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Lawyers
SCHEDULE OF EVENTS

SUNDAY DECEMBER 1
3:00 pm - 5:00 pm  Registration

MONDAY DECEMBER 2
7:00 am - 5:00 pm  Registration
8:00 am - 5:00 pm  Short Courses

TUESDAY DECEMBER 3
8:00 am - 6:00 pm  Grass Valley Field Trip
8:00 am - 5:00 pm  Short Courses
7:00 am - 5:00 pm  Registration
8:00 am - 5:00 pm  Exhibitor Set Up
2:30 pm - 5:00 pm  NWMA Trustee Meeting
6:00 pm - 8:00 pm  Awards & Recognition Reception

WEDNESDAY DECEMBER 4
7:00 am - 5:30 pm  Registration
8:00 am - 11:30 am  Morning Technical Sessions
9:00 am - 7:30 pm  Exhibit Hall & Core Shack
9:35 am - 10:20 am  Coffee Break
Noon - 1:30 pm  Welcoming Luncheon
Keynote Speaker will be William Perry Pendley, President & CEO, Mountain States Legal Foundation
Noon - 1:30 pm  Exhibit Hall Sandwich Lunch
2:00 pm - 5:30 pm  Afternoon Technical Sessions
3:35 pm - 4:20 pm  Coffee Break
5:30 pm - 7:30 pm  Welcoming Reception

THURSDAY DECEMBER 5
7:00 am - 5:30 pm  Registration
7:00 am - 8:00 am  Government Industry Breakfast (by invite only)
8:00 am - 11:30 am  Morning Technical Sessions
9:00 am - 7:30 pm  Exhibit Hall & Core Shack
9:35 am - 10:20 am  Coffee Break
Noon - 1:30 pm  Industry Outlook Luncheon
Keynote Speaker will be Thomas R. Kerr, Senior Vice President, North American Operations, Newmont Mining Corporation
Noon - 1:30 pm  Exhibit Hall Sandwich Lunch
2:00 pm - 5:30 pm  Afternoon Technical Sessions
3:35 pm - 4:20 pm  Coffee Break
5:30 pm - 6:30 pm  Happy Hour Reception

FRIDAY DECEMBER 6
7:00 am - 1:00 pm  Registration
8:00 am - 11:30 am  Morning Technical Sessions
9:00 am - 1:00 pm  Exhibit Hall & Core Shack
9:35 am - 10:20 am  Coffee Break & Moose Milk
11:30 am - 1:00 pm  Hosted Farewell Sandwich Lunch in the Exhibit Halls
1:00 pm - 5:00 pm  Exhibitor Move Out

2013 ANNUAL MEETING CONTACTS

CONVENTION CHAIR
URING Dr. Corby G. Anderson QP CENG FIMMM FICHEME
Harrison Western Professor,
Kroll Institute for Extractive Metallurgy
George S. Ansell Department of Metallurgical and Materials Engineering, Colorado School of Mines
Golden, CO
Tel: 303.273.3580  Email: cganders@mines.edu
Dr. Corby Anderson joined the Department of Metallurgical and Materials Engineering at the Colorado School of Mines as the Harrison Western Professor of Metallurgical and Materials Engineering. Dr. Anderson teaches and conducts research as a member of the Kroll Institute for Extractive Metallurgy. He is an expert in the fields of extractive metallurgy, mineral processing, waste minimization and recycling. Dr. Anderson has an extensive background in industrially oriented research and was responsible for the development and success of the Center for Advanced Mineral and Metallurgical Processing at Montana Tech.

CONVENTION CO-CHAIR
Eric Williams
Principal
Gallatin Public Affairs
Spokane, WA
Tel: 509.624.7655  Email: EricW@gallatinpa.com
Eric Williams is a nationally recognized expert in natural resource policy and politics. Based in the firm’s Spokane office, but frequently travelling to project-sites across the western United States, Eric understands how to effectively position projects in the public eye and how to build and activate community and grassroots support for controversial projects. Prior to joining Gallatin, he was a partner with Environomics Inc. Earlier, Eric was a reporter with the Helena Independent Record and The Montana Standard. Born and raised in Central Montana’s renowned cattle country, Eric earned a Bachelor of Arts degree in Journalism from the University of Montana.

NWMA STAFF
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Operations & Finance Director
Tel: 509.624-1158 x 12  Email: pheywood@nwma.org
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Tel: 509.624.1158 x 16  Email: lskaer@nwma.org

10 N Post Street, Ste. 305 ~ Spokane, WA  99201-0705
Tel: 509.624.1158 ~ Fax: 509.623.1241
Email: nwma_info@nwma.org ~ Website: www.nwma.org
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William Perry Pendley, Esq., President and COO, Mountain States Legal Foundation, Lakewood, CO. Born and raised in Cheyenne, Wyoming, he received B.A. and M.A. degrees in Economics and Political Science from George Washington University in Washington, D.C. He was a Captain in the United States Marine Corps, after which he received his J.D. from the University of Wyoming College of Law, where he was Senior Editor on Land and Water Law Review.

He served as an attorney to former Senator Clifford P. Hansen (R-Wyoming) and to the House Interior and Insular Affairs Committee. During the Reagan Administration, he served as Deputy Assistant Secretary for Energy and Minerals of the Department of Interior, where he authored President Reagan’s National Minerals Policy and Exclusive Economic Zone proclamation. He was a consultant to former Secretary of the Navy John F. Lehman, Jr., and was engaged in the private practice of law in the Washington, D.C., area before his return to the West in 1989. He has argued cases before the Supreme Court of the United States as well as various federal courts of appeals; he won what Time called a “legal earthquake” when the Supreme Court ruled in his favor in the historic Adarand (equal protection) case.


Perry will be on hand following the luncheon to sell and sign copies of his latest book Sagebrush Rebel: Reagan’s Battle with Environmental Extremists and Why It Matters Today (July 8, 2013).
### PRELIMINARY SHORT COURSE & FIELD TRIP SCHEDULE

#### 2013 Short Course and Field Trip Schedule at a Glance
Monday December 2 - Tuesday December 3, 2013

<table>
<thead>
<tr>
<th>SHORT COURSES AND FIELD TRIP</th>
<th>1/2-Day Short Course</th>
<th>1-Day Field Trip</th>
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</thead>
<tbody>
<tr>
<td><strong>MONDAY 12/2/2013</strong></td>
<td><strong>MONDAY 12/2/2013</strong></td>
<td><strong>TUESDAY 12/3/2013</strong></td>
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<tr>
<td>Classes 8:00 am - 5:00 pm</td>
<td>Classes 8:00 am - 5:00 pm</td>
<td>Classes 8:00 am - 5:00 pm</td>
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<tr>
<td>Minimizing Permitting Pitfalls &amp; Delays Case Studies</td>
<td>Using the Standardized Reclamation Cost Estimator (SRCE) Effectively</td>
<td>Integrated Exploration Workflows with Esri and Geosoft ArcGIS Software</td>
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<tr>
<td>Paul McNutt U.S. BLM &amp; Kevin Johnson USDA Forest Service</td>
<td>Jeff Parshley SRK (U.S.)</td>
<td>Willy Lynch ESRI &amp; Taronish Pithawala Geosoft</td>
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<td><strong>TUESDAY 12/3/2013</strong></td>
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<td>Willy Lynch ESRI &amp; Taronish Pithawala Geosoft</td>
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<td><strong>WEDNESDAY DECEMBER 4</strong></td>
<td><strong>WEDNESDAY DECEMBER 4</strong></td>
<td><strong>THURSDAY DECEMBER 5</strong></td>
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<tr>
<td>Exhibit Halls Hours</td>
<td>Morning Coffee Break</td>
<td>Exhibit Halls Hours</td>
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<tr>
<td>9:00 am</td>
<td>9:35 am</td>
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<td>5:00 pm</td>
<td>10:20 am</td>
<td>6:30 pm</td>
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<tr>
<td>Morning Coffee Break</td>
<td>Exhibit Hall Sandwich Lunch</td>
<td>Morning Coffee Break</td>
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<td>Noon</td>
<td>Afternoon Coffee Break</td>
<td>Noon</td>
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<td>1:30 pm</td>
<td>3:35 pm</td>
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<td>4:20 pm</td>
<td>Happy Hour Reception</td>
<td>4:20 pm</td>
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<td>7:30 pm</td>
<td>5:30 pm</td>
<td>7:30 pm</td>
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<tr>
<td><strong>FRIDAY DECEMBER 6</strong></td>
<td><strong>FRIDAY DECEMBER 6</strong></td>
<td><strong>FRIDAY DECEMBER 6</strong></td>
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<td>Exhibit Halls Hours</td>
<td>Morning Coffee Break</td>
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<td>9:00 am</td>
<td>9:35 am</td>
<td>9:00 am</td>
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<tr>
<td>1:00 pm</td>
<td>Exhibit Hall Sandwich Lunch</td>
<td>10:20 am</td>
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<tr>
<td>11:30 am</td>
<td>Exhibitor Move Out</td>
<td>1:00 pm</td>
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<td>5:00 pm</td>
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**EXHIBIT HALL SCHEDULE**

**TUESDAY DECEMBER 3**
Exhibitor Set Up
8:00 am - 5:00 pm

**WEDNESDAY DECEMBER 4**
Exhibit Halls Hours
9:00 am - 7:30 pm
Morning Coffee Break
9:35 am - 10:20 am
Exhibit Hall Sandwich Lunch
Noon - 1:30 pm
Afternoon Coffee Break
3:35 pm - 4:20 pm
Welcoming Reception
5:30 pm - 7:30 pm

**THURSDAY DECEMBER 5**
Exhibit Halls Hours
9:00 am - 6:30 pm
Morning Coffee Break
9:35 am - 10:20 am
Exhibit Hall Sandwich Lunch
Noon - 1:30 pm
Afternoon Coffee Break
3:35 pm - 4:20 pm
Happy Hour Reception
5:30 pm - 6:30 pm

**FRIDAY DECEMBER 6**
Exhibit Halls Hours
9:00 am - 1:00 pm
Morning Coffee Break
9:35 am - 10:20 am
Exhibit Hall Sandwich Lunch
11:30 am - 1:00 pm
Exhibitor Move Out
1:00 pm - 5:00 pm

**ANNUAL AWARDS AND RECOGNITION RECEPTION - POOLSIDE TERRACE**
All Annual Meeting Attendees are Invited to Attend This Hosted Event
### PRELIMINARY TECHNICAL SESSION PROGRAM SCHEDULE

