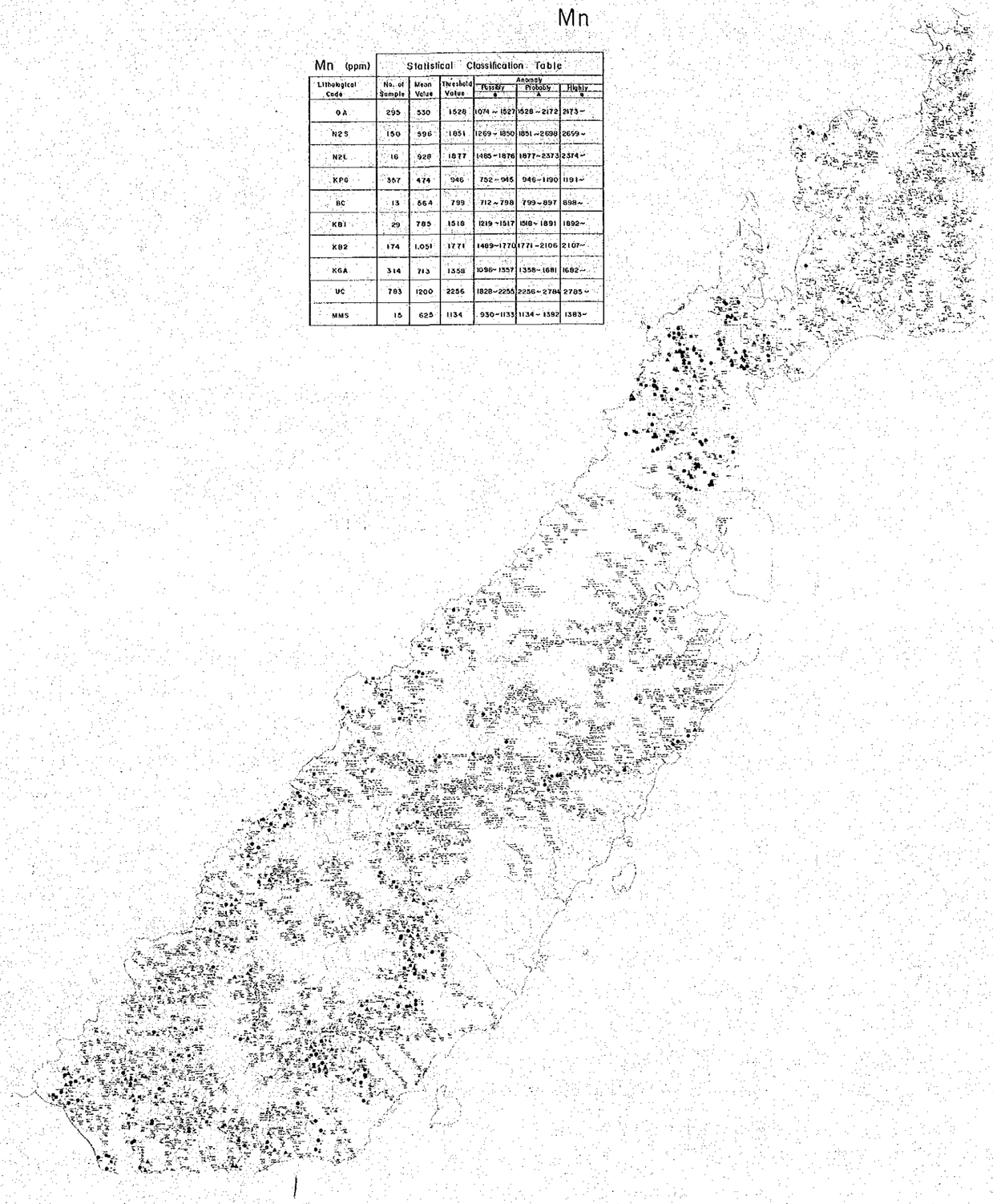
Mn

Mn (ppm)	Statistical Classification Table					
Lithological Code	No. of Sample	Mean Value	Threshold Value	Anomaly Possibly a	Probably A	Highly a
OA	295	530	1528	1074 ~ 1527	1528 ~ 2172	2173 ~
N2S	150	596	1851	1269 ~ 1850	1851 ~ 2698	2699 ~
N2L	16	928	1877	1465 ~ 1876	1877 ~ 2373	2374 ~
KPG	357	474	946	752 ~ 945	946 ~ 1190	1191 ~
BC	13	564	799	712 ~ 798	799 ~ 897	898 ~
KB1	29	785	1518	1219 ~ 1517	1518 ~ 1891	1892 ~
KB2	174	1.051	1771	1489 ~ 1770	1771 ~ 2106	2107 ~
KGA	314	713	1358	1096 ~ 1357	1358 ~ 1681	1682 ~
UC	783	1200	2256	1828 ~ 2255	2256 ~ 2784	2785 ~
MMS	15	625	1134	930 ~ 1133	1134 ~ 1392	1393 ~



As

As (ppm)	Statistical Classification Table					
Lithological Code	No. of Sample	Mean Value	Threshold Value	Anomaly Possibly a	Probably A	Highly a
OA	295	0.6	3.0	1.7 ~ 2.9	3.0 ~ 5.0	5.1 ~
N2S	150	1.1	6.7	3.7 ~ 6.6	6.7 ~ 11.9	12.0 ~
N2L	16	0.6	2.2	1.4 ~ 2.1	2.2 ~ 3.2	3.3 ~
KPG	357	2.2	4.0	3.3 ~ 3.9	4.0 ~ 4.7	4.8 ~
BC	13	0.5	1.7	1.1 ~ 1.6	1.7 ~ 2.5	2.6 ~
KB1	29	0.9	7.9	3.9 ~ 7.8	7.9 ~ 15.9	16.0 ~
KB2	174	0.8	2.9	1.9 ~ 2.8	2.9 ~ 4.4	4.5 ~
KGA	314	0.4	1.0	0.8 ~ 0.9	1.0 ~ 1.3	1.4 ~
UC	783	0.6	1.5	1.1 ~ 1.4	1.5 ~ 1.9	2.0 ~
MMS	15	1.6	3.1	2.5 ~ 3.0	3.1 ~ 3.8	3.9 ~

