# 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



### JANUARY 2024 ISSUE, Vol. 40, No. 1

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Published monthly except June and July

### JAN. 10, 2024 WEDNESDAY

### **GSN WINNEMUCCA CHAPTER MEETING**

The GSN Winnemucca Chapter Meeting will be held at the Martin Hotel, 94 W. Railroad St. SPEAKER: Gabriel Aliaga, Sr. Exploration Geologist, Ridgeline Minerals Corp. TITLE: **Exploration Update on the Selena Carbonate Replacement** Deposit, White Pine County, Nevada. FOOD & BEER SPON-SOR: JUST REFINERS USA. For more info., please contact Chapter President, Kris Alvarez at: kalvarez@i80gold.com. Details on page 6.

### JAN. 18, 2024 **THURSDAY**

### **GSN ELKO CHAPTER MEETING**

The GSN Elko Chapter Meeting will be held at the Western Folklife Center, 501 Railroad St. Elko. SPEAKER: Garrett Frey, Hydrogeologist. TITLE: "Playa Lake Lithium Brine Exploration Utilizing Long Screen Test Wells, Miniaturized Tools, and Downhole Tracers". FOOD & BEER SPONSOR: JUST REFINERS USA. Please contact Elko President, Luke Schranz, lukeschranz@gmail.com for more information. Details on page 7.

### JAN. 19. 2024 **FRIDAY**

### **GSN REGULAR MEMBERSHIP MEETING**

The GSN Membership meeting will be held at the Atlantis Casino Resort, Reno, NV. SPEAKER: Garrett Frey, Hydrogeologist. TITLE: "Playa Lake Lithium Brine Exploration Utilizing Long Screen Test Wells, Miniaturized Tools, and Downhole Tracers". DRINKS SPONSOR: PREMIER DRILLING! Dinner cost is \$60 per person. Please register for dinner online by clicking the link: **DINNER RESERVATION** or RSVP to Laura Ruud: gsn@gsnv.org. PLEASE Register or RSVP by MON-DAY, January 15th! Details on page 3.

### **GSN RENO MEETING SPONSOR**



### FROM THE PRESIDENT Tony Gesualdo, GSN President 2023-2024 JANUARY 2024



Happy New Year, and welcome to 2024!! As 2023 ends, we can reflect on two great field trips and many geological gatherings in Reno and across the state. This is only the midway point of the GSN fiscal year, and we have a few months of good times, good talks, and good outcrop debates planned before our officers pass the baton to the next group of volunteers.

A huge thank you to all who organized and participated in the holiday celebrations and fundraisers put on by the GSN Foundation and our GSN chapters. None of these events would be possible without the time, effort, and items donated by members. The Foundation fundraiser in Reno was a huge success. Along with the raffle, auctions, and good food, we were treated to an enjoyable and insightful talk about the Colorado River (and oysters) by Lew Kleinhans. More details can be found on page 6 of the newsletter.

We have an excellent lineup of speakers in the early months of 2024 starting with Garrett Frey in January. He will be discussing lithium brine exploration and will be pulling double duty with both Reno and Elko talks on back-to-back nights. See pages 3 and 8 for meeting details.

Looking ahead, during our April 19<sup>th</sup> meeting, we will host a student poster session. Keep an eye out for details in upcoming newsletters and emails.

The gold price is over \$2000/oz and critical metals are in demand. There is a growing focus on the state's paleontological resources. Snowpack and water resources are closely monitored with the state's growing pop-

ulation. Nevada is also a very seismically active state, as we were reminded here with a cluster of small quakes near N McCarran Blvd on New Year's Day. Altogether, 2024 looks like a great year to be doing geology in Nevada!

Cheers,

Tony

Window seats are the only acceptable spots for geologists on airplanes. Here is a picture of Ruby Dome and Lamoille Canyon looking northwest towards Spring Creek and Elko in the background, taken on a December 23, 2023 flight from Reno to Denver.



# GSN wishes to thank our HOLIDAY MEETING sponsors!









### GSN MEMBERSHIP MEETING—JANUARY 19, 2024

**Sponsor:** 



# GUEST SPEAKER: GARRETT FREY, Hydrogeologist

TITLE: "Playa Lake Lithium Brine Exploration Utilizing Long Screen Test Wells, Miniaturized Tools, and Downhole Tracers"

TIME: Drinks @ 6 pm, Dinner @ 6:30 pm, talk @ 7:30 pm

WHERE: ATLANTIS CASINO RESORT, RENO, NV

**DINNER COST: \$60 per person** 

ONLINE RESERVATIONS CAN BE MADE on the GSN WEBSITE by clicking this link: **DINNER RESERVATIONS**.

