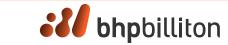


# **REGISTRATION IS NOW OPEN!**

www.seg2014.org/registration.html

### **PATRON**





### **PREMIER**







### **GOLD**







### **SILVER**













lundin mining



### **BRONZE**







Dawn Zhou





The Mather Fund



newgold

# **SEG 2014 Conference Registration Fees**

Early Registration (opens April 1)	Late Registration	On-site Registration
(Ends August 1, 2014)	(August 2 – September 17, 2014)	(On or after September 26, 2014)
MembersUS\$625	MembersUS\$725	MembersUS\$825
Non-members US\$725	Non-members US\$825	Non-members US\$925
Student MembersUS\$195	Student MembersUS\$245	Student Members US\$295
Student Non-membersUS\$245	Student Non-membersUS\$295	Student Non-members US\$345

# PRELIMINARY TECHNICAL PROGRAM

## **INVITED KEYNOTES**

# Theme 1. Fundamental Advances in Economic Geology

- Massimo Chiaradia\*; coauthors U. Schaltegger and R. Spikings, Timescales of mineral systems – What have we learned in the past decade?
- Robert Hazen\*; coauthors X. Liu, R.T. Downs, J. Golden, E.S. Grew, G. Hystad, C. Estrada, and D.A. Sverjensky, Mineral evolution: Episodic metallogenesis, the supercontinent cycle, and the co-evolving geosphere and biosphere
- Clinton Scott\*; coauthors J.F. Slack and K.D. Kelley, The role of geobiology on the metallogenesis of sediment-hosted mineral deposits
- Philipp Weis\*; The physical hydrology of ore-forming magmatic-hydrothermal systems

## Theme 2. Deposit Footprints

- Ravi Anand\*; coauthors M. Lintern, R. Noble,
   M. Aspandiar, C. MacFarlane, R. Hough, A. Stewart,
   S. Wakelin, B. Townley, and N. Reid, Geochemical dispersion through transported cover in regolith-dominated terrains –
   Towards understanding the process
- David Cooke\*; coauthors M. Baker, P. Hollings, G. Sweet, Z. Chang, L. Danyushevsky, S. Gilbert, T. Zhou, N. White, J.B. Gemmell, and S. Inglis, New advances in detecting the distal geochemical footprints of porphyry systems – Epidote mineral chemistry as a tool for vectoring and fertility assessments.
- Anthony Williams-Jones\*; coauthor A.A. Migdisov, Experimental constraints on the transport and deposition of metals in ore-forming hydrothermal systems
- Ken Witherly\*; Geophysical expressions of ore systems, not deposits – Our current understanding [Also presenting a post-conference workshop. See p. 4 for details]

# Theme 3. Mineral System Science

- Hartwig Frimmel\*; A Giant Mesoarchean crustal goldenrichment episode: Possible causes and consequences for exploration
- T. Campbell McCuaig\*; coauthor J.M.A. Hronsky, The mineral system concept: Key to exploration targeting under cover
- John Miller; coauthors T.C. McCuaig and M. Jessell, West Africa – Integrated mapping of a mineral system at subcontinental scale
- John Muntean; coauthor J. Cline, The Carlin gold system: Applications to exploration in Nevada and elsewhere

# Theme 4. Innovations in Exploration Technology

- Paul Agnew, Micro-analytical innovation for diamonds exploration and beyond
- Doug Bryman\*; coauthors J. Bueno, K. Davis, V. Kaminski, Z. Liu, D. Oldenburg, M. Pilkington, and R. Sawyer, Muon Geotomography – Bringing new physics to ore-body imaging
- Richard Hillis\*; coauthors A. Baensch, J.S. Cleverley, D. Giles, S.W. Halley, B.D. Harris, S.M. Hill, P.A. Kanck, S.P. Soe, and G. Stewart, Coiled tubing drilling and real-time sensing Enabling "prospecting drilling" in the 21st Century? [Also presenting a pre-conference workshop. See p. 3 for details]
- Mark Jessell\*; coauthors L. Aillères, E. de Kemp, M. Lindsay, F. Wellmann, M. Hillier, G. Laurent, T. Carmichael, R. Martin, Next generation 3D geological modelling and inversion

