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Characteristics of Ore-controlling Structures of the Hutouya Orefield in the Qimantage Metallogenic Belt, Eastern Kunlun

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The Hutouya polymetallic orefield is located in the Qimantage metallogenic subzone and monoblock exploration area, which belongs to the west segment of Eastern Kunlun. Based on our field investigation for structures and multiple-information analysis and previous research to this orefield, we summarized main characteristics of ore-controlling structures, remote sensing information, joint statistics and analysis for structural chemical sample, and discussed the ore-forming geological conditions from ore-field structure, and analyzed the influence and control function from the nearly east-west fracture to each ore belt. We finally make a distinction between structures at all levels for role of deposit. Through the comprehensive analysis, the main conclusions are as follows: 1) Regional NWW-striking structures are formed before the metallogenic epoch, Which provide the migration pathway and sedimentary space and control the formation and distribution of Hutouya ore field; 2) Magmatic activity of Indosinian period and nearly EW-striking structures are main ore-controlling structure, which are the mineralizing epoch structures and control the spatial distribution of the deposits; 3) Nearly EW-striking secondary fracture and intrusive contact structure belong to the host structure of metallogenic epoch, and control the distribution of Fe-Cu polymetallic ore body; 4) Ore bodies was reformed by NW and nearly SN-striking fractures; 5) Since the indosinian period, there are skarnization mineralization stages and hydrothermal reformation stage of nearly EW-striking fault; 6) Ore-searching directions: intrusive contact structure, nearly EW-striking trending faulted structures, intersection part of faults and different lithological contact area are favorable metallogenetic areas. The results obtain

by the authors will provide geological structural evidence for the relationship between ore field structures and mineralization and can guide further ore prospecting work in the depth and the outskirts of the ore district.

Key words: Qimantage, Hutouya orefield, ore-field structure, skarn, ore-controlling structures

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