



# GEOLOGICAL SOCIETY OF NEVADA NEWSLETTER

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APRIL 2023 ISSUE, Vol. 39, No. 4

Published monthly except June and July

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## APR. 12, 2023 WEDNESDAY

### GSN WINNEMUCCA CHAPTER

The GSN Winnemucca Chapter meeting will be held at the Martin Hotel, 94 W. Railroad St. **SPEAKER: Tony Gesualdo, Exploration Manager, Lahontan Gold Corp. TITLE: "The Santa Fe Mine: from Abandoned Mine to a Million-Ounce Resource"** **SPONSOR: NEILSEN EXPLORATION.** For more information, please contact Chapter Co-Presidents: Nancy Wolverson at [nancyjeanw@aol.com](mailto:nancyjeanw@aol.com) or Pat Donovan [Pat.Donovan@ssrmining.com](mailto:Pat.Donovan@ssrmining.com). Details on pg. 4.

## APR. 20, 2023 THURSDAY

### GSN ELKO CHAPTER

The GSN Elko Chapter will hold their meeting at the Western Folklife Center, 501 Railroad St. Elko. **SPEAKER: Scott Price. Title: "The Path from Geologic Concept toward Carlin-type Gold Discovery, Alpha Gold Project, Cortez Trend, Nevada".** **SPONSOR: WALSH RECLAMATION.** Please contact Elko President Justin Milliard: [justin.b.milliard@gmail.com](mailto:justin.b.milliard@gmail.com) for more information. Details on pg. 5&6.

## APR. 21, 2023 FRIDAY

### GSN REGULAR MEMBERSHIP MEETING

The GSN meeting will be held at the Hidden Valley Country Club. **SPEAKER: Caleb Stroup, Headwater Gold. TITLE: "Exploring Fully Preserved Low-Sulfidation Epithermal Systems: Examples from Headwater Gold's Spring Peak and Midas North Projects, Nevada.".** **SPONSOR: GEOTEMPS/GEOPROS.** Dinner cost is \$50. Please register for dinner online or RSVP at this link: [RSVP/DINNER](#) Details on pg. 3. **PLEASE RSVP BY SUNDAY, APRIL 16TH AT MIDNIGHT!**

## June 9-11, 2023 FRI-SUN

### GSN Spring 2023 Field Trip, based in Ely, Nevada

- \* June 9th - Travel to Ely, NV
- \* June 10th - Carlin-type and Porphyry mineralization with potential for CRD mineralization in the Cherry Creek and Butte Valley Districts in the Cherry Creek Range
- \* June 11th - CRD mineralization in the Mud Springs District in the Medicine Range (Cost & registration form coming later this month via email!)

## GSN APRIL 2023 RENO MEETING SPONSOR



**FROM THE PRESIDENT**  
**Kel Buchanan, GSN President 2022-2023**  
**APRIL 2023**



Our sponsors continue to be very generous, as they have been every year, in opening their wallets to host our cocktail hours. Every month during the GSN yearly cycle of our nine meeting dates, these generous companies and the managements that run them, contribute to each of the three meeting sites in Reno, Winnemucca and Elko. Our acknowledgments made at these meetings are all too brief, considering that many of these firms have been sponsors for twenty years or more. When you get the chance, please express your appreciation to them, whether it's when you are minding a drill rig, or taking samples to the lab.

Our April 21st meeting at Hidden Valley C.C. will feature Caleb Stroup of Headwater Gold, and I'm hoping we will have the kind of normal April weather that will allow us to open the French doors and enjoy some bar refreshments on the patio. While it's great to have a record snowpack, even snow bunnies are getting a little weary of week after week of this, and would appreciate some sunshine.

This last month has been tumultuous on a lot of fronts. With the recent SVB and Signature Bank failures, exploration companies are very concerned about availability of funds for planned programs, and potential tightening of lending requirements. On the other hand, some cracks may be appearing at the edges of Environmental, Societal and Governance (ESG) regulations, given that it took a veto to override both House and Senate votes. Natural resource companies have never been favorites of hedge funds who track ESG, and while resource companies are not necessarily categorized by those funds as pariahs, they rarely receive recommendations.

While the above comments address national issues, GSN members can continue to count on our great organization that has been put together, and continues to function, at a level that encourages volunteerism and collaboration. We continue to grow our GSN membership in both Nevada and other states. Your executive committee members are a dedicated group of folks and a pleasure to work with. We are always looking for new blood as well, so if you feel you have something to contribute, don't be shy.

Kel Buchanan

***GSN wishes to thank the Reno March meeting Sponsor!***



**FALCON  
DRILLING**

***AND the Winnemucca and Elko March meeting Sponsors!***



## **GSN MEETING in RENO—FRIDAY, APRIL 21, 2023**

**GUEST SPEAKER: Caleb Stroup, Headwater Gold**

**Title: “Exploring Fully Preserved Low-Sulfidation Epithermal Systems: Examples from Headwater Gold’s Spring Peak and Midas North Projects, Nevada.”**

