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Analysis on Prospecting Potential of Tungsten Polymetallic Ore in Haergeng of Gonghe County, Qinghai Province

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The discovery of Gonghe County Haergeng tungsten polymetallic deposit is one of the most important tungsten deposits discovered in Qinghai Province in recent years. It has important theoretical and practical significance.

1 Regional geological background

The research area lies in the northwest edge of Qinghai Nanshan-Zeku back-arc tectonic activities zone, which belongs to the metallogenic belt of Hg-As-Cu-Pb-Zn-Au(-Ti-W-Bi-Sn-) on the Tongde-Zeku Indo-Chinese epoch, and the metallogenic sub-belt of Cu-Au(-W-Sn-Bi) on the Qinghai Nanshan-Shuangpeng Variscan. Because of low level of the research and the undeveloped traffic condition in this region, not too much of the mineral has been found yet. It is only found that one point of copper mineralization in the Hazhu Mountain, one point of Tin-Copper mineralization, two points of Tungsten mineralization. There is more exploration prospect in the research area and Peripheral Areas.

2 Geophysical and geochemical characteristics of the study area

This paper is based on the analysis of the metallogenic geological background and regional geology, geophysics and geochemistry of the Hazhu Mountain in Qinghai Province. Using 1:1 million geological survey, 1:1 million magnetic method of measurement, 1:1 million power measurement in the middle of the ladder, the physical characteristics of the strata, structure, magmatic rocks and various rocks in the study area are identified. Two magnetic anomalies

and a group of high resistivity, low resistivity and high polarization zones are delineated. The 1:1 million soil survey and geochemical profile measurements were used to verify the anomalies of 1:5 million River Sediments and delineate a number of anomalies of tungsten, tin and silver. By trenching and drilling and sampling analysis to verify the abnormal part, it is found that there are 4 mineralized zones in the zone of tungsten, tin copper mineralized zone 1, copper belt with 1,20 tungsten, tin and copper bodies. Analysis of the variation of tungsten bearing altered rocks in the vertical direction of 4 tungsten mineralized belts. The width and frequency of the quartz vein in the mineralized zone reflect the variation of the frequency of the vein from shallow to deep, pulse amplitude from small to large. It is shown that there are some similarities between the metallogenic regularities of the typical "five floor" metallogenic model of Jiangxi tungsten deposit.

3 Analysis of metallogenic prospect in the study area

The main ore controlling factors and metallogenic regularity of the study area are summarized, based on the geological, geophysical and geochemical data of the study area, as well as the analysis of the strata, structure, magmatic rocks and space-time ore controlling conditions in the study area. By analogy with the similar deposits in China, this paper is based on the analysis and summary of three factors: the source of mineral, the condition of the structure and the properties of the surrounding rock. It is considered that the metallogenic type of the study area belongs to the middle to high temperature hydrothermal metasomatic deposit. The geological, geophysical and geochemical

information related to the formation of the study area is extracted and the prospecting criteria are established.

4 Conclusion

At the same time, to improve the research level of the deposit, the ore prospecting potential in the study area is analyzed. It is considered that the scale and intensity of the physical and geochemical anomalies in this area are much larger than those found in the ore bodies. There are the potential and prospect to enlarge the scale of ore body which has been found and to be found in the

area.

References

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