

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3} 2/m$ . As blocky grains to 50  $\mu\text{m}$ , occasionally intergrowth with oberthürite.

**Physical Properties:** *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* n.d. Hardness = n.d. D(meas.) = n.d. D(calc.) = 5.555

**Optical Properties:** Opaque. *Color:* In reflected light, slightly bluish compared to oberthürite, gray compared to chalcopyrite, zvyagintsevite, and keithconnite, and pale creamy brown compared to bornite and coldwellite. *Streak:* n.d. *Luster:* Metallic.

*Optical Class:* No discernible pleochroism, bireflectance, or anisotropy.  
R: (470) 34.7, (546) 34.4, (589) 33.8, (650) 33.8

**Cell Data:** *Space Group:*  $R\bar{3} m$ .  $a = 7.060(1)$   $c = 34.271(7)$   $Z = 3$

**X-Ray Diffraction Pattern:** Marathon deposit, Coldwell alkaline complex, Ontario, Canada.  
1.7797 (100), 3.029 (58), 1.2512 (49), 1.0226 (35), 3.080 (33), 1.9329 (30), 2.817 (23)

Chemistry:	(1)	(2)
Rh	28.29	31.87
Ru	0.11	
Os	0.11	
Ir	1.60	
Pt	2.61	
Ni	17.60	36.36
Fe	9.22	
Co	1.89	
Cu	7.41	
S	31.03	31.78
Total	99.87	100.00

(1) Marathon deposit, Coldwell alkaline complex, Ontario, Canada; average EDS analysis;  
corresponding to  $(\text{Rh}_{4.5}\text{Pt}_{0.22}\text{Ir}_{0.14}\text{Ni}_{10.11}\text{Ru}_{0.02}\text{Os}_{0.01})_{\Sigma=5.03}(\text{Ni}_{4.84}\text{Fe}_{2.71}\text{Cu}_{1.92}\text{Co}_{0.53})_{\Sigma=10.00}\text{S}_{15.96}$ .  
(2)  $\text{Rh}_5\text{Ni}_{10}\text{S}_{16}$ .

**Occurrence:** In a heavy-mineral concentrate from coarse-grained ophitic olivine gabbro.

**Association:** Vysotskite, Au-Ag alloy, isoferroplatinum, Ge-bearing keithconnite, majakite, coldwellite, cuprorhodsite-ferhodsite, kotulskite, mertieite-II, chalcopyrite, bornite, millerite, Rh-bearing pentlandite.

**Distribution:** From the W Horizon, Marathon Cu-PGE-Au deposit, Coldwell alkaline complex, Ontario, Canada. From the Sisim Placer Zone, Krasnoyarskiy kray, Russia.

**Name:** Honors Dr. Thorolf ('Torry') W. Weiser (b. 1938), for his work on platinum-group minerals, notably those found in deposits related to the Great Dyke (Zimbabwe) and the Bushveld complex (Republic of South Africa).

**Type Material:** Canadian Museum of Nature, Gatineau, Quebec, Canada (87181 and 87179).

**References:** (1) McDonald, A.M., I.M. Kjarsgaard, L.J. Cabri, K.C. Ross, D.E. Ames, L. Bindi, and D.J. Good (2021) Oberthürite,  $\text{Rh}_3(\text{Ni},\text{Fe})_{32}\text{S}_{32}$  and torryweiserite,  $\text{Rh}_5\text{Ni}_{10}\text{S}_{16}$ , two new platinum-group minerals from the Marathon deposit, Coldwell Complex, Ontario, Canada: Descriptions, crystal-chemical considerations, and comments on the geochemistry of rhodium. Can. Mineral., 59, 1833-1863.