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**Meeting Paper**

# Salt Permeability: A Synthesis of the Rome Panel Discussion

by

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# SALT PERMEABILITY:

# A SYNTHESIS OF THE ROME PANEL DISCUSSION

Massimo Guarascio and Pierre Bérest

## 1. Introduction

A panel discussion meeting has been held at the Rome "La Sapienza" University after the SMRI 1998 Fall Meeting. It gathered experts from salt and storage companies, from universities and research institutions, who shared their experiences and views mainly concerning the permeability of rock salt.

The University of Rome is publishing the transcription of the panel discussion, and this paper will provide a synthesis of the more relevant comments and arguments. Recommendations for practical applications and expectations for future research are outlined as conclusion.

The first topic of the panel has been the need for an increase in the knowledge of the experimental and theoretical basis of salt behavior at some limit conditions, such as when the pressure in the cavern builds up, when the pressure decreases below a certain limit or when the fluid inside the cavern has a low temperature.

The second point has been the encouragement of future researches aiming to account for the behavior of salt at such limit conditions.

The discussion has been introduced by the following list of questions presented by the second co-author:

1. Is rock salt permeable to brine?
2. Is permeability effected by excavation?
3. Can lab data be very different from in situ data?
4. Is rock salt permeable to gas?
5. Can the flow be described by Darcy's Law?
6. What is the natural pore pressure?
7. Are the concepts of effective and total stresses suitable in the case of rock salt?

The participants have given their own answers to the previous questions, adding the point of view of their own field.