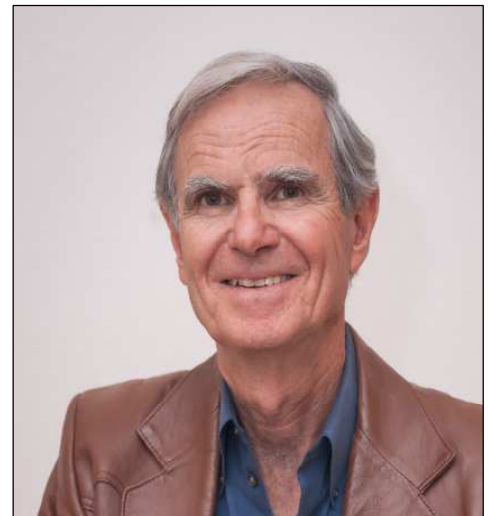




Short Course in Ore Microscopy, University of Waikato, Hamilton, New Zealand

March 4-5, 2015

**Instructor: Dr. John L. Lufkin
Golden, Colorado**



Dr. John Lufkin, Ph.D. Geology,
Stanford University; President,
Golden Publishers

Course Description: This two-day interactive course will provide an introduction to ore microscopy and interpretation of ore textures. It will consist of several lectures mixed with periods of microscope practical work using an extensive collection of over 375 polished sections, including material from Bingham Canyon, Utah; Coeur d'Alene, Idaho; several Arizona porphyry copper systems; Stillwater Complex, Montana; Duluth Complex, Minnesota; Iron Springs, Utah magnetite; Mississippi Valley Pb-Zn ores; Porphyry moly and precious metal deposits of Colorado, including Climax, Henderson, Cripple Creek, Silverton, and Creede; massive sulfide deposits from Alaska and Canada; Lake Superior Banded Iron Formation (BIF), and many more.

Prior registration is required. Please email Tony Christie at t.christie@gns.cri.nz or phone 04 570-4682. AusIMM Members and students free, non-AusIMM members will be charged a small fee, yet to be set. A course manual will be provided.

Course Schedule:

Wednesday, March 4, 2015

10:00 am – 10:30 am	Introduction & Handouts
10:30 am – 11:00 am	The Ore Microscope
11:00 am – 11:30 am	Overview of ore minerals and their optical properties
11:30 am – 12:00 pm	Lab work on ore collections
12:00 pm – 1:00 pm	Lunch
1:00 pm – 2:00 pm	Interpretation of ore textures
2:00 pm – 3:00 pm	Lab work on ore collections
3:00 pm – 3:30 pm	Break for afternoon tea/coffee and general discussion
3:30 pm – 4:00 pm	Decision tree for mineral identification
4:00 pm – 5:00 pm	Lab work, continued

Thursday, March 5

8:30 am – 9:00 am	Lab work, continued
9:00 am – 10:00 am	Interpretation of ore textures & paragenesis of ores, Pt. 2
10:00 am – 10:30 am	Break for morning tea/coffee and general discussion
10:30 am – 12:00 pm	Lab work, continued
12:00 pm – 1:00 pm	Lunch
1:00 pm – 3:00 pm	Lab work, continued
3:00 pm – 3:30 pm	Break for afternoon tea/coffee and general discussion
3:30 pm – 5:00 pm	Choice of activities based on requests from participants

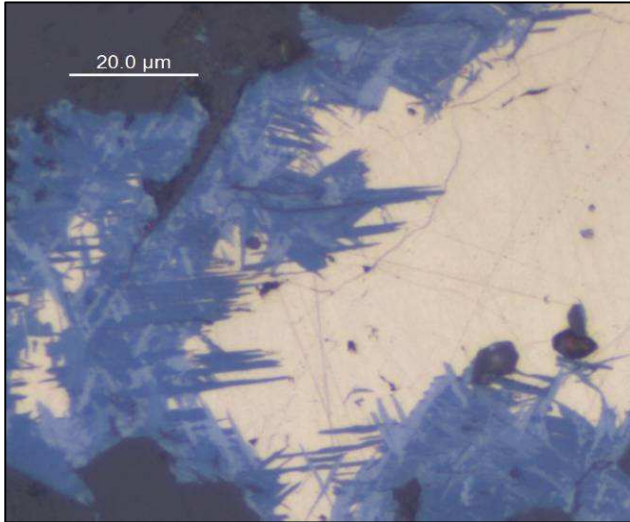
About Dr. Lufkin

John L. Lufkin, B.A., Carleton College; M.S., Brigham Young University; Ph.D., Stanford University. Consulting Geologist and President, Golden Publishers. He has over 40 years of experience in academia, industry, and consulting work. John began his teaching career at the University of Texas Austin in 1973, and later taught at Colorado School of Mines from 1981-84. After working in the environmental consulting field from 1988 to 2001 in Southern California and Texas, he returned to teaching geology part-time at the University of Colorado Denver on the Auraria Campus. For the past four years, he has taught courses in *Geology of Colorado*, *Physical Geology*, *Oceanography*, *Mineralogy*, *Ore Mineralogy & Microscopy*, and *Igneous & Metamorphic Petrology* at Metropolitan State University of Denver and University of Northern Colorado in Greeley.

