



GEOLOGICAL SOCIETY OF NEVADA NEWSLETTER

Geological Society of Nevada, 2175 Raggio Parkway, Room 107, Reno, NV 89512
(775) 323-3500 - Hours Tuesday -- Friday, 8 a.m. to 3 p.m. Monday by appointment.

Website: www.gsnv.org • E-mail: gsn@gsnv.org



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Alan Coyner
Consulting Geologist
nevadageo@hotmail.com

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Kelly Cluer
Kinross Gold
Kelly.cluer@kinross.com

SECRETARY

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Consultant, Geologist
siraweiss@outlook.com

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Bob Kastelic
Consulting Geologist
bob_kastelic@yahoo.com

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Molly Hunsaker
Hunsaker Inc.
mollymhunsaker@aol.com

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David Boden
Truckee Meadows Community College
dboden@tmcc.edu

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gsn@gsnv.org

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CALENDAR OF GSN EVENTS

Feb. 2, 2017
THURSDAY

SO. NEVADA CHAPTER MEMBERSHIP MEETING & SILENT AUCTION!

The monthly meeting and SILENT AUCTION for the CHAPTER FUNDRAISER will be held at the Las Vegas Natural History Museum at 900 N. Las Vegas Blvd. Pizza/drinks at 5:30 pm, Talk at 6:30 pm. **Speaker: Scott Petsel, Metallic Minerals. Title: "An overview of the Keno-Lightning property in the historic Keno Hill Silver District, Yukon Territories". Food & Drinks Sponsored by: MAJOR DRILLING.** Contact Paul Dockweiler for more information: paul.dockweiler@mma1.com. Details on page 7.

Feb. 8, 2017
WEDNESDAY

WINNEMUCCA CHAPTER MEMBERSHIP MEETING (2nd Wednesdays)

The meeting will be held at the Martin Hotel, 94 W. Railroad St., Winnemucca, NV. Refreshments/appetizers at 6 p.m. Talk at 7:00 pm. **Speaker: Meghan Jackson, Barrick Gold Corp. Title: "Everybody Loves a Lamprophyre". Food & Drinks Sponsored by: AMERICAN ASSAY LABORATORIES.** For more info please contact Jim Carver @ jcarver@silverstandard.com. Details & abstract on page 6.

Feb 15, 2017
WEDNESDAY

GSN 2017 DIRECTORY PICKUP PARTY! 4:00 p.m.—7:00 p.m.

Great Basin Brewing Co., RENO LOCATION, 5525 So. Virginia St., Reno, NV. **SPONSORED BY SRK CONSULTING. See details on page 5.**

Feb. 16, 2017
THURSDAY

ELKO CHAPTER MEMBERSHIP MEETING (3rd Thursdays)

The monthly meeting will be held at the Western Folklife Center, 501 Railroad St., Elko, NV. Refreshments begin at 6 p.m. **Talk begins at 7 p.m. Speaker and Topic: To Be Announced. Food/Drinks Sponsored by: To Be Announced.** For more info please contact Mark Travis at: mark.william.travis@gmail.com.

Feb. 17, 2017
FRIDAY

GSN MEMBERSHIP MEETING (3rd Fridays)

The monthly meeting will be held at the Reno Elks Lodge, 597 Kumle Lane, Reno, Nevada. Drinks @ 6 p.m., Dinner @ 7 p.m., Talk at 7:45 p.m. **Speaker: Jeff Hedenquist, Title: "Discovery vs Dogma: Lateral Thinking During Successful Exploration of Porphyry-Epithermal Systems". Drinks Sponsored by: MINE DEVELOPMENT ASSOCIATES.** Cost for Dinner—\$25. GSN Students are free. Please make reservations for dinner with Laura Ruud, by emailing gsn@gsnv.org or calling 775-323-3500. Details on page 3.

G.S.N. FEBRUARY MEETING SPONSOR!



**MINE DEVELOPMENT
ASSOCIATES**

FROM THE PRESIDENT
Alan R. Coyner, GSN President 2016-2017

Greetings to all our GSN members wherever you may be! The number is in for **this year's membership total at 1,183**. We have been hovering around 1,200 members since about 2010 after breaking the 1,000 level in 2007. We have come a long way since our founding in December, 1957 and we will mark our **60th anniversary on December 6th** of this year!

The **2017 membership directory** is at the printer and should be ready in mid-February. Many thanks to those who advertised in the **Gold Pages** as it helps offset the cost of printing the directory! Please pick up your directory at either the **"Directory Pick-Up Party"** or at the **February membership meetings** as it saves us the mailing fee.

We don't keep track of the **longevity** of our members, but I am sure there are a fair number of us that have been members for 30 or more years. My arrival in Nevada in 1988 puts me pretty darn close to joining that club. Just for fun I picked up the oldest GSN directory I have in my collection (1990-1991) and read through the member names. There were some I didn't recognize but my mind paused on those who I had seen recently or who I knew but hadn't seen in a while. And of course, I lingered on those I knew we had lost by their passing. We lost another long-time member with the death of **Ray Wittkopp** on January 2nd. Ray was one of the first geologists I met when I came to Nevada. He gave me a tour of the Mountain View Mine near Gerlach, a property he held for many years. He was also known for his long association with the Original Sixteen to One Mine in Alleghany, California. The folks at Sixteen to One are planning a spring event to remember him and we will let you know the date.

