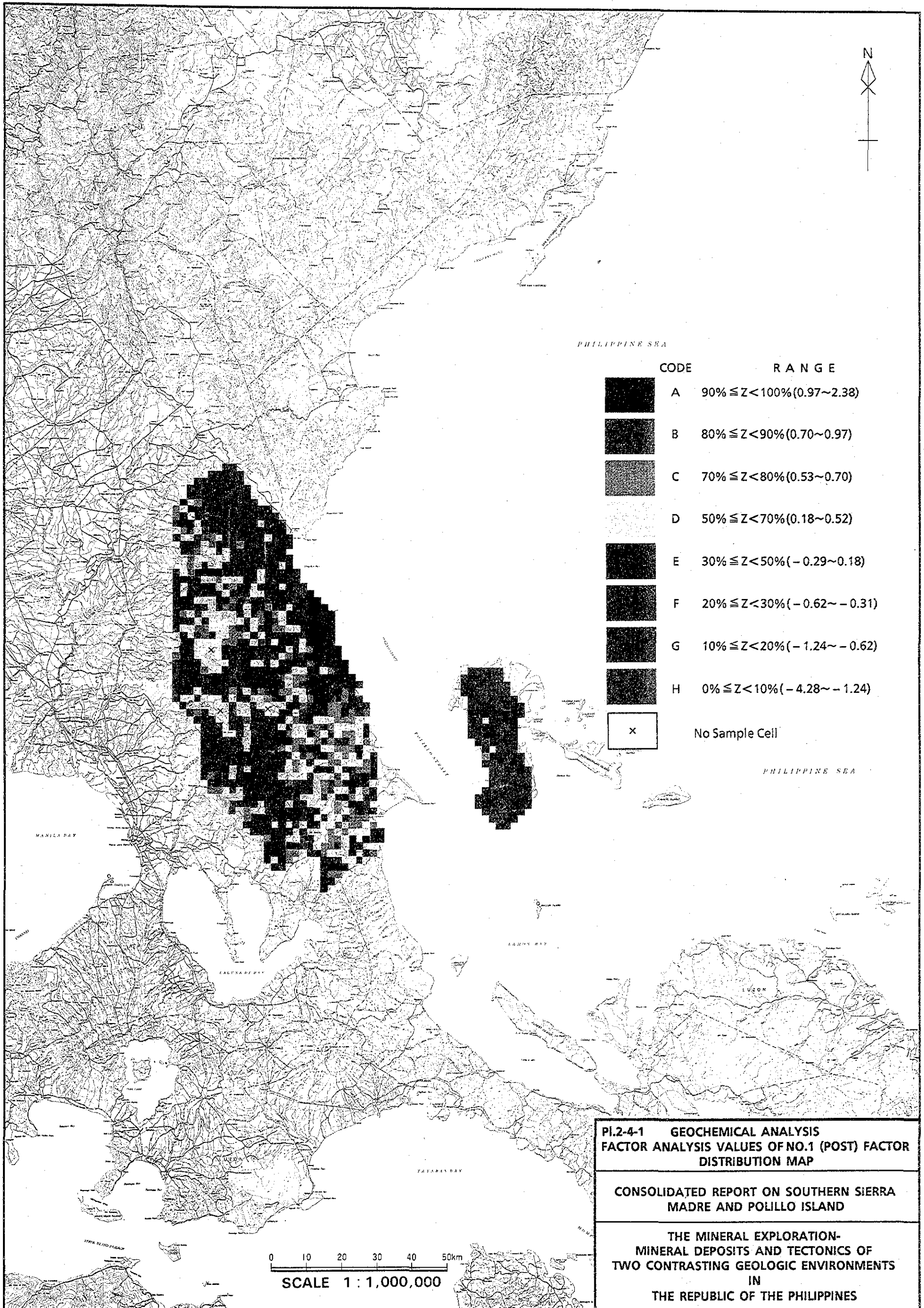


Pl. 2-4 (No. 1~No. 5) 多変量解析 (因子分析) 因子得点分布図
(1/1,000,000)

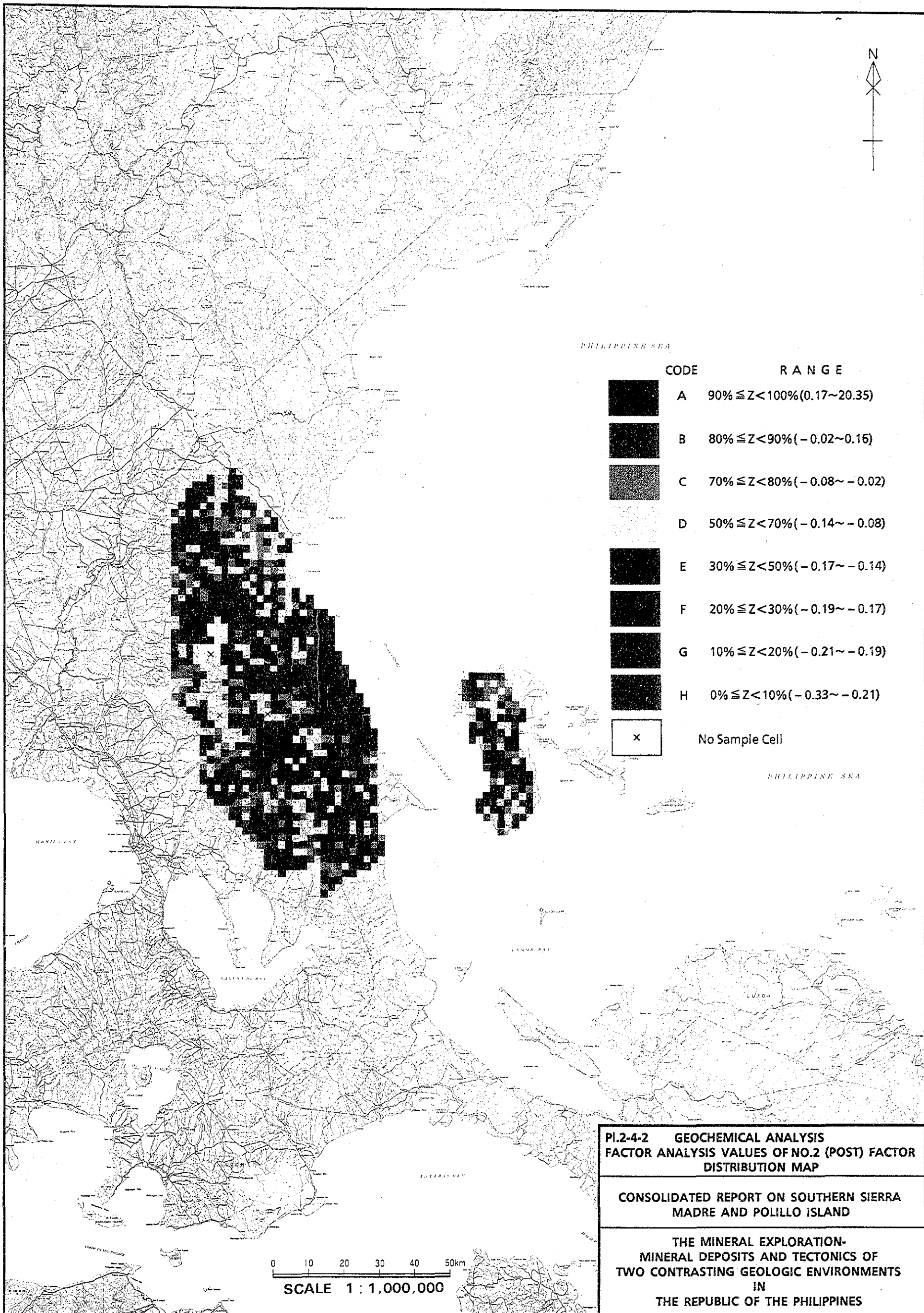


CODE	RANGE
A	$90\% \leq Z < 100\%$ (0.97~2.38)
B	$80\% \leq Z < 90\%$ (0.70~0.97)
C	$70\% \leq Z < 80\%$ (0.53~0.70)
D	$50\% \leq Z < 70\%$ (0.18~0.52)
E	$30\% \leq Z < 50\%$ (-0.29~0.18)
F	$20\% \leq Z < 30\%$ (-0.62~-0.31)
G	$10\% \leq Z < 20\%$ (-1.24~-0.62)
H	$0\% \leq Z < 10\%$ (-4.28~-1.24)
x	No Sample Cell

**PI.2-4-1 GEOCHEMICAL ANALYSIS
FACTOR ANALYSIS VALUES OF NO.1 (POST) FACTOR
DISTRIBUTION MAP**

**CONSOLIDATED REPORT ON SOUTHERN SIERRA
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**THE MINERAL EXPLORATION-
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TWO CONTRASTING GEOLOGIC ENVIRONMENTS
IN
THE REPUBLIC OF THE PHILIPPINES**

