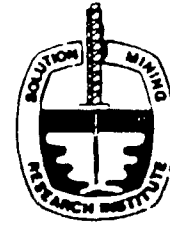


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MEETING
PAPER



REGIONAL SITING VARIATIONS: GEOLOGICAL & GEOPHYSICAL CONSIDERATIONS

Tom Magorian

Underground brine injection requires permeable media: gravels, sands or cavernous limestones, or fractures. Most successful injection has been away from the salt and caprock, into the basal gravels of river channel sands or point bars, found in all deltaic sediments, at depths of 1000 to 3000 feet or deeper.

As determined geophysically, the gravel permeability declines with age from 10 to 12 darcies on recent deposition, to 5 to 6 darcies in the Miocene found with saturated brine in the Gulf Coast. to 2 darcies in the Eocene, allowing optimal siting and design of the injection wells knowing the gravel thickness.