

## Salt Caverns for the Purpose of Waste Disposal

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### Abstract

In light of the increasing amount of environmental regulations that are being enacted throughout the world towards industrial development, alternative methods for the disposal of Industrial and Municipal waste are required.

Tervita Corporation has been in the Waste Disposal business for 20 years serving multiple markets in North America. The locations for Tervita's business are based on market demand in any particular area. Some of the businesses, which include Landfill Services and Downhole Solids/Fluids Disposal Services, handle the Industrial and Municipal waste streams that are produced.

Tervita is an industry leader in providing environmentally friendly alternative methods for disposing industrial waste. When working with our customers in the areas Tervita serves, one of the biggest sources of Industrial Waste is the Petroleum Industry. The products which are created/produced include water, mud slurries, drill cuttings, and tank bottoms, to name a few. To safely dispose of these materials, Tervita builds landfill and salt cavern disposal facilities.

Landfill facilities are facing new challenges because of the elevated environmental and regulatory requirements that are being imposed on these facilities. A viable alternative, especially for solids disposal, is to design and create salt caverns for the sub-surface disposal of this material. Salt caverns provide a stable and secure location for waste disposal while minimizing the environmental footprint to construct the facility.

Tervita is currently operating two salt cavern disposal facilities in North America. The company will increase the number of waste cavern facilities that can serve emerging markets based on market demand.

These facilities will be constructed to serve potential markets but are restricted to the areas where salt cavern construction can be achieved. The fundamental criteria for a salt cavern project include a salt formation that is thick enough to meet the project economics, a water source for solution mining, a disposal zone for the brine that will be created, and a market that will use this facility.

The disposal industry will face increasing environmental and regulatory challenges in the future. It is crucial as the industry leader for waste disposal that Tervita be able to provide alternative disposal methods that are safe for the environment.

If high-quality solutions can be found and delivered, the beneficiaries will include the local/national economy, the businesses in the affected area, our local neighbours and all of the people in the surrounding communities.

**Key words:** brine disposal, Canada, cavern development, caverns for waste disposal, disposal wells, drilling, evaporites, geology, history, mud