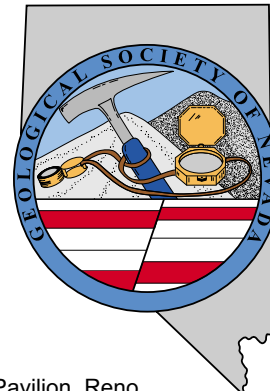


# GSN NEWSLETTER



October 2005, Vol. 20, No. 8

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**Laura Ruud**

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## CALENDAR OF GSN EVENTS

- Oct 2 Sunday** GSN 17<sup>th</sup> ANNUAL PICNIC: Rancho San Rafael Park, Highlands Pavilion, Reno. Noon – 5 pm. Bring a side dish to share. Laura Ruud to RSVP, 775/323-3500.
- Oct 7-9** GSN FALL FIELD TRIP: Mammoth Lakes, CA/Long Valley. Contact Laura Ruud to check space availability. 775-323-3500 or gsn@mines.unr.edu.
- Oct 12 Wednesday** WINNEMUCCA CHAPTER MEETING: Speaker: Eric Saderholm, Newmont Mining Corp. Title: "Phoenix Mine - New Life in an Old District" (see abstract on p.8). Humboldt Room, Red Lion Inn and Casino. Drinks/Social-6:30 pm, talk-7:00 pm. Sponsor-Boart Longyear. Kim Craig, Chapter President, 775/529-5001 x1340, kim\_craig@Placerdome.com.
- Oct 20 Thursday** ELKO CHAPTER MEETING: Speaker: Eric Saderholm, Newmont Mining Corp. Title: "Phoenix Mine - New Life in an Old District" (see abstract on p.8). Western Folklife Center, Elko, NV. Drinks-6:00 pm, talk-7:00 pm. Contact: John Watson, Chapter President, for more info: 775/738-2062, jwatson@barrick.com.
- Oct 21 Friday** GSN MEMBERSHIP MEETING: Speaker: Eric Seedorff, Center for Mineral Resources, Department of Geosciences, Univ. of AZ. Title: "Linkages Between Industry, Academia, and Others: Sustaining Mineral Deposit Research, With Examples From the Basin and Range". Reno Elks Lodge, 597 Kumble Ln, Reno, NV. Drinks-6 pm, dinner-7 pm, talk-8 pm. Contact Laura Ruud for reservations, 775/323-3500, gsn@mines.unr.edu.
- Oct 27 Thursday** SOUTHERN NEVADA CHAPTER MEETING: Speaker: Dieter Krewedl, GSN President. Title: "Geology of Uranium Mineralized, Collapse Breccia Pipes in the Grand Canyon Area, Northwestern Arizona". Room 105 (note change!), Lily Fong Geoscience Building, UNLV, Las Vegas, NV. Social-6:00 pm, presentation-6:30 pm. Robyn A. Howley, Chapter President, 702.895.5054, email: robynhowley@yahoo.com for more information.
- Nov 18 Friday** GSN MEMBERSHIP MEETING: Speaker: Alan Wallace, Research Geologist, USGS, "Cenozoic Basins and Erosion In Northern Nevada and Implications for Mineral Deposits and Ground Water".
- Dec 14 Wednesday** GSN MEMBERSHIP MEETING: Speaker: Donald Hudson, Consulting Geologist, "A Brief Overview of the History and Geology of the Comstock District: 150 Years of Chicanery, Exuberance and Naivete".

GSN Newsletter is published monthly except June and July

Geological Society of Nevada, PO Box 13375, Reno, NV 89507 USA, 775/323-3500, www.gsnv.org  
Office location: Laxalt Mineral Research Center, Rm 266, UNR. Hours: Mon thru Fri, 9 am-12 noon

## FROM THE PRESIDENT

Dieter Krewedl, *GSN President 2004-2006*

The GSN membership has overwhelmingly approved the proposed changes to the constitution. There were 172 total votes with 166 votes or 97% in favor and only 6 votes or 3% against the proposed changes. The 172 votes represent 18% of the 949 members of the GSN. The large voter participation and the high percentage favoring the changes to the constitution is a clear mandate from the membership supporting the establishment of the Board of Directors.

The GSN Board of Directors will consist of 11 members, five of which are non-elected members that consist of the current and past GSN Presidents plus the three current Presidents of the Elko, Winnemucca and Southern Nevada

*continued on page 2*

## OCTOBER MEETING SPONSOR



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### FROM THE PRESIDENT *continued from page 1*

chapters. The remaining six elected Board positions were recently presented for approval to the general membership by the GSN executive committee. They are Jean Cline, Steve Green, Dave Caldwell, Eric Ruud, Dave Shaddrick and Richard DeLong. The first meeting of the Board will be in late October or November.

At the September membership meeting, Dave Miller gave us an excellent overview of the current state of the uranium exploration and mining industry. The demand for uranium in the United States greatly exceeds the current production levels, which has encouraged exploration particularly in the established districts. The interest in the commodity is so strong that a number of junior gold companies are now picking up uranium properties. In fact, some gold explorationists are even admitting to have having some uranium experience. The uranium fever should also encourage exploration in Nevada.

