GM 47147

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT ON THE BOUSQUET TOWNSHIP PROPERTY

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Date: 25 AOUT 1988
No G.M.: 47147

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL

REPORT ON THE

BOUSQUET TOWNSHIP PROPERTY

BOUSQUET LAKE AREA

ROUYN-NORANDA, QUEBEC

NTS : 32 - D / 2

W.Longitude 78^0 37' 00" N.Latitude 48^0 12' 30"

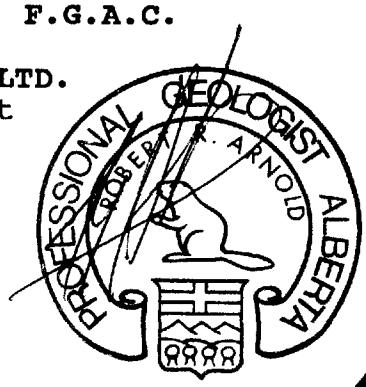
FOR

KENDRA GOLD RESOURCES LTD.
Suite 300 - 800 West Pender Street
Vancouver, B.C.
V6C 2V8

BY

ROBERT R. ARNOLD, M.Sc., P.Geol., F.G.A.C.

HI-TEC RESOURCE MANAGEMENT LTD.
1500-609 Granville Street
Vancouver, B.C.
V7Y 1G5



JUNE 17, 1988

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1.0 SUMMARY

Pursuant to a request by the Directors of Kendra Gold Resources Ltd., a program consisting of geological mapping, geochemical sampling and ground geophysical UTEM surveying was carried out on the Bousquet Township property. The writer visited the property in June 1988 and researched the literature pertaining to the area.

The property, consisting of 40 contiguous claims, is located approximately 28 kilometers east of Rouyn-Noranda, Quebec, and 80 kilometers west of Val d'Or, Quebec. Access to the claims is gained by two wheel vehicle along Highway No. 117, then by an all-weather gravel road to the northern shore of Lake Bousquet. From there, a boat or a skidoo is used to reach the central claims area.

The area has been explored intermittently since the late 1920's when prospectors were attracted to the region by the Horne discovery in the Rouyn-Noranda area. Since then several gold and copper mines have been developed in the general area. At the present time, two mines are in production in the general property area: the Doyon Mine which produced over 528,725 oz gold since 1979 and the Thompson-Bousquet Mine which produced since the same time over 328,230 oz gold.

The property is located in the southern part of the Abitibi greenstone belt, just south of the Larder-Cadillac shear zone. The claims are underlain by two main rock types: Sedimentary rocks, mainly greywacke, of the Archean Pontiac Group and basic volcanic rocks of the Archean Blake River Group. The sedimentary rocks form an east-west band which separate the



volcanics. Several quartz veins and veinlets were recognized in every rock type and minor disseminated pyrite was found locally.

Fourteen rock grab samples have been collected within the surveyed area. Due to the lack of outcrops, no base metal and/or precious metal trends were delineated within the surveyed area. However encouraging base metal anomalies, especially for nickel, were recorded in several locations.

The UTEM survey showed very interesting features within the surveyed area. Several strong to weak conductive zones have been delineated. The most prominent conductor (Zone A) has an east-west strike extension of at least 600 meters and J. MacNae and B. Felix, geophysicists, proposed two diamond drill holes to test this conductive zone. Another conductor (Zone C) also warrants diamond drill testing.

In order to fully evaluate the mineral and economic potential of the Kendra Gold Resources Ltd. property and to delineate the source and nature of the geophysical anomalies established during past and present surveys, further exploration work is fully warranted. The exploration program should consist of additional geological mapping, trenching and stripping, and initial exploratory diamond drilling. The UTEM conductive zones should be diamond drill tested according to J. MacNae's and B. Felix's recommendations (See Appendix IV).

Dependent upon positive results of the preliminary diamond drilling program and upon a review of the data, a systematic diamond drilling program should be

established to define the geometry and grade characteristics of any identified mineralization.

2.0 INTRODUCTION

2.1 OBJECTIVES

Pursuant to a request by the Directors of Kendra Gold Resources Ltd., geological examination, geochemical sampling and ground geophysical UTEM surveying were carried out on the Bousquet Township property by Hi-Tec Resource Management Ltd.

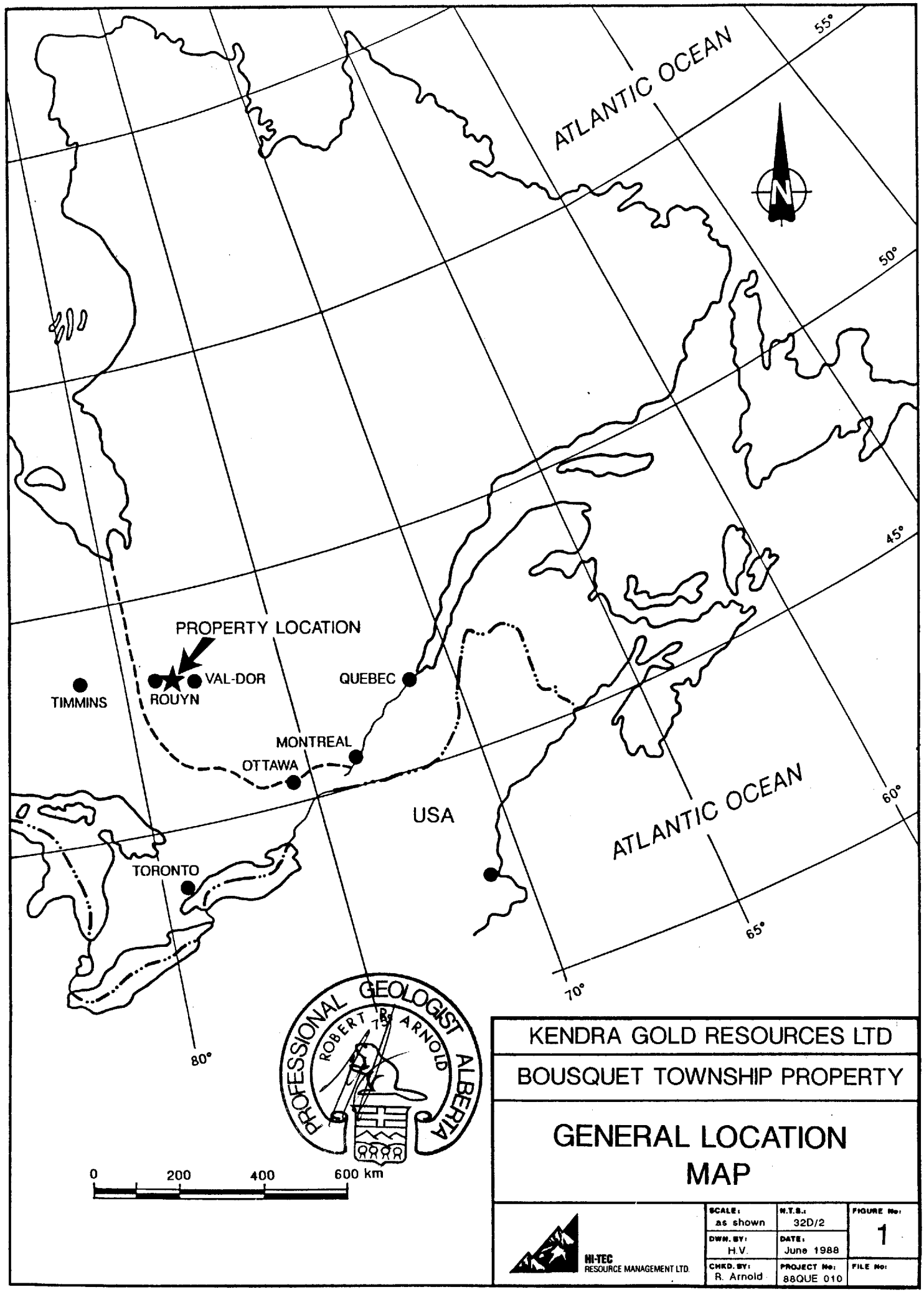
The purpose of the exploration program was to evaluate the precious metal and/or base metal potential of the claims and to propose an exploration program designed to test this potential.

This report is based on the results of the geological, geochemical and geophysical surveys conducted during the spring of 1988 and on the available literature pertaining to the area. The writer supervised the various surveys and visited the property during the month of June 1988.

2.2 LOCATION AND ACCESS

Province:	Quebec
Area:	Bousquet Lake
Township:	Bousquet
NTS:	32 - D / 2
Longitude:	78 degrees 37' 00" West
Latitude:	48 degrees 12' 00" North
Size of Area:	596 hectares (1472.69 acres)
Disposition Holders:	Kendra Gold Resources Ltd.





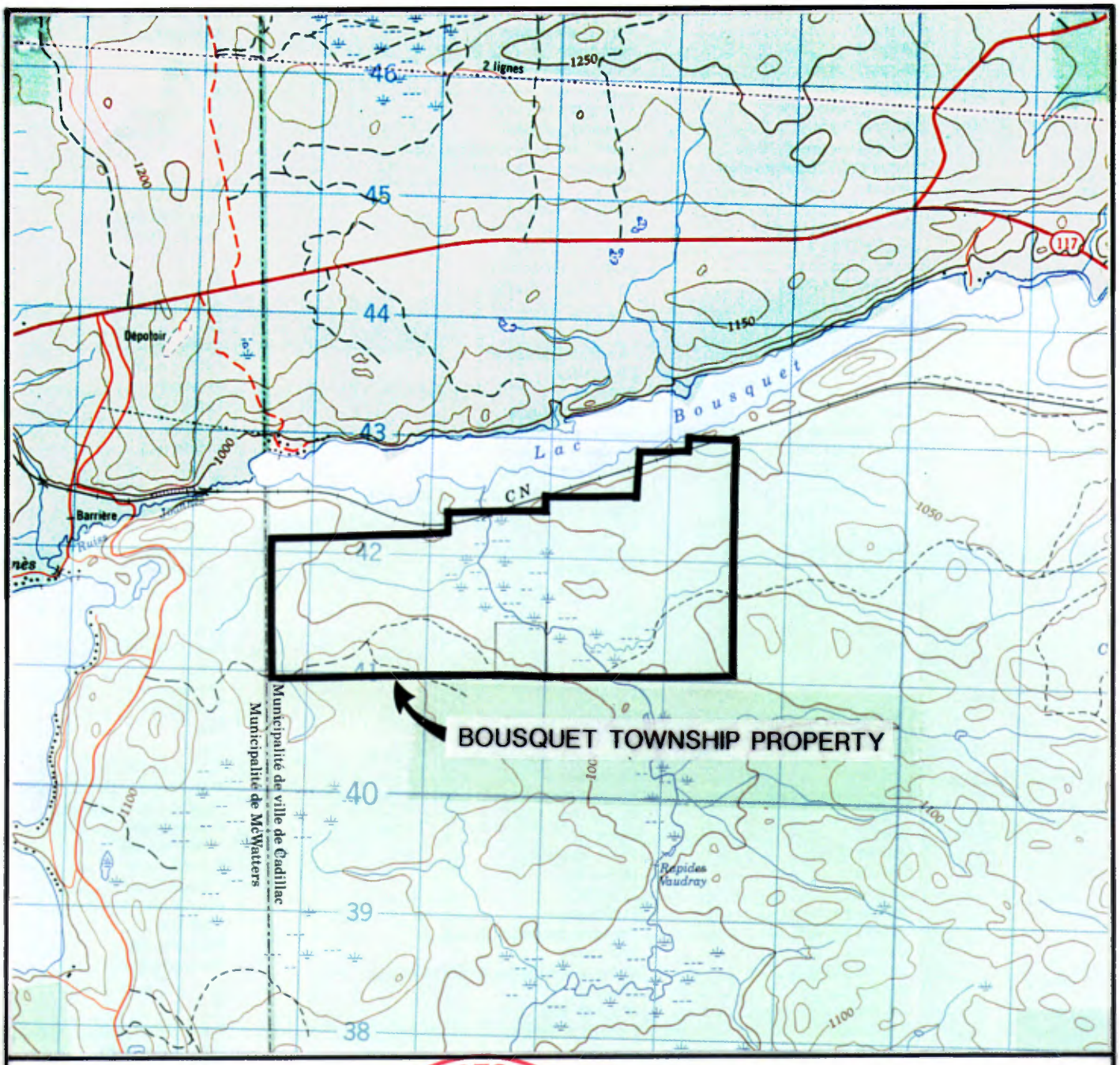
KENDRA GOLD RESOURCES LTD

BOUSQUET TOWNSHIP PROPERTY

GENERAL LOCATION MAP

HI-TEC RESOURCE MANAGEMENT LTD.

SCALE: as shown	N.T.S.: 32D/2	FIGURE No: 1
DWN. BY: H.V.	DATE: June 1988	
CHKD. BY: R. Arnold	PROJECT No: 88QUE 010	FILE No:



PROFESSIONAL GEOLOGIST ALBERTA
ROBERT R. ARNOLD

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0 1000 2000 3000 metres

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BOUSQUET TOWNSHIP PROPERTY

TOPOGRAPHIC MAP

IH-TEC RESOURCE MANAGEMENT LTD.

SCALE: 1 : 50,000	N.T.S.: 32D/2	FIGURE No: 2	
DWN. BY: H.V.	DATE: June 1988		
CHKD. BY: R. Arnold	PROJECT No: 88QUE 010	FILE No:	

The Kendra Gold Resources Ltd. property is located approximately 28 kilometers east of the town of Rouyn-Noranda, Quebec, and 80 kilometers west of the town of Val d'Or, Quebec (Figures 1 & 2). The claims are accessed by truck via Highway No. 117, then along a gravel road that leads to the north shore of Lake Bousquet. From there a boat, or a skidoo during the winter, is used to access the central claims area.

2.3 OPERATIONS AND COMMUNICATIONS

Field work was carried out during the months of May and June 1988. Crews were based in Rouyn-Noranda, Quebec and they commuted daily to the property. Telephone communications were maintained with the office in Vancouver, British Columbia, on a regular basis.

2.4 PHYSIOGRAPHY

Local topographic relief is relatively flat with small hills and ridges rising to a maximum of 15 meters (50 feet) above the level of adjacent lakes. Elevations within the property range from 298 meters (980 feet) to 313 meters (1,026 feet) above sea level.

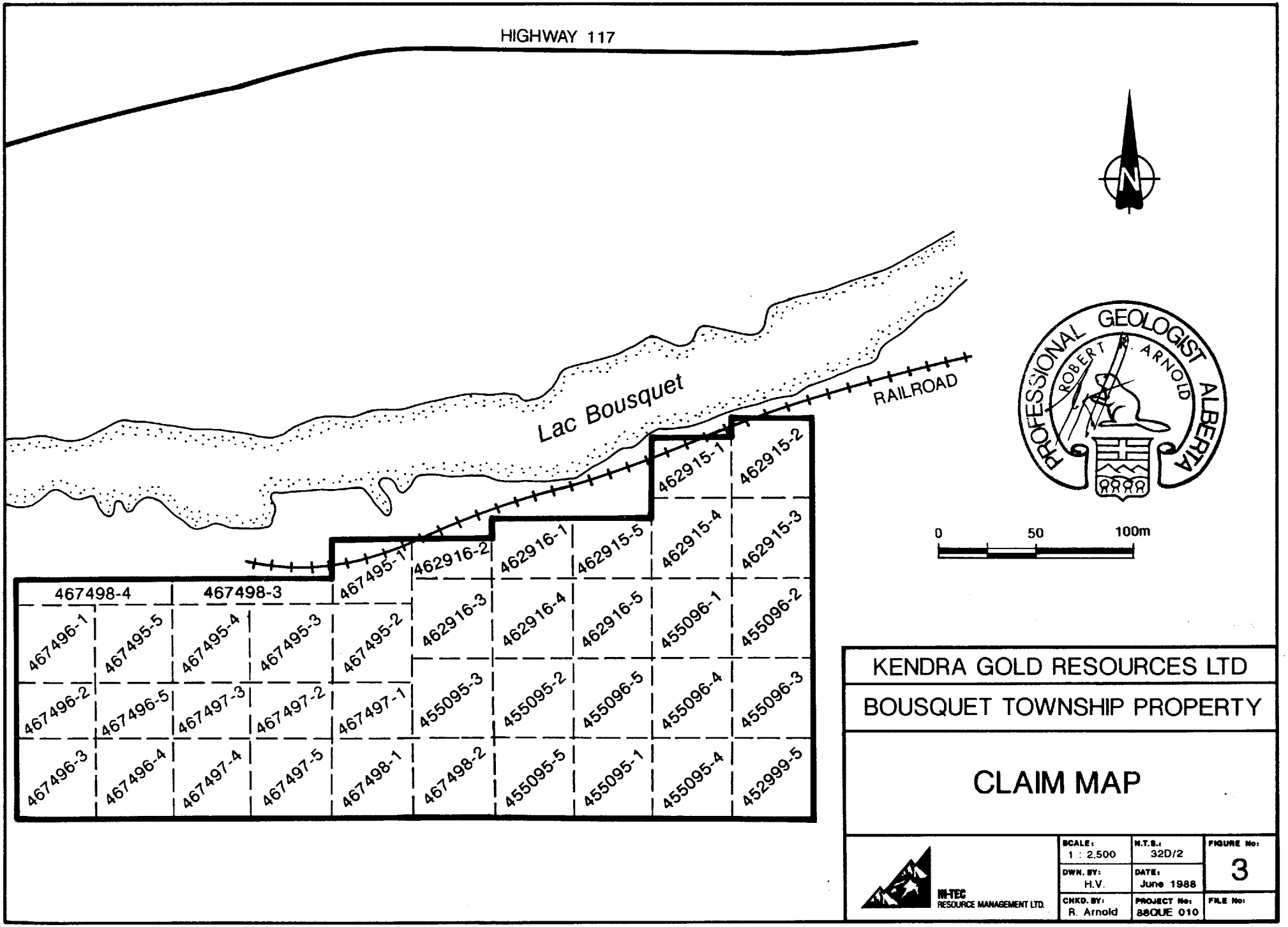
Pleistocene glaciation was the last major geologic event and glacial deposits, muskegs and swamps render geological mapping in low areas difficult. In addition, outcrops on the property are sparse. Vegetation consists mainly of black spruce, tamarack, willow, birch and alder which occur in varying abundance throughout the property. Bousquet River, which flows to the north towards Bousquet Lake, cuts the property in half.

2.5 PROPERTY STATUS

The property is recorded in the Rouyn-Noranda mining recorder's office as follows:

LICENSE No.	CLAIM NO.	EXPIRY DATE *
452999	5	May 26, 1988
455095	1	May 26, 1988
455095	2	May 26, 1988
455095	3	May 26, 1988
455095	4	May 26, 1988
455095	5	May 26, 1988
455096	1	May 26, 1988
455096	2	May 26, 1988
455096	3	May 26, 1988
455096	4	May 26, 1988
455096	5	May 26, 1988
462915	1	May 28, 1988
462915	2	May 28, 1988
462915	3	May 28, 1988
462915	4	May 28, 1988
462915	5	May 28, 1988
462916	1	May 29, 1988
462916	2	May 29, 1988
462916	3	May 29, 1988
462916	4	May 29, 1988
462916	5	May 29, 1988
467495	1	March 24, 1989
467495	2	March 24, 1989
467495	3	March 24, 1989
467495	4	March 24, 1989
467495	5	March 24, 1989
467496	1	March 25, 1989
467496	2	March 25, 1989
467496	3	March 25, 1989
467496	4	March 25, 1989
467496	5	March 25, 1989





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BOUSQUET TOWNSHIP PROPERTY

CLAIM MAP

M-TEC RESOURCE MANAGEMENT LTD.

SCALE: 1 : 2,500	N.T.S.: 32D/2	FIGURE No: 3	
DWN. BY: H.V.	DATE: June 1988		
CHKD. BY: R. Arnold	PROJECT No: 88QUE 010	FILE No:	

LICENSE No.	CLAIM NO.	EXPIRY DATE *
467497	1	March 26, 1989
467497	2	March 26, 1989
467497	3	March 26, 1989
467497	4	March 26, 1989
467497	5	March 26, 1989
467498	1	March 27, 1989
467498	2	March 27, 1989
467498	3	March 27, 1989
467498	4	March 27, 1989

* Prior to the filing of the 1988 exploration work.

The property consists of 40 contiguous claims located in Bousquet Township and all of the claims are 100% owned by Kendra Gold Resources Ltd. The claims are shown on the Mineral Claims Map 32 - D / 2 and on figure 3 of the present report.

3.0 HISTORY AND PREVIOUS WORK

Since the beginning of the 20th century the Rouyn-Noranda area has been known for its gold, copper and zinc mining potential. Since that time several important gold and copper occurrences have been developed in the general area, especially along the Larder-Cadillac fault. This major break, which can be followed from Kirkland Lake to the well known Val d'Or gold camp, hosts numerous present and past gold-copper producers. The Kendra Gold Resources Ltd. property is located just south of the Larder-Cadillac fault.

At the present time, two mines are in production in the property area:

- The Minerais Lac Ltee Doyon Mine, which can be subdivided in three different operations:
1) The Open Pit, with reserves in 1985 of 4,358,000 t @ 4.49 g Au/t, produced from 1979 to 1985 over 18,130 kg Au (528,725 oz Au).
2) The Underground Mine had estimated reserves of 3,580,000 t in 1985 at a grade of 6.21 g Au/t (0.18 oz Au/t).
3) The West Zone, which is a prospect with estimated reserves of 363,000 t @ 11.31 g Au/t (0.33 oz Au/t).
- The Minerais Lac Ltee Thompson-Bousquet Mine, which consists of three zones (1, 3 and 5), produced over 11,255 kg Au (328,230 oz Au) since 1979.
1) Zones 1 and 3 had reserves (1985) of 4,525,000 t at a grade of 5.01 g Au/t (0.14 oz Au/t) whereas zone 5 had reserves of 5,773,000 t @ 1.99 g Au/t (0.06 oz Au/t).

