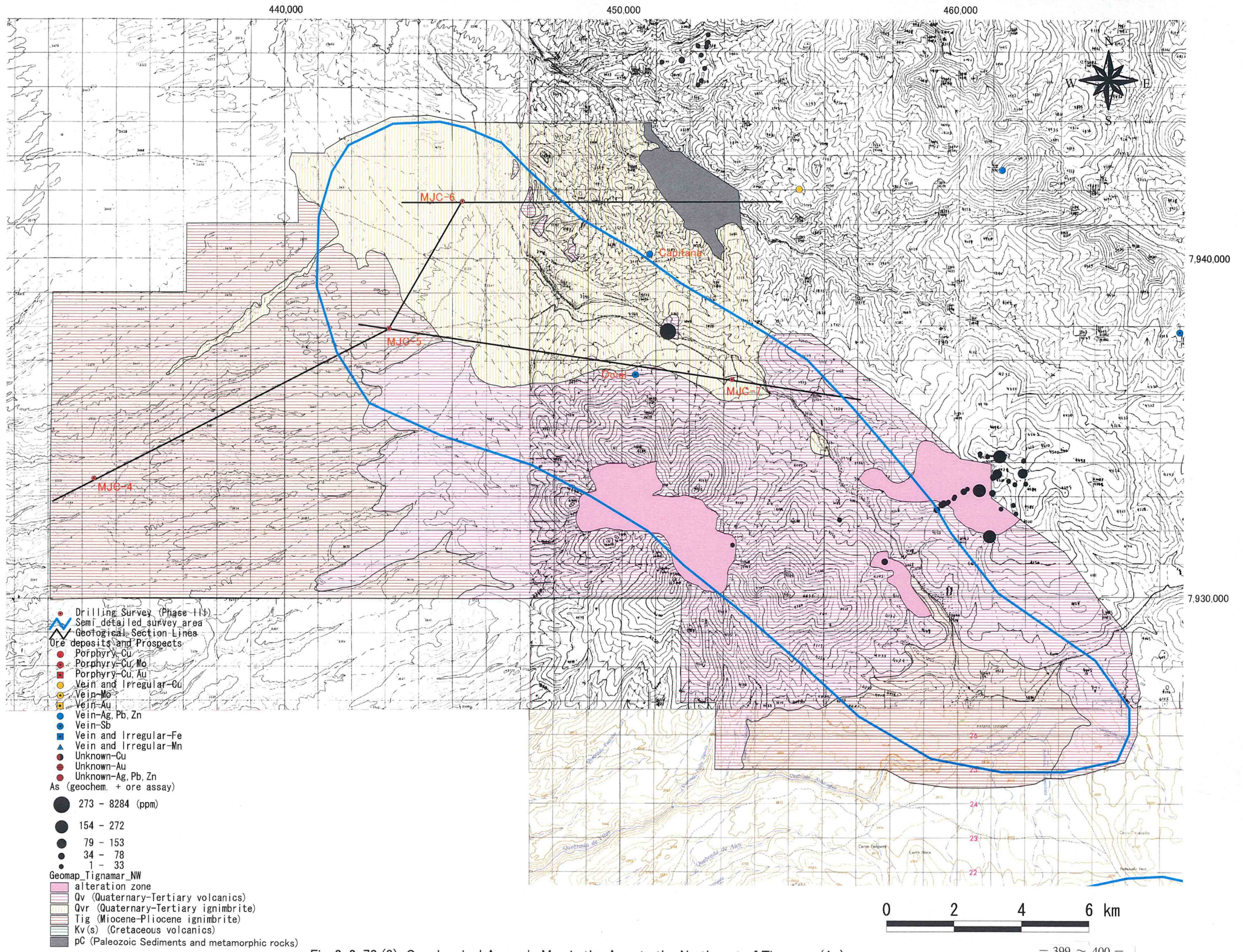


- Drilling Survey (Phase II)
- ⚡ Semi detailed survey area
- Geological Section Lines
- Ore deposits and Prospects**
- Porphyry-Cu
- Porphyry-Cu, Mo
- Porphyry-Cu, Au
- Vein and Irregular-Cu
- Vein-Mo
- Vein-Au
- Vein-Ag, Pb, Zn
- Vein-Sb
- Vein and Irregular-Fe
- ▲ Vein and Irregular-Mn
- Unknown-Cu
- Unknown-Au
- Unknown-Ag, Pb, Zn
- Zn (geochem. + ore assay)
- 224 - 2005 (ppm)
- 143 - 223
- 74 - 142
- 29 - 73
- 1 - 28
- Geomap\_Tignamar\_NW**
- alteration zone
- Qv (Quaternary-Tertiary volcanics)
- Qvr (Quaternary-Tertiary ignimbrite)
- Tig (Miocene-Pliocene ignimbrite)
- Kv(s) (Cretaceous volcanics)
- pC (Paleozoic Sediments and metamorphic rocks)

