

# GEOLOGICAL SOCIETY OF NEVADA NEWSLETTER

Geological Society of Nevada, 2175 Raggio Parkway, Room 107, Reno, NV 89512  
(775) 323-3500 - Hours Monday -- Friday 8-3 Website: [www.gsnv.org](http://www.gsnv.org) • E-mail: [gsn@gsnv.org](mailto:gsn@gsnv.org)



November 2010, Vol. 25, No. 9

Published monthly except June and July

## CALENDAR OF GSN EVENTS

### GSN EXECUTIVE COMMITTEE

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**Nov. 10  
Wednesday**

#### **WINNEMUCCA CHAPTER** *(Every 2nd Wednesday of the month)*

The monthly meeting will be held at the Martin Hotel, 94 West Railroad Street. Drinks and appetizers at 6:30 PM, speaker at 7:00 PM. Sponsors for the evening will be DeLong Construction, Inc. and American Assay Labs. Speakers for the evening will be Hank Ohlin and Gregory McN. French, Nevada Copper Corp. Their talk is titled "**The Iron Oxide-Copper-Gold (IOCG) Deposits of Pumpkin Hollow, Yerington, Nevada**". (see abstract on page 10). For more information contact Rebecca Morris at (775) 304-2661.

**Nov. 18  
Thursday**

#### **ELKO CHAPTER** *(Every 3rd Thursday of the month)*

The monthly meeting will be held at the Western Folk Life Center, 501 Railroad Street. Refreshments at 6:00 PM, talk at 7:00 PM. Speaker for the evening to be announced. Sponsor for the evening will be Geotemps, Inc. For more information contact Joe Becker at (775) 778-4071.

**Nov. 19  
Friday**

#### **GSN MEMBERSHIP MEETING** *(Every 3rd Friday of the month)*

The monthly meeting will be held at the Reno Elks Lodge, 597 Kumle Lane, Reno, NV. Drinks at 6:00 PM, dinner at 7:00 PM, and talk at 8:00 PM. Sponsor for the evening will be TonaTec Exploration LLC. Speaker for the evening will be Chris Henry, Nevada Bureau of Mines and Geology. His talk is titled "**Eocene to Early Miocene Geology and Paleotopography of the Great Basin (Nevadaplano) and Implications for Carlin-Type Au Deposits**". (see abstract on page 3). Dinner reservations must be made by 1:00 PM Wednesday, November 17. Contact Kathy Sestanovich at (775) 323-3500 or e-mail [gsn@gsnv.org](mailto:gsn@gsnv.org) for reservations.

**Unknown at  
Newsletter  
Distribution**

#### **SOUTHERN NEVADA CHAPTER** *(Every Last Thursday of the month)*

The monthly meeting will be held at the Lilly Fong Geoscience building at UNLV, Room 105. Social hour begins at 6:45 pm with the speaker starting at roughly 7:15 pm. For date and more information contact Josh Bonde at 702-468-2500.

### GSN BOARD OF DIRECTORS

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**Peter Vikre, Current**

#### Most Recent Past GSN President

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**Joe Becker**

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**Josh Bonde**

#### Winnemucca Chapter President

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#### Class B, 2010-2013

**David Caldwell**

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#### Class C, 2008-2011

**David Shadrick (Chairman)**

**Camille Prens**

*Don't be left out of the 2011 Membership Directory  
Pay your dues now so you don't forget!  
The Membership Application can be found on the  
GSN website [www.gsnv.org](http://www.gsnv.org).*



## NOVEMBER MEETING SPONSOR



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# FROM THE PRESIDENT

Peter Vikre, *GSN President 2010-2011*

## Open Toolboxes

Geologists who deal with mineral resources often align themselves, and have been correspondingly aligned by others, with one of two groups: exploration and mine (“industry”) geologists, and academic and government (“research”) geologists. These distinctions stem primarily from employer goals (job functions) and have largely relegated each group to the private and public employment sectors, respectively. In broad terms, the goals of exploration and mine geologists are to find economic mineral resources and to produce minerals and metals profitably. Goals of academic and government research geologists include teaching mineral resources geoscience, determining mineralization processes, and conducting mineral resources assessments. Although approaches and timescales differ, the ultimate goal of both groups is to sustain supplies of mineral resources.

Both groups employ common tools, among them maps, images, computers, and basic field hardware and attire (vehicle-hammer-hand lens-compass-GPS-backpack). Common strategies include geologic mapping and geochemical and geophysical data collection. Both groups have developed immunity to roadhouse fare, rustic accommodations, and unwinnable arguments. All said, these tools, strategies, and tolerances obtain similar information for both groups.

