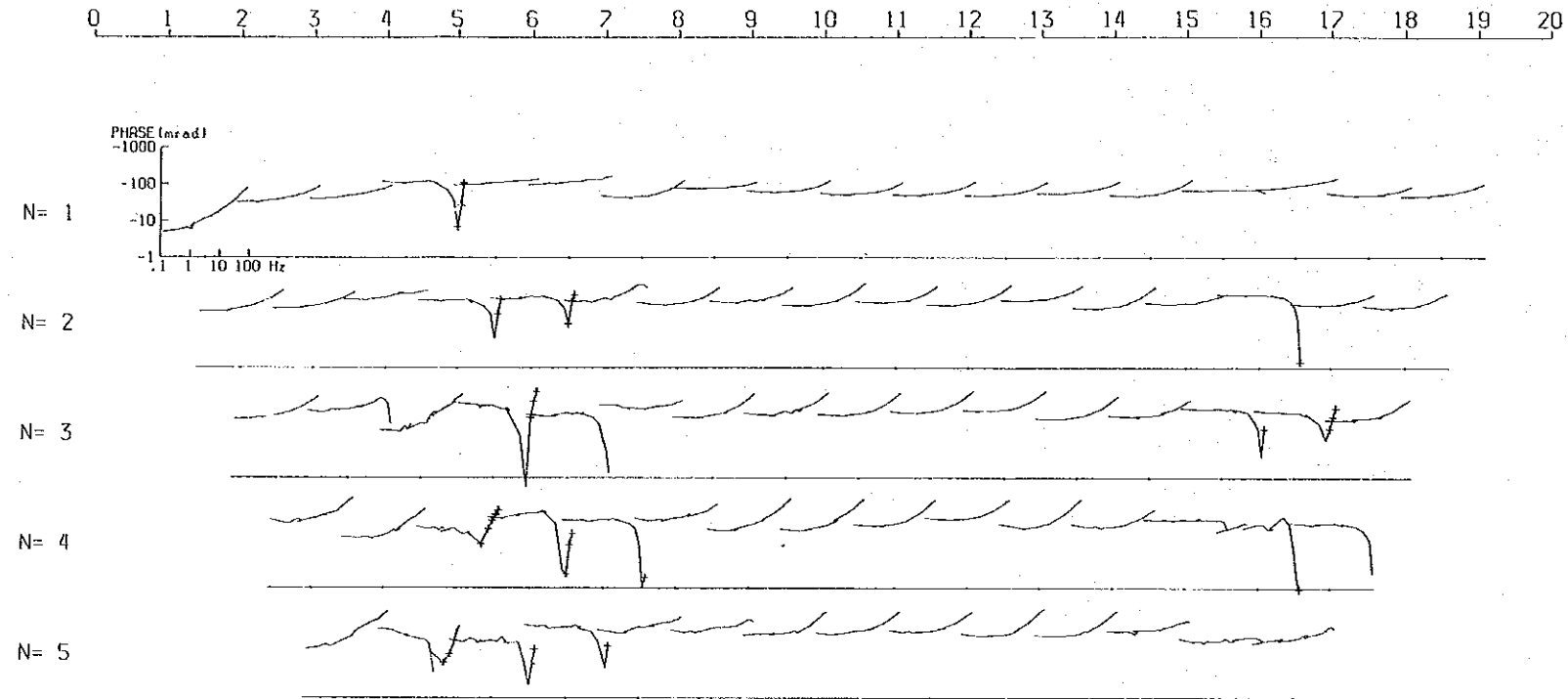
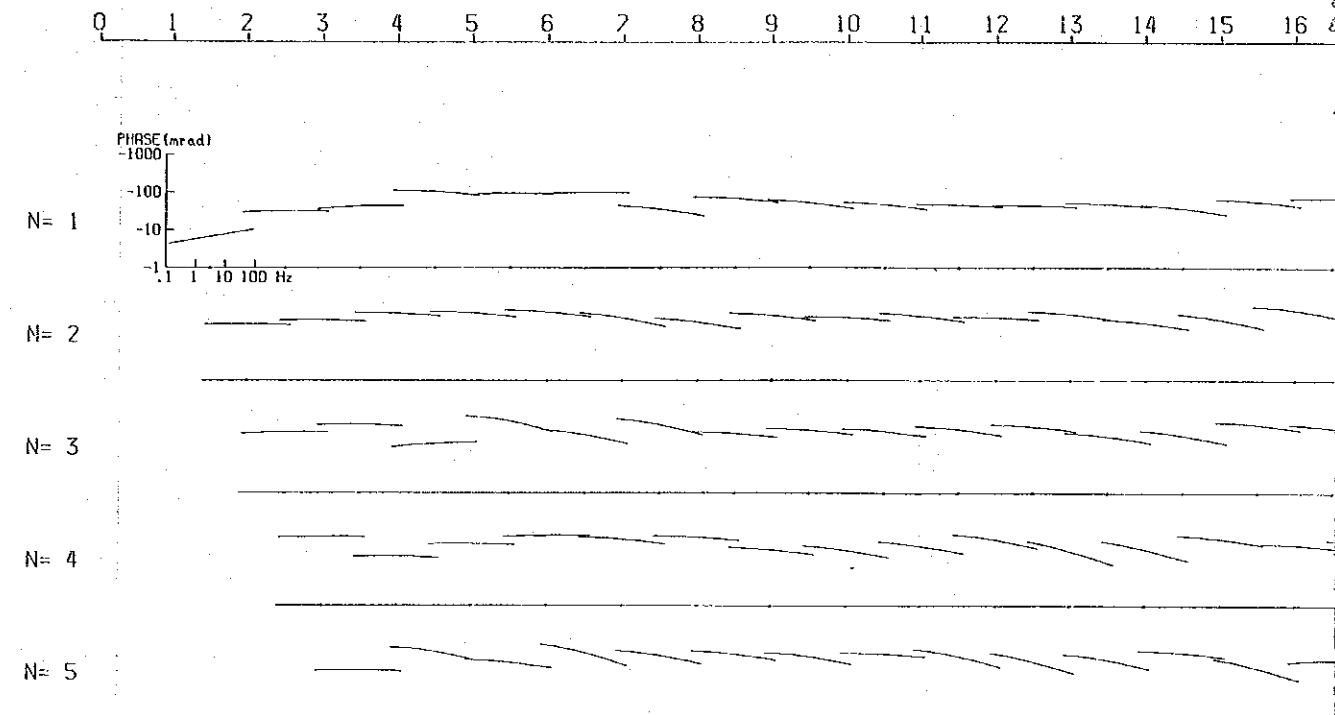


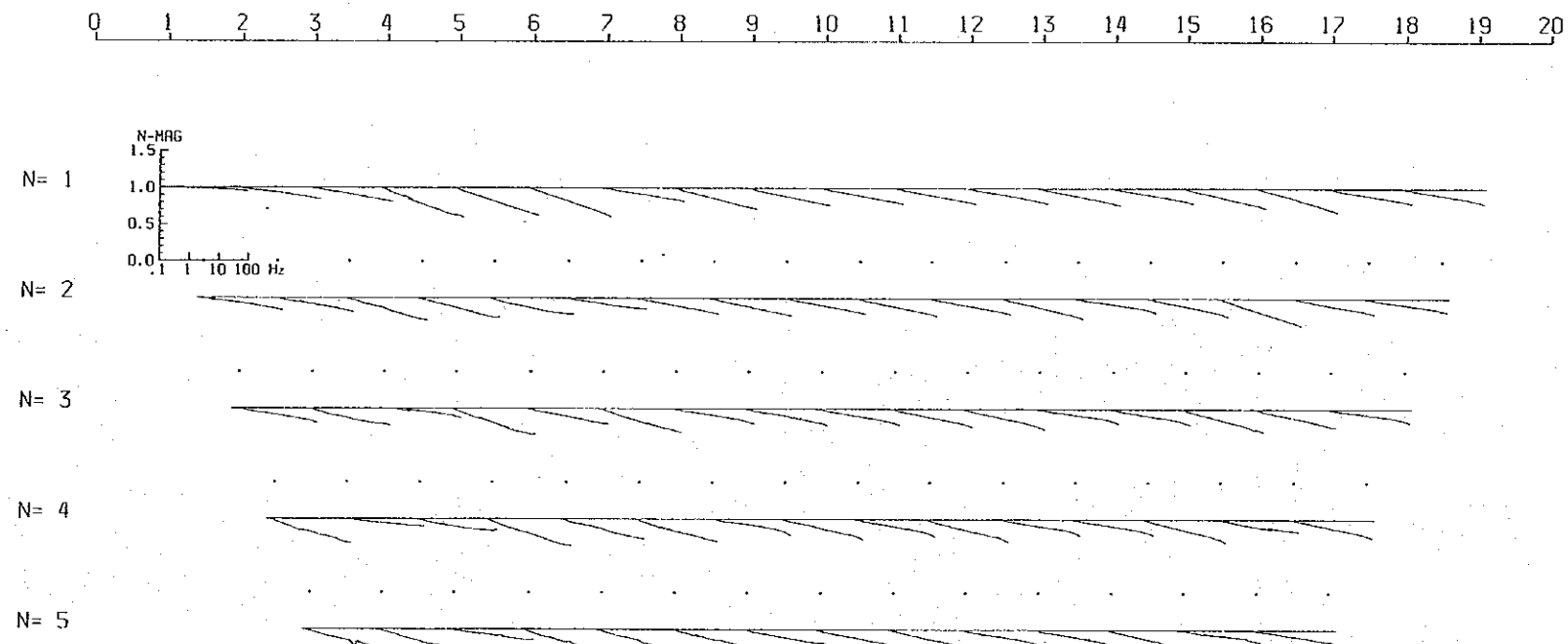
LINE A Phase Spectrum



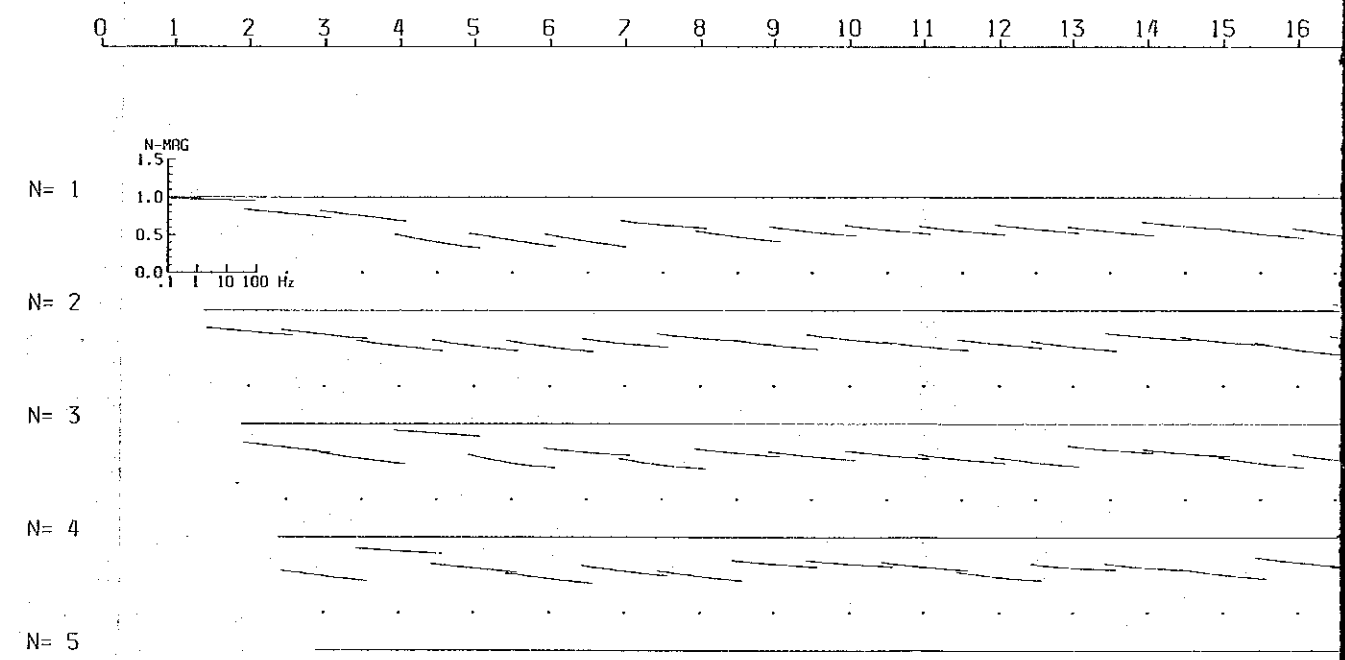
LINE A Decoupled Phase Spectrum



LINE A Magnitude Spectrum

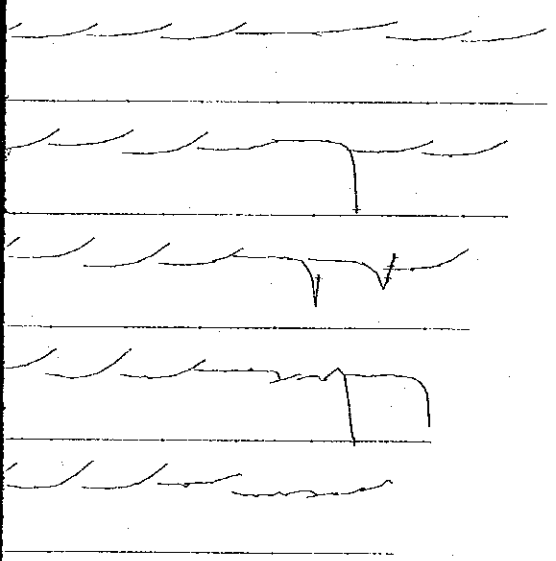


LINE A Decoupled Magnitude Spectrum



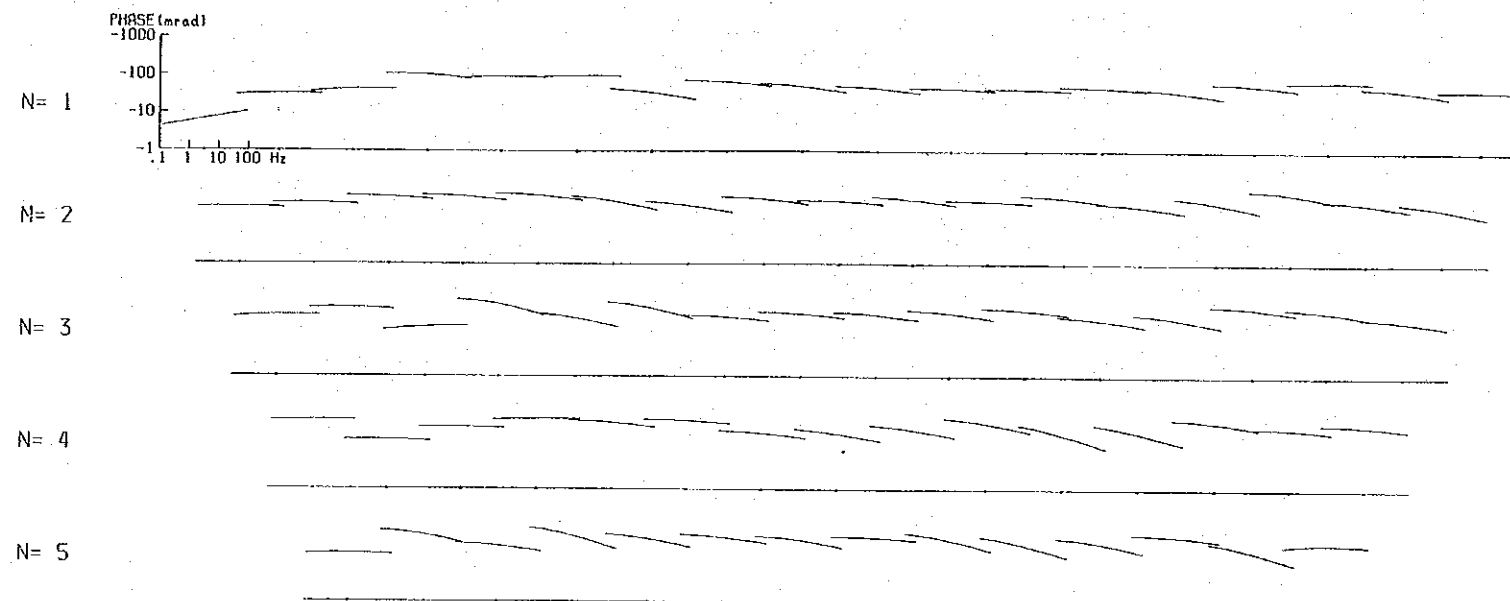
Spectrum

12 13 14 15 16 17 18 19 20



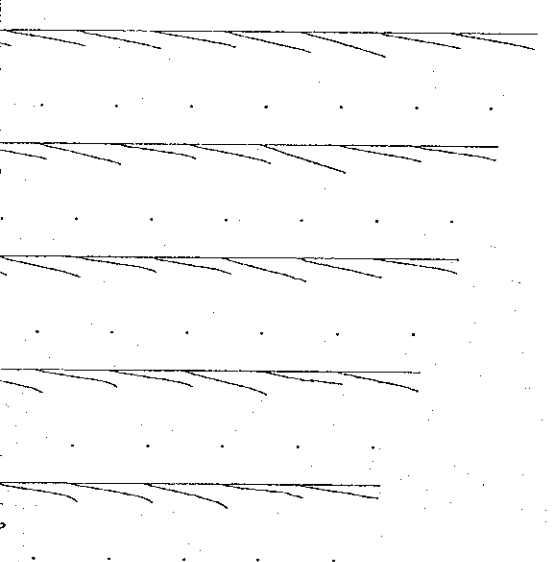
LINE A Decoupled Phase Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



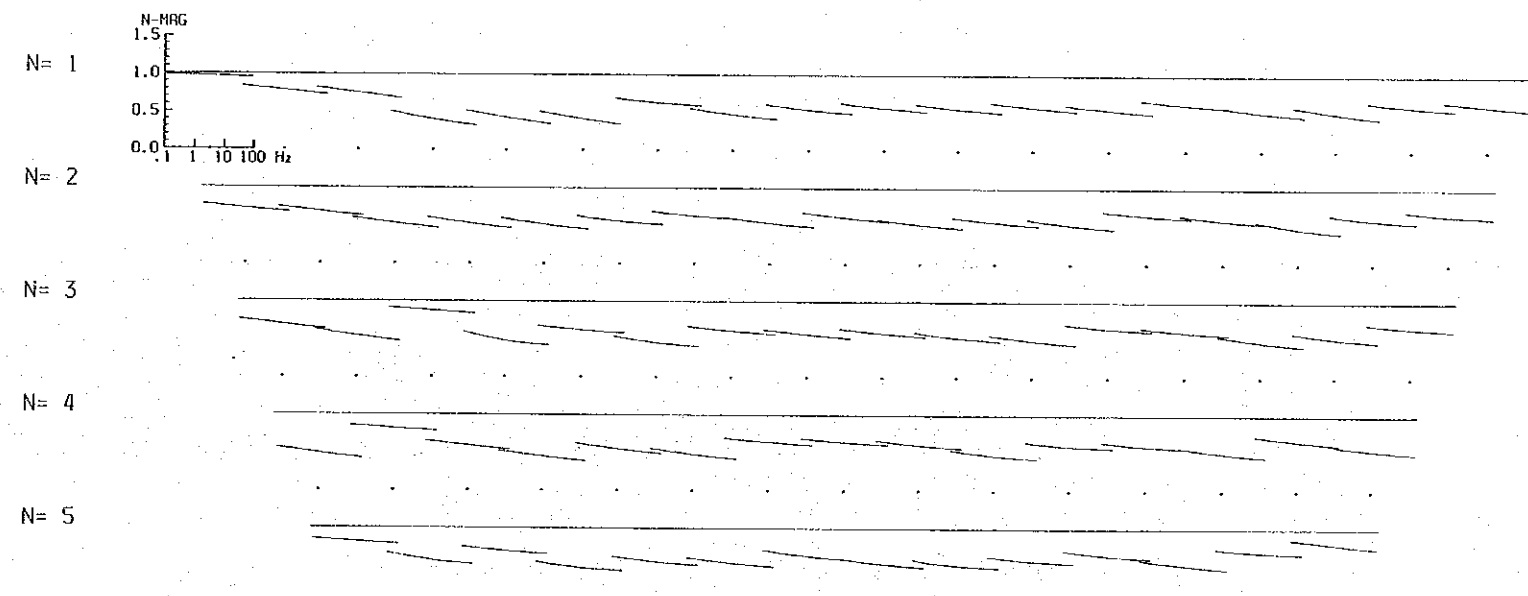
Spectrum

12 13 14 15 16 17 18 19 20



LINE A Decoupled Magnitude Spectrum

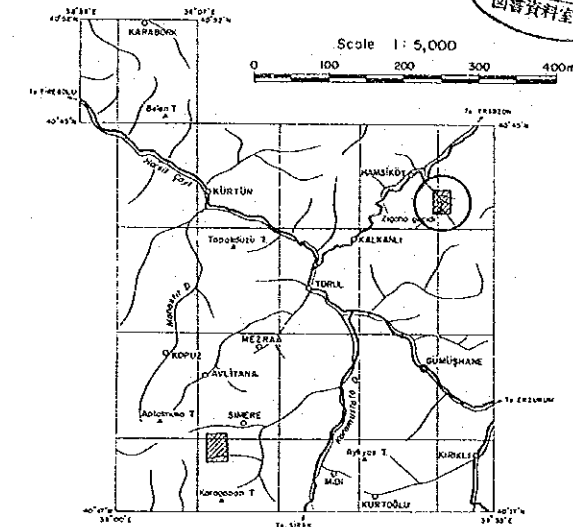
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REPORT ON THE MINERAL EXPLORATION OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

PHASE, MAGNITUDE & COLE-COLE SPECTRUM (LINE A)

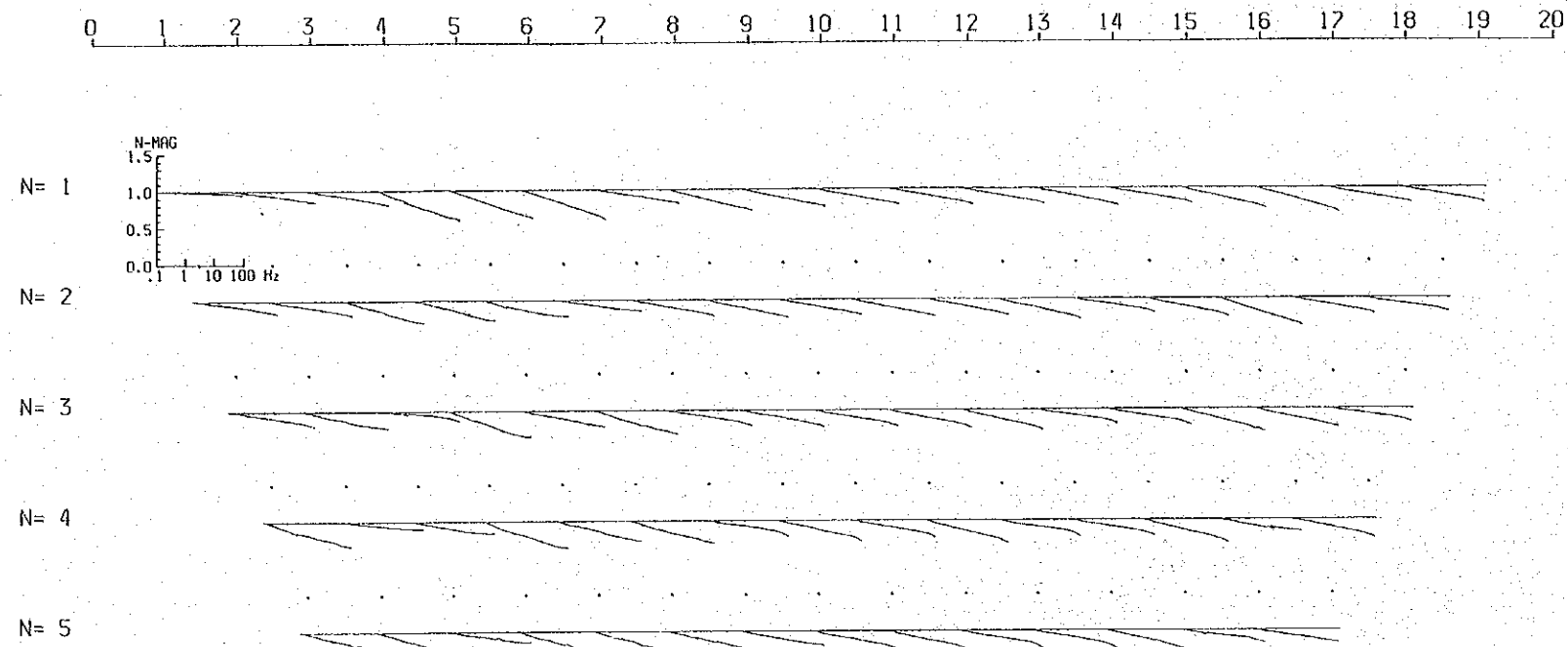
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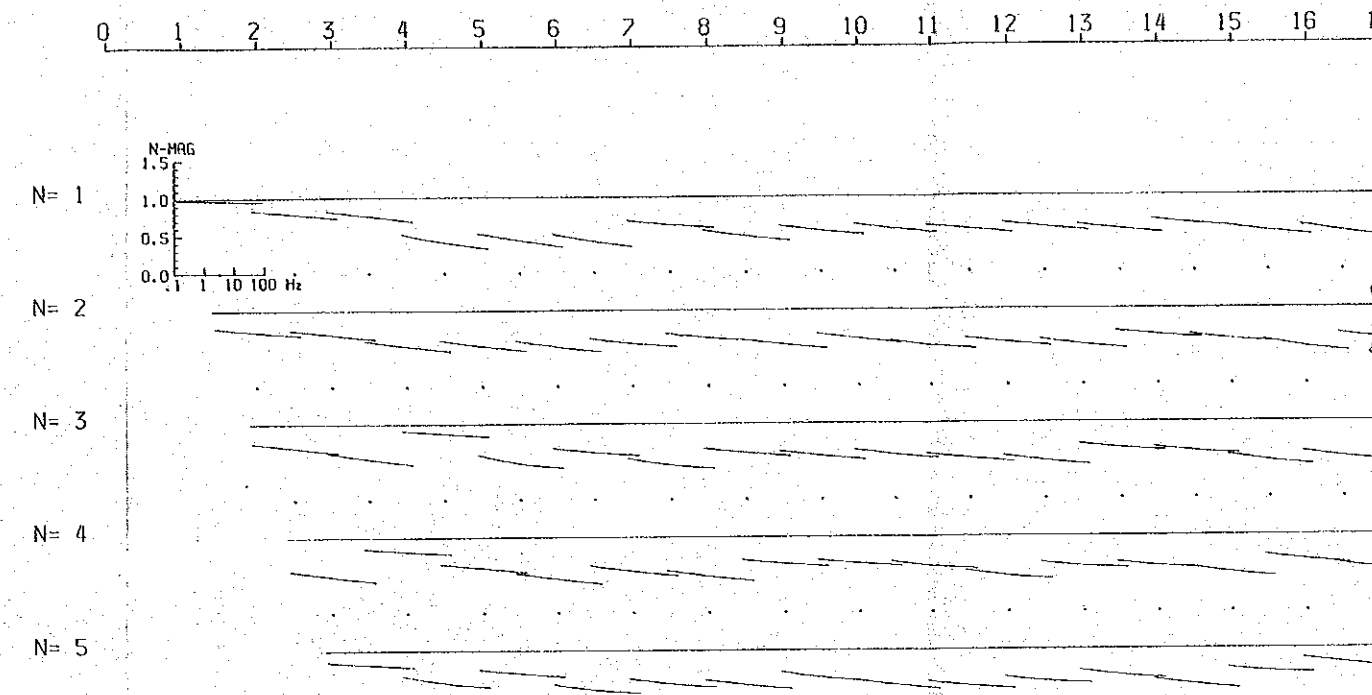
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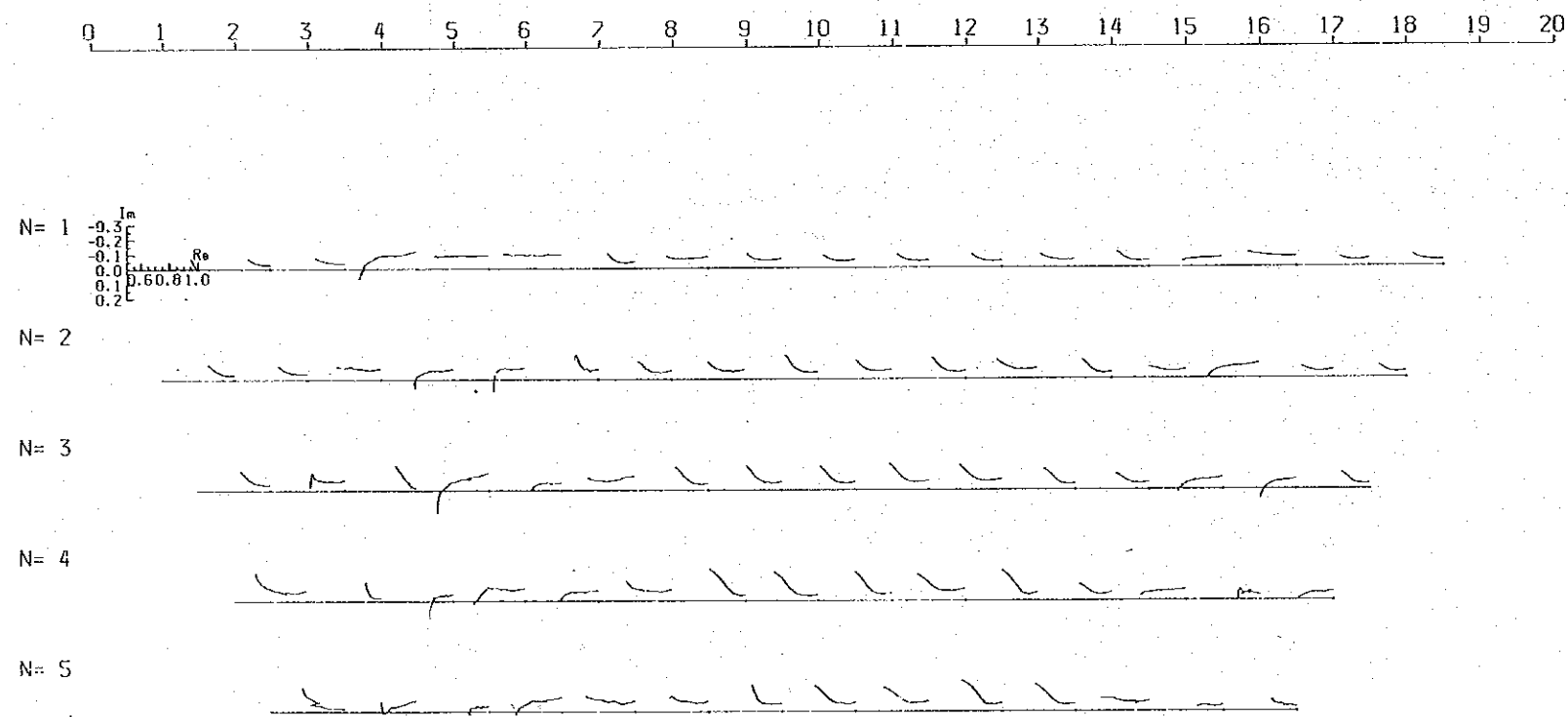
LINE A Magnitude Spectrum



