



# GEOLOGICAL SOCIETY OF NEVADA NEWSLETTER

Geological Society of Nevada, 2175 Raggio Parkway, Room 107, Reno, NV 89512  
(775) 323-3500 - Hours Tuesday -- Friday, 8:30 a.m. to 3 p.m. Monday by appointment.

Website: [www.gsnv.org](http://www.gsnv.org) • E-mail: [gsn@gsnv.org](mailto:gsn@gsnv.org)



April 2018, Vol. 34, No. 4

Published monthly except June and July

## PRESIDENT

Kelly Cluer  
Kinross Gold  
[Kelly.cluer@kinross.com](mailto:Kelly.cluer@kinross.com)

## VICE PRESIDENT

Richard Bedell  
Renaissance Gold  
[rbedell@rengold.com](mailto:rbedell@rengold.com)

## SECRETARY

Steven Weiss  
Consultant, Geologist  
[siraweiss@outlook.com](mailto:siraweiss@outlook.com)

## TREASURER

Bob Kastelic  
McEwen Mining  
[bob\\_kastelic@yahoo.com](mailto:bob_kastelic@yahoo.com)

## MEMBERSHIP CHAIR

Molly Hunsaker  
Hunsaker Inc.  
[mollymariehunsaker@gmail.com](mailto:mollymariehunsaker@gmail.com)

## PUBLICATION CHAIR

David Boden  
Truckee Meadows Community College  
[dboden@tmcc.edu](mailto:dboden@tmcc.edu)

## EXECUTIVE MANAGER

Laura Ruud  
Geological Society of Nevada  
[gsn@gsnv.org](mailto:gsn@gsnv.org)

## GSN BOARD OF DIRECTORS

### Chairman

John Watson

### Current GSN President:

Kelly Cluer

### Most Recent Past GSN President

Alan Coyner

### Elko Chapter President

Mark Travis

### So. Nevada Chapter President

Paul Dockweiler

### Winnemucca Chapter President

Matthew Fithian

### Class A, 2015-2018

Robert Thomas  
John Watson—CHAIR

### Class B, 2016-2019

David Caldwell  
Greg French

### Class C, 2017-2020

David Shaddrick  
Camille Prenn

## CALENDAR OF GSN EVENTS

April 5, 2018  
THURSDAY

### SO. NEVADA CHAPTER MEMBERSHIP MEETING (1st Thursdays)

The meeting will be held at the LV Natural History Museum, 900 N. Las Vegas Blvd. Pizza & beer at 5:30 pm, Talk at 6:00 pm. **Speaker: Mr. Nick Saines.** Title: "Evidence for Glaciation of the Spring Mountains, And It's Impact on the Geology of Tule Springs Fossil Beds National Monument". **Drinks & Food Sponsored: NEED A SPONSOR PLEASE!** Please contact Chapter President, Paul Dockweiler for information @ [PDockweiler@Geosyntec.com](mailto:PDockweiler@Geosyntec.com). Details and abstract on page 3.

April 11, 2018  
WEDNESDAY

### WINNEMUCCA CHAPTER MEMBERSHIP MEETING (2nd Wednesdays)

The meeting will be held at the Martin Hotel, 94 W. Railroad St., Winnemucca, NV. Refreshments/appetizers at 6 p.m. Talk at 7:00 pm. **Speaker: Dr. Thomas Benson, Lithium Americas Corp.** Title: "The McDermitt Caldera, Nevada: Geology and origin of the largest lithium deposit in the United States". **Sponsor: PITEAU ASSOCIATES.** For more information please contact Chapter President, Matt Fithian @ [Matthew.Fithian@ssrmining.com](mailto:Matthew.Fithian@ssrmining.com). Details & abstract on page 6.

April 19, 2018  
THURSDAY

### ELKO CHAPTER MEMBERSHIP MEETING (3rd Thursdays)

The monthly meeting will be held at the Western Folklife Center, 501 Railroad St., Elko, NV. Refreshments begin at 6 p.m. Talk begins at 7 p.m. **Speaker: Contact Gold Geologist, TBD.** Title: "Exploration update on the Pony Creek Project, Carlin Trend, NV". **Sponsor: TBD.** For more info please contact Mark Travis at: [mark.william.travis@gmail.com](mailto:mark.william.travis@gmail.com). Details & abstract on pg. 7.

April 20, 2018  
FRIDAY

### GSN REGULAR MEMBERSHIP MEETING (3rd Fridays)

The monthly meeting will be held at the Reno Elks Lodge, 597 Kumle Lane, Reno, Nevada. Drinks @ 6 p.m., Dinner @ 7 p.m., Talk at 7:45 p.m. **Speaker: Mick Carew.** Topic: "The current state of the junior exploration sector and capital markets". **Drinks Sponsored by: GEOTEMPS!** Cost for Dinner—\$25. GSN Students are free. Please make reservations for dinner with Laura Ruud, by emailing [gsn@gsnv.org](mailto:gsn@gsnv.org). 775-323-3500. Details on page 3.

June 8-10,  
2018

GSN Spring Field Trip to the Monte Cristos, Eastside and Gilbert areas. Registration form is now available on page 10 of this newsletter!



## G.S.N. APRIL SPONSOR!

**GEOPROS  
GEOTEMPS**

RECRUITING EXPERTS FOR INDUSTRY

**FROM THE PRESIDENT**

**J. Kelly Cluer, GSN President 2017-2018**

**APRIL 2018**



Dear GSN Members:

First, I want say a special THANK YOU to the speakers for February, Mark Coolbaugh, who stepped in at the last moment filling a cancelation, and providing an excellent overview of lithium markets and some of the local players, and George Salamis who gave an inspiring talk in March on the state of the (rather dire) junior mining sphere and some ideas on how we can help ourselves improve the situation.

George's comments about engaging millennials and even younger people and mentoring them to develop careers in our sector hit the mark with me. I know that without mentoring early in my career, things would likely have turned out much differently. Find a youngster that shows promise, take them under your wing, and MENTOR. You'll never regret it.

In the coming months you'll see some excellent talks, with Mick Carew lined up for April and Steve Enders for May. From these gentlemen we'll get some insight into markets, trends, and opportunities for innovation.

If we could see gold pricing heading for the \$1400/oz level, I think we'd see money coming back to greenfield exploration projects. But in the meantime it is indeed grim in that space, with far too many "innovative" financial products, and that is a fundamental problem for the resource pipeline. I believe the markets will eventually provide some corrective pressure, but what this will look like down at our level is a bit murky still.

Speaking of innovation in attracting investments, how is the bitcoin "revolution" doing now? It seems to be heading in the direction that many foresaw, as the realities unwind, though equally "innovative" financial devices are getting sucked into the vacuum. But will this be enough to spur gold prices upward in the maelstrom of market chaos? Stay tuned, as I think we'll find out before long.

A special thanks to George and Max and Integra Resources for donating a new compact sound system to GSN for use at the monthly meetings.

As you peruse this issue of the GSN Newsletter you'll note our new ballot is included with a newly nominated slate of officers for 2018-2019, and instructions for voting. PLEASE DO VOTE; YOUR VOTE STILL COUNTS AT GSN!

And if you keep reading the sign-up notice for the GSN Spring Field Trip will appear. As usual, we expect this trip to be a popular one and likely to fill up rapidly, so SIGN UP TODAY!

