

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3}$ . As grains, to 220  $\mu\text{m}$ , and inclusions in platinum-group element nuggets.

**Physical Properties:** Hardness = n.d. VHN = 394–424, 410 average (15 g load). D(meas.) = n.d. D(calc.) = 11.72

**Optical Properties:** Opaque. *Color:* In polished section, cream colored, where isolated; dull cream with brownish tint with kotulskite; gray next to telluropalladinite. *Pleochroism:* Not detectable in air; very slight in oil. *Anisotropism:* Moderate to strong.  $R_1$ – $R_2$ : (400) 40.8–40.6, (420) 41.6–41.1, (440) 41.8–41.5, (460) 42.0–42.0, (480) 42.3–42.6, (500) 42.9–43.4, (520) 43.6–44.1, (540) 44.4–44.9, (560) 45.3–45.8, (580) 46.0–46.6, (600) 46.8–47.5, (620) 48.0–48.8, (640) 49.3–49.9, (660) 50.6–50.9, (680) 52.0–52.1, (700) 53.5–53.4

**Cell Data:** *Space Group:*  $R\bar{3}$ .  $a = 11.458(10)$   $c = 11.296(12)$   $Z = 3$

**X-ray Powder Pattern:** Stillwater complex, Montana, USA. 2.26 (100), 2.16 (90), 0.791 (40), 1.32 (30), 0.885 (30), 2.22 (20), 1.40 (20)

<b>Chemistry:</b>	(1)	(2)	(3)	(1)	(2)	(3)
Pd	68.7	67.31	70.44	Pb	1.6	
Pt		3.19		As		0.32
Rh		0.13		Bi	1.0	
Fe		0.11		Te	29.1	29.56
				<b>Total</b>	100.4	101.51
						100.00

(1) Stillwater complex, Montana, USA; by electron microprobe, corresponding to Pd<sub>19.81</sub>Pb<sub>0.24</sub>Bi<sub>0.15</sub>Te<sub>7.00</sub>. (2) Pustaya River, Russia; by electron microprobe, corresponding to Pd<sub>18.55</sub>Pt<sub>0.48</sub>Fe<sub>0.06</sub>Rh<sub>0.04</sub>As<sub>0.12</sub>Te<sub>7.00</sub>. (3) Pd<sub>20</sub>Te<sub>7</sub>.

**Occurrence:** Rare with other platinum-group minerals in layered ultrabasic complexes and their placers.

**Association:** Merenskyite, kotulskite, telluropalladinite, moncheite, vysotskite, gold, magnetite (Stillwater complex, Montana, USA).

**Distribution:** From the Stillwater complex, Montana, USA [TL]. In the Bird River sill, Manitoba, Canada. From the Department of Chocó, Cauca, Colombia. At the Kirakajuppura deposit, Penikat layered complex, northeast of Kemi, Finland. From the Pustaya River placers, Kamchatka, Russia. In placers in the Velúce ophiolite complex, Serbia. Found in rocks of the Mine Series, Katanga Province, Congo (Shaba Province, Zaire). In the Manampotsy district, Madagascar. In Burma, from the Chindwin River placers.

**Name:** Honors H. Keith Conn (1923–), the geologist largely responsible for the discovery of Pt–Pd mineralization of parts of the Stillwater complex, Montana.

**Type Material:** Canadian Geological Survey, Ottawa, 12187, 12188; Royal Ontario Museum, Toronto, Canada, M35867; National Museum of Natural History, Washington, D.C., USA, 114975.

**References:** (1) Cabri, L.J., J.F. Rowland, J.H.G. Laflamme, and J.M. Stewart (1979) Keithconnite, telluropalladinite, and other Pd–Pt tellurides from the Stillwater Complex, Montana. *Can. Mineral.*, 17, 589–594. (2) (1981) *Amer. Mineral.*, 66, 1275 (abs. ref. 1). (3) Wopersnow, W. and K. Schubert (1977) *J. Less-Common Metals*, 51, 35–???. (4) Bayliss, P. (1990) Revised unit-cell dimensions, space group, and chemical formula of some metallic minerals. *Can. Mineral.*, 28, 751–755. (5) Tolstyykh, N.D., E.G. Sidorov, K.V.O. Laajoki, A.P. Krivenko, and M. Podlipskiy (2000) The association of platinum group minerals in placers of the Pustaya River, Kamchatka, Russia. *Can. Mineral.*, 38, 1251–1264. (6) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 280.

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