

## Monitoring using Tiltmeter of the CO<sub>2</sub> Sequestration in Coal Seams Project (1)

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The CO<sub>2</sub> sequestration in coal seams project is proceeding on schedule from 2003 at Kawaminami area of Minami-Oyubari, Yubari City, Hokkaido. This project involves the establishment of optimum monitoring methods to verify safety of environment and to detect leakage and behavior of gasses (injected CO<sub>2</sub> gas and released coal-bed methane gas). The leakage of CO<sub>2</sub> and methane gasses may occur before and during CO<sub>2</sub> sequestration process from the faults or the former drilled holes to survey geology. The fixed points of monitoring were set up on the vicinities of faults and drilled holes. The monitoring items are as follows; (1) repeated first-class leveling surveys for some bench marks, (2) continuous tiltmeter measurements at nine sites, (3) repeated soil gas analyses sampled from sampler holes, (4) repeated analyses of water-solved gasses at artesian springs, and (5) repeated measurements of gamma-ray spectra from soil gas at five sites. In this report, we present a discussion of possibility to detect behavior of CO<sub>2</sub> gas in coal seams by using some high-precision tiltmeters.