Happy hunting,  
J. Kelly Cluer

***The G.S.N. wishes to thank***

***EM STRATEGIES***

***For sponsoring the March 16th  
membership meeting in Reno!***



# **GSN MONTHLY MEETING—APRIL 20, 2018**

---

**SPEAKER: Mick Carew, Haywood Securities**

**TOPIC: The current state of the junior exploration sector and capital markets**

Social Hour begins @ 6:00 pm; Dinner @ 7:00 pm; Talk @ 7:45 pm

Location: Reno Elks Lodge, 597 Kumle Lane, Reno NV (across from the Convention Center)

**DINNER COST—\$25.00 per person.**

**Reservations due by 5:00 p.m. on WEDNESDAY, APRIL 18, 2018**

For dinner reservations, please e-mail [gsn@gsnv.org](mailto:gsn@gsnv.org) or call 775-323-3500

**(Please remember you will be invoiced \$25 if you do not cancel your reservation by Apr. 19th)**

---

## **GSN SOUTHERN NEVADA CHAPTER MEETING**

**THURSDAY, APRIL 5, 2018**

**Location: Las Vegas Natural History Museum  
900 North Las Vegas Blvd, Las Vegas, NV**

**Time: 5:30 p.m.—Pizza & Beer; 6:00 p.m.—Talk begins**

**Speaker: Marvin (Nick) Saines, Interpretive Naturalist-Geologist  
and Consulting Hydrogeologist, Las Vegas, Nevada**

**Title: Evidence for Glaciation of the Spring Mountains, And It's Impact  
on the Geology of Tule Springs Fossil Beds National Monument"**

**Sponsor: No Sponsor at Press Time**

### **ABSTRACT:**

In the early 90s I interpreted an unusual deposit at 8,300 ft in Kyle Canyon as a glacial moraine. UNLV Professor Richard Orndorff agreed and published on it. Respected glacial geomorphologist, Professor Jerry Osborn, University of Calgary, disagreed and interpreted it as a debris flow. The moraine interpretation was recently confirmed by Professor Lewis Owen, prominent Quaternary geologist. This year in Ron Blakey's new paleogeography book on the West he shows Mt. Charleston as glaciated. It is based on USGS reports by Pierce (2003) and Porter (1983). Physical evidence for the glaciation is presented, including a till-like deposit, striated stones, an over-deepened canyon, and a U-shape instead of V-shape in Kyle Canyon.

Rock flour or glacial milk is ground up rock draining from a melting glacier. Some of the silt deposits at Tule Springs Fossil Beds National Monument may be rock flour derived the glaciers that probably occurred in the Spring Mountains several times during the 2.6 million years of the Pleistocene Epoch.

# **“FACES OF GSN”**

## **BOB THOMAS, RENO, NEVADA**

My introduction to geology can best be described as serendipitous, or even better, dumb luck. In the summer of 1969 it seemed like geology was the last place I was headed. I had just graduated from college, never taken an earth science course, and was in a holding pattern working in the cemetery in my hometown in northeastern Massachusetts. I was killing time waiting to hear about my acceptance into Officer Candidate School with either the Navy or Coast Guard, which seemed like the safest branches considering the times. There was only one hitch - I received a notice from my local draft board classifying me as 1Y status, meaning that I was only eligible for military service in the event of a “national emergency or declared war”. Vietnam was neither. So, my brilliantly calculated strategy paid off – step 1-be a distance runner, step 2-enlarge my heart, step 3-try to join up, and step 4-get rejected. And to think people with less brilliant approaches were doing all sorts of things just to avoid getting drafted! Now there was only one problem – I had to figure out what to do since the military was not going to provide me the benefit of delaying that decision.

I was born in Nashville Tennessee, second of two kids, to a stay-at-home mom and an airline pilot dad. We eventually settled in Hamilton, MA, a small north shore Boston bedroom community. I had a pretty normal childhood, loved sports of all kinds, loved being outdoors, Boy Scouts, and all of that idyllic stuff depicted by Norman Rockwell. I was an average student, and was lucky enough to get into Bates College in Lewiston, Maine. I almost flunked out my freshman year, but eventually managed to survive. Now here I was, in 1970, just married to Allison, living in New York City, working in the insurance industry, hating every minute of it, and looking for some way out. Here’s where the serendipity/dumb luck starts. Allison and I decided to attend a college classmate’s wedding, and ran into another recently married Bates couple, Bruce and Alice Bouley. Many of you knew Bruce, a long-time exploration geologist, and Alice, a long-time (and current) publications editor at SEG. We all decided that a camping trip was in order, as Bruce was finishing up his field work in the New Hampshire White Mountains for his master’s degree at Wesleyan University. I tagged along as we went from outcrop to outcrop, asking stupid questions, not really knowing what I was looking at, but having a great informal teacher in Bruce as he explained the basics. I was asking myself - why had I not discovered this earlier? Hiking around in the woods, getting great exercise, utilizing my brain, trying to imagine the geological processes that led to the current distribution of the rocks, and as an added bonus, sitting around the campfire at night drinking beer! That probably sounds familiar to lots of GSN members.... So I was hooked, and will be forever grateful to Bruce for not only introducing me to geology but encouraging me all along the way. I had absolutely no idea at the time how I could parlay this new interest into an actual paying job. Details, right? Next, I enrolled in a couple of night courses at Hunter College in NYC, in part to confirm that this was not just a passing fancy. I then quit my day job (representing the first appearance of the “supporting spouse” concept) and started a full-time slate of geology courses. Field trips at Hunter were a little different than, say, a GSN field trip. Oftentimes we’d go down to lower Manhattan and look at building stones, maybe into the “wilderness” of Central Park, or, in major excursions, take a trek out to the Palisades Sill or the Delaware Water Gap. After Hunter, I was able to get into a “remedial” graduate program at Wesleyan, taking an extra year to complete, which I did in 1974. My first job was in the geotechnical group for an engineering firm headquartered in Boston that was evaluating and constructing nuclear power plants. I was very interested in getting into mineral exploration, however – the idea of a geologically-driven treasure hunt had a certain appeal. In 1976 I was able to hook on with Phelps Dodge Exploration East in North Carolina, where I was assigned a VMS project in the Slate Belt, living in Lexington. The main property was the Silver Hill Mine, a historic producer and site of a small but high grade Zn-Pb-Ag-Au resource, whose claim to fame was supplying the Confederacy with lead for bullets during the Civil War. I was a one-man show in this little outpost, and it was a great opportunity for exposure to a variety of activities, including core drilling, soil sampling, rock chip sampling, geological mapping, rudimentary resource and economic evaluation, land work, land negotiations, etc. Land was private, so the challenge was to complete land deals with the local landowners, which required convincing them that you weren’t trying to rip them off. That produced mixed results, with lots of skeptical reactions. On the economic side, it didn’t take a very sophisticated analysis to determine that the potential resource was way too small for Phelps Dodge.

The Slate Belt work paved the way for me to jump at the opportunity to transfer to PD’s Reno office in 1979. It was quite a culture shock for the family, with two preschoolers, coming from the east coast woods out to the desert. The landscape rapidly grew on us, however. An added benefit, in those pre-GPS days, was that you could actually locate yourself on a topo map out here. The PD Reno experience illustrated how far exploration thinking has evolved in the last 38 years. I remember my boss at PD telling me that “your job is to go find a Carlin-type deposit, and (cont. on page 5)



(B. Thomas, cont. from pg. 4)

here is where to look”, at which point he showed me the black and white preliminary Nevada geology map compiled by Stewart and Carlson and pointed to the places on the map he had colored that contained mapped Roberts Mountain Formation. Apparently no other unit needed to apply for gold host rock membership. He was an excellent geologist, though, and he was quickly adjusting to the fact that Carlin-type deposits occurred in host rocks covering a wide range of ages. It was all new to me though – a year earlier this young east coast geo had to ask what a Carlin-type deposit was. My Reno PD boss also imparted another observation that proved to be true: “Bob, if you stay here a year or two you’ll be hooked on Nevada”. How right he was, although it took less time than he predicted.

