

# The Red Devil Mercury District

## Southwestern Alaska



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## THE RED DEVIL MERCURY DISTRICT

Cinnabar and stibnite-bearing epithermal vein deposits can be found scattered over a very large area of several thousand square kilometers within the central Kuskokwim region of southwestern Alaska. The Red Devil Mercury District, historically the most productive of the numerous mercury occurrences lies along a 16 kilometer (ten mile) section of the central Kuskokwim River (Figure 1). The important properties of the district include the Red Devil Mine (33,000 flasks), the Barometer Mine, (1000 flasks), two smaller properties with historic production (Willis and Parks), and several other mercury lode prospects.

About 75,000 tons of 1.55% mercury was produced from the Red Devil Mine. The antimony grade has been estimated to be roughly twice the mercury content. Compared to deposits of the western United States, Red Devil places in the upper 30th percentile in tonnage, and the upper 5th percentile in grade for hot-spring mercury deposits. Large areas of anomalous gold values have been mapped in surface soils in the district. Rock and drill core samples from the Red Devil and Barometer Mines have also contained anomalous gold.

Potential for a McLaughlin-type mercury-gold system is very good. Additional gold may also have been deposited along carbonate-rich horizons within the sedimentary rocks. Work by BHP-Utah in 1989 concluded that the Red Devil mine area was centered over a major epithermal mercury/arsenic/stibnite system with significant gold potential. Part of Dr. Ron Thole's summary comments follow: "There is evidence suggesting that the mercury deposits are at the top of large hot-spring systems with characteristics favorable to gold deposition." He adds, "It is safe to say that every other comparable mercury district in North America has (already) been extensively explored and drilled for gold." Despite his recommendations, BHP's priorities shifted and they left the state shortly thereafter. Subsurface geology and structure known from the old mine workings, together with recently completed surface gold and arsenic geochemistry, could successfully focus a drilling program on significant concentrations of gold.



**RED DEVIL DISTRICT: GEOLOGY AND MINERALIZED AREAS**