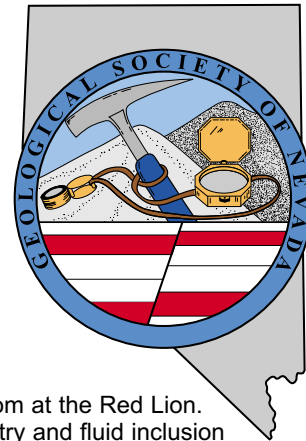


GSN NEWSLETTER



September 2004, Vol. 18, No. 7

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CALENDAR OF EVENTS

**Sept. 15th
Wednesday**

WINNEMUCCA CHAPTER MEETING: Humboldt Room at the Red Lion. Speaker: Stephen Redak, "Trace element geochemistry and fluid inclusion study of the Magdalena Vein, Santa Rita Mine, San Dimas District, Durango Mexico." Contact Fred Breit at 775/635-4704 or fbre1@nevada.newmont.com. See abstract on page 6.

Oct. 1st-3rd

GSN FALL FIELD TRIP. "New discoveries, exploration and mining activities along the southern Battle Mountain-Eureka Trend." See details and sign up form on page 2 or call Shannon Fitzpatrick at 775/323-3500.

**Oct. 10th
Sunday**

GSN 16th ANNUAL PICNIC: Rancho San Rafael Park. Details on page 3. Call Shannon Fitzpatrick at 775/323-3500.

**Oct. 15th
Friday**

GSN MEMBERSHIP MEETING: Reno Elks Lodge, Reno, NV, Speaker: Leroy Schutz, "Geologists add value at Newmont's Nevada mines." Social hour at 6 pm, dinner at 7 pm and talk at 8 pm. Contact Shannon Fitzpatrick for dinner reservations at 775/323-3500 or gsn@mines.unr.edu.

Please note the November meeting is on the 2nd Friday of the month.

**Nov. 12th
Friday**

GSN MEMBERSHIP MEETING: Reno Elks Lodge, Reno, NV, Speaker: Bob Leonardson, "Back to basics at Goldstrike." Social hour at 6 pm, dinner at 7 pm and talk at 8 pm. Contact Shannon Fitzpatrick for dinner reservations at 775/323-3500 or gsn@mines.unr.edu.

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

FROM THE PRESIDENT

Dieter Krewedl, *GSN President 2004-2005*

The third annual Silver Summer Series held on August 19 turned out to be another highly informative and entertaining event. Doug Silver presented us with his positive forecast of a prolonged rally in the commodities markets due to China's huge, on-going consumption of raw materials. He expects the rally in commodity prices to continue for at least the next 10 years, which should help many of us end our careers on a high note. A more detailed summary of Doug's talk is presented later in this Newsletter. We also want to thank Tom and Ann Carpenter for again hosting the event and Eklund Drilling for sponsoring the beverages.

Speaking of positive forecasts, the Nevada Division of Minerals has just come out with the results of their survey of Nevada exploration for 2003 and projections for 2004. According to the thirty respondents to the survey, the two main indicators of exploration activity in Nevada are both expected to have substantial increases during 2004. Exploration expenditures and employment of geologists in Nevada are expected to increase during 2004 by 29% and 25%, respectively. The improving commodity prices combined with the existence of favorable geology continues to

make Nevada an attractive place to explore. The entire report can be downloaded from the Nevada Division of Minerals' website at www.minerals.state.nv.us.

The Fall field trip scheduled from October 1st to 3rd will visit Nevada's most active exploration area and should generate a lot of interest. The trip will emphasize new discoveries, exploration and mining activities along the southern Battle Mountain-Eureka Trend. On the evenings prior to the field visits at the Cortez district and Archimedes deposit, we will be given presentations by Bob Hays of Placer Dome in Battle Mountain on the Cortez district discussing their latest results on the Cortez Hills/Pediment discoveries and by Karl Marlowe of Barrick in Eureka discussing their exploration activities at Archimedes and the proposed pit expansion that will mine the East Archimedes portion of the deposit. We also plan to make stops along the southern extension of the Battle Mountain Trend where representatives of exploration companies active in the area will make presentations. An itinerary and sign up sheet are provided