On a different note, for those of us that just can't seem to get enough of beer and geology, there is a new opportunity for you! A group calling themselves **"Beer Friday"** is now meeting regularly (more or less) at the **Bavarian World Restaurant** at Sixth and Valley in Reno on the second and fourth Fridays of the month from 4:30 to 6:00 pm. German beer is the order of the day, news and rumors flow freely, and the pretzel rolls are delicious! If you would like to be included in their email notifications, please contact Paul Pelke at papelke@gbis.com.

The **GSN Nominating Committee** has been working hard to put together a slate of qualified candidates for positions on the **GSN Executive Committee** and the **GSN Board of Directors**. If you are interested in serving in the future please contact Laura at the GSN Office and she will pass your name on to the appropriate officers.

We have two very exciting speakers set for the February and March meetings in Reno! **Jeff Hedenquist**, one of the world's foremost authorities on metal deposits, will be joining us at the February 17th meeting. The title of his talk contains the phrases "Discovery vs. Dogma" and "Lateral Thinking" so I am sure he will ignite numerous controversies to be discussed over a brew or two. Jeff will also be delivering the **Ralph J. Roberts Lecture** at the **University of Nevada Joe Crowley Student Union** on Thursday, February 16th from 3:30 to 4:30 pm. There will be a reception following the lecture at the **Great Basin Brewery**, 5525 South Virginia Street.

The March meeting is on the 17th (St. Patrick's Day!) and will feature **Gianni Kovacevic**, a renowned investor, author, and sought-after public speaker. Gianni is the Executive Chairman of CopperBank and a leading expert on the role of copper in the modern energy mix. All attendees will receive a complimentary copy of Gianni's book **"My Electrician Drives a Porsche?"** and he will be signing copies of the book during the social hour at the meeting!

So, be sure to make it to one of our upcoming meetings in Reno, Winnemucca, Elko, or Las Vegas!

***The G.S.N. wishes to thank RYE PATCH GOLD CORP.
for sponsoring
the JANUARY 20, 2017 MEETING SOCIAL HOUR in RENO!!***

GSN MONTHLY MEETING, FEBRUARY 17, 2017

SPEAKER: JEFFREY HEDENQUIST

TITLE: “Discovery vs Dogma: Lateral Thinking During Successful Exploration of Porphyry-Epithermal Systems”

Social Hour begins @ 6:00 pm; Dinner @ 7:00 pm; Talk @ 7:45 pm

Location: Reno Elks Lodge, 597 Kumle Lane, Reno NV (across from the Convention Center)

DINNER COST—\$25.00 per person.

Reservations due by 5:00 p.m. on WEDNESDAY, FEBRUARY 15, 2017

For dinner reservations, please e-mail gsn@gsnv.org or call 775-323-3500

(Please remember you will be invoiced \$25 if you do not cancel your reservation by Feb. 16th)

Jeffrey Hedenquist

“Discovery vs Dogma: Lateral Thinking During Successful Exploration of Porphyry-Epithermal Systems”

Abstract:

Ore deposit models are important to provide concepts to guide us to area selection, but as they are simplistic and inflexible, they should not be taken into the field. Prospects – as well as the few (<<1%) that become ore deposits – are variations on a theme, and using a model to site drill holes, rather than interpreting what the rocks are and imply, can be fraught with disappointment. Porphyry systems have a number of targets, from deep-seated porphyry Cu deposits and skarns, etc., to shallow epithermal deposits that are centered on the causative intrusion. This talk presents recent exploration histories of high-sulfidation epithermal deposits in southern Ecuador and Peru, an intermediate-sulfidation diatreme in southern Peru, and porphyry Cu-Au deposits in northern Peru and NW Turkey, including the dogma that prevented the first companies from making the eventual discovery; lateral thinking was key to discovery.

Biography:

Jeffrey W. Hedenquist was educated in the USA followed by New Zealand, where he received a Ph.D. degree in 1983. He conducted research with the US Geological Survey, then spent 10 years each with DSIR-Chemistry Division in New Zealand and the Geological Survey of Japan, on topics including geothermal energy development, the composition of volcanic discharges, and epithermal and porphyry deposits of the circum-Pacific region. Since 1999 he has been based in Ottawa as an independent advisor to the World Bank, several governmental agencies, and the mineral resources industry worldwide. He was SEG President in 2010, and is also Adjunct Professor at the University of Ottawa and James Cook University.



FACES OF GSN

DUSTIN HOLCOMB

I have not always been interested in geology. In 2010, I was working as a snowboard instructor in Tahoe, tired of being a broke ski-bum I decided to try my luck at a summer gig in the booming mining industry. By the luck of the draw and the kindness of those in charge I stumbled into a summer job as a geotech with Nevada Copper.

At first it was difficult, logging core for structure, in a hot, dusty, core shed was not my idea of fun but I stuck with it. Soon I began to acquire more diverse work as the exploration project began to grow into a mine development project. Eventually, I graduated to the position of an environmental scientist, where I became involved with permit compliance and groundwater monitoring.

After that first year, I was hooked, it was nice not being a broke ski-bum. However, I was limited on how far I could progress in the industry without an applicable degree. The choice to go back to school to pursue a degree in geology was not immediately obvious. It took another three years, working with some great geologist, before I decided to enroll in the geology program at the University of Nevada Reno.

While in school I continued to work for Nevada Copper, in varying capacities. Even though work and school took most my time I still tried to stay involved in extracurricular activities. I ran the Mackay Rockhounds for four semesters as the de facto president. The Mackay Rockhounds is a great student organization primarily focused on providing students, of the geologic sciences, the outdoor experiences and field trips that they may not get in regular classes.

