



GEOLOGICAL SOCIETY OF NEVADA NEWSLETTER

Geological Society of Nevada, 2175 Raggio Parkway, Reno, NV 89512
(775) 323-3500 - Hours Monday -- Friday, 10 a.m. to 4 p.m.
Website: www.gsnv.org • E-mail: gsn@gsnv.org



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See you Jan. 11,
2023!

Thank you to our
party sponsor!



DEC. 14, 2022
Wednesday

GSN WINNEMUCCA CHAPTER

Thanks to everyone who attended our Holiday Party and donated to our Silent Auction on November 30th. Our next meeting will be January 11, 2023.

JANUARY SPONSOR: IDS, A GRANITE COMPANY.

TALK: To be announced. Happy Holidays!! For information, please contact Chapter President, Nancy Wolverson at: nancyjeanw@aol.com.

GSN CHRISTMAS MEETING, SILENT AUCTION & RAFFLE!

The GSN's annual Christmas meeting and Foundation Fundraiser will be held at the Nugget Casino Resort, Sparks, NV. **GUEST SPEAKERS: Dr. Joshua Bonde and Becky Hall, Nevada Museums. Title: "Meet Nevadadromeus! Nevada's First Dinosaur". SPONSOR IS ENVIROTECH DRILLING, LLC.** Christmas Dinner cost is \$65 per person. Raffle tickets are \$1 each. Please register for dinner online BY clicking the link: [DINNER RESERVATION](http://DINNERRESERVATION) or RSVP to Laura Ruud: gsn@gsnv.org. Details on Pg. 3.

PLEASE RSVP BY FRIDAY, DECEMBER 10TH!

DEC. 15, 2022
Thursday

GSN ELKO CHAPTER HOLIDAY PARTY

The Elko Chapter will hold their **HOLIDAY PARTY AND AUCTION** at the Western Folklife Center, 501 Railroad St. **SPEAKER: Nathan Carey, UNLV. TITLE: "Age and Genesis of W-Mo-Cu Mineralization, Gold Hill, Utah". SPONSORS: LEGARZA EXPLORATION & BOART LONGYEAR.** Please contact Elko President Justin Milliard: justin.b.milliard@gmail.com for more information. All attendees are asked to donate a silent auction item in exchange for the sponsored food & drinks! Details on pg. 7-8.

GSN DECEMBER HOLIDAY PARTY SPONSOR



Envirotech Drilling LLC

FROM THE PRESIDENT
Kel Buchanan, GSN President 2022-2023
DECEMBER 2022

Chaos is not a synonym for the times we live in, though living through a world-wide pandemic might seem so, and some might wonder if we have put chaos theory into practice. Rare mineral scarcity, especially those that drive green energy needs, are causing some chaos in their own right.

My wife and I recently spent some time on the northern California coast, hiking along the dunes, and watching the seals and river otters play along the Russian River. As we walked along the cliffs above the breakers, a frolicking display by the seals attracted a crowd of other tourists. I loaned my binoculars to a gentleman from the Midwest, who had flown into San Francisco with his family, to watch his daughter play for her college team at a basketball tournament. During the conversation, he told me that the rental vehicle he picked up at the airport had later been broken into, and that his e-mail had been hacked by foreign bad actors.

His story was typical of those subject to San Francisco break-ins, except in one respect. Wanting to see the sights of San Francisco, they first drove to Lombard Street, to see the serpentine curves for themselves. Naturally, they parked their vehicle, took videos of themselves and other cars coming down the steep street and returned to their now rear-windowless SUV.

There are about 86 vehicle robberies each day in San Francisco. There were more break-ins prior to the pandemic, but tourist traffic is picking up. The difference now is what is being stolen. People are used to anything of value being stolen from smash and grab inside the car, but my acquaintance told me that when the rental car company came out to replace their vehicle, they found that the thieves had also stolen the catalytic converter, probably for the cobalt.

Cobalt is a target of opportunity and like other components of lithium based batteries, in high demand. California has mandated all heavy-duty trucks operating on the docks, transporting containers, and currently fueled by diesel, be battery driven by 2025. Policy choices have consequences. As for my Midwest acquaintance, I hope that a trip that began in chaos, resulted in a win on the basketball court.

Kel Buchanan

***GSN wishes to thank the November
Reno meeting sponsor!***



***And thanks also to our Elko
and Winnemucca Chapters'
joint meeting sponsor!***



GSN HOLIDAY MEETING—DECEMBER 14 2022 MEETING

Sponsor: **Envirotech Drilling LLC**

GUEST SPEAKERS: Dr. Joshua Bonde and Becky Hall
TITLE: “Meet Nevadadromeus! Nevada’s First Dinosaur”

TIME: Drinks/Raffle/Silent Auction @ 6 pm, Dinner @ 7 pm,
Live Auction @ 7:45 pm, Talk @ 8 pm

WHERE: NUGGET CASINO RESORT’S GRAND BALLROOM, SPARKS, NV
DINNER COST: \$65

ONLINE RESERVATIONS CAN BE MADE on the GSN WEBSITE by clicking this link: [DINNER RESERVATIONS.](#)

PLEASE RSVP NO LATER THAN FRIDAY, DECEMBER 10TH!

