

Addendum I

PART 2 OF 2

1989 MESA NORTH EXTENSION

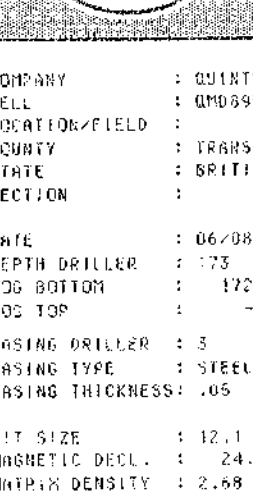
DRILL HOLE GEOPHYSICAL LOGS

(Copy 2 of 2)

753

MESA NORTH EXTENSION

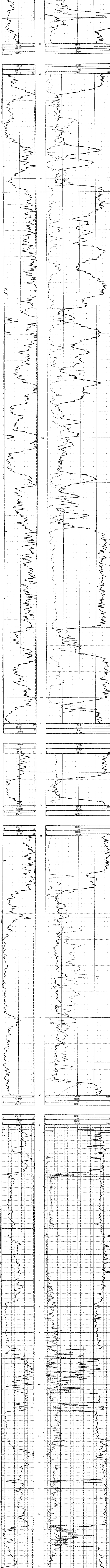
DIAMOND DRILL HOLES



Century

QMD 89501 GAM-DEN-RES-CAL

COMPANY : QUINTELL COAL LTD. WELL : QMD89501 GAM-DEN-RES-CAL LOCATION/FIELD : COUNTY : TRANSFER STATE : BRITISH COLUMBIA SECTION : DATE : 06-08-89 DEPTH DRILLER : 173 LOG BOTTOM : 372.50 LOG TOP : -02 LOGGING DRILLER : S CASING TYPE : STEEL CASING THICKNESS : .05 BIT SIZE : 12.1 MAGNETIC DECL. : 24.500 TRUE DENSITY : 2.68 FLUID DENSITY : 1.0 NEUTRON MATRIX : SANDSTONE REMARKS : LOGGED OPEN HOLE VERTICAL HOLE ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS	OTHER SERVICES: SCALE : 1:200 RANGE : PERMITS/DIAGN : 00 ELEV. PERM. DATA: 00 LOG MEASURED FROM: AL DR. MEASURED FROM: CA LOGGING UNIT : 4902 FIELD OFFICE : CALDARY RECORDED BY : D.ZANFI BOREHOLE FLUID : WATER PH : 00 MID TEMPERATURE : 00 MATHS DELTA T : 175 FLUID DELTA T : 690 ELEVATIONS : KB : 00 OF : 00 OL : 00 FILE : ORIGINAL TYPE : W32000 LOG : 3 PLOT : QUIN 14 THRESH: 50000
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LOG DATE	LOG TIME	SCALE	SENSOR	RESPONSE	SIGNAL
0	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP
1	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP
2	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP
3	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP
4	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP
5	05-04-89	10:25:07	0	3025.000 EPS	173.500 MP-SP
6	05-04-89	10:46:14	0	155.000 EPS	17.628 CM
7	05-04-89	10:46:14	0	1500.000 EPS	17.628 CM
8	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP
9	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP
10	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP
11	05-04-89	10:12:51	0	0.000 EPS	0.000 MP-SP

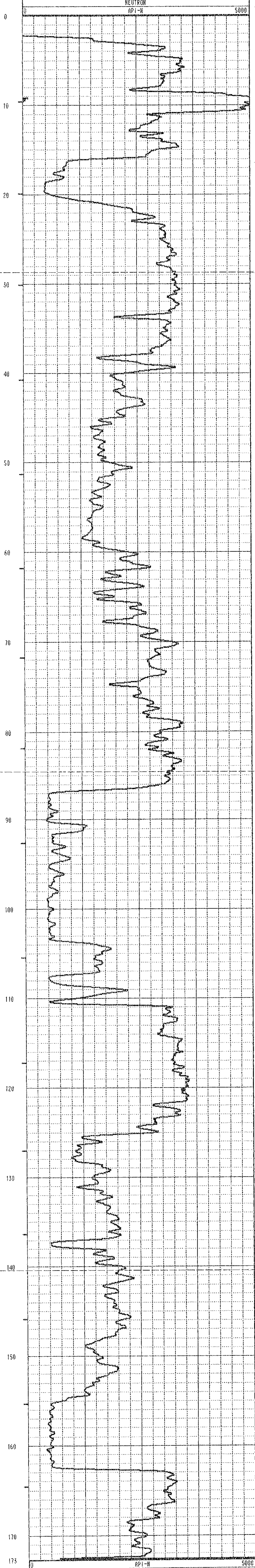
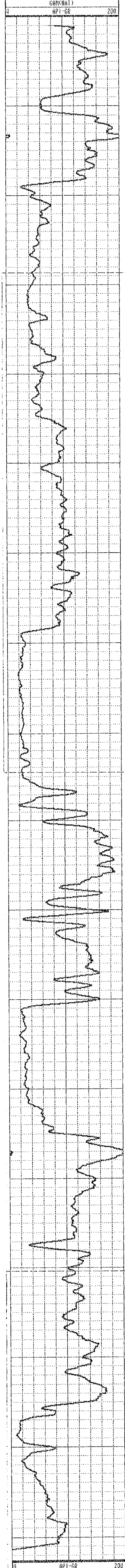


Century

QMD89501 GAMMA-NEUTRON

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMD89501 GAMMA-NEUTRON	SCALE	
LOCATION/FIELD :	1:200	
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP :	RANGE :
DATE : 06/08/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER : 173	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 172.68	LOG MEASURED FROM: 6L	OF : 00
LOG TOP : 1.00	DRL MEASURED FROM: 6L	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 : 5
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



TOOL CALIBRATION		TOOL = 9055A	SERIAL NUMBER = 14			
CAL-DATE	CAL-TIME	SACE	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 IN
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



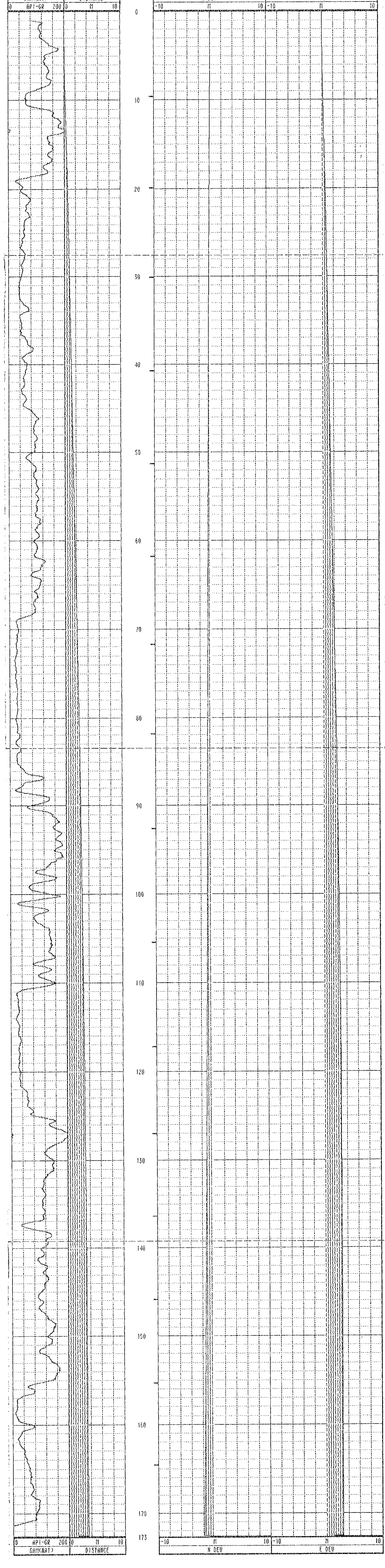
Century

DEVIATION
QMD89501 GAMMA-NEUTRON

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES :	
WELL : QMD89501 GAMMA-NEUTRON	SCALE : 1:200	
LOCATION/FIELD :		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP : RANGE :	
DATE : 06/11/89	PERMANENT DATUM : 00	ELEVATIONS :
DEPTH DRILLER : 173	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 172.60	LOG MEASURED FROM: 6L	DF : 00
LOG TOP : 1.00	DRL MEASURED FROM: 6L	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 : 7
FLUID DENSITY : 1.0	MATRIX DELTA T : 175	PLOT : QUIN 13
NEUTRON MATRIX : SANDSTONE	FLUID DELTA T : 690	THRESH: 50000

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	SRC	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	08:25:24	0	NEUTRON	145.000 CPS	271.000 API-N

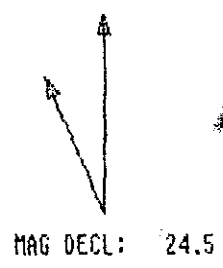
***** COMPU-LOG II -- VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMD89501 GAMM
 FIELD OFFICE : CALGARY DATE OF LOG : 06/11/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 2

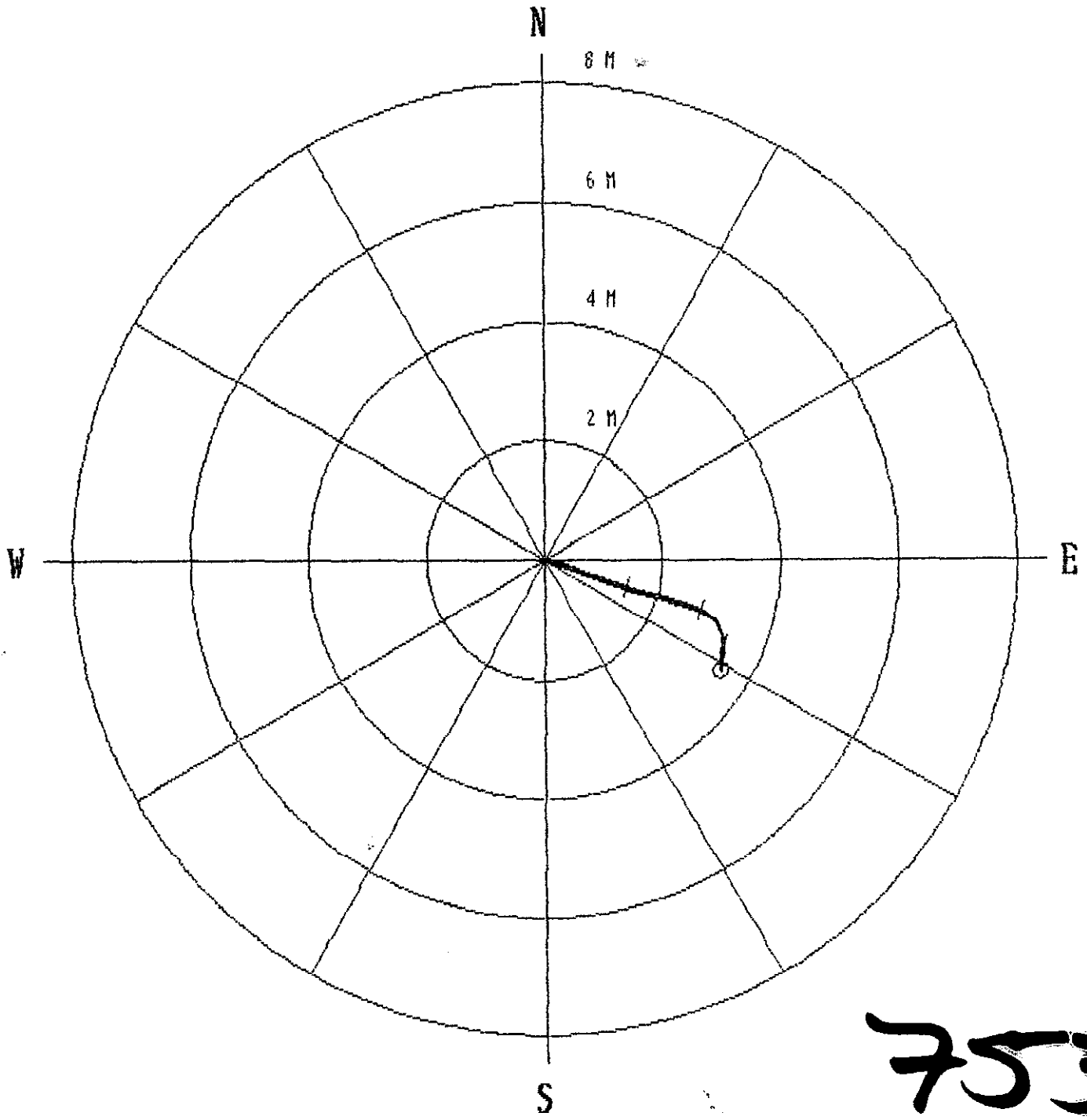
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANBR
LO	1.00	0.00	0.00	0.0	0.0	0.0	0.0
6.0	6.00	-0.02	0.06	0.1	104.0	2.1	98.1
11.0	10.99	-0.06	0.24	0.2	103.8	2.1	105.8
16.0	15.99	-0.12	0.42	0.4	106.3	2.1	113.3
21.0	20.99	-0.18	0.58	0.6	107.2	1.9	108.1
26.0	25.98	-0.24	0.73	0.8	108.0	1.7	106.3
31.0	30.98	-0.29	0.87	0.9	108.2	1.8	110.5
36.0	35.98	-0.33	1.01	1.1	108.1	1.6	103.8
41.0	40.98	-0.37	1.15	1.2	107.9	1.5	102.3
46.0	45.98	-0.41	1.28	1.3	107.8	1.5	106.3
51.0	50.97	-0.46	1.40	1.5	108.2	1.6	116.0
56.0	55.97	-0.51	1.54	1.6	108.3	2.0	99.5
61.0	60.97	-0.55	1.70	1.8	107.9	1.9	104.9
66.0	65.97	-0.59	1.85	1.9	107.6	1.7	103.9
71.0	70.96	-0.62	1.99	2.1	107.4	1.6	109.5
76.0	75.95	-0.67	2.13	2.2	107.3	1.6	108.8
81.0	80.96	-0.71	2.26	2.4	107.3	1.5	114.0
86.0	85.96	-0.77	2.49	2.5	107.3	1.4	105.4
91.0	90.96	-0.81	2.66	2.7	107.4	1.1	115.4
96.0	95.96	-0.85	2.88	2.8	107.7	1.3	106.7
101.0	100.96	-0.89	2.66	2.8	107.7	1.0	106.7
106.0	105.95	-0.89	2.74	2.9	108.1	1.0	123.9
111.0	110.95	-0.95	2.82	3.0	108.6	1.1	123.4
116.0	115.95	-1.00	2.89	3.1	109.2	1.0	133.4
121.0	120.95	-1.06	2.93	3.1	109.9	0.5	174.2
126.0	125.95	-1.11	2.93	3.1	110.7	0.6	199.6
131.0	130.95	-1.18	2.97	3.2	111.7	1.1	152.0
136.0	135.95	-1.26	3.02	3.3	112.7	1.1	148.8
141.0	140.95	-1.33	3.03	3.3	113.7	0.7	174.0
146.0	145.95	-1.39	3.03	3.3	114.7	0.7	177.3
151.0	150.95	-1.46	3.02	3.4	115.7	0.7	191.4
156.0	155.95	-1.52	3.01	3.4	116.8	0.8	192.7
161.0	160.95	-1.60	2.99	3.4	118.1	1.1	191.1
166.0	165.95	-1.70	2.98	3.4	119.7	1.1	178.1
171.0	170.95	-1.81	2.99	3.5	121.1	1.3	173.9
172.7	172.63	-1.84	2.99	3.5	121.6	0.0	0.0

PLAN VIEW COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
LOCATION:
HOLE ID: QMD89501 GAMMA-NEUTRON
DATE OF LOG: 08/30/89
PROBE: 9055A 14



SCALE: 1 M/CM
TRUE DEPTH: 172.57 M
AZIMUTH: 121.6
DISTANCE: 3.5 M
+ = 50 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMD89501 GMM
 FIELD OFFICE : CALGARY DATE OF LOG : 08/30/89
 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
1.0	1.00	0.00	0.00	0.0	0.0	0.0	0.0
6.0	6.00	-.02	0.06	0.1	104.0	2.1	98.1
11.0	10.99	-.06	0.24	0.2	103.8	2.2	105.8
16.0	15.99	-.12	0.42	0.4	106.3	2.1	113.3
21.0	20.99	-.18	0.58	0.6	107.2	1.9	108.1
26.0	25.98	-.24	0.73	0.8	108.0	1.7	106.3
31.0	30.98	-.29	0.87	0.9	108.2	1.8	110.5
36.0	35.98	-.33	1.01	1.1	108.1	1.6	103.8
41.0	40.98	-.37	1.15	1.2	107.9	1.5	102.3
46.0	45.98	-.41	1.28	1.3	107.8	1.5	106.3
51.0	50.97	-.46	1.40	1.5	108.2	1.6	116.0
56.0	55.97	-.51	1.54	1.6	108.3	2.0	99.5
61.0	60.97	-.55	1.70	1.8	107.9	1.9	104.9
66.0	65.97	-.59	1.85	1.9	107.6	1.7	103.9
71.0	70.96	-.62	1.99	2.1	107.4	1.6	109.5
76.0	75.96	-.67	2.13	2.2	107.3	1.6	108.8
81.0	80.96	-.71	2.26	2.4	107.3	1.5	114.0
86.0	85.96	-.74	2.38	2.5	107.3	1.4	105.4
91.0	90.96	-.77	2.49	2.6	107.2	1.6	118.6
96.0	95.96	-.81	2.58	2.7	107.4	1.1	115.4
101.0	100.96	-.85	2.66	2.8	107.7	1.3	106.7
106.0	105.95	-.89	2.74	2.9	108.1	1.0	123.9
111.0	110.95	-.95	2.82	3.0	108.6	1.1	123.4
116.0	115.95	-1.00	2.89	3.1	109.2	1.0	133.4
121.0	120.95	-1.06	2.93	3.1	109.9	0.5	174.2
126.0	125.95	-1.11	2.93	3.1	110.7	0.6	199.6
131.0	130.95	-1.18	2.97	3.2	111.7	1.1	152.0
136.0	135.95	-1.26	3.02	3.3	112.7	1.1	148.8
141.0	140.95	-1.33	3.03	3.3	113.7	0.7	174.0
146.0	145.95	-1.39	3.03	3.3	114.7	0.7	177.3
151.0	150.95	-1.46	3.02	3.4	115.7	0.7	191.4
156.0	155.95	-1.52	3.01	3.4	116.8	0.8	192.7
161.0	160.95	-1.60	2.99	3.4	118.1	1.1	191.1
166.0	165.95	-1.70	2.98	3.4	119.7	1.1	178.1
171.0	170.95	-1.81	2.99	3.5	121.1	1.3	173.9
172.7	172.63	-1.84	2.99	3.5	121.6	0.0	0.0

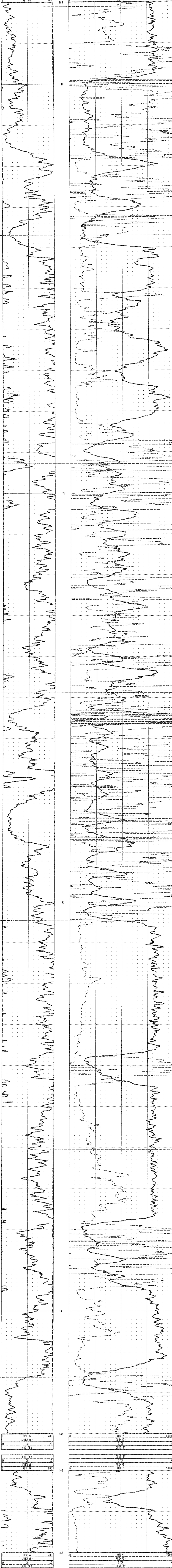


Century

QMD89502 GAM-DENSITY

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMD89502 GAM-DENSITY		
LOCATION/FIELD : WOLVERINE VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA	TOWNSHIP : RANGE :	
SECTION :		
DATE : 06/22/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER : 219	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 218.88	LOG MEASURED FROM: GL	DF : 00
LOG TOP : -.98	ORL MEASURED FROM: GL	GL : 00
CASING DRILLER : 3.04	LOGGING UNIT : 8903	
CASING TYPE : STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05	RECORDED BY : L. LEVAL	
BIT SIZE : 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 24.5	RM :	TYPE : 9032AC
MATRIX DENSITY : 2.68	RM TEMPERATURE :	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		
ANGLE HOLE 60 DEGREES		
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS		

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Century

QMD89502 GAM-DENSITY

COMPANY	: QUINCY COAL LTD.	OTHER SERVICES:	
WELL	: QMD89502 GAM-DENSITY		
LOCATION/FIELD	: HOLWERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:

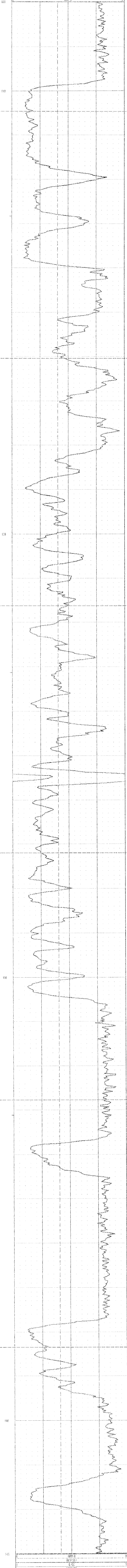
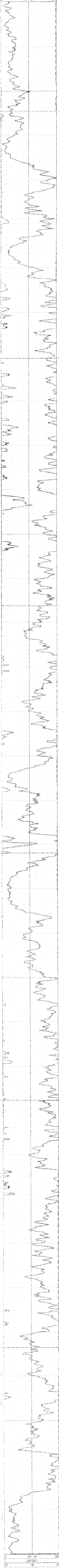
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DEPTH DRILLER	: 219	ELEV. PECH. DATUM	: 00	KB	: 00
LOG BOTTOM	: 210.09	LOG MEASURED FROM	: GL	DF	: 00
LOG TOP	: -99	DRL MEASURED FROM	: GL	GL	: 00

CASING DRILLER	: 3.04	LOGGING UNIT	: 8903
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS	: .05	RECORDED BY	: L. LITAL

BIT SIZE	: 12.1	BOHENDLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RH	:	TYPE	: 9032AC
MATRIX DENSITY	: 2.68	RH TEMPERATURE	:	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 12
NEUTRON INERTIA	: SANDSTONE	FLUID DELTA T	: 690	FRESH	: 50000

REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 60 DEGREES
 Detail Log
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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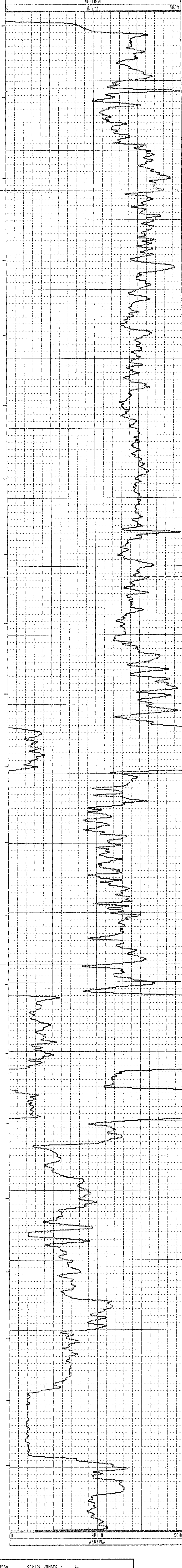
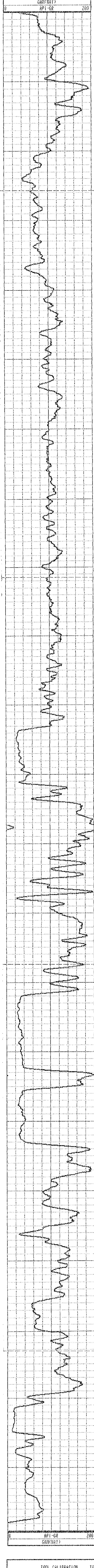
Century

QMD89502 GAM-NEUTRON

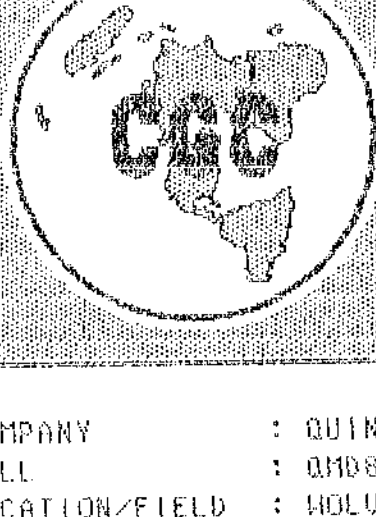
COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMD89502 GAM-NEUTRON		
LOCATION/FIELD : HOLVERINE VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP :	RANGE :
DATE : 06/22/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER : 219	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 219.16	LOG MEASURED FROM: 0L	DF : 00
LOG TOP : 0.18	DRL MEASURED FROM: 0L	GL : 00
CASING DRILLER : 3.04	LOGGING UNIT : 8903	
CASING TYPE : STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05	RECORDED BY : L. LETAL	
BIT SIZE : 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 24.5	RM :	TYPE : 9055A
MATRIX DENSITY : 2.68	RM TEMPERATURE :	LOG : 7
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 60 DEGREES		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

753



TOOL CALIBRATION		TOOL : 9055A	SERIAL NUMBER = 14		
CAL-DATE	CAL-TIME	SRC	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 OHH
3	05/04/89 08:15:10	0	RES	9707.000 CPS	0.000 OHH
4	05/04/89 08:15:10	0	RES	5212.000 CPS	1000.000 OHH
5	05/04/89 08:13:14	0	SP	-9.000 CPS	0.000 HV
6	05/04/89 08:13:14	0	SP	4095.000 CPS	500.000 HV
7	05/04/89 08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89 06:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

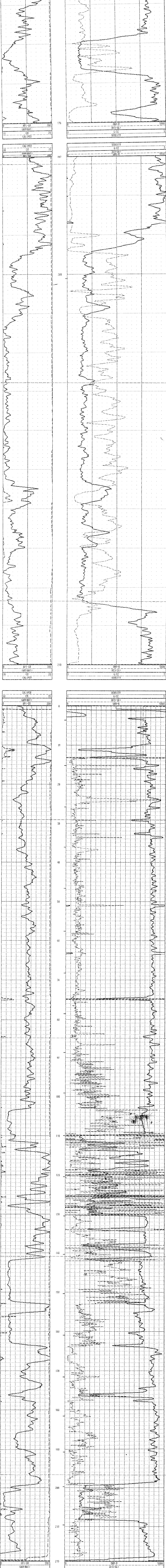


Century

QMD89502 GAM-DEN-RES

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMD89502 GAM-DEN-RES		
LOCATION/FIELD : MCQUEEN VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	RANGE :	
DATE : 06-22-89	PERMANT DATUM : 00	ELEVATIONS
DEPTH DRILLER : 219	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 210.88	LOG MEASURED FROM: GL	DF : 00
LOG TOP : -.98	ORL MEASURED FROM: GL	GL : 00
CASING DRILLER : 3.04	LOGGING UNIT : 8903	
CASING TYPE : STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS : .05	RECORDED BY : L. LOTAL	
BIT SIZE : 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 24.5	RM :	TYPE : 9032AC
MATRIX DENSITY : 2.68	RM TEMPERATURE :	LOG : 8
FLUID DENSITY : 1.0	MATRIX DELTA T : 173	PLOT : QUM 12
NEUTRON MATRIX : SANDSTONE	FLUID DELTA T : 690	THRESH: 50000
REMARKS :		
LOGGED OPEN HOLE		
ANGLE HOLE 60 DEGREES		
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS		

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TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

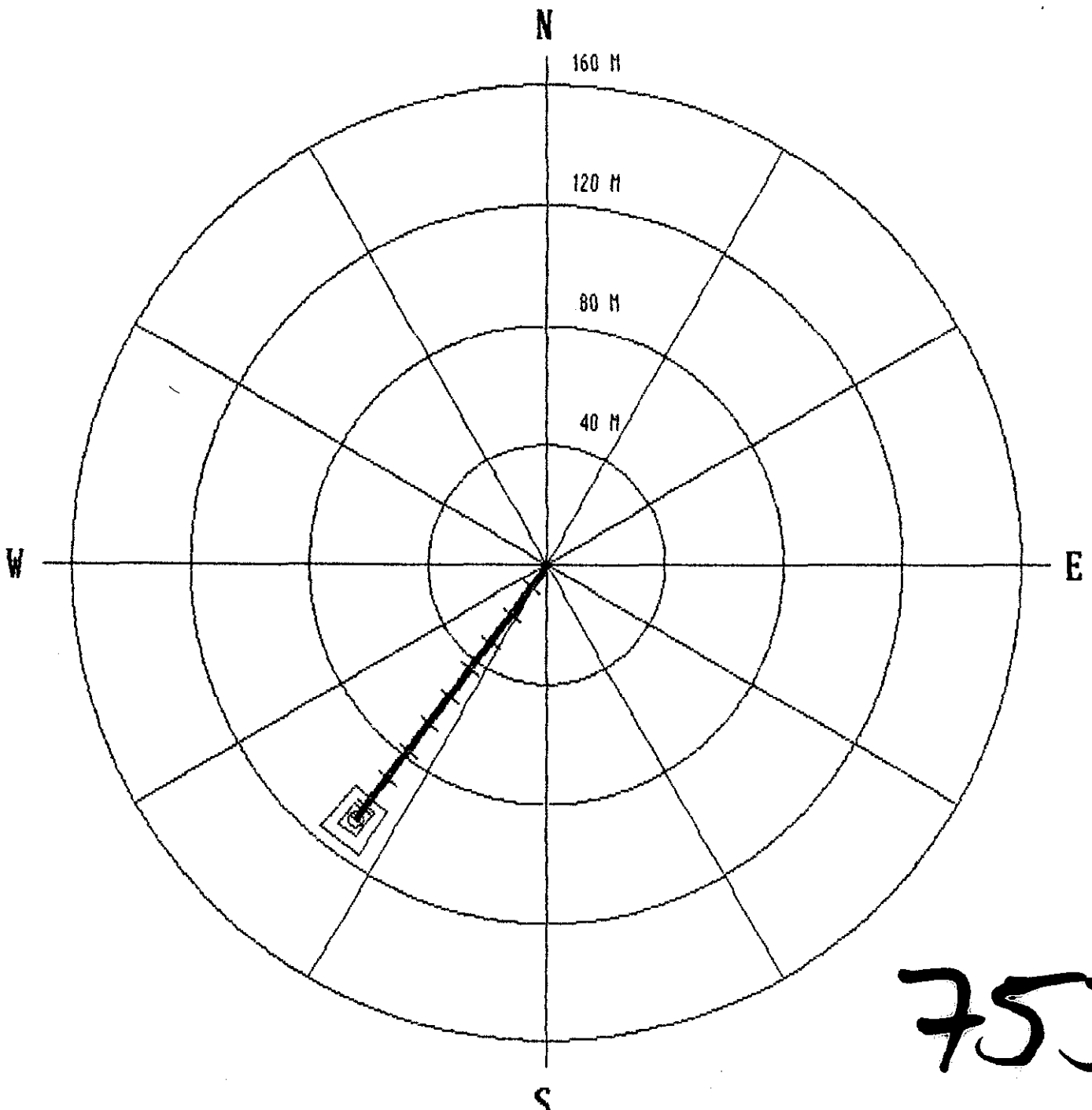
CAL-DATE	CAL-TIME	SIZE	SENSOR	RESPONSE	STANDARD	
0	05-04-89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05-04-89	10:17:51	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05-04-89	12:11:56	0	DENSITY	6166.000 CPS	1.106 G/CC
3	05-04-89	12:11:56	0	DENSITY	2439.000 CPS	2.120 G/CC
4	05-04-89	10:17:51	0	RES(SG)	0.000 CPS	0.000 DM-H
5	05-04-89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 DM-H
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	DENSITY	0.000 CPS	0.000 G/CC
9	05-04-89	10:17:51	0	DENSITY	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

PLAN VIEW COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
LOCATION: WOLVERINE VALLEY SOUTH
HOLE ID: QMD89502 GAM-NEUTRON
DATE OF LOG: 06/22/89
PROBE: 9055A 14



SCALE: 20 M/CM
TRUE DEPTH: 190.12 M
AZIMUTH: 217.0
DISTANCE: 106.9 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMD89502 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/22/89
 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
4.0	3.67	-.55	-.13	0.6	193.1	30.7	184.1
9.0	7.99	-2.18	-1.15	2.5	207.8	30.0	212.5
14.0	12.31	-4.03	-2.39	4.7	210.7	30.1	217.6
19.0	16.64	-6.07	-3.85	7.2	212.4	30.1	216.4
24.0	20.97	-8.08	-5.33	9.7	213.4	29.9	216.3
29.0	25.30	-10.09	-6.81	12.2	214.0	29.9	216.0
34.0	29.64	-12.09	-8.30	14.7	214.5	29.9	217.4
39.0	33.97	-14.08	-9.79	17.1	214.8	29.8	216.9
44.0	38.31	-16.07	-11.29	19.6	215.1	29.9	216.9
49.0	42.65	-18.05	-12.79	22.1	215.3	29.8	216.9
54.0	46.98	-20.04	-14.29	24.6	215.5	29.9	216.7
59.0	51.32	-22.01	-15.79	27.1	215.7	29.9	216.7
64.0	55.66	-23.99	-17.30	29.6	215.8	29.8	217.1
69.0	60.01	-25.96	-18.81	32.1	215.9	29.7	217.1
74.0	64.35	-27.92	-20.31	34.5	216.0	29.7	217.3
79.0	68.69	-29.88	-21.83	37.0	216.1	29.7	217.6
84.0	73.03	-31.84	-23.34	39.5	216.2	29.7	217.5
89.0	77.38	-33.80	-24.86	42.0	216.3	29.7	218.1
94.0	81.72	-35.75	-26.39	44.4	216.4	29.7	218.3
99.0	86.06	-37.70	-27.91	46.9	216.5	29.8	218.5
104.0	90.41	-39.66	-29.43	49.4	216.6	29.8	218.4
109.0	94.75	-41.61	-30.97	51.9	216.7	29.9	218.2
114.0	99.08	-43.58	-32.50	54.4	216.7	29.9	218.0
119.0	103.41	-45.55	-34.02	56.8	216.8	30.0	216.5
124.0	107.75	-47.52	-35.55	59.3	216.8	30.0	216.9
129.0	112.08	-49.50	-37.08	61.8	216.8	30.0	218.7
134.0	116.41	-51.48	-38.60	64.3	216.9	29.9	218.8
139.0	120.74	-53.47	-40.11	66.8	216.9	29.9	217.3
144.0	125.07	-55.46	-41.62	69.3	216.9	30.0	215.8
149.0	129.40	-57.45	-43.14	71.8	216.9	30.0	217.5
154.0	133.73	-59.44	-44.65	74.3	216.9	30.2	215.3
159.0	138.06	-61.43	-46.17	76.8	216.9	30.0	218.2
164.0	142.39	-63.41	-47.69	79.3	216.9	29.9	216.4
169.0	146.72	-65.40	-49.18	81.8	216.9	30.0	216.7
174.0	151.05	-67.37	-50.72	84.3	217.0	30.0	218.1
179.0	155.38	-69.35	-52.26	86.8	217.0	30.0	216.1
184.0	159.71	-71.34	-53.73	89.3	217.0	30.1	219.1
189.0	164.03	-73.33	-55.26	91.8	217.0	30.1	216.2
194.0	168.36	-75.33	-56.77	94.3	217.0	30.1	217.5
199.0	172.69	-77.33	-58.28	96.8	217.0	30.1	217.7
204.0	177.02	-79.31	-59.81	99.3	217.0	30.1	216.9
209.0	181.34	-81.30	-61.33	101.8	217.0	30.0	220.9
214.0	185.68	-83.27	-62.85	104.3	217.0	29.9	206.8
219.0	190.01	-85.26	-64.34	106.8	217.0	29.8	217.9
219.2	190.18	-85.31	-64.38	106.9	217.0	0.0	0.0

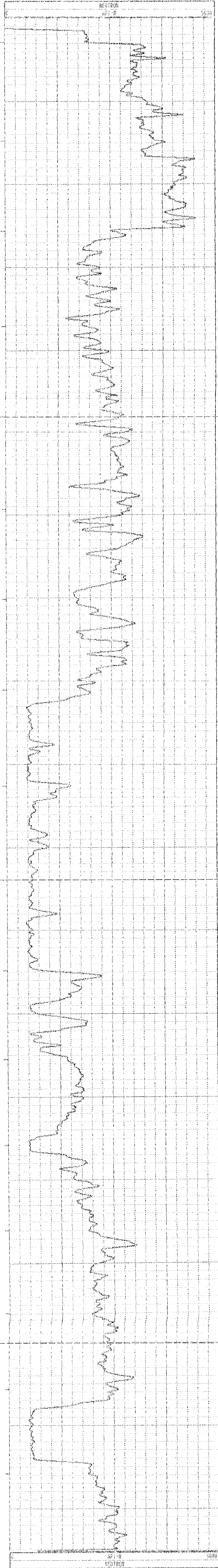
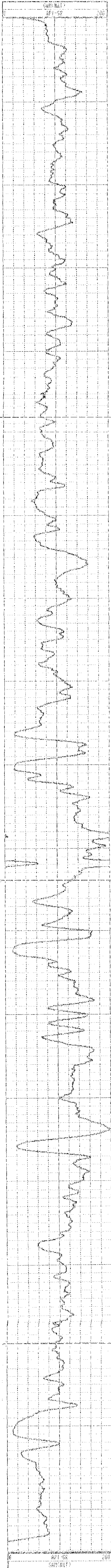


Century

QMD89503 GAM-NEUTRON

COMPANY : QUINETTE COAL LTD. OTHER SERVICES:
 WELL : QMD89503 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/24/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 185 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 135.22 LOG MEASURED FROM: 6L DF : 00
 LOG TOP : 0.02 ORL MEASURED FROM: 6L GL : 00
 CASING DRILLER : 3 LOGGING UNIT : 8903
 CASING TYPE : STEEL FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LITAL
 BIT SIZE : 13.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 6
 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 70 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

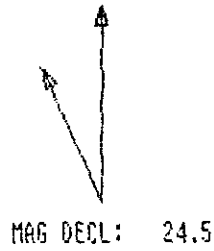
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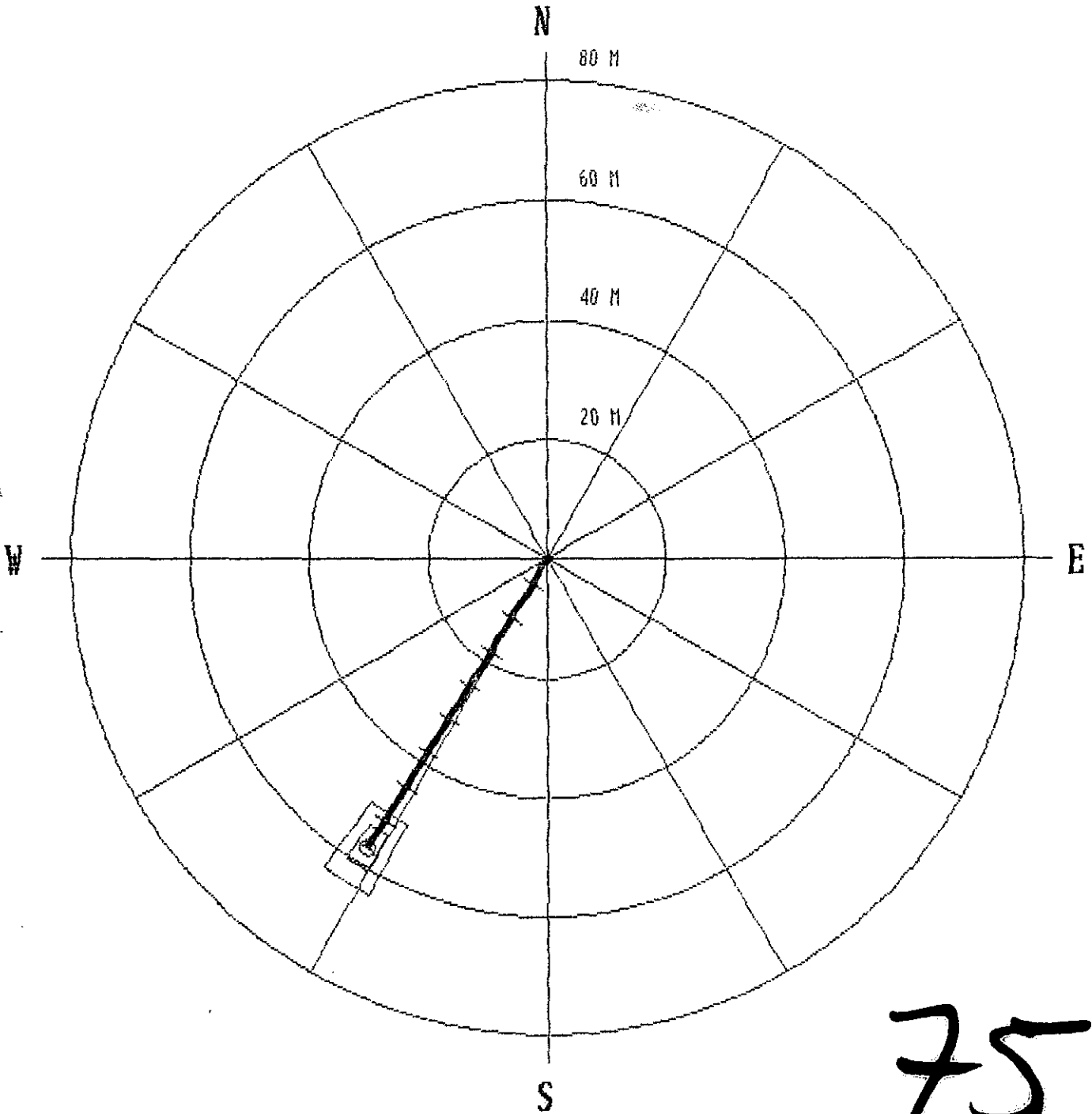
TOOL CALIBRATION			TOOL : 9055A	SERIAL NUMBER : 14		
CAL DATE	CAL TIME	SRC	SENSOR	RESPONSE	STANDARD	
0	05-04-89	08:10:36	0	GAMMA-T	0.000 CPS	0.000 API-GR
1	05-04-89	08:10:36	0	GAMMA-T	0.000 CPS	0.000 API-GR
2	05-05-89	16:59:51	6	DENSITY	0.000 CPS	145.000 CPS
3	05-04-89	09:15:16	6	RES	9707.000 CPS	0.000 OHM
4	05-04-89	08:15:10	0	RES	5212.000 CPS	000.000 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: WOLVERINE VALLEY SOUTH
HOLE ID: QMD89503 GAM-NEUTRON
DATE OF LOG: 06/25/89
PROBE: 9055A 14



SCALE: 10 M/CM
TRUE DEPTH: 175.65 M
AZIMUTH: 212.2
DISTANCE: 57.0 M
+ = 20 M INCR
○ = BOTTOM OF HOLE



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

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMD89503 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/25/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
4.0	3.87	0.15	0.25	0.3	58.3	18.5	240.4
9.0	8.61	-1.02	-0.65	1.2	212.4	18.0	212.5
14.0	13.36	-2.38	-1.40	2.8	210.5	20.6	184.0
19.0	18.11	-3.69	-2.12	4.3	209.9	18.2	166.7
24.0	22.86	-4.99	-2.96	5.8	210.6	18.2	209.7
29.0	27.61	-6.30	-3.81	7.4	211.2	18.2	226.5
34.0	32.35	-7.61	-4.67	8.9	211.5	18.6	211.3
39.0	37.10	-8.94	-5.49	10.5	211.6	18.4	211.7
44.0	41.85	-10.27	-6.32	12.1	211.6	18.2	213.5
49.0	46.59	-11.61	-7.15	13.6	211.6	18.1	211.8
54.0	51.33	-12.95	-7.99	15.2	211.7	18.4	211.2
59.0	56.08	-14.29	-8.83	16.8	211.7	18.5	211.8
64.0	60.82	-15.63	-9.67	18.4	211.7	18.4	211.7
69.0	65.56	-16.96	-10.52	20.0	211.8	18.4	212.9
74.0	70.31	-18.30	-11.37	21.5	211.9	18.5	212.6
79.0	75.05	-19.64	-12.22	23.1	211.9	18.4	213.3
84.0	79.79	-20.96	-13.08	24.7	212.0	18.3	217.5
89.0	84.54	-22.29	-13.93	26.3	212.0	17.8	210.3
94.0	89.28	-23.63	-14.77	27.9	212.0	18.4	211.5
99.0	94.02	-24.97	-15.61	29.4	212.0	18.4	211.6
104.0	98.77	-26.30	-16.46	31.0	212.0	18.7	210.0
109.0	103.51	-27.64	-17.31	32.6	212.1	18.5	213.2
114.0	108.25	-28.98	-18.17	34.2	212.1	18.5	210.7
119.0	112.99	-30.32	-19.02	35.8	212.1	18.6	215.3
124.0	117.73	-31.66	-19.88	37.4	212.1	18.6	213.7
129.0	122.47	-33.01	-20.73	39.0	212.1	18.6	212.4
134.0	127.21	-34.36	-21.58	40.6	212.1	18.6	211.9
139.0	131.95	-35.71	-22.41	42.2	212.1	18.7	212.1
144.0	136.68	-37.07	-23.26	43.8	212.1	18.7	213.1
149.0	141.42	-38.42	-24.13	45.4	212.1	18.7	212.1
154.0	146.15	-39.77	-24.99	47.0	212.1	18.8	212.8
159.0	150.89	-41.13	-25.86	48.6	212.2	18.8	212.7
164.0	155.62	-42.49	-26.72	50.2	212.2	18.8	213.6
169.0	160.35	-43.84	-27.60	51.8	212.2	18.7	213.4
174.0	165.09	-45.20	-28.46	53.4	212.2	18.7	217.1
179.0	169.82	-46.56	-29.32	55.0	212.2	18.8	212.9
184.0	174.55	-47.93	-30.18	56.6	212.2	18.9	214.1
185.2	175.71	-48.25	-30.37	57.0	212.2	0.0	0.0

MESA NORTH EXTENSION

ROTARY DRILL HOLES

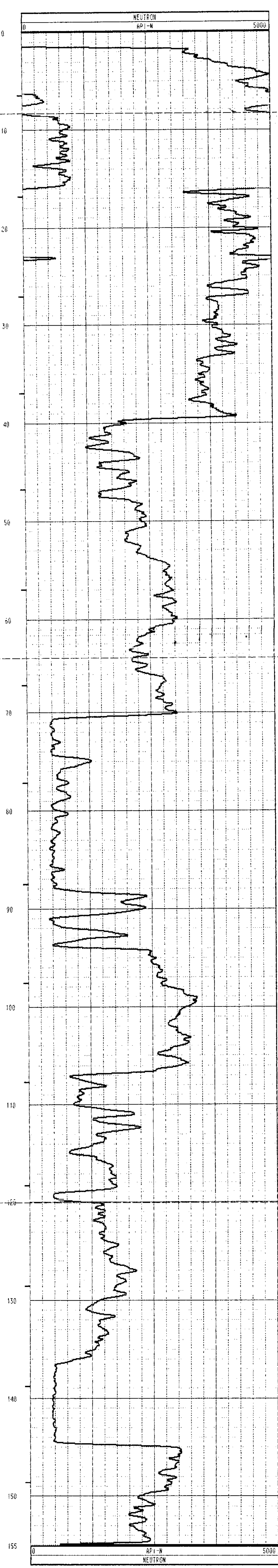
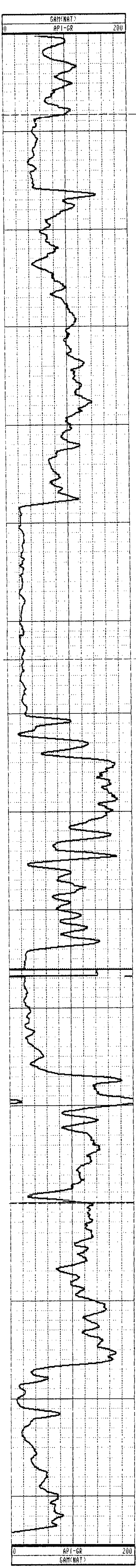


Century

QMR89501 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:
WELL	: QMR89501 GAM-NEUTRON	
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH	
COUNTY	: TRANSFER	
STATE	: BRITISH COLUMBIA	
SECTION	: TOWNSHIP	: RANGE
DATE	: 06/16/89	PERMANENT DATUM : 00
DEPTH DRILLER	: 156	ELEV. PERM. DATUM: 00
LOG BOTTOM	: 155.02	LOG MEASURED FROM: GL
LOG TOP	: 0.22	DRL MEASURED FROM: GL
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
MAGNETIC DECL.	: 24.5	PM :
MATRIX DENSITY	: 2.68	RH TEMPERATURE :
FLUID DENSITY	: 1.0	MATRIX DELTA T : 175
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690
REMARKS	:	FILE : ORIGINAL
LOGGED OPEN HOLE	:	TYPE : 9055H
VERTICAL HOLE	:	LOG : 1
		PLOT : QUIN 10
		THRESH: 50000

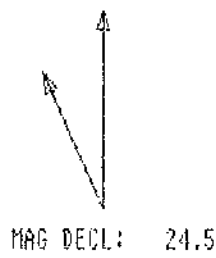
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



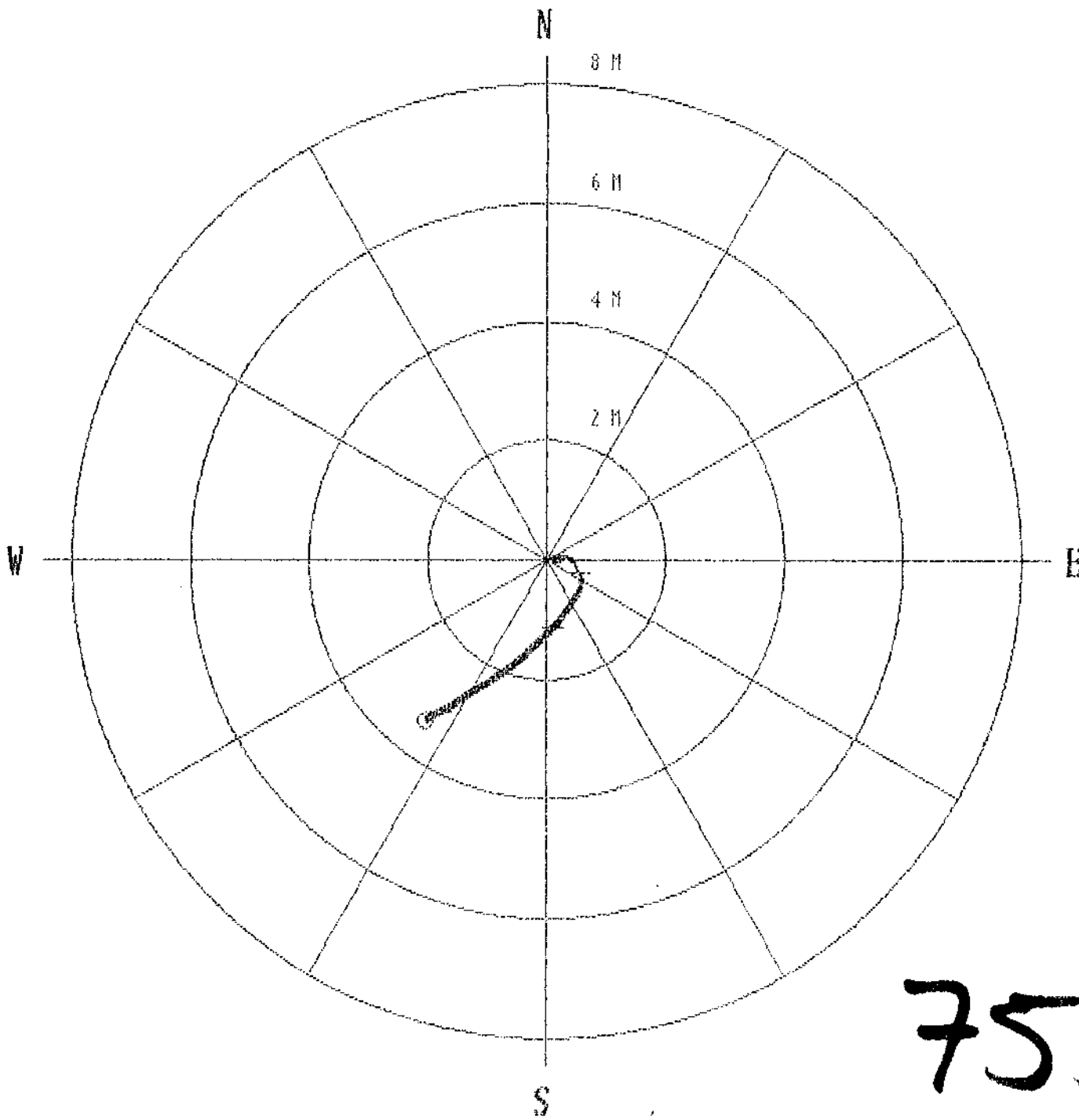
TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 14		
CAL-DATE	CAL-TIME	SPCE	SENSOR	RESPONSE	STANDARD	
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	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: HOLVERINE VALLEY SOUTH
 HOLE ID: QMR89501 GAM-NEUTRON
 DATE OF LOG: 06/16/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 154.87 M
 AZIMUTH: 217.2
 DISTANCE: 3.4 M
 + = 50 M INCR
 O = BOTTOM OF HOLE

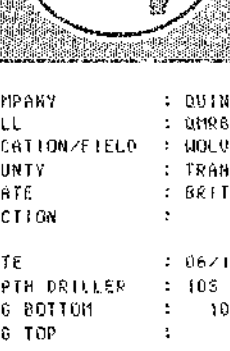


***** COMPU-LOG II -- VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89501 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/16/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 5

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	-0.00	0.02	0.0	92.3	1.4	29.6
8.0	8.00	0.01	0.09	0.1	81.0	0.9	113.7
13.0	13.00	0.02	0.19	0.2	85.5	1.3	71.7
18.0	18.00	0.03	0.29	0.3	84.2	1.2	84.3
23.0	23.00	0.02	0.38	0.4	87.0	0.8	118.3
28.0	27.99	-0.02	0.45	0.4	92.0	0.6	145.8
33.0	32.99	-0.06	0.47	0.5	96.8	0.5	166.8
38.0	37.99	-0.08	0.48	0.5	100.0	0.4	148.2
43.0	42.99	-0.13	0.48	0.5	104.6	0.8	166.6
48.0	47.99	-0.19	0.52	0.5	109.9	0.8	142.5
53.0	52.99	-0.24	0.56	0.6	113.6	0.7	144.0
58.0	57.99	-0.29	0.60	0.7	115.7	0.2	127.8
63.0	62.99	-0.32	0.59	0.7	118.2	0.4	190.8
68.0	67.99	-0.37	0.58	0.7	122.5	0.6	197.3
73.0	72.99	-0.43	0.56	0.7	127.4	0.9	206.3
78.0	77.99	-0.51	0.53	0.7	134.1	1.1	203.8
83.0	82.99	-0.53	0.48	0.8	142.9	1.8	209.0
88.0	87.99	-0.77	0.39	0.9	152.8	1.9	219.2
93.0	92.98	-0.92	0.28	1.0	163.0	2.4	212.6
98.0	97.98	-1.07	0.15	1.1	171.8	2.3	219.3
103.0	102.97	-1.22	0.02	1.2	179.1	2.3	226.3
108.0	107.97	-1.36	-0.13	1.4	185.3	3.0	239.2
113.0	112.97	-1.49	-0.25	1.5	189.7	2.1	232.6
118.0	117.96	-1.62	-0.40	1.7	194.0	1.8	216.9
123.0	122.96	-1.76	-0.57	1.8	198.0	2.7	227.6
128.0	127.95	-1.88	-0.74	2.0	201.5	2.1	238.6
133.0	132.95	-2.02	-0.94	2.2	205.0	3.0	238.9
138.0	137.94	-2.16	-1.18	2.5	208.6	3.4	240.4
143.0	142.93	-2.31	-1.42	2.7	211.6	2.9	236.6
148.0	147.92	-2.47	-1.66	3.0	213.9	3.3	243.2
153.0	152.91	-2.62	-1.92	3.2	216.3	3.6	243.8
155.0	154.93	-2.68	-2.03	3.4	217.2	0.0	0.0

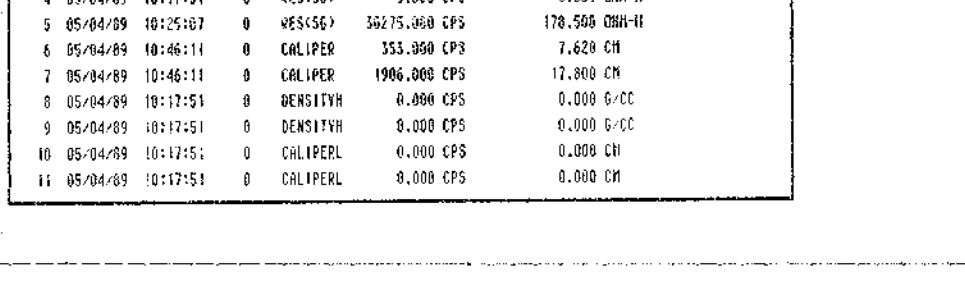
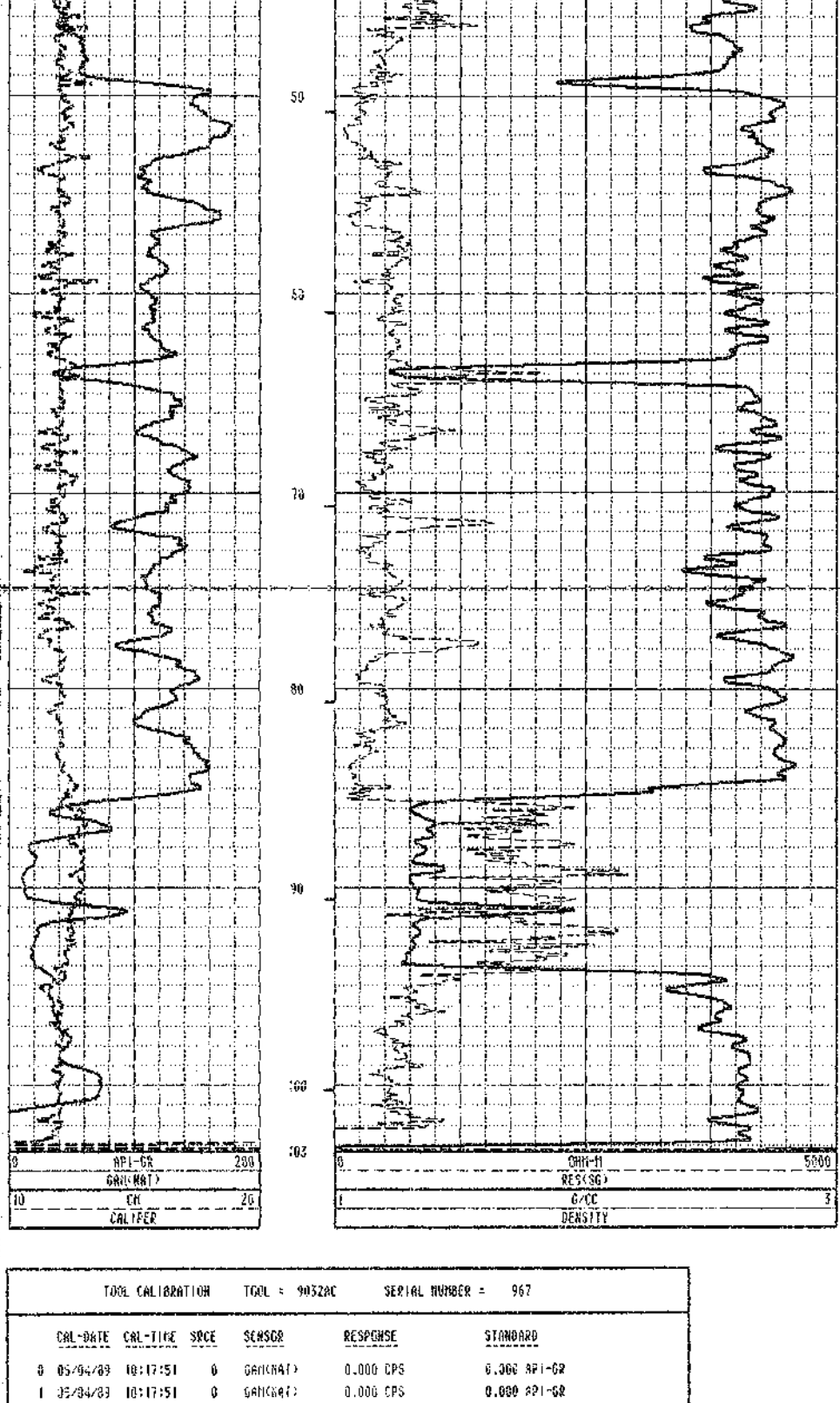
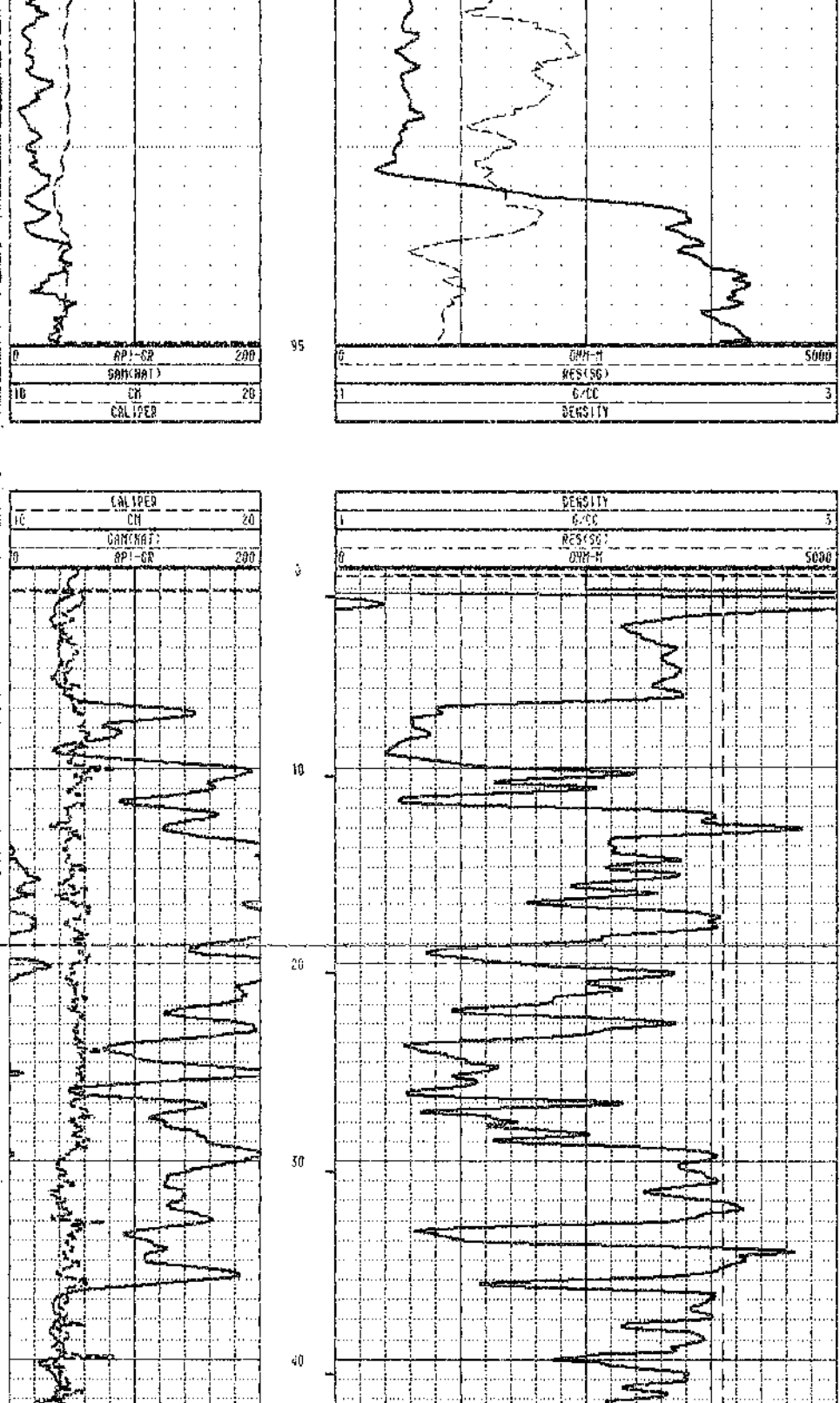
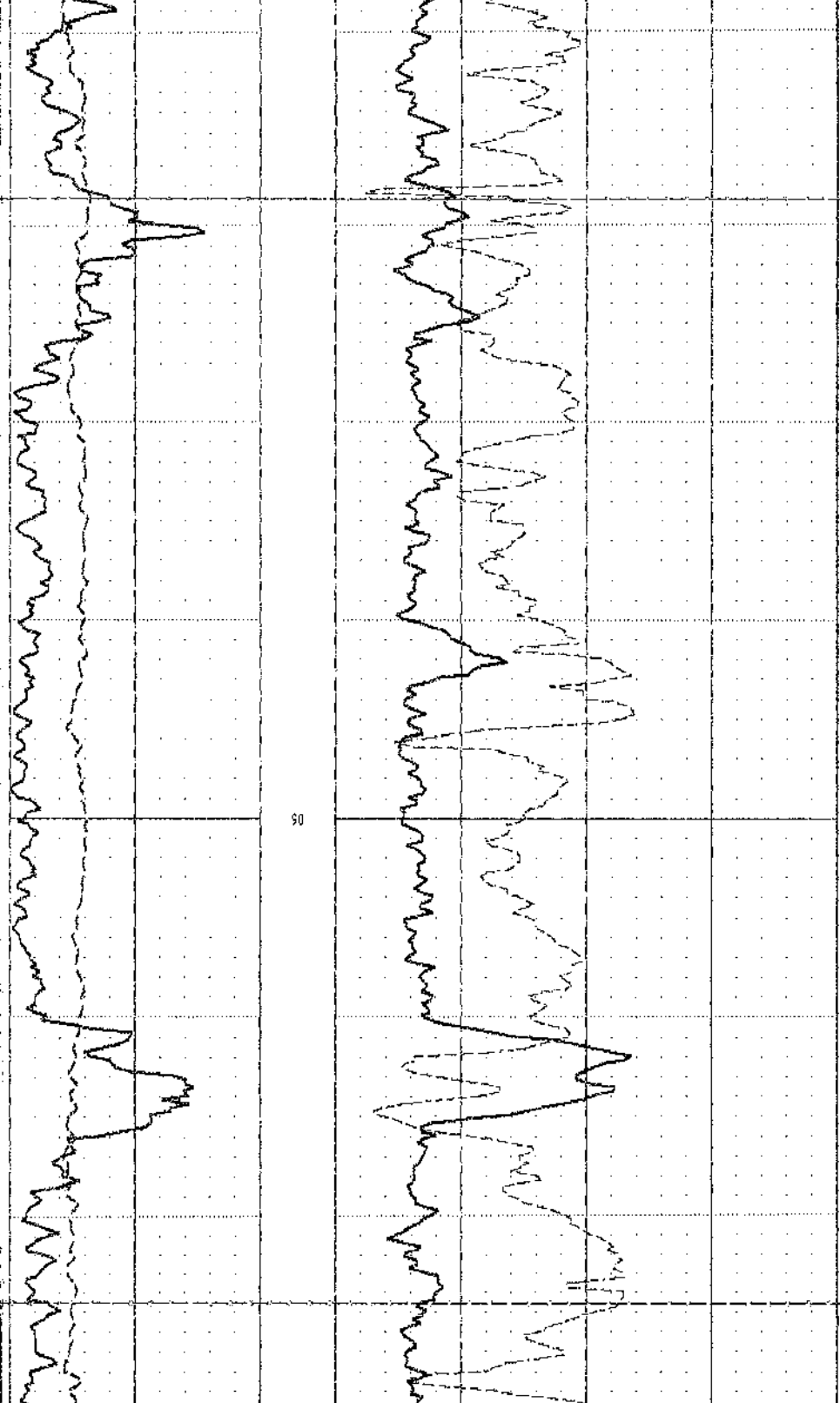
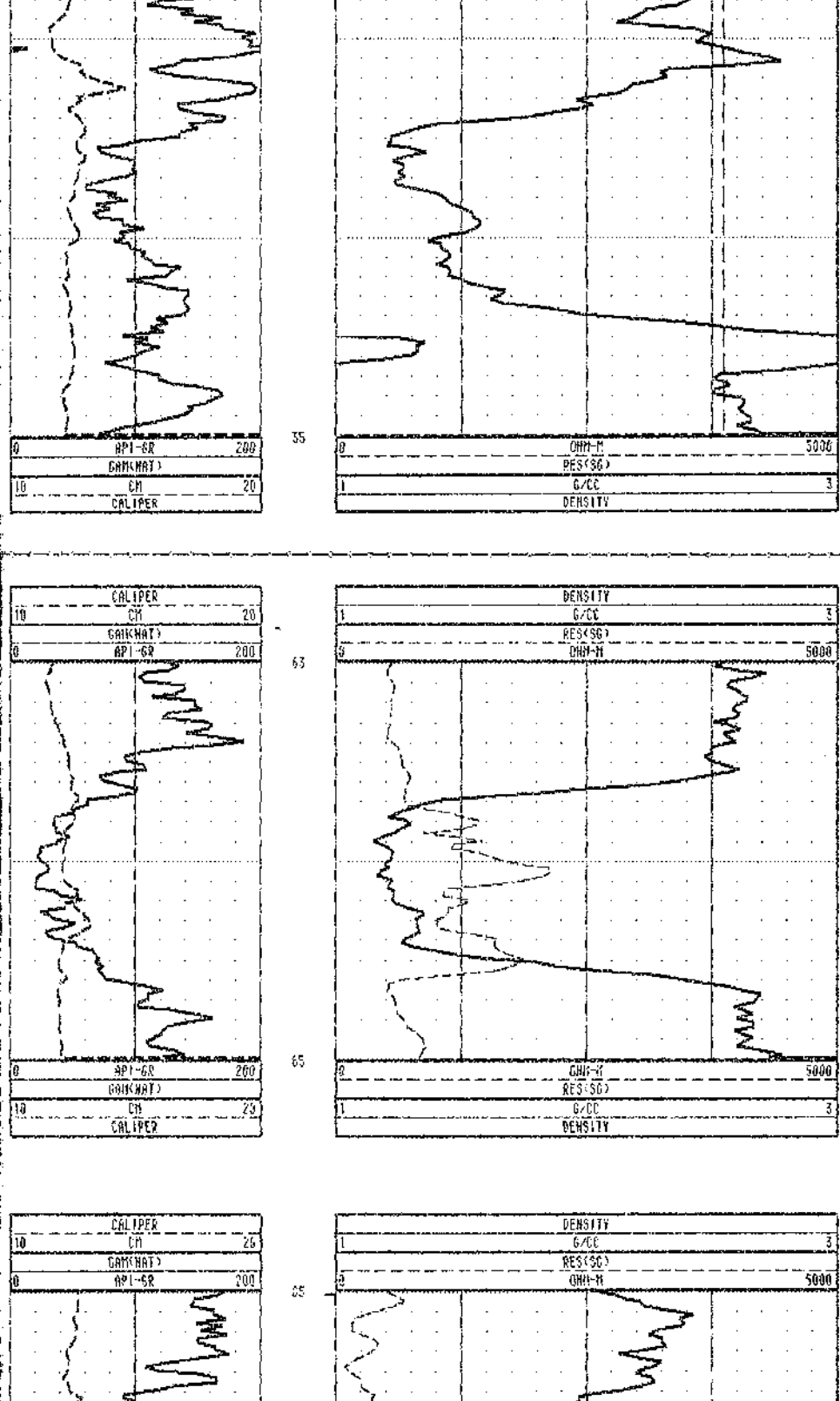
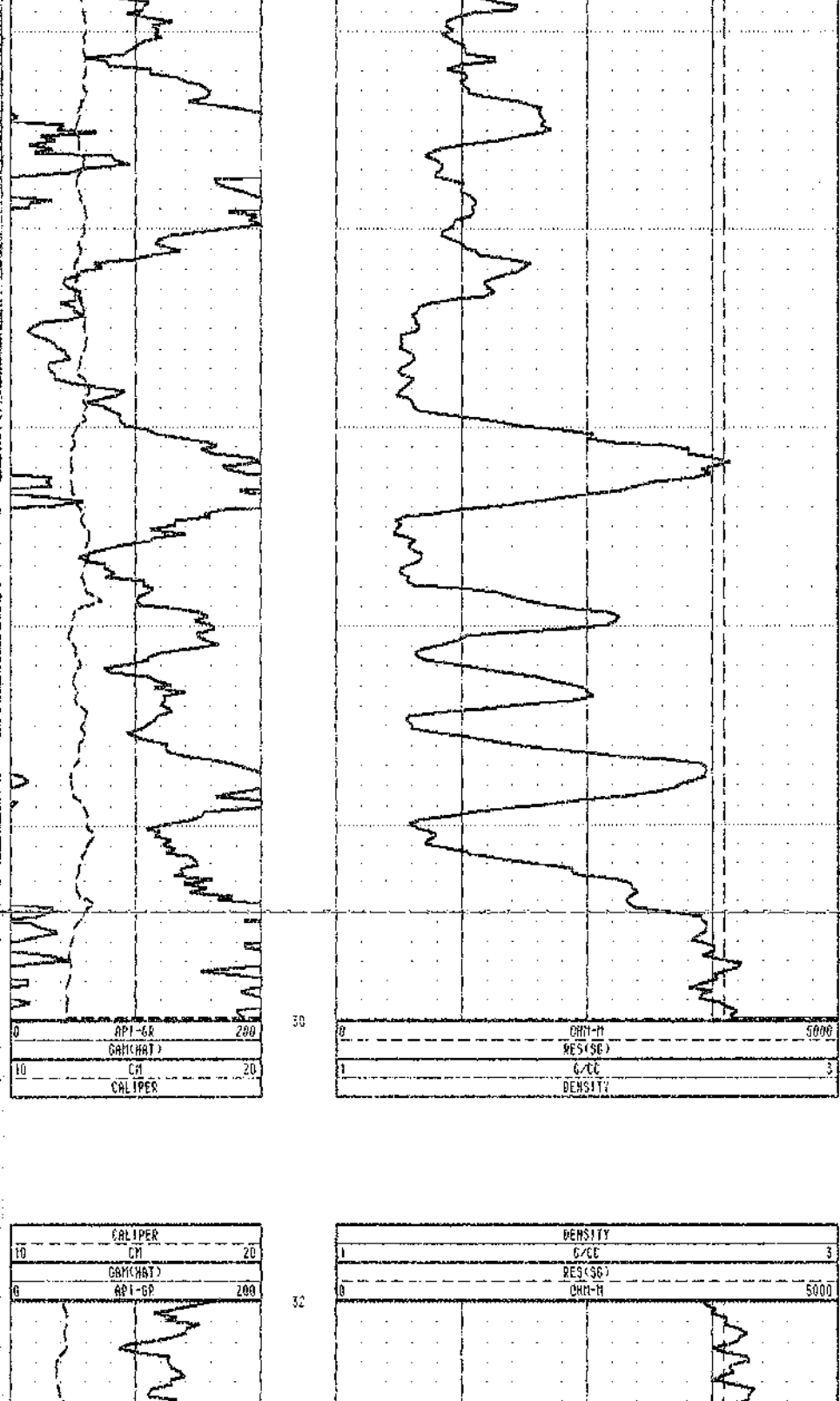
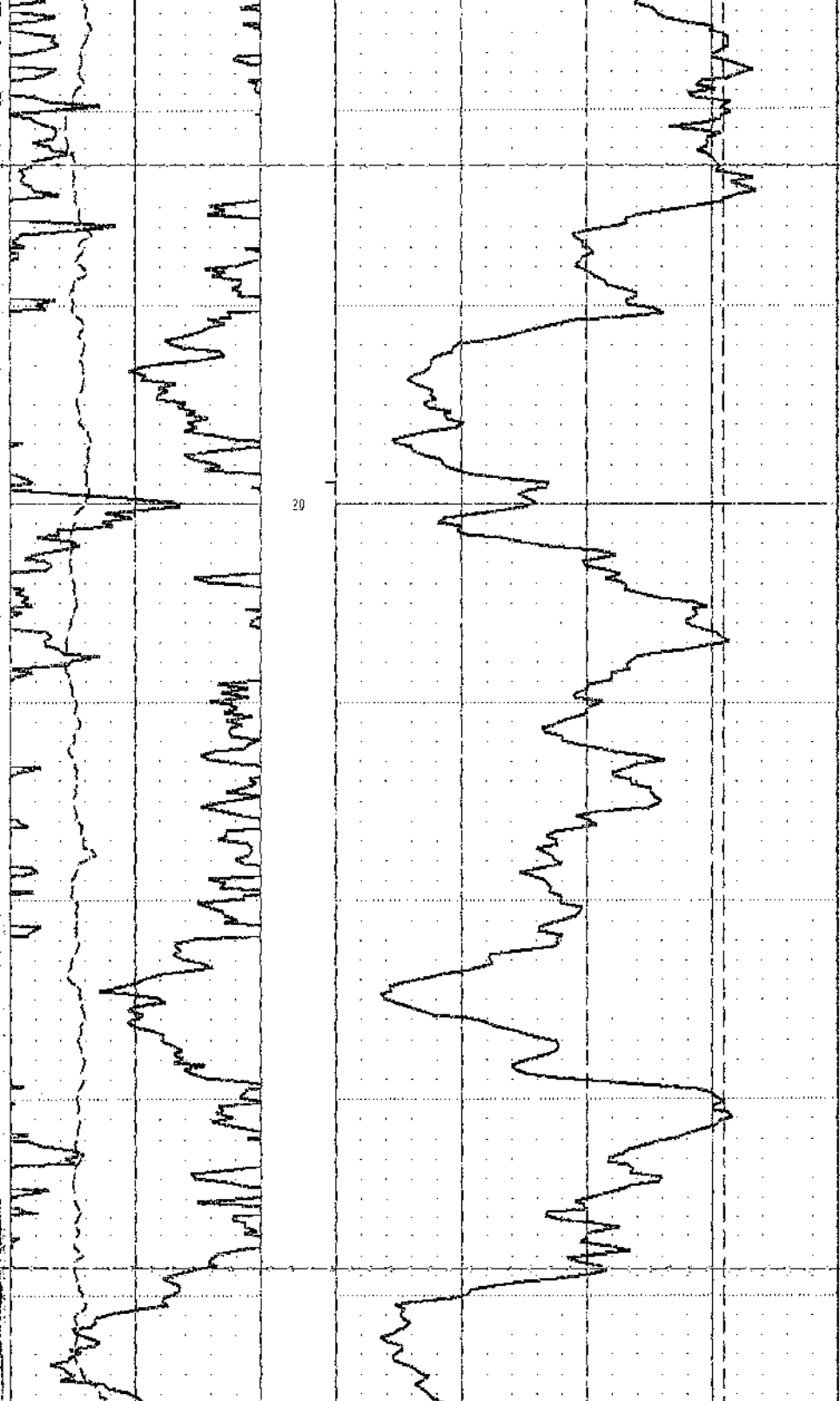
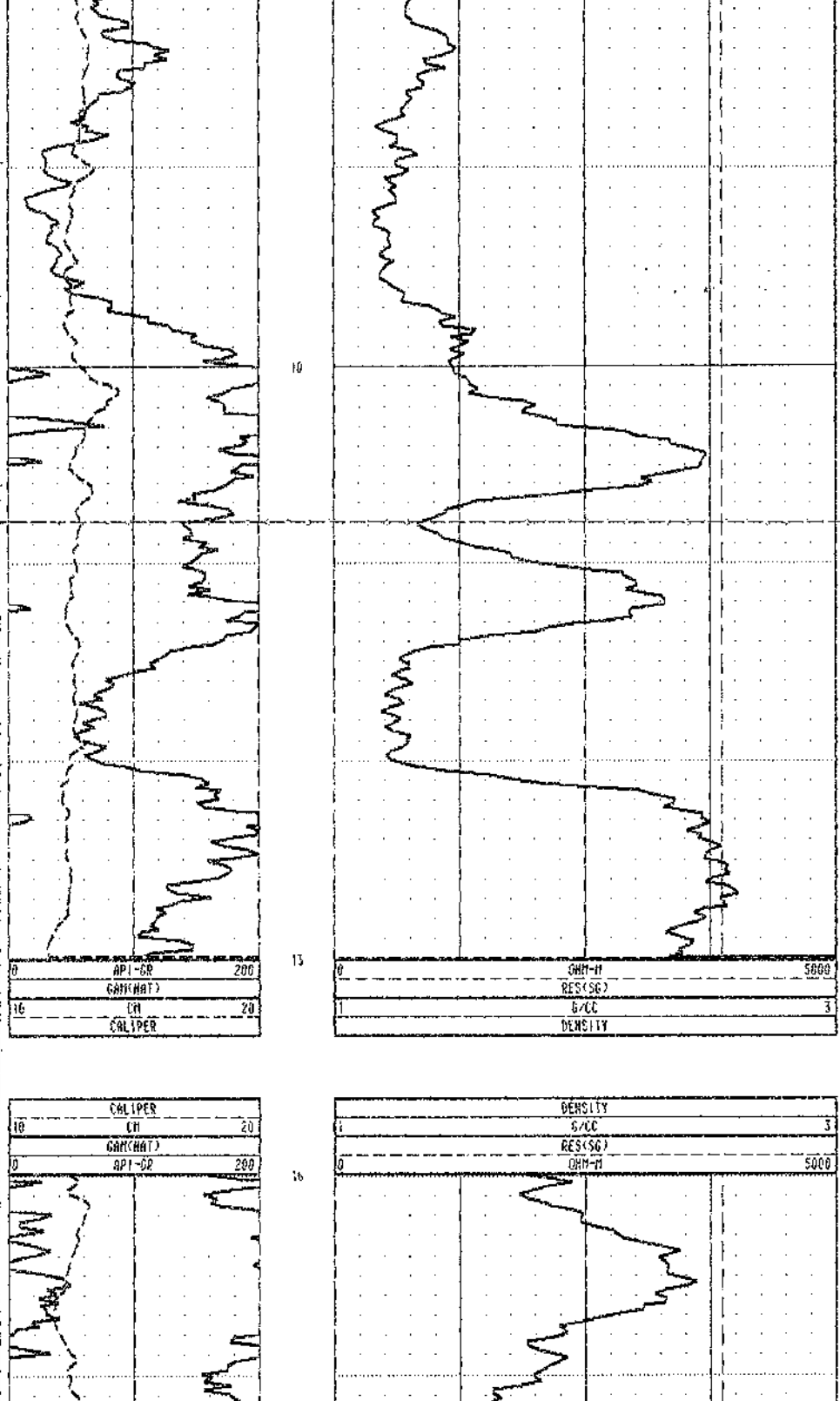
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Century

OMR89502 GAM-DEN-RES-CAL

COMPANY : QUINTELL COAL LTD. OTHER SERVICES: []
 WELL : OMR89502 GAM-DEN-RES-CAL
 LOCATION/FIELD : HOLMERSIDE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/16/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 105 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 103.26 LOG MEASURED FROM: GL DF : 00
 LOG TOP : -74 ORL 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 : 9032AC
 MATRIX DENSITY : 2.69 RM TEMPERATURE : LOG : 6
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 14
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 TAKESH: 50000
 REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 60 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



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Century

QMR89502 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89502 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

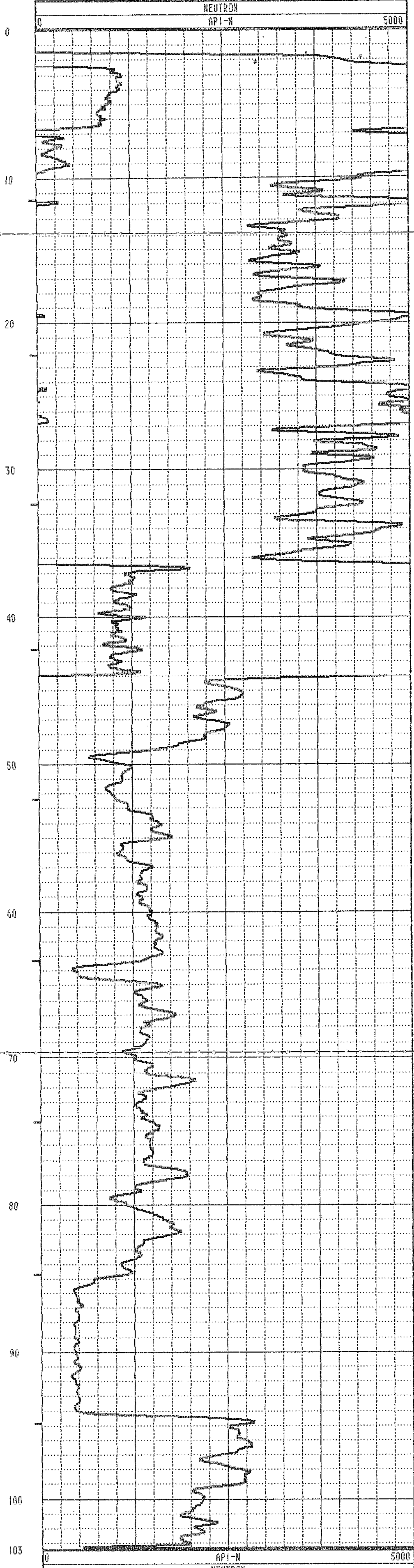
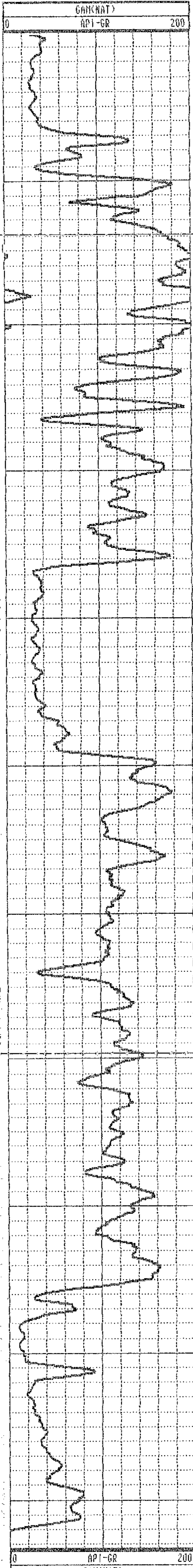
DATE : 06/16/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 105 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 103.38 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.22 DRL MEASURED FROM: GL GL : 00

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 : 5
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 10
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000

REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 60 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	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	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 HV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 HV
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

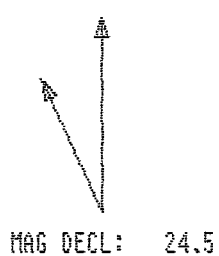
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89502 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/17/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 7

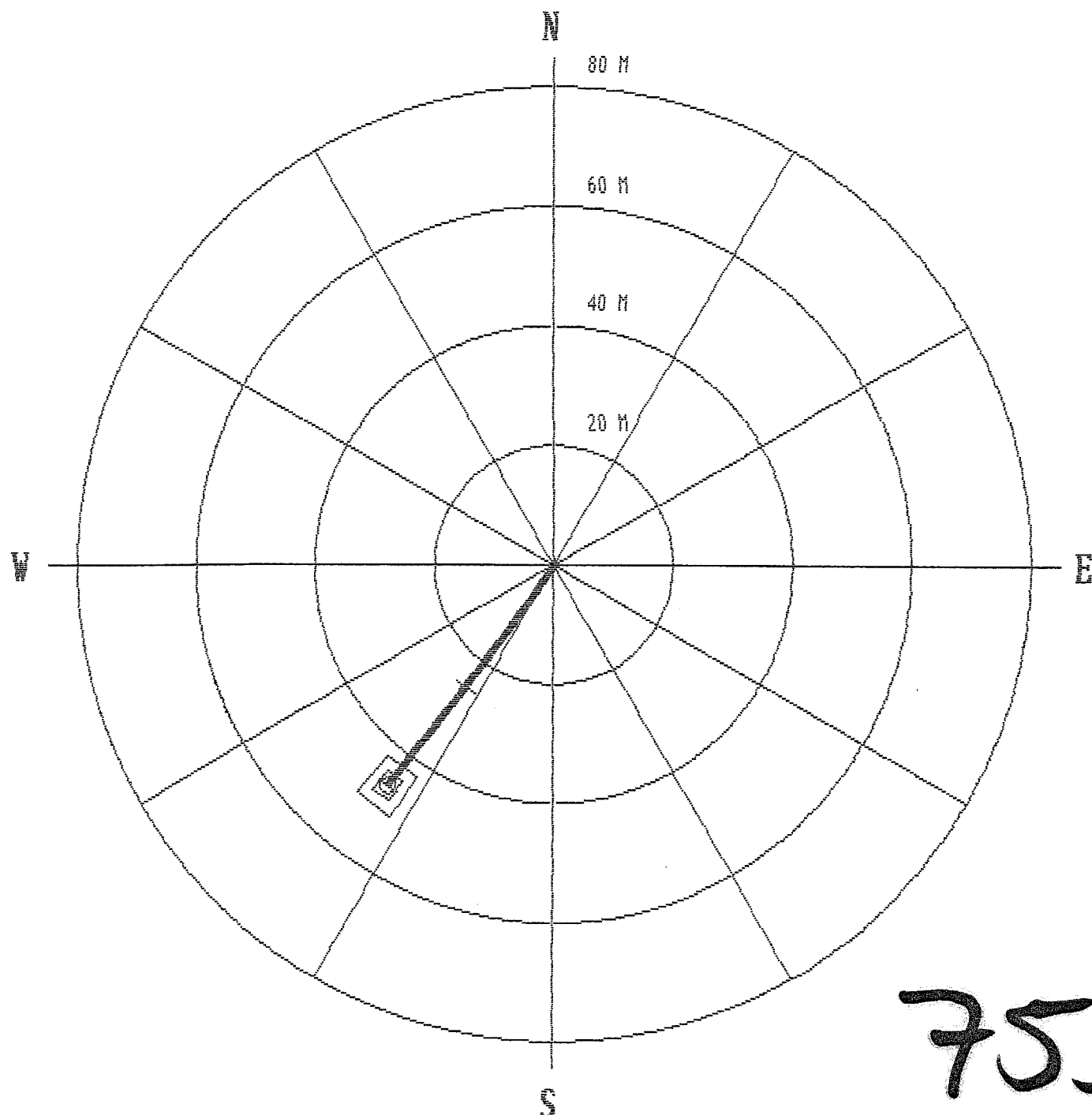
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	2.82	0.19	0.02	0.2	5.2	31.0	35.8
8.0	7.12	-0.84	-0.34	0.9	202.0	30.9	216.5
13.0	11.42	-2.94	-1.77	3.4	211.1	30.7	211.3
18.0	15.72	-4.99	-3.26	6.0	213.2	30.7	218.2
23.0	20.03	-7.05	-4.74	8.5	213.9	30.5	210.2
28.0	24.36	-9.09	-6.21	11.0	214.3	29.8	220.9
33.0	28.69	-11.08	-7.69	13.5	214.8	30.0	212.1
38.0	33.04	-13.07	-9.13	15.9	214.9	29.5	208.6
43.0	37.41	-15.01	-10.58	18.4	215.2	29.3	216.9
48.0	41.79	-16.89	-12.06	20.8	215.5	28.3	223.5
53.0	46.17	-18.80	-13.47	23.1	215.6	28.5	213.5
58.0	50.56	-20.70	-14.90	25.5	215.7	28.3	230.4
63.0	54.96	-22.55	-16.39	27.9	216.0	28.6	219.2
68.0	59.37	-24.42	-17.80	30.2	216.1	28.0	218.6
73.0	63.78	-26.26	-19.23	32.5	216.2	27.6	215.2
78.0	68.20	-28.07	-20.70	34.9	216.4	27.7	226.2
83.0	72.63	-29.88	-22.14	37.2	216.5	27.2	219.5
88.0	77.07	-31.69	-23.55	39.5	216.6	27.2	216.4
93.0	81.53	-33.46	-24.95	41.7	216.7	26.8	219.9
98.0	86.00	-35.22	-26.27	43.9	216.7	27.0	198.4
103.0	90.50	-36.92	-27.64	46.1	216.8	25.9	219.8
103.4	90.84	-37.03	-27.73	46.3	216.8	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

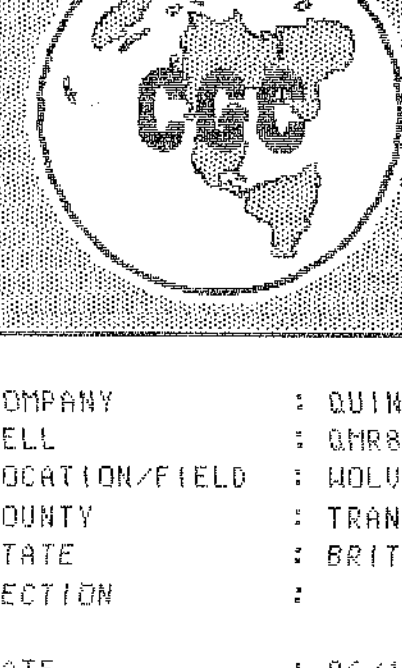
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89502 GAM-NEUTRON
 DATE OF LOG: 06/17/89
 PROBE: 9055A 14



SCALE: 10 M/CM
 TRUE DEPTH: 90.78 M
 AZIMUTH: 216.8
 DISTANCE: 46.3 M
 + = 50 M INCR
 O = BOTTOM OF HOLE



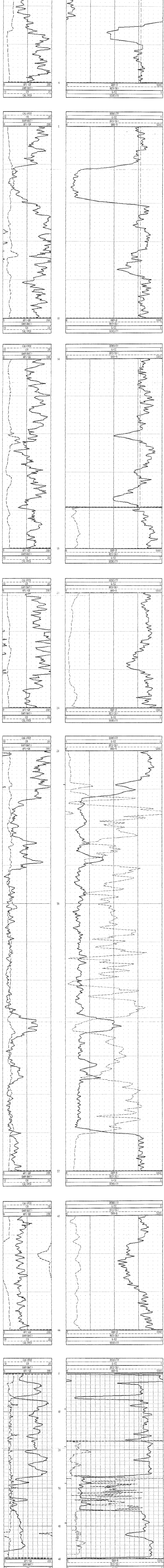
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Century

OMR89503 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : OMR89503 GAM-DEN-RES-CAL
 LOCATION/FIELD : HOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/17/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 54 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 49.48 LOG MEASURED FROM: 6L DF : 00
 LOG TOP : -1.66 DRL MEASURED FROM: 6L 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 : 9032AC
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 3
 FLUID DENSITY : 1.0 MATRIX DELTA T : 175 PLOT : QUIN 12
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 TARESH: 50000
 REMARKS :
 LOGGED OPEN HOLE
 VERTICAL HOLE
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOCN = 9032AC SERIAL NUMBER = 967

CAL-NOTE	CAL-TIME	SRC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GAMINAT	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAMINAT	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	2459.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OMI-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	176.500 OMI-H
6	05/04/89	10:46:11	0	CALIPER	553.000 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	DENSITY	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITY	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

QMR89503 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89503 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

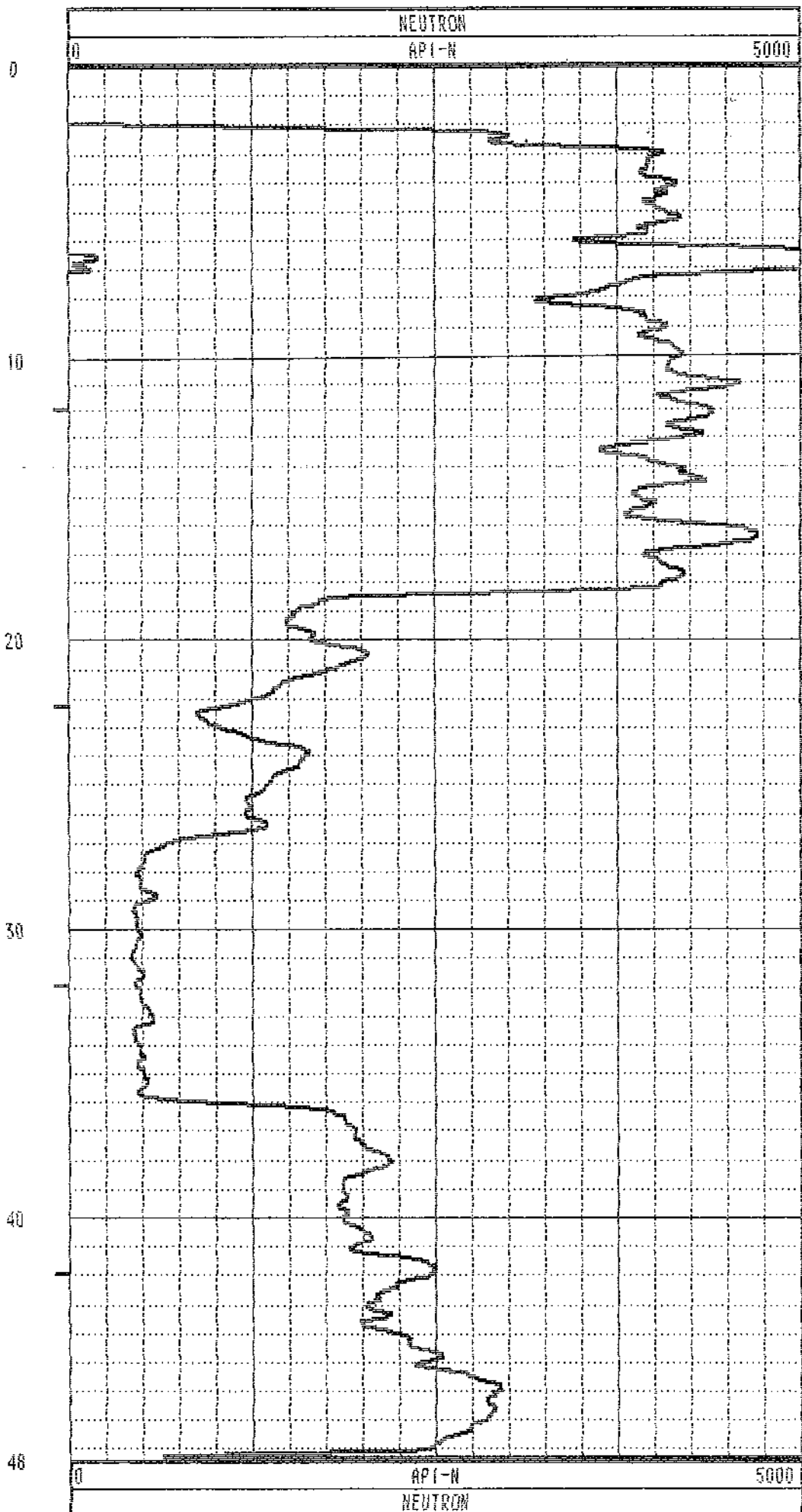
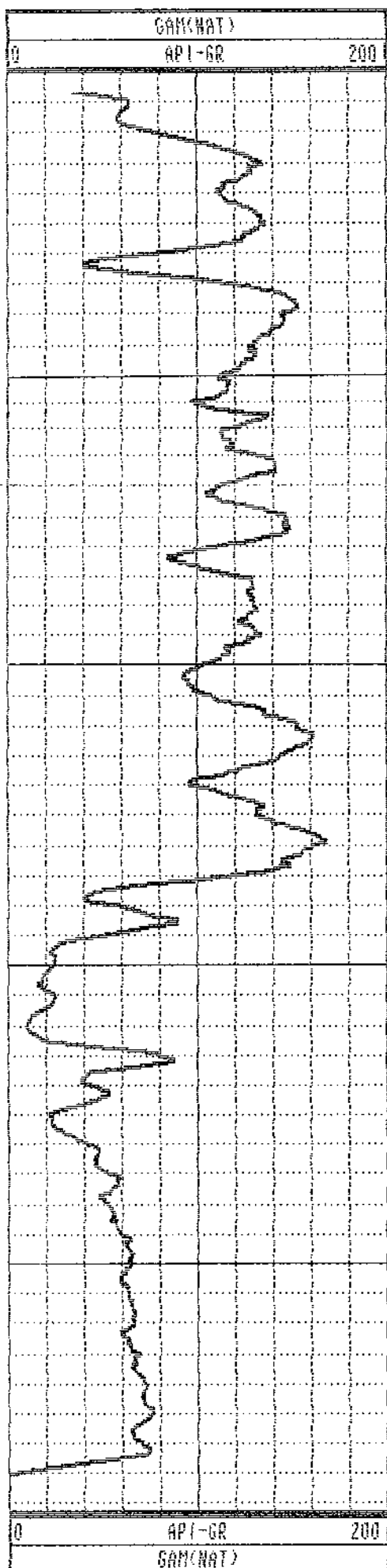
DATE : 06/17/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 54 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 48.36 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.72 DRL MEASURED FROM: GL GL : 00

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 : 2
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 10
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000

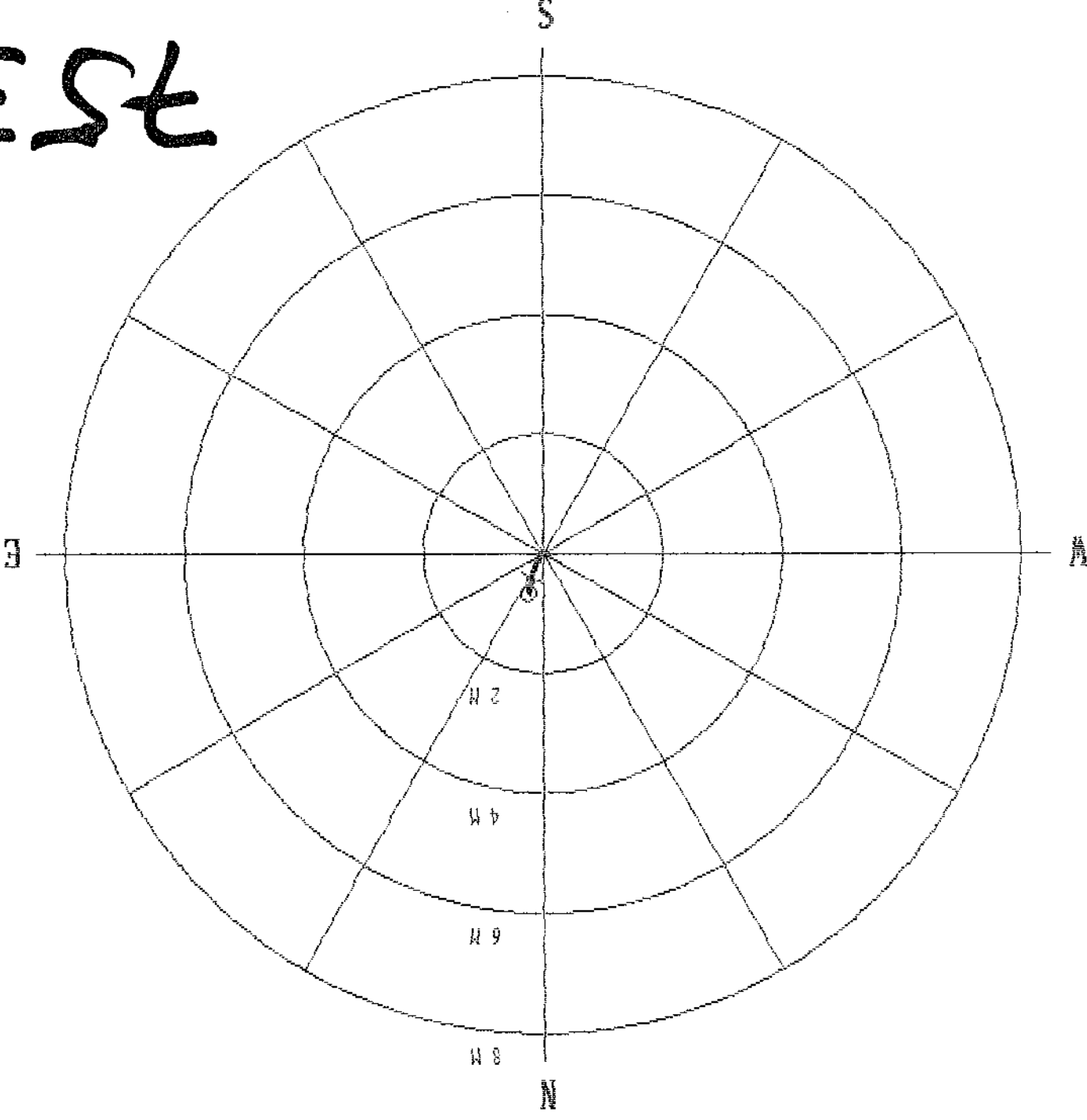
REMARKS :
 LOGGED OPEN HOLE
 VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

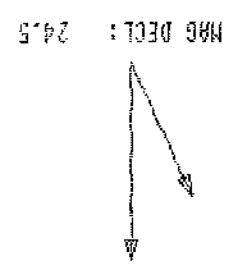


TOOL CALIBRATION		TOOL = 9055A	SERIAL NUMBER = 14			
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM
4	05/04/89	08:15:10	0	RES	5212.000 CPS	1000.000 OHM
5	05/04/89	08:15:14	0	SP	-9.000 CPS	0.000 HV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 HV
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

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○ = BOTTOM OF HOLE
 + = 20 M INCR
 DISTANCE: 0.7 M
 AZIMUTH: 21.1
 TRUE DEPTH: 48.29 M
 SCALE: 1 M/CM



CLIENT: GUINETTE COAL LTD.
 LOCATION: HOLVERINE VALLEY SOUTH
 HOLE ID: GMR89503 GMM-NEURON
 DATE OF LOG: 06/18/89
 PROBE: 9055A 14

PLAN VIEW
COMPU-LOG DEVIATION

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANGS
3.0	3.00	-0.00	0.00	0.0	213.3	0.4 278.6
8.0	8.00	-0.02	-0.01	0.0	218.2	0.6 144.7
13.0	13.00	-0.04	-0.02	0.0	211.7	0.1 154.8
18.0	18.00	-0.03	0.00	0.0	176.0	0.5 73.4
23.0	23.00	-0.00	0.04	0.0	92.8	0.7 37.7
28.0	28.00	0.05	0.08	0.1	53.1	1.5 10.5
33.0	33.00	0.19	0.12	0.2	32.0	1.9 15.8
38.0	37.99	0.34	0.17	0.4	26.4	1.9 15.1
43.0	42.99	0.51	0.22	0.5	23.2	1.6 13.1
48.0	47.99	0.65	0.25	0.7	21.2	1.8 11.7
48.4	48.35	0.66	0.25	0.7	21.1	0.0 0.0

CLIENT : GUINETTE COAL LTD. HOLE ID. : GMR89503 GMM-
 FIELD OFFICE : CALGARY
 DATE OF LOG : 06/18/89
 PROBE : 9055A
 DEPTH UNITS : METER LOG 5
 MAG. DECL. : 24.500
 DATA FROM :
 CLIENT : *****

