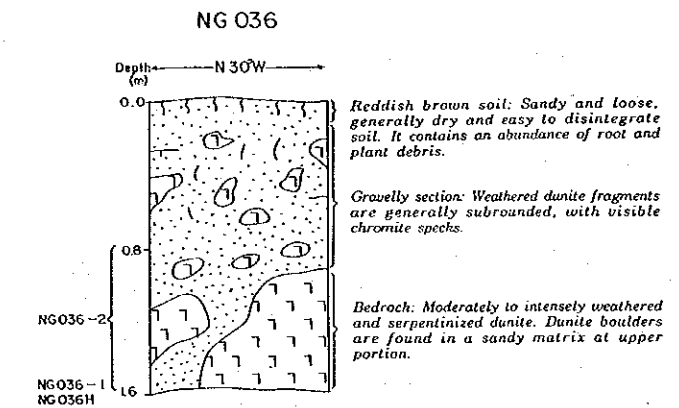
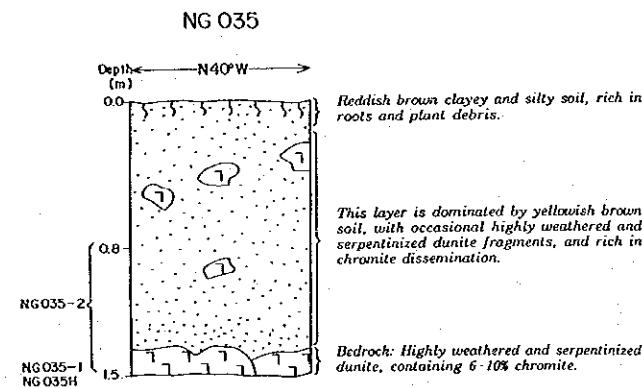
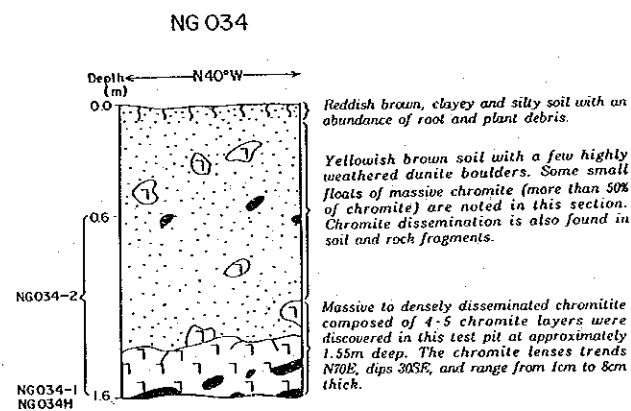
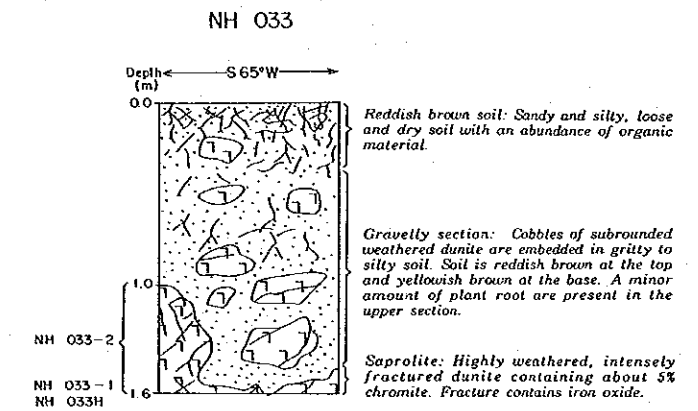
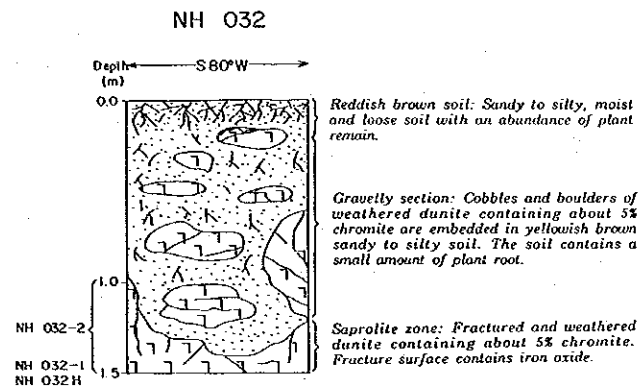
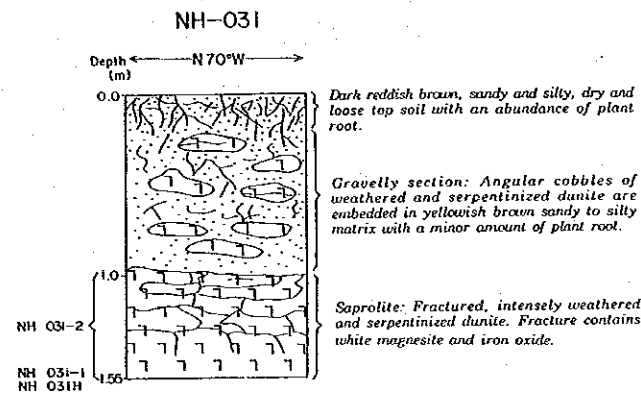
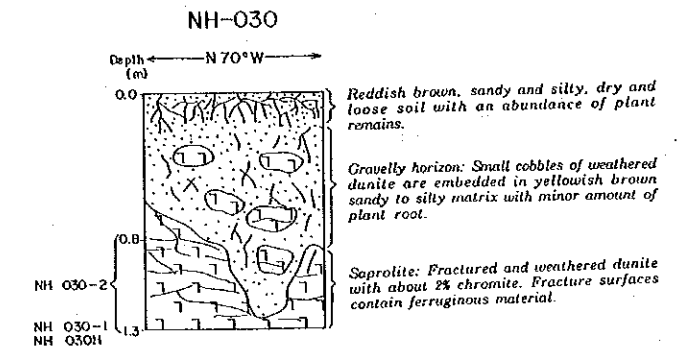
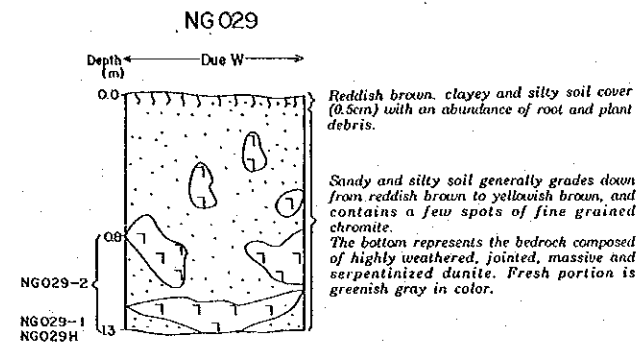
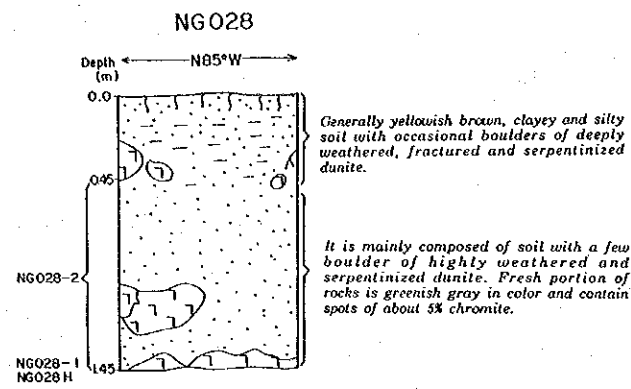
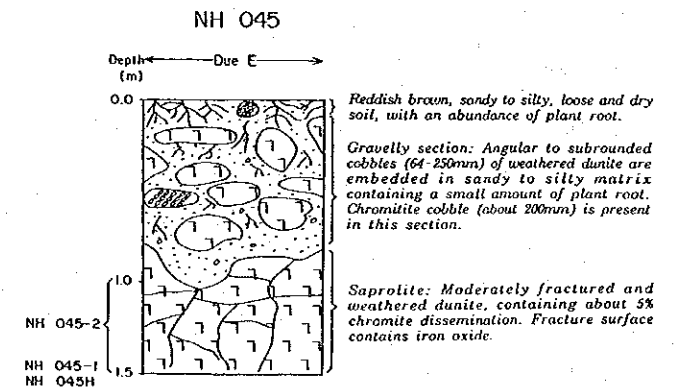
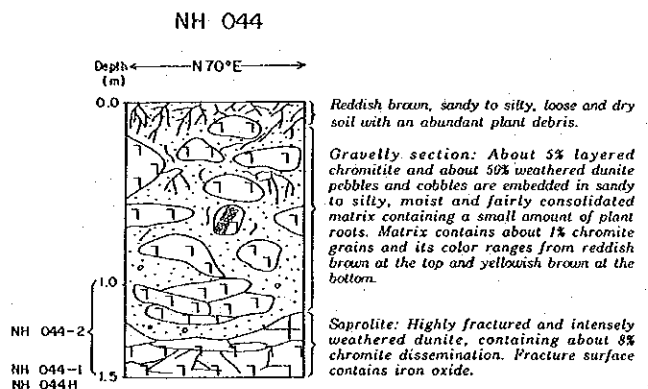
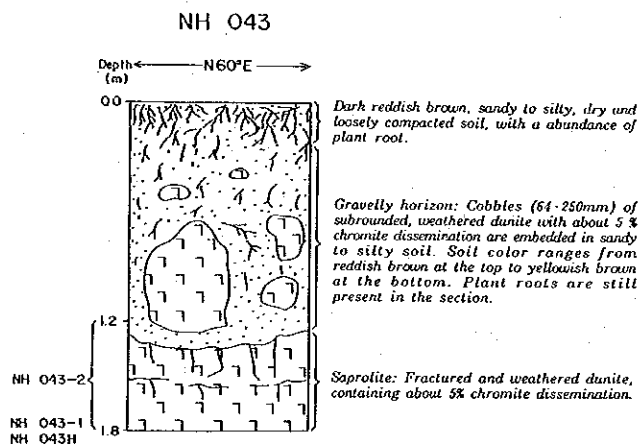
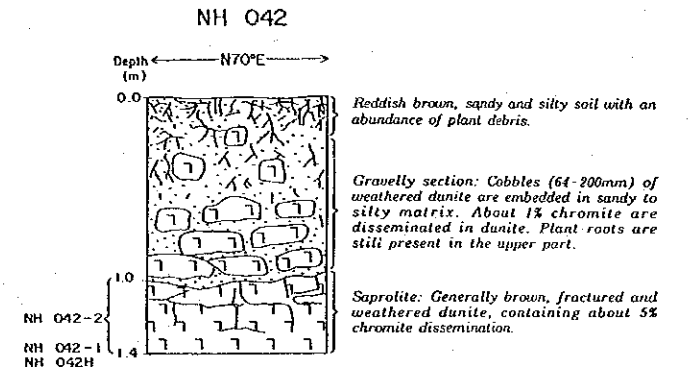
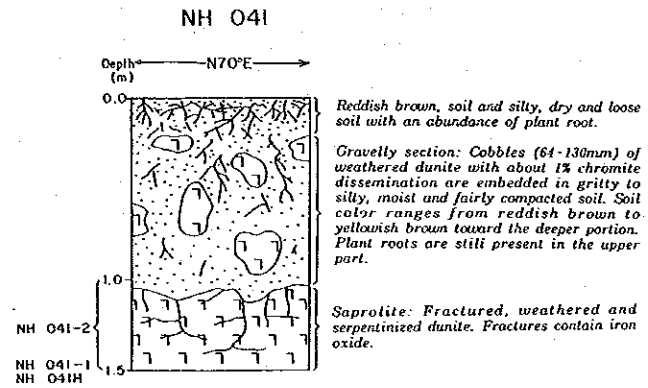
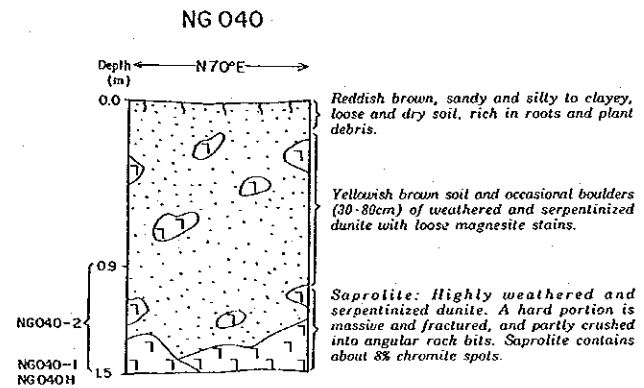
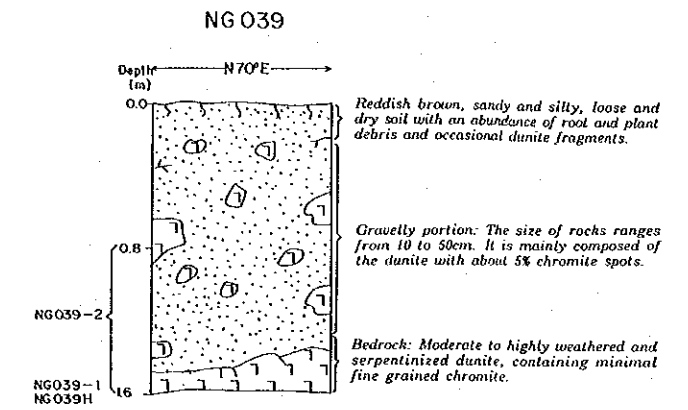
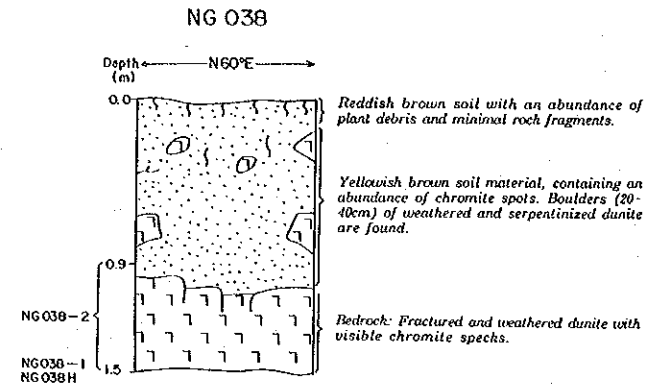
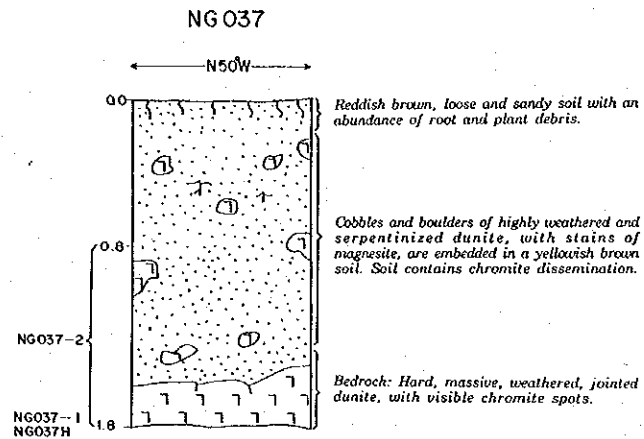
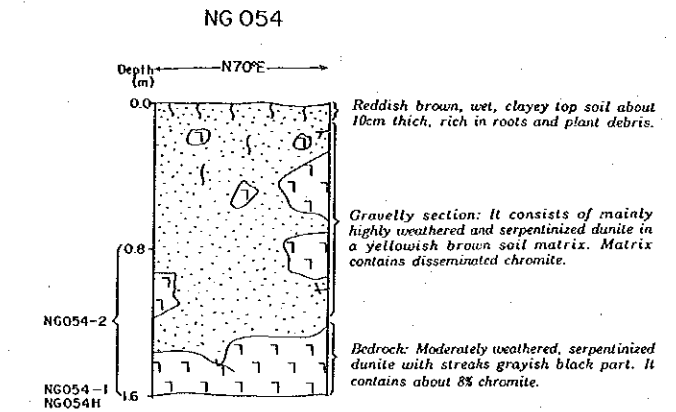
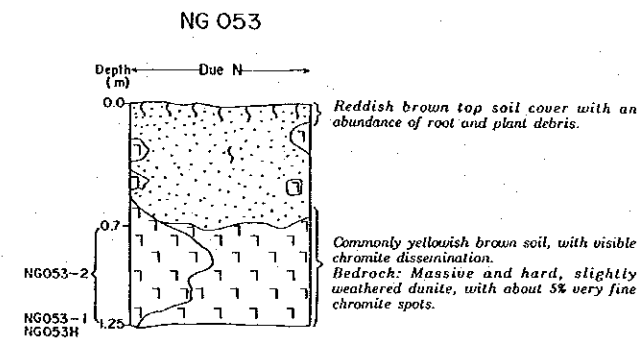
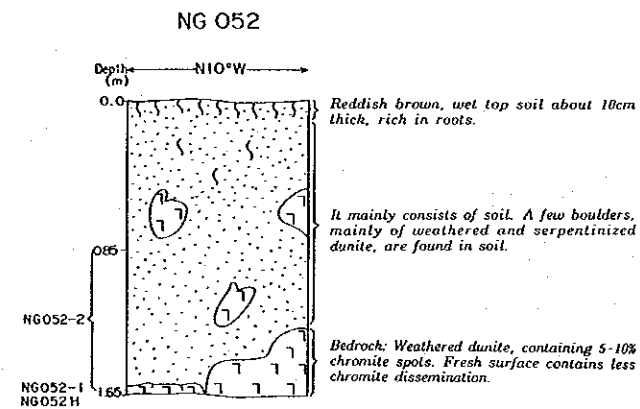
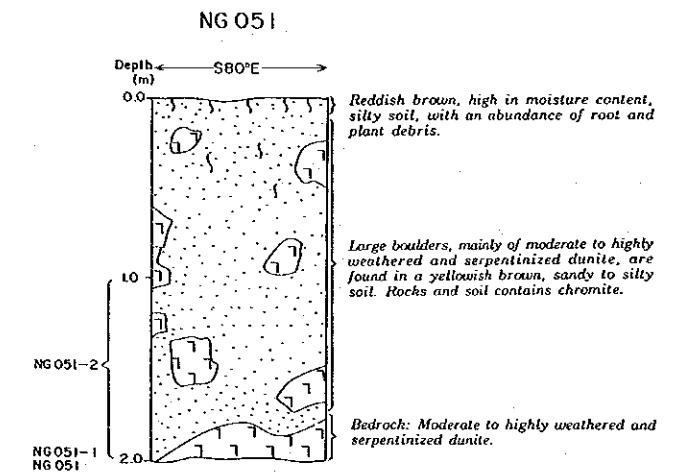
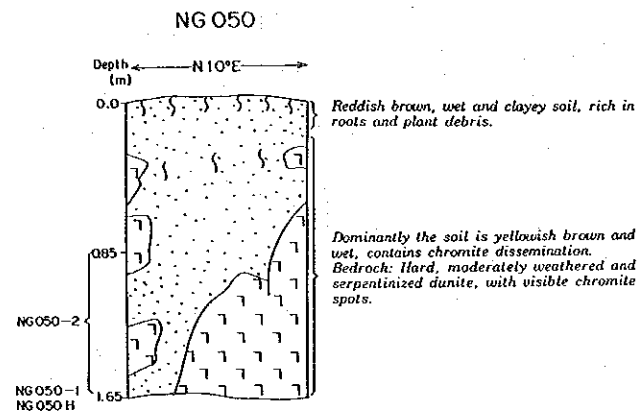
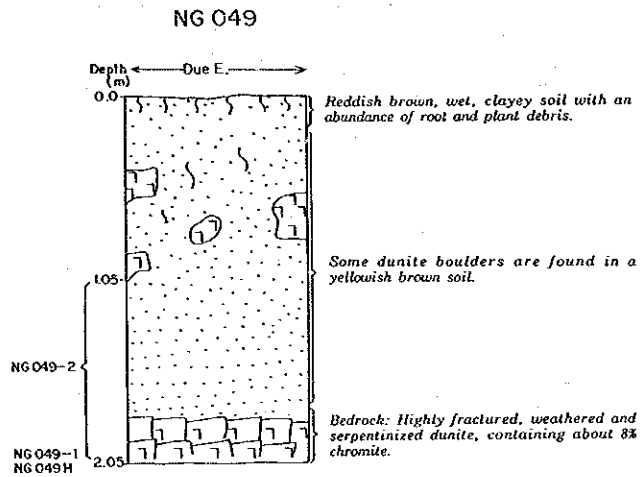
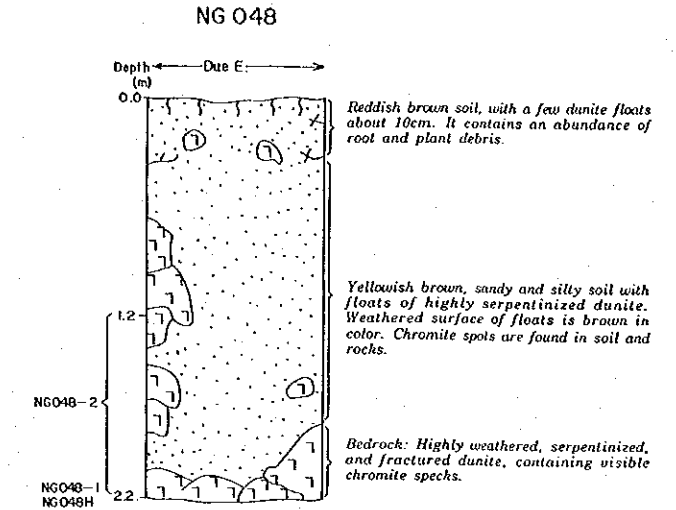
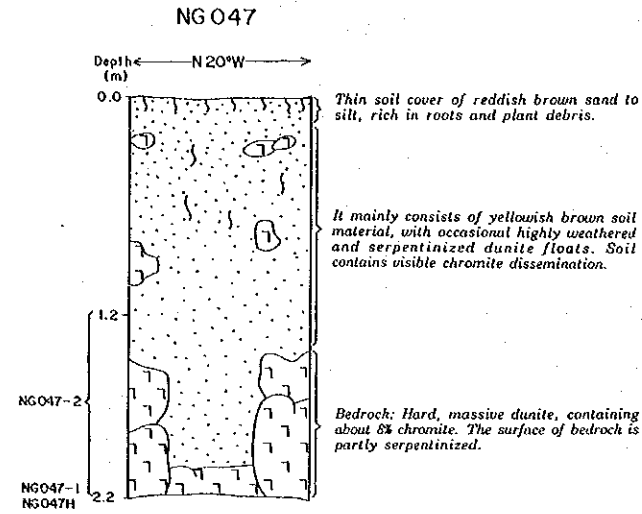
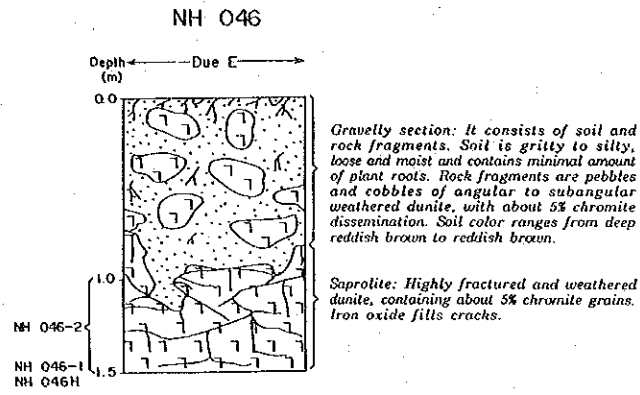
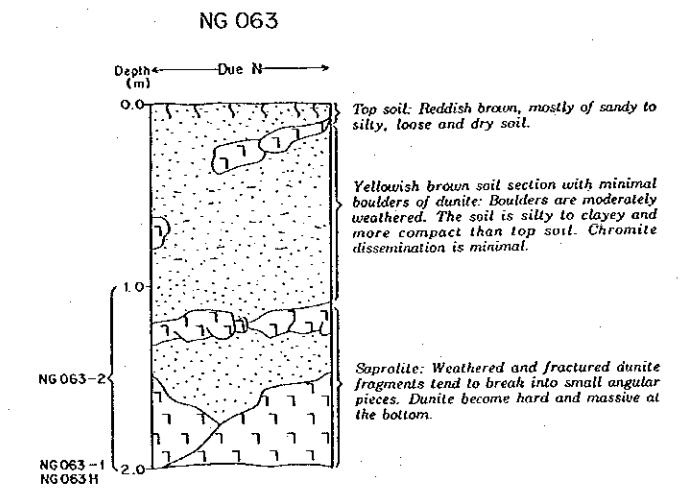
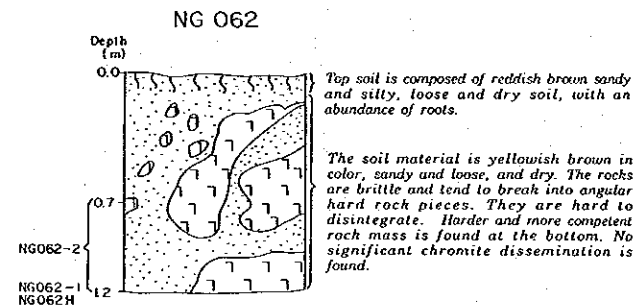
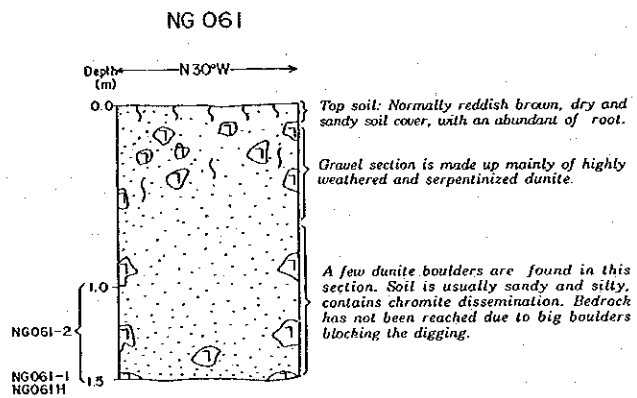
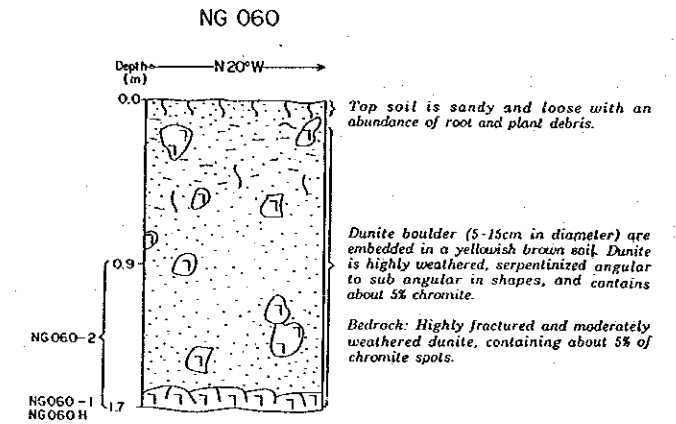
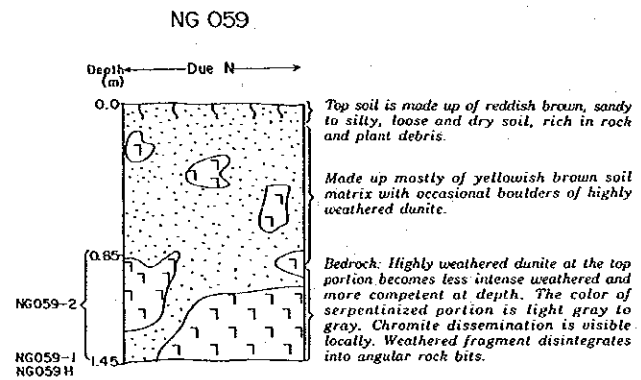
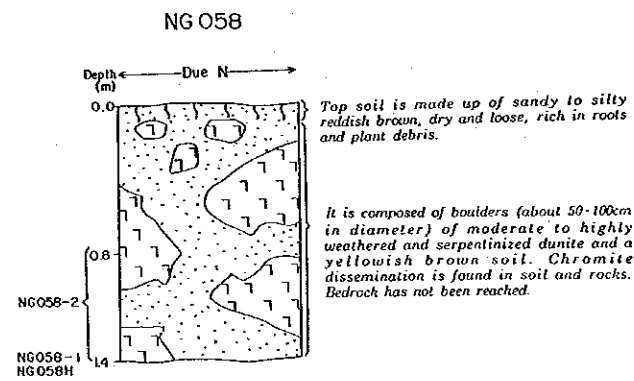
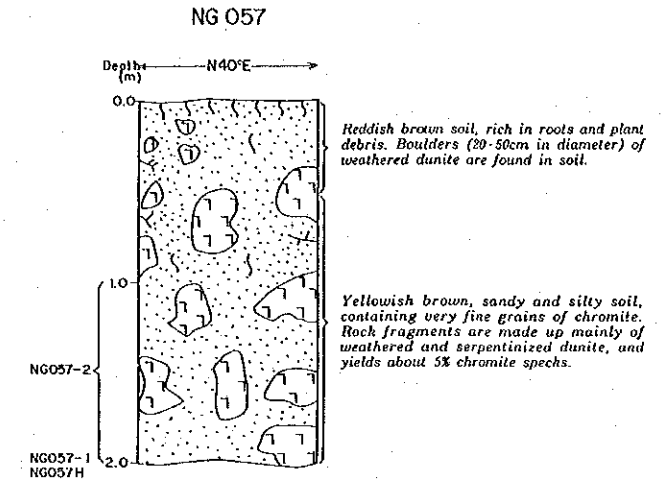
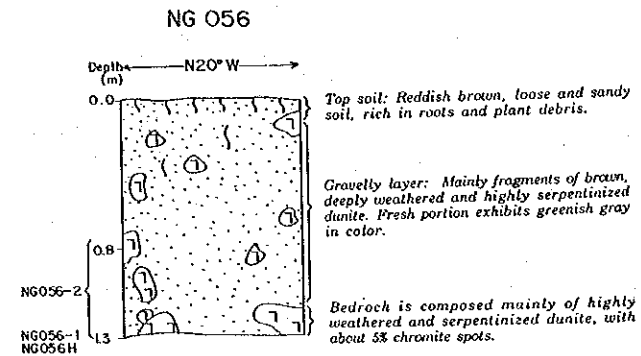
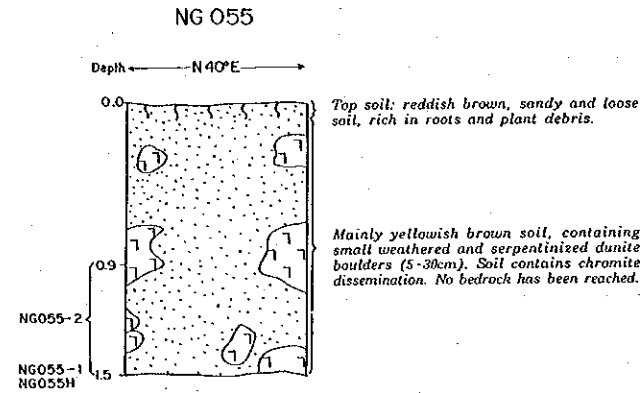


