

# Registration and assessment of seismic events in connection with the flooding of a former uranium mine

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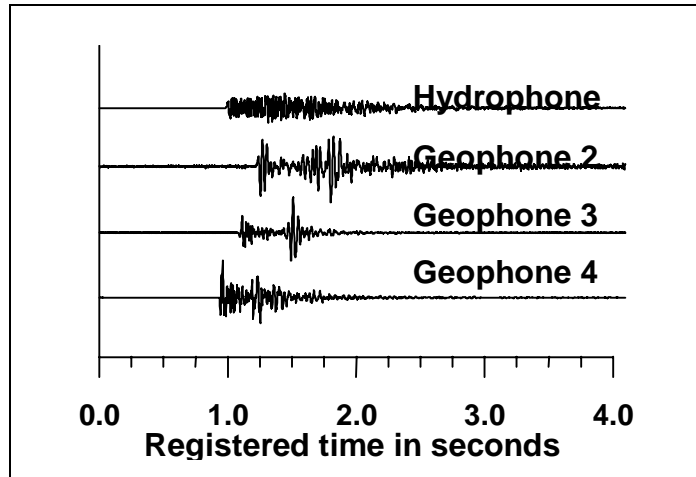
**Project-target:** Supervision of the flooding in an underground mine during and after the flooding with aid of seismo-acoustic monitoring

**Location:** Schlema/Alberoda

**Client:** Wismut GmbH, Chemnitz

**Beneficiary:** Wismut GmbH, Chemnitz

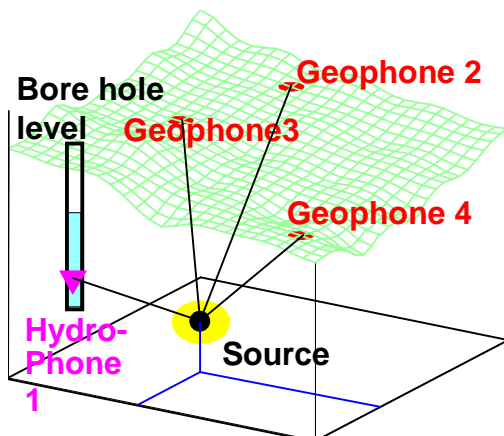
**Period:** since 1993



**Initial situation:**

The seismo-acoustic waves of an event arrive at different times because of the difference in length of the travel path between source area and the vibration converter

- The seismo-acoustic monitoring of endangering rock strain in active or abandoned mines is a possibility to assess the contemporary nature of changes of the rock state. In the flooded area of the mine with an extension over about 10 km<sup>2</sup>, more than 30 suitable locations (fundaments, rocks, bore holes, galleries) are equipped with geophones or hydrophones. With the passage of a seismo-acoustic wave these convert the mechanical vibration of the ground in an electrical signal which is further conveyed to a central controlling and registration unit over a preliminary amplifier and wire line.



The difference in travel time is used in calculating the position source area.

**Main tasks:**

- Designing of seismo-acoustic monitoring, array configuration, controls
- Localisation of registered events
- Signal assessment with respect to relevant parameter such as strength of event