Abstract:

Nevada is not the first state that comes to mind when one thinks of dinosaurs. That being said, over the past 20 years our team has been working across the Silver State to fill in the dinosaur gap for Nevada. As a result of this work we now know of at least a dozen different types of dinosaurs that once called the Great Basin home during the Mesozoic. Here we will discuss the discovery and naming of Nevada’s first new dinosaur species, *Nevadadromeus schmitti*. We also discuss other Mesozoic finds from around the state of and our ongoing research projects.



Josh Bonde Bio:

Josh Bonde is a born and raised Nevadan, and a proud citizen of the Te-Moak Tribe of Western Shoshone. Bonde grew up in Fallon, Nevada, did his B.S. in Biology at the University of Nevada, Reno, his M.S. in Earth Sciences from Montana State University-Bozeman, and his Ph.D. back in Nevada. His research focuses on the complex interplay between tectonics and paleoecosystems through the Phanerozoic of the Great Basin. Bonde currently serves as the Director of the Nevada State Museum.



Becky Hall Bio:

Becky Hall is a paleontologist, science educator, and museum professional researching dinosaurs and more of Nevada’s prehistoric past across the State. She is passionate about connecting others to science and utilizes paleontology to engage and excite others with the common fascination, curiosity, and interest in fossils. Her current research projects include identifying a new species of Hadrosaur (duck-bill) dinosaur from the Valley of Fire State Park, the oldest vertebrate trackways from the Mesozoic of Nevada, and recently helped describe Nevada’s first named dinosaur, *Nevadadromeus schmitti*. She grew up in Wisconsin and has called Nevada home for the past 15 years. In 2020 she founded the Nevada Science Center, a 501c3 dedicated to science education and research in Henderson, NV. Recently, Becky joined forces with the Children’s Museum of Northern Nevada in Carson City to merge nonprofits where she now holds the position of Executive Director. She strives to inspire the community and to use her experiences, knowledge, and passions to grow the museum’s non-profit services she has dedicated her career to.



Faces of GSN

TYLER HILL Reno, Nevada

I grew up in the farm country of rural southeastern Indiana, far away from any commercial mines. My high school was one building, grades 7-12 and my graduating class a mere 63. My first exposure to anything geologic related was joining the soil judging team in high school as part of the FFA. It can best be described as hopping down into grave-like pits dug by a backhoe and examining the soil profile, marking multiple choice and yes-no questions based on what you see and having your answers graded based on what a soil scientist saw. I enjoyed school and had my sights set on attending Purdue University to follow in my dad's footsteps, but Ball State offered me an academic scholarship I couldn't turn down. So, off to Muncie, Indiana I went to study computer science, because that seemed much more practical than geology at the time.

At Ball State I decided to take Geology 101 as an elective my first semester, since I had some interest in the subject. I found that geology class far more interesting than my intro computer science classes and decided



even if I didn't know at the time what I would do with a degree in geology, that I would figure it out later and made the switch in majors. Looking back, it was the best decision I could have made. I enjoyed all my geology classes in undergrad far more than any others. My non-geology major friends thought we were weird for going on field trips that involved late night drinking sessions with professors, but I'd say they were the ones missing out. Most of our trips were to Tennessee, Missouri, and Ohio and focused on structure and carbonate stratigraphy with the addition of a fantastic summer field camp out to South Dakota and Wyoming. I was also lucky enough to visit New Zealand twice, once as part of a volcanology class over spring-break and the other as an assistant to a grad student to help collect field samples for his thesis. After my sophomore year I had a summer internship with an environmental consulting company where I spent time collecting water and soil samples from old dry cleaning shops and manufacturing plants. It was during this summer that I decided environmental consulting was definitely not what I wanted to do, and I would have to find something a bit more interesting.

Dr. Kirsten Nicholson was my structure and igneous petrology professor and is probably the first influence on my path to the mining industry. She had done some consulting for exploration companies in the past and had a few students with projects on nickel laterite deposits in New Caledonia. A few of us in her petrology class had an interest in ore deposits and convinced her to set up a field trip to Hemlo for spring break. I think being underground at Hemlo was where it really hit me that mining was where I needed to take my geology career. As an aside, Hemlo is also where I met Meghan Jackson who I would later work closely with when Barrick joint ventured McCoy-Cove with Premier. I remember her showing us the rocks at Hemlo and talking about propylitic alteration. I also remember thinking at the time, what the heck is alteration?

As my senior year of undergrad came around, I decided I would need to go to grad school if I wanted to make it in the mining industry since Indiana was far away from any mines and at that point, I didn't really know much of anything about ore deposits. I applied to a handful of schools including UNR and East Carolina. Unfortunately, at the time UNR didn't have a spot for me to work with ore deposits. However, I received an offer with an assistantship from East Carolina to work on lithium pegmatites. While lithium wasn't exactly what I wanted to do, I figured it was good enough to get me into the industry and North Carolina seemed like an upgrade from Indiana. During the summer after undergrad in 2013, I landed an internship with Countrymark Petroleum to work on oil and gas exploration in the Illinois Basin. It was also here that I met my future wife, Jen. I was about six weeks into my internship when I got a call from John Muntean at UNR. He said he had a spot open up for a research assistantship with a master's project working on a gold exploration project in Nevada, but that he wanted me to start right away if I wanted the spot. Though conflicted with my commitments to my internship and East Carolina, I decided Nevada was really where I wanted to be and after all, UNR had been my top choice all along. I informed Countrymark and East Carolina of the news, packed up my two-door car and headed west, where I landed in West Wendover with no idea of what I was about to get into.

