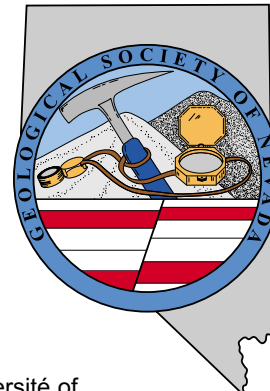


# GSN NEWSLETTER



September 2006, Vol. 21, No. 7

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## CALENDAR OF GSN EVENTS

- Sept. 15 Friday** GSN MEMBERSHIP MEETING. Speaker: Michel Cuney, Université of Henri Poincaré, Nancy, France. Title: "The Major Uranium Districts in the World - Past Production and Prospectivity". Reno Elks Lodge, 597 Kumle Ln, Reno, NV. Drinks at 6 pm, dinner at 7 pm, talk at 8 pm. Contact Laura Ruud for reservations, 775/323-3500 or gsn@mines.unr.edu.
- Sept. 21 Thursday** ELKO CHAPTER MEETING. Kim Schroeder, Kennecott. Title: "Geology of the Bingham Canyon Cu-Mo-Au Porphyry Mine". Western Folklife Center, 501 Railroad Street, Elko. Drinks at 6:00 pm with the talk at 7:00 pm. Call Richard Reid at 775/778-3912 for more information.
- Sept. 28 Thursday** SO. NEVADA CHAPTER MEETING. Speaker: Jim O'Donnell, Consulting Geophysicist. Title: "Overview of Seismic Surveys in Las Vegas for Geotechnical Investigations." UNLV Lily Fong Geoscience Building, Room 105. Refreshments at 6 pm, talk at approx. 6:30 pm. Contact Bruce Hurley, Chapter President at 702/295-1284, rocks2bwh@aol.com.
- WINNEMUCCA CHAPTER MEETING – DATE AND TOPIC UNDETERMINED AT PRESS TIME.
- Oct. 1 Sunday** GSN 18<sup>th</sup> ANNUAL PICNIC – Rancho San Rafael Park, Highlands Pavilion, noon to 4 pm. Mark your calendars! Contact Laura to sign up! GSN will provide meat, drinks and games. See page 4.
- Oct. 27-29 Fri-Sun** GSN FALL FIELD TRIP – Sites to be visited include Bald Mountain, Archimedes and Stacatto Resources' South Eureka Project. See Registration form on page 2 of this newsletter.

**"IT'S DUES RENEWAL TIME!"**

Geological Society of Nevada, PO Box 13375, Reno, NV 89507 USA, 775/323-3500, [www.gsnv.org](http://www.gsnv.org)  
Office location: Laxalt Mineral Research Center, Rm 266, UNR. Hours: Mon thru Fri, 1-4 pm

## FROM THE PRESIDENT

Ellie Davie Leavitt, *GSN President 2006-2007*

With the dog days of summer and field season on the wane (for some), monthly dinner meetings resume this month (Sept. 15) at the Elk's Club. This month's speaker, Michel Cuney of the University of Henri Poincaré-Nancy, France will present an overview of the major uranium districts throughout the world. As the season continues, we'll hear talks on a variety of commodities and geologic topics. In spite of the apparent GSN summer vacation, the Executive Committee continued monthly meetings, convening, thanks to Western Energy Development Corporation (WEDC), in comfortable surroundings at their office in Reno.

GSN's revised website will soon be up and running! It's very close to being live and we'll be shooting for an October 1<sup>st</sup> launch date. The new site will replace our existing site and will have information about GSN and its activities, the

Foundation, the Board of Directors and the chapters' activities. The site will migrate toward becoming the market place for GSN's publications and we'll let you know as

*continued on page 4*

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## News and Announcements

### GSN FALL 2006 FIELD TRIP

#### “Geology and Mineralization at Bald Mountain, East Archimedes, and South Eureka”

The GSN 2006 Fall Field Trip will visit the Bald Mountain mine, the South Eureka project, and the Ruby Hill mine in east-central Nevada. At Bald Mountain, we will see several ore deposits and learn about ongoing exploration in this growing district. At South Eureka, a new perspective on mineralization will be presented. New modeling and geological reinterpretation has recently led to the successful targeting and drilling of significant mineralized intervals at this deposit. The Ruby Hill visit will focus on the geology of the East Archimedes deposit which is currently being exposed through stripping of overburden. This visit will provide a view of this interesting deposit prior to the completion of overburden removal and the commencement of gold production.

