



Ag

Ag (ppb)	
•	3477 \leq Ag < 10760
▲	10761 \leq Ag < 38500
•	38501 \leq Ag

Ag

Ag (ppb)	
•	3477 ≤ Ag < 10760
▲	10761 ≤ Ag < 38300
■	38301 ≤ Ag

Ga

Ga (ppm)	
•	17.2 ≤ Ga < 21.4
▲	21.5 ≤ Ga < 26.9
■	27.0 ≤ Ga

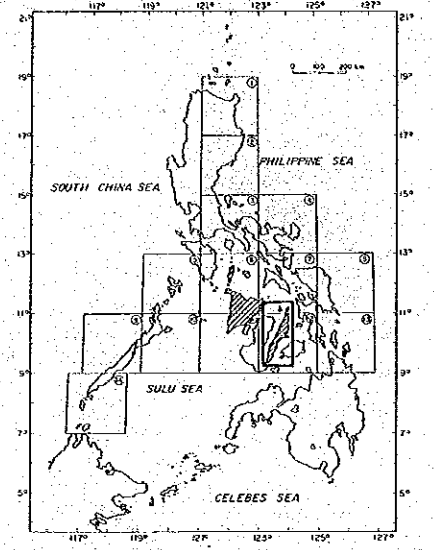
Ga

Ga (ppm)	
•	17.2 ≤ Ga < 21.4
▲	21.5 ≤ Ga < 26.9
■	27.0 ≤ Ga

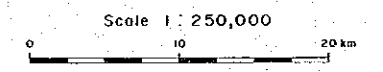
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 国際協力事業団
 16316
 国書資料室蔵書

