

RESOURCE ASSESSMENT BASED ON ENRICHMENT RATIO-CUMULATIVE TONNAGE MODELS

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A relation between enrichment ratios (ER) and tonnages of 4748 metallic mineral deposits in the world gives the following characteristics. 1) The deposits are classified into five groups of exceptionally high ER, high ER, high-moderate transitional ER, moderate ER, and low ER. 2) The ER-cumulative tonnage relation of each of high, moderate and low groups is approximated by an exponential function. 3) The cumulative tonnages estimated by the combination of three functions fairly correlate to the actual tonnages ($r = 0.995$). 4). High ER deposits have keywords such as unconformity, epithermal, mesothermal, vein and Mississippi Valley, and scarcely laterite, porphyry, chemical orthomagmatic and sediment-hosted.