Last year, I graduated with my bachelors of science in geology from UNR. Immediately after graduating I picked up some temporary work with McEwen Mining, where I collaborated with consultants to identify sources of potential growth media to facilitate the development of a reclamation plan, contributory to the development of an EIS at their Gold Bar property.

After the summer project ended I struggled to find work. Thanks to some inspiring and helpful people, I continued to push my job search on. Last month I was hired by Piteau Associates, a hydrogeological and geotechnical company. Piteau has been well established in Canada's (cont. on pg. 5)



(Holcomb, cont. from pg. 4)

mining industry for over forty years but is just now getting its start in Nevada. I am fortunate to have been brought in on the ground floor and help contribute to Piteau's success in the Nevada.

One of the many aspects I like about the mining industry is that it is a global industry, yet it still maintains a small community of workers. I found it is important to network and stay involved in such a small community and being a member of GSN is a great way to do that.



DUSTIN HOLCOMB
Junior Hydrogeologist

G.S.N. 2017 DIRECTORY PICK-UP PARTY

The **new GSN 2017 Membership Directories** will be available to pickup in Reno on **WEDNESDAY, February 15, 2017** at the **Great Basin Brewing Company, RENO LOCATION, 5525 S. Virginia St., Reno.** Time will be from 4 p.m.—7 pm. You can help save GSN postage by picking your directory up and have a drink on our sponsor for the evening, **SRK CONSULTING!** **A big thank you to the people at SRK Consulting for hosting this fun event for the 4th year in a row!**



The 2017 Directories will also be available for pick-up AFTER February 15th at:

- ⇒ **Mine Development Associates, 210 So. Rock Blvd., Reno from Feb. 16—20, 2017**
- ⇒ **the Elko Chapter Membership Meeting on Thursday, Feb. 16, 2017**
- ⇒ **the Membership Meeting in Reno on Friday, Feb. 17, 2017**
- ⇒ **The GSN Office, 2175 Raggio Pkwy., until Feb. 20, 2017 (NBMG is closed Mondays)**
- ⇒ **For those who can't pick them up, they will be mailed out on February 21, 2017!**

GSN WINNEMUCCA CHAPTER MONTHLY MEETING

WEDNESDAY, FEBRUARY 8, 2017

Location: THE MARTIN HOTEL

94 W. Railroad Street, Winnemucca, Nevada

Time: 6:00 p.m.—Appetizers/Drinks; 7:00 p.m.—Talk begins

Speaker: Meghan Jackson, Barrick Gold Corporation

Title: “Everybody Loves a Lamprophyre”

Food and Drinks Sponsored by:



Abstract:

Everybody loves a lamprophyre. These rare, ultrapotassic, primitive igneous rocks are associated with many of the world’s legendary gold mineralizing systems, often in enigmatic ways. The identification of lamprophyres in or around a gold property, even if far from contemporaneous with mineralization, gives the area something in common with the giants. Unfortunately, lamprophyres are tricky. They form a miniscule portion of intrusive rocks in the upper crust, they weather recessively, and they are easily and routinely confused with a variety of common rocks of less interest to the explorationist. Lamprophyres in altered form are seldom identifiable with the naked eye or with the suite of elements more commonly analyzed in early stage exploration projects. The ultrapotassic and primitive nature which defines lamprophyres results in high pressure-stable primary mineral suites which alter very readily to undistinguished clays under hydrothermal or near-surface conditions. These clays tend to wash out of RC drill cuttings and to result in loss of circulation in core holes, resulting in more drilling problems than useful information.

This talk will discuss the identification of the elusive lamprophyre and some of its relatives in their natural habitats, their association with major gold deposits, and their origins and eccentricities. We will briefly touch on some of the hypotheses regarding the empirical connection between lamprophyres and world-class deposits.

Thank you to our generous sponsors for the Elko Chapter meeting in JANUARY!

Thank you to our generous sponsor for the Winnemucca Chapter meeting in JANUARY!



GSN SO. NEVADA CHAPTER MONTHLY MEETING

Please join us on **THURSDAY, FEBRUARY 2, 2017** for the Chapter meeting and 1st Annual Silent Auction Fundraiser!!

Location: Las Vegas Natural History Museum
900 Las Vegas Blvd. North

Time: Food, Drinks & Silent Auction begin @ 5:30 p.m.
Talk begins about 6:15 p.m.

Speaker: Scott Petsel, V.P. of Exploration, Metallic Minerals

Title: *“An overview of the Keno-Lightning property in the historic Keno Hill Silver District, Yukon Territories”*

Food and Drinks Sponsored by: **MAJOR**
Drilling America, Inc.

The first meeting of the New Year of the Geological Society of Nevada-Southern Nevada Chapter is this coming Thursday February 2nd at the Las Vegas Natural History Museum. At this meeting we will be hosting the Board of Directors of the GSN, so if you have any institutional questions or comments be sure you bring them with you to the meeting. Another fun thing we are going to do this month to help support our chapter is to have a **Silent Auction**. So if your significant other is bothering you about the boxes of "rocks" out in the garage bring some down. If you have a closet full of old reprints, bring them down. All proceeds go directly to supporting our chapter.

Everyone is welcome to attend, we request a \$5 donation from non-students to help cover venue expenses

If you have any questions please direct them to chapter president Paul Dockweiler (paul.dockweiler@mma1.com), and don't forget to bring something for the auction!

