SPRING-II Computer Technology for Forecasting-Metallogenic Research

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Forecasting-metallogenic research with the use of computer technologies includes three base stages:

- outlining of prospecting areas;
- determination of formation (mineral) type of mineralization;
- estimation of the size of predicted ore mineralization (resource potential).

General flowsheet of computer forecast metallogenic research incorporates two types of blocks:

- subjects and results of work;
- processing.

The block “subjects and results” includes three subblocks . The first two subblocks (initial geological map and geological class models, corresponding to the scale of the map) describe initial geological information, while the last one characterizes the results of work carried out for getting the data on formation types of mineralization and expected size of ore mineralization.

There are three subblocks in the processing block. The first subblock represents computer mapping. The second one is the selection subblock. The third one outlines prospecting areas. The resulting geological map consists of areal, linear and point elements of stratigraphy, mineral composition and age of rocks and other useful information including objects under study. The main elements of ore district model are obtained from formation, lithofacies, structural, paleostructural, metamorphic, mineral, geochemical and geological data.

Using this technology, the second version of the PC-based SPRING forecasting intelligent-graphic system has been developed.