Two past producers are also known in Bousquet Township: The Mic Mac Mine, which produced 1,000 t Cu, 68 kg Ag and 3,297 kg Au (96,150 oz Au) between 1942 and 1947. The Mooshla Mine, where 132 kg Au (3,850 oz Au) were extracted in 1939-1940.

In addition, several prospects were found in the general property area:
- The Lac Norman prospect, with reserves of 300,000 t @ 3.43 g Au/t (0.1 oz Au/t).
- The Bouscadillac prospect, with reserves estimated at 36,000 t at a grade of 7.89 g Au/t (o.23 oz Au/t).
- The Calder-Bousquet, with reserves of 156,000 t @ 5.83 g Au/t (0.17 oz Au/t).
- The Dumagami prospect, with estimated reserves of 2,449,000 t at a grade of 2.91 g Au/t (0.08 oz Au/t) and 7.88 g Ag/t (0.23 oz Ag/t).



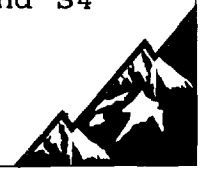
Between 1979 and 1981, Exploration Long Lac Ltee carried out several exploration programs on the property, which consisted of soil and rock sampling, geological mapping, VLF and Magnetometer geophysical surveys. Several geophysical anomalies were delineated on the property, which were confirmed by the present surveys.

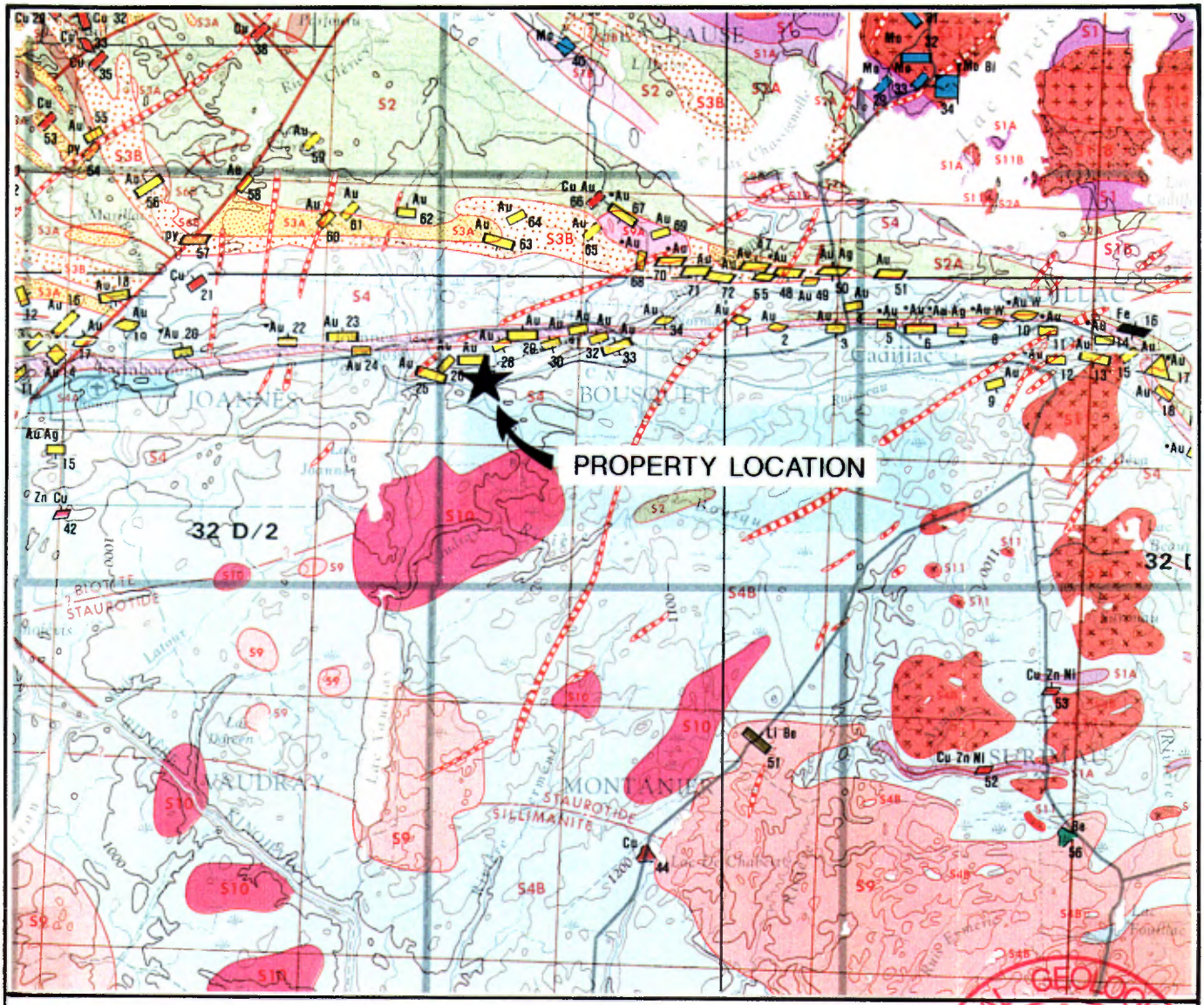
4.0 GEOLOGY

4.1 REGIONAL GEOLOGY AND MINERALIZATION

The Abitibi greenstone belt is the largest and most extensively mineralized of all of the greenstone belts in the Canadian Shield and makes up an economically and geographically significant part of the Superior structural province. Rocks of the Abitibi and other greenstone belts are of Archean age and comprise volcanic and sedimentary units which are usually quite deformed and are cut by numerous intrusives. The property area lies in the southern portion of this belt, just south of the major Larder-Cadillac break.

The regional strike of the sedimentary and volcanic units trends east-west with dips varying from moderate to very steep. The metamorphic grade of the area is relatively weak ranging from prehnite-pumpellyite facies to greenschist facies. Structurally the area is characterized by a polyphase tectonic. Four schistosities have been recognized which are associated with distinct folding phases. The first two phases formed wide isoclinal folds showing east, south-east and south-west trending subvertical axial planes. A later folding phase formed the schistosities S3 and S4 representing a system of kinkbands.





LEGEND

Diabase dykes

GRANITOID ROCKS (MASSIVE)

- S11 — Granite, granodiorite
- S10 — Syenite, Monzonite

GRANITOID ROCKS (FOLIATED)

- S9 — Granite to Diorite
- S9A — Granodiorite

META-INTRUSIVE ROCKS

- S6B — Diorite

META-SEDIMENTARY ROCKS

- S4 — Undifferentiated
- S4B — Graywacke to shale

FELSIC METAVOLCANIC ROCKS

- S3A — Rhyolite to dacite
- S3B — Pyroclastic Felsic Rocks

INTERMEDIATE TO MAFIC METAVOLCANIC ROCKS

- S2 — Undifferentiated
- S2A — Basalt

ULTRAMAFIC METAVOLCANIC ROCKS

- S1A — Ultramafic lavas with mafic intercalated lavas
- S1B — Intercalated ultramafic lavas

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0 1 2 3km

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BOUSQUET TOWNSHIP PROPERTY

REGIONAL GEOLOGY MAP

HI-TEC RESOURCE MANAGEMENT LTD

SCALE: 1 : 250,000	N.T.S.: 32D/2	FIGURE No: 4	
DWN. BY: H.V.	DATE: June 1988		
CHKD. BY: R. Arnold	PROJECT No: 88QUE 010	FILE No:	

Regional volcano-sedimentary piles are divided in eight main lithostratigraphic units which are, from the base to the top, the volcanic groups of Malartic, Kinojevis and Blake River and the sedimentary formations of Caste, Kewagama, Pontiac, Cadillac, Temiscamingue and Duparquet. All of these rocks are cut by intrusives of various ages. The Archean formations are discordantly overlain by sedimentary rocks of the Huronian age Cobalt Formation.

Since the early 20th century the Rouyn-Noranda area has been known for its gold, copper and zinc mining potential. Copper and zinc deposits are generally massive sulphide deposits of exhalative origin. These deposits usually occur in the vicinity of synvolcanic faults and in progradation at the base of volcanic sequences. Generally the main by-products of the zinc mines are cadmium and silver, whereas the by-products of the copper mines are selenium, tellurium and gold.

Gold deposits in the area are generally vein type and usually associated with shear/fault zones. These quartz veins are always carbonate altered and locally pyritized. These deposits are often related to the Larder-Cadillac break and cut through the Archean volcanic and/or sedimentary sequences.

4.2 PROPERTY GEOLOGY

Limited geological mapping (See Figure 5) has confirmed the previous mapping conducted by Long Lac Minerals Ltd in 1982. Two main units were identified: sedimentary rocks of the Archean Pontiac Group and basic volcanic rocks of the Archean Blake River Group. Metamorphic

rocks of biotite schist composition are noted north of the grid on the government compilation map. This rock type was not found on the property during the mapping program.

Sedimentary rocks are found on the claims as an east-west striking band separating the basic volcanics. These rocks consist mainly of greywackes, siltstones and argillites. Greywackes were the most prominent sedimentary rocks observed on the grid.

The volcanic rocks consist mainly of fine to medium grained andesite and basalt. The contact between these two rock formations was not found on the property due to extensive overburden cover.

In addition, several small diabase dykes were recognized within the surveyed area.

Mineralization observed on the outcrops was minimal and consisted mainly of fine disseminated pyrite. Several barren quartz veins and stringers were found in every rock type.

5.0 GEOCHEMISTRY

5.1 ROCK SAMPLING SURVEY

A total of 14 rock chip samples were collected on the property. The sample locations are shown on figure 5 (Property Geology and Sample Location Map) of this report.

All of the samples were submitted to Geo-Lab, in La Sarre, Quebec, for Silver, Copper, Lead, Zinc, Nickel

and Arsenic analysis. Gold was determined by the Fire Assay (F.A.) method.

Analytical procedures are reported in Appendix I and analytical data are presented in Appendix II. A description of the rock samples can be found in Appendix III. Statistical analysis of results was not possible due to the limited number of samples collected.

Results for each element are discussed below:

i) Gold: All of the samples show values being less than 0.06 g/t.

ii) Silver: Values for this element range from 0.4 ppm to 0.8 ppm.

iii) Arsenic: Values determined for this element range from less than 1.0 ppm to 19.9 ppm. Four samples present anomalous values in arsenic: 11.2 ppm (BA-5), 13.8 ppm (BA-7 and BA-8) and 19.9 ppm (BA-2).

iv) Zinc: Values for zinc range from 5.6 ppm to 128.0 ppm. Only one sample (BA-12) shows an anomalous value of 128.0 ppm.

v) Copper: Recorded values for this element range from 5.2 ppm to 122.0 ppm. Only sample BA-4 presents an anomalous value of 122.0 ppm.

vi) Lead: Values for this element range from 0.4 ppm to 11.6 ppm. No anomalies were recorded for lead.

vii) Nickel: Values for nickel range from less than 5.0 ppm to 275.0 ppm. Nine samples present anomalous

values: 275.0 ppm (BA-12), 225.0 ppm (BA-8), 220.0 ppm (BA-10 and BA-13), 210.0 ppm (BA-7), 180.0 ppm (BA-2), 178.0 ppm (BA-9), 123.0 ppm (BA-5) and 108.0 ppm (BA-3).

Due to the lack of outcrops, no base metal and/or precious metal trends were delineated within the surveyed area. However encouraging base metal anomalies, especially for nickel, were recorded in several locations.

6.0 GEOPHYSICS

6.1 UTEM SURVEY

Survey Procedures

The survey was conducted by Lamontagne Geophysics Ltd. of Toronto, Ontario. A UTEM 3C system was used. This system operating in ten channel mode, comprises a transmitter, receiver, coil/tripode assembly, 2.2kW motor generator, and field wire reels and spools. The base frequency used for the whole survey was 31 Hz. The mean sampling times of the channels ranged from 25 us (channel 10) to 12,8 ms (channel 1). Field data was computerized and reduced using a GFC-1 field computer system.

Two transmitter loops were located to the south of the grid (See Figure 6).

Copies of the line data profiles are presented in Appendix IV (Report on the Utem Survey by Jim MacNae and B. Felix, 1988). The Hz data were reduced to be presented in "channel 1 normalized" form (The various

formulas to make this reduction possible can be found in Appendix IV). The interpretation results are shown graphically on the interpretation map (Figure 6) at a scale of 1: 5,000. The conductors identified by means of the Hz data are labeled A to G3.

Survey Interpretation

The UTEM survey magnetic field interpretation delineated several strong to weak conductive zones, noted A to G3 (Figure 6), which are described in detail in the report on the UTEM survey (Appendix IV). A brief description of these conductors will be given below:

Zone A: This conductor is the most prominent UTEM response within the surveyed area. Its strike length is at least 600 meters. It appears that the source is a steeply dipping zone which is either thick (tens of meters) or consists of several parallel conductors in close proximity. Two diamond drill targets (Line 7+00W @ 1+00N and Line 10+00W or 11+00W @ 0+80N) are proposed by J. MacNae and B. Felix to test this anomaly. The depth to the top of the conductor varies from 20 meters to 60 meters.

Zone B: This conductor is a one line anomaly, located just north of zone A. If zone A consists of several parallel conductors that have been displaced or faulted, then zone B may be part of the same system.

Zone C: The strike length of this anomaly is about 600 meters and is somewhat less conductive than zone A. This conductor appears to be narrow, steeply dipping and seems to have a depth extent of several hundred meters. A diamond drill hole on Line 14+00W at station

0+90N or 1+60N (depending of the dip of the formation) is proposed by J. MacNae and B. Felix.

Zone D: This steeply dipping anomaly is about 100 meters to 200 meters wide and extends from line 5+00W to line 14+50W. It is believed that this zone represents a overburden conductor rather than a formational conductor.

Zone E: This anomaly is similar to zone D. The response appears to be directly in line with zone A and may thus represent a zone of disseminated mineralization extending from zone A.

Zone F: This shallow anomalous zone may be caused by either a contact or by an overburden edge. The close proximity with the railroad tracks hinder a valuable interpretation of this anomaly.

Zone G: This zone encompasses a number of overburden conductors which have been noted G1 to G5 and which are plotted on Figure 6 of the present report.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The area has been explored intermittently since the late 1920's when prospectors were attracted to the region by the Horne discovery in the Rouyn-Noranda area. Since then several gold and copper mines have been developed in the general area. At the present time, two mines are in production in the general property area: the Doyon Mine which produced over 528,725 oz gold since 1979 and the Thompson-Bousquet Mine which produced since the same time over 328,230 oz gold. In addition, several prospects are known in

Bousquet Township which are referred to as the Lac Norman, the Calder-Bousquet and the Dumagami prospects. Between 1979 and 1981, Long Lac Minerals Ltd. conducted several exploration programs on the subject property.

The property is located in the southern part of the Abitibi greenstone belt, just south of the Larder-Cadillac shear zone. The claims are underlain by two main rock types: Sedimentary rocks, mainly greywacke, of the Archean Pontiac Group and basic volcanic rocks of the Archean Blake River Group. The sedimentary rocks form an east-west band which separate the volcanics. Several quartz veins and veinlets were recognized in every rock type and minor disseminated pyrite was found locally.

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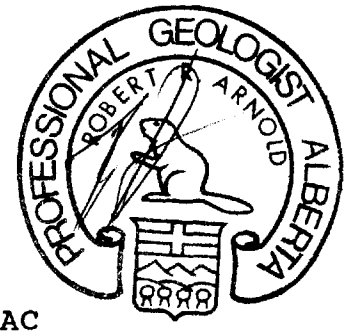
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In order to fully evaluate the mineral and economic potential of the Kendra Gold Resources Ltd. property and to delineate the source and nature of the geophysical anomalies established during past and

present surveys, further exploration work is fully warranted. The exploration program should consist of additional geological mapping, trenching and stripping, and of an initial exploratory diamond drilling program. The UTEM conductive zones should be diamond drill tested according to J. MacNae's and B. Felix's recommendations (See Appendix IV).

Dependent upon positive results of the preliminary diamond drilling program and upon a review of the data, a systematic diamond drilling program should be established to define the geometry and grade characteristics of any identified mineralization.

Respectfully submitted
HI-TEC RESOURCE MANAGEMENT LTD.



Robert R. Arnold, M.Sc., P.Geol., FGAC
June 17, 1988

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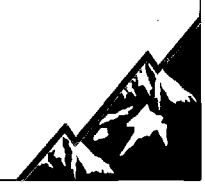
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9.0 STATEMENT OF QUALIFICATIONS

I, ROBERT R. ARNOLD, of 1227 Caledonia Avenue, in the City of North Vancouver, in the Province of British Columbia, hereby cerify:

1. THAT I am a geologist employed by Hi-Tec Resource Management Ltd. My office is at Suite 1500 - 609 Granville Street, Vancouver, B.C., V7Y 1G5, Canada.

2. THAT I obtained a Bachelor of Science degree in Geology from the University of Geneva, in the City of Geneva, Switzerland, in 1976 and a Master of Science degree in Geological Engineering, from the same university in 1978.

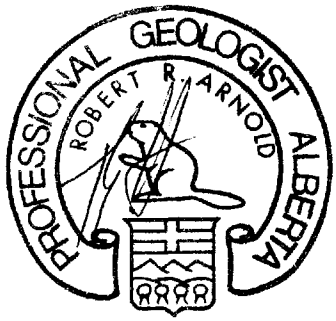
3. THAT I am a Registered Professional Geologist, in good standing, of the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1981.

4. THAT I am a Fellow Member of the Geological Association of Canada, in good standing since 1985. That I am a associate member of the Mineralogical Association of Canada and of the Society of Economic Geologists.

5. THAT I have been practising my profession as a geologist in Western Europe, West Africa, Southeast Asia and North America, both permanently since 1978 and seasonally since 1971.

6. THAT I have not received, nor do I expect to receive any interests, direct or indirect, or contingent in the securities or properties of Kendra Gold Resources Ltd. and that I am not an insider of any company having interest in the Mineral Claims which are the subject of this report, or any other claims within a radius of 10 kilometers.

Dated in Vancouver, British Columbia, this 17th day of June, 1988.



Robert R. Arnold, M.Sc., P.Geol., FGAC.

APPENDIX I

GEOCHEMICAL PREPARATION AND ANALYTICAL PROCEDURES

géo-Lab

La Sarre, May 16, 1988

ANALYTICAL TECHNIQUES

a) Sample preparation

Drying, crushing to < 1/10", pluverizing to ~150 mesh, homogenizing with a tumbler machine for 20 minutes.

Pulverizing criteria: Every sample is verified et must meet the following criteria:

+ 80 mesh = 0.00% (absolute),

+ 150 mesh = < 5%

- 150 mesh = > 95%

b) Analysing

Elements	Techniques	Sample Weight	Detection Limit
Au	F.A/Gravimetric	½ A.T. or 1 A.T. at the client request	0.002 oz/t or 0.06 g/t
Au	F.A./A.A.S. with graphite furnace	½ A.T. or 1 A.T. at the client request	5 ppb
Pt			30 ppb
Pd			15 ppb
Rh			10 ppb
As	Hydride generation	5 grams	1 ppm
Sb		5 grams	1 ppm
Hg	Cold Vapor Flameless A.A.S.	5 grams	5 ppb
Ag	A.A.S.	5 grams	1 ppm
Cu	A.A.S.	0.5 grams	0.2 ppm
Ni			0.5 ppm
Pb			1.0 ppm
Zn			0.1 ppm

208, Route 393, Case Postale 247
LA SARRE (Québec) J9Z 2X5
Tél.: (819) 333-4323 Fax: (819) 333-2586

c) Wet Chemistry

Au - The doré bead is treated with diluted HNO3 (at 10%), then washed with distilled water, a 4 ml of Aqua Regia is added and the solution is completed to a 10 ml volume with distilled water.

Pt - The doré bead is treated with 1 ml of pure HNO3, then
Pd completed with 3 ml HCl to form Aqua Regia, and 6 ml
Rh of HCl (at 50%) is added to avoid precipitation of AgCl.

As - A basic attack is performed to prevent loosing part of the As present in the sample:
The sample is treated with 6 grams of NaOH in 40 ml of distilled water for 30 minutes at 200°C followed by oxidation with 1 ml of KMnO4 at 5%, then the solution is completed in volume to 100 ml with distilled water. A 20 ml subsample is taken in a 100 ml volumetric flask, to which a 40 ml HCl at 50% is added, then the solution is completed in volume to 100 ml with distilled water.

Sb - The 5 grams sample is treated with Aqua Regia (10 ml HNO3/30 ml HCl) for 1½ hour, filtrated and the solution is completed to a volume de 100 ml with distilled water.

At the client's request, the digestion may alternatively be done with 10ml Hf +10 ml HNO3, dryed, then 40 ml Aqua Regia is added and the solution is completed to 100 ml with distilled water.

Hg - The 5 grams sample is treated with Aqua Regia (10 ml HNO3 + 30 ml HCL) and shaked for two hours as a cold extraction, then the volume is completed to 100 ml with distilled water.

Ag - The sample is digested with Aqua Regia, or with 10 ml Hf + 15 ml HNO3, dryed, then 20 ml HNO3 is added and the solution is completed to a volume of 100 ml with distilled water.

