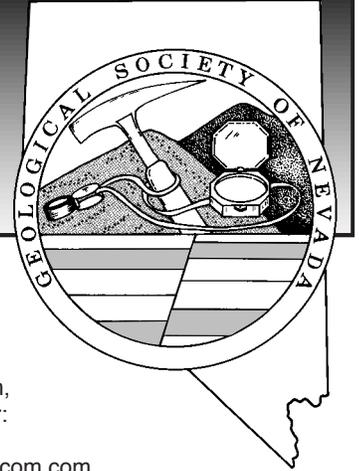


GSN NEWSLETTER



February 2003, Vol. 17, No. 2

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CALENDAR OF EVENTS

Feb 6th
Thursday

WINNEMUCCA CHAPTER MEETING: Humboldt Room, Red Lion Hotel and Casino, Winnemucca, NV. Speaker: To be announced. Social: 6:30 pm, meeting: 7:00 pm. Contact Sheila Bunch, 775/623-0202, sbunch@lambdacom.com.

Feb 21st
Friday

GSN MEMBERSHIP MEETING: Reno Elks Lodge, Reno, NV. Speaker: Eric Jensen, Center for Mineral Resources, Department of Geosciences, University of Arizona, "Magmatic and Hydrothermal Evolution of the Cripple Creek Gold Deposit, Colorado." Social 6pm, dinner 7pm, talk 8pm. Call Shannon Fitzpatrick for dinner reservations, 775/323-3500 or email at gsn@mines.unr.edu.

Feb 27th
Thursday

ELKO CHAPTER MEETING: Western Folklife Center, Elko, NV. Speaker: Bob Jachens along with Jeff Phelps of the USGS; they will be presenting state-of-the-art, truly 3D modeling software, complete with special 3D glasses that allow the audience to become one with the model. Refreshments at 6:30pm, presentation at 7:00pm. Contact Marcus Johnston for more information, 775/778-4036.

Feb 27th
Thursday

SOUTHERN NEVADA CHAPTER MEETING: Room 102, Lily Fong Geoscience Building, UNLV, Las Vegas, NV. Speaker: Maxwell Blanchard, Astronomy Instructor, CCSN, "A Discussion of Some Common Marian Features." Social with food and drink at 5:30pm; talk at 6:30pm. Contact Jean Cline, 702/895-1091 for information.

GSN Newsletter is published monthly except June and July
Geological Society of Nevada, PO Box 13375, Reno, NV 89507 USA, 775/323-3500

**GSN has a new mailing address:
P.O. Box 13375, Reno, NV 89507**

Calendar of Student Posters

February 21, 2003, GSN Meeting

Andy Ten Brink*, Pat Cashman, and Jim Trexler
Folded Tertiary Sediments in the Basin and Range-Sierra Nevada Transition Zone

Weston Thelen*, Shane Smith, John Louie, and Aline Concha-Dimas
Developing a Geothermal Index for the Western Great Basin

*Presenter

FROM THE PRESIDENT

Bob Thomas, GSN President 2002-2003

GSN continues to be fortunate to have a diversity of subjects for presentation, and our January dinner meeting was no exception. **Mark Coolbaugh** gave an excellent presentation entitled "Regional Geologic Controls, Geochemical Characteristics, and Thermal Infrared Signatures of Geothermal Systems in the Great Basin." He made a distinction between magmatic and extensional geothermal

continued

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News and Announcements

FROM THE PRESIDENT (continued)

systems, and also demonstrated the effectiveness of ASTER satellite imagery as a tool for better characterization of existing systems and even exploring for new ones. Thanks, Mark, for the excellent talk. I noticed a crowd of people hanging around the poster sessions also, and thanks to **Alicia Fallacaro** ("Lake Superior Type Banded Iron Formations as an Analog to Mars") and **Shane Smith** ("Ages of Submarine Landslides in Puget Sound"). Thanks also to **Earl Abbott** for continuing to organize these poster presentations – we look forward to more, Earl! Finally, a big thanks goes to **Connors Drilling** and **MI Drilling Fluids** for co-sponsoring the social hour. Our organization continues to be the beneficiaries of the generosity of groups like Connors and MIDF.

