

GEOLOGICAL SOCIETY OF NEVADA NEWSLETTER

Geological Society of Nevada, 2175 Raggio Parkway, Room 107, Reno, NV 89512
(775) 323-3500 - Hours Tuesday -- Friday, 9 a.m. to 4 p.m. Monday by appointment.

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



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CALENDAR OF GSN EVENTS

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Sept. 11, 2019

WEDNESDAY

WINNEMUCCA CHAPTER MONTHLY MEETING (2nd Wednesdays)

The monthly meeting will be held at The Martin Hotel, 94 W. Railroad St., Winnemucca. **Speaker: Robin Zuza, Ormat.** Title: "What's Hot? - Geothermal Resources Around the Globe". **Food & Drinks Sponsored by: IDS, LAYNE & GRANITE!** For more information, please contact Robbie Anderson at robbie.agau@gmail.com. Details on page 6.

Sept. 12, 2019

THURSDAY

SO. NEVADA CHAPTER MONTHLY MEETING (1st Thursdays normally)

The monthly meeting will be held at the Las Vegas Natural History Museum, 900 N. Las Vegas Blvd. Pizza & Beer @ 5:30 p.m., Talk @ 6:15 p.m. **Speaker, Dr. Simon Jowitt, UNLV.** Title: "Recycling and secondary sources of the Rare Earth Elements; why recycling is not yet a solution to critical metals shortages". **Food & Drinks Sponsored by: NEED A SPONSOR!** For more info please contact Joshua Bonde at paleo@lvnhm.org. Details on page 6.

Sept. 14, 2019

SATURDAY

1st ANNUAL BRIAN MORRIS MEMORIAL TRAP SHOOT!!

2-man "Buddy Shoot", Humboldt Co. Shooting Range, Winnemucca, NV. \$140 per team includes prime rib dinner and 12 gauge ammunition. Register by emailing: briantrapshoot@hotmail.com. See flyer on page 5.

Sept. 19, 2019

THURSDAY

ELKO CHAPTER MONTHLY MEETING (3rd Thursdays)

The monthly meeting will be held at the Western Folklife Center, 501 Railroad St., Elko. Refreshments begin @ 6:00 p.m. Talk @ 7:00 p.m. **Speaker, Dean Heitt.** Title: **Before the Gold: the Early Mining History of the Carlin Trend 1874-1961.** **Food & Drinks Sponsored by REDCOR.** For more info please contact Diane Cheung-Harris at dianehcheung@gmail.com. Details on page 7.

Sept. 20, 2019

FRIDAY

GSN MEMBERSHIP MEETING (3rd Fridays) will be held at Great Basin's Taps & Tanks, 1155 S. Rock Blvd. Reno, NV. Drinks @ 6:00 pm, APPETIZERS @ 6:30 pm, Talk @ 7:15 pm. **Speaker, Lucia Patterson, NDOM.** **Topic: Navigating NDOM's & NBMG's new open-data site.** **Drinks Sponsored by BOART LONGYEAR.** Appetizers are \$15. **CLICK HERE TO PREPAY:** <https://www.gsnv.org/dinner-reservations/>. Details and abstract on pg. 3.

Oct. 11-13, 2019

FRI to SUN

GSN FALL 2019 FIELD TRIP to the Pan Mine, Gold Rock, and Mt. Hamilton! Click here to **REGISTER NOW:** <https://www.gsnv.org/field-trips/>. Details and check registration form on page 8.

SEPTEMBER SPONSOR



BOART LONGYEAR™



MESSAGE FROM YOUR PRESIDENT

Dennis Bryan, GSN President 2019-2020

Well, summer is winding down... it went so fast, as they all seem to do as I keep getting more senior. In fact, the world keeps passing me by in so many ways. Think of how "geology" used to look to us in the 1970's, for those of you from that era (and looking around at the attendance at current GSN meetings.... the graying hair crowd seem to be in the proportionate majority). A Brunton compass, tape and occasional alidade and plane table were the high-tech companions for field work. We were experts at reading topo maps and usually could figure out precisely where we were, within several hundred feet, that is, if there was even topo coverage of some of that ground out in the middle of Nevada. We had just learned about Plate Tectonics and I could stop contemplating how geosynclinal arcs formed. And of course, gold nuggets came from gold ledges. How else could they possibly form?

On August 9th we were educated (entertained) once again by that originator and namesake of the Summer Silver Series, Doug Silver. He re-emerged after a hiatus of nine years, and this time he brought his sidekick, assistant, Ruby, who regaled us with her take on the elemental facts of financing in the mining world. She also put in a plug for being a female millennial and assistant to Doug. Yes, the millennials will soon outnumber us Baby-Boomers. Doug shot in with his rendition of why the exploration industry's funding appears to be in the doldrums. Public money is not too excited about the mining industry at the moment and they tend to be going for emerging energy and cannabis opportunities. Well, that is my hazy recollection of the oratory. We wish to thank Dan Kappes for once again hosting us at his house and our other sponsors including Kappes, Cassidy and Associates, Mine Development Associates- A Division of RESPEC, CGS Mule, and MRC, Inc.

