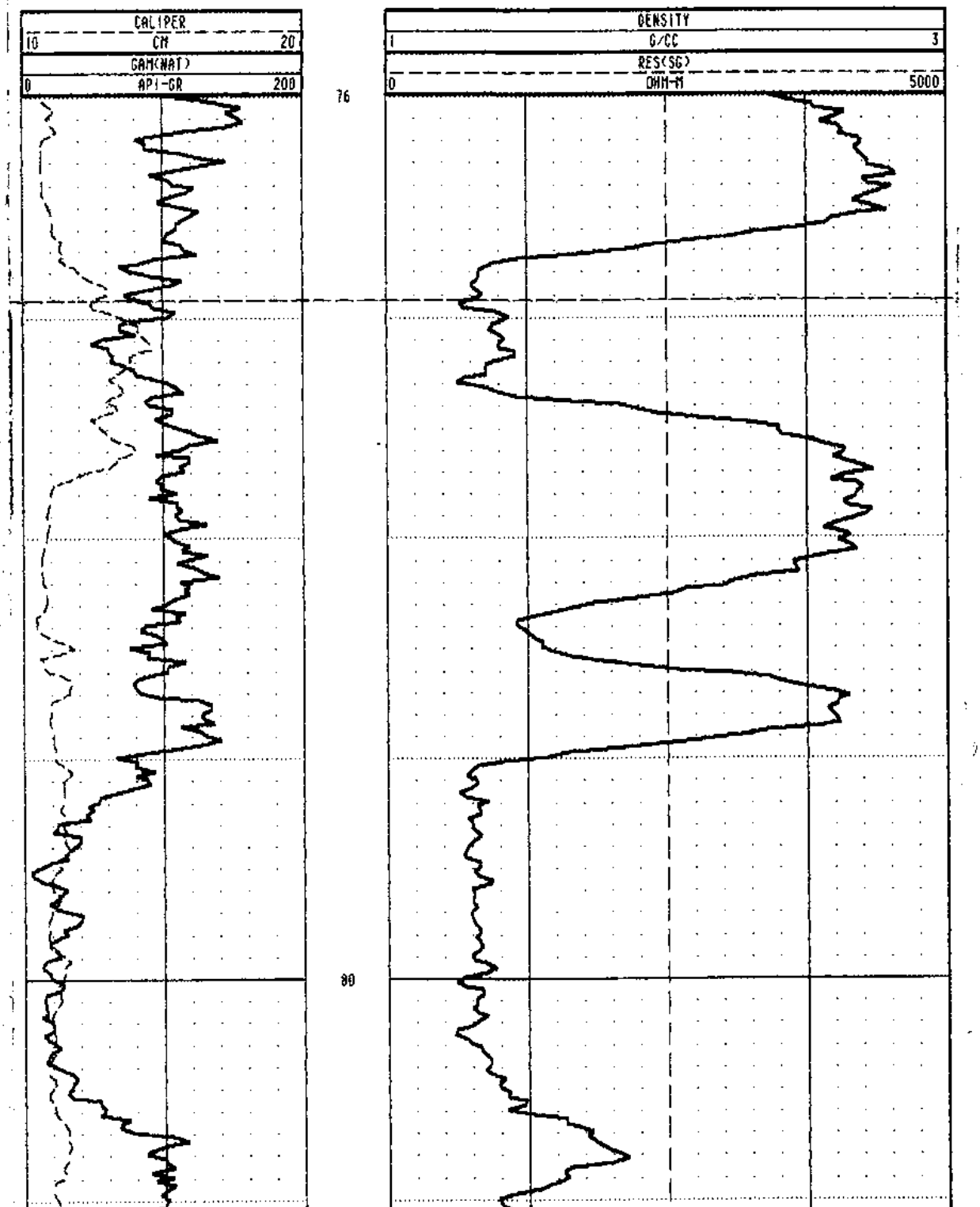
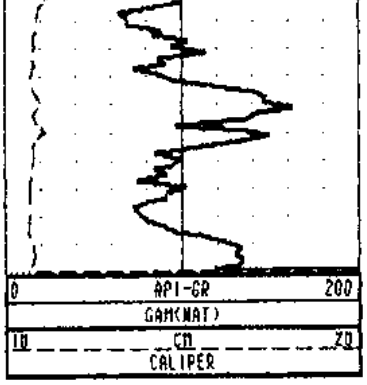
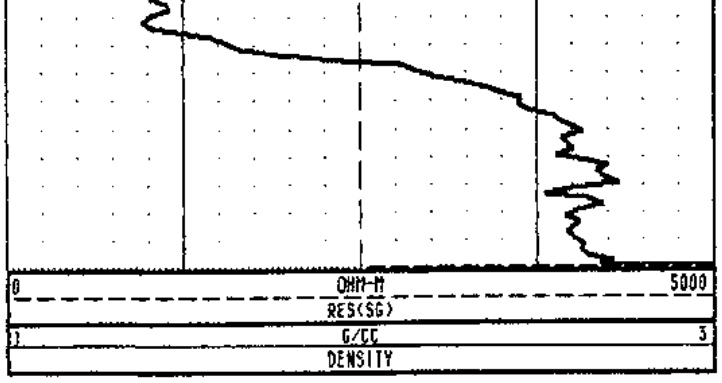
API-GR
200
56
60
DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000

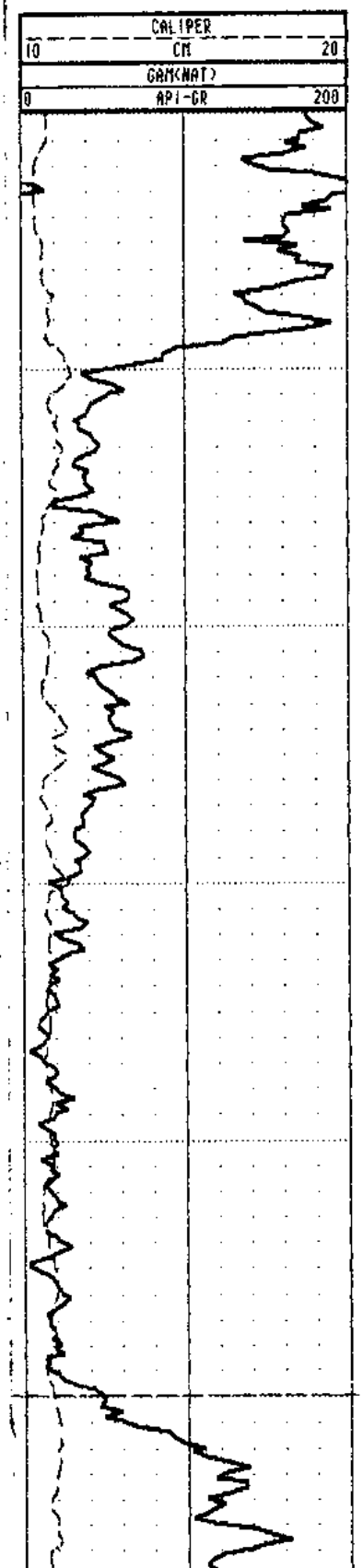

0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER
62
0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY


CALIPER
10
CM
20
GAM(NAT)
0
API-GR
200
76
DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000
80

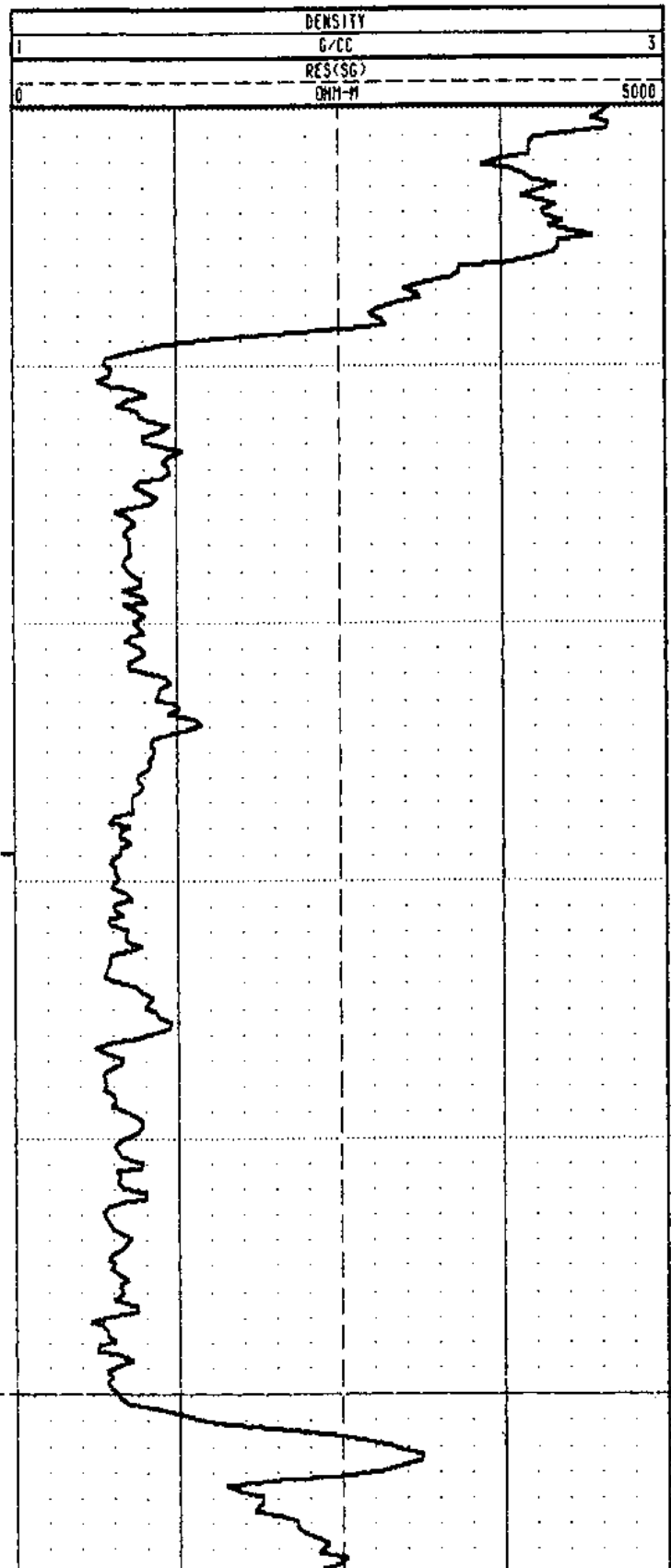

0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER

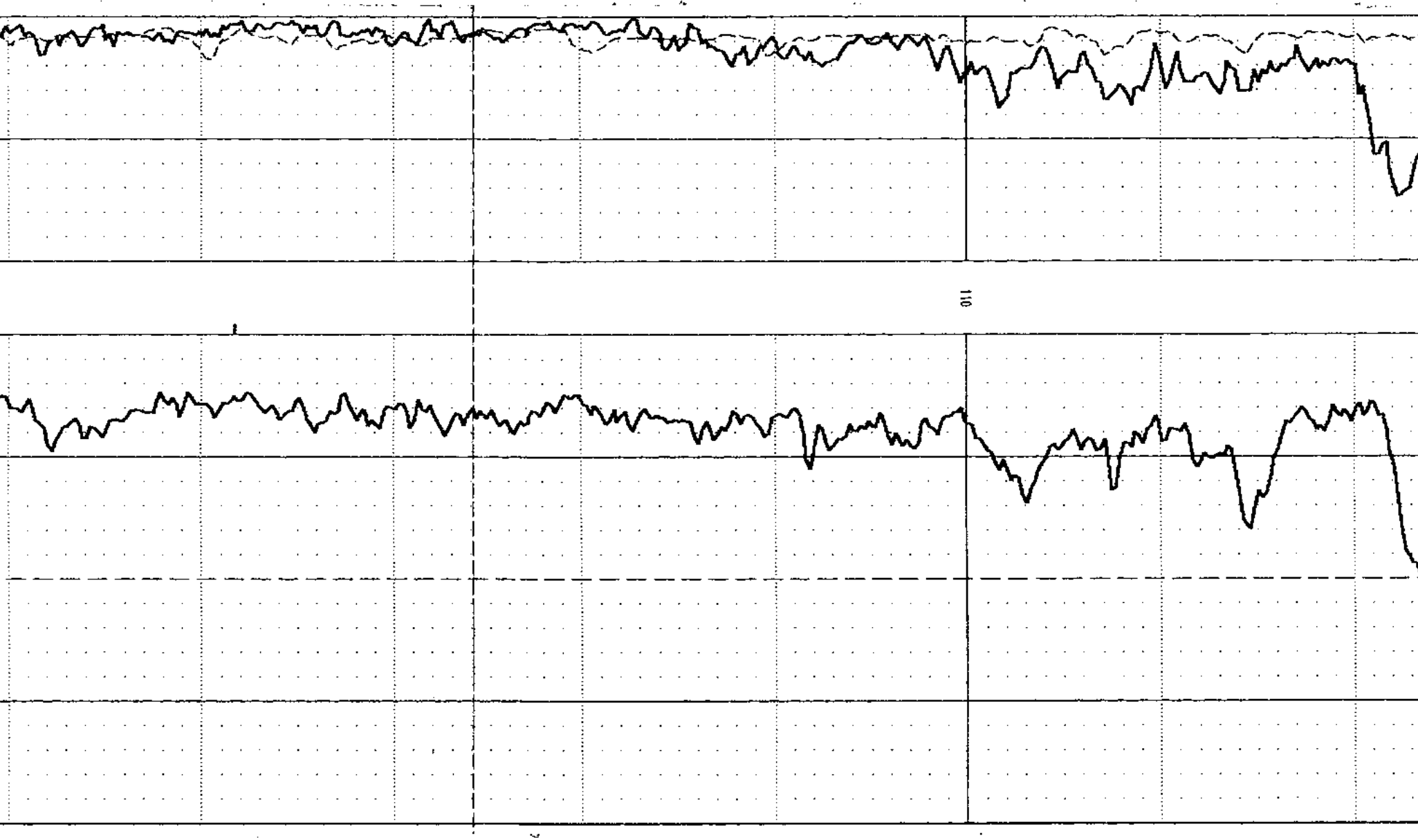
82

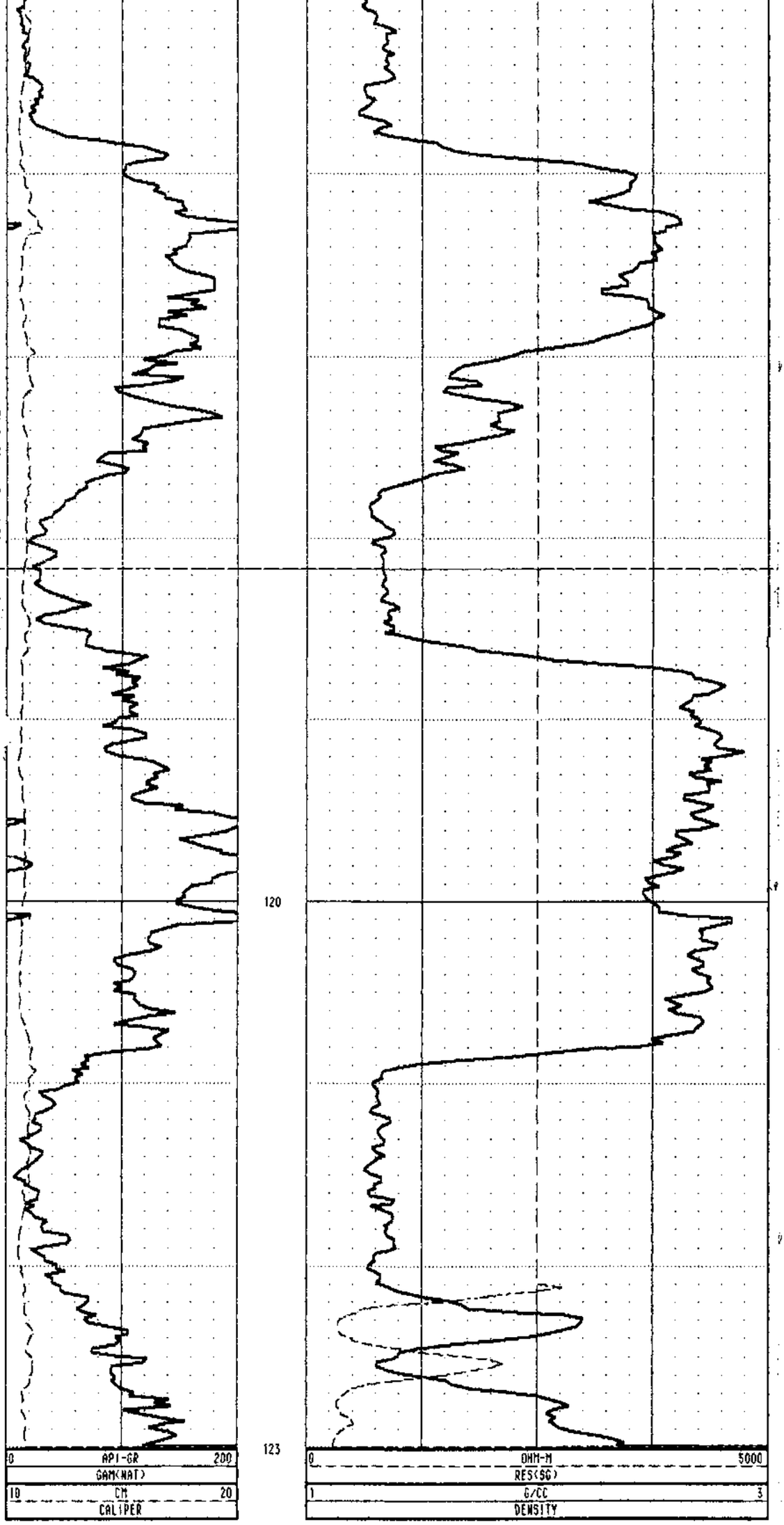

0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY


CALIPER
10
CM
20
GAM(NAT)
0
API-GR
200

102


DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000


110


120
123
0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER
0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY

753

Century

QHR89018 GAMMA-NEUTRON

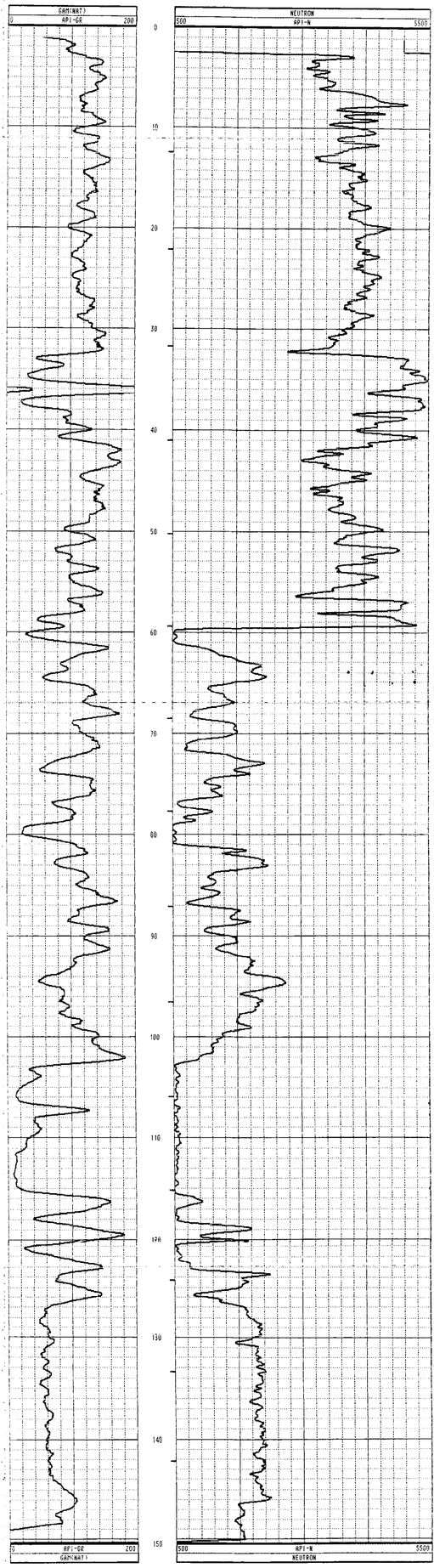
COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR89018 GAMMA-NEUTRON		
LOCATION/FIELD	:		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/30/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER	: 150	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 150.36	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 1.12	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 8	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: .05	RECORDED BY : D.ZANKL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 00	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 2
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 20000

OTHER SERVICES:

SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

QHR89018 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89018 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/31/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 150	ELEV. PERM. DATUM:	GD	KB	: GD
LOG BOTTOM	: 150.36	LOG MEASURED FROM:	GL	DF	: GD
LOG TOP	: 1.12	DRL MEASURED FROM:	GL	GL	: GD
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: GD	TYPE	: 9055H
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: GD	LOG	: S
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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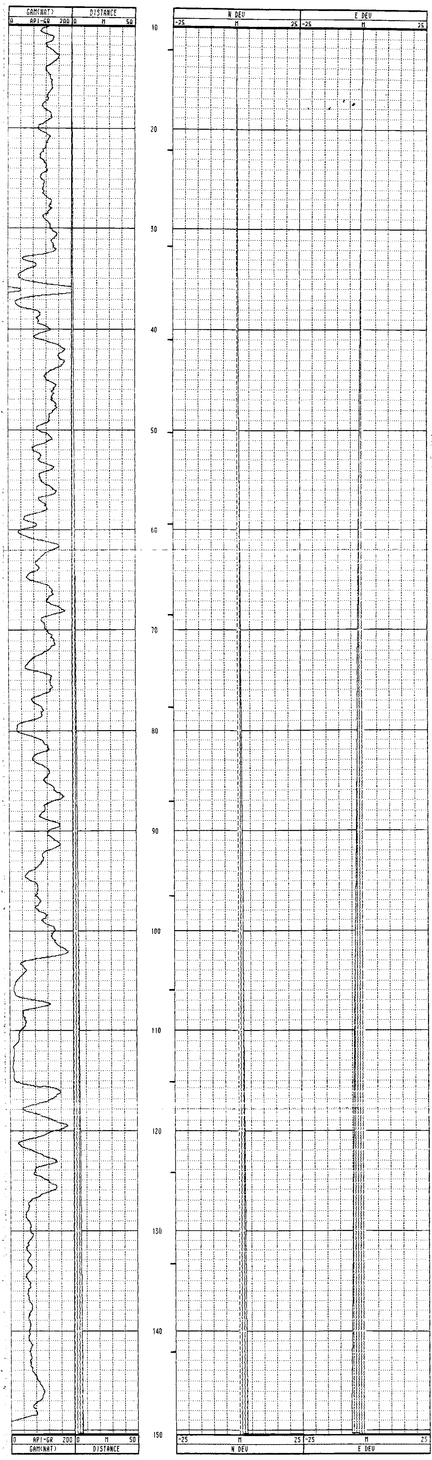

TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA01	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA01	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4995.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89018 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 05/31/89
DATA FROM : PROBE : 9055A 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG S

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.0	10.00	0.08	-.05	0.1	329.9	1.6	315.3
15.0	14.99	0.19	-.22	0.3	310.9	2.8	296.1
20.0	19.99	0.30	-.42	0.5	305.5	2.8	290.3
25.0	24.98	0.42	-.62	0.8	303.8	2.8	287.6
30.0	29.98	0.51	-.82	1.0	301.7	2.3	298.4
35.0	34.97	0.58	-1.01	1.2	300.1	2.3	294.5
40.0	39.97	0.69	-1.19	1.4	299.9	2.6	308.0
45.0	44.96	0.81	-1.37	1.6	300.6	2.5	307.2
50.0	49.96	0.95	-1.56	1.8	301.2	2.9	303.6
55.0	54.95	1.08	-1.76	2.1	301.4	2.7	308.6
60.0	59.95	1.20	-1.96	2.3	301.4	2.4	301.2
65.0	64.94	1.32	-2.15	2.5	301.5	2.6	306.1
70.0	69.94	1.43	-2.35	2.7	301.3	2.7	292.6
75.0	74.93	1.53	-2.54	3.0	301.1	2.0	300.6
80.0	79.93	1.62	-2.71	3.2	300.8	2.1	307.6
85.0	84.92	1.70	-2.90	3.4	300.3	3.0	290.0
90.0	89.92	1.80	-3.14	3.6	299.8	3.0	295.9
95.0	94.91	1.90	-3.38	3.9	299.3	3.1	301.6
100.0	99.90	1.99	-3.62	4.1	298.8	2.9	296.9
105.0	104.90	2.10	-3.86	4.4	298.6	2.9	294.9
110.0	109.89	2.21	-4.09	4.7	298.4	2.9	298.7
115.0	114.88	2.32	-4.33	4.9	298.2	2.9	293.6
120.0	119.88	2.43	-4.58	5.2	298.1	2.4	295.1
125.0	124.87	2.53	-4.75	5.4	298.1	2.1	292.7
130.0	129.87	2.65	-4.94	5.6	298.2	2.6	313.2
135.0	134.86	2.80	-5.15	5.9	298.5	2.9	304.8
140.0	139.86	2.95	-5.35	6.1	298.9	2.8	307.5
145.0	144.85	3.10	-5.53	6.3	299.2	2.7	304.6
150.0	149.84	3.24	-5.72	6.6	299.5	2.6	307.4
150.4	150.20	3.25	-5.73	6.6	299.6	0.0	0.0

QHR89019 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD	OTHER SERVICES:	
WELL	: QHR89019 GAMMA-DENSITY		
LOCATION/FIELD	: TRANSFER	SCALE	
COUNTY	:	1:200	
STATE	: B.C.		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 05/31/89 PERMANENT DATUM : GL	ELEVATIONS	
DEPTH DRILLER	: 180 ELEV. PERM. DATUM:	KB :	
LOG BOTTOM	: 178.76 LOG MEASURED FROM: GL	DF :	
LOG TOP	: -.06 DRL MEASURED FROM: GL	GL :	
CASING DRILLER	: 6 LOGGING UNIT : 8903		
CASING TYPE	: STEEL FIELD OFFICE : CALGARY		
CASING THICKNESS:	00 RECORDED BY : D.ZANKL		
BIT SIZE	: 14.1 BOREHOLE FLUID : WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.5 RM : 0	TYPE : 9069A	
MATRIX DENSITY	: 2.68 RM TEMPERATURE : 0	LOG : 6	
FLUID DENSITY	: 1.0 MATRIX DELTA T : 173	PLOT : QUIN 1!	
NEUTRON MATRIX	: SANDSTONE FLUID DELTA T : 690	THRESH: 10000	

REMARKS :
LOGGED THROUGH RODS
ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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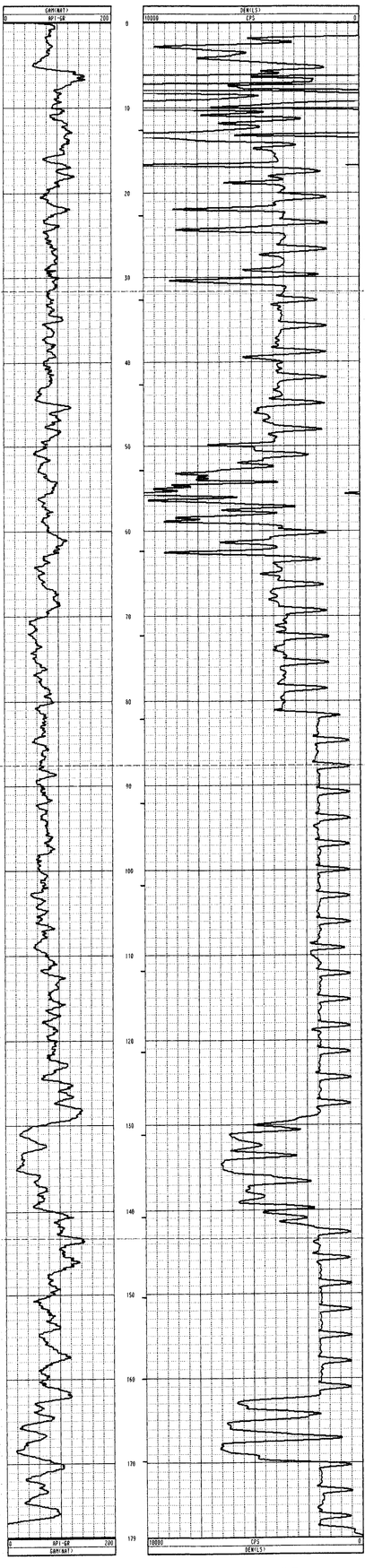


TOOL CALIBRATION TOOL = 9069A SERIAL NUMBER = 1029

	CAL-DATE	CAL-TIME	SAVE	SENSOR	RESPONSE	STANDARD
0	05/04/89	12:58:21	0	GAM(BAT)	0.000 CPS	0.000 API-GR
1	05/04/89	12:57:04	0	GAM(BAT)	0.000 CPS	0.000 API-GR