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

CEBU AREA



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



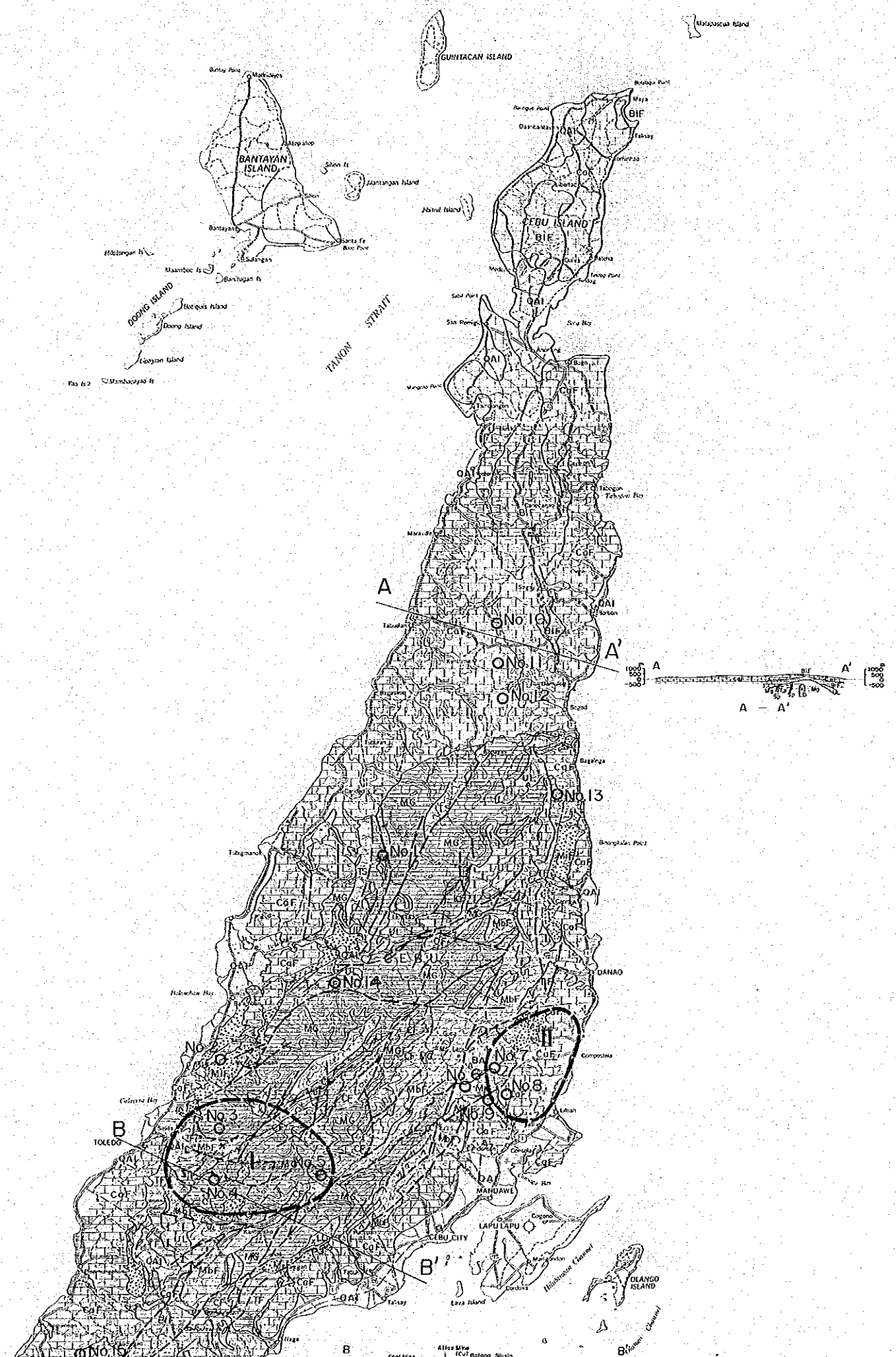
LEGEND

STRATIGRAPHY	STRATIFIED ROCKS		INTRUSIVE AND PSEUDO-STRATIFIED ROCKS	
	Quaternary	Quaternary	Ultrabasic to basic	Intermediate to acidic
QUATERNARY	QRI Quaternary-Recent Coarse and fine sand, silt, clay and gravel in various thicknesses and local beds.	QRI Quaternary-Recent Coarse and fine sand, silt, clay and gravel in various thicknesses and local beds.		
PLIOCENE	PLI Pliocene Formation Dark gray to black, shaly, locally bedded to massive, partly argillaceous and argillaceous sandstone, tuffite.	PLI Pliocene Formation Dark gray to black, shaly, locally bedded to massive, partly argillaceous and argillaceous sandstone, tuffite.		
	PLI Pliocene Formation Lower Pliocene member is light brown, sandy, argillaceous and locally argillaceous sandstone, partly bedded, locally massive.	PLI Pliocene Formation Lower Pliocene member is light brown, sandy, argillaceous and locally argillaceous sandstone, partly bedded, locally massive.		
MIOCENE	MI Miocene Formation Consists of early Miocene and middle Miocene where unconformity and stratigraphic features in the lower part are well developed.	MI Miocene Formation Consists of early Miocene and middle Miocene where unconformity and stratigraphic features in the lower part are well developed.		
	MI Miocene Formation Tertiary Formation This is the most extensive and thick unit. It is composed of a sequence of igneous and sedimentary rocks, including granite, diorite, and various types of igneous rocks, along with shales.	MI Miocene Formation Tertiary Formation This is the most extensive and thick unit. It is composed of a sequence of igneous and sedimentary rocks, including granite, diorite, and various types of igneous rocks, along with shales.	SP Serpentinized Peridotite Serpentinized peridotite, locally containing olivine, pyroxene, and other minerals, and is associated with ultrabasic rocks.	DA Diorite Andesite Diorite, andesite, locally containing olivine, pyroxene, and other minerals, and is associated with ultrabasic rocks.
OLIGOCENE	OL Oligocene Formation Generally acid to intermediate, locally basic and calcareous.	OL Oligocene Formation Generally acid to intermediate, locally basic and calcareous.		
	OL Oligocene Formation Lulu Formation Hydrated sandstone and mudstone with conglomerate and tuffite.	OL Oligocene Formation Lulu Formation Hydrated sandstone and mudstone with conglomerate and tuffite.		
Eocene	EO Eocene Formation Consists of an upper member which is composed of sandstone, shale, and locally argillaceous sandstone, and a lower member which is composed of sandstone, shale, and locally argillaceous sandstone, and is associated with ultrabasic rocks.	EO Eocene Formation Consists of an upper member which is composed of sandstone, shale, and locally argillaceous sandstone, and a lower member which is composed of sandstone, shale, and locally argillaceous sandstone, and is associated with ultrabasic rocks.		
	EO Eocene Formation Lulu Formation Limestone with local sandstone containing trilobites and bryozoans.	EO Eocene Formation Lulu Formation Limestone with local sandstone containing trilobites and bryozoans.		
PALEOCENE	PA Paleocene Formation Massive to tabular, coarse grained sandstone.	PA Paleocene Formation Massive to tabular, coarse grained sandstone.		
	PA Paleocene Formation Base Formation Massive to tabular, coarse grained sandstone.	PA Paleocene Formation Base Formation Massive to tabular, coarse grained sandstone.		
MESOZOIC	MG Mesozoic Group A sequence typically composed of Mesozoic igneous rocks, including granite, diorite, and various types of igneous rocks, and sedimentary rocks, including sandstone, shale, and locally argillaceous sandstone, and is associated with ultrabasic rocks.	MG Mesozoic Group A sequence typically composed of Mesozoic igneous rocks, including granite, diorite, and various types of igneous rocks, and sedimentary rocks, including sandstone, shale, and locally argillaceous sandstone, and is associated with ultrabasic rocks.		
	MG Mesozoic Group Lulu Formation Limestone with local sandstone containing trilobites and bryozoans.	MG Mesozoic Group Lulu Formation Limestone with local sandstone containing trilobites and bryozoans.		

