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# Alta Floresta Gold Province, Amazonas craton: Peixoto de Azevedo-Flor da Serra-União do Norte targets.



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## Introduction

In the paleoproterozoic Alta Floresta Gold Province (AFGP), in the Amazonas craton, the research group of UNICAMP has been mapped (1:50.000) Peixoto de Azevedo-Flor da Serra region, and União do Norte porphyry region (1:5.000, Fig. 1).

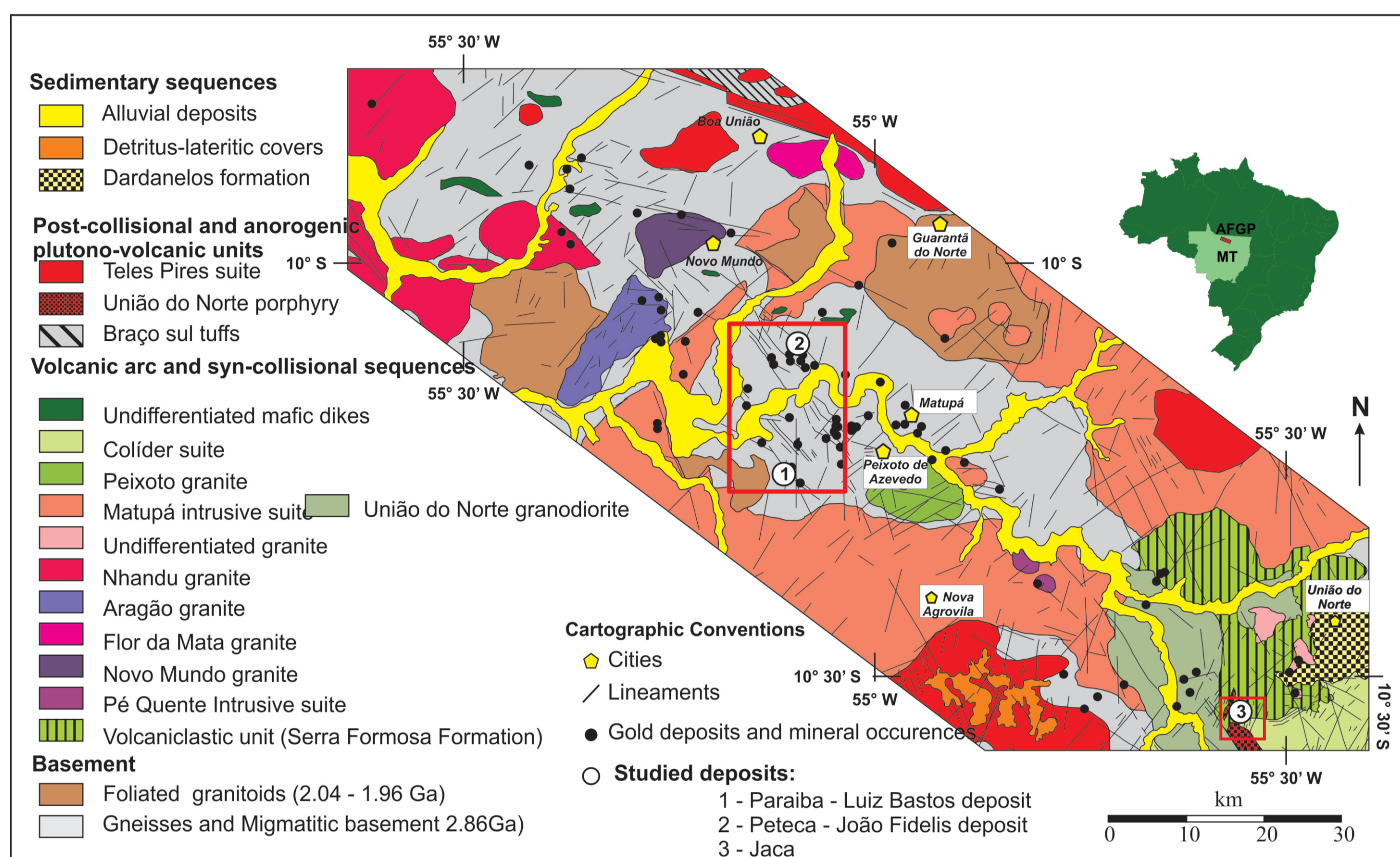


Figure 1. Geological map of the easternmost segment of AFGP (Assis, 2015). Red square – figure 2.