As

cal Classification Table

hreshold Value	Anomaly Possibly ▲	Anomaly Probably ▲	Anomaly Highly ▲
3.0	1.7 ~ 2.9	3.0 ~ 5.0	5.1 ~
6.7	3.7 ~ 6.6	6.7 ~ 11.9	12.0 ~
2.2	1.4 ~ 2.1	2.2 ~ 3.2	3.3 ~
4.0	3.3 ~ 3.9	4.0 ~ 4.7	4.8 ~
1.7	1.1 ~ 1.6	1.7 ~ 2.5	2.6 ~
7.9	3.9 ~ 7.8	7.9 ~ 15.9	16.0 ~
2.9	1.9 ~ 2.8	2.9 ~ 4.4	4.5 ~
1.0	0.8 ~ 0.9	1.0 ~ 1.3	1.4 ~
1.5	1.1 ~ 1.4	1.5 ~ 1.9	2.0 ~
3.1	4.5 ~ 3.0	3.1 ~ 3.8	3.9 ~

Hg

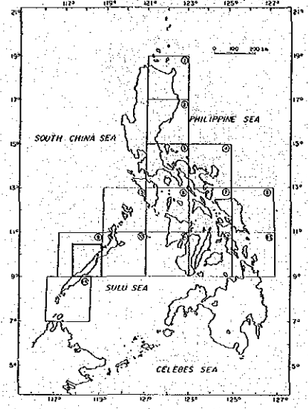
Hg (ppb) Statistical Classification Table

Lithological Code	No. of Samples	Mean Value	Threshold Value	Anomaly Possibly ▲	Anomaly Probably ▲	Anomaly Highly ▲
OA	295	24	82	50 ~ 81	82 ~ 101	102 ~
N2S	150	23	38	32 ~ 37	38 ~ 41	45 ~
N2L	16	20	—	—	—	—
KPG	357	136	1567	698~1566	1567~ 3517	3518~
OC	13	20	—	—	—	—
K91	29	171	12730	3033~12729	12730~63558	63559~
KB2	174	65	317	185 ~316	317~542	543~
K9A	314	34	148	91 ~147	148~241	242~
UC	783	58	164	116 ~163	164~230	231~
MMS	15	71	104	92~103	104~118	119~

THE MINERAL EXPLORATION
– MINERAL DEPOSITS AND TECTONICS OF TWO CONTRASTING GEOLOGIC ENVIRONMENTS –
IN
THE REPUBLIC OF THE PHILIPPINES
PHASE Ⅲ

DISTRIBUTION GEOCHEMICAL ANOMALIES OF STREAM SEDIMENT SAMPLES(UNIVARIATE ANALYSIS)

PALAWAN AREA (2) Part 2



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Feb. 1987

Scale 1 : 250,000
0 10 20 km

N

Cr

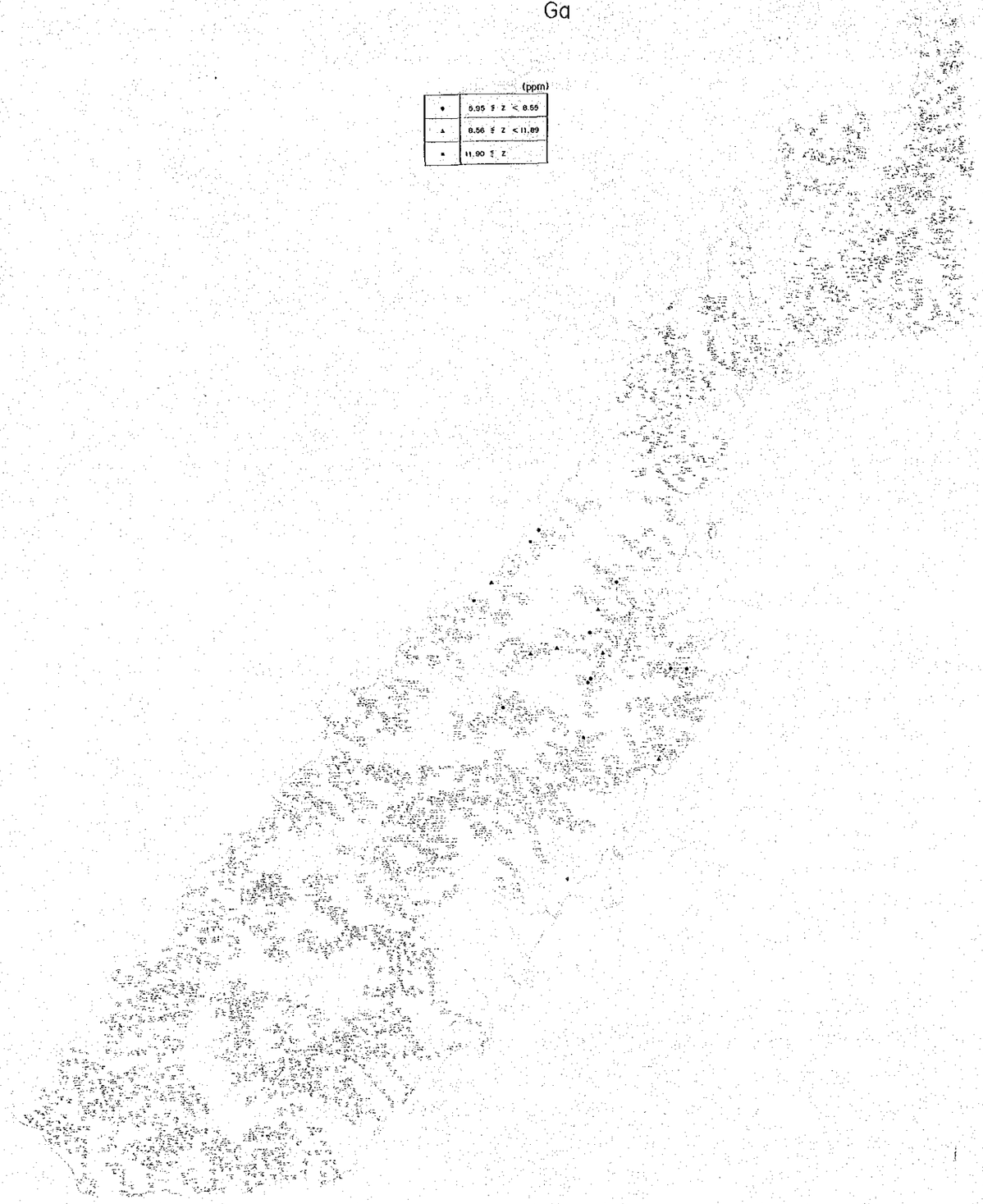
Cr (ppm) Statistical Classification Table

Lithological Code	No. of Sample	Mean Value	Threshold Value	Anomaly Possibly a	Anomaly Probably b	Anomaly Highly c
OA	295	12232	182928	74249 ~ 182927	182928 ~ 450679	450680~
N2S	150	3634	24758	13060-24757	24758 ~ 46934	46935~
N2L	16	2378	12154	7056-12153	12154~23935	20936~
KPG	335	640	14806	5196~14805	14806-42193	42194~
BC	13	7310	44507	24373 ~44506	44507 ~81271	81272~
KB1	29	19196	119210	64756 ~119209	119210 ~219116	219117~
KB2	143	3794	70604	26843 ~70603	70604 ~187100	187101~
KGA	279	3453	60208	23220 ~60207	60208 ~156117	156118~
UC	442	27753	135950	80050 ~135949	135950 ~230888	230889~

