

BURNT RIDGE EXTENSION

GEOLOGICAL REPORT ON COAL LICENCES

272, 273 AND 267

KOOTENAY LAND DISTRICT, BRITISH COLUMBIA

B.C. COAL LICENCE NUMBERS: 272, 273 AND 267

GROUP NUMBER: PART OF GROUP 214

OWNER: SHELL CANADA LIMITED

OPERATOR: CROWN RESOURCES LIMITED

NTS: 82J2

LONGITUDE: 114° 49' WEST

LATITUDE: 50° 05' NORTH

REPORT PREPARED BY:

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STAFF GEOLOGIST
MAY, 1989

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1.0 SUMMARY

Burnt Ridge Extension is the property name assigned by Crows Nest Resources Limited (C.N.R.L.) to a block of three coal licences in southeast B.C. The property is 10 air kilometres northeast of Elkford on the west side of the Fording River.

In this region coal-bearing rocks of the Jura-Cretaceous Kootenay Group are preserved in the core of the north trending Alexander Creek Syncline (Fording Syncline). This remnant of contiguous coal-bearing rocks is referred to as the Elk Valley Coal Field. (Pearson and Grieve 1980). There are three major coal mines located in the Elk Valley Coal Field; the Fording Mine four kilometres to the north; Greenhills Mine three kilometres to the west, and the Line Creek Mine 20 kilometres to the south of Burnt Ridge Extension. The road and rail transport routes to the Fording Mine follow the Fording Valley at the eastern edge of the property.

The Kootenay Group is divided into three formations (Gibson 1979), a lowermost Morrissey Formation, a middle Mist Mountain Formation and an upper Elk Formation with the Mist Mountain Formation containing mineable quantities of coal. A complete section of Mist Mountain Formation averaging 412 metres in thickness crops out on the property. It contains an aggregate thickness of 59.3 metres of coal distributed in at least 18 coal seams or coal zones. Rank of the coal varies from medium to high volatile bituminous.

Strata on Burnt Ridge Extension dip 45° to 65° east; 5° to 30° steeper than the topographic slope which forms the west side of the Fording River Valley; the property is therefore amenable to open pit mining.

The in place coal resource for the property is about 80 million tonnes down to the elevation of the Fording River. Mineable reserves based on open pit geometry are 51.4 million tonnes with a stripping ratio of 3.8 to 1 using a 1.5 specific gravity for coal in place. This pit has its west wall on the base of the four lower seam and descends eastward to an elevation of 1490 metres at its deepest level.

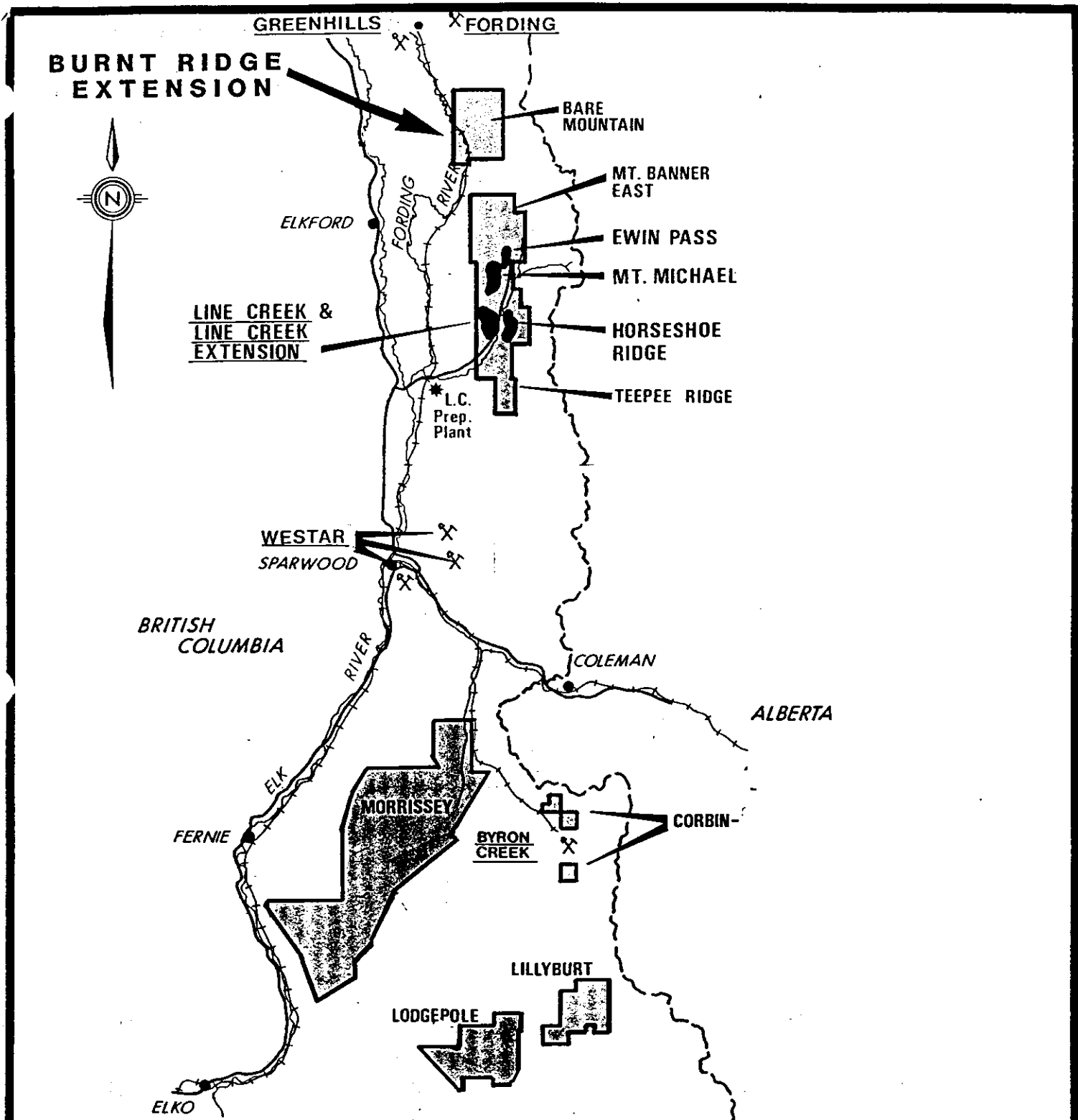
Crows Nest Resources Limited explored the property in 1979, 1980, 1981, 1985 and 1986 prior to the 1988 project. The 1988 program involved the construction of 190 metres of road and the drilling of eight reverse circulation rotary holes for a total length of 974.5 metres.

2.0 INTRODUCTION

2.1 Location, Physiography, Access

Burnt Ridge Extension coal property, which forms part of C.N.R.L.'s "North Block" of coal licences, is located in southeast B.C., 10 kilometres northeast of Elkford. Latitude $50^{\circ} 05'$ and longitude $114^{\circ} 49'$ intersect on the property. (Figure 1)

"North Block" is located in the physiographic region referred to as the Main Ranges of the Rocky Mountains (Holland 1964). The



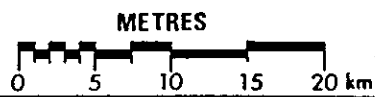
Crows Nest Resources Limited
LINE CREEK MINE

BURNT RIDGE EXTENSION
Location Map

DRAWN BY: J.W.K.	DATE: JULY/89	MAP NO.
AUTHOR: B. RYAN	SCALE:	



FIGURE 1

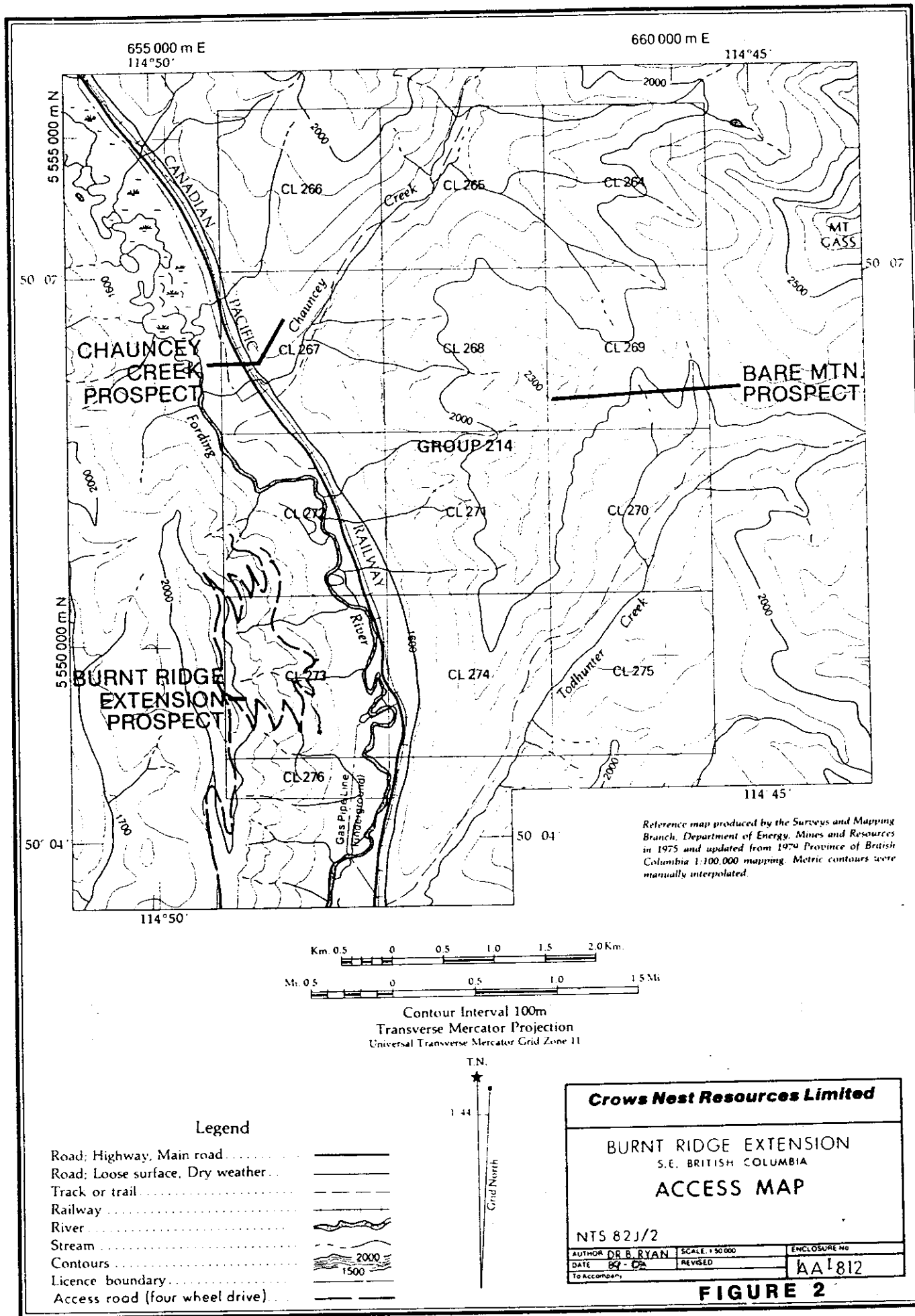


property covers part of a north trending ridge on the west side of the Fording River. The west side of the ridge is grass covered and dips more steeply than the east slope which, except for patches is treed. The maximum height of the ridge is 2100 metres. A linear drainage pattern is established on the east slope where creeks are mostly small and seasonal. These creeks flow directly into the Fording River which meanders through a one kilometre wide valley whose elevation is about 1540 metres.

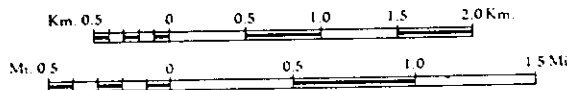
A paved road connects Elkford to Sparwood. The Fording Mine has constructed a paved road from Elkford to its mine site four kilometres north of Burnt Ridge Extension and 22 kilometres from Elkford. The road and a parallel CPR rail line traverse the property where it overlies the Fording River Valley. Access to the ridge crest and upper slopes of the property is by a four wheel drive road which branches off the Fording Mine road three kilometres south of the property. (Figure 2)

2.2 Coal Land Tenure, Property History

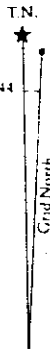
Burnt Ridge Extension forms part of C.N.R.L.'s North Block Group 214 which comprises licences 264 to 276 inclusive. Burnt Ridge Extension is made up of three of these licences (276, 273 and 272). (Figure 3) The Licences are held by Shell Canada Limited and exploration is directed by its wholly owned subsidiary Crows Nest Resources Limited. Shell acquired the licences in 1978 when it acquired Crows Nest Industries (C.N.I.) through purchase. C.N.R.L. personnel started mapping North Block in 1978 (Horachek and Fietz 1979), more



Reference map produced by the Surveys and Mapping Branch, Department of Energy, Mines and Resources in 1975 and updated from 1970 Province of British Columbia 1:100,000 mapping. Metric contours were manually interpolated.



Contour Interval 100m
 Transverse Mercator Projection
 Universal Transverse Mercator Grid Zone 11



- Legend**
- Road: Highway, Main road
 - Road: Loose surface, Dry weather
 - Track or trail
 - Railway
 - River
 - Stream
 - Contours
 - Licence boundary
 - Access road (four wheel drive)

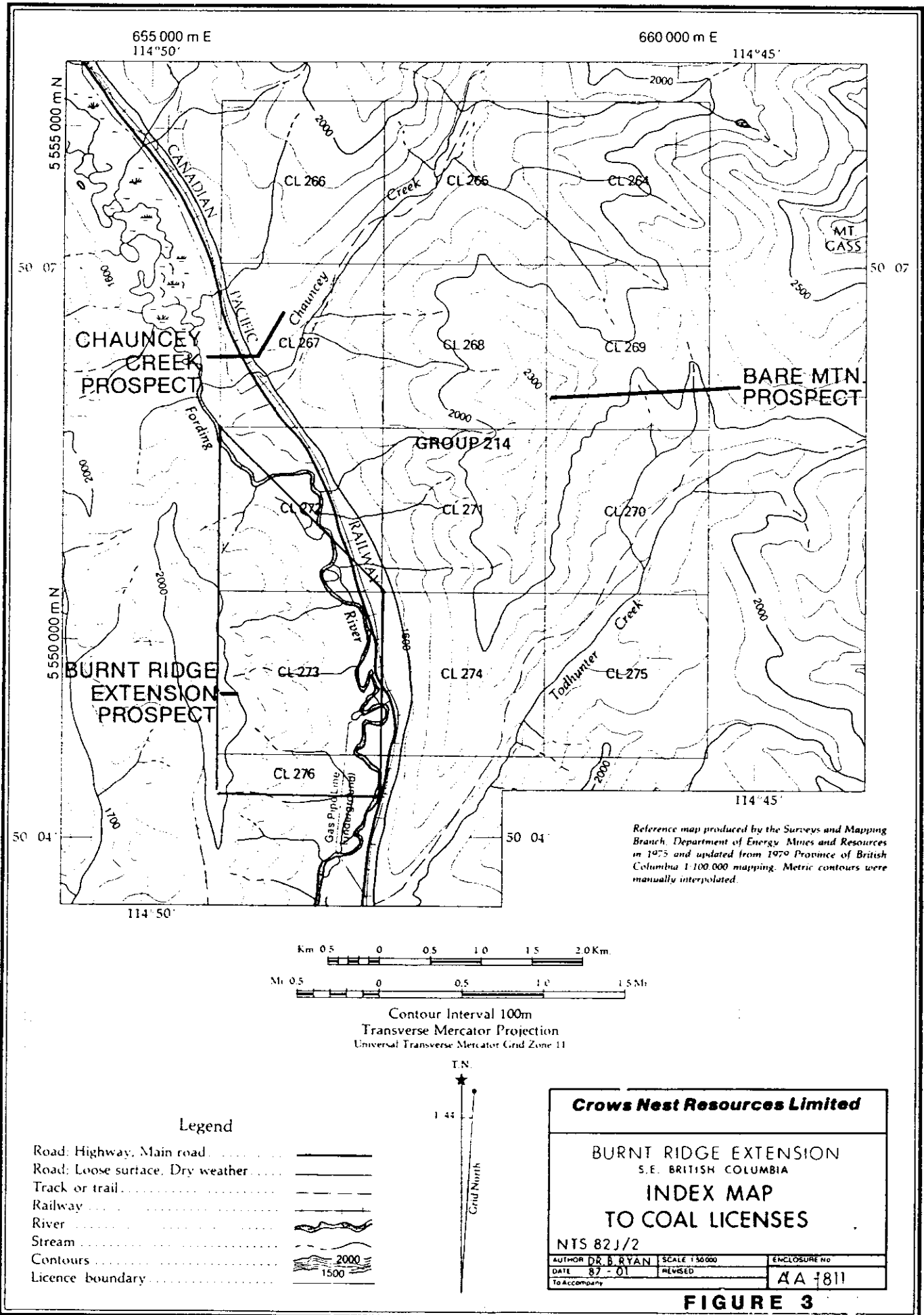
Crows Nest Resources Limited

BURNT RIDGE EXTENSION
 S.E. BRITISH COLUMBIA
ACCESS MAP

NTS 82J/2

AUTHOR DR B. RYAN	SCALE 1:50,000	ENCLOSURE No
DATE 82-02	REVISED	AA1812
To accompany		

FIGURE 2



detailed mapping was undertaken in 1980 (Morris 1981). In 1981 a major program of detailed geological mapping (scale 1:2000), road construction and drilling was undertaken (Ryan 1982). The 1985 program consisted of drilling a 323 metre HQ diamond hole. The 1986 program consisted of the construction of 1730 metres of new road and the drilling of two NQ holes for a total length of 501.4 metres (Ryan 1987). The 1988 program consisted of 190 metres of road construction and 974.5 metres (eight holes) of reverse circulation rotary drilling. The total cost of the program was \$69,517.92 details are in Table 16.

2.3 Summary of 1988 Exploration Activities

New road and drill sites were slashed (Sept. 1 - Sept. 12). Road construction and site preparation was accomplished in Aug. 31 to Sept. 12 using a D8 cat. Drilling lasted from Sept. 12 to Sept. 27. All holes were geophysically logged. Coal samples were analyzed for raw Ash and FSI at the C.N.R.L. lab and for 1.6 wash prox and sulphur at a commercial lab. The new road and drill sites were surveyed by the C.N.R.L. survey crew. The new road and drill hole survey locations are reported in Tables 1 and 2. Exploration activity occurred on Licences 272 and 273.

3.0 **GEOLOGY**

3.1 Regional Geology and Stratigraphy

North Block is located within the "Main Ranges" of the Rocky Mountains. This area is characterized by major northeast directed thrusts and associated north-south trending folds that stack and fold

TABLE 1
1988 DRILL HOLE LOCATIONS GROUND LEVEL

HOLE	NORTHING	EASTING	ELEVATION
RDH 88-1	5550740.5	656132.5	1754.9
RDH 88-2	5550475.4	656142.4	1783.5
RDH 88-3	5549998.7	656147.1	1840.7
RDH 88-4	5549817.3	656042.7	1865.9
RDH 88-5	5549305.2	656252.3	1868.9
RDH 88-6	5549543.6	656035.7	1894.7
RDH 88-7	5549459.7	656175.4	1883.3
RDH 88-8	5550364.9	656083.9	1796.4

TABLE 2
SURVEY COORDINATES
1988 ROAD CONSTRUCTION
(OUT EDGE OF ROAD)

EASTING	NORTHING	ELEVATION
656164.1	5550623.9	1767.1
656167.2	5550629.4	1768.1
656168.6	5550631.7	1768.4
656174.4	5550635.4	1768.4
656186.3	5550640.2	1768.8
656204.2	5550648.0	1767.3
656208.3	5550665.9	1764.7
656201.1	5550687.3	1762.0
656191.9	5550707.5	1760.3
		1759.8
656177.5	5550718.2	1759.2
656163.0	5550724.0	1757.8
656152.2	5550735.5	1756.0
656142.5	5550742.5	1755.1
656131.2	5550744.9	1754.9
656124.7	5550745.5	1754.7
656118.7	5550743.3	1755.1

sedimentary rocks ranging in age from late Proterozoic to early Tertiary (Price and Mountjoy 1970).

Coal-bearing rocks of the Jurassic-Cretaceous Kootenay Group were disrupted by this tectonism and now survive in the cores of major synclines and in separate thrust sheets. Surviving coherent areas of the Kootenay Group define the three major coal fields of southeast B.C.: the Elk Valley, Crows Nest and Flathead coal fields.

North Block occupies part of the Elk Valley coal field. This coal field has been mapped by Pearson and Grieve (1980), Grieve (1981) and Grieve and Pearson (1983). Regionally it is sandwiched between the north trending Borgeau thrust to the west and the Lewis thrust to the east. The coal-bearing rocks are preserved for the most part in the core of the Alexander Creek Syncline and an en. echelon smaller syncline to the west. The hinges of these folds plunge gently north or south forming culminations and depressions along the axial traces. (Figure 4)

The stratigraphic nomenclature of the Jurassic-Cretaceous coal-bearing rocks of southeast B.C. (Kootenay Group) has been reviewed by Gibson (1979). This report adheres to the nomenclature suggested by Gibson (1979). (Table 3)

The Fernie Formation is composed of dark brown recessive weathering mudstones that, near the top of the unit, alternate with

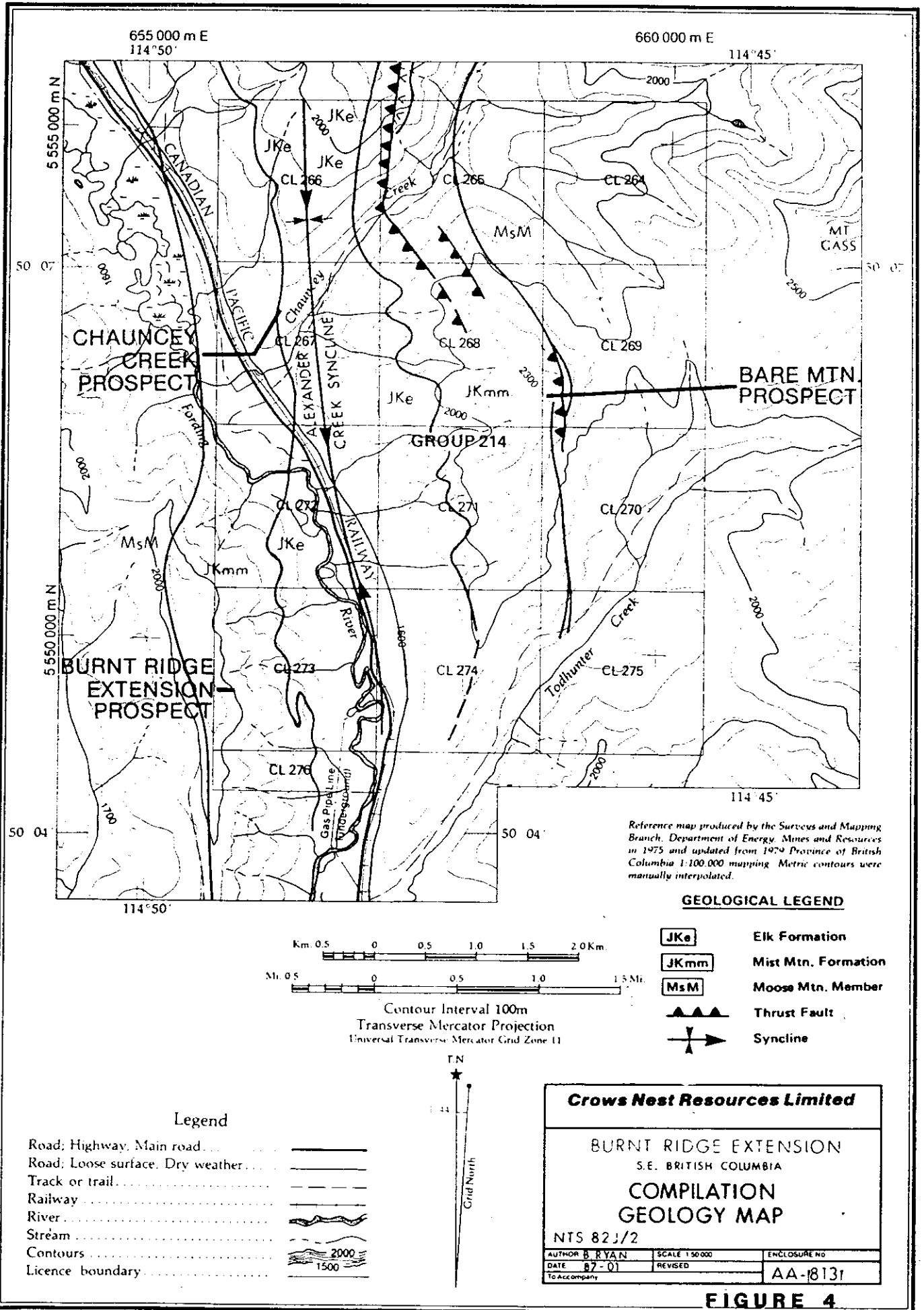


FIGURE 4

TABLE

TABLE OF FORMATIONS (North Block)

ERA	PERIOD	FORMATION	LITHOLOGY	THICKNESS (M)
MESOZOIC	Lower Cretaceous	Cadomin Fm.	non-marine: sandstone, conglomerate and shale	360 - 1980
	LOWER CRETACEOUS AND JURASSIC	Pocaterra Creek	non-marine: sandstones, conglomerate, siltstones and shales	
		ELK FORMATION	non-marine: interbedded medium to coarse grain sandstone, chert-pebble conglomerate with minor siltstone shale and uneconomic coals	150 - 490
		MIST MTN. FORMATION	non-marine and brackish: interbedded coal, siltstones, shales, and sandstones	380 - 480
		MORRISSEY FORMATION	Moose mtn.	non-marine: massive cliff-forming sandstone
	Weary Ridge			
	Jurassic	Fernie Fm.	marine: shales, siltstone, sandstone, limestone	180 - 380

KOOTENAY GROUP

fine-grained sandstones, and contains an upper Jurassic marine fauna.

The Kootenay Group is subdivided into three formations. (Table 3) The lowermost, Morrissey Formation is subdivided into a lower and upper member. The upper Moose Mountain Member is a distinctive and critically important sandstone marker which is conformably and abruptly overlain by the coal-bearing Mist Mountain Formation. The Moose Mountain Member is a grey-weathering, medium-grained, massive sandstone that was deposited in a shallow marine beach environment. The Mist Mountain Formation is composed of sandstone, mudstone, siltstone and coal; it was deposited in a deltaic environment that contained large swampy flood plains. The uppermost, Elk Formation is composed of sandstone, siltstone, mudstone and thin coal seams and is considered to be a product of an alluvial plain depositional environment.

The Lower Cretaceous Cadomin Formation of the Blairmore Group is present to the south of the property in the core of the Alexander Syncline. It is composed of resistant chert pebble conglomerate derived from possibly braided stream and alluvial fan origin.

3.2 Stratigraphy of Burnt Ridge Extension

The Moose Mountain member of the Morrissey Formation is a resistant medium-coarse grained sandstone unit cropping out along the ridge top of the property and provides a western geological boundary to the area of economic interest. East of this unit is the

Mist Mountain Formation consisting of rhythmically interlayered mudstones, siltstones, coal seams and medium to fine-grained channel sandstones. These strata dip uniformly east with values ranging from 10 to 70° but averaging 50°. The general outcrop pattern of coal seams is not overly complicated by folds or thrusts, although on a more detailed scale seams thicken and thin along strike, rock splits appear and disappear, and minor thrusts fold and disjoin the seams. The Mist Mountain section is approximately 410 metres thick. The upper section is dominated by recessively weathering mudstones, coal and siltstone whereas the lower 250 metres of section is characterized by three thick channel sandstones (#2 sandstone, #4 sandstone and #6 sandstone respectively).

At least 18 seams or coal zones greater than one metre thick occur within the Mist Mountain section. Seams 18 (or above) to seam four are separated from the lower three seams by 100 metres of noncoal-bearing sediments. Obvious footwalls to pits would follow the floor of four seam or six seam which is one of the thicker seams in the section.

The Elk Formation overlies the Mist Mountain Formation with a gradational contact, which on Burnt Ridge Extension is placed at the first occurrence of buff, weathering-resistant sandstone which is usually found above seams 13 to 17.

3.3 Structural Geology

The property occupies part of the west limb of the north-trending Alexander Creek Syncline. Further to the west the limb is broken by the north striking Erickson Normal Fault which down-drops beds on its east side. The east limb of the Alexander Creek Syncline is complicated by the Ewin Pass thrust (also called the Fording thrust).

Beds strike uniformly north-south and dip east on Burnt Ridge Extension. Dips vary from 35 - 45° in the west near the Moose Mountain sandstone to 45 to 65° near the Elk contact. This change in dip may reflect a steepening of beds towards the core of the syncline.

Local east-dipping, west-directed thrusts are common in the lower part of the Mist Mountain section. They are evidenced by intense fracture zones up to one metre thick, drag folds and minor displacements in which the upper plate moves relatively westward. These thrusts probably formed at the same time as the Alexander Creek Syncline in response to a room problem in the core of the fold. Minor fold axes related to these thrusts trend northeast or south with shallow plunges; slickensides scatter widely, but a majority plunge easterly. To date, no significant thrusting or folding has been observed above #4 sandstone.

The strike of beds in the Upper Mist Mountain is usually in the range of 340° to 010°, with the dip varying from 40° to 65°. The small

variation in strike implies a shallow plunge to the Alexander Syncline in this region.

3.4 Lithology

Lithologies in the upper section are very variable along strike and no attempt has been made to illustrate non-coal lithologies on the 1:1000 map or the 1:1000 scale sections. If the Elk contact is arbitrarily placed at the first appearance of prominent sandstone then it does not occupy a constant stratigraphic level. True sections to the north and south contain a thicker package of non-sandy rocks than the true sections adjacent to hole DDh 85-1. It is not possible to explain this thickening of the Mist Mountain section by thrusting, consequently it is ascribed to changes in lithology.

In detail the lithology of the Upper Mist Mountain is composed of bands of coal, mudstone and siltstone, often sequenced together to form small coarsening upwards cycles from two to five metres thick or thicker fining-upwards cycles. Sandstones are the least abundant rock type in the upper section.

3.5 Computer Modelling

The project has been modelled using the Mincom Miner2 system. Topography, all drill holes, trench location data and lithology data have been entered. (Tables 4 and 5 in Enclosure 1) To date quality has not been entered. The modelling package can only accept vertical drill holes. To overcome this constraint programs were written on an IBM PC which plot inclined holes and then calculate

and plot partial vertical holes for segments of the original inclined hole. Data from the PC program is then in a format which is acceptable to the Miner2 system. Table 6 and Figure 5 (both in Enclosure 2) illustrate the output from the PC programs. The Miner2 plots the partial vertical holes in sections. The PC plot illustrates the effect of using different dips and strikes for projecting bedding from the original inclined hole into the vertical holes.

The computer has minimal information for modelling the geology, so to construct the computer model imaginary holes were entered (99 series Tables 4 and 5) using geology estimated from hand drawn sections. Once the computer model is satisfactory, it is then possible to generate sections, reserves and quality plots. When more drilling is available the 99 series holes will be removed from the data base.

A computer generated topography map (Figure 6 Enclosure 3) shows the location of all trenches and drill holes, the exploration roads that traverse the upper part of the coal section and the trace of all the upper seams.

The geology of the lower part of the coal section has not changed from the 1986 geology maps previously submitted. Computer sections down to six seam are provided in Figures 7 and 8 (Enclosure 4).

4.0 COMPUTER MODEL OF GEOLOGY

5.0 COAL QUALITY

5.1 1988 Coal Quality

Samples from the rotary drill holes were analyzed for raw Ash and FSI at the C.N.R.L. lab at Line Creek. Reserve samples were forwarded to Loring Labs Calgary for 1.6 SG float, prox analysis, FSI analysis and some sulphur analyses and some ash chemistry analyses.

The results for the 1988 drill program are presented in Table 7A and sorted by seam in Table 7B (both in Enclosure 5). Quality from pre 1988 drill holes is presented in Table 8 (Enclosure 6) with corrected seam names. The 1986 to 1981 trench data with corrected seam names is presented in Table 9 (Enclosure 7). The 1980 trench data is not effected by the seam name changes introduced as a result of the 1988 drill program.

Tables 7 and 8 are formatted into raw and wash paired lines for each sample. The field titled "T" for type contains an R for raw sample or W for wash sample. The SG field has SG of insitu raw coal at 6% H₂O or SG of float for wash data. The R/Yld field contains core recovery if applicable on raw line and float yield on wash line. All data is entered at ADM which is air dried basis; and -1 signifies no data.

The data is sorted and averaged on a by seam basis in Table 10 (Enclosure 8). Averages in these tables are numeric averages not

weighted averages and therefore should only be used for rough comparative purposes.

Table 11 provides a summary of the prox data. All seams are good metallurgical coal. Seams 11 and up are high volatile bituminous in rank.

The washing characteristics of the seams appears to be good. Raw ashes range from 36% to 25% with yields in the range of 65% to 75% for a float ash of about 10%. Coal recoveries are maintained at about 90%. (Figures 9 and 10)

Six ash oxide analysis were performed; the results are reported in Table 12. Base/acid ratios are generally low. Elemental concentrations calculated to a 9.5% ash base indicate moderate phosphorous values. Calculated CSR values range from poor to good.

Coal quality data in Tables 7 and 8 is presented using the drillers picks for seam tops and bottoms. The actual seam locations which were used for computer modelling were obtained from the geophysical logs and are presented with the drill hole location data in Table 13 (Enclosure 9) and summarized in Table 14.

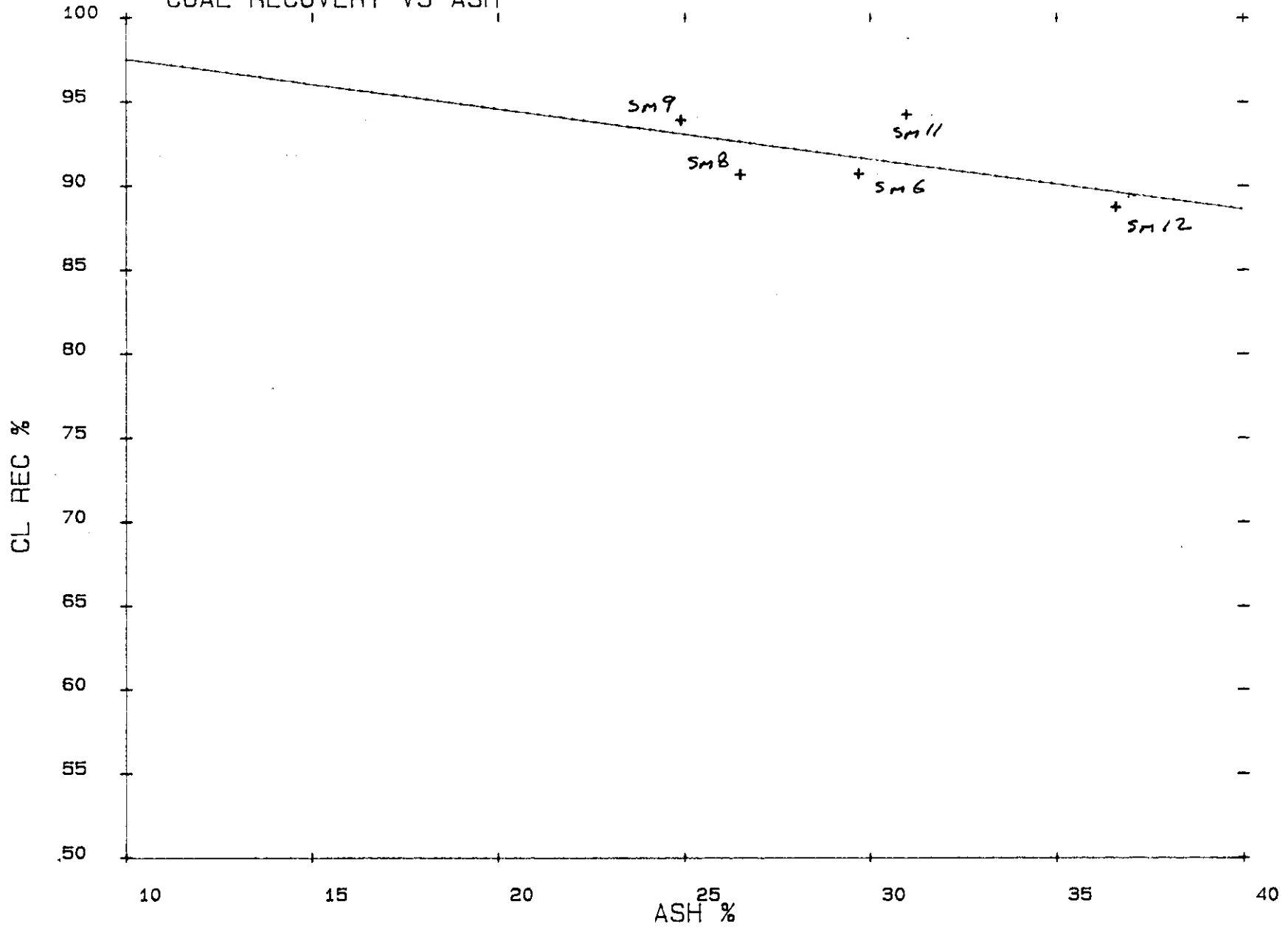
The geophysical logs with cementing certificates are in Enclosures 10 - 17. Details of the logs are in Table 15.

FIGURE 9

BURNT RIDGE EXTENSION

odd lines BREYLD 16/3/89

COAL RECOVERY VS ASH



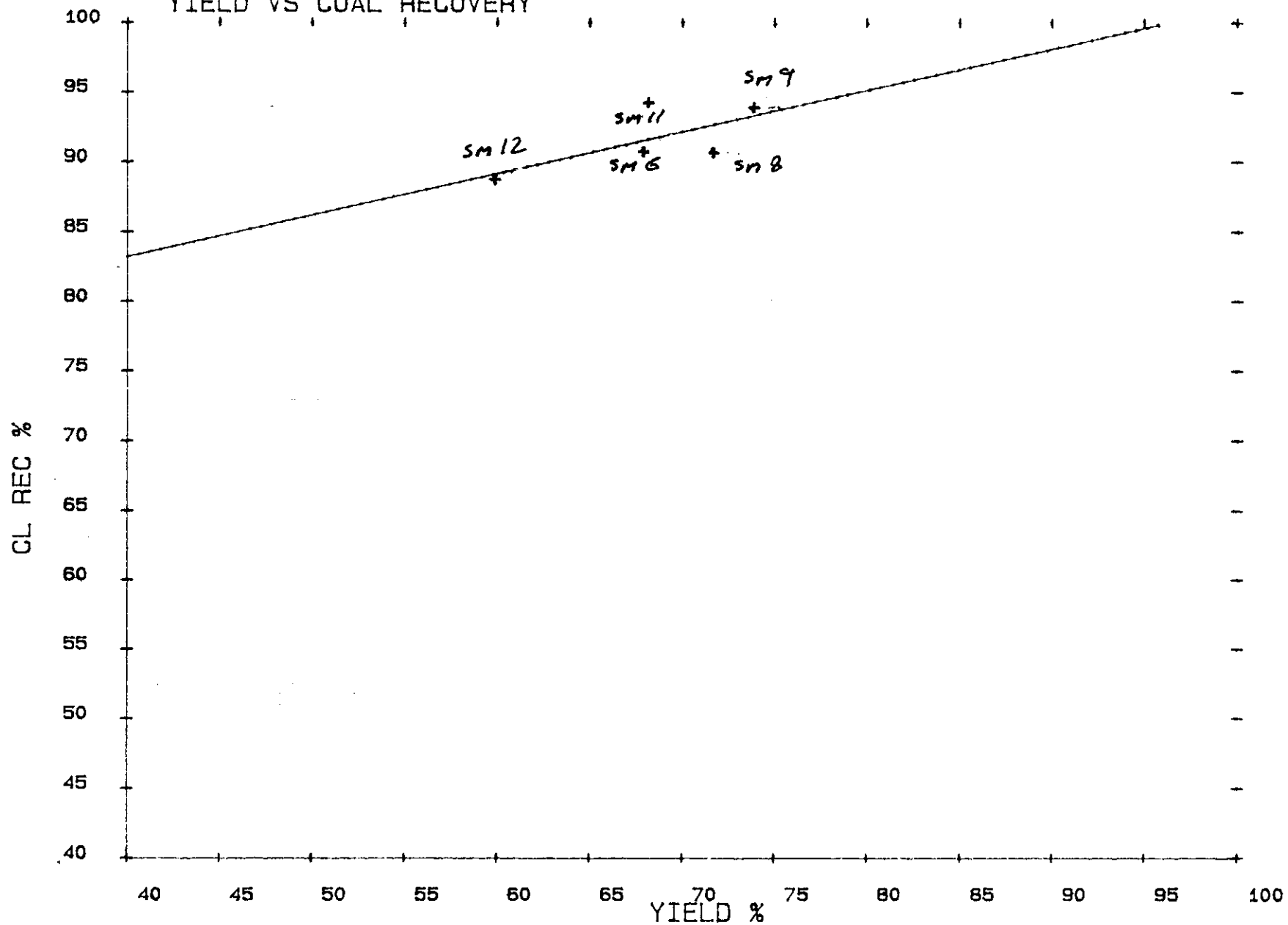
Y on X line I = 100.491 SL = -.2969397

FIGURE 10

BURNT RIDGE EXTENSION

even lines BREYLD 16/3/89

YIELD VS COAL RECOVERY



Y on X line I = 71.2639 SL = .2985547

TABLE 12

BURNT RIDGE EXTENSION 13/6/89

PRJ SM	YR	HOLE	DSCPT	ASH	SiO	AlO	TiO	FeO	CaO	MgO	NaO	KO	PO	SO	S
BRE 15	88	R8802	ML4.8	5.2	61.9	25.6	1.6	3.13	1.6	.8	.35	1.17	.81	.52	.72
BRE 13	88	R8802	ML33.4	7.16	61.4	28.0	1.8	1.55	1.4	.46	.44	.65	1.83	.47	.8
BRE 9	88	R8802	ML110	11.9	61.5	28	1.6	1.15	1.76	.39	.42	.67	1.92	.3	.84
BRE 6A	88	R8803	ML120	13.4	63.2	25.7	1.4	1.29	1.79	.55	.4	1.13	1.83	.55	.8
BRE 6B	88	R8803	ML125	15.2	62.7	28.4	1.4	1.3	.73	.47	.39	1.1	1.2	.33	.8
BRE 11	88	R8807	ML28.2	5.75	56.3	28.7	1.6	1.3	2.88	.4	.45	.74	3.57	.18	.76

ELEMENTAL CONCENTRATIONS IN TOTAL COAL

PRJ SM	YR	HOLE	DSCPT	ASH	Si	Al	Ti	Fe	Ca	Mg	Na	K	P	S
BRE 15	88	R8802	ML4.8	13.0	3.76	1.72	0.12	0.28	0.15	0.07	0.04	0.18	0.05	.72
BRE 13	88	R8802	ML33.4	13.0	3.73	1.93	0.14	0.14	0.13	0.04	0.04	0.09	0.09	.8
BRE 9	88	R8802	ML110	13.0	3.74	1.93	0.12	0.10	0.16	0.03	0.04	0.09	0.11	.84
BRE 6A	88	R8803	ML120	13.0	3.84	1.77	0.11	0.12	0.17	0.04	0.04	0.12	0.10	-1
BRE 6B	88	R8803	ML125	13.0	3.81	1.95	0.11	0.12	0.07	0.04	0.04	0.12	0.07	-1
BRE 11	88	R8807	ML28.2	13.0	3.42	1.97	0.12	0.12	0.27	0.03	0.05	0.08	0.20	.76

ASH CHEMISTRY DERIVED CONSTANTS

PRJ SM	YR	HOLE	DSCPT**ASH TYP**B/A**SI RATIO**SLAG FCTOR**T250'C
BRE 15	88	R8802	ML4.8 BIT 0.087 91.7 0.06 1378
BRE 13	88	R8802	ML33.4 LIG 0.052 94.7 0.04 1359
BRE 9	88	R8802	ML110 LIG 0.050 94.9 0.05 1359
BRE 6A	88	R8803	ML120 LIG 0.057 94.6 0.00 1399
BRE 6B	88	R8803	ML125 BIT 0.043 95.2 0.00 1391
BRE 11	88	R8807	ML28.2 LIG 0.067 92.5 0.05 1235

TABLE 13
SEAM THICKNESS DATA SUMMARY

SEAM	TRENCH AV THICK	DRILL AV THICK	DRILL HOLES											
			SOUTH 86-1	88-5	88-7	88-6	88-4	85-1	88-3	88-8	88-2	86-1	NORTH 88-1	
18	2.94	2.4	2.4	-	-	-	-	-	-	-	-	-	-	-
17	3.05	3.07	2.25	-	-	-	-	-	-	-	-	3.88	-	-
16	5.34	.59	.32	-	-	-	-	.86	-	-	-	.6	-	-
15	3.07	4.16	3.3	2.69	-	-	-	3.48	-	-	5.5	4.58	5.4	-
14	2.09	1.71	1.79	.9	-	-	-	2.3	-	-	1.29	2.10	1.86	-
13	3.28	3.11	3.43	1.89	1.8	-	-	2.79	2.8	-	6.15	3.53	2.47	-
12	4.10	2.72	2.83	2.8	2.74	-	-	2.17	4.99	-	0	3.42	2.79	-
11	3.76	3.44	1.77	3.68	2.04	-	-	4.25	4.8	3.15	4.09	4.8	2.41	-
10	1.65	<.5	0	0	1.2	-	-	0	0	0	0	0	0	0
9	4.18	3.91	4.37	3.19	6.59	-	4.34	4.64	3.79	2.54	4.69	2.7	2.2	-
8	1.55	2.16	6.25	.9	1.55	-	2.29	1.69	1.69	2.35	2.1	1.3	1.44	-
7	2.48	1.91	0	4.19	2.34	-	1.56	2.63	2.3	1.5	2.1	.6	-	-
6	10.67	8.16	5.62	6.59	6.79	12.58	7.24	11.26	8.38	7.65	8.83	6.66	-	-

Thicknesses are coal only (splits >.5m removed) and are intersection lengths. True thickness is about 1% to 3% less than intersection thickness.

TABLE 15
CENTURY GEOPHYSICAL GEOPHYSICAL LOGS

HOLE	THRU RODS GAM +NEUT	OPEN HOLE GAM DEN+CAL	GAM +NEUT	GAM+NEUT +DEN+CAL	GAM+DEN +CAL (EXP)	GAM +DEV	DEV TABLE
88/1	✓		✓	✓	✓	✓	✓
88/2	✓		✓	✓	✓	✓	✓
88/3	✓	✓	✓	✓		✓	✓
88/4	✓	✓✓✓	✓		✓	✓	✓
88/5	✓	✓		✓	✓	✓	✓
88/6	✓		✓		✓	✓	✓
88/7	✓	✓		✓	✓	✓	✓
88/8	✓	✓	✓		✓	✓	✓

GAM = GAMMA LOG
 NEUT = NEUTRON LOG
 CAL = CALIPER
 DEN = DENSITY
 DEV = DEVIATION

5.2 Individual Seam Characteristics

Table 14 provides information on coal thicknesses. Coal thicknesses are not hanging wall to footwall; separate coal bands greater than .5 metres are summed to provide an estimate of coal by seam. Drill holes were drilled perpendicular to strike at tilts nearly perpendicular to dip, consequently, intersection lengths are about 1 to 3% greater than true thicknesses. Individual seam quality is in Table 10.

Seams correlate quite well log to log, the intervening stratigraphy has a number of sands which range from 2 to 10 metres in thickness which can be correlated. Seam 9 is the most distinctive seam; seams above and below change their log fingerprints but tend to occupy the correct stratigraphic interval. For the present no attempt is made to identify minor thrusts within the section and all changes in seam character are assumed to be stratigraphic.

All seams wash well with good coal recovery. (Figures 9 and 10) Ash and FSI data indicate that all seams have good % petrographic reactivities in the range 70 to 80% on an organic basis with no significant variation with stratigraphic section.

Seam 6 outcrops on the exploration roads and was intersected in holes 88R-2 to 88R-8 (1988 drilling). The seam is thickest in the centre of the property around hole 85-1 but thins to the north and south. It is a composite seam usually composed of three sometimes four coal bands. The average thickness from drill holes is 8.16 metres (coal only) the thickness ranges from 5.62 metres to 12.58 metre

(coal only). Thicker intersections were located on exploration roads. Seam 6 is the thickest seam in the upper section. Numerically averaged quality is given in Table 11. The seam is good metallurgical coal with good FSI and acceptable sulphur and phosphorous.

Seam 7 usually has a distinctive rock split in the middle; the average thickness of the coal is 1.91 metres. In trenches the split has a distinctive yellow weathered colour.

Seam 8 is a single seam in some holes but in others is similar in appearance to 7 seam. The average thickness is 2.16 metres (coal only). This seam and all seams above are high volatile bituminous.

Seam 9 is the most continuous and uniform in appearance of the upper section seams. The average thickness is 3.91 metres it washes well to a low ash and has a high FSI.

Seam 10 is present in the south but absent in the north.

Seam 11 is usually composed of two or more splits; the average thickness (coal only) is 3.44 metres. It has good quality except for the possibility of high phosphorous.

Seams 12, 13 and 14 form a coal rich part of the upper section and it is difficult to correlate individual coal bands. The designation of 12a, 12b, 13a, 14a, 14b is designed to provide flexibility for modelling

in the computer. The coal thicknesses for these seams are seam 12, 2.72 metres; seam 13, 3.11 metres; seam 14, 1.71 metres. Quality for these seams is good though the 1.6 float ash is somewhat high.

Seam 15 is intersected in the north and south of the property and is best developed in the north where it is a single coal band. The average thickness is 4.16 metres. This seam has a volatile matter content dry mineral matter free basis of 32.1%, quality data for seams above 15 is sparse.

Seam 16 is thin and intermittent.

Seam 17 is intersected in the north and south of the property and has an average thickness of 3.07 metres.

Seam 18 is intersected in one trench and hole 86-1 and has an average thickness of 2.4 metres.

6.0 COAL RESERVES

No new calculation of reserves incorporating the 1988 drilling is available. The 1988 drilling indicated that 6 seam is thinner than anticipated but that some of the seams higher in the section are thicker than expected. There exists potential for a small pit on the topographic spur drilled by hole 85-1 and down to 6 seam.

Additional reserves may exist in the upper part of the section and north of hole 86-2 at lower elevations toward the Fording River.

7.0 PROGRAM COSTS

Program costs are outlined in Table 16. Total costs \$69,517.92. Road construction costs include cut work for site preparation and slashing. Labour costs include C.N.R.L. permanent staff costs and temporary hire costs; labour costs are arbitrarily assigned 50% field 50% office.

TABLE 16

Category of Work	Dimensions (where applicable)	Unit Cost (where applicable)	Cost
<u>Geology Mapping</u>			
Reconnaissance			
Detail			
Surface			
Underground			
Other (specify) *			
<u>Geophysical/Geochemical</u>			
<u> Surveys</u>			
Method			
Grid			
Topographic			
Other (specify) *			
<u>Road Construction</u>			
On Licences Nos. 272	190 meters	77.7	14755.13
Access to	site 8B-1		
<u>Surface Work</u>			
Trenching			
Seam Tracing			
Crosscutting			
Other (specify) *			
<u>Underground Work</u>			
Test Adits			
Other Workings *			
<u>Drilling</u>			
Core			
Diamond			
Wireline			
Rotary			
Conventional			
Reverse Circulation	979.5	32.67	31856.77
Other (specify) *			
Contractor:	Mc Auley		
Where Core Stored:	N/A		
<u>Logging</u>			
			6117.83
<u>Sampling</u>			
	CNRL Labour costs	14.5	14155.73
<u>Testing</u>			
Other Work: (specify details)*:	Truck and expenses		3670
Reclamation Work (Permit #):	C54		2632.45
ON-PROPERTY COSTS	62440.05		
OFF-PROPERTY COSTS	7077.87		
TOTAL EXPENDITURES	69517.92		

DATE:

SIGNATURE & POSITION:

McAuley
Manager Geology

8.0 SELECTED BIBLIOGRAPHY

Gibson, D.W., 1979, The Morrissey and Mist Mountain Formations - Newly Defined Lithostratigraphic Units of the Jura-Cretaceous Kootenay Group Alberta and British Columbia: Bull Can Petroleum Geology, Vol. 27, No. 2, pp 183 - 208.

Grieve, D.A., 1981, Elk Valley Coal Field B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Field Work 1980, pp 71 - 72.

Grieve, D.A. and Pearson, D.E., 1983, Geology of the Greenhills Range, Elk Valley Coal field. B.C. Ministry of Energy, Mines and Petroleum Resources Preliminary Map 51, Sheets 1 - 3.

Holland, S.S. 1964, Landforms of British Columbia, A Physiographic Outline, B.C. Ministry of Energy, Mines and Petroleum Resources Bulletin No. 48.

Horachek, J. and D. Fietz, 1979, Report on Coal Licences, 264 - 276 inclusive C.N.R.L. unpublished report.

McKinstry, B.W., 1986, Report on Coal Licences 272, 273 and 276 C.N.R.L. unpublished report.

Morris, R.S., 1981, Burnt Ridge Extension, North Block Project Report on Coal Licences, Nos. 264 to 276 inclusive. C.N.R.L. unpublished report.

Pearson, D.E. and D.A. Grieve, 1980, Elk Valley Coal Field, B.C. Ministry of Energy, Mines and Petroleum Resources field work 1979, pp 91 - 96.

Price, R.A. and E.W. Mountjoy, 1970, Geological Structure of the Canadian Rocky Mountains between Bow and Athabasca Rivers, Geological Association of Canada Special Paper, No. 6, pp 7 - 26.

Ryan, B.D. 1982, Report on Coal Licences 272, 273 and 267. C.N.R.L. unpublished report.

Ryan, B.C., 1987, Report on Coal Licences 272, 273 and 267 C.N.R.L. unpublished report.