I spent that summer and the following working for Pilot Gold at Kinsley Mountain on what would be my thesis project for the next few years. I was enrolled in the "Randy Hannink School of Logging" (cont. on pg. 5)

Tyler Hill, Faces of GSN (cont. from pg. 4)

where I learned to log RC chips and drill core and finally learned what this “alteration” stuff was. My thesis work focused on the spatial and temporal relationship between an Eocene granodiorite stock and associated tungsten mineralization and distal Carlin-style mineralization Pilot Gold was drilling. I was lucky enough to do a fair bit of field work and mapping along with lab work, while also getting industry experience. I absolutely loved grad school where I could really focus on learning and understanding ore deposits. I credit much of my knowledge and passion to John Muntean, whose enthusiasm for ore deposits is infectious and inspiring. The combined work with Pilot and grad school helped narrow my focus to a career in exploration.

The day after I defended my thesis, I started a job with the Waterton private equity group based out of Reno. At Waterton I analyzed historic data and reports and made field visits to a variety of early stage projects that had been part of Allied Nevada’s exploration portfolio among other more advanced stage properties. This was a great introduction to a variety of deposit styles and the diverse geology that Nevada has to offer. In July of 2016 my good friend from grad school and future best man in my wedding Wilson Bonner gave me a call asking if I wanted to come work with him in exploration at McCoy-Cove for Premier Gold as a project geologist. Though it meant more time away from home, it was a full-time salary position that I couldn’t turn down.



At Premier I worked on drilling of the Gap and Helen Carlin-style zones at the Cove deposit. We also joint-ventured Goldbanks with Kinross, which was a nice change from the black sooty rock I’d come to know. By 2020 my role shifted more toward project management and evaluations as Premier looked for new opportunities. In early 2021 Equinox Gold acquired Premier’s Canadian and Mexican assets, with their Nevada assets being spun-out into i-80 Gold. Since then, i-80 has acquired Ruby Hill, Lone Tree, and the former Pinson (Granite Creek) mine sites. I now oversee all exploration across our portfolio of operations. I absolutely love what I do and can’t imagine doing anything else.

Jen followed me to Nevada in 2015 and we got married in 2018. Since then, we welcomed our daughter Hannah (2020) and built a new house in Reno just this year. We both really enjoy Reno and all the surrounding area has to offer. During the summer I try to play a good amount of golf and we enjoy traveling outside of the country with visits to Japan, Italy, and Greece over the last several years. I look forward to a long career in exploration, whether in Nevada or half-way around the world. I’ll just go where the rocks take me.



NBMG’s Nevada Geology Calendar 2023

Author: designed by Christina Clack, Jennifer M. Vican, Chip Carroon, Christopher D. Henry, James E. Faulds, and Rachel E. Micander (13 x 9.5 inches, full color)

This 12-month calendar (January through December 2023) is full of beautiful photos highlighting Nevada’s scenic wonders and features a different geologic topic each month: Jarbidge River Pinnacles, Nevada’s Volcanic Past, Red Rock Canyon, Canyons, Toiyabe Range, Cathedral Gorge, High Alpine, Black Rock Range, Critical Minerals, Muddy Mountains, Archaeology, and Snow Covered. Interesting facts about Nevada and Nevada geology are also included.

The price is \$12 each or \$10 each if you order 10 or more calendars. Click here to [ORDER NOW**](#) !**



NEWS FROM THE FOUNDATION

December 2022

Camille Prenn, Chair

I hope you have the GSN Christmas party on your calendar – December 14 at the Nugget. Starting time is 6:00 p.m. with dinner at 7:00. It will be no surprise that the cost of dinner has gone up – it's \$65.00 this year. We will have the traditional layout of raffle prizes and silent auction items with an open bar and appetizers and the live auction will take place before the speaker begins. You can sign up online and buy raffle tickets there also; they're sold in groups of 5. Raffle tickets have not increased in price - still \$1.00 each.

Our speakers are Josh Bonde and Becky Hall. Many of you know Josh from his days at UNR and his many years of service to the GSN Las Vegas chapter, where Becky served as an officer as well. They discovered a new dinosaur fossil in Southern Nevada and will tell us about this unique find.

We're still looking for donations for the raffle and silent auction. Think of things you'd like to win when you're considering your donation. **Items can be dropped off at Paragon Geochemical (1555 Industrial Way, Sparks) during regular office hours. Please have items there by December 12.**



GSN WINNEMUCCA CHAPTER NEWS



The GSN Winnemucca Holiday Party was held on November 30th.

Tyler Hill gave a great talk on i-80 Gold's Granite Creek project and the Silent Auction raised a lot of money for the Chapter and support of students. Thank you to everyone who attended, and special thanks to those who donated or bid on auction prizes!

