

**In-Seam Seismic Survey**

## In-Seam Seismic Survey

### Location of Faults and Anomalies in Coal Seams and General Mining Risk Evaluation

Coal seams are able to guide seismic waves over greater distances. This fact is used to investigate coal seams with respect to faults or other anomalies like wash-outs, seam splitting, dirt content or varying seam thickness.

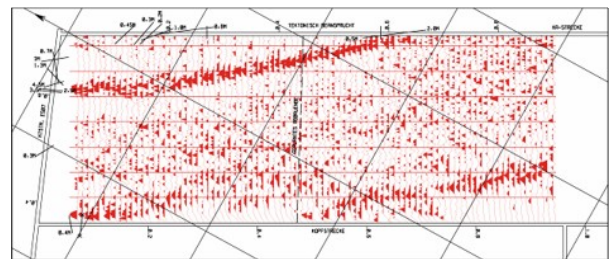
#### Applied survey techniques

- Reflection survey
- Transmission survey
- Tomography

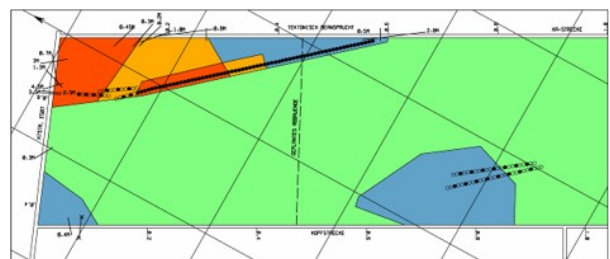
#### Risk Map of a Coal Panel

- Green (almost no risk)
- Blue (low risk)
- Orange (medium risk)
- Red (high risk / in general not mineable)

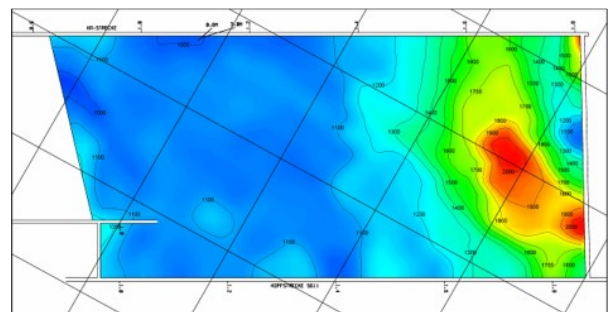
Reflections from faults within a coal panel



Risk Map of a Coal Panel



Tomography



## Selected References

Client	Task
RAG Deutsche Steinkohle AG, Germany	Location of Faults and Anomalies in Coal Seams and General Mining Risk Evaluation
Pozo Santiago Hunosa, Spain	Location of Faults and Anomalies in Coal Seams and General Mining Risk Evaluation
Pozo Carrio Hunosa, Spain	Location of Faults and Anomalies in Coal Seams and General Mining Risk Evaluation
Pozo Maria Luisa Hunosa, Spain	Location of Faults and Anomalies in Coal Seams and General Mining Risk Evaluation
OKD, a. S. Ostrava, Czech Republic	Location of Faults and Anomalies in Coal Seams and General Mining Risk Evaluation
Dneprovskaya, DTEC, Ukraine	Location of Faults and Anomalies in Coal Seams and General Mining Risk Evaluation
Minera Del Norte, Mexico	Location of Faults and Anomalies in Coal Seams and General Mining Risk Evaluation

## In-Mine Seismic Equipment SUMMIT Ex

- In-house development at DMT
- Modular design
- Intrinsically safe
- Two-Component Geophone Probe

Ex-proof PC in underground use



SUMMIT II Ex



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