## 摘要

中蒙跨境多金属成矿带在近几年已经成为地质学家研究的热点之一,随着地质勘察程度的提高,对该地区典型金属矿产资源进行定量评价工作也显得尤其重要。"三部式"矿产资源定量评价方法是一种找矿效率较高、且具有大量成功范例的评价方法。本文以中蒙跨境成矿带"三部式"资源潜力评价委托业务为依托,对中蒙跨境成矿带中东部的热液型钼矿床进行了"三部式"矿产资源定量评价工作。在对数据进行一定处理和筛选后,建立了矿床品位一吨位模型、密度模型,并利用密度模型以及通用密度模公式估计了工作区内未知矿床数,此外,还在 Python 编程语言环境下运用蒙特卡洛模型进行了未探明资源量的估算。

关键词: "三部式"矿产资源定量评价; 中蒙边境; 热液型钼矿床

## **Abstract**

The Sino-Mongolian cross-boarder polymetallic metallogenic belt has been a great hit amongst geologists in recent years. With the fast development of resource exploration regarding this area, the quantitative mineral resource assessments on metallic ore deposits is also of particular significance. Three-part quantitative assessments is a highly efficient quantitative assessments method which has proven to be a great success. Based on the Three-part Quantitative Mineral Assessments on Sino-Mongolian Cross-boarder Polymetallic Metallogenic Belt project, this article mainly demonstrates the process of this assessment method by building grade and tonnage model, density model with processed data and estimating the number of undiscovered hydrothermal molybdenum deposits in the middle-east part of this region. Furthermore, the amount of undiscovered resource is also estimated using Monte-Carlo model under Python environment.

Key words: Three-part mineral quantitative assessments, Sino-Mongolian boarder, hydrothermal molybdenum deposits

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