### PLEASE RSVP/REGISTER NO LATER THAN MONDAY, JANUARY 15TH!

### Abstract:

As the demand for lithium increases around the world, and domestic lithium supply has become a high priority in the United States, the Great Basin has experienced a surge of exploration for lithium. Dry lake playas offer the potential to explore for lithium stored as a brine solution in underground aquifers. However, while there are many proven drilling practices for hard rock precious metal exploration in the Great Basin, and widely accepted drilling strategies for brine projects in other parts of the world, no standard drilling approach has been developed for brine targets in the playas of the Great Basin. Various drilling strategies for brine have included open borehole packer testing, oil field style cemented casing, cored boreholes, and screened wells sampled via airlifting, low flow sampling, or ambient grab samples. While, many drilling and sampling approaches have been attempted for lithium brine exploration in playas with varying degrees of success or failure, there is no consensus on the efficacy of the different methods. One of the largest challenges facing all methods of sampling is overcoming the ambient flow that occurs in any open borehole or well, which results in vertical migration of

fluids and causes the concentration of lithium to appear the same or similar throughout the borehole or well. Steady state pumping of lithium exploration wells is essential to overcome ambient flow and properly delineate stratigraphic depth occurrences of brine. Long screen test wells with a casing diameter larger enough for the installation of submersible pumping equipment is a drilling and sampling method that has been successful at overcoming ambient flow. The pumping of long screen test wells coupled with miniaturized tooling, downhole tracers, and chemistry profiling with the mass balance approach have proven effective at defining zonal flow, defining zonal chemistry, and delineating stratigraphic occurrences of lithium brine.

### Bio:

Garrett Frey, PG received a B.S. degree in both Geology and Hydrogeology from the University of Nevada, Reno in 2012. After graduating he spent 7 years working as an exploration geologist with NuLegacy Gold focusing on Carlin-type gold deposits at various locations in Nevada. For the past 5 years he has worked as a hydrogeologist specializing in groundwater exploration and water supply for mining and geothermal companies, municipalities, and land developers, and has merged his mineral exploration and groundwater experience to advance lithium brine exploration projects in the Great Basin.



# "Faces of GSN" Christian Thomas, Reno, Nevada

Season's Greetings (it's always appropriate!) I've enjoyed reading a great many of these essays since joining GSN, so it's high time I contributed one of my own.

I grew up in southeast Ohio with a geode and plastic Diplodocus on my windowsill, finding pieces of conglomerates and anthracite in our driveway gravel. The 11-mile drive to town contained about 3 outcrops of flat-lying sedimentary rocks overlain by glacial units – the closest igneous or metamorphic rocks were several hours away in western Virginia. My interest in geology passed the hobby level during the mid-2010s when the Utica and Marcellus shale boom took off. The oil and gas industry promised good pay for hard work – exactly what I was after. My initial studies at Ohio University were intended to get me into the oil industry, but I discovered an interest in planetary geology in my senior year, which remains to this day. Additionally, field camp in Red Lodge and Stillwater, MT, including an extended stay at the famous YBRA cabins/barracks, alerted me to the lure of the mountainous and mineral-rich western US.

My tour of UNR as a prospective grad student, including a visit to my future thesis project site near Berlin-Ichthyosaur State Park with Dr. John Muntean, cemented my desire to study and work in the Center for Research in Economic Geology (CREG) group going forward. I moved to Reno after wrapping up my senior thesis on the composition and evolution of recent Alaskan dacites. My initial assignment at UNR was to map and characterize the various mineral deposit types in the Grantsville area, on the south side of the Union district in northern Nye County. This effort culminated in the delineation of many different types of mineralization. It may have been too many to tackle in a satisfactory manner on a Master's timeline without sample location data beyond "somewhere beneath us" – stay tuned for the final version in 20 years. The fluid inclusion component of the project was initially nebulous but became more defined when Dr. Matthieu Harlaux became involved in the project. I made some extra cash over the summers of 2019 and 2020 working for Herb Duerr, who taught me to stake claims with a string box, among other things. Tracing a straight line over uneven terrain was not as easy as it seemed. It was around this time that I joined GSN and began making acquaintances in the Nevada geologic community outside UNR for the first time.



The main Grantsville open pit; a familiar view after 4 years!