To the contrary, each group also uses specialized tools and strategies that are infrequently shared. Tools and strategies nearly unique to exploration and mine geology are drill rigs and drilling programs; acquisition of physical samples of the subsurface is indispensable to mineral resource identification and reserve definition. Tools and strategies largely in the domain of academic and research geology are the beamed instruments (e.g., electron and ion microprobes) and their close associates mass spectrometers, which essentially produce micro-scale geodata. One tired distinction between these tool sets and strategies is perceived cost differential; another is application. In reality costs of drilling

programs and beam analyses (capital and operating) are not dissimilar, and the data produced by each differ mostly in spatial and temporal detail.

Given a future of concealed mineral resources, broader engagement of both groups is essential. To improve exploration efficiency for unexposed deposits and to maximize resource recovery, the subtle characteristics of mineral deposits, and magmas and fluids that formed them, need to be determined at increasingly finer scales. Exploration and mine geology needs more of the spatial and temporal detail that can be provided by the academic and research geologic community. The academic/research community needs more access to real subsurface samples and data, and collaboration in the interpretation of those data, to improve teaching, assessments, and assessment techniques. Each group needs better access to a fuller array of tools and strategies. Each group needs to open its respective toolbox wider, and to share the contents collaboratively.

## November monthly dinner meeting presentation

At the November 19 dinner meeting Chris Henry of the Nevada Bureau of Mines and Geology will relate early Tertiary topography to structure in the northern Great Basin, and fit Carlin-type Au deposits among uplands, valleys, faults, and faulty paradigms.

## Future dinner meeting presentations

Two thousand eleven dinner meeting presentations will depart Carlin, trends, and Au for a wider world of resources. In January, Alan Coyner will renew geothermal energy. In February, Fred Graybeal will deal with deposits and metallogeny of that other precious metal, Ag. In March, Lisa Stillings will dispense the truth (no lie) about Li. In April, Eric Seedorff will describe deposits and economics of that bellwether metal, Cu.

‘Til next **MonTh**,

Peter Vikre

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***"The Nevada Mineral Exploration Coalition is the voice of Exploration in Nevada politics.***

We need your help to insure that the Exploration Community is not ignored again.

Go the [www.nvmec.org](http://www.nvmec.org) and download a membership form - be part of the solution!"



***Thanks to Ruen Drilling Incorporated  
For Hosting the October Meeting***

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# *GSN November 19, 2010 Membership Meeting*

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## **Reservations Are Required - Please Cancel if You Are Unable to Attend**

GSN CAN NO LONGER GUARANTEE DINNER SEATING WITHOUT ADVANCE RESERVATIONS.  
Please call 775-323-3500, Fax 775-323-3599 or e-mail [gsn@gsnv.org](mailto:gsn@gsnv.org) by 1:00 PM, Wednesday, November 17, 2010.  
Social Hour: 6:00 PM – Dinner: 7:00 PM – Speaker: 8:00 PM  
**\$17.00 per person**

Location: Elks Lodge, 597 Kumle Lane, Reno, NV  
Directions: across (W) from the Reno-Sparks Convention Center  
(S. Virginia Street, behind the Les Schwab Tire Center)

**Prepaid dinner reservations will only be accepted for the current monthly meeting.  
Cancellations must be received two days before the meeting in order for your money to be refunded.**  
Download the prepayment form from the GSN website: <http://www.gsnv.org/membership.html>

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## **Eocene to Early Miocene Geology and Paleotopography of the Great Basin (Nevadaplano) and Implications for Carlin-Type Au Deposits**

Speaker: Chris Henry  
Nevada Bureau of Mines and Geology, University of Nevada, Reno, NV 89557  
[chenry@unr.edu](mailto:chenry@unr.edu)

### **Abstract**

Although voluminous Eocene magmatism is commonly favored as a primary driving mechanism to generate Carlin-type Au deposits (CTDs), the contribution of extension remains an important question. CTDs formed in the same place and time as Eocene magmatism. They also formed in areas of significant extension, but the timing and amount of extension and, therefore, influence on CTDs are uncertain. One way to analyze the history of extension is to look at topography as an indicator of structure through time.

