

## Geochemistry of continuous pore water intake by Osmotic Fluid Sampler

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On the Umitaka Spur of the Japan Sea, methane venting on the seafloor has been observed by ROV Hyper Dolphin, its strength and location change in short period. These changes effect on chemical and ecological environment of pore water and shallow sediments, continuous observation of these fluctuations are key to understand the dynamics of gas hydrate system near the seafloor. We have applied an osmotic fluid sampling system (OsmoSampler) from September 2013 to October 2014 to collect pore waters near the seafloor continuously and show the variations of gas and fluid geochemistry associated with the activity of gas venting. Although the concentration of sulfate is lower than that of seawater, it fluctuates for days accompanying small variation of methane concentration. The concentrations of chloride and other major ions also fluctuate near the seawater value. These changes of gas and fluid geochemistry may reflect the change of methane flux and following formation/dissociation of gas hydrates.

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