#### 2013 Technical Sessions and Exposition Schedule at a Glance
**Wednesday December 4 - Friday December 6**

#### Technical Session Areas of Interest

<table>
<thead>
<tr>
<th>MINERAL DEPOSITS, GEOLOGY &amp; EXPLORATION</th>
<th>BUSINESS &amp; FINANCE</th>
<th>OPERATIONS</th>
<th>ENVIRONMENTAL &amp; LEGISLATIVE &amp; PUBLIC AFFAIRS</th>
<th>EXHIBIT HALL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WEDNESDAY MORNING SESSIONS</strong> 8:00 - 11:30</td>
<td>State &amp; Province Reports&lt;br&gt;<strong>Alan Coyner</strong>&lt;br&gt;Trident Exploration</td>
<td>Growth Companies&lt;br&gt;<strong>Ralph Noyes</strong>&lt;br&gt;Investment Advisor</td>
<td>Underground/ Surface Mining&lt;br&gt;<strong>Kanaan Hanna Zapatia, Inc.</strong></td>
<td>Exhibits open 9:00&lt;br&gt;Coffee Break 9:35 - 10:20</td>
</tr>
<tr>
<td><strong>LUNCH</strong> NOON - 1:30</td>
<td><strong>WELCOMING LUNCHEON</strong> – <strong>Perry Pendley</strong>, Mountain States Legal Foundation&lt;br&gt;Celebrity Showroom ~ 12 noon - 1:30 pm</td>
<td><strong>SANDWICH LUNCH</strong></td>
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<tr>
<td><strong>WEDNESDAY AFTERNOON SESSIONS</strong> 2:00 - 5:30</td>
<td>Mining &amp; Exploration: New Mine Developments in the Western U.S.&lt;br&gt;<strong>Richard Diaz</strong>&lt;br&gt;Maptek</td>
<td>Junior Explorers: The Realities of Today’s New World&lt;br&gt;<strong>David Poynton</strong>&lt;br&gt;Daycon Minerals Corp.</td>
<td>Exploration Drilling - The Good, The Bad &amp; The Ugly&lt;br&gt;<strong>James Stevens</strong>&lt;br&gt;National EWP&lt;br&gt;<strong>Ron Parratt</strong>&lt;br&gt;Schlumberger</td>
<td>Coffee Break 3:35 - 4:20</td>
</tr>
<tr>
<td><strong>LUNCH</strong> NOON - 1:30</td>
<td><strong>INDUSTRY OUTLOOK LUNCHEON</strong> – <strong>Thomas Kerr</strong>, Newmont Mining Corporation&lt;br&gt;Celebrity Showroom ~ 12 noon - 1:30 pm</td>
<td><strong>SANDWICH LUNCH</strong></td>
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</tr>
<tr>
<td><strong>THURSDAY MORNING SESSIONS</strong> 8:00 - 11:30</td>
<td>Mining’s Midwest Resurgence: MN, WI &amp; MI Mineral Development&lt;br&gt;<strong>Frank Ongaro</strong>&lt;br&gt;Mining-Minnesota</td>
<td>A Current View of Mining Finance: What is Ahead?&lt;br&gt;<strong>Tim Alch</strong>&lt;br&gt;Behre Dolbear</td>
<td>Conceptual Model Application through the Mine Life Cycle...&lt;br&gt;<strong>Patsy Moran Mike Hay</strong>&lt;br&gt;ARCADIS US</td>
<td>Exhibits open 9:00&lt;br&gt;Coffee Break 9:35 - 10:20</td>
</tr>
<tr>
<td><strong>THURSDAY AFTERNOON SESSIONS</strong> 2:00 - 5:30</td>
<td>Traditional Large Left Lateral Leaps&lt;br&gt;<strong>Eric Saderholm</strong>&lt;br&gt;Western Pacific Resources Corp.</td>
<td><strong>NI 43-101 Technical Reporting</strong>&lt;br&gt;<strong>Jeff Wilson</strong>&lt;br&gt;Tetra Tech</td>
<td>LLLL EP Good Science, Federal Permitting &amp; Good Governance...?&lt;br&gt;<strong>Robert Comer</strong>&lt;br&gt;Jackson Kelly</td>
<td>Coffee Break 3:35 - 4:20</td>
</tr>
<tr>
<td><strong>FRIDAY MORNING SESSIONS</strong> 8:00 - 11:30</td>
<td>Nevada Prospectors Forum&lt;br&gt;<strong>Eric Strubhacker</strong>&lt;br&gt;Renaissance Gold Inc.&lt;br&gt;<strong>Mark Abrams</strong>&lt;br&gt;Onstrike Exploration</td>
<td>Technologies’ Role in Overall Operational Efficiency in Mining &amp; Mineral Process&lt;br&gt;<strong>Ann Carpenter</strong>&lt;br&gt;Granite Construction&lt;br&gt;<strong>Debra Johnson</strong>&lt;br&gt;Eco-Edge, LLC</td>
<td>What Does A Scientist Say is Good Science?&lt;br&gt;<strong>Jeff Parshley</strong>&lt;br&gt;SRK (U.S.) Inc.</td>
<td>Exhibits open 9:00&lt;br&gt;Coffee Break 9:35 - 10:20</td>
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<tr>
<td><strong>11:30 - 1:00</strong></td>
<td><strong>FAREWELL SANDWICH LUNCH</strong> – in the Exhibit Hall&lt;br&gt;11:30 - 1:00 pm</td>
<td><strong>1:00 - 5:00 pm EXHIBITOR TEAR DOWN AND MOVE OUT</strong> ~ 1:00 - 5:00 pm</td>
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</table>
**Short Courses & Field Trip**

**Minimizing Permitting Pitfalls & Delays on Federal Lands - Includes Case Histories**

Monday and Tuesday 8:00 am - 5:00 pm
Cost $250

**COURSE COORDINATORS:**
Paul McNutt, Economist, Bureau of Land Management, DOI, WO, Reno, NV
Kevin L. Johnson, Area Mining Geologist, Rogue River-Siskiyou & Fremont-Winema NF's, Grants Pass, OR

**COURSE DESCRIPTION:**
This two-day workshop will cover permitting requirements and Plans of Operations under the Forest Service’s 36 CFR 228A regulations and the BLM’s 43 CFR 3809 regulations. The first day, agency personnel will cover the basic regulatory requirements. Presenters will then cover specific aspects of the process, including suggestions for minimizing, if not avoiding, permitting pitfalls. On the second day, environmental professionals from several major mining companies will discuss their experience with the permitting process, specifically focusing on what went wrong and what worked. The workshop will close with a joint industry/regulatory panel.

**Applied Structural and Alteration Geology Workshop**

Monday and Tuesday 8:00 am - 5:00 pm
Cost $450

**COURSE COORDINATORS:**
Blair Hrabi, MSc,PGeo, Principal Consultant, SRK Consulting (Canada), Inc., Toronto, ON, CANADA
Anna Fonseca, MSc,PGeo, Principal Consultant, SRK Consulting (Canada), Inc., Toronto, ON, CANADA

**COURSE DESCRIPTION:**
SRK’s two-day Applied Structural and Alteration Geology Workshop is designed to equip participants with the tools and confidence to apply structural and alteration geology effectively and add value to your projects, from grass-roots exploration to deposit-scale resource models. The workshop will be tailored to incorporate several themes and exercises based on the structural setting and alteration assemblages of ore deposits. The workshop includes a combination of presentations, case studies, and exercises, including the following modules:

- CM1: General concepts of structural and alteration geology and application to mineral systems;
- CM2: Structural and alteration mapping techniques;
- CM3: Analysis of faults and fault systems;
- CM4: Analysis of folds and fold systems;
- CM5: Analysis of veins, vein systems and breccias;
- CM6: Infrared spectroscopy applied to alteration mineral identification;
- CM7: Analysis of structure and alteration in drill core;
- CM8: Alteration and structure in porphyry and epithermal environments;
- CM9: Structural and alteration analysis of remote sensing data.

**Using the Standardized Reclamation Cost Estimator (SRCE) Effectively**

Monday and Tuesday 8:00 am - 5:00 pm
Cost $450

**COURSE COORDINATOR:**
Jeff Parshley, Corporate Consultant, SRK (U.S.), Inc., Reno, NV

**COURSE DESCRIPTION:**
The Standardized Reclamation Cost Estimator (SRCE) is a public domain Microsoft Excel-based tool that can be used to calculate mine closure costs. The SRCE uses straightforward user input to create a first-principles estimate of closure costs. A state-specific version is currently used in Nevada by most of the mines and another version is available for use in other states and internationally.

This two-day short course is designed to introduce the SRCE and provide hands-on training to persons interested in using the tool. Instructors will use a combination of teaching tools including, hands-on examples, to familiarize attendees with the components of the model, and provide short-cuts and tips to help them make effective use of the tool. Advanced topics will include how to create custom calculations within the SRCE and integrate the results from other closure cost estimating tools into the SRCE to create an all-inclusive closure cost estimate.

Attendees will need to bring a laptop computer and engineering scale for the hands-on exercises.

Interested in one of the short courses? Don’t let time get away from you. Sign up today so you don’t miss out.
Integrated Exploration Workflows with Esri & Geosoft ArcGIS Software

Monday and Tuesday 8:00 am - 5:00 pm
Cost $450

COURSE INSTRUCTORS:
Willy Lynch, Energy-Mining Industry Team, Esri, Broomfield, CO
Taronish Pithawala, Technical Analyst, Geosoft, Inc., Toronto, ON, CANADA

COURSE OVERVIEW & DESCRIPTION:
On day one of this short course you will develop some fundamental ArcGIS skills and apply them to solving mineral exploration problems such as displaying and managing geology, geochemical, geophysical and other exploration data and also conducting simple analysis and modeling of data for exploration prospectivity and targeting.

Day two of this course teaches how to use Geosoft’s Target for ArcGIS extension for ArcMap to efficiently work with and manage drillhole data in a GIS environment. You will learn how to quickly create powerful, professional maps and how to create 3D geological models from your drillhole data. This course focuses on using Geosoft’s Target for ArcGIS 4.0 within the ArcGIS Desktop 10.1 platform.

Who Should Attend:
• Geoscientists who wish to see how GIS can be used in mining exploration
• Geoscientists wishing to learn how to create drillhole maps and 3D models within the GIS environment

Course Outline:

Day 1 – Esri ArcGIS Desktop 10.1
• Add and explore exploration data in ArcMap
• Display and symbolize layers
• Create geological maps and graphs
• Generate and view statistics

Day 2 – Geosoft Target for ArcGIS 4.0
• Import and verify drillhole data
• Use database compositing tools to better understand your downhole data
• Create 2D section and plan maps, and strip logs
• Digitize geological interpretations

• Build a geodatabase to store data
• Work with spatial reference
• Use editing tools
• Perform GIS analyses

• Create wireframe models
• Create 3D models of assay data
• Integrate 2D and 3D data
• Export your results for sharing and collaborating

Hardware & Software:
No hardware will be provided. Participants are encouraged to bring in their own laptops with Esri & Geosoft software loaded, configured and licensed to follow along with presentation topics.

Evaluation of ArcGIS Desktop 10.1 + Optional 3D, Spatial & Geostatistical Analyst Extensions can be downloaded at:
http://www.esri.com/software/arcgis/arcgis-for-desktop/free-trial

Geosoft Target for ArcGIS 4.0 training licenses will be provided after registration

Prerequisites:
• Basic knowledge of ArcGIS Desktop (equivalent of ArcGIS Desktop I, II or III from http://training.esri.com)
• No previous experience with Target for ArcGIS 4.0 required
• Intermediate geological, geochemical, or geophysical knowledge pertaining to mineral exploration
Heap Leaching Technology

Monday 8:00 am - 5:00 pm

Cost $275

COURSE COORDINATOR:

Thom Seal, Ph.D., P.E., Q.P., Mining-Metallurgical-Mineral Process Engineer, Director of the Institute of Mineral Resource Studies, Barrick Gold of North America Professor, Mackay School of Earth Sciences and Engineering, UNR, Reno, NV

COURSE DESCRIPTION:

A one day short course on the science, engineering and operation of precious metals heap pad will be presented on December 2, 2013, just before the meeting of the Northwest Mining Association in Sparks Nevada. The technology of heap leaching gold and silver ores originated at the University of Nevada, Reno and the US Bureau of Mines on the campus. The class will cover the history of the evolution of this technology to today’s heap leach operations which represented about 10% of the gold production in 2004. Gold and silver heap leaching in Nevada is big with man made mountains that provide the economics for the large open pit mines to be profitable from material that was previously waste rock.

Presentations in the class will be made by leaders in the field led by Dr. Thom Seal, PE, a UNR professor and inventor and developer of the Hydro-JexTM 3-D heap leaching technology, who will address the history and theory of heap leaching. Dr. Carl Nesbitt, Principal Metallurgist for Welsh Hagen of Reno will add his expertise on the hydrometallurgy occurring in the heap leaching process. Mr. Gene McClelland of McClelland Labs of Sparks will inform the class about 10% of the gold production in 2004. Gold and silver heap leaching in Nevada is big with man made mountains that provide the economics for the large open pit mines to be profitable from material that was previously waste rock.

