

**11 8****DISTAL SKARN AND DISSEMINATED GOLD DEPOSITS ASSOCIATED WITH  
BASE METAL AND MAGNETITE SKARN: POTENTIAL IN KOREA BASED ON  
SOUTHEAST ASIAN AND AMERICAN CORDILLERA EXAMPLES**

James, Laurence P.\*, University of Colorado, Boulder, james@mail1.pknu.ac.kr  
Park, Maeng-Eon, Pukyong National University, mepark@pknu.ac.kr

In Asia, gold bearing skarns have been developed in recent decades at Ertsberg-DOM in Irian Jaya and Thanksgiving Mine, Luzon. In the Western hemisphere a much larger family of intrusion related gold deposits have been discovered in recent years. These varied deposit types are now known to contain tens of millions of ounces of gold. This paper compares the genetic environment of such deposits in the Great Basin, western U.S.A., and a similar intrusion-Paleozoic carbonate host rock environment in the Taebaeksan Basin of east-central South Korea.

In both regions, a concentration of small to medium-sized base metal skarn and replacement deposits are well known, as are associated gold and silver occurrences. They are localized in lower Paleozoic carbonate rocks disturbed by folding and thrusting. Sulfides also replace favorable carbonate units, resulting in high temperature carbonate replacement deposits (CRD) near skarn silicate bodies. In both regions barren granitoids of various ages generated magnetite and hematite and arsenopyrite bearing skarns plus base metal veins. Both regions are also Mo-W provinces, containing the largest W deposits of both the U.S.A. and eastern Asia.

In Nevada, U.S.A. near Battle Mountain, are two major gold skarns. At the high grade Fortitude mine, 2 M oz. of gold occurs at some distance from the nearest intrusive rocks. The McCoy deposit, of similar size, is localized near igneous contacts. Both were discovered by drilling to shallow depths more than 110 years after the first precious metal mines opened in the district. Recently an additional 5 to 8 M oz., one of the largest gold reserves in the U.S.A., has been developed in this vicinity.

While gold skarns are well known in North Korea, some lead and zinc skarn deposits of South Korea also have accompanying gold rich zones. Gold occurs in zones at the outer edges and upper boundaries of the Kumho Mine. The Geodo Cu-Au-Fe skarn, developed since 1963, produced significant amounts of gold. The zoning and metal distribution around these deposits are poorly known, and data on closed mines is often lacking. In Korea, regions which combine favorable carbonate stratigraphy, hydrothermal activity associated with intermediate composition intrusions, and presence of traces of gold and base metals are favorable for further discoveries. Application of new models must be accompanied by extensive sampling for multiple metallic elements.