

## SARI

Pada bagian timur dan timur laut lereng Gunung Slamet Muda dijumpai kenampakan kerucut-kerucut parasit monogenesis yang disebut kerucut sinder atau kerucut skoria. Kerucut skoria tersebut berjumlah 35 buah yang tersebar pada radius 4 - 14 km dari kawah Slamet. Tujuan dari penelitian ini untuk mengetahui pembentukan kerucut skoria dan dinamika magma pada Daerah Serang dan Sekitarnya, Purbalingga, Jawa Tengah. Metode penelitian yang dilakukan yaitu analisis citra landsat 8, analisis geokimia (XRF) serta analisis petrografi. Ditemukan grup kerucut sinder yang terdiri dari dua kerucut yaitu Bukit Lompong A dan Bukit Lompong B. Berdasarkan hukum *cross cutting relationship* serta intensitas erosinya Bukit Lompong B memiliki umur yang lebih muda dibandingkan Bukit Lompong A. Pada daerah penelitian dijumpai beberapa tekstur yaitu *hyalofilitik, intergranular, intersertal, poikilitik, porfiritik, vitrofirik* dan *vesikular*. Kemudian dijumpai mikrotekstur plagioklas berupa *coarse sieve, glomerocrysts, fine-scale oscillatory zoning, synneusis, rounded zone corner, fine sieve, resorption surface, swallow-tail, microlites* dan *broken crystal*. Baik pada Bukit Lompong A maupun Bukit Lompong B memiliki jenis plagioklas yang sama yaitu Labradorite-Bytownite. Pada kasus ini, semakin muda semakin tinggi kandungan anortit yang dapat diinterpretasikan terjadinya diferensiasi magma berupa asimilasi dan pencampuran magma. Batuan piroklastik Bukit Lompong B memiliki sifat picro basalt-basalt sedangkan pada Bukit Lompong A memiliki sifat basalt. Magma pembentuk batuan piroklastik pada daerah penelitian termasuk dalam seri magma alkali basalt atau high-K Calc-Alkaline jenis high K Basalt. Serta magma pembentuk batuan piroklastik daerah penelitian berinteraksi dengan kerak benua.

**Kata Kunci : Gunung Slamet, Kerucut Skoria, Analisis, Citra, Landsat 8, Geokimia, Petrografi, Anortit, Bukit Lompong A, Bukit Lompong B.**

## **ABSTRACT**

*In the eastern and northeastern slopes of Mount Slamet Muda, there are sightings of monogenetic parasitic cone-shaped features known as scoria cones or scoria cones. There are a total of 35 scoria cones scattered within a radius of 4 to 14 km from the Slamet crater. The purpose of this research is to understand the formation of scoria cones and magma dynamics in the Serang and surrounding areas, Purbalingga, Central Java. The research methods employed include Landsat 8 image analysis, geochemical analysis (XRF), and petrographic analysis. A group of scoria cones consisting of two cones, namely Lompong A Hill and Lompong B Hill, was discovered. Based on the cross-cutting relationship law and erosion intensity, Lompong B Hill is younger than Lompong A Hill. Several textures were found in the research area, including hyalophilitic, intergranular, intersertal, poikilitic, porphyritic, vitrophyric, and vesicular textures. Additionally, plagioclase microtextures were found, including coarse sieve, glomerocrysts, fine-scale oscillatory zoning, synneusis, rounded zone corner, fine sieve, resorption surface, swallow-tail, microlites, and broken crystals. Both Lompong A Hill and Lompong B Hill have the same type of plagioclase, which is Labradorite-Bytownite. In this case, the younger the sample, the higher the anorthite content, which can be interpreted as magma differentiation through assimilation and magma mixing. The pyroclastic rocks of Lompong B Hill exhibit picrobasalt-basalt characteristics, while those of Lompong A Hill exhibit basaltic characteristics. The magma forming the pyroclastic rocks in the research area belongs to the alkali basalt or high-K Calc-Alkaline magma series, specifically high K Basalt. Additionally, the magma forming the pyroclastic rocks in the research area interacts with the continental crust.*

**Keywords: Mount Slamet, Scoria Cone, Analysis, Landsat 8 Image, Geochemistry, Petrography, Anorthite, Lompong A Hill, Lompong B Hill.**