



**SEG
2018**

Metals, Minerals, and Society

Keystone, Colorado, USA
September 22-25, 2018



SEG 2018 Workshop Schedule (Preliminary)

WS06 - Cu-Mo Porphyry Deposits: Multiscale Practical Approach from Magmas to Minerals

www.seg2018.org/workshops.html#6

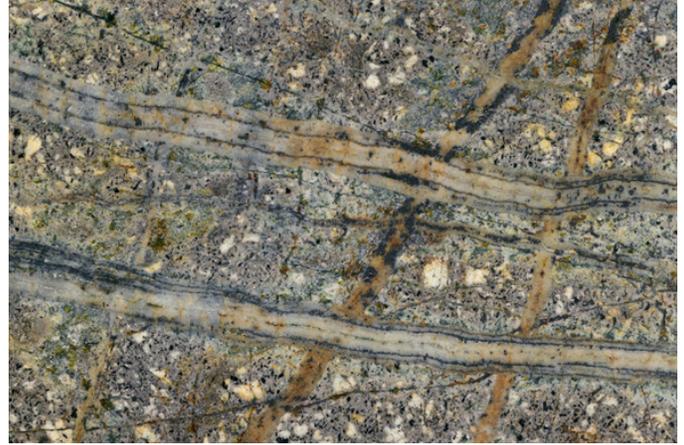
Date: September 26-27, 2018

Location: Keystone Conference Center

Presenters: John Dilles*, Kalin Kouzmanov*

Students will not exceed 20% of total participants.

*Workshop organizer.



Schedule

Day 1 - Wednesday, September 26, 2018

- 8:00am - 10:00am: Late registration (15 min), introduction
 - Ore-forming magmas: Compositions, sources, and crustal modification
 - Melt evolution; oxidation state, volatile and metal contents
 - Lab: Hand samples of porphyry copper intrusions
- 10:00am - 10:15am: Break
- 10:15am - 12:00pm: Partitioning of metals, chlorine and sulfur into magmatic-hydrothermal fluid from silicate melts
 - Case studies of timescales of magmatism and mineralization in porphyry systems
- 12:00pm - 1:00pm: Lunch
- 1:00pm - 3:00pm: Hydrothermal processes: Mineralizing fluids in porphyry systems and fluid inclusion compositions; the H₂O-NaCl system
- 3:00pm - 3:15pm: Break
- 3:15pm - 5:00pm: Metal solubility and sulfide precipitation
 - Case studies (of quartz vein and sulfide zonation)

Day 2 - Thursday, September 27, 2018

- 8:00am - 10:00am: Vein types and relative ages
 - Wallrock alteration and vein selvages
- 10:00am - 10:15am: Break
- 10:15am - 12:00pm: Hemley K⁺/H⁺ vs temperature diagram for alteration minerals
 - Other phase diagrams
 - Lab: Hand samples, veining, and altered rocks
- 12:00pm - 1:00pm: Lunch

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Schedule *(cont.)*

- 1:00pm - 3:00pm: Fluid flow and structural geology
Case studies (Yerington, Morococho)
- 3:00pm - 3:15pm: Break
- 3:15pm - 5:00pm: Exploration methods: Using igneous geochemistry and hydrothermal vectoring