**Sponsor: GEOTEMPS/GEOPROS**

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

**WHERE: Hidden Valley Country Club, 3575 E. Hidden Valley Dr., Reno**

**DINNER COST: \$50.00 [RSVP/DINNER](#).**

**(PLEASE RSVP BY SUNDAY, April 16 , 2023 at 11:00 PM!)**

### **ABSTRACT:**

Discovery rates in any given mining jurisdiction inevitably fall with time as the outcropping orebodies are found. In a jurisdiction such as Nevada, with well over 100 years of exploration and mining history, modern exploration efforts are increasingly applied toward targeting blind deposits. Low-sulfidation epithermal vein deposits are an excellent deposit type to target for blind discoveries in a mature jurisdiction. Nevada hosts many exceptional examples of high-grade gold and silver epithermal veins (e.g. Midas, Sleeper, Aurora). Low-sulfidation epithermal systems are among the best understood gold deposit types globally, with broadly predictable alteration and metal zonation patterns. Even though targets may be “blind” with respect to ore-grade precious metals, outcropping geology, alteration, geochemistry and geophysics can be combined to target with higher confidence than in many other deposit types. A particular feature of low-sulfidation systems is the development of a discrete boiling zone where high-grade mineralization typically occurs. This high-grade zone often begins approximately 150 meters below the paleosurface and can be several hundred meters in vertical extent. In many instances, historic exploration drilling was targeting near-surface bulk tonnage mineralization and did not adequately penetrate to the appropriate depths to reach high-grade targets in the boiling zone. Headwater Gold is currently exploring a large portfolio of fully preserved epithermal systems throughout the western USA, with an emphasis on Nevada. The Company is focused on large epithermal systems where the paleosurface remains at least partly intact and where potential remains for blind high-grade mineralization at depth. Headwater’s Spring Peak Project (Walker Lane) and Midas North Project (Northern Nevada Rift) are two exceptionally well-preserved systems where the Company is utilizing a multi-disciplinary approach to target and explore at depth. Recent drilling at Spring Peak has discovered blind high-grade gold mineralization in banded epithermal veins in an inferred boiling zone below a well-preserved sinter. An aggressive follow-up drill program is being planned to test the extent of high-grade mineralization. At Midas North a detailed geologic, geochemical, and geophysical targeting campaign has recently been completed that has outlined multiple high-priority targets to be tested in a maiden drill program in late spring 2023. Both projects are being advanced under earn-in agreements with Newcrest Mining. Further information about the Company and the agreements with Newcrest can be found at [www.headwatergold.com](http://www.headwatergold.com).

### **BIO**

**Caleb Stroup, President and CEO of Headwater Gold Inc.**

Caleb Stroup is a geologist with over 15 years of experience exploring for gold, base metals, and geothermal resources. Past roles include Senior Geologist for Kinross Gold corporation, where he focused on greenfields exploration in Nevada, as well as positions with several Junior explorers working on diverse resource projects from Central America to Alaska. Caleb co-founded Headwater Gold Inc. in 2018 and has since been focused on exploring for high-grade epithermal veins in Nevada, Idaho and eastern Oregon. In addition to Headwater, Caleb is a partner at NewQuest Capital and sits on the board of several private exploration companies active in North America.





## GSN WINNEMUCCA CHAPTER NEWS



Please join us for the  
**Winnemucca GSN April Meeting**

**Wednesday, April 12, 2023**

**The Martin, 94 W. Railroad St.**

**Food and Drinks at 6 pm; Talk at 7 pm**

**Speaker:** Tony Gesualdo, Exploration Manager, Lahontan Gold Corp.

**Talk:** *"The Santa Fe Mine: from Abandoned Mine to a Million-Ounce Resource"*

**FOOD AND BEER SPONSOR:**



For more information on Neilsen Exploration LLC contact Steve Neilsen,  
[neilsenexploration@gmail.com](mailto:neilsenexploration@gmail.com); 775-340-9191

**ABSTRACT:** *The Santa Fe Mine: from Abandoned Mine to a Million-Ounce Resource*

Lahontan Gold's Santa Fe Project is a historic Au-Ag mine in the Santa Fe mining district within the Walker Lane mineral belt, in the Gabbs Valley Range, Mineral County, Nevada. The property is adjacent to the operating Isabella-Pearl mine and includes both private and public lands. The project is over 19.1 km<sup>2</sup> and includes the historic Santa Fe mine site.

Corona Gold's Santa Fe mine was in production from 1988 to 1992 with leaching operations continuing until 1994. Mining was an open-pit, heap leach operation with ore produced from four deposits: Santa Fe, Slab (or Calvada West), Calvada East, and York. Total production is reported at 345,500 ounces of Au and 710,600 ounces Ag (Nevada Bureau of Mines and Geology, 1995).

Au-Ag mineralization on the Santa Fe project occurs along the east-west Calvada Fault and is concentrated at north-west- and north-striking fault intersections. Mineralization is mainly sediment-hosted in the Triassic Luning Formation and has not been observed in the overlying volcanic rocks. Silicification, brecciation, and decalcification are associated with Au-Ag mineralization, which overprints localized Cu skarn mineralization. While spatially and temporally connected, the four deposits, Santa Fe, Slab, Calvada East, and York, each have unique defining characteristics.

In 2020, Lahontan Gold was formed with the Santa Fe Project as its flagship asset. Initial data verification and building a drill hole database allowed completion of an Order of Magnitude Resource Estimate based on historic drilling. Lahontan completed surface work including mapping and sampling in preparation for the 2021 and 2022 drill programs. In 2021, Lahontan drilled 4,997 meters of reverse circulation (RC) and 4,413 meters of core near the Santa Fe and Slab-Calvada deposits. Follow up work in 2022 included further QAQC of the historic drill database and another 3,734 meters of RC drilling in the Slab-Calvada deposits. Drilling expanded the Santa Fe and Slab-Calvada deposits, with future drill plans for the York deposit and other earlier-stage targets in 2023.

Lahontan announced a maiden Mineral Resource Estimate in January 2023. The project-wide pit constrained Indicated Mineral Resources total 30.4 Mt grading 1.14 g/t gold equivalent ("Au Eq") for 1,112,000 contained Au Eq ounces. The overall Ag/Au ratio is approximately 8:1. The project-wide Inferred Mineral Resources add another 17 Mt grading 1.00 Au Eq for 544,000 contained Au Eq ounces. All resources are constrained by multiple factors including assumed recoveries and conceptual pit shells. Au Eq is calculated by dividing Ag g/t by 75, adjusting for historic lower recoveries for Ag, and adding to Au g/t. Please see Lahontan Gold Corp press release dated January 17, 2023, for further details.

**If you have any questions, contact Nancy Wolverson at [nancyjeanw@aol.com](mailto:nancyjeanw@aol.com) or 775-770-4615**





## GSN ELKO CHAPTER NEWS



The Elko GSN Chapter is excited to have Scott Price of Sitka Gold Corp speaking at our April meeting at the Western Folk Life Center on Thursday April 20<sup>th</sup>. Scott will be presenting on the Alpha project. The event is graciously hosted by Walsh Reclamation.

