

CHEERS!

Welcome to the first edition of *Perfiles* for 2009. We have been lucky to start this year with various different projects in mining exploration as well as engineering applications.

In this edition of *Perfiles*, we will show a different application of 3D induced polarization in thin vein structures with difficult topography. We started our work with 3D IP as early as 2002, and we have obtained good results in this type of environment since. I must thank Mr. Félix Navarro-Grau, from Consorcio Minero Horizonte, for authorizing the use of the Parcoy geophysical survey.

José R. Arce

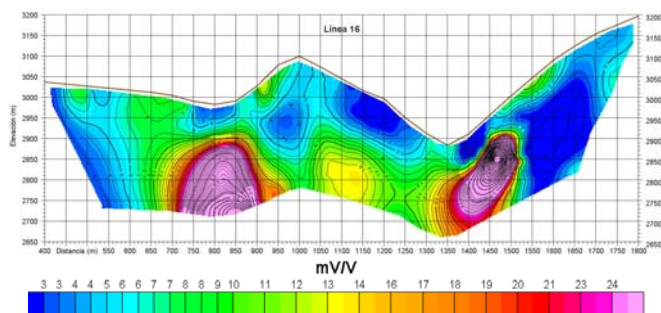
METHODS

We have started work in the development of additional processing applications for the Multichannel Analysis of Surface Waves (MASW) method. These new applications combine the 2D results from MASW with P-wave velocity information obtained from wavepath eikonal tomography modeling, to obtain 2D sections of Poisson's coefficient as well as the elastic moduli. We are currently in the software testing stage, which will complement the geophysical applications we offer, and provide our engineering geophysics clients new information and uses of their geophysical results.

INDUCED POLARIZATION IN 3D

Following our 2003 three dimensional induced polarization surveys in Compañía Minera Poderosa's vein structures in the Patata batholith, we started several exploration surveys and in similar geological and morphological conditions in the Consorcio Minero Horizonte properties in Parcoy, La Libertad. Even though the mineralogical ensemble of the veins of both companies' concessions is comparable, there are several interpretative differences, which allowed us to define a set of targets for follow-up drilling.

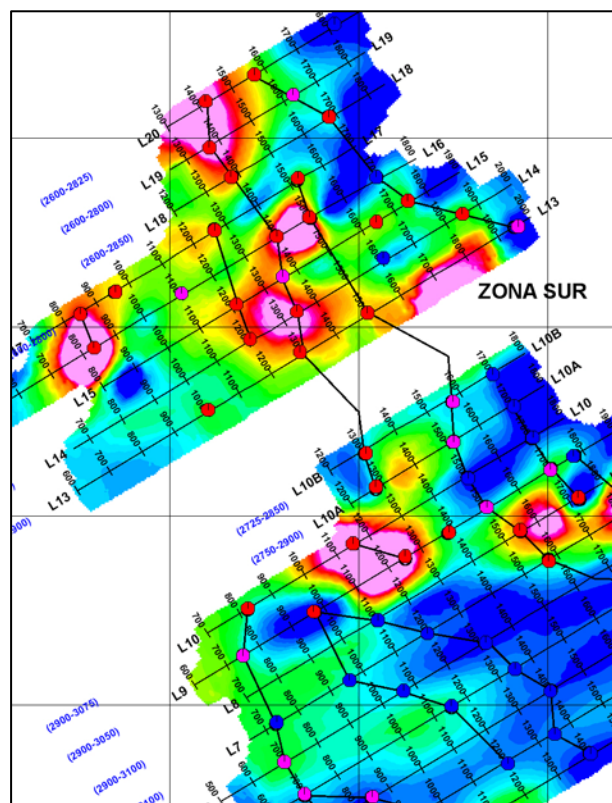
To begin, we noticed Parcoy's chargeability were higher in magnitude than C.M. Poderosa's. This was a quick indication for us that Parcoy's mineralogy was somewhat different than Poderosa's thin gold-bearing pyrite mineralization. The following section model for Line 16 in the Southern Parcoy area, clearly shows two different chargeable masses with different dips, and with an intensity of around 40 mV/V.



The difficult topography we encountered was a challenge for the field crew and had to be compensated in

the modeling process by using the Schwarz-Cristoffel transformation, which considers different size cells at different depths.

The daily analyses of the information collected in the field, along with some basic knowledge of bearing and dip of known mineralized structures, allowed us to prepare and update daily a map with superficial projections for all geophysical structures. The map we present next was part of the final report of the first stage of geophysical work done in Parcoy. To begin, we display a color grid with a chargeability depth slice at 300 meters deep, which shows all geophysical anomalies that should be tested with follow up drilling. These anomalies are irregular in their shape and location, due to the abrupt topography and because this is a depth slice obtained parallel from the surface topography. Even so, the grid gives a very clear idea of the location of all targets. In second place, you can see the line drawings representing the projected surface expression of all geophysical veins, as determined by the Resistivity models, and with color circles representing the chargeability intensity at that location. Last, in the Southwest end of each geophysical line and with blue fonts, we display the elevation ranges at which the anomalies may be found when drilled.



Our geophysical applications on thin vein-like structures provided very favorable results for C.M. Horizonte, as it previously did for C.M. Poderosa as well.

Until next time...