continued on page 4



FALL 2004 FIELD TRIP

NEW DISCOVERIES, EXPLORATION AND MINING ACTIVITIES ALONG THE SOUTHERN BATTLE MOUNTAIN-EUREKA TREND

October 1st to October 3rd, 2004

The field trip will begin in Reno on Friday afternoon. We will drive to Battle Mountain where we will be presented with a talk on Cortez. On Saturday, we will visit the Cortez Joint Venture deposits including the new discoveries at Cortez Hills and Pediment. We will also make stops along the southern extension of the Battle Mountain Trend where representatives of active exploration companies will lead the discussions. In Eureka, we will be presented with a talk on Archimedes and spend the night. Sunday, we will tour the Archimedes deposit and return to Reno.

Friday, October 1

- 1:30 PM Leave UNR parking lot
- 5:00 PM Arrive in Battle Mountain
- 6:00 PM Cocktails at the Hideaway Restaurant
- 7:00 PM Dinner at the Hideaway Restaurant
- 8:00 PM Talk by Bob Hays, Placer Dome, on the Cortez Joint Venture deposits
- Overnight lodging at the Big Chief Motel

Saturday, October 2 (Breakfast is on your own)

- 7:30 AM Leave Battle Mountain
- 8:15 AM Field stops 1-4: NSR Claim Block, Gold Acres, Pipeline and Cortez deposits
- 12:00 AM Lunch provided
- 12:30 PM Stop 5: Overview of the Cortez Hills/Pediment deposits
- 2:00 PM Field stop 6: Golden Trend and various claimants
- 3:00 PM Field stop 7: Trend and Fye Canyon
- 4:30 PM Drive to Eureka
- 6:00 PM Arrive in Eureka
- 7:00 PM Cocktails at Eureka Opera House
- 8:00 PM Catered dinner at Eureka Opera House
- 9:00 PM Talk by Karl Marlowe, Barrick, on the Archimedes deposit

Overnight lodging at the Eureka Best Western Lodge

Sunday, October 3 (Breakfast is on your own)

- 8:00 AM Leave Eureka for a tour of the Archimedes deposit, led by Barrick staff
- 8:30 AM Stop 1: North Wall Pit Overlook
- 9:30 AM Stop 2: West Archimedes pit
- 11:30 AM Lunch provided
- 12:00 PM Return to Reno via US 50 through Austin, Fallon & Fernley
- 4:00 PM Arrive at UNR campus in Reno

Price includes transportation, overnight lodging in Battle Mountain and Eureka, lunch, dinner & drinks and a field trip guidebook. Reservations are on first-come, first-served basis. **Attendance will be limited to 70.** Bring your own hard hats, boots, and field paraphernalia. Payment

must be received in the GSN office for reservations to be guaranteed.

Fall 2004 Field Trip Sign Up

Name _____

Daytime Phone _____

Fax _____

Company _____

Address _____

Email _____

Person to contact in case of emergency:

Name _____ Phone _____

Lodging needed in Battle Mountain & Eureka:

Y__ N__ Single__ Double__

Roommate (or we will assign) _____

MEMBER COST:

single room-\$250.00 _____

double room-\$210.00 _____

w/o lodging-\$160.00 _____

NON-MEMBER COST:

single room-\$270.00 _____

double room-\$230.00 _____

w/o lodging-\$180.00 _____

Amount included with this form \$ _____

Paid with Check# _____

Visa__ MC__ Exp Date _____

Credit Card# _____

Signature _____

(as it appears on card)

**Payment must be made by Sept 17, 2004
No refunds after Sept 24, 2004**

Fax: 775/323-3599 or mail to GSN office:
P.O. Box 13375, Reno, NV 89507,
or email to: gsn@mines.unr.edu

**Thanks to Eklund Drilling Co., Inc. for
sponsoring the Doug Silver talk.**

Please accept the GSN's apology for incorrectly printing Tom Thompson's name in place of Tom Thomas's name in the August Newsletter, which mentioned GSN members that have recently passed away.