## Peixoto de Azevedo-Flor da Serra area

At Peixoto de Azevedo-Flor da Serra mapping there are several foliated granitoids from 2.04 to 1.96Ga, along NW-SE first order shear zones, which host several Au-Cu ore deposits (Fig. 2).

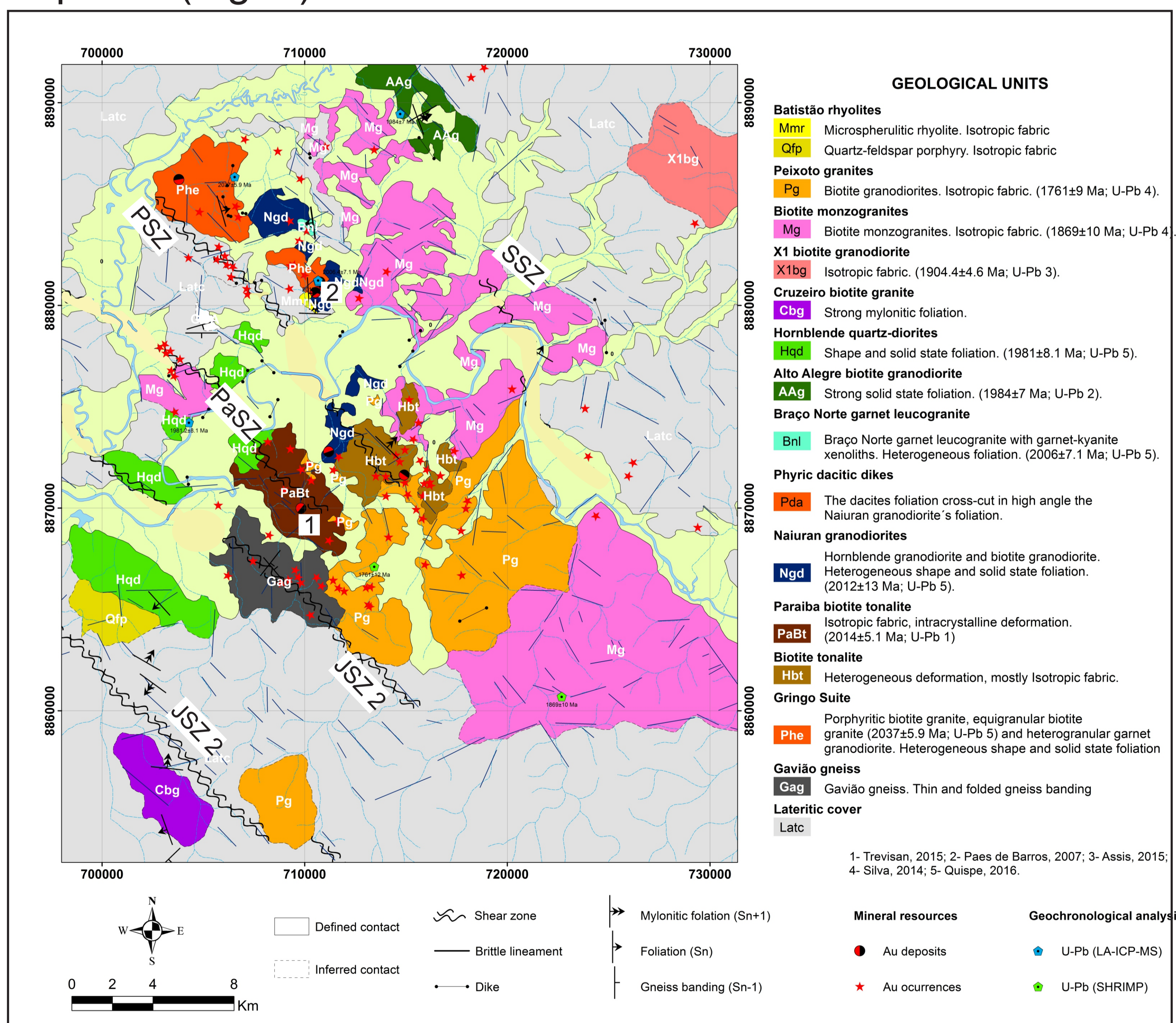


Figure 2. New Geological map of the Peixoto de Azevedo-Flor da Serra region (Quispe, 2016). Shear zones: Joaquim 1 e 2 (JSZ1 e 2), Paraíba (PASZ), Peteca (PSZ), and Serrinha (SSZ).

In this context, the shear zone vein-type Au ± Cu deposits, hosted by phyllonites are the most common type of deposit control by N-S second order shear zones, as the Paraíba (Fig. 3) and Buriti, and E-W second order shear zones, as the Peteca-João Fidelis (Fig. 4), deposits, among others. Similar structural orientation and lateral grading among mylonitic foliation in host granitoids, phyllonites, and ore quartz veins.

