

第3章 PIRCA 地区（精査）

3-1 地質・地質構造

Pirca 地区は、コタウアシ地域の南西部にあり、Pausa の南方約 15km にある Pirca 部落付近からその西方にかけての 90k m² の範囲である (Fig. I - 1)。本地区については調査精度の違いから東部地区 (48k m²) と西部地区 (42k m²) に分けて調査した。

両地区の地質図を Fig. II - 9 及び Fig. II - 10 に示す。

Pirca 地区の地質は、ジュラ系の Chocolate 火山岩類 (Cho) を最下位層とし、順次、第三系の Tacaza 層 (Tc)、第四紀更新統の Pirca 堆積物 (Ps)、Barroso 層群の下部層 (Vb1) 及び上部層 (Vbu)、Moraine (Mo)、さらに第四紀完新統の Pausa 火山堆積物 (Vsp) 及び沖積層 (al) などで構成される。貫入岩には小規模な角閃石安山岩 (An) の岩脈がある。

Pirca 地区では大規模な地質構造は認められない。Pirca 東部地区では、Tacaza 層 (Tc) がわずかに造山運動 (アンデス造山運動の最末期?) の影響を受けたと推定され、地層はほぼ E-W の走向で北方へ 10° ~ 15° 傾斜する。断層構造は、Millo の Paccha 沢沿いの NW-SE 系、この北東斜面にある NE-SW 系、Millo 南東約 1km の斜面にある NE-SW 系などの 3ヶ所で観察される。これらはいずれも小規模で、その転移量は数 10m 前後と推定される。Pirca 西部地区では顕著な地質構造は認められない。

3-2 変質帯及び鉱化帯

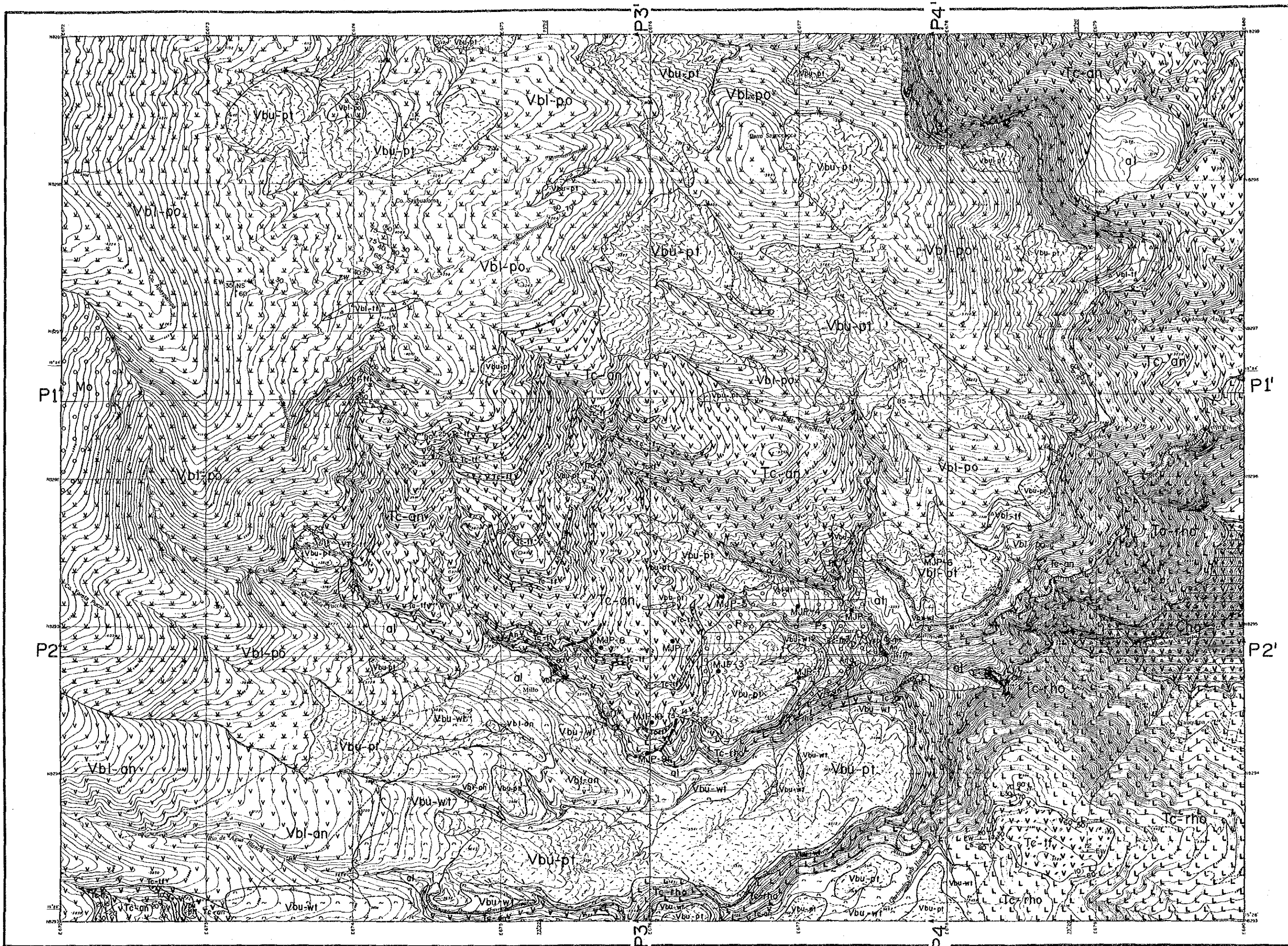
Pirca 東部地区及び西部地区では、大規模なものから小規模なものまで多数の変質帯が観察される (Fig. II - 11, II - 12)。しかし、当地区では鉱化作用が全般に弱く、小規模なトレンチ探査の跡が数ヶ所でみられるものの、稜業された既知鉱化帯はない。

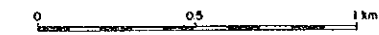
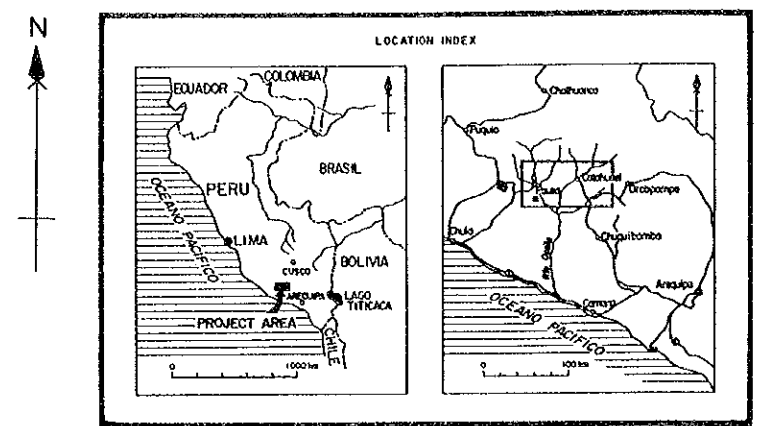
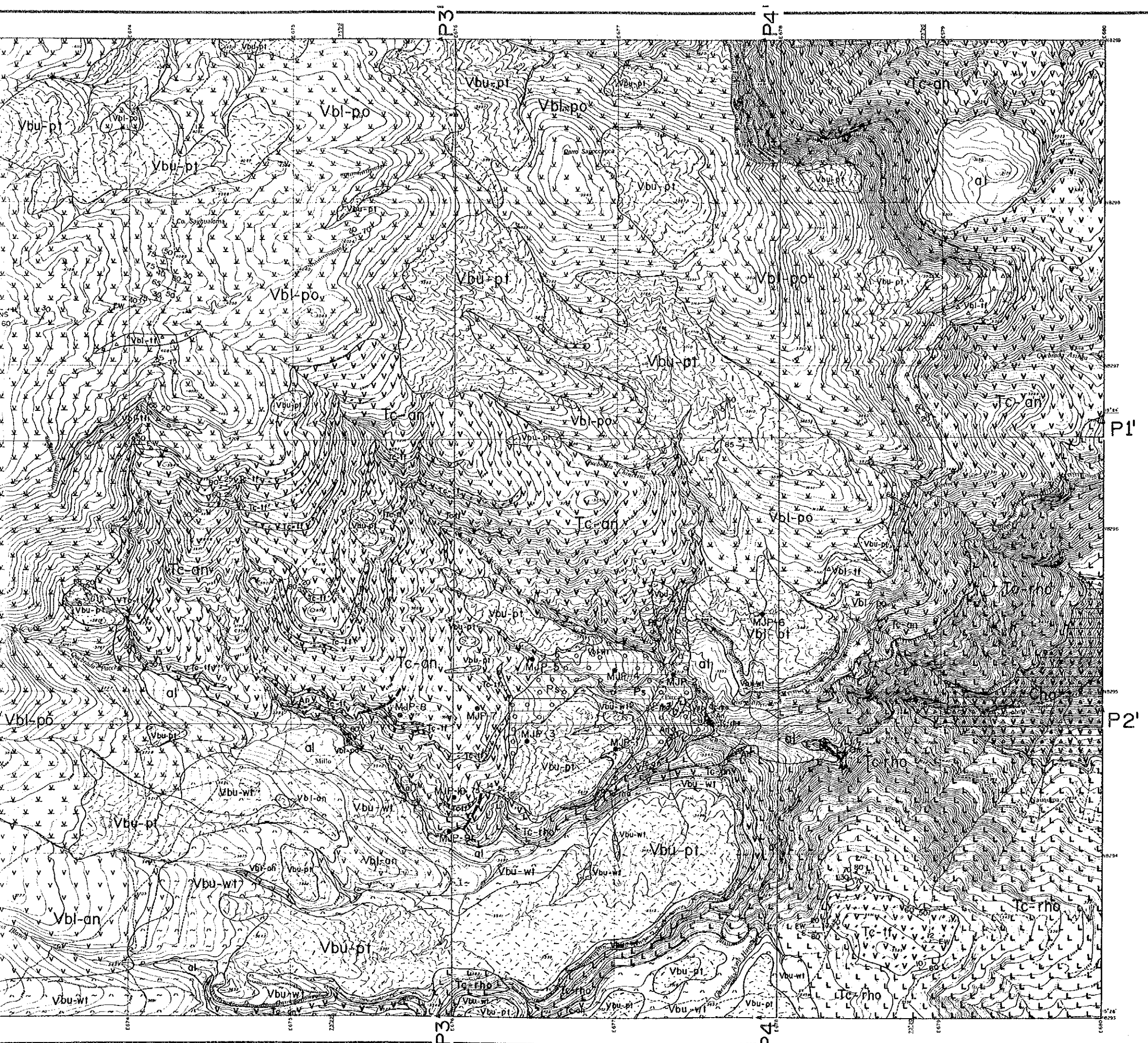
Pirca 東部地区及び西部地区の変質帯は、第三紀中新世の Tacaza 層 (Tc) の安山岩溶岩及び同質凝灰岩 (Tc-an 及び Tc-tf) の分布域に大多数が含まれ、一部は流紋岩質凝灰岩 (Tc-rho) の分布域に含まれる。この Tacaza 層を覆う第四系では、最下位の Porca 堆積物 (Ps) に含まれる礫に変質岩や珪化岩が含まれるものの、第四系には初生的な変質帯や鉱化帯は認められない。

両地区にみられる主要な変質帯及び鉱化帯の分布位置、規模、変質帯の状況及び鉱化作用などをまとめて Table II - 6 に示した。主要な変質帯は Pirca 東部地区の 7ヶ所、Pirca 西部地区の 3ヶ所である。

鉱化作用は、珪化帯とこれに含まれる石英細脈に伴う金銀の鉱化が Pirca 西部地区の PW-1 及び PW-3 変質帯でみられる。Pirca 東部地区では金の鉱化はほとんど無く、銀の鉱化がわずかに認められる。銅、鉛、亜鉛の鉱化は全く認められず、肉眼的には黄鉄鉱の鉱化が顕著に認められるのみである。

