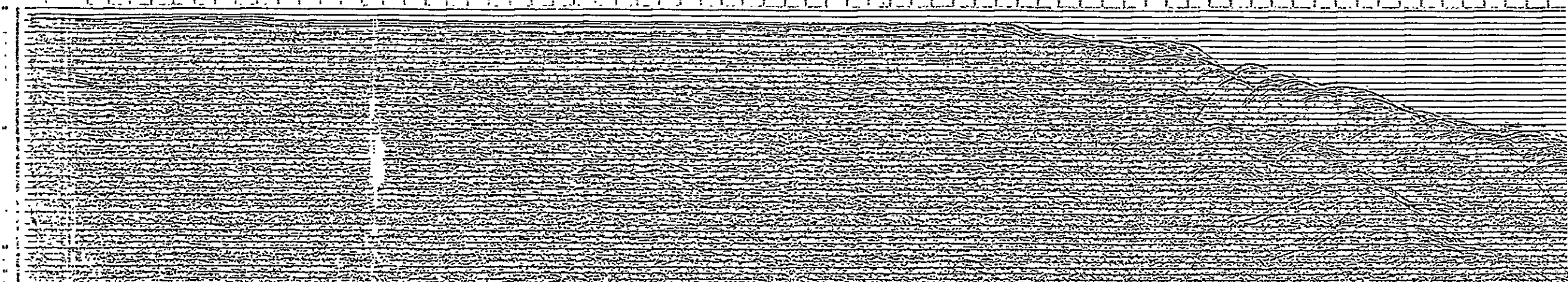
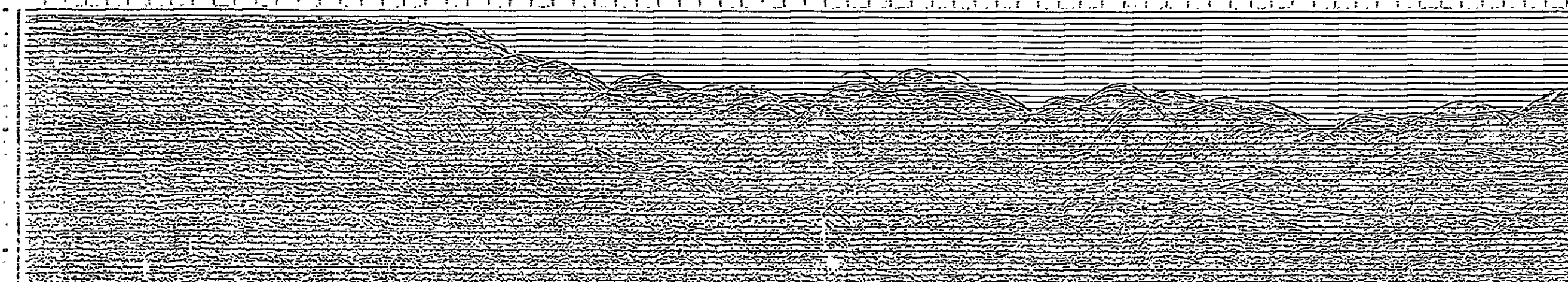


Part 2 Geophysics Fig. 33-36-37-40-42-45-48-50-56-58

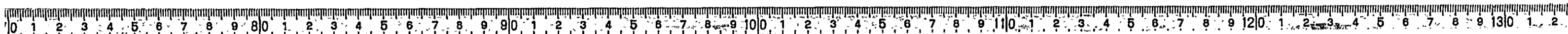
314
66.7
MPN

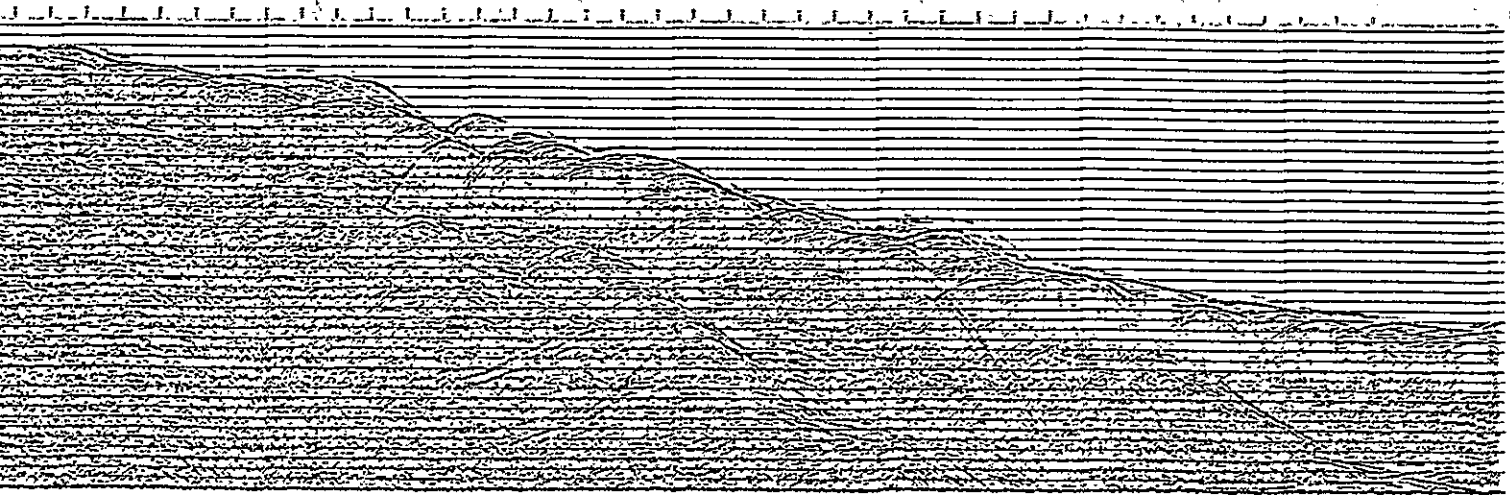


L-2

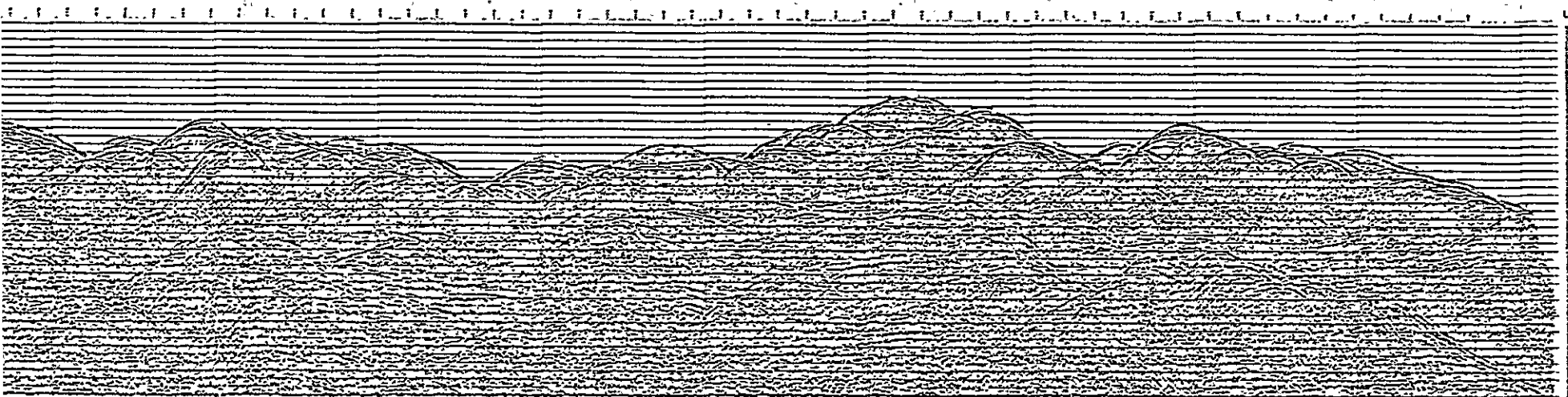
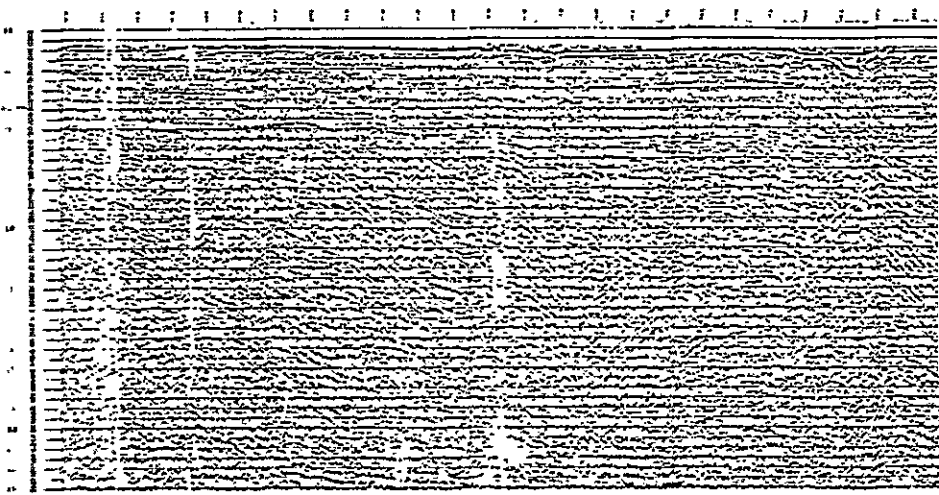


L-6

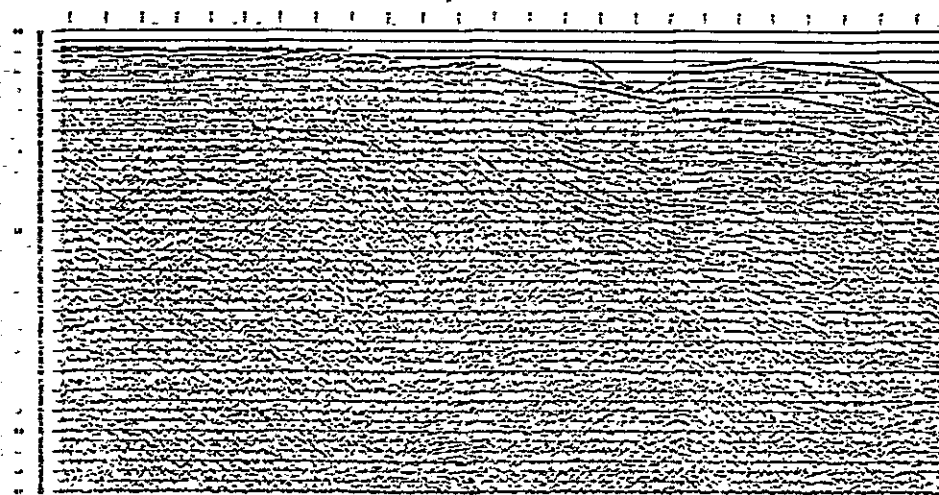




L-2

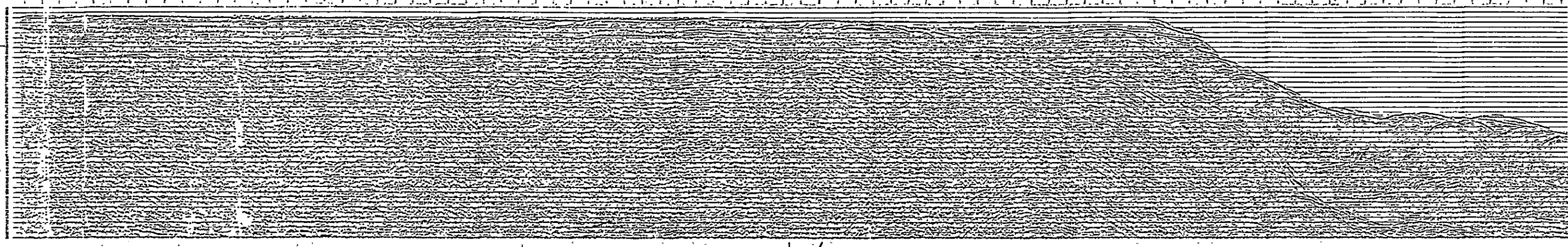


L-6

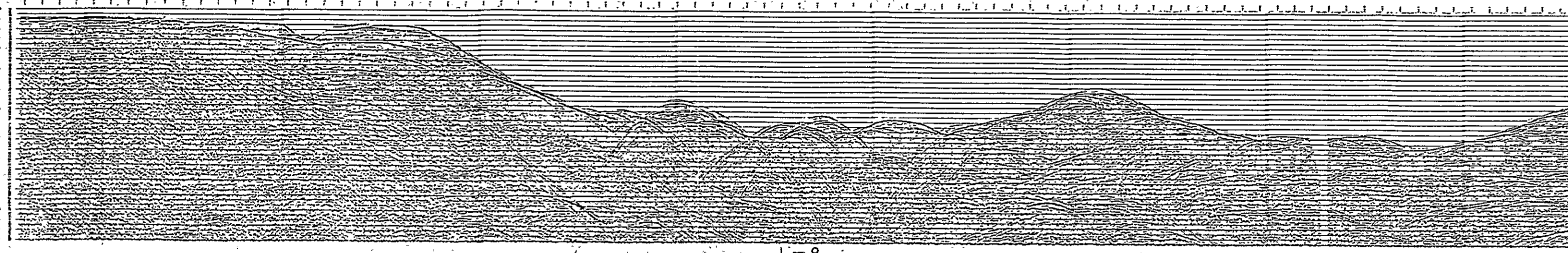


6





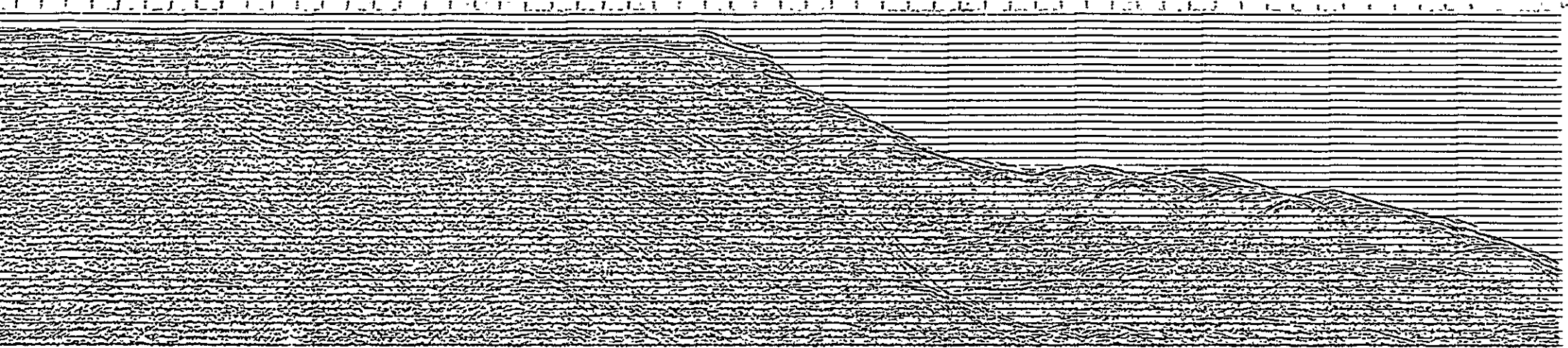
L-4



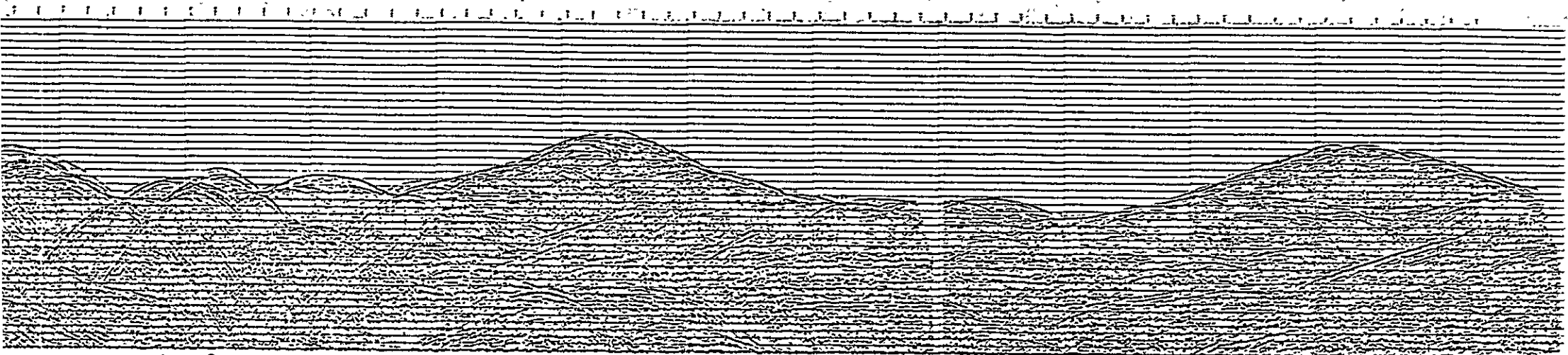
L-8



Fig. 33 - 1



L-4



L-8

COAL DEVELOPMENT PROJECT AT OFFSHORE AREA OF
ZONGULDAK COAL FIELD

Seismic Reflection Records.

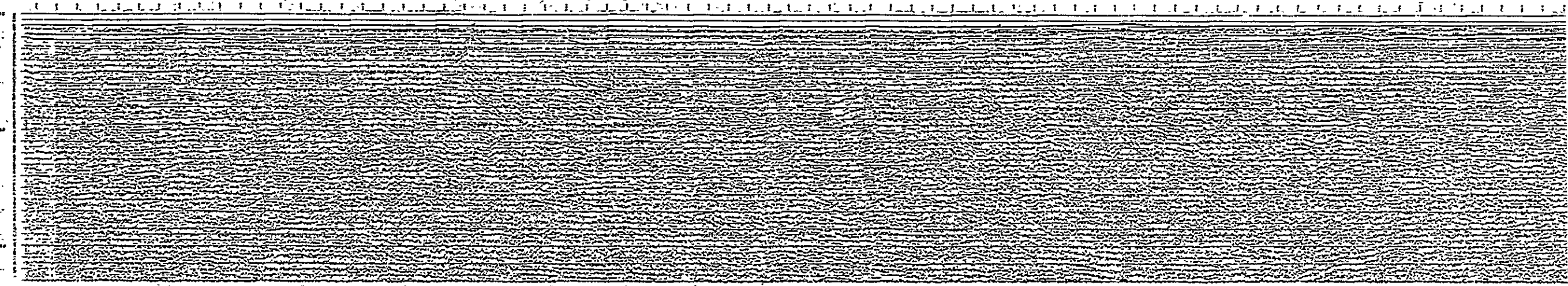
Line.2, Line.4, Line.6, Line.8,

Japan International Cooperation Agency (JICA)

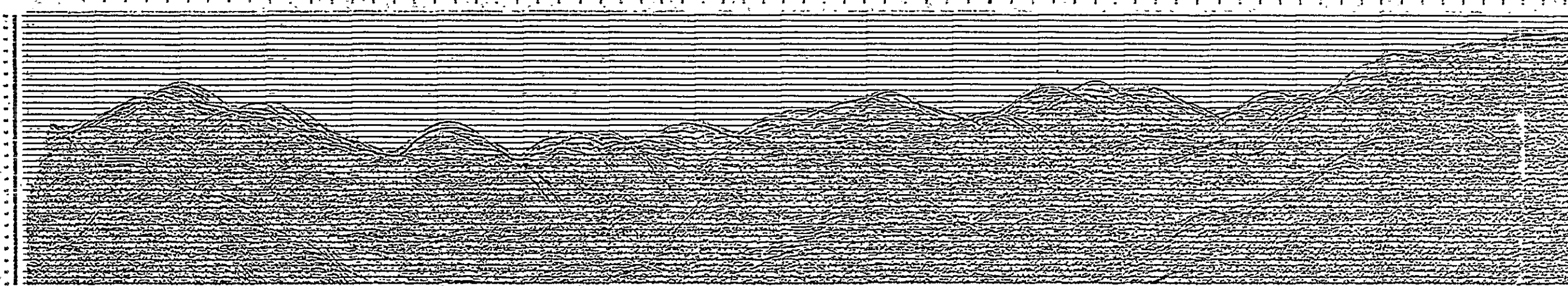
Date: Aug., 1982

Fig. 33 - 1



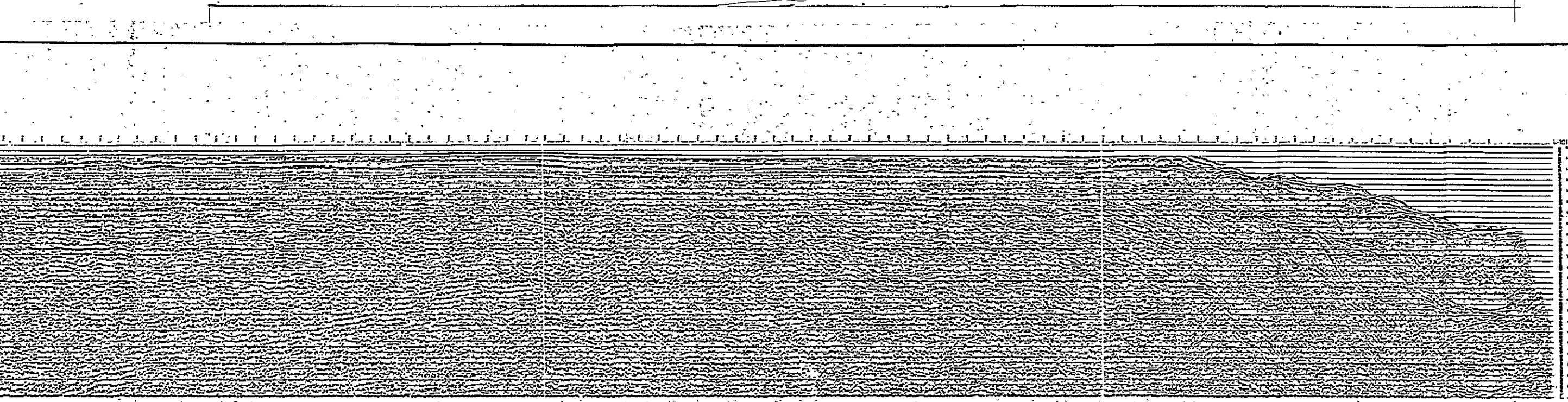


L-101

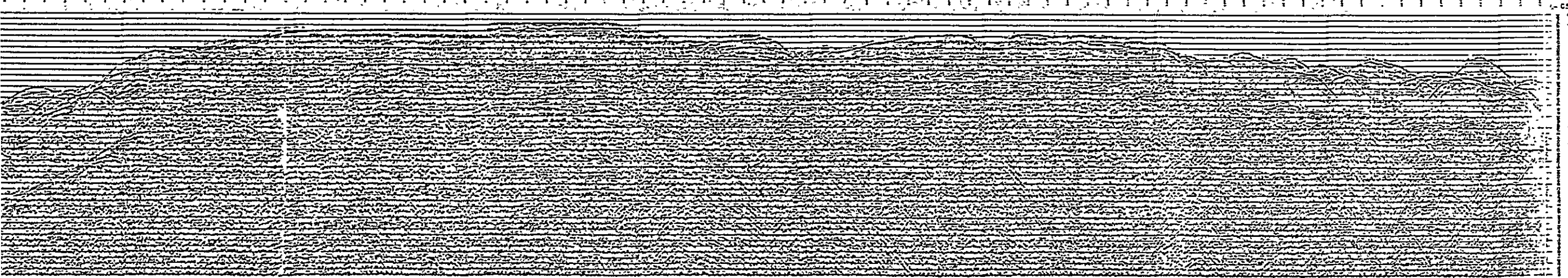


L-105



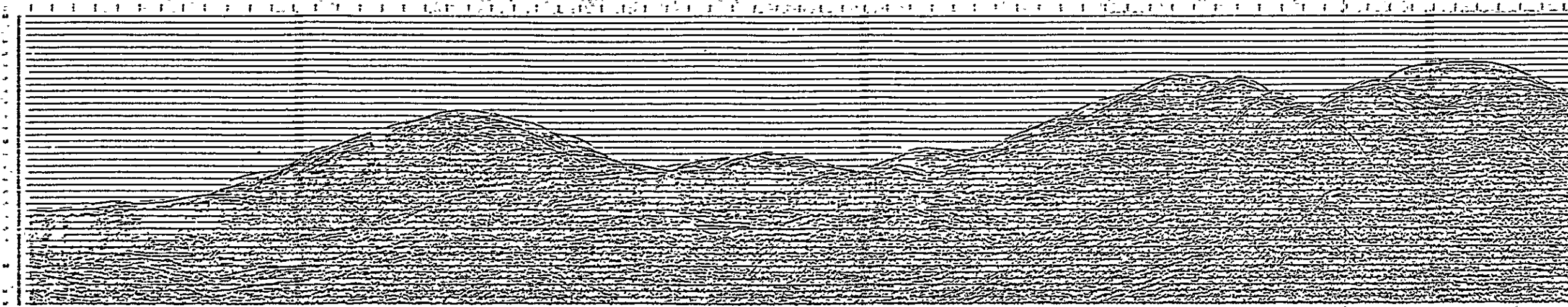
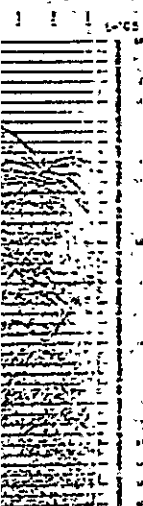
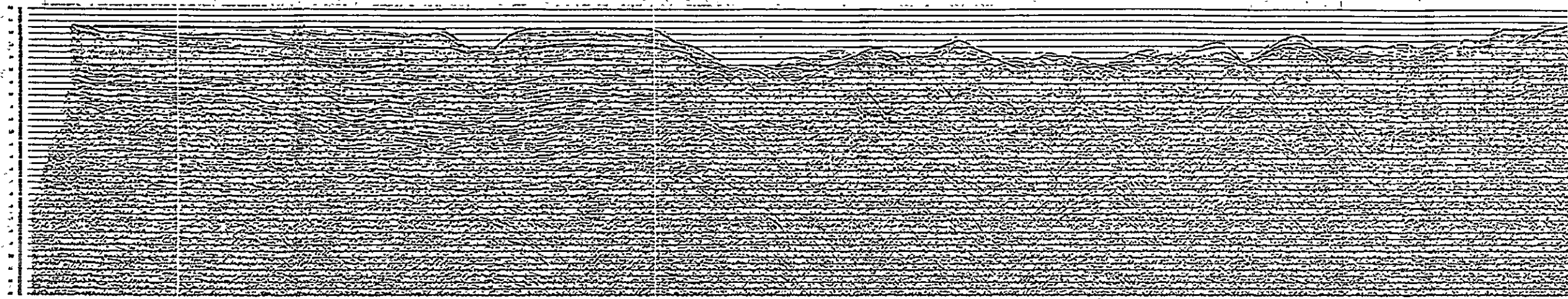


