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BEHAVIOR OF SEALED SOLUTION-MINED CAVERNS

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ABSTRACT

Solution-mined caverns will be one day sealed and abandonned. Due to an increasing concern in environmental and safety issues, the long term behavior of brine bubble initially enclosed in the cavern has been analyzed by several authors, who lay emphasis on the fracturation risk due to the progressive pressure build up in the cavern caused by brine heating and cavern creep. In this paper we suggest to take into account the rock salt permeability : even if small, it allows some pressure release and leads to a final equilibrium pressure which is substantially lower, in many cases, than the lithostatic pressure.

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