

## **A mature exploration environment? New copper and gold discoveries in underexplored high potential mineralized belts of northern Chile**

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SQM, a Chilean company focused on producing lithium, iodine, nitrates, potash and specialty chemicals, periodically has explored for metals in northern Chile since 2008. In 2013, SQM built a specialized exploration team to explore for copper in what has been seen as a mature exploration jurisdiction. In northern Chile, SQM controls approximately 2.5 million hectares of mineral concessions that assure its iodine and nitrate resources. These concessions in turn overlie known metallogenic belts. The concessions are distributed 60% over the Cretaceous belt (Antucoya, Michilla, Mantos Blancos) and to a lesser extent, 16%, the Paleocene belt (Sierra Gorda, Spence, El Peñon, Relincho) and 8% over the Oligocene belt (Chuquicamata, Esperanza, Escondida, El Morro-Fortuna).

The resulting generative work, through the reinterpretation of mineralization age trends, exhumation levels, Miocene block faulting, and by application of old fashion boot and hammer outcrop mapping, has detected to date 44 exploration targets, of which 13 have been drill tested, obtaining technical successes in seven: Km 60, Pampa Oeste, Victoria Oeste, Galenosa Sur, Antuasca, Cerro Balcón, and Las Dunas of which the following are classified as porphyry copper deposits:

Pampa Oeste: A blind porphyry copper-molybdenum discovery conceptualized from bottom of hole geochemical samples from nitrate resource drilling. The discovery was supported by litho-structural interpretation of 2 km lines of IP geophysics, 745 line-km of ground magnetometry, 25 RC drill holes, and confirmed with 5 DDH drill hole. Mineralization has been traced over an area of 1.5km by 0.5 km – all under cover of nitrate deposits.

Galenosa Sur: A partially outcropping porphyry Cu-Mo mineralized sector 9 km southwest of the Cretaceous Puntilla-Galenosa porphyry copper cluster (500mt @ 0,25% CuS).

Antuasca: A porphyry copper system under nitrate cover, 1.0 km by 0.5 km of multi-directional quartz stockwork veins over potassically altered and leached granodiorite tested and confirmed by 16 RC drill holes and 3 DDH drill holes.

Cerro Balcon: Partially covered porphyry copper-molybdenum and mineralized phreatomagmatic breccia with extents of 1.5 km by 0.5 km of copper oxide mineralization (0.2-0.3% Cu) confirmed by 25 RC drill holes and 2 DDH drill holes.

Las Dunas: A buried porphyry copper-molybdenum mineralized area of 1.0 km by 0.5 km showing copper oxide mineralization in monzodioritic and granodioritic host porphyries. Mineralization is confirmed by 20 RC drill holes and 2 DDH drill holes (in progress).

This series of porphyry copper-molybdenum style deposits discovered to date in this new Cretaceous (?) metallogenic (sub-)belt north of Antofagasta, and similar to the Antucoya copper oxide discovery in 2003, are the subject of current studies including radiometric age determinations and lithogeochemical and trace element (REE) characterizations to determine source rock permissibility for potentially economic copper deposits.