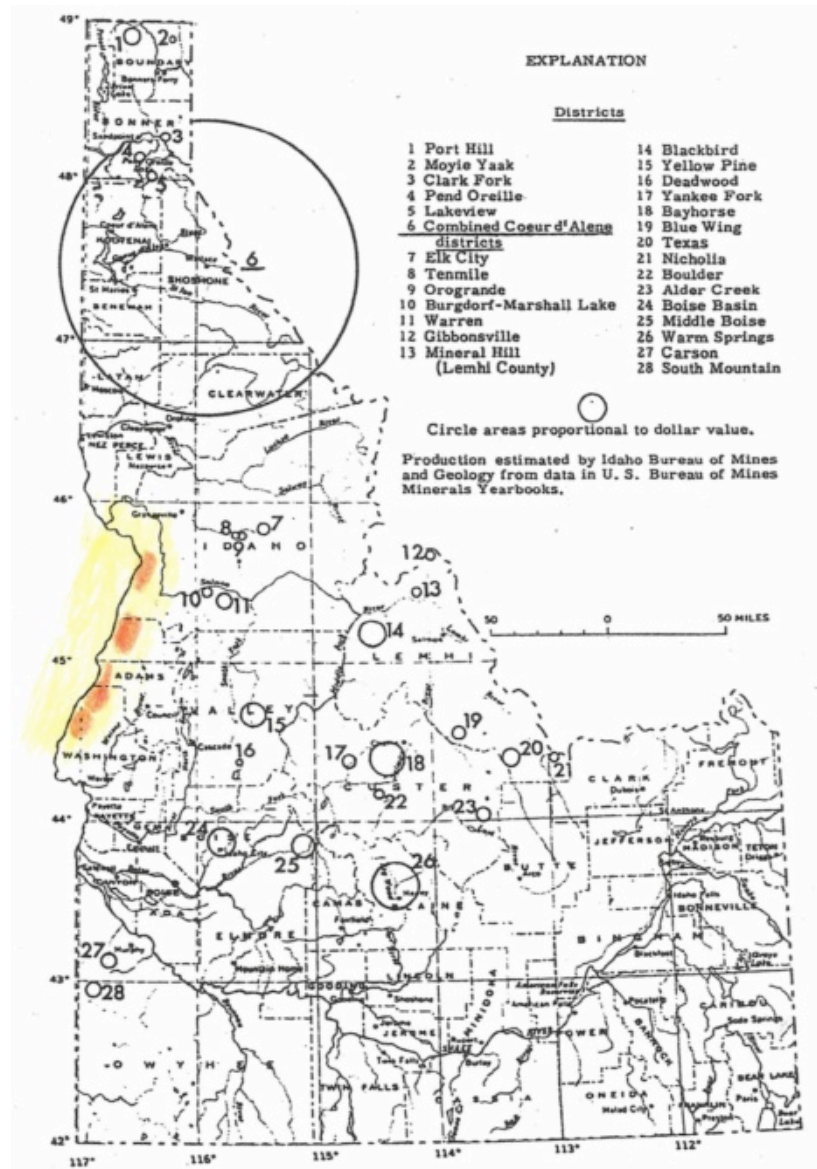


Far Western Idaho



Minerals & Ores in the case are from Mining Districts:

Mineral-Iron Mountain ● Cuddy Mountain
 Seven Devils ● Simpson-Lucille Districts and Vicinity

This region includes the rough country of Hells Canyon, the Seven Devils Mountains, the lower reaches of the Salmon River, and also Cuddy Mountain. There have been a number of productive mines in this region in the past, largely producers of copper and silver with some lead and zinc. These have not been large producers but some were quite rich. Several as yet unmined deposits have been explored in recent years and may become future producers.

The geology of this region is quite unlike the large portion of Idaho that lies to the east. These rocks were imported from a group of volcanic islands that until about 100 million years ago were situated in the Pacific Ocean off the western edge of North America. These volcanic islands, as well as some of the sea floor rocks adjacent to them, became scooped up and attached to the continental margin as a result of compressive plate tectonic processes.

There was considerable over-thrusting and under-thrusting associated with the plate tectonic activity and as a consequence some of the rocks in this western part of Idaho are intensely deformed. Some have been intensely metamorphosed to schists and gneisses. They are mainly old volcanic rocks, with locally interbedded limestone and shale, slate and argillite, and range in age from Permian to Jurassic, about 260 million to 140 million years. Locally they were intruded by younger granitic plutons that range in age from about 160 to 115 million years.

A remarkable feature of some of the mineral deposits in this region is that they formed as products of original sea floor smokers. Hot mineral-bearing water that discharged on the sea floor in some areas produced blanket-like layers of copper-lead-zinc-silver sulfides and other minerals that have since been uplifted and exposed to erosion. There are a number of these but one of the most unusual is a layer rich in manganese. The bright pink rhodonite sample in this cabinet came from this layer. Rhodonite is a manganese silicate mineral that turns black when it oxidizes.