成熟勘探矿集区新一轮找矿：勘查战略创新及铜陵矿集区找矿实例　　点此下载全文

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摘要：

　　成熟勘探的矿区非常有必要开展新一轮的找矿，但矿床模式的局限和大埋藏深度等困难制约了这些地区的预测性找矿发现。促进其预测性找矿发现的关键战略包括：勘查模型的创新、勘查技术的创新和各种信息的综合集成预测。勘查模型的创新必须包含基于地球动力学剖析的新成矿概念，动力学数值模拟是有效的创新手段之一；勘查技术创新的主要目的是加大探测深度和提高探测与解释的准确性，必须以详细可靠的地质资料为基础；综合信息集成是利用GIS和知识驱动及数据驱动的方法充分提取各种数据中的有用信息，集成为更加可靠的预测图。在这种思想的指导下，我们在铜陵凤凰山矿田进行了预测和勘查，并成功地发现了深部的隐伏矿床。

关键词：　成熟勘探矿集区　找矿工作　勘查战略　矿床模式　勘查模型　勘查技术

Re-exploration in Maturely Explored Metallogenic Districts: Innovation of Exploration Strategies and an Exploration Case in the Tongling Metallogenic District　　Download Fulltext

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Abstract:

　　It is necessary to carry out a re-exploration in the maturely explored metallogenic district, but predictive mineral discoveries in these districts have been obstructed by some special difficulties such as ineffective model and large depth of the undiscovered ore deposits. For enhancing predictive discovery of hidden ore deposits, the strategies we should adopt include innovation of exploration model, application of advanced exploration techniques and integration of multiple sets of information. The innovation of the exploration model must incorporate the new metallogenic concepts that are based on the geodynamic anatomization. The numerical geodynamic modeling is an effective way to innovate the model. Advanced techniques should be used for enhancing detecting depth and accuracy. It must be based on detailed and correct geological data. The information synthesis is to integrate multiple sets of data for giving a more credible and visual prospectivity map by using of the GIS and data- and knowledge-driven integration methods, which can extract useful information from every set of data as much as possible. Guided by these strategies, we implemented a prediction exploration program in the Fenghuangshan ore field of the Tongling Cu district, which results in a successful discovery of a hidden ore deposit.

Keywords:exploration strategy innovation　metallogenic geodynamics　exploration model　exploration techniques　information integration　Tongling

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