Geology of the Tamanoura district, Goto Islands, Nagasaki Prefecture

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Tamanoura region, southwestern part of Fukue Island, Nagasaki prefecture, is composed of Early to early Middle Miocene sediments (Goto Group), green volcaniclastics, white rhyolite(12.4Ma), and granites(13.2Ma)(Kawata at el.,1994). We did mapping more than 10km*6km area in Tamanoura area, and identified stratigraphy in the Goto Group.

Based on the mapping, this region is divided into 5 blocks; Kurosezaki, Tamanoura, Ohsezaki, Ogose, and Sasame blocks from north to south. The Goto Group is composed mostly of sandstone and shale, and it is divided into 5 formations in ascending order; Ikariyama, Shimayamashima, Inyamase, Ohsezaki, and Harikuchi formations.

1) Ikariyama Formation composed of crossbedded sandstone, and alteration sandstone and mudstone. It is 500m in thickness. Type locality: Ikariyama east to Kurosezaki block. 2) Shimayamashima Formation composed of two members. Lower member is alteration sandstone and mudstone in equal proportion. Upper member is mudstone with thin sandstone beds. It is 200m in thickness. Type locality: Gunkanse in Tamanoura block. 3) Inyamase Formation composed of two members. Lower member is sandstone. Upper member is alteration sandstone and mudstone is alteration sandstone and mudstone. It is 270m in thickness. Type locality: Inyamase in Tamanoura block. 4) Ohsezaki Formation composed of two members. Lower member is alteration sandstone and mudstone rich in sandstone. It is 340m in thickness. Type locality: Ohsezaki in Ohsezaki block. 5) Harikuchi Formation composed of alteration. Upper end is unfound. It is more than 300m in thickness. Type locality: Middle part of Tamanoura block.

Three type faults are identified; 1) NNE-SSW trending normal fault, with drag fold and low angle SSW plunge open fold; 2)E-W left strike-slip fault; and 3) NE-SW right strike-slip fault. The 5 blocks are separated by these fault system.