各変質帯から採取した試料の化学分析結果を Table II - 7 に示した。





LEGEND

| | | | | |
|----------------------------------|-----------------------------|------------------|---|--|
| Holocene | Alluvium and Talus | al | Gravel, sand, silt and clay | |
| | Volcanic Sediments of Pausa | Vsp | Volcanic ash and gravel | |
| Quaternary | Moraine Sediments | Ms | Gravel, sand and mud | |
| | Barroso Group | Upper Formation | Vbu-pi | Pumice fall and tuffaceous sand |
| | | Lower Formation | Vbi-an | Dacite lava, dacitic tuff and welded tuff |
| | Pleistocene | | Vbi-po | Pyroxene andesite lavas |
| | | Vbi-ff | Andesitic tuff, lapilli tuff and tuff breccia | |
| Pliocene | | Vbi-po | Hornblende andesite lava | |
| | | Vbi-po | Gravel, sand, silt and clay | |
| Tertiary | Miocene | Tacaza Formation | Vtc-ff | Andesitic tuff, lapilli tuff and tuff breccia |
| | | | Vtc-an | Andesite lava with thin bedded tuff, lapilli tuff and tuff breccia |
| Jurassic | Chocolate Volcanic Rocks | | Ltc-rho | Rhyolite lava, tuff and lapilli tuff |
| | | | Ltc-rho | Andesite lava, andesitic tuff and tuff breccia (partly green semischist) |
| Intrusive rock | | | | |
| Dike | | Vbi-an | Hornblende andesite | |
| Fault | | | Fault | |
| Strike and dip of bedding | | 90 80 | Strike and dip of bedding | |
| Strike and dip of flow structure | | 50 10 | Strike and dip of flow structure | |
| Strike and dip of joint | | 80 10 | Strike and dip of joint | |
| Strike and dip of contact plane | | 10 80 | Strike and dip of contact plane | |
| MJP-1 | | | Location of drilling | |
| P1 | | | Geological Profile line | |

Fig. II-9 Geological Map of the Pirca Eastern Area

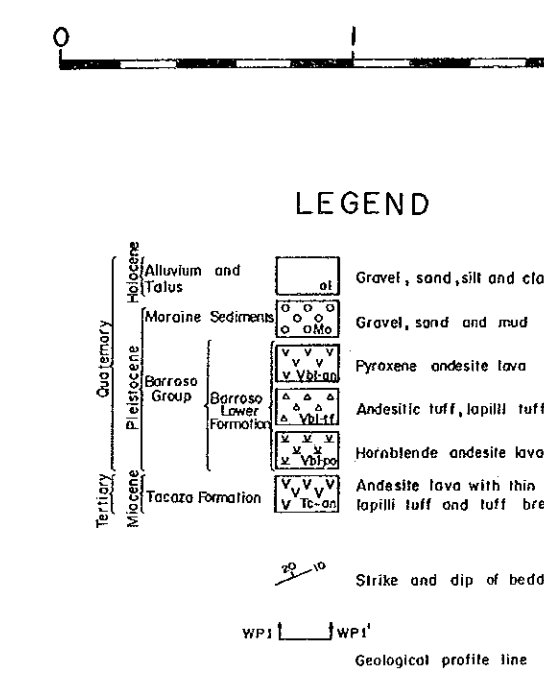
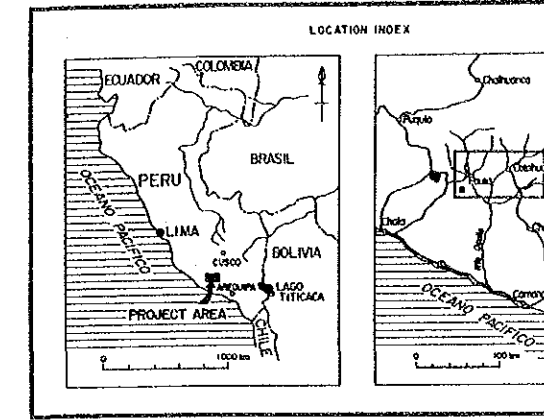
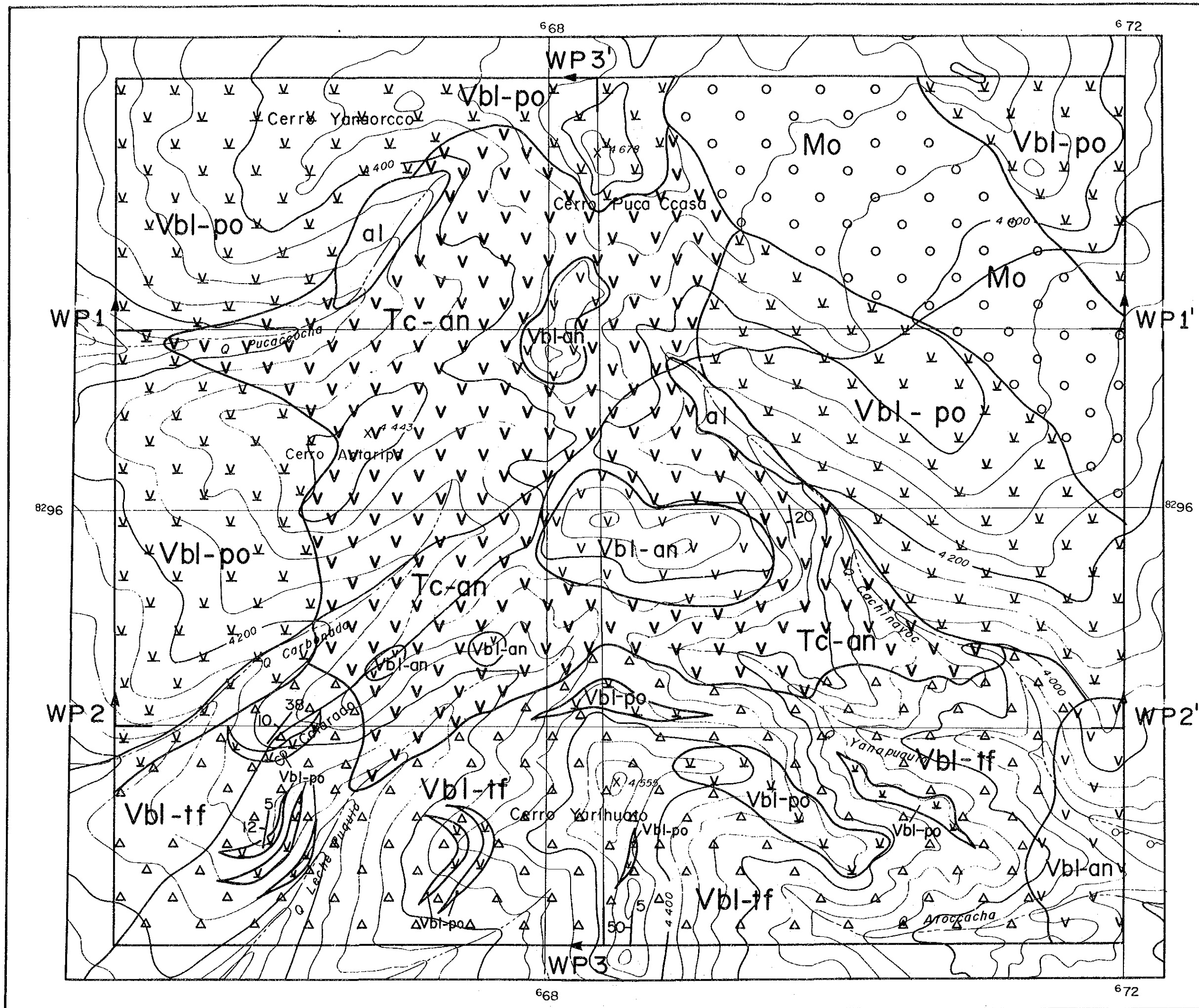
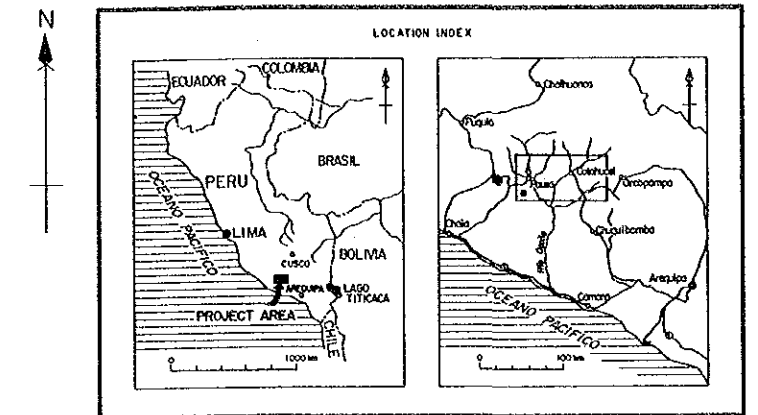
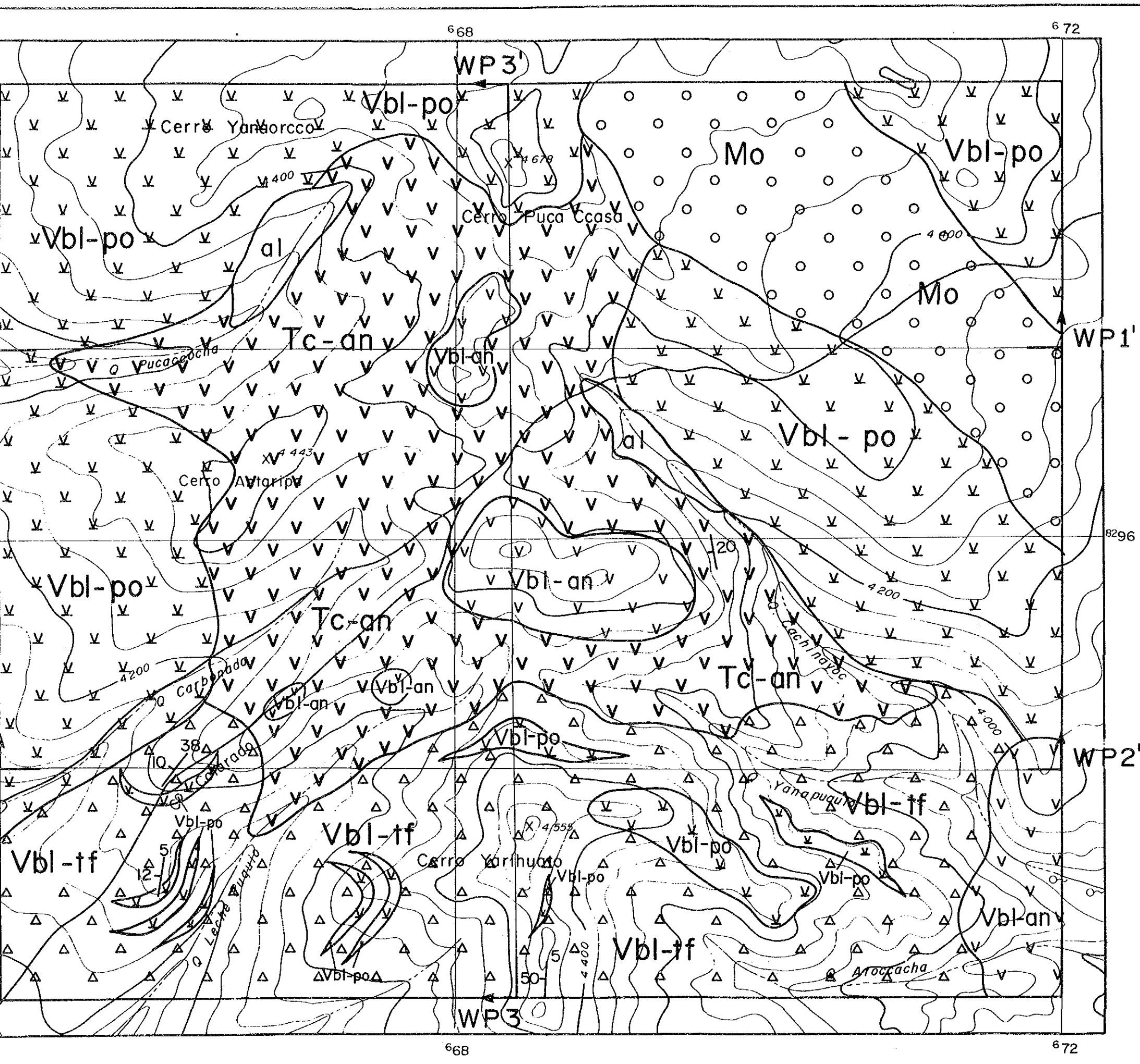