THANK YOU TO OUR GENEROUS PARTY SPONSOR! BAROID IDP



Our next meeting will be January 11, 2023. **SPONSOR: IDS, A GRANITE COMPANY.** **TALK: To be announced.** Happy Holidays!! For information, please contact Chapter President Nancy Wolverson at: nancyjeanw@aol.com.



GSN ELKO CHAPTER NEWS



The Elko GSN Chapter is excited to announce we will be continuing our annual tradition of our Christmas Party and Silent Auction this December. The event will be held at the Western Folk Life Center on Thursday December 15th and **we politely request all attendees bring a silent auction item to donate in exchange for a sponsored dinner, drinks and entertainment!** What a deal and it is tax deductible.

Please drop off silent auction items early to Rangefront Mining Services at 1031 Railroad Street, Elko or bring them the night of the event.

Once all silent auction items are checked in and put on display, we will break for dinner and a show at 7 pm. Nathan Carey of the University of Las Vegas will be presenting on his research Age and Genesis of W-Mo-Cu Mineralization, Gold Hill, Utah. Following the talk we will return to drinking, final bidding on auction items and eventual winners will be decided when bidding closes at 8:15 pm. The event is graciously hosted by dual sponsors, Boart Longyear and Legarza Exploration.



**BOART
LONGYEAR**™



**Bidding and drinks @ 6 pm, dinner served @ 7 pm,
Talk to begin at 7:20 pm**

Presenter: Nathan Carey, UNLV

**Title: "Age and Genesis of W-Mo-Cu Mineralization,
Gold Hill, Utah"**

Abstract:

Utah's Gold Hill mining district hosts a Jurassic felsic pluton (~80 km²) that was emplaced into a Mississippian to Pennsylvanian carbonate-dominated sedimentary sequence and is spatially associated with numerous polymetallic mineral deposits. This study focuses on W-Mo-Cu mineralization at the Lucy L., Doctor, Yellow Hammer, Reaper, and Rustler deposits within the district. The new, detailed petrographic observations, mineral chemistry (on scheelite, molybdenite, chalcopyrite, magnetite, garnet, and pyroxene), and Re-Os molybdenite geochronological data presented in this research allows the determination of key mineral associations and paragenesis, the characterization of deposit types and their evolution, and the constraining of the relative and absolute timing of mineralization and genetic relationships with the Jurassic pluton. Altogether, this research applies modern analytical techniques to a historic mining district and reveals several key insights into the diverse metal potential of Jurassic plutons in the Great Basin.

Mineral chemistry and paragenetic relationships indicate that the deposits at Lucy L., Doctor, Yellow Hammer, and Rustler formed in a skarn environment containing both endoskarn (Doctor, Yellow Hammer, and Rustler) and (cont. pg 8)

exoskarn (Lucy L. and Doctor) mineralization that is genetically related to the emplacement of the Jurassic pluton. Mo-rich scheelite formed during the prograde skarn stage and Mo-poor scheelite, chalcopyrite, and molybdenite formed during the retrograde stage of mineralization. Five of six Re-Os molybdenite ages (ranging from 156.8 ± 2.2 to 154.4 ± 2.2 Ma) are within uncertainty of the U-Pb zircon ages for the Jurassic pluton, supporting this genetic relationship and constraining the timing of W-Mo-Cu mineralization. Grandite garnet and scheelite chemistries are indicative of highly fluctuating fluid compositions during prograde skarn formation and suggest that the prograde stage formed in oxidizing conditions and the retrograde stage formed in more reducing conditions. Following skarn formation, a stage of late supergene Cu alteration and oxidation formed malachite and iron oxide mineralization, the exact timing of which remains uncertain.

One anomalous deposit within the district is the Reaper deposit, which has a somewhat unique paragenesis compared to the other deposits within the system. The new data presented here suggests that the Reaper deposit formed initially as a Mo-rich scheelite-bearing pegmatite pipe that was overprinted by W-Mo-Cu skarn mineralization and was later overprinted by epithermal-type mineralization and supergene Cu enrichment, with W-Mo-Cu skarn and supergene Cu enrichment being consistent with mineralization in the rest of the study area. Potential epithermal-type mineralization at Reaper is evidenced by the presence of crustiform-colloform banding and quartz-tourmaline breccia, scheelite cathodoluminescence zoning that differs from that present elsewhere within the district, and one Reaper molybdenite sample that yielded an apparently older age (165.6 ± 2.4) most likely due to interaction with later epithermal fluids that removed Re from the molybdenite after skarn mineralization.

This study also reveals key insights into the deportment of metals present as minor inclusions or mineral phases, many of which are important base (Pb and Zn) and precious (Au and Ag) metals or are on the 2022 US Federal Government and USGS List of Critical Minerals (As, Ba, Bi, Ce, La, Sb, and Te), indicating the potential importance of this district for the future domestic exploration targeting and production of these metals.

Please see our sponsors' websites for more information about their companies:

Legarza Exploration LLC

Legarza Exploration LLC is an earthmoving construction company that has had a specialized focus on mining and exploration support services in Nevada since 1992. We have earned an impeccable reputation of producing quality work in a safe, and efficient manner. We have brought innovative ideas and tactics to some of the hardest to reach places in Nevada. Our reputation, and general quality of work has made Legarza Exploration a preferred contractor to numerous mining and exploration companies.

