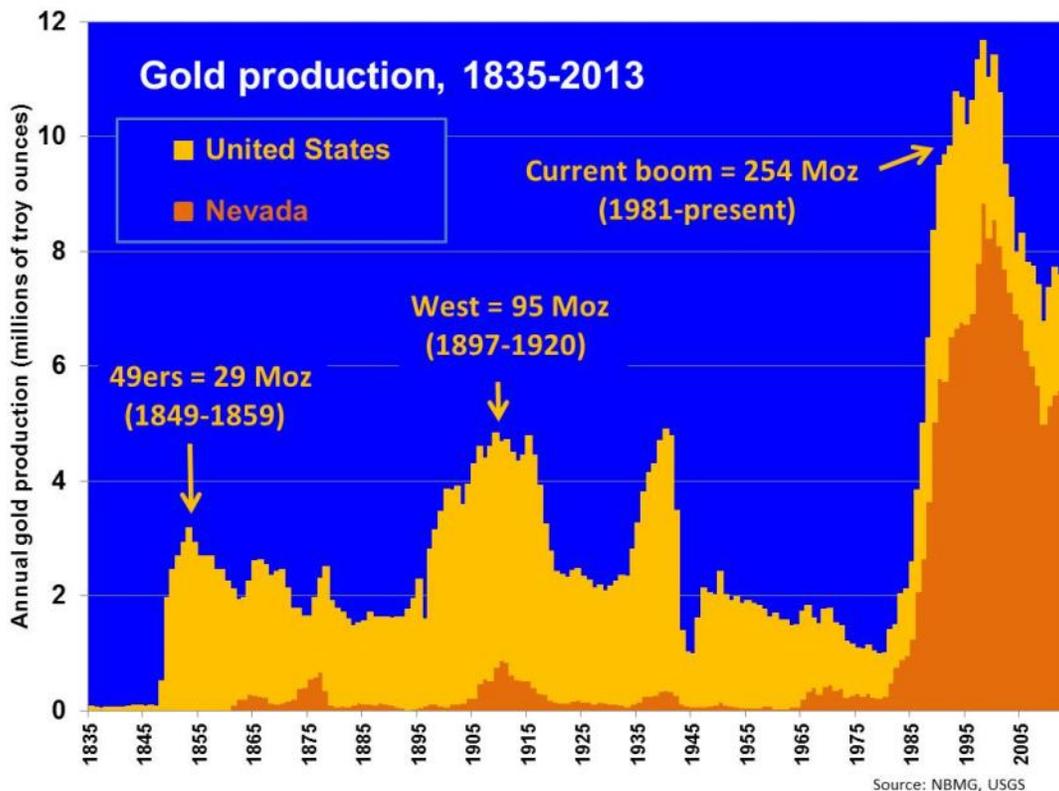




**FROM THE PRESIDENT, OCTOBER 2014**  
**GSN's Reasons Why Nevada is a Great Place to Explore**  
**Jon Price, G.S.N. President 2014-2015**

This month's talk by Jim Faulds, Nevada State Geologist, will highlight work by the Nevada Bureau of Mines and Geology, all of which is relevant to members of GSN – from geologic mapping and ore-deposit studies that are directly applicable to exploration and mining to geomorphic and geodetic investigations related to earthquake hazards. Jim is an expert on structural geology and tectonics. He will focus on his work on geothermal resources, particularly the structural settings that are most favorable for finding new reservoirs. You'll see parallels to the structural settings of hydrothermal ore deposits. Jim's talk will help demonstrate why Nevada is a great place for exploration.

Nevada continues to be the center of the biggest gold-mining boom in American history. As illustrated in this graph of historical US and Nevada production, the current boom far exceeds previous booms, including the 49ers' rush to California and the development of many gold districts in Nevada, Arizona, Montana, Colorado, Alaska, and other western states around the end of the 19<sup>th</sup> century and beginning of the 20<sup>th</sup> century. The current boom is bigger than previous ones in terms of longevity, peak production, and cumulative production. Given known reserves and recent discoveries, the boom will continue for many years.



Last month I mentioned a few other reasons for exploring in Nevada: no massive mudslides, malaria, crocodiles, ebola, cobras, grizzly bears, polar bears, desert death adders, or flying and driving thousands of kilometers to the nearest casino. As we approach the GSN 2015 symposium, where we will welcome geos from other parts of the world, let's expand the list: no permafrost, category-3-or-bigger hurricanes or tornados, or terrorist militias. On the even more positive side, Nevada's mining infrastructure is probably the best in the world, with operating companies eager to expand production; vendors adept at serving exploration geologists with permitting, drilling, assays, geophysical and geochemical surveys, and reclamation; consultants familiar with the local geology; UNR, UNLV, and GBC students glad to get experience as interns and new hires; excellent roads for year-round access in most places; thoroughly acceptable motels in nearly every town (except maybe Gabbs); and some great Basque restaurants. Please send me other items for our list of why Nevada is a great place to explore. (Continued on page 12)

**Thanks to BOART LONGYEAR**  
**For Hosting the GSN's SEPTEMBER 19th MEETING!**

# *GSN OCTOBER 17, 2014 Membership Meeting*

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

Please call 775-323-3500 or e-mail [gnsn@gsnv.org](mailto:gnsn@gsnv.org) by 4 p.m. on WEDNESDAY, OCT. 15, 2014.

Social Hour: 6:00 pm – Dinner: 7:00 pm – Speaker: 8:00 pm

**\$25.00 per person.** Location: Reno Elks Lodge, 597 Kumle Lane, Reno, Nevada

Directions: across (W) from the Reno-Sparks Convention Center (S. Virginia Street, behind the Les Schwab Tire Center)

---

## **Speaker James E. Faulds, State Geologist and Director of the Nevada Bureau of Mines & Geology, will be giving a two-part talk at the GSN's October 14th meeting**

**Title: Part 1. Nevada Bureau of Mines and Geology: Analyzing and Educating for Nevada's Future**

**Title: Part 2. Favorable Structural Settings of Active Geothermal Systems in the Great Basin Region: Implications for Fluid Flow, Normal Faulting Mechanisms, and Geothermal and Epithermal Mineral Exploration**

**James E. Faulds, State Geologist and Director of NBMG**

### **ABSTRACT:**

#### **Part 1. Nevada Bureau of Mines and Geology: Analyzing and Educating for Nevada's Future**

Nevada is richly endowed with natural resources and stunning landscapes, ranging from high alpine mountains to enchanting deserts. It has more mountain ranges, gold, and geothermal resources than any other state. It has some of the largest gold deposits in the world, and its vast geothermal potential could one day be harnessed to produce enormous quantities of electricity. Nevada owes its unique setting to its location within the Pacific-North American plate boundary, where tectonic stresses drive crustal blocks to slide past one another along major faults, akin and related to the San Andreas Fault in California, and also to crustal stretching in the horizontal dimension. These motions make Nevada literally the fastest growing state in the country, as the stretching adds new land at the rate of two acres every decade. Some models predict that the San Andreas fault will eventually shift inland in a few million years and make Nevada home, ultimately allowing the Gulf of California to grow northward and create beachfront property near Reno. All of this activity makes Nevada the third most seismically active state after California and Alaska, with a number of large M 7 earthquakes in our recent past. So large earthquakes are a looming natural hazard that Nevada will continue to face in the coming years.

Studies of Nevada's geology are therefore important for both public safety in its large dynamic cities (Las Vegas and Reno) and rural communities and to support economic development throughout the State, especially for its mining and renewable energy industries.

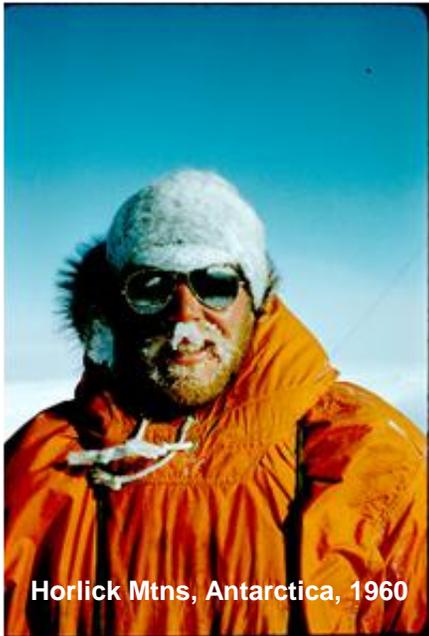
The Nevada Bureau of Mines and Geology is responsible for understanding Nevada's geology and landscapes, assessing its natural resources, and analyzing its earthquake potential and other natural hazards. NBMG is Nevada's state geological survey. Every state has a geological survey, with 1/3 of them residing at a major university. In Nevada, NBMG resides in the College of Science at the University of Nevada, Reno. The university relationship allows us to be intimately involved in both cutting edge research and education of the next generation of geoscience experts. (Cont. on page 6).