The distribution of Cenozoic ash-flow tuffs in the Great Basin demonstrates that the region was a “high” mountain range or plateau during much of the Cenozoic. Major rivers drained the region, with a north-south paleodivide through central Nevada approximately coincident with the Carlin Trend and other major areas of CTDs. The importance of this Great Basin mountain range is demonstrated by its being assigned a prestigious new buzzword “Nevadaplano” by analogy to the Altiplano of the Andes. West of the divide, large volume (several hundred to >1000 km<sup>3</sup>), 34-23 Ma tuffs that erupted from calderas in central Nevada flowed down, were deposited, and are preserved in deep (as much as 1.2 km) but wide (8–10 km), westward-draining paleovalleys separated by low-relief interfluvies. The paleovalleys connected to the famed auriferous gravel channels in the Sierra Nevada and drained to the Pacific Ocean, in the Great Valley at the time. East of the divide, Eocene (~45-40 Ma) ash-flow tuffs that erupted from calderas in northeastern Nevada, e.g., near Tuscarora, flowed eastward to the Uinta Basin in Utah. Northeastern Nevada had to be topographically higher than the basin at the time. Combined with other interpreted paleodrainages in Idaho, California, Utah, Arizona, and Sonora, this system of paleodrainages indicates a mountain range that extended at least from Idaho into northwestern Mexico.

Individual tuffs show highly asymmetric, elliptical distributions, skewed downstream west or east of their source calderas, because they flowed downhill in the obviously downstream-sloping paleovalleys. Several tuffs flowed as much as 200 km from caldera sources in the Toquima Range in central Nevada to the present western foothills of the Sierra Nevada. The tuffs were able to flow these great distances because they were channelized, flowed downhill, did not disperse, and did not mix with air as much as would tuffs that spread more radially.

Tuff ages and distribution, and continuity of paleovalleys demonstrate that (1) the paleoriver systems existed at least as early as 45 Ma, (2) the Sierra Nevada was a lower, westward-sloping ramp to the Nevadaplano during most of the Cenozoic, (3) any faulting in northeastern Nevada before ~40 Ma, in north-central Nevada before ~34 Ma, and in western Nevada before ~23 Ma was insufficient to disrupt the paleodrainages other than temporarily, and, therefore, (4) extension was minor or absent at the time and place that CTDs formed. Minor faulting may have been important by providing fracture pathways for hydrothermal fluids, but major extension as a driving mechanism for CTDs is unlikely.

# Thank you to our generous donors

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# ROCK TALK

A new section in the GSN Newsletter for members.

The GSN Newsletter is adding an editorial section called "Rock Talk" on a trial basis. The purpose of the section is to provide a forum for GSN members to express opinions and geological experiences that would be of interest to members. Topics should be related to geology, mining, and exploration, and could include travel and field experiences or other items of interest to geologists.

The decision to publish letters will be made by the Executive Committee. Letters are limited to 250 words and interesting photos will also be considered for publication. The writer must include his/her name, telephone number, and email address. Letters may be edited for clarity. Letters should be submitted to [gsn@gsnv.org](mailto:gsn@gsnv.org) with "Rock Talk" in the subject line. They can also be mailed or FAXED to the GSN office.

GSN hopes that this new section will provide a forum for communicating interesting items to the more than 1,000 members worldwide.



## ELKO CHAPTER NOVEMBER MEETING SPONSOR



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# FACES OF GSN

*Dan Kappes - Reno, Nevada*

Kappes, Cassiday & Associates

Dan Kappes came to Reno in 1970. During the next couple of years he was working on his master's degree in mining engineering from Mackay, and also he and local exploration geologist Bruce Miller formed Miller Kappes Company with the idea of mining and processing zinc oxide ores. The Dean of Mackay at that time, Art Baker, agreed to let them use a corner of the met lab in return for Dan's becoming a Teaching Assistant in the met department. Many local Precambrian geologists (referring to their age, not their specialty) remember that those were interesting times. The graduate school contingent in the early 1970's was mostly geologists and Dan became part of the group, although always denying responsibility for their most socially extreme activities.



*Dan Kappes views the 70 gpt (gold) Guapinol vein, Tambor Mine, Guatemala.*

Heap leaching of gold had just been "invented", and Dan and Bruce were partially funding the company with consulting work. The company evolved from early heap leach consulting projects into a metallurgical consulting firm. Mike Cassiday (a metallurgical engineer from Mackay) took over Bruce's interest in 1976. Since then it has been Kappes, Cassiday & Associates.

Dan was raised in Cincinnati, Ohio, where mining does not exist. But there were plenty of fossils so he became interested in geology and set his sights on the Colorado School of Mines. Once there, the lure of explosives caused him to change options and he received an Engineer of Mines degree in 1966. Prior to coming to Nevada he worked as a mining engineer at underground mines in Pennsylvania, Illinois, Oklahoma and California. Although his master's degree is also in mining engineering, he describes himself as a metallurgist with a strong mining and geological inclination. He is a registered Professional Mining and Metallurgical Engineer in Nevada, and was named Alumnus of the Year at Mackay in 1995.