Fig. 2-2-78 (2) Geochemical Anomaly Map in the Area to the Northwest of Tignamar (Zn)





- Drilling Survey (Phase II)
- Semi detailed survey area
- Geological Section Lines
- Ore deposits and Prospects**
- Porphyry-Cu
- Porphyry-Cu, Mo
- Porphyry-Cu, Au
- Vein and Irregular-Cu
- Vein-Mo
- Vein-Au
- Vein-Ag, Pb, Zn
- Vein-Sb
- Vein and Irregular-Fe
- Vein and Irregular-Mn
- Unknown-Cu
- Unknown-Au
- Unknown-Ag, Pb, Zn
- As (geochem. + ore assay)**
- 273 - 8284 (ppm)
- 154 - 272
- 79 - 153
- 34 - 78
- 1 - 33
- Geomap\_Tignamar\_NW**
- alteration zone
- Qv (Quaternary-Tertiary volcanics)
- Qvr (Quaternary-Tertiary ignimbrite)
- Tig (Miocene-Pliocene ignimbrite)
- Kv(s) (Cretaceous volcanics)
- pC (Paleozoic Sediments and metamorphic rocks)

Fig. 2-2-78 (3) Geochemical Anomaly Map in the Area to the Northwest of Tignamar (As)



Upper Cretaceous-Lower Tertiary System consisting of andesitic~rhyolitic lava • pyroclastic rocks with intercalation of terrigenous sediments occur to the northeast of this area.

The geology of this survey area consists of Neogene System and Upper Tertiary-Quaternary System.

The Neogene System consists of Miocene-Pliocene ignimbrite (rhyolitic welded tuff • pumiceous tuff) and is overlain unconformably by Upper Neogene-Quaternary System.

The Upper Neogene-Quaternary System is composed of lower layer consisting mainly of felsic pumiceous tuff, and upper layer containing basaltic~andesitic lava. The lower layer has intercalation of thin beds of basaltic~andesitic lava, conglomerate, and rhyolite.

Several relatively large white-colored alteration zones extending in the NW-SE~WNW-ESE direction occur in the Upper Neogene-Quaternary basaltic~andesitic lava area. These alteration zones are acidic consisting mainly of kaolinization and limonite dissemination and are often accompanied by silicification.

Notable rock geochemical anomalies are high Pb-Zn-As anomalies.

The above alteration zones are located in the peripheries and vicinity of the intermediate magnetic intensity zones, medium wavelength low magnetic anomaly zone, and short wavelength high magnetic anomalies of airborne magnetic survey.

#### **2 - 18 District to the southeast of Tignamar**

A geological map of this area is shown in Figure 2-2-79, schematic geologic columns in Figure 2-2-80, distribution of altered minerals in Figure 2-2-81, and rock geochemical anomaly distribution in Figure 2-2-82.

The geology of this area is composed of Neogene System, Upper Neogene-Quaternary System.

The Upper Neogene System consists of Miocene-Pliocene ignimbrite (rhyolitic welded tuff • pumiceous tuff) and is unconformably overlain by Upper Neogene-Quaternary System.



