

HQR011-04

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## Geological structure of the Alluvium from the drilling core coastal zone of the Niigata Plain

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Niigata Plain is one of the biggest plain in Japan Sea side. The thickness of the "Chuseki-so" is more than 100m and it is over 160m in the most thick part. We drill 6 bore hole along the Kakuta-Yahiko Faults and coastal zone, and we correct 20 drilling core datum in this zone.

The stratigraphy of the "chuseki-so" in this area, is fluvial deposit (sand ? silt), esturally and marine system (alternation of sand and silt, and marine silt), marine system (fine sand) and fluvial ? dune sediments (sand).

The bore hole of the coastal zone of the Niigata Plain is GS-NIF (145m), GS-NIK (163m), GS-NAK (115m) and GS-SGT(40m) from northeast. (basement depth of "Chuseki-so")

The basement depth of the "Chuseki-so" around the GS-NIF ? GS-NIK is -130m to -160m and gently tilt to the southwest. The depth of the "Chuseki-so" of the GS-SGT was -30m across the Kakuta-Yahiko Faults. From these fact, mean vertical-slip rate of this fault is estimated 3.5-4.0 mm/yr based on the vertical-offsets of the 8.0-9.0 cal kyr BP ravinment surface and the around 5.5 cal kyr BP pumice layer.

Esturally and marine system repeat itself about 4-5 times. The sediment rate of the marine system was fast and esturally is slow. Some sea level rise is corperate to the sea level records from other sites (Barbdos, Tahiti, and Papua New Guinea). In the other side, some sea level rise is cause from the subsidence by the activity of the Kakuda-Yahiko Faults.

We will discuss the geological structure and fault activities from the drilling core around the Niigata Plain.

Keywords: Niigata Plain, Chusekiso, drilling core, stratigraphy