

EXPLANATION

Area of moderate potential for metallic resources in hydrothermal veins
Area of low potential for metallic resources in hydrothermal veins

LEVELS OF RESOURCE POTENTIAL

- H High mineral resource potential
- M Moderate mineral resource potential
- L Low mineral resource potential
- U Unknown mineral resource potential

LEVELS OF CERTAINTY

- A Available data not adequate
- B Data indicate geologic environment, and suggest level of resource potential
- C Data indicate geologic environment, indicate resource potential, but do not establish activity of resource-forming processes
- D Data define geologic environment and level of resource potential and indicate activity of resource-forming processes in all or part of area

LEVEL OF RESOURCE POTENTIAL	LEVEL OF CERTAINTY			
	A	B	C	D
UNKNOWN POTENTIAL	H/B	H/C	H/D	H/D
	M/B	M/C	M/D	M/D
LOW POTENTIAL	L/B	L/C	L/D	N/D
				NO POTENTIAL

DESCRIPTION OF MAP UNITS

- Qa Alluvium (Quaternary)—Unconsolidated sand and gravel in modern channels or on low-lying terraces adjacent to channels; also includes older high standing dissected terraces and megabreccia
- Tby Younger basalt (Miocene)—Dark gray to black, medium- to fine-grained vesicular basalt
- Tr Rhyolite (Miocene)—Rhyolite flows and intrusive rhyolite rocks including biotite-hornblende-sandine-bearing porphyritic rhyolite flows in the upper and dominantly aphyric plugs and domes in the lower part
- Tbo Older basalt (Miocene)—Dark gray to gray, maroonish-brown vesicular basalt flows and flow breccias. (Also including minor cinder deposits and volcaniclastic rocks)
- TKg Granodiorite (Early Tertiary and late Cretaceous)—Medium gray to light gray, medium-grained granodiorite. Composed of 10 to 20 percent biotite, 5 to 10 percent hornblende, 10 percent quartz, 60 percent feldspar, and trace amount sphene and opaque minerals. Irregular apophyses project into Proterozoic granitic rocks near high angle faults. K-Ar ages of 63.0±1.9 and 68.1±2.0 Ma were obtained from samples of this unit (R.J. Miller, unpublished data)
- Ep Pegmatite (Proterozoic)—Coarse-grained feldspar, quartz, and locally tourmaline-bearing pegmatite. Intrudes quartz monzonite porphyry and gneiss units
- YXp Quartz Monzonite porphyry (Middle or early Proterozoic)—Coarse-grained, light pink to pinkish gray quartz monzonite porphyry consisting of 3- to 4-cm-sized K-spar crystals, plagioclase, and quartz with varied amounts of biotite and/or hornblende. Unit contains subtle changes in size of feldspar crystals
- Xg Gneiss (Early Proterozoic)—Compositionally banded medium-gray quartz-feldspar-biotite gneiss. Commonly associated with foliated granite; locally intruded by pegmatite. Foliation typically N. 70° E., 70 N.
- Xmg Metamorphosed granite and associated granitic rock (Early Proterozoic)—Mainly light gray to medium gray foliated leucocratic granite

- Contact—Dashed where approximately located
- - - Normal fault—Dashed where approximately located; dotted where concealed; ball and bar on downthrown side
- X Location of prospect

Base from U.S. Geological Survey 1:62,500: Big Horn Mts., 1961



CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929



Geology mapped by F. Gray, R.J. Miller, J.J. Brice, III, 1984, 1985

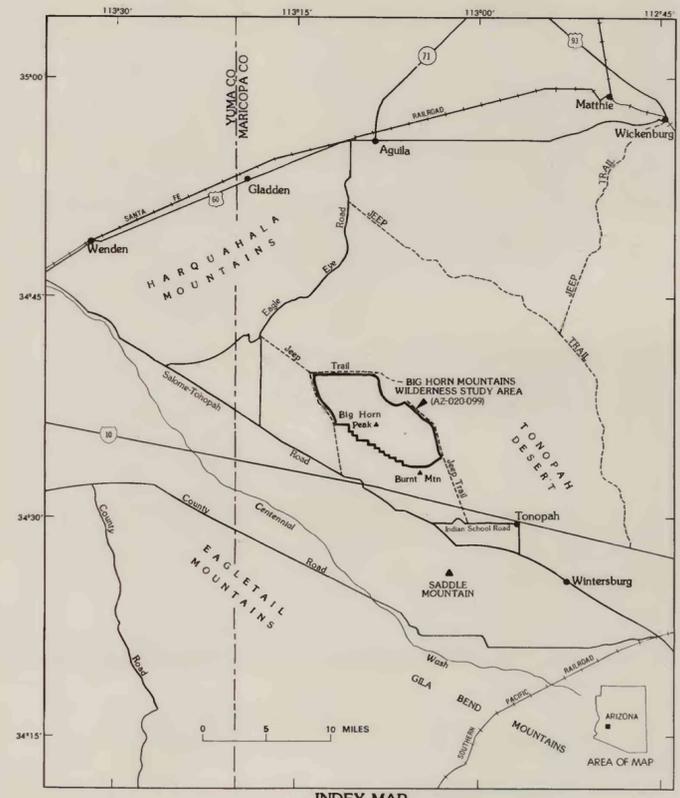
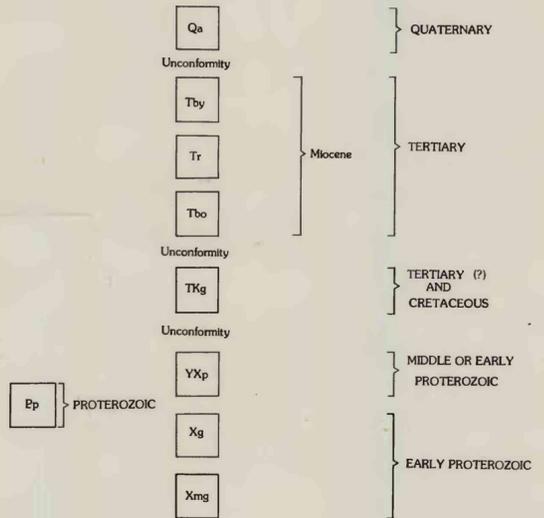
Commodities

- Au Gold
- Ag Silver
- Cu Copper
- Pb Lead
- Zn Zinc

Types of deposits and occurrences

- 1 Epithermal base- and precious-metal deposits in Early Proterozoic metamorphosed granite and gneiss, and Miocene basalt; quartz veins in Early Proterozoic metamorphosed granitic and gneiss
- 2 Epithermal base- and precious-metal deposits in Early or Middle Proterozoic quartz monzonite porphyry

CORRELATION OF MAP UNITS



INDEX MAP

MINERAL RESOURCE POTENTIAL MAP OF THE BIG HORN MOUNTAINS WILDERNESS STUDY AREA, MARICOPA COUNTY, ARIZONA