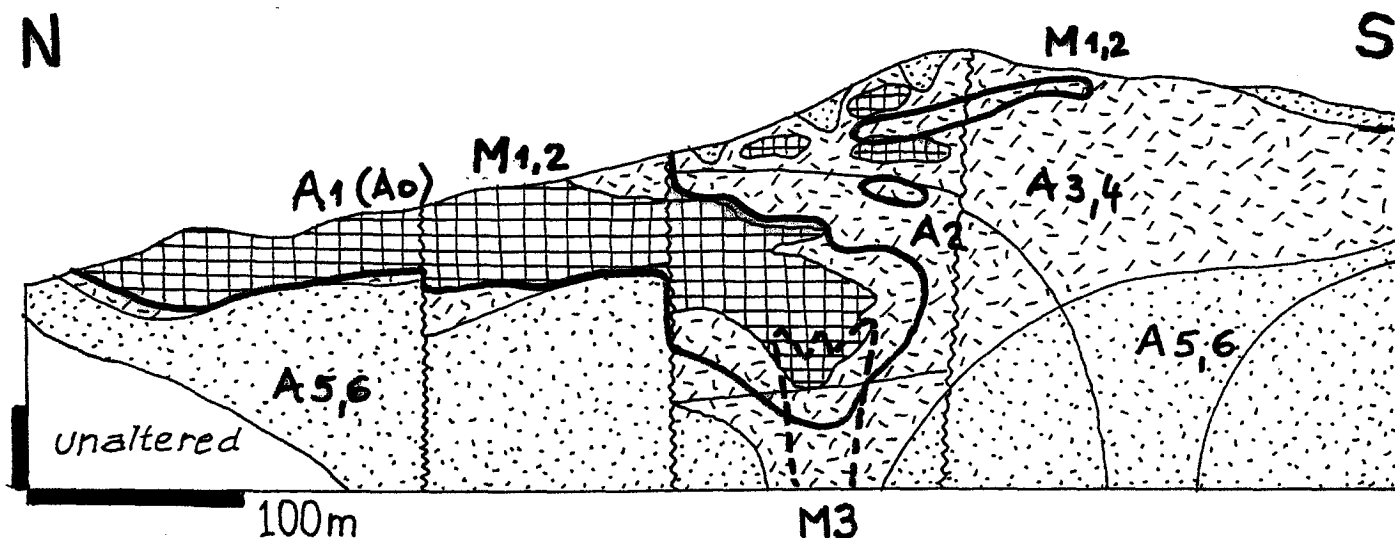


## 2495.2 PIERINA (Huaraz)-Au,Ag 4: acid sulfate alterations



Pierina cross-section; Laznicka (2000) after Volkert et al. (1999)

## LT 2495.2 LEGEND

| Unit No  | Unit Description  |
|--|---|
| M1   | Mi-Pl dispersed (invisible) gold in Fe oxides, quartz, relict pyrite in hypogene oxidized, previously quartz-alunite altered (acid sulfate alteration) porous residual vuggy silica after rhyodacite pyroclastics >> andesite |
| M2   | 14.7 Ma; relicts of earlier mineralization stage preserved as kernels in M1: vuggy silica with alunite, native sulfur, pyrite, enargite, covellite, younger barite; variable but mainly low Au content                        |
| M3   | Sulfides in presumed fluid feeder structure in the footwall: veins and mineralized fractures with pyrite, enargite, sfalerite in fractured silicified tuff  |
| <b>Alteration assemblages (determined by PIMA in the field; not megascopically recognizable)</b> |   |
| A0   | Late steam alteration effects superimposed on earlier alterations   |
| A1   | Residual vuggy silica (principal host to Au), recrystallized from original host by magmatic steam, followed by alunite removal during hypogene leaching and silicification  |
| A2   | Quartz-alunite (dickite, pyrophyllite)  |
| A3   | Dickite (alunite, kaolinite, pyrophyllite, silica)  |
| A4   | Pyrophyllite (dickite, kaolinite, silica, sericite)   |
| A5   | Illite; kaolinite, smectite, sericite, pyrite   |
| A6   | Propylitic + clays (chlorite, kaolinite, smectite)  |

## LT 2495.2 SAMPLE DESCRIPTION

| Unit No | Sample Description   | Sample No |
|---------|--|-----------|
| A3      | Dickite (kaolinite) altered pyroclastics                                       | 1,2       |
| A4      | Pyrophyllite (sericite, dickite, kaolinite) altered pyroclastics               | 3,5       |
| A5      | Illite (pyrite) altered pyroclastics   | 6-8       |
|         | Pyrite, covellite fracture veins in illite, kaolinite, pyrite-altered diatreme | 9-12      |
| A5+A2   | Kaolinite overprinting earlier alunite   | 13-16     |
| A5+6    | Illite, kaolinite, pyrite, some chlorite over faulted andesite                 | 17        |
| A6      | Propylitized andesite  | 18        |