

## **Gold Mineralization in South-Central Chile (39°-42° S)**

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Gold mineralization in the Lake Region in south-central Chile occurs in placer deposits and in hydrothermal alteration zones. Quaternary placer deposits are mainly located along the Coastal Range and have been known since pre-Spanish times. Most of the gold in placer type deposits was transported by ice from the Main Andean Range and concentrated by latter fluvial (i.e., Madre de Dios and Osorno areas) and marine processes (i.e., Carelmapu area), but local gold derived from metamorphic rocks along the Coastal Range has also been recognized.

Hydrothermal gold mineralization occurs in the Main Andean Range (i.e., Colico Lake, Ranco Lake, Hueñu-Hueñu and Pichicolo zones) in stockwork veins and disseminated in quartz-sericite alteration zones, with local adularia and K-spar secondary minerals and associated to pyrite, arsenopyrite, magnetite and locally chalcopyrite, sphalerite, pirrotite and stibnite. Hydrothermal gold mineralization is hosted in Tertiary intrusives, volcanic and sedimentary Tertiary units and Paleozoic-Triassic metamorphic rocks and which also show As, Cu and Zn geochemical anomalies. Detrital gold in the placer types deposits along the Coastal Range could be in part derived from the hydrothermal alteration zones exposed in the Main Andean Range.