Century

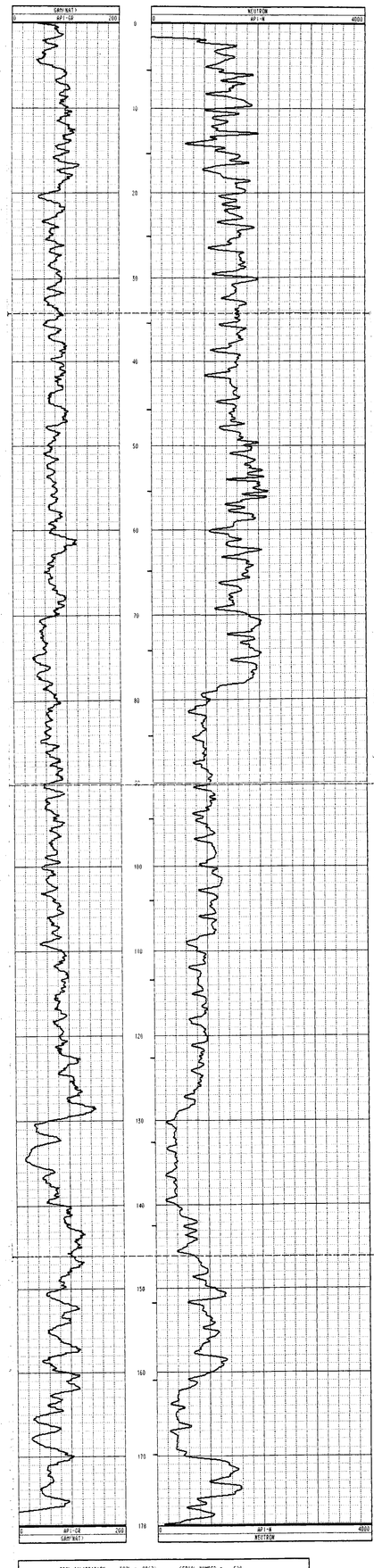
QHR89019 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD			OTHER SERVICES:	
WELL	: QHR89019 GAMMA-NEUTRON				
LOCATION/FIELD	: TRANSFER			SCALE	
COUNTY	:			1:200	
STATE	: B.C.				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 05/31/89	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 180	ELEV. PERM. DATUM:		KB	:
LOG BOTTOM	: 170.24	LOG MEASURED FROM:	GL	DF	:
LOG TOP	: 0.04	DRL MEASURED FROM:	GL	GL	:
CASING DRILLER	: 6	LOGGING UNIT	: 6903		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	00	RECORDED BY	: D.ZINKL		
BIT SIZE	: 14.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	PH	: 0	TYPE	: 9067A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 172	PLOT	: QUIN G
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	10000
REMARKS	:				

LOGGED THROUGH RODS
ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL : 9067A SERIAL NUMBER : 528

	CAL-DATE	CAL-TIME	SPCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	15:47:58	0	GAMMA7	0.000 CPS	0.000 API-GR
1	05/04/89	15:47:58	0	GAMMA7	0.000 CPS	0.000 API-GR
2	05/04/89	15:47:58	0	NEUTRON	0.000 CPS	0.000 API-N
3	05/04/89	15:49:52	0	NEUTRON	154.000 CPS	271.006 API-N

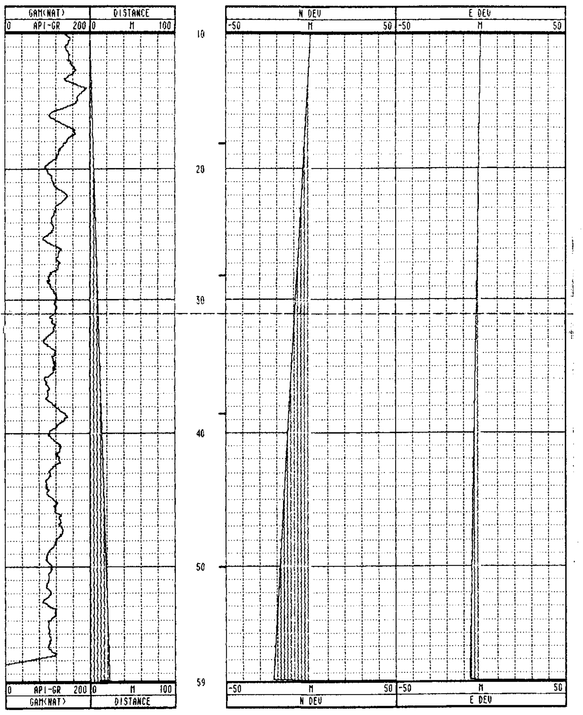
Century

QHR89019 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89019 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/02/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 234	ELEV. PERM. DATUM:	GD	KB	: 00
LOG BOTTOM	: 58.58	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 1.18	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 8	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 8
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000
REMARKS	:				
LOGGED OPEN HOLE					
ANGLE HOLE					

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9767.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89019 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 06/02/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG B

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.0	9.09	-.07	0.15	0.2	115.7	27.9	194.9
15.0	13.49	-2.25	-.59	2.3	194.7	28.3	214.5
20.0	17.88	-4.47	-1.15	4.6	194.5	28.2	196.9
25.0	22.28	-6.70	-1.73	6.9	194.5	29.0	208.8
30.0	26.69	-8.97	-2.32	9.3	194.5	28.1	195.1
35.0	31.06	-11.25	-3.08	11.7	195.3	28.9	197.6
40.0	35.45	-13.51	-3.86	14.0	195.9	28.4	197.6
45.0	39.84	-15.76	-4.58	16.4	196.2	28.8	200.5
50.0	44.21	-18.06	-5.22	18.8	196.1	29.3	193.8
55.0	48.59	-20.37	-5.87	21.2	196.1	28.5	191.6
58.6	51.73	-21.93	-6.39	22.8	196.2	0.0	0.0

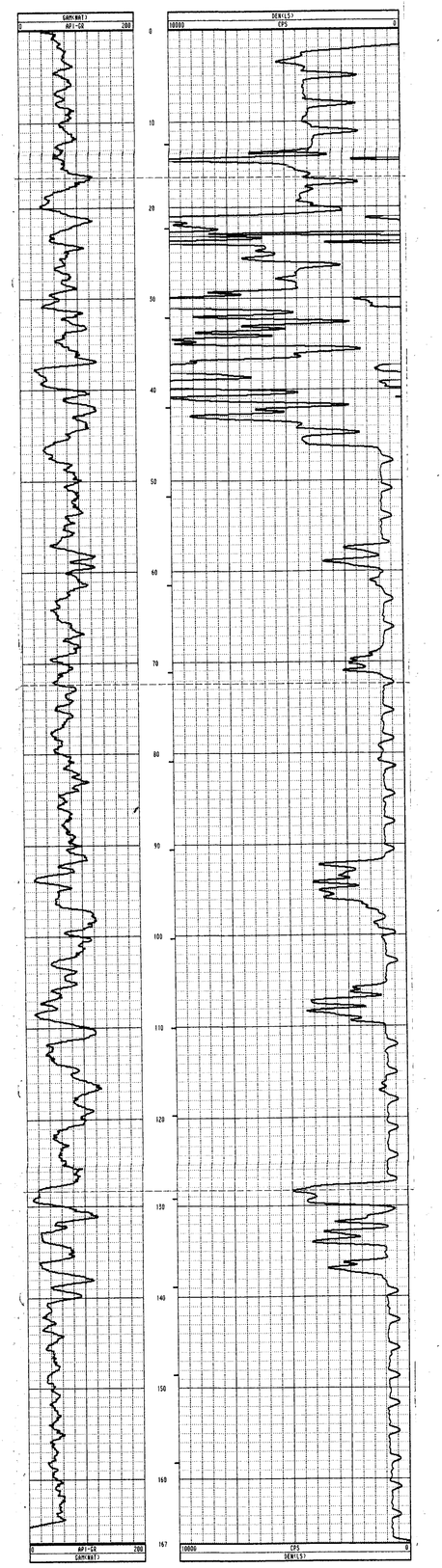
QHR89020 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR89020 GAMMA-DENSITY	OTHER SERVICES:	
LOCATION/FIELD	: BL20180/SL28400	SCALE 1:200	
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 06/03/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 168	ELEV. PERM. DATUM: 00		KB	: 00
LOG BOTTOM	: 167.02	LOG MEASURED FROM: GL		DF	: 00
LOG TOP	: 0.14	DRL MEASURED FROM: GL		GL	: 00
CASING DRILLER	: 22	LOGGING UNIT	: 8903		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: .05		RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9069A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 11
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000
REMARKS	:				

LOGGED THROUGH RODS
ANGLE HOLE - 75 DEGREES FROM THE HORIZONTAL
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL : 9069A SERIAL NUMBER : 1029

	CAL-DATE	CAL-TIME	SSEE	SENSOR	RESPONSE	STANDARD
0	05/04/89	12:58:21	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	12:57:04	0	GAMMA(T)	0.000 CPS	0.000 API-GR

Century

QHR89020 EXP DENSITY

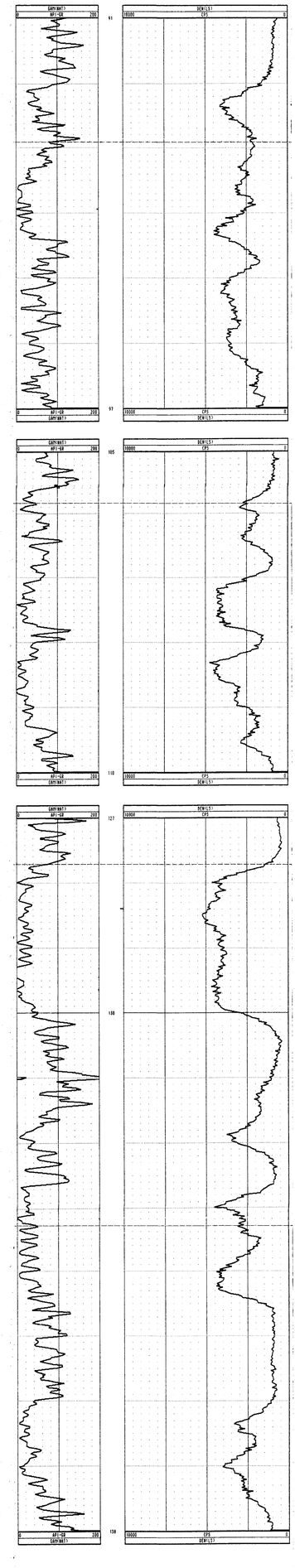
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89020 EXP DENSITY		
LOCATION/FIELD	: 6L20180/5L28400	SCALE	
COUNTY	: TRANSFER	1:20	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 06/05/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 168	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 167.02	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.14	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 22	LOGGING UNIT	: 6903		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANEL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 90694
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN IS
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED THROUGH RODS
ANGLE HOLE - 75 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



Century

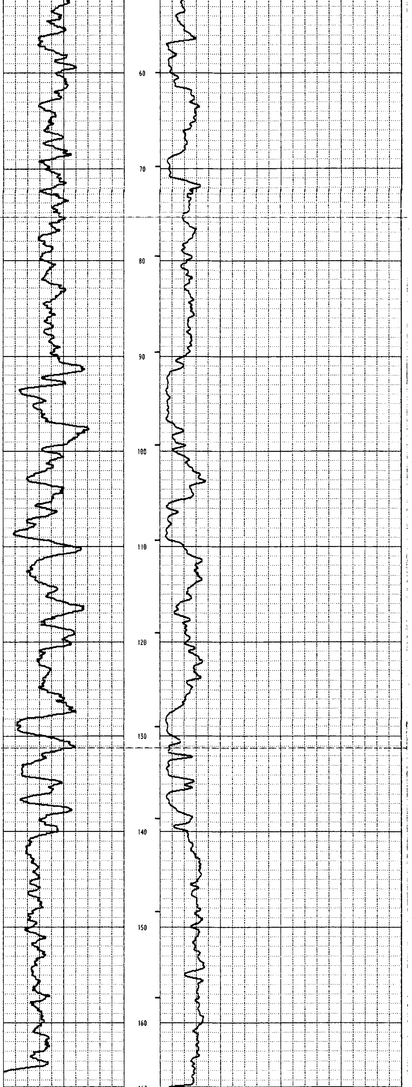
QHR89020 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89020 GAMMA-NEUTRON				
LOCATION/FIELD	: BL20180/SL28400			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/03/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 168	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 166.82	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 0.08	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 22	LOGGING UNIT	: 8903		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9067A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	20000

REMARKS :
LOGGED THROUGH RODS
ANGLE HOLE - 75 DEGREES FROM THE HORIZONTAL

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL : 9067A SERIAL NUMBER : 528

	CAL-DATE	CAL-TIME	SSCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	15:47:58	0	GAMMA(AT)	0.000 CPS	0.000 API-GR
1	05/04/89	15:47:58	0	GAMMA(AT)	0.000 CPS	0.000 API-GR
2	05/04/89	15:47:58	0	NEUTRON	0.000 CPS	0.000 API-N
3	05/04/89	15:49:52	0	NEUTRON	134.000 CPS	271.000 API-N

Century

QHR89021 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.
WELL	: QHR89021 GAM-DEN-RES-CAL
LOCATION-FIELD	:
COUNTY	: FRANKFER
STATE	: BRITISH COLUMBIA
SECTION	: TOWNSHIP : RANGE :

OTHER SERVICES?

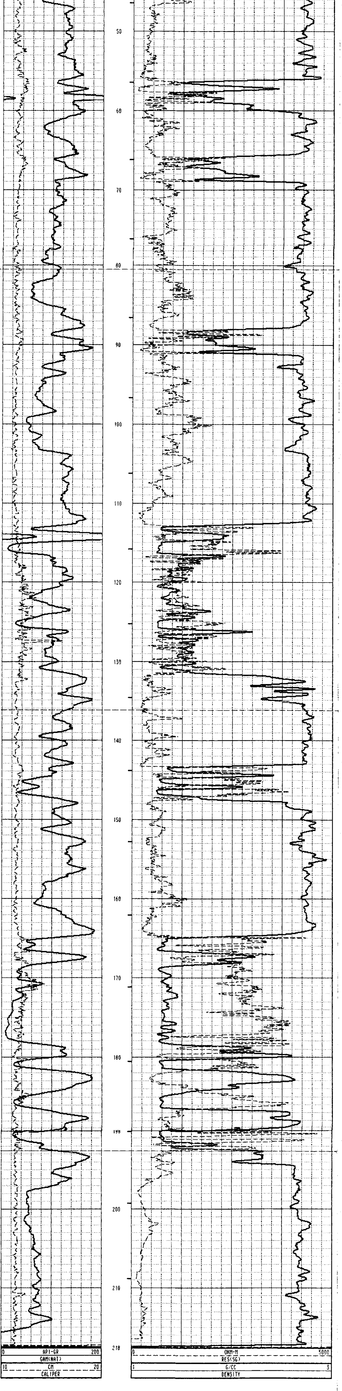
SCALE
1:200

DATE	: 06/05/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 218	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 217.50	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -.66	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 18	LOGGING UNIT	: 6902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.JANAL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9052MC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 50000

REMARKS
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION	TOOL : 9052MC	SERIAL NUMBER : 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
1	05/04/89	10:17:51	0	GAMMAAT	0.000 CPS	0.000 API-GR
2	05/04/89	10:17:51	0	GAMMAAT	0.000 CPS	0.000 API-GR
3	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G-CC
4	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G-CC
5	05/04/89	10:17:51	0	RESIS1	0.000 CPS	0.360 OHM-M
6	05/04/89	10:25:07	0	RESIS1	36275.000 CPS	178.500 OHM-M
7	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
8	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
9	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G-CC
10	05/04/89	10:17:51	0	DENSITYM	0.000 CPS	0.000 G-CC
11	05/04/89	10:17:51	0	CALIPER1	0.000 CPS	0.000 CM

Century

QHR89021 EXP DENSITY

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89021 EXP DENSITY				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/05/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 218	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 217.58	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -.66	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 18	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 50000

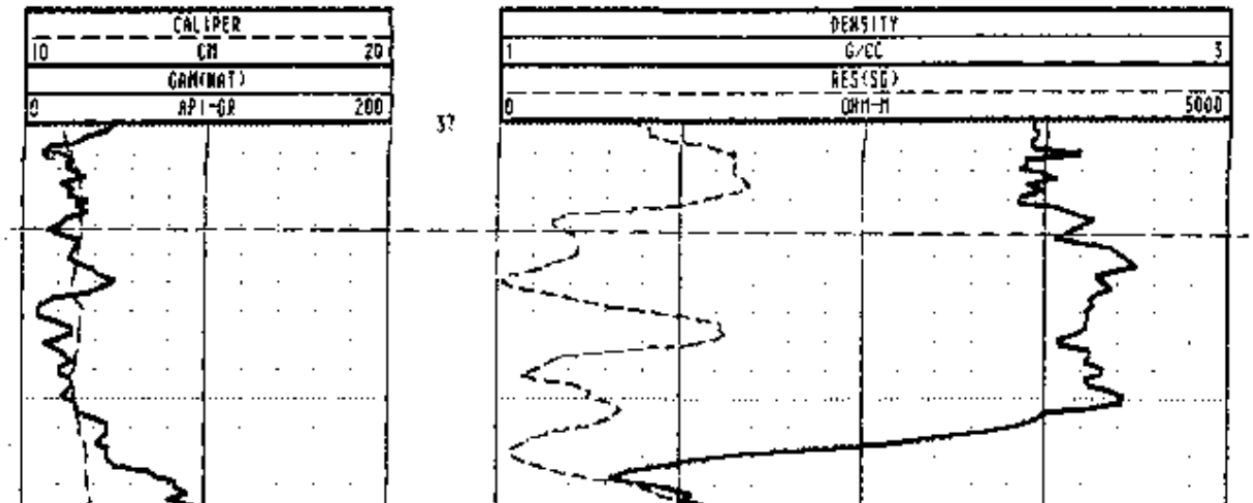
OTHER SERVICES:

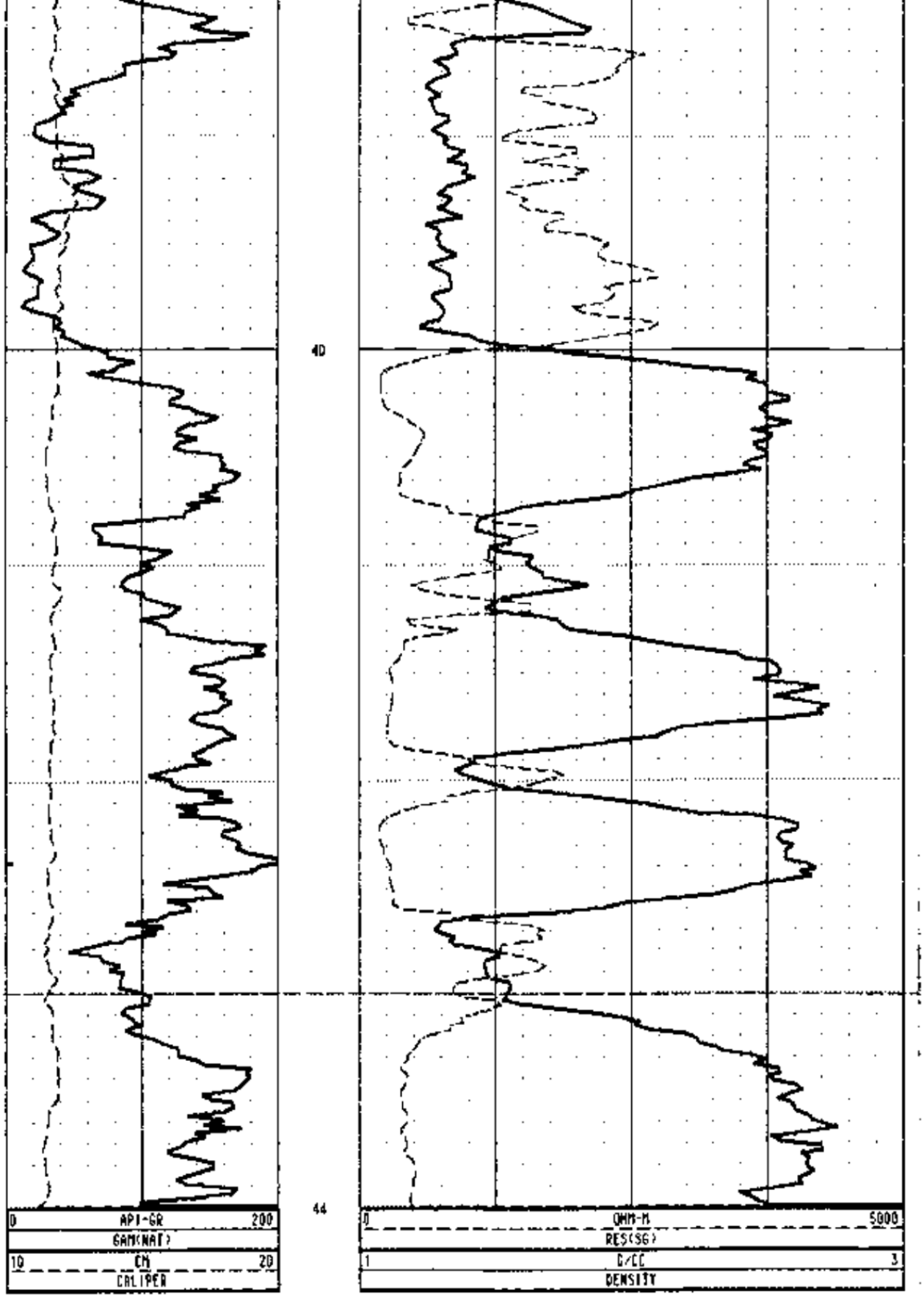
SCALE
1:20

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753




40
44
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API-GR
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GAM(NAT)
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CM
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CALIPER
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OHM-M
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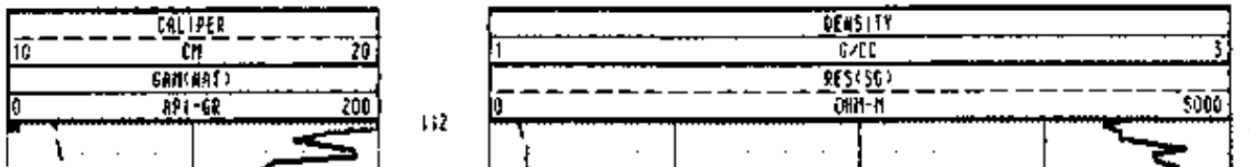
RES(SG)
1
G/CC
3
DENSITY


CALIPER
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CM
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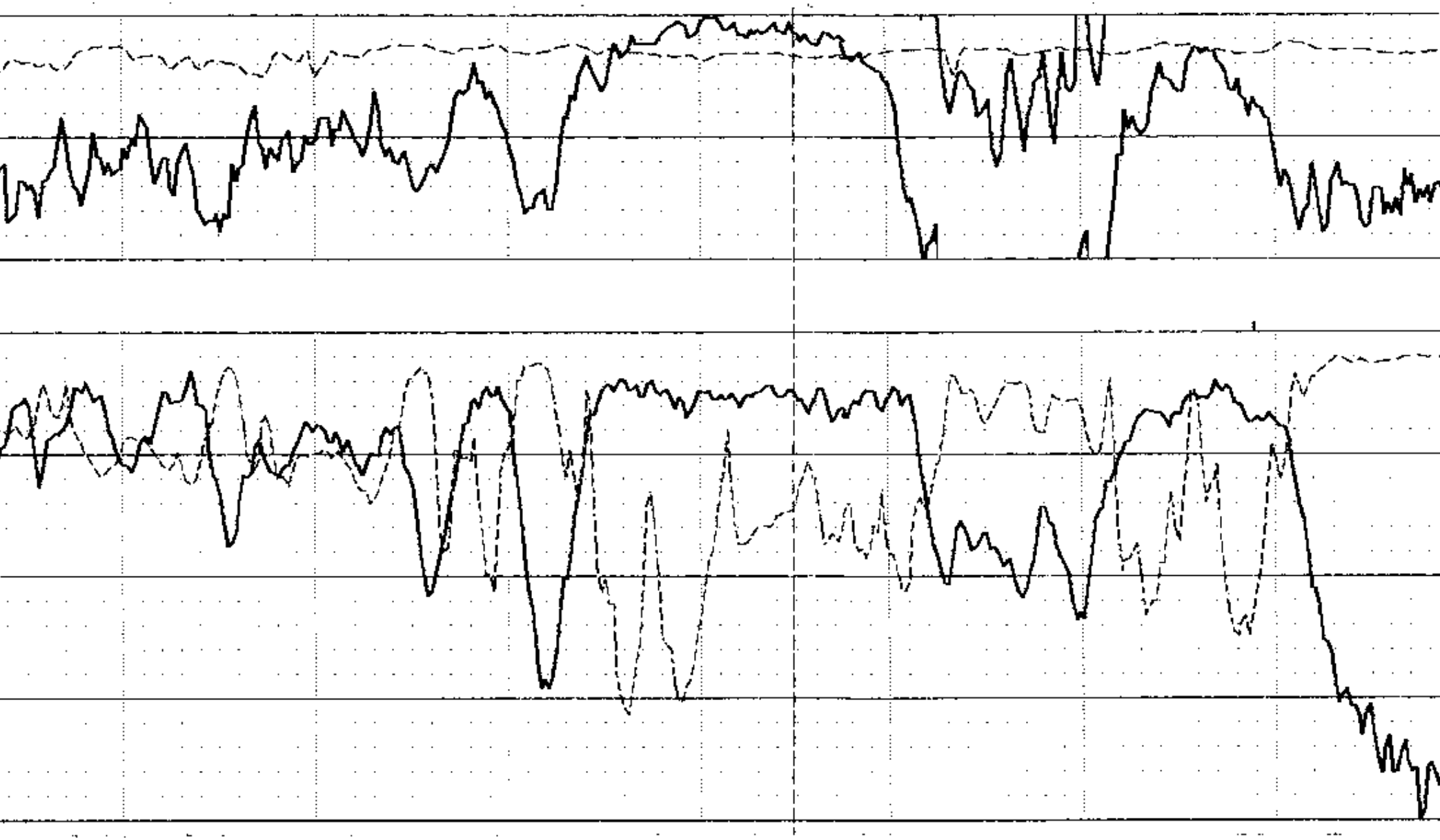
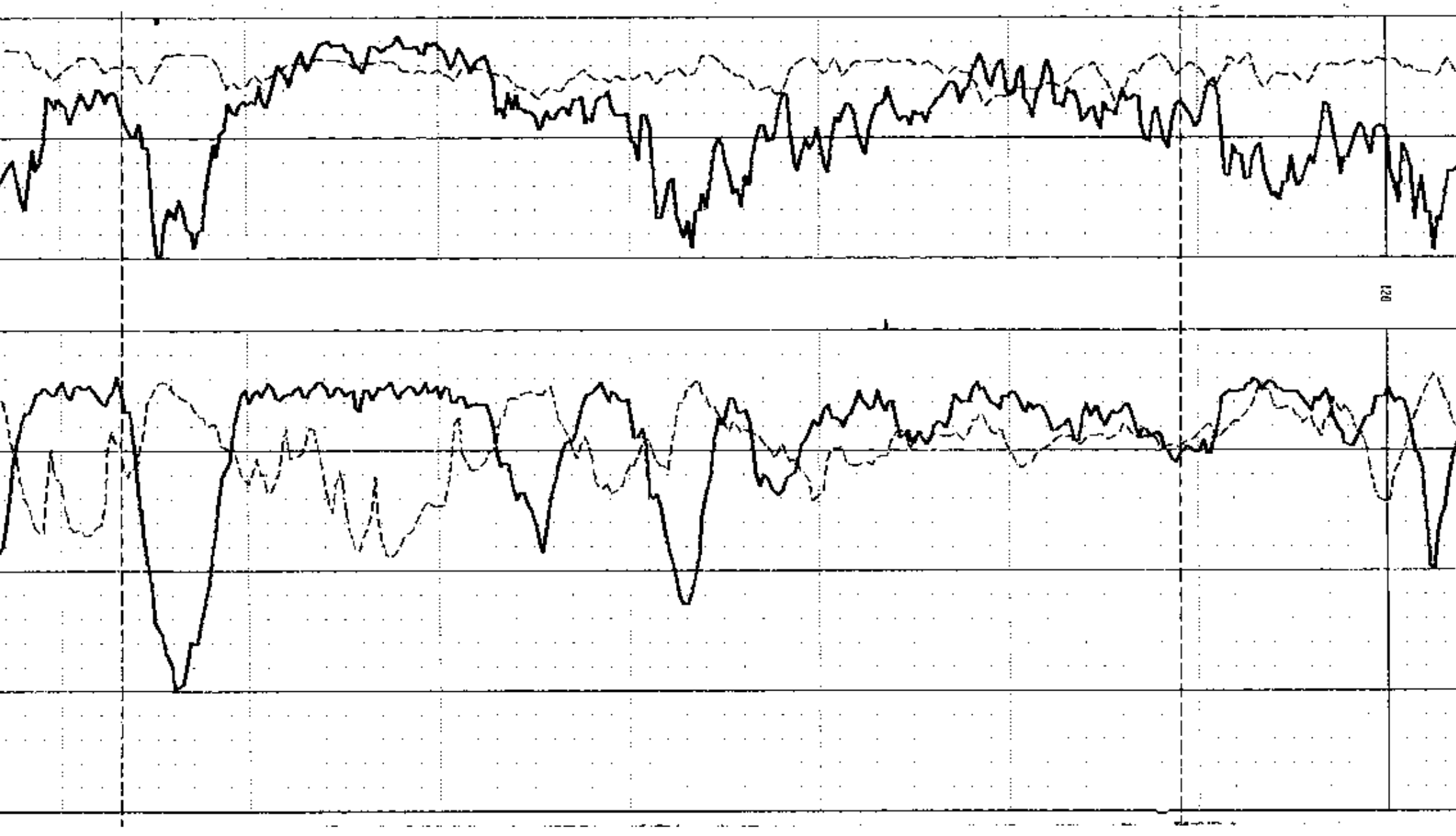
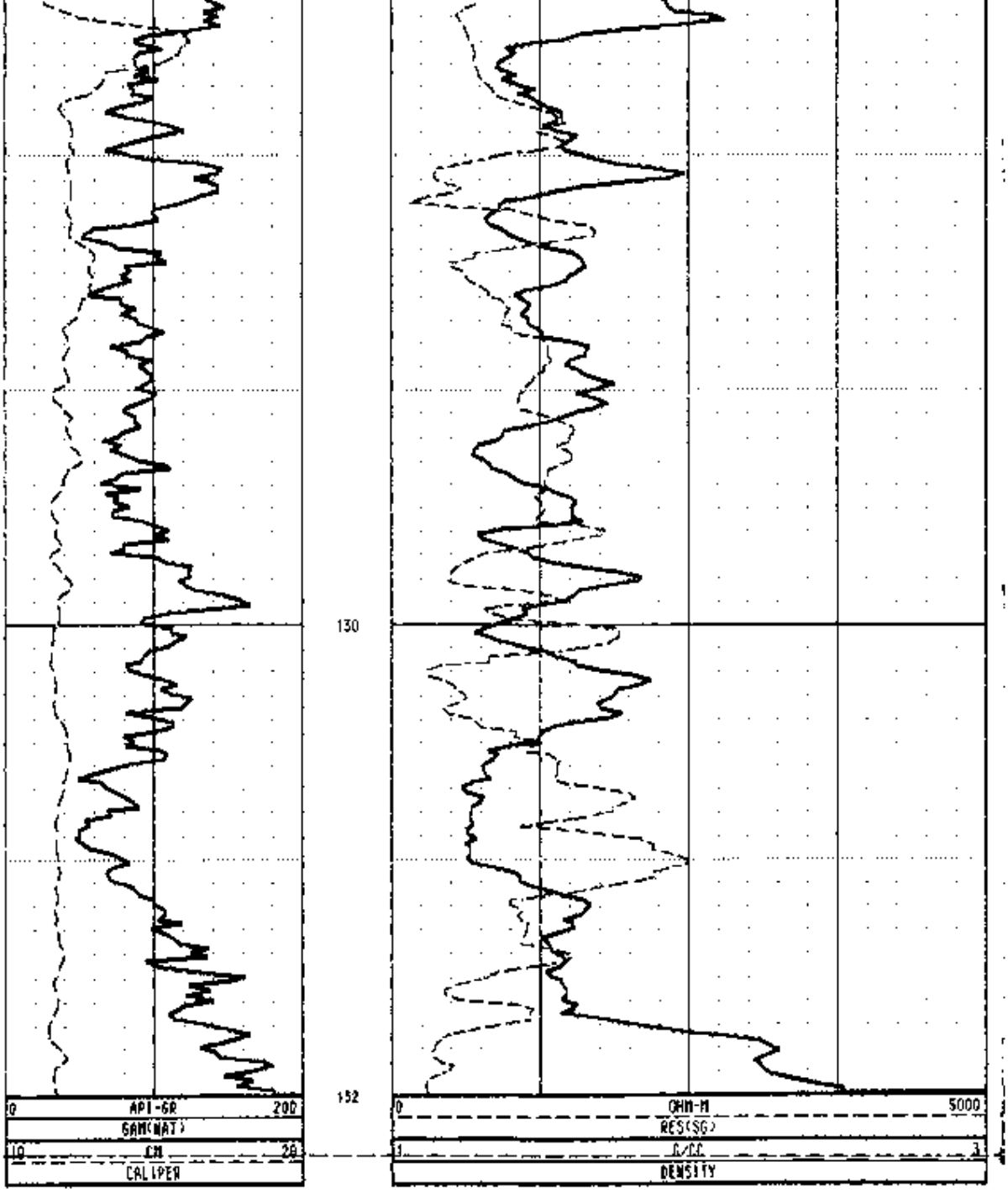
API-GR
200
DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000