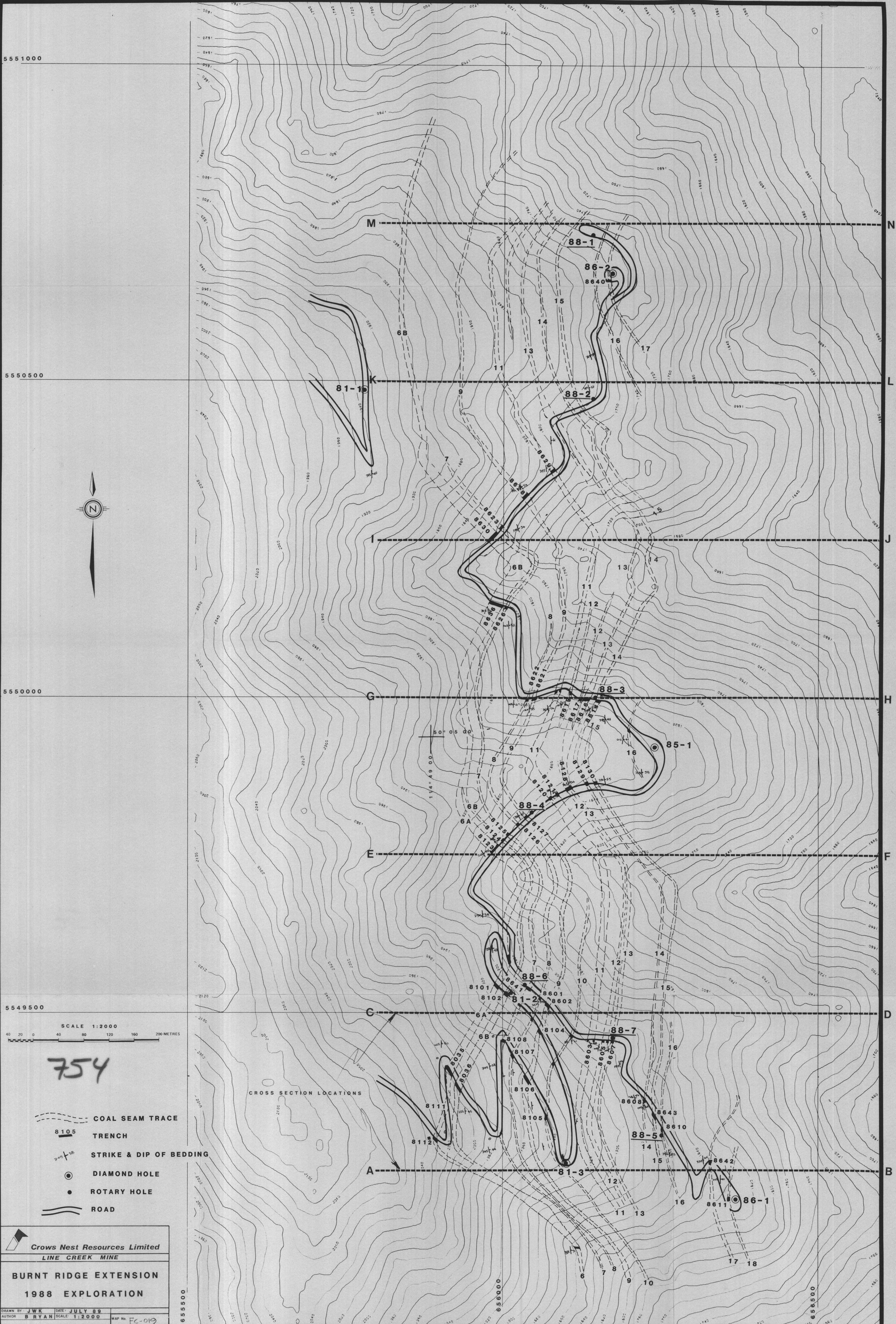
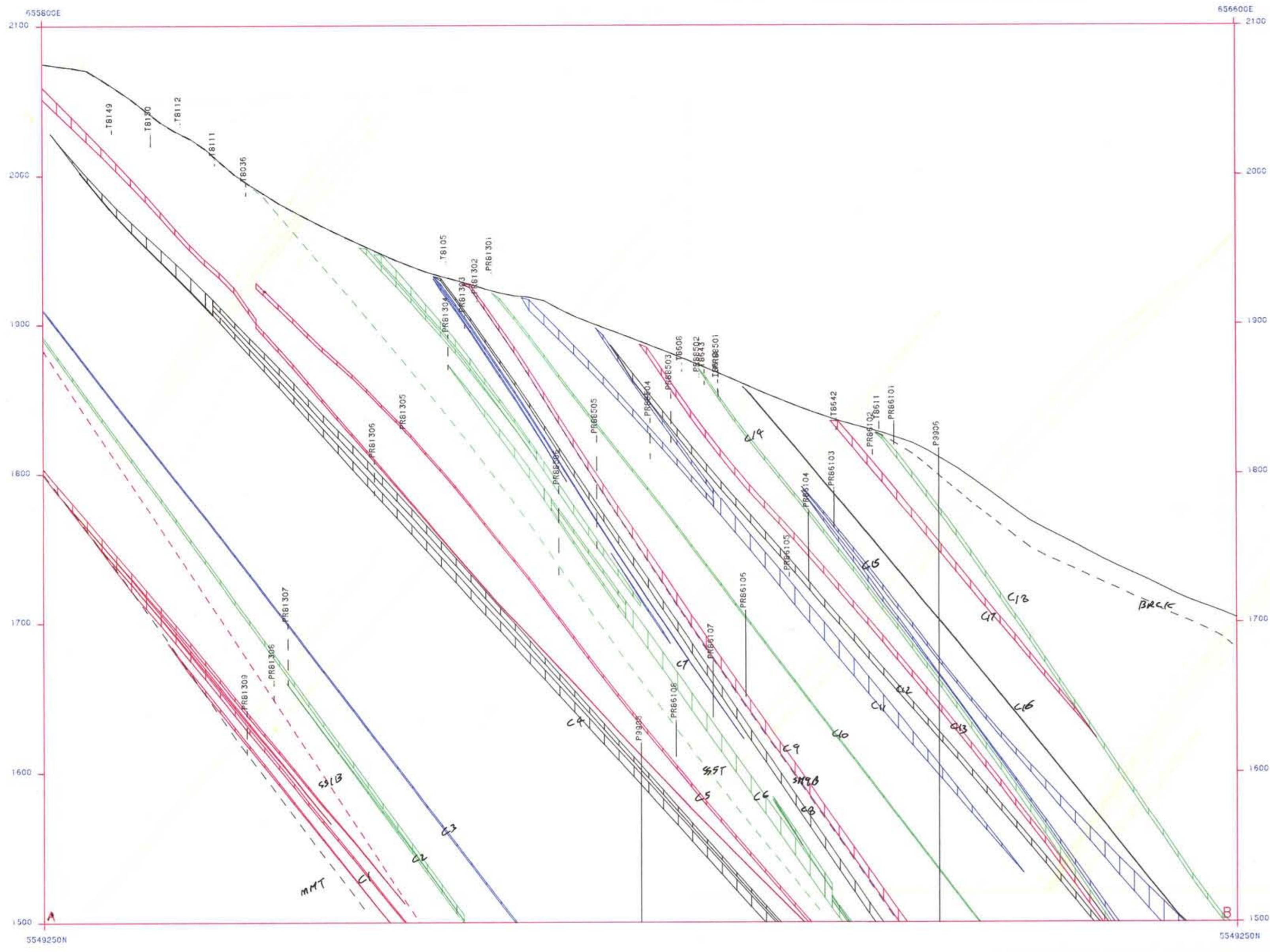


FIGURE 6

BARRY (SCALE 1 : 2,000) 16-Jun-89



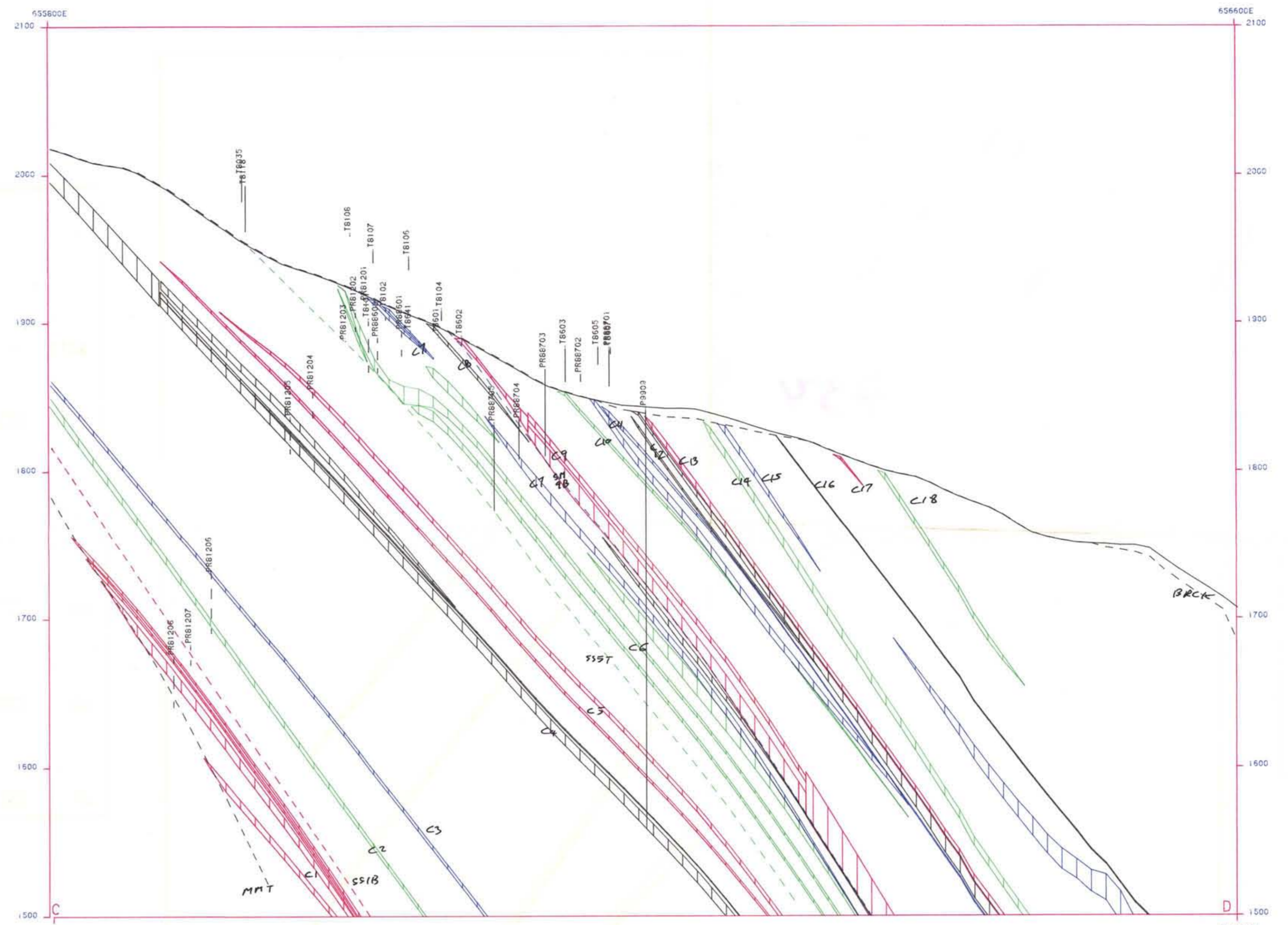
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SM9B	---
SS5T	---
SS1B	---
MMT	---
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C17	█
C16	█
C15	█
C14	█
C13	█
C12	█
C11	█
C10	█
C9	█
C8	█
C7	█
C6	█
C5	█
C4	█
C3	█
C2	█
C1	█

SECTION A-B



BARRY (SCALE 1 : 2,000) 16-Jun-89

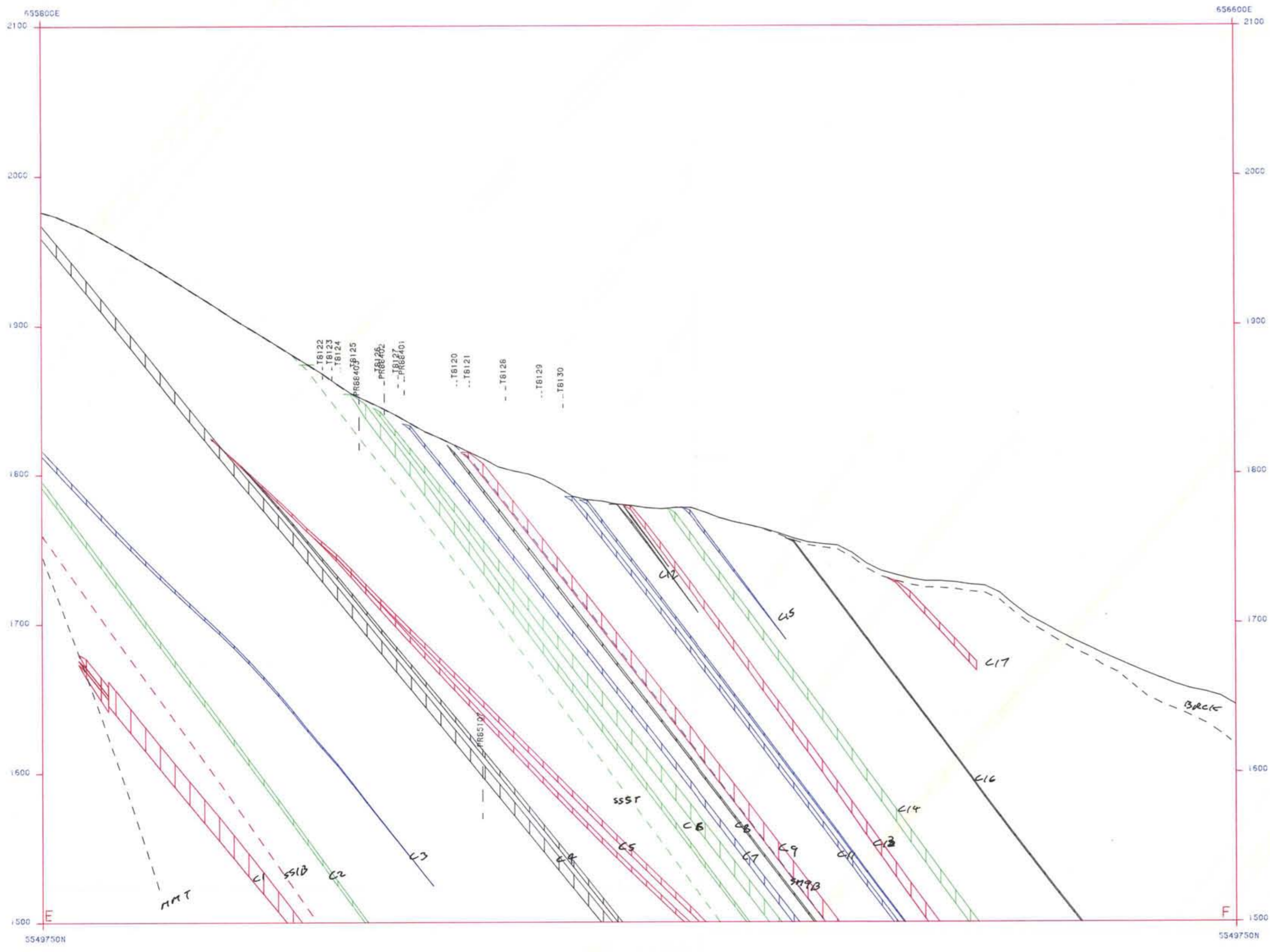


LEGEND

SEAM	COLOUR
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SM9B	---
SS5T	---
SS1B	---
MMT	---
C18	█
C17	█
C16	█
C15	█
C14	█
C13	█
C12	█
C11	█
C10	█
C9	█
C8	█
C7	█
C6	█
C5	█
C4	█
C3	█
C2	█
C1	█

SECTION C-D

BARRY (SCALE 1 : 2,000) 16-Jun-89

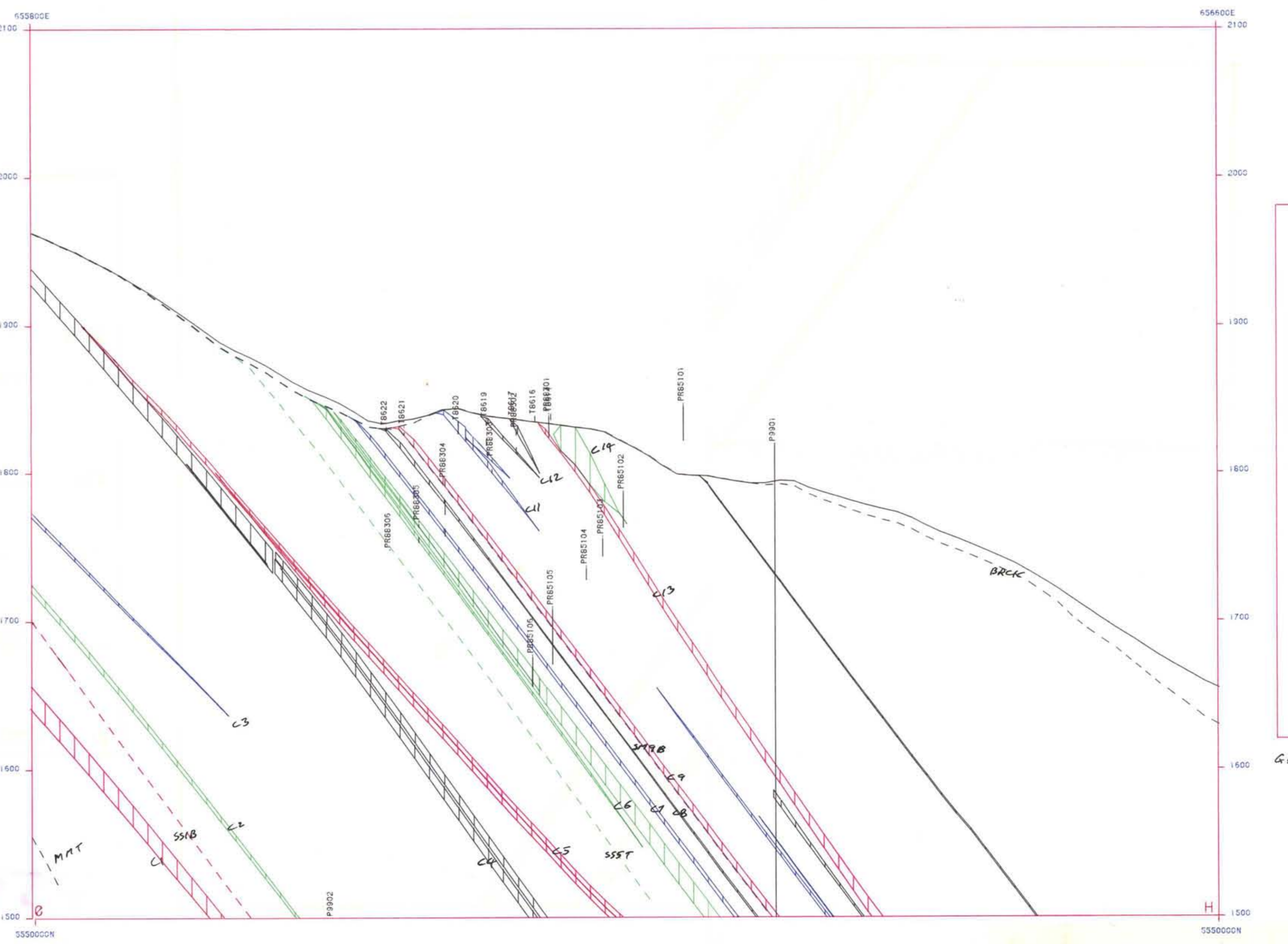


LEGEND

SEAM	COLOUR
BRCK	---
SM9B	---
SS5T	---
SS1B	---
MMT	---
C17	█
C16	█
C15	█
C14	█
C13	█
C12	█
C11	█
C9	█
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C7	█
C6	█
C5	█
C4	█
C3	█
C2	█
C1	█

SECTION E-F

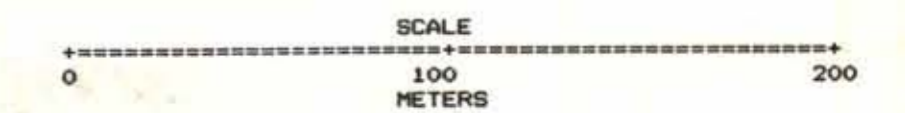
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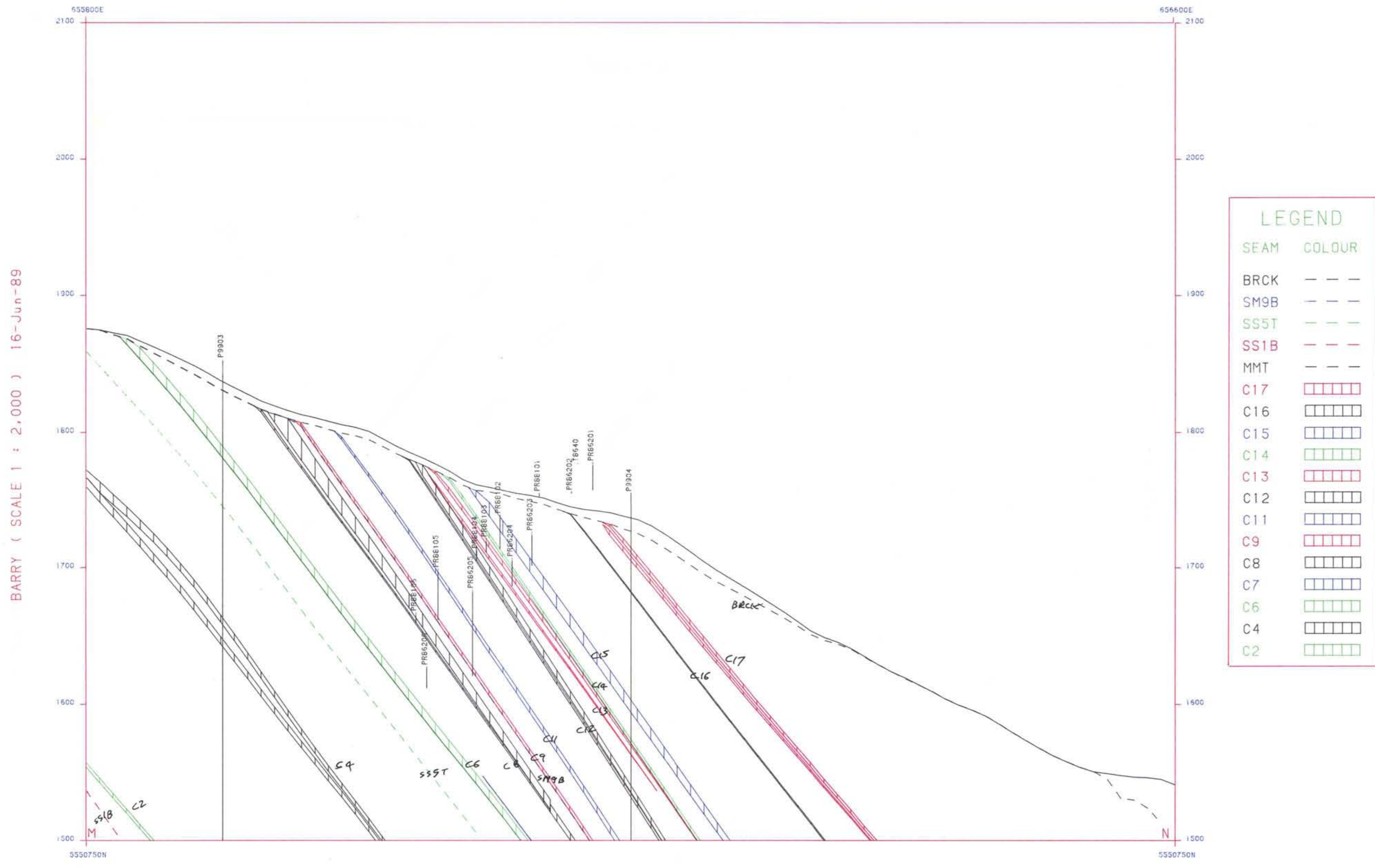
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SS5T	---
SS1B	---
MMT	---
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C14	█
C13	█
C12	█
C11	█
C9	█
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C5	█
C4	█
C3	█
C2	█
C1	█

SECTION G-H

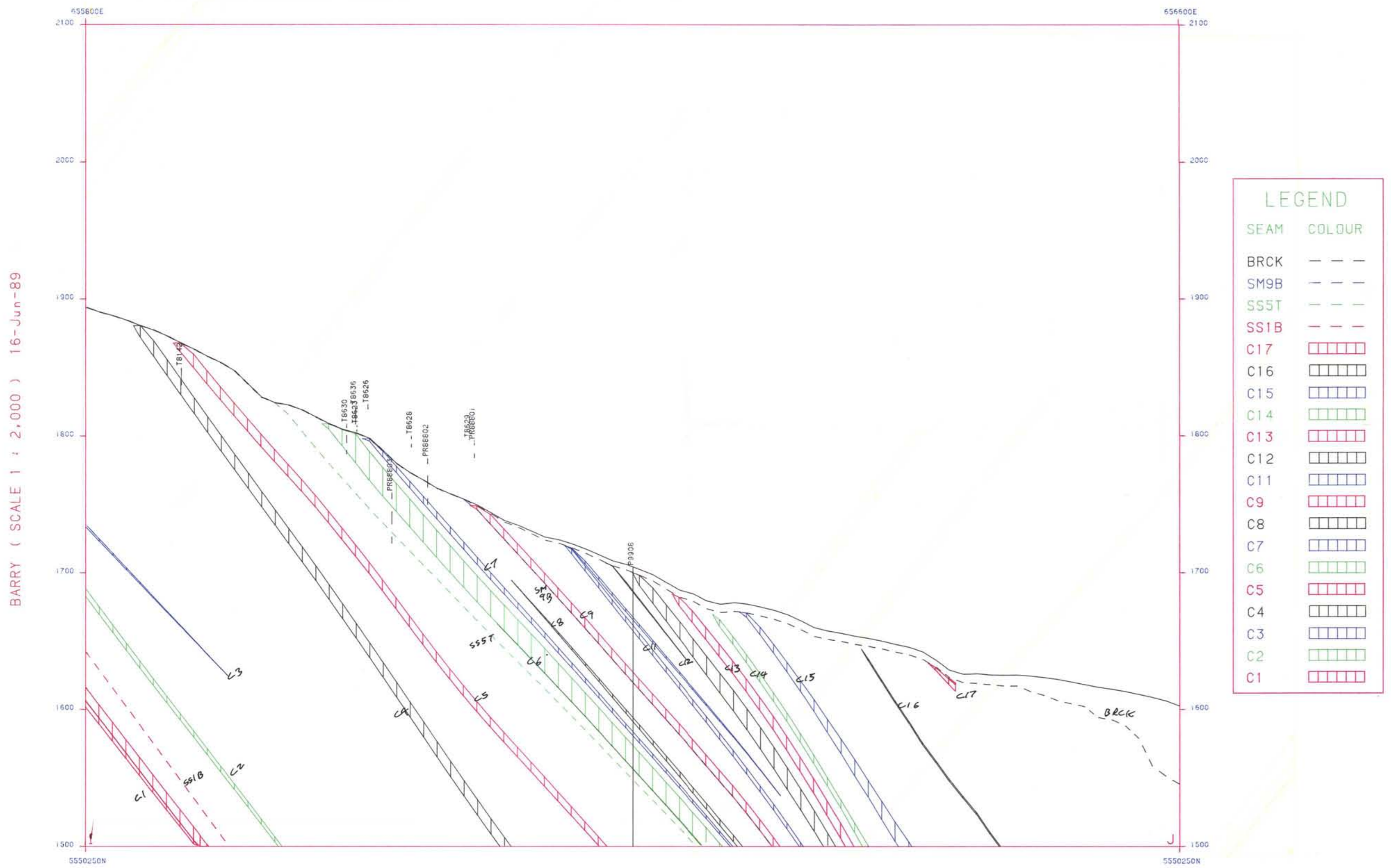


GEOLOGICAL X SECTIONS

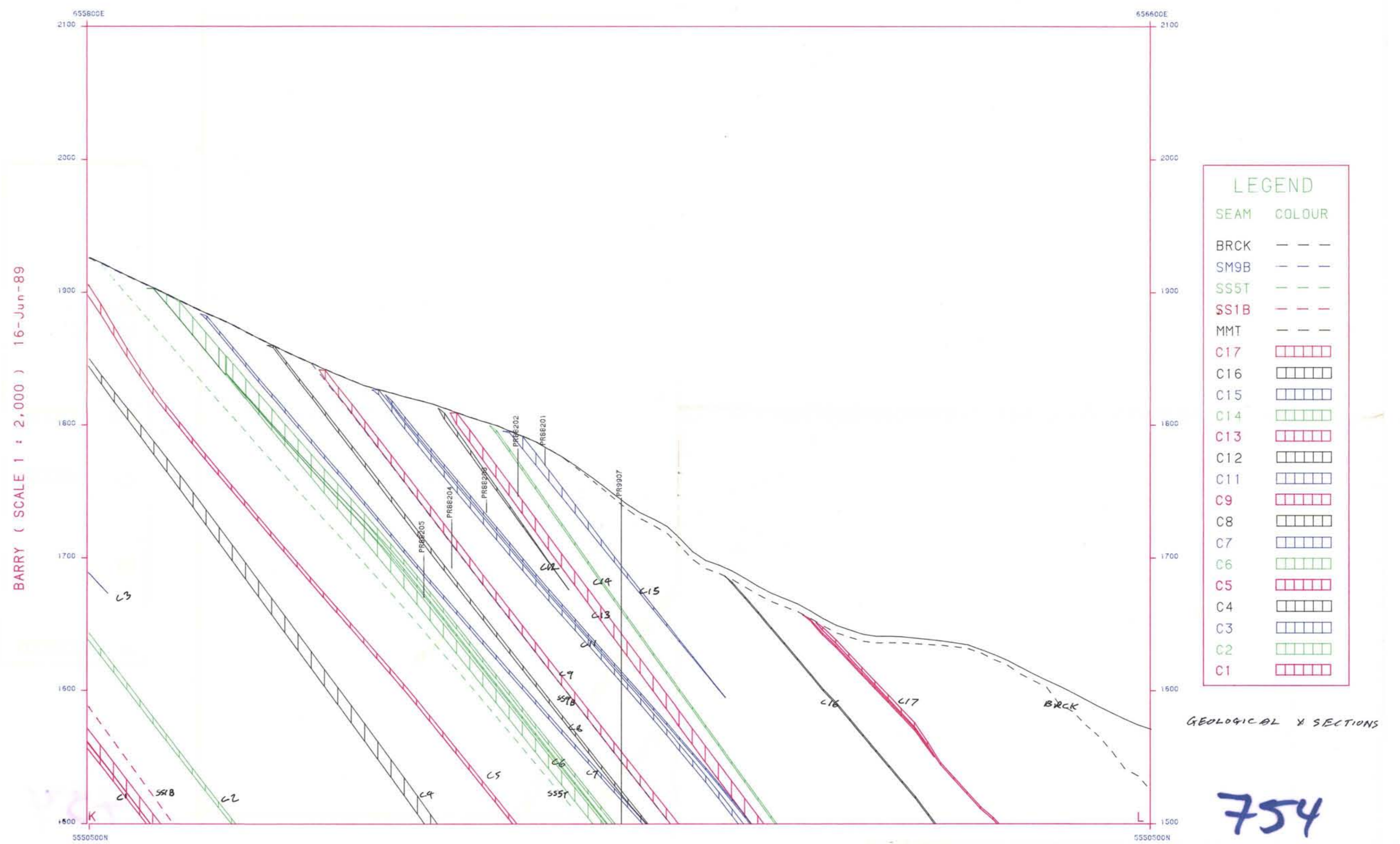
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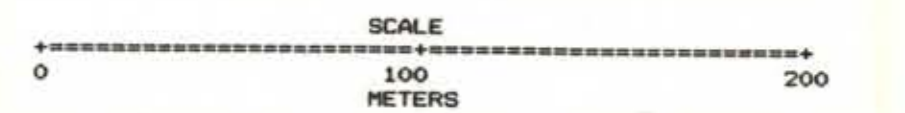
SECTION M-N



SECTION I-J



SECTION K-L



GEOLOGICAL SECTIONS

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Century

BURNT RIDGE 88-01

COMPANY : CROWSNEST RESOURCES
 WELL : BURNT RIDGE 88-01
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION :

OTHER SERVICES:

DATE : 09/25/88
 DEPTH DRILLER : 146.5
 LOG BOTTOM : 146.56
 LOG TOP : 0.56
 CASING DRILLER : 000
 CASING TYPE :
 CASING THICKNESS: 00

TOWNSHIP :
 PERMANENT DATUM : GL
 ELEV. PERM. DATUM:
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL
 LOGGING UNIT : 8602
 FIELD OFFICE : CALGARY
 RECORDED BY : R. WHITTAKER

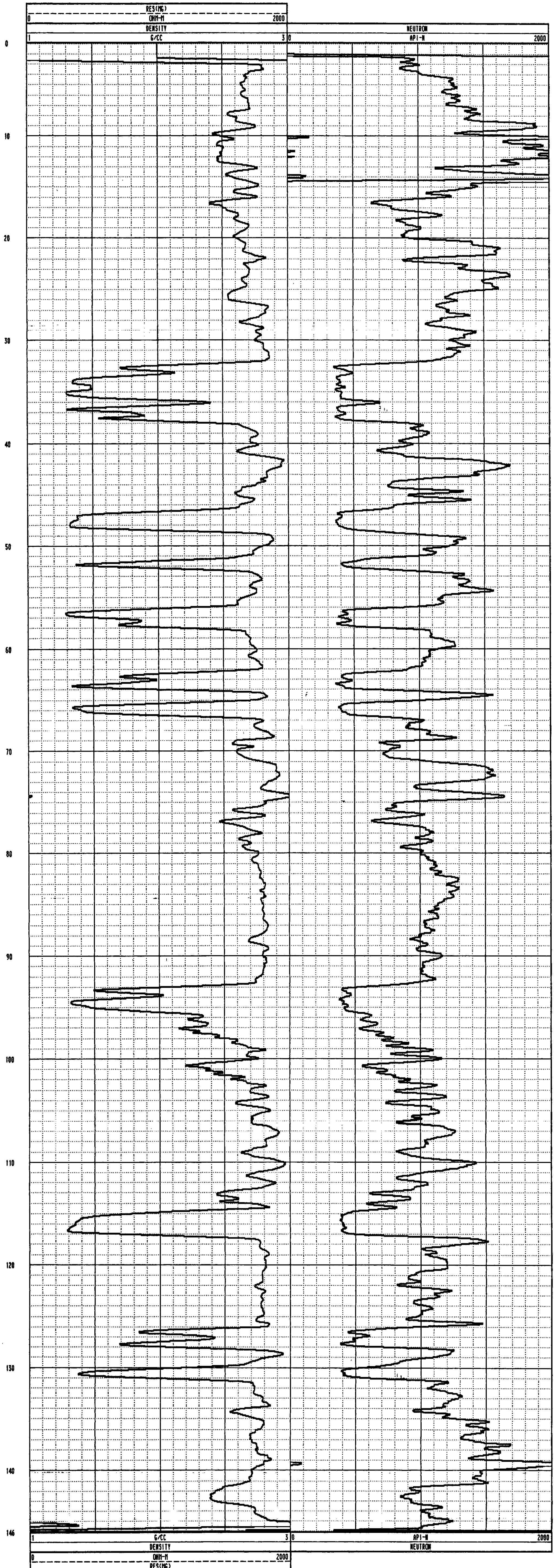
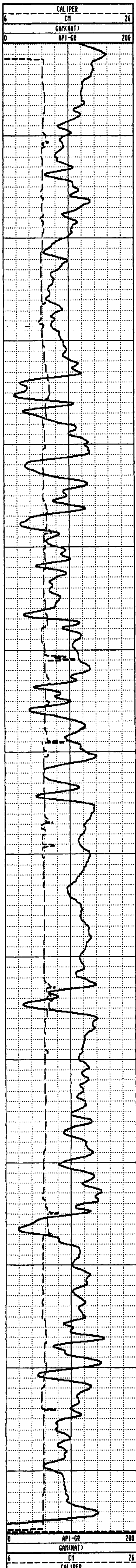
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 ELEVATIONS
 KB :
 DF :
 GL :

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 REMARKS :
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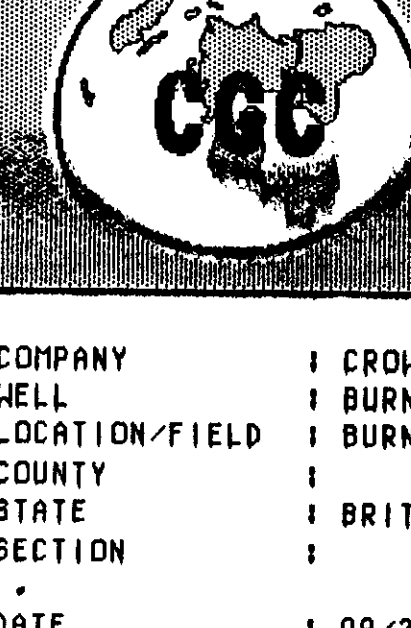
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 RM : 0
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 FLUID DELTA T : 690

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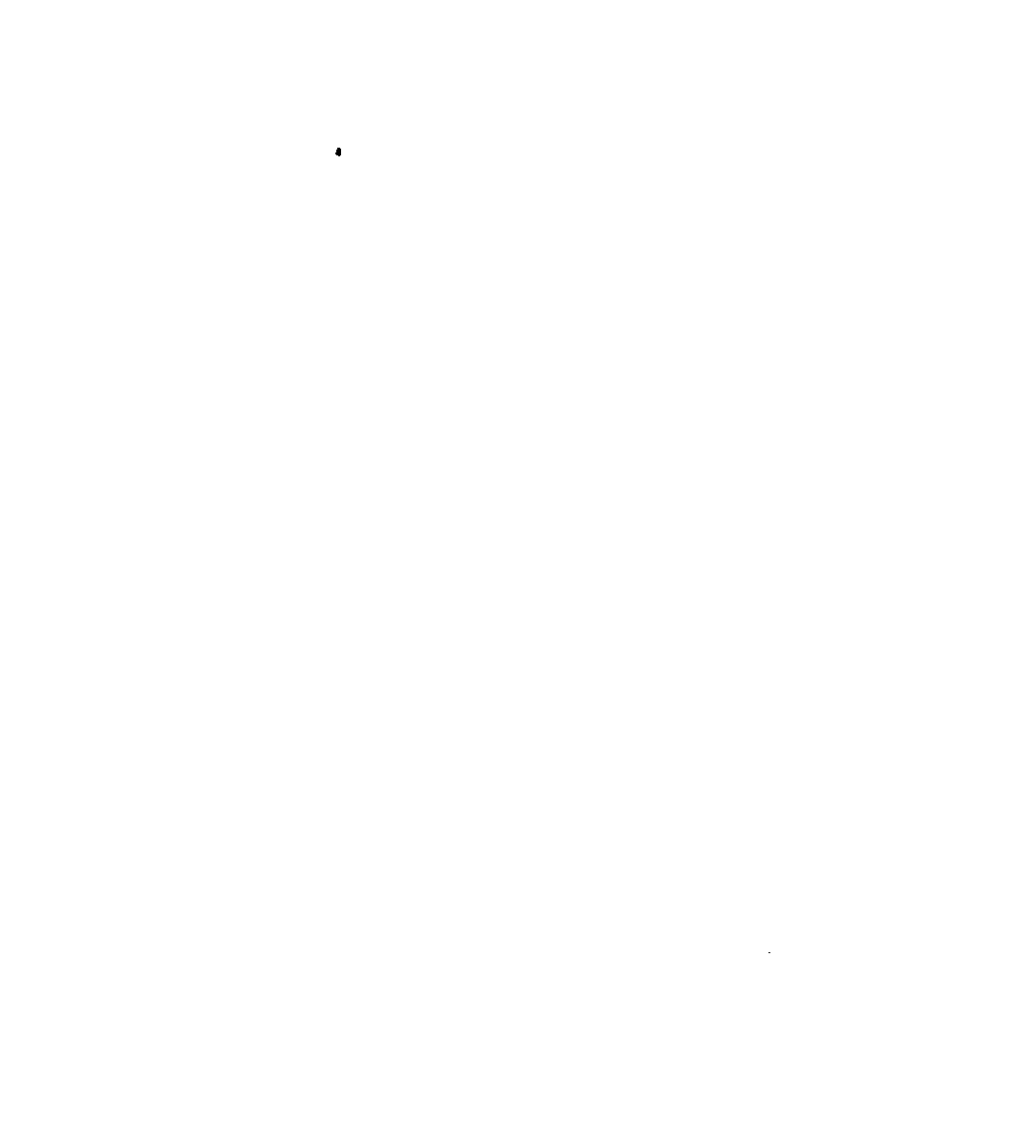
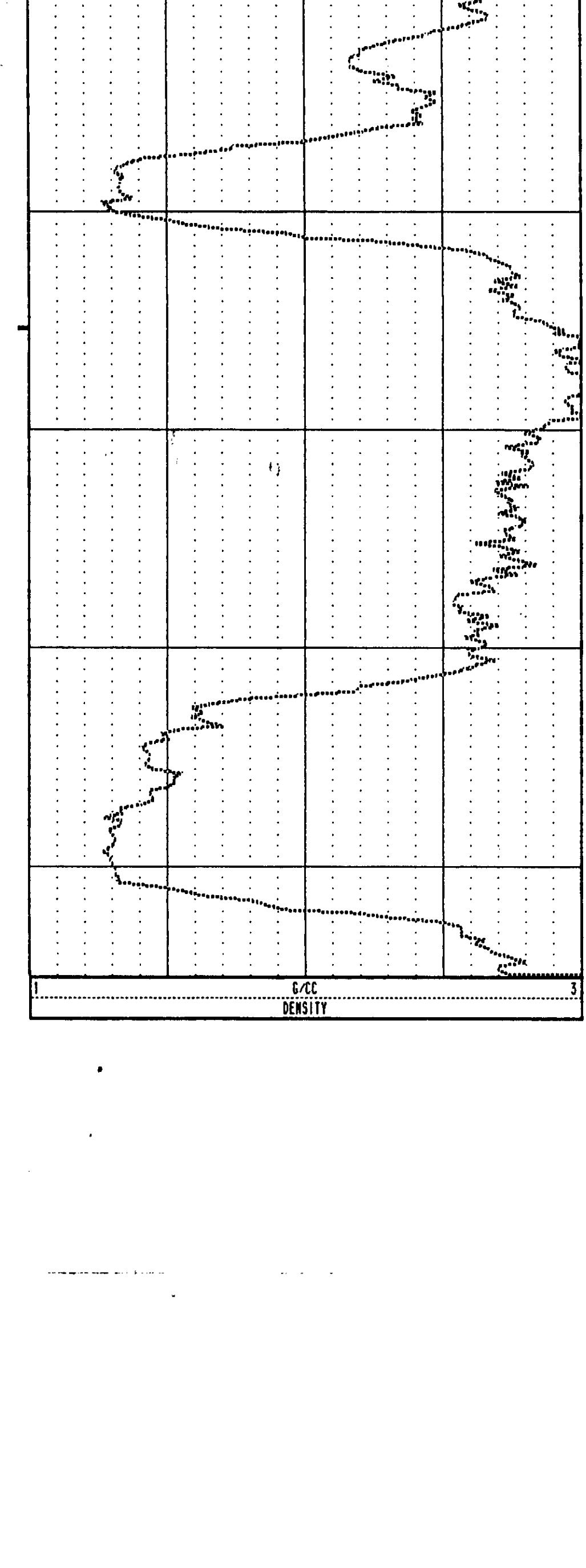
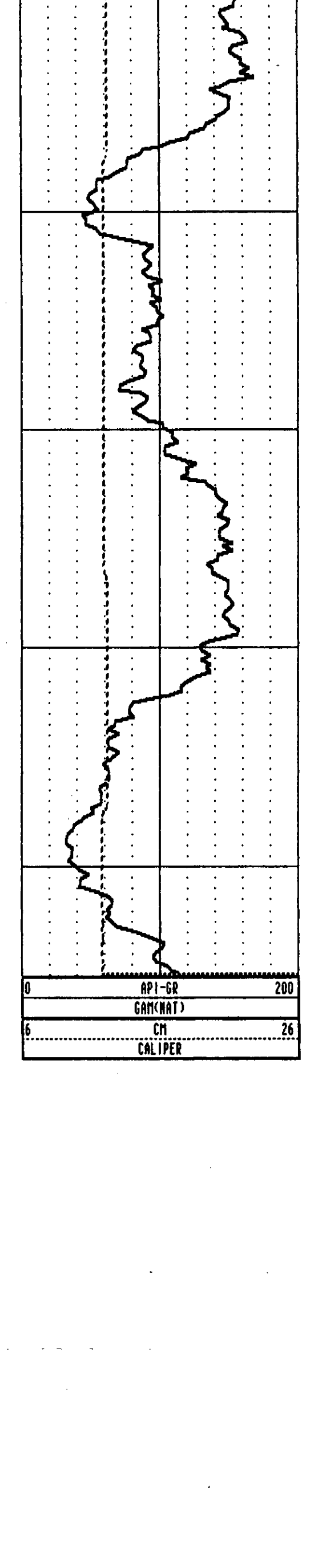
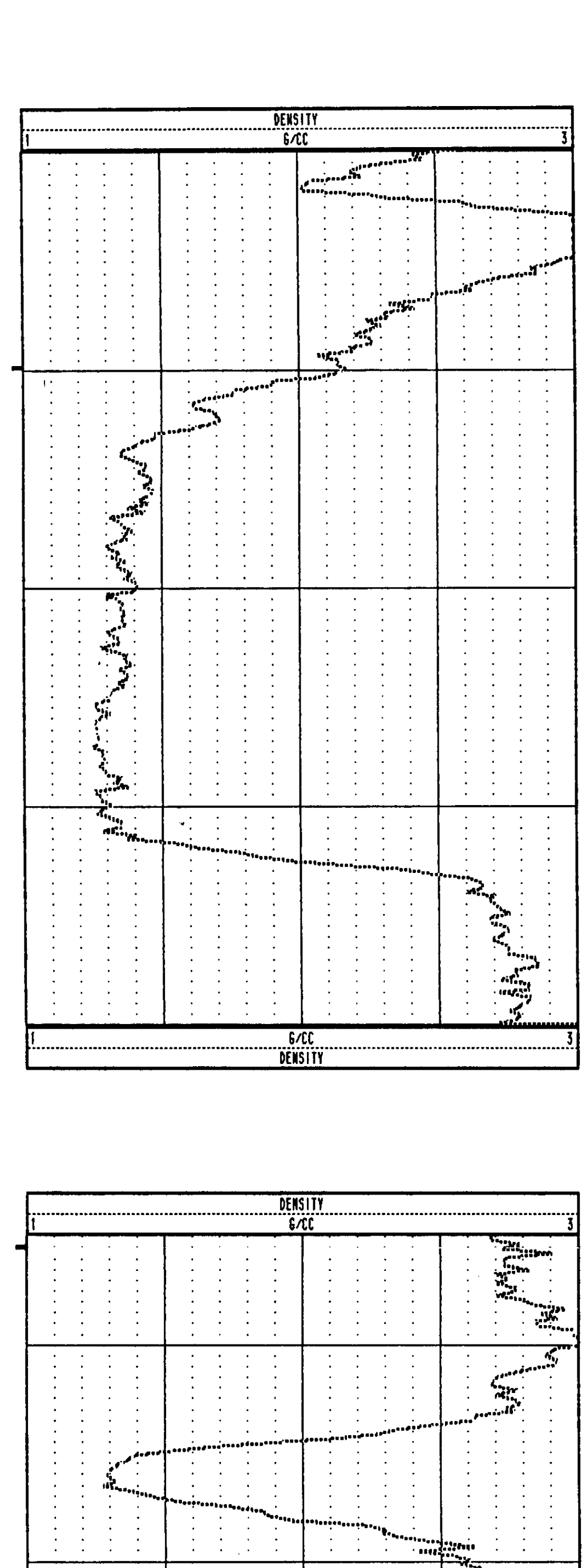
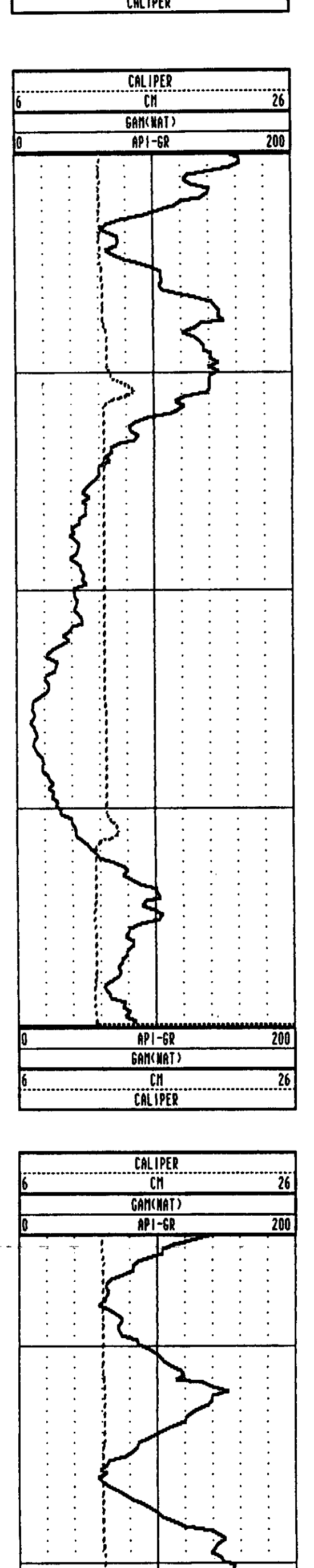
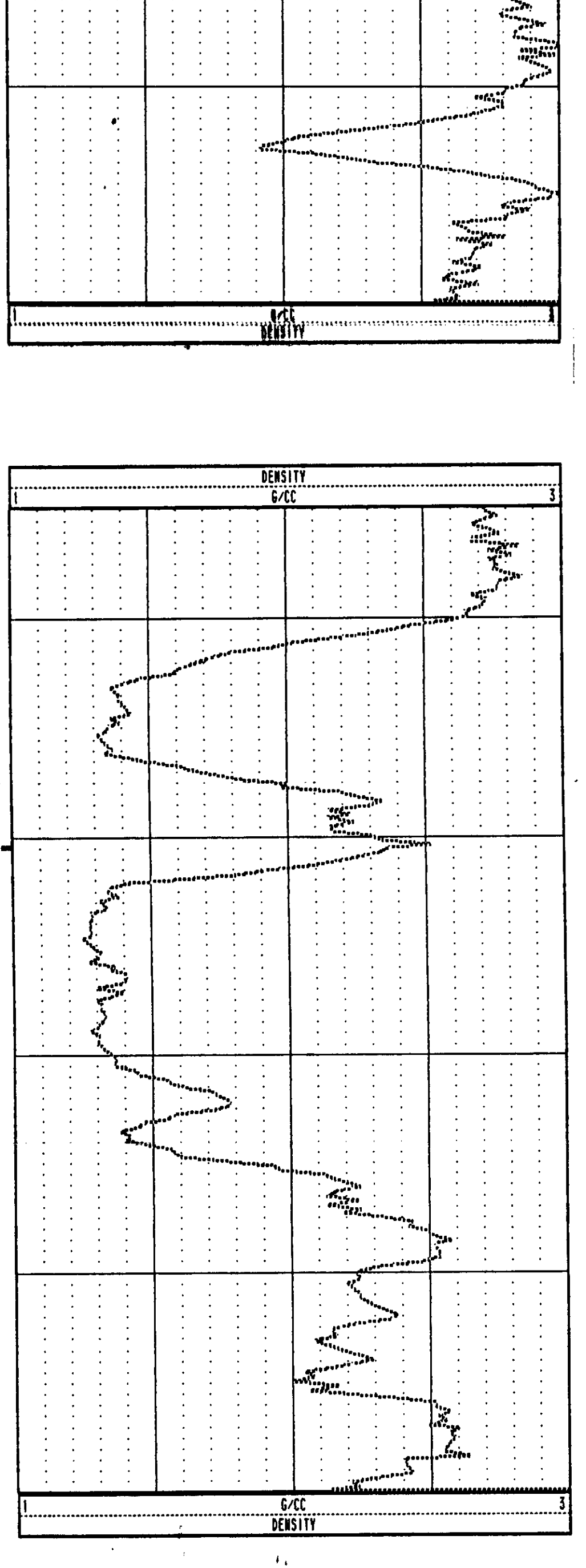
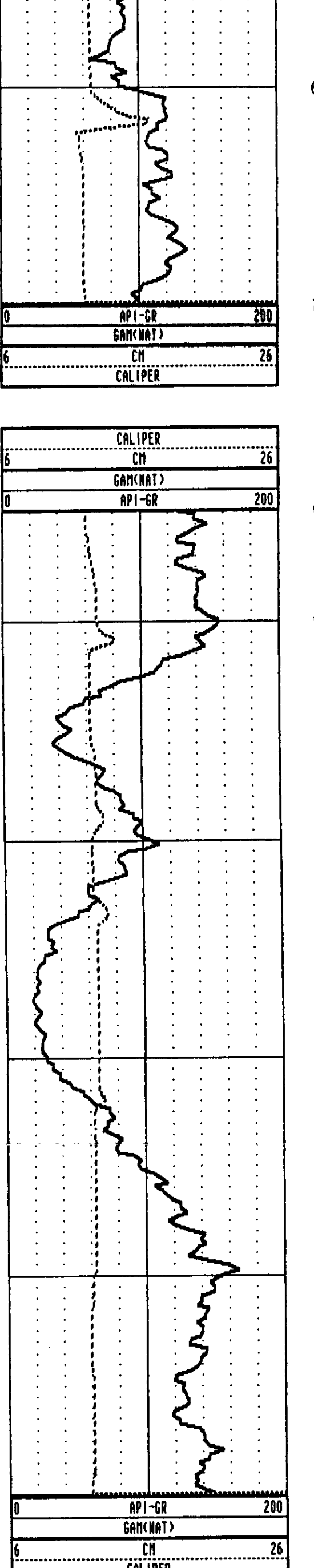
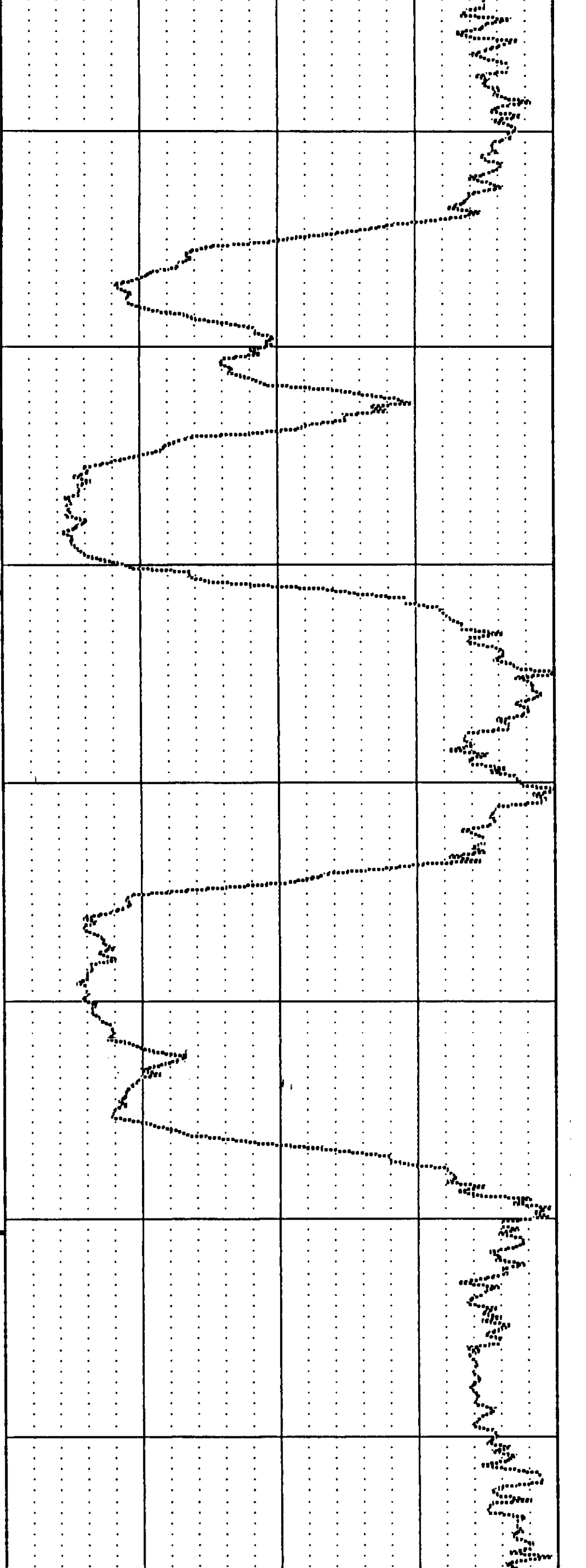
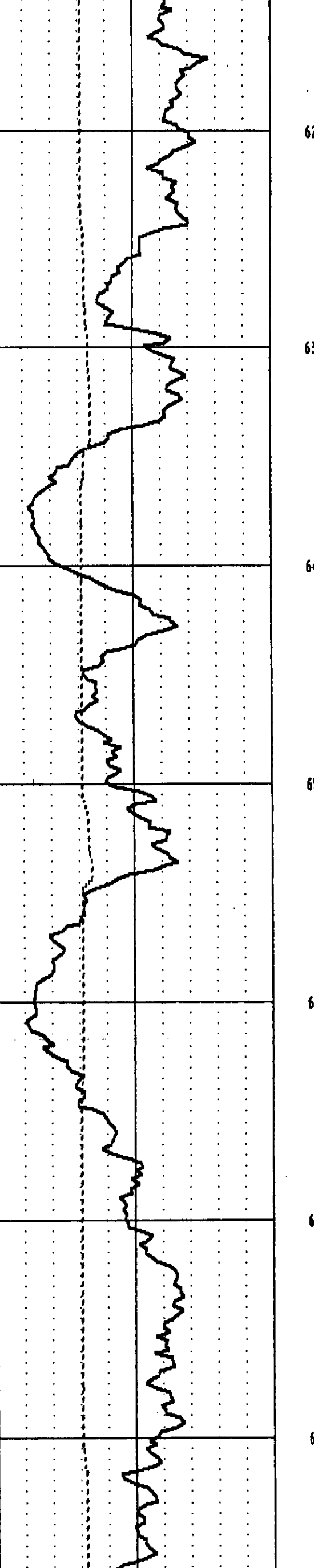
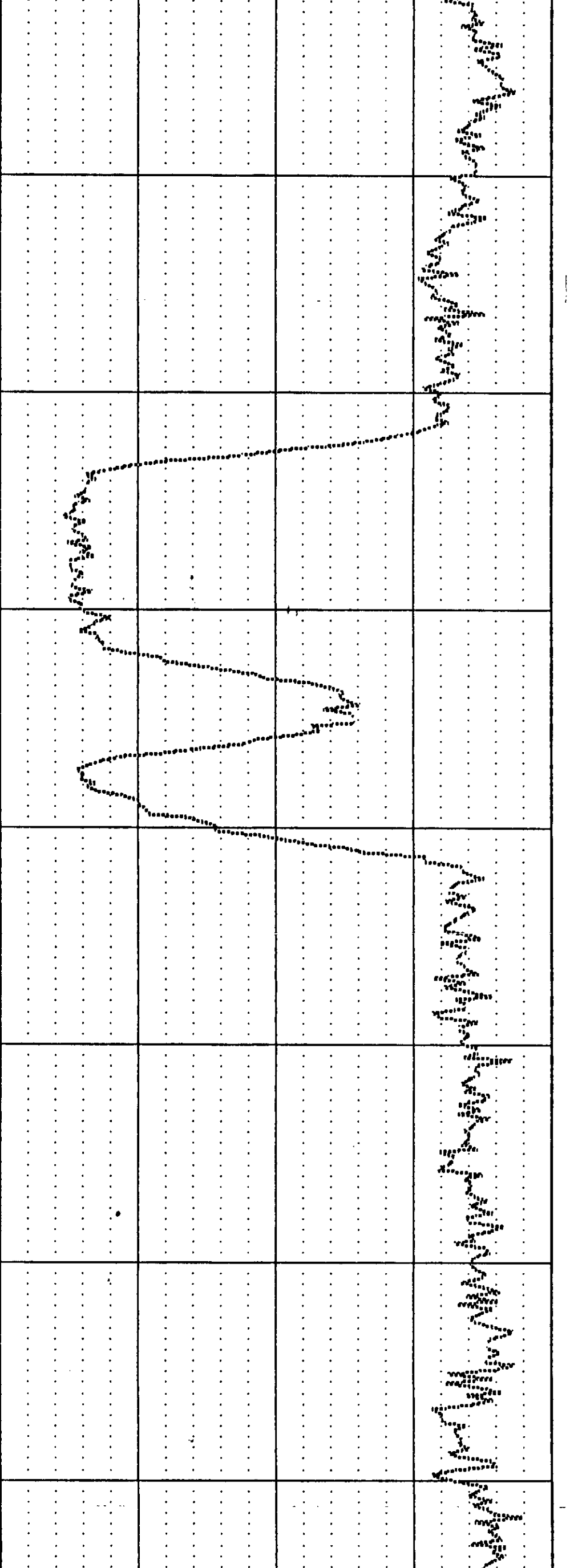
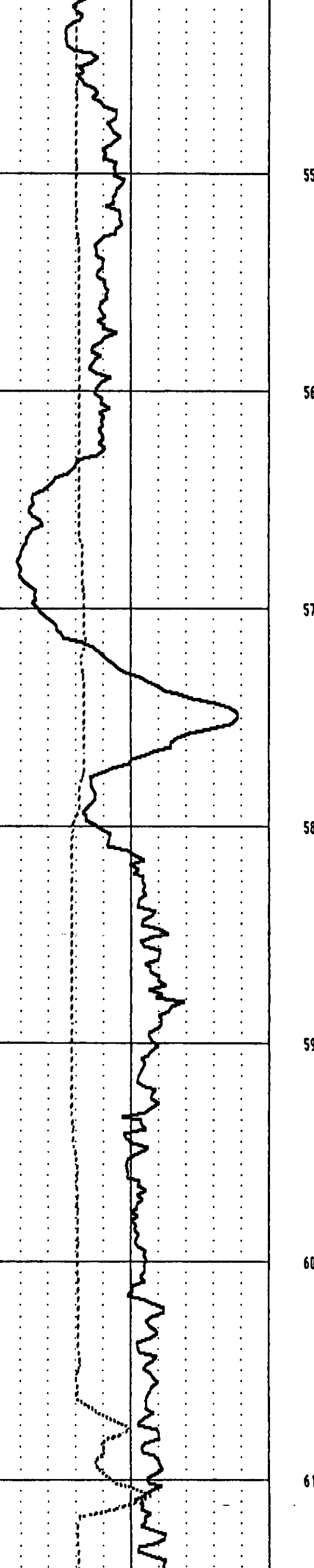
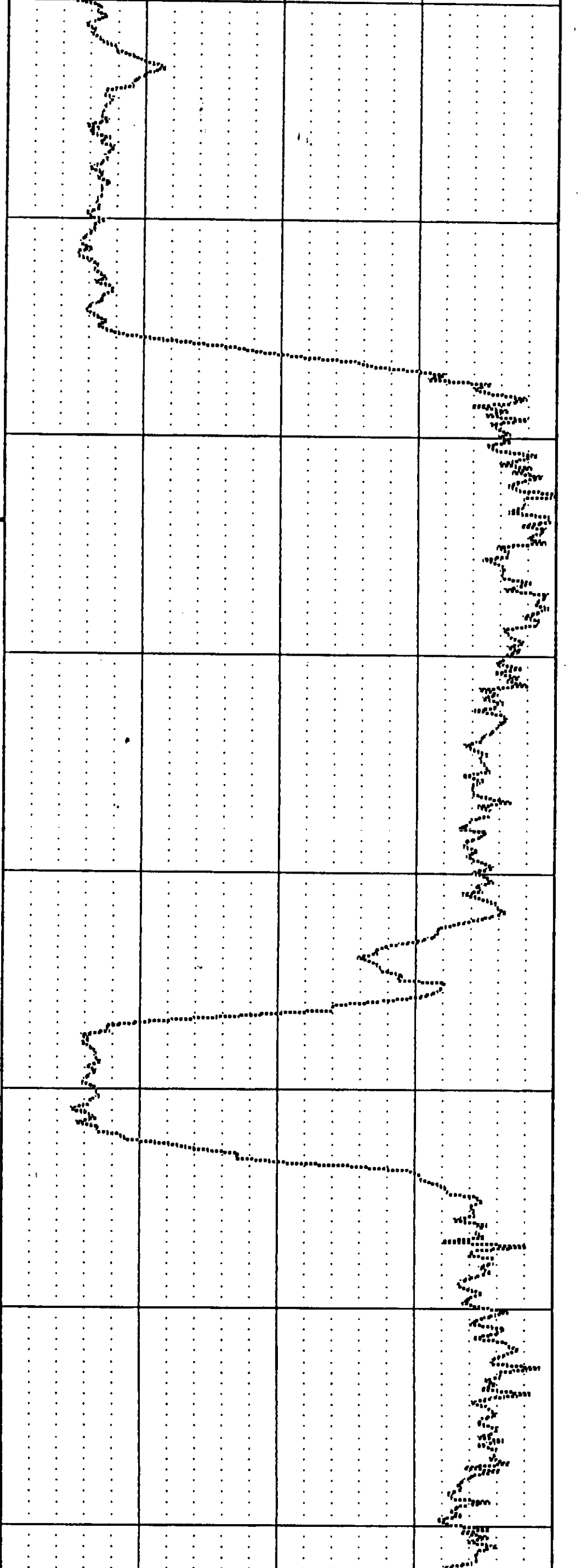
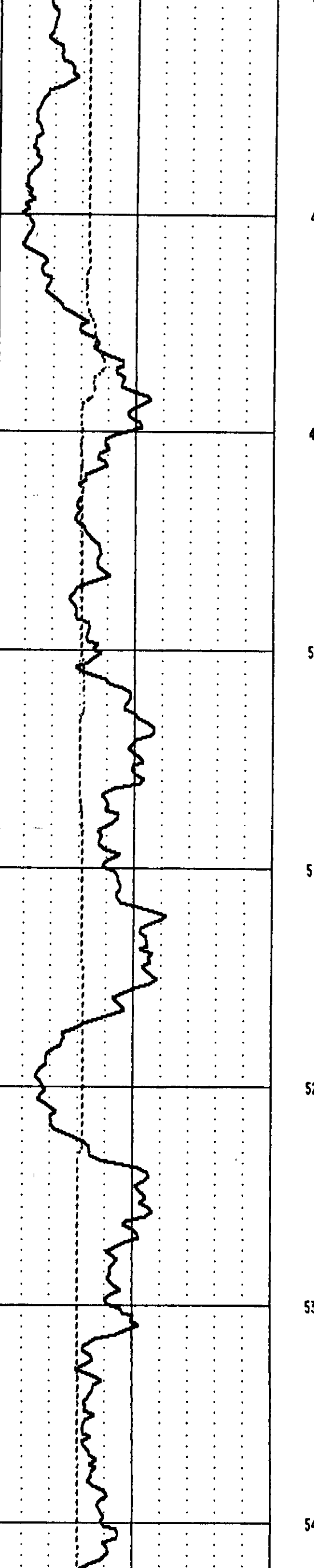
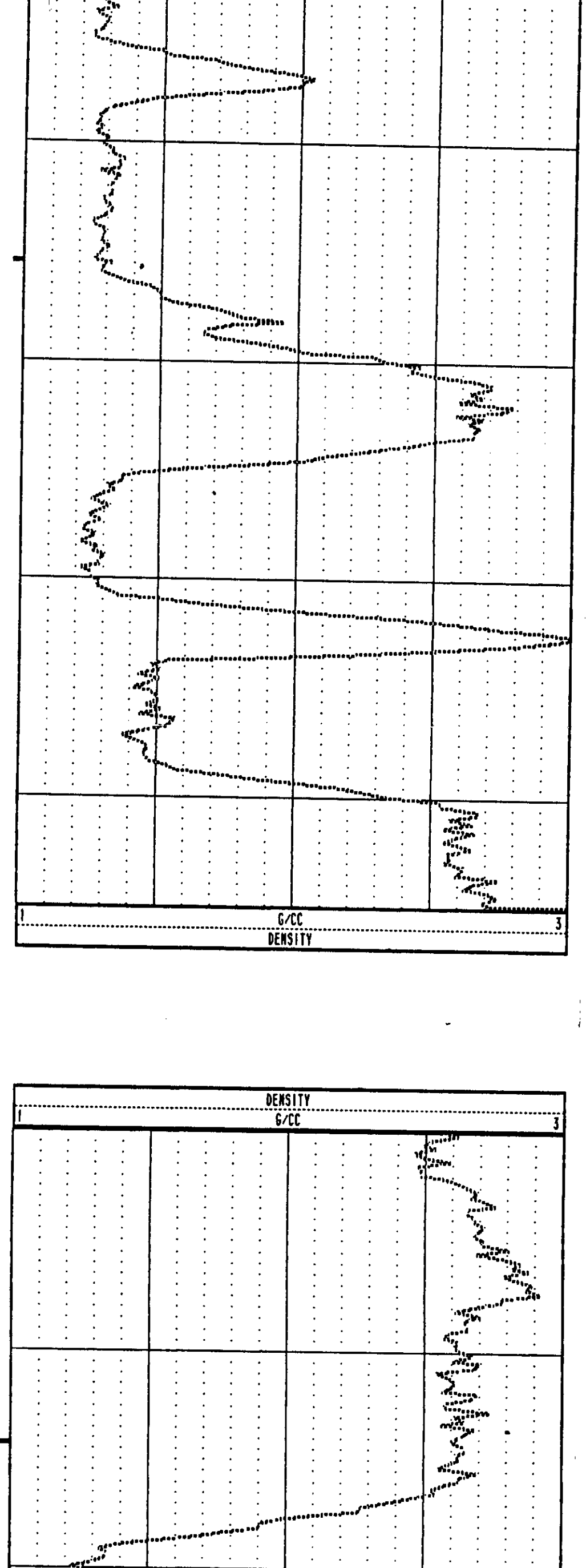
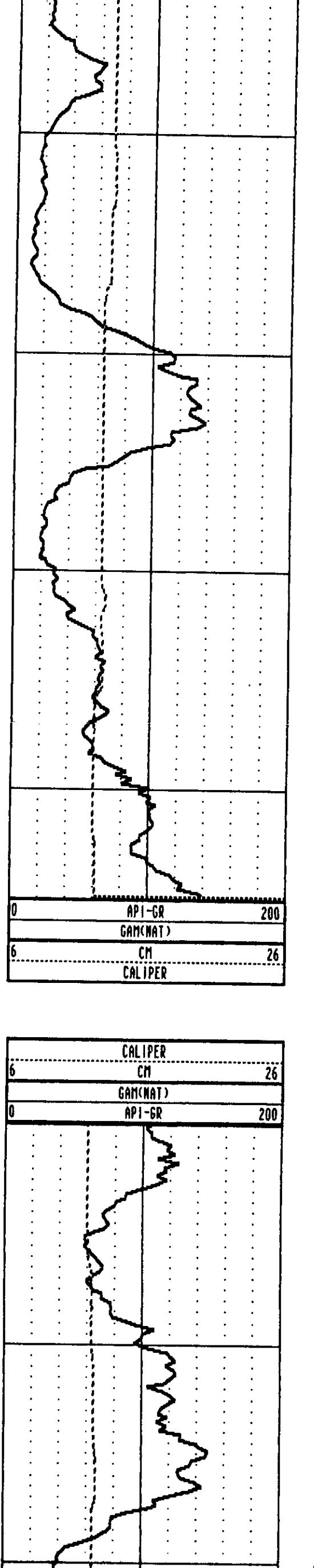