A year after I started work in Reno I began a sequence common to many folks in the mineral exploration business of my era, moving to companies that for one reason or other (mergers, acquisitions, going out of business, etc.) essentially ceased to exist, resulting in layoffs, and repeating that exercise multiple times. My particular sequence went as follows: Callahan Mining (1980-88), Meridian Gold (1988-90), and Lac Minerals (1990-94). My focus was Great Basin and California Mother Lode/foothills. Each one of these stops was fulfilling, and I was fortunate to be involved with some modest discoveries and resource definition programs. During this time I was able to work with some great people, several of whom continue to be friends. I finally grew weary of the rinse and repeat routine, and after Lac Minerals, I decided to give the consulting business a try. It was a breath of fresh air for me, and at the start allowed me to do more geology and field work than I had been doing in my preceding middle management roles. I was happy with that – being outdoors was one of the reasons that I got hooked on geology in the first place. Independent work has been somewhat of a feast or famine experience, but among other benefits it’s gotten me out of the country a bit to broaden my horizons, put (some) food on the table, and it’s a move I have not regretted for one minute.

The last 10 years or so I’ve been involved with Carlin Gold Corp., a Canadian-based junior explorer with properties in Nevada and Yukon. Lots of ups and downs working with junior explorers, but it’s sure not boring. I’m still enjoying the work and am able to get around pretty well, just a little slower and less nimble. I did have the pleasure of celebrating my 70<sup>th</sup> birthday with a rigorous 21 mile hike up into the Sierras with my son-in-law, who’s unwritten job was to scrape me off the ground if need be. Fortunately that wasn’t necessary. So in one respect, nothing has changed since I was a kid – I still love being outdoors, hiking around.

I was “dumb lucky” to have discovered geology when I was young enough to do something about it. My other great fortune is to have had a spouse – Allison - that supported me in all ways along the way. As many exploration geologists can attest, it is not only handy to have emotional/psychological support, but having another breadwinner around is pretty big too.

Lastly I would like to make a pitch for GSN volunteerism. It’s never too late - I was asked to be an officer back in 2000, fully 20 years into my membership. This organization would not exist without the volunteer efforts of its members.



Phelps Dodge Exploration East in South Carolina, 1977. One current and seven former Nevada residents are in this picture. (Bob T. is 3rd from left in the red hat.)



Yukon, summer 2011

## GSN WINNEMUCCA CHAPTER MEETING

WEDNESDAY, APRIL 11, 2018

Location: The MARTIN HOTEL, 94 Railroad St., Winnemucca, NV

Time: 6:00 p.m.—Appetizers & Drinks, 7:00 p.m.—Talk begins

Speaker: Dr. Thomas R. Benson

Title: “The McDermitt Caldera, Nevada: Geology and origin of the largest lithium deposit in the United States”

Food and Drinks Sponsored by:



**PITEAU ASSOCIATES**

GEOTECHNICAL AND HYDROGEOLOGICAL CONSULTANTS

[www.piteau.com](http://www.piteau.com)

### ABSTRACT:

**“The McDermitt Caldera, Nevada: Geology and origin of the largest lithium deposit in the United States”**

*Dr. Thomas R. Benson  
Lead Global Exploration Geologist  
Lithium Americas Corporation*

Located along the Oregon-Nevada border in the western United States, the mid-Miocene McDermitt Caldera formed at 16.3 Ma associated with the Yellowstone hotspot and voluminous outpouring of the Columbia River flood basalts. During this “supervolcanic” eruption, over 1000 km<sup>3</sup> of Li-enriched magma was evacuated from several kilometers below the surface of the Earth, spread out > 80 km away from the vent, and caused collapse of the keyhole-shaped McDermitt Caldera (Benson et al., 2017, *GSAB*; Henry et al., 2017, *Geosphere*). Following ignimbrite eruption, a large lake formed within the caldera basin and lasted for over 100,000 years. During this interval, a thick (> 1km) sequence of sediments accumulated in the caldera, interrupted by eruptions of basaltic, rhyolitic, and icelanditic lava. Resurgent doming associated with the post-caldera magmatism uplifted the caldera lake sedimentary sequence and formed the present-day Montana Mountains within the caldera.

The uplifted caldera lake sediments are considerably enriched in Li and host to the Li clay deposit at McDermitt. The sediments owe their high Li concentrations to the high initial Li enrichment in the magmas of the McDermitt Volcanic Field. These magmas assimilated large proportions of felsic continental crust during their genesis, resulting in high Li concentrations (~1,400 ppm) in the residual magmas (Benson et al., 2017, *Nature Communications*). Eruptions of these magmas resulted in a large volume of Li-enriched tuff, ash, pumice, and lava being deposited on the surface of the earth. Meteoric and low-temperature hydrothermal fluids leached Li from these surficial rocks and were deposited within the McDermitt Caldera basin, which acted as a regional watershed. Subsequent hydrothermal alteration and diagenesis caused the Li to be incorporated in the structure of illite and smectite clays. These Li-enriched clays are uplifted and present near the surface for a substantial portion of the ~1000 km<sup>2</sup> caldera, making McDermitt an attractive deposit for meeting increasing Li demand.

## GSN ELKO CHAPTER MEETING

**THURSDAY, APRIL 19, 2018**

**Location: The WESTERN FOLKLIFE CENTER, 501 Railroad St., Elko**

**Time: Appetizers & Drinks @ 6:00 p.m., Talk @ 7:00 p.m.**

**Speaker: Contact Gold Geologist (TBA)**

**Title: “Exploration update on the Pony Creek Project,  
Carlin Trend, NV”**

**Food and Drinks Sponsored by: TO BE DETERMINED**

### ABSTRACT:

**Exploration update on the Pony Creek Project, Carlin Trend, NV  
by Vance Spalding, Jamie Robinson & Zach Hibdon**

Contact Gold is a new, Nevada gold exploration company that listed on the TSX-V exchange in June of 2017. Contact controls 13 projects located in northeast Nevada, but our focus is on the Pony Creek, North Star and Dixie Flats projects located on the southern Carlin Trend between the Railroad-Pinion and Bald Mountain districts where significant, new discoveries and resource/reserve additions have recently been announced.

Significant gold mineralization was discovered at Pony Creek in the early 1980's by stream sediment sampling followed by drilling, including a Newmont drill hole that returned 2.88 g/t over 99 meters. Blind gold mineralization was discovered by drilling at Dixie Flats in the mid 1980's. North Star has never been drilled. Contact has a large database from this previous work including 200 drill holes, rock and soils sampling, geophysical surveys and surface mapping.

Contact's exploration effort began at Pony Creek in July, 2017 and included claim staking, mapping, soil and rock sampling, CSAMT and Gravity surveys, and drilling of 42 holes totaling over 10,000 meters, 40 of which contained significant gold mineralization. Data compilation on the other 12 projects was initiated, and CSAMT and Gravity surveys were completed at the North Star and Dixie Flats projects north of Pony Creek.