<http://legarza.com/index.html>

Boart Longyear

Established in 1890, Boart Longyear is the world's leading provider of drilling services, drilling equipment and performance tooling for mining and drilling companies. It also has a substantial presence in aftermarket parts and service, energy, mine de-watering, oil sands exploration, production drilling, and down-hole instrumentation.

The Global Drilling Services division operates for a diverse mining customer base spanning a wide range of commodities, including copper, gold, nickel, zinc, uranium, and other metals and minerals. The Global Products division designs, manufactures and sells drilling equipment, performance tooling, down-hole instrumentation and parts and services.

Boart Longyear has a rich history, spanning more than 127 years in the mining and drilling industry. This long record of experience has led them to become the global leaders and experts they are today. With six global manufacturing locations, some of the most advanced drilling technology on the market, and the first U.S. firm to utilize sonic equipment for environmental drilling, Boart Longyear continues to be innovators of the industry. Boart Longyear is headquartered in Salt Lake City, Utah, USA, and listed on the Australian Securities Exchange in Sydney, Australia (ASX:BLY).

<https://www.boartlongyear.com/>

Meet your GSN Executive Committee for 2022-2023



Kel Buchanan, President

1. Years of Membership in GSN – 32
2. Employed by HB Engineering Group, Inc., Registered Geological Engineer, NV.
3. Duties: In addition to carrying out the directives of the board, the President is responsible for most aspects of the monthly GSN dinner meetings.



Tony Gesualdo, Vice President

GSN member since January 2017, ~6 years.

GSN Volunteer Positions:

GSN Winnemucca Chapter Secretary, 2017 – 2019

GSN 2022 Symposium Planning Committee, Exhibits Co-Chair, 2018-2022

GSN Vice President, 2022-present. Main obligation is planning and leading two field trips.

Academic: MSc Geology and Geological Engineering (2016) with a focus on Structural Geology from South Dakota School of Mines and Technology. Thesis: Structural controls on mineralization at Marigold Mine, Humboldt County, Nevada. BSc Geology (2011) from the University of Georgia.

Professional: Currently a consulting geologist and Exploration Manager for Lahontan Gold Corp. Previously worked for precious metal exploration & mining companies in Nevada, South Dakota, & the southeastern US.



Steve Weiss, Secretary

GSN member since 1992 (30 years), possibly before, I cannot remember.

GSN Secretary 2015 – 2022; duties include recording and maintaining minutes of Executive Committee meetings and carrying out official correspondence of the GSN.

Academic Background: MSc 1987 and PhD 1996 focused on ash-flow tuffs, Miocene calderas and volcanic geology; hydrothermal activity and precious-metal mineralization associated with silicic magmatic activity and volcanism.

Professional: exploration geologist based in Nevada since 1982; uranium, molybdenum, gold and silver principally in the western U.S.A. and Mexico; employed by various companies including Noranda, Amoco Minerals, Royal Gold, AngloGold, Glamis Gold and Goldcorp; freelance 2014-2022.



Bob Kastelic, Treasurer

I've been a member of GSN since 2004. I've been GSN's treasurer since 2009, overseeing monthly financial transactions, preparing budgets each year.

I have an MSc in Geology from Lehigh University, and have been working in gold exploration geology since 1979. My current position is Chief Exploration Geologist with McEwen Mining.



Peter O'Byrne, Digital Media Chairman

I have volunteered with GSN for 10 years. I started as a Secretary then became Treasurer for the Winnemucca Chapter. The last two years, I've been the Digital Media Chair with the intended goal of setting up a social media space for GSN. The role transitioned into handling the website and zoom meetings during the pandemic. Moving forward, I will work toward creating a social media presence for GSN.

I'm an independent geologist working with multiple clients in North America to develop targets. My latest hobby is using drones to develop 3-D mapping techniques to augment my field mapping and create a better geology product. It's pretty cool stuff (TargetSynthesis.Com). I received my BS in Geology from the University of Minnesota and got the heart of my training working for Newmont at multiple sites throughout Nevada.



Paul Fix, Publications Chairman

My name is Paul Fix and I have been a GSN member since 2018; I am currently the GSN Publication Chair. I hope to increase interest in GSN publications by creating a spatial reference/ tag for each GSN publication. This will ideally allow folks to identify GSN publications that are relevant to specific areas of interest (for example by viewing a map/ webmap). I completed a BS in Geology at University of Wisconsin – Stevens Point and a MS in Geology at University of Minnesota – Duluth. I started my exploration geology career doing greenfield gold exploration in northern Minnesota, and since 2019 I have been exploring the Beatty District with AngloGold Ashanti.



Melissa Boerst and Kaitlin Sweet, Membership Co-Chairs

Look for Melissa's and Kaitlin's bios in the January 2023 Newsletter!

Mining Activity Update

Mike Brady, OCTOBER 2022

LMBrady@aol.com

NEVADA

Barrick Gold Corp. announced that it acquired an option to earn a 100% interest in the Pearl String Property from Orogen Royalties Inc. for \$1,500,000 cash and \$4,000,000 in exploration expenditures over 5 years.

