

Mineral Resources Management

The efficient exploitation of minerals requires a comprehensive knowledge, use and exposition of all data which is relevant to a deposit.



Future Geogenic Energy Sources

Mine gas and geothermal energy are resources in the legal sense of the German Federal Mining Act. The prospecting and exploitation of both resources are subjected to the same legal regulations as e.g. coal.



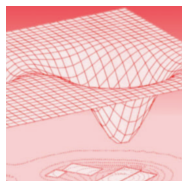
Mine Surveying

Geodesic measurements record data from the surface and the rock mass. The results conduct the mining processes by planning guides, machine control or mapping.



Regional and Country Planning

During the three stages of construction, operation and shutdown of mining sites the standards of land use planning have to be considered. Today most dump heaps are designed to suit to the landscape and to serve as recreation areas.



Ground- and Rock Movements

IT-based projections of surface- and rock-movement related to mining are the background for assessments of environmental impacts and their reduction.

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Know-how with future

Mine Surveying and Mineral Resources Management



What is Mine Surveying?

Mine Surveying is a discipline of mining. It mainly includes:

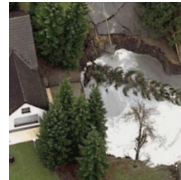
- Prospection, analysis and evaluation of natural resources and modeling of deposits.
- Planning, metrological recording as well as cartographic documentation of minesites, underground and open cast mining.
- Capture, interpretation and provision of geoinformation in line with demand
- Expertise and regulation of mining-induced surface damages

Furthermore

- Participation in contribution to mining permissions, planning- and projection work for the opening and the exploitation of a deposit (including questions of business administration and water management as well as land use- and regional planning)
- Identification, monitoring and reduction of surface and underground impacts of mining (geotechnical land-use planning)
- Planning, monitoring and certification of surface recultivation

Due to the diversified course of study, graduates of Mine-Surveying are engaged in various other business sectors apart from mining. Possible fields of activity can be the employment in public administration or professional activities as freelancers like authorized adjusters or praisers.

The application areas cover a wide-stretching spectrum of geosciences, technical engineering, economics and environmental technologies related to both conventional mining and alternative geogenic energy generation.



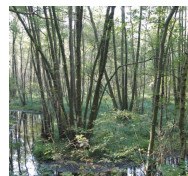
Abandoned Mines and Mine Closure

One major relict of abandoned mines are numerous shafts and near surface mine workings with a risk potential to the surface.



Authorization Procedures in Mining

All mining activity requires official permissions during the different stages of prearrangement, active exploitation and the post-closure phase.



Mining and Environmental Impacts

Effects on the environment caused by mining activities can be reduced by the appliance of precautionary measures. Special attention is paid to habitats and any bodies of water.



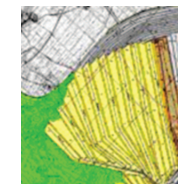
Mining-induced Subsidence Damages

Ground movements due to mining can cause damages on a wide range of surface objects. These surface damages have to be appraised, adjusted and compensated. Preventive measures are planned and realized on the basis of prediction methods.



Geoinformation

The complex IT-based planning of mining projects requires the acquisition and analysis of all spatial information related to mining.



Mine Planning

The exploitation of minerals requires a long term planning with an involvement of deposit and environment data.