

# **The Mallik Gas Hydrate Field: Lessons Learned from 37 Years of Gas Hydrate Investigation**

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## **Abstract**

The Mallik gas hydrate field is located in the Mackenzie Delta in Canada's Northwest Territories. The gas hydrate deposits consist of an interbedded sequence of highly concentrated gas-hydrate-bearing sands from 890 m to 1106 m depth within the crest of a regional anticline feature. Ground temperature conditions of this terrestrial gas hydrate occurrence are conditions by ~600 m of permafrost. Quantitative well log analyses and core studies have documented numerous discrete gas hydrate layers exceeding 110 m in total thickness. High gas hydrate saturation values, that in some cases exceed 80% of the pore volume, establish the Mallik gas hydrate field as one of the most concentrated gas hydrate reservoirs in the world. The abundant geologic and engineering data available at the site, the advantageous logistics presented by its terrestrial location, and the similarities to many offshore gas hydrate occurrences have made the Mallik site a very desirable location for gas hydrate research and development. This presentation will review history gas hydrate investigations at the Mallik site from the first discovery well in the winter of 1971/72 through to several production R&D studies in 1998, 2002 and 2007/08.