CALENDAR OF EVENTS

Feb 4  SYMPOSIUM 2000: Organizational meeting at 12:00 noon - Watts Room, University Inn, UNR. Cheri Reimann, 775/358-4336.


Feb 24  GSN ELKO CHAPTER: At the High Desert Inn, Elko, NV; Speaker - Bob Leonardson, Barrick Gold Corp., Pascua Deposit in Chile. Social-6:30, talk-7:00. Reservations not required. Call Jeff Pontius at 775/778-9280 for information.

Feb 24  GSN SOUTHERN NEVADA CHAPTER; Lily Fong Geoscience Bldg, UNLV; Kim Zikmund, Southern Valley Water Authority, Las Vegas Valley Water Coordination Committee; A Community-Wide Effort. Call K. Goebel, 702/263-7600, or Jean Cline, 702/895-1091 for information.

May 15-18  GSN Symposium, Geology and Ore Deposits 2000: The Great Basin and Beyond. Registration materials now available on our web site.

Check out the GSN web site: www.gsnv.org

DIRECTORY UPDATE

Gregory McN French, GSN Membership Chair

The 1999-2000 Membership Directory is presently at the printer and we expect to begin mailing in February. I wish to thank all individuals and companies that supported the directory and urge the membership to do like wise.

Now that the year 2000 is upon us it would be appropriate for a little historical reflection. In 1957 GSN had 43 members with the directory consisting of two typed pages. In 1988-89 the membership topped 730 and fit on 14 pages with only the addresses listed. In the early 90's the directory was changed to its present format that included additional information that would be helpful to the members. The up coming 1999-2000 directory is 122 pages and includes over 900 members with e-mail and website info, cross referencing by company, meeting abstracts, congressional contacts, and state legislators and officials.

SEEKING NEW OFFICERS

The GSN Nominating Committee is seeking new officers for the fiscal year 2000-2001. The process is being started early this year since there will not be a May Membership meeting due to the Symposium. If you are interested in learning more about becoming an officer, contact GSN President Joe Kizis, jkizis@aci.net, or call the GSN office at 775/323-3500. For details on how the process works, check Article II of the Bylaws of GSN's Constitution. You'll find it in the GSN Membership Directory.

GSN SYMPOSIUM REGISTRATION

Now available on our web site: www.gsnv.org

Thanks to GEOTEMPS for hosting the January Meeting
**WESTERN REGIONAL SCIENCE FAIR**

Elizabeth Jones, GSN Education Co-Chairperson

The Western Regional Science Fair will be held again this year at Lawlor Events Center on Thursday, March 16th, 2000. Every year GSN helps find members of the science community to serve as Judges for this event. Your help is greatly appreciated.

Judges will need to be at Lawlor at 5:00 pm for instructions, sign-up and a buffet dinner. Child care will be provided. Judging usually begins around 6 pm and is over around 8 pm, depending on the number of judges (The more, the easier!)

If you can volunteer your time for this event, please return the following sign-up form by March 2 to GSN, or email your information to the GSN office. Please call or e-mail Liz Jones at 775-846-7901 or ej@povertypeak.reno.nv.us with your questions. Thanks very much for your help.

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**MSM HUGH C. INGLE, JR. ENDOWED SCHOLARSHIP**

Jane C.S. Long, Dean, Mackay School of Mines

Nevada miner Hugh C. Ingle, Jr. passed away, October 16, 1999 at the age of 76. Hugh had worked to winterize his mine on Friday and returned home with soreness in his back and arms. His condition worsened on Saturday, and he called to excuse himself from the Nevada Miners and Prospector Association monthly meeting of which he was president. He died at home with his loving wife of 53 years Janet at his side.

Hugh’s close friend and fellow miner John Livermore has generously offered the Mackay School of Mines a $50,000 challenge gift to establish an endowment in his memory. This endowment will fund an annual scholarship for a top student in Mackay’s Department of Mining Engineering. John will match all gifts towards this scholarship endowment up to $50,000. Hugh was a 1948 graduate of Mackay’s Mining Engineering department, and this scholarship is an appropriate tribute to a man loved and respected throughout the western mining community.

We hope to take full advantage of John’s challenge gift and urge you to be as generous as possible in light of the $50,000 needed. All checks should be made out to “The UNR Foundation/MSM Hugh C. Ingle, Jr. Endowed Scholarship” and sent to Connie Howard, Director of Development, Mackay School of Mines, M.S. 168, University of Nevada, Reno; Reno, Nevada 89557.

For more info call Connie at 775/784-1044.

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**ADVERTISING SPACE AVAILABLE**

Elizabeth Zbinden, GSN Symposium Committee

**Program with Abstracts**

This volume will contain the schedule of symposium activities and events, general information, and abstracts of all the papers and posters to be presented.