October will be a busy month for the GSN. Significant events include the annual GSN picnic on October 2, followed by the GSN Fall field trip from October 7 to 9 and the GSN membership dinner meeting on Friday, October 21.

The 17<sup>th</sup> annual GSN picnic will be held on Sunday, October 2 at Rancho San Rafael Park in the Highland Pavilion from 12-5 PM. The event is being organized by D.D. LaPointe and Rachel Dolbier. It should be a fun event for the entire family.

The GSN Fall field trip from October 7 to 9 will visit the Long Valley caldera and see some spectacular geology. We will study the relationship of recent earthquake activity and volcanism to the development of mineral and energy deposits. Eight students are provided full sponsorships thanks to **Placer Dome Exploration Inc.** and **Boart Longyear/Lang Exploratory Drilling**. The field trip has also received generous support from the following companies: **Eklund Drilling, Boart Longyear/Lang Exploratory Drilling, Geotemps, Newmont Mining Corporation, BSI Inspectorate, ALS Chemex, Enviroscientists, Nevada Mining Association, Major Drilling, CGS Personnel and Zonge Geosciences Inc.** We are very fortunate to have these sponsors, who help defray costs and make this trip more affordable for everyone.

The speaker for the October 21 membership dinner meeting will be past GSN President Eric Seedorff, who is now Associate Professor in Economic Geology at the University of Arizona. Eric will discuss the "Linkage between industry, academia, and others: Sustaining mineral deposit research, with examples from the Basin and Range". It will be interesting to hear Eric's thoughts on the mutual cooperation between these groups since it could lead to greater success for all parties in the long term. Our good friends, **David Watkins** and **Bill Stanley of Atna Resources**, have volunteered to host the social hour. It should be a good meeting and I look forward to seeing all of you there.

### LAST MINUTE PICNIC REMINDER OCTOBER 2<sup>ND</sup>!

GSN's 17<sup>th</sup> Annual Family Picnic is scheduled for this Sunday, October 2, 2005 at Rancho San Rafael's Highland Pavilion (west end of the park) from 12 noon - 5:00 p.m. Bring the family for a fun afternoon of games (both adult and kid), barbecue, beer, and lively conversation. Following tradition, the GSN Education Committee will provide the meat and beverages, and we ask that you bring a salad, side dish, or dessert to share. The price is a bargain at a mere \$5 per person or \$10 per family. Please let us know if you can make it. Call Laura Ruud at the GSN office (775/323-3500) or email at [gsn@mines.unr.edu](mailto:gsn@mines.unr.edu).

### GSN FALL 2005 FIELD TRIP

#### "Volcanic Geology, Volcanology, and Natural Resources of the Long Valley Caldera, California"

The GSN Fall 2005 field trip scheduled for October 7-9 will visit the Long Valley caldera. Field trip stops will focus on the Bishop tuff and very young volcanic products of continued magmatic activity in the region. The trip will include visits to a geothermal power plant, kaolinite deposit, and gold resource. Talks on both nights by scientists from the USGS and Long Valley Observatory will include summaries of past, present, and future (?) volcanic and hydrothermal activity in the region.

Call the GSN office (775/323-3500) for availability.

### GSN ANNUAL DUES ARE NOW DUE!

Fall is here which means it is time to renew your GSN membership dues for the fiscal year of 2005/2006. Renew your dues today by pulling out (or printing) the membership form on page 11 and mailing it with your payment to GSN, PO Box 13375, Reno, NV 89557. If you are paying with Visa or MasterCard, you can fax the form to 775/323-3599 or call Laura Ruud @ 775/323-3500 to renew over the phone.

Please read the form completely and make any necessary changes to your address, position, company, etc. and especially email changes. We added the Qualified Persons notation last year so please check that box if it applies. If there are no changes since last year's Directory then you can write "SAME" on the form without filling the whole thing out again.

We would like to have the 2005/2006 Directory published and mailed out by mid-January this year so we are asking that you get your payment in **NO LATER THAN DECEMBER 1<sup>ST</sup>**. If you are unsure whether you have paid your dues for 05/06, you can contact the GSN office. For those receiving a hard copy in the mail, you can look for the expiration date after your name on the address label.

## *GSN October 21, 2005 Membership Meeting*

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**Date:** Friday, October 21, 2005

**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, October 20<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:** Eric Seedorff, University of Arizona  
See abstract below.

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### **LINKAGES BETWEEN INDUSTRY, ACADEMIA, AND OTHERS: SUSTAINING MINERAL DEPOSIT RESEARCH, WITH EXAMPLES FROM THE BASIN AND RANGE**

Eric Seedorff, Center for Mineral Resources, Department of Geosciences, University of Arizona

Industry and economic geology programs in academia are confronted with parallel challenges. If one looks for analogies between industry and academia, for example, the economics of haul trucks in a mine and of radiometric dating facilities in research institutions have surprising similarities. Mineral deposits research at universities benefits government agencies by access to additional field work and student employees; universities benefit from support for students and research; and industry benefits from contact with potential permanent hires and access to expertise that could help exploration. Results from our ongoing research illustrate how industry, academia, and others can cooperate on mineral deposit research projects.

