Metarossite $CaV_2^{5+}O_6 \cdot 2H_2O$

Crystal Data: Triclinic. *Point Group:* $\overline{1}$. Crystals to 0.1 mm, platy, flaky, massive; as alteration rims on and complete replacements of rossite. *Twinning:* On $\{10\overline{1}\}$ as twin plane.

Physical Properties: *Tenacity:* Friable. Hardness = Soft. D(meas.) = n.d. D(calc.) = [2.80] Soluble in H_2O; alters to rossite on exposure to dry air, which is reversible.

Optical Properties: Semitransparent. *Color:* Very light yellow to pale greenish yellow; colorless to pale yellow in transmitted light. *Luster:* Dull to pearly. *Optical Class:* Biaxial (+). *Dispersion:* Strong. $\alpha = 1.840$ $\beta = > 1.85$ $\gamma = > 1.85$ 2V(meas.) = Large.

Cell Data: *Space Group:* $P\overline{1}$. $a = 6.215(5)$ $b = 7.065(5)$ $c = 7.769(5)$ $\alpha = 92°58(10)'$ $\beta = 96°39(10)'$ $\gamma = 105°47(10)'$ Z = 2

X-ray Powder Pattern: Locality unspecified [Bull Pen Canyon, Colorado, USA]. 5.9 (s), 5.1 (s), 3.05 (m)

Chemistry:

	(1)	(2)	(3)
V_2O_5	64.08	64.20	66.38
MgO	0.10	0.13	
CaO	20.04	19.60	20.47
H_2O	13.56	14.08	13.15
insol.	2.72	2.48	
Total	100.50	100.49	100.00

(1–2) Bull Pen Canyon, Colorado, USA. (3) $CaV_2O_6 \cdot 2H_2O$.

Occurrence: In veinlets in carnotite-bearing sandstone (Bull Pen Canyon, Colorado, USA).

Association: Rossite, carnotite, gypsum (Bull Pen Canyon, Colorado, USA).

Distribution: In the USA, on M.E. O'Neil's [Buckhorn] claim, Bull Pen Canyon, Slick Rock district, San Miguel Co., and in Paradox Valley, Montrose Co., Colorado; along Spring Creek, Brushy Basin, Monticello district, San Juan Co., and in the Thompsons district, Grand Co., Utah; from the Monument No. 2 mine, Apache Co., Arizona.

Name: For its relation to *rossite*, from which it may form by dehydration.

Type Material: National Museum of Natural History, Washington, D.C., USA, 95331A, R5707A.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 1054–1055. (2) Weeks, A.D. and M.E. Thompson (1954) Identification and occurrence of uranium and vanadium minerals from the Colorado Plateaus. U.S. Geol. Sur. Bull. 1009-B, 56–57. (3) Kelsey, C.H. and W.H. Barnes (1960) The crystal structure of metarossite. Can. Mineral., 6, 448–466, 697.