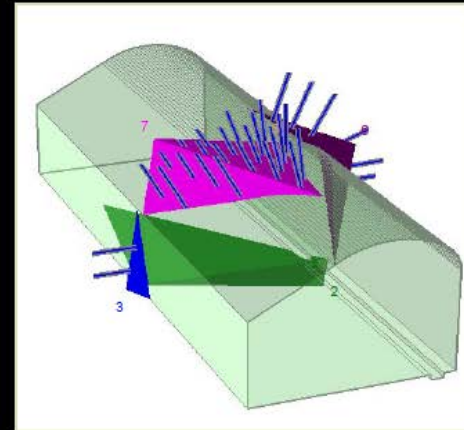


JURONG ROCK CAVERN



Accredited Design Check on Underground Caverns, Singapore

The Jurong Rock Cavern is Southeast Asia's first underground liquid hydrocarbon storage facility. The cavern system is located about 130 metres below Jurong Island's Banyan Basin.

Project Phase 1 will create about 1.47 million cubic metres of storage space when completed in 2014.

Project Description

The first phase of the project involves the construction of 5 rock caverns and 8 kilometers of tunnels for underground hydrocarbon storage space beneath Banyan Basin at Jurong Island. Caverns together with access and operation tunnels as well as water curtain galleries result in a total of approximately 3 million cubic metres of excavation.

Geology

The site is located in the Jurong formation, which is composed of a series of sedimentary rocks such as sandstone, mudstone, shale, tuff, conglomerate, etc. The Formation has been severely folded and faulted. Degrees of weathering depend on types of rocks, usually sandstone being more resistive to weathering than mudstone and tuff.

Project

Cavern System (approx.)	
Storage Capacity:	1'470'000 m ²
Depth of Cavern:	130 m
Volume mined excavation	3'000'000 m ³
Cost estimate:	S\$ 950 Mio.

Our Services

Checking of design for temporary and permanent works involving rock stability and lining design for the underground hydrocarbon rock caverns, the access and operation tunnels, as well as water curtain galleries.