Press Release: October 25

Nevada Copper Corp. announced that it received commitments from its key lending partners for \$93,000,000 in funding to support the restart of underground operations at the Pumpkin Hollow Mine. (reserve = 21,727,000 tonnes @ 1.49% Cu, 0.2 gpt Au proven+probable) *E/MJ:* September 2022

Scorpio Gold Corp. announced that recent drill results at the Manhattan/Goldwedge Project include 16.8-19.8 meters @ 4.03 gpt Au (MWRC22-14); 56.4-59.5 meters @ 1.85 gpt Au (MWRC22-15); 73.2-90.0 meters @ 0.99 gpt Au (MWRC22-16) and 24.4-65.6 meters @ 3.89 gpt Au (MWRC22-21). (resource = 300,000 tonnes @ 10.58 gpt Au indicated) *Press Release:* October 6

Nev Gold Corp. announced that recent drill results at the Limousine Butte Project include 146.3-182.9 meters @ 0.44 gpt Au (CV22-07). (resource = 9,600,000 tonnes @ 0.78 gpt Au measured+indicated) *Press Release:* October 6

I-80 Gold Corp. announced that recent drill results at the Ruby Hill Project include 702.0-713.4 meters @ 13.5 gpt Au (IRH22-12); 472.9-485.2 meters @ 14.8 gpt Au (IRH22-14); 504.7-539.8 meters @ 1.4 gpt Au (IRH22-17) and 601.1-619.4 meters @ 11.8 gpt Au (IRH22-20). *Press Release:* October 5

I-80 Gold Corp. announced that recent drill results at the Granite Creek/South Pacific Project include 500.3-515.9 meters @ 15.7 gpt Au (IGS22-26); 464.5-469.1 meters @ 13.9 gpt Au (IGS22-27); 416.7-422.3 meters @ 8.5 gpt Au (IGS22-29) and 502.6-514.5 meters @ 9.9 gpt Au (IGS22-30). (underground resource = 562,000 tonnes @ 10.49 gpt Au measured+indicated) *Press Release:* October 18

Millennial Precious Metals Corp. announced that recent drill results at the Wildcat Project include 0.9-121.0 meters @ 0.39 gpt Au (WCCD-06); 13.1-63.1 meters @ 0.51 gpt Au (WCCD-07) and 47.2-89.9 meters @ 0.87 gpt Au (WCCD-10). (resource = 60,800,000 tonnes @ 0.40 gpt Au inferred) *Press Release:* October 4

Getchell Gold Corp. announced that recent drill results at the Fondaway Canyon Project include 120.0-227.5 meters @ 1.8 gpt Au (FCG22-19). (resource = 2,050,000 tonnes @ 6.18 gpt Au indicated) *Press Release:* September 27

Westward Gold Inc. announced that it acquired an option to earn a 100% interest in the Rossi and Coyote claims from Fremont Gold Ltd. for \$19,600 cash and 600,000 shares over 1 year. *Press Release:* October 11

Rex Minerals Ltd. announced that recent drill results at the Hog Ranch Project include 0-147.8 meters @ 0.62 gpt Au (HR22-18); 178.3-192.0 meters @ 0.47 gpt Au (HR22-19) and 221-224 meters @ 2.26 gpt Au (HR22-20). (resource = 35,000,000 tonnes @ 0.49 gpt Au indicated) *Press Release:* October 12

Blackrock Silver Corp. announced that recent drill results at the Tonopah West Project include 428.25-429.77 meters @ 1.7 gpt Au, 0.1 gpt Ag (TW22-118); 583.94-588.54 meters @ 0.63 gpt Au, 148.1 gpt Ag (TXC22-52); 674.52-676.05 meters @ 1.61 gpt Au, 3.4 gpt Ag (TXC22-53) and 237.44-239.94 meters @ 0.75 gpt Au, 83.6 gpt Ag (TXC22-59). (resource = 2,975,000 tonnes @ 208 gpt Ag, 2.5 gpt Au inferred) *Press Release:* October 18

Sitka Gold Corp. announced that recent drill results at the Alpha Project include 115.8-137.2 meters @ 0.37 gpt Au (AG22-09) and 202.7-263.7 meters @ 0.59 gpt Au (AG22-10). *Press Release:* October 6

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OTHER UPCOMING EVENTS

December 4-9, 2022: American Exploration & Mining Association Annual Meeting “Secure Supply Chains Start with Us”. Nugget Casino Resort, Reno/Sparks, NV. Click the link for more information and to get registered: <https://www.miningamerica.org/annualmeeting/> **GSN WILL BE IN BOOTH #318 THIS YEAR!**

December 4-5, 2022: SME Arizona Conference, hosted by the Society for Mining, Metallurgy & Exploration, in Tucson, Arizona. For more information on the SME Arizona Conference, visit <https://www.smeazonaconference.org/>

December 6, 2022: Arizona Geological Society. Speakers: Brian Gootee, Lisa Thompson & Tawnya Wilson, AGS. Title: Perspectives on a Carbon Storage Ecosystem Built from Distributed CO2 Sequestration Resources in Arizona”. Time - 6:30 PM MST. ZOOM url: <https://arizona.zoom.us/j/83838511302> (opens at 6:15 p.m.), Passcode: ags2022. For more information please click here: <https://www.arizonageologicalsociety.org/events>

December 6, 2022: NPGS meeting was cancelled for November due to low numbers. The Christmas Party is tentatively being held on December 6th at the Tamarac Junction, Reno, NV. Please contact Robert@Hot-Inc.net if you'd like to attend or help out by serving on the Board.

