

SARI

Daerah penelitian terletak di Kecamatan Tayan Hilir, Kabupaten Sanggau, Provinsi Kalimantan Barat yang secara regional, merupakan bagian dari Pegunungan Schwaner yang terbentuk pada periode magmatisme Kapur serta bagian dari sabuk laterit bauksit di Kalimantan Barat. Penelitian mengenai studi petrogenesis pada batuan beku di daerah ini masih relatif jarang dilakukan, sehingga dilakukan penelitian ini yang bertujuan untuk mengetahui tipe, komposisi mineralogi, dan karakteristik geokimia batuan beku, serta pembentukan dan asosiasi tektonik batuan beku di daerah penelitian. Metode yang digunakan adalah analisis mineralogi berupa petrografi dan analisis geokimia berupa ICP-MS dan ICP-AES pada 6 sampel batuan. Hasil analisis menunjukkan bahwa batuan beku di daerah penelitian terdiri dari batuan plutonik dan vulkanik yang mencakup 3 variasi komposisi, yaitu batuan mafik, intermediet, dan felsik. Berdasarkan analisis mineralogi, komposisi mineralogi pada batuan mafik didominasi oleh plagioklas dan piroksen, pada batuan intermediet didominasi oleh plagioklas dan klinopiroksen serta kuarsa, sedangkan pada batuan felsik didominasi oleh kuarsa dan plagioklas serta K-feldspar. Berdasarkan analisis geokimia, batuan beku di daerah penelitian memiliki saturasi alumina berupa metalumina – peralumina lemah, afinitas magma kalk-alkalin, dan termasuk ke dalam tipe I. Selain itu, batuan beku di daerah penelitian termasuk ke dalam tipe *Volcanic Arc Granite* (VAG) yang terbentuk dari aktivitas magmatik akibat proses subduksi Paleo-Pasifik pada Kapur Awal. Batuan beku di daerah penelitian berasal dari 3 *parent* yang berbeda dengan tatanan tektonik yang sama, yaitu busur vulkanik akibat subduksi.

Kata kunci: Petrogenesis, batuan beku, mineralogi, geokimia, Schwaner

ABSTRACT

The research area is located in Tayan Hilir District, Sanggau Regency, West Kalimantan, which is part of the bauxite laterite belt in West Kalimantan and regionally part of the Schwaner Mountains that formed during the Cretaceous magmatism period. Research about petrogenesis studies on igneous rocks in this area is relatively rare, so this study is conducted with the aims to determine the type, mineralogical composition, and geochemical characteristics of the igneous rocks, as well as the formation and tectonic association of igneous rocks in the research area. The methods used in this study are mineralogical analysis such as petrography and geochemical analysis such as ICP-MS and ICP-AES on 6 rock samples. From the results of the analysis show that igneous rocks in the research area consist of plutonic and volcanic rocks that include 3 composition variations, mafic, intermediate, and felsic rocks. Based on mineralogical analysis, the mineralogical composition of mafic rocks is dominated by plagioclase and pyroxene, intermediate rocks are dominated by plagioclase and clinopyroxene as well as quartz, while felsic rocks are dominated by quartz and plagioclase as well as K-feldspar. Based on geochemical analysis, the igneous rocks in the research area metaluminous – weak peraluminous, calc-alkaline series, and are classified to I-type. In addition, igneous rocks in the research area are included in the Volcanic Arc Granite (VAG) type which is formed from magmatic activity due to the Paleo-Pacific subduction process in the Early Cretaceous. Igneous rocks in the research area come from 3 different magma sources with the same tectonic setting, volcanic arc due to subduction.

Keywords: *Petrogenesis, igneous rocks, mineralogy, geochemistry, Schwaner*