L-101



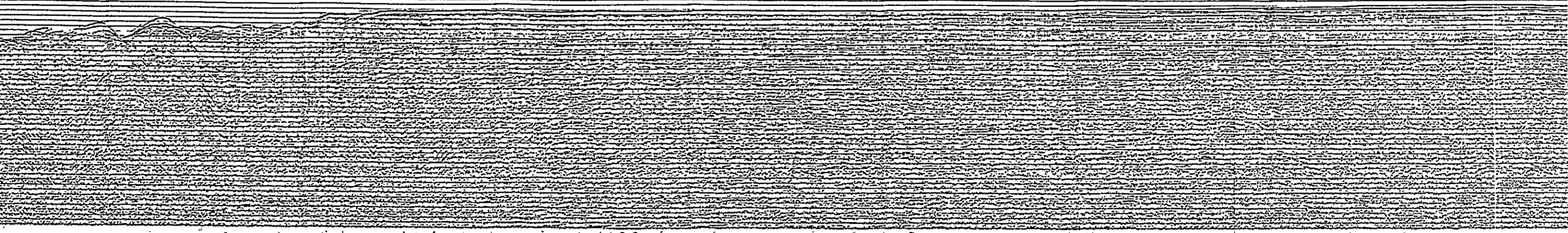
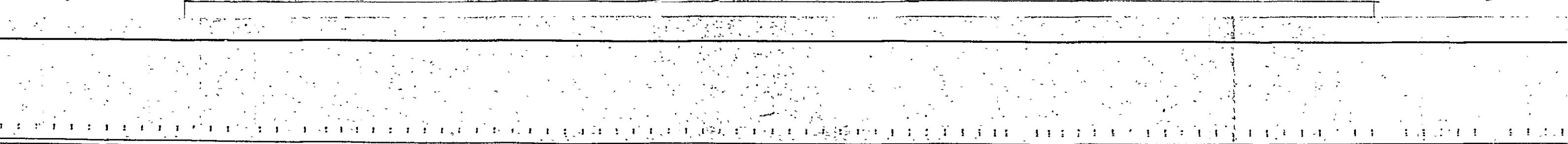
L-105



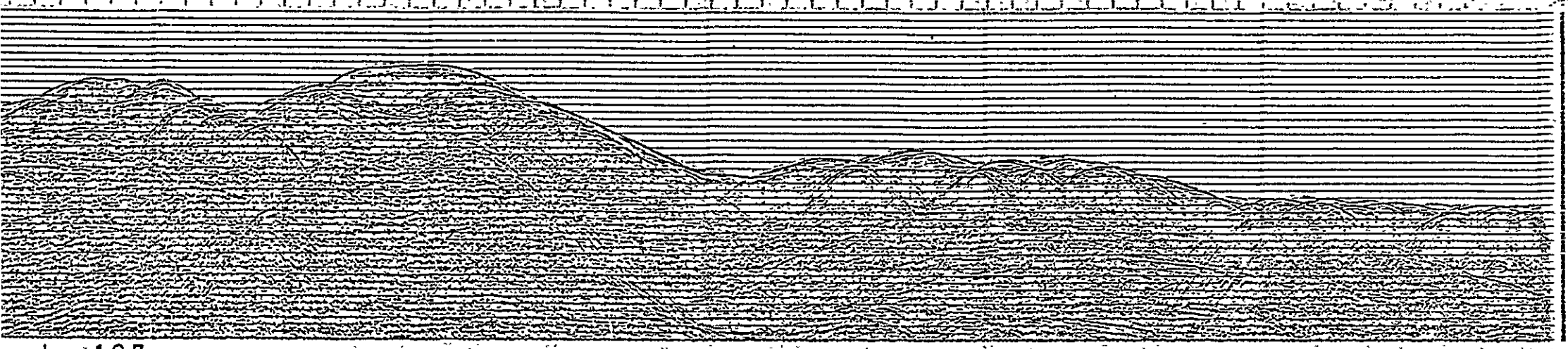


L-107





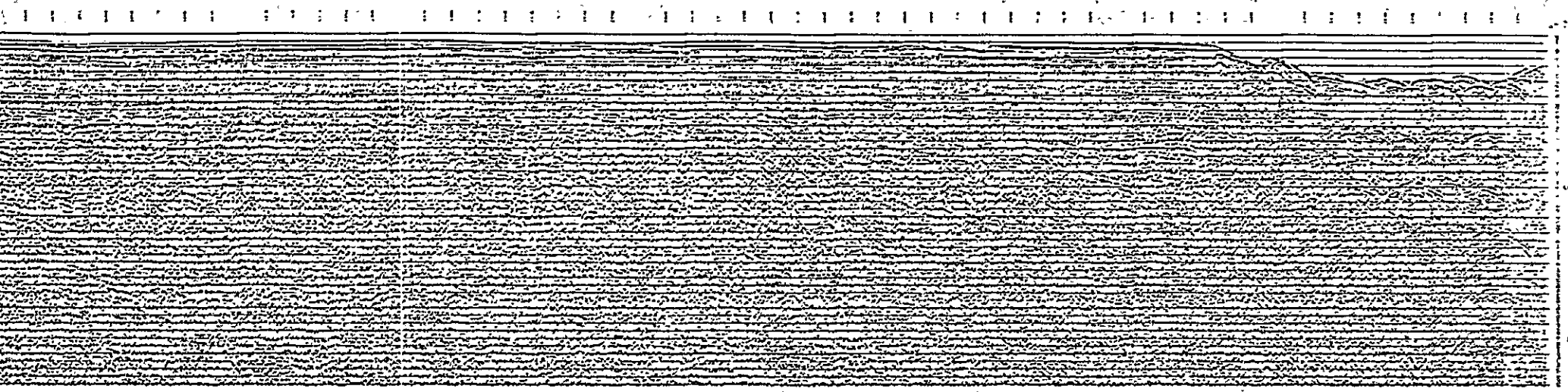
L-103



L-107

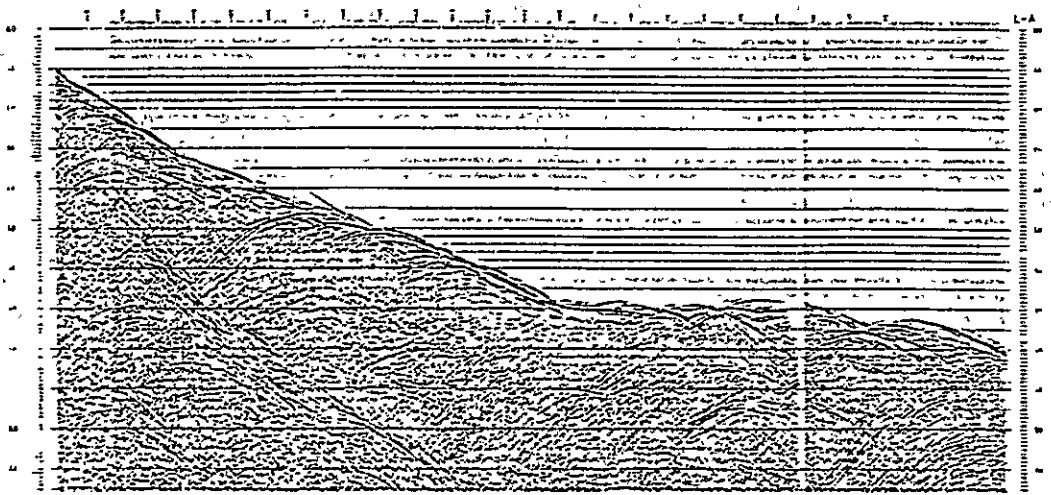


Fig. 33 - 2

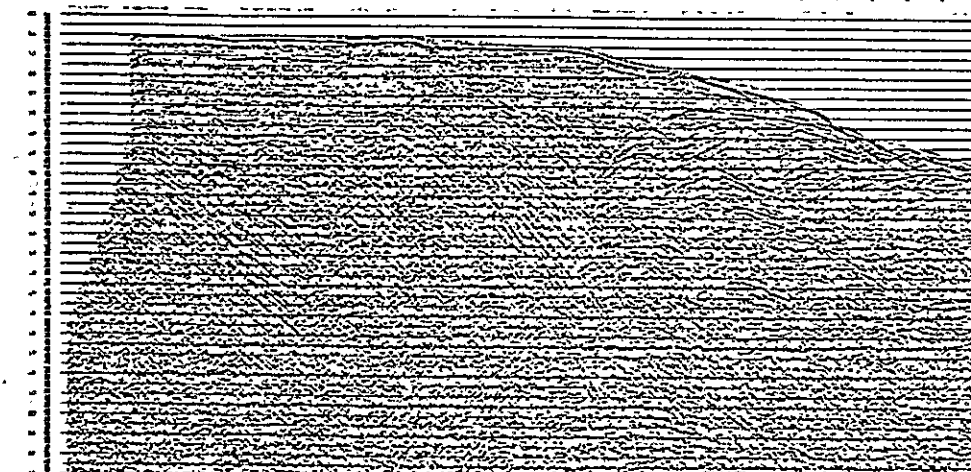


COAL DEVELOPMENT PROJECT AT OFFSHORE AREA OF ZONGULDAK COAL FIELD	
Seismic Reflection Records. Line. 101 , Line. 103 , Line. 105 , Line. 107 ,	
Japan International Cooperation Agency (JICA)	
Date: Aug. , 1982	Fig. 33 - 2.

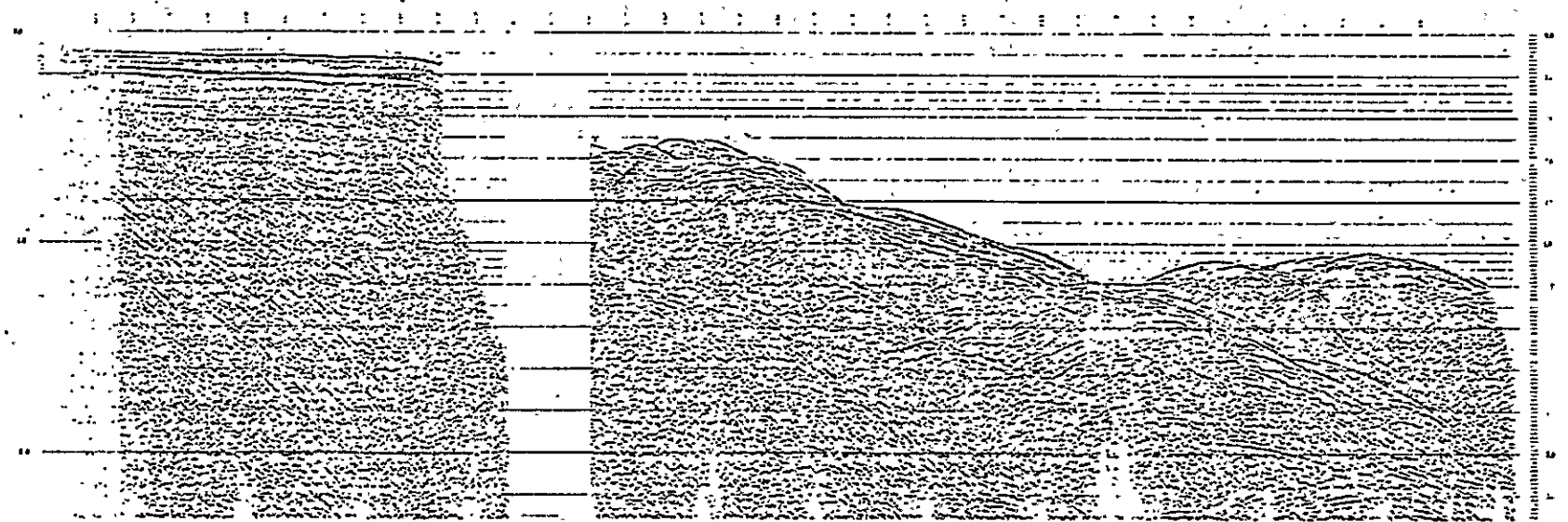




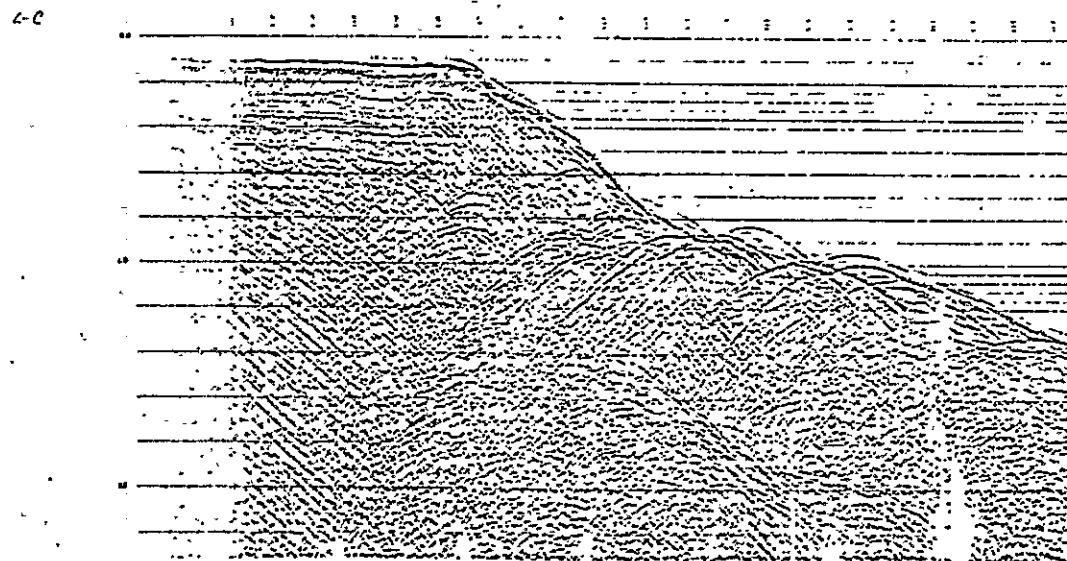
L-A



L-B



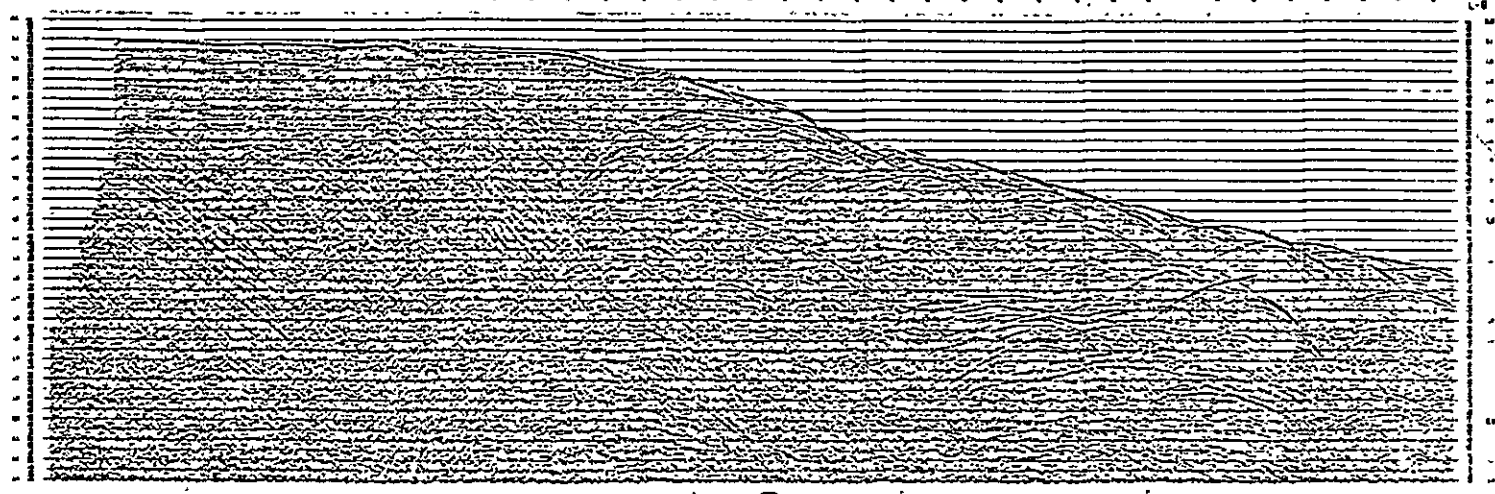
L-C



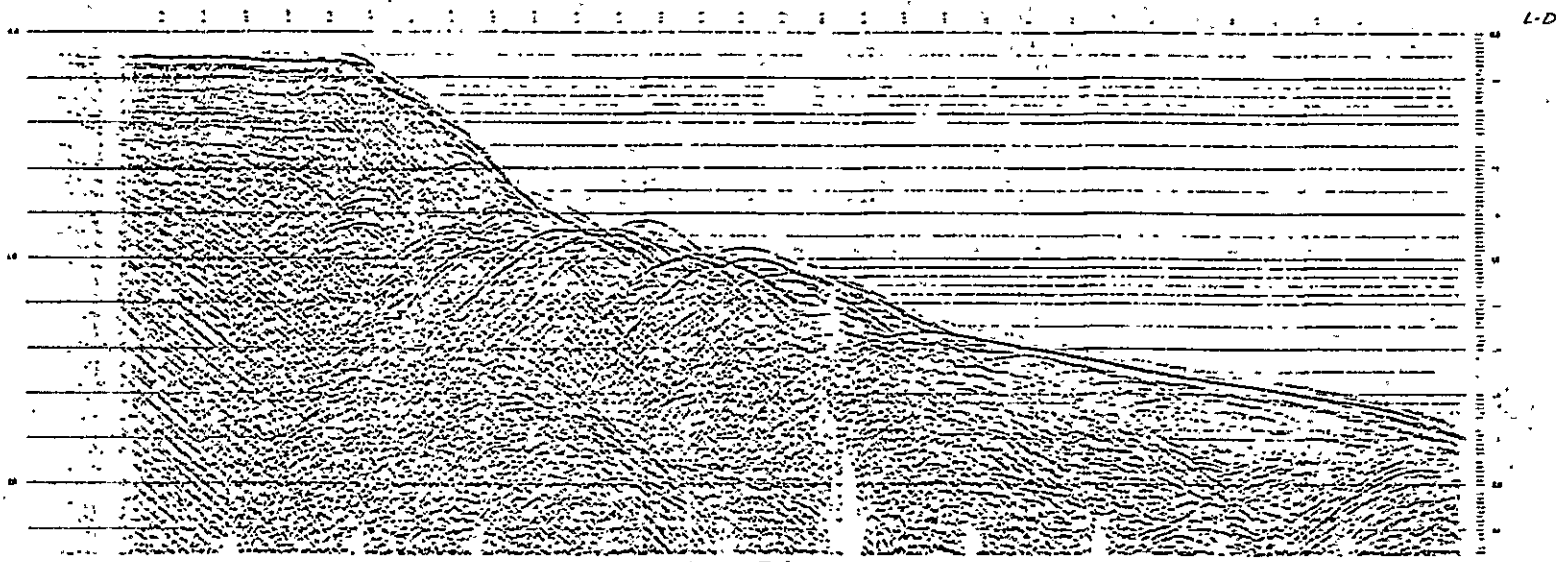
L-D



Fig. 33 - 3



L-B



L-D

COAL DEVELOPMENT PROJECT AT OFFSHORE AREA OF ZONGULDAK COAL FIELD	
Seismic Reflection Records.	
Line A, Line B, Line C, Line D,	
Japan International Cooperation Agency (JICA)	
Date: Aug., 1982	Fig. 33 - 3





Ölçek 1 50 000

41°-30'