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CALIPER
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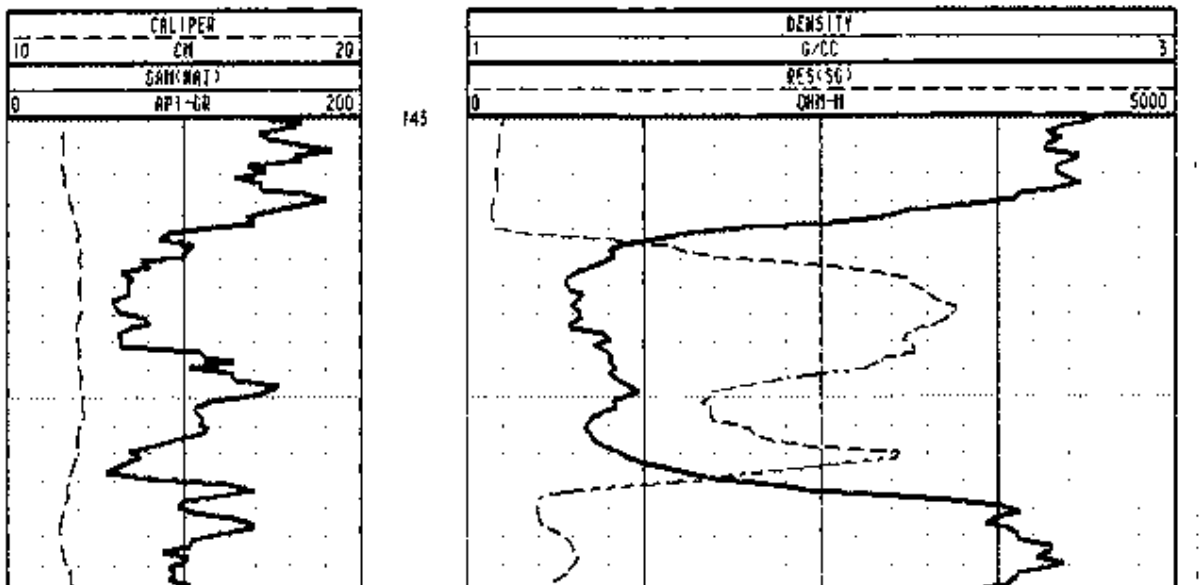
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY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CM
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API-GR
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DENSITY
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G/CC
3
RES(SG)
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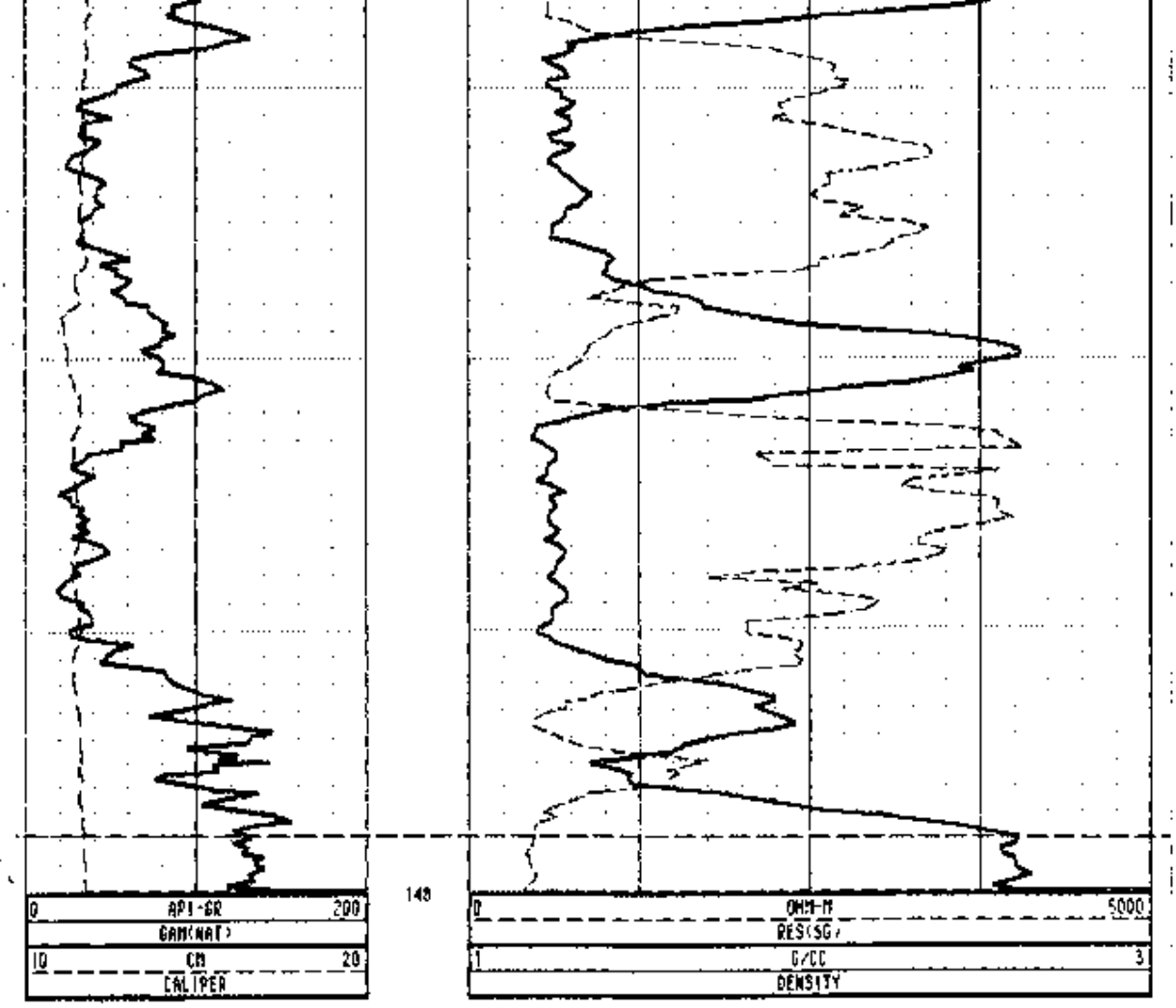
OHM-M
5000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API-GR
200
GAM(NAT)
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CM
20
CALIPER
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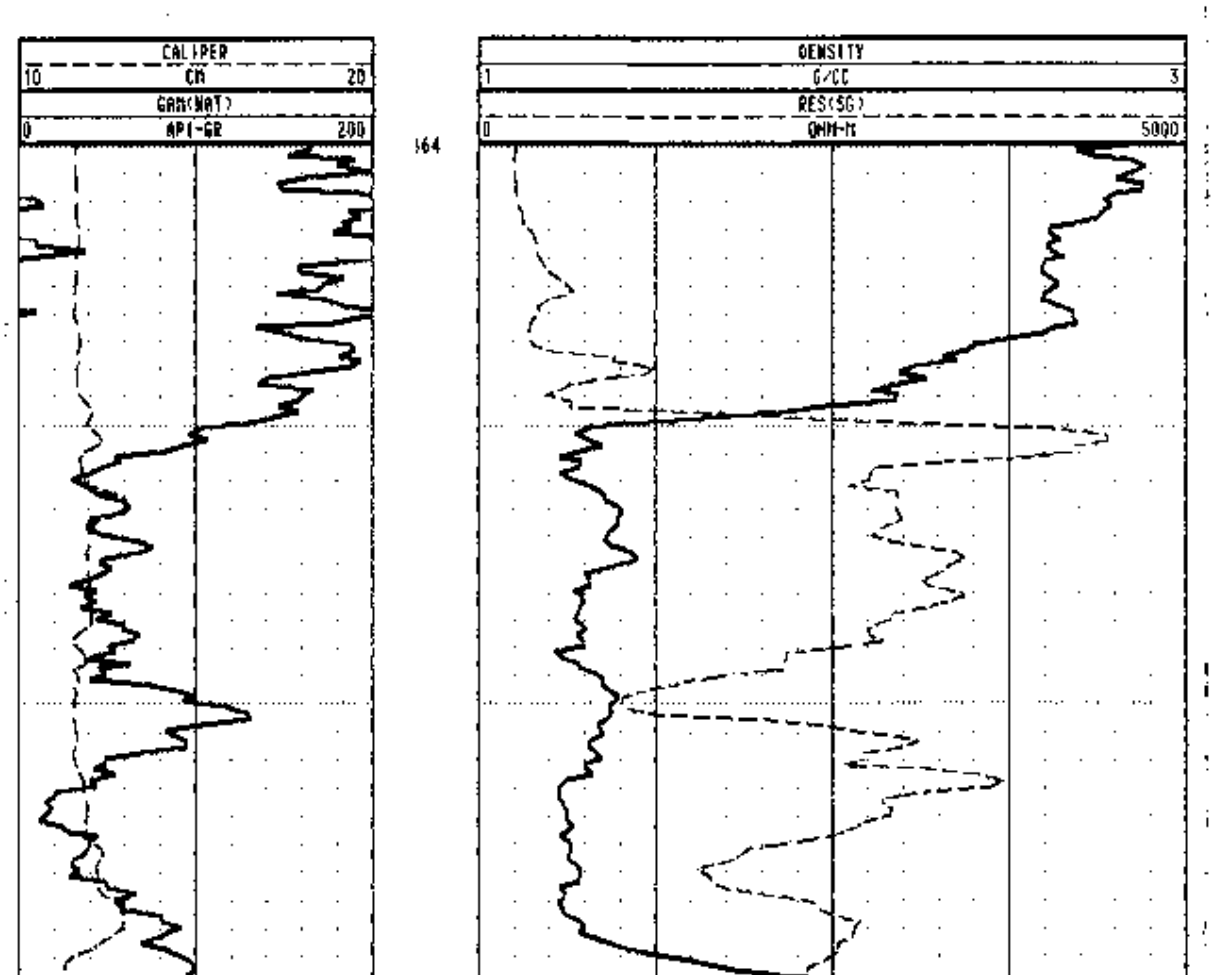
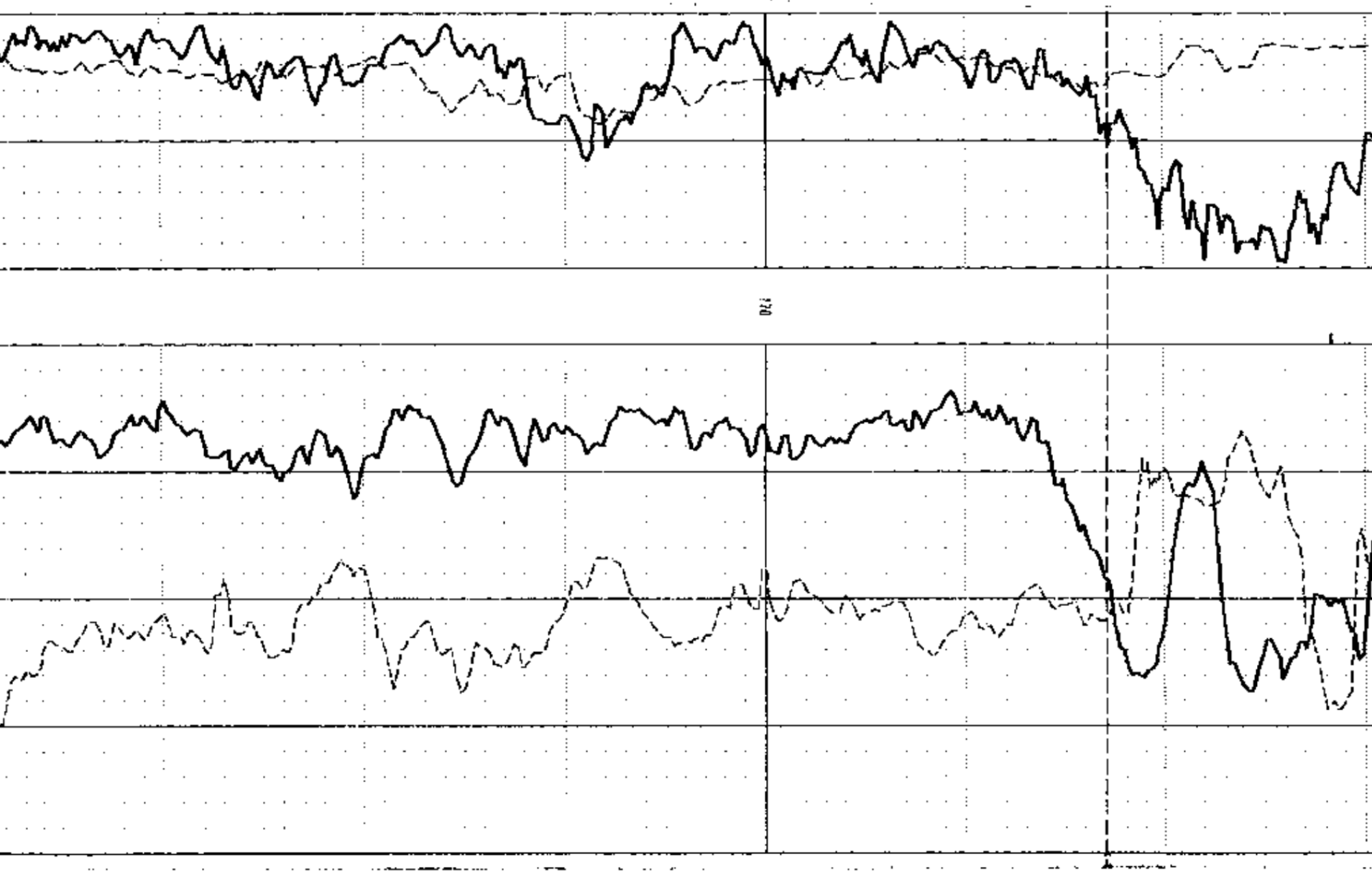
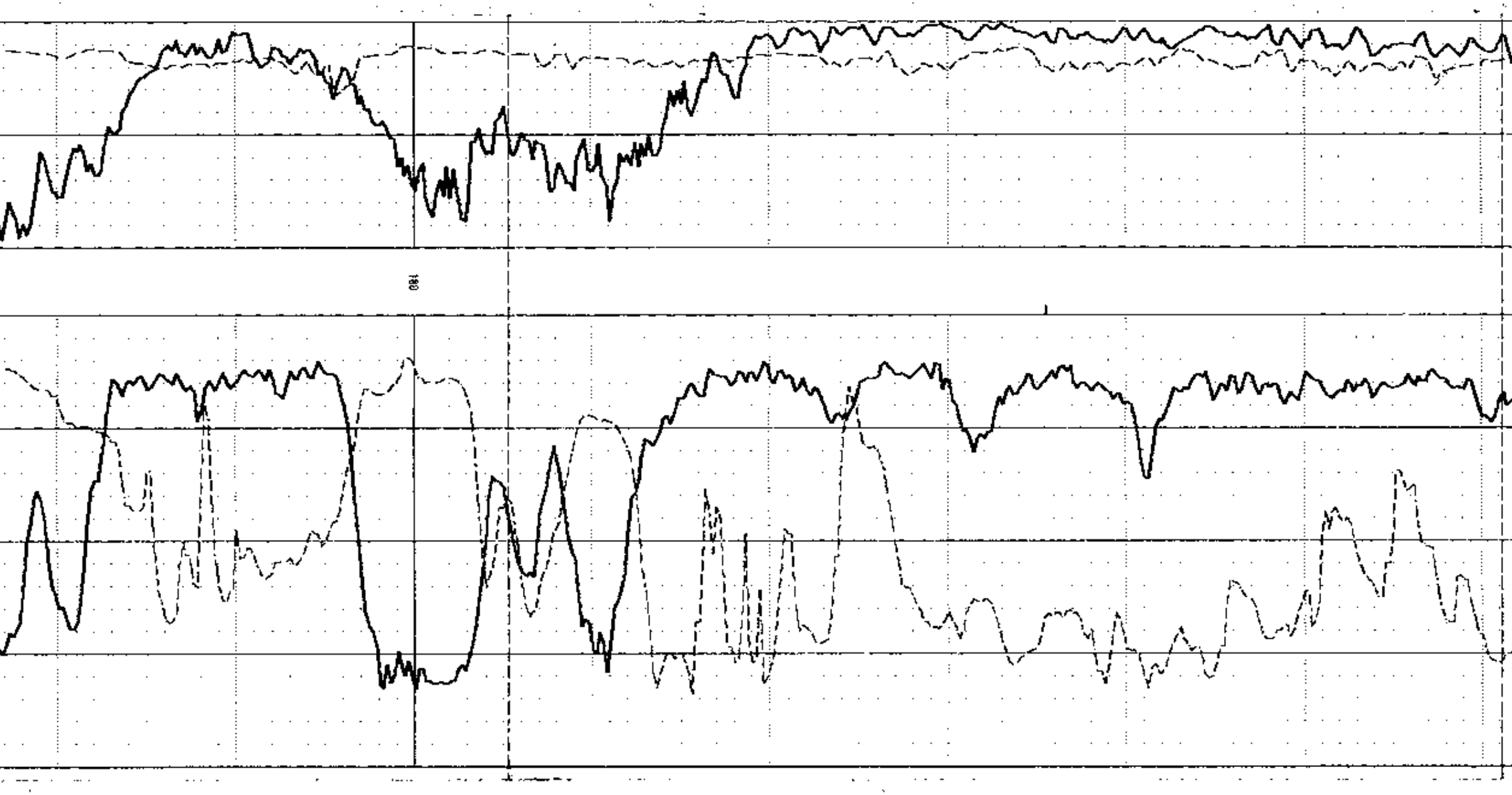
0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY


CALIPER
10
CM
20
GAM(NAT)
0
API-GR
200
164
DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000

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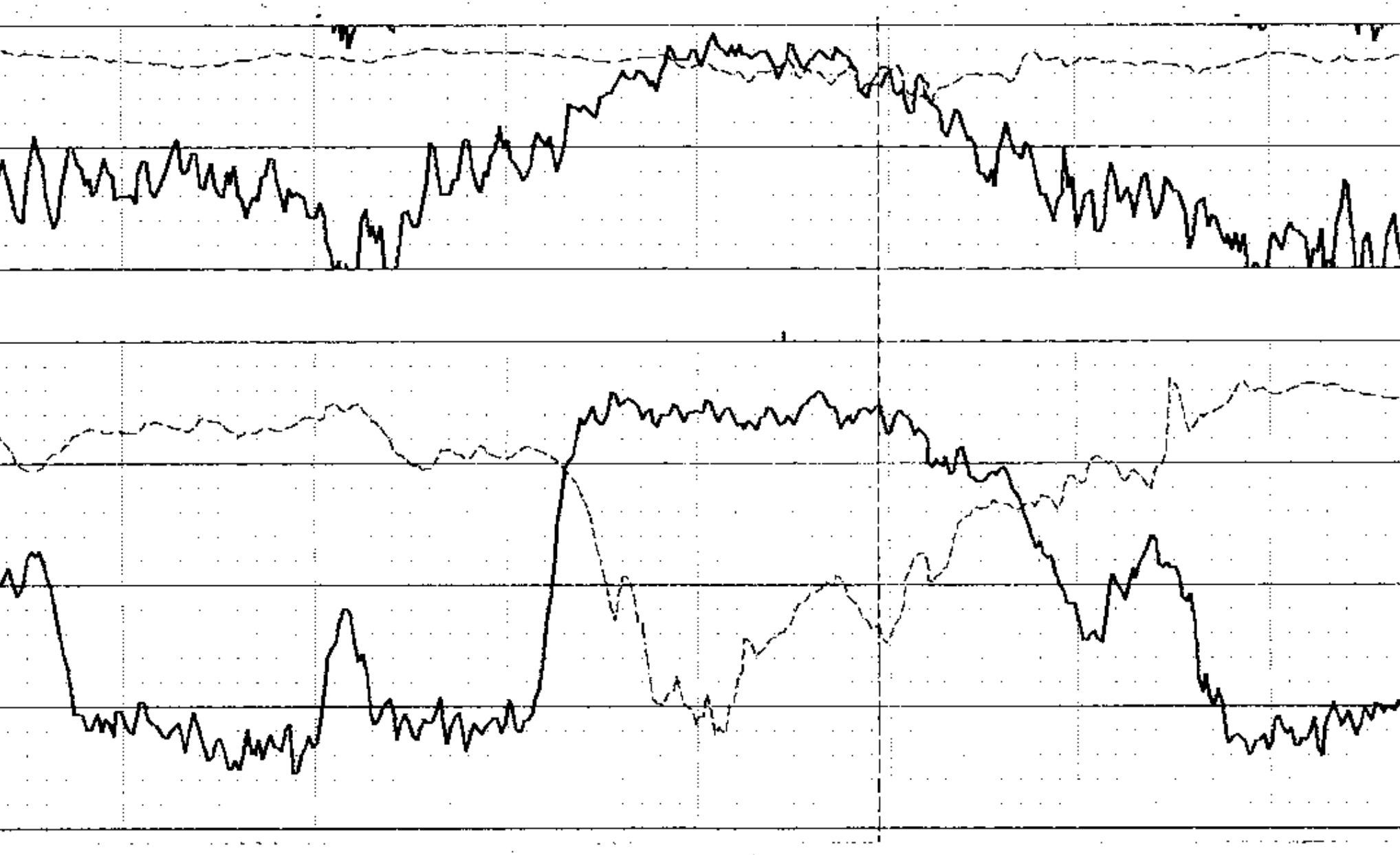

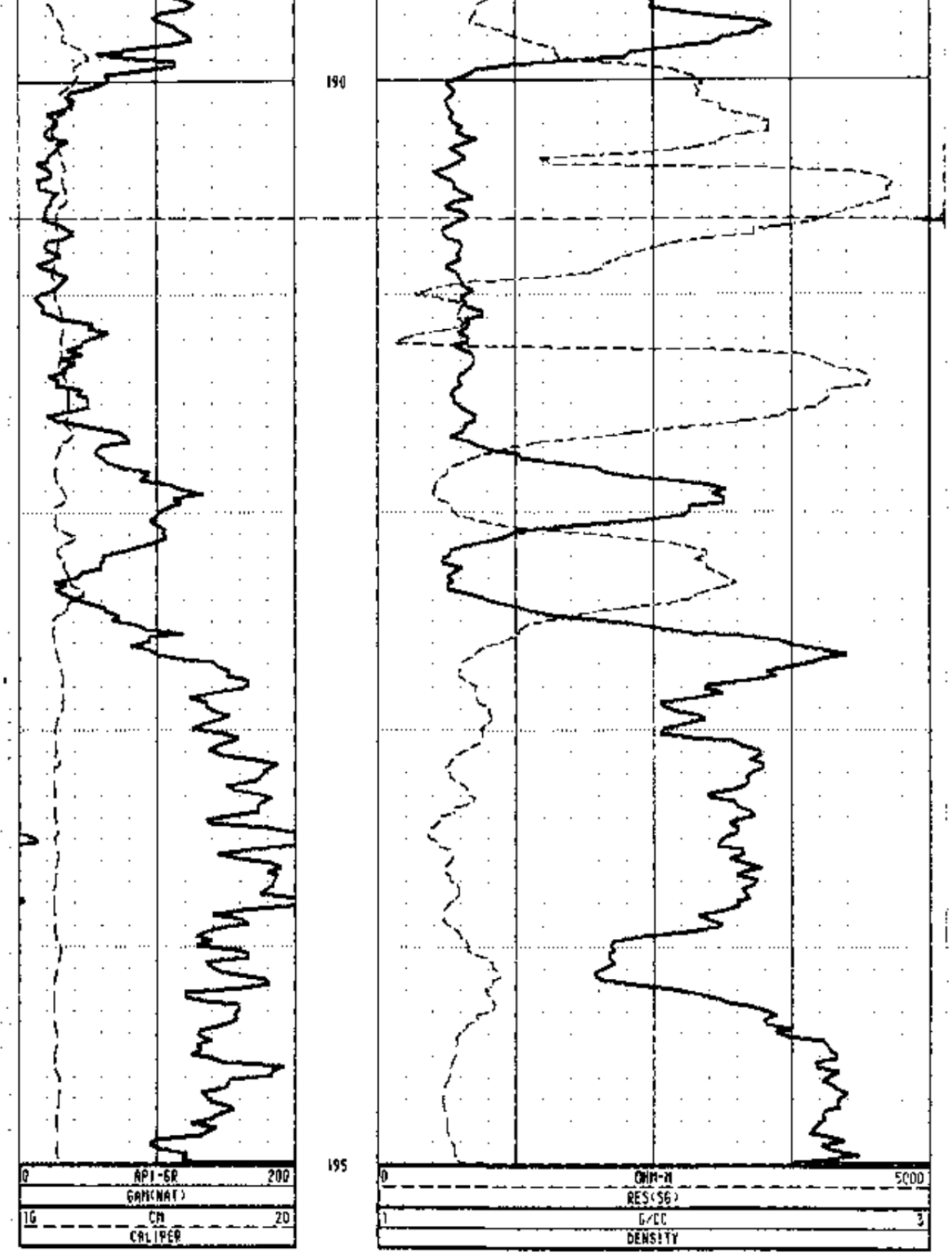
190
195
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API-GR
200
GAMCNAT)
10
CM
20
CALIPER
0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY

Century

QHR89021 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR89021 GAMMA-NEUTRON		
LOCATION-FIELD	:		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

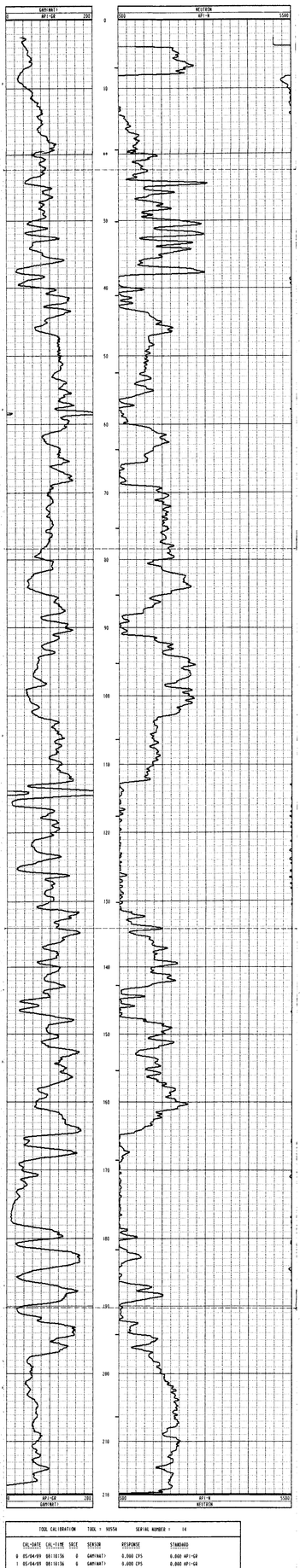
OTHER SERVICES:
SCALE
1:200

DATE	: 06/05/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER	: 218	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM	: 217.70	LOG MEASURED FROM: GL	DF : 00
LOG TOP	: 2.50	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER	: 18	LOGGING UNIT : 8902	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05		RECORDED BY : D.ZANKL	
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 00	TYPE : 9055m
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 00	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIK 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 20000
REMARKS	:		

LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05-04-89	08:10:36	0	GAMMA1	0.000 CPS	0.000 API-GR
1	05-04-89	08:10:36	0	GAMMA1	0.000 CPS	0.000 API-GR
2	05-05-89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05-04-89	08:15:18	0	RES	9107.000 CPS	0.000 OHM
4	05-04-89	08:15:18	0	RES	5312.000 CPS	1000.000 OHM
5	05-04-89	08:15:14	0	SP	-9.000 CPS	0.000 MV
6	05-04-89	08:15:14	0	SP	4095.000 CPS	500.000 MV
7	05-04-89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05-04-89	08:55:24	0	NEUTRON	145.000 CPS	271.000 API-N