#### Friday, October 27, 2006

12:30 PM Meet at the UNR parking lot  
1:00 PM Bus leaves promptly at 1:00 PM  
6:00 PM Arrive in Eureka, Eureka Inn  
6:30 PM Cocktails  
7:00 PM Dinner

Overnight Lodging – Eureka Inn

#### Saturday, October 28, 2006

Breakfast on your own  
8:00 AM Bus leaves Eureka for Bald Mountain  
9:00 AM Bald Mountain tour  
12:30 PM Lunch provided  
1:00 PM Bus leaves Bald Mountain for South Eureka project  
2:00 PM South Eureka project tour  
5:30 PM Bus leaves South Eureka for Eureka  
6:00 PM Return to Eureka  
6:30 PM Cocktails  
7:00 PM Dinner  
8:00 PM Talk – to be announced

Overnight Lodging – Eureka Inn

#### Sunday, October 29, 2006

Breakfast on your own  
8:00 AM Bus leaves Eureka for Ruby Hill mine  
8:15 AM East Archimedes tour  
11:00 AM Bus leaves for Reno  
12:30 PM Lunch – en route  
4:00 PM Arrive at UNR parking lot

Price includes transportation, overnight lodging, snacks and drinks, lunches, dinners, and guidebook.

Reservations are on a **first-come, first-served basis**; attendance is limited to **45 participants**, only a **small number of single occupancy rooms will be available**.

**Payment must be received in GSN office by October 6, 2006 to guarantee reservation.**

Please complete and submit ASAP:

#### Fall 2006 Field Trip Sign Up

Name \_\_\_\_\_

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Fax \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Email \_\_\_\_\_

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Name \_\_\_\_\_ Phone \_\_\_\_\_

Lodging needed in Eureka: Y\_\_ N\_\_  
Single\_\_ Double \_\_

Roommate (or we will assign) \_\_\_\_\_

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single room (Limited Number) \$350.00  
w/o Eureka lodging \$180.00

\*NON-MEMBER COST:  
double room \$300.00  
single room \$385.00  
w/o Eureka lodging \$215.00

\*Non-members are encouraged to become members of the GSN for \$35 annual dues in order to take advantage of the reduced rates.

Amount included with this form \$ \_\_\_\_\_

Paid with Check # \_\_\_\_\_

Visa\_\_ MC\_\_ Exp Date \_\_\_\_\_

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

**Payment must be made by October 6, 2006  
No refunds after October 13, 2006**

Fax: 775/323-3599 or mail to GSN office:  
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**Thanks to Enviroscientists, Inc. and Mine Development Associates  
for sponsoring the Doug Silver talk.**

# GSN September 15, 2006 Membership Meeting

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**Date:** Friday, September 15, 2006

**Time:** Social-6:00, Dinner-7:00, Meeting-8:00

**Reservations:** 775/323-3500; fax 323-3599,  
e-mail gsn@mines.unr.edu

**Deadline:** Reserve by 11 am Thursday, September 14<sup>th</sup>

**Location:** Elks Lodge, 597 Kumle Lane, Reno, NV

**Directions:** Across (W) from the Reno-Sparks Convention Center (S Virginia St), behind the Les Schwab Tire Center

**Speaker/topic:** Michel Cuney, Univ. of Henri Poincaré, Nancy, France. "The Major Uranium Districts in the World - Past Production and Prospectivity"

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## THE MAJOR URANIUM DEPOSIT TYPES AND DISTRICTS IN THE WORLD, PAST PRODUCTION AND PROSPECTIVITY

Michel Cuney, UMR G2R CNRS, Université Henri Poincaré, Nancy, France

Uranium is the only natural resource mined from deposits that occur throughout the entire geological cycle (in metamorphic, igneous, hydrothermal, and sedimentary to surficial environments). Significant uranium deposits occur in all the continents and can be grouped into at least 14 major types based on their geological setting (OECD/NEA & IAEA). Among these, three major types represent over 75% of the world's U resources:

- (i) *unconformity-related deposits* occurring in the vicinity of an unconformity between crystalline basement and a Proterozoic intra-continental basin — major deposits being located in Canada (Athabasca Basin, Saskatchewan with grades generally > 1% U, up to an average of 18% U for 200,000 metric ton U at McArthur River) and Australia (Alligator Rivers Uranium Field, Northern Territory, with lower grades: 0.3 - 0.6 % U).
- (ii) *breccia complex deposits* with Olympic Dam, the only mined deposit of this type, constituting the world's largest low grade U deposit (400-500 g/t U, with reserves exceeding 350,000 t U and resources of 1,500,000 t U) — other deposits of this type are not presently mined because of their low grade.
- (iii) *sandstone hosted deposits* deposited in continental fluvial to marginal marine environments, with low to medium grade (0.05 - 0.4% U<sub>3O8</sub>) and small to medium sized deposits (a few 1000 to several 10,000 t U) that are increasingly mined by in situ leaching — the major resources being located in Kazakhstan, Uzbekistan, Niger, and the USA.