Clancy Wendt has already been working hard organizing the spring field trip. The theme will be precious metal deposits in south-central Nevada. There has been a lot of exploration activity in this area lately, and so far Clancy has lined up a tour of the Goldfield district, courtesy of Metallic Ventures. There may be other localities, so stay tuned for more details and dates.

GSN has an exhibitor's booth reserved at the Prospectors and Developers Convention, to be held in Toronto March 9-12. We are currently looking for volunteers to help cover booth-sitting duties. So if you are planning to attend this meeting, and would be willing to spend some volunteer time, please contact Shannon at the GSN office. The more folks we have to do this, the easier it will be for everyone and no one will be stuck with a lot of work. Look at it as an excuse to sit down for a while, meet some people, and rest!

Finally, because the GSN-sponsored MSHA training course was so successful last summer, we are considering doing it again this year. Mineral exploration activity is picking up, which is good news to much of our membership. I have been told that yes, even geologists sitting on exploration drill rigs **need their MSHA papers**. We would like to put on the same free, three day New Surface Miner training that we had last July, or just the one day annual refresher course, or, depending on the interest level, both. Like last year, we will need a minimum number of attendees to have a state MSHA instructor travel to our locality to give the course for free. We're thinking about sometime in May, before field season starts, and will keep people informed on the dates as we learn more. In the meantime, interested parties should contact Shannon in the GSN office to specify their preference for either the three-day New Surface Miner course or the one-day refresher course. By the way, the state conducts free training throughout the state on a periodic basis. For schedule information, go to <http://www.dirweb.nv.us>

January Sponsor

GSN apologizes to **MI Drilling Fluids** for the computer error in the January newsletter sponsor advertisement.

	<p>Drilling Fluids & Solids Control</p> <p>Phone: 800-964-7866</p>
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SCIENCE FAIR JUDGES WANTED

The Western Nevada Regional Science and Engineering Fair will be held the evening of March 13, 2003 at the Lawlor Events Center.

Judges will be looking at science projects and inventions from students K through 8th grade. The Science Fair Committee is always looking for interested scientists to participate as judges. The more judges we have participating, the easier the task. You will have the added benefit of seeing science through the eyes of a child! If you are interested and available this year, please send an email to Melody Hefner at mlhefner@gbis.com. She will then send announcements and details to you via email. Previous year's judges should have already received an email - if not, please feel free to email Melody also. Call Melody at 775/425-2808 with any questions.

MEMBERSHIP RENEWAL AND DIRECTORY UPDATE

Gregory French, GSN Membership Chairman

I wish to apologize to those members who received the renewal postcard with postage due or did not receive the notice at all. Many notices were returned to the GSN office. There was a mix up with the Postal Service regarding mailing sizes. In order to accommodate the late renewals, the Membership Directory will be delayed until the end of February.

**Thanks to Connors Drilling Inc. and MI Drilling Fluids
for hosting the January meeting.**

GSN February 21, 2003 Membership Meeting

Date: Friday, February 21, 2003

Time: Social-6:00, Dinner-7:00 (\$17.00), Meeting-8:00

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

Deadline: Reserve by noon Wednesday, February 19

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

Speakers/topic: Eric Jensen

See abstract below.

MAGMATIC AND HYDROTHERMAL EVOLUTION OF THE CRIPPLE CREEK GOLD DEPOSIT, COLORADO

Eric Jensen

The Cripple Creek district has produced ~22 Moz of gold since it was discovered in 1891, with an additional resource of ~7 Moz. These figures make Cripple Creek one of the most prolific producers of gold in U.S. history, and one of the largest volcanic-hosted gold deposits in the world. In addition to its size, Cripple Creek is renowned for its unusual styles of mineralization (veins rich in gold tellurides and fluorite) and its association with strongly alkaline volcanic rocks. The complex evolution of the deposit will be the subject of this talk; starting with the dynamic emplacement of mantle-derived alkaline rocks, and culminating with the generation of veins rich in gold telluride minerals.

