

## Geoslicer surveys of liquefaction from the 1700 Cascadia earthquake

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Geoslicer surveys along the Columbia river in the Cascadia subduction zone, Pacific Northwest of USA, revealed liquefaction features probably from the giant interplate earthquake in AD1700. We used sheetpiles 9 m long and 0.6 m wide to obtain 10 rectangular cores. The core mostly consists of river-bottom sand, showing cross-bedding, and are interbedded with mud layers up to 0.3 m thick. Two kinds of disruption are observed. First is bending of beds near the core edge, probably formed at the time of sampling. Second is massive sand that commonly forms sills and dikes, some of which contain angular mud clasts. Many and perhaps all of these intrusions formed in 1700. The subsurface movement of liquefied sand was mostly lateral and local vertical movement formed dikes on the surface.