Kappes, Cassiday & Associates ([www.kcareno.com](http://www.kcareno.com)) pioneered many of the techniques now employed in heap leaching, and for the past several years has expanded into the design of agitated leach plants and other metallurgical processes. The firm employs 70 people in Reno, 13 in Chihuahua, Mexico, and two in Perth, Australia. It generally begins working on a project during the exploration phase with lab testing, continues through engineering and financial studies, and often continues the process with a full contract to build and start up the production facilities.

Although the company works around the world, Dan likes Reno as a base because KCA's introduction to projects is usually via exploration personnel, and Reno probably has the world's highest concentration of gold exploration activity. While Dan is not planning to retire in the near future, he wouldn't mind slowing down and he is bit perplexed that the lofty precious metals prices make it very difficult to do so.



## 2010 FALL FIELD TRIP RECAP

The fall field trip was a success with good fun, good food, and awesome geology. Many thanks to Barrick Gold Corporation for allowing **GSN** to visit Cortez Hills, Ruby Hill and Bald Mountain mines. I would like to especially thank Roger Bond, Will Shumway and the Cortez Hills geologic staff; Warren Rehn, Craig Mach and the Ruby Hill geologic staff; Nancy Richter and the Bald Mountain geologic staff; and Gary Edmondo of Timberline Resources and the Windfall and Lookout Mountain project geologic staff.

Field trippers were full of merriment from Reno to Elko on the first day. A fantastic dinner and drinks, sponsored by **Timberline Drilling Inc.** and **Legend Inc.**, and thought provoking presentations were delivered at the Star Hotel. The bravest amongst the group did find their way to the Stray Dog for an undisclosed number of cleansing ales.

On Saturday, all made the 7 am bus call and breakfast, sponsored by **T&T Exploration LLC.** At 7am, there was not a lot of merriment on the bus; however, as the bus arrived at the Cortez Hills check point at control one, the excitement was evident as everyone piled out of the bus.



### **GSN at Cortez Hills pit overview**

After a safety review and test -- which almost everyone passed -- the bus chugged off to the pit where lots of questions and many answers were noted. Samples collected from the blast pattern at the bottom of the pit show the breccias ore runs 0.196 opt gold. The last stop, the high-grade stock pile, was like a real gold rush off the bus. The lunch stop, sponsored by **Kappes, Cassidy & Associates**, was located at Garden Gate Pass atop newly located claims. The bus was a hen house of speculation. At Ruby Hill, the group received an overview of the history and geology of the Ruby Hill district. After the many excellent questions and answers, the group went to an overview of the pit at the Cambro-Ordovician contact.

After the Cortez Hills and Ruby Hill tours, merriment was put back on the bus as we traveled to the Windfall mine. Gary Edmondo gave an overview of the geology.



### **Gary Edmondo presenting at the Windfall project**

Drinks and an excellent and very delicious dinner were served at the Owl Club. The drinks and dinner were sponsored by **ALS Minerals** and **AMEC.**

Craig Mach and Warren Rehn presented the geology for Ruby Hill and Bald Mountain mine. Gary Edmondo gave an overview of Timberline's exploration programs at Windfall and Lookout Mountain.

On Sunday, almost everyone made the 7am bus call, and again the "merriment" was taken off the bus for the Bald Mountain mine tour.

After a safety refresher on the mine site, the bus crept up the haul road through the Top and Sage flat mining area and down the other side into Mooney Basin and the Saga pit. The group walked to the bottom of the pit where the Bald Mountain mine staff had placed rocks with viewpoints showing the various breccias and karst features in the pit. Lunch was back on Sage Flats near the Top pit and sponsored by **CGS Inc.**

Once safely outside the Bald Mountain mine gate, several volunteers were able to get merriment back aboard the bus. A quick stop was made in Eureka to drop off a few field trippers that had left cars and to pick up those who didn't make the morning bus! The trip back to Reno was merry but uneventful as expected. The group arrived back in Reno on schedule at 7:30pm.

The field trip guide book was made very heavy by the excellent graphics sponsored by **Great Basin GIS (Joe Laravie).**

Thanks to all who helped keep the trip fun and safe. Special thanks to Dave Shaddrick and Radu Conelea for helping me purchase plenty of "merriment" from COSTCO.