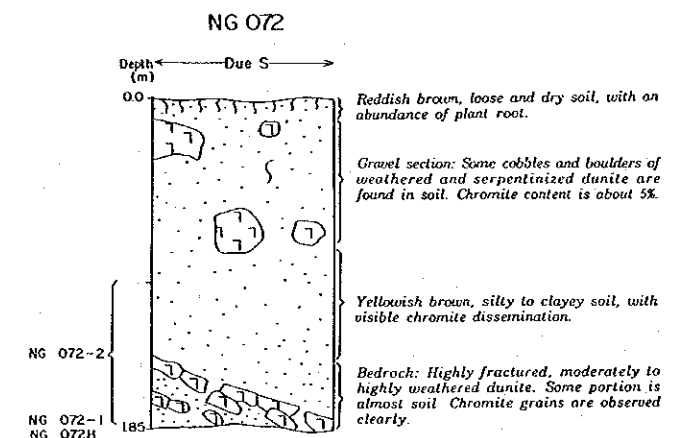
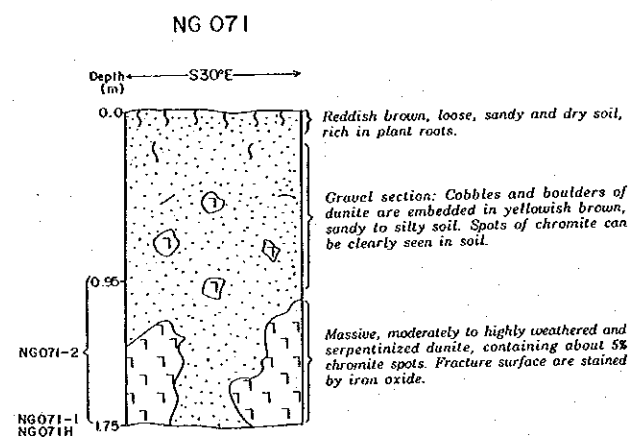
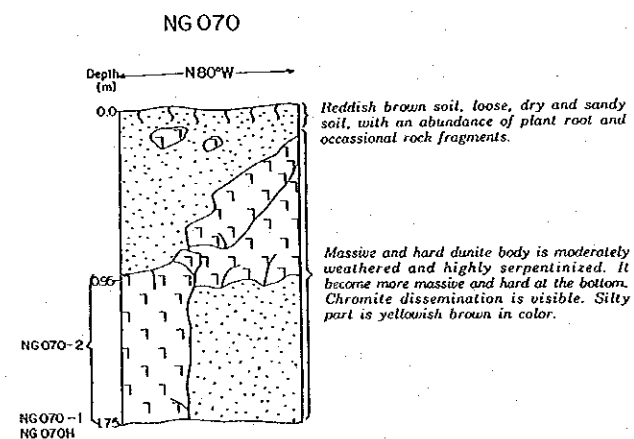
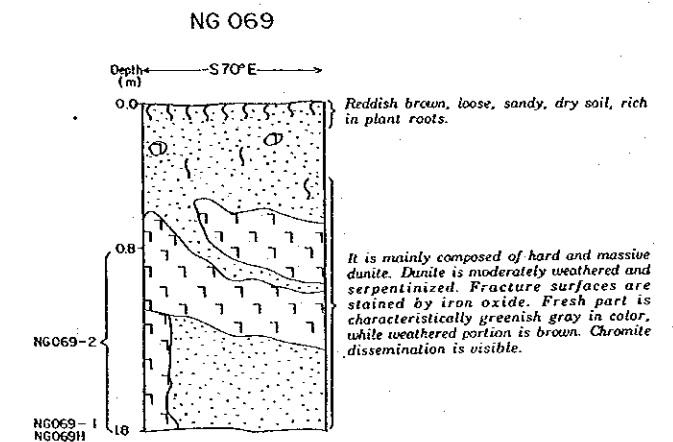
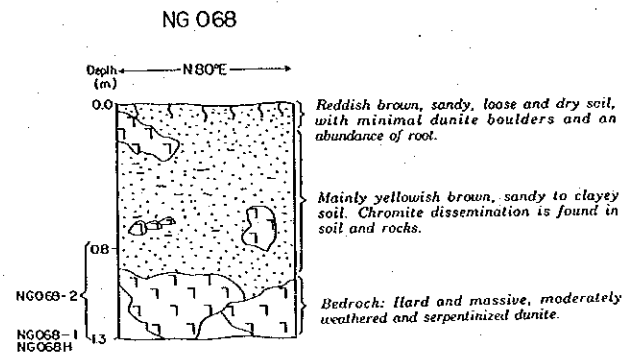
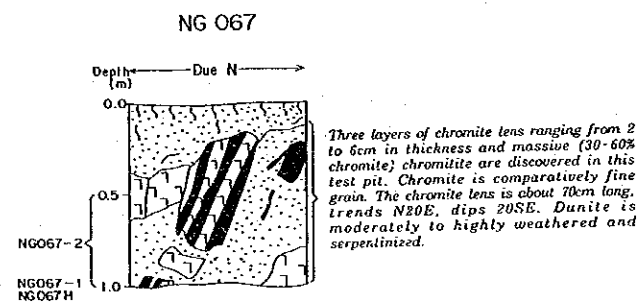
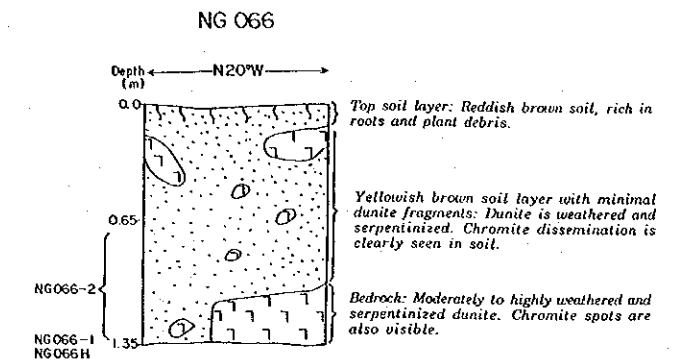
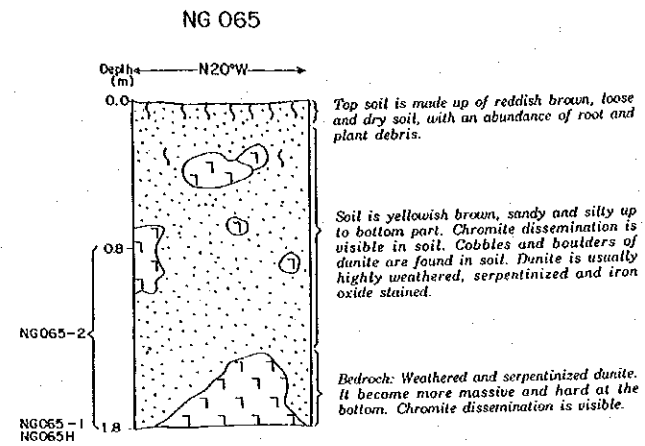
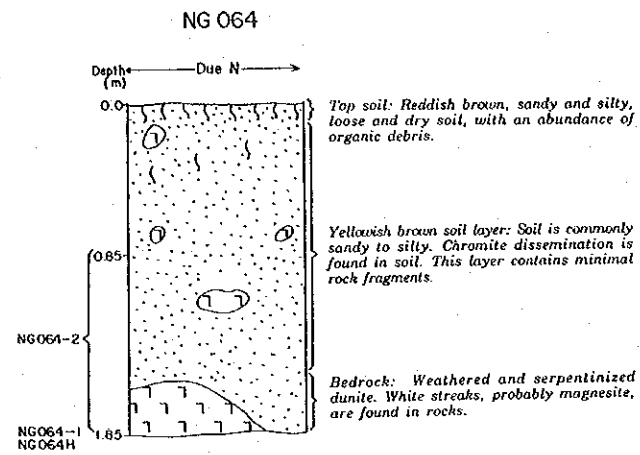
Appendix 13 Profile of test pits in the Mariwara area

