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 18 Figure 2. Geological map of the studied region by Geological Survey of Japan, AIST
 19 (2015) with footprint of ALOS-2/PALSAR-2 images (see Figure 1b). Black and thick
 20 green lines are surface trace of active faults and coseismic surface ruptures [Kumahara
 21 et al., 2016; Goto et al., 2017; AIST, 2018], respectively. Acronyms of active faults
 22 and other geological features are as follows; FF: Futagawa fault, HF: Hinagu fault, IF:
 23 Idenokuchi fault, MF: Midorikawa fault [AIST, 2005]. SzF: Suizenji fault, AkF:
 24 Akitsugawa flexure [Goto et al., 2017]. K.PI.: Kumamoto Plain, Uto Pen.: Uto
 25 Peninsula. Legend of geology: 83: Late Pleistocene to Holocene non-alkaline felsic

26 volcanic rocks, 95: Late Pleistocene to Holocene non-alkaline pyroclastic flow volcanic
27 rocks, 99: Late Pleistocene to Holocene non-alkaline mafic volcanic rocks, 100: Middle
28 Pleistocene non-alkaline mafic volcanic rocks, 84: Middle Pleistocene non-alkaline
29 felsic volcanic rocks, 96: Middle Pleistocene non-alkaline pyroclastic flow volcanic
30 rocks, 101: Early Pleistocene non-alkaline mafic volcanic rocks, 102: Late Miocene to
31 Pliocene non-alkaline mafic volcanic rocks, 166: Holocene non-alkaline mafic volcanic
32 rocks, 123: Middle to Late Miocene felsic plutonic rocks, 130: Early to Late Cretaceous
33 felsic plutonic rocks, 1: Late Pleistocene to Holocene marine and non-marine sediments,
34 18: Early Cretaceous marine sedimentary rocks, 26: Permian marine sedimentary rocks,
35 170: Late Pleistocene lower terrace, 171: Late Pleistocene middle terrace, 173: Late
36 Cretaceous non-marine sediments, 44: melange matrix of Early to Late Cretaceous
37 accretionary complex, 60: melange matrix of Early to Middle Jurassic accretionary
38 complex, 77: ultramafic rocks, 190 Holocene reclaimed land [AIST, 2015].