

## MICACEOUS HEMATITE DEPOSIT FROM MUZAFFARABAD, AZAD KASHMIR (PAKISTAN)

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### Abstract

Micaceous hematite (iron) deposit has been found in the Bala Pir, Bela Noor Shah and surrounding areas of Muzaffarabad District, Azad Kashmir, Pakistan. By tectonic setting these micaceous hematite is sandwiched in the western limb of Hazara-Kashmir syntaxis. The Bala Pir and Bela Noor Shah areas are located in the Northern part of Muzaffarabad city just before the Chela Bandi. These areas are located just close to metalled road. The Muzaffarabad is well connected via metalled road with Islamabad and Abbottabad. This is the first large deposit of micaceous hematite in Pakistan with reference to micaceous hematite mineral and its significance for good quality iron deposits. Micaceous hematite is silvery black/greyish white with highly silvery shining luster. It is also in the form of platy and flaky grains less than 4mm. Generally the micaceous hematite bed is soft and friable. Its vein is lenticular which are enveloped by reddish brown limonitic iron oxide. Further gypsum/anhydrite beds are also associated to micaceous hematite vein. These deposits are hosted by Precambrian Hazara Formation (coeval to Salkhala Formation of Kashmir and Salt Range Formation of Upper Indus/Kohat-Potwar Basin). The Hazara Formation mostly comprises of slates/shale in the Muzaffarabad area with minor gypsum beds. The nature of micaceous hematite vein is discontinuous. Its discontinuous extension is reported by local people upto Balakot in the west. Between the Rara and Thandiani, the gypsum beds contacted with Hazara slates by a lateritic disconformity. These deposits are found just close to Balakot-Muzaffarabad-Bagh-Rawlakot-Tatta Pani active thrust, which may have responsible for the development of this micaceous hematite. Micaceous hematite may be a product of tectonic/geodynamics' metamorphism from limonite/hematite of laterite found on the contact of gypsum/anhydrite with shales/slates. This micaceous hematite deposit is tentatively estimated about one thousand ton and no detail work has been carried out so far. This deposit with very small tonnage is estimated due to its occurrences as lenticular and discontinuous nature. Some mine owners have tried to mine and now mine is abandoned. This micaceous hematite deposit can add some value to the Pakistan steel industry. Pakistan has large deposits of iron but some deposits are low grade like Fort Munro iron deposits (14-21%) and some deposits are medium/high grade, some deposits are unsuitable for processing, and some deposits are suitable for processing but not accessible due to tribes collision and security problems just like Dilband iron deposits. The iron deposits in the country are in high demand for Pakistan steel industry. Further Pakistan is spending large money on the import of iron and iron raw materials. So it is highly required to develop the iron deposits from Pakistan to save foreign exchange. The present findings are valuable in mineral wealth of Azad Kashmir and Pakistan. Its development alongwith other mineral commodities is an innovation for the sustainable development of Azad Kashmir and Pakistan.