A century of geologic work has accompanied the history of mining in Cripple Creek, including numerous government reports and theses. Several recent investigations (including this one) have been prompted by the renewal of mining activity in the Cripple Creek district, and build upon the earlier efforts. New exposures and a wealth of information from recent exploration and mining programs have led to re-interpretation of the district's geology. My work has focussed on deciphering the time-space evolution of the magmatic and hydrothermal systems, and how they relate to gold mineralization. This was accomplished through several years of detailed field mapping, drill core logging, petrography and geochemical analyses. Also addressed by this study were broader questions; what characteristics does Cripple Creek share with other alkaline-related gold deposits, and how would you explore for these deposits?

The volcanism at Cripple Creek was part of a regionally extensive episode of Oligocene alkaline magmatism. Contemporaneous alkaline magmatism was active throughout the Front Range of Colorado, extending southward along the axis of the Rio Grande rift through central New Mexico and the Trans Pecos region of Texas, and into northern Chihuahua/Coahuila. Amongst these mid-Tertiary alkaline intrusive centers, only Cripple Creek is associated with a giant gold deposit. Significant, but much smaller economic gold deposits are associated with alkaline magmatic centers at Ortiz, New Mexico, Lincoln County, New Mexico, Rosita-Silver Cliff (-Bassick-pipe), Colorado, and the Boulder County, Colorado telluride districts. Many other alkaline complexes show localized zones of weak gold mineralization, some of which have minor historic production. Further attention to the magmatic and hydrothermal evolution of these systems will be necessary to explain this apparent disparity in gold enrichment.

Details of Cripple Creek's geology

The gold deposit is associated with an ~ 30 Ma alkaline diatreme complex emplaced at the junction of four Precambrian units along the western margin of the Pikes Peak batholith in Central Colorado. The diatreme is elliptical in shape and roughly 5km in diameter. Within the diatreme are a complex series of alkaline intrusions, with perhaps hundreds of individual intrusive bodies. These form composite flows, dikes, sills, laccoliths, and dome-shaped features intruding diatremal volcanic breccias and the surrounding Precambrian country rock. All intrusive phases within the diatreme are silica undersaturated, and span a wide range of compositions from felsic phonolites to ultramafic lamprophyres and silicocarbonatites. An unusual aspect of the magmatic system is that it evolved towards more mafic compositions with time, culminating with the intrusion of ultramafic lamprophyres and silicocarbonatites as the last intrusive event. Episodes of hydrothermal alteration and metasomatism have been linked to specific intrusive events, but gold mineralization post dates all known igneous events.

The alkaline intrusions at Cripple Creek belong to an unusual and rare class of rocks based upon their distinctive geochemical properties. These include high alkali concentrations for their given levels of silica, and high concentrations of HFSE, LILE LREE and CO₂ (carbonate minerals). Voluminous K-metasomatism has affected most of the diatremal rocks, altering the rocks to potassic and ultra-potassic chemistries. Although commonly cited as an example of gold mineralization associated with high-K rocks, it should be noted that Cripple Creek's igneous rocks are distinctly sodic, with most rocks having molar Na/K~2.5. Potassic chemistries are a result of alteration, and are not original igneous signatures. New isotopic data suggest a link to an enriched mantle source region for the magmatism, possibly in the athenospheric mantle.

Hydrothermal alteration began with the earliest known igneous rocks and continued past the last, lamprophyre-dominated intrusive events. Extensive and diverse styles of hydrothermal alteration include both high and low temperature types. Low temperature K-silicate stable assemblages predominate, but other alteration types (pyroxene, biotite, feldspathoid, sulfate, carbonate, etc.) are also present. Gold mineralization post-dates all known intrusions, but shows closest spatial and temporal relationships with lamprophyres and mafic/ultramafic rocks. Gold is intimately associated with large volumes of late stage K-feldspar-pyrite alteration developed in >5 km³ of the explored portion (upper 1 km) of the complex. A notable characteristic of the K-metasomatism is its cryptic nature, as it is not readily apparent in thin section or in hand specimen.