# “FACES OF GSN”

Larry L. Lackey  
Gardnerville, NV

I wonder how many times over the past fifty-five years or so I sat with another geologist on the tailgate of a truck eating lunch, marveling at the scenery, and commenting “**Can you believe we are getting paid for this**”? What a great profession when you wake up every morning eager to get to the office or into the field. For this I sincerely thank the geologists and staff I worked with for all these years. To this day I sincerely appreciate their friendship and look forward to their good company at every GSN meeting.

A serious interest in “geology” started while I was in Jr. College. I was on a work party at Camp Seabow, a Campfire Girls camp, in the Coast Range, west of Laytonville, CA. My three sisters were Campfire girls and my dad was in charge of work parties that opened and closed the camp. I was absolutely blown away by the variety of rocks and pebbles in the stream bed. I remember thinking “there has got to be a story behind all this”. That fall I enrolled in Geology 101.



I graduated from High School in Richmond in 1953 and attended Contra Costa Jr. College where I received my AA degree in 1957. I moved on to University of California-Berkeley in 1959 where I got a Bachelor’s degree in 1963. In High School and College I was an avid rock climber and a member of the Rock Climbing Section of the Sierra Club. In my second semester at CCJC my leg was crushed in a rock fall while attempting a first ascent of the north face of the Higher Cathedral Spire in Yosemite Valley. Following an extended recovery period I worked as a lab assistant at California Research Corporation from 1954 to 1963.

While attending college I managed to go on two Antarctic Expeditions; The 1960-61 “Horlick Mountains Expedition” and the 1962-63 “Mt. Weaver Expedition”, both in Queen Maud Land, Eastern Antarctica. These were four-man field parties and I was a field assistant. We mapped, sampled and measured the stratigraphy of Permian age, fossiliferous, coal-bearing sediments. It was exciting being the first to walk across the outcrops and find ledge after ledge with “Glossopteris” leaves, logs, branches and upright stumps with roots, a Permian forest in place? The Mt. Weaver camp was located on the edge of the polar plateau, 87° S, 180 miles from the South Pole. We were in the field 93 days, worked one day out of four, had an average temperature of -20°F, and daily winds of 20-50mph. We discovered and climbed the southernmost volcano in the world and stood on Mt. Howe, the earth’s southernmost peak. We proceeded further south to stand on the earth’s southernmost outcrop (a diabase sill). What profession is more fun than that?

Graduate school was at the University of Wyoming where I received a Master’s Degree in 1965. My thesis was mapping PreCambrian granites and metavolcanics in the Sierra Madre Mountains, southeastern Wyoming. Upon completion of my Masters I took a summer job with AMAX logging core at Bald Butte, a molybdenum project near Helena, MT. That summer’s work for Ora Rostad left little doubt that I wanted to be an economic geologist. However, I had committed to participate in a third Antarctic expedition, The 1965-66 “Ellsworth Nunatak Expedition” to Ellsworth Land at the base of the Antarctic Peninsula. This time I was one of six geologists working for the Univ. of Wisconsin’s Geophysical and Polar Research Center. We traveled by snowmobile some 800 miles, from mountain top to mountain top, mapping, sampling and surveying.

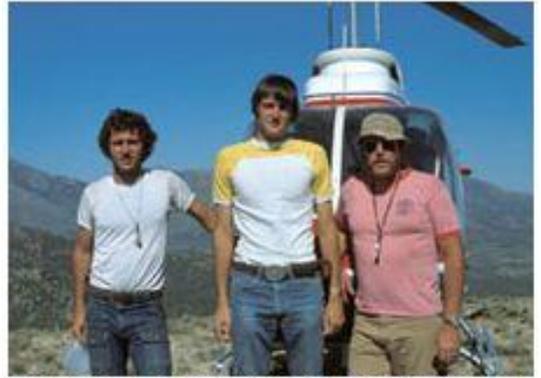
In the spring of 1966, after writing up my Antarctic work, I went to work for Bear Creek Mining Company in Spokane, WA. Doug Cook was the District Manager. Mentoring was common in those days and I worked under Clyde Weatherall in the Belt rocks of Montana, Dave Snyder in the ID-MT porphyry belt and Riz Bigelow in the Brooks Range, Alaska. It was a great time to be with a company like BCMC as they sent their geologists to numerous in-house workshops and training programs. For me, this included a six week program working underground at the Ozark Lead Mine in Missouri. BCMC had a major layoff in late 1971 and I moved to Denver to work for Mine Finders Inc.

Mine Finders was started by ex-AMAX hands, Frank Coolbaugh and Stewart Wallace, two real gentlemen. The Company was in a JV with Bethlehem Steel Corp., primarily looking for molybdenum. MFI had Majuba Hill in Nevada and picked up the New World District near Cooke City, MT. For the next two summers, I spent a lot of time with Bill Oriel who was mapping and running the drilling program. Ron Long and Mark Coolbaugh also worked with us that summer. A plunge in iron prices led Bethlehem Steel to terminate the JV in 1976. (Cont. page 5)

(Cont. from p. 4) Up to that time I had little experience in the Great Basin, so when Geoff Snow, Noranda Exploration Inc., offered me the Western District Manager position in Reno, I grabbed it. Greg Cox and Bob La-Marre were in the Reno office working on projects in the Mother Lode, CA. We acquired the Grey Eagle Copper Mine in northern California and Noranda Mining put the property into production in 1981. At that time 1,000,000 tons @ 0.2 opt gold was a deposit rather than a nice anomaly. Bill Oriel, Greg Cox and Pat Fahey ran the reconnaissance and drilling programs. We hired a lot of smart, young geologists. Education went both ways. One trip I will always remember was driving from Reno to Ely with Eric Seedorff. Eric talked for hours about skarns and skarn deposits.

I went to work for Inspiration Gold Inc. in 1984, where I was a full-time consultant responsible for exploration and acquisition opportunities in Nevada, California, Utah and western Oregon. We acquired and drilled Goldstrike, a property near St. George, Utah. Tenneco Minerals bought the property and put it into production several years later.

In 1987, Minorco and Inspiration formed Western Gold Exploration and Mining Company. Initially, I was the Western Regional Manager located in Reno and was then made U.S. Exploration Manager and moved to Golden, Colorado. As U.S. Manager, part of my job was to direct geological due diligence teams for Minorco's acquisition effort in the U.S. Minorco acquired Freeport MacMoRan Gold Company in 1991. Freeport Gold was renamed Independence Mining Company and WestGold was named "out of business".



Phil Gans, Eric Seedorff, and Larry Lackey with helicopter, molybdenum exploration program in eastern Nevada with Noranda in 1979



Larry and Hart Baitis, Costa Rica, 1992

Through my affiliation with WestGold, Dave Stevens, Independence Mining Co., offered me the position of Regional Vice President, Central America and Caribbean. This was my first exposure to International Exploration. I organized the start-up programs. We established a Mexican subsidiary with an office in Mexico City, formed and operated a joint venture with Phelps Dodge Mining Company in Costa Rica and evaluated mines and prospects in Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Jamaica, Nicaragua, Panama, and Puerto Rico. Francisco Crespo, Dave Ernst, Ray Threlkeld and Tom Doe were key to the programs.