December 10, 2022: DREGS Annual Christmas Pot-Luck, Calvary Episcopal Church, 1320 Arapahoe St., Golden, CO. Please make dinner reservations with Mary Little - mariapequena1@yahoo.com, and for Beverage Donations contact Fred Barnard redbarnard01@aol.com. All reservations must be made by December 5th.

December 12, 2022: SME Northern Nevada Chapter Christmas Party. Circus Circus Mandalay Room, Reno, NV. Speaker: Richard LaPrairie, LMI Engineering L.L.C. Title: “Mining Around the World”. Social/Silent Auction 6 pm, Dinner 6:45 pm, Talk 7:30 pm. [RSVP](#) here. For more information contact: NNevSME@gmail.com

January 30 - February 2, 2023: NWRA 2023 Annual Conference WEEK. Held at the Nugget Casino Resort in Sparks, Nevada. Go to <https://www.nvwra.org/2023-ac-week> for conference information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at nevadawaterresources@gmail.com.

January 30-31, 2023: NWRA 2023 “Lithium Brine” Mine Water Management Symposium. Held at the Nugget Casino Resort in Sparks, Nevada. Register by January 1, 2023, for early rates. Go to <https://www.nvwra.org/2023-mine-water-symposium> for symposium information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at nevadawaterresources@gmail.com.

January 30, 2023: NWRA 2023 Water Rights in Nevada Class. 8:00 a.m. to 4:00 p.m. at the Nugget Casino Resort in Sparks, Nevada. Register by January 1, 2023, for early rates. Go to <https://www.nvwra.org/2023-jan-water-rights-class> for class information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at nevadawaterresources@gmail.com.

January 31, 2023: NWRA 2023 Obtaining Useful Answers from Groundwater Models Workshop. 8:00 a.m. to 12:00 p.m. at the Nugget Casino Resort in Sparks, Nevada. Register by January 1, 2023, for early rates. Go to <https://www.nvwra.org/groundwater-workshop-jan-2023> for workshop information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at nevadawaterresources@gmail.com.

January 31, 2023: NWRA 2023 Advanced Water Rights in Nevada Class. 8:00 a.m. to 2:30 p.m. at the Nugget Casino Resort in Sparks, Nevada. Register by January 1, 2023, for early rates. Go to <https://www.nvwra.org/2023-jan-advanced-water-rights-class> for class information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at nevadawaterresources@gmail.com.

January 31, 2023: 2023 WaterReuse Summit. 8:00 a.m. to 1:00 p.m. at the Nugget Casino Resort in Sparks, Nevada. Go to <https://www.eventbrite.com/e/watereuse-nevada-3rd-annual-symposium-tickets-465814613047> for summit information and registration. For questions or more information contact Sabrina at sabrina.dodos@cityofhenderson.com or call 562-810-6560.

January 31-February 2, 2023: NWRA 2023 Annual Conference. Held at the Nugget Casino Resort in Sparks, Nevada. Register by January 1, 2023, for early rates. Go to <https://www.nvwra.org/2023-ac-program> for conference information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at nevadawaterresources@gmail.com.

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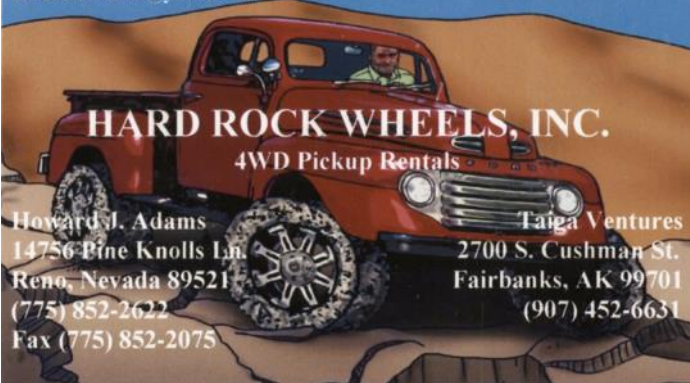
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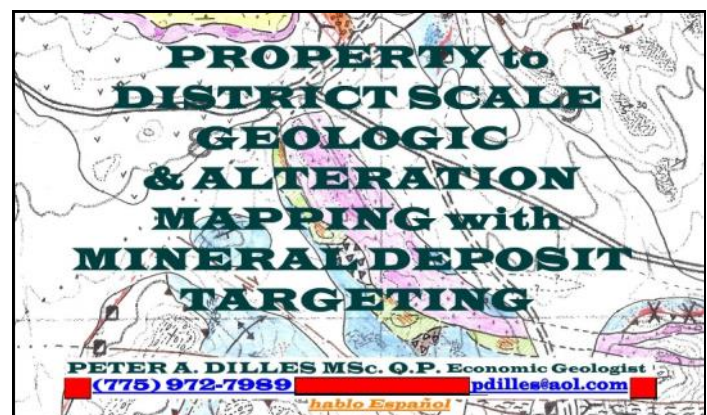