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**GSN PRESENTS
THE SILVER SUMMER SERIES (S³)**

Doug Silver – How to Grab the Brass Ring:
An Update on the World

Summary by: Ann Carpenter and Ruth Carraher

The Silver Summer Series (S³) went off without a hitch with the third annual presentation made by Doug Silver on August 19th. Minor sprinkles could not dampen Doug's enthusiasm for what the next several (10?) years are likely to hold for the mineral development community.

Doug opened his talk by addressing this 'maturing' crowd of geologists and mineral development experts about pension plans. He guessed that most of us are without proper retirement vehicles to ensure a well cushioned life in our advancing years. From Doug's perspective, this up-swing in the minerals' markets will provide us with jobs and investment opportunities for the next 10 years – his estimation of how long this cycle will last. Doug is encouraging each and every one of us to "Grab the Brass Ring", and make some hay (retirement investments) while the going is good.

Doug's view of the mineral development and investment world is summarized in these simple bullets:

- We will end our careers on a high note.
- China will be the engine for a prolonged rally.
- Gold prices will remain around \$400-450/oz, somewhat supported by sustained high oil prices.

Why will we end our careers on a high note? Well, the mirror doesn't lie; we are not getting younger, and there are very few younger faces coming into the industry. Our vast array of knowledge and expertise is a valued commodity! So let's put that to good use and find the mineral resources for which competition is increasing.

For instance, China's consumption of raw materials is already driving prices up and increasing competition for the materials we have historically been first in line for. China's consumption rate has propelled them to the front of the line

for many of the raw materials we need regularly.

Gold prices are at or above \$400, and the overall market indicators suggest it will hover between \$400 and \$450, somewhat strengthened by the weak U.S. dollar and sustained high oil prices. The result: this is good for those of us in the mineral development field, and we should leverage this to help build our retirement plans!

The interesting news and trends include:

- China opened its economic borders in 2000, and is rapidly becoming a global industrialization center.

- China is the world's fastest growing consumer – cement, aluminum, coal, copper, iron, oil, to name just a few.
- By 2020, China will have a 50% shortfall in oil needs.
- By 2010, China plans to produce 100 million cars/year (up from 5 million today), and cars use metal.
- Gold imports in China were up 40.7% during the first 6 months over last year.

China will be the commodities price engine for the foreseeable future for several reasons: it is a huge export manufacturer; it has massive consumption driven by its immense domestic population; its increased urbanization creates new consumers; and 300 million Chinese youth are ramping up into the 'consumer age'.

A conclusion can be drawn based on the influence of this one emerging giant and its need for many of the raw materials required for production of its exports, as well as for its own domestic consumption. Exploration geologists will be needed on a worldwide basis to find the raw materials needed by China and the rest of us around the globe. Sharpen your exploration techniques for a wide variety of commodities – the competition for known resources/reserves is getting fierce with China alone.

So, for those of us without secure pension plans, near-term exploration opportunities should be plentiful, which will enable us to leverage that potential work toward a plan for some 'restful' years ahead! See you somewhere out there on the planet!!!

MINE EXPO INTERNATIONAL 2004

The Mine Expo will be from September 27 to September 30. The GSN will have an information booth in the convention. Anyone willing or able to stop by and donate some time and conversation is welcome. Please let Shannon in the GSN office know if you want to volunteer some time. The GSN appreciates all of the volunteer efforts and welcomes anyone who is new or experienced to come join us.

FROM THE PRESIDENT *continued from page 1*

in this Newsletter. Attendance will be limited, so sign up now.

The slate of speakers for the upcoming meeting year is being assembled and should be of great interest to our membership. The current schedule is as follows: On October 15, Leroy Schutz, Newmont's Director of Nevada exploration and mine geology will discuss "Geologists add value at Newmont's Nevada mines;" on November 12, Bob Leonardson, Barrick's Carlin trend advisor will speak on going "Back to basics at Goldstrike." I have also sent a letter to Congressman and geologist Jim Gibbons to speak at our Christmas party scheduled for December 15. I will keep you posted on his acceptance as well as speakers for the remainder of the year.

Remember, our regular membership dinner meetings start on October 15th. I look forward to seeing you there.