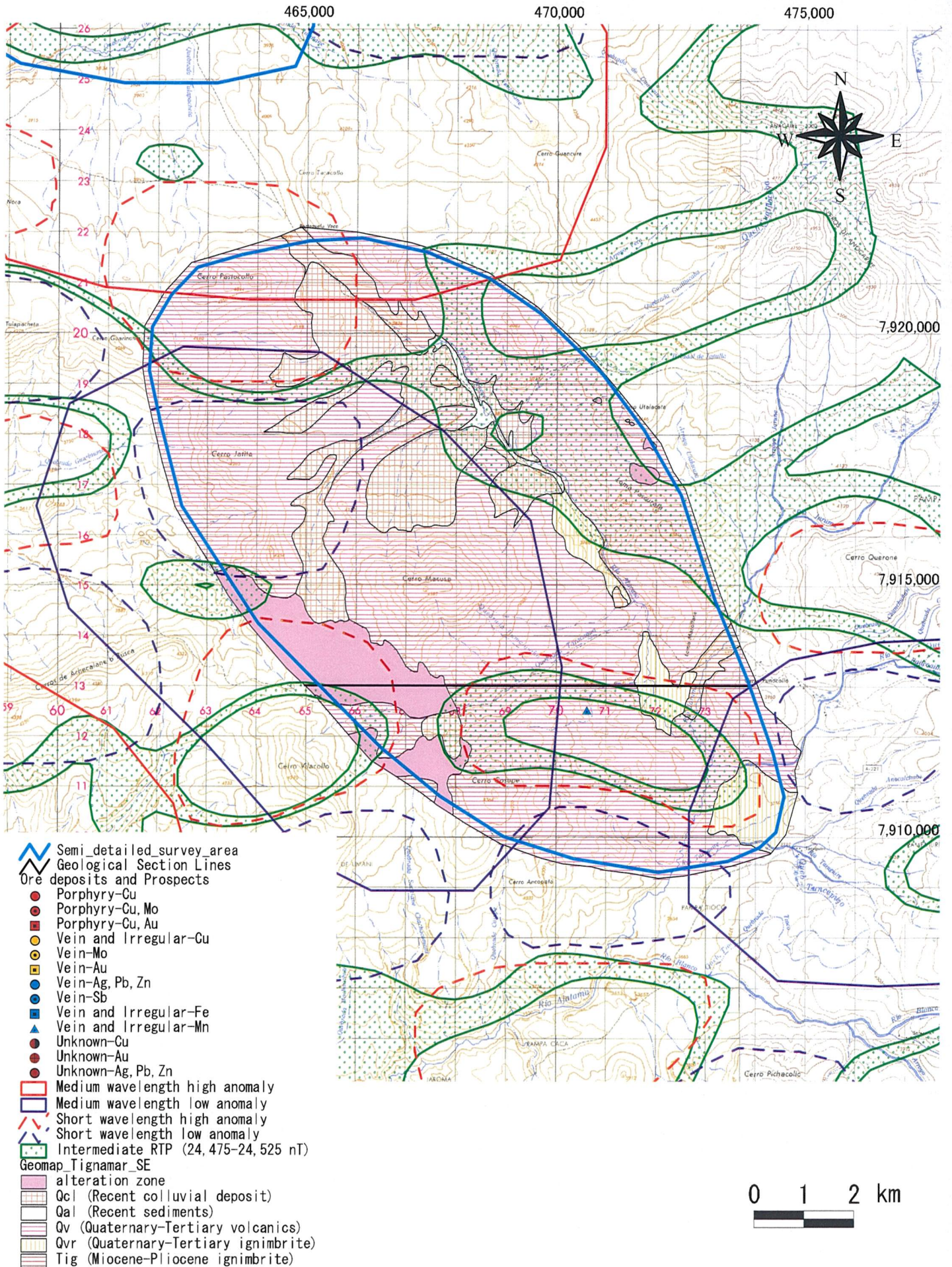


Fig. 2-2-79 Geological Map of the Area to the Southeast of Tignamar





Geologic Time		Columnar Section	Lithology	Intrusives	Mineralization
CENOZOIC	QUATERNARY ~ HOLOCENE	QcP Qal	Colluvium Alluvium		Epithermal type (kaolin, silica, sericite) ↑
	QUATERNARY ~ TERTIARY	Qv Qvr Qvc	Basaltic, andesitic, dacitic lavas  Pumice tuff  Sandstone		
	TERTIARY ~ PLIOCENE ~ MIOCENE	Tig	Welded tuff Pumice tuff		

Fig.2-2-80 Schematic Stratigraphic Columns and Profiles of the Area to the Southeast of Tignamar



