

ABSTRAK

IDENTIFIKASI NIKEL LATERIT MENGGUNAKAN METODE GEOLISTRIK RESISTIVITAS WENNER ALPHA DI DAERAH SANGAJI MORONOPO HALMAHERA TIMUR MALUKU UTARA

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Telah dilakukan penelitian geofisika dengan metode geolistrik di daerah Moronopo Sangaji Halmahera Timur Maluku Utara dengan menggunakan Resistivity Wenner Alpha. Penelitian bertujuan untuk mengetahui lokasi nikel laterit secara horisontaldan memetakannikel secara 2-D dan 3-D didasarkan pada perbedaan nilai resistivitas nikel laterit daerah penelitian.

Pengukuran dilakukan sebanyak 6 lintasan dengan panjang lintasan 325 meter, selanjutnya pengolahan dan pemodelan data geolistrik menggunakan software *Res2dinv* dan *Rockwork*. Hasil yang diperoleh dari penelitian ini dimana Nikel laterit dibagi menjadi dua zona ekonomis, yaitu zona limonit dan zona saprolit. Nilai resistivitas nikel laterit di daerah sangaji moronopo halmahera timur maluku utara berkisar antara 130-200 ohm.m untuk zona limonit sedangkan untuk zona saprolit antara 220-370 ohm.m. Model resistivitas menunjukkan bahwa nikel laterit memiliki ketebalan berkisar 15-30 meter.

Kata kunci : resistivitas, wenner alpha, nikel laterit.

ABSTRACT

IDENTIFICATION OF LATERIT NICKEL USING GEO-ELECTRIC METHOD OF RESISTIVITY WENNER ALPHA IN SANGAJI MORONOPO AREA IN EAST HALMAHERA, NORTH MALUKU

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A geophysics research has been carried out using geo-electric method at MonoropoSangaji area in East Halmahera, North Maluku using Resistivity Wenner Alpha. This research's purpose is to find the location of laterit nickel horizontally and mapping nickel on 2D and 3D based on the difference of resistivity value of laterit nickel at the research site.

The measuring was done by six trajectory with 325 meters long, and then the processing and geo-electric data modeling were carried out by using Res2dinv and Rockwork software. The results from this research is that laterit nickel is divided into two economical zones; limonit zone and saprolit zone. Resistivity value of laterit nickel at the research site is about 130-200 ohm.m for limonit zone, while for the saprolit zone is about 220-370 ohm.m. Resistivity model has shown that laterit nickel's thickness is arranging from 15-30 meters.

Key word(s): resistivity, wenner alpha, laterit nickel.