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Ore Mineralogy and Geochemistry of Banded Iron Formation (BIF) of Narayanaposi Area, Jamda-Koira Valley, Sundhargarh District, Odisha, India

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Narayanaposi iron is a part of the well known Jamda-Koira valley. The host rock for Iron ore bearing formation is shale and BHJ/BHQ other litho units are latertic soil, Laterite, lateritic ore, SLO (soft laminated ore), HLO (Hard Laminated Ore), HMO (Hard Massive Ore), Friable ore, Blue dust, Goethitic and Limonite.

The rocks within area belongs to Iron ore series and the major litho units are Shale, BHQ/BHJ, Laterite and Banded Iron formation at some places the litho units are covered by soil and laterite.

In these area iron ore dividing two types based on geological and mining point of view. Geological point of view the different types of ore occurred lateriticore, hematite, goethite, limonite, blue dust, friable ore and float ore. On the basis of mining point of view the different types of ore occurred in the area Hard Massive ore, Hard Laminated Ore, Soft Laminate Ore, Friable ore and Blue dust.

In the study area presents on close view of the grade of different types ore varies from hard massive ore 61-66%, hard laminated ore 60-65%, Soft laminated ore 58-65%, Blue dust 61-67%, lateritic ore 45-58%, limonitic ore 45-56%, goethite ore 52-58% and Shale15-35%.

The Major, trace and REE data provide information about genetic evolution of different type of ores and their possible precursor components.The major element contents and their correlation matrixes of different types of iron ores and shales of Koira area. Trace and Rare Earth Elements with their correlation matrixes and ratios have been presented in forty representative iron ore samples Koira deposits.

Keywords: Different type of iron ores, microscope studies, major elements and REE

Biography

Ramesh Vadde is pursuing Doctor of Philosophy, with the Specialization of Geology Ore mineralogy, Geo-chemistry and Genesis on Iron Ores at Andhra University, Visakhapatnam and he Completed Post Graduate Degree M.Sc. (Tech) Applied Geology at Andhra University, Visakhapatnam. He has experience in producing reports on Geology, Mapping, Mineral Exploration, Sampling and Ore reserves estimation, Ore Mineralogical analysis, Bulk density, recovery percentage of any ores (like metals, base metals and non metals). He has published more than 10 papers nationally and internationally.