After being laid off by Independence in late 1994, I tried my hand at consulting. My best consulting job was working for Don Ranta at Echo Bay Mining. Don sent me to the Philippines with John Hill to take a preliminary look at the King King copper-gold deposit on the island of Mindanao. That led to other evaluations of gold prospects throughout the Philippine Islands and in Indonesia. On one trip Paul Sargent, a Canadian geologist, and I flew to Balikpapan in Kalimantan (Borneo), and took a 200 mile boat ride up the Mahakam River to visit the Busang prospect with the infamous Michael de Guzman. That was before BreX announced their "first" million ounces of gold. Another time Paul and I flew from Mindanao to northern Luzon, a 900 mile helicopter trip. We visited gold mines and prospects along the way. A side benefit was a close fly-by of the active volcano Mayon and a trip into the steaming Pinatubo crater; Pinatubo had a massive eruption in June, 1991.

In August 1995, I took the job of Chief Geologist with MK Gold Company and moved to Salt Lake City, UT. I managed exploration and drilling programs in Nevada and evaluated properties in Panama, Nicaragua, Argentina, Australia, Bolivia, Brazil, Chile, Peru, Spain, and Russia. It was an interesting ten years working with G. Frank Joklik - only "tons & grade" got his full attention. Leucadia National Corporation, the owners, shut down MK Gold in 2005 after MK Gold acquired the Las Cruces copper deposit in Spain. I was 70 years old by then and thought it might be fun to pursue my interests in photography, quarter horses and easy living. My wife wanted to travel??? Along came 2008 and the 401K debacle - not good. Fortunately, my long-time friend Hart Baitis, talked me into doing a little geology on the side. We acquired a couple of projects and in 2011 formed BHLK LLC, with Bob Hawkins, and Joe Kircher. BHLK identifies, evaluates and acquires advanced-stage mining projects for well-funded private-equity groups and has a portfolio of properties.



Larry, 2011

My wife Joyce and I live in Gardnerville, NV, with our three quarter horses and two dogs. We try to make at least two trips a year, one to fish with Hart and Inga Baitis at their place on the Dearborn River, MT and another to some less exotic place. This year it is to Tanzania, Africa to photograph wildlife.

(Faults, cont. from page 3)

Although NBMG resides at UNR, we are a statewide agency that applies its expertise to all corners of the State, including the burgeoning city of Las Vegas in the south, the major gold resources of the northeast, and the earthquake hazards and geothermal resources of the west and northwest within and near the Reno-Carson City urban corridor. Thus, NBMG is relevant to nearly every Nevada citizen, and its work is making Nevada a safer and more attractive home for its people and industries.

## **Part 2. Favorable Structural Settings of Active Geothermal Systems in the Great Basin Region: Implications for Fluid Flow, Normal Faulting Mechanisms, and Geothermal and Epithermal Mineral Exploration**

Active amagmatic geothermal systems of the Great Basin, USA are used to generate electricity and have temperatures overlapping formation of some epithermal mineral deposits (up to and  $>200^{\circ}\text{C}$ ). We recently completed an inventory of structural settings of known geothermal systems (426 total) in the extensional Great Basin region. Of ~250 categorized fields, step-overs or relay ramps in normal fault zones are the most favorable setting, hosting ~32% of the systems. Such areas have overlapping fault strands, increased fracture density, and thus enhanced permeability. Other common settings include a) normal fault tips (25%), where horse-tailing generates closely-spaced faults and increased permeability; b) fault intersections (22%), where multiple minor faults typically connect major faults and fluids can flow readily through highly fractured, dilational quadrants; and c) accommodation zones (9%), where oppositely dipping normal fault systems intermesh in belts of multiple fault tips and intersections. 3D modeling indicates subvertical conduits of high fracture density in these settings. The primary segments of major faults only host ~1% of the geothermal fields. Quaternary faults lie within or near most fields.

The paucity of geothermal systems along primary fault segments may result from reduced permeability in thick clay gouge and periodic stress release in major earthquakes. Step-overs, terminations, intersections, and accommodation zones represent critically stressed areas, where fluid pathways more likely remain open in breccia-dominated fracture networks. Because stress is not relieved by major earthquakes, abundant microseismicity characterizes fault interaction areas, which precludes pervasive healing of fractures and thus facilitates fluid flow. Increased pore-pressure may also provide a positive feedback mechanism that promotes more frequent but lesser magnitude earthquakes. The association of some young ( $<5$  Ma) epithermal mineral deposits in normal fault footwalls (e.g. Florida Canyon, Wind Mountain, and Hycroft-Lewis) with active geothermal systems in the hanging walls suggests recurrent activity and/or longevity for some hydrothermal systems. These data are relevant to understanding the mechanics of normal faulting and in guiding both geothermal and mineral exploration. For example, conceptual structural models can greatly reduce the risks in geothermal drilling, particularly for blind or hidden geothermal systems, which probably comprise ~75% of the region's geothermal resources.

### **BIOGRAPHY:**

**Dr. James E. Faulds, NBMG Director-State Geologist / Professor, Nevada Bureau of Mines and Geology (NBMG), University of Nevada, Reno (UNR)**

Jim has been with NBMG since 1997, originally as a Research Professor and since 2012 as Director and State Geologist. He specializes in structural geology, tectonics, and geothermal systems. He has studied crustal deformation in many parts of the world, including several regions of the western U.S. and western Turkey. Much of his research has focused on how fault systems initiate and evolve through time. He has published widely on extensional and strike-slip tectonics and the structural controls on geothermal activity. For the past 10+ years, he has been analyzing geothermal systems and recently completed a catalogue of the structural settings of  $>400$  geothermal systems in the Great Basin region. His geothermal work included a one-year sabbatical fellowship from the Le Studium program in France that facilitated work in Turkey. His research has contributed to developing more sophisticated exploration strategies for geothermal systems. He has also taught courses in structural geology, tectonics, geothermal exploration, and field geology, including directing UNR's geology field camp for 5 years. He has served as advisor for about 25 graduate students. He also previously served as President of the Nevada Petroleum and Geothermal Society and is a Fellow with the Geological Society of America.

Jim earned his B.S. (with highest honors) at the University of Montana, his M.S. at the University of Arizona, and his Ph.D. at the University of New Mexico. Following completion of his education, he held postdoctoral research positions at the University of Nevada, Las Vegas and at the University of Southern California. He was on the faculty at the University of Iowa for several years before coming to UNR.





# Geological Society of Nevada

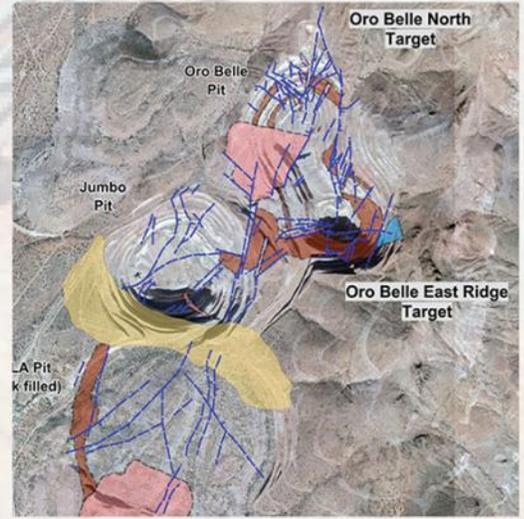
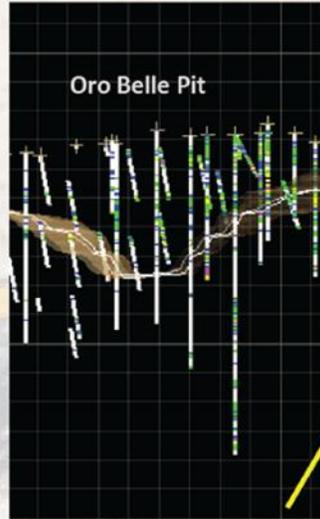
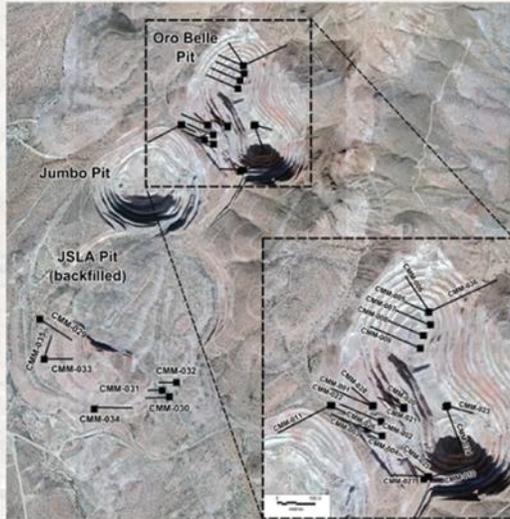


## Southern Nevada Chapter Meeting

**DON'T MISS OUR NEXT MEETING !!**

GSN is proud to present a talk by Peter Olander, VP of Exploration; Castle Mountain Mining Co.