# Field Trip Sponsors

## Dinners

Friday, October 1 – The Star



Saturday, October 2 – The Owl Club



## Cocktails

Friday, October 1 – The Star



Saturday, October 2 – The Owl Club



## Lunches

Saturday, October 2

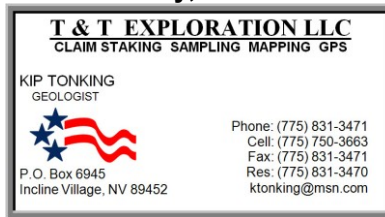


Sunday, October 3

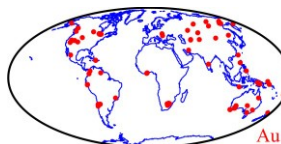


## Breakfast

Saturday, October 2



## Graphics



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

# Thanks to the GSN Members!!!

The generosity of GSN members in sponsoring student activities including field trips, memberships, scholarships, and dinners at GSN meetings is greatly appreciated by me and all Mackay School of Mines students. I went on the GSN 2010 Fall Field Trip to Cortez Hills, Ruby Hill, Lookout Mountain, and Bald Mountain. We enjoyed interesting presentations at The Star in Elko and the Owl Club in Eureka by Roger Bond, UNR alum Wilson Shumway, Gary Edmondo, Craig Mach, and Warren Rehn. We met new and interesting people and enjoyed beautiful weather and scenery. Special thanks to Bill Howald for organizing the trip, comic relief and stopping the bus for me in Eureka! I'm looking forward to future GSN field trips and I recommend you join us.

Ronald E. Starr  
Geosciences Engineering Grad Student  
Mackay School of Mines



Shaddrick, can't you read the itty bitty keep out sign? But where's the rocket? Atlas Copco Pit Viper 235 sans through-the-deck rocket sampler.



So that's 1.5 opt gold. But where's the collapse breccia?  
Cortez Hills Gold Mine.



A gold vein runs through it.  
Bald Mountain Gold Mine.



## Upcoming Events

- Nov. 8  
Monday**      **Northern Nevada SME Meeting**  
**Speaker: Mel Torrie, President and CEO Autonomous Solutions, Inc.**  
**Presentation Title:** "Autonomous Vehicle Technology in Mining: How It Works, How It's Applied, & When It's Coming"  
For reservations contact Neville Rhoden at [neville.rhoden@gmail.com](mailto:neville.rhoden@gmail.com)  
**Location:** Circus-Circus (Mandalay Room in the Convention) Social Hour begins at 6:00PM, Dinner starts at 6.45PM, Technical Talk begins at 7:30 PM. Members \$22/person and Non-Members \$25/person payable at the door  
For additional information, please see SME's website: [www.smennv.org](http://www.smennv.org)
- Nov 19  
Wednesday**      The **GSN Board of Directors** meeting will be at 4:00 PM at the Martin Hotel, 94 West Railroad Street, Winnemucca.
- Dec 5-10  
Sunday -  
Monday**      **NWMA Annual Meeting, Our Future Is In Today's Mines**  
Spokane, WA  
Website: [www.nwma.org](http://www.nwma.org) Email: [nwma\\_info@nwma.org](mailto:nwma_info@nwma.org)
- Dec 14  
Tuesday**      **21<sup>st</sup> AIPG Exploration Roundup**  
The 21<sup>st</sup> Annual AIPG Exploration Roundup will be held December 14, 2010 at the Ramada Inn at 6<sup>th</sup> Street and Wells, beginning at 6:00 PM. Boart Longyear will host the bar, Hydrogeologic (Mark Stock) is donating three crystal specimens for auction to support UNR students and the program will feature eight to ten speakers.  
For reservations contact Kel Buchanan at HB Engineering, 786-4515 or [summitcrk@aol.com](mailto:summitcrk@aol.com).
- 

## GSN December Meeting SILENT AUCTION & RAFFLE ITEMS NEEDED!!

It's time to think about donating items for the Geological Society of Nevada Foundation's fundraiser "Rock Raffle and Silent Auction" to be held at our annual Christmas meeting on December 15. We are seeking donation of any items suitable for raffle or silent auction: gift baskets, attractive rock or mineral samples, gems or gemstones, jewelry, wine or other spirits, logo items, geological equipment or publications, commemorative coins, GOLD, or any geology or mining-related items will be gratefully accepted.

Raffle proceeds support GSN Foundation's educational projects, which include grants to Nevada K-12 classes for transportation on earth science related field trips, scholarships to UNR and UNLV geology students, grants to the UNR DeLaMare Library, and grants for geologic mapping in Nevada.

Donors will have their names displayed on signs at the event as well as having their names listed in the January newsletter. The GSN Foundation is a 501(c)(3) public charity, tax ID # 88-044 7867.