In the fall of 2020, after the projected end of civilization, my funding ran out and I found myself in need of gainful employment. I had knocked out the bulk of my thin section work that summer following Dr. John McCormack's very useful course on reflected light petrography, and was moving on to fluid inclusion petrography and microthermometry on the various quartz and calcite vein types at Grantsville. At that time, my friend and fellow grad student in CREG, Sean Ingersoll, was working for Hercules Gold USA on their epithermal Au project east of Carson City. Hercules was interested (cont. on page 5)

### Faces of GSN, Christian Thomas (cont. from page 4)

in having fluid inclusion work done on the various generations of quartz veins identified in the project area, which lined up perfectly with my thesis work. Sean introduced me to Ron Kieckbusch and Kyle Larson (for Hercules and Extrados, respectively) so that I could work for Hercules through Extrados, which I did in various capacities through 2020 and 2021 while slowly progressing my degree. Eventually I got tired of spending money to stay on the books at UNR, so I took early 2022 off to grind out my thesis, defend, and graduate.

After my defense and a harried, yet enjoyable GSN Symposium where I presented my thesis in poster form, I proceeded to leave Nevada for roughly 6 months and look for porphyry Cu in the Bootheel of New Mexico for Southern Silver Exploration. My skills as an exploration geologist were significantly improved by this pro-

ject, as was my collection of field stories that will be compiled into a book in ~50 years. Drillers are an invaluable part of the industry and can make or break a program, and they will certainly never fail to provide you with discussion topics for the campfire.

I occupied my time off back in Reno with thin section petrography on various projects. These included the Cracker Creek orogenic Au system in eastern Oregon for Ken Tullar of Lode Metals Inc. and the FAD polymetallic Ag-Pb-Zn CRD system in Eureka, originally for Paycore Minerals. After staying warm inside over the winter while concentrating on these projects, I returned to the field in the early spring to log core for Paycore in Eureka. The wet winter made for quite the battle against Mother Nature to get the targets drilled, but we got it done. This position with Paycore led to a short stint with i-80 Gold Corp. at Ruby Hill to assist with the transition of exploration at FAD to the i-80 model. I am grateful to have been a part of both projects, which were and are staffed by excellent geologists, and am looking forward to the future development of the Eureka district.



Staking claims near the Continental Divide Trail in New Mexico

Most of my post-Eureka 2023 was spent behind the wheel of a petrographic microscope associated with Dr. Joel Desormeau at UNR, characterizing samples from a variety of systems including Ruby Hill and Granite Creek for i-80 Gold. I am currently working on a very exciting early-stage exploration project that I can't discuss in detail, but will make the news soon enough. I have benefited greatly from working with Kyle, all of my coworkers, and our clients during my time with Extrados, and look forward to many more years getting closer to understanding this wonderful state we call home. I'll see you all at the next GSN Reno meeting!



### GSN WINNEMUCCA CHAPTER NEWS



Greetings and Happy New Year from Winnemucca!

Our December meeting was incredibly informative, and a big thank you to Rachel Hampton for giving us a great overview of the Thacker Pass Lithium project. A big shout out to all the folks that pitched in to make our silent auction a success, with special thanks to Laura Ruud, JoAnn Newbury and Anthony Danciu for taking on the big job of collecting all the money! We couldn't have done it without everyone's help. Our next meeting is:

# Wednesday, January 10, 2024 The Martin, 94 W. Railroad St., Winnemucca

Food and Drinks at 6 pm, Talk at 7 pm

Speaker: Gabriel Aliaga, Sr. Exploration Geologist, Ridgeline Minerals Corp.

Title: "Exploration Update on the Selena Carbonate Replacement Deposit,
White Pine County, Nevada"

