地质学报
ACTA GEOLOGICA SINICA

薛顺荣,肖克炎,丁建华.基于GIS技术下思茅—景洪地区铜多金属矿 综合信息成矿预测[J].地质学报,2008,82(5):648-654

基于GIS技术下思茅—景洪地区铜多金属矿 综合信息成矿预测

点此下载全文

薛顺荣 肖克炎 丁建华

中国地质科学院矿产资源研究所，北京，100037

基金项目：本文为中国地质调查局大调查项目（编号 200420190004）资助的成果。

DOI：

摘要：

随着地表露头矿、易识别矿越来越少、找矿难度越来越大，成矿预测作为普查找矿的前期工作，一直处于矿产勘查领域的前沿与热点，为国内外地质学者所关注，并不断探索有效的预测方法。本文以云南思茅—景洪地区为例，从成矿地质背景分析出发，按1/20万精度对研究区已有地、物、化、遥等多源地学信息进行综合分析与解译，采用野外调研和室内研究相结合、理论与实践相结合、点和面相结合的基本原则，在“综合信息矿产预测理论”的指导下，通过各地学信息成矿有利度分析研究，确定适合预测矿种的地质变量专题图层和专题属性，以非网格单元汇水盆地为地质统计单元，应用GIS技术实现多源地学综合信息有机关联与综合，依据各地质统计单元内多源地学信息统计权重大小，并以权重从大到小排序确定A 1 、A 2 、A 3 .....A 20 等20个汇水盆地为边界的地质统计单元作为研究区寻找与火山活动有关的铜多金属矿找矿靶区。结果显示，部分预测找矿靶区包括了已知矿床/点，其中研究区内已知的大中小型矿床均分布于预测找矿靶区内，这表明所确定的预测找矿靶区综合致矿异常信息是可信的。野外调研证实，沿澜沧江南段火山岩带具有良好的找矿前景，编制的研究区铜多金属矿找矿靶区预测图对下一步找矿勘查工作部署具有指导意义。

关键词：GIS技术 思茅—景洪 综合信息 成矿预测

Multi information Metallogenic Prognosis of Copper Polymetallic Ore in Simao Jinghong District Based on GIS Technique

Download Fulltext

Fund Project:

Abstract:

Due to decreasing of outcrop, and great difficulty in recognizing potential deposits, metallogenic prognosis, as a prophase work for prospecting, has been paid more attention by geologists around the world. Geologists have been searching for effective methods of prediction. This work took the Yuannan Simiao area, Yunnan province as an example. Based on multifactorial analysis on metallogenic background (scale 1/200000), multi sources data of geological, geophysical, geochemical and remote sensing, interpretation features were used to predict potenical economic deposits. Combined with field investigation and analysis indoors, this study defined geological variations and their properties. Because all known deposits, big or small, all fall within the target area, we can conclude that the multi information metallogenic prognosis method is reasonable and reliable. Field investigation also confirmed that the volcanic belt south the Lancangjiang river has a good prospecting prospect and potentiality. Prognosis map of prospecting targets in this paper will have a guiding significance to next plan of exploration.

Keywords:GIS technique Simao Jinghong multi information metallogenic prognosis

查看全文 查看/发表评论 下载PDF阅读器