

THE FEATURES OF TECHNOLOGICAL MINERALOGY OF ORE IN HEILANGOU GOLD MINE, SHANDONG, CHINA

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Based on the semi-quantitative spectrum analysis, chemical analysis and sieve analysis of crude ore, the chemical composition and industrial value of gold ore in Heilangou Gold Mine of Penglai County, Shandong, China are expounded. By means of the determination under the microscope and electron probing analysis, the features of mineral association, texture and structure of gold ore are ascertained. The ore type is further determined. On the basis of the study mentioned above, the features of gold-bearing minerals are studied, and the dissociated degrees of main gold-bearing minerals are determined also. By means of study on the chemical composition of gold grains, the main auriferous minerals of the ore are obtained. The study on the distributing features and shapes of gold grains makes known that the gold grains mainly distributed in the quartz assuming the fissure gold and enclosure gold. The gold grains mainly take the shapes of long angle grain, needle thread, plank and angle grain. The study on the granularity of gold grain makes known that there is different size of gold grains. The distribution area of coarse grain gold which larger than 74 μ m is about 81.1%, and the one of gold grains which size between 74 μ m to 10 μ m occupies about 18.21%. At last, the suggestion to select the gravity separation-flotation conjunction circuit is put forward.