## Theme 5. Exploration Management and Targeting

- Randall Oliphant, Executive Chairman, New Gold; What does the global exploration industry need to deliver in the 21st Century? – A shareholder's perspective
- Richard Schodde; The global shift to undercover exploration How fast? How effective?
- John Sykes\*; coauthor A. Trench, Finding the copper mine of the 21st Century: Conceptual exploration targeting for hypothetical copper reserves
- Kaihui Yang; Mineral exploration industry in China

# Theme 6. Case Studies of 21st Century Exploration Success

- Graham Brown\*; Anglo American Exploration –
   Key ingredients to a decade of success
- David Broughton; coauthors D. Kirwin, W. Hayden, and R.E. Flood, The Ivanhoe Group – Two decades of global discoveries
- Mark Bennett\*; coauthors M. Gollan, M. Staubmann, and J. Bartlett, Motive, means, and opportunity: Key factors in the discovery of the Nova-Bollinger magmatic Ni-Cu sulfide deposits of Western Australia

**Student Mentoring Forum** Saturday, September 27, 2014

**SEG Awards Presentations** 

Monday, September 29, 2014 (Included in technical program)

## **SEG Industry Outlook Dinner**

Monday, September 29, 2014

Dinner Guest Speaker: **Robert M. Friedland**, Executive Chairman and Founder, Ivanhoe Mines Ltd. **Talk Title** — "Urbanization and industrialization: strategies for some of this century's greatest human challenges presents opportunities for new exploration thinking and discoveries in Africa's mineral fields."

\*Invited talks to be published as part of SEG Special Publication No. 18 (available at a discounted price when you register).

# WORKSHOPS

The number of places available is limited for the following events. Preference will be given to SEG 2014 Conference registrants.

### ADVANCED GIS TECHNIQUES -MAXIMIZING YOUR DATA

September 27, 2014 Pre-Conference Workshop

(Keystone Conference Center, Keystone, Colorado, USA)

### Organizer:

■ Willy Lynch (SEG 1993), Esri

### Presenters:

- Willy Lynch (SEG 1993), Esri
- Mike Price, President, Natural Resources
   & Public Safety GIS Specialist

### **Description:**

This one-day workshop will focus on intermediate to advanced GIS workflow solutions for mining and exploration. Specific topics will include data management, data analysis (2D & 3D), mobile GIS and online GIS.

The morning will concentrate on best practices for effective data management, visualization and analysis of geology, geochemistry, geophysical and drill data in 2D & 3D. Out-of-the-box solutions from Esri and a brief summary of key business partner solutions will be reviewed and demonstrated. The afternoon will review mobile GIS options (Esri ArcPad & ArcGIS for windows mobile, smart phones and tablets) and an introduction to online GIS.

Attendees are encouraged to bring their own hardware (laptops, tablets, smart phones) and GIS software/licenses (ArcGIS for Desktop with 3D analyst extension, ArcPad, ArcGIS for Windows Mobile, ArcGIS & Collector for smart phones and tablets) and can actively participate or just observe.

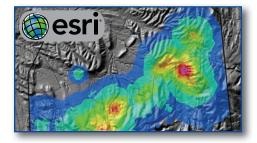
### Attendee Maximum: 30

### **Early Registration:**

Members (US\$395), Non-members (US\$495), Student Members (US\$195), Student Non-members (US\$245)

### Late Registration:

Members (US\$495), Non-members (US\$595), Student Members (US\$245), Student Non-members (US\$295)



### APPLICATION OF MULTI-ELEMENT GEOCHEMICAL DATA: EXPLORING DATASETS FOR BETTER TARGETING AND DOMAINING

September 27, 2014 Pre-Conference Workshop

(Keystone Conference Center, Keystone, Colorado, USA)

### **Organizer:**

Lynda Bloom, President, Analytical Solutions Ltd.