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

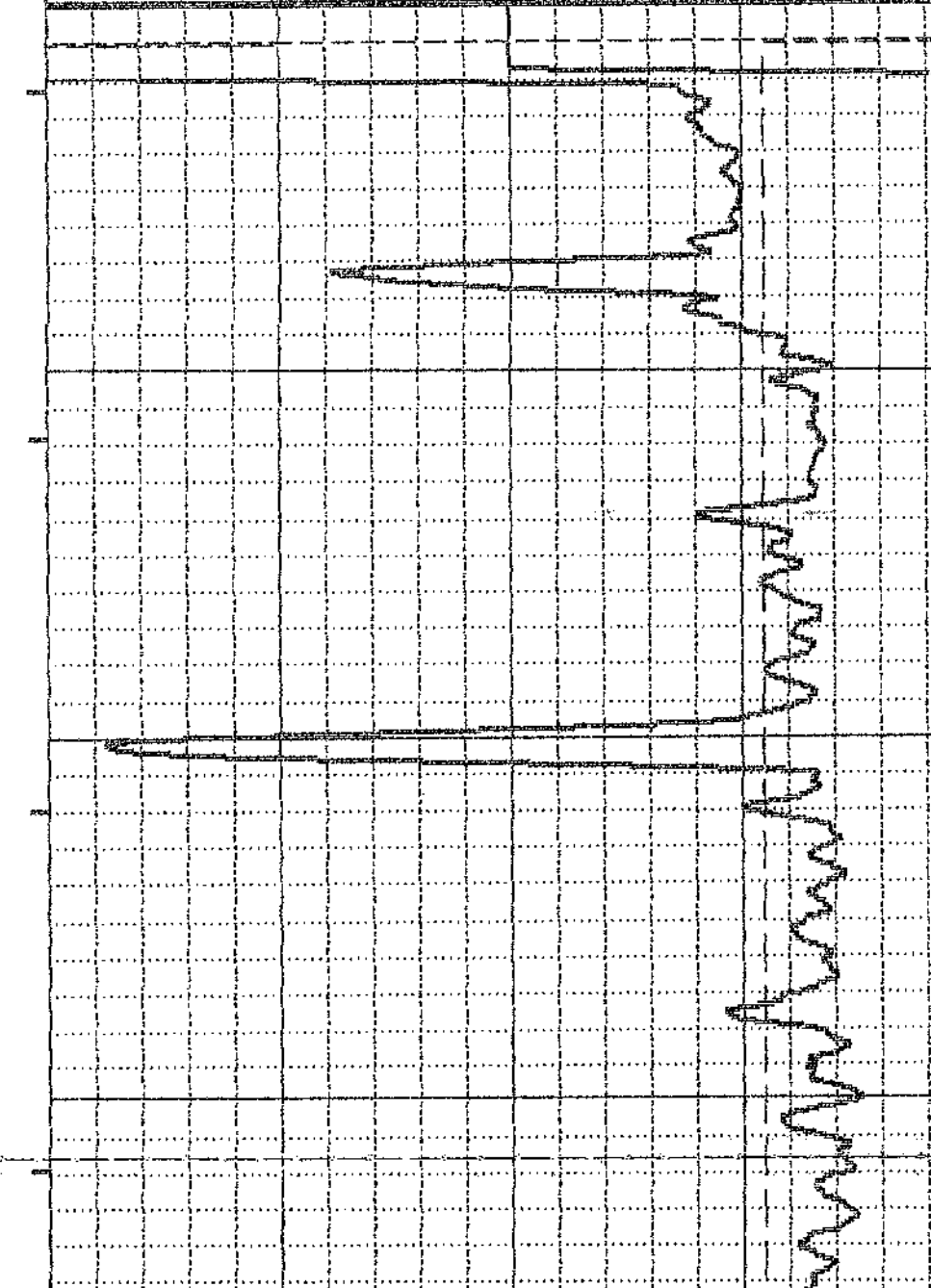
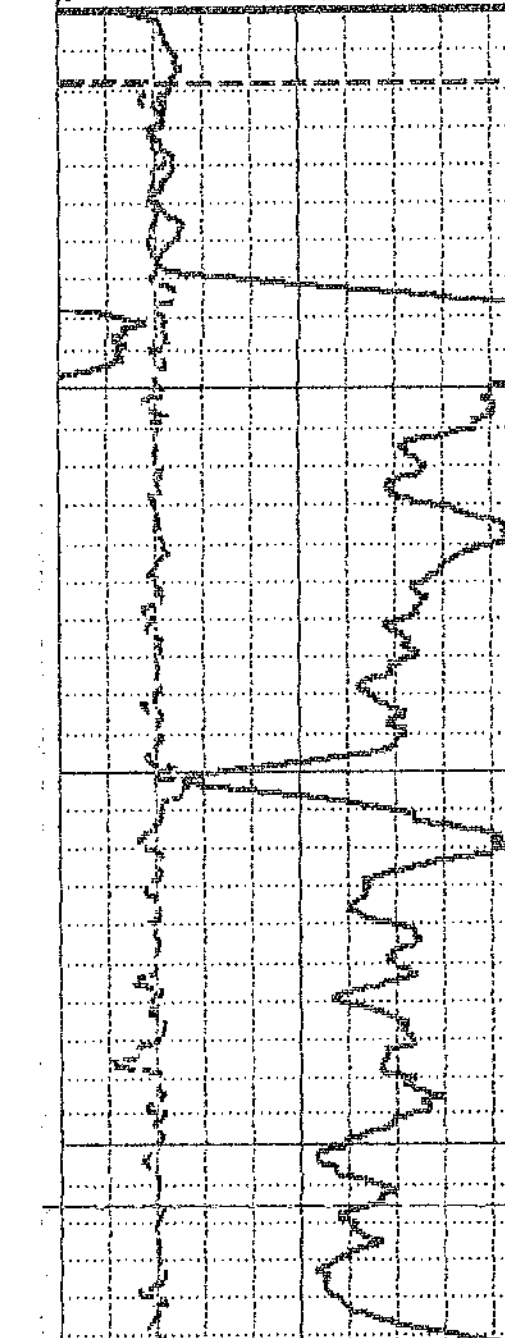
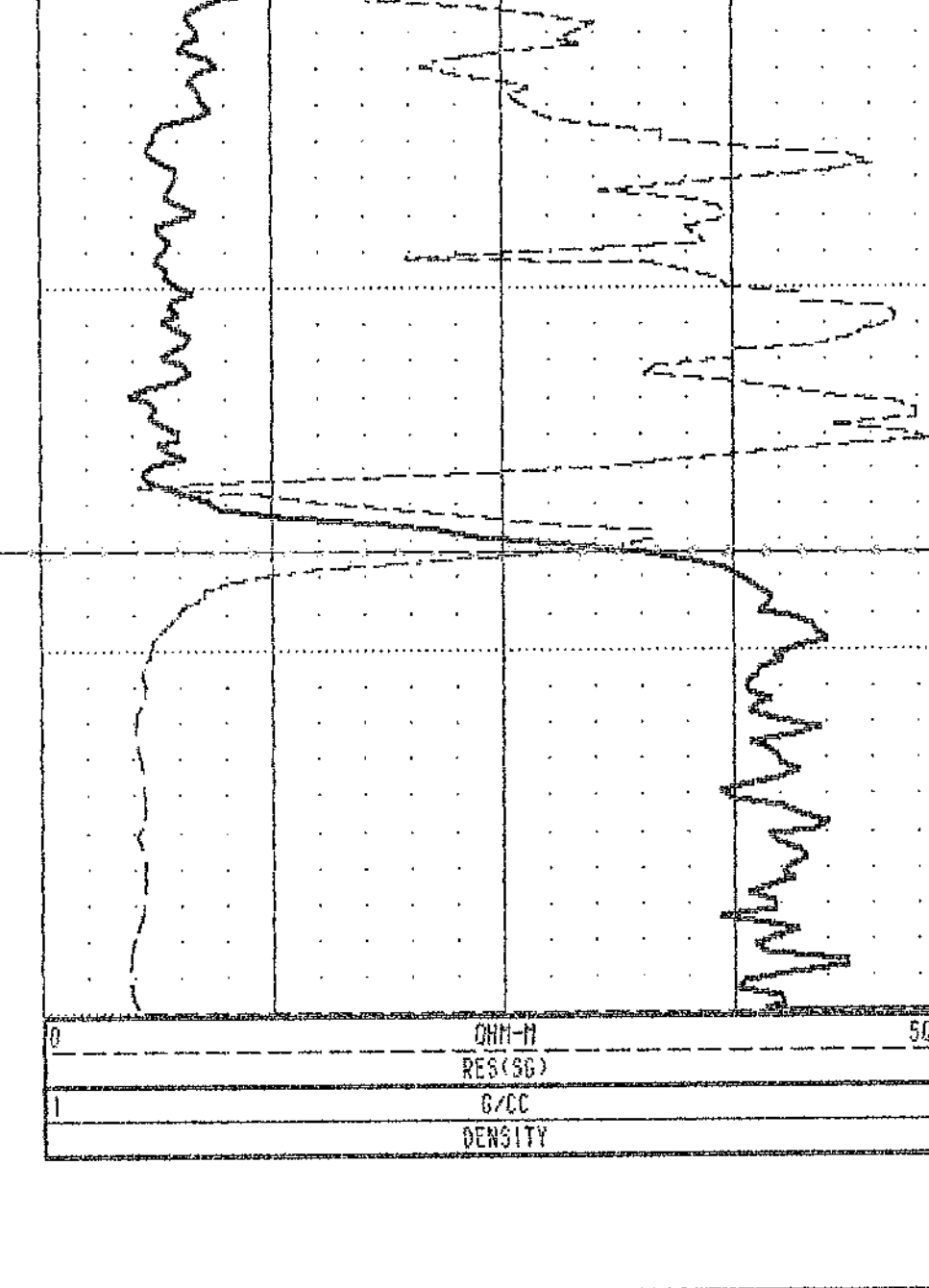
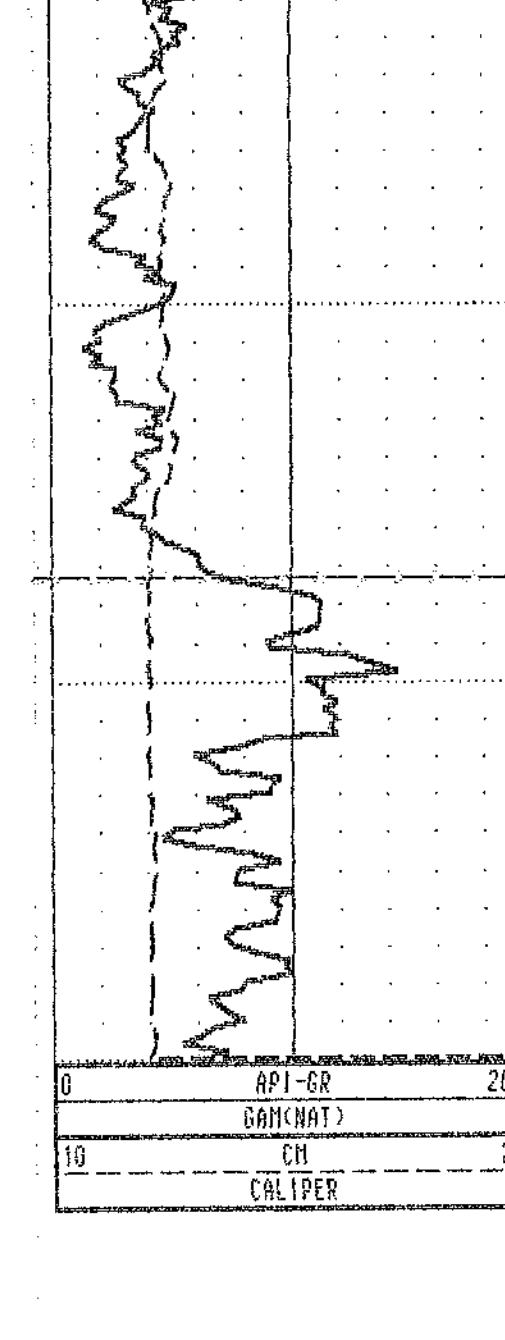
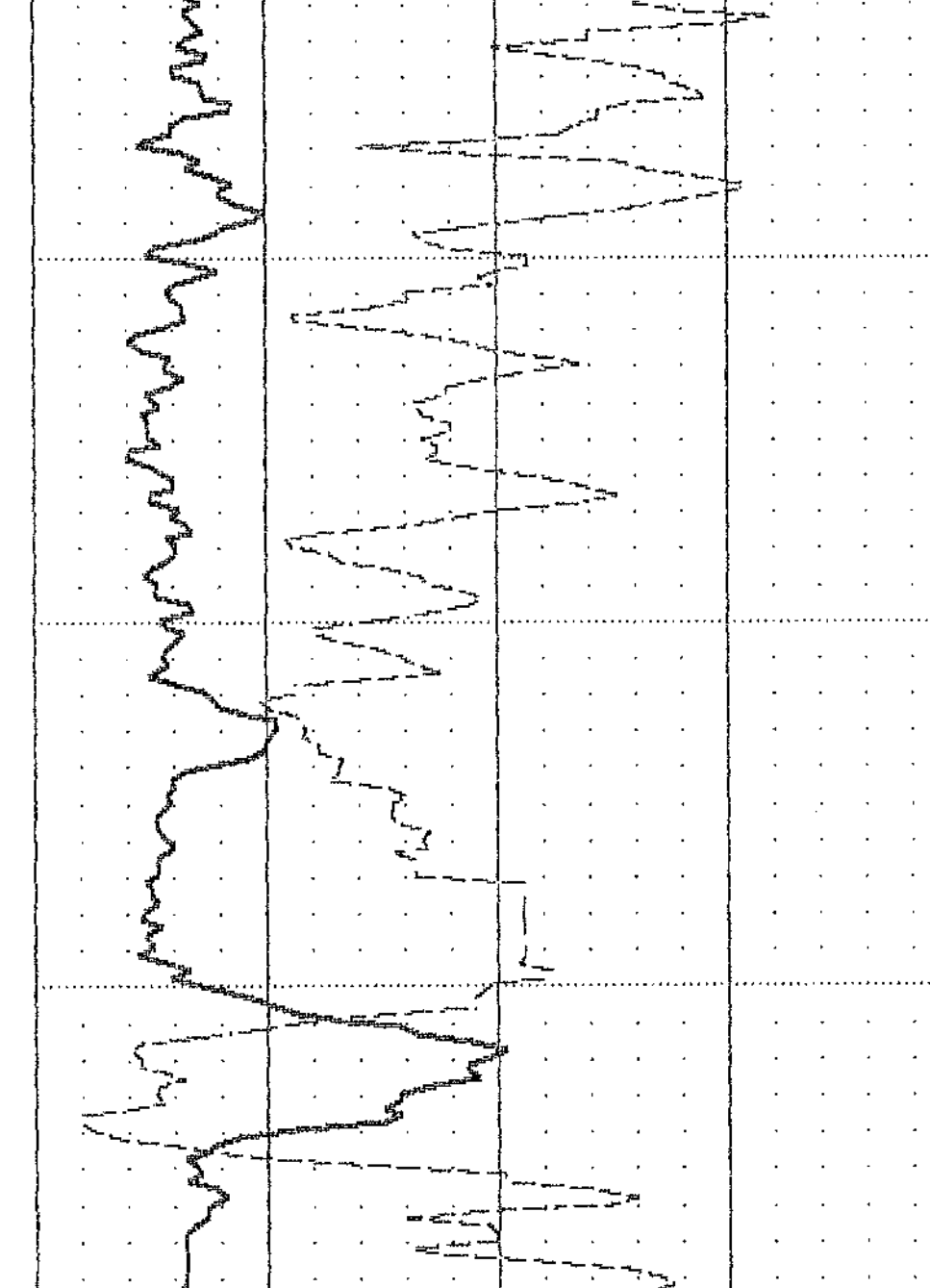
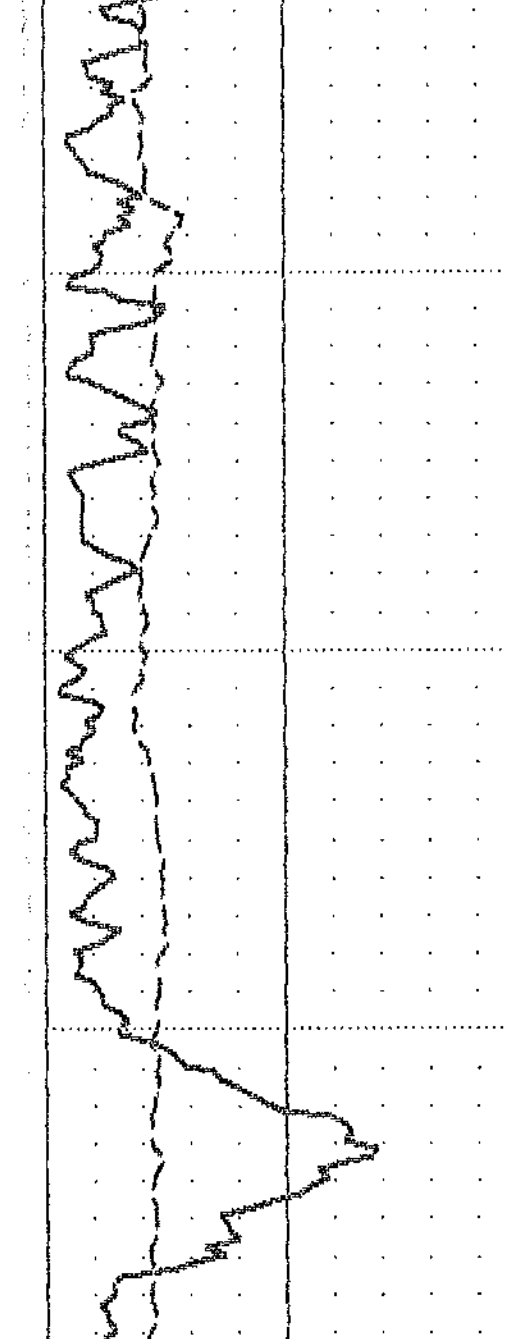
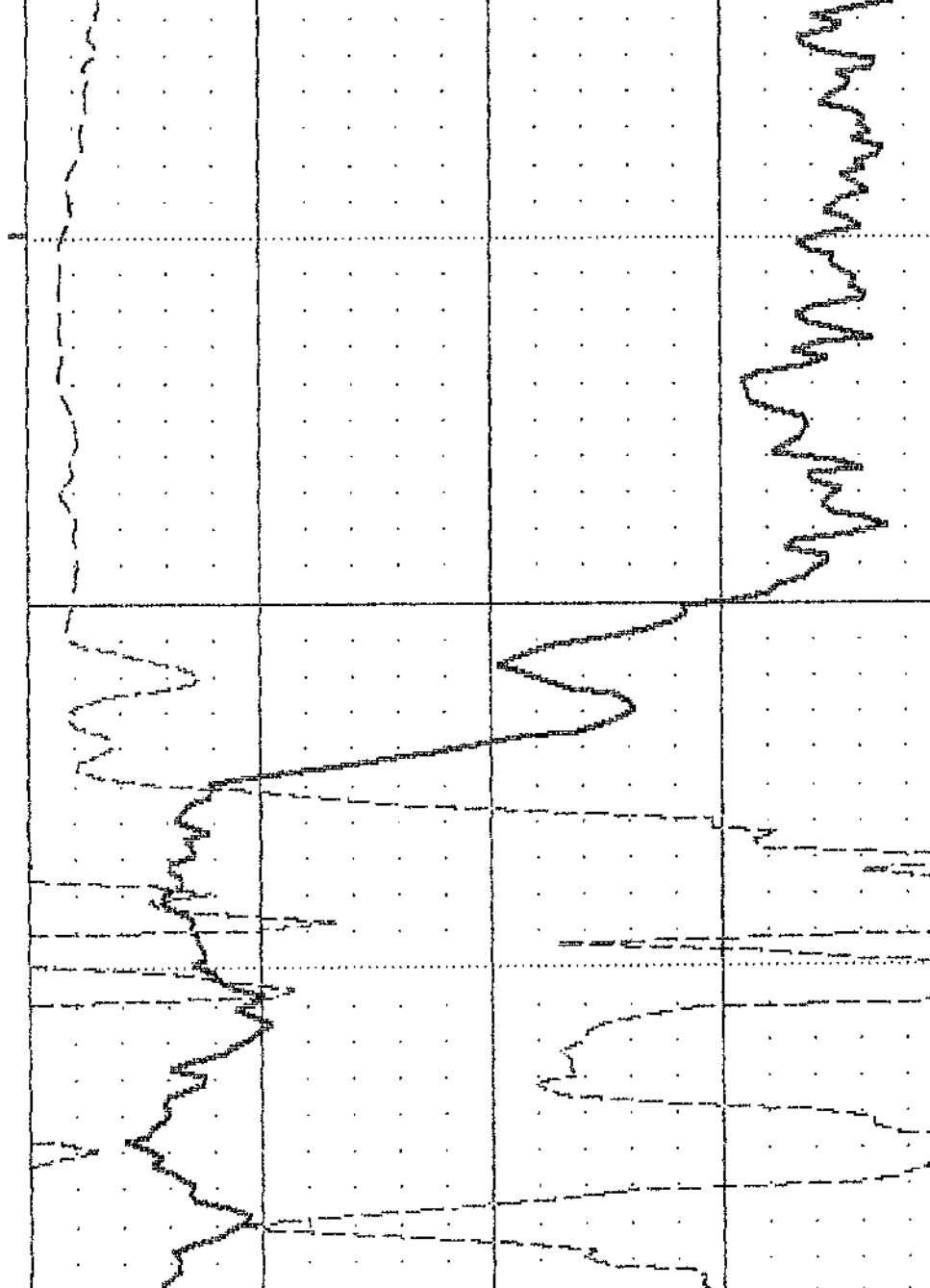
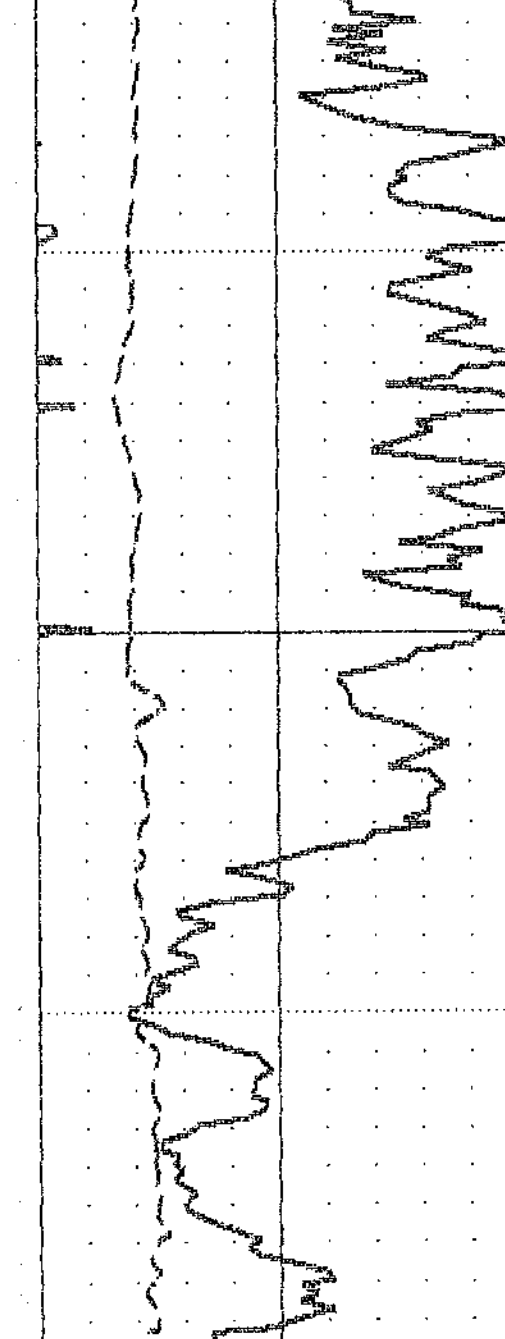
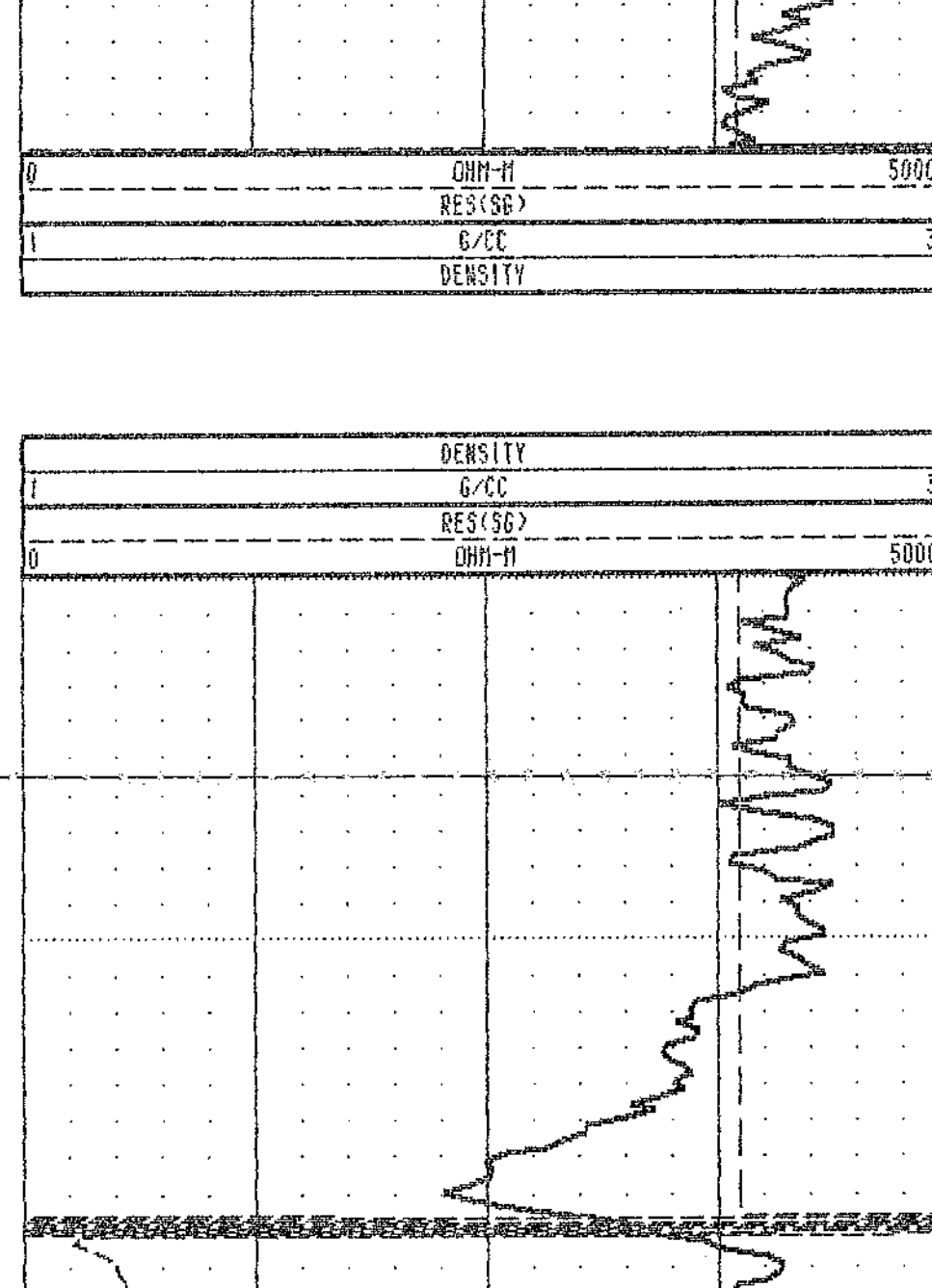
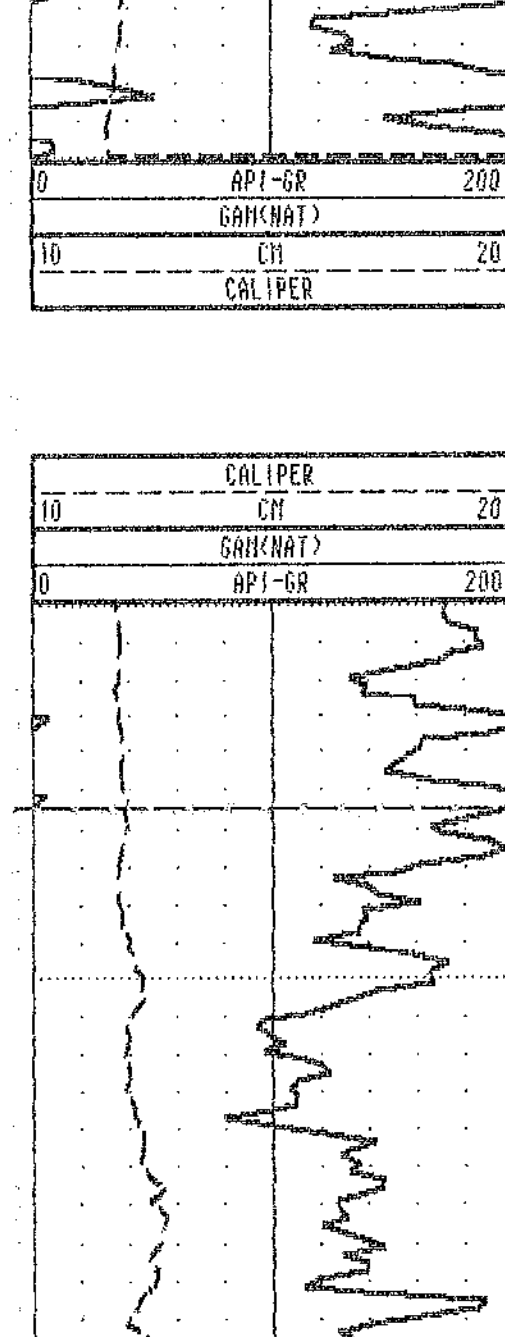
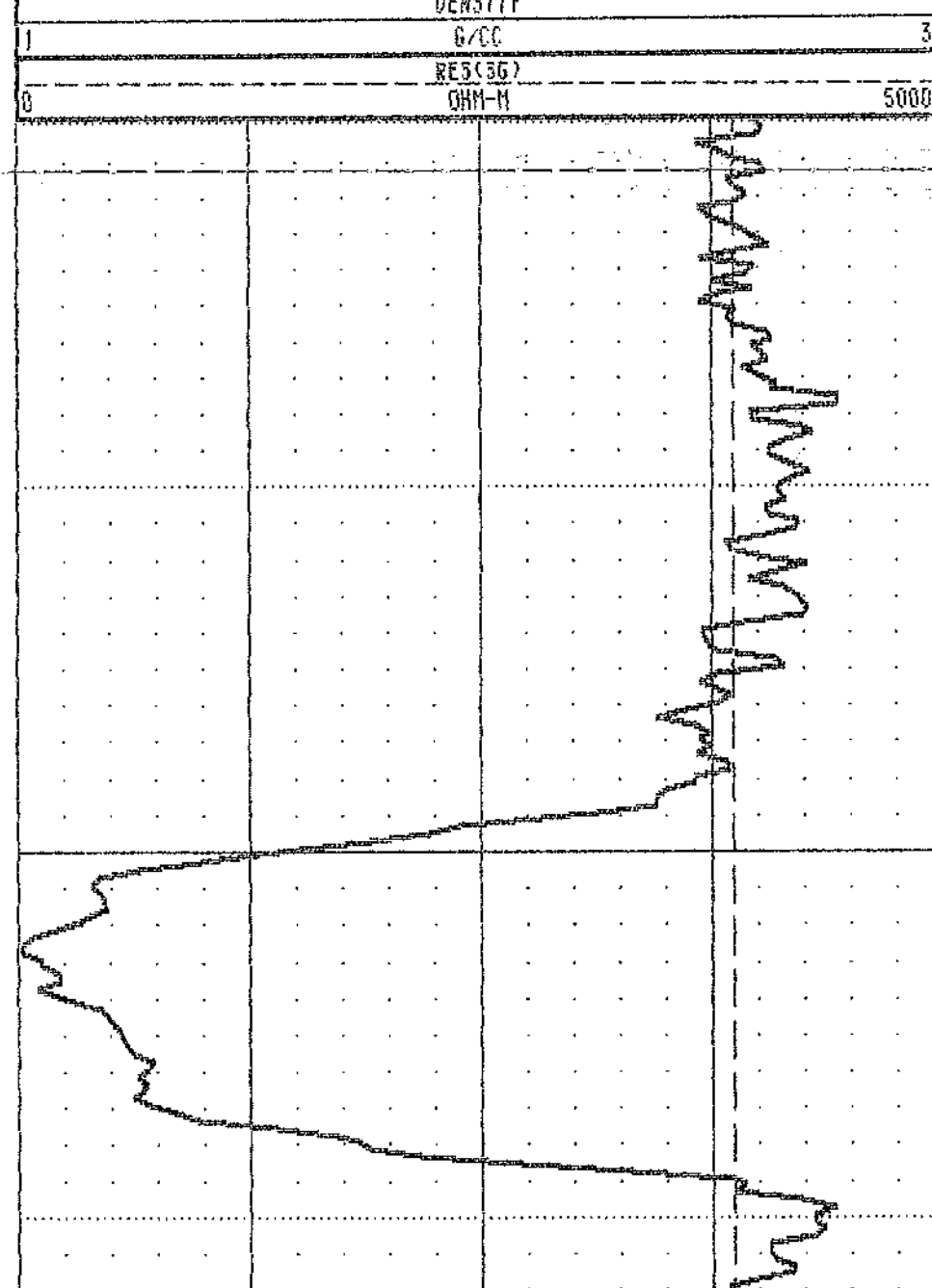
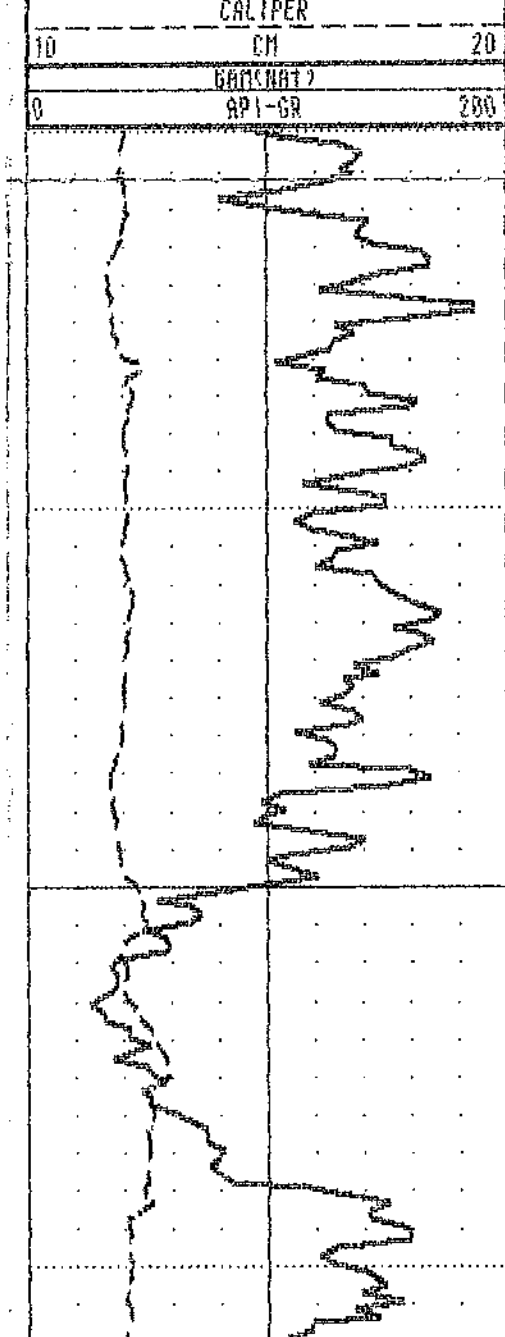
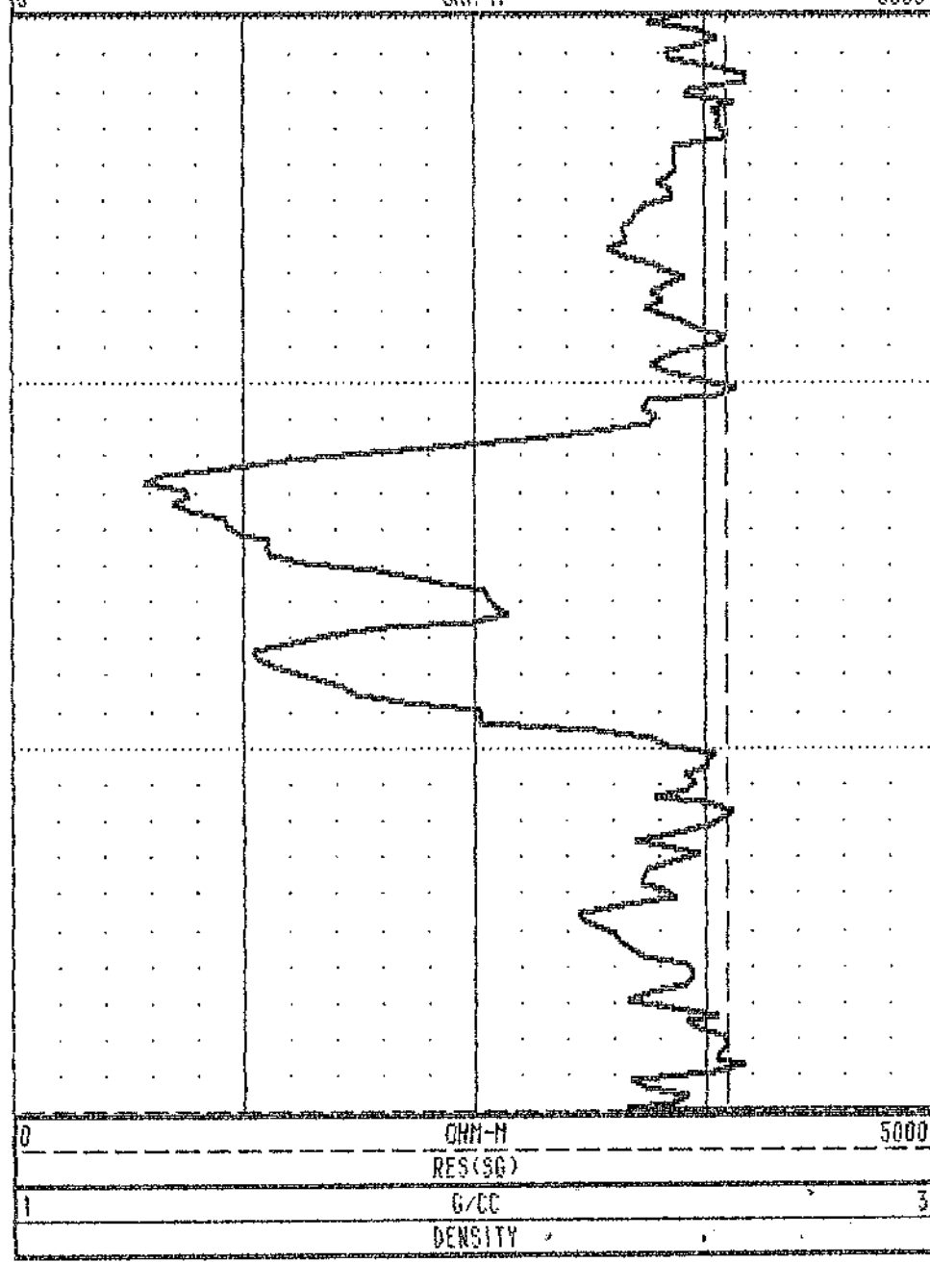
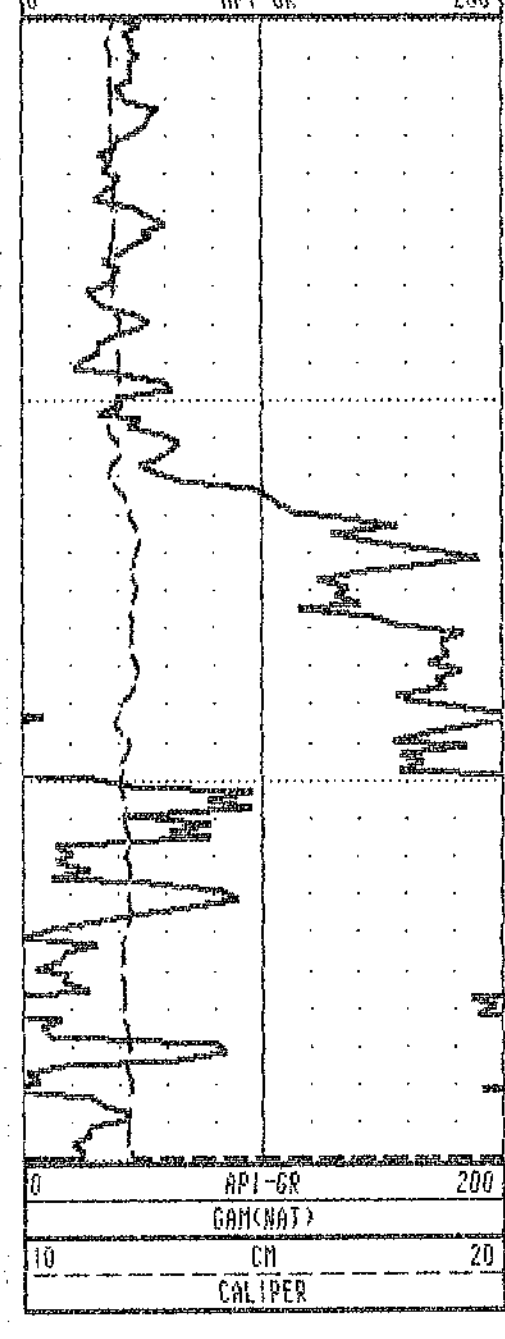


Century

QMR89504 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMR89504 GAM-DEN-RES-CAL		
LOCATION/FIELD : WOLVERINE VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP :	RANGE :
DATE : 06/17/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER : 61	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 60.62	LOG MEASURED FROM: GL	DF : 00
LOG TOP : -.02	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER : 0	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 : 9032AC
MATRIX DENSITY : 2.68	RM TEMPERATURE :	LOG : 4
FLUID DENSITY : 1.0	MATRIX DELTA T : 173	PLOT : QUIN 14
NEUTRON MATRIX : SANDSTONE	FLUID DELTA T : 690	THRESH: 50000
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	SRC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GAKNAT	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAKNAT	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 OMI-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OMI-H
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CH
7	05/04/89	10:46:11	0	CALIPER	1906.000 CPS	17.800 CH
8	05/04/89	10:17:51	0	DENSITY	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITY	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPER	0.000 CPS	0.000 CH
11	05/04/89	10:17:51	0	CALIPER	0.000 CPS	0.000 CH

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Century

QMR89504 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:

WELL : QMR89504 GAM-NEUTRON

LOCATION/FIELD : WOLVERINE VALLEY SOUTH

COUNTY : TRANSFER

STATE : BRITISH COLUMBIA

SECTION : TOWNSHIP : RANGE :

DATE : 06/17/89 PERMANENT DATUM : 00 ELEVATIONS

DEPTH DRILLER : 61 ELEV. PERM. DATUM: 00 KB : 00

LOG BOTTOM : 60.66 LOG MEASURED FROM: GL DF : 00

LOG TOP : 0.62 DRL MEASURED FROM: GL GL : 00

CASING DRILLER : 0 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

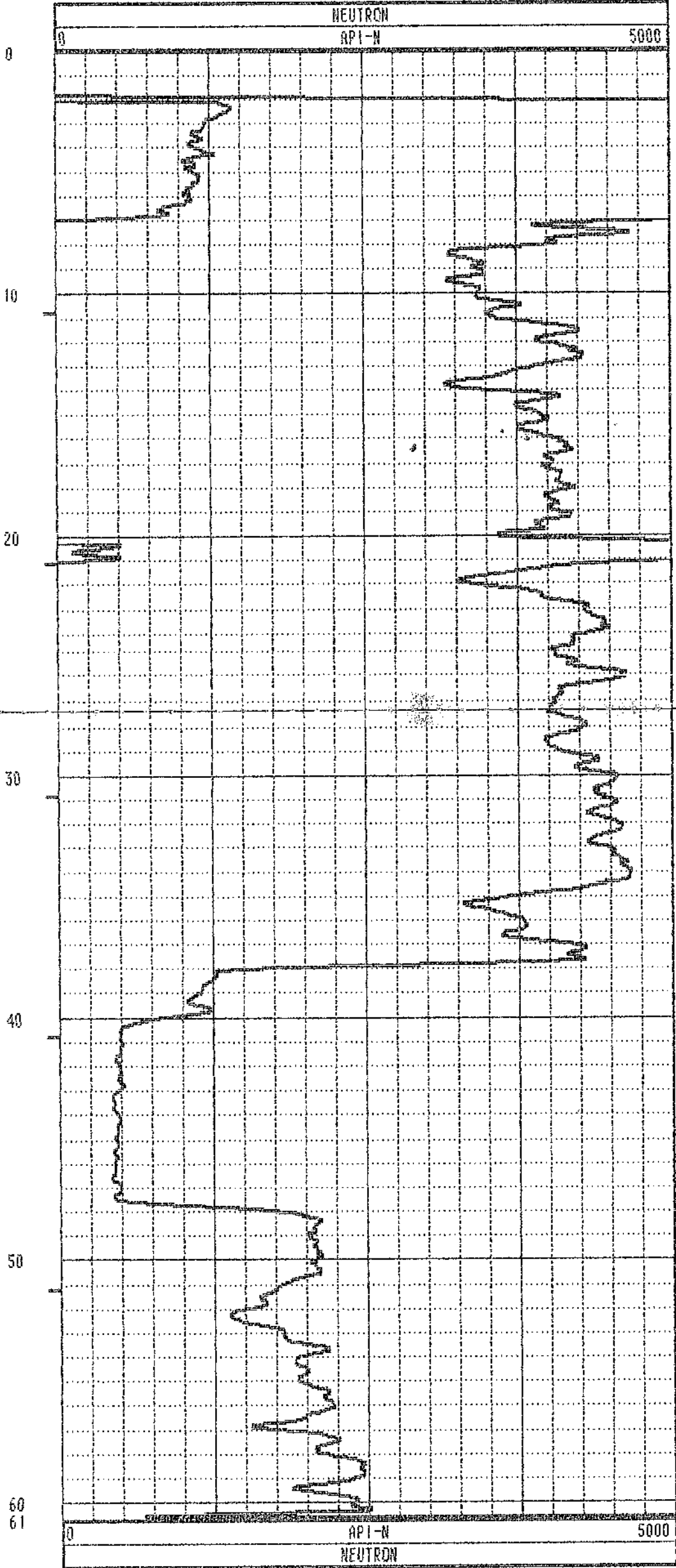
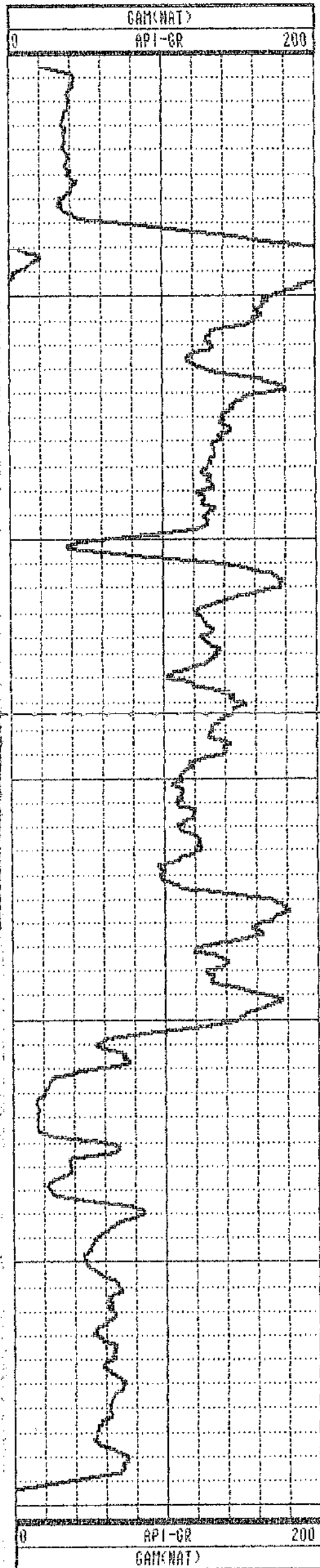
NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000

REMARKS :

LOGGED OPEN HOLE

VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



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

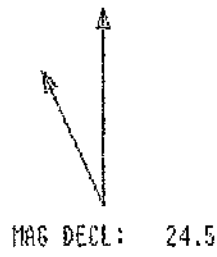
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89504 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/17/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

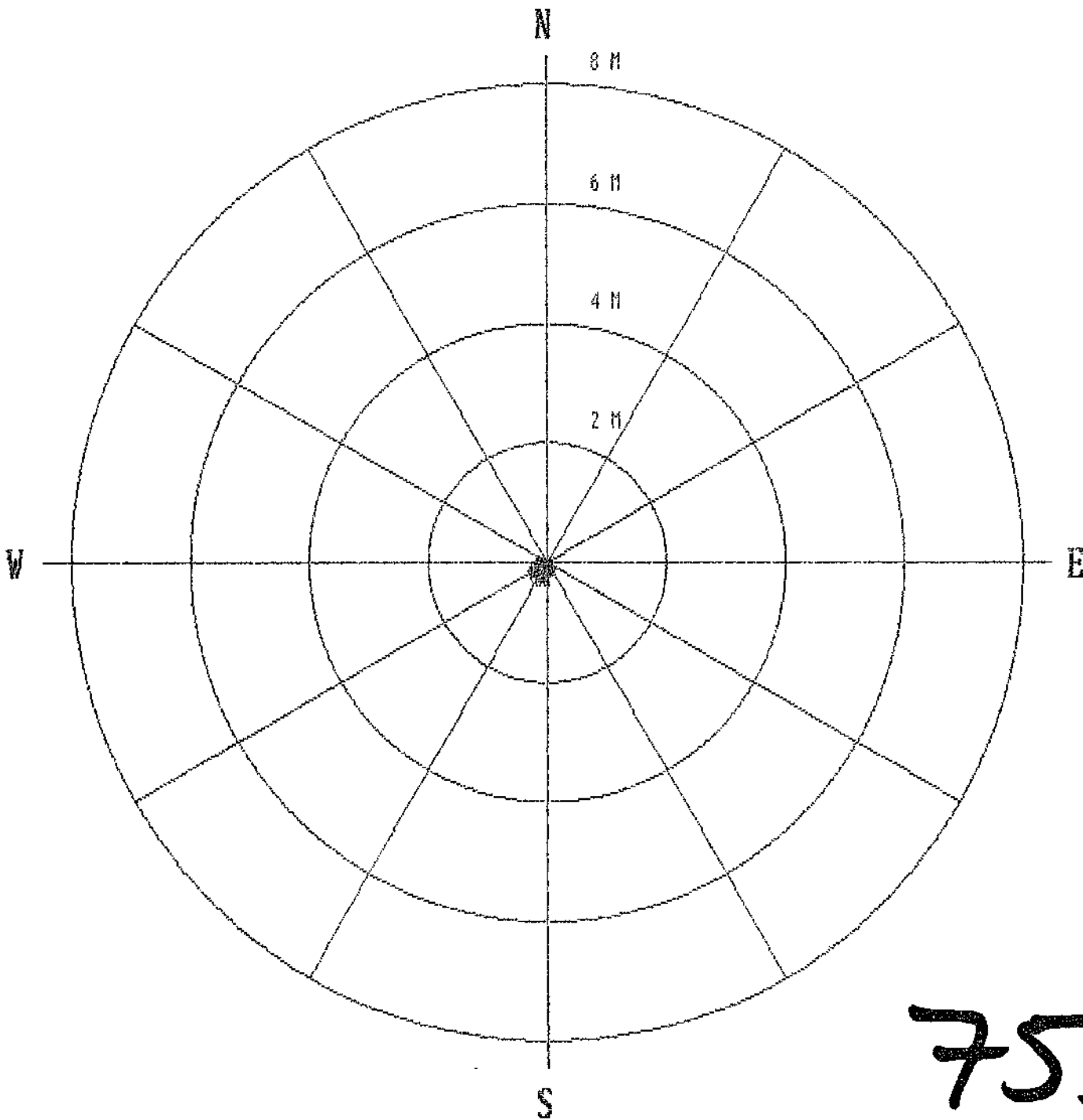
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
0.6	0.62	0.00	0.00	0.0	0.0	0.0	0.0
5.6	5.62	-01	-00	0.0	200.2	0.7	227.4
10.6	10.62	-06	-05	0.1	220.4	0.6	171.8
15.6	15.62	-10	-09	0.1	222.4	0.9	231.9
20.6	20.62	-12	-11	0.2	223.1	0.7	192.3
25.6	25.62	-17	-14	0.2	219.1	0.7	209.9
30.6	30.62	-20	-15	0.2	217.3	0.5	239.5
35.6	35.62	-24	-17	0.3	215.1	0.7	198.2
40.6	40.62	-28	-17	0.3	211.5	0.3	161.4
45.6	45.62	-29	-15	0.3	207.4	0.4	92.0
50.6	50.62	-28	-13	0.3	204.5	0.3	17.8
55.6	55.62	-26	-14	0.3	208.5	0.3	299.0
60.6	60.62	-26	-15	0.3	209.4	0.0	0.0
60.7	60.66	-26	-15	0.3	209.4	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

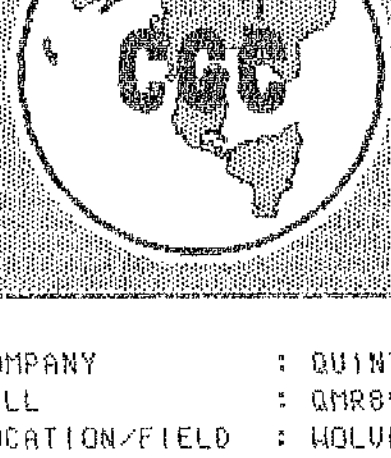
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89504 GAM-NEUTRON
 DATE OF LOG: 06/17/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 60.60 M
 AZIMUTH: 209.4
 DISTANCE: 0.3 M
 + = 1 M INCR
 O = BOTTOM OF HOLE



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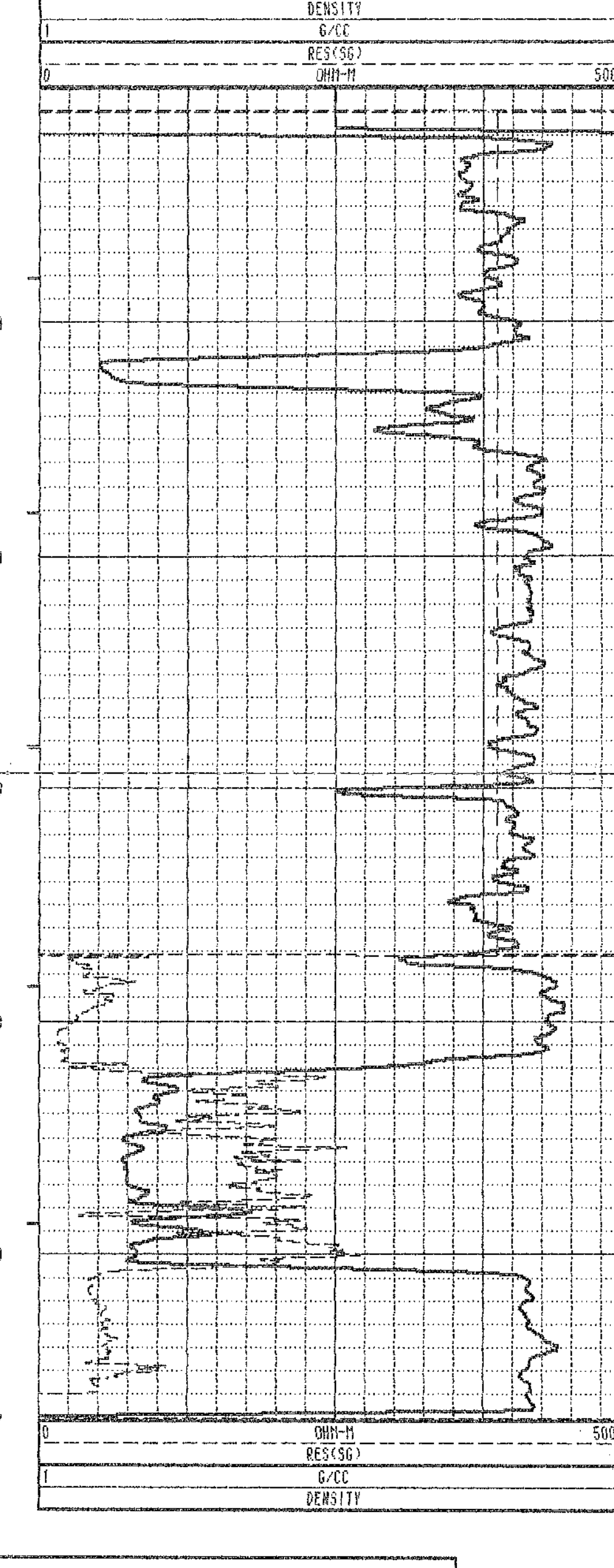
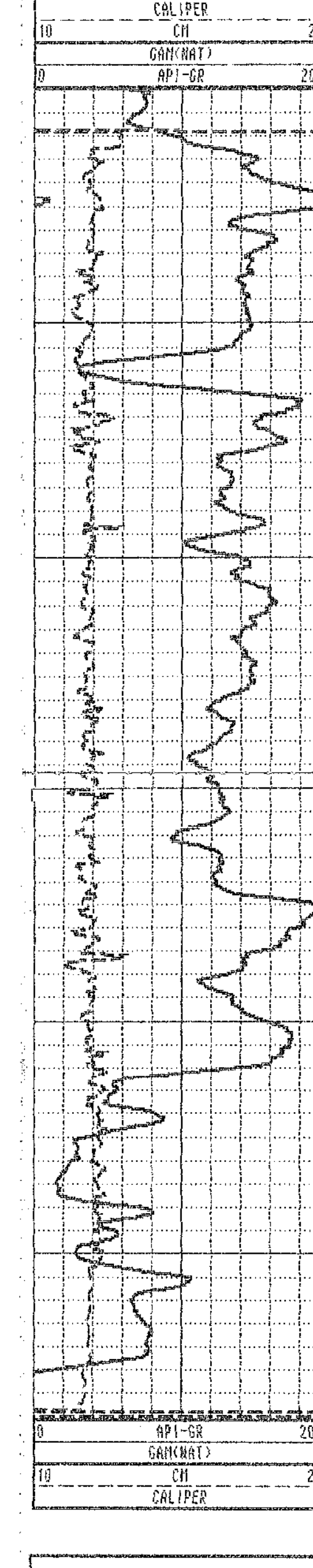
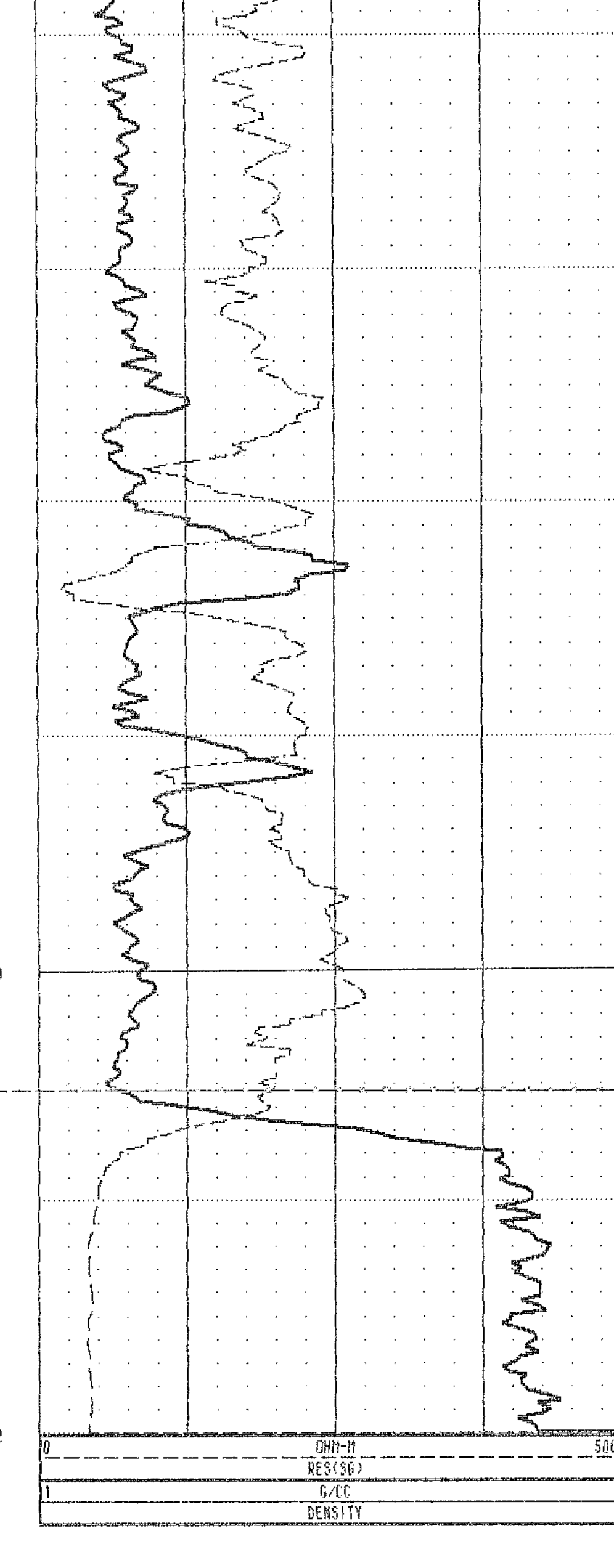
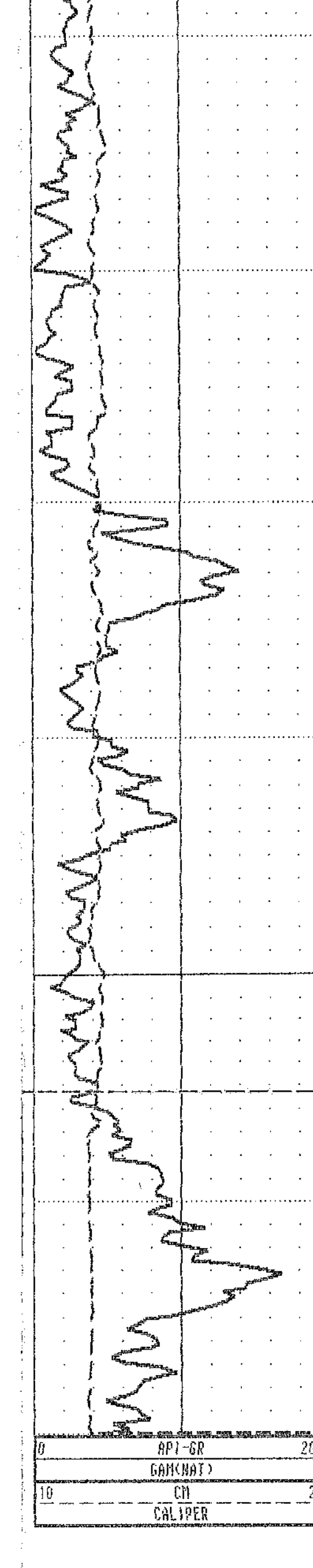
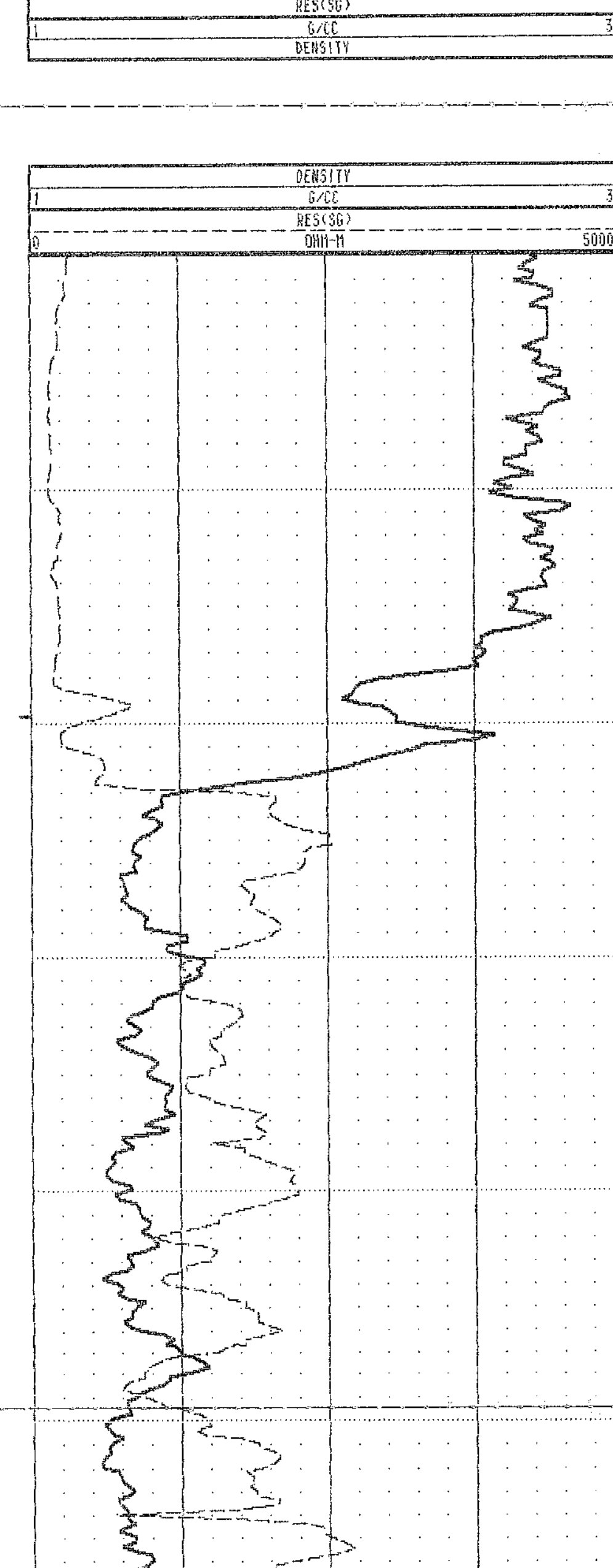
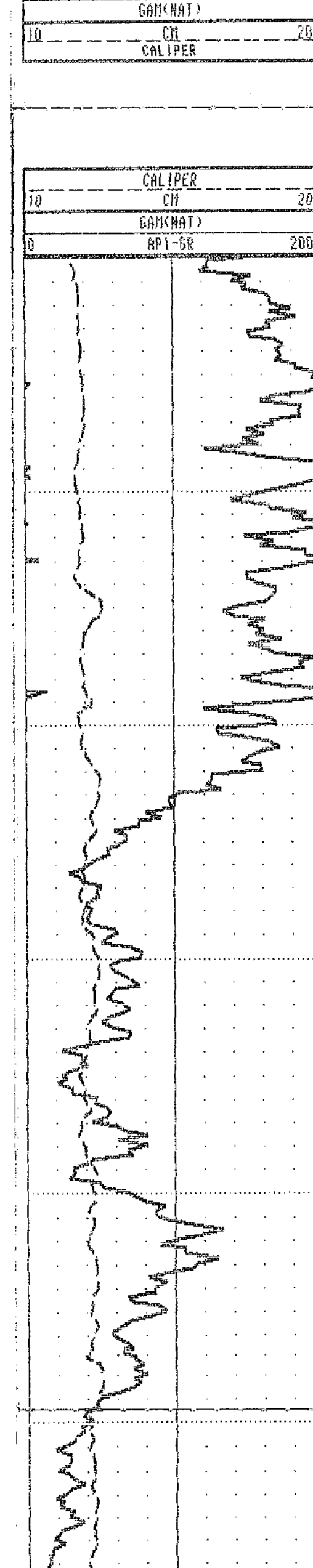
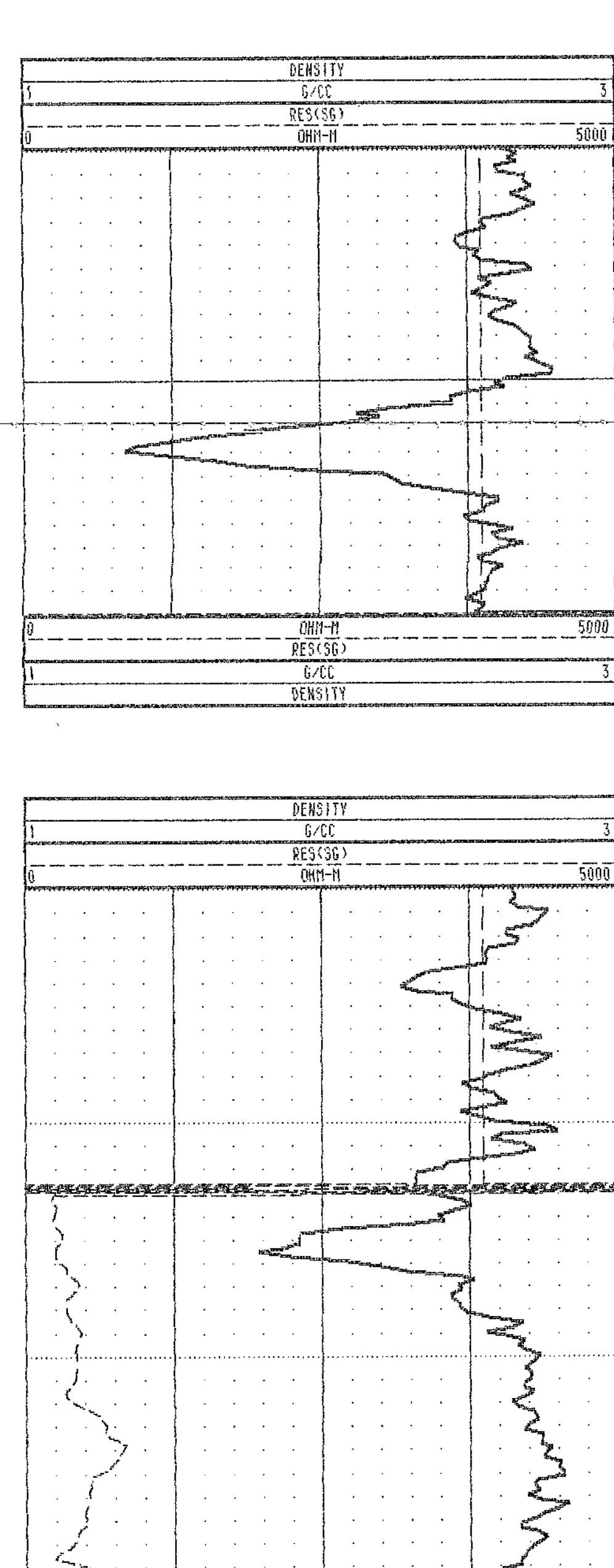
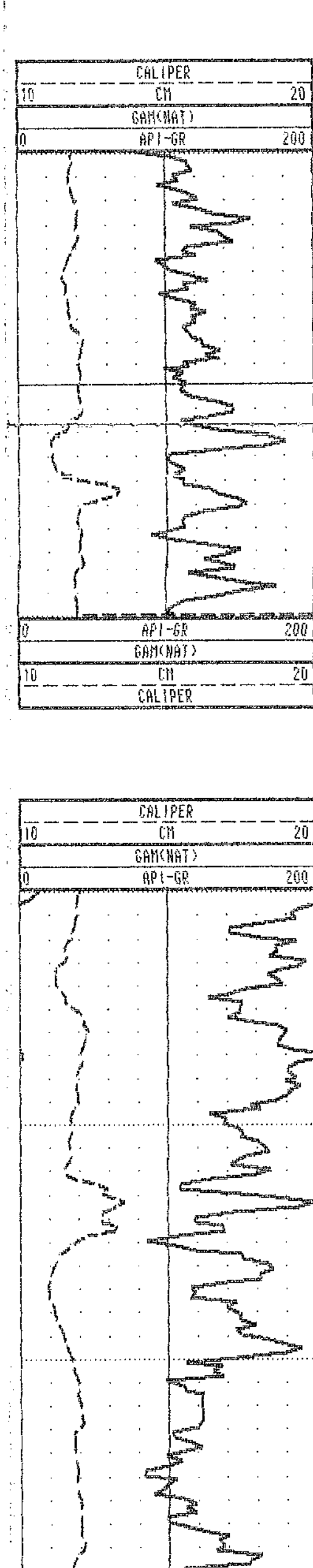
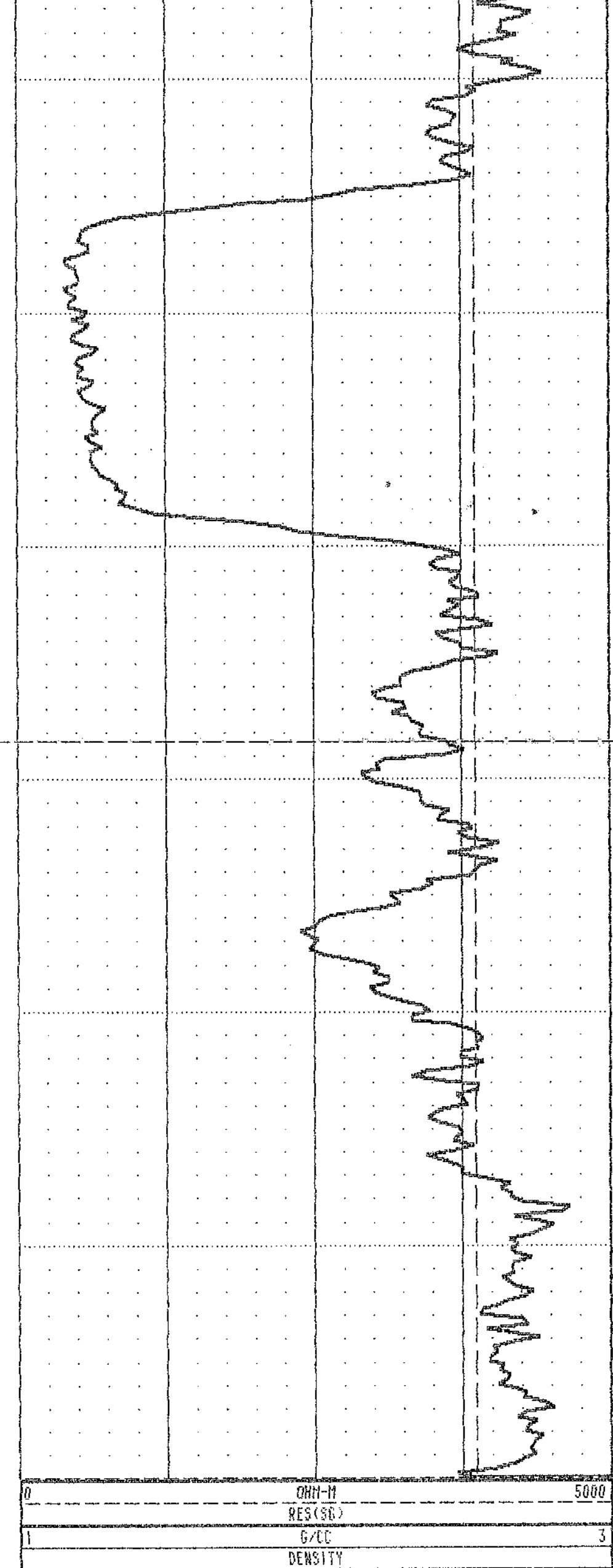
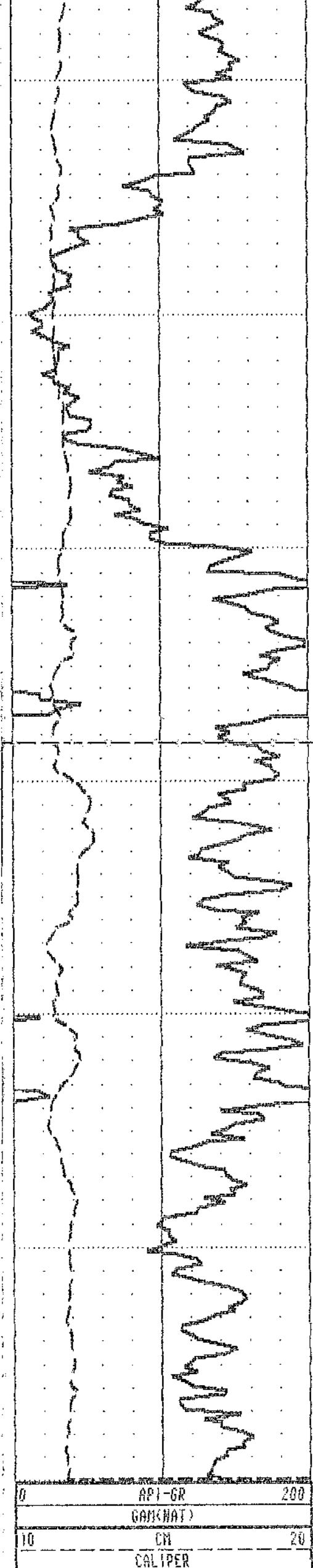


Century

QMR89505 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMR89505 GAM-DEN-RES-CAL		
LOCATION/FIELD : WOLVERINE VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP :	RANGE :
DATE : 06/17/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER : 58	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 57.06	LOG MEASURED FROM: GL	DF : 00
LOG TOP : -.06	ORL 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	RN :	TYPE : 90329C
MATRIX DENSITY : 2.68	RN TEMPERATURE :	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		
VERTICAL HOLE		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION		TOOL = 90529C	SERIAL NUMBER = 967		
CAL-DATE	CAL-TIME	SRC	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	GAMMA	0.000 API-GR
1	05/04/89	10:17:51	0	DENSITY	0.000 CPS
2	05/04/89	12:11:56	0	DENSITY	6166.000 CPS
3	05/04/89	12:11:56	0	DENSITY	2459.000 CPS
4	05/04/89	10:17:51	0	RES	0.000 RES(S)
5	05/04/89	10:25:07	0	RES	30275.000 CPS
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS
7	05/04/89	10:46:11	0	CALIPER	1996.000 CPS
8	05/04/89	10:17:51	0	DENSITYH	0.000 CPS
9	05/04/89	10:17:51	0	DENSITYH	0.000 CPS
10	05/04/89	10:17:51	0	CALIPERL	0.000 CPS
11	05/04/89	10:17:51	0	CALIPERL	0.000 CPS

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Century

QMR89505 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89505 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

OTHER SERVICES:

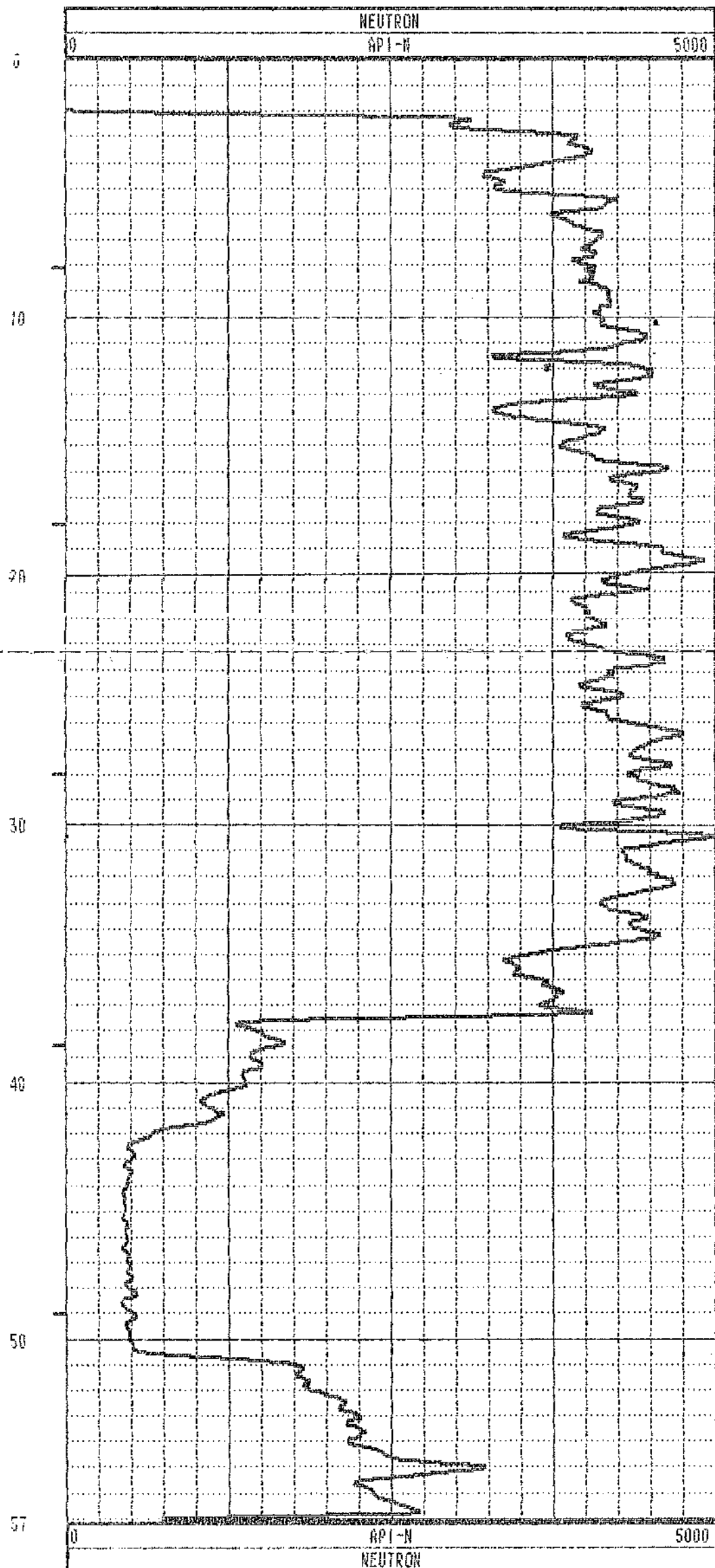
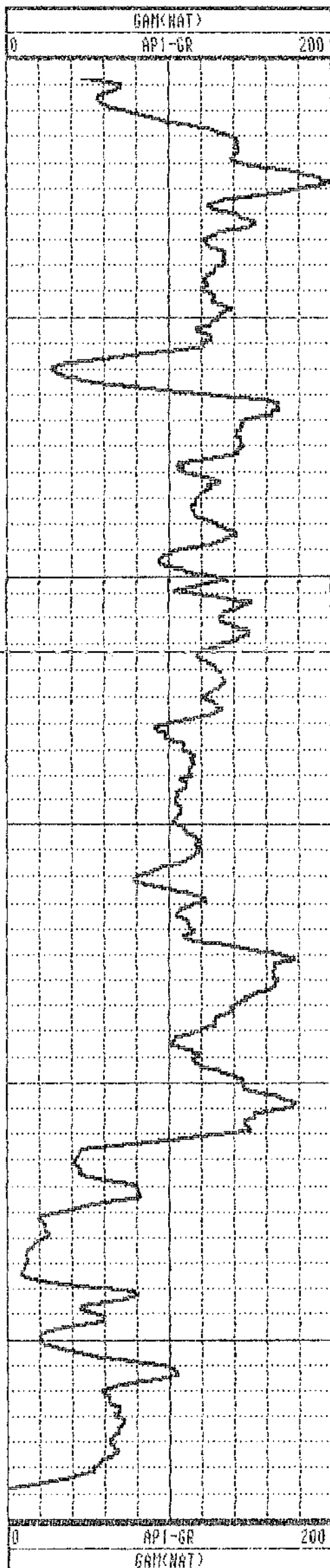
DATE : 06/17/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 58 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 57.12 LOG MEASURED FROM: 6L DF : 00
 LOG TOP : 0.78 DRL MEASURED FROM: 6L GL : 00

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 : 0
 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



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

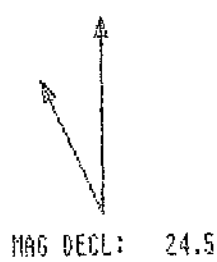
***** COMPU-LOG II -- VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89505 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/18/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : FEET LOG 4

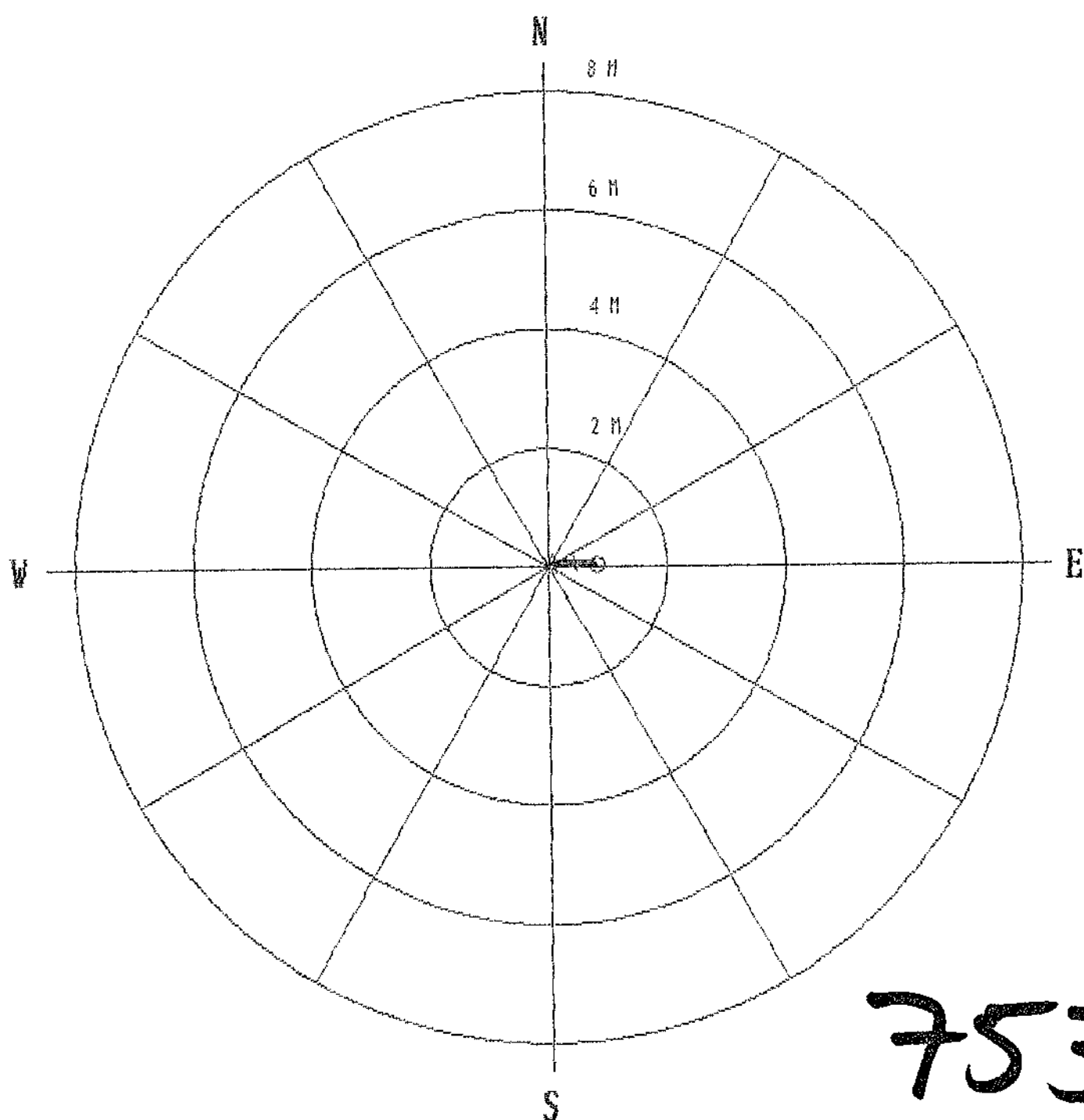
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	-0.00	0.00	0.0	112.5	0.3	233.8
8.0	8.00	0.01	0.03	0.0	69.6	0.2	109.9
13.0	13.00	0.02	0.06	0.1	68.4	0.8	90.0
18.0	18.00	0.03	0.09	0.1	68.1	0.4	81.8
23.0	23.00	0.05	0.13	0.1	69.1	0.9	82.4
28.0	28.00	0.07	0.20	0.2	71.8	1.0	83.2
33.0	33.00	0.08	0.29	0.3	75.1	0.9	78.5
38.0	38.00	0.07	0.39	0.4	79.3	1.1	93.0
43.0	42.99	0.07	0.50	0.5	81.7	1.5	99.2
48.0	47.99	0.07	0.62	0.6	83.1	1.5	93.4
53.0	52.99	0.06	0.72	0.7	84.9	1.4	105.0
57.1	57.11	0.03	0.80	0.8	87.8	0.0	0.0

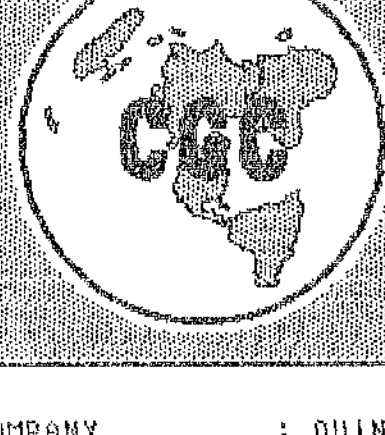
PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89505 GAM-NEUTRON
 DATE OF LOG: 06/18/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 57.05 M
 AZIMUTH: 87.8
 DISTANCE: 0.8 M
 + = 20 M INCR
 O = BOTTOM OF HOLE



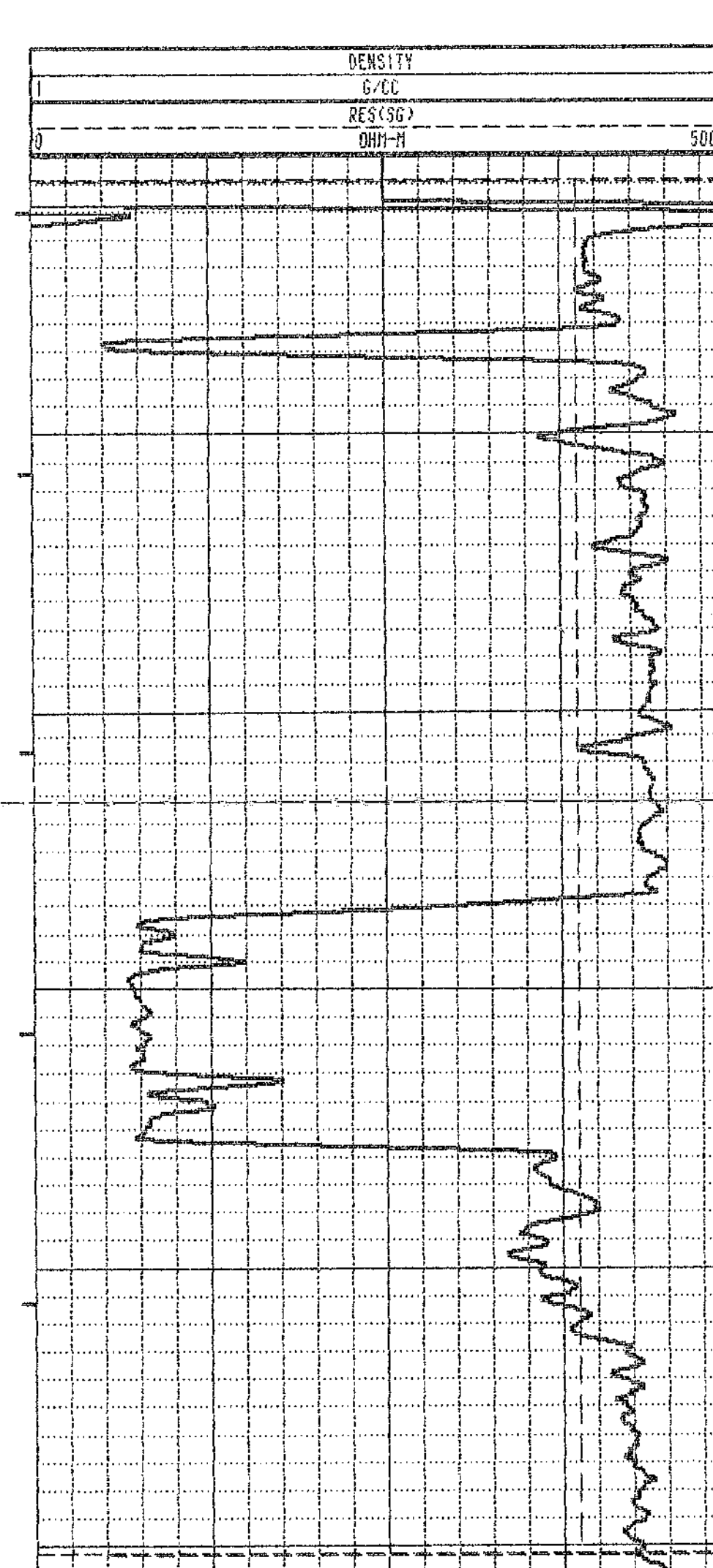
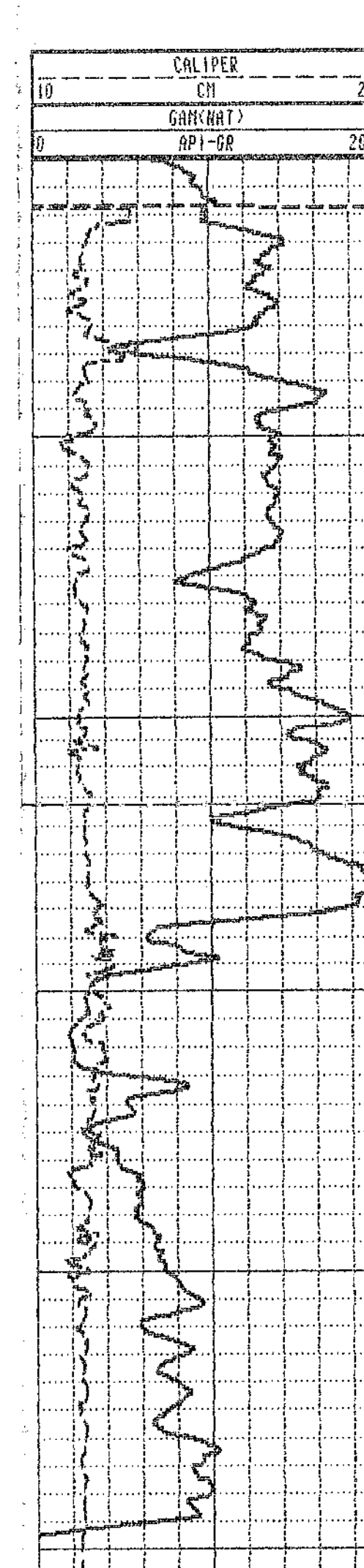
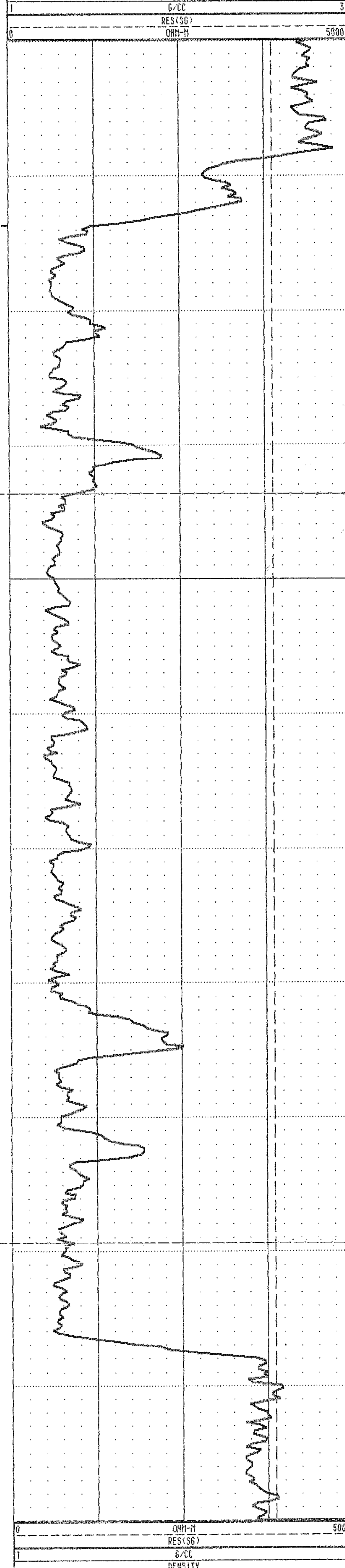
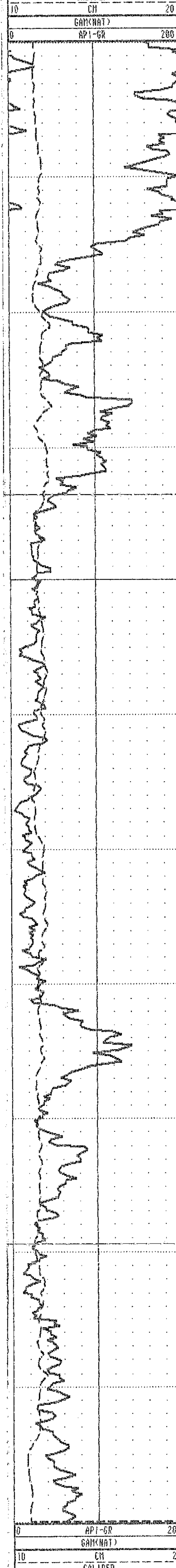
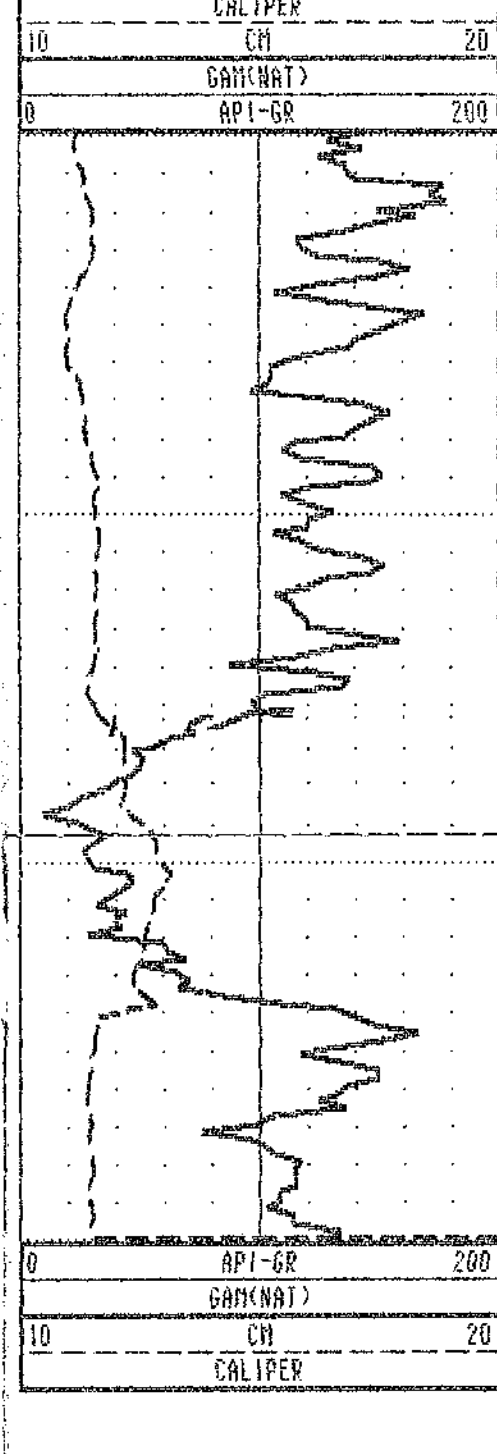


Century

QMR89506 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89506 GAM-DEN-RES-CAL		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:
DATE	: 06/18/89	PERMANENT DATUM	: 00
DEPTH DRILLER	: 65	ELEV. PERM. DATUM:	00
LOG BOTTOM	: 51.42	LOG MEASURED FROM:	GL
LOG TOP	: -1.14	DRL MEASURED FROM:	GL
		ELEVATIONS	KB : 00
			DF : 00
			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
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
		TYPE	: 9032AC
		LOG	: 4
		PLOT	: QUIN 12
		THRESH:	50000
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	GMM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GMM(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-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-H
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

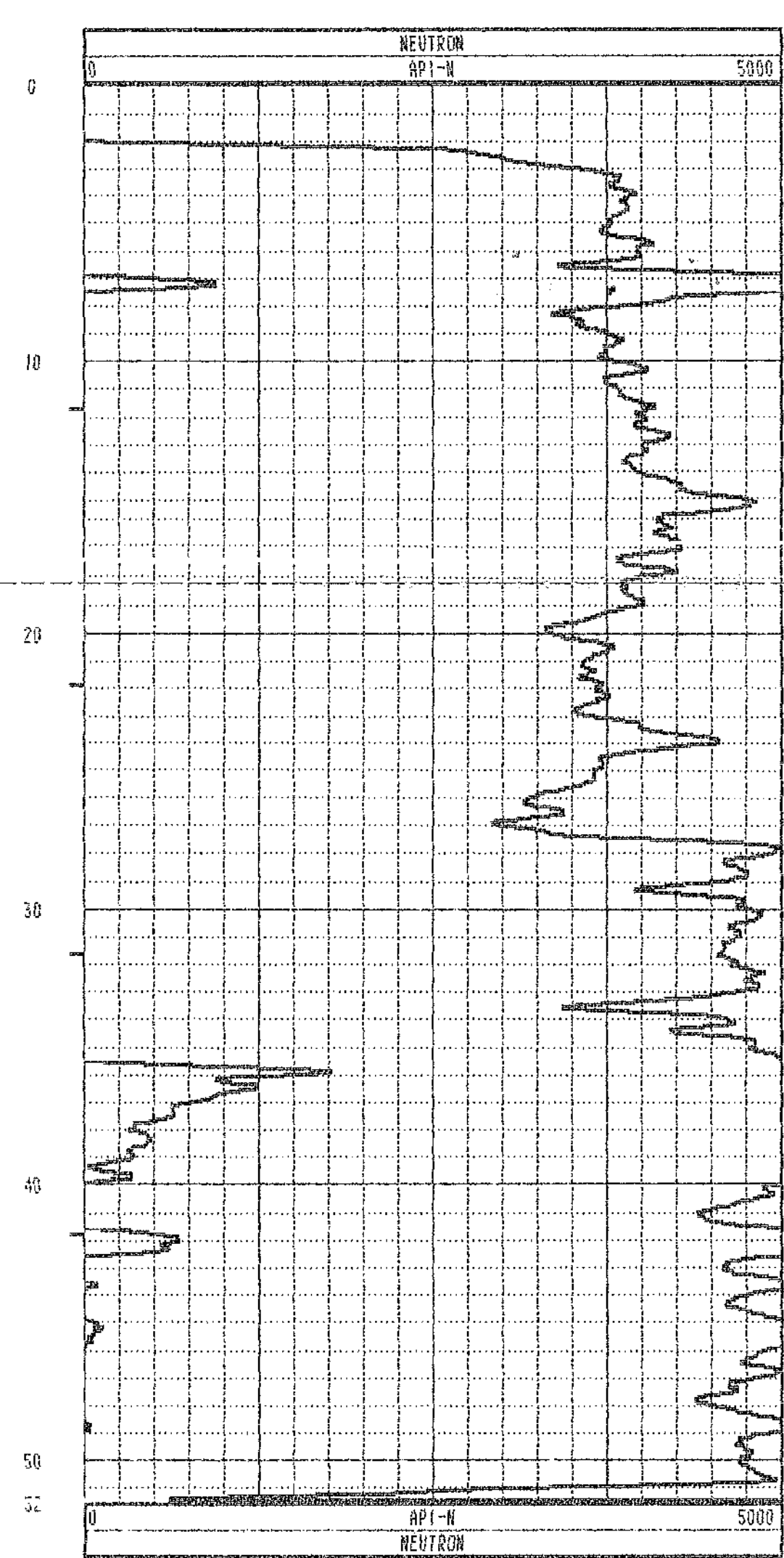
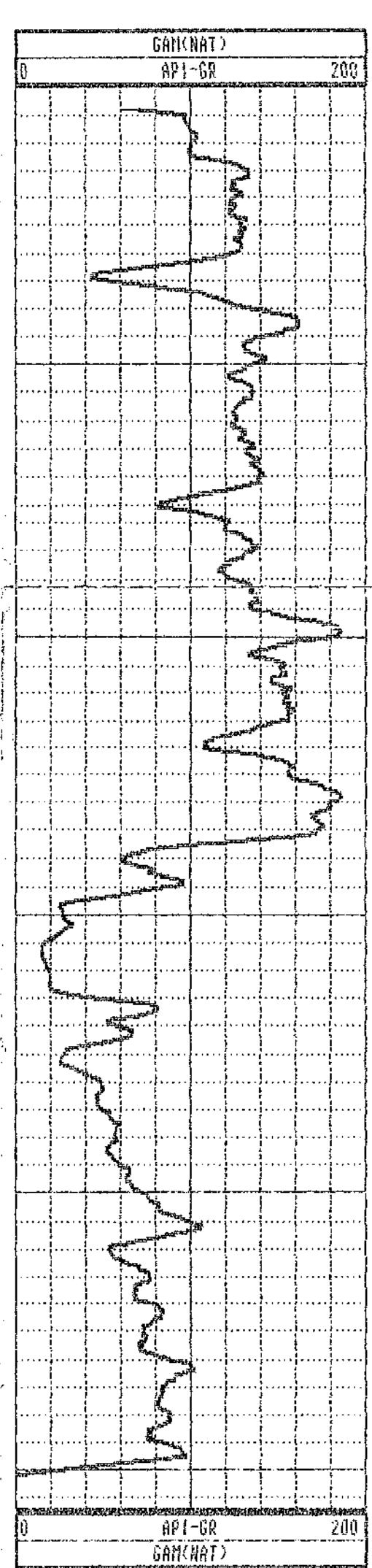
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Century

QMR89506 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89506 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/18/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 65 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 51.50 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.78 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 : 2
 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



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 HV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 HV
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

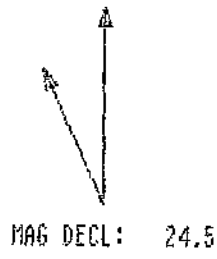
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89506 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/19/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 8