Sedimentary rocks exposed at Pony Creek range from the Devonian Devil's Gate limestone up to the Pennsylvanian / Permian overlap sequence. Most of the gold mineralization encountered in drilling to date occurs beneath or proximal to an Eocene? (or Jurassic?) rhyolite intrusion within the Pennsylvanian /Permian age sandstones and conglomerates. Gold mineralization is controlled by North, North-Northeast, and West-Northwest striking structures. Trace elements accompanying gold mineralization are elevated in arsenic, thallium, antimony and mercury. Realgar and orpiment are sometimes seen just above the best gold grades, as is often the case on the northern Carlin trend.

Our 2018 exploration plans include: 16,000 meters of drilling at the Pony Creek and North Star projects, and additional soil and rock sampling and detailed mapping. Exploration will target the Pennsylvanian/ Permian overlap sequence in areas that were not systematically explored by previous explorers, as well as the traditional exploration target at the top of the Devonian Devil's Gate Limestone.



## It's time to Volunteer For, or Nominate Chapter Officers for 2018-19!

If you have been contemplating helping out your GSN organization by volunteering to be a Chapter Officer this is the time to step forward! Nominations for positions must be finalized at the April Chapter meetings and ballots will be sent out following so the winners can be announced in May.

The Elko Chapter will need a new President as Mark Travis served as VP in 2014-15 and now 3 years as President from 2015-2018! Also, the So. Nevada Chapter is in dire need of people to volunteer for officers. Paul Dockweiler has served 2 years as President and is stepping down on May 31st.

To volunteer/nominate for Elko positions please contact Chelsey Raley @ [chelsearaley1@gmail.com](mailto:chelsearaley1@gmail.com).

For the So. Nevada Chapter positions please contact Paul Dockweiler @ [pdockweiler@geosyntec.com](mailto:pdockweiler@geosyntec.com).

For the Winnemucca Chapter positions please contact Matt Fithian @ [matthew.fithian@ssrmining.com](mailto:matthew.fithian@ssrmining.com).

### GSN 2020 Symposium Planning Committee Progress and LOGO Contest!!

The GSN 2020 Symposium planning committee released its first symposium announcement to the membership on March 1<sup>st</sup>. Last minute efforts by Molly Hunsaker, Mike Ressel, and Curtis Johnson of the Technical Program committee and fast turn-around by Jessica at Allegra Printing allowed GSN to publish a first announcement flyer. Laura Ruud, Dave Shaddrick and others ensured that the flyer was distributed at the Nevada booth in the trade show at PDAC in Toronto in early March. Please look for a second announcement with more detail and a call for papers in the coming months.

In late February, the 2020 planning committee solicited the GSN membership for drawings to be considered for use as the symposium logo. We have received sketches from two members to-date and thank them for their submissions. At this time, the committee would like to extend the period for submitting drawings to April 16<sup>th</sup> to increase the number of designs for consideration. We ask that the drawings be in black and white with sharp details for ease of reproduction.

The makeup of the sub-committees to the symposium planning committee continues to evolve. Still, volunteers are needed to co-chair and assist the sub-committees such as exhibits, field trips, and short courses. The next planning committee meeting will be at noon on Friday, April 20<sup>th</sup>. Please look for an email announcement for the meeting location.

Please contact Eric Struhsacker ([estruhsacker@2020gsnsymposium.com](mailto:estruhsacker@2020gsnsymposium.com)) or Eric Ruud ([eric.ruud775@gmail.com](mailto:eric.ruud775@gmail.com)) with questions or comments and with drawings to be considered for the logo.

Thank you,  
Eric Struhsacker  
GSN 2020 Symposium Chairman

**Submit your 2020 logo ideas by April 16th!!**

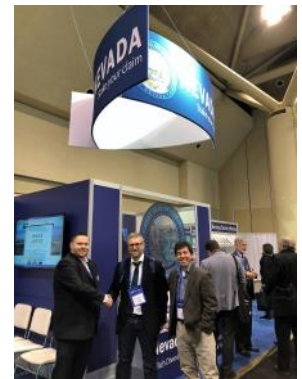
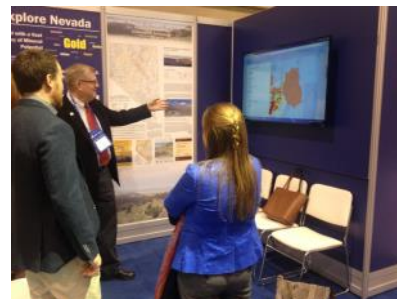
### GSN at PDAC 2018

It was another great year at PDAC! The Prospectors and Developers Association of Canada annual meeting for international mineral exploration and development was held March 4-7 in Toronto. Nevada was represented by a collaboration of GSN, the Nevada Mining Association, Nevada Mineral Exploration Coalition, Nevada Division of Minerals, Nevada State office of the BLM, Nevada Bureau of Mines and Geology, and the Governor's Office of Economic Development. We were big enough for a four-plex booth, complete with a meeting room, display racks and two 50-inch video displays. All the participating groups put a lot of work into designing the new booth – here are some pictures. What do you think?



Many convention attendees stopped to visit and ask about Nevada geology and mineral deposits, and doing business in the state. We caught up with old friends and made new friends. More people than ever now know about GSN and about the opportunities and resources here.

Many thanks to the Nevada Commission on Mineral Resources for funding the booth, the Nevada Mining Association for Tech support, and Kinross for storing some GSN materials from year to year.



**KINROSS**



*Thank you to our generous  
DONORS in MARCH*

**G.S.N. Student Dinner Fund**

Ken Cunningham  
Robert Ellis  
JoAnn Newbury

*Thank you to our generous  
Sponsor for the So. Nevada Chapter  
Meeting in March*

**Geosyntec**  
consultants

engineers | scientists | innovators

*Thank you to our generous  
sponsor for the Winnemucca Chapter  
Meeting in March*

**cyanco**  
Your Mining Solution

*Thank you to our generous  
sponsor for the Elko Chapter  
Meeting in March*

**TonaTec**  
Exploration, LLC  
[www.tonatec.com](http://www.tonatec.com)  
801.446.2400

# GSN FOUNDATION

## NEWS FROM THE FOUNDATION

By Cami Prens, GSN Foundation Chair

As field season starts up it's also time to award the Field Camp Scholarships for UNR Geology and Hydrogeology students. The fee for Field Camp now stands at \$4,500 which is a huge burden for any student, made even more drastic by the fact that the six-week duration means those students aren't able to work a full summer. The Foundation's budget isn't robust enough to cover that whole cost for the number of students that are attending but we were able to award scholarships to each applicant. There were 13 students and they are:

Alison Cramer	Keeton Cahill
Nate Delgado	Jacob Edwards
Marshall Elliott	Amanda Hood
Jennifer Lange	Gary McGaughey
Natasha Neto	Thomas Ott
Morgan Remick	Nicholas Robinette
	Mary Rudolph

We've asked them to attend the April GSN Meeting to receive their scholarship checks and we hope to see them at future GSN meetings as they launch into their careers. We wish them an educational adventure and an enjoyable time at UNR Field Camp this summer!

The Field Camp Scholarship program started with the Foundation in the 2010 – 2011 year when we awarded four student scholarships. Through 2014 there was a modest number of students applying; only four or five every year until the 2014 – 2015 year when we had a record number of 17 students going to camp! Since then it's levelled off to a range of 11 to 13 each year. Thank you donors for your continued support!

I always hope we'll hear from some of those scholarship recipients and find out what they've done since graduation and affirm that our support of their studies made a difference in their lives and our industry. If you know someone who's benefited from a GSN Foundation Scholarship – whether tuition or Field Camp - please encourage them to check in with us.

