

DUAL PARALLEL COMPLETION FOR SOLUTION MINING ?

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0. ABSTRACT

Noordelijke Zoutwinning BV (NOZO), a salt mining company of Billiton International Metals, has drilled ten wells for solution mining of magnesium- and kalium-containing salt deposits.

The wells have been completed with 3½" and 4½" tubings suspended parallel to each other in a last cemented casing of 10.3/4" diameter.

A third tubing of 2.7/8" diameter has been installed inside the 4½" tubing. Hydraulic and thermodynamic characteristics of this completion are being discussed.

Parallel suspension of injection and production tubings provides the possibilities of controlling the cavern temperature, sampling the contents of the cavity and installing elongation pipes and continuous monitoring tools. Experience with this completion under the NOZO chosen requirement of sustained overburden pressure in the cavity is being explained with respect to tubing cutting, coring the cavern floor, oil/brine interface monitoring and other operations.