continued on page 6

REFERENCE MAP FOR GSN FIELD TRIP GUIDEBOOKS

GSN FIELD TRIPS

6 Special Publication #6

1987 Field Trip
Northern Carlin Trend, Big Springs
Mines: Bluestar, Genesis, Goldstrike/Post, Bootstrap, Dee
Editors: Bob Cuffney, Ross Atkinson, Ruth Buffa

7 Special Publication #7

1988 Spring Field Trip
Hot Springs Gold Deposits of NW Nevada and SE Oregon
Mines: Florida Canyon, Sleeper, Quartz Mountain, Hog Ranch
Editors: Ruth Buffa, Bob Cuffney, Eric Seedorff

8 Special Publication #8

1988 Fall Field Trip
Gold Deposits of North Central Nevada
Mines: Marigold, Cove, McCoy, Rain, Surprise
Editors: Ruth Buffa, Bob Schafer

9 Special Publication #9

1989 Spring Field Trip
Geology and Mineral Deposits of White Pine County
Mines: Golden Butte, Robinson Mining District, Illipah, Night Hawk Ridge, Greensprings
Editors: Bob Schafer, Ruth Buffa

10 Special Publication #10

1989 Fall Field Trip
Geology and Gold Deposits of the Osgood Mountains, Nevada
Mines: Pinson, Preble, Chimney Creek
Editors: Ruth Buffa, Pamela Klessig, Robert Schafer

11 Special Publication #11

1990 Fall Field Trip
Geology and Ore Deposits of the Sierra Nevada and Foothills
Mines: Mary Harrison Prospect, Royal Mountain King, Lincoln, Spanish
Editor: Eric Seedorff

12 Special Publication #12

1990 Fall Field Trip
Carlin and Cortez Trends Comparisons and Contrasts
Mines: Buckhorn, Carlin, Post, Hollister

13 Special Publication #13

1991 Spring Field Trip
Tertiary Geology and Volcanic Hosted Gold Deposits of the Southern Great Basin and Vicinity
Mines: Lake Mead Region, Castle Mountains, Halloran Springs District, Nelson District
Editor: Eric Seedorff

14 Special Publication #14

1992 Spring Field Trip
Hawthorne Area, Central Walker Lane Structure and Tectonics
Editor: Steve Craig

15 Special Publication #15

1992 Spring Field Trip
Reno Area, Northern Walker Lane Mineralization and Structure
Editor: Steve Craig

16 Special Publication #16

1992 Fall Field Trip
Industrial Minerals and Gold Deposits Along the I-80 Corridor, Lockwood to Battle Mountain
Editor: Opal Adams

17 Special Publication #17

1993 Summer Field Trip
Robinson Mining District Geology and Mineralization
Editor: Eric Seedorff

18 Special Publication #18

1993 Fall Field Trip
Gold and Silver Deposits of Western Nevada
Mines: Rochester, Florida Canyon, Crofoot/Lewis, Rosebud
Editor: Eric Struhsacker

19 Special Publication #19

Handout for the Symposium on North-Eastern Nevada Breccia Bodies 1993
Compiler: Cindy Williams

20 Special Publication #20

1994 Spring Field Trip
Gold Deposits of the Central Walker Lane, Nevada
Mines: Talaposa Deposit, Borealis, Paradise Peak, Denton Rawhide
Editor: Eric Struhsacker

22 Special Publication #22

1995 Fall Field Trip
Geology and Ore Deposits of Bodie Hills, Northern Mono Basin Region
Editor: Elizabeth Jones

23 Special Publication #23

1996 Spring Field Trip
Geology and Gold Deposits of Eastern Nevada
Mines: Bald Mountain, Alligator Ridge, Robinson Project, Mount Hamilton
Editor: Elizabeth Jones

24 Special Publication #24

1996 Fall Field Trip
Geology and Ore Deposits of Northwestern Nevada
Mines: Trenton Canyon Project, Lone Tree, Getchell, Twin Creeks, Florida Canyon
Editor: Richard DeLong

25 Special Publication #25

1997 Spring Field Trip
Geology and Ore Deposits of Northeastern Nevada
Mines: Cortez, Pipeline, Crescent Pit, West Leeville Project, Goldstrike, Bootstrap
Editor: Richard DeLong