## Geology and Mineralization at the Castle Mountain Mine, San Bernardino County, CA



**Abstract:** The Castle Mountain project, operated by Castle Mountain Mining Company (CMM:TSX.V) is located in the Hart Mining District in eastern San Bernardino County, CA. The property consists of 1249 acres of patented claims, and 6160 acres of unpatented lode and placer claims. Gold was discovered in the district in 1908, followed by several years of small-scale underground mining. Activity in the district was sparse until the early 1980s when exploration and development drilling identified an economic gold resource. Total recovery from 36 Mt of ore placed on the heap leach pad was 1.24 Moz gold and 400 Koz silver during 10 years of open pit mining (1991-2001) and 12 years of heap leaching (1991-2003). Mining was stopped due to sub-US\$300/oz gold, and reclamation efforts were well-advanced before the project was re-evaluated in early 2012.

The region is underlain by Precambrian gneiss, schist and granitics, and Mesozoic intrusives. The Castle Mountains, in which the mine occurs, consists of a series of Miocene volcanic flows, tuffs and high-level intrusives. Low sulfidation epithermal gold mineralization is associated with rhyolite flows, domes and clastic units cut by pre-, syn- and post-mineral normal faults. Principle structural trends are north-south and northeast, with a subordinate northwest trend. Offsets along these faults are small (<50meters). Age dating indicates the host rhyolite lithologies are 14-16 Ma, and alteration and mineralization occurred mid- to late during this time interval. All rock types contain varying amounts of mineralization, from structurally controlled in the units below the rhyolite package to structurally controlled and disseminated within the rhyolite package. Very fine-grained gold (<50 microns) occurs in the native state and in electrum, often associated with pyrite and iron-oxides. Quantities of base metals and indicator elements typical of epithermal gold-bearing systems are all very low.

In late 2013 a NI 43-101 compliant resource estimate was prepared for the company by RPA Inc. At a cut-off grade of 0.004 opt, gold resources are 182 M st @ 0.017 opt (3.15 Moz) in the Indicated category and 64 M st @ 0.017 opt (1.06 Moz) in the Inferred category.

The Mining and Conditional Use Permit and Reclamation Plan (Plan), issued by the County of San Bernardino in 1990, remains valid. The Plan was amended several times to accommodate expansion of previous mining operations, and most recently in 2013 to extend the Plan through the end of 2025. Currently operations by CMM include drilling (RC and core) and the preparation of a feasibility study (expected to be completed in Q1 2015).

The Meeting will be **October 2nd at 5:30pm** at the Las Vegas Natural History Museum (900 Las Vegas Blvd N.)

Free Food and refreshments.

**ALL ARE WELCOME!**

For more information contact Josh Bonde (Joshua.Bonde@unlv.edu)

## G.S.N. WINNEMUCCA CHAPTER SEPTEMBER MEETING

WEDNESDAY, OCTOBER 8, 2014

The Martin Hotel, 94 W. Railroad Street, Winnemucca, Nevada

6:00 p.m. - Refreshments; 6:30 p.m. - Appetizers; 7:00 p.m. - Talk begins

**DRINK SPONSOR:**

**DRIFT EXPLORATION DRILLING INC.**



**FOOD SPONSOR:**

**LEGARZA EXPLORATION**



---

## G.S.N. ELKO CHAPTER SEPTEMBER MEETING

THURSDAY, OCTOBER 16, 2014

Refreshments and appetizers @ 6:00 p.m., Talk @ 7:00 p.m.

Western Folklife Center, 501 Railroad Street, Elko, Nevada

Sponsor for the evening is: **MAJOR DRILLING**

***MAJOR***

*Partners on the Ground*

**NOTE THAT THE TITLE FOR BOTH THE ELKO & WINNEMUCCA MEETINGS IS THE SAME  
BUT THERE WILL BE TWO DIFFERENT PRESENTERS.**

Randy Hannink will speak in Winnemucca and Peter Shabestari will speak in Elko

**“The Discovery and Geology of the Western Flank Zone at the Kinsley  
Mountain Project, Elko County, Nevada”**

**Randy Hannink\*, Peter Shabestari, Vance Spalding, Ken Raabe, and Moira Smith**

*Pilot Gold (USA), Inc., 1031 Railroad St, Ste 110, Elko, NV 89801*

Modern gold exploration at Kinsley began in 1984 with the discovery of gold-bearing jasperoids by USMX. Hecla and Cominco drilled the project before Alta Gold acquired and mined it, producing approximately 135,000 ounces of gold hosted in the Cambrian Candland Shale from eight shallow open pits. Cominco and Alta also explored the western flank of the mountain, but the mineralized drill intercepts were un-oxidized and not amenable to heap leaching. Pilot Gold identified and acquired the Kinsley Project in 2011 due to the geological similarities to the Long Canyon deposit.

High-grade, sedimentary rock-hosted gold mineralization at the Western Flank Zone at Kinsley Mountain was discovered in late 2013 in PK91CA, which returned 8.53 g/t Au over 36.6m. Pilot Gold targeted the intersection of a NNE alignment of historic shallow drill intercepts along the western flank of the range and the extension of (Cont. page 9)

(Abstract Cont. from page 8)

the NW alignment of the Kinsley Mine historic pits, in a location 500m northwest of the mine. These holes tested a stratigraphic horizon below the previously exploited Candland Shale in the historic pits. Subsequent core and RC drilling in 2014 yielded additional high grade mineralization in the Western Flank Zone and tested other targets in this same stratigraphic horizon.

The Kinsley Range is underlain primarily by shelfal and platformal limestone, dolostone and shale ranging from the Middle Cambrian Geddes Limestone, Secret Canyon Shale, Clark Springs Limestone, Big Horse limestone and dolomite and Candland Shale; the Upper Cambrian Notch Peak Limestone and Notch Peak Dolomite; and the Ordovician Pogonip Group limestone and shale. The south end of the range is intruded by a small Tertiary stock with a hornfelsed aureole. Tertiary volcanic rocks are exposed in pediment areas on either side of the range. Strata were subject to ductile, contractional deformation in mid-Mesozoic time as well as Tertiary low- and high-angle normal faulting associated with regional extension. There are low-angle faults bounding most major lithological breaks and locally cutting out entire formations. High-angle faults strike north to northeast and are cut by northwest-trending faults.

Gold mineralization on the west side of the Kinsley Range is present in multiple horizons, including the Secret Canyon shale and Clark Springs limestone, portions of the Big Horse limestone, Candland shale, and Notch Peak limestone. The West Flank high-grade zone is hosted primarily within the Secret Canyon shale and the Clark Springs thin-bedded limestone and shale, 100-200m below historically-known mineralization in the Candland shale. The zone exhibits some control by NW- and NNE- striking, moderate- to high- angle structures. Highest grades are associated with variable silicification, very fine-grained disseminated and shear-hosted arsenical pyrite and late fracture-controlled stibnite, with local development of collapse breccia. The zone is locally strongly oxidized to limonite, hematite, jarosite, with minor scorodite.

The Western Flank discovery demonstrates the potential for high-grade mineralization in newly-recognized stratigraphic units beneath the historic mine area, with current exploration actively seeking more. Moreover, the Western Flank discovery reinforces the potential for sediment-hosted gold systems in the eastern Great Basin to host high-grade mineralization.

