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MEETING
PAPER



COMPARISON OF SANSMIC SIMULATION RESULTS
WITH CAVERN SHAPES ON THE SPR PROJECT

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Comparison of the SANSMIC Simulation Results
with Cavern Shapes on the SPR Project

Abstract

This paper describes the use of the SANSMIC solution mining code developed by Sandia National Laboratories on the Strategic Petroleum Reserve Program. The sonar surveyed cavern shapes are compared to the simulation results of the SANSMIC code for five caverns from the West Hackberry and Bryan Mound sites. The simulations used the actual cavern shape at the start of each leaching phase, the actual casing setting depths, and the field reported flow quantities for water and oil.

There are many differences, minor and major, between the simulated shapes and the actual shapes. The causes of the differences include poor field data and errors and limitations in the code and are discussed.