### **Presenters:**

- Lynda Bloom, President, Analytical Solutions Ltd.
- Pim van Geffen, Senior Geochemist, Imdex Limited
- Gervais Perron, Director of Software, Mira Geoscience
- Peter Winterburn, ACME Industrial Research Chair in Exploration Geochemistry, UBC
- Chris Benn, Benn Consulting
- Juan Carlos Ordóñez, Exploration Geochemist, Hudbay Minerals
- Réjean Girard, Géologist and President, IOS Geoscientific Services

### **Description:**

As we seek deeper buried ore deposits, any surface techniques are subject to the "truth test"—a drill hole. Drilling is costly and deep targets are easy to miss or expensive to evaluate. Maximizing the use of all available data is essential to optimizing drill hole placement and stretching budgets.

Since the 1990s, there has been an explosion of commercially available analytical options and geochemical packages for 40 to 60 elements. This provides an opportunity to use relatively inexpensive geochemical data to improve rock classification, vector to mineralization, or identify metallurgical domains.

The caveat is that geochemical data need to be well managed and data quality needs to be "fit for purpose." The course will emphasize case histories that demonstrate visualization techniques for multi-element data and the importance of understanding the risks associated with using inappropriate data or statistical methods.

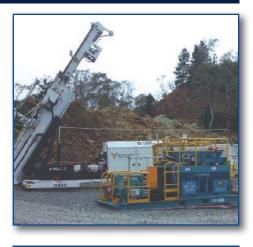
### Attendee Maximum: 40

### **Early Registration:**

Members (US\$395), Non-members (US\$495), Student Members (US\$195), Student Non-members (US\$245)

### Late Registration:

Members (US\$495), Non-members (US\$595), Student Members (US\$245), Student Non-members (US\$295)



# FUTURE OF MINERAL EXPLORATION DRILLING & SAMPLING

September 27, 2014 Pre-Conference Workshop

(Keystone Conference Center, Keystone, Colorado, USA)

#### **Presenters:**

- James S. Cleverley (SEG 2002), Principal Geochemist at CSIRO & Deep Exploration Technologies CRC, Perth, W. Australia
- Richard Hillis, CEO, Deep Exploration Technologies CRC, Perth, W. Australia

### **Description:**

This one-day workshop will provide exploration geologists and researchers with a background to the current challenges of undercover exploration and the new drilling and sampling technology being developed in the Deep Exploration Technologies Cooperative Research Centre (DET CRC) that will drive change in our exploration industry in the next 10 years. The workshop will provide a state-of-the-art synopsis of drilling for non-drillers followed by an exploration of three developing technology pillars: the drill rig, real-time downhole sensing and real-time top-of-hole sensing. The workshop will provide a mix of presentations, practical demonstrations and discussions led by geologists, engineers, geochemists and application specialists. We aim to demonstrate how geologists will be applying these new technologies in the future and how technology will be providing support to exploration targeting and decision making.

The DET CRC is an 8-year, \$115M, Australian research cooperative with partnerships between the mining industry, MET sector and research providers to develop new technology in minerals exploration drilling. The core purpose of the DET CRC is to develop transformational technologies

# WORKSHOPS

for successful mineral exploration through deep, barren cover rocks to be utilized and commercialized by the mineral exploration industry.

Attendee Maximum: 40

### **Early Registration:**

Members (US\$395), Non-members (US\$495), Student Members (US\$195), Student Non-members (US\$245)

### Late Registration:

Members (US\$495), Non-members (US\$595), Student Members (US\$245), Student Non-members (US\$295)

### EXPLORATION IN 2025: THE TOOLS AND TECHNIQUES TO EXPLORE UNDER COVER

October 1–2, 2014 Post-Conference Workshop

(Colorado School of Mines, Golden, Colorado, USA\*)

### **Organizer:**

 Ken E. Witherly (SEG 2008), Condor Consulting, Inc.