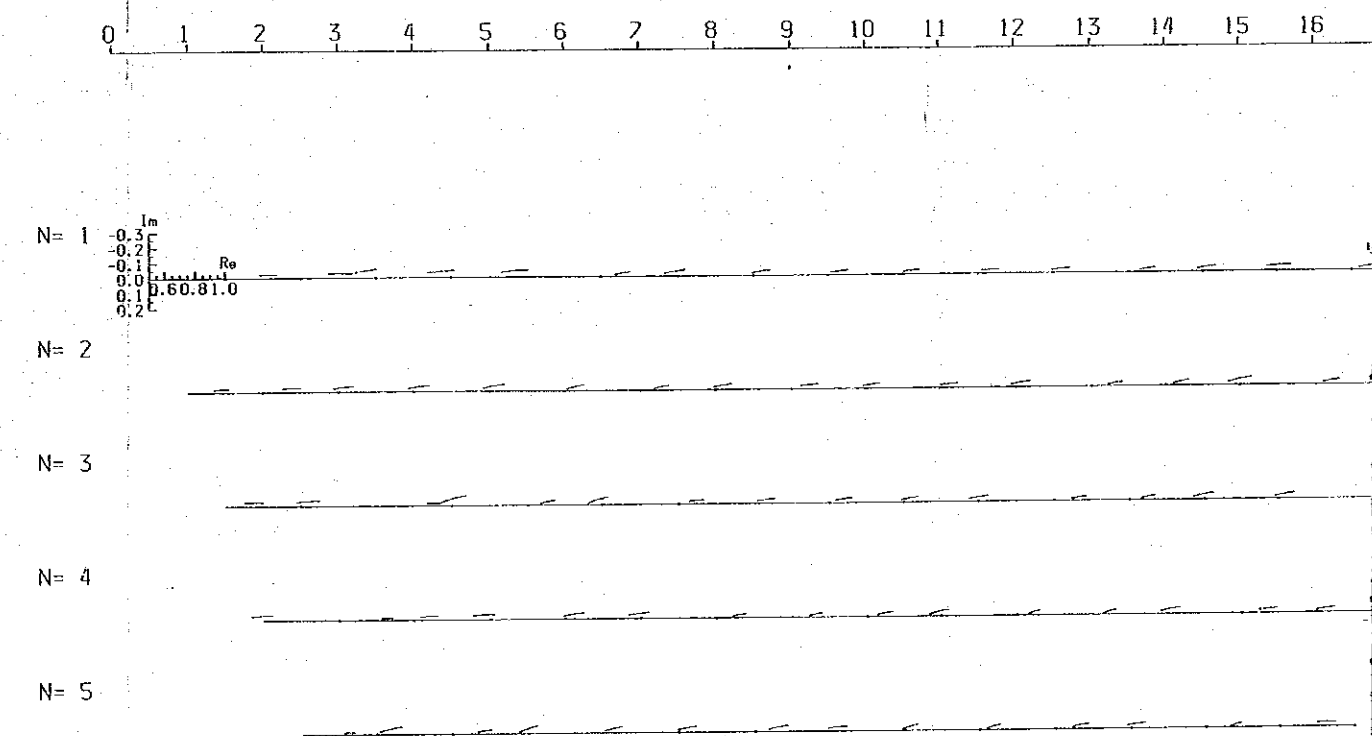
LINE A Decoupled Magnitude Spectrum



LINE A Cole-Cole Diagram

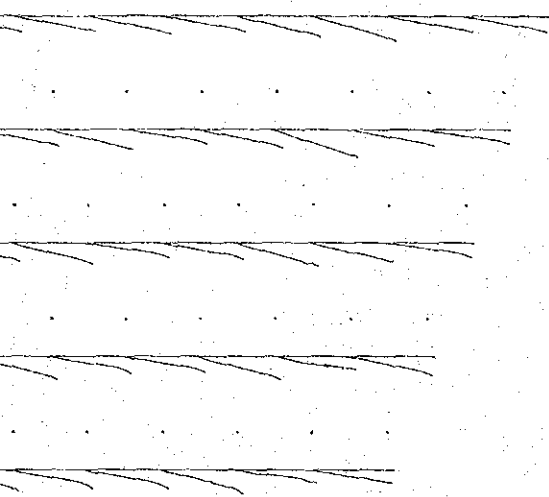


LINE A Decoupled Cole-Cole Diagram



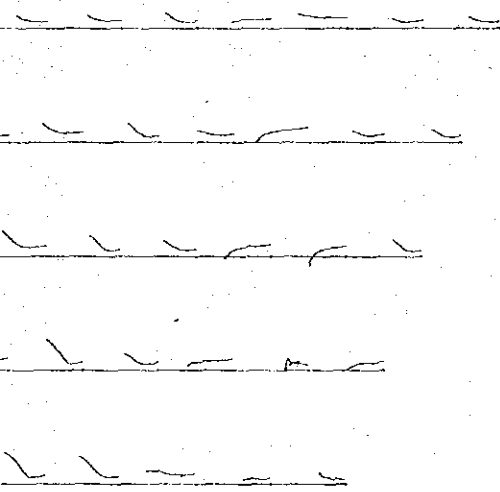
Spectrum

12 13 14 15 16 17 18 19 20



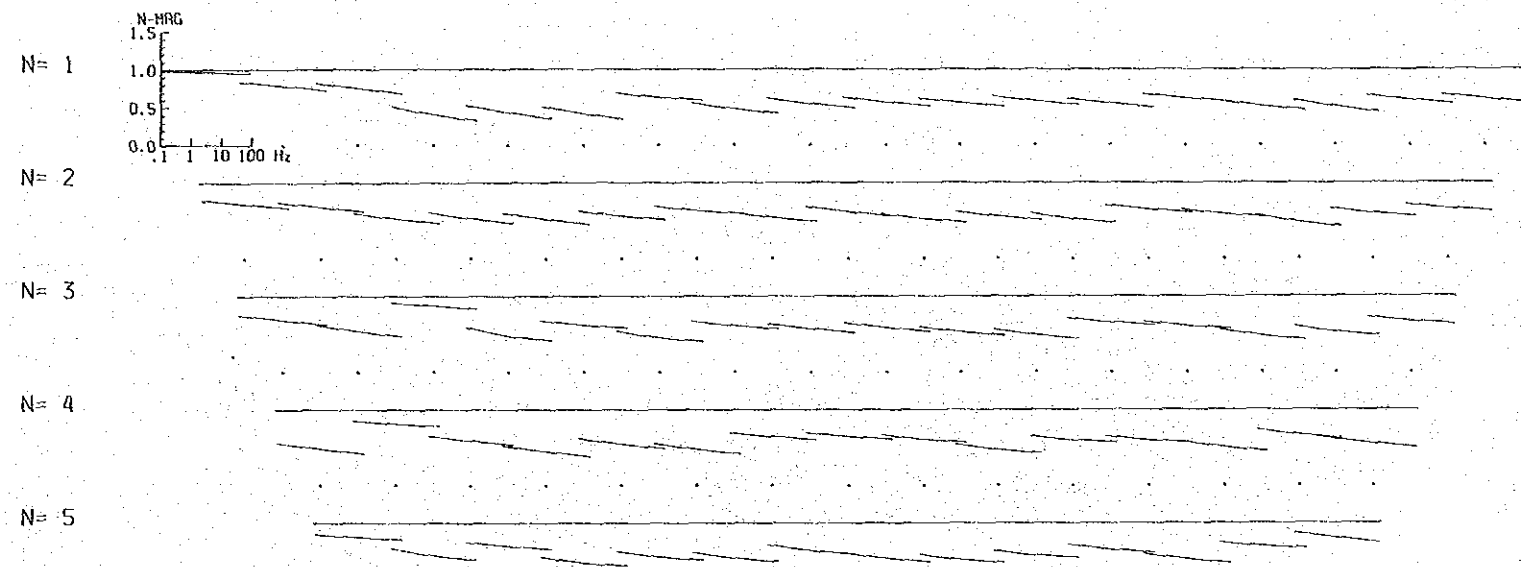
Diagram

12 13 14 15 16 17 18 19 20



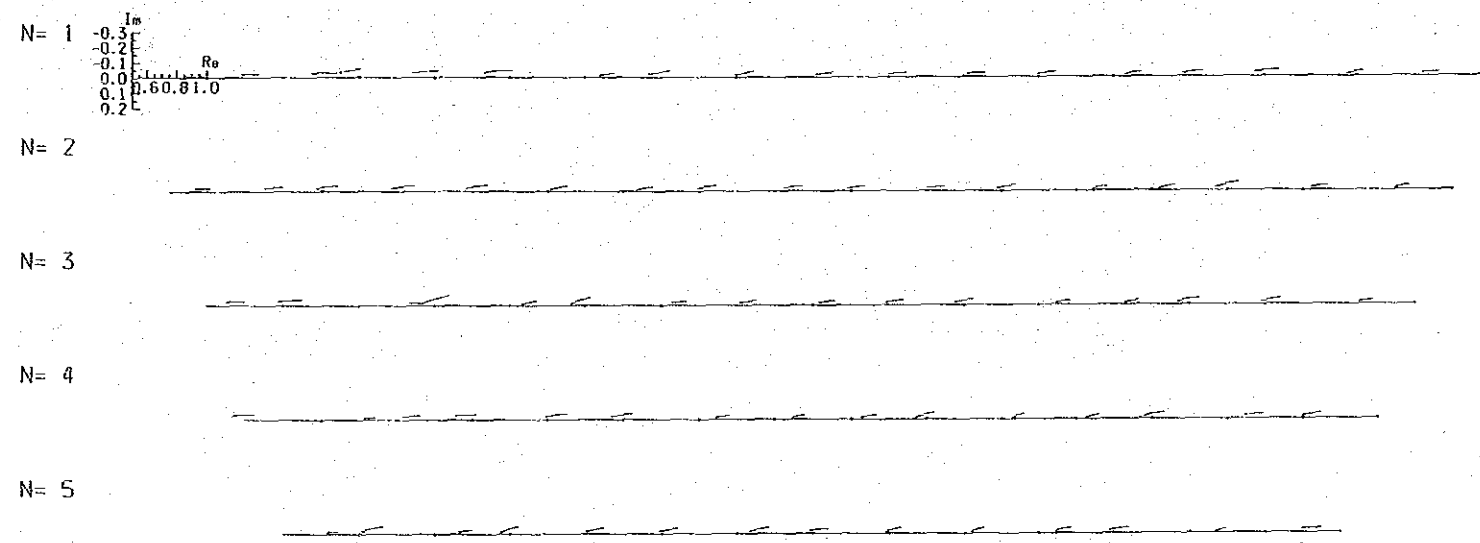
LINE A Decoupled Magnitude Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



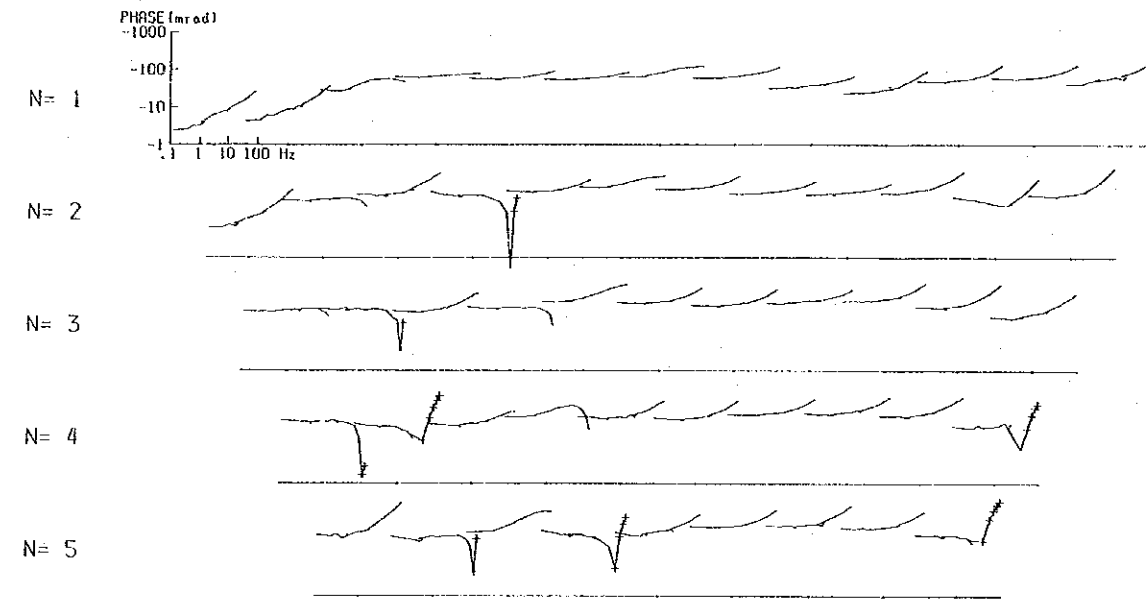
LINE A Decoupled Cole-Cole Diagram

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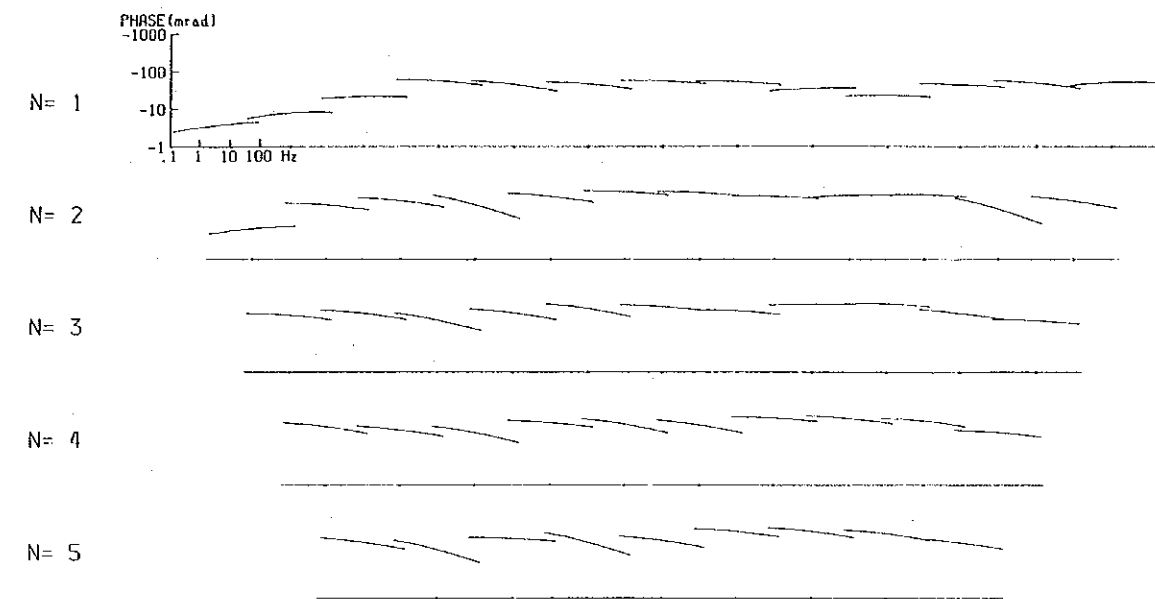
LINE B Phase Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



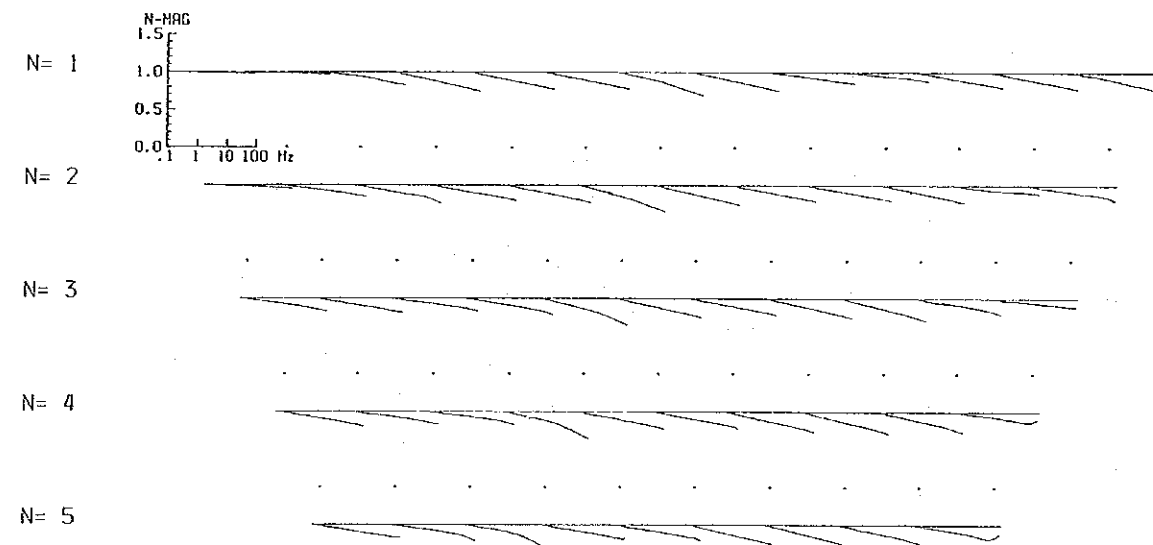
LINE B Decoupled Phase Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



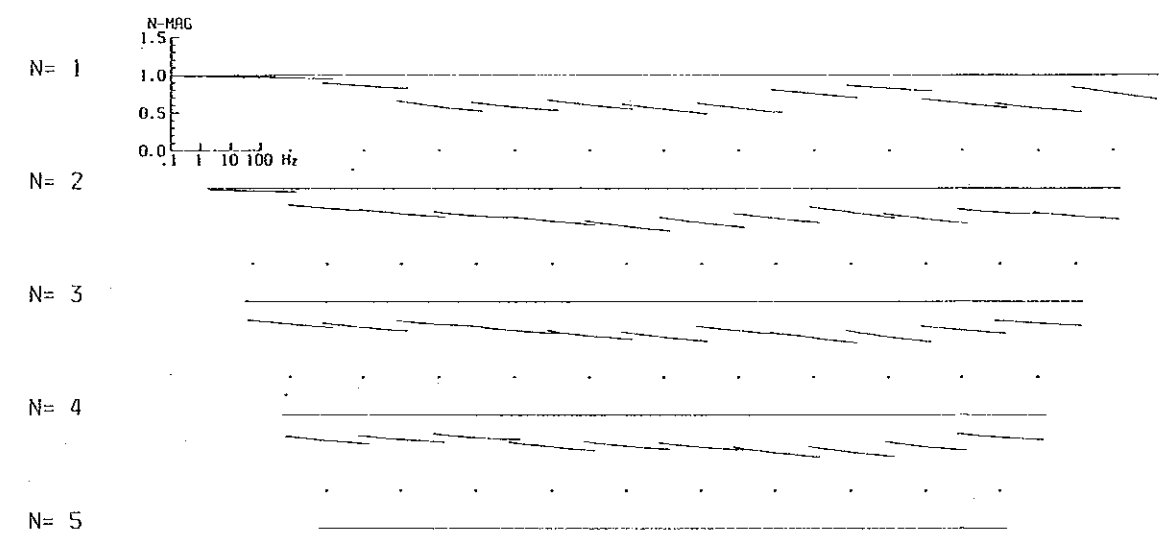
LINE B Magnitude Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



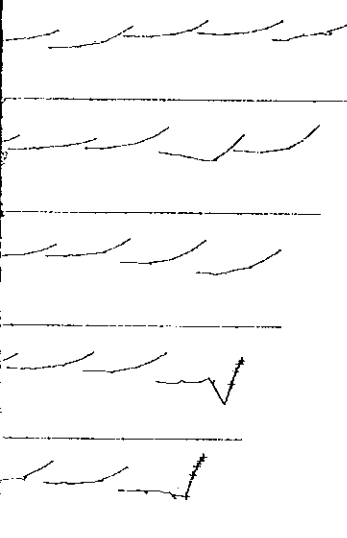
LINE B Decoupled Magnitude Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



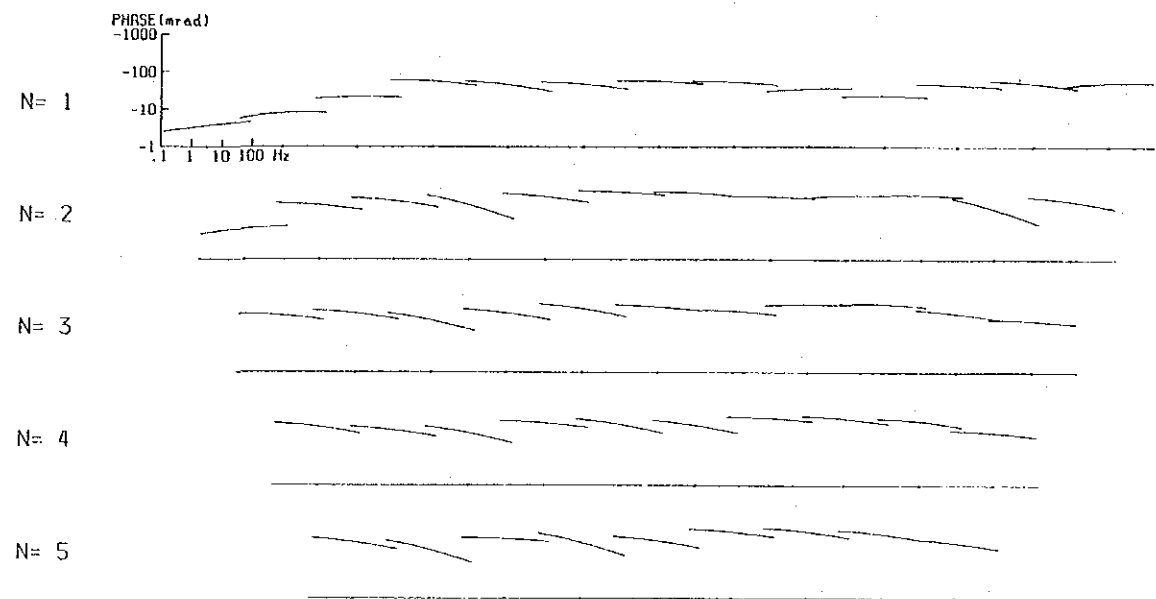
Spectrum

10 11 12 13 14 15



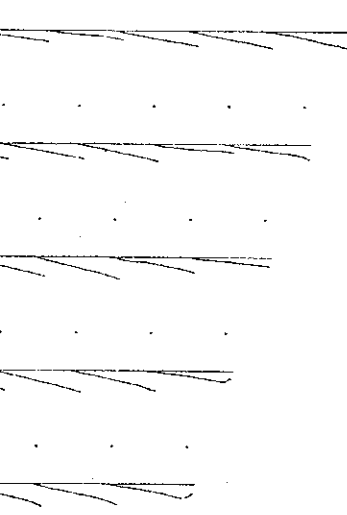
### LINE B Decoupled Phase Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



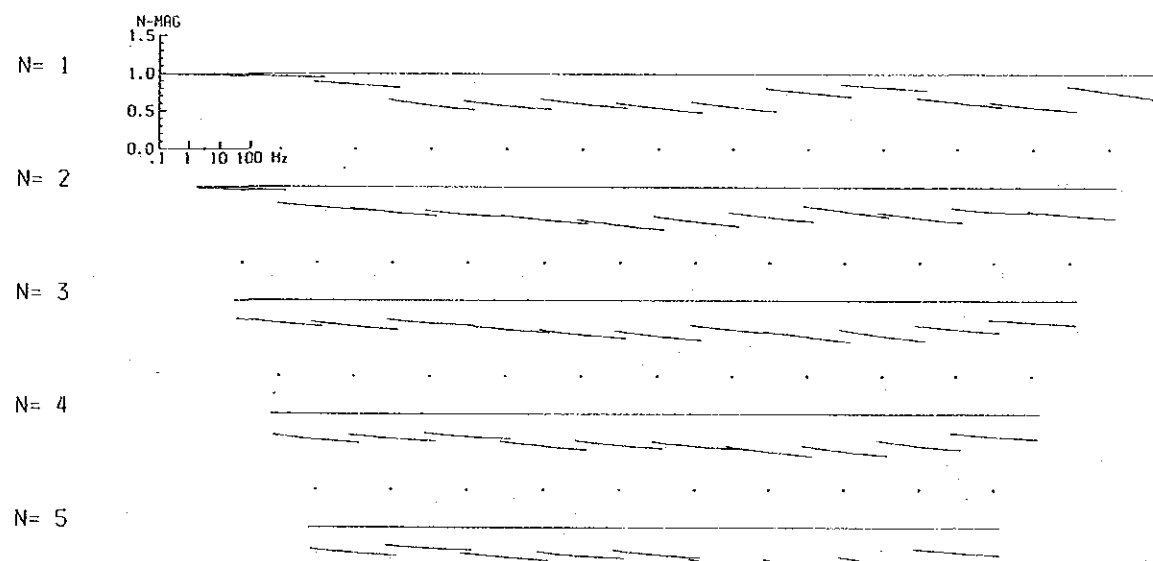
Spectrum

10 11 12 13 14 15

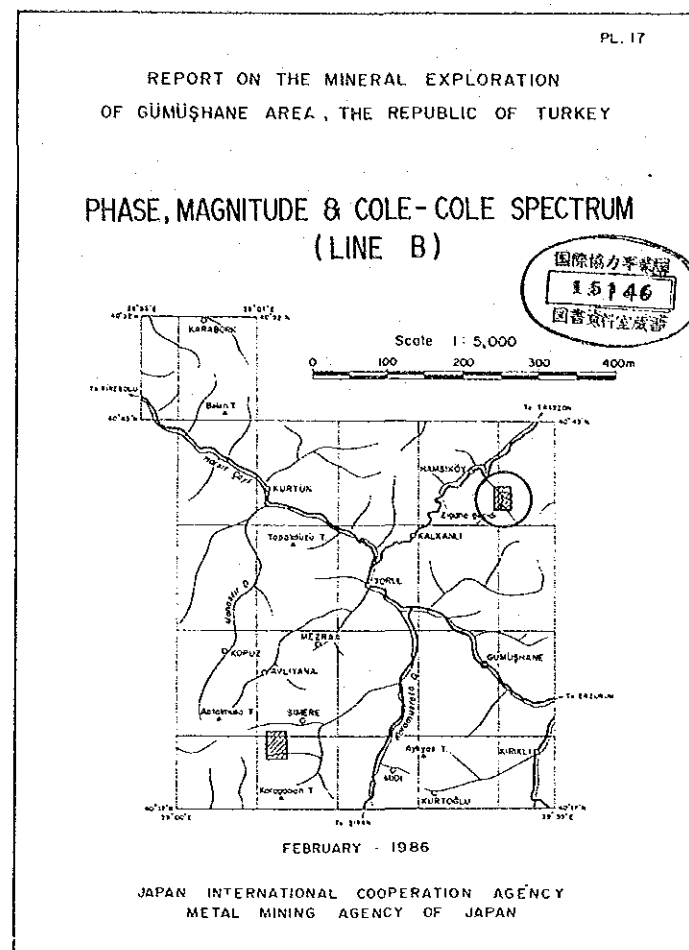


### LINE B Decoupled Magnitude Spectrum

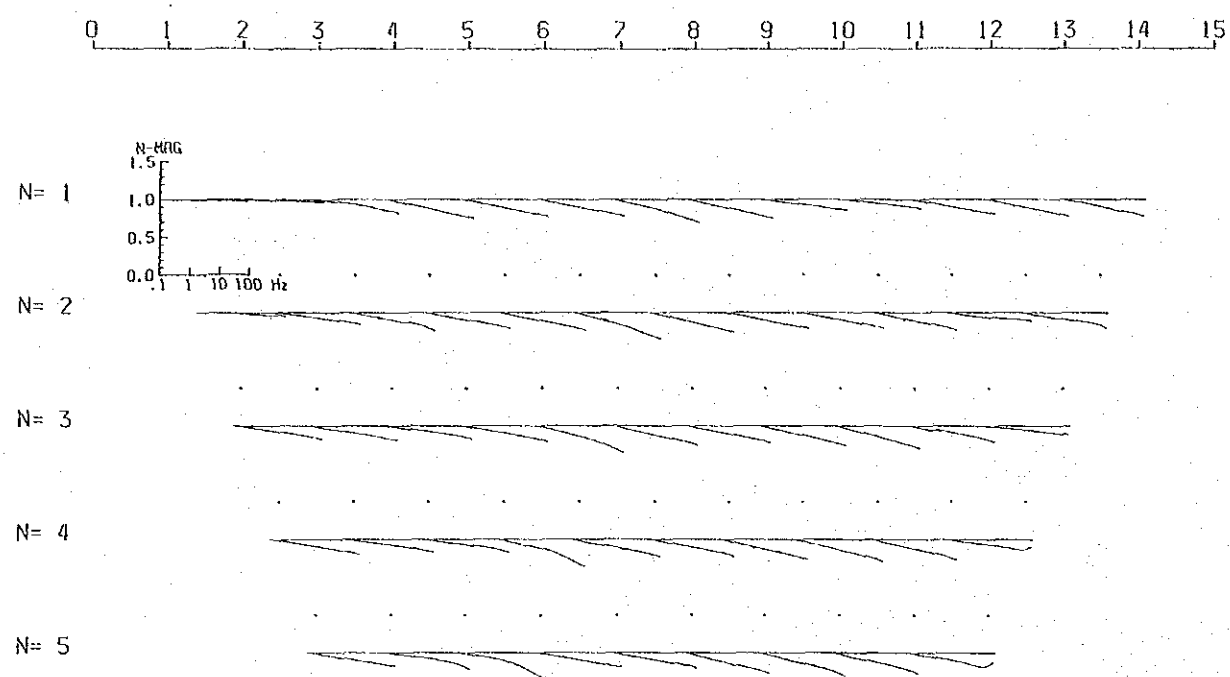
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