Other large past and present U productions have been derived from a variety of deposits:

- (i) *quartz-pebble conglomerate deposits* where U has been recovered as a by-product of Au mining (Witwatersrand, South Africa) with grades as low as 0.01% U and individual deposits ranging from 5,000 to 150 000 t U, also at Elliot Lake (Canada) where U only was extracted but grades were higher (0.13 % U) — new mines are being developed in the Witwatersrand basin.
- (ii) *vein deposits* with major districts occurring in the metamorphic aureole or within peraluminous leucogranites, as in the Erzgebirge (Germany and Czech Republic : 370 000 t U mined out) and the French Massif Central (50 000 t U mined out), but some others occur in metamorphic rocks (Shinkolobwe, Zaire; Schwarzwald, USA) — only a few deposits of this type are still mined in China and the Czech Republic.
- (iii) *volcanic related deposits* for which the largest production is from a district located in a Jurassic caldera at Streltsovka (Russia) with over 300,000 t U already mined and resources @ 0.1 - 0.3 % U — similar deposits mainly occur in Mongolia, Kazakhstan, China.
- (iv) *disseminated intragranitic deposits* where U is associated with intrusive rocks, with Rössing (Namibia) (>150 000 t U @ 0,03 - 0,04 % U), still presently mined — many other occurrences of this type exist in the world and are being explored.
- (v) *metasomatic deposits* located in deformed rocks subjected to regional Na-Ca-metasomatism, including the Lagoa Real (Bahia, Brazil) and the Zheltye Vody (Ukraine) districts, with resources of 100 000t @ 0.1 - 0.3 % U in each district.

Known recoverable U resources @ 130 US \$/kg U (IAEA, 2005) are mostly located in the following countries with metric tons of U and percentage of world resources in parentheses:

- Australia, mainly in unconformity related and breccia complex deposits (1,143,000, 24%)
- Kazakhstan (816,000, 17%), Niger (225,000, 5%), USA (342,000, 7%) and Uzbekistan (116,000, 2%) all mainly in sandstone.
- Canada, in unconformity related deposits (444,000, 9%).
- South Africa (341,000, 7%) mainly from quartz pebble conglomerates.
- Namibia (282,000, 6%) in the Rössing deposit.
- Brazil (279,000, 6%) and Ukraine (90,000, 2%), both mainly metasomatic.
- Russia with the Streltsovka caldera (172,000t U, 4%)
- Jordan (79,000, 2%), India (67,000, 1%), China (60,000, 1%), and others (287,000, 6%).

The above resources comprise a worldwide total of 4,743,000t U.

continued on page 4

## FROM THE PRESIDENT continued from page 1

these functions become active. The revised site will include a forum in which members will be encouraged to participate in topics of interest. In addition, the website will have continually updated news feed, focused on geology and Nevada, as well as links to other geology-related websites and organizations. Be sure to thank Don Avery for his excellent work revising our website, and Debbie Schneider, our new website liaison. Additional ideas and input have been provided by Greg Hill, Dieter Krewedl, and Laura Ruud.

Upcoming events for GSN this fall include the fall field trip which is going to Bald Mountain and Eureka. See the separate article in this newsletter about the trip. Field trips will also be happening in December when Northwest Mining Association (NWMA) will hold their annual convention in Reno this year, December 4-8, 2006. GSN is co-sponsoring and organizing those field trips to various Nevada locations to be held after the NWMA meeting.

Don't forget to sign up for the GSN family picnic being held Sunday, October 1. There is always plenty of fun, food, and games for everyone. Also in October, organizers of Earth Science week will be looking for both volunteers and participants – a great way to share your knowledge and enthusiasm for geology. If you have tried to hire a summer field hand lately, you're aware of the looming shortage of earth scientists. Activities like those during Earth Science Week provide an opportunity to entice newcomers, recruit converts, and educate the general public. Stay tuned for more news on Earth Science Week!

GSN's contribution to education continues. The 2005 Symposium generated a profit of slightly over \$100,000! This remarkable achievement should be acknowledged by all members, with thanks to all volunteers who spent countless hours organizing the very successful 2005 Symposium. GSN's Executive Committee and the Board of Directors have authorized \$50,000 of this profit to go to the GSN Foundation, propelling the Foundation towards its goal of growing the Endowment Account to \$250,000 and sustainability. The Foundation continues GSN's philanthropic activities of granting funds for statewide K-12 earth science field trips, UNR and UNLV scholarship funds, the DeLaMare Library and geologic mapping projects.

## MICHEL CUNNEY ABSTRACT continued from page 3

Owing to the sharp increase of the U prices (\$47.25 US/lb  $U_3O_8$ , nearly \$123 US/kg U in August 2006) many other U-deposit types may become recoverable, such as:

- *surficial deposits* (Tertiary to recent near-surface concentrations in loose sediments or soils) with Yeelirrie (Western Australia), the world largest surficial deposit, and Langer Heinrich (Namibia) which should produce 1000 t U by the end of 2006.
- *paleovalley deposits* of Vitim (Transbaikalia, Russia) which should produce within the next years.
- *synsedimentary deposits* include very large low-grade U resources (several millions t U) associated with phosphates (Morocco having the largest resources of this type)

with grades of 0.01 to 0.03 % U, and in black shales, the best example being the Cambrian Alum shales of southern Sweden.

