

## **RHENIUM AND GERMANIUM IN THE SOUTH OKHOTSK REGION, WEST CIRCUMPACIFIC**

VITALY DANTCHENKO

In the South Okhotsk region (Hokkaido, Sakhalin & Kuril islands) Ge and Re are exporting together by volcanic emanation, but accumulating separately due to sedimentation processes. Their endogenic maximums (in ppm) discovered in ores among proximal volcanic facies of the Kuril islands: sublimatic sulphur-sulphide ones - on the Quaternary island-arc volcanoes ( $\Sigma$  2176 Re and 246 Ge;  $\text{Re/Ge}=1,95$ ), epithermal Au-Ag and (pyrite-) polymetallic ( $\Sigma$  17,1 Re and 200 Ge;  $\text{Re/Ge}=2,8-30$ ) - within the Neogene volcanic-tectonic structures. The Re admixtures discovered in rock-forming minerals ( $\Sigma$  17400), but Ge - in glass ( $\Sigma$  5400) of Kudryavy volcano lavas. This testifies to common Re and Ge sources, but to disjunction of their concentration conditions as they become away (in time and spatially) from the magmatic hearths.

In the Hokkaido-Sakhalin folded-block area Re and Ge are accumulating separately in distal volcanic facies rocks. The Ge maximum ( $\Sigma$  1000;  $\text{Re/Ge}=0,00003$ ) is forming in humificated matter of coal deposits near by the Neogene volcanic centers, i.e. under the conditions of the reduction humide-acid environments. The Re maximum ( $\Sigma$  4-13;  $\text{Re/Ge}=1,3-67$ ) here discovered in the low sulfide mineralization of Cu-bearing lime-siliceous «vari-colored sediments» associated with the Mesozoic volcanism, i.e. in the hydrocarbon-sulphide-alkaline environments. Re and Ge are cancelling also in hydrothermal (Hg-)Au-Ag ( $\text{Re/Ge}=0,01-4,5$ ) and telethermal (As-,W-,Sb-)Hg ( $\text{Re/Ge}=0,0008-0,08$ ) ores, related to the Cenozoic tectonic-magmatic activation of Sakhalin and Hokkaido. These circumstances, just as presence of the great Ge-bearing coal deposits, allow to expect here cognate Re concentrations in sediment rocks.