Cu - The sample is digested with Aqua Regia, (5 ml HNO3 +
Ni 15 ml HCl).
Pb
Zn

d) Main instruments and equipments

Fire Assaying

3 Furnaces " Pyradia " - 2 for fusion, at 1,900°F.,
1 for cupellation, at 1,650°F.

Note: 2 additional furnaces are on order, the delivery of which is scheduled for the end of May 1988.

1 Balance " Sartorius " Model L610, reading down to two decimals after the point, for sub-sampling,

1 Balance " Sartorius " Model Super-micro, reading down to 0.0001 mg, for the gravimetric determination,

1 Binocular microscope " Fisher Stereomaster ", Model SPT-ITH, with magnifying power of x40.

Note: All our doré beads are inspected by microscope, before the gravimetric determination and/or before the A.A. determination to detect the possible presence of slag attached to the bead, (in such case the fire concentration is repeated), or to detect the presence of precious metal not visible to the naked eye.

Wet Chemistry

2 Balances " Sartorius " Model H51, reading down to 0.0001 gram,

1 Perkin Elmer A.A. Model 403, (purchased from McGill University), equipped with a Graphite Furnace Model HGA 2000, and an Automatic Graphic Recorder " Fisher Recordall " series 5000,

1 Perkin Elmer A.A. Model 2380, equipped with an Automatic Graphic Recorder " BBC - Goerz Metrawatt " series SE 120.

1 Hydride Generator " Perkin Elmer " Model MHS 10.

Data transmission

1 Telefax " Canon " Model FAX 230,

1 AT Computer " System 1800 " - IBM compatible, with 640k-Ram, 85 Meg on Hard Disk, 2 Floppy disk drives, and one "Smarteam" modem, 1200 Baud.

Note: We expect being able to transmit data through our Modem as soon as the first week of June 1988.

APPENDIX II

ANALYTICAL DATA FOR ROCK SAMPLES



Géo-Lab

ANALYSIS AND/OR ASSAY CERTIFICATE

HI-TEC Resource Management LTD
1500-609 Granville St
P.O. BOX 10362
VANCOUVER, B.C.
V7Y 1G5

PROJECT: 000374
Order : BOUSQUET 88 QUE 010
Attention : Robert Arnold

Sample	As	Zn	Cu	Ag	Pb	Ni
			ppm			
BA-1	6,7	6,8	16,8	0,40	8,0	67,5
2	19,9	32,4	28,4	0,40	8,8	180
3	2,9	9,8	20, 8	0,40	0,4	108
4	3,8	35,0	122	0,80	11,6	<5
5	11,2	26,4	20,6	0,60	5,0	123
6	3,8	5,6	16,8	0,40	5,0	58
7	13,8	34,6	44,8	0,80	8,0	210
8	13,8	41,0	13,4	0,60	8,4	225
9	<1,0	29,0	32,6	0,60	6,4	178
10	<1,0	26,6	50,0	0,60	9,4	220
11	1,9	15,4	8,8	0,60	3,6	65
12	1,3	128	5,2	0,80	10,4	275
13	<1,0	43,8	12,4	0,80	4,6	220
14	4,8	24,6	14,4	0,40	3,2	75

The undersigned, Chief Analyst, certifies that the above results are those of the analyses/assays performed on the above listed samples.

La Sarre, 17 june 1988

Stéfane Trémont

Stefane Premont, Chimist.

208, Route 393, Case Postale 247
LA SARRE (Québec) J9Z 2X5
Tél.: (819) 333-4323 Fax: (819) 333-2586

Géo-Lab

ANALYSIS AND/OR ASSAY CERTIFICATE

HI-TEC Resource Management Ltd.
1500-609 Granville Street
P.O. Box 10362
VANCOUVER (British Columbia)
V7Y 1G5

PROJECT: 000374

Page 1

Attention: Robert Arnold

Echantillon	g/t Au
BA-1	<.06
2	<.06
3	<.06
4	<.06
5	<.06
6	<.06
7	<.06
8	<.06
9	<.06
BA-10	<.06
11	<.06
12	<.06
13	<.06
BA-14	<.06

The undersigned, Chief Analyst, certifies that the above results are those of the analyses/assays performed on the above listed samples.

La Sarre, June 12, 1988

Stéphane Prémont, Chimist.

208, Route 393, Case Postale 247
LA SARRE (Québec) J9Z 2X5
Tél.: (819) 333-4323 Fax: (819) 333-2586

APPENDIX III

ROCK SAMPLE DESCRIPTIONS



ROCK SAMPLE DESCRIPTIONS

Note: All of the samples have the prefixe 88 QUE 010

BA-1: Grab sample of several small quartz veinlets in greywacke. No visible mineralization

BA-2: Fine grained, medium grey greywacke (quartzwacke) with small quartz veinlets and stringers as fracture fillings. Strike $N45^0$, dip 40^0 SE. Presence of minor disseminated fine grained pyrite.

BA-3: Grab sample of 5-10 cm wide quartz vein in greywacke. Quartz relatively impure with amphibolite and presence of rusty stainings along fracture planes.

BA-4: Grab sample of mafic dyke cutting through greywacke. No visible mineralization.

BA-5: Grab sample of greywacke (quartzwacke) with minor disseminated fine grained pyrite.

BA-6: Grab sample of small quartz vein (2-3 cm wide), slightly pyritized, in outcrop of quartzwacke.

BA-7: Grab sample of medium grained, grey-green, diabase dyke. No visible mineralization.

BA-8: Same as BA-7.

BA-9: Grab sample of fine to medium grained, greenish diabase. Minor disseminated pyrite.

BA-10: Same as BA-9.

BA-11: Grab sample of 5-10 cm quartz vein located at contact between greywacke and diabase dyke.

BA-12: Grab sample of greywacke, same location.

BA-13: Grab sample of diabase, same location.

BA-14: Grab sample of very altered, whitish, vein material in diabase dyke.

APPENDIX IV

REPORT ON THE UTEM SURVEY

BY J. MACNAE AND B. FELIX (1988)



LOGISTICAL AND INTERPRETATION REPORT ON

A UTEM SURVEY AT

THE BOUSQUET TOWNSHIP, QUEBEC

FOR

HI-TEC RESOURCES LTD.

JUNE 1988

JAMES MACNAE
BRENT FELIX

INTRODUCTION

A UTEM 3 survey was carried out south of Bousquet Lake, Quebec for Hi-Tec Resources Ltd. during May 1988. The aim of the survey was to use a deeply penetrating EM technique to search for any bedrock conductors that might be associated with concentrations of economic mineralization. In particular, the primary target was gold mineralization, which is usually associated with conductive sulphide mineralization.

When mineralization is present as massive sulphides, EM techniques show a characteristic slowly decaying response which can be interpreted to derive geometrical parameters of the source. When the source is disseminated, its EM response lasts a much shorter time, and in these cases there are a number of other common geological conductors which can produce similar responses. These are contacts, fault/shear zones and overburden (clay) conductors. Identification and interpretation of poor conductors is thus often difficult and ambiguous, due to overlapping background responses.

FIELD WORK

A crew consisting initially of Brent Felix and Theresa Myrfield (geophysicists) commenced the work on the Hi-Tec properties. Operator Hendryck Urbanski replaced Brent Felix for the latter part of the survey. All crew members are employees of Lamontagne Geophysics Ltd. The crew were based in Rouyn- Noranda for the duration of the job.

A total of 22.0 kilometers were surveyed from two loops. Significant production delays arose due to difficult access caused by waterways and inundated areas. As well, broken transmitter loops were frequent due to large animals in the vicinity. The production obtained during the survey is summarized in Table I.

Table I - Production Diary

date	kms.	rate	comments
May 22	-	M	Brent Felix and Teresa Myrfield drive from Toronto and arrive in Rouyn-Noranda late in the evening.
May 23	-	P	Aquired a boat with outboard to access the grid and traveled out to the grid location. Started putting out the loops.
May 24	-	P	Deep water on the east end of the grid made crossing slow through the dense bush. The loop on the west end (loop-1) alomost completely laid out.
May 25	4.4	P	Loop-1 layout completed. Data acquisition started with lines from loop-1. The back side of loop-2 has to be picked up and laid out again. Syncronizational problems with receiver no 4 at end of day. 25W 600S - 000 0.60 km 24W 850S - 000 0.85 km 23W 850S - 000 0.85 km 22W 850S - 000 0.85 km 21W 850S - 300 0.55 km 20W 850S - 150S 0.70 km
May 26	2.6	P	Completed surveying of lines on loop-1 and picked up most of loop-1. Used receiver no 1. 28W 800S - 800S 0.20 km 27W 800S - 000 0.80 km 26W 800S - 000 0.80 km 25W 800S - 000 0.80 km
May 27	1.0	P	Loop-2 laid out again but due to breaks elsewhere in the wire from animal activity most of the day was used up looking for the breaks. Read lines from loop-2. Brent Felix leaves for Montreal and Hendryk Urbanski arrives in Rouyn-Noranda in the evening. 18W 500S - 000 0.50 km 17W 500S - 000 0.50 km
May 28	4.9	P	Read lines on loop-2.

			0	400S - 400N	0.80 km
			1W	400S - 400N	0.80 km
			2W	400S - 400N	0.80 km
			3W	400S - 400N	0.80 km
			4W	400S - 400N	0.80 km
			5W	500S - 400N	0.90 km
May 29	5.9	P	Read lines on loop-2.		
			6W	500S - 400N	0.90 km
			7W	500S - 400N	0.90 km
			8W	500S - 400N	0.90 km
			9W	500S - 300N	0.80 km
			10W	500S - 300N	0.80 km
			11W	500S - 300N	0.80 km
			12W	500S - 300N	0.80 km
May 30	3.2	P	Read lines on loop-2 and picKed up loop-2.		
			13W	500S - 300N	0.80 km
			14W	500S - 300N	0.80 km
			15W	500S - 300N	0.80 km
			16W	500S - 300N	0.80 km
May 31	-	M	Returned the boat and outboard, picked up the gear and left Rouyn-Noranda.		

SURVEY DESIGN

A total of two loops, were laid out to obtain adequate survey coverage over the grid as shown on the accompanying grid/interpretation map. As the loop edges were not cut, the loops shown were laid out by chain and compass. Their exact shape was influenced by the waterways and flooded areas. The two loops were of approximate sizes 900m x 600m and 1800m x 750m.

Line spacings were nominally 100 meters extending from 0 to 2800W except that line 1900W was absent as it lay along a creek. One component, namely the vertical (Hz) was surveyed, with 10 time channels of data collected at station intervals of 50m with detailing stations spaced 25m near anomalies. The average line length was 800m, with some shorter line lengths caused by the irregular area to be surveyed.

Each station surveyed was stacked for a minimum of 1024 cycles to ensure that adequate precision for interpretation of any deep features was obtained. At the ends of the lines away from the trnsmitter loop, longer averages were used to improve data quality.

DATA PRESENTATION

The data are plottted in "channel 1 normalized" form whereby a different reduction formula is used for channel 1 and the rest of the channels.

The channel 1 data are reduced before plotting according to the formula:

$$R1c = (Ch1c - Hpc) / (Hp) \times 100\%$$

The other channels or reduced using a slightly different formula:

$$Rnc = (Chnc - Ch1c) / (Ch1c) \times 100\%$$

In these expressions, Chnc is the raw component c value for channel n, Hp is the computed primary field, and the index c indicates any field component. The format used in plotting the data is called "continuously normalized" where Hp in the formulae above is the total primary field at each respective survey point.

The data is plotted on three axes. On the bottom axis channel 1 (latest time) is plotted alone, normalized to the calculated primary field. The intermediate to late time channels (ch5 - ch2) are plotted on the center axis. The early time channels (Ch10 - ch6) along with a repeat of channel 5 for comparison are plotted at the top on a reduced scale.The Y axis on each plot represents the difference from 100% of channel 1 (or calculated primary field in the case of channel 1).

INTERPRETATION

Several anomalies were identified within the grid area. After each individual line was inspected and anomalies interpreted, their locations were transferred to the accompanying location map and responses classified into zones of similar interpreted source. These zones have been numbered from A to G3 on the map.

Noise levels affecting interpretation due to spheric activity were insignificant. Some background response is evident in the data caused by the rail tracks to the north of the survey

lines. Their affect is discussed in more detail under zone F.

Zone A:

This anomaly is the most significant conductor on the grid. Its response extends over a strike length of at least 600m. The location of its source as interpreted from line to line may be seen on the location map. The amplitude and shape of the response itself also varies considerably from line to line indicating that there is some complexity in the geometry of the conductive zone. This complexity makes exact interpretation of parameters such as depth to top, depth extent and dip more difficult, and the resulting estimates more prone to error. Due to the large positive background response of the railway line to the north, dip estimates in particular could not be accurately made.

Purely from the shape of the response, it appears that the source is a steeply dipping conductive zone which is either several tens of metres thick or consists of a number of parralel conductors in close proximity. The evidence for a thick zone is that the response at early times on many of the lines is a broad negative similar to that shown in Figure 1D in hte Appendix, with a simpler crossover type response at later delay times. The other evidence for a wide zone is the clear reverse crossover present on all lines whose location is shown on te compilation map. On some lines however, particularly line 1000W, the response is typical of two parallel conductors without any evidence of a broad early time negative.

The line to line characteristics are summarized in table 2 below. The largest response occurs on line 700W, where if this target has not been previously drilled, a hole could be collared to test both zone B and zone A. Collar at 100N to 110N, drill south at -45 degrees. To be certain of intersecting zone A if it dips slightly south, the hole should be extended a minimum of 240m.

On lines 1000W and 1100W, where the nature of the anomaly is different, it may be worthwhile to site a drillhole if geology of other work is encouraging. On tese lines there are two conductors interpreted as shown in the table below and on the location map. Of these, the southern one appears to heve the larger amplitude and thus depth extent. As a result drilling from te north would be recommended unless geological dips are confirmed to be to the south. On line 1000W or 1100W collar at 80N, drill south at -45 degrees.

Table 2

Line	Station	Conductance (Siemens)	Depth (m)	Width (m)	Dip	Depth Extent (m)
600W	40S	18	60	50?	Steep	150?
700W	35S	20	40	60?	Steep	300?
800W	0	20	35	50?	Steep	300?
900W	50N	15	50?	50?	?	250?
1000W	30S,40N	10	20	thin	?	250
1100W	25S,40N	8	30	thin	Steep	200
1200W	30N	8	30	thin	Steep	150

Zone B:

Zone B is a one line anomaly occuring on line 700W just north of zone A at about station 90N. Its source appears very conductive, though small. It is thus quite likey a sulphide conductor. If Zone A actually consists of a number of similar parallel zones that have been displaced/faulted, then zone B may well be part of the same system.

Zone C

The source of this set of anomalies north of the baselins appears to have a strike length of about 600m. The zone itself appears concave to the south as plotted on the location map. The conductive body responding to the UTEM system appears to be narrow, steeply dipping and has a fitted conductance of about 4 Siemens on line 1400W, becoming less conductive to either side. It is thus several times less conductive than zone A. Depending of the nature of the prospect, and the expected physical properties of mineralization, this may represent an interesting target. The response is best on line 1400W, where the conductor's top lies about 20m beneath station 125N. Interpretation of dip and depth extent using anomaly shape information are not possible due to the large background caused by the railway tracks. Based on the anomaly amplitude alone, however, the body must have a significant depth extent of several hundred metres. Depending on geological inferred dip, a hole could be collared at either one of 90N or 160N, and drilled at -45 degrees to intersect the conductor under station 125N.

Zone D

The set of responses classified as zone D have characteristics typical of a 100 to 200m broad, steeply dipping zone which is slightly more conductive than the surrounding rocks. To the east, it appears to terminate between lines 500W and 600W, and to the west the response dies out around 1450W. Fitting the observed decay of the UTEM response indicates that the resistivity of this formational conductor is greater than 100 ohm-m. It is possible that the response is caused by an overburden conductor rather than a formational conductor.

Zone E

The zone E anomaly is typical of a wide basement formational conductor similar to that called zone D above. The response shows up only on the earliest time channels, and with a time constant of less than 0.1ms, indicates that a resistivity of about 100 ohm-m in the zone would be sufficient to explain the UTEM response. The response appears directly along strike from the good conductor zone A. It may thus represent a zone of disseminated mineralization extending from zone A. It is also possible that zone E is actually an overburden conductor associated with Zone G2.

Zone F

This zone is a set of reversed crossover responses that are difficult to understand from simple physical interpretation. From the shape of the response it appears that reversed current is flowing along a shallow zone, probably a contact or possibly an overburden edge. However, the association of the anomalies with the railway tracks in time decay rate and its location in close proximity to the west indicate that this zone cannot be strongly recommended as a geophysical target.

Zone G

A number of responses occur over the grid that have the characteristics of overburden conductors. All these responses have been classified with a letter starting with G.

G1 and G2:

These two zones lie on the eastern end of the grid, and both have moderate amplitude responses that are only evident at early delay times. Zone G2 may possibly be the extension of what was interpreted as formational basement conductor E.

G3, G4 and G5:

Conductors G4 and G5 are good, shallow, flat lying conductors located within the much larger, poorer conductor G3. No other significant features were detected from the lines surveyed from loop 1. All three zones are likely caused by fairly extensive clay, with the more conductive parts indicative of thicker clay deposits within the overburden layer.

Zone H

Between lines 300 and 500W, there is evidence of a poor, steeply dipping conductor just south of the interpreted contact at zone F. With a conductance of less than 4 Siemens, its source is unlikely to be massive sulphides. However, it may represent a zone of disseminated mineralization. The conductor is quite shallow (depth to top <30m) and has the best response on line 300W.

Zone I

A very weak conductor is present on lines 1700 and 1800W to the south of the baseline. This zone may represent an extension of formational zone D, or possibly be a zone into which current from induction in the overburden feature G3 has been channeled.

CONCLUSIONS

The UTEM survey was succesful in detecting a large number of conductors within the area of the survey. Of these, only

zone A has the potential to contain significant massive sulphides. Its depth to top however, is less than 50m on some survey lines and there is thus a good chance that it has been detected and interpreted on previous geophysical surveys.

A number of other basement conductors were interpreted, that may be worth further investigation if their location is coincident with particularly favourable geology.

APPENDIX 1

Plotting and Interpretation

TABLE 4

Channel	Mean delay time	Plotting symbol
1	12.8 ms	|
2	6.4	/
3	3.2	\
4	1.6	□
5	0.8	⊆
6	0.4	◿
7	0.2	⅂
8	0.1	⧖
9	0.05	△
10	0.025	◇

TABLE 3

INTERPRETATION FORMULA FOR FINITE PLATES

C : conductance in siemens
Tc: time constant of the anomaly in ms
Se: effective size of the conductor in m from anomaly length and amlitude

FORMULA:

