



/ K-UTEC AG Salt Technologies | Sondershausen | Germany

## COMPANY PRESENTATION

August 2022 | ACHEMA 2022

**K-UTEC**  
SALT TECHNOLOGIES



# K-UTEC AG SALT TECHNOLOGIES



## 70 Years Competence in Salt

**Foundation of Potash Research Institute of GDR**

1951

**Foundation of K-UTEC GmbH**

1992

**Spin-off of K-UTEC AG Salt Technologies**

2008

**Management Board**

Dr Heiner Marx  
Dr Markus Pfänder  
Dr Sebastian Lüning

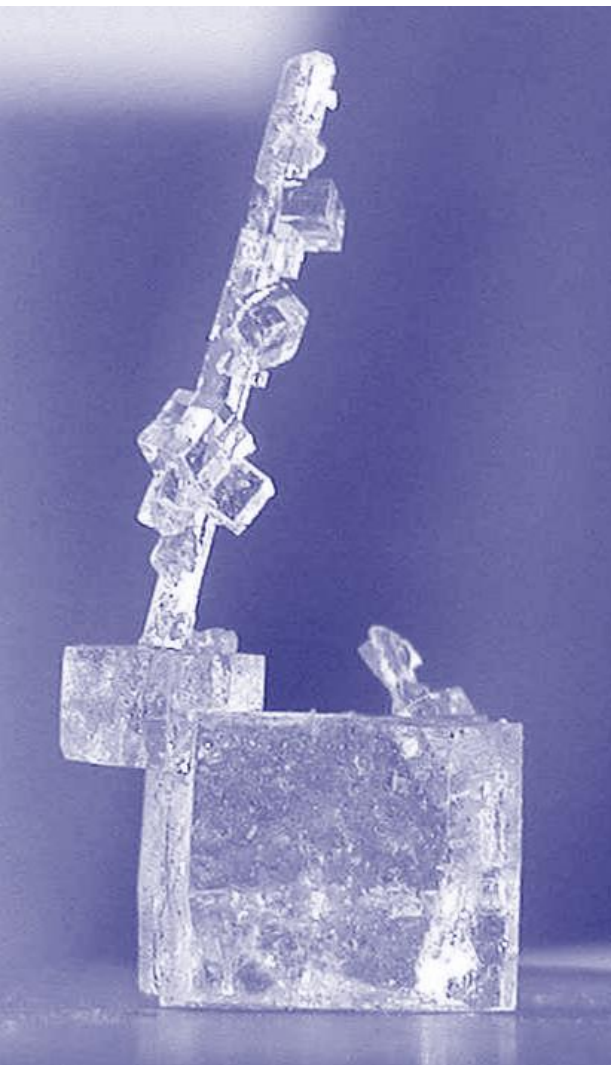
**Employees**

approx. 100





