

Mine Tour for Terrestrial Laser Scanner



The RIEGL VZ-4000 laser scanner is capable of up to 222,000 measurements per second at a maximum range of 4,000 metres. In April 2012, the VZ-4000 toured the world to prove it, with demonstrations taking place in mines in both Chile and Russia.

On Monday, 2 April 2012, Thomas Gaisecker, senior manager International Sales and RIEGL mining expert, arrived in Santiago, Chile to start a demo tour organised by RIEGL distribution partner Geocom S.A. The next day, demo scans at [Minera Los Pelambres](#) (image), were scheduled. Most of Chile's mines are situated at between 3,000 and 4,000m above sea level, where it is extremely exhausting for human beings, so it is obligatory to have a special health certificate for working at these heights. The VZ-4000 performed the large-range scans, even exceeding the maximum range of 4,000 metres.

RIEGL developed RiMONITOR and RiMINING, software packages especially adapted to the demanding field work in open pit mines. RiMINING was used for post processing of the acquired data. Within 30 minutes, results were available. Breakline extraction and object removal, e.g., blocking out of vegetation and trucks, was done automatically, the results are of prime quality.

Thursday, the VZ-4000 was operated in [Minera Los Bronces](#), by Anglo American, a major producer of copper. As this mine is situated at more than 4,000m above sea level, Thomas wasn't allowed to work there. A short introduction was sufficient and David Santos, chief of the development department at GEOCOM, managed data acquisition of the mine site and the following processing via RiMINING.

These results were the basis for the next step of the VZ-4000 tour: Presenting the scanner at South America's major mining event EXPOMIN that occurred in Santiago, Chile from 9 to 13 April 2012. At the GEOCOM booth, the data was presented to an enthusiastic audience. The comments from customers and other interested parties involved that of the unique range measurement capability in conjunction with the new software packages provides significant increase in productivity, which is what mine surveyors are looking for.

From South America, Thomas Gaisecker and the VZ-4000 went on to Russia. Organised by distribution partner [ARTGEO](#), the RIEGL VZ-4000 was presented at Interexpo GEO Siberia that took place in Novosibirsk from 17 to 19 April 2012. In his presentation "RIEGL VZ-4000 Ultra Long Range Terrestrial Laser Scanner for efficient surveying and monitoring missions in mountainous regions", Thomas gave an insight into the state-of-the-art technique of the VZ-4000 and showed his latest results.

Directly after the show, ARTGEO organised a special trip to have a live demonstration with the VZ-4000 in the coal mines of Barzasskoe.