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 SPONSOR: 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 MONDAY, 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 19th 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 population. 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.
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.
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.

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)
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 project, 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.

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!
Gabe holds a M.S. in Geology from the University of Nevada Reno where he studied the relationship between known mineralization and the Butte Valley copper porphyry, which is currently being explored by Freeport McMoRan and moving forward will be further definition drilling at the Selena discovery as well as vectoring towards higher grade mineralization. Further investigation may define overprinting magmatism and/or mineralization but work to date has clearly defined a metal 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, 0.30 g/t Au and 0.14 g/t Ag (or 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 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.
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

**Title:** 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:**

![Just Refiners (USA) Inc.]

---

**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-geology-calendar-2024-p/cal2024.htm](https://pubs.nbmg.unr.edu/Nevada-geology-calendar-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:

Agnico-Eagle (USA) Ltd
AngloGold Ashanti NA
Boart Longyear - Al Frank
Alan & Chris Coyner
Allegiant Gold
ALS Minerals
American Assay Labs
Bill Howald
Blackrock Silver
Bob & Dessie Felder
Bob Kastelic
Bob Laidlaw
Broadbent & Associates
Brooke Miller Clarkson
C&M Consultants
Camille Prenn
Carol Wendt
Dan Kappes
Dane Johnson
Dave Fitch
Debbie & Eric Struhsacker
Debbie Russell
Don Avery
Earth Drilling Co. Ltd. - Garth Patterson

Envirotech Drilling
Fleetwood Koutz
Forrest Hopson
Fortitude Gold
G8 Strategies
Geotemps, Inc.
Great Basin Brewing Co.
Greg & Lacey French
Headwater Gold
Ioneer USA Corp.
J Newbury Consulting LLC
Jon & Beth Price
John Marma
Just Refiners USA, Inc.
Kappes, Cassidy & Assoc.
Ken Cunningham
Ken Raabe
Kinross Gold
Eric Ruud
Laura Ruud
Legend, Inc.
Major Drilling
Marilyn Miller
Mark Coolbaugh

Mark Stock
Mark Svoboda
Mary Stollenwerk
Nevada Select Royalty - Jerry Baughman
Nexus Environmental Consultants - Kristi Schaff
Neilsen Exploration
Opal Adams
Peg O'Malley & Don MacKerrow
Peter Vikre
Placer Gold Design
Rachel Micander
Rob Bastien
Ron & Connie Parratt
Roney Long
Ruth Buffa
Scott Werschky
Swick Drilling
Timberline Drilling
Tom & Ana John
Tom Callicrate & April Barber
Tom Gesick
TonaTec Exploration, LLC
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!
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: November 14

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

Raffle Tables—Reno

Silent Auction Tables—Reno

Winnemucca party-goers who stayed ‘til the bitter end w/Kris Alvarez, Pres (in blue hat)

Raffle Tables and party-goers at the Martin Hotel —Winnemucca

Justin Milliard, Past-Pres; Luke Schranz-Elko, and Alexandria Monroe, Treasurer—Elko

Party-goers at the Western Folklife Center—Elko

Speaker Pete Dilles in Elko

Brian & Heather Mikelson (Envirotech Drilling - Reno Sponsor and attending Winn.)
**OTHER UPCOMING EVENTS**


**January 9, 2024:** 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: http://tinyurl.com/AGS-Jan9-JSpencer. Broadcast begins at 6:35 p.m. No registration or fee to attend remotely. AGS Website: https://www.arizonageologicalsoc.org/

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

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


**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 https://www.nvwwa.org/2024-annual-conference-week for conference information and registration. For questions or more information call Tina Triplett at 775-473-5473 or e-mail NWRA at admin@nwwra.org.

---

**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
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 cibbage 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. (TonopahMiningPark.com/general-donations) 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 www.waltonsfuneralhomes.com.
PAID ADVERTISEMENTS

Just Refiners USA, Inc.  
www.justrefiners.com
350, 540 and 620 Greg St. – Sparks, Nevada 89431  
Telephone: (775) 331-1603  
Facsimile: (775) 331-1799

Since 1993

Now in Mexico  
and Canada too!

Contacts:
USA  
Carmen Arbizo: carmen.arbizo@justrefinersinc.com & Kim Walker: kim.walker@justrefinersinc.com

Mexico  
Marco Barragán: marco.barragan@justrefinersinc.com

Canada  
Logan Zimmerman: logan.zimmerman@justrefinersinc.com

Products JRI Processes
- Borax Slag
- Spent Carbon and Carbon Fines
- Graphite Crucibles
- Furnace Linings
- Baghouse Dust
- Mill Concentrates
- Mine Concentrates
- Gold and Silver Matte

Others

THE INDUSTRY STANDARD FOR CORE STORAGE

CORE BOXES
HQ | NQ | PQ
Setting the industry standard in core box solutions and reliable service.