## Spring 2018 Field Trip!

The Registration Form is on page 10 of this newsletter. Sign up now to save your spot! We are already 1/2 sold!



**Geological Society of Nevada (GSN) Spring 2018 Field  
Trip Friday, Saturday & Sunday, June 8, 9, 10, 2018**



**“Epithermal mineralization of the Monte Cristo's, rhyolite domes and regional detachments”**

The Spring GSN Field Trip will visit locations in the Monte Cristo Range and the Eastside Project. We will departing Reno in Vans after lunch on Friday, June 8th and heading to Tonopah, Nevada for lecture and dinner. Saturday will be stops at Eastside and Gilbert then back to Tonopah for lecture and dinner. Sunday will be looking at Eastside drill core then regional detachment until 1:30 p.m., heading back to Reno arriving at 6 p.m.

Friday, June 8, 2018: 12:30 p.m. - Vans depart from GSN office for Tonopah, Nevada  
(Tentative schedule) 6:00 p.m. - Drinks, Dinner and Speaker at the Mizpah Hotel, Tonopah, Nevada  
Overnight at the Mizpah Hotel

Saturday, June 9, 2018: 6:30-7:30 a.m. - Breakfast at the Mizpah Hotel (included with registration)  
(Tentative schedule) 8:00 a.m. - Vans depart for Eastside, Gilbert and Gilbert South  
12:00 Noon - Sack Lunch provided  
6:00 p.m. - Drinks, Dinner and Speaker at the Mizpah Hotel, Tonopah, Nevada  
Overnight at the Mizpah Hotel

Sunday, June 10, 2018: 6:30-7:30 a.m. - Breakfast at the Mizpah Hotel (included with registration)  
(Tentative schedule) 8:00 a.m. - Eastside drill core in Tonopah, then regional detachment  
12:00 Noon - Sack Lunch provided  
1:30 p.m. - Vans head back to Reno to arrive by 6:00 p.m.

**THANK YOU TO OUR GENEROUS SPONSORS!**



Name: \_\_\_\_\_

Company: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Person to contact in case of Emergency:

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Lodging:  Single Mizpah  Double J. Butler  No Room

Double Roommate: \_\_\_\_\_

**G.S.N. MEMBER REGISTRATION COST:**

- \$375 - Single Room at the Mizpah Hotel (2 nights)
- \$290 - Double Room at Jim Butler Inn (2 nights)  
(no doubles available at the Mizpah)
- \$165 - No Room needed in Tonopah, NV
- \$140 - Spouse w/Member @ Mizpah (No guidebook)
- \$0 - GSN Student Member Helpers (limit 6)

**\*NON-MEMBER REGISTRATION COST:**

**PLEASE ADD \$50 TO THE ABOVE RATES**

\*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 Monday, May 28, 2018**

**No refunds after Wednesday, May 30, 2018**

Total amount included with this form: \_\_\_\_\_

Payment:  Check # \_\_\_\_\_  Cash  Visa  Master Card  Discover  American Express

Card Number: \_\_\_\_\_ Exp. Date: \_\_\_\_\_ 3 or 4 digit security code: \_\_\_\_\_

Name on Card: \_\_\_\_\_ Card Address: \_\_\_\_\_

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

# GEOLOGICAL SOCIETY OF NEVADA 2018-2019 BALLOT

This Ballot will also be attached as a separate file to your email so you can submit online!

In accordance with Article V, Section 4 of the GSN Constitution and Article II of the GSN By-Laws, the GSN Executive Committee and the GSN Board of Directors are recommending the slate of candidates listed below to serve as Officers for 2018-2019 and Directors for 2018-2021; these positions become effective on June 1st.

The entire GSN membership has the right to vote separately on approving the elected positions to the GSN Executive Committee and the Class A three-year terms on the Board of Directors as presented below:

## Board of Directors Class A\* (three-year term, 1 June 2018 – 31 May 2021)

Bob Thomas  
John Watson

FOR BOTH \_\_\_\_\_ AGAINST BOTH \_\_\_\_\_

## Officers/Executive Committee of GSN (one-year term, 1 June 2018 – 31 May 2019)

<u>President:</u>	Richard Bedell
<u>Vice President/President-Elect:</u>	Dennis Bryan
<u>Secretary:</u>	Steve Weiss
<u>Treasurer:</u>	Robert Kastelic
<u>Membership Chair:</u>	Molly Hunsaker
<u>Publication Co-Chairs:</u>	Ruth Carraher and Shannon Gill

FOR SLATE \_\_\_\_\_ AGAINST SLATE \_\_\_\_\_

CURRENT GSN MEMBER'S NAME: \_\_\_\_\_

(All votes must include your name as a member in good standing for 2018. Ballots without a name will not be counted.)

If you are receiving this notice by mail, please either mail your vote to: GSN, 2175 Raggio Parkway, Reno, Nevada 89512 or fax it to (775) 323-3599. In order for the vote on this ballot to be counted the completed ballot must be received in the GSN office on or before 11:59 pm on Friday, April 20, 2018. Thank you for your participation.

\* Elected members of the Board of Directors serve three-year terms, which are renewable at the end of the term. Class B Directors (with terms ending May 31, 2019) are David Caldwell and Gregory French. The Class C Directors (with terms ending May 31, 2020) are Cami Prens and Dave Shadrack. Other members of the Board include the current GSN President, the GSN Immediate Past President, and current Presidents of the Elko, Southern Nevada, and Winnemucca Chapters. The Nominating Committee includes these latter five individuals and the Chair of the Board of Directors.



## Activity Update

Mike Brady, February 2018

[www.activityupdate.com](http://www.activityupdate.com)

### NEVADA

Kinross Gold Corp. announced that recent drill results at the Bald Mountain/Redbird Project include 213.4-259.1 meters @ 4.15 gpt Au (RB17-01); 102.1-167.6 meters @ 2.74 gpt Au (RB17-15) and 166.1-243.8 meters @ 2.54 gpt Au (RB17-16). (reserve @ Bald Mountain = 95,216,000 tonnes @ 0.60 gpt Au proven+probable) *Press Release:* February 14

Kinross Gold Corp. announced that recent drill results at the Bald Mountain/Top Project include 318.5-332.2 meters @ 9.91 gpt Au (TE17-040); 105.2-134.1 meters @ 3.20 gpt Au (TE17-057) and 48.8-137.2 meters @ 7.06 gpt Au (TE17-066). *Press Release:* February 14

Contact Gold Corp. announced that recent drill results at the Pony Creek Project include 160.02-166.12 meters @ 3.95 gpt Au (PCC17-019); 199.65-205.74 meters @ 1.88 gpt Au (PCC17-028); 64.01-86.87 meters @ 2.12 gpt Au (PCC17-040) and 25.91-57.91 meters @ 0.59 gpt Au (PCC17-041). *Press Release:* February 14

Sitka Gold Corp. announced that it acquired an option to earn a 100% interest in the Alpha Property from Objective Exploration LLC. for \$10,000/year payments and by completing 10,000 feet of drilling. *Press Release:* February 13

TriMetals Mining Inc. announced that recent drill results at the Gold Springs Project include 7.6-89.9 meters @ 0.63 gpt Au, 11.6 gpt Ag (E17-016) and 115.8-166.1 meters @ 0.23 gpt Au, 4.3 gpt Ag (E17-018). (resource = 19,003,000 tonnes @ 0.57 gpt Au, 11.4 gpt Ag measured+indicated) *Press Release:* February 8

