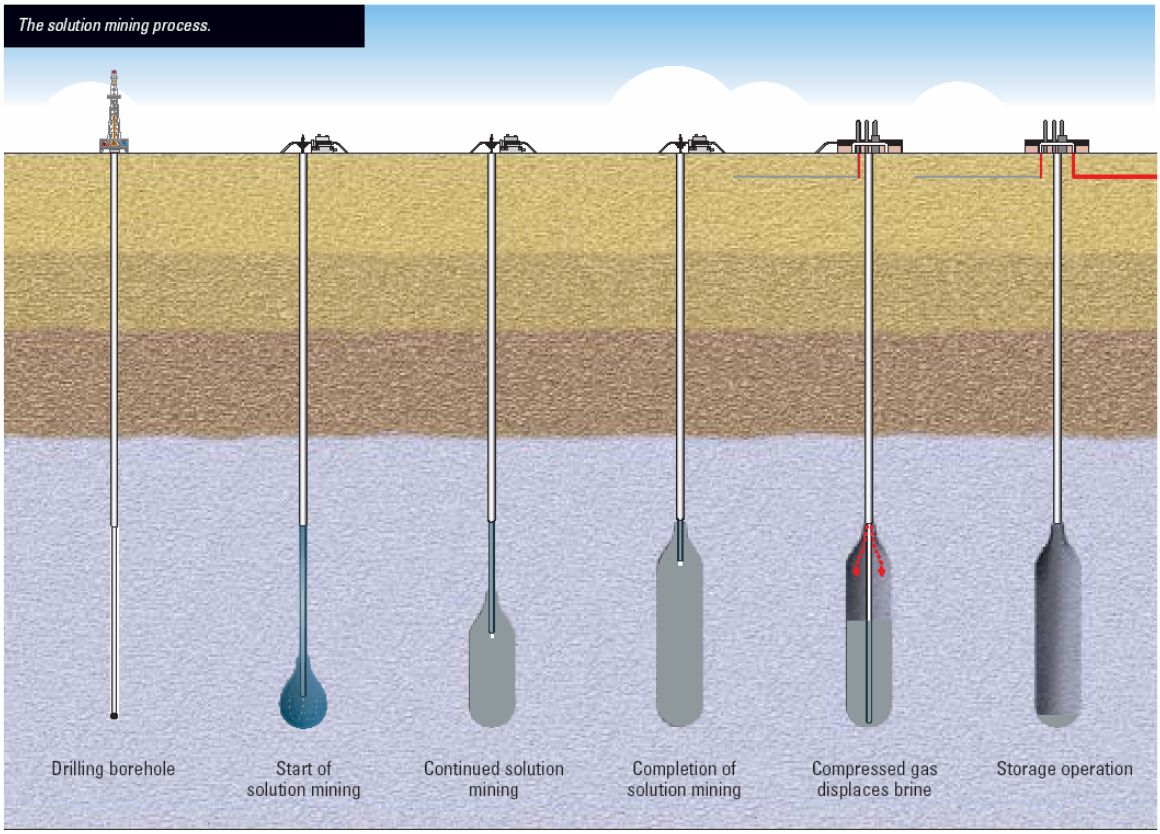
Solution Mining Process

Graphic Depiction of Gas Storage facility



Description
Fresh water is injected into the bore hole to begin the leaching process. Fresh water absorbs salt and become “brine”. Fresh water is continuously pumped into the cavern forcing the brine water out and thereby enlarging the cavern until it reaches the desired dimensions.

Once the cavern has reached the desired dimension, the leaching process is stopped. Natural gas is then injected into the cavern to remove the remaining water and to fill the cavern with gas.

The cavern is then ready to provide natural gas storage service by injecting and withdrawing gas up to the design capacity of the storage facility.

What is a salt dome and what makes it unique?
There are over 500 known underground salt domes in the Gulf Coast region from Mexico to the Florida panhandle. These domes originate from a thick bed of salt as deep as 4-5 miles below the surface. These salt domes push their way up through the sediment layers almost to the surface. A typical salt dome is roughly circular in shape and averages about 1 to 2 miles in diameter. The caverns at Jefferson Island are approximately 150 – 300 feet in diameter and are up to 1,200' tall. Storage of gas in salt domes is one of the best methods to protect against supply interruptions, mitigate high natural gas prices, and accommodate Gulf Coast production and liquefied natural gas (LNG) receipts.

"Typical" Gas Storage Cavern

Schematic Illustration
Brine is displaced from the cavern by the storage gas. The cavern is then operated as a pressure vessel between a range of operating storage pressures. A minimum gas pressure must be maintained to support the cavern structure. Brine or water can be used to displace the gas on occasion to recover the base gas if the dewatering string is left intact.