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HRE28-P08 Room:Convention Hall Time:May 25 18:15-19:30

Gravity monitoring at the Farnsworth CO2-EOR site, TX (2)

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We have been making continuous measurement using a superconducting gravimeter (SG) iGrav15 at the Farnsworth field, TX, for the purpose of studying the effects of CO2 injection at an enhanced oil recovery site. In 2014 CO2 injection has started near the observation site. Determining the drift rate of SG is very important to distinguish real gravity changes from time-varying instrumental drift. Usually annual or semi-annual parallel measurements with an absolute gravimeter (AG) are made for determining the drift rate of SG. The best method is parallel SG and SG measurements located in close proximity. In July the second SG, iGrav17, was deployed by the iGrav15 and parallel measurement has been made for five months. Then iGrav17 was re-installed at the new site, which is about 600 m from the base station. Followings were observed: (1) the parallel SG and SG measurements located in close proximity was very effective not only for determining time-varying instrumental drift but also studying noise components, (2) regarding the instrumental drift a small gap was observed at the re-install, however, the drift rate was converged to the former value in ten days.

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