

Geo-Anomaly Unit Method for Delineation and Assessment of Undiscovered Ore Deposits

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Geo-anomaly unit method is a new procedure for quantitatively synthetic assessing undiscovered ore deposits in the basis of “seeking anomaly or/and difference” by means of sophisticated data processing techniques. The method attempt to make a combination of both ore-controlling anomalies and ore anomalies, obvious geo-anomalies and hidden ones; and a combination of both deep ore-finding information with the shallow, the direct ore-finding information with the indirect. Various ore-forming information is concentrated through a series of information processing procedures such as the extraction, connection, transform and synthesis of diverse ore-forming information. Comprehensive ore-forming information is applied to delineate various scales and types of ore-forming geo-anomaly units to reduce the uncertainty and risk of mineral exploration. Ore bodies may be eventually approached through delineating the ore-forming geo-anomaly units from the regional to the local in proper order.

A case study from the western Shandong uplift terrain, eastern China is given to illustrate its ore-finding effect.