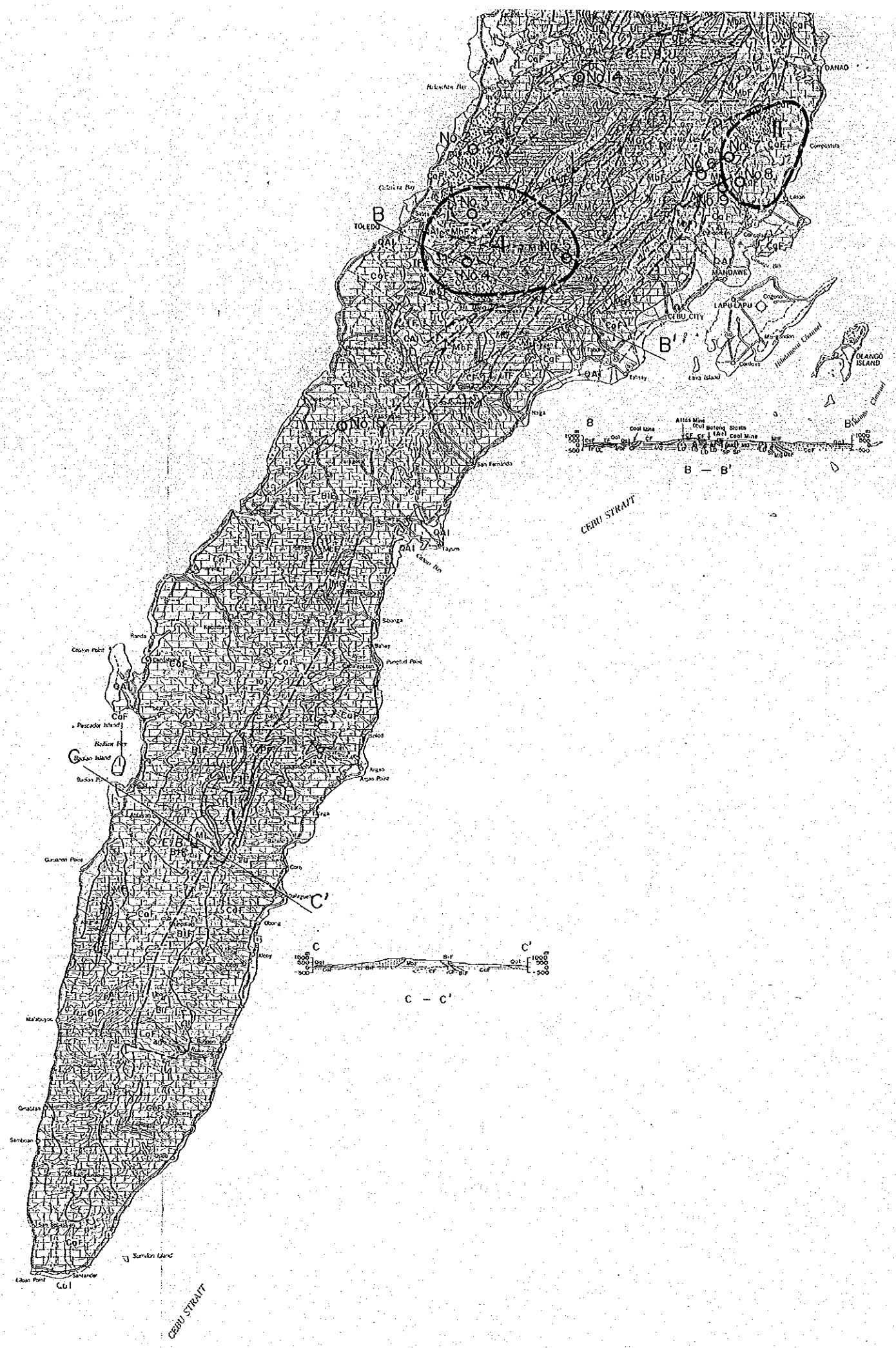
Mineral Showing List

No.	Name of Showing	Kind of Ore	Grade
1	Simo Nita	Hydrothermal Vein	B
2	Buanoy gold	Hydrothermal Vein	C
3	Hayay	Hydrothermal Dissemination	C
4	Sigait Lutusan	Hydrothermal Vein	B
5	Batong Simin	Hydrothermal Vein Dissemination	C
6	Mandave Rv.	Skin	C
7	Consolacion 1	Magnetite Dissemination	D
8	Consolacion 2	ditto	D
9	Consolacion 3	ditto	D
10	Dalid	Phosphate	D
11	Mohon	ditto	D
12	Cabalavan	ditto	D
13	Cabuganan	Diatomite	D
14	La Mesa	Bentonite	C
15	Argilan	Phosphate	D

Grade Definition
 B: Necessity of following survey is high
 C: Possibility of following survey is reliable
 D: Necessity of following survey is low



TANON STRAIT



LEGEND

CENOZOIC TERTIARY

- Magasin Formation**
Gravelly to silty sandstone with shaly part
Unconformity
- Teleo Formation**
Thin to thick bedded sandstone and shale with shaly part
Unconformity
- Mini Formation**
Gravelly to silty sandstone, shaly part
Unconformity
- Luko Formation**
Interbedded sandstone and shale with conglomerate and shaly part
Unconformity
- Makabong Formation**
Medium to coarse grained sandstone and shale with shaly part
Unconformity
- Bayo Formation**
Massive sandstone, shaly part
Unconformity

MESOZOIC CRETACEOUS

- Manobo Group**
Alternating argillaceous and silty sandstone, shaly part
Unconformity
- Turkey Shale**
Silty sandstone and shale
Unconformity