Fig. II-10 Geological Map of the Pirca Western Area

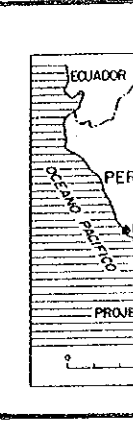
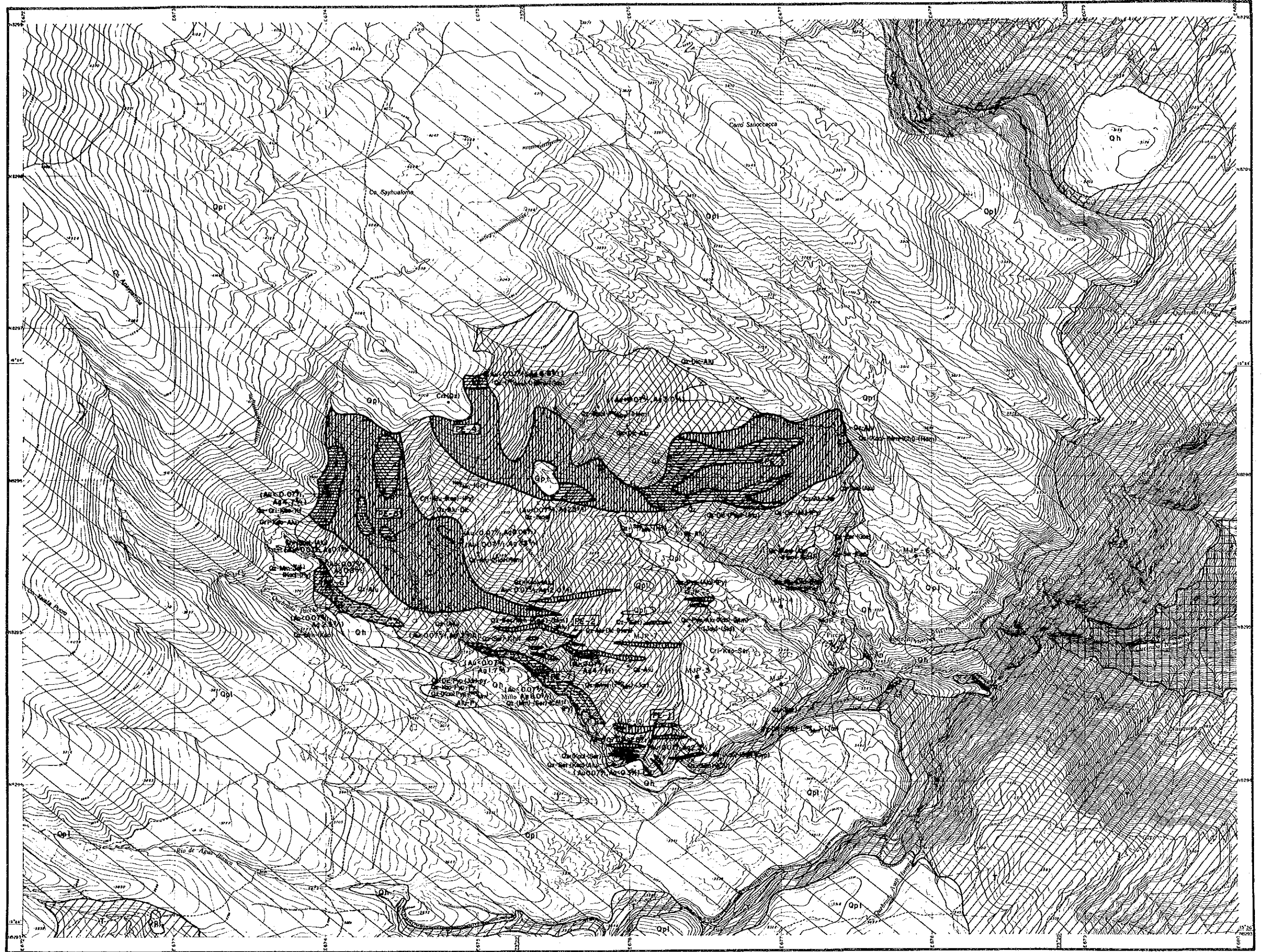


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| | | | | |
|------------|----------|-------------------------|--------|--|
| Quaternary | Holocene | Alluvium and Talus | al | Gravel, sand, silt and clay |
| | | Moraine Sediments | Mo | Gravel, sand and mud |
| Cenozoic | Pliocene | Barroso Group | Vbl-po | Pyroxene andesite lava |
| | | Barroso Lower Formation | Tc-an | Andesitic tuff, lapilli tuff and tuff breccia |
| Tertiary | Miocene | Tacaza Formation | Vbl-an | Hornblende andesite lava |
| | | | Vbl-tf | Andesite lava with thin bedded tuff, lapilli tuff and tuff breccia |

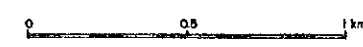
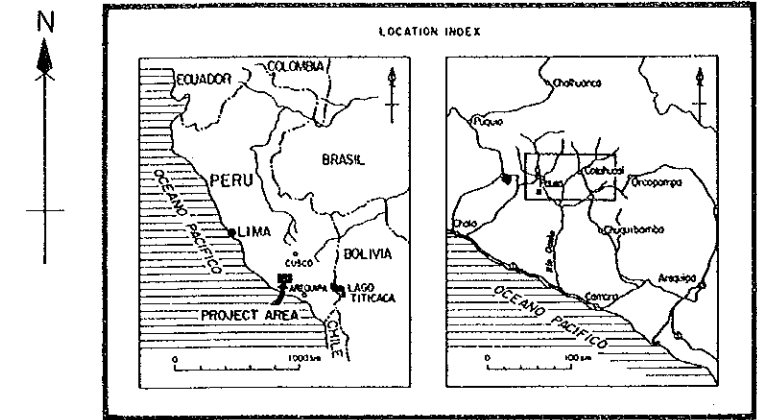
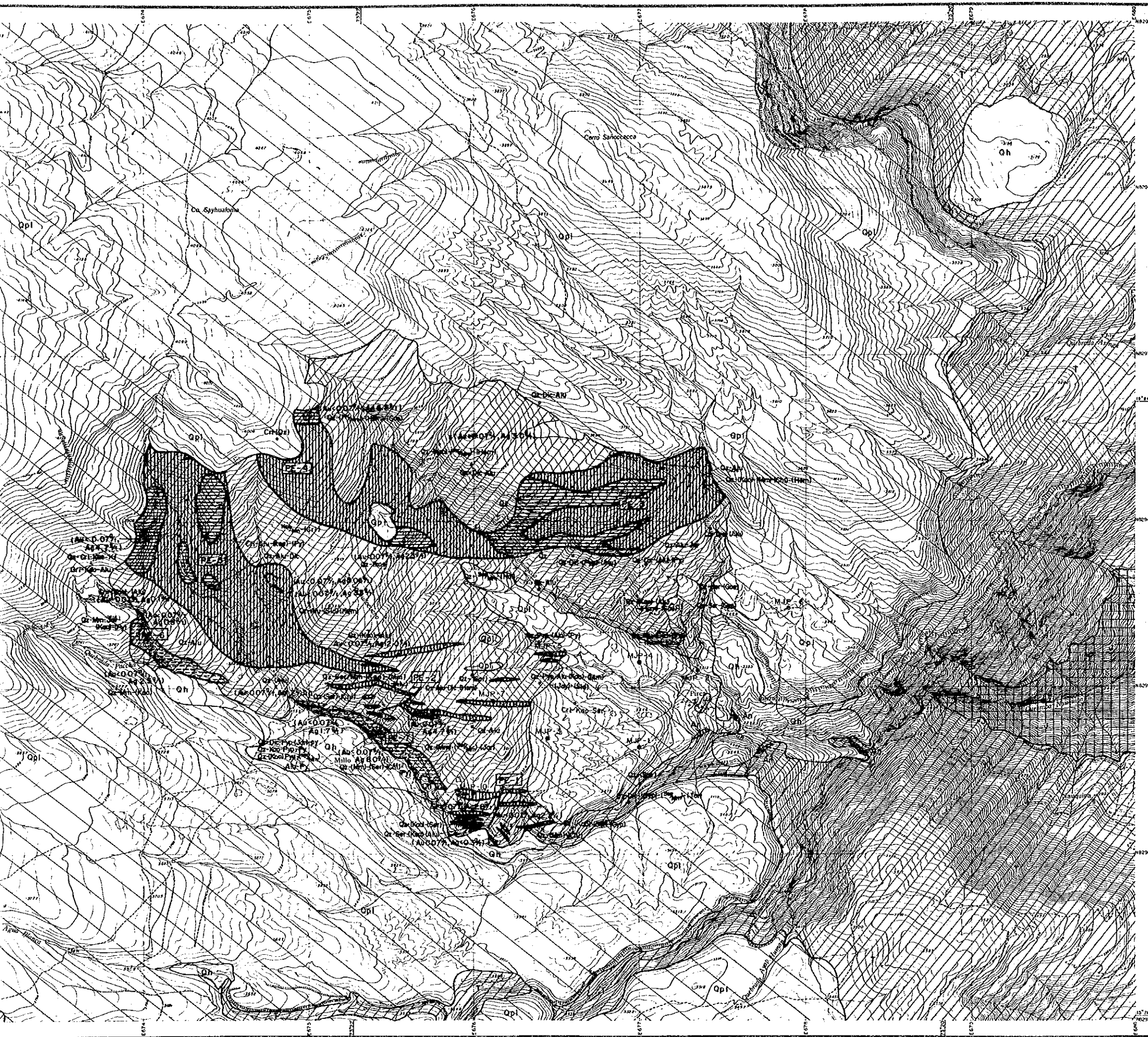
Strike and dip of bedding
 Geological profile line

Fig. II-10 Geological Map of the Pirca Western Area



- Geologi
- Qh
 - Op1
 - Op2
 - Op3
 - Op4
- Intrusiv
- An
- Alterati
- Alterati 1
 - Alterati 2
 - Alterati 3
 - Alterati 4

