

# 36th GRC Annual Meeting, Part Two

by Ian Crawford

**W**e have documented the meeting in two parts. In the November/December *GRC Bulletin*, we reported on the Opening Session, Golf Tournament, Special Luncheons, and Field Trips. In this issue, we're reporting on the GRC Awards, the Poster and Technical Session Awards, and the winners of the 33rd Geothermal Photo Contest.

## Membership Meeting and Awards Luncheon

The 36th Annual Meeting of the Geothermal Resources Council (GRC) was a great success with representatives from 33 countries around the world attending Field Trips, Workshops, Technical Sessions, and enjoying networking and visiting exhibitors at the GEA Energy Expo.

As a climax to the celebrations, distinguished

colleagues in the geothermal community from around the world were honored at the GRC Awards Luncheon.

*For more photos of the Awards Luncheon go to <http://bit.ly/Qs0x7P> or scan this QR code to see the photos on your Smart phone or mobile device.*



## Past Presidents of the GRC

Before the Annual Membership Meeting and Awards Luncheon convened, GRC president Richard Campbell brought together all the past presidents of the GRC, who were present at the Annual Meeting in Reno, for a group photo.



*Standing from left to right: Jim Combs, Frank Monastero, Richard Campbell, Stu Johnson, Paul Brophy, R. Gordon Bloomquist, Sitting from left to right: Jim Koenig, John Lund, Lou Capuano, Dick Benoit, and David Blackwell. (Harry Olson, was at the Peppermill but was unable to make it to the photo session).*



Harry Olson.

## GRC Annual Meeting: Awards Luncheon

*The Joseph W. Aidlin Award recognizes outstanding contributions to the Geothermal Resources Council and to the development of geothermal resources.*

### R. Gordon Bloomquist



*The Geothermal Pioneer Award is given for outstanding achievements in the development of geothermal resources. It recognizes the pioneering efforts of members of the geothermal community who have made lasting contributions to the industry, worldwide.*

### Darrell L. Gallup



Darrell L. Gallup (right) is presented his award by Marcelo Lippmann.

*The Special Achievement Award recognizes special or outstanding achievements in any aspect of geothermal energy development and related areas.*

### Tsuneo Ishido

For outstanding achievements in the development of geothermal resources.



### Doug Powell

For outstanding contributions to the worldwide development and operation of geothermal electric generation facilities.



### Jack A. Frost

For outstanding contributions to the development and optimization of geothermal production pump systems.



Stu Johnson (left) introduced Jack Frost.

## GRC Annual Meeting: Awards Luncheon

### Ahmad Ghassemi

For outstanding contributions to the modeling of coupled chemical-thermal-mechanical processes and rock-fluid interactions in geothermal reservoirs.



Ahmad Ghassemi (*right*) is presented his award by Sabodh Garg.

### Patrick Dobson

For outstanding contributions to the understanding of the geology and geochemistry of geothermal systems.



Joe Moore (*left*) presents Patrick Dobson with his Special Achievement Award.



The GRC Award Winners 2012. *From left to right:* Patrick Dobson, Darrell L. Gallup, Doug Powell, Jack A. Frost, Ahmad Ghassemi, Tsuneo Ishido, and R. Gordon Bloomquist.



Past and present winners of the Aidlin Award were invited to attend the Annual Membership Meeting and Awards Luncheon. *From left to right:* Marcello Lippman, James Koenig, Sabodh Garg, Gordon Bloomquist, John Lund, Richard Campbell, Sue Hodgson, Louis Capuano, Jr., David Blackwell, Joel Renner, Paul Brophy, and Jim Combs.