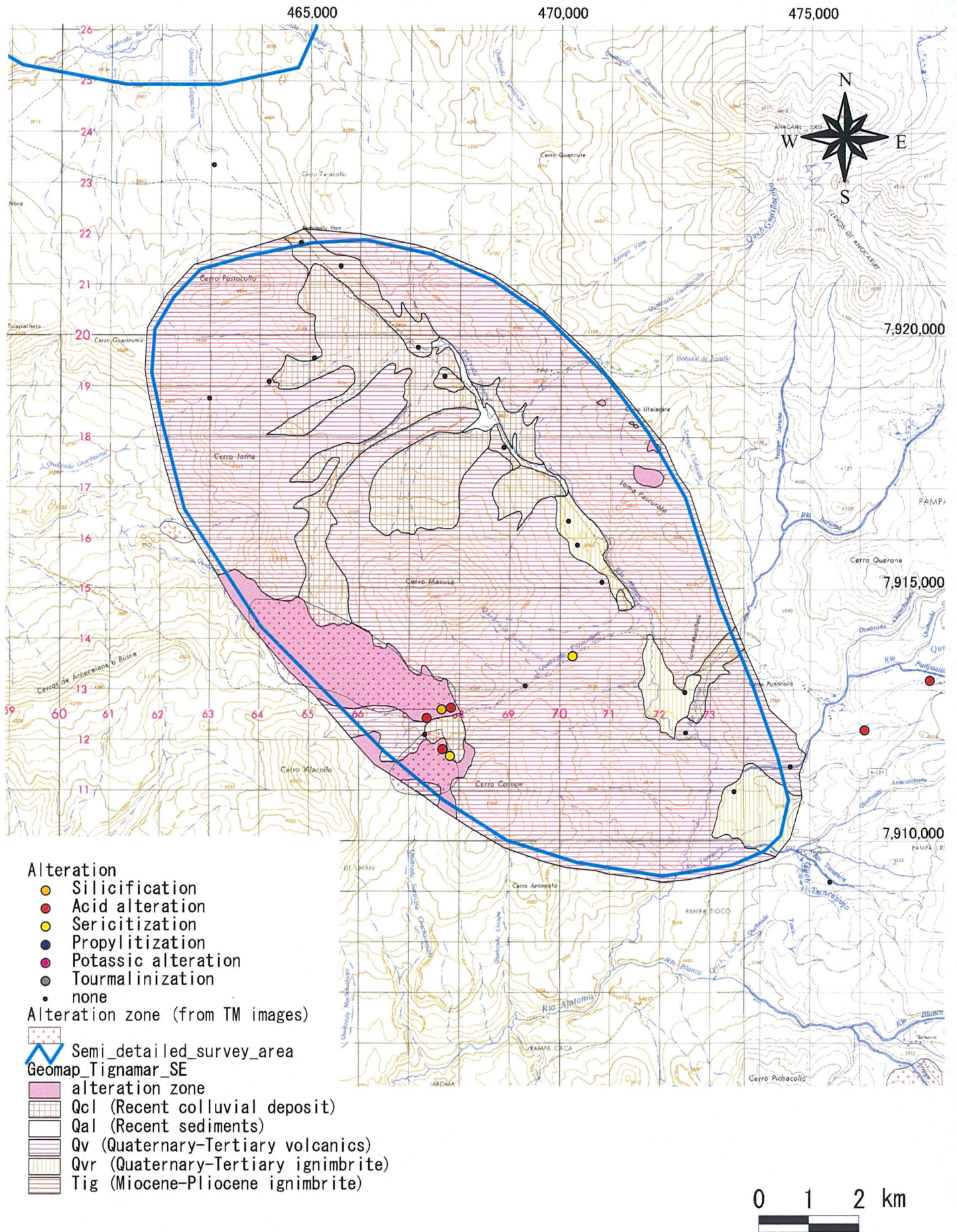


Fig. 2-2-81 Distribution Map of Alteration Minerals at the Area to the Southeast of Tignamar