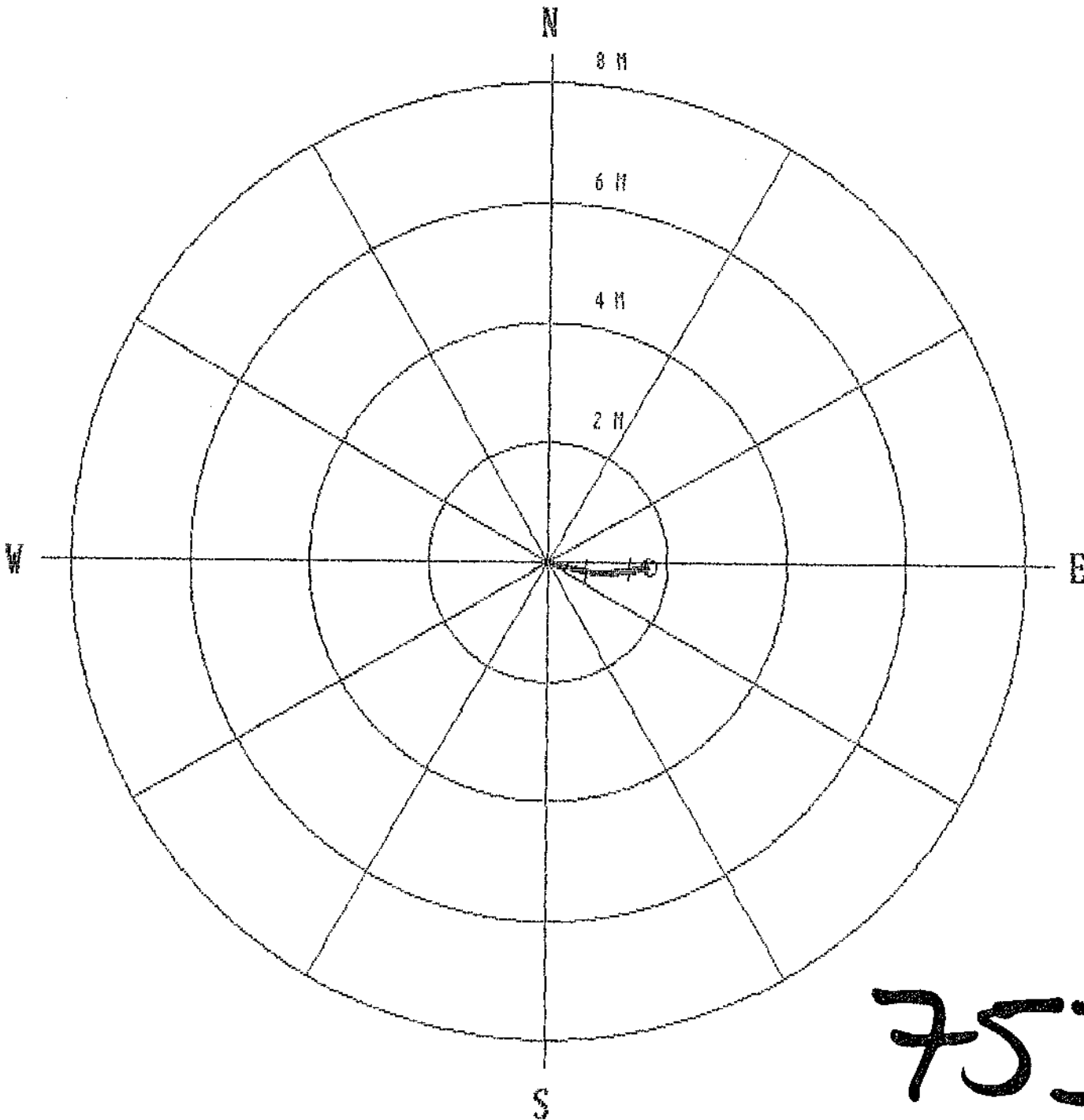
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	-.01	-.01	0.0	221.1	2.1	194.9
8.0	8.00	-.04	0.17	0.2	104.8	2.3	96.6
13.0	12.99	-.09	0.36	0.4	104.1	2.4	104.9
18.0	17.99	-.14	0.56	0.6	103.8	2.1	99.9
23.0	22.98	-.16	0.75	0.8	102.2	2.2	91.5
28.0	27.98	-.17	0.94	1.0	100.3	2.2	85.8
33.0	32.98	-.16	1.12	1.1	98.4	1.8	89.2
38.0	37.97	-.15	1.29	1.3	96.4	1.8	100.5
43.0	42.97	-.12	1.45	1.5	94.8	1.7	73.4
48.0	47.97	-.09	1.61	1.6	93.3	1.7	73.4
51.5	51.47	-.07	1.70	1.7	92.5	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: MOLERINE VALLEY SOUTH
 HOLE ID: QMR89506 GAM-NEUTRON
 DATE OF LOG: 06/19/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 51.41 M
 AZIMUTH: 92.5
 DISTANCE: 1.7 M
 + = 20 M INCR
 O = BOTTOM OF HOLE



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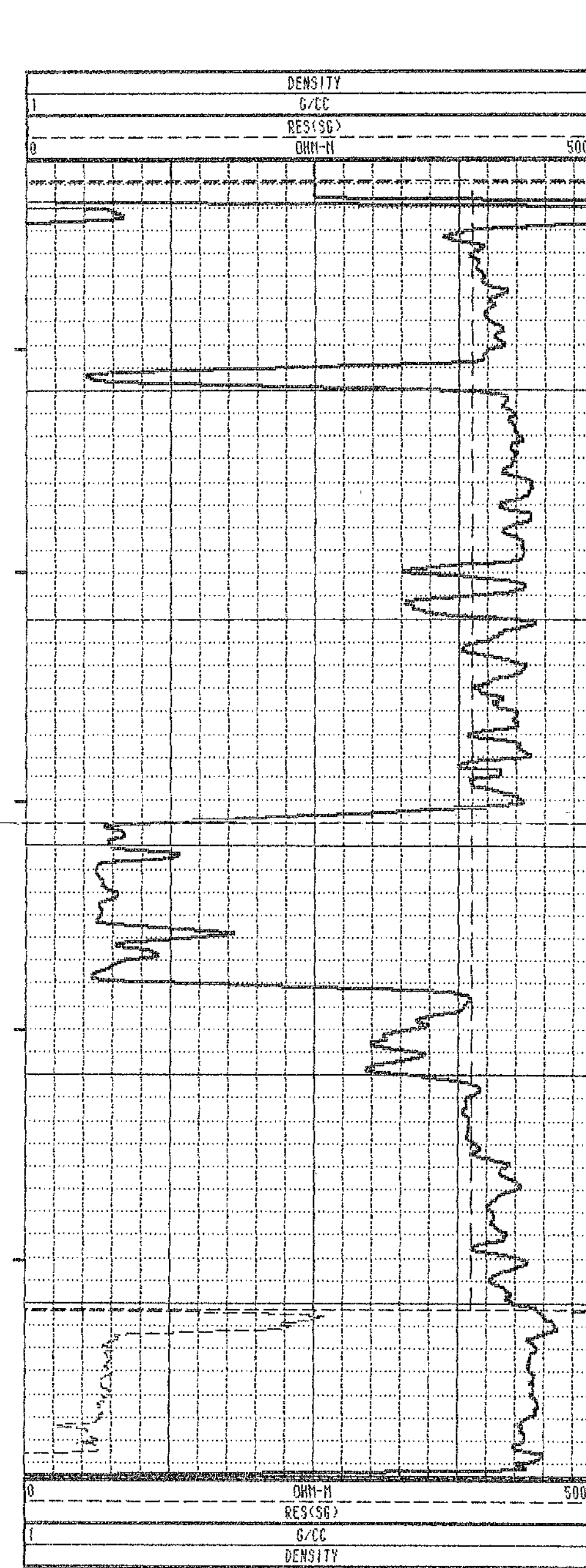
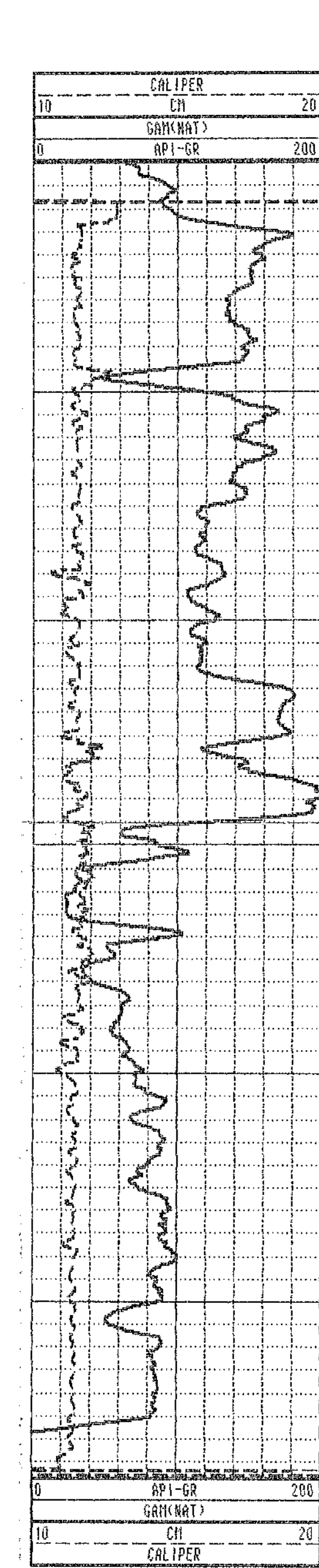
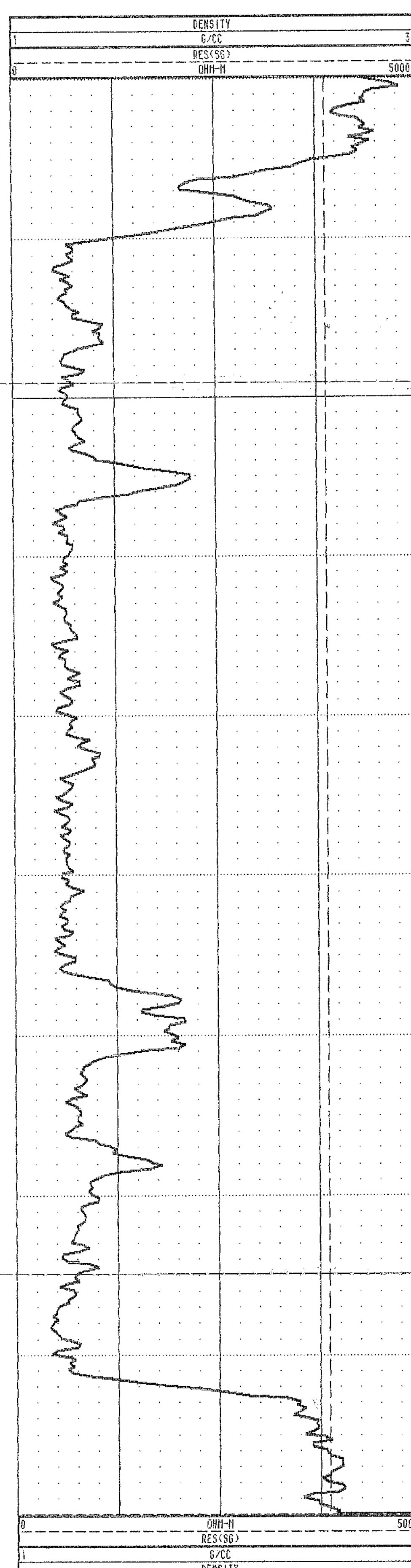
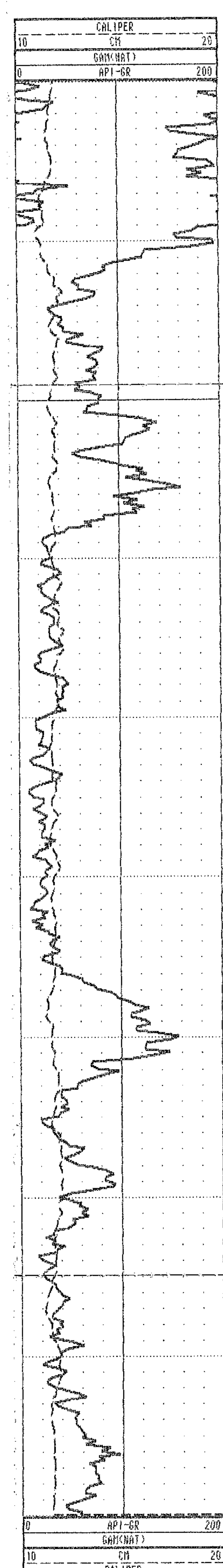
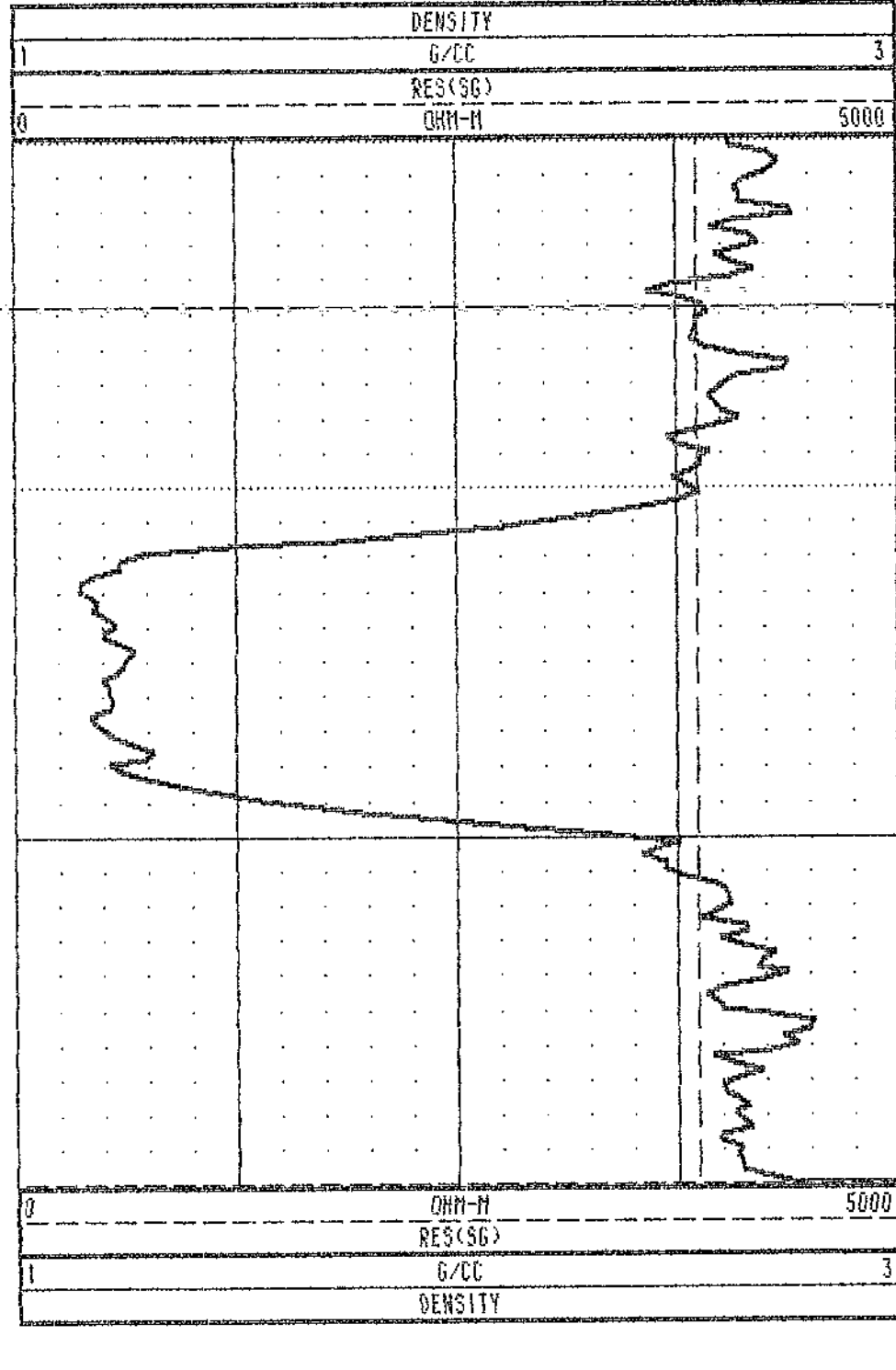
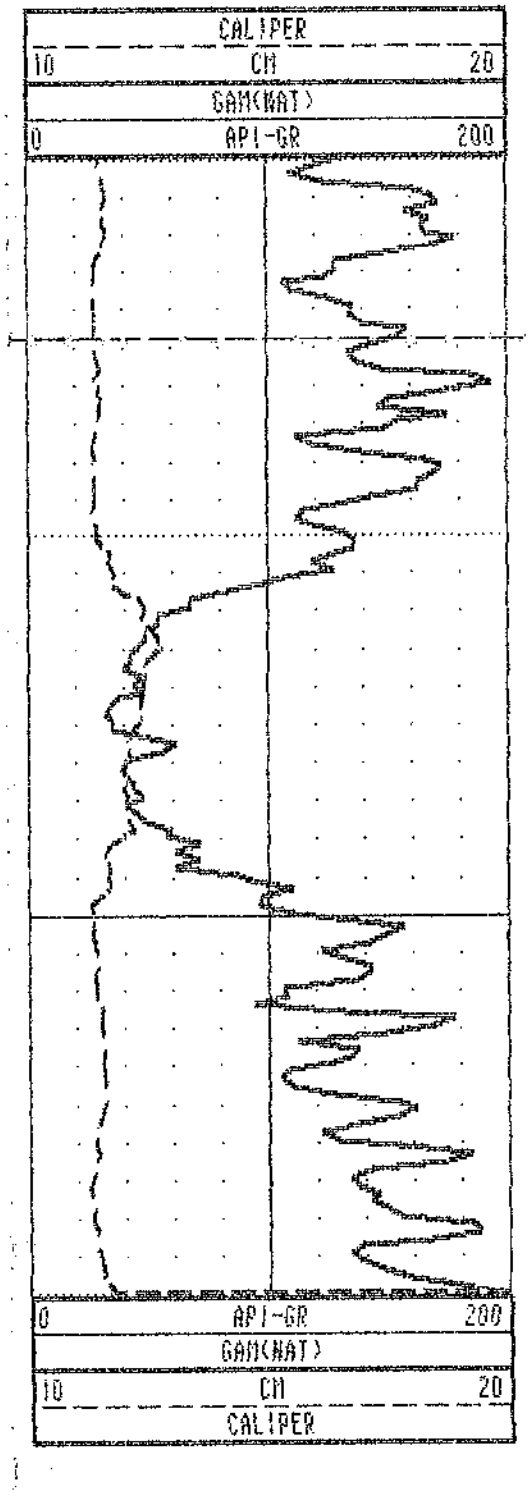


Century

QMR89507 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89507 GAM-DEN-RES-CAL		
LOCATION/FIELD	: HOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:
DATE	: 06/18/89	PERMANENT DATUM	: 00
DEPTH DRILLER	: 58	ELEV. PERM. DATUM	: 00
LOG BOTTOM	: 57.66	LOG MEASURED FROM	: GL
LOG TOP	: -1.16	DRL MEASURED FROM	: GL
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
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9032AC
VERTICAL HOLE	:	LOG	: 3
		PLOT	: QUIN 12
		THRESH	: 50000

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 OHH-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	176.500 OHH-H
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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Century

QMR89507 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89507 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

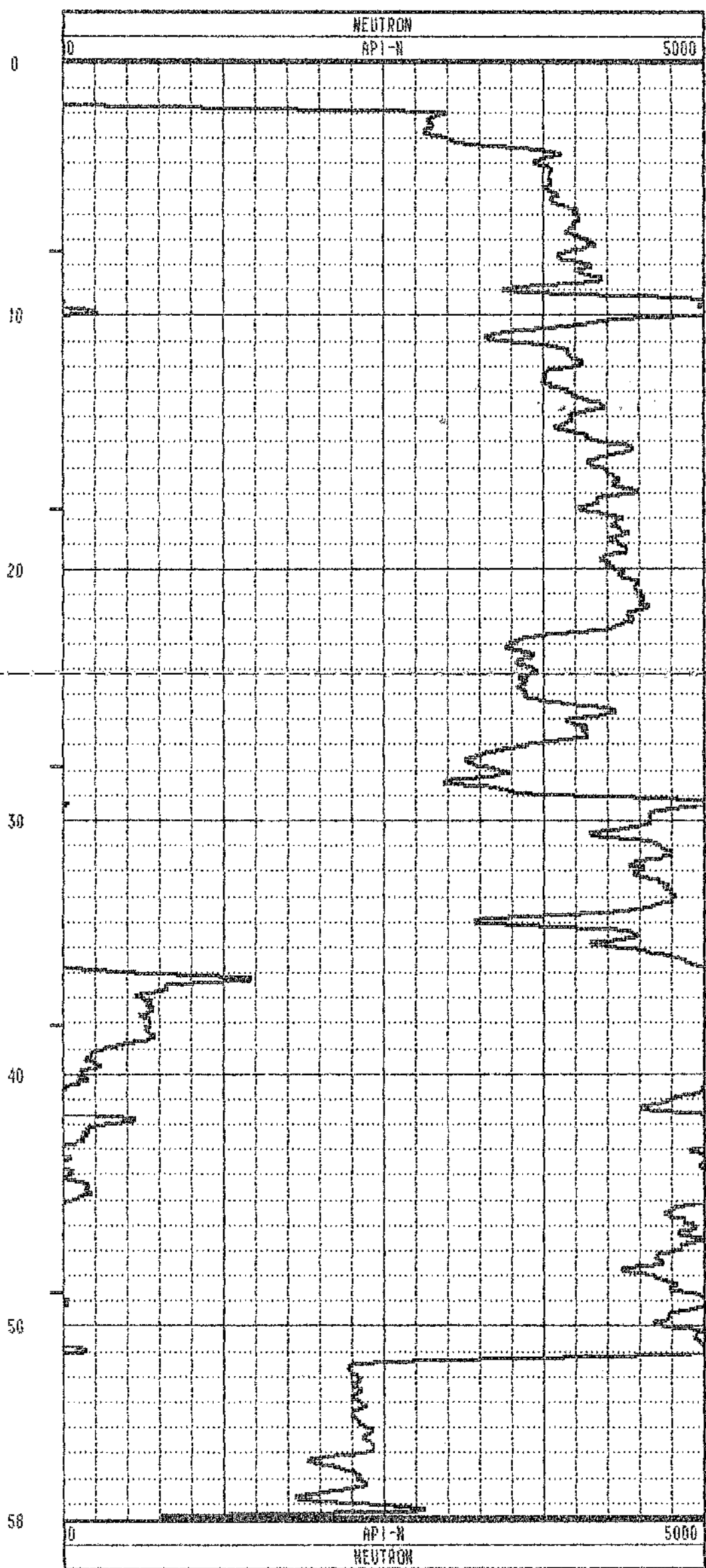
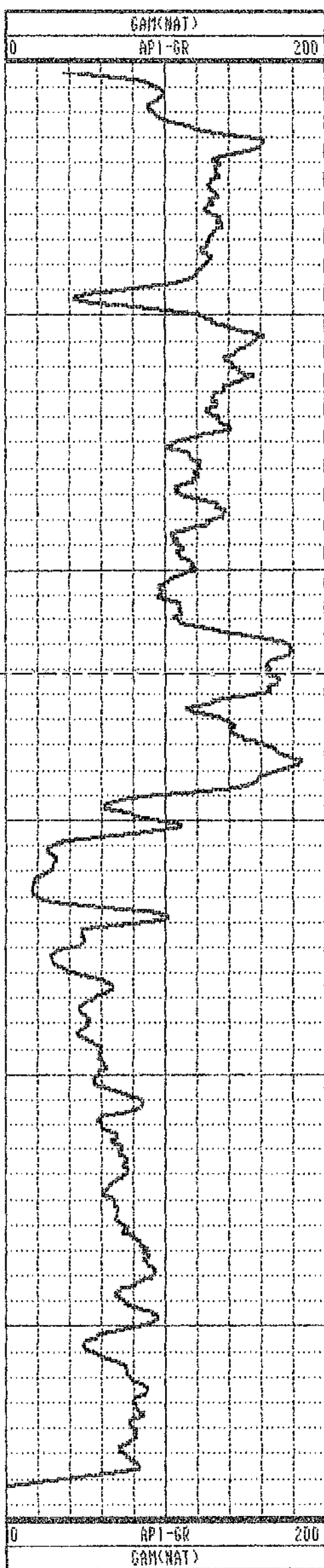
DATE : 06/18/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 58 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 57.62 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.46 DRL MEASURED FROM: GL GL : 00

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 : 1
 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



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	09:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

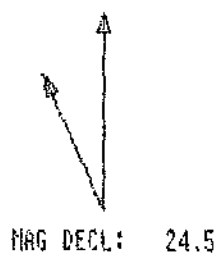
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89507 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/19/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 2

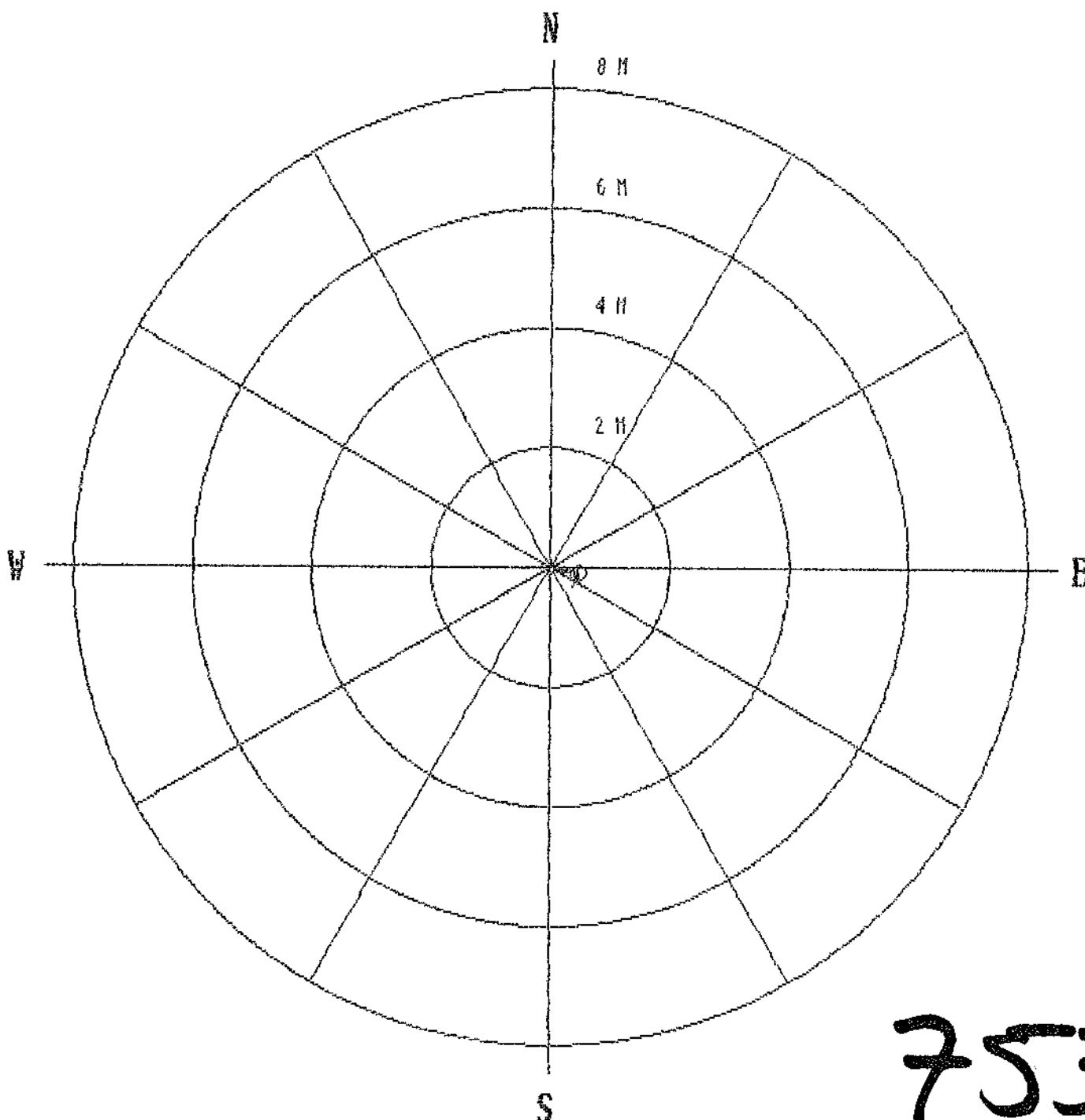
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	0.00	-0.00	0.0	329.5	0.7	335.9
8.0	8.00	0.01	0.02	0.0	53.6	1.2	91.3
13.0	13.00	0.00	0.09	0.1	88.3	0.7	81.5
18.0	18.00	-0.02	0.14	0.1	98.1	0.7	145.2
23.0	23.00	-0.03	0.19	0.2	97.8	0.7	93.6
28.0	28.00	-0.03	0.26	0.3	97.5	1.0	102.1
33.0	33.00	-0.04	0.34	0.3	96.8	0.6	146.1
38.0	38.00	-0.07	0.39	0.4	100.6	0.5	71.3
43.0	43.00	-0.11	0.40	0.4	105.7	0.3	193.8
48.0	48.00	-0.14	0.42	0.4	108.8	0.5	185.9
53.0	53.00	-0.15	0.45	0.5	108.9	0.6	47.1
57.6	57.62	-0.11	0.47	0.5	102.5	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

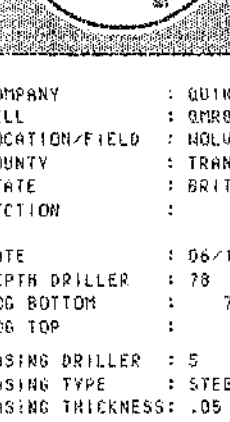
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89507 GAM-NEUTRON
 DATE OF LOG: 06/19/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 57.56 M
 AZIMUTH: 102.5
 DISTANCE: 0.5 M
 + = 50 M INCR
 O = BOTTOM OF HOLE



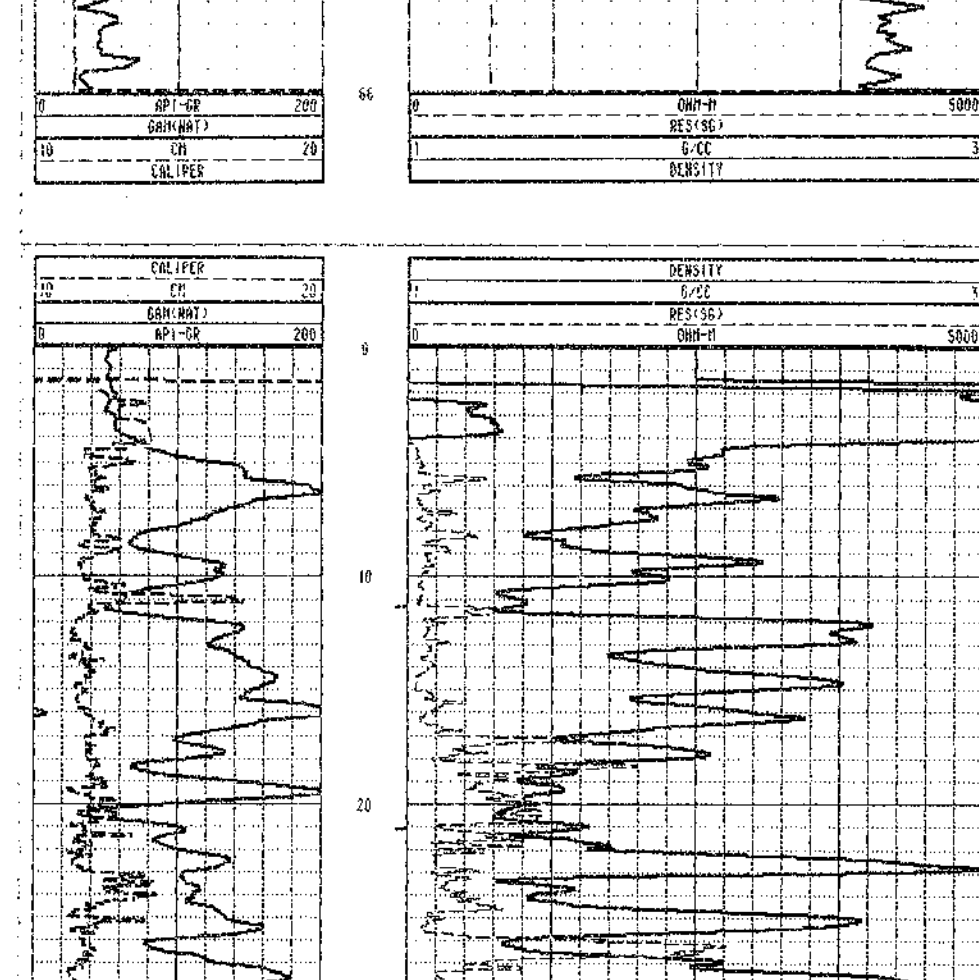
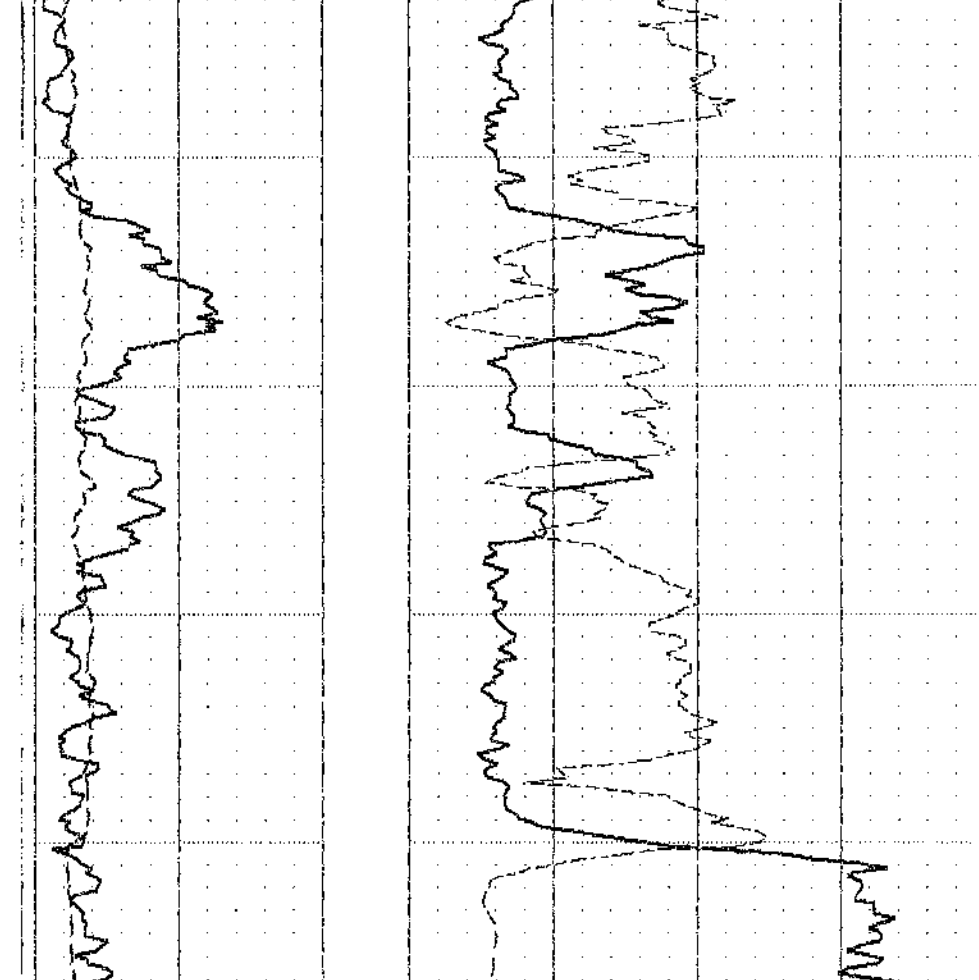
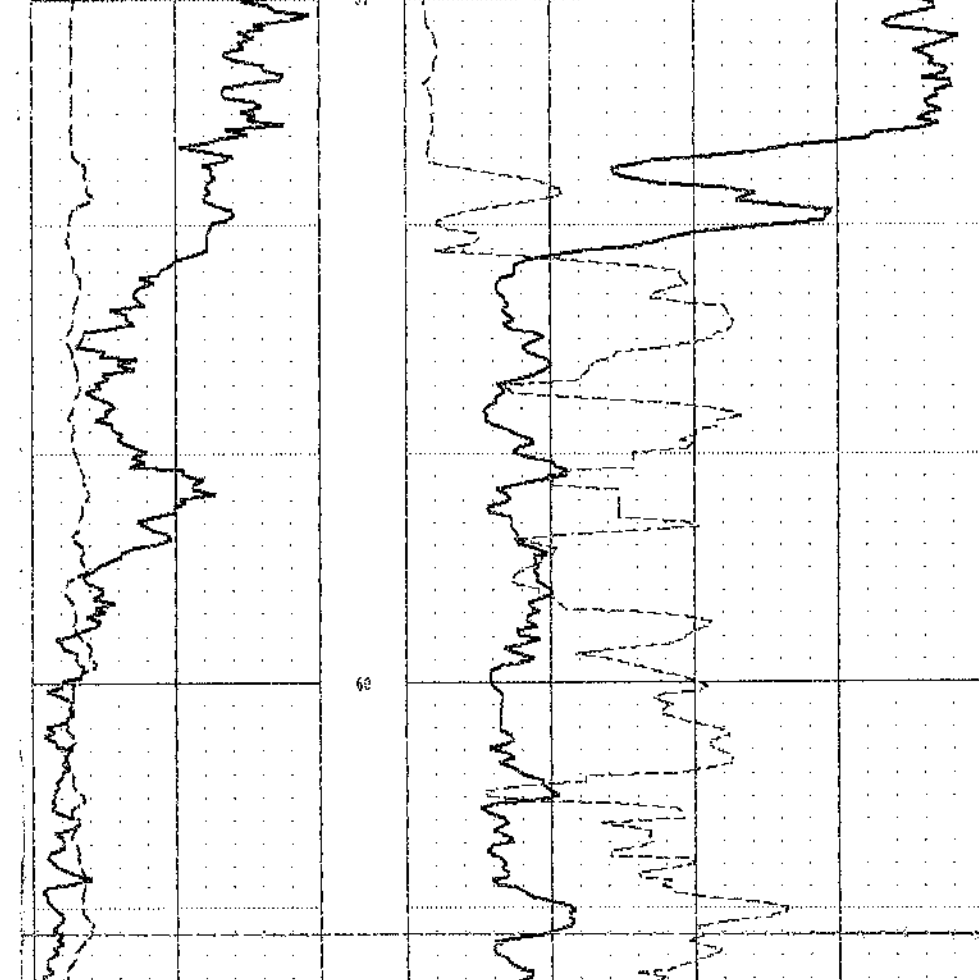
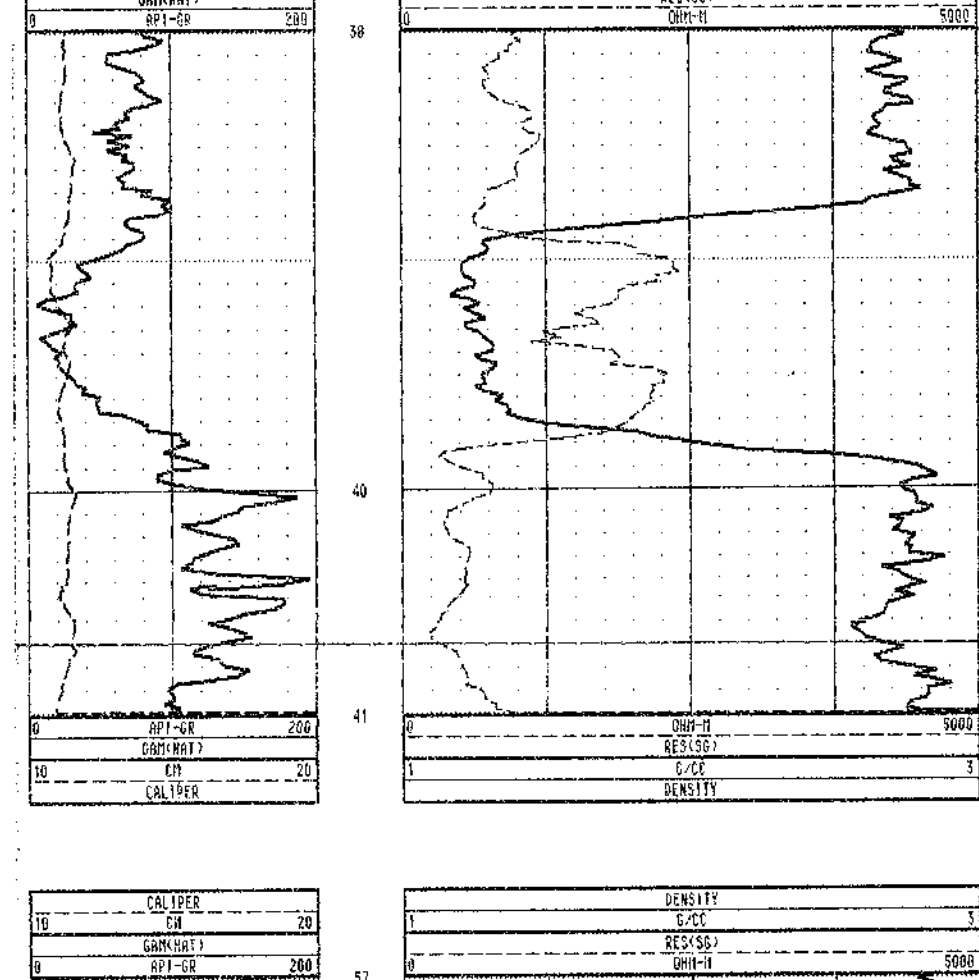
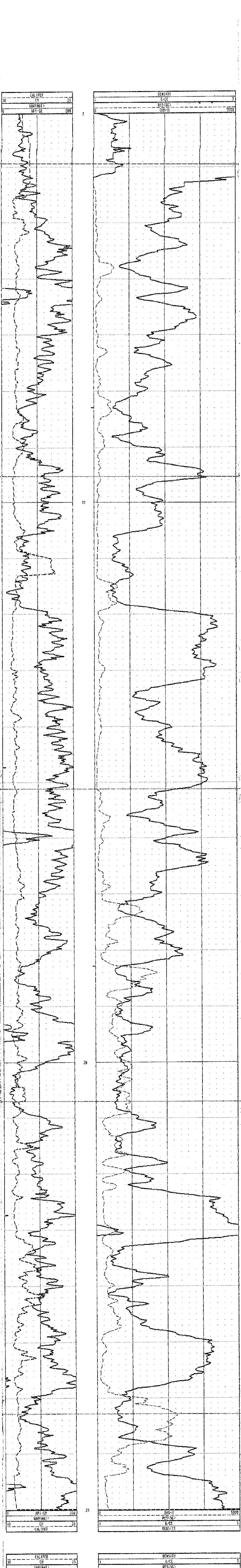
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Century

QMR 89508 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89508 GAM-DEN-RES-CAL
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/18/89 PERMANT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 78 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 78.36 LOG MEASURED FROM: GL DP : 00
 LOG TOP : -34 DPL MEASURED FROM: GL GL : 00
 CASING DRILLER : S LOGGING UNIT : 0903
 CASING TYPE : STEEL FIELD OFFICE : CANCARY
 CASING THICKNESS : .05 RECORDED BY : P. BISSON
 BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM TYPE : 9032AC
 MATRIX DENSITY : 2.68 RH TEMPERATURE : LOG : 6
 FLUID DENSITY : 1.0 RH DELTA T : 175 PLOT : 001H 12
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 696 TRESH: 50000
 REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 40 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION	TOOL : 9032AC	SERIAL NUMBER : 067			
CAL-DATE	CAL-TIME	SOURCE	SENSOR	RESPONSE	STANDARD
0 05/04/89	10:17:51	0	GAMMAY	0.000 CPS	0.000 G/CC
1 05/04/89	10:17:51	0	GAMMAY	0.000 CPS	0.000 G/CC
2 05/04/89	12:11:56	0	DENSITY	1166.000 CPS	1.120 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	RESISG	0.000 CPS	0.000 G/CC
5 05/04/89	10:12:50	0	RESISG	30275.000 CPS	170.500 G/CM-H
6 05/04/89	10:16:11	0	CALPER	355.000 CPS	7.520 CI
7 05/04/89	10:16:11	0	CALPER	1906.000 CPS	17.800 CI
8 05/04/89	10:17:51	0	DENSITY	0.000 CPS	0.000 G/CC
9 05/04/89	10:17:51	0	DENSITY	0.000 CPS	0.000 G/CC
10 05/04/89	10:17:51	0	CALPER	0.000 CPS	0.000 CI
11 05/04/89	10:17:51	0	CALPER	0.000 CPS	0.000 CI

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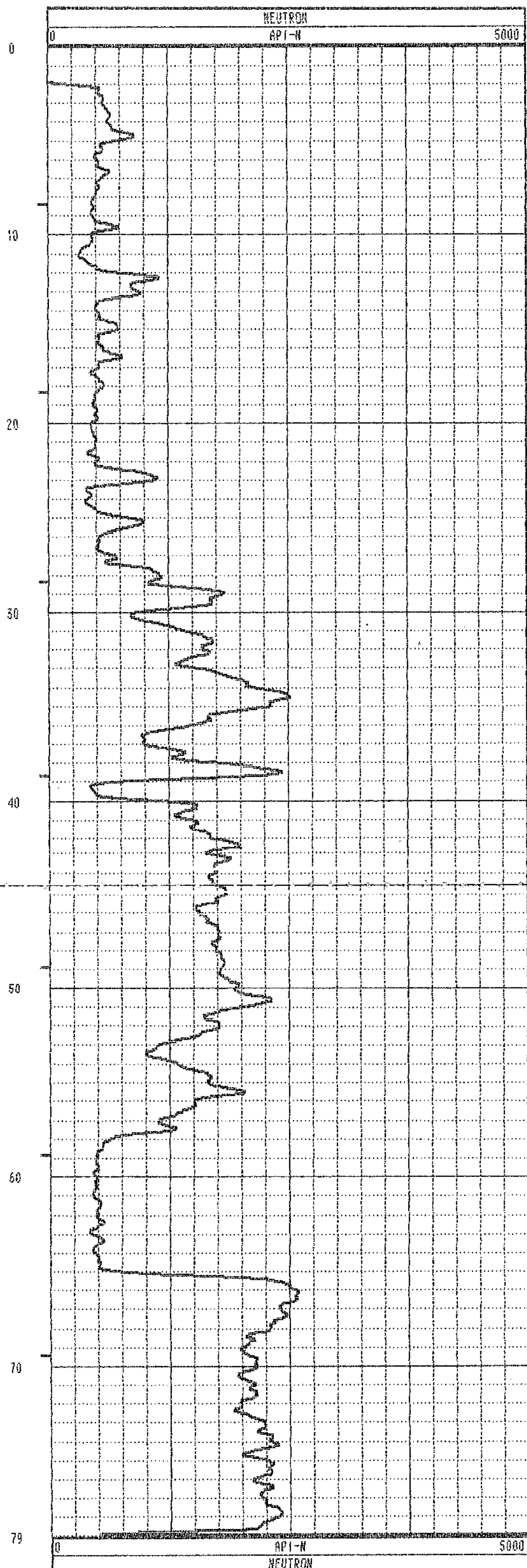
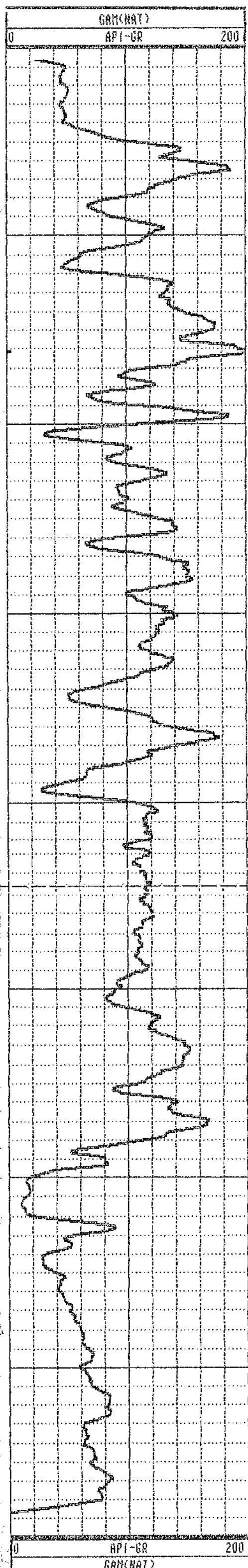
QMR 89508 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89508 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

 DATE : 06/18/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 78 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 79.00 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.68 DRL MEASURED FROM: GL GL : 00

 CASING DRILLER : 5 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 : 7
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 10
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000
 REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 60 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



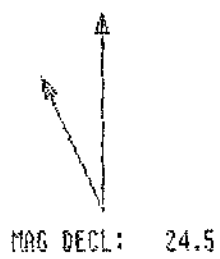
TOOL CALIBRATION		TOOL = 9055A		SERIAL NUMBER = 14	
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	05/04/89 08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89 08:10:36	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	05/05/89 16:59:51	0	POROSITY	0.000 CPS	145.000 CPS
3	05/04/89 08:15:10	0	RES	9707.000 CPS	0.000 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

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89508 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/20/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 3

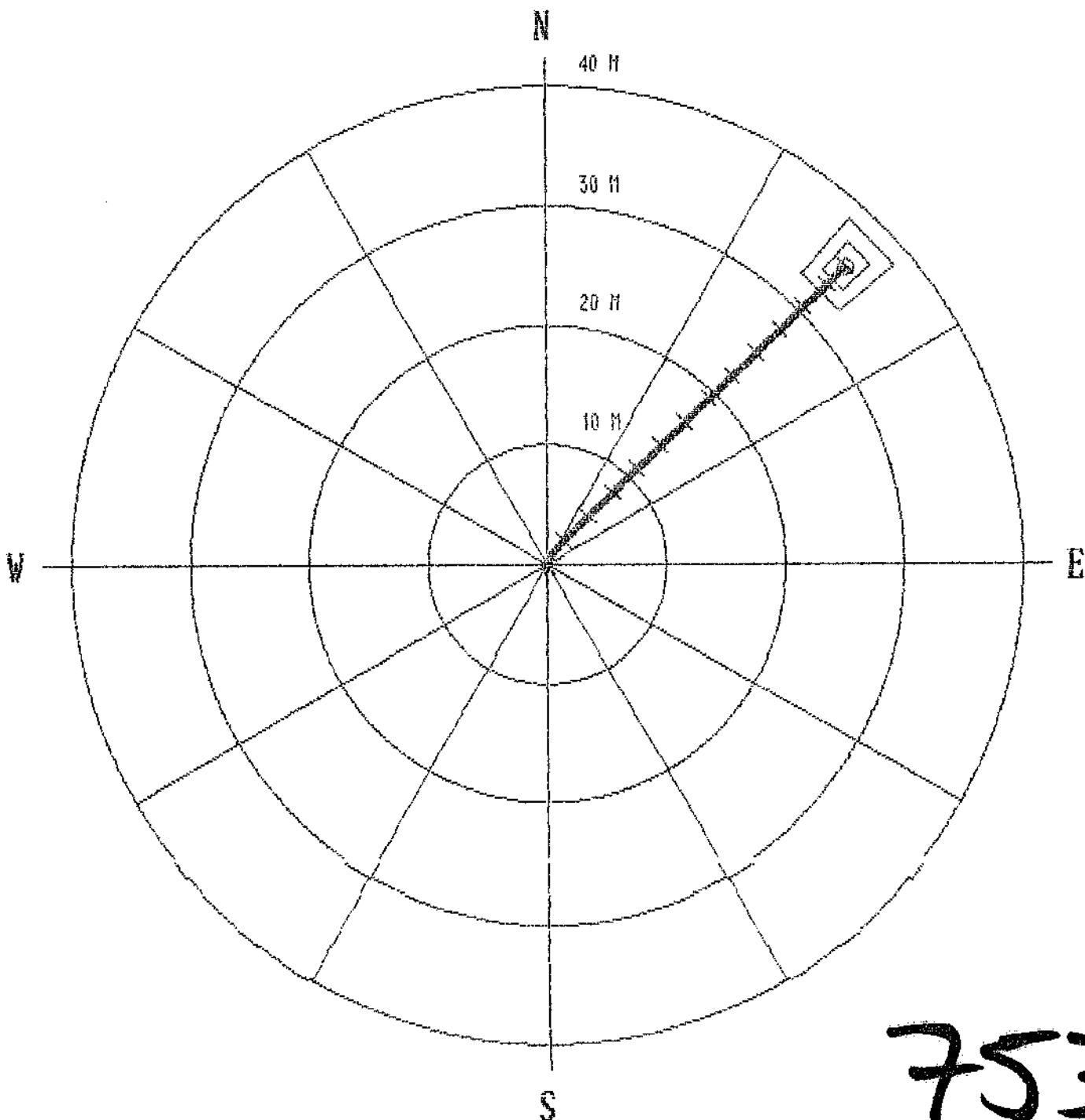
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
5.0	4.62	-45	-03	0.5	184.3	30.6	32.4
10.0	8.94	1.51	1.06	1.8	35.0	30.3	34.3
15.0	13.28	3.29	2.77	4.3	40.1	29.4	45.2
20.0	17.63	4.99	4.55	6.8	42.3	29.5	48.5
25.0	21.98	6.71	6.32	9.2	43.3	29.6	41.6
30.0	26.33	8.42	8.10	11.7	43.9	29.8	52.0
35.0	30.67	10.13	9.88	14.1	44.3	28.9	43.3
40.0	35.03	11.83	11.64	16.6	44.5	29.5	44.8
45.0	39.39	13.53	13.41	19.0	44.7	29.2	46.4
50.0	43.75	15.24	15.16	21.5	44.8	29.4	44.2
55.0	48.11	16.94	16.91	23.9	44.9	29.3	41.1
60.0	52.48	18.63	18.66	26.4	45.0	29.2	44.5
65.0	56.85	20.30	20.42	28.8	45.2	28.9	46.4
70.0	61.23	21.97	22.15	31.2	45.2	28.6	45.6
75.0	65.62	23.62	23.88	33.6	45.3	28.6	47.6
79.0	69.15	24.92	25.23	35.5	45.3	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89508 GAM-NEUTRON
 DATE OF LOG: 06/20/89
 PROBE: 9055A 14



SCALE: 5 M/CM
 TRUE DEPTH: 69.09 M
 AZIMUTH: 45.3
 DISTANCE: 35.5 M
 + = 5 M INCR
 O = BOTTOM OF HOLE





Century

QMR89509 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89509 GAM-DEN-RES-CAL
 LOCATION/FIELD : HOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA

OTHER SERVICES:

SECTION : TOWNSHIP : RANGE :
 DATE : 06/20/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 97.6 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 96.22 LOG MEASURED FROM: GL DF : 00
 LOG TOP : -1.52 DRL MEASURED FROM: GL CL : 00

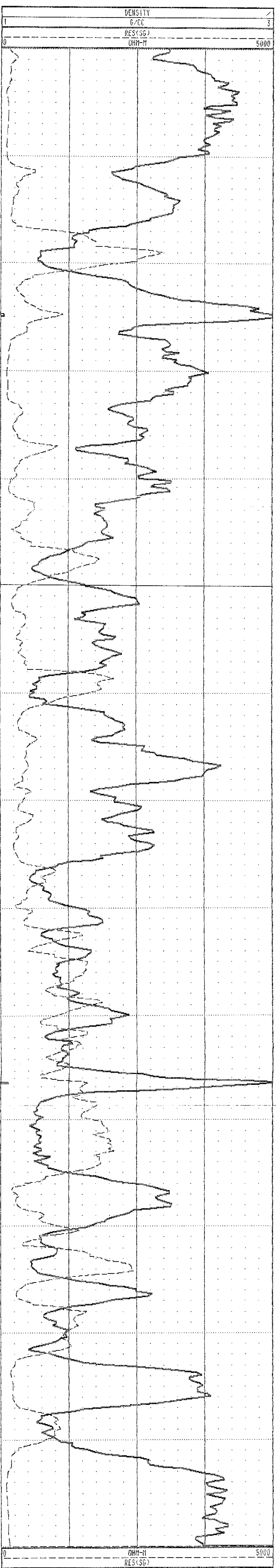
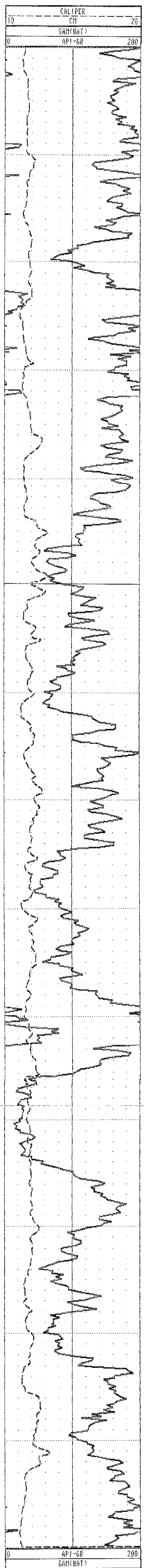
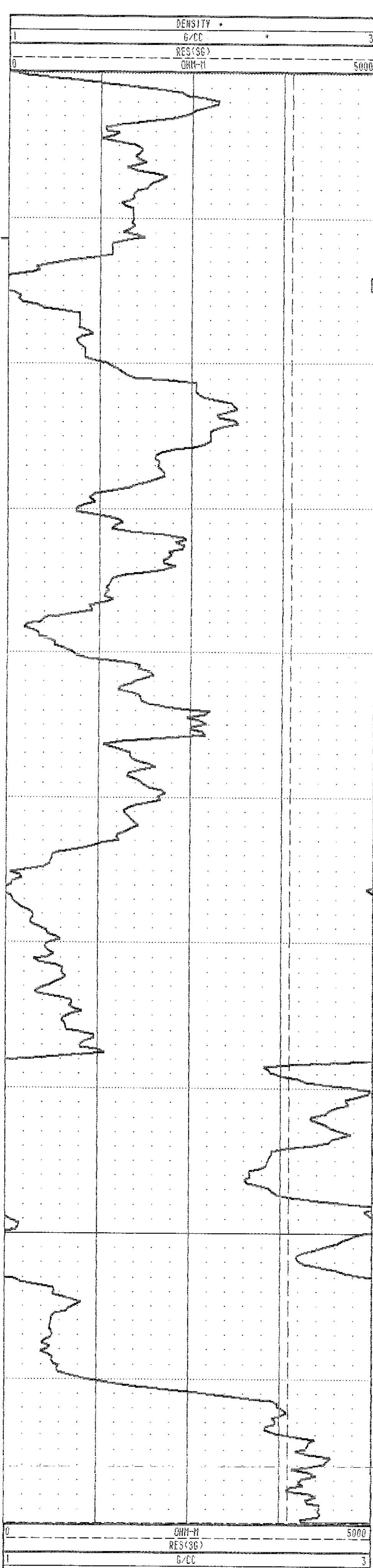
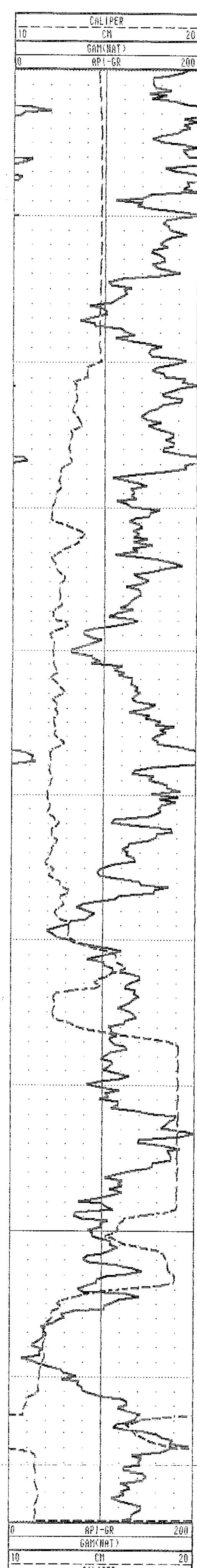
CASING DRILLER : 4 LOGGING UNIT : 8903
 CASING TYPE : STEEL FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : P. BISSON

BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9032AC
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 6
 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

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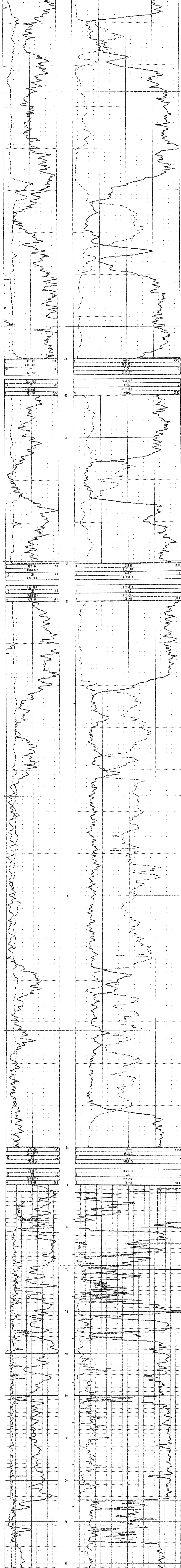


Century

QMR89509 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89509 GAM-DEN-RES-CAL
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/20/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 97.6 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 96.22 LOG MEASURED FROM: 6L DF : 00
 LOG TOP : -.32 DRL MEASURED FROM: 6L GL : 00
 CASING DRILLER : 4 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 RH : TYPE : 9032AC
 MATRIX DENSITY : 2.68 RH TEMPERATURE : LOG : 5
 FLUID DENSITY : 1.0 MATRIX DELTA T : 175 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

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TOOL CALIBRATION TOOL = 98324C SERIAL NUMBER = 967

CAL-DATE	CAL-TIME	SACE	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GAIN(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAIN(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	RES(SG)	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 ORH-H
5	05/04/89	10:25:07	0	RES(SG)	38275.000 CPS	178.500 ORH-H
6	05/04/89	10:46:11	0	CALIPER	353.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1905.000 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

QMR89509 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89509 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

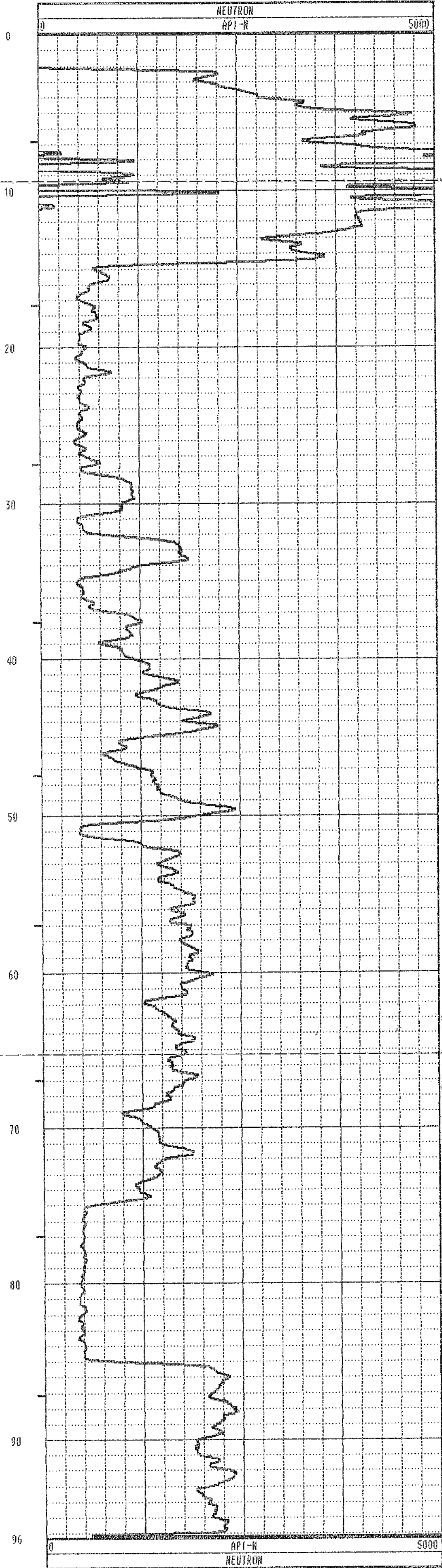
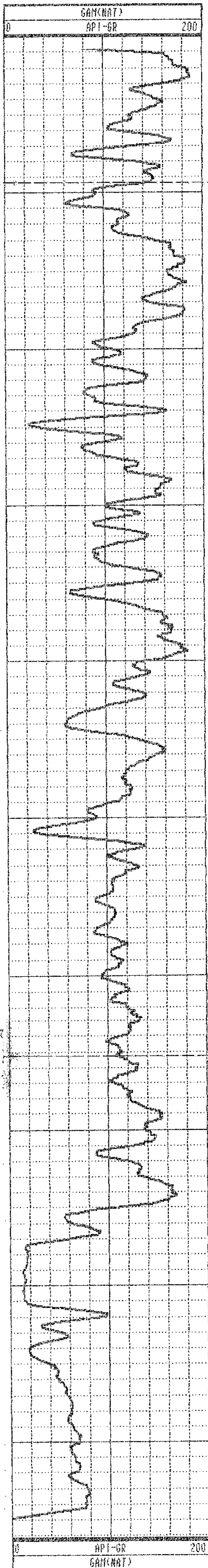
DATE : 06/20/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 97.6 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 96.24 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.86 DRL MEASURED FROM: GL GL : 00

CASING DRILLER : 4 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 : 0
 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



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 HV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 HV
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

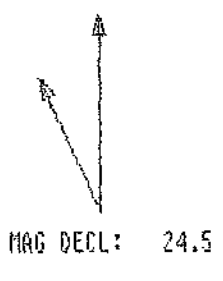
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89509 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/22/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 2

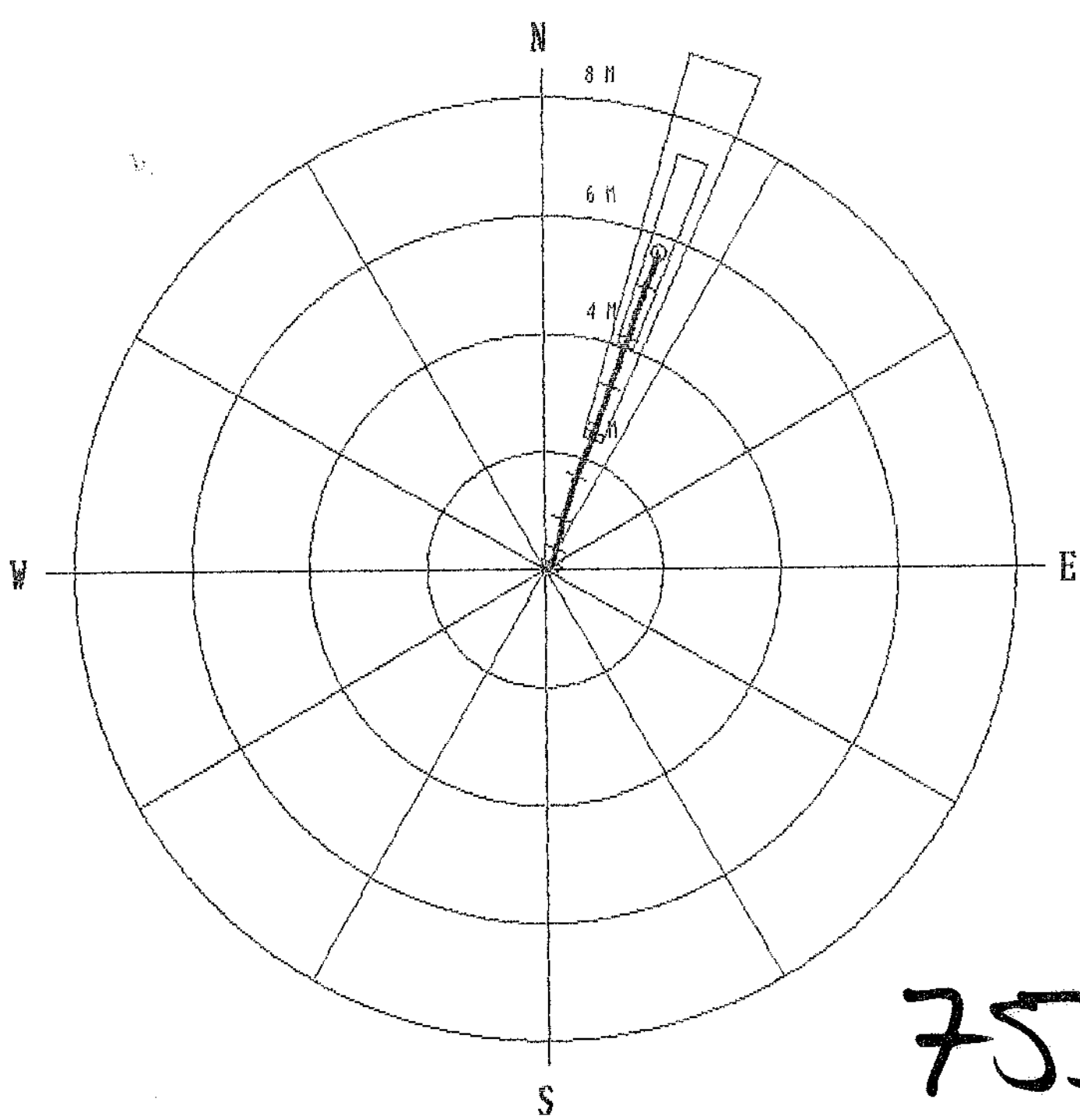
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
5.0	5.00	-0.00	0.01	0.0	98.5	0.5	77.5
10.0	10.00	0.02	0.04	0.0	64.7	0.1	63.4
15.0	15.00	0.05	0.07	0.1	54.1	0.6	11.4
20.0	20.00	0.10	0.11	0.1	47.5	0.9	37.3
25.0	25.00	0.20	0.15	0.2	37.3	1.5	20.8
30.0	29.99	0.34	0.19	0.4	29.1	1.9	15.4
35.0	34.99	0.55	0.24	0.6	23.9	2.6	14.9
40.0	39.98	0.84	0.31	0.9	20.2	3.9	19.6
45.0	44.97	1.21	0.42	1.3	19.0	4.4	22.7
50.0	49.95	1.59	0.54	1.7	18.8	4.1	31.9
55.0	54.93	1.95	0.70	2.1	19.9	4.6	30.9
60.0	59.92	2.33	0.85	2.5	20.1	4.8	21.0
65.0	64.90	2.71	0.99	2.9	20.0	4.7	19.5
70.0	69.88	3.10	1.13	3.3	20.0	4.7	19.3
75.0	74.86	3.51	1.28	3.7	20.0	5.1	18.3
80.0	79.85	3.91	1.43	4.2	20.1	4.6	29.5
85.0	84.83	4.33	1.58	4.6	20.0	5.1	20.7
90.0	89.80	4.77	1.74	5.1	20.0	5.2	28.6
95.0	94.78	5.25	1.92	5.6	20.1	6.1	20.2
96.2	96.01	5.36	1.97	5.7	20.2	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89509 GAM-NEUTRON
 DATE OF LOG: 06/22/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 95.95 M
 AZIMUTH: 20.2
 DISTANCE: 5.7 M
 + = 10 M INCR
 O = BOTTOM OF HOLE

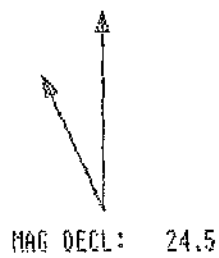


CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89510 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/20/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

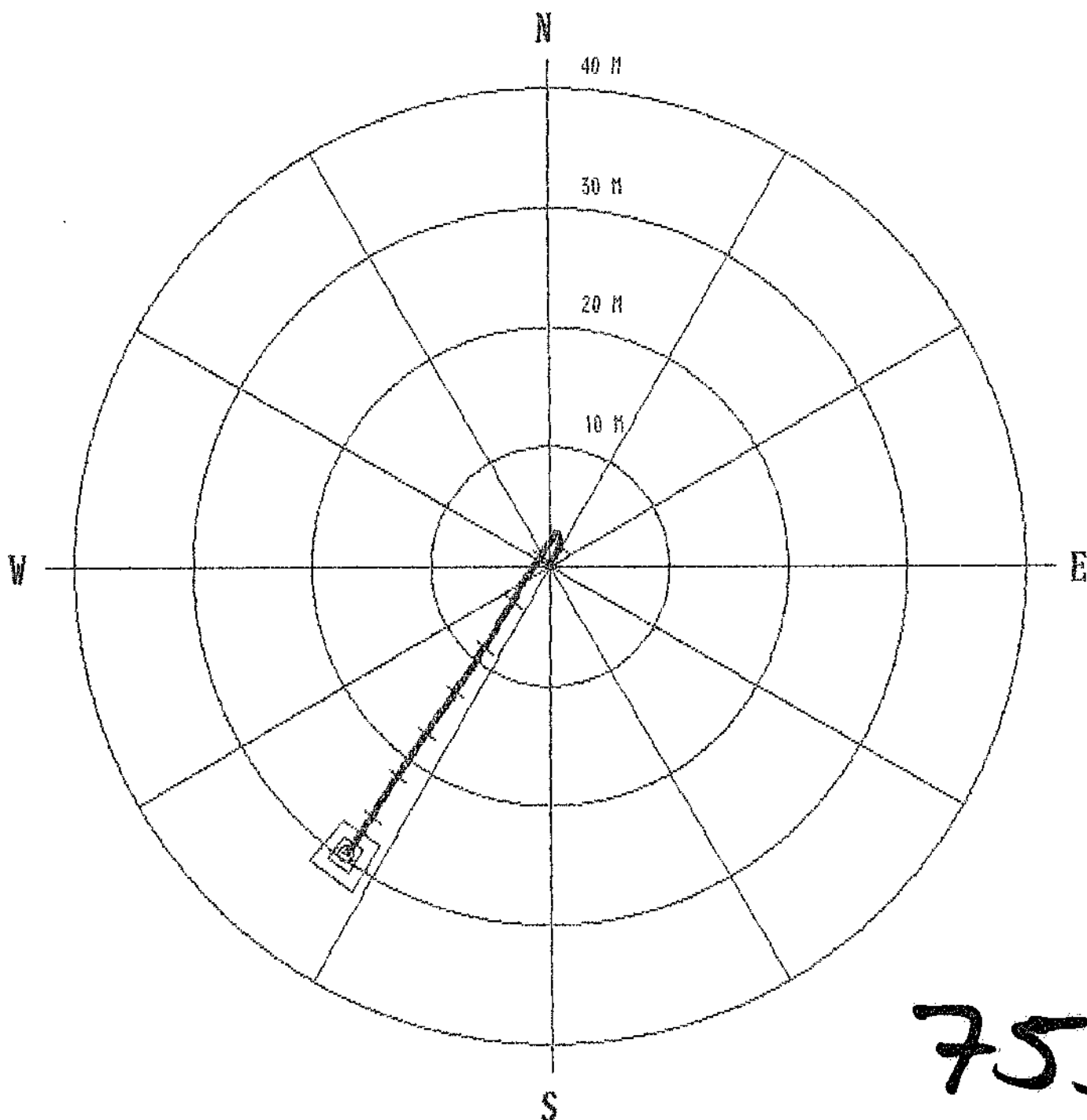
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANBB
8.0	6.26	2.42	0.87	2.6	19.7	44.2	1.1
13.0	9.91	0.97	-0.74	1.2	322.7	43.4	215.5
18.0	13.57	-1.80	-2.63	3.2	235.7	40.7	203.6
23.0	17.26	-4.64	-4.27	6.3	222.6	42.8	195.3
28.0	20.96	-7.47	-5.99	9.6	218.7	41.6	219.1
33.0	24.70	-10.20	-7.87	12.9	217.6	41.1	212.0
38.0	28.47	-12.89	-9.73	16.1	217.0	40.6	220.0
43.0	32.27	-15.57	-11.56	19.4	216.6	40.4	211.4
48.0	36.08	-18.22	-13.41	22.6	216.4	40.4	208.7
53.0	39.89	-20.80	-14.96	25.6	215.7	41.1	213.6
58.0	43.71	-23.42	-16.81	28.8	215.7	39.6	225.7
59.3	44.69	-24.04	-17.26	29.6	215.7	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89510 GAM-NEUTRON
 DATE OF LOG: 06/20/89
 PROBE: 9055A 14



SCALE: 5 M/CM
 TRUE DEPTH: 44.63 M
 AZIMUTH: 215.7
 DISTANCE: 29.6 M
 + = 5 M INCR
 O = BOTTOM OF HOLE



753

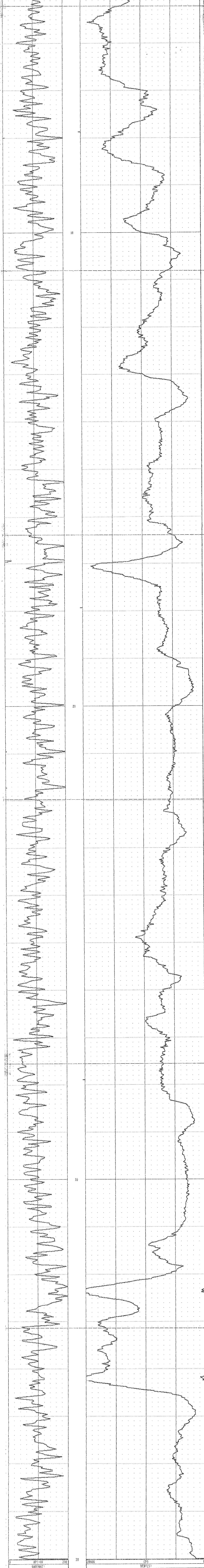


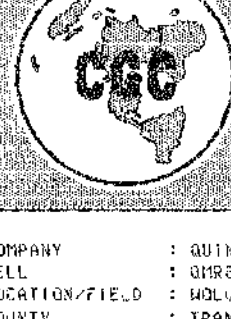
Century

QMR89511 GAM-DENSITY

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMR89511 GAM-DENSITY		
LOCATION/FIELD : HOLVERINE VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION : TOWNSHIP : RANGE :		
DATE : 06/21/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER : 161	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 161.92	LOG MEASURED FROM: GL	DF : 00
LOG TOP : -.88	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER : 6.09	LOGGING UNIT : 8903	
CASING TYPE : STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05	RECORDED BY : L. LETHAL	
BIT SIZE : 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 24.5	RM :	TYPE : 9069A
MATRIX DENSITY : 2.68	RM TEMPERATURE :	LOG : 0
FLUID DENSITY : 1.0	MATRIX DELTA T : 173	PLOT : QUIN 11
NEUTRON MATRIX : SANDSTONE	FLUID DELTA T : 690	THRESH: 50000
REMARKS :		
LOGGED THROUGH RODS		
ANGLE HOLE 50 DEGREES		
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS		

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Century

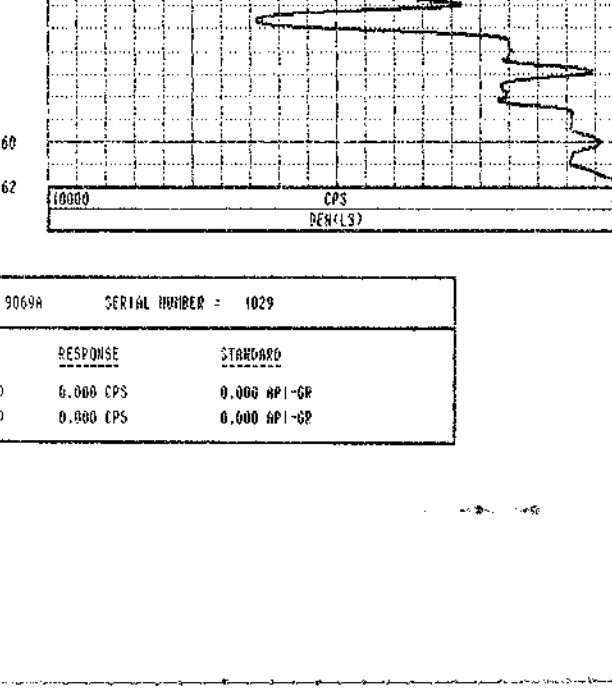
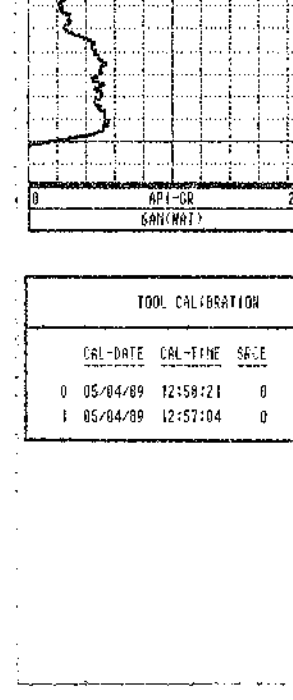
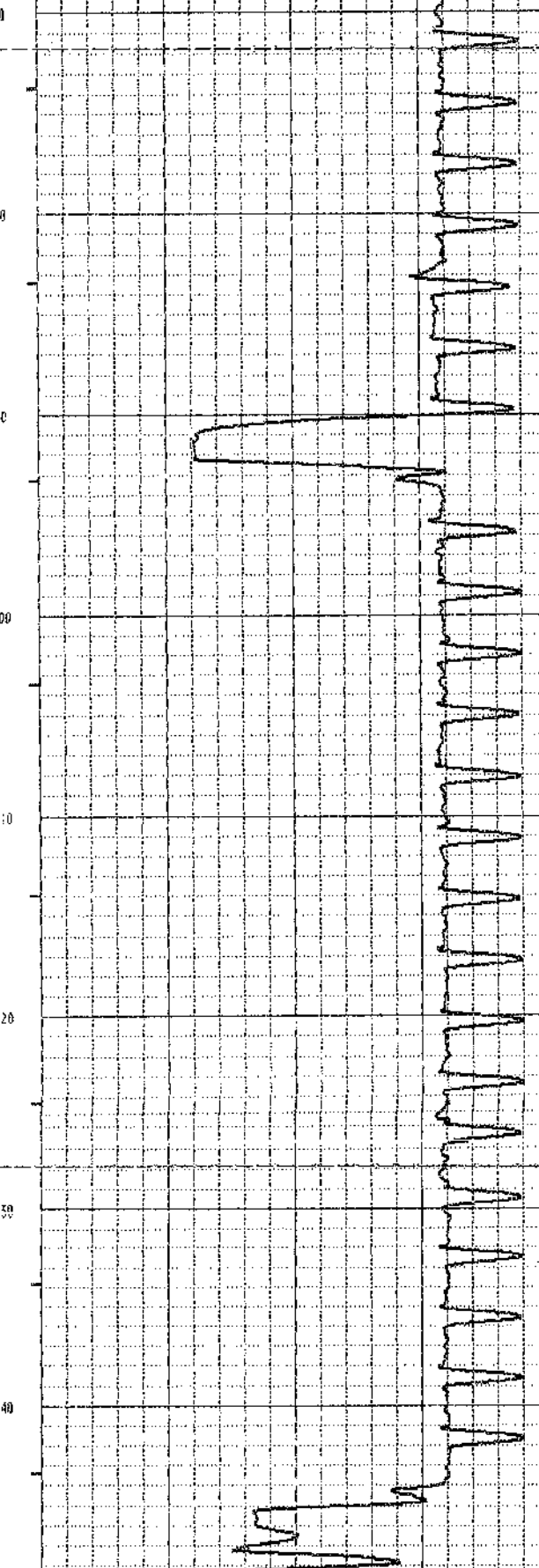
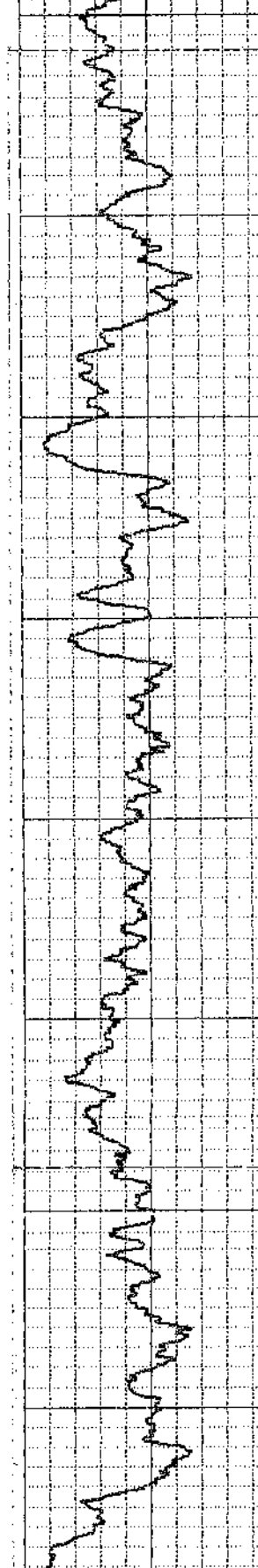
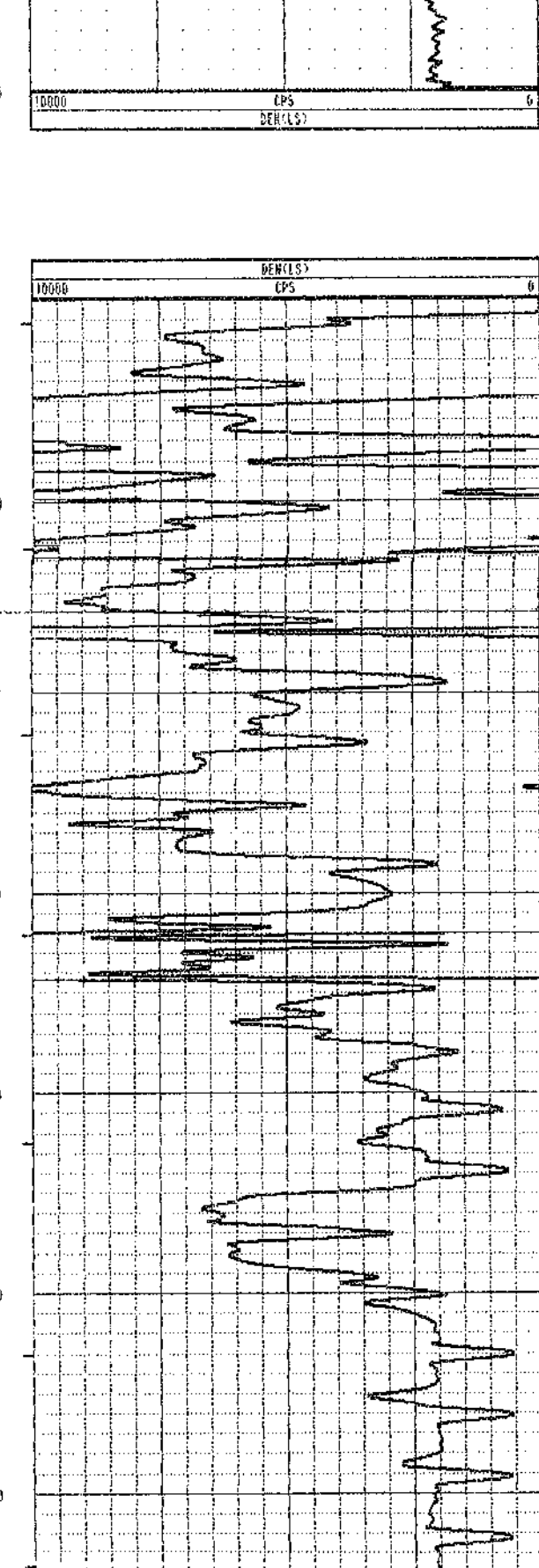
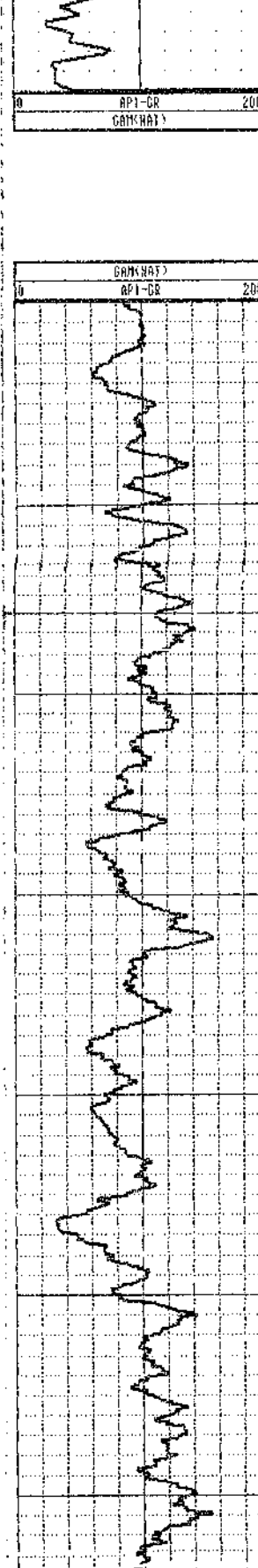
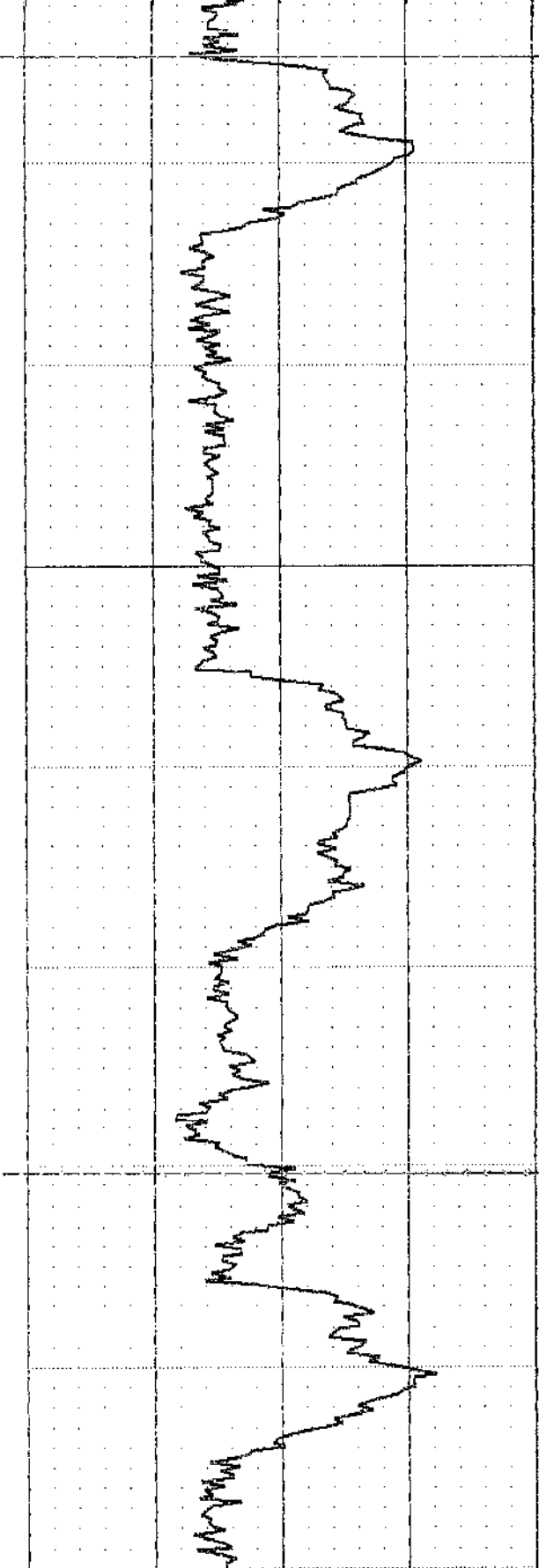
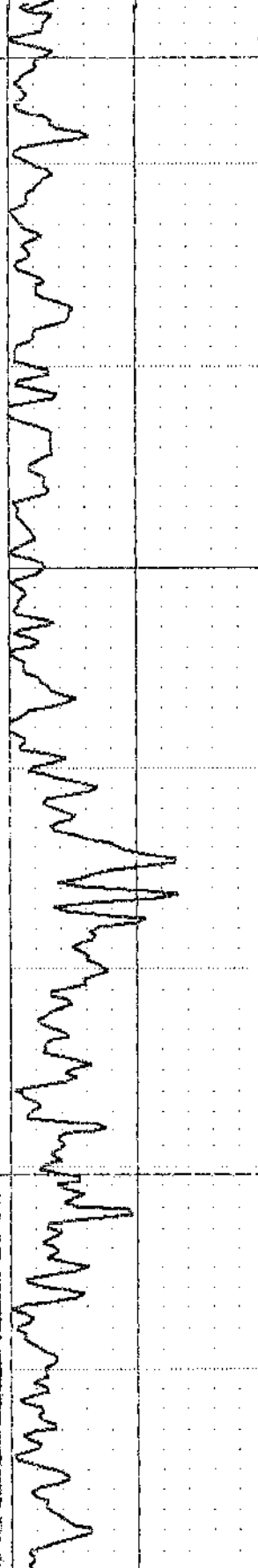
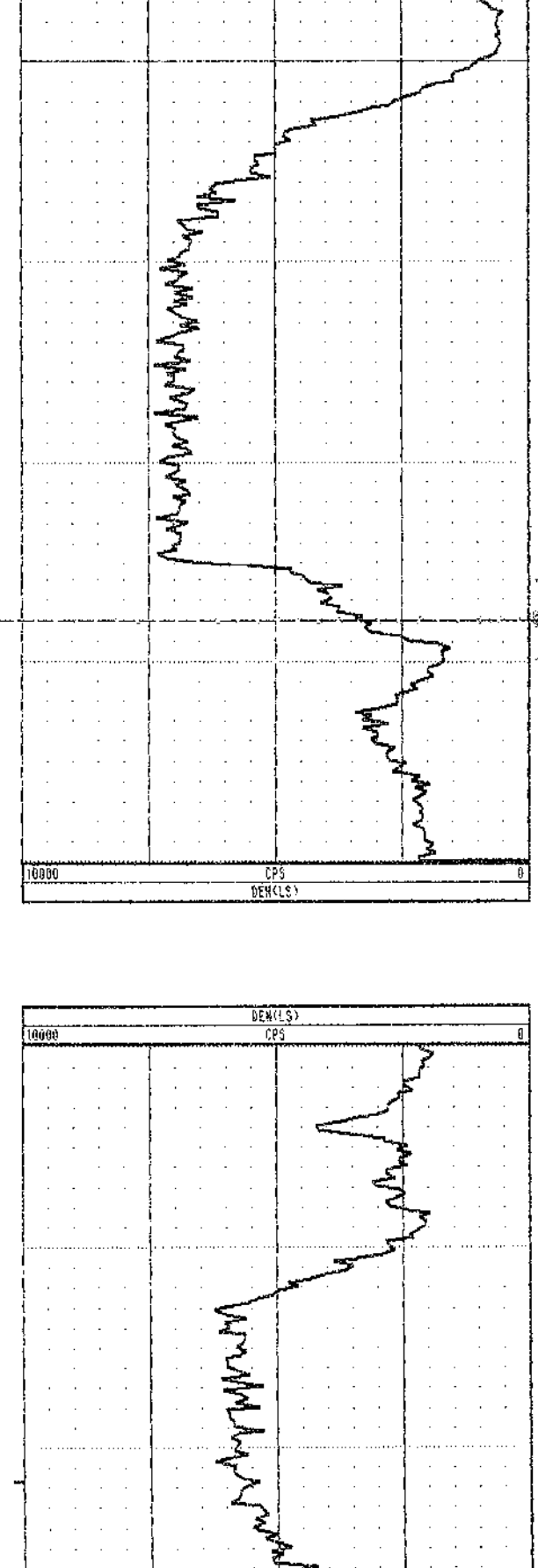
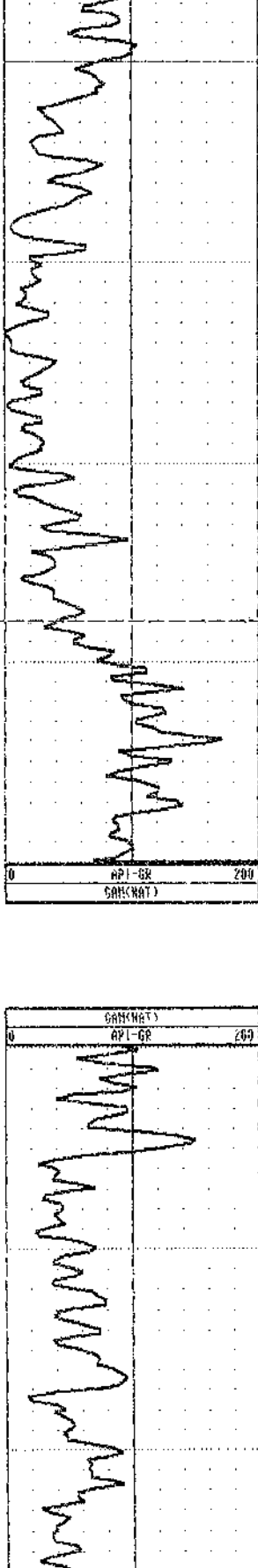
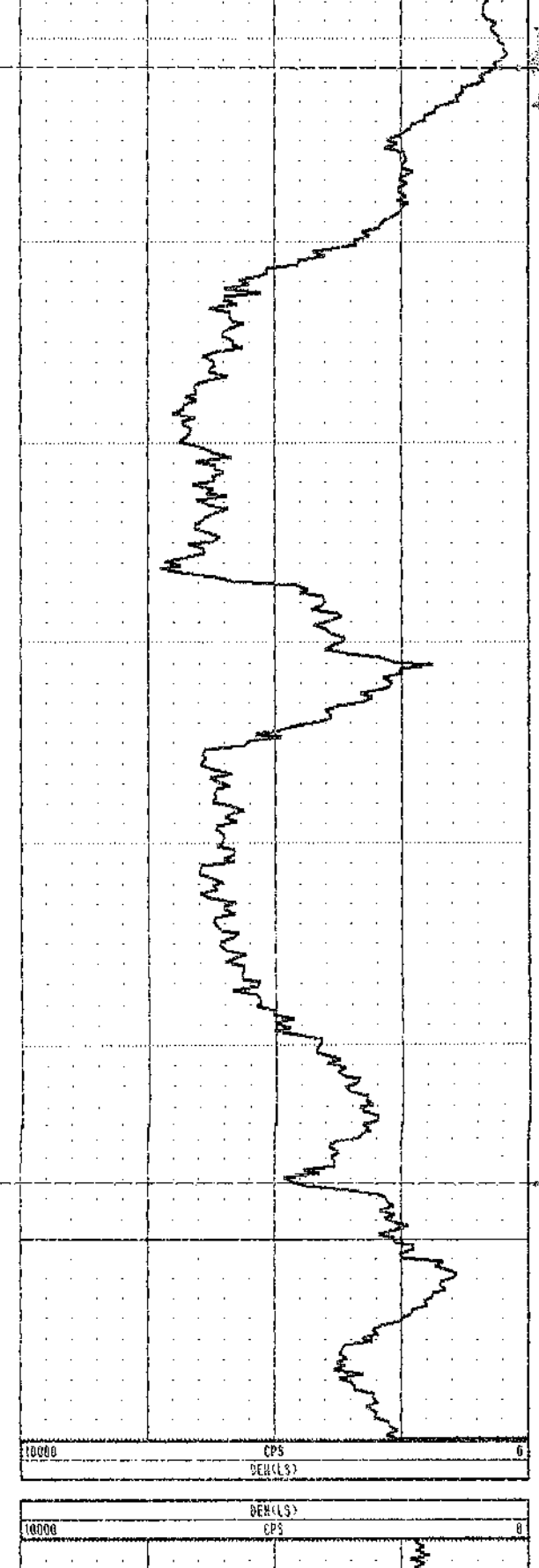
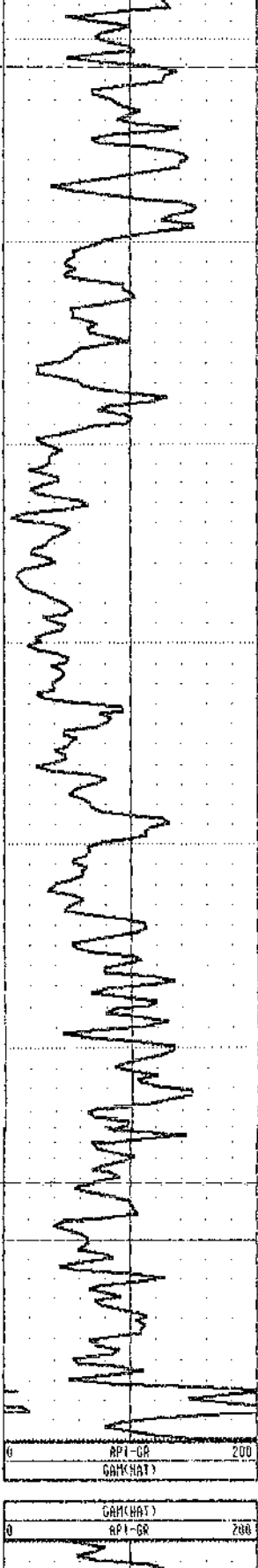
QMR89511 GAM-DENSITY

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89511 GAM-DENSITY
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/21/89
 DEPTH DRILLED : 161
 LOG BOTTOM : 151.92
 LOG TOP : -93
 CASING DRILLER : E. CP
 CASING TYPE : STEEL
 CASING THICKNESS : .05
 BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :
 LOGGED THROUGH GAGES
 HOLE 90 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

OTHER SERVICES:

PERMANENT DATUM : 00
 ELEV. PERR. DATUM : 00
 LOG MEASURED FROM : 0L
 ORL MEASURED FROM : 0L
 LOGGERS UNIT : 8903
 FIELD OFFICE : CALGARY
 RECORDED BY : L. LITAL
 ELEVATIONS :
 KB : 00
 OF : 00
 QL : 00
 FILE : ORIGINAL
 TYPE : 9069A
 LOG : 1
 PLOT : QUIN 11
 THRESH : 50000

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TOOL CALIBRATION		TOOL :	9069A	SERIAL NUMBER :	1029	
CAL-DATE	CAL-TIME	SCALE	SENSOR	RESPONSE	STANDARD	
0	05-04-89	12:58:21	0	GAMMA-RAY	0.000 CPS	0.000 GPI-GR
1	05-04-89	12:57:04	0	GAMMA-RAY	0.000 CPS	0.000 GPI-GR



Century

QMR89511 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89511 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

DATE : 06/21/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 161 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 161.62 LOG MEASURED FROM: GL DF : 00
 LOG TOP : -.72 DRL MEASURED FROM: GL GL : 00

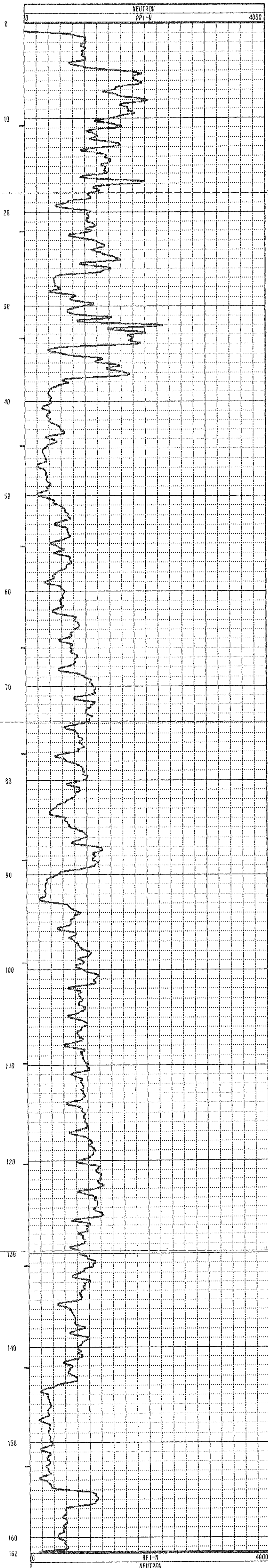
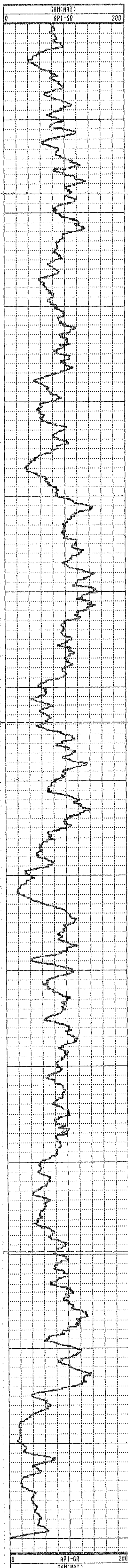
CASING DRILLER : 6.09 LOGGING UNIT : 8903
 CASING TYPE : STEEL FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9067A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 2
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 0
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000

OTHER SERVICES:

REMARKS :
 LOGGED THROUGH RODS
 ANGLE HOLE 50 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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TOOL CALIBRATION		TOOL = 9067A	SERIAL NUMBER = 528			
CAL-DATE	CAL-TIME	SRC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	13:47:58	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	13:47:58	0	GAM(NAT)	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



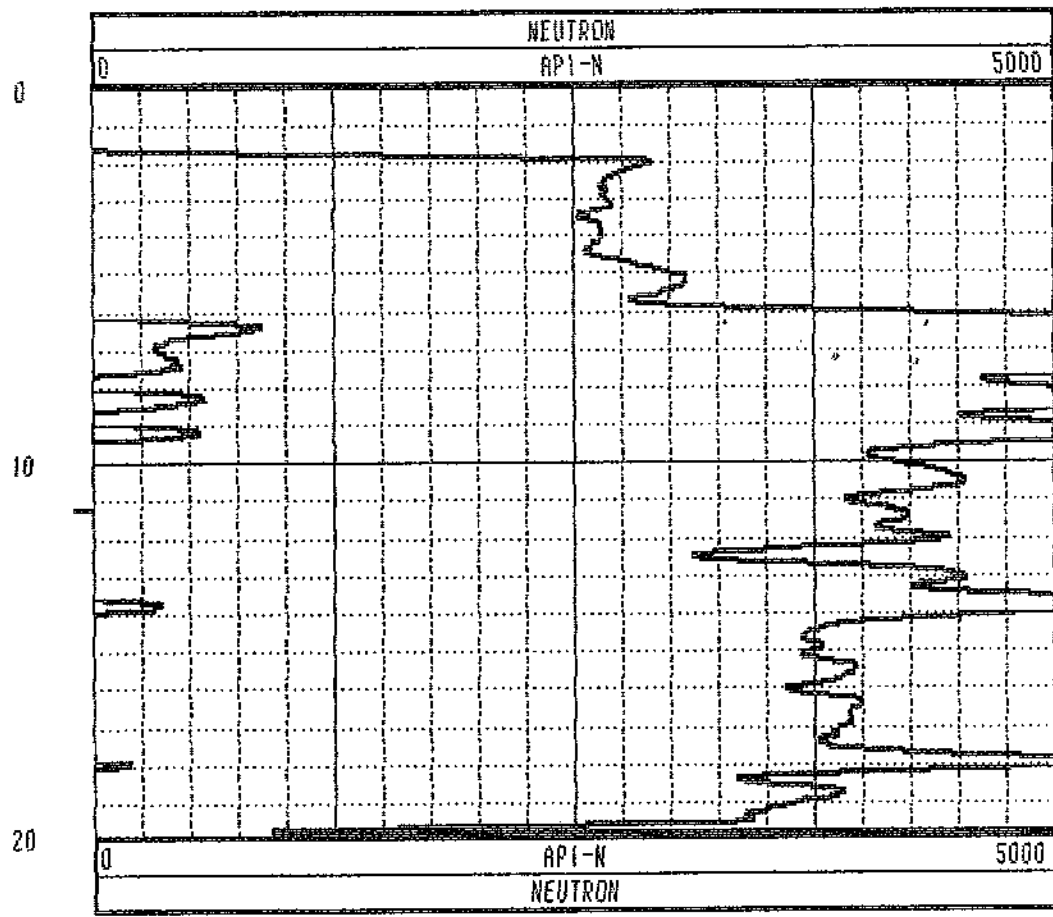
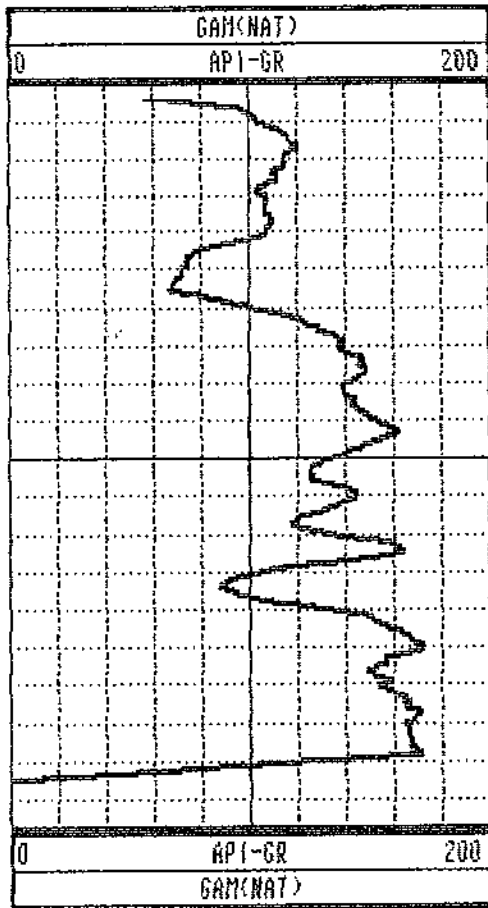
Century

QMR89511 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:			
WELL	: QMR89511 GAM-NEUTRON				
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 06/21/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 161	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 19.82	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 0.44	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 6.09	LOGGING UNIT	: 8903		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	:	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	50000
REMARKS	:				
	: LOGGED OPEN HOLE				
	: ANGLE HOLE 50 DEGREES				

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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TOOL CALIBRATION		TOOL = 9055A	SERIAL NUMBER = 14		
CAL-DATE	CAL-TIME	SRC	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

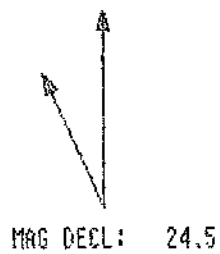
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89511 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/22/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 7

