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THREE-DIMENSIONAL MODELING AND VISUALISATION OF CAVERN FIELD SITES

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Abstract

State-of-the-art 3D-software nowadays allows the entire site of a cavern field to be displayed in an all-inclusive 3D-model, starting with the representation of the surface, for instance 3D-objects of the operational buildings and piping, going down to the cavern geometry and the courses of the boreholes, and even including the geology.

In the paper it is shown by means of a practical example what benefits cavern operators can derive from 3D-models of cavern field sites. Besides being useful for presentation purposes, such models can among other things help in the correlation of the survey results with the geology and support planning.

Modeling is done with the CavWalk Professional software, which has been specially developed for the presentation of cavern fields. The software allows the user to undertake virtual excursions through the 3D-model at the surface as well as underground. In the spatial representation of one or several caverns the observer can move around outside and inside the caverns.

Key words: Cavern mapping, computer modeling, computer software

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