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The vulcanostratigraphy of bregada cililin caldera based on petrography and geomorphology identification, West Java, Indonesia

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The research area is located in Mukapayung and its surroundings, Cililin Sub district, West Bandung District, West Java with total area of 30.58 km². The research area is situated between 107°26'1" E - 107°29'19" E and 6°57'48" S - 7°00'48" S. Geology and geomorphology of the ancient volcanoes were analyzed to divide period of volcanic eruption. Petrographic analysis was also performed by observing microscopic characteristics of volcanic products. Geomorphology was determined by observing in the field and using DEM and SRTM for knowing vulcanostratigraphy of Caldera. The paleovolcanism of Miocene until Pliocene has erupted and formed a Caldera of Cililin Bregada. Three volcano cones known as Solokpandan Khuluk, Lumbung Khuluk, and Gedugan Khuluk composed Cililin Bregada. First erupted volcano, Solokpandan Khuluk has an enormous eruption and formed a caldera. Tectonic Period in Late Miocene – Pliocene formed fractures and faults. Continuity of magmatism generated the marginal eruption of Lumbung Khuluk above Solokpandan Volcanic Rock. Solokpandan Khuluk erupted Solokpandan Volcanic Rocks and Lahar. Lumbung Khuluk erupted Lumbung Pyroclastic Flow 1, Lumbung Lava Flow 2, Lumbung Lava Flow 3, Lumbung Lava Flow 4, Lumbung Lava Flow 5, Lumbung Pyroclastic Flow 6, and Lumbung Pyroclastic Flow 7. Gedugan Khuluk erupted Gedugan Lava Flow 1, Gedugan Lava Flow 2, Gedugan Lava Flow 3, Gedugan Lava Flow 4, and Gedugan Lava Flow 5.

Biography

B Nur Ali is an undergraduate student from Pakuan University - Bogor, West Java. He is researching for his thesis in PT Pertamina Geothermal Energy which studied subsurface alteration and paleotemperature. He is also interested in vulcanology and mining. He has completed several general geology and paleovolcano projects.

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