

**Crystal Data:** Monoclinic. *Point Group:* 2/m. Typically as crusts of rounded crystals; as blocky prismatic crystals, elongated on [010] and exhibiting {100}, {010}, {001},  $\{\bar{1}11\}$ , and {111}, to 2 mm.

**Physical Properties:** *Cleavage:* None. *Tenacity:* Very brittle. *Hardness:* = 1  
D(meas.) = 2.38(2) D(calc.) = 2.362 Crystals dehydrate to a yellow powder. Soluble in water.

**Optical Properties:** Transparent. *Color:* Yellow to yellow-orange. *Streak:* Yellow.  
*Luster:* Adamantine.

*Optical Class:* Biaxial (-).  $\alpha = 1.743(5)$   $\beta = 1.773(5)$   $\gamma = 1.780(5)$   $2V(\text{meas.}) = 43(1)^\circ$   
*Dispersion:*  $r > v$ , strong. *Pleochroism:* X = light greenish yellow; Y = light yellow; Z = light brown.

**Cell Data:** *Space Group:* C2/c.  $a = 23.9019(7)$   $b = 10.9993(3)$   $c = 17.0504(5)$   
 $\beta = 118.284(1)^\circ$   $Z = 2$

**X-ray Powder Pattern:** Vanadium Queen Mine, Utah.  
9.72 (100), 6.67 (80), 7.42 (70), 9.09 (60), 8.19 (60), 2.882 (50), 2.706 (50)

<b>Chemistry:</b>	(1)
Na <sub>2</sub> O	4.06
MgO	5.42
CaO	1.75
K <sub>2</sub> O	0.47
V <sub>2</sub> O <sub>5</sub>	61.87
SO <sub>3</sub>	2.55
<u>H<sub>2</sub>O</u>	<u>23.88</u>
Total	100.00

(1) Vanadium Queen Mine, Utah; average of 2 argon-plasma spectrometric analyses, H<sub>2</sub>O by difference, corresponding to  $(\text{Na}_{1.84}\text{Ca}_{0.44}\text{K}_{0.14})_{\Sigma=2.42}\text{Mg}_{1.89}(\text{V}_{9.55}\text{S}_{0.45})_{\Sigma=10.00}\text{O}_{28.55}\cdot 18.61\text{H}_2\text{O}$ .

**Occurrence:** As efflorescences in oxidized portions of paleochannel uranium vanadium deposits of the Colorado Plateau type.

**Association:** Rossite, dickthomssenite, hewettite.

**Distribution:** Vanadium Queen Mine, La Sal district, and Firefly-Pigmy and Blue Cap mines, Utah, USA. Likely widespread in other similar deposits on the Colorado Plateau, e.g. Yellow Cat district, Grand County, Utah, USA.

**Name:** For the mining district that provided the first specimens.

**Type Material:** National Museum of Natural History, Washington, D.C., USA (174744).

**References:** (1) Hughes, J.M., W.S. Wise, M.E. Gunter, J.P. Morton, and J. Rakovan (2008) Lasalite,  $\text{Na}_2\text{Mg}_2[\text{V}_{10}\text{O}_{28}]\cdot 20\text{H}_2\text{O}$ , a new decavanadate mineral species from the Vanadium Queen mine, La Sal District, Utah: description, atomic arrangement, and relationship to the pascoite group of minerals. *Can. Mineral.*, 46, 1365–1372; (2009) Addendum. *Can. Mineral.*, 47, 206. (2) (2009) *Amer. Mineral.*, 94, 1078–1079 (abs. ref. 1).