Presentations in the class will be made by leaders in the field led by Dr. Thom Seal, PE, a UNR professor and inventor and developer of the Hydro-JexTM 3-D heap leaching technology, who will address the history and theory of heap leaching. Dr. Carl Nesbitt, Principal Metallurgist for Welsh Hagen of Reno will add his expertise on the hydrometallurgy occurring in the heap leaching process. Mr. Gene McClelland of McClelland Labs of Sparks will inform the class about the construction of heap leach pads by a presentation on the Geotechnical Aspects of Heap Leaching. Heap Leach operations and optimization will be presented by Dr. Seal. A representative from Kappes Cassidy and Associates of Reno will present basic economic data on the heap leach technology. Dr. Seal will conclude the class on the subject of closure and reclamation of heap leach pads.

Tentative Presentation Titles:

- History and Theory of Heap Leaching, Dr. Thom Seal
- Hydrometallurgy in Heap Leaching, Dr. Carl Nesbitt
- Geotechnical Aspects of Heap Leaching, Knight Piesold
- Ore Sampling and Agglomeration, McClelland Lab
- Heap Leach Operation and Optimization, Dr. Thom Seal
- Heap Leach Capital and Operational Costs, Kappes Cassidy
- Rinsing, Closure and Reclamation, Dr. Thom Seal

Principles of Mineral & Metallurgical Processing

Tuesday 8:00 am - 5:00 pm

Cost $275

COURSE INSTRUCTORS:

Dr. Courtney Young, QP, Department Head and Lewis S. Prater Distinguished Professor, Metallurgical & Materials Engineering, Montana Tech, Butte, MT

EUR ING Dr. Corby G. Anderson QP CENG FIMMM FICHEME, Harrison Western Professor, Kroll Institute for Extractive Metallurgy, George S. Ansell Department of Metallurgical and Materials Engineering, Colorado School of Mines, Denver, CO

COURSE DESCRIPTION:

This short course is open to anyone wanting to learn about mineral processing and extractive metallurgy operations. It is particularly good as a refresher or introductory course. In this regard, the course begins with simple concepts such as sampling, analysis (mineralogical, chemical and size), material balances and smelter schedules. It then introduces attendees to processing methods and equipment, particularly those utilized in the mining industry (but also the recycling industry as well). Various unit operations are reviewed including comminution (crushing, grinding, screening and classification), mineral separations (floation, magnetic, gravity and electrostatic), and metal production and purification (hydrometallurgy, pyrometallurgy and electrometallurgy) as well as environmental management (dewatering, tailings disposal, and waste treatment for water, dust and air). Flowsheets of typical operations are reviewed throughout with implications on flowsheet development.

Geophysics for Geologists

Tuesday 8:00 am - 5:00 pm

Cost $275

COURSE INSTRUCTORS:

Greg Hodges, Chief Geophysicist, CGG Airborne, Mississauga, ON, CANADA

Luc Lafreniere, Geophysicist/Technical Ambassador, CGG Airborne, Mississauga, ON, CANADA

COURSE DESCRIPTION:

This one-day course will teach geologists, CEOs, investor relations personnel and any non geophysicists the basic principles of applying geophysics to exploration. The focus will be on understanding the relationship between geological processes and the physical properties of the rocks, and how these are measured from airborne survey systems. The examples are primarily airborne geophysics, but the principles apply to all methods of surveying. Practical considerations of choosing a system and method based on: target and host geology, and terrain will be covered, as well as a basic understanding of the results. Major topic areas will include: Integrating Geophysics and Geology, Magnetic, Electromagnetic, IP, Gamma-Ray Spectrometry, Gravity and Gravity Gradiometry, Airborne Geophysical Surveying and Data Evaluation, and Ore Deposit Geophysics.
**Shotcrete for Underground Support**

Tuesday 8:00 am - 5:00 pm  
Cost $275  

**COURSE INSTRUCTOR:**  
Lihe (John) Zhang, PhD., P.Eng., Materials Engineer, LZhang Consulting & Testing Ltd., Vancouver, BC, CANADA  

**COURSE DESCRIPTION:**  
The class will provide basic knowledge and case studies of underground concrete and shotcrete for the site supervisors, nozzleman, engineers and designers. It will cover:  
1) Concrete basics: chemistry of cement and concrete, concrete mix design, concrete performance, supplementary cementitious materials and chemical admixtures.  
2) Specialty concrete for underground application: self-consolidated concrete (SCC), high performance concrete, and fiber reinforced concrete  
3) Quality control and trouble shooting for concrete: concrete batching, supply, delivery and risk, quality control testing and inspection, curing and protection, strength development, temperature and concrete including temperature effect, hot weather concrete, cold weather concrete, mass concrete construction.  
4) Shotcrete basics: ground support, wet-mix process vs. dry-mix process; equipment & system for each process,  
5) Fibre reinforced shotcrete: mixing, pumpability, testing and application.  
6) Underground shotcrete application - batch, transport, remix, application.  
7) Underground shotcrete application - hand nozzling, robotic sprayer application.  
8) Underground shotcrete application - proper use of accelerator.  
9) Quality control testing and inspection.  
10) Project case studies.  

Dr. Zhang is a specialist in concrete and shotcrete. He has been consulting for various shotcrete projects for mines and tunnels. Dr. Zhang is a registered professional engineer in British Columbia, Canada. Dr. Zhang is a member of the Board of Directors of the American Shotcrete Association, Chair of American Concrete Institute (ACI) sub-committee 506.F “Underground Shotcrete” and a voting member of Committee 544 Fibre Reinforced Concrete.

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**Portable X-Ray Fluorescence (XRF) in Exploration and Mining**

Tuesday 8:00 am - 5:00 pm  
Cost $275  

**COURSE INSTRUCTOR:**  
Andrew Somers, Global Business Development Manager: Mining, Analytical Instruments Division (ANI) Olympus NDT, Waltham, MA  

**COURSE DESCRIPTION:**  
A one day short course on best practice application of portable X-ray fluorescence (XRF) analyzers for mining and exploration projects. Demand for portable XRF’s has grown rapidly over the last decade as advancements in accuracy, lower limits of detection and the cost savings provided by these analyzers become more widely accepted. There has been rapid uptake of portable XRF technology in the minerals industry over the last decade with the advent of smaller equipment capable of accurately measuring elemental chemistry at relatively low concentrations. The project efficiencies provided by portable XRF on certain projects can run into the millions of dollars.  

This short course will address the key aspects of portable XRF utilization for mineral applications. Including basic XRF principles and radiation safety, the course will focus on case studies by exploration and mining companies and will use examples to demonstrate the most important considerations associated with implementing an XRF program.  

Discussion of key strengths and weaknesses of the technology, appropriate QA/QC, sampling and heterogeneity issues will be discussed in detail.  

Focus will be paid on:  
- using XRF to target the right samples and sampling intervals for follow up laboratory analysis  
- maximizing exploration budgets through speeding up anomaly identification and drill targeting  
- optimizing end of hole (EOH) assessment and efficient drill rig mobilization  
- short field season optimization (for colder climes)  
- prioritization of most prospective tenements  
- logging lithologies using XRF  
- rapid decision making in pits and underground  
- effective management of XRF data  
- reporting XRF data/findings to stock exchanges  

Presentations in the class will be made by leaders in the field.
**Engineering, Procurement & Construction Considerations for Underground Mine Maintenance Facility Development**

1/2 Day Short Course  
Tuesday Afternoon 1:00 pm - 5:00 pm  
Cost $275

**COURSE INSTRUCTORS:**  
Joe Cline, P.E., P.Eng, SEC B, Engineering Manager, Cementation USA, Inc., Sandy, UT  
Peter Reich, P.Eng-Sr. Mechanical Engineer, Cementation USA, Inc., Sandy, UT

**COURSE DESCRIPTION:**

An underground shop is the major lifeline for mobile fleets in an underground mine. The decision to design, construct and outfit an underground shop is a major undertaking and must take many factors into consideration. This course will provide a detailed overview of the key factors that must be considered, the mandatory questions that must be answered and the amount effort that goes into implementing a major underground mine infrastructure such as this one. Some of the key items that will be discussed include the following:

- **Engineering** - ventilation & fire protection, access, size & number of bays, types and level of services that can be performed, lighting & illumination, utilities & other services
- **Procurement** - Type of contracts, pre-qualifications, assembling the bid package, supplier selection,
- **Construction** - Ground conditions, infrastructure, concrete, structural steel, overhead cranes, project management, construction schedule.

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**Grass Valley Historic Mining District Tour**

1-Day Field Trip - Tuesday 7:30 am - 5:00 pm  
Bus will depart from the tour bus entrance of John Ascuaga’s Nugget  
Cost $150

**TOUR SPONSORS:** HDR Engineering, Inc., Reno, NV  
In association with Teichert Materials, Sierra Nevada Mining and Industry Council, and Idaho-Maryland Mining Corporation, HDR is offering a combined dredge and hardrock mining technology tour.

The tour will be in two parts, featuring dredge operations at the Teichert Goldfields site near Marysville on the Yuba River in the morning. After a traditional Cornish Miners’ lunch at the historic Holbrooke Hotel during which speakers will describe current mining projects, the afternoon will feature a historic hardrock mine technology tour at the North Star Mining Museum in Grass Valley.

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**Awards and Recognition Reception**

Tuesday Evening 6:00 pm - 8:00 pm  
5th Floor, Poolside Terrace

This hosted event has become THE Annual Meeting kick-off event. An evening of networking opportunities, topped with great food and drinks. Get a preview of this year’s award winners before the awards are presented at the Wednesday and Thursday luncheons.

All attendees are welcome.
State & Province Reports

Area of Interest: Mineral Deposits, Geology & Exploration

Chair: Alan Coyner, President, Trident Exploration, Reno, NV

Session Description:
Get the very latest update on all mining, minerals, and energy activity in the key states and provinces. From gold to sand and gravel, from exploration to production, this is a “must session” for exploration, miners, and investors. Bring your notebook and find out what is really happening from the regional experts in our business. Today’s rocks are tomorrow’s riches. Reports include:

- **Alaska**, Larry Freeman, Alaska Mineral Industry, Alaska Division of Geological Surveys, Fairbanks, AK
- **Idaho**, Virginia Gillerman, Associate Research Geologist, Idaho Geological Survey, Boise, ID
- **Nevada**, Alan Coyner, President, Trident Exploration, Reno, NV
- **Oregon**, Clark Niewendorp, Geothermal Resources Evaluator, Oregon Department of Geology & Minerals, Baker City, OR
- **Utah**, Ken Krahulec, Economic Geologist, Utah Geological Survey, Salt Lake City, UT
- **British Columbia**, Bruce Northcote, Regional/Staff Geologist, British Columbia Ministry of Energy and Mines, Vancouver, BC, CANADA

Growth Companies

Area of Interest: Business and Finance

Chair: Ralph Noyes, Investment Advisor, Coeur d’Alene, ID

Session Description:
The Growth Companies session features companies from private startups to major producers who have recently shown, or are expected to show, strong growth or positive exploration results in the future. New discoveries, “new” commodities, and revitalized producers, as well as continued success in long term producing mines have and will continue to be features of the Growth Companies sessions. Presentations will focus on properties, corporate plans for continued growth, management, and the creation of shareholder value. Talks include:

- **Canamex Resources Corp.**, Greg Hahn, President & COO, Vancouver, BC, CANADA
- **Renaissance Gold, Inc.**, Richard Bedell, President & CEO, Reno, NV
- **Midway Gold Corp.**, Kenneth Brunk, President & CEO, Englewood, CO
- **Pilot Gold Ltd.**, Vance Spalding, VP Exploration, Elko, NV
- **Midas Gold, Inc.**, Chris Dail, Exploration Manager, Liberty Lake, WA
- **Adamera Minerals Corp.**, Mark Kolebaba, President & CEO, Vancouver, BC, CANADA

Underground/Surface Mining Advanced Technologies for the Mining Industry

Area of Interest: Operations

Chair: Kanaan Hanna, Senior Mining Engineer, Zapata Incorporated, Golden, CO

Session Description:
This session will cover technological development and case studies in mining. Topics will include mine automation and control, monitoring and modeling for ground control, 2D/3D mine imaging, and 3D geological mapping. The session will also target remote sensing, and mine scheduling and optimization. This session will focus on the use of new technologies to enhance safety and environment, improve productivity, and to reduce overall mining costs. Talks include:

- **North Leadville Project, Lake County Colorado - An Example of Data Capture, Conversion and 3D Editing in ArcGIS10.0**, Willy Lynch, Energy-Mining Industry Team, Esri, Broomfield, CO
- **The Benefits of Using 3D Laser Scanning in Open Pit and Underground Mines**, John Dollan, Director, I-Site Sales, MAPTEK, Lakewood, CO
- **Emergency Sinkhole Mitigation and 3D Laser Void Investigation of Abandoned Tunnel, Leadville, Colorado**, Kanaan Hanna, Sr. Mining Engineer, Zapata Incorporated, Golden, CO
- **Using LiDAR for Underground Mapping**, Mary Darling, CEO/Principal Owner/Biologist, Darling Geomatics, Tucson, AZ
- **New Pushback Design and Scheduling Algorithm Using Larangian Optimization**, Kadri Dagdelen, Prof. & Head of Mining Engineering, Colorado School of Mines, Golden, CO
Nowhere Left to Mine:
Protected Species Everywhere!
Area of Interest: Environmental
Chair: Nils W. Johnson, Director, Legislative and Regulatory Affairs, Holland & Hart, LLP, Washington, DC

Session Description:
In early 2013, the U.S. Supreme Court declined to hear an appeal of the Ninth Circuit ruling in Karuk Tribe of California v. U.S. Forest Service, a decision headlined as “Court Rules Endangered Species Act Trumps 1872 Mining Law.” Outside the courts, and on the ground, many in the mining industry feel this headline represents reality. The ever-increasing number of protected species, and government agencies’ management regarding the same, is having tremendous impacts on mine exploration, development, production, and closure. In this session, we will discuss how the mining industry is being impacted by regulations related to Greater Sage Grouse, Chinook salmon, migratory birds, and other protected species. We will review the requirements that must be met to avoid running afoul of the Endangered Species Act, the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and other wildlife laws and regulations affecting the mining industry. Finally, an afternoon panel will discuss innovative ways to overcome some of the protected-species compliance hurdles faced by the mining industry and provide an update on potential developments under these acts and how they may impact the industry. Talks include:
• A Primer on the Endangered Species Act & the Law’s Effect on Mining Operations, Murray Feldman, Partner, Holland & Hart, LLP, Washington DC
• Sage Grouse Saga: Shaping Mountain West Mineral & Resource Development, Dessa Reimer, Associate, Holland & Hart, Jackson, WY
• TBD, Todd Ungerecht (Invited), Staff Member, U.S. House Natural Resources Committee, Washington, DC
• Endangered Species, They Aren’t Just in the USA: A Dominican Republic Story, Bill Upton, Environmental Director, Barrick Gold Corporation of North America, Salt Lake City, UT
• Last Talk to be Determined

Mining & Exploration: New Mine Developments in the Western US
Area of Interest: Mineral Deposits, Geology & Exploration
Chair: Richard M. Diaz, Sales Engineer, Maptek, Lakewood, CO

Session Description:
In a time of tight market conditions, difficult deposits and unfavorable jurisdictions, finding the right deposit is more challenging than ever. Mining has deep roots in the American West, but there are many new projects moving closer and closer to production. These new projects will revitalize ghost towns, and rip many Americans out of unemployment to a life of prosperity. Come and enjoy hearing about the new lifeblood of our Western mining heritage. Talks include:
• The Island Mountain Gold Deposit in the Jerritt Canyon Trend, Doug Peters, President and COO, Arnevut Resources, Lakewood, CO
• Teaching an Old Mill New Tricks: Improvements using mineral liberations analysis for the Thompson Creek Mill, Paul Miranda, Senior Metallurgist, Thompson Creek Metals Company, Clayton, ID
• Passport Potash; Cultivating Global Growth in Northeast Arizona, Mike Schlumberger, COO, Passport Potash, Apache Junction, AZ
• Bravada Gold Corporation’s Wind Mountain Gold/Silver Project, Washoe County, Nevada, Joseph Kizis, Jr., President and Director, Bravada Gold Corp., Reno, NV
• Lowering Production Costs Through Drill Program Optimization, Kyle Rhoderick, President, Connors Drilling, Montrose, CO
• Update on Rochester, Luke Russell, Coeur Mining, Inc., Coeur d’Alene, ID
Junior Explorers: The Realities of Today’s New World

Area of Interest: Business & Finance - Particularly Listing, Financing, Cost Reduction Strategies

Chair: David Poynton, President & CEO, Daycon Minerals Corporation, Toronto, ON, CANADA

Session Description:
As the industry slump continues and possibly deepens, junior explorers are left scrambling to make ends meet, protect key assets and survive until better times return. With a focus on today’s challenging environment, this Session is expected to include speakers from the TSX (Toronto) on the current climate for listings, an investment banking firm and a mining focused fund on funding challenges, an IR firm on the role of marketing, a major to discuss investing in juniors, and the Chair who will discuss cost reduction strategies that must now be considered by all as a matter of prudent planning and protection of shareholder value.

Talks include:
- TSX @ TSXV- Myths and Realities on Challenging Times, Carlos Espinosa, Head, Business Development, Mining Americas, Toronto Stock Exchange, Toronto, ON, CANADA
- Cutting to the Bone...And Staying Alive, David Poynton, President & CEO, Daycon Minerals Corporation, Toronto, ON, CANADA
- Financing Alternatives for Junior Companies, Craig Warren, Managing Director, Investment Banking, Canaccord Genuity Corp., Toronto, ON, CANADA
- The Market is Listening, You Need to Say Something, Cathy Hume, Chief Executive Officer, CHF Investor Relations, Toronto, ON, CANADA
- Sins of the Past; Seeking Salvation Through the Juniors, Michael Kosovcan, Investment Executive, Sprott Global Resource Investments Ltd., Carlsbad, CA

Small Operator Session

Area of Interest: Operations

Chair: Mike Doran, Consultant, Boise, ID

Session Description:
The session focus will be on how a prospector, small operator, Jr-Jr can develop their property to the point where an exploration company will lease or buy the property. Tentative topics to be covered are:

- Sampling
- Basic exploration, drilling, assaying, mapping, etc.
- How not to get scammed
- Preparing a property report
- Permitting
- Basic joint venturing
- How to legitimately package your property
- Using consultants

Wednesday afternoon... (continued)

Exploration Drilling... The Good, The Bad, and the Ugly

Area of Interest: Operations

Chairs: James Stephens, Client Services Manager, National Exploration Wells & Pumps, Inc., Gilbert, AZ
Ron Parratt, Project Hydrogeologist, Schlumberger, Reno, NV

Session Description:
Exploration drilling involves more than some guys and a rig! Access rights, permitting, geology, and, of course, the drillers are all key pieces of the puzzle that is exploration drilling.

This session will be a forum on lessons learned and what is new in drilling technology along with what else can be done with your open boreholes/wells.

If you have something new in drilling, either from a technology standpoint, or from the perspective of best practices, submit your idea for a presentation.

We will also be sharing interesting stories of projects, good and not so good. Whether you are a claim owner, driller, geologist, or permitting specialist, be prepared to share your thoughts and experiences in a forum that will be well lubricated with some libations and snacks. Talks include:

- Technology’s Role in Overall Operational Efficiency in Mining and Mineral Process, Seth Gering, Implementations Coordinator, Mintec, Inc., Tucson, AZ
- Mineral Exploration from Geologists Point of View, Dr. Roger Steininger, Ph.D., CPG, COO & Director, Acquisitions & Exploration, NuLegacy Gold Corporation, Reno, NV
- Multi-Level Groundwater Monitoring, Brian Peck, Senior Hydrogeologist, Schlumberger, Reno, NV
- Behind the Iron Curtain - Wireline Tools for Looking Beyond Casing, Schlumberger, Houston, TX
- Exploration in Areas Already Processed, James Stephens, Client Services Manager, National EWP, Elko, NV

Mine Closure & Remediation

Area of Interest: Environmental

Chair: Dustin G. Wasley, PE, Principal, Cascade Earth Sciences, Spokane, WA

Session Description:
The mining industry and land management agencies contend with significant technical, legal, and financial considerations for mine closure. Mine closure challenges run the gamut from remediating turn-of-the-century abandoned mines to closing modern operations. This session will present case studies and technical presentations on closure criteria and approaches from the mining industry and land management agencies.

Talks include:
- Reclamation of the Forest Rose Mine and Mill Site, Devin Clary, Reclamation Specialist, Montana DEQ, Helena, MT and Kevin Houch, Project Engineer, Herrer, Missoula, MT
- Sustainable Mine Rehabilitation in the North, Dan Bush, Engineer, ARCADIS, Lakewood, CO
- Closure of Tailings and Mine Waste on Tribal Lands at Asarco Mission, Dale Ortmann, Owner, Dale Ortmann PE Consulting Engineer PLLC, Oracle, AZ
- Limiting Selenium Leaching from Mine Overburden with a Geosynthetic Cap, Rebecca Oliver, Senior Project Engineer, Geosyntec Consultants, San Diego, CA
- A Remediation Monitoring Tool for Abandoned Hard Rock Mine Lands, Loren Barber, Reclamation Scientist, KC Harvey Environment, Bozeman, MT
- The Evolution of Newmont’s Lone Tree Mine Pit Lake, Charlene Hager, Closure and Reclamation Manager, Newmont Mining Corporation, Valmy, NV and Mark List, Miller Engineering, Elko, NV
Thursday morning

Technical Sessions
Morning sessions - 8:00 - 11:30 am
Morning Coffee Break is in the Exhibit Halls from 9:35 - 10:20 am

Mining’s Midwest Resurgence: Minnesota, Wisconsin and Michigan Mineral Development
Area of Interest: Mineral Deposits, Geology & Exploration
Chair: Frank Ongaro, Executive Director, Mining Minnesota, Duluth, MN
Session Description:
The continued advancement of mineral development in Minnesota, Wisconsin and Michigan has attracted interest and investment from around the world. Advancing development of the vast iron, base, and precious metals deposits in these States, holds tremendous potential for future production of these metals.

With proud histories of mining, each state understands the significant economic benefits, and looks anxiously toward becoming global leaders in supplying the metals that are essential to our way of life, for several generations.

This session will highlight many of the development and exploration projects being undertaken by the dozen companies active in Minnesota, Wisconsin, and Michigan. Talks include:

- Base and Precious Metal Mineralization in the Early Proterozoic Penokean Volcanic Belt, Wisconsin and Upper Michigan, Tom Quigley, President, Aquila Resources, Inc., Menomie, WI
- PolyMet’s NorthMet Project: Status Update and a Discussion of the Opposition’s Claims, Brad Moore, Executive Vice President, PolyMet Mining, Saint Paul, MN
- Recent History of Mining in Wisconsin and Efforts to Reform Metallic Mining Laws and Rules, Steve Donohue, PH, Director, Foth Infrastructure & Environment, LLC, Milwaukee, WI
- Gold in the Horn, St. Louis County, Minnesota, Dr. Henry “Rick” J. Sandri, President & COO, Vermillion Gold, LLC, Minneapolis, MN
- Project Development Update: Twin Metals Minnesota’s Maturi Mine, Patricio Vergara, Director of Mining, Twin Metals Minnesota, LLC, Saint Paul, MN

Alaska
Area of Interest: Mineral Deposits, Geology & Exploration
Chair: Deantha Crockett, Executive Director, Alaska Miners Association, Inc., Anchorage, AK
Session Description:
Alaska continues to reveal tremendous mineral potential, with projects on the horizon that stand to be some of the largest mines of their kind in the world. However, national anti-development campaigns focused on Alaska combined with unpredictable federal regulation and changes in investment climate leave their status in question. The Alaska Session will provide an update on some of Alaska’s mines and projects, and what circumstances will ensure they do or do not move forward.