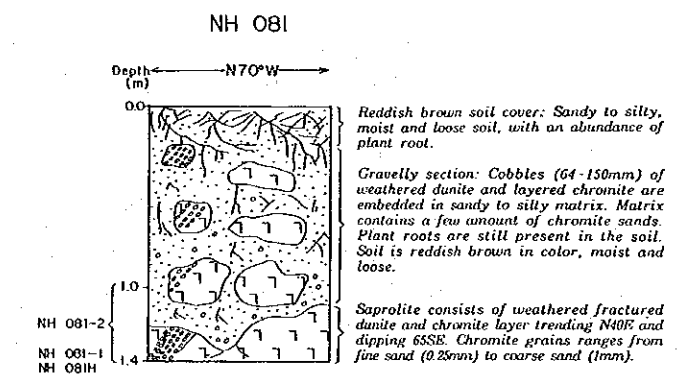
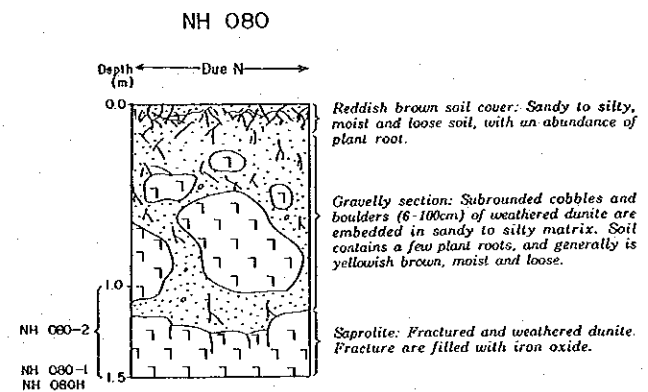
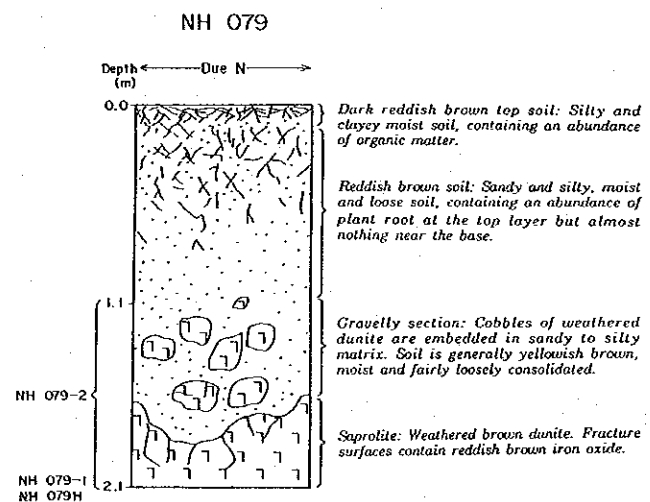
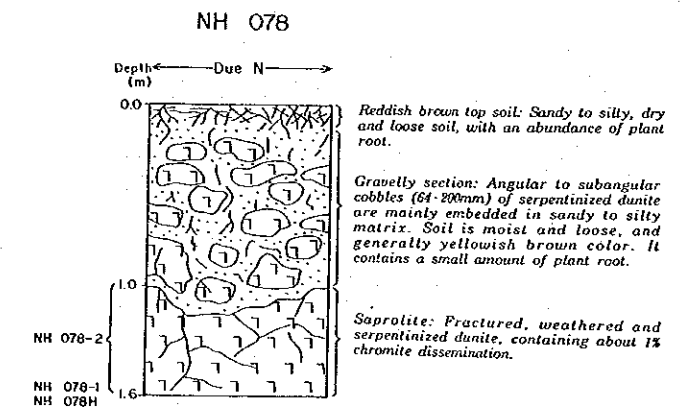
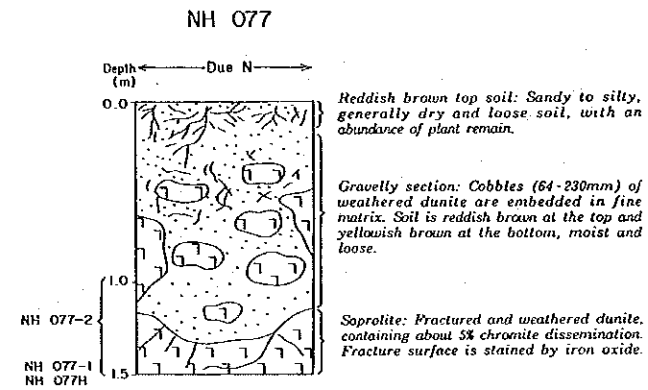
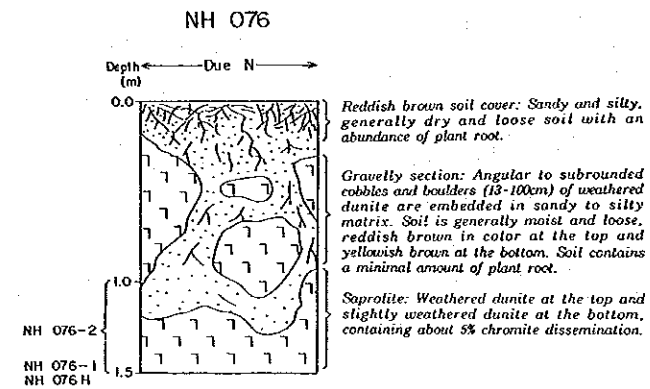
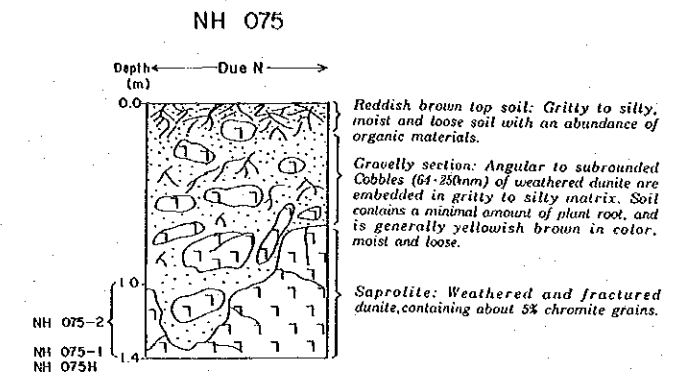
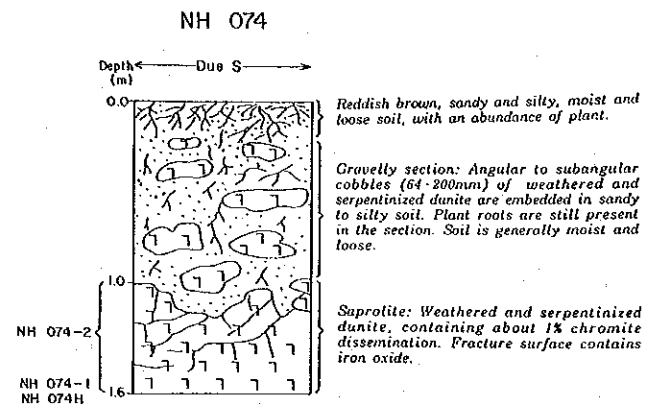
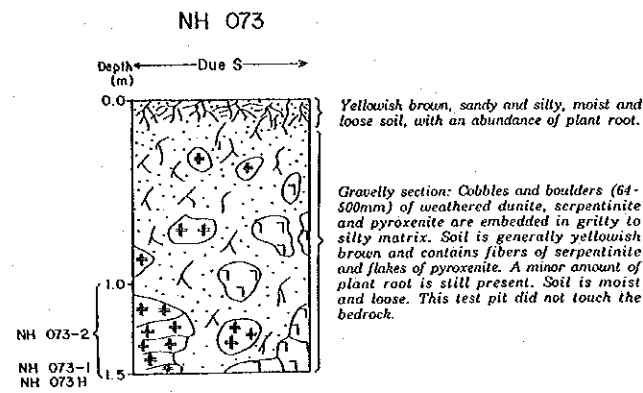


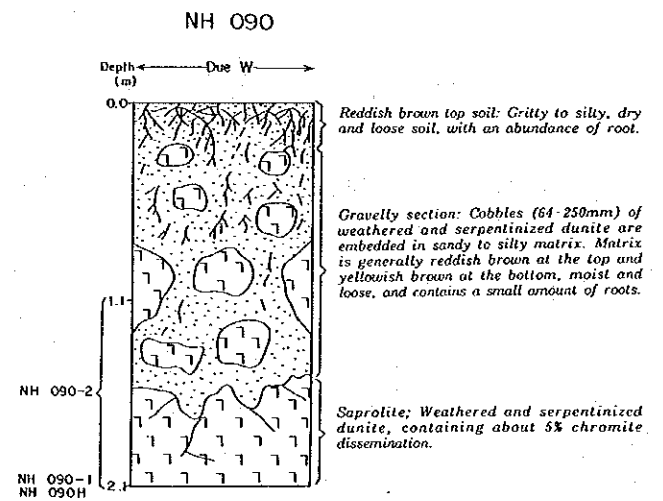
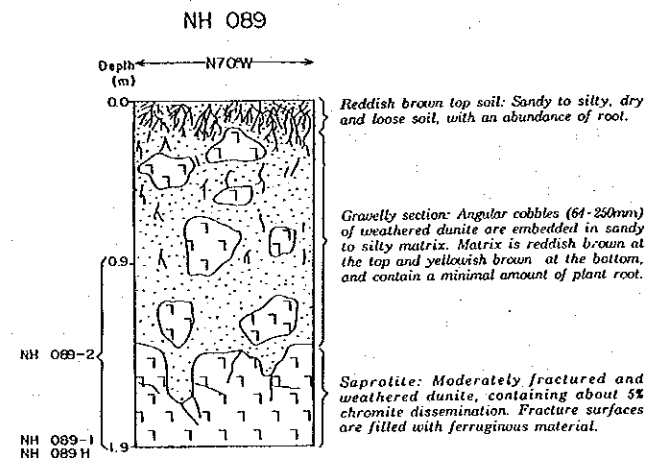
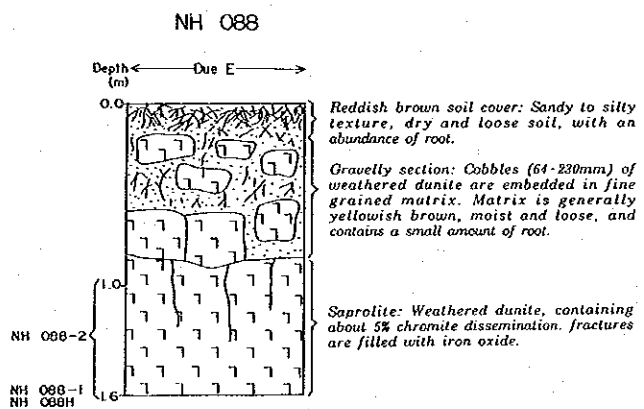
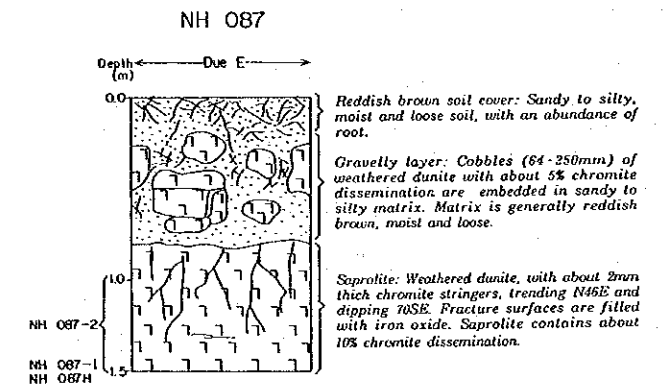
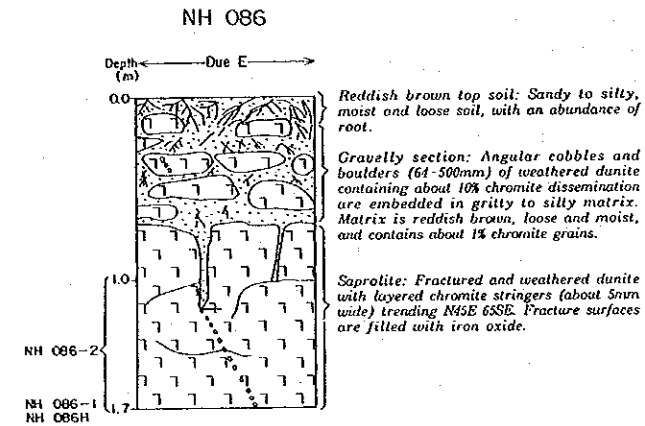
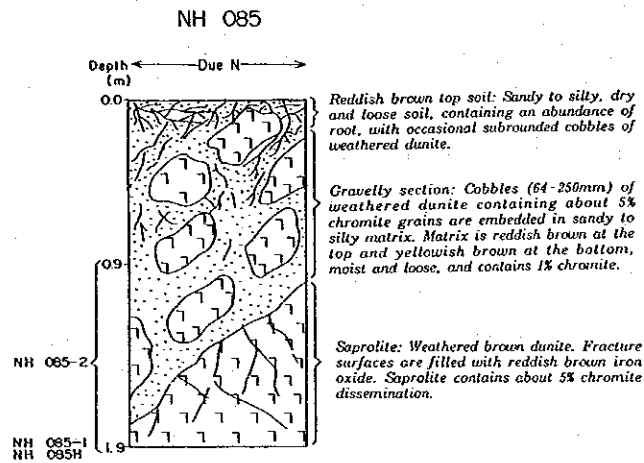
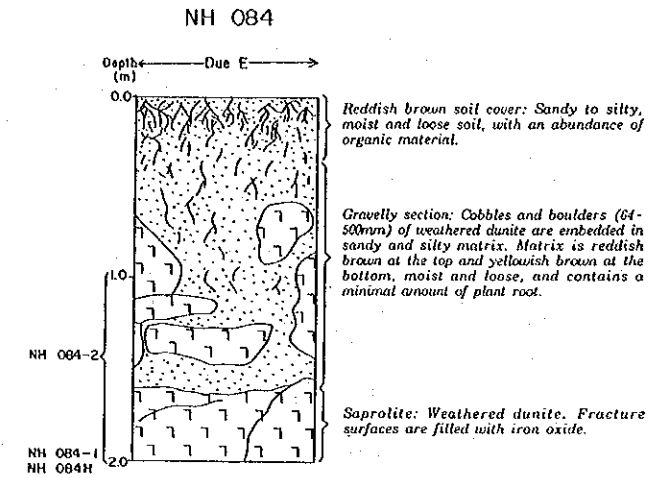
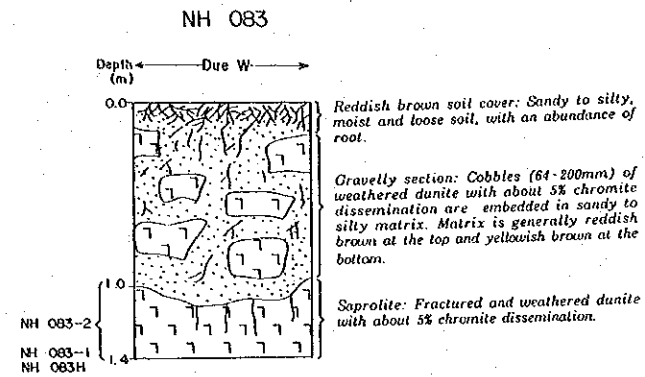
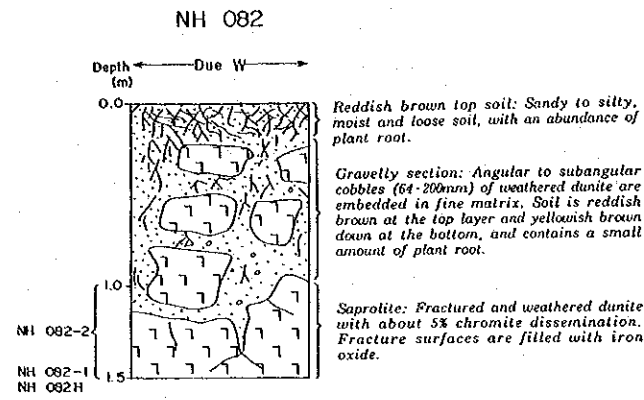


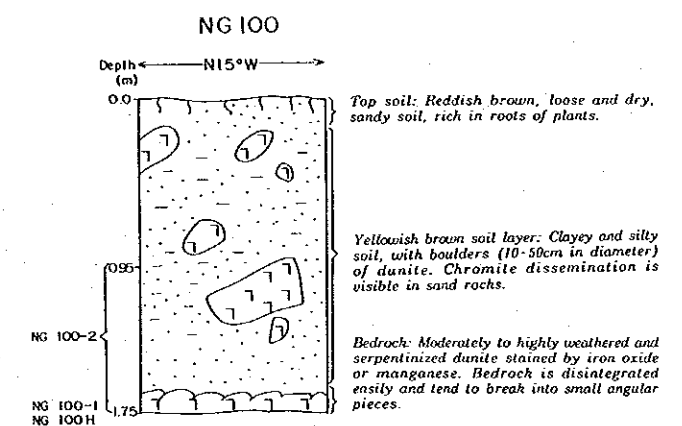
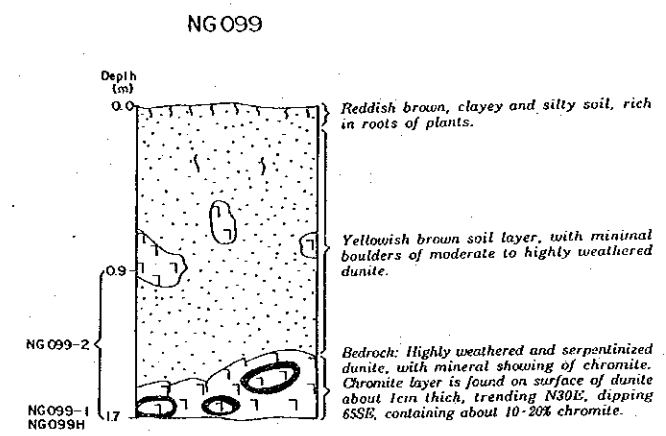
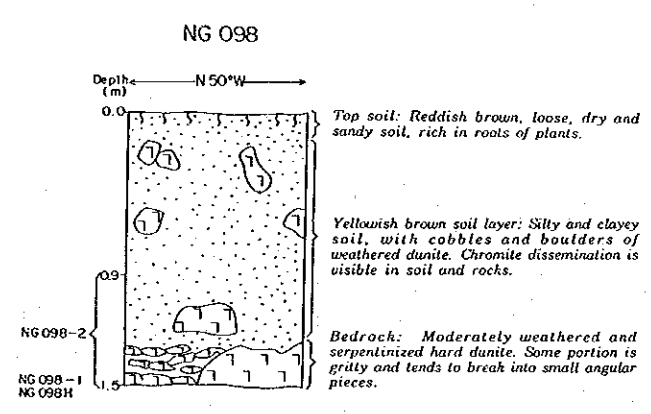
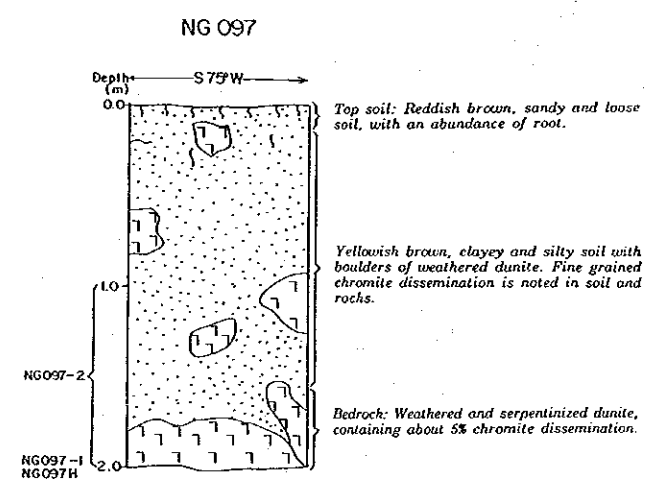
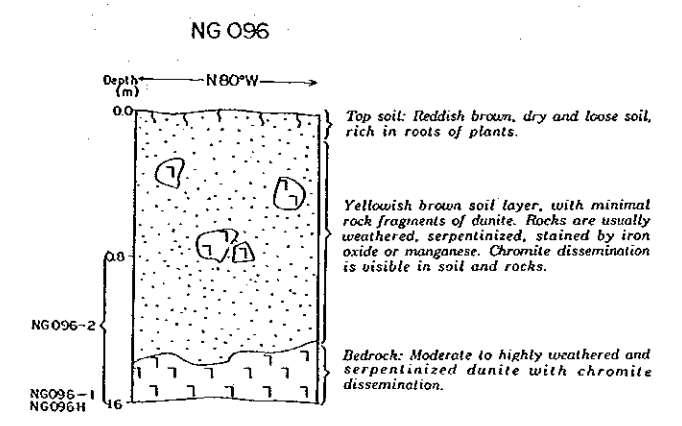
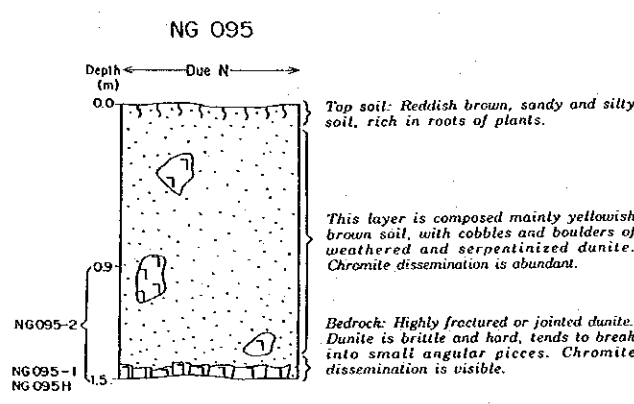
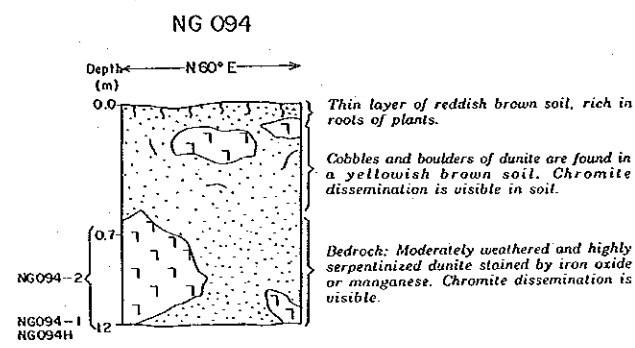
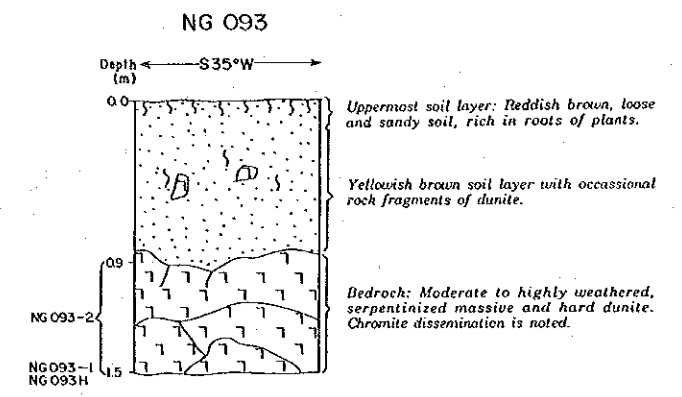
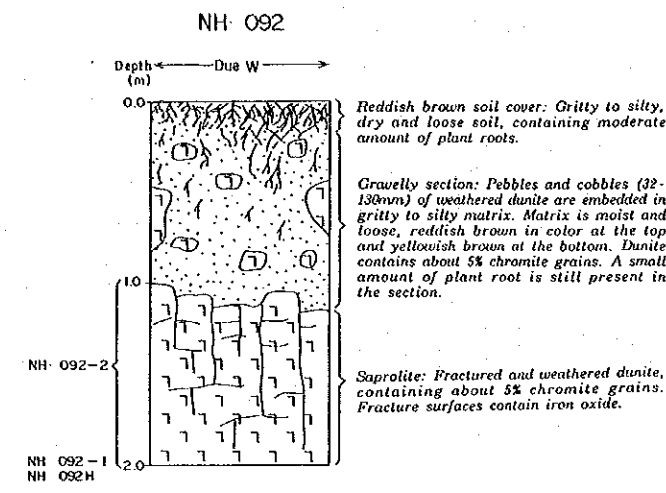
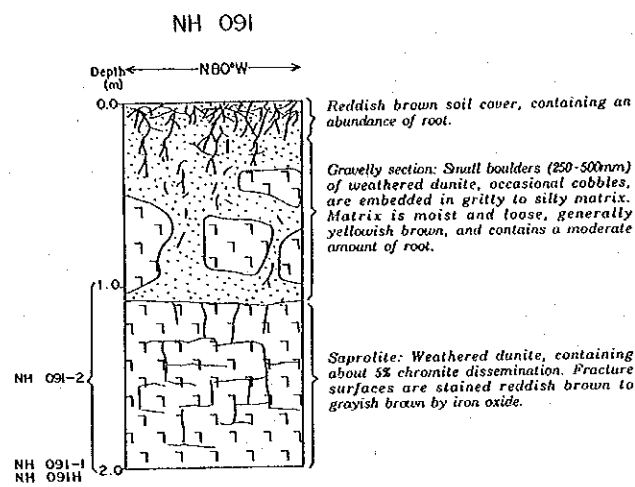