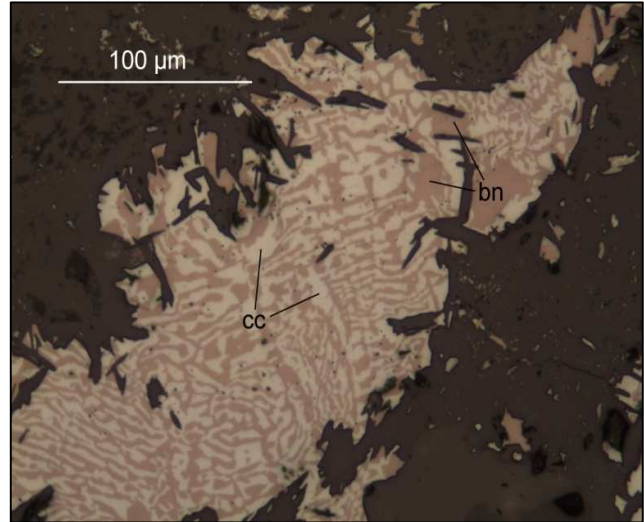
This past year, Dr. Lufkin has published two books, *Geology of Colorado's Parks & Monuments* and *Tucson Mineral Show: Dealers, Minerals, & Fossils*. Books in preparation include *Geology of Colorado's Mountains & Canyons*, *Ore Mineralogy & Microscopy*, and *Guidebook to Geology of the Black Hills, SD, 2nd edition*. For more information see his website, www.golden-publishers.com.

To contact John, email: lufk3@comcast.net

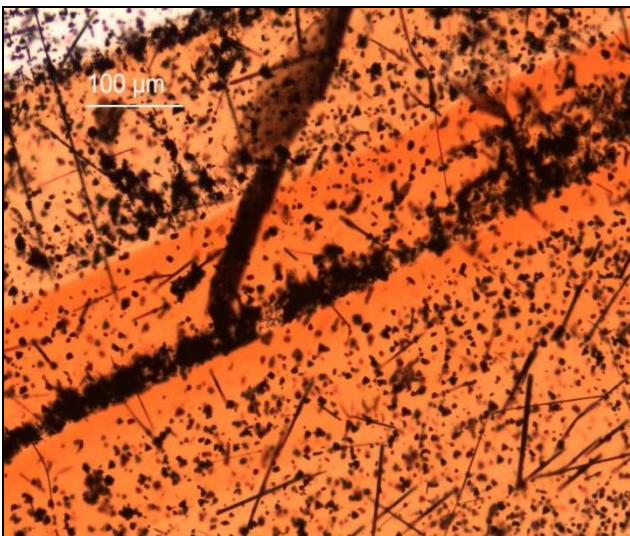
Ore Mineralogy & Microscopy



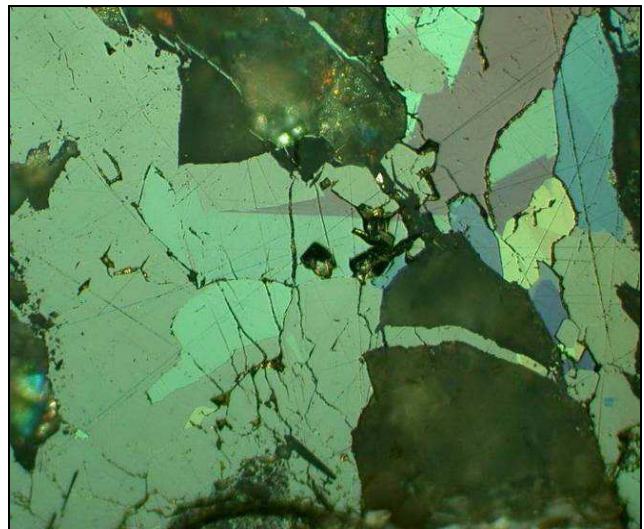
Rim replacement of chalcopyrite (yellow) by covellite. Morenci, Arizona. Reflected light.



Vermicular intergrowth of bornite (bn) and chalcocite (cc), Salobo, Brazil IOCG deposit. Reflected light. Polished section courtesy of Murray Hitzman, CSM.



Color-zoned sphalerite with interlayered pyrite (black) and chalcopyrite?, Mina Plomosas, Chihuahua, Mex. Transmitted light.



Marcasite, showing strong pleochroism. Bessie G mine, LaPlata, Colorado. Photo courtesy of Jim Paschis.

John L. Lufkin, Ph.D.
Golden, Colorado
2015