Halifax, Canada, Nova Scotia, October 8 - 10, 2007

INTERPRETATION OF A TIGHTNESS TEST OF A GAS STORAGE CAVERN LEACHED WITH A GASEOUS BLANKET

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1 Abstract

The final tightness test of salt caverns leached for natural gas storage with a gaseous test medium might become problematic if the cavern was leached with a gaseous blanket and an unknown amount of blanket remained in the cavern.

The paper in hand describes a tightness test in a cavern well already completed for both gas storage operation and first-gas-filling (de-brining string already installed).

In order to quantify possible inflows of gaseous blanket during the tightness test phase the test procedure was complemented by a following gas inflow test phase. That inflow test gave indicative results and allowed to explain approx. 50 % of the apparent inflow determined from the tightness test.

Key words: Cavern Testing, Caverns for Gas Storage, Instrumentation and Monitoring, Leak, MIT (Mechanical Integrity Test), Storage Cavern,

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