

## **Polymetallic deposits in the district of the Rachaite volcanic complex, province of Jujuy, Argentina**

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The research is devoted to barely investigated ore deposits under structural control within the Rachaite-Chocaya district of the Northern Puna (22°53'S and 66°08'W), NW Argentina. The Rachaite volcanic complex is part of the NW-SE striking Ollague-Lipez-Coyahuayma volcanic arc and hosts several Late Cenozoic ore deposits along intersecting N-S, NE-SW and NW-SE faults.

The volcanic complex depicts a collapsed caldera of a former stratovolcano mainly build up of andesites and ignimbrites in the hanging wall, which surround a dome-like structure of dacitic composition. Numerous secondary faults, restricted to the center of the caldera, provided gateways for ascending and descending fluids. Major NW-SE and NNE-SSW striking faults are observed around the margins of the assumed dome and are accompanied by hydrothermal breccias. Fault related younger dykes of dacitic composition cross cut the dacitic dome. Extensive hydrothermal alteration effected the dacites which are located within the center of the Rachaite volcanic complex and partly the andesites around the margin of the dome. Phyllic, argillic and propylitic alterations cover an area of roughly 10 km<sup>2</sup>. Silicification, pyritization and tourmalinization are restricted to areas of ore mineralization. Both vein-type and stockwork lead, zinc and silver are known.

Rachaite can be classified as an epithermal mineralization of the high-sulphidation type.