

Laboratory study of induced seismicity in a brittle-ductile transition regime

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In order to understand the seismic properties induced by artificial effects such as fluid injection in a supercritical geothermal reservoir, I reviewed the current status of laboratory study of induced seismicity in a brittle-ductile transition regime. It is important to evaluate the effects of changes in pore pressure and pore fluid temperature on induced seismicity. Understanding the mechanism of induced seismicity at deep crustal level may be useful to evaluate the possibility of detection of induced seismicity along the development of geothermal energy in the supercritical region.

Keywords: brittle-ductile transition, laboratory rock mechanics, induced seismicity, supercritical geothermal reservoir