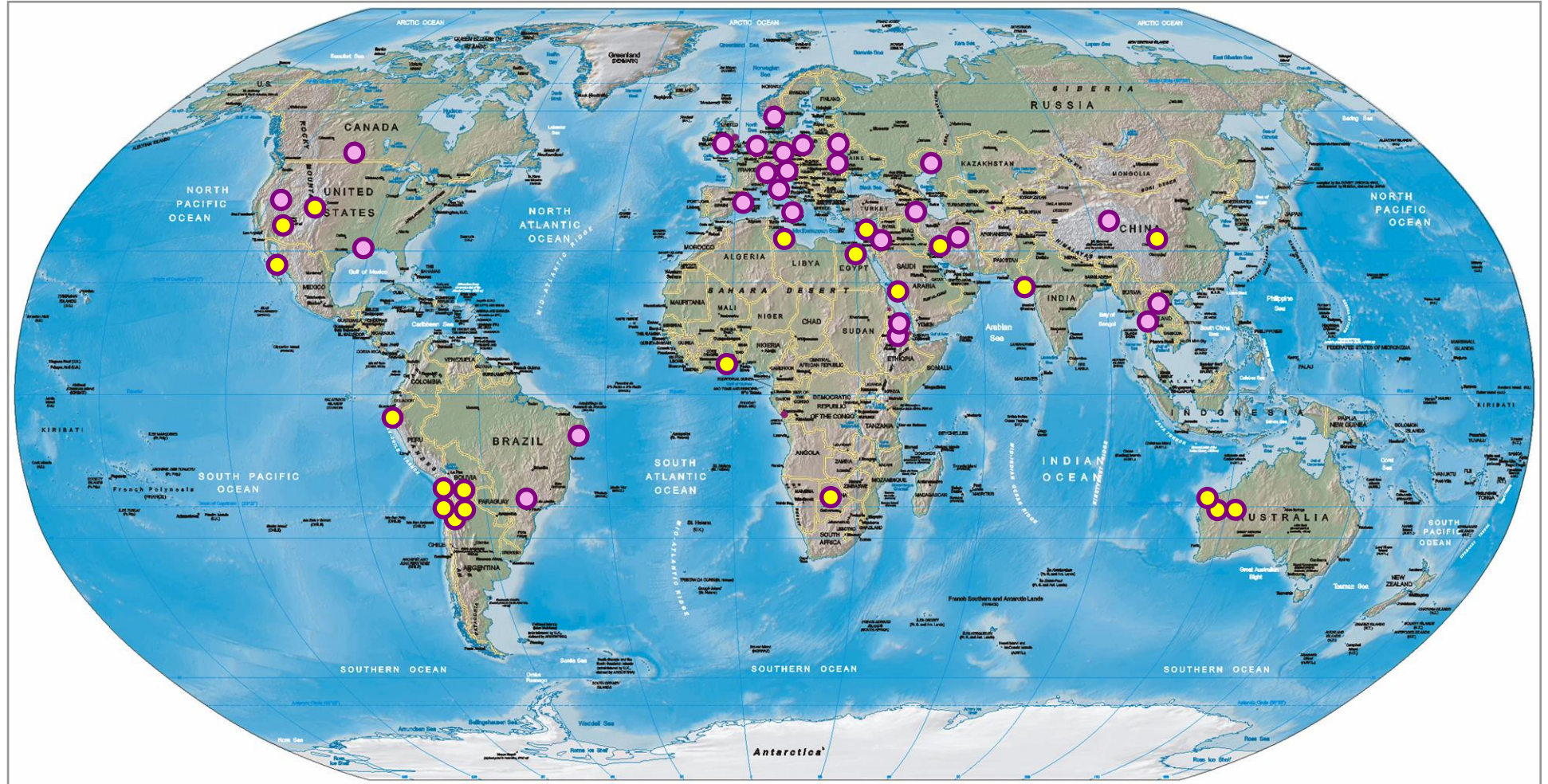
70 Years Competence in Salt





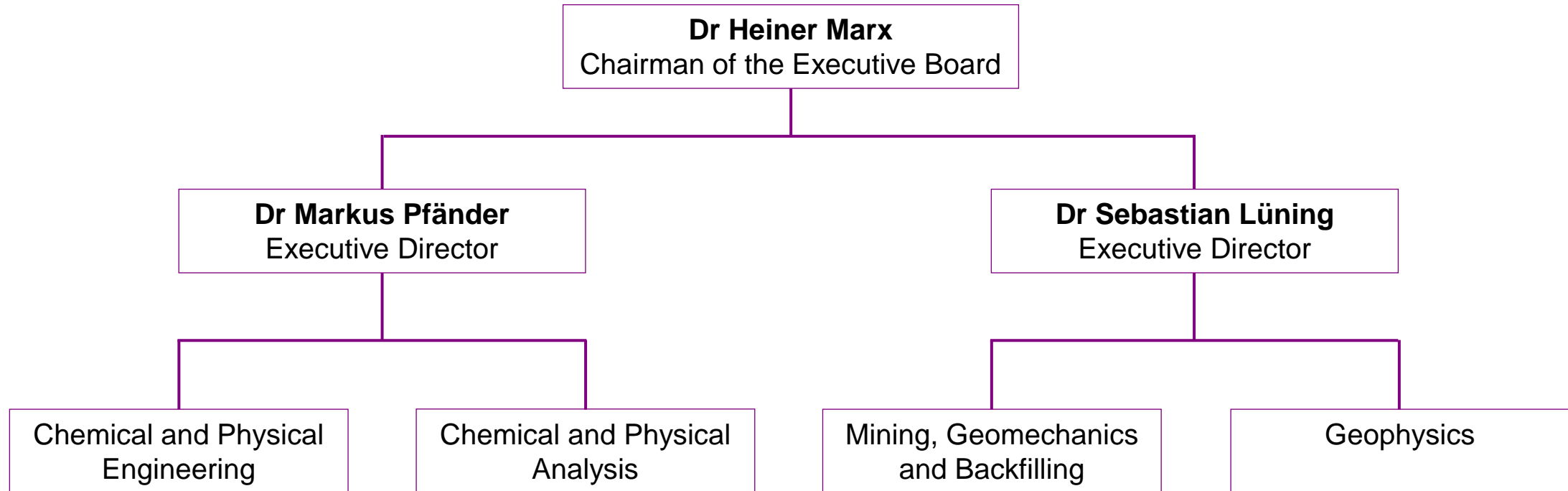
## Projects Worldwide

- Australia
- Argentina
- Austria
- Belarus
- Bolivia
- Botswana
- Brazil
- Chile
- China
- Egypt
- Eritrea
- Ethiopia
- France
- Ghana
- Hungary
- India
- Iran
- Laos
- Mexico
- Peru
- Russia
- Saudi Arabia
- Spain
- Thailand
- Tunisia
- United Kingdom
- USA



● Brine Deposits   ● Solid Deposits

## Company Structure

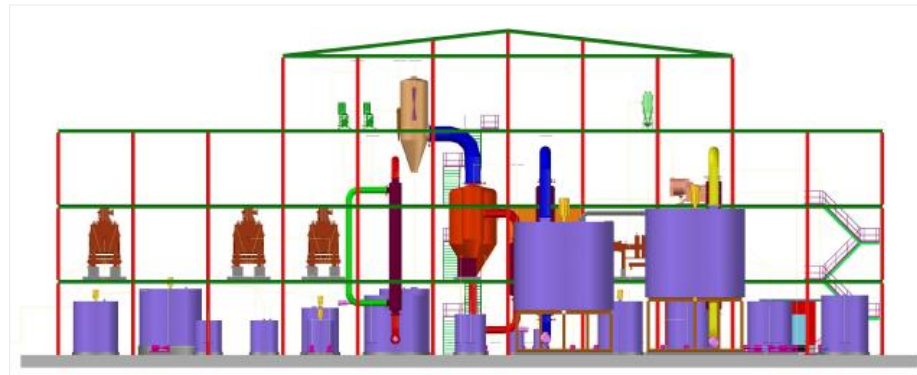




