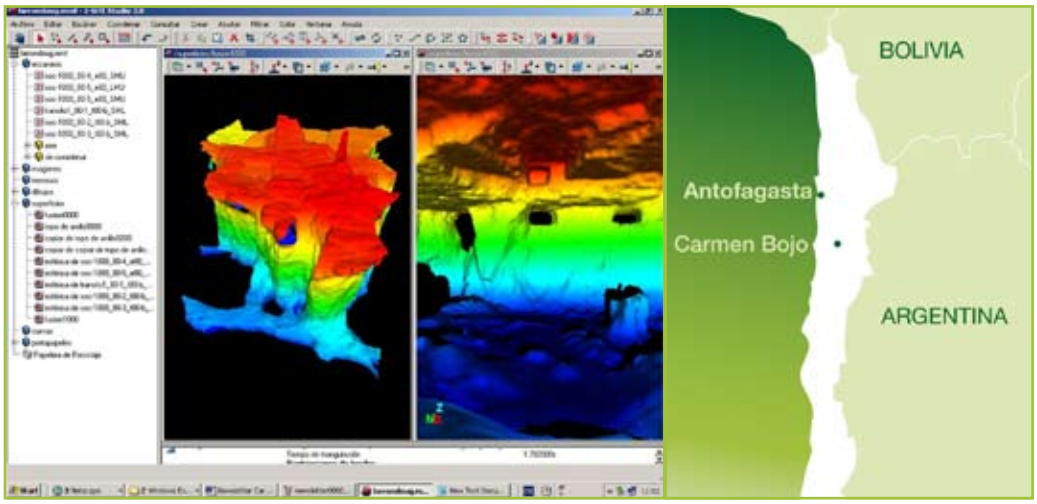
MAPTEK™ I-Site™

CASE STUDY

Underground scanning best practice

Maptek I-Site™ provides reliable data for feasibility studies. Carmen Bajo acquired a Maptek I-Site™ 4400CR laser scanner to provide a solution for wide area topographic capture, visualisation and data processing.



Exterior and interior models of under-ground workings at Carmen Bajo

HIGHLIGHTS

- Accuracy and detail required for feasibility and evaluation of new ventures
- Identification and location of surfaces at same time as tunnel measurements

Mining company Carmen Bajo, founded in 1956, is part of the mining group Sali Hochschild SA that began mining in Chile in the 1930s.

Carmen Bajo is undertaking exploration of a large number of mining properties located in the 3rd and 4th regions of Chile around its operational headquarters in Copiapó, as well as operating 3 mining deposits.

Reliable data is important for feasibility studies and crucial for evaluating new ventures.

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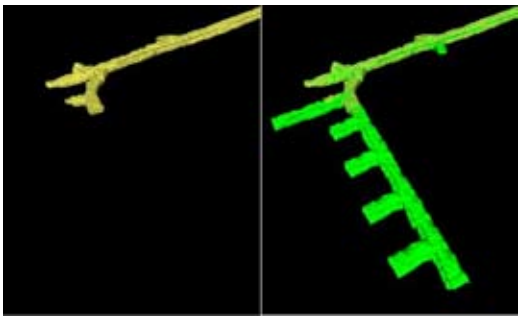
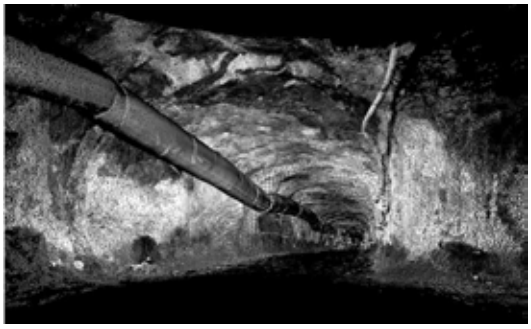
In 2006, Carmen Bajo acquired a Maptek I-Site™ 4400CR laser scanner to provide a solution for wide area topographic capture, visualisation and data processing. The main objective in adopting this new technology was to convert data from its existing 2D format and to capture and model new mine topography data in 3D.

The visualisation capabilities of Maptek I-Site Studio™ and its 3D manipulation tools allow for comprehensive mine analysis.

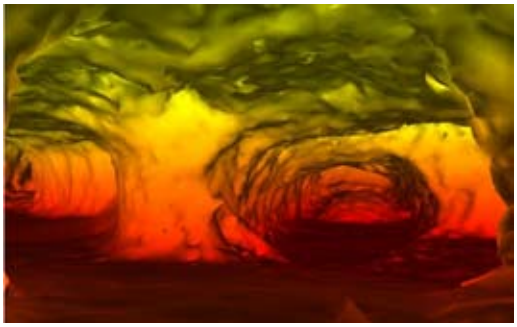


Simulation of underground expansion

The system collects accurate data which can be analysed to determine the width, height and length of tunnels. The location of service equipment such as ventilation ducts and utility pipes can be identified and mapped accurately. A vast amount of fieldwork has resulted in a large area of the mine being scanned in 3 dimensions.



Scan of modelled tunnel at Carmen Bajo mine



Modelled scan data showing location of services

TESTIMONIAL

The efficiency, accuracy and speed of Maptek's I-Site laser scanning system has been fundamental in enabling Carmen Bajo to complete many projects which are essential to fulfilling its objectives.

Scanning with I-Site provides a mass of point cloud data which represents a spatially correct 3D record of the scene. Processing the data in I-Site Studio enables accurate topographic models to be created, revealing the geometry of individual tunnels. Tunnels and voids can be accurately measured.

I-Site provides solutions for a range of underground mining applications including volume calculation, geotechnical face mapping, dilution analysis, controlling the blast and the accurate removal of material, as well as capturing data from inaccessible areas such as walls and ceilings.

I-Site Studio has also proven to be a valuable tool in visualising scenarios and evaluating alternative designs for various expansion projects within the mine.

Thanks to Carmen Bajo