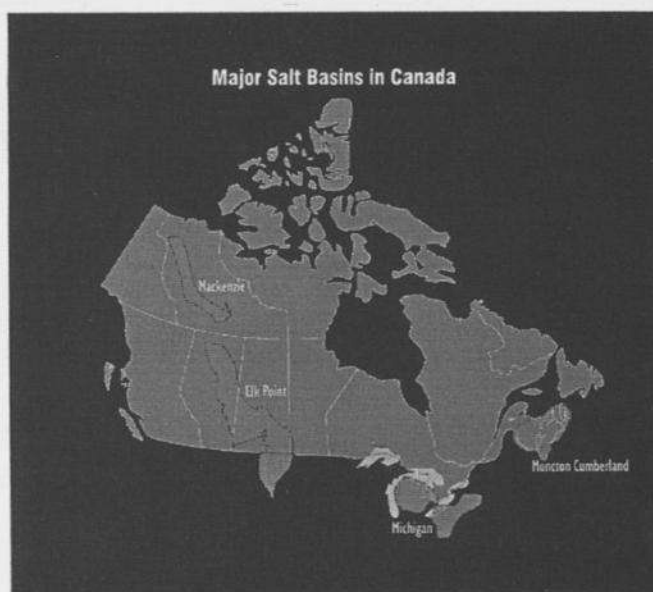


TRENDS IN CAVERN STORAGE OF PETROCHEMICALS AND NATURAL GAS IN CANADA

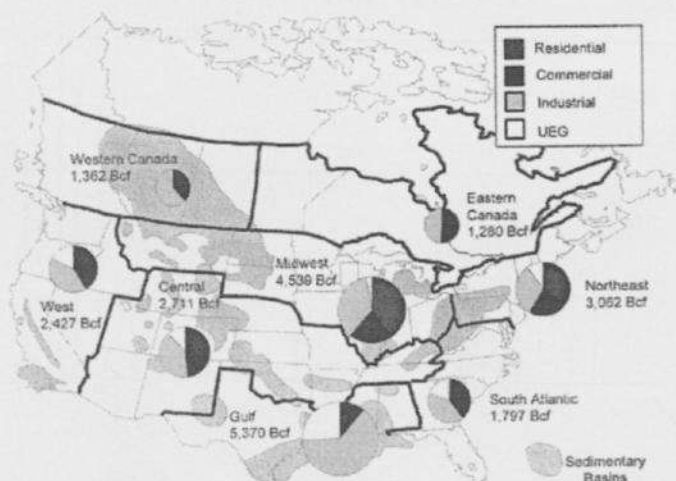
Manocha, J.S. Ontario Ministry of Natural Resources
 Crossley N.G. TransGas, A SaskEnergy Company
 Cicchini O. Dow Chemical Canada Inc.

The storage of natural gas and liquefied petroleum products in salt formations provides economic, environmental, and safety benefits for the industries and residents of Canada. There are 3 major salt formations in Canada covering an area of approximately 390,000 Km² located in Western Canada at Mackenzie and Elk point Basin, in Ontario at the Michigan Basin and in Eastern Canada at the Moncton and Cumberland Basins. There are approximately one hundred and fifty active hydrocarbon storage caverns with a combined storage capacity of 7 million m³ (44 million barrels). These cavern structures are constructed within salt strata and store extremely pure petrochemicals including ethylene, propylene, butane and pentane. The salt formations provide a non reactive medium for such high-grade storage petrochemicals. In addition, formations are located at depths that provide storage pressure of up to 24,000Kpa. The capital costs for development are about 5% of the similar facilities above ground, there are significant compression and heating costs savings, equipment

maintenance costs are estimated at about 2% of the costs for similar above ground facilities, but most importantly there are significant inherent safety and environmental advantages.



GEOGRAPHIC AND SECTORAL GAS DEMAND BREAKDOWN

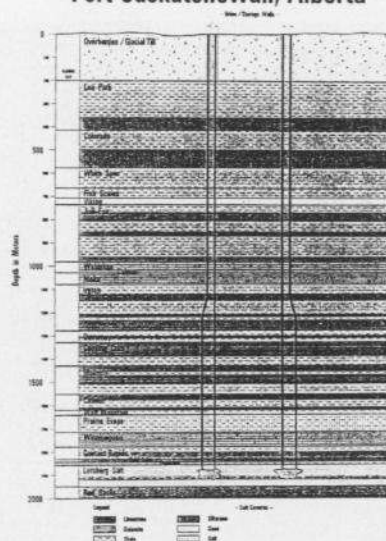


Source: Gas Supply Trends 1996 - 2002, Natural Resources Canada Report. Adapted from Golder Associates Report 1999

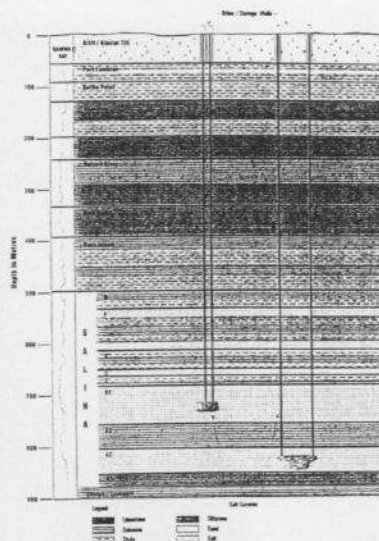
The current trends include the conversion of former solution mined caverns to storage, the construction of wells by salt solution mining companies to be in accordance with Storage of Hydrocarbons in Underground Formations of the Canadian Standards Association for future storage, the operations of caverns with automated interlocks and emergency shutdown systems for increased safety, the testing

for cavern mechanical integrity and further optimization of existing caverns by multiple entry wellbores. Given the large aerial extent of salt formations, the depths at which these deposit exist and the thickness of the salt beds in these formations in Canada, there is tremendous potential for further developing solution mined caverns for storage of petrochemicals and natural gas.

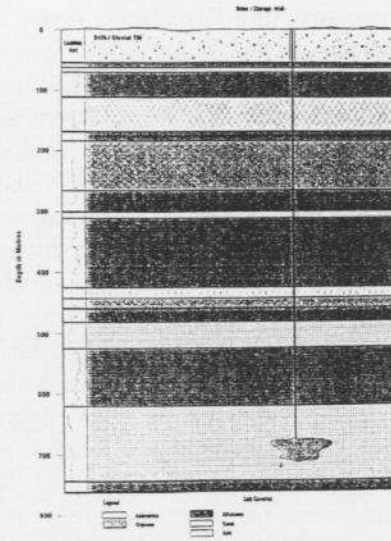
BEDDED SALT GEOLOGY Fort Saskatchewan, Alberta



BEDDED SALT GEOLOGY Sarnia, Ontario



BEDDED SALT GEOLOGY Port Richmond, Nova Scotia



Cavern Storage in Canada

