

Crystal Data: Monoclinic. *Point Group:* 2/m. Crystals to 200 μm are tabular (<5 μm) on {001} with dominant {001}, minor {100} and {110}.

Physical Properties: *Cleavage:* Perfect on {001} and fair on {100}. *Tenacity:* Brittle.
Fracture: Conchoidal. Hardness = 3 D(meas.) = n.d. D(calc.) = 3.254

Optical Properties: Transparent. *Color:* Pale blue. *Streak:* Pale blue. *Luster:* Vitreous.
Optical Class: Biaxial (-). $\alpha = 1.724(2)$ $\beta = 1.745(2)$ $\gamma = 1.750(2)$ $2V(\text{meas.}) = 33(6)^\circ$
 $2V(\text{calc.}) = 52^\circ$ *Orientation:* $Y = c$, $Z = b$, $X \wedge a = 22^\circ$ in β obtuse.
Pleochroism: Distinct; X = pale blue, Z = pale greenish blue.

Cell Data: *Space Group:* C2/m. $a = 10.301(8)$ $b = 6.758(3)$ $c = 8.835(7)$ $\beta = 111.53(6)^\circ$ $Z = 2$

X-ray Powder Pattern: New Cliffe Hill Quarry, Stanton-under-Bardon, Leicestershire, England.
8.199 (100), 5.502 (100), 2.883 (80), 2.188 (50), 5.029 (40), 2.693 (40), 2.263 (40)

Chemistry:	(1)
CuO	70.46
Cl	12.71
H ₂ O	[19.19]
<u>-O = Cl</u>	<u>2.87</u>
Total	99.49

(1) New Cliffe Hill Quarry, Stanton-under-Bardon, Leicestershire, England; average electron microprobe analysis, H₂O calculated from structure; corresponds to Cu_{4.99}Cl_{2.02}(OH)₈(H₂O)₂.

Occurrence: In a quarry on crusts of malachite and azurite that overlie massive cuprite in oxidized waste material containing native copper hosted by diorite in a laccolith.

Association: Malachite, azurite, cuprite.

Distribution: At the New Cliffe Hill Quarry, Stanton-under-Bardon, Leicestershire, England.

Name: Honors mineralogist Robert King (b. 1923), formerly at the Department of Geology, Leicester University, and a founding member of the Russell Society.

Type Material: Canadian Museum of Nature (CMNNG 83270) and the X-ray Diffraction Laboratory at the Geological Survey of Canada, Ottawa, Ontario, Canada.

References: (1) Hawthorne, F.C., M.A. Cooper, J.D. Grice, A.C. Roberts, and N. Hubbard (2002) Description and crystal structure of bobkingite, Cu²⁺₅Cl₂(OH)₈(H₂O)₂, a new mineral from New Cliffe Hill Quarry, Stanton-under-Bardon, Leicestershire, U.K. *Mineral. Mag.*, 66, 301-311.
(2) (2003) *Amer. Mineral.*, 88, 251 (abs. ref. 1).