

**SOLUTION MINING
RESEARCH INSTITUTE**

3336 Lone Hill Lane
Encinitas, California 92024, USA

Telephone: 619-759-7532 ♦ Fax: 619-759-7542
www.solutionmining.org ♦ smri@solutionmining.org

Meeting Paper



**Possible Geologic Influence on Salt Falls
Associated with the Storage Caverns at
Bryan Mound, Brazoria County, Texas**

by

Karl M. Loof

Consultant
Lovelady, Texas, USA

and

Kurt M. Loof

SOFTEGAZ US Inc.
Houston, Texas, USA

Spring 1999 Meeting
Las Vegas, Nevada, USA
11-14 April 1999

Possible Geologic Influence On Salt Falls Associated with the Storage Caverns at Bryan Mound, Brazoria County, Texas

Karl M. Loeff¹ and Kurt M. Loeff²

Abstract

A frequency distribution map of the number of salt falls associated with the various storage caverns at the Bryan Mound facility exhibits a pattern which suggests a geologic influence. To investigate this possibility, the upper 2500 feet of the undifferentiated Plio-Pleistocene strata which encloses the salt dome were studied for evidence of possible differential salt movement. Correlation of well logs in the area provided the basis for dividing the strata into seven mappable units. Each unit was isopached and in conjunction with a map of the salt stock evaluated for evidence of differential salt (spine) movement. The possible boundary zones between areas of differential movements were projected into the salt. In instances where similar trends were observed across the dome, a projection of the boundary zone was made through the salt stock.

A composite of all the boundary zone projections was made and overlaid on the salt map. This map suggests that the salt stock is composed of two separate spine complexes separated by a complex boundary zone area. When this map is compared to the frequency distribution map, caverns with the larger number of salt falls commonly are closely associated with the projected boundary zones particularly the zone separating the main spine complexes. Likewise those caverns which have experienced few or no salt falls tend to be located within the spine complexes. The isopachs of the two intervals which overlie the salt stock provide evidence for the more recent development of a younger spine.

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¹ Geologic Consultant, P.O. Box 546, Lovelady, TX 75851, (409) 624-9008 voice and fax.

² Sofregaz U.S. Inc.