### Presenters:

- Neil Williams (SEG 1982 FL), Hon. Professorial Fellow, Univ. of Wollongong
- John R. Holliday (SEG 2004), Holliday Geoscience
- Thomas Bissig (SEG 2002 F), MDRU, University of British Columbia
- Jon A. Woodhead (SEG 2012), Condor Consulting, Inc.
- Peter L. Kowalczyk (SEG 2011), Geoscience BC
- Dianne E. Mitchinson, Mira Geoscience
- James S. Cleverley (SEG 2002), Principal Geochemist at CSIRO

## **Student Coordinator:**

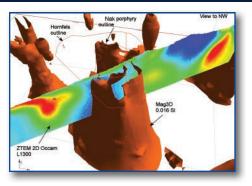
Douglas T. (Ty) Conner (SEG 2013), Colorado School of Mines

### **Description:**

Exploration continues to face challenges related to identifying and defining targets beneath cover. New strategies and tactics related to area selection, technology selection, target definition, and data collection, management, and interpretation are required to improve probability of success and help our industry meet future demands for metals.

The two-day workshop will focus on the challenges and approaches to exploring under cover on day one and then work on a practical exercise using data from the

\*Shuttle from Keystone, Colorado, to Golden,



Quesnel Trough on day two. The workshop is designed to improve target selection and prioritization skills of exploration geoscientists and managers responsible for exploring through cover.

Attendee Maximum: 36

### **Early Registration:**

Members (US\$595), Non-members (US\$695), Student Members (US\$295), Student Non-members (US\$345)

### Late Registration:

Members (US\$695), Non-members (US\$795), Student Members (US\$345), Student Non-members (US\$395)

### GETTING MORE FROM DRILL CORE – AUTOMATED, SPECTRAL-BASED MINERAL AND TEXTURE MAPPING

October 1–2, 2014 Post-Conference Workshop

(Keystone Conference Center, Keystone, Colorado, USA)

### **Organizer:**

 Brigette A. Martini (SEG 2014), VP Business Development, Corescan Pty Ltd, USA

#### **Presenters:**

- Brigette A. Martini (SEG 2014), VP Business Development, Corescan Pty Ltd, USA
- Ronell Carey (SEG 1993), Spectral Geologist with Corescan Pty Ltd, Australia
- Pending representatives from Leapfrog, aQuire, and exploration companies

### **Description:**

The logging of drill core, chips and other geological samples is one of the most important aspects of mineral exploration and development. No single expenditure costs more (in both money and time) than drilling and no single piece of data is more important than fundamental rock data (mineralogy and texture). As such, advances in the accuracy, automation and consistency of logging (both mineralogical and textural) of drilled rock material are of prime

concern in today's mining industry. This workshop focuses on the newest, high resolution spectroscopic methods for obtaining consistent, accurate and objective mineralogy, geochemistry and texture of both drill core and chips. We'll discuss the current methodologies (including popular, portable, point-measurement systems) and their historical and existing application and then move on to discussion and demonstration of the newest generation of automated core imaging systems (combining reflectance spectroscopy, visual imagery and 3D laser profiling) as applied to contemporary exploration programs. Numerous deposit types and specific ore systems on several continents will be showcased. We'll delve deeply into the acquisition (preparation, scanning, analysis) and ultimate application, synthesis and cloud-based storage of these data including hands-on manipulation of real core imagery data via easy-to-use online software and database portals. Further modeling and synthesis of spectrally derived, quantitative mineral data will be demonstrated in familiar statistical and modeling software (e.g., Leapfrog, aQuire). While general datasets will be provided, all registered participants are encouraged to provide personal and/or company core samples at least two months prior to the class for scanning and analysis (included in class cost), thereby rendering class instruction and demonstrations more highly applicable to the attendees' current exploration programs.