PRE-CRETACEOUS

- Luzon Shale**
Silty sandstone and shale
Unconformity

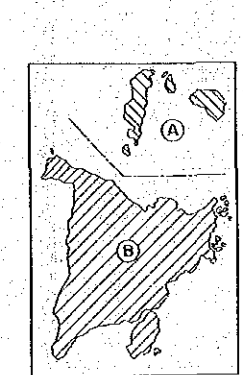
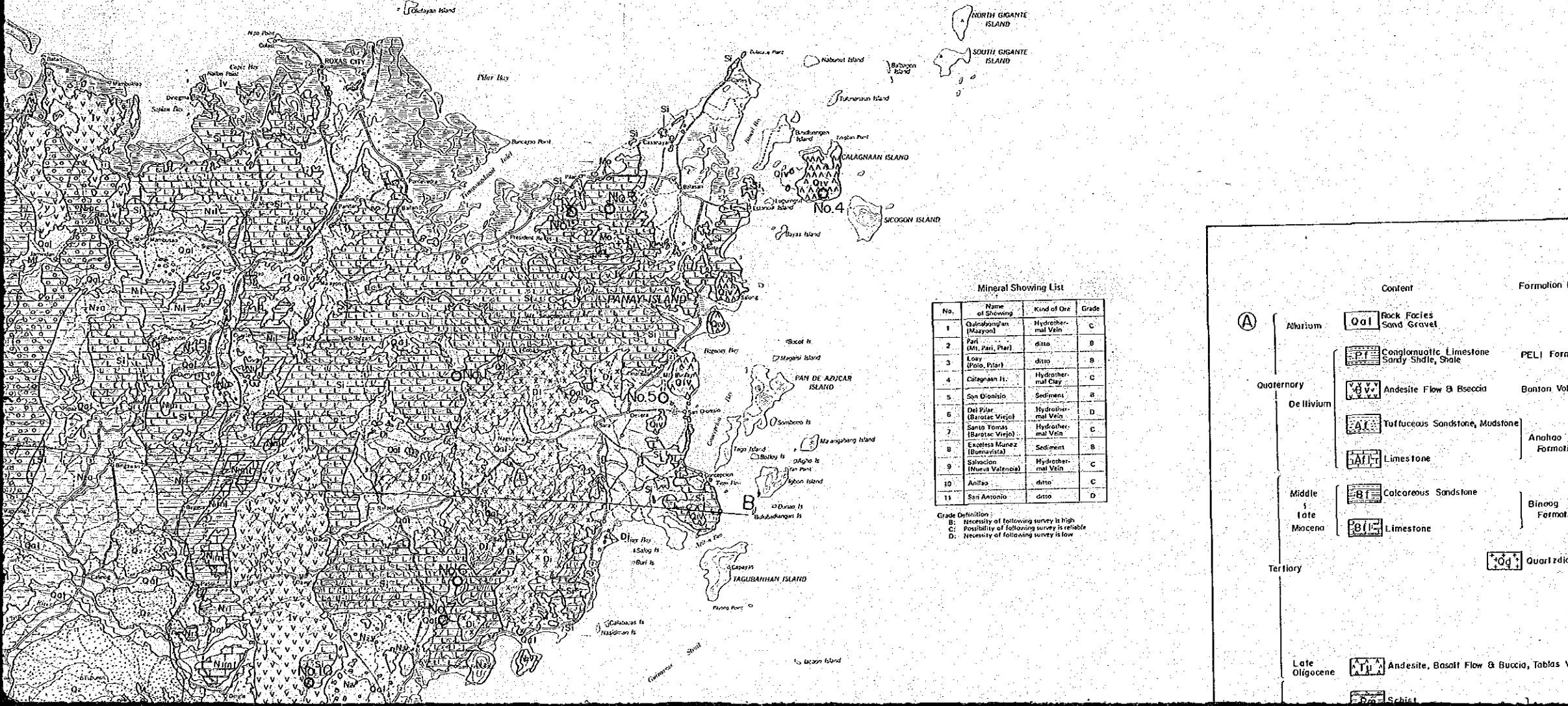
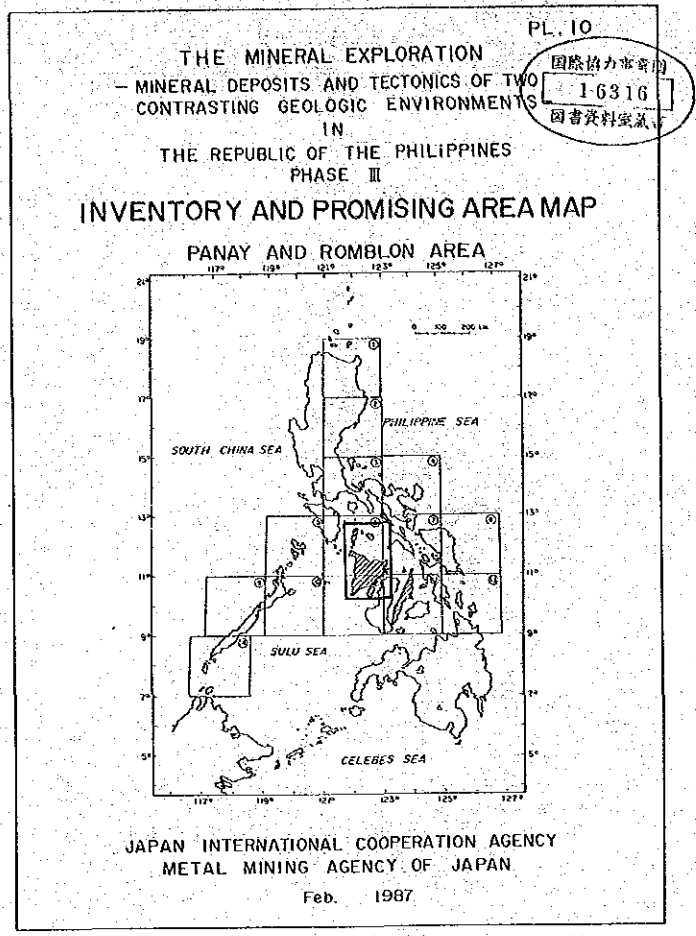
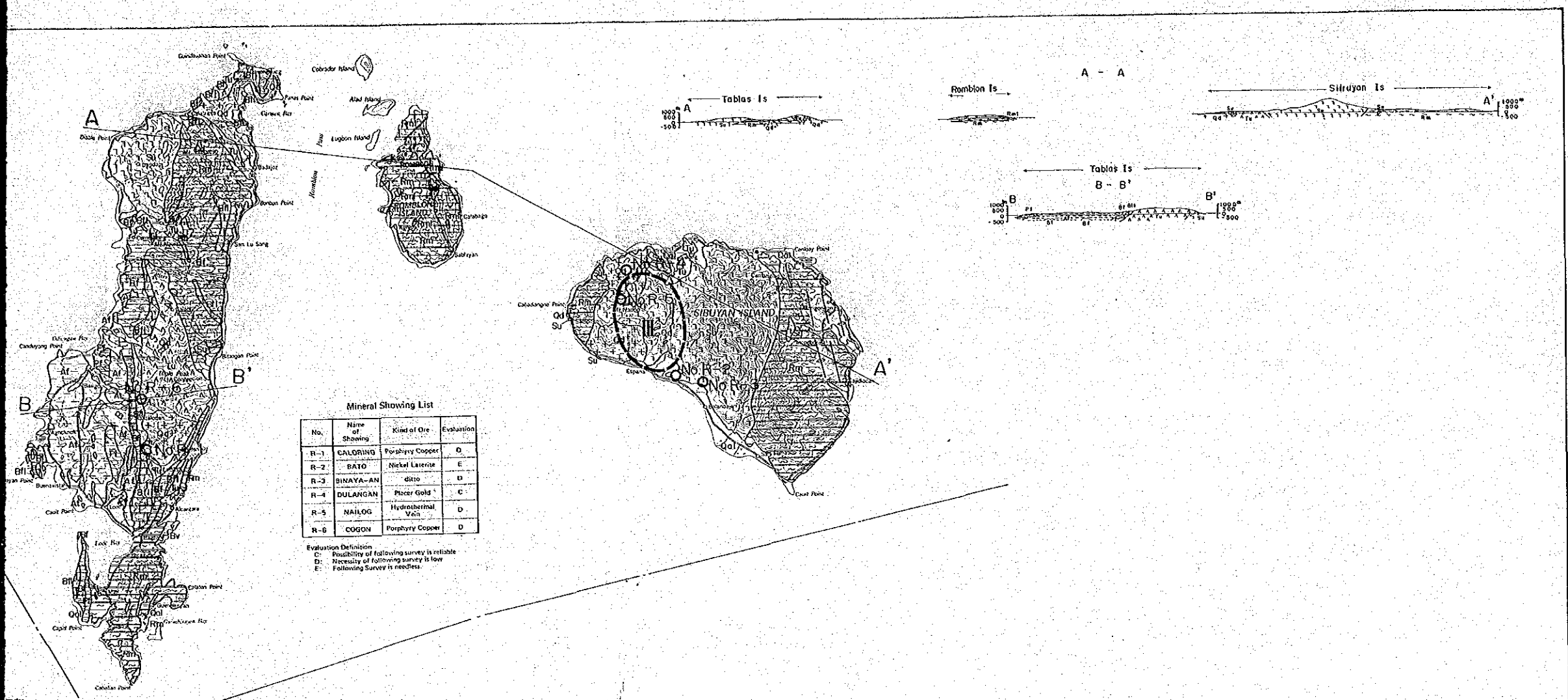
GEOLOGIC STRUCTURES

