

## Geological characteristics and prospecting potential of the Wugudun Ag-Mo polymetallic deposit in Chizhou, Anhui Province

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**Abstract:** The Wugudun Ag-Mo polymetallic deposit, located in the Guichi ore cluster area of the middle-lower Yangtze metallogenic belt, belongs to porphyry-skarn-hydrothermal deposit. By studying the characteristics of ore deposits, metallogenic geological conditions, analyzing prospecting potential, and using metallogenic vacancy theory, we predict prospecting directions for orebodies of different types. It is believed that this area has the prospect of discovering medium-large polymetallic deposits, which is of great significance for finding blind orebodies in mining areas and surrounding areas.

**Key words:** Ag-Mo polymetallic deposit; metallogenic geological conditions; prospecting potential; Wugudun mining area, Chizhou City; Anhui Province

## 江西赣县区新发现牛角龙钨多金属矿床

根据中国地质调查局总体部署,中国地质调查局南京地质调查中心在赣南地区实施了找矿扶贫工作,“南岭东段重要矿种成矿要素调查”项目组通过1:5万矿产地地质调查、大比例尺填图、地表槽探揭露和深部钻探验证等技术手段,在江西赣县区新发现了具有大型找矿远景的牛角龙钨多金属矿床,不仅实现了赣南找矿空白地区新突破,为赣南地区脱贫致富提供了新的钨矿资源基地,也为赣南及其他地区找矿勘查提供了成功示范和理论依据。

初步调查发现,牛角龙钨多金属矿床为细脉带型钨多金属矿床。矿区出露的地层为寒武纪牛角河组,NE向背斜叠加NW向背斜形成的跨褶皱构成矿区主要构造格架,主要有SN向、NE向、NW向和EW向4组断裂、裂隙,石英脉沿断裂、裂隙分布,地表含矿石英脉主要呈细脉分布,矿化以SN向和NW向较好。矿体主要赋存于近SN向挤压破碎带和NW向含矿石英脉带中。目前,已圈定南、北两个矿脉带:北矿脉带(I)呈近SN向展布,以石英细脉—网脉和石英—破碎蚀变岩型为主,破碎带宽10~30 m,南北延伸1500 m以上,是主矿带。含矿石英脉宽0.1~10 cm,呈网脉状,发育黑钨矿、辉钼矿、辉铋矿、黄铁矿和黄铜矿;南矿脉带(II)呈NW向展布,以石英细脉—网脉和石英单脉型为主,含矿石英脉以NW向为主,脉带宽10~40 m,北西延伸500 m以上。含矿石英脉矿脉相对较大,石英脉宽1~20 cm,少数宽30~60 cm,发育黄铁矿、方铅矿、闪锌矿、辉铋矿和辉钼矿。

2017年,项目组实施的ZK001钻孔,见含矿石英脉157条,发现含矿构造破碎带2条,圈定了4个钨矿体和2个银矿体。钨矿体厚2.4~12.4 m,WO<sub>3</sub>平均品位为0.12%~0.38%;银矿体厚1~3 m,Ag平均品位为48.6~48.7 g/t。2019年,项目组实施的ZK002钻孔,见含矿石英脉80余条,发现含矿构造破碎带6条,脉(带)内见黑钨矿、辉铋矿、辉钼矿、黄铜矿、闪锌矿、方铅矿等。初步估算该矿床的钨资源量(333+334<sub>1</sub>)可达中型以上。

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