$C = 3180\ Tc / Se$

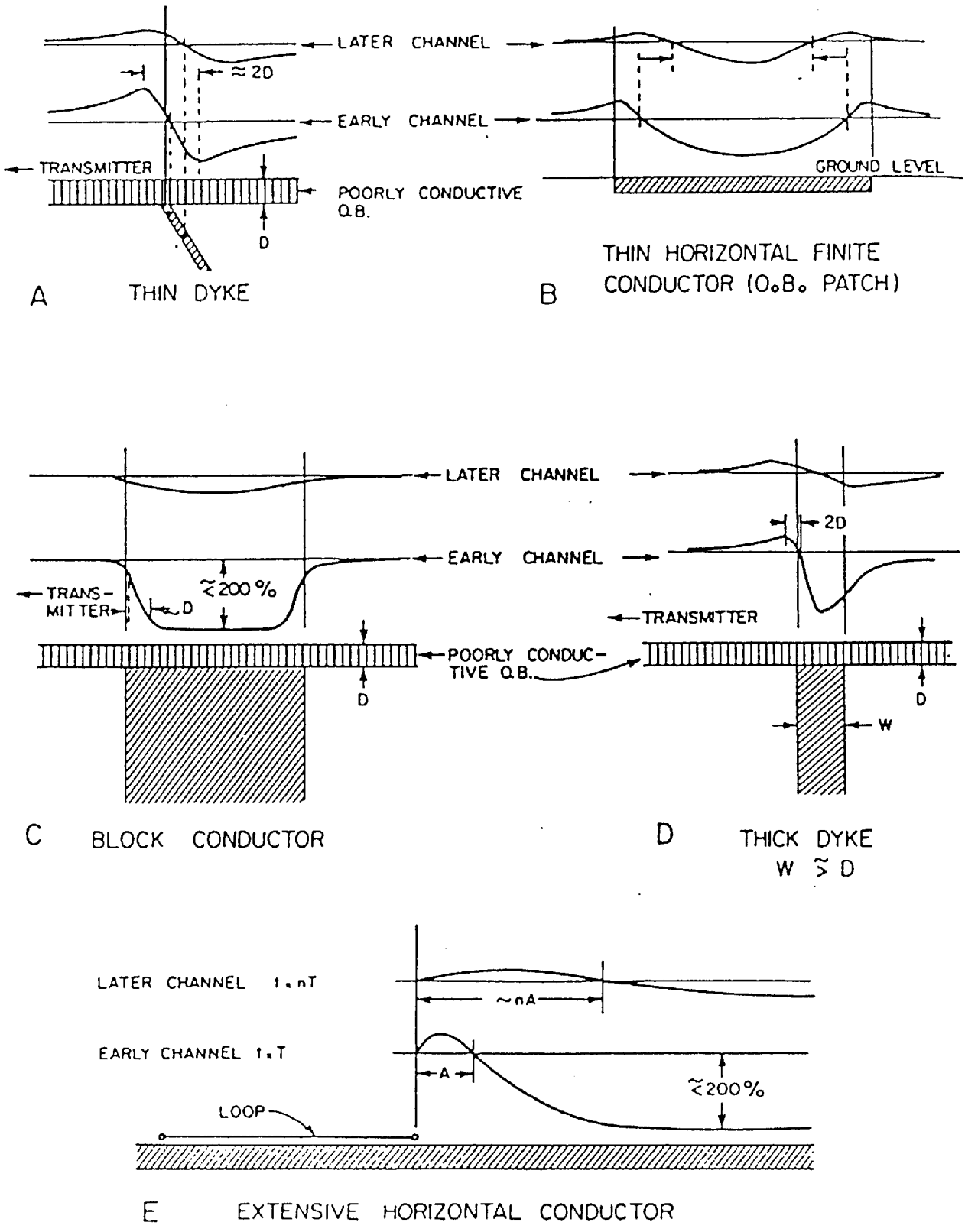
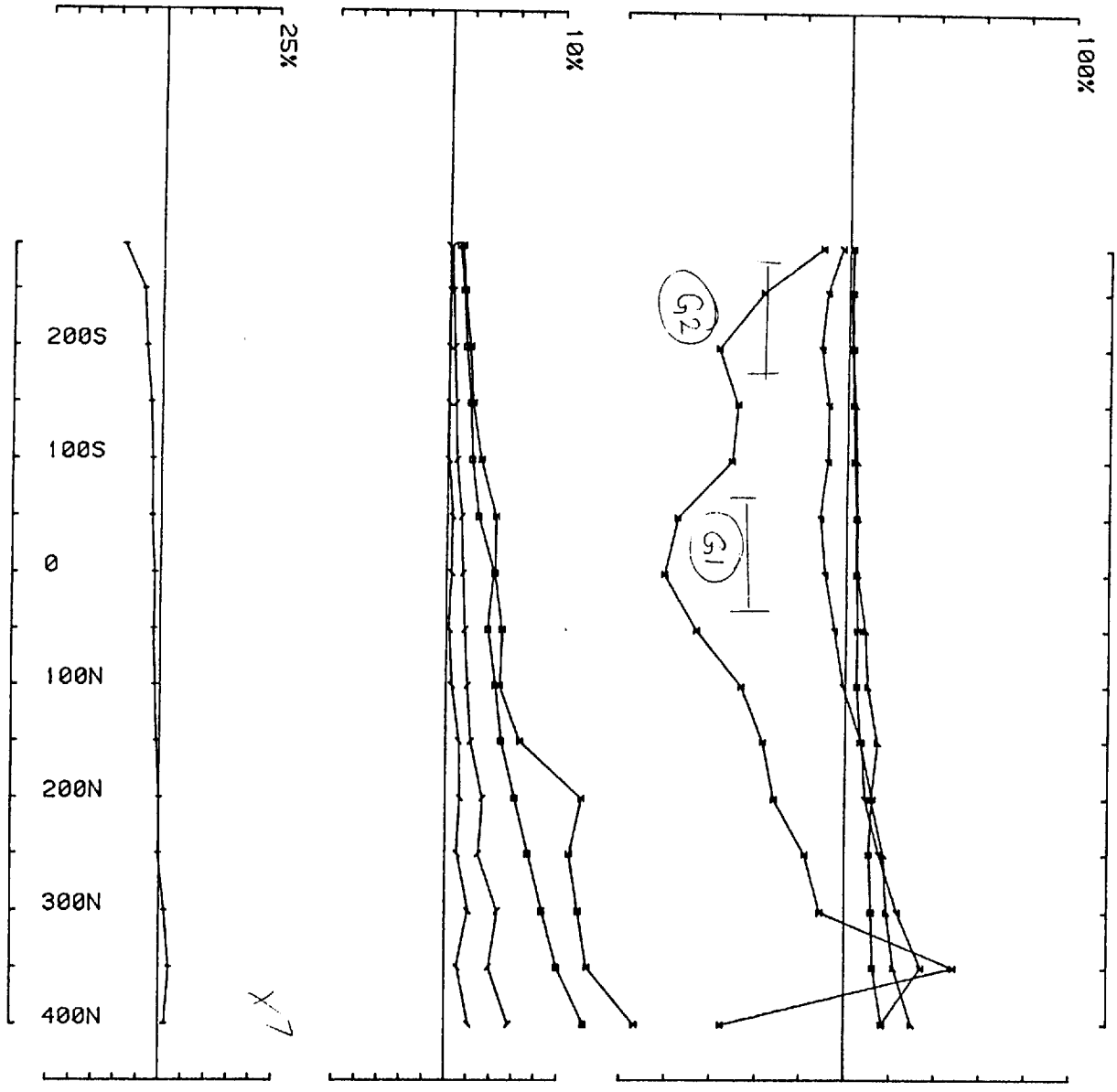


Fig. 1 The form of UTEM H_z anomalies over simple free-space models.