The Winnemucca and Elko GSN chapters had their annual summer barbeques on separate days, August 14th & 15th. It was reported that all had a great time. I wanted to be there but had a conflict, a Nevada Commission on Mineral Resources meeting on the 15th, (you would probably say the barbeque would have been more fun!).

What is upcoming for GSN members in September? Well, our first meeting of the year in Reno, on Friday, September 20th will showcase the Nevada Division of Minerals (NDOM) new open data site on locating land status issues and any mining claim data in the state, active or inactive, just by clicking a map. You will find this much more user friendly than wading through what is currently available elsewhere. Presentation will be by Lucia Patterson, GIS/Field Specialist/Geologist with NDOM. Her abstract is located elsewhere in this newsletter. This should be an essential tool and time-saver for the Nevada Exploration community, as well as others.

The annual GSN Fall Field Trip, scheduled for October 11– 14 is being organized by our new Vice President Mary Stollenwerk and will be visiting the Pan Mine and Mt. Hamilton out by Eureka. A description and sign-up are included elsewhere in this newsletter.

It is not too early to start thinking about Earth Science Week which is in October. As part of that week, the Nevada Bureau of Mines and Geology (NBMG) will again be leading a one-day field trip for the general public to sites of geologic interest on October 12. It really helps to have some geology professionals along on the trips to help answer people's questions. For more details go to the NBM&G website.

For those of you who may be interested, the Nevada Mineral Exploration Coalition (NMEC) is having their annual "Rendezvous" and camp out this year at a new location in Northern Nevada, at the Royal Peacock Opal Mines in north-western Humboldt County, the third weekend of September. If you have not been, it is a unique event with lots of camaraderie and fun. You may even find some precious opals! Go to the NMEC website for details.

Am looking forward to an eventful year and hope to see many of you at our upcoming meetings and other events. Feel free to bring us any ideas you may have to further complement our organization and we will dutifully file them in the "In" basket and perhaps ask you to be the chairman of any resulting endeavor.

Thanks, and looking forward to seeing you at the September meeting.

Dennis



**The G.S.N. wishes to thank
DAN KAPPES, KCA, RESPEC,
CGS MULE AND MRC INC.
for sponsoring the
SUMMER SILVER SERIES
on August 9th in Reno!**



GSN MONTHLY MEETING, SEPTEMBER 20, 2019

Speaker: Lucia Patterson, Nevada Division of Minerals

Topic: The New User-Friendly NDOM/NBMG Open Data Site

Date: Friday, September 20, 2019

Time: Drinks @ 6:00 pm, Appetizers @ 6:30 pm, Talk @ 7:15

Where: TAPS & TANKS, Reno, Nevada

ABSTRACT:

Performing land research prior to staking a claim has been challenging and indirect. This does not result from lack of data but rather from poor presentation of, challenging input parameters for, and unclear locations of the data. Open data sites have not only opened the door to a new public data resource, but have also created a nexus where many pieces of data can be placed in one location and formatted to meet the needs of, and assist people in, specific industries. The Nevada Division of Minerals open data site has evolved not only to be a source of data but also a utility for research which does not require any specialized software, additional data files, or knowledge of reports and query designs. The open data site was constructed to be a **USER-FRIENDLY** interface to assist prospectors, exploration entities, county recorders, government land managers, and the public, who need information on mining claims utilizing public-facing BLM databases.

Lucia M. Patterson

Nevada Division of Minerals

GIS/Field Specialist-Geologist

MEMBER RENEWALS DUE BY OCT. 1ST!

GSN members, this is a reminder that your yearly membership renewals are due during the month of September with **October 1st** as the deadline for 2020. Membership dues are \$50. Any Nevada student dues are \$10 (with Geotemps donating \$15 towards the normal \$25 dues of each Nevada student!). You can also become a lifetime member and never have to worry about dues renewals again for just \$1,250.

Our brand new GSN Website and Membership Directory is now LIVE!! We are working out the bugs still but do encourage you to log in and edit your own information for the Directory! The new bookstore is still being built but will be way easier to use, fully searchable, and you'll have the ability to download individual GSN Symposium papers for only \$10 each!

Please click the link to pay your dues online with a credit card: [2020 MEMBERSHIP RENEWAL](#). If paying by check you can print the form on page 10 and mail it in.

We know there will be a lot of questions about the new website so we will have the web designers answer any questions as quickly as possible!

“FACES OF GSN”

Will Westerfield

My path to becoming a geologist began back east, in New York, not too far from “the city”, as we refer to it. Like most of us, I enjoyed being outdoors growing up and had a fascination with landscapes, always wondering why the earth displayed itself the way it did. Growing up outside New York City and experiencing the congestion of one of the largest metropolitan areas in the world was integral in getting me to where I am today. I learned at an early age that I wanted more space, more freedom to explore and to do something different.

Luckily, I was able to attend college in Colorado, where the skiing was on another level compared to the ice I was used to back home. More importantly, once in school, I discovered that I could study the earth and learn the skills to answer the questions I always had while in the mountains or the desert. It could even be your major, how about that? The decision was easy. Geology is not something people from my hometown study and I got a lot of blank stares when answering someone who asked what my major was. I think I liked that. Studying geology was never a discipline or profession I had been aware until I got to Colorado.