## Vein System at Paraiba target

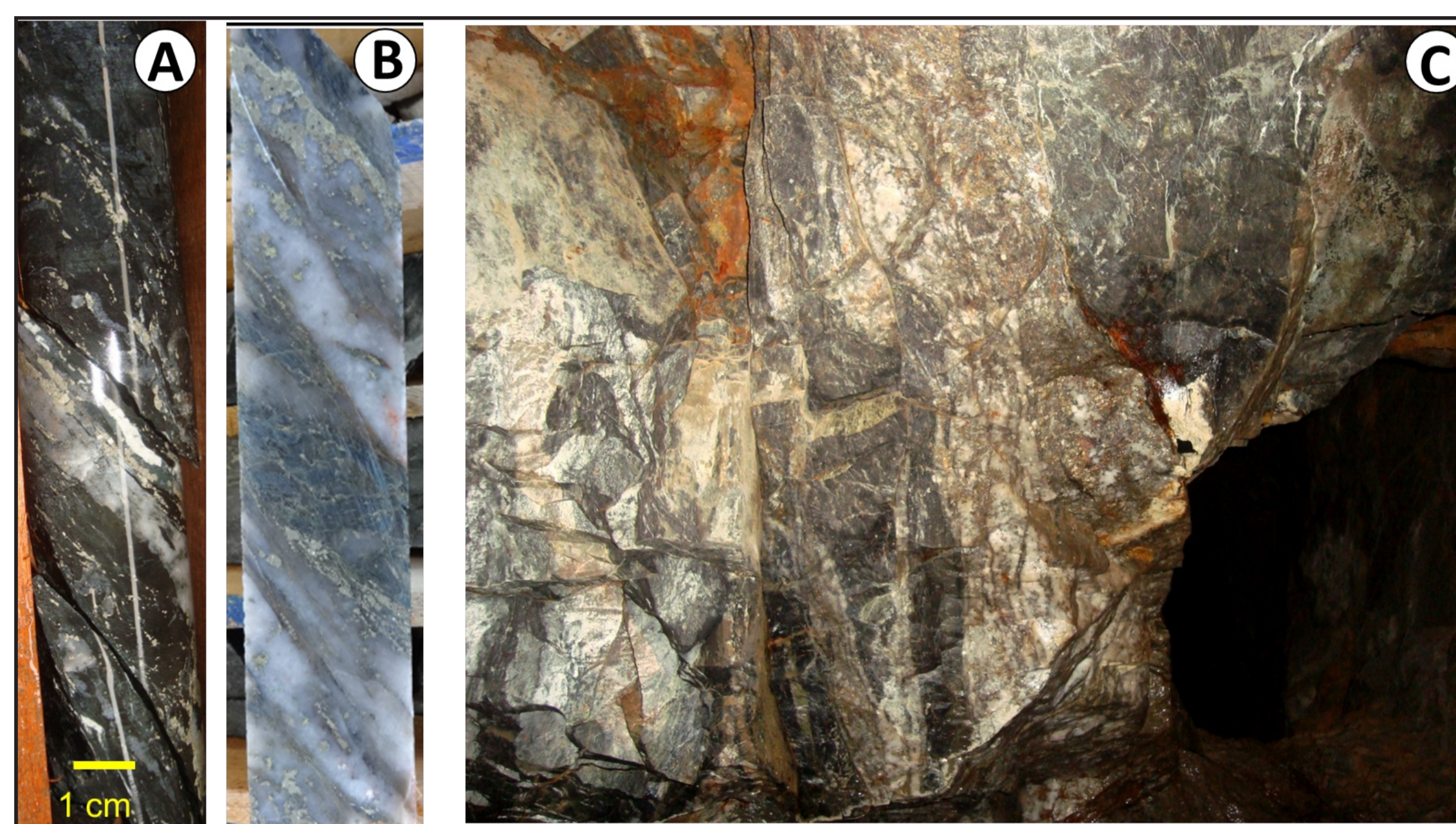


Figure 3. : (A) biotite-chlorite-carbonate phyllonite with of sulphides (pyrite and chalcopyrite) films and quartz-carbonate veinlets along the foliation; (B) book texture ore-quartz vein shows bands of pyrite-chalcopyrite and phyllonite along foliation; (C) Under-ground mine, phyllonite (black) alternated with quartz vein (Trevisan, 2016), B and C photographs are courtesy of Rd. Diogenes Vial, PA Gold. Company).