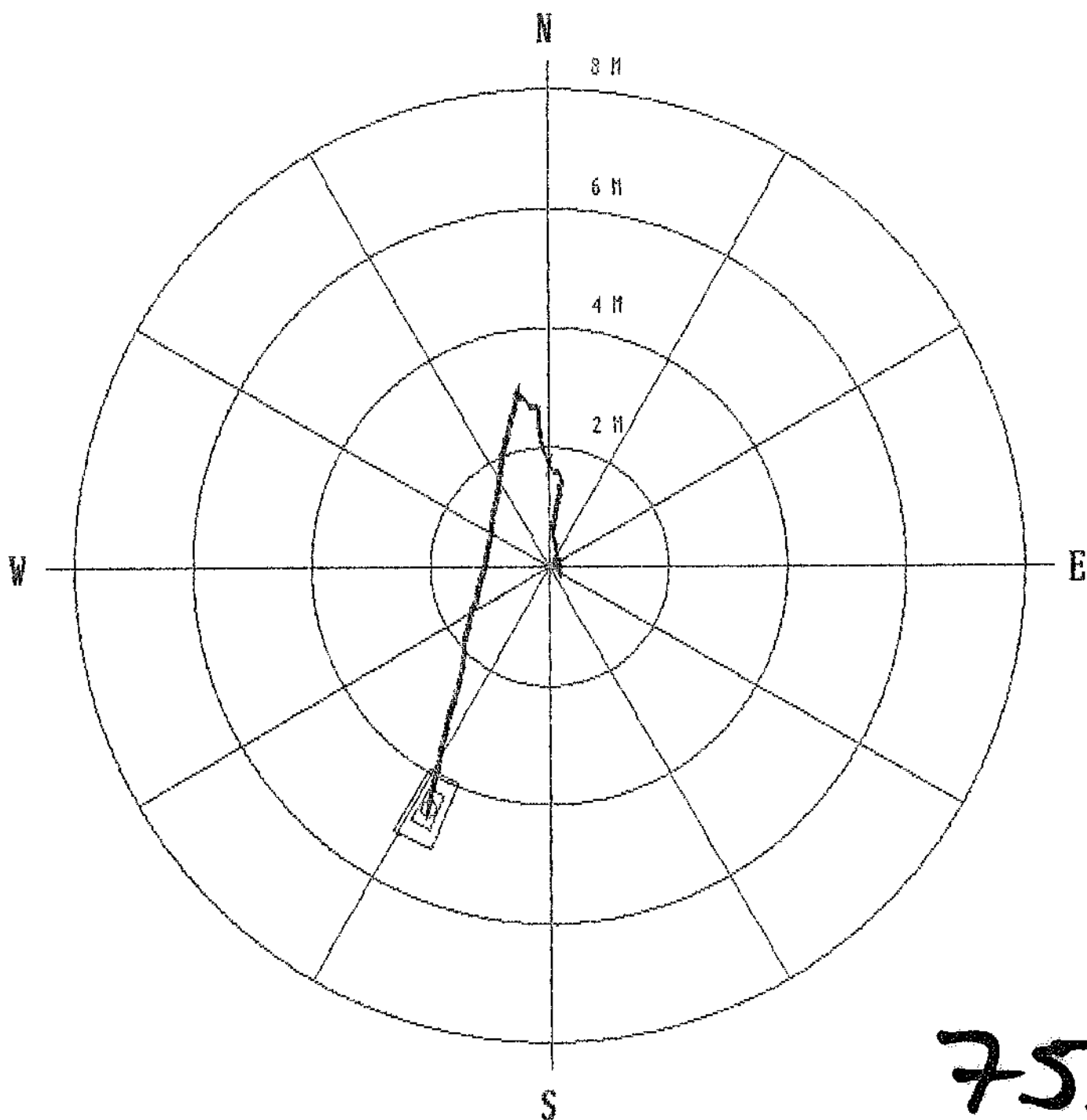
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANBB
7.0	5.84	2.40	-.17	2.4	356.0	40.2	355.6
12.0	9.67	0.77	-.96	1.2	308.8	40.0	187.2
17.0	13.48	-2.33	-1.65	2.9	215.3	40.3	181.9
19.8	15.64	-4.06	-2.06	4.5	206.9	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89511 GAM-NEUTRON
 DATE OF LOG: 06/22/89
 PROBE: 9055A 14



SCALE: 1 IN/CM
 TRUE DEPTH: 15.58 M
 AZIMUTH: 206.9
 DISTANCE: 4.5 M
 + = 1 M INCR
 O = BOTTOM OF HOLE



753

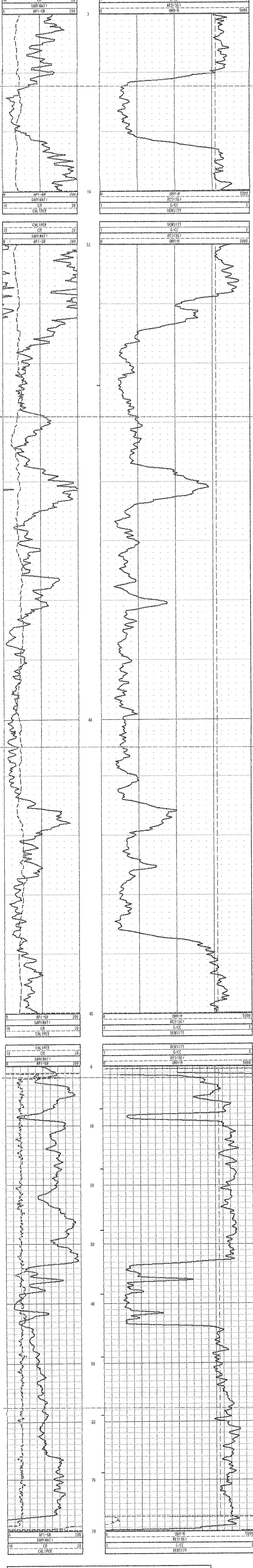


Century

QMR89512 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMR89512 GAM-DEN-RES-CAL		
LOCATION/FIELD : HOLVERINE VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP :	RANGE :
DATE : 06/22/89	PERMANENT DATUM : 00	ELEVATIONS
DEPTH DRILLER : 83	ELEV. PERM. DATUM: 00	KB : 00
LOG BOTTOM : 78.62	LOG MEASURED FROM: GL	DF : 00
LOG TOP : -.68	DRL MEASURED FROM: GL	GL : 00
CASING DRILLER : 2.00	LOGGING UNIT : 8903	
CASING TYPE : PLASTIC	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05	RECORDED BY : L. LITAL	
BIT SIZE : 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 24.5	RM :	TYPE : 9032AC
MATRIX DENSITY : 2.68	RM TEMPERATURE :	LOG : 0
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		

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TOOL CALIBRATION		TOOL = 9032AC	SERIAL NUMBER = 967		
CAL-DATE	CAL-TIME	SRC	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	0.000 CPS	0.000 OMM-H
5	05/04/89	10:25:07	0	30275.000 CPS	178.500 OMM-H
6	05/04/89	10:46:11	0	353.000 CPS	7.620 CH
7	05/04/89	10:46:11	0	1906.000 CPS	17.000 CH
8	05/04/89	10:17:51	0	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	0.000 CPS	0.000 CH



Century

QMR89512 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89512 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

OTHER SERVICES:

DATE : 06/22/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 83 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 78.64 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.26 DRL MEASURED FROM: GL GL : 00

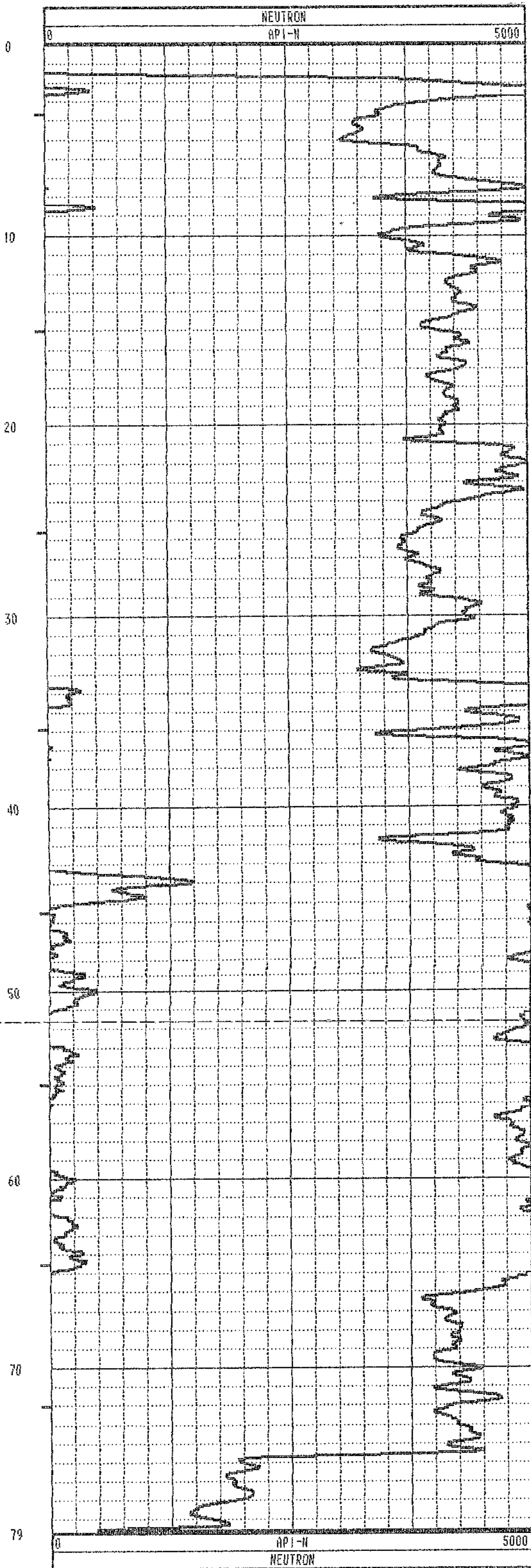
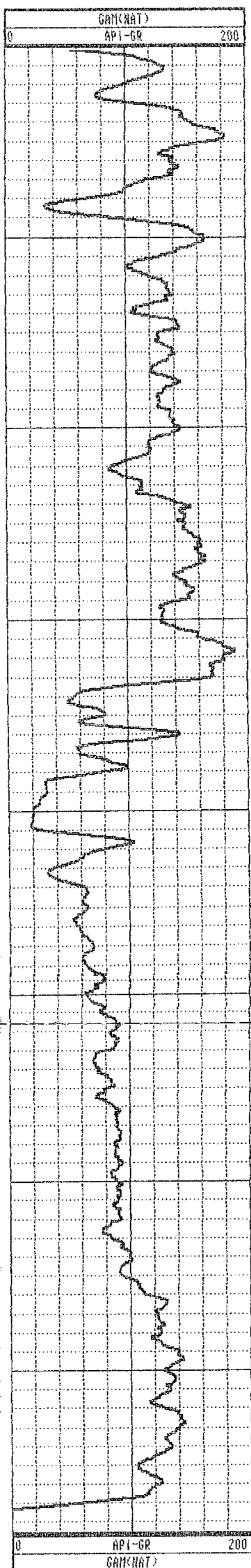
CASING DRILLER : 2.00 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 1
 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

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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

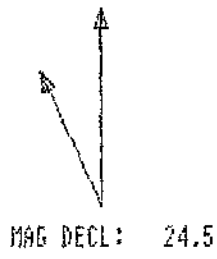
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89512 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/22/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 2

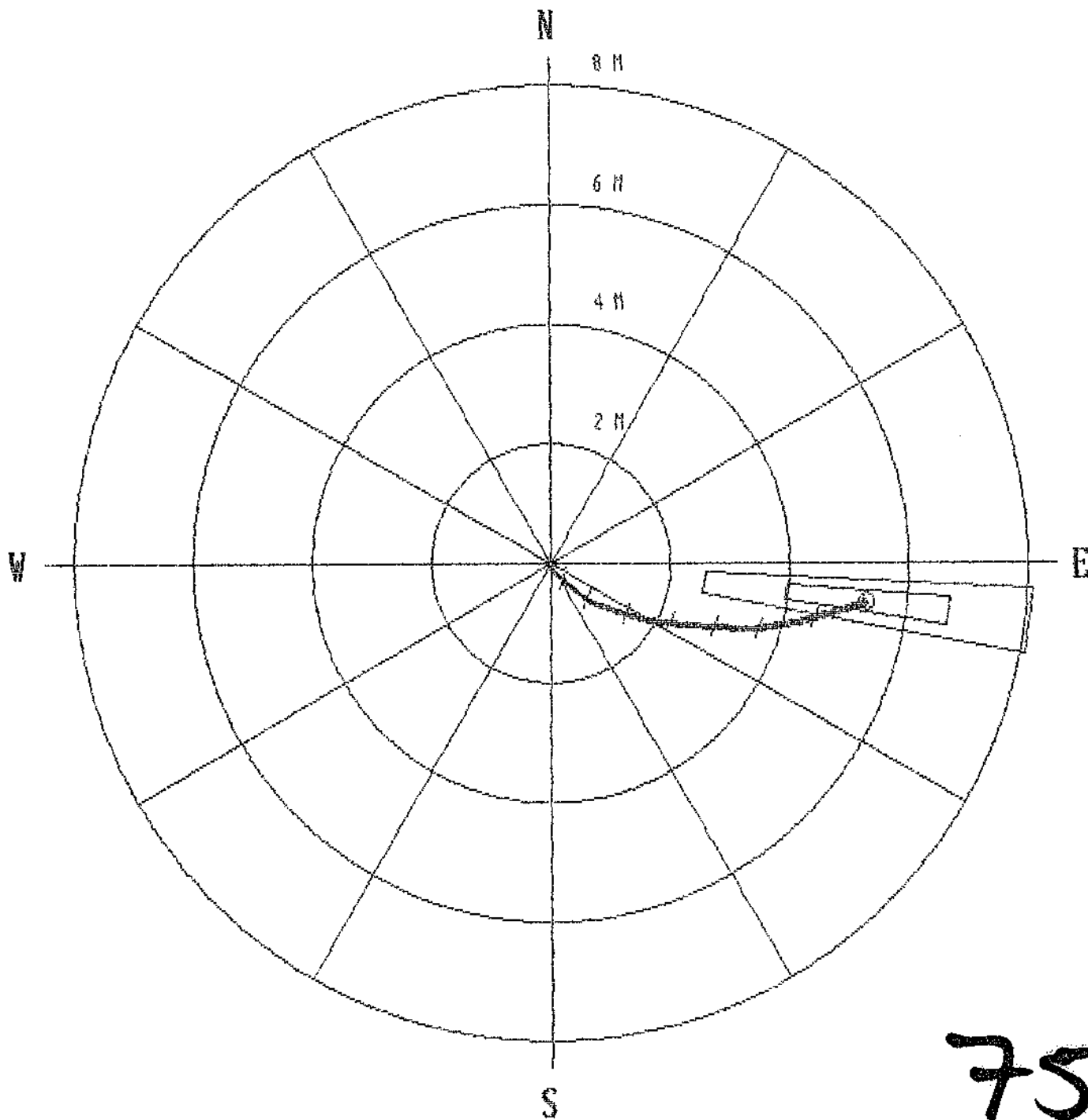
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	-.02	-.01	0.0	221.3	2.4	259.0
8.0	7.99	-.20	0.11	0.2	150.4	3.7	128.5
13.0	12.98	-.36	0.31	0.5	139.4	3.5	117.6
18.0	17.98	-.53	0.51	0.7	136.1	2.3	123.7
23.0	22.97	-.68	0.78	1.0	131.3	3.5	103.9
28.0	27.95	-.81	1.10	1.4	126.2	4.5	105.0
33.0	32.94	-.91	1.44	1.7	121.9	5.0	99.8
38.0	37.93	-.98	1.83	2.1	118.2	4.3	95.8
43.0	42.91	-1.02	2.20	2.4	114.9	4.6	86.1
48.0	47.90	-1.04	2.57	2.8	112.1	4.5	94.4
53.0	52.88	-1.07	2.92	3.1	110.1	3.6	108.6
58.0	57.87	-1.10	3.28	3.5	108.5	5.1	84.3
63.0	62.85	-1.05	3.72	3.9	105.7	5.3	86.8
68.0	67.83	-.97	4.17	4.3	103.1	5.5	79.2
73.0	72.80	-.83	4.69	4.8	100.0	5.9	76.9
78.0	77.77	-.66	5.23	5.3	97.2	6.9	72.8
78.6	78.40	-.64	5.30	5.3	96.9	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

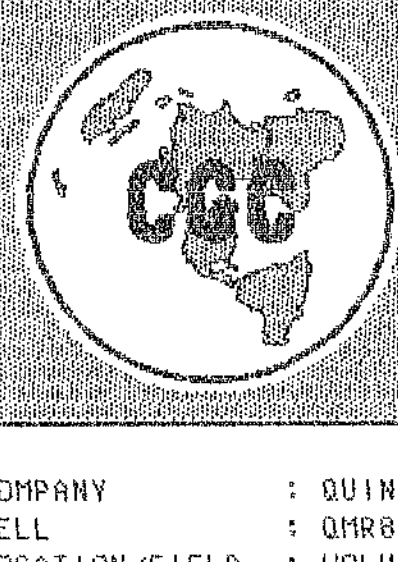
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89512 GAM-NEUTRON
 DATE OF LOG: 06/22/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 78.34 M
 AZIMUTH: 96.9
 DISTANCE: 5.3 M
 + = 10 M INCR
 O = BOTTOM OF HOLE



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Century

QMR89513 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89513 GAM-DEN-RES-CAL
 LOCATION/FIELD : HOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

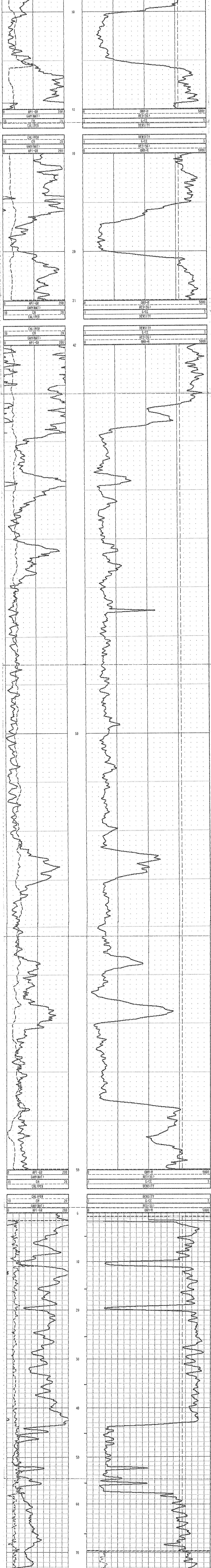
OTHER SERVICES:

DATE : 06/23/89
 DEPTH DRILLER : 79
 LOG BOTTOM : 75.38
 LOG TOP : -36
 CASING DRILLER : 0
 CASING TYPE :
 CASING THICKNESS : 0
 BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 55 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

PERMANENT DATUM : 00
 ELEV. PERM. DATUM: 00
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL
 LOGGING UNIT : 8903
 FIELD OFFICE : CALGARY
 RECORDED BY : L. LÉTAL
 BOREHOLE FLUID : WATER
 RN :
 RN TEMPERATURE :
 MATRIX DELTA T : 175
 FLUID DELTA T : 690

ELEVATIONS
 KB : 00
 DF : 00
 GL : 00

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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	GAIN(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAIN(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 OMI-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OMI-H
6	05/04/89	10:46:11	0	CALIPER	355.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1996.000 CPS	17.800 CM
8	05/04/89	10:17:51	0	DENSITY	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITY	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPER	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPER	0.000 CPS	0.000 CM



Century

QMR89513 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89513 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

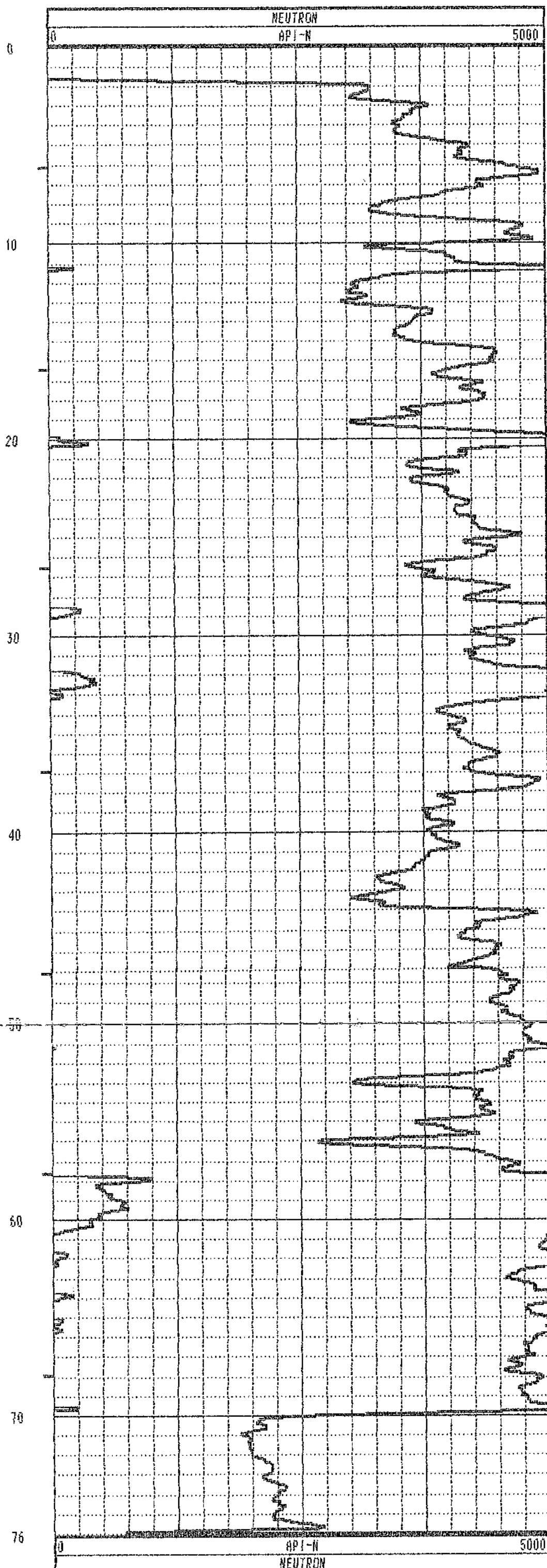
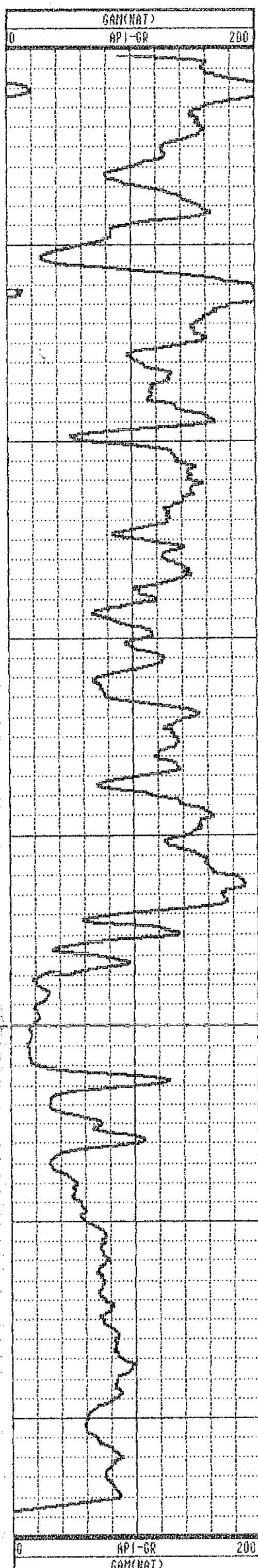
DATE : 06/23/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 79 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 76.04 LOG MEASURED FROM: 6L DF : 00
 LOG TOP : 0.40 DRL MEASURED FROM: 6L GL : 00

CASING DRILLER : 0 LOGGING UNIT : 8903
 CASING TYPE : FIELD OFFICE : CALGARY
 CASING THICKNESS: 0 RECORDED BY : L. LETAL

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
 ANGLE HOLE 55 DEGREES
 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(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 HV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 HV
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

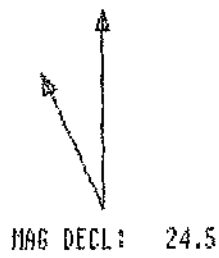
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89513 GAM-
 FIELD OFFICE : CALBARY DATE OF LOG : 06/23/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

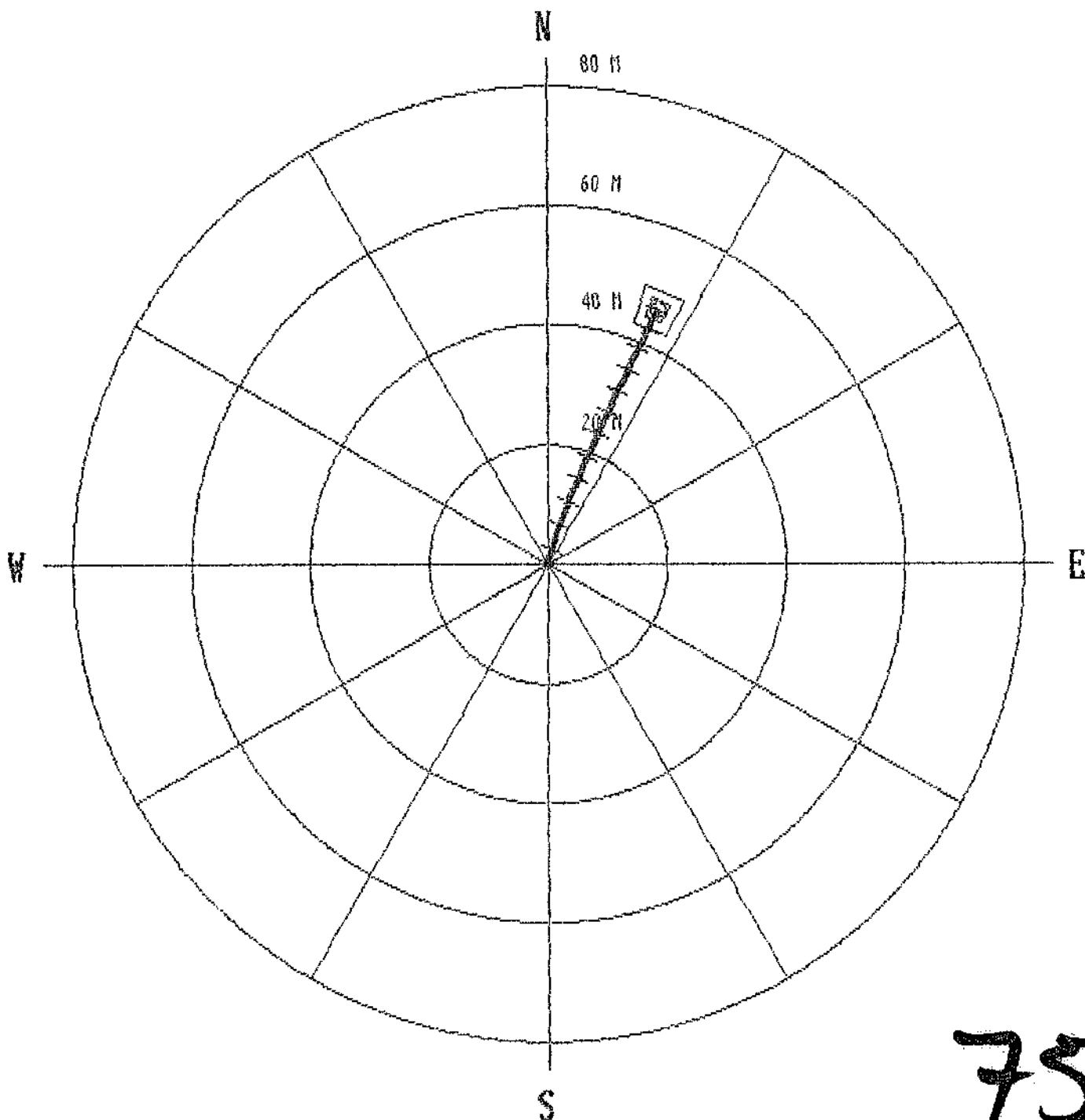
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANBB
1.0	1.00	0.00	0.00	0.0	-0	0.0	0.0
6.0	5.03	2.57	0.52	2.6	11.4	40.3	16.5
11.0	8.85	5.61	1.60	5.8	15.9	40.2	17.0
16.0	12.66	8.65	2.65	9.0	17.0	40.6	22.5
21.0	16.47	11.63	3.88	12.3	18.4	40.1	24.2
26.0	20.31	14.60	5.08	15.4	19.2	39.5	24.3
31.0	24.16	17.49	6.40	18.6	20.1	39.2	32.9
36.0	28.03	20.37	7.70	21.8	20.7	39.3	25.3
41.0	31.92	23.23	9.02	24.9	21.2	39.1	29.1
46.0	35.82	26.05	10.35	28.0	21.7	38.4	26.6
51.0	39.75	28.87	11.63	31.1	21.9	37.5	24.0
56.0	43.69	31.60	13.01	34.2	22.4	38.1	13.6
61.0	47.65	34.32	14.35	37.2	22.7	37.4	36.2
66.0	51.64	37.00	15.71	40.2	23.0	37.5	30.6
71.0	55.66	39.65	17.04	43.1	23.3	36.3	31.1
76.0	59.71	42.23	18.40	46.1	23.5	0.0	0.0
76.0	59.75	42.23	18.40	46.1	23.5	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: HOLVERINE VALLEY SOUTH
 HOLE ID: QMR89513 GAM-NEUTRON
 DATE OF LOG: 06/23/89
 PROBE: 9055A 14



SCALE: 10 M/CM
 TRUE DEPTH: 59.69 M
 AZIMUTH: 23.5
 DISTANCE: 46.1 M
 + = 5 M INCR
 O = BOTTOM OF HOLE



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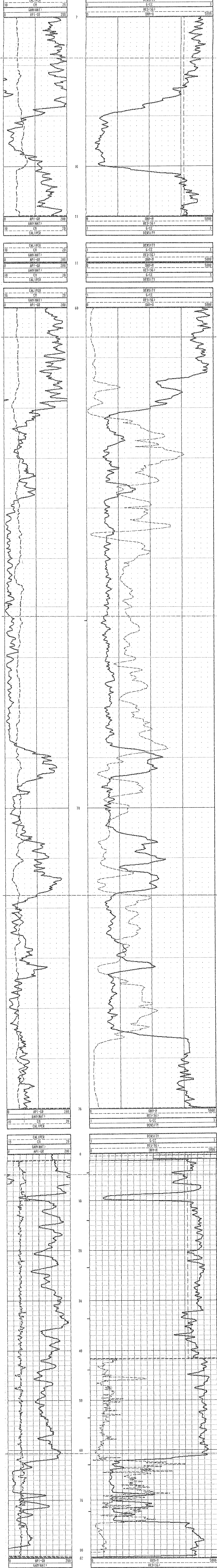
Century

QMR 89514 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89514 GAM-DEN-RES-CAL		
LOCATION/FIELD	: HOLUERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:
DATE	: 06/24/89	PERMANENT DATUM	: 00
DEPTH DRILLER	: 85	ELEV. PERM. DATUM	: 00
LOG BOTTOM	: 81.62	LOG MEASURED FROM	: GL
LOG TOP	: -.66	DRL MEASURED FROM	: GL
CASING DRILLER	: 2	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS	: .05	RECORDED BY	: L. LATAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9032AC
VERTICAL HOLE	:	LOG	: 1
		PLOT	: QUIN 12
		THRESH	: 50000

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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CAL-DATE	CAL-TIME	SRC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GAI(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAI(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	2489.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 DM-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 DM-H
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	17.000 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

QMR89514 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89514 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

DATE : 06/24/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 85 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 82.14 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.84 DRL MEASURED FROM: GL GL : 00

CASING DRILLER : 2 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

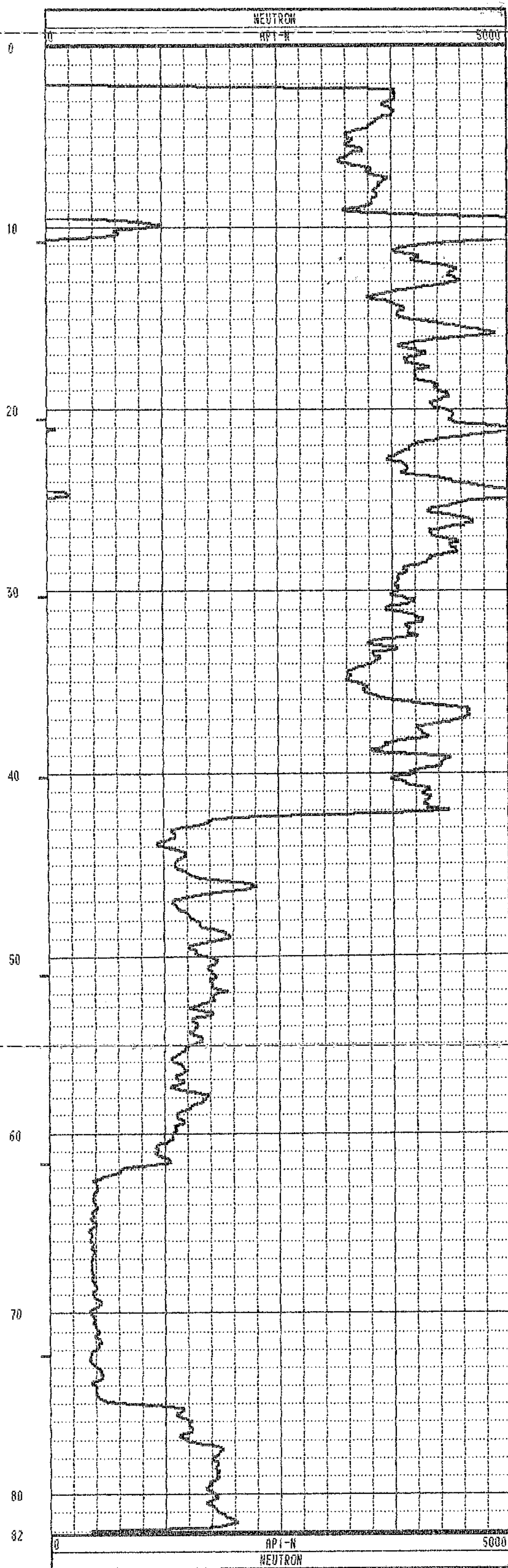
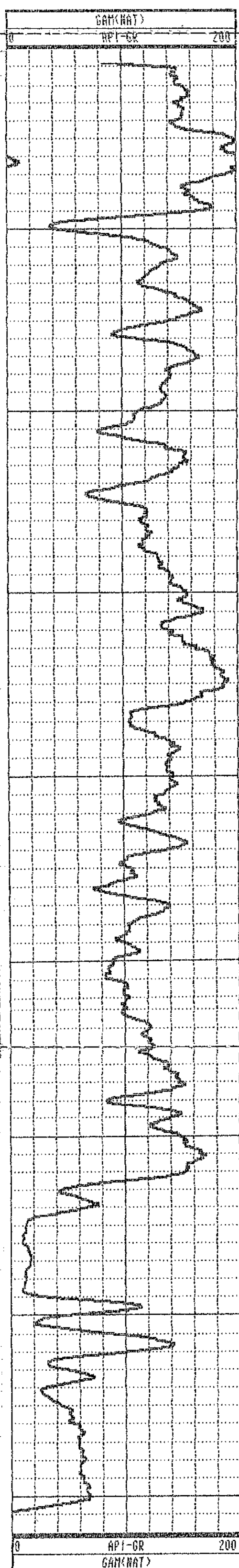
BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 0
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 10
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000

REMARKS :
 LOGGED OPEN HOLE
 VERTICAL HOLE

OTHER SERVICES:

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(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

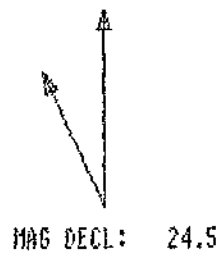
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89514 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/24/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 6

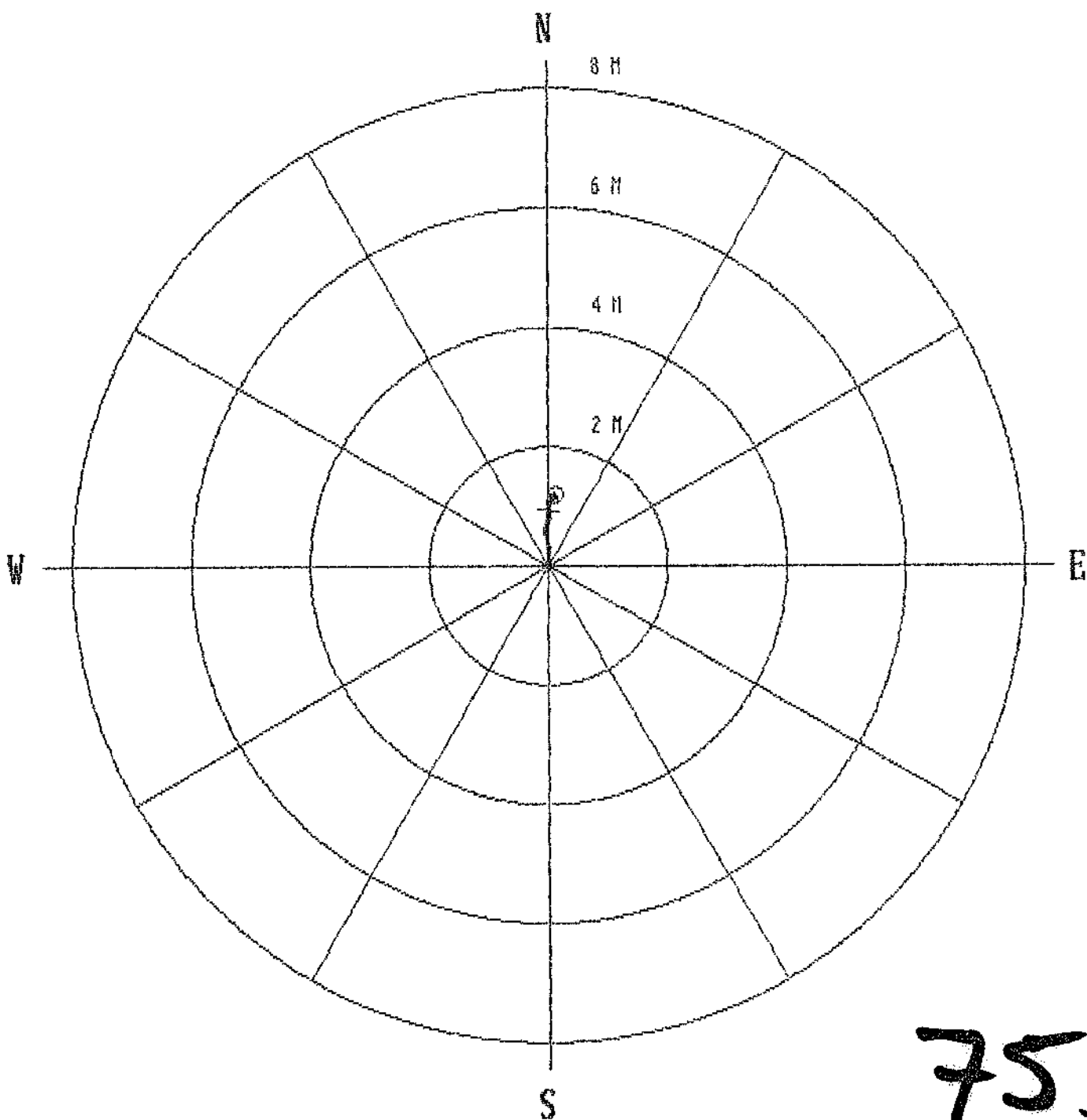
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	0.01	0.01	0.0	27.9	1.3	26.3
8.0	8.00	0.09	0.02	0.1	12.9	1.3	8.5
13.0	13.00	0.18	0.01	0.2	2.5	1.0	357.5
18.0	18.00	0.28	-0.00	0.3	359.9	1.2	339.7
23.0	23.00	0.40	-0.02	0.4	357.3	1.3	350.3
28.0	27.99	0.51	-0.03	0.5	356.3	1.1	2.2
33.0	32.99	0.62	-0.03	0.6	357.2	1.1	15.0
38.0	37.99	0.72	-0.01	0.7	358.9	1.4	12.5
43.0	42.99	0.81	0.01	0.8	0.5	1.5	15.1
48.0	47.99	0.90	0.00	0.9	0.3	1.2	354.1
53.0	52.99	0.99	0.01	1.0	0.4	1.1	3.7
58.0	57.99	1.07	0.02	1.1	1.1	0.8	13.2
63.0	62.99	1.12	0.05	1.1	2.5	0.4	40.5
68.0	67.99	1.15	0.07	1.2	3.4	0.0	85.2
73.0	72.99	1.17	0.10	1.2	4.8	0.5	88.6
78.0	77.99	1.18	0.12	1.2	5.9	0.5	83.3
82.1	82.12	1.20	0.14	1.2	6.4	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89514 GAM-NEUTRON
 DATE OF LOG: 06/24/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 82.06 M
 AZIMUTH: 6.4
 DISTANCE: 1.2 M
 + = 50 M INCR
 O = BOTTOM OF HOLE



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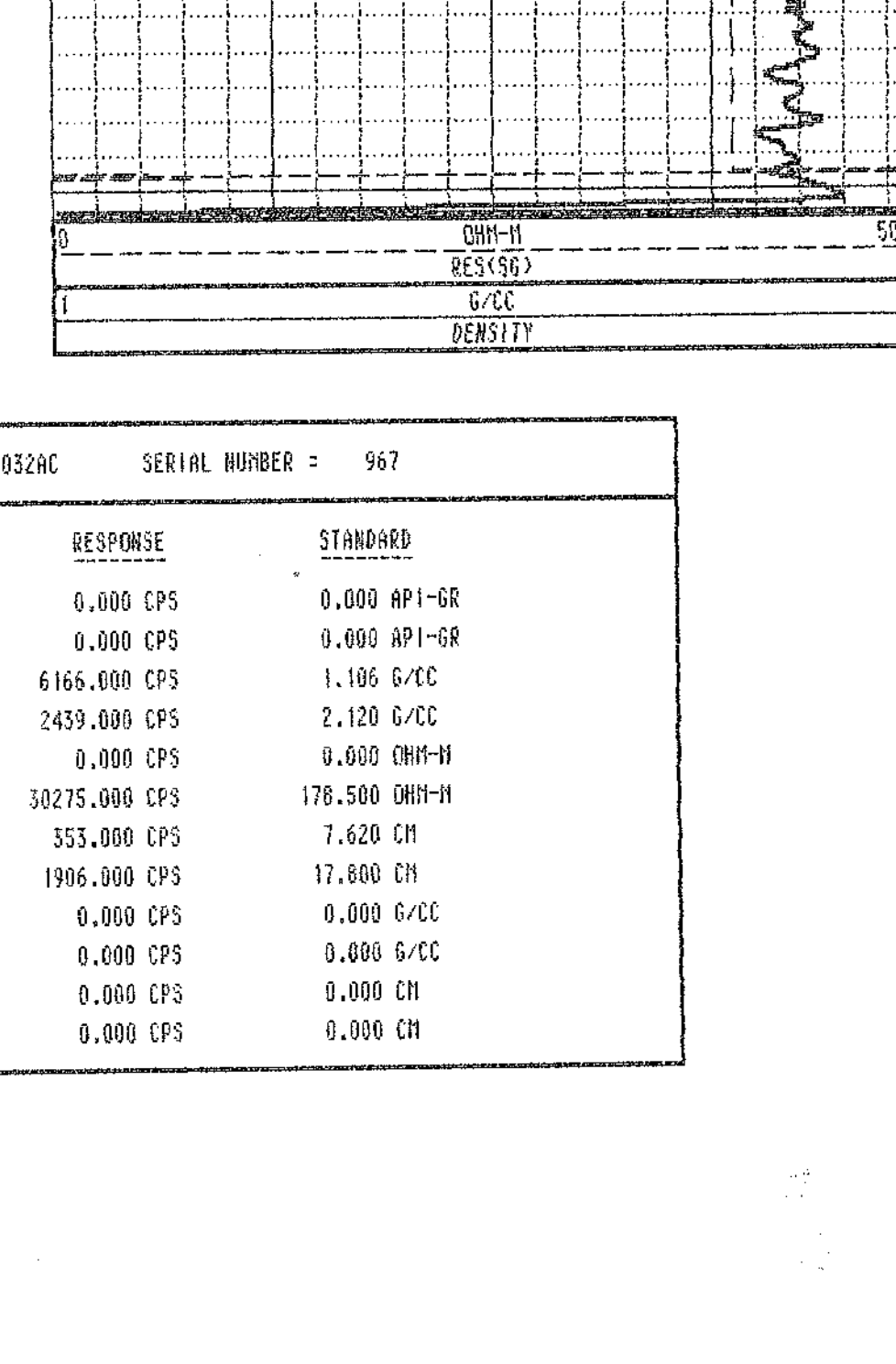
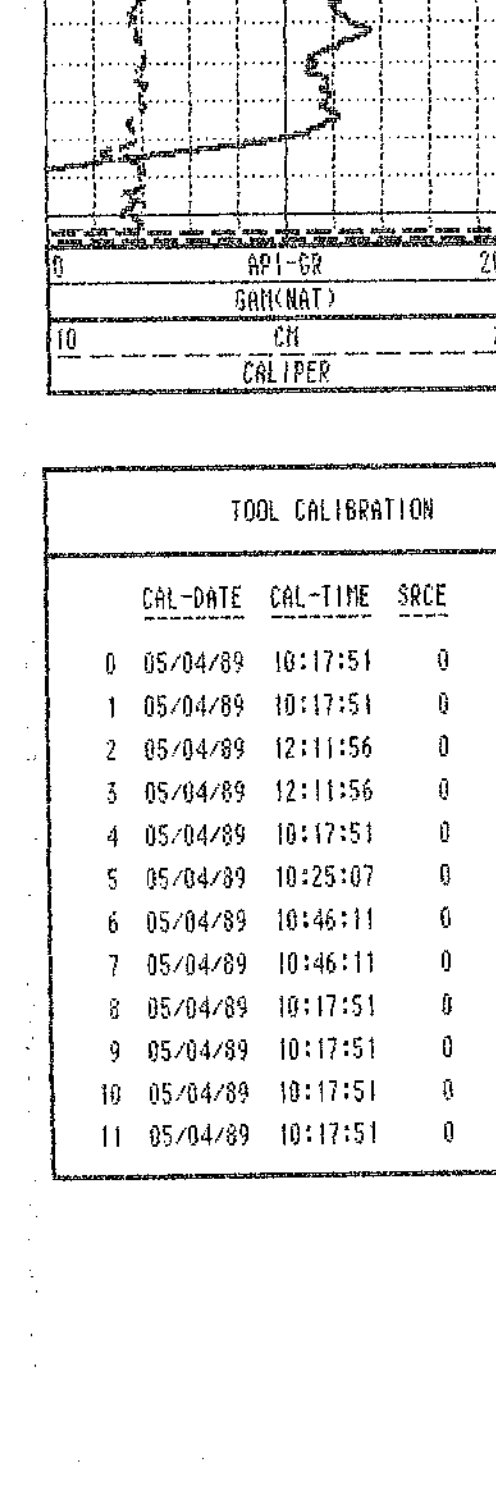
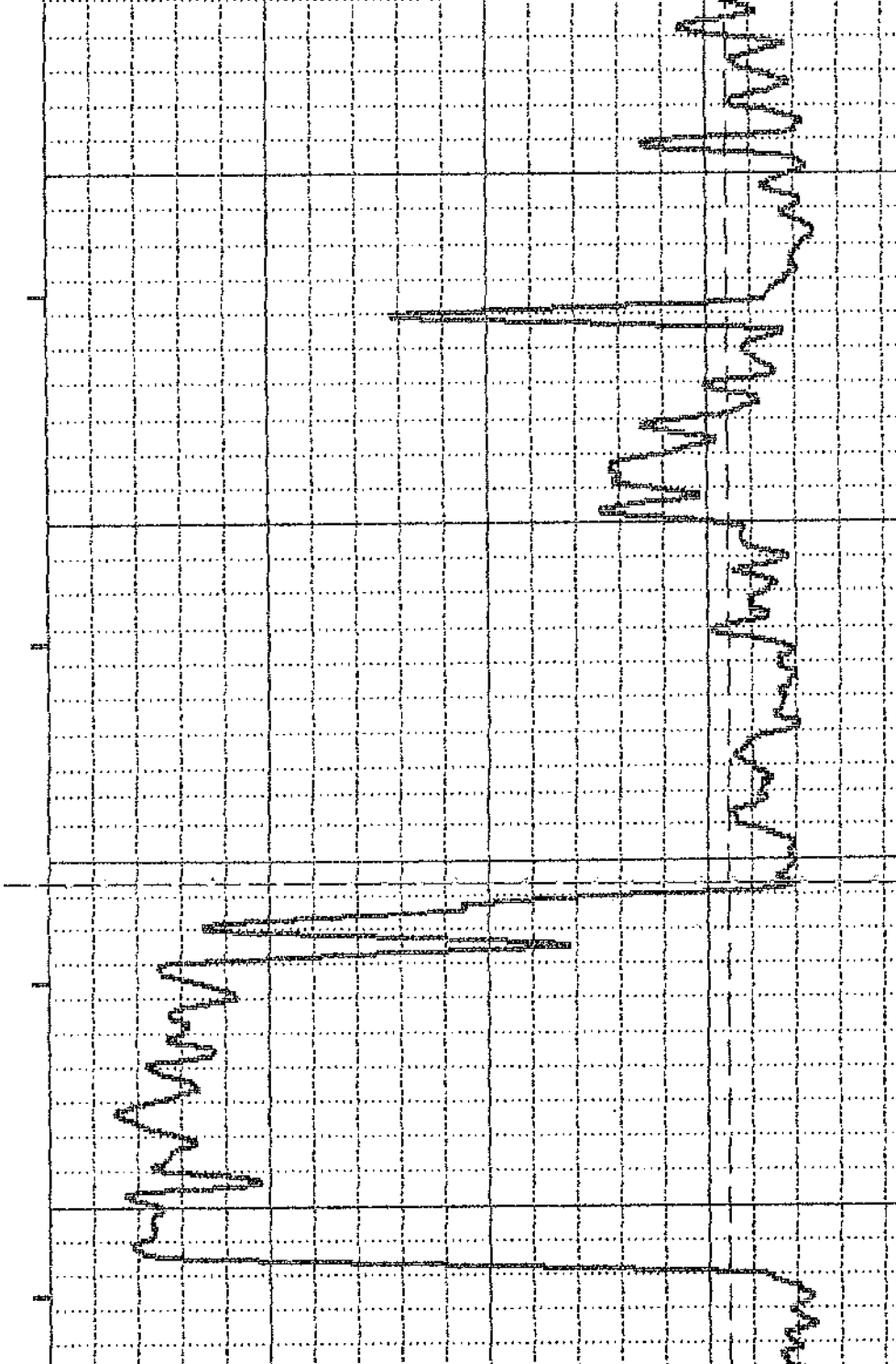
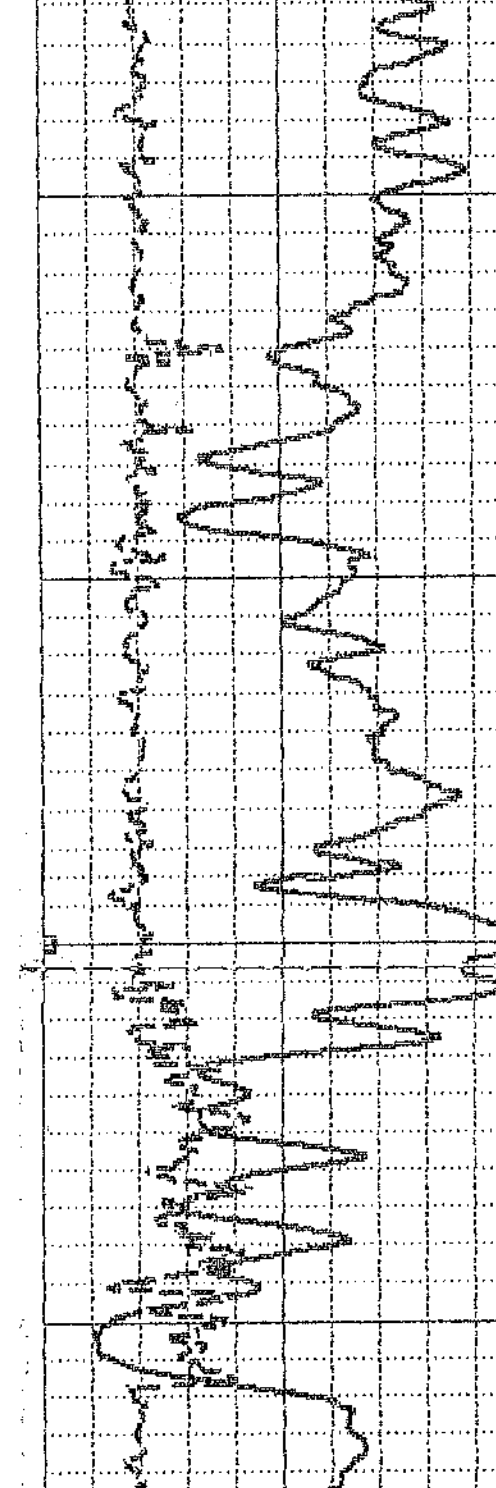
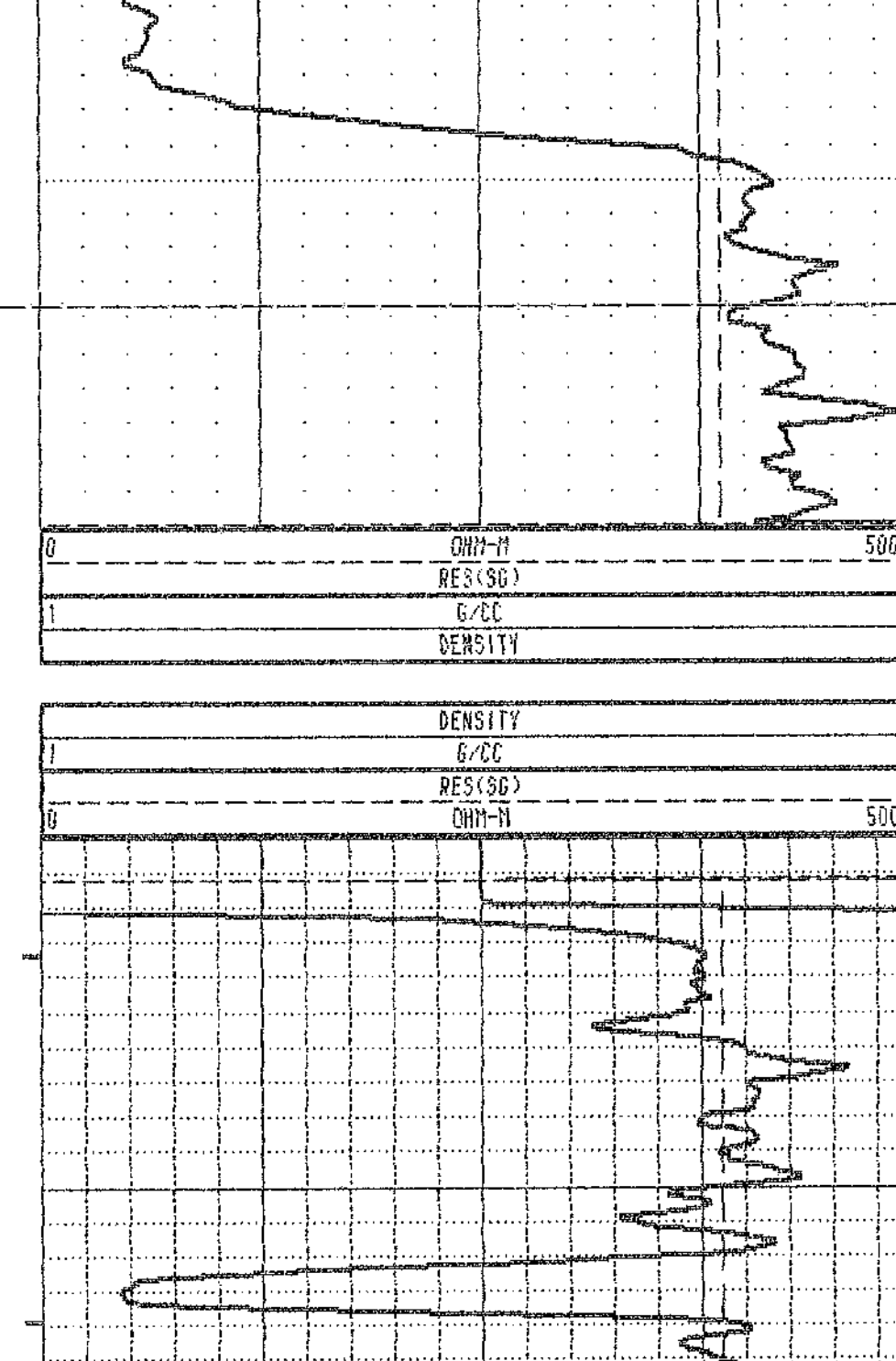
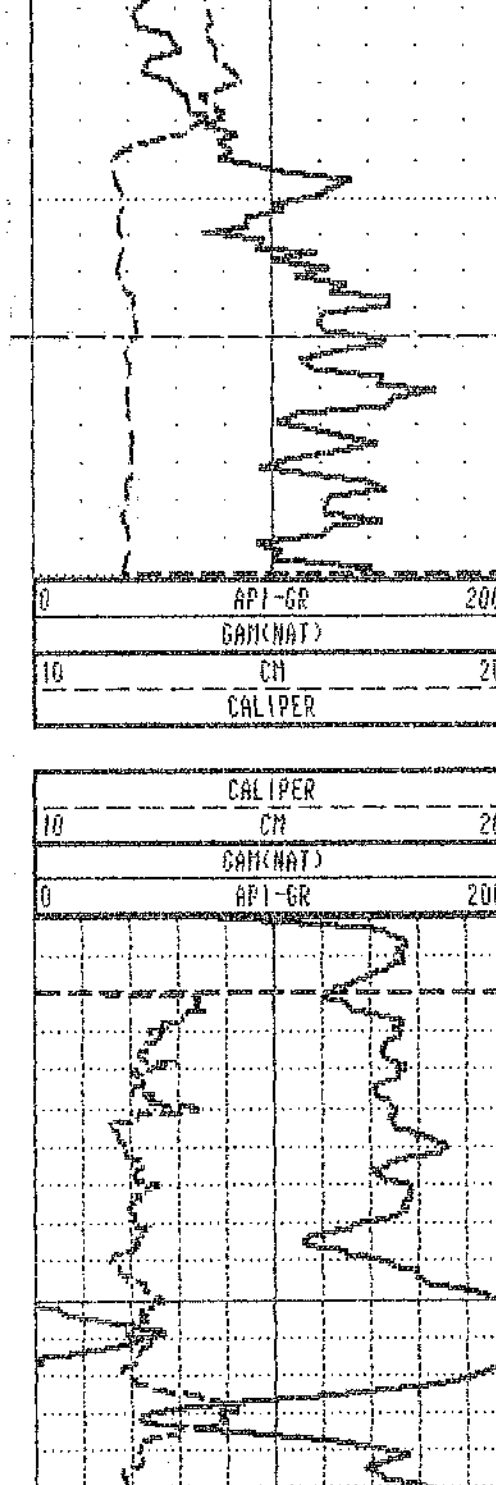
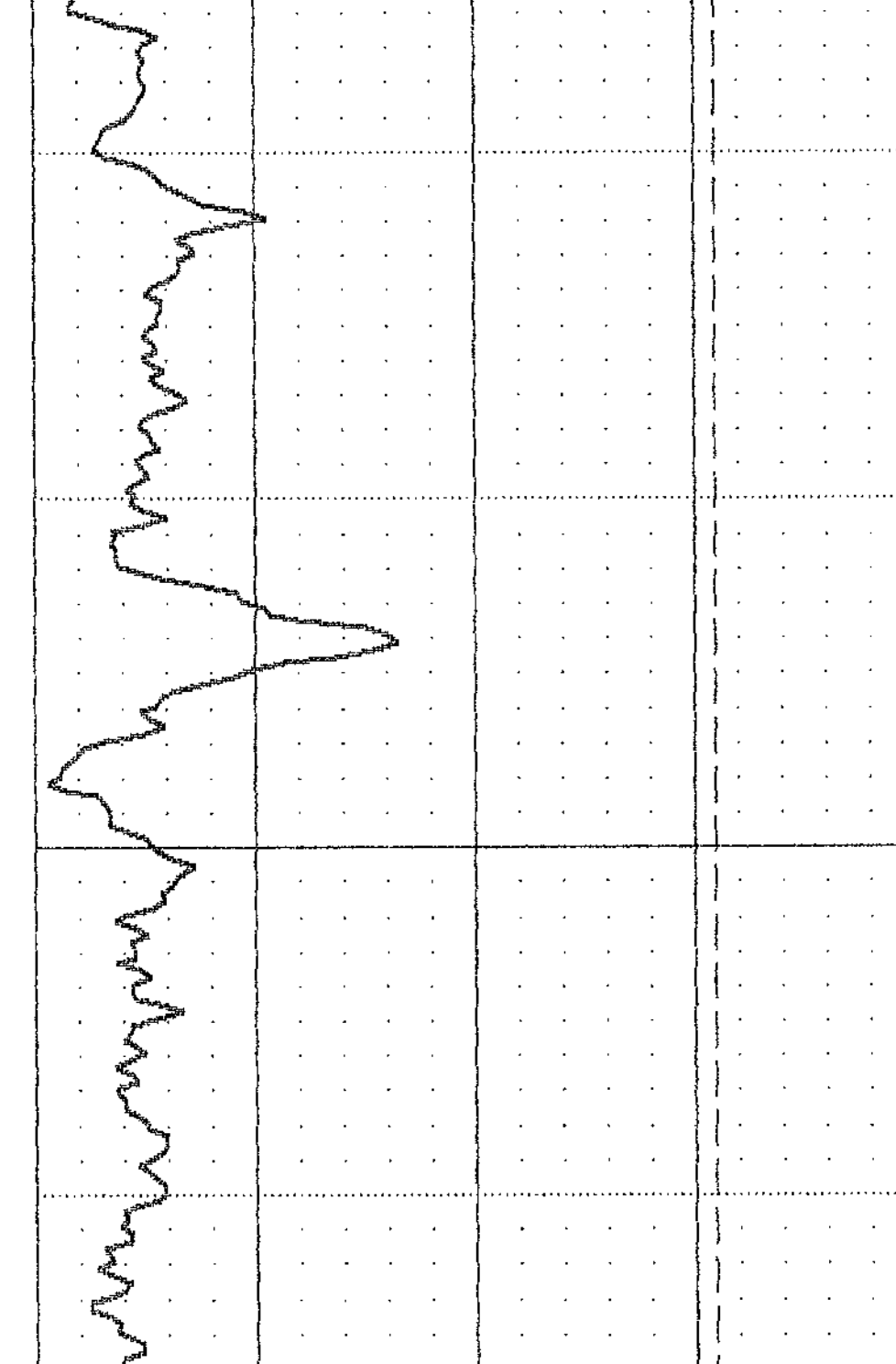
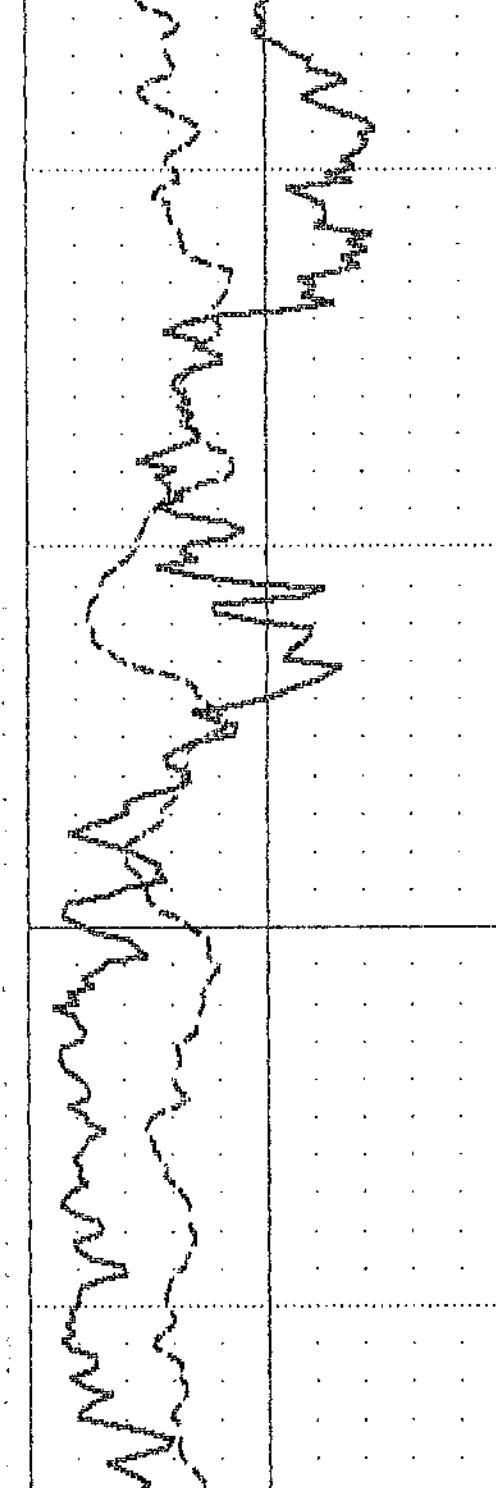
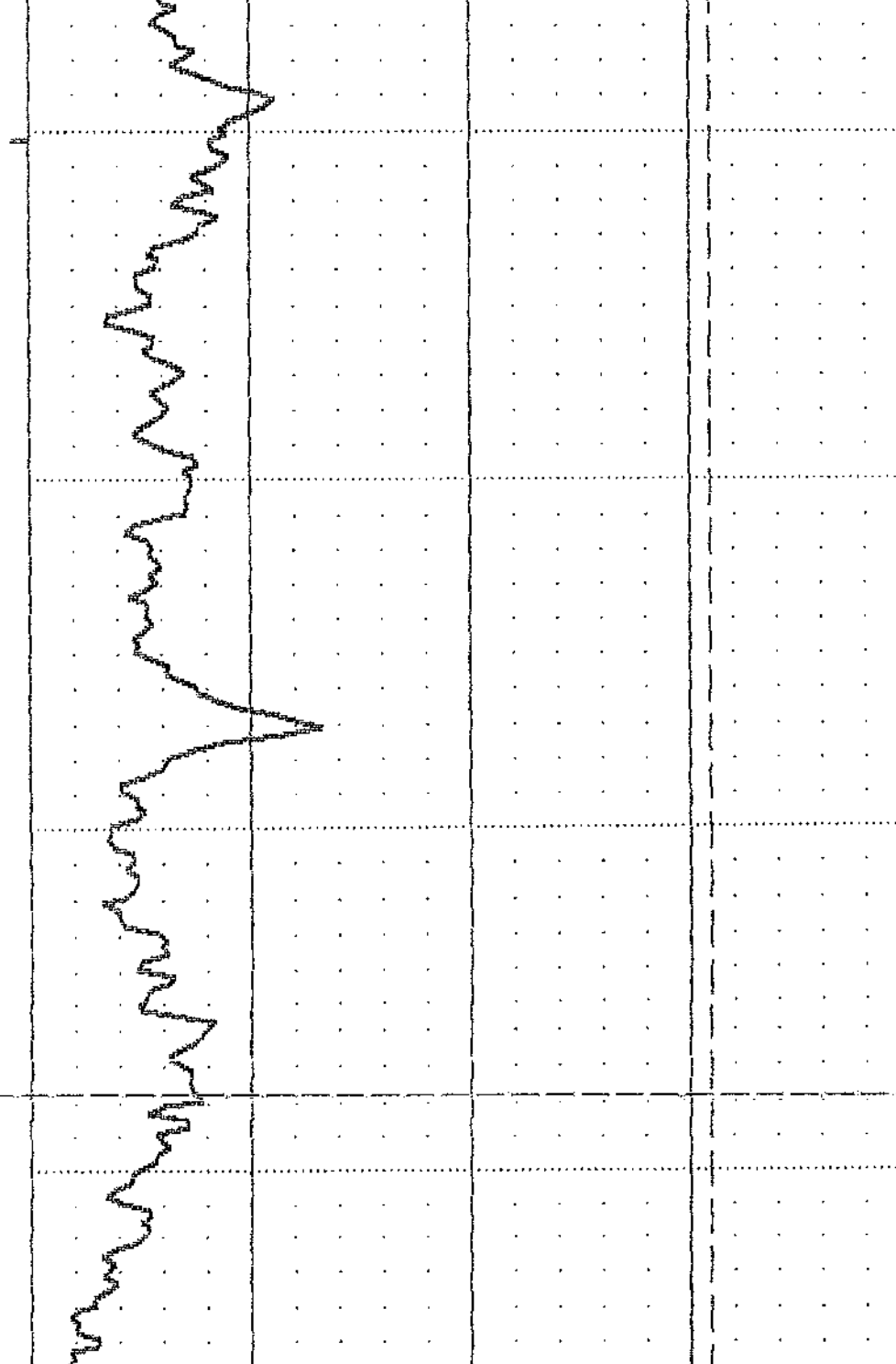
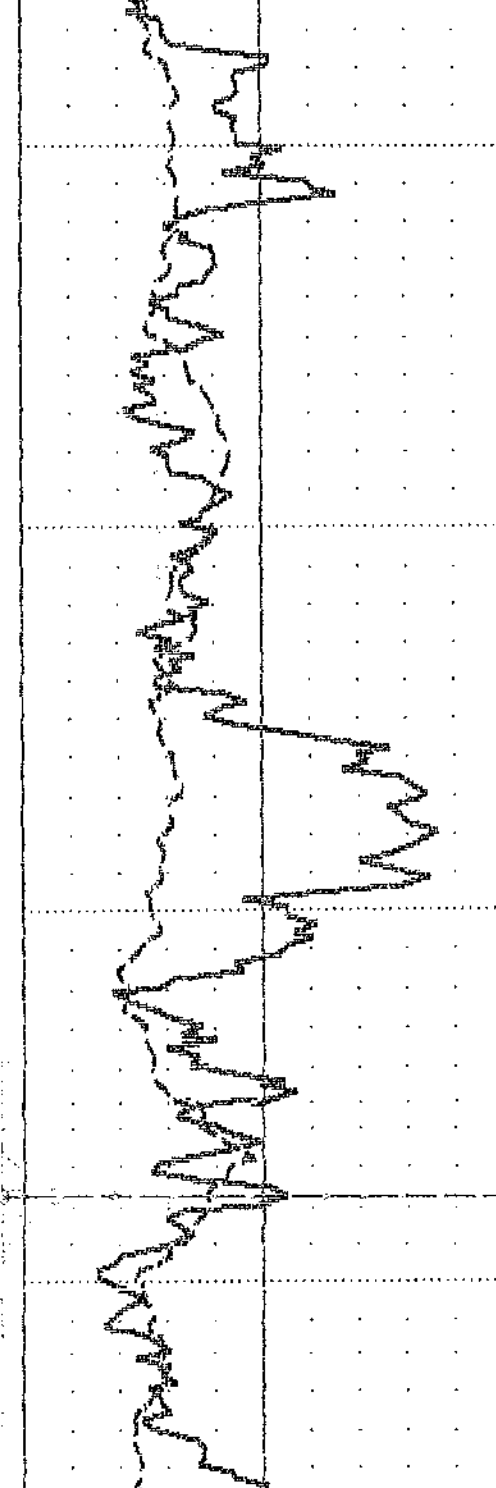
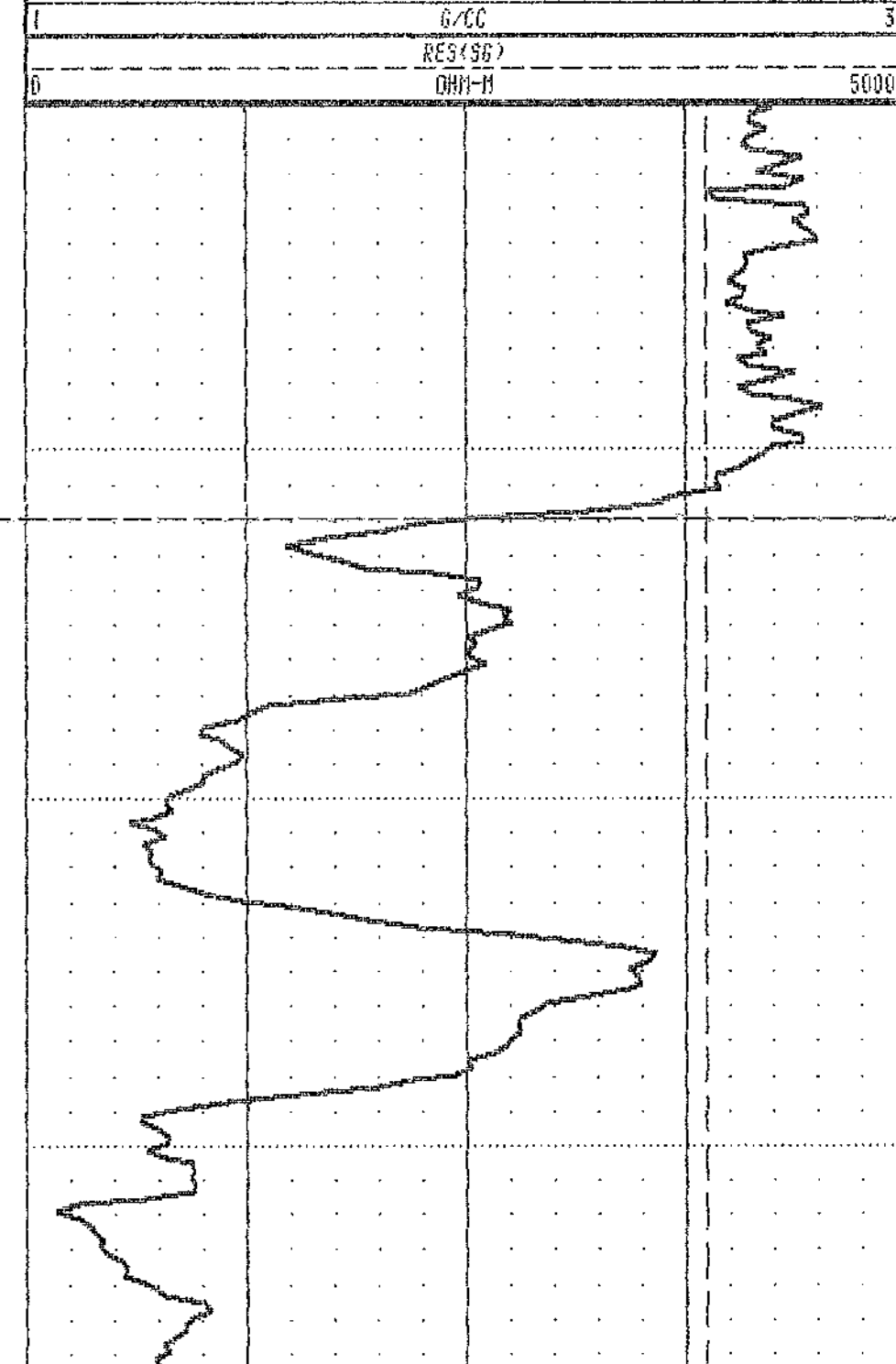
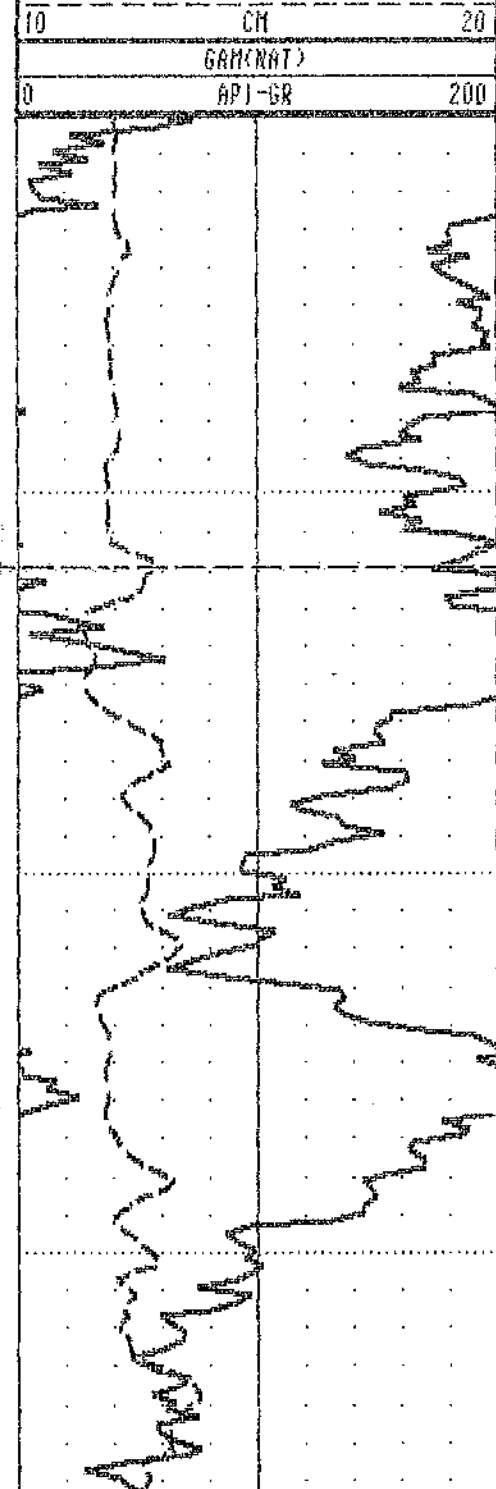
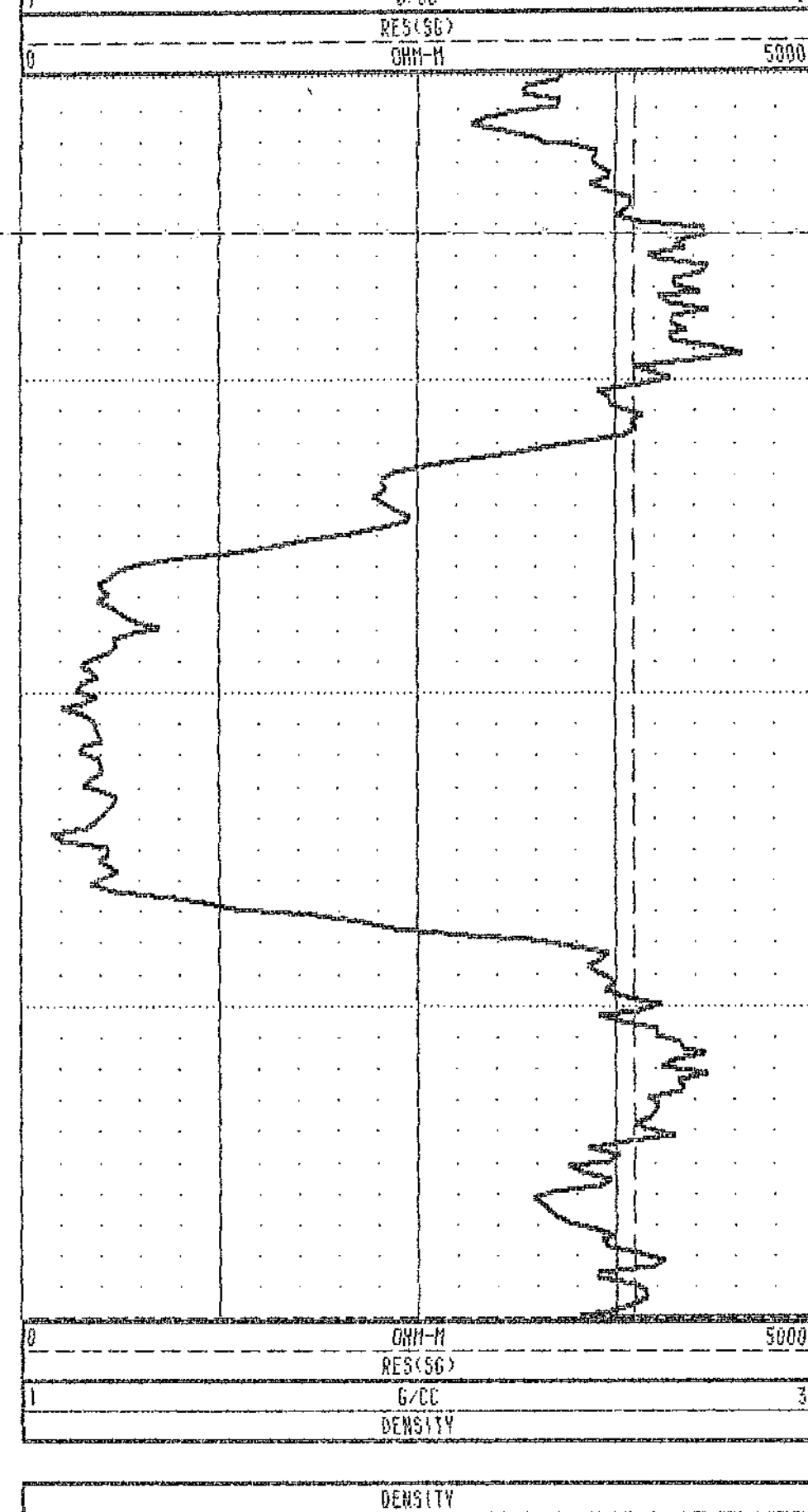
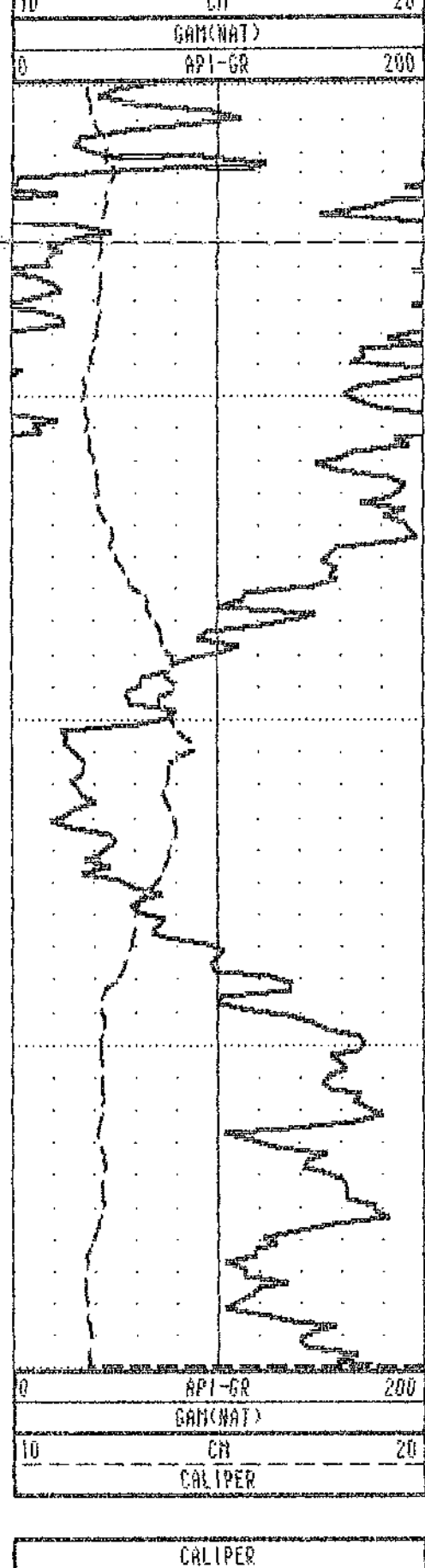
Century

QMR89515 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89515 GAM-DEN-RES-CAL		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 06/24/89	PERMANENT DATUM	: 00 ELEVATIONS
DEPTH DRILLER	: 61	ELEV. PERM. DATUM:	00 KB : 00
LOG BOTTOM	: 60.72	LOG MEASURED FROM:	GL DF : 00
LOGS TOP	: 0.10	DRL MEASURED FROM:	GL GL : 00
CASING DRILLER	: 2	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LITAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 LOG : 9
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 PLOT : 001N 12
REMARKS	:		THRESH: 5000
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	2459.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000 CPS	0.000 OHM-IN
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	170.500 OHM-IN
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	17.620 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

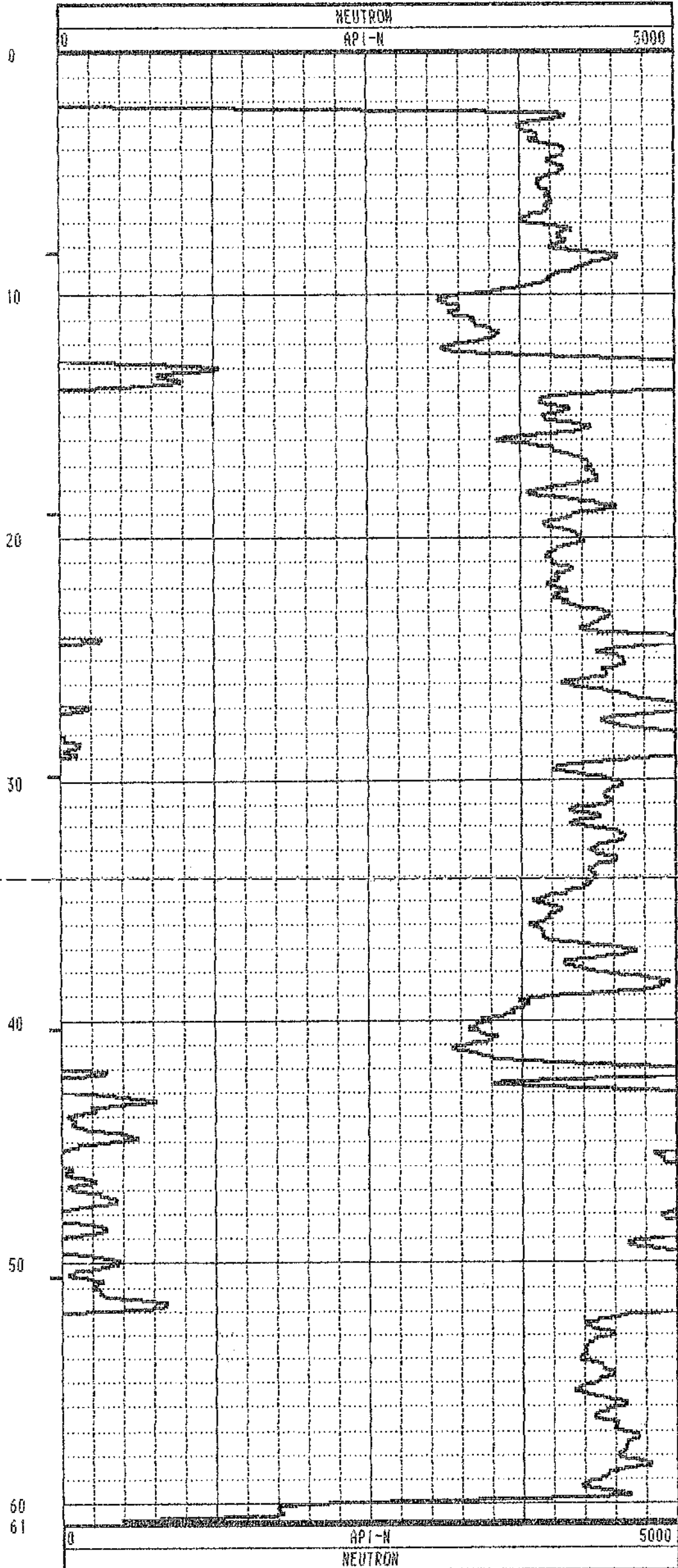
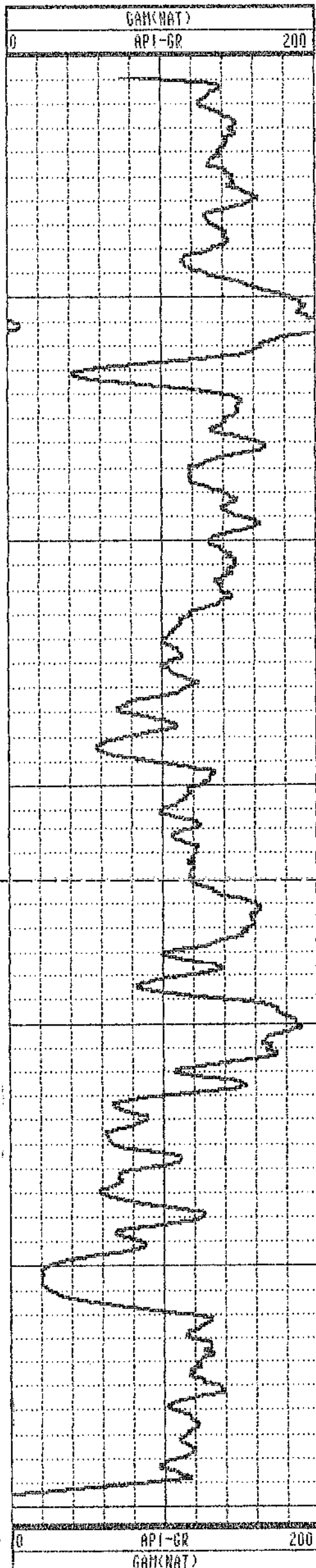


Century

QMR89515 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89515 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/24/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 50 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 60.80 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.96 DRL MEASURED FROM: GL GL : 00
 CASING DRILLER : 2 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL
 BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 8
 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

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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	9787.000 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

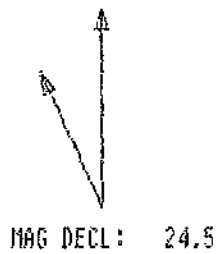
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89515 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/25/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 4

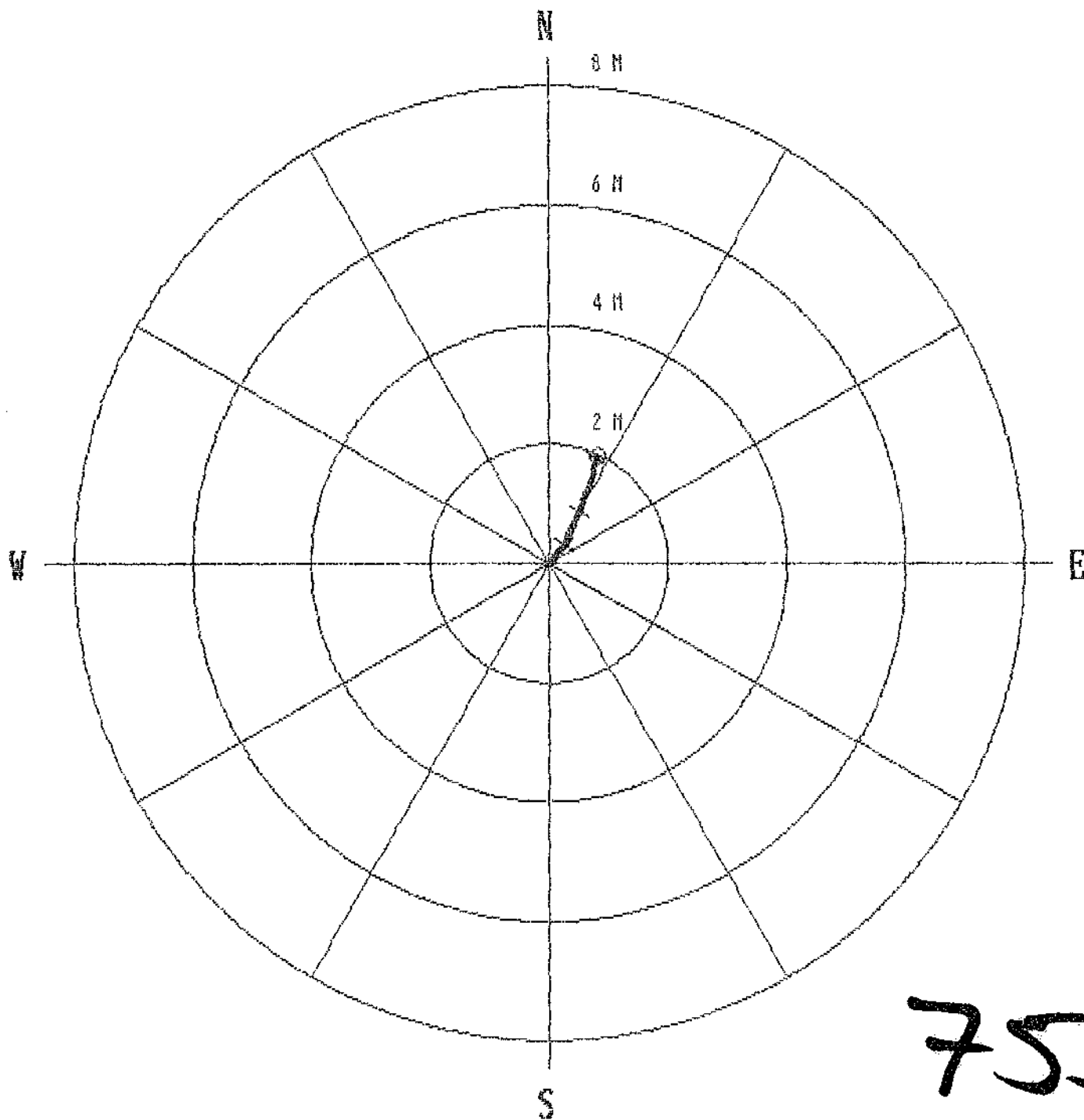
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	0.00	0.01	0.0	63.1	1.0	44.1
8.0	8.00	0.08	0.07	0.1	42.0	1.3	25.2
13.0	13.00	0.17	0.13	0.2	38.9	1.8	62.4
18.0	18.00	0.27	0.22	0.3	38.8	1.7	33.0
23.0	22.99	0.38	0.29	0.5	37.9	1.4	37.7
28.0	27.99	0.51	0.36	0.6	35.5	1.4	17.8
33.0	32.99	0.66	0.42	0.8	32.8	1.8	18.3
38.0	37.99	0.81	0.48	0.9	30.5	1.9	25.8
43.0	42.98	0.98	0.55	1.1	29.1	2.0	5.1
48.0	47.98	1.17	0.63	1.3	28.1	2.7	28.1
53.0	52.97	1.40	0.71	1.6	26.7	2.9	12.1
58.0	57.96	1.66	0.78	1.8	25.1	2.7	9.3
60.8	60.76	1.79	0.82	2.0	24.6	0.0	0.0

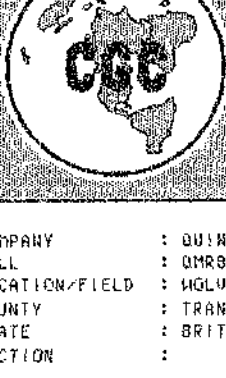
PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89515 GAM-NEUTRON
 DATE OF LOG: 06/25/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 60.70 M
 AZIMUTH: 24.6
 DISTANCE: 2.0 M
 + = 20 M INCR
 O = BOTTOM OF HOLE





Century

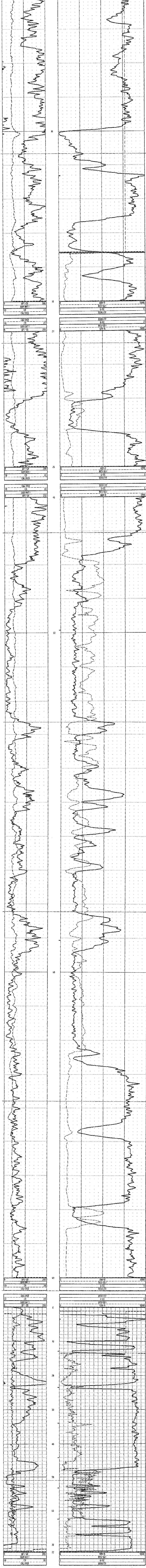
QMR89516 GAM-DEN-RES-CAL

COMPANY : QUINTESTE COAL LTD.
 WELL : QMR89516 GAM-DEN-RES-CAL
 LOCATION/FIELD : HOLLERNE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION :
 DATE : 06/24/89
 DEPTH DRILLER : 75
 LOG BOTTOM : 72.16
 LOG TOP : 0.10
 CASING DRILLER : 2
 CASING TYPE : PLASTIC
 CASING THICKNESS : .05
 BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :
 LOGGED OPEN HOLE
 VERTICAL HOLE
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

OTHER SERVICES:

PERMANENT DATUM : 00
 ELEV. PERM. DATUM: 00
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL
 LOGGING UNIT : 8903
 FIELD OFFICE : CALGARY
 RECORDED BY : L. LERAL
 BOREHOLE FLUID : WATER
 RH :
 RH TEMPERATURE :
 MATRIX DELTA T : 173
 FLUID DELTA T : 699
 ELEVATIONS :
 KR : 00
 DF : 00
 CL : 00
 FILE : ORIGINAL
 TYPE : 9032AC
 LOG : 3
 PLOT : QUIN 12
 THRESH: 5000

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COL-DATE	COL-TIME	SECC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GAMMA1	0.000 CPS	0.000 RPI-CR
1	05/04/89	10:17:51	0	GAMMA1	0.000 CPS	0.000 RPI-CR
2	05/04/89	12:11:56	0	BENSITY	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	BENSITY	2499.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	RES150	0.000 CPS	0.000 OHM-IN
5	05/04/89	10:25:07	0	RES150	50275.000 EPS	176.500 OHM-IN
6	05/04/89	10:46:11	0	CALIPER	355.000 CPS	7.620 CM
7	05/04/89	10:46:11	0	CALIPER	1996.000 CPS	13.000 CM
8	05/04/89	10:17:51	0	RES170	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	RES170	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPER	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPER	0.000 CPS	0.000 CM



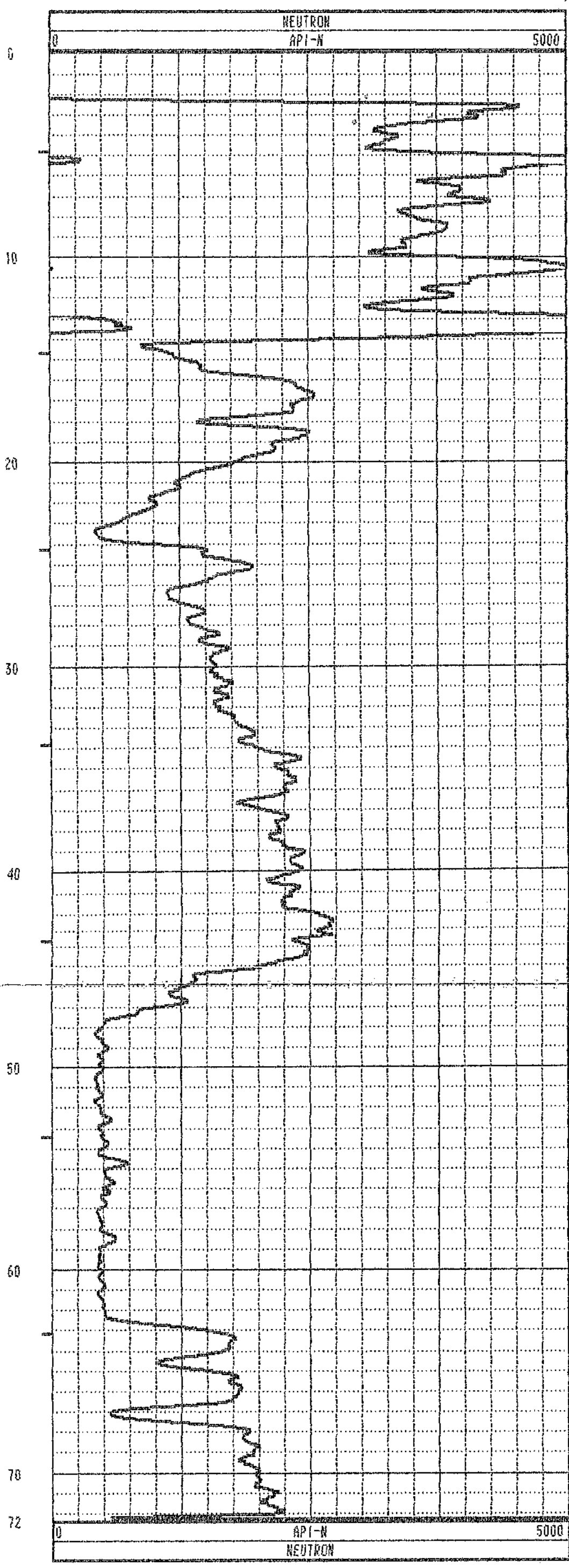
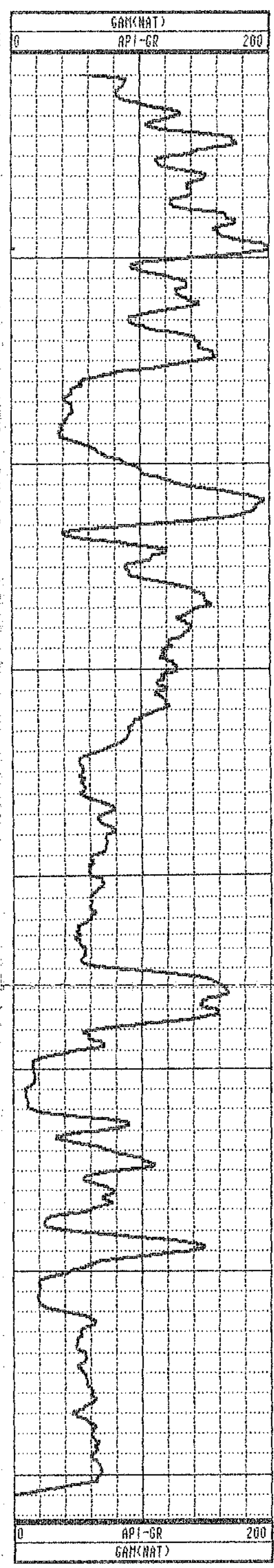
Century

QMR89516 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:			
WELL	: QMR89516 GAM-NEUTRON				
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	: TOWNSHIP	: RANGE			
DATE	: 06/24/89	PERMANENT DATUM	: 00	ELEVATIONS	
DEPTH DRILLER	: 75	ELEV. PERM. DATUM:	00	KB	: 00
LOG BOTTOM	: 72.32	LOG MEASURED FROM:	GL	DF	: 00
LOG TOP	: 1.00	DRL MEASURED FROM:	GL	GL	: 00
CASING DRILLER	: 2	LOGGING UNIT	: 8903		
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL		
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	:	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:	LOG	: 2
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

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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

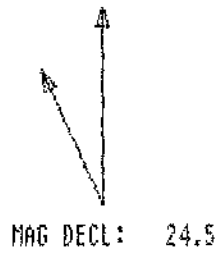
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89516 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/24/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

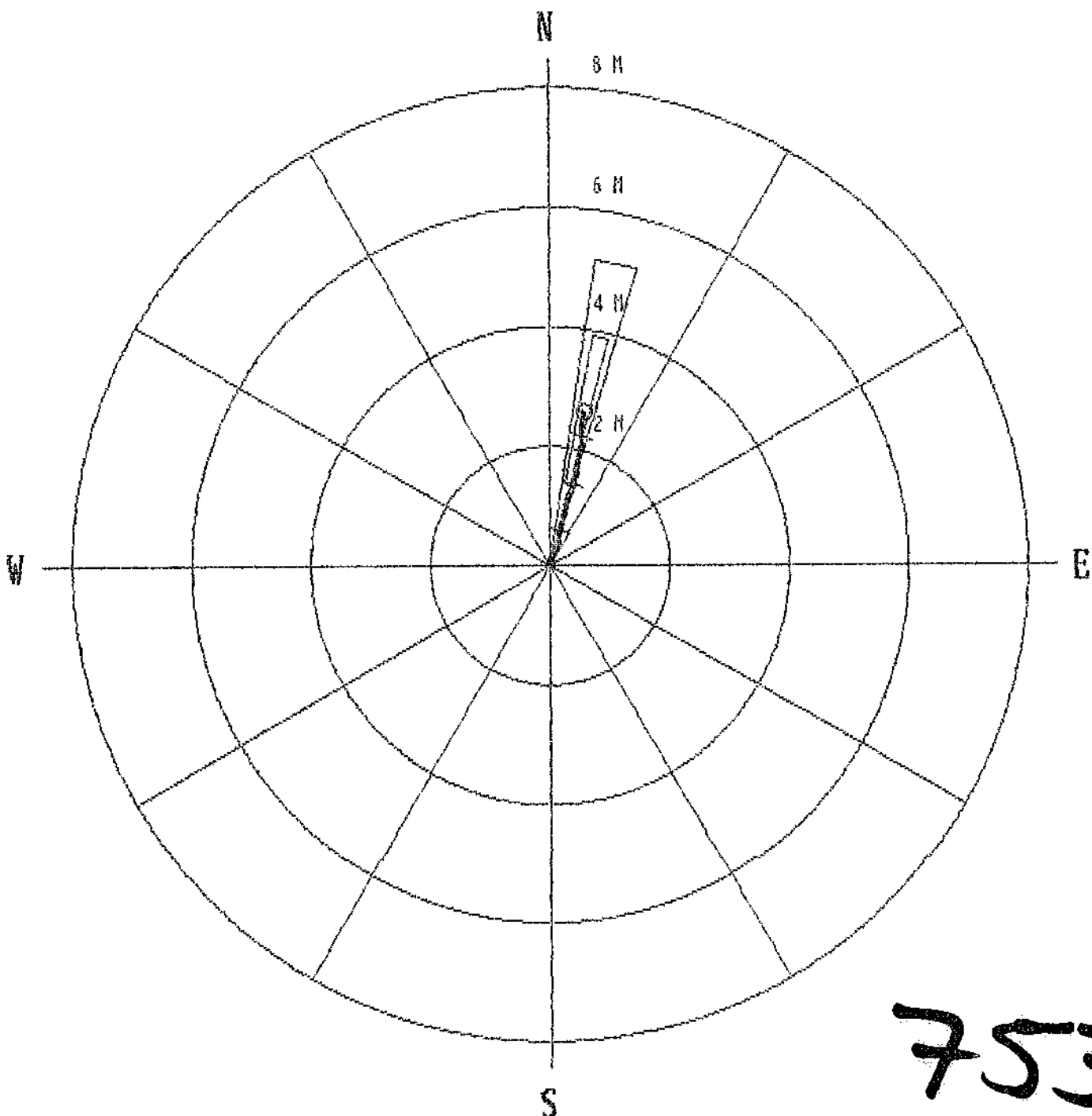
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	0.01	0.00	0.0	3.2	3.3	359.8
8.0	8.00	0.16	0.05	0.2	18.2	1.8	10.0
13.0	12.99	0.32	0.11	0.3	19.5	2.2	22.8
18.0	17.99	0.52	0.16	0.5	17.2	2.4	18.7
23.0	22.99	0.71	0.20	0.7	16.1	2.3	9.3
28.0	27.98	0.91	0.25	0.9	15.2	2.5	17.4
33.0	32.98	1.10	0.31	1.1	15.5	1.8	27.9
38.0	37.97	1.28	0.37	1.3	16.2	2.4	17.4
43.0	42.97	1.46	0.42	1.5	16.1	1.9	15.1
48.0	47.97	1.66	0.47	1.7	15.8	2.5	8.5
53.0	52.96	1.86	0.50	1.9	15.1	2.5	24.2
58.0	57.96	2.09	0.52	2.2	14.1	2.4	355.3
63.0	62.95	2.28	0.53	2.3	13.1	2.2	358.3
68.0	67.95	2.46	0.55	2.5	12.6	2.1	7.3
72.3	72.27	2.59	0.57	2.6	12.5	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89516 GAM-NEUTRON
 DATE OF LOG: 06/24/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 72.21 M
 AZIMUTH: 12.5
 DISTANCE: 2.6 M
 + = 20 M INCR
 O = BOTTOM OF HOLE