Upon graduation, I secured myself a job in the oil industry working for a petroleum systems modeling software and consulting firm in Boulder. I spent three years there and while it was interesting and taught me a great deal, it always felt too abstract. A fellow geology graduate and ski buddy of mine had been working for a junior gold exploration company in Nevada; working several months at a time on drill programs. When the drilling stopped he would spend his off time skiing and pack-rafting in Montana until the next drill program started up. I thought to myself, wow, this seems right up my alley.

I wanted a job that was hands on and in the field, where drilling data and rocks were being analyzed in real-time and decisions were made quickly as new clues to the geology were being uncovered. I wanted to be a field geologist, not a desk geologist. My friend put me in touch with the exploration manager of the company he worked for. It would be three years, a life-changing flat tire near the Henry Mountains in Utah (which led to a not so brief stint living on Lake Tahoe) and a whole lot of persistence before I got the job I had dreamed about.

I ultimately landed in Beatty where I cut my teeth as an RC rig geologist. I thoroughly enjoyed being out on the rig everyday – seeing the chips as the rock is being drilled, getting dirty and trying to piece together the geology of the deposit being drilled. What a job! There is a lot that goes into an exploration project and I have been fortunate enough to get involved in the other aspects of running a project as well.

Most of us really enjoy what we do. It is not the easiest job for a variety of reasons, especially for those of you who have (or had) people waiting for you back home. If we didn't love it, we wouldn't do it. There are many layers to our profession that provide fulfillment and keep our interest. If gold is what your exploring for, I encourage you to learn about the history of gold and its role as money for the vast majority of human history. I guarantee, if you haven't already, that it will add an extra layer of meaning to an already thrilling profession. Exciting times are ahead, happy digging!



FIRST ANNUAL
BRIAN MORRIS MEMORIAL
TRAP SHOOT



TWO MAN "BUDDY SHOOT" FORMAT
WINNEMUCCA TRAP CLUB
10 AM REGISTRATION

**LIMITED SPOTS
AVAILABLE!**

SEPTEMBER
14th 2019

5 PM COCKTAILS

6 PM DINNER

COMSTOCK ROOM
WMCA CONVENTION CENTER

\$140 PER TEAM

INCLUDES TRAP SHOOT AND
PRIME RIB DINNER CATERED BY
THE MARTIN HOTEL

12 Ga. AMMUNITION PROVIDED

DINNER TICKETS \$40

Silent and live auction with all proceeds to support the
Brian Morris Scholarship Fund.

Email briantrapshoot@hotmail.com to preregister,
purchase tickets or for sponsorship information.

PLEASE REGISTER BY FRIDAY, SEPTEMBER 6th!

CLICK ON THIS LINK TO PAY ONLINE: <https://squareup.com/store/GSNV>

GSN WINNEMUCCA CHAPTER MEETING

WEDNESDAY, SEPTEMBER 11, 2019

Speaker: Robin Zuza, Ormat Technologies

Title: What's Hot? - Geothermal Resources Around the Globe

Location: The Martin Hotel, 94 Railroad St., Winnemucca, Nevada

Time: Drinks at 6:00 p.m., Appetizers at 6:30 p.m., Talk at 7:00 p.m.

Abstract: From the sedimentary basin of the Salton Trough, CA to the active volcanic arc of the Philippine Islands and within the thickened crust of the Tibetan Plateau, China, geothermal power generation can be found in a variety of geologic settings. Robin Zuza, a geologist with Ormat Technologies, will provide a snapshot of the geothermal industry today and showcase the spectrum of geothermal systems around the world and their conceptual models. Ormat, headquartered in Reno, Nevada, leads the global geothermal sector: exploring, designing, developing, building, owning and operating geothermal power plants around the world.

Food and Drinks Sponsored by:



GSN SOUTHERN NEVADA CHAPTER MEETING

THURSDAY, SEPTEMBER 12, 2019

Speaker: Dr. Simon Jowitt, UNLV Professor

Title: "Recycling and secondary sources of the Rare Earth Elements; why recycling is not yet a solution to critical metals shortages"

Location: Las Vegas Natural History Museum
900 No. Las Vegas Blvd., Las Vegas, NV

Time: Pizza & Beer at 5:30 p.m., Talk at 6:15 p.m.

Food and Drinks Sponsored by: **Sponsor needed!**

Please contact Josh Bonde at paleo@lvnhm.org to sponsor.

GSN ELKO CHAPTER MEETING

THURSDAY, SEPTEMBER 19, 2019

Speaker: Dean G. Heitt, Geologist and Author

Title: “Before the Gold: the Early Mining History of the Carlin Trend 1874-1961”

Location: Western Folklife Center, 501 Railroad St., Elko, NV

Time: Drinks at 6:00 p.m., Appetizers at 6:30 p.m., Talk at 7:00 p.m.

Food and Drinks Sponsored by:



ABSTRACT:

Before the Gold: the Early Mining History of the Carlin Trend 1874-1961 Dean G. Heitt

Before the Carlin Trend was known as one of the largest gold producing camps in the world, the area was made up of several smaller historic mining districts. The first recorded claim, The Blue Wing, was staked in 1874 approximately 1.5 miles east of the Carlin Mine. The book ***Before the Gold*** details the early prospects, mines and people that were active in the area prior to discovery of the Carlin mine by Newmont Mining in 1962.