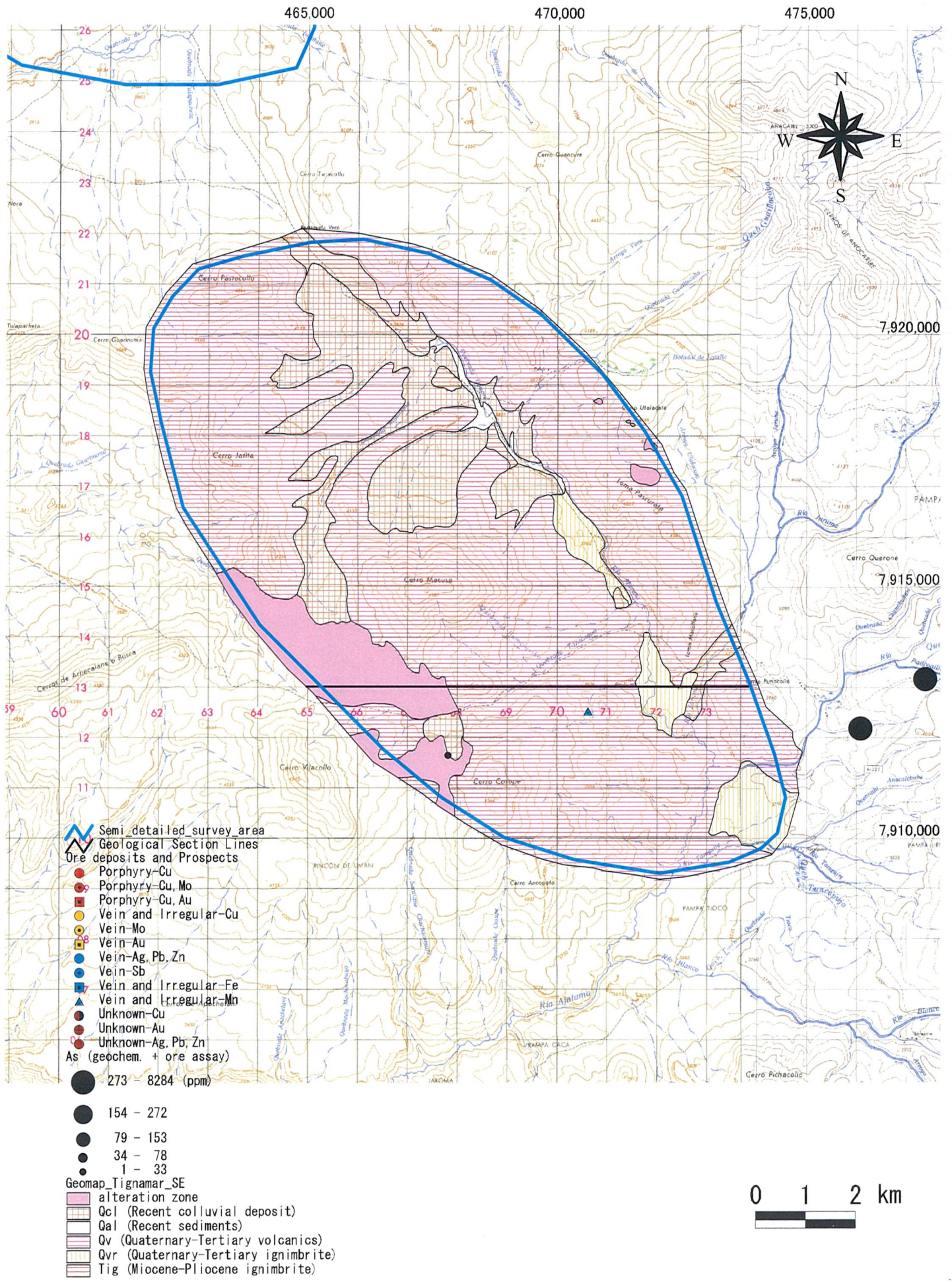


Fig. 2-2-82 (1) Geochemical Anomaly Map in the Area to the Southeast of Tignamar (As)



The Upper Neogene-Quaternary System is composed of lower layer consisting mainly of felsic pumiceous tuff, and upper layer made up of basaltic~dacitic lava. The lower layer contains intercalation of thin basaltic~andesitic lava and sandstone beds.

In western part of the survey area, large white-colored alteration zones occur extending in the WNW-ESE direction in the basaltic~dacitic lava area. These alteration zones are products of acidic alteration and contains kaolinization, silicification, limonite dissemination and others.

Notable rock geochemical anomalies are high As anomalies.

The above alteration zones occur near the intermediate magnetic intensity zone, within the medium wavelength low anomaly zone, and in the short wavelength high magnetic anomaly zone of the airborne magnetic survey.

#### **2 - 19 District to the south of Putre**

A geological map of this area is shown in Figure 2-2-83, schematic geologic columns in Figure 2-2-84, mineral showings in Figure 2-2-85, distribution of altered minerals in Figure 2-2-86, and rock geochemical anomaly distribution in Figure 2-2-87.

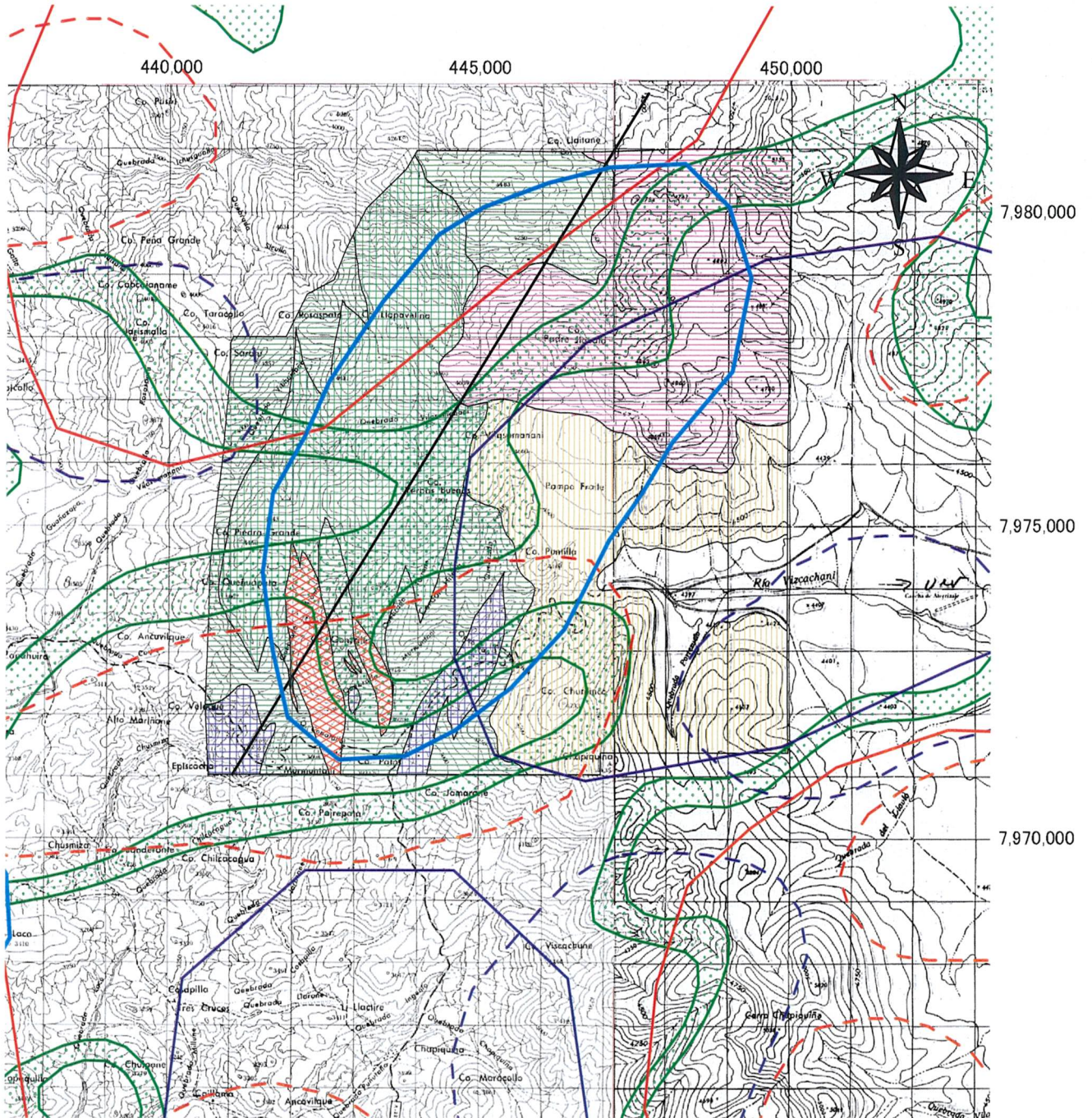
The geology of this area consists of Upper Cretaceous System, Upper Tertiary-Quaternary System, Quaternary System and intrusive bodies.