## Fields of Activities



- Test work in laboratory and pilot scale
- Development of process routes
- Feasibility studies and economic project evaluation
- Supply of key equipment
- Basic engineering
- Support in plant installation, commissioning and training of staff





# DEPARTMENT OF CHEMICAL AND PHYSICAL ENGINEERING

## Demonstration Facilities





Demonstration Facilities



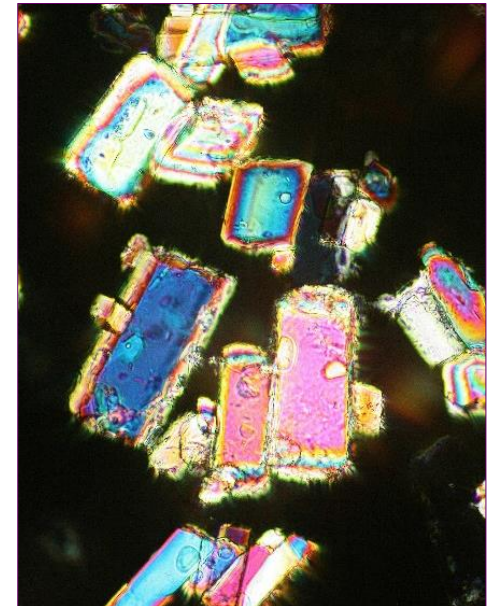
Demonstration plant for manufacture of lithium carbonate based on Hectorite containing ore