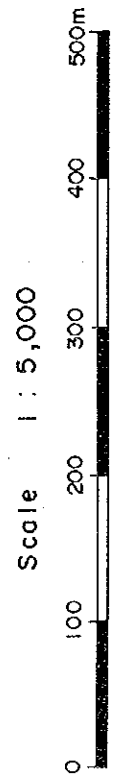
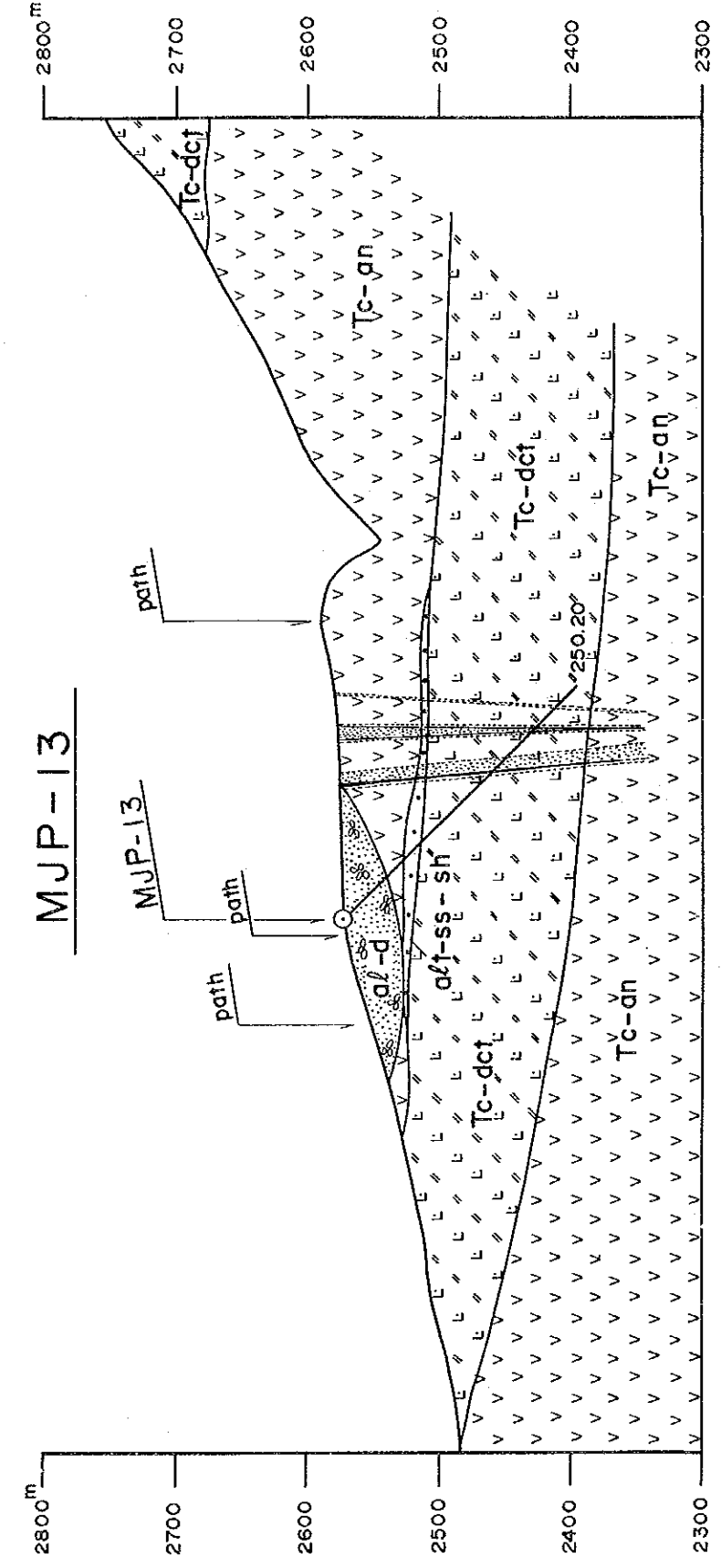
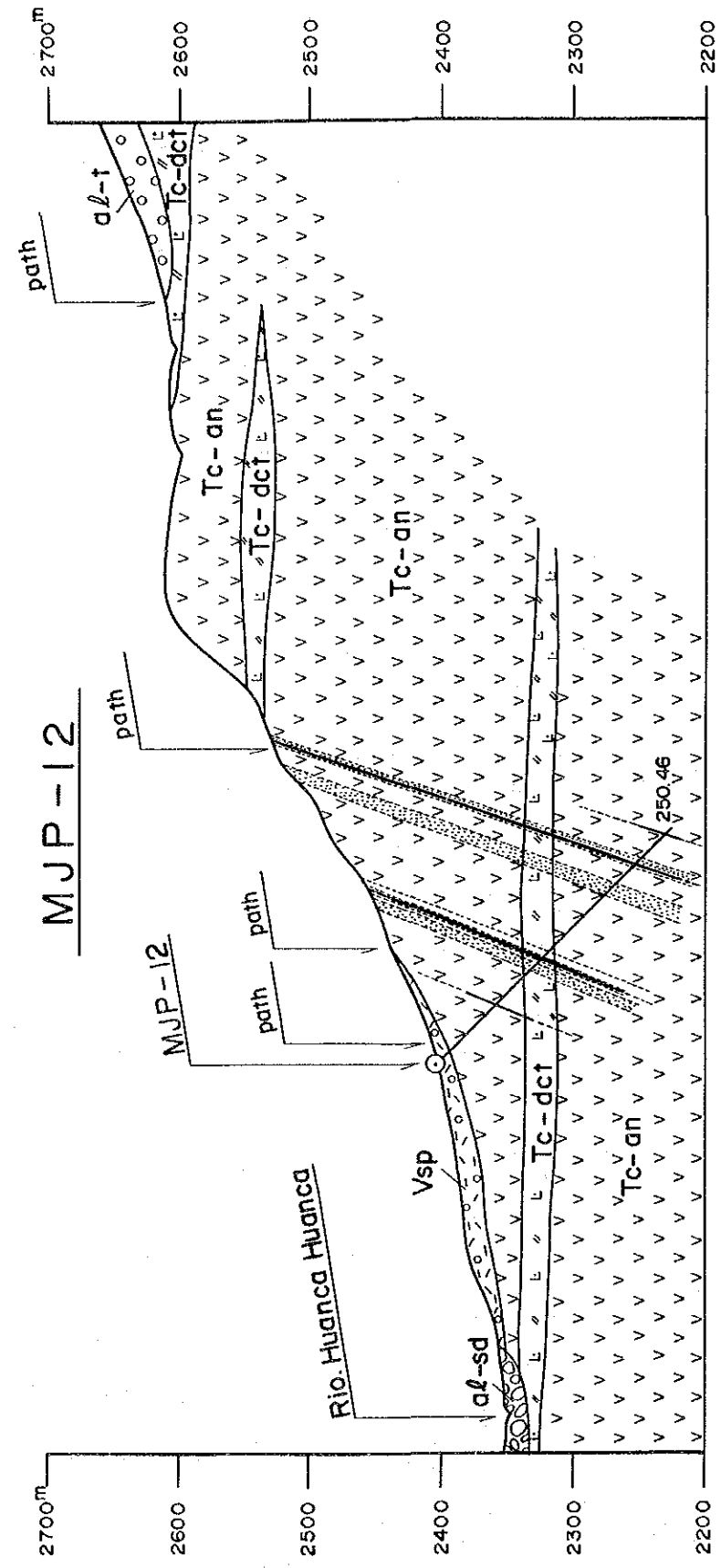
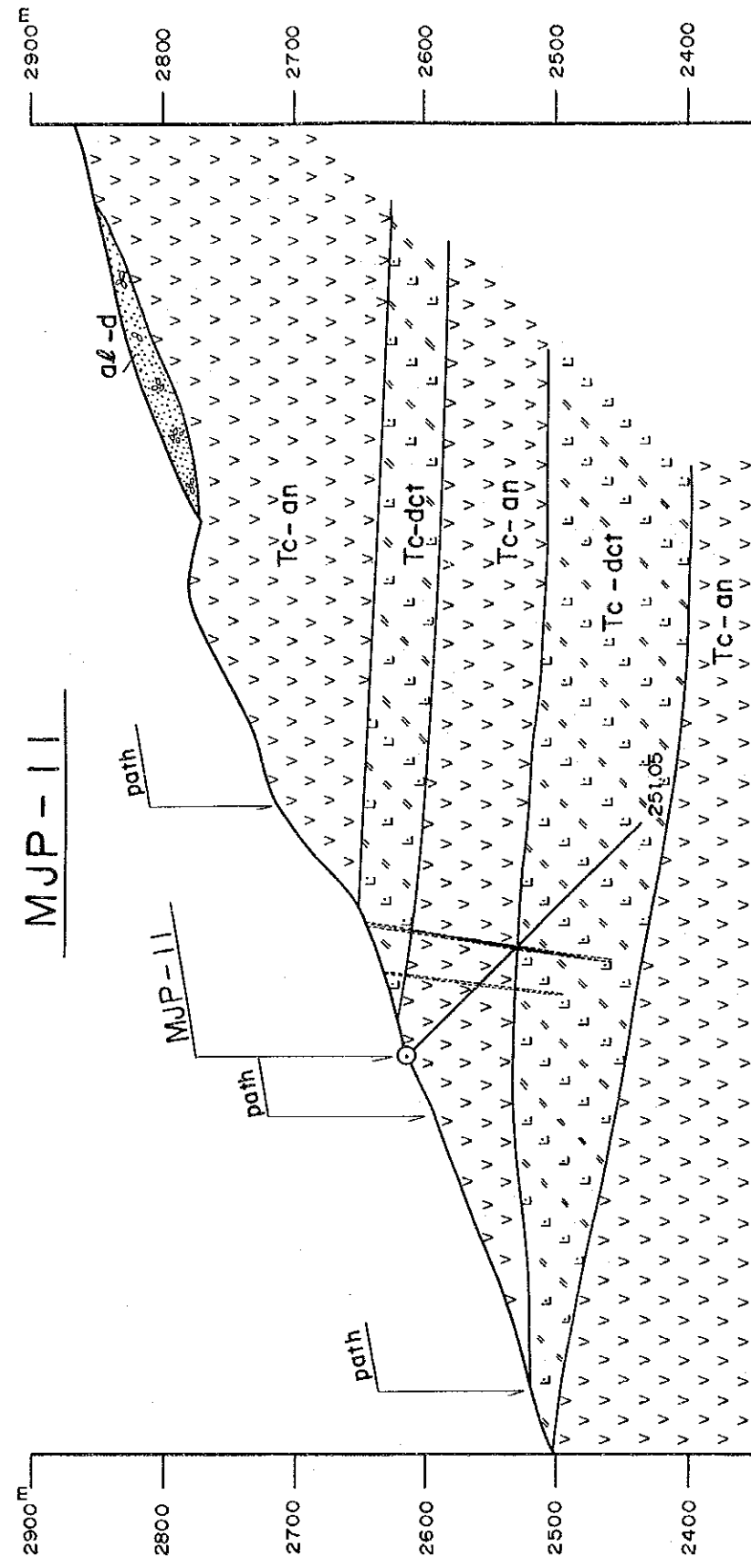
Fig. II-11
Location Map
Mineralizati



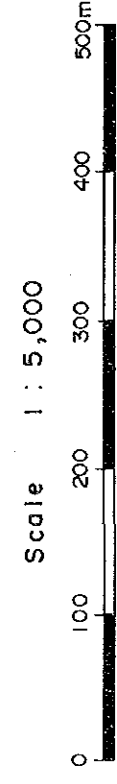
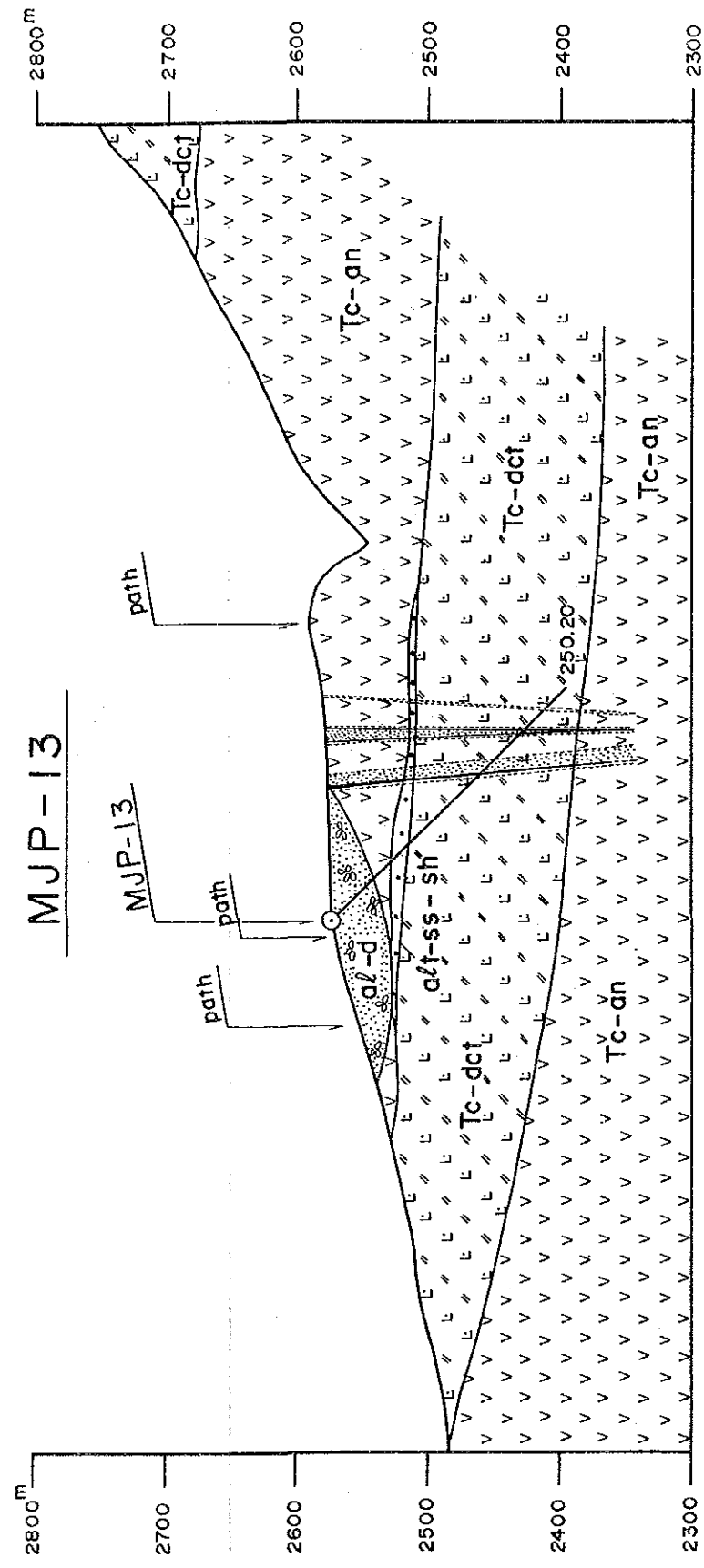
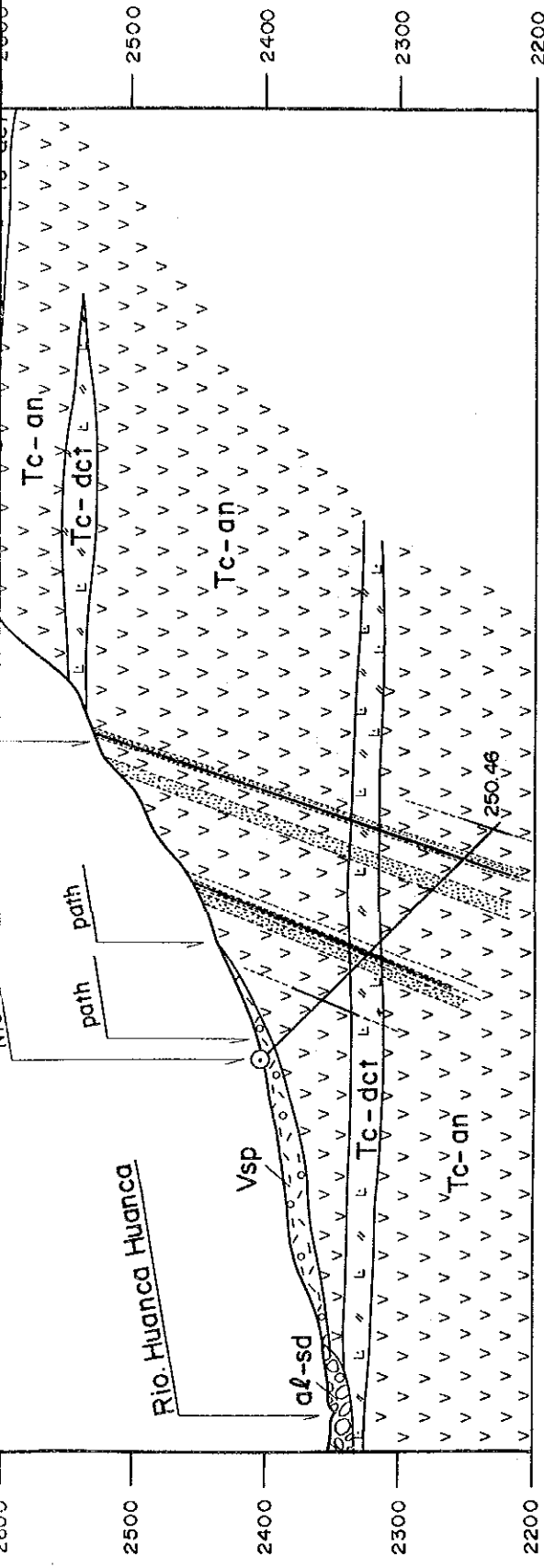
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| Geological System | Abbreviation |
|-------------------------------------|--|
| Quaternary (Holocene) System | Qz : quartz |
| Quaternary (Pleistocene) System | Kf : potassium feldspar |
| Tertiary System | Cri : κ -cristobalite |
| Jurassic System | Hol : halloysite |
| Intrusive Rock | Kao : kaolinite |
| Hornblende andesite | Dic : dickite |
| Fault | Pyp : pyrophyllite |
| Alteration and Mineralization Zones | Mm : montmorillonite |
| Mainly silicification | Ser : sericite |
| Silicification and argillization | Chi : chlorite |
| Mainly argillization | Kao/Mm : kaolinite-montmorillonite mixed layer |
| Mineralization | Ser/Mm : sericite-montmorillonite mixed layer |
| | Alu : alunite |
| | Jar : jarosite |
| | Gyp : gypsum |
| | Py : pyrite |
| | Hem : hematite |
| | Goe : goethite |