LEJAND

KUVATERNER

Alüvyon

TERSİYER

Paleosen-Eosen

Marn ve flis

Maestrichtien

Marnlı kalker

Kampanien

Andezit-bazalt

Marnlı kalker

Santonien

Aglomera, tuf, kumtaşı

Koniasien

Marnlı kalker

Turonien

Vulkanit, Pillow-lava

KRETASE

Senomanien

Flis

Mavi marn

Albien

Glaokanlı kumtaşı

Apsien

Velibey kumtaşı

Marn, flis

Kalker

Barremien

İncüvez serisi

Kalker

KARBONİFER

Westfalen

Karaden serisi

Kozlu serisi

Namurien

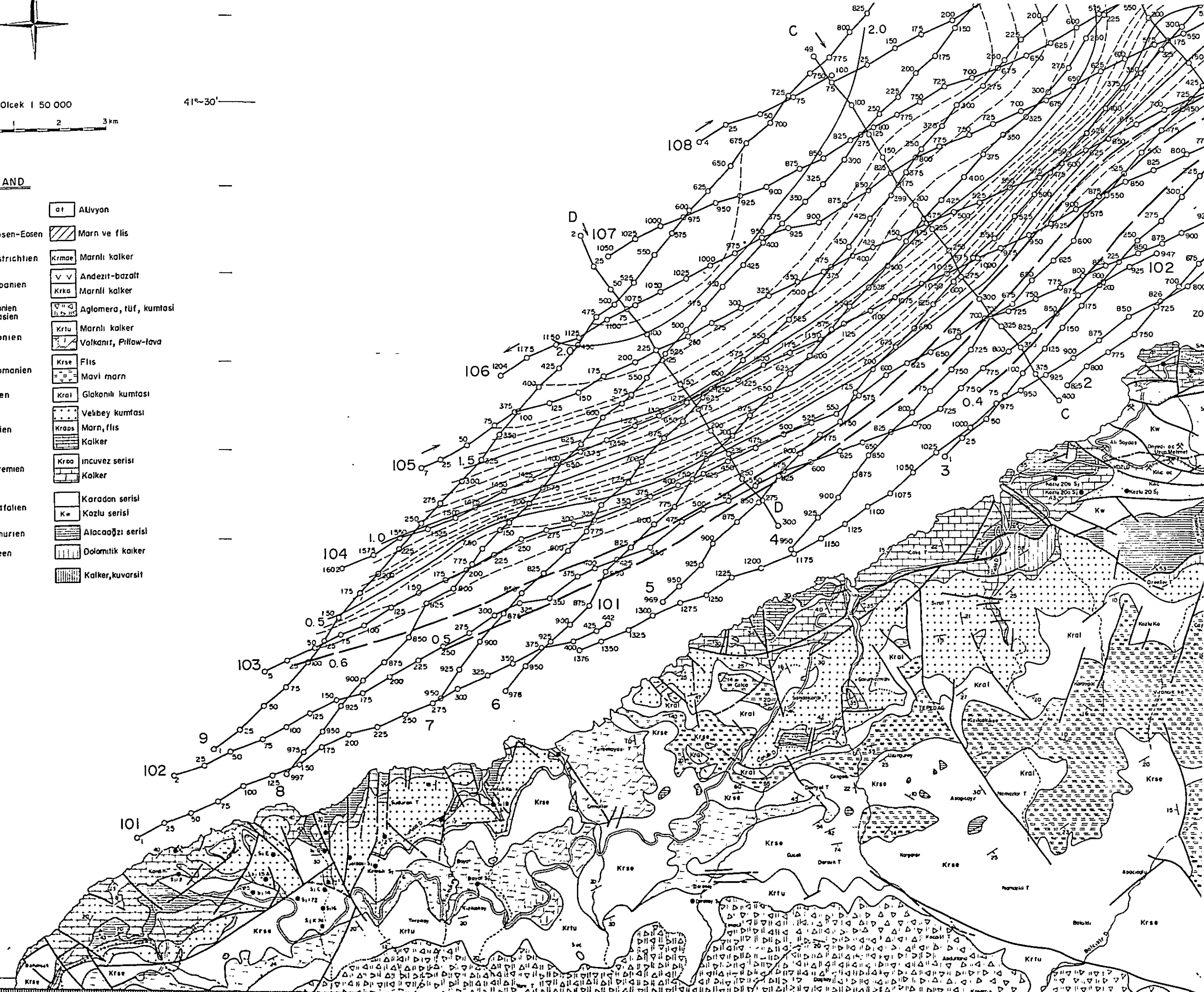
Alaçoğzı serisi

Vizeen

Dolomitik kalker

DEVONİYEN

Kalker, kuvarsit

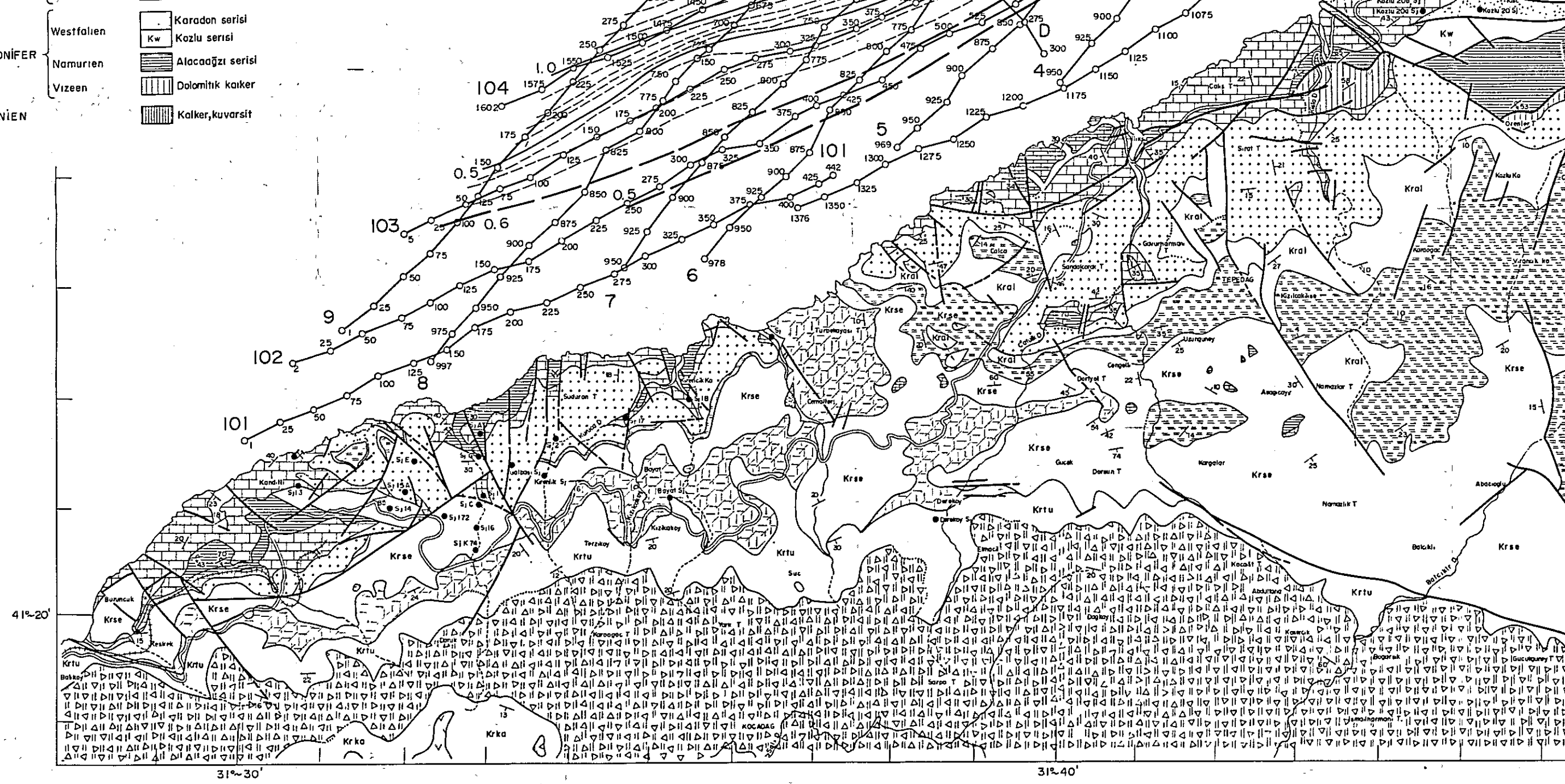


41°-20'



KARBONİFER
 Westfalien
 Namurien
 Vizeen
 DEVONİEN

-  Karadan serisi
-  Kozlu serisi
-  Alacağzı serisi
-  Dolomitik kalker
-  Kalker, kuvarsit



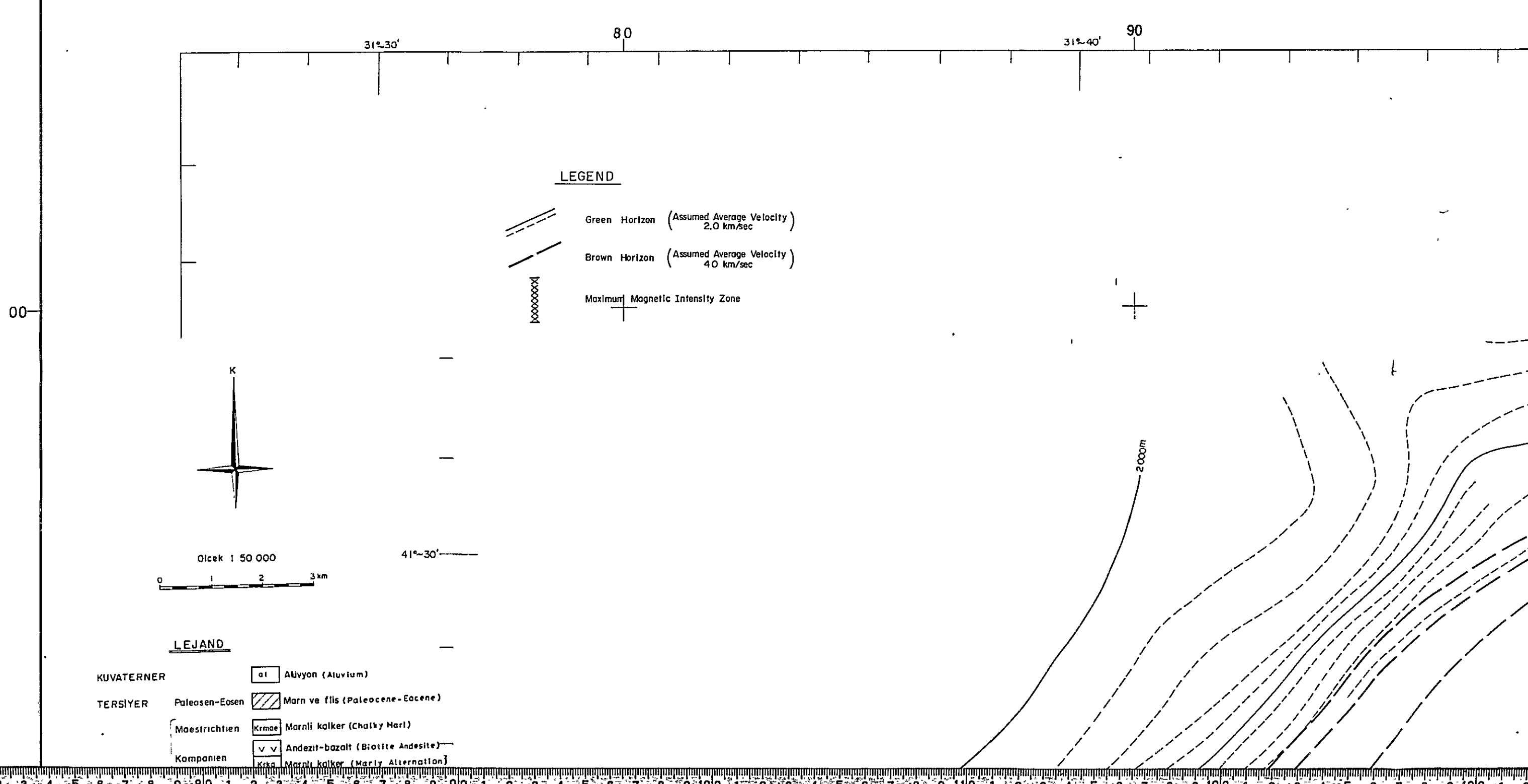
20

90

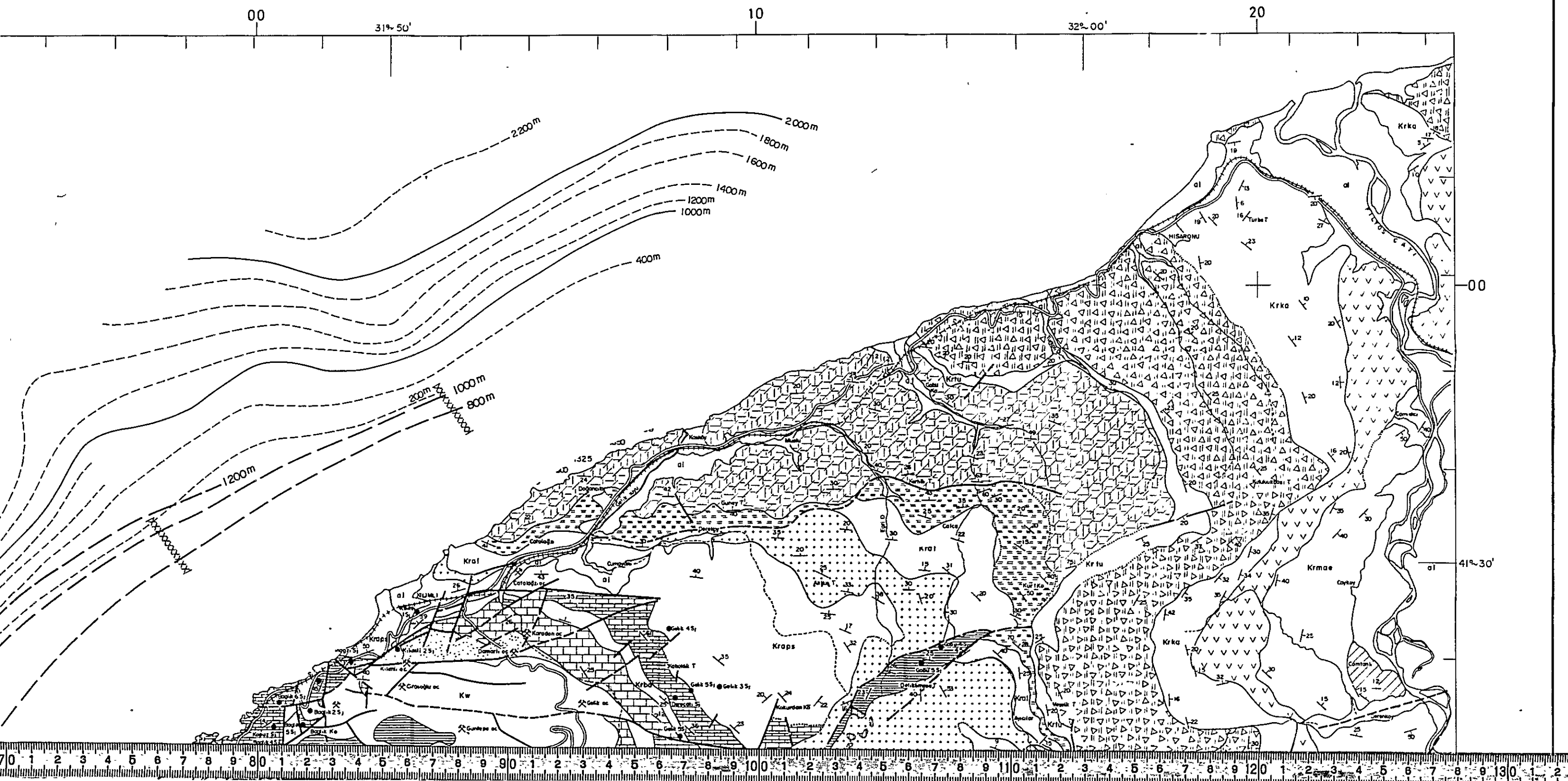


Figure 37

Structure Map of Green and Brown Horizons

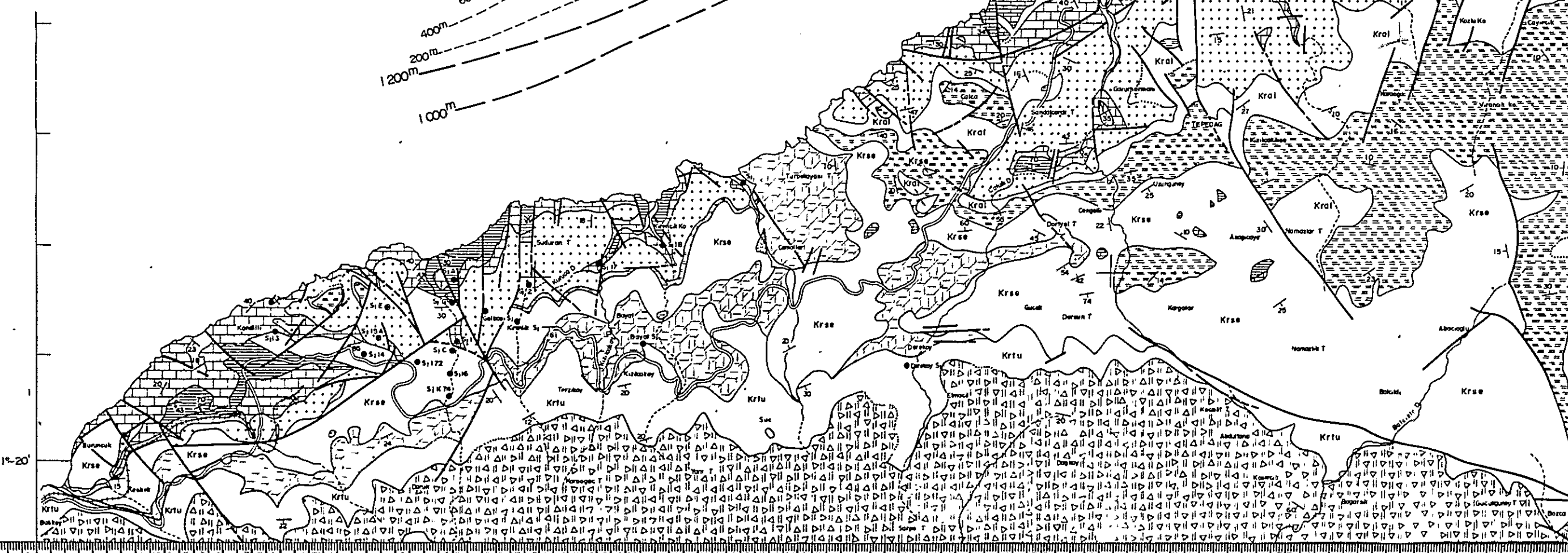


horizons



LEJAND

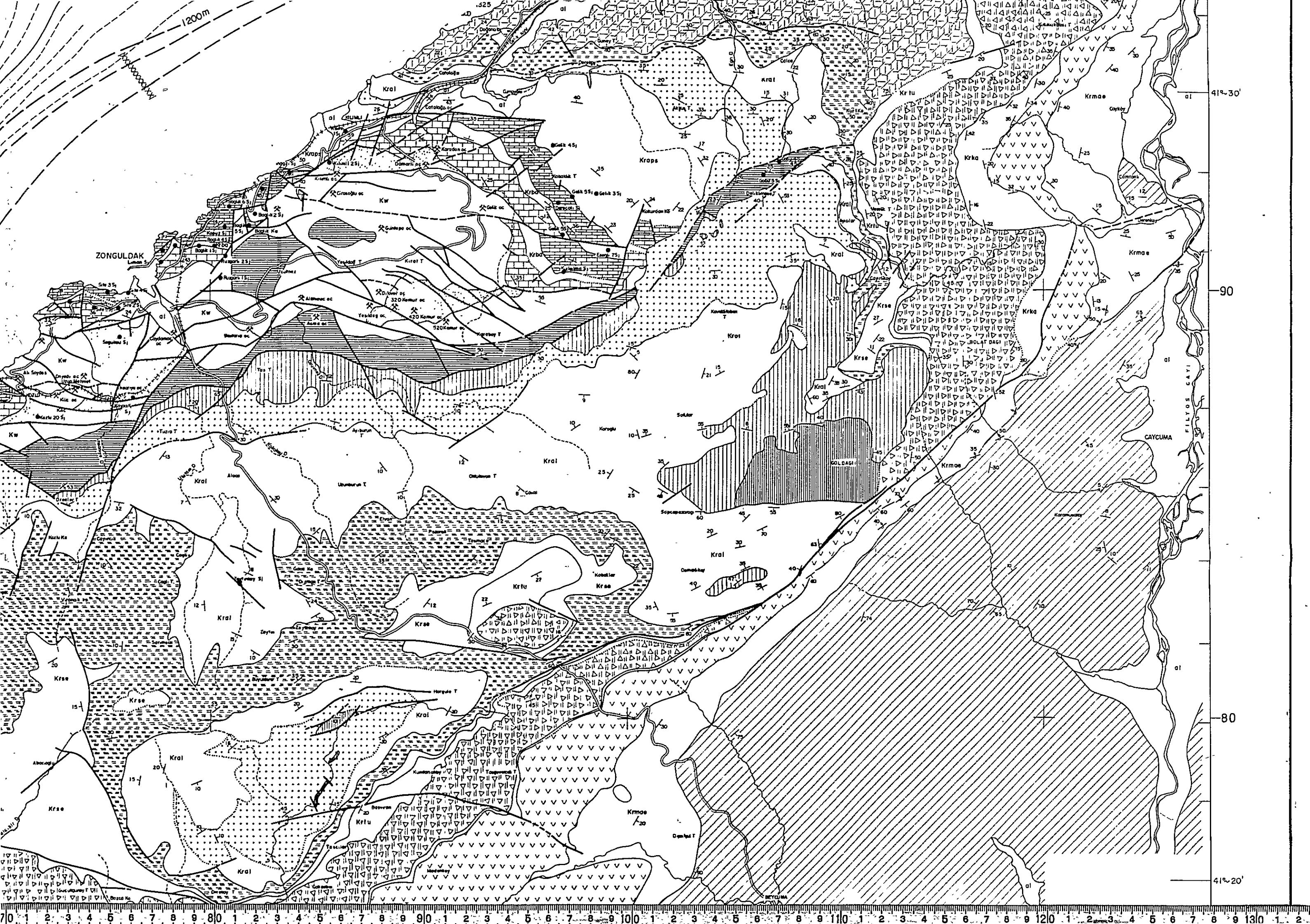
KUVATERNER	al	Alüvyon (Aluvium)
TERSİYER		
Paleosen-Eosen		Marn ve flis (Paleocene-Eocene)
Maestrichtien	Krmae	Marnlı kalker (Chalky Marl)
Komanien	V V	Andezit-bazalt (Biotite Andesite)
	Krka	Marnlı kalker (Marly Alternation)
Santonen		
Koniasien		
Turonien	Krtu	Marnlı kalker (Bedded Marl)
		Vulkanit, Pillow-lava (Glaucanitic Alternation)
KRETASE	Krse	Filis (Filsch)
		Mavi marn (Blue Marl)
Senomanien		
Albien	Kral	Glokonii kumtasi (Glaucanitic Sandstone)
		Velibey kumtasi (Velibey Sandstone)
Apsien	Kraps	Marn, flis (Marly flisch)
		Kalker (Apcian Limestone)
Barremien	Krba	incuvez serisi (Incüvez)
		Kalker (Barremian Limestone)
KARBONIFER		Karadon serisi (Karadon Conglomerate)
	Kw	Kozlu serisi (Kozlu Coat Bearing)
		Alacaözi serisi (Argillaceous Alternation)
Namurien		
Vizeen		Dolomitik kalker (Dolomitic Limestone)
DEVONİYEN		Kalker, kuvarsit (Devonian Arenaceous)












