

ABSTRAK

GEOLOGI DAN STUDI PENGARUH BATUAN ASAL TERHADAP KARAKTERISTIK ENDAPAN BAUKSIT LATERIT DAERAH NANGA TAYAP, KETAPANG, KALIMANTAN BARAT

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Daerah Tayap, Kecamatan Nanga tayap, Kabupaten Ketapang, Kalimantan Barat merupakan salah satu wilayah dengan potensi endapan bauksit laterit yang cukup besar. Endapan ini terbentuk akibat proses lateritisasi batuan beku berkomposisi asam hingga intermediet yang kaya akan aluminium. Penelitian ini bertujuan untuk mengetahui kondisi geologi daerah penelitian, serta menganalisis pengaruh batuan asal terhadap karakteristik endapan bauksit laterit. Metode penelitian dilakukan dengan pemetaan geologi permukaan, pengambilan sampel laterit, serta analisis laboratorium berupa analisis petrografi dan analisis *X-Ray Fluorescence* (XRF). Selain itu juga dilakukan interpretasi data fisik endapan, data mineralogi, data geokimia, terhadap karakteristik endapan bauksit laterit dari total 168 titik pemboran. Berdasarkan hasil pemetaan diketahui Litologi dan Stratigrafi yang menyusun daerah penelitian adalah Satuan Syenogranite Sukadana (KuS), Satuan Granodiorit Sukadana (KuS), dan Endapan Gambut Rawa (Qa) dengan struktur geologi sesar mendatar kiri, dan kekar gerus. Hasil penelitian pada endapan bauksit laterit menunjukkan bahwa profil yang ada pada daerah penelitian meliputi beberapa horizon, yaitu terdiri dari horizon *Overburden*, horizon *Ore Bauxite*, horizon *Kong*, dan horizon *Bedrock / Parent Rock*. Persebaran endapan dibagi menjadi 3 Hill, yaitu Hill Syenogranite, Hill Granodiorit Utara, dan Hill Granodiorit Selatan. Dihasilkan ketebalan bauksit terbesar yaitu pada Hill Granodiorit Selatan dengan rata-rata tebal 6,77 meter. Kandungan geokimia Al_2O_3 pada horizon bauksit berbanding lurus dengan kadar K-Feldspar pada batuan asal Syenogranite dan Granodiorit, serta berbanding terbalik dengan kadar SiO_2 . Sehingga dihasilkan kandungan total Al_2O_3 melalui *composite data* pada Hill Syenogranite dengan rerata 52,89 % Al_2O_3 , Hill Granodiorit Utara 45,71 % Al_2O_3 , dan Granodiorit Selatan 46,34 % Al_2O_3 . Kandungan Al terbanyak berada di Hill Syenogranite dikarenakan pengaruh batuan asal pada kandungan mineral K-Feldspar yang lebih banyak daripada Granodiorit dan derajat laterisasi yang tergolong strong laterization, dimana laterisasi yang kuat membantu proses pelindian silika dan pengkayaan aluminium yang optimal. Sehingga dihasilkan persebaran kualitas bauksit pada peta *isograde* dengan kualitas bauksit terbaik yaitu (Moderate - High Grade Bauxite) atau (45 - >50% Al_2O_3) berada di Hill Syenogranite.

Kata kunci: Bauksit Laterit, Batuan Asal, Geologi, Tayap.

ABSTRACT

GEOLOGY AND STUDY OF THE PARENT ROCK INFLUENCE ABOUT CHARACTERISTIC OF BAUXITE LATERITE DEPOSITS IN NANGA TAYAP, KETAPANG, WEST KALIMANTAN PROVINCE

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Tayap Area, Nanga Tayap District, Ketapang Regency, West Kalimantan is one of the areas with a fairly large potential for laterite bauxite deposits. This precipitate is formed due to the lateritization process of igneous rocks composed of acid to intermediates rich in aluminum. This research aims to find out the geological conditions of the research area, as well as analyze the influence of the original rock on the characteristics of laterite bauxite deposits. The research method was carried out by surface geological mapping, laterite sampling, as well as laboratory analysis in the form of petrographic analysis and X-Ray Fluorescence (XRF) analysis. In addition, the interpretation of physical deposition data, mineralogy data, geochemical data, and the characteristics of laterite bauxite deposits from a total of 168 drilling points was also carried out. Based on the mapping results, it is known that the Lithology and Stratigraphy that compose the research area are the Sukadana Syenogranite Unit (KuS), the Sukadana Granodiorite Unit (KuS), and the Swamp Peat Deposition (Qa) with a left horizontal fault geological structure, and a burly burly structure. Research results on laterite bauxite deposits show that the existing profile in the research area includes several horizons, namely Overburden horizon, Ore Bauxite horizon, Kong horizon, and Bedrock / Parent Rock horizon. The distribution of sediments is divided into 3 Hills, namely Quartz SyenograniteHill, North Granodiorite Hill, and South Granodiorite Hill. The largest thickness of bauxite is produced in the South Hill Granodiorite with an average thickness of 6.77 meters. The geochemical content of Al₂O₃ in the bauxite horizon is directly proportional to the level of K-Feldspar in the quartz and Granodiorite stones, and is inversely proportional to the level of SiO₂. So that the total content of Al₂O₃ is produced through composite data on Hill SyenograniteQuartz with an average of 52,89 % Al₂O₃, Hill North Granodiorite 45,71 % Al₂O₃, and South Granodiorite 46,34 % Al₂O₃. The most Al content is in Hill Syenogranite due to the influence of the original rock on the mineral content of K-Feldspar which is more than Granodiorite and the degree of laterization which is classified as strong laterization, where strong laterization helps the process of silica laching and optimal aluminum enrichment. So that the distribution of bauxite quality on the isograde map with the best bauxite quality is produced, namely (Moderate - High Grade Bauxite) or (45 - >50% Al₂O₃) located in Syenogranite Hill.

Keywords: Lateritic Bauxite, Parent Rock, Geology, Tayap.