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BURNT RIDGE 88-01

COMPANY	CROSSMET RESOURCES	OTHER SERVICES:			
WELL	BURNT RIDGE 88-01				
LOCATION/FIELD	BURNT RIDGE				
COUNTY					
STATE	BRITISH COLUMBIA				
SECTION					
DATE	09/25/88	TOWNSHIP			
DEPTH DRILLER	146.5	PERMANENT DATUM	GL	RANGE	
LOG BOTTOM	146.56	ELEV. PERM. DATUM	KB	ELEVATIONS	
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CASING DRILLER	000	DRL MEASURED FROM	GL	GL	
CASING TYPE		LOGGING UNIT	8602		
CASING THICKNESS	00	FIELD OFFICE	CALGARY		
		RECORDED BY	R. WHITTAKER		
BIT SIZE	13.97	BOREHOLE FLUID	WATER	FILE	ORIGINAL
MAGNETIC DECL.	18	RH	0	TYPE	9030AR
MATRIX DENSITY	2.68	RH TEMPERATURE	0	LOG	0
FLUID DENSITY	1.0	MATRIX DELTA T	173	PLOT	9030 13
NEUTRON MATRIX	SANDSTONE	FLUID DELTA T	690	THRESH	40000
REMARKS	OPEN HOLE				

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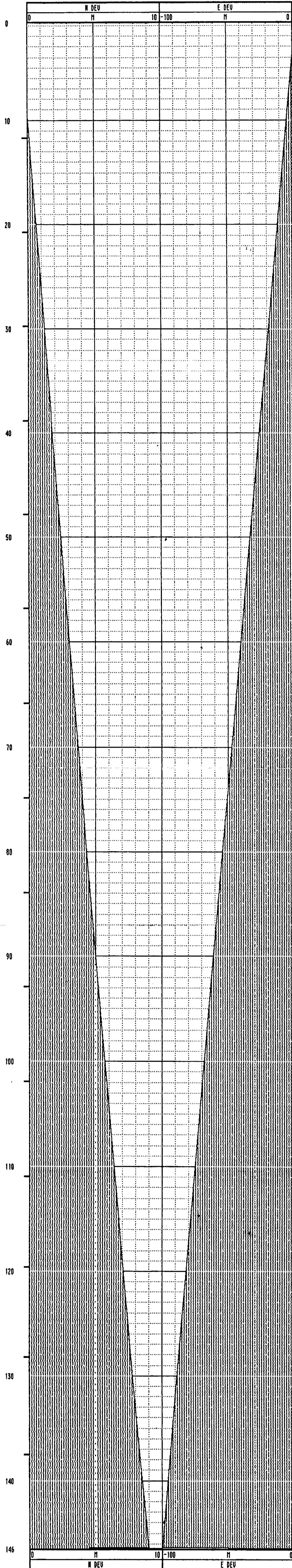
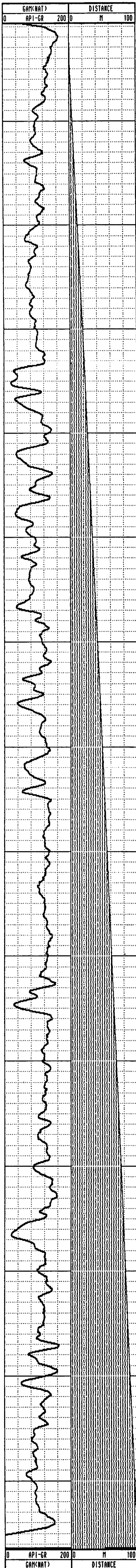


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BURNT RIDGE 88-01

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-01		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
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CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
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NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: PROCESSED
OPEN HOLE	:	TYPE	: 9055A
		LOG	: 2
		PLOT	: 9055-D 10
		THRESH	: 40000

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TOOL CALIBRATION			TOOL = 9055A SERIAL NUMBER = 10			
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
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2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
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754

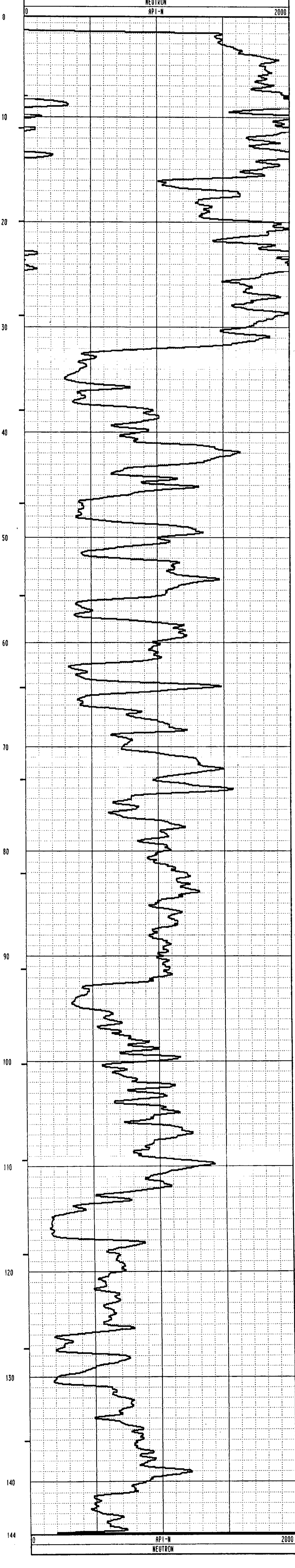
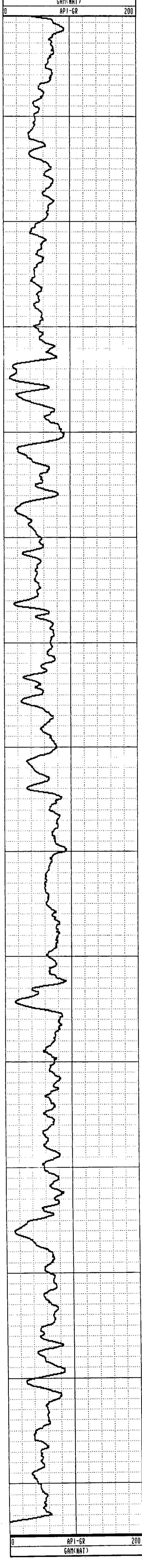


Century

BURNT RIDGE 88-01

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-01		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 09/25/88	PERMANENT DATUM	: GL ELEVATIONS
DEPTH DRILLER	: 146.5	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 144.94	LOG MEASURED FROM:	GL DF :
LOG TOP	: 0.50	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER FILE : ORIGINAL
MAGNETIC DECL.	: 18	RM	: 0 TYPE : 9055A
MATRIX DENSITY	: 2.68	PM TEMPERATURE	: 0 LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 THRESH: 2500
REMARKS	:		
THOUGH RODS	:		

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TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

754

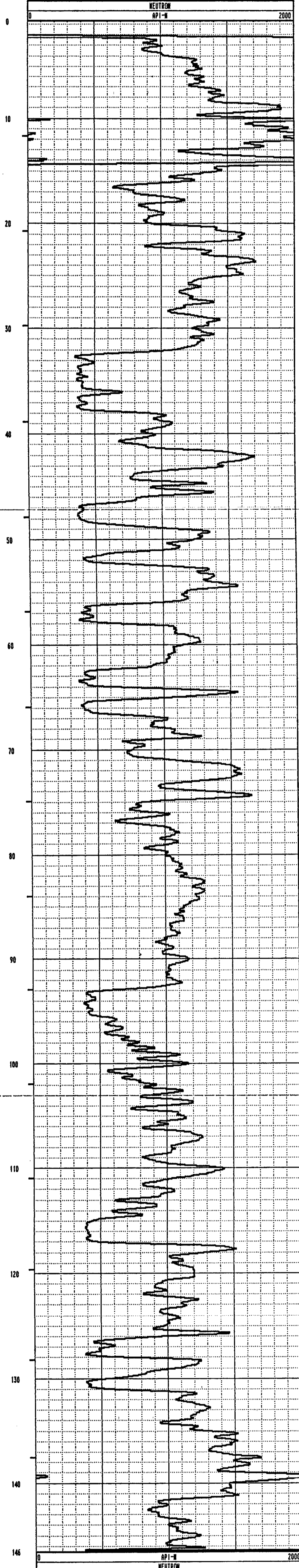
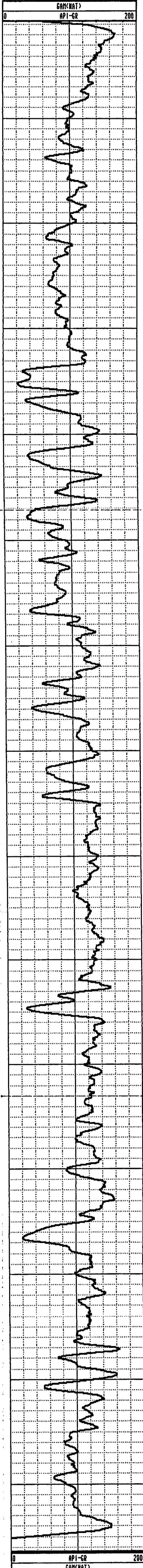


Century

BURNT RIDGE 88-01

COMPANY : CROWNSNEST RESOURCES
 WELL : BURNT RIDGE 88-01
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 09/25/88 PERMANENT DATUM : GL ELEVATIONS
 DEPTH DRILLER : 146.5 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 146.48 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.80 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 000 LOGGING UNIT : 8602
 CASING TYPE : FIELD OFFICE : CALGARY
 CASING THICKNESS: 00 RECORDED BY : R. WHITTAKER
 BIT SIZE : 13.97 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 18 RM : 0 TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : 0 LOG : 1
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : 9055 12
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 40000
 REMARKS :

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	204.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N



Century

BURNT RIDGE 88-02

COMPANY : CROWSNEST RESOURCES
 WELL : BURNT RIDGE 88-02
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION :

OTHER SERVICES:

DATE : 09/23/88
 DEPTH DRILLER : 147.3
 LOG BOTTOM : 147.72
 LOG TOP : 0.72
 CASING DRILLER : 000
 CASING TYPE :
 CASING THICKNESS : 00

TOWNSHIP :
 PERMANENT DATUM : GL
 ELEV. PERM. DATUM:
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL
 LOGGING UNIT : 8602
 FIELD OFFICE : CALGARY
 RECORDED BY : R. WHITTAKER

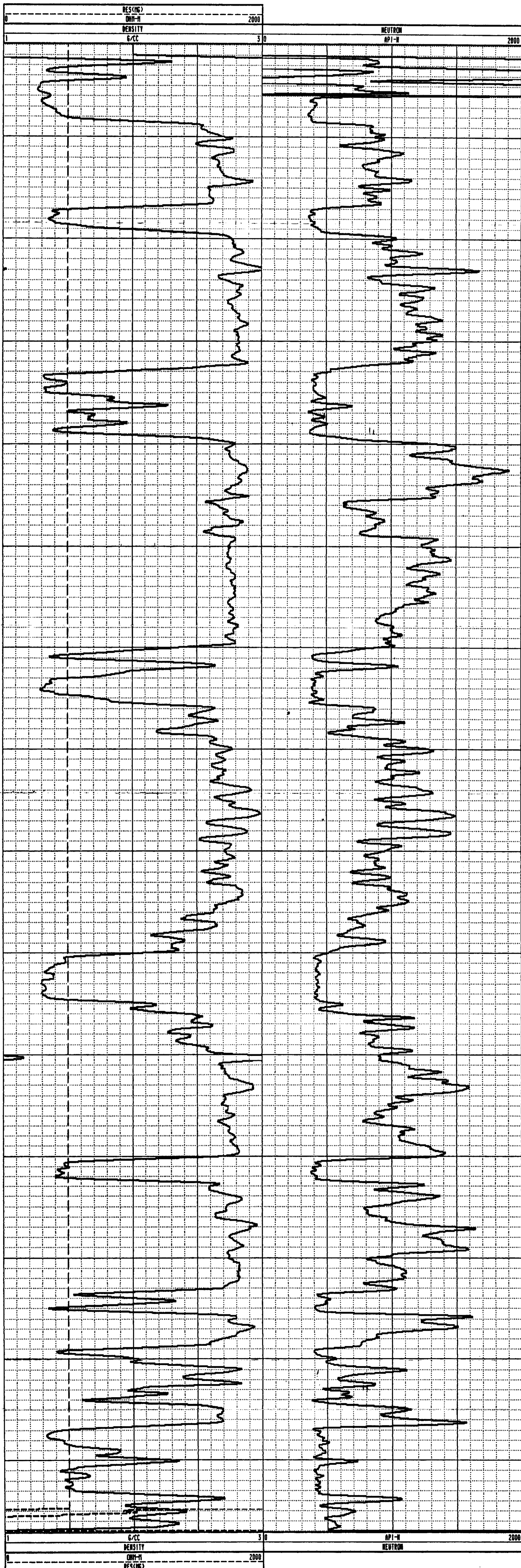
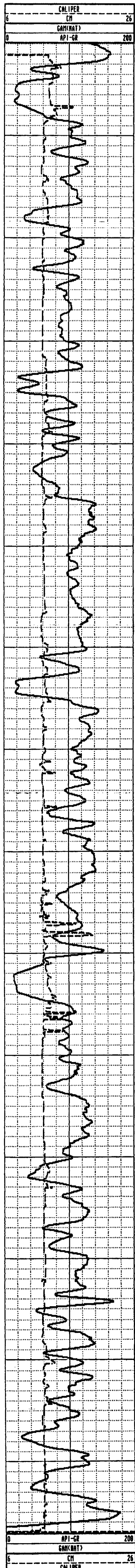
RANGE :
 ELEVATIONS
 KB :
 DF :
 GL :

BIT SIZE : 13.97
 MAGNETIC DECL. : 18
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :

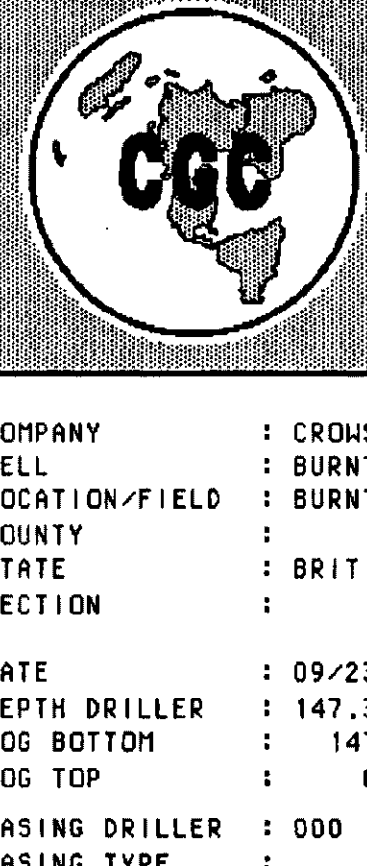
BOREHOLE FLUID : WATER
 RH : 0
 RH TEMPERATURE : 0
 MATRIX DELTA T : 173
 FLUID DELTA T : 690

FILE : PROCESSED
 TYPE : 9030AA
 LOG : 3
 PLOT : CNR 12
 THRESH : 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



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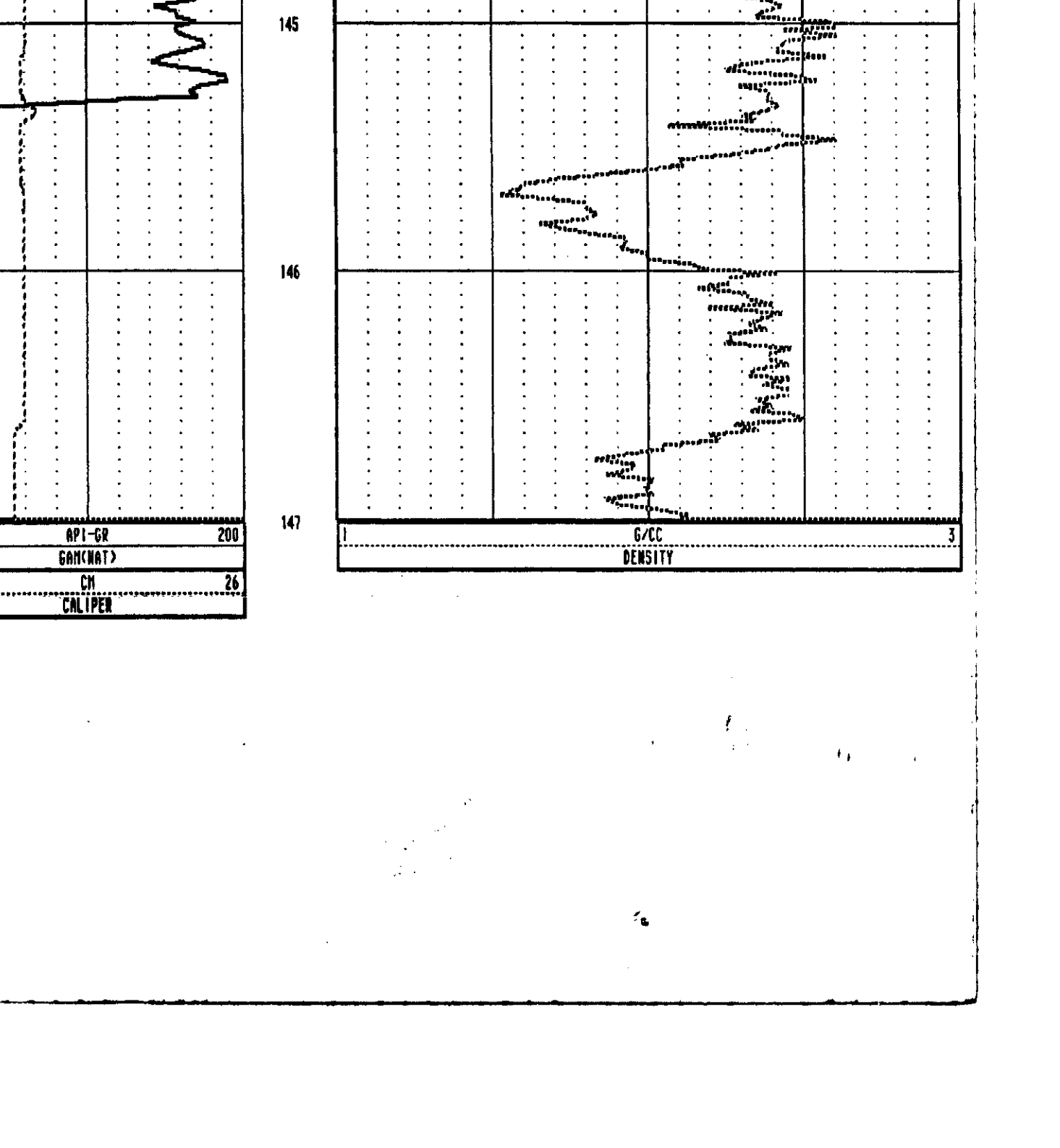
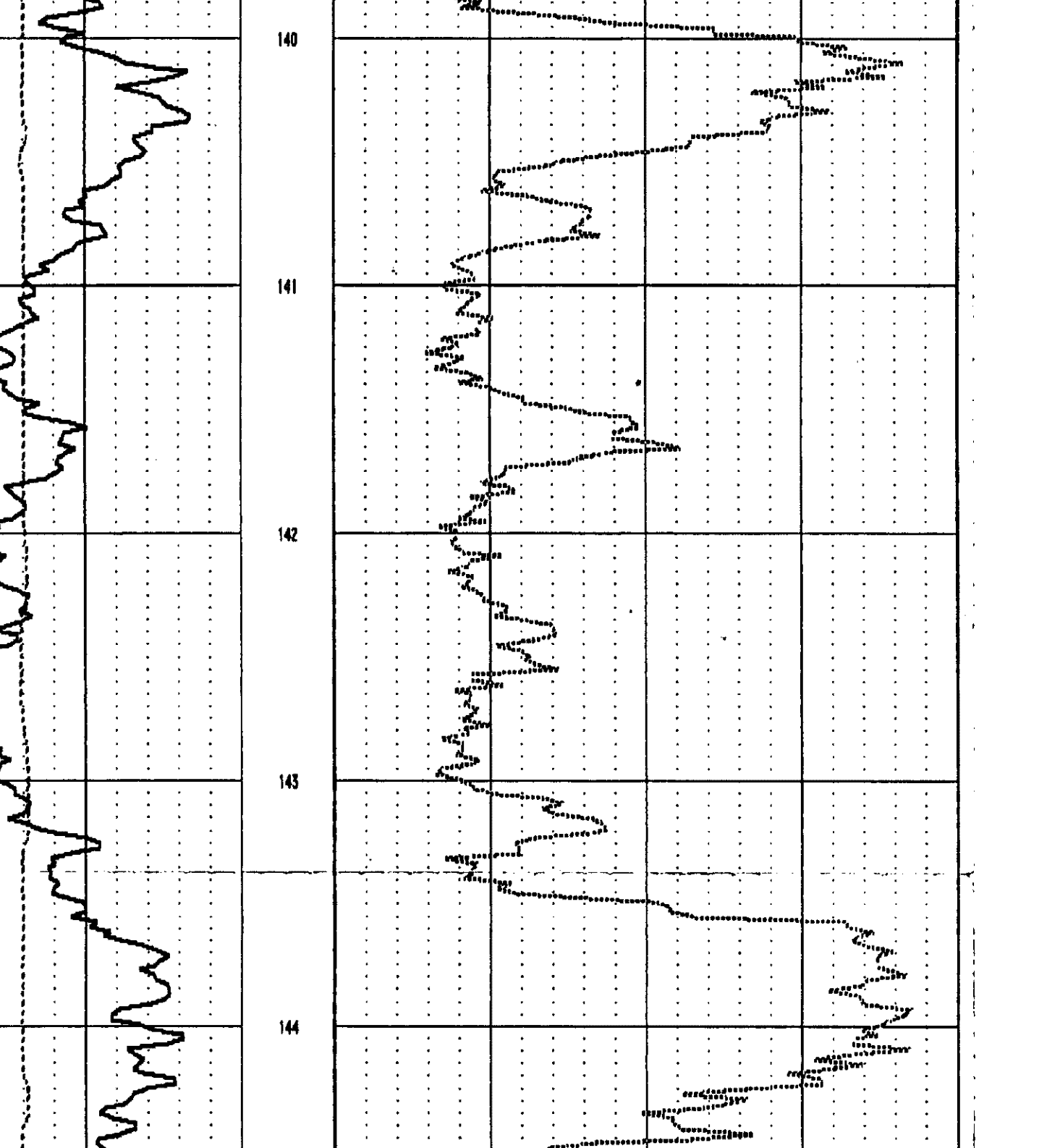
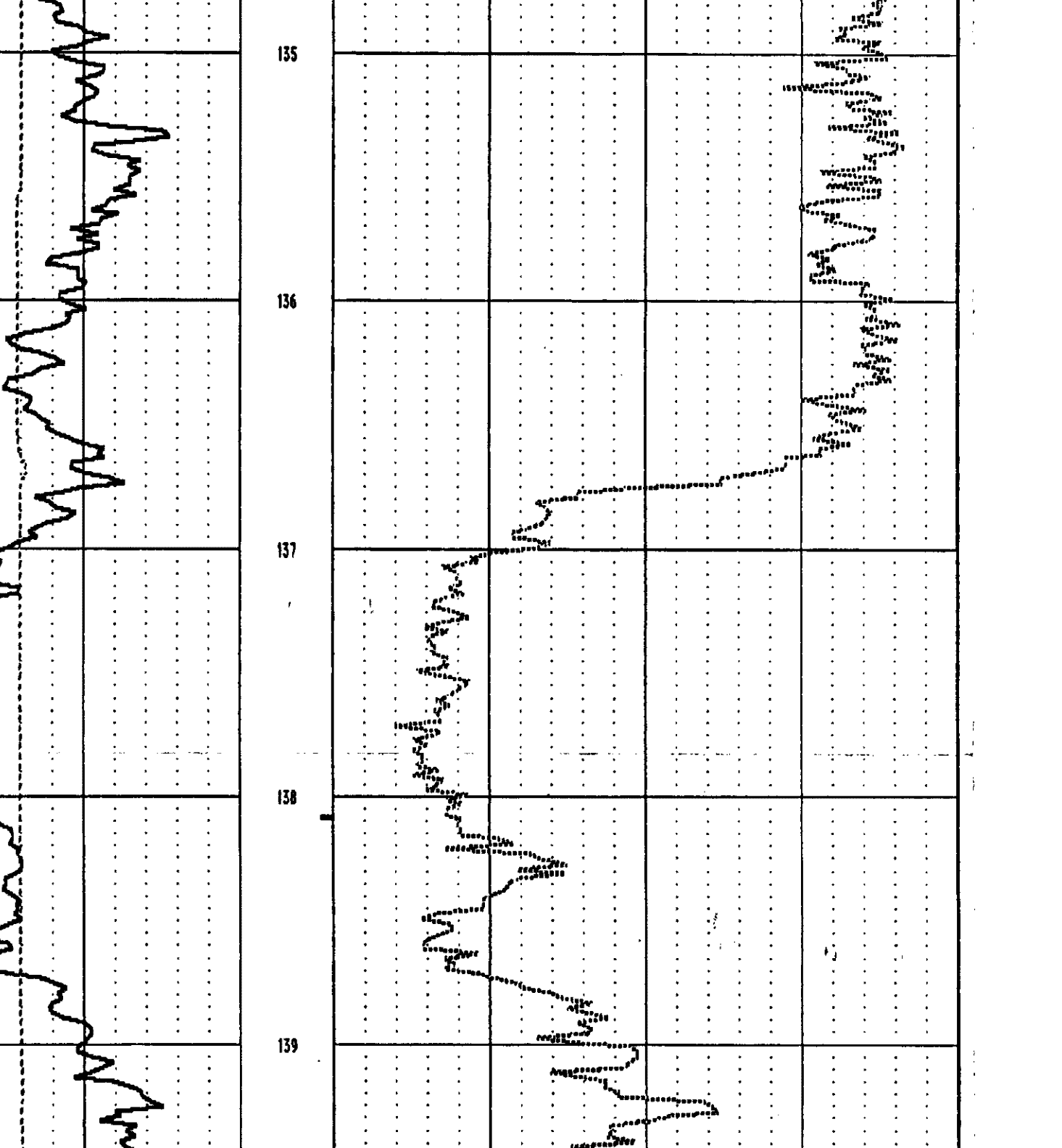
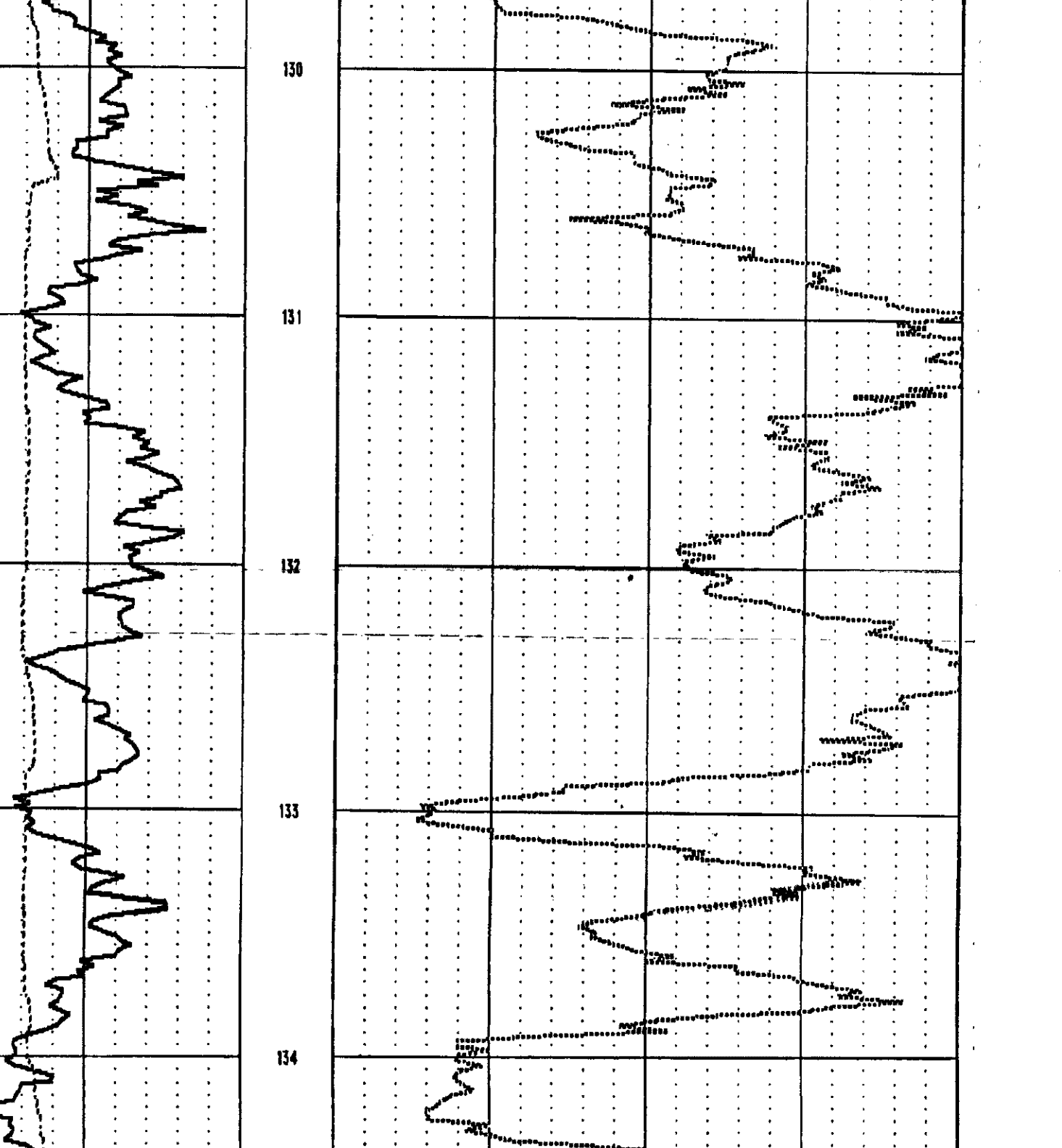
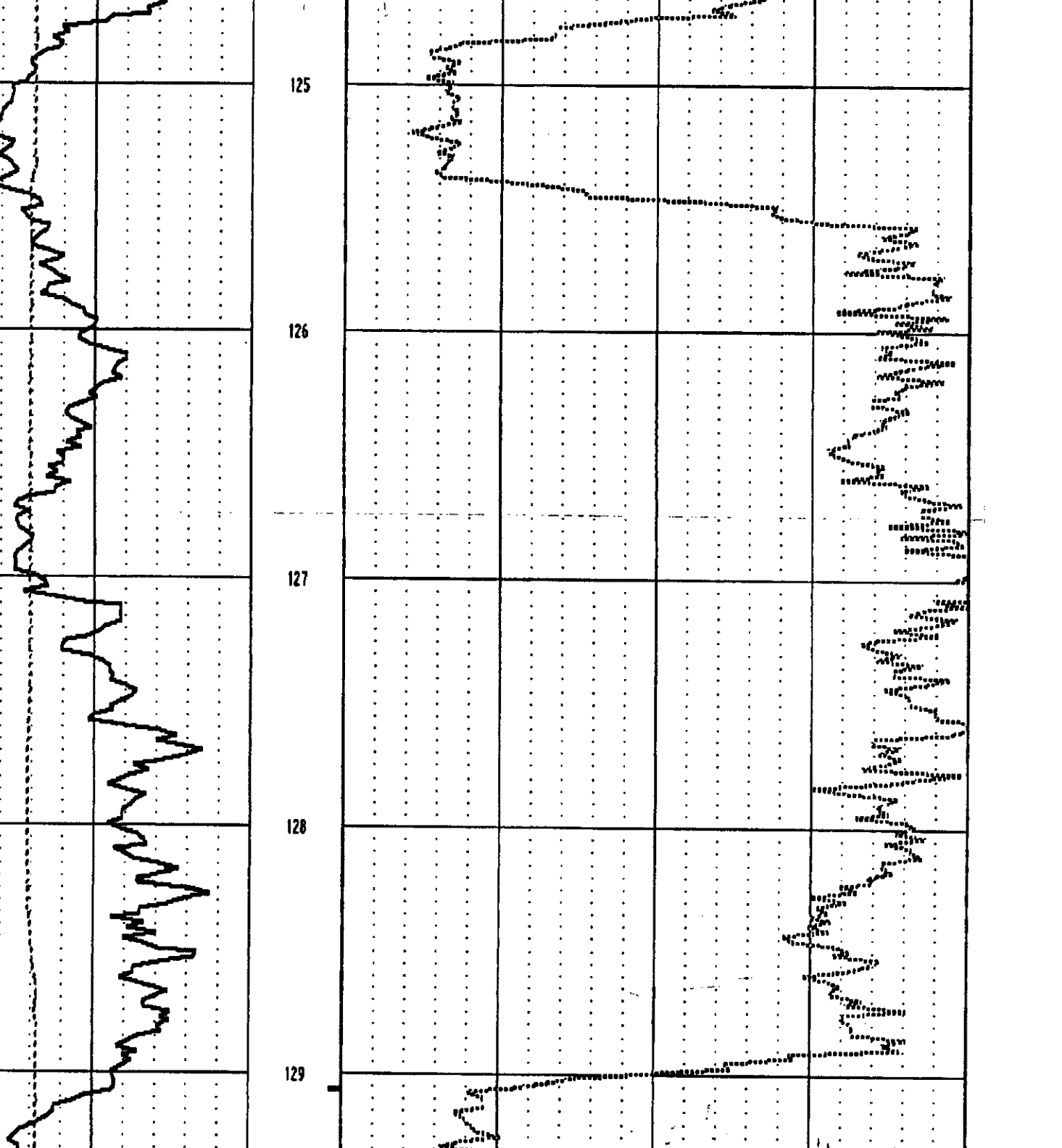
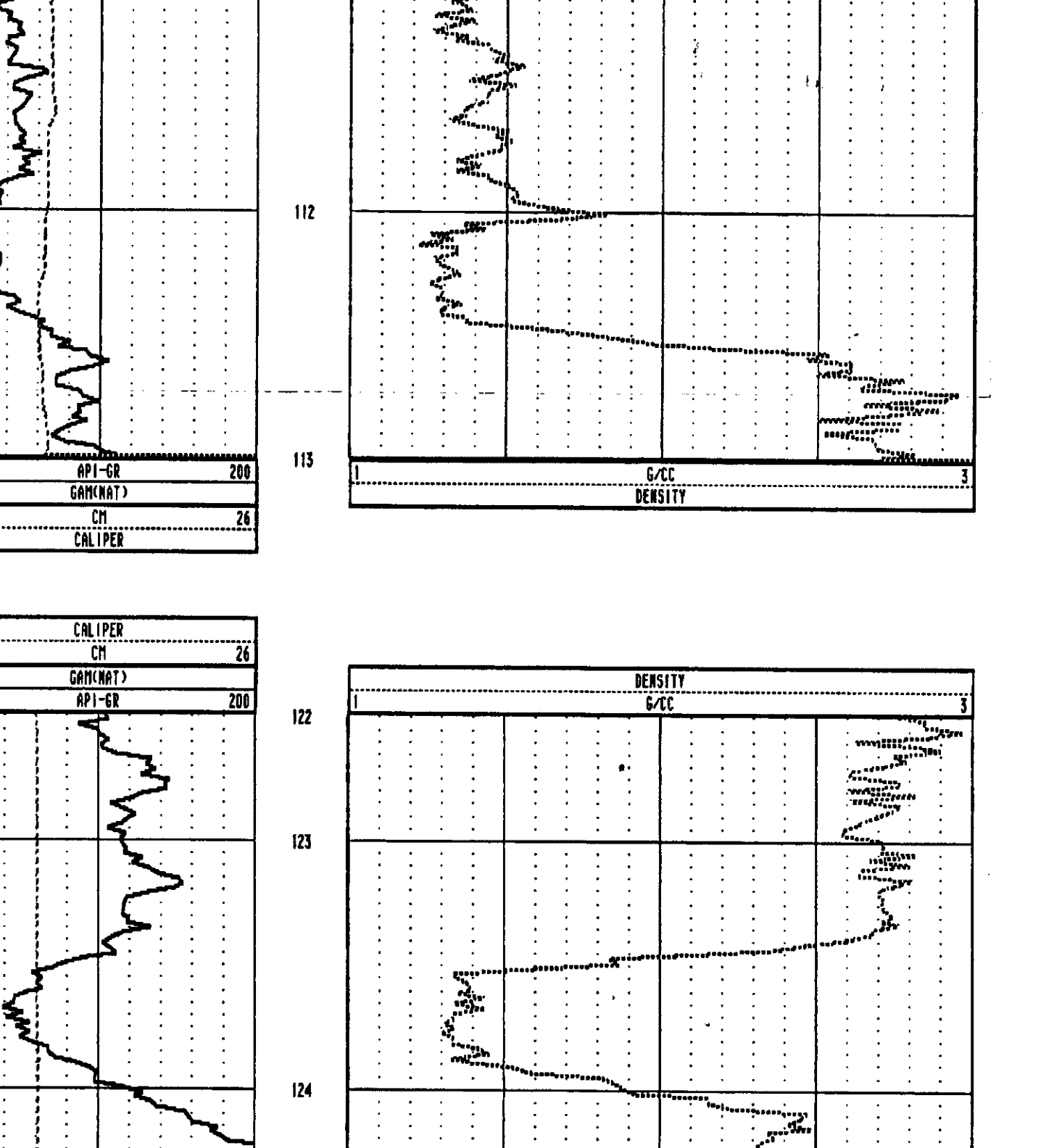
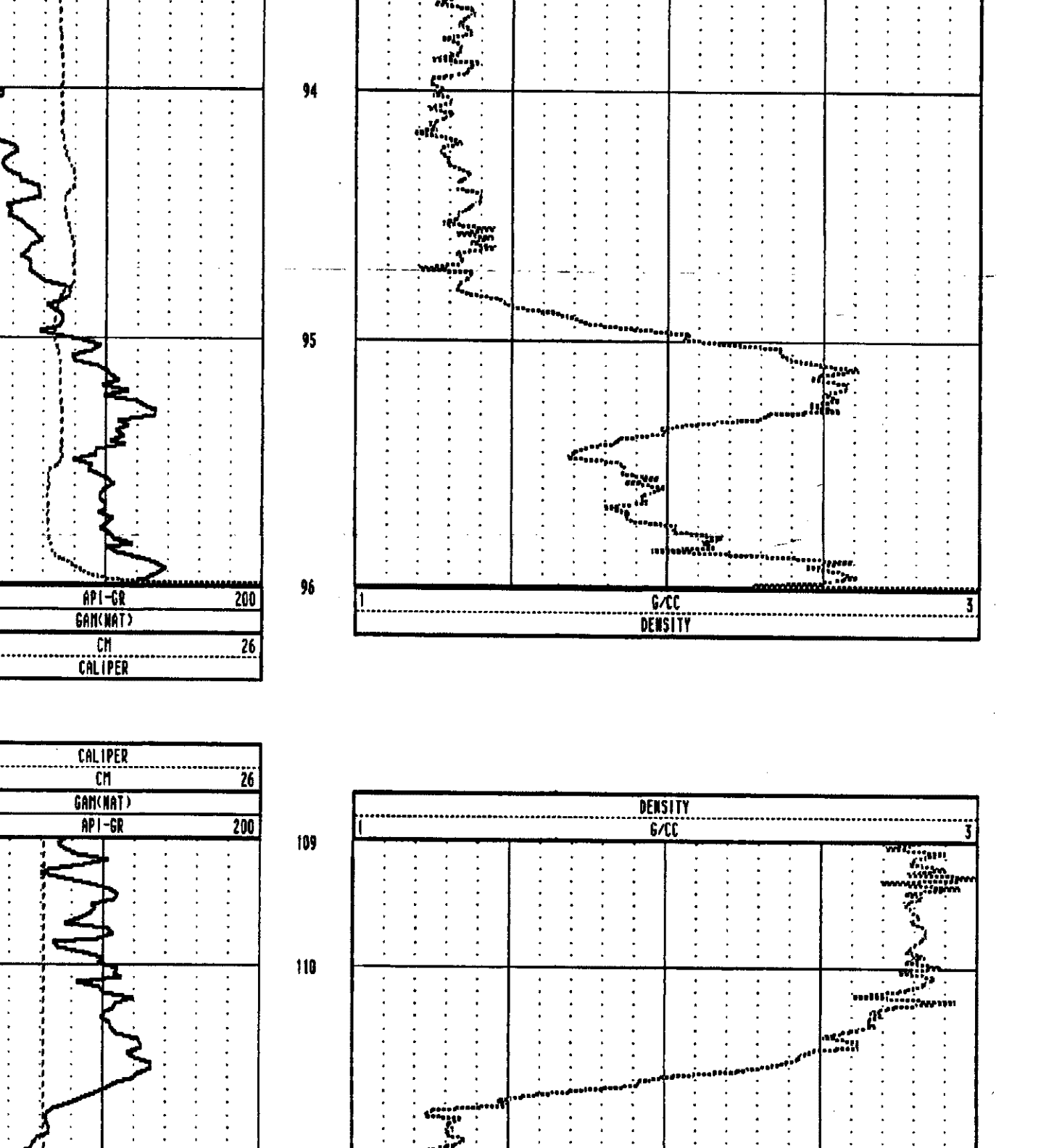
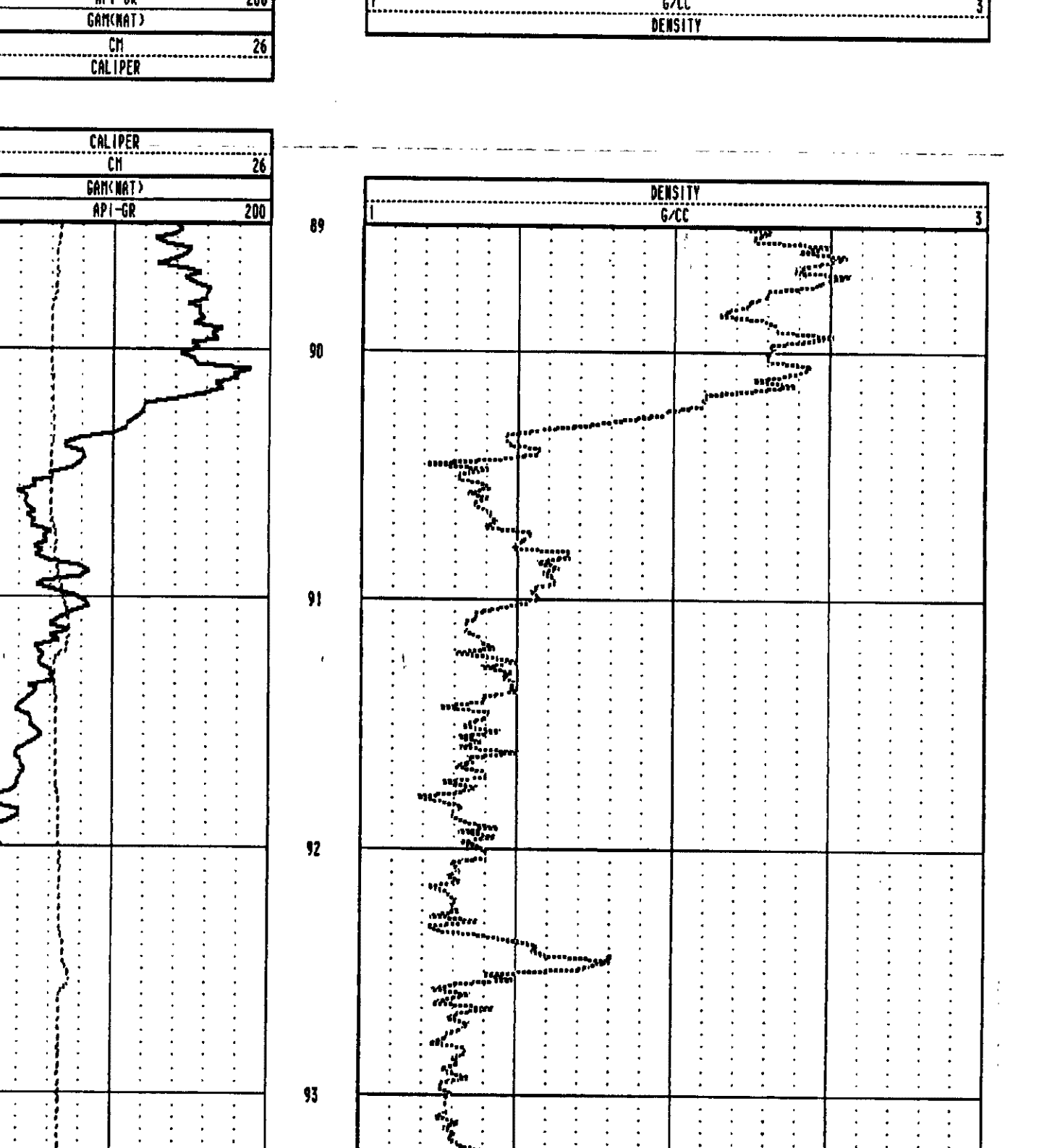
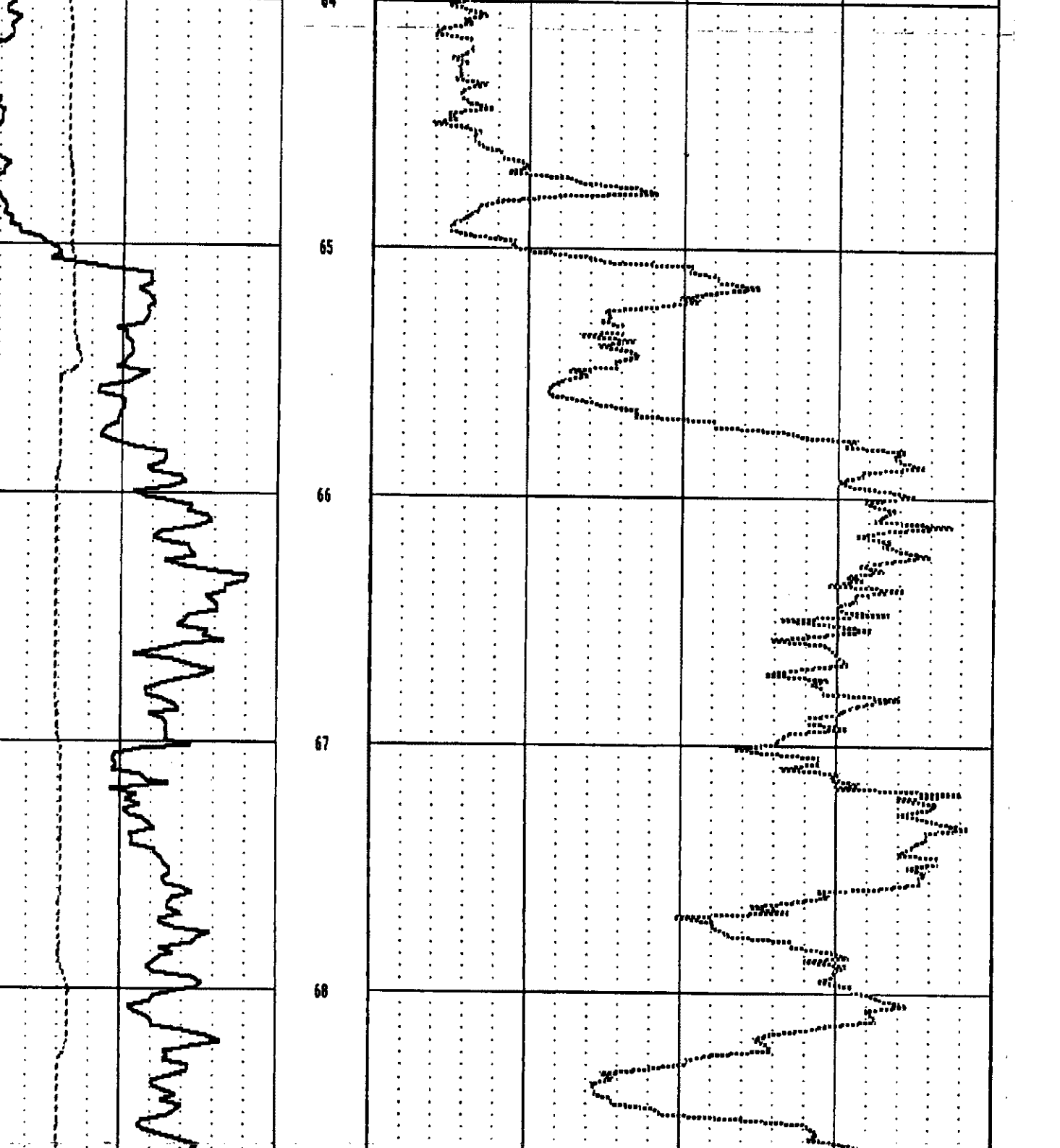
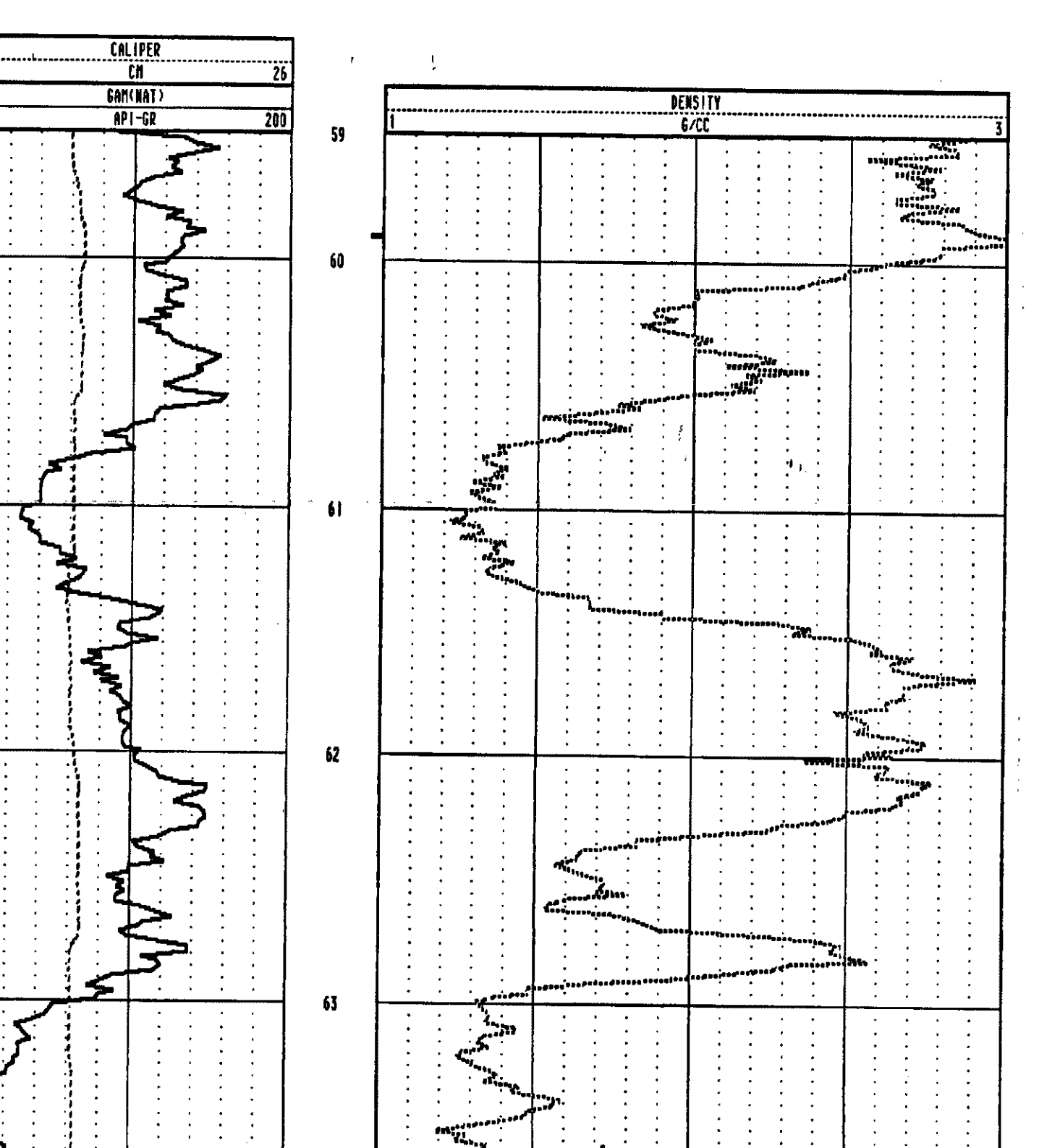
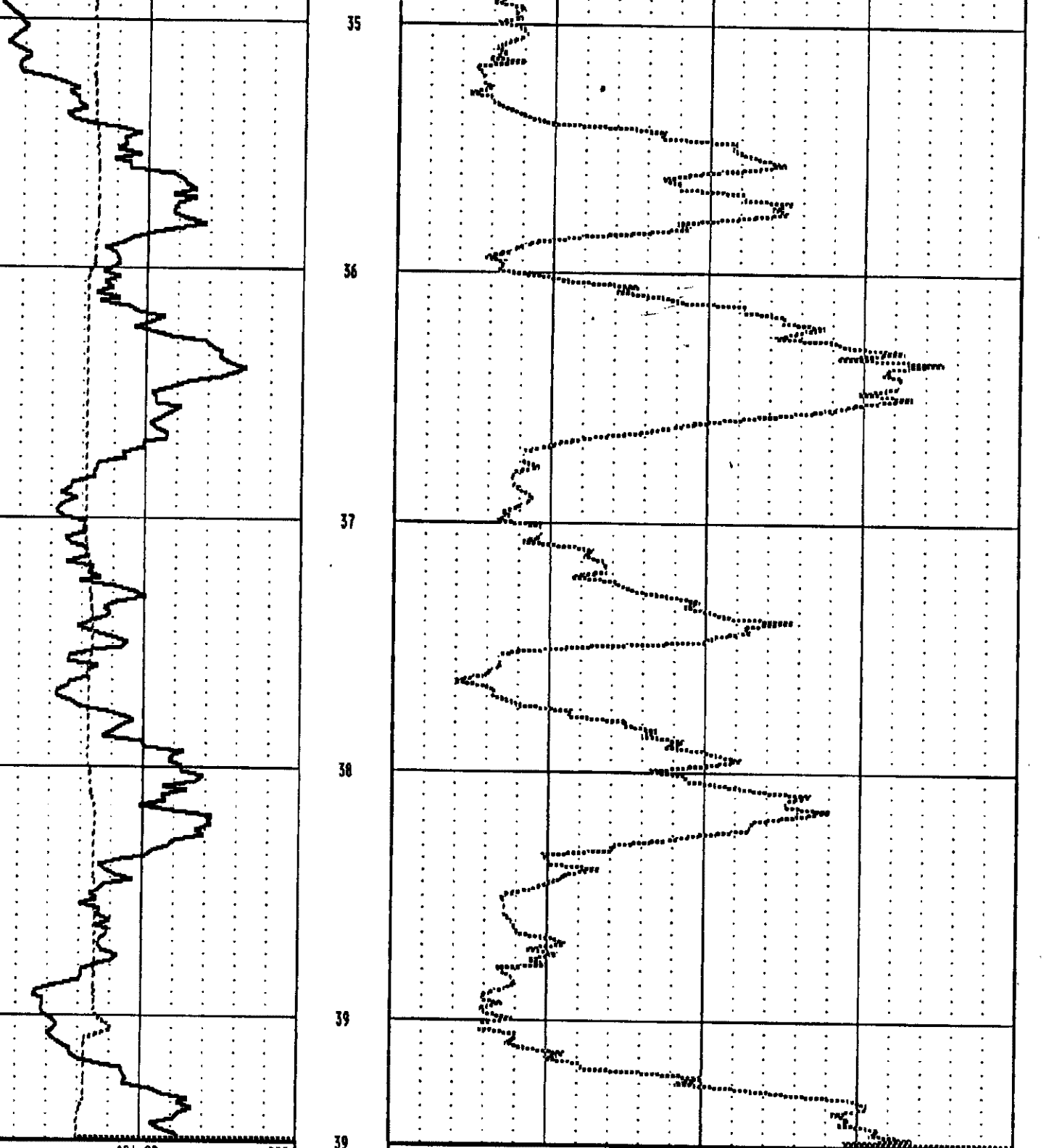
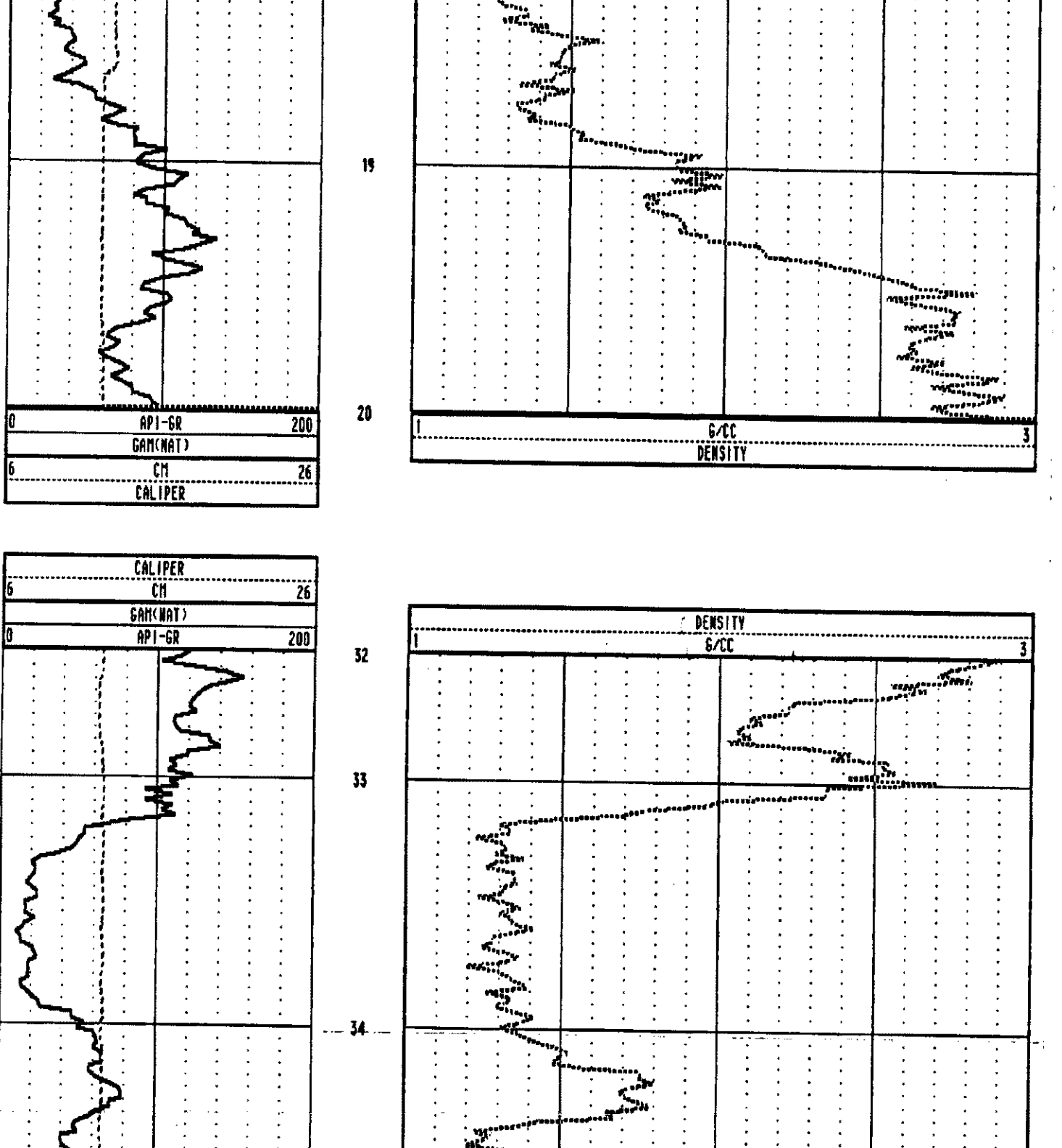
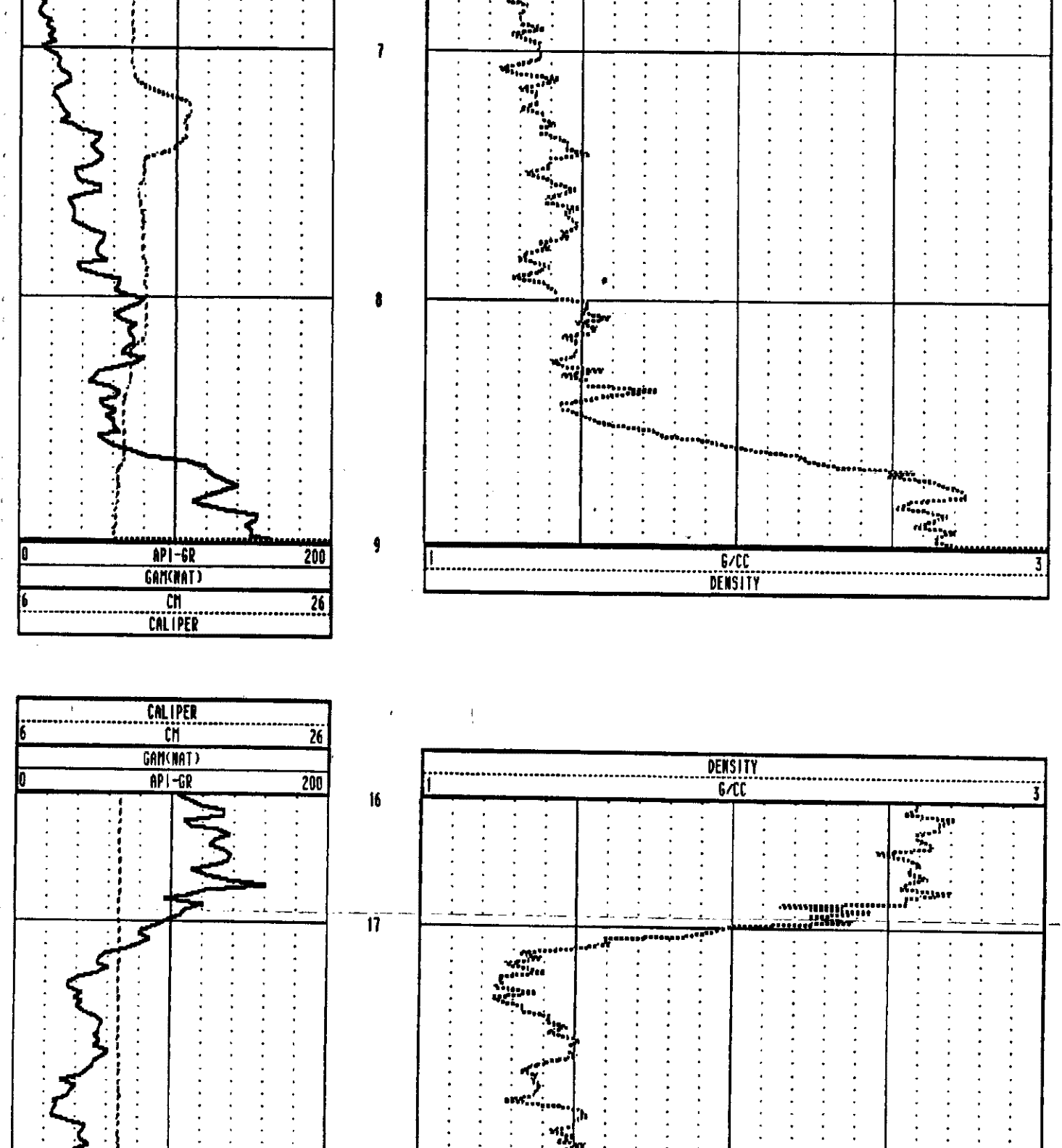