The Upper Cretaceous System is composed of basaltic~rhyolitic lava and is intruded by Tertiary intrusive bodies. These intrusive rocks are granodiorite, diorite, diorite porphyry, and quartz porphyry. The K-Ar ages of these rocks are:  $13.7 \pm 0.5$  Ma for whole-rock diorite,  $17.1 \pm 0.5$  Ma (biotite),  $14.1 \pm 0.6$  Ma (whole rock), for diorite porphyry,  $13.7 \pm 0.7$  Ma (whole rock) for quartz porphyry. This result indicates intrusive activities in Miocene. The Upper Cretaceous System and the above intrusive rocks are overlain unconformably by Upper Tertiary-Quaternary System.

The Upper Tertiary-Quaternary System is composed of lower layer consisting of ignimbrite (rhyolitic welded tuff • tuff breccia), and unconformably overlying basaltic~andesitic lava.

Quaternary System consists of alluvium.



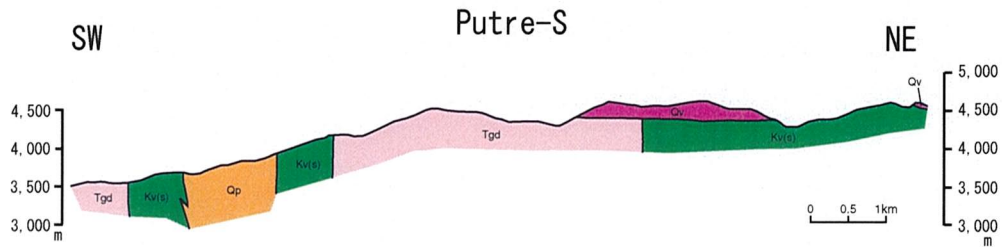


- Semi\_detailed\_survey\_area
- Geological Section Lines
- Medium wavelength high anomaly
- Medium wavelength low anomaly
- Short wavelength high anomaly
- Short wavelength low anomaly
- Intermediate RTP (24, 475-24, 525 nT)
- Geomap\_Putre\_S
- Qal (Recent sediments)
- Qv (Quaternary-Tertiary volcanics)
- Qvr (Quaternary-Tertiary ignimbrite)
- Kv(s) (Cretaceous volcanics)
- Intrusive rocks
- Qp (Quartz porphyry)
- Di, Dip (Diorite, Diorite porphyry)
- Tgd (Tertiary granodiorite)