Appendix 13 Profile of test pits in the Mariwara area

Appendix 14 Element content in the Mariwara area

(2)

• 450	• 380
• 560	• 172
• 310	• 210
• 480	• 310
• 600	• 400
• 490	• 330
• 430	• 300
• 370	• 230
• 210	• 380
• 370	• 380
• 480	• 400
• 250	• 168
• 440	• 230
• 460	• 310
• 720	• 320
• 480	• 310
• 700	• 340
• 670	• 280
• 480	• 174
• 240	• 280
• 280	• 330
• 250	• 340
• 300	• 220

Co (ppm)

• 0.85	• 1.5
• 2.0	• 0.62
• 0.78	• 0.82
• 2.1	• 0.85
• 2.3	• 1.4
• 2.1	• 1.3
• 2.4	• 1.0
• 1.2	• 0.78
• 0.47	• 0.81
• 1.0	• 1.9
• 1.0	• 0.27
• 1.0	• 0.74
• 0.50	• 0.28
• 0.74	• 0.51
• 0.82	• 0.52
• 1.4	• 0.80
• 0.54	• 0.68
• 1.2	• 0.75
• 1.3	• 0.85
• 1.4	• 0.18
• 0.28	• 0.19
• 0.24	• 0.25
• 0.28	• 0.48
• 0.69	• 0.15

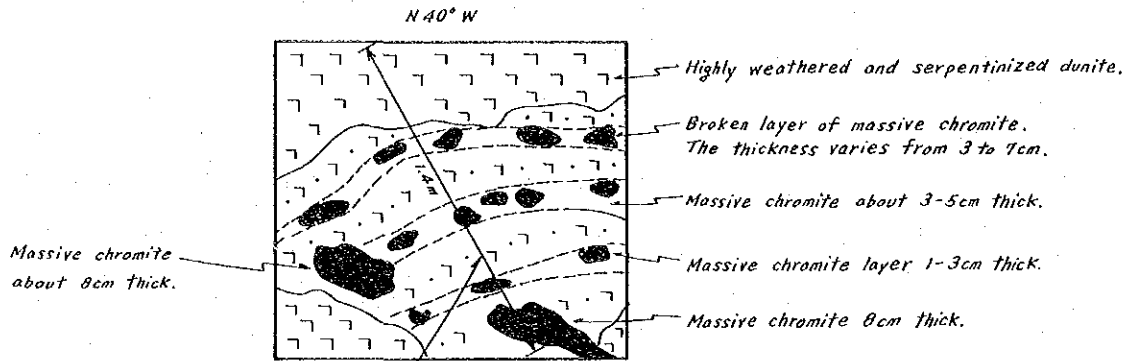
Cr (%)

• 24.8	• 18.1
• 28.4	• 11.4
• 18.1	• 12.6
• 25.7	• 18.4
• 31.0	• 8.8
• 25.3	• 18.1
• 16.1	• 15.3
• 12.3	• 17.1
• 18.8	• 12.5
• 24.9	• 18.7
• 16.4	• 18.8
• 15.1	• 10.5
• 17.2	• 19.5
• 28.1	• 16.8
• 28.4	• 13.8
• 22.7	• 21.1
• 32.0	• 18.3
• 38.0	• 18.9
• 25.1	• 21.8
• 15.3	• 10.8
• 18.5	• 12.3
• 18.2	• 15.2
• 17.1	• 20.4

Fe (%)

(One meter channel sample from the bottom to upper portion)

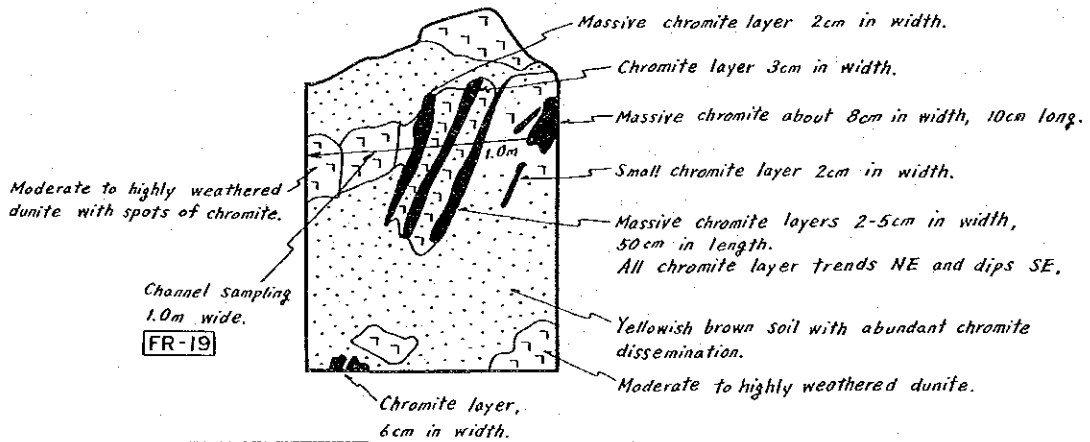
NG 034 (Bottom)



Channel sampling
1.4m wide.

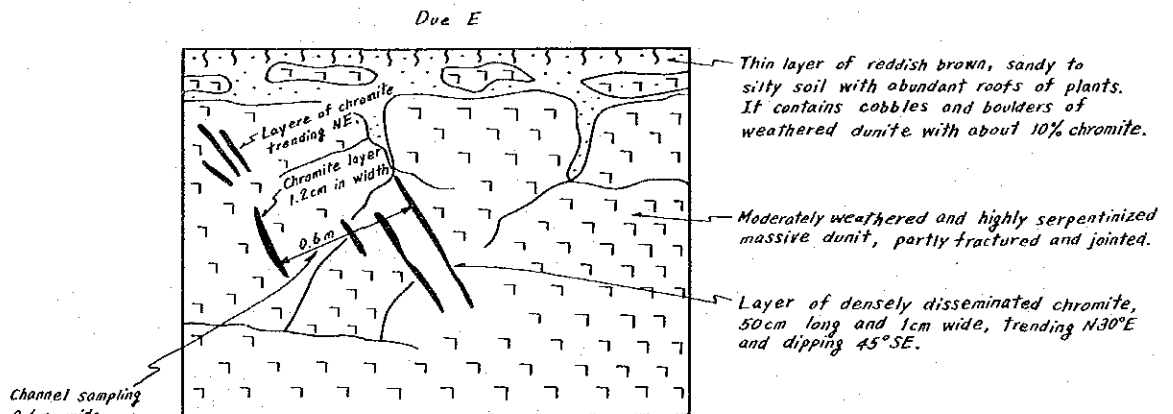
FR-17	Cr ₂ O ₃ (%)	Ni (%)	Fe (%)	Al ₂ O ₃ (%)	SiO ₂ (%)
	26.70	0.21	9.44	23.9	11.10

NG 067 (Bottom)



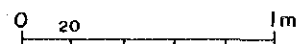
FR-19	Cr ₂ O ₃ (%)	Ni (%)	Fe (%)	Al ₂ O ₃ (%)	SiO ₂ (%)
	17.20	0.38	8.75	14.50	19.70

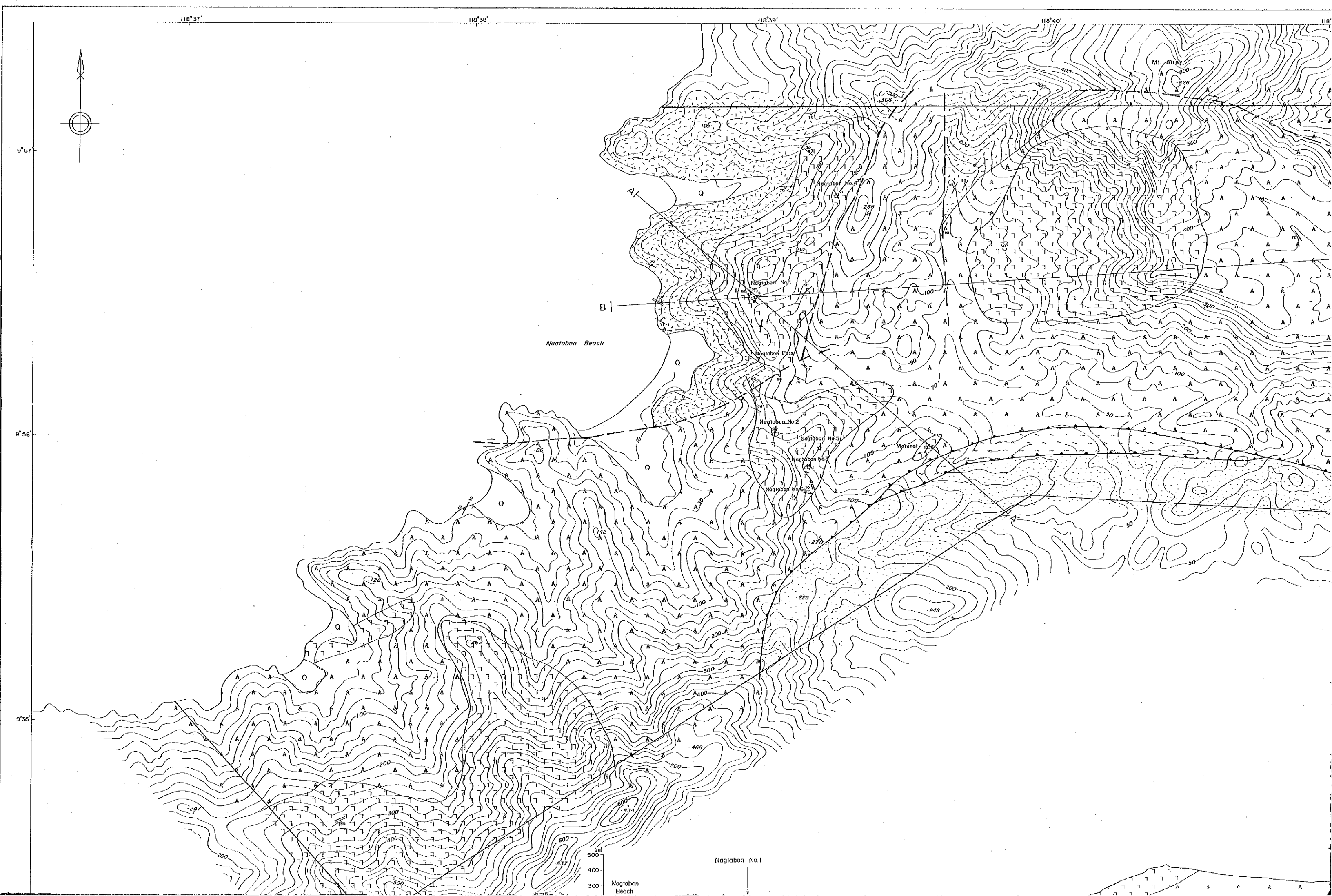
NH 086



FR-18	Cr ₂ O ₃ (%)	Ni (%)	Fe (%)	Al ₂ O ₃ (%)	SiO ₂ (%)
	3.09	0.29	6.42	6.32	38.40

Scale 1:30





118° 37'

118° 39'

118° 39'

118° 40'

118°

9° 57'

9° 56'

9° 55'

Nagtabon Beach

Mt. Airey

Nagtabon No. 2

Nagtabon No. 1

Nagtabon No. 2

Nagtabon No. 5

Nagtabon No. 6

Maranal

Nagtabon No. 1

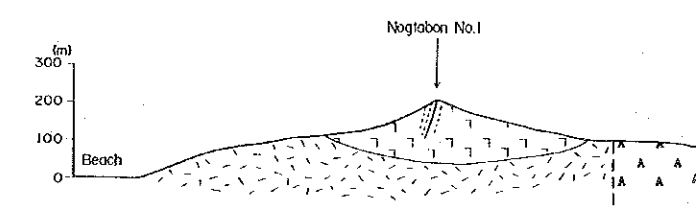
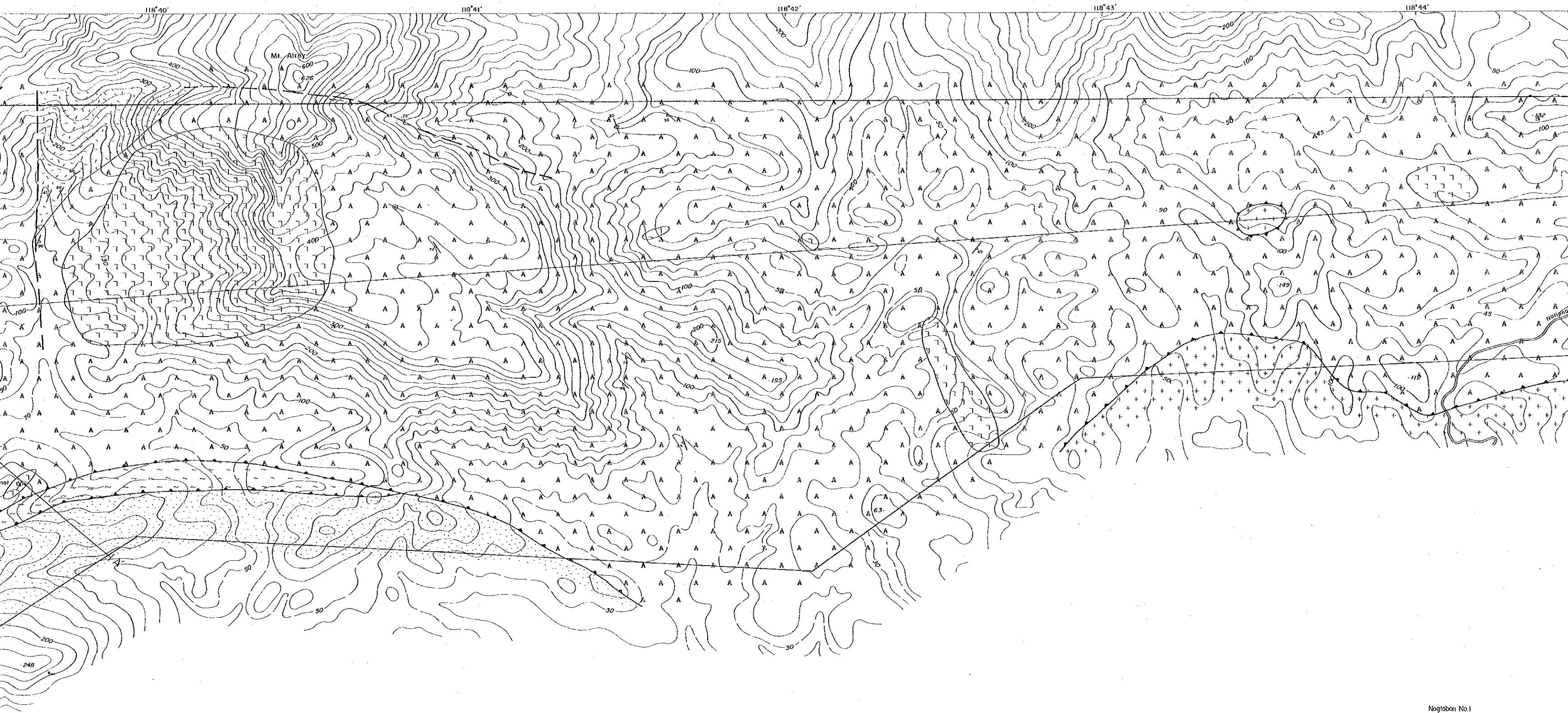
Nagtabon Beach

(m)

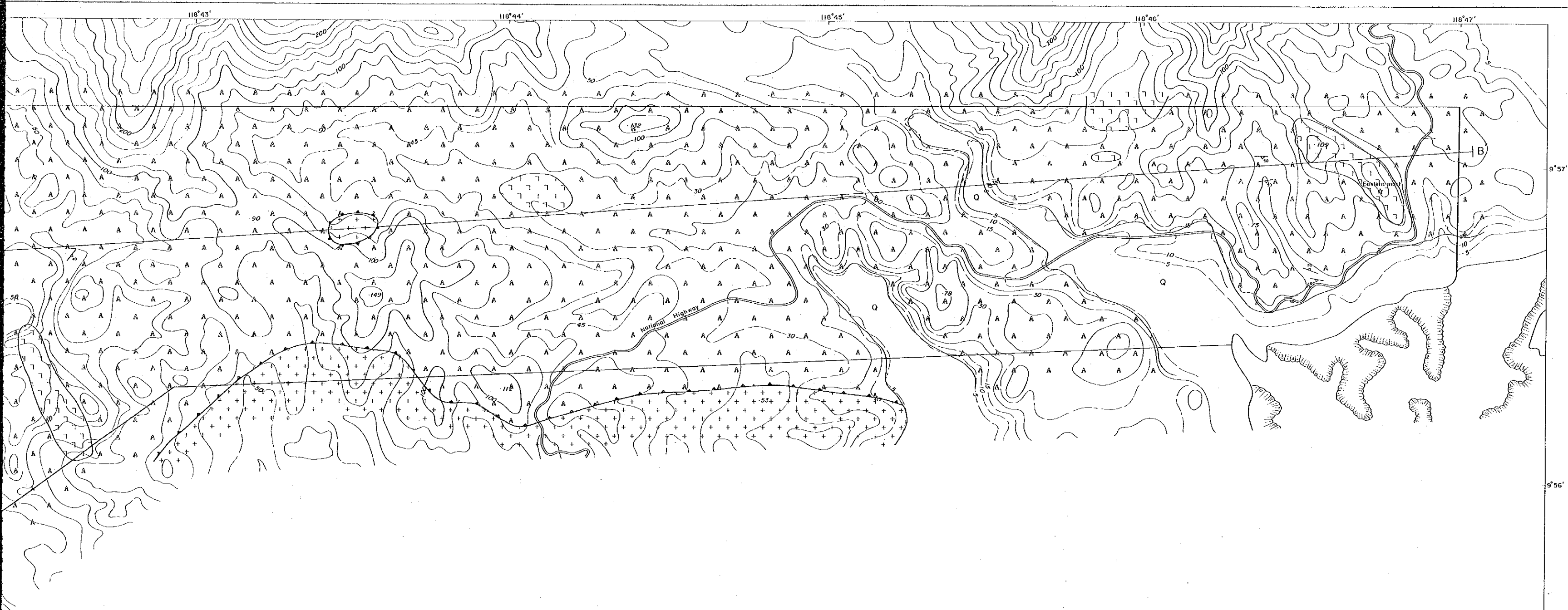
500

400

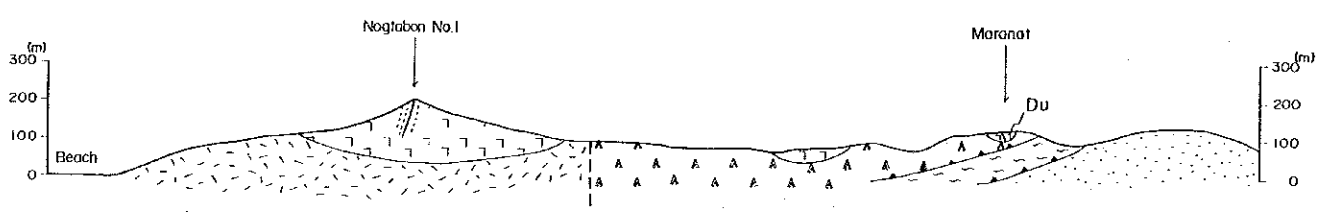
300



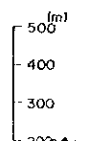
B — B'