Fig. II-11
Location Map of Alteration and Mineralization Zone of the Pirca Eastern Area



LEGEND



LEGEND

| | | |
|------------|----------|--|
| Quaternary | Holocene | River sediments (gravel, sand) Debris (gravel, sand, silt, clay) Terrace (gravel, sand, silt) Tuffaceous silt, sand, gravel |
| | | Alteration of tuffaceous sandstone and shale Dacitic pyroclastic rocks Andesite lava and andesitic pyroclastic rocks |
| Tertiary | Miocene | Tacaza Formation +alt-ss-sh Tc-dct Tc-an |
| | | Volcanic Sediment of Pausa |

Drilling site

Mineralization zone

Alteration zone (silicification and argillization)

Fig. II-8 Geological Section of the Drilling Holes (MJP-11,12,13) in the Colpar Area (scale 1:5,000)

Table II-6 List of Alteration and Mineralization Zones of the Pirca Area

| Area | No. | Name | Location | | Scale (km) | Alteration | Mineralization |
|--------------------|-----|------|---|--|------------|---|--|
| | | | Direction | Distance (km) | | | |
| Pirca Eastern Area | 1 | PE-1 | SE | 0.8 (from Millo) | 0.3×0.5 | <ul style="list-style-type: none"> Brown to light brown altered rhyolitic tuff with pyrite dissemination and iron oxides. Hydrothermal alteration (silicification and argillization) Quartz vein (width: 0.1 - 1.0 m) [Qz + Ser + (Kao) + (Alu)] | <ul style="list-style-type: none"> No significant mineralization observed |
| | 2 | PE-2 | NE | 0.5 (from Millo) | 0.1×0.3 | <ul style="list-style-type: none"> Brown altered zone contaminated by iron oxides. Hydrothermal alteration (silicification and argillization) [Qz + Alu + (Mn) + (Ser)] | <ul style="list-style-type: none"> No significant mineralization observed Reddish brown massive iron oxides (hematite, limonite) are observed in drill cores of the hole MJP-8 Analysis of samples showed the maximum grade of Au < 0.07 g/t, Ag 4.7 g/t |
| | 3 | PE-3 | N NW | 1.3~1.6 (from Pirca) | 0.6×1.4 | <ul style="list-style-type: none"> Brown, light brown and white grey altered zone Hydrothermal alteration (silicification and argillization) [Qz, Qz + Alu, Qz + Dic + (Alu), Qz + (Kao) + (Mn)] | <ul style="list-style-type: none"> No significant mineralization observed |
| | 4 | PE-4 | NW | 1.6~3.0 (from Pirca) | 0.4×1.4 | <ul style="list-style-type: none"> Brown to yellowish brown altered zone with white strongly siliceous rock. Hydrothermal alteration (silicification and argillization) [Qz + (Kao), Qz - (Ser/Mn)] | <ul style="list-style-type: none"> No significant mineralization observed Analysis of samples showed the maximum grade of Au < 0.07 g/t, Ag 6.8 g/t. |
| | 5 | PE-5 | NNW | 0.7~2.2 (from Millo) | 0.5×1.5 | <ul style="list-style-type: none"> Brown, yellowish brown and white altered zone Hydrothermal alteration (silicification and argillization) [Cri + Kao + Alu, Qz + Kf + Cri + Kao, Qz + Alu + Dic] | <ul style="list-style-type: none"> No significant mineralization observed Two of analysed samples showed the grades of Au < 0.07 g/t, Ag 12.0 g/t and Au < 0.07 g/t, Ag 4.7 g/t |
| | 6 | PE-6 | NW | 0.9~1.5 (from Millo) | 0.1×0.6 | <ul style="list-style-type: none"> Brown to light brown strongly argillaceous alteration zone with iron oxides. Hydrothermal alteration (Mainly argillization) [Qz + Mn + (Kao), Qz + Mn + Jar + (Kao)] | <ul style="list-style-type: none"> No significant mineralization observed Analysis of samples showed the maximum grade of Au < 0.07 g/t, Ag 2.5 g/t |
| | 7 | PE-7 | N E | 0.3~0.6 (Along the Q. Paccha near by Millo) | 0.1×0.8 | <ul style="list-style-type: none"> Brown and yellowish brown strongly argillaceous alteration zone with iron oxides Hydrothermal alteration (Mainly argillization) [Qz + Kao + Pyp, Qz + (Mn) + (Ser) + (Chl)] | <ul style="list-style-type: none"> No significant mineralization observed Analysis of a strongly argillaceous rock sample showed the grade of Au < 0.07 g/t, Ag 8.0 g/t |
| Pirca Western Area | 8 | PW-1 | Ridge of Co. Antaripa | | 0.3×1.5 | <ul style="list-style-type: none"> Grey to light grey strongly silicified zone with quartz veinlets, partly pyrite dissemination [Mainly Qz, partly Qz + (Cri) + (Alu)] | <ul style="list-style-type: none"> Weak mineralization of Au and Ag is observed One of spot samples from quartz veinlets in outcrop of siliceous rock showed the grade of Au 6.65 g/t, Ag 10.0 g/t |
| | 9 | PW-2 | Along the right bank of the upper stream of Q. Cachinayoc | | 0.3×2.5 | <ul style="list-style-type: none"> Brown to light brown altered zone contaminated by iron oxides. Hydrothermal alteration (argillization and silicification) [Qz + Cri + Alu, Kf + (Hal) + (Mn) + (Alu)] | <ul style="list-style-type: none"> No significant mineralization observed |
| | 10 | PW-3 | Along the left bank of the upper stream of Q. Carbonada | | 0.15×0.5 | <ul style="list-style-type: none"> Light brown to greyish white altered zone with strongly siliceous parts. Hydrothermal alteration (silicification and argillization) [Qz, Qz + (Hal)] | <ul style="list-style-type: none"> No significant mineralization observed A spot sample of siliceous rock showed the grade of Au 0.89 g/t, Ag 7.0 g/t |

Abbreviations of alteration mineral Qz: quartz, Alu: Alunite, Kao: Kaolinite, Mn: Montmorillonite, Ser: Sericite, Jar: Jarosite, Dic: Dickite, Pyp: Pyrophyllite, Kao/Mn: Kaolinite-Montmorillonite mixed layer, Ser/Mn: Sericite-Montmorillonite mixed layer, Cri: Cristobalite

Table II-7 Chemical Analyses of Altered Rocks and Ore Samples of the Pirca Area

| Name of Alteration Zone | Sample No. | Co-ordinates | | Au g/t | Ag g/t | As % | Cu % | Pb % | Zn % | Remarks |
|-------------------------|------------|--------------|--------|--------|--------|--------|--------|-------|-------------------------------|--------------------------------------|
| | | E (km) | N (km) | | | | | | | |
| Pirca Eastern Area | PE-1 | PMV-2 | 676.2 | 8294.2 | <0.07 | 2.3 | 0.004 | <0.01 | <0.01 | quartz vein (w = 0.80 m) |
| | | PK-6 | 676.0 | 8294.2 | <0.07 | 2.8 | 0.002 | <0.01 | 0.01 | strong siliceous rock |
| | | PK-39 | 675.9 | 8294.1 | 0.07 | <0.3 | 0.005 | <0.01 | <0.01 | strong siliceous rock (quartz vein?) |
| | PE-2 | PK-42 | 676.3 | 8294.2 | <0.07 | <0.3 | <0.001 | <0.01 | <0.01 | quartz vein (w : 0.45 m) |
| | | PV-16 | 675.5 | 8294.8 | <0.07 | 4.7 | 0.003 | <0.01 | <0.01 | siliceous rock |
| | PE-4 | PK-30 | 675.0 | 8296.6 | <0.07 | 6.8 | 0.005 | <0.01 | 0.01 | siliceous rock |
| | | Pm-25 | 675.4 | 8295.8 | <0.07 | 2.5 | 0.002 | <0.01 | <0.01 | " |
| | PE-5 | Pm-13 | 674.0 | 8295.9 | <0.07 | 4.7 | 0.004 | <0.01 | <0.01 | argillaceous rock with pyrite |
| | | Pm-24 | 675.4 | 8295.2 | <0.07 | 12.0 | 0.001 | <0.01 | 0.01 | " |
| | | PZ-14 | 674.8 | 8295.6 | 0.07 | 3.3 | 0.022 | <0.01 | <0.01 | siliceous rock with limonite stains |
| | PE-7 | PZ-15 | 674.8 | 8295.6 | <0.07 | 0.3 | 0.006 | <0.01 | <0.01 | " |
| | | Pm-9 | 674.1 | 8295.2 | <0.07 | 2.5 | 0.022 | <0.01 | <0.01 | white argillaceous rock |
| | PE-6 | Pm-10 | 674.0 | 8295.4 | <0.07 | 0.8 | 0.040 | <0.01 | <0.01 | " |
| | | Pm-11 | 674.0 | 8295.5 | <0.07 | 1.0 | 0.002 | <0.01 | <0.01 | siliceous rock |
| | PE-7 | PK-25 | 675.1 | 8294.8 | <0.07 | 1.7 | 0.011 | 0.01 | <0.01 | siliceous rock (quartz vein?) |
| Pm-20 | | 675.4 | 8294.7 | <0.07 | 8.0 | 0.028 | <0.01 | 0.01 | argillaceous rock with pyrite | |
| Others | Pm-2 | 673.8 | 8294.1 | <0.07 | 0.8 | 0.002 | <0.01 | <0.01 | massive quartz (float) | |
| | PZ-6 | 675.8 | 8296.5 | <0.07 | 3.0 | 0.008 | <0.01 | <0.01 | altered rock with iron oxides | |
| | PZ-12 | 674.8 | 8295.0 | <0.07 | 1.7 | 0.001 | <0.01 | <0.01 | calcedonic quartz (float) | |
| PW-1 | PN-31 | 667.5 | 8297.1 | <0.07 | 1.9 | 0.002 | <0.01 | <0.01 | siliceous rock | |
| | PV-21 | 666.6 | 8296.6 | <0.07 | 1.0 | 0.002 | <0.01 | <0.01 | " | |
| | WG-2 | 667.0 | 8296.8 | 6.65 | 10.0 | 0.006 | <0.01 | 0.02 | grey quartz vein | |
| | WPK-1 | 666.8 | 8296.5 | 0.17 | <0.3 | <0.001 | <0.01 | <0.01 | strong siliceous rock | |
| PW-3 | WPZ-6 | 666.4 | 8296.0 | 0.14 | 2.3 | 0.007 | <0.01 | <0.01 | white siliceous rock | |
| | WG-1 | 666.8 | 8295.3 | 0.89 | 7.0 | 0.009 | <0.01 | 0.04 | siliceous rock | |
| Others | WPZ-10 | 666.5 | 8295.3 | <0.07 | <0.3 | 0.001 | <0.01 | <0.01 | strong siliceous rock | |
| | PN-24 | 667.7 | 8295.7 | <0.07 | <0.3 | 0.008 | <0.01 | <0.01 | siliceous rock | |
| Pirca Western Area | | | | | | | | | | |