GSN ELKO CHAPTER MEMBERSHIP MEETING

THURSDAY, FEBRUARY 16, 2017

Location: The WESTERN FOLKLIFE CENTER
501 Railroad Street, Elko, Nevada

Time: Refreshments @ 6:00 p.m., Dinner @ 7:00 p.m.

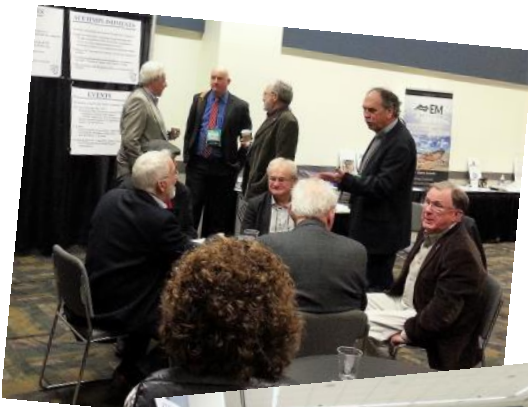
Speaker & Topic: To Be Announced

Food and Drinks Sponsored by: To Be Announced

Vancouver's AME Roundup "Nevada Room" a success for NMEC and the GSN!

By Laura Ruud

The Nevada Mineral Exploration Coalition (along with NMEC members, the GSN, and a few Nevada state agencies) hosted the "Nevada Room" at the AME Roundup in Vancouver BC January 23-26, 2017. Dave Shaddrick with the NMEC makes all of the arrangements to make the Nevada Room happen in Vancouver each year! The Nevada Room is a place where Roundup convention attendees can get all of their questions answered about exploring and operating in Nevada. Many folks come by to get a cup of coffee and shop for properties available in Nevada (among the many Coalition members who display there!). They also come to buy GSN books or learn more about the state agencies and what information each of them has available to the public. The room was fairly busy for most of the show as interest in Nevada seems to be on the upturn again. We were happy to have Mike Ressel, NBMG and Mackay Dept. of Geologic Sciences professor give a talk in the room one day too. Attendees enjoyed the relaxed atmosphere and were happy to have a place to meet with colleagues and prospective investors alike.



GSN Backpacks travel to Vancouver!

A lot of GSN backpacks were spotted travelling around Vancouver BC last month during the AME Roundup convention! To the left is a GSN 2015 Symposium backpack hanging out on Vancouver Bay outside the convention center, and above two GSN backpacks from the 2010 and 2015 Symposia were spotted walking through the Vancouver airport.

If your GSN Symposium backpack has travelled to an interesting place, please email a photo if you like to Laura @ gsn@gsnv.org.

Thank you to our generous donors in JANUARY!!

G.S.N. FOUNDATION

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GOLD DONORS \$500-\$999

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Heartfelt 
THANKS
TO OUR VOLUNTEERS!

A big thank-you needs to be extended to the volunteers who helped with the hauling, set-up, tear-down, and hauling again for the "Nevada Room" at the AME Roundup in Vancouver. The "Nevada Room" wouldn't happen without the help of these volunteers! **Dave Shaddrick** is extraordinary in making this thing happen. He loads his truck up with EVERYTHING needed for the displays and drives it all up to Vancouver! **Steve Green** is a God-send to both the NMEC and the GSN. He almost single-handedly put up AND tore down the displays in the Nevada Room. He also did much of the heavy lifting and Dave and Laura would be in much worse shape if he wasn't there! Other volunteers that helped a ton were **Elizabeth Zbinden, James Bell, Bob Thomas and Larry O'Connor.**

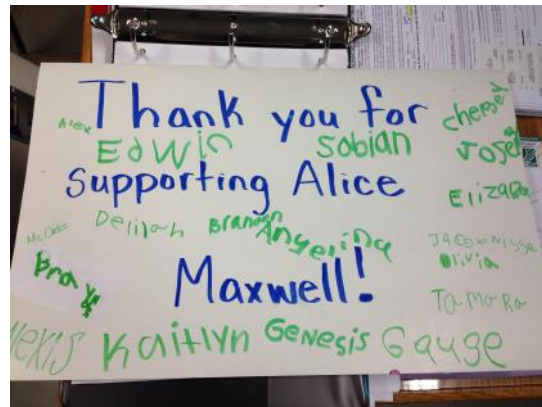
On another volunteer topic I want to thank **Eric Ruud** for his help in reorganizing the GSN storage area and cleaning out the very yucky stuff that grew in the coolers after the last field trip!

NEWS FROM THE GSN FOUNDATION

By Cami Prenn, GSN Foundation Chair

One of the GSN Foundation's programs that dates way back in GSN's history is the K – 12 Earth Science Field Trip Grant program. It began long ago when the Education Committee was first formed. It's open to all schools in Nevada and pays for transportation to a locality that focuses on some aspect of Earth Science. This year we had requests from 12 different schools, some of which had multiple classes of kids going to the same location. The schools this year are all in Northern Nevada and the requests came from elementary, intermediate and high schools. Over 2,100 students will travel to such locations as Donner Memorial Park, the Virginia City area, Grimes Point / Hidden Cave, Incline Flume Trail, Sand Harbor, Spooner Lake, and the Galena Creek Visitor Center. Quite a few classes are going up to UNR to the Keck Museum, which is a great way to get the kids thinking about going to UNR.