Ga

(ppm)

•	5.95 ≦ Z < 8.55
▲	8.56 ≦ Z < 11.89
■	11.90 ≦ Z

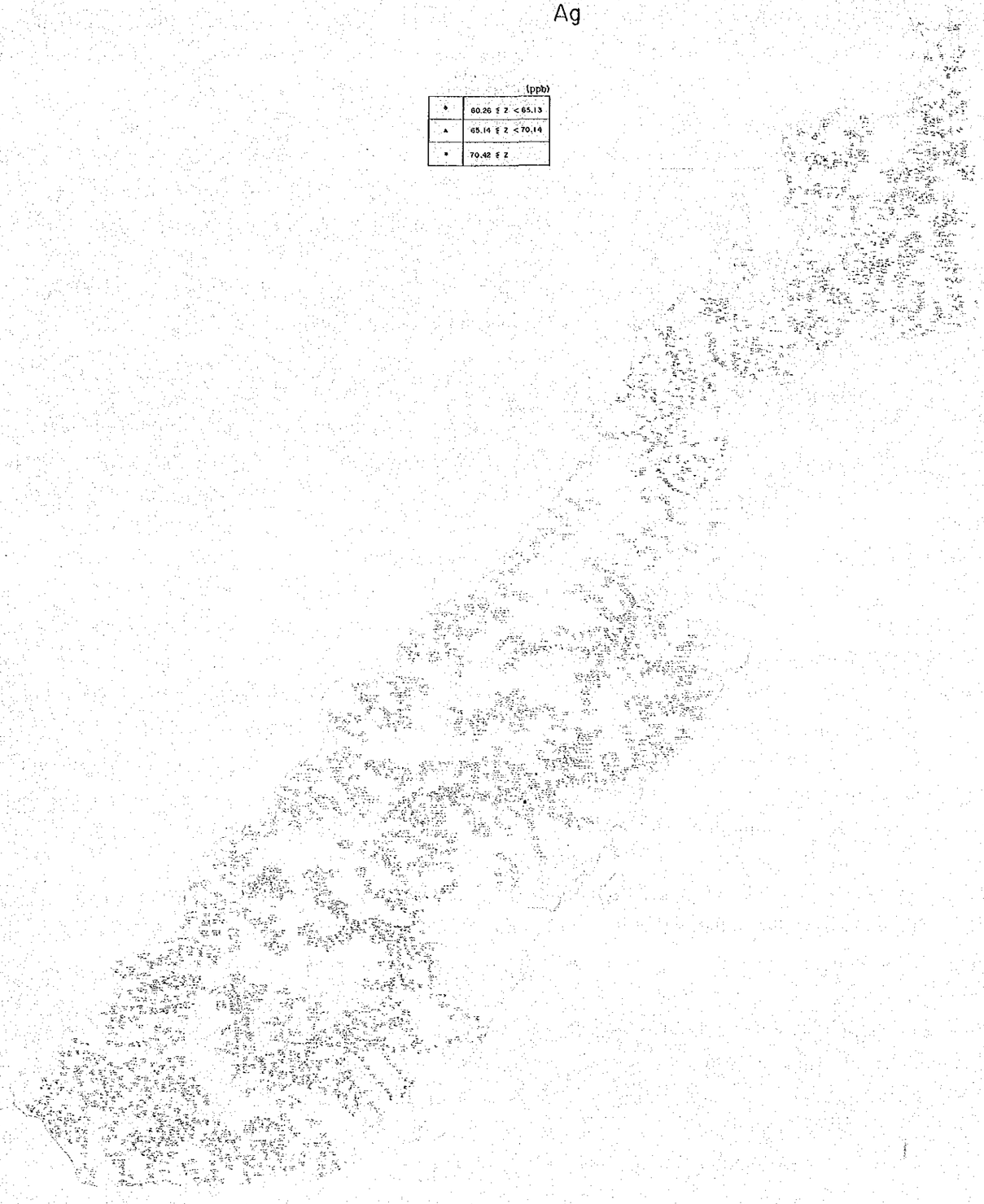


•	60.26 ≦ Z < 65
▲	65.14 ≦ Z < 70
■	70.42 ≦ Z

Ag

(ppb)

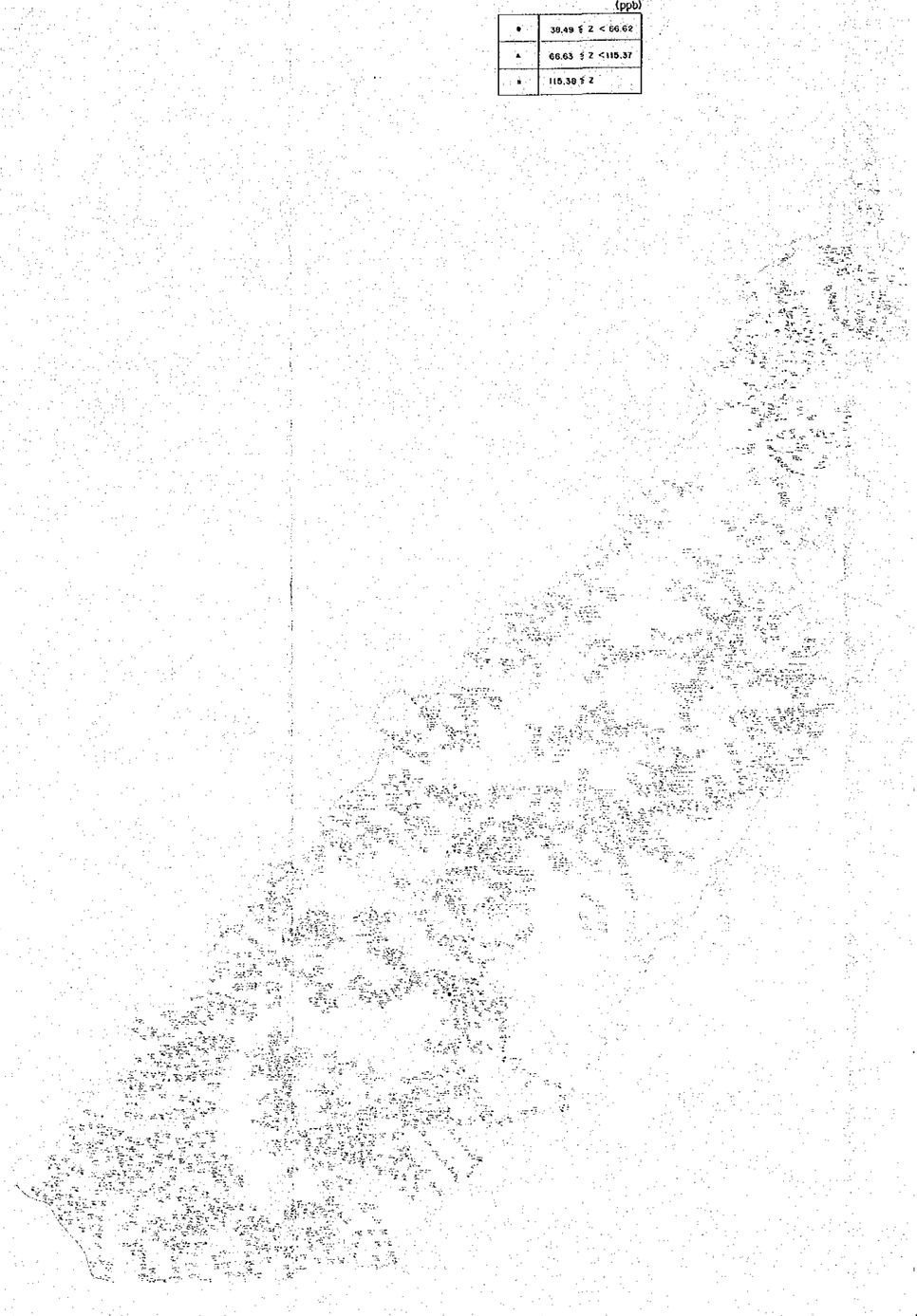
●	60.26 ≦ Z < 65.13
▲	65.14 ≦ Z < 70.14
■	70.42 ≦ Z