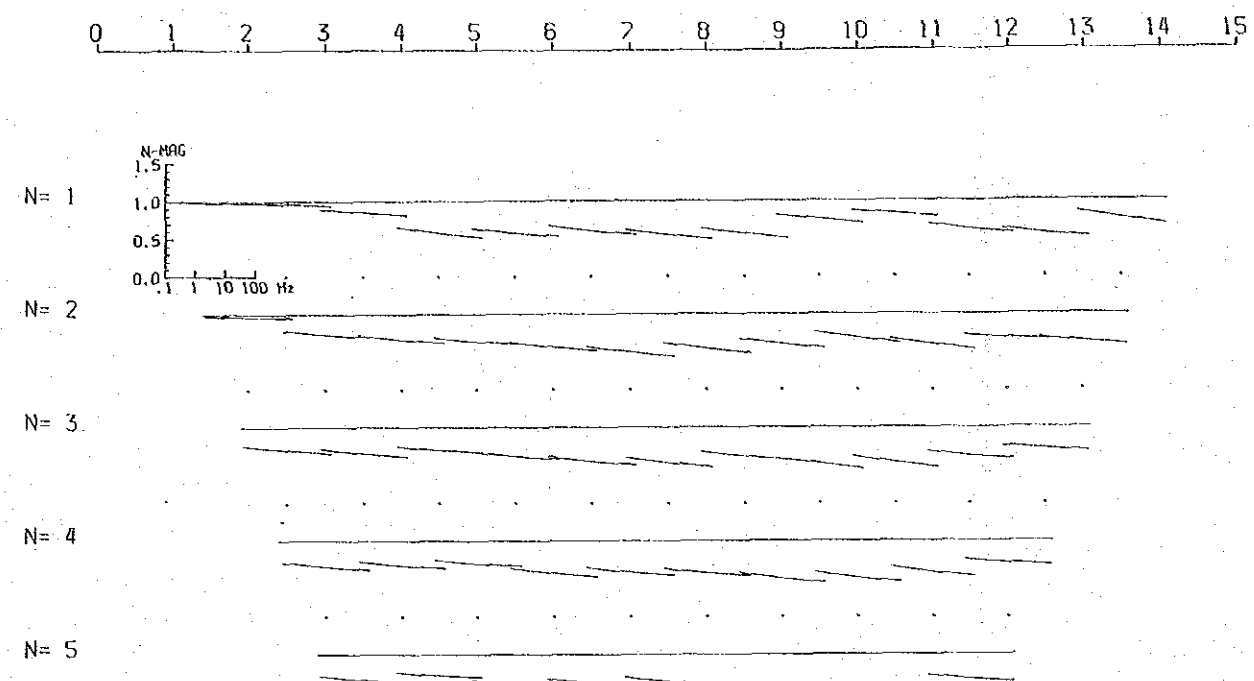
LINE B Decoupled Cole-Cole Spectrum



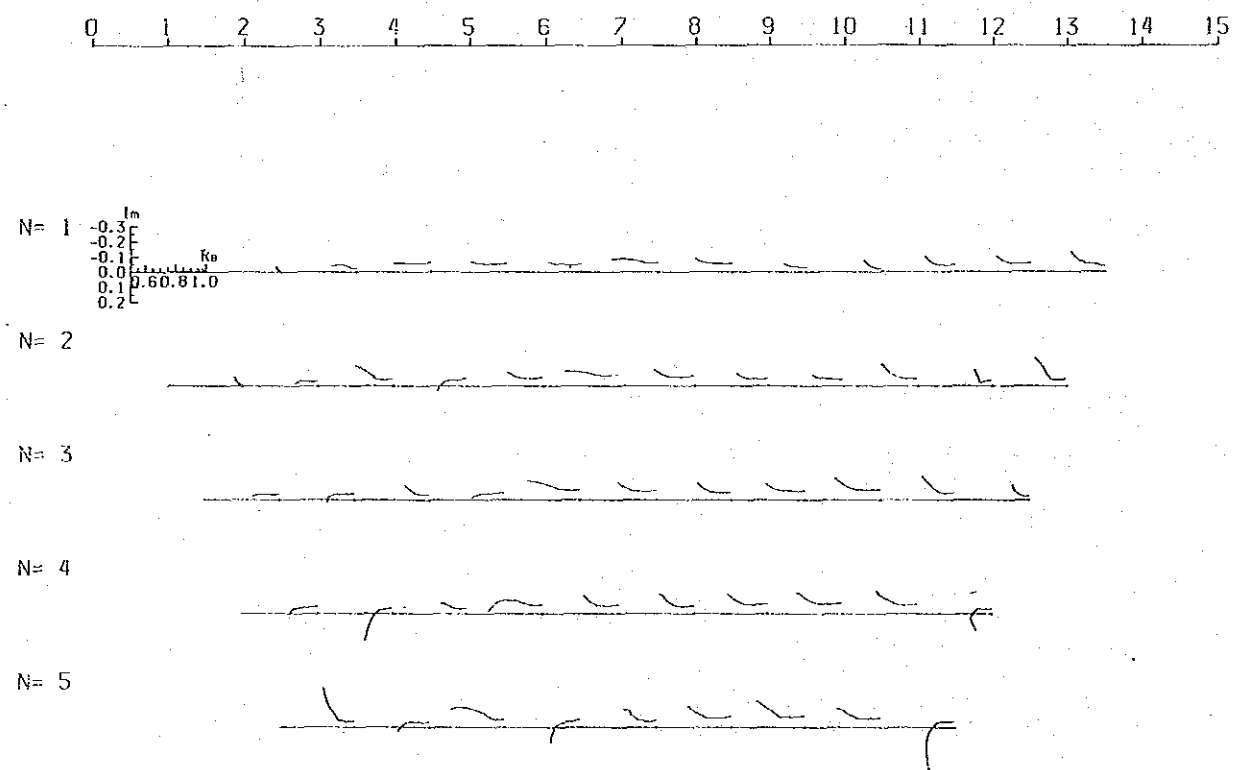
LINE B Magnitude Spectrum



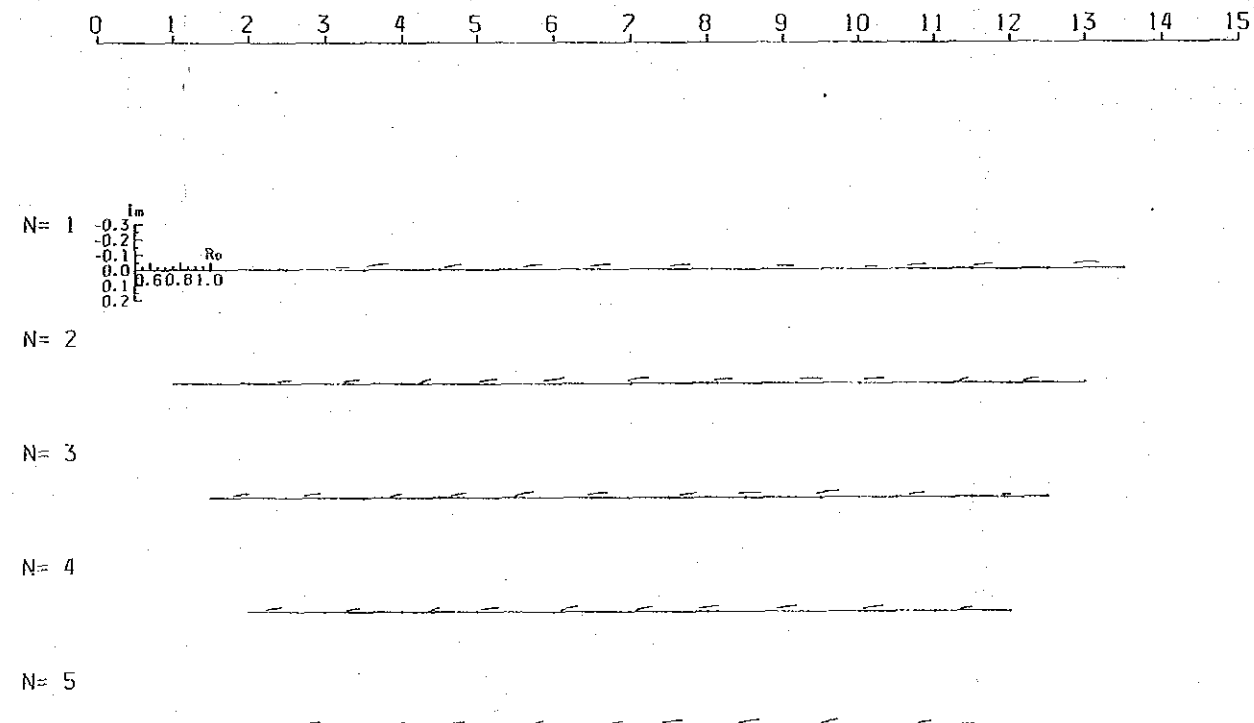
LINE B Decoupled Magnitude Spectrum



LINE B Cole-Cole Diagram

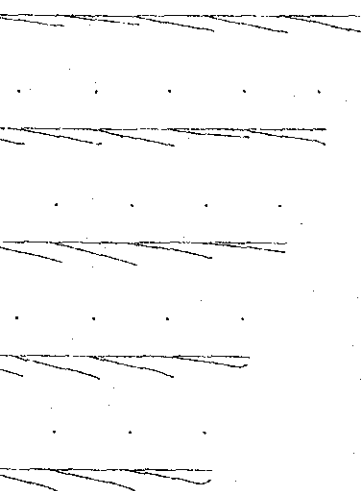


LINE B Decoupled Cole-Cole Diagram



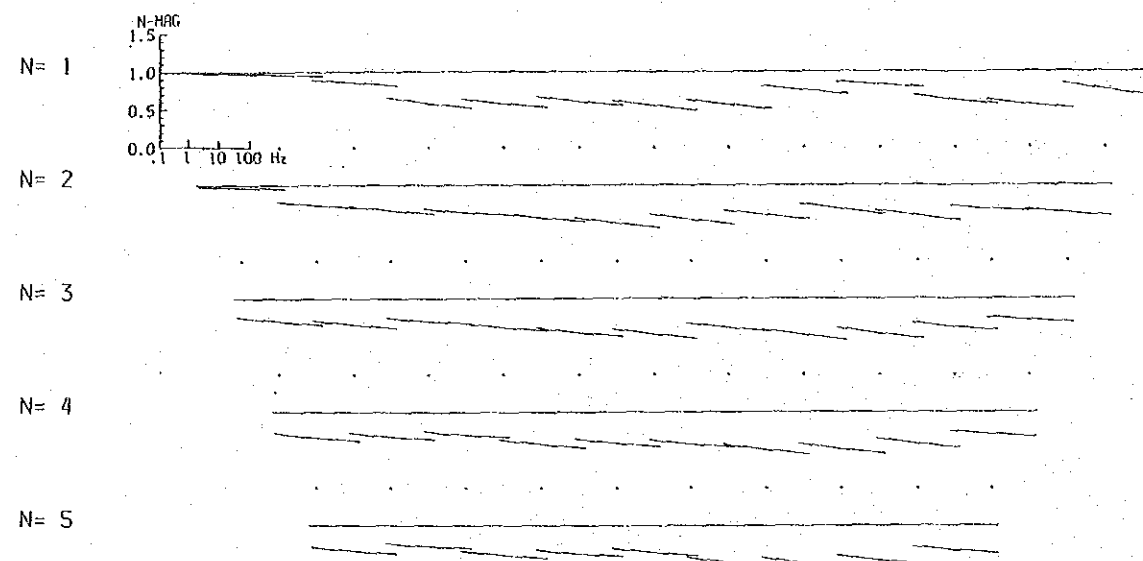
Spectrum

10 11 12 13 14 15



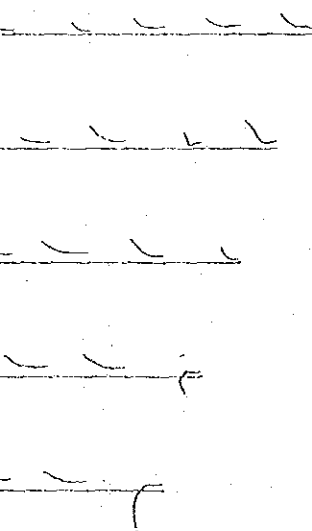
LINE B Decoupled Magnitude Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



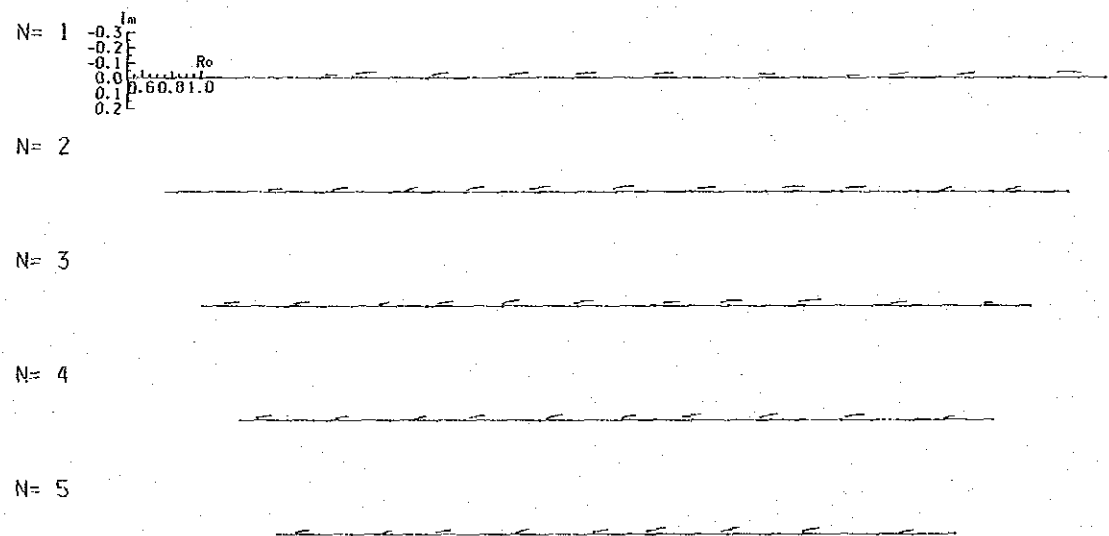
Diagram

10 11 12 13 14 15

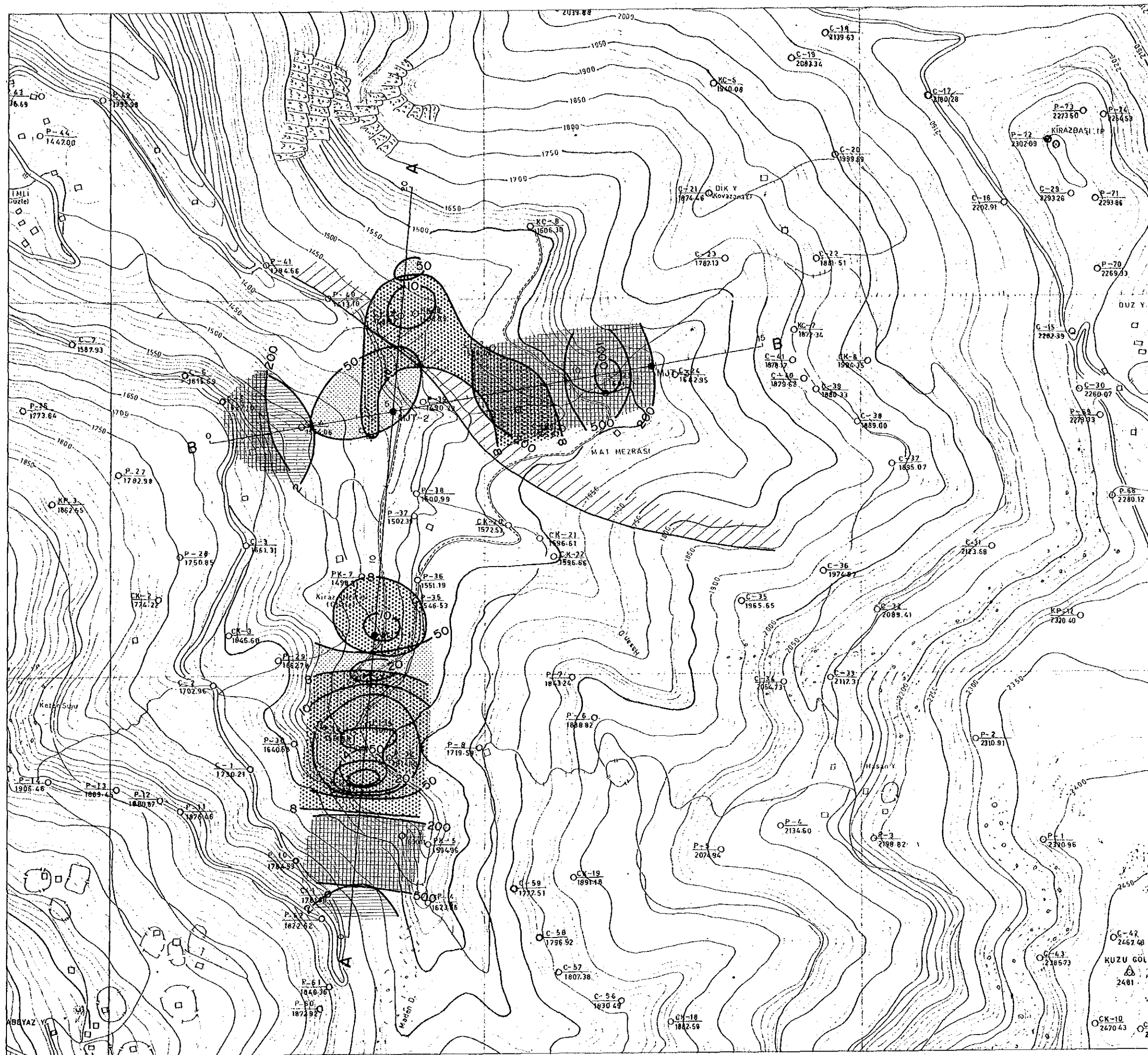


LINE B Decoupled Cole-Cole Diagram

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15







PL. 18

REPORT ON THE MINERAL EXPLORATION  
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**GEOPHYSICAL INTERPRETATION MAP  
OF THE HASANDERE AREA**

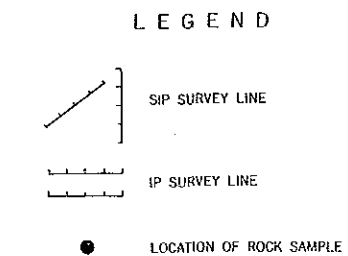
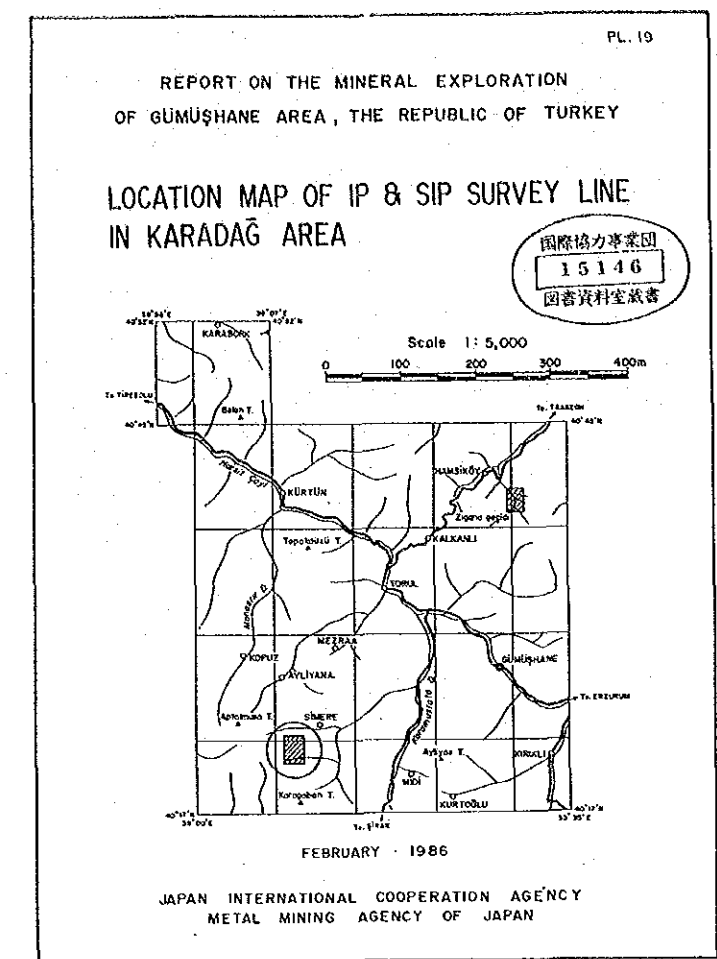
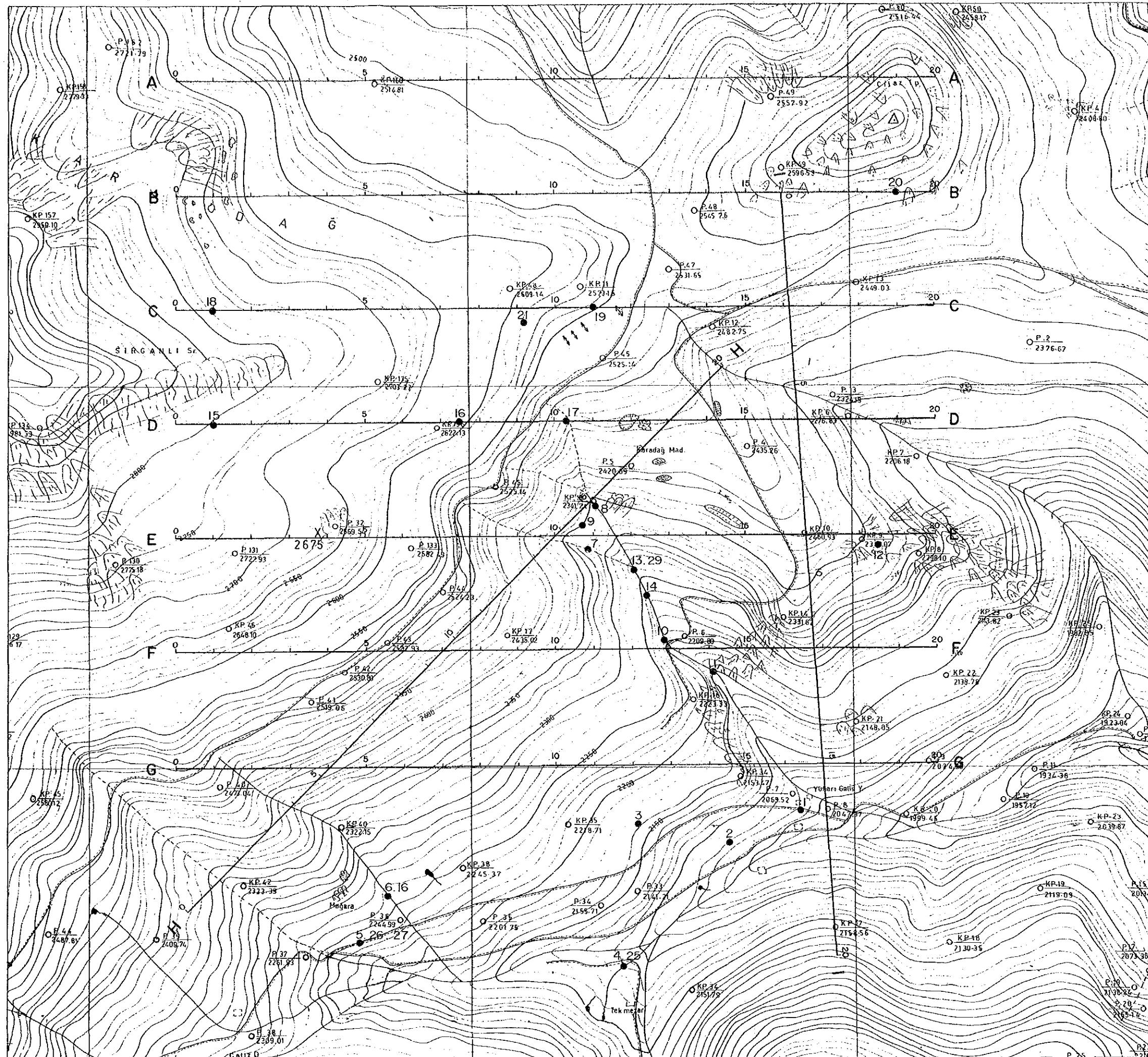
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Scale 1: 5,000  
0 100 200 300 400m

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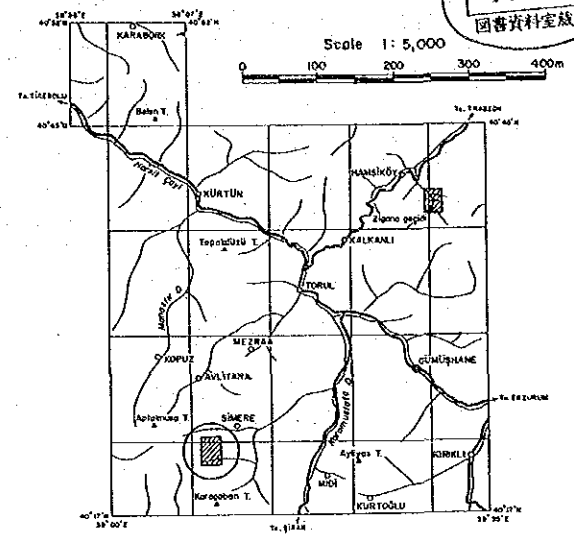
- LEGEND**
- SIP SURVEY LINE
  - MJT-1 DRILLING SITE
  - HIGH PFE ZONE  
6%
  - HIGH PFE ZONE  
2%
  - LOW PFE ZONE  
2%
  - HIGH RESISTIVITY ZONE  
200 ohm-m
  - LOW RESISTIVITY ZONE  
50 ohm-m
  - EXPECTED HIGH Cu% ZONE



REPORT ON THE MINERAL EXPLORATION  
OF GUMUŞHANE AREA, THE REPUBLIC OF TURKEY

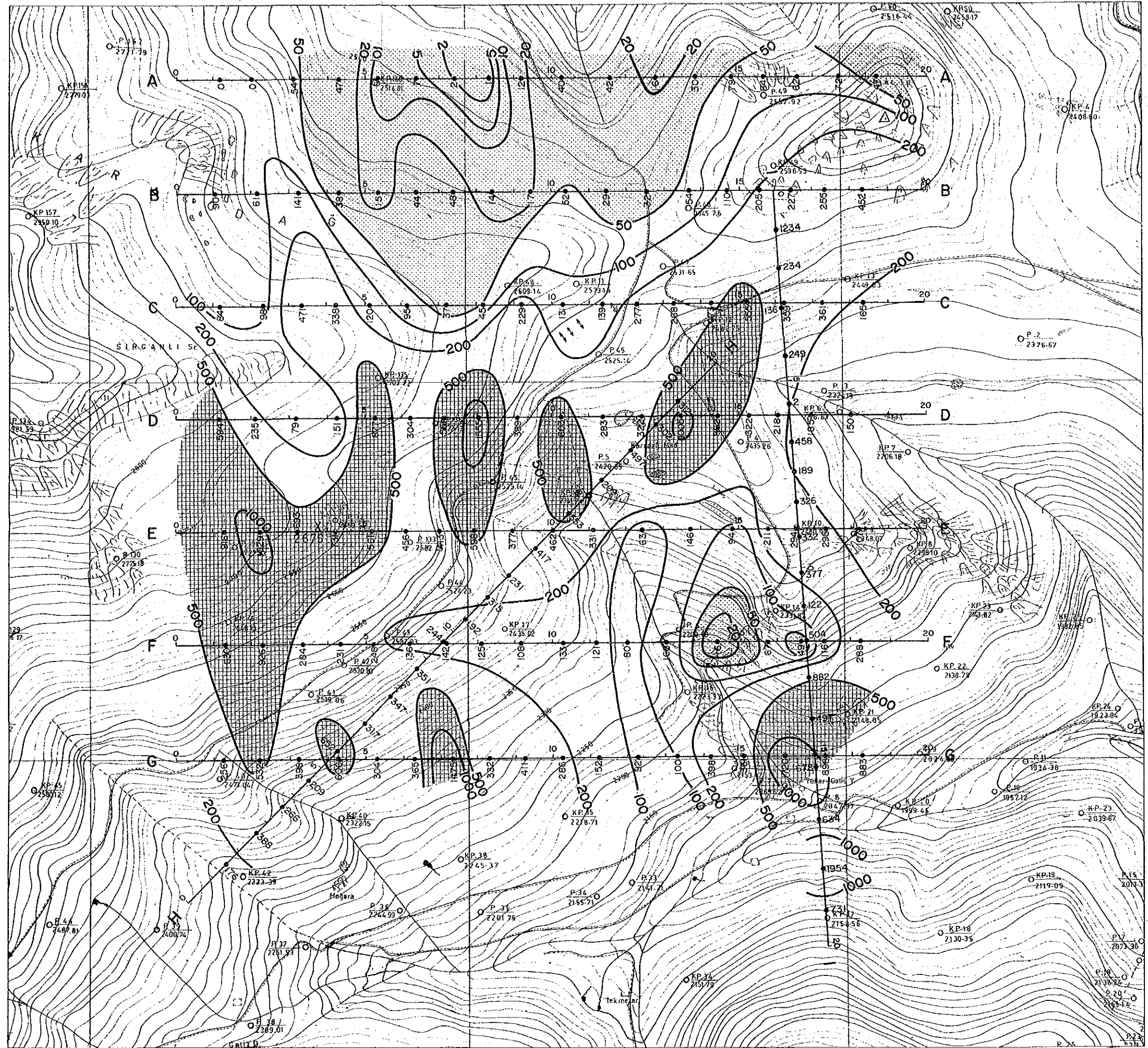
PLAN MAP OF APPARENT RESISTIVITY  
(0.125 Hz) (n = 1)

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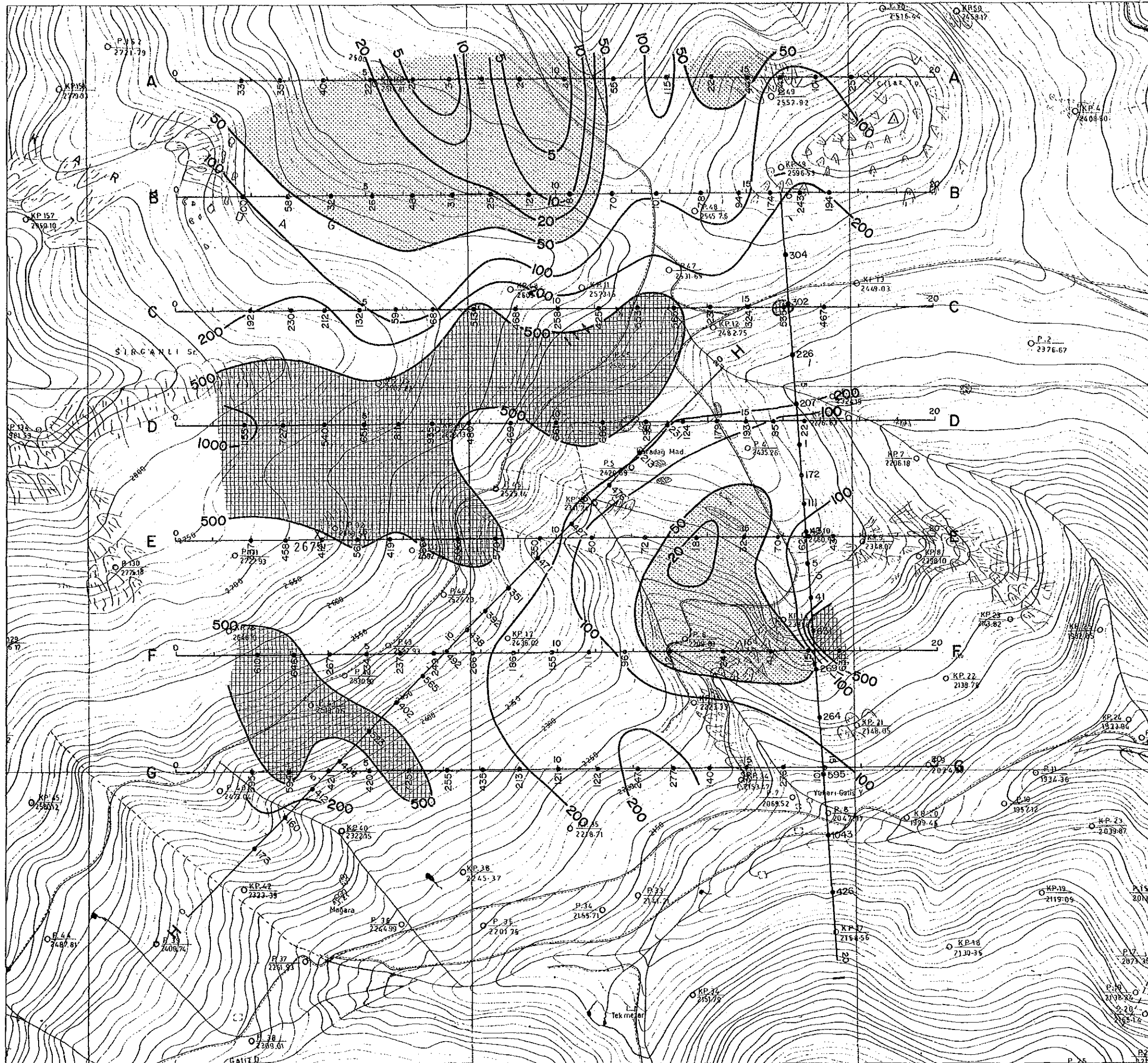
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LEGEND

