

## 基于蚀变信息提取的西藏班公湖-怒江成矿带中段斑岩铜矿找矿预测

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引用本文: 代晶晶,王瑞江,王润生,曲晓明,赵元艺,辛洪波.2012.基于蚀变信息提取的西藏班公湖-怒江成矿带中段斑岩铜矿找矿预测[J].地球学报,33(5):755-762.

DOI: 10.3975/cagsb.2012.05.06

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基金项目:国家科技支撑计划重点项目(编号:2006BAB01A05);中国地质调查工作项目(编号:212010818097);中央级公益性科研院所基本科研业务费专项基金资助项目(编号:K101)

中文摘要:本文选取西藏班公湖-怒江成矿带西段多不杂斑岩铜矿为已知矿床,通过对采样样品实测波谱特征的分析,基于ASTER遥感数据,采用目前主要的蚀变信息提取算法——彩1强、比值算法及光谱角制图算法,在班公湖-怒江成矿带中段开展蚀变信息提取及找矿靶区圈定研究,预测了一处成矿前景区域。通过对此预测区域的野外查证,发现大量的孔雀石露。内电感耦合等离子质谱(ICP-MS)分析得出铜品位在0.18%~1.95%之间,平均为0.51%。对该区域进行了激电测量工作,测量结果和遥感结果相互印证,表明此区域为一处斑岩铜矿成矿区。

中文关键词:[班公湖-怒江成矿带](#) [多不杂](#) [斑岩铜矿](#) [遥感](#) [蚀变信息提取](#) [找矿靶区](#)

## Porphyry Copper Deposit Prognosis in the Middle Part of the Bangong Co-Nujiang River Metallogenic Belt in Tibet Based on Alteration Information Extraction

**Abstract:**In this paper, the Duobuza porphyry copper deposit in western Bangong Co-Nujiang River metallogenic belt of Tibet was selected as the typical deposit, and the spectral character of its field samples was analyzed. ASTER data were used as the remote sensing data source, and three methods of color enhancement, band ratio, and spectral angle mapping were chosen as the main methods for alteration information extraction and potential ore deposit prognosis in eastern Bangonghu-Nujiang metallogenic belt of Tibet. Finally, a promising ore deposit area was delineated. Through field survey of the predicted area, lots of malachite outcrops were found. An analysis of ICP-MS indicates that copper grade is between 0.18% and 1.95%, with the average grade being 0.51%. The result of induced electrical scanning of the predicted area is coincident with the result of remote sensing, suggesting that the predicted area is a prospective area of porphyry copper deposit.