Au

(ppb)

●	39.49 ≦ Z < 66.62
▲	66.63 ≦ Z <115.37
■	115.38 ≦ Z



Au

(ppb)

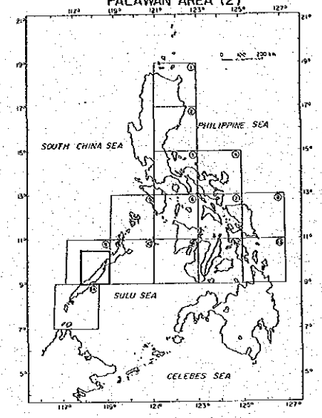
●	38.49 ≦ Z < 66.62
▲	66.63 ≦ Z <115.37
■	115.38 ≦ Z

N

THE MINERAL EXPLORATION
– MINERAL DEPOSITS AND TECTONICS OF TWO CONTRASTING GEOLOGIC ENVIRONMENTS –
IN
THE REPUBLIC OF THE PHILIPPINES
PHASE Ⅲ

DISTRIBUTION GEOCHEMICAL ANOMALIES OF HEAVY MINERAL SAMPLES

PALAWAN AREA (2)



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METAL MINING AGENCY OF JAPAN
Feb. 1987

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0 10 20km

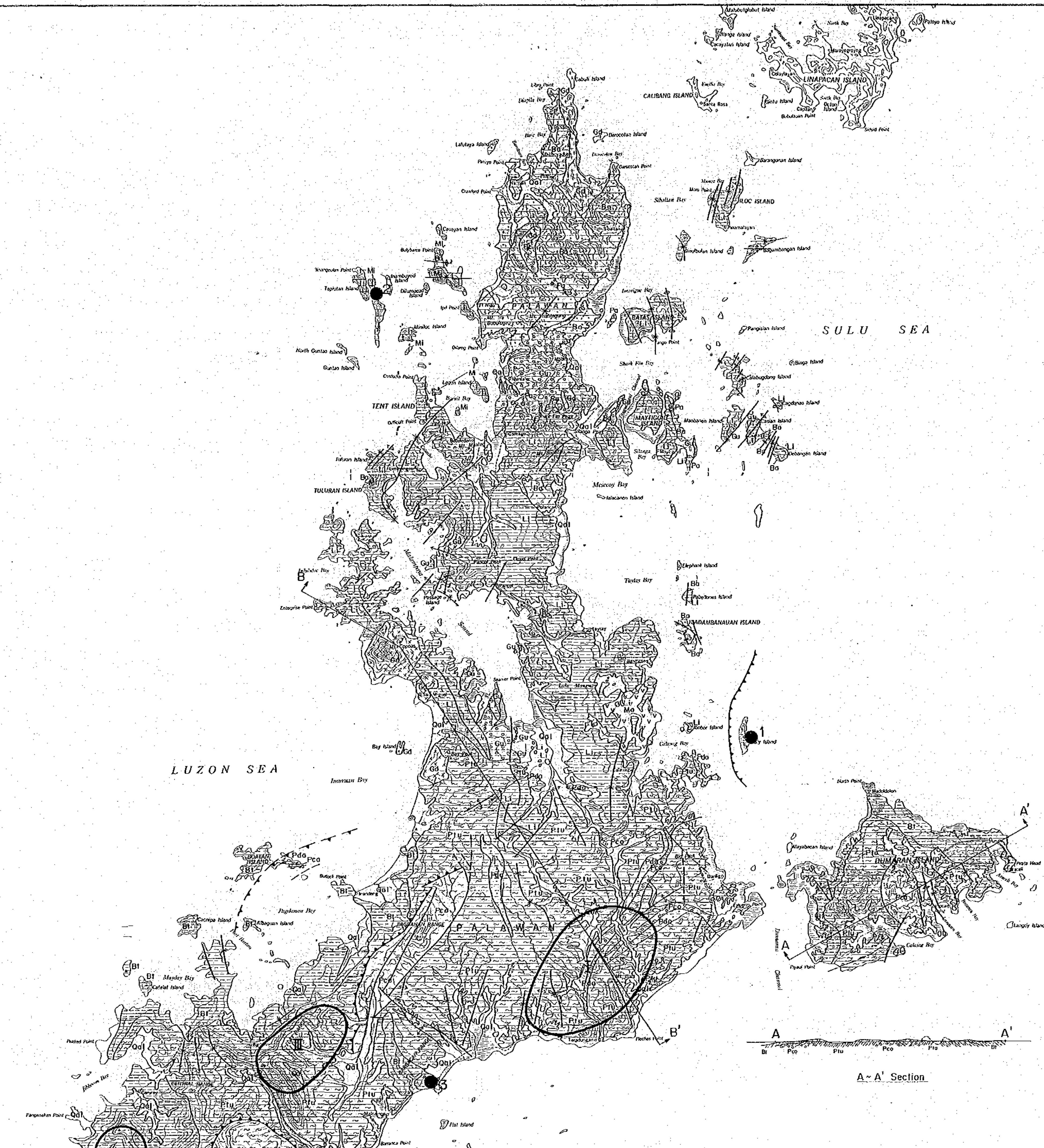
Mineral Showing List

NO	Name of Showing	Kind of Ore	Grade
1	Poly Is.	Chromite Ore	C
2	Matinlot Is.	Dolomite	D
3	Roxas	Silica Sand	D