APPENDIX 2

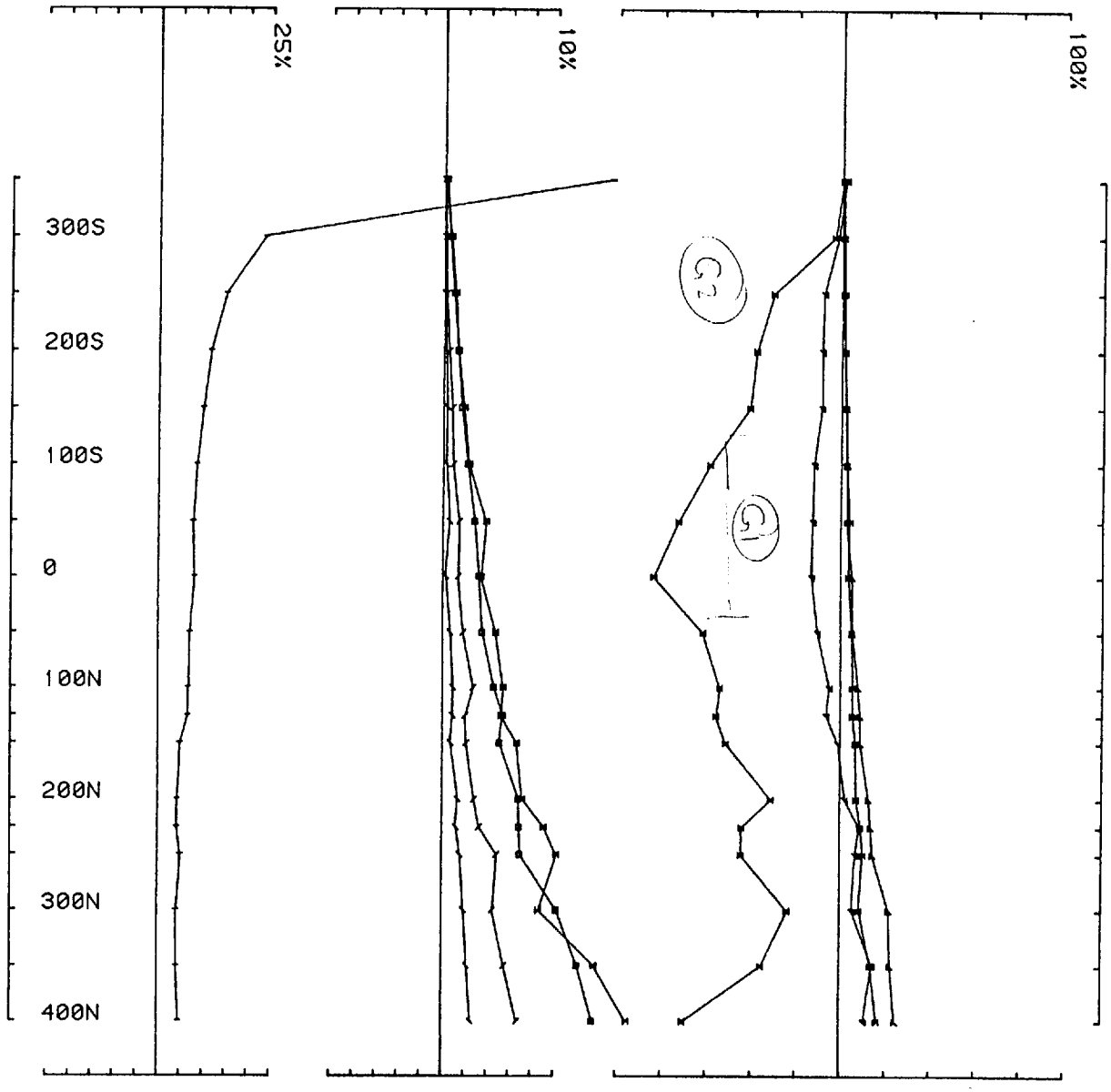
DATA PROFILES



UTEM SURVEY at CANTON BOUSQUET for HI-TECH

conducted by LAMONTAGNE GEOPHYSICS LTD job 8815 base freq (hz) 30.974

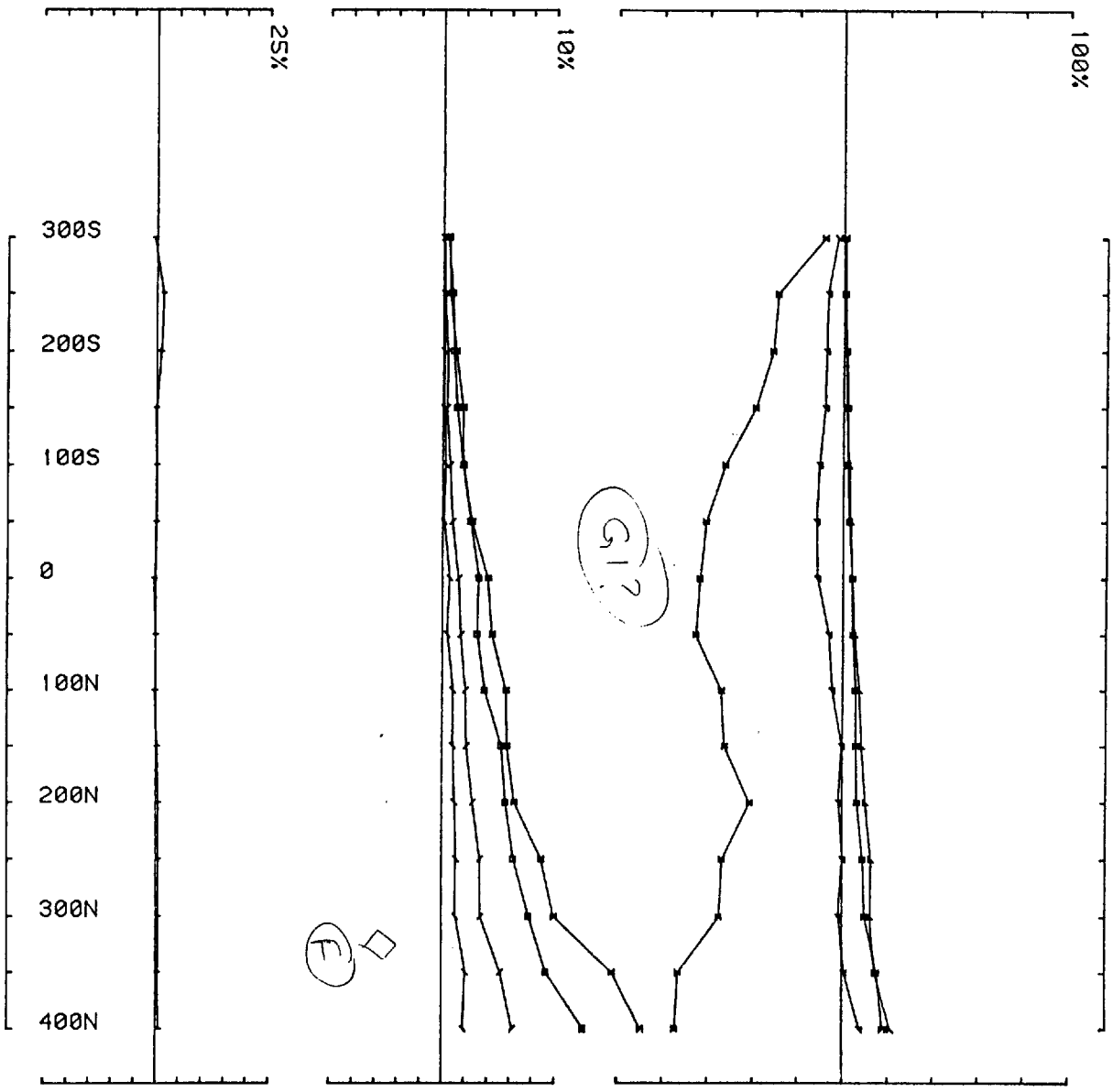
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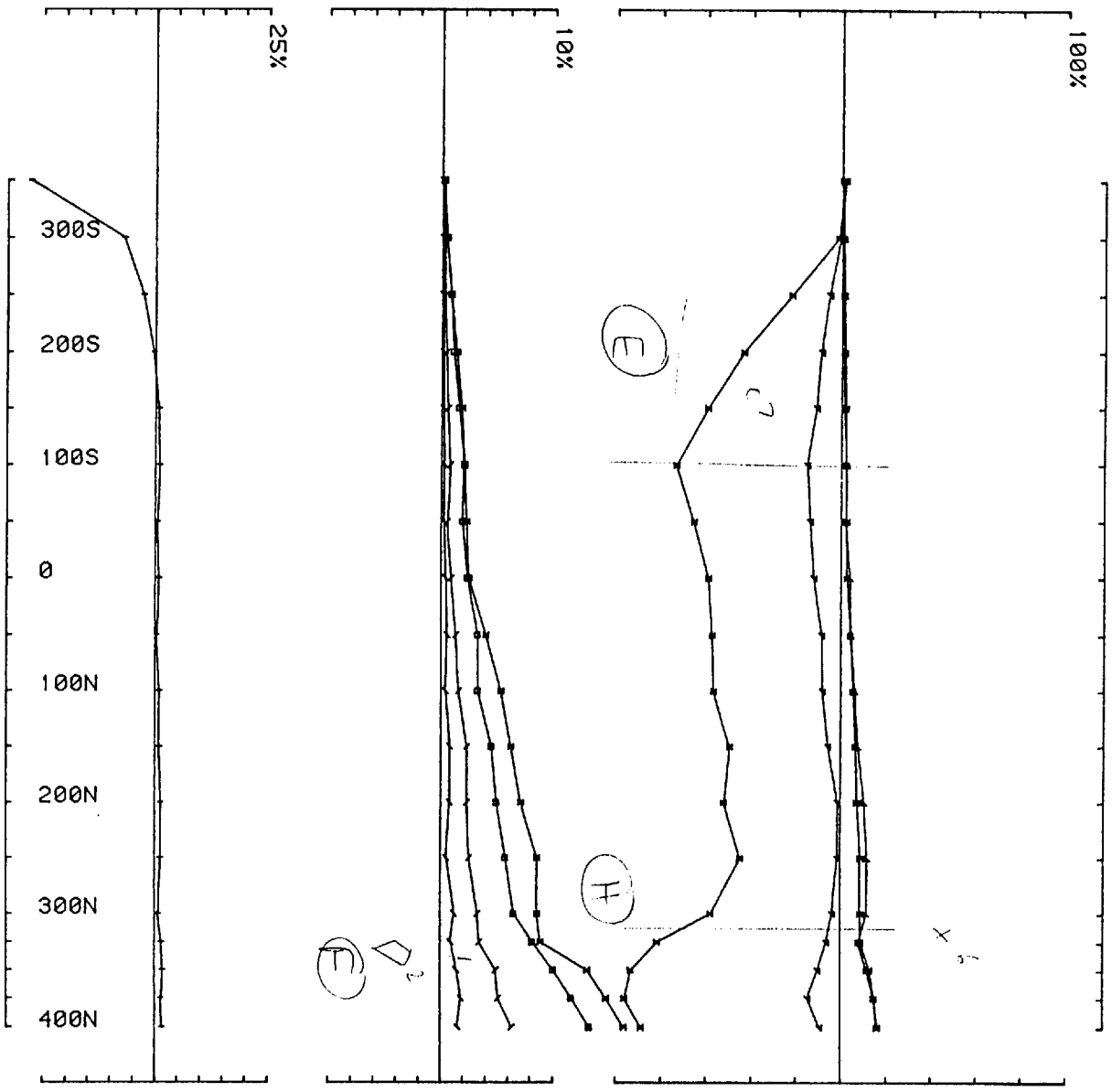
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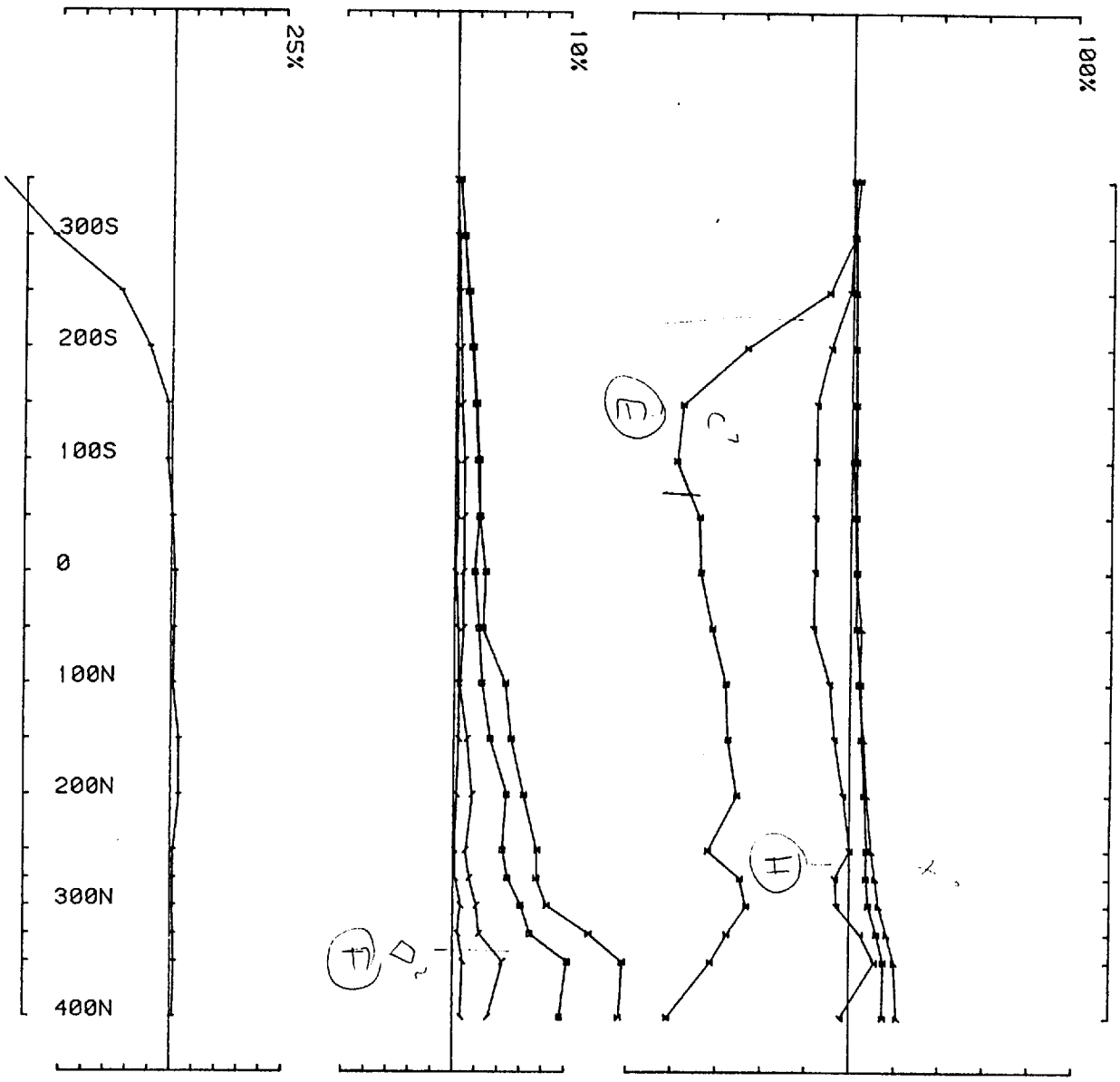
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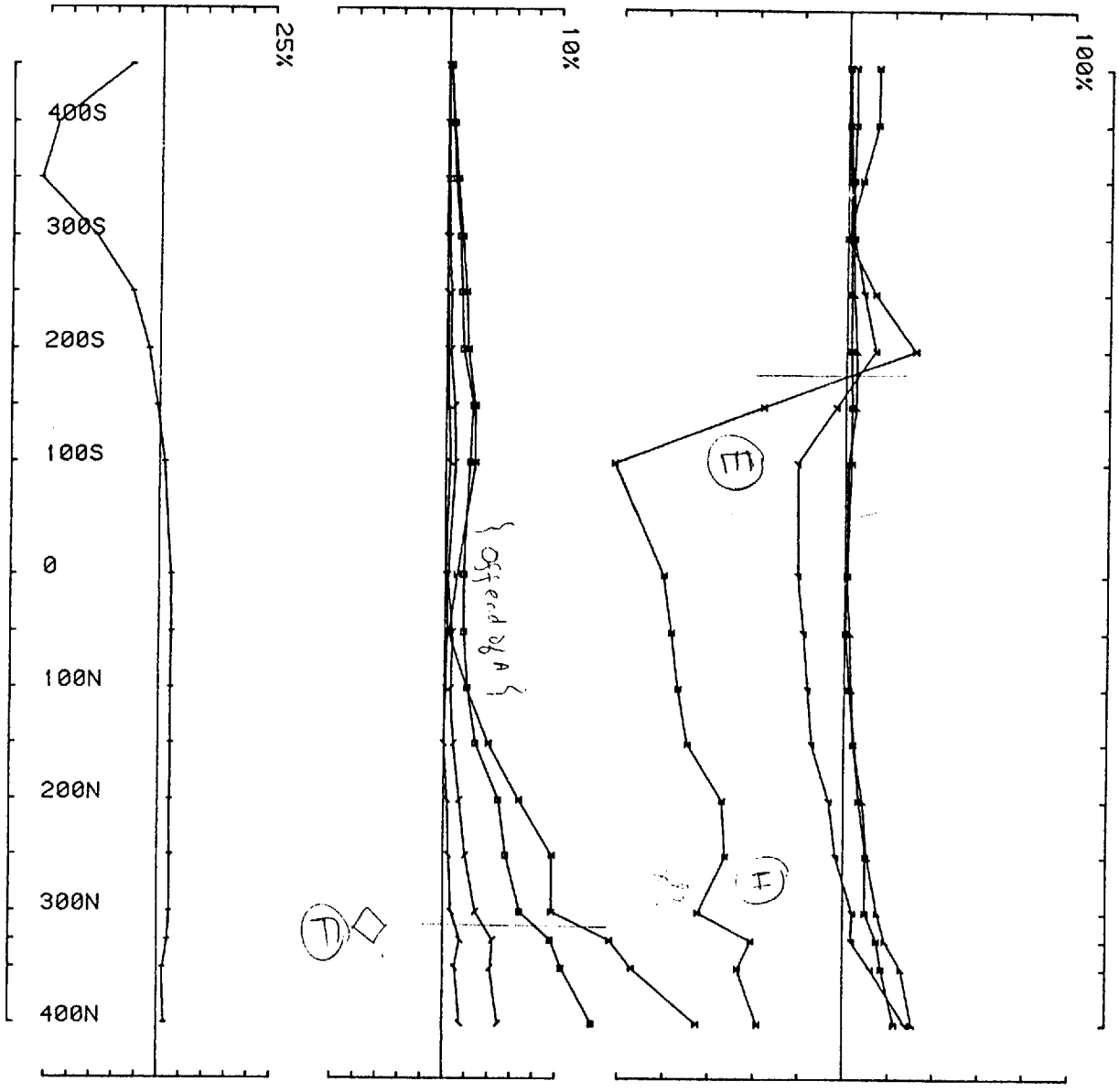
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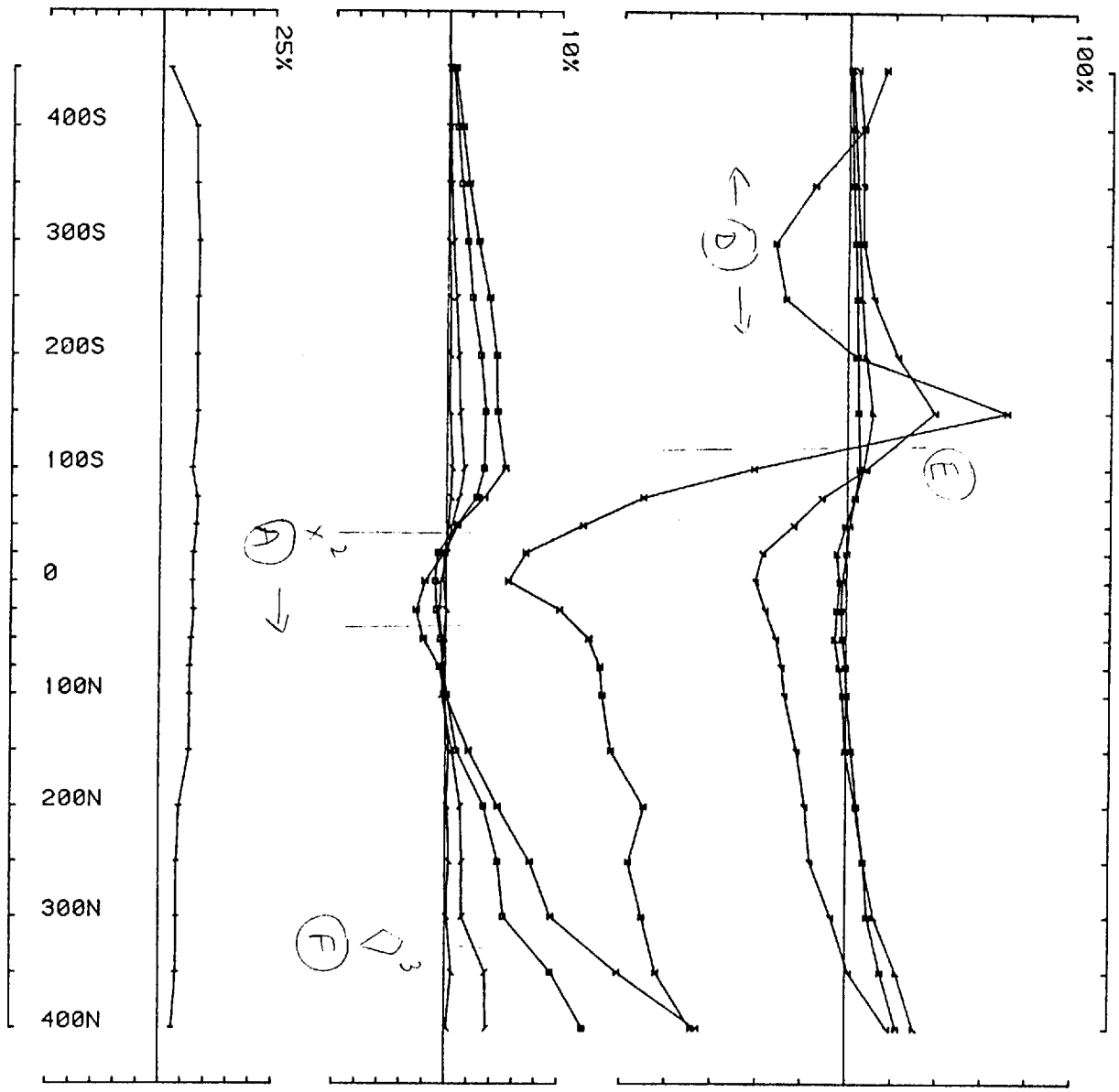
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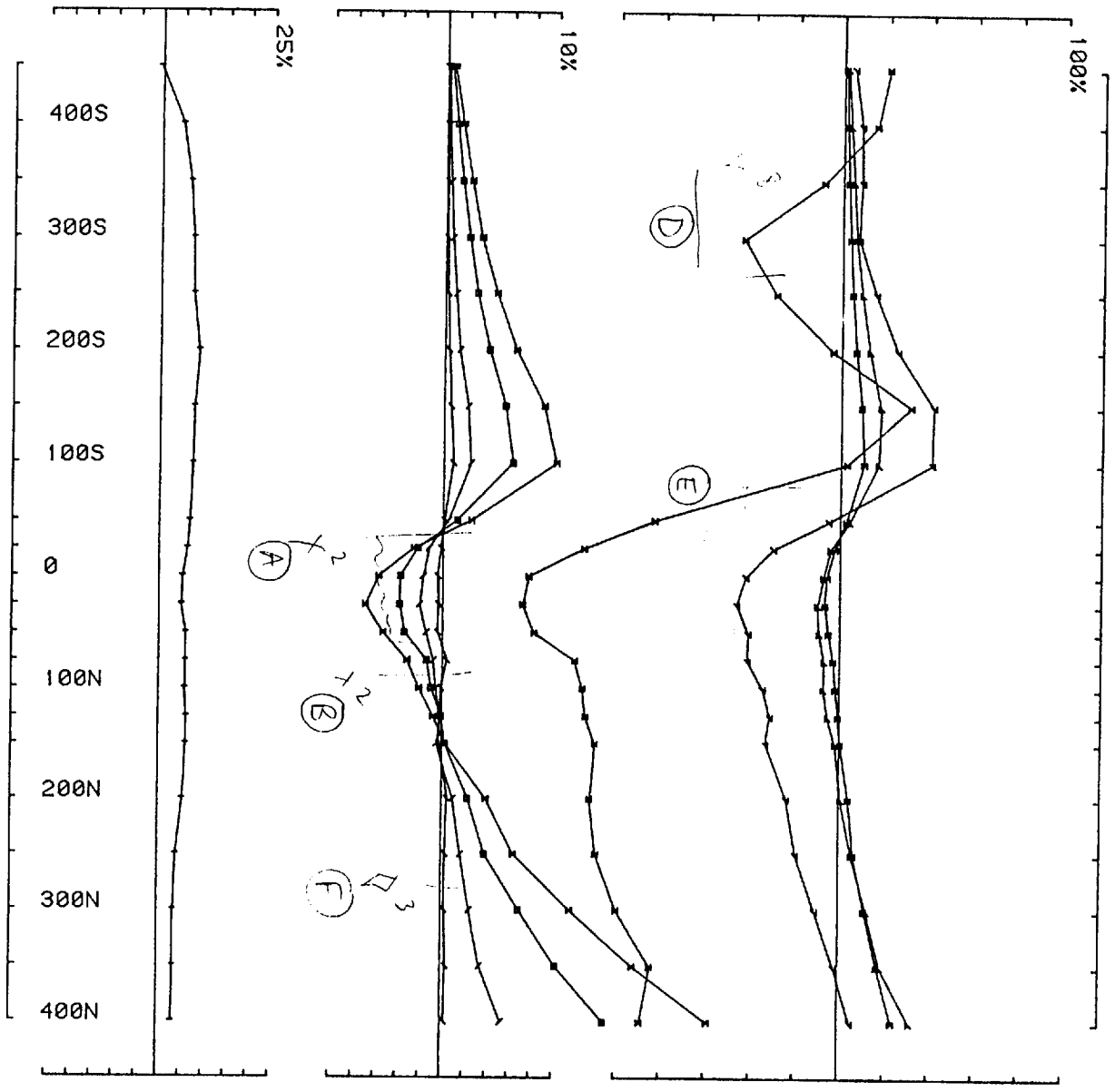
