## MBMG MINING AND MINERAL SYMPOSIUM

October 11-14, 2017 Butte, MT

#### **FIELD TRIPS**

*History and geology of the Silver Star Mining District, MT* Jenna Kaplan, Chris Gammons, Stan Korzeb

**History and geology of the Highlands Mining District, MT** Kaleb Scarberry, Stan Korzeb, Tony Roth; Montana Bureau of Mines and Geology, Butte, MT, Dave Stratton, Water Environmental Technologies, Butte MT

## LECTURES

*In the field with the Hard Rock Mining Bureau: An update on mining in Montana Garrett Smith, Montana Department of Environmental Quality, Helena MT* 

*New concepts in understanding Montana sapphire genesis* Dick Berg, Montana Bureau of Mines and Geology, Butte, MT

**Geology and mineralogy of the eastern margin of the Butte Pluton, Montana** Richard Gibson, Geologist, Butte, MT

*New mineralogy, fluid inclusion, and S-isotope data for the Heddleston porphyry Cu-Mo deposit, Montana Chris Gammons and Benjamin Schubert, Montana Tech, Butte, MT* 

Pipestone Ringing Rocks: A Modern Gas Diapir? John Gabelman, Geologist, Butte, MT

**Eocene ignimbrite flare-up in Montana: Timing and style of emplacement of the Lowland Creek Volcanic Field** Kaleb Scarberry, Montana Bureau of Mines and Geology, Butte, MT

**The geology and development of the Black Butte Copper Project, Montana** Jerry Zieg, Tintina Montana, Inc., White Sulfur Springs, MT

**Petrology and mineralogy of the Mount Rosa Complex, Colorado** Philip Persson, Colorado School of Mines, Fort Collins, CO

**Using your smartphone for field work** Jesse Mosolf, Montana Bureau of Mines and Geology, Butte, MT

**Regional tectonic model and discovery methods of the mineralization at the Clementine Prospect in the Northern Pioneer Mountains of southwest Montana** George Brimhall, Clementine Exploration, Wise River, MT

**Experiments on the hydrothermal solubility of gold and iron and the origin of iron-oxidecopper-gold (IOCG) deposits** Chris Gammons, Montana Tech, Butte, MT **Exploration at the Madison Gold Au-Cu-Ag Skarn** Jenna Kaplan, Broadway Gold Mining, Silver

Star, MT

**Supergene minerals from the Mayflower mine, Madison County Montana** Richard Gibson, Butte, MT

**Copperopolis, Copper City, and Copper Cliff - Microminerals from three of Montana's obscure copper deposits** Mike Gobla, U.S. Bureau of Reclamation, Denver, CO **Structural cotnrols on gold and antimony mineralization in the Yellow Pine Deposit, Stibnite Gold Project, Idaho** Austin Zinnser, Midas Gold, Idaho

*MBMG's abandoned and inactive mines inventory and sampling program - 8000 mines and so little time Phyllis Hargrave, Montana Bureau of Mines and Geology* 

*Geology, history, and remediation in the Carpenter-Snow Creek Mining District: Neihart, MT Sara Edinberg, Montana Department of Environmental Quality, Helena MT* 

Early history of Butte Mine Flooding John Metesh, Montana Bureau of Mines and Geology

### POSTERS

Thermochemical arsenite reduction and the origin of hydrothermal arsenide minerals Nick Allin

Identifying environmental tracers using water chemistry and stable isotopes, Moulton road area, Butte, Montana Matt Berzel, Montana Bureau of Mines and Geology, Butte, MT Mapping alteration halos related to precious metal ore deposits using handheld instruments (pXRF) Phillip Dalhof, Colorado State University, Fort Collins, CO

GeoWrite - A Digital Field Notebook Jonathan, DuPuis, Montana Tech, Butte, MT

*Mineralogy and stable isotope geochemistry of the Apex gold deposit near the Golden Sunlight mine, Montana* Hamadou Gnanou, Montana Tech, Butte, MT *Mineralogy of mines in the Cobalt Belt, Idaho* Francis Grondin, Montana Tech, Butte, MT

**New fluid inclusion and stable isotope investigations of the origin of hydrothermal talc and chlorite deposits in Southwest Montana** Garrett Hill, Montana Tech, Butte, MT **Geochronology of mineralization related to the Boulder Batholith** Stan Korzeb, Montana Bureau of Mines and Geology

Geochemical modeling of hydrothermal fluids at Yellowstone Shanna Law, Montana Tech

Montana lamprophyre occurrences Jake McCane, Colorado School of Mines, Fort Collins, CO

**SPECIAL EVENTS** 

**MEET AND GREET** - Following the field trip, enjoy an informal social hour in the MBMG Mineral Museum.

**MAP CHAT AND PIZZA** - Sample great beers from the Butte Brewing Company, meet our MBMG geologists, and learn about their current geology and mapping projects. Be sure to bring your mineral samples and try to stump our geologists.

**BANQUET/POSTER AWARD** – A no host bar followed by the banquet and best poster presentation award.

# FEES AND REGISTRATION

For more information or to register, please go to (<u>http://mbmg.mtech.edu/2017symposium-registration.asp</u>). Follow us on Facebook and LinkedIn, too.