Evaluation Grade
C : Possibility of following Survey is reliable
D : Necessity of following Survey is low

Promising Area List

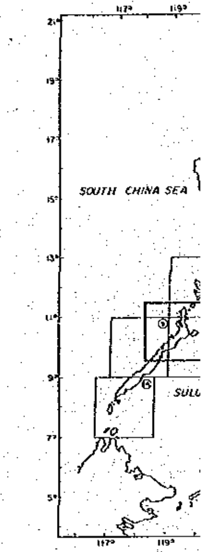
I Northern Tarodungan Area
II NWside of Stripe Peak
III SEside of Barton



THE MINE
– MINERAL DEPOSI
CONTRASTING G

THE REPUBLIC

INVENTORY AN
PALA



JAPAN INTERNATI
METAL MININ

Scal

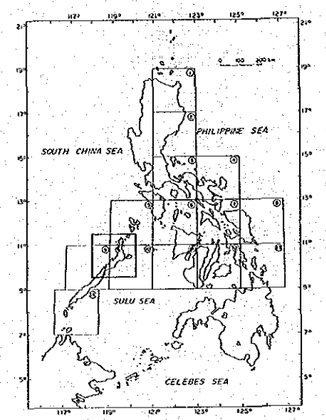
L

			Symbol	Formation
Quarternary	Alluvium		Qal	Alluvium
	Dellivium		Ma	Basaltic
Tertiary	Miocene ~ Oligocene		Sp	St. Pauls
	Eocene		Pa	Pabellion
Cretaceous			S	Serpentin
Jurassic	Middle ~ Lower		Gu	Guinlo For
Triassic	Upper ~ Middle		Li	Liminanc
Permian	Upper ~ Middle		Mi	Minilog
Permian	Middle		Ba	Bacuit
Pre Permian			Pco	Conceptio Phyllite
			Pca	Caramay

Fault
Fault (
Thrust
Anticlin

THE MINERAL EXPLORATION
– MINERAL DEPOSITS AND TECTONICS OF TWO CONTRASTING GEOLOGIC ENVIRONMENTS –
IN
THE REPUBLIC OF THE PHILIPPINES
PHASE II

INVENTORY AND PROMISING AREA MAP
PALAWAN AREA (1)

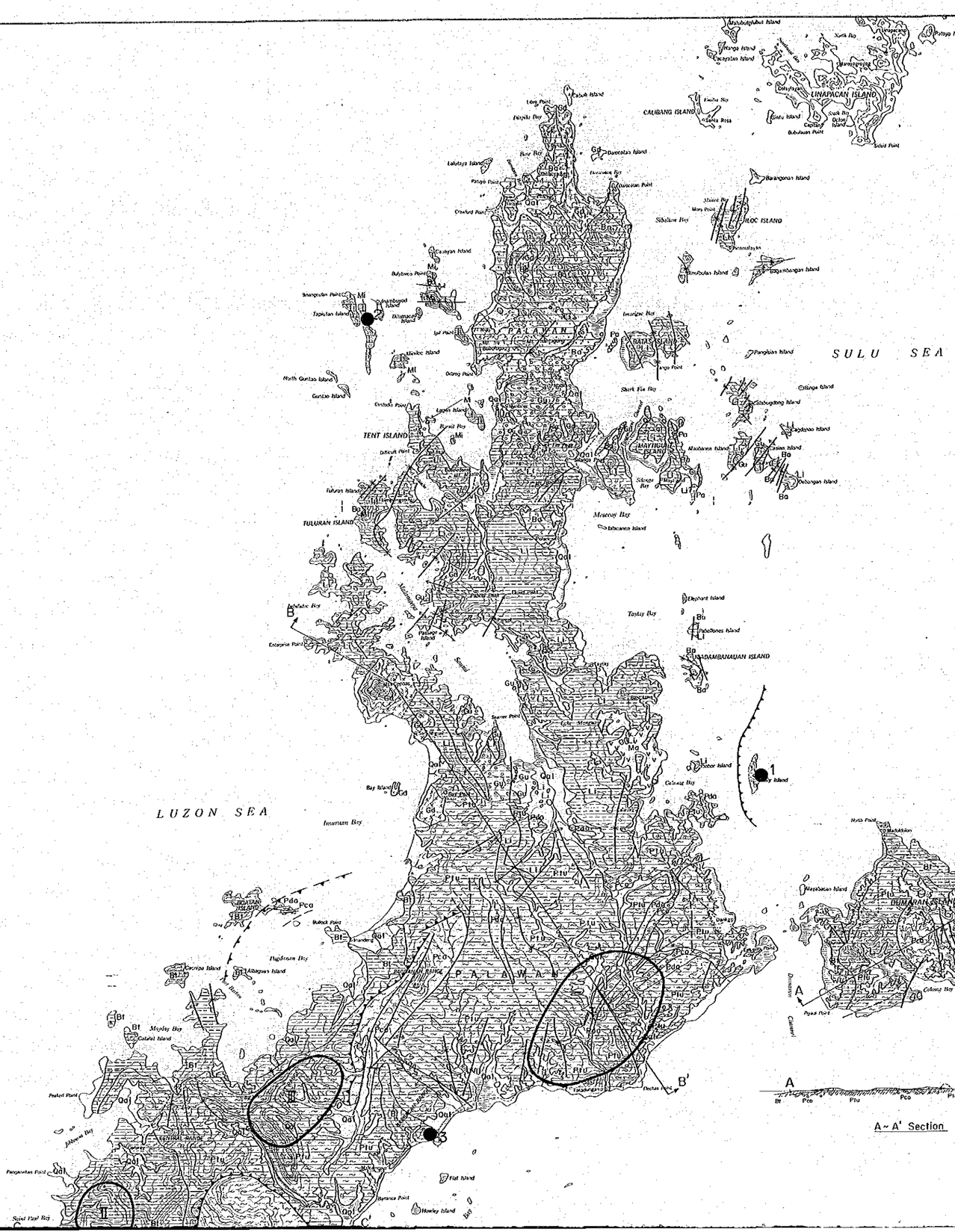


JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

Feb. 1987

Scale 1 : 250,000

0 10 20 km



A ~ A' Section

LEGEND

Quaternary	Alluvium	Qal	Alluvium. Coral reef. Beach Sand
	Deltivium	Mav	Basaltic lava
Tertiary	Miocene Oligocene	Sp	St. Pauls Is
	Eocene	Po	Pabellon Is
		Ppa	Piedras Point Andesite
		Gd	Capoas and Strip Peak Granite
		Bt	Babuyan River Turvidites
Cretaceous		S	Serpentine gabbro
		Gd	Doroctan Granite
Jurassic	Middle Lower	Gus	Guinlo Formation
Triassic	Upper Middle	Li	Liminancong Formation
Permian	Upper Middle	Mi	Minilog Formation
Permian	Middle	Ba	Bacuit Formation
Pre Permian		Pcs	Conception Pebbly Phyllite
		Pda	Dasleg Sandstone
		Ptu	Tumarbong Semi Schist
		Pca	Caramay Schist