Please send donated items to DD LaPointe or Rachel Dolbier at the address listed below, or call to arrange pick-up of donated items if you are in the Reno-Sparks-Carson City area. We need to have all items in hand by Monday, December 6, 2010 in order to prepare labels and make bid sheets.

Thank you for your support!

**D.D. LaPointe**  
GSN Foundation Trustee  
Nevada Bureau of Mines and Geology/MS178  
University of Nevada, Reno  
Reno, NV, 89557-0178

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**Rachel Dolbier**  
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# GSN Winnemucca Chapter Meeting November 10, 2010

## “The Iron Oxide-Copper-Gold (IOCG) Deposits of Pumpkin Hollow, Yerington, Nevada”

Hank Ohlin and Gregory McN. French  
Nevada Copper Corp., Yerington, Nevada

### ABSTRACT

Large high grade chalcopyrite-magnetite skarns are located within the Pumpkin Hollow area of the Yerington copper district. The Pumpkin Hollow deposits are blind, a halo of hornfels and un-mineralized skarn are the only surface expressions. The deposits were originally discovered in 1959 by US Steel Corp. using airborne magnetics. Follow-up magnetic surveys and drilling delineated several magnetite-rich skarn bodies, with greater than 40% iron, hosted by Mesozoic sedimentary and igneous rocks. Later work by Anaconda and other companies outlined copper-rich areas within the system with intercepted grades up to 20 % copper. A recently completed resource study at a 0.2% copper cutoff reported 7.9 billion pounds of copper, 1.2 million ounces of gold, and 57 million ounces of silver. Iron resources at a 24% iron cutoff total 130 million tons averaging 36% iron. The total copper mineral inventory for the district, including present resources and past production, exceeds 20 billion pounds.

In 2006, Nevada Copper embarked on a two-year drill program to better define the internal grade and thickness of mineralization, as well as test extensions into areas of limited or no previous drilling. Lithologic, alteration and assay data from this drilling combined with re-analysis of old drill data has defined manto-like ore bodies and breccia-hosted controls for high grade mineralization. Sediments of the Gardnerville Formation have been metamorphosed to pyroxene-garnet hornfels and later veined and replaced by epidote-garnet-actinolite-calcite skarn accompanied by chalcopyrite, pyrite, magnetite, and pyrrhotite. High grades of copper are found as chalcopyrite filled fractures in skarn breccia. Skarn mineralization within the Mason Valley Limestone follows the contact of a large sill of granodiorite endoskarn. Fine-grain massive magnetite mineralization replaces marble and extends hundreds of feet into underlying calcic endoskarn. Sulfides are disseminated throughout the magnetite and are particularly concentrated; in strata-bound skarn-breccia zones, at the endoskarn-marble contact, and at the front between marble and magnetite. Local late stage talc and extensive chlorite + calcite + pyrite veining overprints the entire system. The associated intrusive bodies, sills and dikes, are the same calc-alkaline suite present in the Yerington Batholith porphyry deposits. Strong calcic alteration of the main stage granodiorite is widespread with secondary albite and potassium feldspar present together with the same skarn assemblage seen in the sedimentary host rocks.

Post-mineral geologic events include regional folding, Jurassic and Cretaceous plutonism, and the deposition of a thick sequence of Oligocene ignimbrites. Great Basin extension has resulted in district-wide low-angle normal faults and westward rotation of pre-Miocene rocks. The Pumpkin Hollow deposits are structurally deeper than the known porphyry and related skarn deposits of the district. The great volume of magnetite mineralization of the Pumpkin Hollow skarns is typical of IOCG deposits. The district and deposit geology indicates the Pumpkin Hollow IOCG deposits are porphyry-related but formed at a deeper level than the other known copper deposits in the district.

Beginning fall 2009, Nevada Copper commenced a program to upgrade resource classifications and collect geotechnical and hydrogeological data needed to support the Definitive Feasibility. In the process several new zones of mineralization have been discovered. The company is currently permitting an Advanced Exploration Decline to access the deeper high grade mineralization. It is expected the permits will be approved early 2011.