### **FOOD & BEER SPONSOR:**



### Abstract:

The Selena property is a shallow-oxide, Ag-Au-Pb-Zn carbonate-replacement deposit (CRD) discovery made by Ridgeline Minerals in 2020. The project is located within the historic Limousine Butte district of the south Carlin-Trend, in the southern Cherry Creek Range, White Pine County, Nevada. Historic and currently producing mines in the area include the Bald Mountain, Alligator Ridge, Yankee, Illipah and Golden Butte deposits. Initial exploration on the property focused on mapping and sampling of Au-Ag-rich jasperoid outcrops and WNW trending dike filled corridors, interpreted as a primary control on mineralization. Subsequent trenching, backpack drilling, and fifty wide-spaced RC and core holes to-date has defined a mineralized Ag-Pb-Zn-Au footprint that outcrops at surface and extends undercover for 3.8km to the E-W and over 2.7km to the N-S with mineralization open down-dip and along strike. Target host horizons for CRD mineralization include multiple horizons within the Devonian Guilmette Limestone as well as its karsted basal contact with the underlying Devonian Simonson Dolomite. Contacts between altered and unaltered rock are sharp and parallel to controlling faults and bedding with decarbonatization, silicification, and pervasive brecciation of carbonate rocks characterizing alteration. Hydrothermal dolomitization and banded calcite veins often bound zones of mineralization and commonly exhibit "BBQ Rock" UV fluorescence, a helpful vectoring tool used by Ridgeline and many other companies in CRD exploration worldwide. The property does not currently contain a mineral resource, however, mineralized intercepts at Selena typically range from 30-50m true thickness and grade 100-200 g/t silver equivalent (AgEq) with higher-grade including intervals ranging from 5-10m thick and commonly exceeding 1,000 g/t AgEq. The best intercept to-date (SE22-045) intersected 32.5 m grading 153.42 g/t Ag, 4.11% Pb-Zn, and 0.09 g/t Au (or 307.54 g/t AgEq) starting at 235 m TVD that included a 6.1 m zone grading 480.52 g/t Ag, 18.39% Pb-Zn and 0.14 g/t Au (or 1,137.20 g/t AgEq). Ridgeline's 2022 and 2023 core drilling campaigns have intersected multiple phases of intrusions within and directly adjacent to mineralized zones. The intrusions vary between dacite to rhyolite quartz-feldspar porphyry (QFP) or quartz-biotite porphyry (QBP). These intrusions also outcrop at mapped intersections of low-angle thrusts and WNW faults and correlate strongly with magnetic anomalies identified with a high-resolution drone magnetics survey commissioned by the company in 2022 and 2023. The thickness of these intrusions varies but observations made in drill core suggest both dike and sill geometries are present. Drilling thus far indicates these intrusions typically carry low-grades of Ag-Pb-Zn but can produce localized bonanza grades of Ag-Pb-Zn ±W-Cu at their margins. Regardless, they are interpreted as being genetically related to the nearby Butte Valley porphyry system and very likely acted as key fluid flow corridors to the adjacent carbonate host rocks.

To date, the age range for magmatism at Selena spans Jurassic to Eocene. Volcanic rocks, intrusions, and their associated polymetallic mineralization in the Cherry Creek Range are all dated as Eocene. The buried Butte Valley porphyry west of Selena has a reported Cretaceous U-Pb zircon age of 98.5 Ma. In 2022, Ridgeline sent two samples for U-Pb zircon dating at the University of Arizona. One sample from a rhyolitic QFP dike from hole SE22-039 returned a Jurassic age date of 160.8 Ma (± 0.98). The other sample was a rock chip of an andesite lava and returned a Tertiary age date of 36.2 ma (± 0.30 Ma). Potential ages of mineralization at Selena therefore range from Jurassic to Eocene with future geochronology work planned to further constrain the age of CRD mineralization. Further investigation may define overprinting magmatism and/or mineralization but work to-date has clearly defined a metal zonation pattern between the Butte Valley porphyry and the companies CRD discovery at Selena. Ridgeline's primary exploration focus moving forward will be further definition drilling at the Selena discovery as well as vectoring towards higher-grade CRD targets located between known mineralization and the Butte Valley copper porphyry, which is currently being explored by Freeport McMoRan and Falcon Butte Minerals.

### **Biography:**

Gabe is an exploration geologist and experienced 3D modeler who brings a focus on data integration and analysis to the Ridgeline team. Prior to joining Ridgeline in 2020, he worked with the Nevada Exploration team exploring for blind Carlin-Type deposits at the Grass Valley project. Gabe holds a M.S. in Geology from the University of Nevada Reno where he studied the relationship between Eocene magmatism and Carlin-Type gold deposits at the Keystone project operated by US Gold Corp.