- Forestructural boundary
- Fault
- Syncline
- Anticline
- Inclined fault
- Inclined bedding
- Overturned bedding
- Inclined layering
- Inclined shear

No. 70 Mineral Showing

II Promising Area

Compiled from Geological Map Quadrangles (1:50,000) of Sheet No. 3648-I, 3649-II, 3650-III, 3750-IV, 3751-V, 3851-VI, 3852-VII and Geologic Map of Cebu (1:250,000)

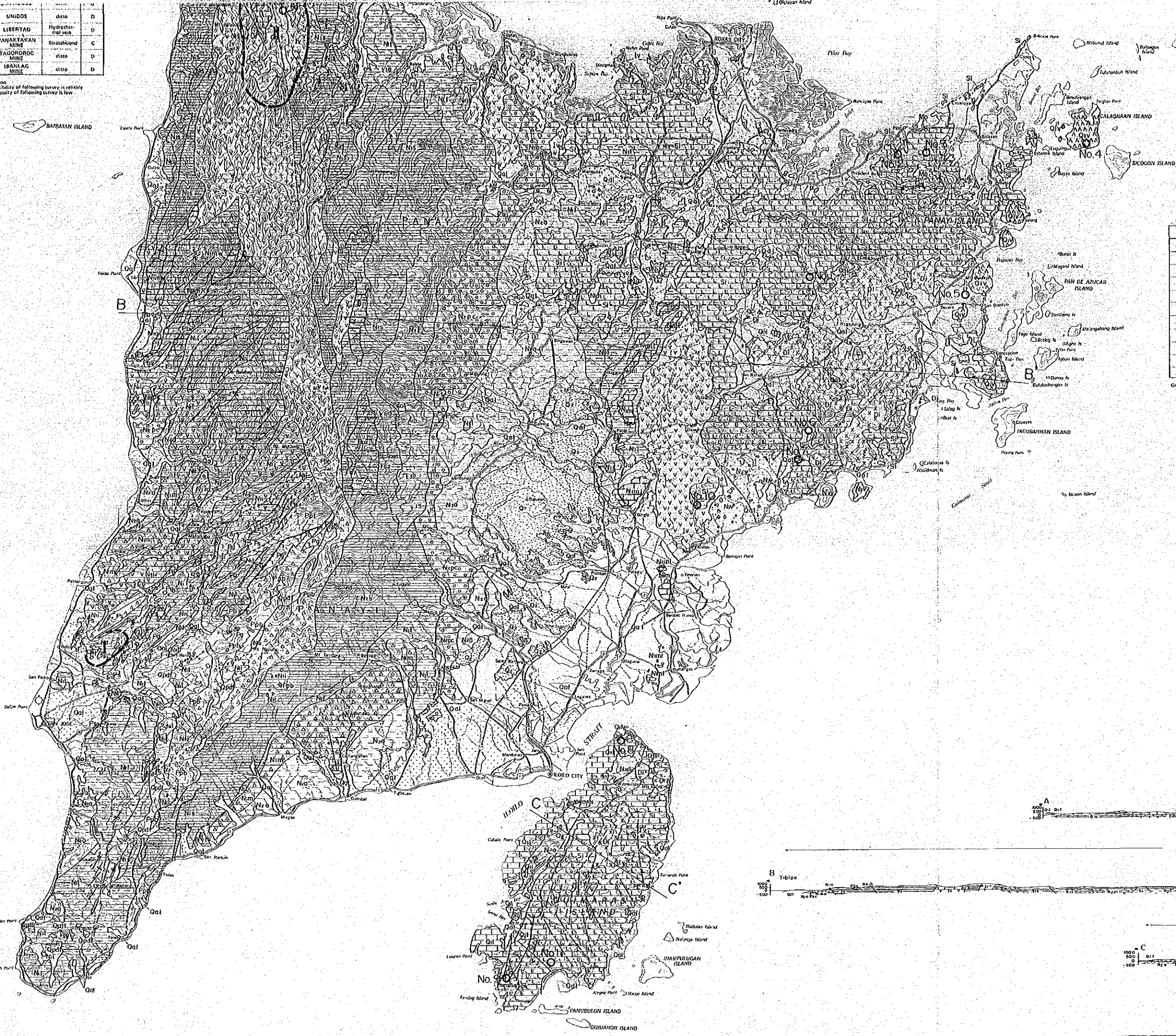


LEGEND

Content	Formation Name	Contents	Formation Name	Contents	Rock Name	
Quaternary	Holocene	Qa1	Soil, Gravel	Qa1	Soil, Gravel	
		Qa2	Sand, Coral Reef	Qa2	Sand, Coral Reef	
	Delirivium	Qd1	Sandstone, Mudstone	Cabatuan Fm (Santa Cruz Fm)	Qd1	Sandstone, Mudstone
		Qd2	Limestone	Guimasas Fm (Santa Cruz Fm)	Qd2	Limestone
	Pliocene	Np1	Limestone	Ulian Limestone	Np1	Limestone
		Np2	Marl, Mudstone, Wacke	Apdo Fm (Ulian Fm)	Np2	Marl, Mudstone, Wacke
	Middle & Late Miocene	Nm1	Conglomerate	Panlupan Conglomerate (Uday Fm)	Nm1	Conglomerate
		Nm2	Calcareous Sandstone	Moyas Fm (Makato Fm)	Nm2	Calcareous Sandstone
	Tertiary	Nt1	Limestone	Makato Fm	Nt1	Limestone
		Nt2	Quartzidiorite	Makato Fm	Nt2	Quartzidiorite
Late Oligocene	Nl1	Turbidite, Wacke, Andesite, Flow, Minor Siltstone	Mallao Wackes	Nl1	Turbidite, Wacke, Andesite, Flow, Minor Siltstone	
	Nl2	Andesite Flow & Breccia	Igupo	Nl2	Andesite Flow & Breccia	
	Nl3	Lava, Breccia, Tuff, Wacke, Conglomerate	Igawa & Breccia	Nl3	Lava, Breccia, Tuff, Wacke, Conglomerate	
	Nl4	Mudstone, Wacke, Conglomerate, Minor Basalt & Andesite Flow	Sewaragan Fm (Singit Fm)	Nl4	Mudstone, Wacke, Conglomerate, Minor Basalt & Andesite Flow	
Gligocene	Ng1	Pillow & Breccia	Panpan Basalt	Ng1	Pillow & Breccia	
	Ng2	Basalt, Breccia, Tuff	Mt. Batoy Volcanics	Ng2	Basalt, Breccia, Tuff	

P-4	UNIDOS	dito	D
P-5	LIBERTAD	Hydrother- mal Vein	D
P-6	FANAKTAKAN MINE	Stratified	C
P-7	TAGOROC MINE	dito	D
P-8	IBANLAG MINE	dito	D

Grade Definition
 C: Possibility of following survey is reliable
 D: Necessity of following survey is low

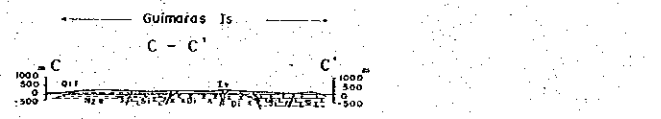
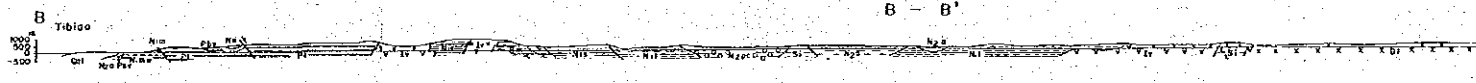
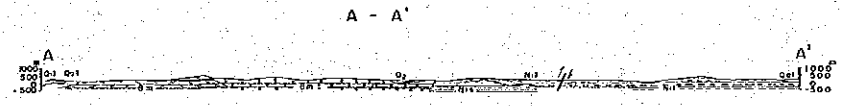


