

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 5 p.m.

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



OCTOBER 2023 ISSUE, Vol. 39, No. 8

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Published monthly except June and July

OCT. 11, 2023 WEDNESDAY **GSN WINNEMUCCA CHAPTER**

The GSN Winnemucca Chapter meeting will be held at the Martin Hotel, 94 W. Railroad St. SPEAKER Quentin Burgess, UNR MS Student. TITLE: "A Look at Great Basin Geothermal Systems-Characterization of a Potential 'Hidden' Geothermal Resource in Buffalo Valley, North-Central Nevada". SPONSOR: ENVIRO-TECH DRILLING. For more information, please contact Chapter President, Kris Alvarez at: kalvarez@i80gold.com. Details on pg 7.

OCT. 19, 2023 THURSDAY

GSN ELKO CHAPTER

The GSN Elko Chapter will hold their meeting at the Western Folklife Center, 501 Railroad St. Elko. SPEAKER: Sergey Konyshev, Orla Mining & TOPIC: Update on South Railroad Property. SPONSOR: ORLA MINING. Please contact Elko President, Luke Schranz, lukeschranz@gmail.com for more information. Details on page 9.

OCT. 20, 2023 **FRIDAY**

GSN REGULAR MEMBERSHIP MEETING

The GSN meeting will be held at the Atlantis Hotel & Casino. SPEAKER: Dr. Wyatt Bain, B.C. Geological Survey. TITLE: "Antiskarn Iron: A Unified Model for Iron Oxide-Apatite (IOA), Iron Oxide-Copper-Gold (IOCG), and Iron Skarn Deposits". SPONSOR: RUEN DRILLING. Dinner cost is \$60. Please register for dinner online or RSVP at this link: RSVP/DINNER Details on pg. 3. PLEASE RSVP BY 5 PM ON MONDAY, OCTOBER 16.

OCT. 7, 2023 SATURDAY

4TH ANNUAL BRIAN MORRIS TRAPSHOOT FUNDRAISER

At the Winnemucca Trap Club. See page 10 for more details.

REGISTER HERE

OCT 21-22, 2023 SAT. & SUN

GSN FALL 2023 FIELD TRIP

This trip will be touring the Buena Vista IOCGs on Saturday, overnighting in Winnemucca, then touring the Majuba Hill Cu Porphyry. See page 10 for more information or REGISTER HERE!

GSN RENO MEETING SPONSOR



FROM THE PRESIDENT Tony Gesualdo, GSN President 2023-2024 OCTOBER 2023



I am looking forward to the Fall Field Trip on October 21-22. Since 2017, I have made time for each trip. Field trips are a great way to meet new people, see new places, and learn about the geology of a particular area of Nevada. The Fall Field Trip (led by Patty Capistrant) will visit the Buena Vista District and Majuba Hill and should be very insightful, as always.

The field trip was originally scheduled for the weekend of the 14-15, with a viewing of the annular eclipse planned to be incorporated into the trip. Since the eclipse will be passing almost directly over Winnemucca (and the field trip area) at 9:20 am on October 14th, Winnemucca became a very popular place for eclipse watchers, filling all the hotels in the area for that weekend. The eclipse will last for 4 minutes and 17 seconds in Winnemucca, so enjoy it if you can. If you don't have a hotel room, there is plenty of BLM land for dispersed primitive camping. Just remember the policy is to leave no trace.

Our first monthly meeting of the year was a success, with some minor hiccups including a party next door that *almost* rivaled our own. Alex Holmwood delivered his presentation through the screams from our neighbors and gave us an informative introduction to the rocks found at Majuba Hill, which will tie into our fall field trip.

Our October monthly meeting speaker is also planned to coincide with the field trip. Wyatt Bain, a Mineral Deposit Specialist for the British Columbia Geologic Survey, is flying down to speak at our Friday dinner meeting and will then lead a portion of the field trip on Saturday. On Friday, he will provide an introduction to IOCG deposits and the Buena Vista District.

Finally, I would like to make an announcement: on September 23rd I (finally) tied the knot with my partner Mandy Bengtson! We had people from all over the country, along with locals and a few international attendees. All visitors were impressed with Reno and impressed with Nevada. It was a reminder of the amazing landscape and geology we have here. Our wedding week also coincided with the news release that Outside Magazine ranked Reno as "one of the happiest places to live" in the country. Somewhat of a surprise but we will take it! We can now be known as "the Happiest Biggest Little City".

Cheers,

Tony



Joyous Bride & Groom



Happy Family

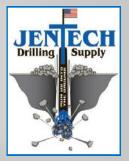


First Dance

GSN wishes to thank our SEPTEMBER meeting sponsors!







GSN MEETING in RENO—FRIDAY, OCTOBER 20, 2023

GUEST SPEAKER: DR. WYATT BAIN, BC Geological Survey

TITLE: "Antiskarn Iron: A Unified Model for Iron Oxide-Apatite (IOA), Iron Oxide-Copper-Gold (IOCG), and Iron Skarn Deposits"

Sponsor: RUEN DRILLING

TIME: Drinks @ 6:00 pm, Dinner @ 6:30 pm, Talk @ 7:30 pm

WHERE: Atlantis Hotel & Casino, 3800 S. Virginia St., Reno

DINNER COST: \$60. Please RSVP online by 5 PM on Monday, October 16th at: **DINNER RESERVATION**

Abstract:

The genesis of Iron Oxide-Apatite (IOA), Iron Oxide-Copper-Gold (IOCG), and Iron Skarn deposits and their potential relationship to one another is the subject of wide-ranging contemporary debate. Key to this controversy is the fact that all three deposit types can occur in a range of geologic settings and host rock lithologies, but share many unusual mineralogic, geologic, and textural features that are difficult to explain collectively using conventional magmatic, metasomatic, and hydrothermal models. These features include massive magnetite ore bodies, abundant Na-Ca and Fe alteration, a common spatial or temporal association with intrusions, and the occurrence of contrasting magmatic and metasomatic textures in magnetite ores. Decades of research have produced a diversity of genetic models for these deposits that include distinctive hydrothermal, magmatic-hydrothermal, and orthomagmatic endmembers. Yet, there is neither clear consensus regarding what key process(es) promote the formation of any one deposit type, nor is there agreement regarding a common genetic mechanism that might account for their mineralogic and geochemical similarities.

Recent research examining the nature of mineralizing fluids in IOA ores has shown that carbonate-sulfate liquids are a key component of ore forming fluids in IOA systems and likely act as fluxes driving the formation of Fe-P melts via silicate melt immiscibility or as ore forming fluid themselves. Similarly, geochemical and isotopic studies of ore and alteration minerology from IOCG deposits and iron skarns consistently reflect the input of carbonate- and sulfate-bearing basinal fluids to the overall fluid evolution of these systems. Moreover, iron skarns are distinct from conventional base-metal skarn systems in that their ore bodies are typically massive in nature and associated with zones of calcsilicate mineralization that occur exclusively in silica-rich host rocks (i.e. volcanic or intrusive lithologies and siliceous sediments). These features are likely formed via the flux of Fe-bearing carbonate-rich fluids rather than the aqueous chloride solutions commonly invoked in the conventional magmatic-hydrothermal models for skarn systems. These lines of evidence all suggest that carbonate-sulfate fluids are a unique through-line linking IOA, IOCG, and iron skarn systems and a key ingredient involved in the formation of all three deposit types. The role of carbonate-sulfate fluids in forming these systems relates to their highly reactive nature, their network modifying characteristics, and their ability to strongly partition and mobilize nominally soluble elements such as Fe and REEs. Moreover carbonate-sulfate fluids likely arise both from the assimilation of sedimentary rocks by intruding silicate magmas and/or their anatexis along the melt-host rock contact. The confluence of both processes would, in turn, account for the formation of IOA, IOCG, and iron skarns in close proximity within mineral systems. This talk will discuss the geology and geochemistry of IOA, IOCG, and iron skarn systems and evaluate this and other models for their formation.

<u>Bio</u>

Dr. Wyatt M Bain received his M.S. degree from the University of Nevada-Las Vegas in 2015, his PhD from the University of Alberta in 2020, and a postdoctoral fellowship at Lakehead University in 2021. Throughout his academic and professional career, Dr. Bain has specialized in economic geology with an emphasis on fluid and melt inclusion research, field-based ore deposit studies, and geoscience education. His research background features both fundamental and applied work examining the origin and evolution of base- and critical-metal systems including the iron oxide-apatite/iron oxide copper-gold/iron skarn family of deposits, porphyry Cu-Mo systems, and magmatic sulfide deposits. Dr. Bain is currently working as a Mineral Deposit Specialist for the British Columbian Geologic Survey and is involved in ongoing research examining the nature and distribution of critical metal resources in the Province of British Columbia.



This photo is from the GSN Fall 2013 field trip to Round Mtn. when Wyatt was a UNLV Grad student. With Melanie Newton. (photo by L. Ruud)

"FACES OF GSN"

Melissa Boerst, Reno, NV

I really can't believe I have been in Reno, Nevada now for 11.5 years (minus a 9mo stint in Az). A true Wisconsinite at heart I was raised for the majority of my life in the great dairy state while spending every summer with my grandparents and great aunt and uncle in Arizona. It seems quite the opposite to spend summers in Arizona but that is where I got to experience all of great national and state parks of the southwest. This is where I found my love of the mountains and traveling.

I grew up in a very small town in Wisconsin named Shawano about 30 minutes away from Green Bay, WI where my family has lived for generations on both sides. My cousin is currently working the family dairy which has been in the family since 1874. Throughout grade school I had to get straight As and was always a book worm nerd but math and science were never my passion or really my best grades. During high school I was a band, drama, and art nerd whose best classes were history, civics, and art. I dreaded the thought of having to take chemistry so I took it my senior year with all of the sophomores and basically talked my way to an A. I was lucky enough in high school to be a Rotary Youth exchange student and was able to spend my junior year of high school in Canberra, Australia. It was a great experience and was able to take a 10,000km bus and camping trip making a giant loop through the middle of the country and back down the east coast.

College was probably the best years of my life. I went to the only school I applied to University of Wisconsin – Eau Claire where I went in declared a psychology major with a Spanish minor which lasted a whole semester. I also decided that playing college rugby was the right choice for me and that I stuck with it the whole five years I was in college.

By my second semester I decided being a business major was a bit more my suited to my personality. I wasn't thrilled that Eau Claire was a liberal arts school which mean that I was required to once again take a science class so along with a good chunk of my rugby team we took the "Rocks for Jocks" class...Geology of National parks. I thought it would be fairly easy since I had been to so many parks as a kid. It wasn't as easy as I thought it would



be but it was very interesting. During this class a special summer field course was announced, Rocky Mountain Field Studies, three weeks camping, hiking, and learning field techniques (bonus was that this course counted as a "Lab Science". They were going to open the course up to non-majors as they were lacking bodies to make the class a go. I thought this would be a great opportunity to finish up my science class requirement and be done. Well, long story short was that I loved the class, loved being out in the field and even took some decent field notes. When we got back to Wisconsin I declared a second major in Geology and stayed another two years. I kept my love of travel alive in my



I loved my geo education in Argentina (also love how I have a camera on my field belt...no cell phone photos at that time vet!)