## **GSN ELKO CHAPTER NEWS**



Thanks to everyone for attending the Elko Chapter Christmas party. We had a great turnout and a great speaker. \$5270.29 was raised for the Elko Chapter scholarships during the silent auction. Thank you to all who participated and donated items. Our January Meeting Details are:

When: Thursday, January 18, 2024

**Presenter:** GARRETT FREY, Hydrogeologist

<u>Title:</u> Playa Lake Lithium Brine Exploration Utilizing Long Screen Test Wells, Miniaturized Tools, and Downhole Tracers" (See abstract on page 3)

TIME: Drinks & Appetizers @ 6 pm, Talk @ 7 pm

Where: The Western Folklife Center, Elko, NV

**SPONSOR:** 



# STUDENTS! SAVE THE DATE for GSN's STUDENT POSTER COMPETITION!

FRIDAY, APRIL 19, 2024 at the Atlantis Casino, Reno

GSN invites any student majoring in the Earth Sciences to present a poster at the GSN's April dinner meeting. Cash prizes will be awarded for 1st, 2nd and 3rd place winners!

# The 2024 Nevada Geology Calendars are still available!

https://pubs.nbmg.unr.edu/Nevada-geologycalendar-2024-p/cal2024.htm

The price is \$12 each for 1-9 copies. Quantity discounts for 10 or more are available in the cart. These beautiful calendars look great on any office wall and would be a welcome gift for the New Year!





# Special thanks to our bar host for the evening:

# **Envirotech Drilling**

and our Live Auction Donor:

# **Neilsen Exploration**

We also greatly appreciate Doug Hensen and his crew at **Paragon Geochemical** for being the drop-off and storage location for all of our donations!

# And many thanks to all our generous donors:

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### NEWS FROM THE FOUNDATION

January, 2024 Bob Felder

The holiday party and fundraiser was a great success again this year and we'd like to thank all the people who made it possible. A big thank you to our bar sponsor, Envirotech Drilling for hosting a great evening and for their consistent generous support of our Society. An equally big thank you to Neilsen Exploration for their donation of three very nice mineral specimens and shotgun for the live auction. These items make up the backbone of our fundraising, and they too are very much appreciated for their consistent, generous support. We also thank the ~240 generous members and guests who attended the event, bought raffle tickets, bid on silent and live auction items and made the fundraiser a success. Thanks to them, we raised \$24,000 this year!! Lew Kleinhans gave a very interesting talk about Grand Canyon geology, rafting (and oysters!), and we thank him for taking time out of his busy schedule to come celebrate with the GSN crowd! We'd also like to thank the volunteers from the GSN Foundation and Executive Committee, and our general membership for all the behind the scenes work, planning and running around that it takes to pull off a successful event. Thank you to Doug Henson and his team at Paragon Geochemical for providing storage space for all of the donations prior to the event. And a special thank you to Laura Ruud, who is always the keystone of organization central to all GSN functions. Her dedication makes it all work!

# GSN FOUNDATION FINAL ACCOUNTING OF THE BRIAN MORRIS TRAPSHOOT FUNDRAISER HELD IN OCTOBER—THANK YOU TO EVERYONE WHO DONATED AND PARTICIPATED!





Timberline













Drilling









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\$14,362 RAISED IN 2023

# Mining Activity Update

NOVEMBER 2023, Mike Brady

LMBrady@aol.com

### **NEVADA**

Western Exploration Inc. announced that recent drill results at the Aura/Gravel Creek Project include 544.5-549.3 meters @ 4.55 gpt Au (WG456). *Press Release:* November 21

I-80 Gold Corp. announced that recent drill results at the Cove Project include 256.6-267.0 meters @ 28.0 gpt Au, 5.1 gpt Ag (iCHU23-23); 278.7-283.3 meters @ 18.0 gpt Au, 9.4 gpt Ag (iCHU23-24); 218.2-224.9 meters @ 7.8 gpt Au, 3.7 gpt Ag (iCHU23-25) and 257.0-266.2 meters @ 8.4 gpt Au, 2.7 gpt Ag (iCHU23-26). (resource = 1,007,000 tonnes @ 10.9 gpt Au, 20.1 gpt Ag indicated) *Press Release:* November 20

Lincoln Gold Mining Inc. announced that it transferred its purchase option of the Bell Mountain Property from Eros Resources Corp. to a new, wholly-owned subsidiary called Lincoln Resource Group Corp. (resource = 2,662,000 tonnes @ 0.61 gpt Au, 15.9 gpt Ag measured+indicated) *Press Release:* November 6

Nevada King Gold Corp. announced that recent drill results at the Atlanta Project include 73.2-126.5 meters @ 2.03 gpt Au, 67.6 gpt Ag (AT23NS57); 15.2-103.7 meters @ 2.52 gpt Au, 50.4 gpt Ag (AT23NS116); 89.9-132.6 meters @ 2.73 gpt Au, 80.2 gpt Ag (AT23NS130) and 122.0-202.7 meters @ 1.99 gpt Au, 118.5 gpt Ag (AT23NS133E). (resource = 11,000,000 tonnes @ 1.3 gpt Au measured+indicated) *Press Release*: November 14

