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# Geophysical survey for site evaluation of pilot scale CO2 storage test in South Korea

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A geological carbon dioxide (CO2) sequestration project to select the potential sites for the first Korean pilot-scale CO sequestration is being undertaken by Korea Institute of Geoscience and Mineral Resources (KIGAM). We try to evaluate the potential site of pilot-scale CO2 storage because the pilot-scale test is very important to understand the total procedure of CO2 storage. Three potential sites from previous geological and geophysical survey, and drilling logs had been selected during last two years. Potential sites are located in Kyeongsang Basin, which is the largest sedimentary basin in the Korean Peninsula. In 2008, we have conducted MT and AMT survey to select the detailed survey area. The areas of three potential sites are Eusung, Kunwi and Heunghae, respectively. MT and AMT survey were performed at 90 stations using Phonenix MTU-5A system and remote reference of AIST located in Kyushu, Japan. 2D and 3D inversion results of MT and AMT data in Eusung show complex geological structures having low resistivity such as fractures or faults in the south and west area, however in case of east side of survey area the resistivity image shows relatively simple structure, and the range of resistivity is about several hundred ohm-meters. And 2D resistivity images of Kunwi and Heunghea area also show low resistivity anomaly indicating the faults and fractures. From the MT and AMT results, we have conducted the 2D seismic reflection survey in the east and north-east area of Eusung in order to identify the sedimentary structure during December in 2008. In this year we will decide the applicability of pilot-scale test site of CO2 storage using seismic processing results in Eusung area, and continue to select the potential site at the other sedimentary basin in Korean Peninsula.