

## **0. Abstract**

Due to the engineering standard prevailing at the time, the first caverns completed at the Bernburg natural gas storage site in the mid-1970s had considerably less capacity than those dating from later stages of construction.

Two caverns from that „generation“ that were flooded and repaired have been postleached since 1997/98 with the aim of increasing capacity, and thus better cost effectiveness. Three years later followed another cavern using the infrastructure that had been established.

Essential decision-making criteria for cavern enlargement were derived from rock mechanical new dimensioning, and the proof of postleaching feasibility.

Practical and economic aspects of cavern enlargement called for new and improved standards of planning, implementation and monitoring. Postleaching of two of the three caverns has now been completed, making it possible to present a number of