

**GEOLOGI, ALTERASI HIDROTERMAL, DAN MINERALISASI BIJIH
ENDAPAN EPITERMAL SULFIDASI RENDAH-MENENGAH DESA
NEGLASARI, KECAMATAN CIBEBER, KABUPATEN LEBAK,
PROVINSI BANTEN**

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Daerah penelitian berada di Desa Neglasari, Kecamatan Cibeber, Kabupaten Lebak, Provinsi Banten yang merupakan bagian dari kompleks kubah Bayah. Penelitian ini bertujuan untuk mengetahui kondisi geologi yang mengontrol alterasi dan mineralisasi, karakteristik alterasi dan mineralisasi bijih, fluida hidrotermal, dan model genetik dari endapan bijih di daerah penelitian.

Metode penelitian yang digunakan meliputi pemetaan geologi dan alterasi permukaan, serta analisis laboratorium yang terdiri dari petrografi, mikroskopi bijih, XRD, FA-AAS, dan inklusi fluida.

Hasil penelitian menunjukkan bahwa geologi daerah penelitian berupa perbukitan aliran piroklastik dan lava berlereng terjal yang tersusun oleh litologi berupa satuan batupasir serta breksi tuf dan lava andesit yang berperan sebagai *host rock* dengan struktur geologi terdiri dari kekar, sesar turun (*pre*-mineralisasi), sesar geser dekstral berarah timur laut-barat daya (*syn*-mineralisasi), dan sesar geser berarah barat laut-tenggara (*post*-mineralisasi) yang membentuk lingkungan *dilational* dengan tipe bukaan *tension fracture* dan *jog*. Tipe alterasi yang berkembang terdiri dari zona silifikasi (kuarsa+kristobalit), *clay*-silika (illit+ kuarsa), argilik (illit±kuarsa±klorit), dan propilitik (klorit+epidot+kuarsa±illit). Mineralisasi didominasi dalam bentuk urat hidrotermal dengan tekstur masif, *colloform-crustiform*, *breccia*, *lattice bladed*, *comb*, dan *sacharoidal*. Mineral bijih yang dijumpai berupa emas dan perak (*native*), pirit, kalkopirit, sfalerit, galena, tennantit-tetrahedrit, kovelit, *malachite*, hematit, dan goethit sementara mineral *gangue* yang dijumpai berupa kuarsa, illit, epidot dan kalsit. Kadar tertinggi untuk tiap jenis logam yaitu Au 8,17 ppm, Ag 113,6 ppm, Cu 1,23%, Pb 1,28%, dan Zn 1,20%. Keterdapat emas-perak umumnya berasosiasi dengan urat bertekstur *colloform* dan *breccia*, sementara logam dasar berasosiasi dengan urat masif. Fluida hidrotermal yang membentuk endapan bijih berasal dari fluida meteorik dengan temperatur 221,8°-279,38°C dengan salinitas 0,36-1,31 wt% NaCl *eq*. Berdasarkan karakteristik tersebut dapat diketahui bahwa endapan epitermal di daerah penelitian termasuk tipe sulfidasi rendah-menengah dengan proses pembentukan pada kedalaman sekitar 258-700 m di bawah *paleosurface* yang terbagi menjadi 4 tahap yaitu *early epithermal stage*, *middle epithermal stage*, *late epithermal stage*, dan *supergene*.

Kata kunci: Cibeber, epitermal, sulfidasi rendah-menengah, tekstur urat.

***GEOLOGY, HYDROTHERMAL ALTERATION, AND ORE
MINERALIZATION OF LOW-INTERMEDIATE SULFIDATION
EPITHERMAL DEPOSIT NEGLASARI AREA, CIBEBER DISTRICT,
LEBAK REGENCY, BANTEN PROVINCE***

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The research area is located in Neglasari Area, Cibeber District, Lebak Regency, Banten Province which is part of Bayah dome complex. This research is aimed to understand the geological control towards alteration and mineralization, hydrothermal alteration and ore mineralization characteristics, hydrothermal fluid, and genetic model of the ore deposit in this area.

The methods used comprise surfacial geology and alteration mapping combined with several laboratory analysis including petrography, ore microscopy, XRD, FA-AAS, and fluid inclusion.

The results of this research indicates that geological conditions are steeped pyroclastic and lava hills consist of sandstone, tuff breccia, and andesitic lava unit as the host rocks with geological structure framework consists of joints, normal fault (pre-mineralization), NE-SW dextral strike-slip faults (syn-mineralization), NW-SE strike slip faults (post-mineralization) which formed dilational environment with tension fracture and jog vein opening types. Alteration zone can be divided into silicification zone (quartz+cristobalite), clay-silica (illite+quartz), argillic (illite±quartz±chlorite), and propylitic (chlorite+epidote+quartz±illite). Mineralization is dominated by hydrothermal veins with several textures including massive, colloform-crustiform, breccia, lattice bladed, comb, and saccharoidal. Ore minerals which can be found are native gold and silver, pyrite, chalcopyrite, sphalerite, galena, tennantite-tetrahedrite, covellite, malachite, hematite, and goethite while the gangue minerals are quartz, illite, epidote, and calcite. The highest grade of each metal is Au 8,17 ppm, Ag 113,6 ppm, Cu 1,23%, Pb 1,28%, and Zn 1,20%. The occurrence of precious metals is associated with colloform and breccia veins while the base metals is associated with massive veins. Hydrothermal fluid is derived from meteoric water with temperature 221,8°-279,38°C and salinity 0,36-1,31 wt% NaCl eq. Based on the characteristics above, the epithermal deposit in this research area can be categorized as low-intermediate sulfidation type where the mineralization depth is about 258-270 m below paleosurface and it was formed by 4 stages including early epithermal stage, middle epithermal stage, late epithermal stage, and supergene.

Keywords: Cibeber, epithermal, low-intermediate sulfidation, vein texture.