Century

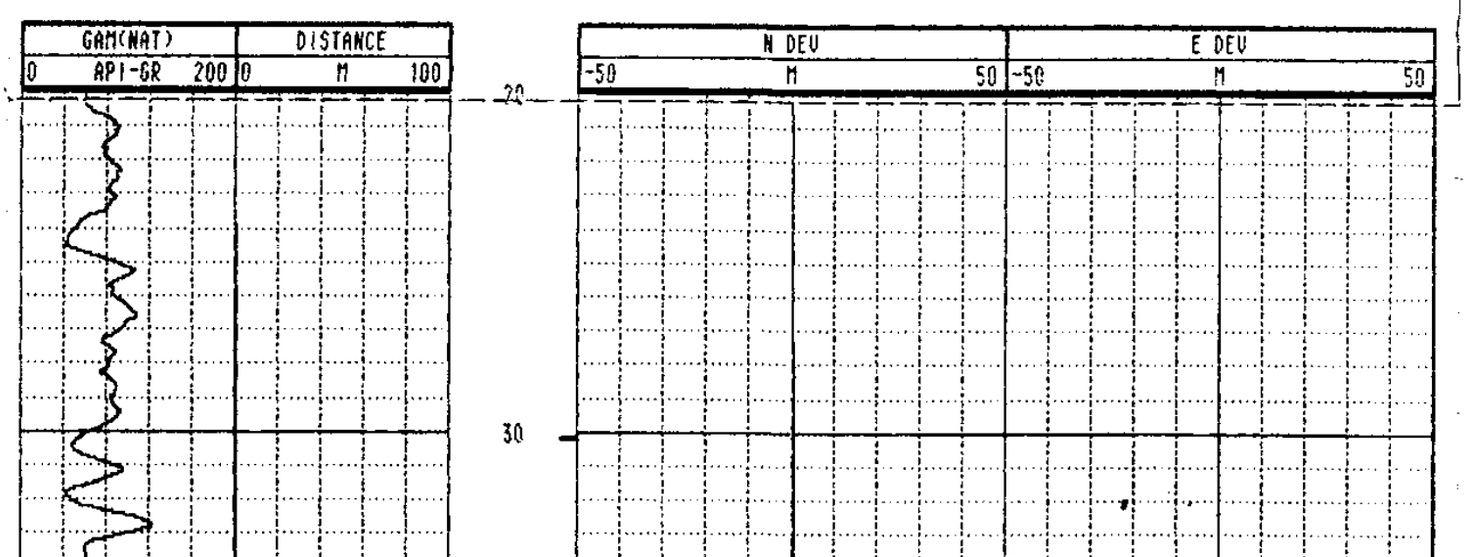
QHR89021 DEVIATION

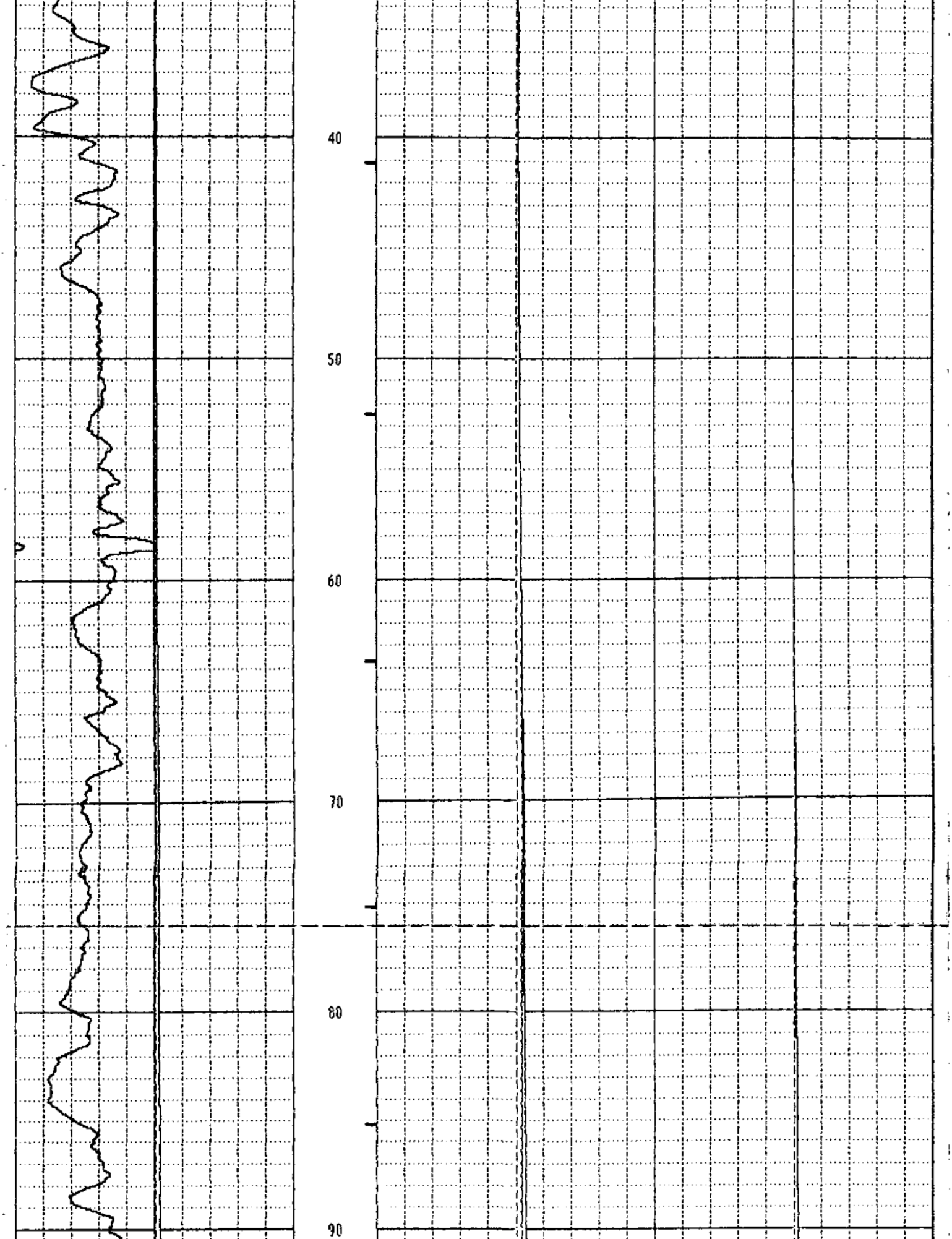
COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89021 DEVIATION				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/06/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 218	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 217.78	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 2.50	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 18	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 20000

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753

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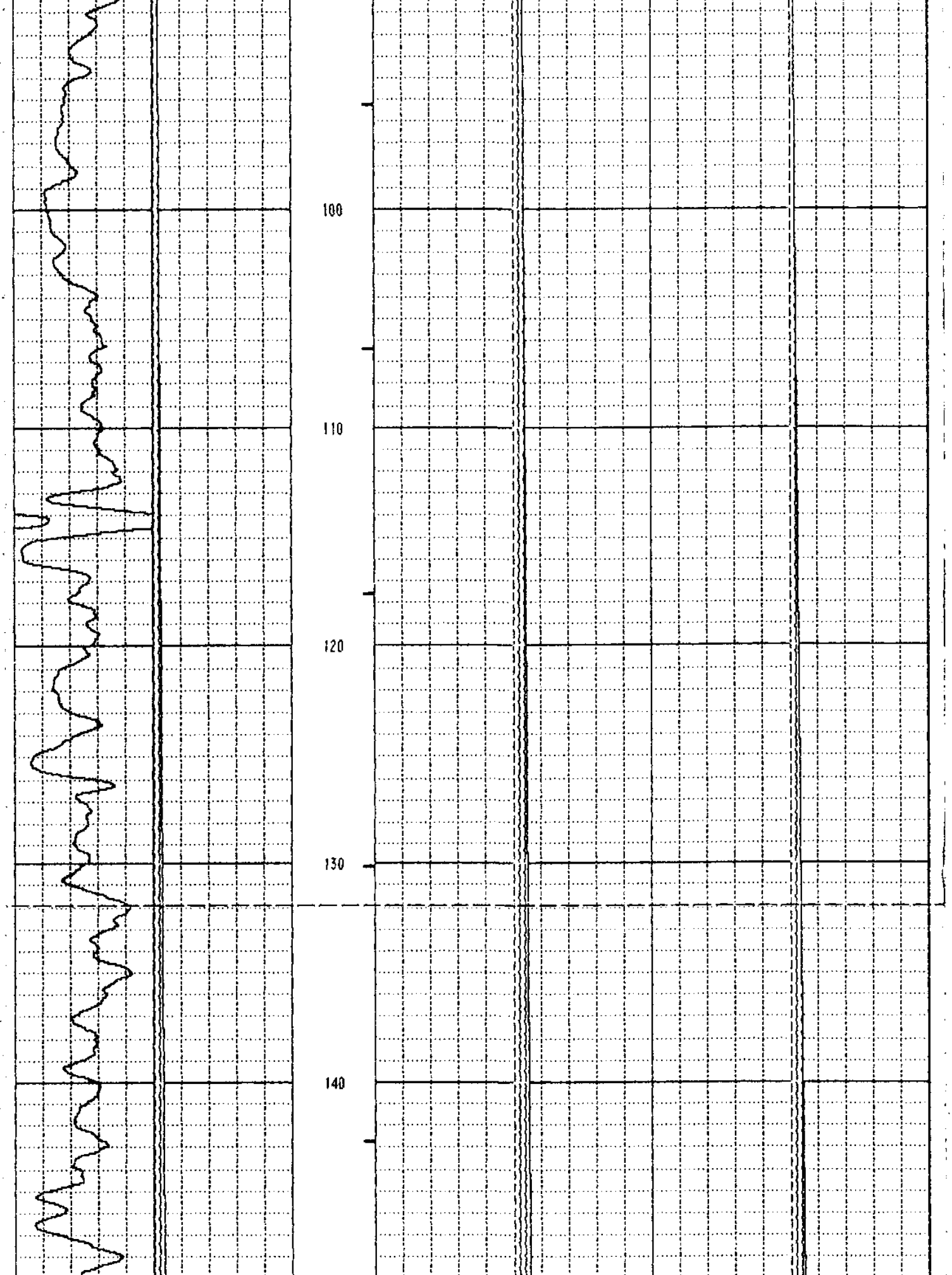
70
80
90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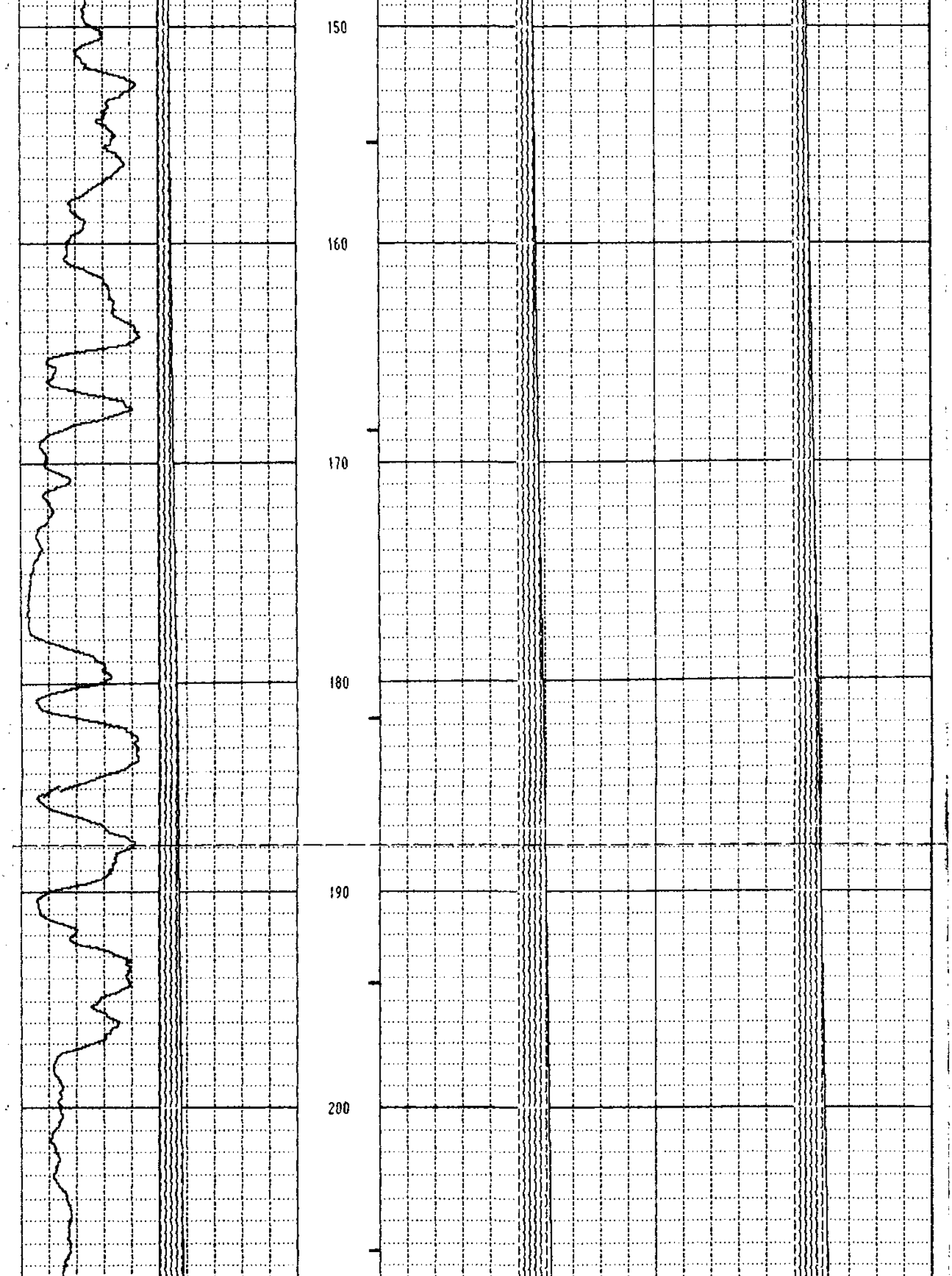
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190
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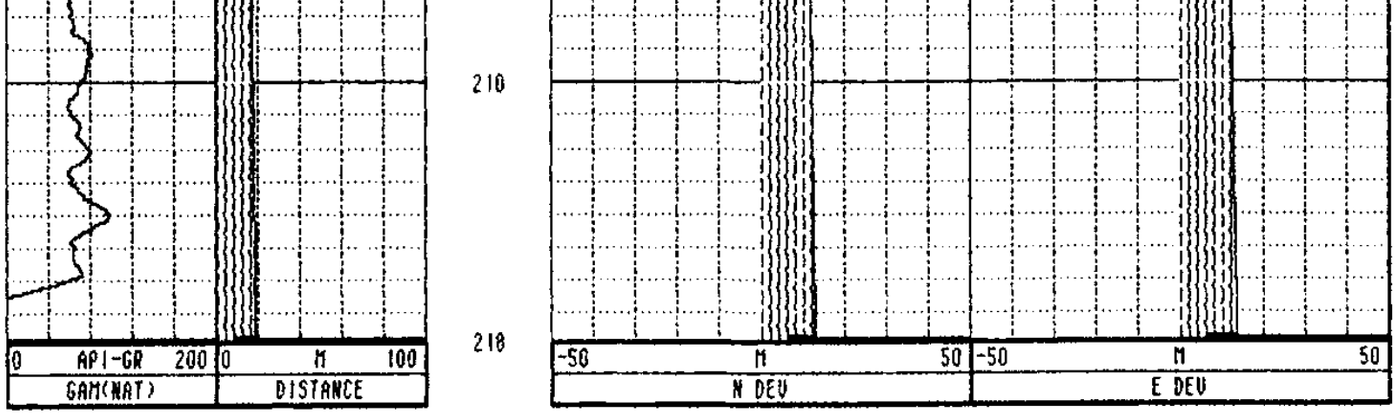

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89021 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 06/06/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 3

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
20.0	19.99	0.13	-.01	0.1	357.1	2.8	349.0
25.0	24.98	0.38	-.03	0.4	355.7	2.5	353.6
30.0	29.97	0.62	-.04	0.6	356.3	2.9	356.6
35.0	34.97	0.87	-.04	0.9	357.2	2.6	0.8
40.0	39.96	1.09	-.04	1.1	358.1	2.3	357.8
45.0	44.96	1.33	-.00	1.3	359.9	2.8	1.5
50.0	49.95	1.57	0.05	1.6	1.7	3.3	13.2
55.0	54.94	1.85	0.15	1.9	4.6	3.5	35.5
60.0	59.93	2.13	0.29	2.2	7.8	3.6	22.6
65.0	64.92	2.42	0.46	2.5	10.8	3.0	38.4
70.0	69.91	2.69	0.66	2.8	13.8	3.7	34.5
75.0	74.90	2.94	0.88	3.1	16.6	3.9	39.4
80.0	79.88	3.20	1.10	3.4	19.0	3.9	41.4
85.0	84.87	3.46	1.34	3.7	21.1	4.1	41.5
90.0	89.86	3.70	1.58	4.0	23.1	3.8	46.7
95.0	94.85	3.91	1.82	4.3	25.0	3.6	51.6
100.0	99.84	4.10	2.08	4.6	26.9	3.9	61.2
105.0	104.83	4.27	2.34	4.9	28.7	3.5	59.4
110.0	109.82	4.45	2.64	5.2	30.6	4.1	55.9
115.0	114.80	4.63	2.95	5.5	32.5	3.7	65.5
120.0	119.79	4.80	3.25	5.8	34.1	4.0	57.0

125.0	124.78	4.98	3.54	6.1	35.4	3.8	63.8
130.0	129.77	5.19	3.83	6.4	36.4	4.0	62.9
135.0	134.75	5.40	4.13	6.8	37.4	4.5	63.0
140.0	139.74	5.62	4.49	7.2	38.6	5.3	60.9
145.0	144.71	5.87	4.90	7.6	39.9	5.8	60.2
150.0	149.68	6.14	5.34	8.1	41.0	6.5	51.4
155.0	154.65	6.50	5.83	8.7	41.9	7.1	56.3
160.0	159.60	6.89	6.39	9.4	42.8	7.7	61.7
165.0	164.54	7.37	6.98	10.1	43.5	9.8	47.3
170.0	169.47	7.95	7.60	11.0	43.7	10.6	46.1
175.0	174.39	8.56	8.23	11.9	43.9	10.0	45.7
180.0	179.32	9.16	8.83	12.7	43.9	10.4	38.5
185.0	184.24	9.78	9.44	13.6	44.0	9.7	45.0
190.0	189.17	10.34	10.06	14.4	44.2	9.4	49.9
195.0	194.10	10.85	10.69	15.2	44.6	9.6	57.1
200.0	199.03	11.35	11.35	16.1	45.0	9.4	53.2
205.0	203.97	11.83	12.02	16.9	45.5	9.4	54.4
210.0	208.90	12.27	12.68	17.6	45.9	9.3	53.9
215.0	213.84	12.73	13.36	18.4	46.4	9.4	60.1
217.8	216.58	12.96	13.74	18.9	46.7	0.0	0.0

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Century

CGC

QHR89021 DIPMETER

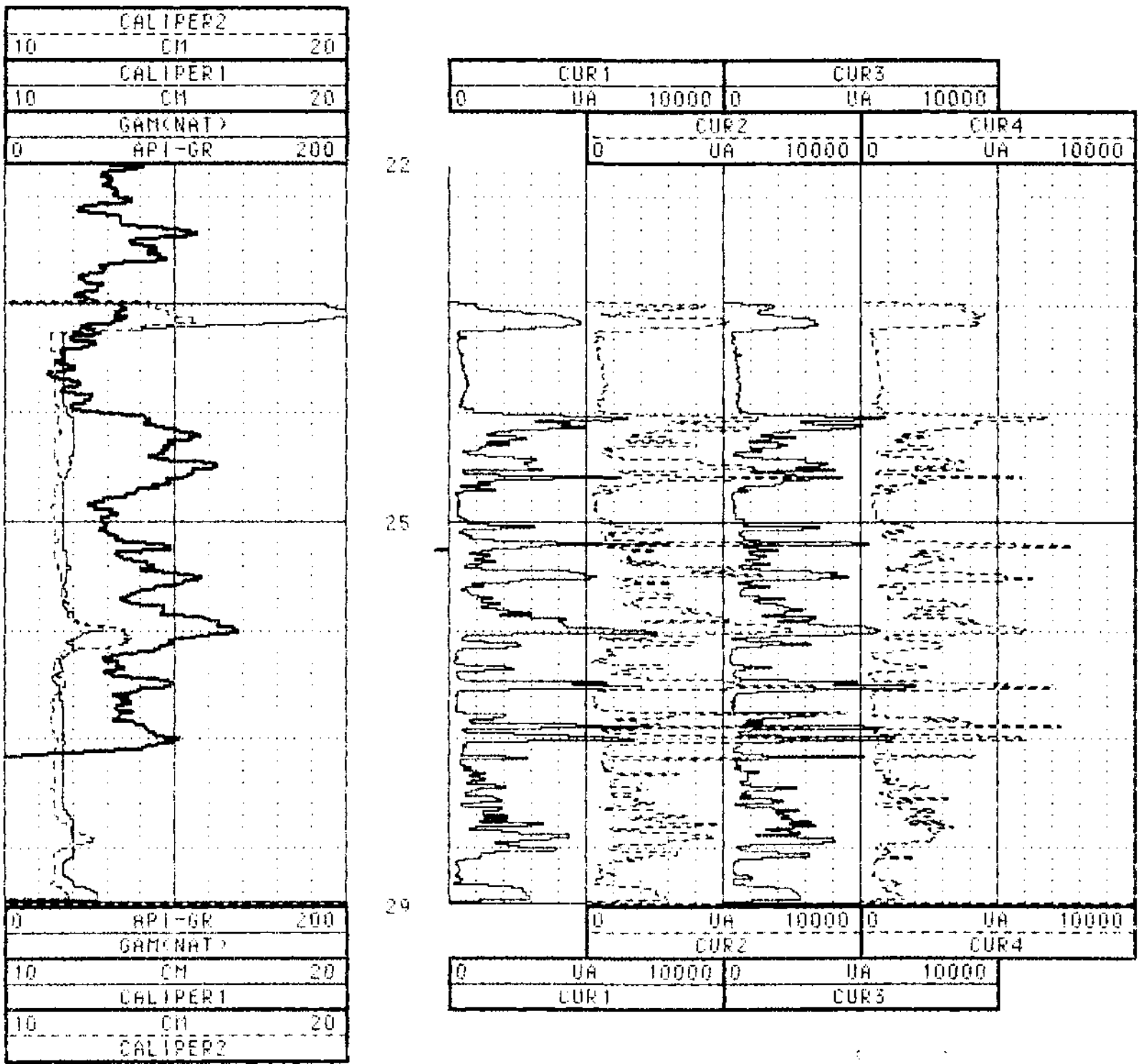
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89021 DIPMETER				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/07/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 218	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 28.52	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 21.73	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 18	LOGGING UNIT	: 6902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9400A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9400 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 50000

OTHER SERVICES:

SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



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Century GEOPHYSICAL CORP.

QHR89021 DIPMETER

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89021 DIPMETER				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/07/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 218	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 28.52	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 21.73	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 18	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9400A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9400 4
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 50000

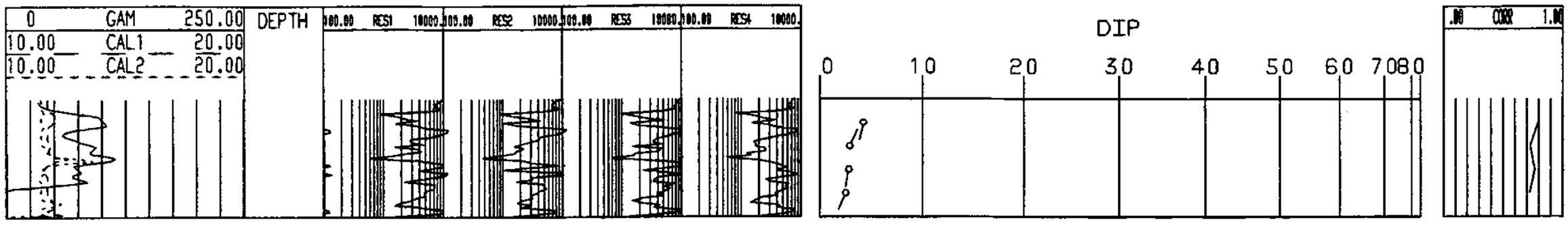
REMARKS :

logged open hole vertical

Window: 2m Step: 1m Search Angle: 30deg Method-2

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



Century

753

753

Century

QHR89022 GAMMA-NEUTRON

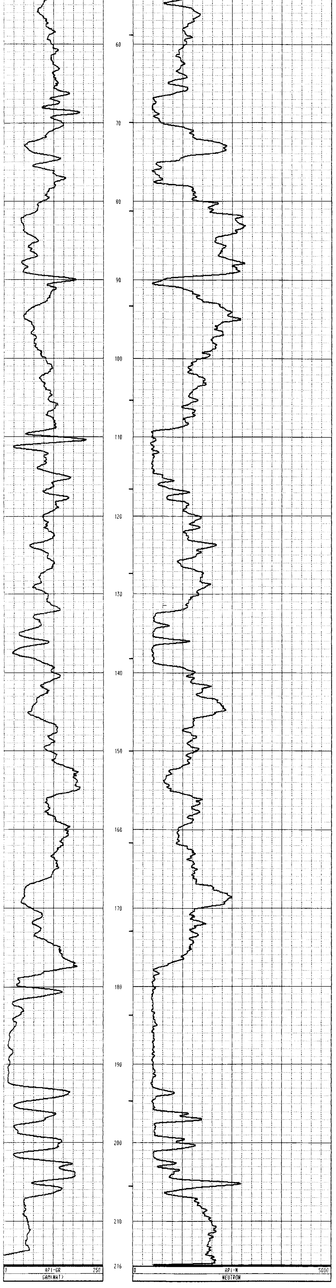
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR89022 GAMMA-NEUTRON		
LOCATION/FIELD	:	SCALE	
COUNTY	: TRANSFER	1:200	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 06/07/89	PERMANENT DATUM	: GD	ELEVATIONS	
DEPTH DRILLER	: 218	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 215.68	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 9.62	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 95	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .25	RECORDED BY	: D.ZANKL		

BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: S
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	50000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE 45 DEGREES

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONCE	STANDARDS
0	05-04-89	08:13:36	0	GAMMAT:	0.000 CPS	0.000 API-GR
1	05-04-89	08:13:36	0	GAMMAT:	0.000 CPS	0.000 API-GR
2	05-05-89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05-04-89	08:15:10	0	RES	9707.000 CPS	0.000 Ohm
4	05-04-89	08:15:10	0	RES	5210.000 CPS	1000.000 Ohm
5	05-04-89	08:15:14	0	SP	-5.000 CPS	0.000 MV
6	05-04-89	08:15:14	0	SP	4095.000 CPS	500.000 MV
7	05-04-89	08:16:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05-04-89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

753

Century

QHR89022 DEVIATION

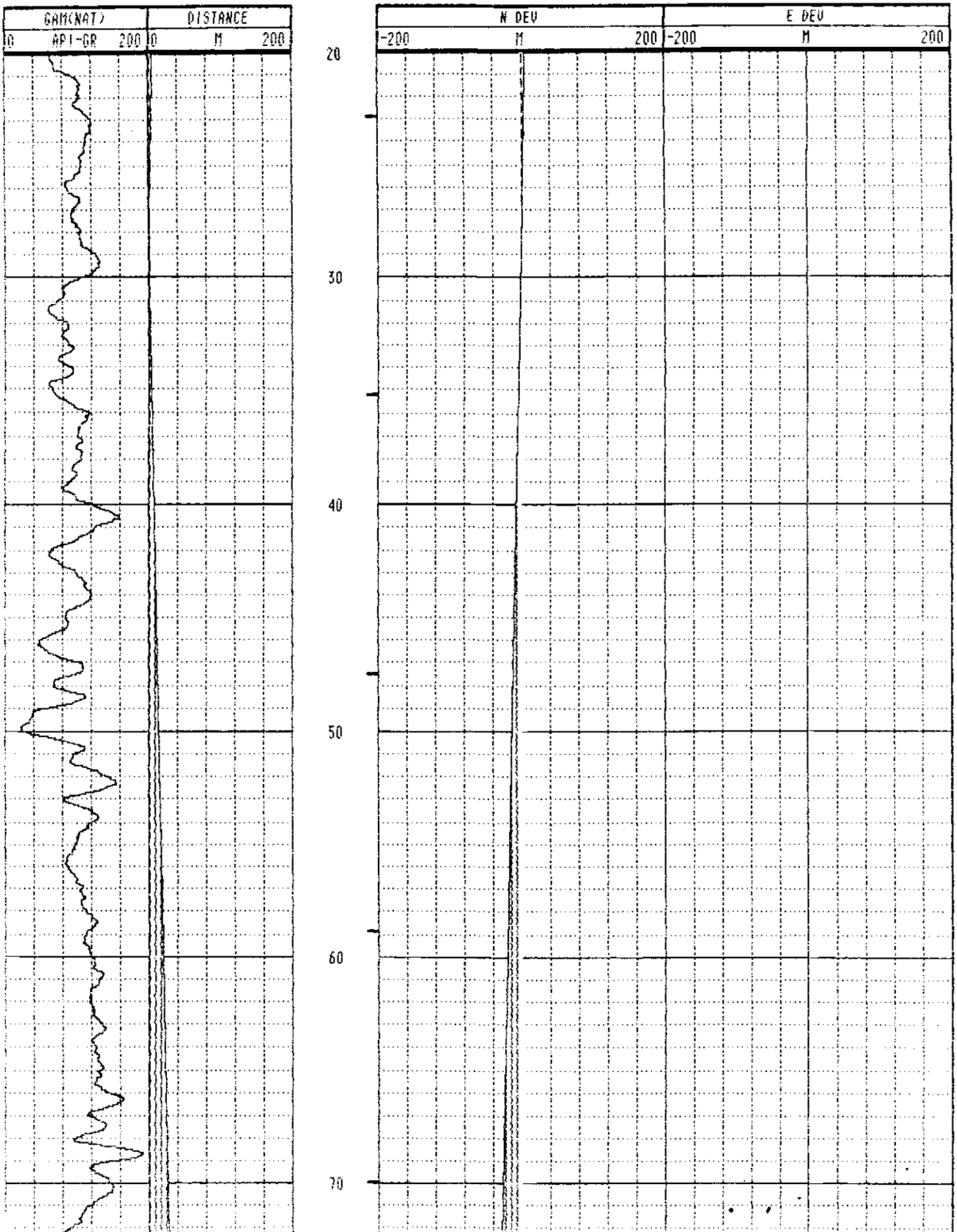
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89022 DEVIATION				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/08/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 218	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 215.68	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.62	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 15	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 50000