Sierra Nevada Journeys is a non-profit organization that puts on programs for students in different STEM subjects, one of which is Geology. They have a 3-day program at Grizzly Creek Ranch in Portola, CA that several 5th and 6th grade classes will attend, transportation provided by the Foundation. Science standards have been established for all grades and the field trips are in line with teaching to those standards, even at the lowest grades in elementary school.



“GEOLOGICAL SOCIETY OF NEVADA” ENDOWED UNLV SCHOLARSHIP FUND

The GSN Southern Nevada Chapter and the UNLV Foundation are making strides to meet their \$30,000 endowment mark for establishing a GSN scholarship fund at UNLV but they need your help!

Please consider helping them meet their goal and show your support for geology students all over the state.* You can make a tax deductible contribution at:

<https://netcommunity.unlv.edu/SSLPage.aspx?&pid=295>,

and please be sure to select “Geological Society of Nevada Scholarship” in the designation field.

Thank you to the GSN Foundation for its ongoing commitment to yearly contributions to this fund!



*The GSN created an endowed fund many years ago that gives two scholarships yearly to students in the Mackay School of Earth Sciences and Engineering at the University of Nevada, Reno, and the Elko Chapter is helping to fund higher education for students in the Elko area of the state.





Ralph J. Roberts

CREG

23rd Distinguished Lecture in Economic Geology

February 16, 2017, 3:30 p.m.—4:30 p.m.

Joe Crowley Student Union, Theater (3rd Floor), University of Nevada, Reno

Dr. Jeffrey Hedenquist

Guest Speaker

Title: “Transition from the Epithermal Environment to the Tops of Porphyry Deposits”

5:00-7:30: Hosted reception at Great Basin Brewery (5525 S. Virginia)

Sponsored by the

Dept. of Geological Sciences & Engineering,
Nevada Bureau of Mines & Geology,

and the

Ralph J. Roberts Center for Research in Economic Geology (CREG)



Mackay School of Earth Sciences & Engineering

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SAVE THE DATE!!

SATURDAY, JUNE 17, 2017

GSN'S ANNUAL GOLF TOURNAMENT

WASHOE GOLF COURSE, RENO, NV



TITLE SPONSOR:



**Field
Trip**

Mark your calendars for the GSN's Spring 2017 Field Trip scheduled for Saturday & Sunday, May 6 & 7, 2017. The field trip will be exploring the Historic Silver City District, Nevada.

Activity Update

Mike Brady, DECEMBER 2016

www.activityupdate.com

NEVADA

TriMetals Mining Inc. announced that recent drill results at the Gold Springs/Jumbo Project include 32.0-38.1 meters @ 1.47 gpt Au, 4.9 gpt Ag (J16-010); 108.2-112.8 meters @ 5.24 gpt Au, 11.5 gpt Ag (J16-010); 21.3-25.9 meters @ 0.30 gpt Au, 8.1 gpt Ag (J16-011) and 57.9-67.1 meters @ 0.41 gpt Au, 6.1 gpt Ag (J16-013). (resource = 19,003,000 tonnes @ 0.57 gpt Au, 11.4 gpt Ag measured+indicated) *Press Release:* December 16

Colorado Resources Ltd. announced that it acquired an option to earn a 100% interest in the Green Springs Property from Ely Gold + Minerals Inc. for \$3,000,000 cash and 2,250,000 shares over 4 years. (resource = 754,500 tonnes @ 2.05 gpt Au inferred) *Press Release:* December 7

Columbus Gold Corp. announced that based on recent drill results at the Eastside Project, resources aggregate 35,780,000 tonnes @ 0.57 gpt Au, 3.5 gpt Ag inferred. (no previous estimate) *Press Release:* December 5

West Kirkland Mining Inc. announced that it acquired a 10-year lease of the Hill of Gold Property from private interests for \$25,000-30,000/year payments. (resource = 5,727,000 tonnes @ 0.78 gpt Au inferred) *Press Release:* November 29

NuLegacy Gold Corp. announced that recent drill results at the Iceberg Project include 81.7-96.5 meters @ 2.11 gpt Au (RHB-96c); 65.6-79.3 meters @ 0.57 gpt Au (RHB-107); 59.5-71.7 meters @ 0.65 gpt Au (RHB-108) and 100.6-123.5 meters @ 1.29 gpt Au (RHB-109). *Press Release:* November 30

Nevada Sunrise Gold Corp. announced that recent drill results at the Clayton Northeast Project include 207.3-396.2 meters @ 164 ppm Li (CNE16-02). *Press Release:* December 5

Corvus Gold Inc. announced that recent drill results at the North Bullfrog/Yellowjacket Project include 108.2-256.03 meters @ 0.29 gpt Au (NB16-313)

and 131.06-301.75 meters @ 0.60 gpt Au (NB16-314). (resource @ Yellowjacket = 4,000,000 tonnes @ 0.97 gpt Au, 5.1 gpt Ag indicated) *Press Release:* November 29

Bravada Gold Corp.(40%) announced that recent drill results at the Baxter Project include 51.8-56.4 meters @ 0.6 gpt Au (BAX16-17); 24.4-50.3 meters @ 0.3 gpt Au (BAX16-18); 61.0-67.1 meters @ 0.3 gpt Au (BAX16-31) and 29-32 meters @ 1.0 gpt Au (BAX16-32). *Press Release:* November 21