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BURNT RIDGE 88-02

COMPANY : CROWSNEST RESOURCES	OTHER SERVICES :	
WELL : BURNT RIDGE 88-02		
LOCATION/FIELD : BURNT RIDGE		
COUNTY : BRITISH COLUMBIA		
STATE : BRITISH COLUMBIA	TOWNSHIP : RANGE :	
SECTION :		
DATE : 09/23/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER : 147.5	ELEV. PERM. DATUM: KB	
LOG BOTTOM : 147.72	LOG MEASURED FROM: GL	DF :
LOG TOP : 0.10	DRL MEASURED FROM: GL	GL :
CASING DRILLER : 000	LOGGING UNIT : 8602	
CASING THICKNESS: DD	FIELD OFFICE : CALGARY	
	RECORDED BY : R. WHITTAKER	
BIT SIZE : 13.97	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 1.8	RH : 0	TYPE : 9050AA
MATRIX DENSITY : 2.68	RH TEMPERATURE : 0	LOG : 9
FLUID DENSITY : 1.0	MATRIX DELTA T : 173	PLOT : 9050 15
NEUTRON MATRIX	FLUID DELTA T : 690	THRESH: 2500
REMARKS :		

ALL SERVICES PROVIDED SUBJECT TO CGG STANDARD TERMS AND CONDITIONS



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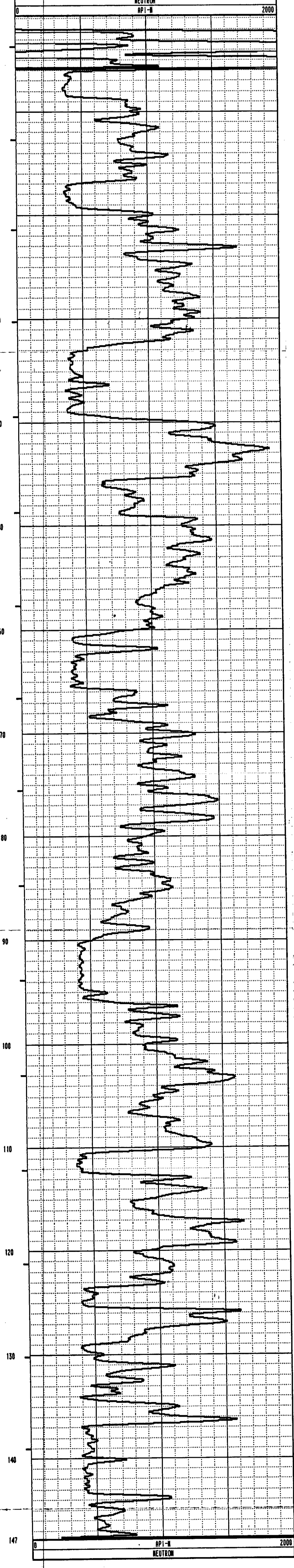
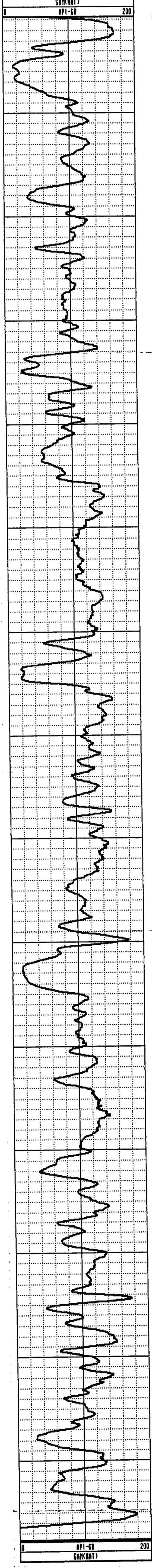


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BURNT RIDGE 88-02

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-02	[]	
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 09/23/88	PERMANENT DATUM	: GL ELEVATIONS
DEPTH DRILLER	: 147.3	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 147.72	LOG MEASURED FROM:	GL :
LOG TOP	: 0.82	DRL MEASURED FROM:	GL :
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS	: 00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER FILE : ORIGINAL
MAGNETIC DECL.	: 18	RM	: 0 TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0 LOG : 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 THRESH: 2500
REMARKS	:		
OPEN HOLE	:		

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10	
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/18/88	23:37:30	0 GAN(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0 GAN(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0 POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0 RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0 RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0 SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0 SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0 NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0 NEUTRON	0.000 CPS	0.000 API-N

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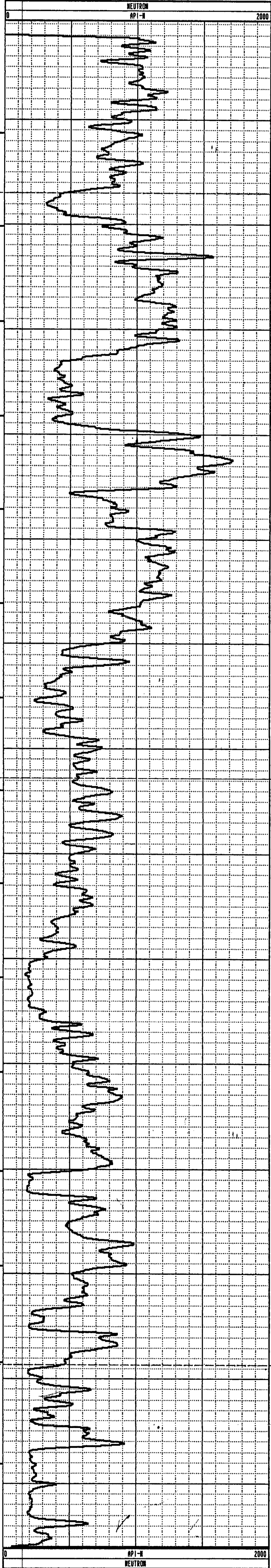
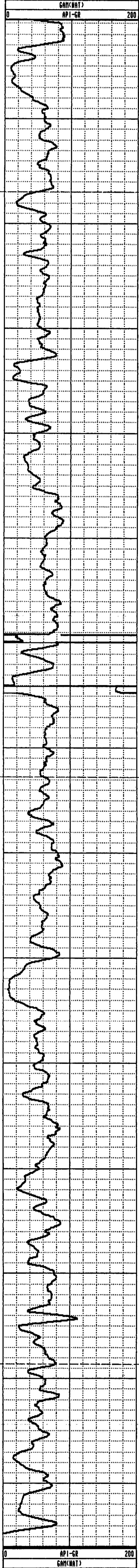


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BURNT RIDGE 88-02

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:
WELL	: BURNT RIDGE 88-02	
LOCATION/FIELD	: BURNT RIDGE	
COUNTY	:	
STATE	: BRITISH COLUMBIA	
SECTION	:	TOWNSHIP : RANGE :
DATE	: 09/23/88	PERMANENT DATUM : GL ELEVATIONS
DEPTH DRILLER	: 147.3	ELEV. PERM. DATUM: KB :
LOG BOTTOM	: 146.02	LOG MEASURED FROM: GL DF :
LOG TOP	: 0.76	DRL MEASURED FROM: GL GL :
CASING DRILLER	: 000	LOGGING UNIT : 8602
CASING TYPE	:	FIELD OFFICE : CALGARY
CASING THICKNESS	: 00	RECORDED BY : R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID : WATER FILE : ORIGINAL
MAGNETIC DECL.	: 18	RM : 0 TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0 LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173 PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690 THRESH: 2500
REMARKS	:	
THROUGH ROGS	:	

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

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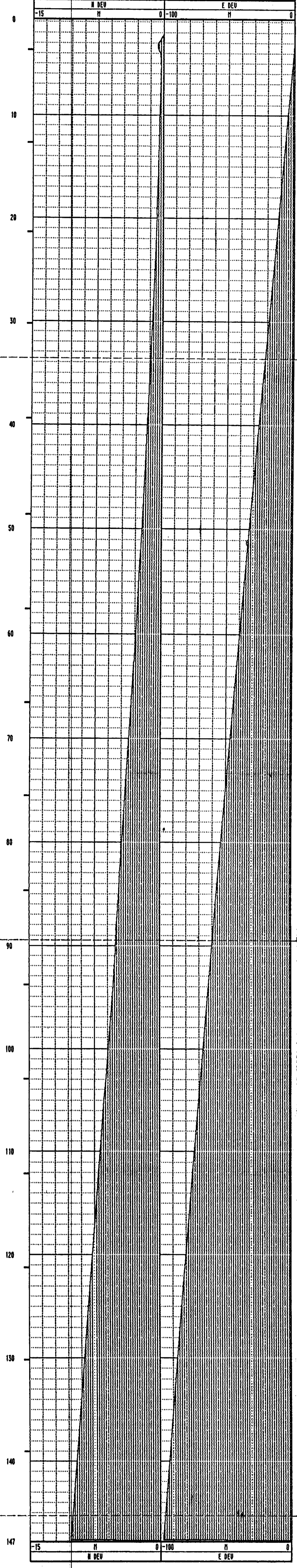
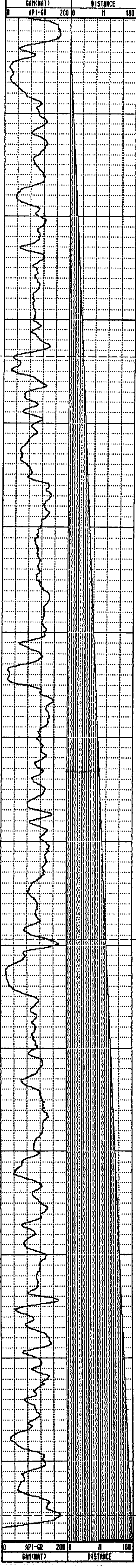


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DEVIATION

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-02		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 09/23/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 147.3	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 147.72	LOG MEASURED FROM:	GL :
LOG TOP	: 0.82	DRL MEASURED FROM:	GL :
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18.000	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: PROCESSED
OPEN HOLE	:	TYPE	: 9055A
		LOG	: 0
		PLOT	: 9055-D 0
		THRESH	: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N



Century

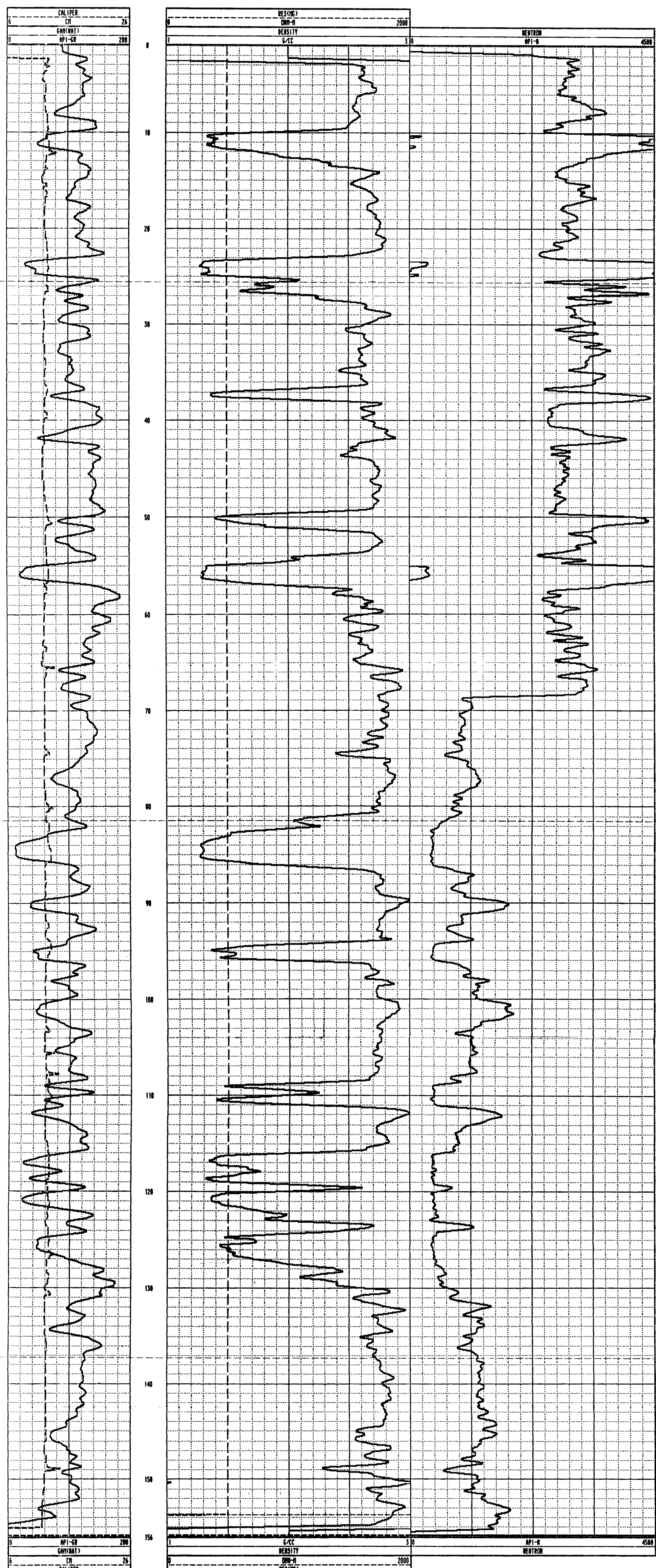
BURNT RIDGE 88-03

COMPANY : CROWNEST RESOURCES
 WELL : BURNT RIDGE 88-03
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION :
 DATE : 09/23/88
 DEPTH DRILLER : 155.4
 LOG BOTTOM : 155.98
 LOG TOP : 0.98
 CASING DRILLER : 000
 CASING TYPE :
 CASING THICKNESS: 00
 BIT SIZE : 13.97
 MAGNETIC DECL. : 18
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :

OTHER SERVICES:

TOWNSHIP :
 RANGE :
 PERMANENT DATUM : GL
 ELEV. PERM. DATUM:
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL
 LOGGING UNIT : 8602
 FIELD OFFICE : CALGARY
 RECORDED BY : R. WHITTAKER
 BOREHOLE FLUID : WATER
 RM : 0
 RM TEMPERATURE : 0
 MATRIX DELTA T : 173
 FLUID DELTA T : 690
 ELEVATIONS
 KB :
 DF :
 GL :
 FILE : PROCESSED
 TYPE : 9030AA
 LOG : 8
 PLOT : CNR 12
 THRESH: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



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BURNT RIDGE 88-03

COMPANY : CROWNEST RESOURCES
 WELL : BURNT RIDGE 88-03
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

DATE : 09/20/88
 DEPTH DRILLER : 155.4
 LOG BOTTOM : 154.30
 LOG TOP : 0.74

CASING DRILLER : 000
 CASING TYPE :
 CASING THICKNESS : 00

BIT SIZE : 13.97
 MAGNETIC DECL. : 18
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :
 THROUGH RODS :

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

ELEVATIONS :
 KB :
 DF :
 GL :

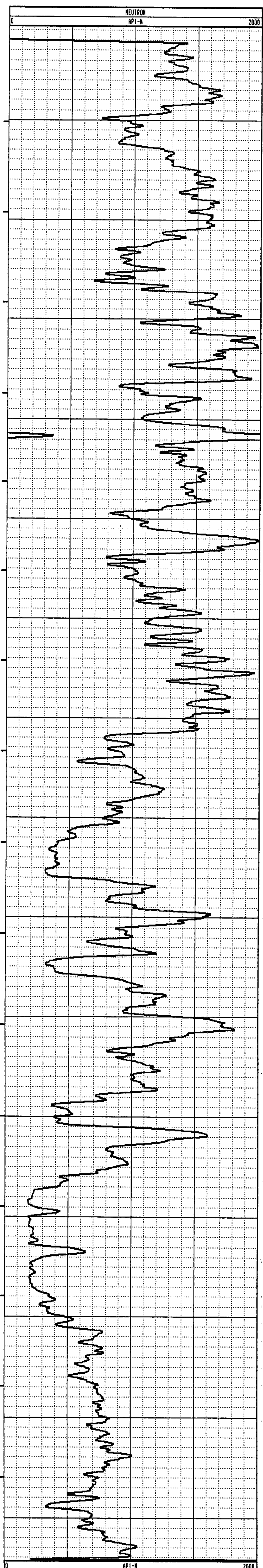
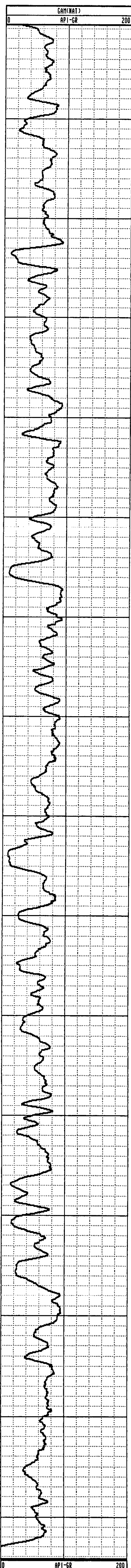
LOGGING UNIT : 62
 FIELD OFFICE : CALGARY
 RECORDED BY : R.A. WHITTAKER

BOREHOLE FLUID : WATER
 RM : 0
 RM TEMPERATURE : 0
 MATRIX DELTA T : 173
 FLUID DELTA T : 690

FILE : ORIGINAL
 TYPE : 9055A
 LOG : 4
 PLOT : 9055 12
 THRESH : 10000

OTHER SERVICES:

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAMMART	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAMMART	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 HV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 HV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

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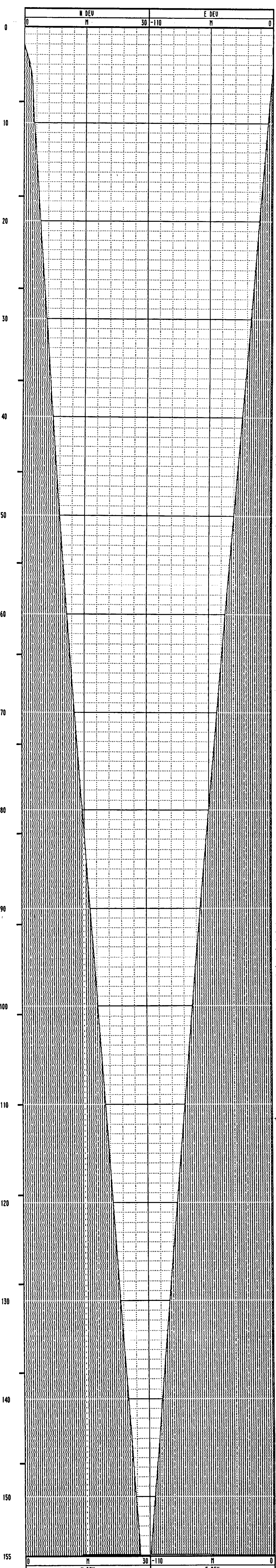
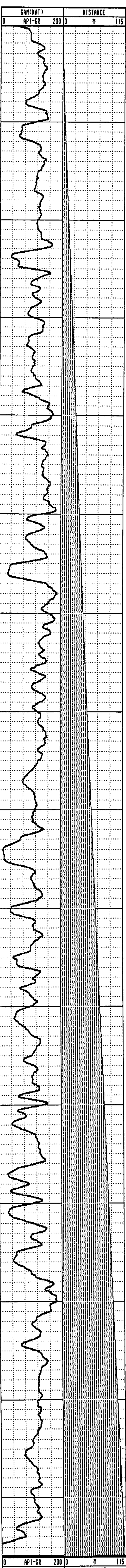


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BURNT RIDGE 88-03

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:
WELL	: BURNT RIDGE 88-03	
LOCATION/FIELD	: BURNT RIDGE	
COUNTY	:	
STATE	: BRITISH COLUMBIA	
SECTION	: TOWNSHIP	RANGE :
DATE	: 09/20/88	PERMANENT DATUM : GL
DEPTH DRILLER	: 155.4	ELEV. PERM. DATUM: KB
LOG BOTTOM	: 155.98	LOG MEASURED FROM: GL
LOG TOP	: 0.32	DRL MEASURED FROM: GL
CASING DRILLER	: 000	LOGGING UNIT : 8602
CASING TYPE	:	FIELD OFFICE : CALGARY
CASING THICKNESS	: 00	RECORDED BY : R.WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID : WATER
MAGNETIC DECL.	: 18.000	RM : 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690
REMARKS	<i>mm</i>	FILE : PROCESSED
		TYPE : 9055A
		LOG : 1
		PLOT : 9055-D 10
		THRESH: 10000

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

754



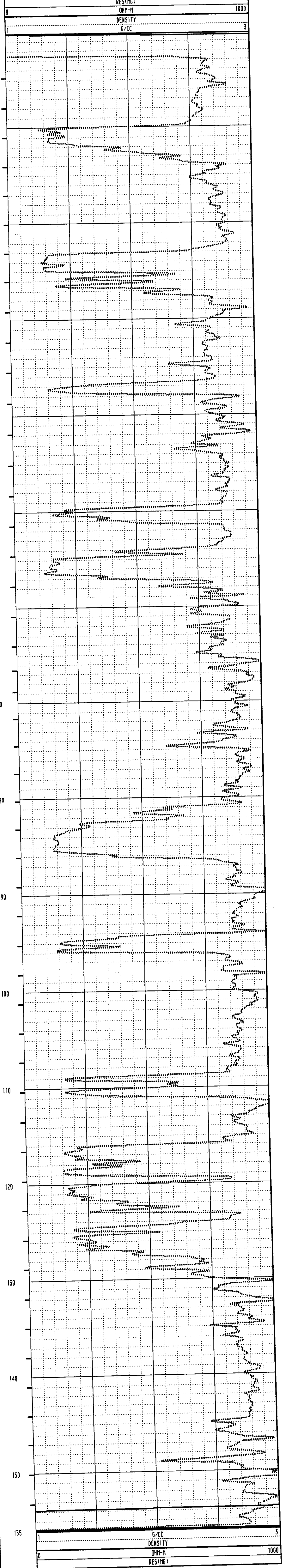
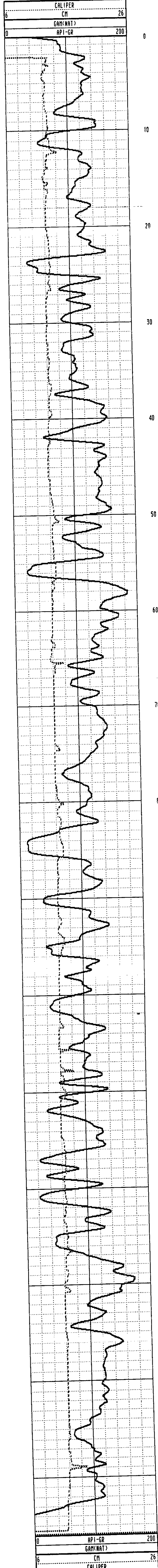
Century

BURNT RIDGE 88-03

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:
WELL	: BURNT RIDGE 88-03	
LOCATION/FIELD	: BURNT RIDGE	
COUNTY	:	
STATE	: BRITISH COLUMBIA	
SECTION	: TOWNSHIP	RANGE :
DATE	: 09/22/88	PERMANENT DATUM : GL
DEPTH DRILLER	: 155.4	ELEV. PERM. DATUM: KB :
LOG BOTTOM	: 155.94	LOG MEASURED FROM: GL
LOG TOP	: 0.34	DRL MEASURED FROM: GL
CASING DRILLER	: 000	LOGGING UNIT : 8602
CASING TYPE	:	FIELD OFFICE : CALGARY
CASING THICKNESS	: 00	RECORDED BY : R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID : WATER
MAGNETIC DECL.	: 18	RM : 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690
REMARKS	:	FILE : ORIGINAL
		TYPE : 9030AA
		LOG : 1
		PLOT : 9030 12
		THRESH: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

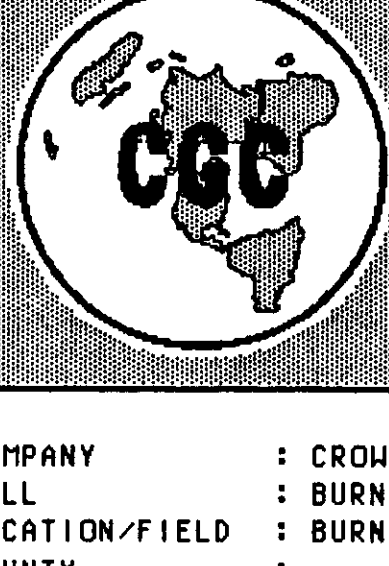
(3)



TOOL CALIBRATION			TOOL = 9030AA	SERIAL NUMBER = 412		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/21/88	13:49:09	0	DENSITY	5153.000 CPS	1.106 G/CC
3	09/21/88	13:26:41	0	DENSITY	2061.000 CPS	2.120 G/CC
4	09/21/88	14:21:03	0	RES(MG)	6747.500 CPS	50.000 OHM-M
5	09/21/88	14:21:03	0	RES(MG)	67250.000 CPS	800.000 OHM-M
6	09/21/88	14:12:38	0	CALIPER	518.200 CPS	7.200 CM
7	09/21/88	14:12:38	0	CALIPER	1880.000 CPS	17.800 CM
8	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM
11	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM

754

Expanded

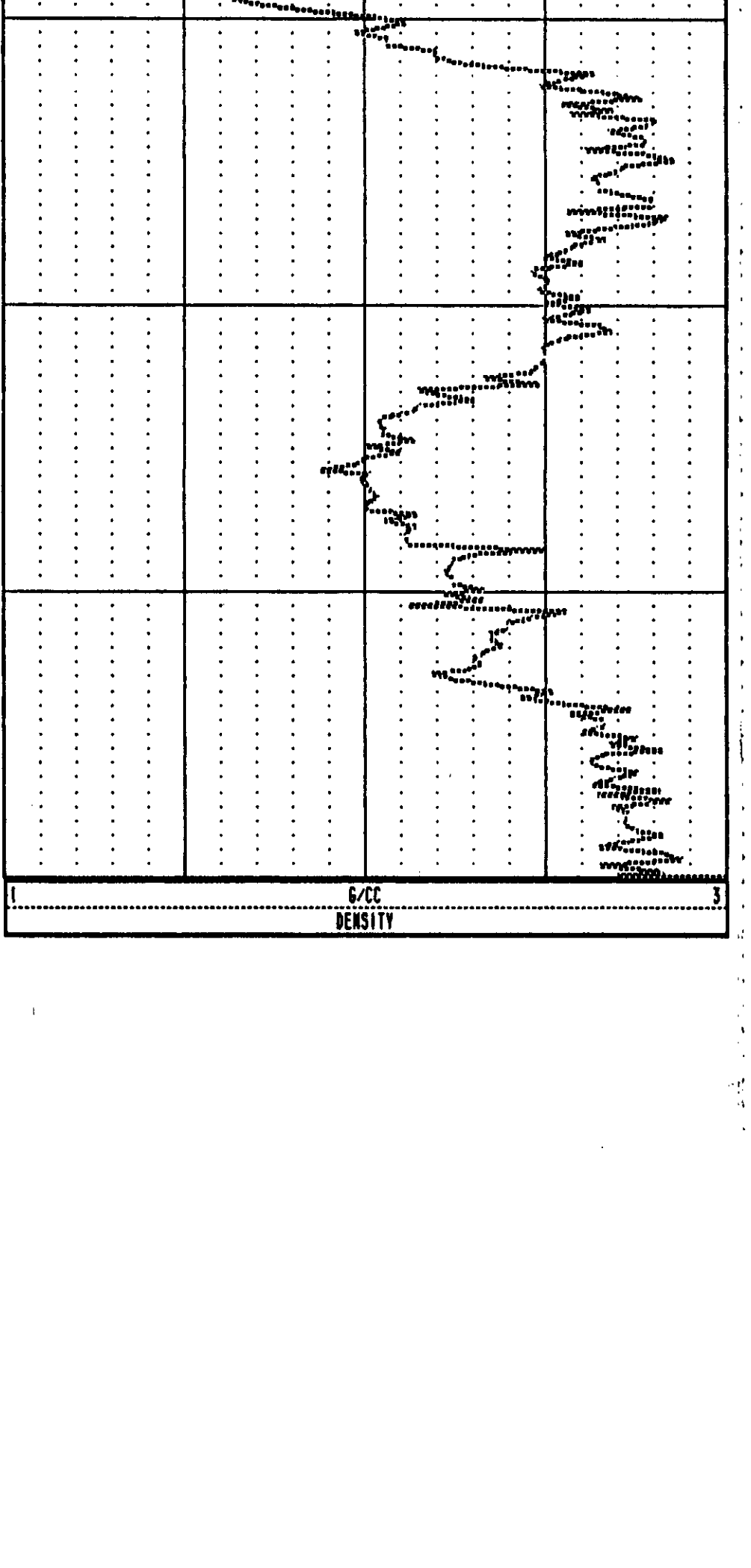
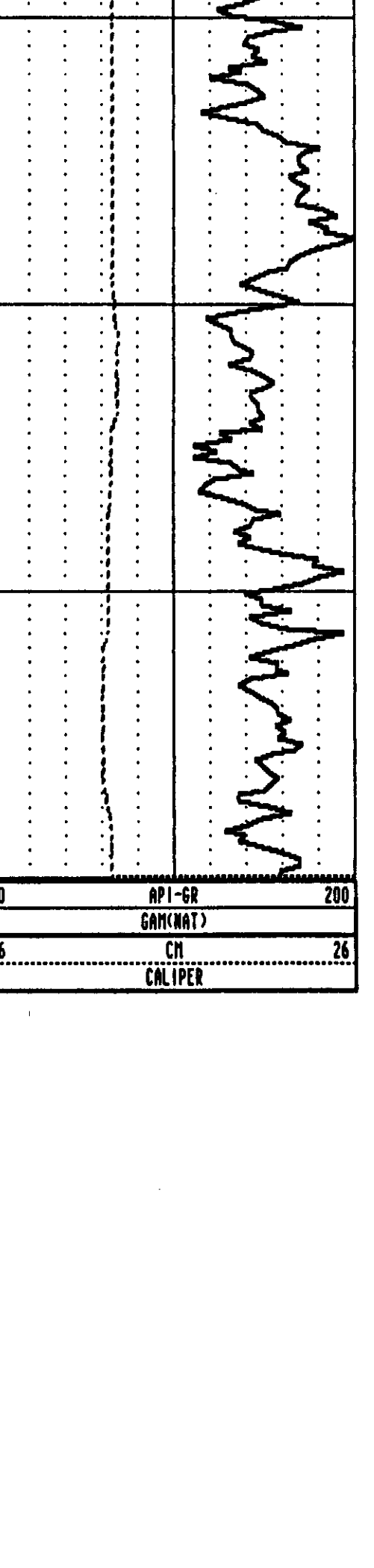
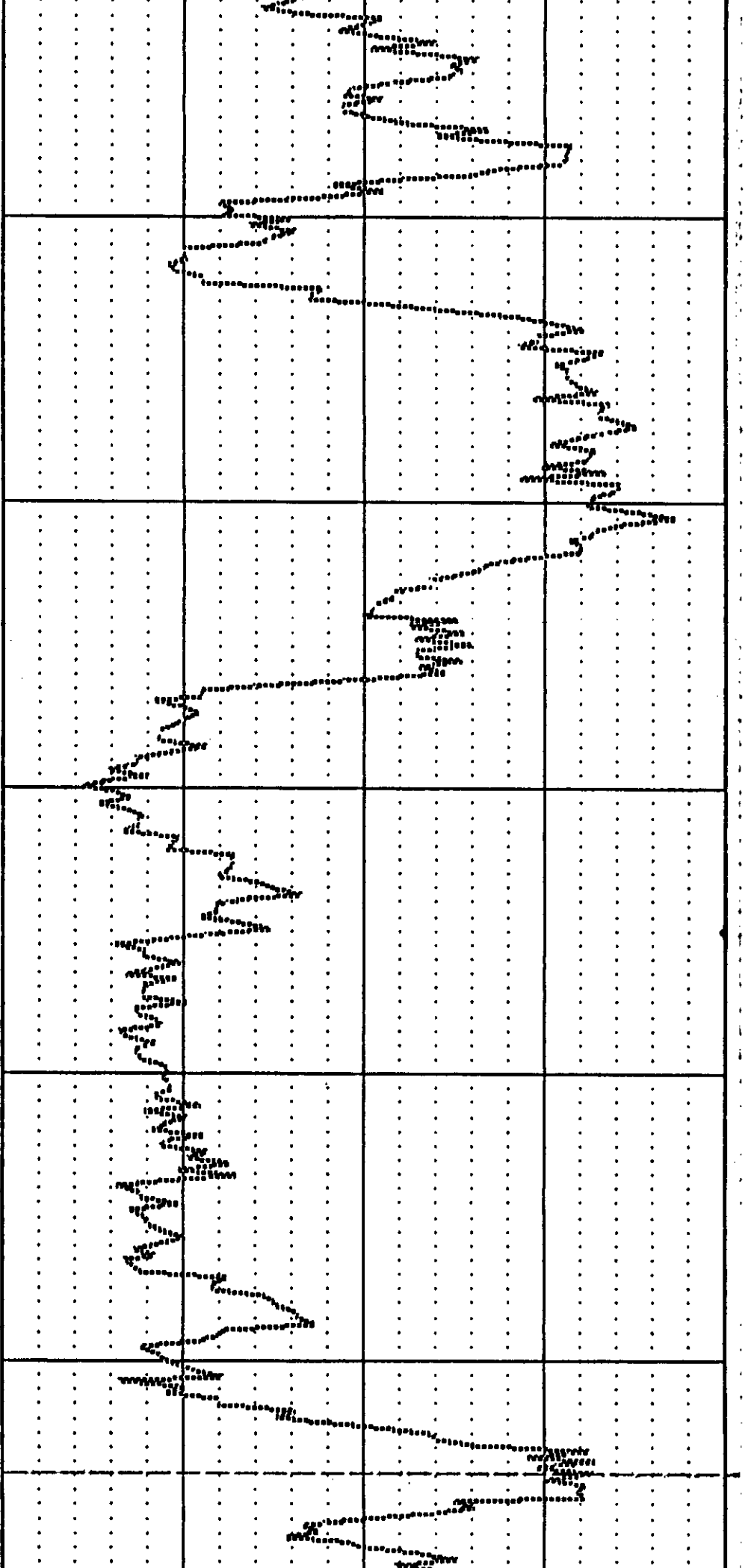
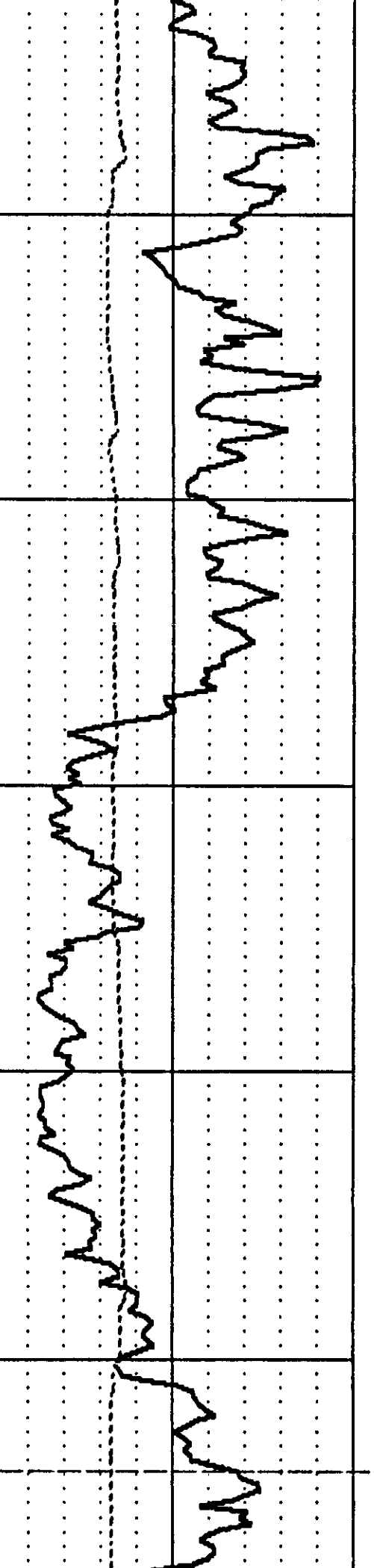
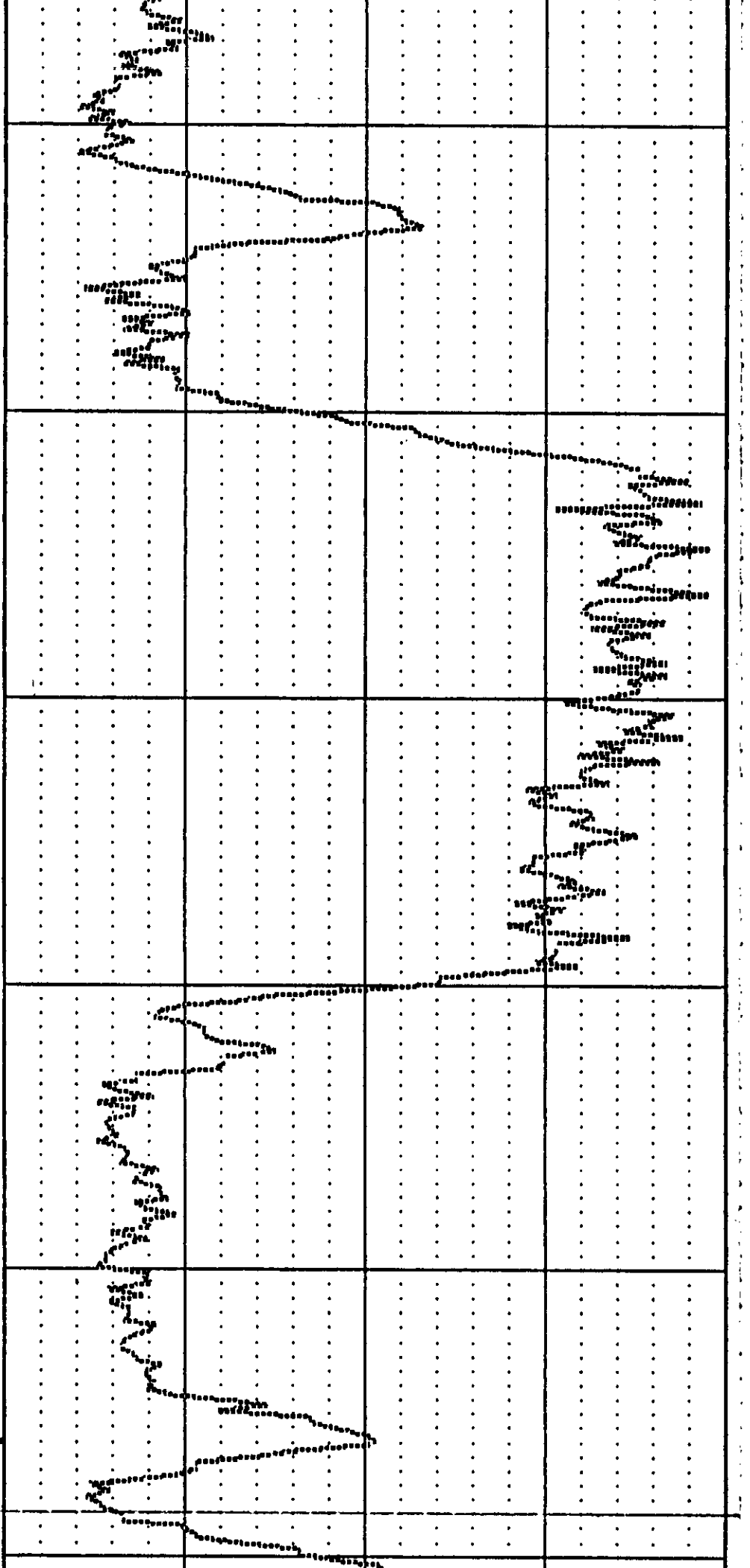
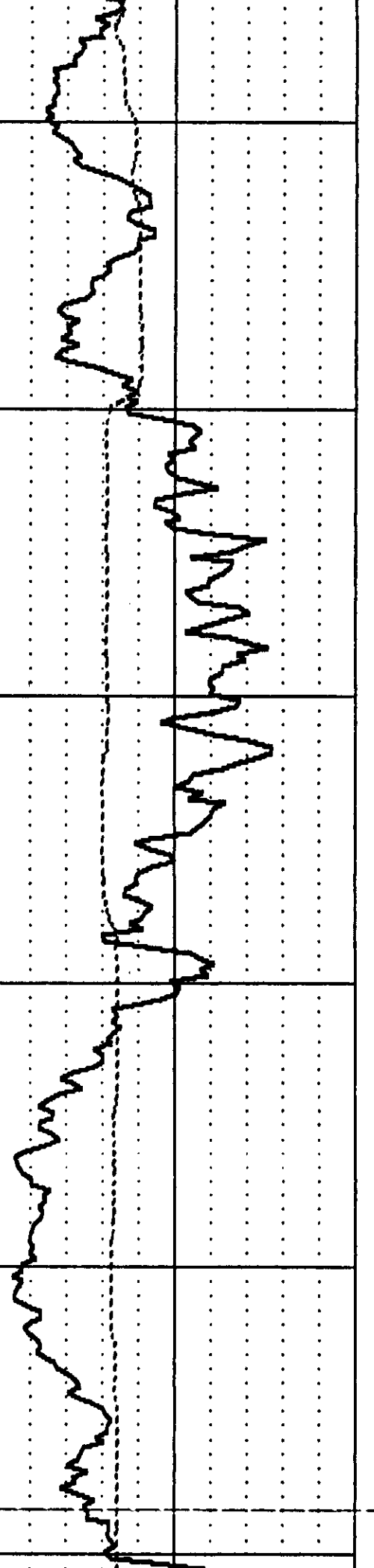
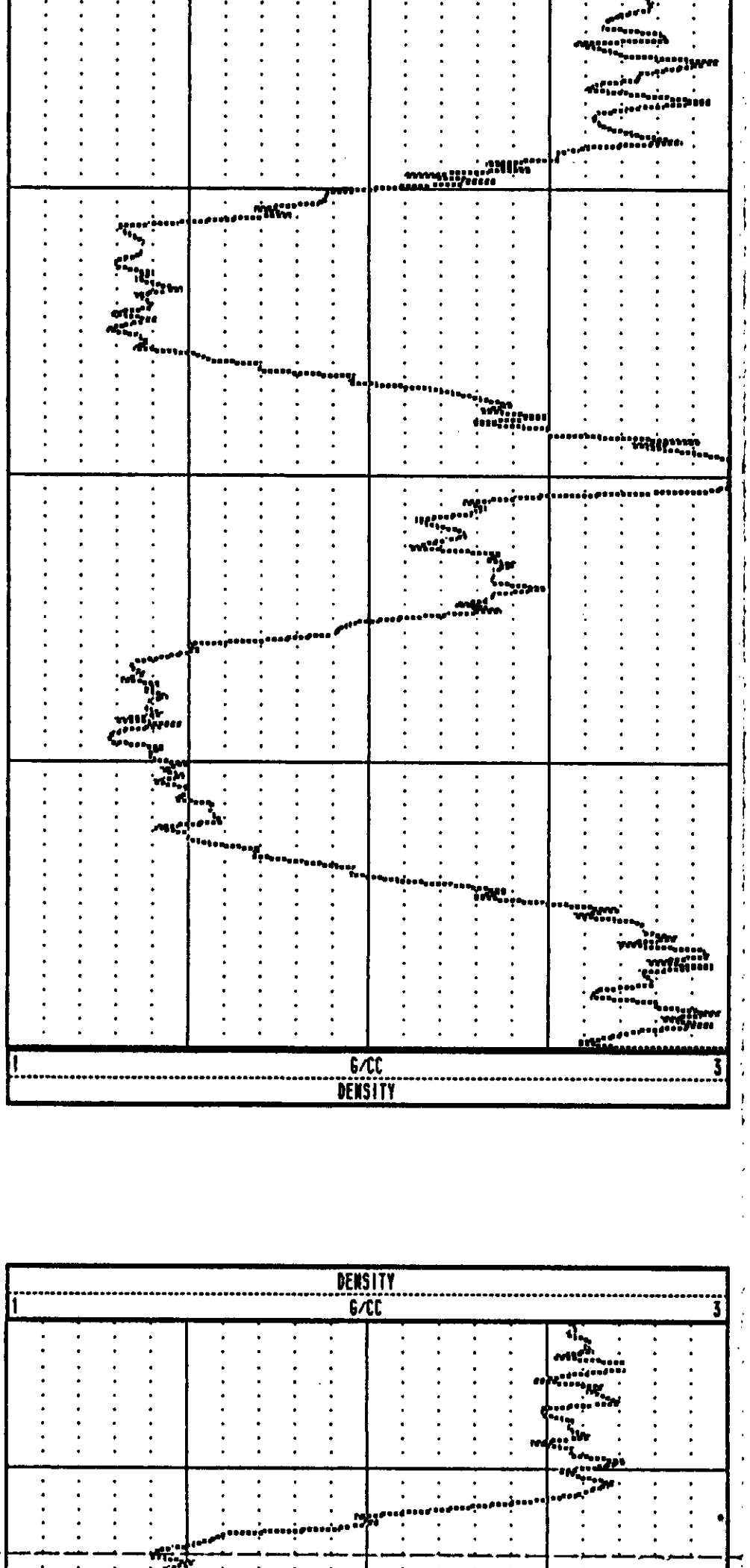
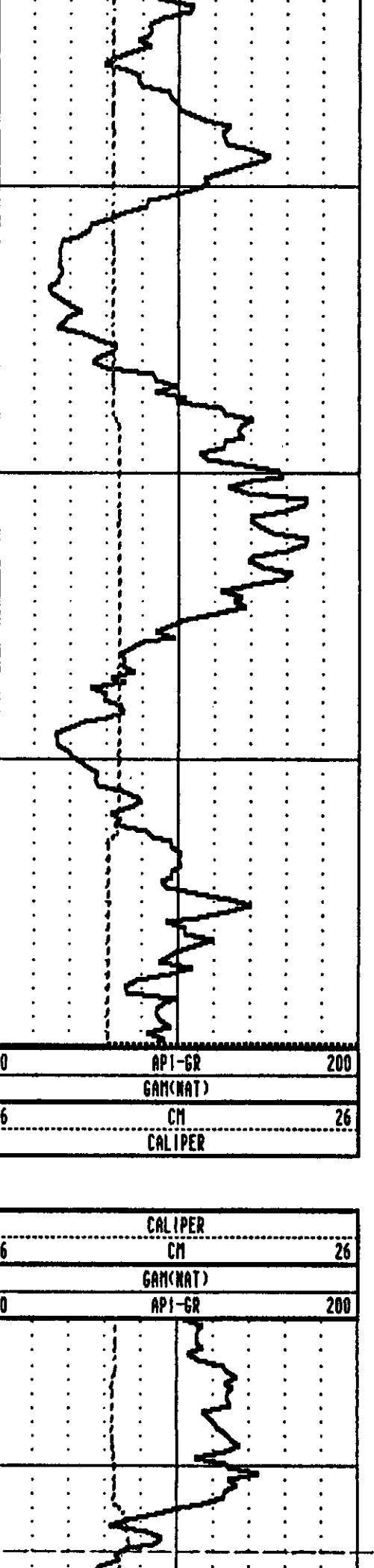
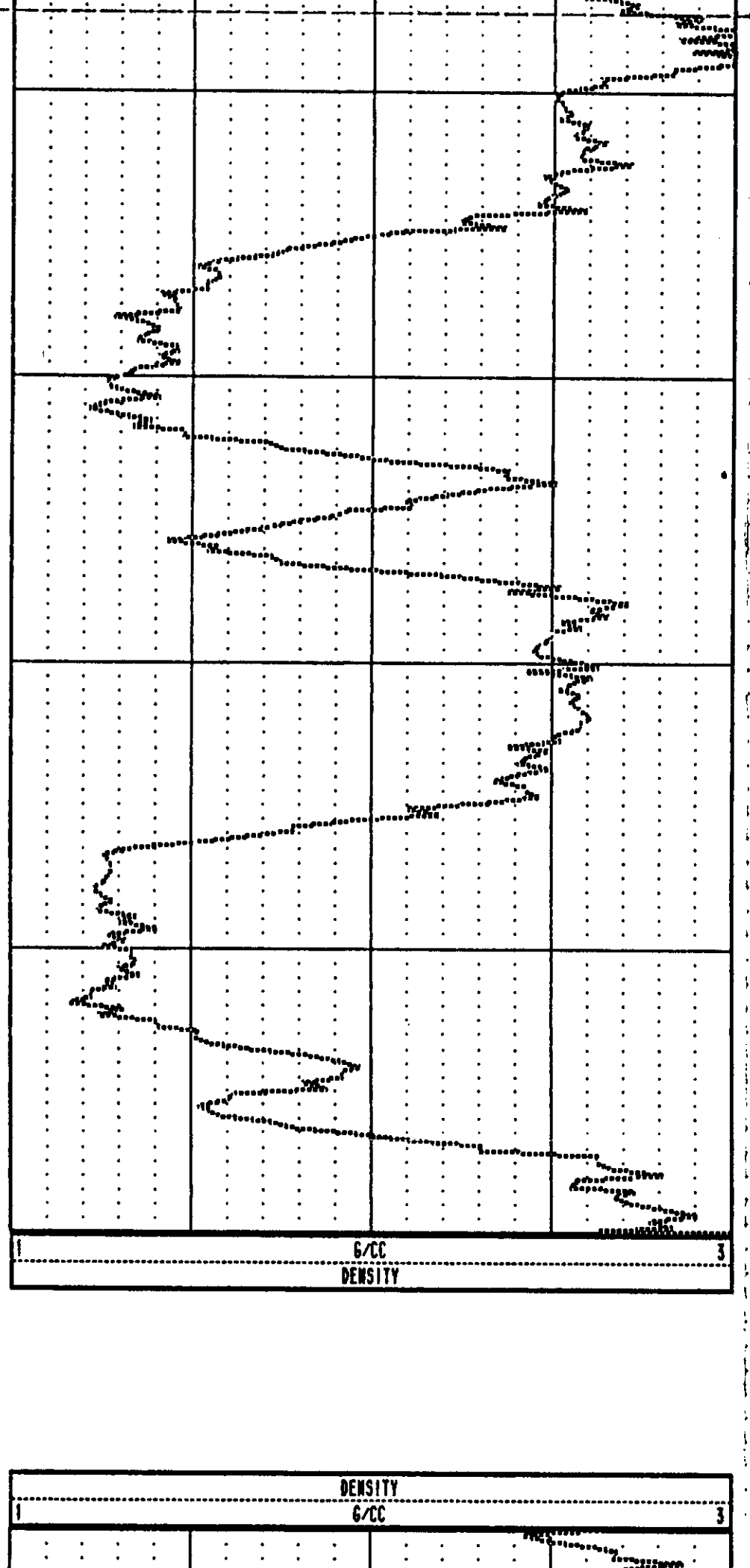
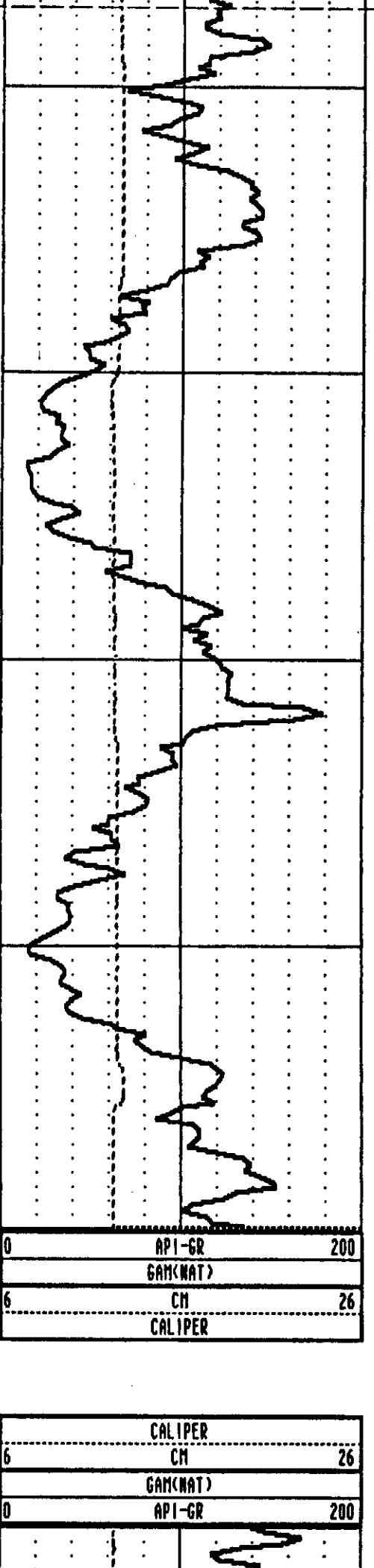
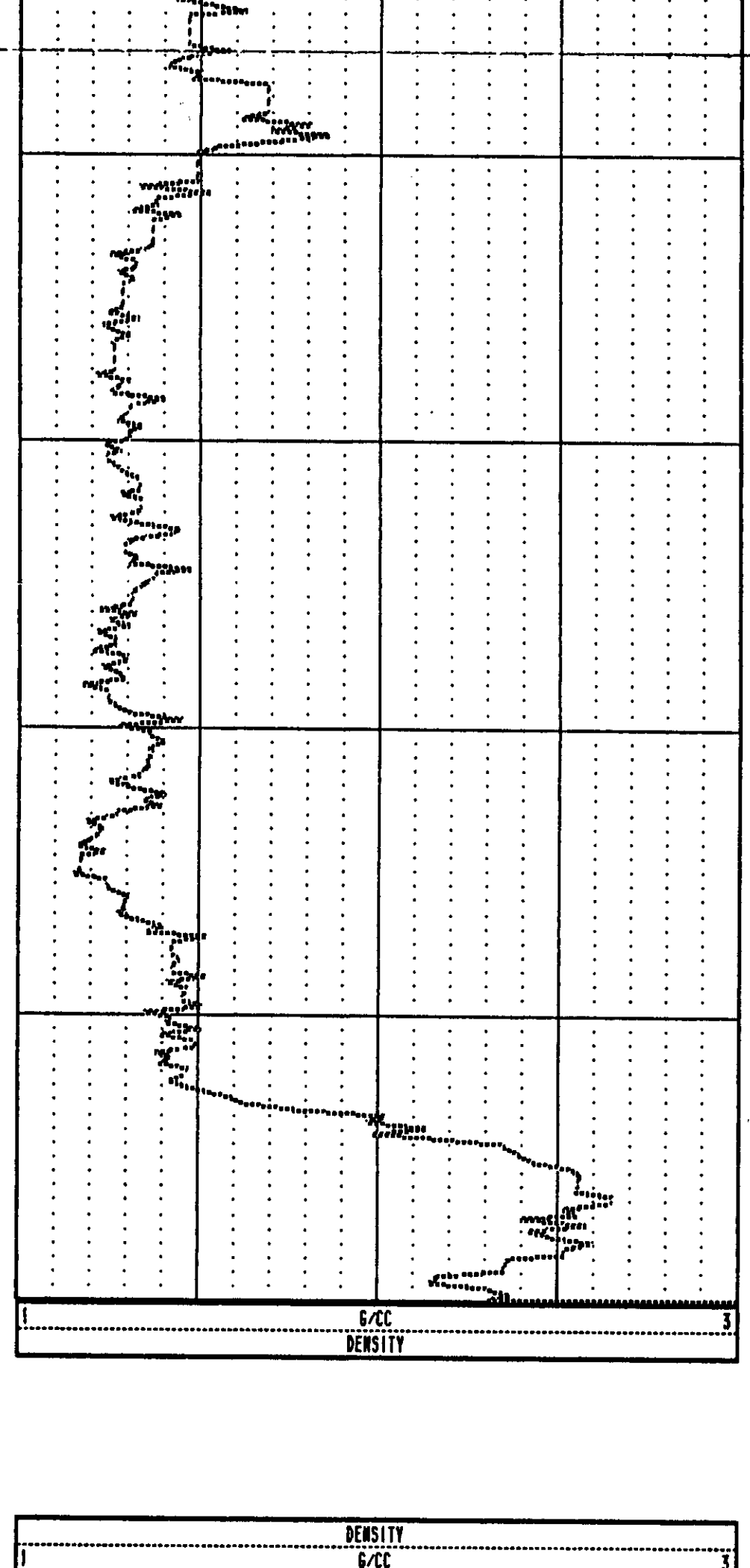
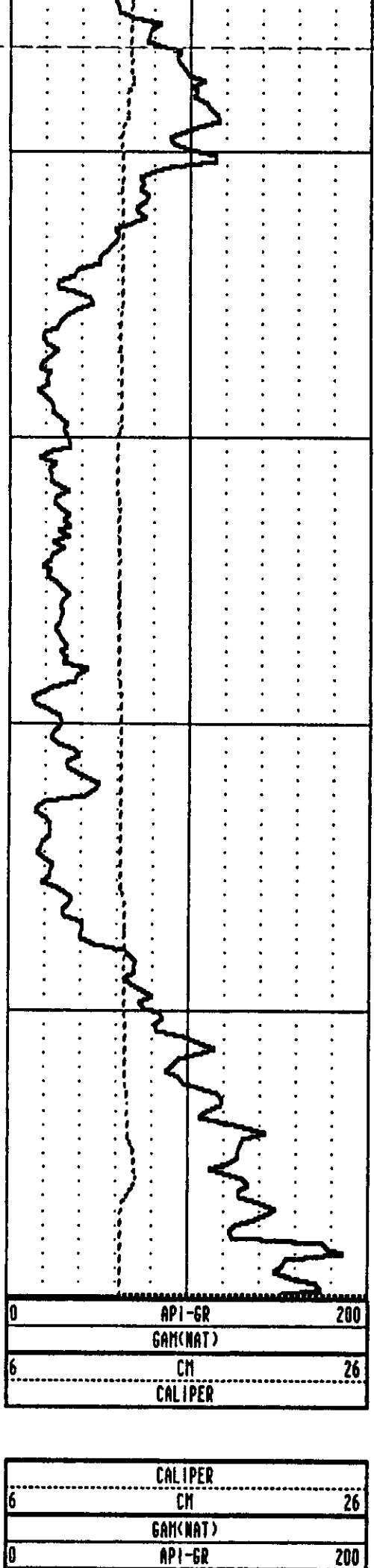