**Thursday, April 20, 2023**

**Western Folklife Center, 501 Railroad St., Elko, NV**

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

**FOOD & BEER SPONSOR:**



**Presenter: Scott Price**

**Title: "The Path from Geologic Concept toward Carlin-type Gold Discovery, Alpha Gold Project, Cortez Trend, Nevada"**

**Abstract:**

Early stage drilling at Alpha has identified a blind subsurface Carlin-type gold occurrence along a NNW trending anticline. The first ten drillholes on the still poorly defined fold trend have all intercepted broad intervals of gold and Carlin pathfinders in strong decalcification and silicification. Gold grade-thicknesses of 6 to 37 gram-meters in seven of ten holes support a throughgoing undrilled 2.5 km target zone along the fold that is open to the south. Gold and alteration follow calcareous siltstone, calc arenite, and fossiliferous debris flow strata immediately above the Devils Gate Limestone, dated as Late Devonian by Famennian *Angustidontis* arthropod appendages in closely overlying mudstone. These host strata are correlative with the Horse Canyon Formation in the Cortez district 40 km to the NNW. On surface, above the drill indicated gold occurrence, non-reactive shale and chert are commonly unaltered. Clay-limonite altered Eocene rhyolite dikes are barren at surface but control several drillhole gold intercepts and strong arsenic anomalies at depth. The dikes are part of an Eocene volcanic and shallow intrusive complex centered mostly east of the drilling area. Structure and bedding controlled limonite, hematite, clay, and scorodite locally occur in shale along the target trend. Limestone and calcareous sandstone at the top of the capping siliciclastic section commonly display pervasive decalcification and silicification but are geochemically weak. No prior drilling or historic prospecting is evident over the gold occurrence. West of Alpha, widespread surface alteration and geochemistry with historic prospecting and drilling is present where the east dipping host rock comes to surface. The McColley Canyon Fm, a second deeper host horizon, underlies the entire area and is an additional untested target at Alpha. The McColley Canyon Fm is the primary host at the McEwen Gold Bar Mine 15 km to the southwest and is time equivalent to the Wenban Fm Unit 5, the primary host at Goldrush.

Targeting at Alpha is now aimed at better defining the anticline geometry, testing the throughgoing target zone and identifying secondary structural mineralization controls. Surface exposures provide only limited information due to poorly exposed recessive stratigraphy, complex small-scale folding, and post-mineral tilting. Drilling has tested mostly the east limb of the anticline with grade increasing significantly up limb, producing a best intercept of 21.3m @ 1.21 g/t Au, and a peak grade of 4.62 g/t Au. Defining the fold crest/hinge and finding wider intervals +4 g/t Au is the ultimate objective. Secondary structural targets should also be important, including the zone of higher fracture intensity in the axial plane of the anticline, northerly dike-filled normal faults along the anticline trend, a northwest striking reverse fault, and altered cross-structures. At Frazier Creek, 5.5 km SSE along trend, strong alteration on NNW faults and deeper stratigraphic exposures may represent the same fold implying an 8 km total target length. The first hole at Frazier Creek intercepted a major pyritic dike-filled fault zone and failed to reach the host rock horizon. Stratigraphic data from the hole suggest a target depth of 450-550m.

(More Elko Chapter news on page 6)

## GSN ELKO CHAPTER VOTING & FIELD TRIP NEWS

**SPONSOR'S COMPANY INFO:** Walsh Reclamation—<http://www.walshreclamationinc.com/>

We provide the building of roads, sumps, drill pads, vac-truck services to support the drilling industry and reclamation services to mining, exploration and other companies in the Northern region of Nevada. We have been in business since 1993, and strive to be environmentally aware of the land and habitat. We have an impeccable safety record and highly enforce the importance of safety to our employees.

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The Elko Chapter is honored to have numerous people volunteer to be officers for the 2023-2024 year. Please submit your vote online. (Elko Chapter members only please.)

<https://www.surveymonkey.com/r/BCYHBSD>

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Open slots on the fall field trip a filling fast, reserve your seat now.  
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### **David Knight Memorial Field Trip** **"Geology of the Jarbidge District, Elko County, Nevada"** **w/ talk on Jarbidge Mine History and District Geology** **September 23 – 24, 2023**

**Cost/Donation:**     **\$300/individual, includes individual lodging at the Outdoor Inn or Barn**

**\$250/individual with roommate at the Outdoor Inn or Barn**

Lunches, snacks, Saturday dinner and Sunday breakfast included!

#### Itinerary:

Day 1: Elko to Jarbidge via Charleston. Multiple stops to see key outcrops and overviews. Prime rib dinner at the Outdoor Inn, to be followed by a talk on Jarbidge history and district geology.

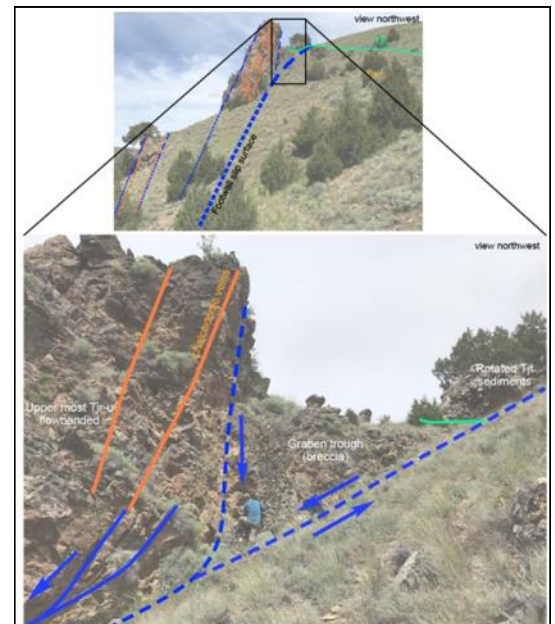
Day 2: Breakfast at the Outdoor Inn. Jarbidge to Rogerson and returning to Elko. Key stops in the Jack/Jenny Creek basin to see uppermost portions of the epithermal system and review the unique exhumation history of the deposit.