\*E-mail: [rhannink@pilotgold.com](mailto:rhannink@pilotgold.com)



**MARK YOUR CALENDARS NOW!!**

**MAY 14—24, 2015**

**[www.gsnv.org/2015-Symposium](http://www.gsnv.org/2015-Symposium)**

**John Ascuaga's Nugget Hotel**

**Reno/Sparks, Nevada**

**SCHEDULE:**

**May 14-16, 2015**

**Four Pre-Symposium Field Trips  
Five Pre-Symposium Short Courses**

**May 17, 2015—Sunday**

**GSN-SEG FORUM**

**"Carlin -Like Gold Deposits:**

**What Can We Learn Beyond the Known Trends?"**

**May 18-21, 2015**

**TECHNICAL PROGRAM—FOCUS TOPICS**

**Regional Geology & Metallogeny of the Great Basin  
Exploration Technology**

**Case Histories of Discoveries & Exploration Update**

**Intrusion-Related Cu-Au-Mo Deposits**

**Northeastern Nevada: The New Frontier**

**Advances in Carlin-Type Gold Deposits**

**Epithermal Deposits**

**Diversification: Looking Beyond Gold, Copper & Silver**

**May 21-24, 2015**

**Three Post-Symposium Field Trips**

**Six Post-Symposium Short Courses**

**Questions? Email us: [info@2015GSNsymposium.org](mailto:info@2015GSNsymposium.org)**

**Exhibitors Email: [exhibits@2015GSNsymposium.org](mailto:exhibits@2015GSNsymposium.org)**

**Want to be a Sponsor? Email: [dave@dshaddrick.com](mailto:dave@dshaddrick.com)**

**FOR MORE DETAILS SEE THE ATTACHED FLYER  
AND REGISTER NOW ONLINE @  
[www.gsnv.org/2015-Symposium](http://www.gsnv.org/2015-Symposium)**

## GSN Fall Field Trip: Castle Mountain Mine; Searchlight; Dinosaurs and Dunes at Valley of Fire

Friday Oct 24 through Sunday Oct 26, 2014

Our fall field trip will head to southern Nevada (and easternmost California). We will meet in Las Vegas on Friday afternoon. For those who choose to fly in, a van will meet participants at Las Vegas airport at 4 pm; please make flight arrangements to arrive by about 3:30 pm. We'll depart Las Vegas at 4:30 and head to Primm, Nevada for dinner and overnight.

Saturday will feature Castle Mountain Mine, just west of the Nevada/California line. Peter Olander (Castle Mountain Mining Co.) will lead us on a tour of this past-producing low-sulfidation epithermal gold deposit and showcase exploration results from renewed work of the past two years. Mineralization is hosted primarily in Miocene volcanic rocks but continues into underlying Precambrian gneiss and schist. The deposit here was first discovered as prospectors fanned out from the Searchlight district, and we will return to Nevada by way of Searchlight. Not to change the subject, but along the way we will drive through the most spectacular Joshua Tree forest I've seen.

Sunday will feature the structure, stratigraphy, sedimentology, and paleontology of the north shore of Lake Mead and the Valley of Fire. Josh Bonde (UNLV) will lead us through some of the same formations found in the Painted Desert and Petrified Forest of the Colorado Plateau, except here they show off distinctive Basin and Range structural drama. The Aztec Sandstone and Willow Tank Formation carry fossil dinosaur bones, eggs, and tracks. An optional 3-mile (round trip) hike can take us to Josh's field outcrops; for those who don't care to hike there will be an Equally Attractive Alternative, viewing outcrops closer to the vans. We will return to Las Vegas airport by 4:30 pm. For those who will fly out, please make reservations for 6 pm or later. **REGISTRATION FORM—PG. 11!!** (The NBMG is allowing GSN to publish excerpts of their publications in the Fall 2014 Field Trip Guidebook. See page 12 for full list.)



### Activity Update

Mike Brady, August 2014

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

#### NEVADA

Anova Metals Ltd. announced that it entered into a toll treatment agreement with Veris Gold Corp. to process up to 1,000 tonnes/day of ore from the Big Springs Project at the Jerritt Canyon Facility. (resource @ Big Springs = 5,403,000 tonnes @ 2.5 gpt Au measured+indicated) *Press Release: August 22*

Pathion Inc. announced that it purchased the BC Sugar (graphite), San Emidio (Li) and Fish Lake Valley (Li) properties from Altura Mining Ltd. for \$2,250,000 cash and 500,000 shares. *Press Release: August 21*

Rawhide Mining LLC. announced that it acquired an option to earn a 100% interest in the Buckskin Rawhide East Property from Engold Mining Corp. for \$10,000/year payments and \$500,000 in exploration expenditures over 3 years. *Press Release: August 21*

Chaparral Gold Corp. announced that the recent takeover offer received from Waterton Precious Metals Fund II expired. (resource @ Converse = 363,000,000 tonnes @ 0.50 gpt Au measured+indicated) *Press Release: August 1*

Starcore International Mines Ltd. announced that it offered to acquire American Consolidated Minerals Corp. through a 1.0 share Starcore/3.0 shares American Consolidated exchange basis. (resource @ Toyiabe = 4,520,000 tonnes @ 1.19 gpt Au indicated) *Press Release: August 20*

Golden Predator Mining Corp. announced that it acquired an option to earn a 100% interest in the Castle West Property from Platoro West Inc. for \$288,000 cash over 6 years followed

by additional annual payments. *Press Release: August 25*

Walker River Resources Corp. announced that it terminated its interest in the Fondaway Canyon Property of Hale Capital Partners due to title discrepancies. (resource = 355,000 tonnes @ 14.61 gpt Au indicated) *Press Release: August 25*

Scorpio Gold Corp.(70%) announced that recent drill results at the Mineral Ridge/Bluelite Project include 68.58-76.2 meters @ 1.01 gpt Au (MR14-880); 12.19-15.24 meters @ 6.51 gpt Au (MR14-972); 18.29-22.86 meters @ 1.45 gpt Au (MR14-973) and 53.34-56.39 meters @ 0.46 gpt Au (MR14-975). (resource @ Mineral Ridge = 4,230,000 tonnes @ 1.47 gpt Au indicated) *Press Release: August 11*

Premier Gold Mines Ltd. announced that recent drill results at the Cove Project include 581.1-584.5 meters @ 17.89 gpt Au, 13.1 gpt Ag (PG14-22); 423.4-505.8 meters @ 2.14 gpt Au, 48.0 gpt Ag (PG14-23) and 720.2-727.8 meters @ 12.73 gpt Au, 39.0 gpt Ag (PG14-25A). (resource = 425,000 tonnes @ 10.46 gpt Au indicated) *Press Release: August 25*

Midway Gold Corp.(40%) announced that based on recent drill results at the Spring Valley Project, resources aggregate 245,500,000 tonnes @ 0.55 gpt Au measured+indicated and 71,100,000 tonnes @ 0.47 gpt Au inferred. (was 144,825,000 tonnes @ 0.46 gpt Au measured+indicated and 103,935,000 tonnes @ 0.59 gpt Au inferred) *Press Release: August 12*

Canamex Resources Corp. announced that recent drill results at the Bruner Project include 143.78-178.36 meters @ 1.46 gpt Au (B1433) and 273.0-283.9 meters @ 11.9 gpt Au (B1436). *Press Release: August 12*



**Geological Society of Nevada (GSN) Fall 2014 Field Trip  
Friday, October 24, through Sunday, October 26, 2014**



**Castle Mountain Mine; Searchlight; Dinosaurs & Dunes at Valley of Fire**

Friday, October 24th: Meet in Las Vegas at 4:30 p.m. for caravan to Primm, Nevada.  
5:30 p.m. - Drinks, 6:00 p.m. - Dinner, Overnight at the Primm Valley Resort.  
7:00 p.m. - Talk by Peter Olander on the Castle Mountain Mine.

Saturday, October 25th: Breakfast on your own.  
7:30 a.m. Depart Primm Valley Resort for Castle Mountain Mine tour led by Peter Olander.  
Noon - Box Lunch to be provided.  
2:00 p.m. - Tour the Searchlight District.  
6:00 p.m. - Drinks & Dinner and Overnight at the Fiesta Henderson Hotel & Casino, Henderson, NV  
7:30 p.m. - Talk by Josh Bonde on what we will see at the Valley of Fire.

Sunday, October 26th: Breakfast on your own.  
8:00 a.m. Depart the Fiesta Henderson for Valley of Fire tour led by Joshua Bonde.  
Noon - Box Lunch to be provided.  
4:30 p.m. Return to Las Vegas.

THANK YOU TO OUR GENEROUS SPONSORS!!