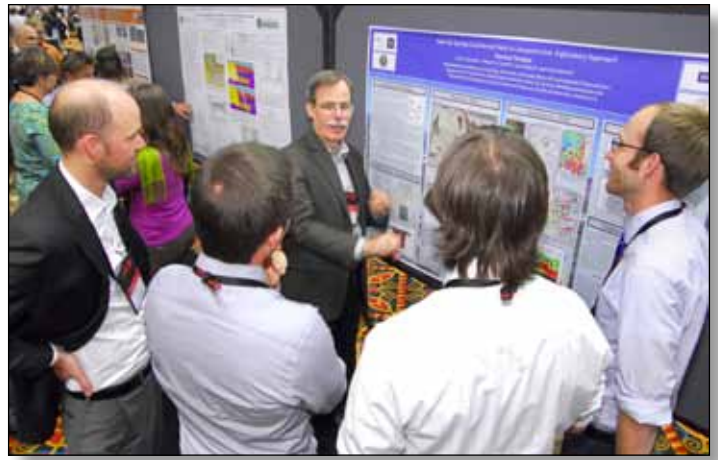
# Poster Session Awards

## Winner Best Non-Student Poster

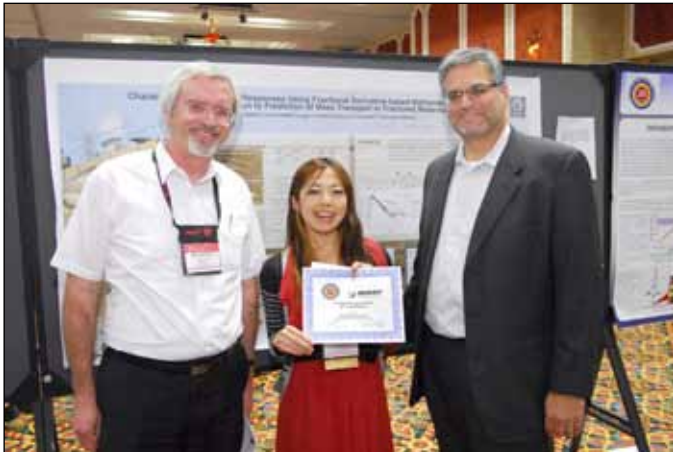
*The Rate of Success of Geothermal Wells Drilled in Nevada, Lisa Shevenell*

## Winner Best Student Poster

*Characterization of Tracer Responses Using Fractional Derivative-Based Mathematical Model and Its Application to Prediction of Mass Transport in Fractured Reservoirs, Anna Suzuki, et al.*



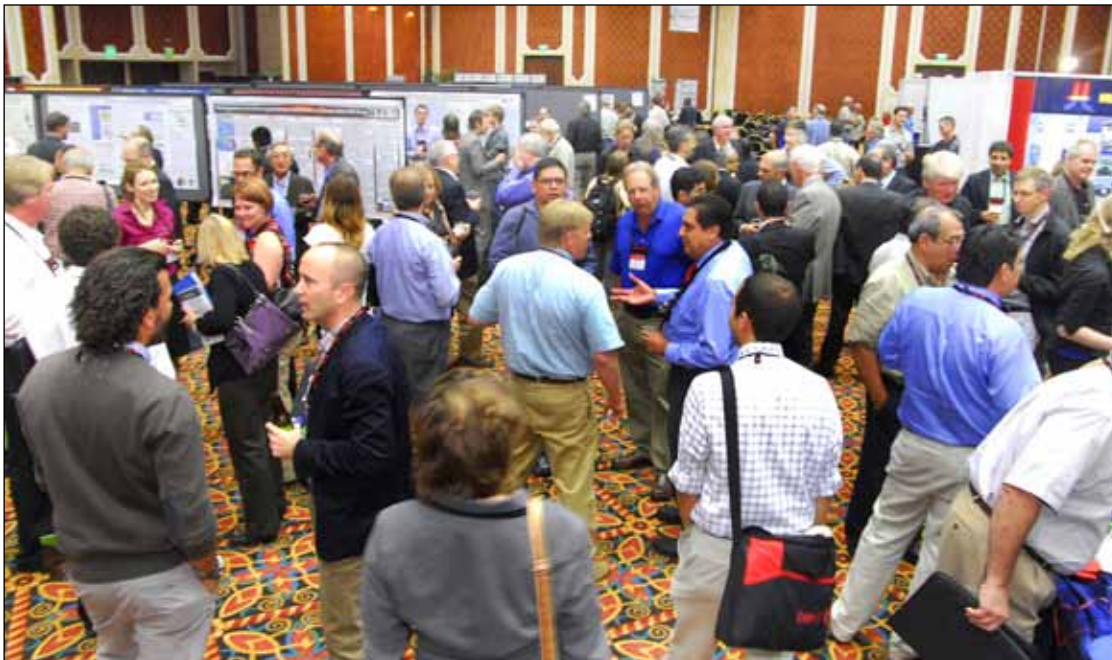
Bill Cumming lead a lively discussion in front of one of the posters.



Anna Suzuki, flanked by Roland Horne of the Stanford Geothermal lab (left) and Craig Mataczynski, CEO of Gradient Resources Inc. (right). GRI donated the \$500 winning prize. Anna was a Visiting Student at the Stanford Geothermal Program during the summer and helped Roland Horne at the National Geothermal Academy at the University of Nevada, Reno, by serving as Teaching Assistant for the course on Reservoir Engineering.