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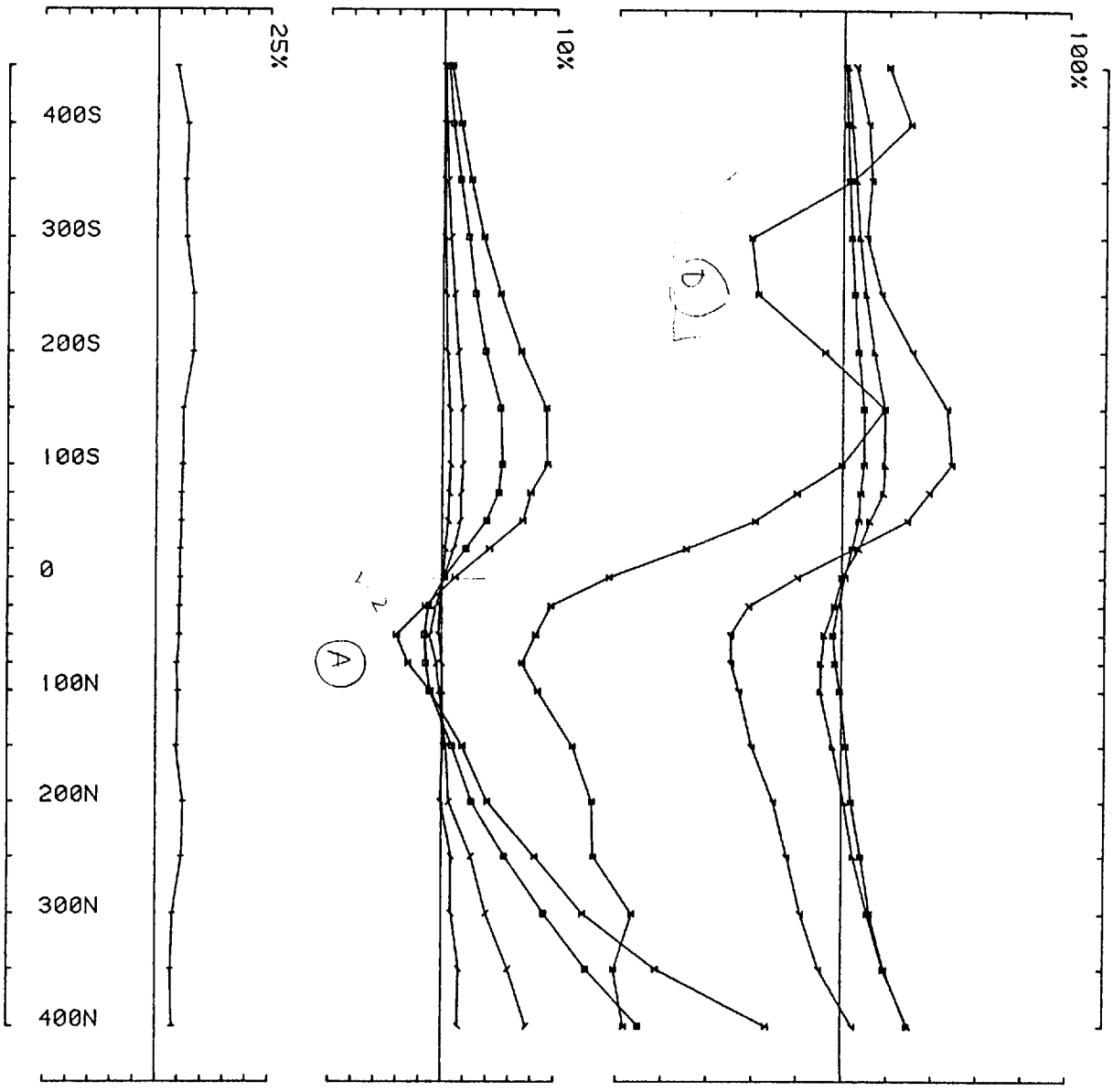
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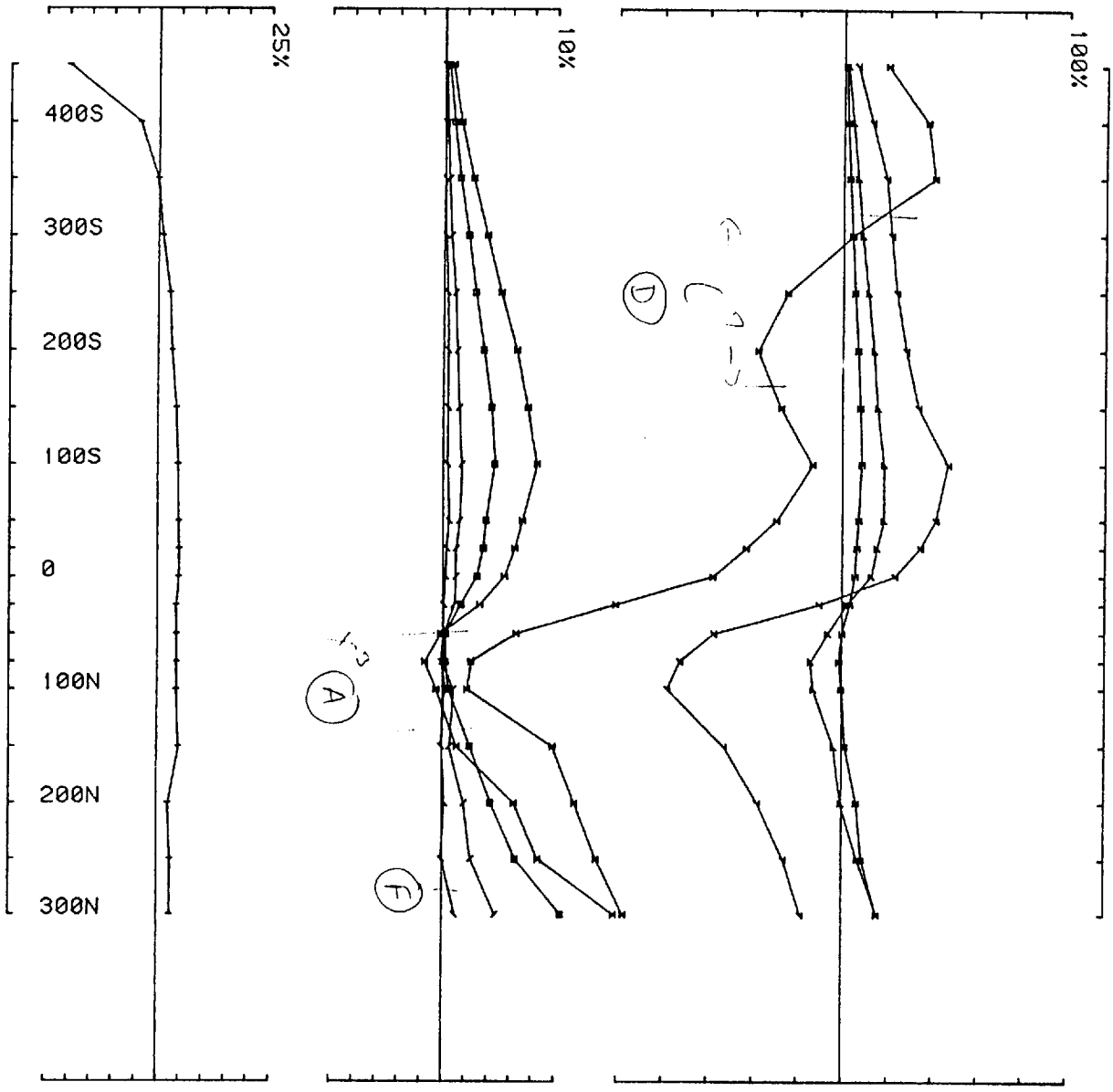
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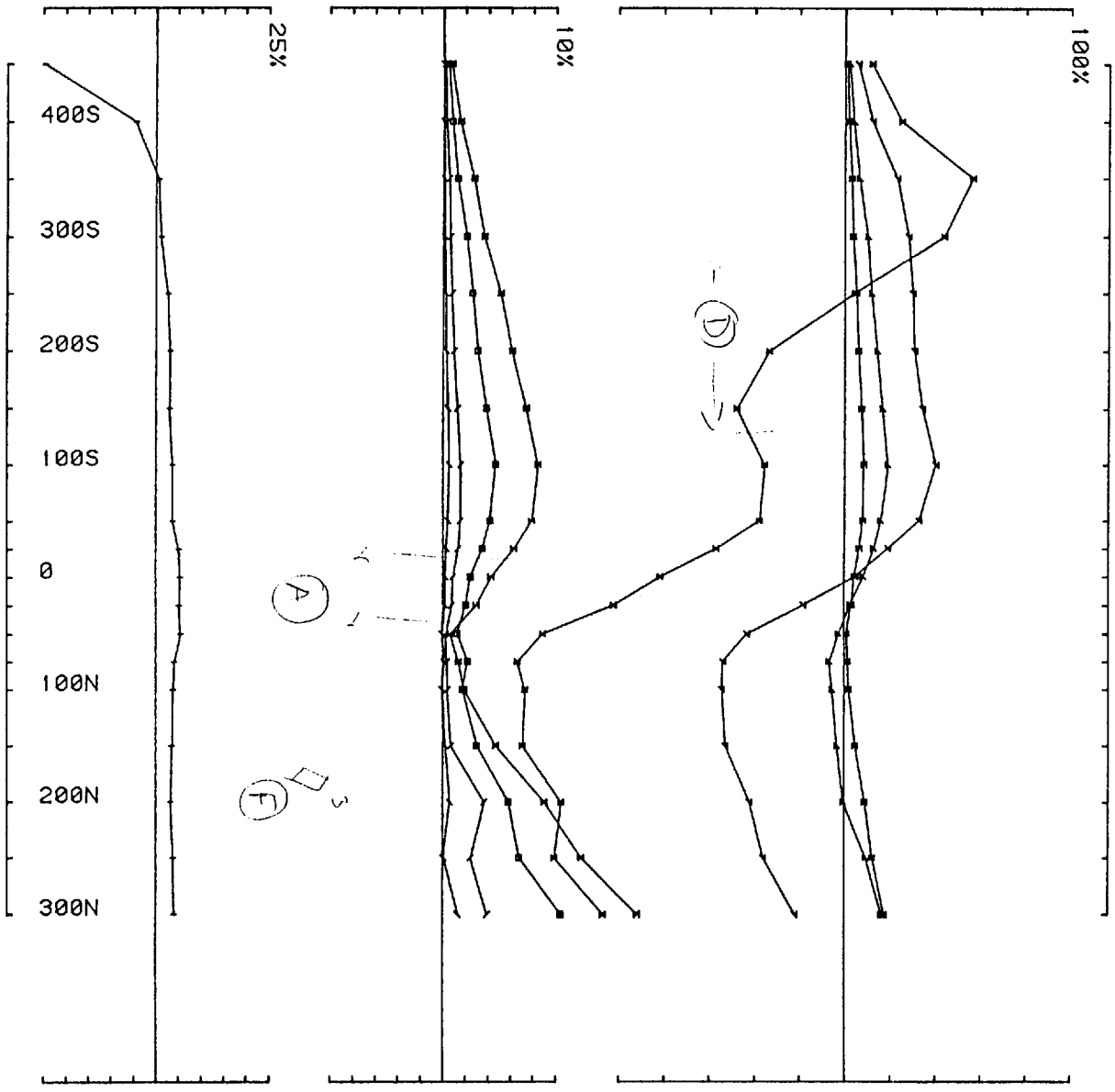
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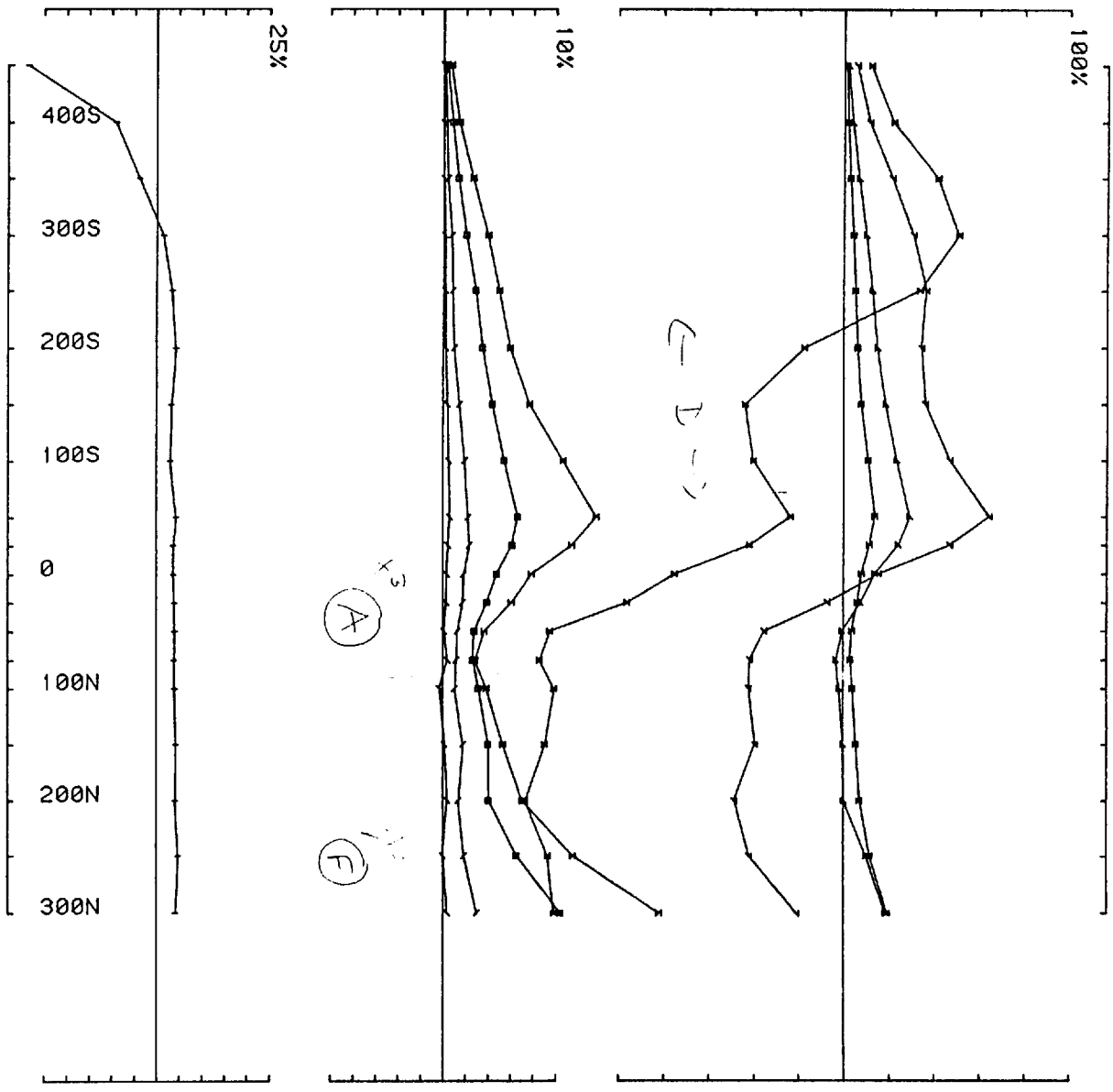
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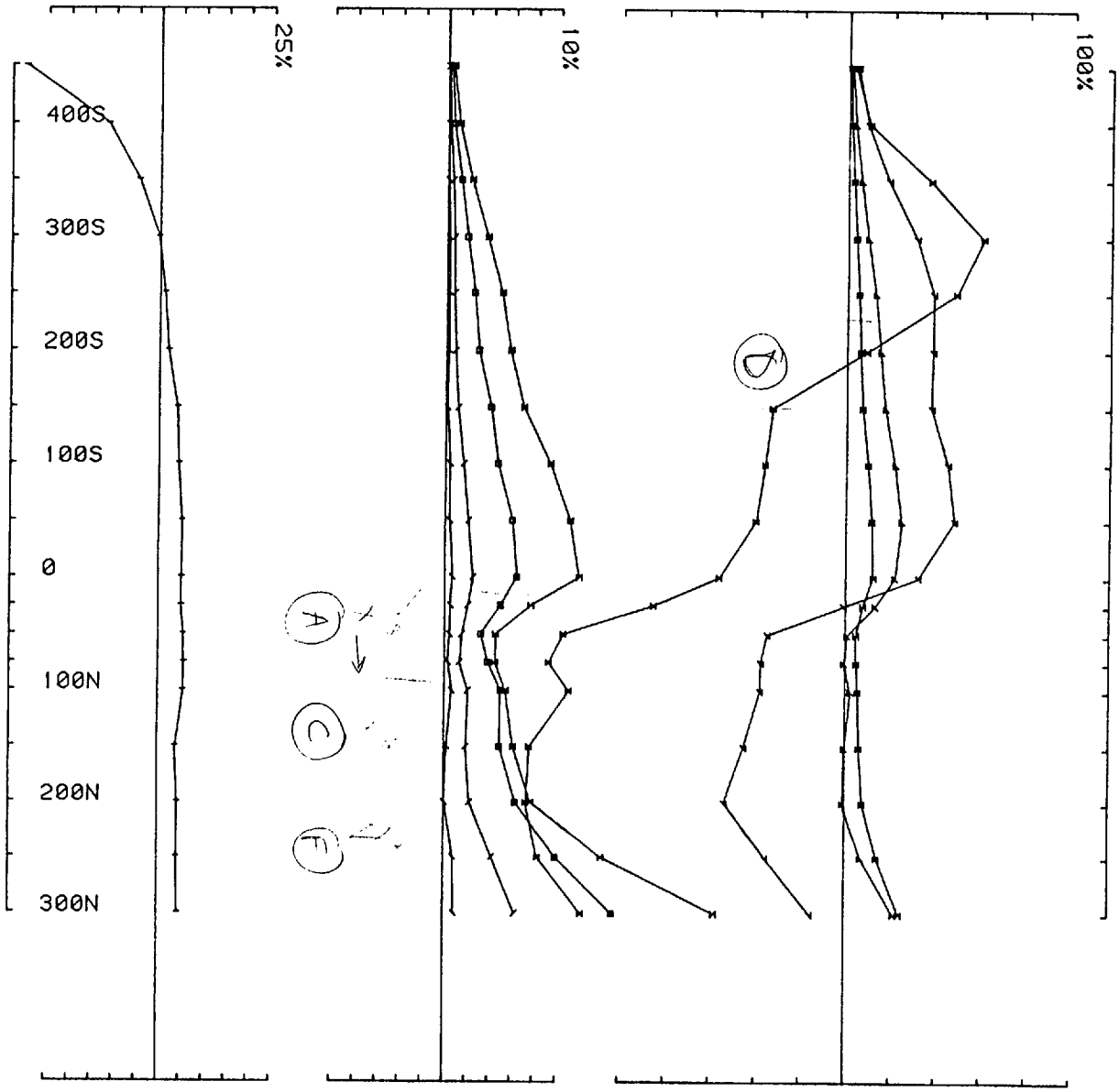
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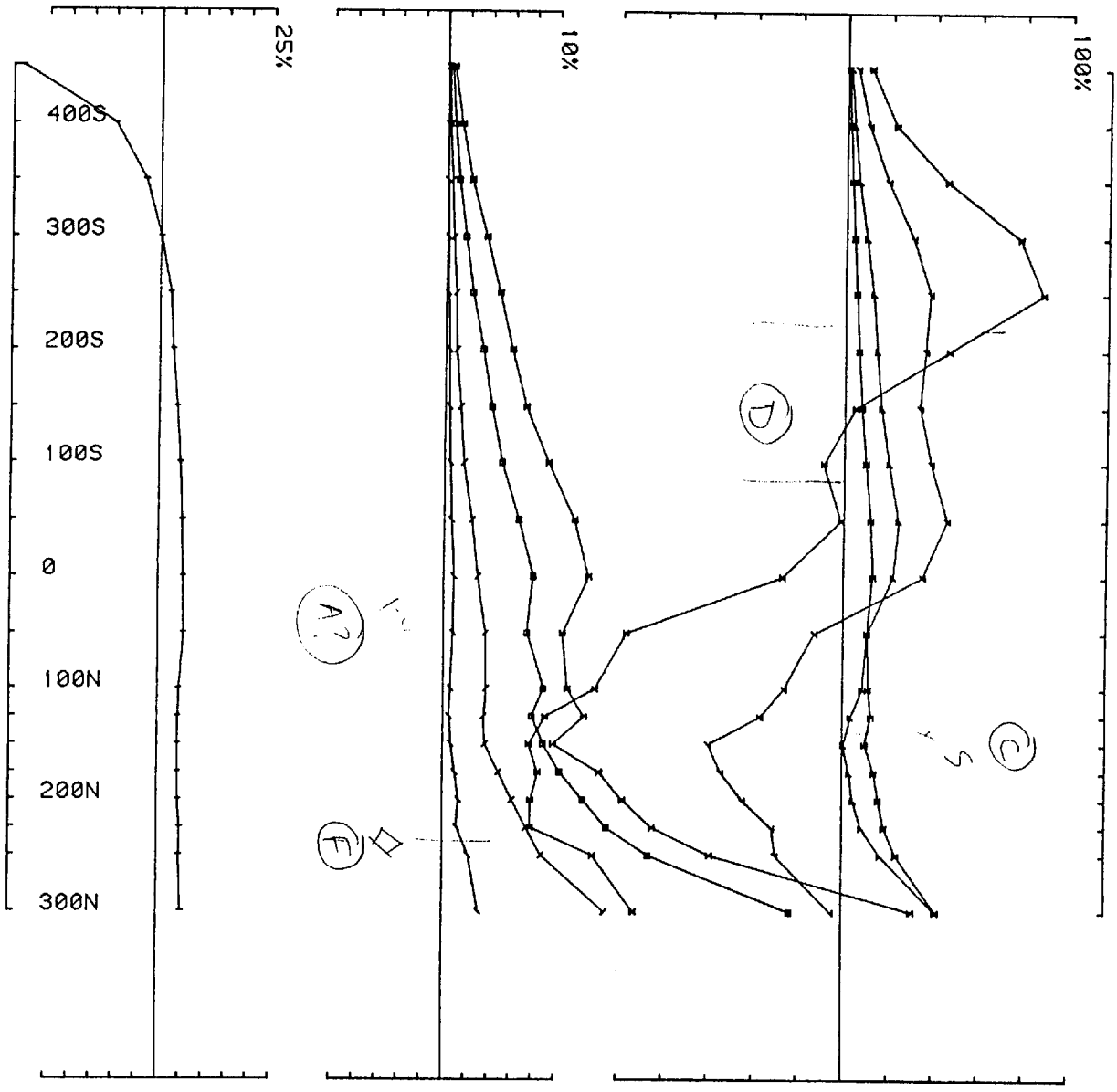
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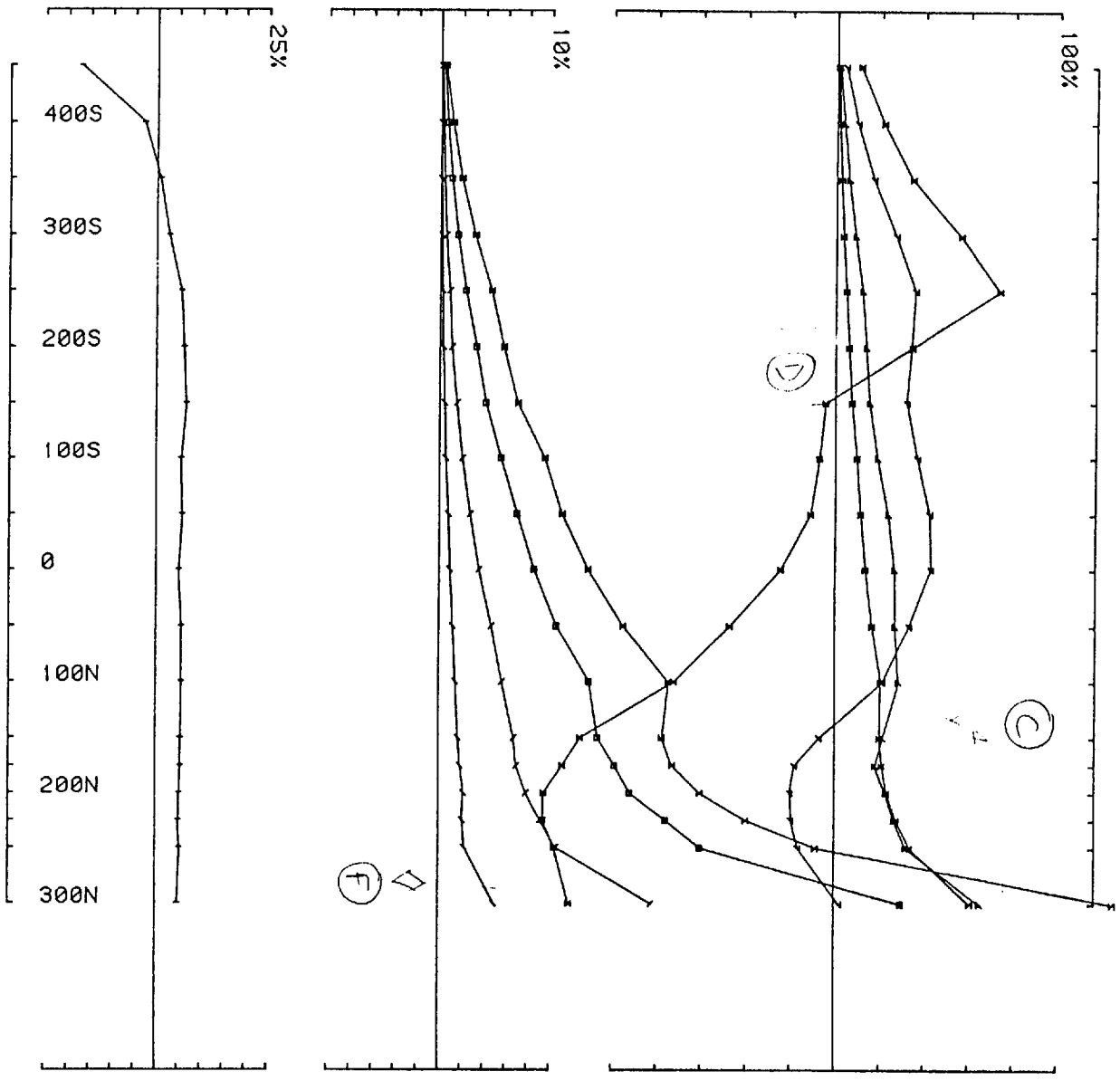
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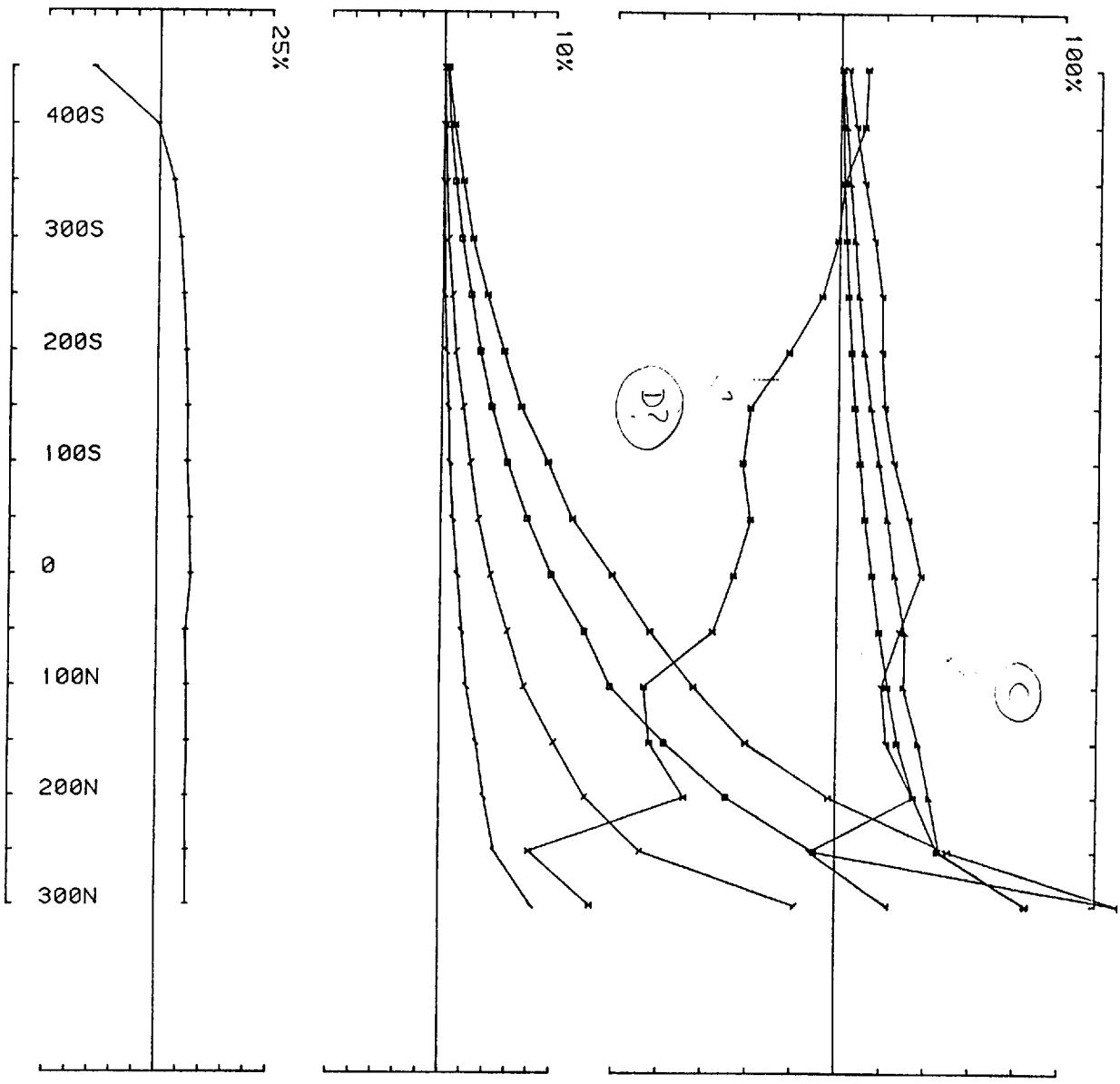