## Vein System at Peteca target

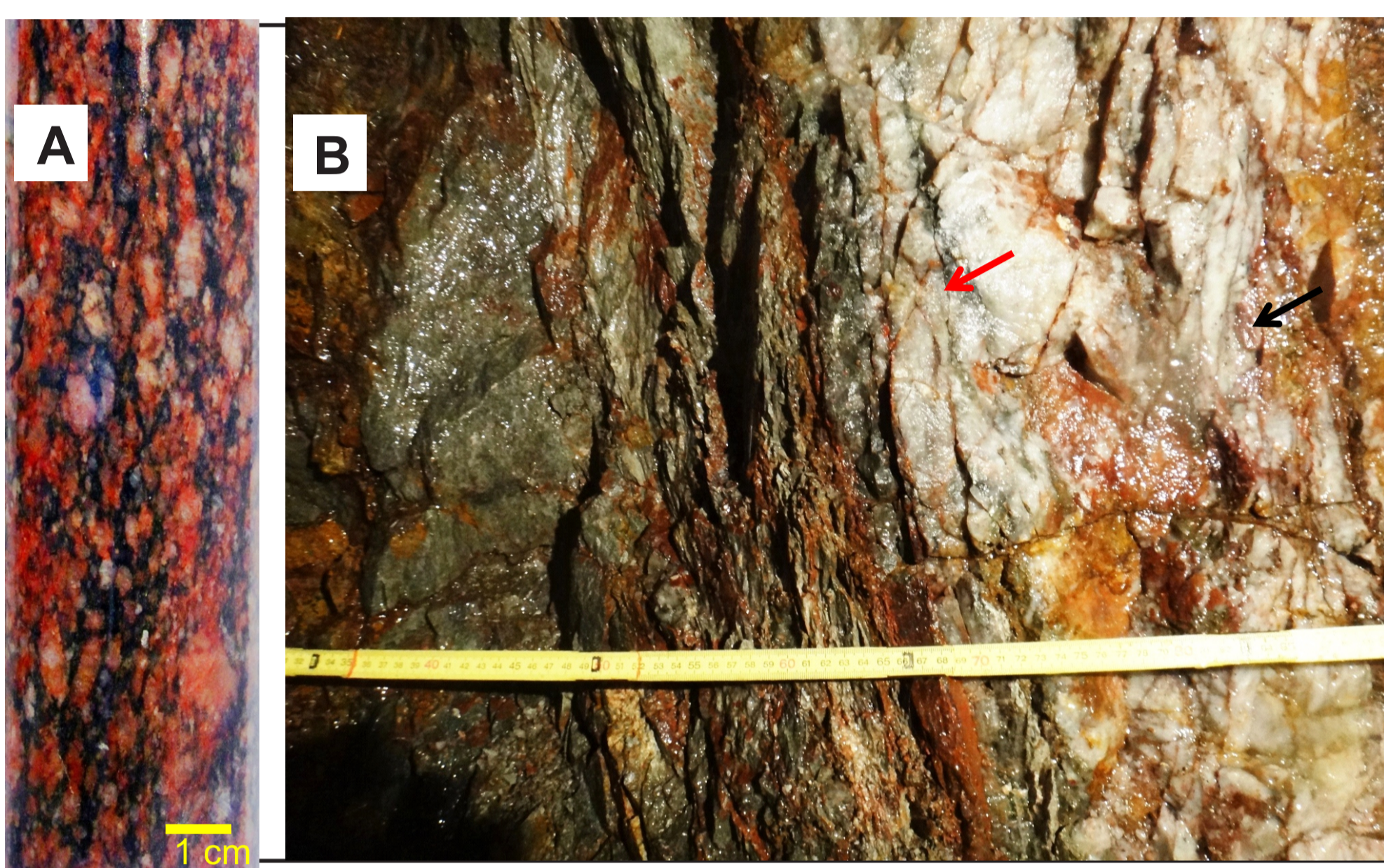


Figure 4. (A) granodiorite mylonite with pervasive potassic alteration with K-feldspar; (B) Underground gallery shows illite-chlorite phyllonites (left side) host gold-quartz vein (right side). The oreshoot is controlled by oblique thin fractures (black arrow) sealed by sulphides and gold. Elongated slices of phyllonite in the vein characterized book texture (red arrow, Teixeira, 2015).

## Jaca target at União do Norte area

Jaca is a Au-base metal deposit, which the main hydrothermal alteration is muscovitic, chloritic and several veinlet systems in grauwackes at volcanoclastic Serra Formosa Formation (Fig.1 - 5).