3-3 地化学探査

Pirca 地区において、土壌 (B層) を対象とし、指示元素を Au, Ag, As, Cu, Pb, Zn の6成分とする地化学探査を行った。以下にその探査結果について記述する。

なお Pirca 地区のデータ処理は、Pirca 東部地区の試料と Pirca 西部地区の試料を加え1つの母集団として行った。しかし、結果を示す種々の図面は Pirca 東部地区と Pirca 西部地区を区分して作成した。

単一変量解析及び主成分分析による地化学異常帯を総合して、Pirca 東部地区地化学探査総合図 (Fig. II -13) Pirca 西部地区地化学探査総合図 (Fig. II -14) 及び地化学異常帯一覧表 (Table II -8) に示した。

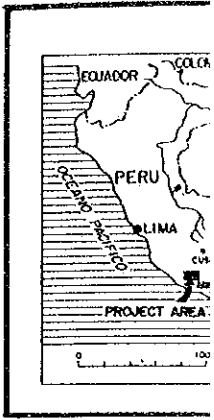
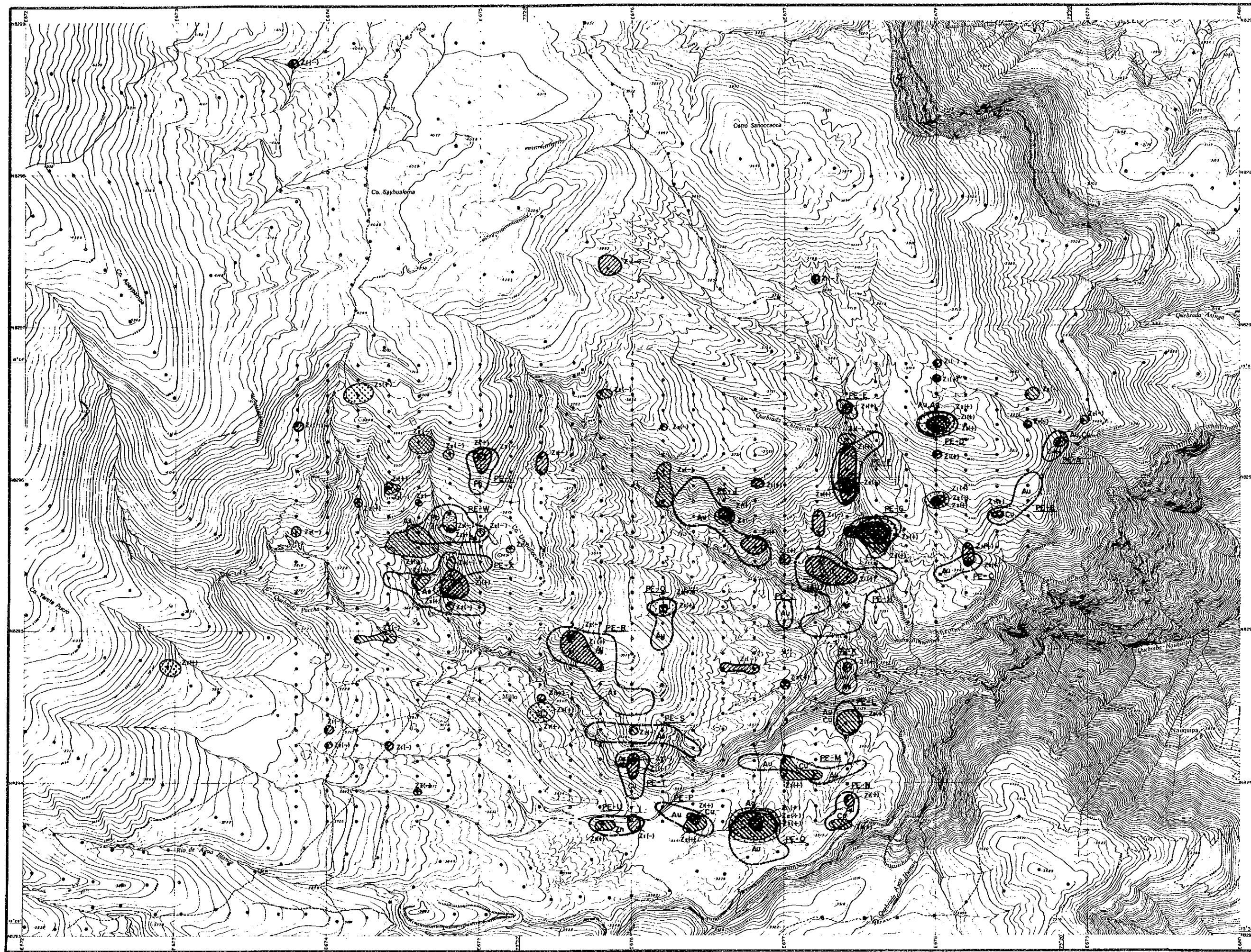
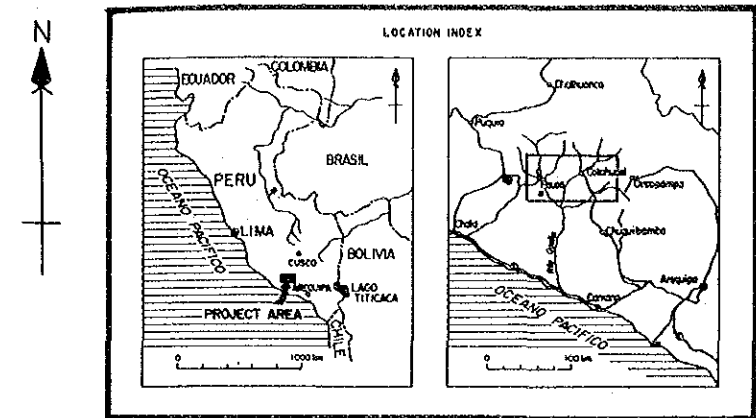
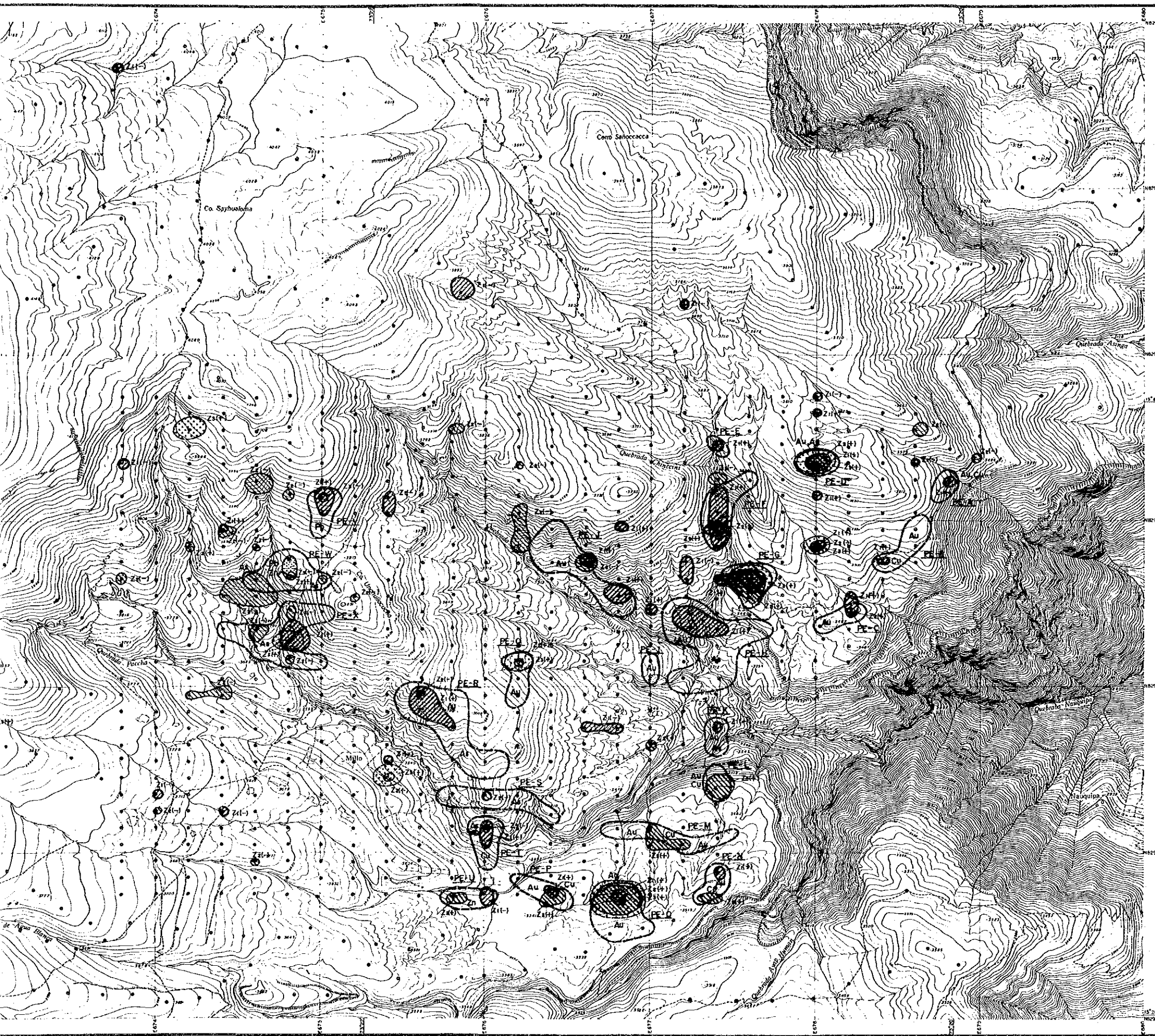