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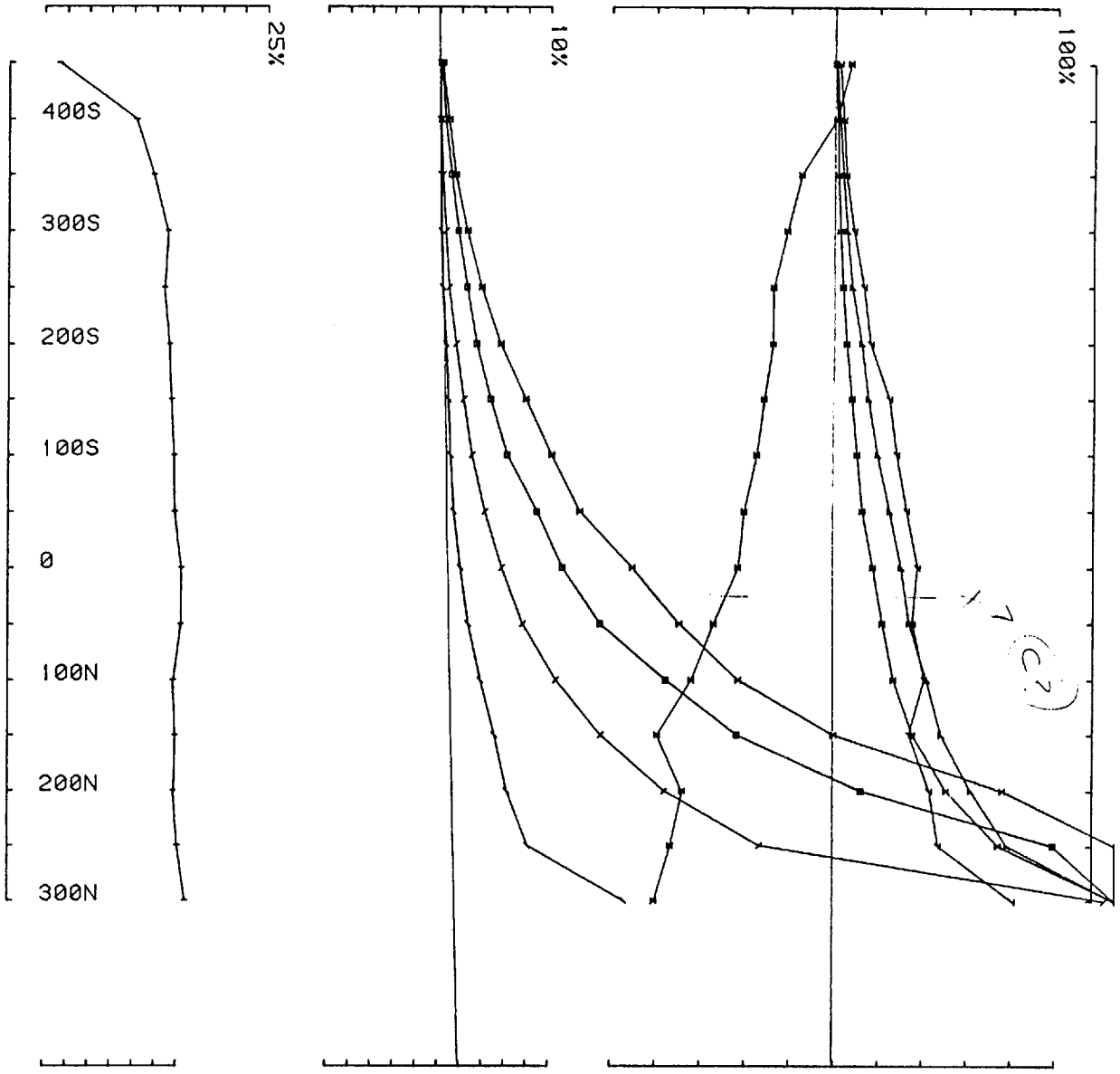
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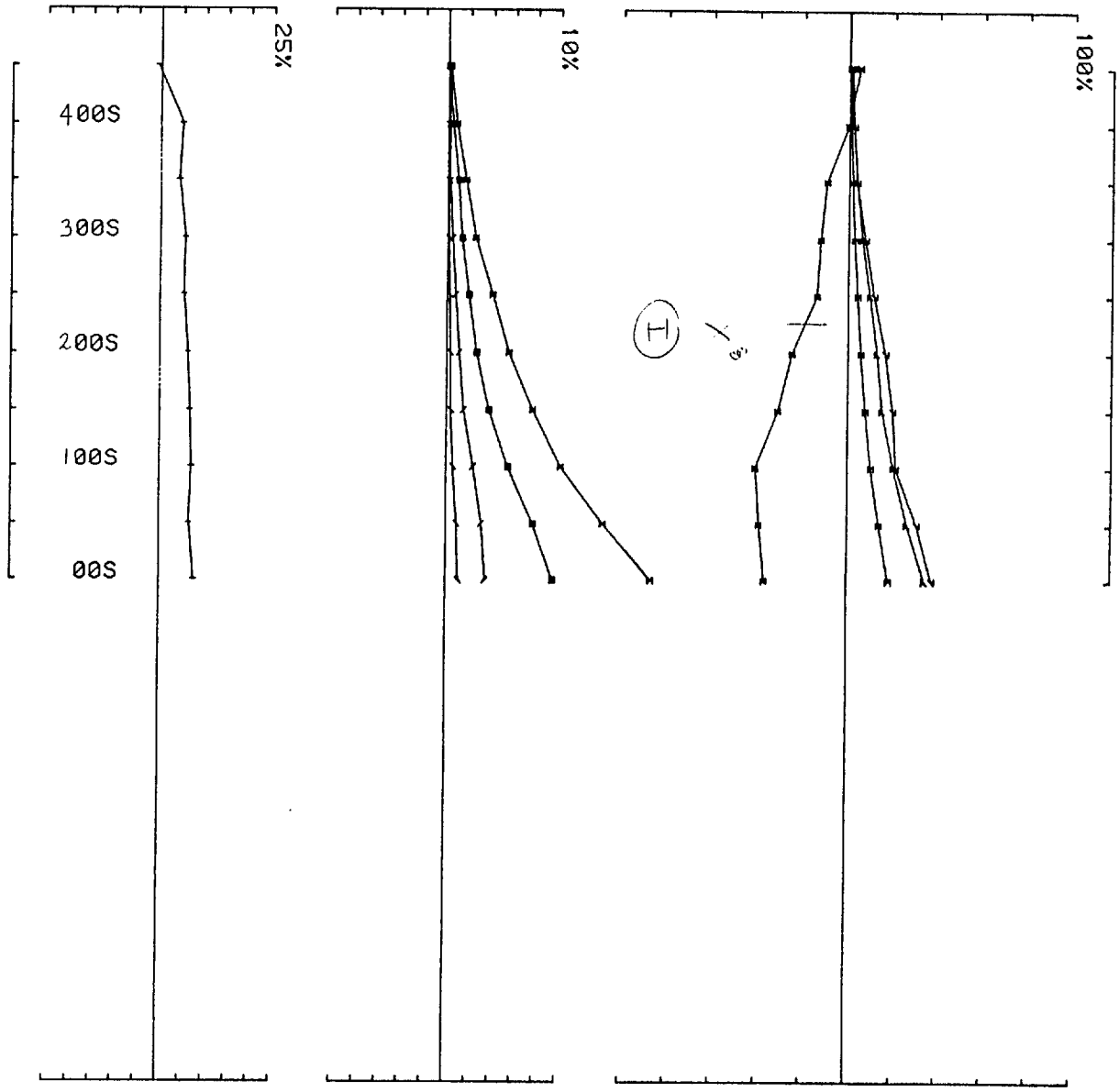
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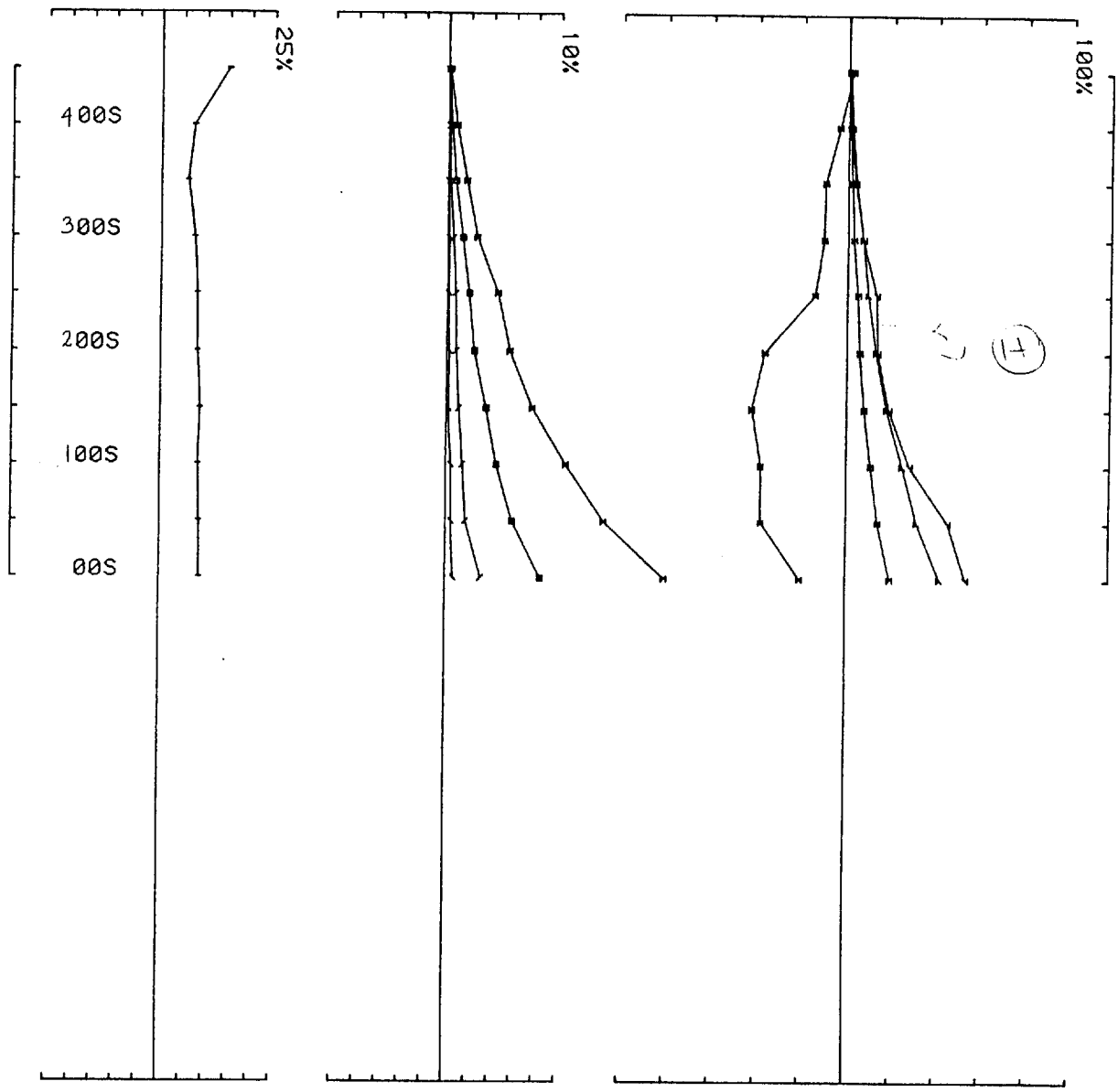
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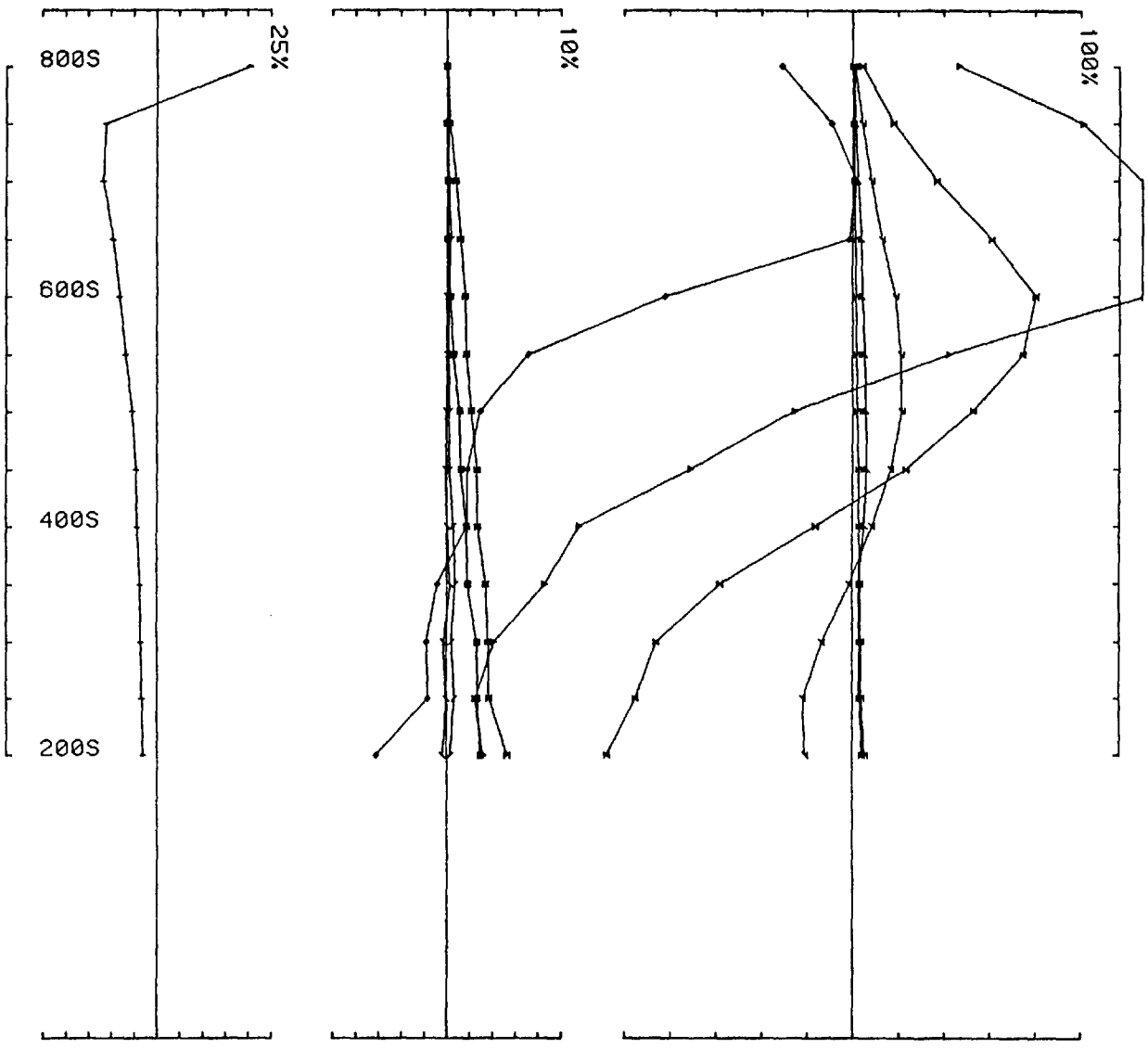
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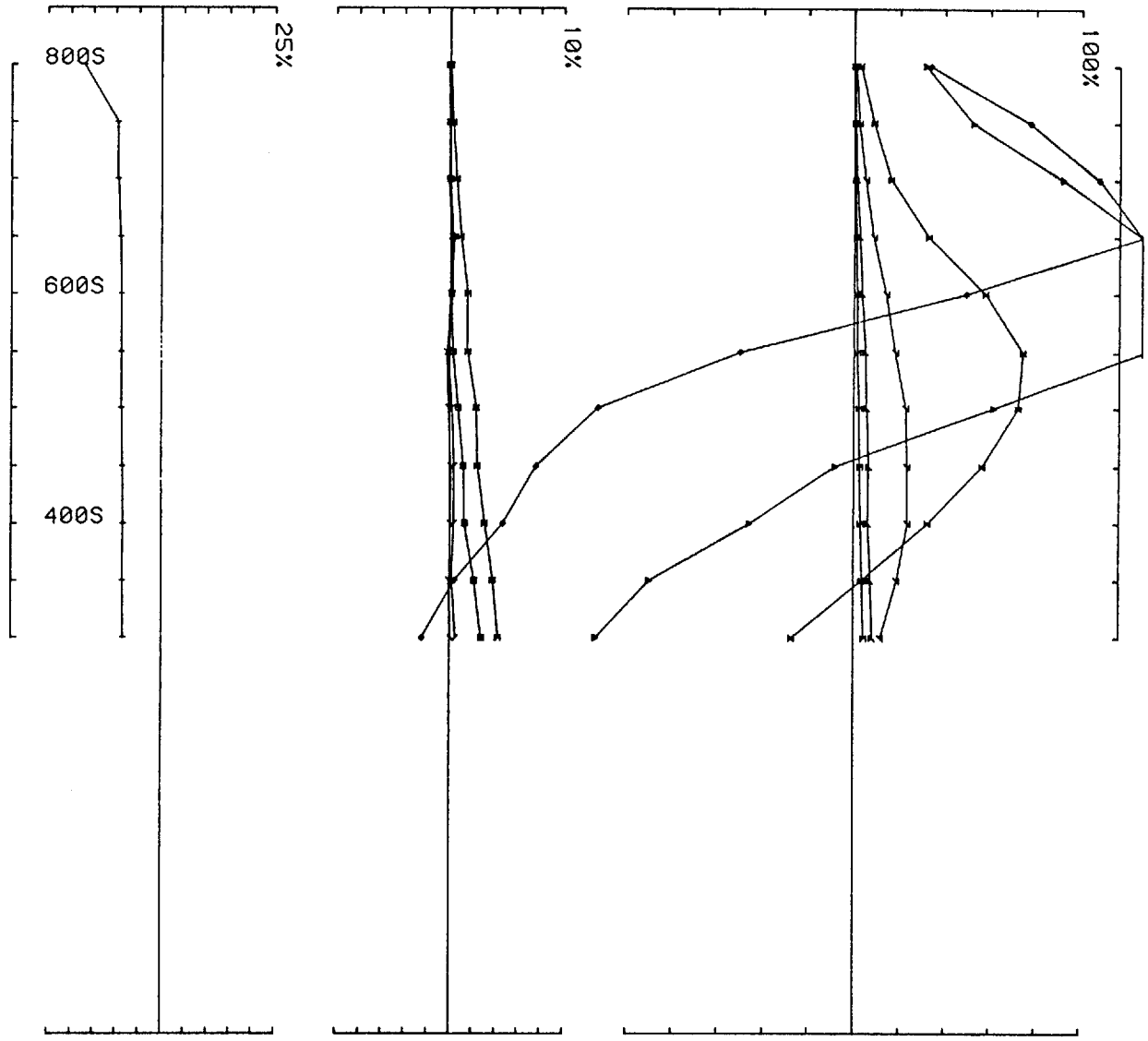
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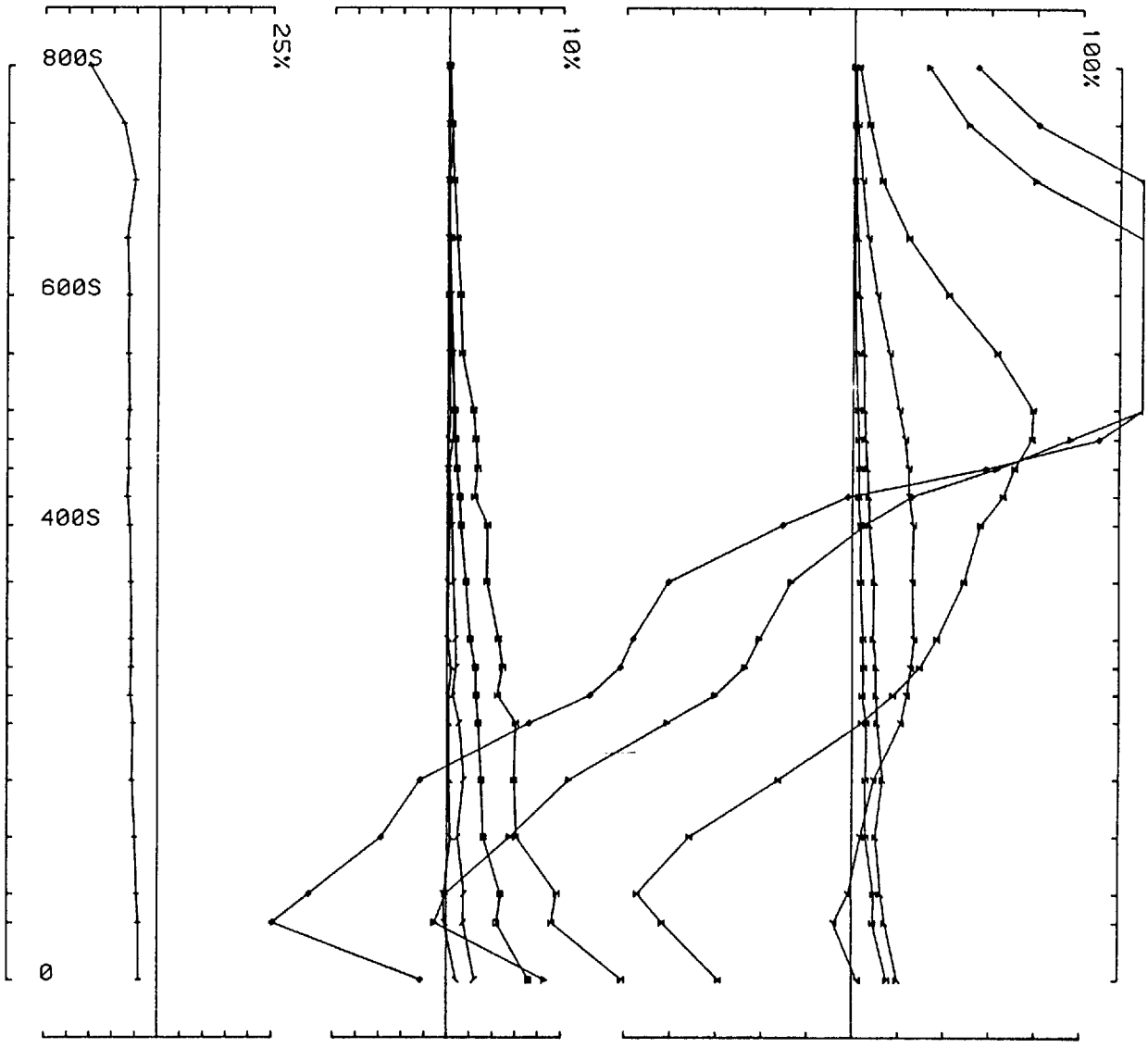
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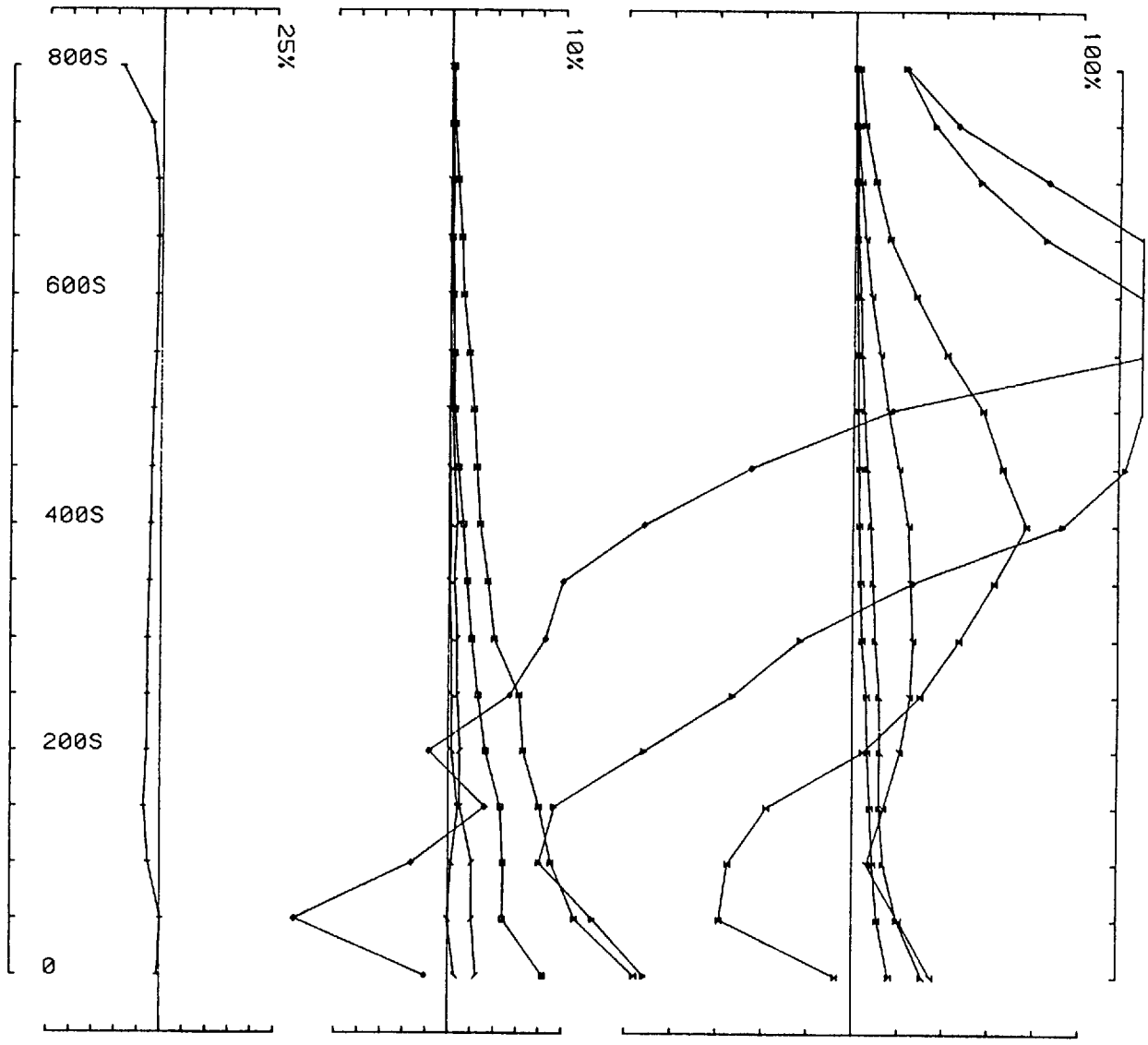
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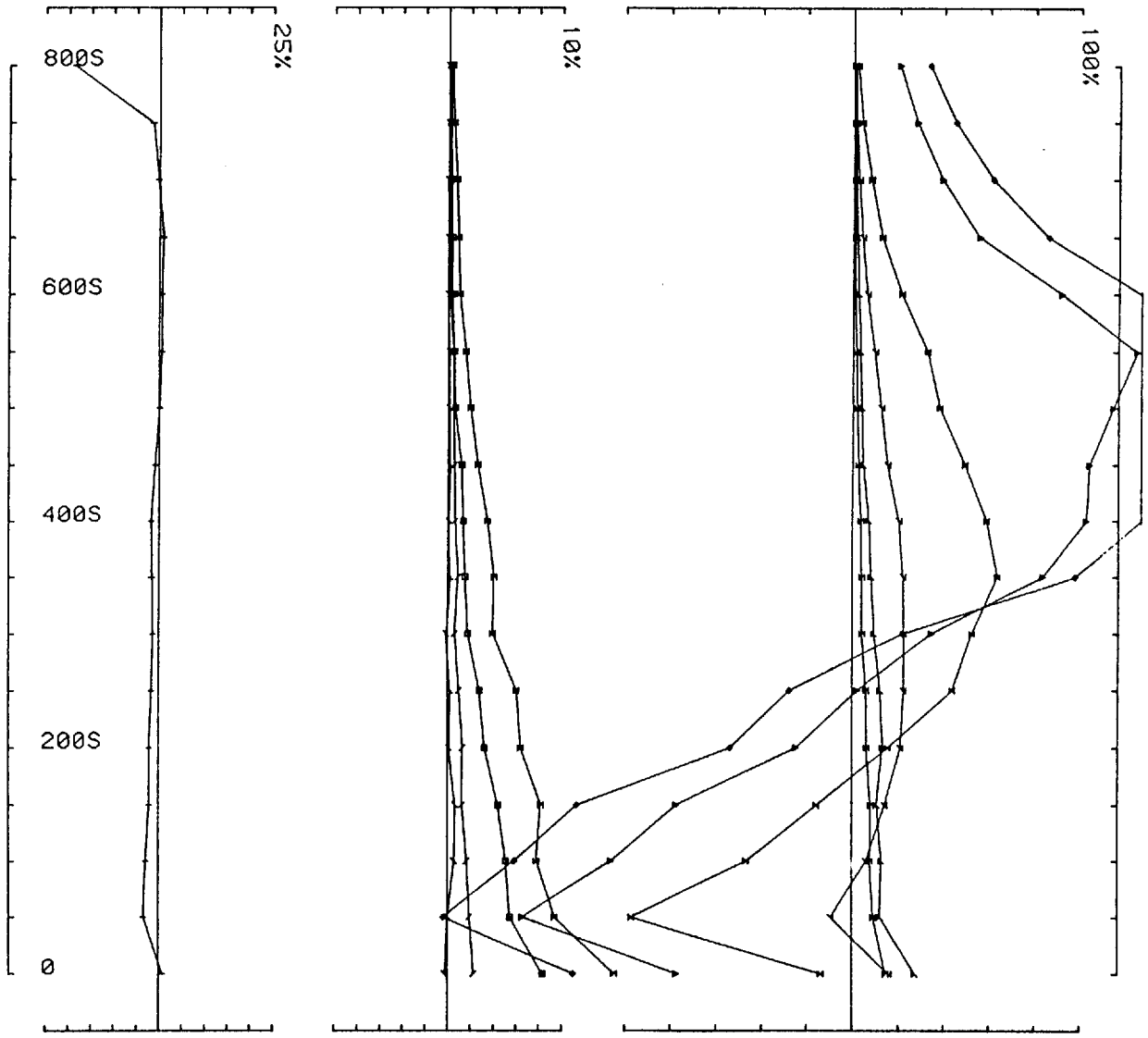