Allegiant Gold Ltd. announced that recent drill results at the Bolo Project include 38.1-47.2 meters @ 0.30 gpt Au (BL-10); 118.9-135.6 meters @ 0.61 gpt Au (BL-11); 77.7-153.9 meters @ 1.15 gpt Au (BL-23) and 47.2-109.7 meters @ 0.65 gpt Au (BL-29). *Press Release:* February 5

Barrick Gold Corp.(75%) announced that it approved the construction of a 3<sup>rd</sup> shaft at the Turquoise Ridge Mine at a capital cost of \$300-325,000,000. The shaft will provide access to the North Zone Deposit. (reserve = 11,770,000 tonnes @ 15.53 gpt Au proven+probable) *Press Release:* February 22

Ramelius Resources Ltd.(75%) announced that recent drill results at the Jupiter Project include 112.78-121.92 meters @ 1.1 gpt Au (JURC01); 99.06-108.2 meters @ 0.3 gpt Au (JURC02); 149.35-153.92 meters @ 0.27 gpt Au (JURC03) and 65.53-85.34 meters @ 0.16 gpt Au (JURC06). *Press Release:* January 29

Newrange Gold Corp. announced that recent drill results at the Pamlico Project include 0-53.4 meters @ 2.36 gpt Au (P17-33); 13.7-31.2 meters @ 0.71 gpt Au (P17-34); 24.4-42.7 meters @ 2.51 gpt Au (P17-35) and 38.1-50.3 meters @ 0.61 gpt Au (P17-37). *Press Release:* January 31

Klondex Mines Ltd. announced that underground reserves at the Fire Creek Mine aggregate 319,000 tonnes @ 24.27 gpt Au, 23.4 gpt Ag proven+probable. (was 218,200 tonnes @ 44.74 gpt Au, 33.2 gpt Ag proven+probable) *Press Release:* February 6

Corvus Gold Inc. announced that recent drill results at the Mother Lode Project include 220.98-248.41 meters @ 1.81 gpt Au (ML17-043); 230.12-251.46 meters @ 0.92 gpt Au (ML17-044) and 256.03-295.66 meters @ 2.45 gpt Au (ML17-045). (sulfide resource = 8,545,000 tonnes @ 1.57 gpt Au inferred) *Press Release:* February 22



### **WOMEN'S MINING COALITION 2018 FLY-IN – OUR 26<sup>th</sup> ANNUAL! April 22 – 26, 2018 Washington D.C.**

**CONSIDER JOINING US IN WASHINGTON DC FOR  
THE 2018 WMC FLY-IN.**

**WE HAVE LOTS OF WORK TO DO, EDUCATING THE  
MEMBERS OF CONGRESS ABOUT THE IMPORTANCE  
OF A ROBUST DOMESTIC MINING INDUSTRY.**

**SCHEDULING AND HOUSING DETAILS TO FOLLOW.**

**For more information, contact:**

[wearewmc@wmc-usa.org](mailto:wearewmc@wmc-usa.org)



## Resources for Future Generations 2018

**RFG 2018, taking place June 16-21, 2018 in Vancouver (Canada), is the first international conference dedicated to the availability of resources needed to sustain future generations.**

Under the auspices of the International Union of Geological Sciences (IUGS), Resources for Future Generations 2018 will be delivered by the Canadian Federation of Earth Sciences (CFES), the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), the Geological Association of Canada (GAC), and the Mineralogical Association of Canada (MAC). **Along with the support of 30+ Technical Partners, RFG 2018 will bring together a global community of industry, academia and government, to address issues related to energy, minerals, water and the earth. More than 5,000 delegates and 120 exhibiting companies are expected to participate.** For more information visit [www.rfg2018.org](http://www.rfg2018.org).



### OBITUARIES

#### **William “Bill” W. Walker**

Longtime GSN Member William “Bill” Walker passed away on Sunday, March 18, 2018 in Reno, Nevada. Bill’s wife, Shirene Urton, would like to co-host **“Drinks on Bill” at the Reno GSN meeting on May 18, 2018.** During the social hour we will be able to share stories of Bill and have a drink “on him” in his honor!

Bill was a very nice man and a well-respected geologist in his long career as the owner of his company, Walker Geological Services. He was an active member of the GSN and attended meetings regularly in Reno for many years. He will be sorely missed by all those who knew him.

#### **Richard “Dick” Ahern (80) passed away on March 3, 2018**

Richard was an exploration geologist. He served in the Navy before the main part of Vietnam War and spent time on a Liberty Ship.

During the 1960s and 1970s, Dick worked for Kerr-McGee at the Red Mountain porphyry copper project near Patagonia, Arizona and elsewhere in Arizona exploring for mineral deposits including the Anamax Rosemont porphyry copper-skarn deposit near Sonoita, Pima County, Arizona. Prior to 2006, he worked for the Arizona State Land Department and then took a position with the U.S. Forest Service - Coronado National Forest as a Minerals Geologist (GS-11

(Ahern continued)

and GS-12) between 2006 and 2012. He was very helpful and addressed all permitting requirements by the book per report by an exploration geologist working for Wildcat Silver at the Hardshell project near Patagonia. Russell Corn and Dick Ahern had claim blocks over four areas in Nevada.

He was a member of several professional societies such as Society of Mining, Metallurgy and Exploration Geology (SME) and Arizona Geological Society (AGS). He participated in numerous field trips and dinner meetings for AGS and co-led a field trip with Fleetwood Koutz and Russell Corn in Fall 2009 to examine the *Geology and Silicate Alteration at the Red Mountain Porphyry Copper Deposit and Geology and Mineralization of the Hardshell Silver, Base Metal, Manganese Oxide Deposits, Santa Cruz Co., Arizona.*

He received his Bachelor of Applied Science (B.A.Sc) degree in geology at The University of Arizona (1961-1966) and completed his M.S. in Mining Engineering under the Lowell Institute for Mineral Resources program at The University of Arizona (2010-2012).

He was a courteous, thoughtful gentleman who will be missed by his geology colleagues and friends.

<https://www.findagrave.com/memorial/187825581/richard-ahern>

*Additional information from GSN Member, Fleet Koutz:*

*Dick was a member of GSN through 1999. He is probably best known in NV as a partner in the consulting group Corn & Ahern that discovered in the 1980s, & mined OP/HL gold in the Monte Cristos (Gilbert District) west of Tonopah and Secret Pass SE of Beatty. The McLean Pit (Au) in the Gilbert District in the Monte Cristo Range NW of Tonopah is a Corn & Ahern Discovery (mined before 1991) and is still a very active exploration area.*

**VALE PETER MUNK—FOUNDER OF BARRICK GOLD CORPORATION**

Reprinted from the Mining Journal, March 29, 2018 (Alastair Sharp in Toronto)



*Peter Munk (left), Bob Smith, and Dr Brian Meikle overlooking the Betze-Post pit at Goldstrike, Nevada, in 1992*

Peter Munk, the mining business visionary who founded Toronto-based Barrick Gold Corporation and built it into the world's largest gold mining company, died surrounded by family on Wednesday aged 90, the company said.

Hungarian-born Munk built Barrick up from modest investments in two small mines in Ontario and Quebec in 1983 to a company with operations spanning across the Americas to Saudi Arabia, Zambia, Papua New Guinea, and Australia.

Born into a prosperous Jewish family in Budapest in 1927, Munk and his family fled the invading Nazis in 1944 and arrived in Toronto with a single suitcase in 1948, when Peter was 20 years old.

In later life he donated hundreds of millions of dollars to a Toronto hospital and university, establishing the country's premier cardiac care centre and funded a top school for global affairs.