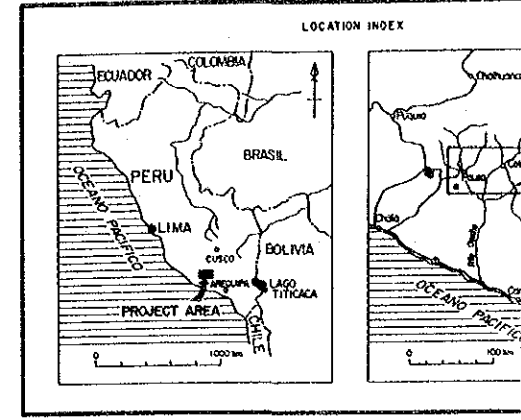
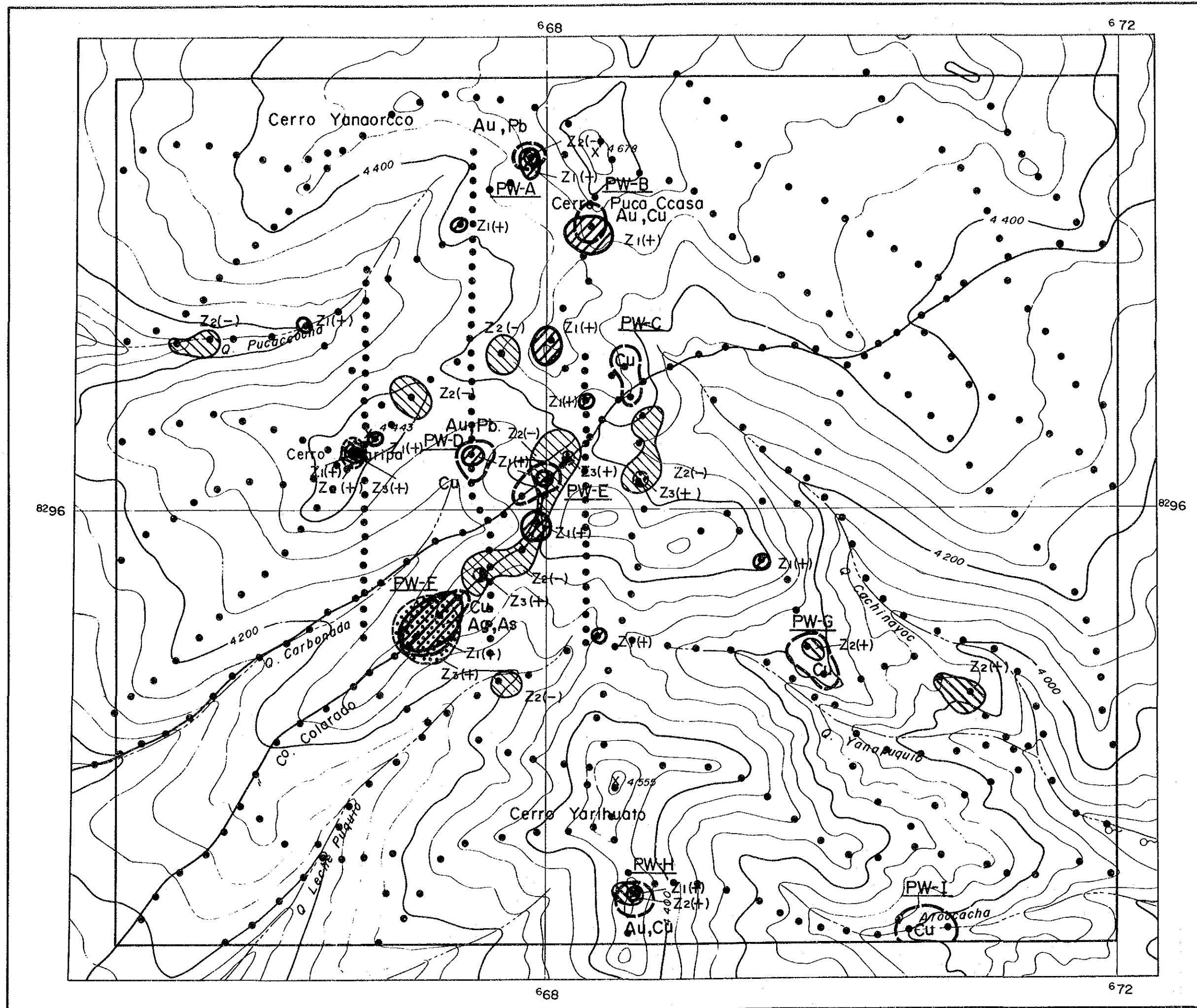
Fig. II-13 Geochronology
Pirca



LEGEND

- Geochemical Anomaly
- <Univariate Analysis>
- Anomaly Zone and Anomalous Elements
- PE-A** Name of Anomaly Zone
- <Principal Components Analysis>
- 1st Principal Component
- Zn(+) + Anomaly
- Zn(-) - Anomaly
- 2nd Principal Component
- Zn(+) + Anomaly
- Zn(-) - Anomaly
- 3rd Principal Component
- Zn(+) + Anomaly
- Zn(-) - Anomaly

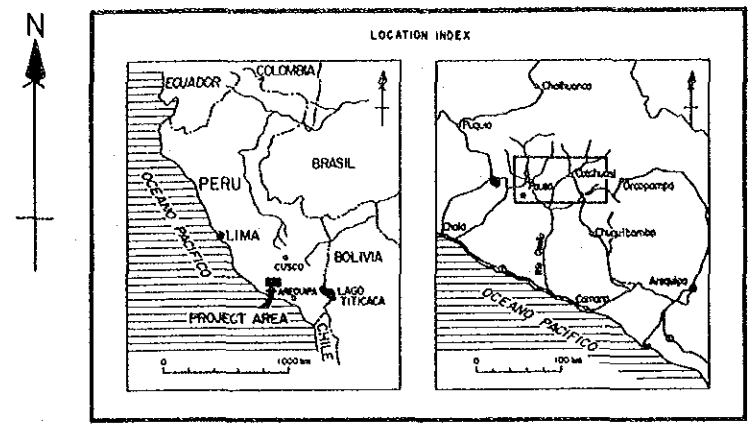
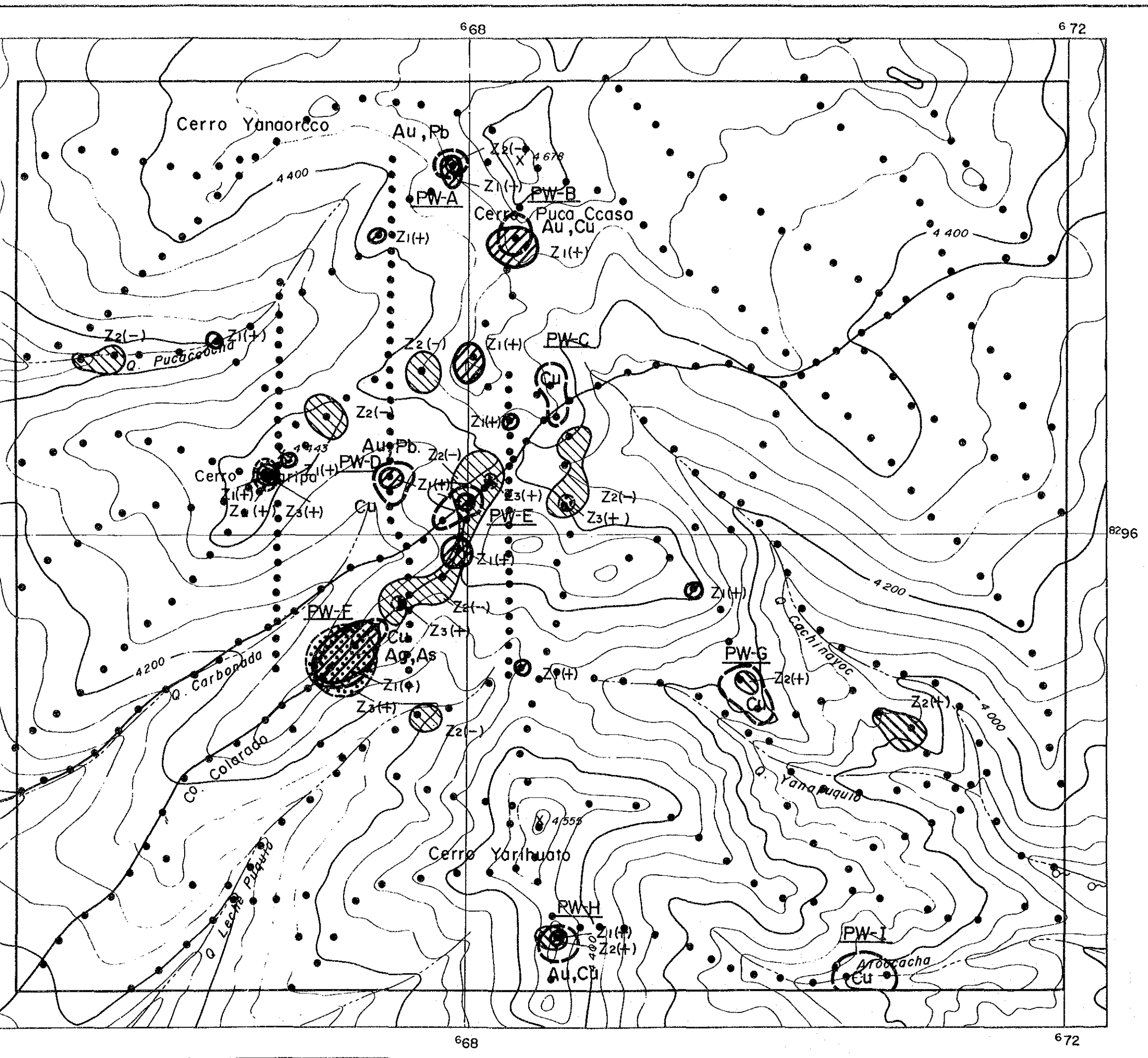
Fig. II-13 Geochemical Interpretation Map of Pirca Eastern Area (Composite Data)



LEGEND

- Geochemical Anomaly
 <Univariate Analysis>
- Anomaly Zone and Anomalous Elements
 - PW-A Name of Anomaly Zone
- <Principal Components Analysis>
- 1st Principal Component
 - Z1(+) + Anomaly
 - Z1(-) - Anomaly
 - 2nd Principal Component
 - Z2(+) + Anomaly
 - Z2(-) - Anomaly
 - 3rd Principal Component
 - Z3(+) + Anomaly
 - Z3(-) - Anomaly

Fig. II-14
 Geochemical Interpretation Map of the Pirca Western Area (Com)



LEGEND

- Geochemical Anomaly
- <Univariate Analysis>
- Anomaly Zone and Anomalous Elements
 - PW-A Name of Anomaly Zone
- <Principal Components Analysis>
- 1st Principal Component
 - Z1(+) + Anomaly
 - Z1(-) - Anomaly
 - 2nd Principal Component
 - Z2(+) + Anomaly
 - Z2(-) - Anomaly
 - 3rd Principal Component
 - Z3(+) + Anomaly
 - Z3(-) - Anomaly

Fig. II-14
Geochemical Interpretation Map of
the Pirca Western Area (Composite Data)

Table II-8 List of Geochemical Anomaly Zones in the Pirca Area

| Area | Name of anomaly zone | Location | Scale (km) | Remarks (mineralization) |
|--------------------|----------------------|----------------------------------|-------------|--------------------------|
| Pirca Eastern Area | PE-A | 2.0 km NE of Pirca | 0.1 x 0.2 | Au |
| | PE-B | 1.5 km NE of Pirca | 0.1 x 0.4 | Au (+Cu) |
| | PE-C | 1.0 km NE of Pirca | 0.1 x 0.3 | Au-Cu |
| | PE-D | 1.6 km NNE of Pirca | 0.15 x 0.25 | Au-Ag, Cu-Zn |
| | PE-E | 1.5 km N of Pirca | 0.07 x 0.15 | Au-Pb |
| | PE-F | 1.2 km N of Pirca | 0.2 x 0.5 | Au-Ag-Cu-Pb |
| | PE-G | 0.8 km NNE of Pirca | 0.25 x 0.3 | Au-Ag, Cu (+Pb) |
| | PE-H | 0.3 km N of Pirca | 0.5 x 0.7 | Au-As |
| | PE-I | 0.3 km WNW of Pirca | 0.1 x 0.2 | (Au) |
| | PE-J | 1.0 km NW of Pirca | 0.2 x 0.75 | Au |
| | PE-K | 0.2 km S of Pirca | 0.15 x 0.25 | (Au) |
| | PE-L | 0.5 km S of Pirca | 0.15 x 0.2 | Au-Cu |
| | PE-M | 0.8 km SSW of Pirca | 0.1 x 0.8 | Au-Cu |
| | PE-N | 1.0 km S of Pirca | 0.1 x 0.3 | Au-Cu |
| | PE-O | 1.3 km SSW of Pirca | 0.3 x 0.4 | Au-Ag, (Cu-Zn) |
| | PE-P | 1.5 km SW of Pirca | 0.1 x 0.4 | Au-Cu (+Ag) |
| | PE-Q | 1.1 km W of Pirca | 0.1 x 0.3 | Ag, Cu |
| | PE-R | 1.5 km W of Pirca | 0.25 x 0.8 | Au-As |
| | PE-S | 1.3 km WSW of Pirca | 0.1 x 0.75 | As |
| | PE-T | 1.5 km WSW of Pirca | 0.15 x 0.3 | Au-As-Cu |
| PE-U | 1.8 km SW of Pirca | 0.1 x 0.35 | Zn | |
| PE-V | 2.5 km WNW of Pirca | 0.15 x 0.3 | Pb-As | |
| PE-W | 2.5 km WNW of Pirca | 0.2 x 0.55 | Pb-As, Zn | |
| PE-X | 2.5 km W of Pirca | 0.3 x 0.7 | As, Ag | |
| Pirca Western Area | PW-A | W of C ^o . Puca Ccasa | 0.15 x 0.2 | Au-Pb |
| | PW-B | S of C ^o . Puca Ccasa | 0.2 x 0.25 | Au-Cu |
| | PW-C | S of C ^o . Puca Ccasa | 0.15 x 0.4 | Cu |
| | PW-D | E of C ^o . Antaripa | 0.25 x 0.25 | Au-Cu-Pb |
| | PW-E | S of C ^o . Puca Ccasa | 0.15 x 0.35 | Pb (+Au) |
| | PW-F | C ^o . Colarado | 0.25 x 0.6 | Ag-Cu (+As) |
| | PW-G | NE of C ^o . Yarihuato | 0.25 x 0.4 | Cu |
| | PW-H | S of C ^o . Yarihuato | 0.2 x 0.2 | Au-Cu |
| | PW-I | Q. Atocchacha | 0.25 x 0.4 | Cu |