**All proceeds go to the David Knight  
Memorial Scholarship!**

**Please contact Elko Chapter President,  
Justin Milliard to reserve a spot:**

**Cell: 406-529-5787**

**Email: [justin.b.milliard@gmail.com](mailto:justin.b.milliard@gmail.com)**



## NEWS FROM THE FOUNDATION

By Cami Prenn, GSN Foundation Chair

Last year at this time we were anticipating the 8<sup>th</sup> Geological Society of Nevada's 2022 Symposium. The Symposia first started in 1987 and have continued with mostly volunteers putting on the whole event. Countless GSN members have worked countless hours on the organizing committees, making these events successful and they are highly regarded in the industry. Although it wasn't intended to be a money-making event when it started, due to generous sponsors and willing attendees, they have generated profits for GSN. You might wonder what happens with the profits generated. Most of it is invested to guarantee GSN's future and some of it is donated to the Foundation for its philanthropic programs. The Foundation received \$62,000 and we put all of it into the three endowed scholarship funds; the D.D. LaPointe Scholarship, the Great Basin Scholarship, and the Brian Morris Scholarship.

Some of the funds will be used for the scholarship awards for the 2023-2024 academic year and the remaining will be added to the invested endowed accounts for each scholarship. It is our mission to promote the advancement of the geological sciences, especially as they relate to Nevada, through our philanthropic programs. We hope you agree that the use of Symposium 2022 funds fulfills that mission.

We'll open the scholarship application process for the 2023-2024 academic year April 1 and will award those before the Fall 2023 semester. All applications are available on the GSN website (see page 8 also).

# GSN Scholarship Application Time!

## GSN Spring 2023 Field Trip

The GSN's Spring field trip will be going to eastern Nevada with overnight stays in Ely, Nevada. The dates are set for **June 9-11, 2023** so mark your calendars and watch for the registration form via email this month!

### **GSN Spring 2023 Field Trip—Tentative Itinerary!**

- \* **June 9th - Travel to Ely, NV**
- \* **June 10th - Carlin-type and Porphyry mineralization with potential for CRD mineralization in the Cherry Creek and Butte Valley Districts in the Cherry Creek Range**
- \* **June 11th - CRD mineralization in the Mud Springs District in the Medicine Range**

**KEEP AN EYE ON YOUR EMAIL FOR COST & REGISTRATION FORM SOON!**



## **Geological Society of Nevada Foundation**

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(775) 323-3500 • FAX (775) 323-3599

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# **SCHOLARSHIP OPPORTUNITIES FOR 2023**

## **1. The GSN-Great Basin Geology Scholarship**

- Open to full-time graduate students studying at an accredited university for a degree in the earth sciences.
- The candidate must be a member or student member in good standing of GSN ([www.gsnv.org](http://www.gsnv.org)).
- The candidate's research must be directed towards fundamental geologic problems in the Great Basin.
- The scholarship award money will be spent on research costs including field work or analytical work and can also be used towards travel to one meeting per year if the student is giving a paper or presenting a poster on the funded research.
- Application period open from March 1, 2023 through May 31, 2023 for scholarship(s) to be awarded prior to the beginning of Fall Semester, 2023.
- 2023 Scholarship(s) to be awarded: **Up to \$12,000 in scholarship funding\***.

## **2. The GSN-D.D. La Pointe Scholarship**

- Open to undergraduate and graduate students studying at the Mackay School of Earth Science and Engineering for a degree in earth sciences related to the minerals field.
- The candidate must be a member or student member in good standing of GSN ([www.gsnv.org](http://www.gsnv.org)).
- Major fields of study recognized for the scholarship are geological sciences, geological engineering, economic geology and other related majors.
- The main criterion for awarding the scholarship will be a demonstrated interest and commitment to the minerals industry.
- Application period open from March 1, 2023 through May 31, 2023 for scholarship(s) to be awarded prior to the beginning of Fall Semester, 2023.
- 2023 Scholarship(s) to be awarded: **Up to \$12,000 in scholarship funding\***.

## **3. The GSN-Brian Morris Scholarship**

- Open to full-time undergraduate and graduate students studying at an accredited university for a degree in the earth sciences and a demonstrated commitment to Nevada mineral deposit exploration or research.
- The candidate must be a member or student member in good standing of GSN ([www.gsnv.org](http://www.gsnv.org)).
- The scholarship award money will be spent on field work or analytical costs related to the student's degree program or research; however, consideration will also be given to students needing tuition support.
- Application period open from March 1, 2023 through May 31, 2023 for scholarship(s) to be awarded prior to the beginning of Fall Semester, 2023.
- 2023 Scholarship(s) to be awarded: **Up to \$4,000 in scholarship funding\***.

**Scholarship guidelines and application materials may be found at [www.gsnv.org](http://www.gsnv.org)  
From the GSN home page, click on GSN Foundation then Scholarship Opportunities**

\* The number of scholarships and amounts to be awarded will be determined following the committee's evaluation of the applicant pool.

The Geological Society of Nevada Foundation is a non-profit 501(c)(3) organization  
Tax ID #88-0447867



# “FACES OF GSN”

## Josh Miller, Reno, NV

I am new to Nevada as of summer 2021 and as it seems to be a common thread with many others, I too have worked in Alaska and in other industries before landing in my current role as an exploration geologist. I grew up on Lookout Mountain, Georgia, just south of the city of Chattanooga, Tennessee. If you've ever traveled through the southeastern US and saw big red barns with "See Rock City" on the roof, that's very close to where I lived. My family has been traced back several generations in that area and some worked coal mines throughout the southern Appalachians. In fact, there were several abandoned coal mines in the woods just a short hike from my childhood home and I used to dig through shale piles that had incredibly well-preserved seed-fern fossils. This had quite the impression on me as a kid and I've been fortunate to turn that curiosity into a career.

In early undergrad at the University of West Georgia, I was in an engineering program and was about to transfer to Georgia Tech to finish. My program advisor suggested I take a geology course to satisfy one of the requirements since "geology is so easy, it's basically a humanities course". I took the intro class and realized not only is it more interesting than differential calculus, the geology majors also had a fondness for plaid shirts and good beer. I found my people. I transferred to the University of Georgia Athens and graduated with my B.S. Geology in 2010. I was invited back the next year to be a field school T.A. where one of the students was none other than Tony Gesualdo. Small world!