The Richmond District, in and around the Cretaceous age Richmond Stock, was the first to be prospected in 1877. Prospects were generally for silver, lead, and minor zinc, but had little reported production. Several shallow shafts were dug but no production is reported. The early 1900s saw renewed interest in the district.

The Schroeder district was established in 1883 also exploiting primarily silver-lead-zinc mantos and a few copper deposits. The district was renamed the Maggie Creek district in 1905 with a focus on the Copper King deposit. The first gold deposit would not be found until the 1930s. The jasperoid containing the gold would become the discovery for the Gold Quarry deposit which would also be the first deposit on the trend to have confirmed microscopic gold. The district produced copper, silver, lead, zinc, barite and minor gold.

In 1907 the discovery of placer gold by Joe Lynn kicked off the largest rush to the area. Placer gold was primarily mined from Lynn and Sheep Creeks with lesser production from Simon and Rodeo Creeks. As miners fanned out through the Lynn District, as it was to be named, they quickly discovered the source of the placers for Lynn and Sheep creek and established the Big Six Mine. The Big Six would become the largest underground mine in the area and would produce gold until at least the early 1940's. Additionally the district would produce silver, lead, zinc, copper, barite and world class turquoise from the Number 8 mine. The Blue Star mine, on the site of the Number 8 mine, would produce 800 ounces of gold in 1959 and 1960 from a Carlin Type deposit by Bob Morris and his partners. It was Morris who enticed Newmont to look over the deposit and eventually led to the discovery of the Carlin Mine in 1962.

The Bootstrap district lies at the north end of the main portion of the Carlin Trend. Originally prospected for Antimony in 1914 it was restaked in 1949 as a possible gold mine. Between 1956 and 1959 Bootstrap produced 7,104 ounces of gold from several small open pits. This was the first mine in the area to use cyanide leaching to recover the gold and the first open pit to produce from a Carlin Type deposit on the Carlin Trend. Marion Fischer and his partners helped put the area on the mining map.

Between 1874 and 1961 total production for all the districts was 18,581 ounces of gold, 12,928 ounces of silver, 135,481 pounds of lead 10,145 pounds of zinc and 874,242 pounds of copper. Unknown quantities of barite and antimony were also produced. Turquoise production is estimated at \$1.4M.

Gold Mineralization Crowded Along the Loneliest Highway in America: Visits to the Pan Mine, Gold Rock, Mt. Hamilton and The Ruby Hill Overlook

Mary Stollenwerk, GSN VP & Field Trip Organizer

In this compact area along Highway 50 hosts a multitude of deposits in varying stages of development. The vans will leave Friday at noon, traveling to Eureka Nevada. Saturday, we will visit the Pan Mine as well as the Gold Rock site (AKA Easy Junior) with Paul Noland and his team at Fiore Gold. The Pan mine has been in production only since October, 2017, so it is one of Nevada's newest producers. We will also get to see the rocks and core of their expansion to Gold Rock where they are currently drilling in advance of a PEA (Preliminary Economic Assessment). On Sunday, Christine Hohl and Brian May of Elko Mining Group will give us a tour of the Mt. Hamilton area in the White Pine Range. Mt Hamilton is a past producer of gold and copper in skarn mineralization. As we make our way back to Reno, Elko Mining Group we will be able to give us an overview of the Ruby Hill Pit and geology. Our evening dinners will each be followed by presentations from our hosts about what we will see the next day.



Geological Society of Nevada (GSN) Fall 2019 Field Trip Friday, Saturday & Sunday, October 11-13, 2019



"Expressions of Shallow Carlin Systems"

Friday, October 11, 2019:
(TENTATIVE SCHEDULE)

1:00 p.m. - Bus departs from GSN office for Eureka, Nevada
6:00 p.m. - Drinks, Dinner and Speaker at Owl Club, Eureka, NV
Overnight at Sundown Lodge or Eureka Gold Country Inn

Saturday, October 12, 2019:
(TENTATIVE SCHEDULE)

6:30-7:30 a.m. - Breakfast Buffet at the Owl Club (included with registration)
8:00 a.m. - Bus departs Eureka, NV for Pan Mine
12:00 Noon - Sack Lunch provided
6:00 p.m. - Drinks, Dinner and Speaker at the Owl Club, Eureka, NV
Overnight at Sundown Lodge or Eureka Gold Country

Sunday, October 13, 2019:
(TENTATIVE SCHEDULE)

6:30-7:30 a.m. - Breakfast Buffet at the Owl Club (included with registration)
8:00 a.m. - Bus departs Eureka, NV for Mt. Hamilton
12:00 Noon - Sack Lunch provided
2:00 p.m. - Bus heads back to Reno

ALL PARTICIPANTS WILL NEED PPE - Steel-toed boots, hard hat, safety glasses, orange/lime safety vest.

THANK YOU TO OUR GENEROUS SPONSORS!



