Industrial minerals that have been or are presently being produced from rocks of Permian and Pennsylvanian age include phosphate, limestone, dolomite, gypsum, construction aggregate, dimension stone, decorative and ornamental stone, and agate. A large resource of Permian evaporites, possibly containing significant potash, is present in the subsurface in the Powder River Basin and the northern Denver-Julesburg Basin — Alliance Arch region.

Base and precious metals are present in Permian and Pennsylvanian rocks in the Overthrust Belt. Permian and Pennsylvanian rocks host low temperature replacement copper and silver occurrences elsewhere in Wyoming, and host one hydrothermal replacement deposit adjacent to a Tertiary intrusive at Black Buttes in the Black Hills. Paleoplacer gold and diamond deposits are a possibility in Pennsylvanian units in southeastern Wyoming, and replacement iron and manganese occurrences are found in Permo-Pennsylvanian rocks in central and western Wyoming.

Phosphatic shales of the Meade Peak Phosphatic Shale Member of the Permian Phosphoria Formation contain 0.01 to 0.02 percent uranium. Radioactive black shales are also present at depth in rocks of Desmoinesian age in eastern Wyoming and may represent a significant resource. Small redox uranium occurrences, some of which have been mined in the past, are present in Permian and Pennsylvanian sandstones throughout the state. Uranium occurrences in the Pennsylvanian Fountain Formation in southeastern Wyoming may indicate uranium mineralization near the basal Fountain-Precambrian nonconformity.

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Mineral Resources of Permian and Pennsylvanian Rocks in Wyoming

Permian and Pennsylvanian rocks in Wyoming contain significant resources of industrial minerals. They also host interesting occurrences of metals and uranium, including some that have been mined in the past.