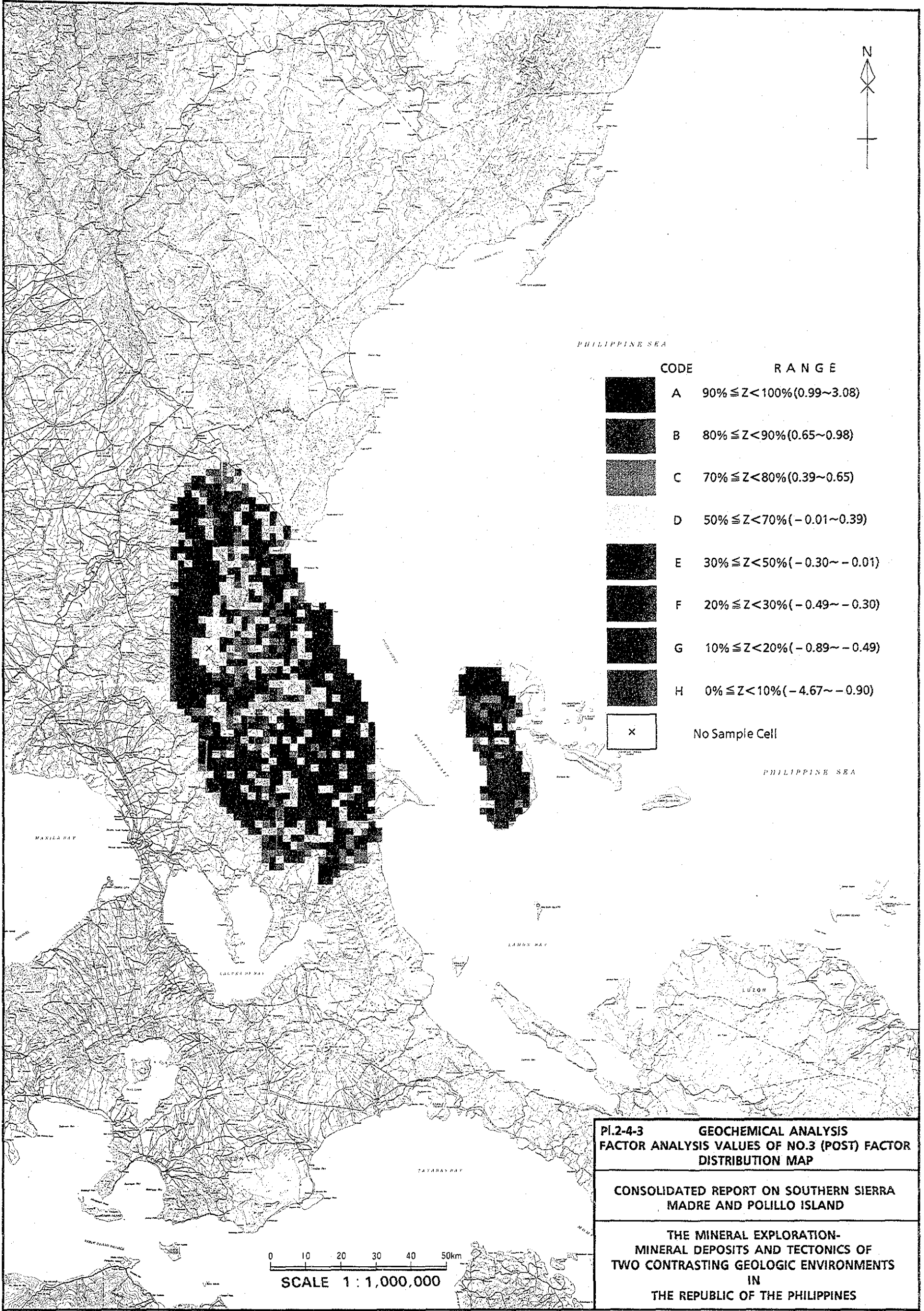


CODE	RANGE
A	90% ≤ Z < 100% (0.17 ~ 20.35)
B	80% ≤ Z < 90% (-0.02 ~ 0.16)
C	70% ≤ Z < 80% (-0.08 ~ -0.02)
D	50% ≤ Z < 70% (-0.14 ~ -0.08)
E	30% ≤ Z < 50% (-0.17 ~ -0.14)
F	20% ≤ Z < 30% (-0.19 ~ -0.17)
G	10% ≤ Z < 20% (-0.21 ~ -0.19)
H	0% ≤ Z < 10% (-0.33 ~ -0.21)
x	No Sample Cell

PI.2-4-2 GEOCHEMICAL ANALYSIS
 FACTOR ANALYSIS VALUES OF NO.2 (POST) FACTOR
 DISTRIBUTION MAP

CONSOLIDATED REPORT ON SOUTHERN SIERRA
 MADRE AND POLILLO ISLAND

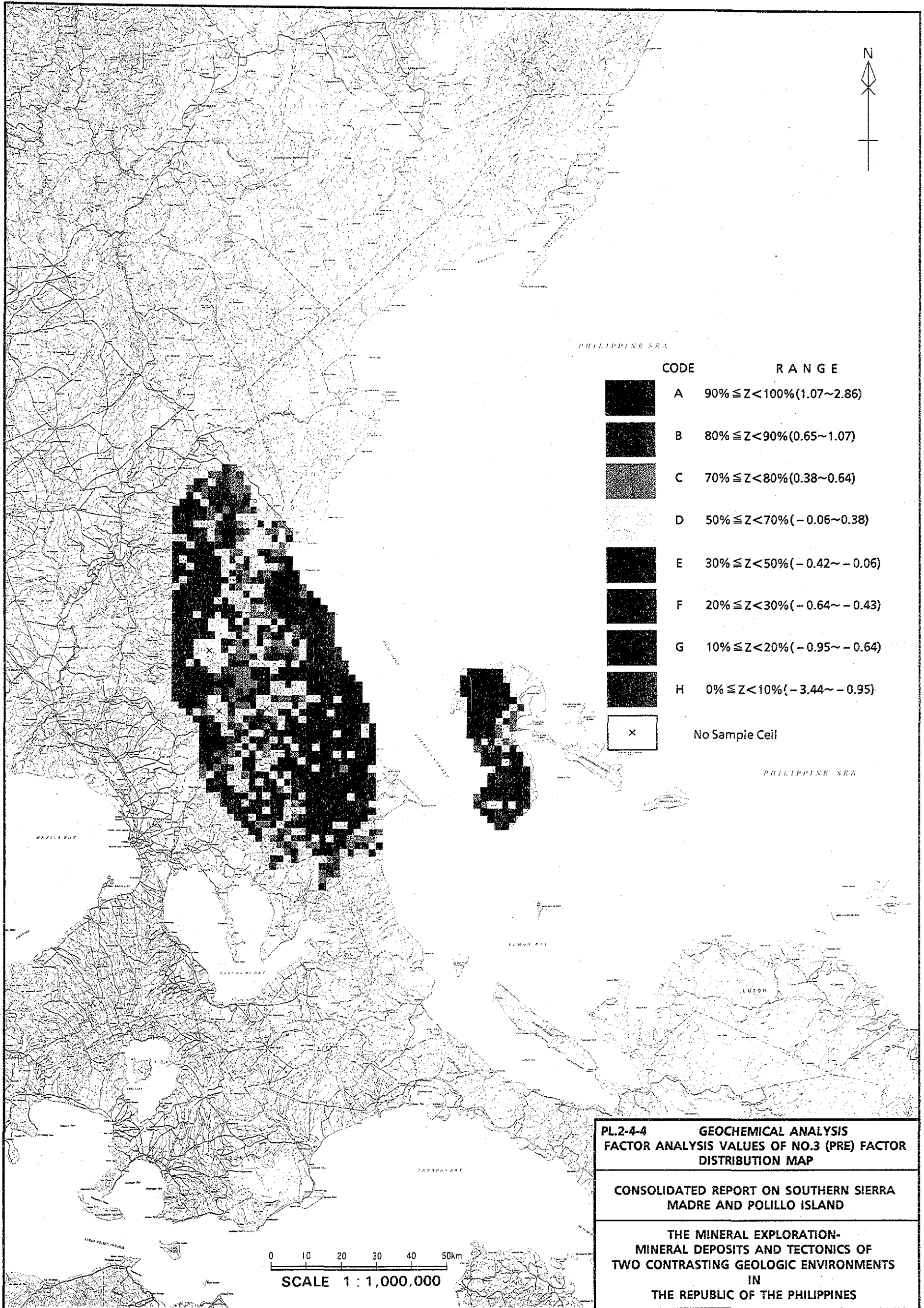
THE MINERAL EXPLORATION-
 MINERAL DEPOSITS AND TECTONICS OF
 TWO CONTRASTING GEOLOGIC ENVIRONMENTS
 IN
 THE REPUBLIC OF THE PHILIPPINES



CODE	RANGE
A	90% ≤ Z < 100% (0.99~3.08)
B	80% ≤ Z < 90% (0.65~0.98)
C	70% ≤ Z < 80% (0.39~0.65)
D	50% ≤ Z < 70% (-0.01~0.39)
E	30% ≤ Z < 50% (-0.30~-0.01)
F	20% ≤ Z < 30% (-0.49~-0.30)
G	10% ≤ Z < 20% (-0.89~-0.49)
H	0% ≤ Z < 10% (-4.67~-0.90)
x	No Sample Cell

**Pl.2-4-3 GEOCHEMICAL ANALYSIS
 FACTOR ANALYSIS VALUES OF NO.3 (POST) FACTOR
 DISTRIBUTION MAP**
**CONSOLIDATED REPORT ON SOUTHERN SIERRA
 MADRE AND POLILLO ISLAND**
**THE MINERAL EXPLORATION-
 MINERAL DEPOSITS AND TECTONICS OF
 TWO CONTRASTING GEOLOGIC ENVIRONMENTS
 IN
 THE REPUBLIC OF THE PHILIPPINES**