I had applied and was accepted to attend graduate school at the University of Alaska Fairbanks the fall of 2010. It was important to me to see radically different geology and live somewhere new. Fairbanks was the absolute furthest I could be and still be in the US. It fit the bill. However, I was then working as an earth science tutor at the UGA Athletic Association, helping football players get through their junior year for the NFL draft, several going on to be millionaires and leaving me to briefly question my career choices. It was then that I was offered and accepted a job to become an exploration geologist for a Canadian junior Strongbow Exploration based in South Carolina. I was granted a gap year and deferred grad school until the following year.

For Strongbow, I collected rock, soil, and organic samples throughout the South and around the Haile Gold Mine, the largest gold mine on the East Coast. That experience was a crash course on the practical application of geochemistry and geophysics and learned many lessons in gold exploration that still serve me well today. However, when the time came for grad school in 2011, I left Georgia for what was "two years, three years tops". At UAF, I came with an interest primarily in sedimentology & stratigraphy and was ushered into a focus on petroleum systems. After a couple of months, my advisor notified me my thesis project ran out of funding and I should get creative quickly. Luckily, a request for a geology student to work wellsite in remote Alaska came by, so I adopted the project for my thesis research. I spent the summer and fall of 2012 sixty miles north of Nome, Alaska, working with the USGS Research Drilling Team and their [very] modified core rig to drill geothermal exploration targets for a proposed geothermal power plant at Pilgrim (cont. on pg. 10)



Photo: Obligatory "Alaskan co-pilot" selfie

Hot Springs. My thesis focused on characterizing the hot springs reservoir properties, delineating hydrothermal alteration through clay mineralogy, and building a comprehensive model for producing geothermal fluids from the upflow at depth. This work landed me an internship with BP Exploration Alaska, which led to a full-time offer with my master's degree in hand in 2013.



Photo: Learning the ropes on how to run wireline surveys in geothermal drillholes from the USGS team



Photo: Being thoroughly frozen while celebrating the holiday season in Prudhoe Bay by inspecting the “Christmas trees” aka wellheads with the Arctic Ocean behind me.

For the next seven years, I worked for BP in the Anchorage office. I spent the bulk of my time identifying oil & gas well targets in Prudhoe Bay, Alaska, (the largest conventional oil & gas reservoir in North America) where I learned to interpret well logs, perform seismic attribute analysis, fluid & reservoir modeling, subsurface mapping, and doing so with economic constraints in mind. I occasionally worked wellsite on the rotary & coil-tubing rigs in Prudhoe. In 2020, BP left the state and divested 100% of their property, operations, and staff. Being a tumultuous time, I enjoyed severance by biking or kayaking on nice days and focused on coding and other skill training while looking for new opportunities.

In early 2021, I was offered and accepted to be an exploration geologist for Nevada Exploration Inc. in Reno. Somehow, with the tantalizing pitch of “Hey, you know anything about Reno, Nevada?”, my better half & now fiancée, Mary, was willing to come with me from Anchorage, where she was born and raised. Turns out she is a big fan of 300+ sunny days a year. Working with Wade Hodges, I was inundated by the subject of Carlin Type Gold Deposits, including the geology, exploration techniques, and

the animated retelling of major discoveries and players in Nevada. I was primarily tasked with consolidating new and existing RC & core into a comprehensive logging scheme, leading to a more simplified conceptual model for their South Grass Valley prospect. At the end of 2022, I started my own contracting LLC (CMA Geoscience) and began working with Kinross Gold here in Reno where I’m continuing my real-world education in chasing gold deposits and learning from incredibly talented geologists. I look forward to meeting more of the Nevada geology community and thanks for reading!



My fiancée Mary and I, in Reno, NV

# Mining Activity Update

FEBRUARY 2023, Mike Brady

[LMBrady@aol.com](mailto:LMBrady@aol.com)

## NEVADA

Barrick Gold Corp.(61.5%) announced that open pit reserves at the Carlin Mine aggregate 118,700,000 tonnes @ 2.27 gpt Au proven+probable. (was 227,642,000 tonnes @ 2.23 gpt Au proven+probable) *Press Release: February 9*

Barrick Gold Corp.(61.5%) announced that underground reserves at the Carlin Mine aggregate 27,640,000 tonnes @ 8.79 gpt Au proven+probable. (was 50,406,000 tonnes @ 8.86 gpt Au proven+probable) *Press Release: February 9*

Barrick Gold Corp.(61.5%) announced that open pit reserves at the Cortez Mine aggregate 178,860,000 tonnes @ 0.90 gpt Au proven+probable. (was 102,439,000 tonnes @ 1.68 gpt Au proven+probable) *Press Release: February 9*

Barrick Gold Corp.(61.5%) announced that underground reserves at the Cortez Mine aggregate 42,280,000 tonnes @ 7.78 gpt Au proven+probable. (was 69,920,000 tonnes @ 7.79 gpt Au proven+probable) *Press Release: February 9*

Coeur Mining Inc. announced that reserves at the Rochester Mine aggregate 421,590,000 tonnes @ 0.10 gpt Au, 13.3 gpt Ag proven+probable. (was 417,655,000 tonnes @ 0.10 gpt Au, 13.6 gpt Ag proven+probable) *Press Release: February 22*

Orla Mining Ltd. announced that recent drill results at the South Railroad/Pinion Project include 109.7-163.0 meters @ 0.85 gpt Au (PR22-01); 80.8-143.8 meters @ 0.46 gpt Au (PR22-02) and 210.3-237.7 meters @ 1.10 gpt Au (PR22-07). (reserve = 36,041,000 tonnes @ 0.66 gpt Au proven+probable) *Press Release: February 8*

Anglo Gold Ashanti Ltd. announced that based on recent drill results at the Silicon Project, resources aggregate 121,560,000 tonnes @ 0.87 gpt Au indicated and 36,030,000 tonnes @ 0.70 gpt Au inferred. (was 120,440,000 tonnes @ 0.87 gpt Au inferred) *Press Release: February 23*

Viscount Mining Corp. announced that it acquired the Mary Anne patented claims at the Cherry Creek District from Southwest Land and Metals Corp. for undisclosed terms. *Press Release: February 13*