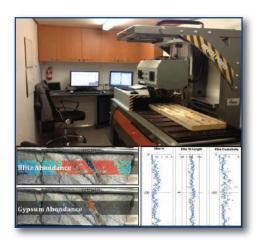
Attendee Maximum: 40

### **Early Registration:**

Members (US\$595), Non-members (US\$695), Student Members (US\$295), Student Non-members (US\$345)

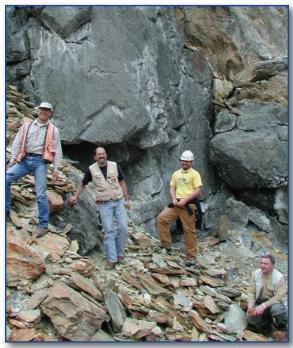
### Late Registration:

Members (US\$695), Non-members (US\$795), Student Members (US\$345), Student Non-members (US\$395)



# FIELD TRIPS

The number of places available is limited for the following events. Preference will be given to SEG 2014 Conference registrants.



Southwest USA

systems and their relationships to porphyry ores will be discussed at several ore deposits, allowing participants to compare and contrast porphyry and skarn geochemical features. Visits to key outcrops will reinforce discussions dealing with the importance of regional and local geologic settings for southwestern U.S. hydrothermal systems.

In-the-field and evening presentations will complement field observations and include discussions of the applications of activity and Eh-pH diagrams to exploration, mining, and geometallurgical considerations. As such, this course is designed for exploration and mining professionals who are involved with exploration and ore targeting; this course is also appropriate for graduate students and upper-division undergraduate students with interest in economic geology and the application of geochemistry to minerals exploration.

This course will be given in English and Spanish.

Attendee Maximum: 20

### Early Registration:

Members (US\$1,295), Non-members (US\$1,395), Student Members (US\$645), Student Non-members (US\$695)

### Late Registration:

Members (US\$1,395), Non-members (US\$1,495), Student Members (US\$695), Student Non-members (US\$745)

NON-FERROUS MINERALIZATION
ASSOCIATED WITH THE
WAWA-ABITIBI TERRANE AND
DULUTH COMPLEX Cu-Ni-PGM
DEPOSITS, NORTHEASTERN
MINNESOTA

September 22–25, 2014 Pre-Conference Field Trip

(Field Trip departs from and returns to Duluth International Airport, MN, USA)

### Field Trip Leaders:

- George Hudak (SEG 2011 F), Director, Minerals Division, NRRI, University of Minnesota, Duluth, MN, USA
- Dean Peterson, Senior Vice President

   Exploration, Duluth Metals Limited,
   Duluth, MN, USA

#### **Description:**

After more than 100 years of iron mining, Minnesota is on the cusp of developing a new, non-ferrous mining industry. The world-class Duluth Complex mineral district ranks second in contained copper, third in contained nickel, and second in contained PGM (i.e., platinum, palladium, and gold) worldwide. Successful resource development has the potential to result in an entirely non-ferrous mining district that may be similar in scale to the region's existing taconite mining and processing industry. Additionally, recent studies indicate that Minnesota's Wawa-Abitibi Terrane may hold considerable potential for hosting additional non-ferrous and/or precious metals resources, including copper, zinc, and gold.

Attendee Maximum: 22

### **Early Registration:**

Members (US\$895), Non-members (US\$995), Student Members (US\$445), Student Non-members (US\$495)

### Late Registration:

Members (US\$995), Non-members (US\$1,095), Student Members (US\$495), Student Non-members (US\$545)

# PORPHYRY AND SKARN SYSTEMS OF THE SOUTHWEST U.S.

September 21–26, 2014
Pre-Gentinent Laboratoria Trip
Dep Savorn Las Vegas, Nevada, USA
and ends in Tucson, Arizona, USA)

### Field Trip Leaders:

- William X. Chávez, Jr. (SEG 1990 F), Professor of Geological Engineering, New Mexico Institute of Mining and Technology, USA
- Erich U. Petersen (SEG 1986 F), Professor, University of Utah, USA