For details and advertising rates contact Elizabeth Zbinden, E_Zbinden@geology.reno.nv, or call the GSN Symposium office at 775/323-4569.
GEOLOGY AND MINERALIZATION ON THE ROSEBUD MINE, ROSEBUD MINING DISTRICT, PERSHING COUNTY, NEVADA
Kurt D. Allen, Brian W. Morris, Alex Davidson, and Travis Schwertfeger, Rosebud Mining Company, LLC, Hecla Mining Company, Operator

The Rosebud deposit is a volcanic-hosted, low sulfidation, epithermal, gold-silver deposit, located within the Rosebud Mining District in northwest Pershing County, Nevada. The deposit and surrounding area is controlled and operated by The Rosebud Mining Company, LLC., a joint-venture between Hecla Mining Company (50%) and Newmont Gold Corporation (50%). Hecla Mining Company is the manager of mining and Newmont Gold is manager of milling and exploration. The deposit consists of three ore bodies that are currently being mined underground, predominantly by cut-and-fill methods. The ore is then transported to Newmont Gold’s Twin Creeks Pinon Mill for processing. Pre-production development began in October of 1996 with production beginning in February 1997. Rosebud production through November 1999 consists of 789,244 tons at an average grade of 0.442 Au oz/ton and 2.68 Ag oz/ton containing 348,898 gold ounces and 2,117,957 silver ounces. The remaining proven and probable reserve consists of 215,673 tons at an average grade of 0.323 Au oz/ton and 1.23 Ag oz/ton totaling 69,713 gold ounces and 264,432 silver ounces.

The deposit is generally hosted within a series of Tertiary (late Oligocene-age) volcanics and volcaniclastics, primarily rhyolitic to latitic in composition. The volcanic package unconformably overlies the Jurassic/Triassic-age metasediment basement, which is also host to precious metal mineralization. Ore-grade mineralization at the Rosebud deposit has been divided into three ore zones: the South, East, and North ore zones, although lower-grade ‘halo’ mineralization generally transcends the spatial boundaries separating these zones.

The structural setting in the Rosebud deposit area is dominated by the northeast trending Cave fault and the east-west trending South Ridge fault. The Cave fault is a regional structure that strikes from N50°E to N60°E and dips between 25° to 30° to the northwest. Stratigraphic offset across the Cave fault displays up to 2,000 feet of apparent normal displacement. The Cave and South Ridge faults were generated from the same deformation event in which the Cave fault represents the main shear and the South Ridge fault represents the conjugate shear. The South Ridge fault is a mineralized, arcuate-striking, sinistral normal fault that generally strikes east-west and dips between 30° and 60° to the north that acted as a conduit for mineralizing fluids during the formation of the Rosebud Deposit. This fault is the footwall boundary to approximately two-thirds of the ore-grade mineralization in the deposit (South + North ore zones) and is the hanging wall boundary to the remaining ore-grade mineralization (East ± North ore zone). Inflections of the South Ridge fault occur and are one of the main controls to the mineralization at Rosebud. These inflections create open and fractured areas during the early sinistral and later dextral movement of the fault. South Ridge fault inflections have been identified in all three of the ore zones.

Structure and stratigraphy control precious-metal mineralization in the Rosebud Deposit. In the South ore zone, gold and silver mineralization occurs on the hanging wall of the South Ridge Fault: 1) in northeast trending (N60°E ±) extension fractures to the sinistral normal movement of the South Ridge Fault; 2) in east-west trending high-angle structures; 3) along flow bedding planes, and 4) disseminated into specific rhyolitic to latitic volcanic/volcaniclastic facies, where there is a distinct clay-rich, silica-poor association with precious metals. In contrast, mineralization in the East ore zone is characterized by pervasive silica-replacement, silica + illite + nacrite + marcasite ± pyrite stockwork within the Dozer Formation and Bud Marker Bed “type” of porphyritic rhyolitic dike. East ore zone mineralization is contained within, and in the footwall, of the South Ridge fault and along high-angle structural zones, where during the reverse dextral movement, a transpressional crush zone was created. The North ore zone displays mineralizing styles and controls that are a combination of those seen in both the South and East ore zones.
GSN’S FINANCIAL REPORT

The GSN’s fiscal year runs from June 1 to May 31. In the accompanying Profit and Loss statement we have summarized the 1999 financial statement prepared by the GSN’s accounting firm, Albright, Persing & Associates.