GSN'S 16th ANNUAL FAMILY PICNIC

Sunday, October 10, 2004 at Rancho San Rafael

This year we have staked our claim at the Highland Pavilion (west end of the park) from 12 noon 'til the sun goes down. 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 (four-legged kinds) 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. Sign up today by filling in the form or calling Shannon Fitzpatrick at the GSN office 775/323-3500.

**16th ANNUAL GSN FAMILY PICNIC
Great Basin Adventure Park at
Rancho San Rafael**

Name: _____

Total # family members or guests in your party: _____

Ages of children: _____

Address: _____

City/State/Zip: _____ Daytime phone: _____

Bringing salad: _____ or dessert: _____

Enclosing: **\$10.00 per family** or **\$5.00 per single**

**Please mail to: Geological Society of Nevada
PO Box 13375, Reno, NV 89507, or fax to: 775/323-3599**

**Don't forget the Tin Cup Tea &
Chuck Wagon BBQ**

September 11th, from 6 pm to 10 pm

See the August newsletter for more information.

SYMPOSIUM 2005

The Editors are seeking experienced geoscientists willing to review full-length and short technical papers to be presented at the symposium either in plenary sessions or as poster displays. It is expected that over 50 long papers for two-peer review and at least 60 short papers for single review will be received. Volunteers are requested to complete the following form and send it by fax to the GSN office (775/323-3599) or Editors (775/746-4856), or by email (nevrhoden@aol.com, gnsymp@unr.edu).

The short time frame for reviews will be from September 2004 to January 2005, and referees will be asked to complete their reviews quickly by annotating hard copies and returning them to the Editors rapidly. Please refer to the web site (www.gsn2005.org) for more information about the subjects to be covered.

Name _____

Address _____

Town _____ State/Zip _____

Tel. _____ Cell _____

Fax _____ Email _____

Present employment/activity _____

Qualifications _____ Experience (years) _____

Signed _____ Date _____

Diane K. Bryan Fund

On August 23 GSN lost a true friend with the passing of Diane Bryan, who died peacefully at home surrounded by family after a long struggle with cancer. Diane spent many years in the minerals industry, including the last eight years as the Education Coordinator with the Nevada Mining Association. Those of us who had the privilege to know her and work with her saw her dedication to minerals education and knew her passion went beyond her "job-description" as she helped educators and students learn the importance of minerals and mining to our everyday life.

In order to honor Diane's passion for minerals education, her husband, Dennis Bryan has established an endowment at the Mackay School of Earth Sciences and Engineering in her name. The intention of this endowment is to help fund an award for a single parent attending Mackay, or possibly UNR as a whole, who demonstrates an interest in minerals education and outreach.

Although it had been Dennis' intention to fund this endowment himself, he has been persuaded to allow the minerals community this opportunity to show Diane's family our appreciation for her commitment to minerals education. There is already \$5500 in the fund, and if you would like to contribute, please make your check payable to "UNR Foundation/Diane K. Bryan Fund" and send it to Rachel Dolbier at W.M. Keck Earth Science and Engineering Museum, MS 168, University of Nevada, Reno, NV 89557 (775-784-4528 phone or rdolbier@unr.edu).

**Geological Society of Nevada Symposium 2005
15-18 May 2005, Reno, Nevada (USA)**

WINDOW TO THE WORLD

Talks & Posters
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Field Trips
Networking

Call for papers: We invite geoscientists worldwide to submit original papers for oral or poster presentation at the Symposium. Descriptive papers on recently discovered ore deposits are especially invited.

**Geological Society of Nevada Symposium 2005, gnsymp@unr.edu
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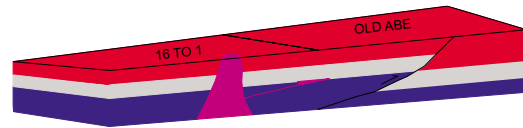


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ACTIVITY UPDATE

Mike Brady, July 2004
www.activityupdate.com

NEVADA

Goldcorp Inc. announced that it purchased an additional 624,000 shares of White Knight Resources Ltd. to now hold 4,680,000 shares (13.23%).
M.J.: June 25

Newmont Mining Corp. announced that it terminated its interest in the Midway Project of Midway Gold Ltd. due to discouraging exploration results.
N.M.: June 18