90

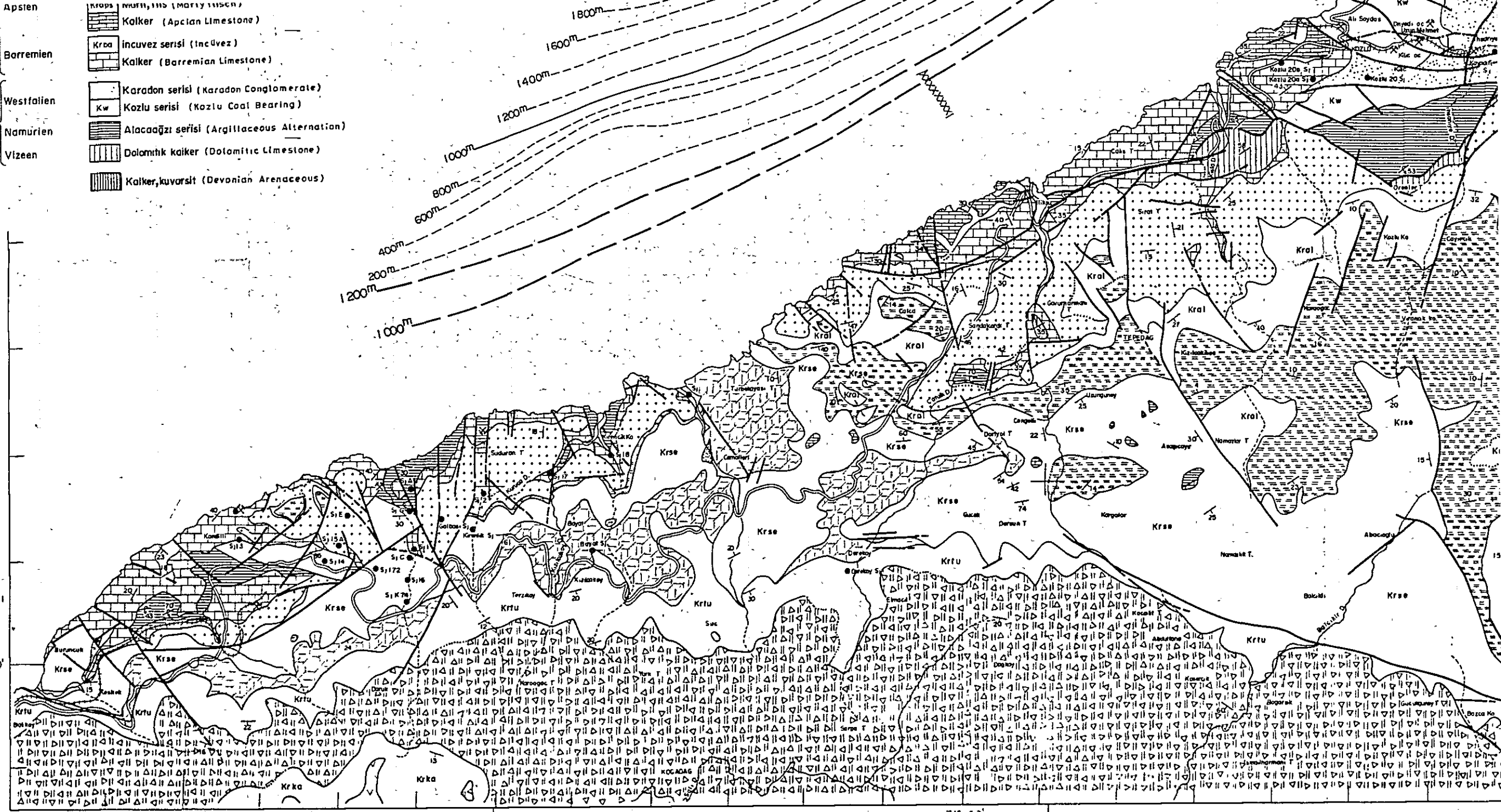
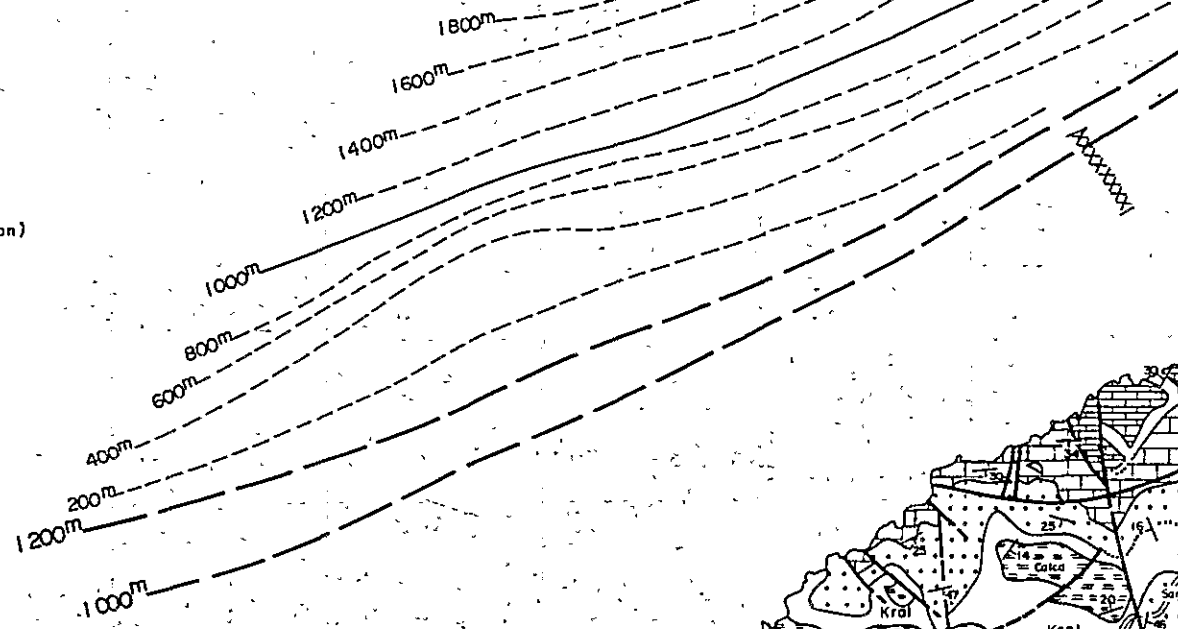
80

41°-20'



Apstien
Barremien
Westfalien
Namürten
Vizeen
KARBONIFER
DEVONIEN

-  Kraap (Muriel, 1115 (Muriel 1115))
-  Kalker (Apcian Limestone)
-  Kraa incuvez serisi (Incüvez)
-  Kalker (Barremian Limestone)
-  Karadon serisi (Karadon Conglomerate)
-  Kw Kozlu serisi (Kozlu Coal Bearing)
-  Alacaazi serisi (Argillaceous Alternation)
-  Dolamitk kalker (Dolamitic Limestone)
-  Kalker, kuvarsit (Devonian Arenaceous)



80

41°-20'

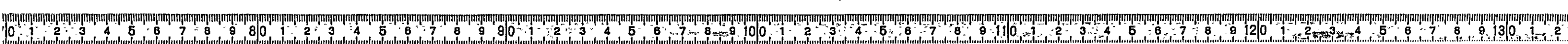
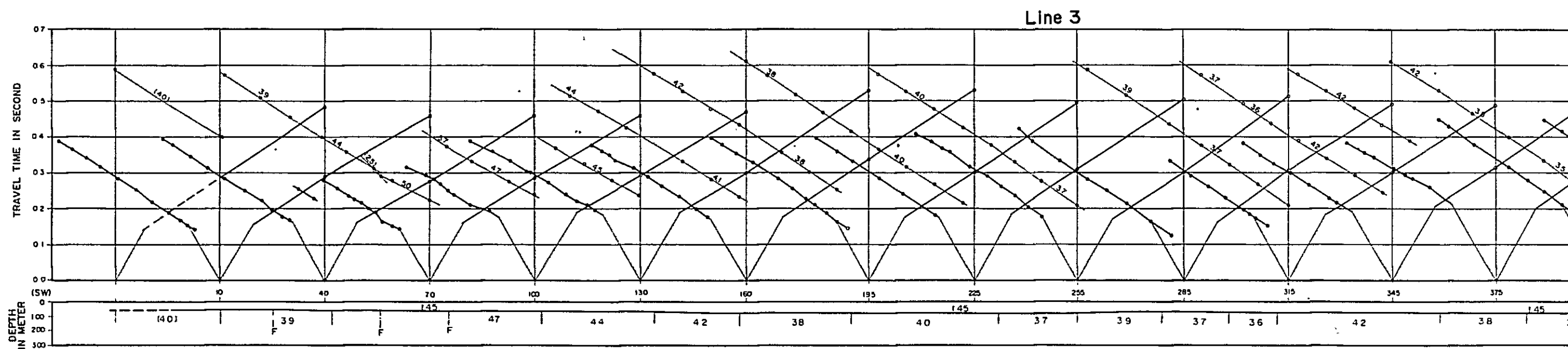
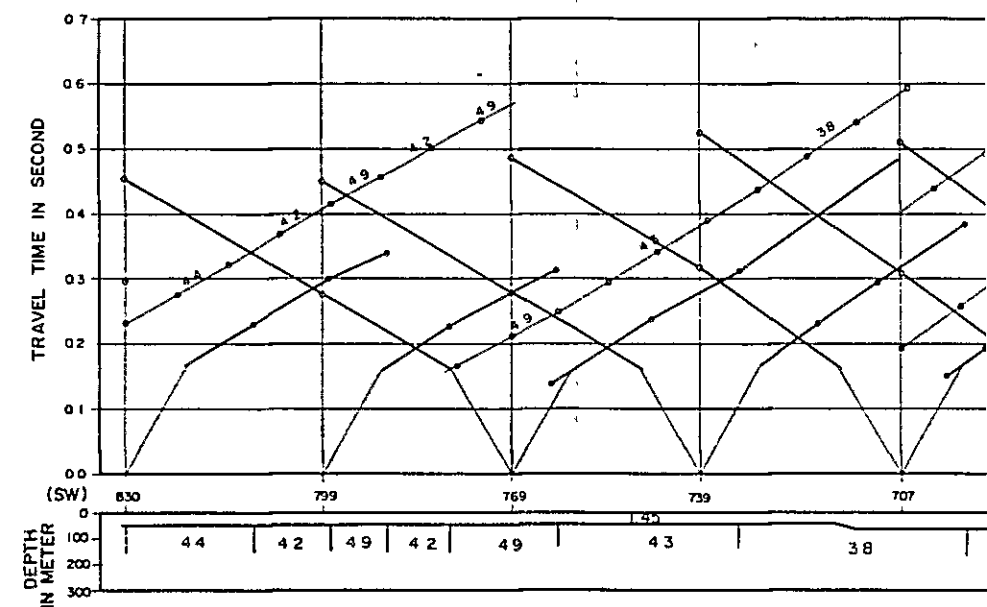
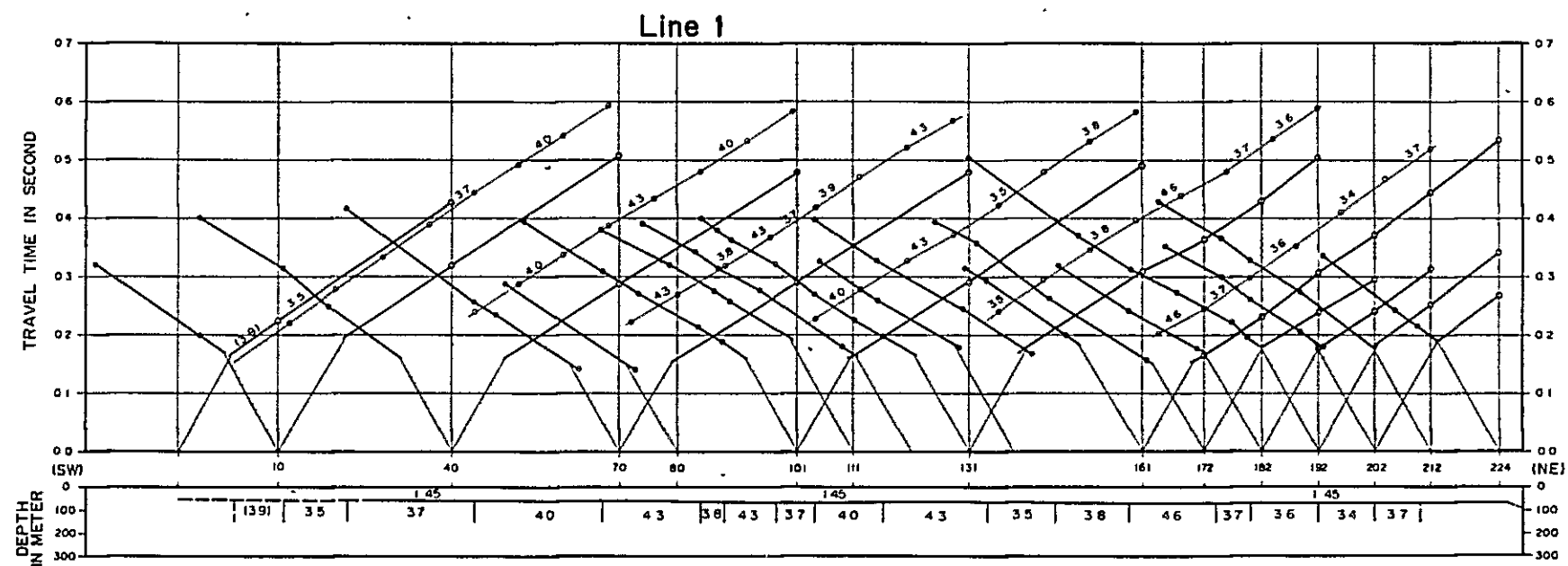
31°-30'

80

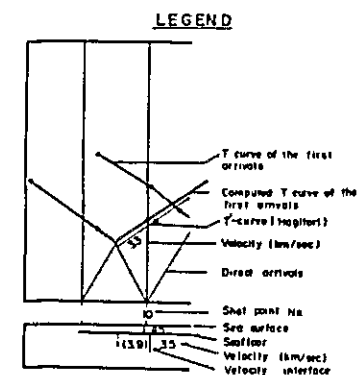
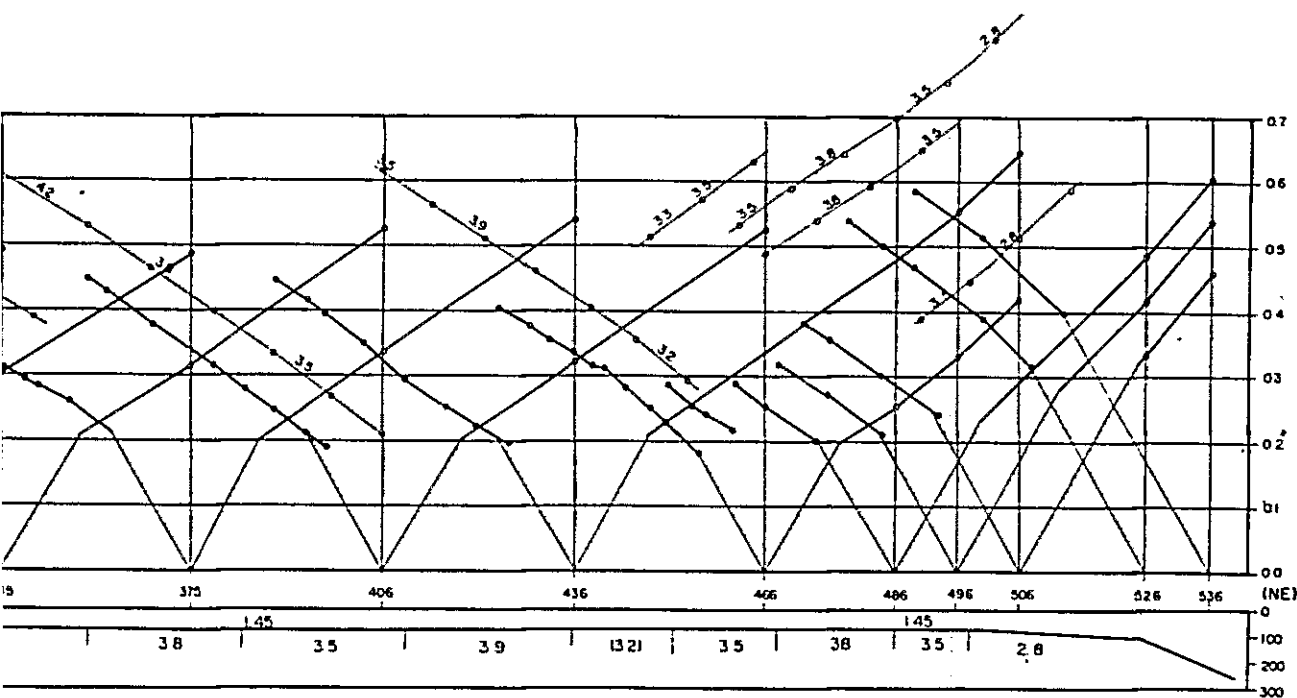
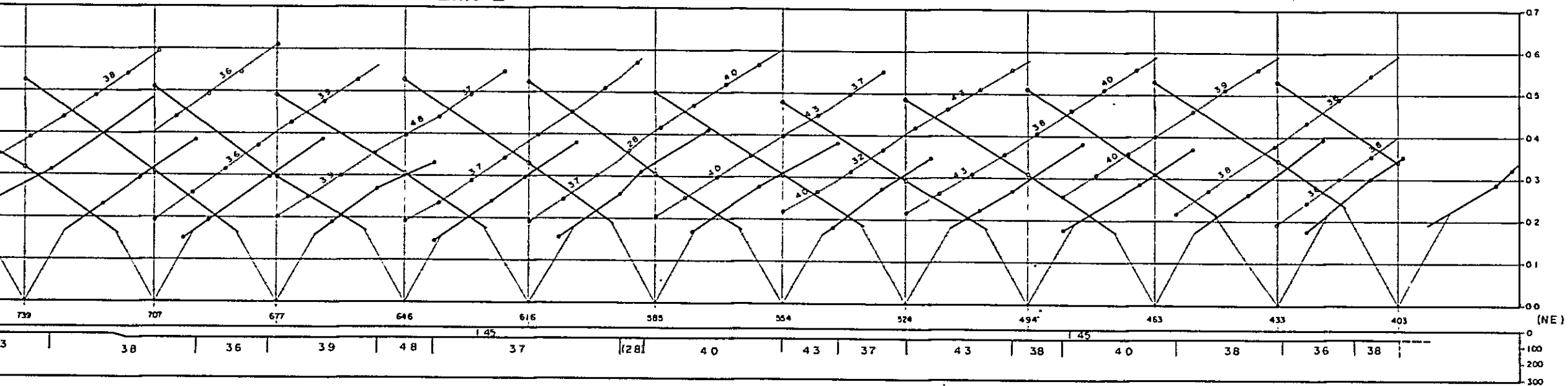
31°-15'

90

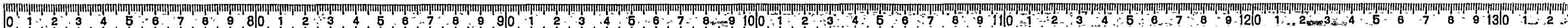
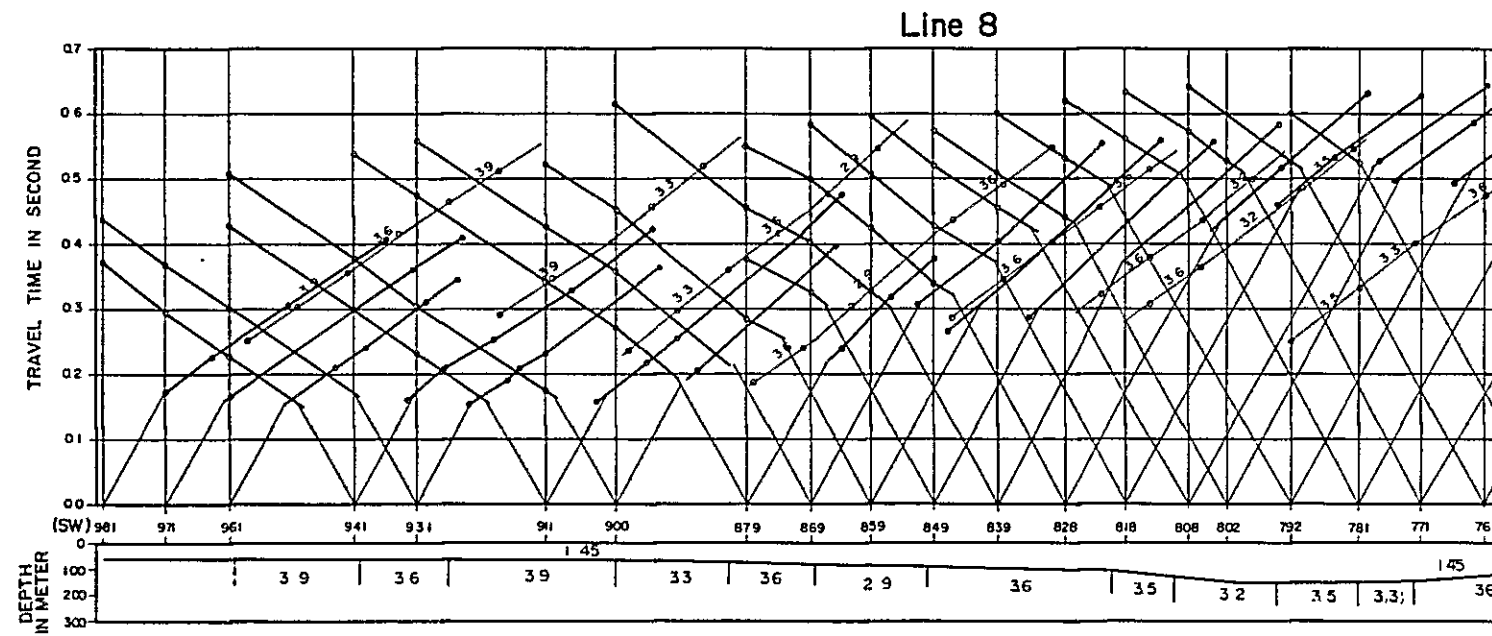
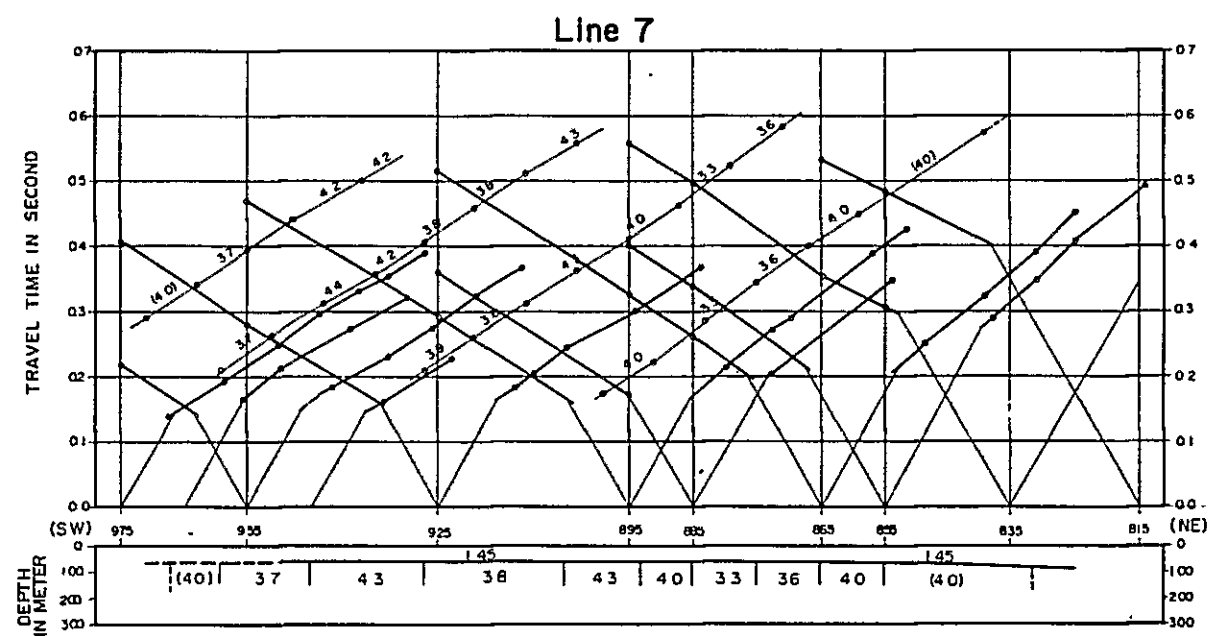
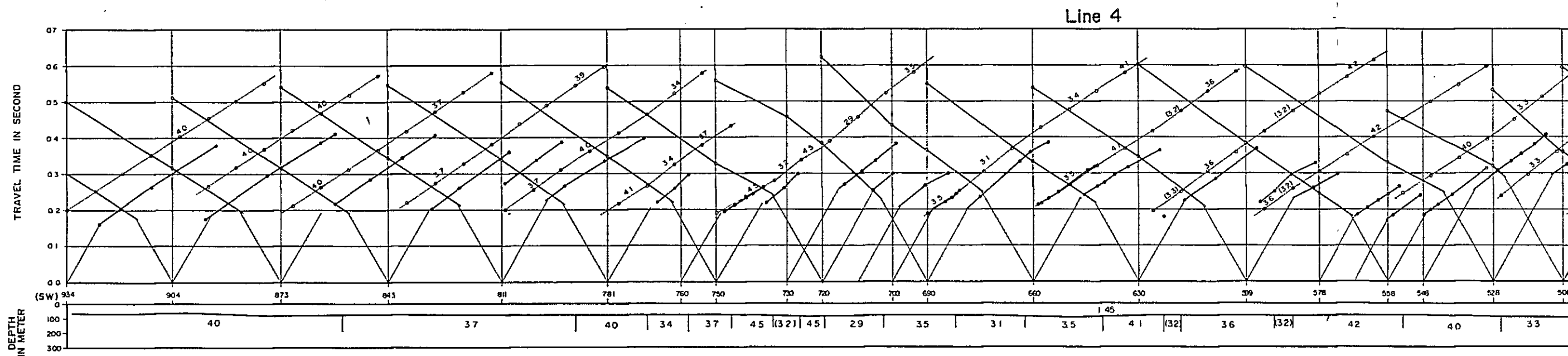