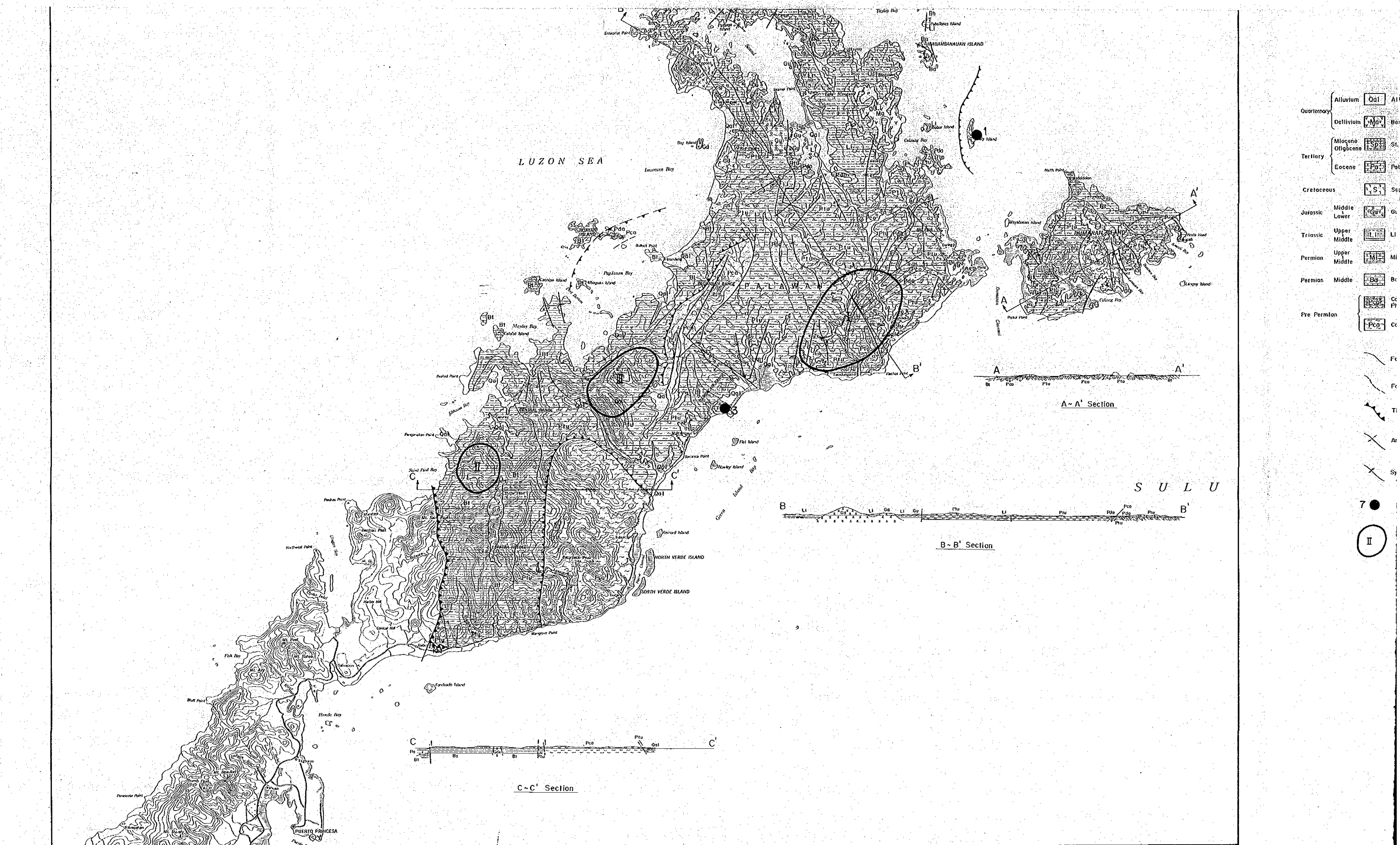
Fault

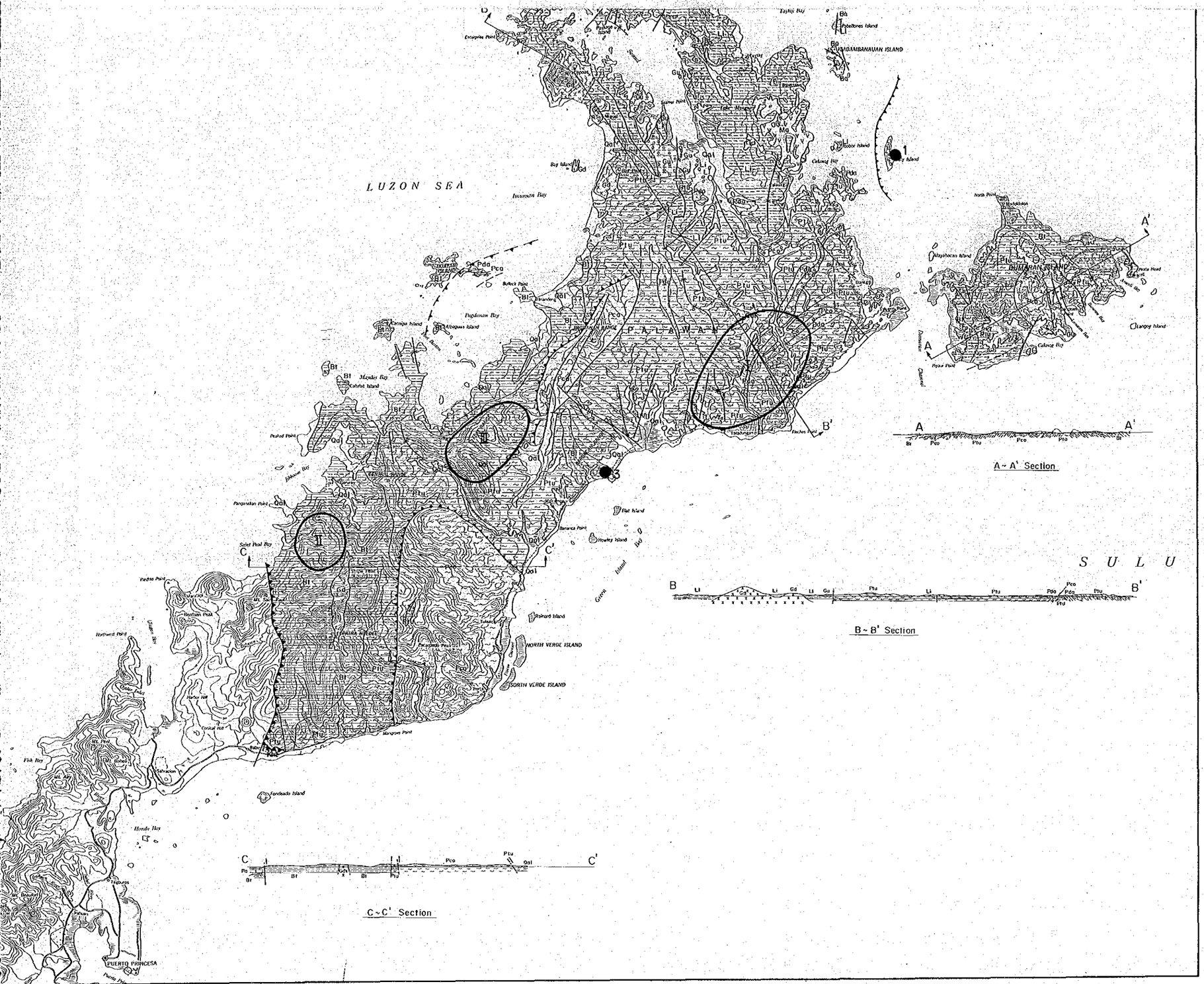
Fault (assumed)