0 10 20 30 40 50km
SCALE 1 : 1,000,000

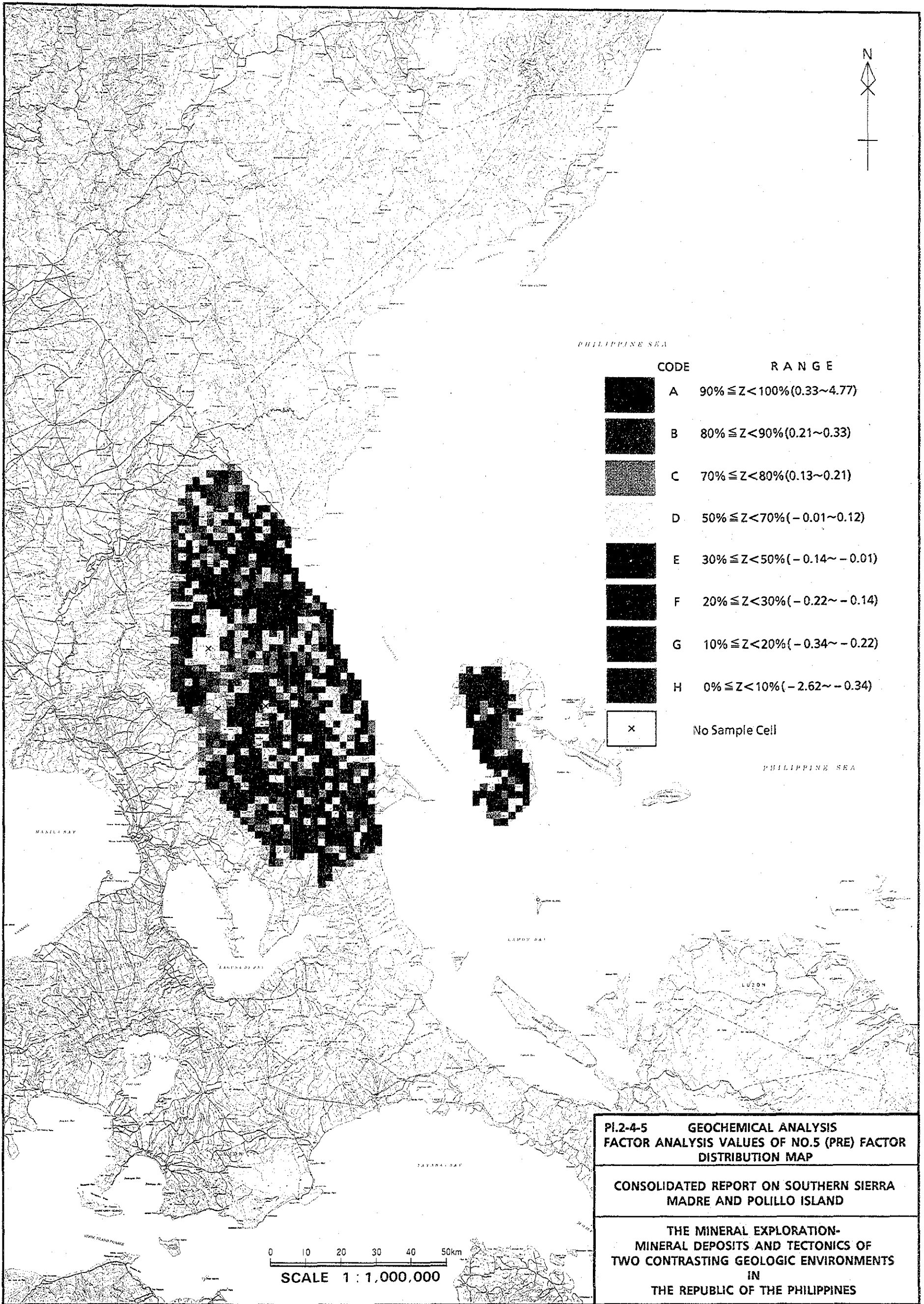


CODE	RANGE
A	90% \leq Z < 100% (1.07~2.86)
B	80% \leq Z < 90% (0.65~1.07)
C	70% \leq Z < 80% (0.38~0.64)
D	50% \leq Z < 70% (-0.06~0.38)
E	30% \leq Z < 50% (-0.42~-0.06)
F	20% \leq Z < 30% (-0.64~-0.43)
G	10% \leq Z < 20% (-0.95~-0.64)
H	0% \leq Z < 10% (-3.44~-0.95)
x	No Sample Cell

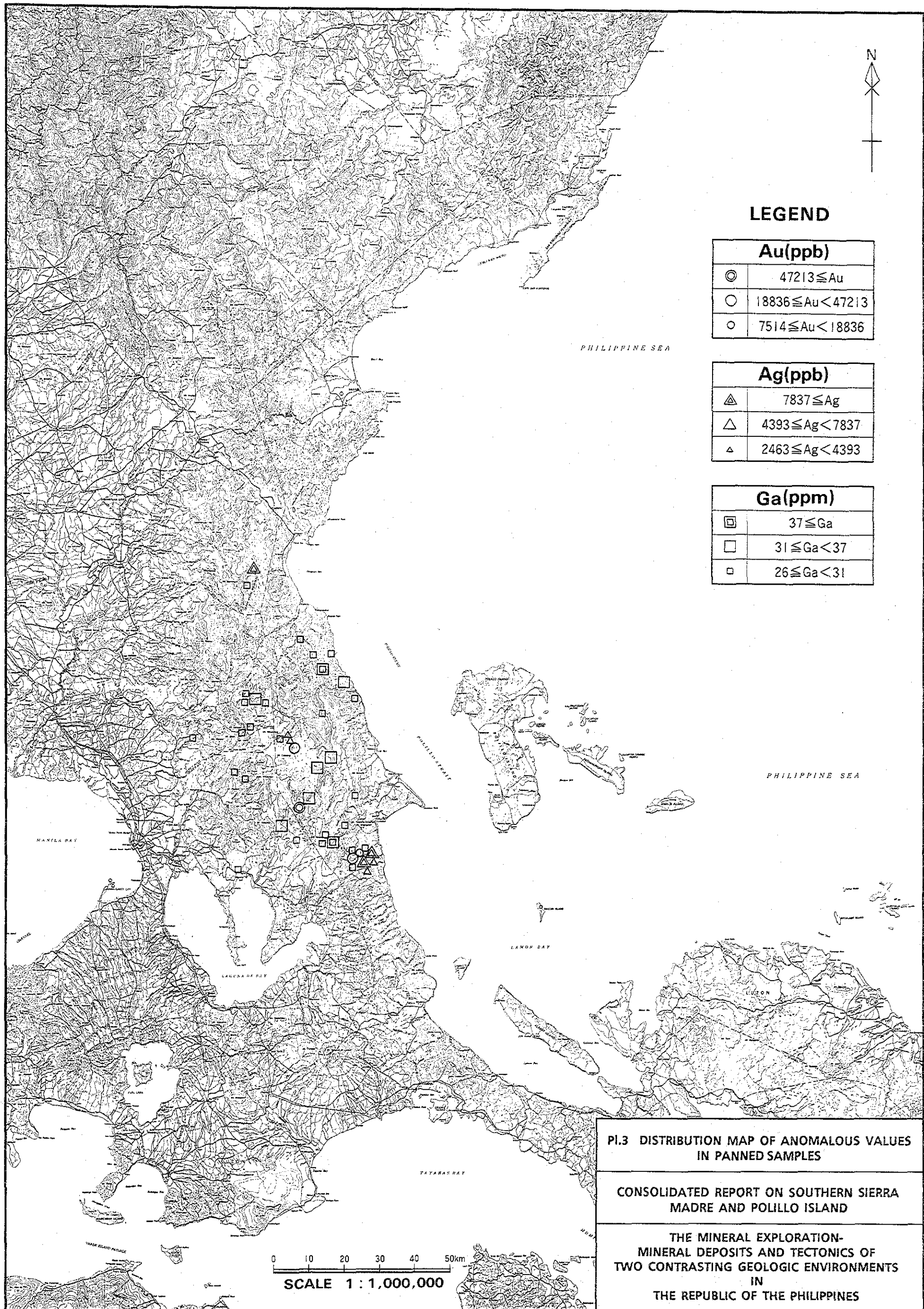
**PL.2-4-4 GEOCHEMICAL ANALYSIS
FACTOR ANALYSIS VALUES OF NO.3 (PRE) FACTOR
DISTRIBUTION MAP**

**CONSOLIDATED REPORT ON SOUTHERN SIERRA
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- Pl. 3 重鉍物パンニング試料の異常値分布図 (1/1,000,000)
- Pl. 4 重力 (ブーゲー異常) 分布図 (1/1,000,000)
- Pl. 5 リニアメント解析図 (1/1,000,000)
- Pl. 6 鉍徴地位置図 (鉍徴地一覧表添付) (1/1,000,000)
- Pl. 7 既存データインデックス図 (1/1,000,000)
- Pl. 8 探査有望地と鉍徴地の関係図 (1/1,000,000)