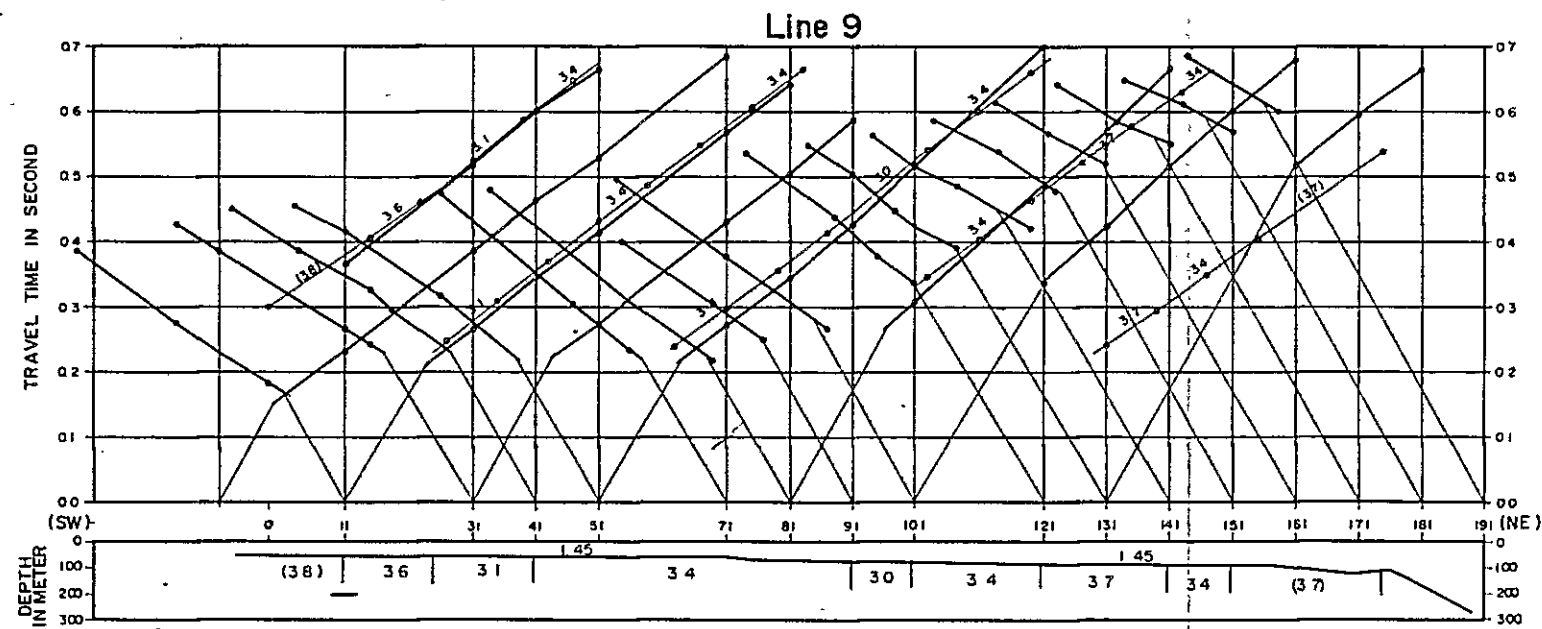
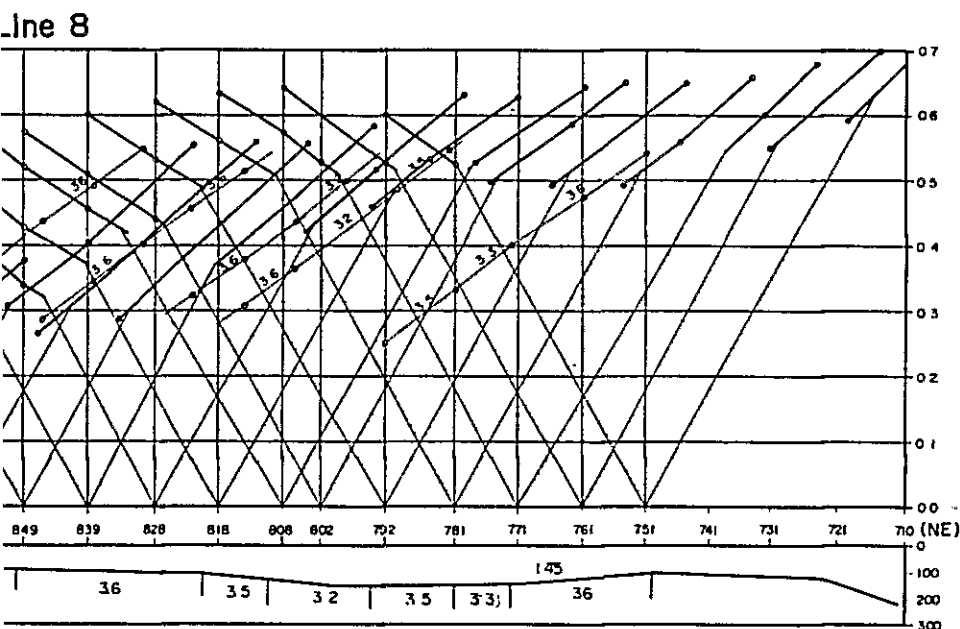
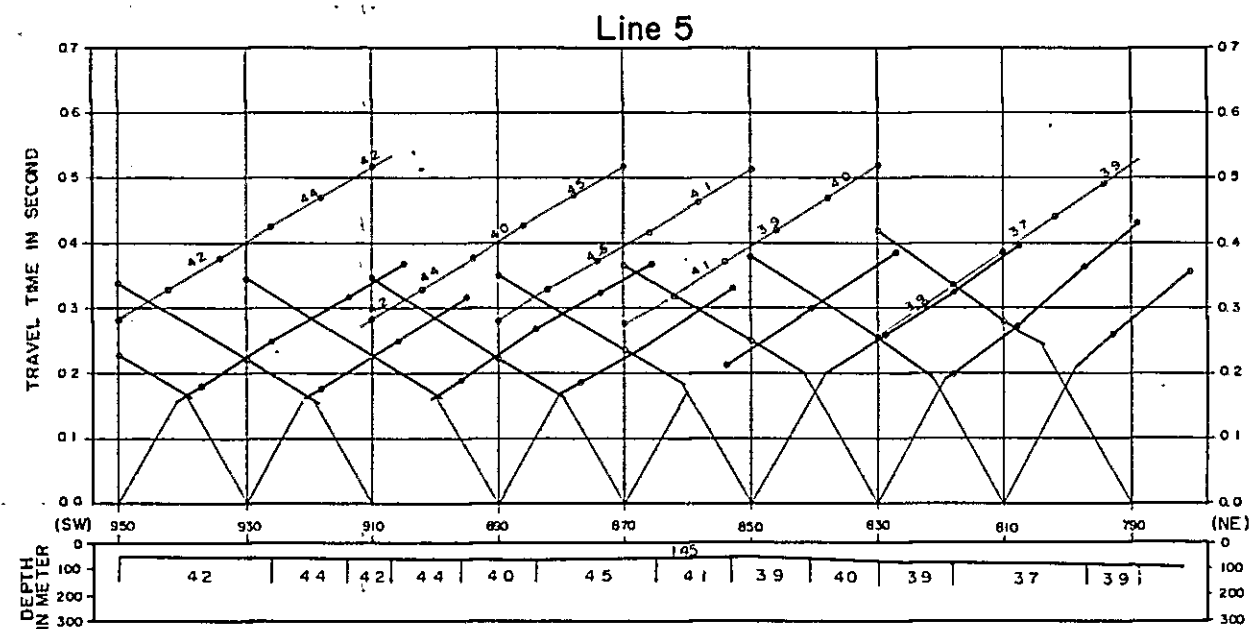
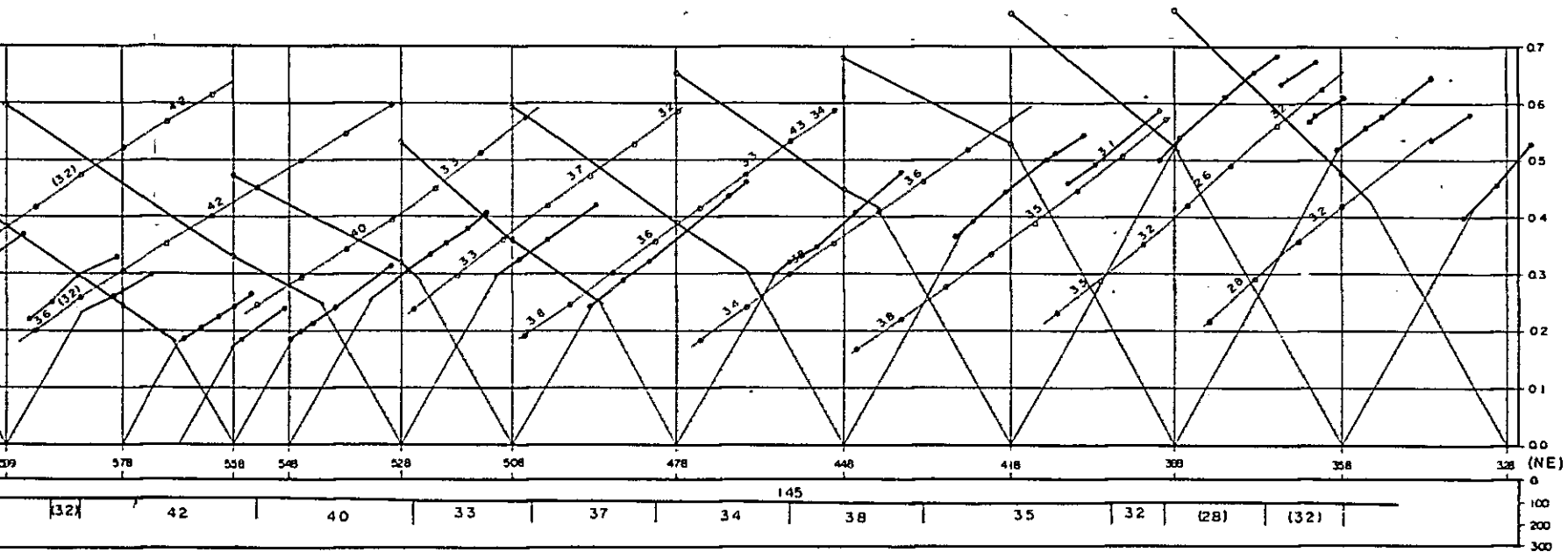


Line 2

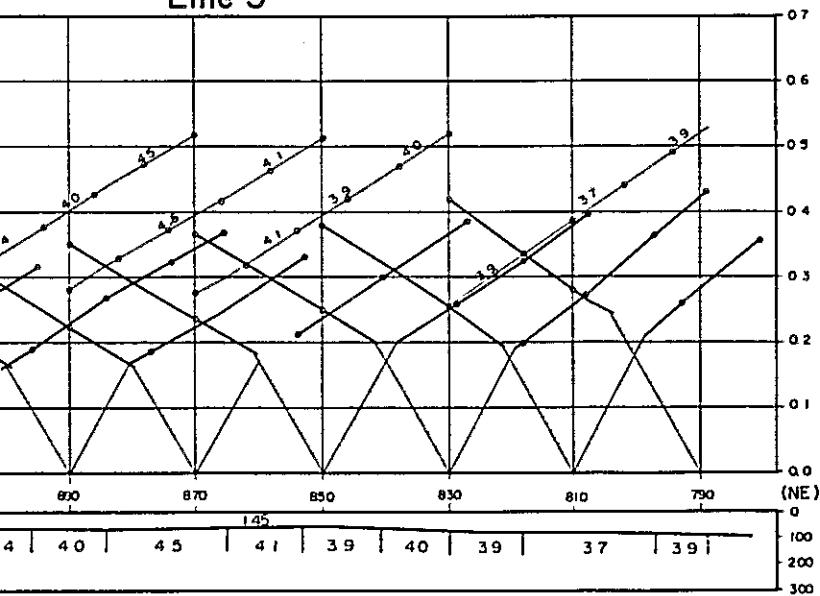


COAL DEVELOPMENT PROJECT AT OFFSHORE
 AREA OF ZONGULDAK COAL FIELD
 Time-Distance curve and
 Velocity section
 Line 1, Line 2, Line 3
 Japan International Cooperation Agency (JICA)
 Date Aug., 1982 Fig. 40-1

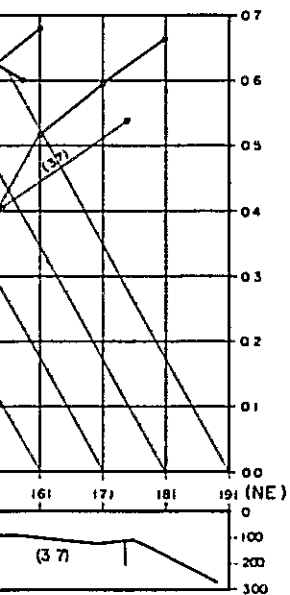
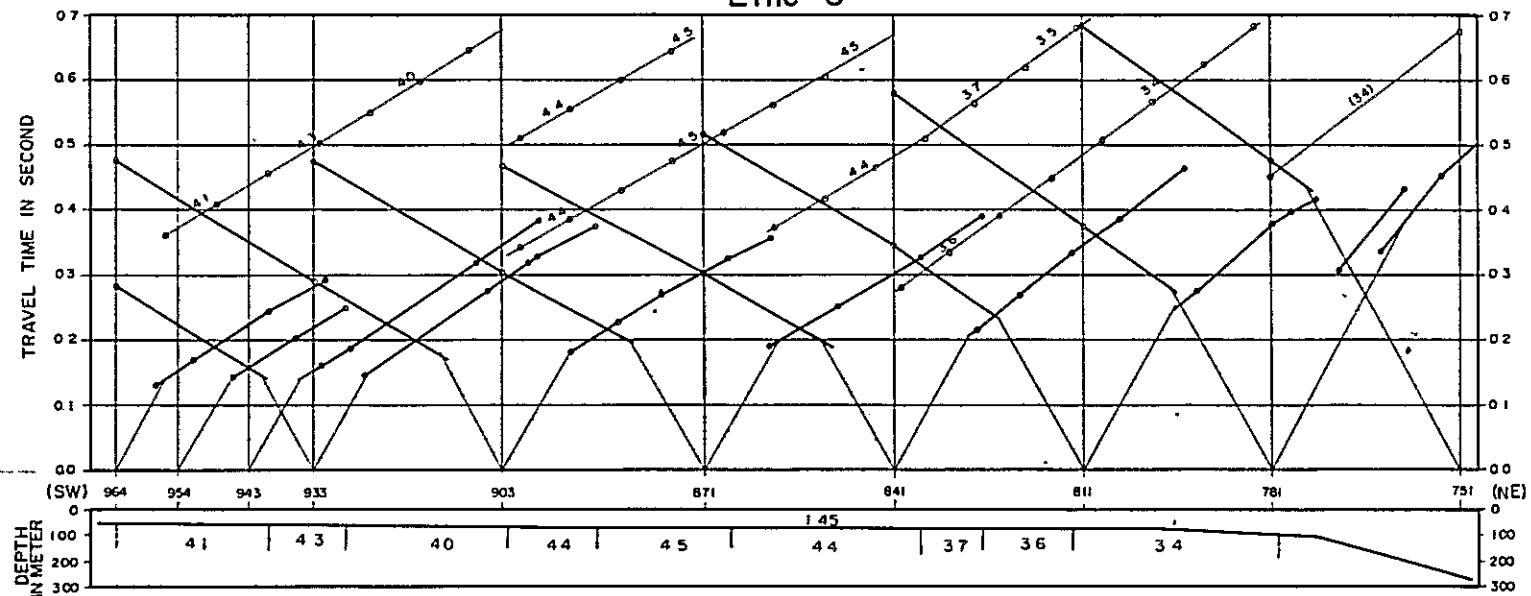




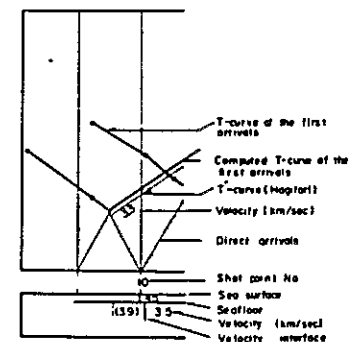
Line 5



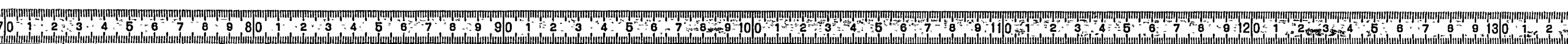
Line 6



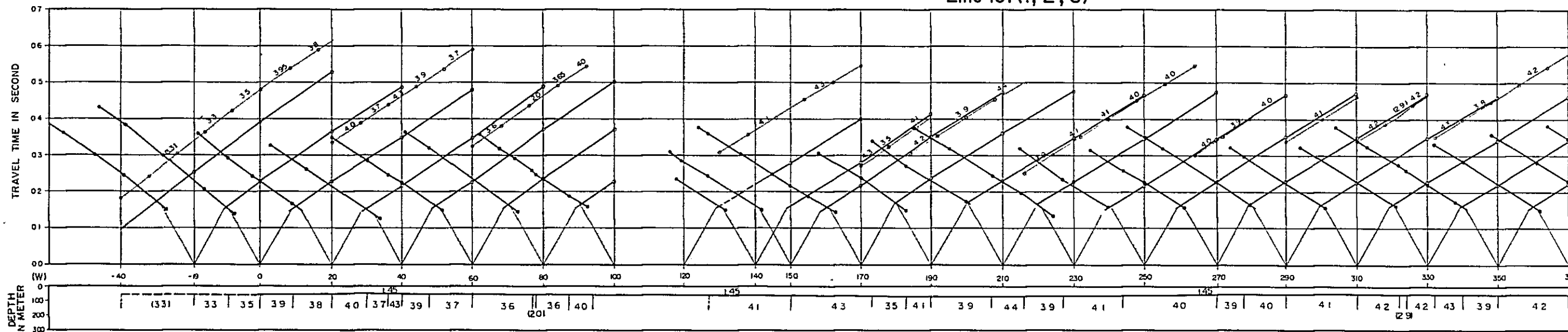
LEGEND



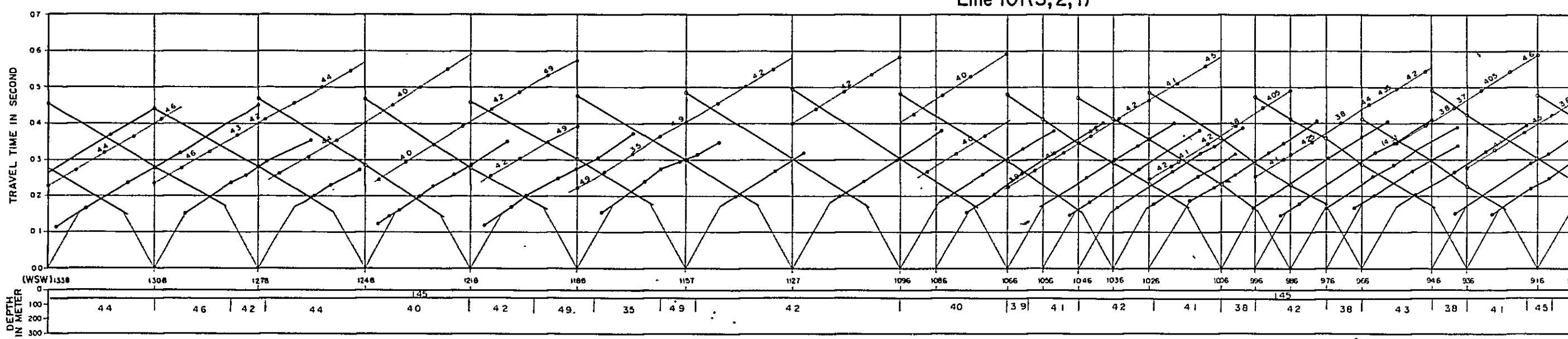
COAL DEVELOPMENT PROJECT AT OFFSHORE
 AREA OF ZONGULDAK COAL FIELD
 Time-Distance curve and
 Velocity section
 Line 4, Line 5, Line 6, Line 7, Line 8, Line 9
 Joint International Cooperation Agency (JICA)
 Date Aug. 1982 Page 40-2

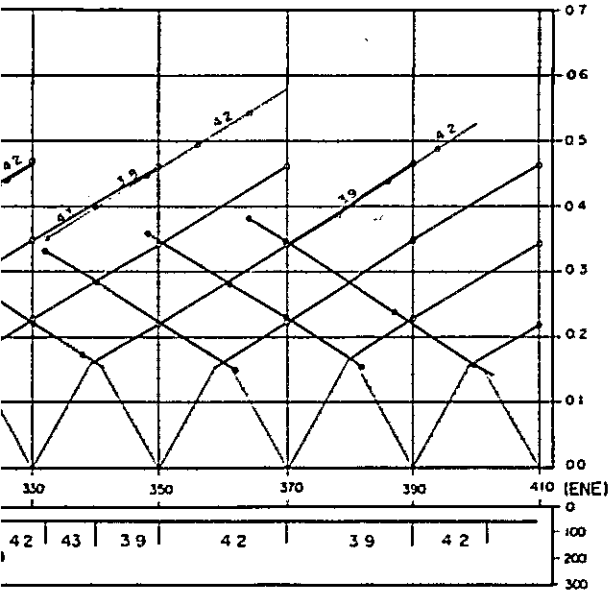


Line 101 (1, 2, 3)

