

# Knowledge That Goes Deeper

Mining

Exploration & Geosurvey



# We explore, you get more

Where are mineral deposits located? How big are they and what quality do they have? And under what conditions can they be economically recovered? Not easy questions to answer, but providing answers to these and many other related questions is precisely our speciality. For more than 100 years in the exploration of natural resources we have been investing our time, effort and expertise to get the best results out of every project we undertake. And with quite some success. We are now one of the world's leading providers of exploration services and instruments. Take advantage of our know-how and get to the bottom of things.



Drill core evaluation – one step to get a comprehensive model deposits

## Experience and know-how

Since 1990 we have been offering our services under the name of DMT. Yet our experience goes back way further, to the early days of mining and exploration research. Our aim is to further develop the technical and scientific know-how we have accumulated over the years and to apply this in the best way possible in the interests of our customers. Our interdisciplinary teams, made up of numerous experts with broad-ranging skills and abilities, are constantly developing new means and methods to find the solutions that our customers need.

## Exploration geology

Our work in mineral deposit geology covers the entire range of operations from initial prospecting to detailed exploration and economic assessment. For instance on the basis of exploration and drill core results and of geophysical surveys and qualitative investigations, we prepare facial and structural interpretations and display the results as three-dimensional models of deposits. Such models enable the potential of deposits to be assessed and support the subsequent mine planning.

Photo left:  
Open pit  
lignite mine



Photo right:  
3D-model of an  
open pit mine

### Geophysical surveys

In mining and geosciences the term exploration refers to all those activities that are associated with the search for and investigation of mineral deposits. Besides surface seismics and in-seam seismics, DMT applies a broad range of other methods for acquiring quantitative and qualitative information about raw material deposits. Whether you need high resolution near-surface information or data from deep targets, we have the suitable equipment and the entire knowledge to carry out exactly the right service you need.

### Deposit modelling and appraisal

Combining geological and geophysical information to form a lifelike 3D model has many advantages. For instance, it allows the integration of all information from various investigation techniques – such as seismics, borehole geophysics and remote sensing. Indeed, such models make it possible to calculate deposit volumes very precisely – which is an indication of the exploitation potential. Furthermore, they provide the basis for subsequent mine planning and are suitable as vivid presentations of investment projects, for instance to banks and development agencies.

### Surveying, passive seismics and subsidence monitoring

We have developed innovative engineering survey technology for a range of special operations. For instance, there is our survey equipment designed for measuring in areas of mine gas: Our high precision inertial shaft surveying system ISSM (Inertial Shaft Surveying System Mining) as well as our accurate underground direction measuring setup using the GYROMAT gyro system.

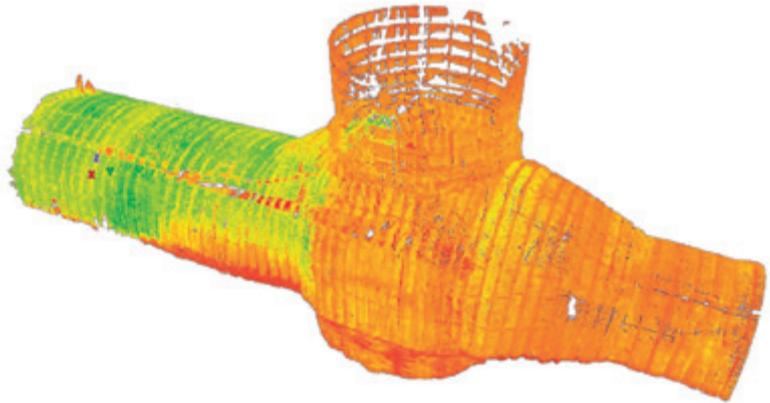
As a result of new safety aspects and rules geomonitoring is becoming increasingly significant, not only in connection with immission control but also with early warning and alarm systems. For example, we use vibration measurements as well as geodetic and geotechnical monitoring to detect and predict at an early stage changes in the bedrock and at the surface.



Knowing the underground is a vital basis for planning and assessment

Photo left:  
Seismic exploration for high resolution investigation of deposits

Photo right:  
3D-Laserscanning – latest measuring technique to take the inventories with highest precision: shaft-landing



### Quality, health, safety and the environment

Quality and safety as well as the protection of health and the environment have top priority at DMT. We are committed to doing our utmost to achieve the very best in this respect. Constant education and training of our experienced employees guarantee our standards. It is self-evident that we certify our quality management system according to DIN EN ISO 9001 and our HSE systems according to SCC\*\*. Our health, safety and environmental management system conforms to OGP and IAGC guidelines.

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