Name: _____

Company: _____

Address: _____

Cell # _____

Email: _____

Person to contact in case of Emergency: _____

Name: _____

Phone: _____

Lodging: ☐ Single ☐ Double ☐ No Room

Couple ☐

Roommate: _____

GSN MEMBER REGISTRATION COST:

\$340 - Single Room at Sundown Lodge (2 nights)
\$395 - Single Room at Gold Country Inn (2 nights)
\$285 - Double Room at Gold Country Inn (2 nights)
\$550 - Couples (1 bed at Gold Country Inn (2 nights)
\$155 - No Room needed in Eureka, NV
\$0 - GSN Student Member Helpers (limit 6)

*NON-MEMBER REGISTRATION COST:

Add \$50 to the rates above

*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 4, 2019
No refunds after Friday, October 4, 2019

Payment: ☐ Check # _____ ☐ Cash

We strongly encourage you to register online if using a credit card for payment. GSN is phasing out the manual machine!

Total amount included with this form: _____

[CLICK HERE TO REGISTER ONLINE NOW!](#)

Return 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

RECORD ATTENDANCE AT THE SUMMER SILVER SERIES!

Laura Ruud

The GSN Summer Silver Series enjoyed record attendance of ~180 people wanting to hear the Series namesake, Doug Silver's opinion on why no one is investing in mineral exploration. We thank Doug for making the trip to expound on his expert thoughts and introducing the GSN members to his protégé, Ruby Barickman who shared the results of their research on the topic. Ruby also gave her perspective on the topic from a millennial's point of view. As usual the food was fabulous, thanks to **Dan Kappes**, the beer was cold and flowing freely thanks to Mine Development Assoc. a Division of RESPEC, the wine was plentiful thanks to **CGS Mule** and the liquor was high quality thanks to **MRC, Inc.!** It was a beautiful evening for our outdoor event and we thank everyone who attended and brought side dishes too!



GSN CONSTITUTION PROPOSED REVISIONS AND VOTING TO APPROVE CHANGES:

Article V. Governance

Section 3. Executive Committee. The GSN Executive Committee shall be comprised of Officers that include a President, Vice-President, Secretary, Membership Chairperson, Treasurer, [Digital Media Chairperson](#), and Publication Chairperson. The Executive Committee shall have the authority to add additional [voting](#) or non-voting members to the Executive Committee. All members of the GSN Executive Committee shall be current GSN Members as defined in Article IV. The Executive Committee shall meet on a monthly basis at times and locations determined appropriate by the Executive Committee. A quorum for a meeting of the Executive Committee shall consist of no less than two-thirds of the Officers of the Executive Committee. The Officers of the Executive Committee, in consultation with the Board of Directors, may remove an Officer of the Executive Committee for actions inappropriate with the Objectives of the GSN. The By-Laws shall outline the procedures for consultation and such removal. The Executive Committee shall be responsible for the daily affairs of the GSN. The Executive Committee shall, as determined necessary, establish other committees comprised of members of the GSN. The Executive Committee shall: develop and present to the Board of Directors an annual operating plan and budget, including the budgets for the Adjunct Organizations, for the GSN; propose amendments to the GSN By-Laws to the Board of Directors, as determined necessary; manage the GSN operating funds and the other GSN assets; and conduct other activities necessary to fulfill the responsibility for management of the daily affairs of the GSN.

The requirements of each Officer of the Executive Committee are as follows:

Section 3.1. President. The President shall be responsible for directing the activities of the GSN and for developing the annual operating plan, chairing the meetings, which involves opening and closing the proceedings, making announcements, and arranging for and introducing the speaker. The President shall be responsible for the oversight of any hired support staff. The President shall be the chairperson of the Executive Committee.

Section 3.2. Vice President. The Vice President shall be responsible for chairing the meetings in the absence of the President. The Vice President shall be responsible for bringing the audio visual equipment to the meeting, setting it up, and operating it at the meeting, and storing it between meetings. The Vice President shall be responsible for organizing and conducting one or more field trips and work with the Publication Chairperson on the preparation of the accompanying field trip guidebooks.

Section 3.3. Secretary. The Secretary shall be responsible for the production and distribution of the newsletter, meeting announcements and any other required correspondence, maintaining the GSN's records, and recording minutes of Executive Committee meetings.

Section 3.4. Membership Chairperson. The Membership Chairperson shall be responsible for conducting membership drives, maintenance of a complete and correct membership list, preparation of the membership directory, preparation of members' and guests' name tags for meetings, arranging the place for meetings, selecting the dinner menu, taking reservations and notifying the meeting place of the number of people expected at each meeting.

Section 3.5. Treasurer. The Treasurer shall be responsible for collecting dues, recording expenses and income, keeping financial matters in order in both checking and savings accounts, paying all bills and taxes, filing all necessary legal and tax forms with state and federal agencies, and coordinating with Treasurers of chapters and committees.

Section 3.6. Publication Chairperson. The publication chairperson shall be responsible for maintaining the master copies of the GSN publications; maintaining an adequate inventory of publications; overseeing progress toward creation and completion of GSN publications; conducting an annual fiscal year-end inventory of the publications; and implementing advertising of the GSN publications to increase sales of those publications.

For the proposed amendments to the Constitution, a vote of the Membership is required after the proposed amendments have been published in the GSN Newsletter. The GSN Executive Committee and the Board of Directors recommend a **YES** vote for the revisions to the Constitution shown above. Please vote via email by September 13, 2019 @ gsn@gsnv.org.

