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MINING AND PROCESSING METHOD FOR NEW SULPHIDE ZONE OF COPPER IN INGALDHAL-CHITRADURGA COPPER UNIT

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Abstract

Ingaldhal copper mines are situated in the Bangalore -- Bombay National Highway about 10 Kms from Chitradurga town (Karnataka State). The main mineral is chalcopyrite (Cu FeS2) occuring as a vein deposit in chlorite schist, the thicknes of the veins varying from 60 cms to 18 cms. The estimated reserves of developed and blocked out ore is 0.2 million tonnes of grade 1.23% Cu. Probable reserves are one million tonnes at 1.0% copper.The ore from the under ground mines is hoisted up and stored in the surface ore bins. It is transported by trucks to the hopper of the crushing unit.Not all metal deposits have igneous origins- sedimentary deposits can also be a valuable source of many metals, including copper. While sedimentary copper deposits share the feature of a sedimentary origin, there are many different types of sedimentary copper deposits, each with distinct characteristics. Sedimentary deposits are generally stratiform- meaning their morphology is controlled by stratigraphy of their host rocks. Sedimentary deposits are generally tabular, sheet-like or flat lenticular form. They are horizontal if not disturbed, but are frequently folded and faulted. Beds containing metallic ore are generally less than 20 ft. thick. Beyond copper, common metals found in sedimentary deposits are lead, zinc, cobalt and silver. Sedimentary copper can be deposited through different processes. This paper reveals that this formation is the result of the movement of a copper-bearing fluid through strata, that for one reason or another precipitates. This research presents the structurally controlled mineralized vein quartz owing arsenopyryte , galena and chalcopyrite has been located for the first

time in the region Precipitation is generally due to a of chemical change, either through the contact of certain host rocks, or as in the case with sedimentary exhalative deposits, through contact with water.

Keywords : 1. Metamorphic rocks 2. Sedimentary rocks 3. Copper 4. Chemical Trap 5. Deposit 6. Sulphide zone 7. Host rocks.

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