body. IBM thus, reviewed and notified new threshold values for iron ore after due consensus built up with the mining industry. Though five workshops and wetting by various technical committees, finally the revised threshold values for hematitic and siliceous iron ore were fixed at 45% Fe.

For iron ore, fresh cut-off grades facilitated by revised threshold values were taken at 45% Fe. IBM thus, volunteered through its annual program 2008-09 and 2009-10 (Regional Mineral Development Studies) when a revaluation of low grade iron ore resources was attempted in over 425 iron ore mining leases existing in the country, on the basis of available exploration data. Under this scheme, all low grade iron bearing litho-units exposed in the leasehold areas in the form of Banded Hematite Quartzite (BHQ), Banded Iron Formations (BIF), Banded Magnetite Quartzite (BMQ), Lateritic zones etc were re-valuated. This effort which is already continuing in IBM through its annual program for 2008-09 and 2009-2010, have so far yielded resources of over 601.425 million tonnes of additional low grade iron ore in the existing mining leases in the country. These resources are likely to be added afresh to the national Mineral Inventory of India, as these resources were not estimated earlier. Taking a modest provisional economic value @ Rs.200 per tonne, these additional low grade iron ore resources are estimated at Rs.120,290 crores. These additional resources after due validation will be added to National Mineral Inventory (NMI) as on 1.4.2010, an exercise which IBM proposes to take up during the program year 2010-2011.

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Shear Zones of the Granulites of the Ambaji Area, Gujarat and Significance for Base-Metal Mineralization

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Abstract

The granulite terrane west of Ambaji in the Banaskantha district of Gujarat is bounded by ductile shear zones. The western shear zone known as Kui-Chitraseri shear zone is reactivated cataclasites. However, the eastern bounding shear zone called Kui-Surpaga-Kengora shear zone is not very prominent as it has been overprinted by late stage amphibolites facies metamorphism. There are many ductile shears within the granulite terrane. These are marked by mylonites and based on the several mylonitic fabric thrust slip has been interpreted. The granulites are represented by pelitic granulites, calc granulites and gabbro-norite-basic granulite suite. These are emplaced by Ambaji granites having an age of 840 Ma. The mylonites are well developed in granites. The shearing is synkinematic to F2 folding. The F3 folding has folded the shear zone along with the litho-units.

The granulite terrane is juxtaposed against the low grade terranes of Ambaji basin to the east. The low grade terrane is characterized by mica schist, calc schist and quartzite. There are a few ductile shear zones in them, but the mylonitic fabric is not well developed. However, epidotization and quartz veins are emplaced profusely along them.

The sulphide mineralization around Ambaji is found to be shear zone hosted and occur within the low grade terrane. The sulphides include chalcopyrite, galena and sphalerite. The mineralization is associated with wall rock alteration in the host mica schist. Tourmalization, epidotization and biotitization are very prominent. It is interpreted that the flow of mineralizing fluid along the shear zones has given rise to the sulphide mineralization. Absence of mineralization in the high grade terrane is attributed to high temperature that has flushed out the fluid from the host rock.

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