A current group of projects in a highly extended region of the southern Basin and Range is a cooperative university-government-industry undertaking, with USGS, NSF, and industry funding. The mining companies seek insight into mine-scale problems and means to develop exploration targets. Using new concepts for structural reconstruction, the study area restores to a 50-km long, 10-km deep slice along the Laramide arc, with porphyry Cu-(Mo) deposits related to plutons of granodioritic to granitic compositions. The systems are exposed at different levels. Marked contrasts in type and intensity of alteration at deep levels can be used to explore in the original up-direction of the system, across fault blocks and beneath cover. Geologic relations indicate that mineralizing plutons were emplaced following Laramide contractional deformation, and new U-Pb zircon dates indicate that multiple mineralization events occurred over a span of 10 to 15 my. In the Tortilla Mountains, the oldest Tertiary rocks and underlying strata dip ~90° east. In the Hackberry Wash area—previously has been interpreted as a single panel of tilted crust—we recognize three sets of normal faults. Elsewhere in the region, the geometry of faulting generally is more complex than at Hackberry Wash, and the amount of rotation and direction of tilting varies geographically.

In the northern Basin and Range, porphyry, high- and low-sulfidation epithermal, and Carlin-type deposits form during Tertiary extension, which also dismembers Mesozoic systems. In the case of the mid-Cretaceous Robinson porphyry Cu-(Mo-Au) deposit, the system has been complexly faulted and variably tilted both to the east and west. Recent work funded by Quadra Mining reveals that dismembered segments of the early generations of west-dipping faults that occur in the Liberty pit have been recognized across the Footwall East fault in the Tripp-Veteran area, with implications for exploration and operations.

Cooperation among the minerals industry, academia, government agencies, and professional societies is essential to our mutual survival and prosperity. Increased awareness and understanding could lead to greater success for all parties in the long term.

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Eric Seedorff was born in Carlsbad, New Mexico, and raised in a mining family. Eric earned a BS degree in Geology from the University of California, Davis, and MS and PhD degrees in the Ore Deposits and Exploration Program, Department of Applied Earth Sciences, Stanford University. Prior to becoming a faculty member, Eric was an entrepreneur for two years. His earlier positions in industry included Vice President Mineral Resources for BHP Copper, Chief Geologist of Magma Copper Company, Chief Mine Geologist for Magma at Robinson, an exploration geologist for WestGold and Chevron Resources in the Great Basin, and various summer positions in Nevada, mostly with Noranda Exploration. Eric currently is Associate Professor, Lowell Chair in Economic Geology, in the Department of Geosciences, University of Arizona, where he leads a post-graduate education and training program for geologists in the minerals industry. His principal research interests are in porphyry deposits, extensional tectonics, and hydrothermal alteration-mineralization. Eric has been active in the Society of Economic Geologists and is a past President of both GSN and the Arizona Geological Society.

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### **MSHA REFRESHER COURSE**

The GSN organized another successful MSHA 8-Hour Annual Refresher Surface Training course this past July. We had a great turnout of 28 people who were re-certified. The State of Nevada trainer is always happy to accommodate the GSN group.

We are putting feelers out now to see if there is interest in another Refresher being organized for sometime this winter or if anyone needs the full 3-Day Certification training. Please contact Laura at the GSN office if you have any input on this. Let her know if you need the one-day or three-day training and what month you would like it to be held. It will be a little harder to get a room while UNR classes are in Session but we may look at Christmas Break or Spring Break if there is interest. Laura's email is: gsn@mines.unr.edu and phone #775/323-3500.

## **SOUTHERN NEVADA CHAPTER OCTOBER 27<sup>TH</sup> MEETING**

### **Geology of Uranium Mineralized, Collapse Breccia Pipes in the Grand Canyon Area, Northwestern Arizona**

Dieter A. Krewedl, Ph.D.  
*Geological Society of Nevada President*

Exploration for uranium mineralized breccia pipes throughout the Grand Canyon area of northwestern Arizona has been reactivated due to recent rise in the price of the metal. Exploration was most active during the 1980s when high grade uranium was discovered and mined in a number of collapse breccia pipe deposits that generally average 0.60 % uranium and range from 2 to 4 million pounds.

Uranium mineralized collapse breccia pipes occur in Mississippian to Triassic age rocks throughout the entire Grand Canyon area. Collapse breccia pipes exposed on the canyon walls of the Colorado River were studied to understand their formation and assist in their exploration on the plateaus located north and south of Grand Canyon National Park. A detailed discussion will be presented on the discovery and geology of the EZ-2 collapse breccia pipe located on the Arizona Strip, north of the Grand Canyon.

