

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As tabular to equant to prismatic crystals, to several mm, typically intergrown in parallel groups; displaying prominent {001} with numerous small faces that produce striations at 120° to one another.

**Physical Properties:** *Cleavage:* Perfect on {001}. *Fracture:* Conchoidal, curved.  
*Tenacity:* Brittle. Hardness = 2.5 D(meas.) = 2.43(2) D(calc.) = 2.442

**Optical Properties:** Transparent. *Color:* Bright orange. *Streak:* Yellow. *Luster:* Adamantine.  
*Optical Class:* Biaxial (-).  $\alpha = 1.769(3)$   $\beta = 1.802(3)$   $\gamma = 1.807(3)$   $2V(\text{meas.}) = 45(5)^\circ$   
 $2V(\text{calc.}) = 42^\circ$  *Pleochroism:* Y = Orange; Z = yellow. *Orientation:* X = b; Z  $\wedge$  a = 20°.

**Cell Data:** *Space Group:* C2/m.  $a = 19.8442(15)$   $b = 9.9353(8)$   $c = 10.7149(8)$   
 $\beta = 120.305(1)^\circ$  Z = 2

**X-ray Powder Pattern:** Blue Cap mine, San Juan County, Utah, USA.  
8.571 (100), 7.270 (40), 8.872 (30), 9.242 (20), 2.137 (20), 5.477 (15), 4.590 (15)

Chemistry:	(1)	(2)
CaO	7.78	8.31
MgO	2.67	2.98
ZnO	0.23	
CoO	0.05	
V <sub>2</sub> O <sub>5</sub>	71.32	67.35
H <sub>2</sub> O	21.94	21.35
Total	103.99	100.00

(1) Blue Cap mine, San Juan County, Utah, USA; average of 4 electron microprobe analyses, H<sub>2</sub>O calculated from structure, corresponding to Ca<sub>1.77</sub>(Mg<sub>0.85</sub>Zn<sub>0.04</sub>Co<sub>0.01</sub>)(H<sub>2</sub>O)<sub>15.34</sub>(H<sub>3</sub>O)<sub>0.66</sub>(V<sub>10</sub>O<sub>28</sub>).

(2) Ca<sub>2</sub>Mg(V<sub>10</sub>O<sub>28</sub>)·16H<sub>2</sub>O.

**Mineral Group:** Pascoite group.

**Occurrence:** Product of groundwater leaching and oxidation of vanadium oxides in a post-mining environment.

**Association:** Gypsum, rossite, pyrite, montroseite, martyite.

**Distribution:** Blue Cap and Vanadium Queen mines, near La Sal, San Juan County, Utah, USA.

**Name:** As the magnesium analog of *pascolite*.

**Type Material:** Natural History Museum of Los Angeles County, California, USA, 58610 and 58611.

**References:** (1) Kampf, A.R. and I.M. Steele (2008) Magnesiopascoite, a new member of the pascoite group: description and crystal structure. *Can. Mineral.*, 46, 679–686. (2) (2009) *Amer. Mineral.*, 94, 400 (abs. ref. 1).