Scorpio Gold Corp.(70%) announced that recent drill results at the Mineral Ridge/Bunkhouse Hill Project include 53.34-59.44 meters @ 5.15 gpt Au (MR16-2080); 71.63-79.25 meters @ 9.64 gpt Au (MR16-2081); 48.77-51.82 meters @ 1.66 gpt Au (MR16-2082) and 68.58-74.68 meters @ 4.30 gpt Au (MR16-2088). (resource @ Mineral Ridge = 2,452,000 tonnes @ 2.01 gpt Au indicated) *Press Release:* December 8

The government announced that it withdrew 300,000 acres in the extreme southeastern corner of the state as the Gold Butte National Monument. *Reno G/J:* December 29

G.S.N. NEWSLETTER ADVERTISING RATES

Business Card Ads—\$50.00 month

1/4 Page Ads—\$150.00 month

1/2 Page Ads—\$300.00 month

Full Page Ads—\$450.00 month

10% Discount for running 10 ads (1 year)!



ROCK TALK

University of Nevada, Reno, Department of Geologic Sciences—Spring 2017 SEMINAR Schedule

The UNR Dept. of Geological Sciences hosts Seminars for faculty and students on Mondays, in the Davidson Mathewson Science building, Room 102 beginning at 4 p.m. Public is invited if you are interested.

List of confirmed seminar speakers for Spring 2017:

01/30 Dr. Dan McGrath (CSU)

02/13 Dr. Esteban Gazel (VirginiaTech) - GeoPRISMS Distinguished Lecturer

03/13 Dr. Wes Thelen (USGS-Vancouver)

03/27 Dr. Elizabeth Cassel (UIdaho)

04/03 Dr. Daniela Rubatto (UBern, Switzerland) - MSA Distinguished Lecturer

04/24 Dr. James Dolan (USC) - Slemmons Lecture

05/01 Dr. Keith Priestley (Cambridge, UK)

Philipp Ruprecht

Assistant Professor, Geological Sciences

LME 409

Phone: 775-682-6048 Fax: 775-784-1833

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Dept. of Geological Sciences

University of Nevada, Reno

Doug Silver to be Keynote Speaker at SME/CMA Mining Conference in CO

SME Keynote Speaker to Examine Mining's Cyclical Nature

Global industry leaders look to the future of mining

The Society for Mining, Metallurgy & Exploration (SME) is pleased to announce **Douglas Silver** will be the Keynote Speaker at the 2017 SME Annual Conference & Expo and CMA 119th National Western Mining Conference, **February 19 – 22, 2017**, at the Colorado Convention Center.

The 2017 Conference theme is Creating Value in a Cyclical Environment, and Douglas Silver is uniquely qualified to give the keynote address. His presentation, When are Commodity Prices Going to Rebound, is drawn from the accrued experience of a 30-year career spent at the intersection of mining and finance. A talented speaker, Silver will discuss how the world has changed in the past ten years, its impact on commodity prices and the ramifications to the minerals industry.

Complementing Silver's timely keynote is the depth of the 120 technical sessions that focus on every aspect of the mining industry, including:

- Assessing Capital in Mining Today: Managing Through the Cycle
- Bulk Material Handling: New Technology
- Career Development Right from the Start – Defining Your Professional Path
- Coal & Energy focus
- Environmental focus
- Health & Safety focus
- Industrial Minerals & Aggregates focus
- Geology focus
- Mine Management

And much more...



Reprinted from Science Daily online

<https://www.sciencedaily.com/releases/2017/01/170112083722.htm>

“Modeling magma to find copper”

Date: January 12, 2017

Source: Université de Genève

Copper is an essential element of our society with main uses in the field of electricity and electronics. About 70% of the copper comes from deposits formed several million years ago during events of magma degassing within Earth's crust just above subduction zones. Despite similar ore forming processes, the size of these deposits can vary orders of magnitude from one place to another, the main reason of which has remained unclear. A new study led by researchers from the Universities of Geneva (UNIGE, Switzerland) and the Saint-Etienne (France), to be published in *Scientific Reports*, suggests that the answer may come from the volume of magma emplaced in the crust and proposes an innovative method to better explore these deposits.

Magmas formed above subduction zones contain important amount of water that is essentially degassed during volcanic eruptions or upon magma cooling and solidification at depth. The water escaping from the crystallizing magma at several kilometers below surface carries most of the copper initially dissolved in the magma. On its way toward the surface the magmatic fluids cool and deposit copper in the fractured rocks forming giant metal deposits such as those exploited along the Andean Cordillera.

By modeling the process of magma degassing, the researchers could reproduce the chemistry of the fluids that form metal deposits. "Comparing the model results with available data from known copper deposits, we could link the timescales of magma emplacement and degassing in the crust, the volume of magma, and the size of the deposit," explains Luca Caricchi, researcher at the UNIGE. The scientists also propose a new method to estimate the size of the deposits, based on high-precision geochronology, one of the specialties of the Department of Earth Sciences in UNIGE's Science Faculty.

This technique is a new add-in in the prospector toolbox with the possibility to identify deposits with the best potential, early in the long and costly process of mineral exploration. It is anticipated that the computational approach developed in this study can also provide important insights on the role of magma degassing as a potential trigger for volcanic eruptions.