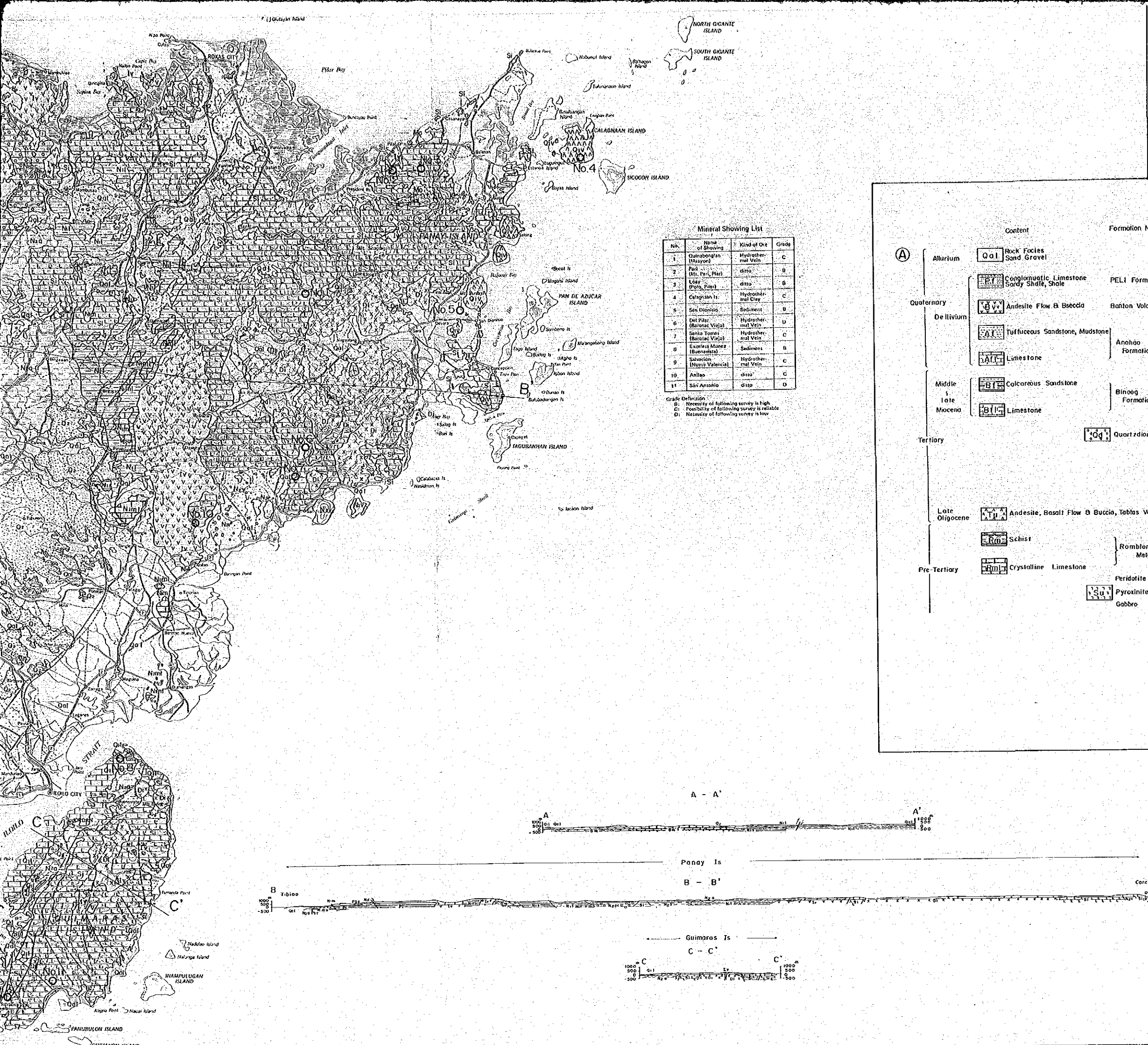
Mineral Showing List

No.	Name of Showing	Kind of Ore	Grade
1	Dalabonghan (Marjori)	Hydrother- mal Vein	C
2	Pat (Mt. Pat, Pat)	dito	B
3	Loa (Polo, Pola)	dito	B
4	Calyanan Is.	Hydrother- mal Clay	C
5	San Dionisio	Sediment	B
6	Del Pilar (Barroco Vija)	Hydrother- mal Vein	D
7	Santo Tomas (Barroco Vija)	Hydrother- mal Vein	C
8	Expedes Munez (Buhayusa)	Sediment	B
9	Suloboon (Barroco Vija)	Hydrother- mal Vein	C
10	Anilao	dito	C
11	San Antonio	dito	D

Grade Definition
 B: Necessity of following survey is high
 C: Possibility of following survey is reliable
 D: Necessity of following survey is low

(A) Albitum
 Quaternary
 De Iivium
 Middle
 Late
 Miocena
 Tertiary
 Late
 Oligocene
 Pre-Tertiary



