

VOLCANIC GEOLOGY AND MINERALIZATION, ABSAROKA MOUNTAINS  
NORTHWEST WYOMING - A RESUME

by

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## abstract

Calc-alkalic volcanic rocks, aggregating more than 6500 feet in thickness, crop out in an 8000 square mile area comprising the Absaroka Range of northwest Wyoming. Major volcanic activity, consisting of at least six major eruptions, began in Middle Eocene times and continued until Oligocene time. Minor volcanism continued spasmodically until Recent time.

The northern half of the range is generally underlain by relatively undeformed basaltic to andesitic vent facies volcanics, while the southern part is underlain by folded and faulted volcanoclastics which intertongue with felsic andesitic vent facies rocks. All are intruded by plutons and dikes ranging in composition from rhyolite to basalt. Field and drill hole data, seem to indicate that much of the range is underlain by Paleozoic strata.

Four known mineralized areas (south to north), Kirwin, Stinkingwater, Eagle Creek, and Sunlight, occur in a localized felsic andesitic sequences, which have been intruded by intermediate plutons. These vent areas are believed to have been the sites of complex shield volcanoes. The four areas are generally similar to many western porphyry copper deposits with respect to disseminated copper-molybdenum mineralization, intrusive rock types, alteration, and intensity of fracturing. Data on regional structural control is suggested, but field evidence is sparse.

Field and drill hole data suggest that disseminated and possibly replacement mineralization may occur at depth in other vent areas in the Absaroka Mountains.