Caldera-fill deposits in Pliocene Teragi Cauldron-Has the doming occurred?

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Pliocene Teragi Group, which is distributed around the borderland of north Hyogo and Tottori Prefecture, is composed of voluminous (about 77Km3)rhyolitic pyroclastic flow (Lower tuff), caldera-fill deposits (Yudani conglomerate and Haruki mud) and andesitic volcanics (Terada volcanics). Caldera collapse occurred about 3.1Ma along with the eruption of the Lower tuff. The size of the caldera is about 22km (N-S), and about 18 km (E-W). It is estimated that the caldera floor is not flat but piece-meal. The caldera floor exhibits lower gravity anomaly (about 10 mgal) compared with the outside of the caldera. The Yudani conglomerate and the Haruki mud dpositted almostly flat, but various complicated deposits as below are recognized around the southwestern half of the caldera.

Several meter sized blocks derived from the Lower tuff are contained in the Haruku mud.

Some parts of the Haruki mud show perpendicular alternated layers.

Land slides of sand and Mud layers are recognized within the Haruki mud.

The volcanic conglomerate, which covers the Haruki mud, are derived from Terada volcanics. It suggest the imeadiate erosion of the Terada volcanics during deposition of the Haruki mud.

An occurence of basltic hyaloclastite shows a flow into a caldera lake from a land inside of the caldera.

These facts show upheaval inside of the caldera. Intrusions of porphyrite dikes (NNW-SSE elongation) might be related with the upheaval, bur these dykes themselves were eroded during the late stage of the caldera activity.