

Mining Project

Underground Mining of “Xomandri” and “Kakavos 5” magnesite deposits

Evia, Central Greece

Project

Feasibility Study, Environmental Impact Assessment and Implementation Study of underground magnesite deposits.

Capital Cost

Total cost: approx. € 23 m.

Project Schedule

Design: 2012 - 2013

Development - Mining: 2013 - 2033

Project Description

- Underground mining (overhand cut & fill method) of magnesite deposits.
- Total reserves:
 - “Xomandri” deposit: 5.971.000 ton.
 - “Kakavos 5” deposit: 9.808.000 ton.

Geology

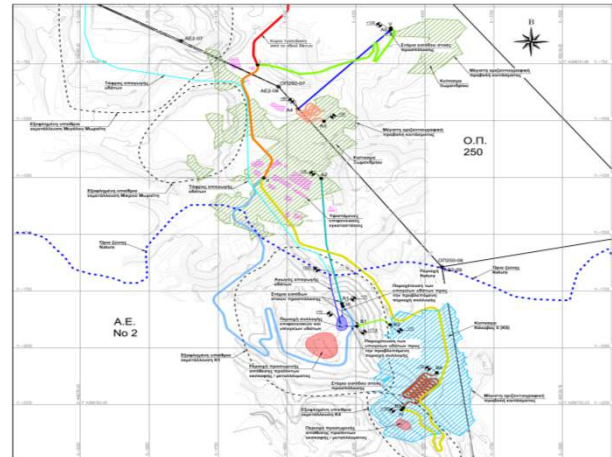
Magnesite, serpentine, tertiary deposits (marls, clays, conglomerates), ground water.

Our Services

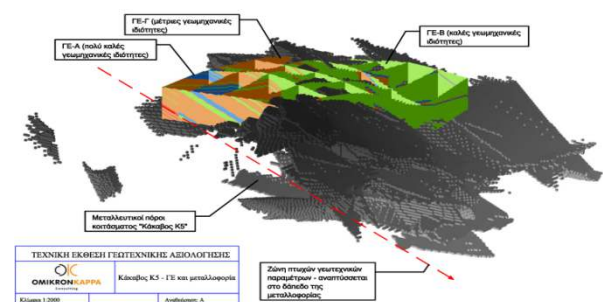
- Assessment of drilling works and construction of 3D block model according to state-of-the-art geostatistical methods.
- Classification of resources according to JORC and 3D design of magnesite reserves.
- Geotechnical characterization of rockmass – Development of geotechnical model.
- Design of underground works (development, delineation, ore access).
- Selection of feasible mining methods and detailed design of mining and backfilling works
- 3D dimensioning of main underground ventilation system and ground water management.
- Analytical design of mining cycle (drilling, blasting, scaling, LHD, rock support) and all corresponding auxiliary works (ventilation, pumping, hydraulic and mechanical backfilling).
- Detailed investment budget estimation and detailed cost of the magnesite mining (RoM) (2 scenarios: owned equipment or subcontracting).
- Environmental impact assessment.

Client

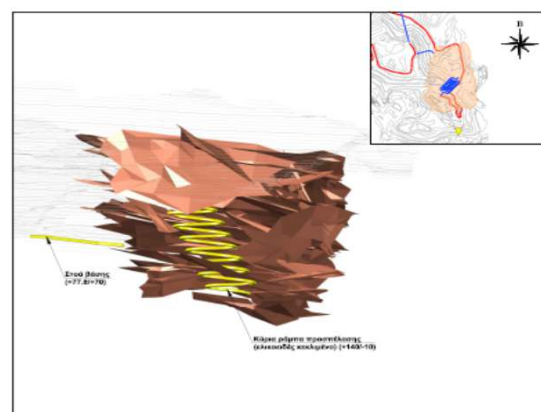
TERNA MAGNESITE S.A.



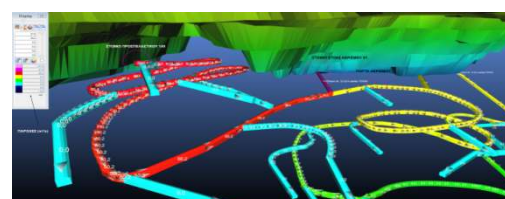
Plan view of magnesite deposits – Main surface and underground infrastructures



3D view of K5 deposit geotechnical model



3D view of magnesite deposit and the associated ramp



Dimensioning of main ventilation system