- SIP SURVEY LINE
  - IP SURVEY LINE
  - HIGH RESISTIVITY ZONE
  - LOW RESISTIVITY ZONE
- [UNIT : ohm-m]



PL. 21

REPORT ON THE MINERAL EXPLORATION  
OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

PLAN MAP OF APPARENT RESISTIVITY  
(0.125 Hz) (n = 3)

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Scale 1: 5,000  
0 100 200 300 400m

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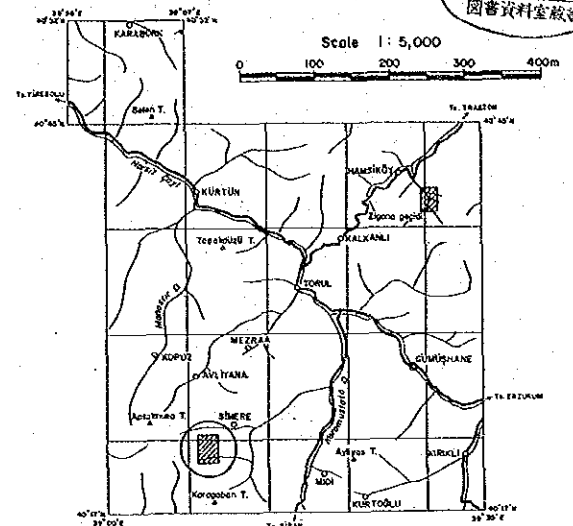
JAPAN INTERNATIONAL COOPERATION AGENCY  
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- LEGEND
- SIP SURVEY LINE
  - IP SURVEY LINE
  - HIGH RESISTIVITY ZONE
  - LOW RESISTIVITY ZONE
- [UNIT : ohm-m]

REPORT ON THE MINERAL EXPLORATION  
OF GUMUŞHANE AREA, THE REPUBLIC OF TURKEY

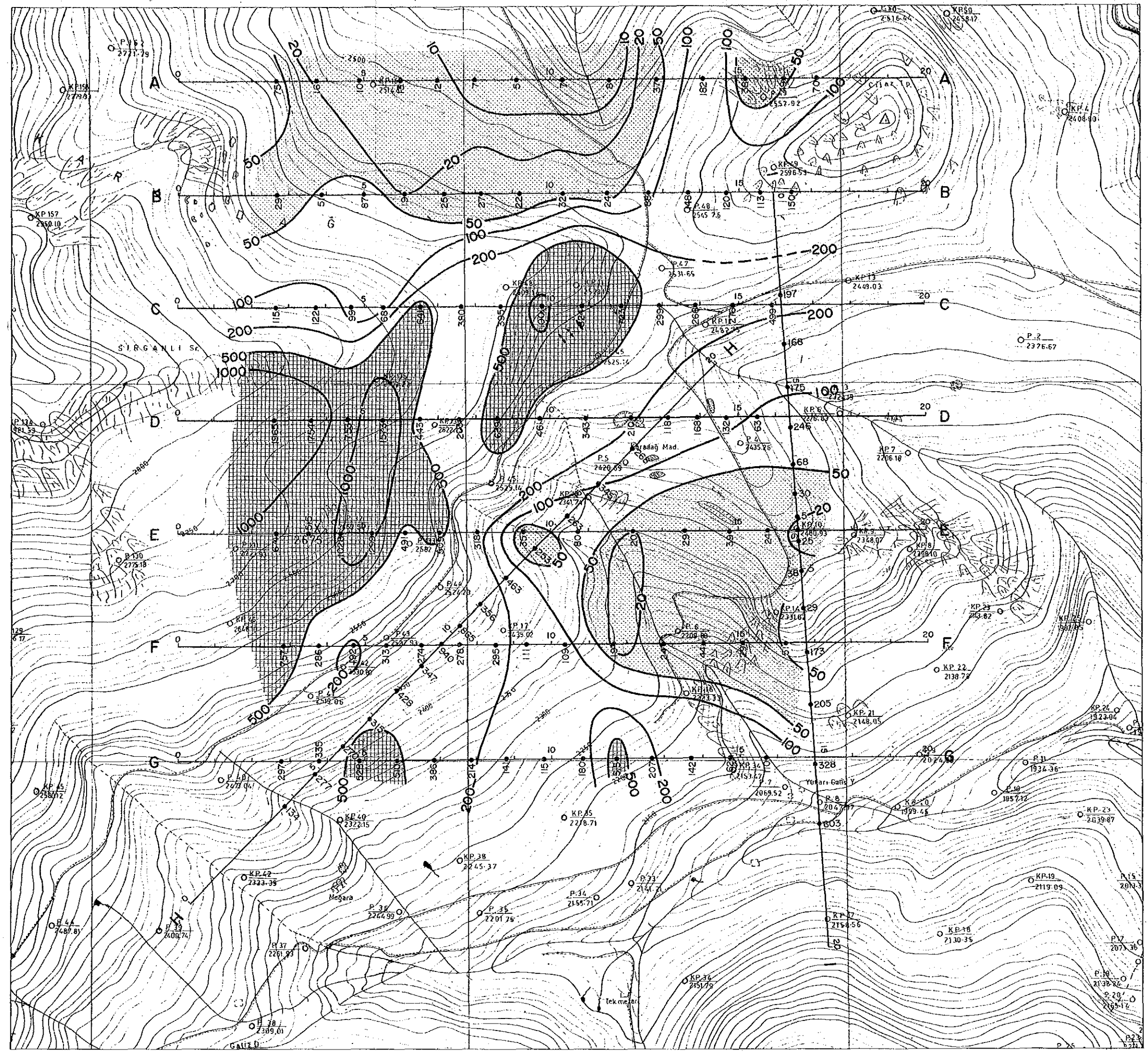
PLAN MAP OF APPARENT RESISTIVITY  
(0.125 Hz) (n = 5)

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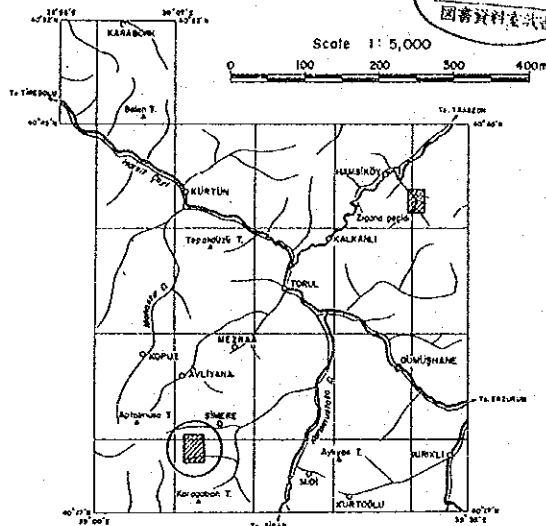
LEGEND

- SIP SURVEY LINE
  - IP SURVEY LINE
  - HIGH RESISTIVITY ZONE
  - LOW RESISTIVITY ZONE
- [UNIT : ohm-m]

REPORT ON THE MINERAL EXPLORATION  
OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

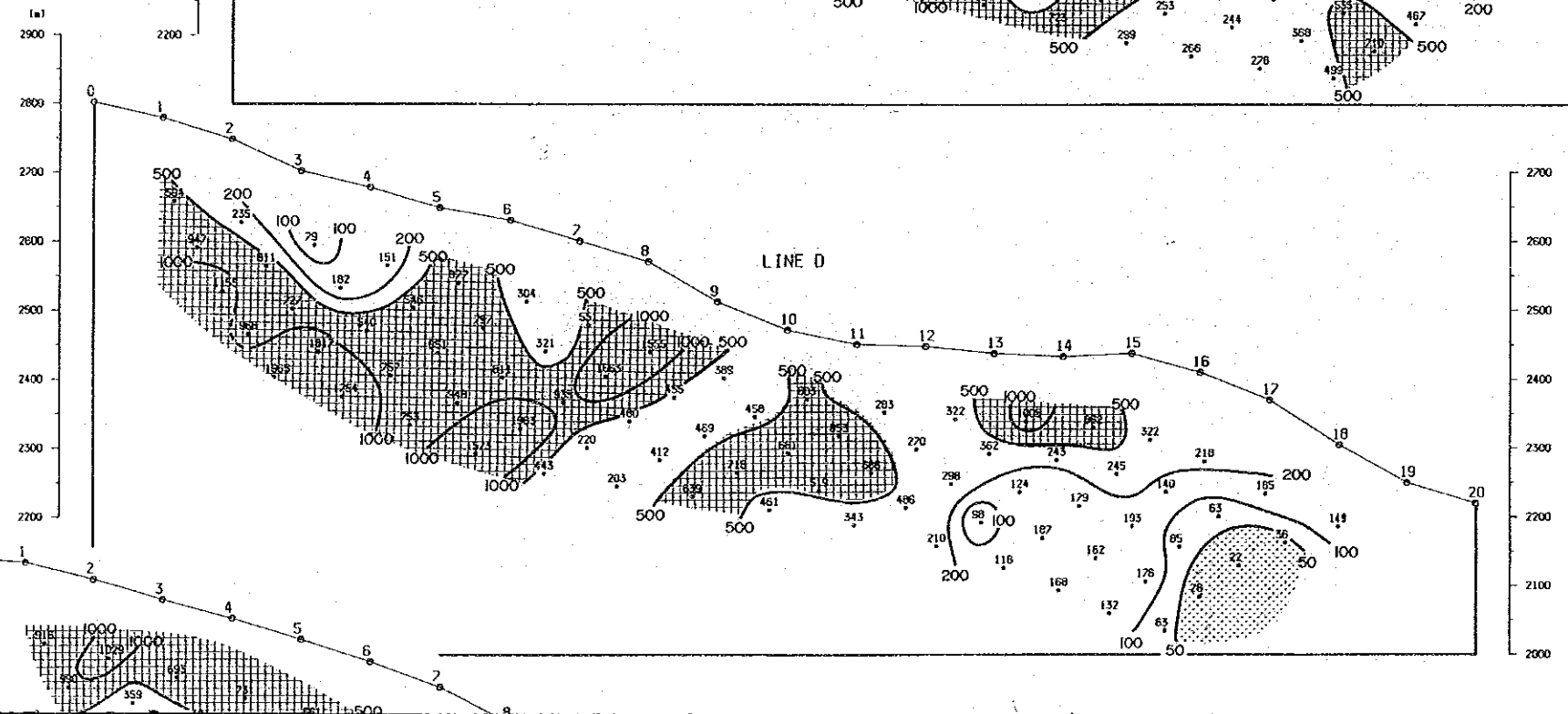
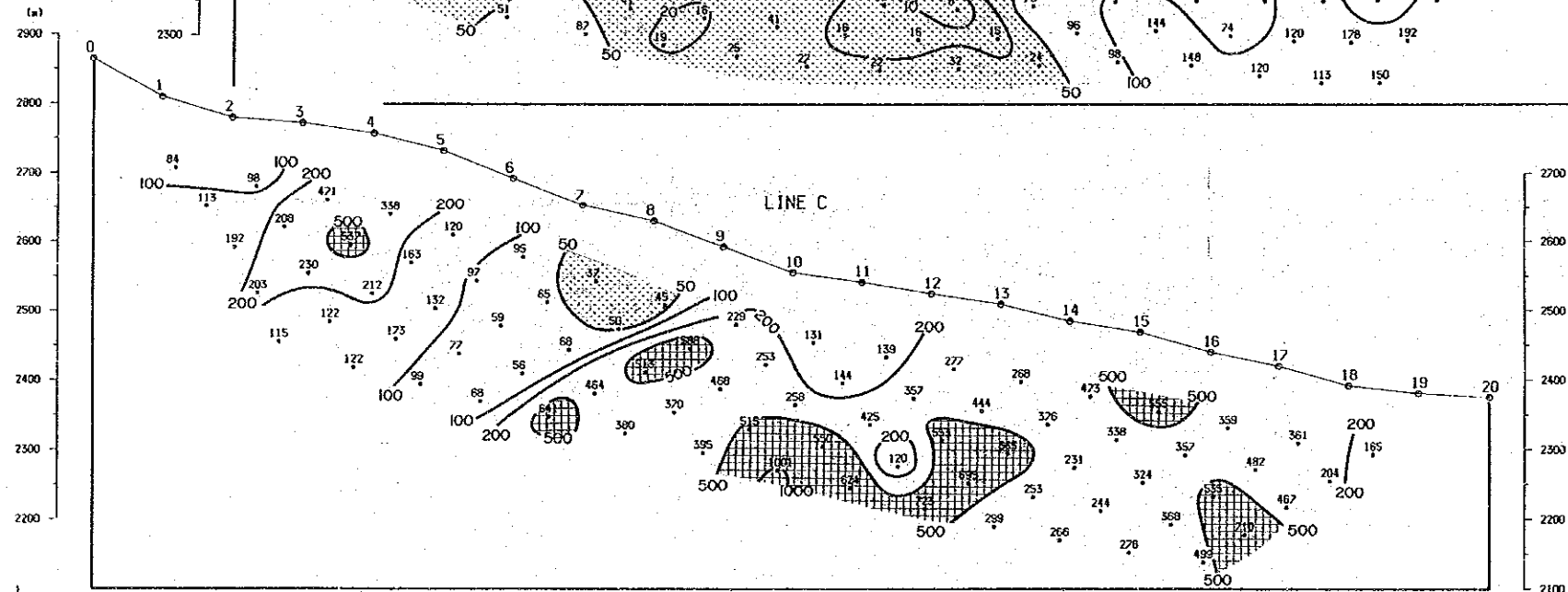
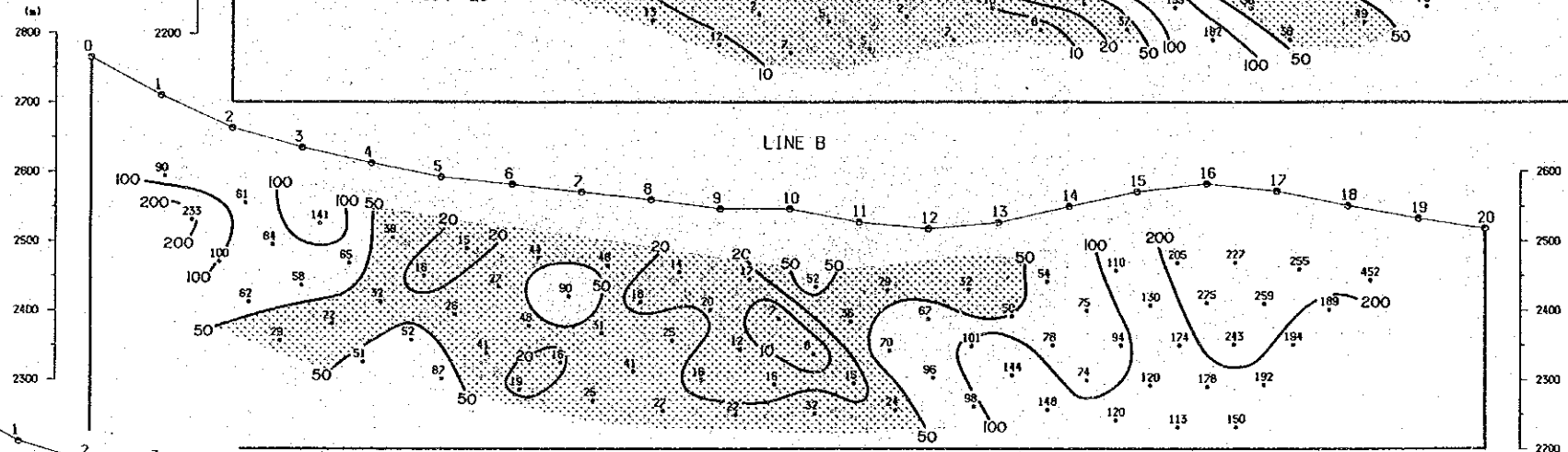
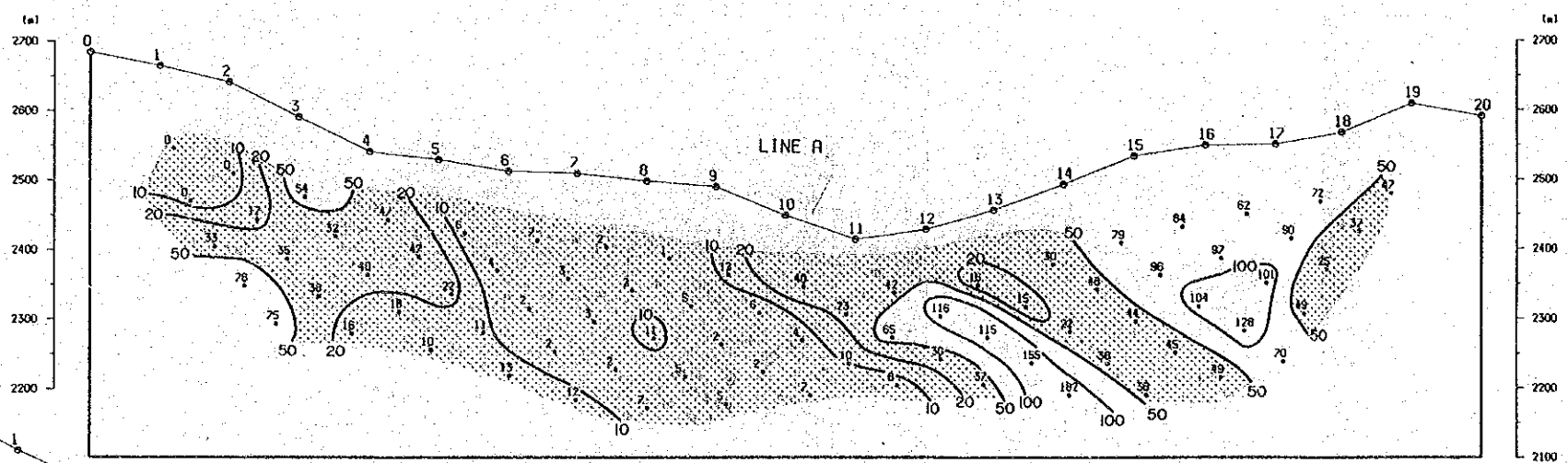
PANEL DIAGRAM OF APPARENT RESISTIVITY  
(0.125 Hz) (LINE A-G)

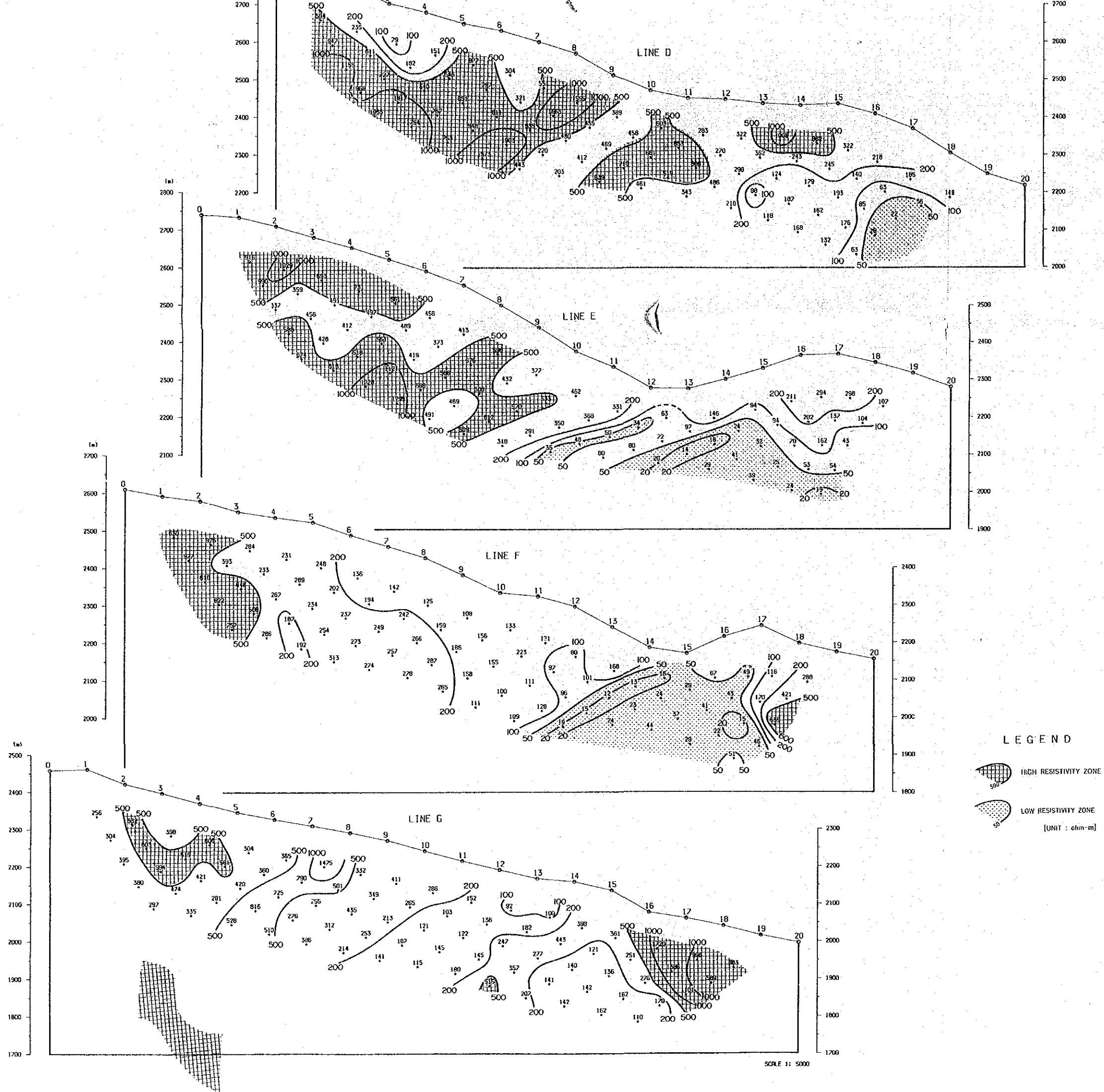
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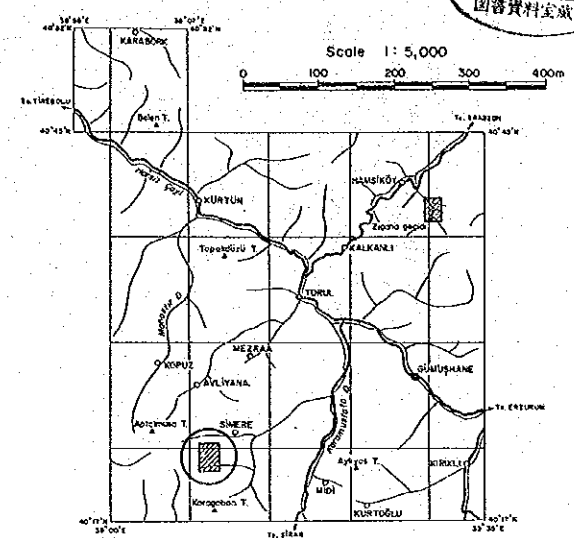




REPORT ON THE MINERAL EXPLORATION  
OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

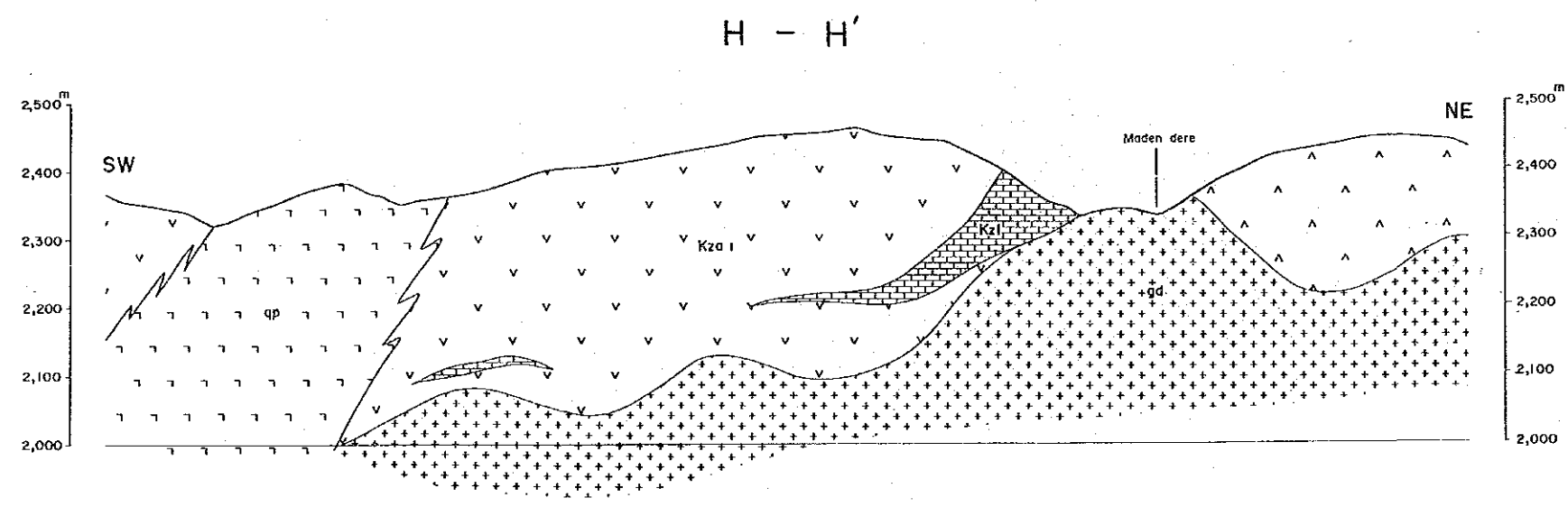
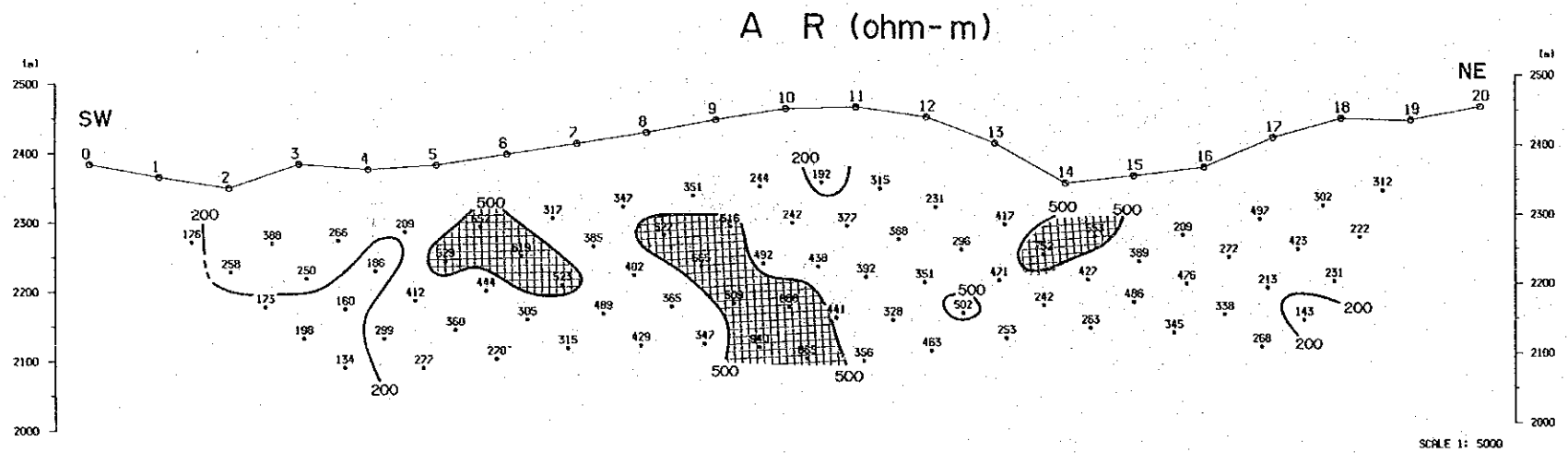
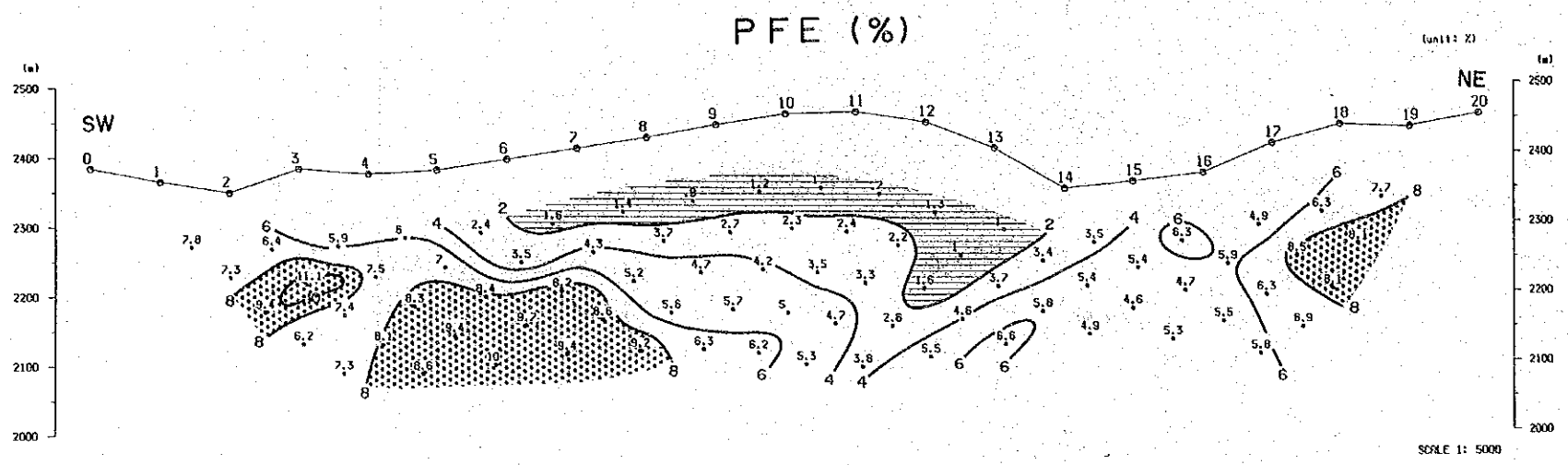
PSEUDO-SECTION OF AR & PFE  
(LINE H)

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LEGEND

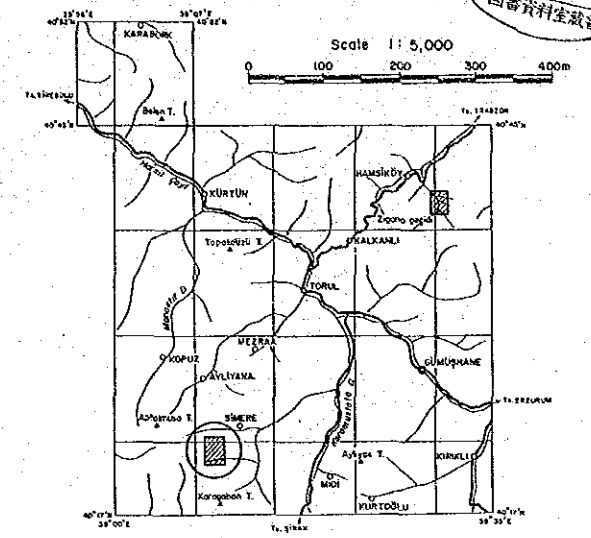
- HIGH PFE ZONE 8 %
- LOW PFE ZONE 2 %
- HIGH RESISTIVITY ZONE 500 ohm-m
- LOW RESISTIVITY ZONE 50 ohm-m