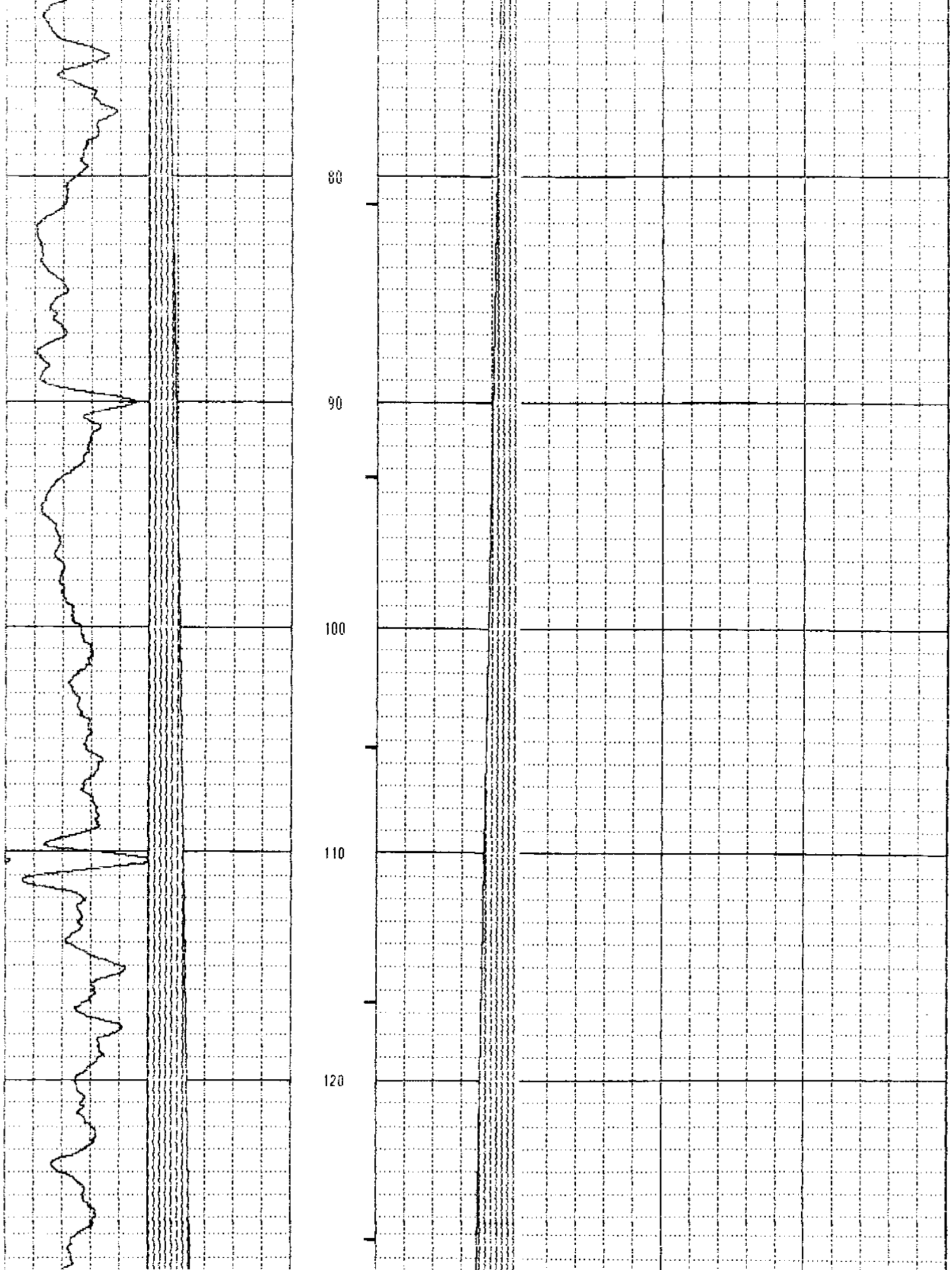
OTHER SERVICES:

SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE 45 DEGREES

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS


GAM(NAT)
0 API-GR 200
DISTANCE
0 M 200
N DEV
-200 M 200
E DEV
-200 M 200
20
30
40
50
60
70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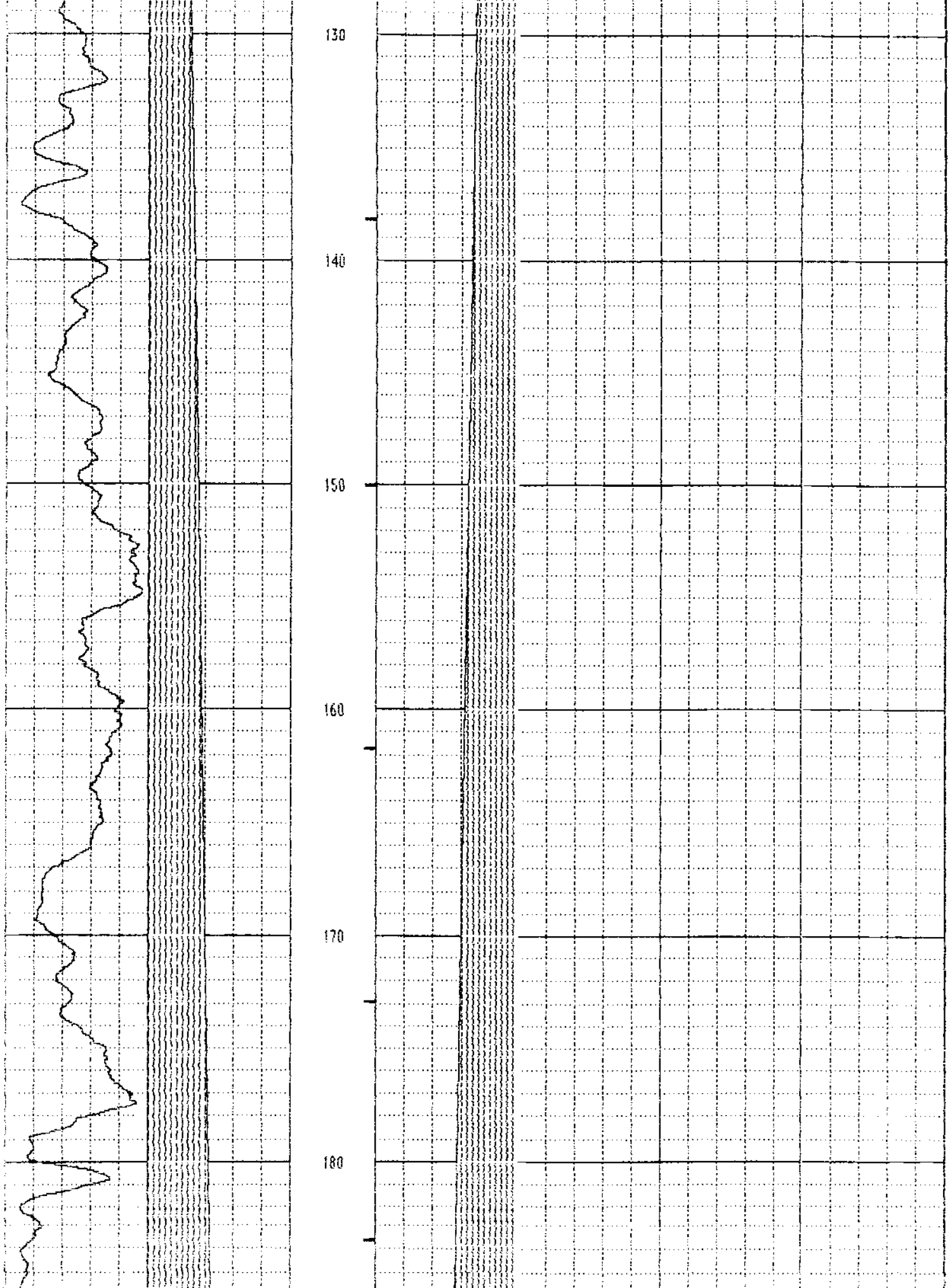
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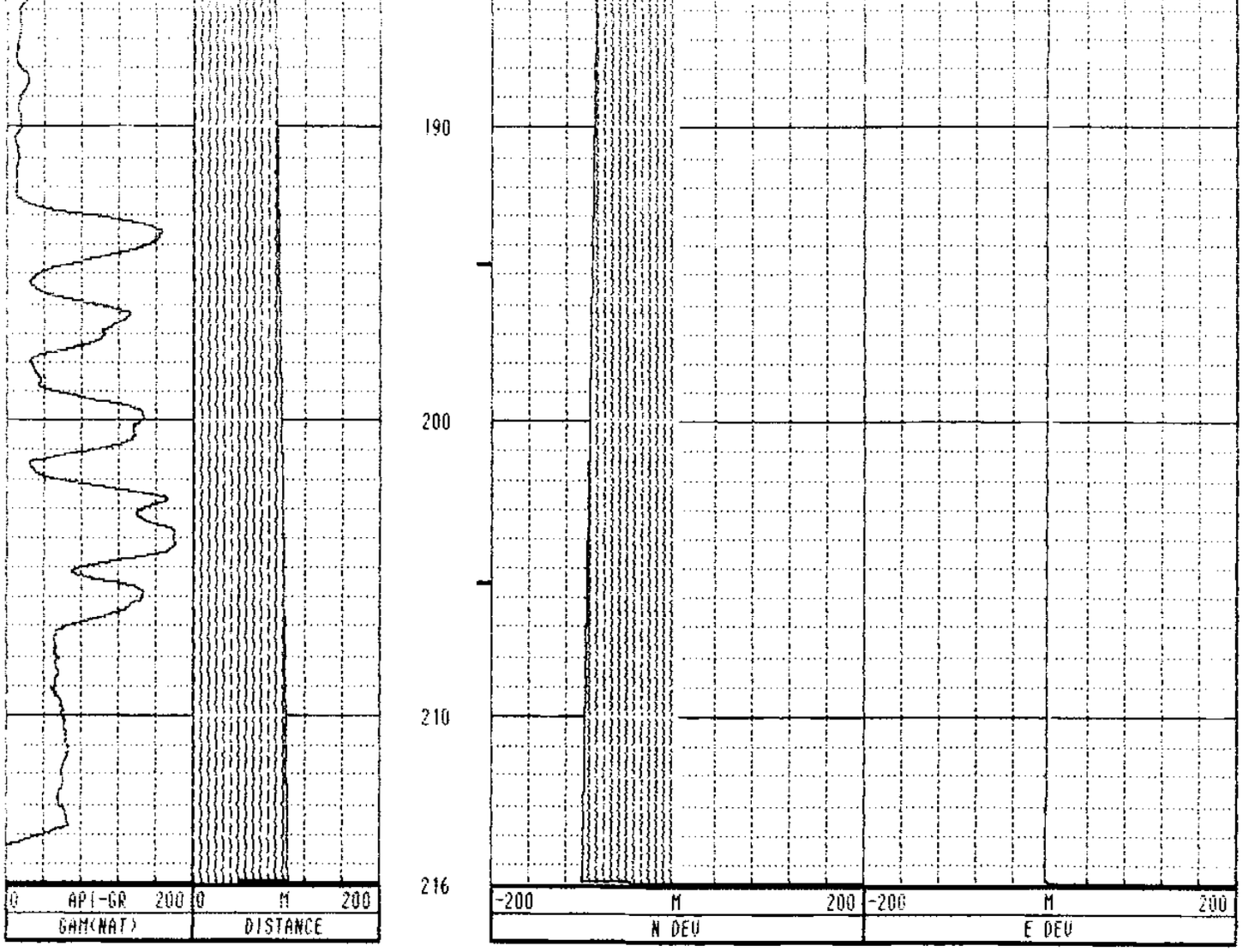


TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

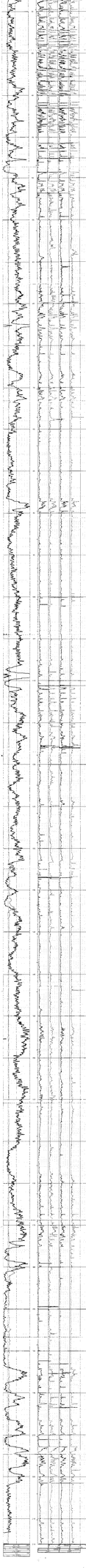
* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD.
FIELD OFFICE : CALGARY
DATA FROM :
MAG. DECL. : 24.500

HOLE ID. : QHRB9022 GAMM
DATE OF LOG : 06/08/89
PROBE : 9055A , 14
DEPTH UNITS : METER LOG 6

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
20.0	14.91	6.01	-.50	6.0	355.3	43.5	182.1
25.0	18.55	2.60	-.68	2.7	345.3	43.3	192.3
30.0	22.22	-.78	-.88	1.2	228.2	42.5	186.1
35.0	25.92	-4.10	-1.10	4.2	195.0	42.2	187.2
40.0	29.64	-7.39	-1.24	7.5	189.5	42.1	196.5
45.0	33.39	-10.63	-1.35	10.7	187.3	41.1	157.1
50.0	37.18	-13.79	-1.33	13.9	185.5	39.9	178.9
55.0	41.03	-16.94	-1.45	17.0	184.9	39.8	170.5
60.0	44.90	-20.06	-1.49	20.1	184.3	38.4	163.3
65.0	48.80	-23.17	-1.56	23.2	183.9	38.3	183.7
70.0	52.74	-26.22	-1.59	26.3	183.5	37.4	157.0
75.0	56.71	-29.23	-1.56	29.3	183.1	37.5	177.5
80.0	60.71	-32.19	-1.55	32.2	182.8	36.3	181.5
85.0	64.74	-35.13	-1.59	35.2	182.6	35.8	192.0
90.0	68.79	-38.04	-1.58	38.1	182.4	35.7	179.9
95.0	72.88	-40.90	-1.67	40.9	182.3	34.8	177.8
100.0	77.00	-43.71	-1.71	43.7	182.2	34.0	174.0
105.0	81.14	-46.47	-1.71	46.5	182.1	33.7	181.3
110.0	85.32	-49.20	-1.71	49.2	182.0	33.4	187.5
115.0	89.53	-51.88	-1.73	51.9	181.9	32.4	169.9
120.0	93.77	-54.52	-1.76	54.5	181.8	31.7	182.6
125.0	98.01	-57.13	-1.83	57.2	181.8	32.0	175.9
130.0	102.26	-59.74	-1.87	59.8	181.8	32.8	148.0
135.0	106.51	-62.35	-2.00	62.4	181.8	32.0	192.6
140.0	110.76	-64.93	-2.12	65.0	181.9	31.2	193.6
145.0	115.03	-67.52	-2.19	67.6	181.9	31.0	183.3
150.0	119.32	-70.06	-2.22	70.1	181.8	30.5	189.1
155.0	123.62	-72.58	-2.24	72.6	181.8	30.2	182.3
160.0	127.93	-75.07	-2.42	75.1	181.8	30.3	182.3
165.0	132.25	-77.56	-2.48	77.6	181.8	30.7	182.7
170.0	136.56	-80.05	-2.70	80.1	181.9	30.2	201.3
175.0	140.88	-82.55	-2.80	82.6	181.9	30.0	183.3
180.0	145.22	-85.00	-2.97	85.0	182.0	29.1	190.3
185.0	149.58	-87.41	-3.24	87.5	182.1	29.1	186.4
190.0	153.93	-89.82	-3.50	89.9	182.2	29.4	188.0
195.0	158.29	-92.24	-3.71	92.3	182.3	29.8	193.9
200.0	162.65	-94.66	-4.00	94.7	182.4	29.0	186.4
205.0	167.02	-97.06	-4.25	97.1	182.5	28.8	188.3
210.0	171.41	-99.42	-4.53	99.5	182.6	28.4	182.0
215.0	175.82	-101.76	-4.76	101.9	182.7	28.1	178.0
215.7	176.43	-102.05	-4.80	102.2	182.7	0.0	0.0


Century
GRAPHIC DYNAMICS



753

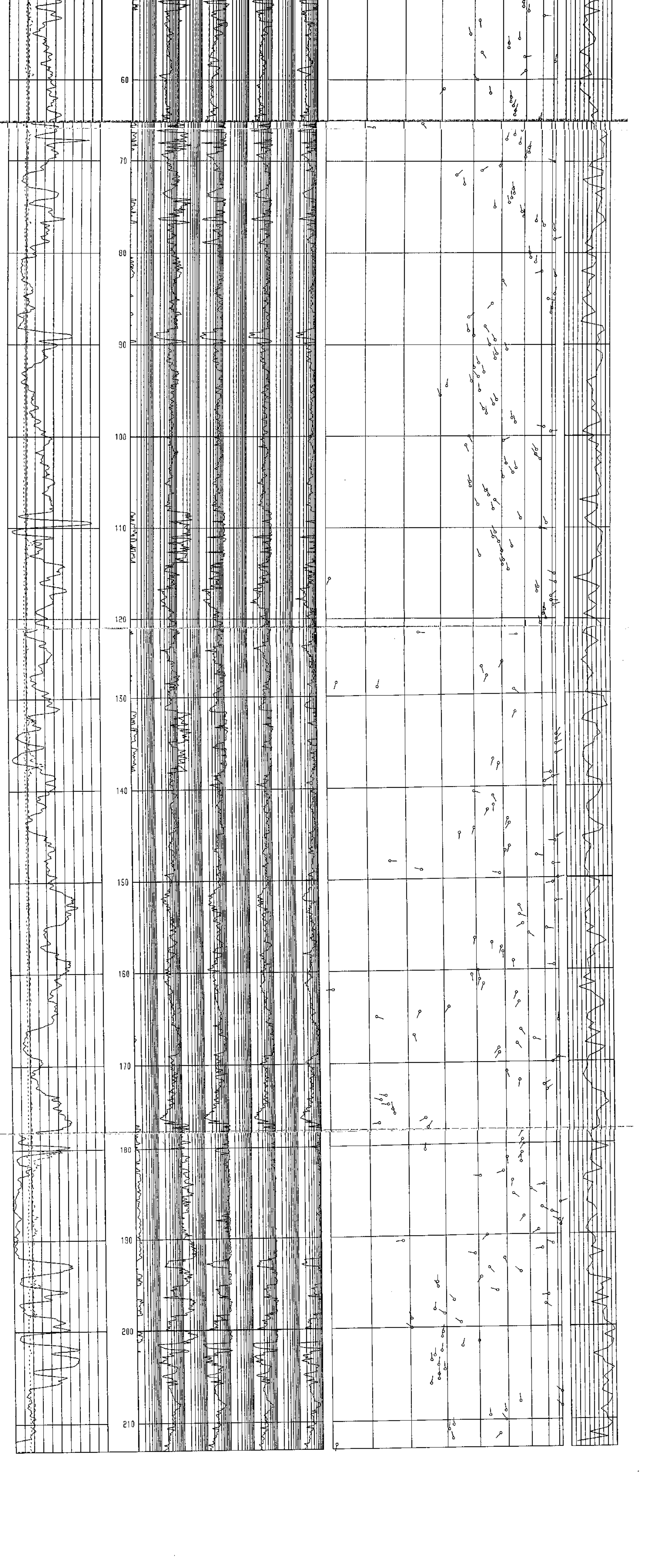
Century Geophysical Corp.

QHR89022 DIPMETER

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89022 DIPMETER				
LOCATION/FIELD	:			SCALE	
COUNTY	: TRANSFER			1:200	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/07/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 218	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 213.02	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 16.40	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 15	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9400A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9400 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 60000
REMARKS	:				

logged open hole 45deg
Window: 1m Step: .5m Search Angle: 80deg method-2

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



DIPMETER LIST FOR:QHR-89022
WINDOW:1m
STEP:.5m
SEARCH ANGLE:80deg
MAGNETIC DECLINATION:24.5

DEPTH	DIP	AZIM	CORR COEFF	HOLE DEV.	HOLE AZIM	PAD1 AZIM
18.500	36.3	110.	.741	43.7	191.	305.
19.000	44.1	157.	.765	43.6	191.	305.
19.500	42.1	112.	.877	43.4	185.	301.
20.000	38.3	112.	.800	43.5	182.	299.
20.500	16.3	126.	.585	43.3	182.	299.
21.000	14.6	121.	.642	43.4	185.	300.
21.500	43.7	155.	.388	43.0	189.	303.
22.000	36.7	179.	.452	43.2	183.	299.
22.500	38.5	159.	.495	43.2	183.	300.
23.000	115.1	351.	.484	43.1	181.	298.
23.500	39.8	107.	.355	43.3	181.	298.
24.000	54.2	106.	.433	43.0	175.	294.
24.500	95.4	73.	.358	43.0	182.	299.
25.000	24.9	315.	.439	43.3	192.	307.
25.500	89.4	82.	.453	43.0	182.	299.
26.000	46.3	269.	.500	43.0	184.	301.
26.500	120.4	347.	.383	43.0	184.	300.
27.000	55.5	98.	.523	42.8	185.	301.
27.500	77.4	85.	.764	42.8	183.	299.
28.000	77.7	76.	.721	42.8	178.	295.
28.500	109.2	325.	.646	42.7	186.	302.
29.000	56.4	81.	.788	42.5	182.	298.
29.500	47.2	76.	.613	42.0	188.	302.
30.000	52.7	71.	.660	42.5	186.	301.
30.500	52.2	66.	.790	42.4	182.	298.
31.000	50.3	55.	.752	42.6	173.	291.
31.500	49.8	64.	.777	42.0	185.	301.
32.000	58.8	54.	.793	42.4	181.	298.
32.500	59.6	68.	.895	42.5	197.	309.
33.000	58.7	75.	.893	42.2	205.	316.
33.500	57.0	50.	.894	41.5	181.	297.
34.000	54.0	51.	.756	40.8	186.	300.
34.500	52.4	45.	.785	42.0	184.	299.
35.000	55.1	41.	.760	42.2	187.	301.
35.500	59.6	54.	.665	42.1	183.	298.
36.000	60.4	50.	.605	41.8	177.	293.
36.500	67.0	49.	.717	41.9	188.	301.
37.000	75.5	49.	.823	41.7	189.	302.
37.500	61.7	45.	.790	39.4	185.	299.
38.000	63.2	35.	.523	41.9	178.	293.
38.500	44.8	344.	.521	42.1	177.	292.
39.000	65.5	34.	.562	41.7	179.	294.
39.500	63.9	27.	.765	41.9	175.	291.
40.000	75.7	45.	.864	42.1	196.	307.
40.500	78.5	18.	.760	41.5	170.	286.
41.000	82.1	37.	.815	41.1	192.	302.
41.500	73.4	34.	.762	41.2	186.	298.
42.000	72.9	43.	.753	41.5	195.	304.
42.500	76.4	29.	.444	41.7	193.	303.
43.000	61.7	9.	.667	41.5	183.	295.
43.500	66.1	26.	.780	41.6	200.	308.
44.500	71.4	23.	.671	40.9	185.	296.
45.000	57.6	38.	.550	41.1	157.	275.
45.500	76.9	17.	.907	41.4	184.	296.
46.000	73.1	9.	.675	40.7	176.	289.
46.500	57.1	14.	.524	40.9	190.	300.
47.000	62.5	24.	.795	40.4	197.	305.
47.500	75.1	16.	.810	40.4	185.	296.
48.000	75.8	351.	.801	42.8	157.	275.
48.500	102.3	324.	.714	40.6	182.	294.
49.000	63.8	22.	.881	40.6	190.	300.
49.500	69.4	6.	.885	41.6	177.	290.
50.000	63.5	1.	.863	39.9	179.	291.
50.500	64.2	357.	.890	39.8	171.	285.
51.000	70.5	5.	.915	40.2	165.	296.
51.500	38.5	4.	.536	40.2	188.	298.
52.000	58.5	11.	.397	40.3	196.	303.
52.500	61.1	2.	.735	39.4	181.	292.
53.000	70.4	91.	.404	39.5	182.	293.
	41.6	173.	.456	39.2	184.	294.
53.500			.371	39.5	213.	316.
54.000	113.6	5.	.478	39.6	183.	294.
54.500	106.0	22.	.572	39.8	171.	284.
55.000	38.6	345.	.645	39.7	178.	290.
55.500	56.7	0.	.600	39.4	177.	289.
56.000	52.2	357.	.424	39.0	189.	298.
[illegible]	52.1	359.	.296	39.4	171.	284.
	[illegible]	145.	.511	39.4	178.	289.
58.500	106.6	53.	.426	39.0	180.	291.
59.000	59.7	229.	.514	[illegible]	185.	295.
59.500	101.2	304.	.558	40.0	180.	292.
60.000	40.9	324.	.294	38.4	163.	279.
60.500	116.4	338.	.323	38.8	186.	296.
61.000	30.6	220.	.290	39.3	187.	297.
61.500	45.3	353.	.387	39.3	184.	295.
62.000	53.2	353.	.533	38.6	178.	290.
62.500	53.0	357.	.499	38.5	182.	293.
63.000	54.0	20.	.601	38.8	191.	300.
63.500	54.9	19.	.695	38.8	183.	294.
64.000	54.6	7.	.553	38.3	173.	287.
64.500	68.0	9.	.611	38.3	179.	291.
65.000	66.2	12.	.629	38.3	184.	294.
65.500	48.0	346.	.865	38.5	171.	285.
66.000	49.5	355.	.719	38.1	178.	291.
66.500	58.4	358.	.839	38.1	180.	292.
67.000	55.1	6.	.925	38.4	185.	295.
67.500	51.7	18.	.762	38.1	192.	301.
68.000	57.5	9.	.863	37.8	180.	292.
68.500	61.9	17.	.829	37.7	181.	293.
69.000	61.9	16.	.829	37.9	181.	292.
69.500	60.1	12.	.849	37.8	185.	296.
70.000	84.5	293.	.599	37.4	157.	275.
70.500	49.2	16.	.537	37.4	181.	292.
71.000	42.7	57.	.836	37.5	181.	293.
71.500	34.7	49.	.822	37.6	177.	290.
72.000	112.1	9.	.408	37.9	164.	280.
72.500	37.1	352.	.523	37.3	181.	292.
73.000	54.5	356.	.880	37.0	183.	294.
73.500	55.0	355.	.668	37.2	175.	288.
74.000	53.8	358.	.815	37.4	183.	293.
74.500	52.9	345.	.777	37.6	172.	285.
75.000	47.3	359.	.752	37.5	178.	289.
75.500	58.6	344.	.710	37.0	154.	273.
76.000	59.5	1.	.848	37.0	182.	292.
76.500	66.3	9.	.684	37.1	185.	295.
77.500	84.7	353.	.638	36.5	186.	296.
78.000	94.4	337.	.595	36.5	180.	291.
78.500	85.0	75.	.564	36.8	184.	294.
79.000	104.3	28.	.449	37.0	191.	299.
79.500	104.9	30.	.635	36.5	189.	297.
80.000	62.7	354.	.463	36.3	181.	292.
80.500	63.2	340.	.686	36.3	164.	280.
81.000	66.0	10.	.690	36.2	181.	292.
81.500	112.7	338.	.631	36.3	183.	293.
82.000	70.2	255.	.377	36.3	172.	285.
82.500	89.9	346.	.672	36.3	176.	288.
83.000	50.5	149.	.544	36.0	193.	300.
83.500	106.7	2.	.553	35.5	183.	293.
84.000	111.5	334.	.500	35.9	187.	296.
84.500	85.4	15.	.583	35.9	190.	298.
85.000	75.5	105.	.401	35.8	192.	299.
85.500	46.5	222.	.476	35.5	180.	291.
86.000	80.2	9.	.601	36.0	182.	292.
86.500	79.0	358.	.675	36.2	169.	283.
87.000	38.6	52.	.440	36.7	188.	296.
87.500	106.4	329.	.365	35.5	175.	288.
88.000	44.0	147.	.833	35.6	179.	290.
88.500	38.5	348.	.875	35.4	170.	284.
89.000	40.2	0.	.730	34.9	181.	292.
89.500	47.6	331.	.777	36.0	172.	285.
90.000	45.6	340.	.709	35.7	180.	291.
90.500	52.1	341.	.701	35.5	171.	284.
91.000	48.2	337.	.844	35.4	171.	284.
91.500	47.6	343.	.834	35.1	177.	289.
92.000	41.8	341.	.803	35.2	181.	291.
92.500	40.3	351.	.743	34.3	191.	298.
93.000	43.6	347.	.706	35.2	185.	294.
93.500	41.7	318.	.709	35.0	171.	284.
94.000	39.5	342.	.491	34.9	184.	293.
94.500	31.8	10.	.574	34.8	187.	295.
95.000	42.1	351.	.627	34.8	178.	289.
95.500	29.9	338.	.613	34.8	178.	289.
96.000	48.1	332.	.606	34.8	173.	285.
96.500	47.0	333.	.685	34.5	178.	289.
97.000	43.4	330.	.588	34.6	159.	276.
97.500	44.4	357.	.730	34.3	186.	295.
98.000	54.1	352.	.770	34.1	188.	296.
98.500	55.6	345.	.778	34.3	182.	291.
99.000	71.6	281.	.523	34.4	168.	282.
99.500	78.0	84.	.399	35.2	171.	284.
100.000	38.6	154.	.654	34.0	174.	286.
100.500	50.6	63.	.523	34.1	183.	272.
101.000	37.6	157.	.749	34.0	182.	292.
101.500	66.5	323.	.679	34.1	177.	288.
102.000	66.0	326.	.804	34.0	181.	291.
102.500	68.9	311.	.716	34.2	167.	281.
103.000	51.7	346.	.788	34.3	180.	290.
103.500	55.9	347.	.666	33.8	181.	291.
104.000	54.5	326.	.695	33.9	179.	289.
104.500	50.6	340.	.761	33.2	198.	303.
105.000	39.0	344.	.762	33.7	181.	291.
105.500	39.0	340.	.806	33.4	177.	288.
106.000	44.1	334.	.721	33.4	182.	291.
106.500	45.2	345.	.757	33.7	185.	294.
107.000	47.4	134.	.335	33.3	169.	283.
107.500	41.5	334.	.731	33.2	177.	289.
108.000	46.8	345.	.716	32.2	185.	294.
108.500	111.9	322.	.608	33.5	167.	282.
109.000	58.0	333.	.447	33.1	181.	291.
109.500	73.6	335.	.546	32.5	184.	293.
110.500	47.5	335.	.835	33.2	179.	290.
111.000	46.8	337.	.816	32.7	181.	290.
111.500	48.9	327.	.822	31.8	186.	293.
112.000	54.1	340.	.742	32.8	178.	287.
112.500	50.0	341.	.722	32.6	182.	290.
113.000	42.1	339.	.803	32.5	181.	290.
113.500	50.7	334.	.618	32.3	188.	294.
114.000	50.2	338.	.615	32.3	185.	293.
114.500	52.6	343.	.612	32.3	179.	288.
115.000	83.6	295.	.544	32.4	170.	283.
115.500	86.8	356.	.438	32.3	186.	295.
116.000	88.0	290.	.525	32.2	184.	294.
116.500	67.5	341.	.768	32.3	179.	290.
117.000	66.7	347.	.685	32.2	179.	290.
117.500	78.4	49.	.528	32.2	183.	293.
118.000	78.5	92.	.544	32.3	190.	298.
118.500	81.8	74.	.710	32.0	178.	290.
119.000	72.1	358.	.605	30.8	193.	300.
119.500	71.0	3.	.418	31.7	191.	298.
120.000	73.3	346.	.678	31.7	183.	293.
120.500	69.0	346.	.798	31.6	180.	291.
121.000	60.4	0.	.777	31.8	181.	292.
121.500	50.9	4.	.403	31.8	181.	292.
122.000	55.9	78.	.616	31.9	183.	294.
122.500	101.8	351.	.780	31.8	174.	287.
123.000	23.7	96.	.464	31.3	190.	298.
123.500	56.0	272.	.414	31.8	182.	293.
124.000	98.1	53.	.618	31.1	190.	299.
124.500	93.4	357.	.749	31.9	180.	292.
125.000	100.7	1.	.575	32.0	176.	290.
125.500	97.1	67.	.438	31.7	183.	294.
126.000	107.5	6.	.501	31.8	186.	297.
126.500	50.0	206.	.365	32.3	167.	284.
127.000	42.6	164.	.485	31.8	172.	287.
127.500	107.1	30.	.548	32.2	179.	292.
128.000	44.4	204.	.629	31.8	176.	290.
128.500	2.5	199.	.527	31.8	180.	293.
129.000	12.9	14.	.491	32.4	171.	287.
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130.500	99.7	26.	.845	32.1	180.	294.
131.000	98.3	29.	.868	31.8	186.	297.
131.500	105.7	34.	.928	33.6	192.	302.
132.000	55.2	207.	.598	31.8	179.	292.
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133.000	92.4	30.	.360	31.7	192.	301.
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138.000	94.2	325.	.581	31.3	205.	313.
138.500	76.5	264.	.481	32.2	178.	295.
139.000	79.3	74.	.462	32.0	201.	310.
139.500	71.2	61.	.761	31.9	184.	298.
140.000	70.8	84.	.793	31.2	194.	306.
140.500	39.6	107.	.750	31.8	174.	330.
141.000	46.1	152.	.705	31.5	183.	31.
141.500	111.0	348.	.605	31.0	187.	54.
142.000	46.3	182.	.464	31.5	163.	49.
142.500	44.2	208.	.453	31.4	182.	60.
143.500	51.6	177.	.494	31.6	182.	61.
144.000	52.3	213.	.619	31.5	197.	70.
144.500	39.6	198.	.821	31.1	184.	60.
145.000	35.0	183.	.739	31.0	183.	56.
145.500	86.9	63.	.355	31.4	167.	42.
146.000	81.5	275.	.397	31.7	178.	46.
146.500	52.2	198.	.535	30.8	175.	34.
147.000	50.5	192.	.527	30.9	180.	349.
147.500	65.2	103.	.435	31.2	175.	302.
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149.000	24.0	285.	.388	30.1	193.	358.
149.500	48.3	281.	.471	30.8	167.	358.
150.000	87.8	80.	.447	30.5	189.	15.
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151.000	94.6	73.	.700	30.8	191.	21.
151.500	108.7	32.	.610	30.6	193.	25.
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164.500	23.2	206.	.567	30.5	191.	336.
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166.500	56.3	144.	.441	30.7	179.	326.
167.000	21.6	161.	.691	30.6	176.	321.
167.500	62.9	106.	.500	30.7	180.	321.
168.000	54.6	141.	.362	30.5	201.	334.
168.500	47.4	218.	.807	30.3	179.	317.
169.000	47.6	216.	.681	30.2	183.	318.
169.500	85.2	98.	.453	30.4	194.	323.
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170.500	110.4	1.	.421	30.0	178.	310.
171.000	50.2	158.	.370	30.2	181.	311.
171.500	100.7	47.	.314	30.2	181.	311.
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172.500	68.6	58.	.477	30.1	183.	309.
173.000	70.7	53.	.515	30.1	183.	306.
173.500	14.1	280.	.778	30.7	172.	299.
174.000	12.8	283.	.782	30.2	176.	302.
174.500	14.7	272.	.874	30.7	171.	298.
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176.500	12.3	263.	.657	30.0	[illegible]	[illegible]
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191.500	66.9	261.	.472	29.2	186.	119.
192.000	38.9	280.	.732	29.0	184.	118.
192.500	49.0	158.	.426	29.7	171.	109.
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206.000	25.5	11.	.820	28.7	188.	122.
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207.000	88.8	309.	.677	28.5	188.	122.
207.500	92.5	342.	.901	28.6	187.	121.
208.000	54.9	355.	.874	28.4	190.	124.
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209.000	49.0	349.	.644	28.2	188.	121.
209.500	43.4	357.	.780	28.3	190.	124.
210.000	49.1	325.	.782	28.4	182.	118.
210.500	31.8	357.	.905	28.3	199.	123.
211.000	30.5	1.	.805	28.3	189.	123.
211.500	46.9	224.	.393	28.2	188.	122.
212.000	31.6	346.	.795	28.4	184.	119.
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753