### **Description:**

Beginning in Phoenix, Arizona, this fieldbased course will examine the geologic settings and geochemical characteristics of large hydrothermal systems, with emphasis on porphyry, porphyry-related breccia "pipes," and skarn-style ore deposits. Starting in northwest Arizona, participants will visit porphyry systems showing welldeveloped supergene profiles and deeper, K-silicate assemblages characteristic of well-developed hydrothermal alterationmineralization. Exposures in the Globe-Miami District and those near San Manuél, Arizona, offer the opportunity to examine early alteration-related veining styles and vein paragenesis assemblages. Skarn-type



Anorthosite, MN

# FIELD TRIPS

### **COLORADO PORPHYRY-MOLYBDENUM DEPOSITS AND LEADVILLE DISTRICT**

September 25-27, 2014 **Pre-Conference Field Trip** 

(Field Trip departs from and returns to Keystone Resort, Keystone, Colorado, USA\*)



### **Field Trip Leaders:**

- Ralph J. Stegen (SEG 1986), VP Exploration, Freeport-McMoRan, USA
- Tommy B. Thompson (SEG 1976 SF), Professor of Economic Geology, University of Nevada, Reno, UŚA

### **Field Trip Description:**

From Keystone, Colorado, USA, visit the world-class porphyry Mo deposits at Climax and Henderson

(Freeport-McMoRan Copper & Gold) and the carbonate-hosted Ag-Zn-Pb manto deposits at Leadville. These deposits have been the focus of leading research in porphyry Mo deposits and development of exploration methods. The Leadville district is noted for its long history of production, research on carbonate-hosted Ag-Zn-Pb-(Au) deposits, and the founding of the Guggenheim mining fortune, including the formation of ASARCO, Inc. The trip will include tours of the Climax and Henderson mines, with updates in geology of both, as well as numerous stops in the Leadville district.

### Attendee Maximum: 28

### **Early Registration:**

Members (US\$595), Non-members (US\$695), Student Members (US\$245), Student Non-members (US\$295)

### Late Registration:

Members (US\$695), Non-members (US\$795), Student Members (US\$295), Student Non-members (US\$345)

\*Two overnight stays in Keystone will be attendee's

### **CRIPPLE CREEK &** VICTOR GOLD MINE

September 26, 2014 Pre-Conference Field Trip

(Departs from and returns to Keystone, Colorado, USA)

### **Field Trip Leaders:**

- Timothy R. Brown (SEG 2000), Exploration Manager, Cripple Creek & Victor Gold Mining Co., Colorado, USA
- Sergei A. Diakov (SEG 1993 F), Consultant, California, USA



Cripple Creek

### **Description:**

From Keystone, visit the world's premier alkaline epithermal gold mine at Cripple Creek (Cripple Creek & Victor Mining Co.). The Cripple Creek diatreme complex has produced over 24 Moz gold, continues to produce approx. 250,000 oz Au per annum, and is not only a world-class gold district, but one of the defining examples of alkaline epithermal gold deposits. Field trip leaves from Keystone Resort at 7 am on September 26, returning the same evening. Registration does not include lodging.

### Attendee Maximum: 50

### **Early Registration:**

Members (US\$195) Non-members (US\$245), Student Members (US\$95), Student Non-members (US\$115)

### Late Registration:

Members (US\$245), Non-members (US\$295), Student Members (US\$115), Student Non-members (US\$145)

### THE VIBURNUM TREND: A WORLD-CLASS Pb-Zn-Cu MVT **DISTRICT IN SE MISSOURI, USA**

October 1-3, 2014 **SEG 2014 Post-Conference Field Trip** 

> (Field Trip departs from and returns to St. Louis Airport, Missouri, USA\*)

### Field Trip Leaders:

- Thomas G. Schott (SEG 1999 F), Senior Exploration Geologist, The Doe Run Company, Missouri, USA
- Anna A. Kutkiewicz (SEG 2013), The Doe Run Company, Missouri, USA
- Harrison J. Ingham (SEG 2013), The Doe Run Company, Missouri, USA
- Kyle Williams, The Doe Run Company, Missouri, USA

### **Description:**

From Salem, Missouri, visit the world-class Viburnum Trend, which has been in production for more than 50 years and generates approximately 250,000 tons of lead concentrate per annum. The trip will include tours of the Casteel and RC West Fork mine and mill complexes with updates on geology. The trip will continue with a stop at the Buick Resource Recycling Division (BRRD), one of the world's largest single-site lead recycling facilities. BRRD processes more than 13.5 million lead-acid batteries per year along with various other lead scrap. The trip will conclude with tours of the Doe Run core logging facility and rotary and diamond drill rigs operating in the Viburnum Trend. Overnight stays in Salem, Missouri, are included.