Most of the Income and Expenses categories are self-explanatory, with the exception of Grants and Legal & Accounting. GSN funds a number of educational activities as part of GSN’s chartered educational mission. These grants usually include earth-science field trips for K-6 children and 7.5 minute quadrangle mapping grants through the Nevada Bureau of Mines & Geology (NBMG). For the field trip grants, preference is given to at-risk schools, and the funds are used only for the cost of transportation. These grants have been funded from the interest income from the GSN “endowment account.” GSN also funds two scholarships, one at UNR and one at UNLV. Income from publications is down by almost 50 percent compared to the previous year, and operating costs are higher. The expenses under Legal & Accounting are the result of settlement of previous years accountant charges with GSN’s former accountant.

The GSN “endowment account” was created after the 1987 symposium with the money earned during that symposium, in part to ensure that the GSN is a perpetual educational organization. The money that was placed in the account was restricted by the Executive Committee so that only the interest could be spent and the principal had to be retained. The Executive Committee, during the next two symposia, have done the same with the monies earned at those symposia. A total of $180,000 in the account has been so restricted and the Executive Committee uses the income off those monies to fund the grants.

The bottom line for fiscal year 1999 is that the GSN lost $33,973, which is an increase of about $5,000 over the previous fiscal year. These losses have been funded through the sale of “endowment account” assets which are in excess of the $180,000. Due to these losses, the GSN Executive Committee has implemented the following actions over the past nine months:

- Increase the membership dues by $5 per year starting in fiscal year 2000;
- Field trip grants have been reduced from $8,000 to $5,000 per year;
- Mapping grants were not funded for this year;
- Hours for accounting & graphical support have been reduced;
- GSN is in the final stages of establishing the GSN Foundation to allow tax-deductible funding for our various grants, ultimately removing that expense from our balance sheet;
- E-mail distribution of our newsletter has been implemented to reduce the cost of newsletter distribution.

The GSN Executive Committee is considering additional cost-saving measures.

The financial records are always available for review. Please contact the Treasurer during business hours to make the request and arrangements for a meeting.

GSN Executive Committee
GSN Symposium Subcommittee
GSN Financial Subcommittee

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**Profit and Loss Statement, Fiscal Year 1999**

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<thead>
<tr>
<th></th>
<th>Reno Chapter</th>
<th>Southern NV Chapter</th>
<th>Elko Chapter</th>
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<td>Capital Gains on Investments</td>
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<td>Total Operating Expenses</td>
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<td><strong>Gain (Loss)</strong></td>
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GREAT BASIN CREDIT UNION

Thank you Geological Society of NV for being a Select Employer Group with Great Basin Federal Credit Union. We appreciate the success you have helped bring to the credit union and we hope that our relationship will continue to flourish.

In March of 1999 Great Basin Federal Credit Union applied with the National Credit Union Administration (NCUA) to officially change its charter from employer based to a community based credit union. We are pleased to announce on November 18, 1999, Great Basin FCU received approval to become a community-chartered credit union.

This change in our charter will in no way effect any of the accounts or loans you or your staff currently maintain with Great Basin Federal Credit Union, nor will it adversely affect our direct support of Geological Society of NV. Becoming a community-chartered credit union will allow us to offer a wide variety of services and become even more active within the community.

FIRST ANNOUNCEMENT - 2001 GORDON CONFERENCE

Jean Cline, Vice President, GSN Southern NV Chapter

The next Gordon Conference on “Inorganic Geochemistry” - particularly related to mineral deposits, is scheduled for August 19-24, 2001 at Proctor Academy, New Hampshire. The theme of the next conference will be the formation, modification and preservation of ore deposits, with a focus on geochemical processes related to tectonic, climatic and surficial factors.

As in previous years, space will be limited and the organizers will be seeking expressions of interest from those in academia, government and industry with interests in this general topic. Students will be encouraged to attend and subsidies for students are anticipated.

Formal announcements will follow later this year with registration details in early 2001. If you wish more information in the meantime, please contact Jeff Hedenquist - Gordongeochem@aol.com

MISCELLANEOUS

✦ Symposium Registration Packets have been sent out. Sign-up now for the early registration rate of $250.00.
✦ Eureka! When former Alaska Miner’s Association President (and quintessential bachelor) Tom Crafford was introduced to former GSN President Liz Jones - it was just a matter of time. Best wishes to this good-natured couple who plan to wed April 1st, and thanks for reminding the rest of us that there are still treasures to be found!
THE GREAT BASIN EXPERIENCE*
("is it true that Home Depot has the largest geology department
doing any company in the United States?)

By Ol’ Three Toe and Club Tail
(not your ordinary fossils)
e-mail address - dinos28297@aol.com

Club Tail:
Remember last week when we were driving past the Shoe Tree near Middle Gate and saw a geologist helping himself
to a pair of boots?

Ol’ Three Toe:
Yes, but I am not sure I like the direction this is going!

Club Tail:
Hang with me Bro. Why don’t we establish a tree outside of
several towns in the Great Basin to help geologists cope
with life in the field?