## Fields of Activities



- Salt and mineral analytics
- Environmental and waste analytics
- Process monitoring analytics

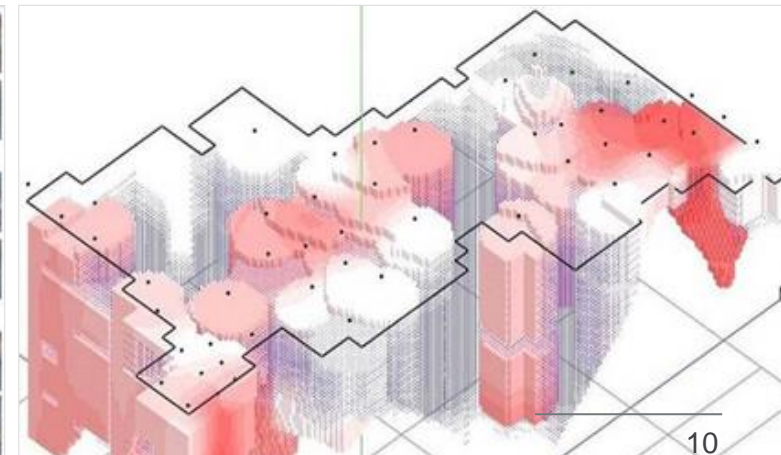




## Fields of Activities (Mining, Geomechanics)



- Deposit prospection and assessment
- Mine design (solution mining / underground mining)
- Geomechanical monitoring and investigation
- Geomechanical and geological rock characterisation
- Drilling and shaft exploration
- Abandoned mines & securing of shafts





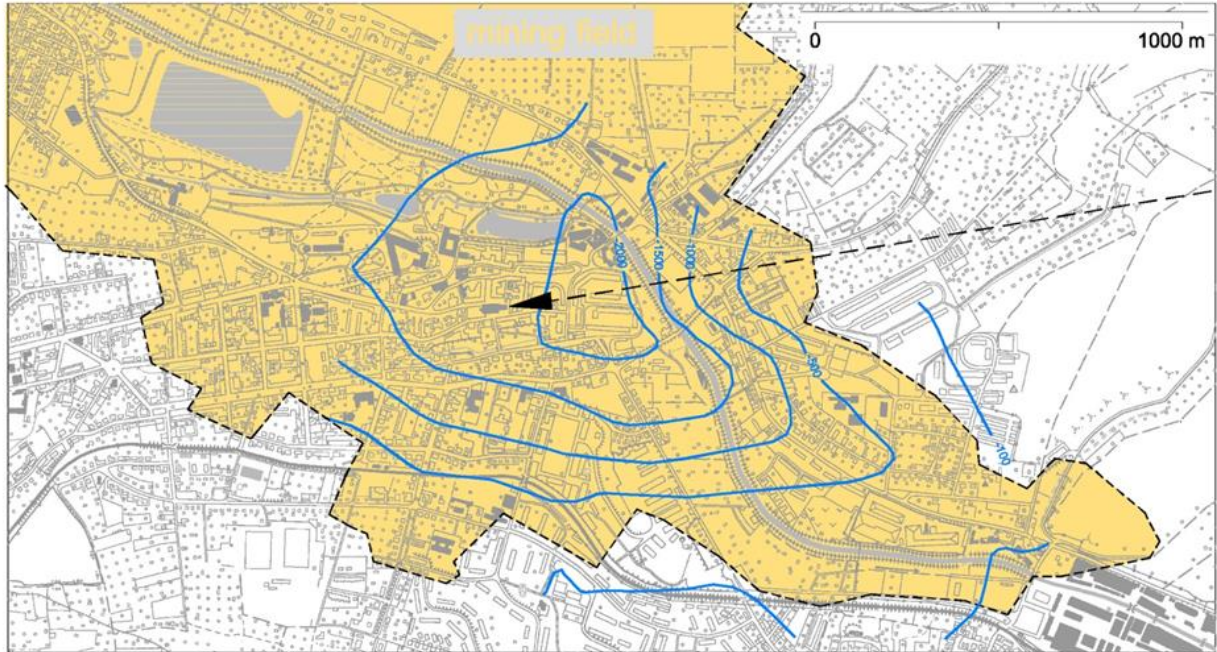
## Fields of Activities (Backfilling, Waste Management)