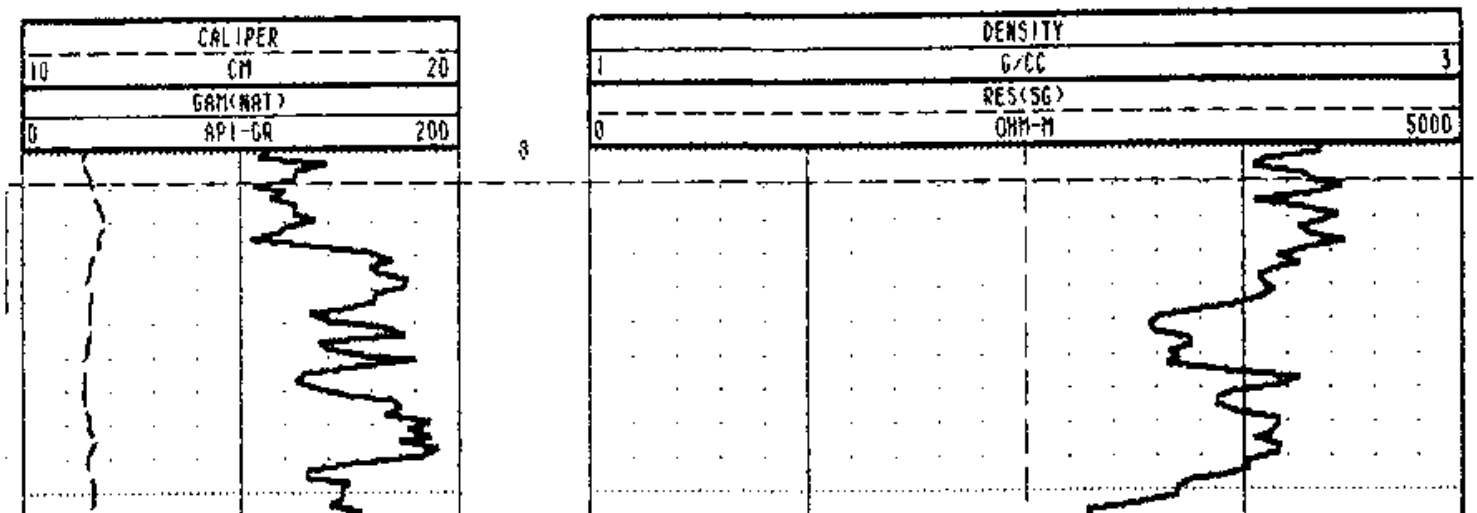
Century

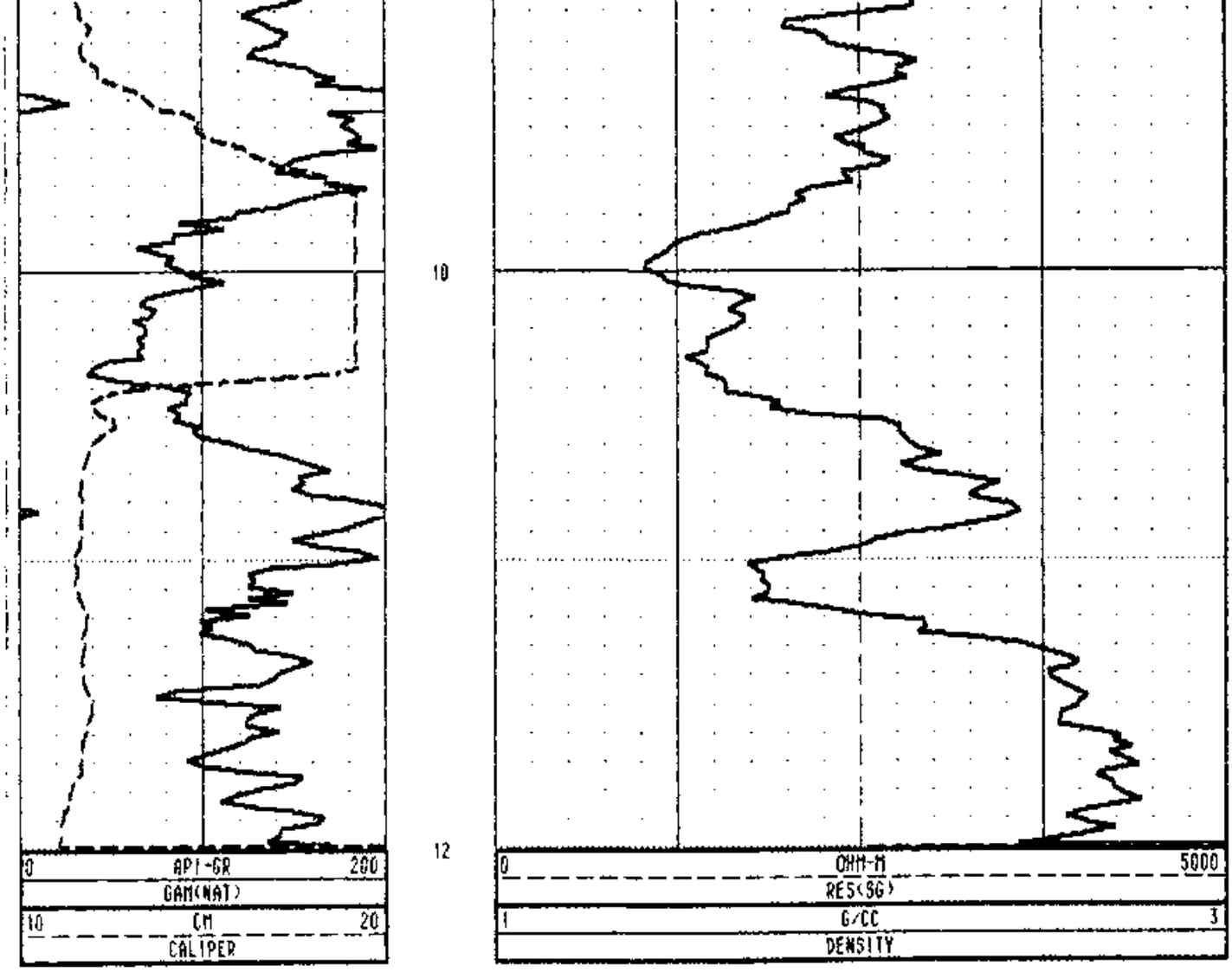
QHR89023 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89023 GAM-DEN-RES-CAL			SCALE 1:200	
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/08/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 109	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 108.80	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.16	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 3	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 14
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 50000

