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APPLICATION OF “DIPOLE CHIM” ELECTRIFIED BY LOW VOLTAGE DIPOLE

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Abstract: CHIM has been constantly improved since it was proposed, but there are still many disadvantages. Main disadvantages of the current CHIM reduce its value as an exploration tool. The previous CHIM has heavy equipment, complicated operation procedures, high cost and low working efficiency, and in most cases only positively charged mobile forms are collected. With the new halo-formation theory, tests of extract in the cathode electrified by low voltage “dipole” was carried out at known mine areas, and their feasibility and availability were verified. According to anionic as well as cationic species may provide useful information, “dipole” CHIM electrified by low voltage dipole was firstly proposed, and field tests of this improved technique have enabled identification of distinct multi-element anomalies at Yingezhuang gold deposit in Shandong and at 210 gold deposit in Xinjiang. The test data indicated that anionic species anomalies of elements are very obvious above the existing ore bodies, and the sum of anionic species anomalies of elements and cationic species anomalies of elements enables identification of the position of the deeply buried ore body. The improved CHIM has simple equipment, convenient operation procedures, low cost and enables simultaneous extraction of anionic and cationic species of elements. Thus, much useful information can be obtained, and the rate of extraction is high. So it can be applied at geological survey and researches.

Key words: “dipole CHIM” method, epigenetic ionic halo, concealed deposit

江西探明国内最大钽铌矿

据《地持勘查导报》报道。7月5日召开的全国有色金属行业地质找矿成果交流会显示,我国有色地质行业在重点成矿区带找矿取得重大突破,江西横峰县钽铌矿,钽储量近3万t,为目前国内最大钽铌矿储量的3倍。

各有色地质勘查单位近几年加强了所在省(区)重点金属成矿区带的地质勘查工作,提供了一批中一大型矿产勘查基地,在多个矿种实现了找矿突破。江西有色地勘局在横峰县找到了相当于此前我国最大的宜春钽铌矿3倍的大型钽铌矿——葛源钽铌矿,钽的储量近3万t;新疆有色地勘局通过加强阿尔泰蒙库铁矿的工作,探获铁矿储量1亿多吨,新增优质富铁矿储量8000多万吨,使其上升为我国目前发现的西北地区第二大、新疆第一大铁矿床;辽宁有色地勘局在青城子外围找金也获得新突破,新增黄金储量十几吨;湖南有色地勘局加强科技创新,在郴州找到了新类型的锡矿,对于扩大我国找锡的目标范围具有非常重要的示范意义。

在地勘队伍不断取得找矿成果的同时,有色金属矿山企业也高度重视地质找矿,许多矿山企业还建立了自己的地质勘查队伍,出台了鼓励找矿的相关措施,取得了在老矿区深边部找矿的重大进展。金川集团利用井下巷道进行深部探矿,在镍矿体深部新发现了厚大的矿体,新增资源储量1270多万吨;云南铜业集团通过加强深部和外围找矿,4年共探获铜资源量48.77万t,相当于为自己又增加了一个大型铜矿床。