Newmont Mining Corp. announced that reserves at the Lone Tree Mine aggregate 16,300,000 tons @ 0.086 opt Au proven+probable. (was 21,000,000 tons @ 0.069 opt Au proven+probable)
2003 Annual Report

Newmont Mining Corp. announced that reserves at the Midas Mine aggregate 3,400,000 tons @ 0.580 opt Au, 7.06 opt Ag proven+probable. (was 3,400,000 tons @ 0.650 opt Au, 7.65 opt Ag proven+probable)
2003 Annual Report

American Goldfields Inc. announced that it acquired an option to earn a 100% interest in the Imperial Property from Minquest Inc. for undisclosed terms. (resource = 260,000 tons @ 0.025 opt Au)
Press Release: July 15

GoldSpring Inc. announced that N.A. Degerstrom would replace American Asphalt Inc. as the contract miner for the Plum Mine.
P.D.: June 2004

Hunter Dickinson Inc. announced that it acquired an option to earn a 70% interest in the Horse Mountain and North Star properties from Anaconda Gold Corp. for \$1,500,000 in exploration expenditures over 6 years.
Press Release: June 28

Sudbury Contact Mines Ltd. announced that it acquired an option to earn a 51% interest in the Trend Property from NDT Ventures Inc. for \$350,000 cash, 210,000 shares and \$1,500,000 in exploration expenditures.
N.M.: July 2

Atna Resources Ltd. announced that it acquired an option to earn a 70% interest in the Pinson Property from Barrick Gold Corp. for \$12,000,000 in exploration expenditures over 4 years. (MAG sulfide resource = 10,000,000 tons @ 0.046 opt Au)
N.M.: July 2

Metallic Ventures Gold Inc. announced that recent underground drill results at the Esmeralda/Martinez Project include 237.2-240.2 feet @ 0.170 opt Au, 3.5 opt Ag (MUG-52); 60-63.5 feet @ 0.140 opt Au, 1.1 opt Ag (MUG-53); 147-152 feet @ 0.10 opt Au, 0.30 opt Ag (MUG-54); 4-14 feet @ 0.140 opt Au, 2.8 opt Ag (MUG-55); 145.5-146.5 feet @ 0.140 opt Au, 0.30 opt Ag (MUG-56); 201-202 feet @ 0.370 opt Au, 0.30 opt Ag (MUG-60) and 339-344 feet @ 0.160 opt Au, 0.30 opt Ag (MUG-61). (resource = 192,132 tons @ 0.41 opt Au)
Press Release: July 22

Metallic Ventures Gold Inc. announced that recent drill results at the Esmeralda/Silver Hill Project include 120-125 feet @ 0.150 opt Au, 0.15 opt Ag (SRC-04-01); 470-475 feet @ 0.040 opt Au, 0.04 opt Ag (SRC-04-06); 260-265 feet @ 0.070 opt Au, 0.07 opt Ag (SRC-04-12); 100-110 feet @ 0.040 opt Au, 0.04 opt Ag (SRC-04-13); 60-65 feet @ 0.120 opt Au, 0.12 opt Ag (SRC-04-18) and 360-365 feet @ 0.040 opt Au, 0.04 opt Ag (SRC-04-20).
Press Release: July 22

Metallic Ventures Gold Inc. announced that recent drill results at the Esmeralda/Humboldt Project include 460-465 feet @ 0.130 opt Au, 0.26 opt Ag (HRC-04-3); 490-500 feet @ 0.150 opt Au, 0.32 opt Ag (HRC-04-4); 370-375 feet @ 0.120 opt Au, 0.26 opt Ag (HRC-04-5); 205-245 feet @ 0.020 opt Au, 0.11 opt Ag (HRC-04-6); 205-255 feet @ 0.013 opt Au, 0.05 opt Ag (HRC-04-7) and 165-210 feet @ 0.132 opt Au, 0.37 opt Ag (HRC-04-9).
Press Release: July 22

WINNEMUCCA CHAPTER ABSTRACT

Stephen Redak, Trace Element Geochemistry and Fluid Inclusion Study of the Magdalena Vein, Santa Rita Mine, San Dimas District, Durango Mexico

The subject of my talk will be the results of an M.S. thesis completed in 2002 at the Colorado School of Mines at the San Dimas mining district.