The morphology of the collapse breccia pipes consist of two interrelated parts: the throat and the collapse cone. Originating in the Mississippian Redwall Limestone, the throat consists of downward displaced and brecciated strata as young as the Triassic Chile Formation. The collapse cone surrounds the throat above the Coconino Sandstone level and was formed by dissolution primarily of the evaporites within the Kaibab and Toroweap Formations. Its area of influence is much wider than the throat and is expressed on the plateau surfaces by concentric, inward dipping beds.

Uranium mineralization is found mostly within the collapse breccia pipe's throat in reduced zones within strata that range from the Seligman Member of the Toroweap Formation to the Supai Group. Associated trace elements include copper, arsenic, nickel, lead, zinc and silver.

The source of the uranium was probably from the volcanic rocks within the Chinle Formation, which covered the entire region during Triassic time. The uranium either moved directly down the pipe's throat or indirectly by moving laterally through an aquifer such as the Coconino Sandstone. Precipitation of the uranium occurred when the metal rich oxidizing solutions encountered the highly reduced breccia pipe environment. Reduction in the described EZ-2 collapse breccia pipe was caused by hydrocarbons that probably migrated out of the Brady Canyon Member of the Toroweap Formation and into the porous breccia pipe. The mineralizing event probably occurred sometime between the Late Triassic and Cretaceous time.

## **FREE EARTH SCIENCE WEEK PUBLIC FIELD TRIP 2005**

**Nevada Bureau of Mines & Geology  
October 22 OR October 23, 2005**

### **The Great Highway 50 Rock Tour**

This year's Earth Science Week public field trip will start in Fallon and travel east to several sites of geologic interest along the way or within a few miles of Highway 50. In keeping with the 2005 National Earth Science Week theme "Geoscientists Explore our Earth," we will discuss careers in the geosciences such as exploring for mineral resources, investigating earth hazards to property and people, and monitoring of environmental change. We will have the opportunity to collect samples of a variety of minerals and rocks along the way.

You must sign up for this free field trip online at [www.nbmg.unr.edu](http://www.nbmg.unr.edu) by following the links for the 2005 Earth Science Week Field Trip, or call 775 784-6691, ext 152 if you do not have Internet access. Sign up for one of two identical day trips on either Oct. 22<sup>nd</sup> or 23<sup>rd</sup>.

## **GEOLOGICAL SOCIETY OF NEVADA FISCAL YEAR-END REPORT**

**June 2004 - May 2005**

### **Treasurer's Report, Camille Prens, GSN Treasurer**

Our tax returns are being prepared for submission on or before October 15, 2005 for the fiscal year just ended in May 2005. This Treasurer's Report has been prepared before our Accountant has finished his review and does not incorporate his adjustments to any of the accounts except Depreciation and Dividends Re-Invested for the Investment Accounts. It does not reflect the income and expenses of the Elko, Southern Nevada, and Winnemucca chapters, other than that the amounts shown for the checking balances of those chapters are current and include dues for the fiscal year.

This report does not show any activity from the recent Symposium. That event has its own Treasurer and separate books and will not be completed until the Symposium Proceedings are published. A report will be given at that time.

Certain items to note on this Report are:

- 1) Donations were made in memory of Vic Kral, Lyle Taylor, and Tom Thomas. A donation was made to the Foundation to match AIPG's 2-for-1 donation for K-12 Field Trips, and a Best-Student-Poster award was given at the Symposium.
- 2) GSN has matched donations under \$250 from members to the Foundation up to a total of \$5000; this year it totaled \$4,489.
- 3) Contract Labor includes Office Manager, Bookkeeper, Typesetting for the Newsletter and Field Trip Guidebooks, etc.
- 4) Accounts Receivable includes \$15,000 "seed" money given to the Symposium Accounts to start the books for that event.

If there are any questions about any items on this Report (see page 5), please contact me or any other officer.

# GEOLOGICAL SOCIETY OF NEVADA FINANCIAL REPORT

June 2004 - May 2005

May 31, 2005

**Income**

Publication Sales	\$20,626.00
Novelty Sales (Hats, T-Shirts)	\$563.00
Shipping Charges	\$718.69
Directory Advertising	\$7,350.00
Newsletter Advertising	\$6,900.00
Monthly Dinner Meetings	\$25,522.38
Student Dinner Fund	\$339.00
Golf Tournament	\$3,082.86
Annual Picnic	\$165.00
Field Trip-Fall	\$23,068.31
Field Trip-Spring	\$4,513.58
Dividends Paid-Money Market Account	\$464.41
Dividends Re-Invested-Investment Accounts	\$8,906.86
Interest Income-Checking	\$19.87
Collected Dues-Elko	\$1,035.00
Collected Dues-Reno	\$26,050.00
Collected Dues-So. NV	\$355.00
Collected Dues-Winn.	\$540.00
<b>Total Income</b>	<b>\$130,219.96</b>

