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庐江-枞阳矿集区深部结构与成矿

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中文摘要:为探测长江中下游成矿带庐江?枞阳白垩纪火山岩盆地和铁、硫矿集区深部构造和地壳结构,探讨成矿深部控制条件,作者完成了穿越火山岩盆地的深反射地震剖面(记录30 s) 和罗河铁矿区浅层高分辨反射地震剖面,揭示了矿集区全地壳精细结构,同时开展区域构造测量和应力场反演研究,获得了新的认识。证实"耳状"的庐?枞火山岩盆地是一个沿北东向罗河断裂向东发育的非对称火山盆地,排除了另一半被断在西侧红层之下的判断;罗河断裂是一条切穿MOHO的深断裂,倾向南东,是引导地幔流体和岩浆上涌和喷发的通道;鉴别出多层界面,火山岩?侏罗系砂岩厚约4?5 km(其中火山岩厚度约3 km),三叠系?震旦系变形层底界深度大致18?20 km,变质基底组成中下地壳,MOHO平缓向西北倾,深度33?31 km;追踪郯?庐断裂带的深部产状,陡立延伸到MOHO,宽约10 km。

中文关键词: 庐江? 枞阳矿集区 深部结构 高分辨率地震反射 应力场 构造演化

Deep Structure and Ore-forming in Lujiang-Zongyang OreConcentrated Area

Abstract:In order to explore the deep structure and crustal frame of Lujiang-Zongyang iron and sulfur ore con-centrated area and volcanic basin in middle-lower Yangtze valley metallogenic belt during Cretaceous, and discuss deep metallogenic control conditions. We finished deep reflection seismic profile through volcanic basin (recorded 30 s) and shallow high resolution reflection seismic profile in Luohe iron diggings and discovered whole fine crustal structure, surveyed regional structure and stress field characteristics simultaneously, and obtained latest Cognition. It was confirmed that the ear-shape Luzong basin was a dissymmetrical basin along Luohe fault with north-east strike direction and eliminated the judgment that another half basin was buried, below red layer, west side of Luohe fault. The Luohe fault was a deep fault which cut through MOHO, the dip was south-east, and it also was the surging and eruption channel of magma and mantle fluid; we also identified multi-layer interfaces, the thickness of the volcanic rocks and sandstones was ca. 4-5 km (the thickness of volcanic rocks was ca. 3 km), the depth of deformation bottom layer from Triassic to Sinian was ca. 18-20 km, the metamorphic basement formed middle and lower crust, the dip of MOHO surface was north-west, depth was ca. 33-31 km; the deep occurrence of Tanlu fault was steep and cut through MOHO. width was ca. 10 km.

keywords:Lujiang-zongyang ore concentrated area deep structure high resolution seismic reflection stress field structural evolution

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