

## The Micro seismic and well pressure monitoring system installation for Tomakoami CCS demonstration project

TSUCHIYA, Makoto<sup>1</sup> ; TANAKA, Tomoyuki<sup>1</sup> ; HIGASHINAKA, Motonori<sup>2\*</sup> ; TSUKAHARA, Hitoshi<sup>2</sup> ; KURIHARA, Tomokazu<sup>2</sup> ; ITO, Kunihiro<sup>2</sup> ; ABE, Susumu<sup>2</sup> ; MACNTYRE, Jarra<sup>3</sup> ; SUE, Hiromi<sup>3</sup> ; AOKI, Yoshiyuki<sup>3</sup>

<sup>1</sup>Japan CCS Co., Ltd., <sup>2</sup>JGI, Inc., <sup>3</sup>PrimeCast Co.,Ltd.

As a part of "the large-scale CCS demonstration project at the Tomakomai area", METI plans the micro-seismic monitoring and wellbore pressure/temperature continuous measurement. These monitoring data will be used in order to find out the distribution of CO<sub>2</sub> plume in the reservoir and to assess relations between micro-seismic activities and CO<sub>2</sub> injection. The installation of the measurement system has completed in the end of January 2015 and the baseline observation has been just started.

The monitoring measurement system consists of an ocean bottom seismic cable, four ocean bottom seismometers, a land seismic observation station, seismic sensors in three observation wells, wellbore pressure/temperature sensors and three DTSS(distributed temperature Sensor) in each well.

Observed Data, excludes three OBS data, are gathered to the JCCS Tomakomai Office at almost the same time. The monitoring data management system, which has been developed, will be able to check anomalies of the collected data immediately. If any seismic event is detected, hypocenter will be determined automatically.

This paper reports the overview of the monitoring data management system

Keywords: CO2 storage, CCS, monitoring