

STUDI KARAKTERISTIK PETROGRAFI DAN GEOKIMIA BATUAN
METAMORF PADA LOKASI PROSPEKTIF SITUS GEOLOGI (*GEOSITE*)
DI KABUPATEN POSO, SULAWESI TENGAH

SARI

Daerah sebaran *Pompangeo Schist Complex* cukup luas, terutama di mandala Tengah Pulau Sulawesi. Tersingkap variasi batuan metamorf mulai dari derajat rendah sampai derajat tinggi terbentuk di mandala tengah Pulau Sulawesi. Namun, penelitian mengenai karakteristik batuan metamorf di mandala tengah Pulau Sulawesi masih sangat terbatas khususnya di daerah penelitian, yaitu Kabupaten Poso. Oleh karena itu, penelitian ini bertujuan untuk mengetahui karakteristik persebaran batuan metamorf beserta dengan genesanya lalu dihubungkan dengan potensi pengembangan situs geologi (*geosite*). Pada penelitian ini, menggunakan beberapa metode yaitu analisis petrografi, analisis XRF, analisis ICP-MS, dan analisis penilaian potensi situs geologi dari 11 sampel batuan metamorf. Berdasarkan analisis petrografi, terdapat 3 variasi fasies batuan metamorf, yaitu fasies sekis hijau (sekis muskovit, sekis klorit, sekis epidot, filit, dan serpentinit), fasies sekis biru (sekis glaukofan), dan fasies hornfels (marmer). Variasi fasies tersebut menunjukkan bahwa batuan metamorf di Kabupaten Poso merupakan batuan metamorf dengan tipe metamorfisme di zona subduksi. Berdasarkan analisis geokimia, didapatkan batuan asal berupa batuan beku plutonik dan batuan sedimen. Batuan beku plutonik asalnya meliputi diorit, alkalic gabbro, dan peridotit gabbro. Sedangkan untuk batuan sedimennya berupa *shale*. Hasil analisis geokimia yang didapatkan dari hasil analisis XRF berupa oksida mayor yaitu SiO_2 , TiO_2 , Al_2O_3 , Fe_2O_3 , FeO , MnO , MgO , CaO , Na_2O , K_2O , dan P_2O_5 . Sedangkan untuk hasil analisis ICP-MS didapatkan unsur jejak berupa Rubidium (Rb), Molibdenum (Mo), Stronsium (Sr), Itrium (Y), dan Holmium (Ho) yang mengalami pola *depleted*. Sedangkan untuk hasil penilaian potensi situs geologi didapatkan level indeks yang sangat baik dan skor yang tinggi. Nilai ilmiah dan edukasi mendapatkan nilai maksimal yaitu 10, sedangkan untuk nilai aksesibilitas dan *preservation* rata rata mendapatkan nilai 3 dan 4 dikarenakan beberapa situs geologi memiliki akses yang cukup jauh dari jalan raya dan ada beberapa situs geologi yang kondisinya cukup lapuk.

Kata kunci : Batuan Metamorf, Fasies Metamorfisme, Batuan Asal, Situs Geologi, Poso.

*STUDY OF PETROGRAPHIC AND GEOCHEMICAL CHARACTERISTICS OF
METAMORPHIC ROCKS AT PROSPECTIVE GEOLOGICAL SITES IN POSO
REGENCY, CENTRAL SULAWESI*

ABSTRACT

The distribution area of the Pompangeo Schist Complex is quite wide, especially in the Central Mandala of Sulawesi Island. It was revealed that a variety of metamorphic rocks ranging from low grade to high grade were formed in the central mandala of Sulawesi Island. However, research on the characteristics of metamorphic rocks in the central mandala of Sulawesi Island is still very limited, especially in the research area, namely Poso Regency. Therefore, this research aims to determine the distribution characteristics of metamorphic rocks along with their genesis and then relate them to the potential for development of geological sites (geosite). In this research, several methods were used, namely petrographic analysis, XRF analysis, ICP-MS analysis, and geological site potential assessment analysis of 11 metamorphic rock samples. Based on petrographic analysis, there are 3 variations of metamorphic rock facies, namely green schist facies (muscovite schist, chlorite schist, epidote schist, phyllite, and serpentinite), blue schist facies (glaucophane schist), and hornfels (marble) facies. These facies variations indicate that the metamorphic rocks in Poso Regency are metamorphic rocks with a type of metamorphism in the subduction zone. Based on geochemical analysis, the original rock was found to be plutonic igneous rock and sedimentary rock. The original plutonic igneous rocks include diorite, alkalic gabbro, and peridotite gabbro. Meanwhile, the sedimentary rock is in the form of shale. The results of geochemical analysis obtained from the results of XRF analysis are major oxides, namely SiO₂, TiO₂, Al₂O₃, Fe₂O₃, FeO, MnO, MgO, CaO, Na₂O, K₂O, and P₂O₅. Meanwhile, the results of the ICP-MS analysis showed that the trace elements Rubidium (Rb), Molybdenum (Mo), Strontium (Sr), Yttrium (Y), and Holmium (Ho) experienced a depleted pattern. Meanwhile, the results of the assessment of the potential of geological sites obtained a very good index level and a high score. The scientific and educational values received a maximum score of 10, while the average accessibility and preservation scores received scores of 3 and 4 because several geological sites have access that is quite far from the main road and there are several geological sites that are in quite decayed condition.

Keywords: *Metamorphic Rocks, Metamorphic Facies, Original Rocks, Geological Sites, Poso.*