

FM  
cig/mi

---

BULLETIN DE L'ASSOCIATION MINÉRALOGIQUE DU CANADA

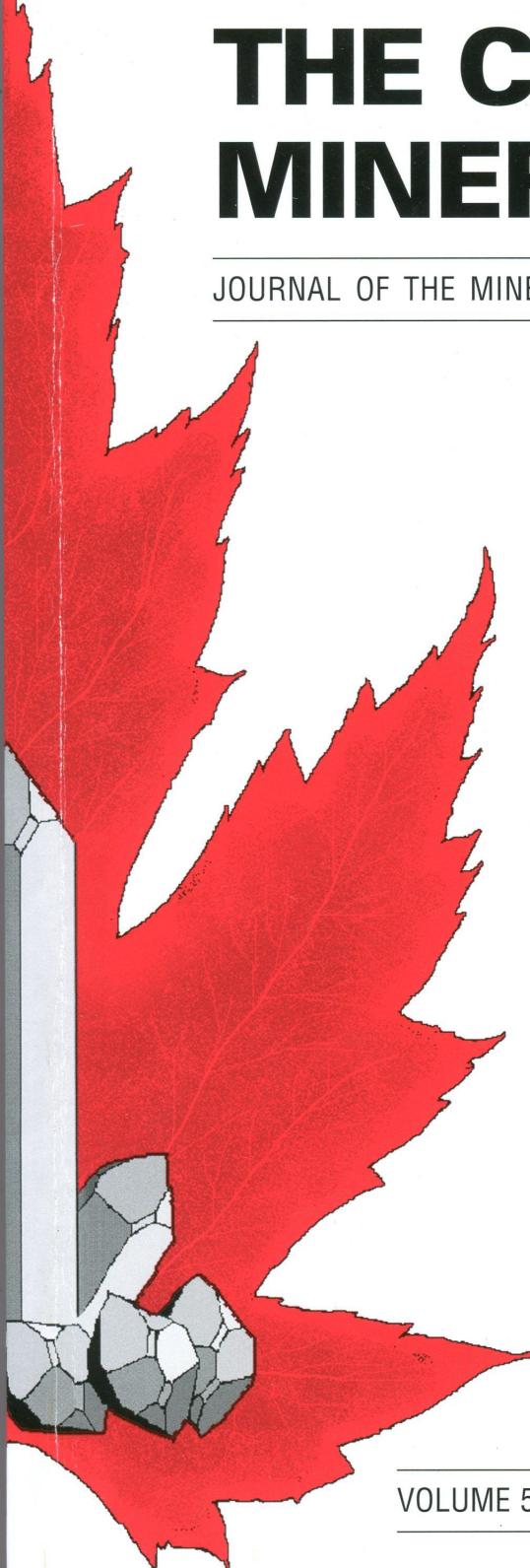
---

# THE CANADIAN MINERALOGIST

---

JOURNAL OF THE MINERALOGICAL ASSOCIATION OF CANADA

---



**MINERALOGY**  
**CRYSTALLOGRAPHY**  
**PETROLOGY**  
**ECONOMIC GEOLOGY**  
**GEOCHEMISTRY**

---

VOLUME 52, part 4

AUGUST 2014

---

Volume 52

AUGUST 2014

Part 4

A new occurrence of the borosilicate serendibite in tourmaline-bearing calc-silicate rocks, Portage-Du-Fort Marble, Grenville Province, Québec: Evolution of boron isotope and tourmaline compositions in a metamorphic context	P.M. BELLEY, J.D. GRICE, M. FAYEK, P.M. KOWALSKI, & E.S. GREW	595
Ruthenium and magnetite intergrowths from the Loma Peguera chromitite, Dominican Republic, and relevance to the debate over the existence of platinum-group element oxides and hydroxides	F. ZACCARINI, L. BINDI, G. GARUTI, & J.A. PROENZA	617
The crystal chemistry of gadolinite-datolite group silicates	P. BAČÍK, J. FRIDRICHOVÁ, P. UHER, J. PRŠEK, & M. ONDREJKA	625
Cl-rich fluorapatite, devoid of OH, from the Three Peaks area, Utah: The first reported structure of natural Cl-rich fluorapatite	J.M. HUGHES, K.M. HEFFERNAN, B. GOLDOFF, & H. NEKVASIL	643
The mineralogy, geochemistry, and metallurgy of cobalt in the rhombohedral carbonates	I.F. BARTON, H. YANG, & M.D. BARTON	653
Rhenium distribution in molybdenite from the Vosnesensk porphyry Cu ± (Mo, Au) deposit (Southern Urals, Russia)	A.I. GRABEZHEV & P.C. VOUDOURIS	671
Mammothite: A Pb-Sb-Cu-Al oxy-hydroxide-sulfate — Hydrogen atom determination lowers space group symmetry	J.D. GRICE & M.A. COOPER	687
Wulffite, $K_3NaCu_4O_2(SO_4)_4$ , and parawulffite, $K_5Na_3Cu_8O_4(SO_4)_8$ , two new minerals from fumarole sublimates of the Tolbachik volcano, Kamchatka, Russia	I.V. PEKOV, N.V. ZUBKOVA, V.O. YAPASKURT, D.I. BELAKOVSKIY, N.V. CHUKANOV, I.S. LYKOVA, D.P. SAVELYEV, E.G. SIDOROV, & D.YU. PUSHCHAROVSKY	699
Hydrothermal evolution in the Hoidas Lake vein-type REE deposit, Saskatchewan, Canada: Constraints from fluid inclusion microthermometry and evaporate mound analysis	K. PANDUR, D.J. KONTAK, & K.M. ANSDELL	717
Saamite, $Ba\Box TiNbNa_3Ti(Si_2O_7)_2O_2(OH)_2(H_2O)_2$ , a Group-III Ti-disilicate mineral from the Khibiny alkaline massif, Kola Peninsula, Russia: Description and crystal structure	F. CÁMARA, E. SOKOLOVA, Y.A. ABDU, & F.C. HAWTHORNE	745
The system Hg–Pd–Se at 400 °C: Phase relations involving tischendorfite and other ternary phases	M. DRÁBEK, A. VYMAZALOVÁ, & F. LAUFER	763
Discreditation of thorogummite	P.C. PIILONEN, R. ROWE, G. POIRIER, J.D. GRICE, & A.M. McDONALD	769