26 Special Publication #26

1997 Fall Field Trip
Low-Sulfidation Volcanic-Hosted Epithermal Gold-Silver Deposits of West-Central Nevada
Mines: Rawhide Mine, Three Hills Project, Round Mountain Mine
Editor: Jacob Margolis

27 Special Publication #27

1998 Spring Field Trip
Sediment-Hosted Gold Deposits of the Eureka (Ruby Hill Mine) and Gold Bar Districts, East-Central Nevada
Mines: Ruby Hill Mine
Editor: Jacob Margolis

28 Special Publication #28

1998 Fall Field Trip
Shallow Expressions of Deep, High-Grade Gold Deposits
Deposits: NW Rain/Tess, West Bazza/Screamer, SSX
Editor: Joseph A. Kizis, Jr.

29 Special Publication #29

1999 Spring Field Trip
Low-Sulfidation Gold Deposits in Northern Nevada
Deposits: Olinghouse, Mule Canyon, Midas
Editor: Joseph A. Kizis, Jr.

30 Special Publication #30

1999 Elko Chapter Fall Field Trip
Geology and Ore Deposits at Bingham Canyon, Barney's Canyon, Mercur and Adjacent Districts in the Oquirrh Range, Utah

31 Special Publication #31

1999 Fall Field Trip Guidebook
Geology & Gold Mineralization of the Buffalo Valley Area, NW Battle Mtn Trend
Deposits: Trenton Canyon, N Peak, Buffalo Valley, & Marigold Mines, Redline Gold Skarn Deposit, Copper Canyon Gold Skarn
Editor: Ken Cunningham

32 Special Publication #32

2000 Fall Field Trip Guidebook
PGE's, High-Grade Gold and History: The Sierra Nevada 2000
Deposits: Empire, 16:1, & Kentucky Mines
Editor: Dave Shadrick

33 Special Publication #33

2001 Spring Field Trip Conference Proceedings Volume and Field Trip Guidebook
Regional Tectonics and Structural Control of Ore: The Major Gold Trends of Northern Nevada
Deposits: Carlin Trend, Battle Mountain-Eureka Trend, Getchell Trend, Jerritt Canyon Trend
Editors: David R. Shadrick, Elizabeth Zbinden, David C. Mathewson, Camille Prens

34 Special Publication #34

2001 Fall Field Trip Guidebook
Magnetism and Gold Deposits in North-Central Nevada
Mine: McCoy/Cove
Editor: Bob Thomas

35 Special Publication #35

2002 Spring Field Trip Guidebook
Jurassic Magmatism and Metal Deposits in Western Nevada
Deposits: Yerington Mining District, Humboldt Mafic Complex
Editor: Bob Thomas

36 Special Publication #36

2002 Fall Field Trip Guidebook
Gold Deposits of the Humboldt Range, New Discoveries
Mines: Florida Canyon, Standard, Rochester, Packard Flat
Editor: Clancy Wendt

SYMPOSIUM FIELD TRIPS

87 1987 Symposium Field Trips

Guidebook for Field Trips
Bulk Mineable Precious Metal Deposits of the Western United States

- 1) Detachment Terrains Southeastern California and Arizona
 - 2) Southeastern California and South and West Central Nevada
 - 3) Deposits of Northwest Nevada
 - 4) Deposits of Central California
 - 5) Deposits of West Central Nevada
 - 6) Deposits of the Carlin Trend
 - 7) Deposits of Central Nevada
 - 8) Deposits of Northeastern Nevada
 - 9) Deposits of North Central Nevada
 - 10) Deposits of Western Utah
 - 11) Comstock Lode/Steamboat Springs, Nevada
- Editor:* Joseph L. Johnson

90 1990 Symposium Field Trips

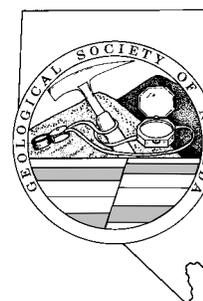
Guidebook for Field Trips
Volume 1 & 2 Guidebook for Field Trips
Geology and Ore Deposits of the Great Basin
Editors: Ruth H. Buffa and Alan R. Coynor