CORE-BLOX
Custom wooden core markers.

NEW COREBOX COVERS
Protect your investment from the elements.  
Ask us about our custom corebox covers.

Coeur Products
LOCATIONS | SONORA MEXICO | IDAHO | NEVADA

COREBOX.COM
TO ORDER CALL: 208.762.1376
ALVARADO MINE FOR SALE

The Alvarado Mine located near Congress, AZ, was developed to the 1300’ level and produced 24,780 oz of gold between 1935 and 1942. Two other mines on geologic strike have been worked to 2200’ and 4,000’. Levels 1-8 at the Alvarado have probable reserves of 41,000 T @ 0.207 OPT, measured resource of 30,000 T at 0.242 OPT, and indicated resource of 63,700 T @ 0.264 OPT. Levels 9-13 have an inferred resource is 100,000 T @ 0.35 OPT. Surface minable reserves include dumps (22,000 T @ 0.1 OPT) and tailings (139,000 T @ 0.044 OPT).

For further details including feasibility studies, sampling results and UG maps contact:
KIM ROBERTS (775) 741-1692 or kim.roberts1949@yahoo.com.

***************

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

ALVARADO MINE FOR SALE

The Alvarado Mine located near Congress, AZ, was developed to the 1300’ level and produced 24,780 oz of gold between 1935 and 1942. Two other mines on geologic strike have been worked to 2200’ and 4,000’. Levels 1-8 at the Alvarado have probable reserves of 41,000 T @ 0.207 OPT, measured resource of 30,000 T at 0.242 OPT, and indicated resource of 63,700 T @ 0.264 OPT. Levels 9-13 have an inferred resource is 100,000 T @ 0.35 OPT. Surface minable reserves include dumps (22,000 T @ 0.1 OPT) and tailings (139,000 T @ 0.044 OPT).

For further details including feasibility studies, sampling results and UG maps contact:
KIM ROBERTS (775) 741-1692 or kim.roberts1949@yahoo.com.

***************

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

ALVARADO MINE FOR SALE

The Alvarado Mine located near Congress, AZ, was developed to the 1300’ level and produced 24,780 oz of gold between 1935 and 1942. Two other mines on geologic strike have been worked to 2200’ and 4,000’. Levels 1-8 at the Alvarado have probable reserves of 41,000 T @ 0.207 OPT, measured resource of 30,000 T at 0.242 OPT, and indicated resource of 63,700 T @ 0.264 OPT. Levels 9-13 have an inferred resource is 100,000 T @ 0.35 OPT. Surface minable reserves include dumps (22,000 T @ 0.1 OPT) and tailings (139,000 T @ 0.044 OPT).

For further details including feasibility studies, sampling results and UG maps contact:
KIM ROBERTS (775) 741-1692 or kim.roberts1949@yahoo.com.

***************

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

ALVARADO MINE FOR SALE

The Alvarado Mine located near Congress, AZ, was developed to the 1300’ level and produced 24,780 oz of gold between 1935 and 1942. Two other mines on geologic strike have been worked to 2200’ and 4,000’. Levels 1-8 at the Alvarado have probable reserves of 41,000 T @ 0.207 OPT, measured resource of 30,000 T at 0.242 OPT, and indicated resource of 63,700 T @ 0.264 OPT. Levels 9-13 have an inferred resource is 100,000 T @ 0.35 OPT. Surface minable reserves include dumps (22,000 T @ 0.1 OPT) and tailings (139,000 T @ 0.044 OPT).

For further details including feasibility studies, sampling results and UG maps contact:
KIM ROBERTS (775) 741-1692 or kim.roberts1949@yahoo.com.

***************

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

ALVARADO MINE FOR SALE

The Alvarado Mine located near Congress, AZ, was developed to the 1300’ level and produced 24,780 oz of gold between 1935 and 1942. Two other mines on geologic strike have been worked to 2200’ and 4,000’. Levels 1-8 at the Alvarado have probable reserves of 41,000 T @ 0.207 OPT, measured resource of 30,000 T at 0.242 OPT, and indicated resource of 63,700 T @ 0.264 OPT. Levels 9-13 have an inferred resource is 100,000 T @ 0.35 OPT. Surface minable reserves include dumps (22,000 T @ 0.1 OPT) and tailings (139,000 T @ 0.044 OPT).