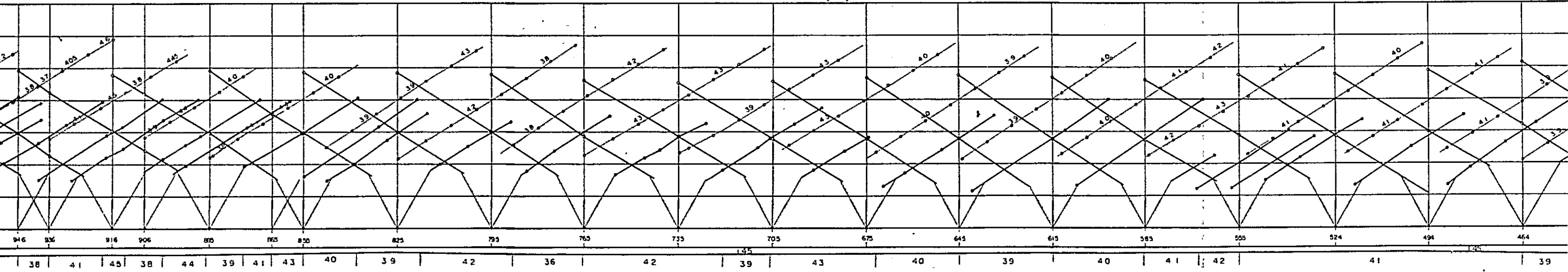


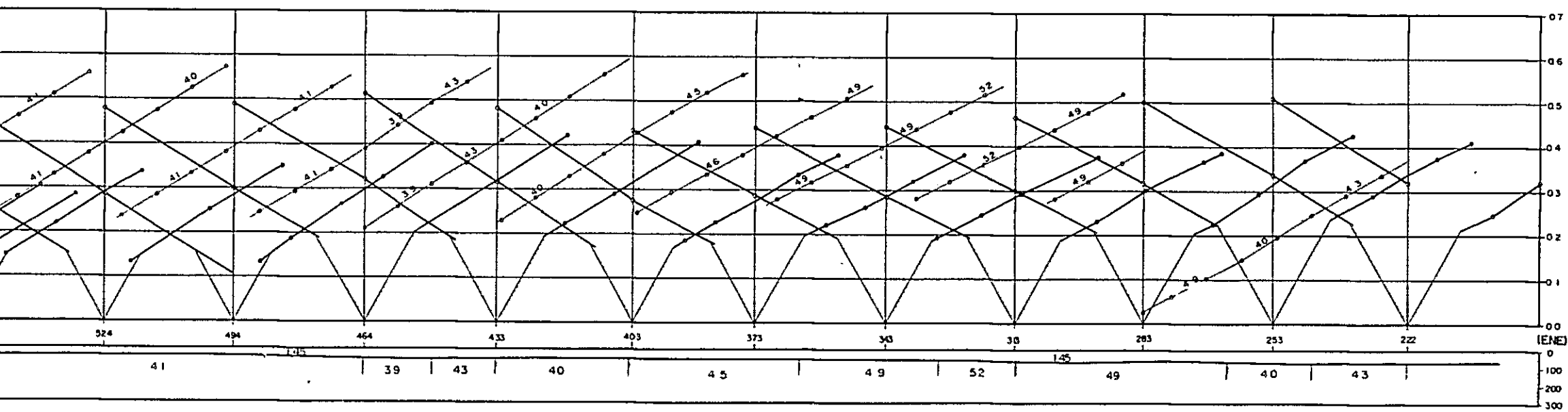
Line 101 (3, 2, 1)



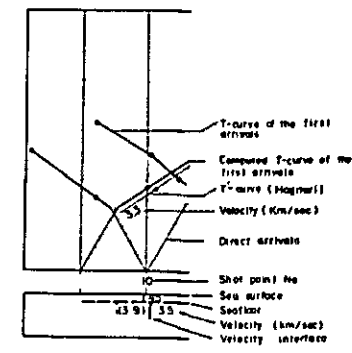


Line 101(3,2,1)

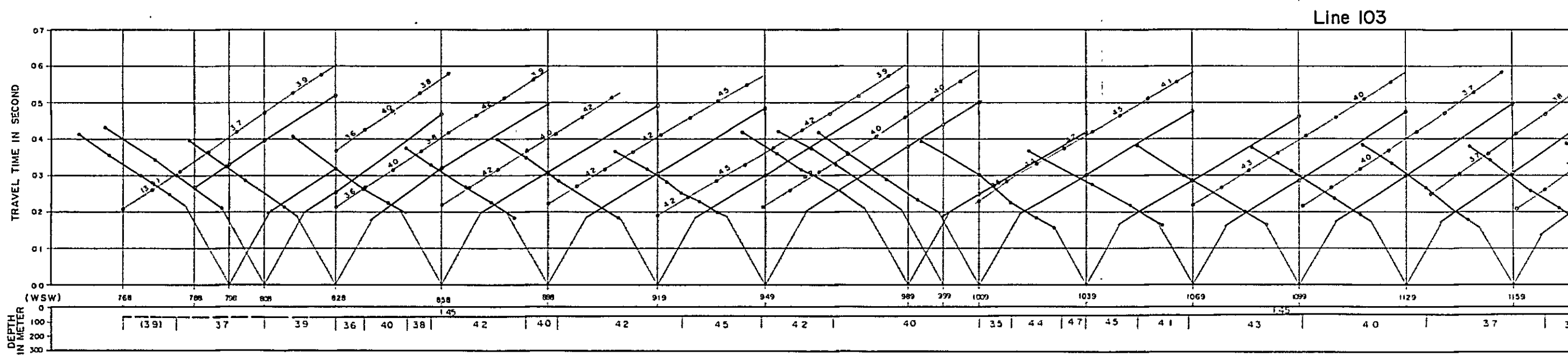
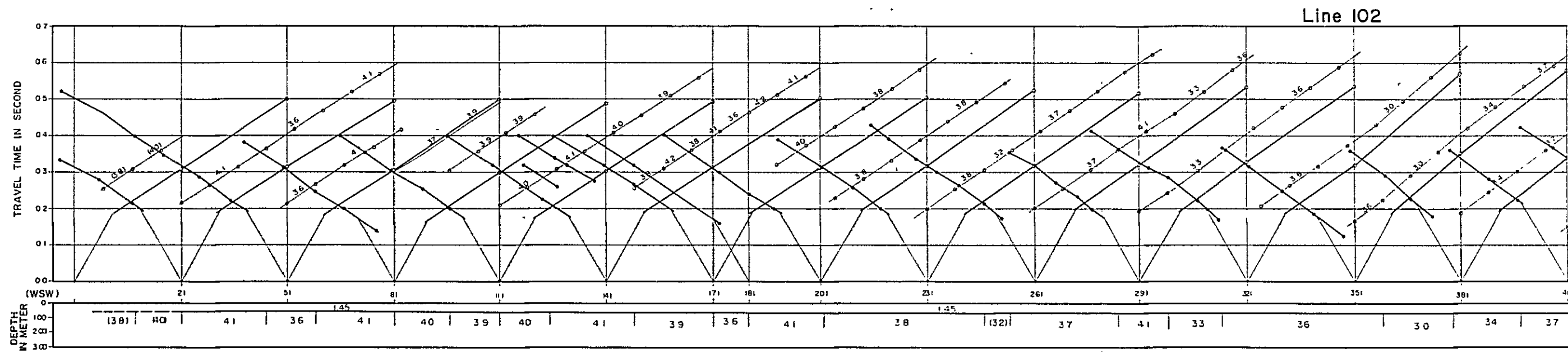




LEGEND

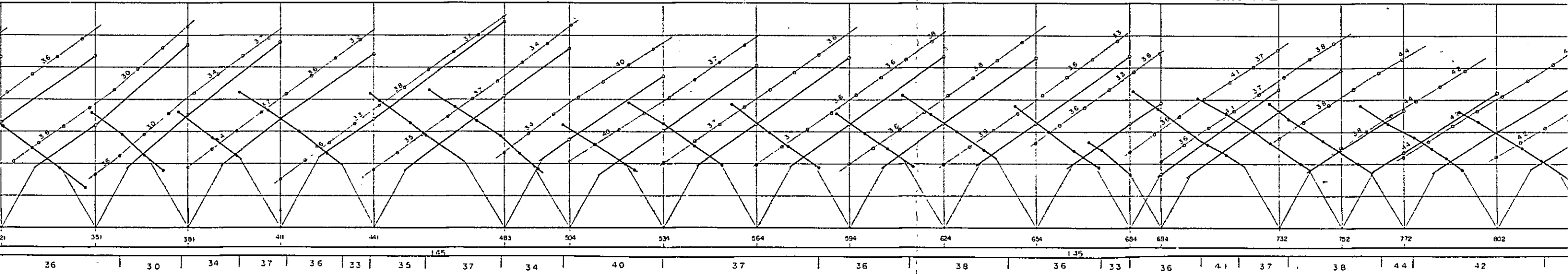


COAL DEVELOPMENT PROJECT AT OFFSHORE
 AREA OF ZONGULDAK COAL FIELD
 Time-Distance curve and
 Velocity section
 Line 10 (1,2,3), Line 10 (1,3,2,1)
 Joint Commission Committee Report (JICA)
 Date: Aug., 1982 | Pg. 40-3



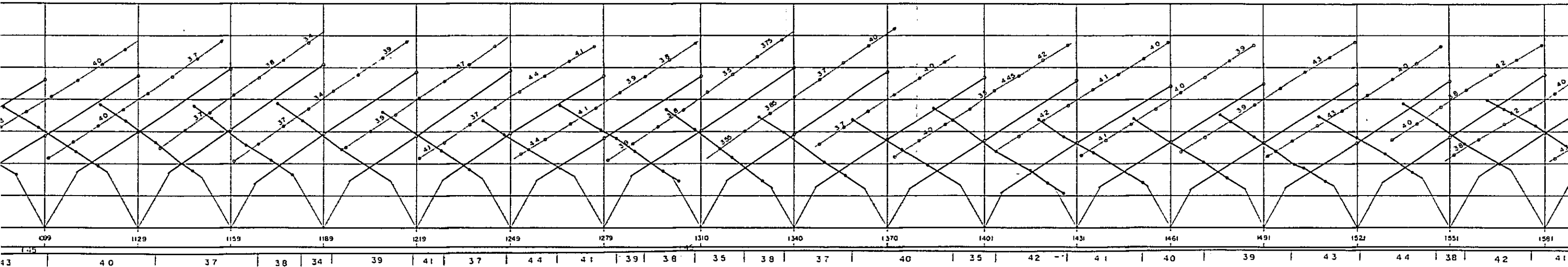
Line 102

Line 102

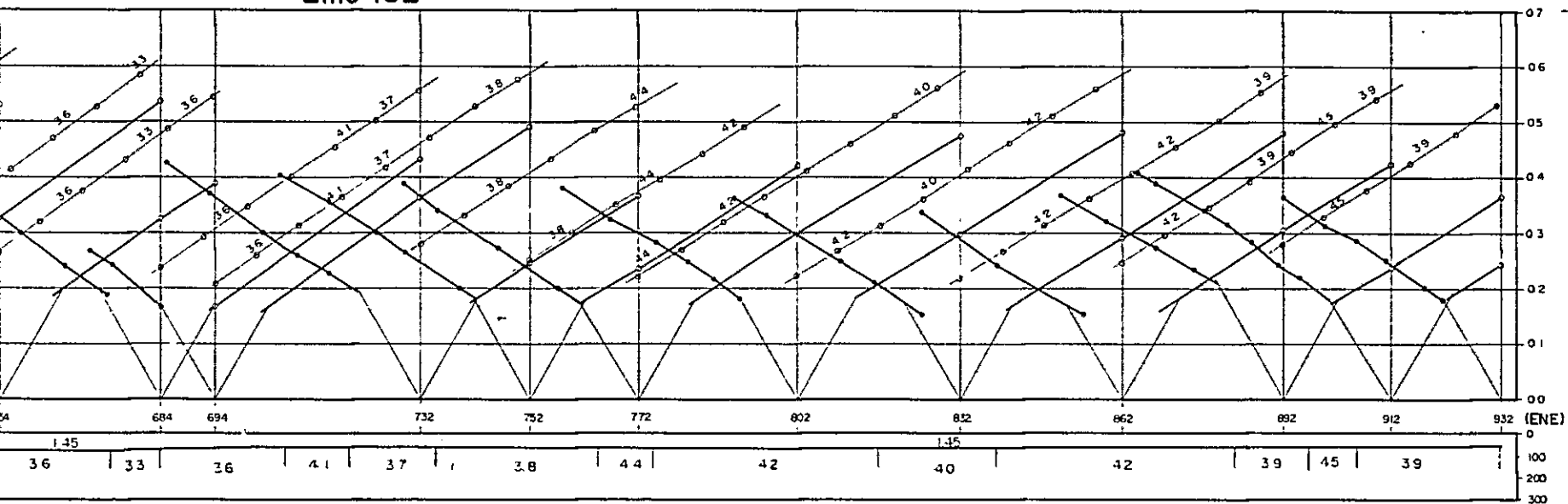


Line 103

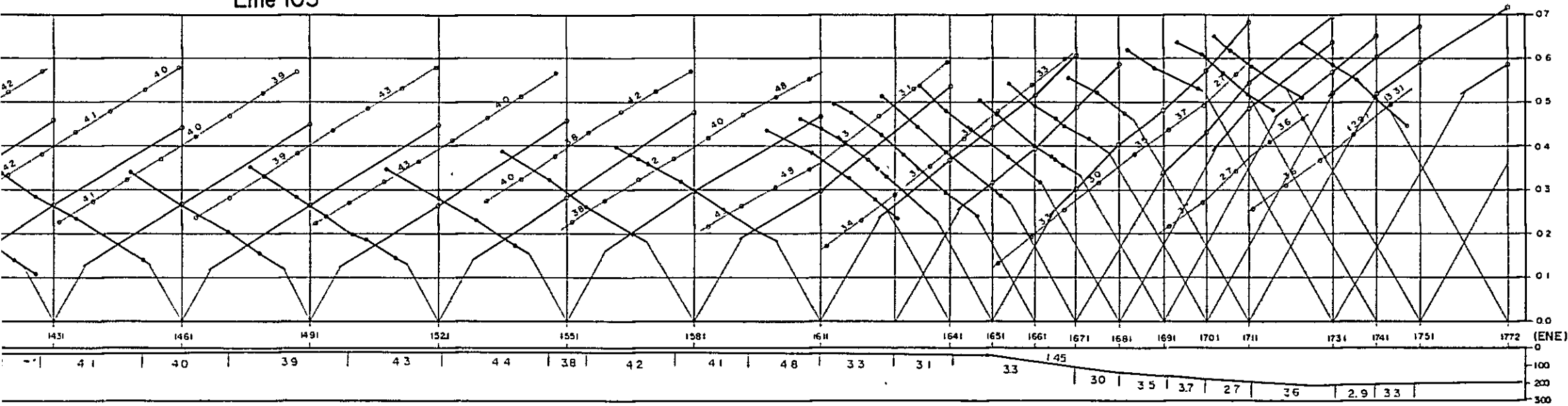
Line 103



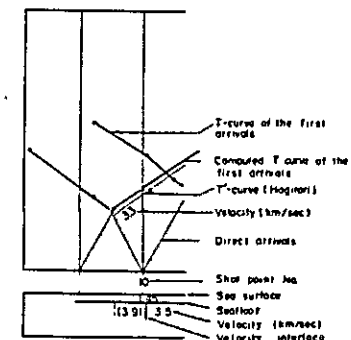
Line 102



Line 103

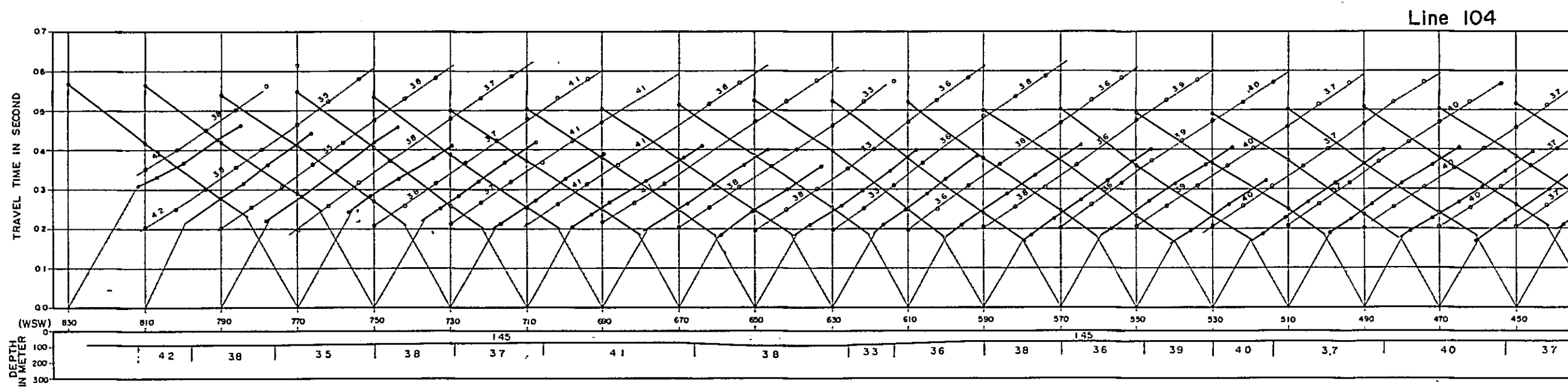
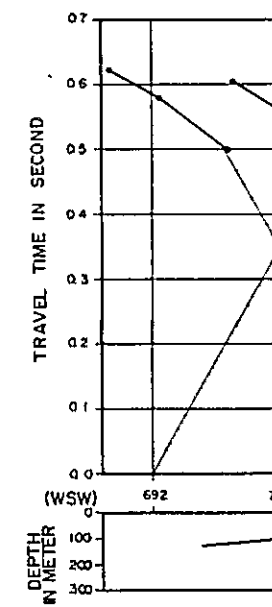
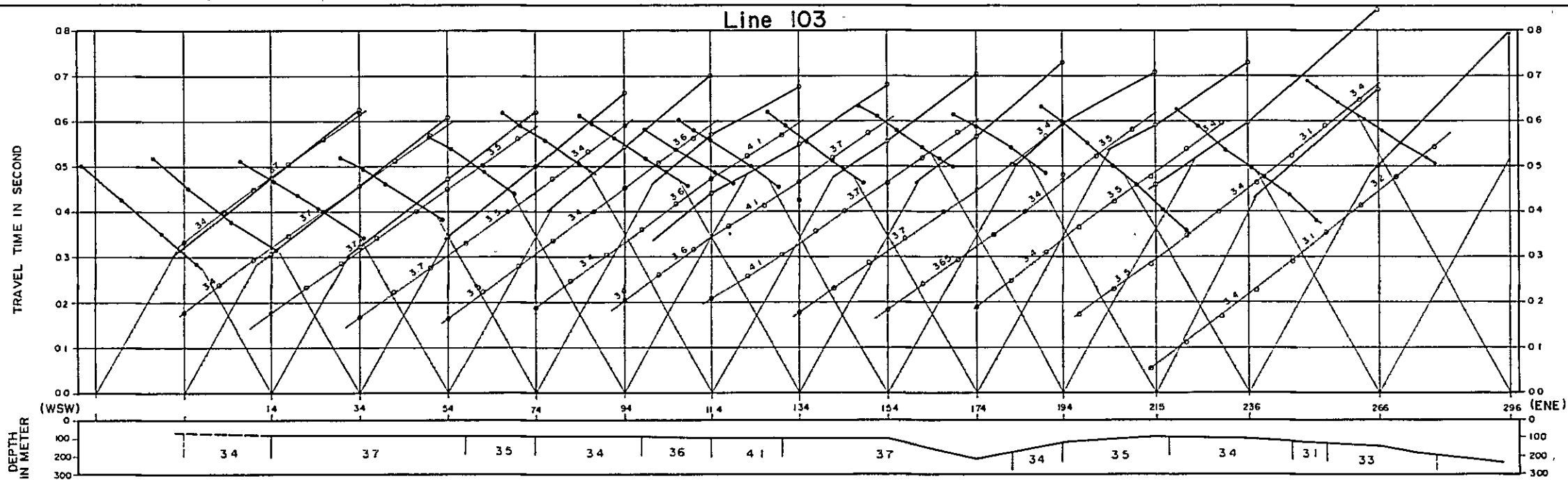


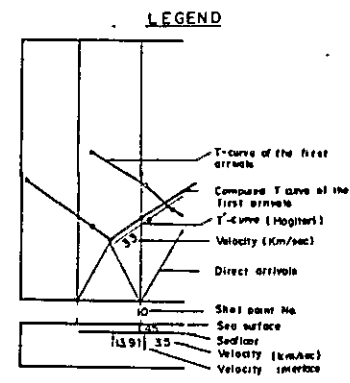
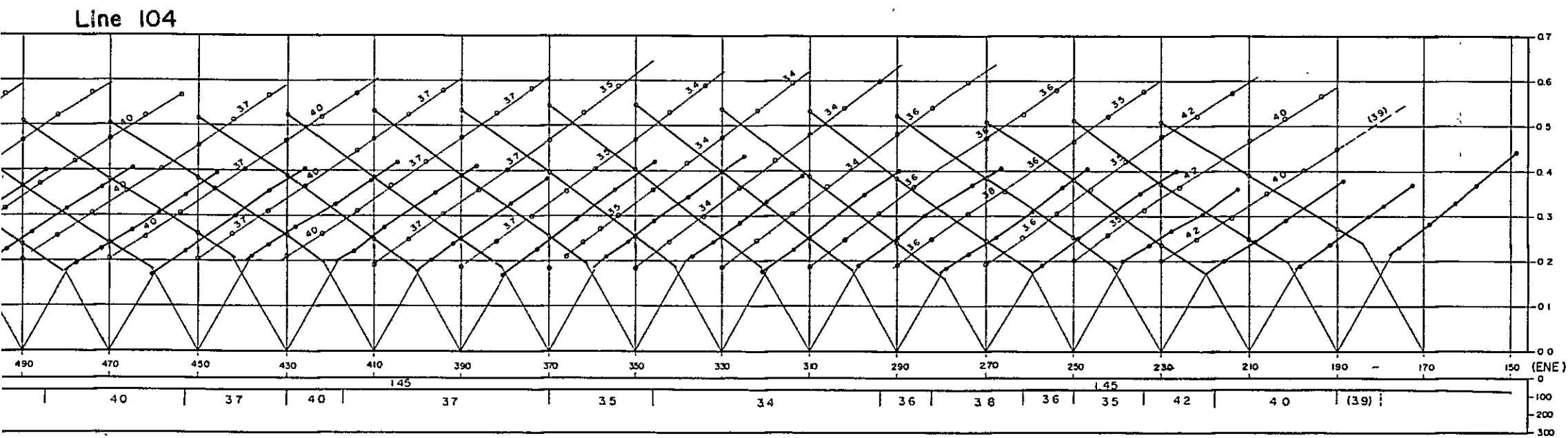
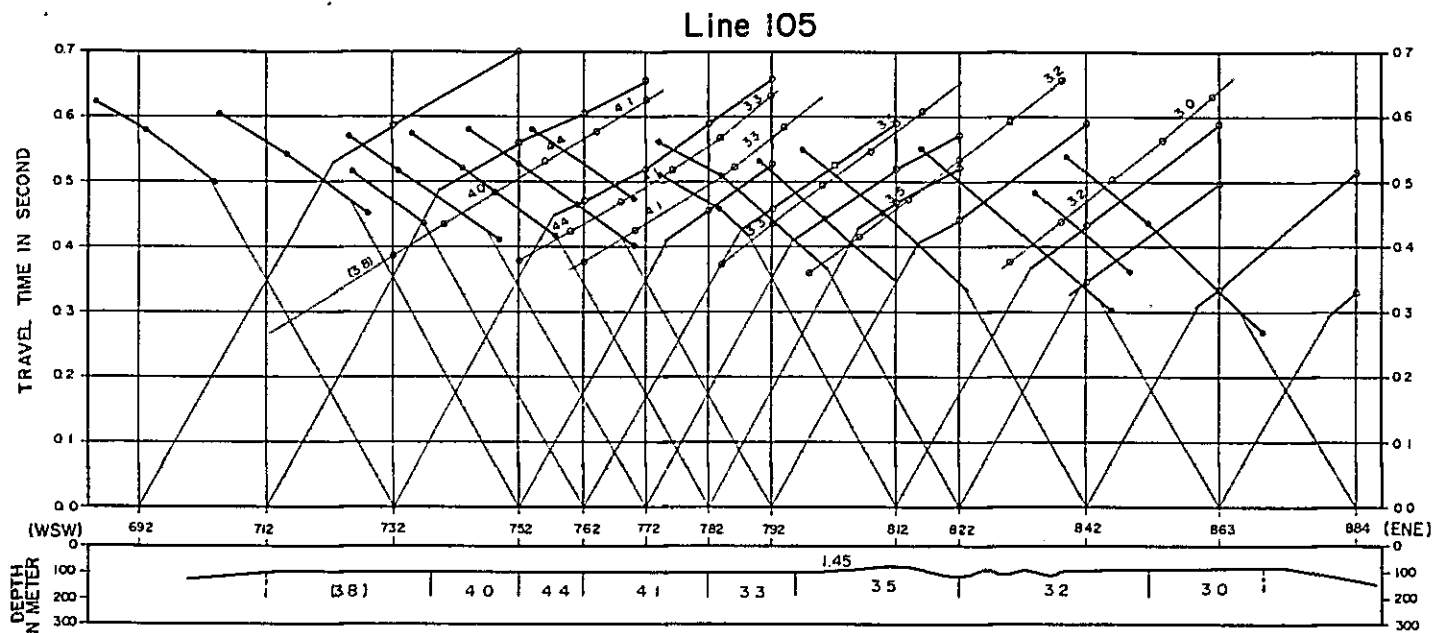
LEGEND