The IAEA Red Book assesses the world's U resource base at 11  $10^6$  t if speculative and higher-cost resources are included. The world's 440 power reactors (355 GWe) require 66,000 t U/year. It is likely that the annual U demand will grow only slightly to 2010. Production from world U mines now supplies only 40,000 t U. Secondary sources include: (i) recycled U and Pu from spent fuel, as mixed oxide fuel; (ii) re-enriched depleted U tails; and (iii) military weapons-grade U and Pu. From 2000 the dilution of 30 t of highly enriched U corresponds to 7600 t natural U, or 14% of the world's reactor requirements. The balance is made up from secondary sources or stockpiled U held by utilities, but those stockpiles are now largely depleted. World mine production must expand significantly within the next few years to meet demand.

## GSN'S 18<sup>th</sup> ANNUAL FAMILY PICNIC

The 18<sup>th</sup> annual GSN Family Picnic will be held on Sunday, October 1 at the Highland Pavilion at Rancho San Rafael, Reno, NV, starting at noon and wrapping up around 4:00 pm. We'll provide the meat, beer, and games; you bring a side dish, a competitive spirit, and possibly a spouse and kids! If you are single, bring a friend! Only \$5 a person and \$10 per family. Please contact Laura Ruud before September 26<sup>th</sup> if you plan on attending and let her know how many will be in your party so we can have enough meat and beer! We look forward to seeing you on October 1<sup>st</sup>.

### 18<sup>th</sup> ANNUAL GSN FAMILY PICNIC Rancho San Rafael, Highlands Pavillion Sunday, October 1, 2006

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

Total # family members or guests in your party: \_\_\_\_\_

Ages of children: \_\_\_\_\_

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## IT'S TIME TO RENEW YOUR DUES



Greg French, *GSN Membership Chair*

The attached 2006-2007 Membership Form (see page 11) has been simplified. The Chapter affiliation selection has changed. You will no longer add \$5 for a local Chapter affiliation. Chapters will now receive monies for activities based on budgets submitted to the Board of Directors. The annual dues will be a flat \$35 dollars for regular members and \$17.50 for students. This is the first change in dues in over five years and reflects increased costs in insurance, materials, and labor.

Those that are members or wish to become local Chapter members will still need to check the appropriate box. This is necessary in order to comply with voting and Chapter business requirements.

Before sending in your renewal, we encourage all members at this time to donate to the GSN Foundation and Student Dinner Fund.

## ELKO CHAPTER SEPTEMBER 21<sup>st</sup> MEETING

### GEOLOGY OF THE BINGHAM CANYON CU-MO-AU PORPHYRY MINE

Kim Schroeder, *Kennecott*

Beginning as the first successful bulk tonnage porphyry copper mine, Bingham Canyon is among the world's six largest known copper-moly-gold porphyry deposits. Discovery began in 1863 and involved a progression of major commodities from initially a lead-silver, to a gold, then lead-zinc-silver, and ultimately to the Cu-Mo-Au district of today.

Lying 20 miles southwest of Salt Lake City, Utah, Bingham Canyon is an open pit mine utilizing a fleet of 71 diesel powered 318 ton and 240 ton haul trucks, eight electric shovels, one loader, and seven blast hole rigs. Ore is hauled to an in-pit crusher and shipped along a conveyor through a 3.2 mile underground tunnel to a mill/concentrator complex. From here, both the concentrate, at nearly 28% copper, and tails are piped 17 miles north to the smelter/refinery. Annual production (*2004 figures*) includes over 290,000 tons of copper, 300,000 ounces of gold, 7,500 tons of molybdenum, and about 5,000,000 ounces of silver. Daily production averages nearly 400,000 tons at a 1.8 to 1 waste to ore strip ratio. Deposit grades average 0.57% Cu, 0.32g/ton Au and 0.039% MoS<sub>2</sub>, although through the last year the average molybdenum grade approaches 0.09% MoS<sub>2</sub>.