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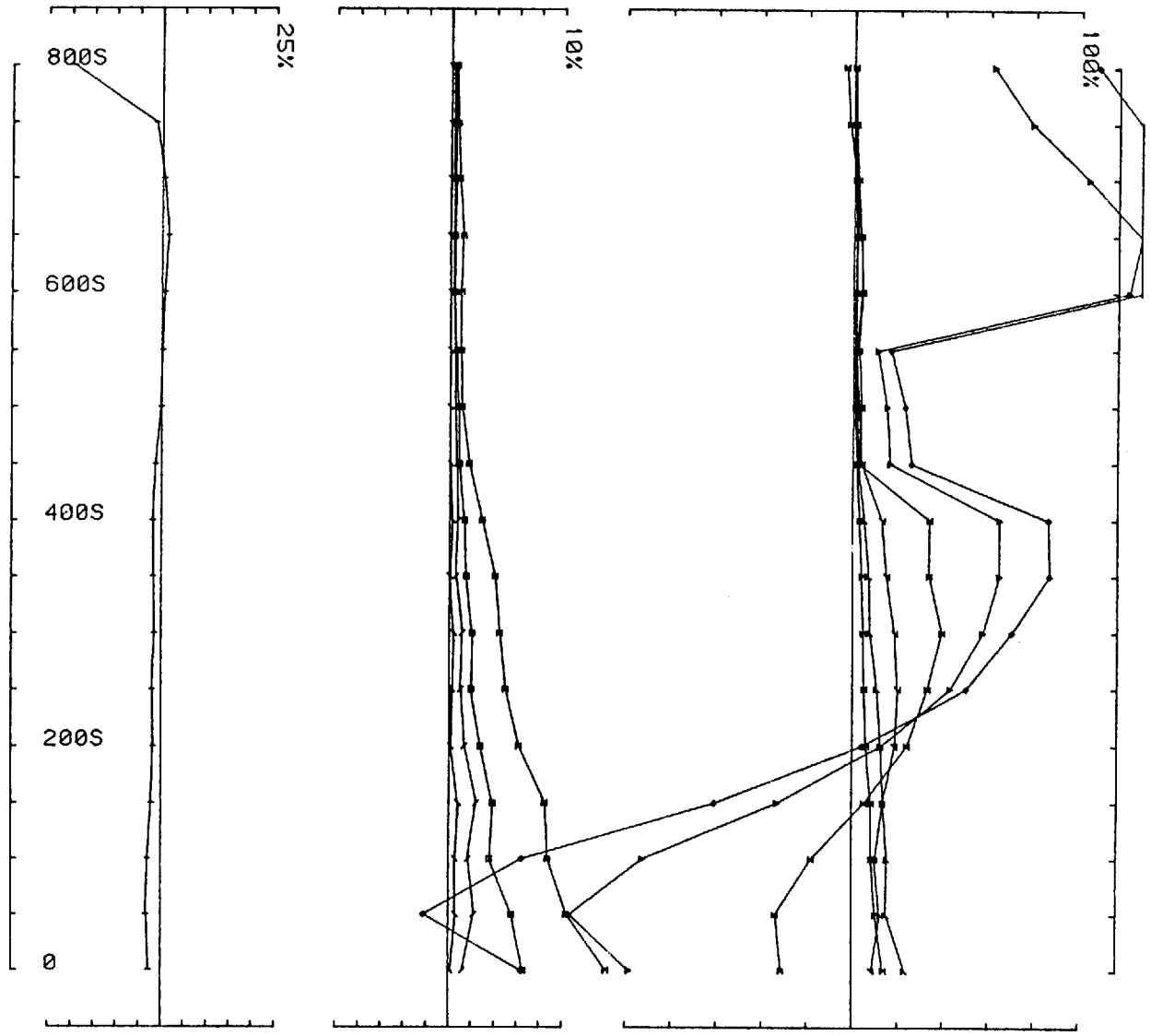
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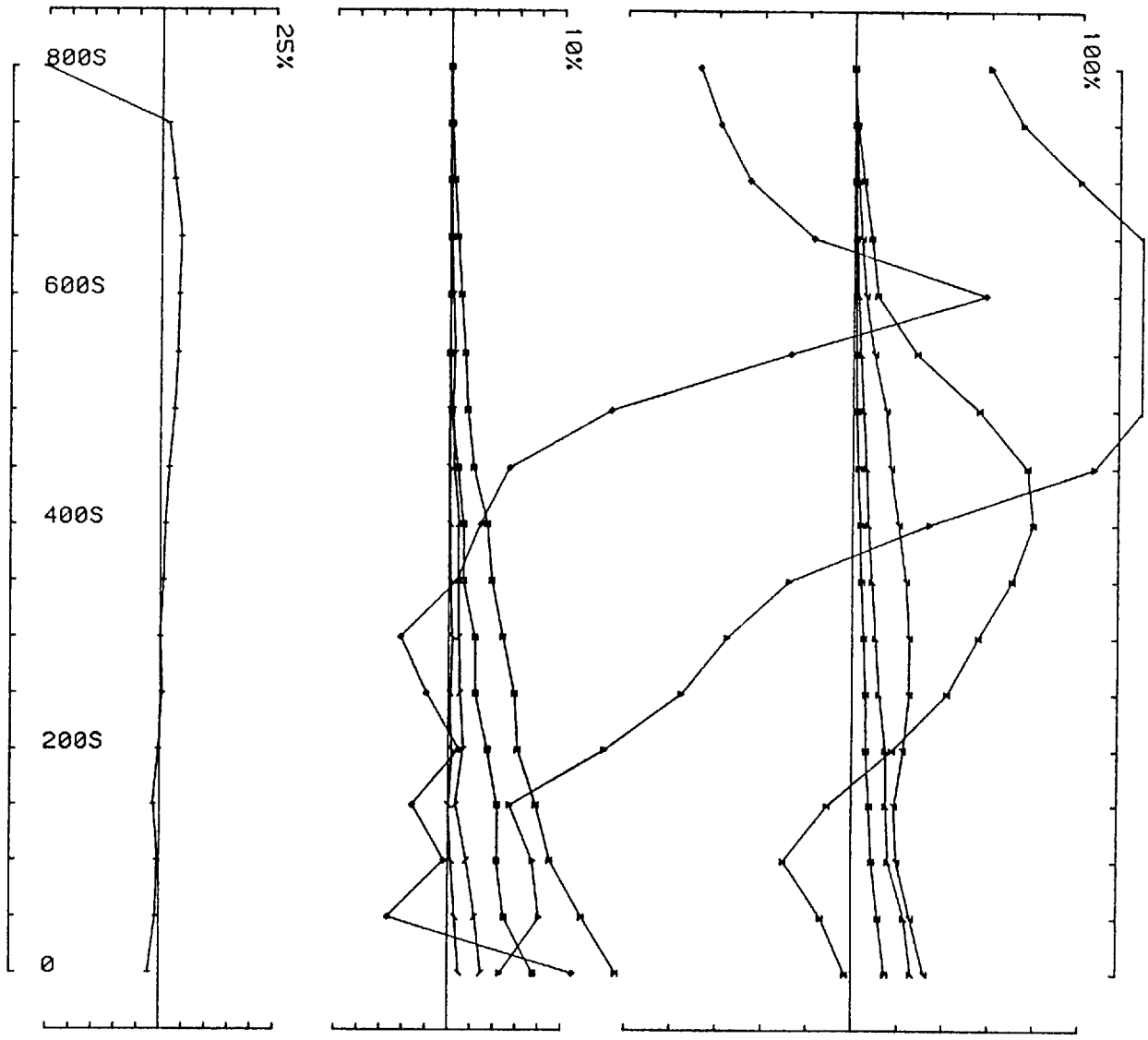
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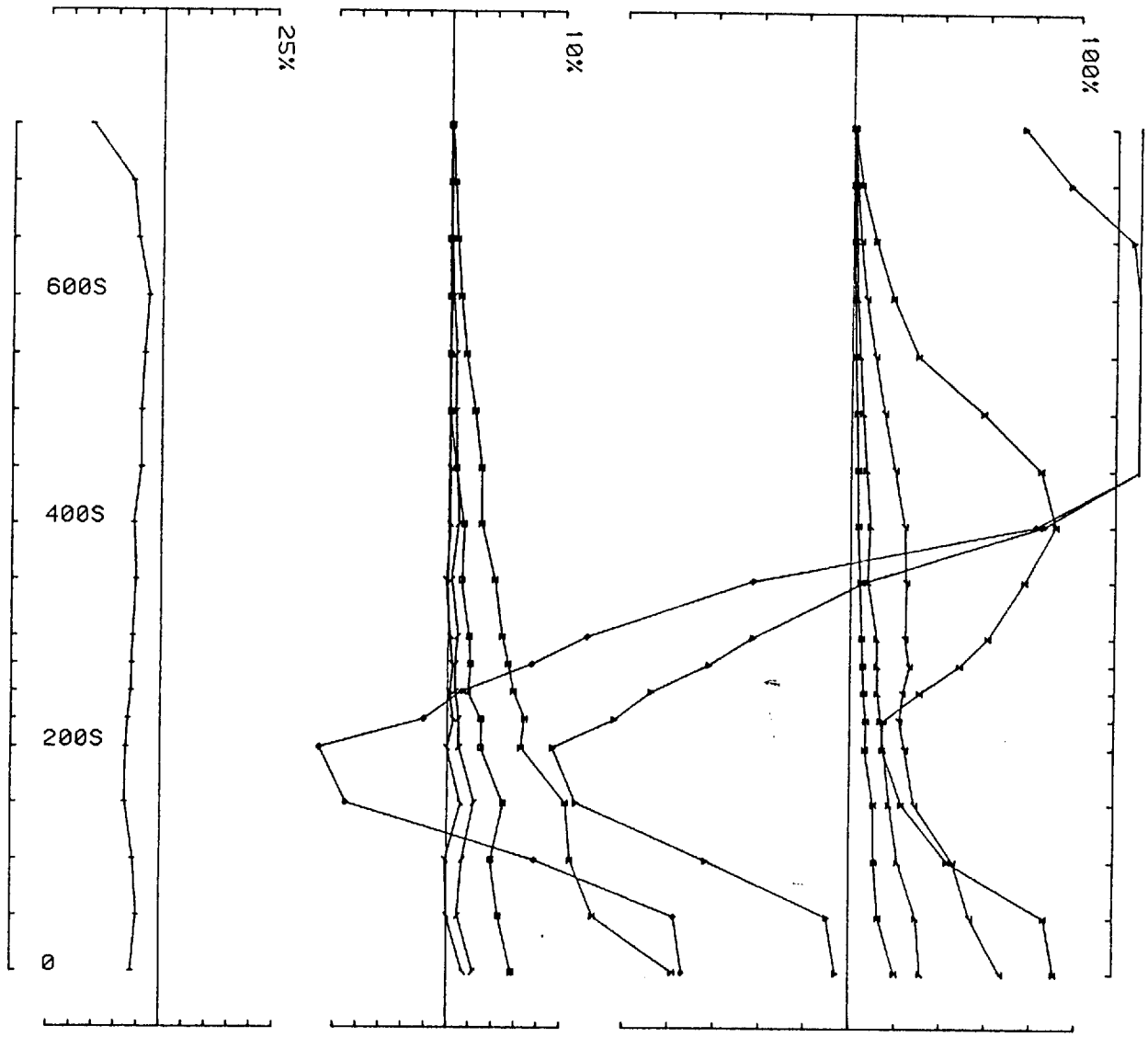
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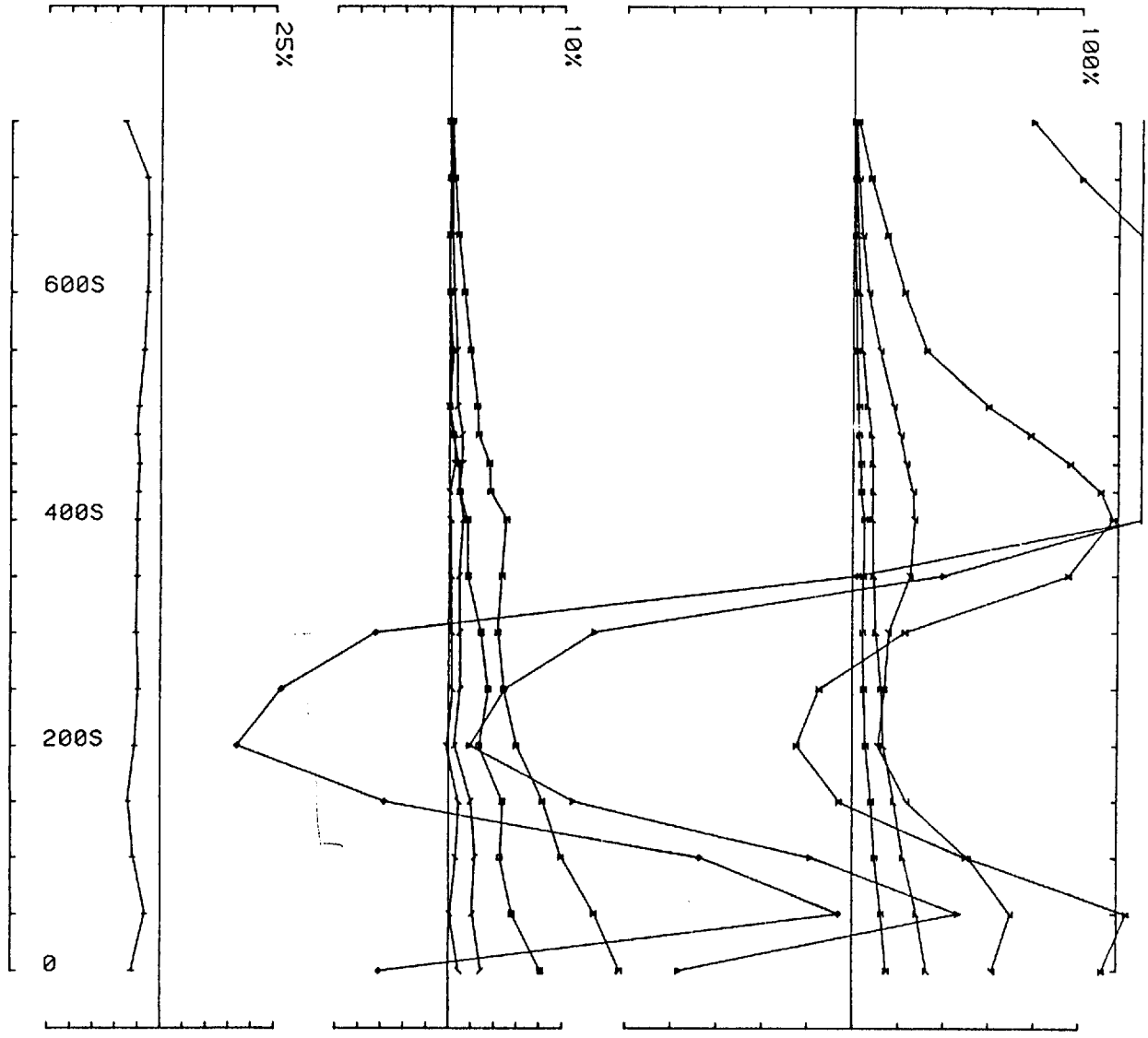
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UTEM SURVEY at CANTON BOUSQUET for HI-TECH

conducted by LAMONTAGNE GEOPHYSICS Job 8815 base freq (hz) 30.974

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UTEM SURVEY at CANTON BOUSQUET for HI-TECH

conducted by LAMONTAGNE GEOPHYSICS Job 8815 base freq (hz) 30.974

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