

Alteration Characteristics and Gold Mineralization of the Yingezhuang Gold Deposit, Sangdong Peninsula, China

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The Yingezhuang gold deposit located in Sangdong peninsula belongs to the disseminated type and is one of the most representative gold producers in China. The country rock of the deposit is granite. The granite is strongly altered by the hydrothermal process in which the gold mineralization took place. Wall rock alteration minerals are K-feldspar, sericite, carbonate minerals, clay minerals, and pyrite. The alteration zone of wall rocks including orebody is divided into six categories, fresh granite, reddish granite (K-feldspar granite), sericite rock, pyrite-sericite ore, fault clay and metamorphosed rock. The fresh granite (Guojiadian) is grayish-white in color, and composed mainly of quartz, K-feldspar, plagioclase and biotite. The reddish granite distributes relatively near to orebodies and varies gradually from pale to deep red toward orebody in color. The granite contains albite, quartz and sericite in addition to predominant K-feldspar. The sericite rock is composed mostly of sericite and quartz with small amounts of plagioclase and K-feldspar. The pyrite-sericite ore is characterized by the occurrence of pyrite and carbonate. Amounts of pyrite and carbonate increase with increasing fracture density in network-veinlets. The parts where gold is high in this zone are orebodies. K-Ar ages are 144 ± 7 Ma for the fresh granite, 126 ± 6 Ma for the reddish granite, 126 ± 6 Ma for the sericite rock, and 129 ± 6 Ma for the pegmatite which

distribute as vein shape frequently in wall rocks.