

## **MODELING OF PRECIOUS METAL DEPOSITS OF THE RUSSIAN FAR EAST**

KHANCHUK, A.I., and IVANOV, V.V. Far East Geological Institute, Far Eastern Branch, Russian Academy of Science, Vladivostok, Russia

The formation of precious metal deposits in the large, heterogeneous territory of the Russian Far East was the result of various geological processes. Because of these complexities, our mineral deposit database contains over 250 deposits that describe various types of information. Some of the information is derived on maps being prepared in GIS format for the Northeast Asia Metallogensis Project (International Project of W. J. Nokleberg et al, 1998, Web address of <http://minerals.usgs.gov/west/projects/minres.html>). For exploration, the most promising mineral deposit models (types) are gold-sulfide deposits hosted in black schist, epithermal Au-Ag deposits hosted mainly in Cretaceous and Cenozoic volcanic belts, and Au-Pt deposits hosted mainly in mafic-ultramafic plutons. Most precious metal deposits in the Russian Far East formed in either Mesozoic-Cenozoic subduction environments, or in continental transform margin (Californian type) environment. The following classes of models are developed for the Russian Far East: 1. Geological-industrial quantitative and descriptive models. 2. Forecasting-prospecting (qualitative) models. 3. Parametric forecasting-prospecting models. 4. Geologic-structural models of ore deposit location. 5. Geologic-genetic (qualitative and quantitative) models. For both theoretical considerations and practical use, the simultaneous development of several classes models will be demonstrated in the report.