

Rock texture of clastic ejecta from Kumano Mud volcano

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Clastic ejecta from mud volcanoes in Kumano Basin in the eastern Nankai Trough were analysed. The clastic ejecta are mainly composed of mud stone and mud breccia, and consists of few sandstone. As a result of microscopic observation, two typical features were found in texture of the clastic ejecta. One is that muddy blocks and matrix is tremendously fractured by intruded carbonate vein in irregular direction. The other texture shows that most of grains in sandstone are fractured and the fractures are all filled with authigenic carbonate. And the fractures seem to indicate a specific direction.

Therefore, it can be considered that the former texture indicates hydro fracturing which occurred within a mud diapir while fluidization progressing. And the later is likely shear fracturing which occurred in the margin of mud diapir when the diapir rises up intruding within mother rock.