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BURNT RIDGE 88-04

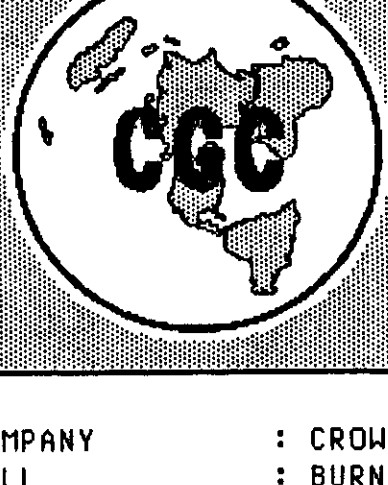
COMPANY : CROWSNEST RESOURCES	OTHER SERVICES:	
WELL : BURNT RIDGE 88-04		
LOCATION/FIELD : BURNT RIDGE		
COUNTY :		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP : RANGE :	
DATE : 09/22/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER : 68.5	ELEM. PERM. DATUM:	KB :
LOG BOTTOM : 68.66	LOG MEASURED FROM: GL	DF :
LOG TOP : 0.22	DRL MEASURED FROM: GL	GL :
CASING DRILLER : 000	LOGGING UNIT : 8602	
CASING TYPE :	FIELD OFFICE : CALGARY	
CASING THICKNESS: 00	RECORDED BY : R. WHITTAKER	
BIT SIZE : 13.97	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 18	RM : 0	TYPE : 9030AA
MATRIX DENSITY : 2.68	RM TEMPERATURE : 0	LOG : 4
FLUID DENSITY : 1.0	MATRIX DELTA T : 173	PLOT : 9030 13
NEUTRON MATRIX : SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS :		
LOGGED AT 9 METRES PER MINUTE		

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Expanded

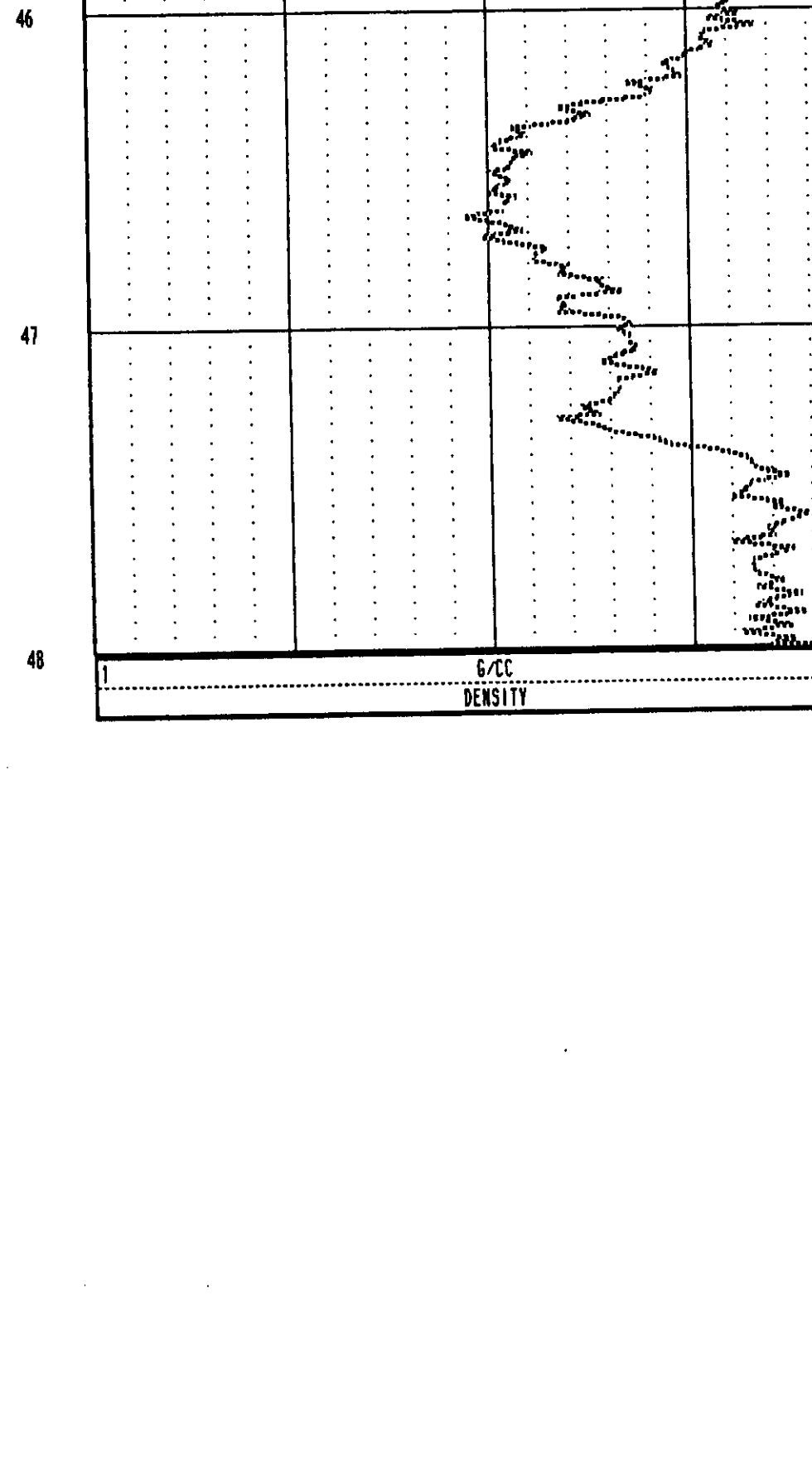
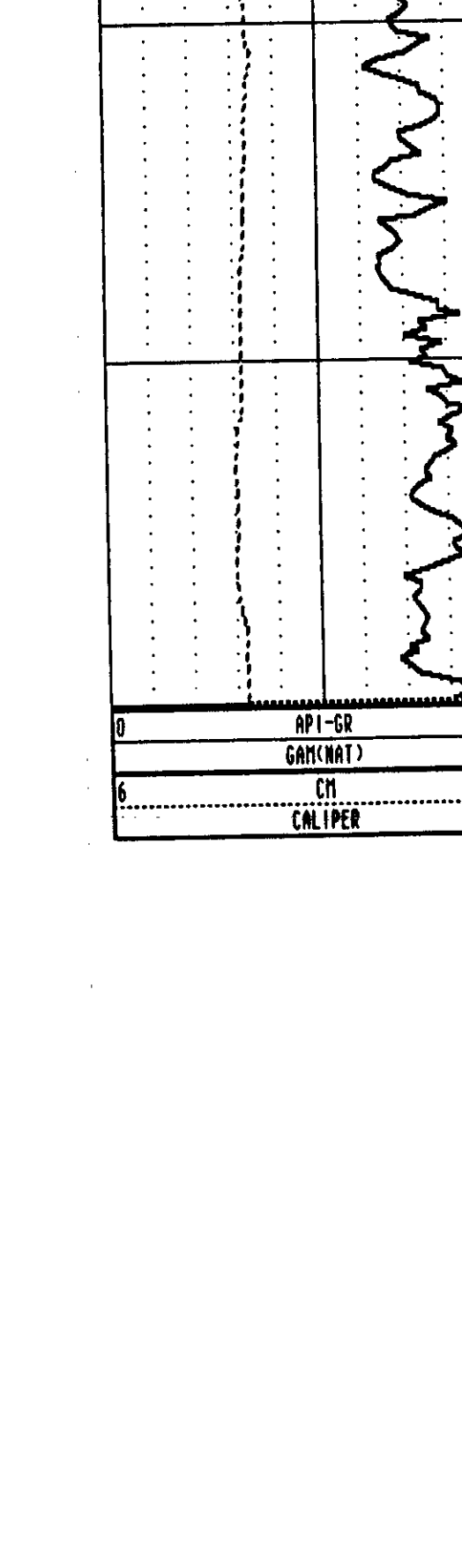
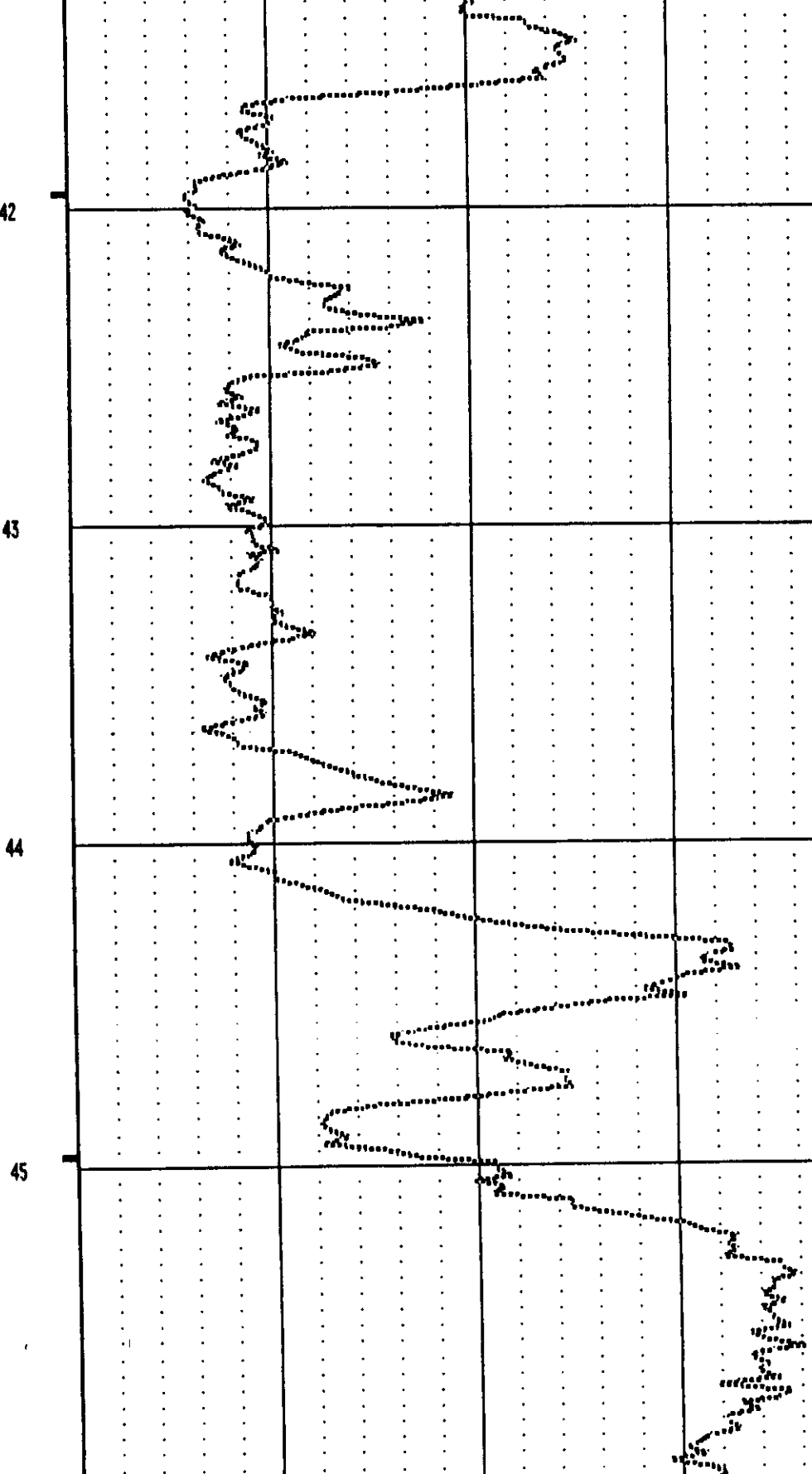
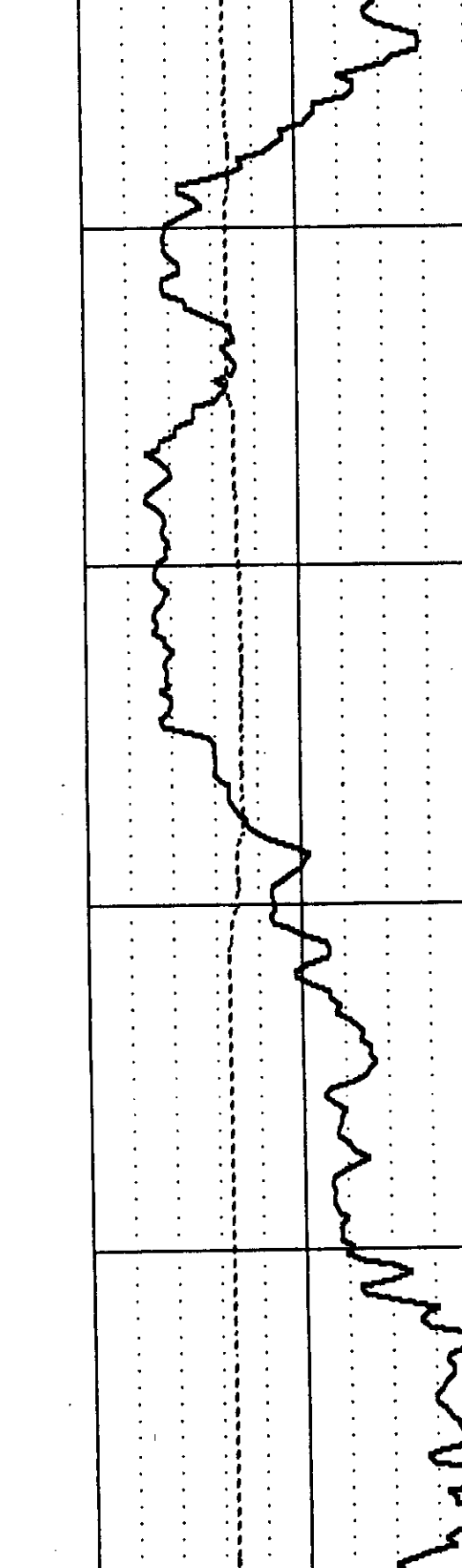
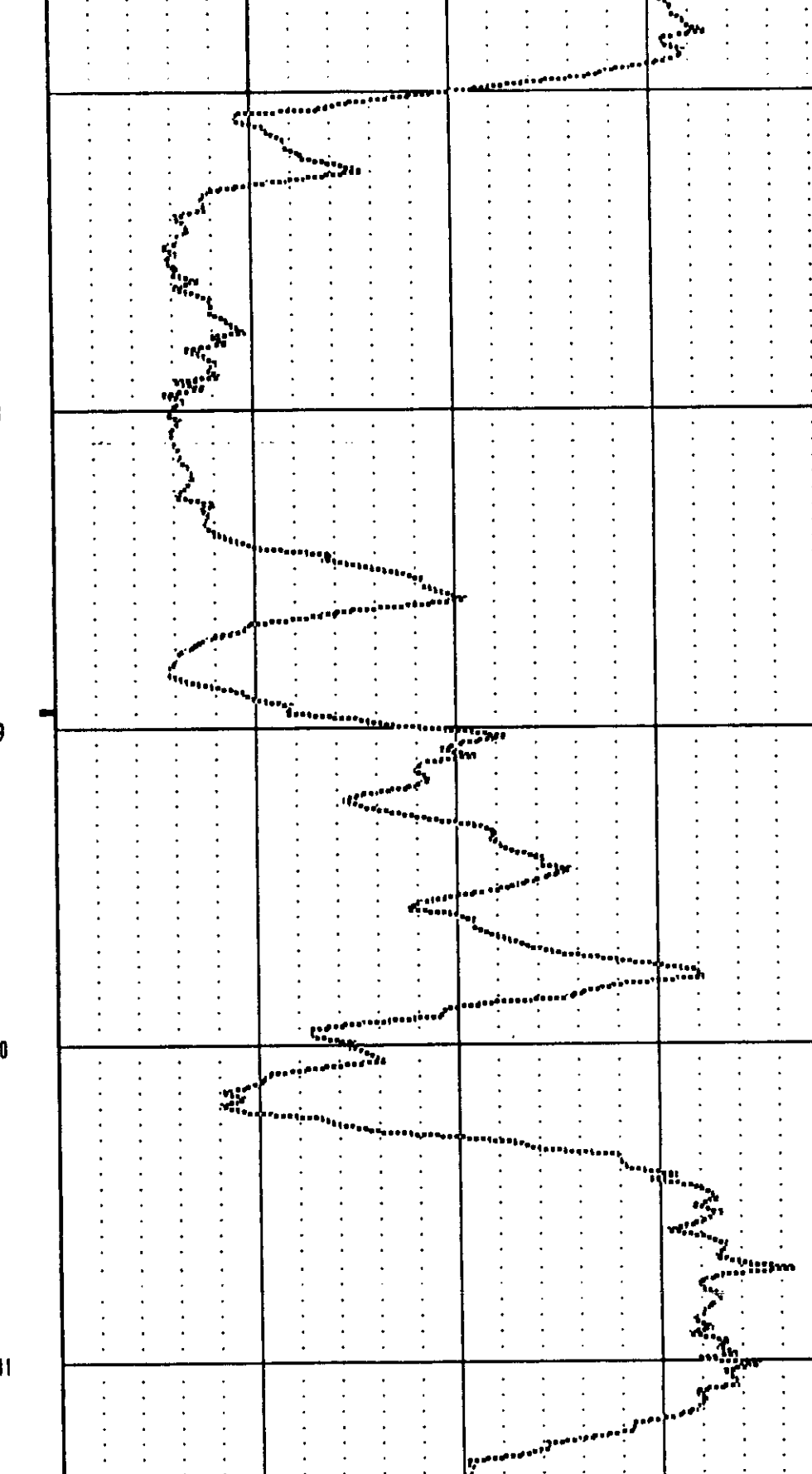
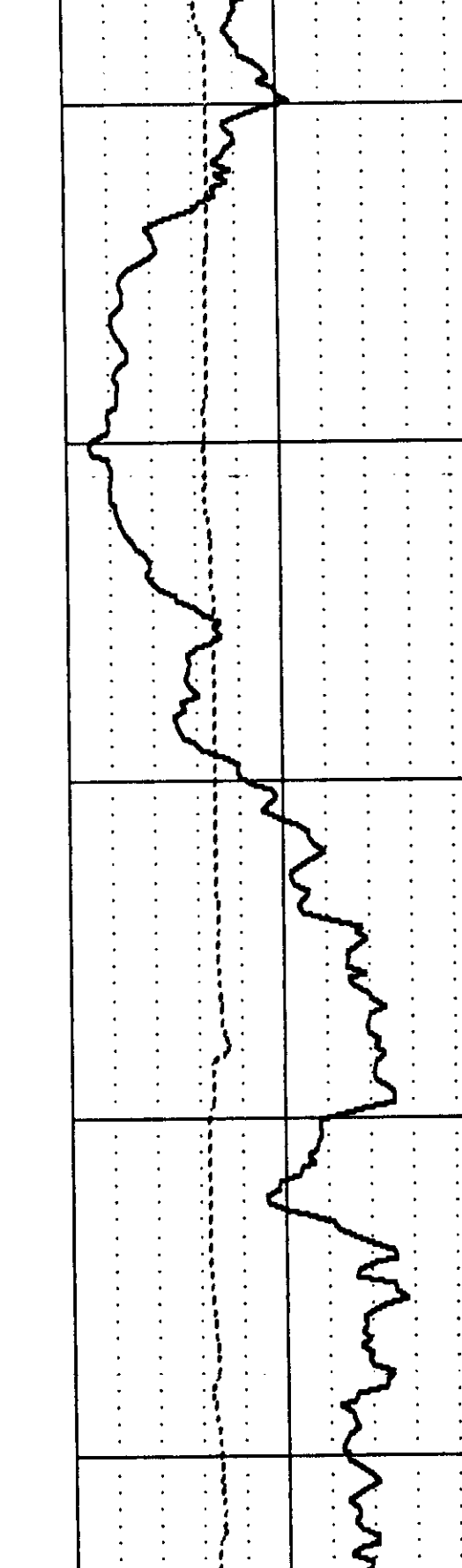
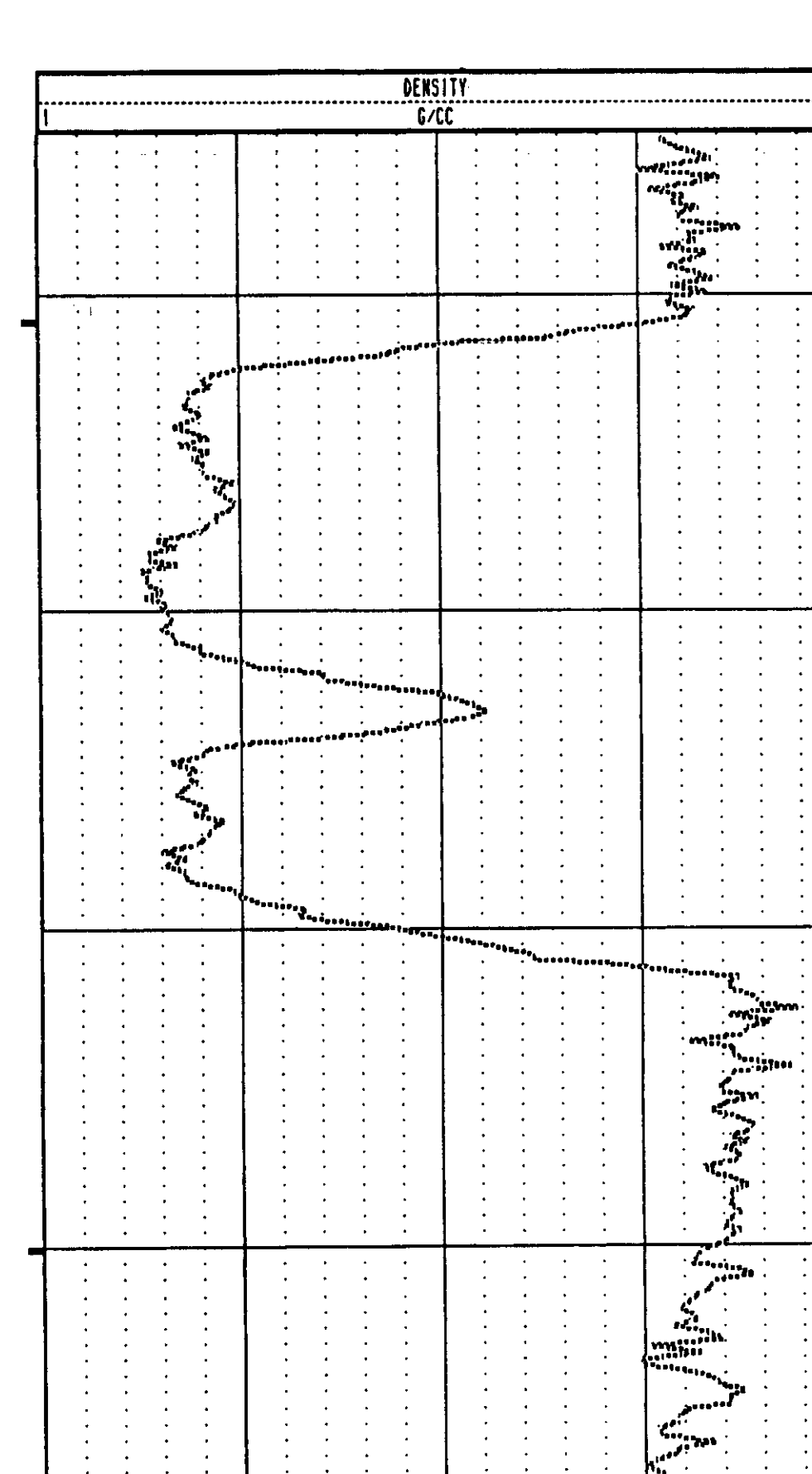
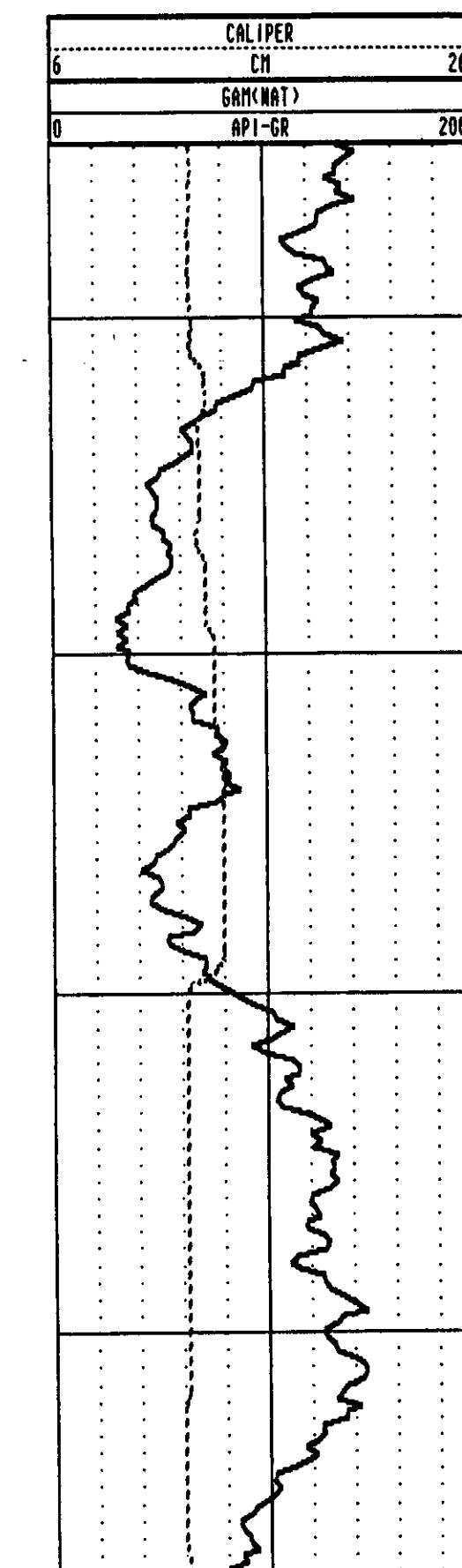
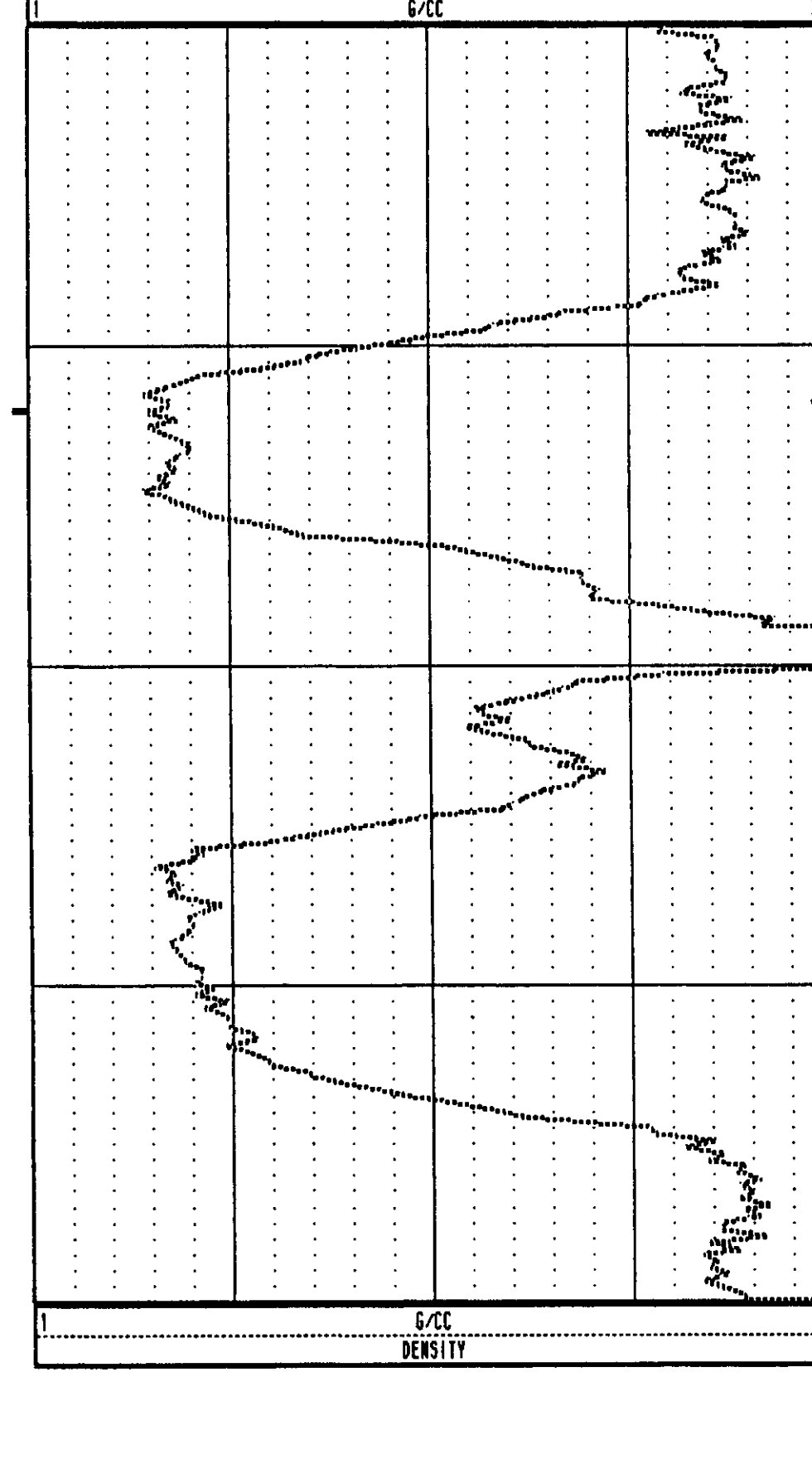
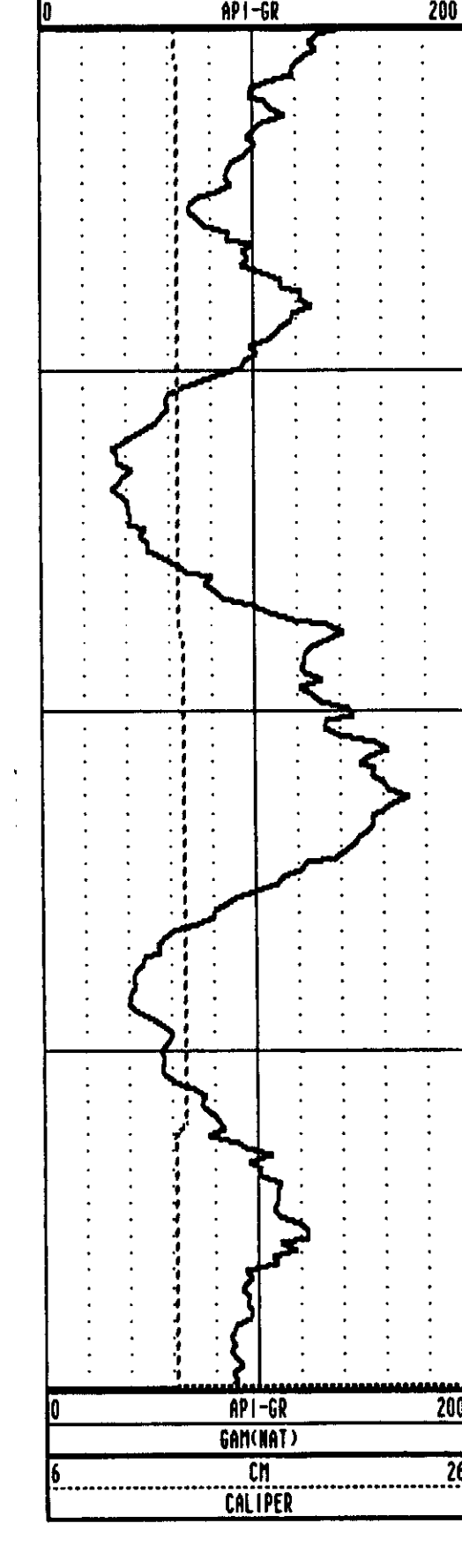
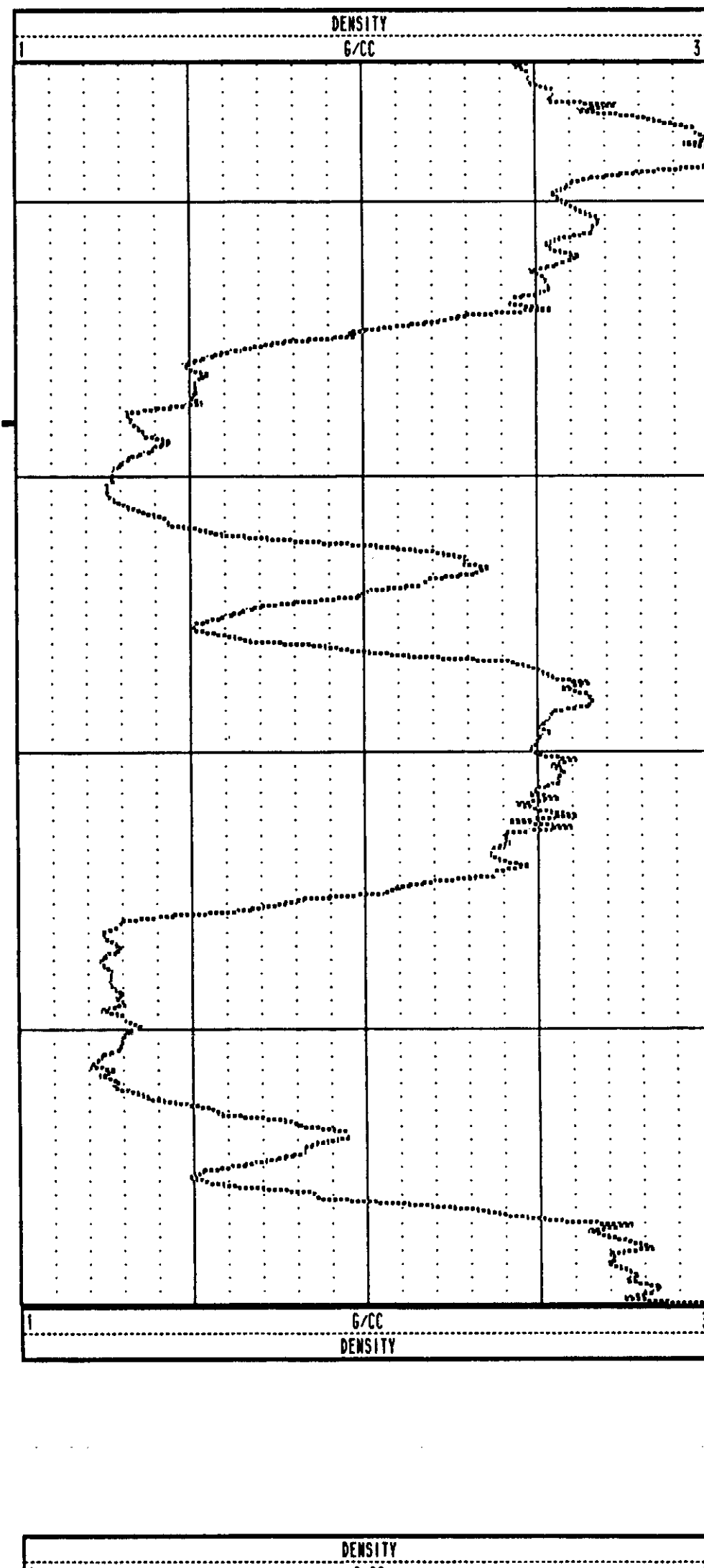
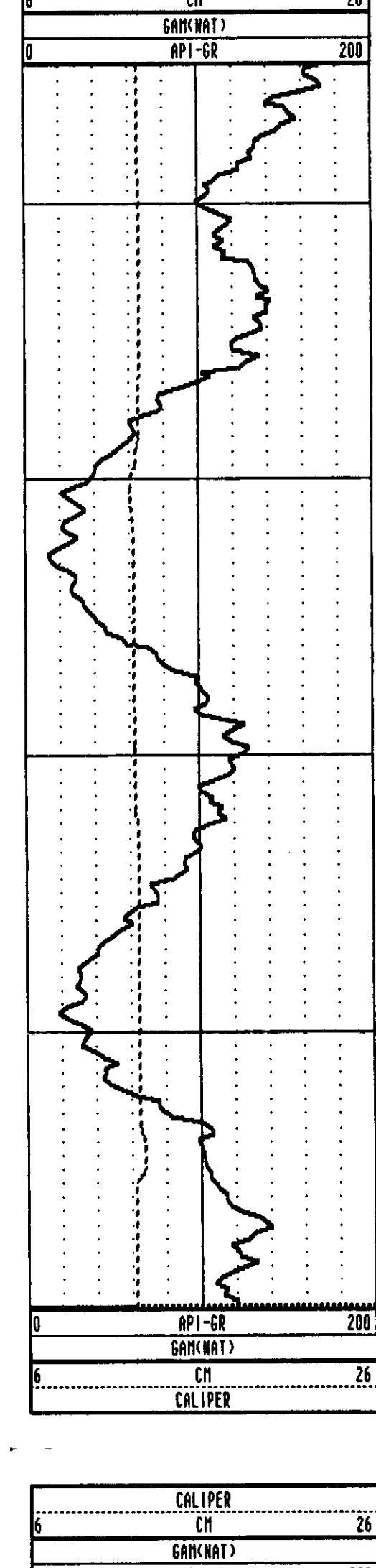
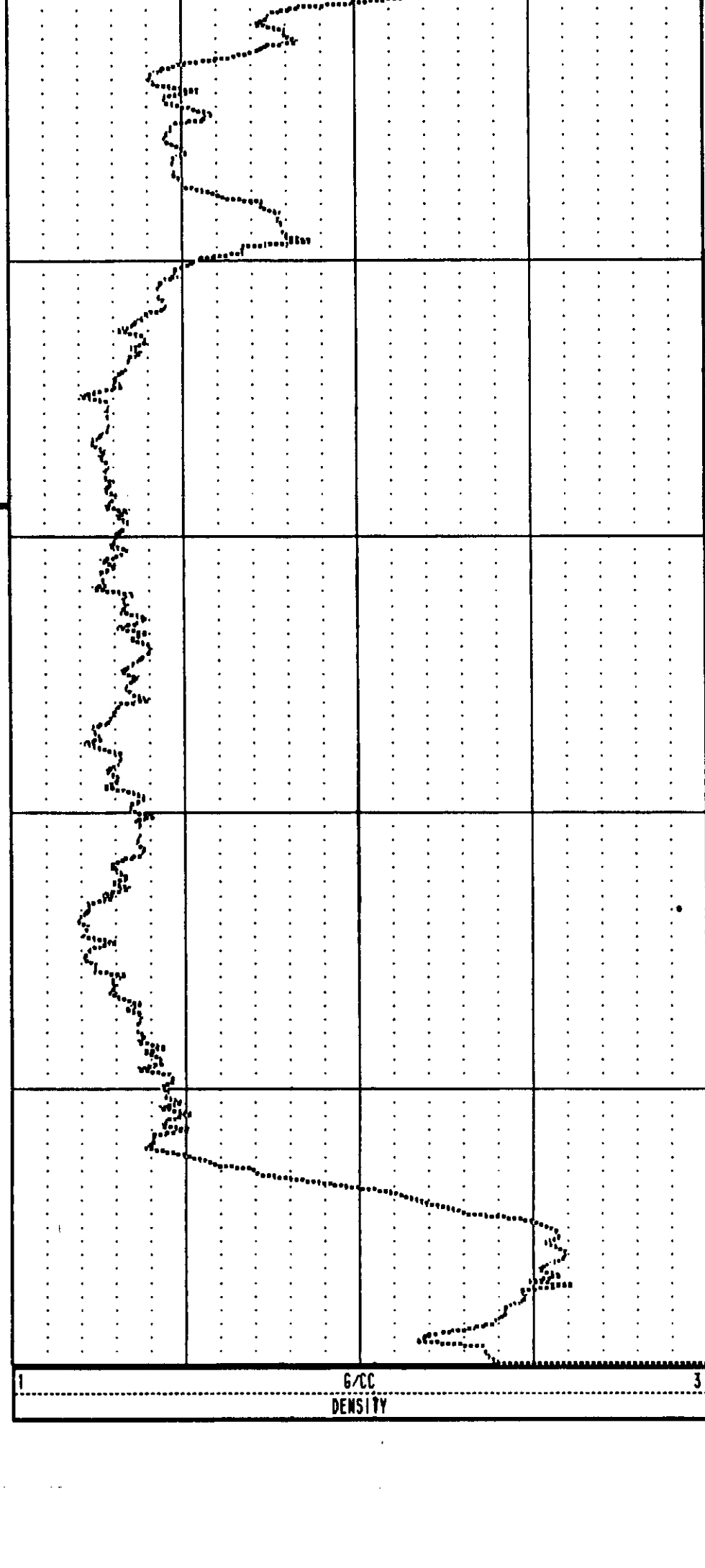
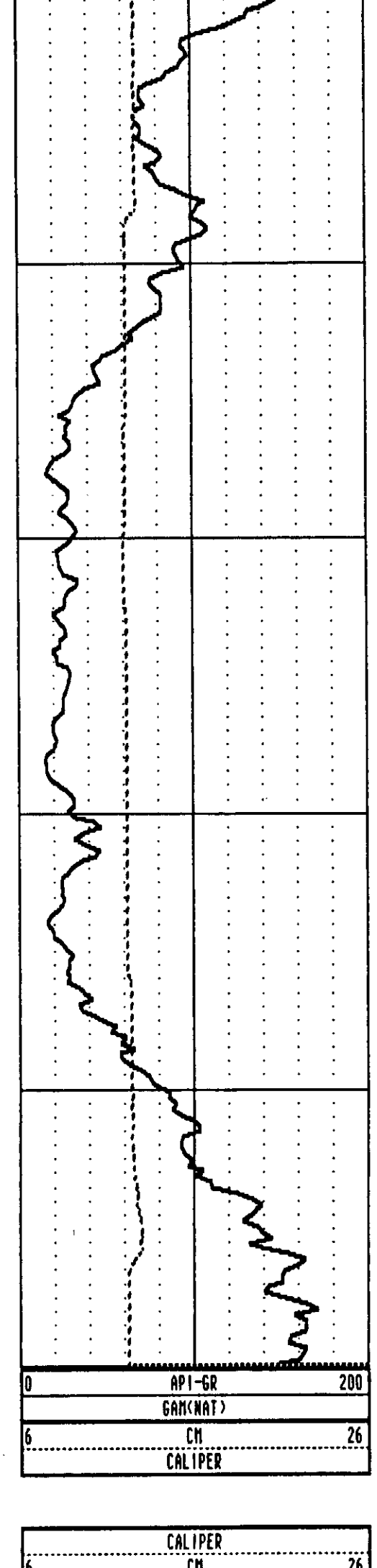