地化学探査による異常帯を、地質調査により確認された鉍化・変質帯と重ね合せ、Pirca 東部地区総合図 (Fig. II - 15) 及び Pirca 西部地区総合図 (Fig. II - 16) に示した。

Pirca 東部地区の異常帯のうち PE-D, PE-F, PE-G, PE-H, PE-J, PE-O, PE-Q, PE-R, PE-T の 9 異常帯及び変質帯と重なる PE-S, PE-V, PE-W, PE-X の 4 異常帯、計 13 の異常帯について Pirca 西部地区については PW-B, PW-D, PW-F, PW-H について検討した。これら 17 個所の地化学異常帯について、地化学探査結果から推定される地化学異常帯と、地質調査により確認された鉍化・変質帯の特徴を比較し Table II - 9 に示す。

両者間の関係をみると、次の諸点が注目できる。

①地質調査により鉍化・変質作用の認められない所に地化学異常帯が現われている場合がある (PE-D, PE-G, PE-H, PE-O, PW-H), ②地質調査結果にみられる Ag の弱い鉍化の影響が地化学異常には不明瞭にしか現われていない場合がある, (PE-R, PE-V, PE-W), ③地化学異常から推定される Au の鉍化が地質調査では認められない場合がある, ④地質調査でごく弱い鉍化が認められる鉍化・変質帯に地化学異常が現われていない場合がある (PE-4 及び PE-5 変質帯の一部, PE-6, 7 変質帯), ⑤ Au : 6.65g/t, Ag : 10.0g/t の部分的に顕著な鉍化作用が認められる PW-1 変質帯においても、小規模な地化学異常しか現われていない場合などである。これらの原因としては、土壌の生成がごく少なく、一般的な土壌断面が発達していないこと、少なくとも地表での鉍化作用が弱いこと、かつ局所的であることなどが考えられる。

Pirca 地区の地化学探査による比較的有望な異常帯としては、PE-F, PE-G, PE-J, PE-Q, PE-R, PE-T 及び PW-F が挙げられる。しかし、これらのうち PE-Q, PE-R, PE-T についてはそれぞれ 100m のボーリング調査が実施されたが、有望な鉍床や顕著な鉍化作用は認められなかった。このため、他の地化学異常帯についても顕著な鉍化作用の存在は推定し難い。

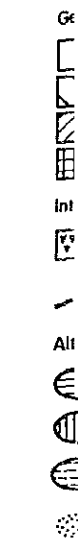
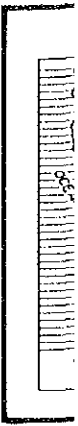
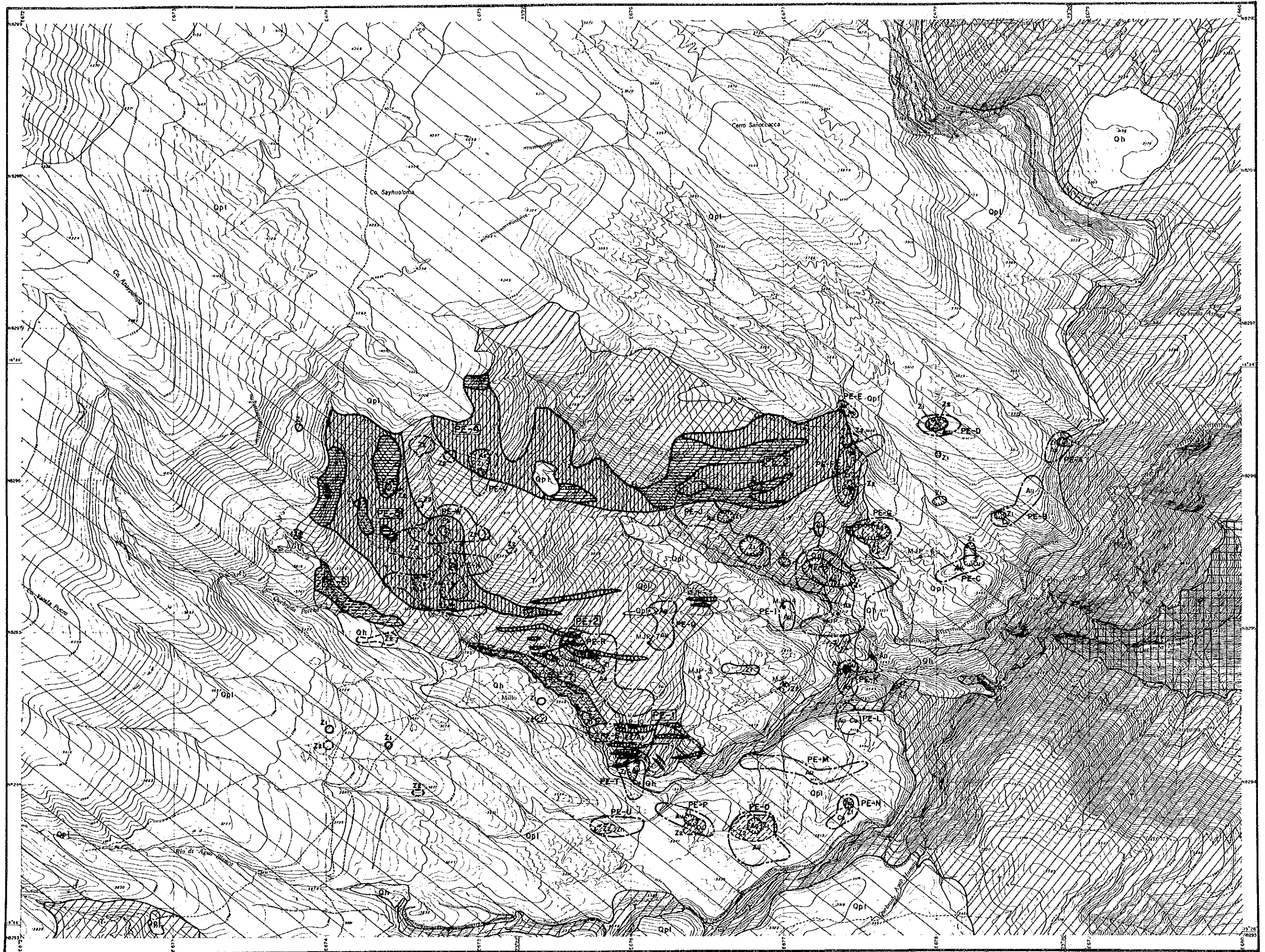
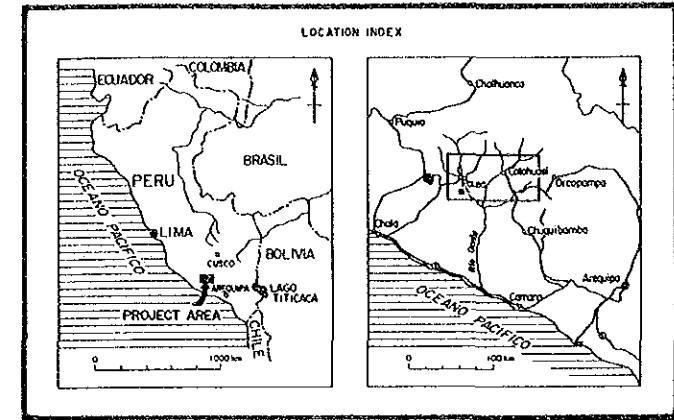
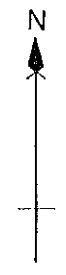
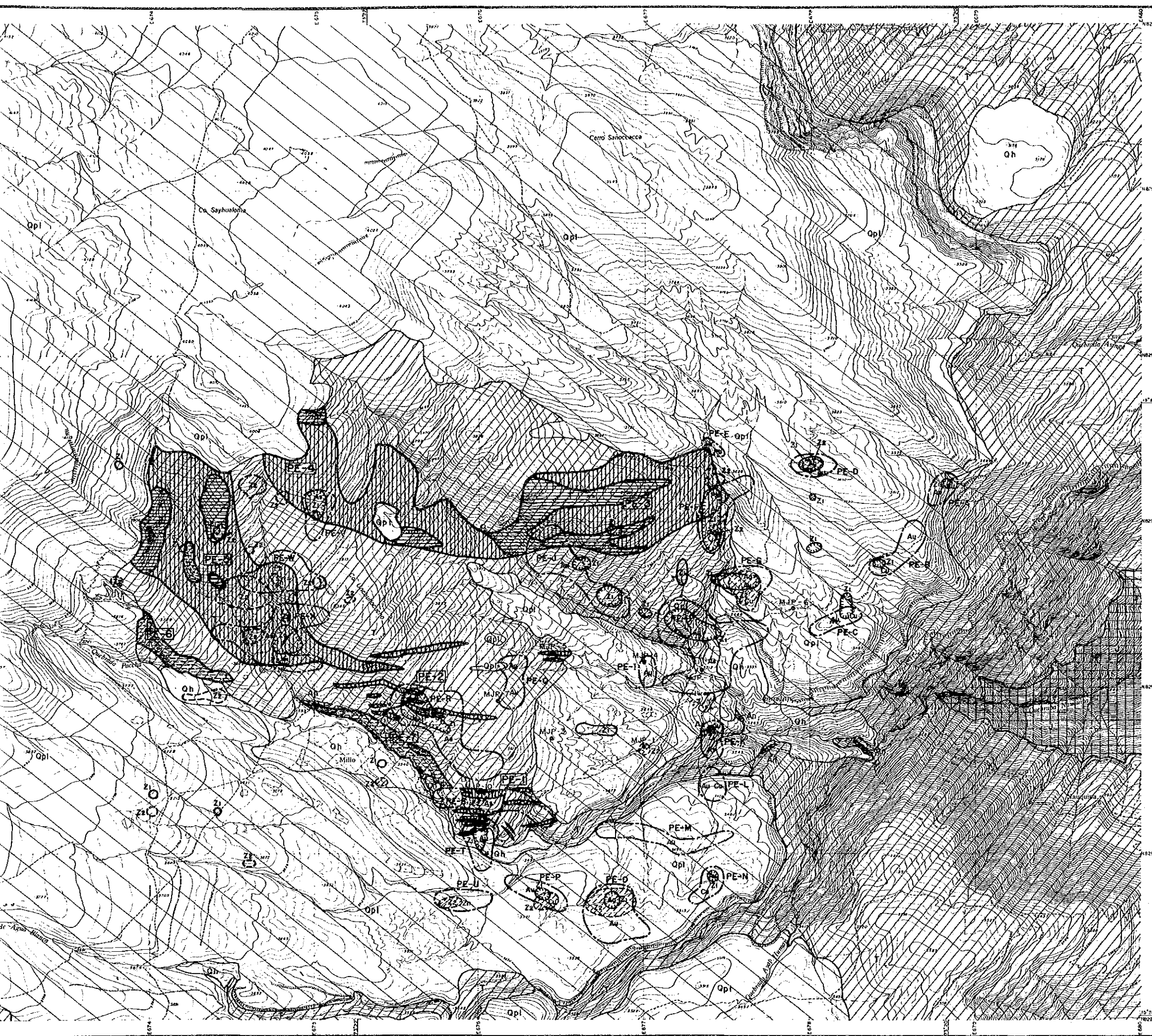


Fig. 1



LEGEND

| | |
|--|--|
| Geological System | Geochemical Anomaly |
| Quaternary (Holocene) System | <Univariate Analysis> |
| Quaternary (Pleistocene) System | Anomaly zone and anomalous elements |
| Tertiary System | <Principal Components Analysis> |
| Jurassic System | *1st Principal Component |
| Intrusive Rock | + Anomaly |
| Hornblende andesite | - Anomaly |
| Fault | *2nd Principal Component |
| Alteration and Mineralization Zones | + Anomaly |
| Mainly silicification | - Anomaly |
| Silicification and argillization | |
| Mainly argillization | |
| Mineralization | |

Fig. II-15 Interpretation Map of the Pirca Eastern Area