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE 45 DEGREES

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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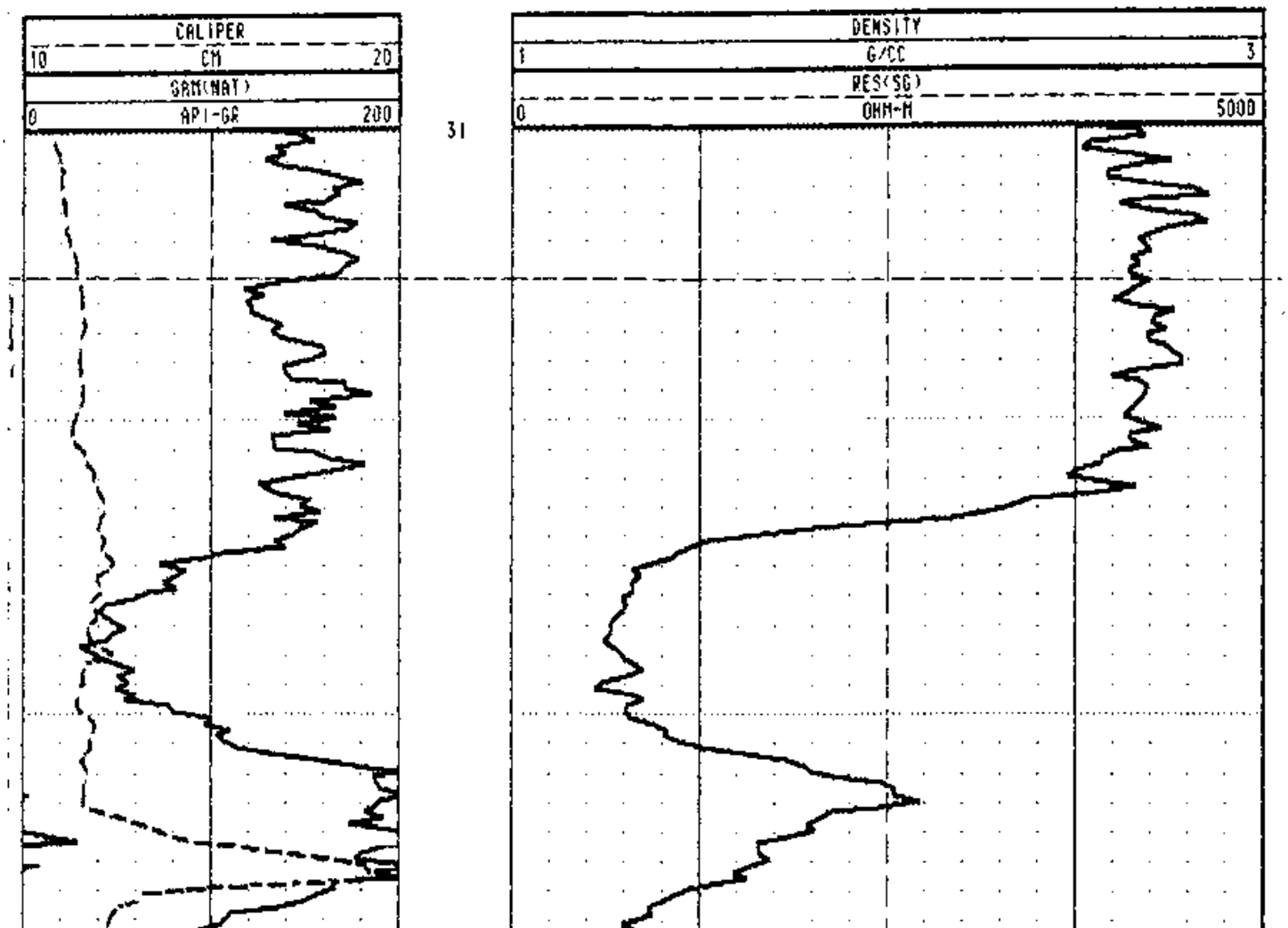
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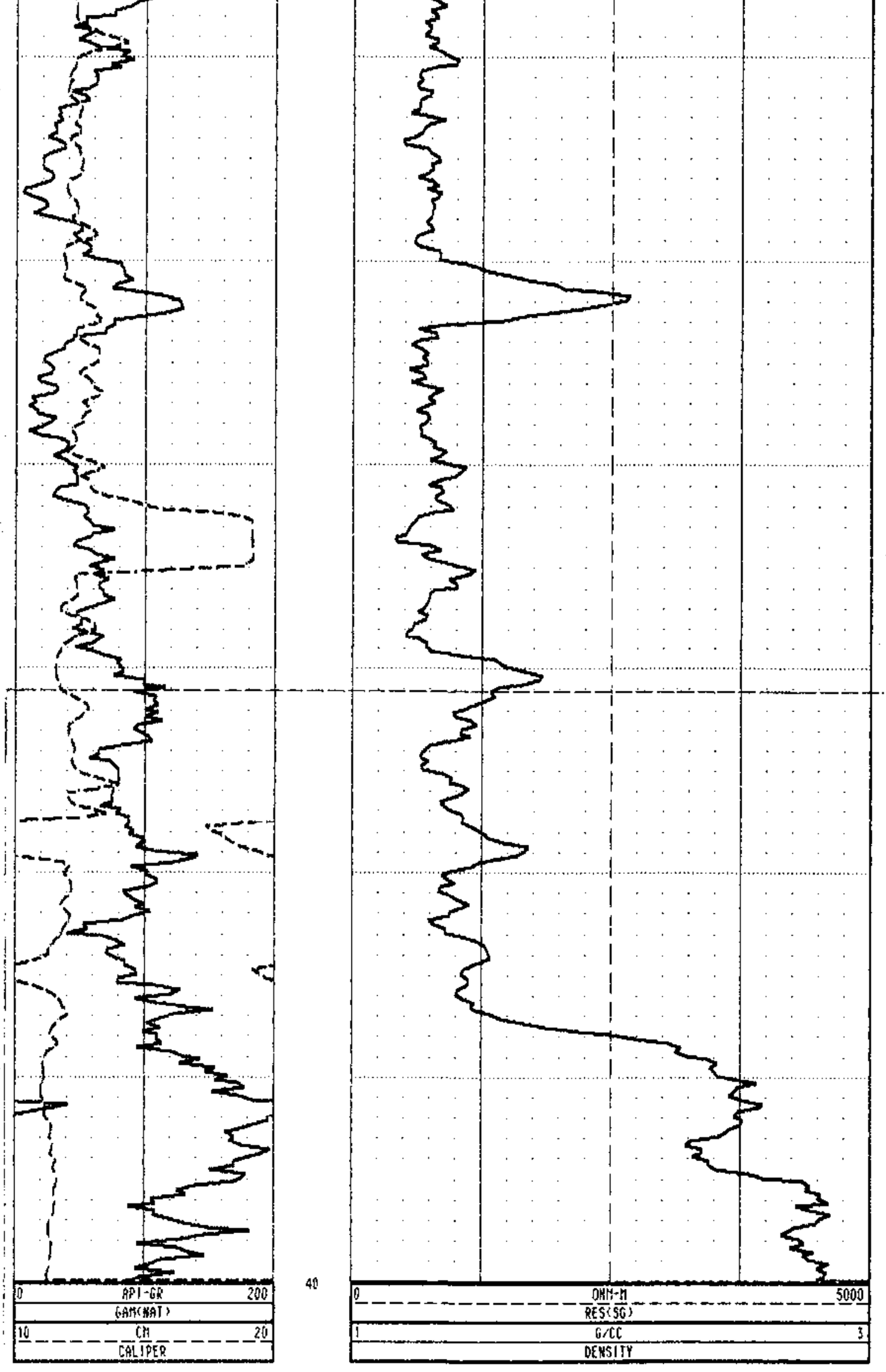
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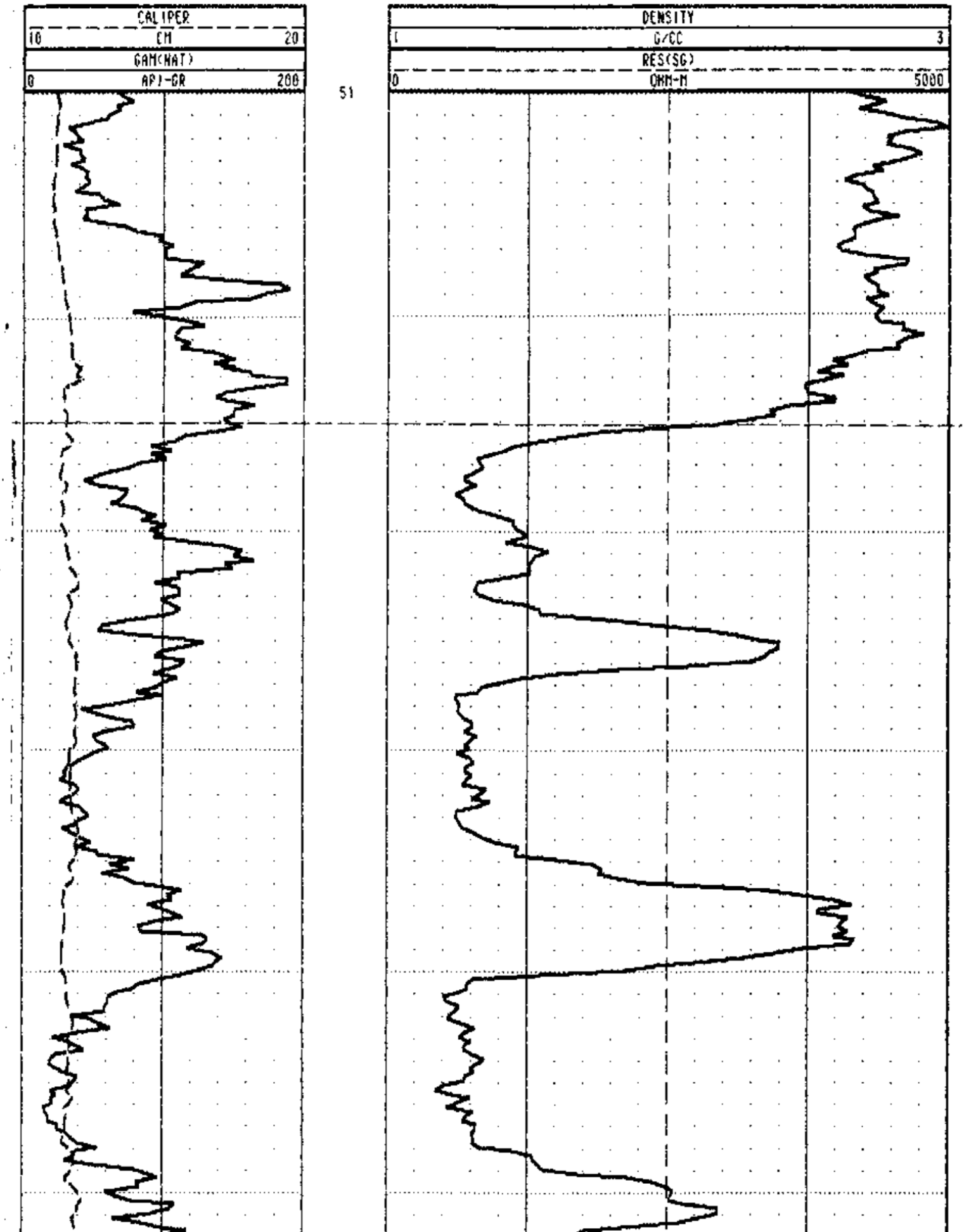
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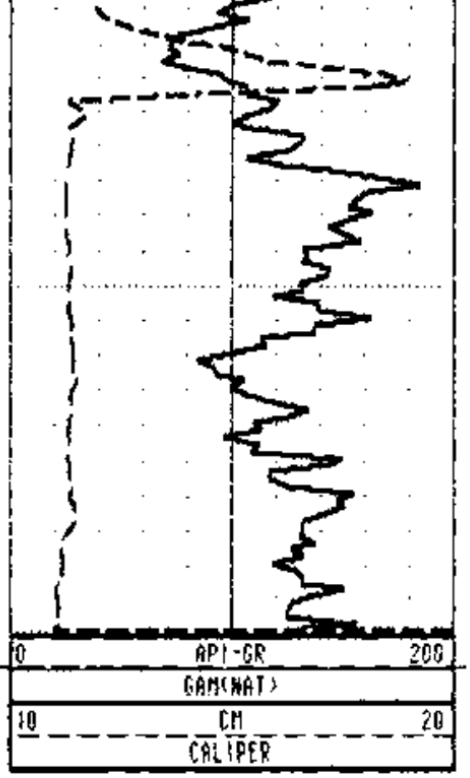
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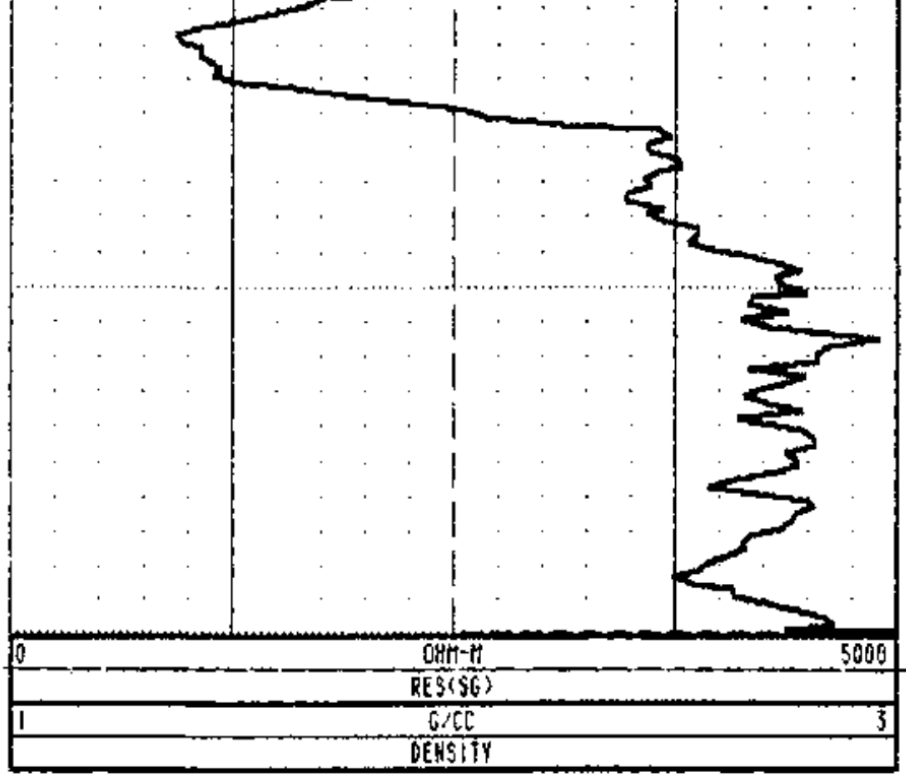
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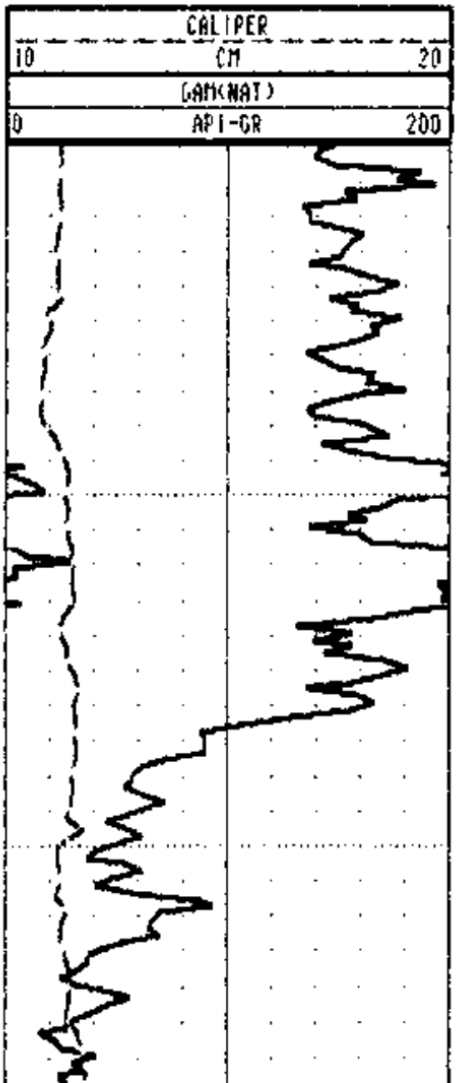
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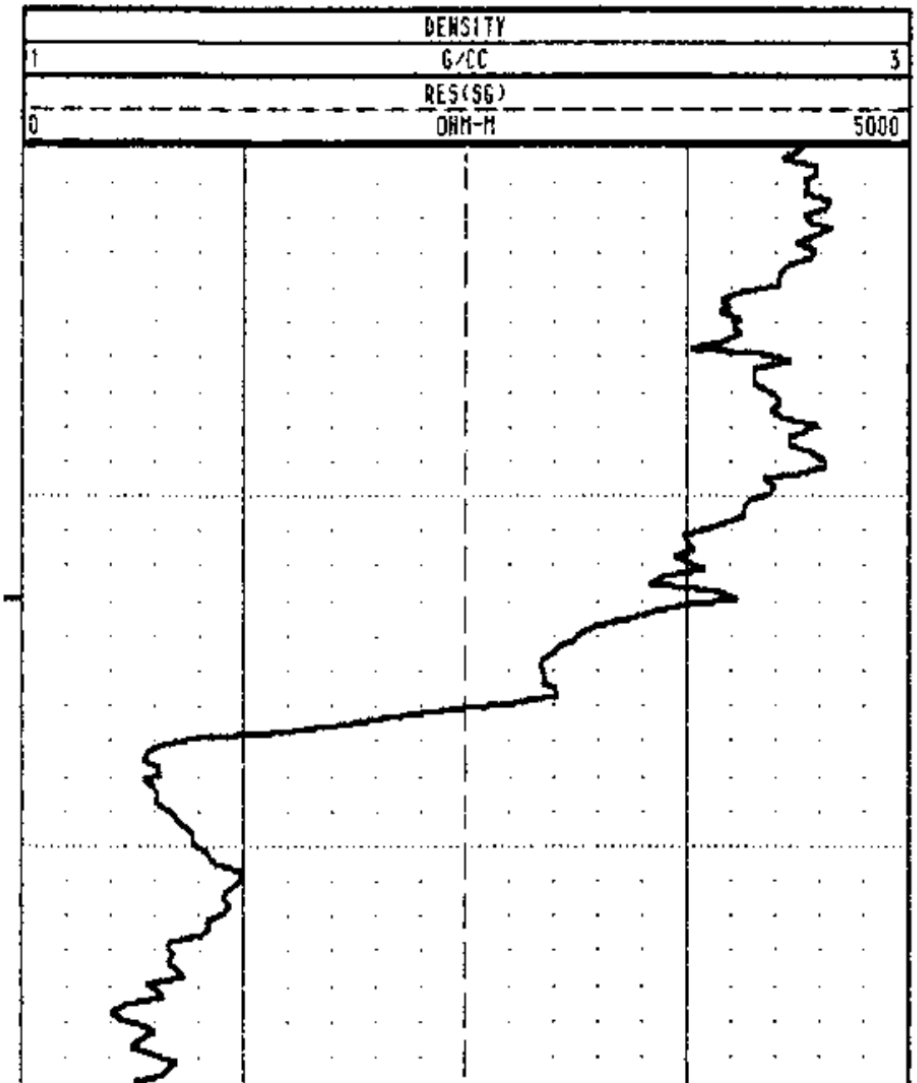
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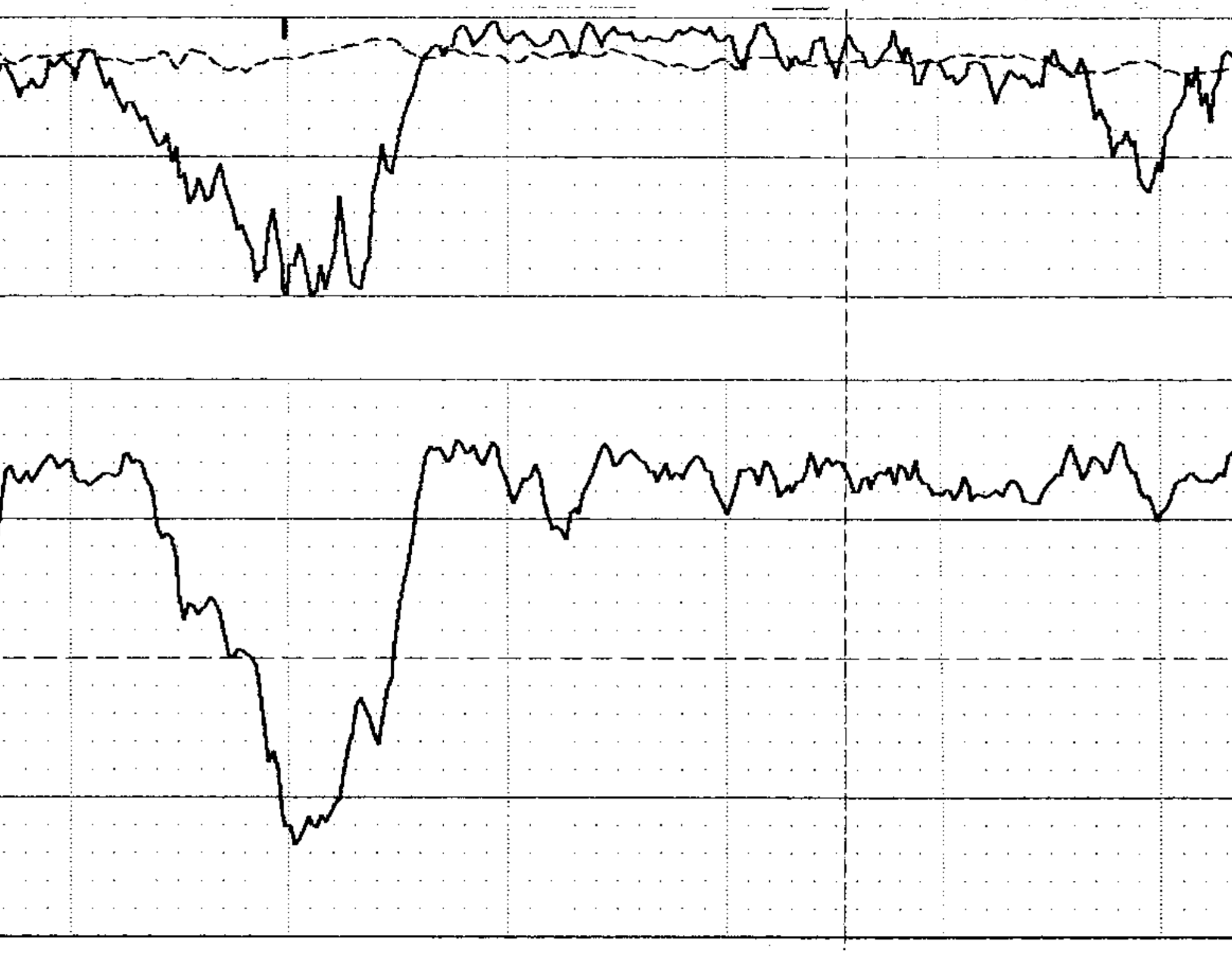
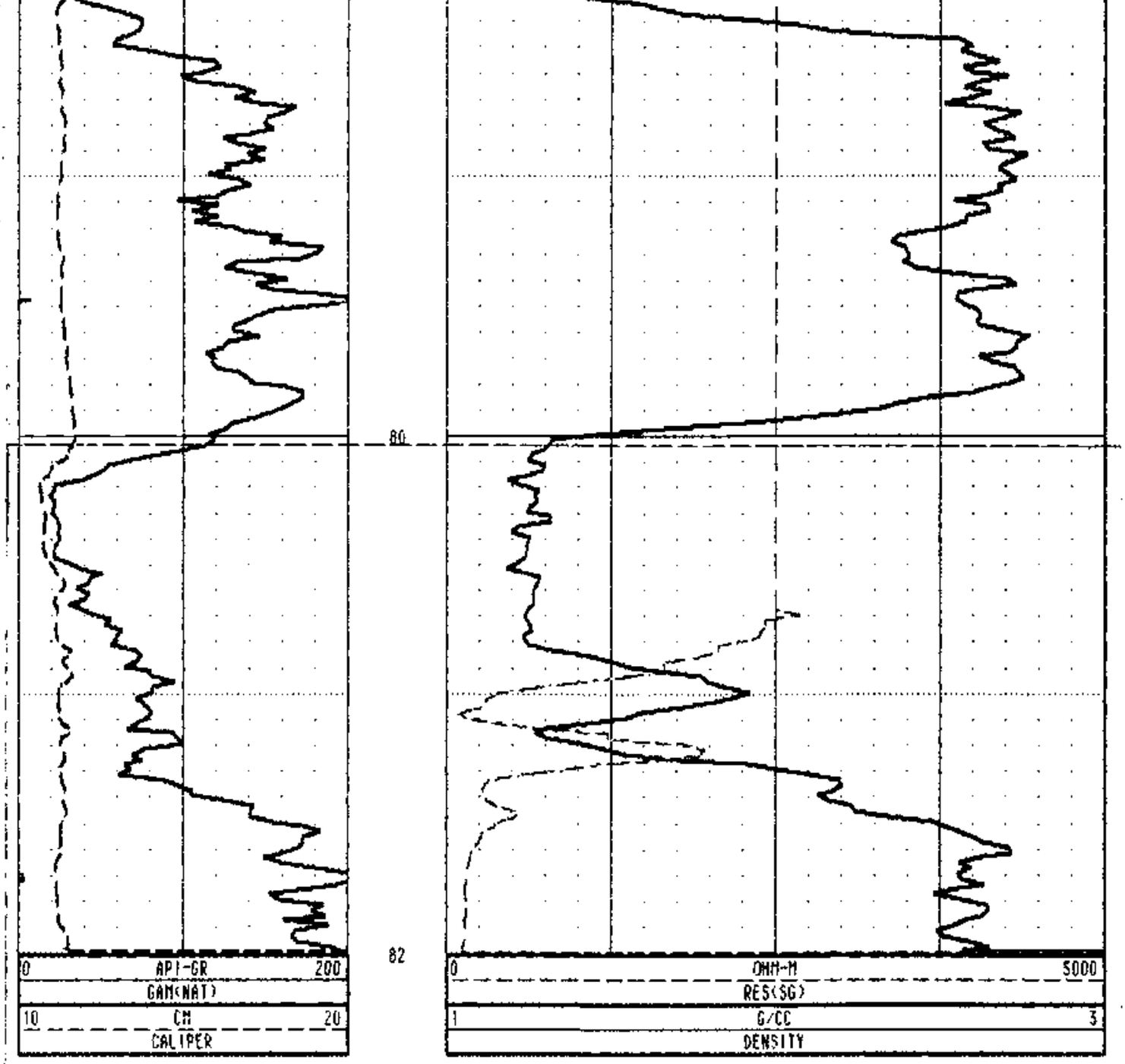
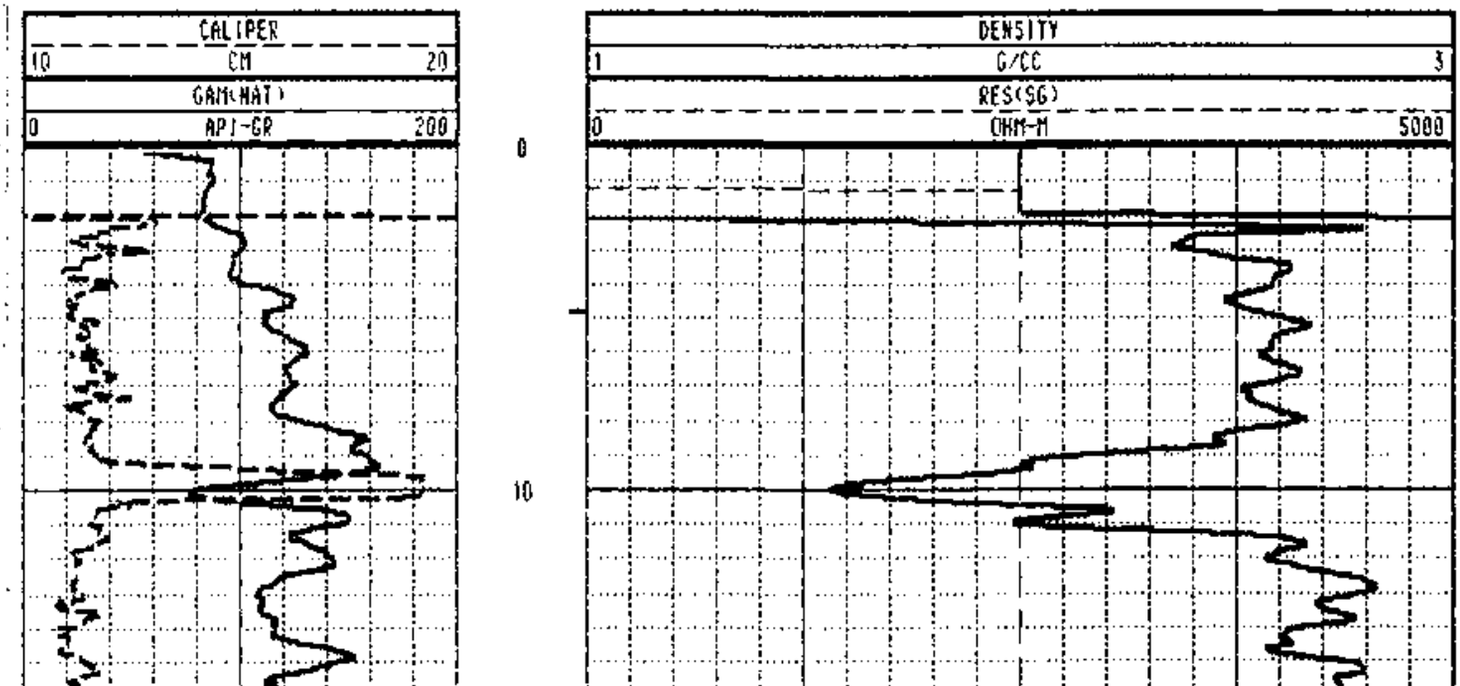
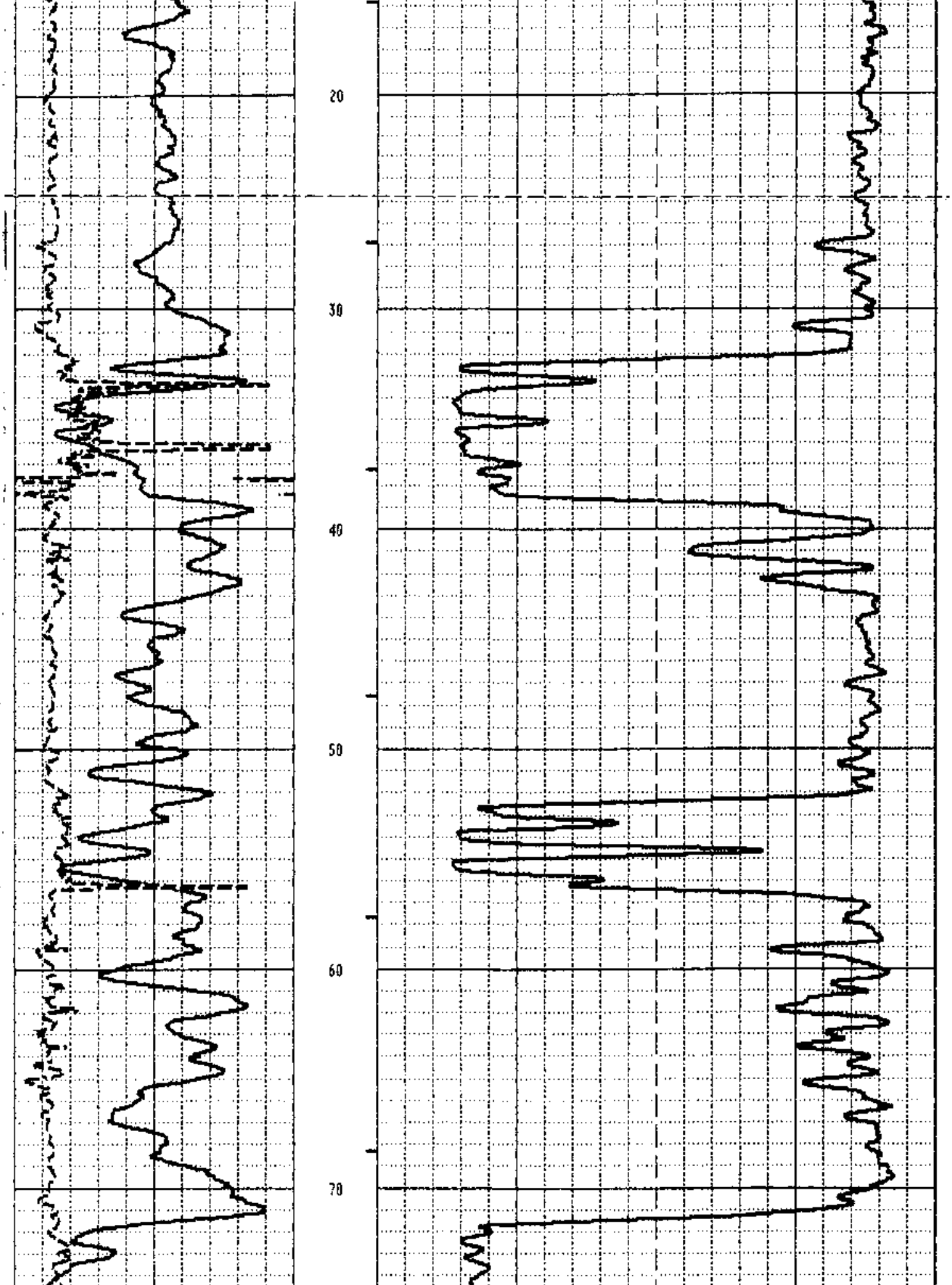
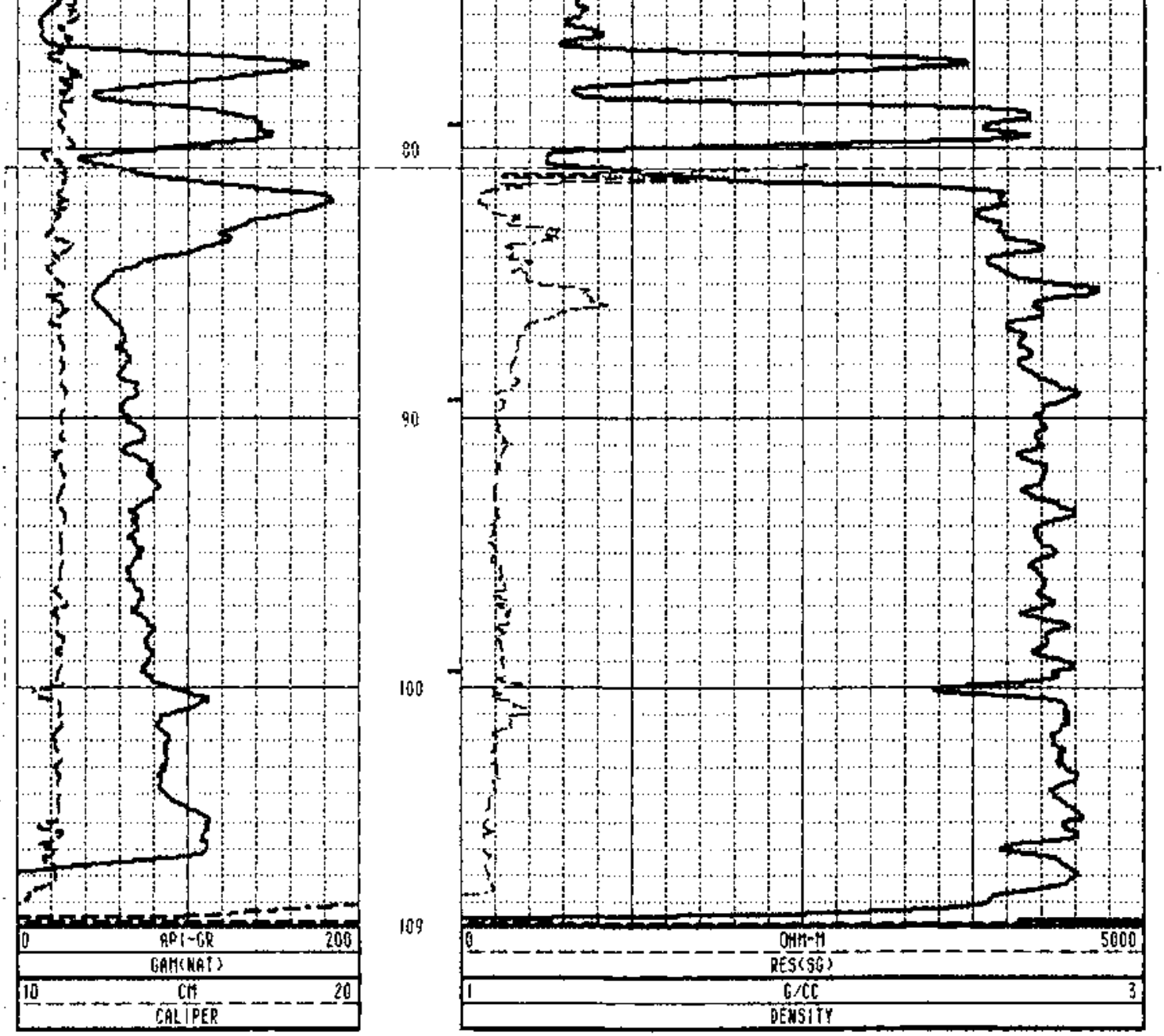



80
82
0
API-GR
200
GAM(NAT)
10
CM
20
CALIPER
0
OHM-M
5000
RES(SG)
1
G/CC
3
DENSITY


CALIPER
10
CM
20
GAM(NAT)
0
API-GR
200
0
10
DENSITY
1
G/CC
3
RES(SG)
0
OHM-M
5000


20
30
40
50
60
70



TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-M
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITYH	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS	0.000 CM

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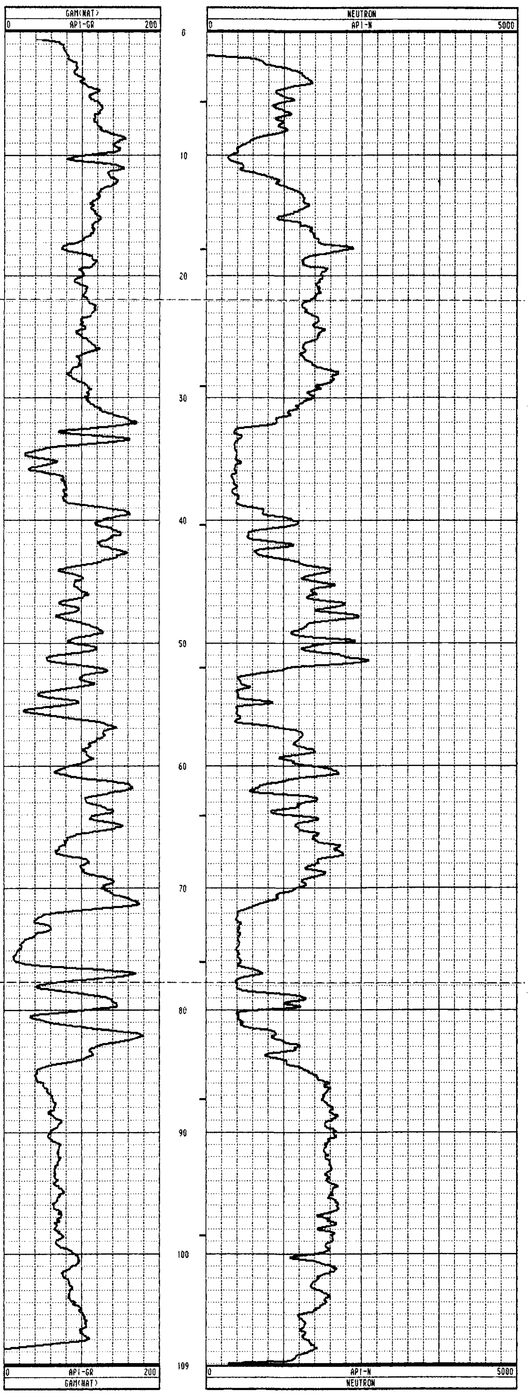
QHR89023 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR89023 GAMMA-NEUTRON				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/08/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 109	ELEV. PERM. DATUM	: 00	KB	: 00
LOG BOTTOM	: 109.10	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.64	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 3	LOGGING UNIT	: 8902		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: D.ZANKL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 00	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 00	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 50000

OTHER SERVICES:
SCALE
1:200

REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE 45 DEGREES

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD.
FIELD OFFICE : CALGARY
DATA FROM :
MAG. DECL. : 24.500

HOLE ID. : QHR89023 GAMM
DATE OF LOG : 08/30/89
PROBE : 9055A , 14
DEPTH UNITS : METER LOG 3

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
1.0	1.00	0.00	0.00	0.0	-.0	0.0	0.0
6.0	4.87	1.83	-.09	1.8	357.3	44.6	23.4
11.0	8.44	5.19	0.85	5.3	9.3	44.1	17.1
16.0	12.01	8.56	1.71	8.7	11.3	44.0	12.0
21.0	15.63	11.90	2.59	12.2	12.3	43.3	15.0
26.0	19.28	15.22	3.37	15.6	12.5	43.0	19.0
31.0	22.95	18.50	4.21	19.0	12.8	42.6	14.1
36.0	26.64	21.76	5.03	22.3	13.0	42.2	14.8
41.0	30.36	24.97	5.77	25.6	13.0	42.0	22.9
46.0	34.07	28.20	6.61	29.0	13.2	41.6	16.6
51.0	37.81	31.40	7.45	32.3	13.4	41.4	15.7
56.0	41.57	34.59	8.26	35.6	13.4	41.0	14.5
61.0	45.35	37.76	9.12	38.8	13.6	40.6	16.3
66.0	49.14	40.91	9.91	42.1	13.6	41.1	15.8
71.0	52.94	44.06	10.68	45.3	13.6	40.9	16.4
76.0	56.74	47.20	11.47	48.6	13.7	40.3	15.0
81.0	60.54	50.34	12.30	51.8	13.7	40.7	12.7
86.0	64.34	53.49	13.08	55.1	13.7	41.1	14.0
91.0	68.15	56.61	13.89	58.3	13.8	39.9	13.5
96.0	72.00	59.69	14.72	61.5	13.8	39.3	14.1
101.0	75.88	62.74	15.53	64.6	13.9	39.1	14.9
106.0	79.77	65.76	16.37	67.8	14.0	38.8	14.6
109.1	82.20	67.60	16.86	69.7	14.0	0.0	0.0

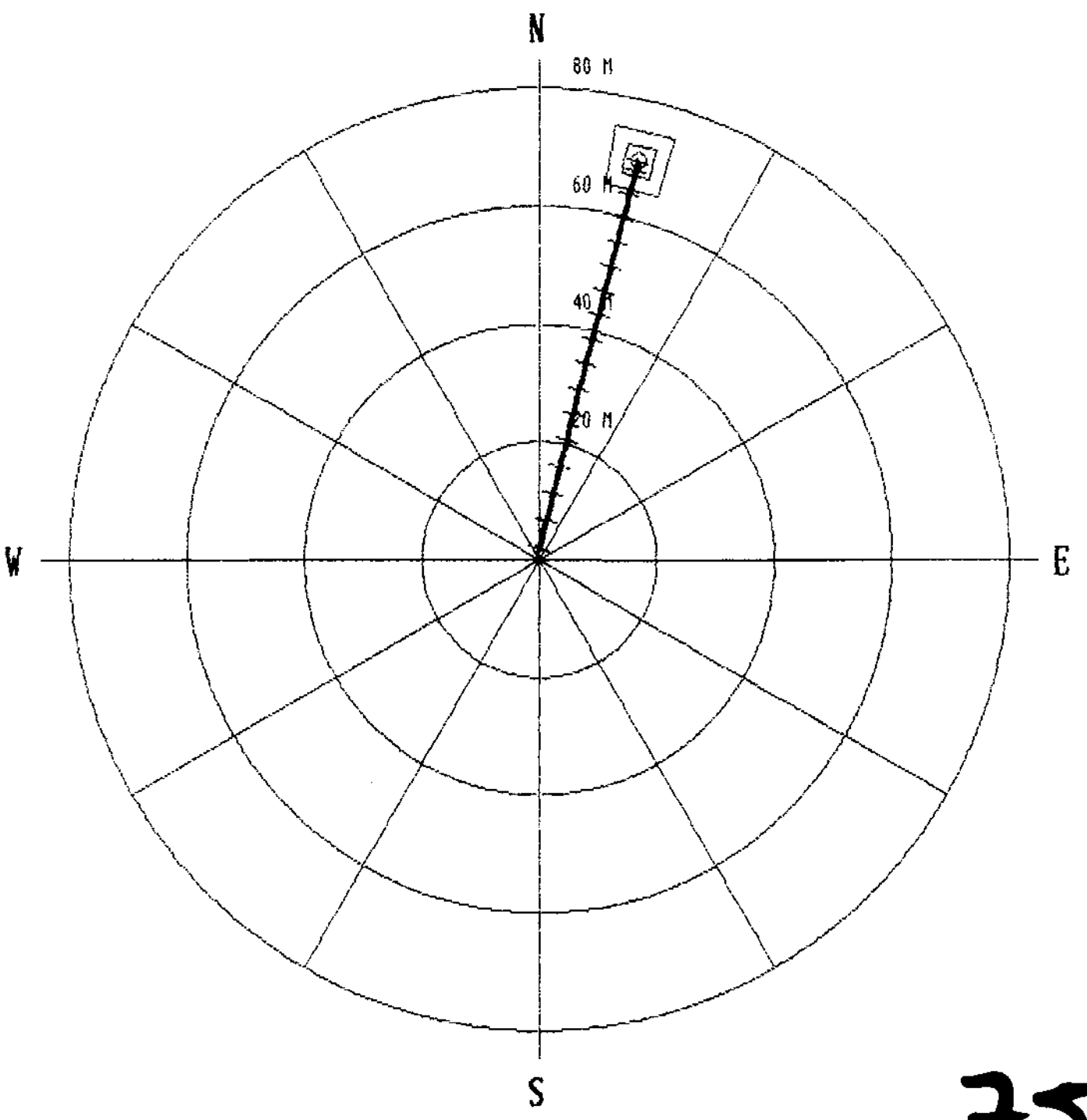
PLAN VIEW

COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
LOCATION:
HOLE ID: QHR89023 GAMMA-NEUTRON
DATE OF LOG: 08/30/89
PROBE: 9055A 14