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BURNT RIDGE 88-04

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:
WELL	: BURNT RIDGE 88-04	
LOCATION/FIELD	: BURNT RIDGE	
COUNTY	:	
STATE	: BRITISH COLUMBIA	
SECTION	: TOWNSHIP	: RANGE :
DATE	: 09/22/88	PERMANENT DATUM : GL
DEPTH DRILLER	: 68.5	ELEV. PERM. DATUM: KB :
LOG BOTTOM	: 68.60	LOG MEASURED FROM: GL
LOG TOP	: 0.38	DRL MEASURED FROM: GL
CASING DRILLER	: 000	LOGGING UNIT : 8602
CASING TYPE	:	FIELD OFFICE : CALGARY
CASING THICKNESS	: 00	RECORDED BY : R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID : WATER
MAGNETIC DECL.	: 18	RM : 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690
REMARKS	:	FILE : ORIGINAL
LOGGED AT 3 METRES PER MINUTE		TYPE : 9030AA
		LOG : 3
		PLOT : 9030 13
		THRESH: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



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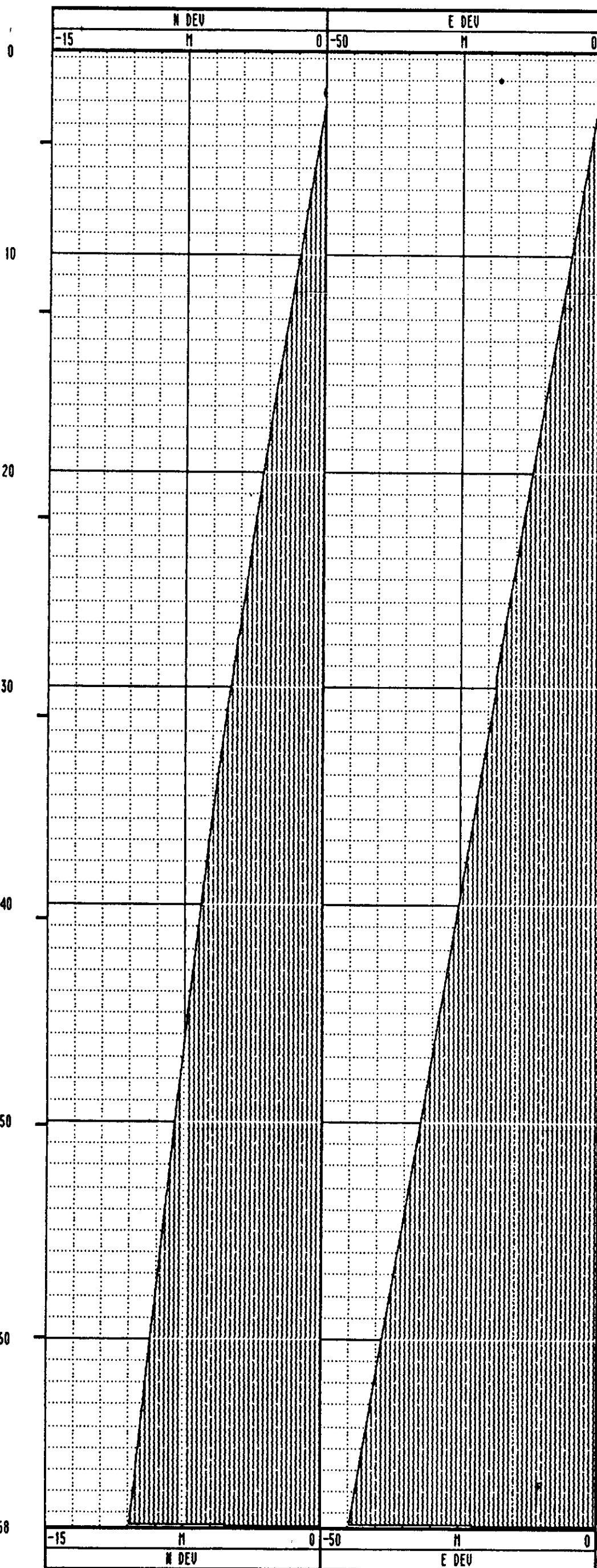
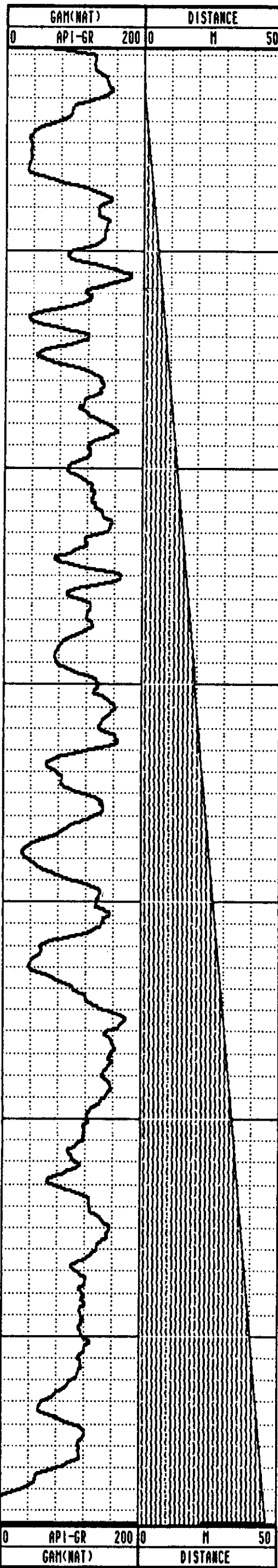


Century

BURNT RIDGE 88-04

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-04		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 09/20/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 68.5	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 68.64	LOG MEASURED FROM:	GL DF :
LOG TOP	: 0.78	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 000	LOGGING UNIT	: 62
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R.A. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18.000	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: PROCESSED
		TYPE	: 9055A
		LOG	: 7
		PLOT	: 9055-D 10
		THRESH:	10000

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/16/88	13:15:43	0	GAN(NAT)	0.000 CPS	0.000 API-GR
1	09/16/88	13:15:43	0	GAN(NAT)	0.000 CPS	0.000 API-GR
2	09/16/88	13:21:08	0	POROSITY	0.000 CPS	204.000 CPS
3	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
4	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
5	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
6	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
7	09/16/88	13:15:43	0	NEUTRON	0.000 CPS	0.000 API-N
8	09/16/88	13:20:30	0	NEUTRON	204.000 CPS	271.000 API-N

754



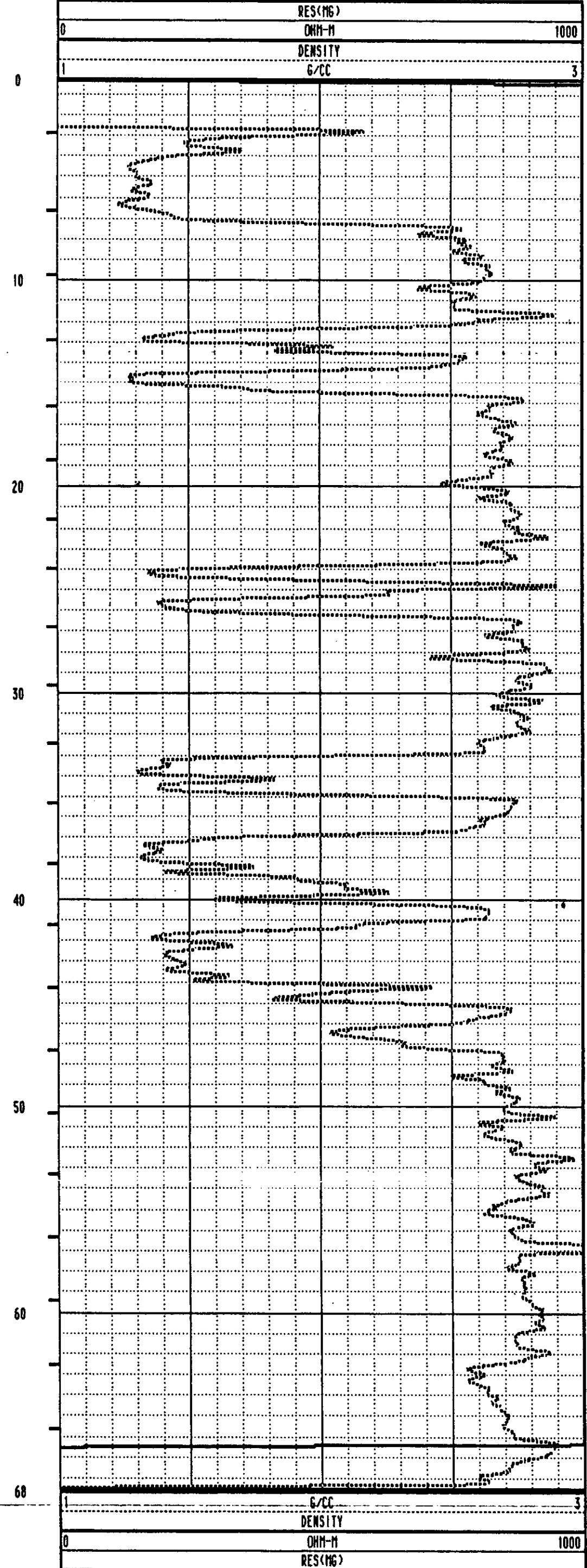
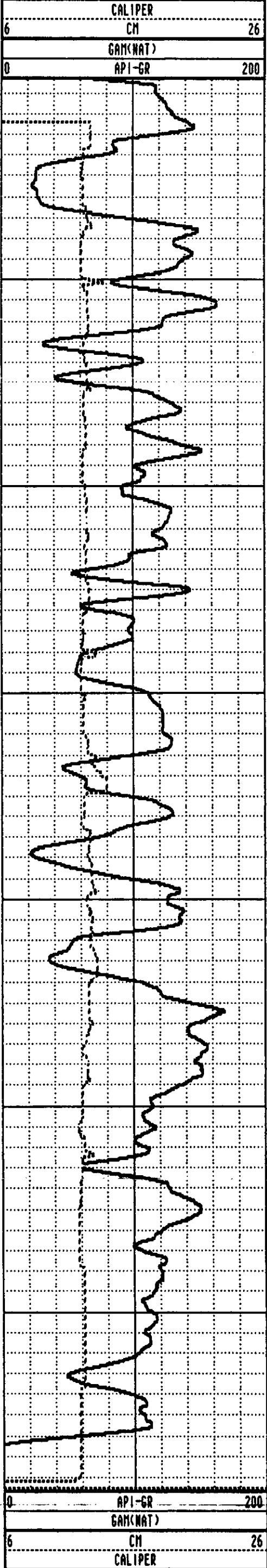
Century

BURNT RIDGE 88-04

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-04		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 09/22/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 68.5	ELEV. PERM. DATUM:	KB
LOG BOTTOM	: 68.60	LOG MEASURED FROM:	GL
LOG TOP	: 0.38	DRL MEASURED FROM:	GL
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED AT 3 METRES PER MINUTE		TYPE	: 9030AA
		LOG	: 3
		PLOT	: 9030 12
		THRESH	: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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TOOL CALIBRATION			TOOL = 9030AA	SERIAL NUMBER = 412		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/21/88	13:49:09	0	DENSITY	5153.000 CPS	1.106 G/CC
3	09/21/88	13:26:41	0	DENSITY	2061.000 CPS	2.120 G/CC
4	09/21/88	14:21:03	0	RES(MG)	6747.500 CPS	50.000 OHM-M
5	09/21/88	14:21:03	0	RES(MG)	67250.000 CPS	800.000 OHM-M
6	09/21/88	14:12:38	0	CALIPER	318.200 CPS	7.200 CM
7	09/21/88	14:12:38	0	CALIPER	1880.000 CPS	17.800 CM
8	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM
11	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM

754

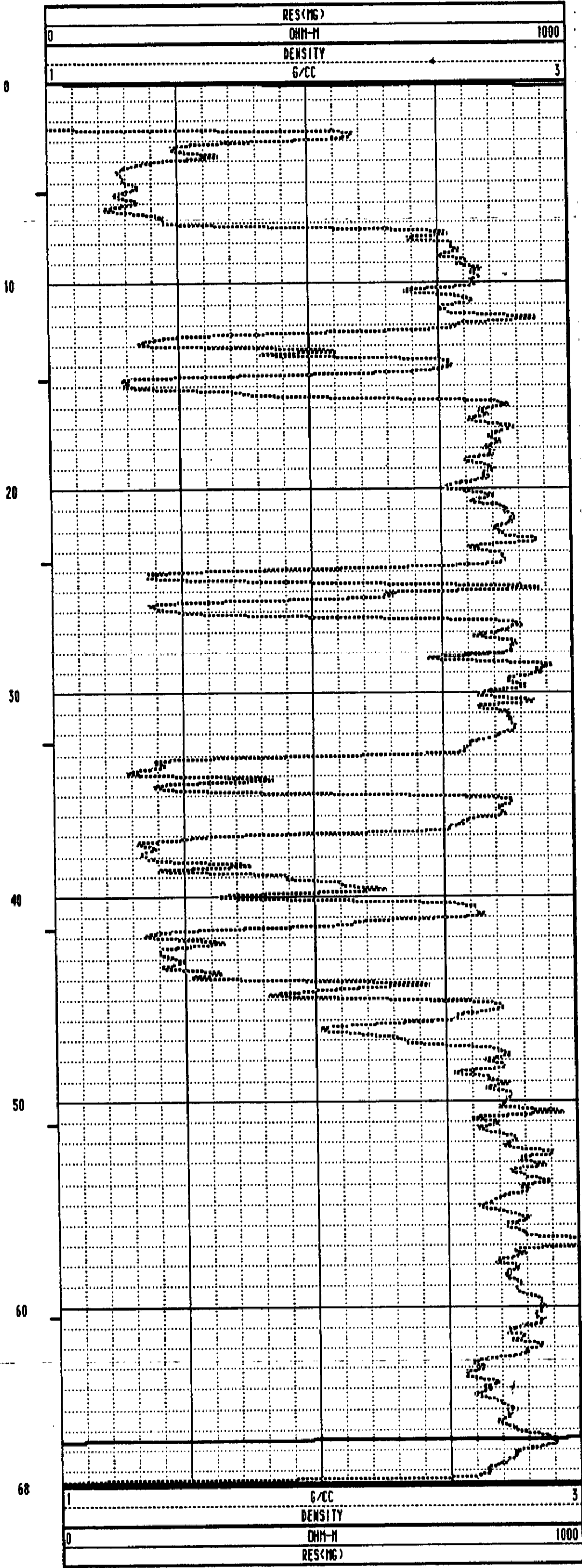
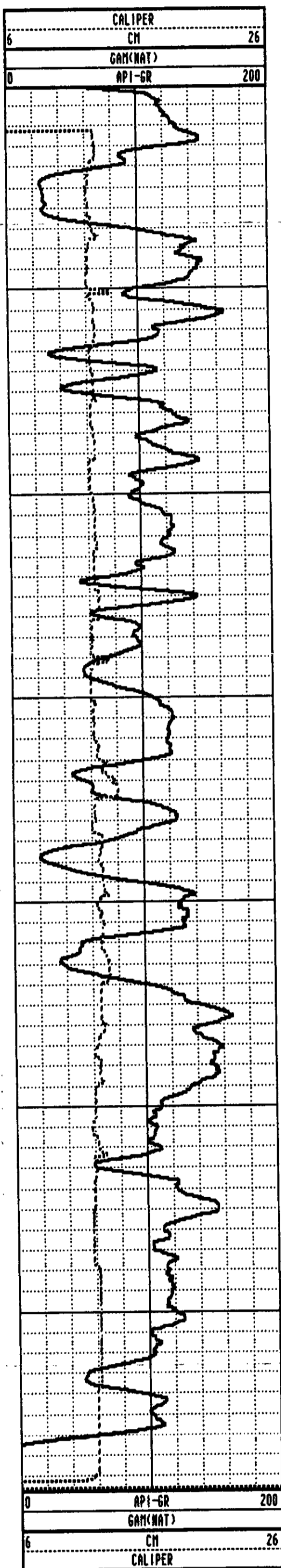


Century

BURNT RIDGE 88-04

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-04		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 09/22/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 68.5	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 68.66	LOG MEASURED FROM:	GL DF :
LOG TOP	: 0.22	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
LOGGED AT 9 METRES PER MINUTE		TYPE	: 9030AA
		LOG	: 4
		PLOT	: 9030 12
		THRESH:	2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9030AA	SERIAL NUMBER = 412		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/21/88	13:49:09	0	DENSITY	5153.000 CPS	1.106 G/CC
3	09/21/88	13:26:41	0	DENSITY	2061.000 CPS	2.120 G/CC
4	09/21/88	14:21:03	0	RES(MG)	6747.500 CPS	50.000 OHM-M
5	09/21/88	14:21:03	0	RES(MG)	67250.000 CPS	800.000 OHM-M
6	09/21/88	14:12:38	0	CALIPER	318.200 CPS	7.200 CM
7	09/21/88	14:12:38	0	CALIPER	1880.000 CPS	17.800 CM
8	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM
11	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM

754

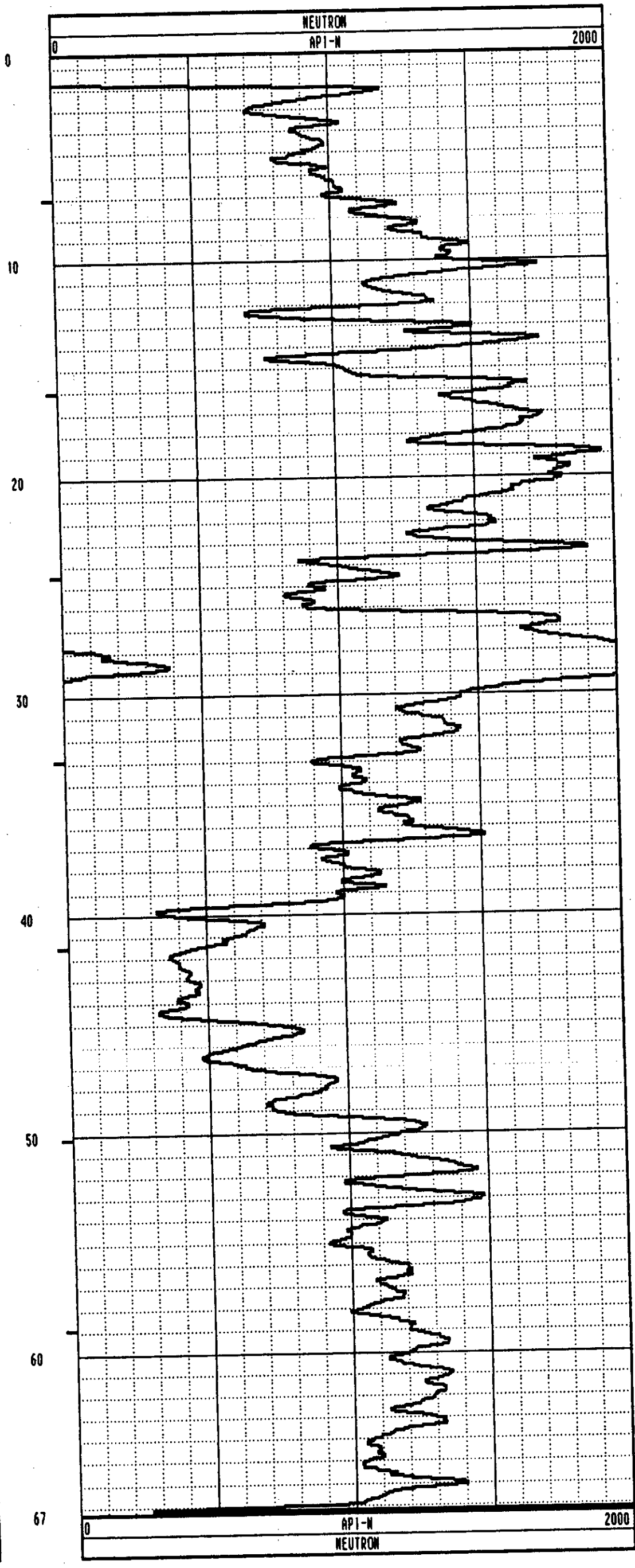
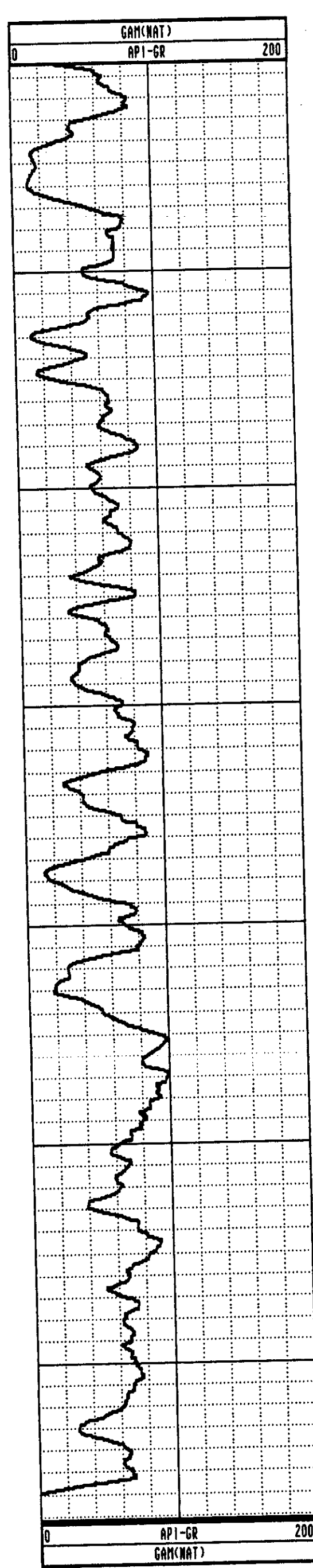


Century

BURNT RIDGE 88-04

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-04		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 09/17/88	PERMANENT DATUM	: GL ELEVATIONS
DEPTH DRILLER	: 68.5	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 67.26	LOG MEASURED FROM:	GL DF :
LOG TOP	: 0.54	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 000	LOGGING UNIT	: 62
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R.A. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER FILE : ORIGINAL
MAGNETIC DECL.	: 18	RM	: 0 TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0 LOG : 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 THRESH: 10000
REMARKS	:		
THROUGH RODS	:		

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/16/88	13:21:08	0	POROSITY	0.000 CPS	204.000 CPS
3	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
4	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
5	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
6	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
7	09/16/88	13:15:43	0	NEUTRON	0.000 CPS	0.000 API-N
8	09/16/88	13:20:30	0	NEUTRON	204.000 CPS	271.000 API-N

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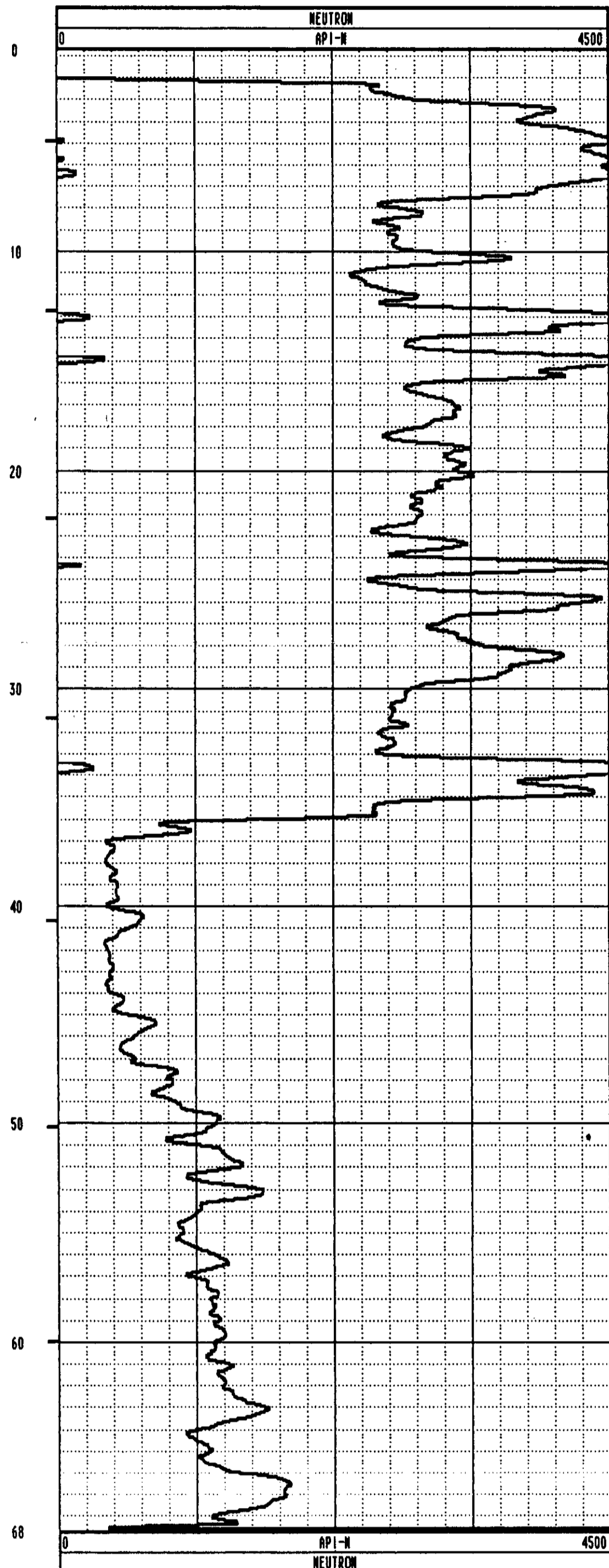
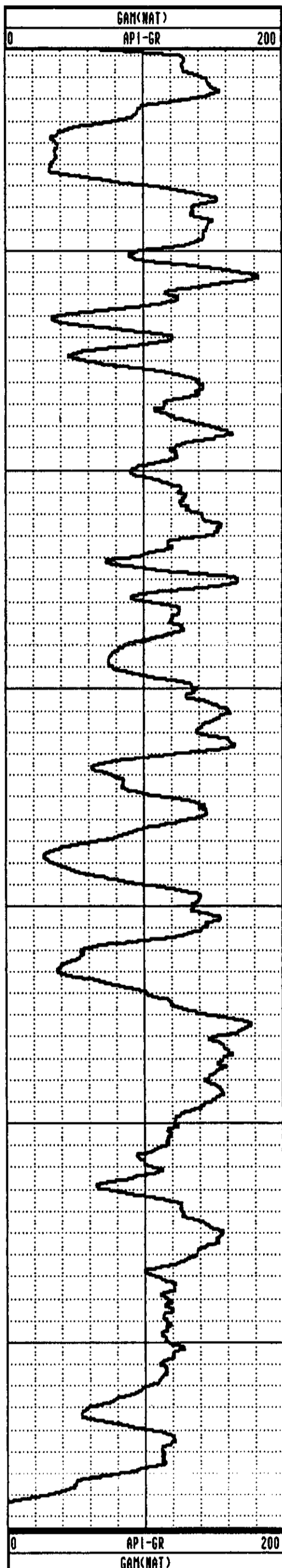


Century

BURNT RIDGE 88-04

COMPANY	: CROWNSHAW RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-04	[]	
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA	TOWNSHIP	:
SECTION	:	RANGE	:
DATE	: 09/17/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 68.5	ELEV. PERM. DATUM	: KB
LOG BOTTOM	: 68.64	LOG MEASURED FROM	: GL
LOG TOP	: 0.78	DRL MEASURED FROM	: GL
CASING DRILLER	: 000	LOGGING UNIT	: 62
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS	: 00	RECORDED BY	: R.A. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	open hole		

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/16/88	13:21:08	0	POROSITY	0.000 CPS	204.000 CPS
3	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
4	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
5	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
6	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
7	09/16/88	13:15:43	0	NEUTRON	0.000 CPS	0.000 API-N
8	09/16/88	13:20:30	0	NEUTRON	204.000 CPS	271.000 API-N



Century

BURNT RIDGE 88-05

COMPANY : CROWNSNEST RESOURCES
 WELL : BURNT RIDGE 88-05
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION :
 DATE : 09/23/88
 DEPTH DRILLER : 180
 LOG BOTTOM : 100.10
 LOG TOP : 1.10
 CASING DRILLER : 000
 CASING TYPE :
 CASING THICKNESS: 00
 BIT SIZE : 13.97
 MAGNETIC DECL. : 18
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :

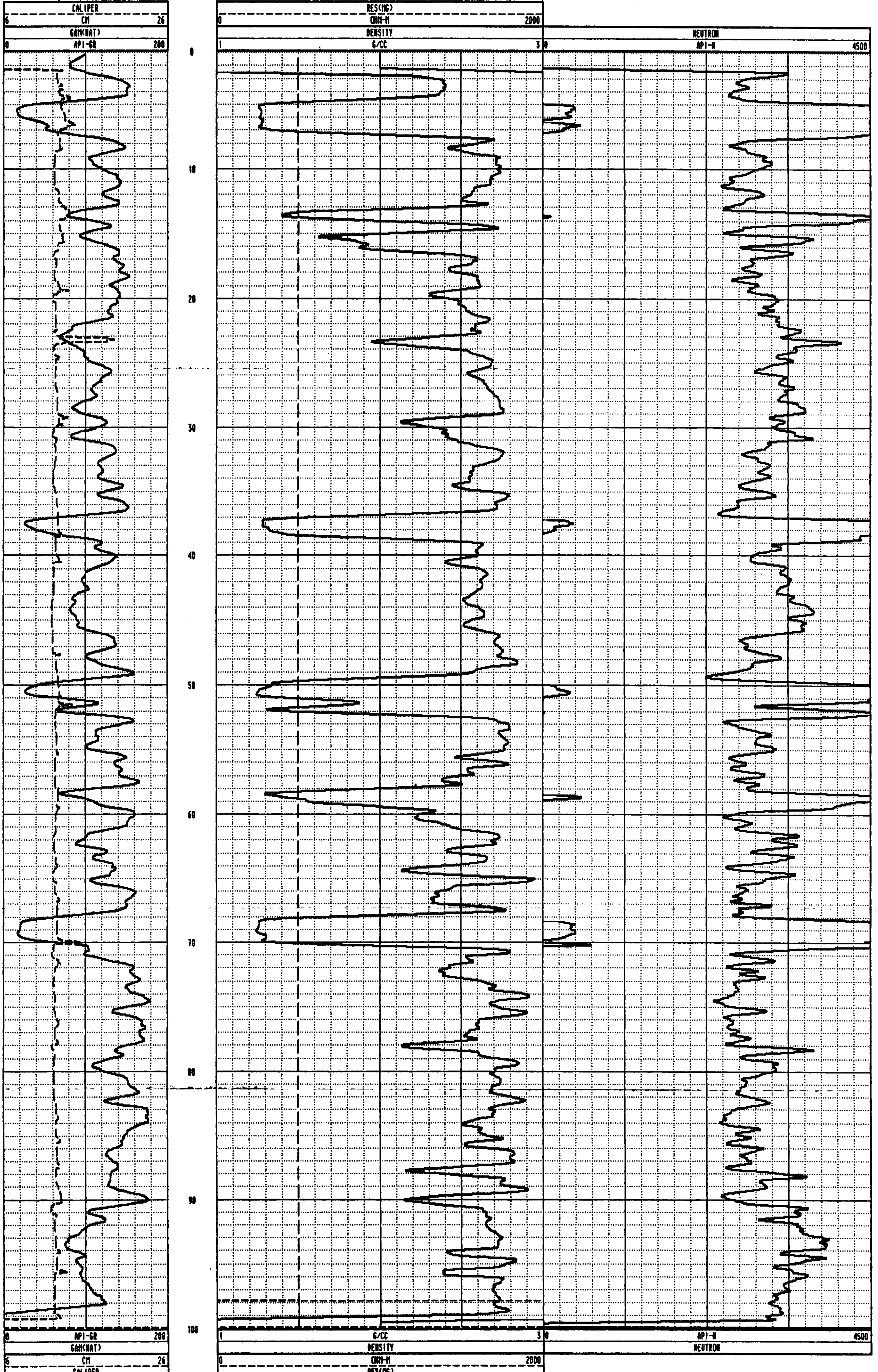
OTHER SERVICES:

TOWNSHIP :
 PERMANENT DATUM : GL
 ELEV. PERM. DATUM:
 LOG MEASURED FROM: GL
 DRL MEASURED FROM: GL
 LOGGING UNIT : 8602
 FIELD OFFICE : CALGARY
 RECORDED BY : R. WHITTAKER

RANGE :
 ELEVATIONS
 KB :
 DF :
 GL :

FILE : PROCESSED
 TYPE : 9030AA
 LOG : 2
 PLOT : CNR 12
 THRESH: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



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Century

BURNT RIDGE 88-05

COMPANY : CROWNEST RESOURCES
 WELL : BURNT RIDGE 88-05
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION :

OTHER SERVICES:

DATE : 09/22/88
 DEPTH DRILLER : 180
 LOG BOTTOM : 100.08
 LOG TOP : 0.30

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

ELEVATIONS
 KB :
 DF :
 GL :

CASING DRILLER : 000
 CASING TYPE :
 CASING THICKNESS: 00

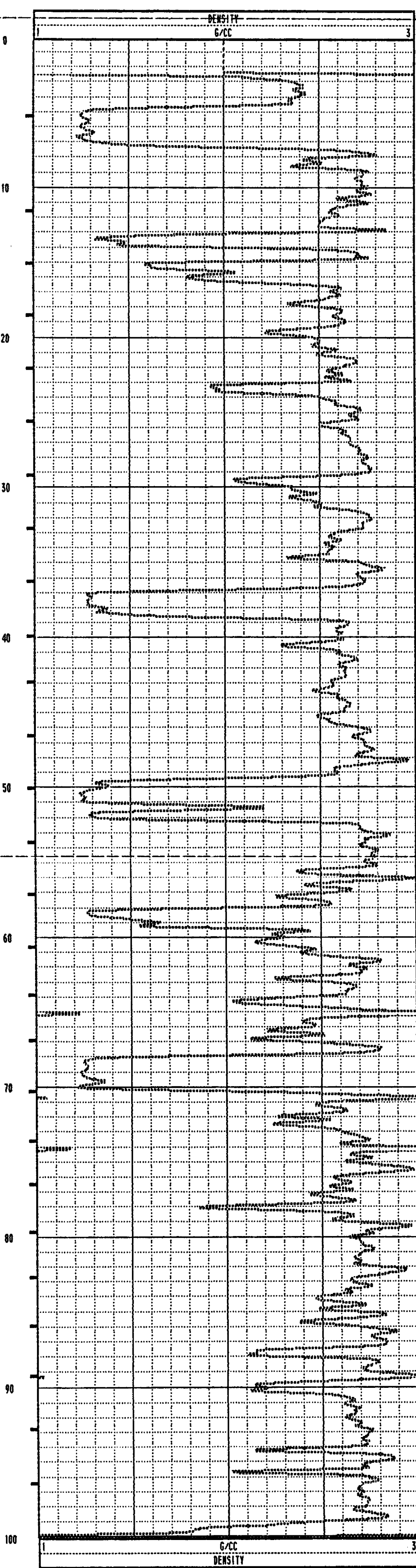
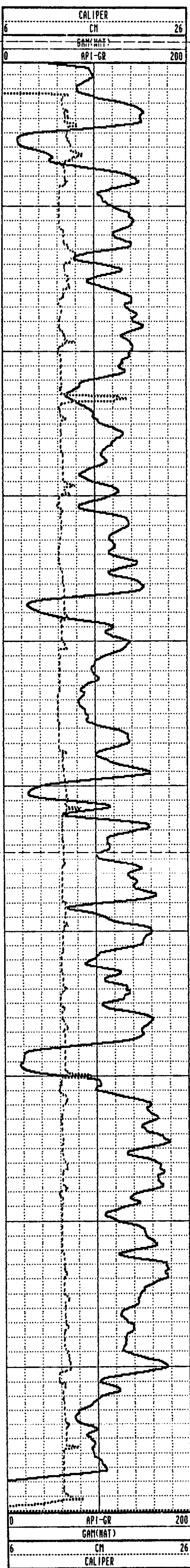
LOGGING UNIT : 8602
 FIELD OFFICE : CALGARY
 RECORDED BY : R. WHITTAKER

BIT SIZE : 13.97
 MAGNETIC DECL. : 18
 MATRIX DENSITY : 2.68
 FLUID DENSITY : 1.0
 NEUTRON MATRIX : SANDSTONE
 REMARKS :

BOREHOLE FLUID : WATER
 RM : 0
 RM TEMPERATURE : 0
 MATRIX DELTA T : 173
 FLUID DELTA T : 690

FILE : ORIGINAL
 TYPE : 9030AA
 LOG : 3
 PLOT : 9030 12
 THRESH: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9030AA	SERIAL NUMBER = 412		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/21/88	13:49:09	0	DENSITY	5153.000 CPS	1.106 G/CC
3	09/21/88	13:26:41	0	DENSITY	2061.000 CPS	2.120 G/CC
4	09/21/88	14:21:03	0	RES(MG)	6747.500 CPS	50.000 OHM-M
5	09/21/88	14:21:03	0	RES(MG)	67250.000 CPS	800.000 OHM-M
6	09/21/88	14:12:38	0	CALIPER	318.200 CPS	7.200 CM
7	09/21/88	14:12:38	0	CALIPER	1880.000 CPS	17.800 CM
8	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM
11	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM

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DIGITAL COMPUTER LOG

COMPANY : CROWNEST RESOURCES
 WELL : BURNT RIDGE 88-05
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 09/17/88 PERMANENT DATUM : GL ELEVATIONS
 DEPTH DRILLER : 180 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 100.10 LOG MEASURED FROM: GL DF :
 LOG TOP : 1.00 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 000 LOGGING UNIT : 62
 CASING TYPE : FIELD OFFICE : CALGARY
 CASING THICKNESS: 00 RECORDED BY : P.A.WHITTAKER
 BIT SIZE : 13.97 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 18 RM : 0 TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : 0 LOG : 3
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : DEFAULT 0
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 10000
 REMARKS :

OTHER SERVICES:

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

PAGE 1 Century Geophysical Corp. 9055A -ORIGINAL

DEPTH (M)	GAM(NAT) API-GR	POR(NEU) PERCENT	RES OHM	NEUTRON API-N	SP MV	SANG DEG	SANGB DEG	TEMP DEG C
1.00	102.7	-7	1011.9	1226.7	0.0	18.5	85.8	60.3
6.00	91.8	-4.9	2500.0	3816.5	0.0	46.0	273.4	148.9
11.00	135.1	0.4	2500.0	2828.0	0.0	46.1	272.8	148.9
16.00	129.8	-2.8	2500.0	3259.8	0.0	46.2	272.8	148.9
21.00	126.8	-2.6	2500.0	3161.8	0.0	46.0	272.4	143.6
26.00	115.2	-4.2	2500.0	3341.0	0.0	45.9	272.5	142.9
31.00	116.6	-3.1	2500.0	3218.2	0.0	45.6	273.4	143.6
36.00	107.2	-2.3	2500.0	3313.5	0.0	45.2	273.3	148.9
41.00	114.0	-4.0	2500.0	3348.9	0.0	45.3	273.2	127.0
46.00	109.8	-3.5	2500.0	3270.6	0.0	45.4	273.8	148.9
51.00	104.9	-3.8	2500.0	3569.1	0.0	45.4	273.8	148.9
56.00	133.9	-2	2500.0	2895.5	0.0	45.4	274.0	143.6
61.00	126.6	-3.4	2500.0	3360.7	0.0	45.4	273.5	125.6
66.00	133.5	-4	2500.0	2941.5	0.0	45.3	274.7	148.9
71.00	104.0	-4.0	2500.0	3672.3	0.0	45.1	274.2	142.9
76.00	159.2	1.8	2500.0	2696.0	0.0	45.1	274.9	148.9
81.00	154.3	-3	2500.0	2902.0	0.0	45.0	274.4	142.9
86.00	154.3	0.9	2500.0	2788.1	0.0	44.9	275.5	131.0
91.00	124.1	-3.0	2500.0	3222.5	0.0	44.7	275.3	148.9
96.00	101.2	-4.9	2500.0	3430.4	0.0	44.4	275.7	136.9

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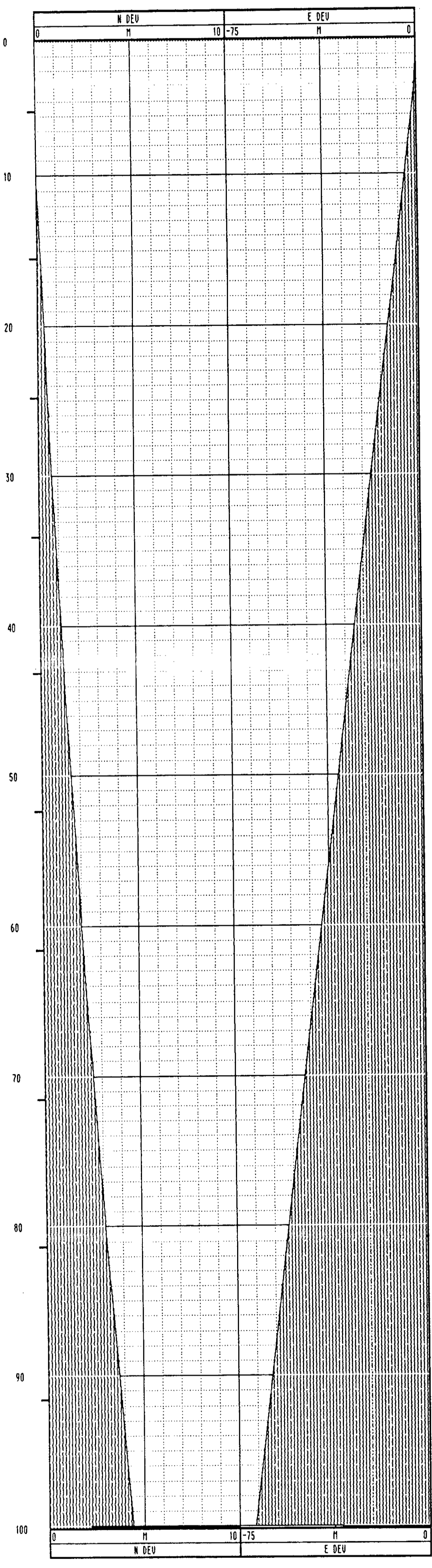
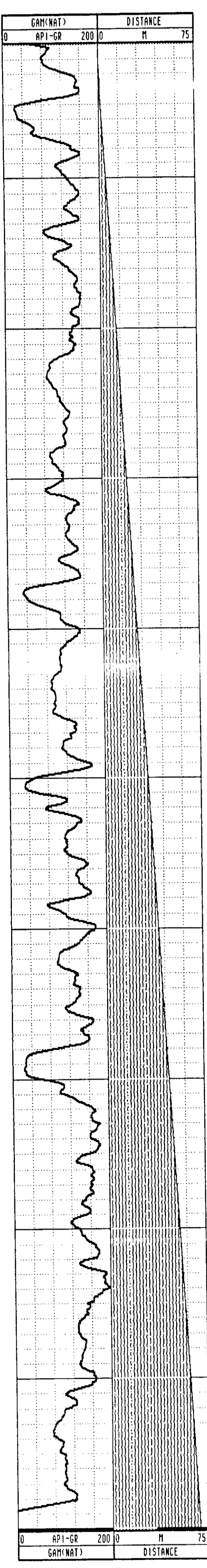


Century

BURNT RIDGE 88-05

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:
WELL	: BURNT RIDGE 88-05	
LOCATION/FIELD	: BURNT RIDGE	
COUNTY	:	
STATE	: BRITISH COLUMBIA	
SECTION	:	TOWNSHIP : RANGE :
DATE	: 09/20/88	PERMANENT DATUM : GL
DEPTH DRILLER	: 180	ELEV. PERM. DATUM: KB :
LOG BOTTOM	: 100.10	LOG MEASURED FROM: GL
LOG TOP	: 1.00	DRL MEASURED FROM: GL
CASING DRILLER	: 000	LOGGING UNIT : 62
CASING TYPE	:	FIELD OFFICE : CALGARY
CASING THICKNESS	: 00	RECORDED BY : R.A. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID : WATER
MAGNETIC DECL.	: 18.000	RM : 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690
REMARKS	:	FILE : PROCESSED
		TYPE : 9055A
		LOG : 8
		PLOT : 9055-D 10
		THRESH: 10000

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/16/88	13:21:08	0	POROSITY	0.000 CPS	204.000 CPS
3	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
4	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
5	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
6	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
7	09/16/88	13:15:43	0	NEUTRON	0.000 CPS	0.000 API-N
8	09/16/88	13:20:30	0	NEUTRON	204.000 CPS	271.000 API-N