**Expense**

Donations	\$3,600.00
Dues Distributed to Elko Chapter	\$1,005.00
Dues Distributed to S. Nevada Chapter	\$355.00
Dues Distributed to Winnemucca Chapter	\$550.00
Matching Dues Distributed to Chapters	\$1,910.00
GSN Foundation-Matching Member Donations	\$4,489.00
Ski Day	\$112.13
Family Picnic	\$186.63
Golf Tournament	\$3,466.86
Field Trip-Fall	\$17,403.39
Field Trip-Spring	\$3,811.55
Monthly Meeting	\$26,093.03
NV State Sales Tax	\$464.25
Publications Re-Printed	\$8,945.51
Directory Printing	\$4,895.13
Newsletter Printing & Handling	\$2,554.68
Novelties Purchased	\$2,497.92
Credit Card Fees-2%	\$1,786.92
Accounting & Legal Fees	\$975.00
PaineWebber Account Fees	\$125.00
General Administration	\$483.48
Office Supplies	\$667.16
Postage	\$1,005.35
Storage Rental	\$3,193.10
Telephone	\$1,908.88
Contract Labor	\$28,206.27
Liability Insurance	\$3,008.13
Misc Expense	\$577.25
Advertising & Conventions	\$2,611.98
Depreciation Expense	\$488.00
<b>Total Expense</b>	<b>\$127,376.60</b>

**Net Income** **\$2,843.36**

**ASSETS**

**CURRENT ASSETS**

Checking	\$317.91
Cash - Elko Chapter	\$3,829.13
Cash - S. Nevada Chapter	\$1,164.02
Cash - Winnemucca Chapter	\$2,430.90
Total Checking/Savings	\$7,741.96

Accounts Receivable \$21,720.70

**OTHER CURRENT ASSETS**

Investment Accounts	\$284,815.67
Money Market Fund	\$32,222.85
Total Other Current Assets	\$317,038.52
<b>Total Current Assets</b>	<b>\$346,501.18</b>

**FIXED ASSETS**

Equipment	\$8,267.65
Accumulated Depreciation	(\$7,322.75)
<b>Total Fixed Assets</b>	<b>\$944.90</b>

**OTHER ASSETS**

Inventory \$132,390.43

**TOTAL ASSETS** **\$479,836.51**

**LIABILITIES & EQUITY**

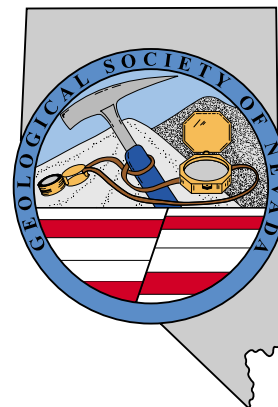
**CURRENT LIABILITIES**

Accounts Payable	\$200.00
Prepaid Income	\$620.00
<b>Total Liabilities</b>	<b>\$820.00</b>

**EQUITY**

Earnings	\$476,173.15
Net Income	\$2,843.36
<b>Total Equity</b>	<b>\$479,016.51</b>

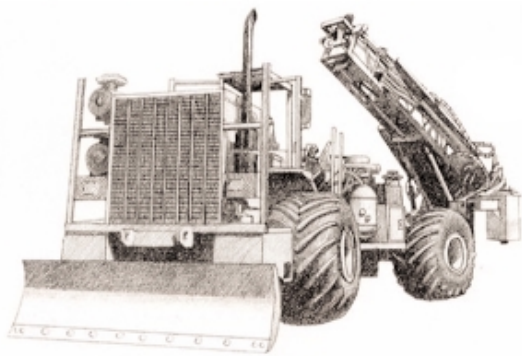
**TOTAL LIABILITIES & EQUITY** **\$479,836.51**







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**STATUS OF 2005  
GSN SYMPOSIUM PROCEEDINGS**

Greg Hill, editor for the 2005 GSN Symposium Proceedings, reports that the 91 manuscripts slated for publication have gone through the final editing process. The manuscripts are now going through a final review and will then be sent out for composition and layout. He is hoping to complete the publishing process by the end of this year barring some unforeseen factors that could potentially delay the process.



**DIXIE BULLOCK**  
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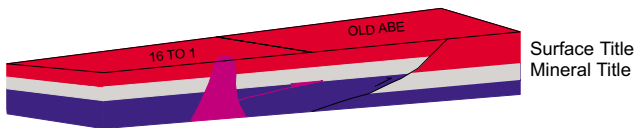
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## WINNEMUCCA CHAPTER OCTOBER 12<sup>TH</sup> MEETING

### Phoenix Mine New Life in an Old District

Eric Saderholm, *Newmont Mining Corporation*

#### Location:

The Phoenix Mine is located in the Battle Mountain mining District in Lander County, Nevada, approximately 13 miles southwest of the town of Battle Mountain.

#### Brief Mining History:

Mining began in the Battle Mountain district in 1867. Initially silver-bearing galena veins were mined north of the current Phoenix Mine. High-grade copper was mined in the 1920's from the Glory Hole, in the central project area. Duval began (modern) mining of open pit copper resources in 1964 and began open-cut gold mining in 1979. Battle Mountain Gold Company, a spin-off from Duval, mined gold from open pits in the 1984 to 1998. Newmont Mining Corporation, the current owner/operator, bought the property in 2001 and mining resumed in 2004 with the production of leachable oxide gold ores. A large multi-metal processing facility is currently under construction and sulfide ore production will begin in early 2006.