The San Dimas mining district best known for the Tayoltita mine, is a world-class (>17 million oz Au equiv) volcanic-hosted, low-sulfidation (intermediate-sulfidation) type epithermal vein Ag-Au deposit located in the central Sierra Madre Occidental mountain range of Durango, Mexico. The objective of the study was to investigate the changes in trace element geochemistry and fluid inclusion temperatures throughout the vertical extent of the ore bodies in the Santa Rita mine.

The geology of the district is dominated by the Tertiary Volcanics. The structural history includes three distinct events. Early compressional stress formed ENE trending high-angle gash faults. Later oblique stresses formed NNW trending right lateral high-angle strike-slip faults. The final structural event was extensional, producing block faulting, and normal displacement on earlier strike-slip faults.

Three distinct stages of mineralization are recognized at the district. Economic mineralization is confined to the second stage. The late stage is volumetrically most abundant but carries very low metal concentrations.

Vein mineralogy is dominated by quartz, with varying amounts of chlorite, calcite, rhodonite, adularia, pyrite, sphalerite, galena, and chalcopyrite. The primary ore minerals are argentite and electrum. The principal vein texture is brecciation. Textural evidence indicate that the veins were deposited contemporaneously with fault movement.

Wallrock alteration includes propylitic, silicic, and argillic and alteration assemblages.

Economic mineralization occurs as structurally controlled high-grade orebodies that are confined to a horizontal paleo-depth interval or "favorable zone" spanning about 250m vertically. Supergene enrichment is negligible.

Results of the trace element study show that the elements valuable for exploration are Au, Ag, Cu, Pb, Zn, Cd, As, and S. Gold and Ag are the best pathfinder elements. Other useful pathfinder elements include Cu, Pb and Zn.

Two distinct metal associations were identified and consist of Au-Ag-Hg, and Pb-Zn-Cd. Copper exhibits intermediate geochemical behavior between those two groups.

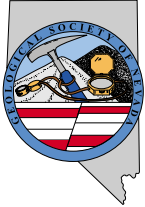
A slight but measurable trace element zonation exists with depth, where Au-Ag-Cu, occur above Pb-Zn-Cd.

The average concentration of all metals is an order of magnitude greater in ore stage vein material than in late stage vein material. However, the distribution pattern is very similar. Useful element ratios that produce concentric distribution patterns within and around the orebodies include Ag/Cu, Ag/S, Ag/Zn, and Ag/Pb. Useful Ag/Au patterns cannot be defined. Arsenic/cadmium is a useful element ratio that produces an asymmetrical distribution pattern with depth.

Results of the fluid inclusion study show that the average T_h from Magdalena ore stage vein material is 259°C, and the average T_h from Magdalena late stage vein material is 296°C. The distribution of fluid inclusion T_h measurements is fairly large and ranges from 184-304°C in ore stage vein material. The fairly large variation in T_h values may reflect either mixing, necking, boiling, or a combination of these processes.

A poorly defined temperature zonation exists in some of the data subpopulations. Higher T_h values loosely correspond to higher precious-metal values where average T_h values (250-280°C) occur near the center and decrease to lower T_h values (<200-250°C) toward the vertical extremes of the orebodies.

The depth-temperature profiles for the data in this study share similar inflection points and inversions with depth as profiles reported from some active geothermal systems. It is postulated that the observed depth-temperature profiles are a result of temperature disequilibria with wallrock of ore depositing fluids flowing through highly permeable, horizontally oriented, structurally open areas. The location of high Au and Ag and high T_h values in the structurally open areas of the veins support the hypothesis that ore deposition is primarily a result of high fluid flux through those areas.



ANNUAL DUES ARE DUE NOW!!

GEOLOGICAL SOCIETY OF NEVADA

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The GSN membership year begins in September. 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, October through May. No formal meetings are currently held during the summer field season. The following are sanctioned Chapters of the Geological Society of Nevada: 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.

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

GEOLOGICAL SOCIETY OF NEVADA MEMBERSHIP APPLICATION/RENEWAL

DATE _____

NAME: _____ POSITION/TITLE _____

CONSULTANT COMPANY NAME: _____

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