

GEOLOGI DAN KARAKTERISTIK EMAS PADA ENDAPAN EPITERMAL SULFIDASI RENDAH DAERAH KERTA, KECAMATAN BANJARSARI, KABUPATEN LEBAK, PROVINSI BANTEN

SARI

Lokasi penelitian secara administratif terletak di Daerah Kerta, Kecamatan Banjarsari, Kabupaten Lebak, Provinsi Banten. Penelitian ini terfokus pada wilayah Izin Usaha Pertambangan milik PT. Suma Heksa Sinergi. Penelitian ini bertujuan untuk mengetahui kondisi geologi daerah tersebut, meliputi geomorfologi, stratigrafi, struktur geologi, alterasi, mineralisasi dan karakteristik emas. Hasil dari analisis karakteristik emas dapat menentukan metode ekstraksi yang dapat disesuaikan dengan karakteristik tersebut (Siti A., 2018). Metode penelitian ini dilakukan dengan empat tahap yaitu tahap pendahuluan (studi pustaka dan interpretasi daerah penelitian), tahap pengambilan data lapangan (pengamatan lapangan serta pengambilan sampel batuan), tahap analisis dan pengolahan data (analisis petrografi, analisis mineragrafi, analisis XRD (*X-Ray Diffraction*) dan analisis struktur geologi). Hasil penelitian ini meliputi satuan geomorfologi yang terbagi menjadi lima satuan yaitu, bentuk lahan perbukitan struktural, perbukitan denudasional, bukit intrusi, bukit lava, dan tubuh sungai. Stratigrafi daerah penelitian yang disusun oleh batuan yang berumur Miosen awal hingga Kuartar yang terbagi menjadi Satuan tuf Cimapag, Satuan batupasir-tufan Malingping, Satuan andesit Gunung Api Kuartar, Satuan lava Gunung Api Kuartar. Struktur geologi dengan total delapan sesar, yaitu empat sesar mendatar, satu sesar naik, dan tiga sesar turun serta kekar berpasangan dengan tegasan *N-S* dan *NW-SE*. Alterasi dibagi menjadi tiga dengan berbagai mineral penciri antara lain, silisik (silika ± kaolinit), argilik (kaolinit ± smektit ± siderit ± ilit ± monmorilonit ± klorit), propilitik (klorit ± smektit ± epidot). Mineralisasi daerah penelitian didominasi oleh sistem urat dan *stockwork* dengan berbagai tekstur antara lain *massive chalcedonic*, *comb/dogteeth*, *cavities infilling*, *cockade*, *crustiform-colloform*, *saccharoidal*, *lattice bladed* dan *cavities infilling*. Hadir mineral bijih berupa pirit, *native Ag*, *native Au* dan sfalerit. Karakteristik emas pada daerah penelitian bersifat *visible gold* dan hadir pada mineral *gangue* berupa kuarsa tanpa mineral sulfida atau sebagai *free gold* dengan ukuran butir berkisar 6 sampai 8 mikron. daerah penelitian termasuk ke dalam endapan epitermal sulfidasi rendah berdasarkan parameter-parameter yang diidentifikasi serta terletak pada super zona *chalcedonic* dan *crustiform-colloform*.

Kata kunci: Alterasi, Emas, Epitermal, Geologi, Mineralisasi.

**GEOLOGY AND GOLD CHARACTERISTIC IN LOW
SULFIDATION EPITHERMAL DEPOSIT IN KERTA,
BANJARSARI DISTRICT, LEBAK REGENCY, BANTEN
PROVINCE**

ABSTRACT

The research location is administratively located in the Kerta area, Banjarsari District, Lebak Regency, Banten Province. This research focuses on the Mining Business License area owned by PT. Suma Heksa Synergy. This research aims to determine the geological conditions of the area, including morphology, stratigraphy, geological structure, alteration, mineralization, and gold characteristics. The results of the analysis of gold characteristics can determine an extraction method that can be adapted to these characteristics. This research method was carried out in four stages, namely the preliminary stage (literature study and interpretation of the research area), the field data collection stage (field observations and rock sampling), the analysis and data processing stage (petrographic analysis, mineragraphic analysis, XRD (X-Ray) analysis Diffraction) and geological structure analysis). The results of this research include geomorphological units, which are divided into five units: structural hills, denudational hills, intrusive hills, lava hills, and river bodies. The stratigraphy of the research area is composed of rocks of early Miocene to Quaternary age, which are divided into the Cimapag tuff unit, Malingping sandstone-tuff unit, Volcanic Quarter andesite unit, Volcanic Quarter lava unit. Geological structure has eight faults, namely four strike-slip faults, one thrust fault, three thrust faults, and paired joints with N-S and NW-SE lines. The alteration is divided into three with various characteristic minerals, including silicic (silica ± kaolinite), argillic (kaolinite ± smectite ± siderite ± illite ± montmorillonite), propylitic (chlorite ± smectite ± epidote). Mineralization in the research area is dominated by vein and stockwork systems with various textures including massive chalcedonic, comb/dogteeth, infilling cavities, cockade, crustiform-colloform, saccharoidal, lattice bladed and infilling cavities. There are ore minerals in the form of pyrite, native Ag, native Au and arsenic. The characteristics of gold in the research area are visible gold and is present in gangue minerals in quartz without sulfide minerals or as free gold with grain sizes ranging from 6 to 12 microns. Based on the parameters identified, the research area is included in low sulfidation epithermal deposits and is located in the chalcedonic and crustiform-colloform super zones.

Keywords: Alteration, Epithermal, Geology, Gold, Mineralization