Hiked to the bottom and back up to the top of the Grand Canyon in 1 day when I was fit in college.

college years by spending a semester in Greece in 2010 to finish my International Business Certificate (what better way to learn experience about international business than to live in a county while it is collapsing), and also spend a semester in Mendoza, Argentina looking at the Andes.

My mining career started with a job application while I was still in school to ALS Minerals (Geochemistry) for a Client Services Representative. (cont. on pg. 5)

Melissa Boerst, Faces of GSN (cont. from page 4)

I thought this would be a great way to combine my business degree with my geology degree. I was lucky enough to get the job and move straight out to Reno with nothing more than two suitcases and a wooden crate of my belongings. Within a couple weeks I was on the road with Mary Stollenwerk to get a tour of the I-80 corridor.

I received a real culture shock with our first stop in Elko...drillers and geos everywhere! Working for ALS was a great experience where I was able to receive a deeper education in geochemistry as well as the whole assay process. I was also able to prepare my first professional business proposal for a new ALS branch in Tucson which was approved, built, and is still in operation today!

My first GSN field trip circa 2012 with Mary Stollenwerk!



After leaving ALS, I decided to be a "real" geologist and received my first logging job up on the Comstock. I really enjoyed learning about all of the history of the Comstock as well as much as I could about the amazing epithermal/hydrothermal geology in the district. Getting to see visible gold in the core isn't half bad either. After Comstock I bopped around a bit as we geos do with some small projects as well as a sonic project out at Cortez for 6 months. That is where I learned that infiltration basins are not really my passion. I was really grateful to receive a call in the fall of 2016 to join a new company called Lithium Nevada (Lithium Americas) who was going to be taking over the Western Lithium project. The role was for Project Facilitator which basically meant that I was going to get to do a little bit of everything and a self-proclaimed multi-tasker that I thought that this was a great opportunity. (All thanks to meeting Catherin Clark at the Reno Rodeo the previous June!). For almost 4 years I had the privilege to watch a small but highly intelligent team look at a project with new eyes and ideas and turn it into the world class Thacker Pass Project that it is today. I also learned more about lithium than I ever thought I would need or want to know...who knew it would become some of the most valuable career knowledge I would ever receive.





Visiting my first coal mine and my first drag line! NTEC outside of Farmington, NM.

At the end of 2019, I ventured out on my own and I have been contracting/consulting ever sense. Over the last five years I have really enjoyed working on so many different projects. I always try to be available for the small fill in projects and that really has allowed me to travel and see so many different types of deposits and geology. Within five years, I've worked in Nevada, Arizona, Alaska, South Dakota, California, and even a week in Mexico. From all of the locations, I have worked at a lot of different lithium projects, tin, tungsten, fluorite, gold, with skarns, pegmatites, sedimentary, and epithermal deposits. I was also able to go back to work on the Comstock (I think I have been up there four different times now!) and dive into all of the crazy complicated land statuses that show up there and (cont pg 6)

Melissa Boerst, Faces of GSN (cont. from page 5)

have found I really do enjoy title work. My enjoyment of research and the business side of the mining industry led me to apply this last year to the University of Arizona James E. Rodgers School of Law where I am currently working on my masters in Global Mining Policy & Contract Law.



Trying my hand at jack leg drilling. I think I will leave this to the professionals.



The face you make when after mapping for weeks you finally find the dike!



Typical Geo photo... pointing at a skarn outcrop in Alaska.

My other life passion is running my Texas Longhorn ranch, Silver Summit Ranch. I have been raising longhorns north of Reno now for seven years and really enjoy showing off our beautiful animals. I also enjoy always having fresh beef in the freezer as nothing beats home grown beef! Thank you for reading this bio and feel free to reach out anytime to talk about rocks, cows, or the Green Bay Packers.



A nice winter photo of one of my really friendly longhorn heifers.





GSN WINNEMUCCA CHAPTER NEWS



Please join us for the Winnemucca GSN October Meeting

Wednesday, October 11, 2023 The Martin, 94 W. Railroad St. Food and Drinks at 6 pm, Talk at 7 pm

Speaker: Quentin Burgess, M.S. Candidate, University of Nevada Reno

Talk: "A Look at Great Basin Geothermal Systems- Characterization of a Potential 'Hidden' Geothermal Resource in Buffalo Valley, North-Central Nevada"

FOOD AND BEER SPONSOR: Envirotech Drilling

For more information on **Envirotech Drilling** contact Brian Mikelson at:

<u>brian@envirotechdrilling.com</u> or phone: 480-200-8300 www.envirotechdrilling.com

If you have any questions, contact Kris Alvarez at kalvarez@i80qold.com or 775-621-6195

ABSTRACT:

Geothermal energy is a promising source of renewable power production that offers several advantages over other forms of renewable energy, as it is able to generate sustainable, clean energy year-round at baseload capacities. The Great Basin region (GBR) in the western United States is known for abundant geothermal activity and has been identified as having substantial geothermal resource potential due to its favorable tectonic setting. Despite abundant Quaternary faults in the GBR, ~39% of known geothermal systems are blind or hidden with estimates suggesting that up to 75% of all geothermal resources in the region are blind (Coolbaugh, et al. 2006, 2007). A blind geothermal system has no surface manifestations of geothermal activity (e.g., warm/hot springs, fumaroles, vents, mud pots, etc.). These blind systems can be challenging to discover using traditional exploration methods, prompting new multidisciplinary approaches that are able to increase the ability to detect these untapped resources while decreasing the drilling risk associated with geothermal exploration. For this field study, we aim to better characterize hidden geothermal systems in the GBR using in-depth structural analyses of designated field sites. We focus on Buffalo Valley in north-central Nevada, a site in the GBR that has been identified as having high potential for a hidden system based on an abundance of Quaternary faults and presence of a major accommodation zone, a structural setting that hosts some of the larger geothermal systems in the region. Our objectives are to integrate multiple geologic, geophysical, and geochemical datasets to establish the stratigraphic and structural framework of Buffalo Valley, identify favorable structural settings, delineate the geometry and kinematics of the Quaternary fault systems, define locations of thermal anomalies, and assign the most favorable targets for future temperature gradient drilling. This will be accomplished through detailed geologic mapping, 🖣 2-meter temperature surveys, petrographic analysis, geophysical investigations including, gravity, magnetics, and magnetotellurics (MT), geochemical analyses, and 2D conceptual modeling. Our results will contribute to the development. of a multidisciplinary approach for detecting hidden geothermal systems, which will be critical for the sustainable development of geothermal energy in the GBR and other regions with substantial geothermal potential.

Bio- Quentin Burgess is a current master's student with the Great Basin Center for Geothermal Energy at the University of Nevada, Reno (UNR). He obtained his bachelor's from UNR, focusing on structural geology, and researching the relationship between fault systems and the thermal rheology of the upper crust. This interest in Nevada's extensive faulting and elevated heat flow propelled him into geothermal exploration. Having gained a background in geothermal development and management, Quentin has had the opportunity to work on several geothermal projects across the Great Basin, gaining "boots on the ground" experience in some of the country's coveted geothermal fields. From this, he has been able to gain a unique insight into how a geothermal prospect becomes an operating field, having executed and managed on-site geologic investigations, resource testing campaigns, and geothermal power plant production modeling. His current research focuses on understanding the structural constraints of geothermal systems in the Great Basin region to improve upon exploration techniques for 'hidden' geothermal systems.





GSN ELKO CHAPTER NEWS



THANKS to All who donated to the Dave Knight Memorial Scholarship and to those that attended the Dave Knight Memorial Field Trip to Jarbidge, NV hosted by the Elko Chapter! We were honored to have Dave Knight's siblings attend from the far corners of AZ, AK and NE as well as Mr. Westervelt all the way from Durango, CO.

The field trip was a smashing success with twenty-three people joining the geo-caravan. We covered a few hundred dirt road/two track/trail miles, shared a lot of geology and introduced many to the splendor of Jarbidge. The trip could not have happened without Debra Knight and the Carlin Trend spurring the scholarship in her husband's memory, the amazing sponsors, the volunteer drivers (James Warren, Dave Shaddrick, Robin Knight, Christine Johnson, Dick Reid, & Bob Thomas), Brad Stock our guide and the owner/operator of the historic Buckeye Mine (now known as the Amy mine), and the staff of the Outdoor Inn for hosting our entire party.







Left: Amy Mine portal with owner/operator/guide Brad Stock (suspenders).

Center: Overview of Jack/Jenny Creek, L to R: Back row; Luke Schranz, James Warren, Dick Reid, Justin Milliard, Roger Bond, Doug Knight, Warren Thompson, Dave Shaddrick, David Landis, Robin Knight, Caylen Milliard, Sandy Shaddrick, Ruth Knight, Thomas Westervelt, Christine Johnson, Bob Thomas, Allison Thomas. Front row; Andrew Belot, Ian Riddle, Eric Lauha, Joe Laravie.

Right: Sat. night prime rib dinner at the Outdoor Inn and Jarbidge history/geology talk



Panorama of the road up Bourne Gulch to the Amy Mine. Brad Stock giving attendees (at D. Shaddrick's window) a historic account of the tramways and infrastructure.

Please join us for the

Elko Chapter Meeting

Thursday, October 19, 2023

Food and Drinks @ 6 p.m., Talk to begin @ 7 p.m.

WHERE: Western Folk Life Center, Elko, NV

SPEAKER: SERGEY KONYSHEV

TOPIC: Exploration and Mining Outlook Update on the South Railroad Property

FOOD & DRINKS SPONSORS: ORLA MINING



A HUGE THANKS TO OUR ELKO FIELD TRIP SPONSORS!

Field Trip SPONSORS



Travel - Volunteer Attendees (Vehicles)

Lodging – Legarza Exploration

Cocktails - National EWP

Dinner - National EWP

Lunches - Carlin Trend

Breakfast – Major Drilling

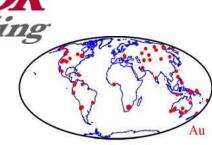
Snacks - Major Drilling

Guidebooks - American Assay

Graphics - Great Basin GIS

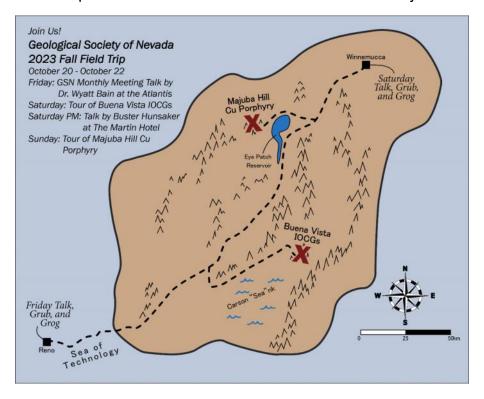






GSN 2023 Fall Field Trip

Join us next month for a trip to the Buena Vista Hills IOCG district and Majuba Hill copper porphyry!



