



Los Bronces Underground Tunnel Anglo American Sur

Location: Los Bronces Mine, Valpariso and Metropolitana Regions, Chile

Date: 2020 - Present

Structure: TBM Tunnel

Length: 8 km (4.5m diameter)

Cross-Section: Large Tunnel (14.3 m x 9 m) and slightly smaller Tunnel (12.9 m x 8.1 m)

Geology: Farellones and San Francisco formations consisting primarily of Andesite, Diorite, and tourmaline Breccia

Client: Anglo American Sur

Owner: Anglo American Sur



Figure 1. Aerial view of the project.



Figure 2. Another view of the Los Bronces Mine.

Expert Consulting Services:

Anglo American Sur (AAS) is in the process of advancing project development studies for the Los Bronces underground (LBUG) project to access the Los Sulfatos Copper deposit, located approximately 65 km northeast of Santiago Chile and approximately 5 km SE of the current Los Bronces mine. Due to environmental concerns, the deposit would need to access the ore body by tunnels extending from the existing Los Bronces mine. Current project planning envisions the construction of multiple tunnels for access, mucking, ore conveyances, and ventilation purposes.

Gall Zeidler Consultants (GZ) was retained by AAS during the Pre-Feasibility A Stage (PFSA) to assist in the evaluation of the developed tunnel options, to provide recommendations concerning the tunneling methods to be used, and to provide recommendations for future project advancement. A comprehensive review of NATM and TBM technologies was performed to optimize the development of the access tunnels while minimizing capital investment costs and managing the expected geologic and hydrogeologic conditions during tunneling. These studies were used to further advance the project development and to more clearly define possible tunneling alignment. Gall Zeidler Consultants is currently involved in the project on an on-call basis.