Fremont Gold Ltd. announced that it sold its Nevada lithium assets to a private Australian group for \$100,000. *Press Release*: November 27

Hycroft Mining Holding Corp. announced that recent drill results at the Hycroft Project include 274.3-359.7 meters @ 0.23 gpt Au, 534.3 gpt Ag (H23R-5753); 224.0-355.1 meters @ 0.34 gpt Au, 3.1 gpt Ag (H23R-5760) and 144.8-297.7 meters @ 0.32 gpt Au, 142.6 gpt Ag (H23R-5771). (reserve =

669,680,000 tonnes @ 0.34 gpt Au, 14 gpt Ag proven+probable) *Press Release*: November 16

Gold Springs Resource Corp. announced that recent drill results at the Gold Springs/Charlie Ross Project include 106.7-118.9 meters @ 2.83 gpt Au, 39.6 gpt Ag (CR22-14); 36.6-39.6 meters @ 0.84 gpt Au, 3.1 gpt Ag (CR22-15); 131.1-134.1 meters @ 1.14 gpt Au, 1.8 gpt Ag (CR22-16) and 88.4-99.1 meters @ 1.57 gpt Au, 19.8 gpt Ag (CR22-19). (resource @ Gold Springs = 50,555,000 tonnes @ 0.51 gpt Au measured+indicated) *Press Release:* October 30

Eminent Gold Corp. announced that it terminated its interest in the Weepah Property of Nevada Select Royalty Inc. (resource = 233,300 tonnes @ 1.43 gpt Au inferred) *Press Release*: November 14

Headwater Gold Inc. announced that recent drill results at the Spring Peak Project include 108.2-135.64 meters @ 0.95 gpt Au (SP23-17); 118.87-135.64 meters @ 0.46 gpt Au (SP23-18) and 272.16-284.53 meters @ 1.25 gpt Au (SP23-19). *Press Release:* October 31



# G.S.N. HOLIDAY PARTY PICTURES FROM **RENO, WINNEMUCCA AND ELKO, DECEMBER 2023!**





Lew Kleinhans, Reno speaker, Garrett Frey, January speaker, and Tony Gesualdo, GSN President-Reno







Winnemucca



### OTHER UPCOMING EVENTS

<u>January 8, 2024:</u> DREGS Meeting, Colorado School of Mines, Berthoud Hall, Room 108, Golden CO. Social at 5:30, Presentation at 6:30 p.m. Speaker: Carl Nelson, Title: "Geologic setting of the Pueblo Viejo Au-Ag-Cu-(Zn) Mining District, Dominican Republic—Links to a tholeitic volcanic dome field and VMS mineralization in a shallow marine setting." Zoom link—<a href="https://us06web.zoom.us/j/3688010347">http://www.dregs.org/.</a>
Meeting ID: 368 801 0347. <a href="https://www.dregs.org/">http://www.dregs.org/</a>.

<u>January 9, 2024:</u> Arizona Geological Society. Speaker: Jon Spencer. Title:: "Cenozoic Tectonic Extension in the Sonoran Desert Region and Reconstruction of the Initial Distribution of Porphyry Copper Deposits". Location: Hexagon Mining Division Office, 40 East Congress St, Suite 150, Tucson, AZ. Parking: On the street or parking garage (Old Pueblo Parking). Social Hour with Sandwiches from Beyond Bread (5:30-6:30 PM) Presentation (6:35 PM). For those planning to attend the event, please register by 6:00 PM on Sunday, January 7, 2024. For those unable to attend, here is an MS Teams URL for Remote Viewing: <a href="http://tinyurl.com/AGS-Jan9-JSpencer">http://tinyurl.com/AGS-Jan9-JSpencer</a>. Broadcast begins at 6:35 p.m. No registration or fee to attend remotely. AGS Website: <a href="https://www.arizonageologicalsoc.org/">https://www.arizonageologicalsoc.org/</a>

<u>January 22, 2024:</u> <u>SME Northern Nevada Chapter Meeting.</u> Circus Circus Mandalay Room, Reno, NV. Speaker to be announced. Sponsor: SWICK DRILLING. Email: <u>NNevSME@gmail.com</u>. email us about the details.

