PRACTICAL EXPERIENCES WITH THE MINE WATER OUTBURSTS FROM ABANDONED MINES IN SLOVAKIA ACQUIRED BY THE STATE MINING AUTHORITY
BANSKÁ ŠTIAVNICA
MINING TOWN OF THE
WORLD HERITAGE

The first Mining Technical University in a world was established in 1763
WE TACKLE TWO PRINCIPAL ISSUES

ABANDONED MINES

OLD MINING WORKS
• In 1990 year was adopted government’s programme for stifle of the ore mining

• Closure of Cu, Zn, Pb, Hg, Fe, Sb, U, Mg mines – ABANDONED MINES

• 1990-2009 were 81,02 mill. € spent from the state budget for technical works and social compensations
RUDNE BANE state company has realized this programme

1. Project documentation

2. Work Management

3. Technical applications
   - Liquidation of shafts, drifts
   - Remove of steel support Etc.
   - Remove of negative effects of abandoned mines
The first known mining on Slovak territory started in 4th century B.C. and in 12th century started real mining development.

Original mining works keeper or his legal successor not exists or he is unknown.

More than 16 000 of old underground mining works are registered nowadays.
ABANDONED MINES & OLD MINING WORKS ARE REAL OR POTENTIAL ENVIRONMENTAL LOADS (heavy metals, acid mine drainage, subsidence, pollutants)
LEGISLATIVE FRAMEWORK OF OLD MINING WORKS ACCORDING TO ARTICLE 35 OF THE MINING ACT No. 44/1988 Coll.

THE MINISTRY OF ENVIRONMENT OF THE SLOVAK REPUBLIC WAS UP TO 31th MAY 2007 obliged to secure or liquidate the old mining works.
Securing or liquidation of old mining works and their consequences which represent a threat to public interests shall be taken care of to the extent necessary by Ministry of Environment of the Slovak Republic. The Ministry of Environment of the Slovak Republic shall also settle damage to property, if any caused upon the securing or liquidation of old mining works.
Securing or liquidation of old mining works and their consequences was done by means of state or private companies funded from state budget and Environmental fund to which mining companies pay a royalties for mineral extraction.
LEGISLATIVE FRAMEWORK OF OLD MINING WORKS

ACCORDING TO ARTICLE 35 OF THE MINING ACT No. 44/1988 Coll.

THE MINISTRY OF ECONOMY OF THE SLOVAK REPUBLIC

IS SINCE 1\textsuperscript{th} JUNE 2007

obliged to secure or liquidate the old mining works
Securing or liquidation of old mining works and their consequences is done by means of Rudne bane state company funded from state budget.
LEGISLATIVE FRAMEWORK OLD MINING WORKS (OMW)

- MINING ACT No. 44/1988 Coll.
- ACT No. 51/1988 Coll. on mining activity – mining licence for OMW
- GEOLOGICAL ACT No. 569/2007 Coll. article 36 Ministry of Environment is obliged for securing of ascertaining of OMW
- Regulation No. 9/1989 Coll. on registration of OMW - Ministry of Environment of the Slovak Republic keeps their register. It may designate another organisation reporting to it to keep the register.

Regulation No. 89/1988 Coll. stipulates contents and details of plan for securing and liquidation of OMW
STATE MINING AUTHORITY
SLOVAK REPUBLIC

Water inrush

[Slovakia map]
Water inrush
BASIC GEOLOGY

• Spišsko-gemerské rudohorie belongs to Internal West Carpathians region

• It is built up of Early Paleozoic volcanic-sedimentary formations on which the Late Paleozoic is resting autochtonous position, also overlain by the Mesozoic. Lower and Upper Permian sequences are preserved.

• The most spreaded are metamorphed sedimentary and volcanogenic rocks

• Overall region is a rich for ore mineralisation of different genesis and different age namely As, Fe, Sb, Pb, Cu, Zn, Hg a Cr.
STATE MINING AUTHORITY
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THANK YOU FOR YOUR ATTENTION

ZDAR BOH !

SREČNO !