Talks include:

- Tetlin Gold Project, Curt Freeman, President, Avalon Development Corp., Fairbanks, AK
- Pebble Project, John Shively, CEO, The Pebble Partnership, Anchorage, AK
- Moving Forward from Armed Investigations in Fortymile Mining District, Deantha Crockett, Executive Director, Alaska Miners Association, Inc., Anchorage, AK

A Current View of Mining Finance: What is Ahead?
Area of Interest: Business & Finance
Chairs: Tim Alch, Vice President & Senior Minerals Business Analyst, Behre Dolbear & Company (USA), Inc., New York, NY
Session Description:
In this session, we will hear several leading experts talk about the latest trends, issues and best opportunities and ways for mining companies today and going forward.

The issues we plan to discuss are: Are the Juniors able to raise capital? Which sectors and companies are attractive? Will metals prices and company valuations recover? Where do investors see value outweighing the risks? What are the issues that will impact financing going forward? What financing options are available? Talks include:

- Future of the Market Given Current Metal Prices, Heiko Ihle, CFA, Senior Research Analyst, Euro Pacific Capital, Inc., Westport, CT
- Financing of Development Stage Gold Companies in Turbulent Times, Joel Schneyer, Managing Director, Headwaters MB, Denver, CO
- Financing a Mine - Traditional and Alternative Methods, Benjamin Stull, CFA, Vice President, Valuation Advisory Services, Duff & Phelps LLC, San Francisco, CA
- Private Equity Finance in the Mining Sector, TBA, Resource Capital Funds, Denver, CO
- How to Find the Living in the Land of the Walking Dead, Benjamin Cox, Managing Director, Oren, Inc., Vancouver, BC, CANADA
- Important Accounting Auditing Data Issues for Raising Capital and Financings, Kevin Karo, Partner, BDO, Las Vegas, NV
- What are Mining Management Teams Doing to Successfully Survive?, Roy Hinkamper, Managing Director, KPMG LLP, St. Louis, MO

Courageous Leadership: The People Side of Safety
Area of Interest: Operations
Chair: Bruce Huber, Certified Mine Safety Professional, West Valley City, UT
Session Description:
Courageous Leadership is about empowering people to speak up when things are not right. It is about treating people like people, building relationships and trust, and empowering people to become part of the solution rather than remain as part of the problem. In this presentation, we will help supervisors understand the difference between management and leadership, and why implementing a safety culture within the organization is vital to ensuring every employee returns home safely.

Talks include:

- Chancing a Culture, Bruce Huber, Certified Mine Safety Professional, West Valley City, UT
- Systems & Culture Impact on Change, Josh Arritola, CEO, Haploos, Inc., Spokane, WA
- Developing Effective Site Safety Leaders in the Mining Industry, Michael Hajaistron, Vice President BST, Ojai, CA
- Case Study on Creating Leadership Awareness to Address Fatigue, Bill Sirois, Senior Vice President & COO, Circadian Technologies, Stoneham, MA
- Implementing a Courageous Leadership Program, Mark Thompson, Director, Safety & Health, TECK American Incorporated, Spokane, WA

Morning Coffee Break is in the Exhibit Halls from 9:35 - 10:20 am
Conceptual Model Application Through the Mine Life Cycle: A Tool for Getting Lost in the Weeds or Finding a Way Out?

**Area of Interest: Environmental**

**Chairs:** Patsy Moran, Ph.D., Senior Geochemist, ARCADIS U.S., Inc., Highlands Ranch, CO  
Michael Hay, Ph.D., Senior Geochemist, ARCADIS U.S., Inc., Boulder, CO

**Session Description:**

Mining operates at the interface between a highly engineered system and the natural environment. This interface is exceptionally complex with a myriad of parameters that factor into system behavior and ultimately into the environmental footprint of a project. Conceptual models are prepared that describe pit development, pit lakes and the surface water-groundwater interface, mine-watershed interactions, and at closure that describe environmental effects of mine features optimize reclamation. Conceptual models also form the framework for numerical models and help to constrain the boundaries and parameters considered within these models. This session will focus on case studies on the application of conceptual models to the mine life cycle and will attempt to arrive at a consensus as to their overall utility to successful mine planning, operation and closure: do they enhance mine planning, facilitate stakeholder understanding, and provide for more efficient reclamation or do they limit our view of the system?

- Development and Practical Application of a Conceptual Site Model for a Tailing Facility, Tim Cox, Principal Hydrogeologist, ARCADIS, Highlands Ranch, CO
- Three Unique Conceptual Land Numerical Groundwater Models Developed for the Rosemont Copper Project - What data control the predicted impacts?, Grady O’Brien, Principal Hydrogeologist, Hydro-Logic, Fort Collins, CO
- Geochemical Conceptual Models: Assembling the Technical Details to Optimize Mine Project Strategies, Jim Ranville, Associate Professor, Colorado School of Mines, Golden, CO
- Benefits of Developing and Applying Site-wide Water Management Tools, Jason Kerstiens, Principal Environmental Engineer, ARCADIS, Denver, CO
- Building Foundational Solutions for Intelligent Information Management and Data Visualization to Support Strategic and Conceptual Initiatives at Mine Sites, Micah Callough, National Technical Manager, ARCADIS, Highlands Ranch, CO

Digging, Dating and Data

**Area of Interest: Legislative & Public Affairs**

**Chair:** Eric Williams, Principal, Gallatin Public Affairs, Spokane, WA

**Session Description:**

Mining is an industry of highly technical people who rely on data to do their jobs - metallurgists, geologists, engineers, hydrologists, etc. At the same time, many think the government affairs and public relations practitioners seldom use the left side of their brains - and pretty much just wing it.

In this session, professionals will demonstrate that many of them can not only add and subtract, but actually use immense amounts of data and complex formulas to successfully engage with soccer moms and other members of the public to garner support for projects, policies and legislation.

- Digging Data - How to Identify Individuals Most Likely to Support Mining, John Davies, CEO, Davies Public Affairs, Santa Barbara, CA
- Running Out of Fingers - Ways to make sure you count your supporters and spur them to take action, Chris Hopkins, Senior Vice President, The Saint Consulting Group, Franklin, TN
- Big Data?... So What?: Get beyond the buzzwords to learn how to make tactical and strategic decision with Big Data, Todd Herman, Founder, Crowdverb, Washington, DC
- Overcoming the False Choice. Creating Jobs While Protecting the Environment, Brooks Kochvar, Senior Vice President, GS Strategy Group, Boise, ID
- A Poll? We Don’t Need No Stinkin’ Poll!, George Byers, Vice President, Rare Element Resources, Lakewood, CO

**Full time college students...**

- NWMA offers free Technical Session passes with a $25 membership.
- Student Poster Contest ...see page 20
- Discounts on Short Course fees
- Young Professional’s Mixer
Traditional Large Left Lateral Leaps

Area of Interest: Mineral Deposits, Geology & Exploration

Chair: Eric Saderholm, President & Director, Western Pacific Resources Corp., Elko, NV

Session Description:
2013 Large Left Lateral Leaps will continue the tradition of provocative talks, accentuated by (un)conventional beverages and free-wheeling discussions and commentary from the audience. The session targets presentations at the cutting edge of geologic-geophysical-geochemical science, and presenters are welcome and invited to contribute new ideas, hypotheses on exploration and development of mineral projects worldwide. Talks include:

• Will the Real Comus Fm. Please Stand Up and Reveal Your True Identity and Birth Places: New Comus Fm. Gold-Host Models for the Getchell Trend, Harry Cook, Ph.D., CPG-11001 President & CEP, Carbonate Geology LLC, Redwood City, CA
• MULTIPULSE Time Domain EM: Expanding the Geobandwidth of Airborne EM Systems, Adam Shales, Sales & Marketing Manager, Vancouver, Fugro Airbourne Surveys, Vancouver, BC, CANADA
• Intermountain Seismic Belt/East Pacific Rise: Engine of the “Wasatch Line (Neogene)/East Pacific Rise” Plate Tectonic Model (Model @ Northwest Geology, Vol. 41, July 2012), Joe Baird, Partner, Baird Hanson LLP, Boise, ID
• GV Technology for Exploration and Delineation of Lode Gold Claims, Jim Combs, Executive Vice President, Geo Vision, Inc., Reno, NV

NI 43-101 Technical Reporting

Area of Interest: Business & Finance

Chair: Jeff Wilson, Director, Geology, Tetra Tech, Mining & Minerals, Vancouver, BC, CANADA

Session Description:
There is an ongoing discussion amongst companies, consultants and regulators in Canada regarding economic studies. This session will attempt to examine preliminary economic assessments, pre-feasibility and feasibility studies, including expectations for the underlying project data, the NI 43-101 Reporting Code and the level of confidence of a given report submitted to the market. Talks include:

• CIM Standards and Best Practices in NI 43-101, Garth Kirkham, Principal Consultant & Chair of CIM Best Practices Committee, Kirkham Geosystems Ltd., Burnaby, BC, CANADA
• Preliminary Economic Assessments of Mining Projects: Definition, Use and Misuse, Greg Gosson, Technical Director, Geology & Compliance, AMEC, Vancouver, BC, CANADA
• NI 43-101 - Topical Issues and Guidance, Robert Holland, Chief Mining Advisor, Corporate Finance, British Columbia Securities Commission, Vancouver, BC, CANADA
• Comparison Between Reporting Environments in USA, Canada and Australia, Pat Stephenson, P.Geo., Director/General Manager, Vancouver/Principal Geologist, AMC Mining Consultants (Canada) Ltd., Vancouver, BC, CANADA
• Don’t Get Bitten by What is Written (in your report)!, Brian Abraham, Partner, Dentons Canada LLP, Vancouver, BC, CANADA
High Technology Systems and Automation in Mining, Metallurgy and Exploration

Area of Interest: Operations

Chair: Clark West, Mining Service/Marketing Manager, Agru America, Inc., Fernley, NV

Session Description:
This session is focused on cutting edge technology that is between the beta stage and new implementation at a mine site. The aim of this session is to put forward the evaluations of innovation in the mining industry, share experiences, discuss new ideas and introduce efficiency opportunities through the use of new technologies. Disciplines welcomed include all aspects of the mine cycle from early state exploration through the entire mine life cycle, in either surface or underground mining.

All presentations in this session will focus on utilizing new technologies to achieve operational excellence with ideas, opportunities, solutions and case studies. Joint presentations between OEM/OTM and mining company are encouraged. Talks include:

- Conventional or Thickened/Paste Tailings? Case Study for an Iron Mine in China, J. P. Wu, Ph.D., P.E., Vice President & Chief Process Engineer, Ausenco, Concord, CA
- TBD, Gregory Bracci, Business Development Manager - Urban Industrial, Brüel and Kjaer EMS Inc., Victor, NY
- Drones - Unmanned Aerial Vehicles, Edwin “Chip” Berniard, Technical Sales Western USA/Canada Geomatics & Engineering Division, Trimble, St. Paul, MN
- Making Your Concrete “Bullet-proof” with Concrete Protective Liners (CPL’s), Kitt Hawkins, Western Sales/Marketing Manager Western Region, Agru America, Inc., Fernley, NV
- Use of Acrylic Polymer to Combat Fugitive Dust on Mine Sites, Justin Vermillion, Vice President of Environmental Products and Applications, EP & A Envirotac, Inc., La Quinta, CA

Large Left Lateral Leaps for Environmental Professionals - Good Science, Federal Permitting and Good Governance - Wherefore Art Thou?

