AAPG Annual Meeting
March 10-13, 2002
Houston, Texas

J.J. Kolle[1], M. D. Max[2] (1) Tempress, Kent, WA (2) Marine Desalination Systems, Washington, DC

Seafloor Drilling of the Hydrate Economic Zone for Exploration and Production of Methane

The economic production of natural gas from oceanic hydrate deposits will require new offshore drilling systems and methods. Also, the product of hydrate dissociation may be relatively low pressure, wet gas, especially where the excess pressure produced by hydrate dissociation can be equilibrated rapidly through high porosity sediments. Natural gas derived from hydrate may result in low local production rates. The low production rate requires low-cost drilling methods to ensure economic viability.

Fortunately, hydrate is located relatively close to the seafloor in the hydrate stability zone and drilling conditions will be different from, and possibly more benign, than those of conventional gas reservoirs. Large numbers of low-cost wells could produce enough gas to recover costs and this will require extensive seafloor apparatus. A workboat-based drilling system that includes an integrated gas production capability is described.