95 1995 Symposium Field Trips

Field Trip Guidebook Compendium
Geology and Ore Deposits of the American Cordillera
A) Great Basin Porphyry Deposits
B) Structural Geology of the Carlin Trend
C) Gold Deposits of the Rabbit Trend
D) CANCELLED
E) Mojave Desert Gold Deposits of Southern California
F) CANCELLED
G) Gold Deposits of the Cortez Trend
H) Geology and Ore Deposits of the Battle Mountain Mining District
I) Gold Deposits of the Walker Lane
J) CANCELLED
K) CANCELLED
L) CANCELLED
M) Gold and Copper Deposits of Sonora Mexico
N) Copper and Gold Deposits of Chile
Editors: Steven M. Green and Eric Struhsacker

00 2000 Symposium Field Trips

Guidebook for Field Trips
Geology and Ore Deposits: The Great Basin and Beyond
1) CANCELLED
2) Structure, Volcanic Stratigraphy, and Ore Deposits of the Pah Rah Range, Washoe County, Nevada
3) Tilted Middle Tertiary Ash-Flow Calderas and Subjacent Granitic Plutons, Southern Stillwater Range, Nevada: Cross Sections of an Oligocene Igneous Center
4) Eocene Magmatism and Its Role in Generating Sediment-Hosted Gold Deposits of the Carlin Trend, Nevada
5) Ore Deposits of the Battle Mountain Area, Nevada: Variations on a Theme in the Havallah and Antler Sequences
6) Cortez to Eureka Gold Deposits
7) Giant Sedimentary Rock-Hosted Mineral Systems of the Carlin Trend: Gold Quarry and Betze/Post Deposits
8) Volcanic History, Structure, and Mineral Deposits of the North-Central Northern Nevada Rift, Nevada
9) Geology and Ore Deposits of the Getchell Region, Humboldt County, Nevada
10) Comparisons of Various Types of Ore Deposits in South-Central Nevada
11) Cenozoic Tectono-Magmatic Evolution of White Pine County: Core Complexes, Eocene-Oligocene Volcanic Centers, Episodic Extensions and Shortening, and Disseminated Gold Deposits, Nevada
Editor: Elizabeth Jones Crafford



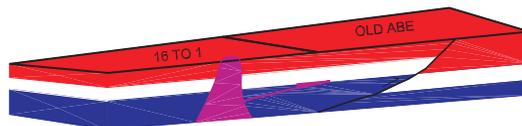


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ABSTRACT (continued from page 3)

Mineralization and related alteration tend to be localized along igneous contacts, in fractures and small displacement faults, but are more pervasively developed in porous volcanic breccias. Most veins, from high-T biotite stable veins to low temperature Au-rich types, are quartz-poor; fluorite, carbonate, sulfates, base metals, and Au-tellurides are the main accessory minerals in the thin, high-grade quartz-bearing seams that produced >90% of the district's Au. Also present are mineralized bodies of hydrothermal breccias, rich in Mn-carbonate, fluorite and sulfate minerals (celestite, barite and anhydrite).

Mineral and whole rock compositions vary systematically with alteration types and can be used to demonstrate changes in fluid composition and massive changes in the chemical composition of the diatreme. Hydrothermal alteration at Cripple Creek resembles that reported in other alkaline gold districts, and suggests links to common processes. Although similar to other gold deposits related to alkaline magmatism, Cripple Creek differs markedly from most other epithermal systems in the large volume of K-feldspar added and the relative scarcity of quartz and acid alteration.

UP-COMING EVENTS

Feb 6th, Thursday – WINNEMUCCA CHAPTER MEETING: Humboldt Room, Red Lion Hotel and Casino, Winnemucca, NV. Speaker: To be announced. Refreshments start at 6:30pm and the meeting starts at 7:00pm. Contact Sheila Bunch, 775/623-0202, sbunch@lambdacom.com.