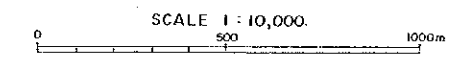
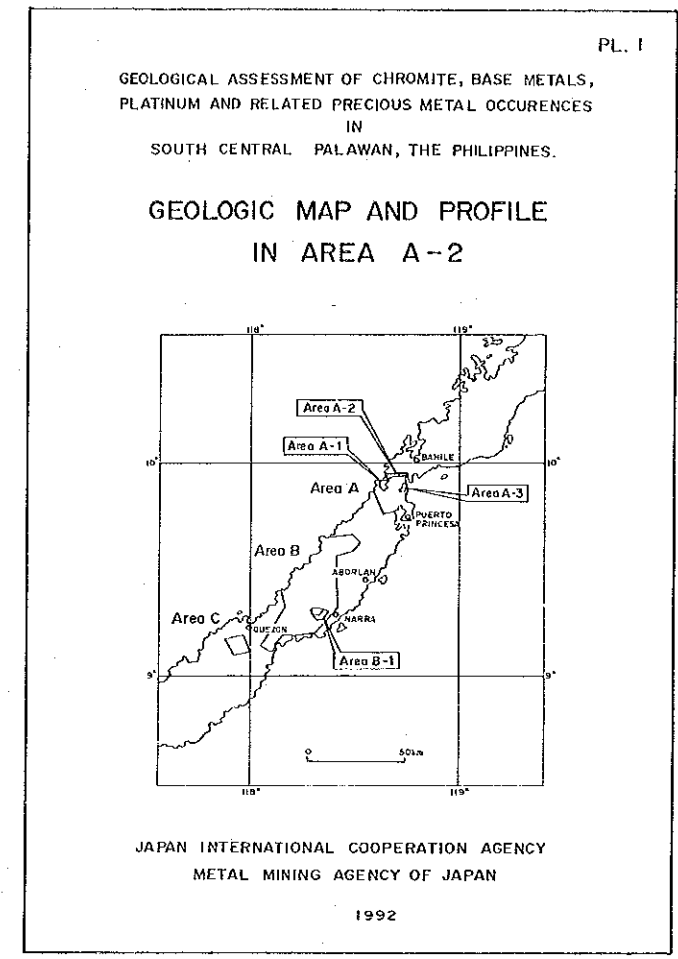
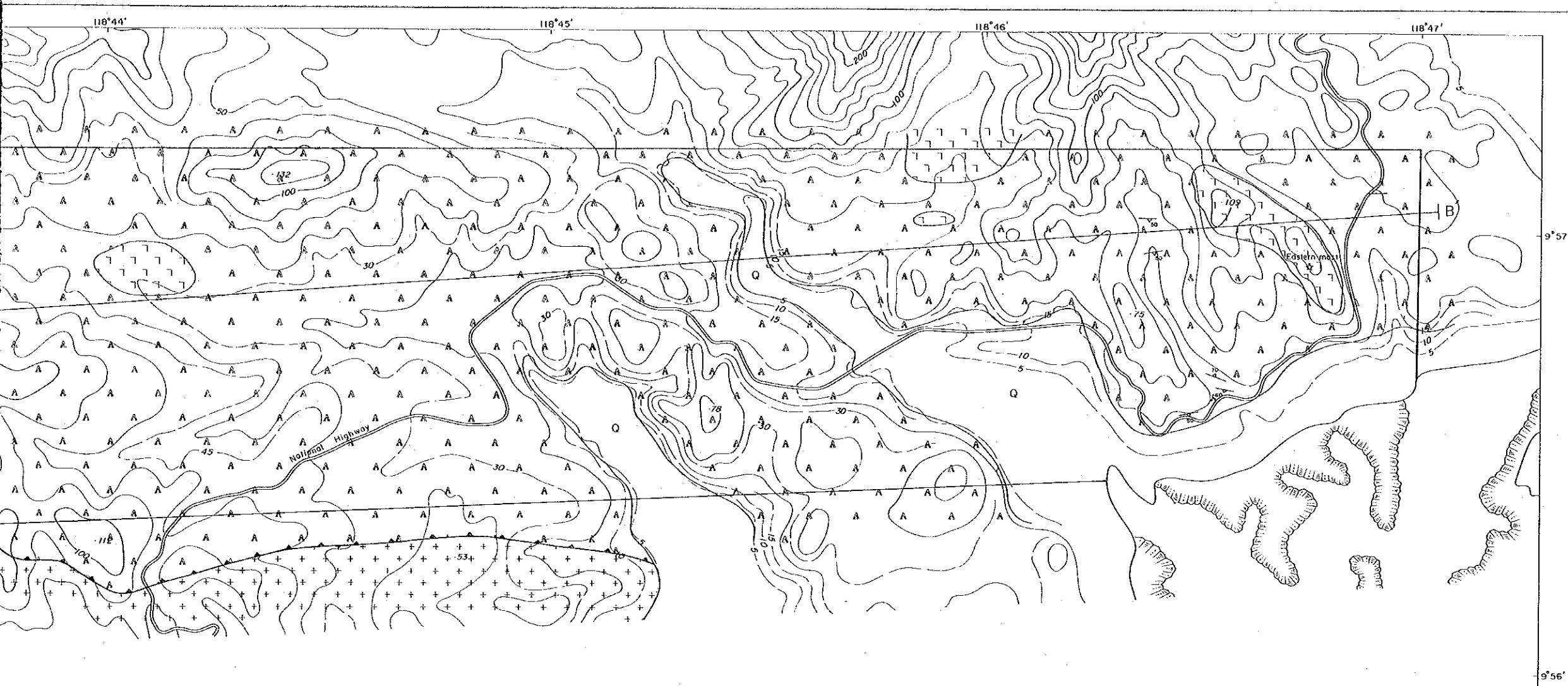


A — A'

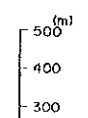
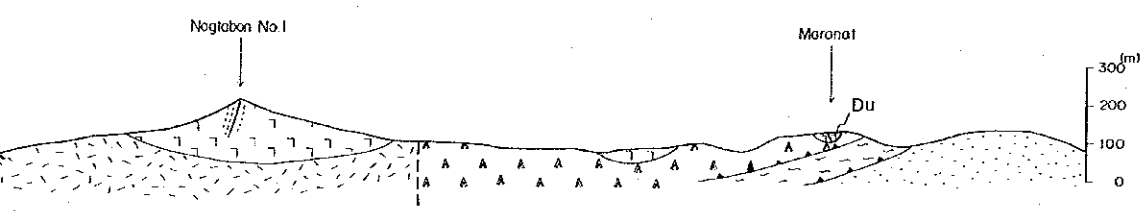


B — B'



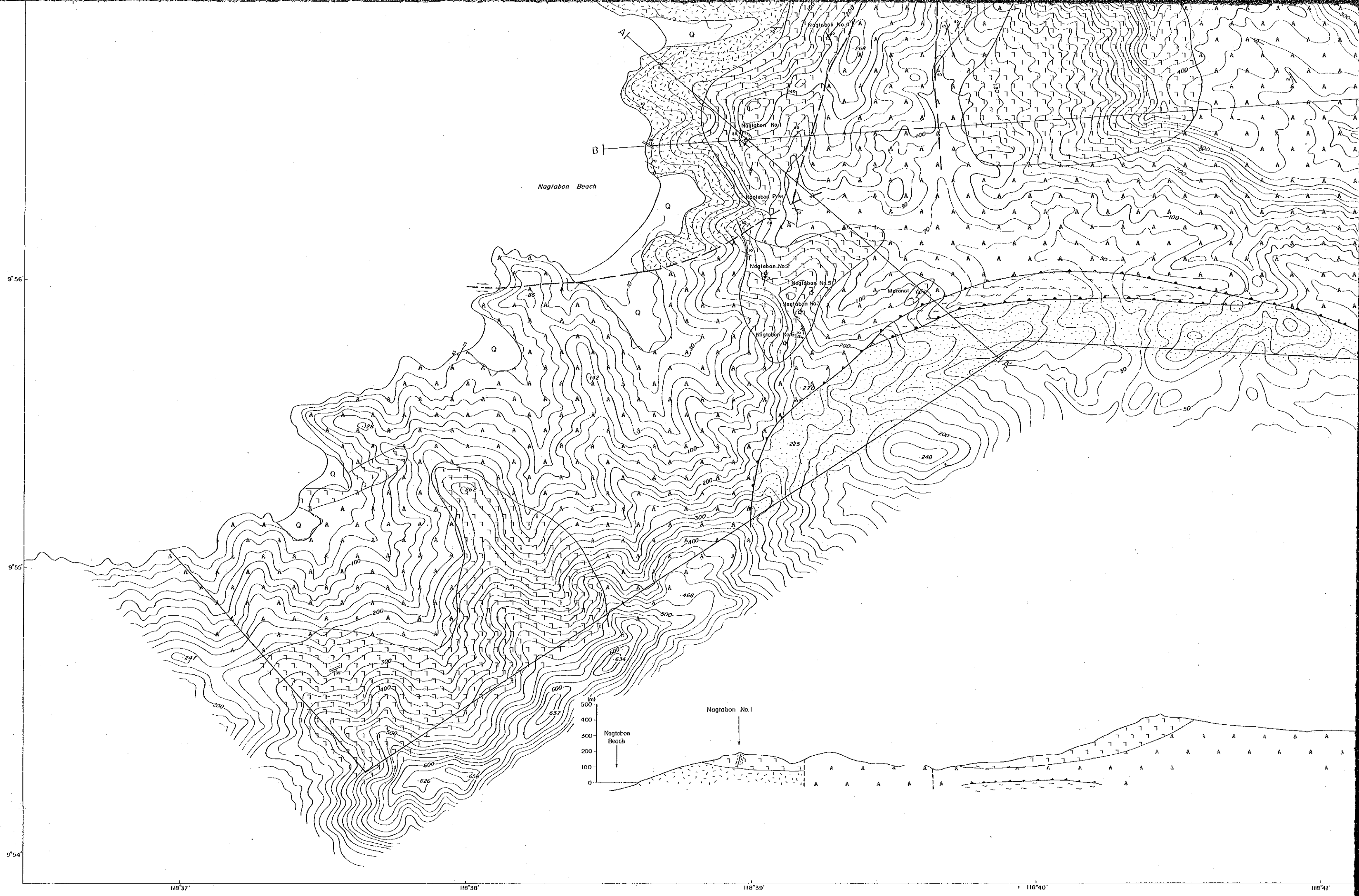


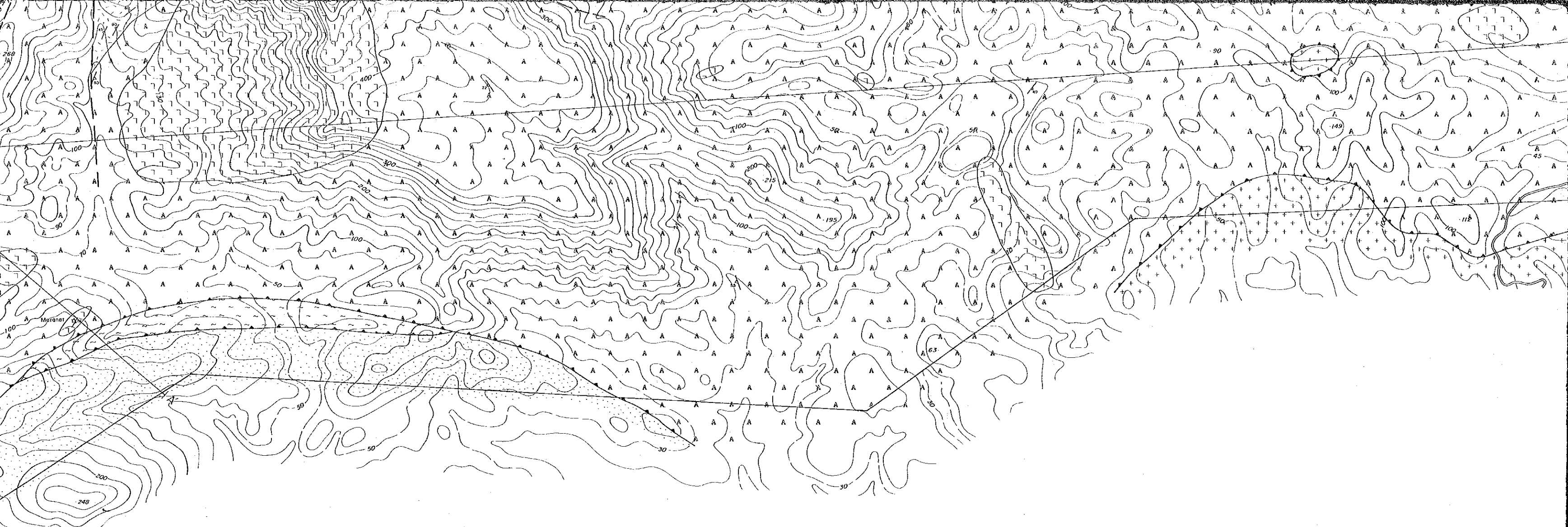
A — A'



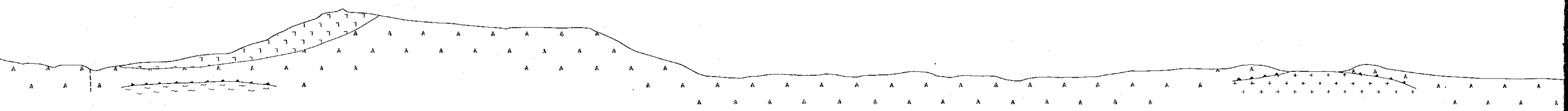
LEGEND

Alluvium	Q	Gravel, sand and silt
Sulu Sea Mine Formation	[Symbol]	Chert, conglomerate and sandstone with basaltic lava and tuff breccia
Dike	[Symbol]	Fine grained gabbro
San Vicente Gabbro	[Symbol]	Isotropic and layered gabbro
Mt. Beaufort Ultramafics	[Symbol]	Pyroxenite rich dunite
	[Symbol]	Dunite
	[Symbol]	Harzburgite
Inagaun Metamorphics	[Symbol]	Quartz schist
Structures	[Symbol]	Foliation of pyroxene
	[Symbol]	Foliation of chromite
	[Symbol]	Thrust
Others	[Symbol]	High angle fault (inferred)
	[Symbol]	Open pit
	[Symbol]	Chromite occurrence





B — B'



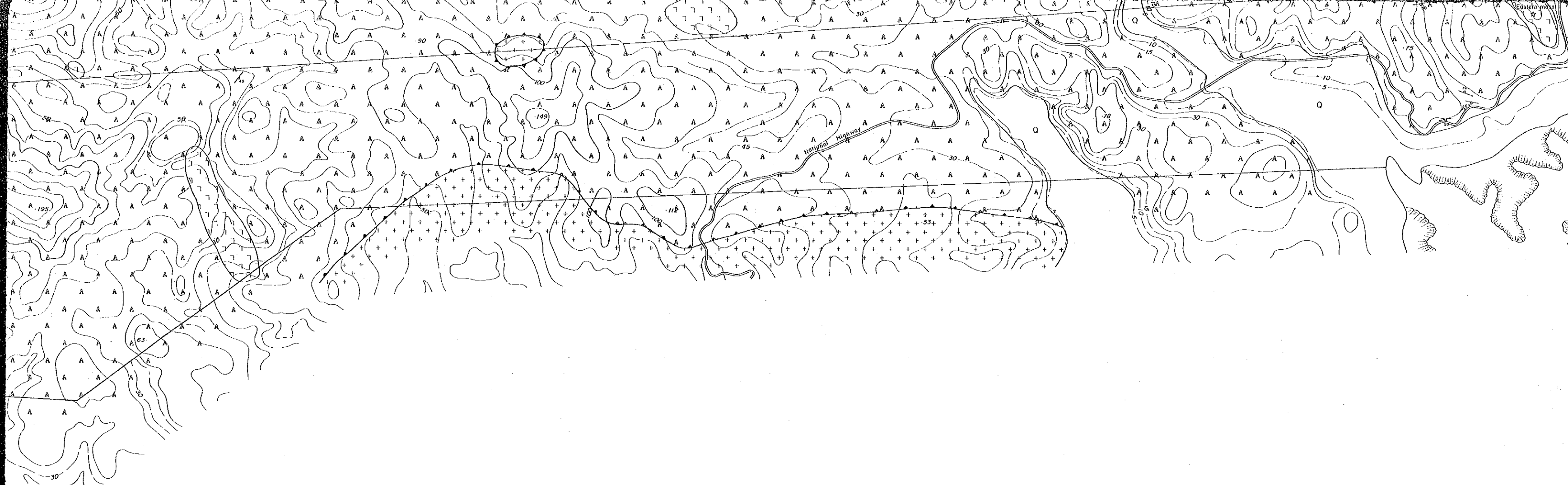
118°40'

118°41'

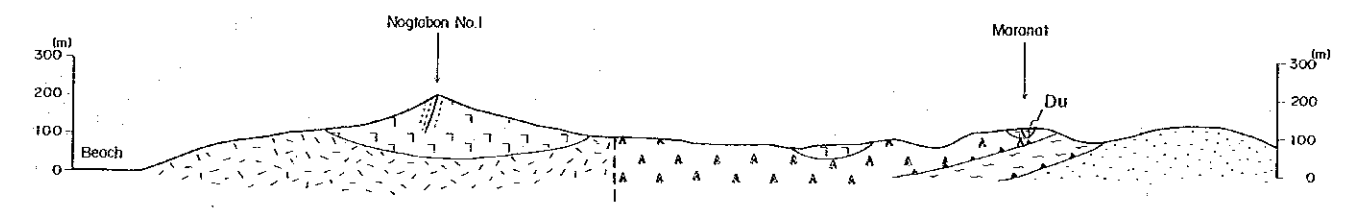
118°42'

118°43'

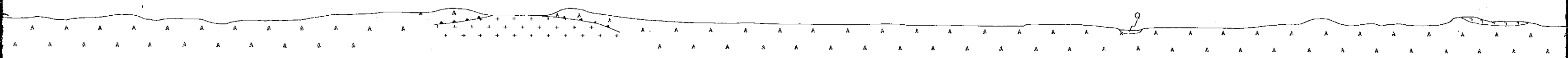
118°44'



A — A'



B — B'



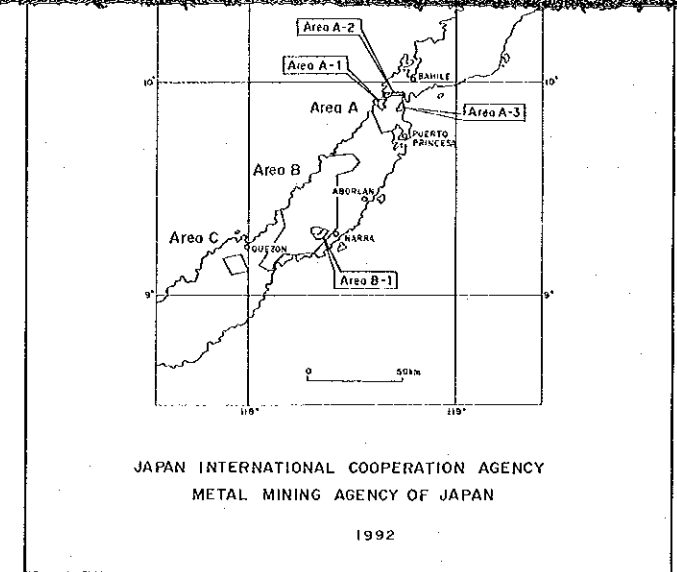
118°42'

118°43'