Thrust

Anticline Axis

Syncline Axis


LUZON SEA
SULU
PALAWAN
DUMARAN ISLAND
NORTH VERDE ISLAND
SORTH VERDE ISLAND
PUERTO PRINCESA
CENTRAL RANGE
Enterprise Point
Taytay Bay
Pabellones Island
IGADAMBANAUAN ISLAND
Bay Island
Imuruan Bay
Bulleck Point
Cacnipa Island
Albaguen Island
Malampaya Bay
Catabit Island
Peaked Point
Pangaraitan Point
Saint Paul Bay
Piedras Point
Northwest Point
Ulugan Bay
Harbor Hill
Conical Hill
Fish Bay
Mt. Peel
Mt. Bahile
Salvacion
Bluff Point
Honda Bay
Fondeado Island
Penascosa Point
Mt. Beaufort
Thumb Peak
Tagburos
Mangrove Point
Fol Island
Reinard Island
Harley Island
Green Island Bay
Mayabacan Island
North Point
Calasag Bay
Pirate Head
Langoy Island
Dumaran Channel
Flechas Point
A ~ A' Section
B ~ B' Section
C ~ C' Section
Quarternary
Alluvium
Qal
Delluvium
Ma
Tertiary
Miocene
Oligocene
Sp
Eocene
Pa
Cretaceous
S
Jurassic
Middle
Lower
Gu
Triassic
Upper
Middle
Li
Permian
Upper
Middle
Mi
Permian
Middle
Ba
Pre Permian
Pco
7
II



LEGEND

- Quaternary
  - Alluvium — Qal — Alluvium, Coral reef, Beach Sand
  - Detrivium — Mav — Basaltic lava
- Tertiary
  - Miocene Oligocene — St. Pauls ls
  - Eocene — Pobellion ls
  - Pliocene — Pdo — Piedras Point Andesite
  - Pliocene — Gd — Capoas and Strip Peak Granite
  - Pliocene — Bt — Babuyan River Turvidites
- Cretaceous — S — Serpentine gabbro
- Cretaceous — Gd — Darocton Granite
- Jurassic — Middle Lower — Guinlo Formation
- Triassic — Upper Middle — Liminancong Formation
- Permian — Upper Middle — Minilog Formation
- Permian — Middle — Bacuit Formation
- Pre Permian
  - Conception Pebbly Phyllite
  - Pda — Danleg Sandstone
  - Ptu — Tumarbong Semi Schist
  - Pco — Coramoy Schist

Fault

Fault (assumed)