"He was an immigrant who came to Canada with big dreams, surpassed them beyond any imagination, and shared his good fortune through historic philanthropy," the country's prime minister, Justin Trudeau, said in a tweet. "Thank you, Peter Munk, for your enormous contributions to our country. You will be missed."

Munk built Barrick into a global powerhouse - it employs more than 10,000 people on five continents - via a string of acquisitions and with help from an innovative hedging strategy that provided Barrick with steady revenue even in tough years for the price of gold.

"He transformed the industry that made him a titan into something it had never been before — a financially sophisticated business able to compete with other industries for investment capital," the Canadian Mining Hall of Fame says of Munk, who was inducted in 2002.

Munk was named a Companion of the Order of Canada, Canada's highest civilian honour, in 2008.

One of the very early acquisitions Munk made snared him the services of top engineer Bob Smith and his technical team. Together they went on to develop one of Munk's earliest successful bets, on the Goldstrike mine in Nevada, which was producing 40,000 ounces of gold a year when he bought it in 1986. The mine, located on the Carlin trend, has since produced 42 million ounces for Barrick.

But the company has also made missteps under Munk's leadership - including the 2011 purchase and subsequent writedown of Equinox Minerals, and the spiralling cost overruns and legal wrangles at Pascua Lama that pushed Barrick to mothball the project high in the Andes straddling Chile and Argentina in 2013.

Munk retired from day-to-day operations at Barrick in 2014, when he was made emeritus chairman.

Before starting Barrick, Munk had built two previous companies: high-end stereo equipment company Clairtone, and an island resort chain.

"We have lost an iconic entrepreneur, a visionary philanthropist, and a caring friend," said Barrick's current executive chairman, John Thornton, as tributes poured in from Canadian business and political leaders for Munk, who was known to wear fedora hats and talk straight.

"To the very end, he had a brain as sharp as can be," Glencore CEO Ivan Glasenberg said of Munk, according to the Globe and Mail. "We all dream of the kind of energy he had at his age. His big fear was not being on top of everything, of becoming an old man who couldn't do what he wanted to do."

Munk is survived by Melanie, his wife of 45 years; by his children, Anthony, Nina, Marc-David, Natalie, and Cheyne; and by his 14 grandchildren.

## OTHER UPCOMING EVENTS

**2 April 2018 DREGS (Denver Region Exploration Geologists), Speakers & Topic:** Donald Taylor, Jack Mueller and Scott Burkett; Arizona Mining Inc., "Arizona Mining's Taylor Deposit - A World-Class Zinc, Lead and Silver Discovery". Social 6 p.m., Presentation 7 p.m. at Berthoud Hall, Room 241, CO School of Mines, Golden. For more info. contact James Piper at [geopros@q.com](mailto:geopros@q.com)

**3 April 2018 Arizona Geological Society** meeting, 6 p.m. to 9 p.m. at the Sheraton, 5151 E Grant Rd. (& Rosemont), Tucson, AZ. **Speakers: Volker Spieth and Stanley B. Keith are the featured speakers. Title: "Finding Gold in the Kupferschiefer"**. For more info and online registration click on the link: <https://arizonageologicalsoc.org/events/>. Dinner closes on March 30th.

**5 April 2018 Nevada Petroleum & Geothermal Society, Reno, Nevada monthly meeting.** *Cocktails at 6:30 PM, Dinner at 7:00 PM, Ramada Reno Hotel; 1000 East 6th St., Reno NV 89512. **SPEAKER: Vincent Ramirez. Geologist and CEO, 3PL Operating Inc. TOPIC: Lake Livada and Other Lithium Exploration Activities in Nevada.** Please make reservations by Tuesday, April 3rd by using the following link: <https://www.123signup.com/register?id=hbxcx>*

**9 April 2018 SME Northern Nevada Section Monthly Meeting.** Circus-Circus Mandalay Room, Reno NV. **Speakers: Jennifer Jorgensen and Kelsey Herzig, Ledcor and Fiore Gold. Topic: Overview of Pan Project.** Happy Hour @ 6 pm, Dinner @ 7 pm. Please contact Alex Wheatley for more information [NNevSME@gmail.com](mailto:NNevSME@gmail.com). You can pay dinner in advance at: <https://squareup.com/store/nnevsmc>

**16 April 2018 Utah Geological Association meeting,** will be at 12:00 noon, **Monday, April 9th, 2016,** at the **Utah Department of Natural Resources,** 1594 West North Temple. *Enter on south side.* Syracuse University's Christopher Scholz will speak about *Magmatic versus amagmatic extension, and the sedimentary sequence architecture of rifts.* **Please make your reservations no later than 4:00 p.m. on Thursday April 12th.** Click to make reservations for the Luncheon Meeting by sending email to [reservations@utahgeology.org](mailto:reservations@utahgeology.org).

**19 April 2018 AEG Great Basin Section Monthly Meeting.** Sure Stay Plus Hotel by Best Western, 1981 Terminal Way, Reno NV. **Speaker & Topic to be announced.** Social Hour @ 5:30 pm, Dinner @ 6:30 pm, Presentation @ 7:00 pm. Please email Merrily Graham to RSVP at [mkgraham75@gmail.com](mailto:mkgraham75@gmail.com).

## ROCK TALK

### The Nevada Secretary issued a reminder involving state business licenses

[The Ely Times](#) (Reprinted from The Ely Times, March 2, 2018)

According to Nevada Revised Statute 76.100 a person shall not conduct a business in this state unless and until the person obtains a state business license issued by the secretary of state. The state business license is \$200 or \$500, depending on the type of business, and is in addition to any other licensing requirements from other state and local jurisdictions.

Exemptions are listed in Nevada Revised Statute 76.020. Any person who claims an exemption must apply for a certificate of exemption issued by the secretary of state.

A "business" means:

Any person who performs a service or engages in a trade for profit; Any entity organized pursuant to Title 7 of the Nevada Revised Statutes, including those required to file with the secretary of state, whether or not the entity performs a service or engages in a business for profit.

This includes sole proprietors, independent contractors, partnerships, domestic corporations, foreign corporations, nonprofit corporations, LLCs, LPs, LLPs, LLLPs, business trusts, and professional entities and associations.

To obtain or renew a state business license online, visit [www.nvsilverflume.gov](http://www.nvsilverflume.gov)., For additional information visit [www.nvsos.gov](http://www.nvsos.gov) or contact the secretary of state at 775-684-5708.



PAID ADVERTISEMENTS



**JUST REFINERS (USA), INC.**  
 540 & 620 Greg St – Sparks, Nevada 89431  
 Telephone: (775) 331-1663 / Facsimile: (775) 331-1799  
 Website: [www.justrefiners.com](http://www.justrefiners.com)

Since 1993



Please contact us if you have material not listed here.

JRI – Specializing in processing of spent carbon and borax slag!

