SOLUTION MINING RESEARCH INSTITUTE

812 MURIEL STREET
WOODSTOCK, ILLINOIS 60098
815-338-8579

MEETING PAPER

THE WATER-BRINE INTERFACE METHOD, AN ALTERNATIVE MECHANCIAL INTEGRITY TEST FOR SALT SOLUTION MINING WELLS

by

H.W. Diamond

Presented at the SMRI San Antonio, Texas Meeting - October 23-24, 1989

Water-Brine Interface Method
An Application for Approval of An Alternative MIT for Casing Leaks for Class III Salt Solution Mining Wells

The U.S. Salt Industry requests approval of an alternative MIT to demonstrate the absence of significant leaks in the casing of all Class III salt solution mining wells. As will be explained, the proposed method has the necessary sensitivity. Furthermore, compared to the tubing and packer method it avoids problems of false-negative results and excessive downtime and is more easily and economically conducted.

This application includes the following information: (1) general background on solution mining, including geology, and well construction and operation, (2) reasons for proposing an alternative method of testing, (3) the underlying principle of the proposed method, (4) practical application of the principle, (5) the results of preliminary tests of the proposed method,(6) the proposed criteria to judge the test's success, (7) the proposed alternative procedure and (8) a plan for an official demonstration of the proposed method.