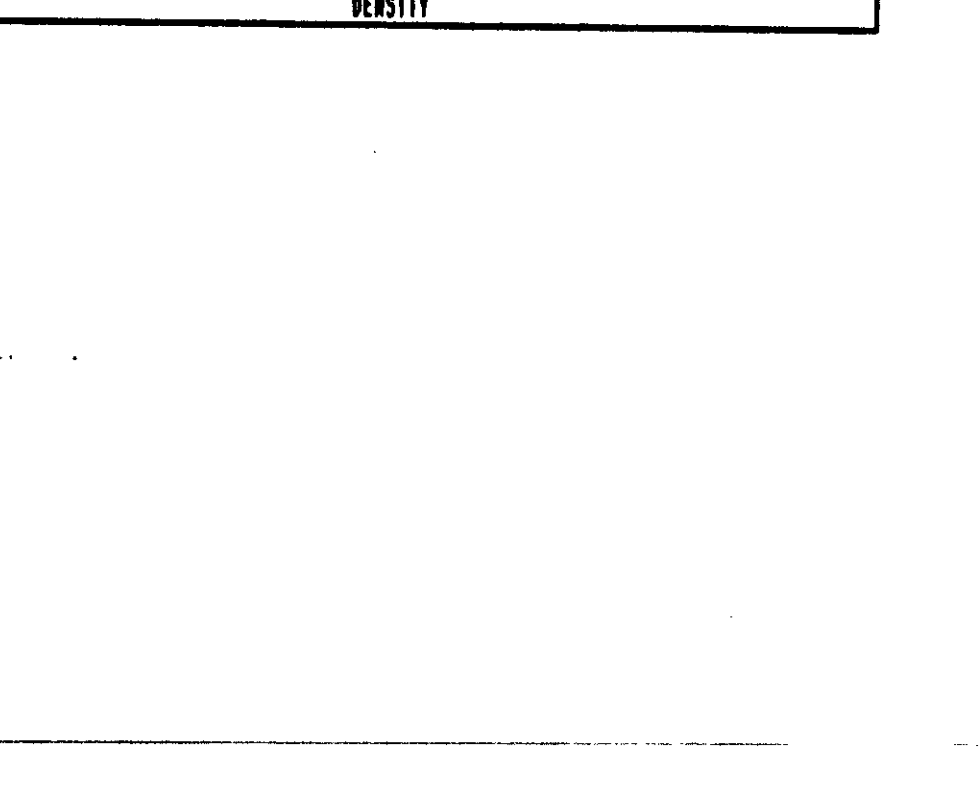
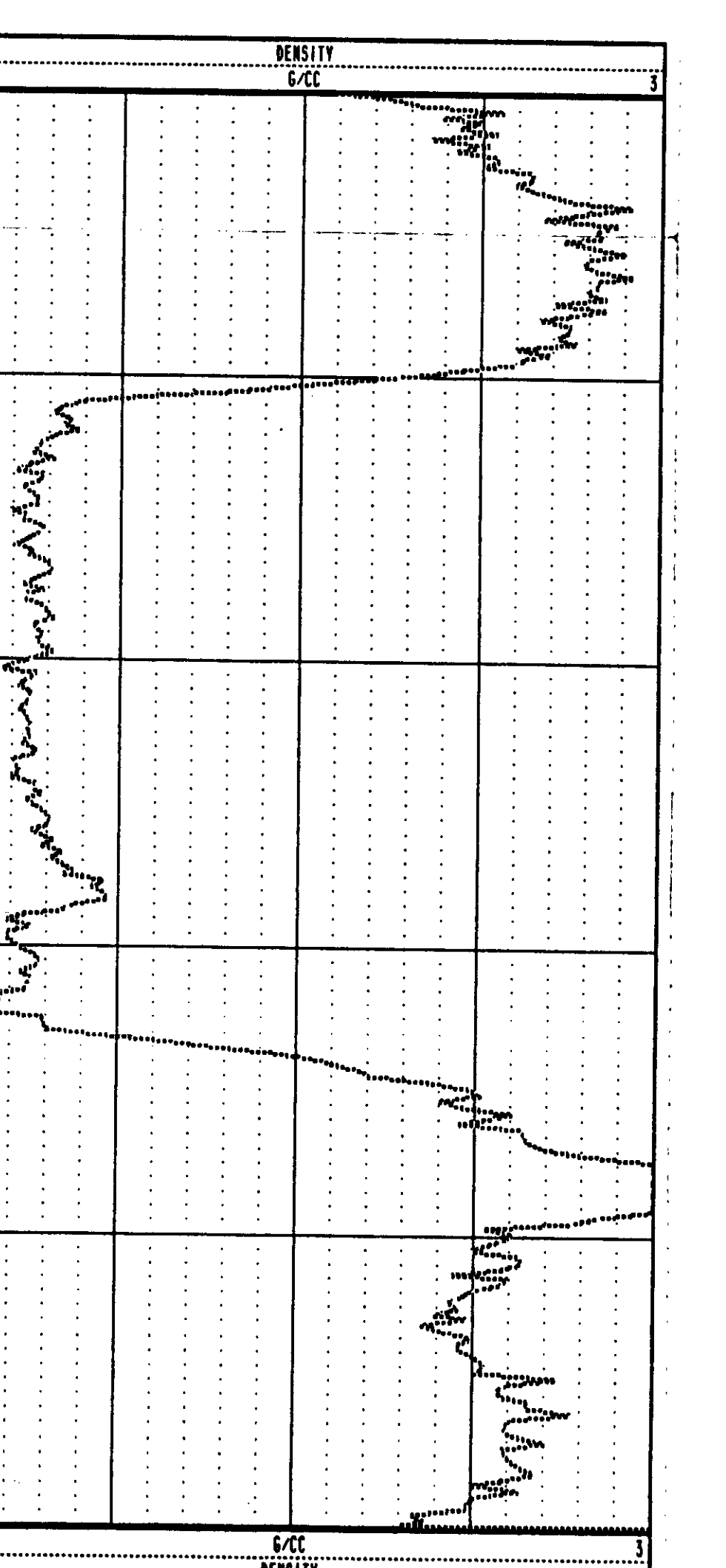
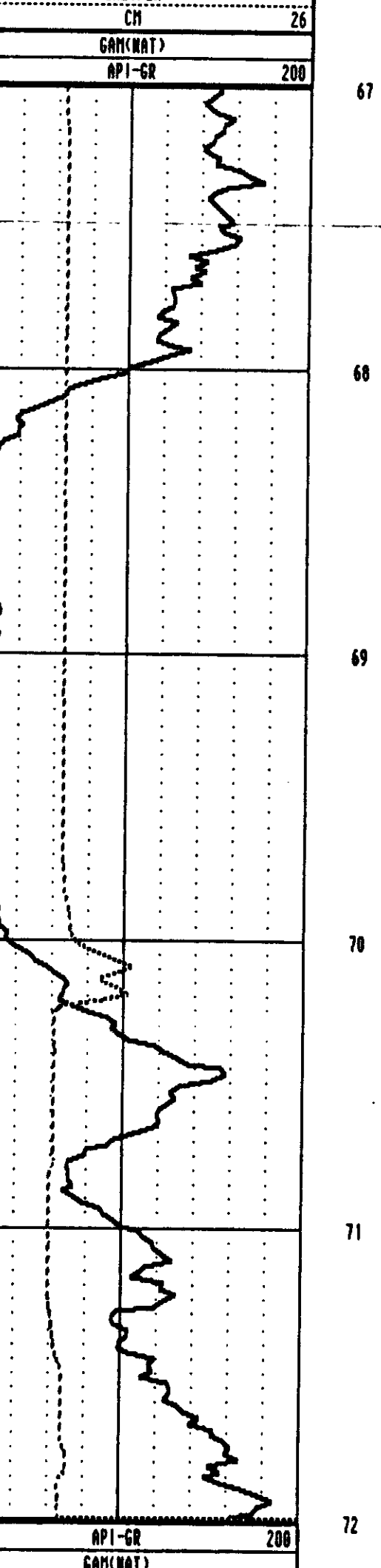
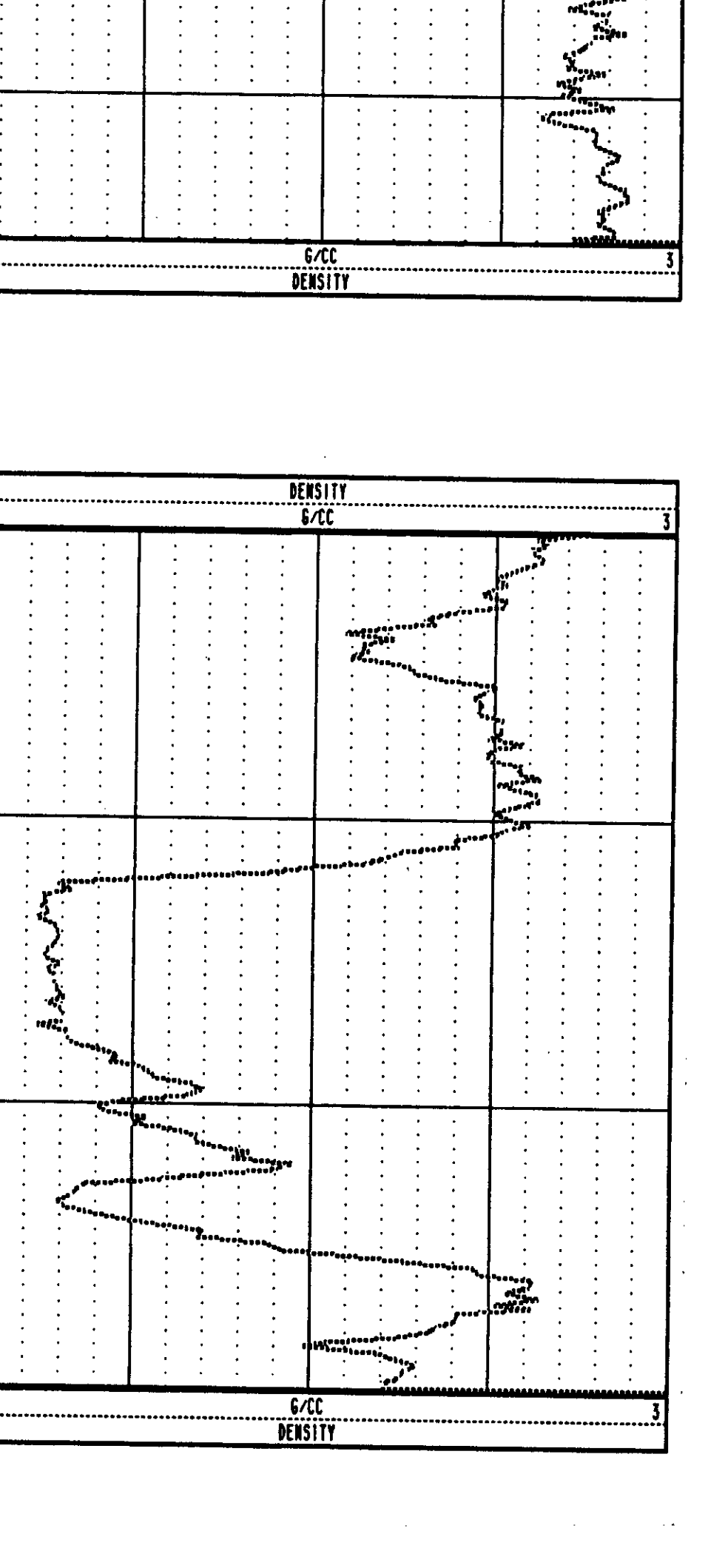
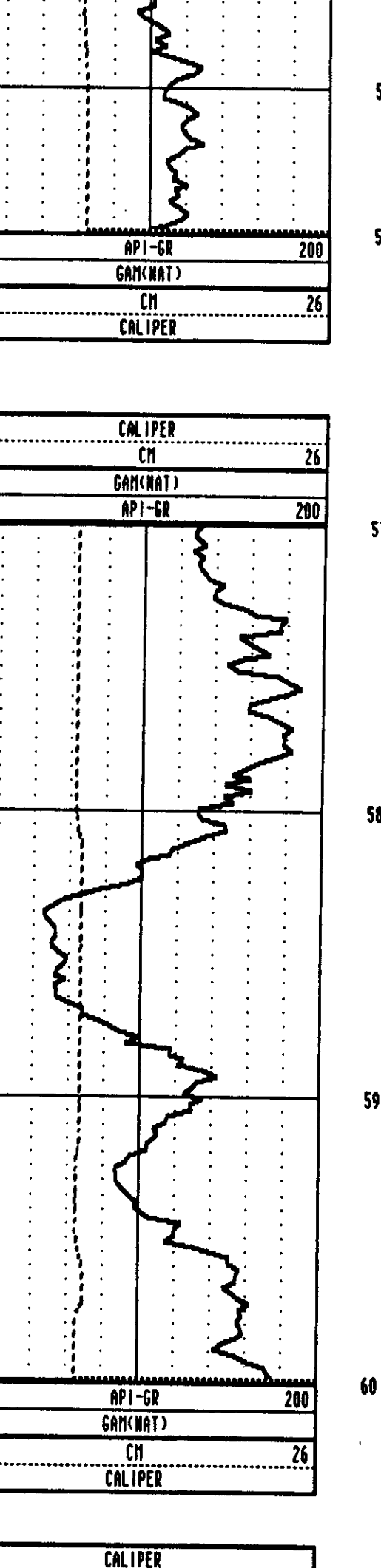
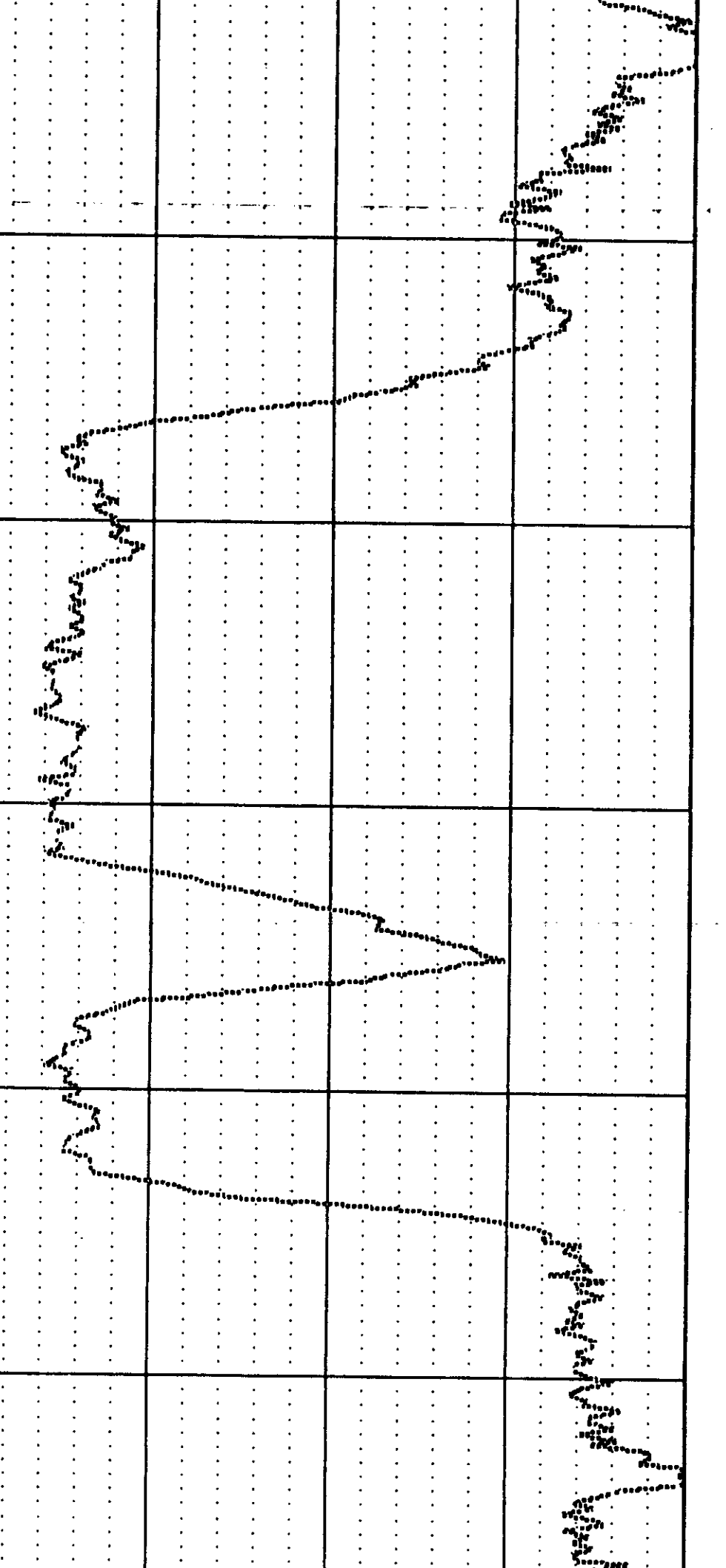
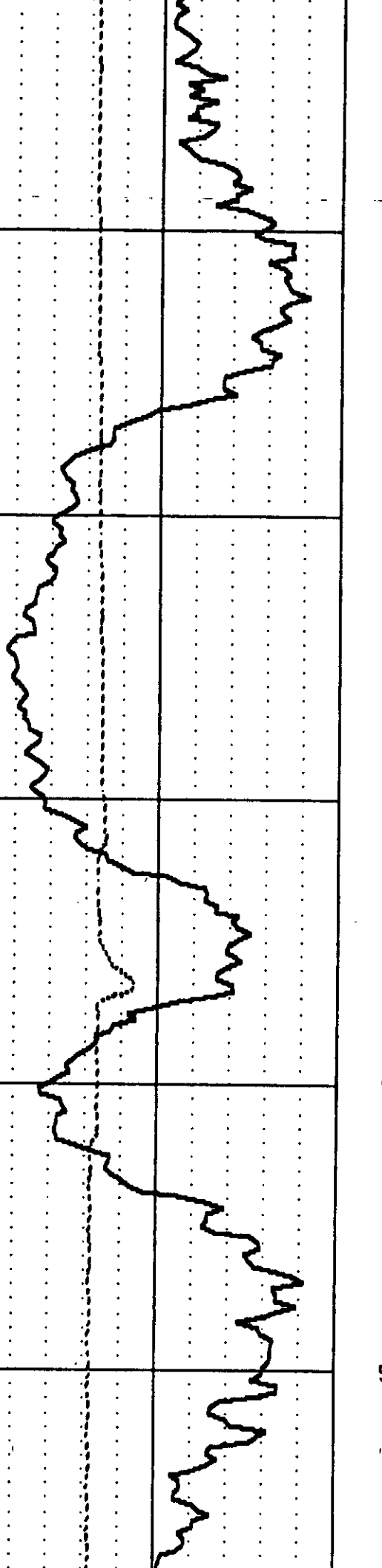
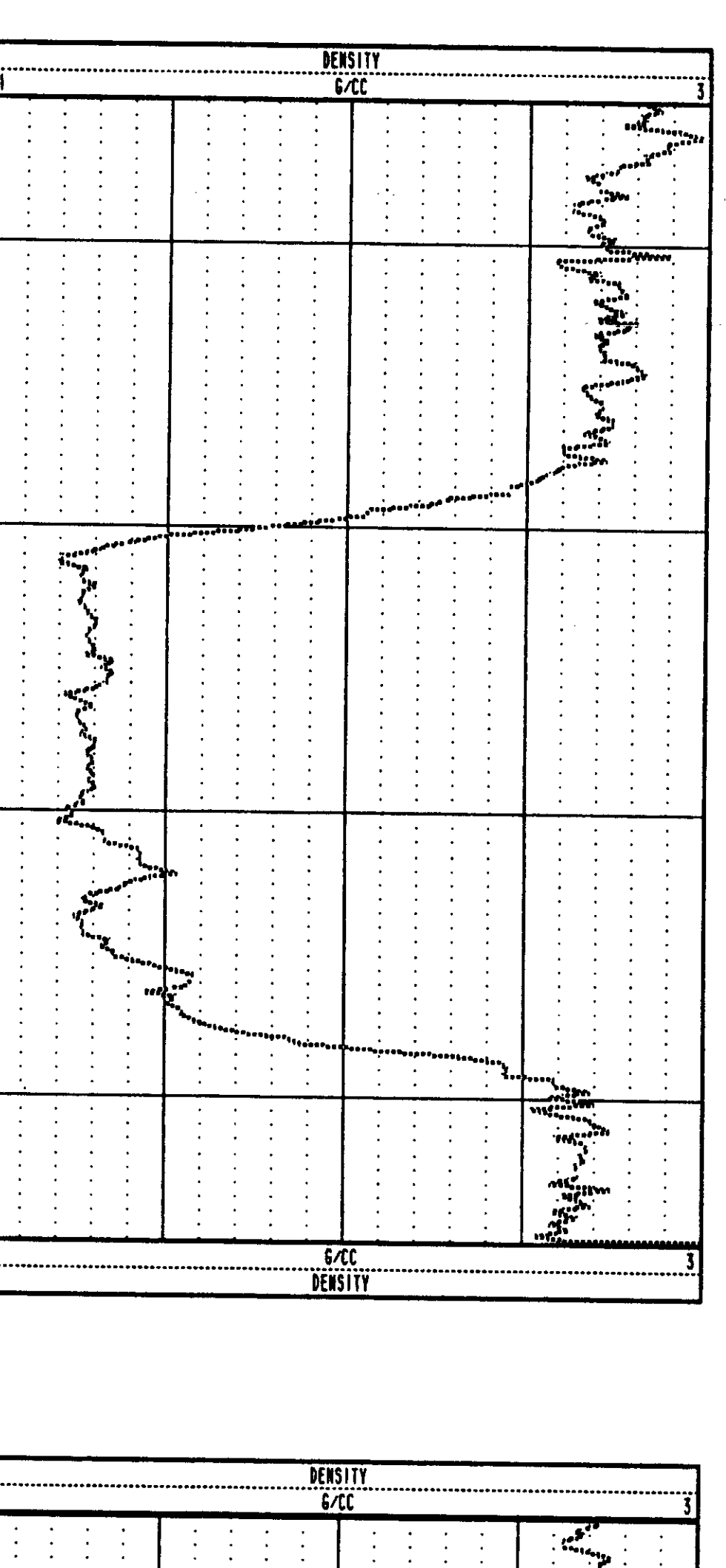
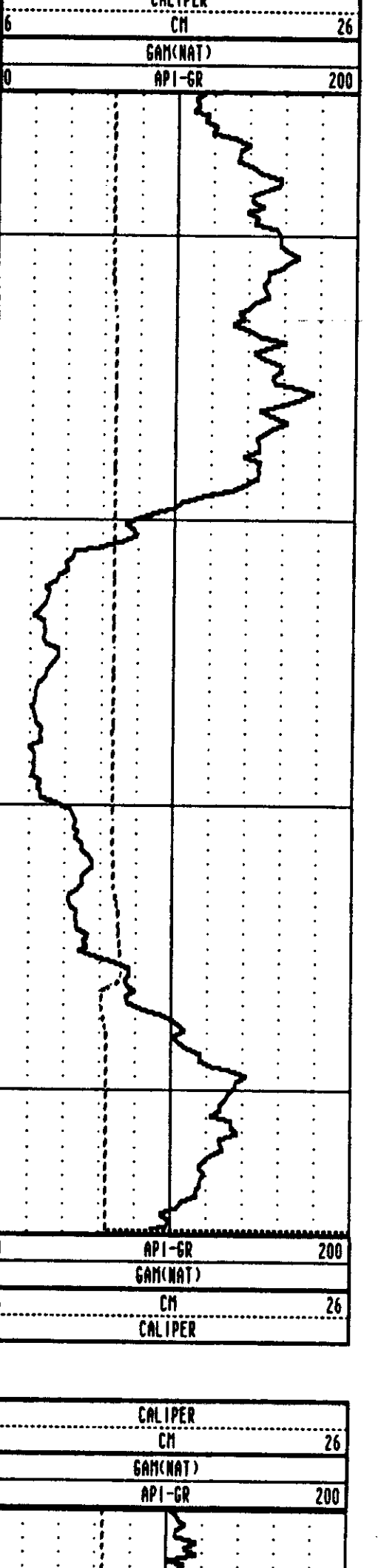
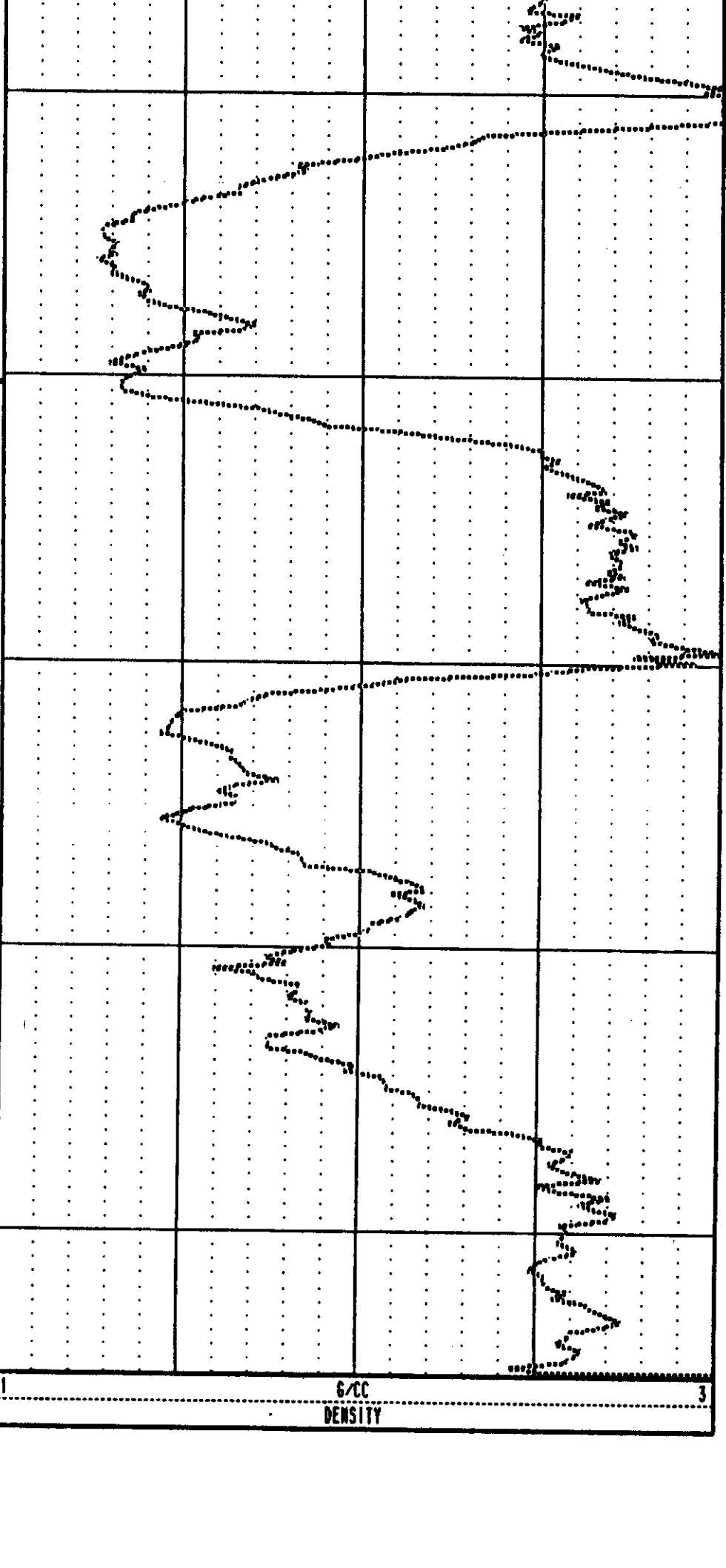
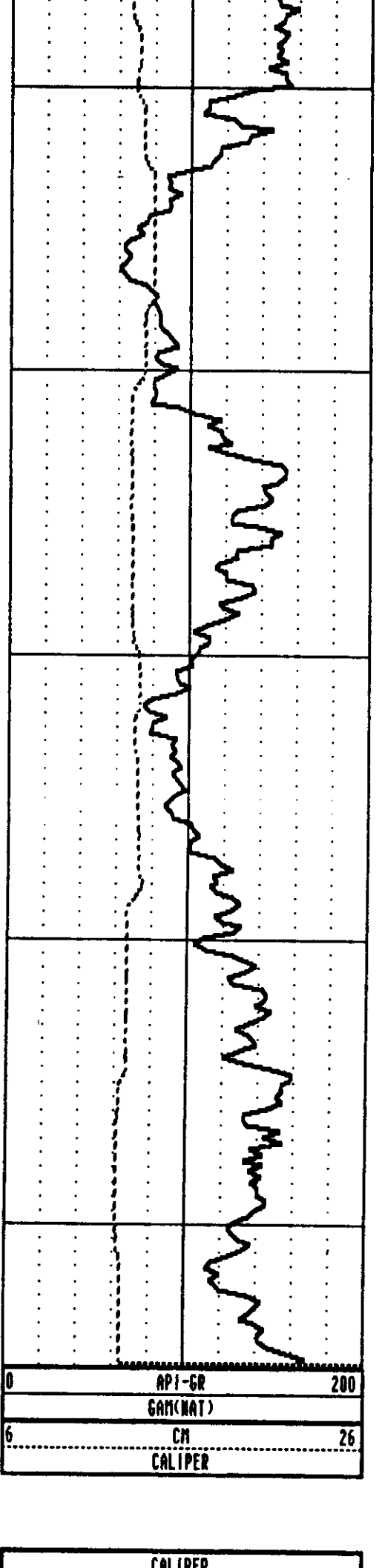
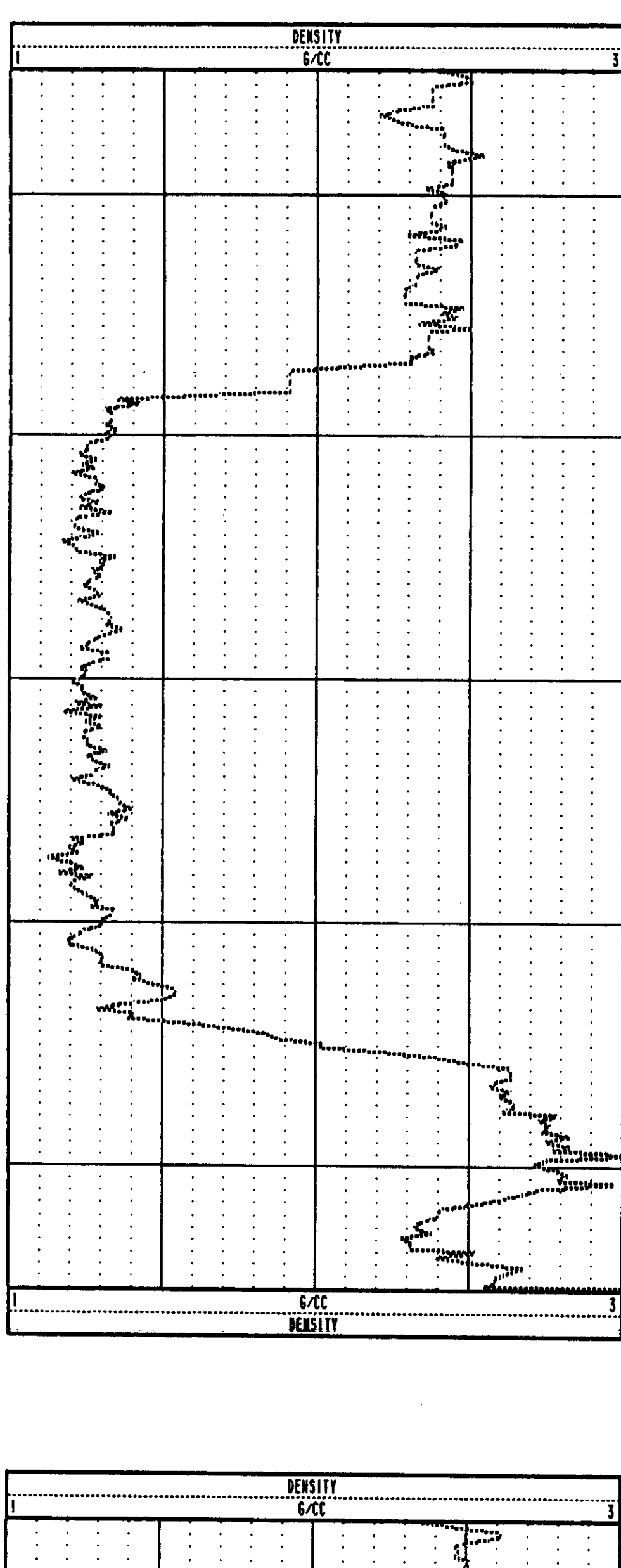
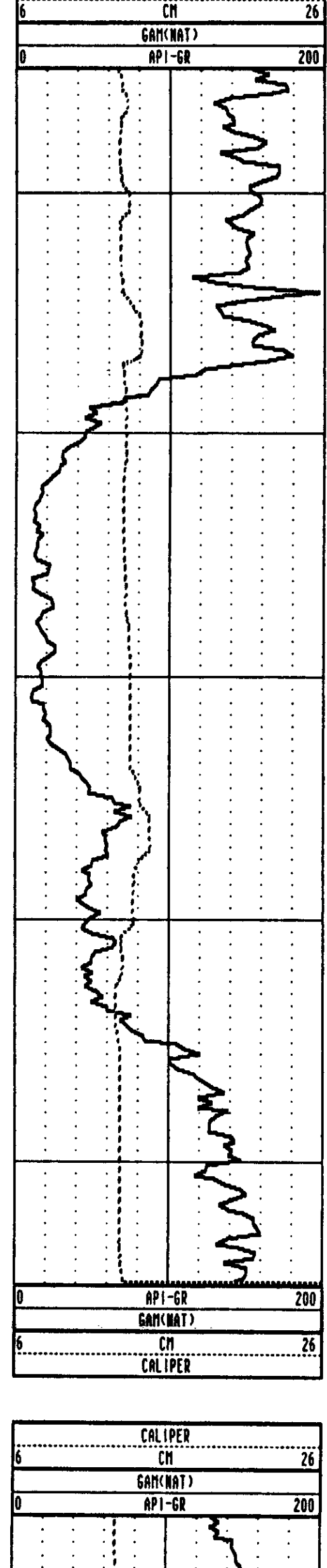
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BURNT RIDGE 88-05

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-05		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP : RANGE :	
DATE	: 09/22/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER	: 180	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 100.08	LOG MEASURED FROM: GL	DF :
LOG TOP	: 0.30	DRL MEASURED FROM: GL	GL :
CASING DRILLER	: 000	LOGGING UNIT : 8602	
CASING TYPE	:	FIELD OFFICE : CALGARY	
CASING THICKNESS:	00	RECORDED BY : R. WHITTAKER	
BIT SIZE	: 13.97	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 18	RM : 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 2
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 9030 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		



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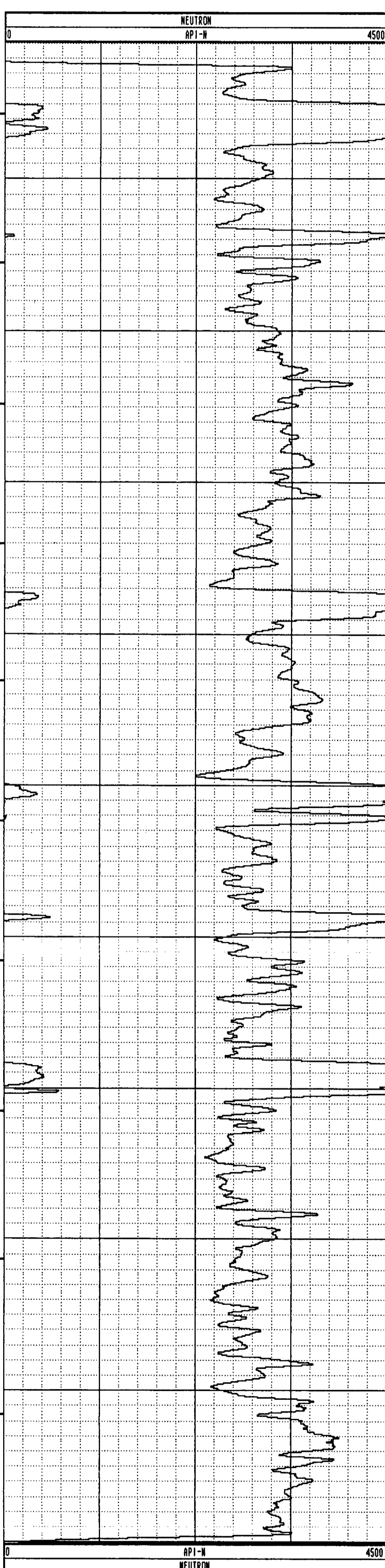
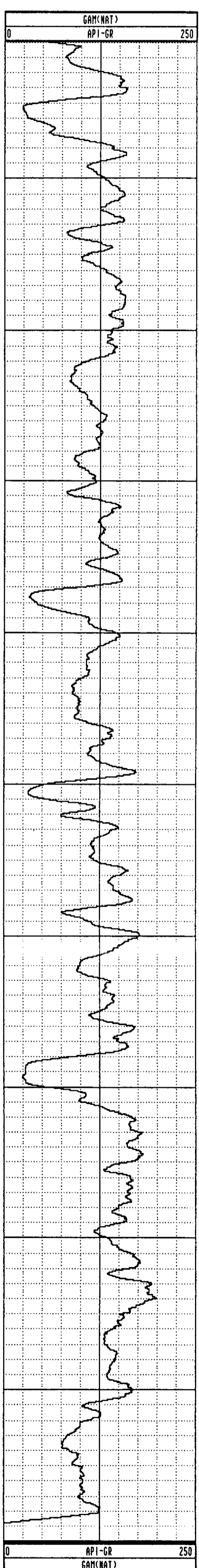


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BURNT RIDGE 88-05

COMPANY	: CROWNSHED RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-05	[]	
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA	TOWNSHIP	:
SECTION	:	RANGE	:
DATE	: 09/17/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 180	ELEV. PERM. DATUM	: KB
LOG BOTTOM	: 100.10	LOG MEASURED FROM	: GL
LOG TOP	: 1.00	DRL MEASURED FROM	: GL
CASING DRILLER	: 000	LOGGING UNIT	: 62
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS	: 00	RECORDED BY	: R.A. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
		TYPE	: 9055A
		LOG	: 3
		PLOT	: 9055 CR 0
		THRESH	: 10000

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/16/88	13:21:08	0	POROSITY	0.000 CPS	204.000 CPS
3	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
4	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
5	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
6	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
7	09/16/88	13:15:43	0	NEUTRON	0.000 CPS	0.000 API-N
8	09/16/88	13:20:30	0	NEUTRON	204.000 CPS	271.000 API-N

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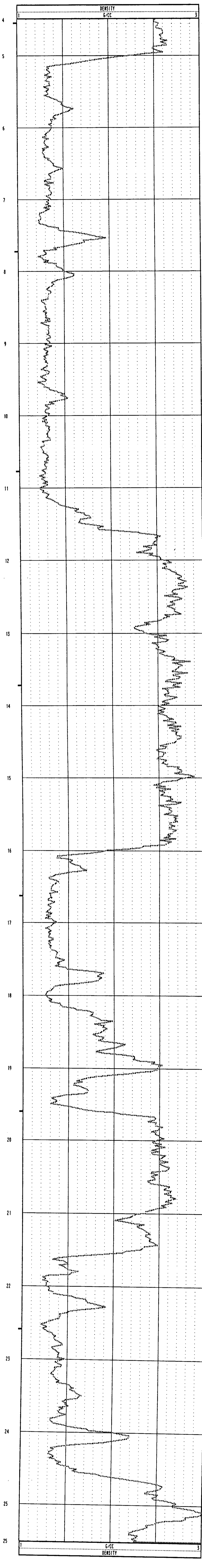
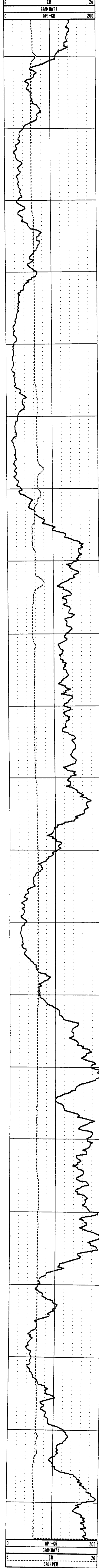


Century

BURNT RIDGE 88-06

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:
WELL	: BURNT RIDGE 88-06	
LOCATION/FIELD	: BURNT RIDGE	
COUNTY	:	
STATE	: BRITISH COLUMBIA	
SECTION	: TOWNSHIP	RANGE :
DATE	: 09/27/88	PERMANENT DATUM : GL
DEPTH DRILLER	: 36.5	ELEV. PERM. DATUM: KB :
LOG BOTTOM	: 36.42	LOG MEASURED FROM: GL
LOG TOP	: 0.28	DRL MEASURED FROM: GL
CASING DRILLER	: 000	LOGGING UNIT : 8602
CASING TYPE	:	FIELD OFFICE : CALGARY
CASING THICKNESS: 00		RECORDED BY : R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID : WATER
MAGNETIC DECL.	: 18	RM : 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690
REMARKS	:	FILE : ORIGINAL
OPEN HOLE	:	TYPE : 9030AA
		LOG : 2
		PLOT : 9030 13
		THRESH: 40000

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



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BURNT RIDGE 88-06

COMPANY : CROWNEST RESOURCES
 WELL : BURNT RIDGE 88-06
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

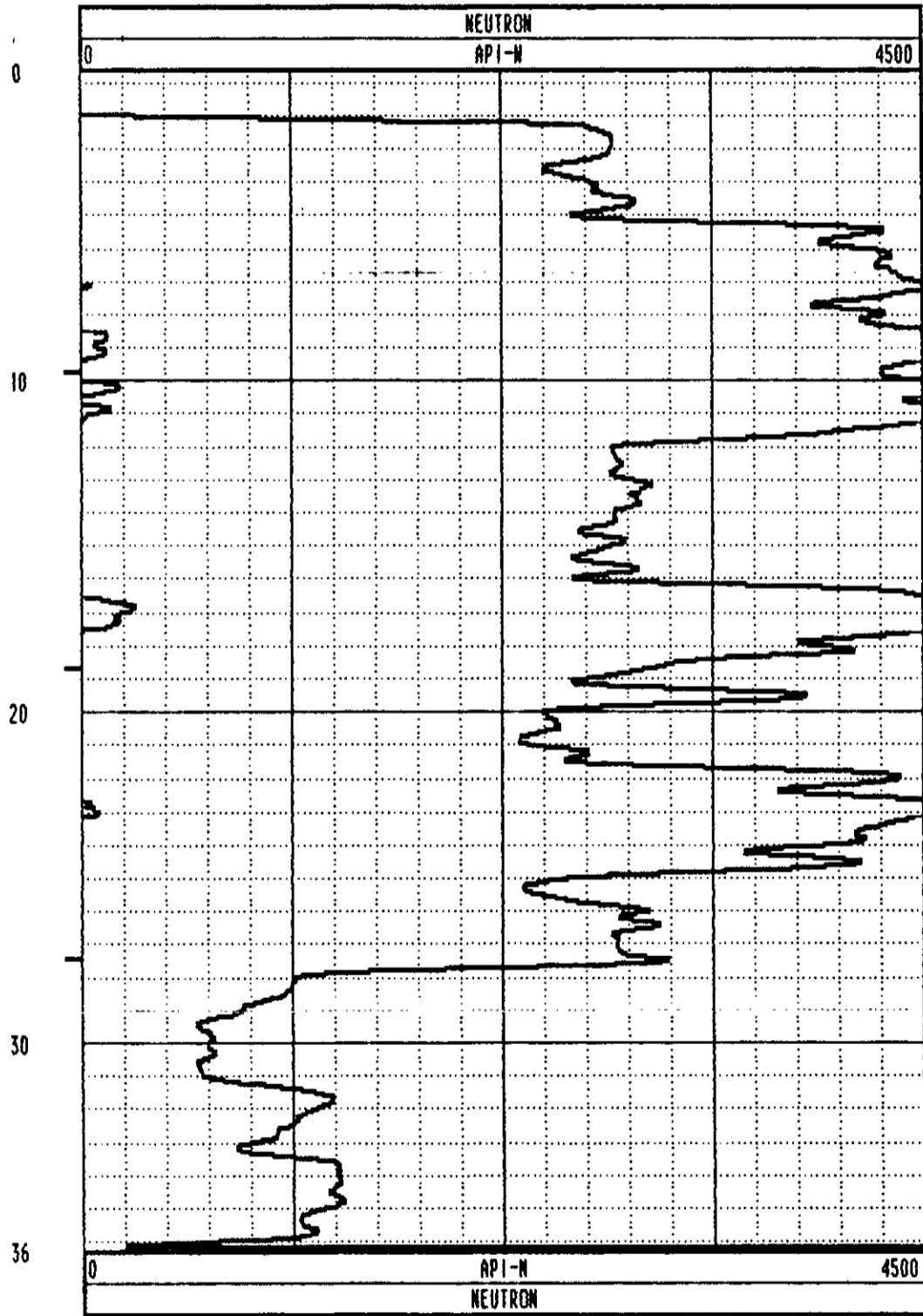
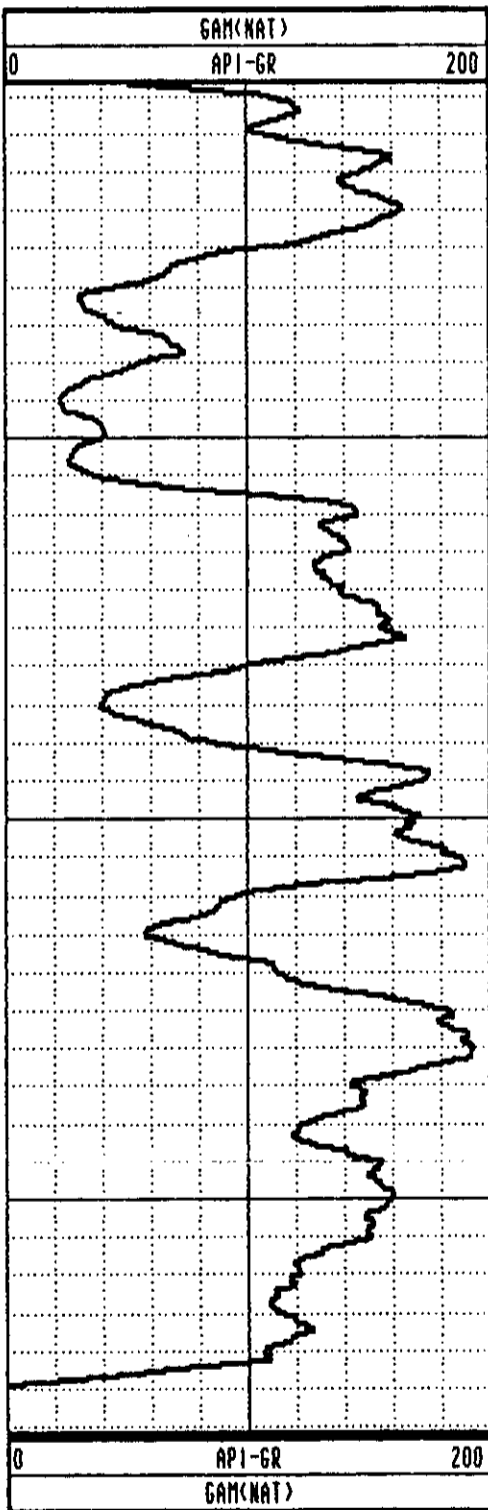
DATE : 09/27/88 PERMANENT DATUM : GL ELEVATIONS
 DEPTH DRILLER : 36.5 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 36.24 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.76 DRL MEASURED FROM: GL GL :

CASING DRILLER : 000 LOGGING UNIT : 8602
 CASING TYPE : FIELD OFFICE : CALGARY
 CASING THICKNESS: 00 RECORDED BY : R. WHITTAKER

BIT SIZE : 13.97 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 18 RM : 0 TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : 0 LOG : 4
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : 9055 12
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 40000
 REMARKS :
 OPEN HOLE

OTHER SERVICES:

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION		TOOL = 9055A	SERIAL NUMBER = 10			
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

754

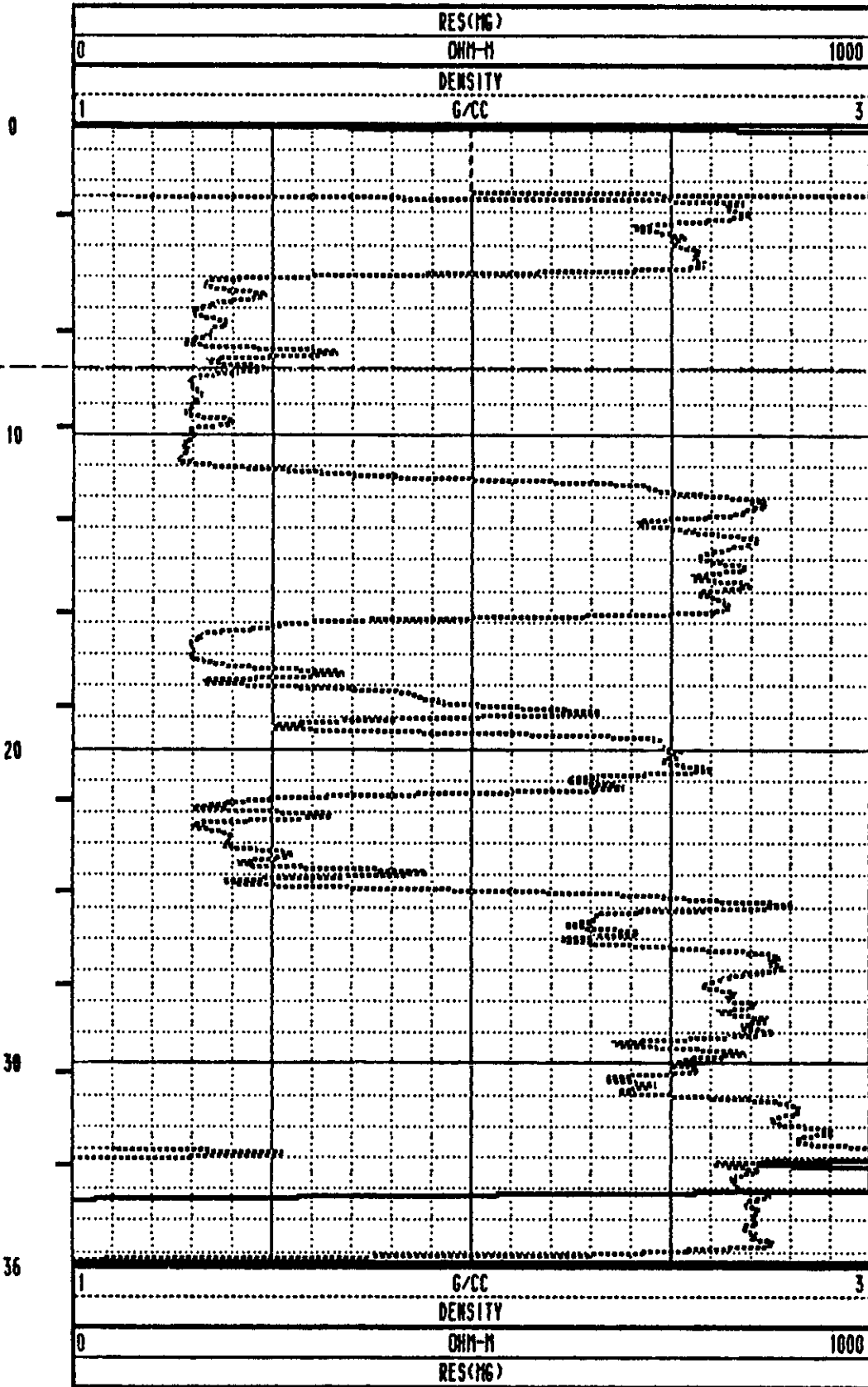
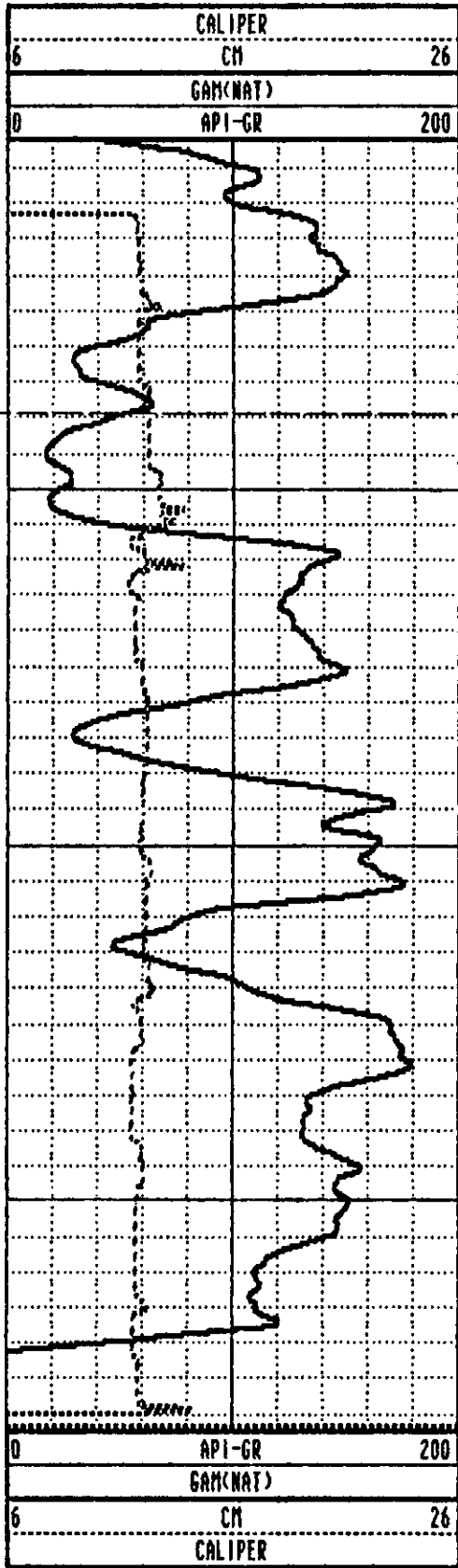


Century

BURNT RIDGE 88-06

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-06		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 09/27/88	PERMANENT DATUM	: GL ELEVATIONS
DEPTH DRILLER	: 36.5	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 36.42	LOG MEASURED FROM:	GL DF :
LOG TOP	: 0.28	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER FILE : ORIGINAL
MAGNETIC DECL.	: 18	RM	: 0 TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0 LOG : 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 PLOT : 9030 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 THRESH: 40000
REMARKS	:		
OPEN HOLE	:		

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9030AA	SERIAL NUMBER = 412		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/21/88	13:49:09	0	DENSITY	5153.000 CPS	1.106 G/CC
3	09/21/88	13:26:41	0	DENSITY	2061.000 CPS	2.120 G/CC
4	09/21/88	14:21:03	0	RES(MG)	6747.500 CPS	50.000 OHM-M
5	09/21/88	14:21:03	0	RES(MG)	67250.000 CPS	800.000 OHM-M
6	09/21/88	14:12:38	0	CALIPER	318.200 CPS	7.200 CM
7	09/21/88	14:12:38	0	CALIPER	1880.000 CPS	17.800 CM
8	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM
11	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM

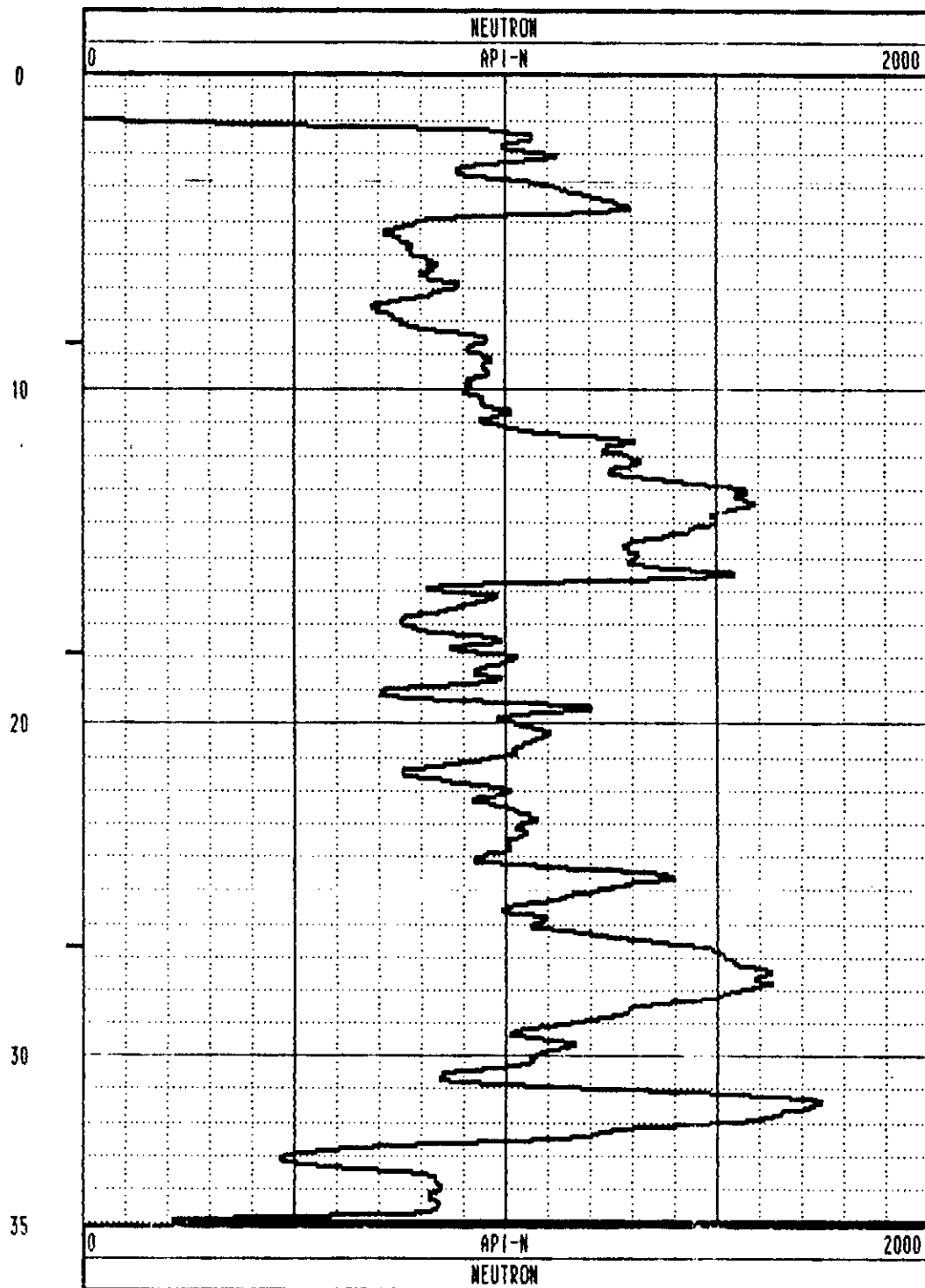
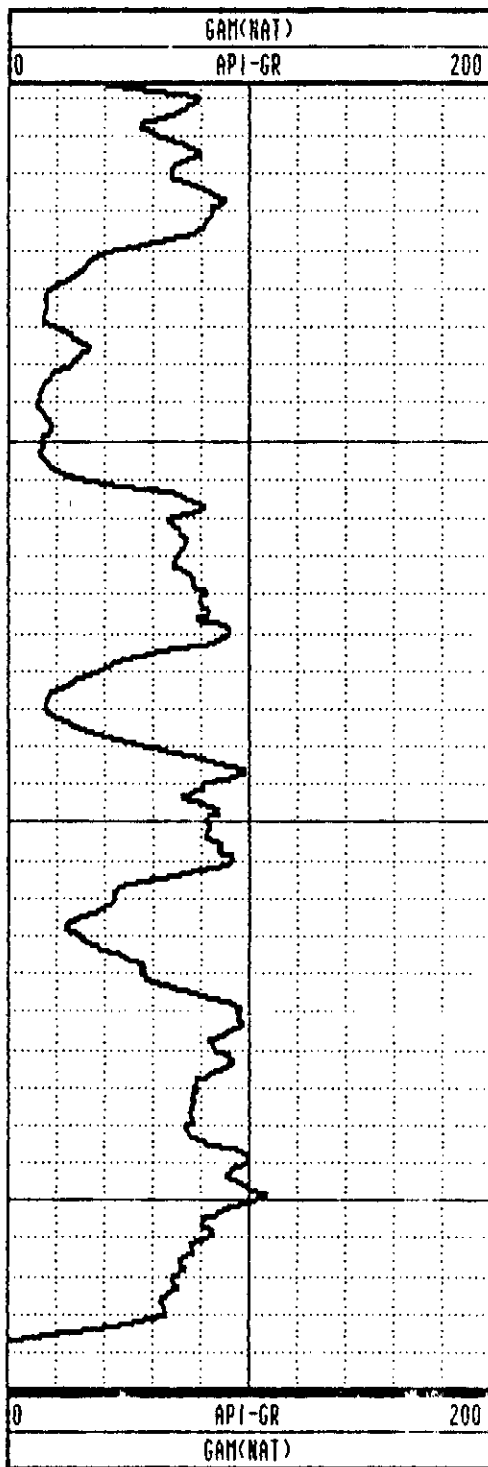


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BURNT RIDGE 88-06

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-06		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 09/27/88	PERMANENT DATUM	: GL ELEVATIONS
DEPTH DRILLER	: 36.5	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 35.02	LOG MEASURED FROM:	GL DF :
LOG TOP	: 0.74	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER FILE : ORIGINAL
MAGNETIC DECL.	: 10	RM	: 0 TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0 LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 THRESH: 40000
REMARKS	:		
THROUGH RODS	:		

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

754



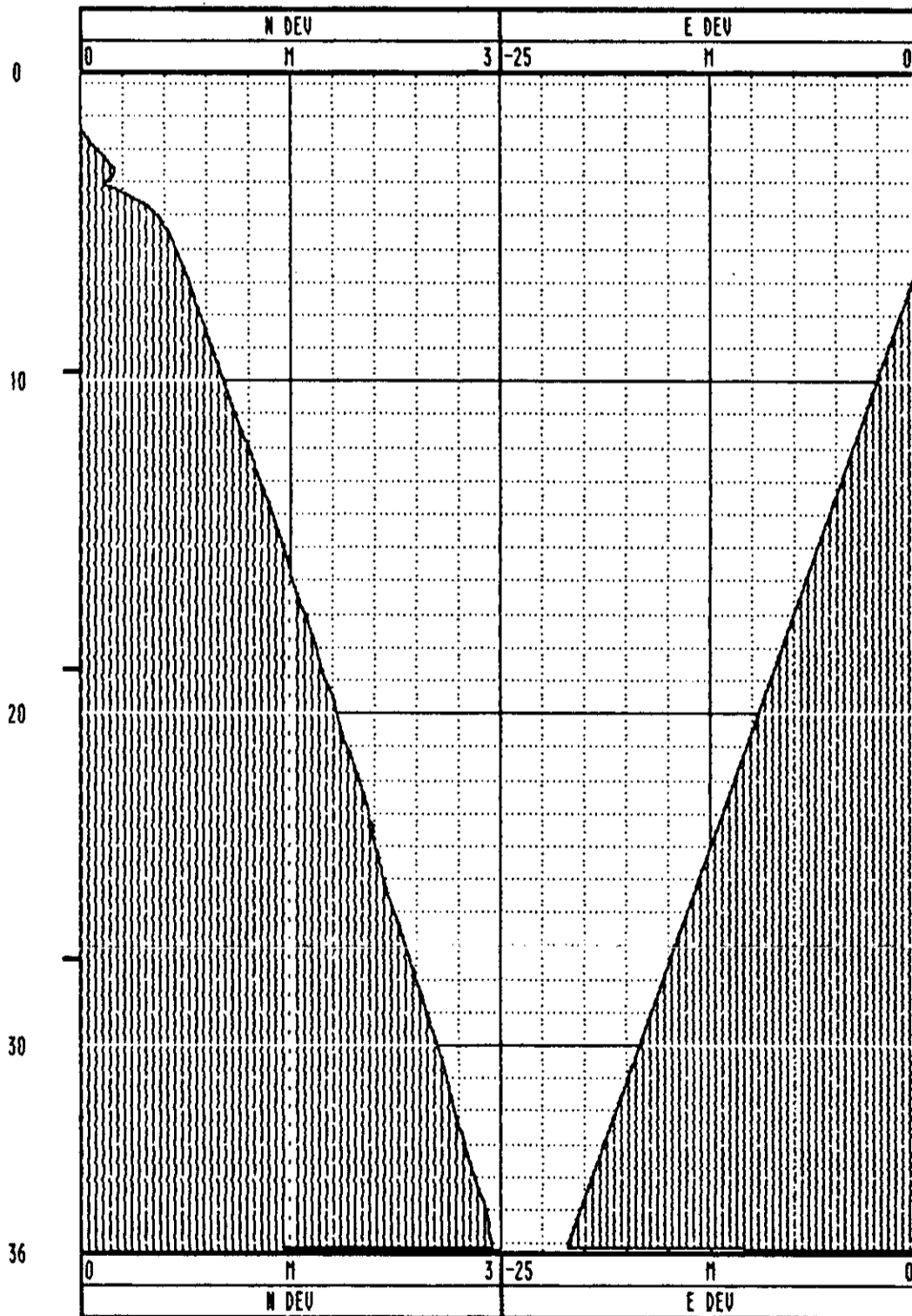
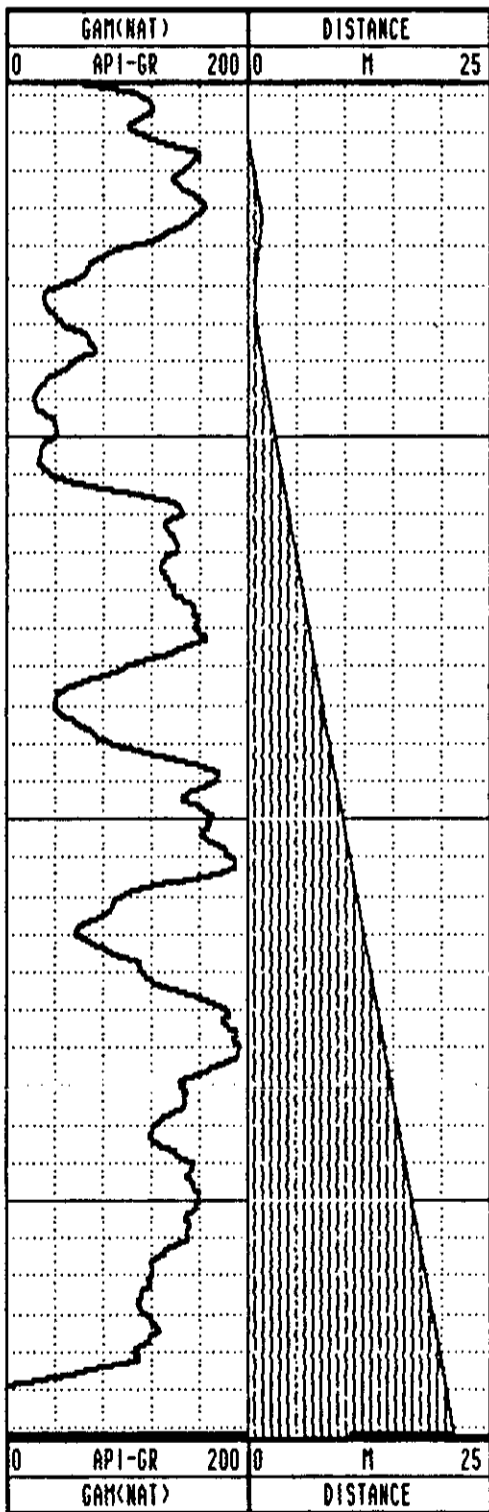
Century

BURNT RIDGE 88-06

COMPANY : CROWNEST RESOURCES
 WELL : BURNT RIDGE 88-06
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 09/27/88 PERMANENT DATUM : GL ELEVATIONS
 DEPTH DRILLER : 36.5 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 36.24 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.76 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 000 LOGGING UNIT : 8602
 CASING TYPE : FIELD OFFICE : CALGARY
 CASING THICKNESS: 00 RECORDED BY : R. WHITTAKER
 BIT SIZE : 13.97 BOREHOLE FLUID : WATER FILE : PROCESSED
 MAGNETIC DECL. : 18.000 RM : 0 TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : 0 LOG : 6
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : 9055-D 10
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 40000
 REMARKS :
 OPEN HOLE

OTHER SERVICES:

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N



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BURNT RIDGE 88-07

COMPANY : CROWNEST RESOURCES
WELL : BURNT RIDGE 88-07
LOCATION/FIELD : BURNT RIDGE
COUNTY :
STATE : BRITISH COLUMBIA
SECTION :

OTHER SERVICES:

TOWNSHIP : RANGE :

DATE : 09/23/88
DEPTH DRILLER : 140
LOG BOTTOM : 135.20
LOG TOP : 1.20

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

ELEVATIONS
KB :
DF :
GL :