Fig. 2-2-83 Geological Map of the Area to the South of Putre

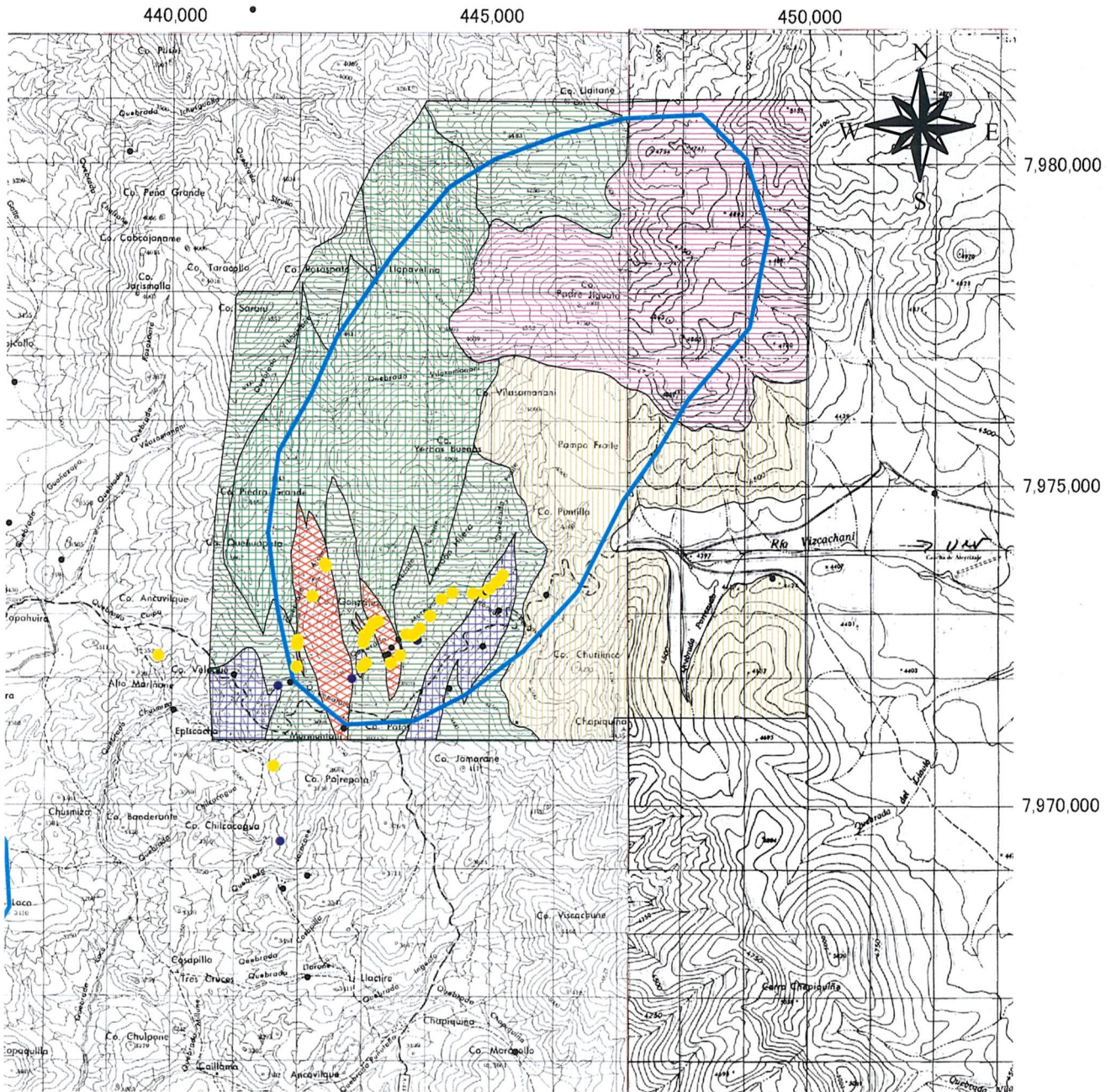












Geologic Time		Columnar Section	Lithology	Intrusives	Mineralization
CENOZOIC	QUATERNARY HOLOCENE	Gal	Alluvium		Porphyry copper type? (py, sericite, silica) ↑ Epithermal type (silica, kaolin) ↑
	QUATERNARY ~ LATE TERTIARY	Qv	Basaltic ~ andesitic lava		
		Qw	Welded tuff Tuff breccia		
	MIDDLE ~ EARLY TERTIARY				
MESOZOIC	LATE CRETACEOUS	Tgd Qp Kv(s) Dip Kw(s) Di	Andesitic ~ basaltic lava	Granodiorite (Tgd) ↑ Quartz porphyry (Qp) ↑ Diorite (Di) ↑ Diorite porphyry (Dip) ↑	

Fig.2-2-84 Schematic Stratigraphic Columns and Profiles of the Area to the South of Putre





