A Big Earth Data Platform for Three Poles

**Achievement report of "effective exploration technology and method integration demonstration" (2018-2021)**

1、Description

This subject takes the porphyry skarn epithermal copper polymetallic deposit in the important metallogenic belt of Tibet as the research object, and comprehensively investigates and studies the development characteristics of its deep magma, structure, fluid alteration and mineralization system based on the preliminary exploration and research results of important ore (concentration) areas, so as to effectively dissect the metallogenic system structure of key mining areas. This paper focuses on the fine anatomy of the coupling relationship between the ore controlling structure of duolong porphyry epithermal copper gold deposit and the magmatic mineralization alteration system formed from the late stage of ocean crust subduction to the stage of continental soft collision; At the same time, the formation, transformation and preservation mechanism of its metallogenic system are comprehensively studied to form a prospecting prediction demonstration. This paper dissects the three-dimensional structure of Beiya porphyry copper gold metallogenic system formed in the transformation stage of India Eurasia collision strike slip structure, so as to accurately grasp its metallogenic process and effectively realize the positioning prediction of deep ore bodies. The magma, hydrothermal evolution fluid migration metal precipitation mechanism and ore-forming fluid migration process of Jiama porphyry metallogenic system are dissected by means of traditional deposit science and non-traditional potassium and magnesium isotopes, so as to establish the magmatic fluid evolution model of the deposit and realize the prospecting prediction. Finally, based on the exploration results of Jiama Qulong ore concentration area, junuo, Xiongcun ore concentration area, zhaxikang cuonadong ore concentration area and duolong ore concentration area, the effective exploration technology and method combination of the metallogenic system of each key ore (concentration) area is integrated and formed into a demonstration.

2、Keywords

Theme：Others,Metallogenic model,Rocks/Minerals,Prospecting prediction demonstration,成矿系统结构 Metallogenic system structure
Discipline：Others,Solid earth
Places：Tibet
Time：None

3、Data details

1.Scale：None

2.Projection：

3.Filesize：20.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：29.74 | - |
| west：91.73 | - | east：91.81 |
| - | south：29.68 | - |

5、Time frame:2018-06-30 16:00:00+00:00--2021-08-14 16:00:00+00:00

6、Reference method

References to data:

WANG Liqiang . Achievement report of "effective exploration technology and method integration demonstration" (2018-2021). A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2720612022

References to articles:

7、Supporting project information

National Key R&D Program of China

8、Data resource provider

name: WANG Liqiang
unit: Institute of Mineral Ｒesources，Chinese Academy of Geological Sciences
email: wlq060301@163.com