<u>January 29 - February 1, 2024:</u> NWRA 2024 Annual Conference WEEK. Held at the Tuscany Suites & Casino, Las Vegas, Nevada. Go to <a href="https://www.nvwra.org/2024-annual-conference-week">https://www.nvwra.org/2024-annual-conference-week</a> for conference information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at <a href="mailto:admin@nvwra.org">admin@nvwra.org</a>.

<u>January</u> 29-30, 2024: **NWRA** 2024 "Symposium. *Held* at the Tuscany Suites & Casino, Las Vegas, Nevada. Register by January 1, 2024, for early rates.

January 29, 2024: NWRA—Water Rights in Nevada

January 29, 2024: NWRA—Eldorado Canyon Mine Tour

January 29-30, 2024: NWRA—2024 NEPA Symposium

January 30, 2024: NWRA—Advanced Water Rights in Nevada

Go to <a href="https://www.nvwra.org/2024-annual-conference-week">https://www.nvwra.org/2024-annual-conference-week</a> for conference information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at <a href="mailto:admin@nvwra.org">admin@nvwra.org</a>.

### ROCK TALK

Hello GSN Members-

I am looking for historical information for the 16 to 1 mill in Silver Peak, Nevada. Specifically, I am looking to document all companies and individuals who ran ore or mineralized rock through the mill, either for production or for test work. Beside gold and silver, copper and other base metals were also produced. I have identified production numbers for base metals but no specific mine to credit them to.

I currently understand Sunshine Mining and Zephyr Minerals ran material through the mill from the 16 to 1 mine, Mineral Ridge mine, Weepah mine and Summit mine. I would like to identify any additional operators (production or testwork), especially those who ran copper or base metal rich ores through the mill. If anyone in the membership has additional information, or knows someone who may, please email me directly at ken@tinyminersmineralsexploration.com. Thank you.

Ken Coleman

### **GSN MEMBER OBITUARIES**

### **NEIL B. PRENN**



Neil had a spirit of adventure and optimism he followed throughout his life. He was one of the youngest 80 year-olds you'd ever meet. He never spoke a bad word about anyone and he always had a smile on his face. Friends describe Neil as generous, modest, soft-spoken, reserved, trustworthy, dependable, hard-working, confident and uncompromising in ethics. He could also be lovingly eccentric. He will be profoundly missed.

Neil passed away after a short battle with cancer on Nov. 14, 2023. He was born on Dec. 7, 1942 in Manhattan, New York but his family moved to the hills above Los Angeles when he was young. He developed his lifelong interests in the outdoors, natural resources, and minerals early in life and pursued those in a career as a mining engineer. Neil graduated from the Colorado School of Mines with an Engineer of Mines degree in 1967. His first employer was a large mining company based in Los Angeles. They had him evaluate projects in many locations, domestic and international. His experience at operating mines came in California, Nevada, Idaho, and Tucson where he worked at the Pima Copper Mine for 3 years. He spent the rest of his life in a career that took him to six continents working on countless projects and he thoroughly enjoyed every minute of it. His sense of adventure was put to good use traveling to remote and wild places.

Neil's interest in collecting mineral specimens was formed early and he pursued that eagerly as a lifelong student of mineralogy and an enthusiastic collector. Along with minerals he collected mining artifacts; cap tins, ore buckets and dynamite boxes. Living in Tucson afforded Neil many opportunities for mineral collecting at world-class localities. It was there he developed many friendships with like-minded serious collectors with whom he collected and collaborated until his last days. That also cemented his annual trek to Tucson for the world's largest gem and mineral show every February at which he entered competitive and educational displays until his last one in 2023.

Neil's career took him to Colorado and then Nevada where he managed a mine in the Big Smoky Valley, a remote spot he dearly loved. He met his future wife, Cami, while in Colorado and they married in 1982, first living in remote Nevada and eventually settling in Reno. Neil and Cami started Mine Development Associates (MDA), a mining engineering and geology consulting company, in 1987. MDA grew slowly and steadily, never intending to become a big company. They built a close-knit group of skilled professionals with intelligence and integrity who became a family. All made a positive mark on MDA. Projects spanned the globe across six continents for all sizes of companies, from the smallest of junior exploration companies to the largest mining companies. MDA was sold in 2019 with Neil and Cami staying for a transitional period.