**Payments must be made by October 10, 2014  
No refunds after October 10, 2014**

Lodging:  Single  Double  No Room

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

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

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

MEMBER COSTS (does not include travel to Las Vegas):

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

- \$260 - Double Room (Limited Number)
- \$350 - Single Room
- \$165 - No Hotel Needed
- \$0 - GSN Student Member Helpers (limit 6)

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

\*NON-MEMBER COSTS (does not include travel to L.V.):

Person to contact in case of Emergency:

- \$310 - Double Room (Limited Number)
- \$400 - Single Room
- \$215 - No Hotel Needed

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

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

\*Non-members are encouraged to become members of the GSN for \$50 annual dues in order to take advantage of the reduced rate.

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

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

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

Name (as it appears on card): \_\_\_\_\_

Return with payment to: Geological Society of Nevada  
2175 Raggio Parkway, Room 107  
Reno, NV 89512  
Phone: (775) 323-3500, Fax: (775) 323-3599  
E-mail: gsn@gsnv.org

Print Form

(President's Message, Cont. from pg. 2)

Jim will be followed by other great speakers:

November 21 – Stephen G. Peters, USGS, Reno – *Results of Three Recent Missions to the REE-, U-, F-, and P-bearing Khanneshin Carbonatite in Southern Helmand Province, Afghanistan*

December 17 – George Davis, Univ. of Arizona – on *The Beauty of the Geology of the Colorado Plateau* (Wednesday evening at the Nugget in Sparks – guests will enjoy this talk, and we'll have the auction for the GSN Foundation!)

January 16 - Paul Hohbach, Coeur, on silver deposits in the western US

February 20 – Alan Koenig, USGS, Denver – Where the Trace Elements in Ore Deposits Live - Applications of a New Elemental Analysis Technique.

March 20 –UNR-Department of Geological Sciences and Engineering Faculty – A Sampling of Geoscience Research at UNR

April 17 – likely UNR student posters and 5-minute presentations (TBD)

May 14-24, GSN 2015 Symposium.

#### ANOTHER CALL FOR VOLUNTEERS

Many thanks go to John Churchill, who responded to last month's call for volunteers with about 40 hours of office work that greatly helped Laura Ruud. GSN needs more help preserving its old records, particularly past minutes of the executive committees, financial records, and newsletters. We recently began off-site (cloud) backup of the digital files (everything on the GSN office computer), which covers much of the recent information, but we figure sorting through the paper files and selecting those to preserve is at least another 40-hour job. As a GSN member, if you are able to help with this volunteer task, please let me (jprice@unr.edu) or Laura Ruud (gsn@gsnv.org) know.

If you haven't already volunteered for a task during or leading up to the Great GSN 2015 Symposium this coming May, please contact Molly Hunsaker (mollymhunsaker@aol.com) or Don Harris (Donald.Harris@AlliedNevada.com).

Finally, if you are interested in serving GSN as an officer and Executive Committee member, please let Tommy Thompson (ThompsonTommyt@aol.com), who chairs the Nominating Committee, know. Officers include the President, Vice President/President-Elect, Secretary, Treasurer, Membership Chair, and Publications Chair. Many thanks!

## Tax Deduction

It is that time of the year to consider gift giving. If you have any geologic books that you are considering giving away please contact Clancy Wendt. GSN and the Tucson Gem and Mineral Society have given over 70,000 books to Universities in Mexico. This is a tax deductible item and anything you have will be greatly appreciated as Mexican Universities have very little in the way of reference books. We are also seeking people who are going to Tucson who have room in the cars or trucks to take some of the books we already have. 775-852-2513

## NEVADA BUREAU OF MINES & GEOLOGY PUBLS

Excerpts from these publications have been included in the field trip guidebook. You may order the complete publications from Nevada Bureau of Mines and Geology by calling NBMG at (775) 682-8766 or on the Web at <http://www.nbmng.unr.edu/Departments/PubSales/PubSales.html>

**Geologic Tours in the Las Vegas Area, Expanded Edition with GPS Coordinates**, by Joseph V. Tingley, Becky W. Purkey, Ernest M. Duebendorfer, Eugene I. Smith, Jonathan G. Price, and Stephen B. Castor, 2008, \$33.00, **SP16**

**Geologic Map of the Castle Mountains, San Bernardino County, California and Clark County, Nevada**, by Richard C. Capps and John A. Moore, 1997, \$19.00, **Map 108**

**Preliminary Geologic Map of the Searchlight Quadrangle, Clark County, Nevada**, by James E. Faulds, Alan R. Ramelli, and Stephen B. Castor, 2010, \$18.00, **Open-File Report 10-13**

You may also place an order and pick it up at the GSN meeting on October 17 in Reno (and save on shipping). Thank you!

*Thank you to our generous donors in September!*

### **G.S.N. FOUNDATION**

#### **Silver Sponsors \$100-\$499**

Robert Ahl  
Liang Hsu  
Don Jennings  
Thomas John  
Dieter Krewedl  
Larry Larson  
Mike Ressel  
Alan Wallace  
John Young

#### **Bronze Sponsors \$1-\$99**

W T Cohan  
Kim Craig  
Melanie Dolberg  
John Hoskins  
Marilyn Miller

#### **STUDENT DINNER FUND**

Ken Brook  
Hal Elson  
Del Flint  
John Hoskins  
Fleetwood Koutz  
Dieter Krewedl  
Anthony Longo  
Robert Thomas  
Alan Wallace

#### **STUDENT FIELD TRIP FUND**

David Boden  
John Hoskins  
Dieter Krewedl  
Daniel Laux  
Marilyn Miller  
Nancy Richter  
Alan Wallace

## New Economic Geologist at NBMG – Dr. Mike Ressel

Dr. Mike Ressel is joining the faculty of the Nevada Bureau of Mines and Geology and is filling a new tenure-track faculty position in Economic Geology. Mike will be responsible for studying and assessing mineral resources in the region, including analysis of the processes that make Nevada one of the world's richest regions in gold deposits. This position will allow NBMG to better fulfill its core mission of studying mineral deposits and distributing that information through published geologic maps, papers, and reports to the public.



Mike is all set for an underground tour at Leeville during the GSN Field Trip in 2009.

Mike has a B.S. in Geology from California State Polytechnic University, Pomona (1989) and M.S. and Ph.D. degrees in Geology (1996 and 2005, respectively) from the University of Nevada, Reno. His graduate studies were Nevada-focused and broadly covered aspects of Tertiary volcanic geology, igneous petrology, regional magmatism, ore deposits, and tectonics. A major focus of his Ph.D. work was on the relationships between magmatism and Carlin-type gold mineralization on the Carlin Trend, Nevada. His work experience includes five years prior to graduate school working for a consulting firm specializing in geotechnical engineering, GIS, hazardous materials, and hydrogeology throughout the U.S. Since 2000, Mike worked in mining and exploration for gold and copper across North America but also in Africa, Australia, and South America for several companies and involving a variety of deposit styles. His industry experience includes several Nevada underground and open-pit mines where he did ore control, mine mapping, resource modeling and near-mine development. He has conducted exploration for mineral deposits over a range of scales from reconnaissance-level through district- and mine-scales, which included the assembly of regional framework and prospectivity studies, project generation and management, mapping and sampling, target generation, and property evaluation for acquisitions and auditing. He most recently served as Chief Geologist for North America for Newmont Mining Corp., where he contributed to evaluations of grassroots through ad-

vanced exploration projects, helped guide regional and global exploration focus, was involved in developing training and mentoring programs in both mines and exploration, and liaised with university-sponsored research, including advisement for several M.S. and Ph.D. studies.

Mike has served on several academic research boards including the Precambrian Research Center at the University of Minnesota, Duluth, the Lowell Institute for Mineral Resources at the University of Arizona, and the Center for Research in Economic Geology at the University of Nevada, Reno as well as being an industry liaison for advisory boards of NBMG and the Geological Sciences Department at UNR. He is a past president of the Geological Society of Nevada and currently serves on its Foundation. He is a fellow with the Society of Economic Geologists.

Mike is excited about joining the Nevada Bureau of Mines and Geology, a group that he has been closely involved with for many years. His plans are to advance understanding of mineral deposits, igneous geology, and tectonics in Nevada and the Great Basin through field studies that include mapping and geochronology. He hopes to join with industry and other researchers in strengthening the economic geology program at UNR.



