CavBase-Visualization and Database for Cavern Construction, Solution Mining Process, Brine Production and Product Storage

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Summary

During the planning and construction of cavern bore holes, during the mining process of caverns as well as during storage operations, a tremendous amount of data has to be collected. Normally these data are stored in file cabinets, on spreadsheets, as scattered notes or even in the heads of the engineers and operators.

CavBase is a database system specifically designed for collecting and storing cavern-related information in one designated environment, either for individual caverns and for complete cavern fields. Besides the cavern each piece of information has always a date attached. The date is the key element of the whole database system.

The data management of the CavBase system is complemented by a variety of output features, e.g. daily, weekly, monthly reports, lists and tables of technical details, historical changes of cavern configurations, production figures, statistical evaluations and graphical analysis. Self-describing menus and buttons lead the user in an accustomed manner through the whole system and help him to enter data, to analyze and visualize his operations and to prepare and customize reports and figures.

The software package CavBase, usable for

- brine/salt production,
- cavern construction in general and
- operation of liquid storage,

has been established:

- to support the operator for the daily production routine,
- to assist the engineer in his planning and decision-making process,
- to provide for the different external reporting in a corporate design,
- to enable the management to get fast and reliable access to the cavern field status and as a consequence
- to save time and costs.