LEGEND

Au(ppb)	
⊙	$47213 \leq Au$
○	$18836 \leq Au < 47213$
◦	$7514 \leq Au < 18836$

Ag(ppb)	
△	$7837 \leq Ag$
△	$4393 \leq Ag < 7837$
△	$2463 \leq Ag < 4393$

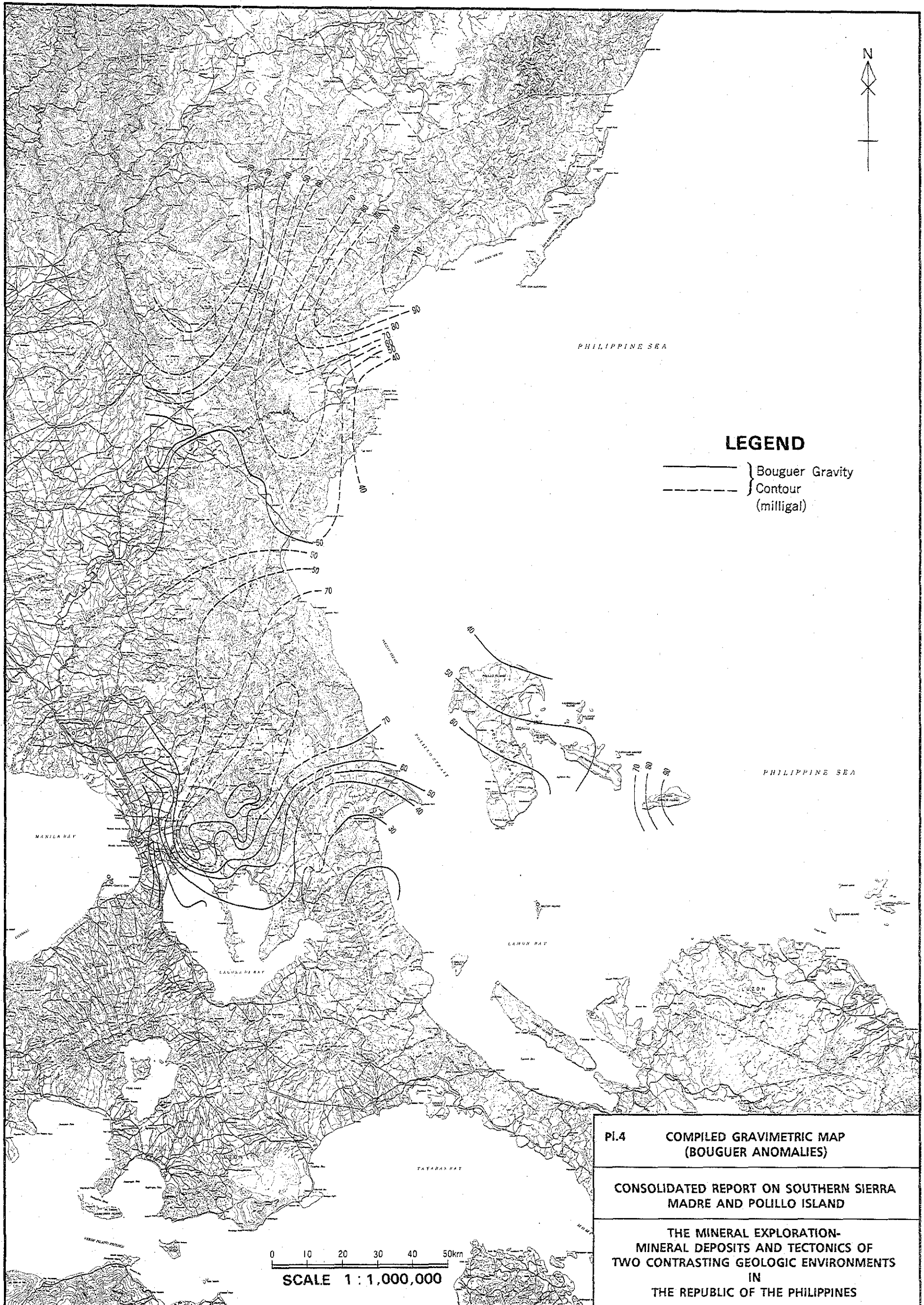
Ga(ppm)	
⊠	$37 \leq Ga$
□	$31 \leq Ga < 37$
□	$26 \leq Ga < 31$

PI.3 DISTRIBUTION MAP OF ANOMALOUS VALUES IN PANNED SAMPLES

CONSOLIDATED REPORT ON SOUTHERN SIERRA MADRE AND POLILLO ISLAND

THE MINERAL EXPLORATION- MINERAL DEPOSITS AND TECTONICS OF TWO CONTRASTING GEOLOGIC ENVIRONMENTS IN THE REPUBLIC OF THE PHILIPPINES

0 10 20 30 40 50km
SCALE 1 : 1,000,000



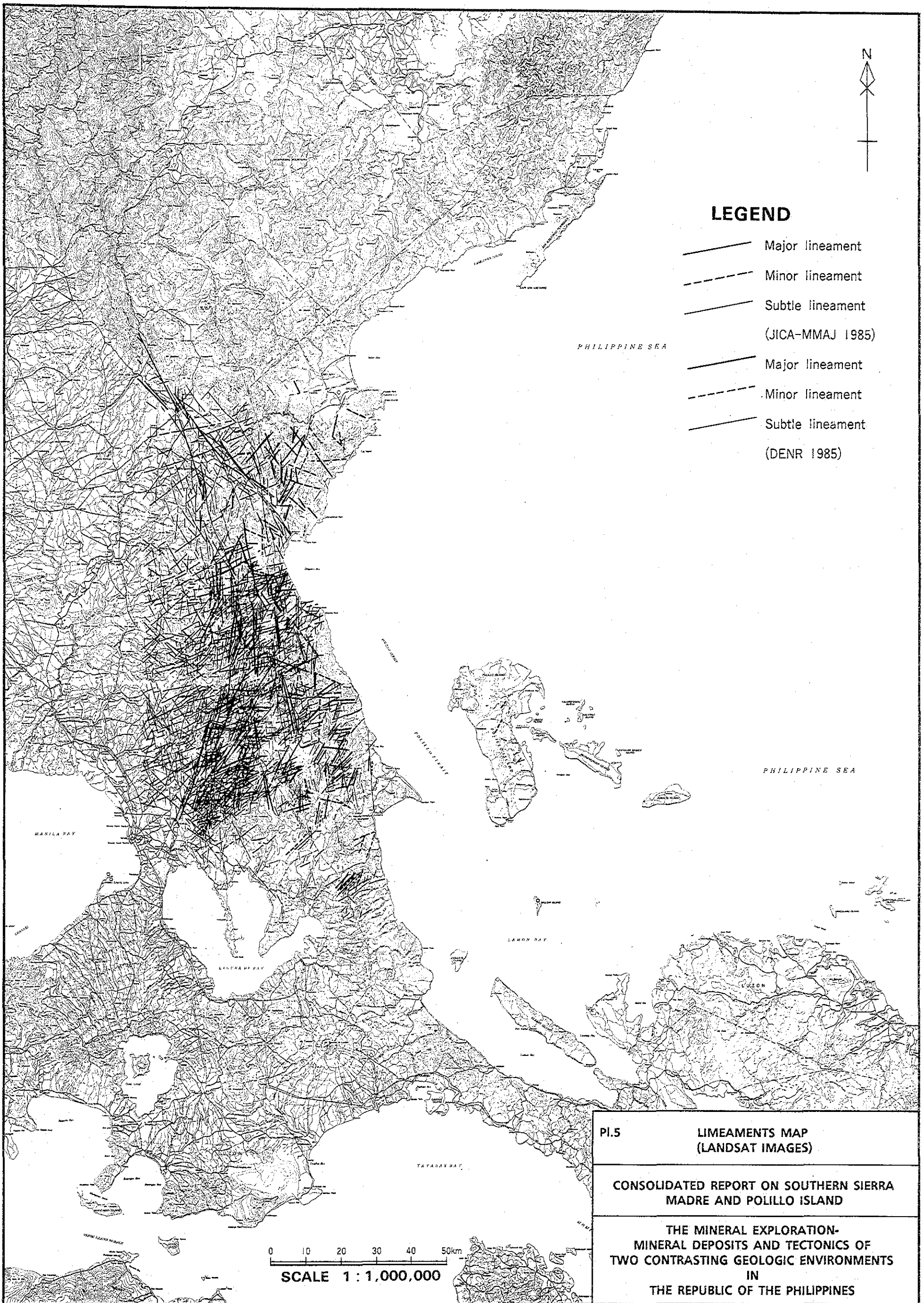
LEGEND

- Bouguer Gravity
- - - Contour (milligal)

PI.4 COMPILED GRAVIMETRIC MAP (BOUGUER ANOMALIES)

CONSOLIDATED REPORT ON SOUTHERN SIERRA MADRE AND POLILLO ISLAND

THE MINERAL EXPLORATION-MINERAL DEPOSITS AND TECTONICS OF TWO CONTRASTING GEOLOGIC ENVIRONMENTS IN THE REPUBLIC OF THE PHILIPPINES



LEGEND

- Major lineament
- - - - - Minor lineament
- Subtle lineament
- (JICA-MMAJ 1985)
- Major lineament
- - - - - Minor lineament
- Subtle lineament
- (DENR 1985)

PI.5 **LIMEAMENTS MAP
(LANDSAT IMAGES)**

**CONSOLIDATED REPORT ON SOUTHERN SIERRA
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**THE MINERAL EXPLORATION-
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IN
THE REPUBLIC OF THE PHILIPPINES**

鉍 徵 地 一 覽 表

Southern Sierra Madre and Polillo

Metallics

1. Delasag	Cu
2. Casigukan	Cu
4. San Ildefonso	Cu
5. Dilalongan	Cu
6. Dinalungan	Cu
7. Diarabasin	Cu, Mn
8. Ditec	Cu
9. San Luis	Mn
11. Nasudijan	Cu
13. Besog	Cu
14. Madulag, Baler	Mn
15. Libok, Gaddidon	Mn
16. Papaya	Au
17. Sumacbao, Gapan	Cu
18. Ibonga	Cu
23. Norsagaray	Fe
24. Angat	Cu
26. Angelo Mountains	Au, Ag, Zn
27. Lumbay Collosal (Luzon Mining)	Au
28. Puray	Cu
29. Bosoboso River, Rizal	Au
30. Lumbay, Collosal	Cu
31. Sta. Ines	Fe
32. Tigman River, Real	Au
36. Mt. Malolod	Fe
37. May-Ilaw	Fe
38. Marcopper Prospect	Cu
39. Kalubakis	Fe
42. Lagingbayan	Cu
49. San Vicente	Cu
58. San Rafael, Burdeos	Fe
67. Limutan, Gen. Nakar	Cu
74. Bulacan Iron Deposit	Fe
78. Bilintigon, Gen. Tinio	Cu
79. Gapan Mining Ass.	Cu
80. NE1369	Mn
81. Madulag, Baler	Mn
82. Ortegon, Liggayu	Cu
84. Artavi Mining Co.	Cu, Mn
86. Carranglan	Cu
87. Puncan	Mn
90. Santa Ines	Fe
91. Marcopper Polillo Prospect	Mo
92. Angat Iron Prospect	Fe
93. Camachin Iron Deposit	Fe