With best regards,
Steve Weiss, Secretary



GEOLOGICAL SOCIETY OF NEVADA

2020

2175 Raggio Parkway, Room 107, Reno, NV 89512 USA

Phone (775) 323-3500 • Fax (775) 323-3599 • gsn@gsnv.org • www.gsnv.org

Offices are located at NBMG's Great Basin Science Sample & Records Library at The Desert Research Institute

Walk-in Office hours: Tuesday through Friday, 9:00 AM - 4:00 PM. Mondays - Call or email for appointment.

The Geological Society of Nevada (GSN) is a non-profit, educational organization whose principal objective is to promote the advancement of geological sciences, especially as they relate to Nevada. GSN supports the dissemination of information through meetings, field trips, publications and academic endeavors. Membership is open to geologists, geophysicists, geochemists, engineers, educators, students, prospectors or anyone else with an interest in the geological sciences and/or the goals of the GSN. The organization is based in Reno with additional Chapters in Elko, Las Vegas and Winnemucca.

The GSN Membership year begins September 1st. Annual dues are \$50.00, Students \$25.00 or \$1,250.00 for Lifetime Membership. Dues are due in September each year at the commencement of the fall meeting schedule. The GSN conducts a Field Trip in the Fall and one in the Spring of each year. Monthly meetings are held September through May in Reno, Elko, Winnemucca, and Las Vegas. If you would like to receive email announcements from one of the G.S.N. Chapters (Elko, Winnemucca or Southern Nevada) please check a box below.

Please help support the GSN Foundation and its scholarship funds when renewing if you can. Foundation dollars are used for the Kindergarten through 12th grade Field Trip Earth Science Grant Program, Nevada Mapping Grants, Field Camp Grants, and scholarships at the University of Nevada, Reno, and University of Nevada, Las Vegas.

MEMBERSHIP APPLICATION

☐ Renewal ☐ New

Date: _____

Name: _____ Position/Title: _____

☐ **CHECK HERE if everything is the same as before, except as indicated below.**

☐ Consultant ☐ Consulting Geologist Company Name: _____

☐ Current Full-Time Earth Science Student University: _____ Alma Mater: _____

Address: _____ City: _____ State/Province: _____ Zip Code: _____

E-Mail: _____ Country: _____

Email address is required for Emailed Newsletter

Office/Work #: _____ Website: _____

Fax #: _____

Cell Phone #: _____ Home Phone # (optional): _____

(Your home phone number will not be listed in the Directory)

- ☐ I would like to have an asterisk by my name in the directory indicating I am available for consulting.
- ☐ I have met the licensing requirements and want "QP" (Qualified Person) by my name in the directory.

I authorize GSN to send to me, via email: GSN event announcements, publications updates, employment opportunities, etc.

Yes ☐ No ☐

Optional Chapter Affiliation (to receive Chapter announcements directly and Chapter voting rights):

☐ Elko Chapter ☐ Southern Nevada Chapter ☐ Winnemucca Chapter

☐ \$50.00 - Regular Membership Dues 2020 - Email newsletter (International or Domestic)

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BABY ANNOUNCEMENTS

MACSEN DAVID FITHIAN

MAY 27, 2019

Macsen David Fithian was born to Matthew and Kathryn Fithian on May 27th, 2019 at 1:17 am in Reno, Nevada. Macsen was 8 pounds 0 ounces and 21 inches at birth.



ISABEL ELAINE LARSON

JULY 9, 2019

Isabel Elaine Larson was born to Kyle and Samantha Larson on July 9th, 2019 at 1am in Boise, Idaho. This is their second child with son Sydney Elsdon Larson (age 2) excited about being a big brother.



Activity Update

Mike Brady, JULY 2019

www.activityupdate.com

NEVADA

McEwen Mining Inc. announced that the Gold Bar Mine has now achieved commercial production status of 50,000 ounces/year of gold. (reserve = 11,900,000 tonnes @ 1.16 gpt Au proven+probable) *E/MJ*: June 2019

Fremont Gold Ltd. announced that it terminated its interest in the Gold Bar Property of Nevada Select Royalties Inc. (resource = 1,475,000 tonnes @ 2.57 gpt Au inferred) *Press Release*: July 23

Contact Gold Corp. announced that it acquired an option to earn a 100% interest in the Green Springs Property from Ely Gold Royalties Inc. for \$275,000 cash and 2,000,000 shares over 4 years. (resource = 754,500 tonnes @ 2.05 gpt Au inferred) *Press Release*: July 24

Fiore Gold Ltd. announced that it commissioned the primary crushing circuit at the Pan Mine. Previous ore to the leach pad was direct run-of-mine. (reserve = 16,748,000 tonnes @ 0.51 gpt Au proven+probable) *Press Release*: June 28

Contact Gold Corp. announced that recent drill results at the Pony Creek Project include 15.24-50.29 meters @ 0.43 gpt Au (PC19-01); 65.53-97.53 meters @ 0.80 gpt Au (PC19-02) and 64.01-76.2 meters @ 1.21 gpt Au (PC19-03). (resource = 29,463,000 tonnes @ 1.5 gpt Au inferred) *Press Release*: July 10

Allegiant Gold Ltd. announced that it terminated its management agreement with Cordilleran Exploration Co. due to the retirement of Andy Wallace. *Press Release*: July 3