Itinerary

Friday, October 20

6-9pm: Dinner and Talk by Dr. Wyatt Bain on the geology of the Buena Vista Hills, NV* at the Atlantis Hotel and Casino, Reno, NV

Drinks sponsored by **RUEN DRILLING**

(*this is also the GSN monthly meeting, so all GSN members are welcome to attend. If you would like dinner, you will need to sign up here, which is separate than the GSN field trip sign up.)

Saturday, October 21

7:45am: Meet at the GSN Office (2175 Raggio Pkwy, Reno, NV 89512)

8am: depart Reno in convoy of vans. <u>AMERICAN ASSAY LABS</u> is sponsoring the snacks and drinks in the vans. 9:30am: stop at Safeway in Lovelock for additional passenger pick-ups

10-4pm: tour of the Buena Vista Hills led by Dr. Wyatt Bain, lunch will be provided by **ENVIROTECH DRILLING** 6-9pm: Dinner and Talk by Buster Hunsaker on the geology of the Majuba Hill Cu deposit at the Martin Hotel and Restaurant, Winnemucca, NV;

Drinks sponsored by **ALS MINERALS** and dinner sponsored by **BOART LONGYEAR**

Accommodation: Model T Motel, Winnemucca NV

Sunday, October 22

6-8am: breakfast on your own

8am: Meet at vans, depart for the field trip

9-3pm: tour of the Majuba Hill Cu deposit led by Buster AND Molly Hunsaker

lunch will be provided by **PREMIER DRILLING**

6pm: arrive back in Reno (one van will stop back in Lovelock)

Sign up for the Field Trip **HERE**

Email, Call, or Text Patty Capistrant with questions Patty Capistrant
plcapistrant@gmail.com
775-220-2532



Geological Society of Nevada (GSN) Fall 2023 Field Trip Saturday & Sunday, October 21 & 22, 2023



Majuba Hill and Buena Vista Valley, Nevada

Saturday, October 21

7:45am: Meet at the GSN Office (2175 Raggio Pkwy, Reno, NV 89512)

8am: depart Reno in convoy of vans

9:30am: stop at Safeway in Lovelock for additional passenger pick-ups

10-4pm: tour of the Buena Vista Hills led by Dr. Wyatt Bain, lunch will be provided by ENVIROTECH DRILLING

6-9pm: Dinner and Talk by Buster Hunsaker on the geology of the Majuba Hill Cu deposit at the Martin Hotel and Restaurant,

Winnemucca, NV;

Drinks sponsored by ALS MINERALS and dinner sponsored by BOART LONGYEAR

Accommodation: Model T Motel, Winnemucca NV

Sunday, October 22

6-8am: breakfast on your own

8am: Meet at vans, depart for the field trip

9-3pm: tour of the Majuba Hill Cu deposit led by Buster AND Molly Hunsaker

lunch will be provided by PREMIER DRILLING

6pm: arrive back in Reno (one van will stop back in Lovelock)

THANK YOU TO OUR GENEROUS SPONSORS!









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	Single Double No Room		
Participant:	Roommate (hotel):		
Company:			
Address:	REGISTRATION COST:		
Cell#	\$245 - Single Room at Quality Inn Model T		
Email:	\$195 - Double Room at Quality Inn Model T \$295* - Non-member Single Room		
Person to contact in case of Emergency:	\$245* - Non-member Double Room at Quality In		
Name:	\$140 - No Room needed in Winnemucca \$50 - Membership Dues for 2023		
Phone:	\$0 - GSN Student Member Helpers (limit 6)		
	*Non-members are encouraged to become members of the GSN in order to take advantage of the reduced Member Rates - Annual Dues are \$50/year.		
Payments must be made by Friday, October 13, 2023 No refunds after Friday, October 13, 2023	Total amount included with this form:		
Payment: Check # Cash			

Return form with payment to: Geological Society of Nevada

2175 Raggio Parkway Reno, NV 89512

Phone: (775) 323-3500; Fax: (775) 323-3599; E-mail: gsn@gsnv.org

We ask you to register online if using a credit card for payment. GSN no longer has a manual credit card machine!



12 GA. AMMUNITION PROVIDED

Buddy Shoot Format



Brian Morris Memorial

FOURTH ANNUAL

OCTOBER 7, 2023

to register your team or for info on sponsorship please email briantrapshoot@hotmail.com

include

\$50 non-shooter dinner tickets available PER TEAM



Mining Activity Update

AUGUST 2023, Mike Brady

LMBrady@aol.com

NEVADA

Anglo Gold Ashanti Ltd. announced that recent drill results at the Silicon/Merlin Project include 342-556 meters @ 1.19 gpt Au (MD-1); 425.2-592.8 meters @ 0.82 gpt Au (MD-17); 448.1-662.9 meters @ 2.46 gpt Au (MDT-21) and 284.1-569.1 meters @ 3.27 gpt Au (MER23-147RD). (resource = 121,560,000 tonnes @ 0.87 gpt Au indicated) *Press Release:* August 8

