12-YEAR PRESSURE MONITORING IN AN IDLE SALT CAVERN — THE 1997-1998 ETREZ ABANDONMENT TEST REVISITED

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ABSTRACT

Twelve years ago, the solution Mining Research Institute awarded a research contract to Gaz de France and Ecole Polytechnique to perform an abandonment test in a salt cavern of the Etrez gasstorage facility. This test was performed during the 1997-1998 period. In the conclusions of the Research Report, it was predicted that cavern pressure would reach a steady-state equilibrium value such that the effects of cavern creep closure and of brine permeation through the cavern wall were balanced exactly. Between 2002 and 2009, wellhead pressures in that cavern were monitored again. During this period, it was observed that, after any sufficiently long period during which the cavern is kept idle (no injection or withdrawal), the cavern pressure reached a constant value exactly equal (within pressure gauge accuracy) to the figure predicted after the 1997-1998 test.

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