

## The 1948 Fukui Earthquake Fault and the topographic feature, subsurface geological structure of the Fukui Plain, central Japan.

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Subsurface geological structure and fine geographical feature of the Fukui plain where the 1948 Fukui Earthquake (M7.1) occurred has been investigated by topographic profile survey together with geological survey and re-analysis of drilling data.

The characteristics of the basin structure under Fukui plain are different in the north central area and the southern area. In the north central area, the depth of the basement rocks gets deep toward the west gradually, though sometimes deep rapidly by faults several tens of meters. Along the western linear boundary of the mountains and the plain, the basement becomes rapidly deep to more than 150 meters. In the southern area, the depth is shallowly uneven and in a part the basement rocks come out on the surface of the plain. The linear discrepancy of the depth of the base is recognized along the boundary of the north central area and the southern area.

As for the geographical features of the Fukui Plain, some rivers curve and go straight along the fault, as noted by Tada (1970). In the topographic map, the intervals of the contours are narrow along a fault, and the shape of the fan is deformed. So, we have a measurement of the topographical profiles across the fault in place where the fault displacements were estimated from the topographic map. As a result of the measurements, two types of deformation were recognized in the geographical sections. The first type is the topographic flexure; the slope of the fan becomes steep gradually. The second type is the topographic flexure with a ridge; the slope of the fan becomes gentle, by the place, slopes in the reverse direction, and becomes steep in that front again.

The characteristics of these geographical features look like the deformation of those by a reverse fault, and the position where the fault appears on the surface of the plane seems to deviate to the west about 1km from where it has been estimated so far.