Response of BGHS to sea-level change in shallow gas hydrate field

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This study focuses on BGHS change in the Oki Trough, one of the shallow-gas hydrate fields in the eastern margin of Japan Sea, and evaluates influences of sea-level on accumulation and disassociation of gas hydrate. At the observation site in the southwestern slope of Oki Trough (OT-2A: 763 m in water depth), present BGHS depth is estimated to be 151 mbsf. The BGHS was 24 m shallower than present during the Last Glacial Maximum (20 Ka) in response to a 120 m sea-level fall. Submarine ground around OT-2A was subdivided into six domains based on the history of gas hydrate state after the last interglacial (125 Ka). A great many submarine slides have been reported in the southwestern Oki Trough. It is highly probable that gas hydrate disassociation makes the submarine ground unstable. Relation between slope failure and gas hydrate disassociation is necessary to examine.
This study was partly conducted under the commission from AIST as a part of the methane hydrate research project funded by the Ministry of Economy, Trade and Industry, Japan.

Keywords: shallow gas hydrate, BGHS, sea-level change, Oki Trough