### Attendee Maximum: 16

### **Early Registration:**

Members (US\$695), Non-members (US\$795), Student Members (US\$345), Student Non-members (US\$395)

### Late Registration:

Members (US\$795), Non-members (US\$895), Student Members (US\$395), Student Non-members (US\$445)



Bornite, Casteel Mine

\*Where applicable, transportation from Keystone, Colorado, USA, to St. Louis, Missouri, USA, to be arranged by participants. However, airport shuttle from St. Louis, Missouri, to Salem, Missouri, where field trip begins, is included in field trip cost.

# FIELD TRIPS



The second part of that day will be a trip to look at the mineral occurrences and alteration surrounding the unmined Stockton porphyry Cu system 17 km west of Bingham Canyon from an exploration perspective.

This course would benefit those wishing to view a developed Cu-Au-Mo porphyry system along with a sub-economic buried porphyry system (Stockton) from an exploration perspective.

Attendee Maximum: 20

**Early Registration:** 

Members (US\$595), Non-members (US\$695), Student Members (US\$295), Student Non-members (US\$345)

Late Registration:

www.segweb.org

Members (US\$695), Non-members (US\$795), Student Members (US\$345), Student Non-members (\$395)

### GOLD AND SILVER MINES OF THE SIERRA MADRE OCCIDENTAL, MEXICO

October 1–5, 2014 Post-Conference Field Trip

(Field Trip departs from and returns to Chihuahua, Mexico\*)

### Field Trip Leader:

 Guillermo Gastelum-Morales (SEG 2002), Northern Mexico Exploration Sub-Director for Fresnillo plc.

### **Description:**

The field trip is focused on visiting gold and silver mines developed on high, intermediate, and low sulphidation epithermal deposits of the Sierra Madre Occidental metallogenic belt of northwestern Mexico. This part of the world has attracted much exploration investment due to its excellent potential and historic track record of precious metals discoveries turning into successful mine operations. Explorers looking for these types of deposits in Mexico or elsewhere are encouraged to attend.

# UNCOVERING THE BINGHAM

Bingham Canyon

October 1–2, 2014 Post-Conference Field Trip

AND STOCKTON Cu-Mo-Au
PORPHYRIES

(Departs from and returns to Salt Lake City, Utah, USA\*)

### Field Trip Leaders:

- Kim E. Schroeder (SEG 1993), Senior Geologist, Bingham Canyon Mine, Rio Tinto
- Kenneth A. Krahulec (SEG 2002), Senior Economic Geologist, Utah Geological Survey
- Rudy Ganske, Senior Geologist, Rio Tinto Kennecott

### **Description:**

This field trip will include a morning and early afternoon visit to the upper and lower portion of the Bingham Canyon mine and 2013 slide which filled the bottom of the pit. We will make 2 to 3 stops in the pit, followed by a presentation in the 3D room.

\*Dinner planned for evening of October 2, 2014. Includes hotel nights on October 1–2.



Ciénega Mine

# Schedule:

- Day 1: Travel from Keystone to Chihuahua
- Day 2: La India and Pinos Altos mines
- Day 3: Palmarejo mine and surroundings
- Day 4: Ciénega District
- Day 5: Travel from Ciénega to Chihuahua

**Attendee Maximum:** 15

### **Early Registration:**

Members (\$US1,595), Non-members (US\$1,695), No student discounts

### Late Registration:

Members (US\$1,695), Non-members (US\$1,795)

\*All transportation from Keystone, Colorado, USA, to Chihuahua, Mexico, and back to be arranged by participants, as well as dinner upon arrival in Chihuahua.

