

Séminaire IPGS
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"Seismicity induced by hydraulic fracturing: surface and borehole observations, constraints and interpretation"

Abstract :

Hydrocarbon reservoirs are frequently stimulated with hydraulic fracturing in order increased production. Hydraulic fracturing is injection of fluid (and solids known as proppants) into reservoir under high enough pressure that the reservoir rock is fractured and new fluid paths are created. This stimulation is also used in geothermal reservoirs, coal bed fracturing etc. Hydraulic fracturing induces seismicity commonly observed with boreholes arrays of geophones or dense surface arrays of seismic station. The mechanism of fracture-seismicity interaction is still unknown and investigated. In this talk I will discussed detailed case study of the hydraulic fracture stimulation from downhole array and further I shall discuss a new developed monitoring technique for surface detection of very weak events and its application to hydraulic fracturing.