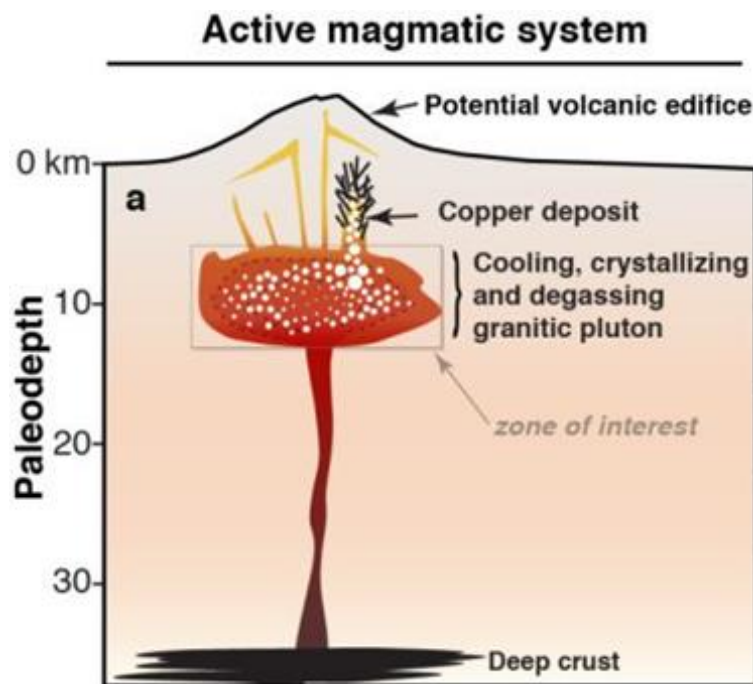
Story Source:

Materials provided by **Université de Genève**. Note: Content may be edited for style and length.

Journal Reference:

Cyril Chelle-Michou, Bertrand Rottier, Luca Caricchi, Guy Simpson. **Tempo of magma degassing and the genesis of porphyry copper deposits**. *Scientific Reports*, 2017; 7: 40566 DOI: [10.1038/srep40566](https://doi.org/10.1038/srep40566)

Université de Genève. "Modeling magma to find copper." ScienceDaily. ScienceDaily, 12 January 2017.



This is an active magmatic system. Credit: ©UNIGE

ROCK TALK

Paleontological Resources Preservation Act—Proposed Rule by BLM Comments must be received by February 6, 2017!

AGENCY:

Bureau of Land Management, Bureau of Reclamation, National Park Service, U.S. Fish and Wildlife Service; Interior.

ACTION: Proposed rule.

SUMMARY: The Department of the Interior (DOI) proposes to promulgate regulations under the Paleontological Resources Preservation Act. Implementation of the proposed rule would preserve, manage, and protect paleontological resources on lands administered by the Bureau of Land Management, the Bureau of Reclamation, the National Park Service, and the U.S. Fish and Wildlife Service and ensure that these federally owned resources are available for current and future generations to enjoy as part of America's national heritage. The proposed rule would address the management, collection, and curation of paleontological resources from federal lands using scientific principles and expertise, including collection in accordance with permits; curation in an approved repository; and maintenance of confidentiality of specific locality data. The Paleontological Resources Preservation Act authorizes civil and criminal penalties for illegal collecting, damaging, otherwise altering or defacing, or for selling paleontological resources, and the proposed rule further details the processes related to the civil penalties, including hearing requests and appeals of the violation or the amount of the civil penalties.

DATES: Comments on the proposed rule must be received by February 6, 2017. Comments on the information collection requirements must be received by January 6, 2017.

ADDRESSES: You may submit comments, identified by Regulation Identifier Number (RIN) 1093-AA16, by any of the following methods: *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments to Docket No. NPS-2016-0003.

- *Mail to:* Julia Brunner, Geologic Resources Division, National Park Service, P. O. Box 25287 Denver, CO 80225-0287.

Instructions: All submissions received must include the RIN for this rulemaking. All comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. For additional information, see the Public Participation heading of the **SUPPLEMENTARY INFORMATION** section of this document. Please make comments on the proposed rule as specific as possible, confine them to issues pertinent to the proposed rule, and explain the reason for any recommended changes. Where possible, comments should reference the specific section or paragraph of the proposed rule that is being addressed. DOI may not necessarily consider or include in the administrative record for the final rule comments that are received after the close of the comment period (see **DATES**) or comments delivered to an address other than those listed above (see **ADDRESSES**).

Comments on the Information Collection Aspects of the Proposed Rule: You may review the Information Collection Request online at <http://www.reginfo.gov>. Follow the instructions to review DOI collections under review by OMB. Send comments (identified by RIN 1093-AA16) specific to the information collection aspects of this proposed rule to:

Desk Officer for the Department of the Interior at OMB-OIRA at (202) 295-5806 (fax) or OIRA_Submission@omb.eop.gov (email); and

Jeffrey Parrillo, Office of the Secretary, Departmental Information Collection Clearance Lead, Department of the Interior, 1849 C Street NW., Mailstop MIB-7056, Washington, DC 20240 (mail); or jeffrey_parrillo@ios.doi.gov (email). Start Printed Page 88174

System of Records Notice: The Privacy Act of 1974 ([5 U.S.C. 552](http://www.usdoj.gov/oeo/5_U.S.C._552)) protects the information submitted in accordance with this part. A System of Records Notice is being developed and will be published in the **Federal Register**.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> and search for Docket No. NPS-2016-0003.

FOR FURTHER INFORMATION CONTACT:

Julia F. Brunner, Geologic Resources Division, National Park Service, by telephone: (303) 969-2012 or email: Julia_F_Brunner@nps.gov. Persons who use a telecommunications device for deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 to contact the above individual during normal business hours. FIRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individuals. You will receive a reply during normal business hours.

