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model of induced seismicity from JBBP-type EGS reservoirs

Hiroshi Asanuma^{1*}, Yusuke Mukuhira¹

¹Graduate School of Environmental Studies, Tohoku University

Induced seismicity is typically observed at EGS (Engineered Geothermal Systems) reservoirs while its creation and circulation/production phases. Many of the hydrothermal reservoirs also have natural or induced seismic activity. The microseismicity has been effectively used as one of the few means which have ability to resolve reservoir extension and structure with practically acceptable resolution. However, some of the seismic events have large magnitude and they brought some degree of damages to houses and infrastructures on the ground surface. In the JBBP, the authors expect that the activity and released energy of the induced seismicity will be reduced, because the reservoir would be isolated in less fractured rock mass in the BDT, and the creation process of the reservoir would be different from that in the ductile zones. The authors will disucuss risk of induced seismicity with large magnitude from the JBBP reservoirs showing some possible models of the reservoirs.

Keywords: EGS, Induced seismicity, Stimulation