CAVERN- AND SURFACE- SIMULATION FOR NATURAL GAS STORAGES

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Abstract

During their close cooperation when automating the Epe storage cavern, two German companies – SOCON Sonar Control Kavernenvermessung GmbH and GreyLogix – were able to develop the first ever system for simulating online the surface and underground capacities of a cavern storage so as to obtain secure data for implementing a nomination.

Based on the know-how of the two companies, their NomiX software precisely predicts the feasibility in terms of rock mechanics, thermodynamics and cavern-system aspects of the gas volume nominations. The software then provides the gas trader and the cavern operator with the information and carries out the nominations in a safe and efficient manner after approval via the location automation system as well as a specially developed Dynamic Routing module. And as these processes can, if required, be executed within an hour, NomiX contributes to safe and efficient multi-cycle operations in cavern storage facilities.

Key words: Simulation, Caverns for Gas Storage, capacity, prediction, surface facilities, history match, nomination, profile