The Bingham stock is associated with an east-west trend of Tertiary age stocks along the core of the Mesozoic

Uinta arch. The mine is hosted in Pennsylvanian age sedimentary rocks consisting of quartzites and lesser limestones and marls. At least five Eocene age intrusives make up the stock and consists of; 1) a pre-mineral monzonite, 2) the causative quartz monzonite porphyry, 3) latite porphyry dikes, 4) quartz latite porphyry dikes and, 5) very minor, discontinuous mafic dikes (minettes). Petrochemically similar volcanic breccias and flows are preserved predominantly on the east side of the Oquirrh Range, and are synchronous with the Bingham intrusives. The stock is hosted in the southwest limb of the Bingham Syncline, and is cut by a series of northeast and northwest trending faults. Both mineralization and alteration exhibit classical Cu-porphyry character. Metal zonation consists of crude outlines involving a "barren core" near the center of the pit, concentrically overlain by a low-grade copper/ high grade moly zone, grading outward to a high grade copper zone, then to a proximal pyrite zone. The latter is rimmed by a previously mined lead-zinc vein and fissure zone encased in a much broader arsenic rock and soil anomaly stretching beyond the Barneys Canyon gold mine 5 miles north of the deposit. The predominant copper mineral is chalcopyrite, which grades inward near the center of the pit to a bornite + chalcopyrite + hypogene chalcocite zone. Major copper-gold skarn deposits flank the copper ore body at its north end, and lie just outside the lead-zinc halo, 1500-2500 feet from the causative quartz monzonite porphyry.

Alteration consists of a magnetite-destructive biotite-orthoclase potassic core surrounded by an actinolite-dominated propylitic zone. Both of these are cut by phyllic alteration concentrated along quartz-sericite-pyrite veins which pervade through structural zones. Argillic alteration of plagioclase overlaps the former systems and is ubiquitous in the quartz-monzonite porphyry. Copper and molybdenum mineralization occur as both disseminated and as stockwork veins. Gold occurs mostly as micrometer-sized metallic gold and electrum particles within copper sulfides, predominately bornite.

The shape of copper mineralization is analogous to a "molar tooth" configuration, where present mining is removing the exposed tooth portion. Potential underground mining of the remaining four copper "root" zones and of higher grade copper-gold mineralization in limestone-hosted skarn deposits are currently being studied.

## GSN WEBSITE NEWS

Debbie Schneider, *GSN Website Committee*

Implementation of the new GSN website is scheduled for October 1, 2006. Many thanks to Don Avery for his work in designing an improved website with links to GSN news, membership information, Foundation news and sites of interest to the geological community. Future plans for the website include a publication sales page and links to news and information websites.

[www.gsnv.org](http://www.gsnv.org)



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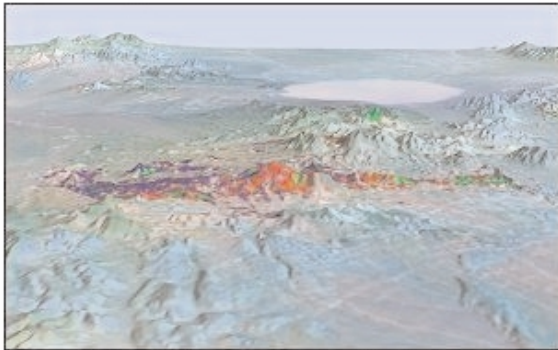
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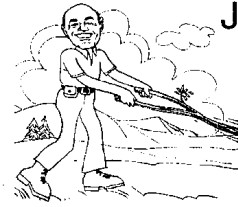
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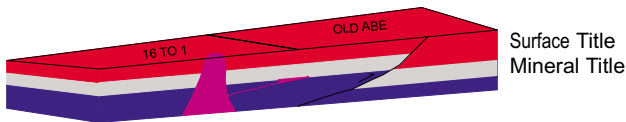
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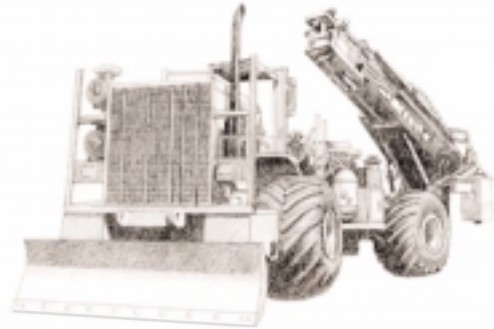


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## EARTH SCIENCE WEEK PUBLIC FIELD TRIP

D.D. LaPointe, GSN Education Co-Chair

This year's Earth Science Week (ESW) public field trip will be offered on Saturday, October 7, and repeated on Sunday October 8<sup>th</sup>, organized by Nevada Bureau of Mines & Geology. The goal is to educate the public about local geology and why it is important. The more geologists we can get to come along to talk to and interact with the public, the better able we are to get the message out, so please sign up to come along on one of these days if you can. The registration will be up on the NBMG website by Sept. 1<sup>st</sup>. This year's trip will roughly follow the Truckee River between Verdi and Wadsworth with several stops to discuss geology and collect rocks. As in past years, we will caravan in personal (high-clearance) vehicles, carpooling where possible. I will put out another reminder in the October newsletter.

National Earth Science Week is promoted by American Geological Institute and this year's national ESW theme is: "Be A Citizen Scientist!" More Earth Science Week information and ideas are on the AGI website at www.earthsciweek.org.



