

KARAKTERISTIK ALTERASI DAN MINERALISASI
TAMBANG BAWAH TANAH PROSPEK ZHR LEVEL 460-477
DAERAH PONGKOR, KECAMATAN NANGGUNG, KABUPATEN BOGOR,
PROVINSI JAWA BARAT

SARI

Daerah penelitian terletak di Kecamatan Nanggung, Kabupaten Bogor, Provinsi Jawa Barat yang merupakan wilayah Izin Usaha Pertambangan Operasi Produksi milik Unit Bisnis Pertambangan Emas Pongkor, PT. ANTAM Tbk. Tujuan dari penelitian ini adalah untuk mengidentifikasi karakteristik alterasi dan mineralisasi pada daerah penelitian berdasarkan analisis megaskopis atau pengamatan lapangan berupa pemetaan bawah permukaan dan deskripsi sampel hasil pemetaan maupun sampel inti bor dan pengamatan mikroskopis berupa analisis petrografi, analisis mikroskopis bijih, analisis *X-Ray Diffraction* (XRD), analisis *X-ray Fluorescence* (XRF), analisis *Fire Assay* (FA) serta analisis *Scanning Electron Microscope* (SEM). Sampel batuan meliputi sampel pemetaan dari 2 bukaan tambang serta 1 akses bukaan tambang dan data hasil deskripsi geologi dari 2 lubang inti bor. Hasil penelitian menunjukkan bahwa satuan batuan yang menyusun daerah penelitian terdiri dari 3 satuan, yaitu Satuan Breksi Tuf, Satuan Tuf Lapili dan Satuan Intrusi Andesit. Zona alterasi yang terdapat pada daerah penelitian terdiri dari 3 zona, yaitu Zona Kuarsa + Kalsit – Klorit – Smektit ± Ilit (Propilitik 1), Zona Kuarsa – Kalsit – Klorit – Adularia ± Epidot (Propilitik 2) dan Zona Kuarsa – Ilit ± Smektit (Argilik). Mineral bijih yang teramati pada daerah penelitian berupa mineral Pirit, Sfalerit, Galena, Kalkopirit dan Kovelit. Keberadaan mineralisasi tersebut merupakan indikasi kasar pembentukan sistem urat. Karakteristik dari himpunan mineral alterasi pada daerah penelitian mengindikasikan tipe mineralisasi berupa sistem urat epitermal sulfidasi rendah dengan beberapa karakteristik tekstur urat yang dijumpai diantaranya *banded (crustiform, colloform)* dan *bladed calcite* serta kehadiran mineral Adularia pada daerah penelitian.

Kata Kunci: Alterasi, Mineralisasi, Pongkor, Epitermal Sulfidasi Rendah, Mineragrafi

CHARACTERISTICS OF UNDERGROUND MINING ALTERATION AND MINERALIZATION AT ZHR PROSPECT LEVEL 460-477 PONGKOR AREA, NANGGUNG SUBDISTRICT, BOGOR DISTRICT, WEST JAVA PROVINCE

ABSTRACT

The research area is located in Nanggung District, Bogor Regency, West Java Province, where this location is a Production Operation Mining Business Permit area belonging to the Pongkor Gold Mining Business Unit, PT. ANTAM Tbk. The aim of this study are to identify the characteristics of alteration and mineralization in the research area based on megascopic analysis or field observations in the form of underground mapping and description of mapping samples also drill core samples and microscopic observations in the form of petrographic analysis, ore microscopic analysis of ore, X-Ray Diffraction (XRD) analysis, X-ray analysis Fluorescence (XRF), Fire Assay analysis (FA) and Scanning Electron Microscope (SEM)S analysis. Rock samples include mapping samples from 2 front mining and 1 mine front access and geological description data from 2 drill core holes. The research results show that the rock units that make up the research area consist of 3 units, namely the Tuff Breccia Unit, the Lapilli Tuff Unit and the Andesite Intrusion Unit. The alteration zone in the research area consists of three zones, namely the Quartz + Calcite - Chlorite – Smectite ± Illite Zone (Propylitic 1), the Quartz – Calcite – Chlorite – Adularia ± Epidote Zone (Propylitic 2), and the Quartz – Illite ± Smectite Zone (Argilic). The ore minerals observed in the research area are Pyrite, Sphalerite, Galena, Chalcopyrite and Covellite. The presence of mineralization is a rough indication of the formation of a vein system. The characteristics of the alteration mineral assemblage indicate the type of mineralization in the form of a low sulfidation epithermal vein system with several vein texture characteristics found including banded (crustiform, colloform) and bladed calcite as well as the presence of Adularia minerals in the study area.

Keywords: Alteration, Mineralization, Pongkor, Low Sulphidation Epithermal, Mineragraphy