

Problems of Quality of Geochemical Information

Anatoly Gavrishin

South-Russian State Polytechnic University, Russia

In the development of geology, geochemical information plays an important role. Based on this information the possible solution to the issues of genesis and the practical use of geological objects phenomena and processes. There were significant errors in the data by various authors. Estimates of main geochemical indicators for example, the Clark and the ocean variations in individual elements of the contents reach several times.

The problem of quality of geochemical information addressing the following points:

- Methods of quality assessment.
- Requirements for information quality.
- Assessment of Information real quality.
- Information Management of quality.
- Accounting for measurement errors in justifying conclusions.

Among the methods of quality assessment highlighted ways to evaluate the quality of primary and secondary information. In justifying the quality requirements of geochemical information compare levels of formation of errors and levels of aggregate data. This led to the allocation of five major classes of quality of geochemical information.

When assessing the quality of geochemical information used by more than 100 thousand control analyses of rocks, natural waters and samples of Lunar rocks based on the results of international, national and regional experiments Quality management information system offered a series of geochemical measurement standards and reference materials.

The task of accounting errors in synthesis of geochemical information offered methods of restoration of real parameters of the distribution of contents of chemical elements in geological sites. The increasing complexity of the tasks of geological research requires the development and application of the monitoring system for geochemical information quality.

Biography:

A.I.Gavrishin is Professor, doctor of geological-mineralogical Sciences, academician of the RANS and the RANH. He had graduated from Novocherkassk Polytechnic Institute. He worked in the Ural and participated in the compilation of geochemical data and he is the co-author of the original "Forecasting geochemical maps Ural".

A.I.Gavrishin works in the South-Russian State Polytechnic University. He has published more than 350 papers including 18 monographs and more than 100 publications in collaboration with Italian, French, German and American scientists. He is the author of the original statistical criterion and multidimensional classification method of observations. He passed a yearlong internship at the University of Rome. For successes in scientific and pedagogical activity A.I.Gavrishin has been awarded 20 medals and decorations and has 19 honorary degrees.