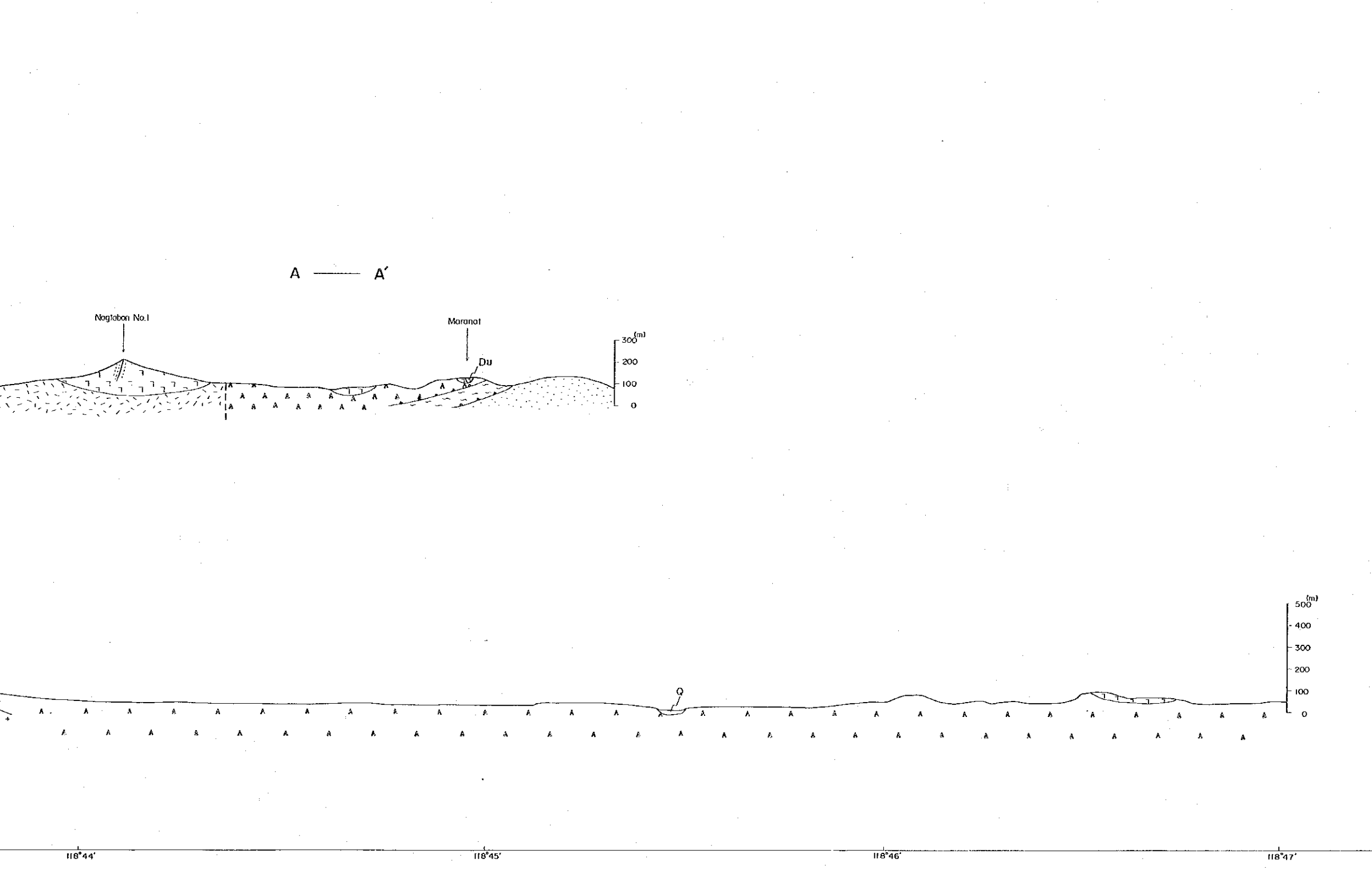
118°44'

118°45'

118°46'

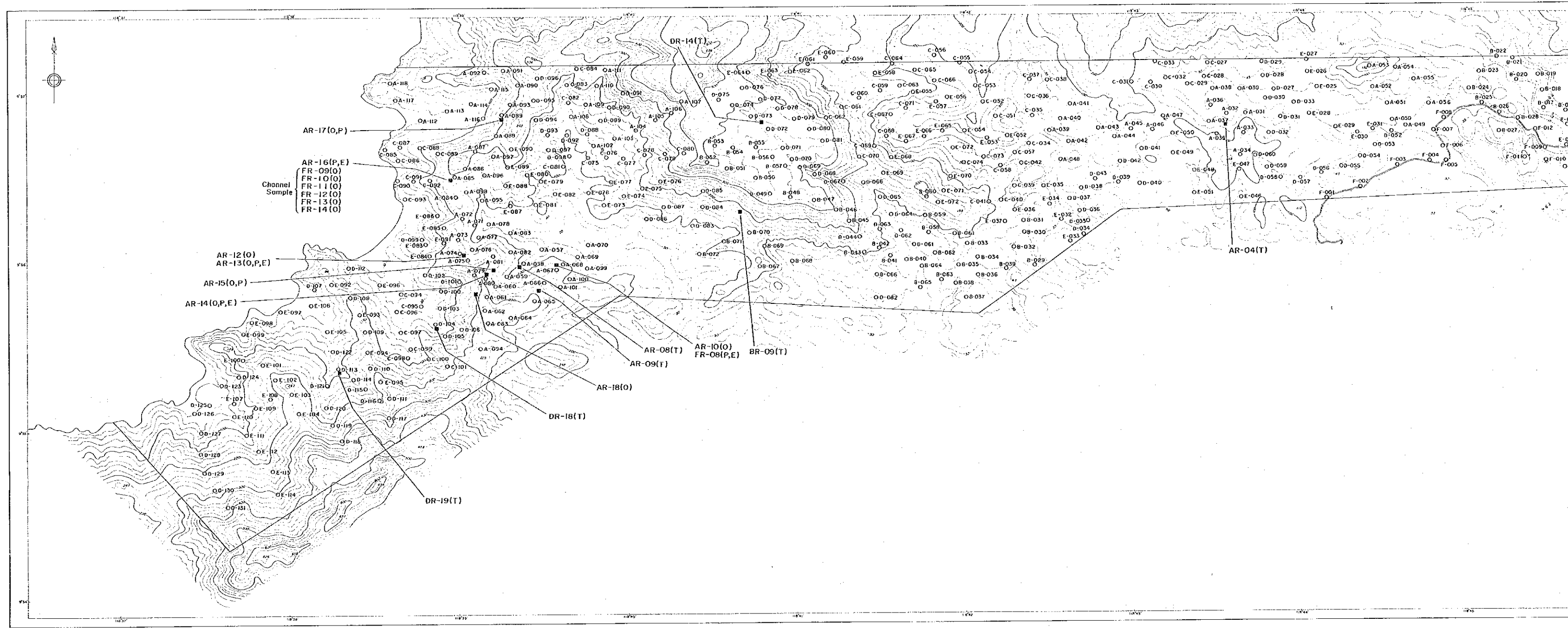


SCALE 1 : 10,000
0 500 1000m



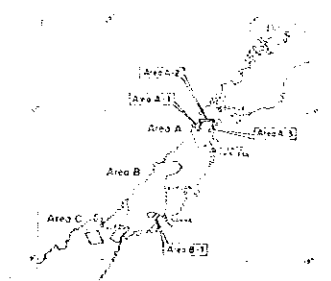
LEGEND

- | | | |
|--------------------------|--|---|
| Alluvium | | Gravel, sand and silt |
| Sulu Sea Mine Formation | | Chert, conglomerate and sandstone with basaltic lava and tuff breccio |
| Dike | | Fine grained gabbro |
| San Vicente Gabbro | | Isotropic and layered gabbro |
| Mt. Beaufort Ultramafics | | Pyroxenite rich dunite |
| | | Dunite |
| | | Hornblende gabbro |
| Inagaan Metamorphics | | Quartz schist |
| Structures | | Foliation of pyroxene |
| | | Foliation of chromite |
| | | Thrust |
| | | High angle fault (inferred) |
| Others | | Open pit |
| | | Chromite occurrence |
| | | Geologic profile line |



GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURRENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES

LOCALITY MAP OF ROCK AND GEOCHEMICAL
SOIL SAMPLES IN AREA A-2

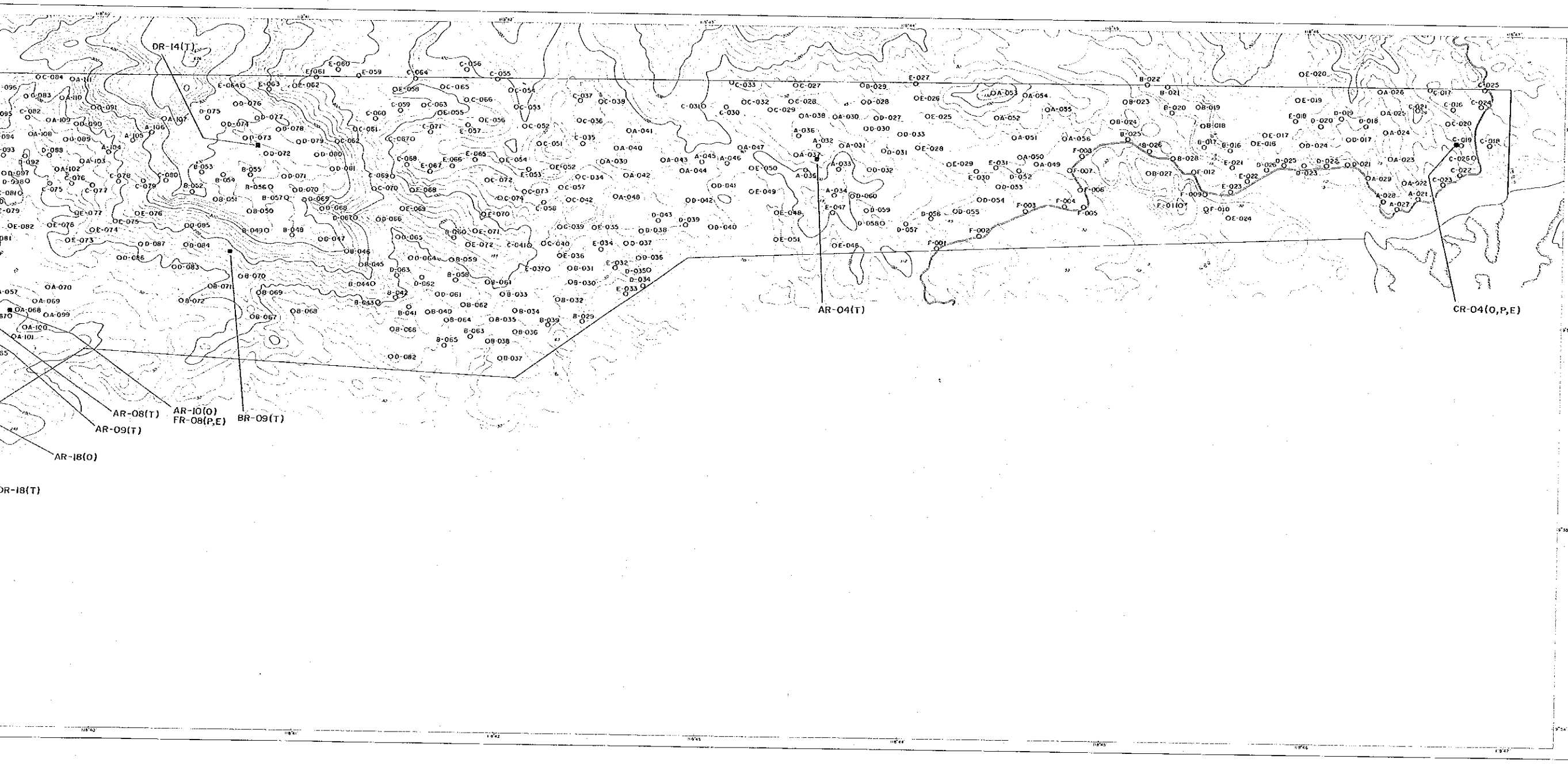


JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
1997

SCALE 1:20,000
0 500 1000m

LEGEND

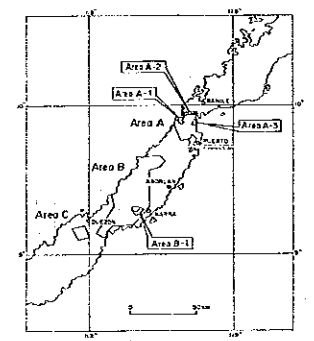
- F-001 Soil Sample Number
- AR-15(O, T, P, E) Rock Sample Number
 - └─ EPMA
 - └─ Polished Thin Section
 - └─ Thin Section
 - └─ Ore Assay



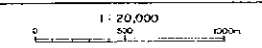


GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURRENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES.

NI CONTENT OF SOIL SAMPLES
IN AREA A-2



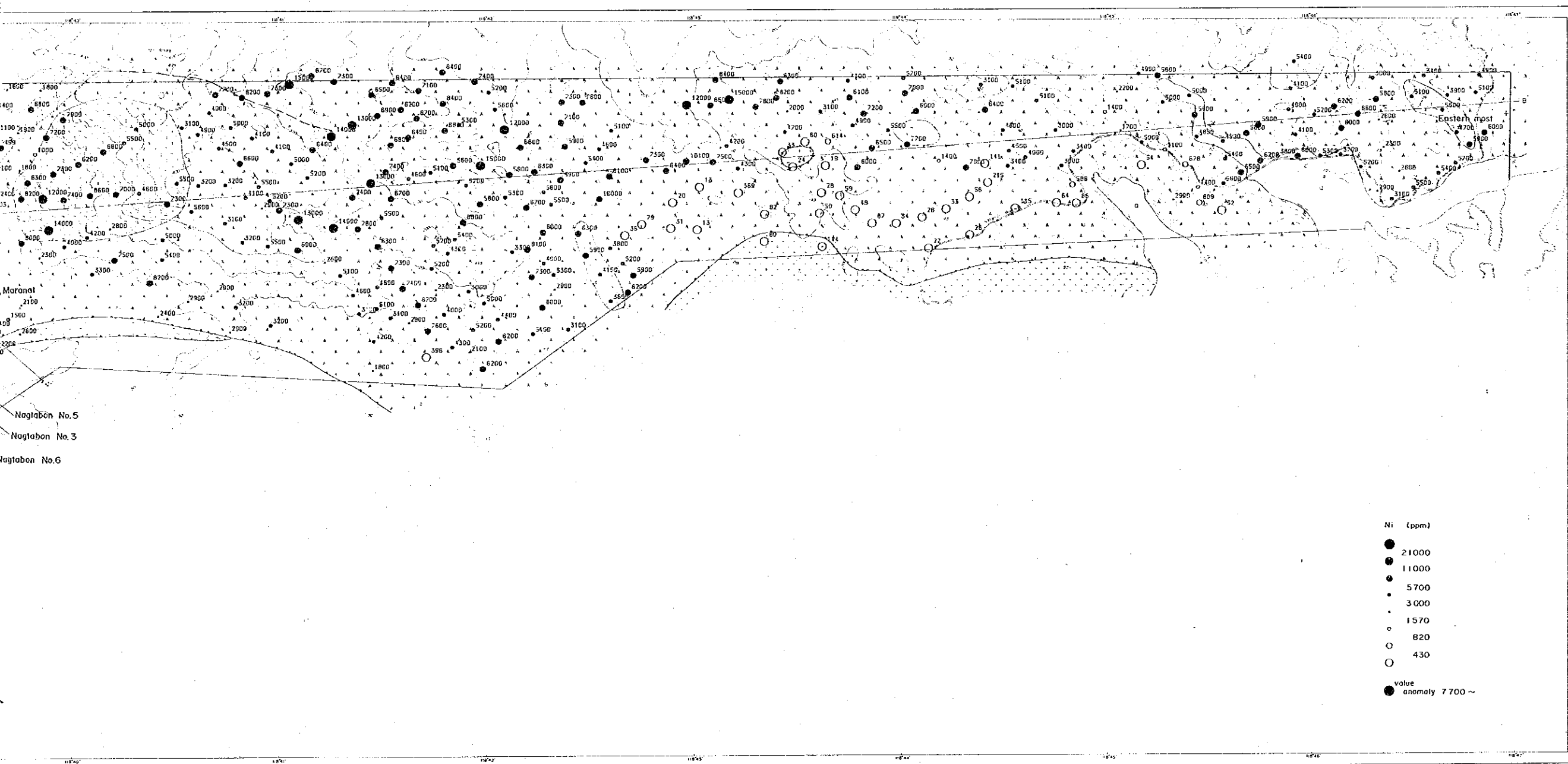
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
1992

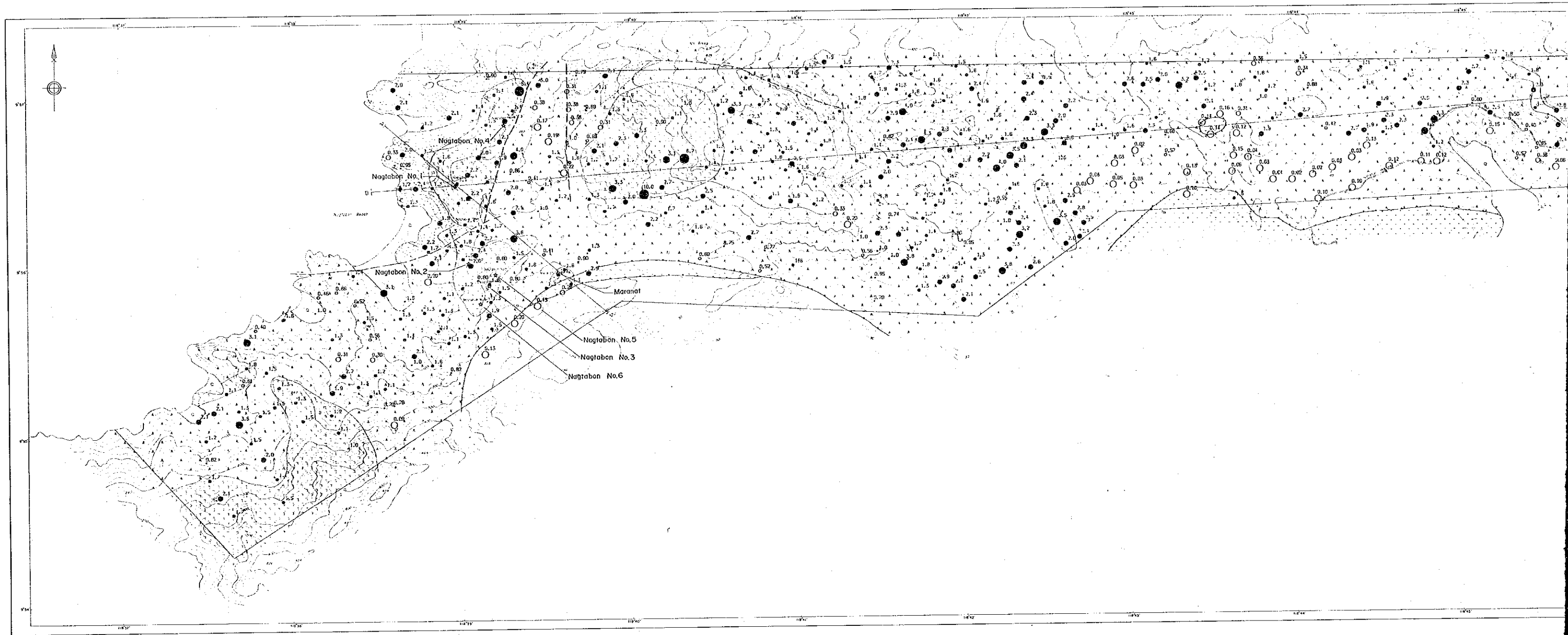


LEGEND

- Alluvium: □ Gravel, sand and silt
- Sub Sea Mine Formation: □ Ore conglomerate and sandstone with basic flow and buff breccia
- Dike: ▨ Fine grained gabbro
- San Vicente Gabbro: ▨ Homotax and layered gabbro
- Mt. (San) Utrana: ▨ Pyroxene rich diorite
- Diabase: ▨ Diorite
- Herburburg: ▨ Diorite
- Progon Metamorphic: ▨ Quartz schist
- Structures: ~~~~~ Erosion of pyroxene
~::~~ Erosion of diorite
- - - - - Thrust
/ / / / High angle fault (inferred)
- Others: ○ Open pit
● Chromite occurrence
— Geologic profile line

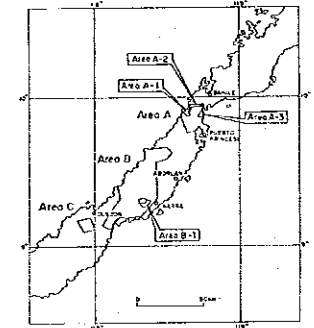
- Ni (ppm)
- 21000
 - 11000
 - 5700
 - 3000
 - 1570
 - 820
 - 430
 - value anomaly 7700 ~



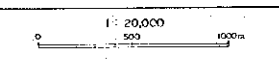


GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURRENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES.

