



CSPG Geothermal Division

Understanding and mitigating induced earthquakes due to geothermal operations

Speaker: Thomas Eyre

Date: Thursday, June 9, 2022 | 12:00pm – 1:00pm (MST)

Location: Virtual

Abstract:

ASEISMIC Solutions and University of Calgary

Induced earthquakes are a known hazard for geothermal projects and there have been several well-documented cases (particularly related to enhanced geothermal systems) where these earthquakes have been large enough to cause damage to local buildings and infrastructure, causing project abandonment. In addition, induced earthquakes are perceived by the public as an uncontrollable side effect of geothermal development, and this can influence social license to operate. It is therefore of vital importance to address this issue when designing and implementing geothermal projects. This talk will give a background on induced earthquakes within a geothermal context and the various mechanisms that contribute to cause them. Common risk management strategies will be introduced, and case studies with varying degrees of success in mitigating the problem will be discussed.

Biography:



Dr. Thomas Eyre is a research seismologist with over 13 years of experience. He holds a Research Associate position at the University of Calgary and is also the CEO of ASEISMIC Solutions (www.aseismic.com), a spinoff company founded to help bring solutions developed through his research to industry. His current work focuses on the development of a software tool for induced earthquake risk mitigation. He has a PhD in seismology from University College Dublin, Ireland, and has held postdoctoral fellowships at the University of Alberta and University of Calgary, where his research has focused on induced seismicity and microseismicity. He has 13 peer-reviewed papers in leading international journals such as *Science Advances* and *Nature Scientific Reports*, and has carried out several consulting projects for the geothermal industry.