The origin of Baribis Fault and its relationship to the dynamics of Sunda Arc

Publons ID	(not set)
Wos ID	WOS:001296652100005
Doi	10.55981/risetgeotam.2024.1311
Title	The origin of Baribis Fault and its relationship to the dynamics of Sunda Arc
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Publish Date	2024
Journal Name	RISET GEOLOGI DAN PERTAMBANGAN
Citation	
Abstract	Based on analyses of published geological cross sections along the Baribis Fault, we briefly review several possible mechanisms of this backarc thrust that developed behind the volcanic arc in western Java. There is no general agreement regarding the mechanisms of the backarc thrust. Therefore, the origin of this fault remains uncertain. Previous works proposed that the backarc thrust in western Java may have developed as deformation of paleo-accretionary wedge sediments behind a continental backstop, inverted normal fault, northward migrating thrust belt, and thrusting due to gravitational sliding of the volcanic arc. However, evidences supporting those mechanisms still need to be elucidated. Detailed examination of the available geological data might suggest that backarc thrusting in western Java may have formed due to stress transfer through rigid arc blocks. The far-field stress from the subduction zone is propagated through remnants and modern volcanic arcs and finally, deformed sediments in the Bogor Trough that nucleated as backarc thrust.
Publish Type	Journal
Publish Year	2024
Page Begin	55
Page End	65
Issn	0125-9849
Eissn	2354-6638
Url	https://www.webofscience.com/wos/woscc/full-record/WOS:001296652100005
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