

Effectiveness of Geophysical Methods for Exploration of Volcanogenic Massive Sulfide (VMS) Ore Deposits in Porava-Miliska-Geraj Area, Albania

Idriz Jata¹, Ibrahim Milushi^{1*},

¹*Institute of Geosciences, Energy, Water and Environment, Polytechnic University of Tirana, Albania*

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Abstract: High-Ti basalts intercalated by argillaceous and argillaceous – radiolarite constitute the volcano-sedimentary formation of Porave - Miliska – Geraj area. As compared to the other areas the ratio between basalts and intercalations composed of argillaceous and argillaceous – radiolarite is different. Basalts in Porave - Miliska – Geraj area constitute over than 70 %, whereas in the other areas they constitute lower than 50 %. In the area are identified over than 40 sulphide showings. Based on the exploration works carried out up to now, in five showings are evaluated over than 30000 tons ore in each of them. In Porava deposit, the biggest in the area, are evaluated about 350000 tons ore. In the last part of twentieth century, the area of field-spreading of volcano-sedimentary formation is covered with complex geological-geophysical works. The complex geological – geophysical mapping is carried out with 50x20 m grid, but in small sectors of the showings the grid is denser. These works have identified numerous of IP anomalies related to known ore bodies and in sectors with no ore showings. Measurements of IP with Dinpol apparatus provide clear differences between the ore body and surrounding rocks (Porave deposit case). The method of body charged also gives very good results (case of Geraj ore deposit).

Keywords: *volcano-sedimentary formation, sulphide ore, Dinpol measurements, IP measurements.*

* Corresponding: E-Mail: ibrahimmilushi@yahoo.com; Tel: +355682011052; Fax: +35542232887