Nonmetallics

3. Dilalongan Reach	Si
10. Ulebete	Mbl
12. Bateria, Bagting	Fd
19. Cogonan, Sibul	Mbl
20. Suklay	Gyp
21. Dingalan	Ls
22. Akle, San Rafael	Cly
25. Suga, Norzagaray	Ls
33. Anibawan	Coal
34. Burdeos	Ls
35. West Burdeos	Coal
40. Mauban	Ls
41. Paglubog	Mbl
43. Sampaloc	Mbl
44. Piis, Luchan	Cly
45. Lawique, Tayabas	Ls
46. Sta. Catalina, Atimon	Ls
47. Lipata	Ls
48. Sapaan	Mbl
50. Sta. Cecilia, Tagkawayan	Si
51. Abi	Si
56. Lipata, Padre Burgos	Ls
57. Lawigue, Tayabas	Ls
59. Burdeos	Coal

60. Cabungalunan, Burdeos	Ls
61. Anibauan, Burdeos	Coal
62. Tanay	Mbl
63. Tanay	Ls
64. Pantay, Antipolo	Ls
65. Antipolo	Cly
66. Teresa	Ls
68. Norzagaray, Bulacan	Si
69. Norzagaray, Bulacan	Ls
70. Pingalan	Ls
71. Dingalan	Ls
72. Camachino, San Ildefonso	Cly
73. Tungku, Alagao	Ls
75. Camachino, San Miguel	Cly
76. Pulong Bato, Alagao	Mbl
77. Camachille, Angat	Ls
83. Sumpawo, Pantabangan	Coal
85. Pantabangan	Cly
88. Maringalo	Si
89. Burgos, Carranglan	Si

LEGEND

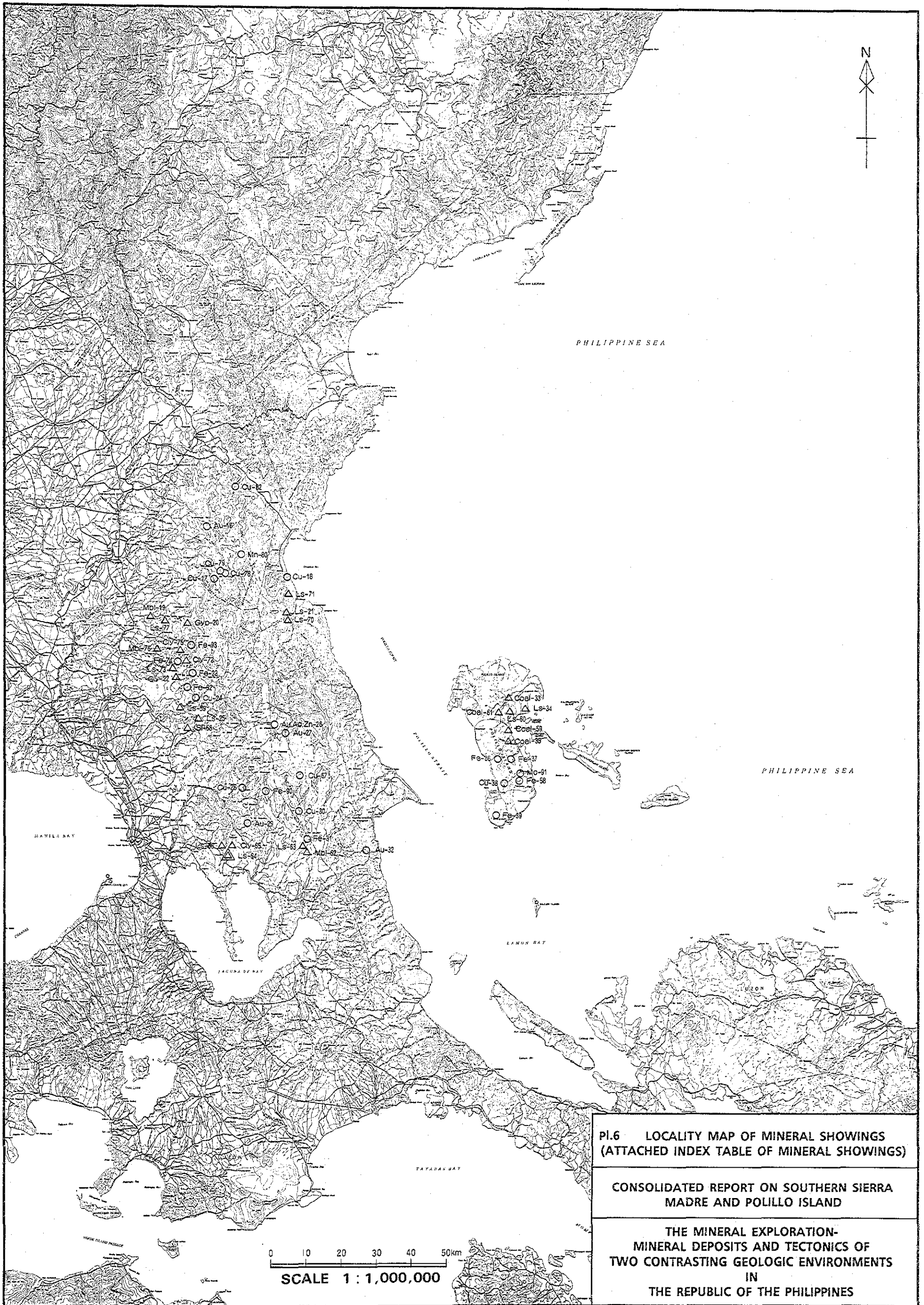
Deposit

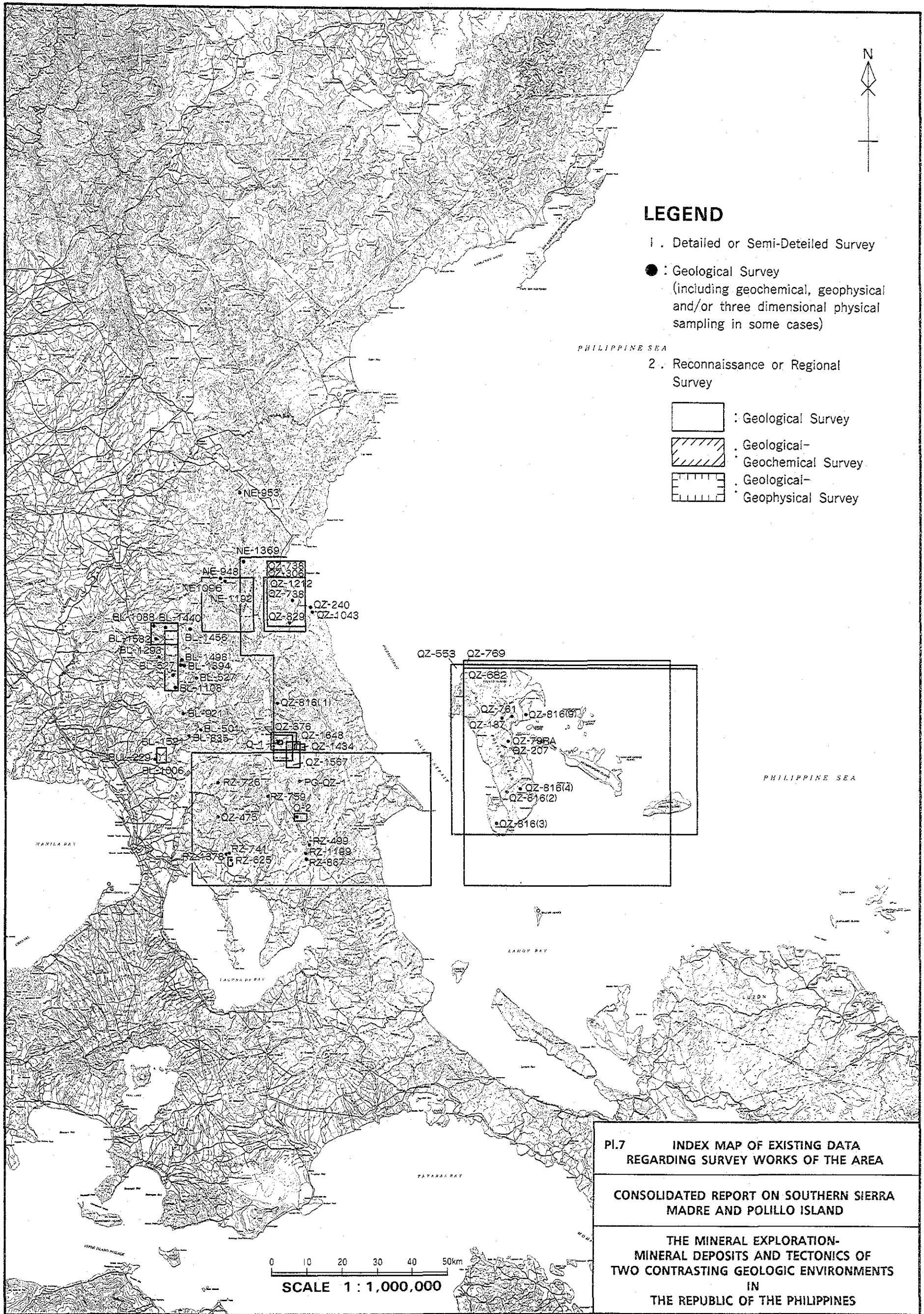
metallic nonmetallic

⊙	△	: Operating mine
○	△	: Explored, Developed, Prospect or Indication

Symbols

metallic	nonmetallics
Au : Gold	Asb : Asbestos
Ag : Silver	Asp : Asphalt
Al : Aluminum	Bar : Barite
As : Arsenic	Bnt : Bentonite
Bax : Bauxite	Cly : Clay
Cu : Copper	Coal : Coal
Co : Cobalt	Dia : Diatomaceous Earth
Cr : Chromite	Dol : Dolomite
Fe : Iron	Fd : Feldspar
Hg : Mercury	Fl : Flourite
Mn : Manganese	Gn : Guano
Mo : Molybdenum	Gnp : Guano-Phosphate
Ni : Nickel	Gr : Granite
Pb : Lead	Gyp : Gypsum
Sb : Antimony	Ls : Limestone
Sn : Tin	Mbl : Marble
U : Uranium	P : Phosphate
W : Tungsten	Peb : Pebble
Zn : Zinc	Peat : Peat
	Per : Perlite
	Py : Pyrite
	S : Sulfur
	Sh : Shale
	Si : Silica
	SiS : Silica Sand
	SS : Sandstone
	Tlc : Talc