I-80 Gold Corp. announced that recent drill results at the Ruby Hill Project include 149.4-176.8 meters @ 0.8 gpt Au, 461 gpt Ag, 25.9% Pb, 7.7% Zn (iRH22-42); 199.6-214.9 meters @ 1.7 gpt Au, 421.3 gpt Ag, 19.8% Pb, 6.9% Zn (iRH22-52); 204.2-211.8 meters @ 2.53 gpt Au, 848 gpt Ag, 7.9% Pb, 0.2% Zn (iRH22-66) and 174.7-181.2 meters @ 7.2 gpt Au, 420.1 gpt Ag, 16.8% Pb, 2.8% Zn (iRH22-70). (resource = 2,818,000 tonnes @ 5.46 gpt Au, 9.5% Zn, 3.7% Pb, 188 gpt Ag inferred) *Press Release: February 23*

Ridgeline Minerals Corp. announced that recent drill results at the Swift Project include 565.1-572.1 meters @ 0.76 gpt Au (SW22-02); 598.3-649.4 meters @ 0.45 gpt Au (SW22-03) and 724.5-727.5 meters @ 2.27 gpt Au (SW22-04). *Press Release: February 16*

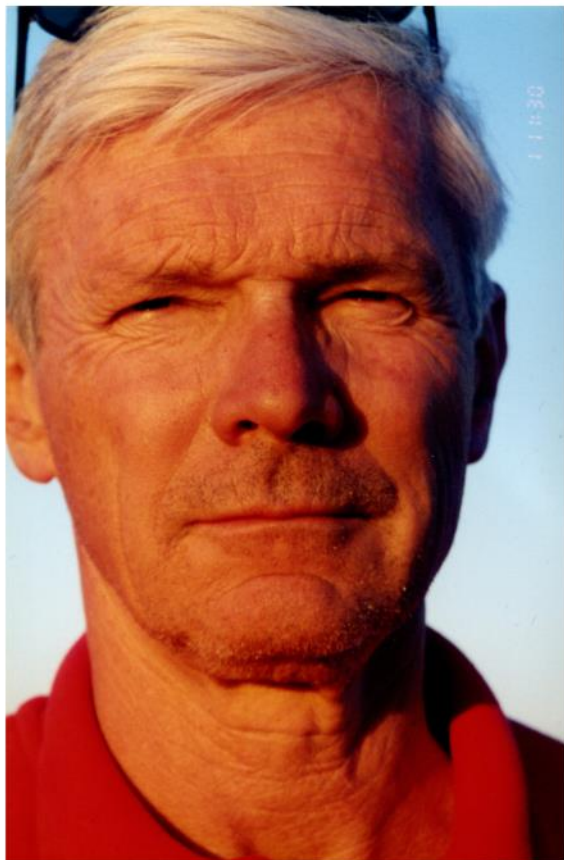
Fortitude Gold Corp. announced that recent drill results at the Golden Mile Project include 92.96-95.99 meters @ 0.64 gpt Au (GMRC-126); 6.1-19.82 meters @ 0.69 gpt Au (GMRC-128); 169.16-179.83 meters @ 2.06 gpt Au (GMRC-136) and 44.2-50.3 meters @ 1.56 gpt Au (GMRC-139). (resource = 890,700 tonnes @ 3.51 gpt Au inferred) *Press Release: February 22*

Fortitude Gold Corp. announced that recent drill results at the Isabella Pearl Project include 24.38-36.57 meters @ 1.29 gpt Au (IPRC-365); 79.29-118.87 meters @ 1.25 gpt Au (IPRC-366); 109.73-123.45 meters @ 1.19 gpt Au (IPRC-368) and 124.97-135.54 meters @ 1.58 gpt Au (IPRC-372). (reserve = 2,694,000 tonnes @ 2.22 gpt Au, 13 gpt Ag proven+probable) *Press Release: February 8*

Hycroft Mining Holding Corp. announced that recent drill results at the Hycroft Project include 221-249 meters @ 0.98 gpt Au (H22R-5679); 179.8-192.0 meters @ 0.38 gpt Au (H22R-5702); 221.0-242.3 meters @ 0.54 gpt Au (H22R-5703) and 93.0-121.9 meters @ 0.41 gpt Au (H22R-5739). (reserve = 669,680,000 tonnes @ 0.34 gpt Au, 14 gpt Ag proven+probable) *Press Release: February 7*

Integra Resources Corp. and Millennial Precious Metals Corp. announced that they would merge on a 0.23 share Integra/1.0 share Millennial exchange basis. (resource @ Mountain View = 23,200,000 tonnes @ 0.57 gpt Au inferred) *Press Release: February 27*





## IN LOVING MEMORY OF LEWIS B. GUSTAFSON

**9.4.1933—2.21.2023**

Longtime GSN member, Lew Gustafson, passed away on Tuesday, February 21st, 2023. He had a long storied career in Nevada before retiring in San Mateo, California in about 2016. In the words of Jonathan Price, NV State Geologist Emeritus, "He was a great geologist, valued mentor, and prized friend of many."

Lew's wife, Ulla and daughters, Katrin, Kirsten and Irene, held an online Memorial Service to remember and celebrate Lew's life on March 25th. There was a short program followed by the sharing of memories and stories about Lew.

If you would like to send condolences to the family, you can send emails to:

Irene Gustafson @ [ireneg@ucsc.edu](mailto:ireneg@ucsc.edu)

## OTHER UPCOMING EVENTS

**April 4, 2023: Arizona Geological Society** meets at Hexagon Mining Division Office. Speaker: Susan Lieb, Ph.D., U of Arizona Alfie Norville Gem & Mineral Museum, Title: "Temporal Evolution of the Rattlesnake Creek Terrane and Implication of Jurassic Construction of Crust in the Western United States". **Registration Required for those attending in-person:** <https://www.arizonageologicalsociety.org>. Click the link for virtual attendance also.

