The Geoelectrochemical-extraction Measurement Method to Look for Hidden Gold Ore Deposit

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The geoelectrochemical-extraction measurement is an ore prospecting method of deep-penetrating geochemistry, by using the element receptors to extract the mobile metal ions from the soil under the artificial electric field to look for the hidden ore deposit. The study of using the geoelectrochemical-extraction measurement method to look for blind gold ore deposit has been carried out in the Xinjiang Habahe and Gansu Wanghe gold ore deposit, which resulted in the clearly geoelectrochemical extraction anormalies above the concealed ore-bodies. Therefore, the geoelectrochemical-extraction measurement method is useful for forecasting the hidden gold ore deposits after carrying out on different genetic types of concealed gold ore deposits in different landscape areas, which would achieve the clear geoelectrochemical-extraction anomalies above the ore-bodies. The prospecting forecast conducted in the unknown areas indicated that using the geoelectrochemical-extraction measurement method to search for blind gold ore deposit is practical.

We have done a large number of tests on the geoelectrochemical-extraction measurement. It has a complete, reliable and credible theoretical basis. The ore-bodies occurred the electrochemical dissolution and formed ions halo around the ore-bodies. These mineralizing ions continue to migrate to the surface under the actions of electric field and airborne and other actions, to achieve the purpose of searching for blind ore deposits by extracting these dynamic mineralizing ions to predict the occurrence position of deep concealed ore. As one of the deep penetrating exploration geochemistry to search for ores, this method attracted more and more attentions of the domestic and international geological experts.

Acknowledgement:
This work is supported Guangxi NSF (No. 2012GXNSFCA053007), 2013 Bagui Scholar Innovation Project of Guangxi Province (to Xu JF).