

Investigations and Evaluations on the Technical, Economical and Ecological Situation of the Brine Fields of Ocnele Mari, Romania

by

Dr. -Ing. Andreas J. Reitze

Hartmut von Tryller

SOCON Sonar Control Kavernenvermessung GmbH

and

Ralph Gaertner

DEEP. Underground Engineering

Abstract

The cavern fields of OCNELE MARI are located at the southern edge of the Transylvanian Alps in Romania near the town of RIMNECU VALCEA. Since 1959 SALROM have been operating brine leaching caverns in five cavern fields. The brine is supplied exclusively to a nearby chemical plant. SALROM also operates a mine for exploiting rock salt in Rimnecu Valcea; this salt is mainly used for spreading on roads in winter, but is also exported. SALROM is the state salt exploitation company and operates other fields in Romania.

Since 1959 a total of about 66 brine caverns have been created in four brine leaching fields. Only fields III and IV are still partly in operation. The first signs of surface damage occurred in 1968. As a result, Romanian institutes carried out subsidence measurements and more extensive rock mechanic investigations. Sonar surveys carried out in the nineties provided the first indications of disproportionally large voids.

Following various studies carried out in Romania, this cavern field was more closely investigated in 1997 and 1998 by the SOCON/DEEP consortium during a comprehensive study. The study was funded by the European Community and investigated and evaluated the technical, economic and ecological situation of the OCNELE MARI brine field. Within the framework of this study a large cavern system that had been formed from six individual caverns by uncontrolled leaching was brought to light.

©2023 – Solution Mining Institute

Full Paper is Available in the SMRI Library(www.solutionmining.org)