Area of Interest: Environmental

Chair: Robert D. Comer, Member, Jackson Kelly PLLC, Denver, CO

Session Description:
The National Environmental Policy Act has been called “a tool for stranding capital.” The science employed in listing and designating habitat under the Endangered Species Act has been questioned by states, environmentalists and industry alike. Third party experts empaneled by the federal government are becoming common place as a backstop to the administrative law process. The Department of the Interior has a good science policy and the Data Quality Act offers congressional protection in limited instances. Yet, agencies often are accused of “black box” science in their decision making developing regulations, the permitting process and undertaking their daily functions. This panel will explore these issues with the objective of identifying critical issues and developing concrete, game-changer recommendations for establishing good governance in the natural resource permitting process. Talks include:

- The Science Gap in Science and the Public Interest, Robert D. Comer, Member, Jackson Kelly PLLC, Denver, CO
- What I Learned About the ESA at the DOI or The ESA Problem is Implementation or Scientists are Cheaper than Lawyers - Winning the ESA Game, Julie A. MacDonald, Consultant, Dixon, CA
- Climate Change Reconsidered, James Taylor, Senior Fellow, Heartland Institute, Chicago, IL
- Panel Discussion Led By Moderator Robert D. Comer

Thursday Happy Hour Reception
5:30 - 6:30 pm
In the Exhibit Hall
The place to be before your dinner engagement!
Technical Sessions

Morning sessions - 8:00 - 11:30 am
Morning Coffee Break is in the Exhibit Halls from 9:35 - 10:20 am
All sessions will break

Nevada Prospectors Forum
Area of Interest: Mineral Deposits, Geology & Exploration

Chairs: Eric M. Struhsacker, Vice President Exploration, Renaissance Exploration, Inc., Reno, NV
Mark J. Abrams, Consulting Geologist, Onstrike Exploration, Reno, NV

Session Description:
The Nevada Prospectors’ Forum will consist of one session on Friday morning. The forum will feature short presentations describing mineral and geothermal energy prospects in Nevada and adjacent locations in the Basin and Range. The forum will provide explorationists an opportunity to discuss the mineral endowment and promising targets of their prospects in the context of geologic setting and style of mineralization.

Talks include:

- Multiple Styles and Ages of Mineralization in the Yearington District, Nevada. Lindsay Bottomer, Vice President Business Development, Entrée Gold Inc., Vancouver, BC, CANADA
- New Developments at the Relief Canyon Gold Deposit. Douglas W. Prihar, Pershing Gold Corporation, Lovelock, NV
- The Buckskin North Copper-Gold Project, Douglas County, Nevada, Brian Goss, Buckskin Resources LLC, Elko, NV
- The Mountain Chief Project - Boise County, Idaho, Dustin Henderson, IDA Gold Corporation, Vernon, BC, CANADA
- South Roberts Prospect: A Shallow, Pediment Covered Carlin Target on a Major Gold Trend in Nevada. Greg Hill, Kinetic Gold (US) Inc., Reno, NV
- Awakening of the Sleeper Deposit. Nancy Wolverson, Paramount, Reno, NV
- The Everson Deposit at the Buffalo Canyon Project: A Reduced Intrusion-related Gold System. Dan Pace, Geologist, Renaissance Gold Inc., Reno, NV
- Castle Mountain Mine, San Bernardino County, California. Peter Olander, Reno, NV
- The West Trinity Property, Churchill County, Nevada. Steve Jones, Jones Consulting, Reno, NV

Technologies’ Role in Overall Operational Efficiency in Mining & Mineral Process

Area of Interest: Operations

Chairs: Ann S. Carpenter, Mining Business Development Manager, Granite Construction, Inc., Reno, NV
Debra T. Johnson, President, Eco-Edge, LLC, Chandler, AZ

Session Description:
With an eye on exploring those systems and solutions that would help improve operation efficiency from the ore deposit to the market. Wherever people are working, machines are running (or not) and processes are happening, there are down times, reductions in production (below name plate) and in general numerous places to improve operations and get more out of the existing operations.

Mining uses a lot of everything, Electrical Energy is a key component however so is Diesel, Natural Gas, etc..........

People are also a resource, if they are not working efficiently, or within a systems that does not help them see production issues in real time, they can not improve the out comes of the current shift, or daily production. Talks include:

- Idle Reduction: Eliminating the Nagging Drag on Profits+B40, President, Eco-Edge, LLC, Chandler, AZ
- Technologies’ and Data’s Role in Over All Operational Efficiency in Mining & Mineral Process. Shaun MacCrae, Senior Consultant, Dassult Systemes, GEOVIA, Vancouver, BC, CANADA
- Cost Reduction in Mining Through Energy Efficiency. Tony Teske, Energy Consultant, Otis Orchards, WA

What Does a Scientist Say is Good Science?

Area of Interest: Environmental

Chair: Jeff Parsley, Corporate Consultant, SRK (U.S.), Inc., Reno, NV

Description: What is good science? Scientists specializing in mining issues ranging from site characterization and prediction to site environmental management, are trained to base project decisions on a scientific approach, rather than policy or business or process considerations. In this session we will define “good science” from a scientist’s perspective by exploring current scientific practice in the mining industry in context of method limitations alternatives, and case studies that examine how rapidly the science is evolving. This session will not limit the areas of science discussed and is likely to include presentations on mine waste characterization, pit lakes, cover modeling, fate and transport analysis, ecological risk assessment, and heap leach decommissioning.

This topic will be explored further from a policy and process perspective during the Large Left Lateral Leaps for Environmental Professionals Technical Session. This new session is looking for papers.
Friday morning... (continued)

Geosynthetics in Mining

Area of Interest: Environmental

Chair: Scott Solotorovsky, Group Manager, CETCO, Hoffman Estates, IL

Description: The proper selection and application of geosynthetic materials is critical for maximizing the economic viability of a mine operation, and for ensuring environmental responsibility and compliance are achieved. This session will provide an overview of the various geosynthetic materials available, including their respective applications, benefits, and limitations, as well as design and installation considerations. Attendees will benefit from a diverse range of speakers representing engineers who design with geosynthetics, installers who install geosynthetics, manufacturers who develop and produce geosynthetics, and independent labs that research and test geosynthetics. Talks include:

- Earthen and Geosynthetic Cover systems for Mine Waste Containment, Craig Benson, Ph.D., PE, DGE, NAE, Civil and Environmental Engineer Chair, University of Wisconsin-Madison, Madison, WI
- Construction Quality Assurance of Mine Tailings and Leach Pad Facilities from the Owners Perspective, Bill Orr, Technical Services Manager, Coeur Mining, Inc., Coeur d’Alene, ID
- GCL Product Selection and Design Considerations, Chris Athanassopoulos, PE, Technical Services Manager, CETCO, Hoffman Estates, IL
- Composite Liner System Design for Mining Facilities, Mike Henderson, PE, Senior Vice President, Global Mining Practice, Tetra Tech, Golden, CO

Legislative & Regulatory Affairs

Area of Interest: Legislative & Public Affairs

Chair: Laura Skaer, Executive Director, Northwest Mining Association, Spokane, WA

Session Description: Industry experts and congressional staff will offer their insights on key legislative, regulatory and judicial issues facing the industry. Topics to be discussed may include: Greater Sage-grouse; EPA CERCLA 108(b) financial assurance requirements; Earthworks v DOI; CWA §402 and 404 issues; Critical and strategic minerals legislation; Permitting reform; and the 113th Congress. Topics will be narrowed prior to the meeting. Speakers include:

- Federal Issues Update, Matt Ellsworth, Government Affairs Manager, Northwest Mining Association, Spokane, WA
- What to Expect in the House in 2014, Kathy Benedetto, Republican Staff, House Natural Resources Committee, Washington, DC
- Critical Minerals Legislation and Other Issues in the 2014 Senate, Colin Hayes, Professional Staff, U.S. Senate, Washington, DC
- Sage Grouse, The Government, and What it Means for Mining in the U.S., Megan Maxwell, Biologist/Environmental Consultant, Broomfield CO
- Sage Grouse, Tom Perry, Counselor to Idaho Governor Butch Otter, Office of Governor C.L. “Butch” Otter, Boise, ID

Networking Opportunities

Networking plays an important role at the Northwest Mining Association Annual Meeting, Exposition & Short Courses. One of our goals is to help make that happen. Below is a sampling of the many opportunities you will have.

TUESDAY

Awards & Recognition Reception ~ 6:00 - 8:00 pm
5th floor - Poolside Terrace.

WEDNESDAY

Morning Coffee Break ~ 9:35 - 10:20
in the exhibit hall - all sessions will break
Welcoming Luncheon ~ noon - 1:30
1st floor Celebrity Showroom - Tickets $45.00
Keynote Speaker - Perry Pendley, President & CEO, Mountain States Legal Foundation
Walk Around Exhibit Hall Sandwich Lunch ~ noon - 1:30
in the exhibit hall - Tickets $15.00
Afternoon Coffee Break ~ 3:35 - 4:20
in the exhibit hall - all sessions will break
Welcoming Reception ~ 5:30 - 7:30 pm - Exhibit Hall

THURSDAY

Morning Coffee Break ~ 9:35 - 10:20
in the exhibit hall - all sessions will break
Industry Outlook Luncheon ~ noon - 1:30
1st floor Celebrity Showroom - Tickets $45.00
Keynote Speaker - Thomas Kerr, Senior Vice President, North American Operations, Newmont Mining Corporation
Walk Around Exhibit Hall Sandwich Lunch ~ noon - 1:30
in the exhibit hall - Tickets $15.00
Afternoon Coffee Break ~ 3:35 - 4:20
in the exhibit hall - all sessions will break
Happy Hour Reception ~ 5:30 - 6:30 pm
Exhibit Hall
Young Professional’s Mixer ~ 6:30 - 10:00 pm
Room to be announced

FRIDAY

NWMA’s Historic Moose Milk & Morning Coffee Break ~ 9:35 - 10:20
in the exhibit hall - all sessions will break
Hosted Farewell Sandwich Lunch ~ noon - 1:30
in the exhibit hall
The Student Poster Contest is designed to give young men and women the opportunity to present papers to the convention attendees. This year’s contest will be judged on Thursday December 5. Set up will take place on Tuesday December 3.

Contest Description

The contest is structured to simulate the presentation of a project or process to management by an engineer, geologist or metallurgist. The candidate will be judged on his/her ability to convey meaning and conviction that the work is significant and is of benefit to the minerals industry. The contest provides an excellent opportunity for young people to meet leaders in the minerals industry, and to develop communication skills with other professionals who may not necessarily be skilled in the student’s particular discipline. We are accepting papers dealing with exploration, operations, management, economics, reclamation and other subjects pertinent to the mining industry.

Prizes Will be Awarded

Grand Prize ~ $350 - a $250 gift certificate from Miners Incorporated - donated by the Wray D. Farmin Family Fund and a check for $100 donated by the William C. Jordan fund

2nd Prize ~ $200 Check donated by Sponsors of the 2013 NWMA Annual Meeting

3rd Prize ~ $150 Check donated by Sponsors of the 2013 NWMA Annual Meeting

4th Prize ~ $100 Check donated by Sponsors of the 2013 NWMA Annual Meeting

5th Prize ~ $75 Check donated by Sponsors of the 2013 NWMA Annual Meeting

Specifications

BOOTH DIMENSIONS:
Each student will be provided a 4’ x 8’ poster board display unit (that will accept push pins), a table and a chair.

DISPLAY MATERIALS:
The display materials for hanging on the panels should be maps, diagrams, charts and posters that are of good quality. Core, rock samples, test results, demonstrations, handouts or other such items can be displayed or distributed on the table.

SIGNAGE:
NWMA will prepare one “identifying” sign for each student to display at his/her booth. The sign will have the student’s name, school name and the presentation title.

SET UP:
Exhibitor, core shack and student poster set up will take place between 8:00 am and 5:00 pm on Tuesday December 2.

Cost

Technical Session fees are waived for all full time students who are members, or become members of NWMA. Student membership fees are $25.00 annually. Student travel aid is available. Contact Pat Heywood - pheywood@nwma.org

This entry form does not constitute a registration. Students must complete and return a registration form. See form in this brochure, or online at www.nwma.org

How to Enter

Interested students should complete and return the registration form below to NWMA on or before October 15. If you have any questions please contact Pat Heywood pheywood@nwma.org.
Annual Meeting Sponsorships

Sponsorships deliver visibility and impact. By becoming a NWMA Annual Meeting Sponsor you are helping to keep registration costs low and allow us to offer more social and networking events, while enhancing your visibility among the industries most influential business leaders. Complete the form below and return it to NWMA today. Start getting the recognition you deserve!