- Products JRI Processes**
- Borax Slag
  - Spent Carbon
  - Carbon Fines
  - Graphite Crucibles
  - Furnace Linings
  - Baghouse Dust
  - Mill/ Mine Concentrates
  - Gold and Silver Matte
  - Gold Scrap
  - Electrolytic Mesh
  - Spent Cathode Steel Wool
  - Alluvial Gold
  - Dore Gold Silver Bullion
  - Dental Scrap – Au, Pt, Pd
  - JEWELRY SCRAP
  - SILVER SCRAP
  - PLATINUM GROUP METALS

Contacts: Bobby Boekhoud: [bobby.justrefiners@gmail.com](mailto:bobby.justrefiners@gmail.com) / Carmen Arbizo: [carmen.justrefiners@gmail.com](mailto:carmen.justrefiners@gmail.com)



RENO, NV +1 775 356 5395  
 ELKO, NV +1 775 738 2054  
 TUCSON, AZ +1 520 747 3218  
 FAIRBANKS, AK +1 907 452 2188

[alsglobal.com](http://alsglobal.com)



**GeoSequel** Drill Hole, Blast Hole & Sample Management Program

**QUIT CHASING DATA!**

One Location • Easy-to-Access • User friendly  
 Searchable • Accurate



[www.TerraSourceSoftware.com](http://www.TerraSourceSoftware.com)  
[info@TerraSourceSoftware.com](mailto:info@TerraSourceSoftware.com)  
 775.856.2913

**TOM CARPENTER**

CONSULTING GEOPHYSICIST

5445 Goldenrod Drive  
 Reno NV 89511  
 (O) 775.849.9707  
 (e) [tcarpenter@gbis.com](mailto:tcarpenter@gbis.com)





## Bureau Veritas Minerals

Analytical Laboratory Services for the Exploration & Mining Industries

- Assaying and Geochemical Analysis
- Metallurgy and Mineralogy
- Spectral Services
- Mine Site Laboratories



**BUREAU  
VERITAS**

**US LABS** Reno +1 775 359 6311 | Elko +1 775 777 1438 | Juneau +1 907 750 1734  
 bvminfo@ca.bureauveritas.com | www.bureauveritas.com/um

MINERALS



# OREAS

Certified Reference Materials

OREAS gold CRMs are the most homogeneous available and provide unrivalled confidence in your assay data



**North American Distributor:**  
 Analytical Solutions Ltd  
 www.explorationgeochem.com  
 Tel: (+416) 462 9124  
 Email: info@mail.explorationgeochem.com

## JBA WORKS, INC.

Jo Beth Allen  
 Geologist

GIS, Presentation Maps & Data Graphics

GIS / CAD  
 Slide & print Graphics / Illustrator & Photoshop

1055 Joshua Drive  
 Reno, Nevada 89509

jobethallen@sbcglobal.net  
 Phone: 775-303-6818



**Carlin Trend Mining  
 Supplies & Service**

369 - 5<sup>th</sup> Street, Elko, Nevada 89801  
 775.778.0668 www.carlin-trend.com

Claim Staking - Soil Sampling - Land Research  
 Core Cutting - Mine Hazard Fencing - Reclamation  
 Project Management - Geological Consulting  
 Geology & Drafting Supplies - AutoCad & GIS

Temporary Employees in All Fields  
 Sister store located in Superior, Arizona  
 Copper Triangle Mining Services 520-689-5200



Drift Exploration Drilling, Inc., 6120 Pedroli Lane, Winnemucca, Nevada

FORAGE  
**ORBIT GARANT**  
DRILLING

For more information please contact Garth Patterson @ 403-601-4374 or Garth.patterson@orbitgarant.com

hardrockwheels@yahoo.com

**HARD ROCK WHEELS, INC.**  
4WD Pickup Rentals

Howard J. Adams Taiga Ventures  
14756 Pine Knolls Ln. 2700 S. Cushman St.  
Reno, Nevada 89521 Fairbanks, AK 99701  
(775) 852-2622 (907) 452-6631  
Fax (775) 852-2075

## Big Sky Geophysics

Clark Jorgensen, M.Sc. *Field Work*  
Geophysicist *Processing*  
*Interpretations*

P.O. Box 353 Phone/Fax +1 (406) 587-6330  
Bozeman, Montana 59771 Mobile +1 (406) 580-9718  
USA clark@bigskygeo.com

**For more details, my background, and case studies,  
Visit my webpage at [www.bigskygeo.com](http://www.bigskygeo.com)**

**PROPERTY to DISTRICT SCALE  
GEOLOGIC & ALTERATION  
MAPPING with  
MINERAL DEPOSIT  
TARGETING**

**PETER A. DILLES MSc. Q.P. Economic Geologist**  
(775) 972-7989 pdilles@aol.com

*hablo Español*

**NEVADA-UTAH MINERAL EXPLORATION  
HIGHEST QUALITY GIS DATA**

MINERAL OCCURRENCES  
GEOLOGY  
GEOCHEMISTRY  
GEOPHYSICS  
CULTURE  
POLITICAL

Great Basin GIS  
Spring Creek, NV  
[www.greatbasingis.com](http://www.greatbasingis.com)  
jlaravic@frontiernet.net 775-777-8223





Fire Assay, ICP-OES/MS,  
XRF, LECO, Custom Prep, BLEB

Chris Ioannakis, Managing Director, Analytical Services

**Corporate Office**

1500 Glendale Avenue  
Sparks, NV USA 89431-5902  
Telephone: (775) 356-0606  
Fax: (775) 356-1413

**Elko Office**

2320 Last Chance Road  
Elko, NV USA 89801-4852  
Telephone/Fax : (775) 738-9100

E-mail: AALADMIN@aallabs.com  
Website: www.aallabs.com

# NORTH AMERICAN EXPLORATION

GEOLOGY • CLAIM STAKING • GEOCHEM SAMPLING • LANDWORK



**DAVID MORRIS**  
PRESIDENT • GEOLOGIST

895 N. MARSHALL WAY, SUITE A  
LAYTON, UT 84041

801.546.6453  
DMORRIS@NAE-EXPLORATION.COM



## MINERAL EXPLORATION SERVICES AND CONSULTING

*We specialize in a full range of services including:*

- Claim Staking
- Exploration Project Management
- Contract and Consulting Geology
- Soil Sampling
- 2D and 3D GIS
- Drill Core Processing

*Call us at 775.340.2395 for a free estimate on your next project.*

*For more information on our services visit our website at [www.RangeFront.com](http://www.RangeFront.com)*



*Serving Mining in Nevada Since 1992*

**General Engineering Contractor**

- Drill Pads
- Road Building
- Reclamation
- Earthwork

**Office: 775-753-5832**  
**Mobile: 775-778-1681**  
**Mobile: 775-934-1837**  
**www.legarza.com**

NV License #35480  
CA License #804120



- LARGE NEVADA PROPERTY PORTFOLIO
- DRILL READY PROJECTS - FOR SALE or OPTION
- PROPERTIES PURCHASED
- ROYALTIES PURCHASED - PRODUCING or NOT

Trey Wasser - President & CEO  
(972) 803-3087 - office  
(940) 368-8337 - mobile  
trey@elygoldinc.com

Jerry Baughman - President, NSR  
office - (775) 853-1913  
mobile - (702) 592-6992  
jbaughman@elygoldinc.com

For Company & Property information go to:

**[www.elygoldinc.com](http://www.elygoldinc.com)**

# GEOLOGICAL SOCIETY OF NEVADA



gsn@gsnv.org ● www.gsnv.org  
Telephone (775) 323-3500  
Fax (775) 323-3599  
2175 Raggio Parkway, Room 107  
Reno, NV 89512 USA

Here are the latest entries to the somewhat regular feature of the **“GSN Traveling Backpacks”!** The left photo was submitted by GSN Treasurer, Bob Kastelic from his trip to Egypt in March. Cool pyramids! Many of you will recognize the grand old hotel where another GSN backpack travelled to in early March. It’s in Toronto and several of our GSN sponsors and advertisers hosted parties there during PDAC. If you guessed the Royal York Hotel then you are correct! Any member who takes their GSN backpack on a trip is encouraged to snap a photo of it and send it in!