Neil retired last year but kept an office at MDA and spent most days there until July when he was diagnosed. His last venture was researching all facets of the mineral quartz with the intention of writing a book. He was an avid racquetball player, switching to pickleball when gyms shut down and he developed solid friendships on the courts. He loved cribbage and played weekly with a local group. He also played poker monthly with a special group of colleagues. He had a passion for photography, his favorite subjects being sunsets, wildlife, flowers and birds. Neil and Cami loved to travel, Africa being one of their favorite destinations. Among their treasured trips were tulip time in Amsterdam, countless beach vacations with a close group of friends, and an epic trip to Alaska, crossing the distances in a small plane. Their next adventure was to have been Patagonia. The hole Neil is leaving behind is deep and he will be profoundly missed.

Appreciation goes to the Renown Oncology group, especially Dr. Thomas, Dr. Dieringer and nurse Kirsti O. The entire oncology staff showed us extreme kindness. Renown Hospice also gave great care and comfort in the final days. Numerous friends and family have shown us such love and kindness; a wonderful reminder to do likewise and pay it forward.

If you wish to make a donation, a scholarship in Mining Engineering has been set up at the Colorado School of Mines in Neil's name. (Colorado School of Mines Foundation, P.O. Box 912031, Denver, CO 80291-2031, Memo; in memory of Neil Prenn). Donations can also go to the Tonopah Historic Mining Park where he was on the Board of Directors and Neil's collection of Nevada mineral specimens resides. (<a href="TonopahMiningPark.com/general-donations">TonopahMiningPark.com/general-donations</a>) A memorial will be held at a later date.

The family invites you to share memories or condolences in Neil's Book of Memories at <a href="https://www.waltonsfuneralhomes.com">www.waltonsfuneralhomes.com</a>.

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For further details including feasibility studies, sampling results and UG maps contact: KIM ROBERTS (775) 741-1692 or

kim.roberts1949@yahoo.com.

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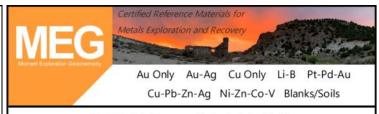


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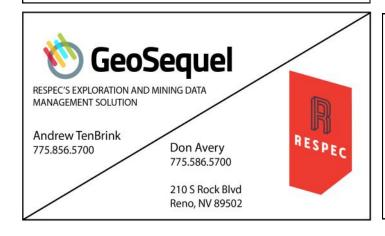
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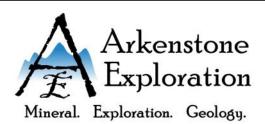
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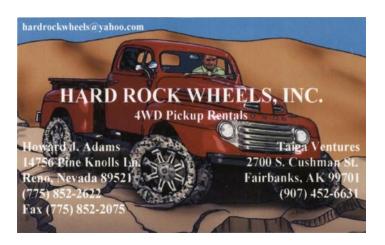
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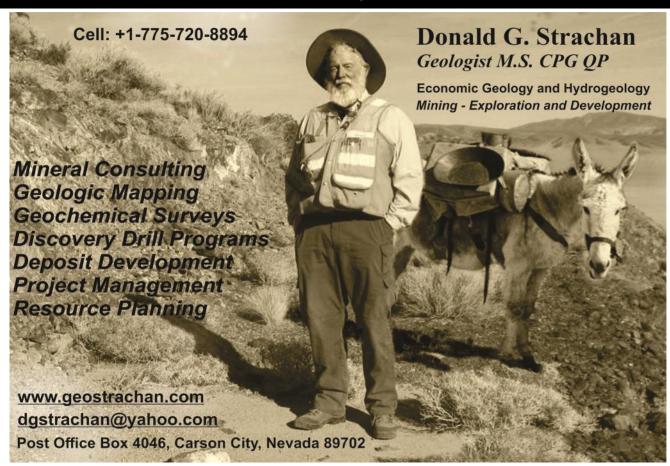


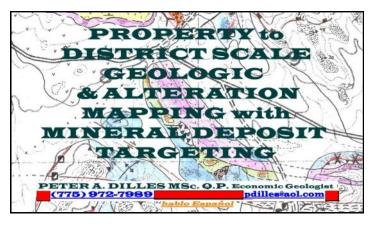
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### GSN TRAVELLING BACKPACK PICTURES (Submit your photo to gsn@gsnv.org!)

This month's backpack photo is a reprint in memory of our good friend Lane Griffin who passed away in 2023. He requested no service or obituary but we wanted those who knew him that he passed away. He was one of those good guys of GSN! And as far as I know he is the only GSN member who was a geologist and a dentist!

These photos were taken at the Rand Mine on their way to Mineral County, NV a few years ago!