## UPCOMING EVENTS

**Sept 7** – NV Petroleum Society Meeting. Speaker: Alfred Cavallo, Ph.D.; Consultant, US Dept of Homeland Security. Title: Peak Oil? Modeling Non-OPEC Oil Production. Austin's Restaurant, 7671 South Virginia St, Reno, cocktails at 6:30 pm. Dinner is at 7:00 pm. (\$17 for members; \$19 for non-members), talk immediately follows dinner, about 7:45 or 8:00 pm. Reservations are required; contact Diane Phillips at [trailsend@pyramid.net](mailto:trailsend@pyramid.net) or 775/267-4663. For further info, contact Sam Limerick at [shlimerick@charter.net](mailto:shlimerick@charter.net) or 775/825-0640.

**Sept 7-9** – NV Mining Association Annual Convention. Lake Tahoe Hyatt – Golf Tournament at the Championship Course at Incline Village. For information call 775/829-2121.

**Sept 15** – GSN MEMBERSHIP MEETING: Michel Cuney, Title: "The Major Uranium Districts in the World - Past Production and Prospectivity". Reno Elks Lodge, 597 Kumle Ln, Reno, NV. Drinks at 6 pm, dinner at 7 pm, talk at 8 pm. Contact Laura Ruud for reservations, 775/323-3500 or [gsm@mines.unr.edu](mailto:gsm@mines.unr.edu).

**Sept 21** – ELKO CHAPTER MEETING: Kim Schroeder, Kennecott. Title: "Geology of the Bingham Canyon Cu-Mo-Au Porphyry Mine". Western Folklife Center, 501 Railroad St, Elko. Drinks at 6:00 pm with the talk at 7:00 pm. Call Richard Reid at 775/778-3912 for more information.

**Sept 28** – SO. NEVADA CHAPTER MEETING: Speaker: Jim O'Donnell, Consulting Geophysicist. Title: "Overview of Seismic Surveys in Las Vegas for Geotechnical Investigations." UNLV Lily Fong Geoscience Building, Room 105, at Refreshments at 6 pm, talk at approx. 6:30 pm. Contact Bruce Hurley, Chapter President at 702/295-1284, [rocks2bwh@aol.com](mailto:rocks2bwh@aol.com).

**Oct 1** – GSN 18<sup>th</sup> ANNUAL PICNIC – Rancho San Rafael Park, Highlands Pavilion, Noon to 4 pm. Mark your calendars! GSN will provide meat, drinks and games. You bring a side dish, salad or dessert to share, and your family or friends. Contact the GSN office to register (see page 4).

**Oct 5** – NV Petroleum Society Meeting. Speaker: Jeff Hulen, Consultant, Title: "New Perspectives on the Geothermal-Petroleum-Gold Connection in the Great Basin". Austin's Restaurant, 7671 South Virginia St, Reno, cocktails at 6:30 pm. Dinner at 7:00 pm. (\$17 for members; \$19 for non-members).

**Oct 17** – SME's Northeastern NV Section Technical Conference. "2006: A Golden Year". Elko Convention Center, Elko, NV. Visit <http://www.smenet.org/SCRD/SCRDInfo.cfm?BUID=71>

**Oct 22-25** – Geological Society of America Annual Meeting, Philadelphia, PA. "Building on a Foundation of Discovery". Early registration due Sept. 18, 2006. [www.geologicalsociety.org](http://www.geologicalsociety.org) or call +1-888-443-4472.

**Oct 24-26** – Minerals South Conference at the Prestige Lakeside Resort in Nelson, BC. The conference is sponsored by the Chamber of Mines of Eastern BC. Look for updates on courses and events on this website or on the link below. For information, contact Nikki Olsson at 250/352-5242. Email: [chamberofmines@netidea.com](mailto:chamberofmines@netidea.com) <http://www.cmebc.com>.

**Oct 27-29** – GSN FALL FIELD TRIP – Sites to be visited include Bald Mountain, Archimedes and Stacatto Resources South Eureka Project. See Registration form on page 2.

**Nov 14-16** – EPA Hard Rock 2006 Sustainable Modern Mining Applications Conference to be held at the Doubletree, Tucson Reid Park in Tucson, Arizona. This conference will provide participants with an opportunity to examine and discuss current and future environmental issues which provide sustainable opportunities for efficient extraction and maximum utilization of resources in mining. For more information, contact Alina Martin at 703/318-4678 or by email. Email: [tcs-events@saic.com](mailto:tcs-events@saic.com) <http://www.epa.gov/hardrockmining/hardrock/hardrock2006.htm>.

**Dec 4-8** – Northwest Mining Associations 112th Annual Meeting, Exposition and Trade Show will be held at John Ascuagas Nugget Casino-Resort in Reno, Nevada. For information, please see the home page on this website or call Pat Heywood at the NWMA office in Spokane, WA at 509/624-1158. Email: [pheywood@nwma.org](mailto:pheywood@nwma.org), <http://www.nwma.org>

## GSN MEMBERS' PERSONAL NOTES & NEWS

### *Career Related Moves*

► **Greg Hill** has accepted the position of Vice President at Harvest Gold Corp. (US). Congratulations Greg!

