

## **The Gold District “La Carolina” San Luis Argentina**

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The gold district “La Carolina” is in Sierra Alta de San Luis, Argentina, is located within the crystalline basement of Sierras Pampeanas. A pre-tertiary peneplain was uplifted and a volcanic event took place, yielding andesite-dacite rocks associated with a gold-silver mineralization related to zinc, copper and arsenic. By means of petrology and geochemical studies we have distinguished two populations of gold alluvial sediments related to volcanic rocks. One is associated with the Tomolasta hill, which has not been very productive and is accompanied by Ag, Pb, and Zn. The other has been more productive and is associated to Sololasta hill, this gold is related to Cu. The wide range of shapes of gold grains that reveals their diverse sources and chemical secondary growth. The studies on heavy minerals have allowed us to distinguish two mineral populations in the alluvion. One is characterized by scheelite-zircon with  $3.00 \text{ gr/m}^3$  of gold, which is associated with metamorphic rocks. This association has been on the west of the basin. The other is characterized by garnet - opaque minerals with  $10.0 \text{ gr/m}^3$  gold. This pair is connected with volcanic rocks and lies on the east of the basin.