

Three-dimensional grid modeling based on analysis of borehole data

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The article presents a 3D geologic modeling method and applies it to build a subsurface 3D geologic model in the northern Tokyo and southern Nakagawa lowlands and the adjacent upland area. The modeling method, using borehole data for ground survey consists of (1) the surface modeling of the base of the Chuseki-so (the latest Pleistocene to Holocene incised-valley fill) , which has been improved by interpolating borehole data and (2) the 3D grid modeling of lithofacies and *N*-values constrained by the above surface model. The 3D grid model is very useful for not only geologic expression, but also the ground model of seismic response characteristics, because this can be converted to be S-wave velocity and density models.

Keywords: 3D model, ground, grid model, basal surface of the Chuseki-so, Tokyo lowland, borehole data