

SOLUTION MINING RESEARCH INSTITUTE

105 Apple Valley Circle
Clarks Summit, Pennsylvania, USA

Telephone: 570-585-8092 ♦ Fax: 570-585-8091
www.solutionmining.org ♦ smri@solutionmining.org

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**Engineering and Logistical Concerns in Conducting a
Multi-Well Cavern Mechanical Integrity Test at LOOP**

Slezak, Matthew and Busch, Eric

PB Energy Storage Services, Inc., USA

Spring 2005 Conference
17-20 April
Syracuse, New York, USA

Logistical and Engineering Concerns in Conducting a Multi-Well Cavern Mechanical Integrity Test at LOOP

**Matt Slezak and Eric Busch
PB Energy Storage Services, Inc.**

ABSTRACT

When performing a multi-well Mechanical Integrity Test (MIT) there are several engineering and logistical considerations to be made. This is especially true at the Louisiana Offshore Oil Port (LOOP) terminal where the cavern wells are in inland waters. Engineering concerns of a multi-well cavern include the determination of cavern compressibility and the effect one cavern well's pressurization on the other wells, determination of the "pre-MIT" cavern pressure and interface depth changes due to the pressurization of the other wells. Standard factors such as maximum surface injection pressure, temperature, and the pressure gradient also need to be determined. Logistical considerations include the scheduling of two sets of test personnel and their associated equipment, ensuring the necessary test equipment and fittings are available, and the coordination of wireline and nitrogen services. This paper will address these issues and the "lessons learned" from this experience.

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