Cr CONTENT OF SOIL SAMPLES
IN AREA A-2

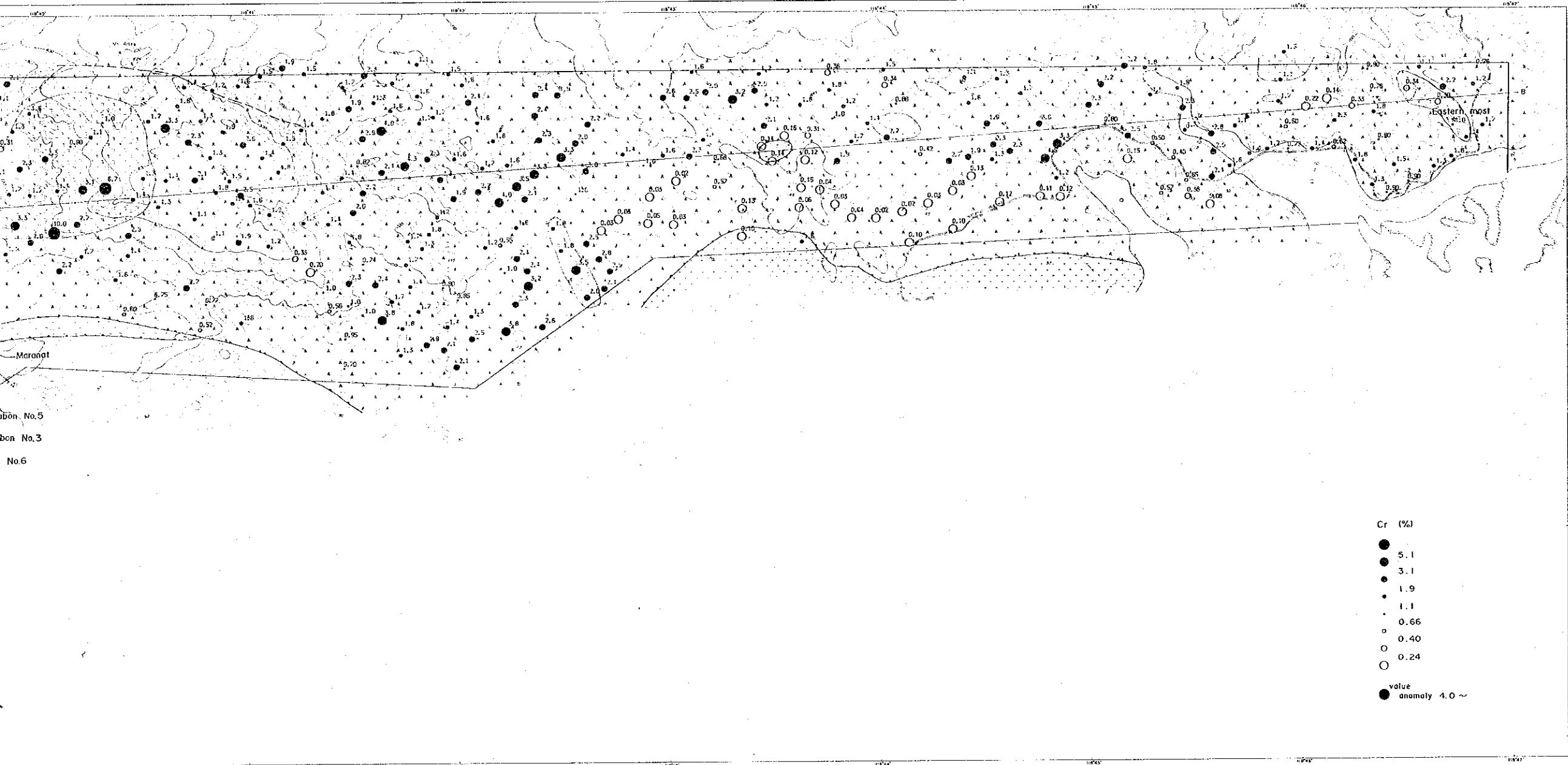


JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
1992



- LEGEND
- Aluminum Gneiss, sand and silt
 - Sulu Sea Mine Formation Gneiss, migmatite and schistose with basic, iron and sulf. breccias
 - Dike Fine grained gabbro
 - Sulu Yacora Gabbro Isomeric and layered gabbro
 - Mt. Banaon Ultramafics Pyroxene rich dunite
 - Dunite
 - Harzburgite
 - Popayan Metacherts Quartz schist
 - Structures Foliation of pyroxene
 - Foliation of chromite
 - Thrust
 - High angle fault (reclined)
 - Others Open pit
 - Chromite occurrence
 - Geologic profile line

- Cr (%)
- 5.1
 - 3.1
 - 1.9
 - 1.1
 - 0.66
 - 0.40
 - 0.24
 - value
 - anomaly 4.0 ~

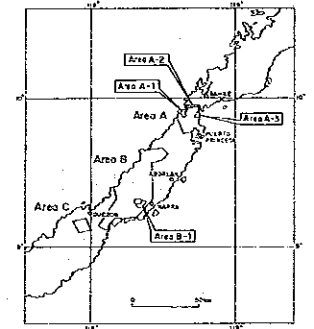


Section No.5
Section No.3
Section No.6

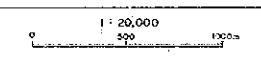


GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURRENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES.

INTERPRETATION MAP OF AREA A-2

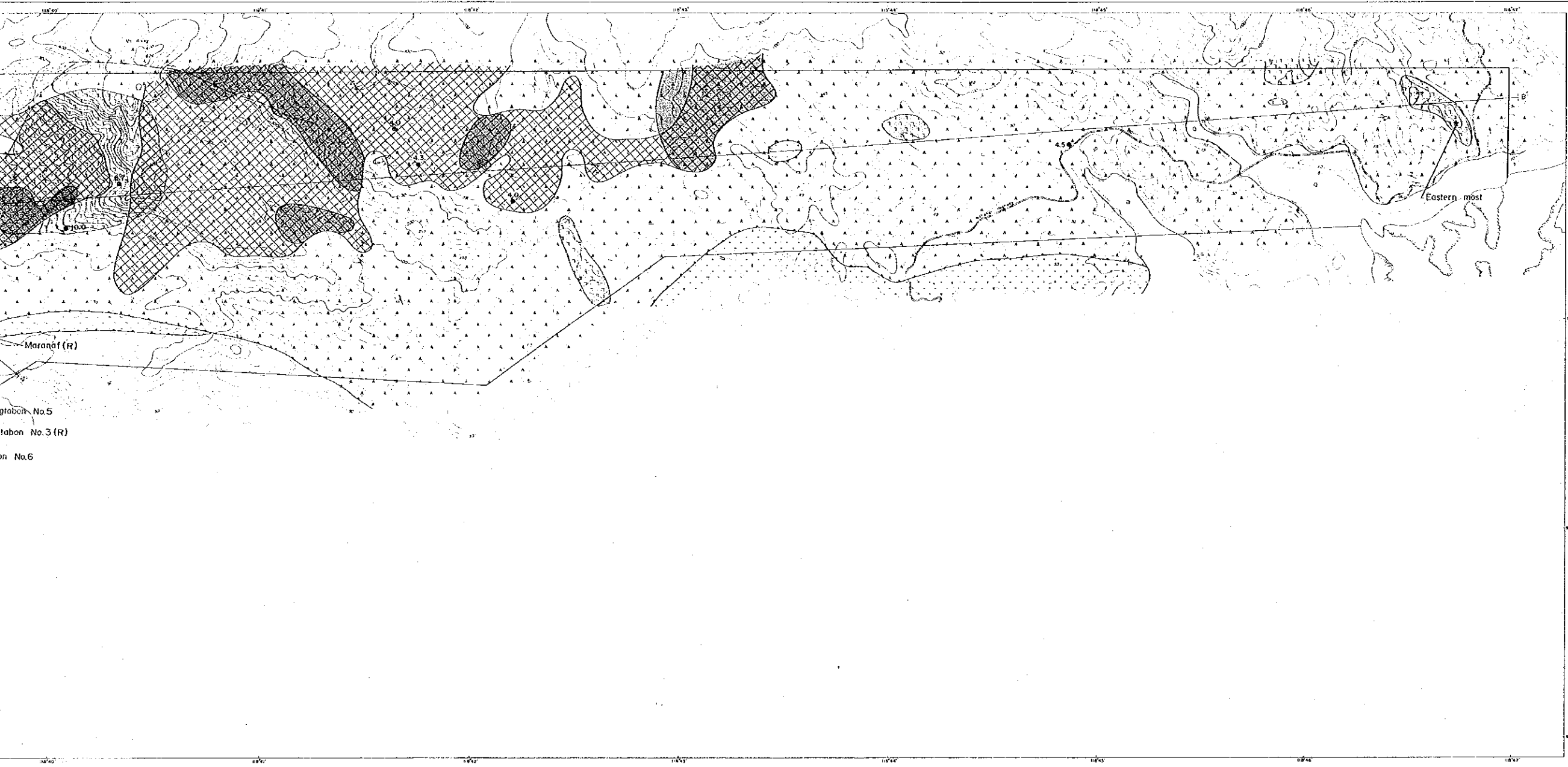


JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
1992



LEGEND

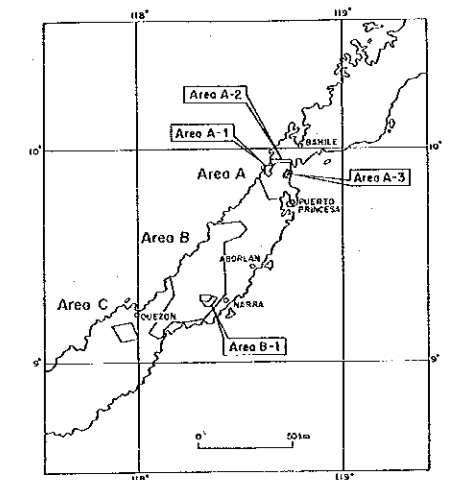
- Albion (Cave, sand and soil)
- Sulu Sea Mine Formation (Chert conglomerate and sandstone with basaltic lap and tuff breccia)
- Dike (Fine grained gabbro)
- San Vicente Gabbro (Isotropic and layered gabbro)
- San Vicente Ultramafics (Pyroxene rich dunite)
 - Dunite
 - Harzburgite
- Magway Metamorphics (Quartz schist)
- Structures (Religion of pyroxene)
 (Fault zone of oblique)
 Thrust
 High angle fault (normal)
- Others Open pit
 Occurrence
 Metallurgical grade
 Chemical grade
 Refractory grade
 Content of chromium (%)
 Ni anomaly area
 Fe anomaly area



Map No. 5
Map No. 3 (R)
Map No. 6

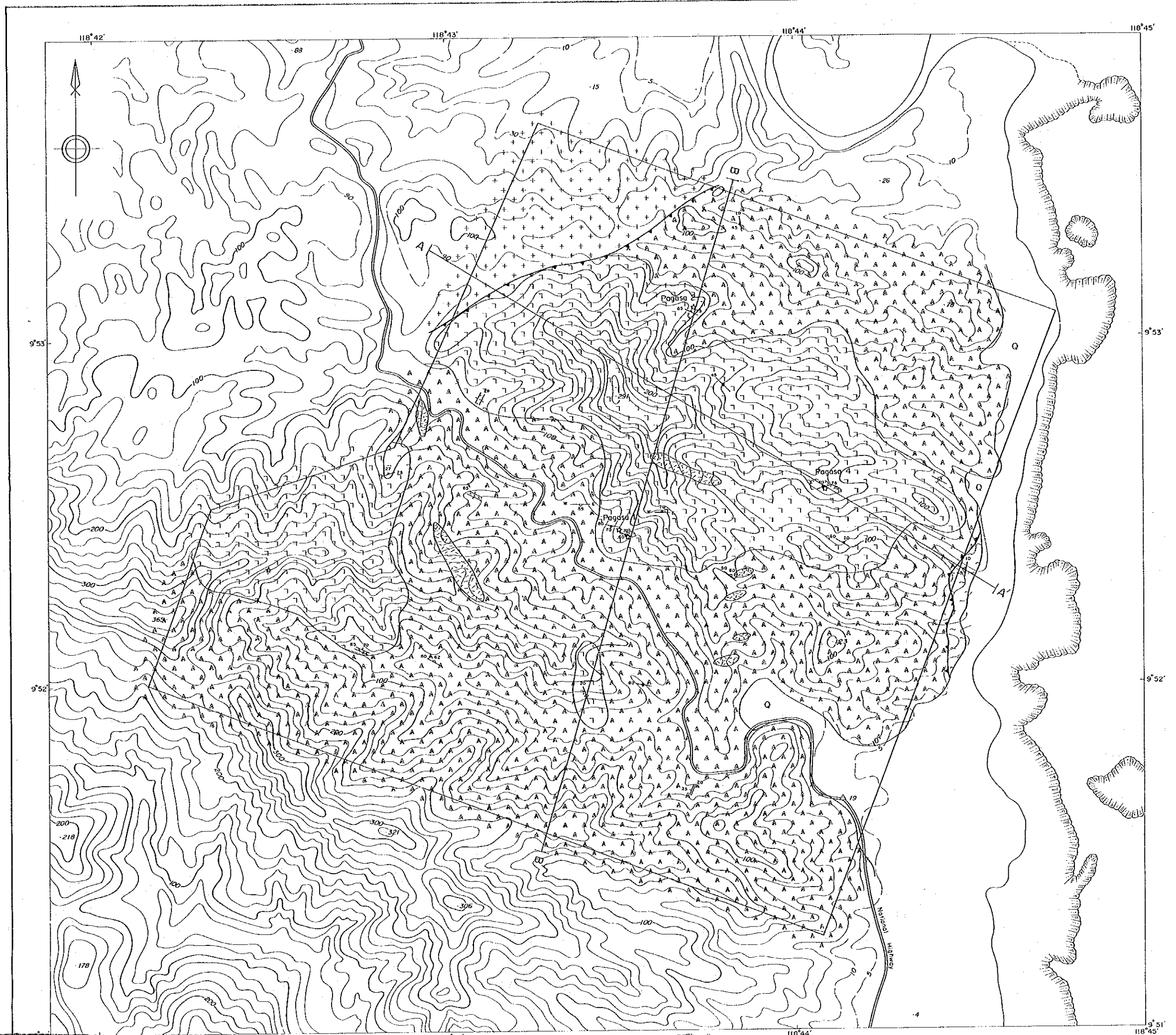
GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURRENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES.

GEOLOGIC MAP AND PROFILE
IN AREA A-3



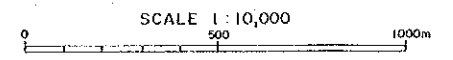
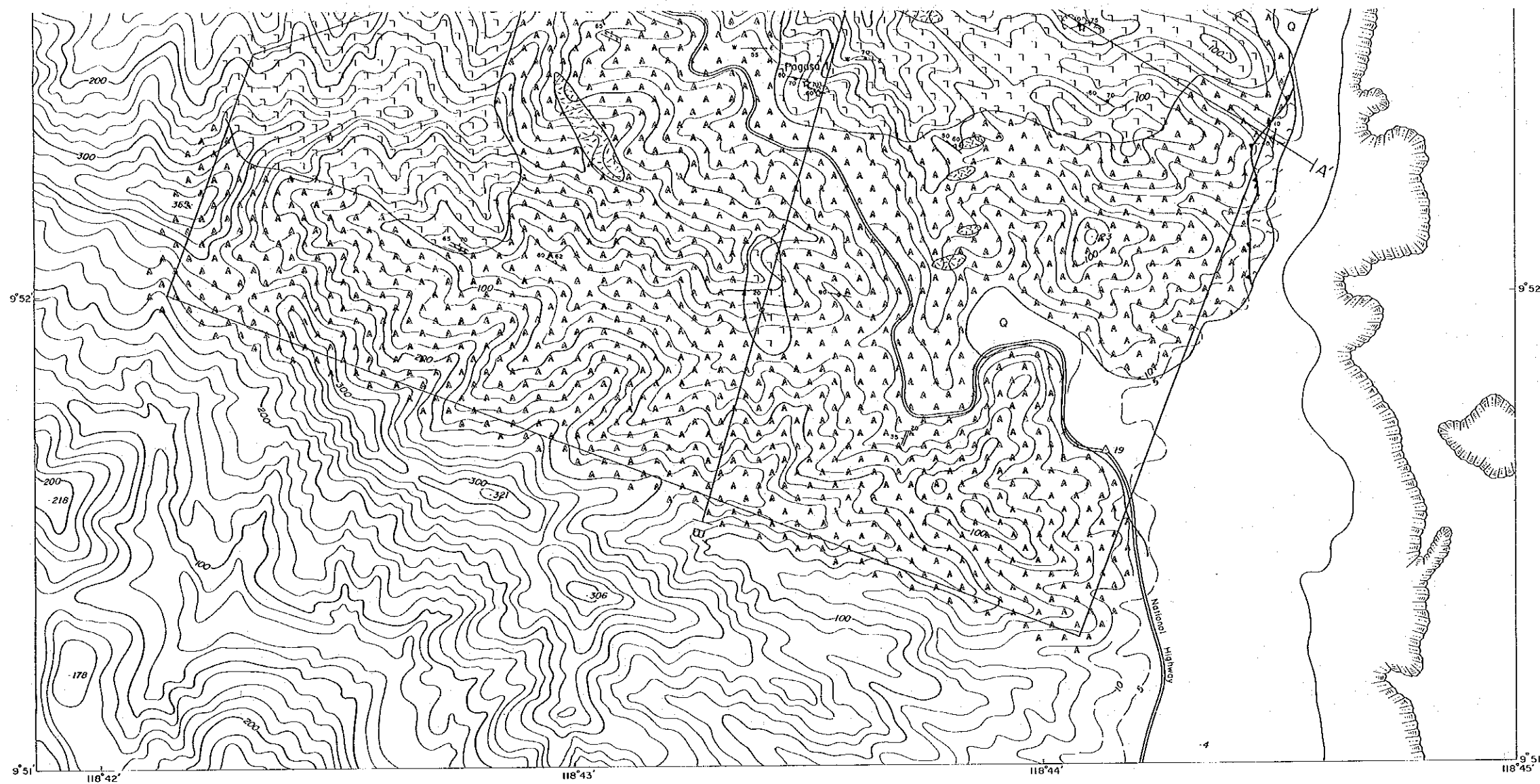
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
1992

SCALE 1:10,000
0 500 1000m



LEGEND

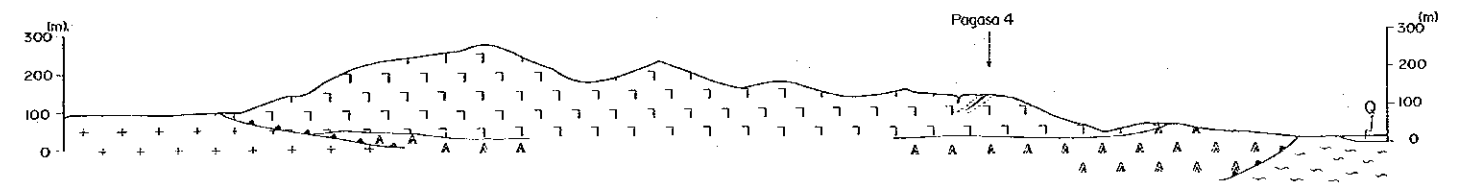
- | | | |
|--------------------------|----------|---------------------------------|
| Alluvium | Q | Gravel, sand and silt |
| Dike | [Symbol] | Fine grained gabbro, porphyrite |
| | [Symbol] | Pyroxenite |
| San Vicente Gabbro | [Symbol] | Isotropic and layered gabbro |
| Mt. Beaufort Ultramafics | [Symbol] | Dunite |
| | [Symbol] | Harzburgite |
| Inaguan Metamorphics | [Symbol] | Amphibolite |
| Structures | [Symbol] | Foliation of pyroxene |
| | [Symbol] | Foliation of chromite |
| | [Symbol] | Schistosity |
| Others | [Symbol] | Thrust |
| | [Symbol] | Open pit |
| | [Symbol] | Adit |
| | [Symbol] | Chromite occurrence |
| | [Symbol] | Geologic profile line |



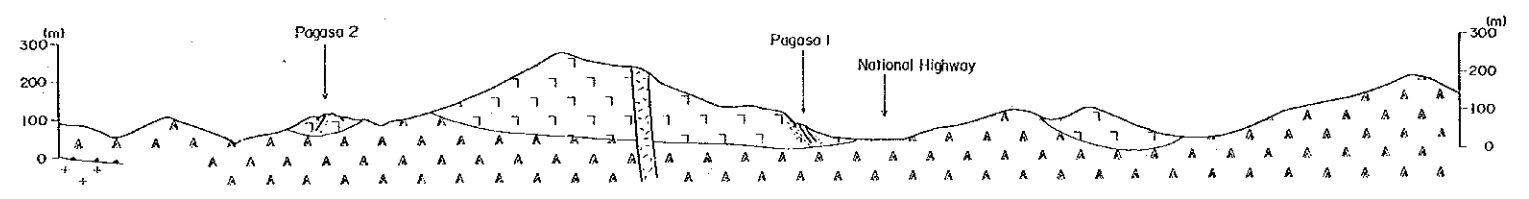
LEGEND

- Alluvium Gravel, sand and silt
- Dike Fine grained gabbro, porphyrite
- Pyroxenite
- Son Vicente Gabbro Isotropic and layered gabbro
- Mt. Beaufort Ultramafics Dunite
- Harzburgite
- Inagawan Metamorphics Amphibolite
- Structures Foliation of pyroxene
- Foliation of chromite
- Schistosity
- Others Thrust
- Open pit
- Adit
- Chromite occurrence
- Geologic profile line

A — A'

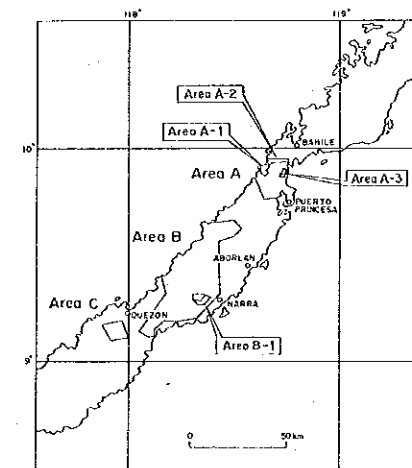


B — B'



