DISTRIBUTION OF SULFUR ISOTOPES IN STRATA-BOUND MESOZOIC DEPOSITS OF CENTRAL PERU

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A great proportion of the base metal deposits is situated in orogenic zones and thus many authors have established a relationship between orogenic phases and ore formation. The Central Andean Orogeny is one of the best-exposed examples of metallogeny at a convergent plate margin. At least eight ore forming epochs could be observed since Mesozoic times, which could be related in space and time to different phases of the Andean orogeny, of which five could be correlated with different geosynclinal stages. The distribution of sulfur isotopes of 8 stratabound deposits which had formed during the preorogenic phase and of one Beriassian evaporitic horizon are compared: 1. Two Zn-Pb deposits in the Triassic-Liassic carbonates of the Pucara Group 2. One Zn-Pb deposit in the Bajocian carbonates of the Chaucha Formation 3. One Zn-Pb deposit in the Valanginian carbonates of the Santa Formation 4. One Cu deposit in the Aptian volcano-sedimentary rocks of the Copara Formation 5. Three Ba-Zn deposits in the Albian volcano-sedimentary rocks of the Casma Formation The isotopic composition of sulfur varies from -31 to +30 d34S ‰, and reflects the different conditions of formation of the ore minerals as well as of the country rocks from the 8 investigated deposits.