

**STUDI PETROGRAFI DAN GEOKIMIA ENDAPAN TRAVERTIN DI  
DAERAH BATURRADEN, KABUPATEN BANYUMAS,  
PROVINSI JAWA TENGAH**

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**SARI**

Mataair panas Pancuran Pitu di kawasan Baturraden memiliki penyebaran endapan travertin yang cukup luas dan bervariasi. Guna mengetahui karakteristik mineralogi dan geokimia serta proses pembentukan endapan travertin di Pancuran Pitu maka dilakukan penelitian menggunakan metode pemetaan geologi, analisis petrografi, *X-Ray Diffractometer*, *X-Ray Fluorescence*, dan analisis *Inductively Coupled Plasma Optical Emission Spectrometry*. Travertin di Pancuran Pitu terendapkan di atas Satuan Andesit yang merupakan produk Vulkanik Muda gunungapi Slamet. Travertin di daerah penelitian secara umum tersusun oleh aragonit, sparit dan mikrit dengan komposisi dominan aragonit. Tipe alterasi pada andesit adalah alterasi propilitik, dicirikan dengan kehadiran mineral klorit. Berdasarkan sifat fisiknya travertin di daerah penelitian di bedakan menjadi 2 tipe, yaitu *amorphous travertine* dan *crystallized travertine*. Berdasarkan konsentrasi Ca, HCO<sub>3</sub>, *Dissolved Inorganic Carbonates*, dan morfologinya, travertin di daerah penelitian termasuk ke dalam tipe travertin termogen. Morfologi travertin tipe termogen di daerah penelitian berupa *mound* dan *cascades*. Sumber Ca bukan berasal dari *breakdown* plagioklas batuan sampling, melainkan dari batuan karbonat yang terendapkan sebelumnya (Formasi Lutut, Formasi Kapung, atau Formasi Damar). Travertin masih mengalami pembentukan hingga saat ini karena suhu air panas yang mengalir di Pancuran Pitu yang berkisar antara 30-52°C masih memungkinkan terbentuknya endapan travertin.

**Kata kunci : travertin, petrografi, geokimia, Pancuran Pitu, Baturraden**

**PETROGRAPHY AND GEOCHEMICAL STUDY OF TRAVERTINE  
DEPOSITS IN BATURRADEN AND SURROUNDING AREA, BANYUMAS  
REGENCY, CENTRAL JAVA PROVINCE**

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**ABSTRACT**

*The travertines were broadly exposed in Pancuran Pitu hot springs, Baturraden area. In order to determine mineralogy and geochemical characteristics as well as the formation of travertine deposits in Pancuran Pitu, these research used some methods. These methods consisted of geological mapping, petrography, X-Ray Diffractometer, X-Ray Fluorescence, and Inductively Coupled Plasma Optical Emission Spectrometry analysis. Travertines in Pancuran Pitu were deposited above Andesite unit that belongs to Young Volcanic Formation of Mount Slamet. Generally, travertine deposits in Pancuran Pitu consisted of aragonite, sparite and micrite while dominated by aragonite. Some of andesites in Pancuran Pitu area have been altered by hydrothermal fluids. The type of alteration was propilitic alteration, characterized by presence of chlorites. Travertines in Pancuran Pitu classified into amorphous travertine and crystallized travertines. Travertines in Pancuran Pitu were thermogen travertine. Morphology of thermogene travertines in Pancuran Pitu consisted of mound and cascades. Source of Ca derived from carbonate rocks that deposited before, such as carbonates rock of Lutut Formation, Kapung Formation, or Damar Formation, instead of derived from breakdown of plagioclase. Travertines in Pancuran Pitu still deposited because the temperature of hot water in Pancuran Pitu was about 30-52°C, appropriate enough for travertines to deposited.*

**Key words : travertine, petrography, geochemical, Pancuran Pitu, Baturraden**