

**Crystal Data:** Hexagonal. *Point Group:*  $6/m\ 2/m\ 2/m$ . Massive, as small lenses up to 2.5 cm across.

**Physical Properties:** *Fracture:* Uneven. *Hardness* = 3 *VHN* = 145–158 (100 g load). *D*(meas.) = ~6 *D*(calc.) = [5.83]

**Optical Properties:** Opaque. *Color:* Dark bluish black, tarnishing to deep black. *Streak:* Black. *Luster:* Shiny metallic. *Pleochroism:* Distinct. *Anisotropism:* Distinct.  
*R*<sub>1</sub>–*R*<sub>2</sub>: (400) 40.3–41.6, (420) 39.8–41.3, (440) 38.9–40.6, (460) 37.9–39.6, (480) 36.9–38.4, (500) 35.9–37.1, (520) 34.8–35.9, (540) 33.7–34.9, (560) 32.6–34.0, (580) 31.5–33.1, (600) 30.5–32.5, (620) 29.6–32.0, (640) 28.9–31.6, (660) 28.1–31.2, (680) 27.3–30.8, (700) 26.4–30.2

**Cell Data:** *Space Group:*  $P6/mmm$ . *a* = 12.54 *c* = 21.71 *Z* = [15]

**X-ray Powder Pattern:** Synthetic.  
2.09 (100), 3.61 (70), 2.01 (70), 3.24 (60), 1.80 (50), 2.55 (30), 2.17 (30)

<b>Chemistry:</b>	(1)	(2)
Cu	45.84	45.35
Te	53.97	54.65
Total	99.81	100.00

(1) Good Hope mine, Colorado, USA; average of two analyses. (2) Cu<sub>5</sub>Te<sub>3</sub>.

**Occurrence:** In hydrothermal veins with other tellurides.

**Association:** Pyrite, tellurium, sylvanite, petzite, rickardite, sulfur (Colorado, USA); gold, calaverite, krennerite (Kalgoorlie, Australia).

**Distribution:** In the USA, from the Good Hope and Mammoth Chimney mines, Vulcan, Gunnison Co., Colorado; near Winston, Sierra Co., New Mexico. In Japan, from the Teine mine, Hokkaido. From the Kalgurli gold mines, Kalgoorlie, Western Australia.

**Name:** For Louis Weiss, owner of the Good Hope mine and discoverer of rickardite.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, 95782.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 199. (2) Thompson, R.M. (1949) The telluride minerals and their occurrence in Canada. *Amer. Mineral.*, 34, 342–382. (3) Patzak, I. (1956) Über die Struktur und die Lage der Phasen im System Kupfer–Tellur. *Zeits. für Metallkunde*, 47, 418–420 (in German). (4) Ramdohr, P. (1969) The ore minerals and their intergrowths, (3rd edition), 417–418.