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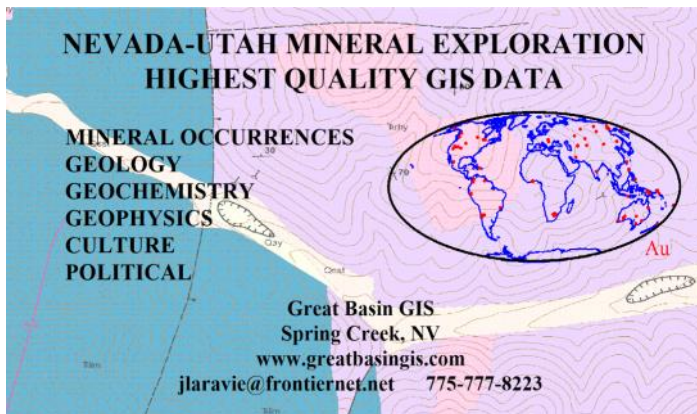
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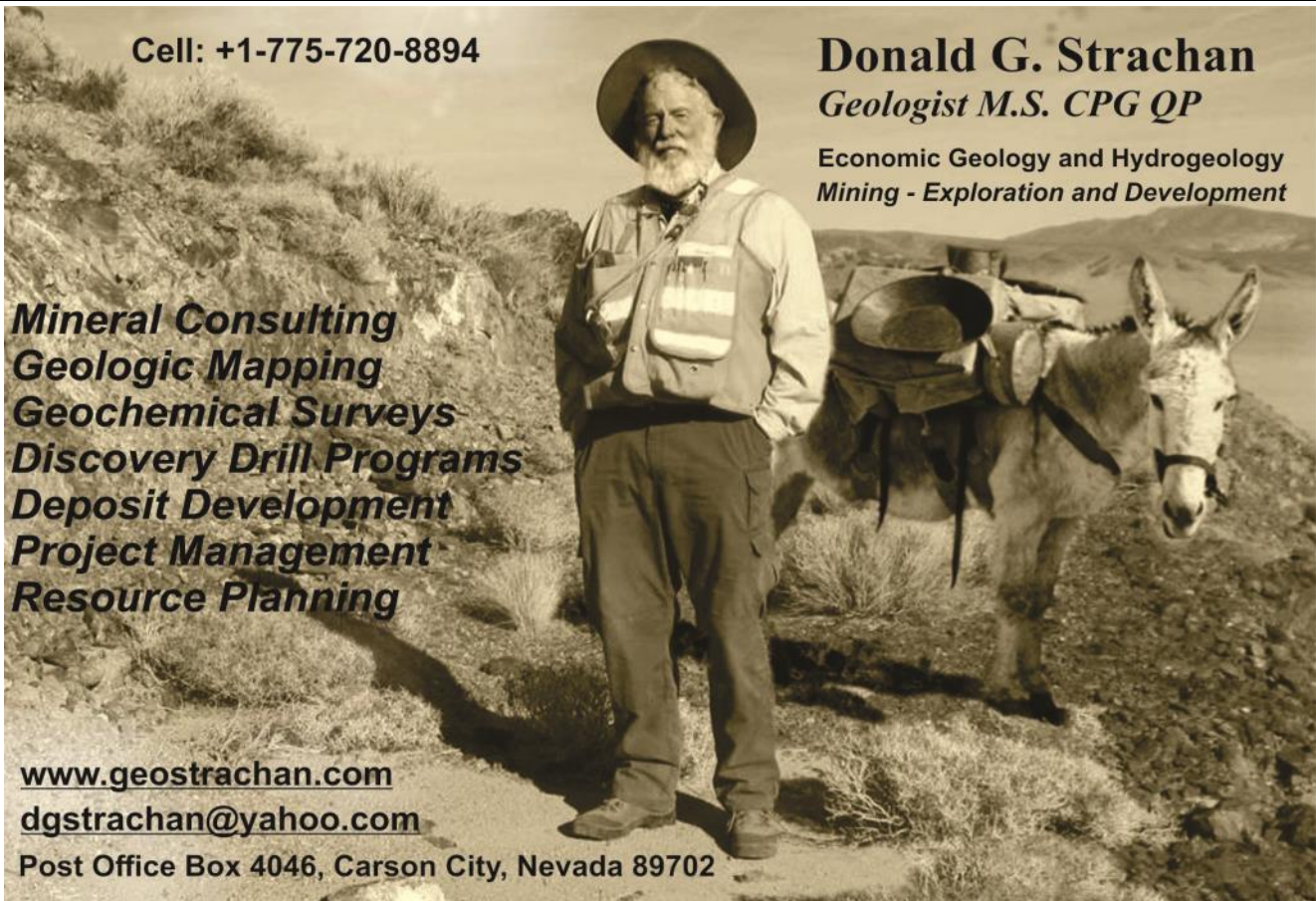
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GSN TRAVELLING BACKPACK PICTURES

Opal Adams submitted these photos of her GSN backpack visiting Iceland and Greenland. Beautiful locations! Opal gifted the backpack to her trip leader, Thor Vilhjalmsen and he was thrilled!

Iceland
Fagradalsfjall Volcano



Iceland



Greenland



Thor's new pack in
Greenland



Don Hudson submitted these photos of his GSN backpack at the famous Carara marble quarries in Tuscany, Italy. Very cool!