Ol’ Three Toe:
If I am reading your intent, how about a Rolaids tree outside
of Austin for after dinner relaxation?

Club Tail:
And how about a mattress tree outside of Pioche so that
there is a place to sleep?

Ol’ Three Toe:
How about a sandwich tree outside of Eureka so you can
get a field lunch, now that the deli is closed and Rains
Market is only open 15 minutes a day?

Club Tail:
We could build a one of everything tree outside of Tonopah
since all the stores in town are closed.

Ol’ Three Toe:
There is probably a need for a road map tree in Beatty so
that you can find the way back to Reno. If you have gotten
that far you are probably lost.

Club Tail:
A Scottie tree in Rachel so that you can get beamed up.

Ol’ Three Toe:
A Carlin Trend tree in, you guessed it, so that you can get a
property on “trend” to launch that new company.

Club Tail:
A book tree in Battle Mountain so that you can have some-
thing to do in the evenings.

Ol’ Three Toe:
A TV dinner tree in Gabbs so that you can eat.

Club Tail:
A Bud tree in Hawthorne since there are no good places to
drink.

Ol’ Three Toe:
A penicillin tree at Salt Wells.

Club Tail:
A job tree in Reno.

Ol’ Three Toe:
Yes, but that one would be dead; maybe the job tree should
be in Elko. Reno should just have a soup kitchen tree.

Club Tail:
Or better yet, there should be a money tree in Reno. That
would solve all of the problems!

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email: day@mineralexploration.com
UP-COMING EVENTS


Feb 20-24 Environmental & Eng Geophysical Soc Annual Meeting, SAGEEP, at Arlington, VA. 303/771-2000, mcramer@expomasters.com


Feb 28-Mar 1 SME Annual Meeting & Exhibit in Salt Lake City, UT. 303/973-9550, sme@smenet.org

Mar 5-10 PDAC Mining Millennium 2000 at Toronto, Canada. 416/362-1969


Mar 6-11 AMS Mining in the New Millennium: Challenges & Opportunities in Alaska in Fairbanks, AK. http://mineral.uafsmee.alaska.edu/bxama.htm, 907/458-8951

Mar 7 AGS Dinner Meeting at Tucson, AZ. John Lacy, Mining Law. Social-6:00, dinner-7:00, talk-8:00. Res 520/770-3500

Mar 8-9 14th High Altitude Revegetation Workshop in Fort Collins, CO. 970/491-7296, www.highaltitudereveg.com


Mar 24 AEG SW Section LV Subsection Workshop at Las Vegas, NV. One-Day Workshop on Geologic & Hydrologic Hazards in the Las Vegas Valley: Reducing Risk. D Blatchford, 702/251-5449

Mar 25 AEG SW Section LV Subsection Geologic Hazards Field Trip. D Blatchford, 702/251-5449

Apr 4-6 Workshop on the Characterization, Modeling, Remediation, & Monitoring of Mining Pit Lakes at Reno, NV. 703/645-6945 x5946

Apr 27-29 GSA Cordilleran Section 96th Annual Meeting at Vancouver, B.C. Abstracts-303/447-2020, x161, ncarnson@geosociety.org. Technical program-B Struik, 604/666-6413, bstruik@gsc.nrcan.gc.ca, D. Allen, 604/291-3967, dallen@sfu.ca, or D Thorkelson, 604/291-5390, dthorkel@sfu.ca

May 8-12 CMA CA Mining 2000: The Odyssey Continues at Palm Springs, CA. 916/447-1977

May 15-18 Geology & Ore Deposits 2000 - The Great Basin & Beyond, A GSN Symposium at Reno/ Sparks, NV. 775/323-3900, gnsymp@unr.edu, www.gsv.org

July 31-Aug 3 Pacific Rocks 2000, the Fourth North American Rock Mechanics Symp at Seattle, WA. M Cramer, 303/771-2000, mcramer@expomasters.com

Aug 31st Int’l Geol Congress, Brazil 2000 at Rio De Janeiro, Brazil. 55 21 295 5847, 311gc@311gc.org.br

Dec 3-7 NWMA Annual Meeting & Expo at Spokane, WA. H Hoeft, 509/624-1158, www.nwma.org

2001

HAVE YOU FILLED OUT YOUR REGISTRATION FORMS YET???
THE GSN SYMPOSIUM 2000 BEGINS IN JUST A FEW SHORT WEEKS!!!

ANY QUESTIONS?
CALL SYMPOSIUM OFFICE:
(775) 323-4569

OR E-MAIL:
gsnsymp@unr.edu

HURRY!
TIME IS RUNNING OUT!

REGISTER NOW AND RESERVE YOUR PLACE!
DON'T BE LEFT OUT!