For further details including feasibility studies, sampling results and UG maps contact:
KIM ROBERTS (775) 741-1692 or kim.roberts1949@yahoo.com.

***************

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

EXTRADOS EXPLORATION

Limited Liability Company
Est. 2016

info@extradosgold.com
www.extradosgeo.com

ALVARADO MINE FOR SALE

The Alvarado Mine located near Congress, AZ, was developed to the 1300’ level and produced 24,780 oz of gold between 1935 and 1942. Two other mines on geologic strike have been worked to 2200’ and 4,000’. Levels 1-8 at the Alvarado have probable reserves of 41,000 T @ 0.207 OPT, measured resource of 30,000 T at 0.242 OPT, and indicated resource of 63,700 T @ 0.264 OPT. Levels 9-13 have an inferred resource is 100,000 T @ 0.35 OPT. Surface minable reserves include dumps (22,000 T @ 0.1 OPT) and tailings (139,000 T @ 0.044 OPT).

For further details including feasibility studies, sampling results and UG maps contact:
KIM ROBERTS (775) 741-1692 or kim.roberts1949@yahoo.com.

***************
PAID ADVERTISEMENTS

Arkenstone Exploration
Mineral Exploration Geology
Mark Travis, CPG
mark.travis@arkenstoneexploration.com
www.mineralexplorationgeology.com

Hard Rock Wheels, Inc.
4WD Pickup Rentals
Hardy & Adams
14756 Pine Knolls Ln.
Reno, Nevada 89521
(775) 852-2022
Fax (775) 852-2075

Leading Provider of Analytical Geochemistry Services
via an integrated global network of laboratories delivering trusted results and exceptional client service.

Gold Royalty Corp.
NEVADA PROJECT GENERATION
Contact: Jerry Baughman
Mobile: 702-592-6992
Email: jbaughman@goldroyalty.com

Cash Reward for Historical Data
Looking for Phillips Uranium Geological Data for the Daisy Creek (aka Dacie Creek, Fish Creek) project located in the Fish Creek Range, Lander Co, Nevada.
Please contact Western Property Holdings LLC at southwestmines@proton.me or (480) 550-1854

GSN NEWSLETTER AD PRICES per Month

Business Card size (3 ½ X 2") = $50.00
Quarter Page (3 ½ X 4 ¾") = $150.00
Half Page (4 ¾ X 7 ½") = $300.00

Classifieds ads = $10.00 per line (approx. 9 words in a line).

10% Discount when you buy a full year (10 ads)!

Here is a link to order with a credit card via Square:
https://gsnv-509989.square.site/product/gsn-newsletter-advertisements/2?cs=true&cst=custom
Serving Mining in Nevada Since 1992

General Engineering Contractor
Drill Pads
Road Building
Reclamation
Earthwork

Office: 775-753-5832
Mobile: 775-934-1837
www.legarza.com

NV License #84449
Donald G. Strachan
Geologist M.S. CPG QP
Economic Geology and Hydrogeology
Mining - Exploration and Development

Mineral Consulting
Geologic Mapping
Geochemical Surveys
Discovery Drill Programs
Deposit Development
Project Management
Resource Planning

www.geostrachan.com
dgstrachan@yahoo.com
Post Office Box 4046, Carson City, Nevada 89702

Cell: +1-775-720-8894

Big Sky Geophysics
Clark Jorgensen, M.Sc.  Field Work
Geophysicist  Processing
P.O. Box 353  Interpretations
Bozeman, Montana 59771  Phone/Fax +1 (406) 587-6330
USA  Mobile +1 (406) 580-9718
clark@bigskygeo.com
For more details, my background, and case studies,
Visit my webpage at www.bigskygeo.com

Tom Carpenter
CONSULTING GEOPHYSICIST

John S. Oldow, Ph.D.
200 East Troxell Road
Oak Harbor, Washington 98277
360-875-0461 (land)
jsoldow@gmail.com
www.borealisgeosciences.com

TOM CARPENTER
CONSULTING GEOPHYSICIST

5445 Goldenrod Drive
Reno NV 89511
(0) 775.849.9707
(e) tcarpenter@gbis.com
JBA WORKS, INC.

Jo Beth Allen
Geologist

Professional Map & Data Graphics
GIS / CAD Drafting
Technical Presentations & Graphic Design

Phone: 775-303-6818  JoBethAllen@sbcglobal.net
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!