Thrust

Anticline Axis

Syncline Axis

7 — Mineral Showing

II — Promising Area

Mineral Showing List

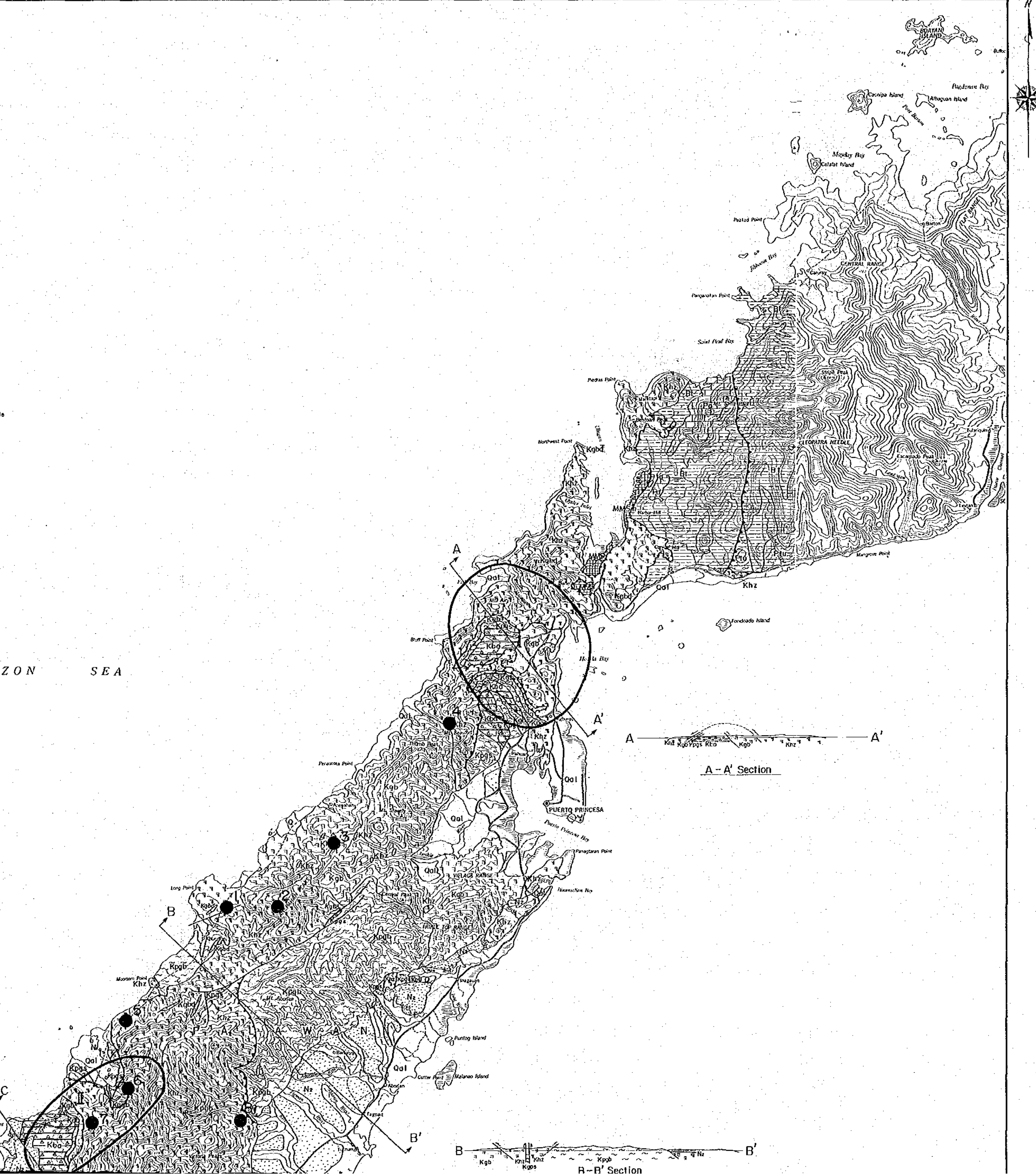
NO.	Name of Showing	Kind of Ore	Grade
1	ATLAS MINE	Chromite ore	D
2	RICHMAN MINE	〃	D
3	Boyo MINE	〃	D
4	BENGUIT MINE	〃	D
5	Romorao	Nickel laterite Chromite ore	C
6	Barong	Nickel laterite	C
7	Ibatng	Nickel laterite	D
8	Malasgao	〃	D
9	Bethlehem	Ni laterite Chromite ore	C
10	Bethlehem West	Ni laterite	D
11	Olympic	Ni laterite Chromite ore	B
12	Santa Monika	Ni laterite Chromite ore	C
13	Trident	Chromite ore	D
14	Abuabu	Guano phosphate	C

Evaluation Grade

B : Necessity of following Survey is high
C : Possibility of following Survey is reliable
D : Necessity of following Survey is low

Promising Area List

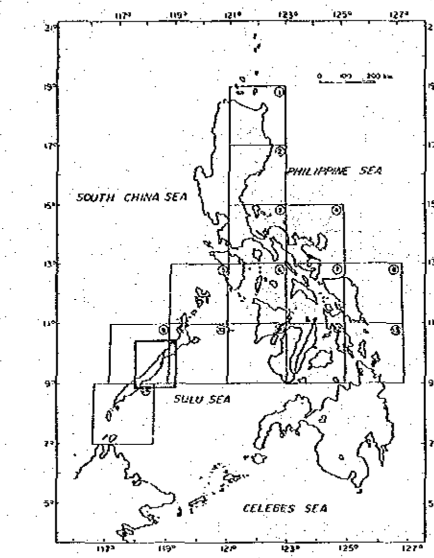
I Northern Puerto Princesa (UNDP Area)
II Westside Bireng (Ni, Co, Ca)
III Around Mt. Catalugas (Ni, Co)



PL. 10-2

THE MINERAL EXPLORATION
– MINERAL DEPOSITS AND TECTONICS OF TWO CONTRASTING GEOLOGIC ENVIRONMENTS – IN THE REPUBLIC OF THE PHILIPPINES PHASE III

INVENTORY AND PROMISING AREA MAP
PALAWAN AREA (2)



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METAL MINING AGENCY OF JAPAN
Feb. 1987

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0 10 20 km

LEGEND

Period			Symbol	Description
Quarternary			Qal	Alluvial
Tertiary	Miocene		N2	Sandstone and Mudstone
	Miocene		N1	Limestone
	EOCENE		Pg1	Pabellion limestone
	Palaeogene ~ Cretaceous	Uv	Kba	Basalt
		Uv	Kdb	Diabase
		Uv	Kgb	Gabbro
			Kgbd	Gabbro dyke
		Uc	Kdu	Dunite
		Uc	Khz	Harzbergite
			Kpgs	Sandstone and Shale ~Quartz Sericite Schist
			Kpgb	Basalt ~Green Schist
			Ptu	Tumallong Semi Schist

Bt Babuyan River Turvidites

MMs Sagasa Point *Tectonic Complex*

Fault

Thrust

Anticline Axis

10	Bethlehem West	Ni laterite	D
11	Olympic	Ni laterite Chromite ore	B
12	Santa Monika	Ni laterite Chromite ore	C
13	Trident	Chromite ore	D
14	Abubbu	Guano phosphate	C

Evaluation Grade

B : Necessity of following Survey is high
C : Possibility of following Survey is reliable
D : Necessity of following Survey is low

Promising Area List

I Northern Puerto Princesa (UNDP Area)
II Westside Bilrong (Ni, Co, Cr)
III Around Mt. Catalugas (Ni, Co)

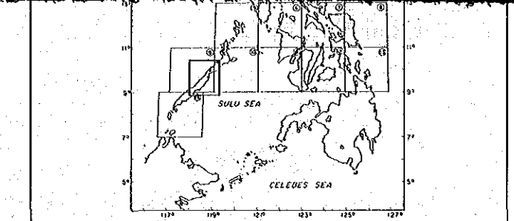
LUZON SEA

SULU SEA

A - A' Section

B - B' Section

C - C' Section



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
Feb. 1987

Scale 1 : 250,000

0 10 20 km

LEGEND

- Quaternary
  - Qal — Alluvial
- Tertiary
  - Miocene
    - Ns — Sandstone and Mudstone
    - Nl — Limestone
  - EOCENE
    - Pal — Pabellon Limestone
    - Bl — Babuyan River Turvidites
  - Uv
    - Kpb — Basalt
    - Kdb — Diabase
    - Kgb — Gabbro
    - Kgbd — Gabbro dyke
  - Mms — Sagasa Point Tectonic Complex
- Palaeogene & Cretaceous
  - Uc
    - Kdu — Dunite
    - Khz — Harzbergite
    - Kpgs — Sandstone and Shale ~Quartz Sericite Schist
    - Kpgb — Basalt ~Green Schist
  - Ptu — Tumallong Semi Schist

Fault

Thrust

Anticline Axis

Syncline Axis

7 Mineral Showing

II Promising Area

JICA