

Liquefaction features associated with the 1575 Chilean earthquake in southern Chile

Yuki Sawai[1]; Masanobu Shishikura[1]

[1] Active Fault Research Center, AIST, GSJ

We present an evidence of liquefaction associated with the 1575 Chilean earthquake. The delta of the Rio Coihuin is in middle along the 1960 rupture zone and 10 km east of Puerto Montt. The delta contains three terraces and the highest terrace comprises ~1.0-1.5 m of sandy mud and overlaying peaty layers. The lower part of the sandy mud intersected sills and dikes of fluidized sand. The liquefied sand lies a few ten centimeters above an ash layer, and the liquefied sand can be traced laterally over a hundreds meters along outcrops, using the ash layer. Radiocarbon ages of wood fragments, leaves, and charred materials, which were collected just below the liquefied sand, range from A.D. 1520 and A.D. 1360 years, and the ages imply the liquefaction was generated with the 1575 Chilean earthquake.

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