LEGEND

- 1. Detailed or Semi-Detailed Survey
- : Geological Survey
(including geochemical, geophysical and/or three dimensional physical sampling in some cases)

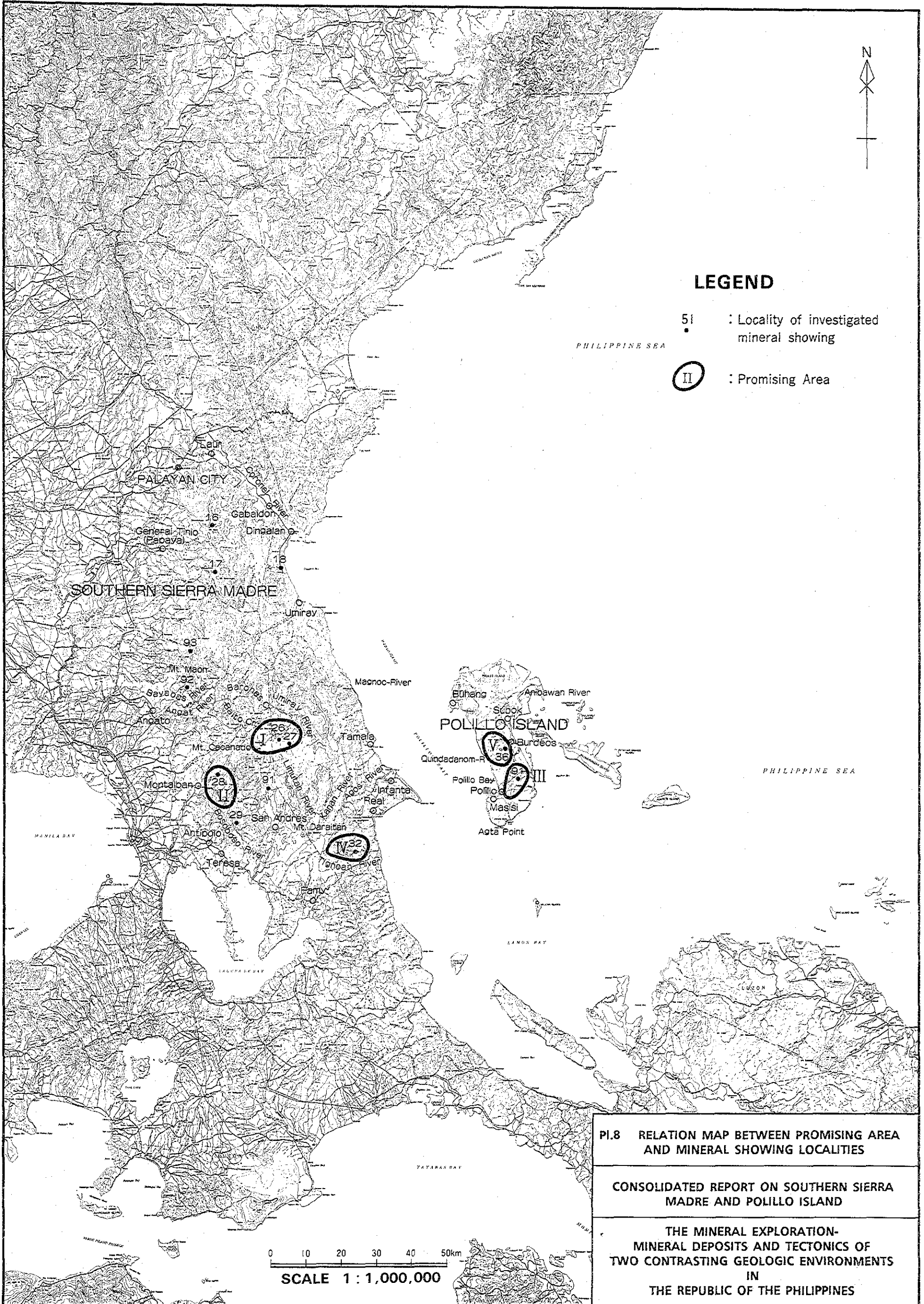
- 2. Reconnaissance or Regional Survey

- : Geological Survey
- ▨ : Geological-Geochemical Survey
- ▤ : Geological-Geophysical Survey