- Upper Cretaceous
  - Kz1 Limestone
  - Kzo1 Andesite lava
  - Kzb1 Basalt lava
- Jurassic
  - Kuyakaya Limestone Jku1 Limestone
  - Kırıklı F. Jks Siltstone - Sandstone
  - Jkb Basalt lava
  - Jkc Conglomerate
- Paleozoic
  - Gümüşhane Granite Pgb Melo-basalt
  - Pgg Paleozoic granite
- Intrusive rocks
  - md Microdiorite
  - gdp Grenodiorite porphyry
  - qp Quartz porphyry
  - gd Granodiorite



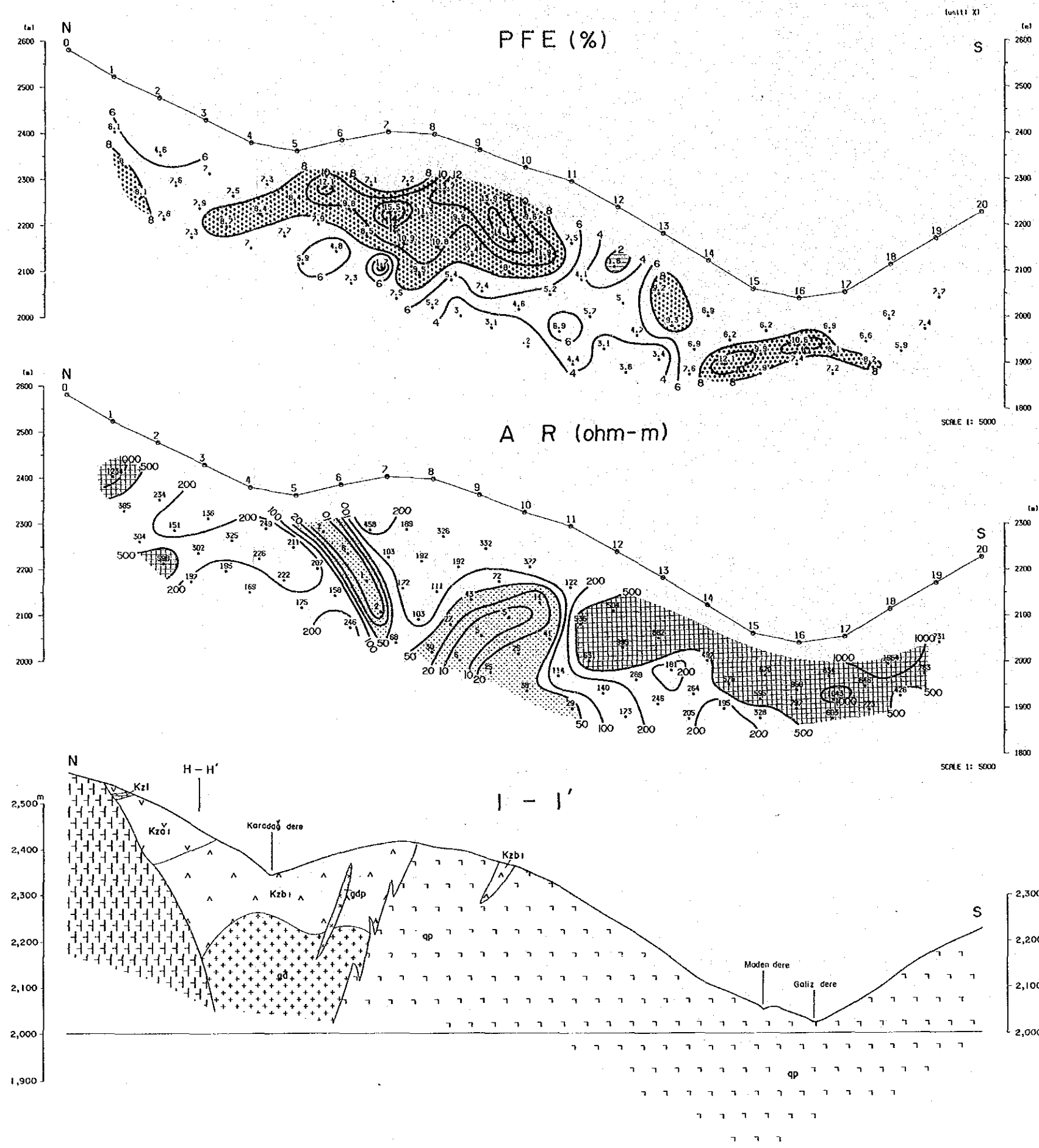
REPORT ON THE MINERAL EXPLORATION  
OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

PSEUDO - SECTION OF AR & PFE  
(LINE 1)



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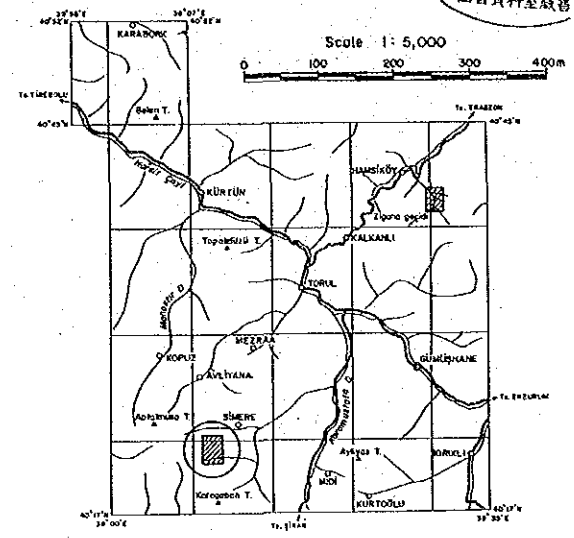
LEGEND

- HIGH PFE ZONE
- LOW PFE ZONE
- HIGH RESISTIVITY ZONE
- LOW RESISTIVITY ZONE
- Kz1 Limestone
- Zigano F (A1 Member) Kz2 Andesite lava
- Kz3 Basalt lava
- Kuşaklıya Limestone Jks Limestone
- Jks Siltstone - Sandstone
- Kirikli F. Jkb Basalt lava
- Jkc Conglomerate
- Gümüşhane Granite Pgb Meta-basalt
- Pgg Paleozoic granite
- md Microdiorite
- gdp Granodiorite porphyry
- qp Quartz porphyry
- gd Granodiorite

REPORT ON THE MINERAL EXPLORATION  
OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

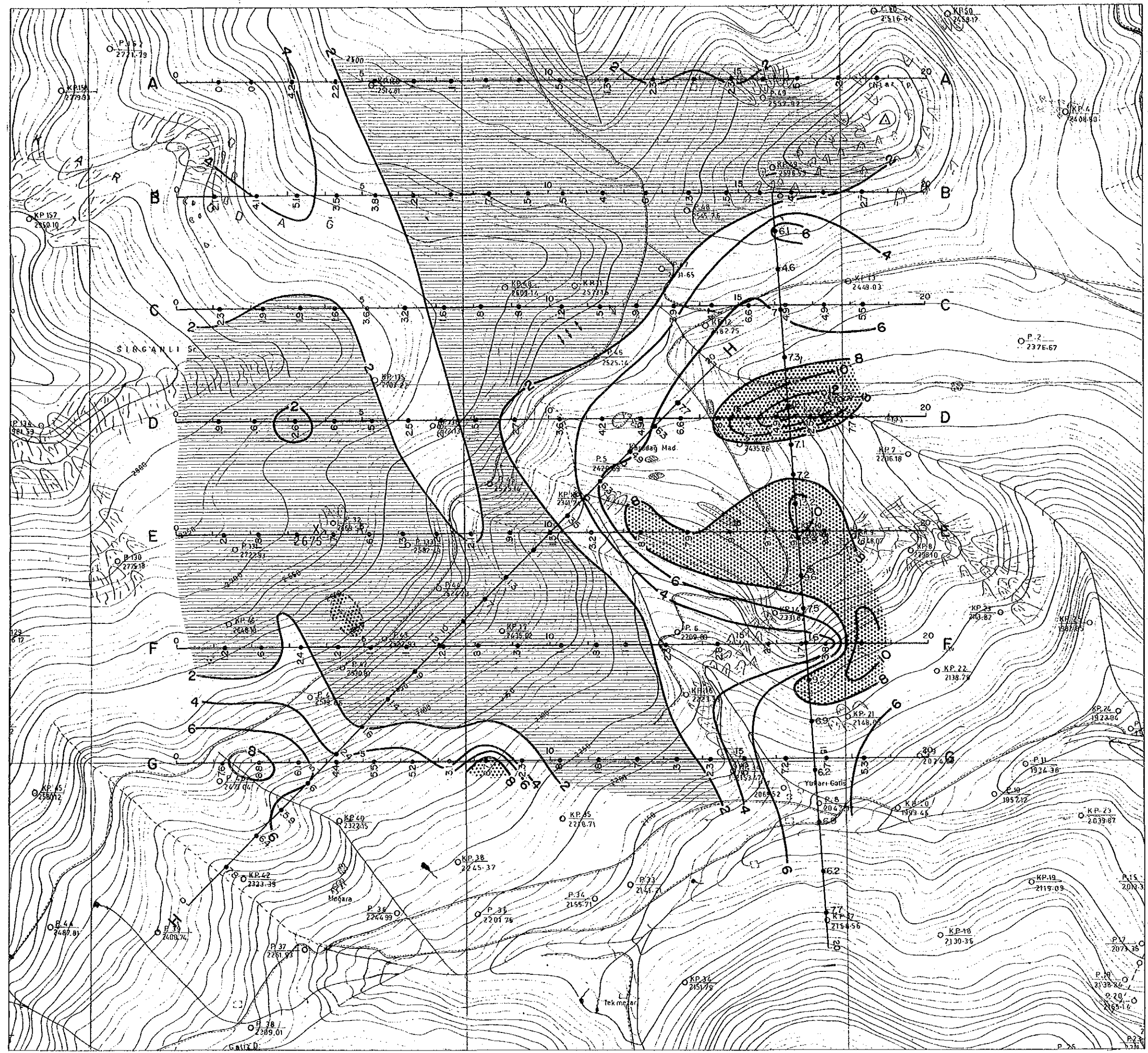
PLAN MAP OF PFE (0.125-1.0 Hz)  
(n = 1)

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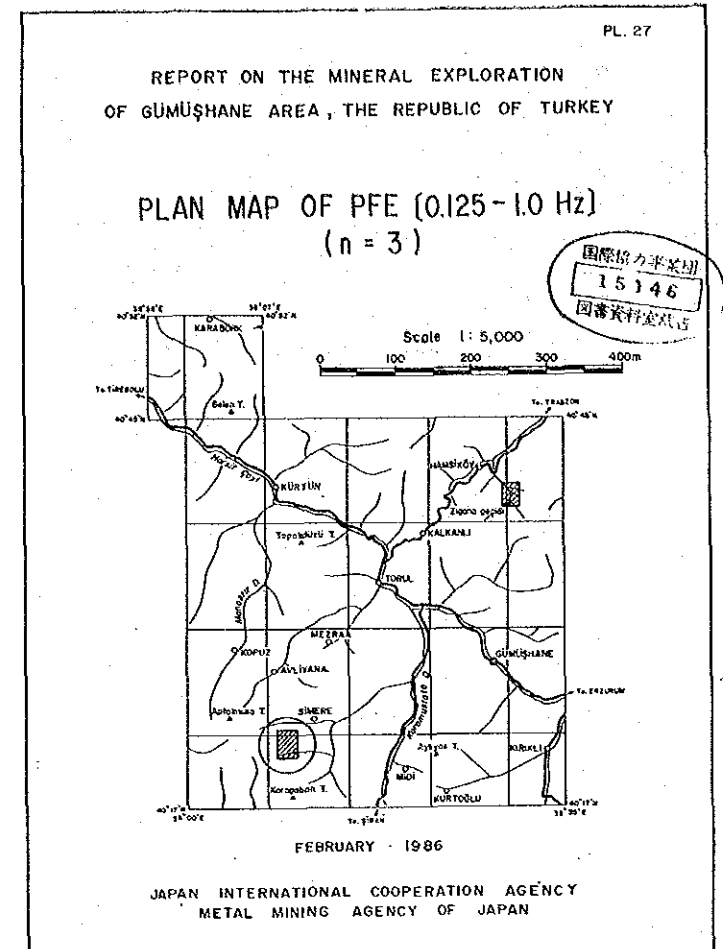
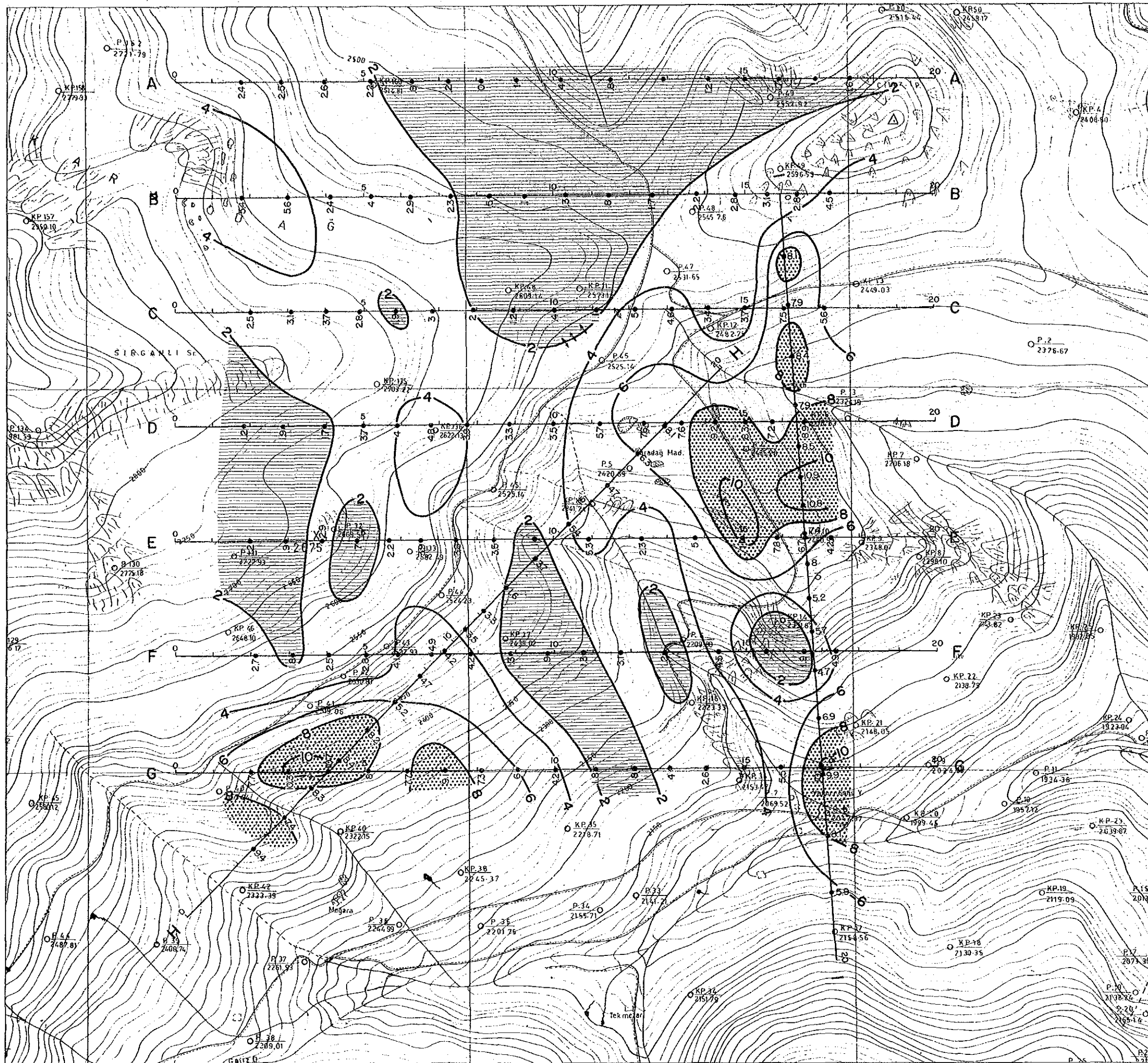
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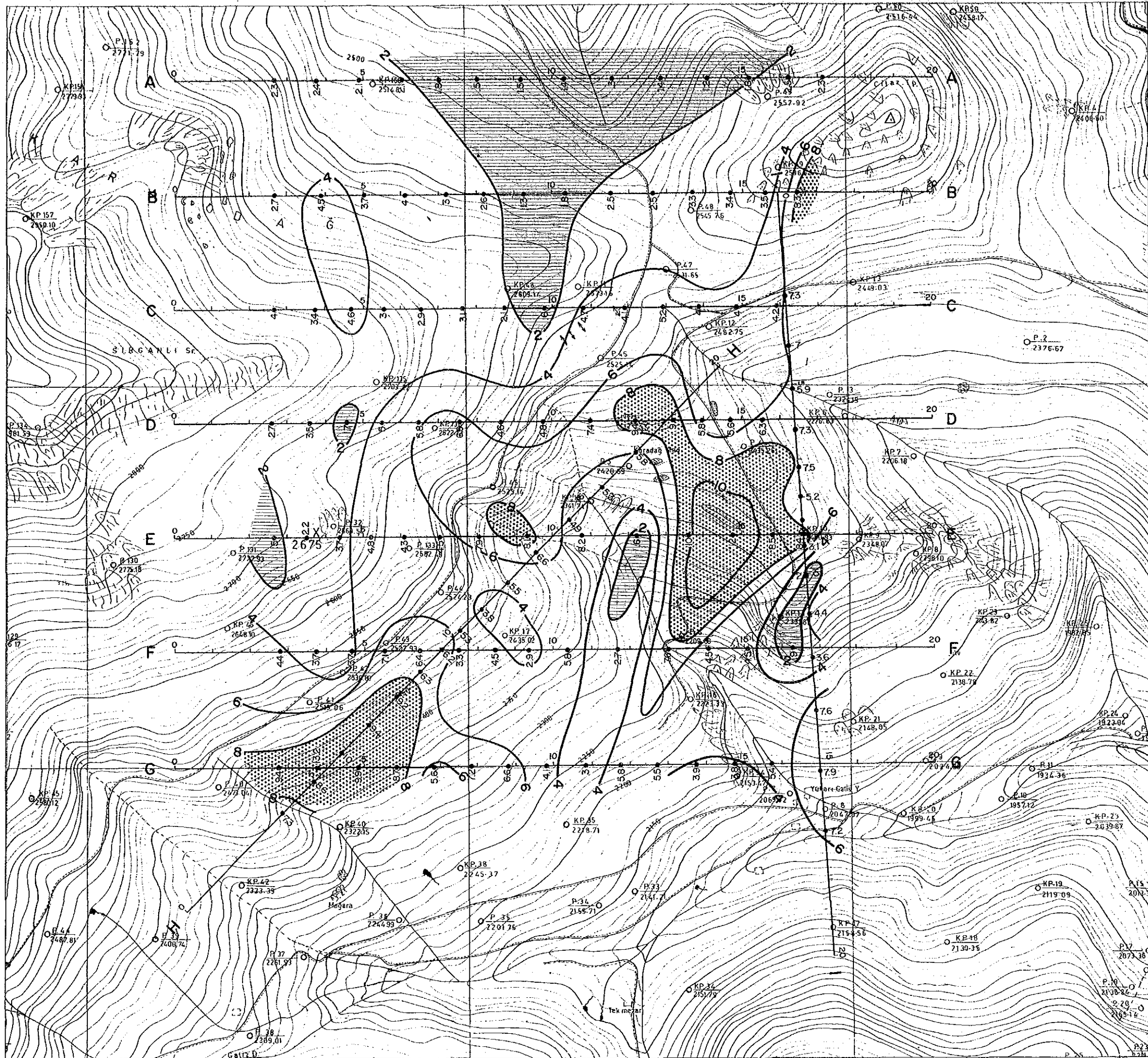
LEGEND

- SIP SURVEY LINE
  - IP SURVEY LINE
  - HIGH PFE ZONE
  - LOW PFE ZONE
- [UNIT : %]



LEGEND

- SIP SURVEY LINE
  - IP SURVEY LINE
  - HIGH PFE ZONE
  - LOW PFE ZONE
- [UNIT : %]



PL. 28

REPORT ON THE MINERAL EXPLORATION  
OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

PLAN MAP OF PFE (0.125-1.0 Hz)  
(n = 5)

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Scale 1: 5,000

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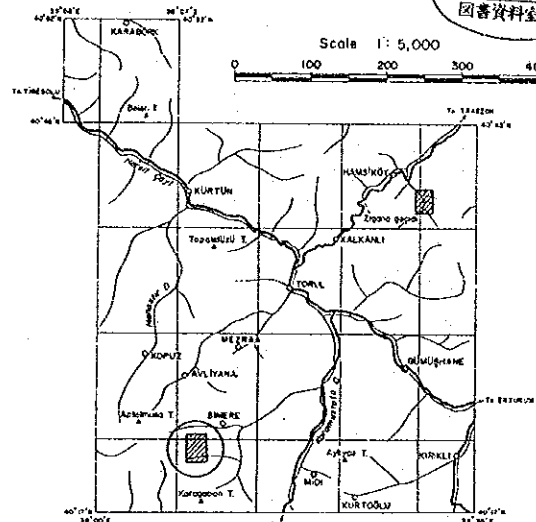
LEGEND

- SIP SURVEY LINE
  - IP SURVEY LINE
  - HIGH PFE ZONE
  - LOW PFE ZONE
- [UNIT : %]

REPORT ON THE MINERAL EXPLORATION  
OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

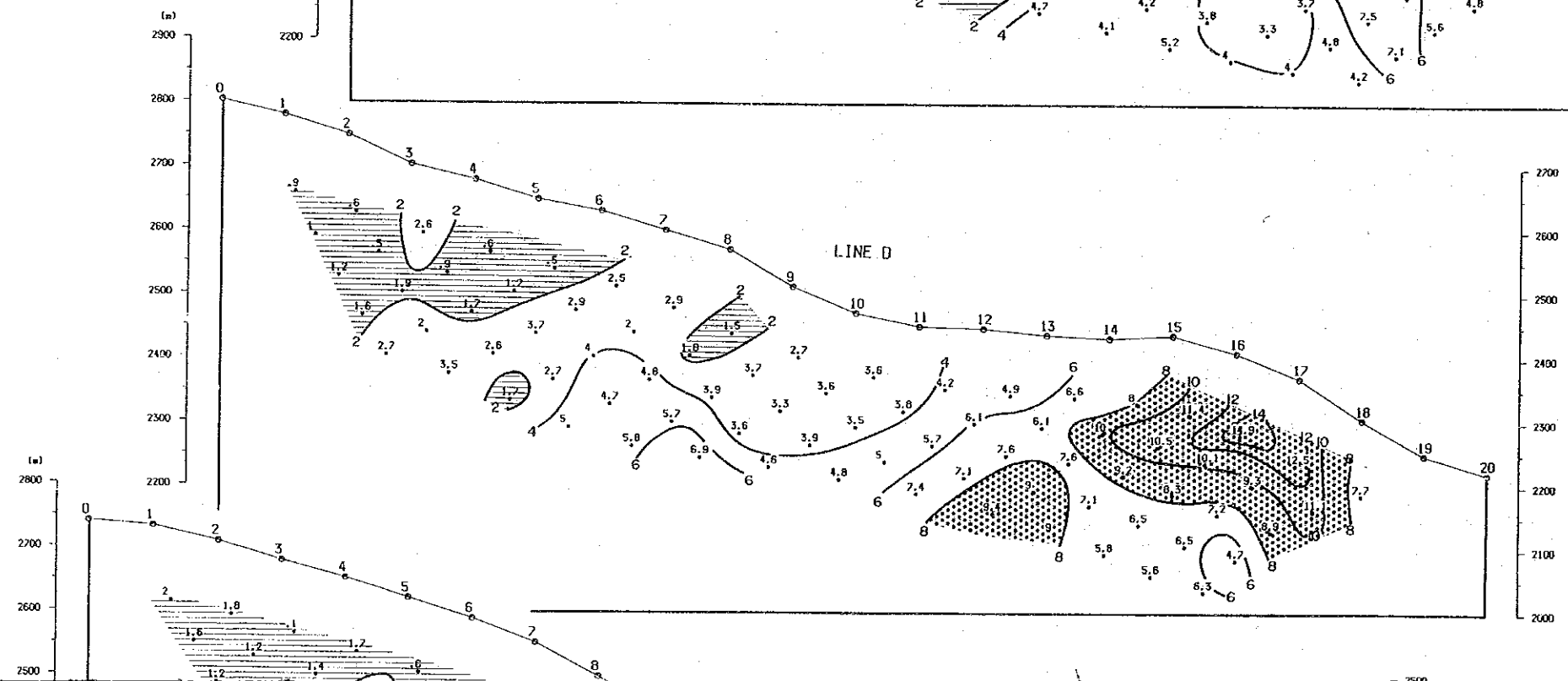
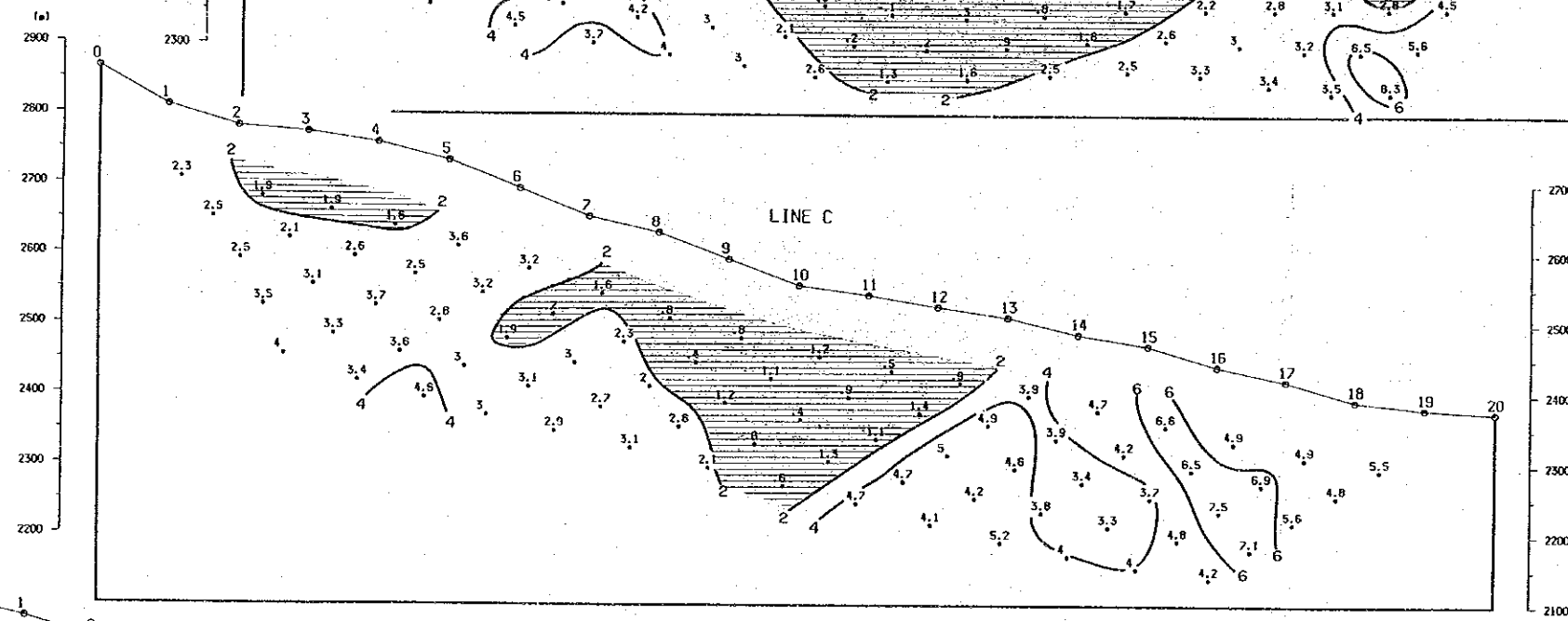
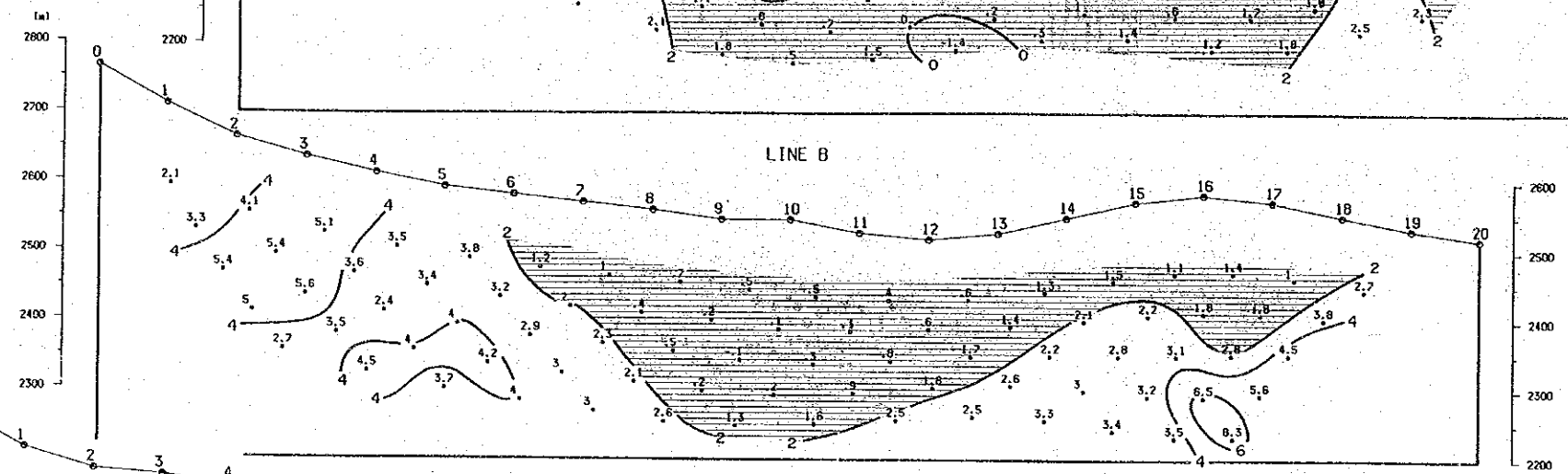
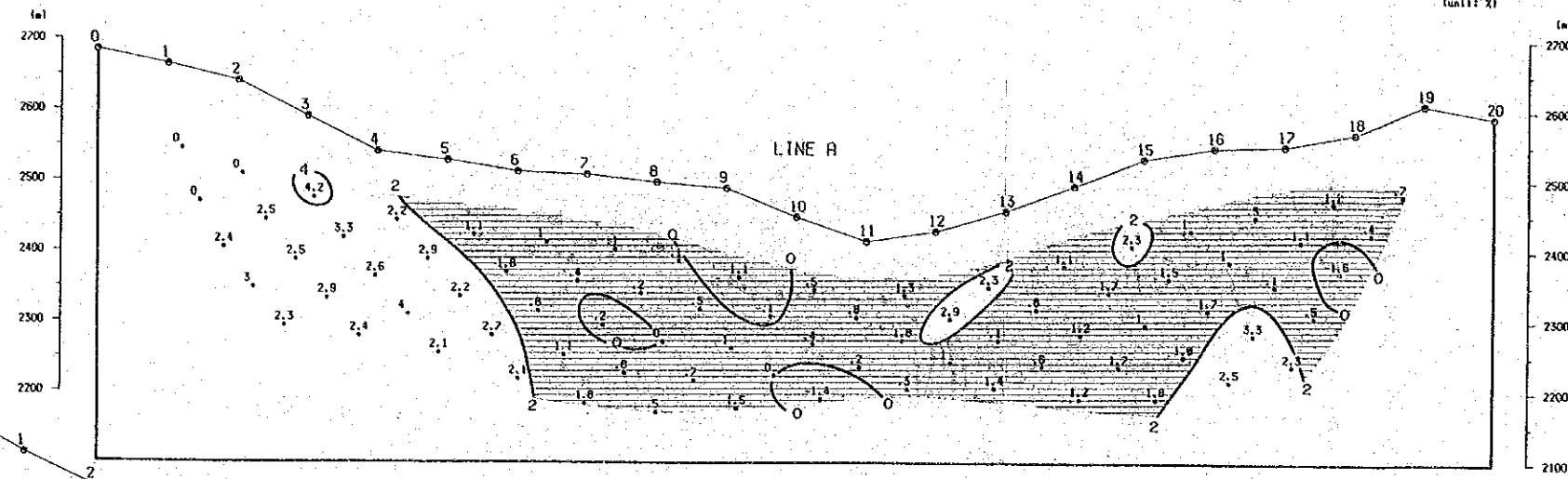
PANEL DIAGRAM OF PFE (0.125-1.0 Hz)  
(LINE A-G)