**April 6, 2023: NPGS Nevada Petroleum & Geothermal Society** meets on the 1st Thursday of each month at the Tamarack Junction, Reno, NV. Speaker: Johanna Ostrum - Transitional Energy. Title: Geothermal co-production in Blackburn oil field, Nevada. Please contact [Robert@Hot-Inc.net](mailto:Robert@Hot-Inc.net) if you'd like to attend. [NPGS Website](#)

**April 10, 2023: DREGS Denver Region Exploration Geologists Society**, CSM Berthoud Hall, 1516 Illinois St., Golden, CO. Speaker: Matt Fithian, Principal Geologist at SSR Mining Inc. Title: *"Early Paleozoic Host Rocks of the Battle Mountain District, NV: How Quartzite Can Muddy the Waters of Deposit Classification"*. \*Please note the temporary change of location: CSM Alderson Hall 330. Social hour begins at 6:00 pm. Talk @ 7:00 pm. Zoom link [here](#). For more information, please see our [Events](#) page

**April 10, 2023: SME Northern Nevada Chapter**. Circus Circus Mandalay Room, Reno, NV. Speaker: Shane Behanish, *Business Development Geologist, Micromine*. Title: It is Time to Modernize: The Importance of 3D Software for Drillhole Planning. Social 6 pm, Dinner 6:45 pm, Talk 7:30 pm. For more information visit their website: <https://nnevsmesquare.site/> or contact: [NnevSME@gmail.com](mailto:NnevSME@gmail.com)

**May 17-19, 2023: GSA 119th Annual Meeting of the Cordilleran Section** in Reno, NV. Early Register by April 10: [https://www.geosociety.org/GSA/Events/Section\\_Meetings/GSA/Sections/cd/2023mtg/home.aspx](https://www.geosociety.org/GSA/Events/Section_Meetings/GSA/Sections/cd/2023mtg/home.aspx)

### Nevada governor blasts Biden for locking up mineral-rich land: 'A historic mistake' NV Gov. Lombardo says Biden's action is 'a historic mistake that will cost Nevadans for generations to come'

Published March 21, 2023 6:32pm EDT (reprinted from online article)

By [Thomas Catenacci](#) | Fox News

Nevada Gov. Joe Lombardo heavily criticized President Biden for his designation of a new national monument in Nevada, arguing it would negatively impact residents for generations.

On Tuesday, Biden announced he would establish the so-called Avi Kwa Ame National Monument in southern Nevada, a region that includes Spirit Mountain and used as a [sacred space by Indigenous tribes](#), according to the White House. Lombardo, though, said he had contacted Biden about the 506,814-acre monument designation in his state, but never received a response.

"Since I took office, the Biden White House has not consulted with my administration about any of the details of the proposed Avi Kwa Ame national monument which, given the size of the proposal, seems badly out of step," Lombardo, who took office in January, said in a statement.

"Upon learning that the President was considering unilateral action, I reached out to the White House to raise several concerns, citing the potential for terminal disruption of rare earth mineral mining projects and long-planned, bipartisan economic development efforts," he continued. "While I'm still waiting for a response, I'm not surprised."

The newly-minted national monument, located near multiple national wilderness areas including the Mojave Desert, is home to both [significant mineral reserves](#) and land where energy developers have proposed large renewable energy projects. Nevada contains massive deposits of lithium, a key mineral for green energy technologies like electric vehicle batteries.

In 2015, Crescent Peak Renewables, a subsidiary of a Swedish energy firm, proposed a 500-megawatt [wind energy project](#) across more than 30,000 acres of federal lands in the area where Biden declared the monument. The Trump administration ultimately denied approving permits for the project, citing the 306 active mining claims that would be disturbed by its construction.

Then, last year, the company proposed a scaled-down version of the project across nearly 5,000 acres. However, the entire project is unlikely to move forward since it is entirely located in the Avi Kwa Ame National Monument.

"This kind of 'Washington Knows Best' policy might win plaudits from unaccountable special interests, but it's going to cost our state jobs and economic opportunity — all while making land more expensive and more difficult to develop for affordable housing and critical infrastructure projects," said Lombardo.

"The federal confiscation of 506,814 acres of Nevada land is a historic mistake that will cost Nevadans for generations to come."

In addition to establishing the Avi Kwa Ame National Monument, Biden also designated the Castner Range National Monument in western Texas near El Paso.

During remarks at the White House Conservation in Action Summit on Tuesday, Biden lauded both monuments.

"[Avi Kwa Ame National Monument is] one of our most beautiful landscapes that ties together one of the largest contiguous wildlife corridors in the United States: 500,000 acres," he said. "It's breathtaking. Breathtaking deserts, valleys, mountain ranges. Rich in biodiversity. Sacred lands that are central to the creation story of so many Tribes who have been here since time immemorial."

"[Castner Range is] also a place of incredible beauty," he added. "As winter gives way to spring, Mexican gold poppies are bursting into bloom. You see — I wish I — what I wanted to do was have all this in a video behind me here because when you see it, it's just breathtaking. Transforming desert plains and hills into a sea of vibrant yellow and oranges, framed with the rugged mountains and the blue sky."

*Fox News' Lee Ross contributed to this report*



The Castle Mountains within Avi Kwa Ame are pictured on Feb. 13 in Boulder City, Nevada. (L.E. Baskow/Las Vegas Review-Journal/Tribune News Service via Getty Images)