Update on Editing Abstracts for 2020 GSN Symposium Proceedings and Program Fleetwood Koutz

The Technical and Editing Committees have received 146 invited and volunteered Draft Abstracts for Talks and Posters as of Aug. 25. Deadline is Aug. 31. All abstracts are out to 18 senior sub-editors for review/recommended changes. We have received no Draft Papers for the Proceedings yet; deadline is Nov 1. We have 47 promised Papers and expect about 60 total. To date we have 35 volunteer reviewers signed up and need additional volunteer reviewers so that we do not burden Paper reviewers with more than one or two manuscripts. We have 42 more names that were on the Reviewers lists in 2015 & 2010 and received a solicitation to volunteer last Spring, but did not respond. If you are interested in Reviewing a paper and are not signed up please E-Mail Fleetwood Koutz @ Fleetrk@aol.com.

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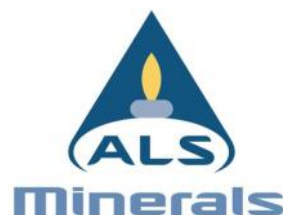
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ROCK TALK

South Africa's Largest Open-Pit Mine Reprinted from Nasa.gov

<https://earthobservatory.nasa.gov/images/145366/south-africas-largest-open-pit-mine?src=eoaiotd>

Plunging deep into the ground, the gaping hole of an open-pit mine is unmistakable from space. People have excavated such pits on every continent except Antarctica.

The mine pictured here has been growing vertically and horizontally near Phalaborwa, South Africa, for more than 50 years. The [Operational Land Imager](#) (OLI) on [Landsat 8](#) acquired this image of the Palabora mine on July 2, 2019. It is South Africa's largest open-pit mine, measuring almost 2 kilometers wide. It is about half the width of the world's largest open-pit mine, which is at [Bingham Canyon](#) in Utah.

Copper mining began at Palabora in 1965, and by 1967 the open-pit mine was fully operational. The hole reached 800 meters down into the Earth before the depletion of resources made it uneconomical to continue mining in the pit. Operations moved underground (below the pit) and mostly out of sight in the early 2000s. The new mining method, known as [block caving](#), involves extracting rock below an ore body, letting the ore break under its own weight, and then hauling the ore back to the surface.

Three years after the start of underground mining at Palabora, cracks grew in the wall of the pit until the northwest wall collapsed. The second image shows a detailed view of that landslide, which is still visible in 2019. The collapse damaged some infrastructure—roads, power and water lines, and a railway line—but critical mine infrastructure stayed intact and underground mining continues there today.

The site has become a case study in the challenges in transitioning from surface to underground mining. For example, [researchers started using satellite data](#) to improve the models that predict how mining underground will deform the surface.

People were mining South Africa's copper and iron resources long before the advent of open pit mines. Some archaeological estimates date mining artifacts back to at least 800 CE. In neighboring Kruger National Park, more than 250 archaeological sites show signs of human occupation back about 1 million years ago.

NASA Earth Observatory image by [Joshua Stevens](#) and Allison Nussbaum, using Landsat data from the [U.S. Geological Survey](#) and topographic data from the [Shuttle Radar Topography Mission](#) (SRTM). Story by [Kathryn Hansen](#).



OTHER UPCOMING EVENTS

5 September: the NPGS meeting will be held at the Tamarack Junction, 13101 S. Virginia St., Reno, NV. Dave Browning (TerraCore) will be speaking about "Hyperspectral Core Imaging: Applications in Unravelling Deposit and Reservoir Mineralogy". Click on this link for more info or to sign up for dinner: <https://npgs.123signup.com/event/details/rcypx?mid=5044444>.

10 September: Arizona Geological Society, Kent J. McGrew presents In-Situ Recovery Basics. Sheraton, 5151 E Grant Rd. (& Rosemont), Tucson AZ 85701. Please click on the link for more information and to RSVP: <https://www.arizonageologicalsociety.org/event-3438743>

15-18 September: On behalf of the AAPG, the NPGS would like to remind you, and encourage your attendance at the **AAPG Rocky Mountain Section Annual Meeting**. The meeting is being held in Cheyenne, Wyoming on September 15-18, 2019! Please visit the website: <https://rmsaapg2019.com/>

14-17 September AIPG 56th National Conference. Geology in the Green Mountains: Scenic Beauty and Economic Engine. Burlington, Vermont. Go to www.aipg.org for more information. <https://www.aegannualmeeting.org/>

17 September: 2019 NWRA Nevada Gold Mines Phoenix Mine Tour. Departure Location: Hilton Garden Inn, 3650 East Idaho Street, Elko, NV 89801. Go to www.nvwa.org/2019-september-newmont-mine-tour for more information or to register or call Tina Triplett at 775-473-5473 or nevadawaterresources@gmail.com.