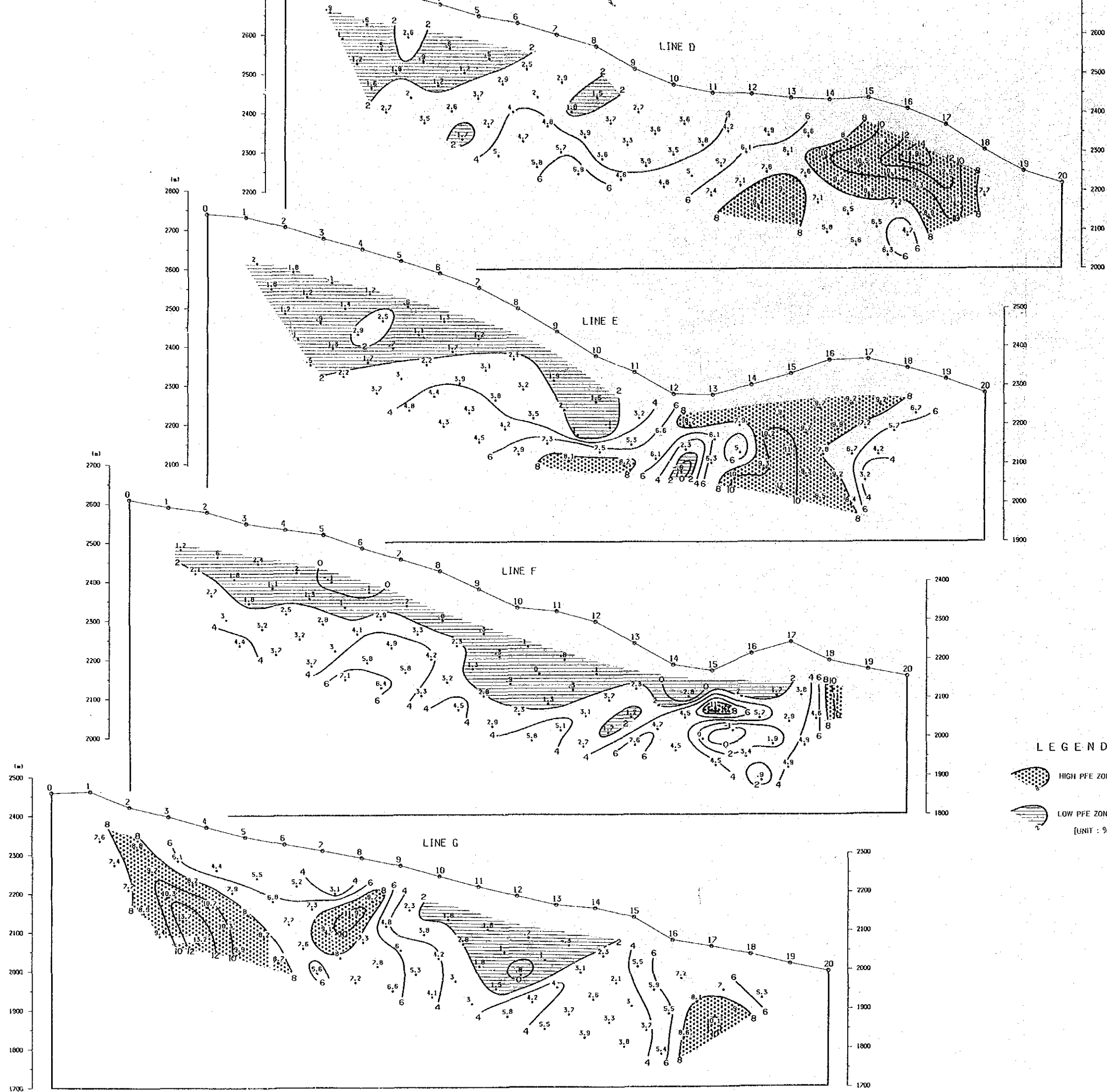
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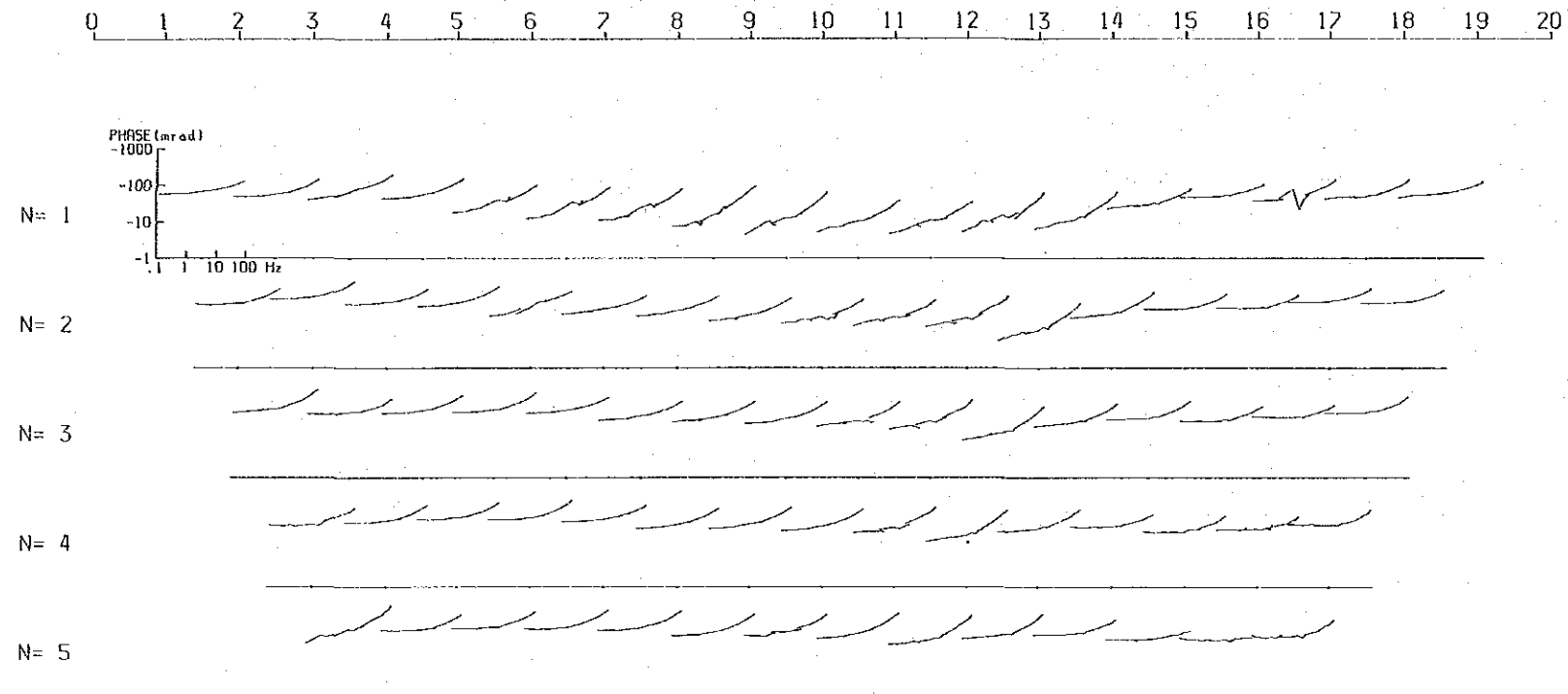




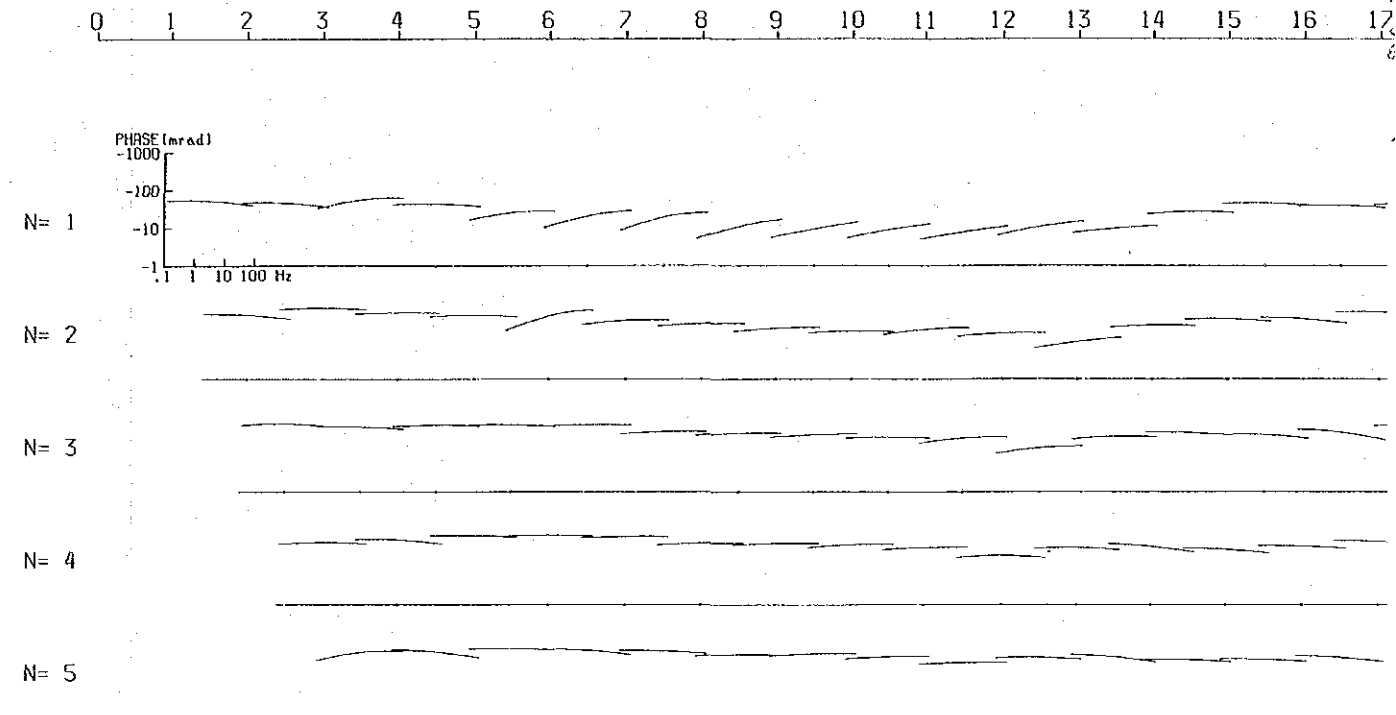
LEGEND

-  HIGH PFE ZONE
  -  LOW PFE ZONE
- [UNIT : %]

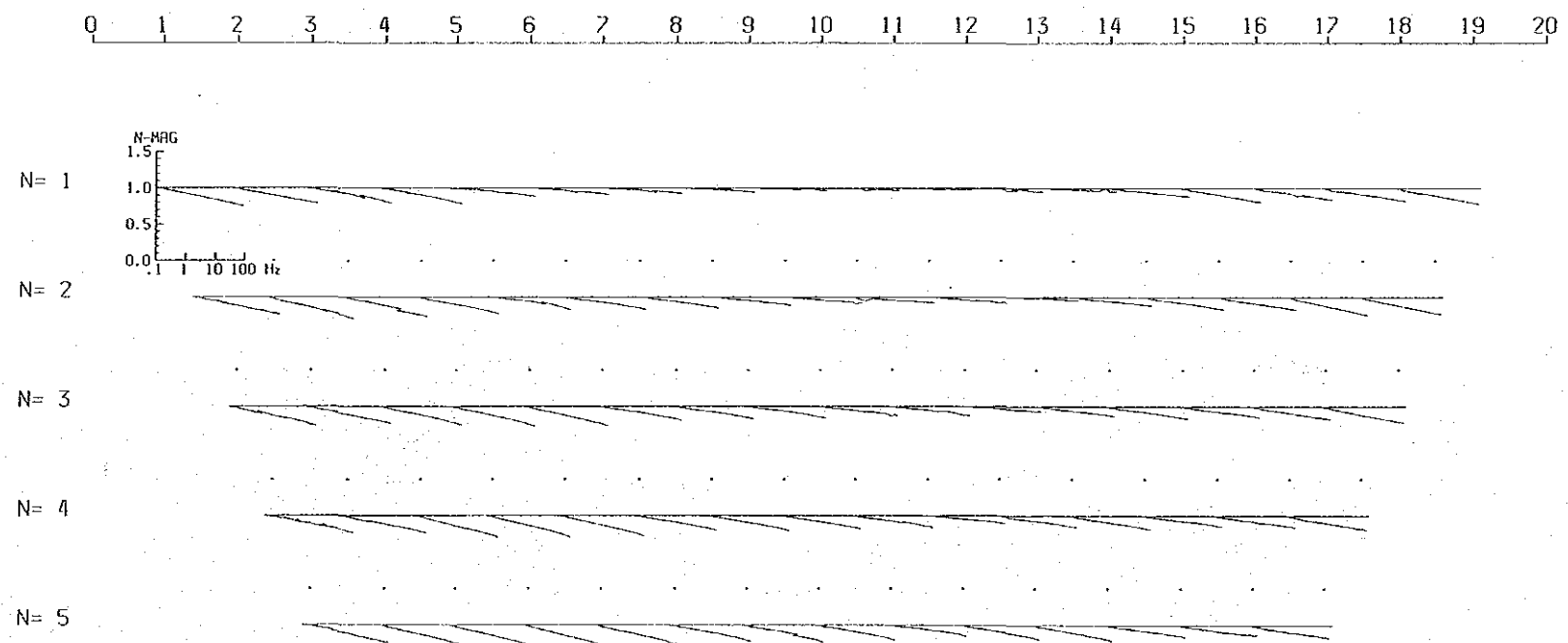
LINE H Phase Spectrum



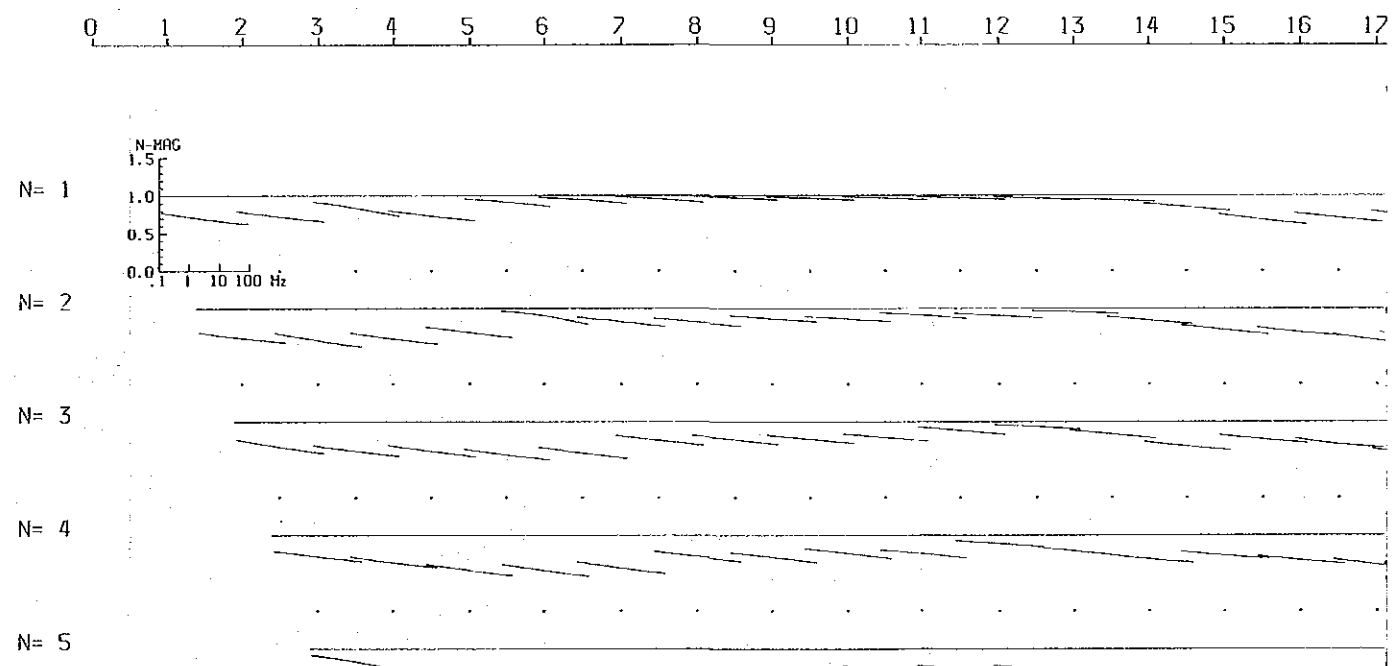
LINE H Decoupled Phase Spectrum



LINE H Magnitude Spectrum

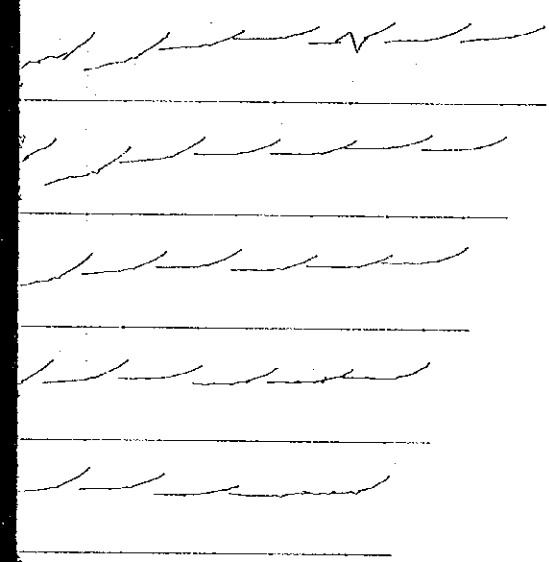


LINE H Decoupled Magnitude Spectrum



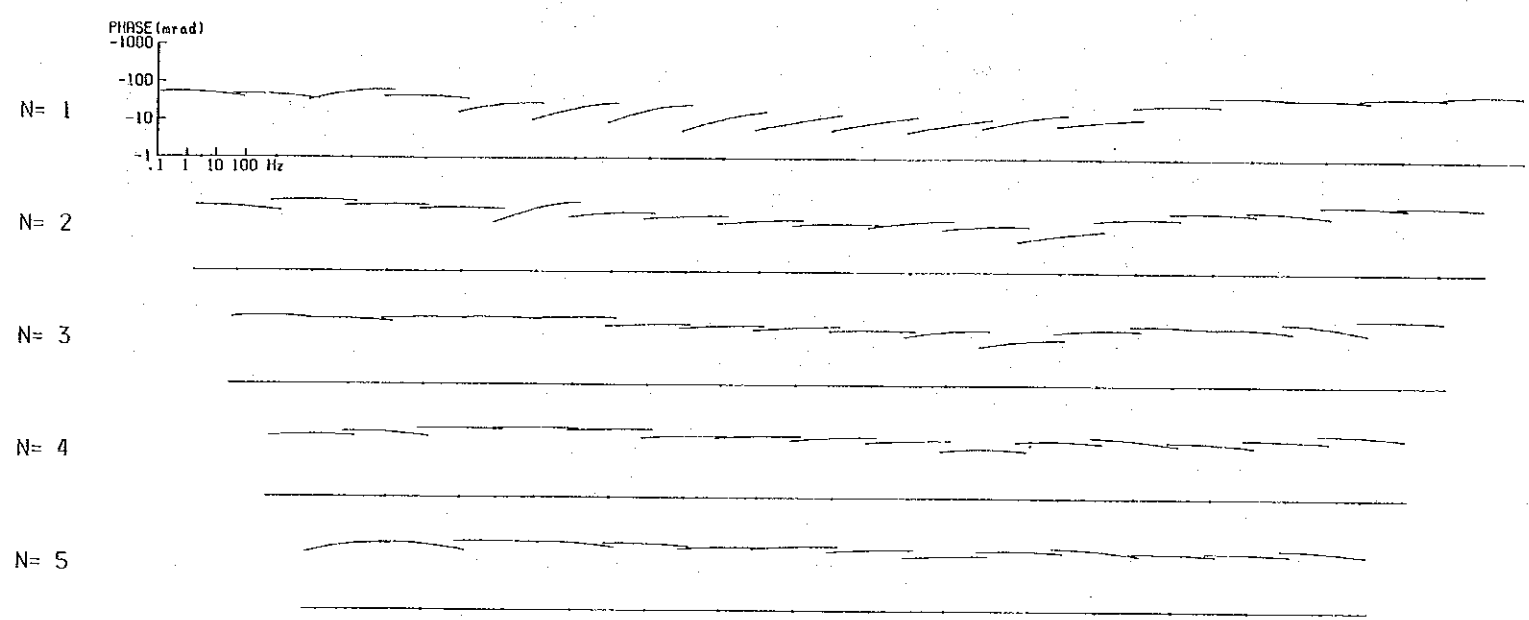
pectrum

13 14 15 16 17 18 19 20



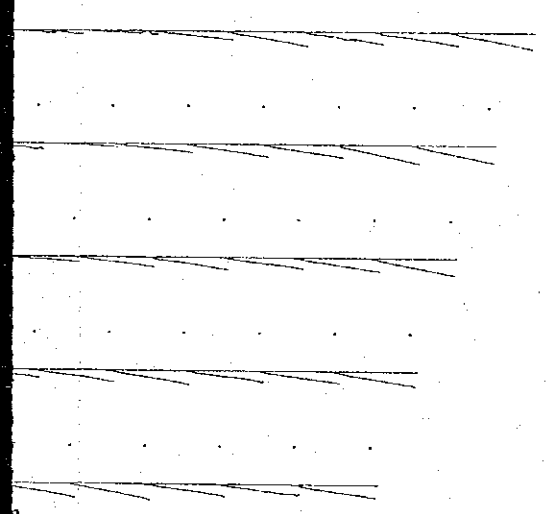
### LINE H Decoupled Phase Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



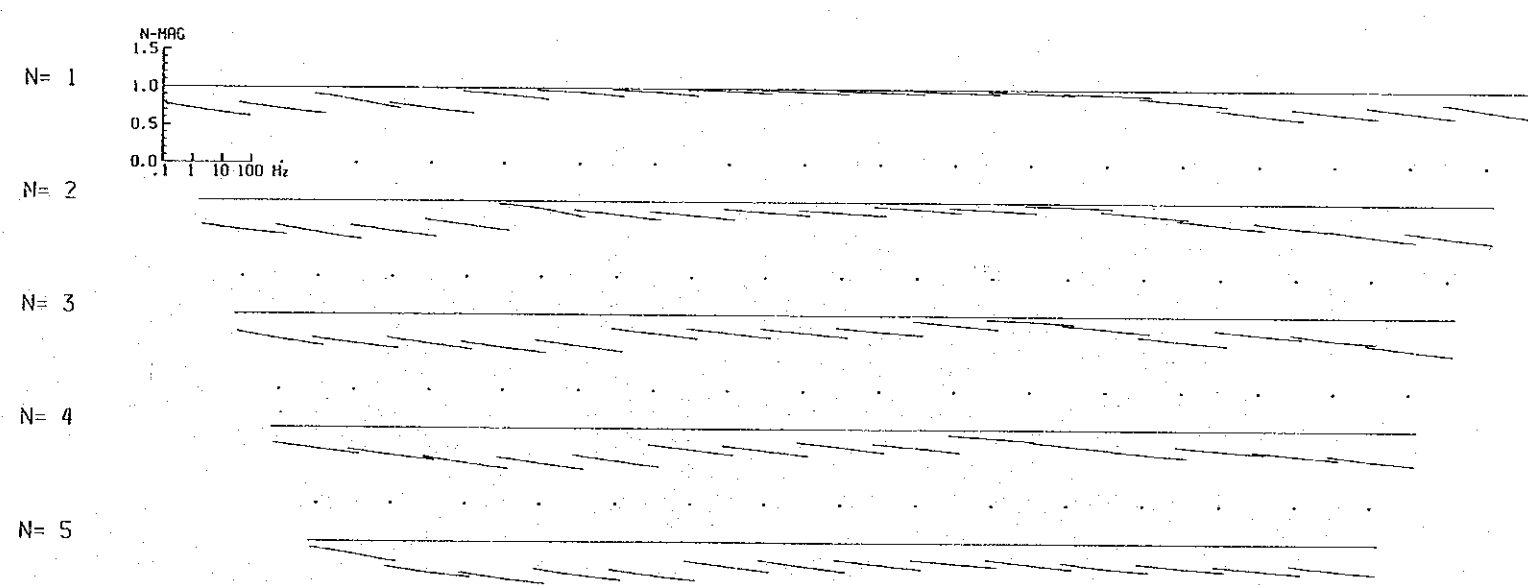
pectrum

13 14 15 16 17 18 19 20



### LINE H Decoupled Magnitude Spectrum

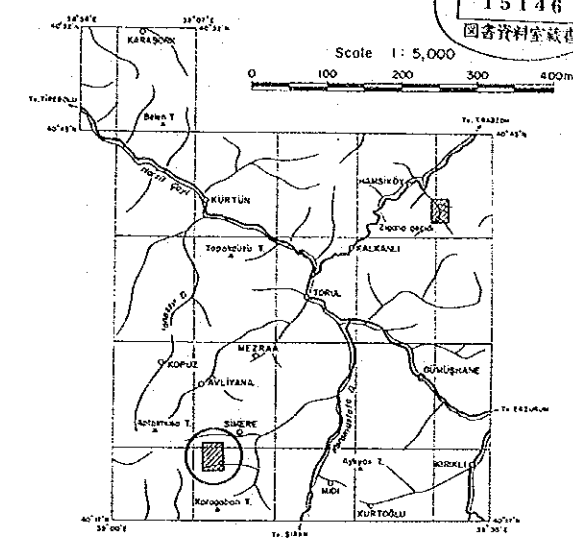
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



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OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY.