SHORT COURSE SPONSORSHIPS

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<tr>
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<tr>
<td>LUNCHES</td>
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<td>COFFEE BREAKS</td>
<td>MONDAY</td>
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RECEPTIONS

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<tr>
<td>TUESDAY 2013 AWARDS &amp; RECOGNITION RECEPTION</td>
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<tr>
<td>WEDNESDAY WELCOMING RECEPTION IN THE EXHIBIT HALL</td>
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<td>THURSDAY AFTERNOON RECEPTION IN THE EXHIBIT HALL</td>
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<td>YOUNG PROFESSIONALS MIXER</td>
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MEALS

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<td>WEDNESDAY WELCOMING LUNCHEON</td>
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<td>WEDNESDAY EXHIBIT HALL SANDWICH LUNCH</td>
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<tr>
<td>THURSDAY GOVERNMENT INDUSTRY BREAKFAST - SPONSORSHIP IS FULL</td>
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<tr>
<td>THURSDAY INDUSTRY OUTLOOK LUNCHEON</td>
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<tr>
<td>THURSDAY EXHIBIT HALL SANDWICH LUNCH</td>
<td>$ 250</td>
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<tr>
<td>FRIDAY EXHIBIT HALL FAREWELL HOSTED SANDWICH LUNCH</td>
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TECHNICAL SESSION BREAKS IN THE EXHIBIT HALL

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<td>AFTERNOON</td>
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OTHER SPONSORSHIP OPPORTUNITIES

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<td>TECHNICAL SESSIONS</td>
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<td>EXHIBIT HALL BAR - MORNING &amp; AFTERNOON’S PRIOR TO RECEPTION - SPONSORSHIP IS FULL</td>
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<td>LARGE LEFT LATERAL LEAPS SESSION BEER - SPONSORSHIP IS FULL</td>
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<td>ENVIRONMENTAL PROFESSIONALS SESSION BEER</td>
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<tr>
<td>STUDENT POSTER SESSION</td>
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<tr>
<td>CORE SHACK DISPLAYS</td>
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<tr>
<td>GENERAL CONVENTION SPONSOR</td>
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2013 Annual Meeting Sponsorship Agreement Form

Complete this form and return it by mail to NWMA.

10 N Post Street, Ste. 305, Spokane, WA 99201-0705; fax: (509) 623-1241 or email: pheywood@nwma.org

If you have a new logo, or you are a new sponsor, please email a high quality vector image of your logo to pheywood@nwma.org

Event Sponsored/Co-Sponsored _______________________________ Amount of Sponsorship $ ________________

Company _______________________________ _______________________________

Contact _______________________________ Contact’s Title _______________________________

Contact E-mail _______________________________

Address ________________________________

City, State, Postal Code ________________________________

Country ________________________________ Phone ________________________________

Payment  please Invoice Me  check  VISA  MasterCard  American Express  Discover

Card Number ________________________________ Expir Date __________ Authorization# __________

Name as it appears on the Card (Please Print) ________________________________

Cardholder Signature ________________________________
HOTEL RESERVATIONS AND INFORMATION

John Ascuaga’s Nugget Casino Resort ~ 1100 Nugget Avenue ~ Sparks, Nevada ~ 1-800-648-1177

NWMA Group Reservation Code is GNWM – Northwest Mining Association - reserve your room before November 17, 2013

Important Note - We will not be using any outside company or agency to book rooms. In order to make a reservation and receive our discounted price you must choose one of these methods. Be aware, you may be called by other agencies proclaiming to be our service provider. Do not use them. This is a scam and they usually target the exhibitors. The rooms they are offering are not the rooms in either the east or west tower of the main hotel. They do not have access to this room block.

Online: www.nwma.org - Click the Convention button on the home page and find the Hotel Reservation link

Phone: Room Reservations - 1-800-648-1177 - Use code GNWM – Northwest Mining Association to get our group room rate.

You are responsible for making your own reservations. We have a block of rooms held at the following rate:

<table>
<thead>
<tr>
<th></th>
<th>West Tower</th>
<th>East Tower</th>
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<tr>
<td>Single or Double:</td>
<td>$ 96.00</td>
<td>$ 106.00</td>
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</table>

Triple and Quad occupancy rates are $10 per person over quoted rate. Rates apply three (3) days before and three (3) days after - (Friday November 29 - Monday December 9, 2013) To secure these rates, reserve prior to November 17, 2013.

CONTACT INFORMATION

FOR HOSPITALITY EVENTS AT JOHN ASCUAGA’S NUGGET

HOSPITALITY SUITE RESERVATIONS

Amanda Flangas
Executive Vice President of Sales
John Ascuaga’s Nugget
Email: amanda_flangas@janugget.com
Phone: (775) 356-3348

FOOD & BEVERAGE FOR YOUR HOSPITALITY SUITE OR IN YOUR EXHIBIT BOOTH

Jennifer Powers
Director of Convention Operations
John Ascuaga’s Nugget
Email: jennifer_powers@janugget.com
Phone: (775) 356-3361
Registration Information

Everyone Must Register... This includes chairs, speakers, & exhibitors

Registration is required for admittance to all short courses, sessions and exhibits and will be strictly enforced. To receive the advance discounted registration fee your completed registration form must be received by NWMA on or before midnight PST Sunday November 17, 2013. After that date you must register on-site. Technical Session fees will be $50 higher. The on-line link will be disabled and the fax machine turned off. Save time and money - register before midnight PST Sunday November 17, 2013! Payment must be in U.S. Funds, drawn on a U.S. Bank. We accept VISA, MasterCard, American Express, Discover and Government PO’s.

Helpful Hints:
• COMPLETE THE CORRECT FORM - Exhibitors have their own form.
• ONE REGISTRATION PER FORM - Even if you are paying with one check, or one credit card.

3 EASY WAYS TO REGISTER
1. On-line www.nwma.org - Click the On-line Registration button on the home page or convention pages.
2. Fax (509) 623-1241 - Complete your registration form and return it with your payment information.
3. Mail NWMA, 10 N. Post St., Ste. 305, Spokane, WA 99201-0705
   Complete your registration form and return it with your payment information.

• STUDENTS - Technical Session Registration is free to all NWMA student members - Not a member? Join Today Annual Membership Fee $25. NWMA also has travel and lodging assistance available to qualified students. For more information contact Pat Heywood - pheywood@nwma.org.

• SHORT COURSE CHAIRS - Your registration fees for your short course and for the technical sessions are waived provided you register prior to the November 17 cut off. After that date, your registration fee will be $50.

• SHORT COURSE SPEAKERS - Your registration fee for the short course you are speaking is waived provided you register prior to the November 17 cut off. After that date, your registration fee will be $50. Please indicate which short course you are speaking in on the registration form.

• TECHNICAL SESSION CHAIRS & SPEAKERS - Your registration fee for the technical sessions is waived provided you register prior to the November 17 cut off. After that date, your registration fee will be $50. Please indicate which session you are speaking in on the registration form.

• EXHIBITORS - Registration is in addition to reserving your booth space. Please coordinate. You are allowed 2 complimentary Technical Session Passes and 2 complimentary Exhibit Hall Only Passes provided you register prior to the November 17 cut off. After that date, your registration fee will be $50. Spouse and Guest passes do not qualify as Exhibitor Badges. If you exceed this allotment, you will be billed. Exhibitors who receive a complimentary technical session pass as a Short Course Chair, Technical Session Chair or Technical Session Speaker will not count against these allotments.

Cancellations/Substitutions - Your registration fee minus a 20% cancellation charge will be refunded if your written notification is received by NWMA on or before November 17, 2013. After that date, refunds will not be issued. You may send a substitute from your organization.

Packet Pickup & On-Site Registration - NWMA on-site registration and badge pickup will be located on the 2nd floor of John Ascuaga’s Nugget Casino Resort - in the Convention Area. Signs will be posed on the main floor.
Exhibitor Presentation Information & Sign Up Form

Time slots are available to sign up for Exhibitor Presentations. You may reserve a slot (1/2 hour) by completing and returning the form below to Pat Heywood - pheywood@nwma.org. The room will be set theater style and will have a podium, screen and PowerPoint projector. You are responsible for bringing your own laptop. If you require other AV equipment or Internet Access you will have to arrange that with the hotel. You may not mount anything from the walls. Plan ahead and bring an easel and pre-mounted items. We will assign times as forms are returned. If you have a particular day and morning/afternoon in mind, please enter that. We will not reserve times during morning or afternoon breaks, or during the evening receptions.

Please keep in mind, this room is strictly for presentations. It is not a hospitality suite and meals may not be served. Due to the turn around times coffee service will also not be an option.

Yes, please sign our company up to do an Exhibitor Presentation

Our preferred time would be (please list 1st and 2nd choice)

Wednesday AM _____ PM _____  Thursday AM _____ PM _____  Friday _____

Exhibiting Company: ___________________________________________  Booth # _____

Presenter Name ________________________________________________

Title: __________________________________________________________

Address: _______________________________________________________

City: ________________________  State/Province: ______________________

Postal Code ________________________  Country: ______________________

Phone ________________________  Email: __________________________

Information about your presentation:

Presentation Title ____________________________________________

Description:

________________________________________________________________

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NWMA’s 2013 Advanced Discount Registration Form

Name: ____________________________ Preferred first name for badge
Title: ____________________________
Organization: _______________________
Address: __________________________
City: ____________________________ State/Province: _______________________
Postal Code: _______________________
Country: __________________________
Phone: ____________________________
Email: ____________________________

Spouse Name (complete & check box below for complimentary exhibit hall badge):

Annual Membership Dues - you must join, renew or have a current membership to get discount rates

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<thead>
<tr>
<th>Membership Type</th>
<th>New</th>
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<tr>
<td>Individual Active</td>
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</tr>
<tr>
<td>Retired Senior (65 and over &amp; not working)</td>
<td>$25</td>
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<tr>
<td>Full-time University Student (ID required)</td>
<td>$25</td>
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Membership Fee ____________

Short Course Registration - (some student discounts available on short courses - contact NWMA)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Minimizing Permitting Pitfalls &amp; Delays on Federal Lands (2-day course)</td>
<td>$225</td>
</tr>
<tr>
<td>Using the Standardized Cost Estimator (SRCE) Effectively (2-day course)</td>
<td>$450</td>
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<tr>
<td>Integrated Exploration Workflows with Esri &amp; Geosoft ArcGIS Software (2-day course)</td>
<td>$450</td>
</tr>
<tr>
<td>Applied Structural &amp; Alteration Geology</td>
<td>$450</td>
</tr>
<tr>
<td>Heap Leaching Technology (1-day course)</td>
<td>$275</td>
</tr>
<tr>
<td>Principles of Mineral &amp; Metallurgical Processing (1-day course)</td>
<td>$275</td>
</tr>
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<td>Geophysics for Geologists (1-day course)</td>
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<tr>
<td>Shotcrete Underground Support (1-day course)</td>
<td>$275</td>
</tr>
<tr>
<td>Portable XRF - Principles &amp; Radiation Safety &amp; Case Studies (1-day course)</td>
<td>$275</td>
</tr>
<tr>
<td>Engineering Procurement &amp; Considerations for Underground Mine Maintenance Facility</td>
<td>$275</td>
</tr>
<tr>
<td>Grass Valley Historic Mining District Tour (1-day bus tour)</td>
<td>$150</td>
</tr>
</tbody>
</table>

Short Course Fee ____________

FULL REGISTRATION (includes technical sessions, exhibit hall & social functions)

<table>
<thead>
<tr>
<th>Membership Type</th>
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<th>Non-Member</th>
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<tbody>
<tr>
<td>Full Registration</td>
<td>$300</td>
<td>$535</td>
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<tr>
<td>Retired Senior (65 and over &amp; not working)</td>
<td>$200</td>
<td>$360</td>
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<tr>
<td>I am a Session or Short Course Chair</td>
<td>No Fee</td>
<td>No Fee</td>
</tr>
<tr>
<td>I am a Technical Session Speaker</td>
<td>No Fee</td>
<td>No Fee</td>
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* enter session name:

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<th>Membership Type</th>
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<tbody>
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<td>Full Time University Student (ID required)</td>
<td>No Fee</td>
<td>$85</td>
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<td>Press Pass (1 per media group)</td>
<td>No Fee</td>
<td>No Fee</td>
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Tech Session Reg Fee ____________

EXHIBIT HALL ONLY REGISTRATION (includes exhibit hall & social functions)

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<th>Membership Type</th>
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<tr>
<td>Exhibit Hall Pass (member/non-member same price)</td>
<td>$75</td>
<td>$75</td>
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<tr>
<td>Complimentary Spouse Exhibit Hall Pass (spouse will have separate packet)</td>
<td>No Fee</td>
<td>No Fee</td>
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Expo Only Fee ____________

Meal and Drink Tickets

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<th>Quantity</th>
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<tbody>
<tr>
<td>Welcoming Luncheon (Keynote speaker – Perry Pendley, MSLF)</td>
<td>@ $45 ea</td>
<td>=</td>
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<tr>
<td>Exhibit Hall Sandwich Lunch (walk around lunch)</td>
<td>@ $15 ea</td>
<td>=</td>
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</table>

<table>
<thead>
<tr>
<th>Meals</th>
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</thead>
<tbody>
<tr>
<td>Industry Outlook Luncheon (featured speaker luncheon)</td>
<td>@ $45 ea</td>
<td>=</td>
</tr>
<tr>
<td>Exhibit Hall Sandwich Lunch (walk around lunch)</td>
<td>@ $15 ea</td>
<td>=</td>
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</table>

<table>
<thead>
<tr>
<th>Meals</th>
<th>Quantity</th>
<th>$</th>
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</thead>
<tbody>
<tr>
<td>Drink Tickets (Redeemable at NWMA Exhibit Hall Bars)</td>
<td>@ $ 6 ea</td>
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<table>
<thead>
<tr>
<th>Meals</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Meal &amp; Drink Tickets</td>
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<td>Meal &amp; Drink Tickets</td>
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TOTAL AMOUNT DUE AND FORM OF PAYMENT

Method of Payment: ☐ Check ☐ Visa ☐ MasterCard ☐ American Express ☐ Discover
☐ PO (Government Agency)

Credit Card Number ____________________________
Exp Date ____________________________

Name as it Appears on Card ____________________________
Cardholder Signature ____________________________
Cardholder Email ____________________________

Total Amount Due ____________________________

 nwma deposit info only

Return to NWMA by Fax: (509) 623-1241, or mail to NWMA, 10 N. Post St., Ste 305, Spokane, WA 99201-0705, USA.

To quality for Advance Registration Pricing, your completed form must be received by NWMA no later than Sunday November 17, 2013.

NWMA’s 2013 Advanced Discount Registration Form
Exhibiting Company: 

Name (as you want it to appear on the badge) 

Title: 

Company (if different from above): 

Address: 

City: State/Province: Postal Code: 

Country: 

Phone: Email: 

Spouse Name (complete & check box below for complimentary exhibit hall badge - MAY NOT BE USED FOR EXHIBITOR): 

Annual Membership Dues - you must join, renew or have a current membership to get discount rates 

<table>
<thead>
<tr>
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<th>New</th>
<th>Renew</th>
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<tr>
<td>Individual Active</td>
<td>$105</td>
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<tr>
<td>Retired Senior (65 and over &amp; not working)</td>
<td>$25</td>
<td></td>
<td></td>
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<tr>
<td>Full-time University Student (ID required)</td>
<td>$25</td>
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Short Course Registration - (some student discounts available on short courses - contact NWMA) 

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Minimizing Permitting Pitfalls &amp; Delays on Federal Lands (2-day course)</td>
<td>$225</td>
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<tr>
<td>Using the Standardized Cost Estimator (SRCE) Effectively (2-day course)</td>
<td>$450</td>
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<tr>
<td>Integrated Exploration Workflows with Esri &amp; Geosoft ArcGIS Software (2-day course)</td>
<td>$450</td>
</tr>
<tr>
<td>Applied Structural &amp; Alteration Geology</td>
<td>$450</td>
</tr>
<tr>
<td>Heap Leaching Technology (1-day course)</td>
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</tr>
<tr>
<td>Grass Valley Historic Mining District Tour (1-day bus tour)</td>
<td>$150</td>
</tr>
<tr>
<td>I am a Short Course Chair/Speaker (check course box above)</td>
<td>No Fee</td>
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EXHIBITOR FULL REGISTRATION (includes technical sessions, exhibit hall & social functions) - Exhibiting companies are allotted 2 free passes per booth space 

Choose one...

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<th>Tech Session Reg Fee</th>
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<td>No Fee</td>
<td>No Fee</td>
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</tr>
<tr>
<td>Additional Paid Registration (use if allotment is full)</td>
<td>$300</td>
<td>$355</td>
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<tr>
<td>I am an Exhibitor &amp; Session or Short Course Chair (does not count against allotment)</td>
<td>No Fee</td>
<td>No Fee</td>
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<tr>
<td>I am an Exhibitor &amp; Technical Session Speaker * (does not count against allotment)</td>
<td>No Fee</td>
<td>No Fee</td>
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EXHIBIT HALL ONLY REGISTRATION (includes exhibit hall & social functions) Exhibiting companies are allotted 2 free passes per booth space 

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<td>No Fee</td>
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</tr>
<tr>
<td>Additional Paid Exhibit Hall Pass (use if allotment is full)</td>
<td>$75</td>
<td>$75</td>
<td></td>
</tr>
<tr>
<td>Complimentary Spouse Exhibit Hall Pass* (spouse will have separate packet)</td>
<td>No Fee</td>
<td>No Fee</td>
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* MAY NOT BE USED FOR EXHIBIT HALL PASS

Meal and Drink Tickets

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<td>Special food requirements</td>
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<td></td>
<td>$15 ea =</td>
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Wednesday

Welcome Luncheon (Keynote speaker ~ Perry Pendley, MSLF) @ $45 ea =

Exhibit Hall Sandwich Lunch (walk around lunch) @ $15 ea =

Thursday

Industry Outlook Luncheon (featured speaker luncheon) @ $45 ea =

Exhibit Hall Sandwich Lunch (walk around lunch) @ $15 ea =

Drink Tickets (Redeemable at NWMA Exhibit Hall Bars) @ $6 ea = Meal & Drink Tickets

TOTAL AMOUNT DUE AND FORM OF PAYMENT

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<th>American Express</th>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Method of Payment:

PO (Government Agency) 

Credit Card Number 

Exp Date 

Authoriz # 

Name as it appears on Card 

Cardholder Signature 

Cardholder Email 

Total Amount Due $
## 2013 Exhibitors by Company

### A

- **AATA International**, Environmental Consultants, 313
- **Acker Drilling**, Drilling Equipment, Drilling Rigs, 433
- **ACZ Laboratories, Inc.**, Analytical Laboratory Services, 319
- **AECOM**, Environmental Services, 404
- **Aero-Metric, Inc.**, Aerial Photography/ LiDAR, Satellite Imagery, 642
- **Agate Inc.**, General Contractor-Mine Operations, 312
- **Agru America, Inc.**, Geosynthetics, Liners, 203
- **AIL Mining**, Mining Construction, 752
- **AirFlow Catalyst Systems, Inc.**, Diesel Emissions Control, 754
- **Alaska Marine Lines, Inc.**, Transportation Services, 733
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- **American Analytical Services, Inc.**, Assay Laboratory, 536
- **American Assay Laboratory**, Assay Laboratory, Mineralogy Analyst, 730
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- **American Drilling Corp., LLC**, Diamond Core Drilling, 664 & 666
- **American Mining & Tunneling, LLC**, Mine Development, Contract Mining, 413 & 415
- **American Mining Insurance Company**, Insurance, 675
- **Anachemia Mining LLC**, Laboratory Equipment & Supplies, Laboratory Chemicals, 775
- **Anvil International**, Plastic Connections, 649
- **Applied Soil Water Technologies LLC**, Engineering Consulting & Design, Geomembrane Leak Location, 528
- **ARANZ Geo Limited (Leapfrog Mining)**, Mining Software, 755
- **ARCADIS**, Environmental Services, Engineering Services, 437
- **ASPEX Corporation**, Scanning Electron Microscopes, 730
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- **ASTERimages, Inc.**, Terra Aster Imagery & Alteration Maps, 124
- **Atkinson Construction**, Underground Contractor, 228
- **Atlas Copco CMT USA LLC**, Mining Equipment, Rock Support, 219
- **Atlas Inspection Technologies**, Visual Equipment/Services, 866
- **Ausenco PSI**, Slurry Transportation, 659

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- **Baroid Industrial Drilling Products**, Drilling Fluid Products, 726
- **Becker Mining America**, Designer, Manufacturer & Commissioner of Electrical Systems, 772
- **Behre Dolbear & Co (USA), Inc.**, Mining & Minerals Industry Consulting, 210 B
- **Black Rock Drilling**, Drilling Company, 512
- **Boart Longyear**, Drilling Services, Drilling Company, 708 & 710
- **Bruker Elemental**, XRF Analyzer, Laboratory Equipment & Supplies, 846
- **BV Group**, Assay Laboratory, 111 & 113

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- **CAE Datamine USA**, Mine Planning Software, 659
- **Cascade Drilling, L.P.**, Drilling Contractor, 867
- **Cascade Earth Sciences**, Engineering & Environmental Consulting, 214
- **Cd’A Metals (The Coeur d’Alenes Company)**, Metals Products & Processing, Wear Plate, 877
- **Center for Advanced Metallurgical Processing**, Metallurgical Consulting, 327
- **CETCO**, Geosynthetics, 658
- **CGS Mule, LLC**, Geological Supplies, 414
- **CH Spencer**, Pumps & Valves, 973
- **Challenger Pipe & Steel**, Steel Pipe & Casing, Grooved Piping Products, 328
- **Clean Harbors**, Environmental Services, 972
- **ClearSpan Fabric Structures**, Tension Fabric Structures, 873
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- **Colorado Mining Association**, Mining Industry Association, 315
- **COMANCO**, Geosynthetics, 403
- **Conner & Associates**, Legal Services, 766
- **Connors Drilling LLC**, Drilling Contractor, 830 & 832
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- **Crystals Unlimited**, Gems & Minerals, Jewelry, 739 & 741
- **Cummins NW LLC**, Diesel Engines, Diesel Parts and Service, 842

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- **Dassault Systemes GEOVIA**, Mining Software, Mine Modeling Software, 323
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- **Davies Public Affairs**, Public Affairs, Public Relations, Grassroots, 869
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- **Diaset Products**, Drill Bits, 852
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- **Drift Exploration Drilling, Inc.**, Drilling Company, 725
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- **Energy Laboratories, Inc.**, Environmental Laboratory Services, 329
- **Engineering Analytics, Inc.**, Engineering Consultants, 317
- **Environco, Inc.**, Environmental and Reclamation Services, 731
- **Environmental Products & Applications, Inc.**, Dust Control-Roads and Erosion, 309
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Enviroscientists, Inc., Environmental Consulting & Permitting, 712
EnviroTech Services, Dust & Erosion Control, 534
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Florin Analytical Services, Analytical Laboratory Services, Laboratory Services, 208
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Gradient Geophysics Inc., Geophysical Exploration, 734
Granite Construction, Mining Services, 974
GSE Lining Technology, Inc., Liners, 402
Gustavson Associates LLC, Mining & Mineral Processing Consultants, Engineering Consultants, 129

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Zonge International, Inc., Geophysical Services, Geophysical Instrumentation, 722

CORE SHACK

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Kinetic Gold (US) Inc., Junior Exploration Company, C 7
Midas Gold Inc., Junior Exploration Company, C 9
Midway Gold Corp., Junior Exploration Company, C 15
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Premier Gold Mines, Junior Exploration Company, C 12
Rare Element Resources, Inc., Junior Exploration Company, C 5
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Western Environmental Testing Laboratory, Environmental Laboratory Services, 640
Western Shelter Systems, Shelters & Support Equipment, 759
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<table>
<thead>
<tr>
<th>Category</th>
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