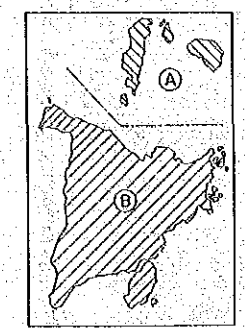


Mineral Showing List

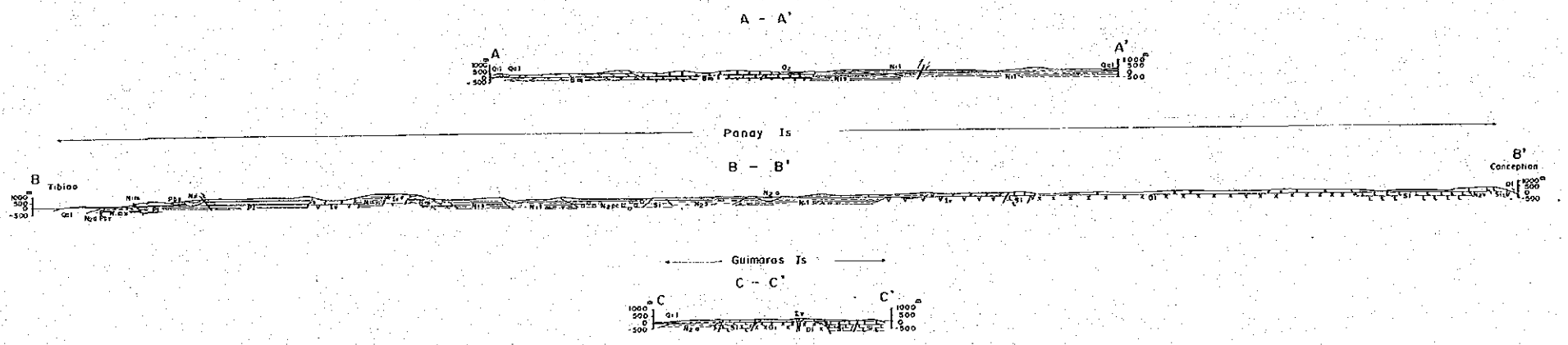
No.	Name of Showing	Kind of Ore	Grade
1	Quinsabangan (Masyon)	Hydrothermal Vein	C
2	Pail (Dil. Fer. Pir)	ditto	B
3	Laya (Polo, Pir)	ditto	B
4	Calagnaan I.	Hydrothermal Vein	C
5	San Diego	Sediment	B
6	Del Pilar (Barotac Vieja)	Hydrothermal Vein	D
7	Santa Tomas (Barotac Vieja)	Hydrothermal Vein	C
8	Cuevas Marez (Buenavista)	Sediment	B
9	Salvacion (Barotac Vieja)	Hydrothermal Vein	C
10	Anlao	ditto	C
11	San Antonio	ditto	D

Grade Definition:
 B: Necessity of following survey is high
 C: Possibility of following survey is reliable
 D: Necessity of following survey is low

LEGEND



Content	Formation Name	Contents	Formation Name	Contents	Rock Name
Quaternary	Alitrium	Qa1: Rock Facies Sand Gravel	Quaternary	Holocene: Qa1: Soil, Gravel Sand Coral Reef	
Quaternary	De Iltivium	Q2: Conglomeratic Limestone Sordy Shale, Shale Q3: Andesite Flow & Bsecda Q4: Tuffaceous Sandstone, Mudstone Q5: Limestone	Quaternary	Delirivium: Q11: Limestone Pliocene: Q12: Limestone Q13: Marl Mudstone Wacke Q14: Conglomerate	PELI Formation Banton Volcanics Añoño Formation Binooq Formation
Middle Tote	Moceno	BT1: Calcareous Sandstone BT2: Limestone	Tertiary	Q15: Calcarenites Basalt Flow & Breccia Q16: Siltstone, Mudstone, Lagaó Fm Tuff, Wacke, Minor Conglomerate Q17: Turbidite, Wacke, Andesite, Flow, Minor Siltstone Q18: Andesite Flow & Breccia Q19: Mudstone, Wacke, Conglomerate, Minor Basalt & Andesite Flow Q20: Pillow & Lreccia Basalt, Minor Conglomerate Q21: Crystalline Limestone	Magos Fm Imakoto Fm Limestone Makoto Fm Toledo Fm Matlao Wackes Igapaco Volcanics Sewaragan Fm (Linasco Fm) Singit Fm Mt. Baloy Volcanics Lubuyan Fm
Late Oligocene		Q22: Andesite, Basalt Flow & Buccia, Tablas Volcanics Q23: Schist Q24: Crystalline Limestone	Tertiary	Q25: Quartzdiorite Q26: Granodiorite, Paol Diorite Q27: Massive Gabbro Q28: Serpentinized Horzburgite Q29: Basalt Flow & Breccia Tuff Q30: Basalt Q31: Calcite Veined Mudstone, Turbidites Volcanic Wacke, Conglomerate	Quartzdiorite Granodiorite, Paol Diorite Antique Ophiolites Pillow Lavas Diabase Dyke Complex Massive Gabbro Serpentinized Horzburgite Pannnon Basalt Mt. Baloy Volcanics
Pre-Tertiary		Q32: Peridotite Q33: Pyroxinite Q34: Gabbro	Miocene	Q35: Mudstone, Chert Siltstone, Minor Basalt Lava & Sheet	Sibuyan Ultra-Mafic Rocks
			Oligocene	Q36: Basic Clastic Sediments	Romblon Metamorphics Sibuyan Ultra-Mafic Rocks
			Eocene	Q37: Crystalline Schist Slate, Phyllite, Chert	
			Paleocene	Q38: Basic Clastic Sediments	
			Pre-Tertiary	Q39: Crystalline Schist Slate, Phyllite, Chert	Basement Lime Stone Basement



- Geologic Symbols**
- Fault
 - Dip. Strike
 - Anticline Axis
 - Syncline Axis
 - No. 70 Mineral Showing
 - Premising Area

