## Abstract

Methane hydrates are solid, crystalline substances made up of a grid of water molecules that hold a methane molecule. These methane hydrates are stable in the gas hydrate stability zone (GHSZ). The thickness of this zone is mainly determined by temperature and pressure. The detection of a methane hydrate reservoir is mainly seismic. This is done by determining the bottom-simulating reflector (BSR), which marks the basis of the GHSZ. The BSR is the separation under the seabed between sediments containing hydrates (above the BSR) and free methane gas (below the BSR). The extraction of methane gas from the methane hydrate is based on the displacement of the methane hydrate outside the GHSZ. The most common techniques are thermal stimulation, decompression and chemical inhibitor injection. The dissociation can lead to instability of the seafloor. The impact of the methane hydrate exploitation on the climate will be smaller than the conventional exploitation of gas. The methane gas can then be transported via pipelines, LNG or CNG carriers, but also via a natural gas hydrate pellet carrier. The hydrate carrier will be the most lucrative when the distance is small and the amount to be transported is relatively small. It can be an important alternative in cases where LNG tankers are too expensive and pipelines are not installed.