A Big Earth Data Platform for Three Poles

**Large scale structural construction and alteration mapping of Xianglin ore section in cuonadong mining area（2018-2022）**

1、Description

The Cuonadong gneiss dome, a newly discovered dome in the North Himalaya Gneiss Domes (NHGD) belt, iscomposedofthreeparts: core, mantle, andouterlayer. Theyarecomposedof Cambrian granitic gneiss, Early Paleozoic mica schist and skarn marble, and metamorphic sedimentary rocks, respectively, andleucogranitesandscores ofpegmatite veinsintrudeintothecore ofthe Cuonadong gneiss domeatalater stage. The Xianglin Be-Sn polymetallic ore depositislocatedin the northern Cuonadong gneiss dome. Anumber of north-south and east-north extensionalfaults are developedinthe mining area. The Be-Sn polymetallic orebodies were newly discovered through systematic surface exploration engineering in the mantle layer around the core of the dome and fault fracture zones. Theanatomy ofatypical mining areain the northern Cuonadong dome shows four types of ore bodies: skarn, cassiterite-quartz vein,  
cassiterite-sulfide, and granite pegmatite. Skarn type ore bodies occur in skarn marble in the mantle; mineralization is dominated by Sn, Be and W; Sn ore gradeis relatively low. Cassite-quartz vein type ore bodies are controlled by NE extensional fracture; mineralization is dominatedby Sn, Beand W; oregrades are relatively high. Cassite-sulfide orebodies are controlled by the interlayers lipstructure in marble; Snore gradeis high but Beand W ore grades arelow. Mineralization in pegmatiteis mainly Be, accompanied by Rb. Verified at great borehole depth, we found the deep extension of all types of ore bodies except pegmatite is relatively stable. Based on the study of there lationship between magma and Be-Sn polymetallic mineralization, we reveal that there are two stages of mineralization in the Xianglin mining area, and the mineralization is closely related to the weakly oriented two-mica granite and muscovite granite. Based on orebody characterization we developed a ore prospecting strategy. The main targets infuture ore exploration will be cassite-sulfide and cassite-quartz vein type ores as they are relatively rich in Be, Sn and W.

2、Keywords

Theme：Gneiss Dome,Rocks/Minerals,Formation,tectonic rock zones,Tectonics,Alteration mineral  
Discipline：Solid earth  
Places：Xianglin, Cuonadong  
Time：2018-2022

3、Data details

1.Scale：2000

2.Projection：WGS84

3.Filesize：1.83MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：28.2 | - |
| west：91.8 | - | east：92.1 |
| - | south：28.1 | - |

5、Time frame:2018-08-31 16:00:00+00:00--2022-02-09 16:00:00+00:00

6、Reference method

References to data:

ZHANG Linkui. Large scale structural construction and alteration mapping of Xianglin ore section in cuonadong mining area（2018-2022）. A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2721112022

References to articles:

7、Supporting project information

National Key R&D Program of China（2018YFC0604103）

8、Data resource provider

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