

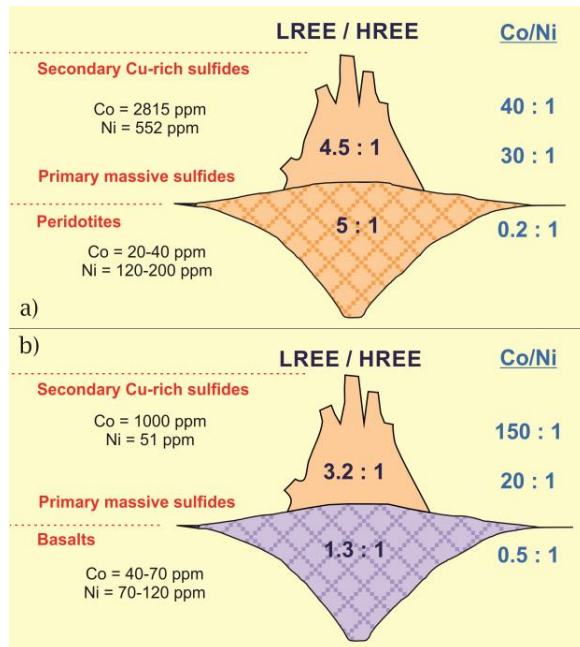
Transformation of Co/Ni and LREE/HREE from host rocks to oceanic sulfide mineralization

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The study reviews the behavior and ratio of Co, Ni and REE in Cu-rich sulfides (SMS) and host rocks – peridotites and basalts from Mid-Ocean Rift hydrothermal vent fields.



Conclusions

1. Distribution of these ratios shows the trend of content increasing: Co/Ni: host rocks (basalts and peridotites) → network mineralized rocks → massive ores; LREE/HREE: massive ores → host rocks → sediments.

2. There are two mechanisms of SMS generation conditions for Co/Ni ratios: peridotites' (a) and basalts' (b).

3. A predominant role in the redistribution of REE from the primary source of SMS genesis is determined by two mechanisms – an impurity (for rocks) and an absorption one (for sediments), depending on the material composition of the oceanic hydrothermal formations.