

## The new proposal for methane hydrate reservoir model from the BSR and the seismic attributes in the eastern Nankai Trough

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METI/MH21 drilled the 32 boreholes at the various areas for the exploratory well of methane hydrate named 'METI Tokai-oki to Kumano-nada' around the eastern Nankai Trough area in 2004. The LWD and the wireline well logging data or cores from those wells, were clarified the occurrence of methane hydrates in the eastern Nankai Trough at many well sites. And many information of the methane hydrate reservoir was collected.

It is well known the Bottom Simulating Reflector (hereafter BSR) indicates the occurrence of methane hydrate. It is thought that the BSR is phase boundary between methane hydrate and methane free gas, and is equivalent to the base of methane hydrate stability zone.

We will introduce the relationship between the BSR and the base of methane hydrate stability zones at the 16 LWD well sites and the 2 wireline well sites.

The resistivity of methane hydrate-bearing sediments has higher than normal sediments. There are some wells which are found the over 20m high resistivity zones, or some wells which are found the sparse some 1m high resistivity zones, or others well are not found so much high resistivity zones.

Old one-dimensional methane hydrate reservoir model is assumed the methane hydrate homogeneous reservoir. However, one-dimensional model is not able to explain the results of boreholes and to delineate the methane hydrate reservoir.

In the eastern Nankai trough area, methane hydrate concentrated zones are found at the coarse turbidite sand layer and they are heterogeneous. There are methane hydrates where BSRs are seen in the seismic migration sections, however, methane hydrates are concentrated in some areas and not in other areas. In consideration of such a thing, we propose a new methane hydrate reservoir model. We have to think new two-dimensional reservoir models, when the methane hydrate reservoir is delineated in detail.

The new methane hydrate reservoir model gives work in search of quantity of natural resources of methane hydrate useful information.

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