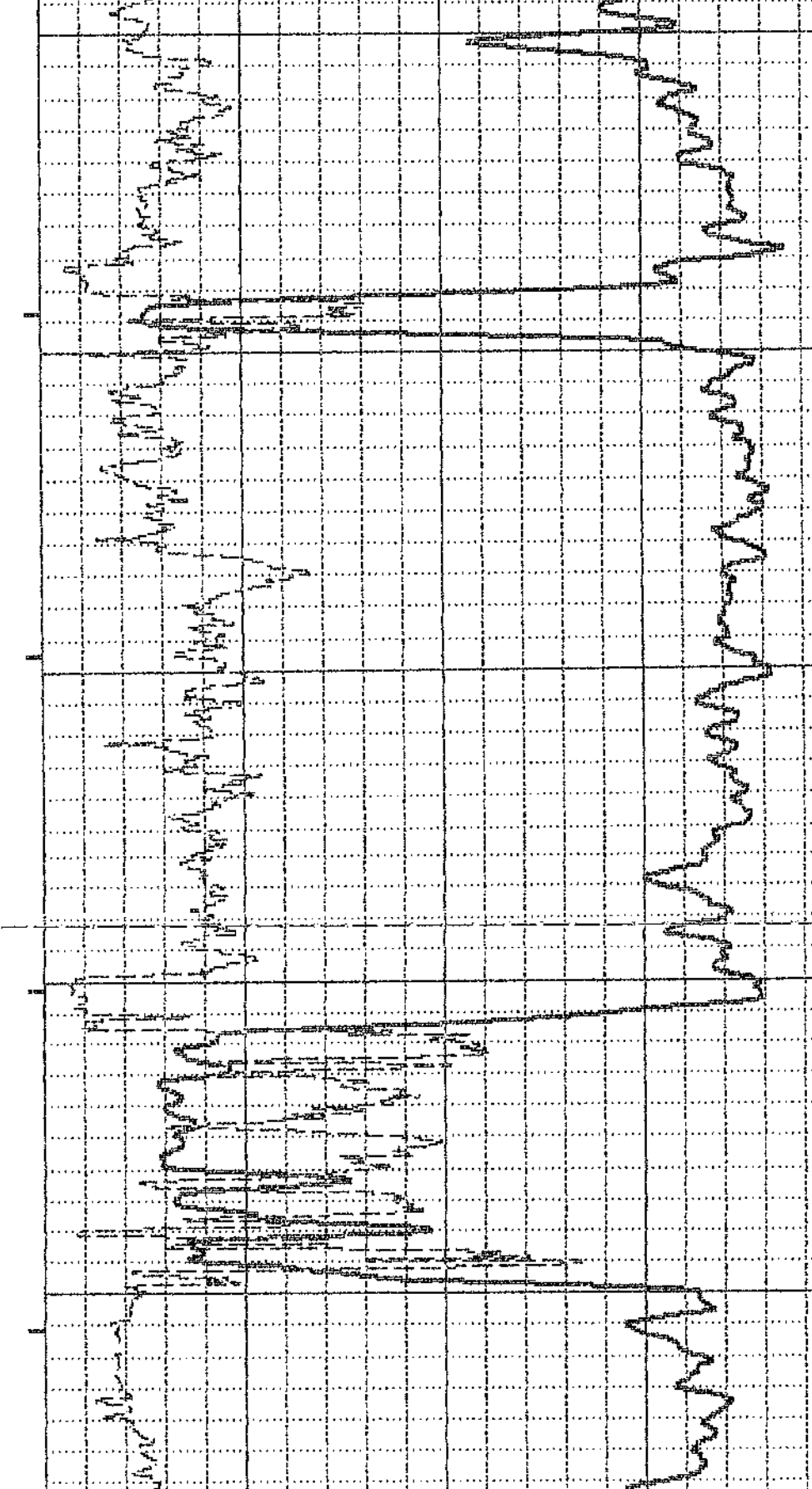
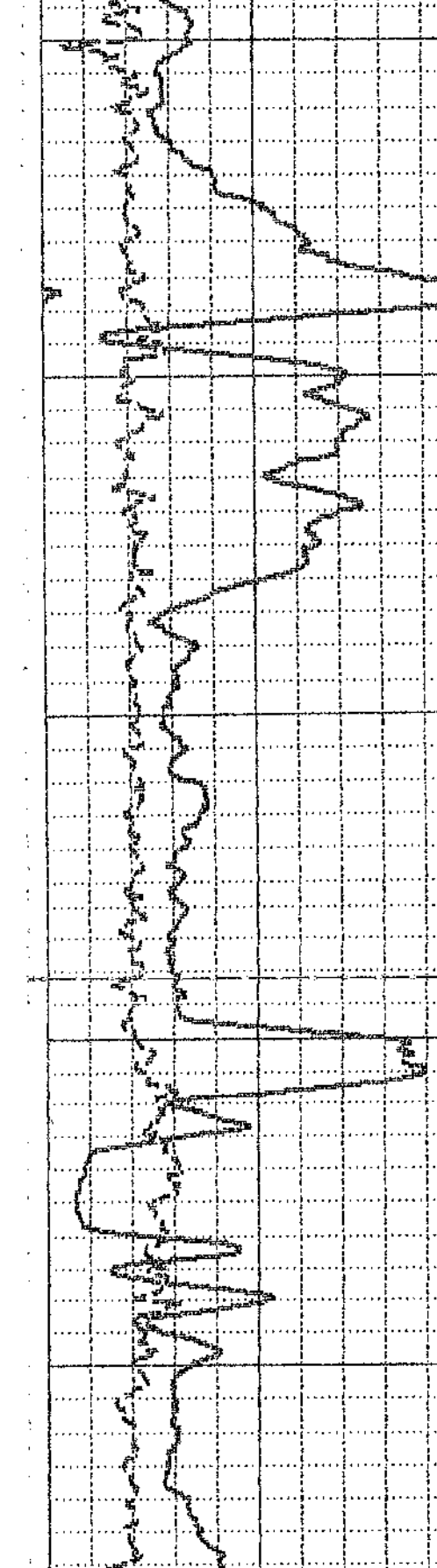
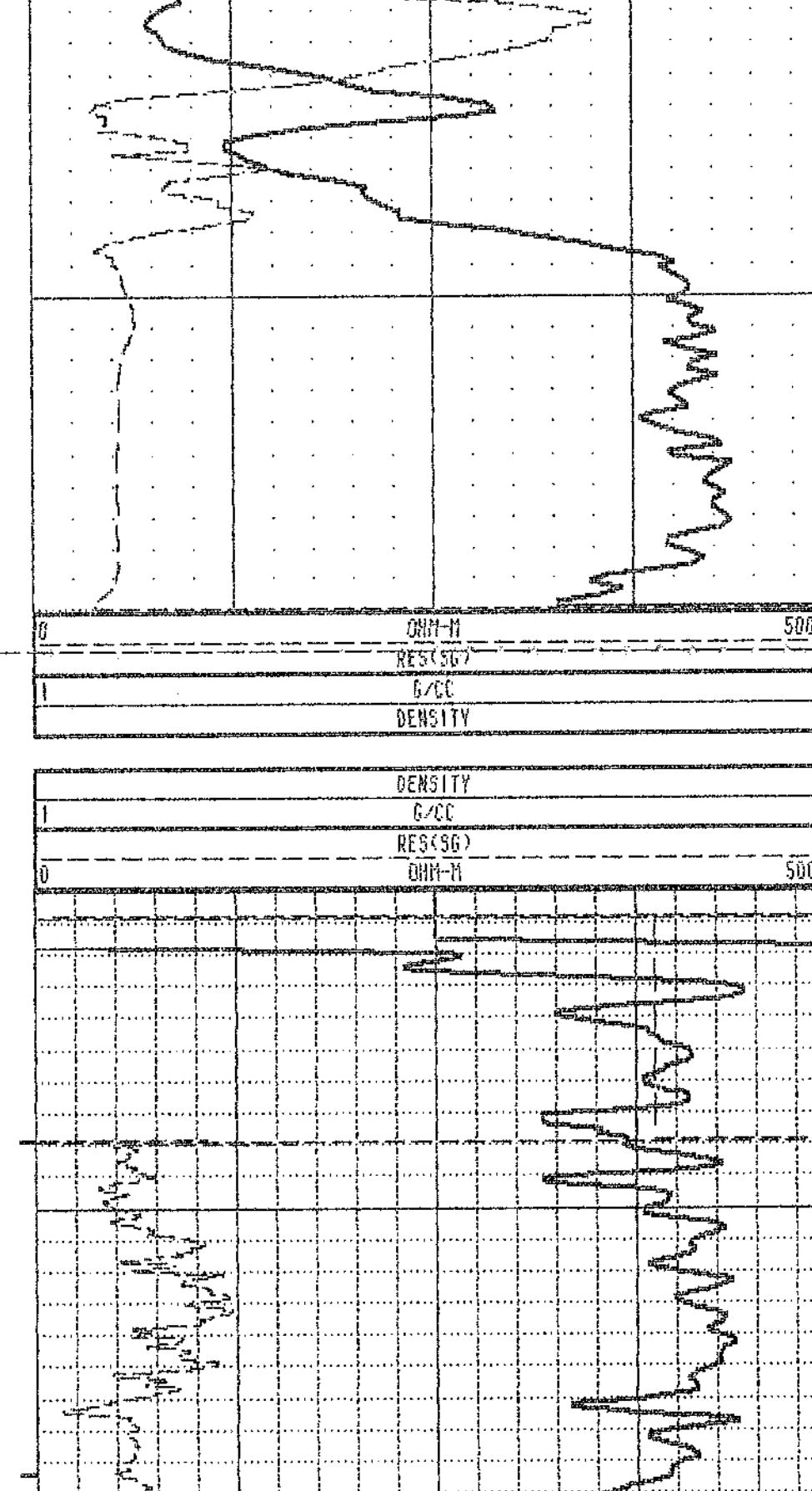
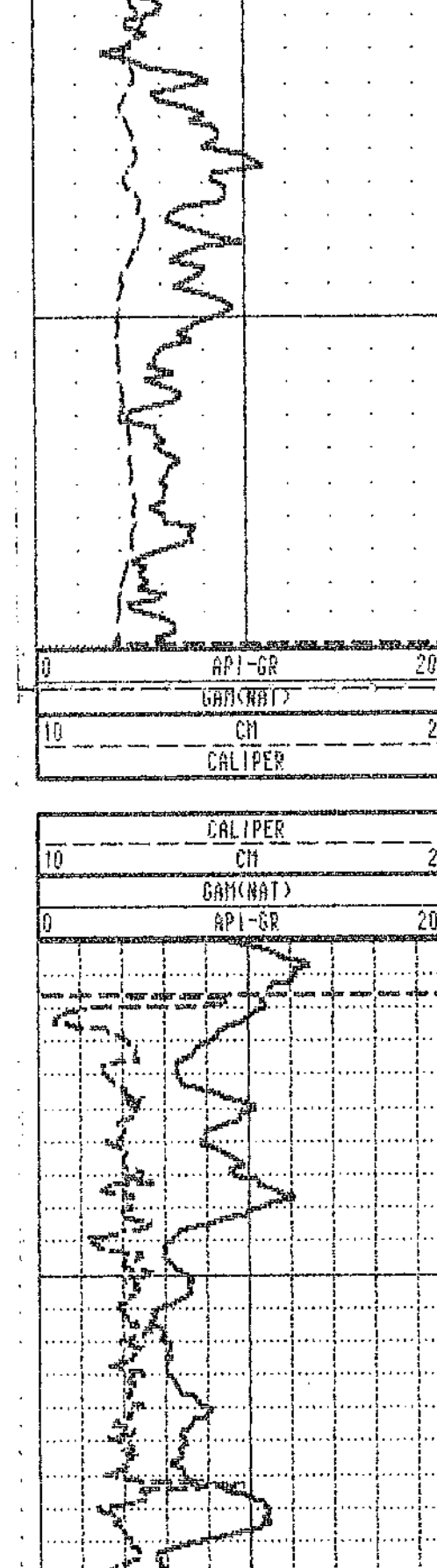
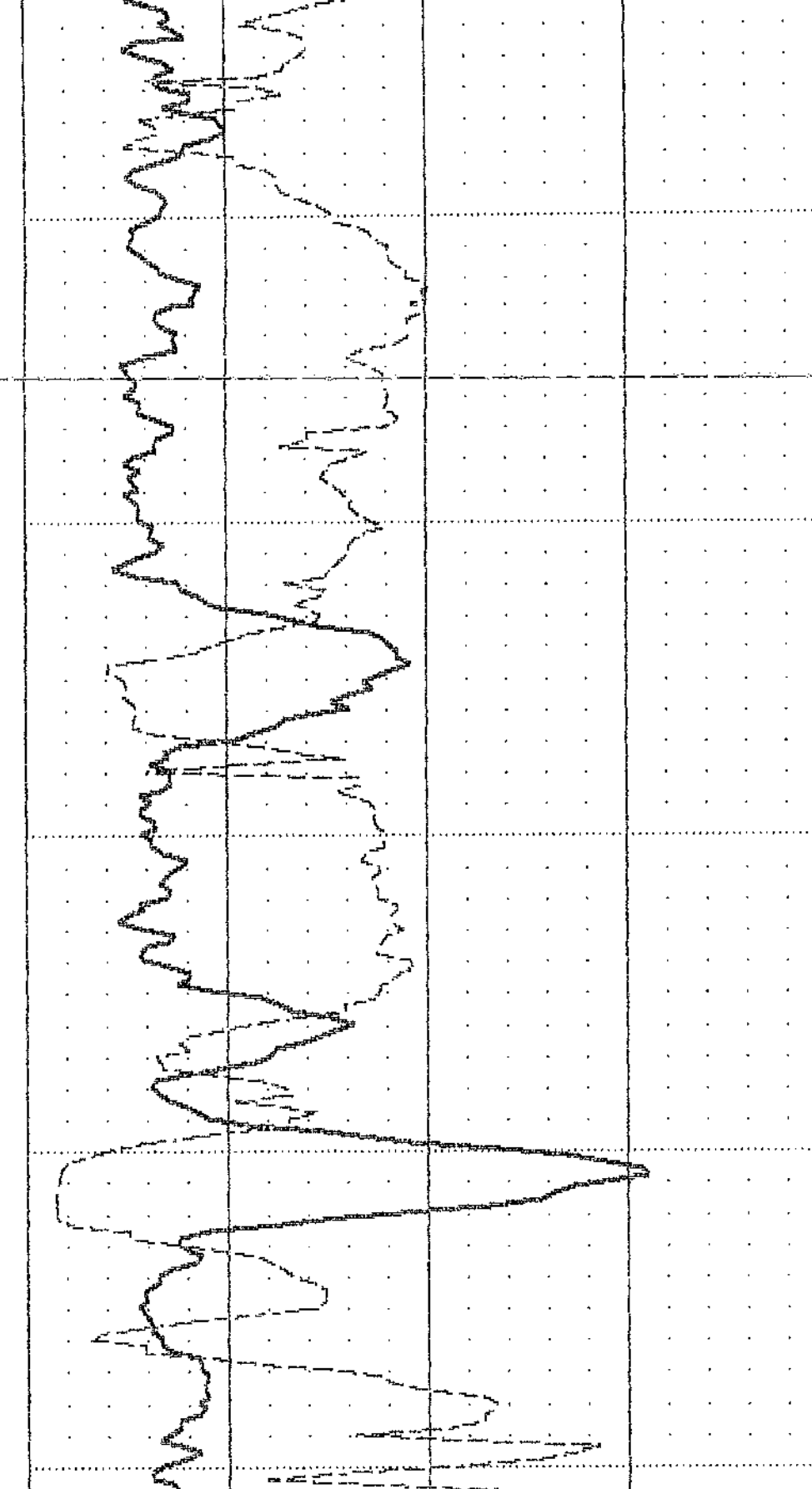
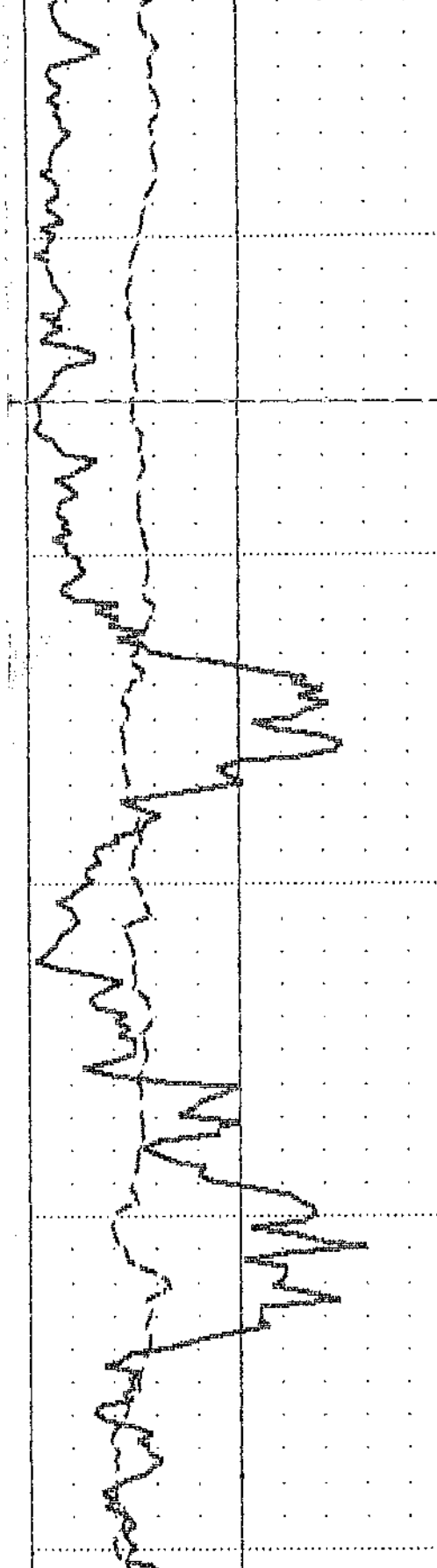
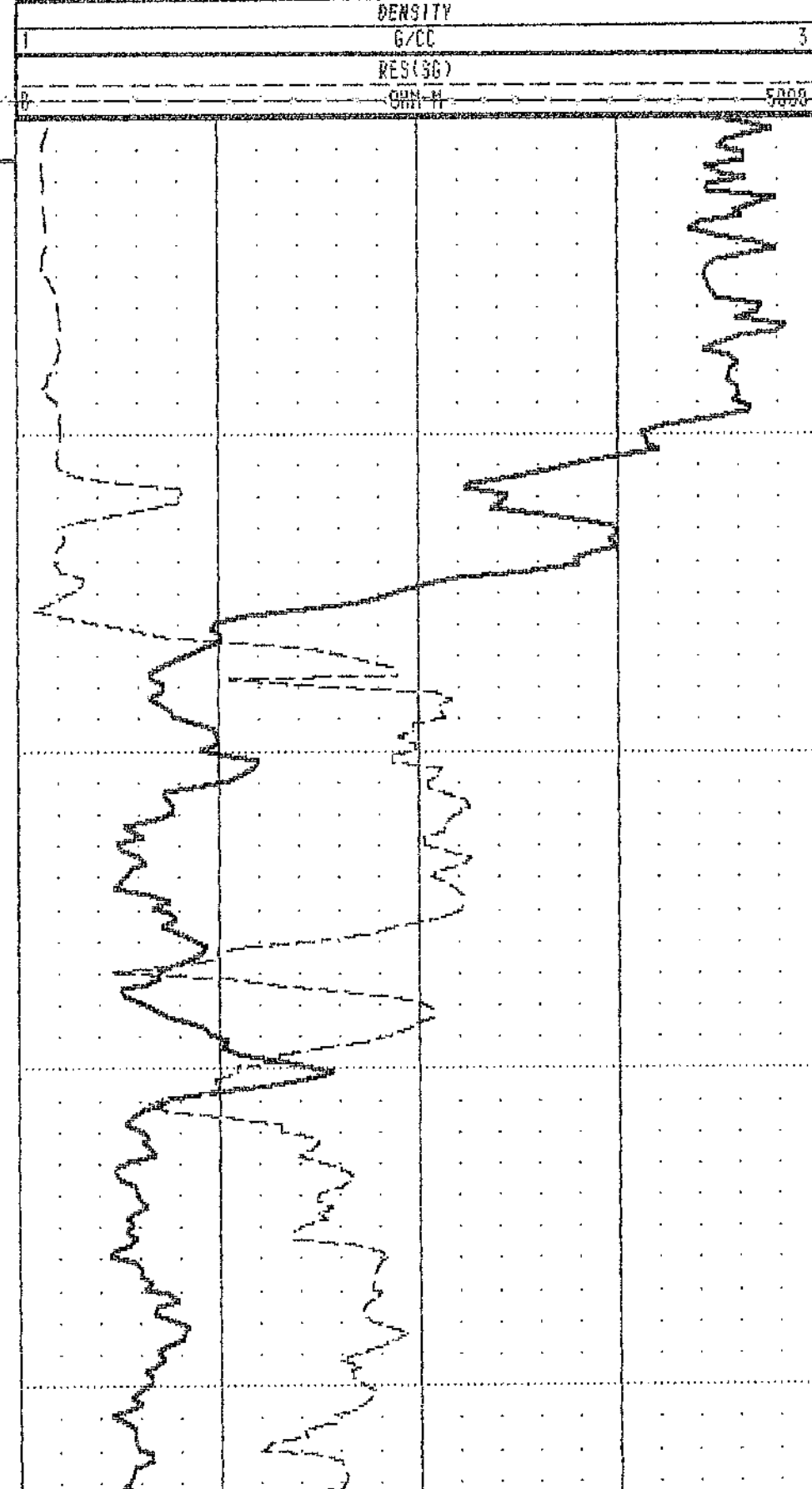
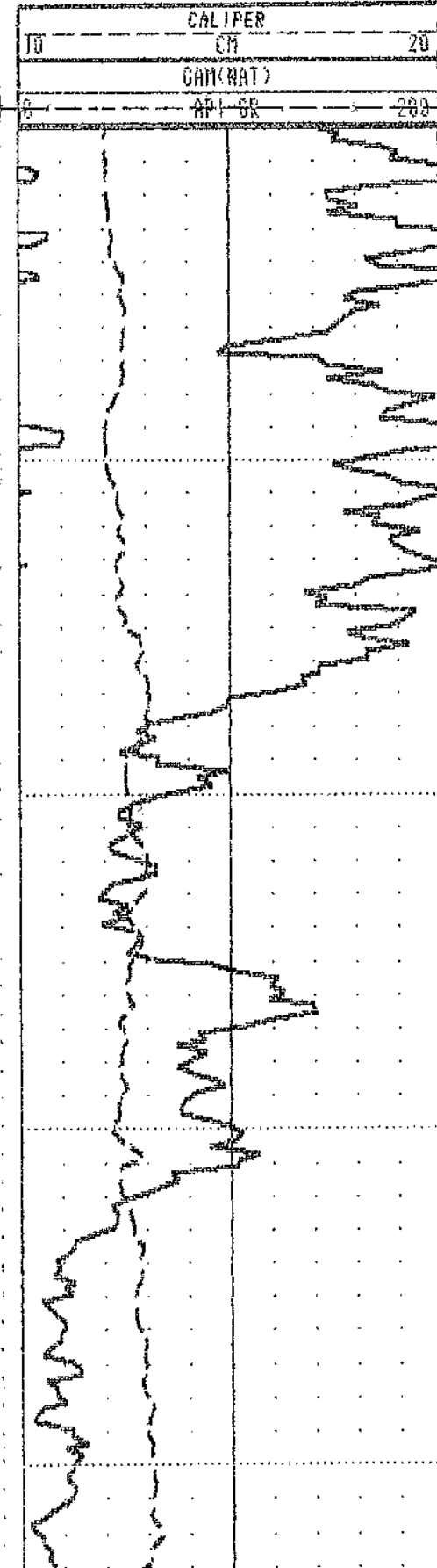
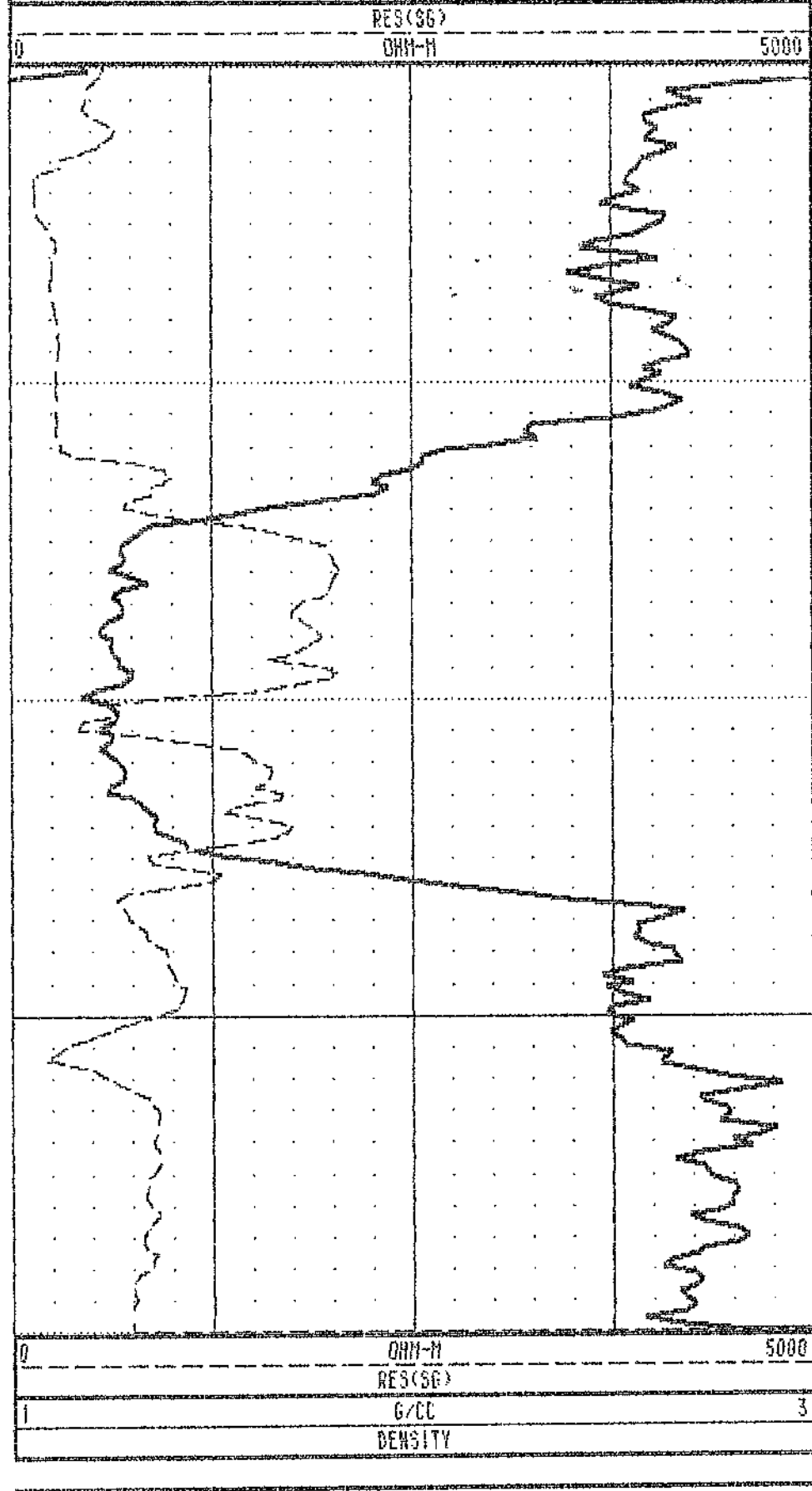
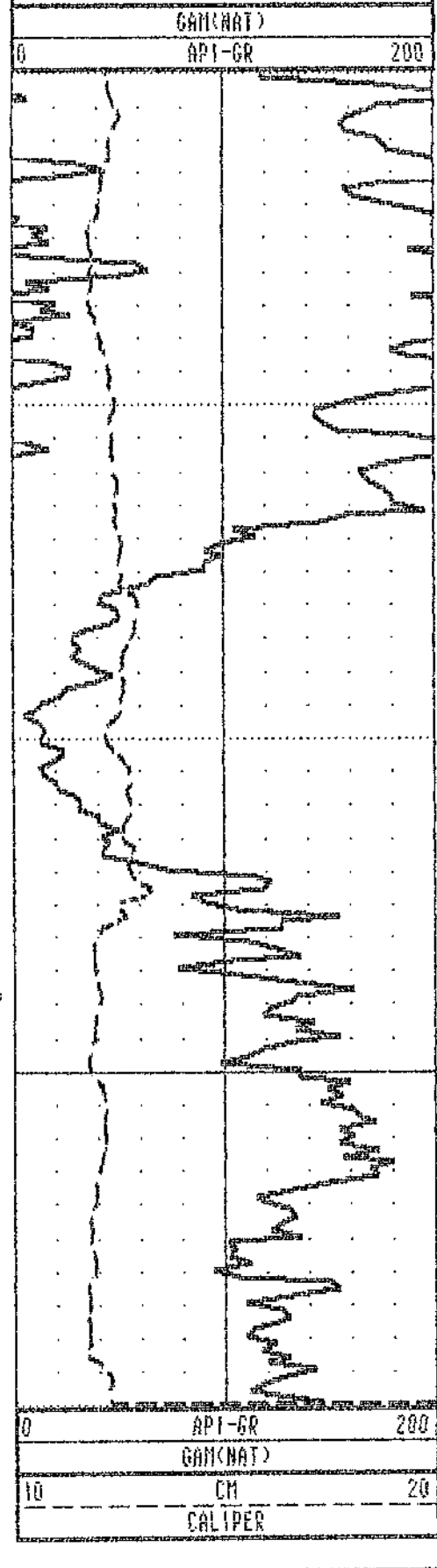


Century

QMR89517 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:
WELL	: QMR89517 GAM-DEN-RES-CAL	
LOCATION/FIELD	: HOLVERINE VALLEY SOUTH	
COUNTY	: TRANSFER	
STATE	: BRITISH COLUMBIA	
SECTION	: TOWNSHIP	: RANGE :
DATE	: 06/25/89	PERMANENT DATUM : 00
DEPTH DRILLER	: 71	ELEV. PERM. DATUM: 00
LOG BOTTOM	: 69.82	LOG MEASURED FROM: GL
LOG TOP	: -2.24	DRL MEASURED FROM: GL
CASING DRILLER	: 2	LOGGING UNIT : 8903
CASING TYPE	: PLASTIC	FIELD OFFICE : CALGARY
CASING THICKNESS	: .05	RECORDED BY : L. LÉTAL
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER
MAGNETIC DECL.	: 24.5	RH :
MATRIX DENSITY	: 2.68	RH TEMPERATURE :
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690
REMARKS	: LOGGED OPEN HOLE	FILE : ORIGINAL
	: ANGLE HOLE 45 DEGREES	TYPE : 9032AC
		LOG : 2
		PLOT : QUIN 12
		THRESH: 50000

753



TOOL CALIBRATION		TOOL = 9032AC	SERIAL NUMBER = 967			
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GMM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GMM(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-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-H
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

QMR 89517 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89517 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

OTHER SERVICES:

DATE : 06/25/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 71 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 69.94 LOG MEASURED FROM: 6L DF : 00
 LOG TOP : 0.84 DRL MEASURED FROM: 6L GL : 00

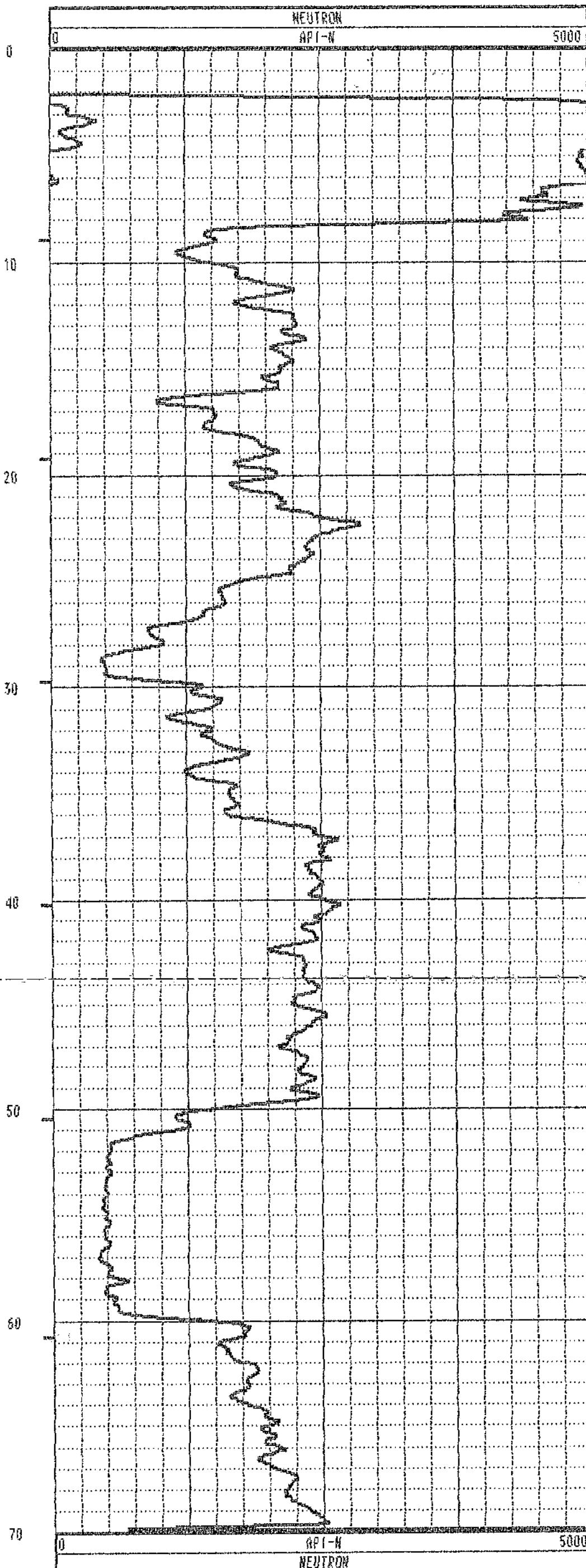
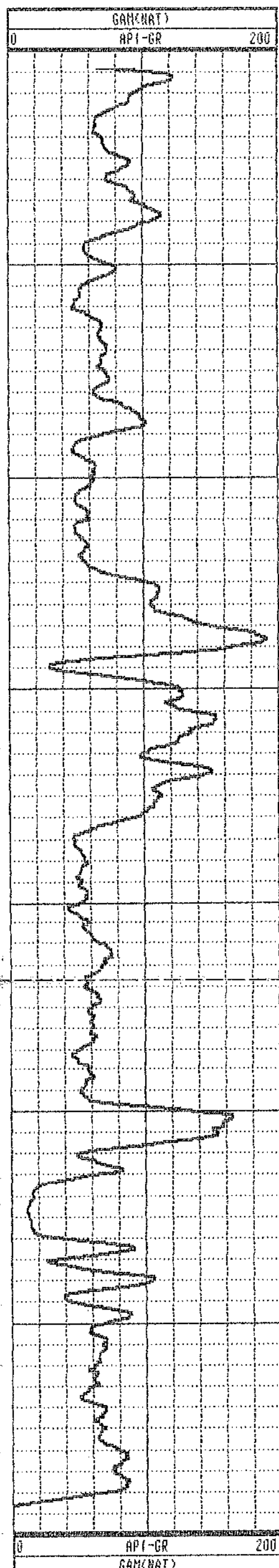
CASING DRILLER : 2 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 1
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 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

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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

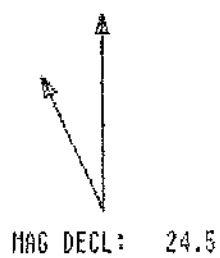
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89517 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/25/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

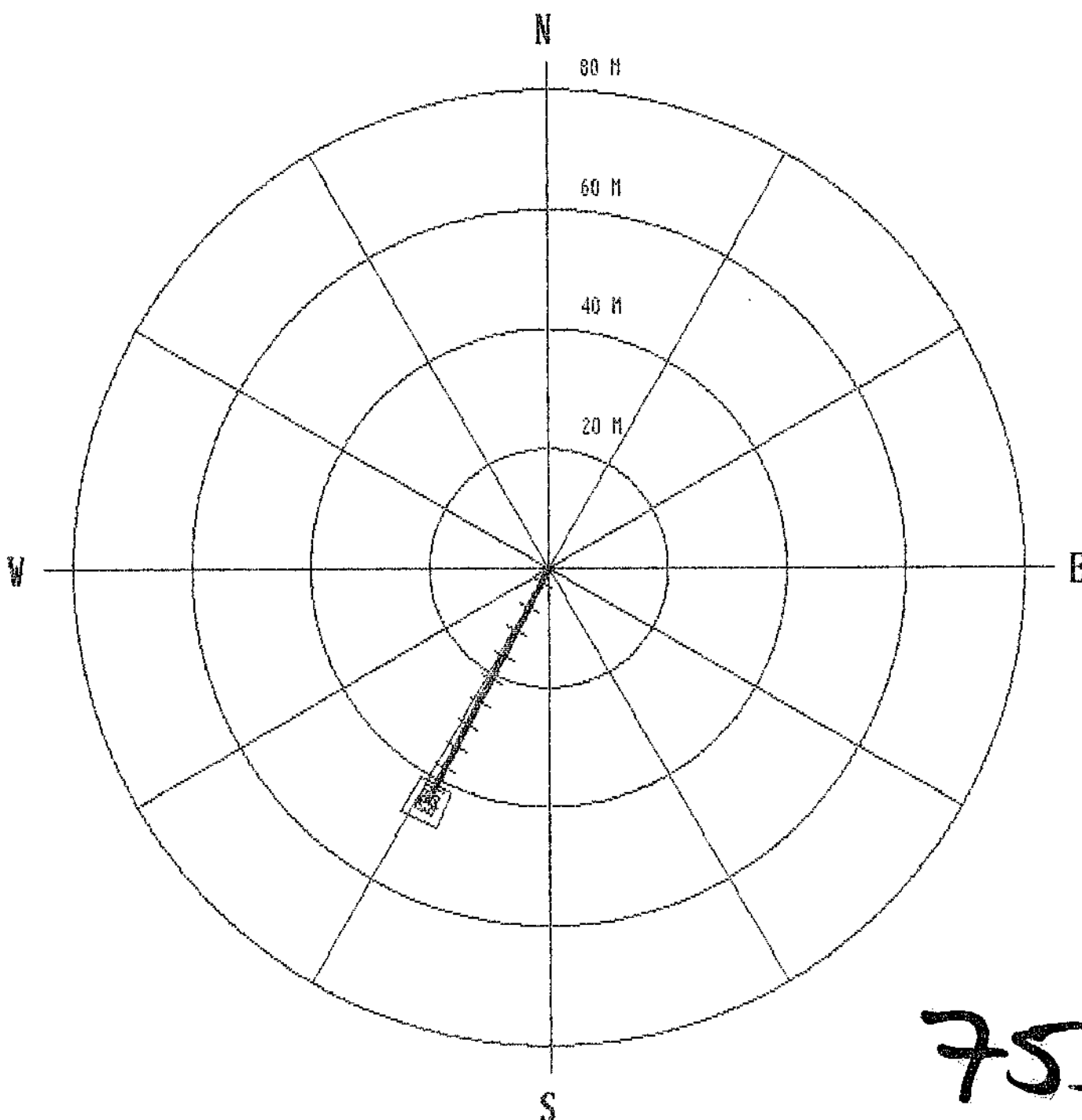
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	2.80	-.43	-.21	0.5	206.5	44.7	205.1
8.0	6.39	-3.44	-1.74	3.9	206.8	43.9	200.9
13.0	10.02	-6.46	-3.34	7.3	207.3	43.1	210.9
18.0	13.69	-9.46	-4.91	10.7	207.4	42.4	215.1
23.0	17.37	-12.44	-6.48	14.0	207.5	42.9	209.5
28.0	21.09	-15.38	-8.06	17.4	207.6	41.8	207.4
33.0	24.82	-18.32	-9.60	20.7	207.7	41.9	206.9
38.0	28.56	-21.25	-11.13	24.0	207.6	41.4	204.0
43.0	32.34	-24.13	-12.66	27.3	207.7	40.5	206.8
48.0	36.16	-26.98	-14.16	30.5	207.7	39.9	195.5
53.0	40.00	-29.81	-15.64	33.7	207.7	39.5	206.0
58.0	43.87	-32.61	-17.11	36.8	207.7	39.2	207.6
63.0	47.74	-35.41	-18.58	40.0	207.7	38.9	207.6
68.0	51.63	-38.17	-20.04	43.1	207.7	38.8	206.3
69.9	53.17	-39.21	-20.57	44.3	207.7	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

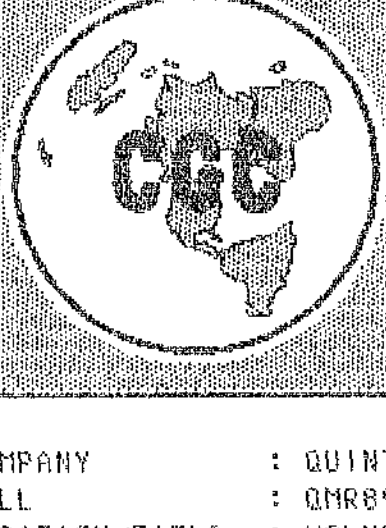
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89517 GAM-NEUTRON
 DATE OF LOG: 06/25/89
 PROBE: 9055A 14



SCALE: 10 M/CM
 TRUE DEPTH: 53.11 M
 AZIMUTH: 207.7
 DISTANCE: 44.3 M
 + = 5 M INCR
 O = BOTTOM OF HOLE



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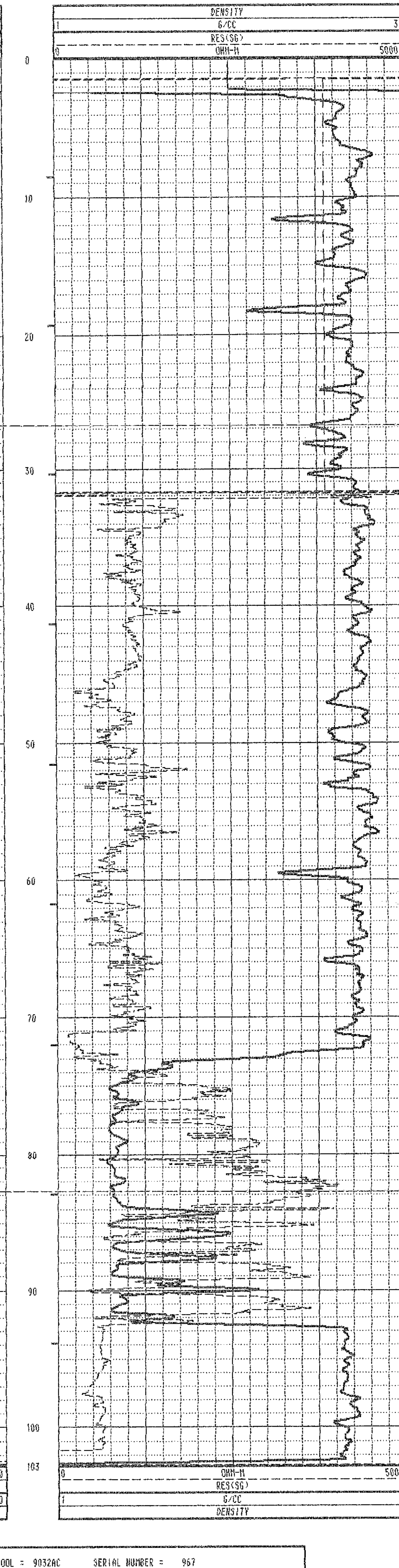
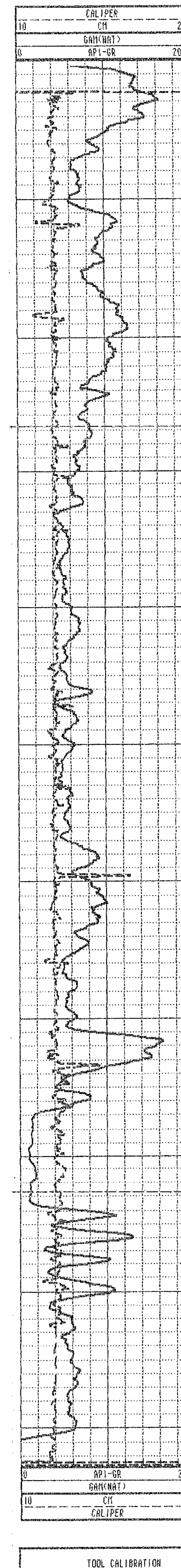
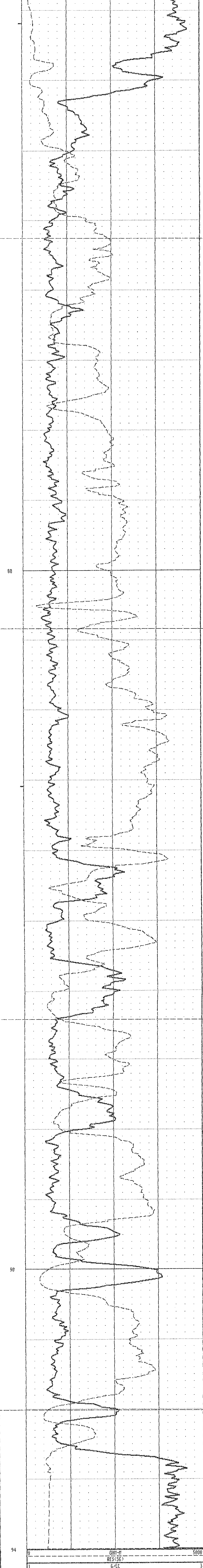
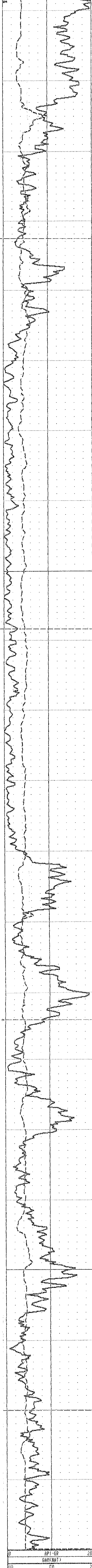


Century

QMR89518 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89518 GAM-DEN-RES-CAL
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/25/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 103 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 102.76 LOG MEASURED FROM: GL DF : 00
 LOG TOP : 0.42 DRL MEASURED FROM: GL GL : 00
 CASING DRILLER : 2 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LÉTAL
 BIT SIZE : 12.1 BOPEHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RN : TYPE : 9032AC
 MATRIX DENSITY : 2.68 RN TEMPERATURE : LOG : 3
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIM 12
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 5000
 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 = 957			
CAL-DATE	CAL-TIME	SRC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GAIN(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAIN(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	0.800 OMI-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OMI-H
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



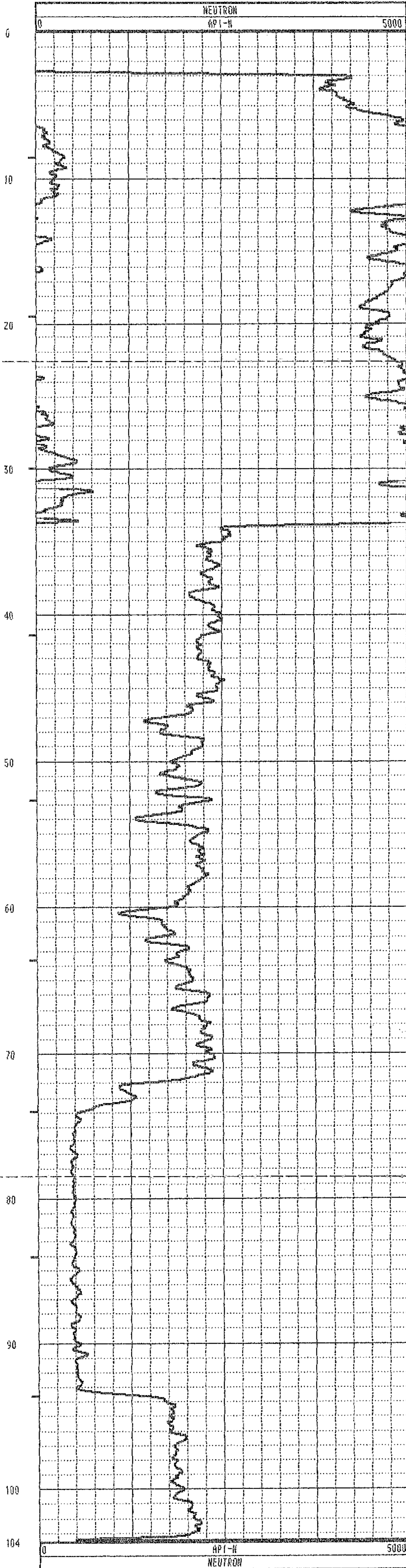
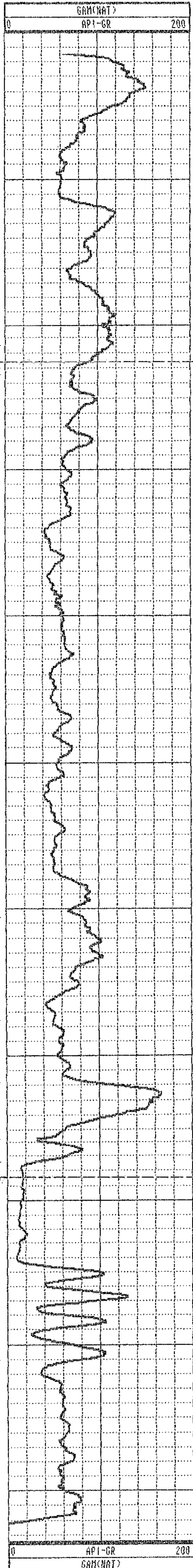
Century

QMR89518 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89518 GAM-NEUTRON		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 06/25/89	PERMANENT DATUM	: 00
DEPTH DRILLER	: 103	ELEV. PERM. DATUM:	00
LOG BOTTOM	: 103.54	LOG MEASURED FROM:	GL
LOG TOP	: 1.48	DRL MEASURED FROM:	GL
		ELEVATIONS	
		KB	: 00
		DF	: 00
		GL	: 00
CASING DRILLER	: 2	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9055A
VERTICAL HOLE	:	LOG	: 0
		PLOT	: QUIN 10
		THRESH	: 50000

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(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	05/04/89 16:59:51	0	PORO(SITY)	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 HV
6	05/04/89 08:13:14	0	SP	4095.000 CPS	500.000 HV
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

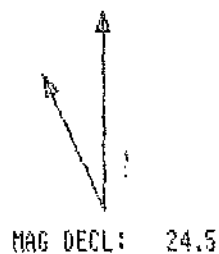
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89518 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/25/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 4

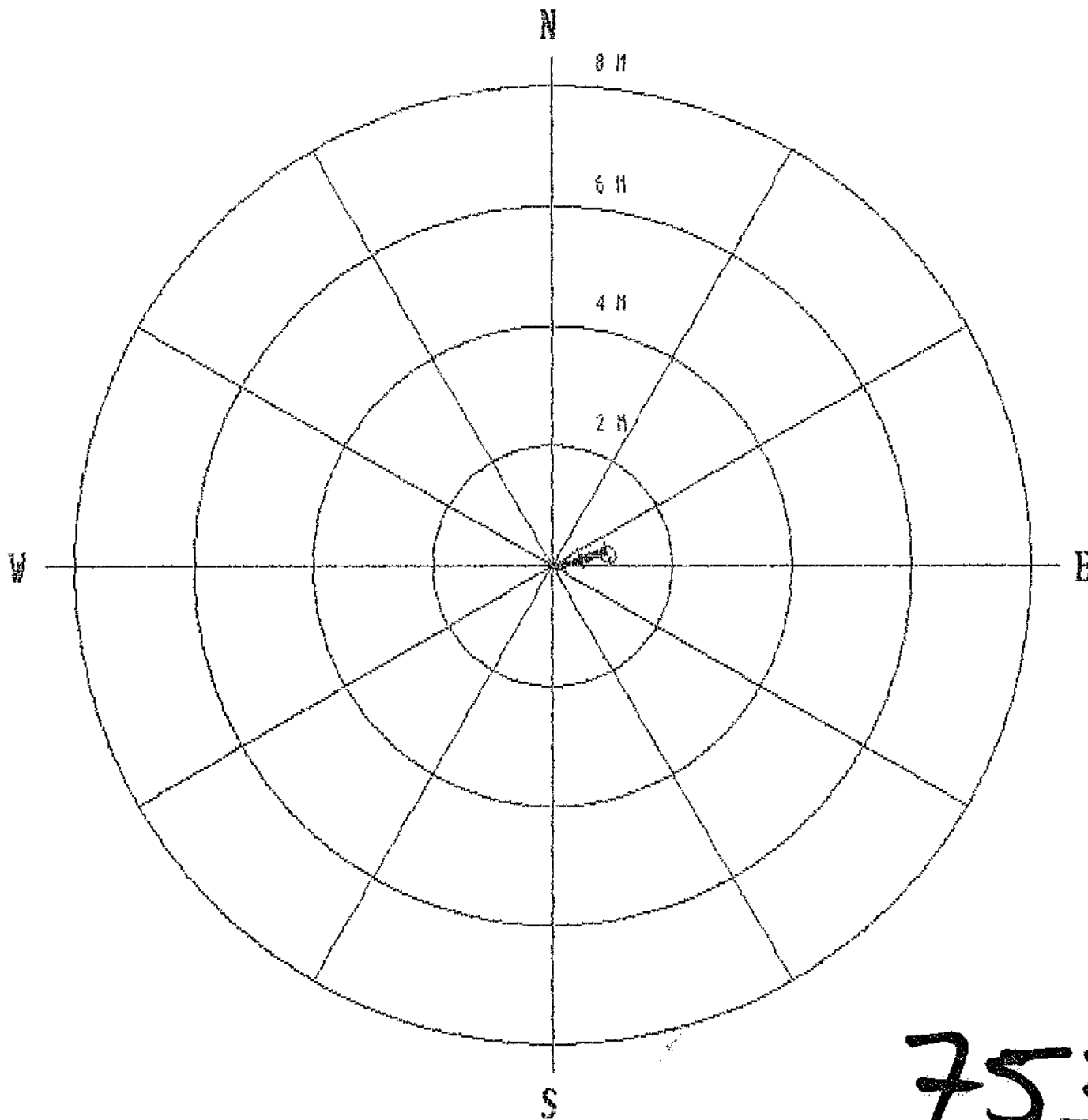
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	0.00	0.00	0.0	88.4	1.0	88.4
8.0	8.00	-.01	0.03	0.0	113.0	0.5	152.5
13.0	13.00	-.02	0.08	0.1	105.6	0.6	64.1
18.0	18.00	-.00	0.13	0.1	91.0	0.6	63.8
23.0	23.00	0.02	0.18	0.2	83.1	0.6	81.5
28.0	28.00	0.04	0.24	0.2	81.4	0.8	59.8
33.0	33.00	0.04	0.29	0.3	81.4	0.5	84.3
38.0	38.00	0.05	0.35	0.3	82.1	0.6	86.4
43.0	43.00	0.07	0.40	0.4	80.6	0.6	55.1
48.0	48.00	0.10	0.45	0.5	77.9	0.6	34.3
53.0	53.00	0.13	0.49	0.5	75.1	0.6	32.2
58.0	58.00	0.14	0.51	0.5	74.5	0.2	70.4
63.0	63.00	0.12	0.52	0.5	76.6	0.5	125.9
68.0	68.00	0.12	0.56	0.6	77.7	2.0	67.3
73.0	73.00	0.15	0.61	0.6	76.3	0.9	67.2
78.0	77.99	0.17	0.69	0.7	75.7	0.6	83.4
83.0	82.99	0.20	0.75	0.8	75.1	0.5	77.7
88.0	87.99	0.22	0.80	0.8	74.6	1.0	94.1
93.0	92.99	0.22	0.85	0.9	75.3	0.4	87.9
98.0	97.99	0.20	0.89	0.9	77.4	0.6	131.4
103.0	102.99	0.18	0.93	0.9	78.8	0.4	100.9
103.5	103.53	0.18	0.93	0.9	78.9	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89518 GAM-NEUTRON
 DATE OF LOG: 06/25/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 103.47 M
 AZIMUTH: 78.9
 DISTANCE: 0.9 M
 + = 50 M INCR
 O = BOTTOM OF HOLE



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Century

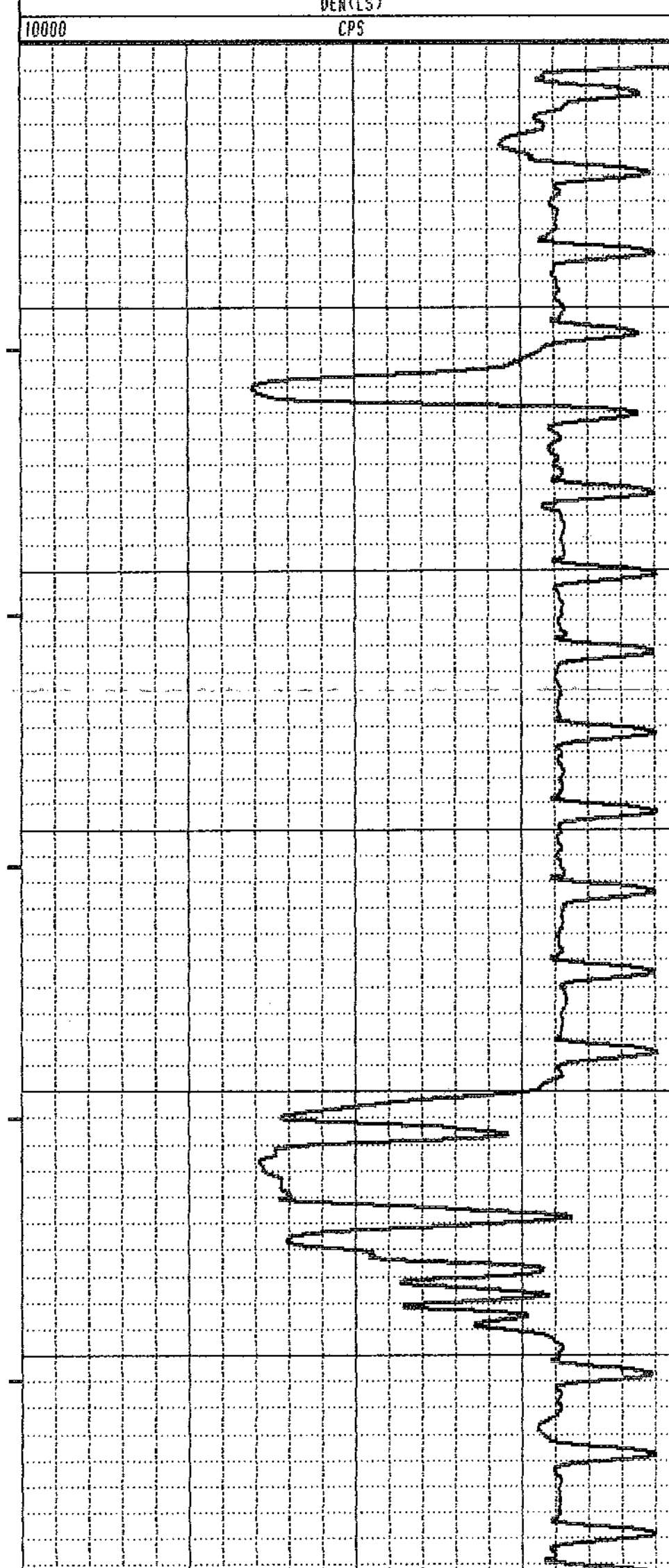
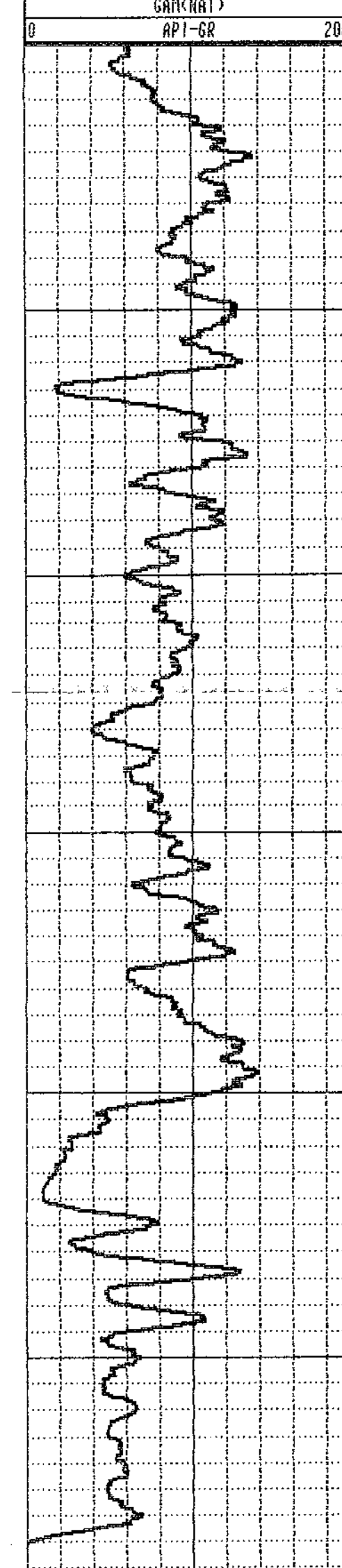
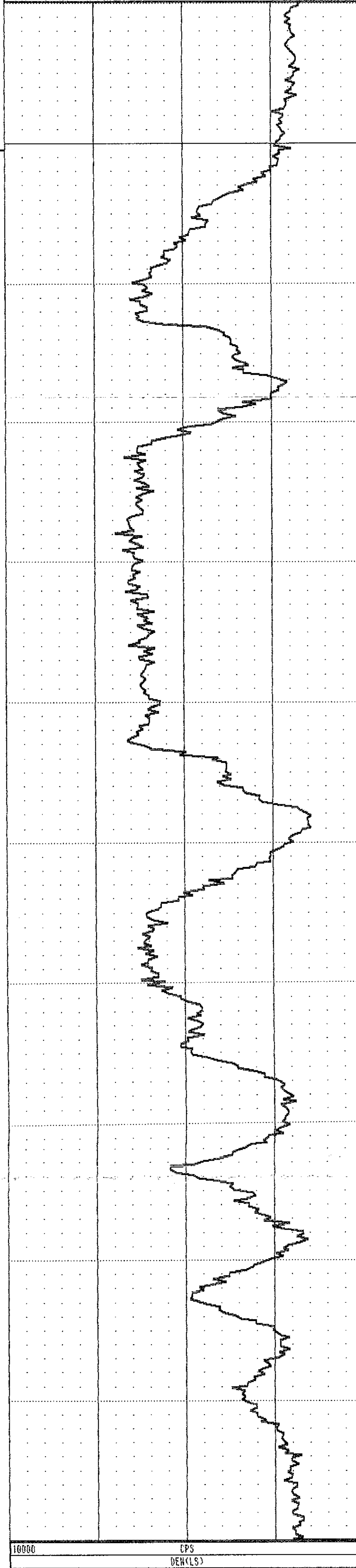
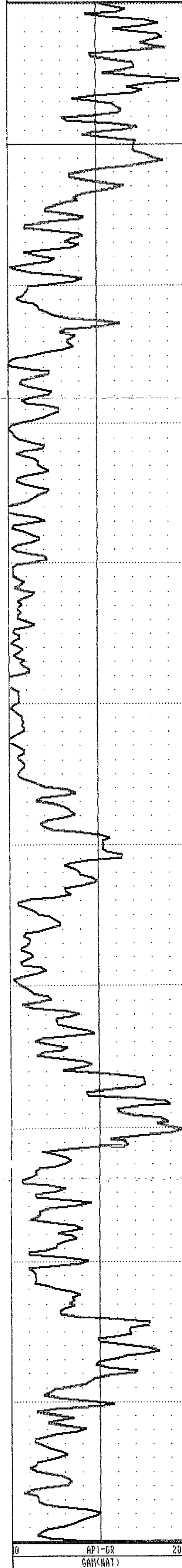
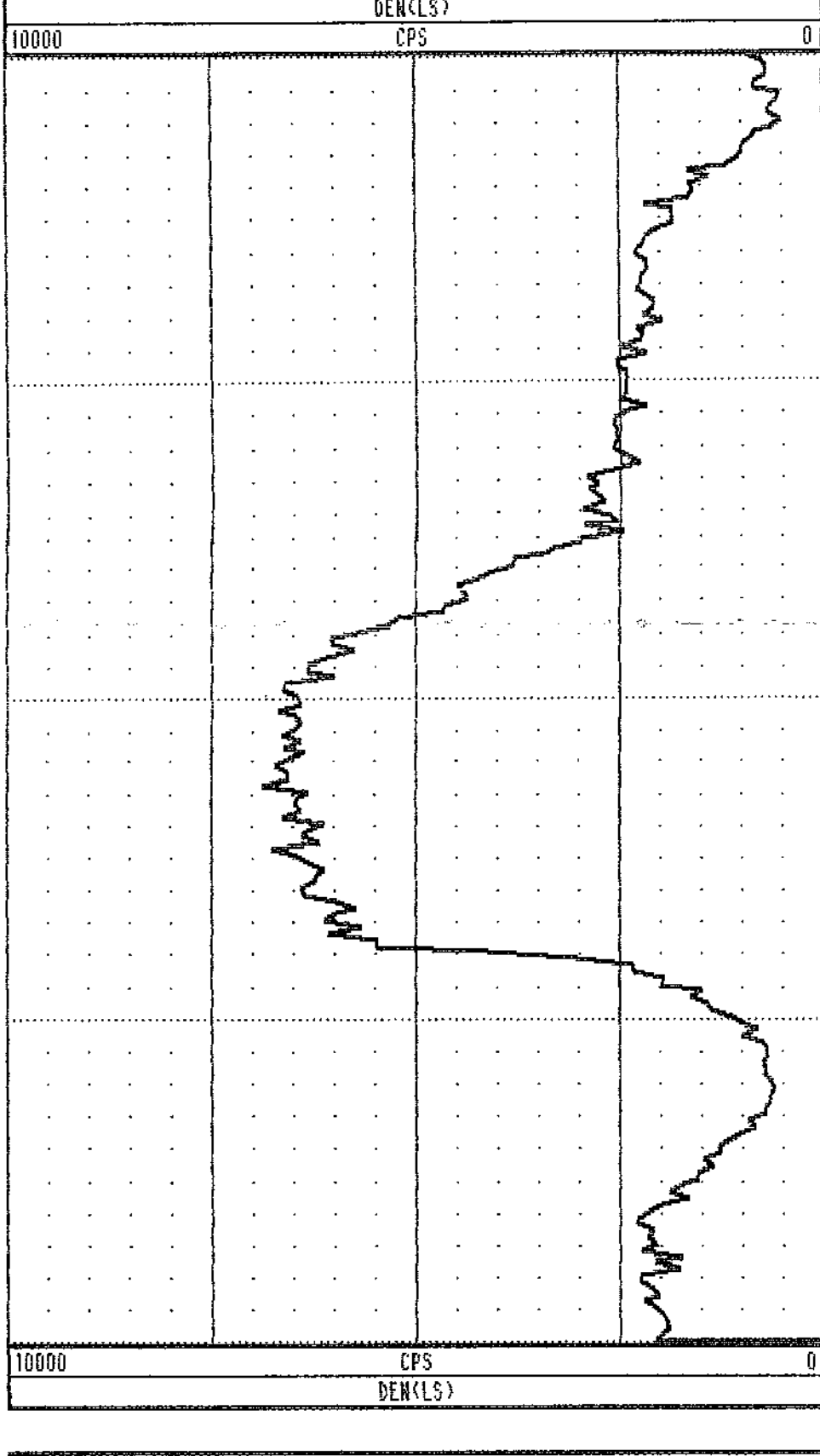
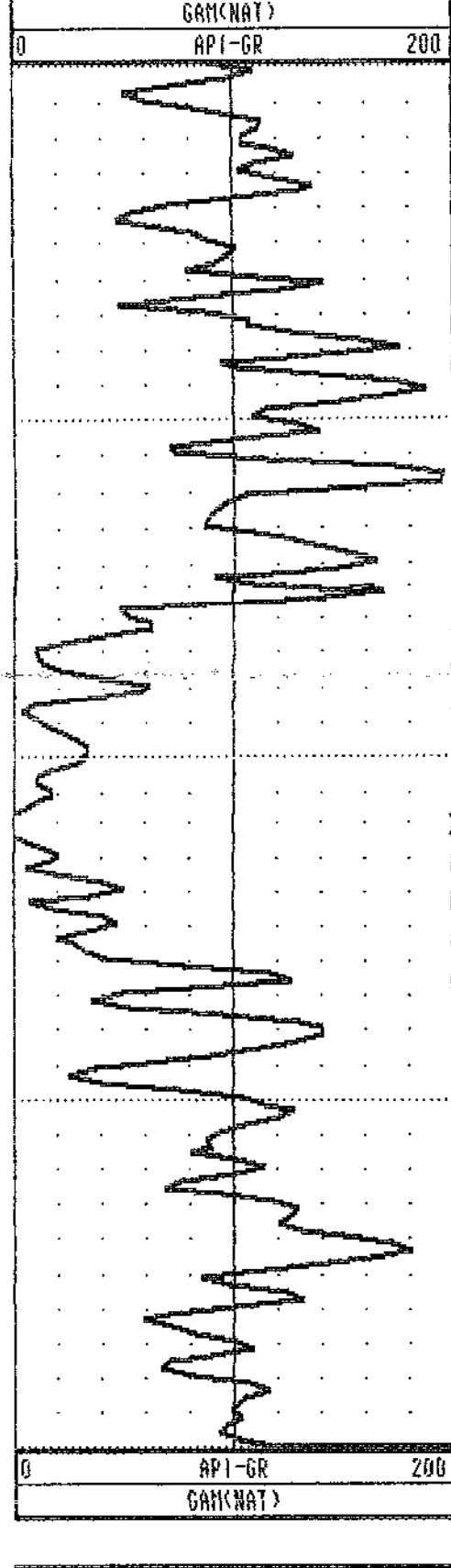
QMR89519 GAM-DENSITY

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89519 GAM-DENSITY
 LOCATION/FIELD : HOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/26/89 PERMANENT DATUM : 00 ELEVATIONS
 DEPTH DRILLER : 61 ELEV. PERM. DATUM: 00 KB : 00
 LOG BOTTOM : 58.78 LOG MEASURED FROM: GL DF : 00
 LOG TOP : -.78 DRL MEASURED FROM: GL GL : 00
 CASING DRILLER : 3 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9069A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 3
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 11
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000

REMARKS :
 LOGGED THROUGH RODS
 ANGLE HOLE 50 DEGREES
 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

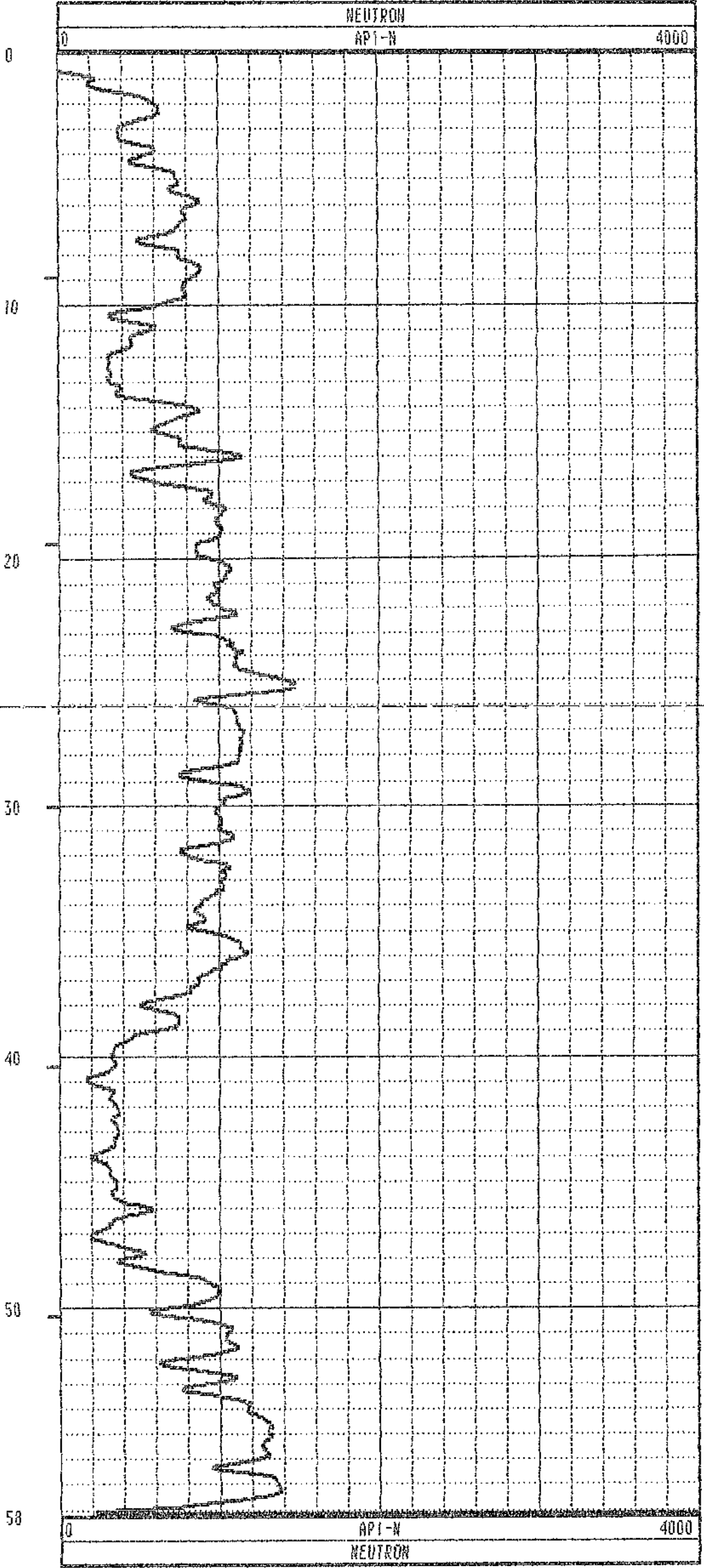
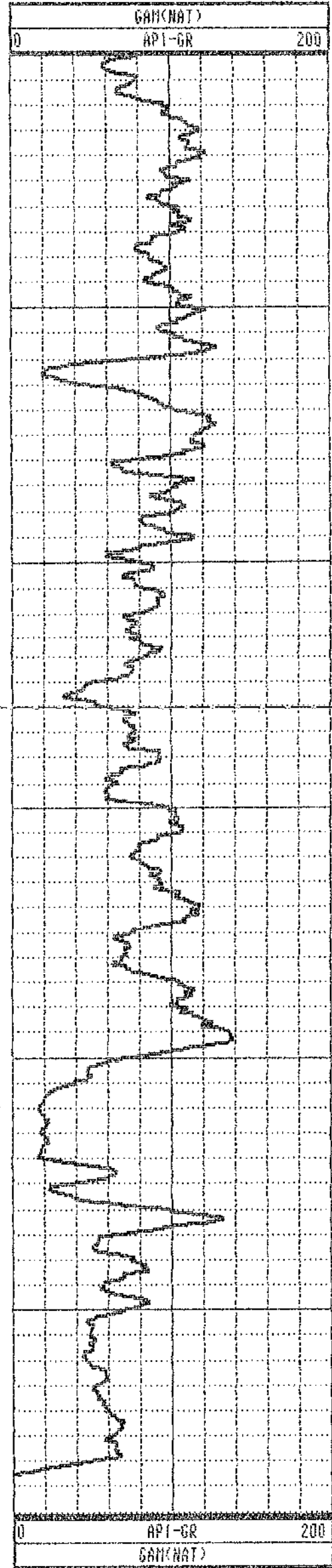


Century

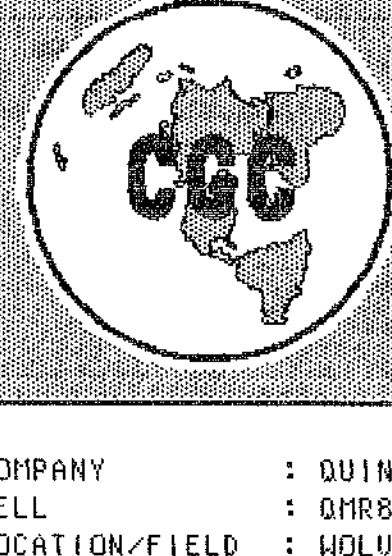
QMR89519 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89519 GAM-NEUTRON		
LOCATION/FIELD	: HOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:
DATE	: 06/26/89	PERMANENT DATUM	: 00
DEPTH DRILLER	: 61	ELEV. PERM. DATUM	: 00
LOG BOTTOM	: 58.20	LOG MEASURED FROM	: GL
LOG TOP	: -.86	DRL MEASURED FROM	: GL
CASING DRILLER	: 3	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS	: .05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
		TYPE	: 9067A
		LOG	: 2
		PLOT	: QUIN 0
		THRESH	: 50000
LOGGED THROUGH RODS			
VERTICAL HOLE 50 DEGREES			
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS			

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TOOL CALIBRATION		TOOL = 9067A	SERIAL NUMBER = 526			
CAL-DATE	CAL-TIME	SACE	SENSOR	RESPONSE	STANDARD	
0	05/04/89	13:47:58	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	13:47:58	0	GAM(NAT)	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



Century

QMR89520 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89520 GAM-DEN-RES-CAL
 LOCATION/FIELD : MILLERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

OTHER SERVICES:

DATE : 06/26/89
 DEPTH DRILLER : 83
 LOG BOTTOM : 81.12
 LOG TOP : -10
 CASING DRILLER : 2
 CASING TYPE : PLASTIC
 CASING THICKNESS : .05

PERMANENT DATUM : 00
 ELEV. PERM. DATUM: 00
 LOG MEASURED FROM: 0L
 DRL MEASURED FROM: 0L
 LOGGING UNIT : 0903
 FIELD OFFICE : CALGARY
 RECORDED BY : L. LETAU

ELEVATIONS
 KB : 00
 DF : 00
 GL : 00

BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE

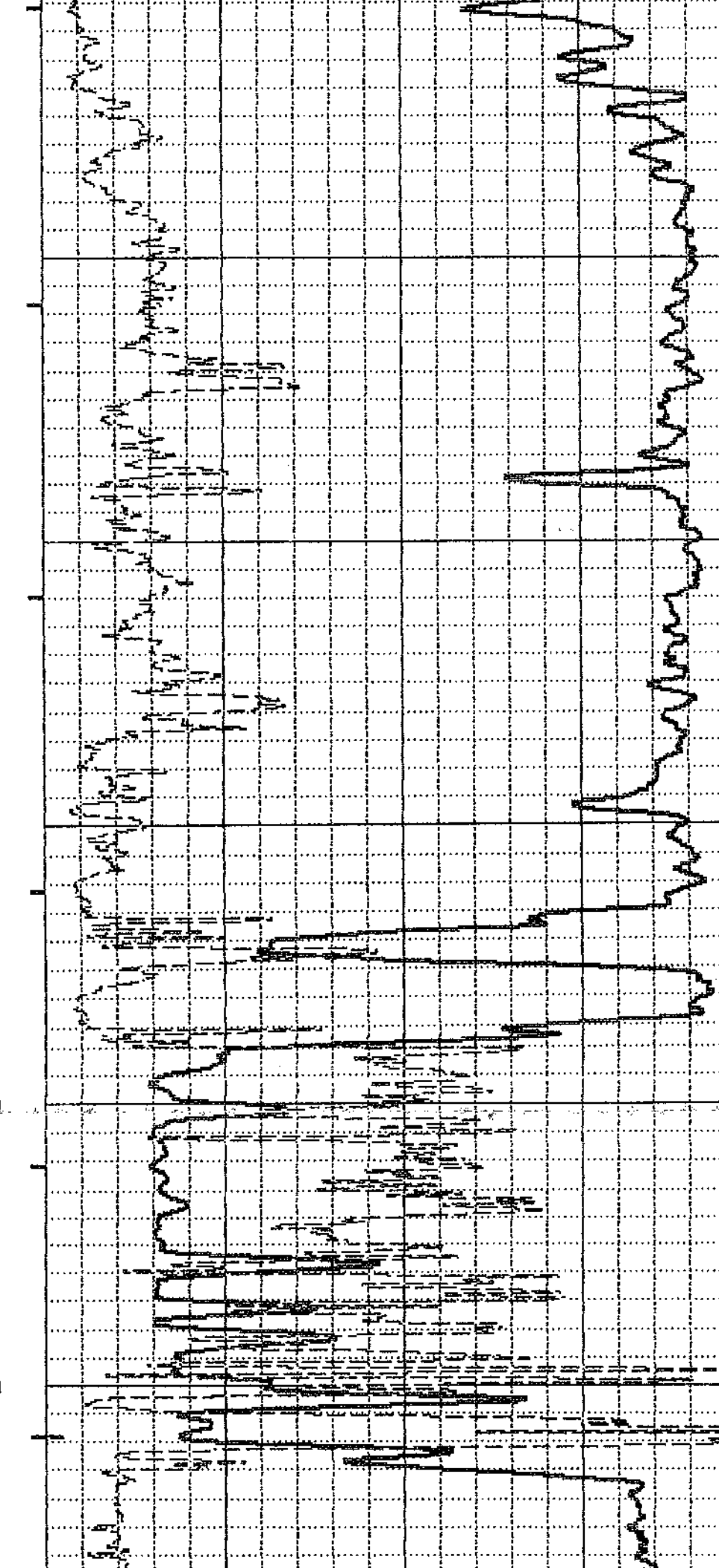
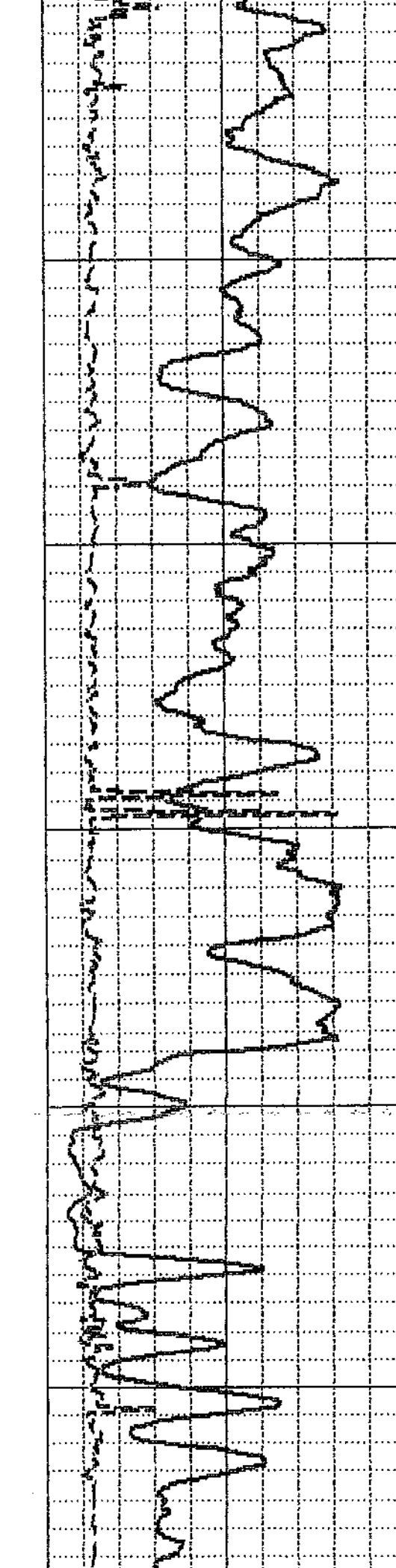
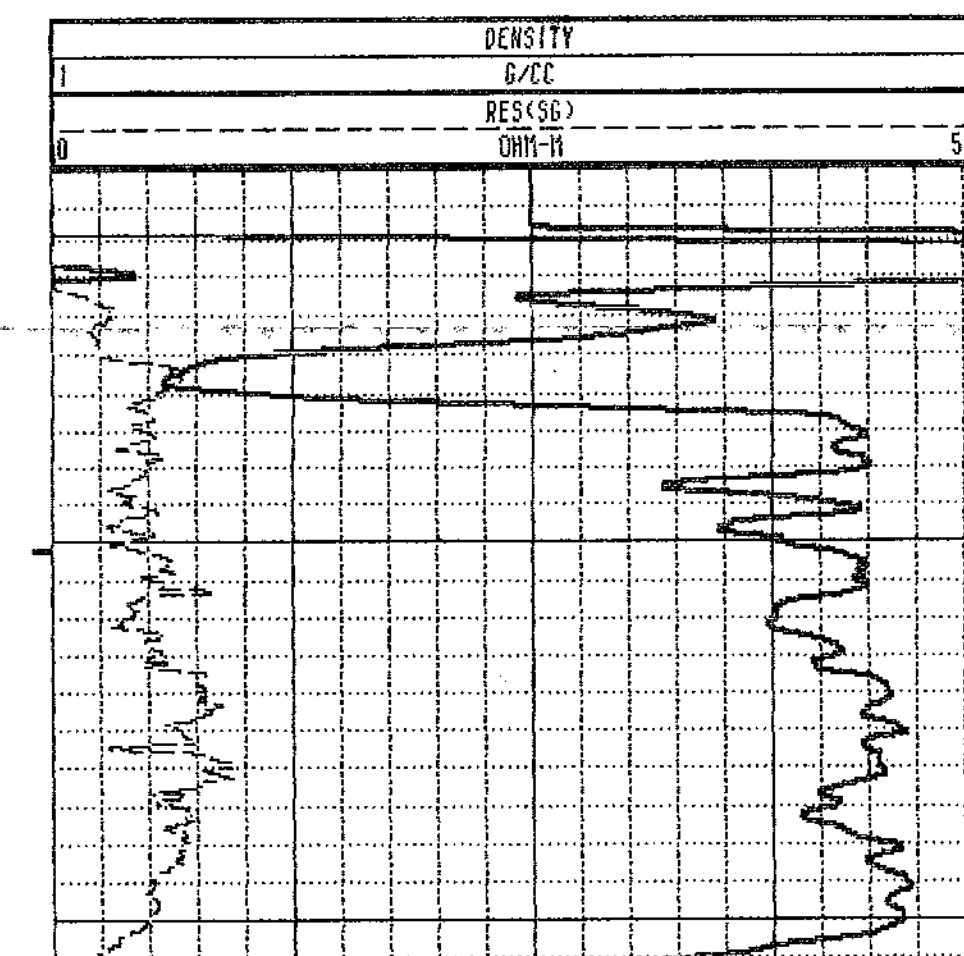
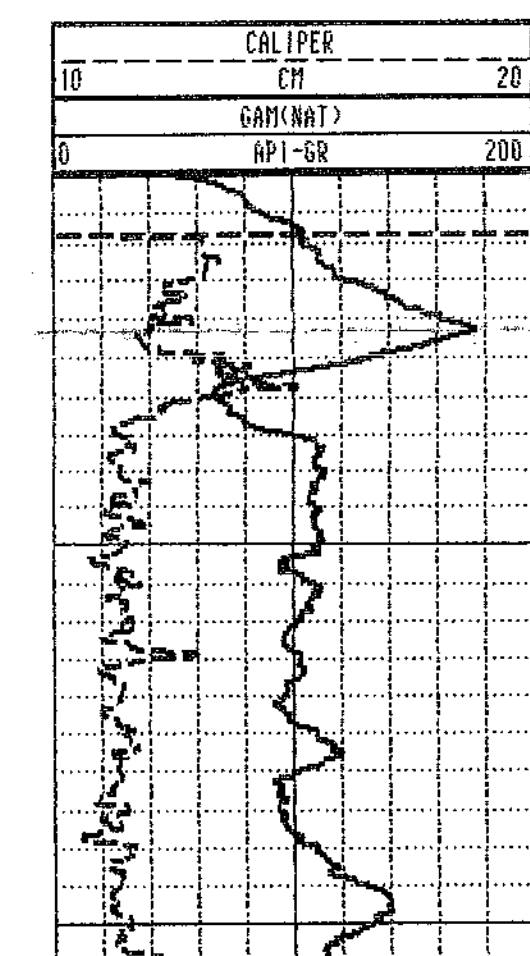
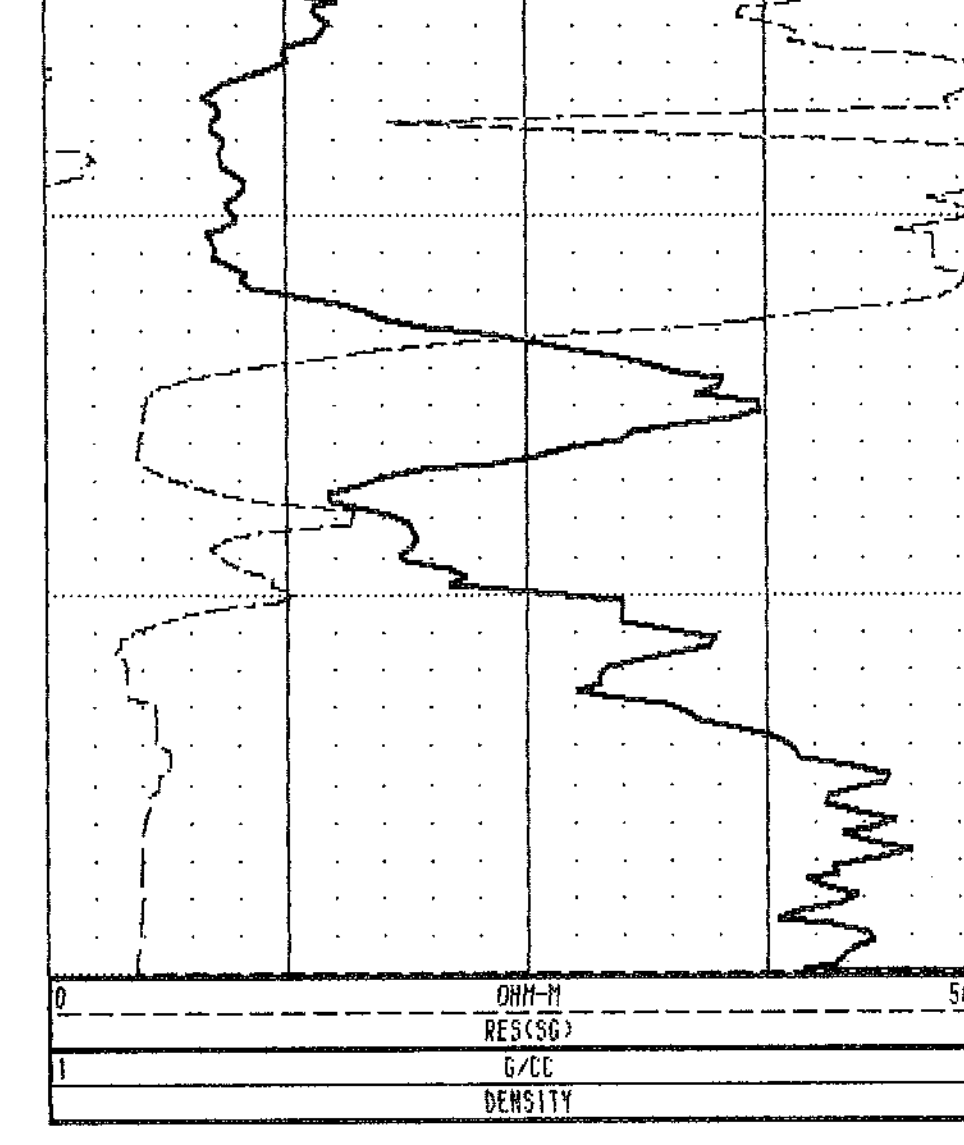
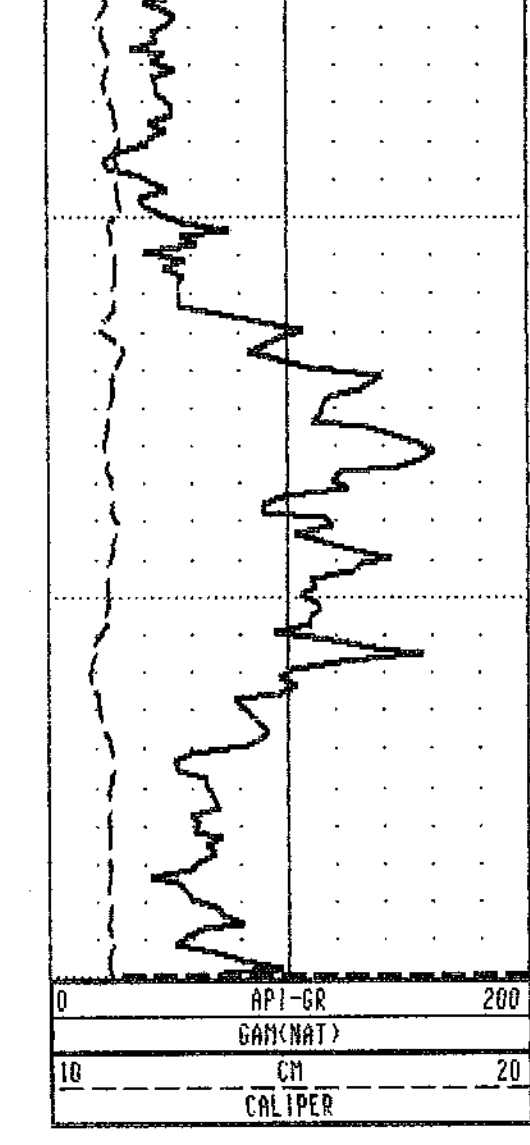
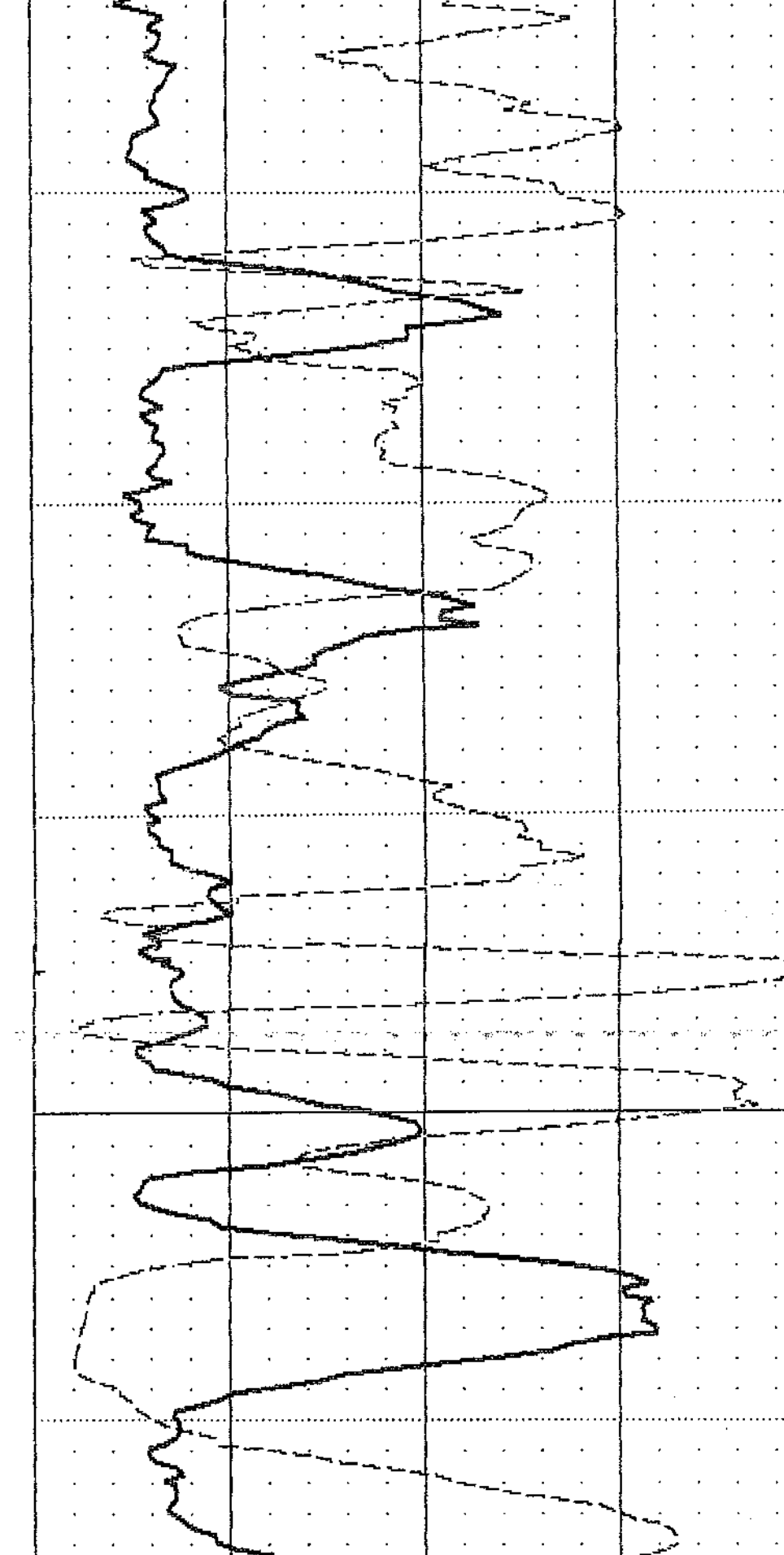
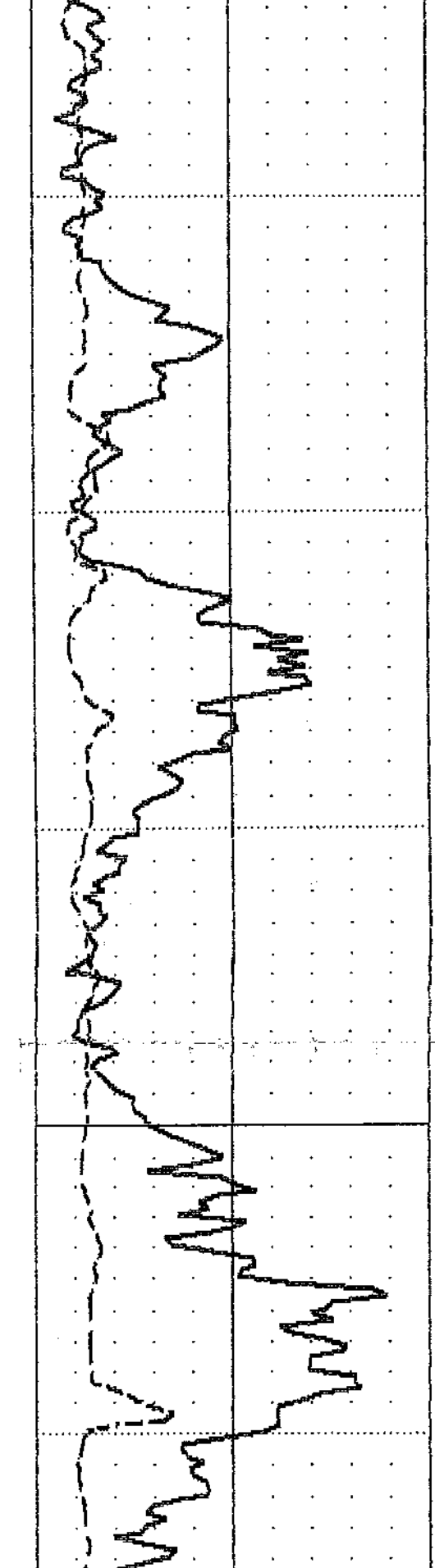
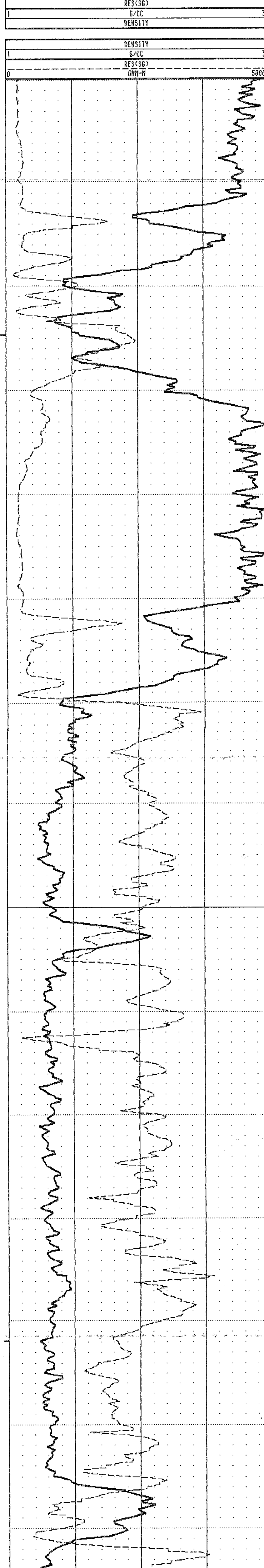
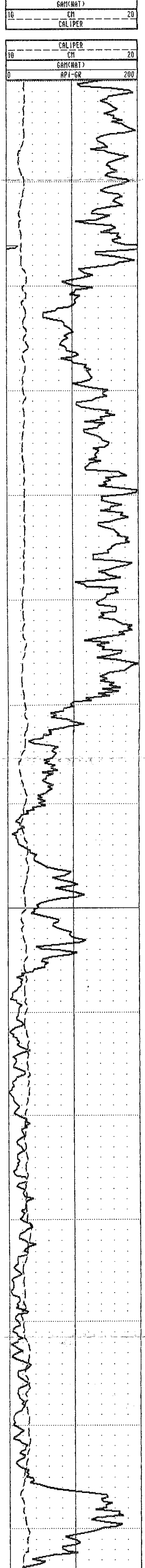
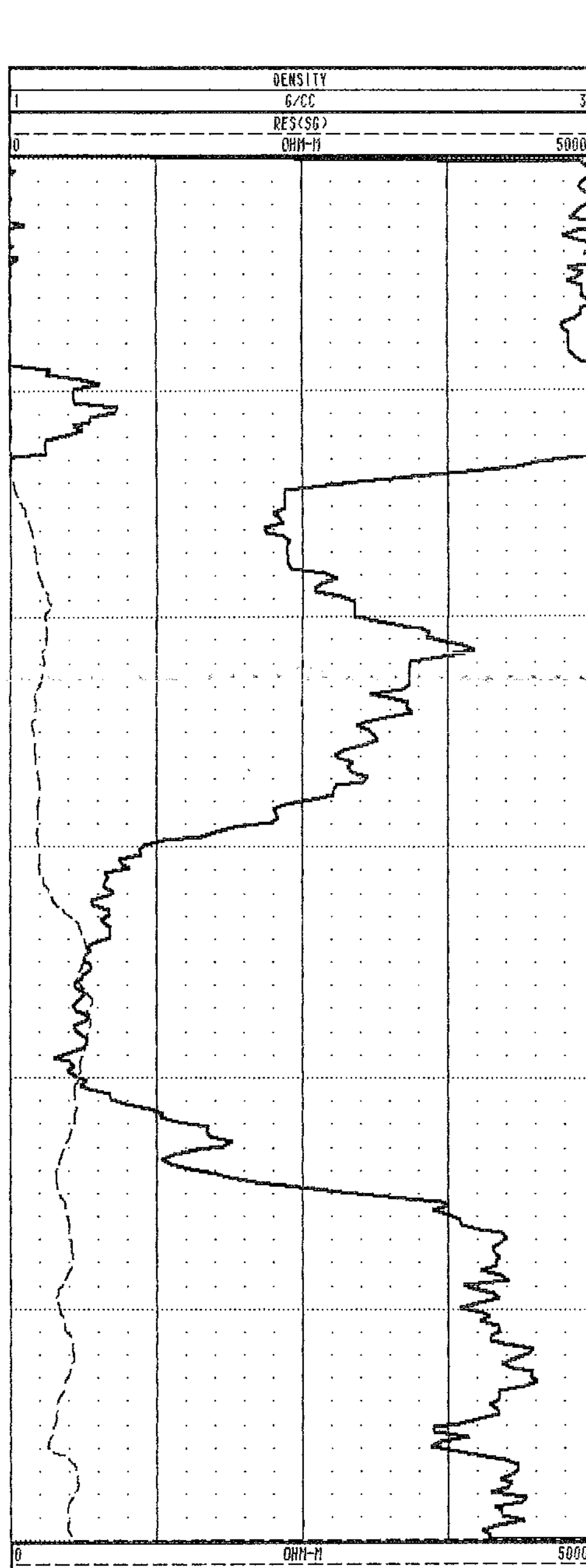
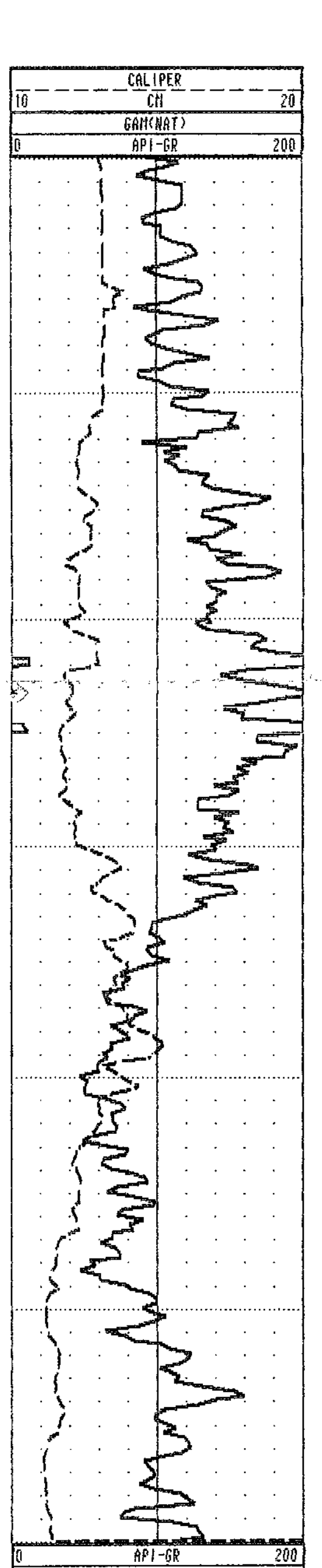
BOREHOLE FLUID : WATER
 RH :
 RH TEMPERATURE :
 MATRIX DELTA T : 173
 FLUID DELTA T : 690

FILE : ORIGINAL
 TYPE : 9032AC
 LOG : 1
 PLOT : QUIN 12
 THRESH : 50000

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	SRC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GAK(NAT)	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAK(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 OMT(H)
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OMT(H)
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	DENSITY	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITY	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