#### General Geology and Ore Controlling Features:

Lithologically and structurally-controlled Copper Canyon ores are part of a large porphyry-skarn Au-Cu-Ag system developed around the 38 Ma Copper Canyon granodiorite porphyry stock. A 3-mile long north-south zone of Au-Cu-Ag is centered on several known and inferred stocks that are part of a larger buried pluton based on hornfelsing, dike swarms, metal zoning and a broad aeromagnetic anomaly. High-angle, west-dipping NS-striking normal faults served as the primary hydrothermal fluid conduits, particularly the Virgin fault zone. Stratabound mineralization is hosted predominantly by carbonate-rich sedimentary rocks of the Pennsylvanian/Permian Antler sequence, including the Antler Peak, Edna Mountain and Battle Formations. The fractured and deeply oxidized siliciclastic Cambrian Harmony Formation and Pennsylvanian Havallah Sequence are locally mineralized where strongly structurally broken.

#### Production Information:

- Mining of ROM oxide ores began in November, 2004.
- When completed, the large mill will consist of a crushing and grinding circuit, gravity and flotation followed by CIL gold recovery and the production of a copper concentrate to be shipped off-site for smelting.
- The 2004 reserves are 8.5 million ounces gold, 45 million ounces silver and 660 million pounds copper.
- The current mine life is 20 years (2024) with significant upside potential for increase.
- The average mining rate will be 150K tons/day (54 million tons/year) yielding 430K ounces gold/year, 30 million pounds copper/year and 3 million ounces silver/year.
- Cash costs are estimated to be \$200 to \$225/ounce.

## ELKO CHAPTER OCTOBER 20<sup>TH</sup> MEETING

### Phoenix Mine New Life in an Old District

Eric Saderholm, *Newmont Mining Corporation*

See Winnemucca Chapter for abstract.

## UPCOMING EVENTS

**Oct 4** – SME Northeastern Nevada Section, Mining Renaissance 2005 Technical Conference. Elko Convention Center, Elko, NV. See [www.smenet.org/meetings/calendar/event\\_calendar.cfm](http://www.smenet.org/meetings/calendar/event_calendar.cfm).

**Oct 6** – Nevada Petroleum Society – Greg Nielsen, Financial Advisor, Avisen Securities – “Investing in the Oil and Gas Business”. Austin’s Restaurant, 7671 S Virginia St in Reno, NV. Cocktails-6:30 pm. Dinner-7:00. Talk immediately follows dinner, 7:45 or 8:00 pm. Reservations required; Diane Phillips at [trailsend@pyramid.net](mailto:trailsend@pyramid.net) or 775-267-4663.

**Oct 7** – Mackay Seminars in Economic Geology - Elizabeth Zbinden, Round Mountain Gold Corporation - “Ol Doinyo Lengai, Tanzania: the Carbonatite Volcano”. Room 215, Mackay Science Building (on the SE side of the quad) University of NV, Reno campus, 3:00 pm.

**Oct 15-19** – Geological Society of America Annual Meeting & Exhibition, Salt Lake City, UT. [www.geosociety.org/meetings/2005](http://www.geosociety.org/meetings/2005).

**Oct 16-19** – Heavy Minerals Conference 2005, Ponte Vedra Beach, Sawgrass Marriott, Jacksonville, FL. Organizers: Society of Mining, Metallurgy & Exploration. [davis@smenet.org](mailto:davis@smenet.org), [www.smenet.org/meetings/HMC/index.cfm](http://www.smenet.org/meetings/HMC/index.cfm).

**Oct 21** – Mackay Seminars in Economic Geology - Eric Seedorff, University of Arizona - “Arizona Porphyry Systems: New U-Pb Dates, New 3-D Views, and New Questions”. Room 215, Mackay Science Building (on the SE side of the quad) University of NV, Reno campus, 3:00 pm.

**Oct 31-Nov 5** – Alaska Miners Association Convention and Trade Show, Anchorage, AK. Short course: Mon.-Tues., Oct. 31-Nov. 1; General Convention, Weds.-Fri., Nov. 2-4; Rock & Mineral Show, Fri.-Sat., Nov. 4-5. For more information, e-mail [ama@alaskaminers.org](mailto:ama@alaskaminers.org); website: [www.alaskaminers.org](http://www.alaskaminers.org).

**Nov 3** – Nevada Petroleum Society – Larry Anna, USGS Energy Resources Team - “The Latest Federal Assessment of Oil and Gas Resources in the Eastern Great Basin.” Austin’s Restaurant, 7671 S Virginia St in Reno, NV. Cocktails-6:30 pm. Dinner-7:00. The talk immediately follows dinner, 7:45 or 8:00 pm. Reservations required. Contact Diane Phillips at [trailsend@pyramid.net](mailto:trailsend@pyramid.net) or 775/267-4663.

