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PUCHERITA EN LA PEGMATITA LAS TAPIAS, DEPARTAMENTO SAN JAVIER, CÓRDOBA

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Abstract

The second find of pucherite ($BiVO_4$) in Argentina has been made in Las Tapias mime, San Javier Department, Córdoba Province. The pegmatite displays an unclear zoning and different patterns have been described by a few authors. In the main pit the wall and border zones seem to be lacking; two zones have been described from the hanging wall downwards: an outer zone (Qtz + Kfs + Ms ± Beryl) and an inner zone (Qtz + Kfs + Ms + Spodumene ± Beryl, with larger grain size). These are cut by replacement bodies (Ms ± Grt ± Bi-bearing minerals ± Cu-Fe sulphides). Pegmatitic veins with Kfs + Ms + Qtz ± Tourmaline are found traversing the host amphibolic diorite, or between it and the pegmatite. Other species with essential Bi occurring in Las Tapias include bismuthinite, bismutite, native bismuth and duhamelite.

Pucherite was found in a quartz pile ready to be hauled. A fissure in gray quartz with muscovite was covered by a "limonite" film, where the thin tabular pucherite microcrystals (up to 0.25 mm long) are implanted forming scattered rosettes. Colour ranges from orange yellow to brownish orange and they are transparent with adamantine lustre. Pleochroism is weak, varying between orange brown and yellowish orange with greenish tinge.

The mineral was identified by X-ray diffraction. The strongest diffraction lines are (d [Å]; $1/1_{0\ est}$): (3,500; 100) (2,708; 100) (3,956; 70) (4,659; 60) (3,000; 40) (2,537; 40) (2,311; 40) (2,127; 40) (1,830; 50).