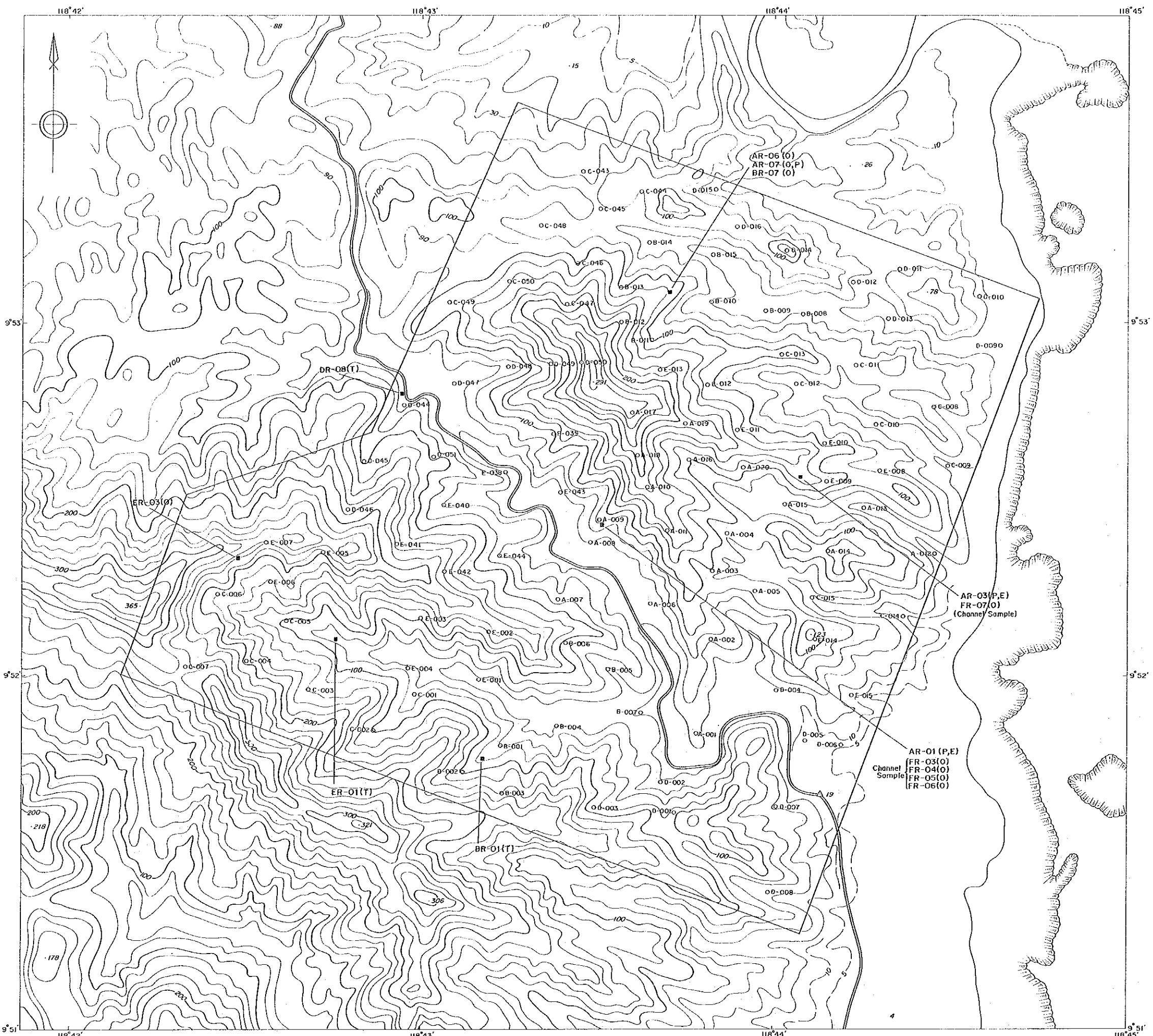
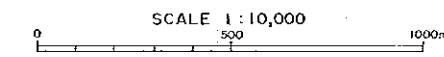
GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURRENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES.

LOCALITY MAP OF ROCK AND GEOCHEMICAL
SOIL SAMPLES IN AREA A-3



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

1992

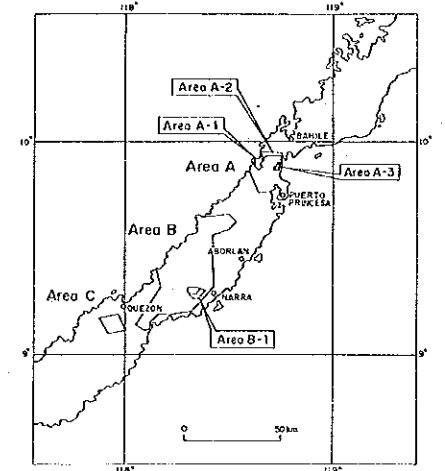


LEGEND

- A-001 Soil Sample Number
- AR-07 (O,T,P,E) Rock Sample Number
- ┌ EPMA
- ├ Polished Thin Section
- ├ Thin Section
- └ Ore Assay

GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURRENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES.

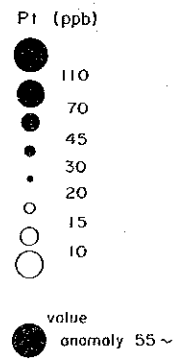
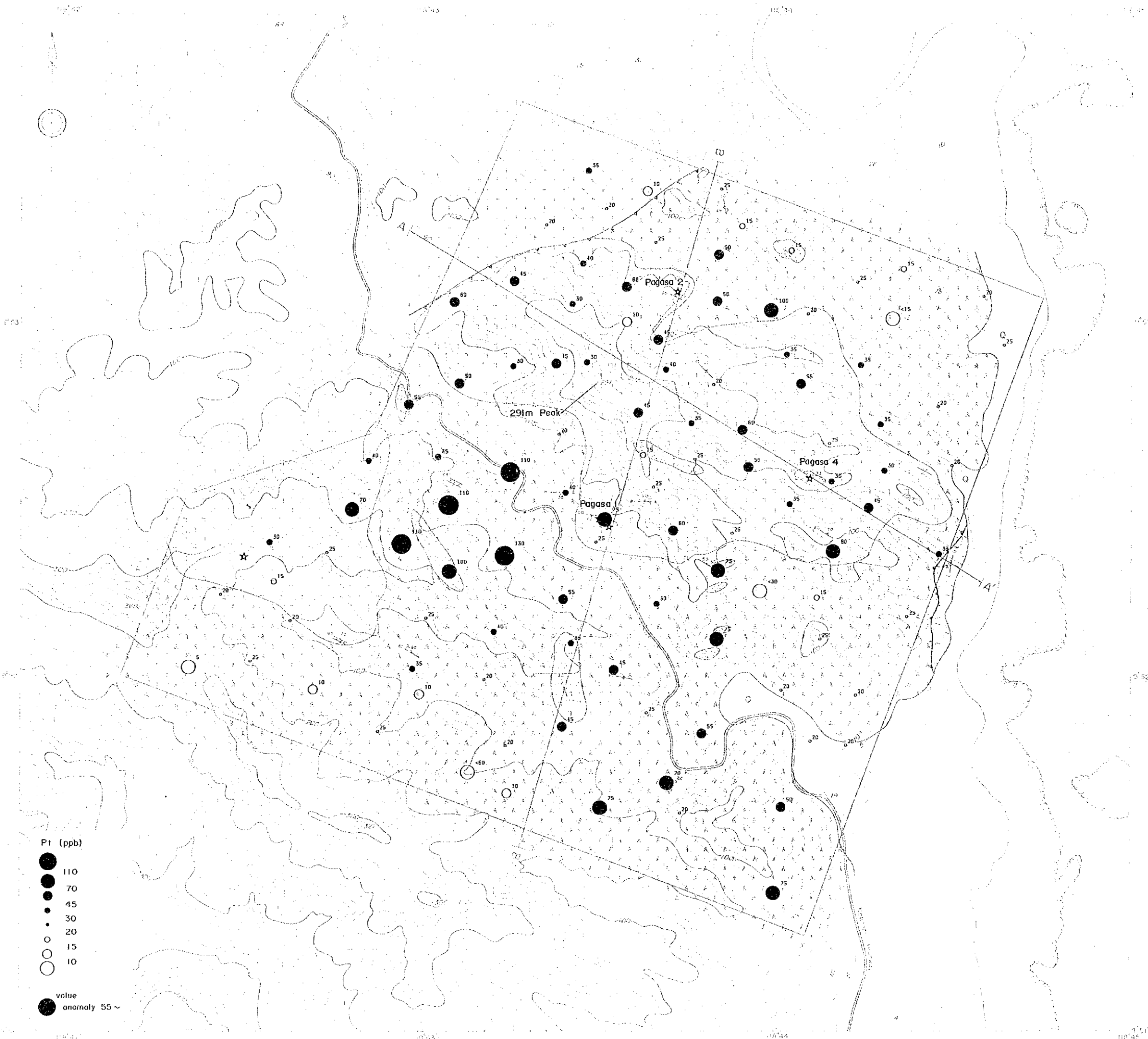
P1 CONTENT OF SOIL SAMPLES
IN AREA A-3



JAPAN INTERNATIONAL COOPERATION AGENCY
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1992

SCALE 1:10,000
0 500 1000m

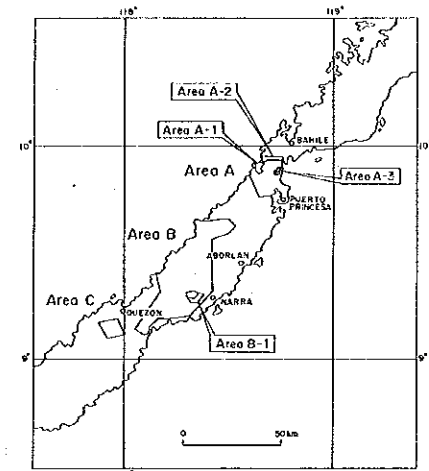


LEGEND

- Alluvium Q Gravel, sand and silt
- Dike Fine grained gabbro, porphyrite
- Pyroxenite
- San Vicente Gabbro Isotropic and layered gabbro
- Mt. Beaufort Ultramorphics Dunite
- Harzburgite
- Inagaun Metamorphics Amphibolite
- Structures Foliation of pyroxene
- Foliation of chromite
- Schistosity
- Others Thrust
- Open pit
- Adit
- Chromite occurrence
- Geologic profile line

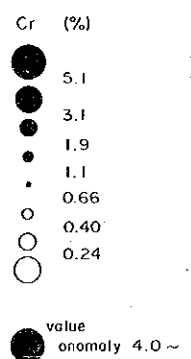
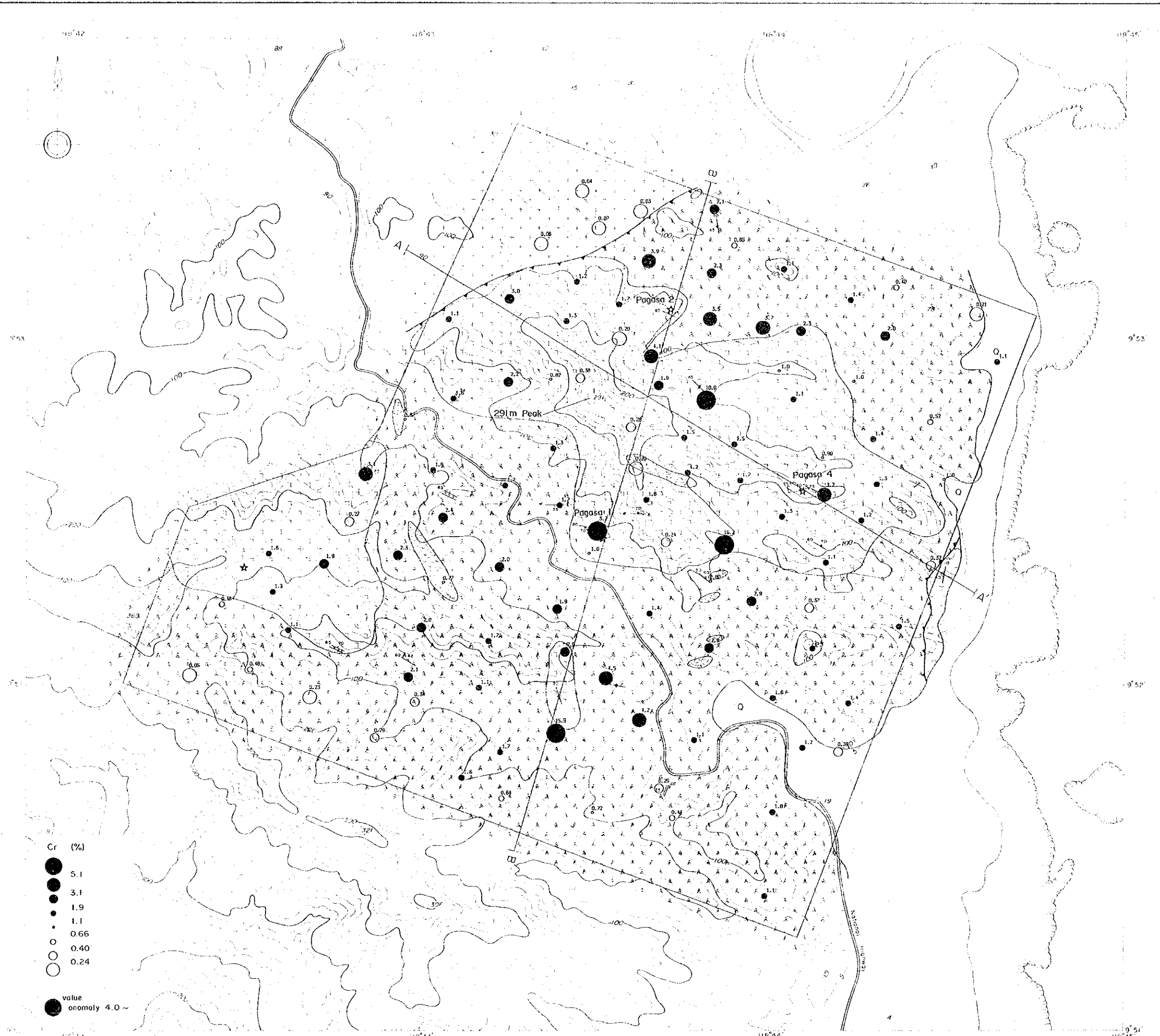
GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES.

Cr CONTENT OF SOIL SAMPLES
IN AREA A-3



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
1992

SCALE 1 : 10,000
0 500 1000m

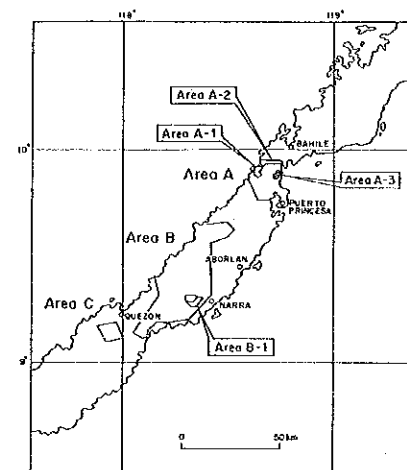


LEGEND

- Alluvium Q Gravel, sand and silt
- Dike Fine grained gabbro, porphyrite
- Pyroxenite
- San Vicente Gabbro Isotropic and layered gabbro
- Mt. Beaufort Ultramafics Dunite
- Harzburgite
- Inagaun Metamorphics Amphibolite
- Structures Foliation of pyroxene
- Foliation of chromite
- Schistosity
- Others Thrust
- Open pit
- Adit
- Chromite occurrence
- Geologic profile line

GEOLOGICAL ASSESSMENT OF CHROMITE, BASE METALS,
PLATINUM AND RELATED PRECIOUS METAL OCCURENCES
IN
SOUTH CENTRAL PALAWAN, THE PHILIPPINES.

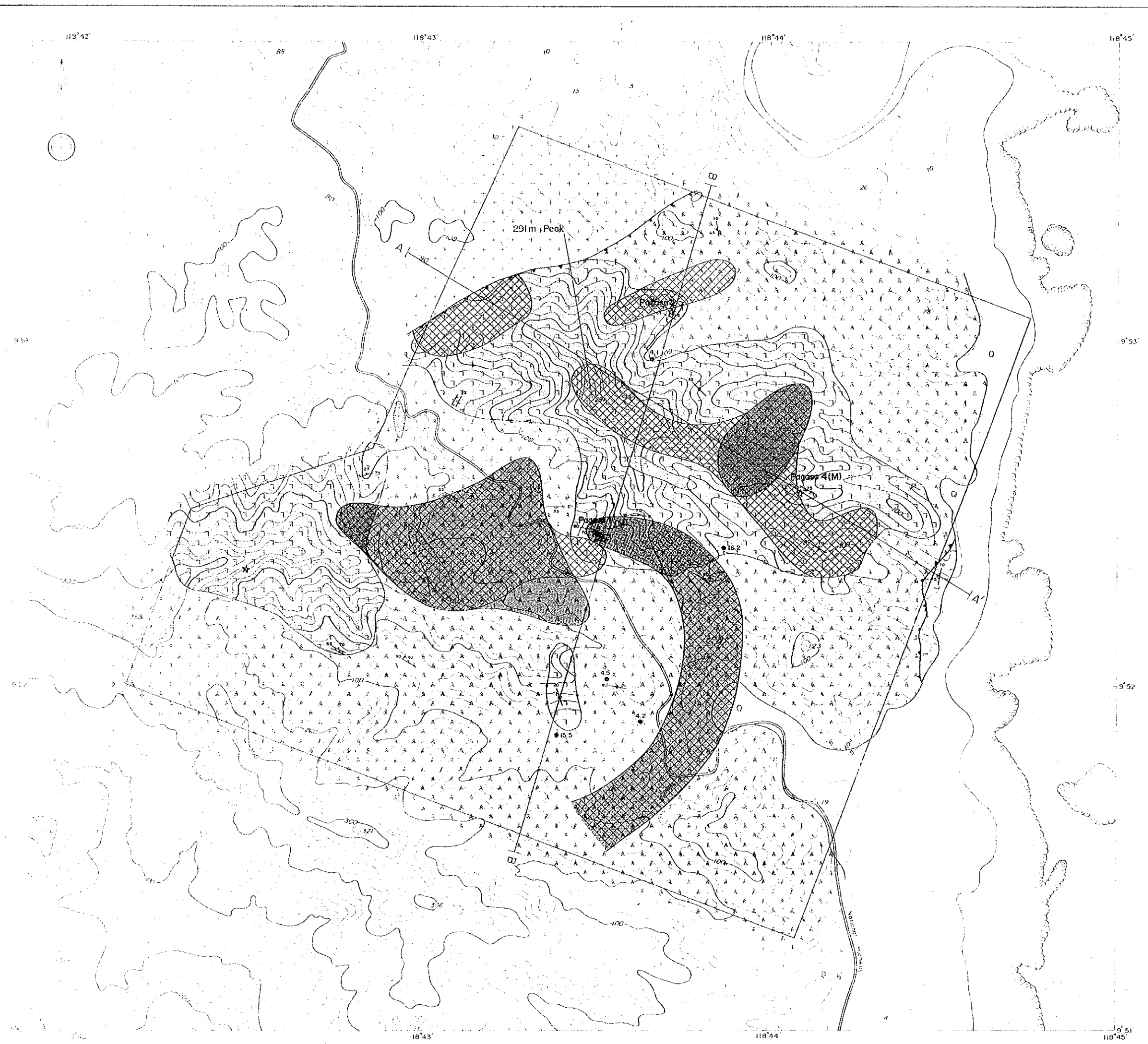
INTERPRETATION MAP OF AREA A-3



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

1992

SCALE 1 : 10,000
0 500 1000m



LEGEND

- | | | |
|--------------------------|--------------------|---------------------------------|
| Alluvium | Q | Gravel, sand and silt |
| Dike | [Diagonal lines] | Fine grained gabbro, porphyrite |
| | [Dotted pattern] | Pyroxenite |
| San Vicente Gabbro | [Cross-hatch] | Isotropic and layered gabbro |
| Mt. Beaufort Ultramafics | [Vertical lines] | Dunite |
| | [Stippled] | Harzburgite |
| Inaguan Metamorphics | [Horizontal lines] | Amphibolite |
| Structures | [Arrow] | Foliation of pyroxene |
| | [Arrow] | Foliation of chromite |
| | [Arrow] | Schistosity |
| Others | [Thick line] | Thrust |
| | [Circle] | Open pit |
| | [Line] | Adit |
| | [Star] | Chromite occurrence |
| | [Star] | (M) Metallurgical grade |
| | [Dot] | 4.1 Content of chromium (%) |
| | [Cross-hatch] | Pt anomaly area |
| | [Cross-hatch] | Pd anomaly area |

JICA