PI.7 INDEX MAP OF EXISTING DATA REGARDING SURVEY WORKS OF THE AREA

CONSOLIDATED REPORT ON SOUTHERN SIERRA MADRE AND POLILLO ISLAND

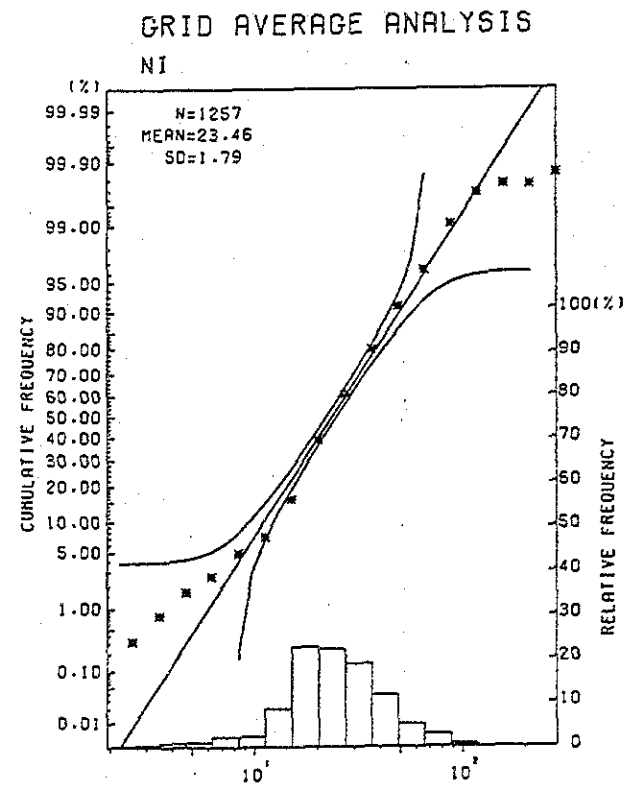
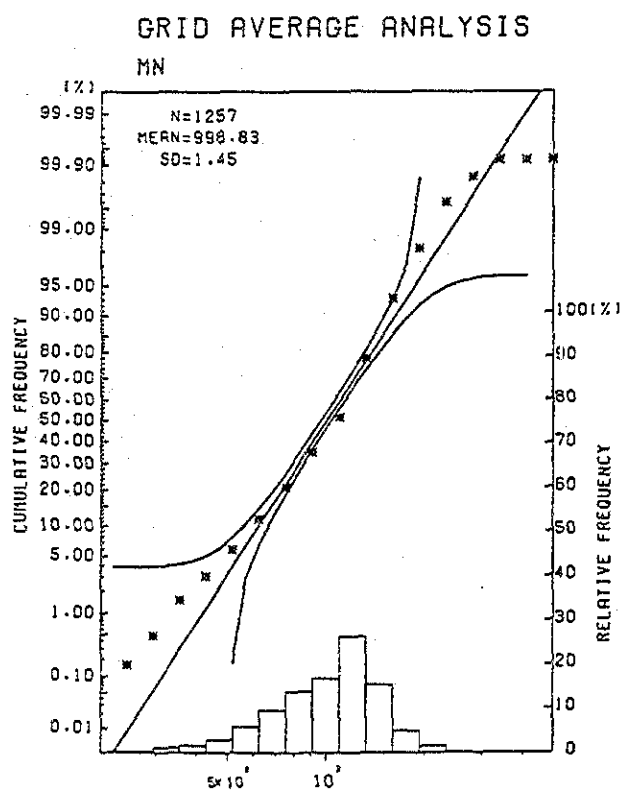
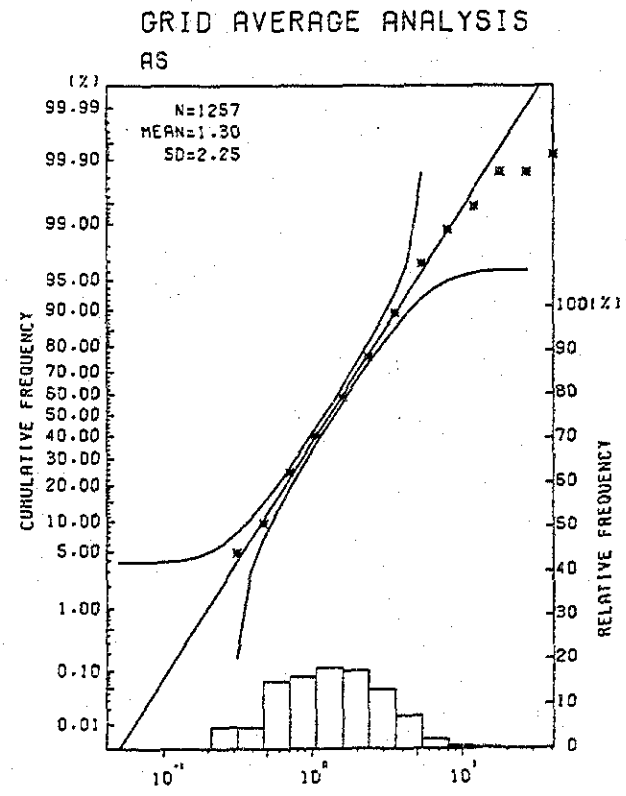
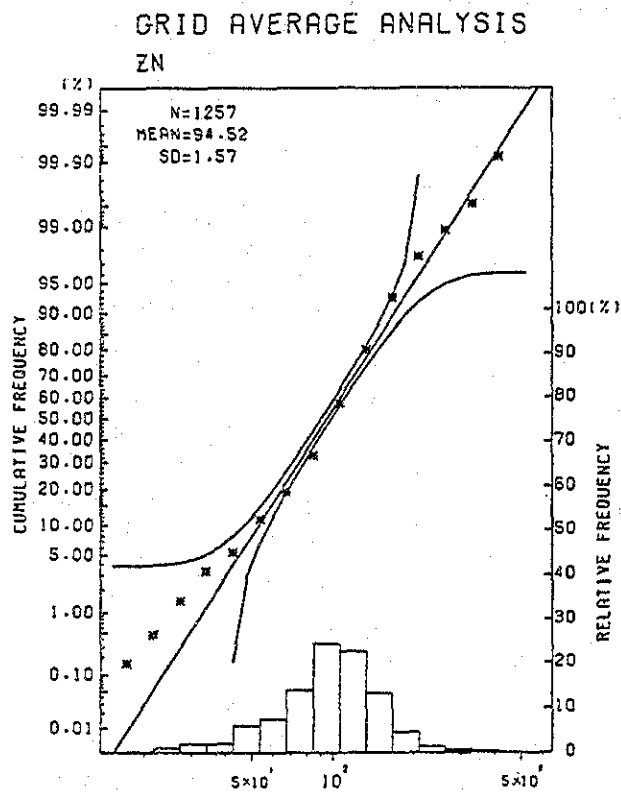
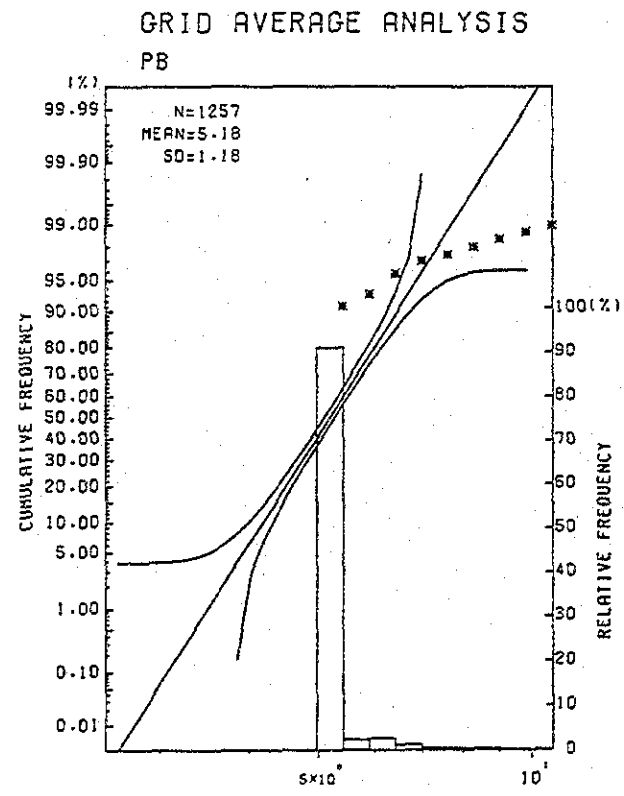
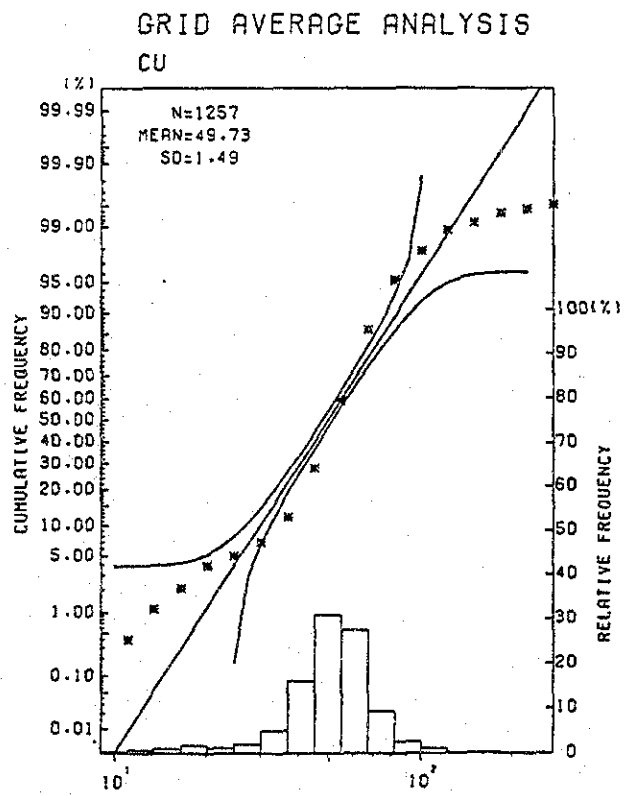
THE MINERAL EXPLORATION- MINERAL DEPOSITS AND TECTONICS OF TWO CONTRASTING GEOLOGIC ENVIRONMENTS IN THE REPUBLIC OF THE PHILIPPINES



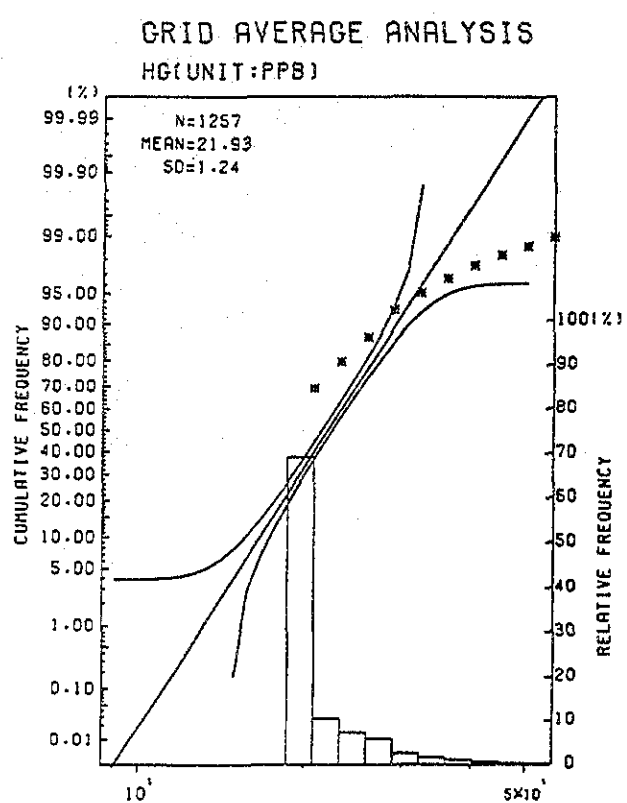
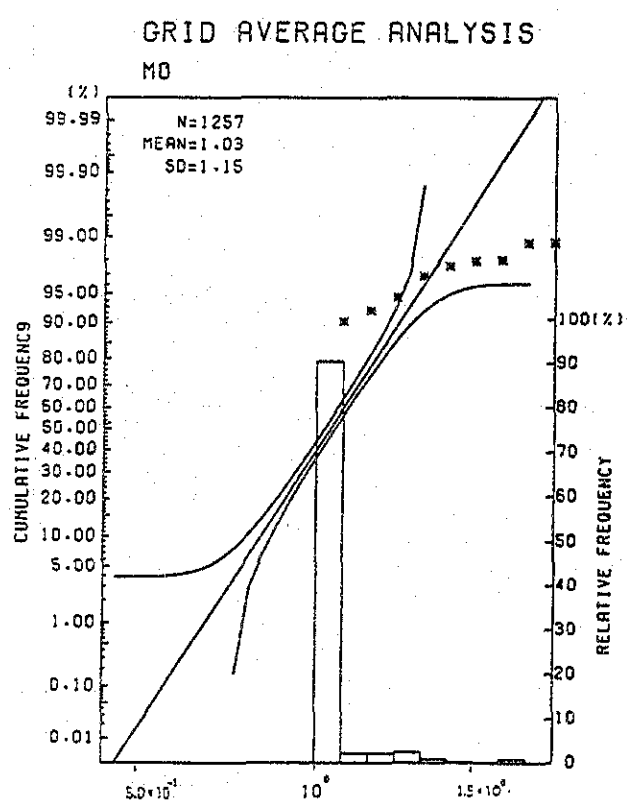
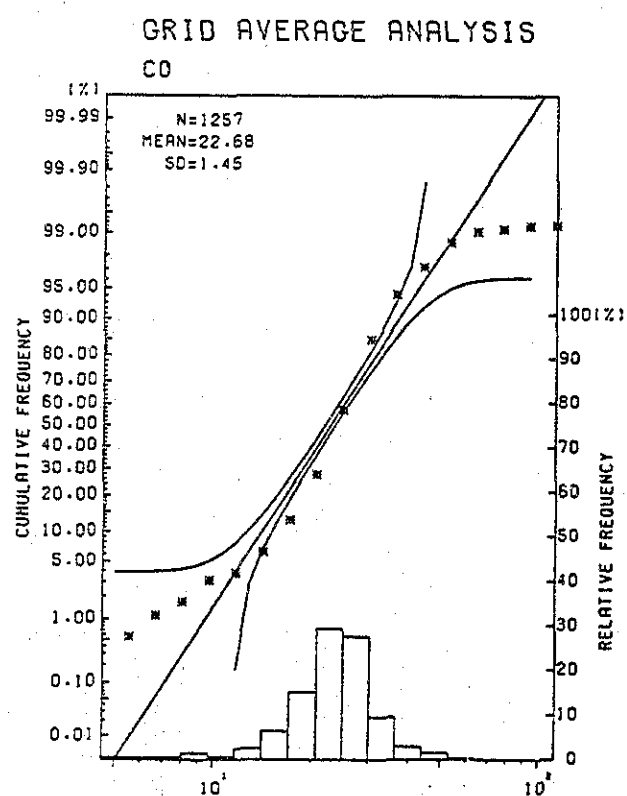
巻末資料