### PHASE, MAGNITUDE & COLE-COLE SPECTRUM (LINE H)

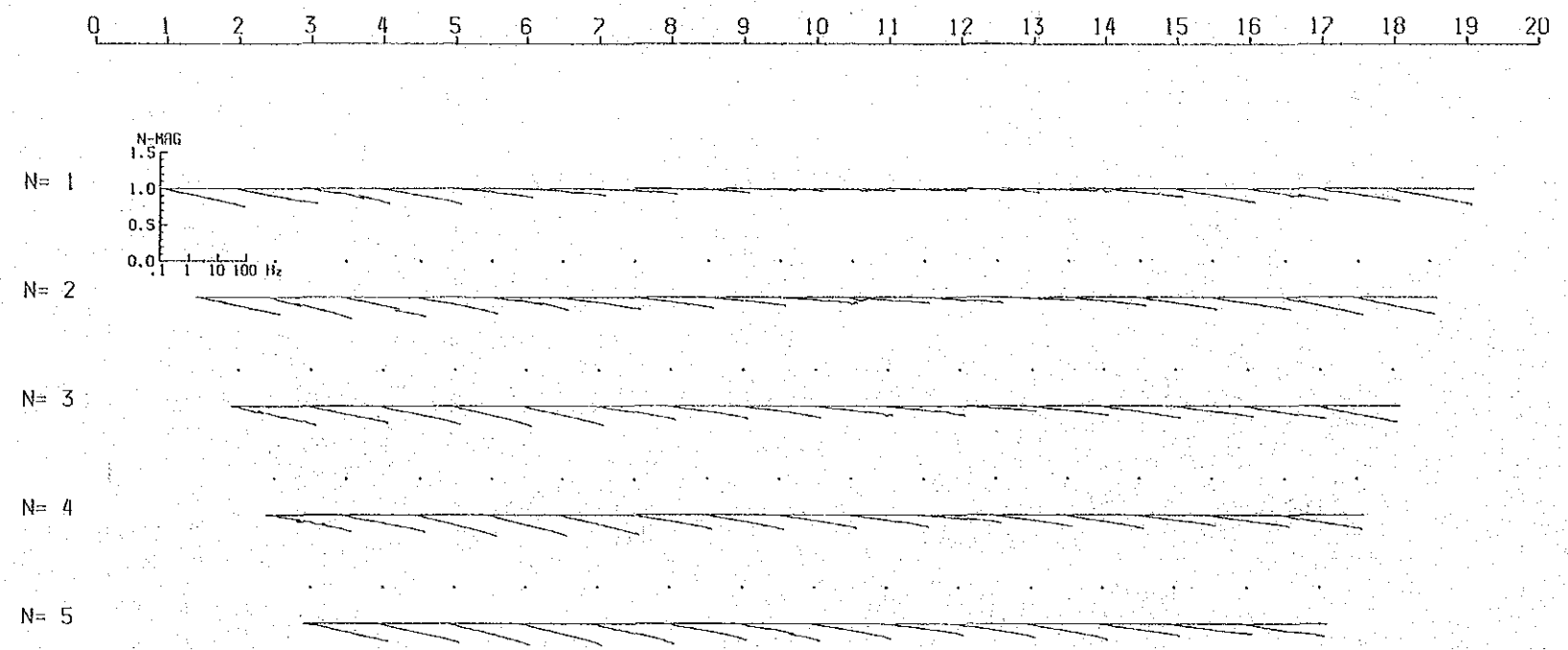
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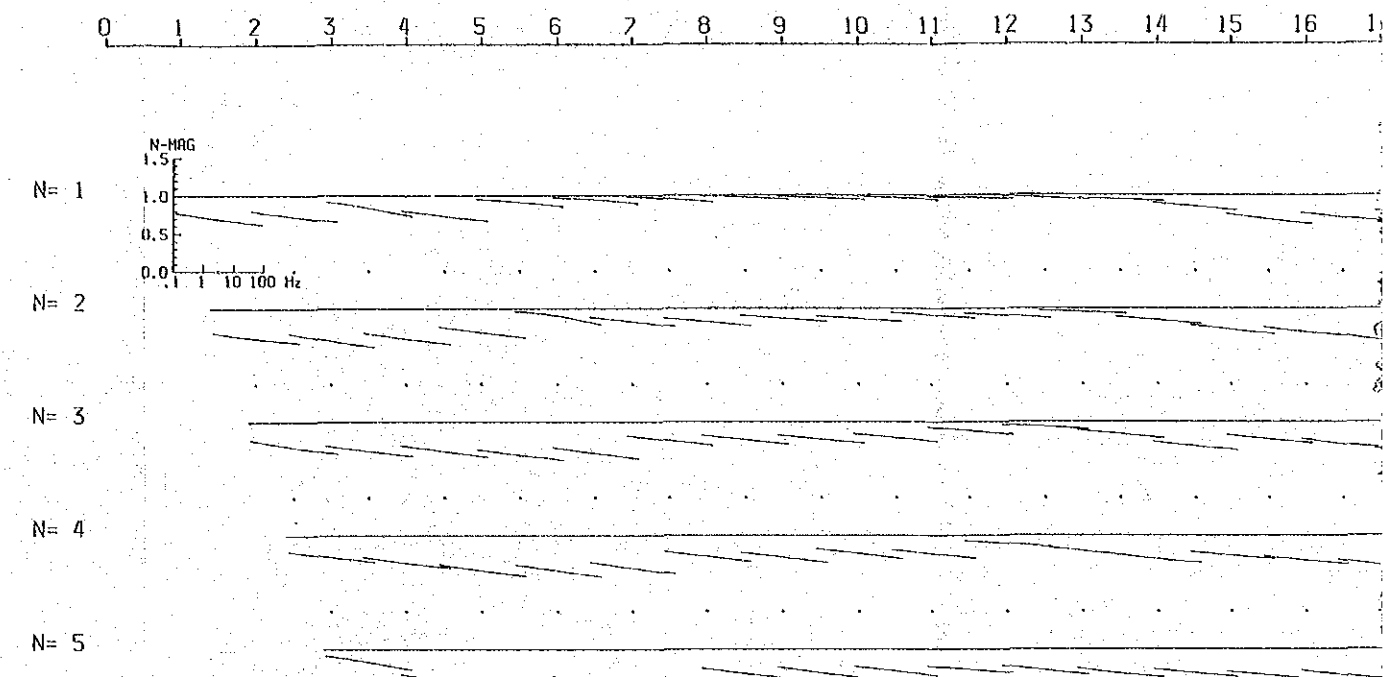
JAPAN INTERNATIONAL COOPERATION AGENCY  
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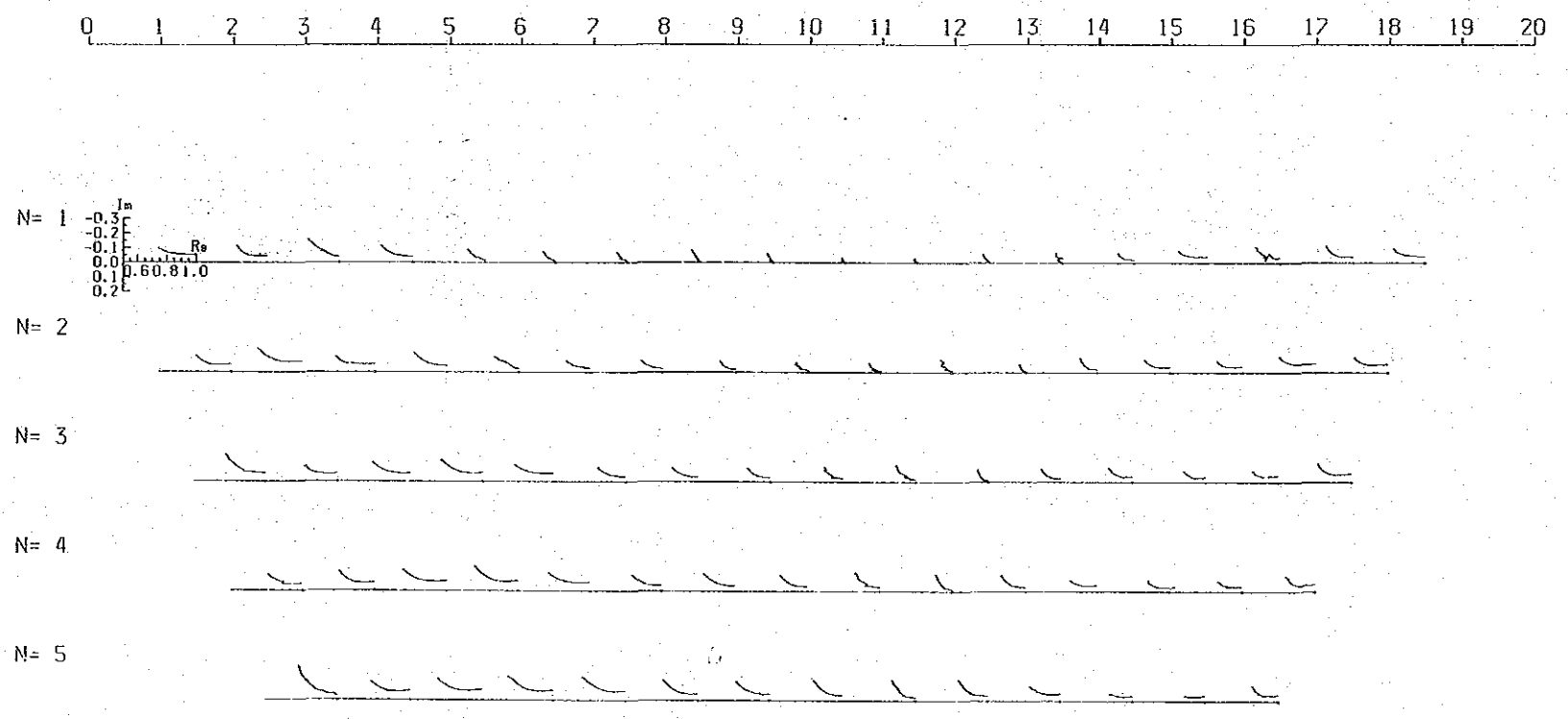
LINE H Magnitude Spectrum



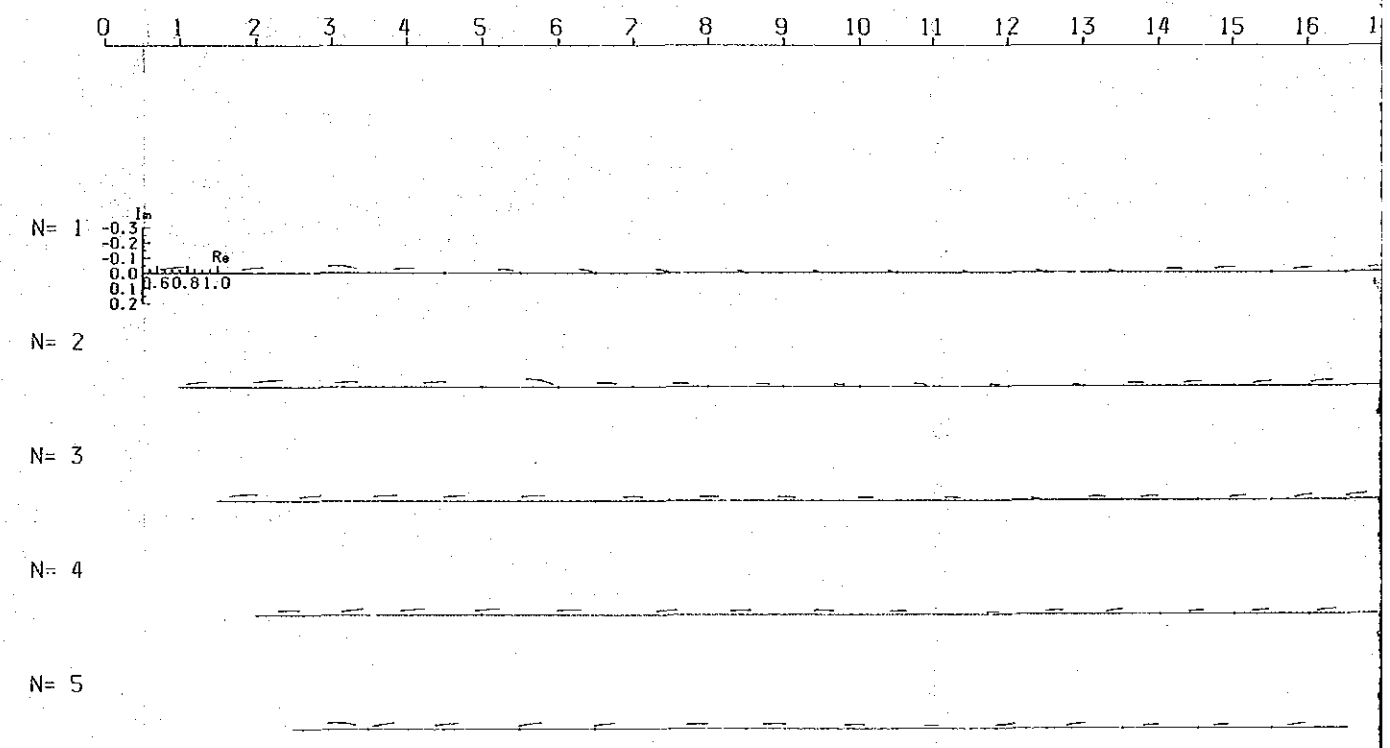
LINE H Decoupled Magnitude Spectrum



LINE H Cole-Cole Diagram

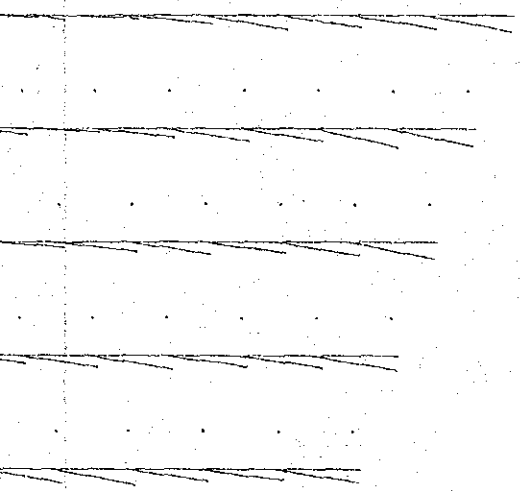


LINE H Decoupled Cole-Cole Diagram



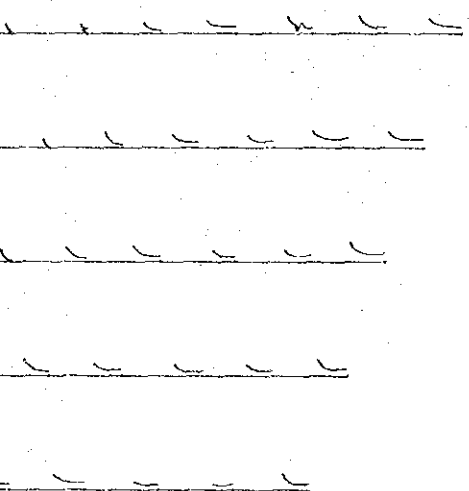
spectrum

13 14 15 16 17 18 19 20



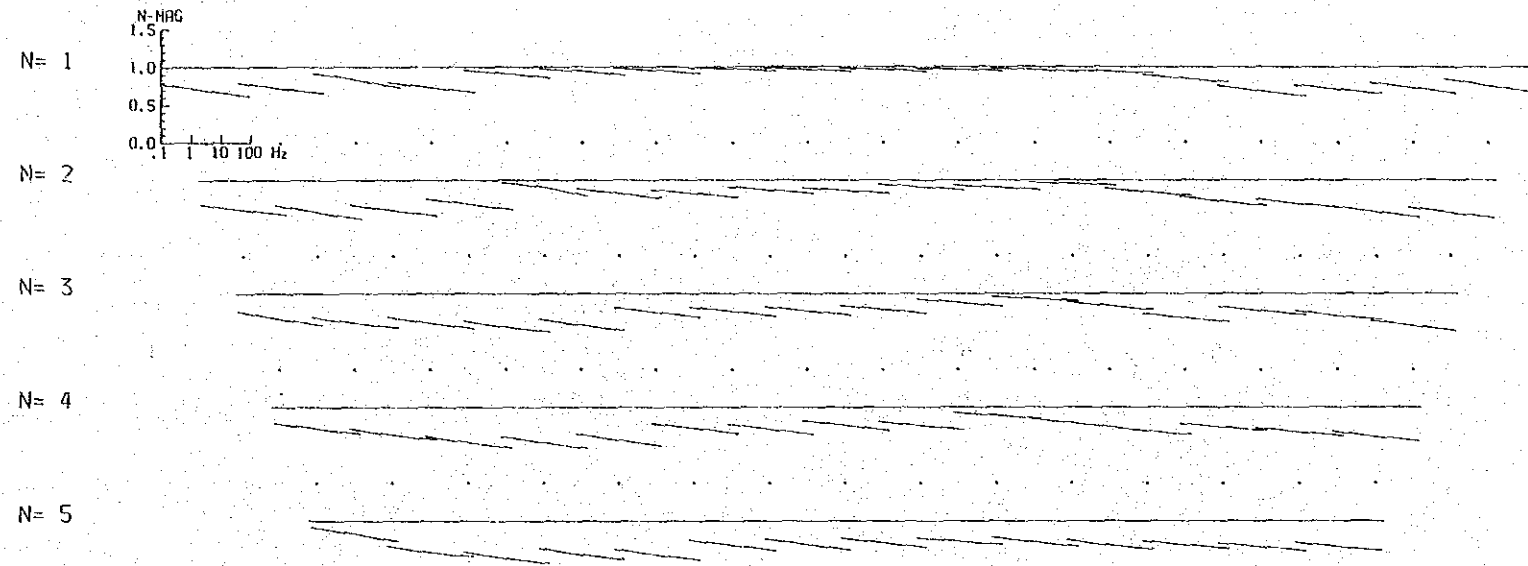
Diagram

13 14 15 16 17 18 19 20



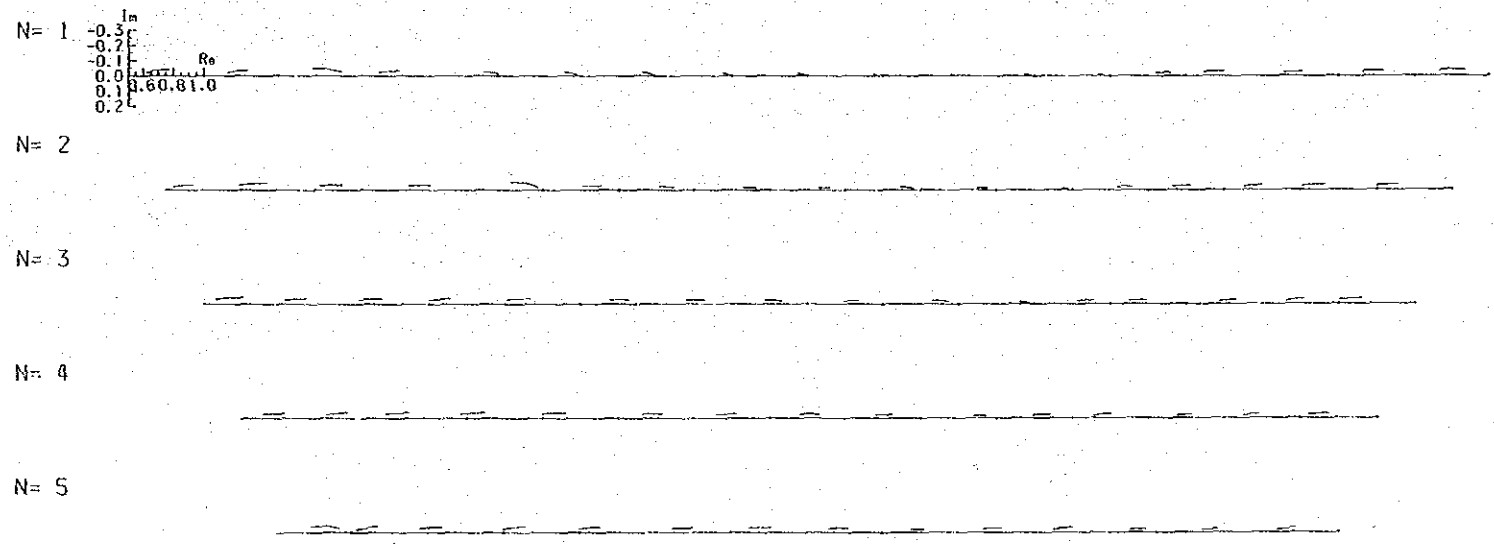
### LINE H Decoupled Magnitude Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

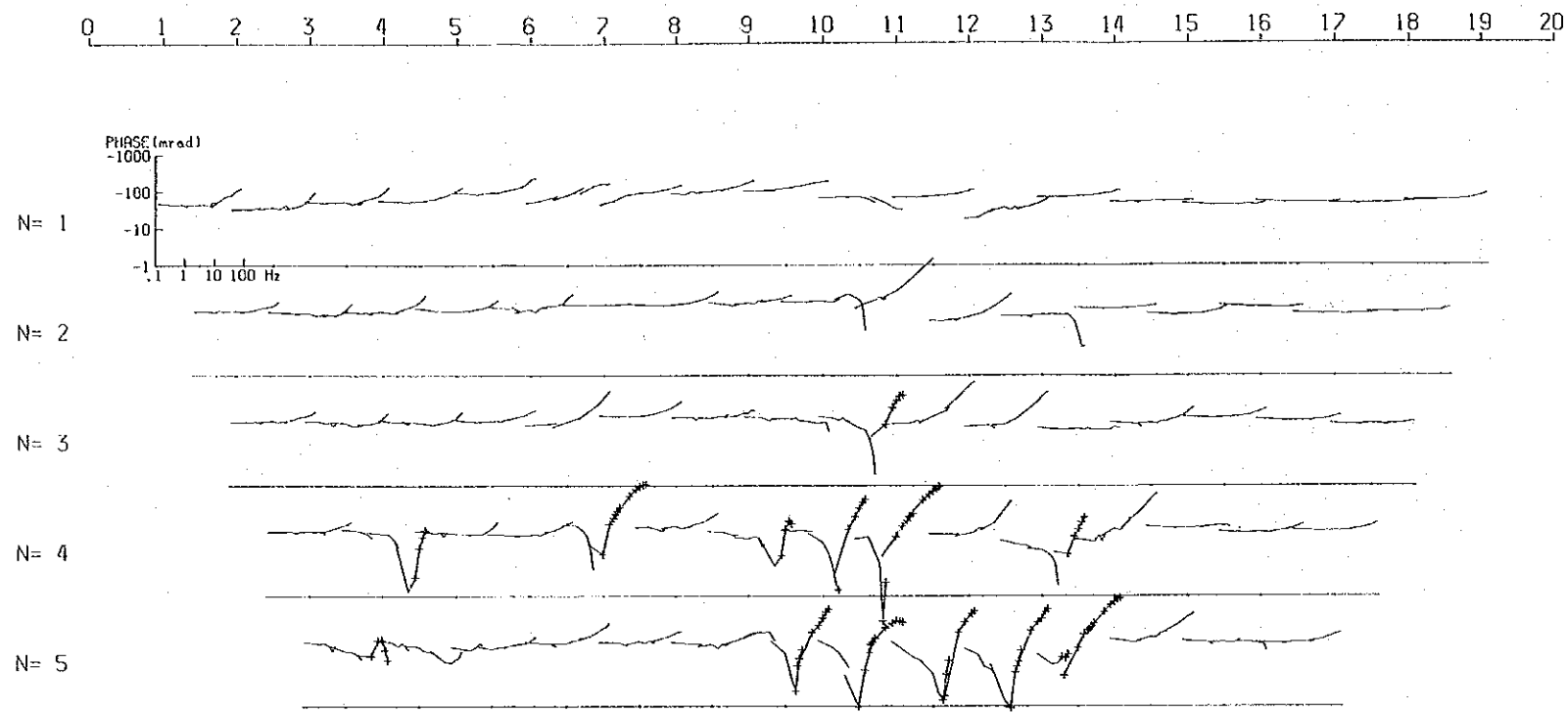


### LINE H Decoupled Cole-Cole Diagram

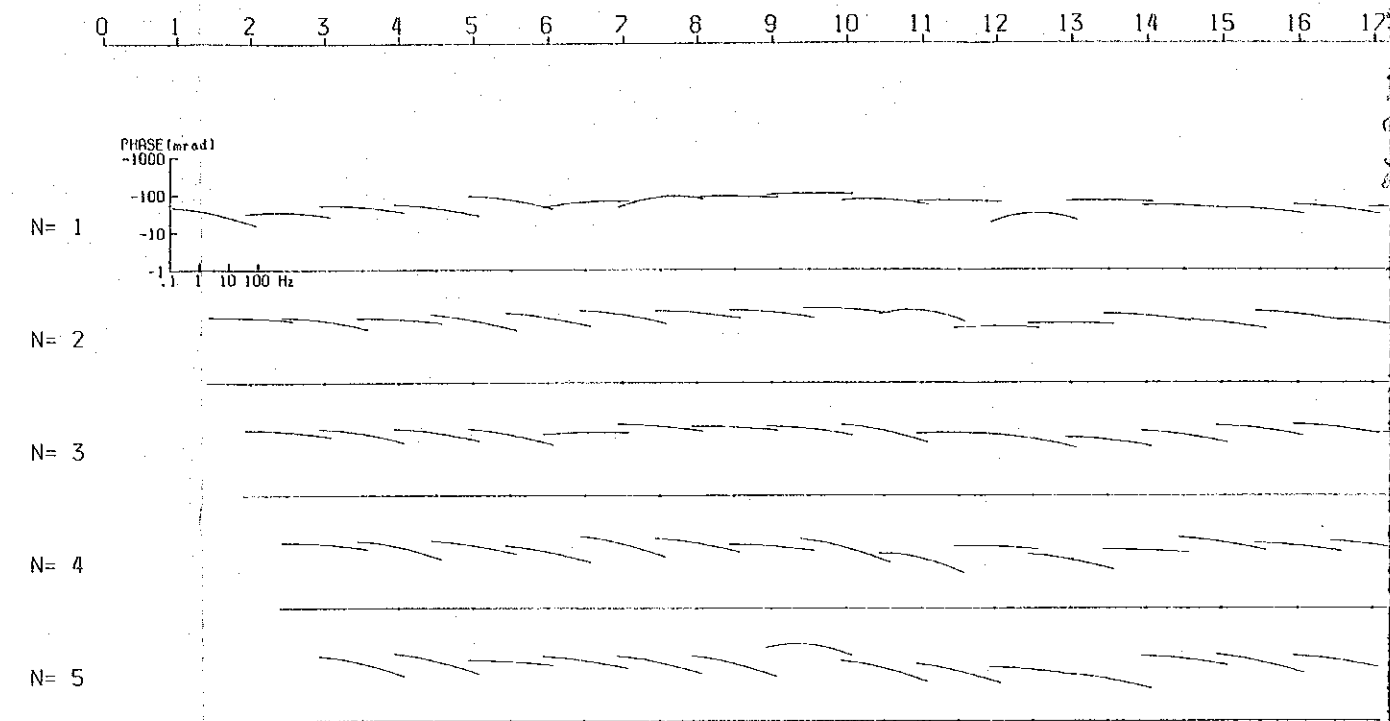
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



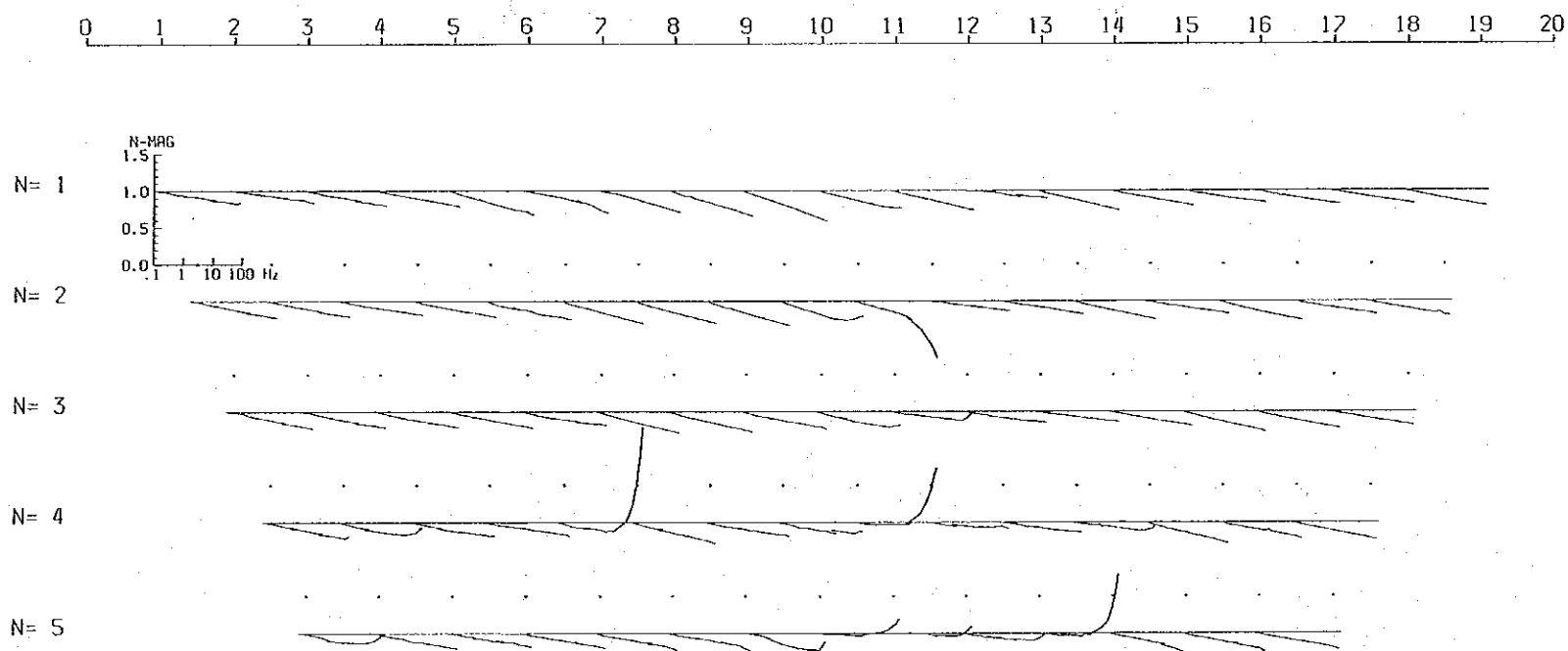
LINE I Phase Spectrum



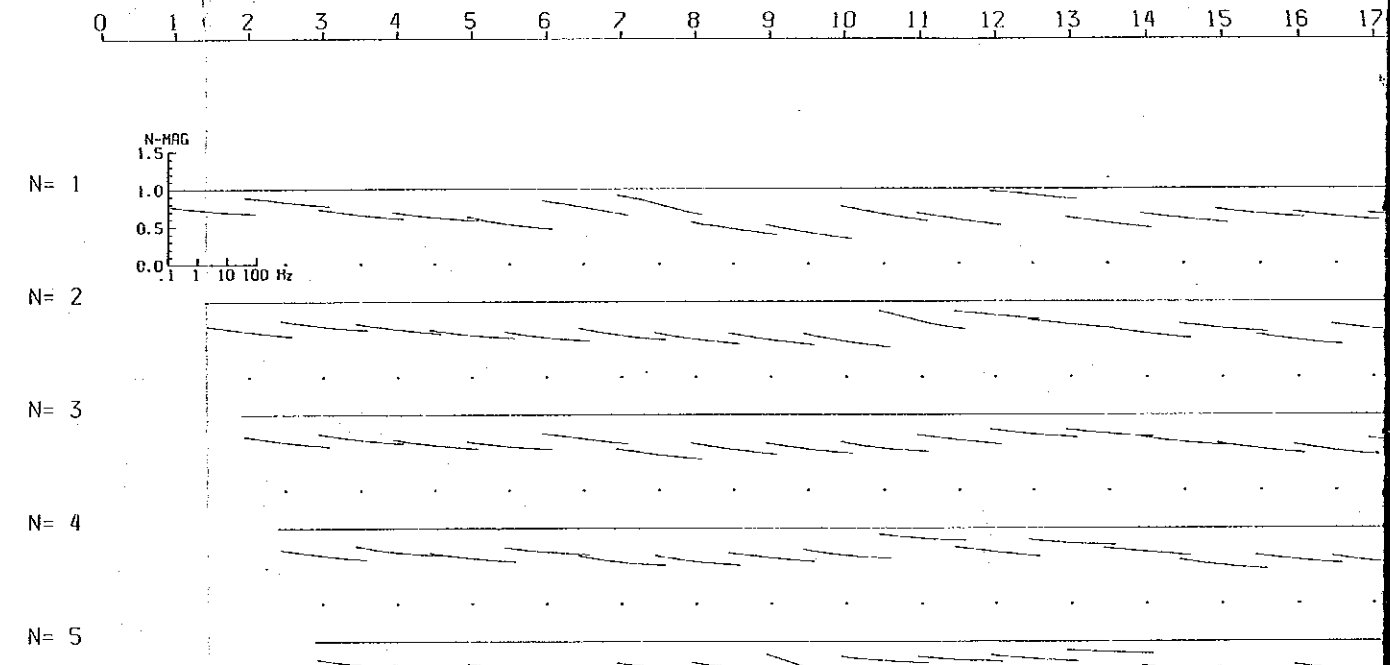
LINE I Decoupled Phase Spectrum



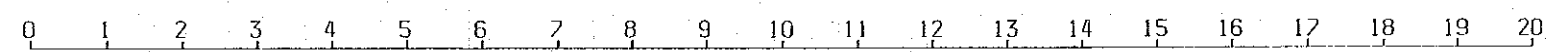
LINE I Magnitude Spectrum



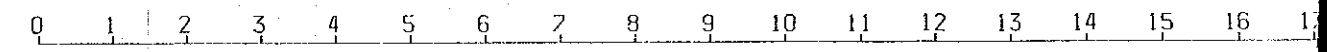
LINE I Decoupled Magnitude Spectrum



LINE I Cole-Cole Diagram

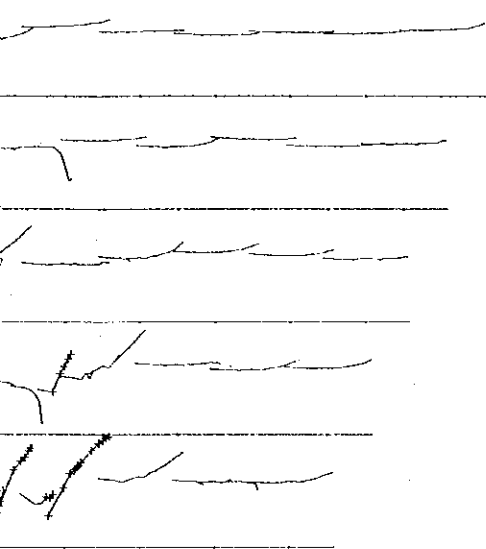


LINE I Decoupled Cole-Cole Diagram



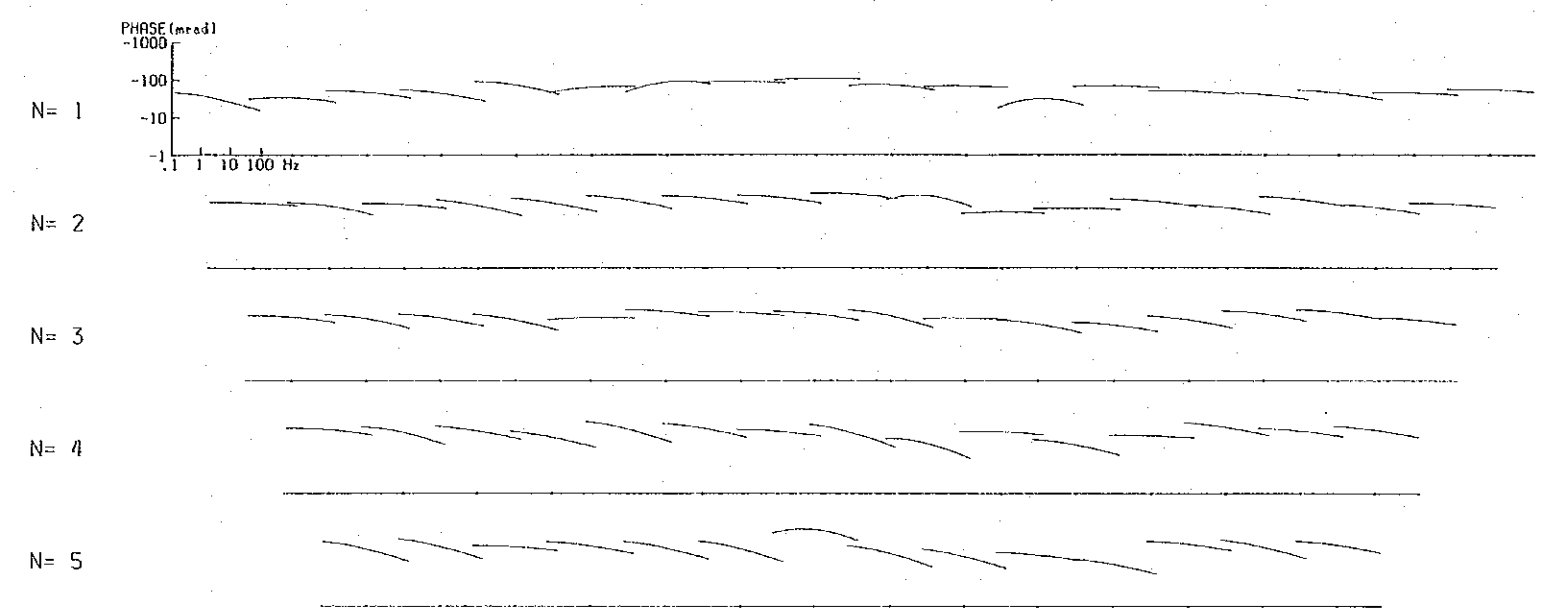
rum

13 14 15 16 17 18 19 20



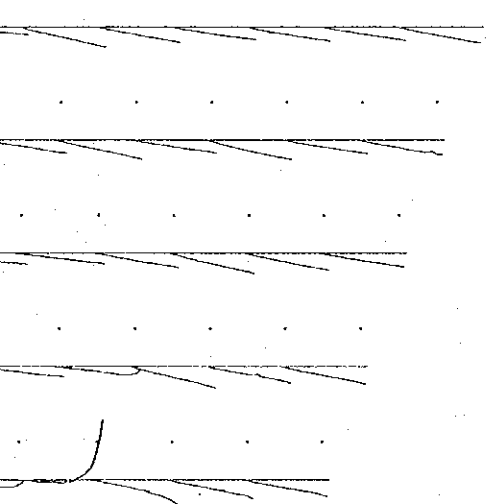
### LINE I Decoupled Phase Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



