

Natural Gas Hydrate Stability In The East Coast Offshore – Canada.

J. A. Majorowicz
Northern Geothermal Consultants, Edmonton, AB

K. G. Osadetz*
Geological Survey of Canada, 3303 - 33rd St. N.W., Calgary, AB T2L 2A7
kosadetz@nrcan.gc.ca

ABSTRACT

The methane hydrate stability zone beneath the Canadian East Coast oceanic margin has developed to a depth of more than 600 meters beneath the deep water column in the area of the deep shelf and the slope. This zone is continuous spreading from the Labrador continental shelf in the north to the slope of the Nova Scotia shelf in the south. Gas hydrates within the methane hydrate stability zone are detected only in one situation, however, they are numerous in the deeper zone in which type II gas hydrates are present through the whole area at water depths as low as 100-200 m. Well-log indications of gas hydrate situated deeper than the base of the methane hydrate stability zone may be an indication of wetter, compositionally more complicated hydrates that probably are not of bacterial only origin. This could indicate a deep thermogenic source of gas in hydrates. The presence of hydrates in the upper 1000 m of sediments also can be considered as an indicator of deeper hydrocarbon sources.