

## **Discovery of Banded iron formations mineralization in the Takeroumt area, Bou Azzer-El Graara inlier, central Anti-Atlas Morocco**

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The district of Bleida corresponds to a structure oriented NW-SE which extends about 11 km in length. It is located in the SE of the Bou Azzer-El Graara inlier, in the central Anti-Atlas, Morocco, and in the north border of West African Craton.

It is one of the most remarkable examples of copper mineralization in Morocco. Sometimes, it is cross-cut by veins of white sterile quartz, hematite quartz, or hematite corridors. These veins are exploited for orogenic gold, that [Wafik et al. \(2000\)](#) attribute to a Cauê Mine.

The natural concentrations of hematite represent a geological phenomenon of a regional character, closely localized in the northern border of Bou Azzer-El Graara inlier. In our study area, we encountered lithological formations, either magmatic or metamorphic quartz-ferruginous formations which accompanied amphibolite schist. These deposits are located within early Neoproterozoic sequence of Takeroumt area. They correspond lithologically to rocks formed by alternations of beds, millimetric to centimetric thickness in general, of pure silica and of a mixture of silica and hematite in southwestern part of El Graara.

To establish any structural, petrographic and geochemical relationship among lithological hosted facies in Takeroumt deposits, and tectonic setting, we sampled the Takeroumt deposits sequence. We also mapped the area and studied the relation between ore body and tectonic structures. The samples were subject to petrographic, metallographic, microstructural, and geochemical study (in DLGR, Laboratory, Semlalia Sciences Faculty, Marrakech).

This formation has a perfect ribbon texture which is very obvious. It is parallel to the  $S_0$  stratification and is affected by the pan-African  $S_1$  schistosity. The ribboning is very well marked and gives the rock its typical macroscopic appearance, typical appearance of Banded Iron Formation (BIF).

In this type of deposits, the mineralization occurs in compact rock, following bands with well-marked bedding and conformable with that of the surrounding gneiss and amphibolite.