Orogen Royalties Inc., the holder of a 1.0% NSR on the Silicon Property of Anglo Gold Ashanti Ltd. states in a recent press release that the Merlin Zone (1.0 km south of Silicon) now has a separate size potential of 230-250,000,000 tonnes @ 0.8-1.0 gpt Au inferred. *Press Release*: August 8

I-80 Gold Corp. announced that recent drill results at the Ruby Hill Project include 187.5-208.8 meters @ 1.1 gpt Au, 74.6 gpt Ag, 0.4% Pb, 0.1% Zn (iRH23-19); 187.5-193.5 meters @ 1.1 gpt Au, 121.5 gpt Ag, 3.0% Pb, 0.3% Zn (iRH23-22); 320.7-334.7 meters @ 0.7 gpt Au, 235.5 gpt Ag, 5.7% Pb, 7.0% Zn (iRH23-26) and 597.4-613.8 meters @ 0.9 gpt Au, 59.8 gpt Ag, 0.8% Pb, 17.8% Zn (iRH23-29). (resource = 2,818,000 tonnes @ 5.46 gpt Au, 9.5% Zn, 3.7% Pb, 188 gpt Ag inferred) *Press Release:* August 24

Lincoln Gold Mining Inc. announced that it is in negotiations to acquire the Bell Mountain Property from Eros Resources Corp. (resource = 2,662,000 tonnes @ 0.61 gpt Au, 15.9 gpt Ag measured+indicated) *Press Release*: August 10

Contact Gold Corp. announced that recent drill results at the Green Springs Project include 89.92-115.82 meters @ 1.90 gpt Au (GS23-10); 85.34-97.54 meters @ 1.41 gpt Au (GS23-11) and 85.34-96.01 meters @ 1.67 gpt Au (GS23-12). (resource = 754,500 tonnes @ 2.05 gpt Au inferred) *Press Release*: August 17

Calibre Mining Corp. announced that recent drill results at the Pan Project include 53.34-65.53 meters @ 0.91 gpt Au (PR23-117); 67.06-86.87 meters @ 0.41 gpt Au (PR23-119); 99.06-112.78 meters @ 0.52 gpt Au (PR23-121) and 100.58-103.63 meters @ 0.78 gpt Au (PR23-129). (reserve = 19,788,000 tonnes @ 0.37 gpt Au proven+probable) *Press Release*: August 1

Summa Silver Corp. announced that recent drill

results at the Hughes Project include 480.8-483.7 meters @ 8.40 gpt Au, 813 gpt Ag (SUM23-59) and 413.0-414.5 meters @ 2.56 gpt Au, 175 gpt Ag (SUM23-62). *Press Release:* August 2

BABY ANNOUNCEMENTS!

NOELLE ELIZABETH UNGER—JANUARY 4, 2023

Proud parents, Derick and Heather Unger announce the birth of their beautiful baby girl. Noelle Elizabeth Unger was born January 4, 2023. She weighed 7 lbs. 13 oz. and was 20 inches long. She joined her two sisters at home, Madelyn (7) and Chloe (3). If Tony's wedding is any indication, she likes hanging out with geologists.



Paul and Jenny welcomed the birth of their first child, Hannah Fix on August 23, 2023. Hannah is healthy and mom and dad are enjoying the beginning of a new chapter in life!



OBITUARIES

Gael McGibbon

August 25, 2023

Gael McGibbon, 69, left home for her final adventure on Friday, August 25th, surrounded by all the love and well-wishes of her family and her closest friend. She had waged a valiant battle with cancer for 13 months.

She will be fondly remembered by the many people whose lives she touched, and missed deeply and always by her surviving family: husband Doug; sister Betsy; children Mark, Jess (Mick), and Andy (Kaitlin); and grandchildren Brendan, Ophelia, Bradley, Weston, and Wyatt.

Always a spitfire, she was born in Cincinnati, Ohio, and spent her childhood creating mischief with her older sister, Betsy, and their dog, Dodo.



After high school and college at the University of Cincinnati, Gael moved to Texas, where, while she was working toward a Master of Science degree in geology at the University of Texas at Arlington, a cute kid kept coming into her office to draw pictures on her chalkboard. When she inquired about his parents, he introduced her to his dad, Doug, a man wearing purple corduroy bell-bottoms. It was love at first sight, and Doug and Gael were married not long after in Bellingham, Washington. At the time of her passing, they were approaching 46 years together as a couple.

They relocated to Colorado for a brief time after grad school, and then to Battle Mountain, Nevada with new jobs, where Gael's love affair with the desert mountains began. After a few years in Battle Mountain, they moved on to Reno, where they had their two younger children, Jess and Andy. They settled in Winnemucca in 1987, where Doug worked many years at exploration geology at gold mines and more recently, as a consulting economic geologist specializing in gold and industrial minerals.

Gael was a "Jill of all trades". At various times she worked in small business administration, geology, chemistry, and education. Gael earned two Master's degrees and a pilot's license, ran the (Humboldt-Pershing-Lander) Tri-County Development Authority, served as Director of US Operations for a major international assaying/geochemical company, and supervised quality control product analysis for an international health food/supplements company.

Science was one of her many passions, and as an exploration geologist, she got to combine her love of science with her love of trekking through the Nevada desert. A self-proclaimed "camel," she could do a 9-mile hike over rocky hillsides in +90-degree heat, carrying a full-to-the-brim field vest and multiple rock sample bags, on a single canteen of water, rewarding herself with a vodka tonic and a handful of goldfish crackers at the end of the day.