**Dec 5-9** – Northwest Mining Association, 111<sup>th</sup> Annual Meeting and Exposition, Spokane, WA. Pat Heywood, [pheywood@nwma.org](mailto:pheywood@nwma.org); <http://www.nwma@nwma.org>.

**Dec 6-15** – The Lowell Program in Economic Geology at the U of Arizona is presenting a Short Course on Porphyry Deposits, held in Tucson. Contact Eric Seedorff at [seedorff@geo.arizona.edu](mailto:seedorff@geo.arizona.edu) or Lukas Zurcher at [lzurcher@geo.arizona.edu](mailto:lzurcher@geo.arizona.edu).



## ACTIVITY UPDATE

Mike Brady, August 2005  
www.activityupdate.com

### NEVADA

Castleworth Ventures Inc. announced that recent drill results at the Pan/Black Stallion Project include 0-40 feet @ 0.101 opt Au (05-01); 0-50 feet @ 0.023 opt Au (05-02); 0-90 feet @ 0.039 opt Au (05-03); 85-95 feet @ 0.009 opt Au (05-04); 0-45 feet @ 0.038 opt Au (05-05); 0-25 feet @ 0.022 opt Au (05-06); 100-155 feet @ 0.007 opt Au (05-11); 85-115 feet @ 0.017 opt Au (05-12) and 40-60 feet @ 0.021 opt Au (05-13). (resource = 17,900,000 tons @ 0.019 opt Au indicated) *Press Release: August 15*

NovaGold Resources Inc. announced that it purchased 5,374,500 shares of U.S. Gold Corp. for \$2,687,000. (reserve @ Tonkin Springs = 10,637,000 tons @ 0.061 opt Au proven+probable) *Press Release: July 29*

Gateway Gold Corp. announced that recent drill results at the Big Springs/Crusher Zone Project include 130-265 feet @ 0.122 opt Au (GW05-166) and 70-95 feet @ 0.818 opt Au (GW05-172). (resource = 904,200 tons @ 0.288 opt Au measured+indicated) *Press Release: August 11*

Royal Standard Minerals Inc. announced that it acquired an option to earn a 50% interest in the Mustang Canyon Property from Metallic Ventures Gold Inc. for \$20,000/year exploration expenditures.

*Press Release: July 19*

U.S. Gold Corp. announced that it terminated its offer to merge with Romarco Minerals Inc. and Western Goldfields Inc. (reserve @ Tonkin Springs = 10,637,000 tons @ 0.061 opt Au proven+probable) *M.J.: August 5*

Placer Dome Inc. announced that reserves at the Bald Mountain Mine aggregate 21,485,200 tons @ 0.044 opt Au proven+probable. (was 20,781,200 tons @ 0.032 opt Au proven+probable) *2004 Annual Report*

Placer Dome Inc.(75%) announced that reserves at the Turquoise Ridge Mine aggregate 6,843,500 tons @ 0.615 opt Au proven+probable. (was 8,267,600 tons @ 0.589 opt Au proven+probable) *2004 Annual Report*

Placer Dome Inc.(60%) announced that reserves at the Cortez Complex aggregate 321,920,500 tons @ 0.047 opt Au proven+probable. (was 256,604,300 tons @ 0.050 opt Au proven+probable) *2004 Annual Report*

Placer Dome Inc.(60%) announced that reserves at the Cortez Hills Project aggregate 52,616,600 tons @ 0.138 opt Au proven+probable. (was 41,215,200 tons @ 0.128 opt Au proven+probable) *2004 Annual Report*

Atna Resources Ltd. announced that the new decline at the Pinson Project intersected a mineralized structure that averages 11.1 meters Wide at 0.562 opt Au. It was unclear if this structure was the same as that intersected in

the surface drill holes. (resource = 1,760,000 tons @ 0.302 opt Au measured+indicated) *Press Release: August 17*

Bravo Venture Group Inc. announced that it acquired an option to earn a 49% interest in the Shoshone Pediment Project from Placer Dome Inc. for \$100,000 in exploration expenditures. *Press Release: August 22*

## MERIDIAN GOLD – RUN FOR EDUCATION

The Meridian Gold Run for Education will be held Saturday, October 15, 2005 at the Meridian Gold Headquarters in South Reno, Nevada. 100% of the registration fee will be given to The Education Collaborative of Washoe County, a non-profit 501(c)(3) that connects businesses and public schools in Washoe Co. Funds will be used for two purposes. One is to provide a portion of the seed money needed to introduce an after school intramural program at the elementary school level. The second use of the funds will be for specific academic and scholastic programs. See <http://www.meridianrunforeducation.com/race/index.cfm> for complete information.

## GSN MEMBERS’ PERSONAL NOTES & NEWS

### *Career Related Moves*

► Steve Craig, past President of the GSN, has left Golden Phoenix Minerals after eight years of service to the Company. He intends to stay in the Reno area and pursue opportunities that will focus on exploration and development of mineral deposits.

