

Mobil's Approach to Minimize Personnel Requirements in Cavern Leaching Operations

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Summary

For the solution mining of the two MEEG gas caverns in the northern part of Germany, at Bremen Lesum, in 1997, the process control system and manning schedule had to be chosen prior to start. Between the two choices of a round the clock manning schedule and a highly automated, but capital intensive leaching plant, with only a minimum of man power, the later one was chosen. DEEP Underground Engineering GmbH was lucky to come into play early enough in order to influence the personnel and job management and the flow of responsibility. Having finished the leaching of the caverns with about 600.000 m³ each in 2000 and 2002 respectively it can be concluded that the model was successfully, precise, and at target cost and date.

The paper will present the starting situation in mid 1996 and the background of the decisions that lead to the basic design which was followed for the construction in 1997. A summary of major process equipment and the supervisory control system will be presented. A short overview on the experience during start-up and the first year of leaching operations will be given followed by major design criteria that lead to quite some improvements and process optimisations during lifetime.

The flow of responsibility between MEEG , DEEP's head office, and the cavern site will be pointed.

In order to underline the successful operations different pie charts will be shown with respect to down time statistics, identifying and structuring the different reasons for it and possible changes in the strategy to circumvent the same failures and partial failures in future operations.