Visit the SEG 2014 Conference website for workshop and field trip updates — www.seg2014.org

# SEG

## **SEG 2014 Conference Organizing Committee**

Bart Suchomel, Chair barton.suchomel@wesminllc.com

Jon Hronsky, Technical Sessions jon.hronsky@wesminllc.com

Karen Kelley, Publications kdkelley@usgs.gov

Thomas Monecke, Posters/Students tmonecke@mines.edu

John Black and Brad Margeson, Workshops juannegro@comcast.net brad.margeson@wesminllc.com

Bill Chávez, Field Trips wxchavez@nmt.edu

Brian Hoal and Nikki Jamison, Fundraising/Marketing brianhoal@segweb.org anikajamison@segweb.org

Darline Daley, Exhibits/Administration darline@absoffice.com

Christine Horrigan, Secretary/Students christinehorrigan@segweb.org

## How to Reserve Exhibit Space

Quality Business Services (QBS) SEG Conference Facilitators

Tel: +1.303.914.0694 Fax: +1.303.382.8061 Email: darline@QBSoffice.com

### **Booth Rental Includes:**

- One complimentary full registration for each 10'x10' booth.
- Two complimentary exhibits-only registrations for each 10'x10' booth.
- 7"x44" booth sign with company name and booth number.
- 8' high back drape with 3' high draped side rails.
- General security

## **Booth Rate** — \$2500

### Location

Keystone Resort & Conference Center Keystone, Colorado, USA

## **FREE to Exhibitors**

- Wi-fi 🥱
- Pocket Program Listing
- Link from SEG Website
- List of Registered Attendees

## We have also planned . . .

Poster sessions, breaks, 3 receptions and 3 lunches in the Exhibit Hall to bring the crowd to you!

### **Exhibit Hours**

## Saturday, September 27

8:00am - 1:00pmSet-up 5:00pm - 7:00pm Open/Reception

### Sunday, September 28

10:00am - 7:00pmOpen 5:30pm - 7:00pm Reception

### Monday, September 29

10:00am - 6:30pmOpen Reception 5:30pm - 6:30pm

### Tuesday, September 30

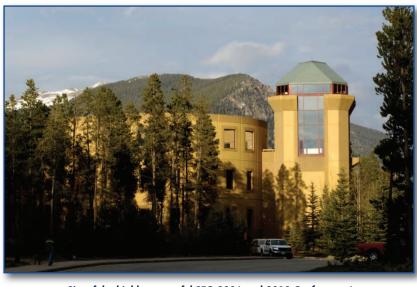
10:00am - 1:30pm Move Out 1:30pm - 5:00pm

# Sponsorship Opportunities

Corporations can support student attendance and continuing education by becoming a sponsor:

- Patron
- Premier
- Gold
- Silver
- Bronze

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# SEG 2014 CONFERENCE EXHIBITORS

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Booth 34



Booth 49-50

Booth 22

Booth 37-38













Booth 40



Booth 11

Booth 28

Booth 12

Booth 20







corescan





Booth 23

Booth 14

Booth 29

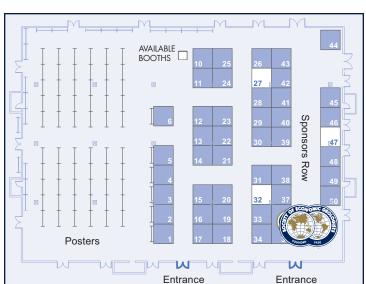
Booth 16



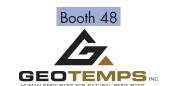
Booth 21

GeoSpectral *Imaging* 









Booth 18



Booth 46











Booth 33

Booth 25



Booth 5

Booth 3



**OLYMPUS** 









Booth 30



Booth 6

















Booth 39

Booth 42-43

Booth 13

Booth 26

Booth 19

Booth 31