OTHER UPCOMING EVENTS

2 February 2017 Nevada Petroleum & Geothermal Society, Reno, Nevada monthly meeting. *Cocktails at 6:30 PM, Dinner at 7:00 PM, Ramada Reno Hotel; 1000 East 6th St., Reno NV 89512. Speaker: Bill Ehni, Ehni Enterprises. Topic: The Elko Basin in North Eastern Nevada in retrospect of the results of Noble Energy's recent drilling campaign. Please make reservations by Tuesday, January 31, 2017 by using the following link:*
<https://docs.google.com/forms/d/e/1FAIpQLSdUnipMSyAq7ZmRttFE4ILJyiX-HvZALM-FNRXsYS2uLK-9rw/viewform>

7 February 2017 Arizona Geological Society meeting, Speaker: Daniel Hummer, Southern Illinois University, will present "Mineral ecology and evolution: Using large datasets to tell the story of the co-evolution of Earth and life". 6 p.m. to 9 p.m. at the Sheraton, 5151 E Grant Rd. (& Rosemont), Tucson, AZ Click on the link for more info and online registration: <http://www.arizonageologicalsoc.org/event-2375470>. Reservations due by February 3, 2017.

7-10, February 2017 Mining Leadership Program: We are pleased to announce that the University of Arizona Lowell Institute for Mineral Resources and Vanto Group are jointly sponsoring a Mining Leadership Program. The inaugural offering of the four-day program "Leadership: Inventing the Future, A Breakthrough Leadership Program for the Mining Industry and Its Stakeholders," will be February 7-10, 2017, in Tucson, Arizona, and will be led by executives of the Vanto Group. Please go to the IMR home page at <http://imr.arizona.edu>, click on the Featured Project (Mining Leadership Program), then download the Information Packet for further information and instructions regarding registration. Please contact Rocío Brambila by e-mail at: brambila@email.arizona.edu to register.

11 February 2017 DREGS (Denver Region Exploration Geologists), Speaker & Topic to be announced. Social 6 p.m., Presentation 7 p.m. at Berthoud Hall, Room 241, CO School of Mines, Golden. For more info. contact James Piper at geopros@q.com

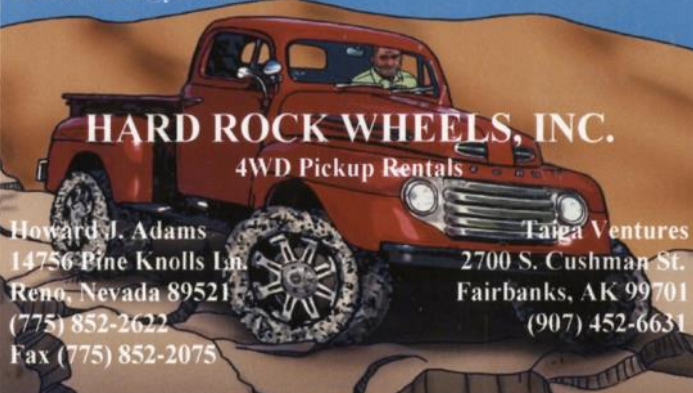
13 February 2017 SME Northern Nevada Section Monthly Meeting. Circus-Circus Mandalay Room, Reno NV. Speaker and Topic To Be Announced. Happy Hour @ 6 pm, Dinner @ 7 pm. Please contact Sarah Lightner for more information at 775-746-7147 or NNevSME@gmail.com

September 16-22, 2017 GSA Thompson Field Forum - Catastrophic mega-scale landslide failure of large volcanic fields, Cedar City and Bryce Canyon City, Utah.
CONVENERS: Robert F. Biek—Utah Geological Survey, Salt Lake City, Utah, USA, bobbiek@utah.gov. David B. Hacker—Department of Geology, Kent State University, Kent, Ohio, USA, dhacker@kent.edu; Peter D. Rowley—Geologic Mapping Inc., New Harmony, Utah, USA, pdrowley@rushisp.com.

A 6-day field forum designed to investigate the concept of exceptionally large catastrophic collapse of volcanic fields using the distinguishing characteristics and geologic implications of the gigantic Markagunt gravity slide and Marysvale volcanic field, southwest Utah. **Applications due: January 31, 2017.** For details, go to: www.geosociety.org/fieldforums/

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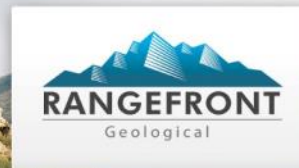
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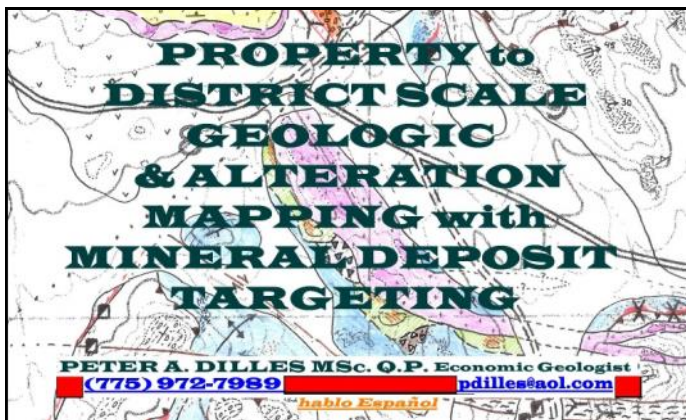
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