**Thanks to Boart Longyear Drilling Services for  
Sponsoring the Winnemucca Chapter's  
October Meeting**

### WINNEMUCCA CHAPTER NOVEMBER MEETING SPONSORS

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# Activity Update

Mike Brady, September 2010

Nevada

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

Barrick Gold Corp. announced that 2 of its workers at the Meikle Mine were killed in a shaft accident. (reserve = 6,923,000 tons @ 0.368 opt Au proven+probable) *M.J.*: August 20

Bravada Gold Corp. and Fortune River Resource Corp. announced that they would merge on a 2.0 shares Fortune River/1.0 share Bravada exchange basis. (resource @ Wind Mountain = 33,700,000 tons @ 0.012 opt Au measured+indicated) *Press Release*: August 25

Fronteer Gold Corp. announced that recent drill results at the Northumberland Project include 33.53 meters @ 0.174 opt Au, 0.34 opt Ag (NUG05) and 8.63 meters @ 0.129 opt Au, 0.37 opt Ag (FNU38). (resource = 40,169,000 tons @ 0.056 opt Au, 0.23 opt Ag indicated) *Press Release*: September 8

Great Basin Gold Ltd. announced that based on recent drill results at the Hollister Mine, resources aggregate 371,350 tons @ 2.160 opt Au, 18.1 opt Ag measured; 750,000 tons @ 0.881 opt Au, 6.5 opt Ag indicated and 1,040,000 tons @ 0.590 opt Au, 13.8 opt Ag inferred. (was 1,111,000 tons @ 1.172 opt Au, 8.63 opt Ag measured+indicated and 1,033,100 tons @ 1.346 opt Au, 2.73 opt Ag inferred) *Press Release*: September 9

International Minerals Corp. announced that recent drill results at the Goldfield Main Project include 620-780 feet @ 0.050 opt Au (10-048); 25-130 feet @ 0.076 opt Au (10-049); 555-600 feet @ 0.026 opt Au (10-050) and 540-670 feet @ 0.032 opt Au (10-051). (resource = 6,600,000 tons @ 0.035 opt Au indicated) *Press Release*: August 25

Yukon-Nevada Gold Corp. announced that recent drill results at the Jerritt Canyon/Smith Project include 537-552 feet @ 0.214 opt Au (SMI-LX-750); 576-599 feet @ 0.324 opt Au (SMI-LX-750) and 627-635 feet @ 0.764 opt Au (SMI-LX-750). (reserve = 3,155,000 tons @ 0.027 opt Au proven+probable) *Press Release*: September 7

Fronteer Gold Corp. announced that it offered to acquire AuEx Ventures Inc. through a 1.0 share of AuEx/ 0.645 share + \$0.66/share of Fronteer exchange basis for a total value of \$280,800,000. (resource @ Long Canyon = 13,464,000 tons @ 0.050 opt Au measured+indicated) *Press Release*: August 30

Solitario Exploration + Royalty Corp. announced that it acquired an option to earn an 80% interest in the Mt. Hamilton Property from Ely Gold and Minerals Inc. for \$2,750,000, 300,000 shares and \$300,000/year advance royalty payments. (resource @ Centennial = 7,700,000 tons @ 0.035 opt Au inferred) *Press Release*: August 26

U.S. Gold Corp. announced that recent drill results at the Gold Bar Project include 400-455 feet @ 0.024 opt Au (GB143); 595-620 feet @ 0.023 opt Au (GB144); 165-180 feet @ 0.030 opt Au (GB145) and 125-185 feet @ 0.020 opt Au (GB146). (resource = 36,850,000 tons @ 0.026 opt Au measured+indicated) *Press Release*: September 13

Nevada Sunrise Gold Corp. announced that it acquired an option to earn a 100% interest in the Pinnacle Property from Nevada Sunrise LLC. for \$210,000 and \$300,000 in exploration expenditures over 3 years. *Press Release*: September 2

Nevada Copper Corp. announced that recent drill results at the Pumpkin Hollow/North Project include 344-349 meters @ 0.36% Cu, 0.004 opt Au (NC10-51); 157.0-190.5 meters @ 1.96% Cu, 0.005 opt Au (NC10-59); 67.0-73.1 meters @ 1.02% Cu, 0.001 opt Au (NC10-60) and 210.3-439.4 meters @ 0.59% Cu, 0.001 opt Au (NC10-62). *Press Release*: September 8

Midway Gold Corp. announced that recent drill results at the Spring Valley Project include 1,222-1,275 feet @ 0.014 opt Au (SV10-476C); 535-615 feet @ 0.018 opt Au (SV10-477); 411.6-422.4 meters @ 0.033 opt Au (SV10-478C) and 653-663 feet @ 0.015 opt Au (SV10-479C). (resource = 87,750,000 tons @ 0.021 opt Au inferred) *Press Release*: August 26

Harvest Gold Corp. announced that recent drill results at the Rosebud Project include 13.7-16.8 meters @ 0.034 opt Au (HGR-9); 19.8-32.0 meters @ 0.053 opt Au (HGR-10); 62.5-117.3 meters @ 0.008 opt Au (HGR-11) and 7.6-22.9 meters @ 0.008 opt Au (HGR-12). *Press Release*: September 1