20-22 September: The NMEC (Nevada Mineral Exploration Coalition) is hosting the 7th Annual Great Basin Rendezvous. The event will be held at the Royal Peacock Opal Mine in northern Nevada. (Camp Lamoille was burned in a wildfire this year). Contact Dave Shaddrick, dshaddrick@aol.com or Warren Thompson wthompson@frontiernet.net for more information. Register at <https://www.nvmec.org/2019-great-basin-rendezvous-royal-peacock-opal-mine>

23-26 September: 2019 NWRA Fall Week of Water Events. Location: 5650 Riggins Court, Reno, NV 89502. ~ Switch Facility Tour ~ Borehole Geophysical Logging Workshop ~ Direct Push Technology Workshop ~ Evaluating Calibration of Groundwater Models Workshop ~ Operational Value of a Well Workshop ~ Marlette Lake Water System Tour & Sparks Marina Tour. Go to www.nvwa.org/2019fallweekofwater for more information or to register or call Tina Triplett at 775-473-5473 or nevadawaterresources@gmail.com.

24-25 September: 2019 NWRA Fall Symposium. Location: 5650 Riggins Court, Reno, NV 89502. ~ For Fall Symposium Schedule or to register go to www.nvwa.org/2019-fall-symposium or call Tina Triplett at 775-473-5473 or nevadawaterresources@gmail.com.

7-10 October 2019 Society of Economic Geologists (SEG/Chile Explore Group) 2019 Conference: South American Metallogeny: Sierra to Craton; Santiago, Chile; Website: www.seg2019.org

14-25 MAY 2020 GEOLOGICAL SOCIETY OF NEVADA'S SYMPOSIUM 2020! Nugget Resort, Sparks/Reno Nevada. Technical Sessions, Field Trips, Short Courses, Exhibits, Luncheons, Parties! Visit the Website for more information: WWW.GSNSYMPOSIUM.ORG

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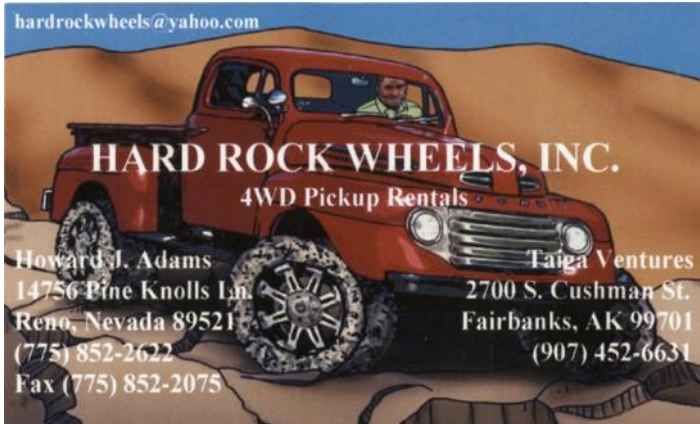



Burlington, Vermont ➡ September 14-17, 2019

Go to www.aipg.org and select events for more information!

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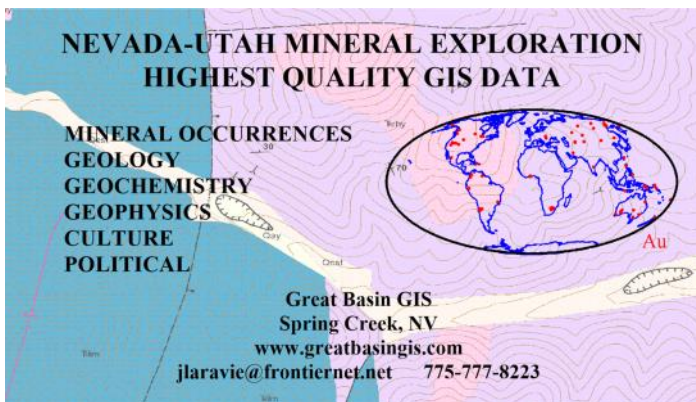
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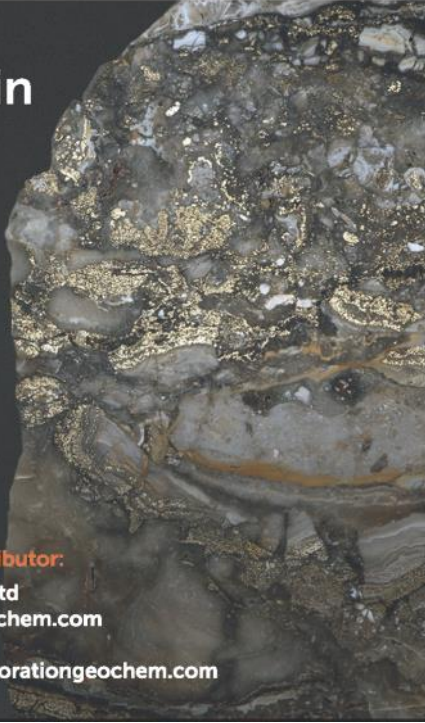
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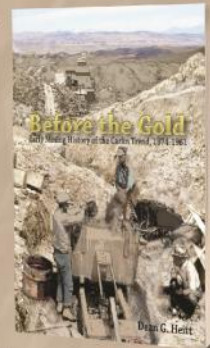
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BEFORE THE GOLD

Written by Dean G. Heitt of Elko, NV

Before the Gold details the early mining history of one of the most prolific gold mining districts on the planet the Carlin Trend. Located in northeastern Nevada, this region had a long history of exploration and production prior to the discovery of the large gold mines seen today. Heitt, a retired geologist with over 30 years of experience working on the Carlin Trend, tells the story of these early mines, the people involved and how these small mines helped lead to the discovery of this world class district.



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