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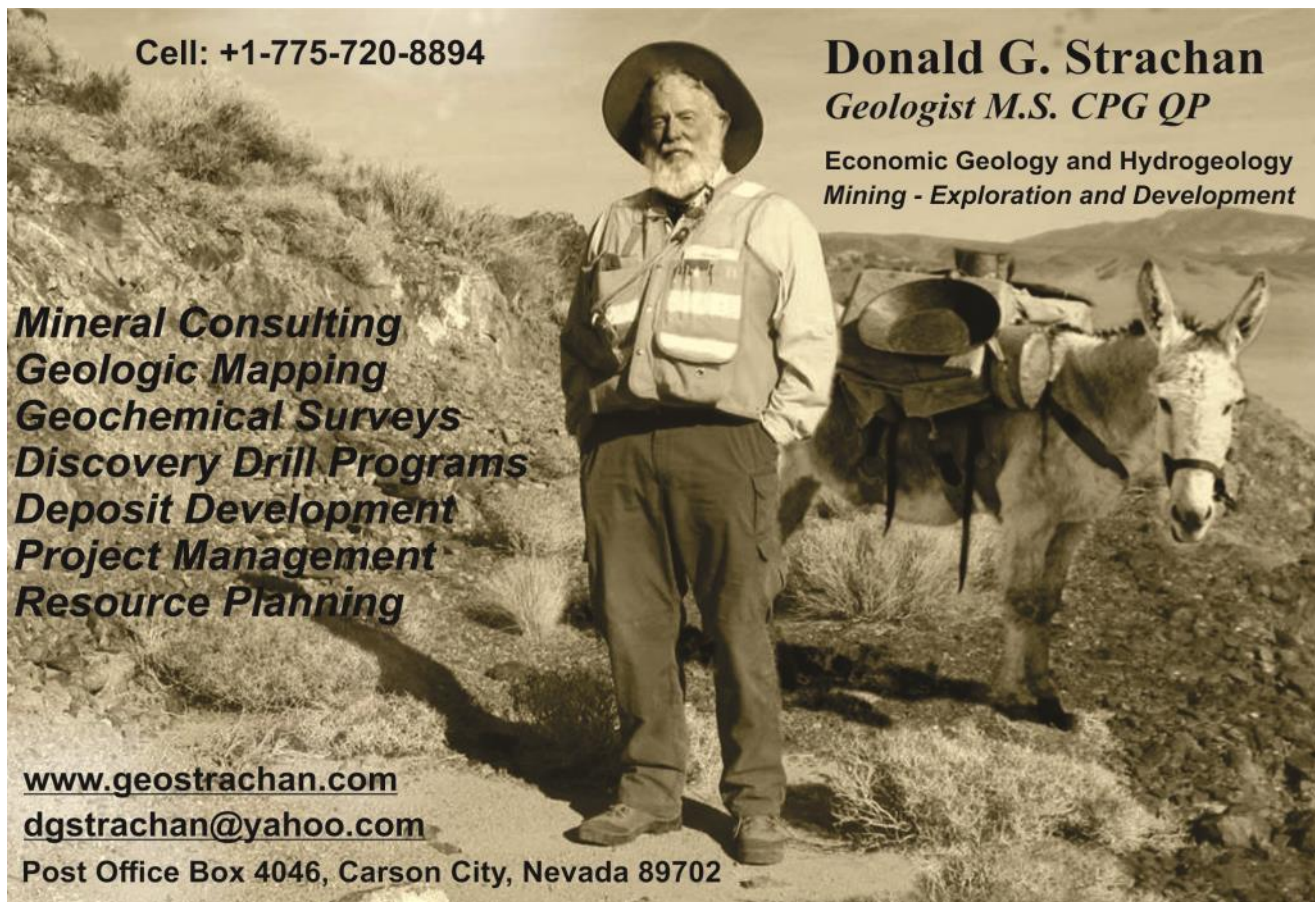
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Rocio Brambila at [brambila@arizona.edu](mailto:brambila@arizona.edu); Webpage: <https://lpeg.geo.arizona.edu/>

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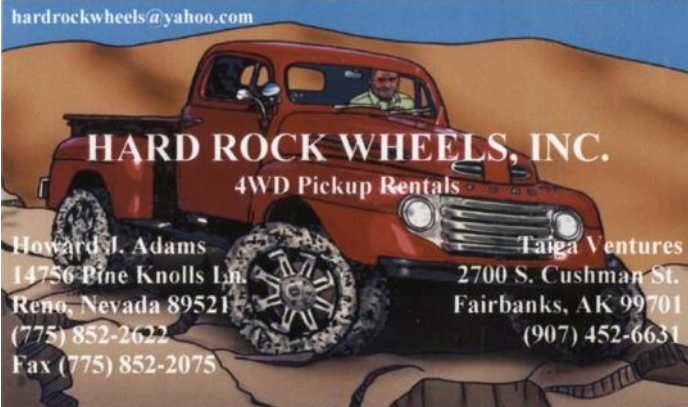
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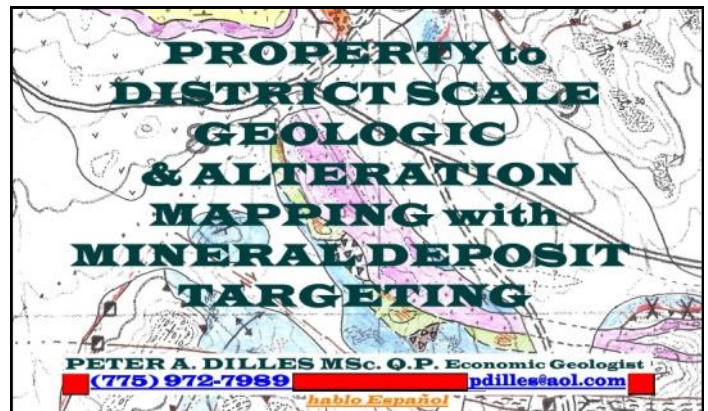
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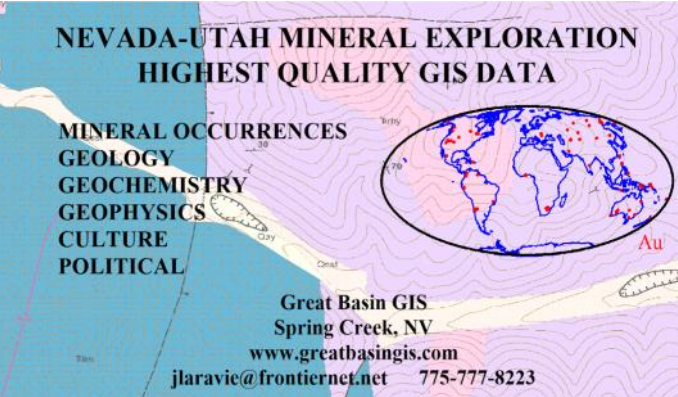
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**The GSN appreciates when members and companies offer to pick up expenses for Laura Ruud when she travels to PDAC like sharing a cab or paying for a meal. Thank you to:**

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