

# SEG 2022 Conference: Minerals For Our Future

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## Characterization of Multiepisodic Events of Calcatreu Project, Rio Negro Province, Argentina

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The Calcatreu project is a low sulphidation Au-Ag deposit located in Rio Negro province, Argentina. Exploration operations are carried under the management of Patagonia Gold SA since its acquirement in 2018. Indicated resources are estimated at 746 kOz, with an ore grade of 2.36 g/t AuEq.

The deposit encompasses multiple arrays of NE-SW trending quartz and carbonate veins, hosted by jurassic andesites, dacites and tuffs of Taquetrén Formation. These rocks are the product of the many extensional events that occurred during the Godwanide Orogeny. Furthermore, the mineralization is estimated to have an upper Jurassic age, based on comparisons with other similar deposits of the Patagonia.

A paragenetic and mineralogical study was done in the main veins of the deposit: Veta 49, Nelson Este, Nelson Oeste, Castro and Castro Sur. These veins are composed mostly by multiepisodic mineralized events of quartz and carbonate with banded and breccia textures. Many quartz variants have been identified, with white, grey and colourless being the most common, but other types such as pink, black, green and amethyst have also been found. Carbonate minerals are mostly white crustiform and banded colloform calcite, but additional pink, grey and brownish varieties have also been recognized.

The veins have a small amount of sulphide minerals, to which gold is commonly associated. Pyrite, chalcopyrite, galena and red-brown sphalerite have been identified as occasional thin veinlets or as clasts within hydrothermal breccias. Ginguero layers are somewhat common alongside other silica bands, usually showing signs of deformation, such as sigmoidal banding and shingle-type brecciation. Sulphosalt species may be present also, given the elevated As and Sb concentrations commonly present in sulphide-rich drill samples.

Calcatreu deposit represents a major project in the Somún Curá Massif, a sub-explored region that presents similarities with the important low sulphidation Deseado Massif province.