MAG DECL: 24.5

SCALE: 10 M/CM
TRUE DEPTH: 82.14 M
AZIMUTH: 14.0
DISTANCE: 69.7 M
+ = 5 M INCR
○ = BOTTOM OF HOLE



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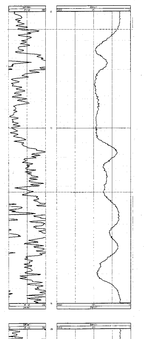
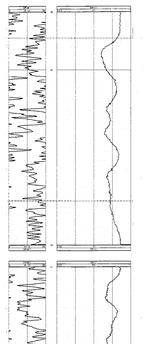
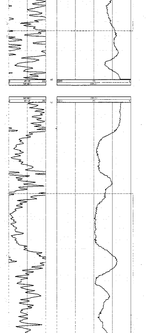
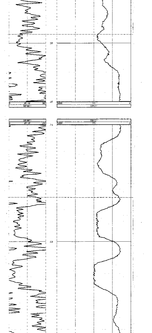
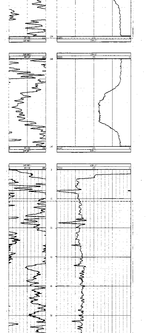
SUBSURFACE CONSULTANTS

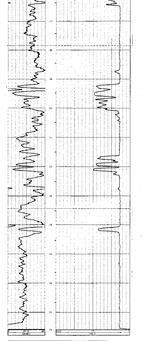












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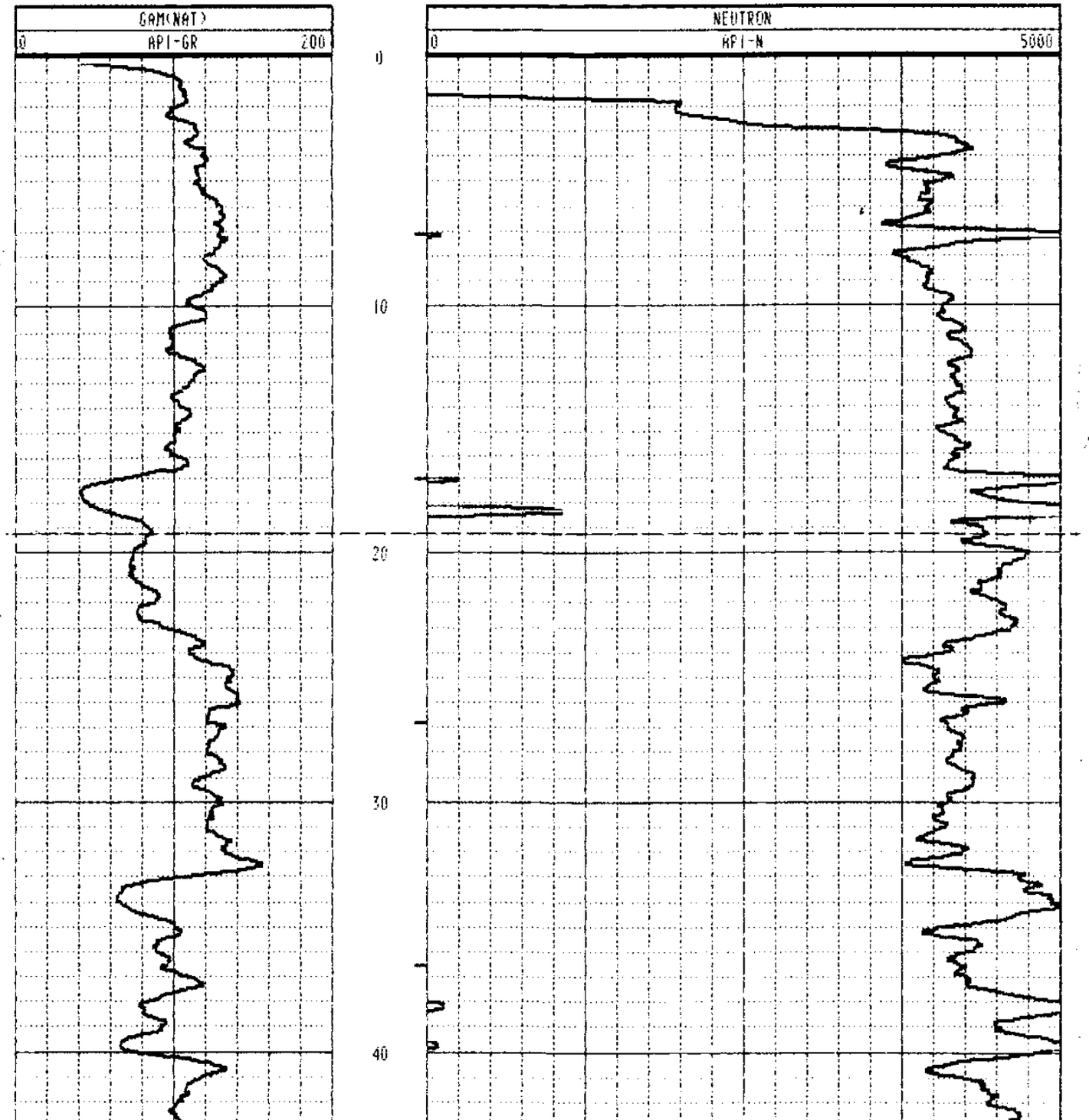
CGC

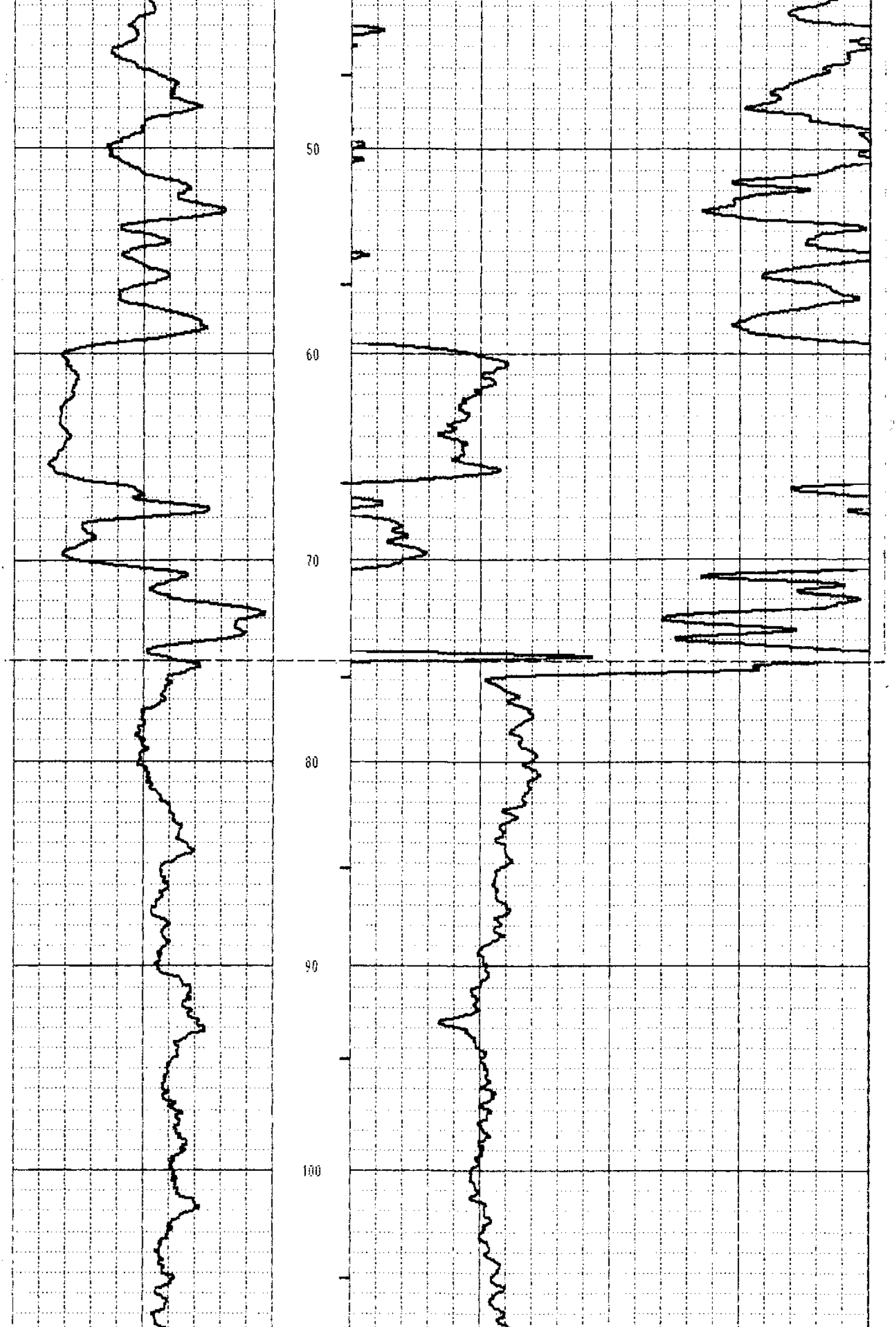
QHR89024 GAM-NEUTRON

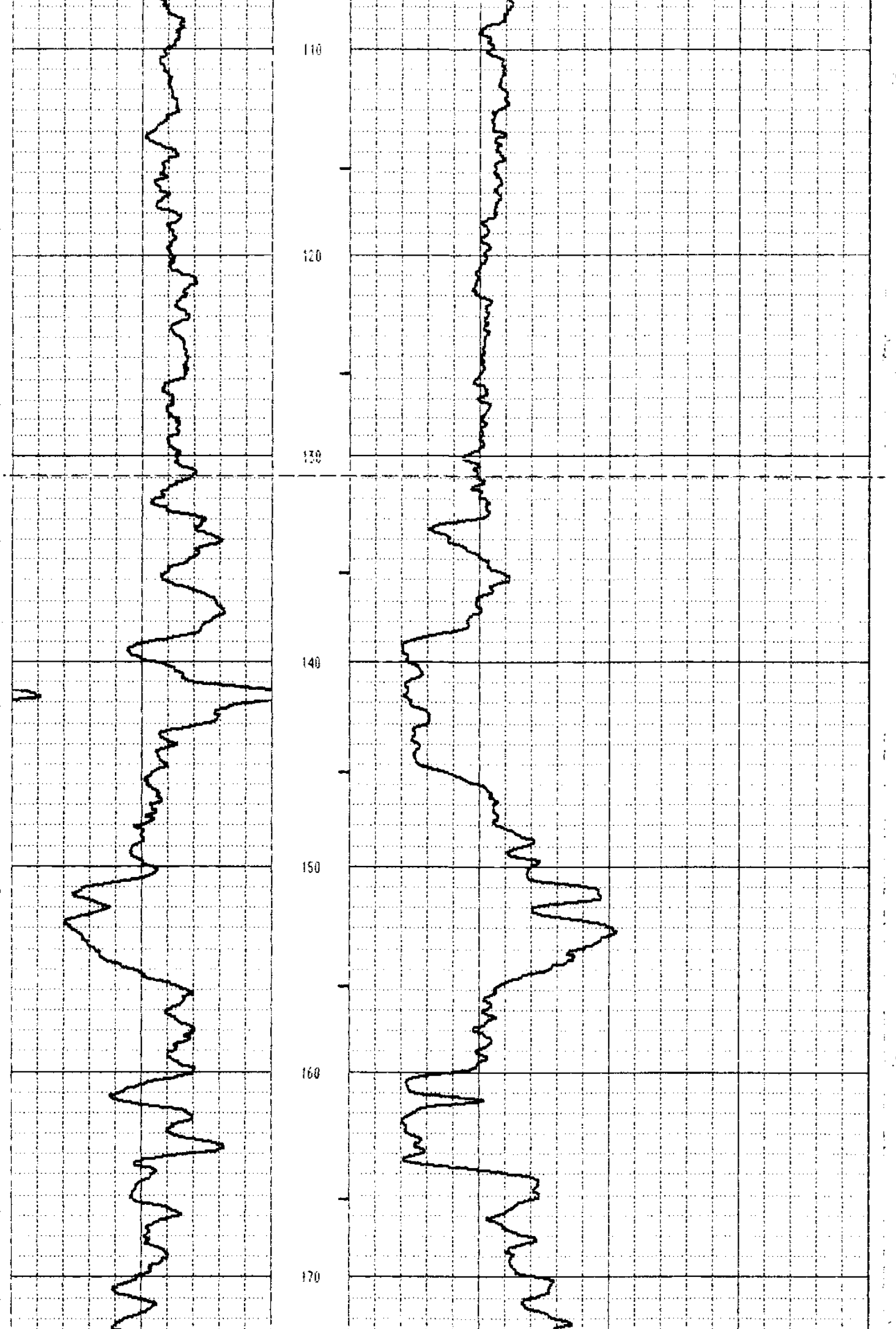
COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR89024 GAM-NEUTRON				
LOCATION/FIELD	:				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/12/89	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 276	ELEV. PERM. DATUM	: GL	KB	: 00
LOG BOTTOM	: 275.90	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: 0.32	DRL MEASURED FROM	: GL	GL	: 00
CASING DRILLER	: 3	LOGGING UNIT	: 8903		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .05	RECORDED BY	: P. BISSON		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	:	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 50000

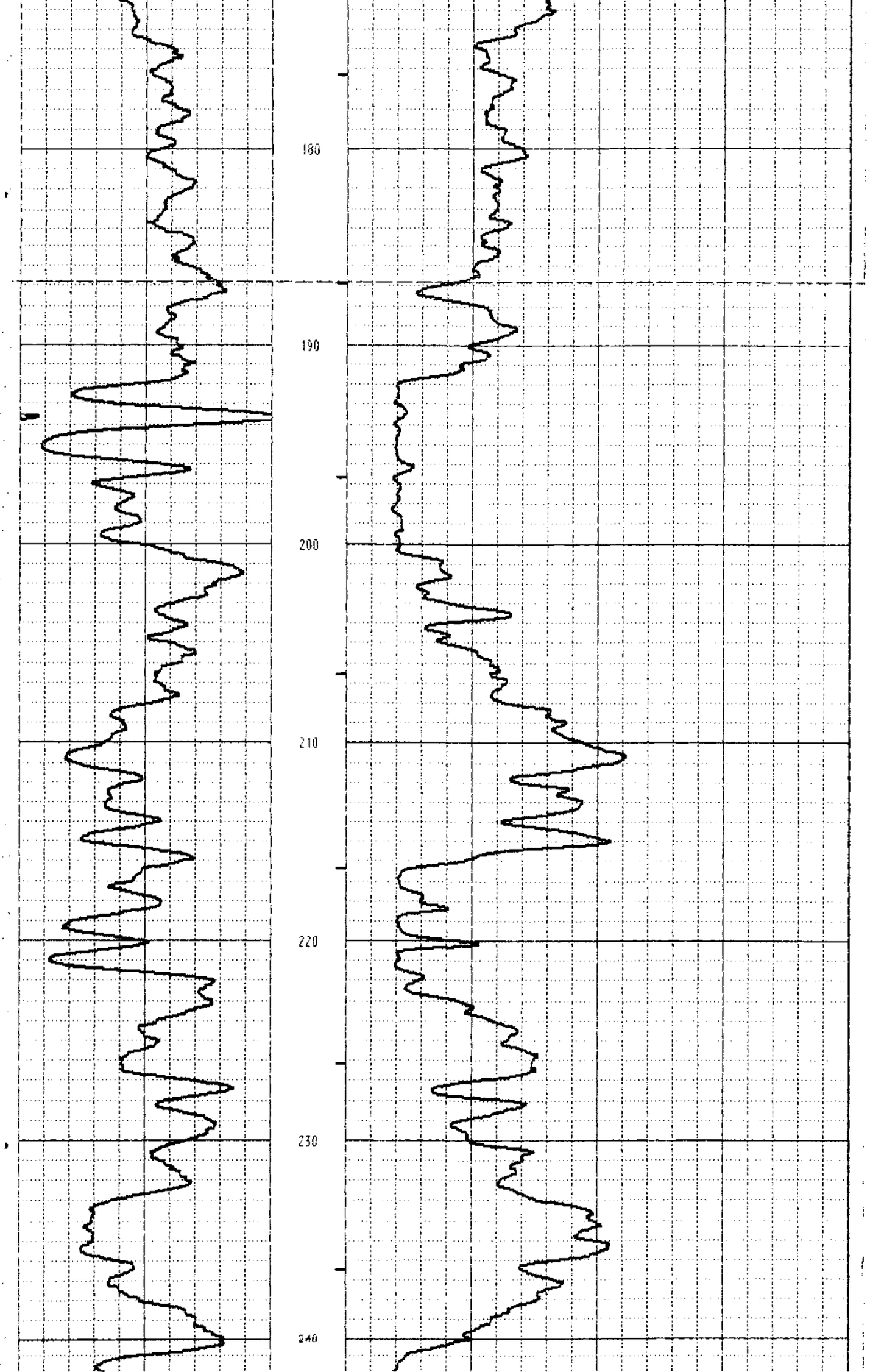
REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE

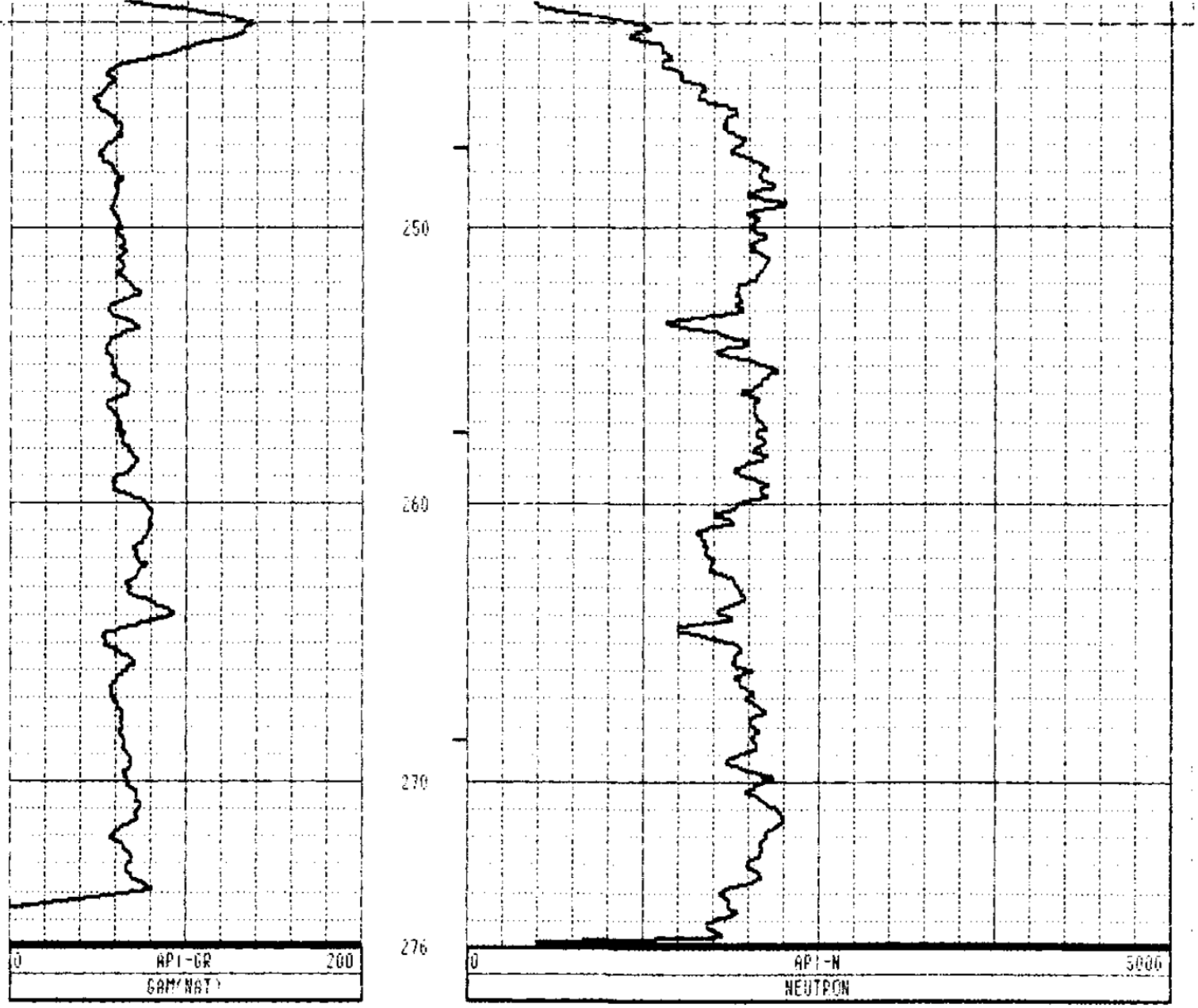
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS


GAM(NAT)
0
API-GR
200
NEUTRON
0
API-N
5000
0
10
20
30
40


50
60
70
80
90
100


110
120
130
140
150
160
170


180
190
200
210
220
230
240



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 14

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:13:14	0	SP	-9.000 CPS	0.000 MV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

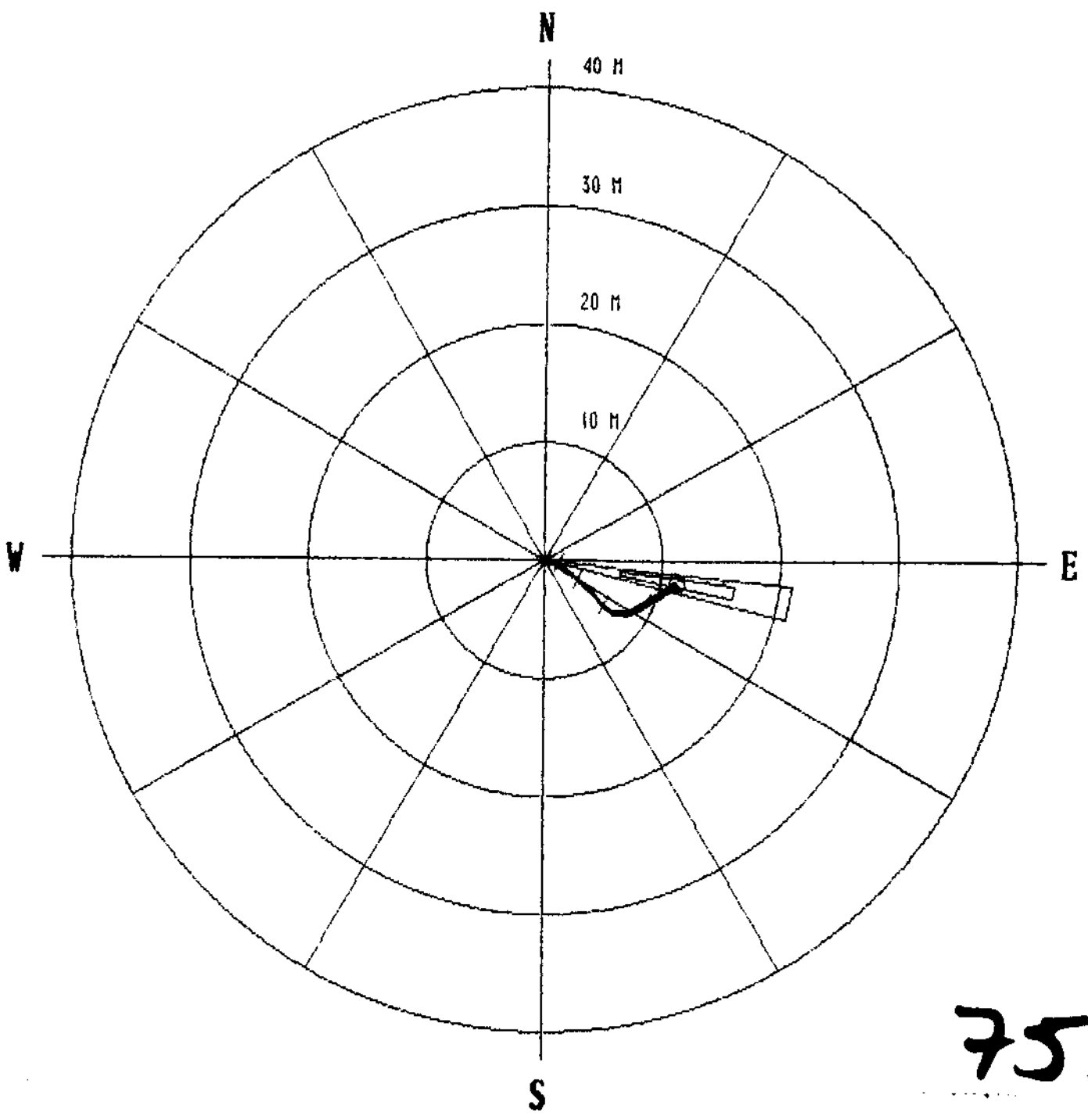
PLAN VIEW

COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
LOCATION:
HOLE ID: QHR89024 GAM-NEUTRON
DATE OF LOG: 06/13/89
PROBE: 9055A 14

MAG DECL: 24.5

SCALE: 5 M/CM
TRUE DEPTH: 275.31 M
AZIMUTH: 99.5
DISTANCE: 11.4 M
+ = 50 M INCR
○= BOTTOM OF HOLE



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* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89024 GAM-
FIELD OFFICE : CALGARY DATE OF LOG : 06/13/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 4

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	0.00	0.00	0.0	0.1	0.3	252.4
8.0	8.00	-.02	-.02	0.0	220.7	0.3	216.2
13.0	13.00	-.04	-.04	0.1	218.6	0.2	193.1
18.0	18.00	-.07	-.04	0.1	209.4	0.8	47.0
23.0	23.00	-.10	-.04	0.1	203.2	0.3	125.9
28.0	28.00	-.11	-.04	0.1	200.3	0.1	223.2
33.0	33.00	-.11	-.04	0.1	198.1	0.4	82.9
38.0	38.00	-.08	-.04	0.1	205.1	0.1	227.8
43.0	43.00	-.07	-.02	0.1	198.4	0.3	44.5
48.0	48.00	-.07	0.02	0.1	167.2	0.9	101.1
53.0	53.00	-.09	0.08	0.1	139.9	0.6	96.0
58.0	58.00	-.11	0.17	0.2	121.2	1.5	86.9
63.0	63.00	-.10	0.28	0.3	109.0	1.1	90.1
68.0	68.00	-.10	0.37	0.4	105.0	0.9	98.2
73.0	72.99	-.11	0.43	0.4	103.9	0.9	110.0
78.0	77.99	-.13	0.52	0.5	104.3	1.3	109.9
83.0	82.99	-.16	0.64	0.7	103.6	1.7	90.3
88.0	87.99	-.16	0.80	0.8	101.5	1.7	101.1
93.0	92.99	-.19	0.96	1.0	101.2	2.0	98.7
98.0	97.98	-.23	1.12	1.1	101.6	1.9	111.1
103.0	102.98	-.31	1.28	1.3	103.6	2.1	118.7
108.0	107.98	-.41	1.41	1.5	106.2	1.9	126.2
113.0	112.97	-.52	1.55	1.6	108.5	2.3	128.8
118.0	117.97	-.64	1.71	1.8	110.7	2.4	130.8
123.0	122.97	-.78	1.87	2.0	112.5	2.5	136.4
128.0	127.96	-.93	2.02	2.2	114.8	2.4	137.8
133.0	132.96	-1.08	2.18	2.4	116.4	2.7	121.2
138.0	137.95	-1.23	2.37	2.7	117.6	2.9	129.1
143.0	142.94	-1.37	2.56	2.9	118.3	2.7	133.1
148.0	147.94	-1.54	2.72	3.1	119.5	3.2	136.0
153.0	152.93	-1.72	2.90	3.4	120.6	2.9	137.9
158.0	157.92	-1.90	3.08	3.6	121.7	3.3	138.6
163.0	162.92	-2.10	3.26	3.9	122.6	2.9	136.8
168.0	167.91	-2.29	3.51	4.2	123.1	3.5	114.7
173.0	172.90	-2.47	3.73	4.5	123.4	3.0	135.1
178.0	177.89	-2.62	3.95	4.7	123.6	3.3	113.9
183.0	182.88	-2.84	4.14	5.0	124.4	3.8	143.7
188.0	187.87	-3.12	4.35	5.3	125.6	4.2	145.3
193.0	192.86	-3.40	4.59	5.7	126.6	4.2	137.3
198.0	197.84	-3.66	4.86	6.1	127.0	4.4	131.0
203.0	202.83	-3.90	5.14	6.4	127.2	4.4	127.8
208.0	207.82	-4.13	5.43	6.8	127.3	4.1	136.4
213.0	212.80	-4.30	5.71	7.1	127.0	3.7	120.8
218.0	217.79	-4.40	6.01	7.4	126.2	3.6	95.8
223.0	222.78	-4.44	6.32	7.7	125.1	3.5	106.2
228.0	227.77	-4.46	6.63	8.0	124.0	3.8	82.6
233.0	232.76	-4.42	6.98	8.3	122.4	4.0	83.3
238.0	237.74	-4.31	7.37	8.5	120.3	5.3	62.9
243.0	242.72	-4.07	7.83	8.8	117.4	6.2	58.1
248.0	247.68	-3.76	8.31	9.1	114.3	6.5	60.3
253.0	252.65	-3.46	8.79	9.4	111.5	6.2	70.5
258.0	257.62	-3.15	9.28	9.8	108.7	6.6	59.1

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QHR89024 GAM-
FIELD OFFICE : CALGARY DATE OF LOG : 06/13/89
DATA FROM : PROBE : 9055A , 14
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 4

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
263.0	262.58	-2.84	9.81	10.2	106.2	7.4	60.6
268.0	267.54	-2.48	10.36	10.6	103.5	7.3	60.6
273.0	272.49	-2.09	10.90	11.1	100.9	7.6	40.7
275.9	275.37	-1.88	11.21	11.4	99.5	0.0	0.0