

ABSTRACT

Prediction of the spread of iron ore in the region of PT. Buana Asia Metalindo using geoelectric and geomagnetic methods. Geoelectric measurements using a resistivity meter model of ARES (Automatic Resistivity) and geomagnetic measurements using a magnetometer GEM SYSTEM.

In principle, geoelectric measurements is to obtain resistivity values of the constituent rock bedding under the surface , while the geomagnetic measurement is to determine the value of the magnetic anomaly arising from subsurface rock constituent . However, if only using the two methods so the hematite iron ore can't be detected , therefore , the addition of the geoelectric measurements the method Induced Polarization (IP) , this method is a method to detect the presence of metal levels based on the decay time when the electric current is switched off suddenly. With these three methods it is known the existence of magnetite iron ore and hematite iron ore. The geoelectrical investigation use a Wenner – Alpha configuration. It was restricted to the variation determination of resistance subsurface according to vertical and horizontal. The geomagnetic method is used because iron ore having a magnet can provide a image about spread of iron ore at subsurface based on the anomaly of a magnetic field.

Based on data acquisition, processing and data interpretation of geomagnetic and geoelectrical, there are several cross section of measurement having iron ore potential. cross section which is considered as prospects for detail investigated by core drilling in line:

- a) Titik bor 1 di lintasan 1 pada koordinat X= 175174, Y= 9442780
- b) Titik bor 2 di lintasan 1 pada koordinat X= 175133, Y= 9444888
- c) Titik bor 3 di lintasan 2 pada koordinat X= 175510, Y= 9442431
- d) Titik bor 4 di lintasan 2 pada koordinat X= 175519, Y= 9442332
- e) Titik bor 5 di lintasan 3 pada koordinat X= 175468, Y= 9442386
- f) Titik bor 6 di lintasan 3 pada koordinat X= 175546, Y= 9446798
- g) Titik bor 7 di lintasan 4 pada koordinat X= 175161, Y= 9442306
- h) Titik bor 8 di lintasan 7 pada koordinat X= 175131, Y= 9442288
- i) Titik bor 9 di lintasan 8 pada koordinat X= 174716, Y= 9442146