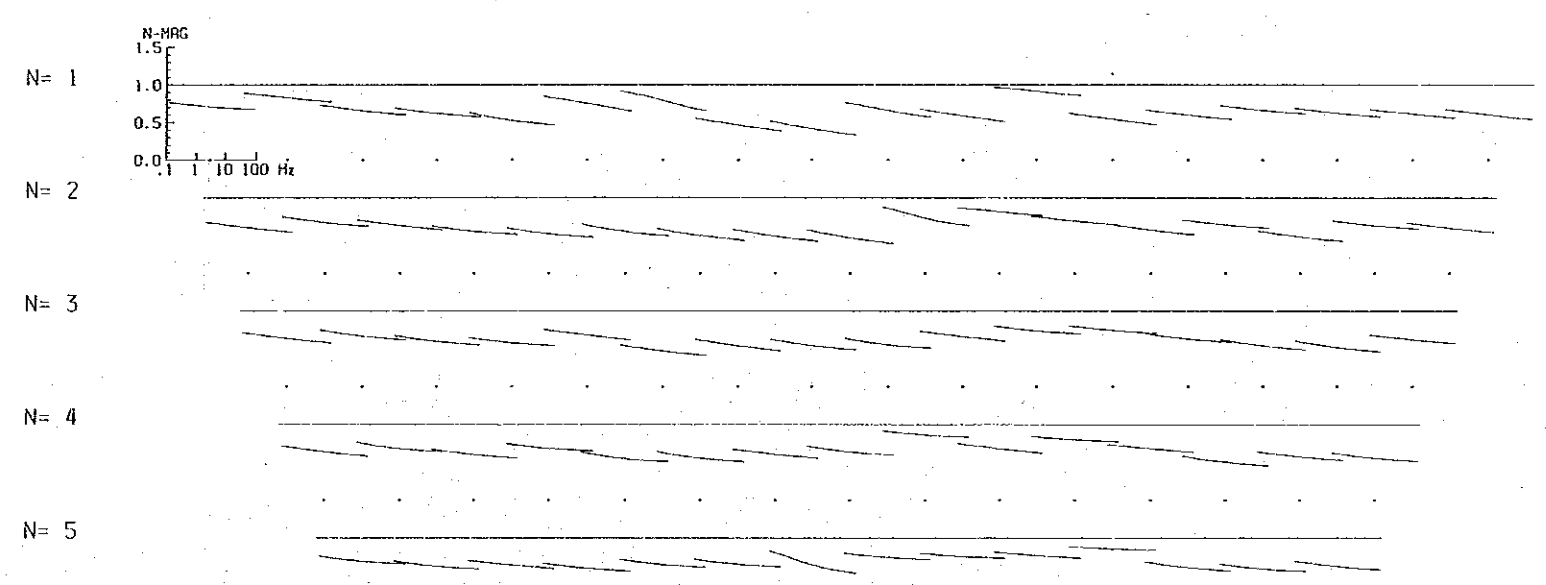
pectrum

13 14 15 16 17 18 19 20



### LINE I Decoupled Magnitude Spectrum

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



agram

13 14 15 16 17 18 19 20

### LINE I Decoupled Cole-Cole Diagram

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

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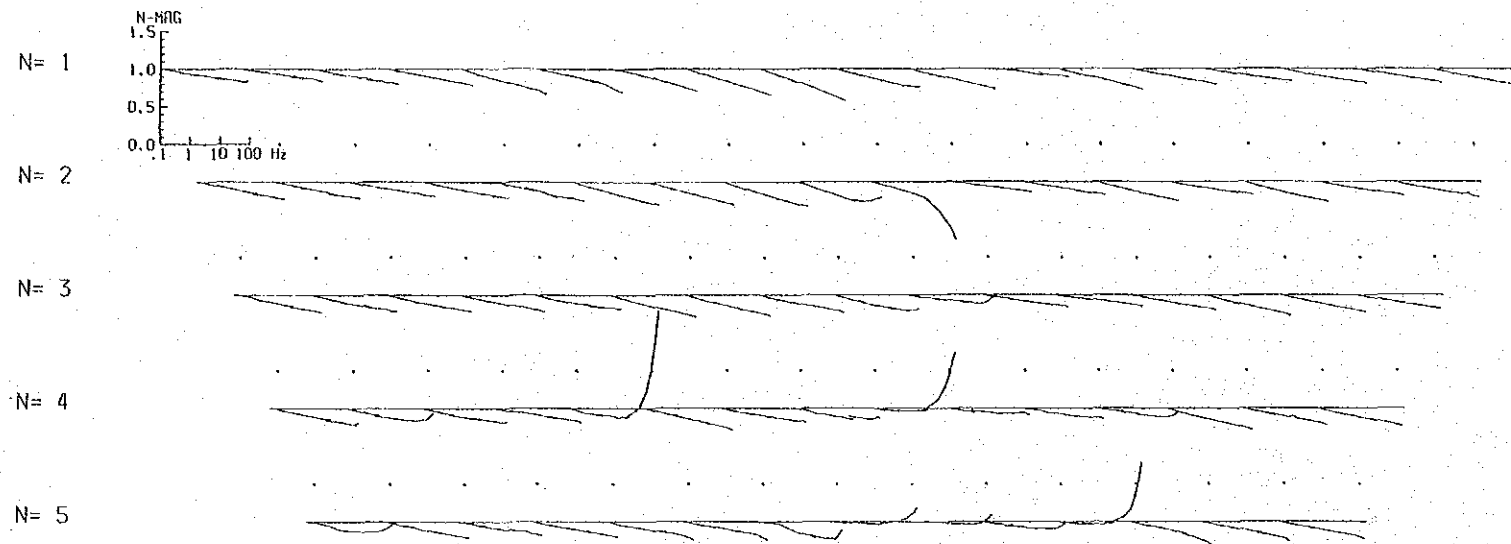
**PHASE, MAGNITUDE & COLE-COLE SPECTRUM  
(LINE 1)**

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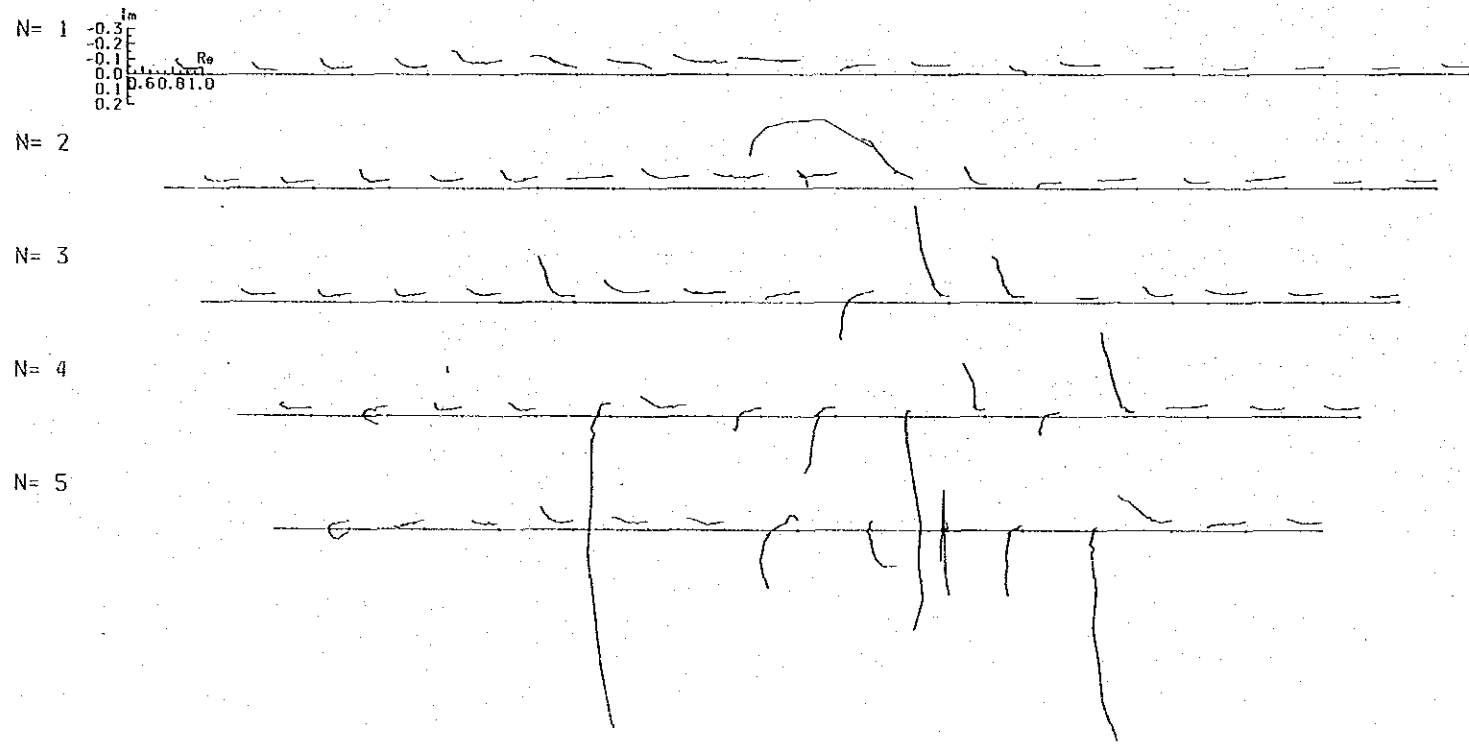
JAPAN INTERNATIONAL COOPERATION AGENCY  
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0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

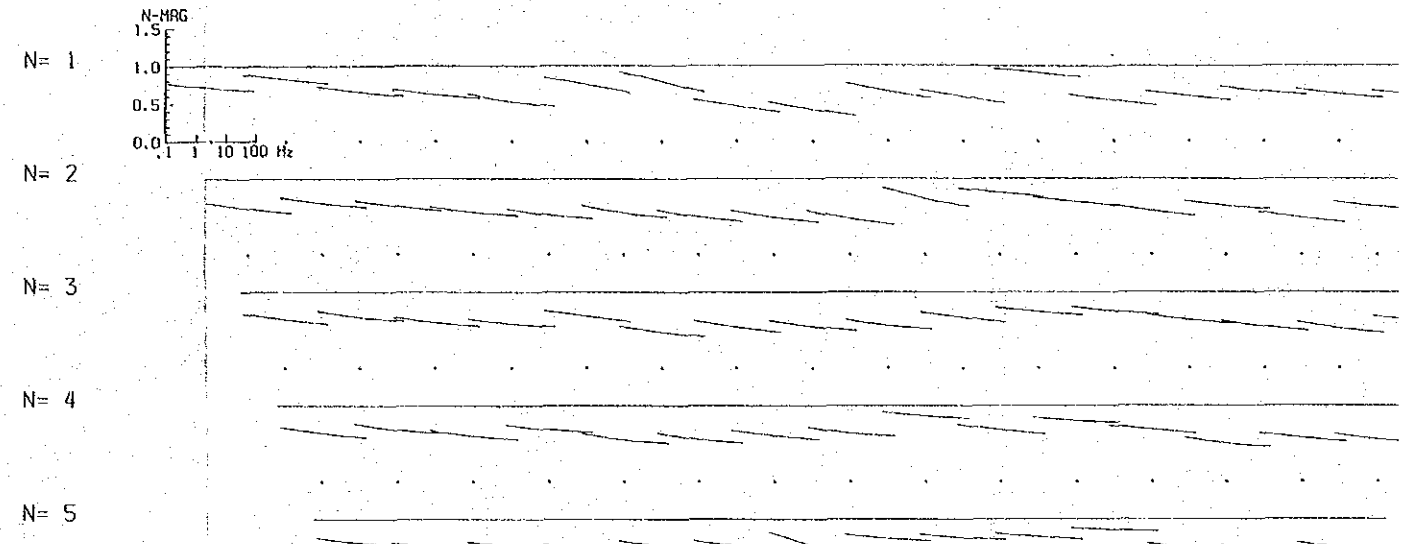


LINE I Cole-Cole Diagram

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

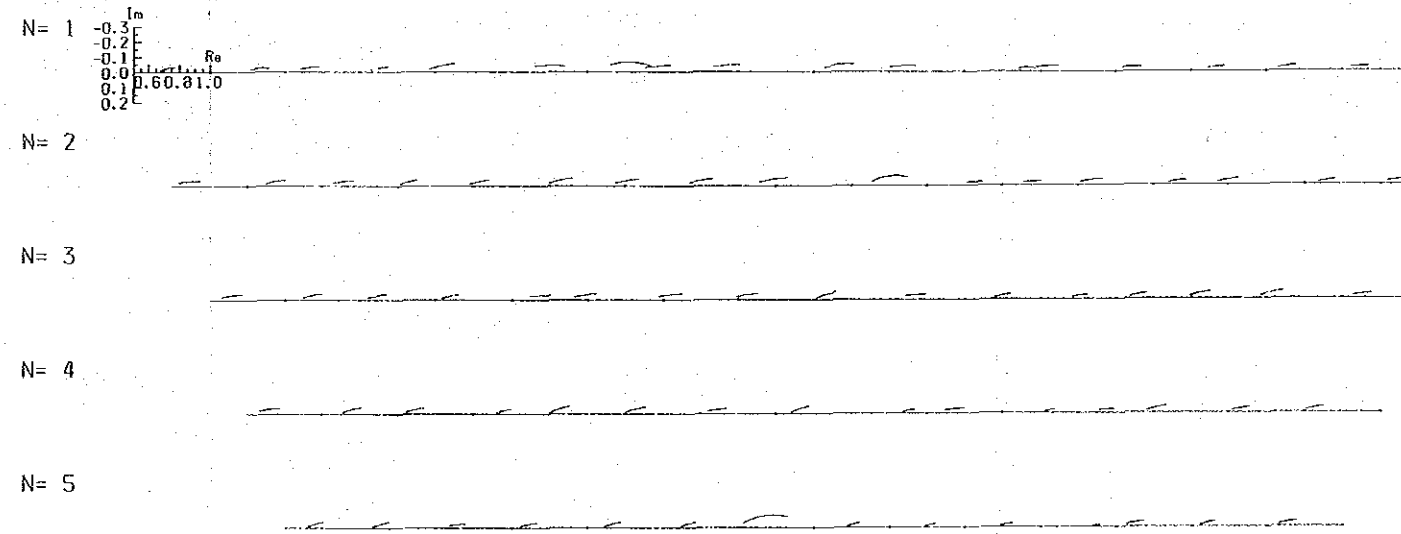


0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17



LINE I Decoupled Cole-Cole Diagram

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17



Spectrum  
12 13 14 15 16 17 18 19 20

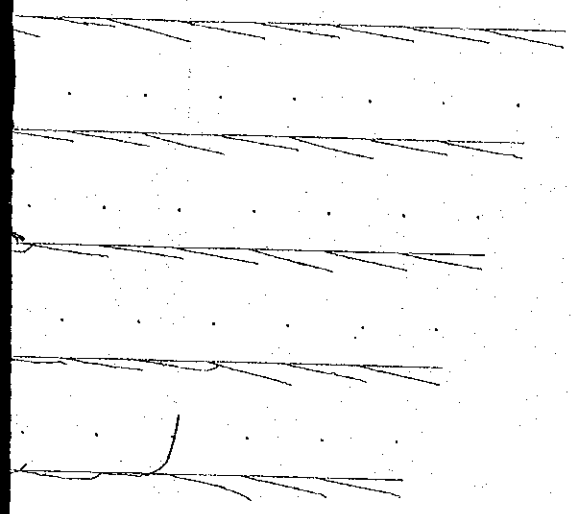
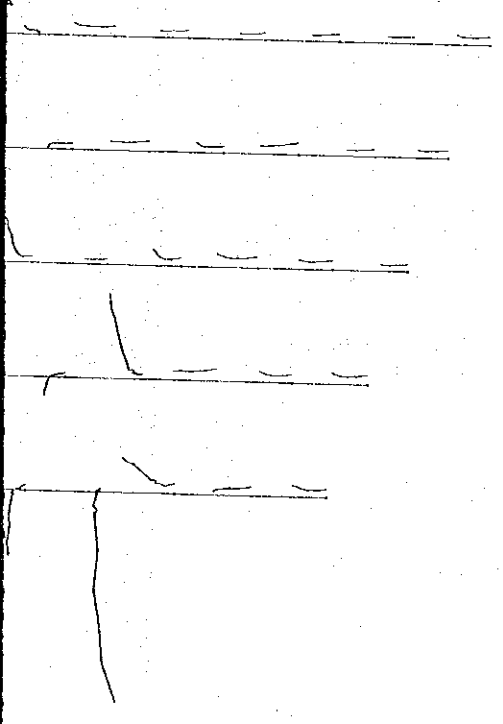
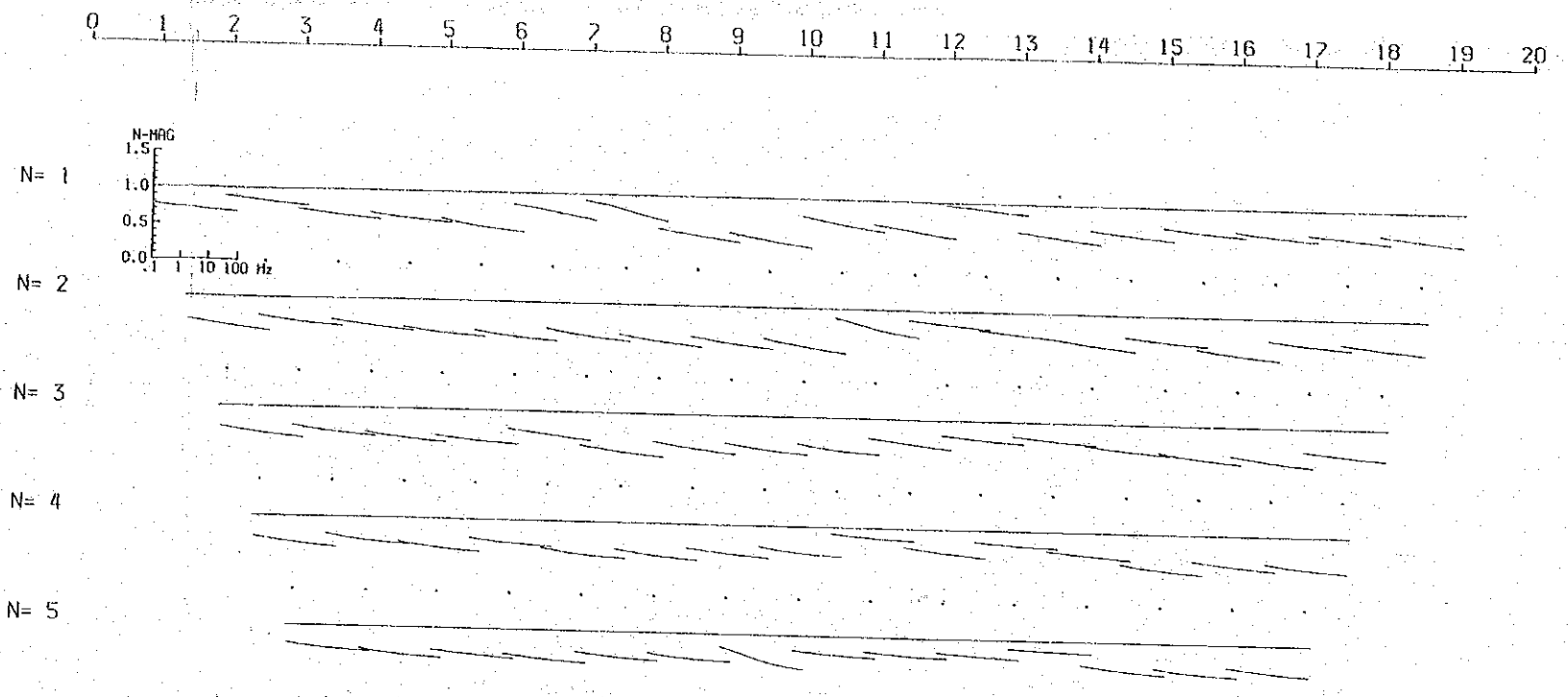


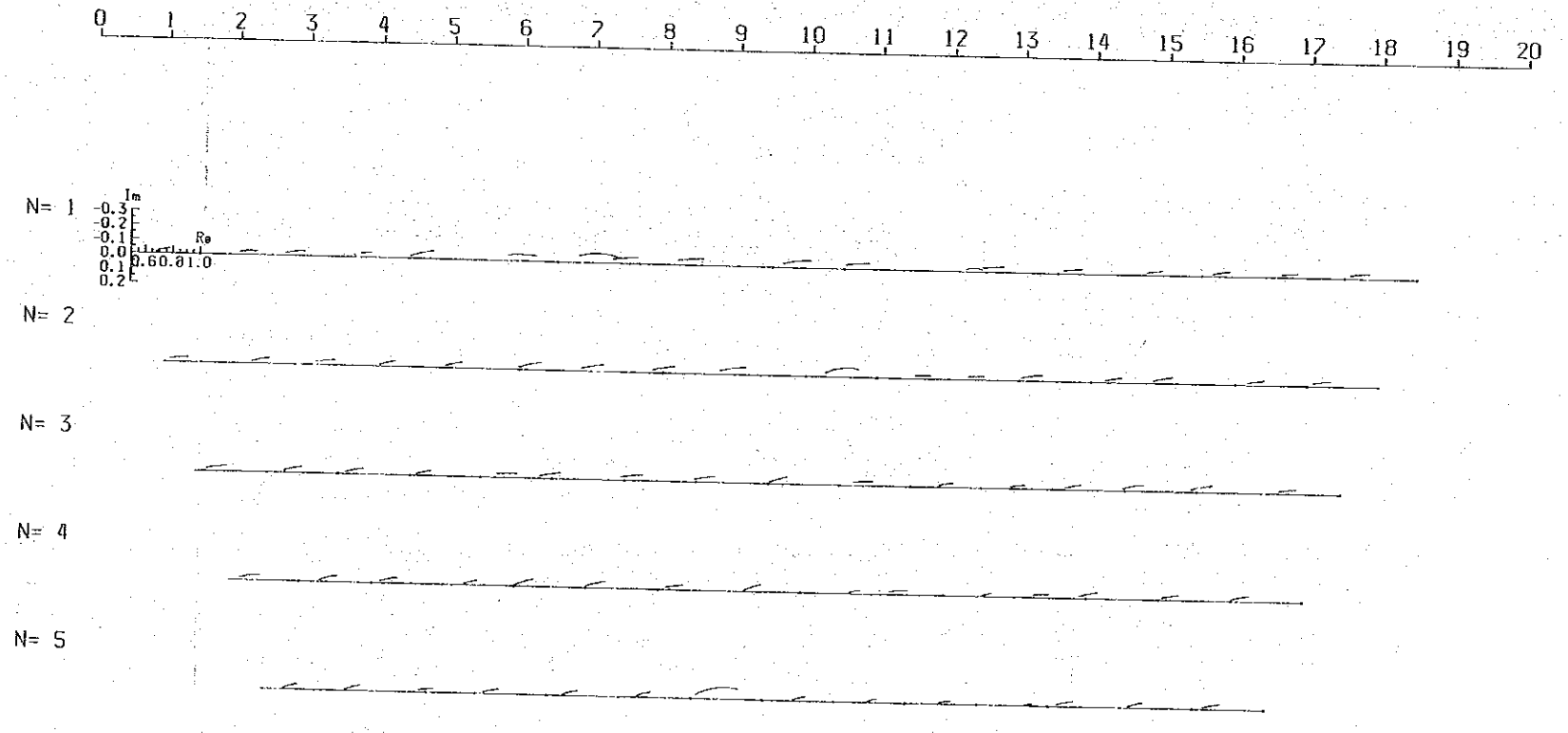
Diagram  
12 13 14 15 16 17 18 19 20



### LINE I Decoupled Magnitude Spectrum



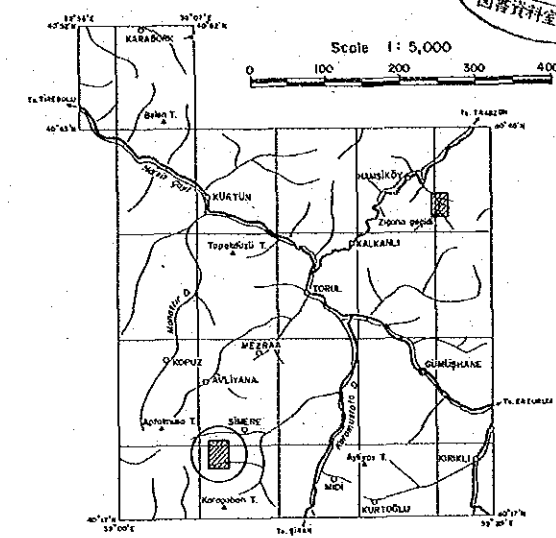
### LINE I Decoupled Cole-Cole Diagram



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OF GÜMÜŞHANE AREA, THE REPUBLIC OF TURKEY

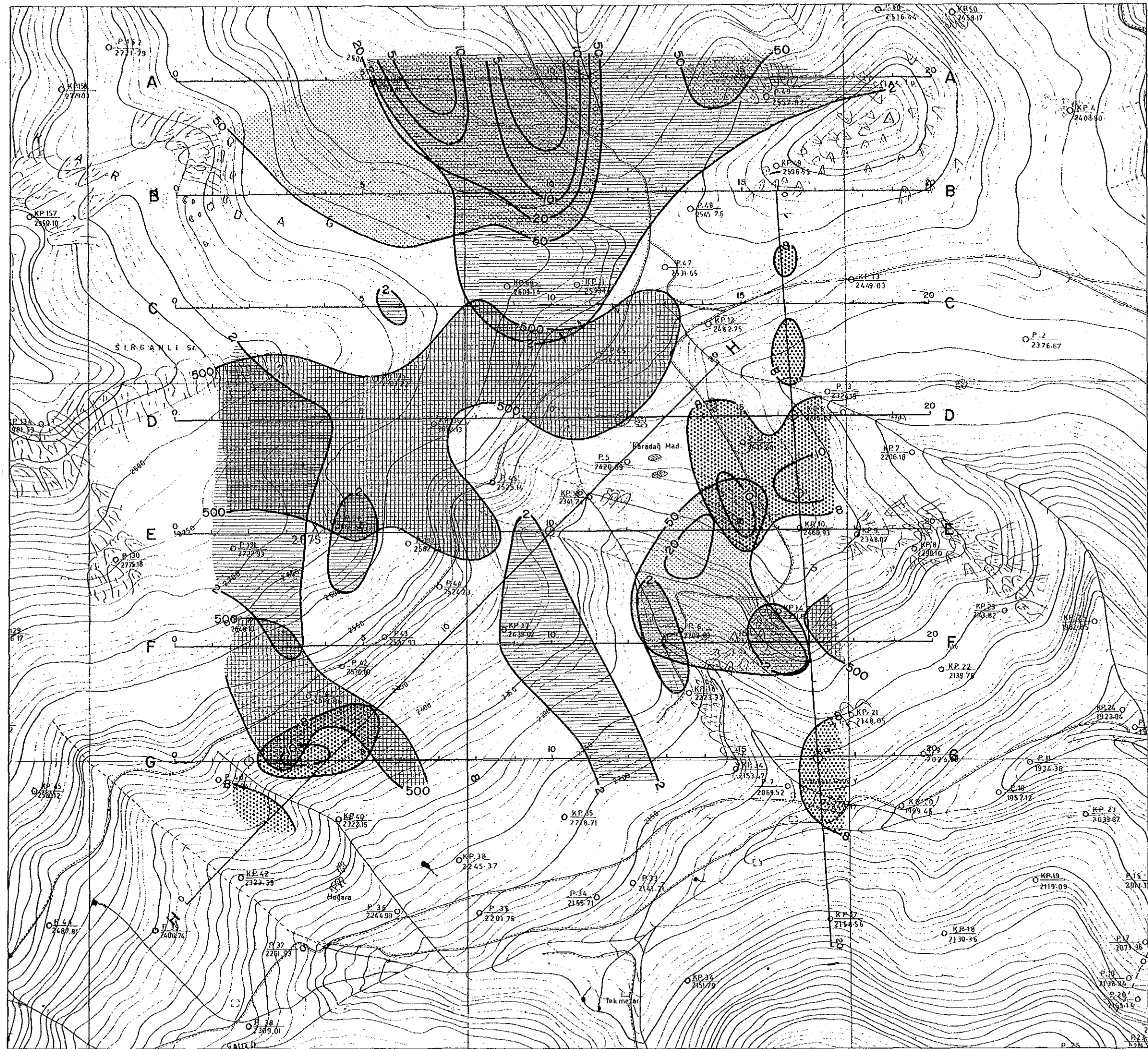
GEOPHYSICAL INTERPRETATION MAP  
OF THE KARADAĞ AREA

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LEGEND

- SIP SURVEY LINE
- IP SURVEY LINE
- HIGH PFE ZONE  
8%
- LOW PFE ZONE  
2%
- HIGH RESISTIVITY ZONE  
500 ohm-m
- LOW RESISTIVITY ZONE  
50 ohm-m
- RECOMMENDED DRILLING POINT

JICA