THANK YOU TO THE WINNEMUCCA CHAPTER  
SEPTEMBER MEETING SPONSOR



THANK YOU TO THE ELKO CHAPTER  
SEPTEMBER MEETING SPONSOR





**2015 MEMBERSHIP DUES DUE NOW!** It is time to renew your membership dues for the current fiscal year 2015! You can do this online at our website by following this link: <http://gsnv.org/membership/join-gsn.php> or by filling out the form below and returning it to the GSN office by Fax (775-323-3599) or mail to 2175 Raggio Pkwy., Reno, Nevada 89512  
Thank you in advance for not waiting until the last minute! Laura really appreciates it!



## GEOLOGICAL SOCIETY OF NEVADA

**2015**

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

Phone (775) 323-3500 • Fax (775) 323-3599 • [gsn@gsnv.org](mailto:gsn@gsnv.org) • [www.gsnv.org](http://www.gsnv.org)

Offices are located at NBMG's Great Basin Science Sample & Records Library at The Desert Research Institute  
Walk-in Office hours: Tuesday through Friday, 8:00 AM - 3:00 PM. Mondays - Call or email for appointment.

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

The membership year begins on January 1. Annual dues of \$50.00 (\$25.00 for full time students) are due prior to December 31. The GSN conducts a Field Trip in the Fall and one in the Spring of each year. Monthly meetings are held September through May in Reno, Elko, Winnemucca and Las Vegas. If you would like to receive email announcements from Elko, Winnemucca or Las Vegas please check a box.

Please help support the GSN Foundation, the Student Dinner Fund, or Student Field Trip Fund when renewing. Foundation dollars are used for the Kindergarten through 12th grade Field Trip Earth Science Grant Program, Nevada Mapping Grants and University of Nevada and UNLV scholarships, and Field Camp Grants.

**MEMBERSHIP APPLICATION**  Renewal  New Date: \_\_\_\_\_

Name: \_\_\_\_\_ Position/Title: \_\_\_\_\_

**Everything is the same as before, except as indicated below.**

Consultant:  Company Name: \_\_\_\_\_

Student:  University: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Country: \_\_\_\_\_ Website: \_\_\_\_\_

Telephone) **Work:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

Numbers ) **Cell:** \_\_\_\_\_ **Residence:** \_\_\_\_\_

(Your residence telephone number will not be listed in the Directory)

**E-Mail:** \_\_\_\_\_

**Email address is required for Emailed Newsletter**

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

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

Yes  No

**Optional Chapter Affiliation** (to be eligible for chapter voting and emails from those Chapter Officers)

Elko Chapter  Southern Nevada Chapter  Winnemucca Chapter

Regular Membership Dues 2015 - Email newsletter \$50.00 (**International & Domestic**) \_\_\_\_\_

Regular Membership Dues 2015 - Hardcopy newsletter via postal service \$70.00 (**Domestic Only**) \_\_\_\_\_

Student Membership Dues 2015 - Email newsletter only \$25.00 (Nevada students' dues paid for by Geotemps, Inc.) \_\_\_\_\_

**Donations:**.....  I wish to donate to the **GSN Student Dinner Fund** \_\_\_\_\_

(Foundation Donated Funds will be used for unrestricted grants and scholarships unless otherwise specified below:)  I wish to donate to the **GSN Student Field Trip Fund** \_\_\_\_\_

I wish to donate to the **GSN Foundation** \_\_\_\_\_

**TOTAL:** \_\_\_\_\_

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

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

Signature (as it appears on card): \_\_\_\_\_

Return with payment to: Geological Society of Nevada,  
2175 Raggio Parkway #107, Reno, NV 89512  
Fax to 775-323-3599, E-mail: [gsn@gsnv.org](mailto:gsn@gsnv.org)

## “Chinese investment to make Peru world’s second-largest copper producer”

By Cecilia Jamasmie, August 27, 2014 (reprinted from Mining.com)

A \$20 billion pipeline of China-backed mining projects in Peru is set to place the country back in the second position among the world’s largest copper producers by 2016.

The biggest push came from China Minmetals’ MMG subsidiary last month, with its \$7 billion acquisition of Glencore’s (LON:GLEN) flagship Las Bambas copper project, in the southern part of the country.

### **Chinese backers are now behind one-third of all Peru’s new mining investments by value**

According to *FT.com* (subs. required) that meant that Chinese backers are now behind one-third of all Peru’s new mining investments by value, officially estimated at \$61 billion (*in Spanish*).

Ironically, by investing in Peru, Asian capitals are helping the nation take over China as the world’s No. 2 producer of the red metal, a title the South American country lost in 2012.

Currently China’s output stands at about 1.6 million tonnes per year, well below the nearly 5.8 million annual tonnes produced by Chile, the world’s leader, based on data provided by CRU Consulting earlier this year.

Peru’s energy and mining minister, Eleodoro Mayorga Alba, has repeatedly said the country’s total production will hit 2.8 million tonnes in 2016, up from 1.4 million tonnes in 2013. This, thanks to major projects slated to begin operations by or during that year.

Freeport-McMoRan’s (NYSE:FCX) **Cerro Verde**’s \$4.6bn expansion: Scheduled for completion during the first quarter of 2016, with initial production to begin next year;

Southern Copper’s (NYSE, LON:SCCO) \$1bn **Tía María** mine, near Arequipa, which received final approval earlier this month, after being halted for almost three years due to opposition from nearby communities concerned about the mine’s use of water;

Chinalco’s (HKG: 3668) \$4.82bn **Toromocho** copper mine, currently undergoing an expansion;

Minmetals and Jiangxi’s \$2.5bn **El Galeno**, a copper, gold and silver project.

Other Chinese mining investments in Peru include a \$1.5bn expansion of iron ore mine by Shougang Hierro Peru in Marcona, and Jinzhao Mining’s planned \$3.28bn investment in Pampa de Pongo, also an iron ore mine.



The biggest push came from China Minmetals’ MMG subsidiary in July, with its \$7 billion acquisition of Glencore’s flagship Las Bambas project.

## PHOTOS FROM THE NMEC'S GREAT BASIN RENDEZVOUS, SEPT. 26-28, 2014

Everyone had a great time at the 2nd GBR! The occasional downpours of rain did nothing to spoil the fun!

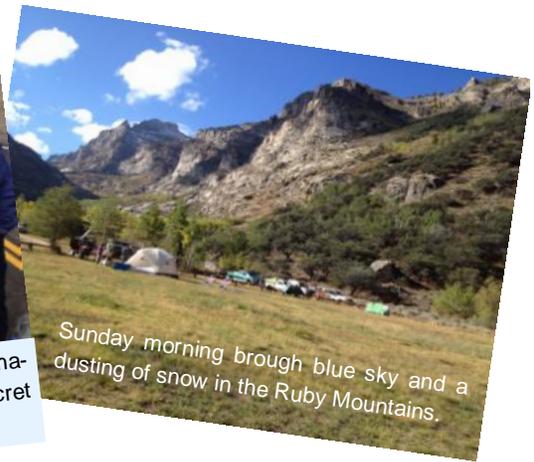
Morning and afternoon field trips in and around Lamoille Canyon and Secret Pass were very informative and led to lively geologic discussions during the fantastic dinners and next to the roaring fire well into the night.



Mike McFarland, professor at GBC, gives an overview to the group going on the morning field trip.



Chris Henry, NBMG, talks about the Elko Formation and core complex geology near Secret Pass.



Sunday morning brought blue sky and a dusting of snow in the Ruby Mountains.

## OTHER UPCOMING EVENTS

**1 OCTOBER CSM SEG STUDENT CHAPTER.** Speaker: Dr. Neil Williams, SEG Thayer Lindsley Lecturer will present his Distinguished Lecture: "Deep Mineral Exploration—The Next Economic Geology Frontier". Begins at 7 p.m. in Metals Hall, Green Center, Colorado School of Mines, Golden CO.