CASING DRILLER : 000
CASING TYPE :
CASING THICKNESS: 00

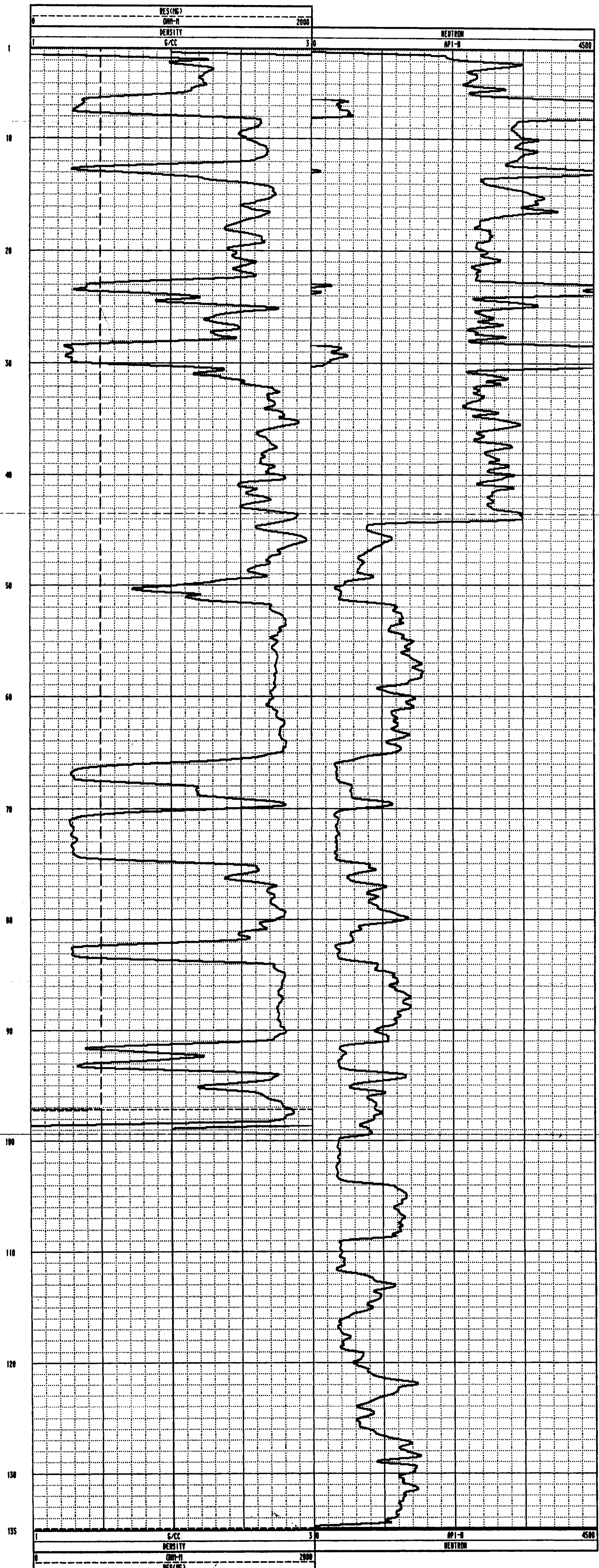
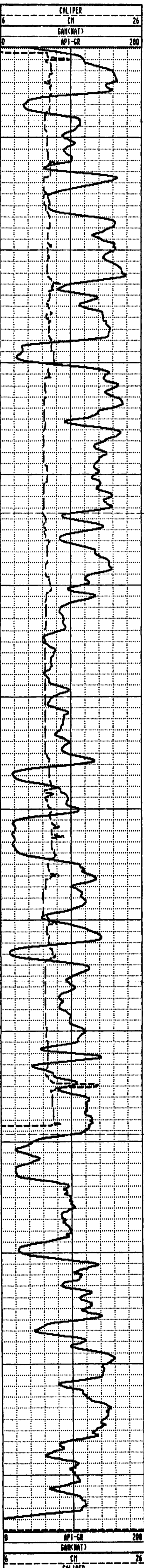
LOGGING UNIT : 8602
FIELD OFFICE : CALGARY
RECORDED BY : R. WHITTAKER

BIT SIZE : 13.97
MAGNETIC DECL. : 18
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
NEUTRON MATRIX : SANDSTONE
REMARKS :

BOREHOLE FLUID : WATER
RM : 0
RM TEMPERATURE : 0
MATRIX DELTA T : 173
FLUID DELTA T : 690

FILE : PROCESSED
TYPE : 9030AA
LOG : 6
PLOT : CNR 12
THRESH: 2500

ALL SERVICES REQUIRED SUBJECT TO COC STANDARD TERMS AND CONDITIONS



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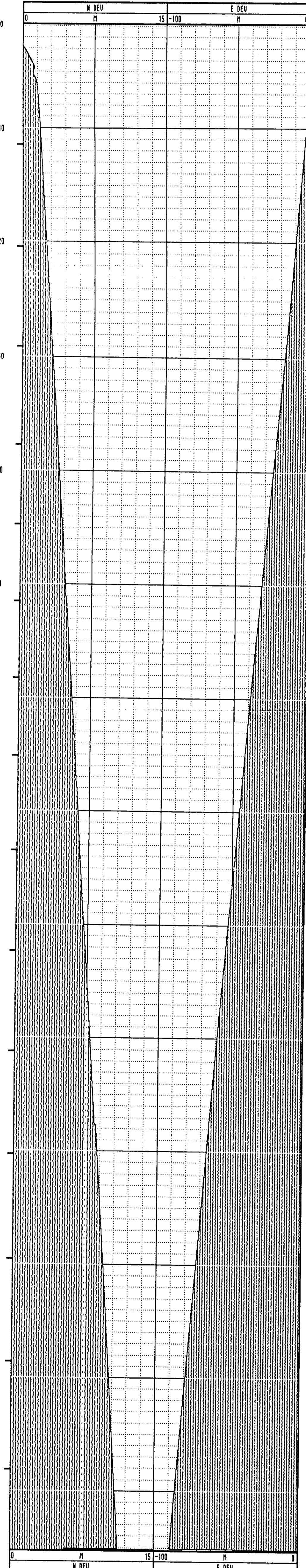
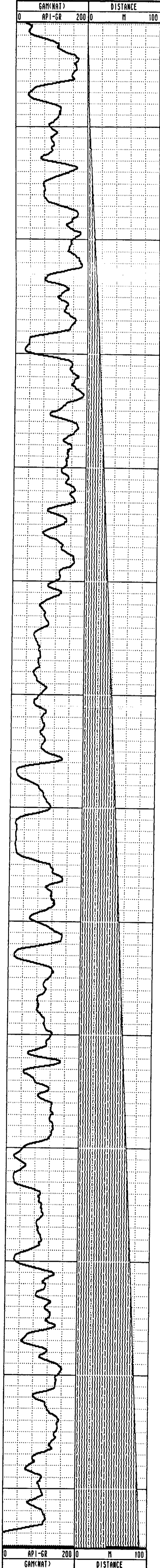


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BURNT RIDGE 88-07

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-07		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 09/20/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 140	ELEV. PERM. DATUM:	KB
LOG BOTTOM	: 135.20	LOG MEASURED FROM:	GL
LOG TOP	: 0.96	DRL MEASURED FROM:	GL
CASING DRILLER	: 000	LOGGING UNIT	: 62
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R.WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18.000	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: PROCESSED
		TYPE	: 9055A
		LOG	: 6
		PLOT	: 9055-0 10
		THRESH	: 10000

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/16/88	13:21:08	0	POROSITY	0.000 CPS	204.000 CPS
3	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
4	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
5	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
6	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
7	09/16/88	13:15:43	0	NEUTRON	0.000 CPS	0.000 API-N
8	09/16/88	13:20:30	0	NEUTRON	204.000 CPS	271.000 API-N

754

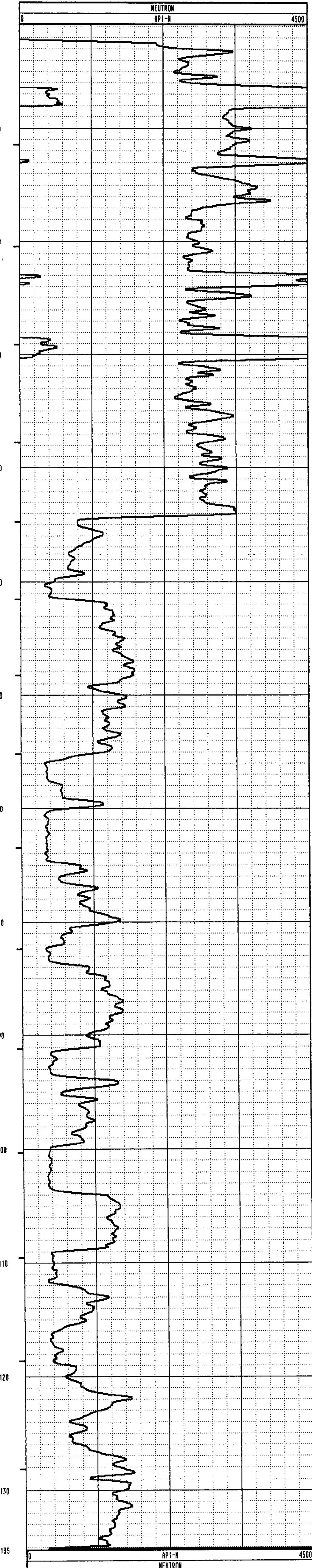
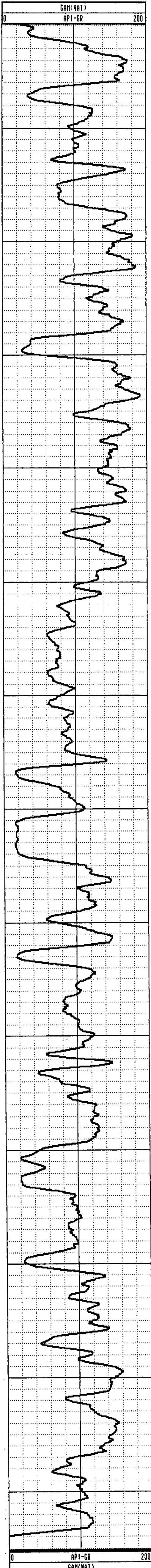


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BURNT RIDGE 88-07

COMPANY : CROWNEST RESOURCES
 WELL : BURNT RIDGE 88-07
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 09/17/88 PERMANENT DATUM : GL ELEVATIONS
 DEPTH DRILLER : 140 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 135.20 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.96 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 000 LOGGING UNIT : 62
 CASING TYPE : FIELD OFFICE : CALGARY
 CASING THICKNESS: 00 RECORDED BY : R.A. WHITTAKER
 BIT SIZE : 13.97 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 18 RM : 0 TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : 0 LOG : 0
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : 9055 12
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 10000
 REMARKS :
 O.H.

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/16/88	13:15:43	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/16/88	13:21:08	0	POROSITY	0.000 CPS	204.000 CPS
3	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
4	09/16/88	13:15:43	0	RES	0.000 CPS	0.000 OHM
5	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
6	09/16/88	13:15:43	0	SP	0.000 CPS	0.000 MV
7	09/16/88	13:15:43	0	NEUTRON	0.000 CPS	0.000 API-N
8	09/16/88	13:20:30	0	NEUTRON	204.000 CPS	271.000 API-N

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Expanded

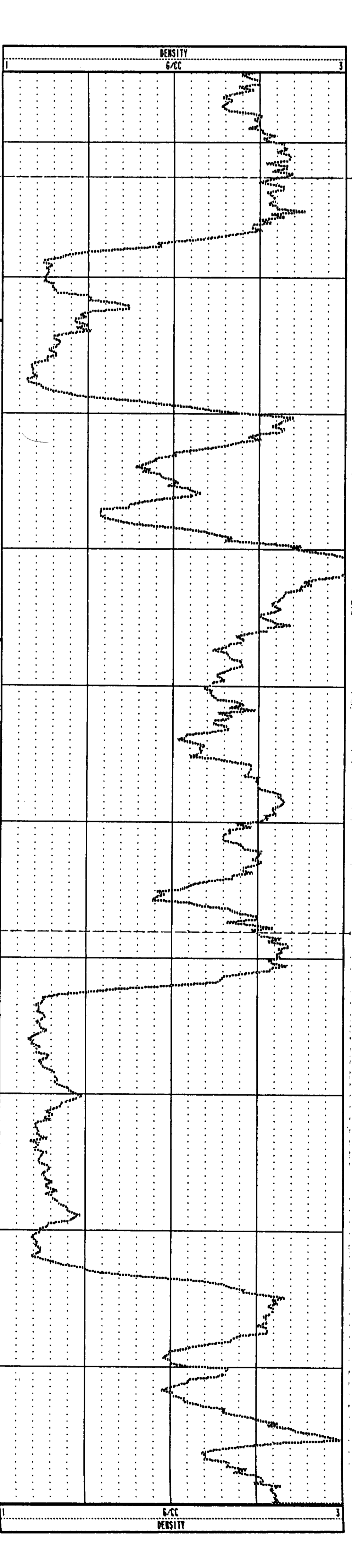
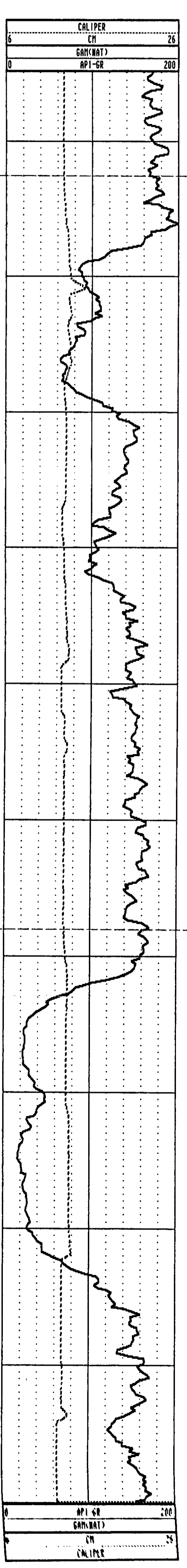
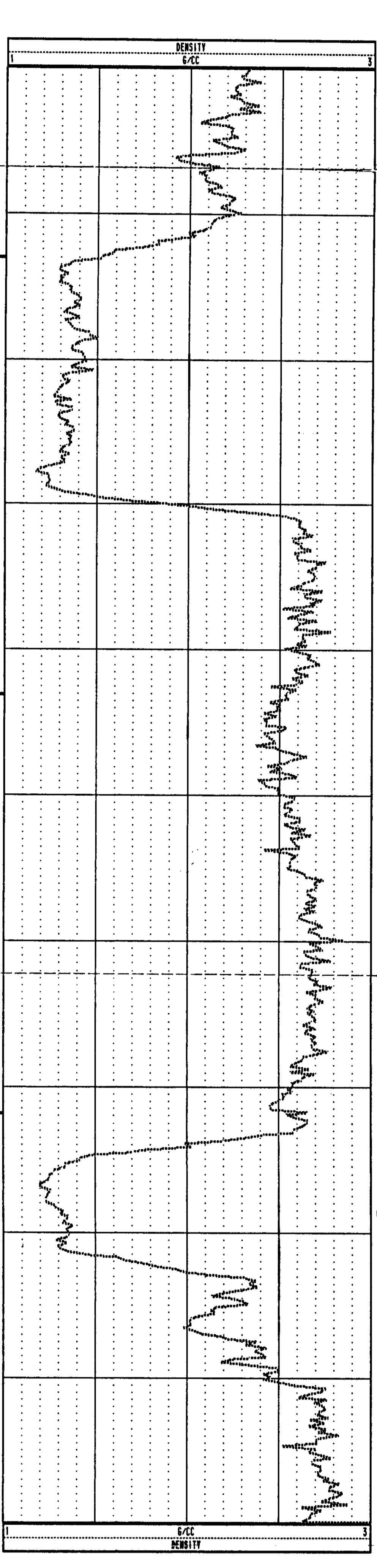
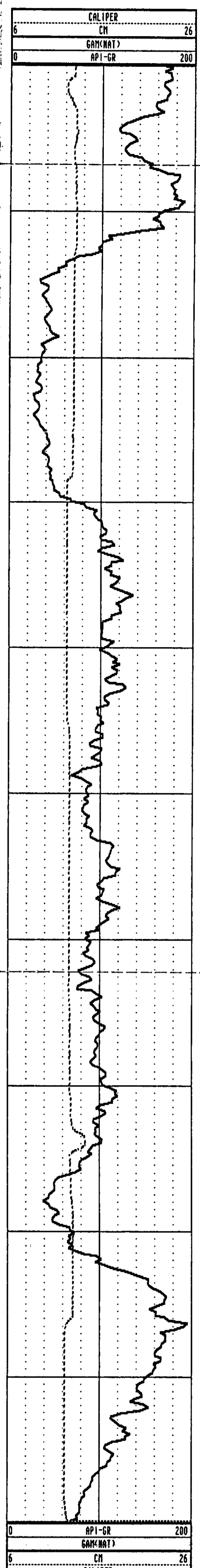


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BURNT RIDGE 88-07

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:			
WELL	: BURNT RIDGE 88-07				
LOCATION/FIELD	: BURNT RIDGE				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP : RANGE :			
DATE	: 09/22/88	PERMANENT DATUM : GL	ELEVATIONS		
DEPTH DRILLER	: 140	ELEV. PERM. DATUM:	KB :		
LOG BOTTOM	: 99.42	LOG MEASURED FROM: GL	DF :		
LOG TOP	: 0.36	DRL MEASURED FROM: GL	GL :		
CASING DRILLER	: 000	LOGGING UNIT	: 8602		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER		
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 18	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9030 13
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500
REMARKS	:				

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



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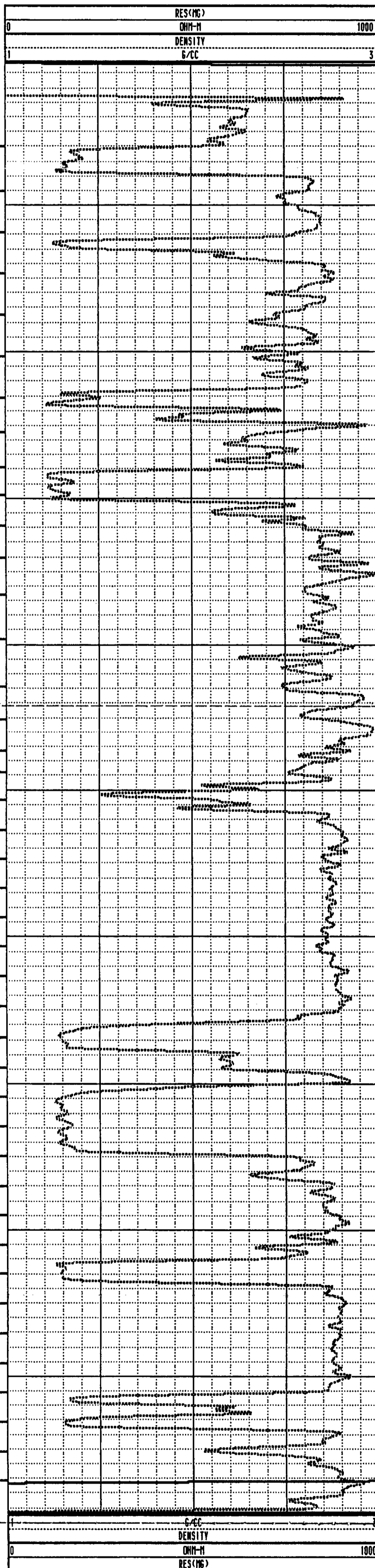
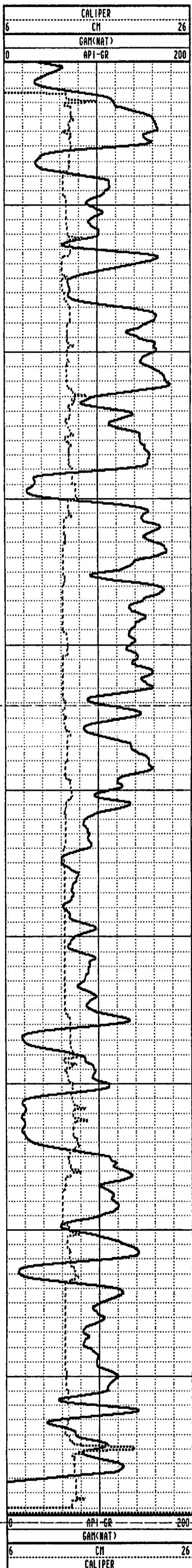


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BURNT RIDGE 88-07

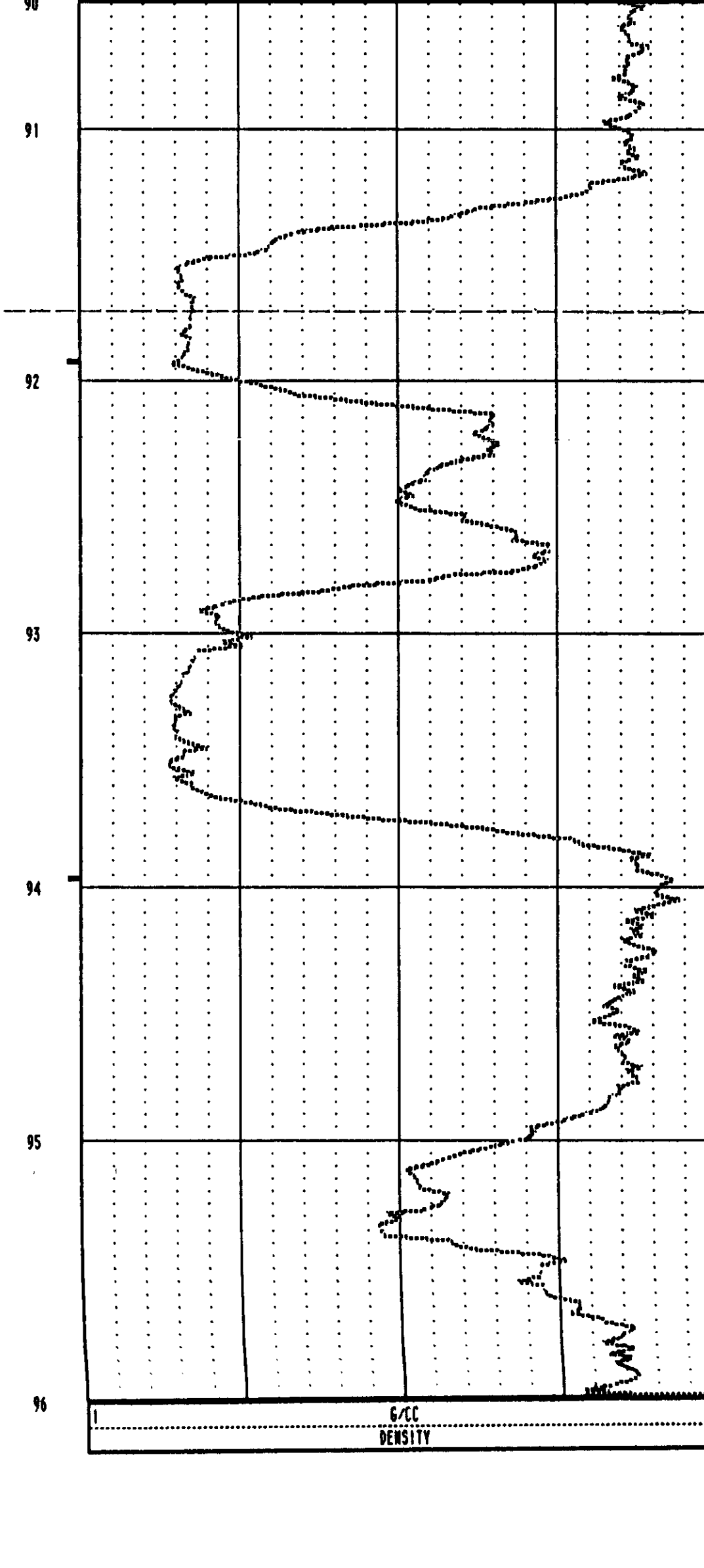
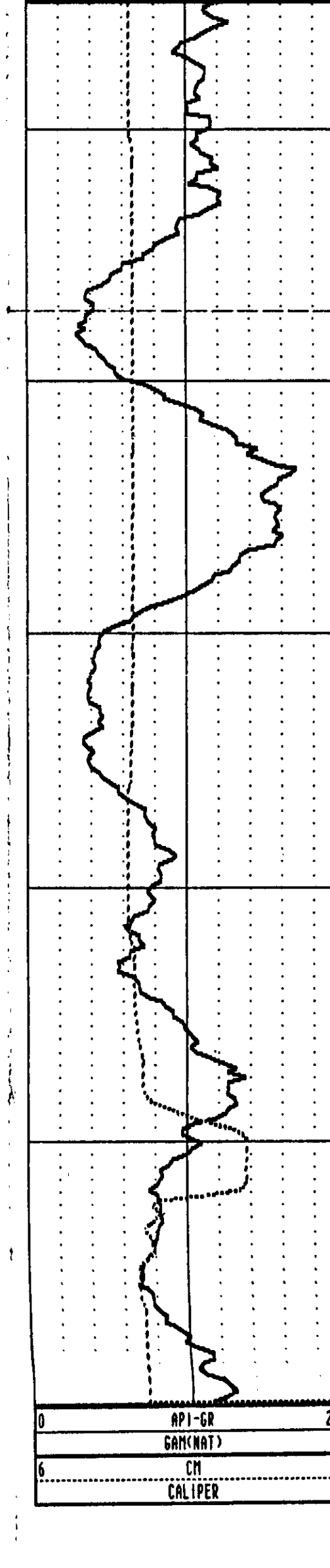
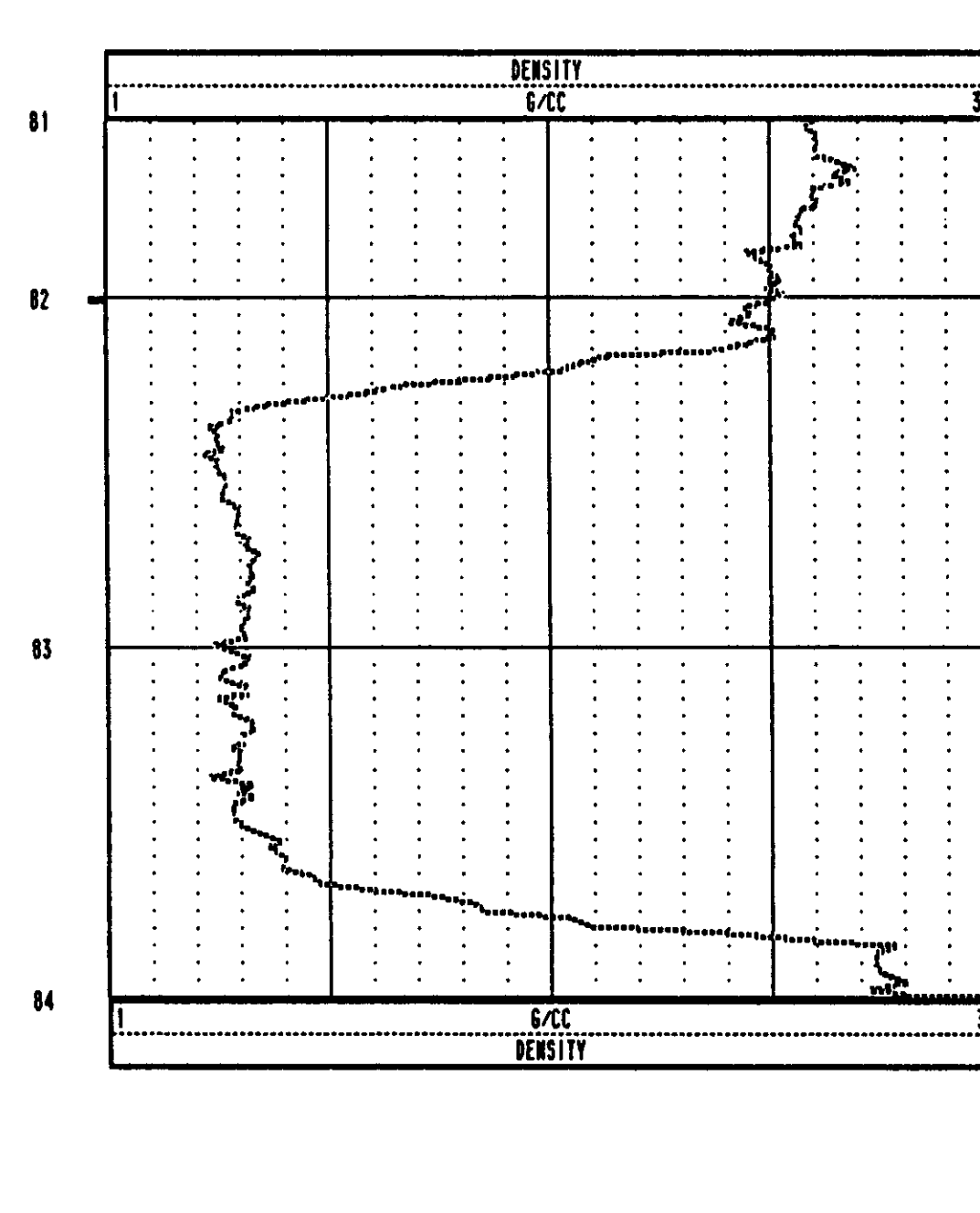
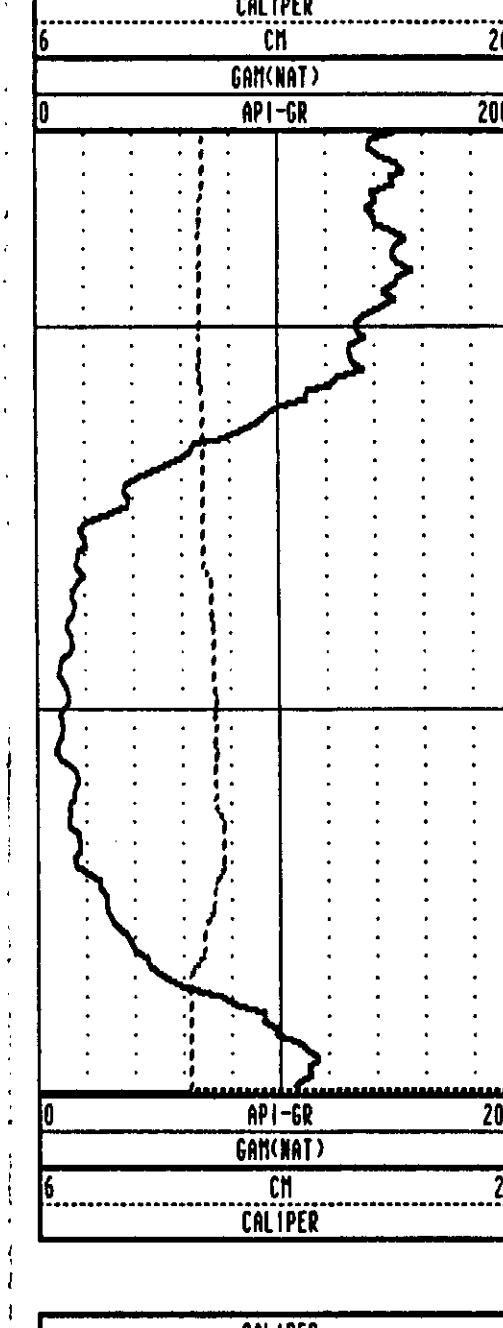
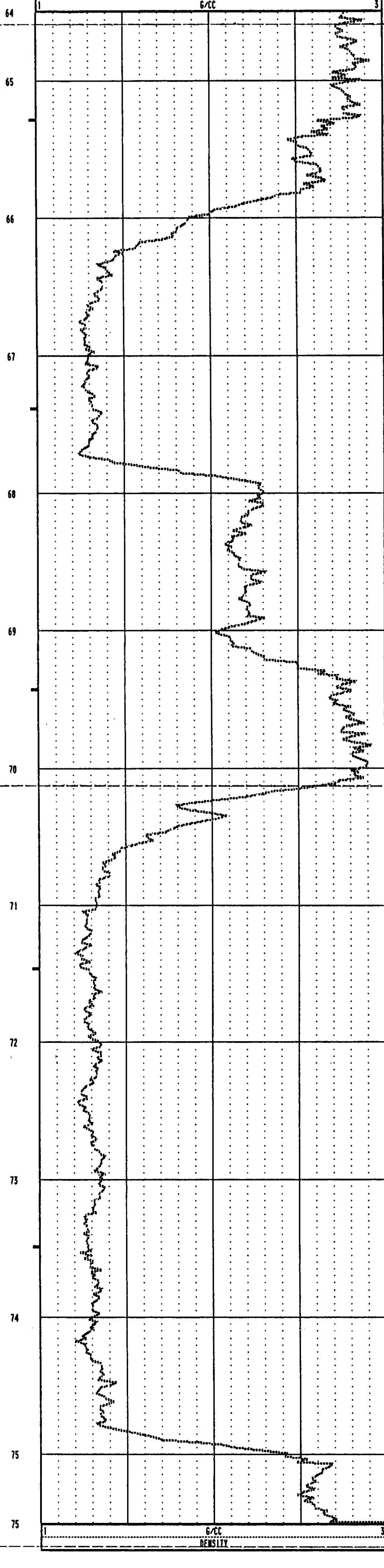
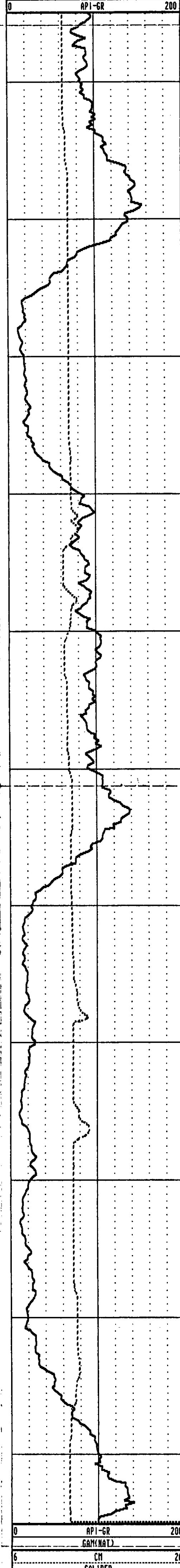
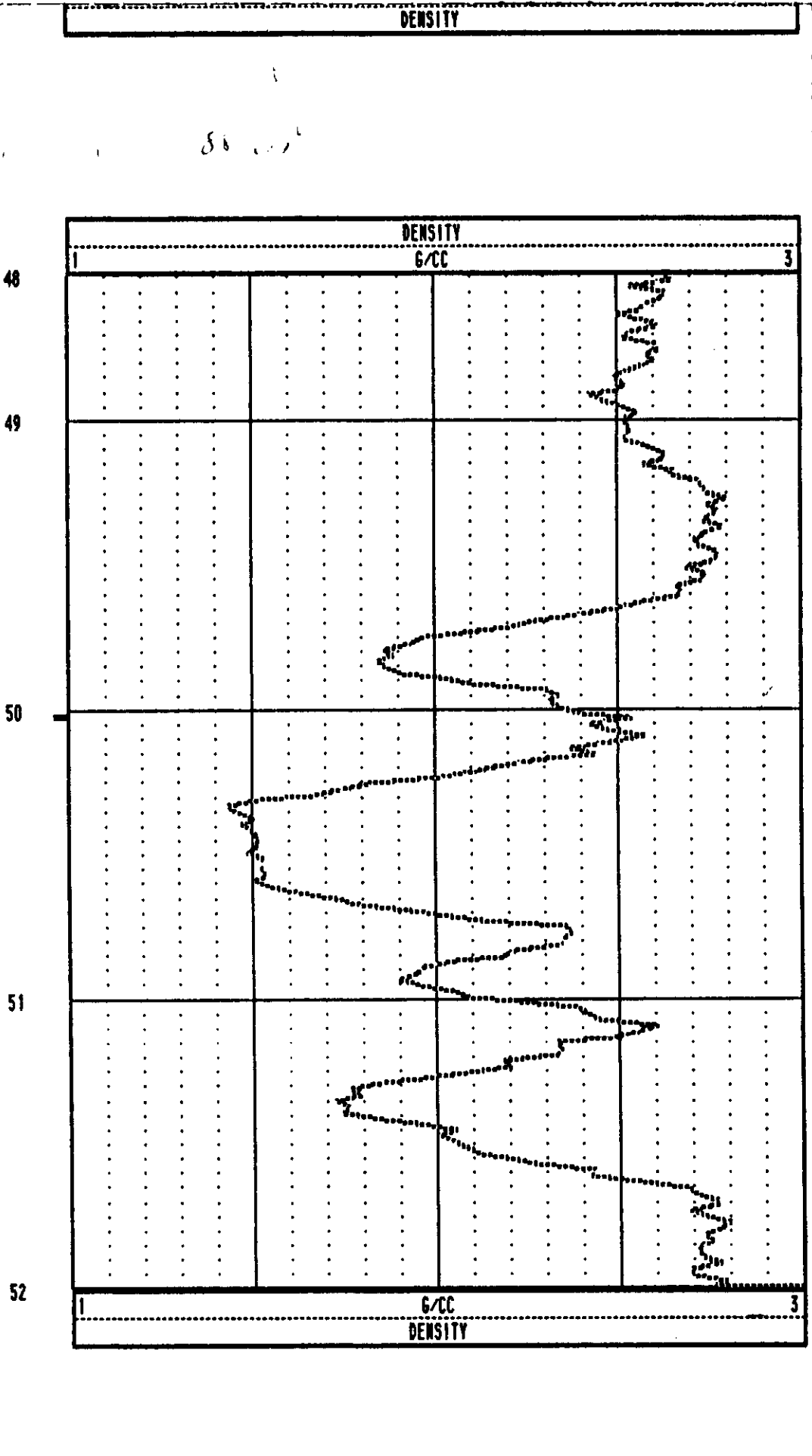
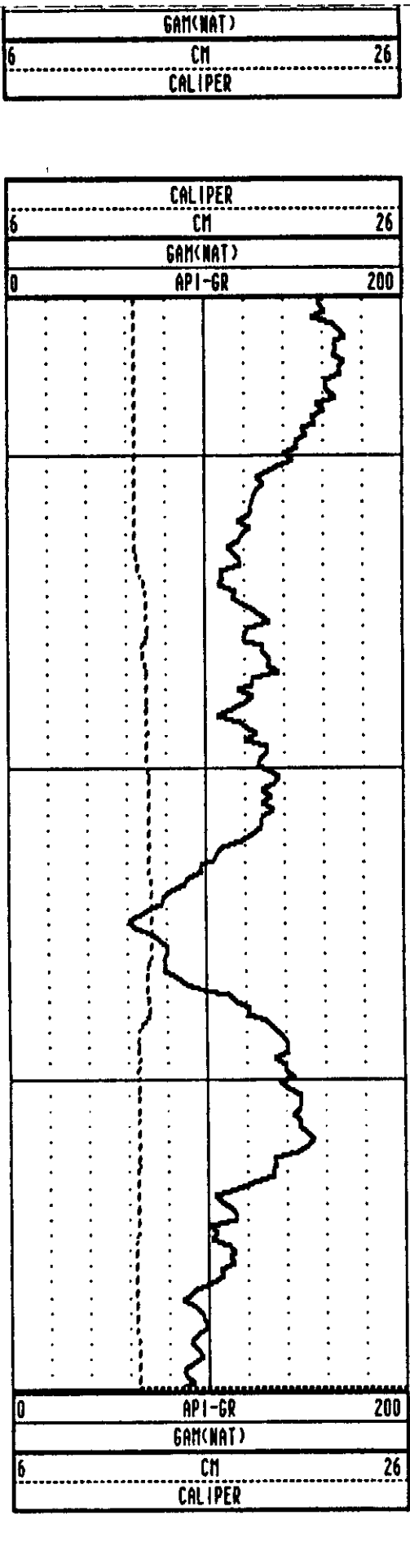
COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-07		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 09/22/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 140	ELEV. PERM. DATUM:	KB
LOG BOTTOM	: 99.42	LOG MEASURED FROM:	GL
LOG TOP	: 0.36	DRL MEASURED FROM:	GL
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
THROUGH RODS	:	TYPE	: 9030AA
		LOG	: 0
		PLOT	: 9030 12
		THRESH	: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9030AA	SERIAL NUMBER = 412		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/21/88	14:21:03	0	DENSITY	5153.000 CPS	1.106 G/CC
3	09/21/88	13:26:41	0	DENSITY	2061.000 CPS	2.120 G/CC
4	09/21/88	14:21:03	0	RES(MG)	6747.500 CPS	50.000 OHM-M
5	09/21/88	14:21:03	0	RES(MG)	67250.000 CPS	800.000 OHM-M
6	09/21/88	14:12:38	0	CALIPER	318.200 CPS	7.200 CM
7	09/21/88	14:12:38	0	CALIPER	1880.000 CPS	17.800 CM
8	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM
11	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM

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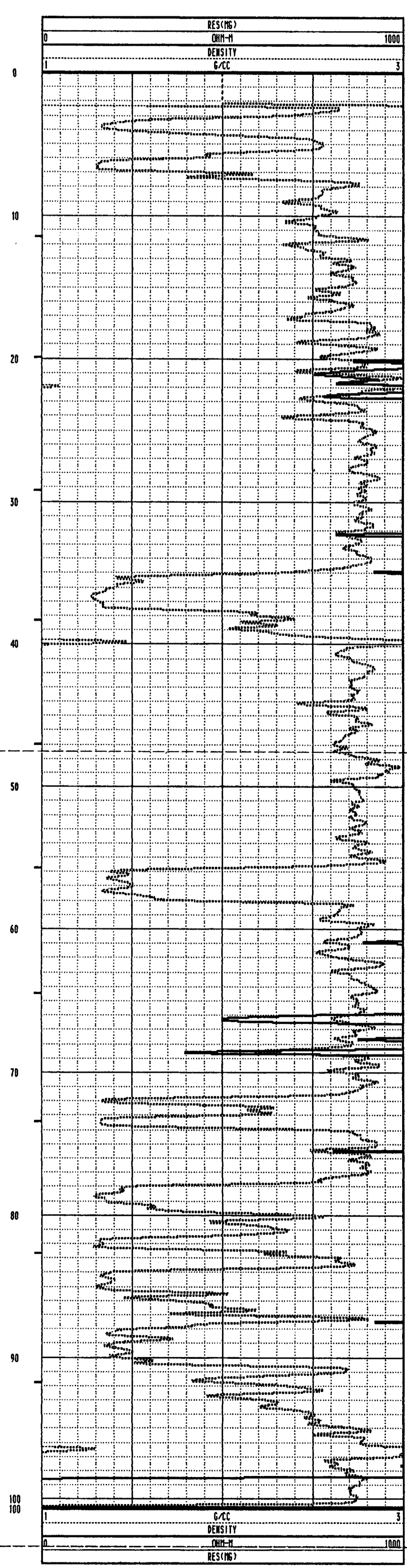
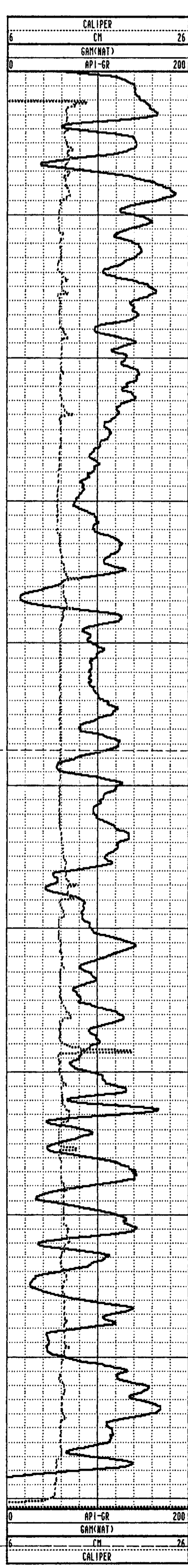


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BURNT RIDGE 88-08

COMPANY	: CROWNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88-08		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 09/27/88	PERMANENT DATUM	: GL ELEVATIONS
DEPTH DRILLER	: 100.5	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 100.64	LOG MEASURED FROM:	GL DF :
LOG TOP	: 0.08	DRL MEASURED FROM:	GL GL :
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER FILE : ORIGINAL
MAGNETIC DECL.	: 18	RM	: 0 TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0 LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 PLOT : 9030 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 THRESH: 40000
REMARKS	:		
OPEN HOLE	:		

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TOOL CALIBRATION			TOOL = 9030AA	SERIAL NUMBER = 412		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/21/88	12:43:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/21/88	13:49:09	0	DENSITY	5153.000 CPS	1.106 G/CC
3	09/21/88	13:26:41	0	DENSITY	2061.000 CPS	2.120 G/CC
4	09/21/88	14:21:03	0	RES(MG)	6747.500 CPS	50.000 OHM-M
5	09/21/88	14:21:03	0	RES(MG)	67250.000 CPS	800.000 OHM-M
6	09/21/88	14:12:38	0	CALIPER	318.200 CPS	7.200 CM
7	09/21/88	14:12:38	0	CALIPER	1880.000 CPS	17.800 CM
8	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/21/88	12:43:23	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM
11	09/21/88	12:43:23	0	CALIPERL	0.000 CPS	0.000 CM

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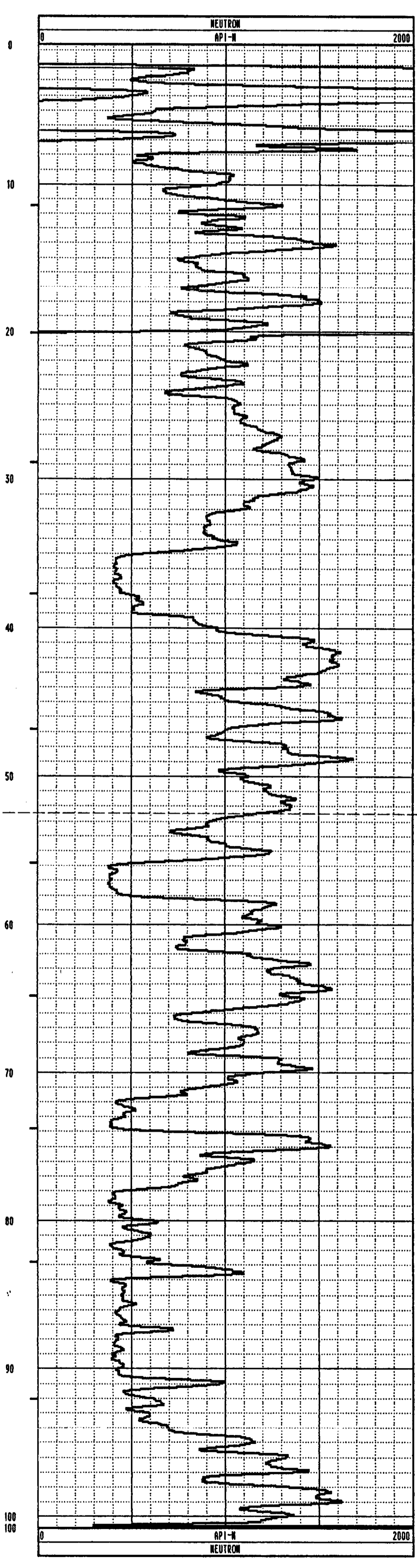
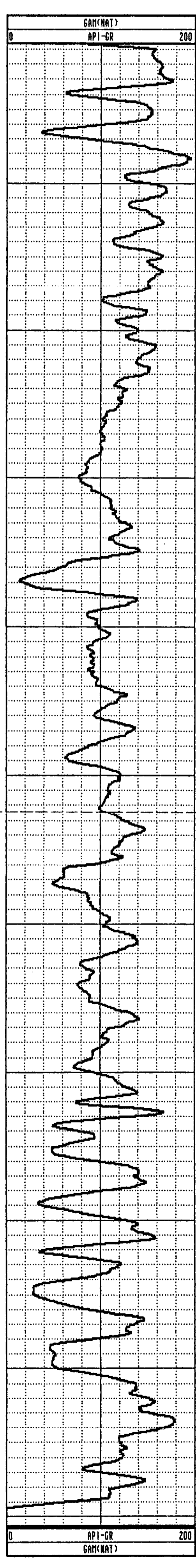


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BURNT RIDGE 88-08

COMPANY : CROWNSNEST RESOURCES
 WELL : BURNT RIDGE 88-08
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :
 DATE : 09/27/88 PERMANENT DATUM : GL ELEVATIONS
 DEPTH DRILLER : 100.5 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 100.72 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.72 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 000 LOGGING UNIT : 8602
 CASING TYPE : FIELD OFFICE : CALGARY
 CASING THICKNESS: 00 RECORDED BY : R. WHITTAKER
 BIT SIZE : 13.97 BOREHOLE FLUID : WATER FILE : ORIGINAL
 MAGNETIC DECL. : 18 RM : 0 TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : 0 LOG : 1
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : 9055 12
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 40000
 REMARKS :
 OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

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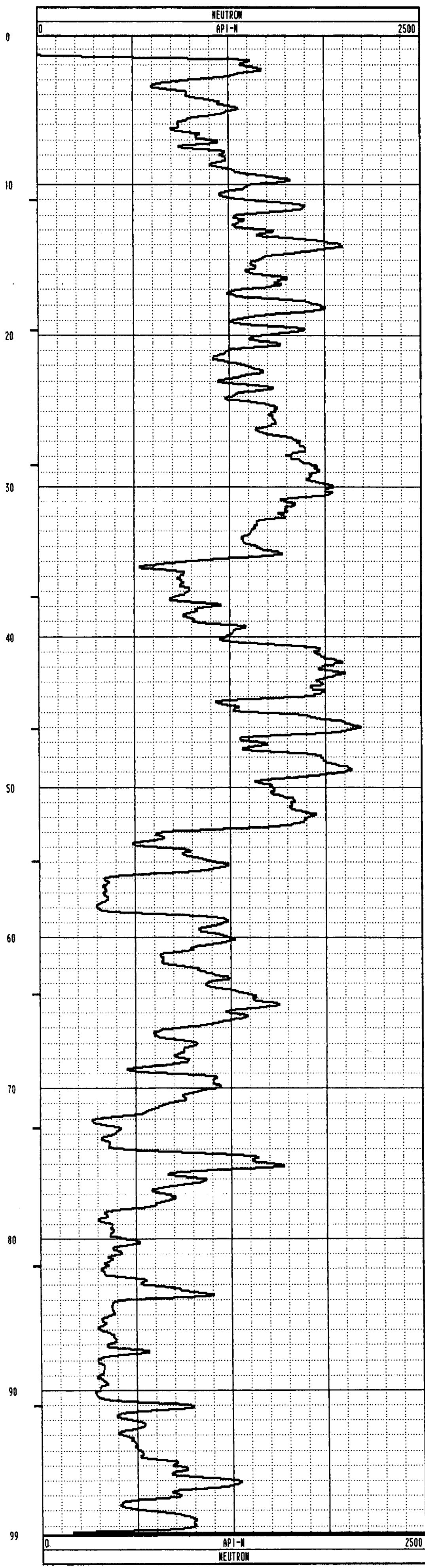
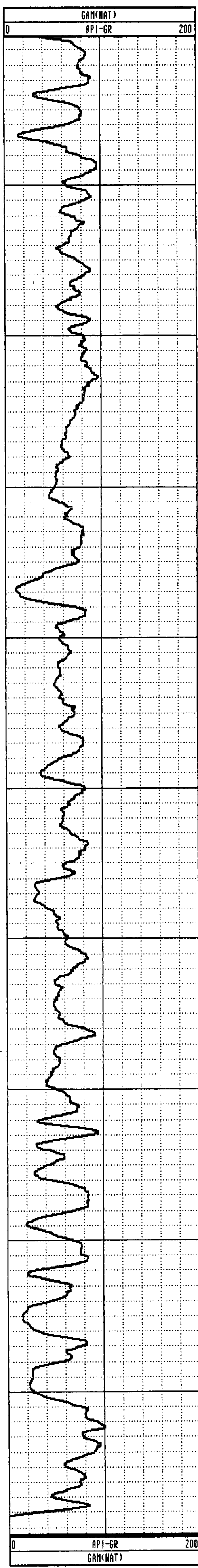


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BURNT RIDGE 88 08

COMPANY	: CROWSNEST RESOURCES	OTHER SERVICES:	
WELL	: BURNT RIDGE 88:08		
LOCATION/FIELD	: BURNT RIDGE		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	:
		RANGE	:
DATE	: 09/26/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 100.5	ELEV. PERM. DATUM:	KB
LOG BOTTOM	: 99.56	LOG MEASURED FROM:	GL
LOG TOP	: 0.18	DRL MEASURED FROM:	GL
CASING DRILLER	: 000	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS:	00	RECORDED BY	: R. WHITTAKER
BIT SIZE	: 13.97	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 18	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:	FILE	: ORIGINAL
THROUGH RODS	:	TYPE	: 9055A
		LOG	: 0
		PLOT	: 9055 12
		THRESH	: 40000

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TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 DHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 DHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

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BURNT RIDGE 88-08

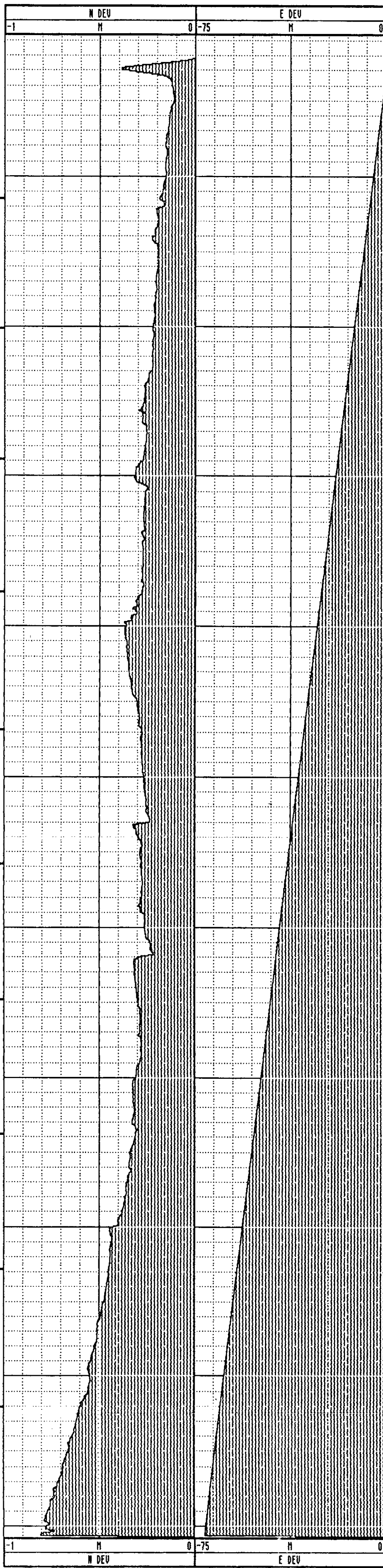
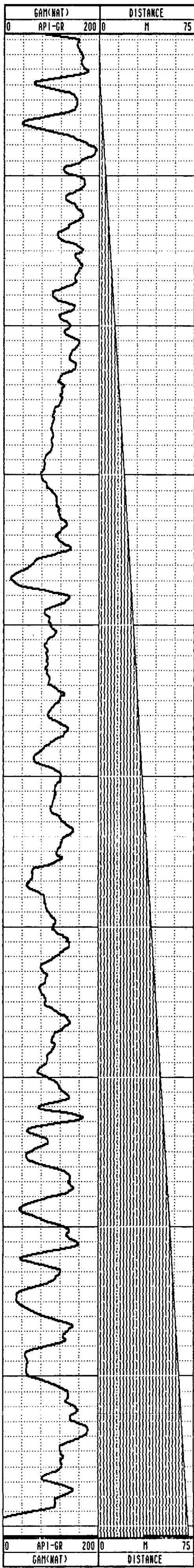
COMPANY : CROWNEST RESOURCES
 WELL : BURNT RIDGE 88-08
 LOCATION/FIELD : BURNT RIDGE
 COUNTY :
 STATE : BRITISH COLUMBIA
 SECTION : TOWNSHIP : RANGE :

OTHER SERVICES:

DATE : 09/27/88 PERMANENT DATUM : GL ELEVATIONS
 DEPTH DRILLER : 100.5 ELEV. PERM. DATUM: KB :
 LOG BOTTOM : 100.72 LOG MEASURED FROM: GL DF :
 LOG TOP : 0.72 DRL MEASURED FROM: GL GL :
 CASING DRILLER : 000 LOGGING UNIT : 8602
 CASING TYPE : FIELD OFFICE : CALGARY
 CASING THICKNESS: 00 RECORDED BY : R. WHITTAKER

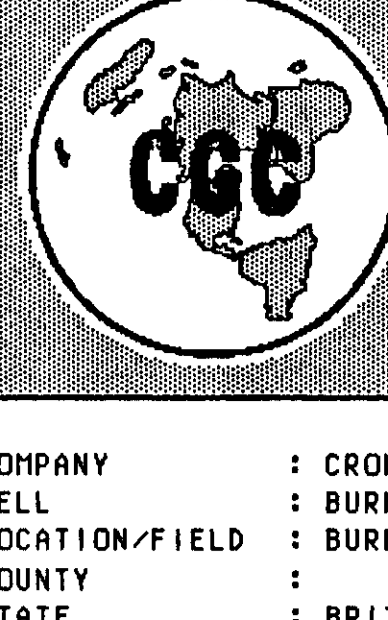
BIT SIZE : 13.97 BOREHOLE FLUID : WATER FILE : PROCESSED
 MAGNETIC DECL. : 18.000 RM : 0 TYPE : 9055A
 MATRIX DENSITY : 2.68 RM TEMPERATURE : 0 LOG : 5
 FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : 9055-D 10
 NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 40000
 REMARKS :
 OPEN HOLE

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TOOL CALIBRATION			TOOL = 9055A	SERIAL NUMBER = 10		
CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/18/88	23:37:30	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/18/88	23:41:44	0	POROSITY	0.000 CPS	204.000 CPS
3	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
4	09/18/88	23:37:30	0	RES	0.000 CPS	0.000 OHM
5	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
6	09/18/88	23:37:30	0	SP	0.000 CPS	0.000 MV
7	09/18/88	23:42:17	0	NEUTRON	204.000 CPS	271.000 API-N
8	09/18/88	23:37:30	0	NEUTRON	0.000 CPS	0.000 API-N

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BURNT RIDGE 88-08

COMPANY : CROWSNEST RESOURCES	OTHER SERVICES:	
WELL : BURNT RIDGE 88-08		
LOCATION/FIELD : BURNT RIDGE		
COUNTY :		
STATE : BRITISH COLUMBIA		
SECTION :	TOWNSHIP : RANGE :	
DATE : 09/27/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER : 100.5	ELEV. PERM. DATUM: KB :	
LOG BOTTOM : 100.64	LOG MEASURED FROM: GL	DF :
LOG TOP : 0.08	DRL MEASURED FROM: GL	GL :
CASING DRILLER : 000	LOGGING UNIT : 8602	
CASING TYPE :	FIELD OFFICE : CALGARY	
CASING THICKNESS: 00	RECORDED BY : R. WHITTAKER	
BIT SIZE : 13.97	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL. : 18	RM : 0	TYPE : 9030AA
MATRIX DENSITY : 2.68	RM TEMPERATURE : 0	LOG : 0
FLUID DENSITY : 1.0	MATRIX DELTA T : 173	PLOT : 9030 13
NEUTRON MATRIX : SANDSTONE	FLUID DELTA T : 690	THRESH: 40000
REMARKS :		
OPEN HOLE		

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