Another of her great loves was education, and during more than 15 years teaching at Winnemucca Junior High, Lowry High School and Great Basin College, she infused her teaching with both enthusiasm and rigor - and only minor embarrassment for Jess and Andy, who both were her students at various points. She made lifetime friends with more than a few of her students, and touched countless lives, both academically and personally. She taught abroad when she could, including volunteer stints in Japan, China, Turkey, and Romania, and traveled to all 50 States, Mexico, Canada, and much of Europe.

Wanderlust was the defining word of Gael's life, and she made a point of being sure that her kids and, later, her grand-children, were able to experience as much of the world as they could. Adventures both to big cities and remote locations, in-country and abroad, were what she looked forward to most and were some of her favorite memories.

A fierce and devoted fan and mentor to her grandchildren, her retirement years were spent with family as much as possible. She enjoyed camping, road trips, and "experience-the-city" trips, and had plans to take each of her five grandkids on an international trip someday.

A celebration of life was held for friends and family in the backyard of their home in Winnemucca on September 30.

Rest in peace, Gael. We will always love you.

Tonopah Historic Mining Park Receives Special Gift from GSN Members

The Tonopah Historic Mining Park Foundation (THMPF) has received a new Nevada Mineral Specimen collection from Neil and Cami Prenn. As well, they also donated eight (8) new mineral display cases to best highlight and show off this new collection in the exhibit hall at the Park. We thank the Prenns for this very generous and spectacular donation, and we encourage you all to head to the Park and see this new installment and the upgraded mineral specimen display cases and evolving exhibits.

THMPF has filled five (5) of the eight (8) cases with the donated Prenn mineral collection (first four cases entering the Exhibit Hall); and one case highlighting Tonopah centric specimens that Dick Reid (THMPF Board member) and Jeff Martin (Park leadership) recently collected at the Park along with donated specimens representing key Tonopah area mines. We have three (3) remaining cases that would be fabulous homes to additional donated mineral collections with an emphasis on Nevada.

Please contact Ann Carpenter, Chair of the THMPF for further information. ann.carpenter57@gmail.com; 775-240-2477.

Kind regards, Ann Carpenter Chair THMPF

Here is the THMPF Website if you'd like to support the park:

https://www.tonopahminingpark.com/general-donations/

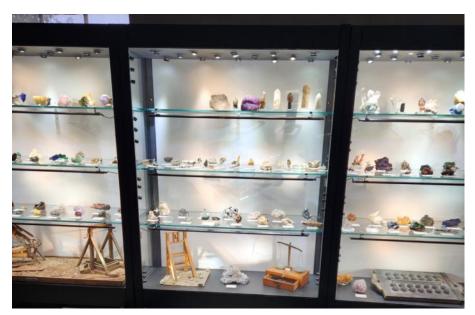


Photo of some of the cases filled with the PRENN Collection.

IT'S GSN DUES RENEWAL TIME

DUES ARE STILL ONLY \$50/YEAR

(\$80 FOR A PAPER NEWSLETTER)

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Thank you for renewing your membership in the GSN for FY 2024! Dues are due by October 1st to ensure your listing in the GSN directory (there is a 30-day grace period!). You can find out your actual renewal date by going to the GSN website (https://www.gsnv.org/membership/) and clicking on "My Account" to login, then clicking on "Membership Details". The site gives you the option to reset your password if you don't know it. Please contact the GSN office if you don't know your user name. If your dues expire, it does not automatically take you off the email list. That happens on November 1st each year so please make sure you renew by then. THANK YOU!

ALSO, MEMBER DIRECTORY ADS CAN BE PURCHASED ON THE WEBSITE HERE: 2024 DIRECTORY AD



Join us for the Thirteenth Annual Mineral Exploration Summit

Tuesday, October 10th, 2023, Atlantis Resort Casino, Reno, Nevada

Register Online

Early Registration - ENDS SOON by Tuesday, October 3rd, 2023:

Members: \$200

Nonmembers: \$300 (includes a discounted NMEC membership through 2024)

Late Registration:

After Tuesday, October 3rd, 2023, and on site:

Members: \$250

Nonmembers: \$350 (includes a discounted NMEC membership

through 2024)

Registration includes: Continental breakfast, lunch and reception

The registration desk opens at 7:30am on Tuesday, October 10th, 2023, and will be available until noon.

OTHER UPCOMING EVENTS

NBMG Earth Science Week Field Trip 2023 Saturday, October 7, 2023

Location: Starts at Great Basin Science Sample and Records Library, 2175 Raggio Parkway, Reno, NV 89512, 8:00 am, Saturday, October 7, 2023. We will depart from the GBSSRL at 8:30 a.m. sharp.

This year, Earth Science Week is celebrating the theme Geoscience Innovating for Earth and People. In keeping with the theme, our 2023 field trip will take us on a tour of the Truckee and north Lake Tahoe areas, and the Truckee River west of Reno. We will discuss some aspects of the geosciences that are helping our mountain communities work towards healthier and increasingly sustainable lifestyles, while implementing environmental problem-solving in the Tahoe basin and beyond. We will discuss the geology and ecosystems in these regions, past mining and logging activities, landscape evolution, and natural hazards. We will also learn about microplastics in Lake Tahoe, which provides drinking water to downstream communities, and research that is being done to study these substances.

Field trip sign up: https://docs.google.com/forms/d/e/1FAlpQLSeauRub25g3Mw0JsZQfEArHGPX1q2E3fTU-rPUpaygsoAVPBQ/viewform

Please note: Because of the nature of the trip location, parking will be incredibly limited. Please carpool as much as possible.

