

**CORRELATIONS IN GEOLOGICAL MODEL AND TITAN 24 DCIP AT
THE BOLIVAR SKARN MINERALIZATION, CHIHUAHUA, MEXICO ⁽¹²⁾**

Expositor	Día	Hora	Sala
Leduar Ramayo	Jueves 25	9:00 – 9:30	Sala B

Leduar Ramayo^{1*}, Roger Sharpe¹, Mehran Gharibi¹, Alonso Lujan²

1 Quantec Geoscience LTD. 146 Sparks Avenue Toronto, Ontario M2H 2S4, Canada
(lramayo@quantecgeoscience.com), 2. Sierra Metals, Chihuahua, Fernando de Borja No.
100. Col. San Felipe, Chihuahua, Chihuahua, México

Sierra Metals' Bolívar Mine is a copper-silver-zinc-gold deposit that is mined underground using the room-and-pillar mining method. Skarn alteration and mineralization at the Bolivar property is hosted primarily in Late Cretaceous – Early Cenozoic sedimentary and volcanic rocks that underlie the Piedras Verdes Mining within the Sierra Madre Precious Metals Belt that extends across Chihuahua, Durango and Sonora in northwestern Mexico. In the Bolivar area the Lower Volcano-Sedimentary package is reported to be approximately 750 m thick and is covered by younger continental rhyolitic and dacitic ignimbrites up to 1.5 km thick and Middle Tertiary in age.

Brownfield exploration has played a very important role to drive a potential expansion of mineral resources at the Bolivar Mine. High-value drill targets are identified using a combination of geophysical, geological and geochemical exploration methods. The Titan 24 survey methodology is a deep search geophysical tool that was used to follow-up an integrated suite of previous geophysical, geological and geochemical exploration methods. A Titan 24 geophysical survey was carried out to assist in mapping the extent of mantos replacement and structures containing copper and copper / zinc skarn mineralization for drill targeting in the immediate vicinity of the Bolivar mine. The Bolivar survey grid consisted of a total of 12 lines which were 26.5 km in length. Each line had a 100 m dipole spacing and was located 200 m from the line adjacent. The survey covers an area of approximately 2.4 km by 2.2 km. The survey highlighted over 40 specific areas of interest requiring further investigation and follow up. The 3D inversion modelling of the data provided an excellent tool for further exploration and highlights the overall structure below the deposit, in addition to similar structures and mineralization to the north of the deposit. Twenty-two of the forty areas identified were high priority exploration targets and the first four drill holes intercepted wide, high-grade copper structures in three different zones previously unknown to be mineralized. The Titan 24 geophysical survey was planned and integrated with several phases and scales of geological mapping

including 25,000 scale regional geology and stream sediment sampling, 1,000 scale geological mapping chip sampling and 250 scale geological mapping and panel sampling. This presentation will demonstrate some correlations between survey methods that are resulting in successful targeting.

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