

**Crystal Data:** Tetragonal. *Point Group:*  $4/m$  or  $4/m\ 2/m\ 2/m$ . As stubby prisms and dipyrramids, to  $25\ \mu\text{m}$ ; as microscopic grains. *Twinning:* Knee-shaped twins with  $\{605\}$  as composition plane; contact twins on  $\{hkl\}$  less common; twinning on  $\{h0l\}$  may also be present, developing trains of prisms and discontinuous lamellae.

**Physical Properties:** *Cleavage:* Rare. Hardness = n.d. VHN = 262 (25 g load).  
D(meas.) = n.d. D(calc.) = 4.23–5.63

**Optical Properties:** Nearly opaque; translucent in thin section. *Color:* Black; gray in polished section, with intense red internal reflections. *Luster:* Resinous to adamantine. *Pleochroism:* Very slightly brownish gray to slightly lavender-gray. *Anisotropism:* Moderate in air, strong in oil.  
 $R_1$ – $R_2$ : n.d.

**Cell Data:** *Space Group:*  $P4/n$ ,  $P4_2/n$ ,  $P4/nbm$ ,  $P4/nmm$ ,  $P4_2/nm$ , or  $P4_2/nm$ .  
 $a = 8.71$   $c = 14.74$   $Z = 24 - 32(?)$

**X-ray Powder Pattern:** B and B deposit, Idaho, USA.  
3.08 (vs), 1.888 (s), 3.16 (ms), 1.608 (ms), 3.60 (m), 1.222 (m), 1.086 (m)

<b>Chemistry:</b>	(1)
Zn	49.1
Hg	25.8
Fe	0.5
S	26.7
Total	102.1

(1) B and B deposit, Idaho, USA; by electron microprobe, average analysis of 15 grains, corresponding to  $(\text{Zn}_{0.87}\text{Hg}_{0.15}\text{Fe}_{0.01})_{\Sigma=1.03}\text{S}_{0.97}$ .

**Occurrence:** As part of a replacement deposit of stibnite (B and B deposit, Idaho, USA).

**Association:** Stibnite, cinnabar, mercurian sphalerite, zincian metacinnabar (B and B deposit, Idaho, USA); realgar (Getchell mine, Nevada, USA).

**Distribution:** In the USA, from the B and B deposit, Big Creek district, Valley Co., Idaho [TL], and in the Getchell mine, Potosi district, Humboldt Co., Nevada.

**Name:** In honor of Clyde Polhemus Ross (1891–1965), American economic geologist.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, 145549.

**References:** (1) Leonard, B.F., G.A. Desborough, and C.W. Mead (1978) Polhemusite, a new Hg–Zn sulfide from Idaho. *Amer. Mineral.*, 63, 1153–1161.