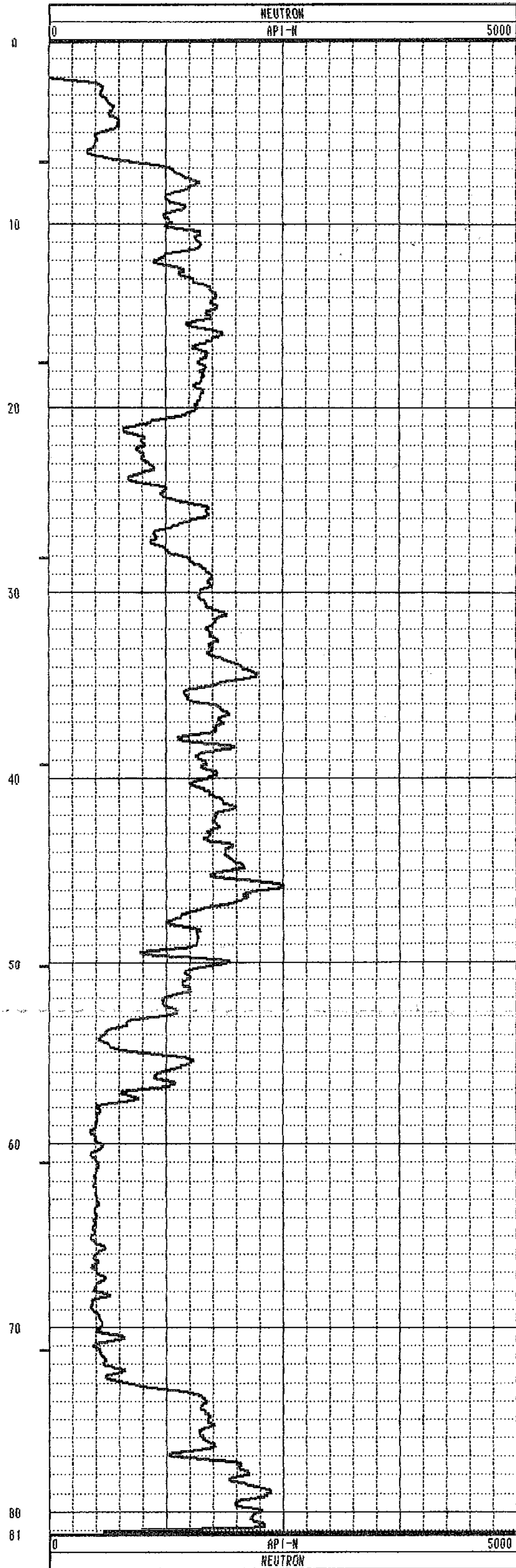
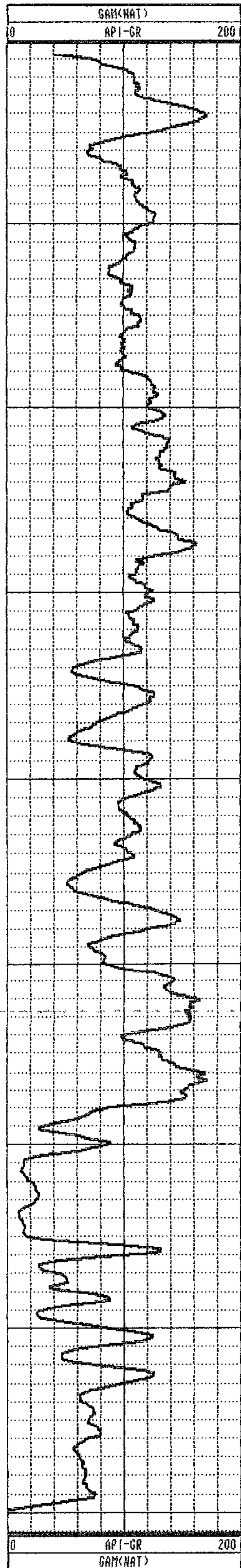
Century

QMR89520 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89520 GAM-NEUTRON		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 06/26/89	PERMANENT DATUM	: 00
DEPTH DRILLER	: 83	ELEV. PERM. DATUM:	00
LOG BOTTOM	: 81.18	LOG MEASURED FROM:	GL
LOG TOP	: 0.82	DRL MEASURED FROM:	GL
		ELEVATIONS	
		KB	: 00
		DF	: 00
		GL	: 00
CASING DRILLER	: 2	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9055A
VERTICAL HOLE	:	LOG	: 0
		PLOT	: QUIN 10
		THRESH:	5000

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(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

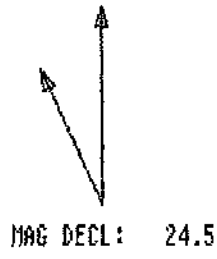
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMRB9520 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/26/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 3

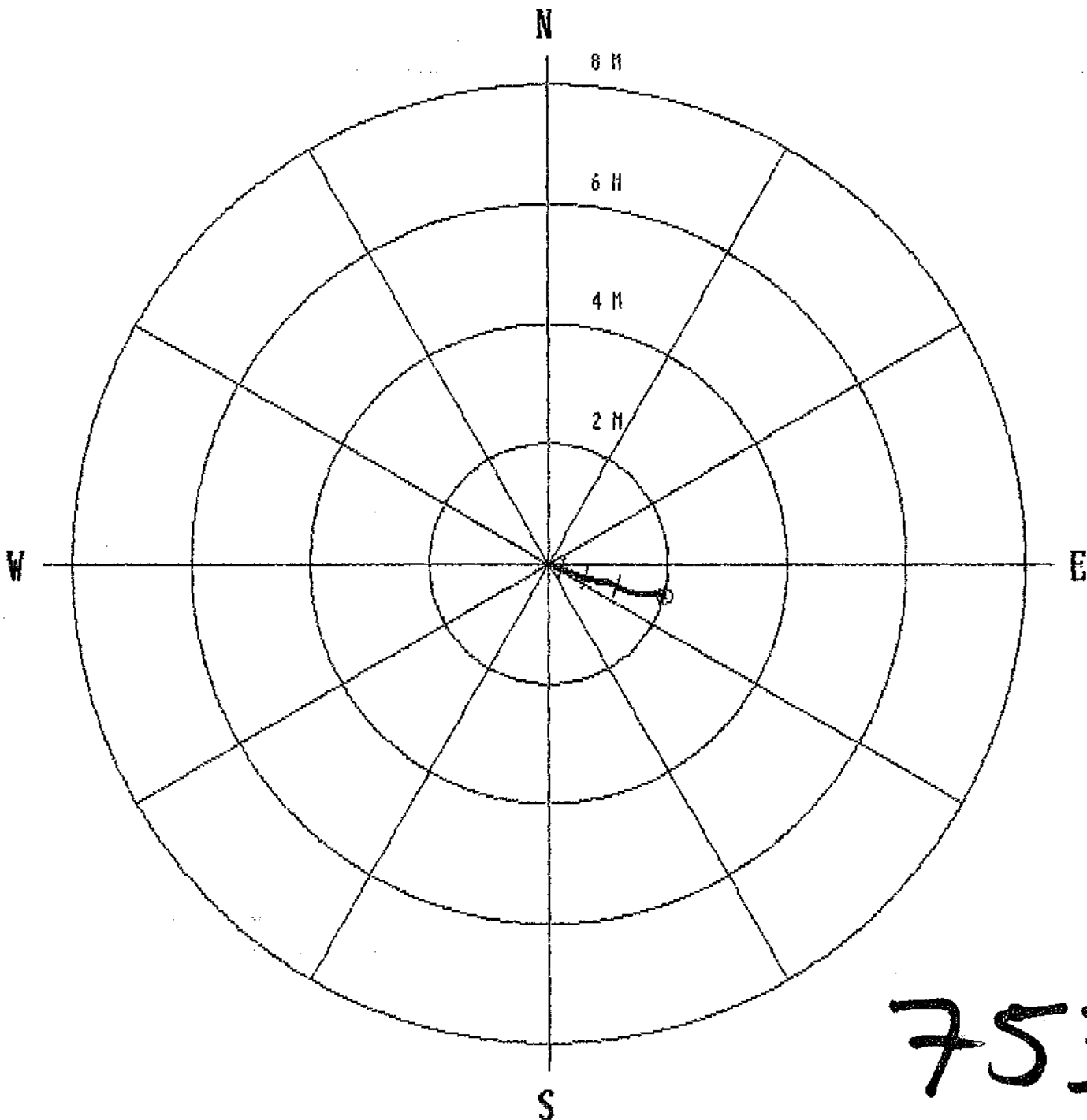
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	0.00	-0.01	0.0	313.3	0.7	330.4
8.0	8.00	0.01	0.04	0.0	77.8	2.5	116.9
13.0	13.00	-0.03	0.10	0.1	105.1	1.0	111.0
18.0	18.00	-0.05	0.18	0.2	107.0	1.0	122.8
23.0	23.00	-0.09	0.26	0.3	108.4	1.1	133.5
28.0	28.00	-0.13	0.36	0.4	110.0	1.2	117.7
33.0	32.99	-0.17	0.46	0.5	110.4	1.3	111.9
38.0	37.99	-0.22	0.56	0.6	111.5	1.6	103.5
43.0	42.99	-0.25	0.68	0.7	110.4	1.4	99.6
48.0	47.99	-0.27	0.81	0.9	108.4	1.7	97.9
53.0	52.99	-0.29	0.96	1.0	106.6	1.4	106.3
58.0	57.99	-0.34	1.07	1.1	107.4	1.5	119.1
63.0	62.98	-0.40	1.22	1.3	108.3	1.9	112.9
68.0	67.98	-0.47	1.39	1.5	108.5	2.1	110.4
73.0	72.97	-0.49	1.60	1.7	107.1	2.3	97.2
78.0	77.97	-0.51	1.82	1.9	105.6	2.6	92.1
81.2	81.15	-0.51	1.95	2.0	104.7	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

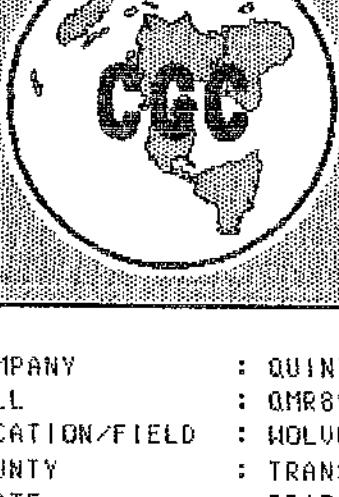
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMRB9520 GAM-NEUTRON
 DATE OF LOG: 06/26/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 81.09 M
 AZIMUTH: 104.7
 DISTANCE: 2.0 M
 + = 20 M INCR
 O = BOTTOM OF HOLE



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Century

QMR89521 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89521 GAM-DEN-RES-CAL
 LOCATION/FIELD : HOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : _____ TOWNSHIP : _____ RANGE : _____

DATE : 06/26/89
 DEPTH DRILLER : 103.7
 LOG BOTTOM : 102.82
 LOG TOP : 0.34
 CASING DRILLER : 6
 CASING TYPE : STEEL
 CASING THICKNESS : .05

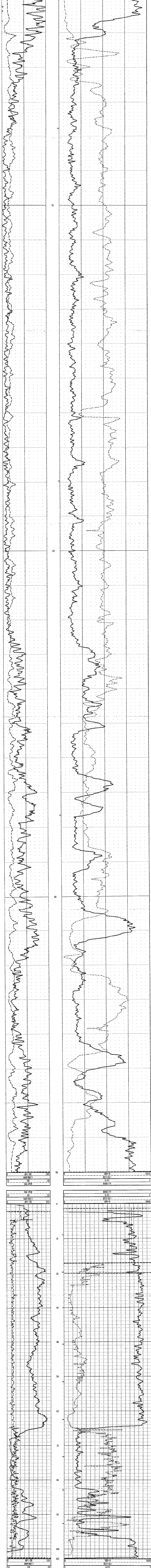
PERMANENT DATUM : _____
 ELEV. PERM. DATUM : _____
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL
 LOGGING UNIT : 8903
 FIELD OFFICE : CALGARY
 RECORDED BY : L. LITAL

ELEVATIONS : _____
 KB : _____
 DF : _____
 GL : _____

BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.66
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE -70 DEGREES AT 037 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

OTHER SERVICES:

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TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967

CAL DATE	CAL TIME	SRC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	10:17:51	0	GAINCMT>	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	GAINCMT>	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/CC>	0.000 CPS	0.000 OHM-H
5	05/04/89	10:25:07	0	RES/CC>	30275.000 CPS	178.500 OHM-H
6	05/04/89	10:46:11	0	CALIPER	553.000 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	DENSITY	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	DENSITY	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	CALIPER	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0	CALIPER	0.000 CPS	0.000 CM



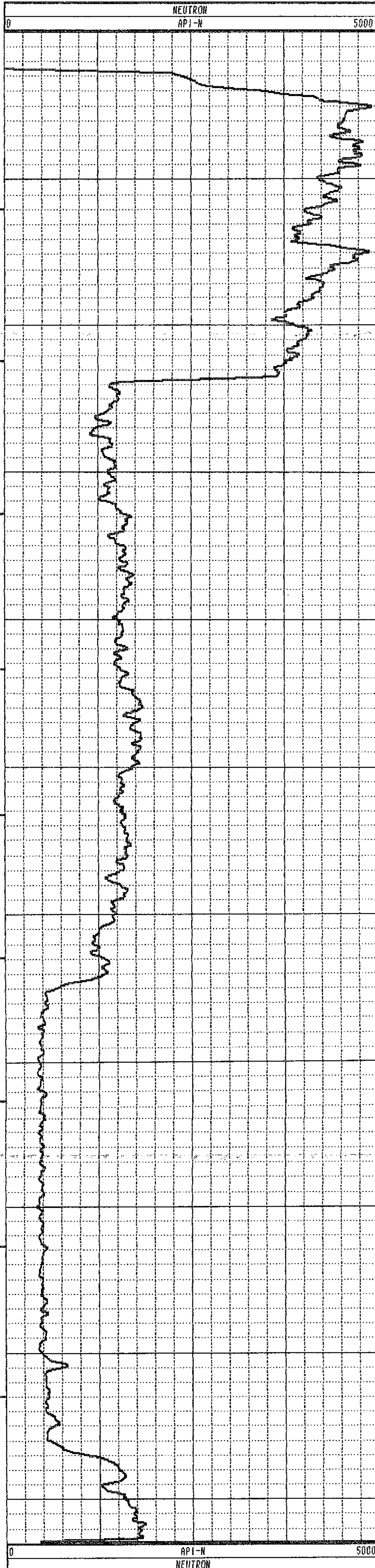
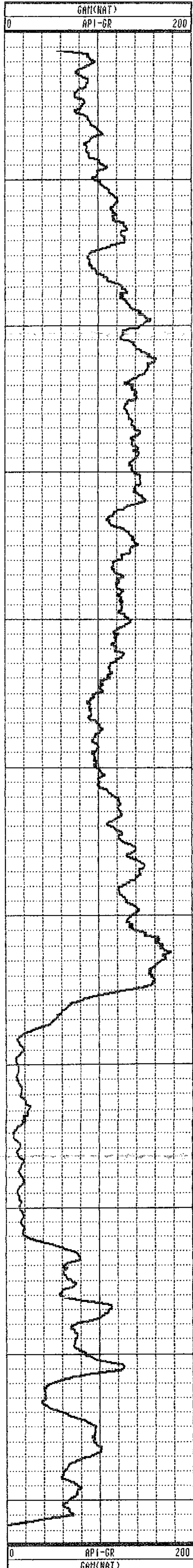
Century

QMR89521 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89521 GAM-NEUTRON		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP : RANGE :		
DATE	: 06/26/89	PERMANENT DATUM	: ELEVATIONS
DEPTH DRILLER	: 103.7	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 102.98	LOG MEASURED FROM:	GL DF :
LOG TOP	: 1.26	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 6	LOGGING UNIT	: 8903
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9055A
ANGLE HOLE -70 DEGREES AT 037 DEGREES	:	LOG	: 5
	:	PLOT	: QUIN 10
	:	THRESH	: 50000

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(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 HV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 HV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	6.000 API-N
8	05/04/89	08:53:24	0	NEUTRON	145.000 CPS	271.000 API-N

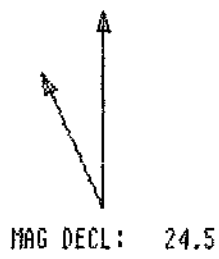
***** COMPU-LOG II -- VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89521 GAM--
 FIELD OFFICE : CALGARY DATE OF LOG : 06/26/89
 DATA FROM : PROBE : 9055A 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 7

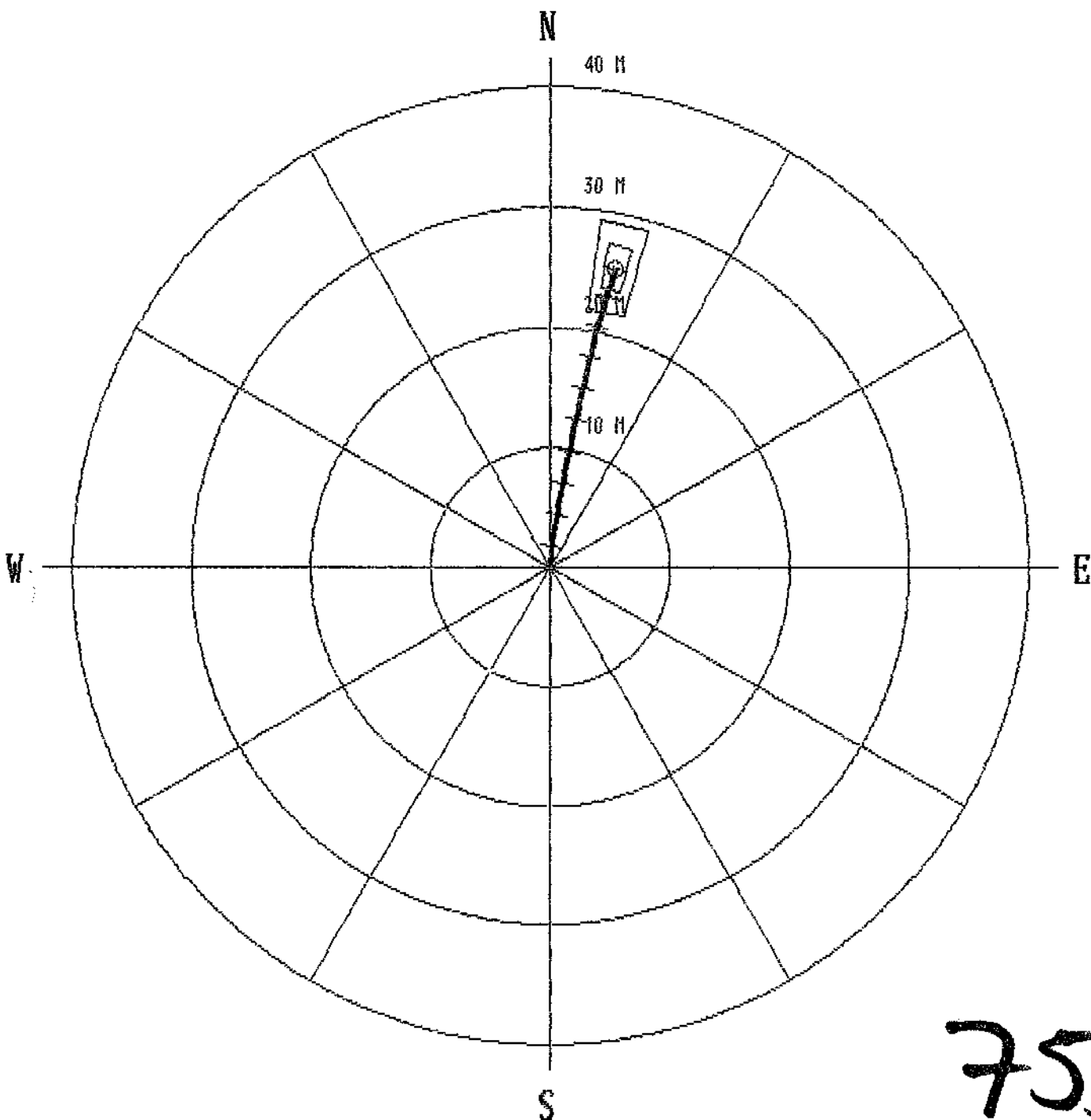
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
7.0	6.84	0.89	0.02	0.9	1.6	15.3	3.4
12.0	11.66	2.20	0.21	2.2	5.4	15.4	8.9
17.0	16.48	3.49	0.41	3.5	6.6	15.5	9.9
22.0	21.31	4.78	0.63	4.8	7.5	15.1	10.4
27.0	26.13	6.06	0.87	6.1	8.1	15.0	10.4
32.0	30.96	7.34	1.10	7.4	8.6	15.1	10.7
37.0	35.79	8.63	1.36	8.7	8.9	15.3	11.5
42.0	40.61	9.91	1.64	10.0	9.4	14.9	15.3
47.0	45.43	11.21	1.90	11.4	9.6	15.5	11.9
52.0	50.26	12.49	2.17	12.7	9.9	15.1	12.6
57.0	55.09	13.76	2.46	14.0	10.1	15.1	13.6
62.0	59.92	15.02	2.75	15.3	10.4	14.8	13.4
67.0	64.75	16.25	3.04	16.5	10.6	14.4	13.6
72.0	69.57	17.47	3.32	17.8	10.7	14.4	14.5
77.0	74.44	18.69	3.60	19.0	10.9	14.4	12.0
82.0	79.28	19.89	3.90	20.3	11.1	14.5	17.1
87.0	84.12	21.08	4.26	21.5	11.4	14.3	17.2
92.0	88.96	22.30	4.62	22.8	11.7	14.6	16.8
97.0	93.79	23.52	4.97	24.0	11.9	14.5	17.2
102.0	98.64	24.70	5.34	25.3	12.2	14.6	16.3
103.0	99.59	24.92	5.41	25.5	12.2	0.0	0.0

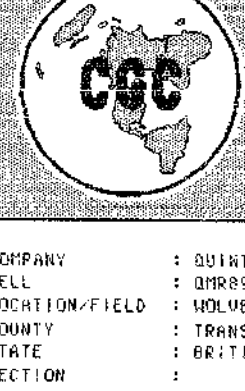
PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: HOLVERINE VALLEY SOUTH
 HOLE ID: QMR89521 GAM-NEUTRON
 DATE OF LOG: 06/26/89
 PROBE: 9055A 14



SCALE: 5 M/CM
 TRUE DEPTH: 99.53 M
 AZIMUTH: 12.2
 DISTANCE: 25.5 M
 + = 10 M INCR
 O = BOTTOM OF HOLE





Century

QMR89522 GAM-DENSITY

COMPANY : QUINCYTE CORP. LTD.
 WELL : QMR89522 GAM-DENSITY
 LOCATION/FIELD : MOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION :

OTHER SERVICES:

DATE : 06/27/89
 DEPTH DRILLER : 150
 LOG BOTTOM : 147.32
 LOG TOP : -1.14
 CASING DRILLER : 3
 CASING TYPE : STEEL
 CASING THICKNESS : .05

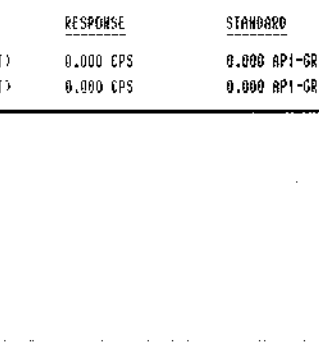
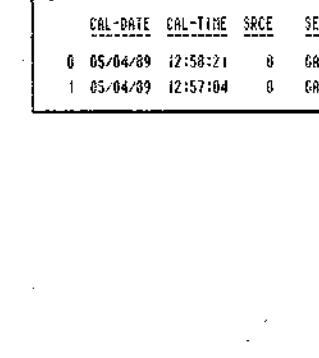
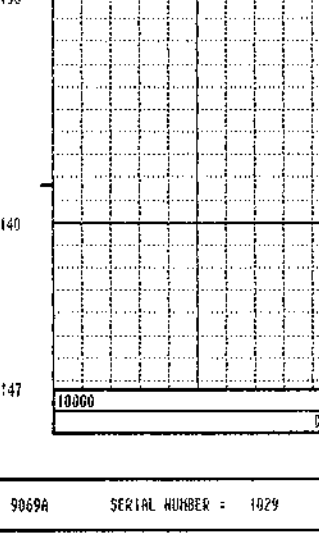
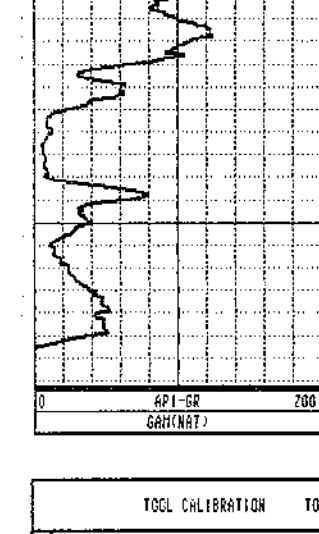
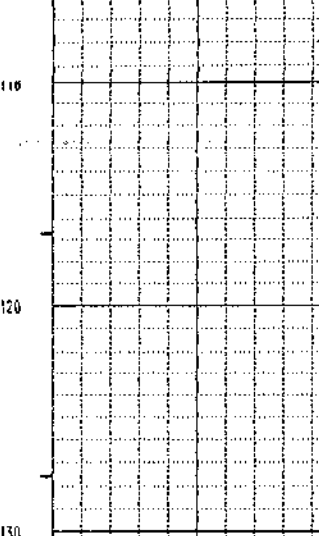
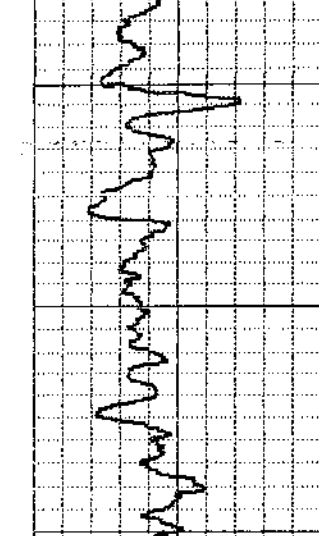
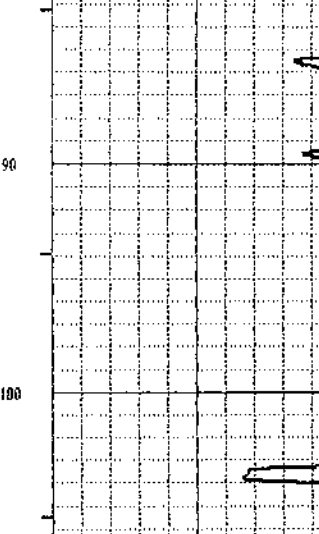
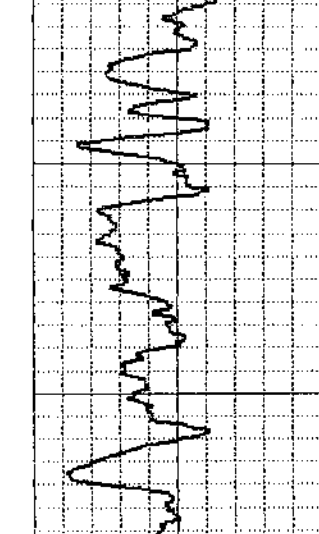
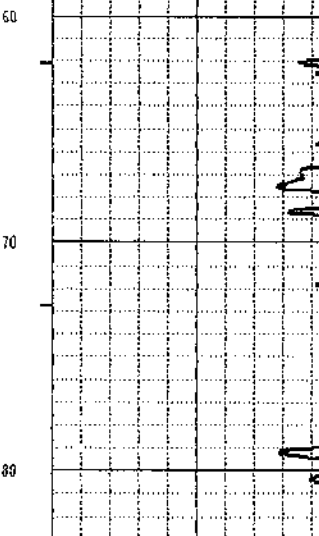
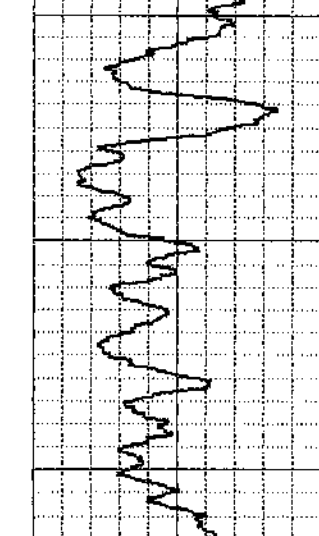
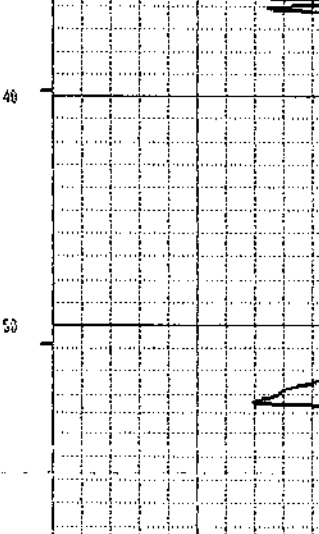
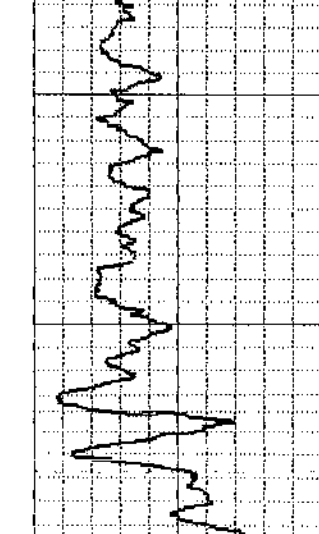
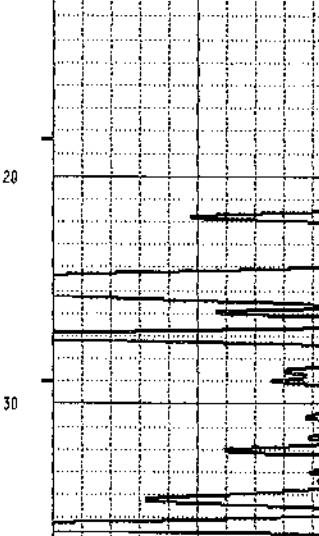
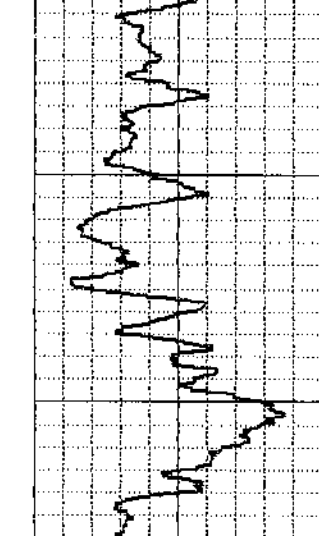
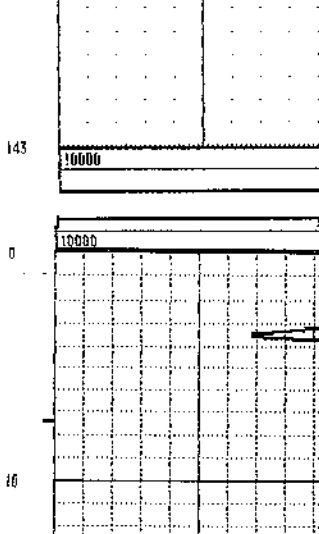
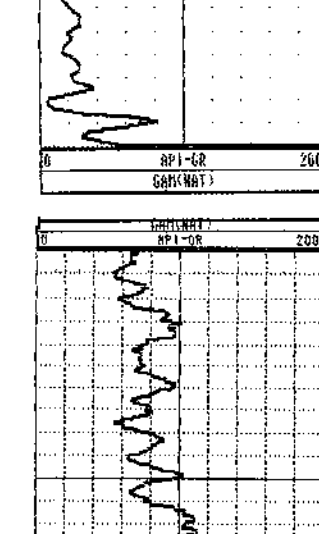
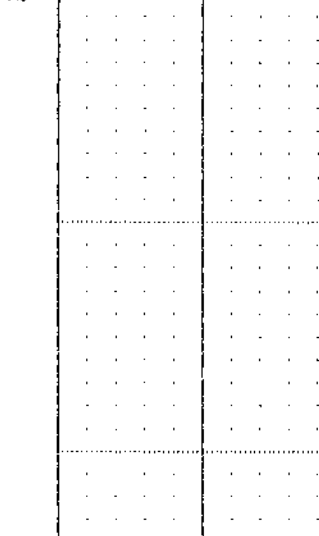
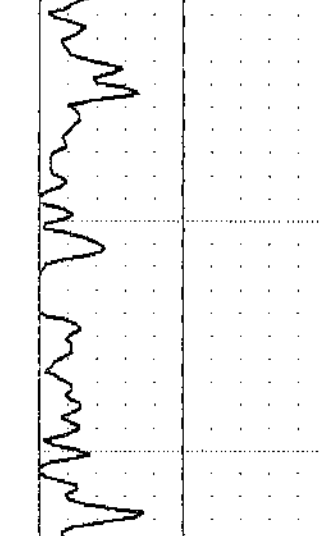
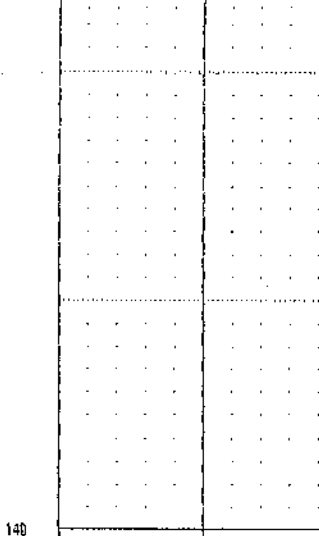
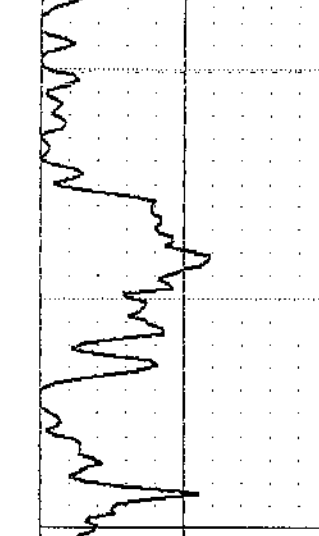
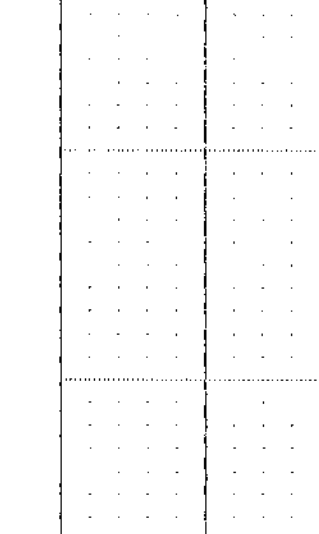
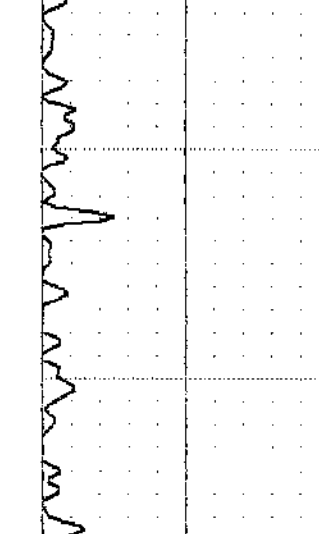
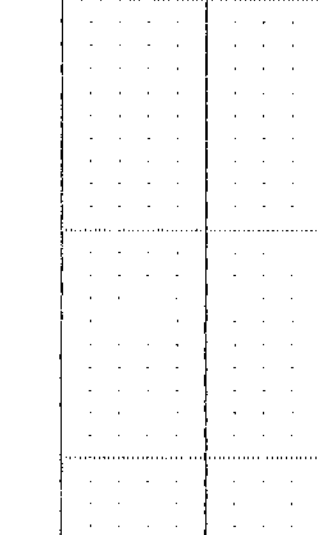
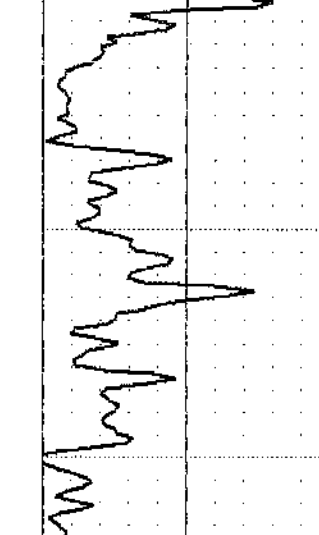
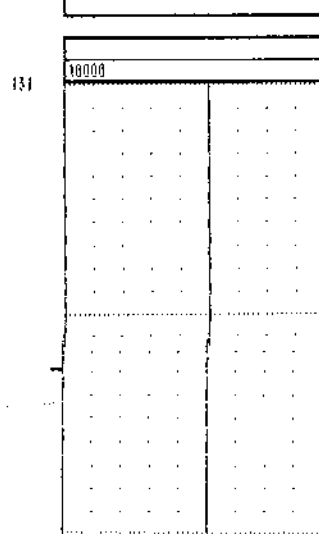
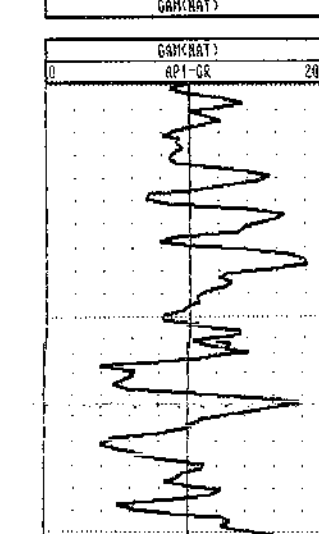
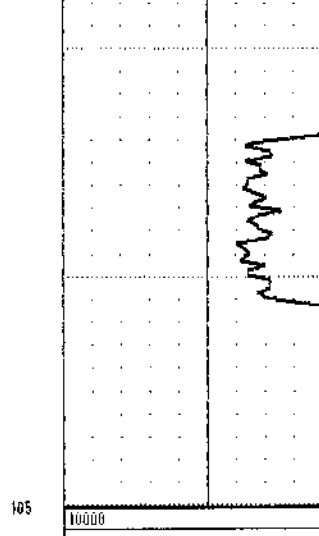
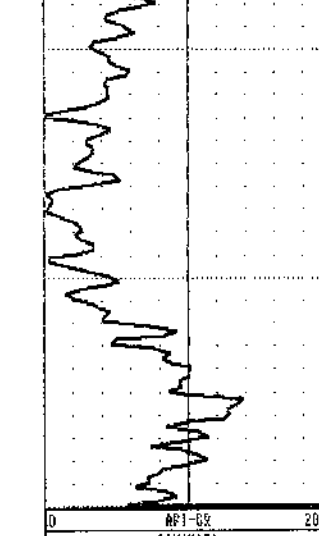
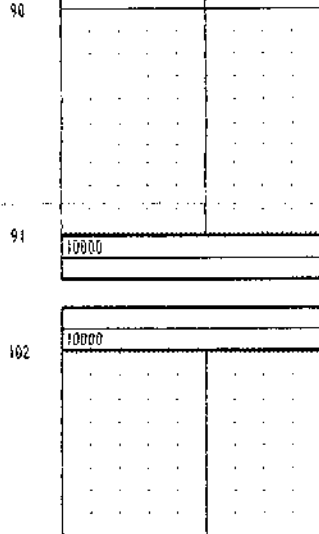
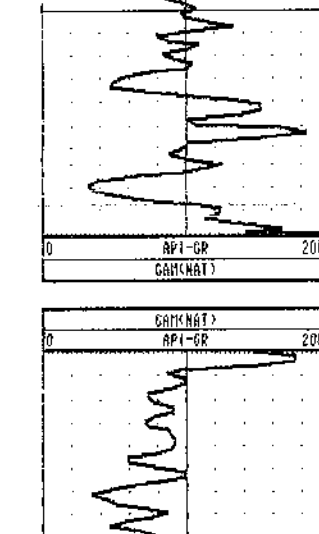
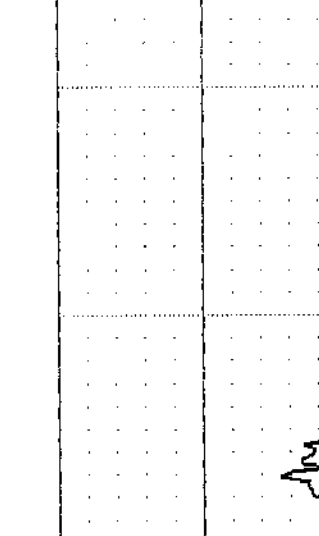
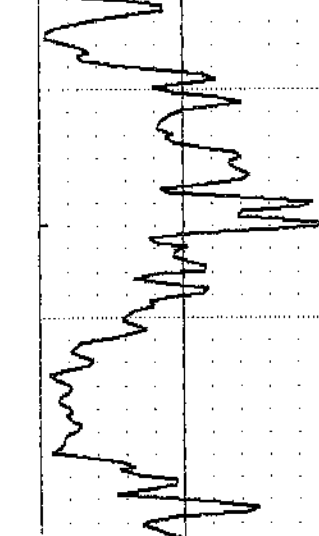
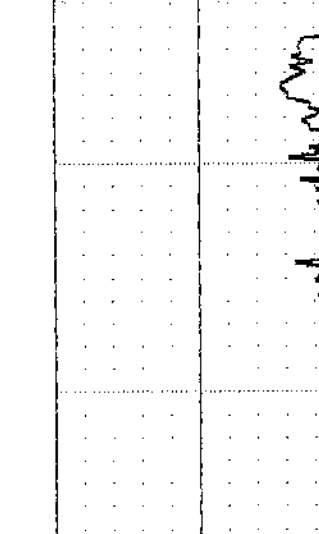
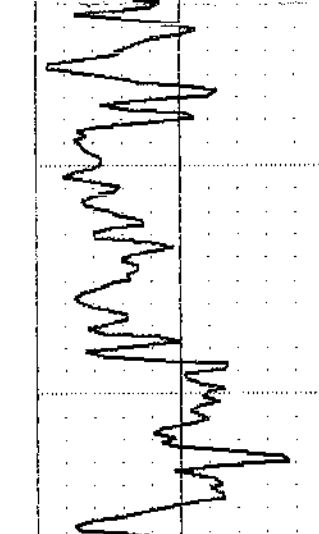
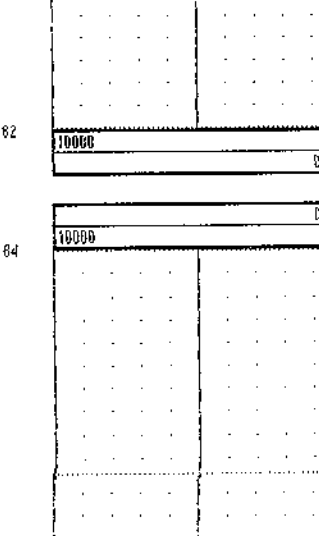
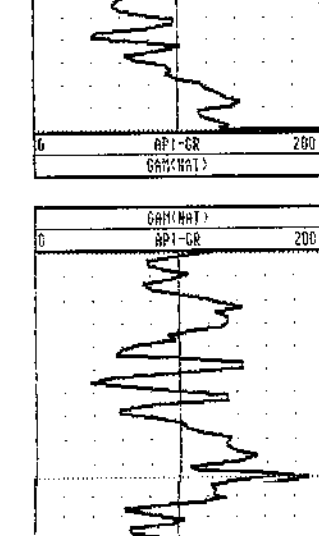
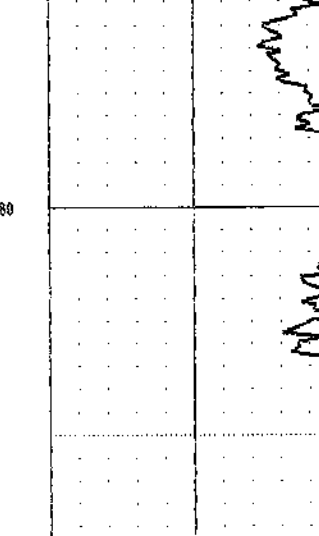
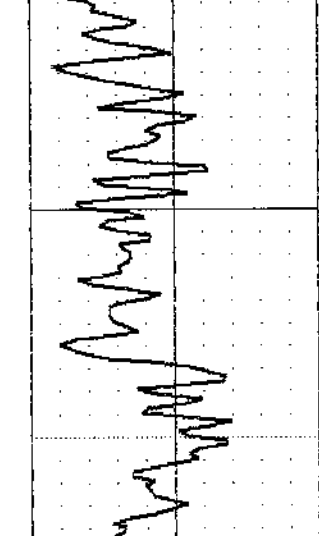
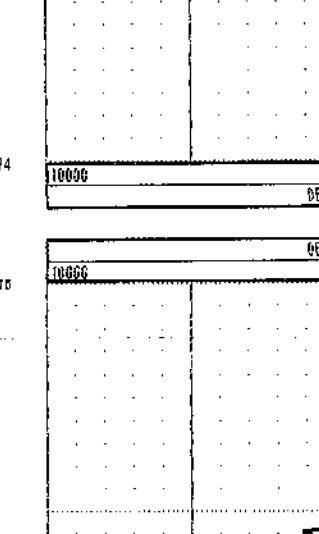
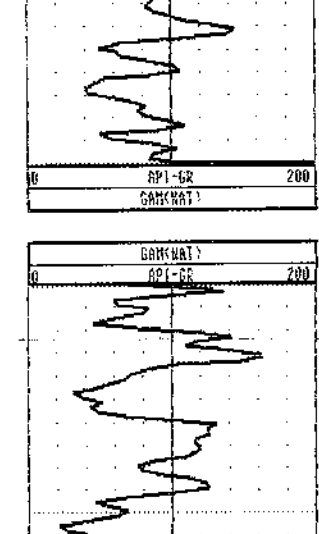
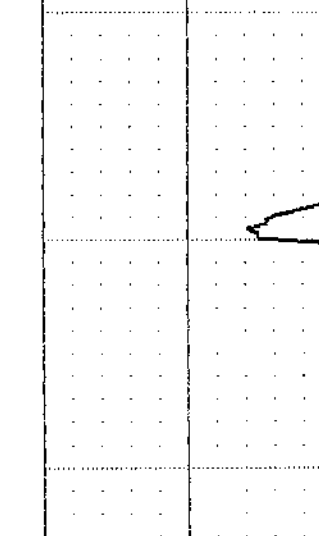
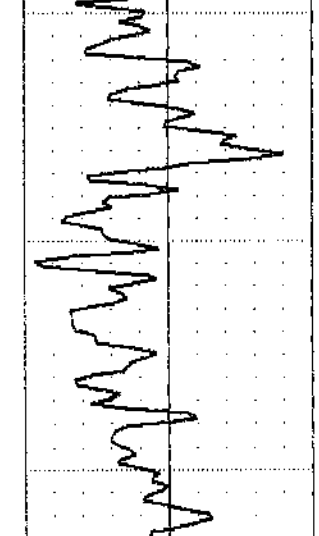
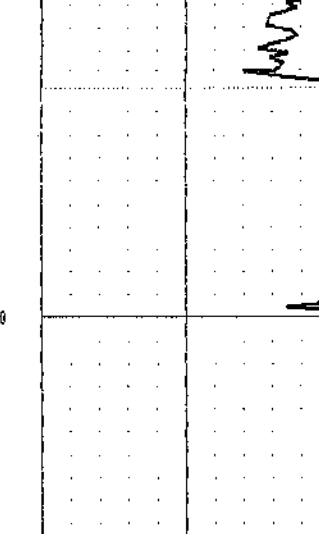
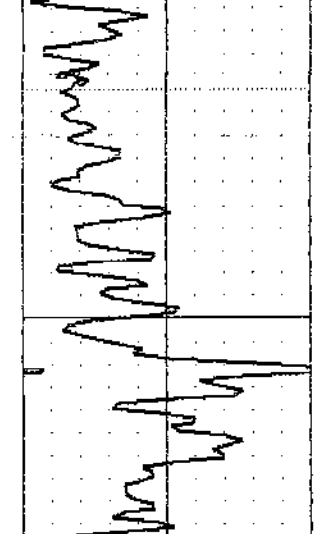
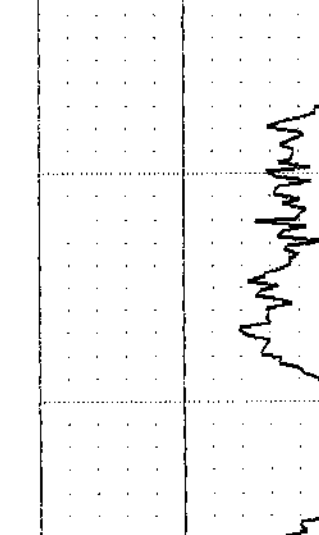
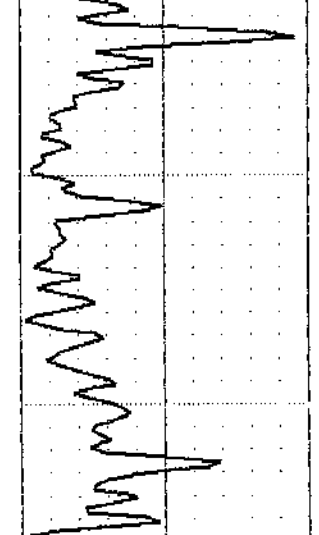
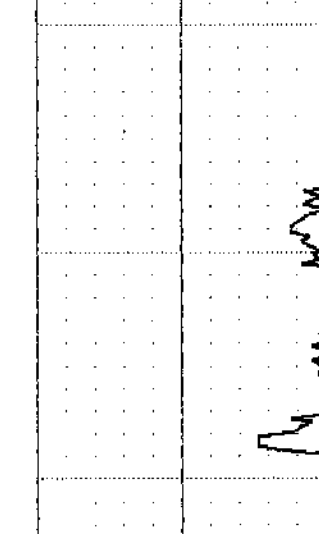
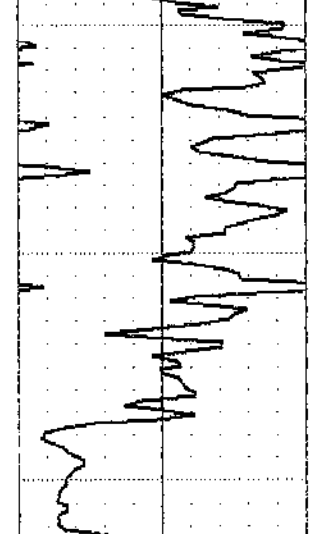
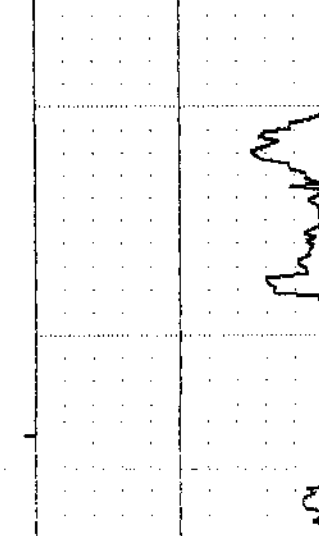
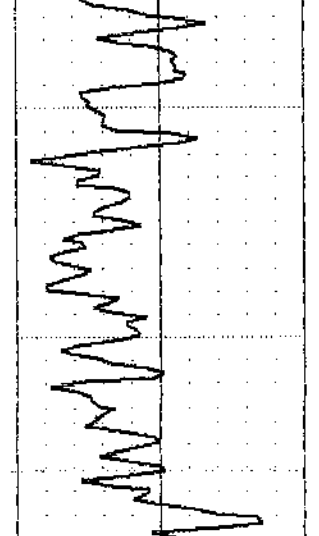
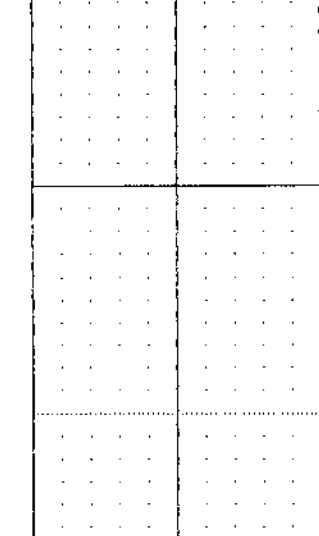
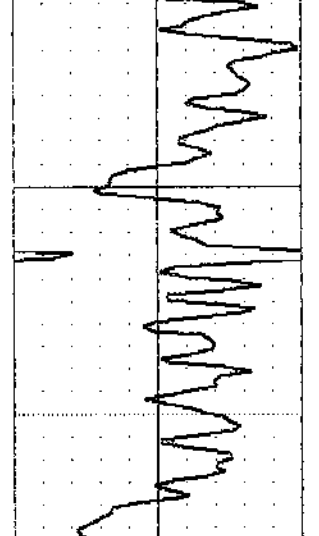
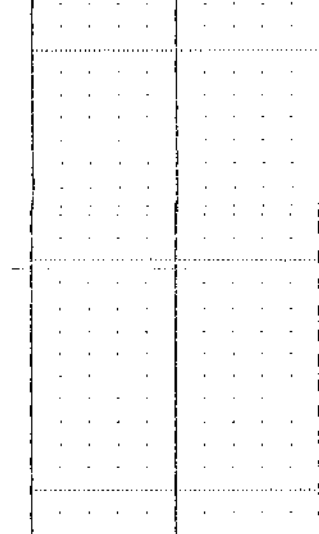
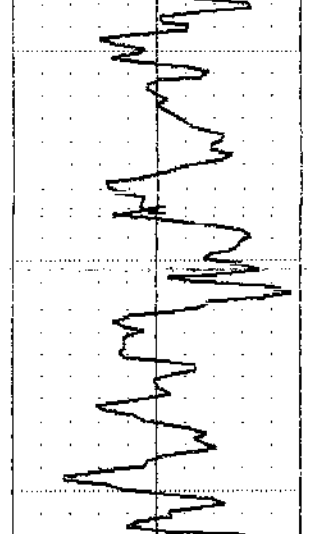
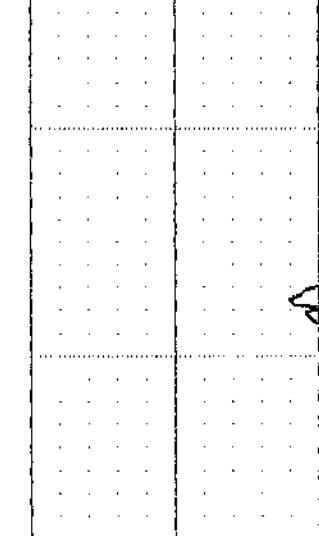
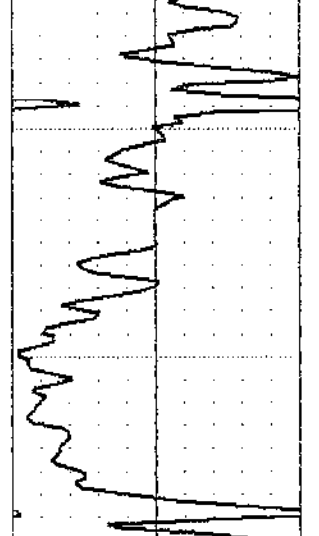
PERMANENT DATUM :
 ELEV. PERM. DATUM :
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL
 LOGGING UNIT : 8903
 FIELD OFFICE : CALGARY
 RECORDED BY : L. LITAL

BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE

RECORDED FLUID : WATER
 FILE : ORIGINAL
 RN :
 RN TEMPERATURE :
 MATRIX DELTA : 173
 FLUID DELTA : 490

REMARKS :
 LOGGED THROUGH RODS
 ANGLE HOLE 70 DEGREES
 WELL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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COL-DATE	COL-TIME	SPCE	SENSEP	RESPONSE	STANDARD
0 05-04-89	12:58:21	0	GAMMA1	0.000 CPS	0.000 RPI-GR
1 05-04-89	12:57:04	0	GAMMA1	0.000 CPS	0.000 RPI-GR



Century

QMR89522 GAM-DEN-RES-CAL

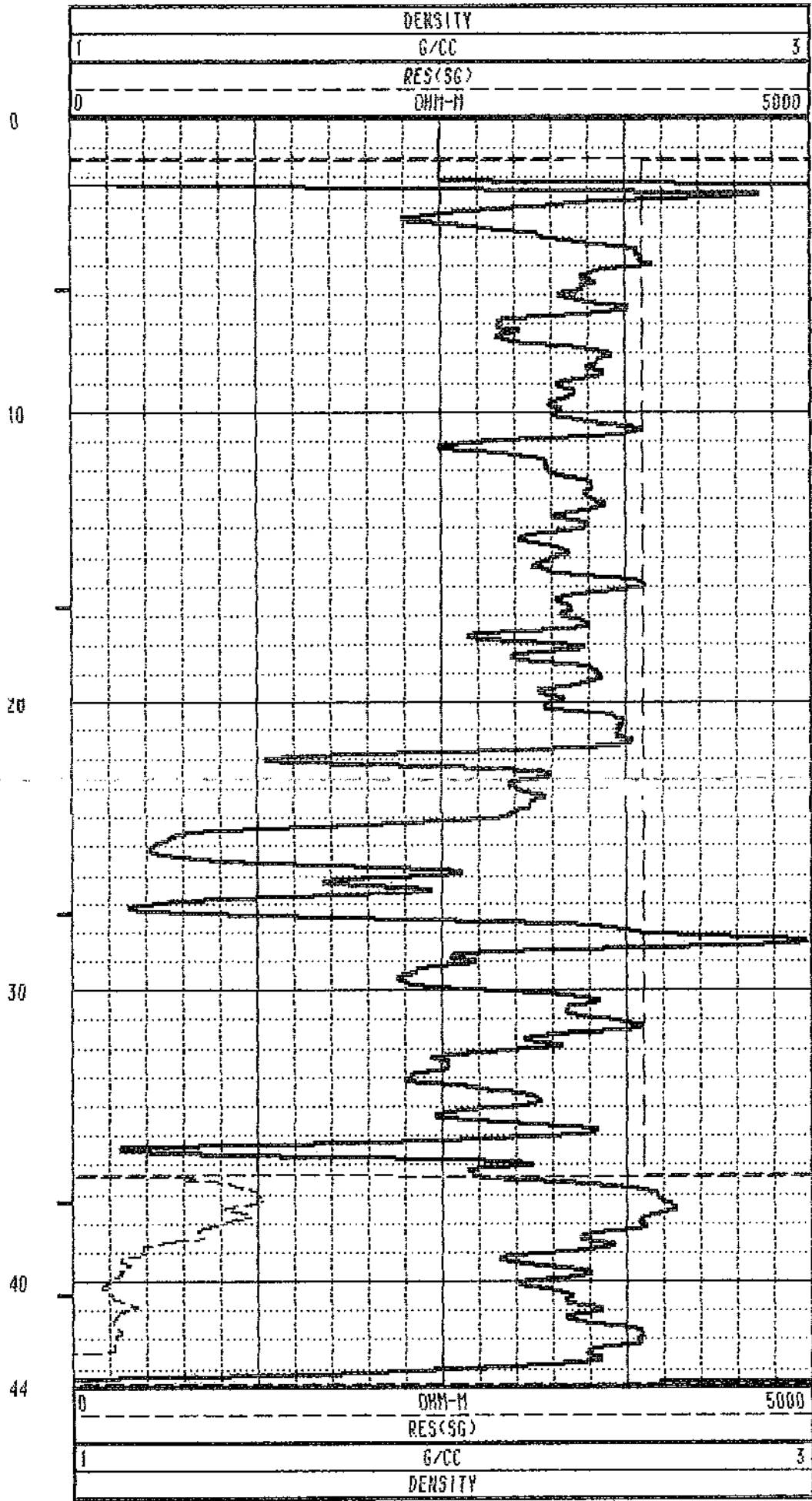
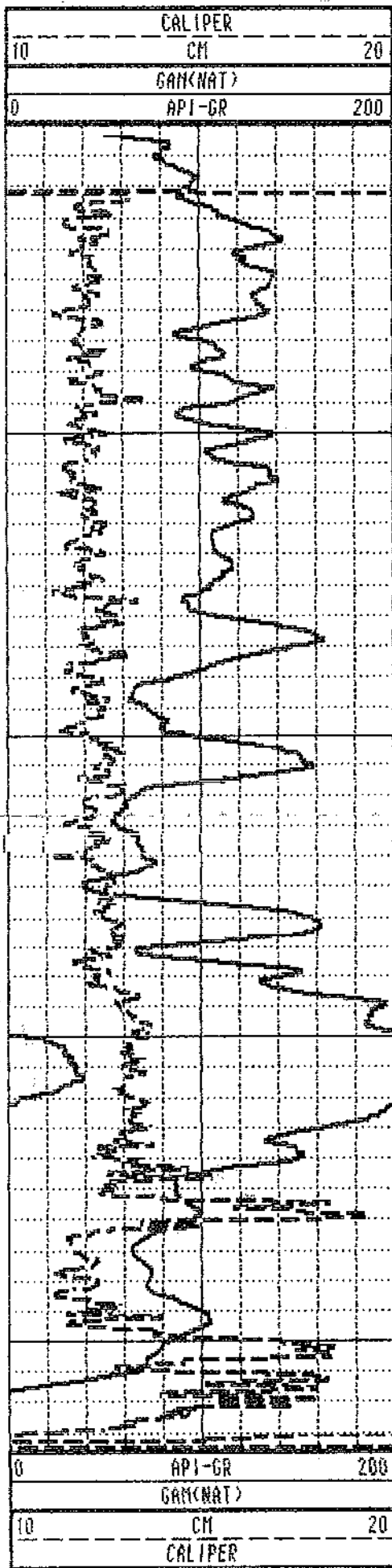
COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89522 GAM-DEN-RES-CAL
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA

SECTION : TOWNSHIP : RANGE :
 DATE : 06/27/89 PERMANENT DATUM : ELEVATIONS
 DEPTH DRILLER : 150 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 43.56 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.34 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 3 LOGGING UNIT : 8903
 CASING TYPE : STEEL FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9032AC
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 7
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 12
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000

REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 70 DEGREES
 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

QMR89522 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89522 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

DATE : 06/27/89
 DEPTH DRILLER : 150
 LOG BOTTOM : 149.00
 LOG TOP : 1.24
 CASING DRILLER : 3
 CASING TYPE : STEEL
 CASING THICKNESS: .05

PERMANENT DATUM :
 ELEV. PERM. DATUM: KB :
 LOG MEASURED FROM: GL DF :
 DRL MEASURED FROM: GL GL :

LOGGING UNIT : 8903
 FIELD OFFICE : CALGARY
 RECORDED BY : L. LETAL

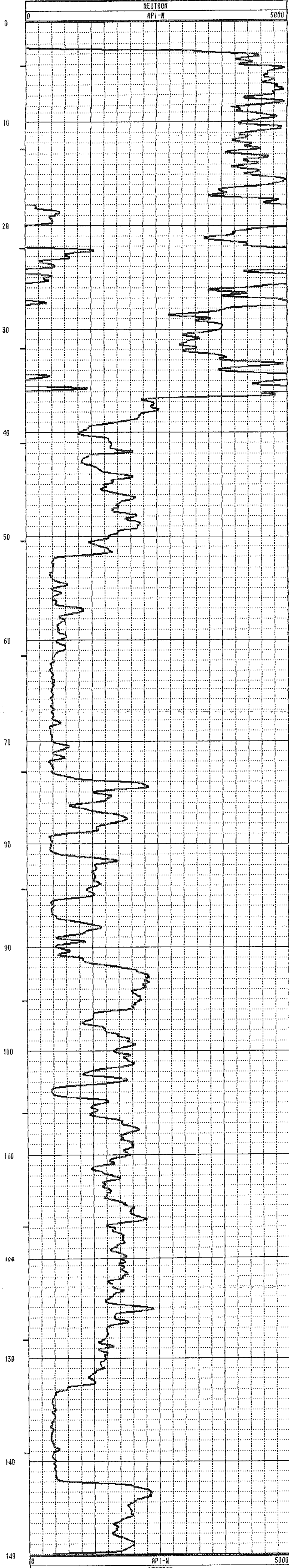
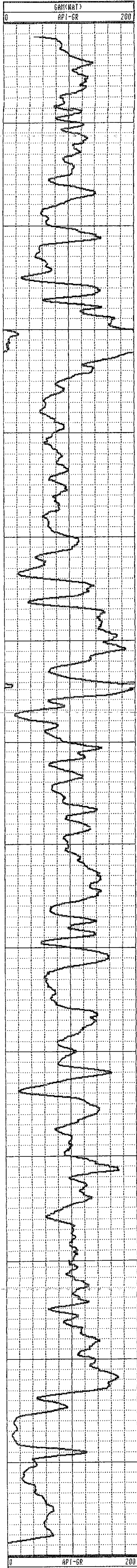
BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE

BOREHOLE FLUID : WATER
 RM :
 RM TEMPERATURE :
 MATRIX DELTA T : 173
 FLUID DELTA T : 690

FILE : ORIGINAL
 TYPE : 9055A
 LOG : 6
 PLOT : QUIN 10
 THRESH: 50000

REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 70 DEGREES
 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	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 HW
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MW
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

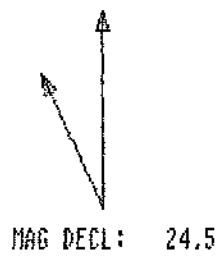
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89522 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/28/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 2

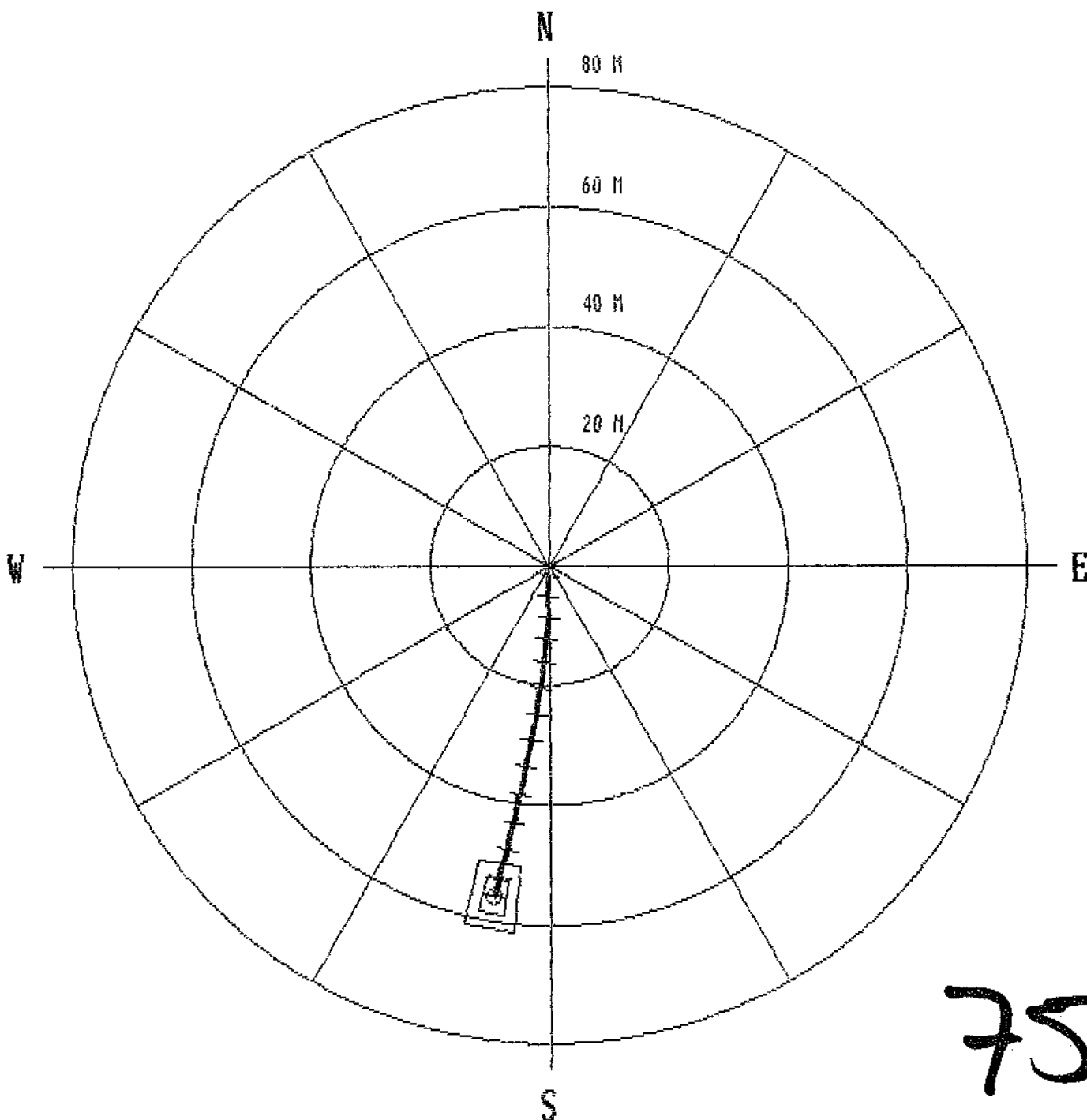
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANBB
4.0	3.93	0.35	-21	0.4	329.7	19.6	343.1
9.0	8.63	-9.5	-39	1.0	202.4	19.5	184.0
14.0	13.33	-2.61	-36	2.6	187.8	19.8	136.8
19.0	18.00	-4.29	-30	4.3	184.1	19.9	191.7
24.0	22.68	-5.99	-28	6.0	182.7	20.3	184.5
29.0	27.35	-7.68	-29	7.7	182.1	21.0	180.9
34.0	32.03	-9.42	-34	9.4	182.1	20.3	193.2
39.0	36.70	-11.09	-42	11.1	182.2	17.9	138.2
44.0	41.34	-12.82	-75	12.8	183.3	21.9	144.4
49.0	45.95	-14.62	-91	14.6	183.6	22.7	186.0
54.0	50.54	-16.46	-104	16.5	183.6	23.2	181.8
59.0	55.14	-18.38	-129	18.4	184.0	23.5	187.9
64.0	59.72	-20.36	-161	20.4	184.5	23.6	188.3
69.0	64.29	-22.35	-192	22.4	184.9	24.2	191.2
74.0	68.87	-24.33	-227	24.4	185.3	23.7	187.5
79.0	73.44	-26.31	-257	26.4	185.6	23.2	185.6
84.0	78.02	-28.27	-295	28.4	186.0	23.6	185.5
89.0	82.59	-30.21	-345	30.4	186.5	24.3	190.9
94.0	87.14	-32.23	-389	32.5	186.9	24.5	190.0
99.0	91.68	-34.27	-429	34.5	187.1	25.2	194.8
104.0	96.20	-36.35	-475	36.7	187.4	25.4	181.9
109.0	100.70	-38.45	-522	38.8	187.7	25.8	189.2
114.0	105.21	-40.54	-575	40.9	188.1	25.9	188.0
119.0	109.72	-42.64	-621	43.1	188.3	25.3	196.8
124.0	114.24	-44.70	-674	45.2	188.6	25.3	194.7
129.0	118.77	-46.76	-724	47.3	188.8	25.2	194.3
134.0	123.28	-48.84	-776	49.4	189.0	25.6	196.2
139.0	127.79	-50.90	-835	51.6	189.3	25.5	204.6
144.0	132.31	-52.97	-895	53.7	189.6	25.5	200.2
149.0	136.83	-55.03	-948	55.8	189.8	25.3	193.1
149.1	136.90	-55.04	-948	55.8	189.8	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: HOLVERINE VALLEY SOUTH
 HOLE ID: QMR89522 GAM-NEUTRON
 DATE OF LOG: 06/28/89
 PROBE: 9055A 14



SCALE: 10 M/CM
 TRUE DEPTH: 136.84 M
 AZIMUTH: 189.8
 DISTANCE: 55.8 M
 + = 10 M INCR
 O = BOTTOM OF HOLE



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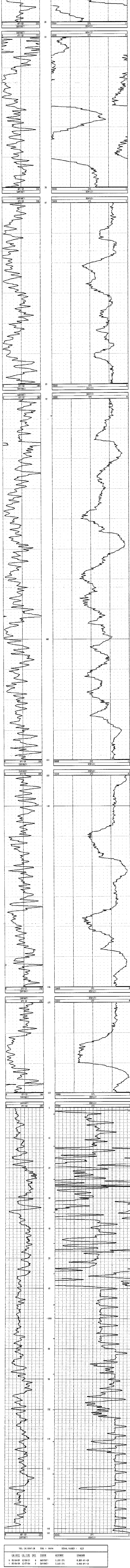
Century

QMR89523 GAM-DENSITY

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMR89523 GAM-DENSITY		
LOCATION/FIELD : WOLVERINE VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP :	RANGE :
DATE : 06/28/89	PERMIT/DATUM :	ELEVATIONS :
DEPTH DRILLER : 146	ELEV. FROM DATUM :	KB :
LOG BOTTOM : 141.42	LOG MEASURED FROM: GL	DF :
LOG TOP : -.74	DFL MEASURED FROM: GL	GL :
CASING DRILLER : 3	LOGGING UNIT : 8903	
CASING TYPE : STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05	RECORDED BY : L. LETAU	
BIT SIZE : 12.1	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 24.5	RH : TYPE : 9069A	
MATRIX DENSITY : 2.65	RH TEMPERATURE : LOG : 9	
FLUID DENSITY : 1.0	MATRIX DELTA T : 173	PLOT : QUIN 11
NEUTRON MATRIX : SANDSTONE	FLUID DELTA T : 690	THRESH: 50000

REMARKS
 LOGGED THROUGH RODS
 ANGLE HOLE 60 DEGREES
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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TOOL CALIBRATION			TOOL :	9069A	SERIAL NUMBER :	1029
DATE	CAL-TIME	SOURCE	SENSOR	RESPONSE	STANDARD	
8 05/04/89	12:58:21	6	GAM(DAT)	0.000 CPS	0.000 API-GR	
1 05/04/89	12:57:04	0	GR(NAT)	0.000 CPS	0.000 API-GR	



Century

QMR 89523 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89523 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

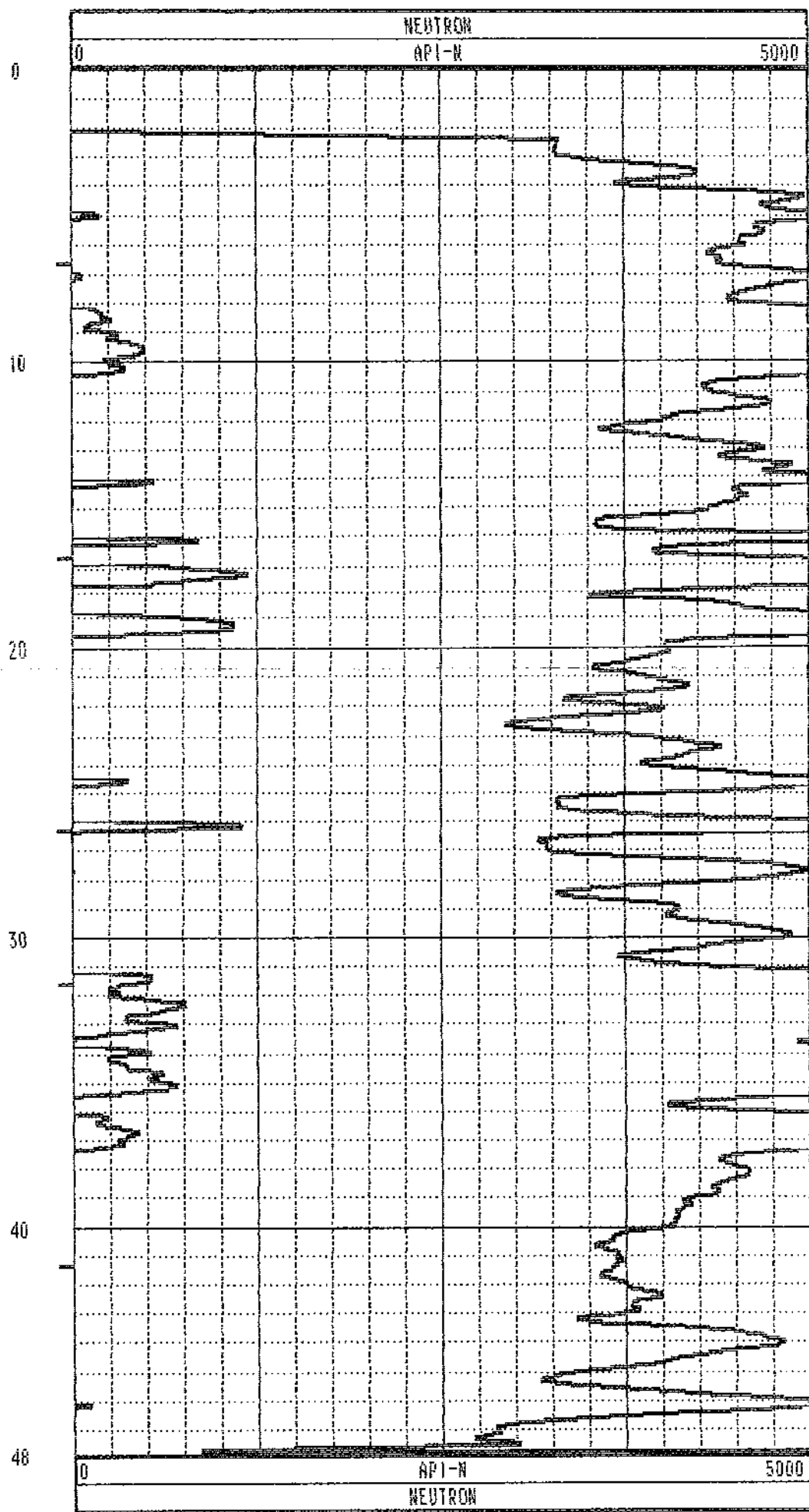
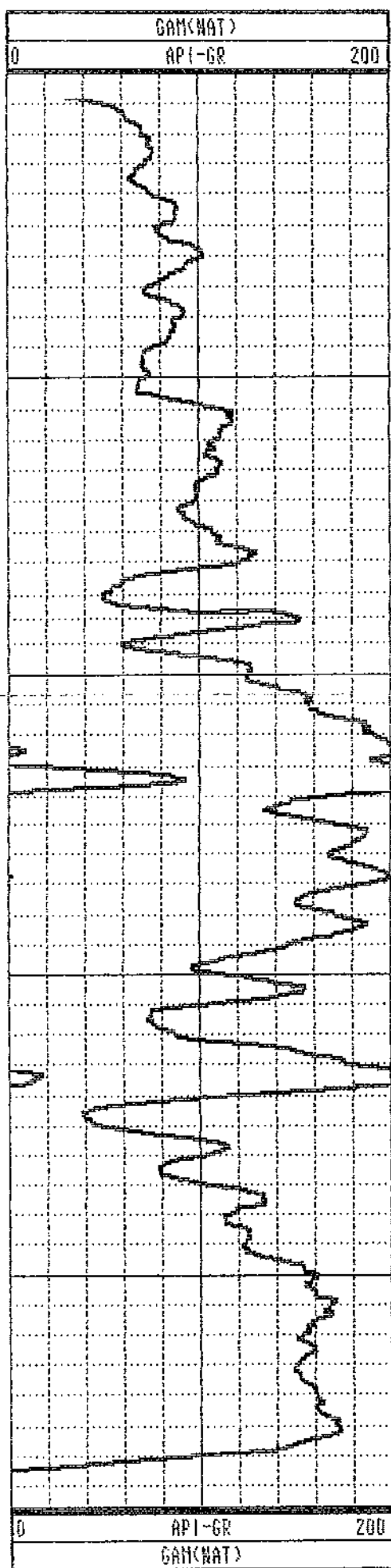
DATE : 06/28/89 PERMANENT DATUM : ELEVATIONS
 DEPTH DRILLER : 146 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 47.82 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.88 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 3 LOGGING UNIT : 8903
 CASING TYPE : STEEL FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 1
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 10
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 50000
 REMARKS :
 LOGGED OPEN HOLE
 ANGLE HOLE 60 DEGREES

OTHER SERVICES:

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(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 HV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 HV
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

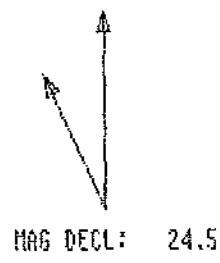
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89523 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 06/29/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 4

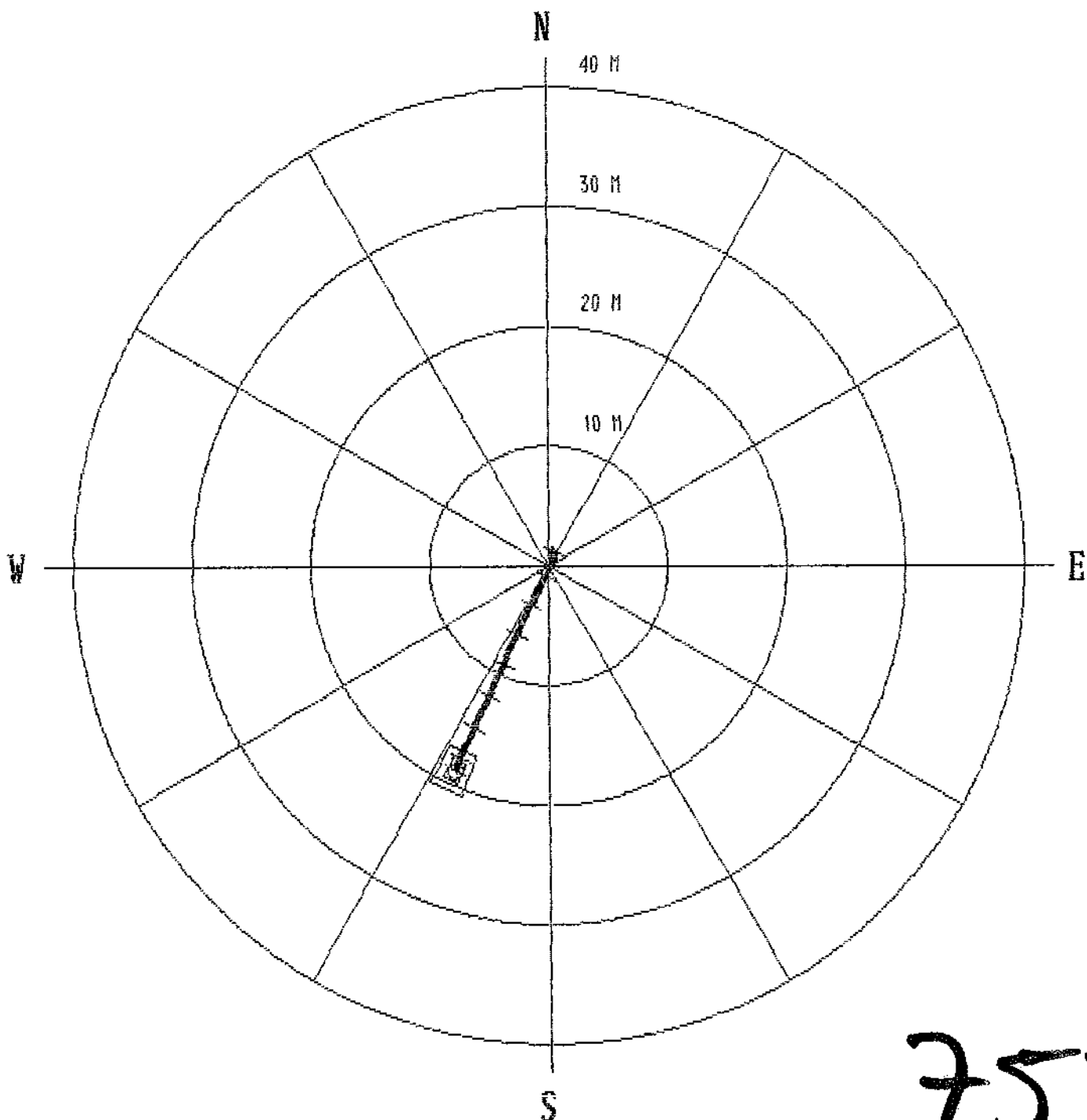
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
4.0	3.79	0.63	0.19	0.7	17.2	29.2	15.9
9.0	8.15	0.14	0.23	0.3	59.3	29.3	210.9
14.0	12.53	-2.00	-0.86	2.2	203.2	29.1	210.9
19.0	16.89	-4.15	-1.94	4.6	205.0	29.5	222.5
24.0	21.24	-6.35	-2.98	7.0	205.2	29.4	205.1
29.0	25.58	-8.59	-4.01	9.5	205.0	29.9	204.9
34.0	29.92	-10.84	-5.05	12.0	205.0	30.0	204.1
39.0	34.25	-13.09	-6.13	14.5	205.1	30.0	204.7
44.0	38.58	-15.34	-7.20	16.9	205.1	30.3	196.7
47.8	41.89	-17.05	-7.99	18.8	205.1	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

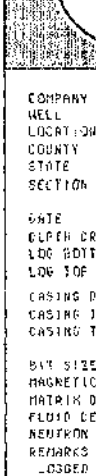
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89523 GAM-NEUTRON
 DATE OF LOG: 06/29/89
 PROBE: 9055A 14



SCALE: 5 M/CM
 TRUE DEPTH: 41.83 M
 AZIMUTH: 205.1
 DISTANCE: 18.8 M
 + = 5 M INCR
 O = BOTTOM OF HOLE



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Century

QMR 89524 GAM-DEN-RES-CAL

COMPANY : QUINCY COAL LTD.
 WELL : GREENSBORO GAM-DEN-RES-CAL
 LOCATION : TRANSFER
 COUNTY : BRITISH COLUMBIA
 SECTION : 10
 TOWNSHIP : 10
 RANGE : 10

DATE : 08-20-59
 LOG SHEET : 55-5
 LOG BOTTOM : 55.39
 LOG TOP : 0.00
 LOGGING DRILLER : J. W. BROWN
 CASING TYPE : PLASTIC
 CASING THICKNESS : .38

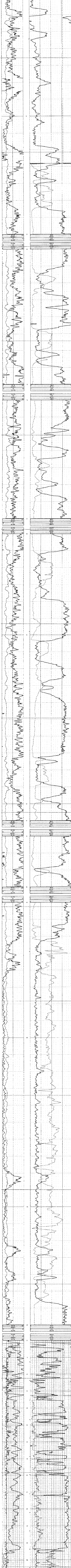
VERTICAL DATUM : ELEVATIONS
 ELE. PERM. DATUM : 66
 LOG MEASURED FROM : OL
 LOG MEASURED FROM : OL
 LOGGING UNIT : 5000
 FIELD OFFICE : CALGARY
 RECORDED BY : L. L. LEPL

BOREHOLE FLUID : WATER
 TEMPERATURE : 78.0
 MATH. TEMPERATURE : 77.2
 MATH. TEMPERATURE : 77.2
 MATH. TEMPERATURE : 77.2

FILE : ORIGINAL
 TYPE : ORIGINAL
 LOG :
 PLOT : 0.00
 TRACKS : 0.00

REMARKS :
 LOGGED OPEN HOLE
 SECTION : 10
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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LOG SHEET	DATE	DEPTH	RESISTIVITY	TEMPERATURE
0	08-20-59	0.00	600	78.0
1	08-20-59	0.00	600	78.0
2	08-20-59	0.00	600	78.0
3	08-20-59	0.00	600	78.0
4	08-20-59	0.00	600	78.0
5	08-20-59	0.00	600	78.0
6	08-20-59	0.00	600	78.0
7	08-20-59	0.00	600	78.0
8	08-20-59	0.00	600	78.0
9	08-20-59	0.00	600	78.0
10	08-20-59	0.00	600	78.0
11	08-20-59	0.00	600	78.0
12	08-20-59	0.00	600	78.0
13	08-20-59	0.00	600	78.0
14	08-20-59	0.00	600	78.0
15	08-20-59	0.00	600	78.0
16	08-20-59	0.00	600	78.0
17	08-20-59	0.00	600	78.0
18	08-20-59	0.00	600	78.0
19	08-20-59	0.00	600	78.0
20	08-20-59	0.00	600	78.0
21	08-20-59	0.00	600	78.0
22	08-20-59	0.00	600	78.0
23	08-20-59	0.00	600	78.0
24	08-20-59	0.00	600	78.0
25	08-20-59	0.00	600	78.0
26	08-20-59	0.00	600	78.0
27	08-20-59	0.00	600	78.0
28	08-20-59	0.00	600	78.0
29	08-20-59	0.00	600	78.0
30	08-20-59	0.00	600	78.0
31	08-20-59	0.00	600	78.0
32	08-20-59	0.00	600	78.0
33	08-20-59	0.00	600	78.0
34	08-20-59	0.00	600	78.0
35	08-20-59	0.00	600	78.0
36	08-20-59	0.00	600	78.0
37	08-20-59	0.00	600	78.0
38	08-20-59	0.00	600	78.0
39	08-20-59	0.00	600	78.0
40	08-20-59	0.00	600	78.0
41	08-20-59	0.00	600	78.0
42	08-20-59	0.00	600	78.0
43	08-20-59	0.00	600	78.0
44	08-20-59	0.00	600	78.0
45	08-20-59	0.00	600	78.0
46	08-20-59	0.00	600	78.0
47	08-20-59	0.00	600	78.0
48	08-20-59	0.00	600	78.0
49	08-20-59	0.00	600	78.0
50	08-20-59	0.00	600	78.0
51	08-20-59	0.00	600	78.0
52	08-20-59	0.00	600	78.0
53	08-20-59	0.00	600	78.0
54	08-20-59	0.00	600	78.0
55	08-20-59	0.00	600	78.0
56	08-20-59	0.00	600	78.0
57	08-20-59	0.00	600	78.0
58	08-20-59	0.00	600	78.0
59	08-20-59	0.00	600	78.0
60	08-20-59	0.00	600	78.0
61	08-20-59	0.00	600	78.0
62	08-20-59	0.00	600	78.0
63	08-20-59	0.00	600	78.0
64	08-20-59	0.00	600	78.0
65	08-20-59	0.00	600	78.0
66	08-20-59	0.00	600	78.0
67	08-20-59	0.00	600	78.0
68	08-20-59	0.00	600	78.0
69	08-20-59	0.00	600	78.0
70	08-20-59	0.00	600	78.0
71	08-20-59	0.00	600	78.0
72	08-20-59	0.00	600	78.0
73	08-20-59	0.00	600	78.0
74	08-20-59	0.00	600	78.0
75	08-20-59	0.00	600	78.0
76	08-20-59	0.00	600	78.0
77	08-20-59	0.00	600	78.0
78	08-20-59	0.00	600	78.0
79	08-20-59	0.00	600	78.0
80	08-20-59	0.00	600	78.0
81	08-20-59	0.00	600	78.0
82	08-20-59	0.00	600	78.0
83	08-20-59	0.00	600	78.0
84	08-20-59	0.00	600	78.0
85	08-20-59	0.00	600	78.0
86	08-20-59	0.00	600	78.0
87	08-20-59	0.00	600	78.0
88	08-20-59	0.00	600	78.0
89	08-20-59	0.00	600	78.0
90	08-20-59	0.00	600	78.0
91	08-20-59	0.00	600	78.0
92	08-20-59	0.00	600	78.0
93	08-20-59	0.00	600	78.0
94	08-20-59	0.00	600	78.0
95	08-20-59	0.00	600	78.0
96	08-20-59	0.00	600	78.0
97	08-20-59	0.00	600	78.0
98	08-20-59	0.00	600	78.0
99	08-20-59	0.00	600	78.0
100	08-20-59	0.00	600	78.0



Century

QMR89524 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89524 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : _____ TOWNSHIP : _____ RANGE : _____

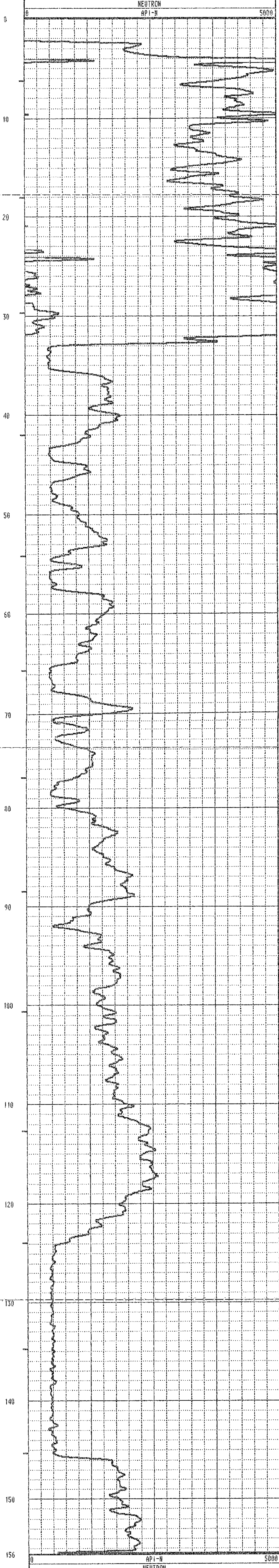
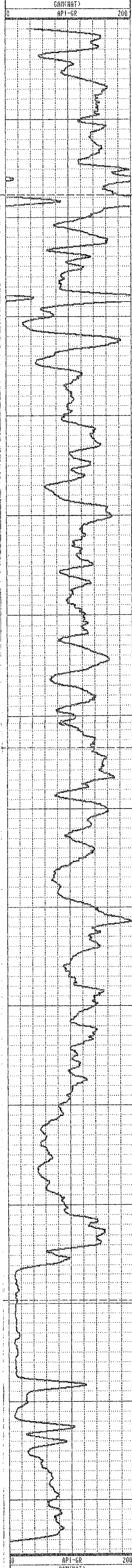
DATE : 06/29/89 PERMANENT DATUM : _____ ELEVATIONS
 DEPTH DRILLER : 155.5 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 155.52 LOG MEASURED FROM: GL DF :
 LOG TOP : 1.00 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 4 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : _____ TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : _____ LOG : 0
 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

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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	GAMCHAT	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMCHAT	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 HV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 HV
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

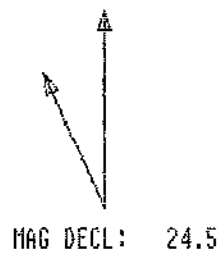
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89524 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 07/02/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 9

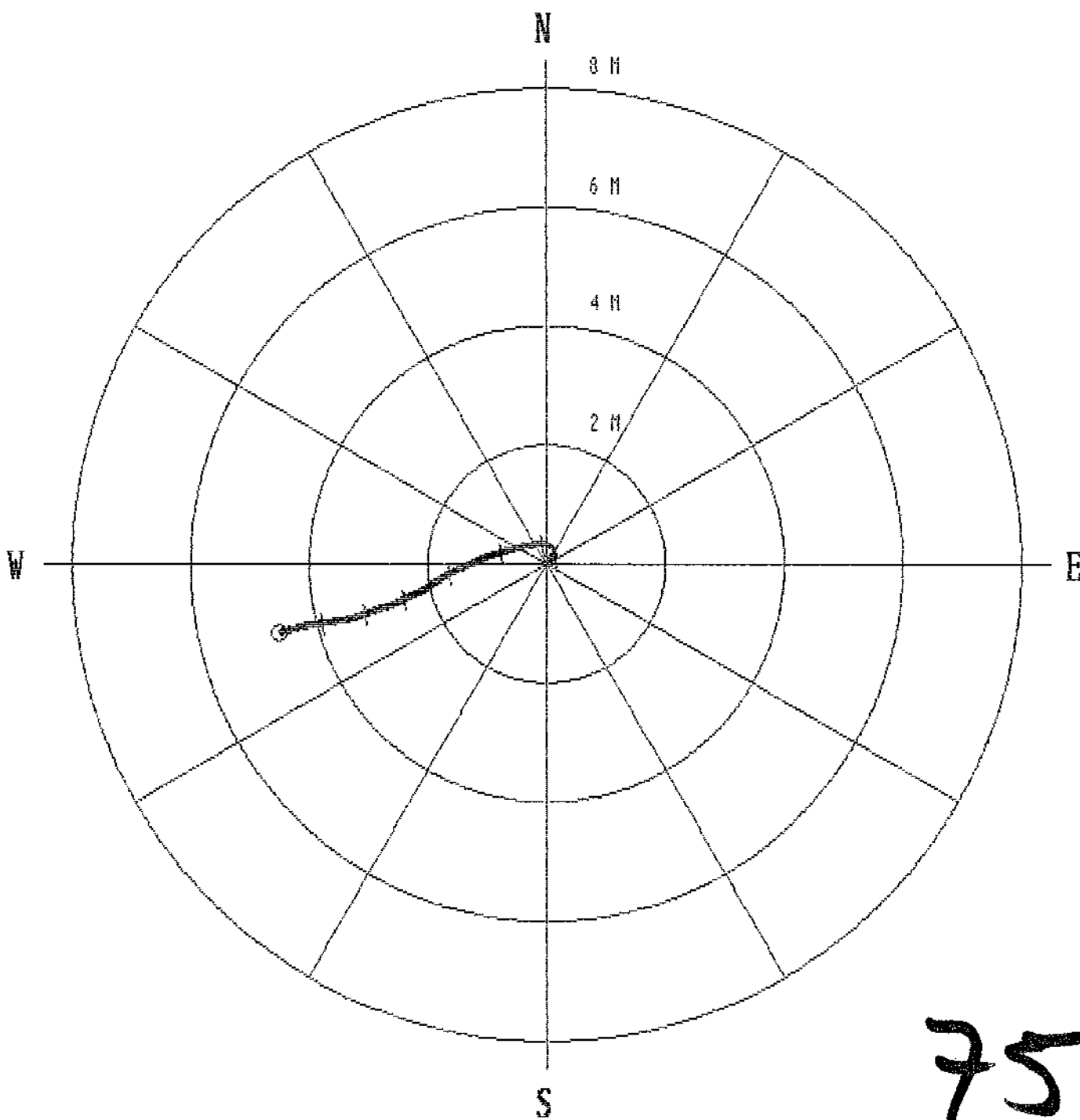
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
5.0	5.00	0.04	0.03	0.0	36.1	1.0	59.3
10.0	10.00	0.09	0.06	0.1	34.5	0.6	55.8
15.0	15.00	0.13	0.10	0.2	36.9	0.9	58.2
20.0	20.00	0.17	0.13	0.2	38.9	0.1	113.8
25.0	25.00	0.21	0.13	0.3	32.0	1.1	346.5
30.0	30.00	0.27	0.11	0.3	21.9	1.2	300.9
35.0	35.00	0.32	0.03	0.3	6.0	1.3	295.3
40.0	39.99	0.35	-0.07	0.4	349.0	1.3	262.7
45.0	44.99	0.33	-0.22	0.4	326.2	1.9	256.3
50.0	49.99	0.30	-0.39	0.5	307.5	2.5	259.0
55.0	54.98	0.25	-0.59	0.6	292.8	2.3	272.7
60.0	59.98	0.20	-0.78	0.8	284.1	2.2	251.7
65.0	64.98	0.14	-0.97	1.0	278.3	2.8	249.5
70.0	69.97	0.04	-1.20	1.2	271.8	2.8	248.5
75.0	74.96	-0.05	-1.42	1.4	267.8	3.0	247.5
80.0	79.96	-0.16	-1.64	1.6	264.4	3.0	230.0
85.0	84.95	-0.30	-1.86	1.9	260.9	3.2	234.8
90.0	89.94	-0.43	-2.06	2.1	258.2	2.4	244.0
95.0	94.94	-0.52	-2.24	2.3	256.9	2.3	245.0
100.0	99.94	-0.60	-2.41	2.5	256.0	2.1	263.0
105.0	104.93	-0.68	-2.58	2.7	255.2	1.6	242.6
110.0	109.93	-0.74	-2.73	2.8	254.9	2.0	240.1
115.0	114.93	-0.79	-2.90	3.0	254.7	1.7	249.1
120.0	119.92	-0.84	-3.06	3.2	254.6	2.4	226.3
125.0	124.92	-0.90	-3.22	3.3	254.4	1.8	263.0
130.0	129.92	-0.94	-3.38	3.5	254.5	2.3	252.2
135.0	134.91	-0.97	-3.57	3.7	254.8	2.4	256.1
140.0	139.91	-1.00	-3.78	3.9	255.2	2.5	266.4
145.0	144.90	-1.03	-4.01	4.1	255.6	2.8	258.2
150.0	149.90	-1.08	-4.24	4.4	255.7	3.4	259.6
155.0	154.89	-1.16	-4.49	4.6	255.5	2.9	252.8
155.5	155.41	-1.17	-4.51	4.7	255.5	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

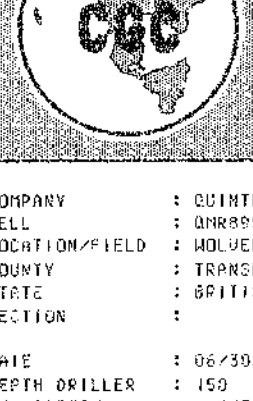
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89524 GAM-NEUTRON
 DATE OF LOG: 07/02/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 155.35 M
 AZIMUTH: 255.5
 DISTANCE: 4.7 M
 + = 20 M INCR
 O = BOTTOM OF HOLE



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Century

QMR89525 GAM-DENSITY

COMPANY : QUINTELL CORP. LTD. OTHER SERVICES:

WELL : QMR89525 GAM-DENSITY

LOCATION/FIELD : MID-WERNE VALLEY SQUIN

COUNTY : BRANFORD

STATE : BRITISH COLUMBIA

SECTION :

FORMATION :

RANGE :

DATE : 06/30/89

DEPTH DRILLER : 150

LOG BOTTOM : 147.20

LOG TOP : -44

CASING DRILLER : 3

CASING TYPE : STEEL

CASING THICKNESS : .05

BIT SIZE : 12.1

MAGNETIC DECL. : 24.5

MATRIX DENSITY : 2.68

FLUID DENSITY : 1.0

NEUTRON MATRIX : SANDSTONE

REMARKS : LOGGED THROUGH ROADS

VERTICAL SCALE :

PERMANENT DATUM :

ELEV. PERM. DATUM : KB

LOG MEASURED FROM: GL

DR. MEASURED FROM: GL

LOGGING UNIT : 0905

FIELD OFFICE : CALGARY

RECORDED BY : L. LUTAL

BOREHOLE FLUID : WATER

RH TEMPERATURE :

MATRIX DELTA T : 175

FLUID DELTA T : 690

ELEVATIONS :

TYPE : ORIGINAL

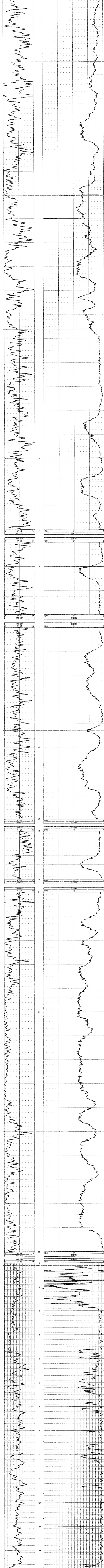
LOG : 2

PLOT : QUIN II

THRESH: 50000

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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DATE	TIME	AREA	SENSOR	RESPONSE	STANDARD
0 05-04-89	12:58:21	0	GAM-DENSITY	0.000 CPS	0.000 API-GR
1 05-04-89	12:57:04	0	GAM-DENSITY	0.000 CPS	0.000 API-GR



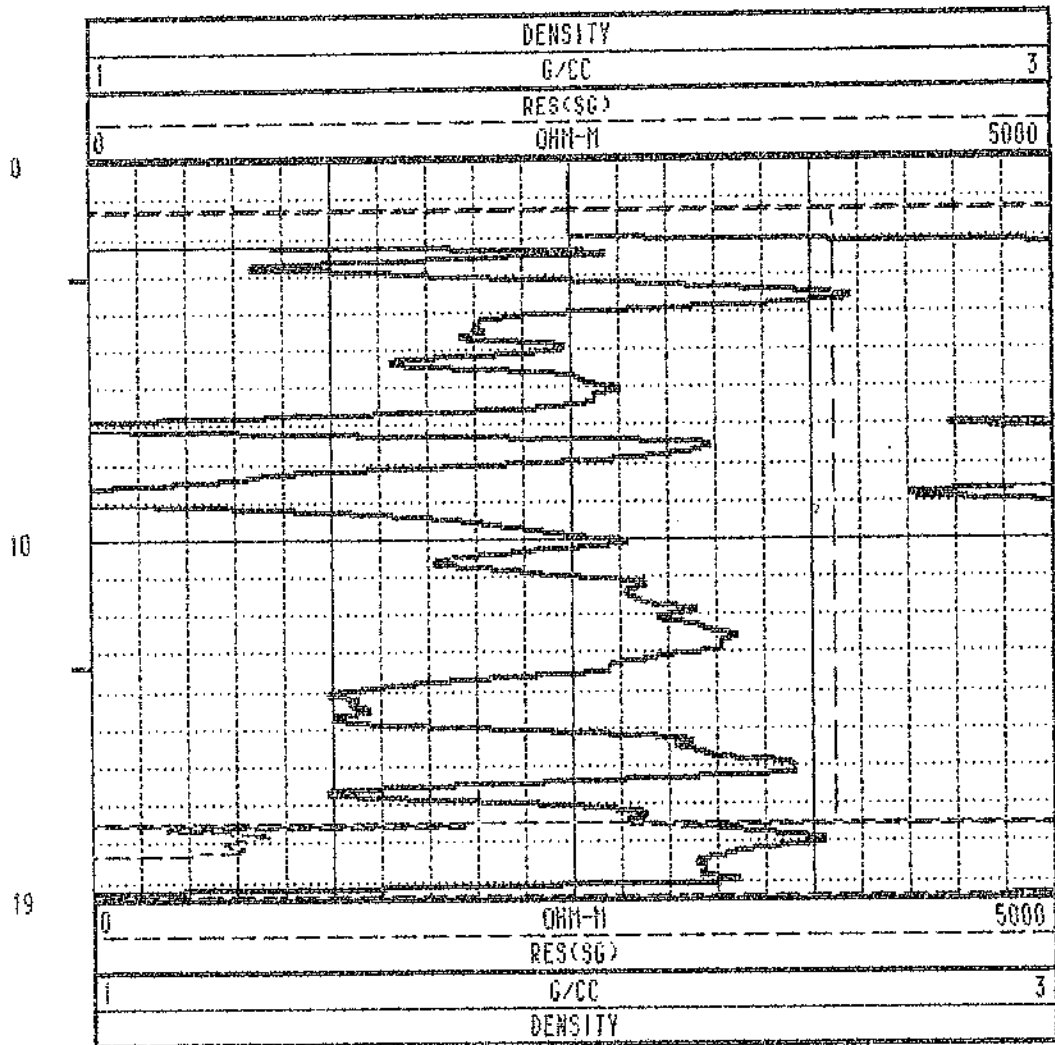
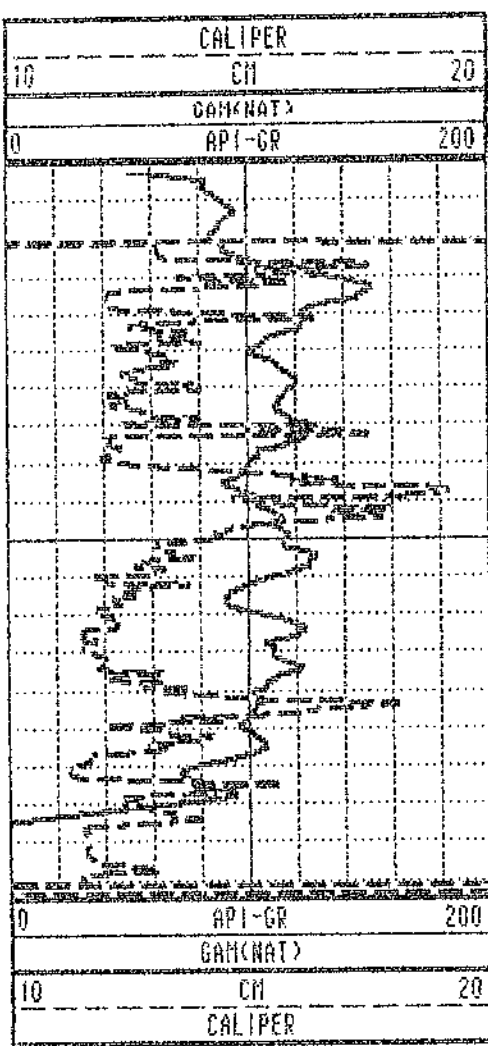
Century

QMR89525 GAM-DEN-RES-CAL

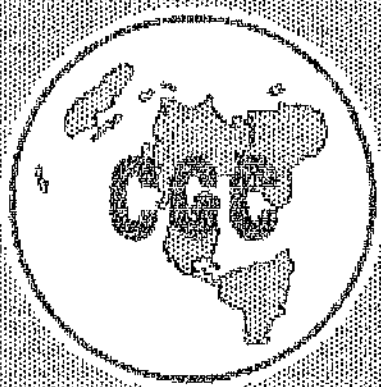
COMPANY : QUINTETTE COAL LTD. OTHER SERVICES :
 WELL : QMR89525 GAM-DEN-RES-CAL
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 06/30/89 PERMANENT DATUM : ELEVATIONS
 DEPTH DRILLER : 150 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 19.42 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.24 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 3 LOGGING UNIT : 8903
 CASING TYPE : STEEL FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL
 BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 24.5 RM : TYPE : 9032AC
 MATRIX DENSITY : 2.68 RM TEMPERATURE : LOG : 5
 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

