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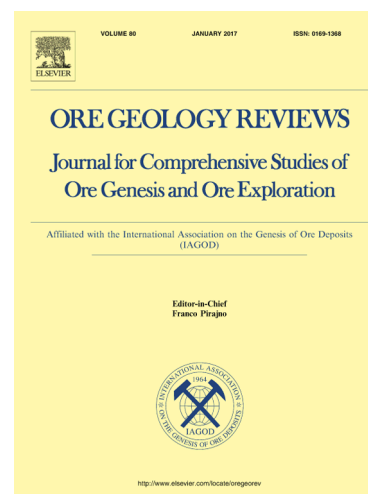
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A pilot study to test the reliability of the ERT method in the identification of mixed sulphides bearing dykes: the example of Sidi Flah mine (Anti-Atlas, Morocco)

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ABSTRACT

A multidisciplinary study, comprising geological, petrographical and geophysical methods, was carried out for the identification and the geometrical and volumetric assess of the main mineralized bodies (mixed sulphides, Zn-Pb and Fe-Cu) in the area of the Anti-Atlas chain, located at SW of the town of Sidi Flah (Ouarzazate, Morocco). The initial phase of exploration involved an extensive fieldwork (structural investigations and sampling) and a detailed survey for verifying the effectiveness and reliability of the Electrical Resistivity Method (ERT). Geological fieldworks and laboratory analyses played a fundamental role in identifying the resistivity anomalies and constraining tomographic results. Main issues we focused on are: i) mineralized bodies imaging according to the electrodic step; ii) consistency with geometry of mineralized bodies; iii) contrast of electrical resistivity between mineralized dykes and host rocks; iv) possible correlations between the type and amount of sulphides and electrical resistivity.

KEYWORDS: ERT; Structural investigation; Mixed sulphides; Petrographical analyses; Anti-Atlas; Morocco

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