

## ANNOUNCEMENT MASTER THESIS

The Chair of Mining Engineering and Mineral Economics is announcing the following master thesis as part of the Horizon Europe project [REESOURCE](#):

### **Rock Mechanics concept for Raise Mining: A Preliminary Scoping Study**

#### **Aim of the thesis**

The main objective of this thesis is to conduct an initial rock mechanical evaluation of the proposed raise mining concept. Additionally, a technical risk analysis will be performed based on the current available data.

#### **Description**

At the present stage, the plan for mining the FEN complex, a rare earths elements deposit in Norway, is to implement a raise mining strategy. This strategy will encompass considerations regarding stope and panel design, sequencing, and backfill requirements. Existing geological data from core drilling programs, other existing underground developments and outcrops shall be thoroughly reviewed, with missing data to be identified.

Utilizing available data and preliminary engineering calculations, the current concept will be developed further towards an initial mine design: key rock mechanical aspects related to raise mining will be defined, and areas requiring further investigation will be outlined. Finally, a qualitative assessment of the scoping study's confidence level will be conducted through a technical risk analysis based on available information.

#### **Requirements**

Relevant studies, i.e., mining engineering and rock mechanics

#### **Timing**

To start as soon as possible with finalization of the work planned for August 2024

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