Feb 21st, Friday – GSN MEMBERSHIP MEETING: Reno Elks Lodge, Reno, NV. Speaker: Eric Jensen, "Magmatic and Hydrothermal Evolution of the Cripple Creek Gold Deposit, Colorado." Social 6pm, dinner 7pm, talk 8pm. Call Shannon Fitzpatrick for dinner reservations, 775/323-3500 or email gsn@mines.unr.edu.

Feb 27th, Thursday – ELKO CHAPTER MEETING: Western Folklife Center, Elko, NV. Speaker: Bob Jachens along with Jeff Phelps of the USGS; they will be presenting state-of-the-art, truly 3D modeling software, complete with special 3D glasses that allow the audience to become one with the model. Refreshments at 6:30pm, presentation at 7:00pm. Contact Marcus Johnston for more information, 775/778-4036.

Feb 14th, Friday – SME; Business Luncheon Meeting of the Northern Nevada Section of SME, Bonanza Casino, 4720 N. Virginia St., Reno, NV. Speaker: Robert Kistler, Exploration Manager (retired) US Borax of the Rio Tinto Org., "U.S. Borax-From Humble Nevada Beginning to World Class Mineral Supplier." Lunch is \$15 and begins at 12pm, program at 12:30pm. Reservations are not required.

Feb 24-26th – SME Annual Meeting and Exhibit, Cincinnati, Ohio. Phone Society for Mining, Metallurgy and Exploration at 303/973-9550 Email sme@smenet.org.

Feb 27th, Thursday – SOUTHERN NEVADA CHAPTER MEETING: Room 102, Lily Fong Geoscience Building, UNLV, Las Vegas, NV. Speaker: Maxwell Blanchard, Astronomy Instructor, CCSN, "A Discussion Of Some Common Marian Features." Social with food and drink at 5:30pm; talk at 6:30pm. Contact Jean Cline, 702/895-1091 for information.

Mar 9-12th – PDAC Annual Convention, Metro Toronto Convention Centre. Phone Prospectors & Developers Association of Canada 416/362-0101. Email: hsklarz@pdac.ca.

NEW NEVADA BUREAU OF MINES AND GEOLOGY PUBLICATION

B111 - Gold deposits of the Carlin Trend, edited by Tommy B. Thompson, Lewis Teal, and Richard O. Meeuwig (2002) \$35.00.

You may place an order or check for shipping charges through our shopping cart at:

<<http://www.nbmng.unr.edu/sales.htm>>

or by calling Charlotte Stock at (775) 784-6691 x2.

Please note that our prices for many NBMG publications will be decreased on February 1, 2003. Budget cutbacks coupled with increasing costs prompted an evaluation of our pricing structure and led to increases on many of our publications on July 1, 2002. Unfortunately, price increases on some publications were excessive. The new price revisions are an attempt to keep our publications affordable while covering our increased expenses. The revised prices will be, for the most part, lower than our current prices but about 23% higher than our prices were in June 2002. Many of our slow-selling and overstocked items will be reduced in price as much as 80%. We regret any inconvenience caused by our fluctuating prices and appreciate your comments and support during these tight fiscal times.

THE SECRETS OF THE EXPLORATION BUSINESS REVEALED II

As part of our ongoing Yardley lecture series, Dr. Roger Steininger will conduct a second series of three seminars dealing with additional practical aspects of the mineral exploration business. This spring's seminar will deal with the practical aspects of developing an exploration program, leading to the discovery of economic mineral deposits. Topics to be covered include:

How to identify commodities that may be in demand in the future.

What parts of the world are best to conduct exploration?

Area selection and developing background information to identify properties.

Ideas on how to explore properties and drill out resources.

Throughout the seminar exploration philosophies, techniques, and geological models will be examined. Judging from last fall's seminar there will be participants with a wide variety of experiences, which should add greatly to the discussions. The seminar will meet on Monday February 24 and March 3 and 10 from 6 to 8 PM. There is no cost for attending, but you must register before February 17 so that we can arrange appropriate space. For more information and to register contact Greg Arehart at UNR at 775/784-6470 or arehart@unr.edu

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