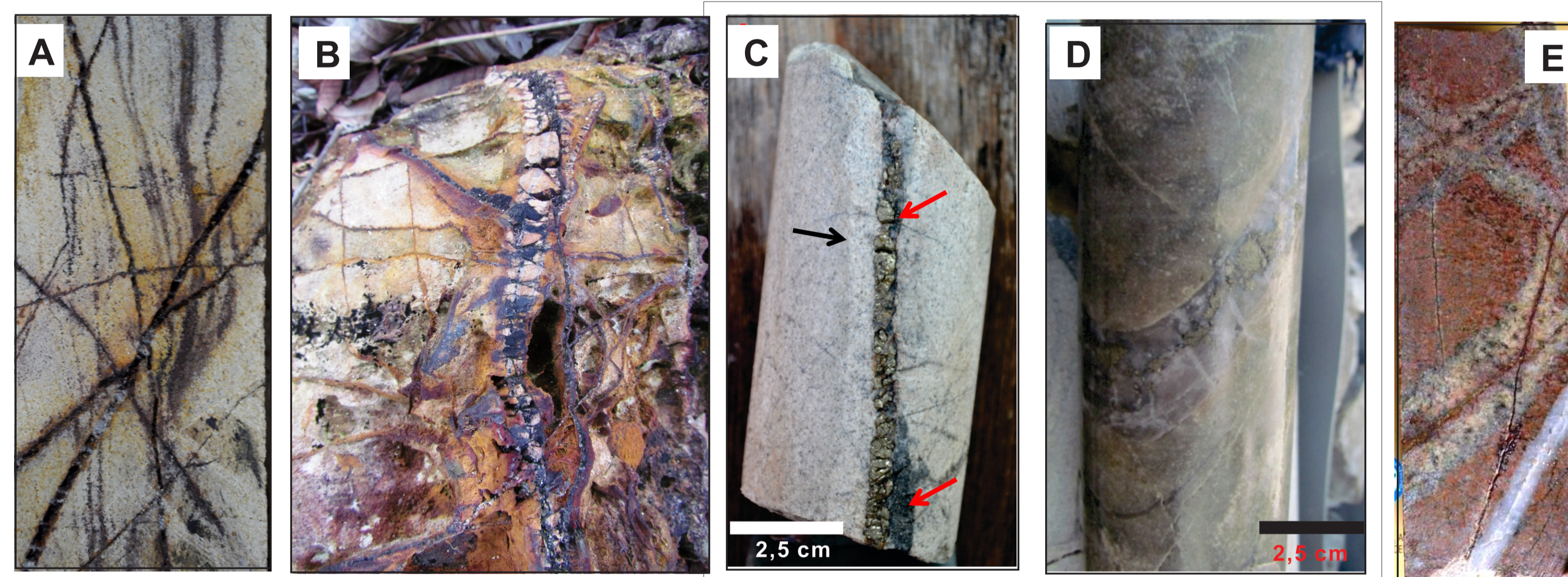


Figure 5. Types of veilets hosted in grawake from Jaca target (Novo, 201) (A) sinous pyrite-quartz V<sub>2</sub>-type veinlet; (B) stockwork quartz-pyrite (goethite) V<sub>3a</sub>-type veinlets; (C) and (D) pyrite-chalcopyrite (red arrow) quartz V<sub>3b</sub>-type veinlets and ilite halo (black arrow); (E) potassic-altered grauwacke cut by pyrite V<sub>3b</sub>-type veinlet and ilite halo, cut by monomineralic quartz V<sub>4</sub>-type veinlet.

## Brief discussions and Conclusions

Given the complex nature of the Au-Cu shear vein-type Paraiba and Peteca deposits and the Au-Cu disseminate (Assis et al. 2017) and Au-base-metal vein-type deposits as Jaca, we consider an overlap of hydrothermal systems. Further university and Jr companies researches are been developed and will be important to understand the chronology of shear zones, granite emplacement, hydrothermal systems and Au-Cu-Mo-base metal ore.

## References

Assis R 2015Gold deposits and the magmatism of AFGP, Amazonas Craton UNICAMP,PhD thesis, Novo Y 2016. Au-base metals veinlets at Jaca deposit, União do Norte. TCC, UNICAMP. Teixeira R V 2015 Host rocks and structural control of golf mineralization, Peteca deposit, AFGP, TCC-UNICAMP. Trevisan VG 2014 Comparative studies between Au-Cu and Au-base metals veins at AFGP. UNICAMP, Master thesis.

## Acknowledgements