Crown Minerals Inc. and Gold Summit Corp. announced that they would merge on a 1.0 share Gold Summit/1.65 shares Crown exchange basis. *Press Release*: August 24

Golden Phoenix Minerals Inc. announced that it acquired an option to earn an 80% interest in the Coyote Fault Property from Mhakari Gold Inc. for undisclosed terms. *Press Release*: August 26

Allied Nevada Gold Corp. announced that recent drill results at the Hycroft/North Brimstone Project include 187-223 meters @ 0.074 opt Au, 1.02 opt Ag (H10R-3439); 172-206 meters @ 0.041 opt Au, 0.64 opt Ag (H10R-3986); 162-212 meters @ 0.017 opt Au, 0.73 opt Ag (H10R-3988) and 198-244 meters @ 0.016 opt Au, 0.47 opt Ag (H10R-3991). (resource = 510,918,000 tons @ 0.014 opt Au, 0.36 opt Ag measured+indicated) *Press Release*: September 9

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Each month the GSN Newsletter features a member in "Faces of GSN". Please consider nominating a colleague for this highlight by submitting a biographic write-up and an appropriate photograph of the nominee to Kathy at the GSN Office [gsm@gsnv.org](mailto:gsm@gsnv.org).

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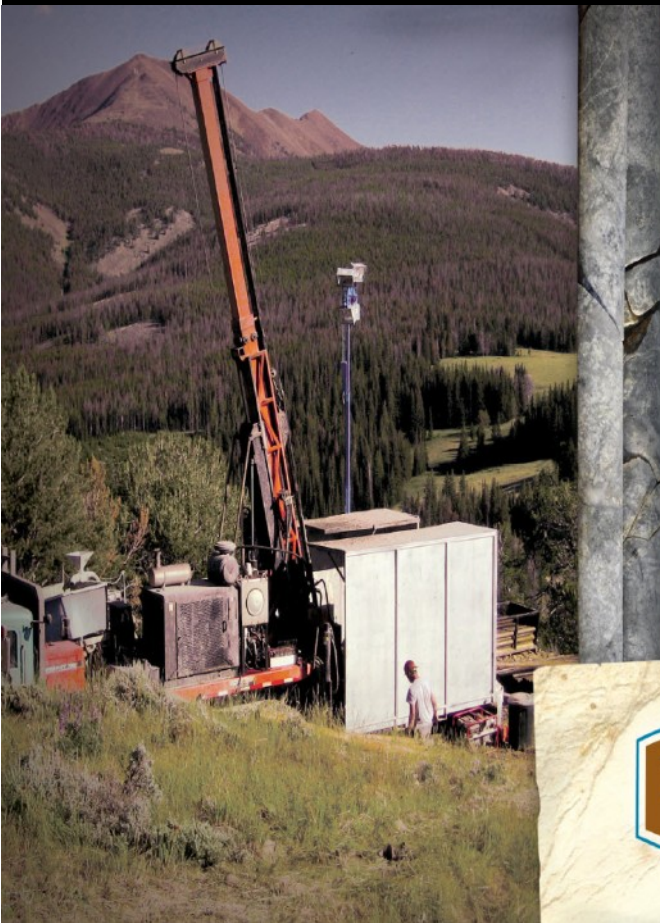


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**Corporate Office**  
1500 Glendale Avenue  
Sparks, NV USA 89431-5902  
Telephone: (775) 356-0606  
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2320 Last Chance Road  
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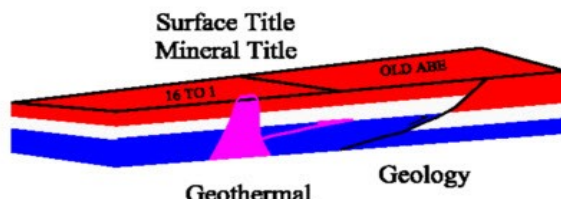
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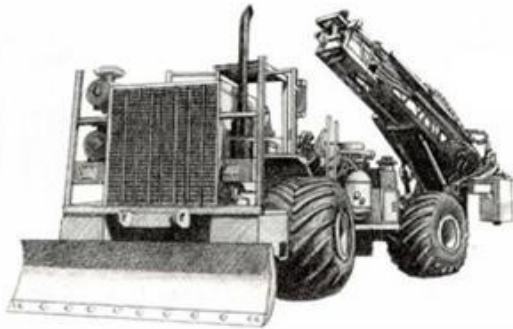


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