

Epithermal Precious Metal Deposits in South Korea—History and Pursuit

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Abstract

The gold and silver endowment of Korea has historically been well known, with records alluding to production as far back as 1122 BC. The main gold production period was from 1925 to 1943 during the Japanese occupation of Korea, with more than 1 Moz recorded in 1939. Muguk was the most productive gold mining operation, located within the central region of South Korea, with a recorded 590 koz of gold produced from 1934 to 1998 (first mined in AD 912). The majority of the historical mining operations were closed by government order in 1943 during the Second World War and never reopened. A number of small mines operated between 1971 and 1998, with limited production during a period of gold prices generally lower than at present (~25–50% of current inflation adjusted prices, apart from a four-year period 1979–83). It is likely that significant resources remain within these historical mining areas. Gold-silver deposit types historically recognized and exploited in Korea include placers and orogenic and intrusion-related vein systems. Only more recently have epithermal vein and breccia systems been recognized. This is not surprising, given that the geologic and tectonic setting of the Southern Korean peninsula is prospective for epithermal precious metal deposits, spatially associated with basin-scale brittle fault systems in Cretaceous volcanic terranes. South Korea is an underexplored jurisdiction, with limited modern exploration and drilling until the mid-1990s, when Ivanhoe Mines Ltd. discovered the Gasado, Eunsan, and Moisan epithermal gold-silver deposits, all of which became mines. Exploration was limited for another 20 years until Southern Gold Ltd., an Australian Securities Exchange (ASX)-listed company, commenced regional-scale exploration for epithermal deposits, using a strategy similar to that successfully employed by Ivanhoe.

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