

ABSTRAK
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Daerah penelitian berada di area pertambangan nikel laterit PT. Trimegah Bangun Persada pada wilayah Kawasi, Kecamatan Obi, Kabupaten Halmahera Selatan, Provinsi Maluku Utara. Secara geografis daerah penelitian terletak pada koordinat X: 327426-325924, Y: 9830363-9833363 UTM (*Universal Transverse Mercator*) WGS 1984 Z52S.

Pola pengaliran pada daerah penelitian merupakan pola pengaliran ubahan berupa pola pengaliran sub-trellis yang mengalir ke arah tenggara dan barat laut. Morfologi penyusun daerah penelitian yaitu bentuk asal denudasional dan antropogenik dengan bentuklahan perbukitan denudasional (D1) dan lahan bukaan tambang (A1). Morfologi perbukitan denudasional merupakan bentuklahan dominan yang ada di lokasi penelitian. Stratigrafi daerah penelitian disusun oleh hazburgit, dan serpentinit dengan umur Jura. Struktur geologi yang berkembang di lokasi penelitian berupa hasil interpretasi data assay bor perusahaan dan data citra satelit. Sesar naik berarah timurlaut-baratdaya, sesar dekstral berarah baratlaut-tenggara, dan sesar normal berarah timurlaut-baratdaya.

Metode penelitian dilakukan dengan analisis geologi deskripsi litologi lapangan dan mikroskopis serta pengukuran data struktur dan analisis streonet dan perbandingan sampel XRF hasil analisis lab plan mining dan produksi. Unsur Ni dan Fe pada daerah penelitian ditambang oleh PT. TBP di dua lokasi, yaitu Pit Utara dan Pit Selatan.

Tujuan penelitian ini adalah untuk mengetahui kondisi geologi dan perbandingan kadar Ni-Fe pada daerah penelitian berdasarkan data *Sample Plan Mining* dan Data Aktual Produksi pada daerah penelitian

Perbedaan nilai kadar pada sampel plan mining disebabkan material yang diambil untuk analisis sampel plan mining merupakan material tumpukan hasil penambangan langsung yang tersusun oleh material dari horizon zona transisi (zona batas limonit-saprolit yang memiliki nilai Fe dan Ni yang tinggi) dan saprolit, sedangkan Perbedaan nilai kadar pada sampel aktual produksi disebabkan material sampel aktual produksi merupakan material gabungan dari semua tumpukan dengan grade rata-rata yang sudah *diloaded* dan *diblending* ke *stockpile*.

Kata Kunci: kadar, laterisasi, obi, penambangan, sampel

ABSTRACT

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The research area is in the laterite nickel mining area of PT. Trimegah Bangun Persada in the Kawasi area, Obi District, South Halmahera Regency, North Maluku Province. Geographically, the research area is located at coordinates X: 327426-325924, Y: 9830363-9833363 UTM (Universal Transverse Mercator) WGS (World Geodetic System) 1984 zone 52S.

The drainage pattern in the research area is a modified drainage pattern in the form of a sub-trellis drainage pattern that flows towards the southeast and northwest. The morphology of the research area is of denudational and anthropogenic origin with denudational hills (D1) and mine openings (A1). The morphology of denudational hills is the dominant landform in the research location. The stratigraphy of the study area is composed of hazburgite and serpentinite of Jurassic age. The geological structure that develops at the research location is the result of interpretation of company drill assay data and satellite image data. Thrust faults trend northeast-southwest, dextral faults trend northwest-southeast, and normal faults trend northeast-southwest.

The research method was carried out using geological analysis, description of field and microscopic lithology as well as measurement of structural data and strome analysis and comparison of XRF samples resulting from mining and production plan lab analysis. The Ni and Fe elements in the research area were mined by PT. TBP in two locations, namely North Pit and South Pit.

The aim of this research is to determine the geological conditions and comparison of Ni-Fe levels in the research area based on Sample Plan Mining data and Actual Production Data in the research area.

The difference in grade values in the mining plan samples is due to the material taken for analysis of the mining plan samples being pile material resulting from direct mining which is composed of material from the transition zone horizon (limonite-saprolite boundary zone which has high Fe and Ni values) and saprolite, while the difference The grade value in the actual production sample is because the actual production sample material is a combined material from all piles with an average grade that has been loaded and blended into the stockpile.

Keywords: *rate, laterization, obi, minning, sample*