

Methane activity in BSR distribution area of Off Shimokita Peninsula

Ryosuke Kotani[1]; Yasushi Ishida[2]; Akihiro Hiruta[3]; Ryo Matsumoto[4]

[1] Earth and Planetary Sci., Univ of Tokyo; [2] Earth and Planetary Sci., Univ Tokyo; [3] Earth and Planetary Sci, Tokyo Univ.; [4] Earth and Planetary Sci., Univ. of Tokyo

Seismic and side-scan sonar surveys were conducted 15-200 km off Simokita Peninsula by CDEX/JAMSTEC, in 2002. Strong and characteristic BSRs and gas columns have been revealed in this area. Seismic profiles demonstrates pull-down and pull-up like structures and vertical blanking zones indicating fluid migrations at the depth of 2.000 to 3.750 seconds(TWT). These features may suggest anomalous accumulation of free gases and probably gas hydrates in sediments. Eastern end of the survey area is characterized by a number of mound-like topography. These observations seem to suggest anomalously high flux of upward migrating methane. Nine meter long piston cores were collected at 14 sites, and sea water sampling by 24-port Rosset + CTD were performed at 6 sites during KT05-7 cruise, April 2005. We analyzed sulfate concentration in pore waters and determined the methane concentration in sediments and seawaters over the area, with an intention to reveal the methane activity in this area.