COAL DEVELOPMENT PROJECT AT OFFSHORE
 AREA OF ZHONGDAN COAL FIELD
 Time-Distance curve and
 Velocity section
 Line 102, Line 103
 Geomatics Engineering Department
 Date: Aug. 1992 Fig. 40-4







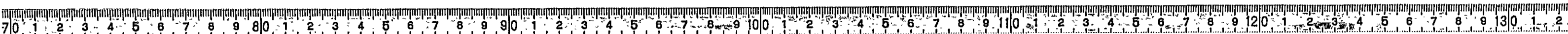
COAL DEVELOPMENT PROJECT AT OFFSHORE
 AREA OF ZONGULDAK COAL FIELD

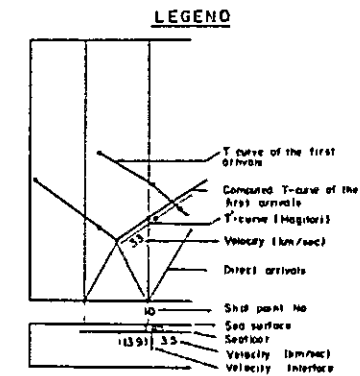
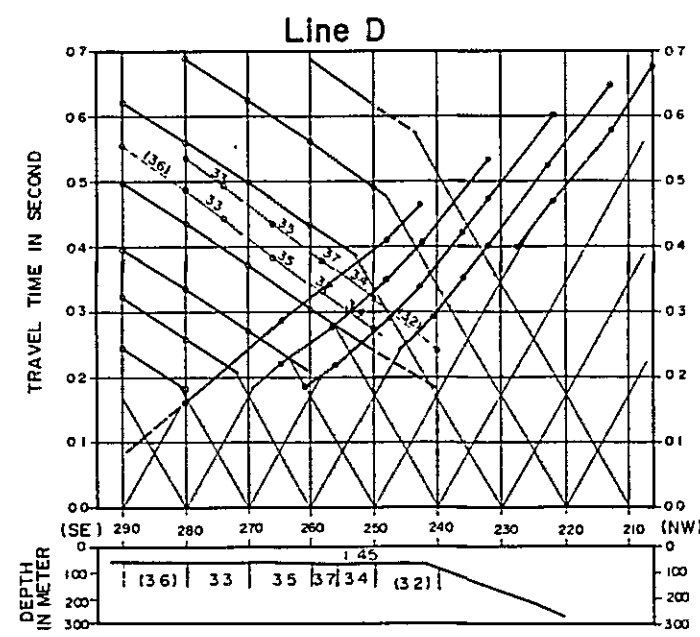
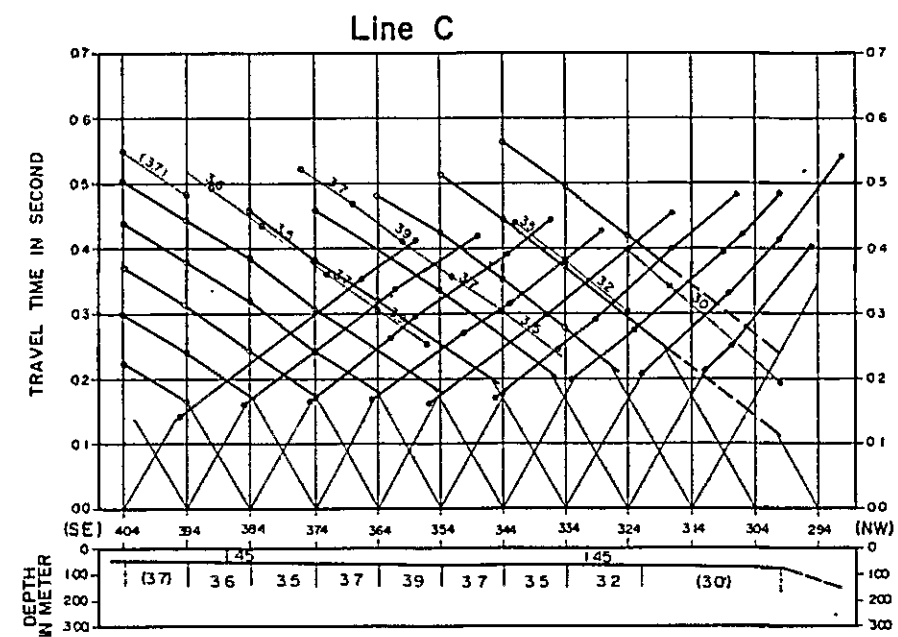
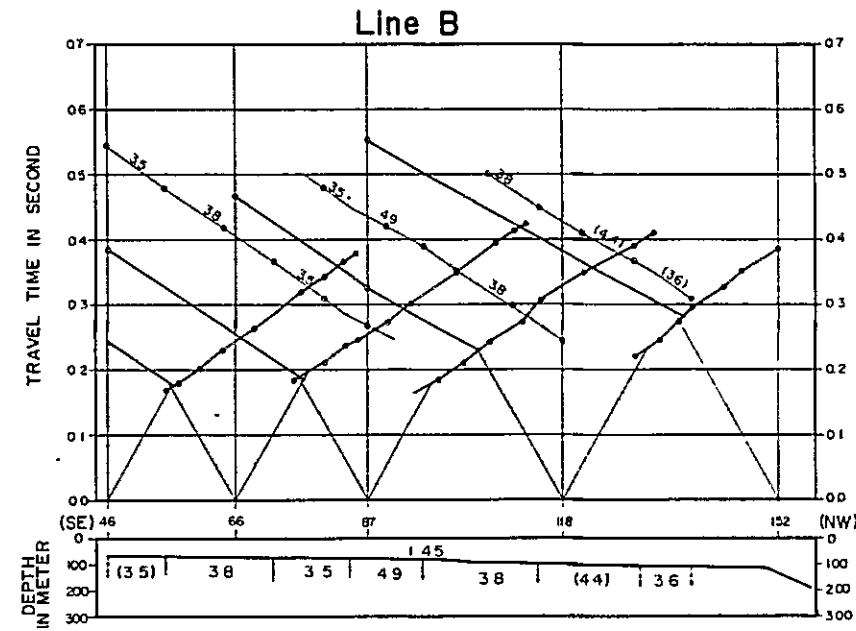
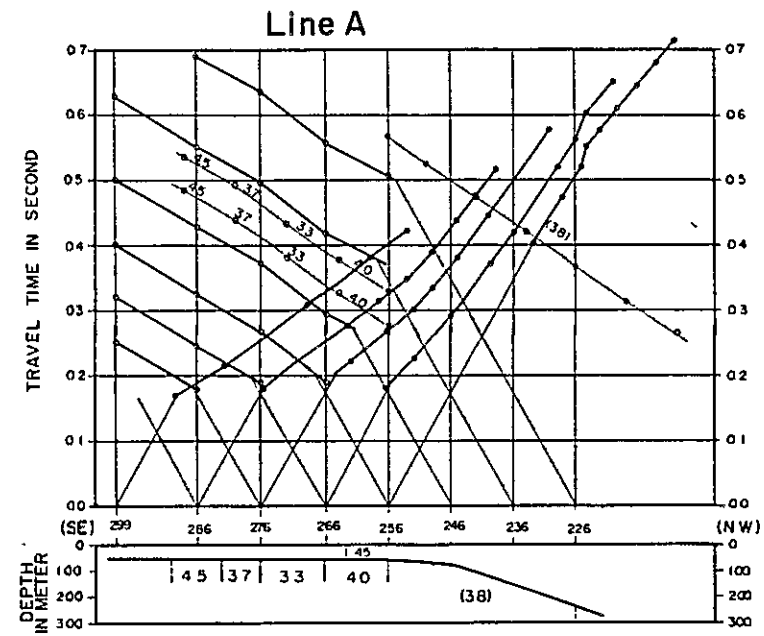
Time-Distance curve and
 Velocity section

Line 103, Line 104, Line 105

Joint International Corporation Agency (JICA)

Date Aug. 1982 File 40-5





COAL DEVELOPMENT PROJECT AT OFFSHORE
 AREA OF JONGGALAK COAL FIELD

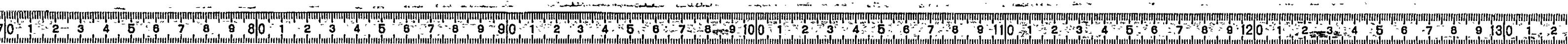
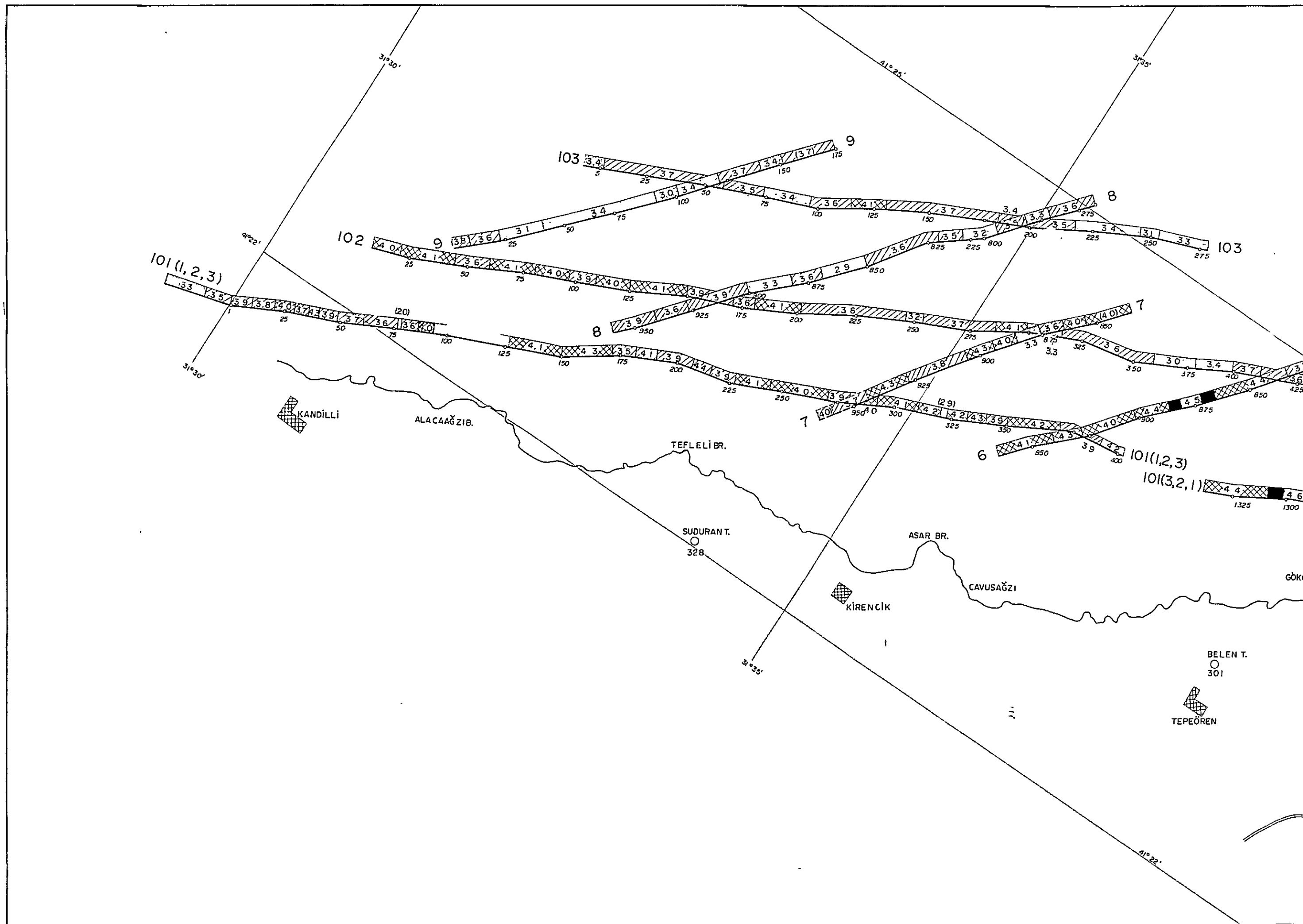
Time-Distance curve and
 Velocity section

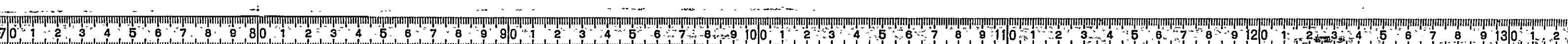
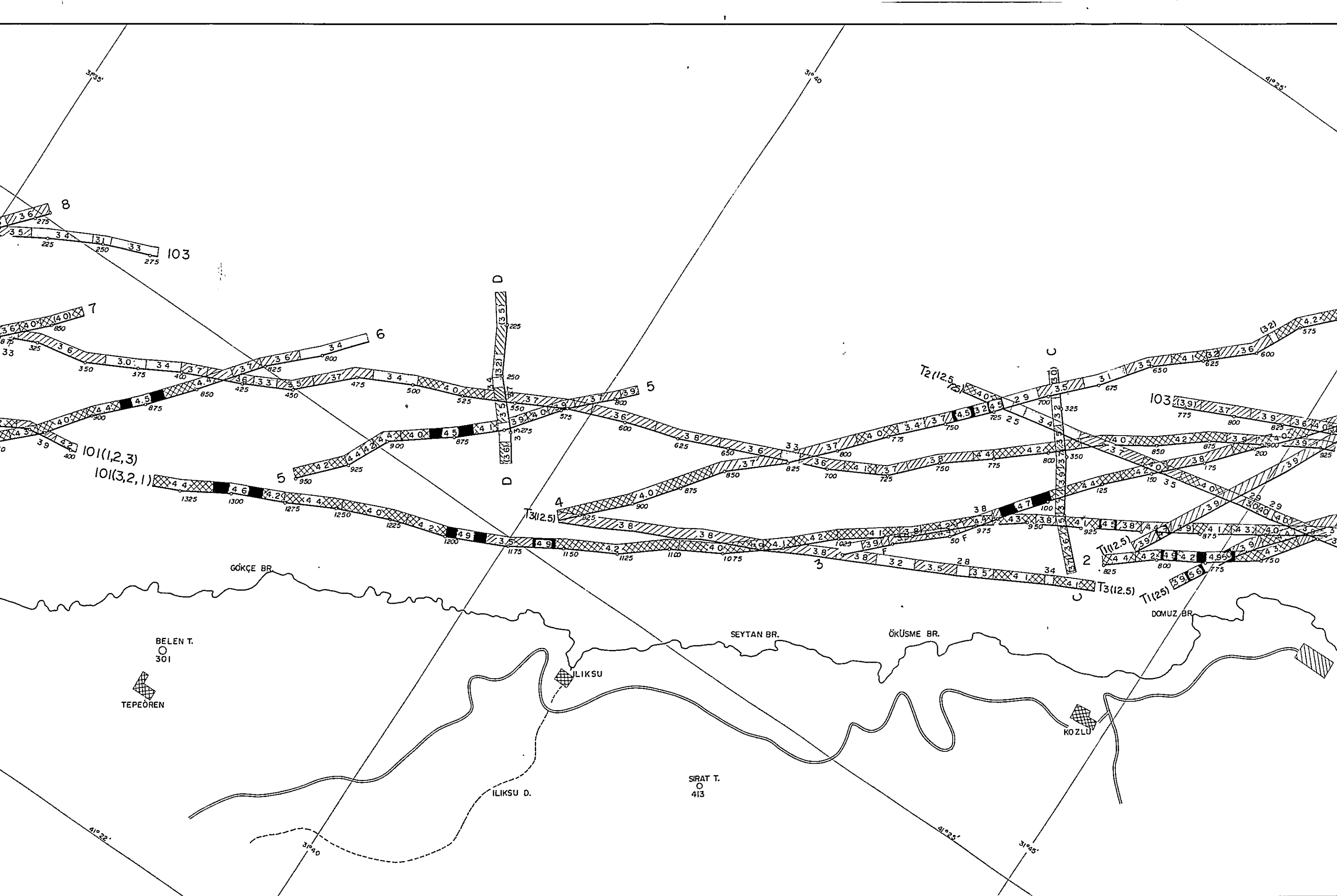
Line A, Line B, Line C, Line D

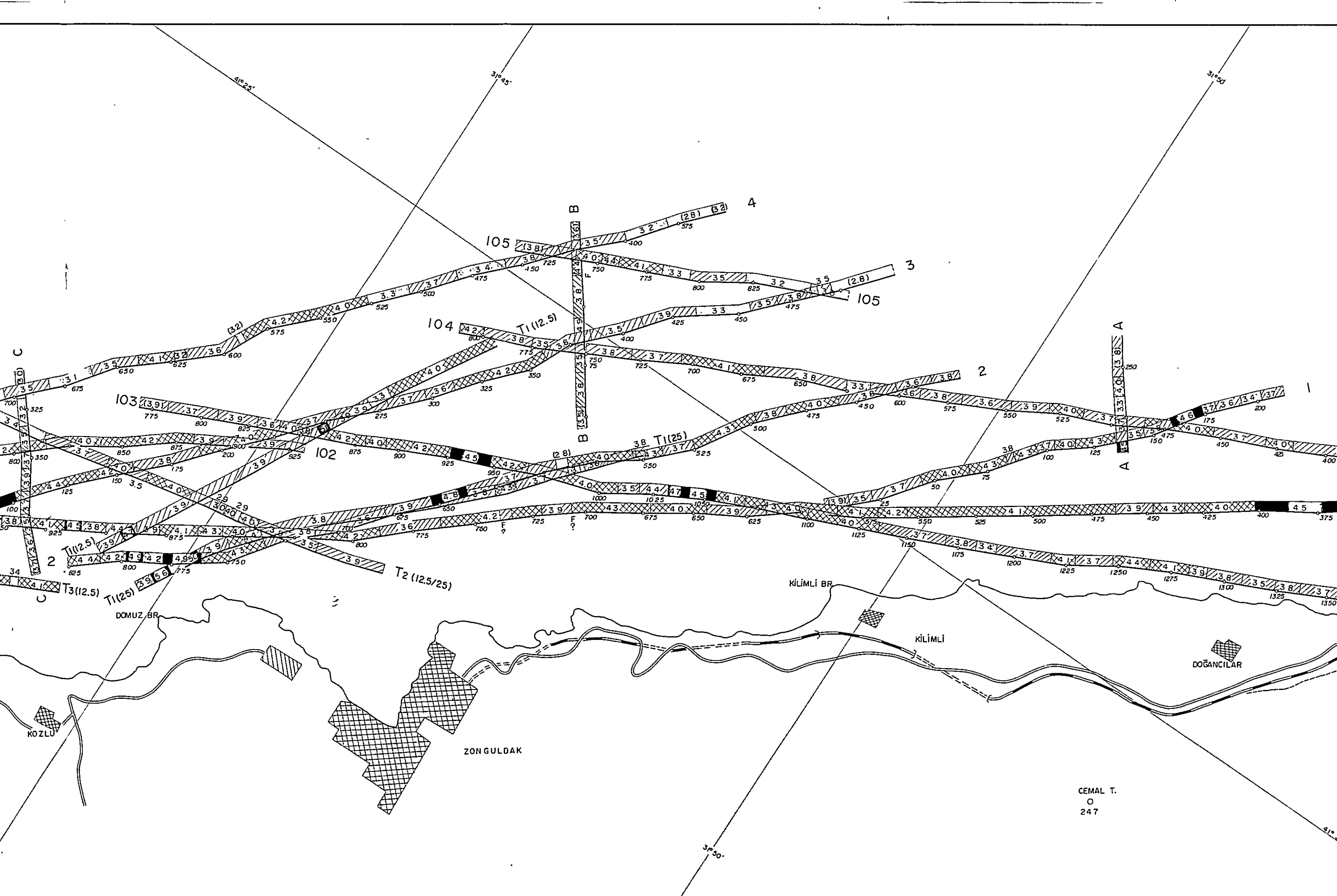
Jaya (Indonesia) Corporation Agency (JICA)

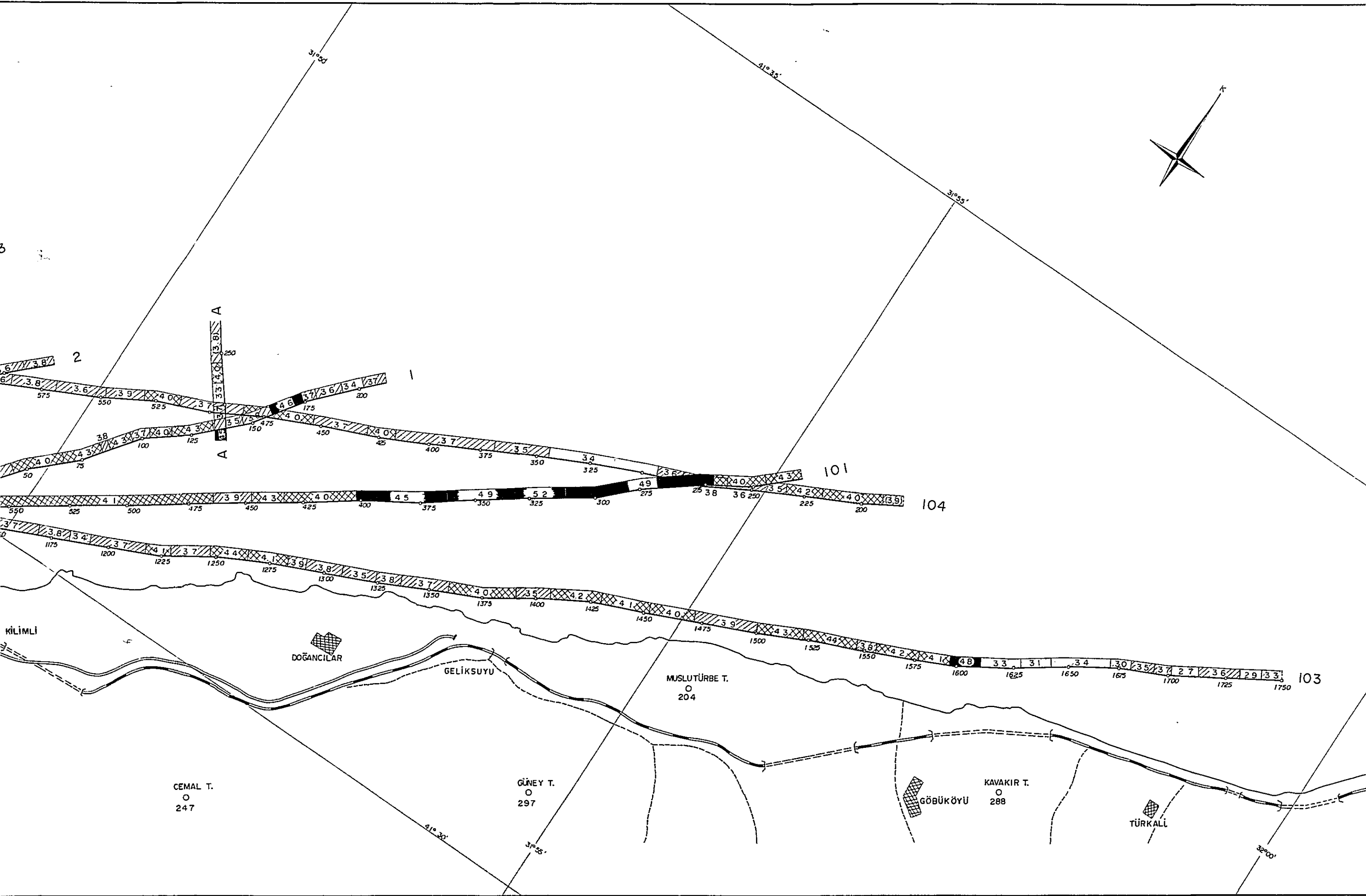
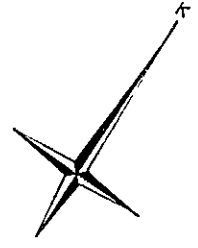
Date Aug - 1982 | Fig. AD-6