1. グリッド平均値のヒストグラム・累積頻度曲線図
2. 既存調査資料リスト

卷末資料-1 グリッド平均値のヒストグラム・累計頻度曲線図
(南シェラマドレ地区1)



卷末資料-1 グリッド平均値のヒストグラム・累計頻度曲線図
(南シェラマドレ地区2)



卷末資料－２ 既存調査資料リスト

NUEVA ECIJA

<u>REPORT NO.</u>	<u>AUTHOR/S</u>	<u>DATE</u>	<u>TITLE OF REPORTS</u>
* 948 (1358)	M. Liggayu	1970,	Geological investigation of the Gapan Mining Ass. copper prospects in Balintongan, General Tinio, Nueva Ecija
* 953 (1366)	J. Fernandez	1970,	Geological investigation of the Ruby, Buna, Starcom and Ortegon copper prospects, Liggayu, Galbaldon, Nueva Ecija
* 1096 (1569)	A. Paderes	1971,	Report on the geological investigation of Balao, the Villarosa Mining prospects at San Miguel, Bulacan and General Tinio, Nueva Ecija
1192 (1719)	A. Baptista	1972,	Verification of copper sulfide mineralization at Balintongan, General Tinio, Nueva Ecija
* 1369	D. Abiog	1970,	Geology of portion of Eastern Sierra Madre Range in Quezon and Nueva Ecija Provinces

RIZAL

<u>REPORT NO.</u>	<u>AUTHOR/S</u>	<u>DATE</u>	<u>TITLE OF REPORTS</u>
499 (766)	A. Magpantay	1965,	Geologic Investigation of Proposed Cement Plant Site at Daraitan-Nilubugan Area, Tanay, Rizal
* 625	A. Cruz E. Cusi	1966,	Geologic Investigation of the Four Sidling Placer Claims and Vicinity, Antipolo-Teresa Area Rizal for Cement Raw Materials
726	J.U. Santiago	1964,	Geologic Investigation of the Puray mineral deposits, Montalban, Rizal
* 741 (1084)	C. Llave	1968,	Geological Investigation of Argillaceous Materials in Bos. Antipagak and Abuyod. Antipolo, Rizal for Island Cement Corporation.
759	C.P. Jongco	1965,	Report on the ore reserve estimation of Sta. Ines Mines
* 867 (1245)	A. Cruz	1971,	Geological Investigation of Placer Claims in Tanay, Rizal for Marble
* 1199 (1730)	C. Velasquez	1972,	Geological Verification of Limestone Deposits in the Mining Claims of Pasig Mining Associations in Teresa and Antipolo, Rizal
* 1378 (2067)	C. Llave	1973,	Mineral and Lease Survey Verification of "Francisco" Mining Claim in itio Puting Bato, Barrio Cabuayahan, Teresa, Rizal

BULACAN

<u>REPORT NO.</u>	<u>AUTHOR/S</u>	<u>DATE</u>	<u>TITLE OF REPORTS</u>
* 229	Crispin, Ganzon Puzon, Malicdem	1957,	Report on the Geologic Investigation of Gold-Titanium-Iron Placer Deposit at Sta. Maria, Bulacan
* 501	C. Llave N. Biscocho	1965,	Report on the Geological Investigation of Limestone Deposit in Sitio Suga, Norzagaray, Bulacan
* 527	D. Abiog		Geology of Bulacan Iron Deposits
* 835 (1205)	A. Gorriceta	1969,	Memo Report on the Geological Investigation of the Silica Deposits in Bo. Bayabas, Norzagaray, Bulacan
921 (1323)	C. Velasquez	1969,	Memo Report on the Geological Investigation & Verification of Placer Mining Claim "Peping of Continental Marble Corp. in Matictic and Bayabas, Norzagaray, Bulacan
1006 (1434)	C. Velasquez	1970,	Memo Report on the Geological Investigation and Verification of Placer Mining Claims Union Mining Ass., Dulong Bayan, San Jose Del Monte, Bulacan
1088 (1547)	M. Jandumon	1971,	Report on the Geological Investigation of the Marble Deposits in Sitio Cogonan, Barrio Sibul San Miguel, Bulacan
1108 (1578)	C.A. Llave	1971,	Geological Investigation of the Lot of Mr. Fidel P. Villafuerte for Siliceous and Clay Materials in Barrio Akle, San Rafael, Bulacan
* 1293 (1918)	P.H. Liñgat	1973,	Geological and Mineral Verification of Aliw III Placer Claim in Sitio Pulong Bato, Barrio Alagao, San Ildefonso, Bulacan
* 1394	A.J. Gorriceta	1973,	Geological Verification of Clay Deposits in Barrio Camachino, San Ildefonso, Bulacan
* 1440	C.A. Llave	1974,	Mineral & Survey Verification of Emerald & Diamond Placer Mining Claims in Bo. Camachille, Angat, Bulacan

BULACAN

<u>REPORT NO.</u>	<u>AUTHOR/S</u>	<u>DATE</u>	<u>TITLE OF REPORTS</u>
* 1456	P.H. Liñgat	1974,	Report on the Geological & Mineral Verification of "Don Paco" Placer Claim for Gypsum in Sitio Suklay, Bo. Sibul Spring San Miguel, Bulacan
* 1498	C.A. Llave	1974,	Mineral Verification of Violita VIII Mining Claim in Bo. Camachin, San Miguel Bulacan
1521	E.M. Manalang	1975,	Mineral Verification of the Gold-Iron-Titanium Placer Deposit Along Sta. Maria River and San Jose Del Monte Mun., Prov. Bulacan
* 1582 (1975)	H.P. Quiazon	1975,	Memorandum Report on the Gas Emanation at Bo. Balaong, San Miguel, Bulacan

QUEZON

<u>REPORT NO.</u>	<u>AUTHOR/S</u>	<u>DATE</u>	<u>TITLE OF REPORTS</u>
* 187	V. de los Santos D. Abiog	1956,	Report on the geological investigation of coal claims in Anibauan, Burdeos (Polillo Island) Quezon for the Commonwealth Ceramics Corp.
* 207	I. Antonio		Report on the survey of the Polillo Forest reserve
* 475	D. Abiog J. Mantaring	1964,	Geologic investigation of gold-zinc prospect in Angelo Mountains, Infanta, Quezon
* 514 306	O. Crispin M. Pacis	1959,	Memo report on the preliminary geologic investigation of copper prospects in Ibuna-Agosis area, Dingalan, Quezon Province
* 553 (1001)	J. Fernandez O. Abarquez B. Vera Cruz P. Estupigan	1967,	Geology of Polillo Iron prospects, Quezon
* 682	J. Fernandez B. Vera Cruz P. Estupigan O. Abarquez	1967,	Preliminary report on the regional geology of Polillo Island group, Quezon
* 738 (1075)	A. Cruz D. Abiog	1967,	Geologic investigation of the Placer claims of Umiray Mng. Co., in Dingalan, Quezon for cement raw materials location of plant site
* 761 (1107)	C. Llave R. de Luna	1968,	Report on the geological investigation of limestone deposit in sitios Pangasinan and Tingtingon, Bo. Cabungalan, Burdeos, Quezon
* 769	V. delos Santos F.D. Spencer	1957,	Geology and coal resources of central Polillo Island, Quezon
* 816	GSD	1968,	Mineral deposits of Infanta and Polillo Island, Quezon
* 829 (1193)	D. Abiog	1969,	Geologic investigation of cement raw materials deposits in Dingalan, Quezon
* 1043 (1488)	A. Cruz	1970,	Memo report on the geologic investigation of mineral claims of Phil. Mineral Industries Chemical Pioneer Corp. in sitio Pandayan, Umiray, General Nakar, Quezon
* 1212 (1704)	A. Cruz	1972,	Marble in Southern Dingalan, Quezon
* 1434	C.V. Ramos	1974,	Geological verification covering 38 lode claims of the Lumbay copper deposit in Limutan, General Nakar, Quezon
* 1567 (1975)	M.G. Pacis	1975,	Mineral verification of Three areas applied for exploration permit at Umiray Forest Reserve General Nakar, Quezon province
* 1648 (1976)	P. Estupigan	1976,	Mineral and geological verification inside the Umiray Forest reservation at Bo. Lumbay General Nakar, Quezon the exploration permit application
* PG-Q2-1	D.G. Malicdem	1975,	Notes on the geology and exploration of Collosal-Lepanto Copper Project, Gen. Nakar, Quezon, Journal of GSP. Vol. 29, No. 1, March 1975
* Q-376	R.E. Yumul	1977,	Inspection and verification of the exploration activities of Marcopper Mining Corporation, covered by Exploration permit No. 50 w/in a portion of the umiray forest reservation at BO. Lumbay, Gen. Nakar, Quezon
* Q-1	R.J. Robles	1980,	Progress report on the detailed geological mapping and geochemical sampling of Matani area, Gen. Nakar, Quezon, for April 1980
* Q-2	E.R. Malaca	1982,	Individual accomplishment report on the detailed geological mapping of Limutan-Irramang area, Gen Nakar, Quezon
* Q-240	A. Cruz	1970,	Memorandum report on the geological investigation of mineral claims of Philippine Mineral Industrial Chemical Pioneer Corporation in Sitio, Pandayan, Umiray, Gen. Naker, Quezon