► **Raul Madrid**, Manager of Nevada Projects for Victoria Resources US Inc. has opened a new office in Reno. Other GSN Members working out of the new Victoria office include, **Marcus Johnston**, **Craig Mach** and **Juan Ruiz Parraga**. **Alma Sanchez** will be the new office manager. They are located in the old Placer Dome exploration office at 240 South Rock Blvd., Suite 117, Reno, Nevada 89502. Tel: 775/856-4477, Toll Free: 888/360-4477, Fax: 775/856-4479, Email: [rmadrid@victoriaus.com](mailto:rmadrid@victoriaus.com). Office hours, roughly 8-5 or as dictated by exploration efforts.

► **Mary Stollenwerk** will transfer from Winnemucca Branch Manager for ALS Chemex to Reno, where she will join the Reno team in a new role as U.S. Client Service Manager. **Orland Durben** with ALS Chemex, will assume the position of Winnemucca Branch Manager.

**Members are encouraged to keep us informed about their own career related moves and awards, and deaths of GSN colleagues. Your information needs to be received by Laura at [gsm@mines.unr.edu](mailto:gsm@mines.unr.edu) by the 21<sup>st</sup> of each month.**

## ACTIVITY UPDATE

Mike Brady, July 2006  
www.activityupdate.com

### NEVADA

Romarco Minerals Inc. announced that it acquired an option to earn a 60% interest in the Red Canyon Property from Miranda Gold Corp. for \$3,000,000 in exploration expenditures over 5 years. *Press Release: July 13*

Newmont Mining Corp. announced that reserves at the Carlin Underground Operations aggregate 7,700,000 tons @ 0.490 opt Au proven+probable. (was 8,700,000 tons @ 0.510 opt Au proven+probable) *2005 Annual Report*

Newmont Mining Corp. announced that reserves at the Carlin Open Pit Operations aggregate 238,300,000 tons @ 0.043 opt Au proven+probable. (was 201,600,000 tons @ 0.047 opt Au proven+probable) *2005 Annual Report*

Newmont Mining Corp. announced that reserves at the Twin Creeks Mine aggregate 61,200,000 tons @ 0.074 opt Au proven+probable. (was 61,800,000 tons @ 0.075 opt Au proven+probable) *2005 Annual Report*

Newmont Mining Corp. announced that reserves at the Lone Tree Mine aggregate 4,000,000 tons @ 0.080 opt Au proven+probable. (was 14,000,000 tons @ 0.063 opt Au proven+probable) *2005 Annual Report*

Pan-Nevada Gold Corp. announced that recent drill results at the Pan Project include 0-20 feet @ 0.010 opt Au (236); 0-55 feet @ 0.026 opt Au (237); 0-35 feet @ 0.011 opt Au (238) and 0-55 feet @ 0.039 opt Au (240). (resource = 17,900,000 tons @ 0.019 opt Au indicated) *Press Release: July 14*

Golden Phoenix Minerals Inc. announced that it surpassed the \$5,000,000 spending requirement to earn a 60% interest in the Ashdown Property from Win-Eldrich Mines Ltd. *Press Release: July 12*

Klondex Mines Ltd. announced that recent drill results at the Fire Creek Project include 960-970 feet @ 0.145 opt Au (FC0527); 1,090-1,125 feet @ 0.092 opt Au (FC0603); 910-930 feet @ 0.076 opt Au (FC0604); 1,135-1,140 feet @ 0.383 opt Au (FC0606) and 650-670 feet @ 0.102 opt Au (FC0607). (resource = 1,779,200 tons @ 0.328 opt Au indicated) *Press Release: July 20*

Midway Gold Corp. announced that recent drill results at the Spring Valley Project include 123-162 meters @ 0.033 opt Au (SV06-171C); 290-350 meters @ 0.030 opt Au (SV06-171C); 217-238 meters @ 0.032 opt Au (SV06-173); 202-217 meters @ 0.017 opt Au (SV06-175); 131-161 meters @ 0.023 opt Au (SV06-177) and 126-151 meters @ 0.018 opt Au (SV06-178). (resource = 10,030,000 tons @ 0.024 opt Au measured+indicated) *Press Release: July 20*

Nevada Pacific Gold Ltd. announced that recent drill results at the BMX Project include 15-20 feet @ 0.016 opt Au (R06-03); 110-175 feet @ 0.031 opt Au (R06-04) and 30-40 feet @ 0.022 opt Au (R06-06). *Press Release: July 20*

Vista Gold Corp. announced that it would combine its Nevada gold properties with those of the Pescio Group into a new company called Newco. *Press Release: July 10*

