

**A CAVERN ABANDONMENT PROGRAM IN A CSME CAVERN
AT GELLENONCOURT (LORRAINE, FRANCE)**

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SUMMARY

A cavern abandonment program was established for the SG13-SG14 cavern of the Gellenoncourt brine field operated by CSME at Gellenoncourt in Lorraine, France. Cavern compressibility and the evolution of cavern brine temperature were measured. A 6-month brine-outflow test was performed, followed by an 6-month shut-in test. In this shallow cavern (250 m, or 800 ft, deep), which had been kept idle for 30 years, cavern-brine thermal expansion can be disregarded. Pressure evolution during the shut-in test is influenced by atmospheric pressure changes, ground temperature changes and Earth tides. From the average pressure-evolution rate, it can be inferred that the cavern closure rate is smaller than 10^{-5} /yr.

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