► Dave Emmons has accepted the position of Chief Geologist at the Round Mountain mine. He will be responsible for the geology at the Round Mountain mine and exploration in the area. Dave is pleased to be with Kinross Gold Corp again and kicking the rocks in Nevada.

### *Awards and Related Items*

► Richard F. DeLong has been appointed by Nevada Governor Guinn to the Nevada Commission on Mineral Resources as a representative for large scale mining. Richard is the President of Enviroscentists, Inc., a Reno based environmental permitting and consulting firm, and a past President of the GSN.

**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 [gsn@mines.unr.edu](mailto:gsn@mines.unr.edu) by the 21<sup>st</sup> of each month.**

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Joe Laravie	John Taylor
John Lucas	Alan Wallace
Ed MacKevett, Jr.	William Wulfange
Bob McCusker	Stacy Zimmerman
Marilyn Miller	

### **Student Dinner Fund**

Opal Adams	Nadine Langley
Rich DeLong	Marilyn Miller
Del Flint	Ronald Parratt
Bob Forest	Placer Dome Exploration
Bob Horton	Alan Wallace
Dieter Krewedl	Dana Willis

## **STUDENT MEMBERSHIP DUES PAID BY GEOTEMPS!**

Many years ago, Lyle Taylor, President of GEOTEMPS, Inc., volunteered to pay the GSN membership dues of any Mackay School of Mines student who wanted to join. A few years later, he expanded his offer to all students enrolled in Geological Sciences in the State of Nevada.

After Lyle's untimely passing last summer, his son Lance Taylor agreed to continue the tradition of paying the membership dues for these students. GEOTEMPS, Inc. sponsored 36 students last year from all over the state. The Geological Society of Nevada would like to send a very heartfelt thank-you to Lance and the people at GEOTEMPS for continuing the tradition that Lyle so generously began.

## **TIN CUP TEA MUSEUM BENEFIT**

Rachel Dolbier, *W.M. Keck Museum Administrator*

Over 900 people attended the 2005 Tin Cup Tea and Chuck Wagon BBQ held on September 16 at the Governor's Mansion in Carson City. This wonderful fundraiser event was hosted by Governor and First Lady Guinn as a benefit for the W.M. Keck Earth Science and Mineral Engineering Museum at the Mackay School of Earth Sciences and Engineering, University of Nevada, Reno and the Nevada State Museum in Carson City. Guests enjoyed a western BBQ and lots of different libations, danced to the music of David John and the Comstock Cowboys, and had a chance to bid on items auctioned off by Governor Guinn. Master of Ceremonies John Tyson presided over the round-up of sponsors that included Barrick Goldstrike Mines, Inc., Enviroscientists, Geotemps, Inc., Kappes Cassiday & Associates, Kinross Gold U.S.A., Inc., Mine Development Associates, Newmont Mining Corporation, Nevada Mining Association, Placer Dome USA, Queenstake Resources USA, Inc., Roger & LuAnne Steinger, Royal Gold, Inc., and Jim & Colleen Taranik.

This year's event was the most successful to date, with more than \$60,000 raised in total. The museums will use these funds to improve operations and provide new programs for the public. Thanks to all of you who attended and we hope to see you next year!

## **2005 SYMPOSIUM FIELD TRIP GUIDEBOOKS**

Guidebooks are available at the GSN office. Hours are 9 am-12 noon, Mon thru Fri. Contact Laura at 775/323-3500, fax at 775/323-3599, or email at [gsn@mines.unr.edu](mailto:gsn@mines.unr.edu).

**05FT01** Geology and Structural Controls of the Precious Metal Deposits of the Walker Lane and South-Central NV, (2005) **\$45.00**

**05FT03** An update on the Northeast NV Eocene Paleogeography, Volcanic Succession, and the Depth of Formation of Sediment-Hosted Gold Deposits of the Northern Carlin Trend, NV, (2005) **\$45.00**

**05FT04** Sediment-Hosted Gold Deposits of the Getchell District, NV, (2005) **\$45.00**

**05FT05** Low Sulfidation Vein Systems in the Northern Nevada Rift, NV, (2005) **\$45.00**

**05FT06** Geology and Mineralization of Sediment-Hosted Gold Deposits of the Southern Carlin Trend, NV, (2005) **\$45.00**

**05FT07** Sediment-Hosted Gold Deposits of the North-Central Eureka-Battle Mountain Trend, NV, (2005) **\$45.00**

**05FT08** Sediment-Hosted Gold Deposits of the Independence Range, NV, (2005) **\$45.00**

**05FT09** Porphyry Deposits of the Great Basin, (2005) **\$45.00**

**05FT10** Geology, Mineralization and Remote Sensing of the Comstock District, NV, (2005) **\$45.00**



# GEOLOGICAL SOCIETY OF NEVADA

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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 \$30.00 (\$15.00 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. Additional dues to these Chapters are \$5.00 annually. The \$5 Chapter dues are matched by \$5 from the GSN and go directly to the respective Chapter.

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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