- Expert's opinions concerning the suitability of wastes for backfilling
- Development of backfilling materials based on industrial wastes / mining residues
- Building material systems for mining application
- Design and planning of backfilling facilities
- Licensing procedures, environmental impact assessments



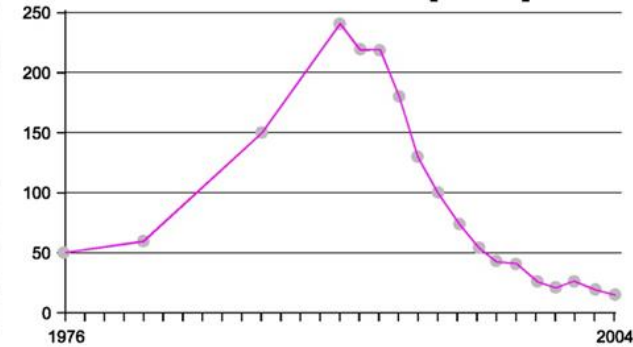


## Effects of Backfilling | Mine Sondershausen, East Mining Field



situation at and below ground surface

ratio of surface subsidence [mm/a]

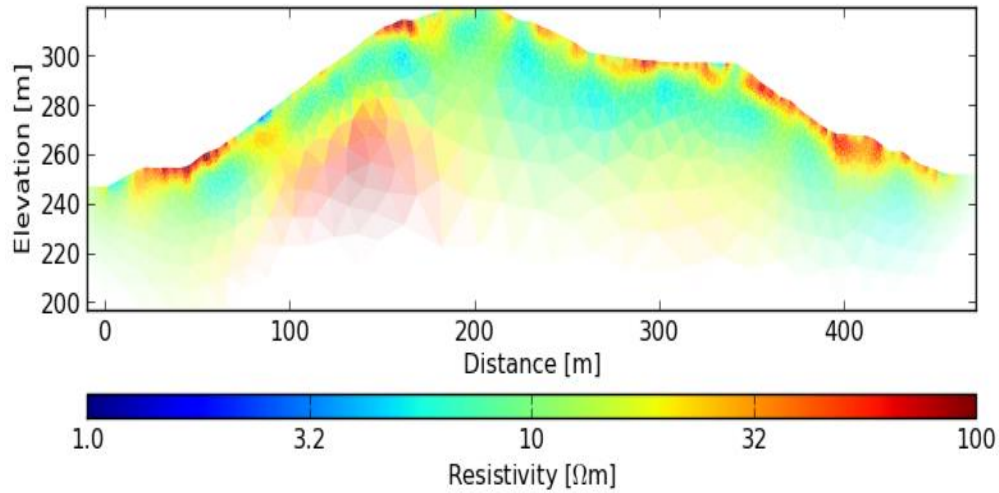


seismic events





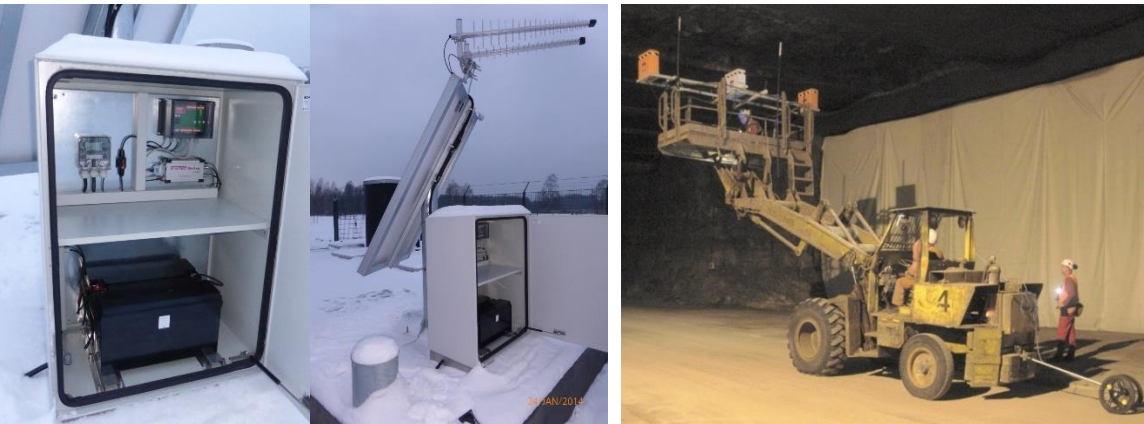
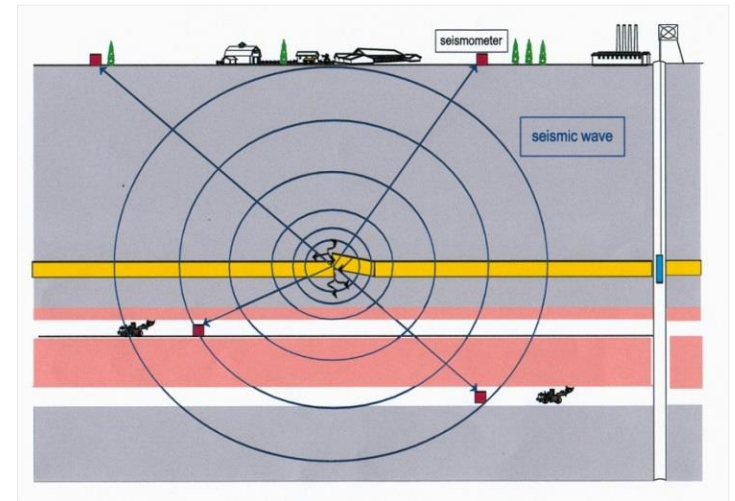
## Fields of Activities



## Geophysical exploration



## (Micro-) Seismic monitoring





# SELECTED REFERENCES

## Project Example 1

### Review of Mine Design, MOP Plant Garlyk / Turkmenistan



Continuous miner



Power station



Shuttle car from continuous miner to field crusher



Field crusher



Main belt conveyor



Minecar



## SELECTED REFERENCES

### Project Example 2

#### SOP via Schoenite Process

Location	Runn of Kutch, India
Resource	Bittern resulting from sea salt production
Capacity SOP ( $K_2SO_4$ )	100,000 tpa



#### K-UTEC's Scope

Test Work  
Process Design  
Basic Engineering  
Partial Detailed Engineering  
Support in Commissioning (2015)





# SELECTED REFERENCES

## Project Example 3

### SOP via Schoenite Process

Location	Beyondie Lake, Australia
Resource	Natural Brine
Capacity SOP ( $K_2SO_4$ )	90,000 tpa



**K-UTEC's Scope**  
Test Work  
Process Design and Basic Engineering  
Detailed Engineering for the Process Plant  
Procurement and Supply of Key Components  
Support in Commissioning (2021)





# SELECTED REFERENCES

## Project Example 3



Commissioning since 2021





# SELECTED REFERENCES

## Project Example 4

### SOP via Glaserite Process

Location	Ebensee, Austria
Resource	KCl containing effluent brine
Capacity SOP ( $K_2SO_4$ )	20,000 tpa
Capacity NaCl	60,000 tpa

**K-UTEC's Scope**  
Test Work  
Process Design and Basic Engineering  
Partial Detailed Engineering  
Support in Commissioning  
Plant in Operation since 2006  
Capacity Enhancement since 2014



7-stage cooling crystallisation of Glaserite



SOP conversion reactor



Circulation pumps



Evaporation / NaCl crystallisation



SOP centrifuges



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**THANK YOU**

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