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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(5G)	0.000 CPS	0.000 OHM-M
5	05/04/89 10:25:07	0	RES(5G)	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



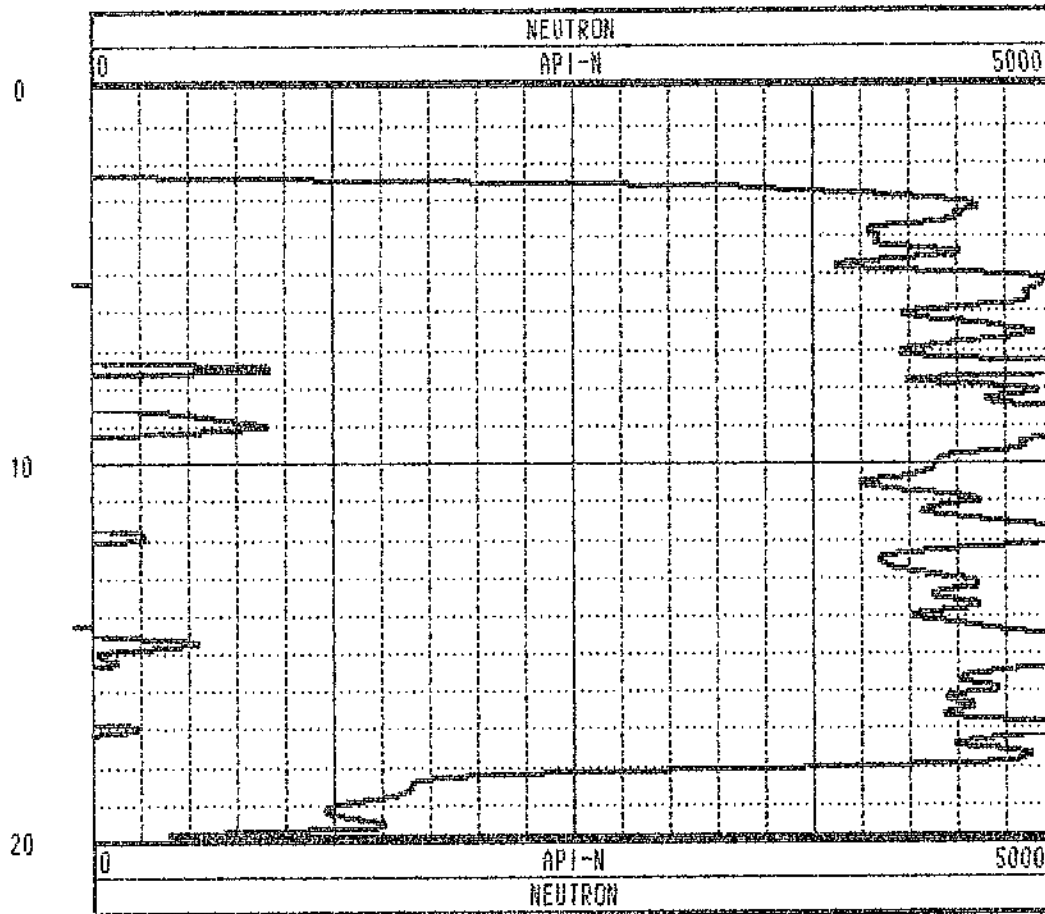
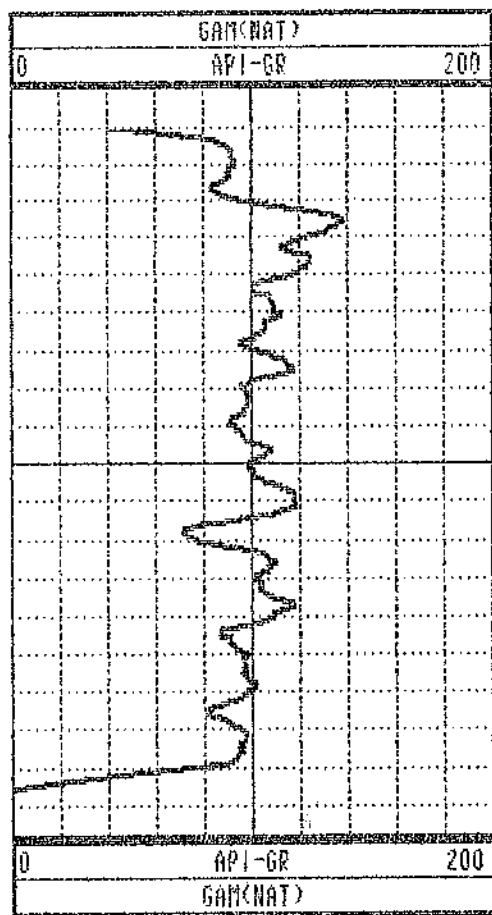
Century

QMR89525 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89525 GAM-NEUTRON		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 06/30/89	PERMANENT DATUM	:
DEPTH DRILLER	: 150	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 19.90	LOG MEASURED FROM:	GL DF :
LOG TOP	: 1.12	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 3	LOGGING UNIT	: 8903
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED OPEN HOLE		TYPE	: 9055A
VERTICAL HOLE		LOG	: 4
		PLOT	: QUIN 10
		THRESH	: 50000

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(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

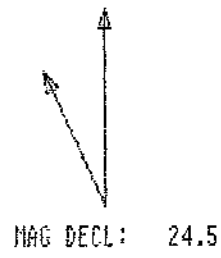
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89525 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 07/02/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

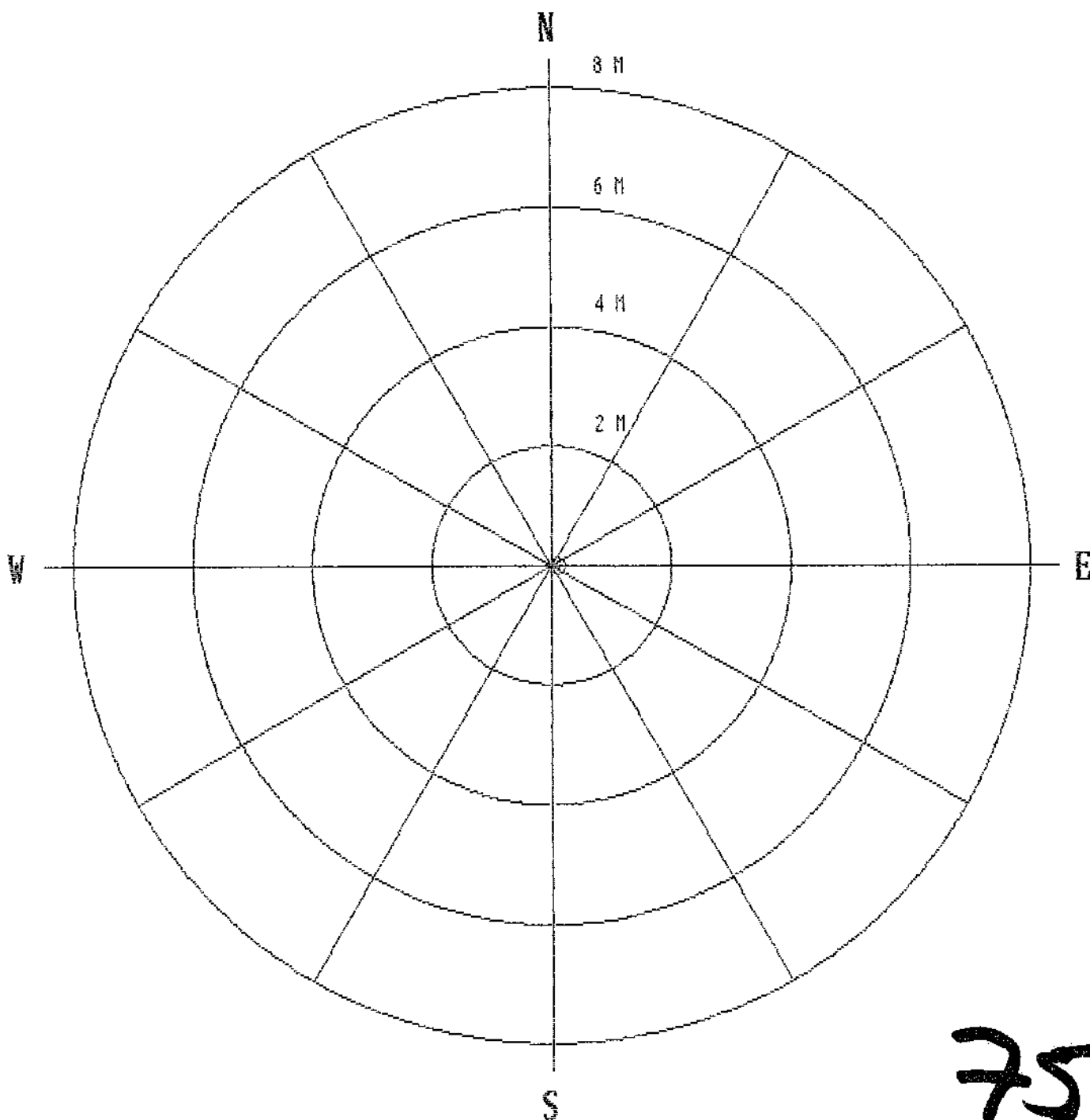
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
4.0	4.00	-0.00	0.01	0.0	103.3	0.8	71.6
9.0	9.00	0.01	0.03	0.0	79.0	0.6	40.4
14.0	14.00	0.02	0.06	0.1	75.1	0.6	26.4
19.0	19.00	0.01	0.10	0.1	85.8	0.7	82.6
19.9	19.90	0.01	0.11	0.1	83.8	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89525 GAM-NEUTRON
 DATE OF LOG: 07/02/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 19.84 M
 AZIMUTH: 83.8
 DISTANCE: 0.1 M
 + = 50 M INCR
 O = BOTTOM OF HOLE



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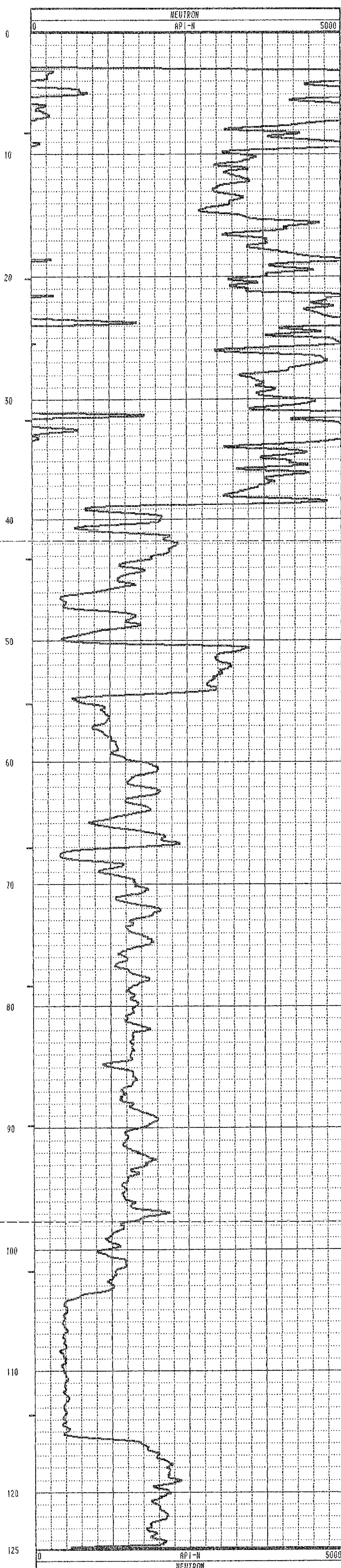
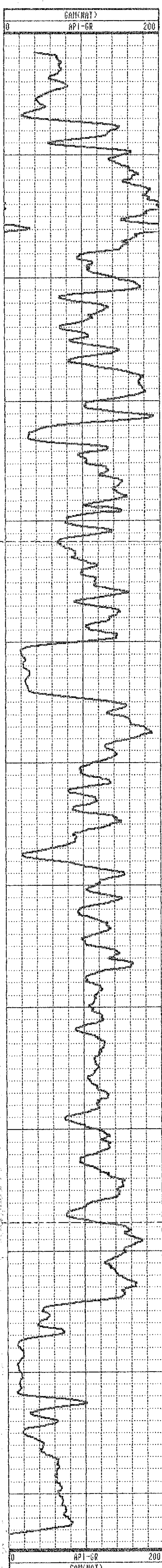
Century

QMR89526 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89526 GAM-NEUTRON		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 06/30/89	PERMANENT DATUM	:
DEPTH DRILLER	: 125	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 124.64	LOG MEASURED FROM:	GL :
LOG TOP	: 1.58	DRL MEASURED FROM:	GL :
CASING DRILLER	: 3	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	:
MATRIX DENSITY	: 2.68	RM TEMPERATURE	:
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9055A
ANGLE HOLE 65 DEGREES	:	LOG	: 7
		PLOT	: QUIN 10
		THRESH	: 50000

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 14		
CAL-DATE	CAL-TIME	SRC	SENSOR	RESPONSE	STANDARD	
0	05/04/89	08:10:36	0	GAMNAT	0.000 CPS	0.000 API-GR
1	05/04/89	08:10:36	0	GAMNAT	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 INV
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 INV
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-N
8	05/04/89	08:58:24	0	NEUTRON	145.000 CPS	271.000 API-N

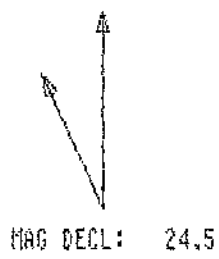
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89526 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 07/02/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 0

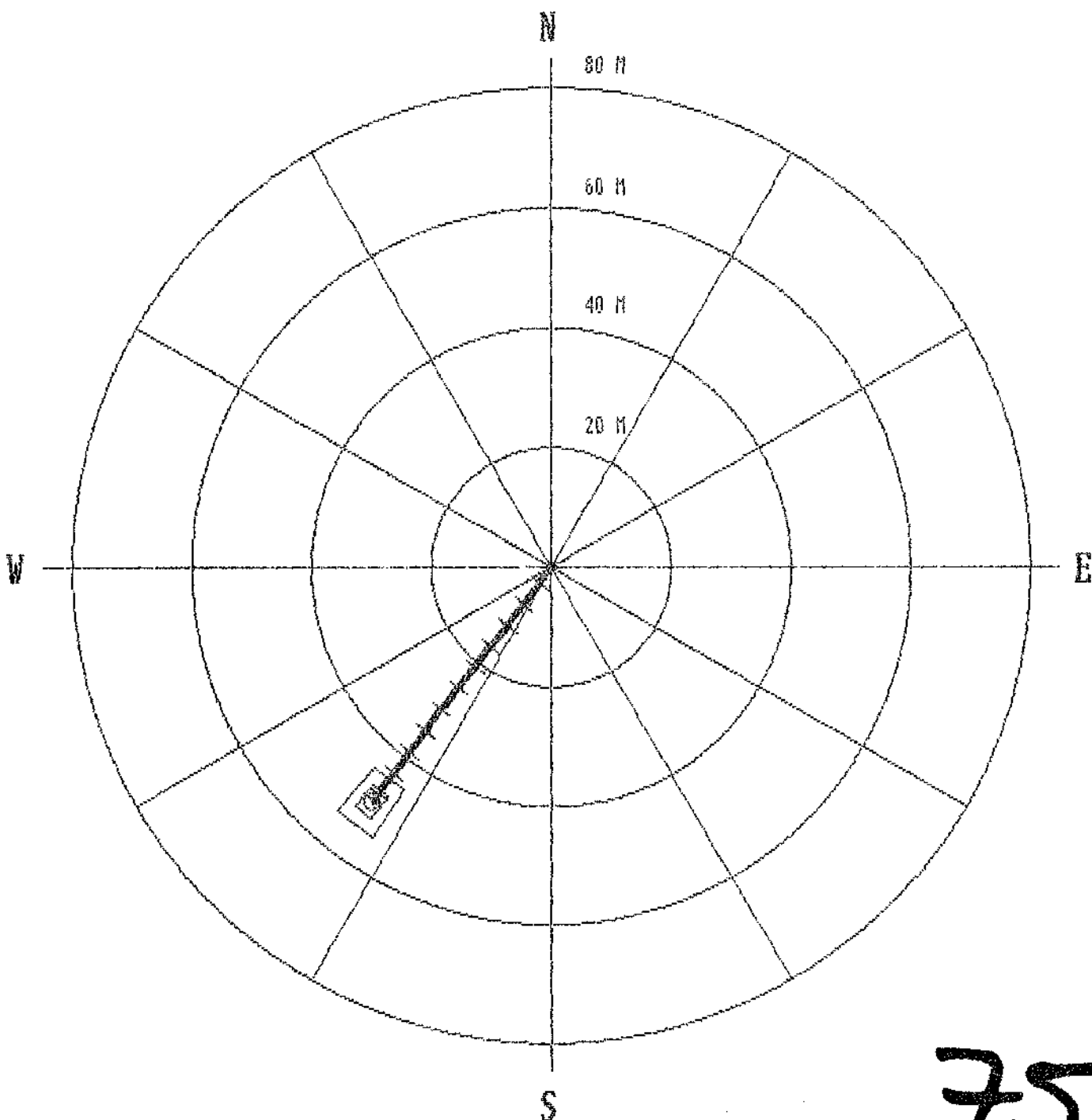
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGS
4.0	3.91	-.32	-.23	0.4	215.6	25.5	221.4
9.0	8.45	-1.98	-1.41	2.4	215.5	25.0	218.4
14.0	12.99	-3.67	-2.62	4.5	215.5	24.6	216.5
19.0	17.53	-5.32	-3.90	6.6	216.2	24.7	219.8
24.0	22.08	-6.97	-5.18	8.7	216.6	25.4	208.6
29.0	26.61	-8.47	-6.37	10.6	216.9	25.3	219.6
34.0	31.16	-10.10	-7.65	12.7	217.1	24.4	218.0
39.0	35.72	-11.70	-8.92	14.7	217.3	23.9	219.3
44.0	40.29	-13.26	-10.20	16.7	217.6	23.6	217.9
49.0	44.88	-14.81	-11.44	18.7	217.7	23.1	222.9
54.0	49.46	-16.38	-12.66	20.7	217.7	23.6	213.2
59.0	54.04	-17.98	-13.87	22.7	217.6	24.0	218.0
64.0	58.60	-19.58	-15.12	24.7	217.7	24.0	218.5
69.0	63.16	-21.16	-16.41	26.8	217.8	24.3	215.4
74.0	67.71	-22.79	-17.69	28.8	217.8	24.6	217.9
79.0	72.25	-24.42	-19.00	30.9	217.9	25.1	207.5
84.0	76.76	-26.11	-20.22	33.0	217.8	25.3	213.5
89.0	81.29	-27.83	-21.33	35.1	217.5	28.0	169.4
94.0	85.83	-29.39	-22.47	37.0	217.4	24.0	218.2
99.0	90.39	-31.00	-23.74	39.0	217.4	26.7	204.3
104.0	94.95	-32.62	-24.97	41.1	217.4	24.5	215.8
109.0	99.52	-34.21	-26.22	43.1	217.5	23.5	216.9
114.0	104.10	-35.80	-27.43	45.1	217.5	23.9	214.5
119.0	108.68	-37.35	-28.68	47.1	217.5	24.2	215.8
124.0	113.27	-38.91	-29.86	49.0	217.5	23.2	222.7
124.6	113.87	-39.08	-30.00	49.3	217.5	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

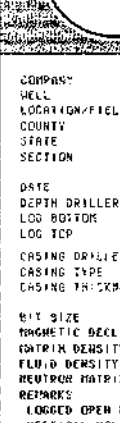
CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89526 GAM-NEUTRON
 DATE OF LOG: 07/02/89
 PROBE: 9055A 14



SCALE: 10 M/CM
 TRUE DEPTH: 113.81 M
 AZIMUTH: 217.5
 DISTANCE: 49.3 M
 + = 10 M INCR
 O = BOTTOM OF HOLE



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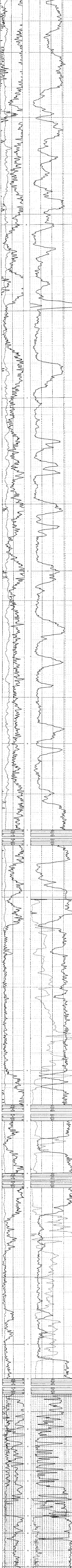


Century

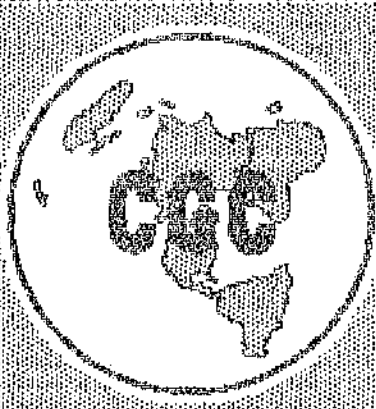
JMR 89527 GAM-DEN-RES-CAL

COMPANY	QUINTELL CORP. LTD.	OTHER SERVICE	
WELL	0808527 GAM-DEN-RES-CAL		
LOCATION/FIELD	WOLFRINE HILLY		
COUNTY	TRASSER		
SECTION	SECTION	FRAC	
DATE	07/15/89	PERMANENT DATA	
DEPTH DRILLER	122	ELEV. PERM. DATA	
LOG SECTION	121-120	LOG MEASURED FROM	0'
LOG TOP	58	LOG MEASURED FROM	2'
CASING DEPTH	3	LOGGING UNIT	8503
CASING TYPE	STEEL	FIELD OFFICE	TRASSER
CASING P.C. PRESS.	65	RECORDED BY	T.C. LETA
BIT SIZE	12 1/4	WIRELINE FLUID	WATER
MOTORIC BEEL	24.5	WT	8.75
DENSITY	2.55	WT TEMPERATURE	120
WATER DENSITY	1.0	WATER DENSITY	1.0
WATER VISCOSITY	1.0	WATER VISCOSITY	1.0
WATER PHOSPHORUS	0.0000	WATER PHOSPHORUS	0.0000
REMARKS			
LOCKED OPEN			
VERTICAL HOLD			
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS			

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LOG	DATE	TIME	SIZE	SECTION	DEPTH	DEPTH	DEPTH
6	05-04-89	12:13:58	0	0808527	0.000	0.000	0.000
2	05-04-89	12:14:06	0	0808527	0.000	0.000	0.000
2	05-04-89	12:14:12	0	0808527	0.000	0.000	0.000
4	05-04-89	12:14:18	0	0808527	0.000	0.000	0.000
5	05-04-89	12:14:27	0	0808527	0.000	0.000	0.000
2	05-04-89	12:14:34	0	0808527	0.000	0.000	0.000
3	05-04-89	12:14:41	0	0808527	0.000	0.000	0.000
6	05-04-89	12:14:50	0	0808527	0.000	0.000	0.000
6	05-04-89	12:14:58	0	0808527	0.000	0.000	0.000
2	05-04-89	12:15:03	0	0808527	0.000	0.000	0.000
2	05-04-89	12:15:07	0	0808527	0.000	0.000	0.000



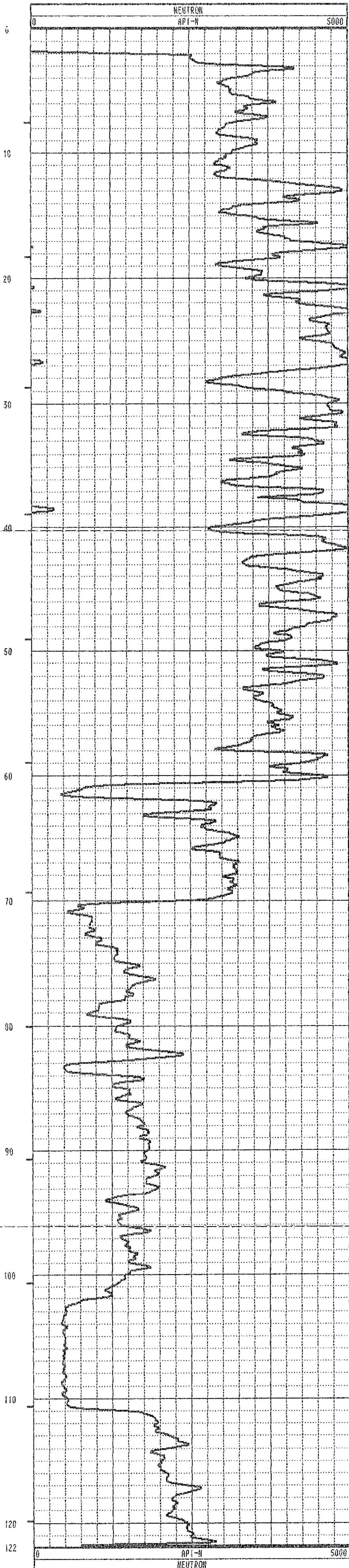
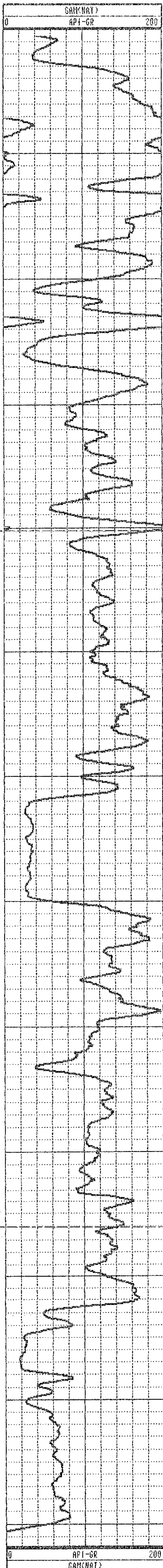
Century

QMR 89527 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89527 GAM-NEUTRON		
LOCATION/FIELD	: HOLVORINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:
DATE	: 07/15/89	PERMANENT DATUM	: ELEVATIONS
DEPTH DRILLER	: 122	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 121.90	LOG MEASURED FROM:	GL DF :
LOG TOP	: 0.62	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 3	LOGGING UNIT	: 8903
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
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 : 7
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

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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

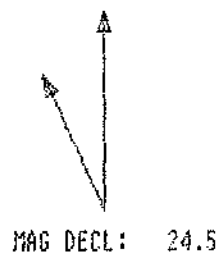
***** COMPU-LOG II -- VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89527 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 07/15/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 1

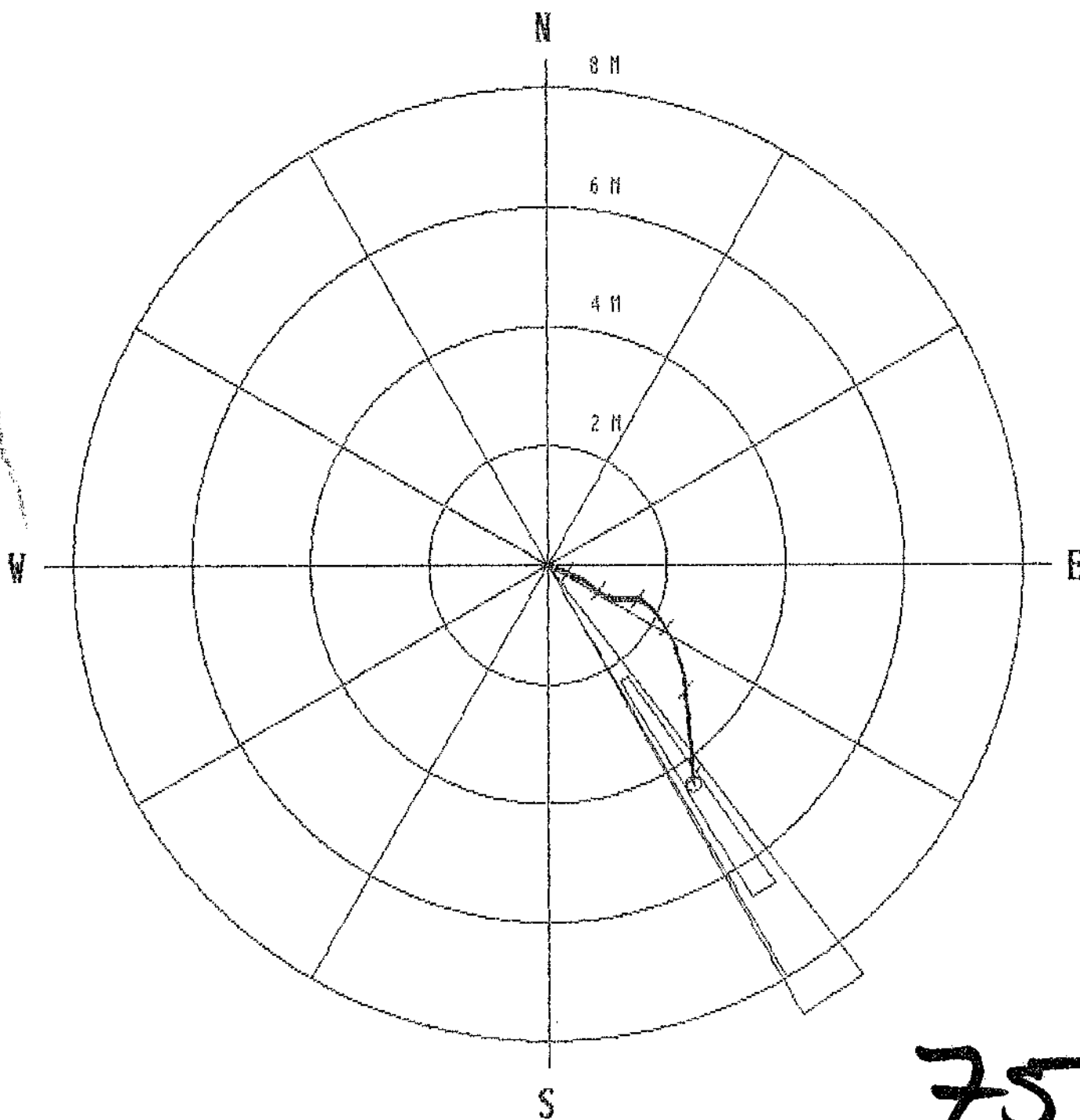
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
4.0	4.00	-.01	-.01	0.0	227.7	0.9	192.3
9.0	9.00	-.05	0.05	0.1	137.2	1.1	115.3
14.0	14.00	-.08	0.16	0.2	117.0	1.7	91.2
19.0	18.99	-.12	0.29	0.3	112.7	1.3	107.8
24.0	23.99	-.17	0.43	0.5	112.3	1.3	128.9
29.0	28.99	-.24	0.56	0.6	113.1	1.9	129.7
34.0	33.99	-.33	0.69	0.8	115.4	1.6	133.8
39.0	38.99	-.42	0.81	0.9	117.5	1.9	131.7
44.0	43.98	-.50	0.93	1.1	118.4	1.7	129.8
49.0	48.98	-.55	1.09	1.2	116.9	1.9	95.3
54.0	53.98	-.57	1.28	1.4	113.9	2.2	85.2
59.0	58.97	-.57	1.46	1.6	111.2	1.9	116.6
64.0	63.97	-.62	1.62	1.7	111.0	2.0	123.0
69.0	68.97	-.74	1.74	1.9	112.9	2.2	139.4
74.0	73.96	-.88	1.86	2.1	115.3	2.0	137.3
79.0	78.96	-1.02	1.96	2.2	117.6	2.3	139.9
84.0	83.96	-1.22	2.07	2.4	120.5	2.9	152.2
89.0	88.95	-1.46	2.15	2.6	124.1	3.1	171.5
94.0	93.94	-1.72	2.24	2.8	127.5	3.0	179.9
99.0	98.93	-2.04	2.30	3.1	131.6	3.9	169.1
104.0	103.92	-2.38	2.33	3.3	135.6	3.9	172.7
109.0	108.91	-2.74	2.37	3.6	139.2	4.2	167.2
114.0	113.89	-3.10	2.40	3.9	142.2	4.2	171.8
119.0	118.88	-3.47	2.43	4.2	145.0	4.2	178.4
121.9	121.77	-3.67	2.44	4.4	146.4	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

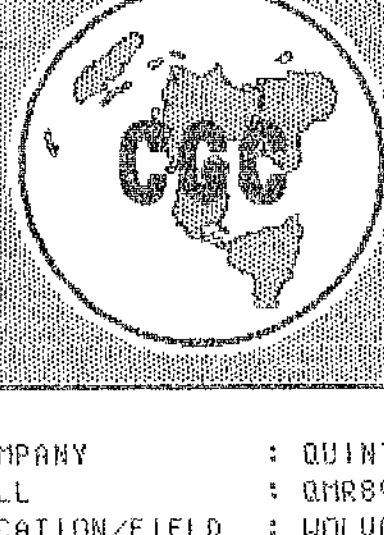
CLIENT: QUINTETTE COAL LTD.
 LOCATION: MDLORINE VALLEY SOUTH
 HOLE ID: QMR89527 GAM-NEUTRON
 DATE OF LOG: 07/15/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 121.71 M
 AZIMUTH: 146.4
 DISTANCE: 4.4 M
 + = 20 M INCR
 O = BOTTOM OF HOLE



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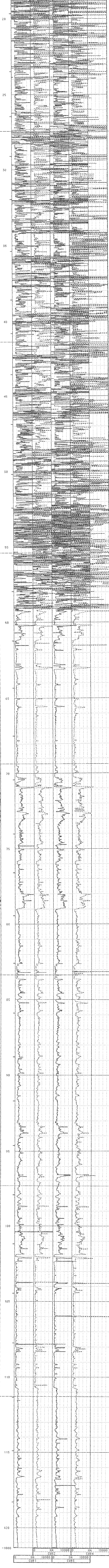
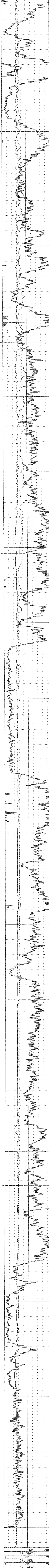
Century

QMR89527 DIPMETRE

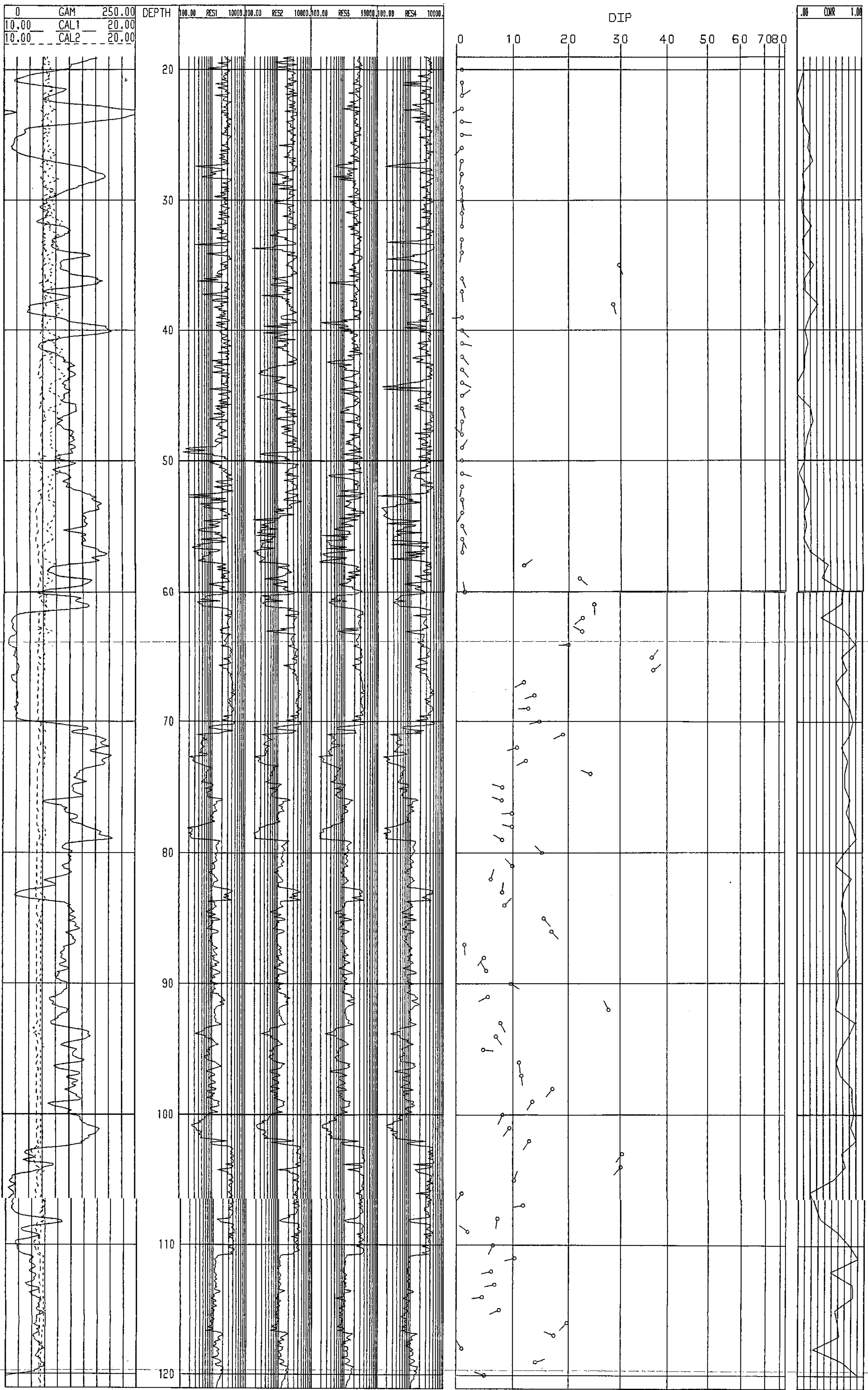
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89527 DIPMETRE		
LOCATION/FIELD	: WOLUORINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:
DATE	: 07/15/89	PERMANENT DATUM	: ELEVATIONS
DEPTH DRILLER	: 122	ELEV. PERM. DATUM:	KB
LOG BOTTOM	: 121.34	LOG MEASURED FROM:	GL
LOG TOP	: 17.26	DRL MEASURED FROM:	GL
CASING DRILLER	: 3	LOGGING UNIT	: 8903
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS	: .05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RH	: 00
MATRIX DENSITY	: 2.68	RH TEMPERATURE	: 00
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9400A
VERTICAL HOLE	:	LOG	: 3
		PLOT	: 9400 0
		THRESH	: 50000

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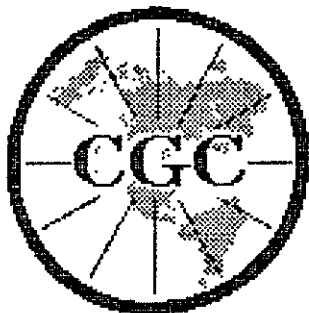
753



753



753



Century
GEOPHYSICAL CORP.

QMR89527 DIPMETRE

COMPANY : QUINTETTE COAL LTD.
WELL : QMR89527 DIPMETRE
LOCATION/FIELD : WOLVORINE VALLEY SOUTH
COUNTY : TRANSFER
STATE : BRITISH COLUMBIA
SECTION :

OTHER SERVICES:

TOWNSHIP :

RANGE :

DATE : 07/15/89
DEPTH DRILLER : 122
LOG BOTTOM : 121.34
LOG TOP : 17.26

PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM: GL
DRL MEASURED FROM: GL

ELEVATIONS
KB :
DF :
GL :

CASING DRILLER : 3
CASING TYPE : STEEL
CASING THICKNESS: .05

LOGGING UNIT : 8903
FIELD OFFICE : CALGARY
RECORDED BY : L. LETAL

BIT SIZE : 12.1
MAGNETIC DECL. : 24.5
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
NEUTRON MATRIX : SANDSTONE
REMARKS :

BOREHOLE FLUID : WATER
RM : 00
RM TEMPERATURE : 00
MATRIX DELTA T : 173
FLUID DELTA T : 690

FILE : ORIGINAL
TYPE : 9400A
LOG : 0
PLOT : 9400 4
THRESH: 50000

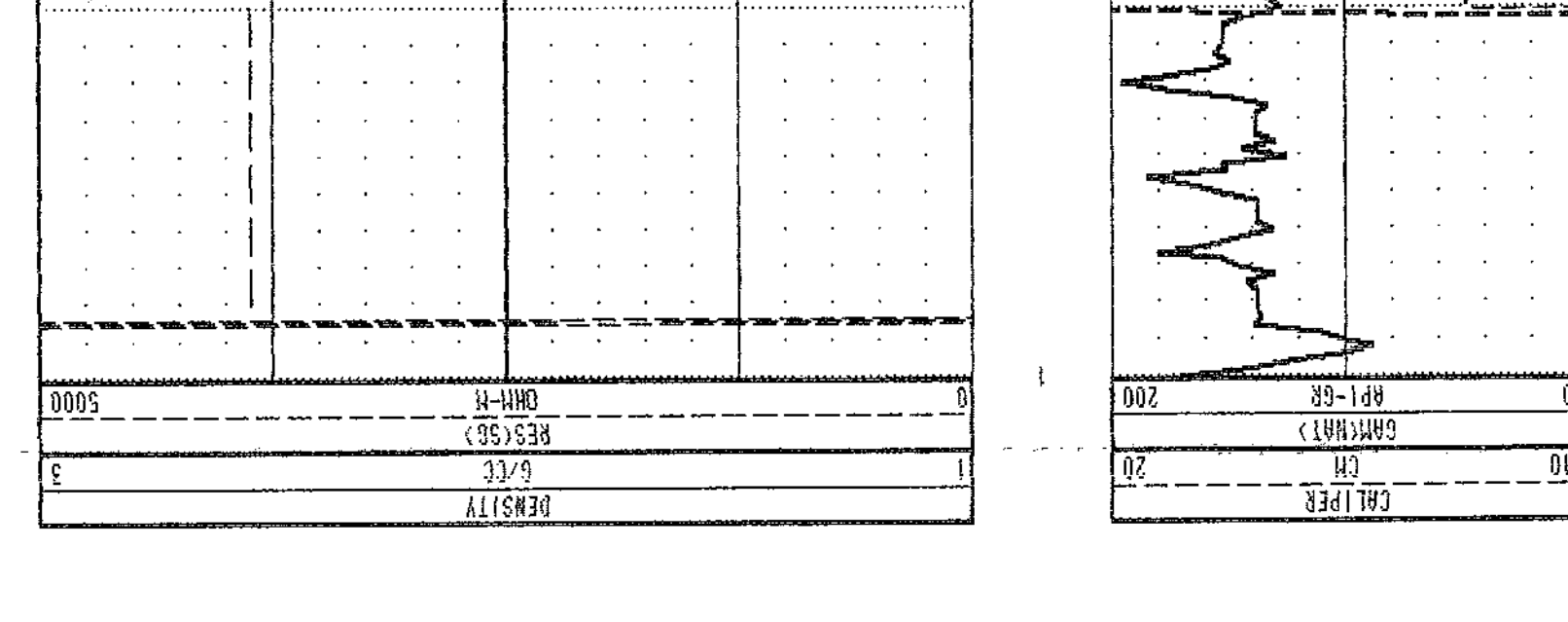
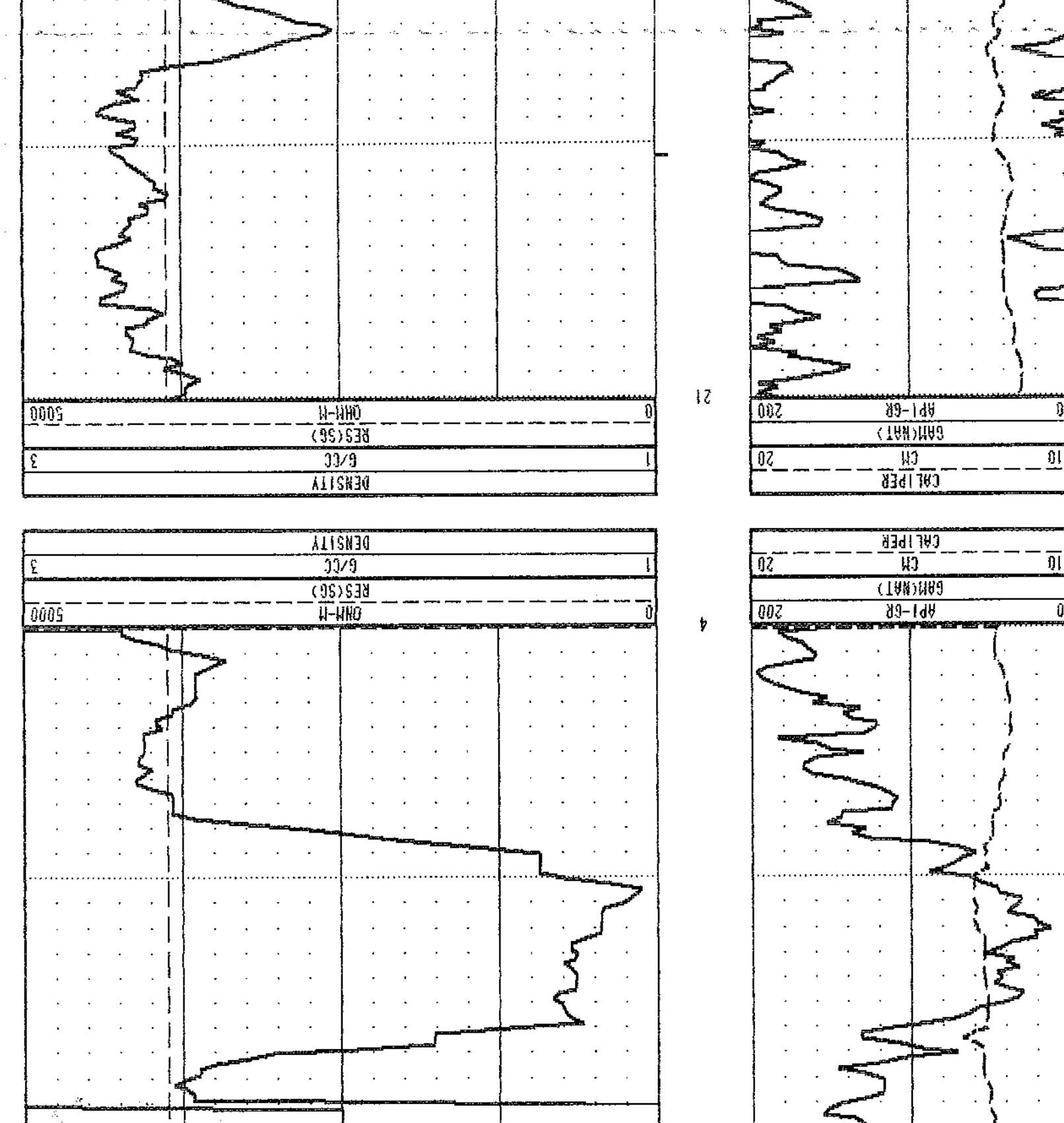
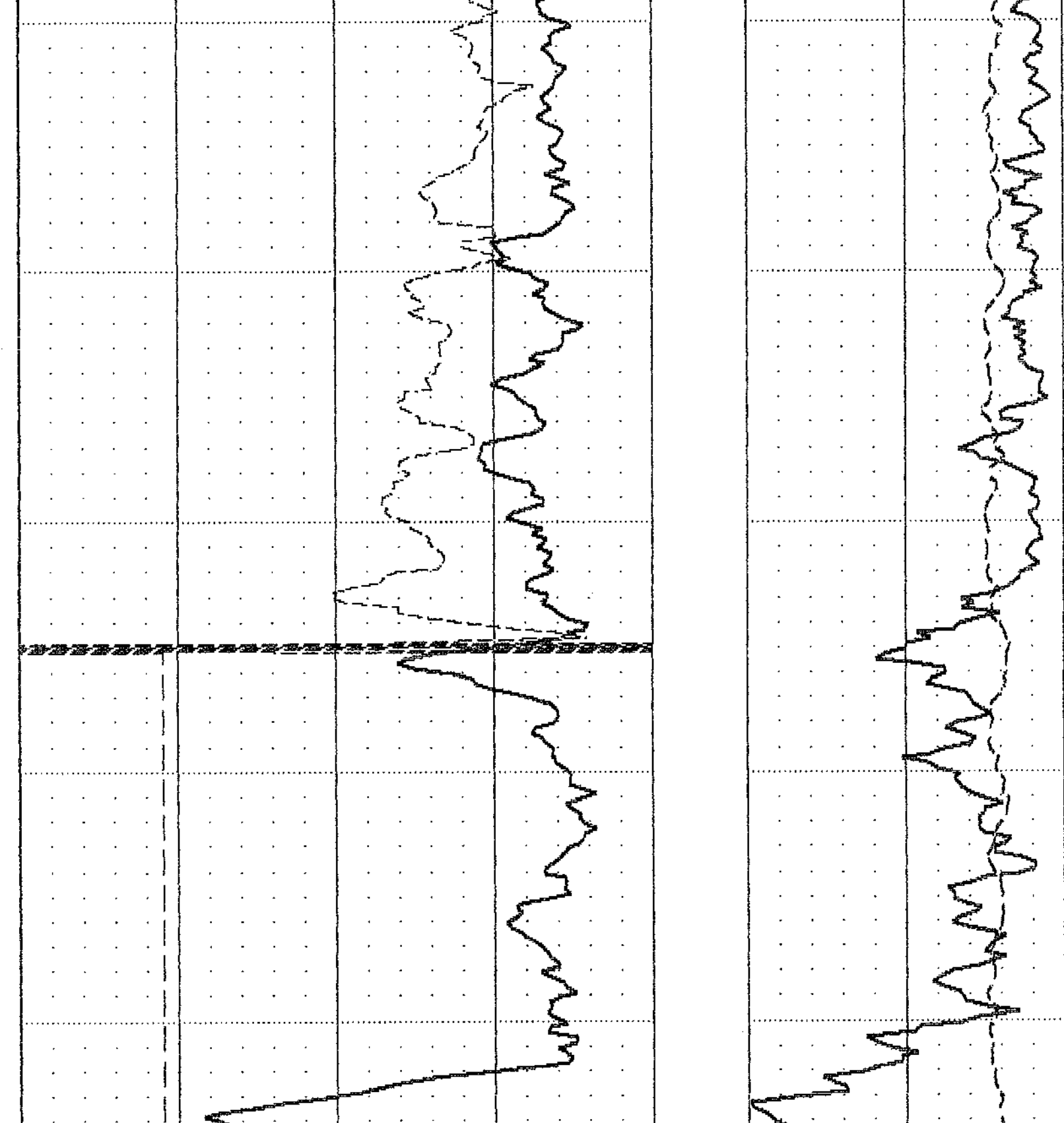
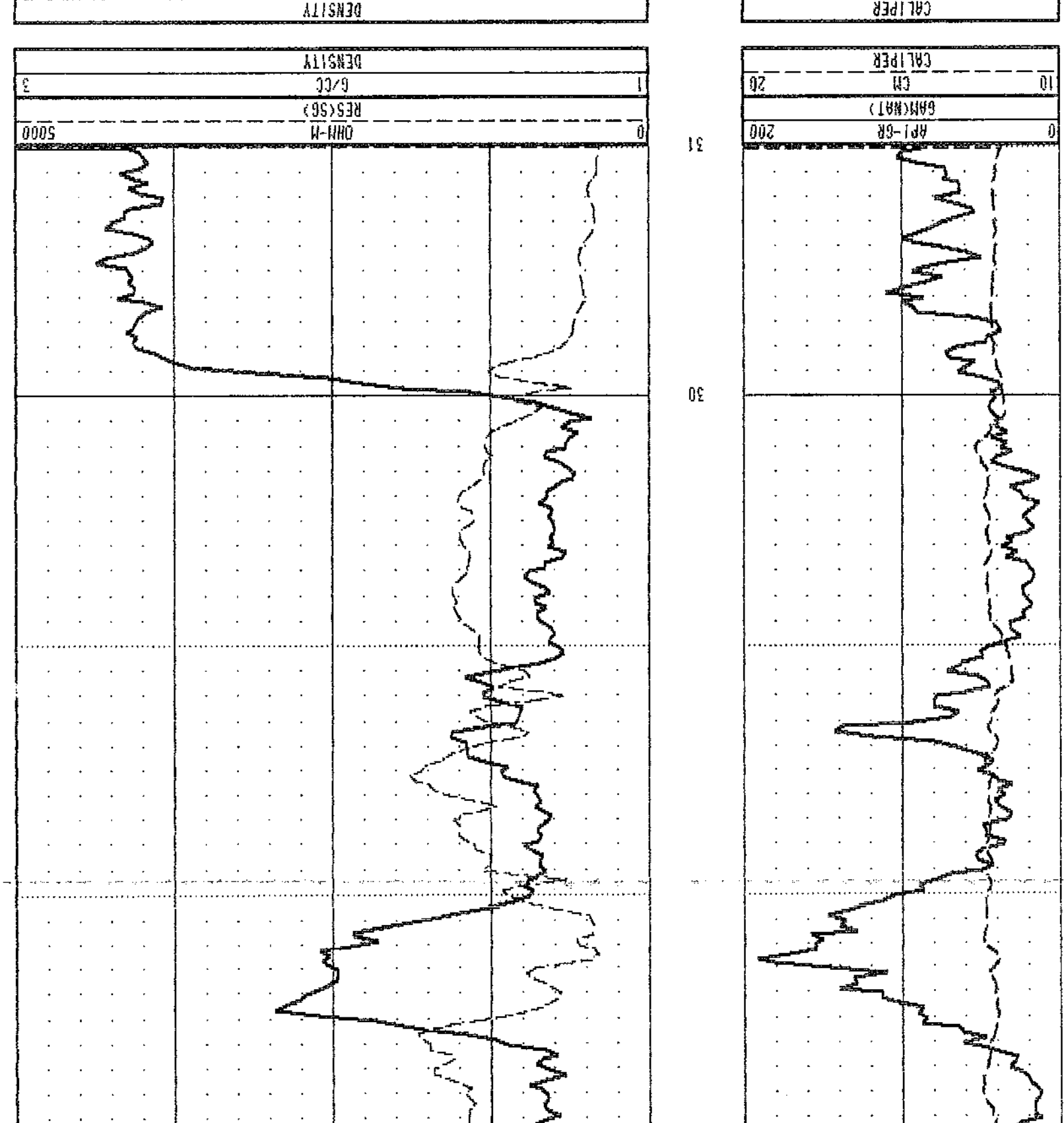
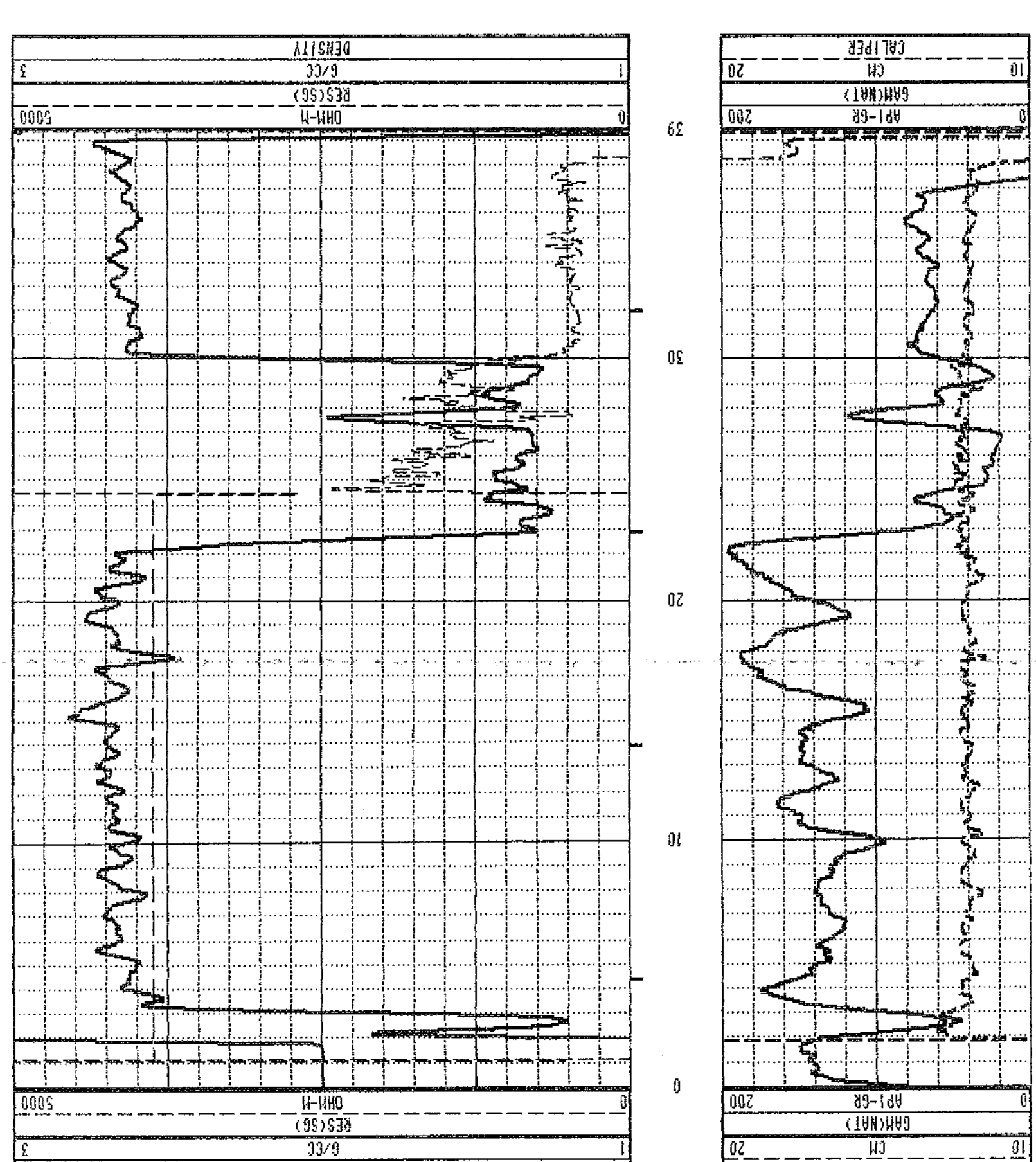
logged open hole vertical

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

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

CAL-DATE	CAL-TIME	SRC	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0	0.000 CPS	0.000 API-GR
2	05/04/89	12:11:56	0	6166.000 CPS	1.106 G/CC
3	05/04/89	12:11:56	0	2439.000 CPS	2.120 G/CC
4	05/04/89	10:17:51	0	0.000 CPS	0.000 OHM-IN
5	05/04/89	10:25:07	0	30275.000 CPS	178.500 OHM-IN
6	05/04/89	10:46:11	0	353.000 CPS	7.620 CH
7	05/04/89	10:46:11	0	1906.000 CPS	17.800 CH
8	05/04/89	10:17:51	0	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0	0.000 CPS	0.000 CH
11	05/04/89	10:17:51	0	0.000 CPS	0.000 CH

TOOL CALIBRATION TOOL = 9032AC SERIAL NUMBER = 967



753

COMPANY : QUINTELL COAL LTD.
 WELL : OMR89528 GAM-DEN-RES-CAL
 LOCATION/FIELD : MOLUORINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION :
 DATE : 07/15/89
 DEPTH DRILLER : 40
 LOG BOTTOM : 39.36
 LOG TOP : 0.00
 CASING DRILLER : 1
 CASING TYPE : PLASTIC
 CASING THICKNESS : .05
 BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :
 LOGGED OPEN HOLE
 VERTICAL HOLE
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

OTHER SERVICES:

OMR89528 GAM-DEN-RES-CAL



Century



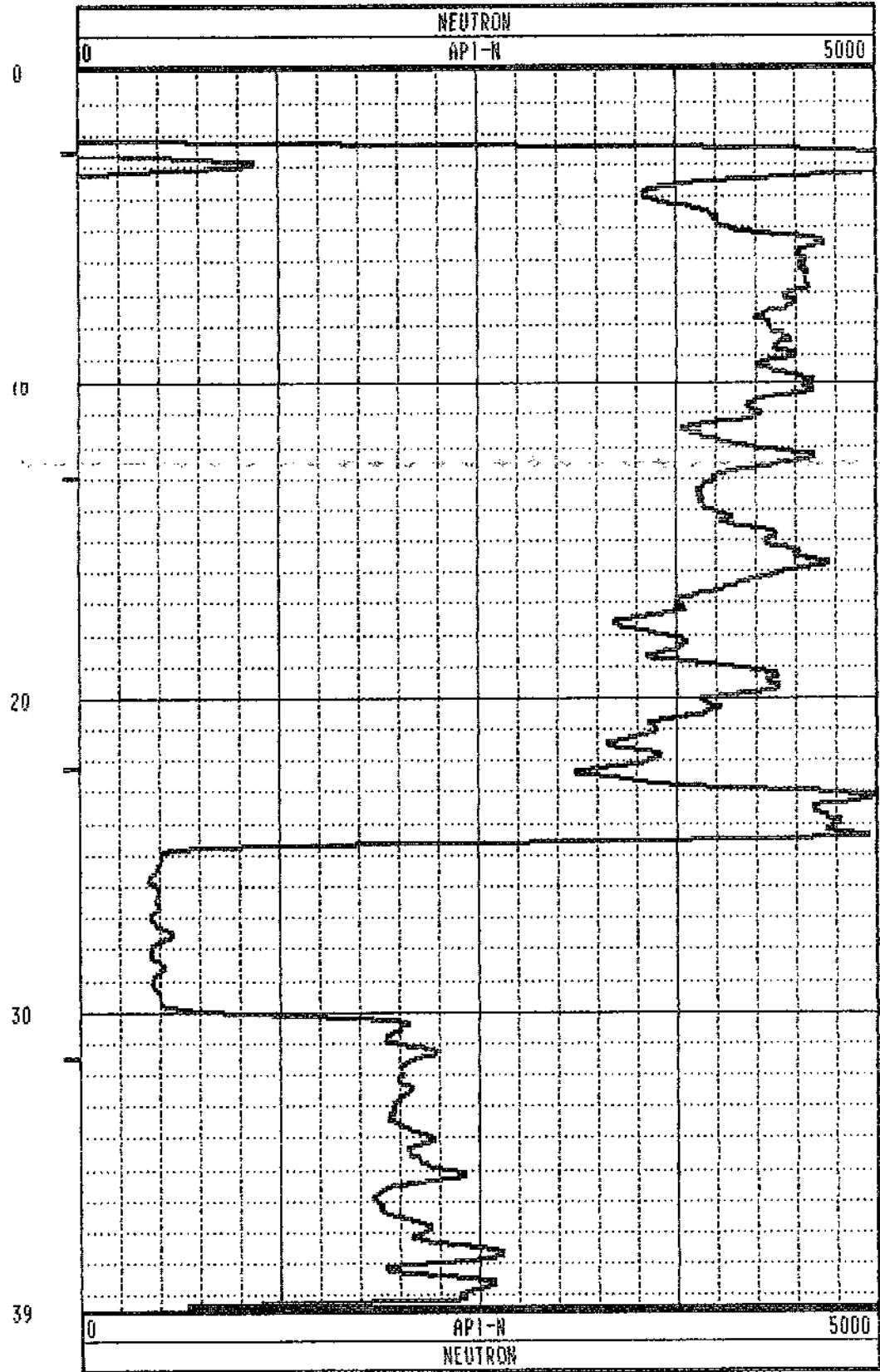
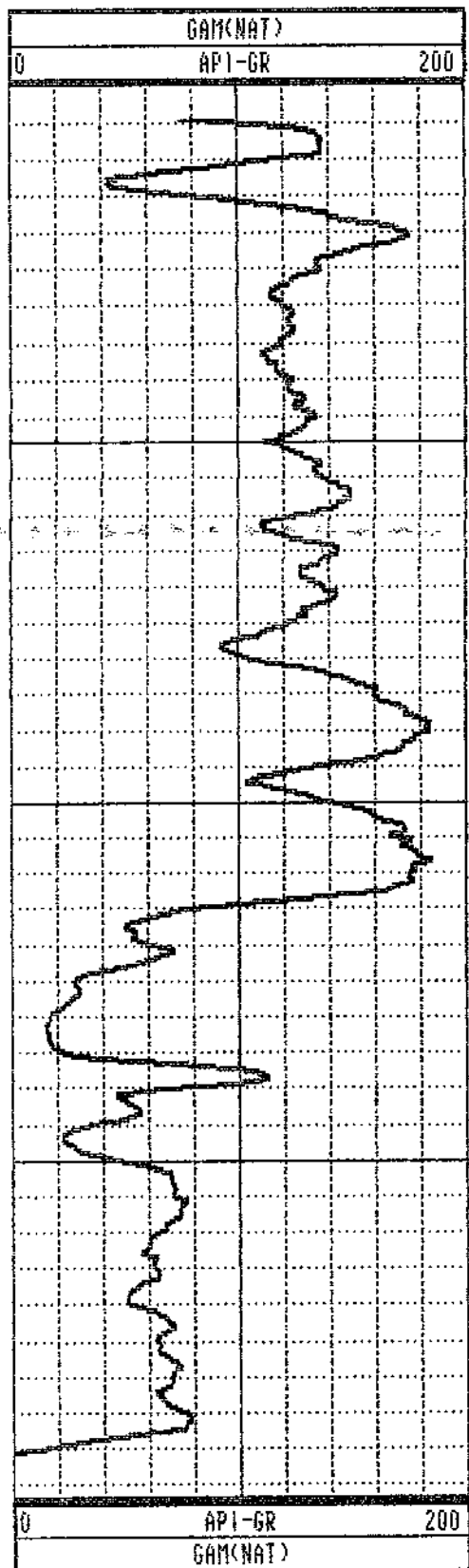
Century

GMR89528 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : GMR89528 GAM-NEUTRON
 LOCATION/FIELD : WOLUORINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 07/15/89 PERMANENT DATUM : ELEVATIONS
 DEPTH DRILLER : 40 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 39.44 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.96 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 1 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL
 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: 5000
 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	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

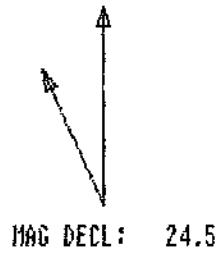
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89528 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 07/16/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 7

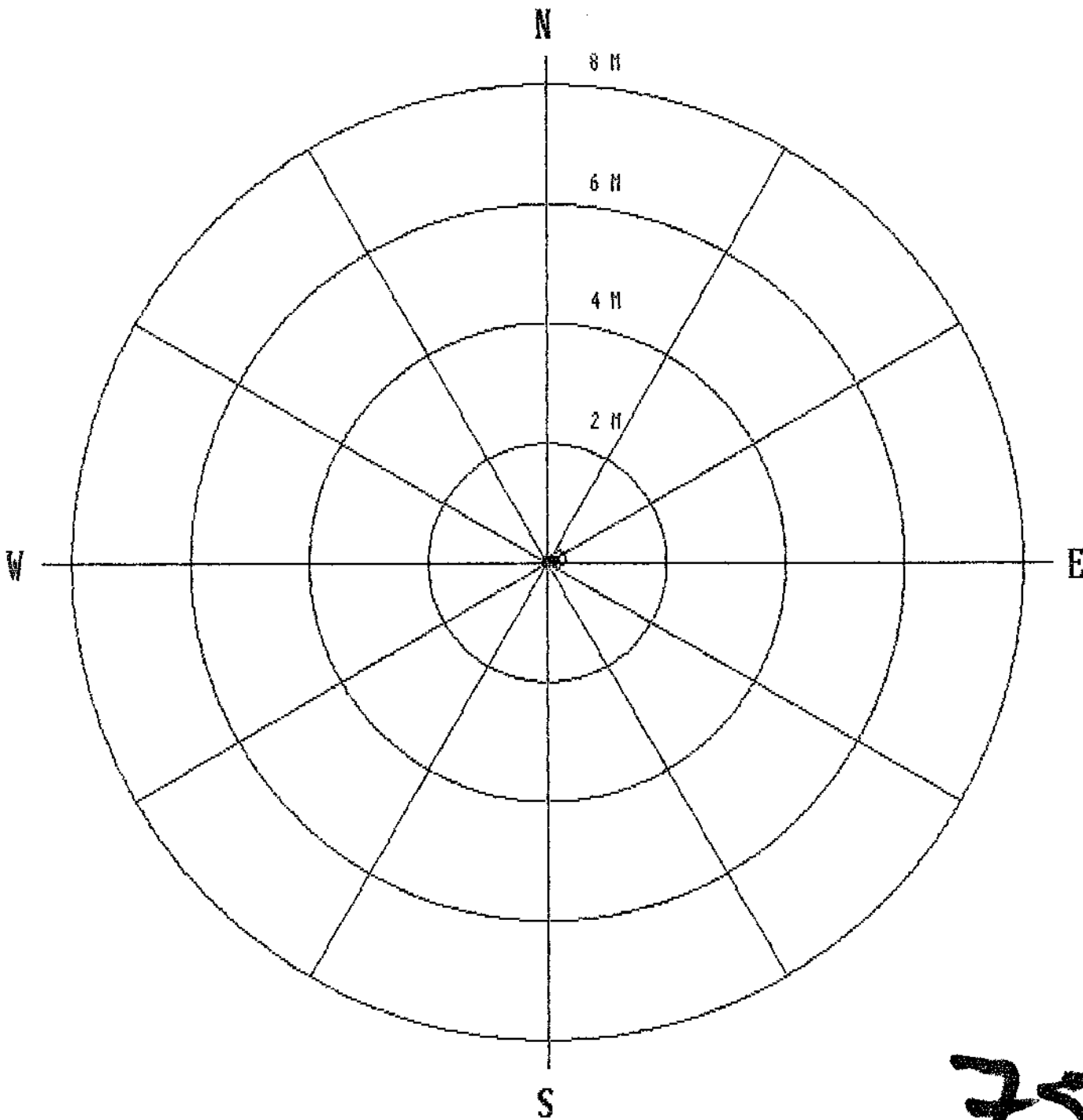
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
2.0	2.00	0.00	0.00	0.0	-0	0.0	0.0
7.0	7.00	0.01	-0.03	0.0	296.5	0.5	324.4
12.0	12.00	0.05	-0.05	0.1	313.1	0.4	327.0
17.0	17.00	0.07	-0.04	0.1	327.7	0.3	93.2
22.0	22.00	0.08	-0.03	0.1	339.3	0.2	305.5
27.0	27.00	0.08	-0.00	0.1	358.6	0.4	85.6
32.0	32.00	0.07	0.05	0.1	33.8	0.3	91.1
37.0	37.00	0.06	0.12	0.1	63.3	0.7	95.0
39.4	39.44	0.06	0.18	0.2	71.9	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: MDLVORINE VALLEY SOUTH
 HOLE ID: QMR89528 GAM-NEUTRON
 DATE OF LOG: 07/16/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 39.38 M
 AZIMUTH: 71.9
 DISTANCE: 0.2 M
 + = 50 M INCR
 O = BOTTOM OF HOLE



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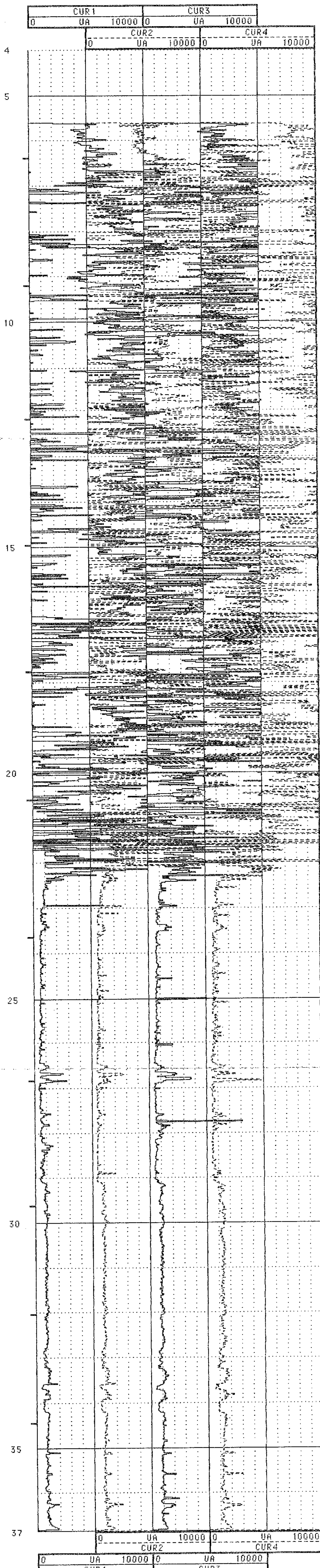
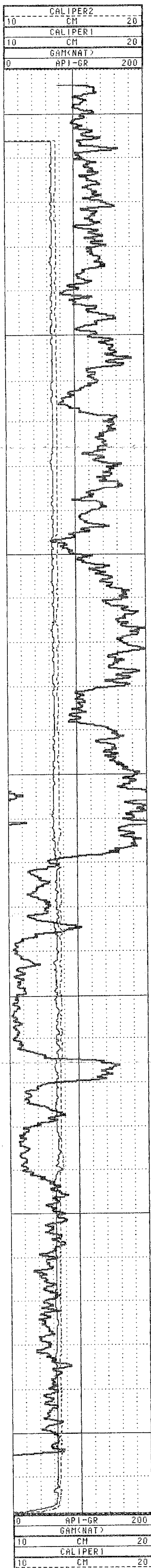
Century

QMR89528 DIPMETRE

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89528 DIPMETRE	[]	
LOCATION/FIELD	: WOLUORINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 07/15/89	PERMANENT DATUM	: ELEVATIONS
DEPTH DRILLER	: 40	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 36.85	LOG MEASURED FROM:	GL DF :
LOG TOP	: 4.36	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 1	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	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	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9400A
VERTICAL HOLE	:	LOG	: 9
		PLOT	: 9400 0
		THRESH	: 50000

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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Century
GEOPHYSICAL CORP.

QMR89528 DIPMETRE

COMPANY : QUINTETTE COAL LTD.
WELL : QMR89528 DIPMETRE
LOCATION/FIELD : WOLUORINE VALLEY SOUTH
COUNTY : TRANSFER
STATE : BRITISH COLUMBIA
SECTION :

OTHER SERVICES:

TOWNSHIP : RANGE :

DATE : 07/15/89
DEPTH DRILLER : 40
LOG BOTTOM : 36.85
LOG TOP : 4.36

PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM: GL
DBL MEASURED FROM: GL

ELEVATIONS
KB :
DF :
GL :

CASING DRILLER : 1
CASING TYPE : PLASTIC
CASING THICKNESS: .05

LOGGING UNIT : 8903
FIELD OFFICE : CALGARY
RECORDED BY : L. LETAL

BIT SIZE : 12.1
MAGNETIC DECL. : 24.5
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
NEUTRON MATRIX : SANDSTONE
REMARKS :

BOREHOLE FLUID : WATER
RM : 00
RM TEMPERATURE : 00
MATRIX DELTA T : 173
FLUID DELTA T : 690

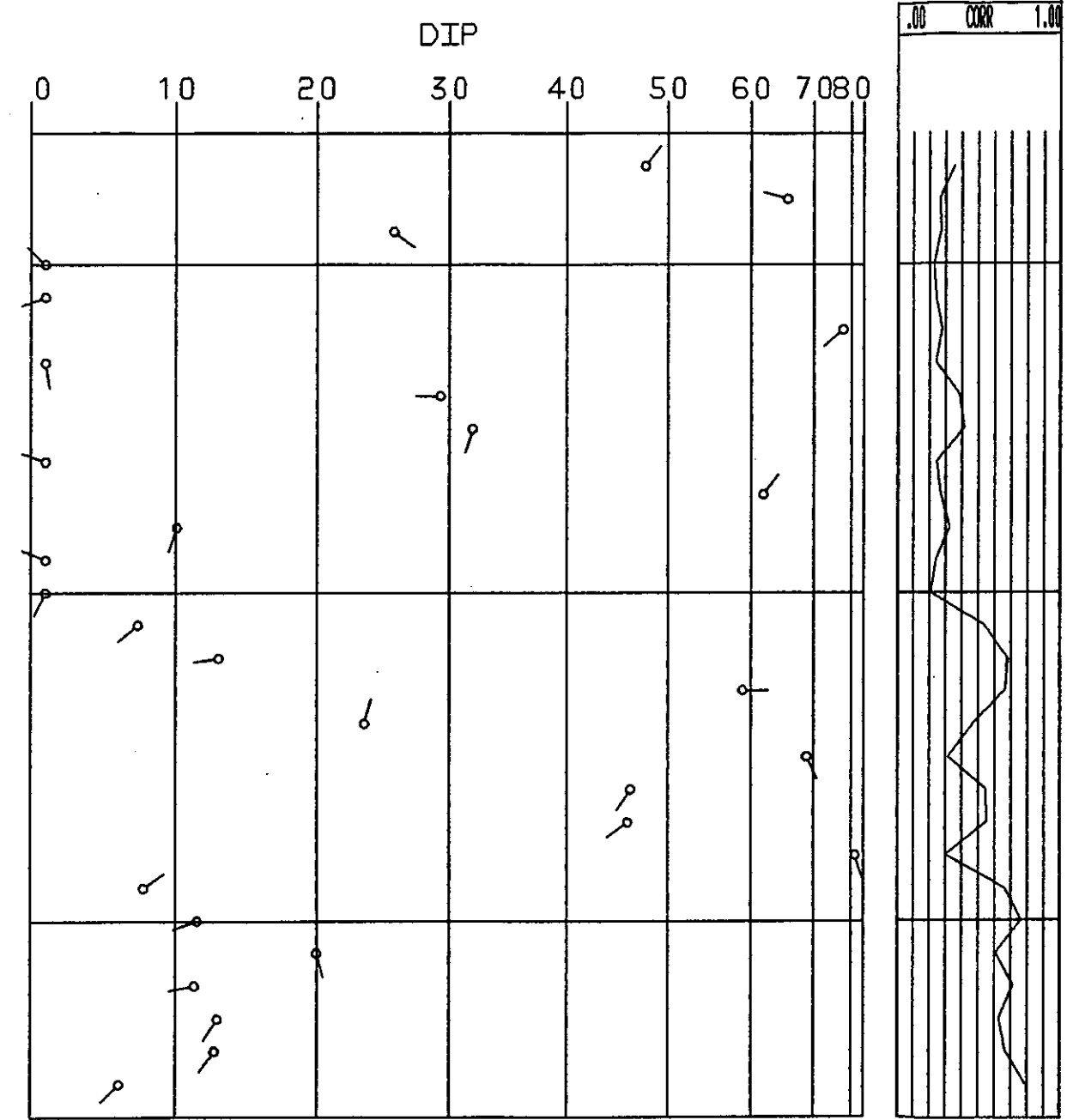
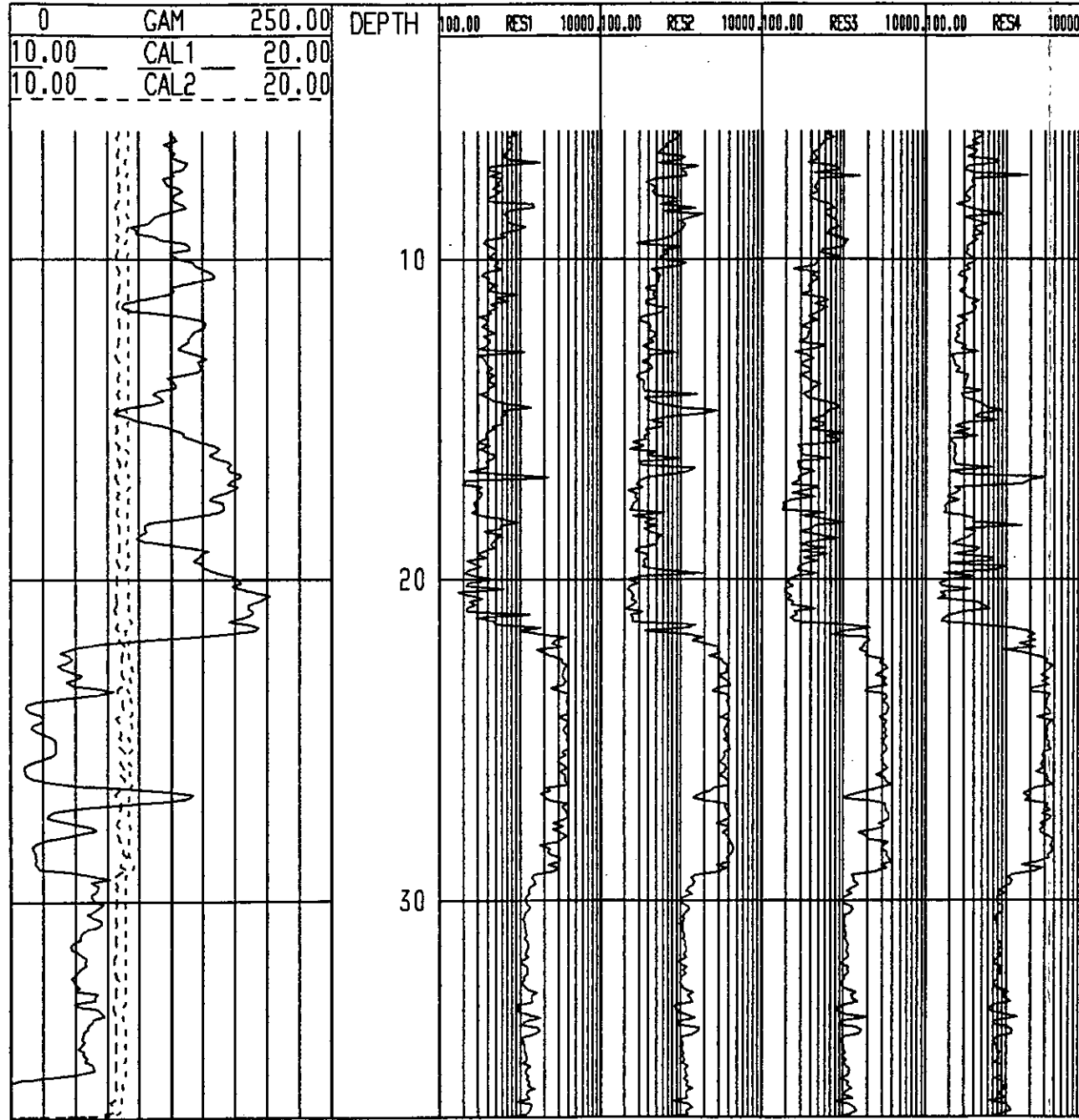
FILE : ORIGINAL
TYPE : 9400A
LOG : 0
PLOT : 9400 4
THRESH: 50000

logged open hole vertical

Window: 2m Step: 1m Search Angle: 80deg. Method-2

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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Century GEOPHYSICAL CORP.

QMR89528 DIPMETRE

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89528 DIPMETRE
 LOCATION/FIELD : WOLVORINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION :

OTHER SERVICES:

DATE : 07/15/89
 DEPTH DRILLER : 40
 LOG BOTTOM : 36.85
 LOG TOP : 4.36

TOWNSHIP :

RANGE :

CASING DRILLER : 1
 CASING TYPE : PLASTIC
 CASING THICKNESS: .05

PERMANENT DATUM :
 ELEV. PERM. DATUM:
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL

ELEVATIONS
 KB :
 DF :
 GL :

LOGGING UNIT : 8903
 FIELD OFFICE : CALGARY
 RECORDED BY : L. LETAL

BIT SIZE : 12.1
 MAGNETIC DECL. : 24.5
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :

BOREHOLE FLUID : WATER
 RM : 00
 RM TEMPERATURE : 00
 MATRIX DELTA T : 173
 FLUID DELTA T : 690

FILE : ORIGINAL
 TYPE : 9400A
 LOG : 0
 PLOT : 9400 4
 THRESH: 50000

logged open hole vertical

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

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



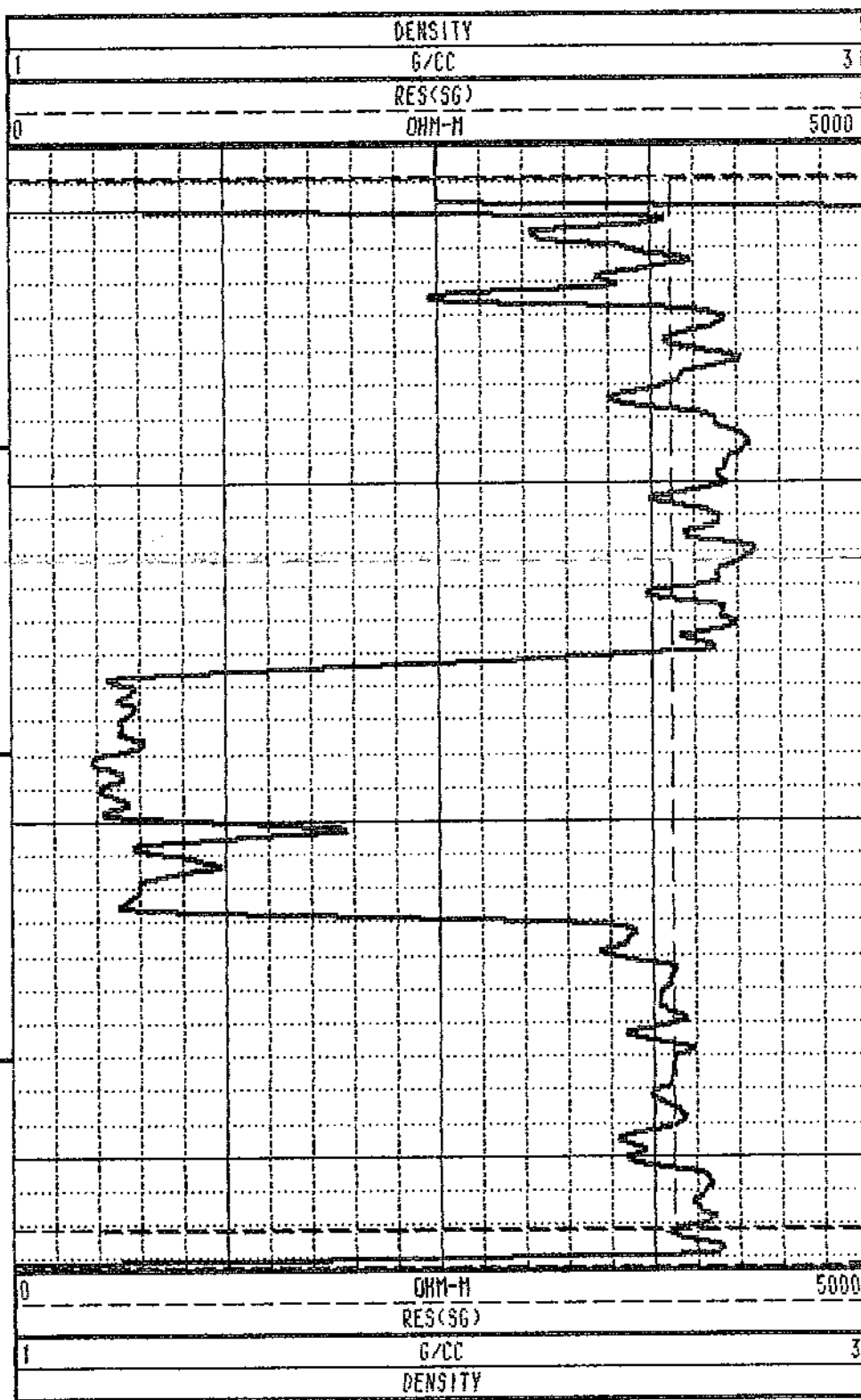
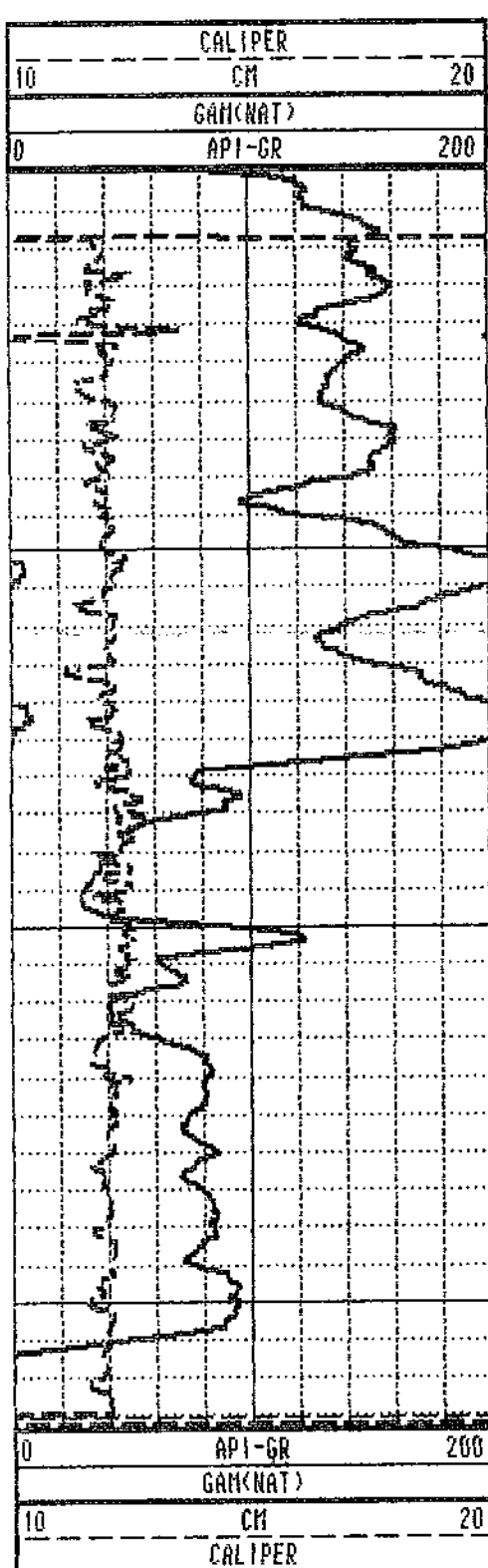
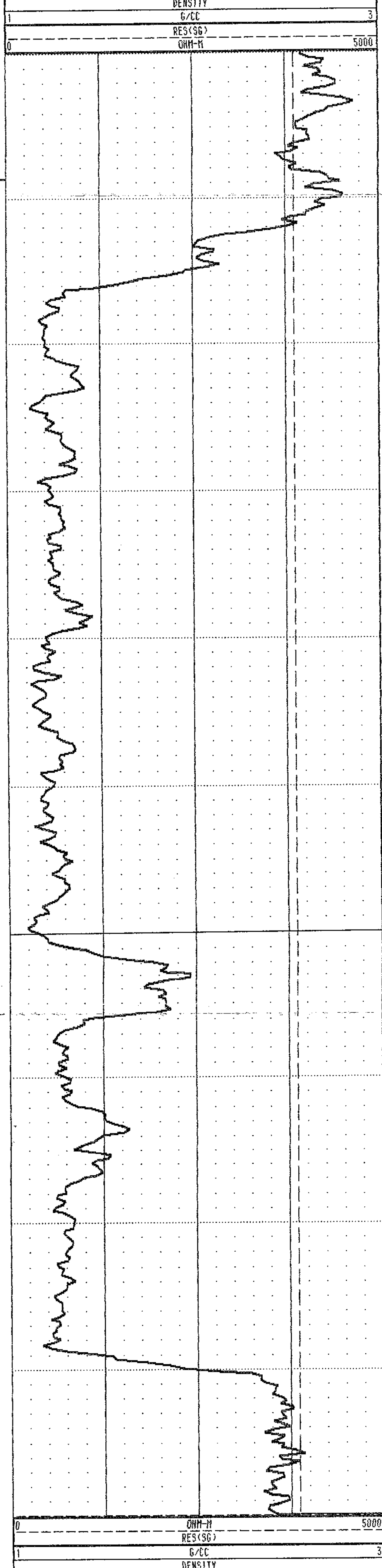
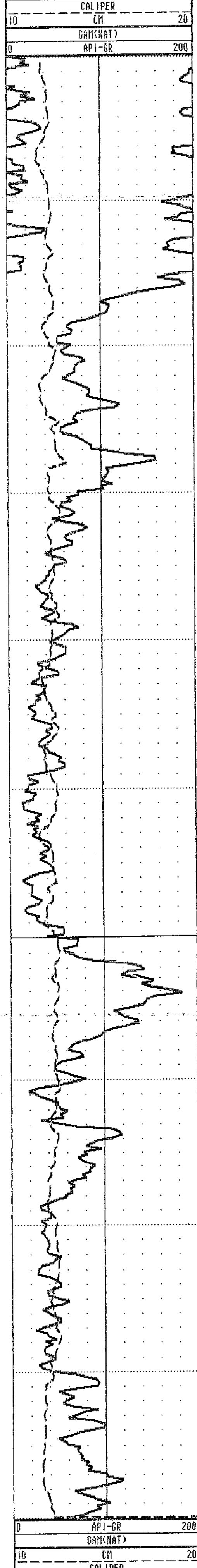
Century

QMR89529 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89529 GAM-DEN-RES-CAL		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:
DATE	: 07/15/89	PERMANENT DATUM	: ELEVATIONS
DEPTH DRILLER	: 33.5	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 33.30	LOG MEASURED FROM: GL	DF :
LOG TOP	: -.12	DRL MEASURED FROM: GL	GL :
CASING DRILLER	: 1	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	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	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9032AC
VERTICAL HOLE	:	LOG	: 2
		PLOT	: QUIN 12
		THRESH	: 5000

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	17.000 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

QMR89529 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89529 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

OTHER SERVICES:

DATE : 07/15/89 PERMANENT DATUM : ELEVATIONS
 DEPTH DRILLER : 33.5 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 33.32 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.74 DRL MEASURED FROM: GL GL :

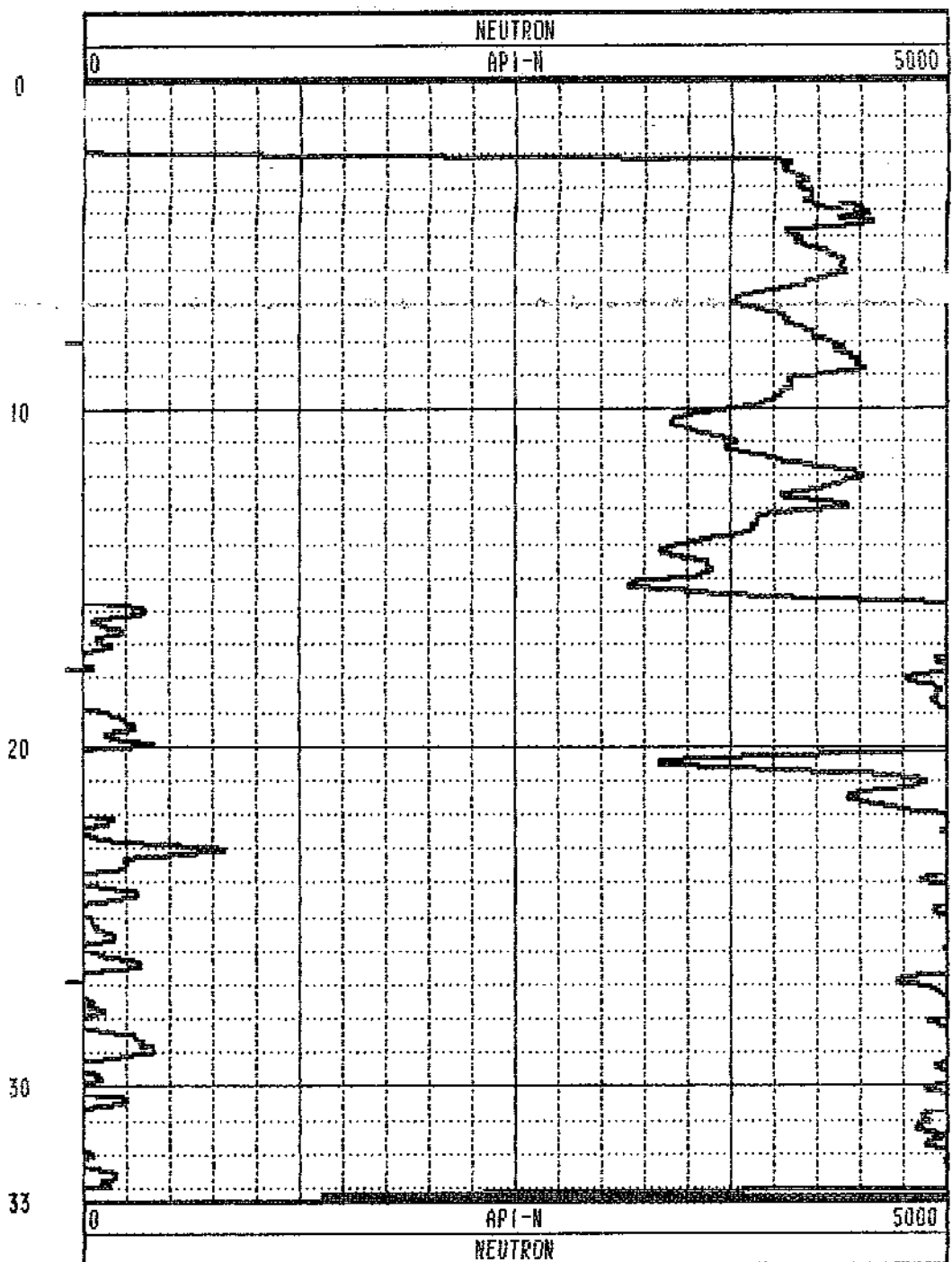
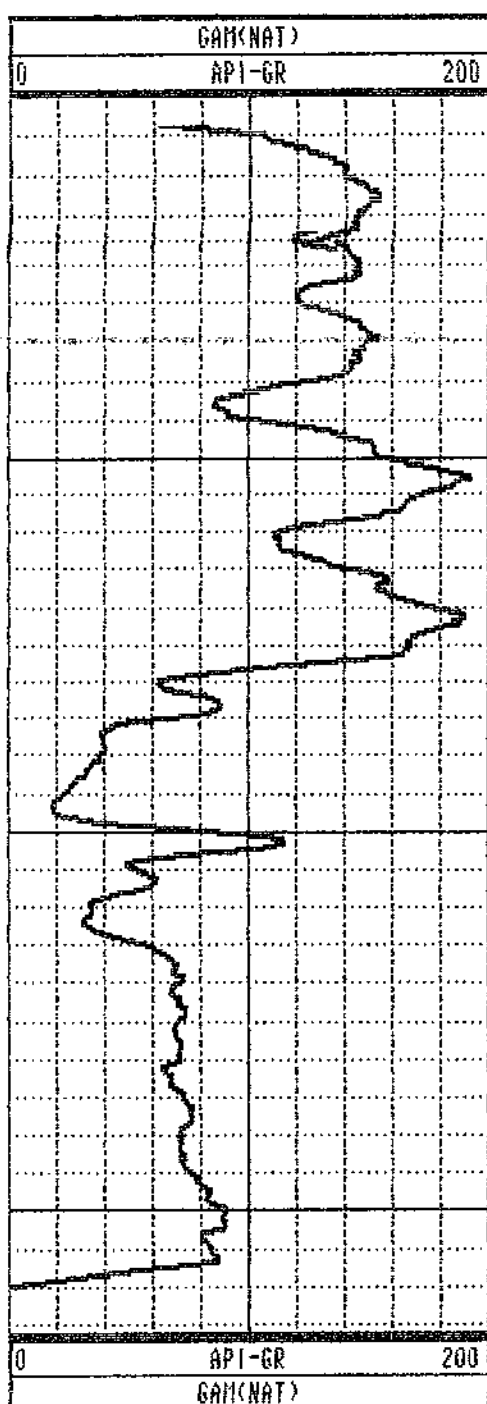
CASING DRILLER : 1 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

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 : 0
 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

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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

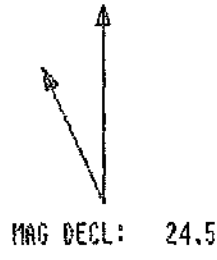
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89529 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 07/16/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 3

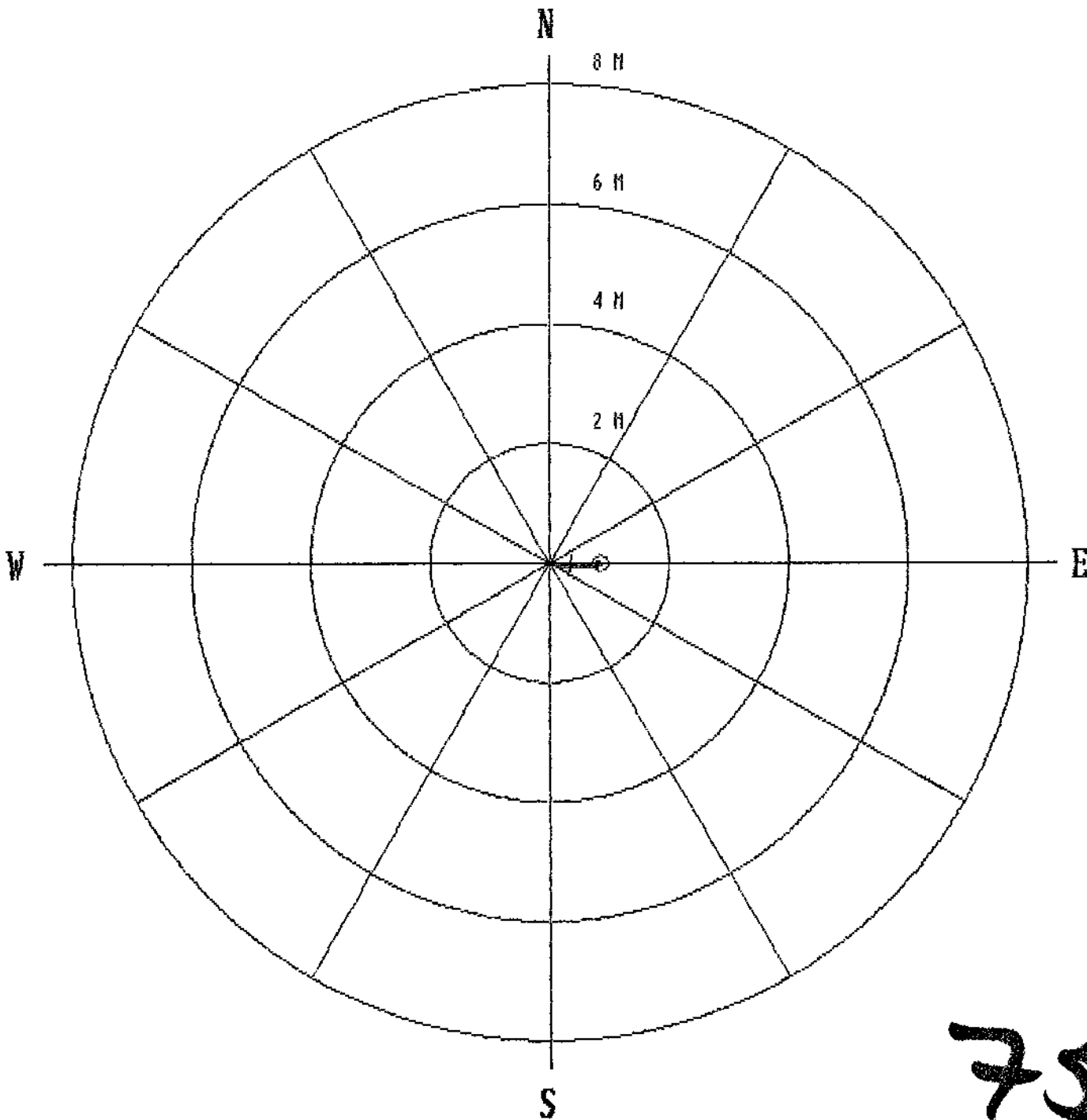
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANBB
2.0	2.00	0.00	0.00	0.0	-0	0.0	0.0
7.0	7.00	-0.00	0.04	0.0	94.2	0.3	106.0
12.0	12.00	-0.02	0.11	0.1	101.9	1.4	80.6
17.0	17.00	-0.04	0.24	0.2	100.4	1.6	88.9
22.0	21.99	-0.05	0.42	0.4	96.2	2.3	106.3
27.0	26.99	-0.05	0.60	0.6	94.4	1.8	77.1
32.0	31.99	-0.02	0.79	0.8	91.2	2.5	80.4
33.3	33.30	-0.01	0.85	0.8	90.4	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89529 GAM-NEUTRON
 DATE OF LOG: 07/16/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 33.24 M
 AZIMUTH: 90.4
 DISTANCE: 0.8 M
 + = 20 M INCR
 O = BOTTOM OF HOLE



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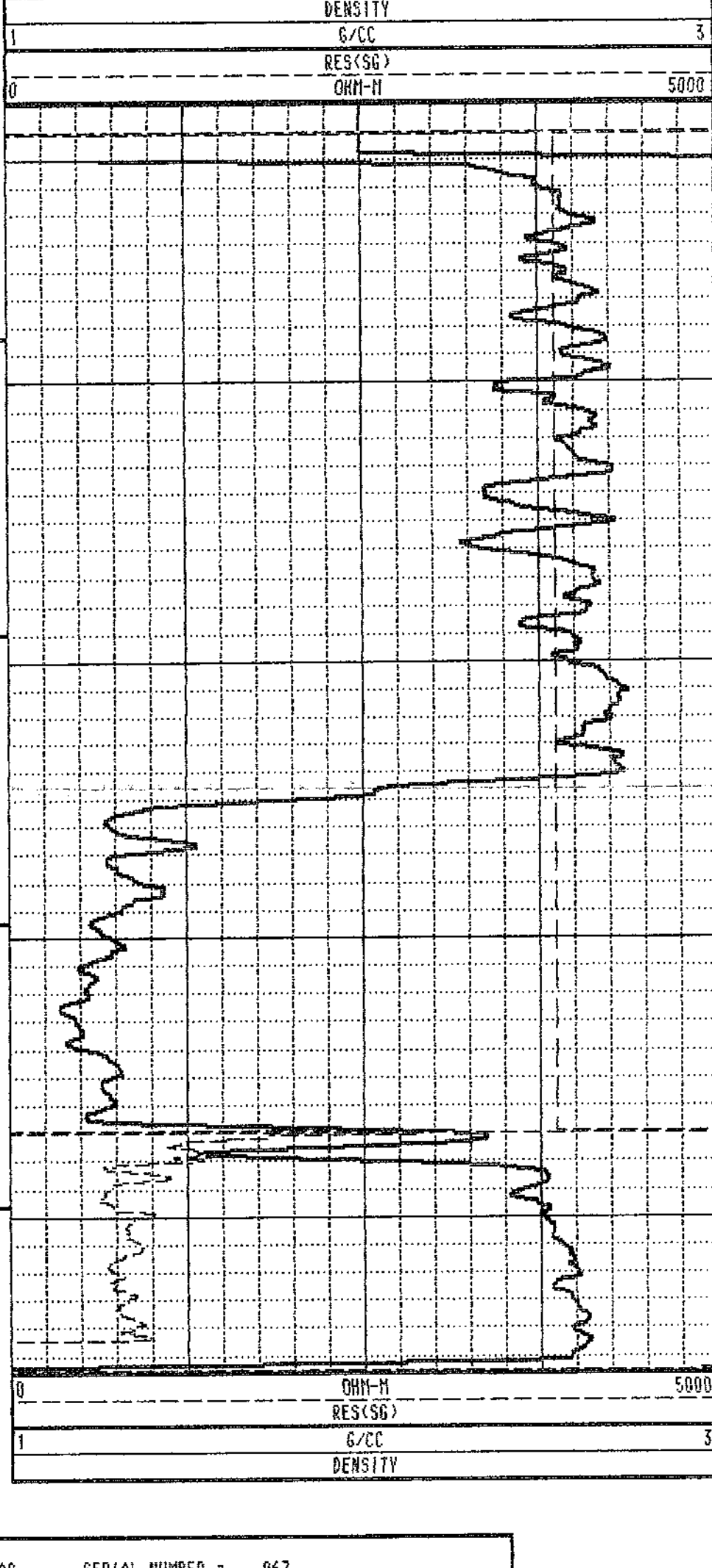
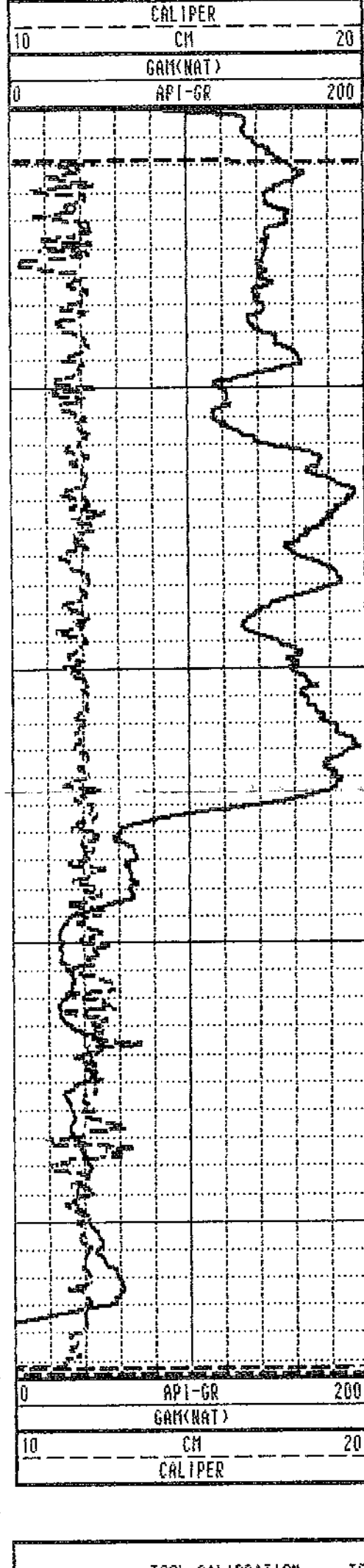
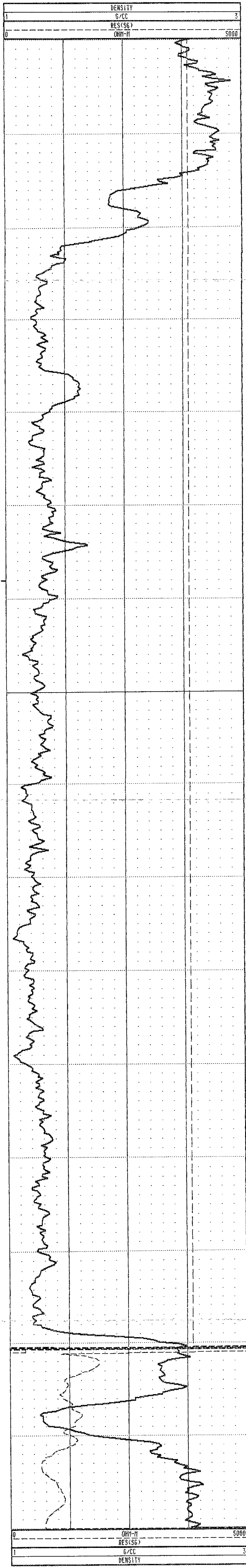
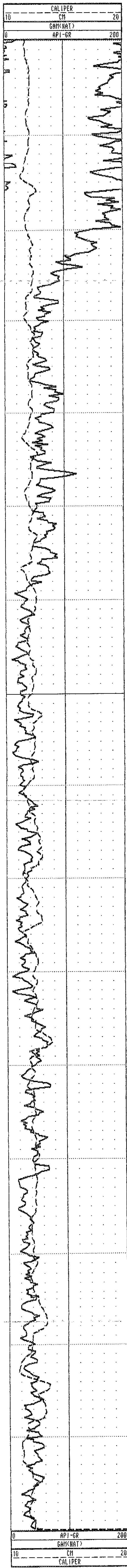
Century

