SARI

Pulau Muna tersusun oleh batugamping Kuarter serta kehadiran undak-undak pantai purba yang termasuk dalam Formasi Wapulaka. Pemahaman karakteristik urat dan struktur geologi penting untuk kajian geologi regional dan potensi geologi di Pulau Muna. Penelitian berfokus pada karakteristik mineralogi urat serta pola, tipe, dan mekanisme deformasi struktur geologi yang berkembang di Kecamatan Lakudo dan Kecamatan Gu, Kabupaten Buton Tengah, Provinsi Sulawesi Tenggara. Penelitian didasarkan pada data lapangan meliputi data sesar, urat ekstensional, dan sampel urat serta data sekunder meliputi data geologi dan *Digital Elevation Model* Nasional (DEMNAS). Analisis yang dilakukan meliputi analisis penginderaan jauh, petrografi, sayatan poles, dan *X-Ray Diffraction* (XRD). Kombinasi data dan analisis disajikan dalam peta sebaran struktur, mineralogi urat, peta geologi, dan peta kelurusan.

Hasil penelitian menunjukan produk deformasi yang dijumpai adalah jenis sesar turun yaitu Sesar Wamengkoli, Sesar Labungkari, dan Sesar Wakeakea berarah barat laut-tenggara. Produk deformasi lainnya yaitu urat ekstensional berarah timur laut-barat daya. Kehadiran urat ekstensional di lokasi penelitian merupakan hasil pengisian kekar ekstensional sebagai produk dari proses pengangkatan. Hubungan urat ekstensional dan sesar turun yaitu Sesar Wamengkoli, Sesar Labungkari, dan Sesar Wakeakea terbentuk pada kondisi tektonik pengangkatan hingga pasca-pengangkatan. Proses pengangkatan tektonik merupakan respon terhadap kolisi miring mikrokontinen Buton yang menghasilkan tegasan utama dari arah tenggara. Komposisi mineralogi urat adalah mineral kalsit, maghemit, hematit, dan boehmit yang hadir pada batuan induk *chalky algae rudstone*. Kalsit menyusun material karbonat jenis mikrit, sparit kalsit dalam jumlah kecil, dan jejak fosil cangkang alga dan koral yang dijumpai dalam bentuk pori. Kehadiran mineral kalsit, maghemit, dan hematit didominasi oleh presipitasi fluida batuan induk sedangkan mineral boehmit adalah hasil pengendapan fluida air laut.

Kata Kunci: Struktur ekstensional, urat ekstensional, Formasi Wapulaka, Batugamping Kuarter, pengangkatan tektonik.

ABSTRACT

Muna Island is consists of Quaternary limestones and the presence of paleo beach terraces from the Wapulaka Formation. Understanding the characteristics of veins and geological structures is important for regional geological studies and the geological prospect on Muna Island. The study focuses on the mineralogical characteristics of veins as well as the pattern, type, and deformation mechanism of geological structures that develop in Lakudo and Gu District, Buton Tengah Regency, Southeast Sulawesi Province. This study based on field data includes faults, extensional veins, and vein samples as well as secondary data including geological and Digital Elevation Model Nasional (DEMNAS). The analysis included remote sensing analysis, petrography, ore microscopy, and X-Ray Diffraction (XRD). The combination of data and analysis is presented in the structural map, vein mineralogy, geological map, and lineaments map.

The results showed the deformation products developed in the study area were the result of the northeast-southwest extensional stress. Deformation products that found are normal fault namely Wamengkoli Fault, Labungkari Fault, and Wakeakea Fault trending northwest-southeast. Another deformation product is the extensional veins trending northeast-southwest. The presence of extensional veins at the study site is the result of extensional joints filling as a product of the uplift. The relationship between extensional veins and normal faults namely Wamengkoli Fault, Labungkari Fault, and Wakeakea Fault is formed in uplift to post-uplift. The tectonic uplift process is a response to the oblique collision of the Buton microcontinent which results in remote stress from the southeast. The mineralogical composition of veins consists of calcite, maghemite, hematite, and boehmite minerals present in the chalky algae rudstone as the host rock. Calcite composes carbonate material, small amounts of calcite sparites, and fossilized traces of algal and coral skeletal found in pore form. The presence of calcite, maghemite, and hematite minerals is dominated by the host rock fluid precipitation while the boehmite mineral is the result of the marine fluid deposition.

Keywords: Extensional structures, extensional veins, Wapulaka Formation, Quaternary Limestones, tectonic uplift