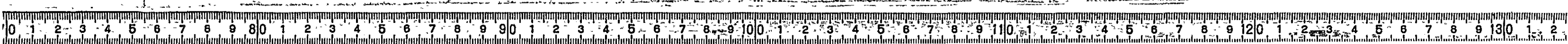
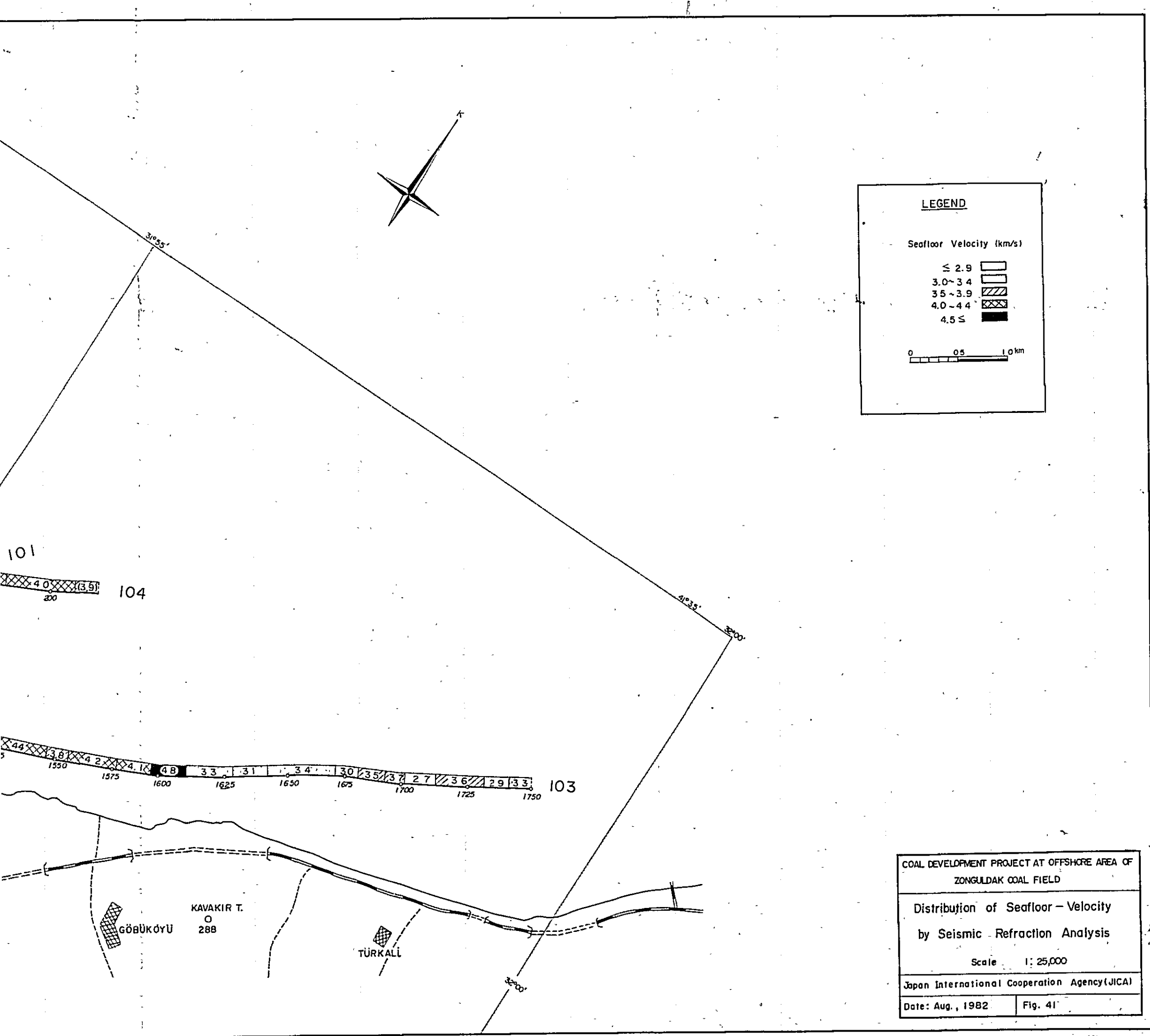
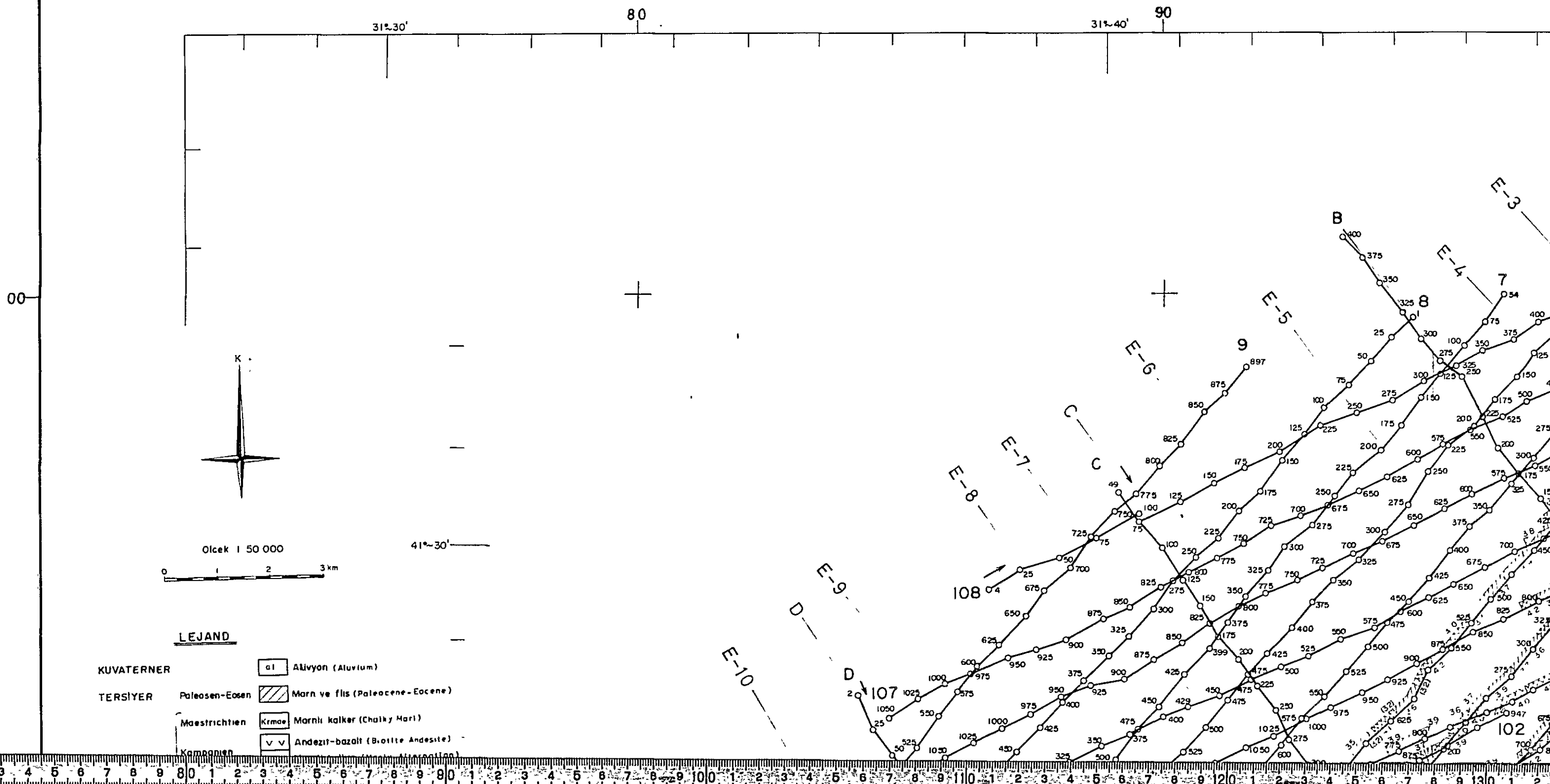
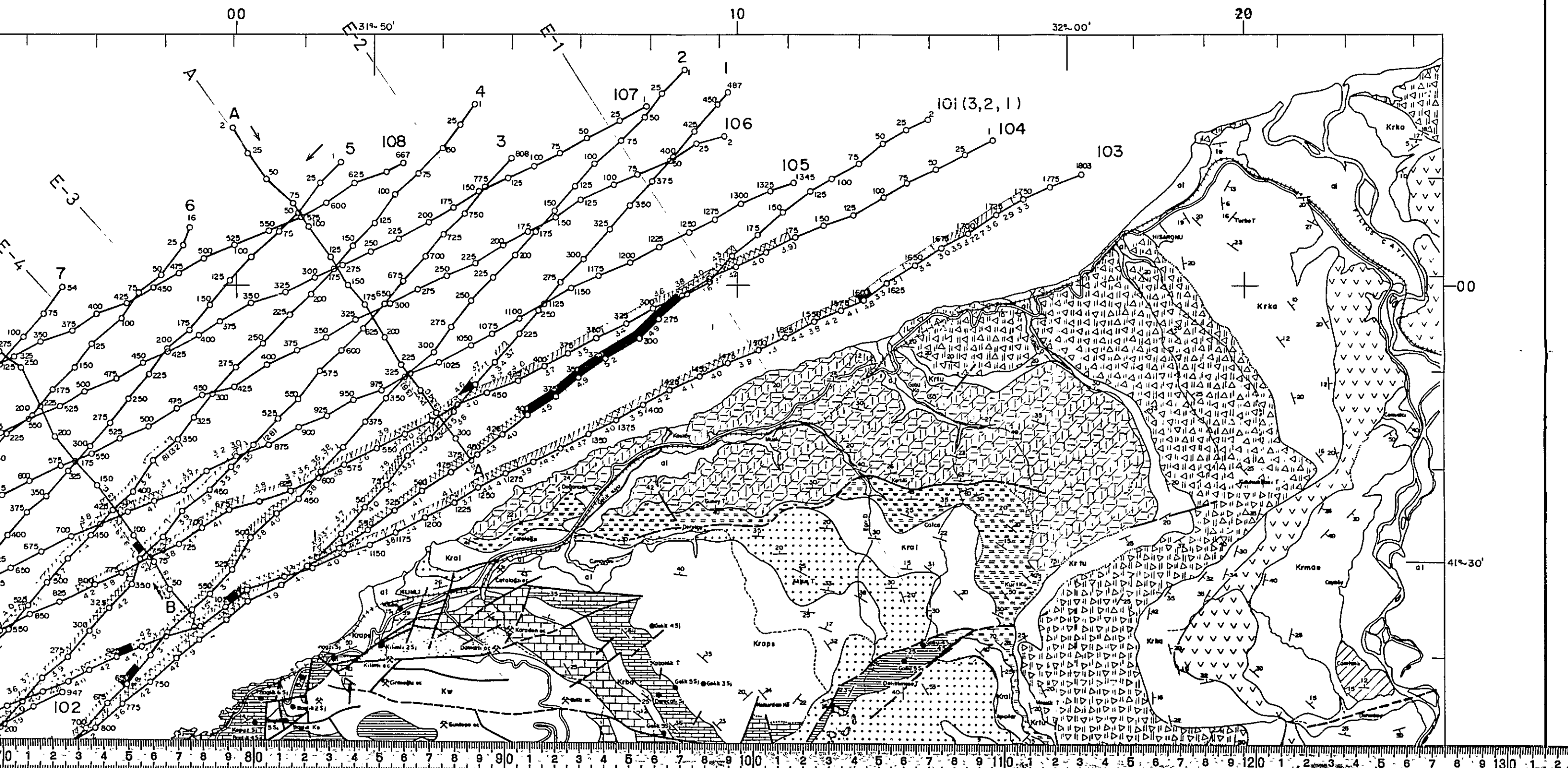


Figure 42

Distribution of Seafloor Velocity by Seismic Refraction Analysis



Scale 1 : 50,000



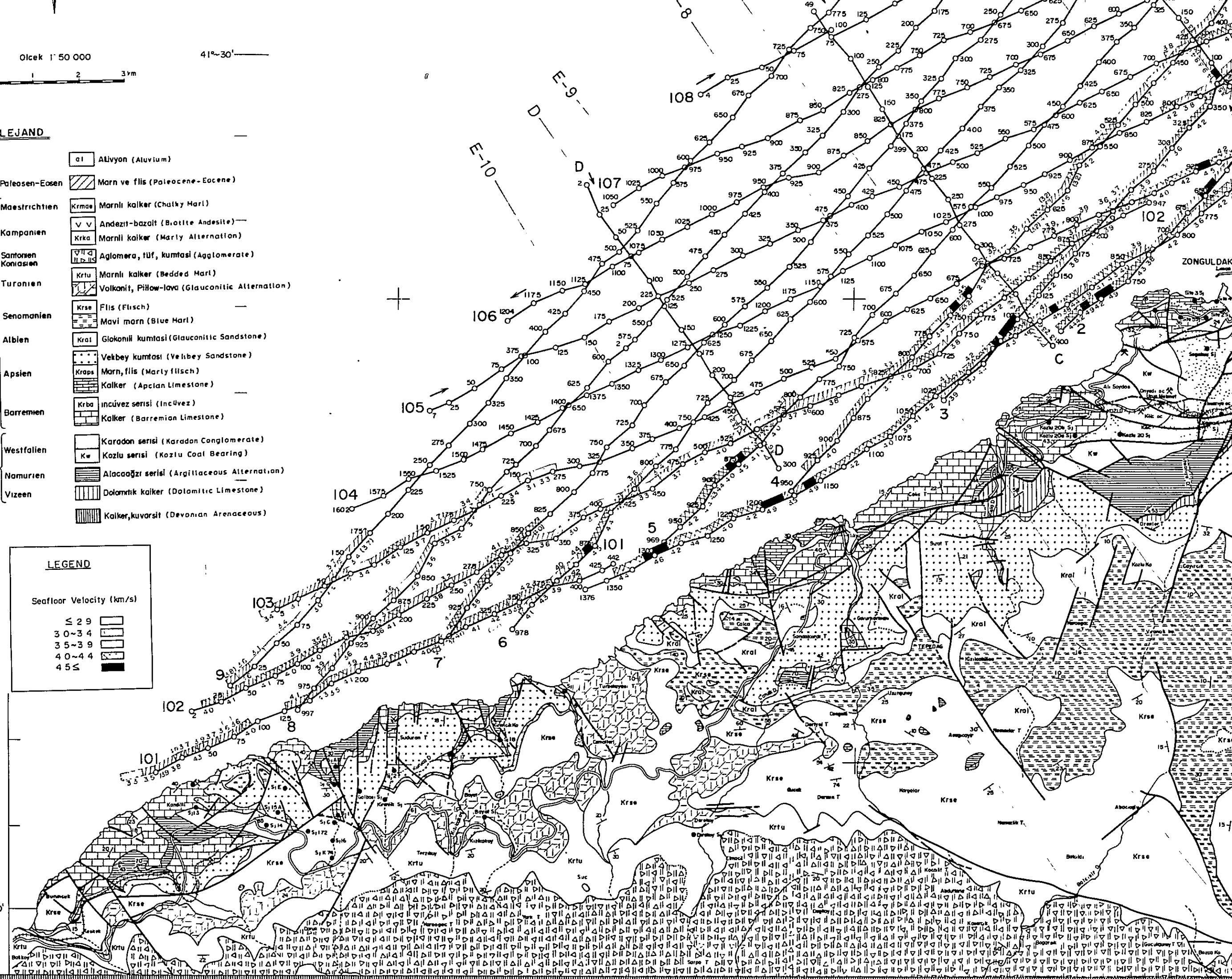
Ölçek 1:50 000
41°-30'

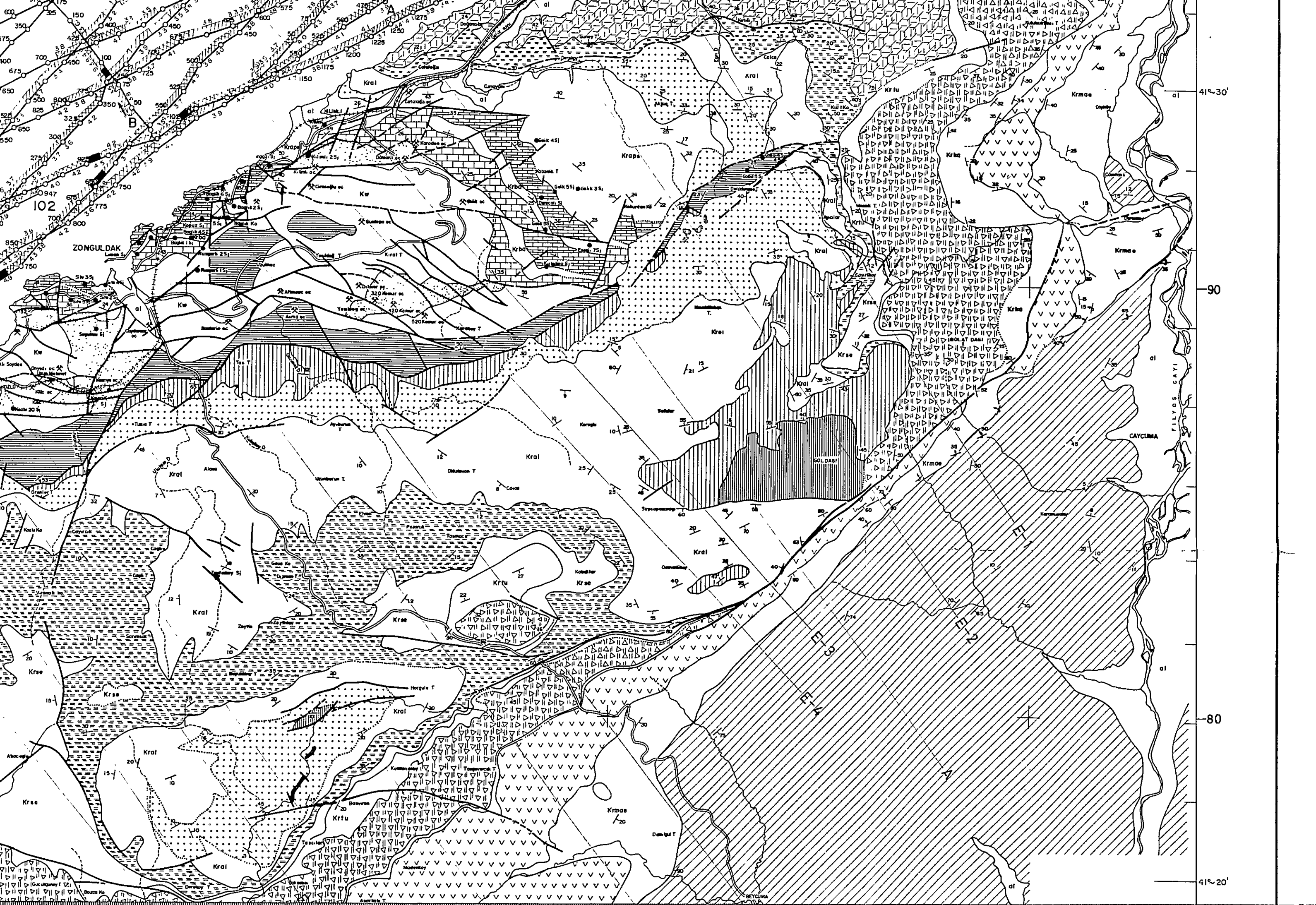
LEJAND

- KUVATERNER** a1 Alüvyon (Aluvium)
- TERSİYER** Paleosen-Eosen / / / / Marn ve flis (Paleocene-Eocene)
- Maastrichtien** K r m a e Marnlı kalker (Chalky Marl)
- Kampanien** V V Andezit-bazalt (Basaltic Andesite)
- K r k a Marnlı kalker (Marly Alternation)
- Santonen Koniasien** K r t u Aglomera, tuf, kumtaşı (Agglomerate)
- Turonien** K r t u Marnlı kalker (Bedded Marl)
- / / / / Vulkanit, Pillow-lava (Glaucanitic Alternation)
- KRETASE** **Senomanien** K r s e Flis (Flisch)
- / / / / Mavi marn (Blue Marl)
- Albien** K r a l Glakonilli kumtaşı (Glaucanitic Sandstone)
- / / / / Vekbey kumtaşı (Velibey Sandstone)
- Apsien** K r a p s Marn, flis (Marly flisch)
- / / / / Kalker (Apcian Limestone)
- Barremien** K r b a Incüvez serisi (Incüvez)
- / / / / Kalker (Barremian Limestone)
- KARBONIFER** **Westfalien** K a r d a n Karadon serisi (Karadon Conglomerate)
- K w Kozlu serisi (Kozlu Coal Bearing)
- Namurien** / / / / Alacaağzı serisi (Argillaceous Alternation)
- Vizeen** / / / / Dolomitik kalker (Dolomitic Limestone)
- DEVONİYEN** / / / / Kalker, kuvarsit (Devonian Arenaceous)

LEGEND

- Seafloor Velocity (km/s)
- ≤ 2.9
 - 3.0-3.4 / / / /
 - 3.5-3.9 / / / /
 - 4.0-4.4 / / / /
 - 4.5 ≤ / / / /





KARBONİFER
DEVONİEN

- Barremien Kalkar (Apcian Limestone)
- Westfallen Krbn incüvez serisi (Incüvez)
- Namurten Kalkar (Barremian Limestone)
- Vizeen Karadon serisi (Karadon Conglomerate)
- Kw Kozlu serisi (Kozlu Coal Bearing)
- Alaçoğuzi serisi (Argillaceous Alternation)
- Dolomitik kalker (Dolomitic Limestone)
- Kalkar,kuvarsit (Devonian Arenaceous)

LEGEND

Seafloor Velocity (km/s)

≤ 2.9	
3.0~3.4	
3.5~3.9	
4.0~4.4	
4.5 ≤	