Metallic Ventures Gold Inc. announced that recent in-fill drill results at the Gemfield Project include 117.5-212.5 feet @ 0.026 opt Au (GEM-400); 82.5-205 feet @ 0.024 opt Au (GEM-401); 60-235 feet @ 0.020 opt Au (GEM-402); 90-190 feet @ 0.025 opt Au (GEM-403); 105-185 feet @ 0.918 opt Au (GEM-404) and 52.5-225 feet @ 0.030 opt Au (GEM-405). (resource = 9,500,000 tons @ 0.040 opt Au) *Press Release: July 25*

Nevada Pacific Gold Ltd. announced that recent drill results at the Cornerstone Project include 0-65 feet @ 0.017 opt Au (CSR06-18); 0-150 feet @ 0.010 opt Au (CSR06-19) and 0-60 feet @ 0.030 opt Au (CSR06-20). *Press Release: July 24*



## NEW PUBLICATIONS AT NBMG

**M149 - Gold and Silver Resources in Nevada** by David A. Davis, Joseph V. Tingley, and John L. Muntean, 2006

A 1:1,000,000-scale map of Nevada showing locations of deposits with known or inferred gold and silver resources or reserves discovered since 1930. Base-metal and industrial-mineral deposits are also shown if they contain a significant amount of gold or silver. *Map 149 supersedes Map 120.* **M149** is available **free on the Web** at: <http://www.nbmg.unr.edu/dox/m149.pdf> (*please note: file takes a while to download*) **M149D**, a new **CD-ROM**, is available for \$15.00 or is **free on the Web** at: <http://www.nbmg.unr.edu/dox/m149d.zip>

**OF06-4 - The Timing and Evolution of Cenozoic Extensional Normal Faulting in the Southern Tobin Range, Pershing County, Nevada, An MS Thesis** by Zachary J. Gonsoir, Oregon State University, 2006, **CD-ROM - \$15**, or is available **free on the Web** at: <http://www.nbmg.unr.edu/dox/OF064/OF064.htm>

**OF06-4m - The Geology of Golconda Canyon, Southern Tobin Range, Pershing County, Nevada** by Zachary J. Gonsoir, Oregon State University, 2006, scale 1:24,000 (geologic **plate only** from the thesis) \$15.00 rolled or folded paper copy. Available **free** at: [www.nbmg.unr.edu/dox/of064/TobinGeomap.pdf](http://www.nbmg.unr.edu/dox/of064/TobinGeomap.pdf)

**OF06-5 - Mineral- and Energy-Resource Potential for White Pine County - The Nevada State Agencies' Perspective**, layout by Jennifer Mauldin, Christine Arritt, Elizabeth Crouse, edited by Dick Meeuwig, 60 x 42-inch poster, **\$20.00 or free on the Web**.

This poster illustrates where proposed land withdrawals in White Pine County coincide with areas of mineral- and energy-resource potential as determined in assessments made by the U.S. Geological Survey (USGS), the Nevada Bureau of Mines and Geology (NBMG), and others.

**New journal article by faculty:** Latest Quaternary Fault Movement along the Las Vegas Valley Fault System, Clark County, Nevada by Craig M. dePolo, John W. Bell, Steve Boron, D. Burton Slemmons, and James L. Werle (*Environmental & Engineering Geoscience*, Vol. XII, No. 2, May 2006, pp. 181-193) pdf of the article: <http://eeg.geoscienceworld.org/cgi/reprint/12/2/181>

**USGS Fact Sheet 2006-3044 - Freshwater Diatomite Deposits in the Western United States** by Alan R. Wallace, David G. Frank, and Alan Founie, available **free on the Web** at: <http://pubs.usgs.gov/fs/2006/3044> We have copies of this 2-sided color fact sheet available in SEM 310 or free to send with orders.



# GEOLOGICAL SOCIETY OF NEVADA

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Office hours: 1-4 pm, Monday through Friday • Office Manager: Laura Ruud

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 GSN membership year begins in June. Annual dues of \$35.00 (\$17.50 for full time students) are due in the fall. The GSN sponsors a Field Trip in the Fall and one in the Spring of each year. Monthly meetings are held on the third Friday of each month, September through May. The following are sanctioned Chapters of the GSN: Elko Chapter, based in Elko; Southern Nevada Chapter, based in Las Vegas, and the Winnemucca Chapter, based in Winnemucca.

Please remember the GSN Foundation when renewing. Foundation dollars are used for the Kindergarten through 12<sup>th</sup> grade Field Trip Grant Program, Nevada Mapping Grants and University of Nevada scholarships.

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<input type="checkbox"/> I WOULD LIKE TO HAVE AN ASTERISK BY MY NAME IN THE DIRECTORY INDICATING I AM AVAILABLE FOR CONSULTING.		
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I authorize GSN to send to me, via email: GSN announcements, publication updates, employment opportunities, etc.		Yes <input type="checkbox"/> No <input type="checkbox"/>
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