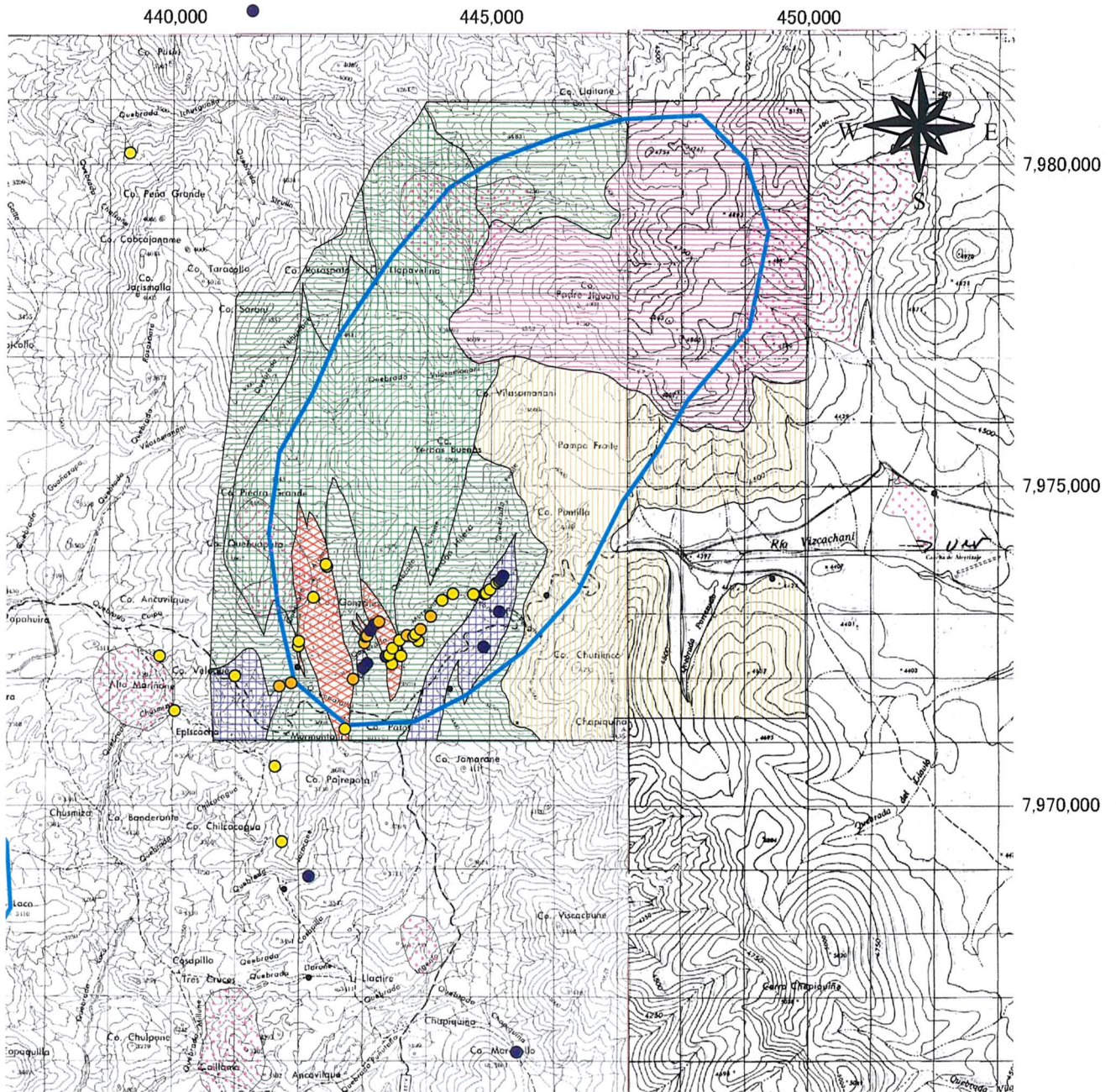
- Mineralization
- Pyritization
  - Cu-oxide
  - Cu-sulfide
  - Molybdenite
  - Oxidation
  - Native sulfur
  - Barite-limonite vein
  - none
-  Semi\_detailed\_survey\_area  
 Geomap\_Putre\_S
-  Qal (Recent sediments)
  -  Qv (Quaternary-Tertiary volcanics)
  -  Qvr (Quaternary-Tertiary ignimbrite)
  -  Kv(s) (Cretaceous volcanics)
  - Intrusive rocks
  -  Qp (Quartz porphyry)
  -  Di, Dip (Diorite, Diorite porphyry)
  -  Tgd (Tertiary granodiorite)

0 1 2 km



Fig. 2-2-85 Mineralization Map of the Area to the South of Putre





- Alteration
- Silicification
  - Acid alteration
  - Sericitization
  - Propylitization
  - Potassic alteration
  - Tourmalinization
  - none
- Alteration zone (from TM images)
- Semi\_detailed\_survey\_area
  - Geomap\_Putre\_S
  - Qal (Recent sediments)
  - Qv (Quaternary-Tertiary volcanics)
  - Qvr (Quaternary-Tertiary ignimbrite)
  - Kv(s) (Cretaceous volcanics)
  - Intrusive rocks
  - Qp (Quartz porphyry)
  - Di, Dip (Diorite, Diorite porphyry)
  - Tgd (Tertiary granodiorite)

0 1 2 km

Fig. 2-2-86 Distribution Map of Alteration Minerals at the Area to the South of Putre