**2 OCTOBER Nevada Petroleum & Geothermal Society, Reno, Nevada.** Speaker: Donna M. Herring, Petroglyph Consulting. Topic: Structural re-interpretation of the Confusion Range "synclinoria" in western Utah leads to multiple new exploration targets in the Western Utah Thrust Belt". 6:30 PM, Ramada Reno Hotel; 1000 East 6th Street, Reno, NV 89512. Please RSVP by Tuesday, September 30 with the following link:  
[https://docs.google.com/forms/d/16L9wSj-pJ5fh-B1xHkWelZWc6ez5tNYXdxospU3\\_O6A/viewform](https://docs.google.com/forms/d/16L9wSj-pJ5fh-B1xHkWelZWc6ez5tNYXdxospU3_O6A/viewform)

**7 OCTOBER Arizona Geological Society, Tucson AZ.** Speaker: Apollo 17 Astronaut and Former Senator Harrison H. Schmitt presents A Geological Visit to a Valley on the Moon. Sheraton, 5151 E Grant Rd. (& Rosemont), Tucson AZ 85712. Begins @ 6 pm. Dinner \$27; Non-member \$30. Student Members Free. Register by Friday. <http://www.arizona Geological Soc.org/event-1714196>

**10 OCTOBER Nevada Mineral Exploration Coalition—Annual General Meeting.** All forums and talks will be focused on Nevada exploration and legislative affairs. Time: 8:00 a.m. – 6:00 p.m. (registration opens at 7:00 a.m.) Location: The Atlantis Casino Resort Spa, Reno, Nevada. For more information or to register online, please visit: <https://www.nvmec.org/2014-annual-general-meeting>.

**13 OCTOBER Northern Nevada Section of SME:** Speaker and Title to be Announced. Circus-Circus Mandalay Room, Reno NV. Happy Hour @ 6 pm, Dinner @ 6:45 pm, Talk @ 7:30 pm. Dinner \$30; Non-member \$35. Students Free. RSVP by 5 pm on Wednesday, October 8, 2014. Send RSVP to Brooke Miller 775-303-2835 or [NNevSME@gmail.com](mailto:NNevSME@gmail.com)

**15-16 OCTOBER Nevada Water Resource Associates—2014 FALL SYMPOSIUM.** Exploring Bureau of Reclamation Projects within Nevada, and how past and current management practices and Federal policies have influenced water use and people in Nevada over the past 100 years. Reno/Fernley, Nevada, Ramada Reno Hotel and Casino, 1000 East 6th Street, Reno, NV 89512. Register online at: <http://www.nvwr.org/2014-fall-symposium>. Contact Tina Triplett for more information at [creativerno@charter.net](mailto:creativerno@charter.net).

**19-22 OCTOBER Geological Society of America Annual Meeting & Exposition, Vancouver, B.C. Canada.** Register online at: <http://community.geosociety.org/gsa2014/registration>

**14-24 MAY 2015, GSN SYMPOSIUM 2015: NEW CONCEPTS AND DISCOVERIES.** J.A. Nugget, Sparks, Nevada. Pre- and Post-Field Trips, Short Courses, Exhibits and Technical Program. For more information please contact Molly Hunsaker, [mollymhunsaker@2015GSNsymposium.org](mailto:mollymhunsaker@2015GSNsymposium.org) or visit the website: [www.gsnv.org/2015-symposium](http://www.gsnv.org/2015-symposium).



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](http://www.legarza.com)

NV License #35480  
 CA License #804120



**JOSEPH R. ANZMAN**

Exploration Geophysicist

- consulting
- interpretation
- project management
- geophysical surveys
- domestic & foreign

P.O. Box 370526  
 Denver, Colorado 80237

303-519-0658  
[geophjoe@gmail.com](mailto:geophjoe@gmail.com)

**Big Sky Geophysics**

Clark Jorgensen, M.Sc.  
 Geophysicist

Field Work  
 Processing  
 Interpretations

P.O. Box 353  
 Bozeman, Montana 59771  
 USA

Phone/Fax +1 (406) 587-6330  
 Mobile +1 (406) 580-9718  
[clark@bigskygeo.com](mailto:clark@bigskygeo.com)

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

MINERAL EXPLORATION SERVICES AND CONSULTING



Providing accurate, dependable, documented results.

We specialize in a full range of services including:

- Exploration Project Management
- Contract and Consulting Geology
- Data Compilation
- GIS & Remote Sensing
- 3D Modeling
- Disturbance Surveying
- Soil and Rock Chip Sampling
- Claim Staking
- Abandoned Mine Hazard Fencing
- Core Processing
- Warehouse Management
- Temp Services

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)



**Hyperspectral Mineralogy**  
 Easy Integration of Complex Data Sets



- > Spectral imaging on core and other exploration samples
- > Routine and cost-effective analysis of high sample volumes
- > Timely interpretation of large data sets
- > Integrated visual interface in ALS CoreViewer™
- > Automated mineral identification from spectral traces

For more information, scan this QR code or visit [www.alsglobal.com](http://www.alsglobal.com)  
 Phone: +1 775-356-5395



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



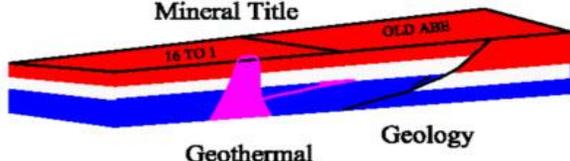
For more information please contact Garth Patterson @403-601-4374 or garth.patterson@telus.net

### G.I.S. Land Services

Greg Ekins M.S. R.P.L. #32306 President  
Mineral Landman - Commissioned Abstractor  
"From Courthouse Records to Final Map"

Mineral Title, Geothermal Title,  
National Instrument (NI) 43-101 Title Review,  
Due Diligence  
3D AutoCad; ArcMap and MapInfo GIS

Surface Title  
Mineral Title



A professional firm of  
Landmen, Geologists, Draftsmen and Technicians  
Providing Abstracts of Title, Land Status and  
Exploration Geology Services  
Utilizing AutoCad - ArcMap - MapInfo - PowerPoint  
www.gislandservices.com

241 Ridge St., Suite 250  
Reno, NV 89501  
Ph: 775-746-8803 Fax: 775-746-8802  
email: greg@gislandservices.com



### HARD ROCK WHEELS, INC.

4WD Pickup Rentals

Howard J. Adams  
14756 Pine Knolls Lane  
Reno, Nevada 89521  
(775) 85202622  
Fax (775) 852-2075

Taiga Ventures  
2700 S. Cushman St.  
Fairbanks, Alaska 99701  
(907) 452-6631

hardrockwheels@yahoo.com



## Inspectorate - Exploration & Mining

**Chuck Whipple – Senior Account Manager**

Mobile: +1 (775) 830-4242 | Fax: +1 (866) 830-9482

Chuck.Whipple@Inspectorate.com

**Tel:** +1 775 359 6311

**E-Mail:** quotes@inspectorate.com

**Web:** www.inspectorate.com/ems



**INSPECTORATE**

## North American Exploration

Providing service to the Mining industry since 1964



With over 45 years of experience,  
we will complete any exploration project,  
Anytime! Anywhere!

**Project Management**  
**Geochemical Sampling**  
**Claim Staking**  
**Land Status**  
**Research/Permitting**  
**Drill Design**  
**Environmental Services**

**Geology**  
**Hydrology**

Call us any time!

**801-544-3421**

North American Exploration, Inc.

447 North 300 West, Suite #3

Kaysville, Utah 84037

Email: nae@nae-xploration.com



**Carlin Trend Mining  
Supplies & Service**

www.carlintrendminingservices.com

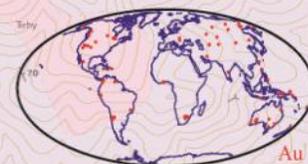
369 5th St., Elko, NV 89801

(775) 778-0668, Fax: (775) 778-0687, carlintrend@frontiernet.net

Geological Consulting - Claim Staking - Soil Sampling  
Geology & Drafting Supplies - AutoCad & GIS  
Temporary Employees In All Fields

## NEVADA EXPLORATION GIS DATA SETS

MINERAL OCCURRENCES  
GEOLOGY  
CULTURE  
POLITICAL  
GEOGRAPHY  
GEOPHYSICS  
GEOCHEMISTRY



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

email: [jaravie@frontiernet.net](mailto:jaravie@frontiernet.net)

phone: 775-777-8223

# 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**