QMR89530 GAM-DEN-RES-CAL

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:
WELL	: QMR89530 GAM-DEN-RES-CAL	
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH	
COUNTY	: TRANSFER	
STATE	: BRITISH COLUMBIA	
SECTION	: TOWNSHIP	: RANGE :
DATE	: 07/15/89	PERMANENT DATUM :
DEPTH DRILLER	: 44	ELEV. PERM. DATUM:
LOG BOTTOM	: 45.56	LOG MEASURED FROM: GL
LOG TOP	: 0.00	DRL MEASURED FROM: GL
CASING DRILLER	: 1	LOGGING UNIT : 8903
CASING TYPE	: PLASTIC	FIELD OFFICE : CALGARY
CASING THICKNESS	: .05	RECORDED BY : L. LOTAL
BIT SIZE	: 12.1	BOREHOLE FLUID : WATER
MAGNETIC DECL.	: 24.5	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 : ORIGINAL
LOGGED OPEN HOLE	:	TYPE : 9032AC
VERTICAL HOLE	:	LOG : 6
		PLOT : QUIN 12
		THRESH: 50000

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-H
5	05/04/89	10:25:07	0	RES(SG)	30275.000 CPS	178.500 OHM-H
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

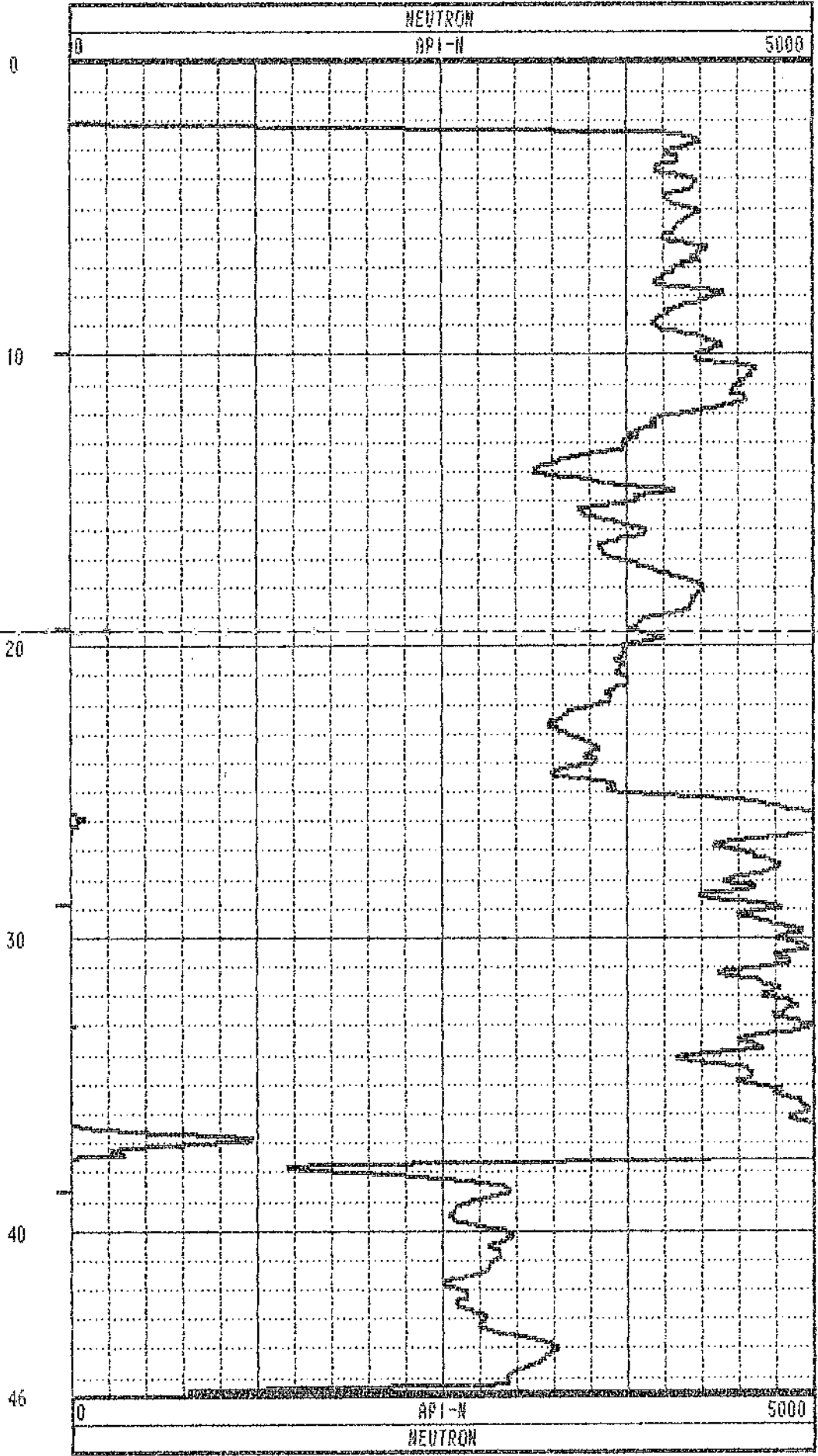
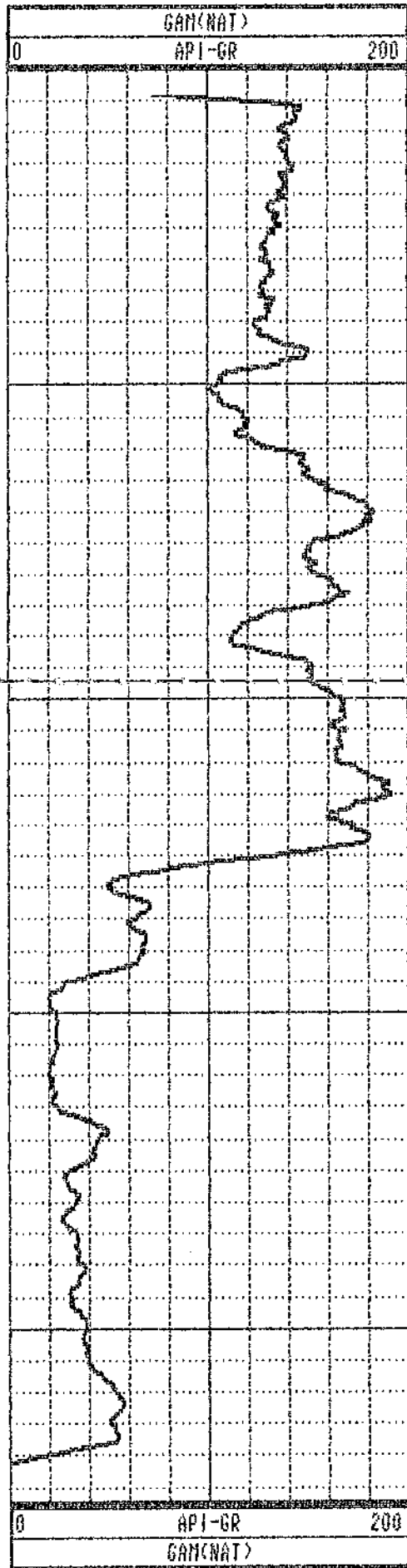


Century

QMR89530 GAM-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:			
WELL	: QMR89530 GAM-NEUTRON				
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	: TOWNSHIP	: RANGE			
DATE	: 07/15/89	PERMANENT DATUM	: ELEVATIONS		
DEPTH DRILLER	: 44	ELEV. PERM. DATUM:	KB		
LOG BOTTOM	: 45.56	LOG MEASURED FROM:	GL		
LOG TOP	: 0.90	DRL MEASURED FROM:	GL		
CASING DRILLER	: 1	LOGGING UNIT	: 8903		
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL		
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	: 1
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					

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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	POROSIY	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

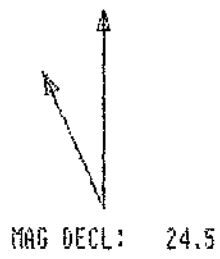
***** COMPU-LOG II - VERTICAL DEVIATION *****

CLIENT : QUINTETTE COAL LTD. HOLE ID. : GMR89530 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 07/16/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG O

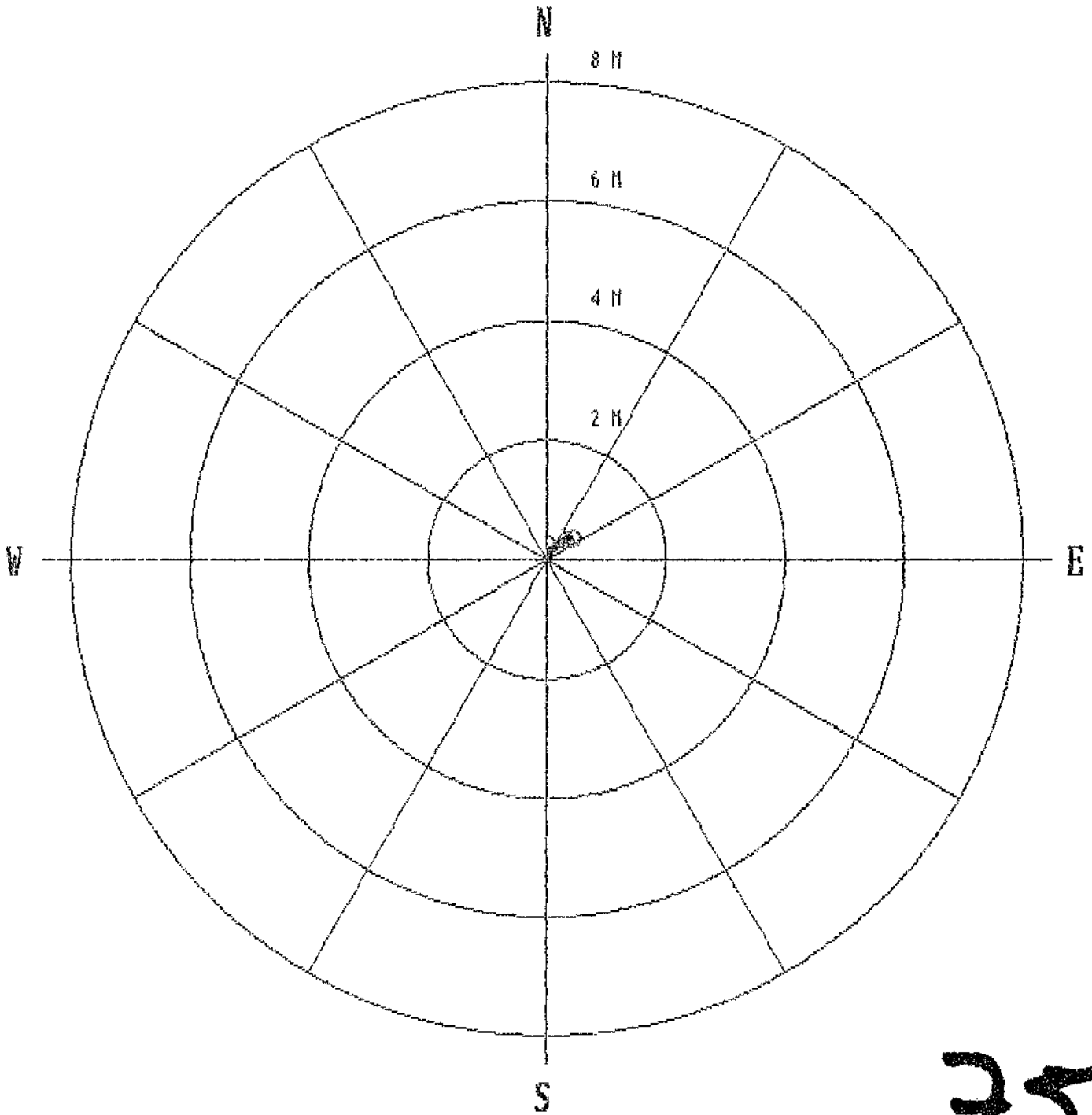
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
2.0	2.00	0.00	0.00	0.0	-0	0.0	0.0
7.0	7.00	0.10	0.03	0.1	17.2	1.1	42.6
12.0	12.00	0.18	0.09	0.2	26.4	1.1	39.9
17.0	17.00	0.23	0.16	0.3	33.9	1.1	59.6
22.0	22.00	0.28	0.23	0.4	39.6	1.1	57.0
27.0	26.99	0.31	0.30	0.4	43.7	0.8	65.8
32.0	31.99	0.33	0.34	0.5	45.5	0.8	89.1
37.0	36.99	0.36	0.38	0.5	46.4	1.0	77.2
42.0	41.99	0.36	0.41	0.5	48.8	0.5	127.4
45.6	45.55	0.34	0.44	0.6	52.7	0.0	0.0

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: GMR89530 GAM-NEUTRON
 DATE OF LOG: 07/16/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 45.49 M
 AZIMUTH: 52.7
 DISTANCE: 0.6 M
 + = 20 M INCR
 O = BOTTOM OF HOLE



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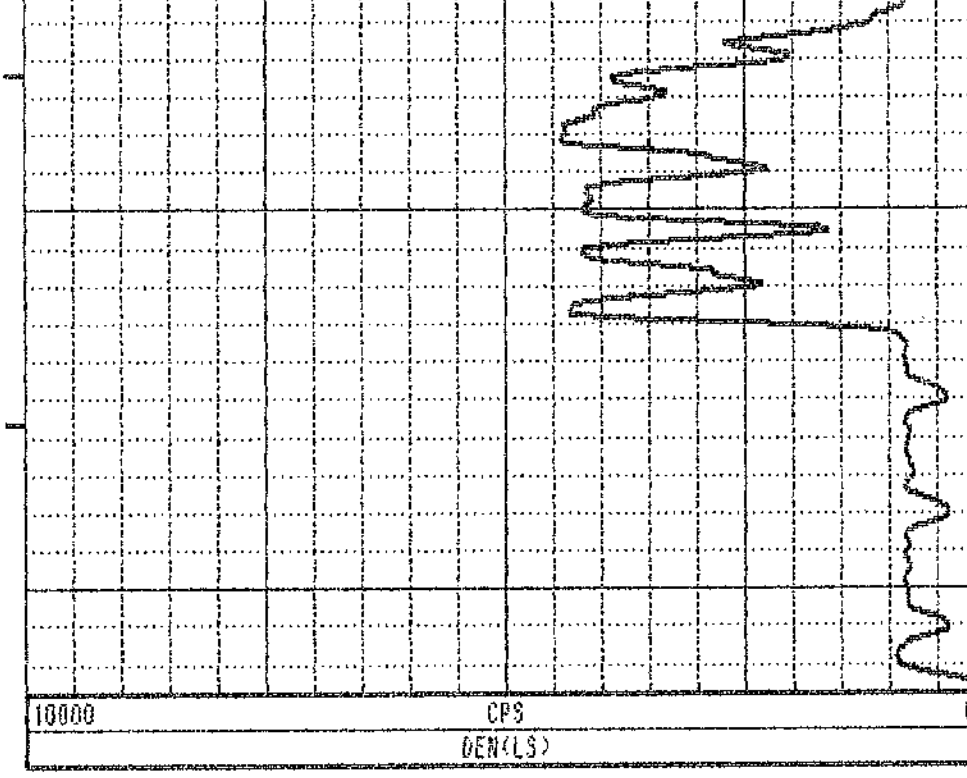
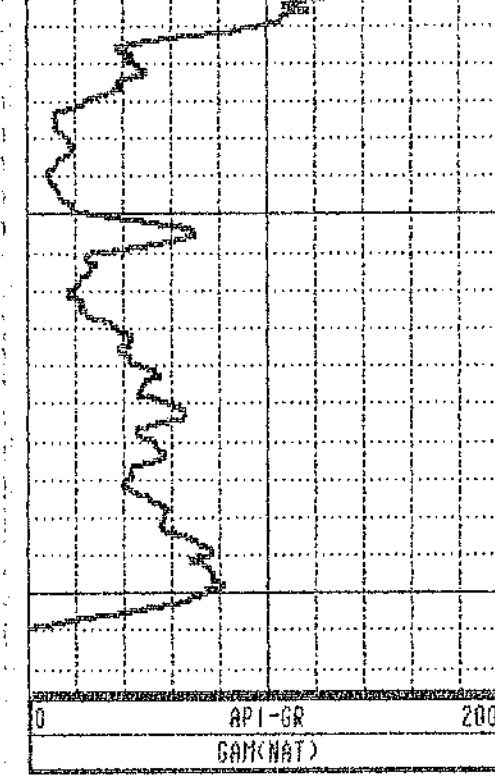
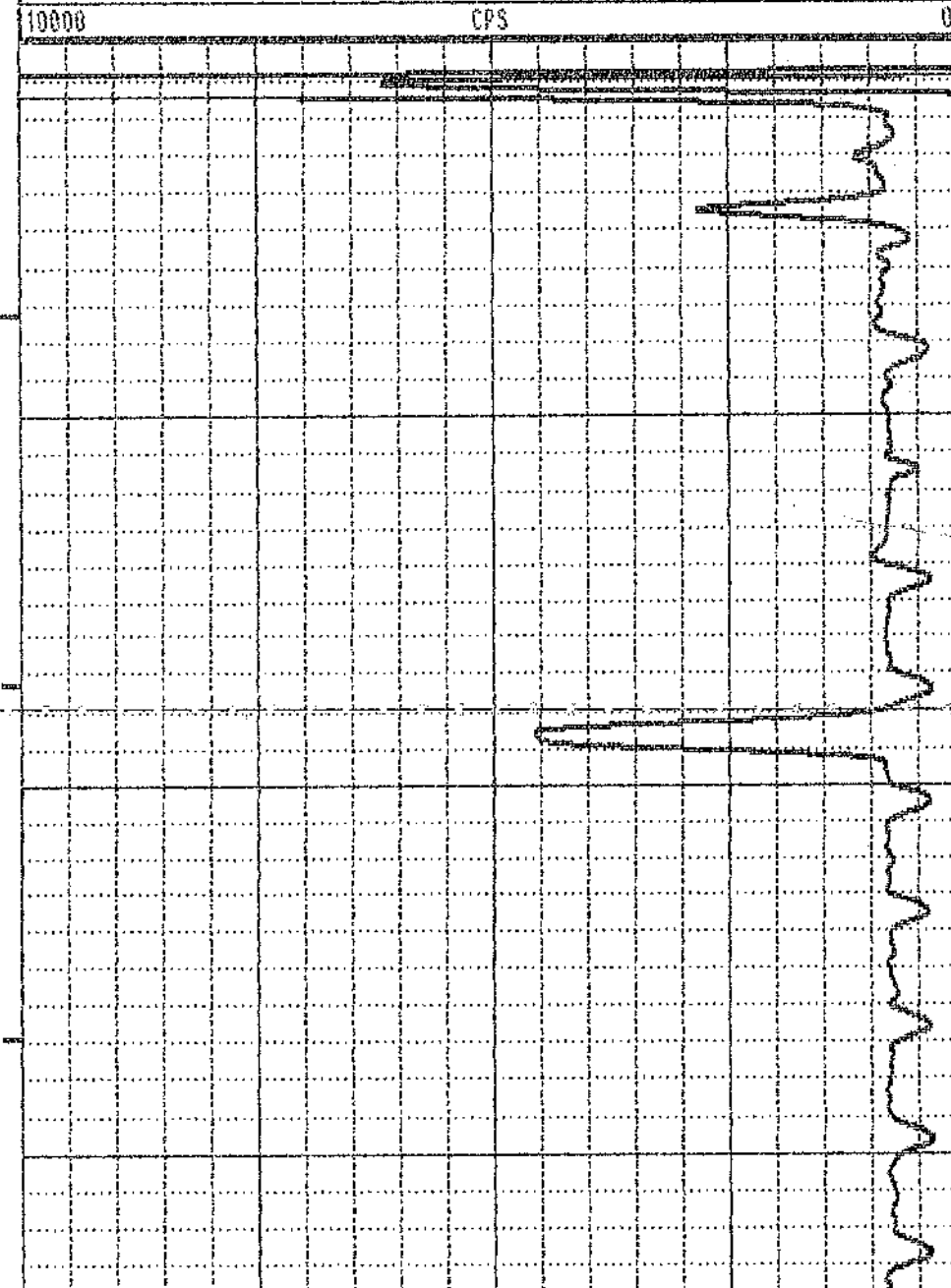
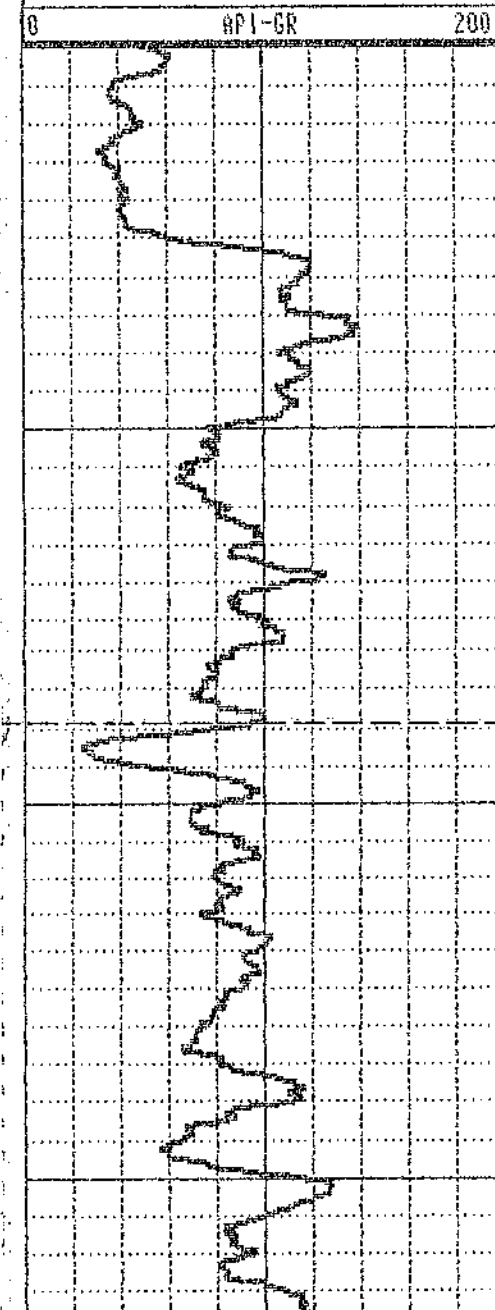
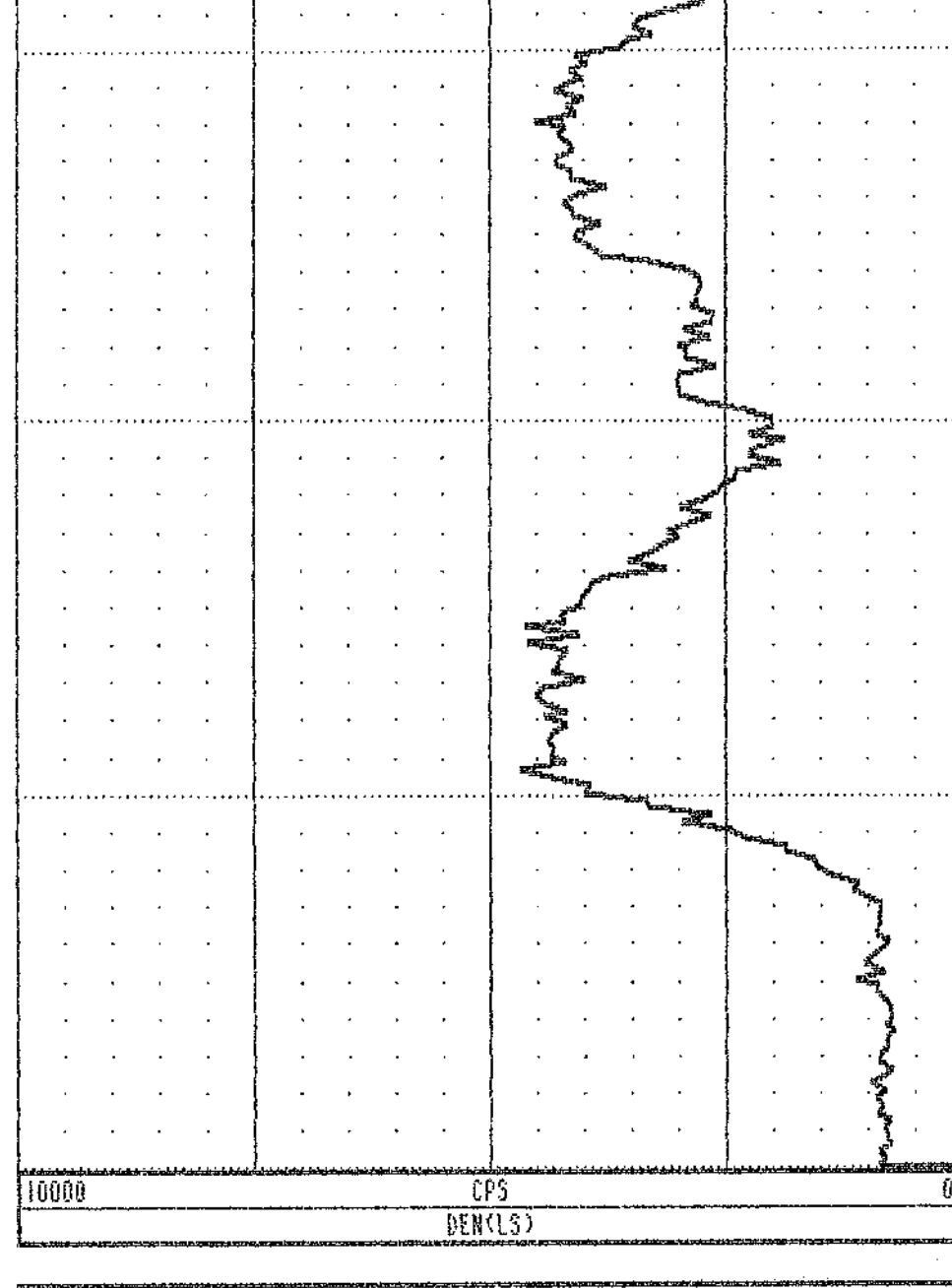
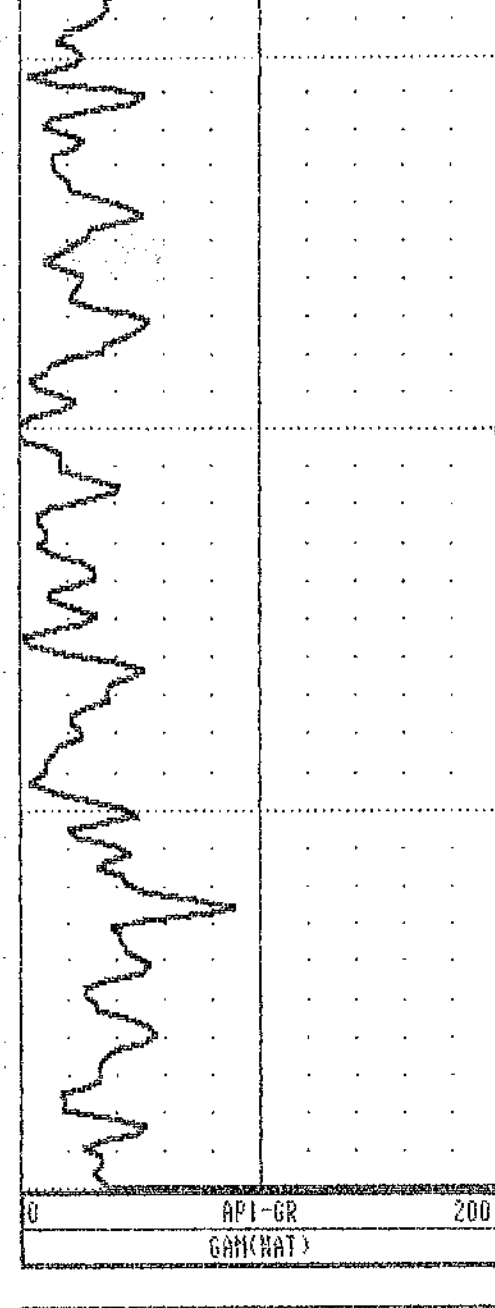
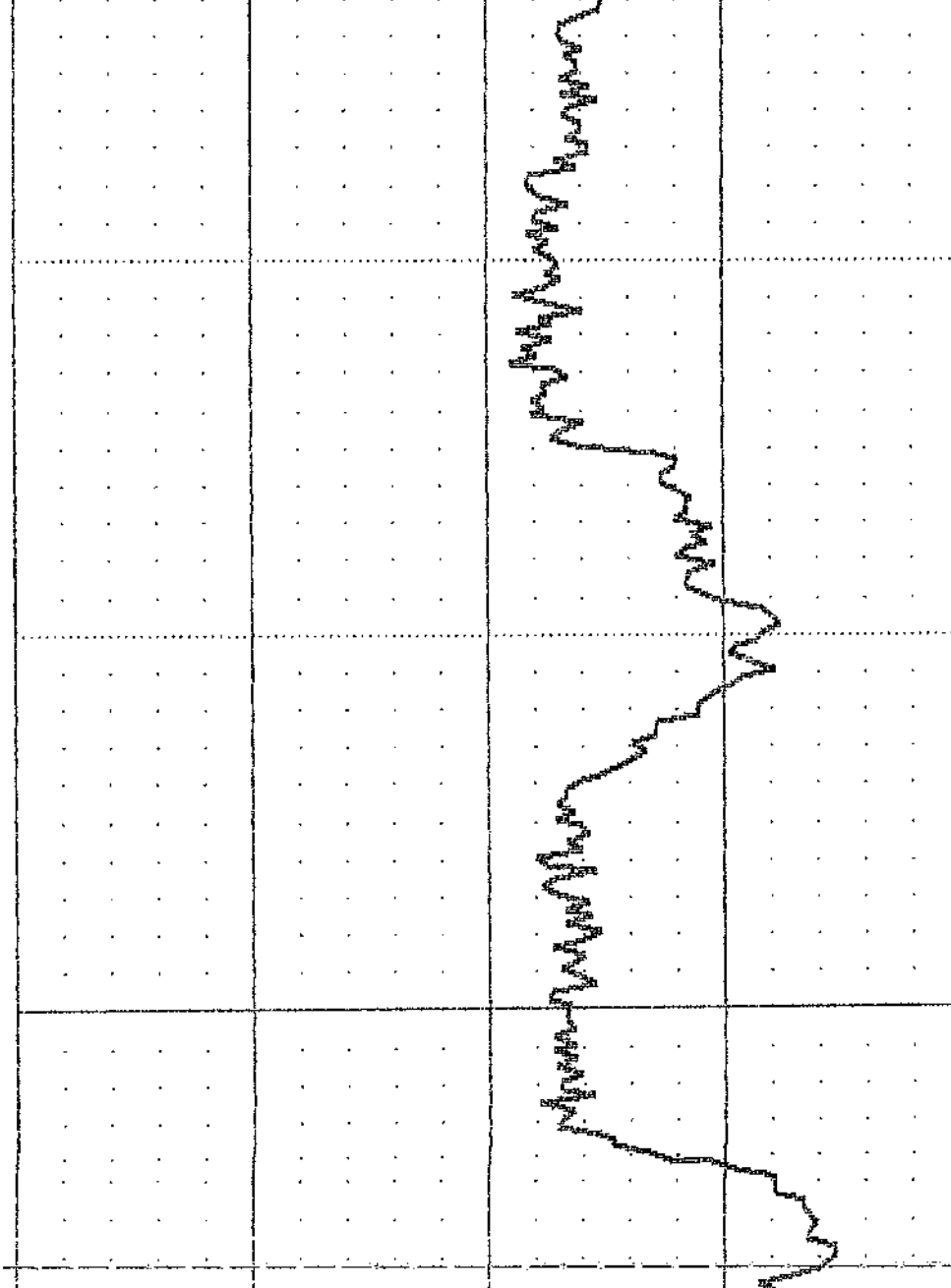
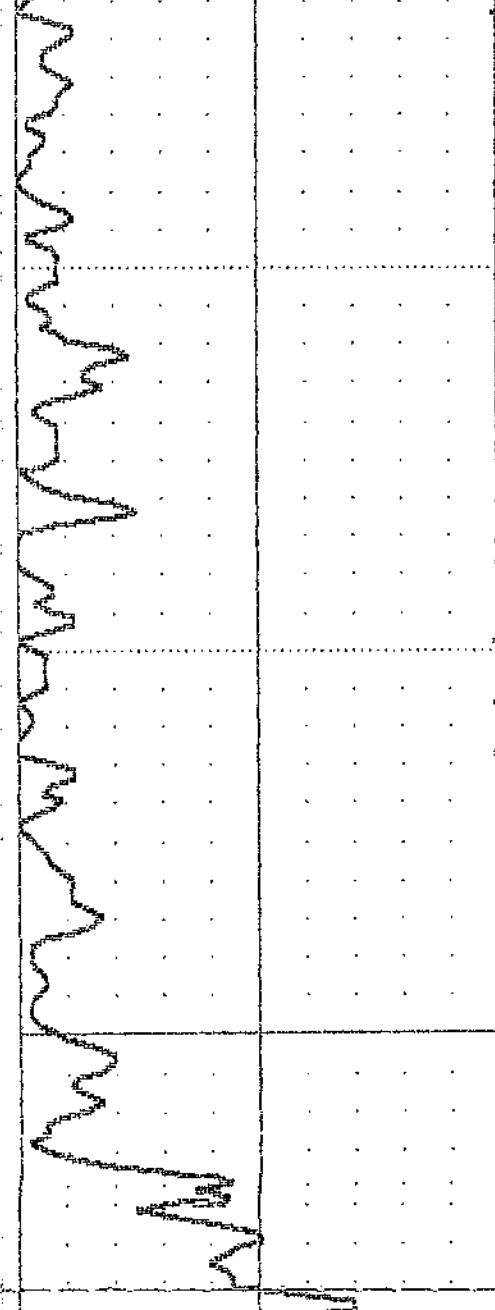
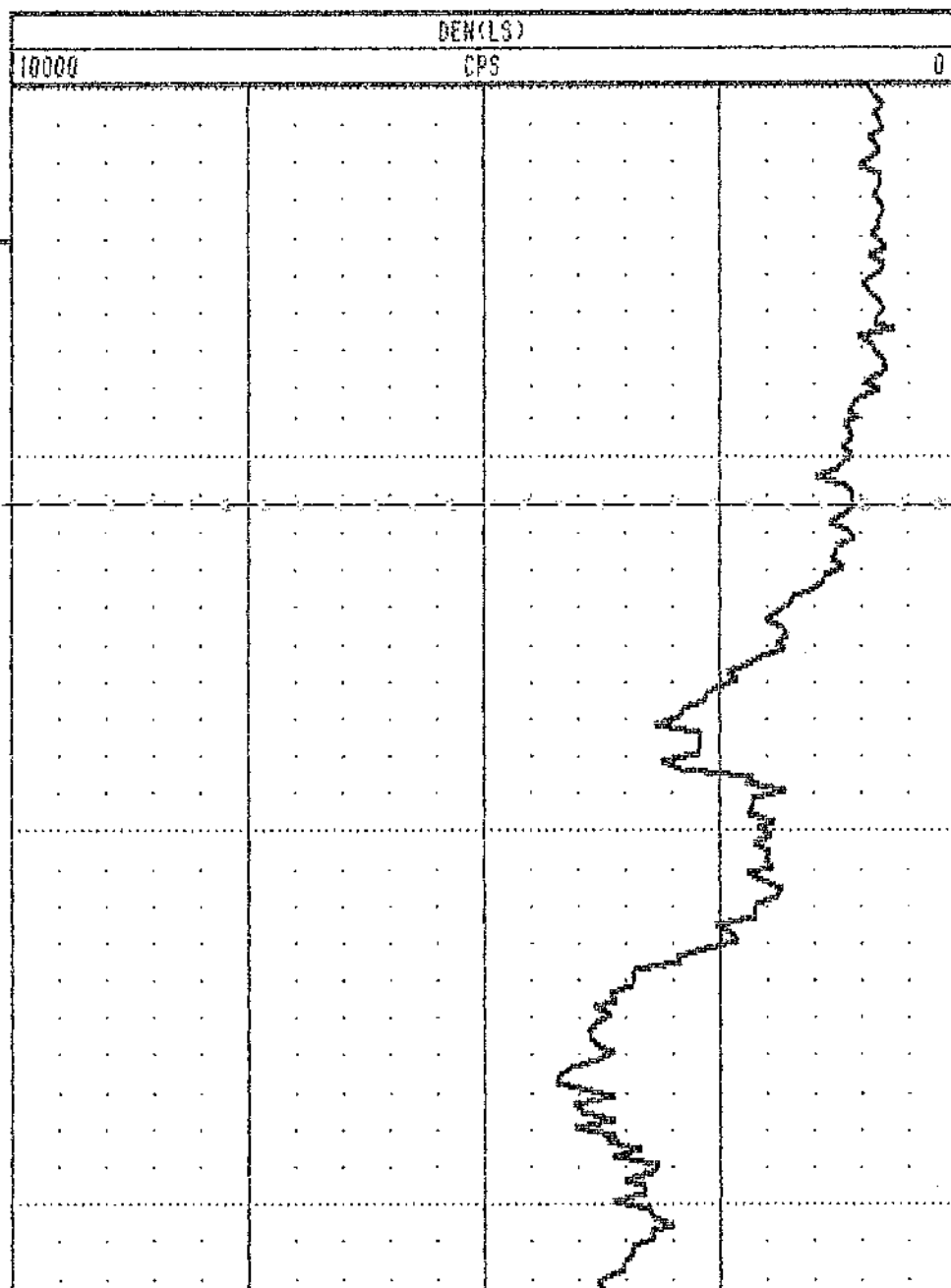
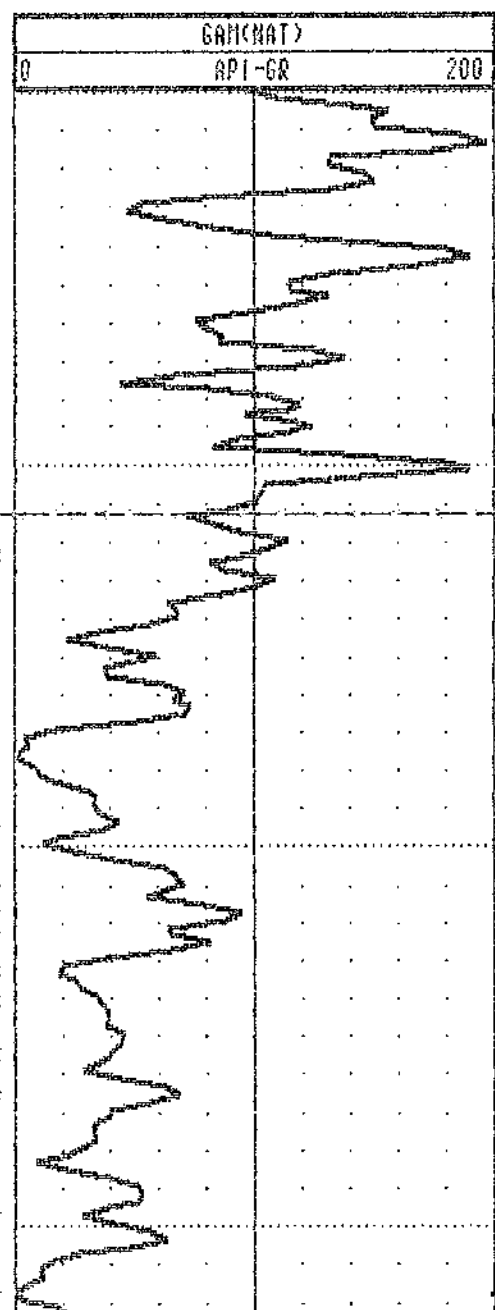
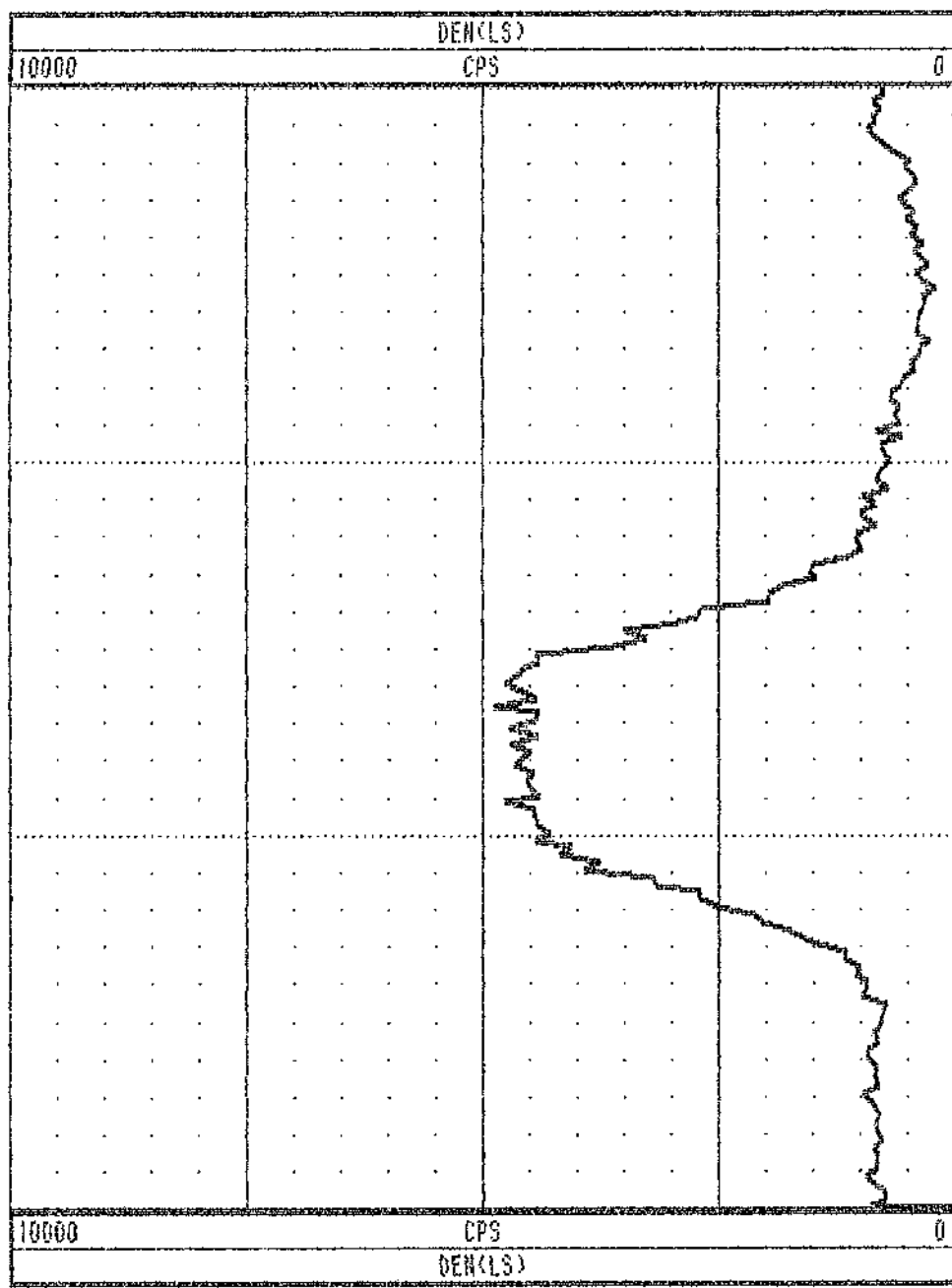
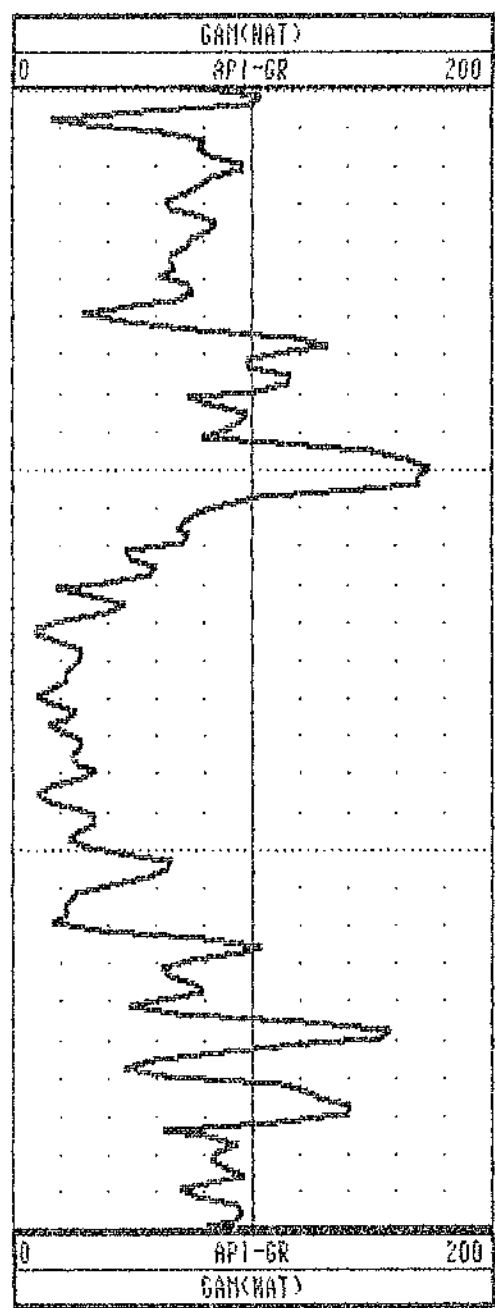
Century

QMR89531 GAM-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:
WELL	: QMR89531 GAM-DENSITY	
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH	
COUNTY	: TRANSFER	
STATE	: BRITISH COLUMBIA	
SECTION	: TOWNSHIP	RANGE :
DATE	: 07/17/89	PERMANENT DATUM :
DEPTH DRILLER	: 53	ELEV. PERM. DATUM:
LOG BOTTOM	: 52.70	LOG MEASURED FROM: GL
LOG TOP	: -.88	DRL MEASURED FROM: GL
CASING DRILLER	: 1.5	LOGGING UNIT
CASING TYPE	: PLASTIC	FIELD OFFICE
CASING THICKNESS	: .05	RECORDED BY
BIT SIZE	: 12.1	BOREHOLE FLUID
MAGNETIC DECL.	: 24.5	RM
MATRIX DENSITY	: 2.68	RM TEMPERATURE
FLUID DENSITY	: 1.0	MATRIX DELTA T
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T
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	SOURCE	SENSOR	RESPONSE	STANDARD	
0	05/04/89	12:58:21	0	GAMCHART	0.000 CPS	0.000 API-GR
1	05/04/89	12:57:04	0	GAMCHART	0.000 CPS	0.000 API-GR

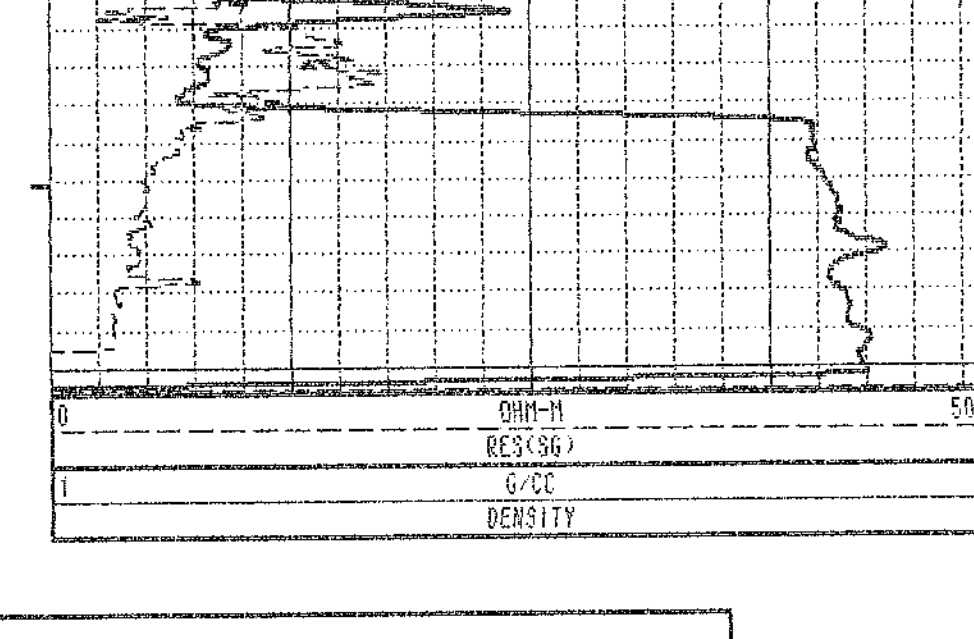
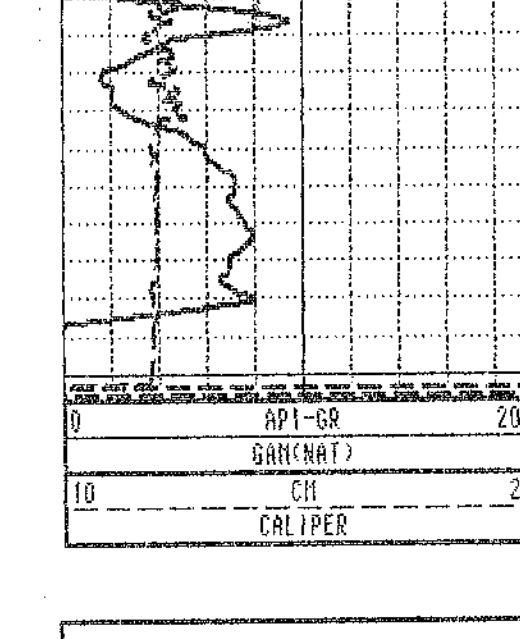
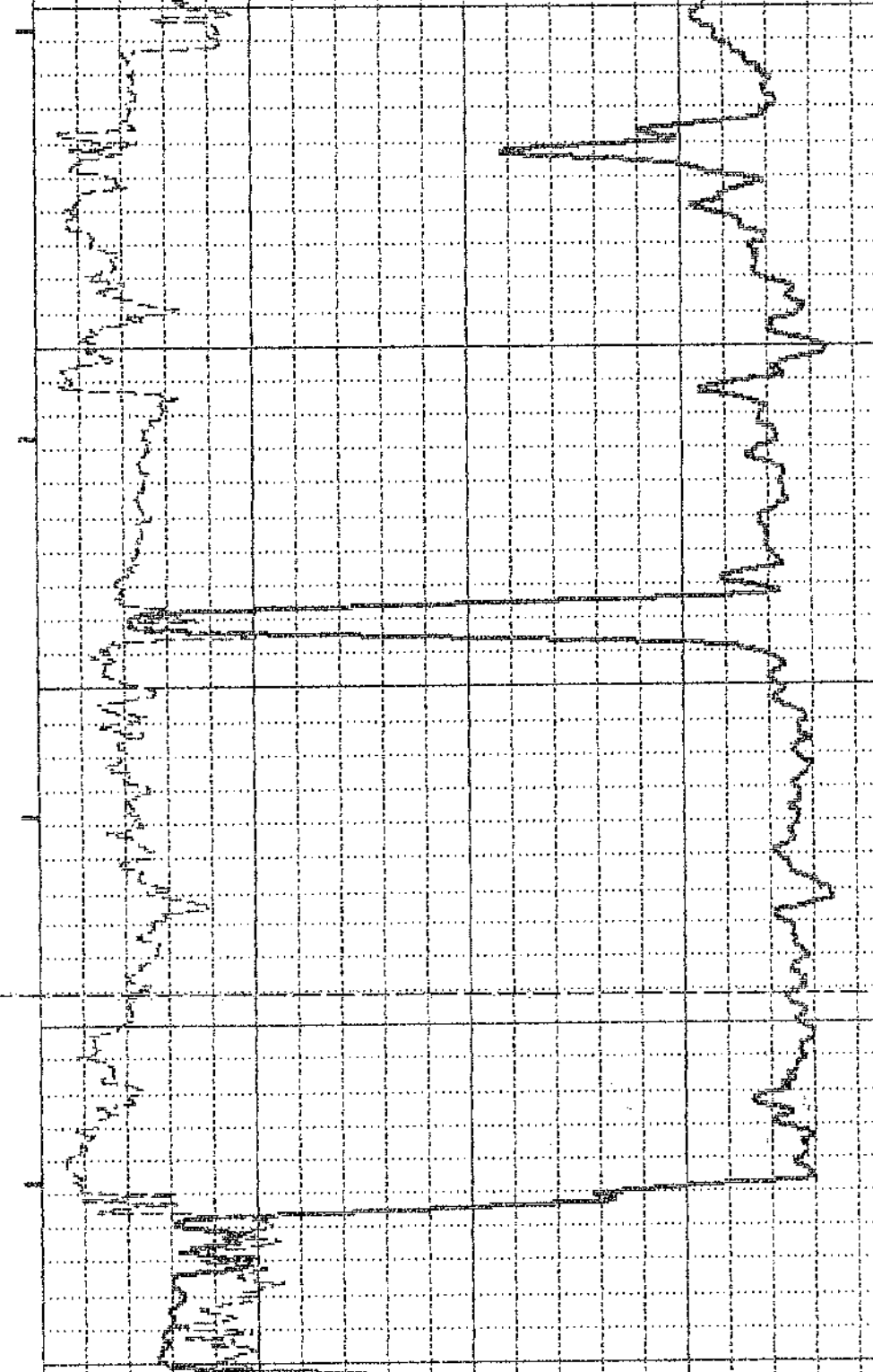
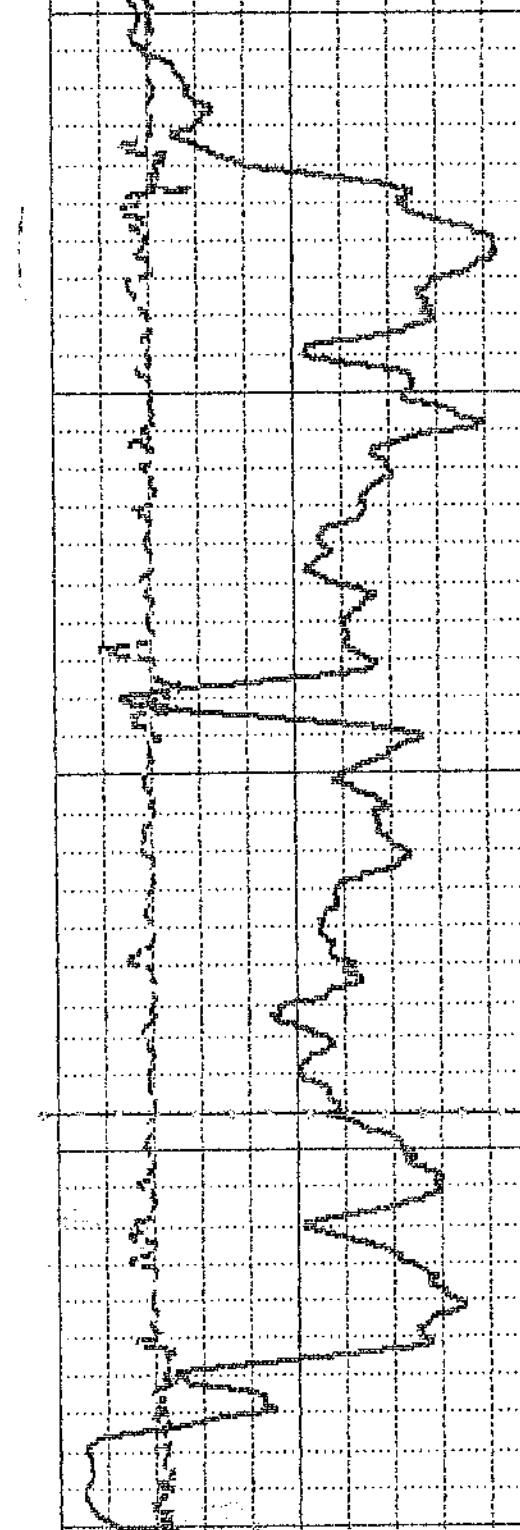
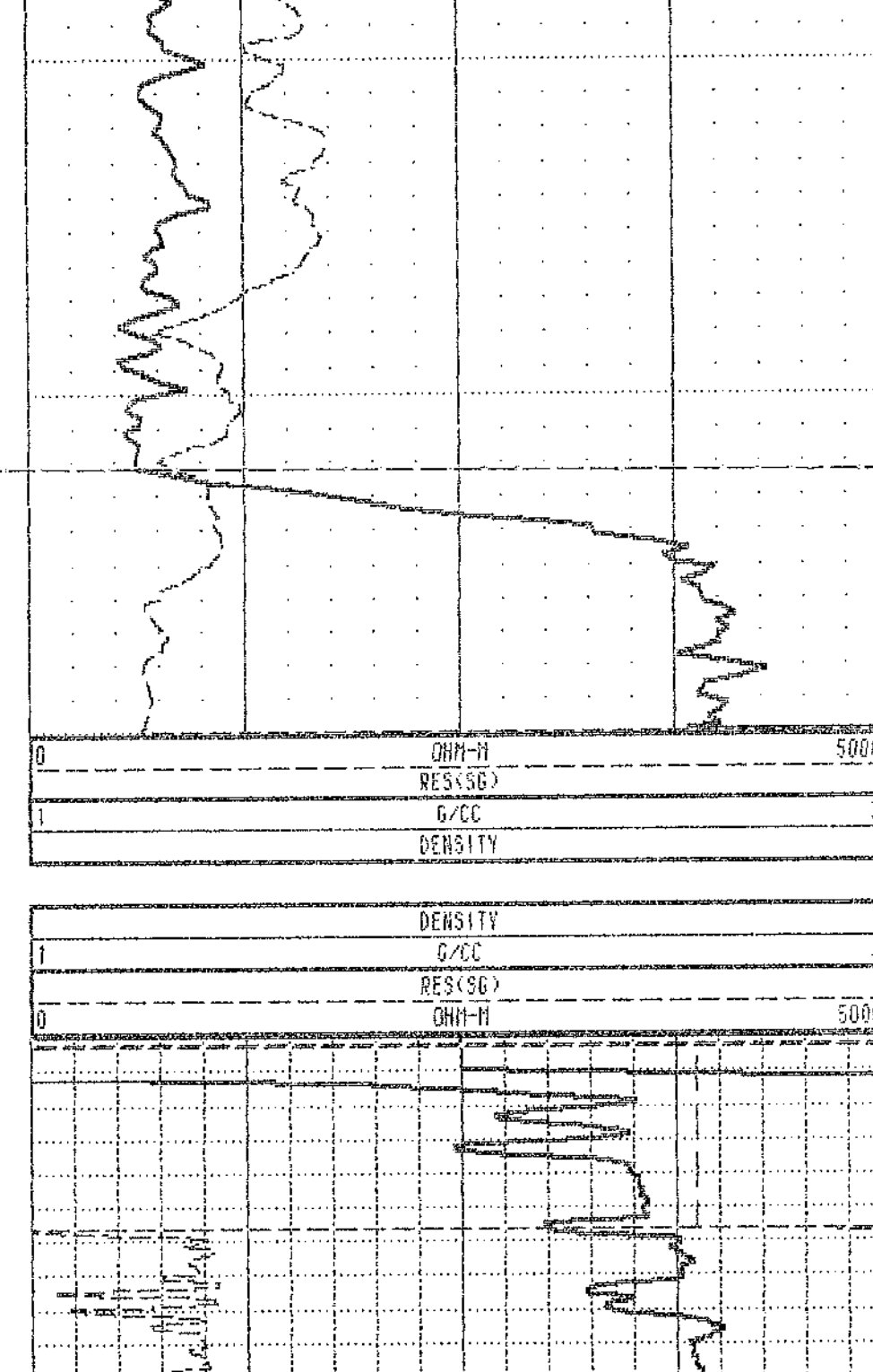
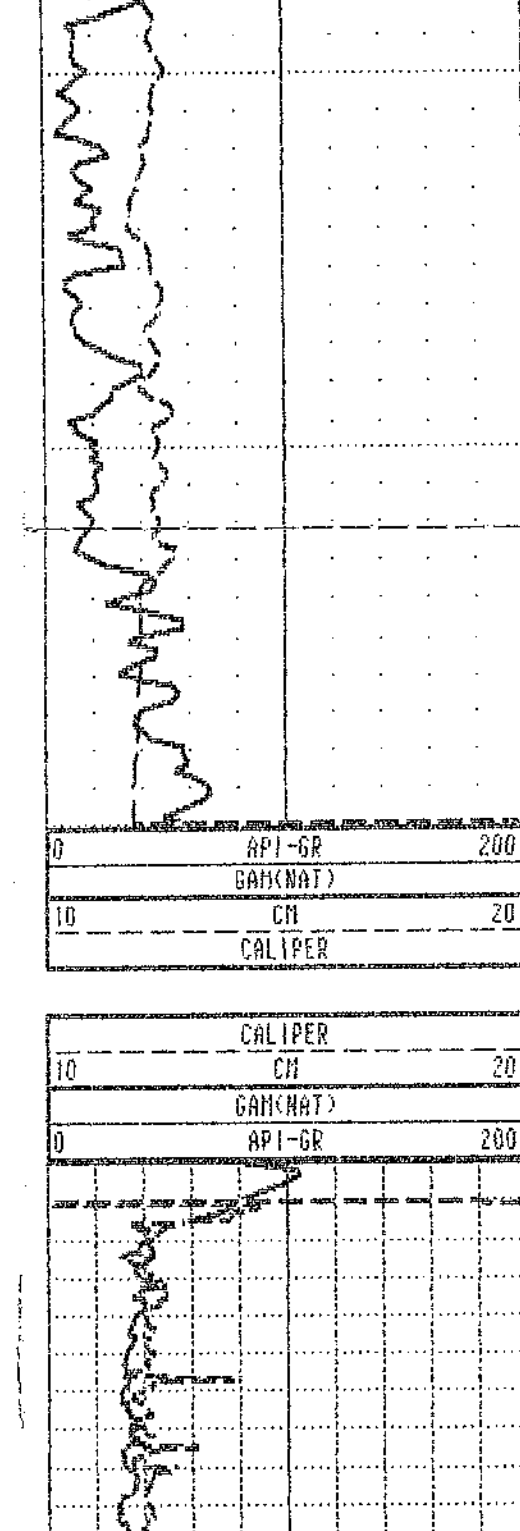
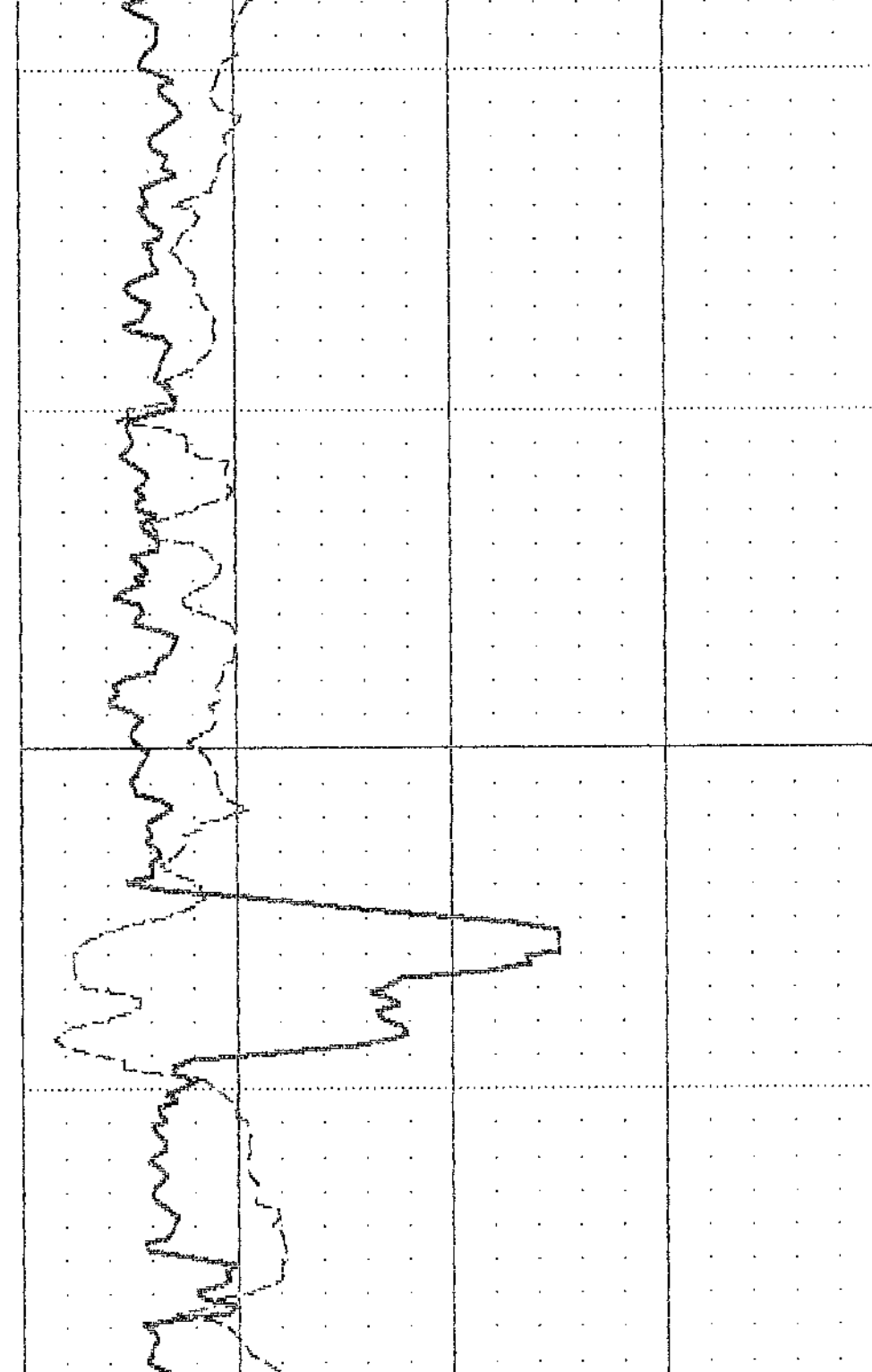
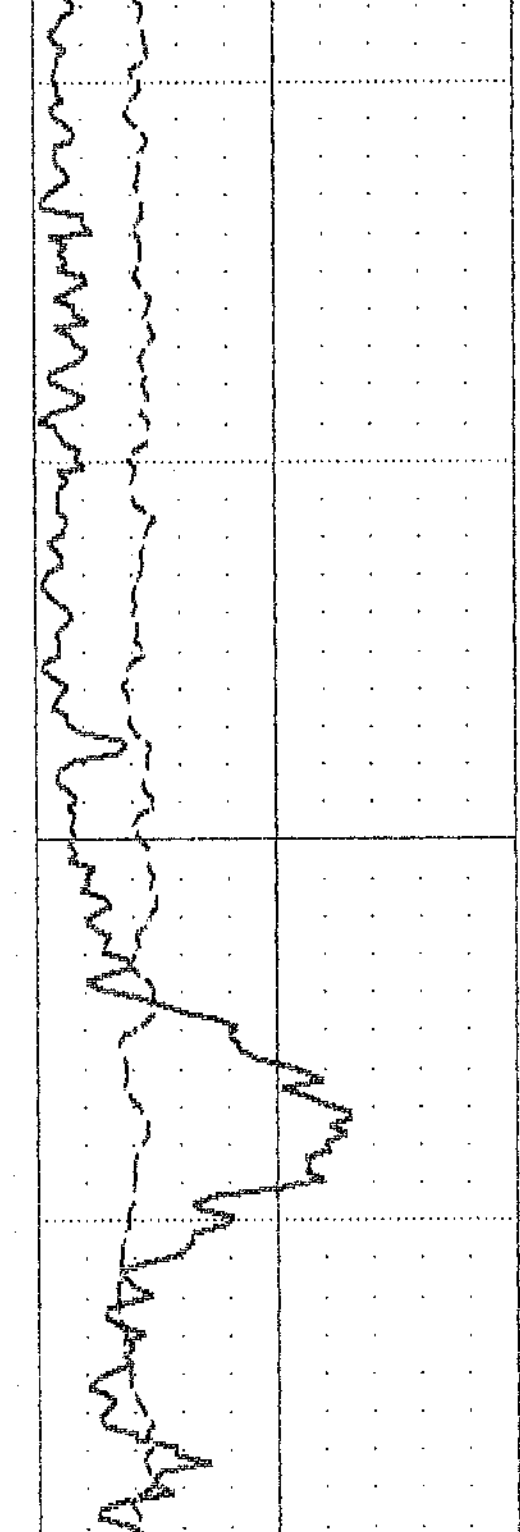
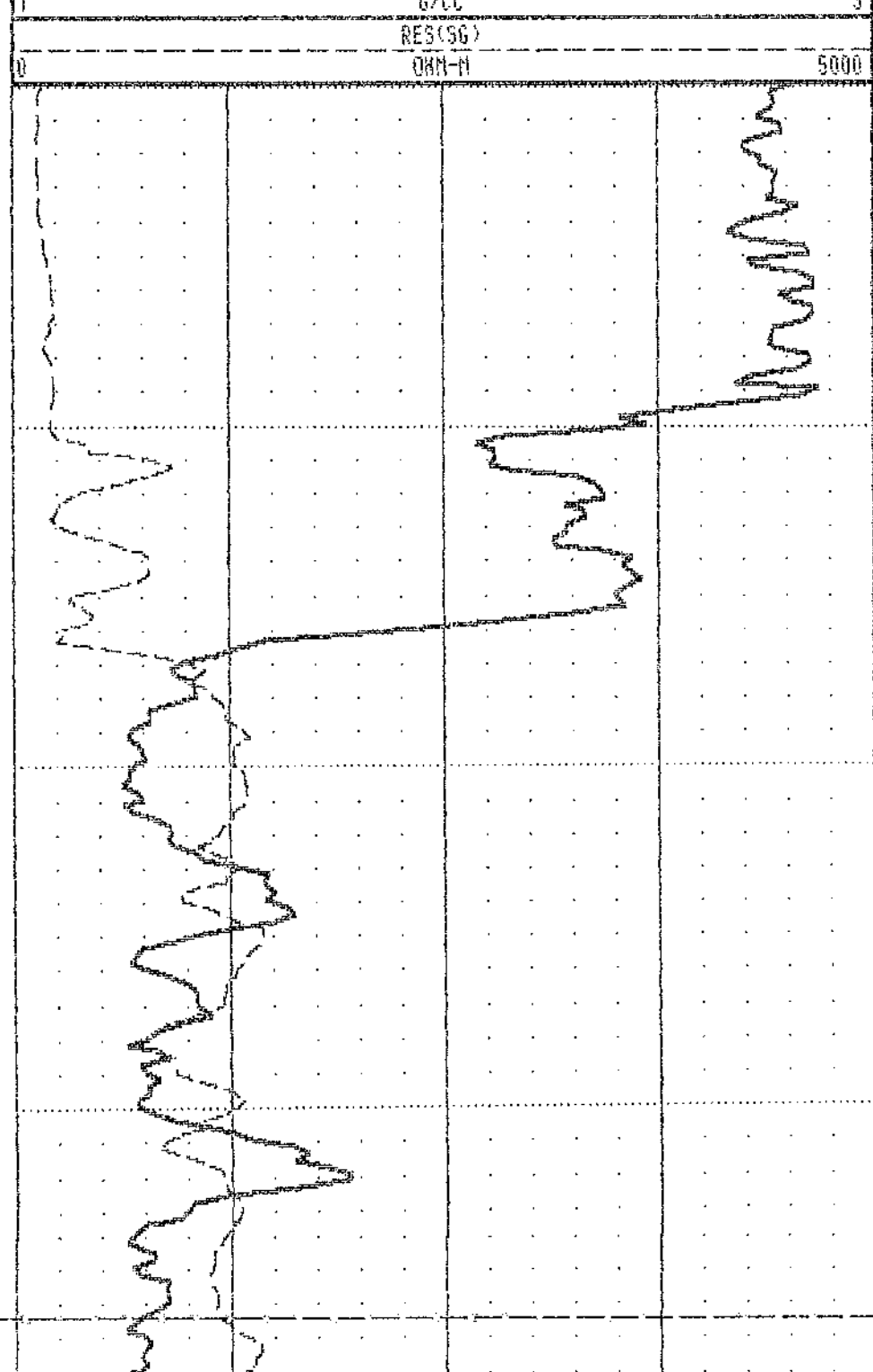
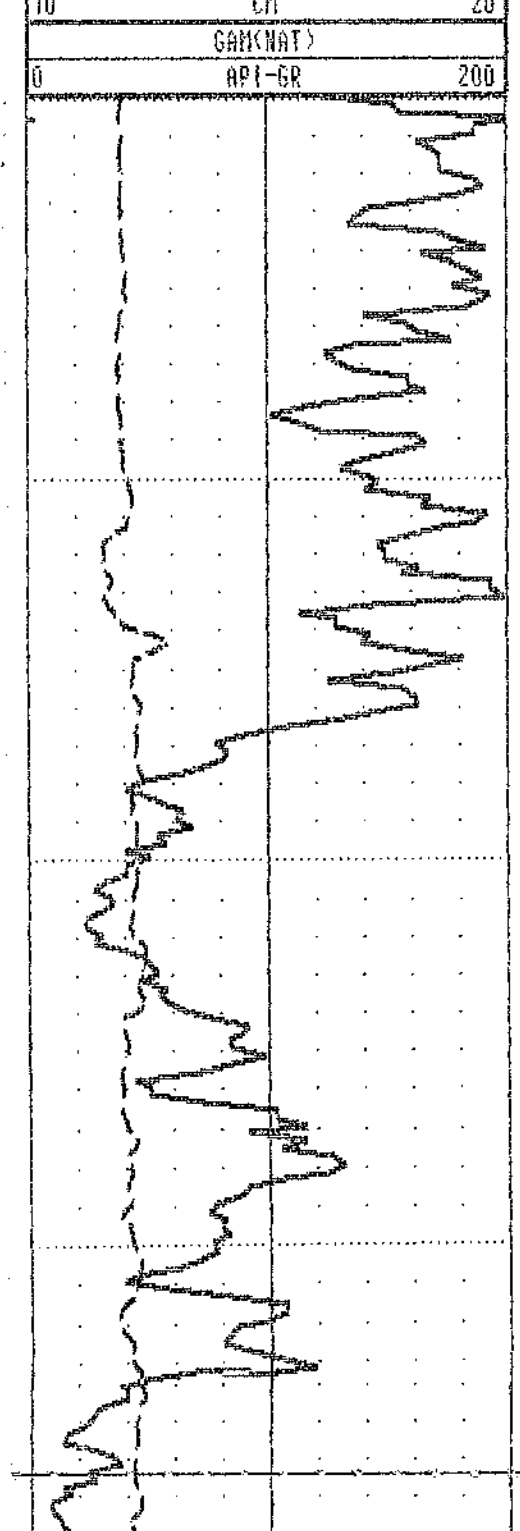
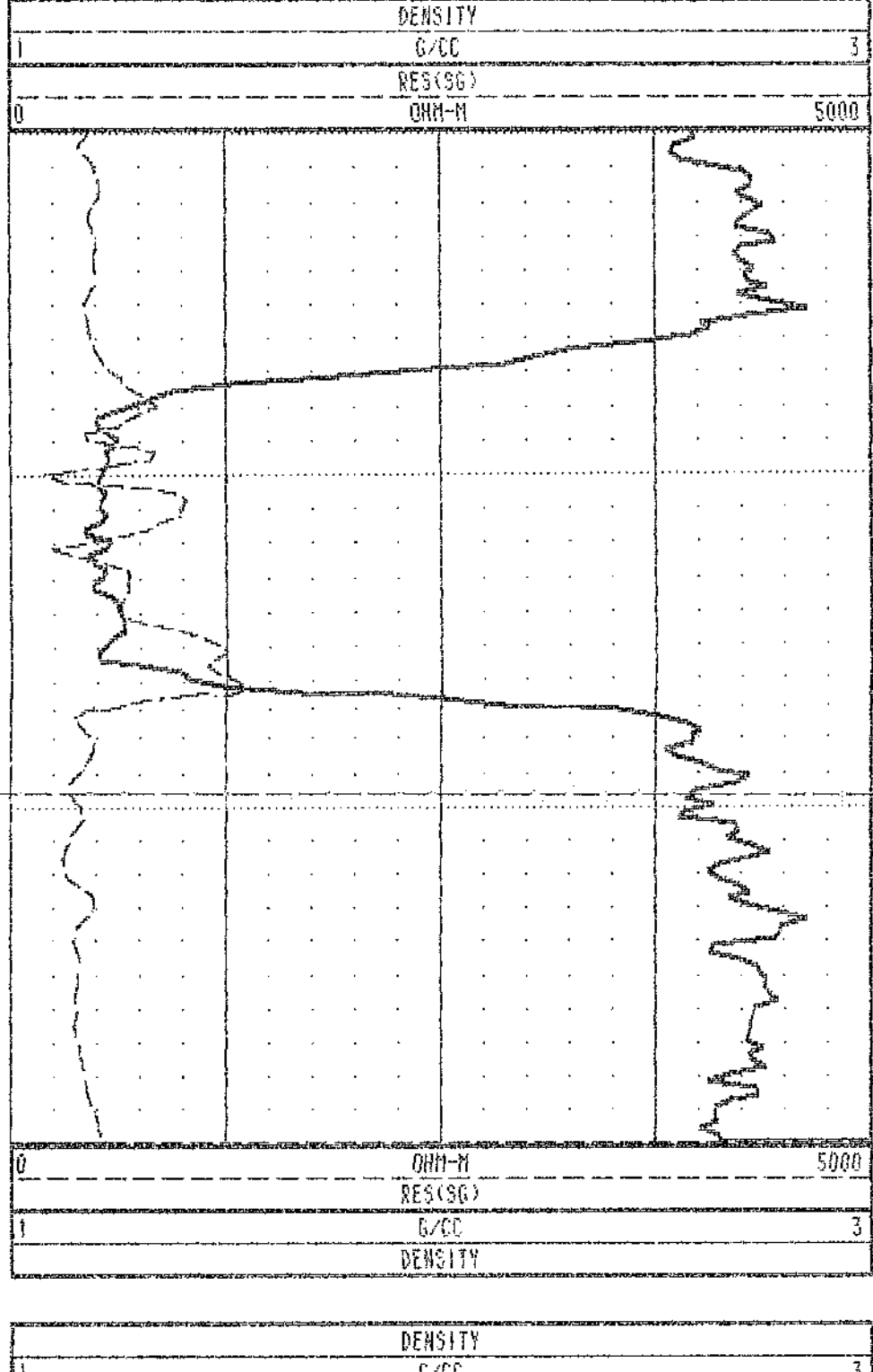
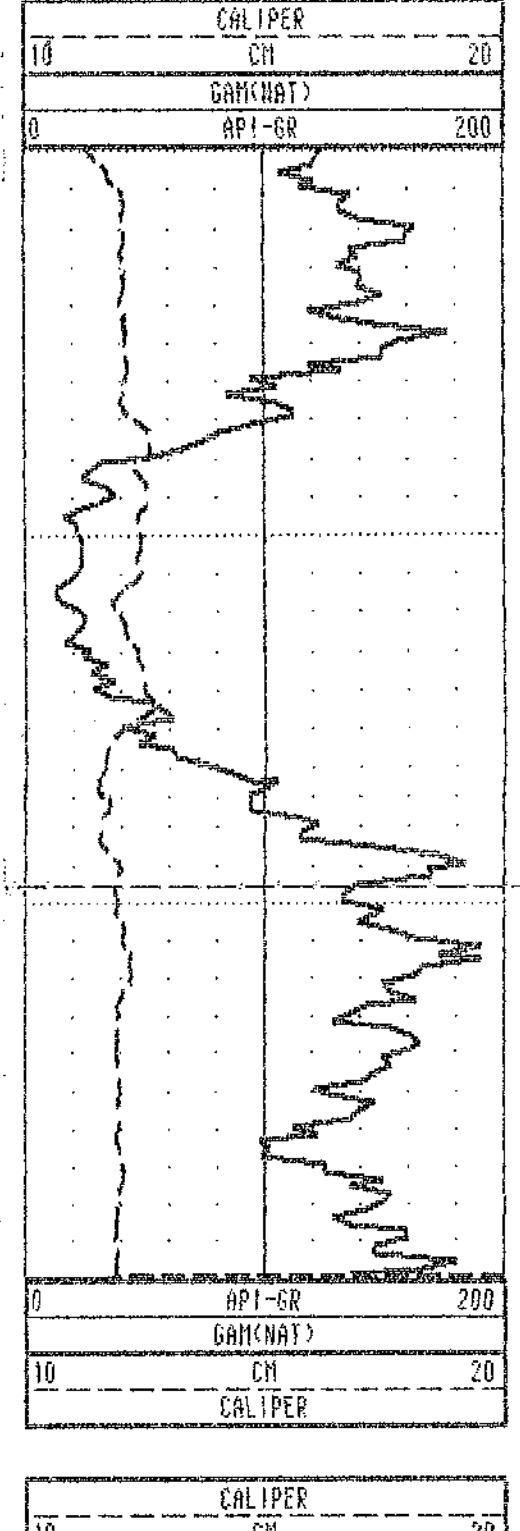


Century

QMR89532 GAM-DEN-RES-CAL

COMPANY : QUINTETTE COAL LTD. OTHER SERVICES:
 WELL : QMR89532 GAM-DEN-RES-CAL
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 07/16/89 PERMANENT DATUM : ELEVATIONS
 DEPTH DRILLER : 61 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 60.62 LOG MEASURED FROM: GL DF :
 LOG TOP : -1.82 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 2 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL
 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: 50000
 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	SRC	SENSOR	RESPONSE	STANDARD
0	05/04/89	10:17:51	0 GAMMA-RAY	0.000 CPS	0.000 API-GR
1	05/04/89	10:17:51	0 GAMMA-RAY	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-H
5	05/04/89	10:25:07	0 RES(SG)	30275.000 CPS	178.500 OHM-H
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 DENSITY	0.000 CPS	0.000 G/CC
9	05/04/89	10:17:51	0 DENSITY	0.000 CPS	0.000 G/CC
10	05/04/89	10:17:51	0 CALIPER	0.000 CPS	0.000 CM
11	05/04/89	10:17:51	0 CALIPER	0.000 CPS	0.000 CM



Century

QMR89532 GAM-NEUTRON

COMPANY : QUINTETTE COAL LTD.
 WELL : QMR89532 GAM-NEUTRON
 LOCATION/FIELD : WOLVERINE VALLEY SOUTH
 COUNTY : TRANSFER
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

OTHER SERVICES:

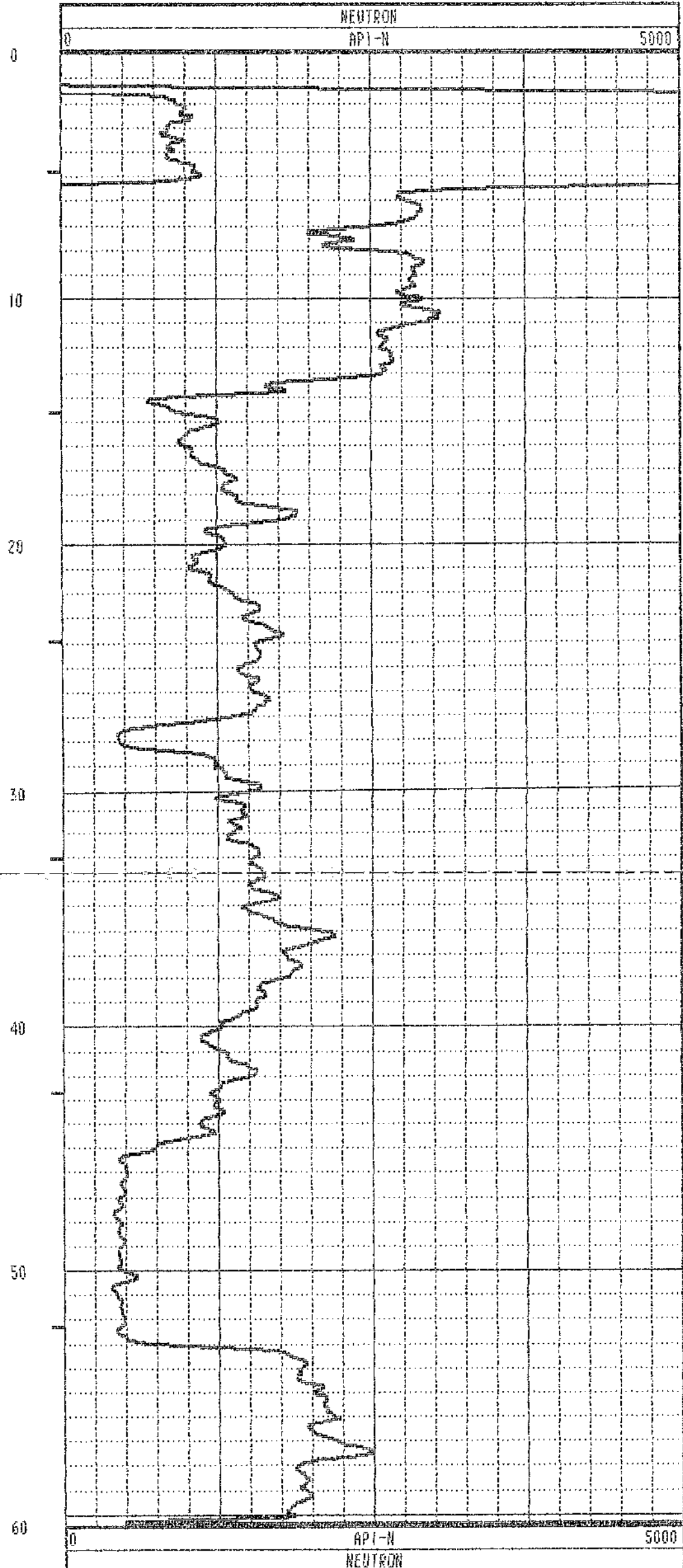
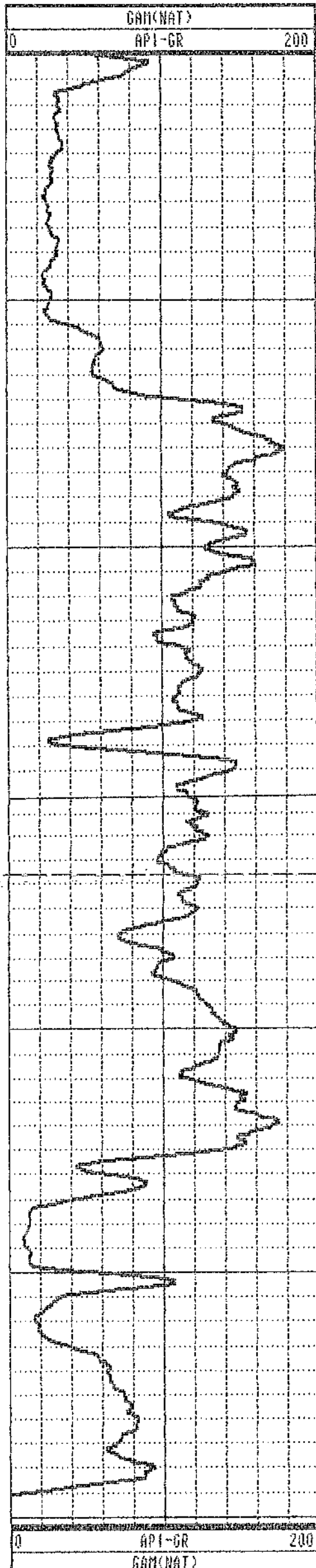
DATE : 07/16/89 PERMANENT DATUM : ELEVATIONS
 DEPTH DRILLER : 61 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 60.40 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.04 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 2 LOGGING UNIT : 8903
 CASING TYPE : PLASTIC FIELD OFFICE : CALGARY
 CASING THICKNESS: .05 RECORDED BY : L. LETAL

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: 50000

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	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 HV
6	05/04/89 08:13:14	0	SP	4095.000 CPS	500.000 HV
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 *****

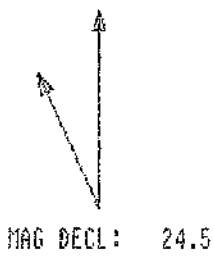
CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR89532 GAM-
 FIELD OFFICE : CALGARY DATE OF LOG : 07/17/89
 DATA FROM : PROBE : 9055A , 14
 MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 1

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
3.0	3.00	0.01	-0.00	0.0	328.7	1.2	353.5
8.0	8.00	0.02	0.04	0.0	64.1	1.7	125.1
13.0	13.00	0.02	0.09	0.1	78.5	0.6	70.9
18.0	18.00	0.05	0.15	0.2	69.9	0.7	47.6
23.0	23.00	0.07	0.19	0.2	68.9	0.6	80.2
28.0	28.00	0.09	0.23	0.2	69.6	0.3	92.3
33.0	33.00	0.08	0.27	0.3	73.4	0.4	91.4
38.0	38.00	0.07	0.27	0.3	76.3	0.3	94.8
43.0	43.00	0.06	0.28	0.3	78.5	0.3	177.9
48.0	48.00	0.05	0.29	0.3	79.7	0.1	154.9
53.0	53.00	0.06	0.29	0.3	77.4	0.5	9.9
58.0	58.00	0.10	0.27	0.3	70.1	0.4	343.8
60.4	60.40	0.12	0.26	0.3	65.5	0.0	0.0

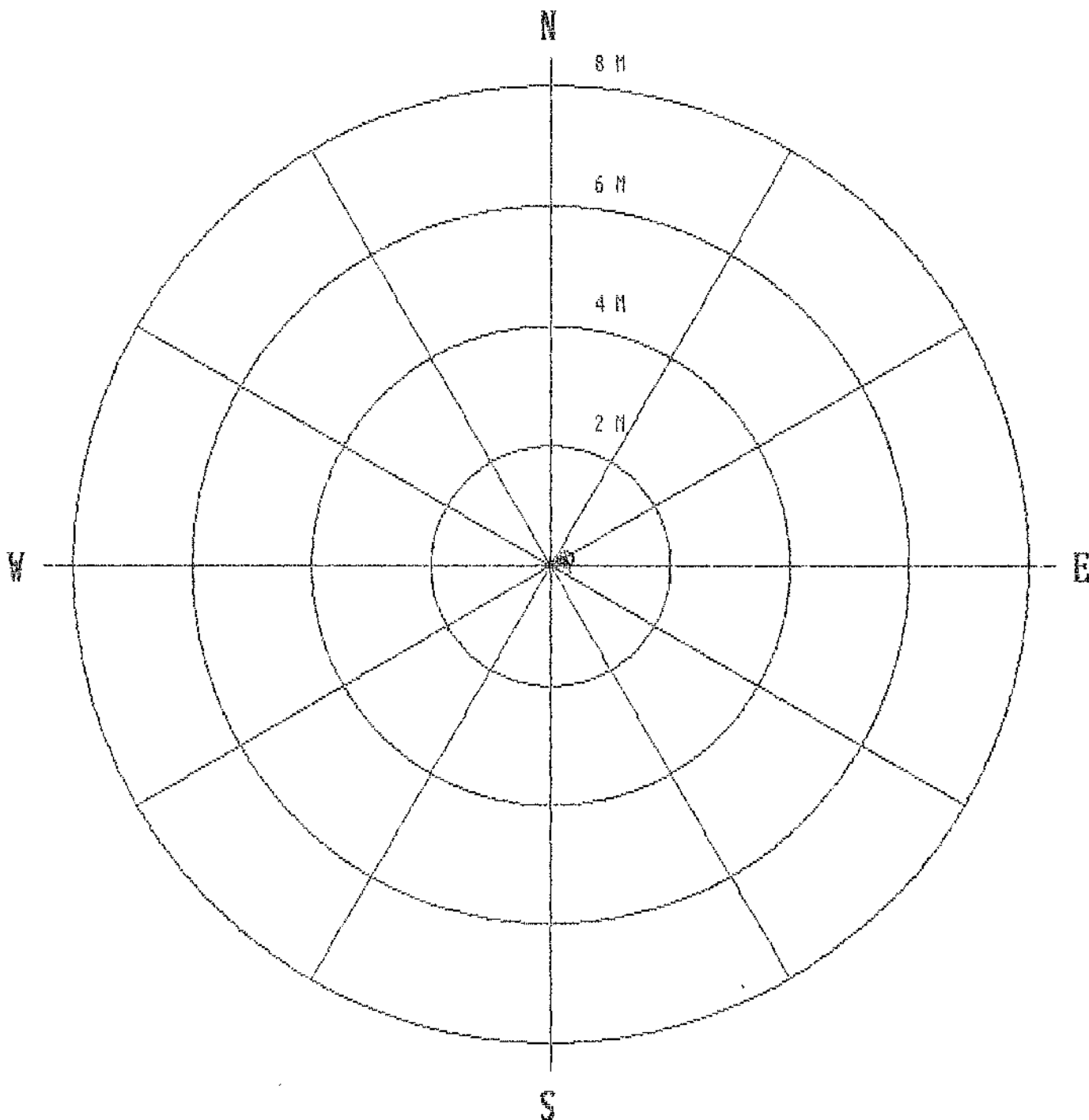
753

PLAN VIEW
 COMPU-LOG DEVIATION

CLIENT: QUINTETTE COAL LTD.
 LOCATION: WOLVERINE VALLEY SOUTH
 HOLE ID: QMR89532 GAM-NEUTRON
 DATE OF LOG: 07/17/89
 PROBE: 9055A 14



SCALE: 1 M/CM
 TRUE DEPTH: 60.34 M
 AZIMUTH: 65.5
 DISTANCE: 0.3 M
 + = 50 M INCR
 O = BOTTOM OF HOLE





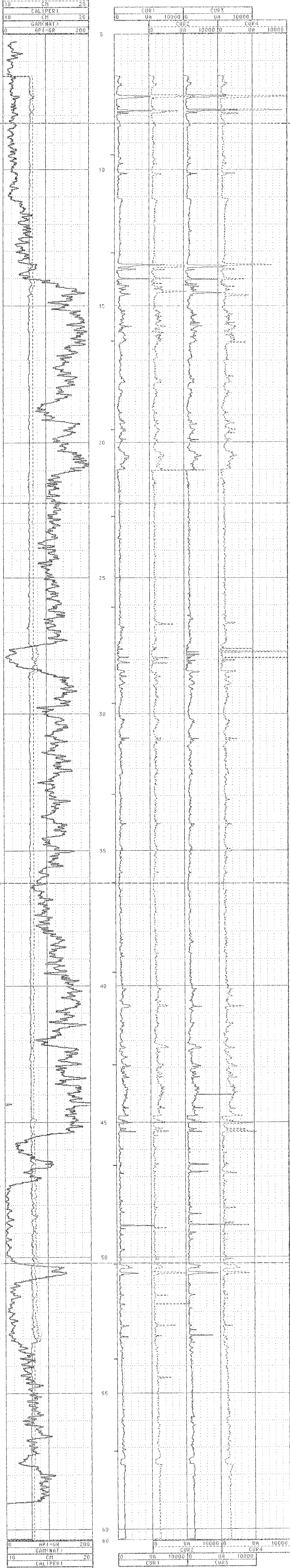
Century

QMR89532 DIPMETER

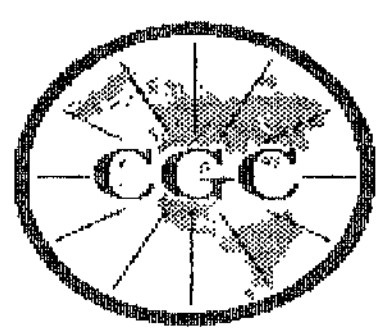
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR89532 DIPMETER		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE	:
DATE	: 07/16/89	PERMANENT DATUM	:
DEPTH DRILLER	: 61	ELEV. PERM. DATUM:	KB
LOG BOTTOM	: 60.39	LOG MEASURED FROM:	GL
LOG TOP	: 5.27	DRL MEASURED FROM:	GL
CASING DRILLER	: 2	LOGGING UNIT	: 8903
CASING TYPE	: PLASTIC	FIELD OFFICE	: CALGARY
CASING THICKNESS:	.05	RECORDED BY	: L. LETAL
BIT SIZE	: 12.1	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	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	: ORIGINAL
LOGGED OPEN HOLE	:	TYPE	: 9460A
VERTICAL HOLE	:	LOG	: 9
		PLOT	: 9400 0
		THRESH	: 50000

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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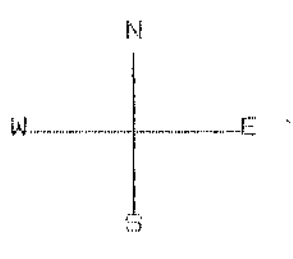
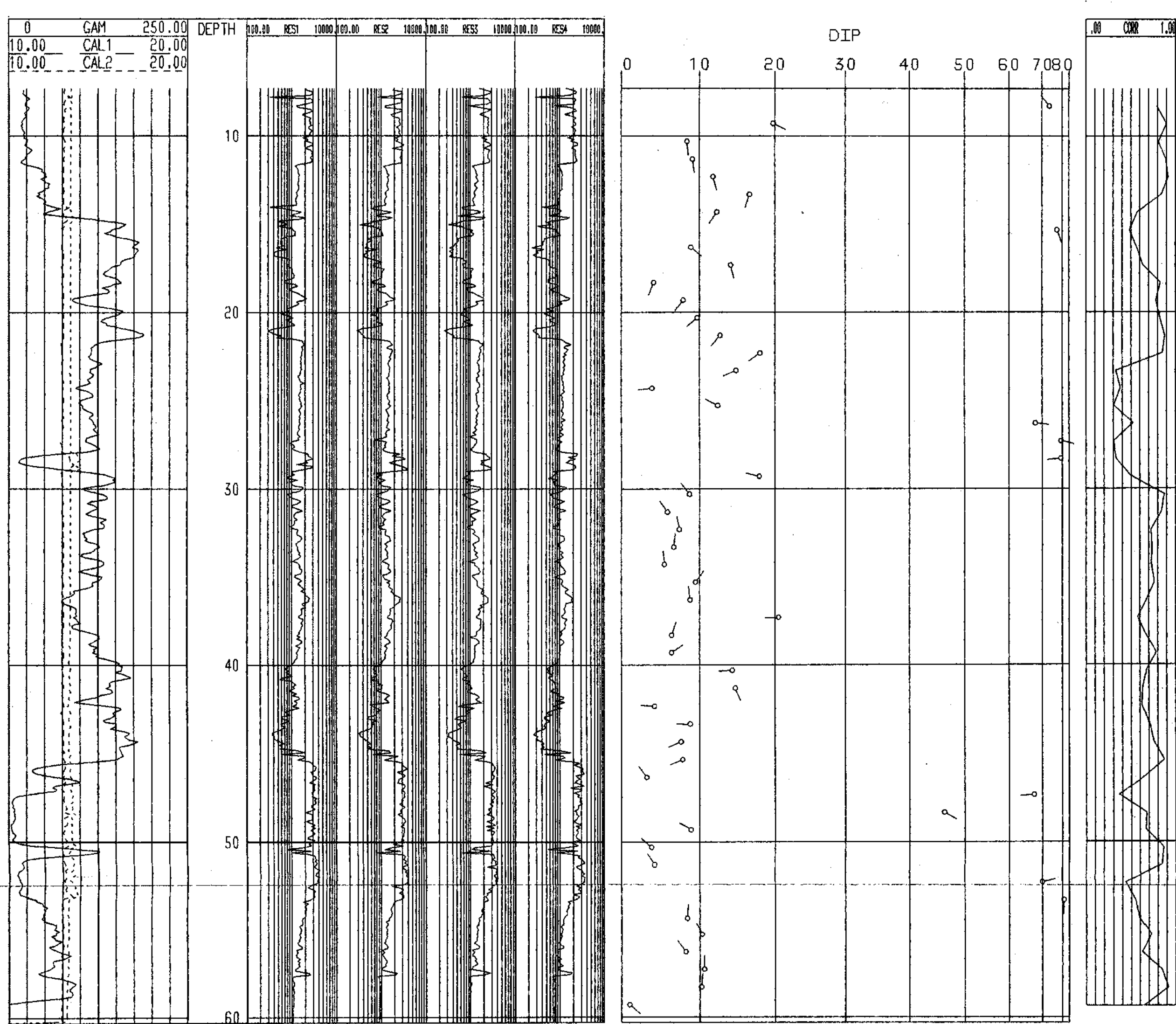


Century GEOPHYSICAL CORP.

QMR89532 DIPMETER

COMPANY : QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL : QMR89532 DIPMETER		
LOCATION/FIELD : HOLVERINE VALLEY SOUTH		
COUNTY : TRANSFER		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP :	RANGE :
DATE : 11/15/89	PERMANENT DATUM :	ELEVATIONS :
DEPTH DRILLER : 61	ELEV. PERM. DATUM :	KB :
LOG BOTTOM : 60.39	LOG MEASURED FROM: GL	DF :
LOG TOP : 6.00	DAL MEASURED FROM: GL	GL :
CASING DRILLER : 2	LOGGING UNIT : 8903	
CASING TYPE : PLASTIC	FIELD OFFICE : CALGARY	
CASING THICKNESS: .05	RECORDED BY : L. LOTAL	
BIT SIZE : 12.1	BOREHOLE FLUID : WATER	FILE : PROCESSED
MAGNETIC DECL. : 24.5	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
REMARKS :		

logged open hole vertical
 Window: 2m Step: 1m Search Angle: 80deg Method-2
 ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



DIPMETER LIST FOR:089532
 WINDOW:2M
 STEP:1M
 SEARCH ANGLE:80DEG.
 MAGNETIC DECLINATION:24.5

DEPTH	DIP	AZIM	CORR COEF	HOLE DEV.	HOLE AZIM	PADI AZIM
8.300	73.0	321.	.791	4.4	7.	50.
9.300	19.8	115.	.899	1.9	15.	52.
10.300	8.4	175.	.809	2.2	31.	54.
11.300	9.1	173.	.690	2.5	49.	59.
12.300	11.0	166.	.914	1.6	31.	59.
13.300	16.6	198.	.841	1.7	27.	61.
14.300	12.3	215.	.567	2.7	31.	62.
15.300	76.6	160.	.479	1.3	14.	69.
16.300	8.9	128.	.564	2.5	36.	68.
17.300	14.1	166.	.632	1.7	12.	73.
18.300	4.1	201.	.823	3.0	92.	69.
19.300	7.9	218.	.776	2.1	66.	73.
20.300	9.7	229.	.823	2.1	71.	76.
21.300	12.7	220.	.676	1.3	95.	79.
22.300	18.0	234.	.854	1.0	75.	82.
23.300	14.8	248.	.309	1.3	97.	83.
24.300	3.9	264.	.381	1.7	83.	85.
25.300	12.4	296.	.295	1.9	87.	87.
26.300	67.6	97.	.527	1.9	83.	90.
27.300	79.0	103.	.307	.5	62.	97.
28.300	78.9	263.	.329	.6	111.	101.
29.300	17.9	265.	.497	.8	101.	105.
30.300	8.7	323.	.869	.9	161.	109.
31.300	5.9	324.	.842	1.5	51.	113.
32.300	7.4	351.	.723	.7	49.	118.
33.300	6.7	6.	.731	.7	98.	121.
34.300	5.5	355.	.728	1.1	129.	122.
35.300	9.5	37.	.761	1.2	72.	130.
36.300	8.8	354.	.673	.8	67.	135.
37.300	20.5	258.	.575	1.3	93.	127.
38.300	6.1	19.	.663	.8	86.	135.
39.300	6.4	56.	.680	.4	68.	165.
40.300	14.3	267.	.673	1.2	1.	66.
41.300	14.7	157.	.626	.0	214.	307.
42.300	4.2	274.	.621	1.7	316.	21.
43.300	8.8	271.	.708	1.1	327.	347.
44.300	7.6	267.	.75.	..	311.	335.
45.300	7.8	267.	.87.	1.6	316.	49.

DEPTH	DIP	AZIM	CORR COEF	HOLE DEV.	AZ.	AZ.
46.300	3.2	325.	.642	1.4	326.	42.
47.300	67.1	244.	.366	1.4	8.	348.
48.300	46.1	120.	.674	1.7	8.	351.
49.300	8.9	301.	.664	.8	11.	354.
50.300	3.8	311.	.862	1.6	3.	355.
51.300	4.2	328.	.844	.6	37.	354.
52.300	70.0	77.	.435	.3	854.	354.
53.300	81.0	185.	.547	1.6	320.	3.
54.300	8.4	3.	.594	1.5	299.	3.
55.300	10.3	336.	.728	1.1	268.	7.
56.300	8.2	324.	.625	.9	328.	9.
57.300	10.6	360.	.845	.5	334.	9.
58.300	10.2	6.	.916	1.0	340.	15.
59.300	1.0	131.	.652	1.0	311.	18.