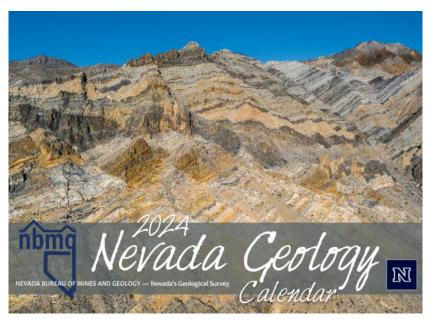
Rachel Micander (she/her)

Geologist & Information Specialist Great Basin Science Sample and Records Library Nevada Bureau of Mines and Geology



The Nevada Geology Calendar 2024 is now available for preorder!

https://pubs.nbmg.unr.edu/Nevada-geology-calendar-2024-p/cal2024.htm We will notify you when the calendars arrive--sometime in mid-October.



After October 7, the price will be \$12 for 1-9 copies. Quantity discounts for 10 or more will be available after October 7.

If you place an online order by October 17 and will be attending the GSN Fall field trip, you can pick it up at our office on that Saturday morning, October 21.

OTHER UPCOMING EVENTS

October 5, 2023 Arizona Geological Society Speaker Series 2023 via Zoom. Speaker: Amanda Hughes Ph.D., Assistant Professor of Practice, Department of Geosciences, University of Arizona. Title: "Structural Modeling for Reducing Uncertainty in Geologic Interpretations". Time - 6:30 PM MST (zoom event opens at 6:15 PM) ZOOM Link – https://arizona.zoom.us/j/89006049062. More information and online registration: Structural Modeling for Reducing Uncertainty in Geologic Interpretations

October 5, 2023 Nevada Petroleum & Geothermal Society meeting, Tamarack Casino, 13101 S. Virginia St., Reno, NV: Speaker and Topic to be announced. Bar opens @ 6:30 pm, Dinner @ 7:00 pm, Presentation @ 7:30 pm. click here to register: Register Now

October 10, 2023 NMEC Annual Meeting. SAVE THE DATE! More information and registration form can be found on their website. https://nvmec.org/2023-mineral-exploration-summit

October 16, 2023 DREGS October Meeting at Colorado School of Mines, Berthoud Hal 241. Speaker: Ken Witherly, Condor Consulting. Title: "The Greatest Obstacle to Discovery Is Not Ignorance—It Is the Illusion of Knowledge". Social hour begins at 6:00 p.m.

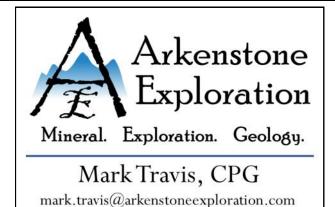
Zoom link here. For more information, please see our **Events** page.

October 15-18, 2023 Geological Society of America Annual Meeting. Connects 2023. Pittsburgh, PA. Website: https://community.geosociety.org/gsa2023/home

October 28, 2023: National Mining Hall of Fame Induction Gala. 6-11 PM at the The Gaylord Rockies Resort and Convention Center, Aurora, CO. RSVP here. Don't miss an amazing night!

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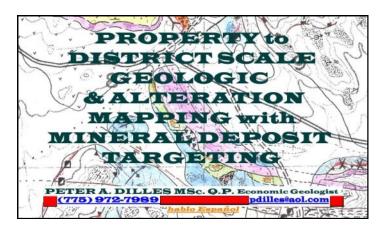
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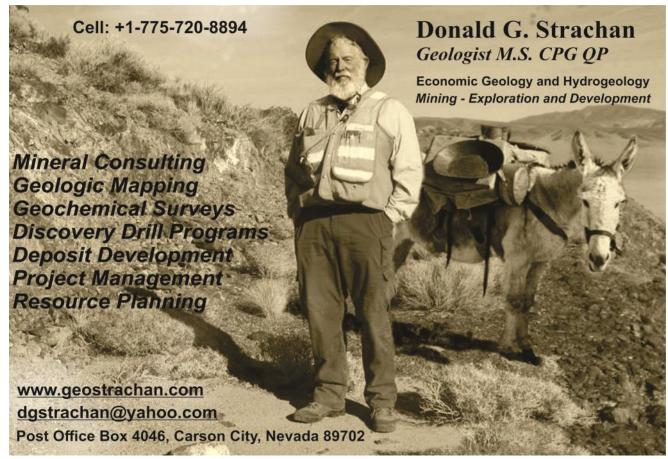


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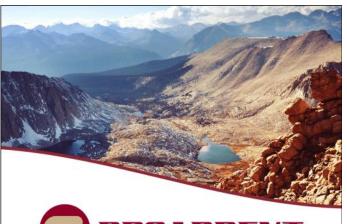
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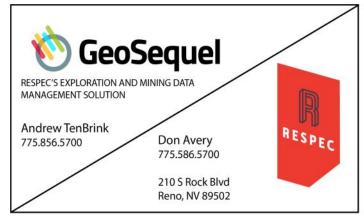
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GSN TRAVELLING BACKPACK PICTURES (Submit your photo to gsn@gsnv.org!)

Laura Ruud with her 2015 Symposium backpack at Fly Geyser, NV on the NBMG's Earth Science Week field Trip in Oct 2022. See pg. 17 for this

year's trip information!





And just for fun, this pic is of Quentin Burgess, our Winnemucca speaker this month, and Jim Faulds, State Geologist & NBMG Director.

Terri and Larry Garside traveled to Lake Louise in Canada this September and took this beautiful shot of the GSN 2022 symposium backpack.