Nikola N. Lacic (right), CEO of Geothermal Worldwide, Inc. explains his poster to Greg Stillman of the DOE.



The Poster Reception, co-hosted by the GRC and GEA was a popular event.

To view photos from the Poster Session Reception, go to <http://bit.ly/Ryle5d>



# Outstanding Technical Session Presentation Awards

Awarded by Session Chair

**Basin & Range** – *Structural Controls of the Tuscarora Geothermal Field, Elko County, Nevada*, Dering, Gregory & Faulds, James.

**Business Development 1** – *Economic and Performance Benefits Resulting From the Use of Large Diameter Fans on Air Cooled Heat Exchangers (A Case Study in the Use of Large Fan Air Cooled Condensers at the Neal Hot Springs Geothermal Power Plant)*, Kitz, Kevin & Elliott, Ryan & Spanswick, Ian.

**Business Development 2** – *Innovative Drilling and Completion Concept for Geothermal Applications*, Oppelt, Joachim & Lehr, Joerg.

**Case Studies** – *Overcoming Drilling Challenges With Rotary Steerable Technology in Deep Geothermal Wells in the Molasse Basin of Southern Germany*, Lentsch, David & Schoebel, Wolfgang & Savvatis, Alexandros & Schubert, Achim.

**Co-production** – *A 400 Kw Geothermal Power Generator Using Co-Produced Fluids From Huabei Oilfield*, Xin, Shouliang & Liang, Hongbin & Hu, Bing & Li, Kewen.

**Direct Use** – *The Canby Geothermal Project, A Community-Based Geothermal Development*, Merrick, Dale.

**Drilling 1** – *Three-Dimensional Drilling Simulation of Geothermal Drilling*, Shiratani, Hidehiro & Nakagawa, Masami.

**Drilling 2** – *PDC Bits Outperform Conventional Bit in Geothermal Drilling Project*, Raymond, David & Knudsen, Steven & Blankenship, Doug & Bjornstad, Steve & Barbour, Joel & Schen, Aaron.

**EGS 1** – *Stratigraphic Reservoirs in the Great Basin – The Bridge to Development of Enhanced Geothermal Systems*, Allis, Rick & Blackett, Bob & Gwynn, Mark & Hardwick, Christian & Moore, Joe & Morgan, Craig & Schelling, Dan & Sprinkel, Douglas.

**EGS 2** – *Thermal Shock-Resistant Cement*, Sugama, Toshifumi & Pyatina, Tatiana & Gill, Simerjeet.

**EGS 3** – *Fracture Network Interpretation Through High Resolution Velocity Models: Application to The Geysers Geothermal Field*, Tafti, Tayeb A. & Aminzadeh, Fred.

**EGS 4** – *Integrated, Geothermal-CO<sub>2</sub> Storage Reservoirs: Adaptable, Multi-Stage, Sustainable, Energy-Recovery Strategies That Reduce Carbon Intensity and Environmental Risk*, Buscheck, Thomas A. & Elliot, Thomas R. & Celia, Michael A. & Chen, Mingjie & Hao, Yue & Lu, Chuanhe & Sun, Yunwei.

**EGS 6** – *Hydraulic Fracturing Scenarios for Low Temperature Hot-Dry-Rock Heat Generation From the Precambrian Basement in Northern Alberta*, Hofmann, Hannes & Babadagli, Tayfun & Zimmermann, Gunter.

**EGS 7** – *Advanced Electric Submersible Pump Design Tool for Geothermal Applications*, Qi, Xuelei & Turnquist, Norman & Ghasripoor, Farshad.

**Environmental/Regulatory Issues 1** – *Geothermal Regulations in Colorado – Land Ownership Is the Key*, Morgan, Paul.

**Environmental/Regulatory Issues 2** – *Lessons Learnt From Geothermal-Friendly Regulatory Frameworks in Iceland, Kenya, New Zealand, Philippines and The United States of America*, Sander, Marietta.

**Exploration 1** – *A Geothermal Data System for Exploration and Development*, Allison, M. Lee & Richard, Stephen M. & Clark, Ryan C. & Patten, Kim J. & Love, Diane S. & Coleman, Celia & Chen, Genhan & Matti, Jordan & Day, Janel & Pape, Esty & Musil, Leah & Caudill, Christy.

**Exploration 2** – *3-Dimensional Geologic Characterization of Geothermal Systems: Astor Pass, Nevada, USA*, Siler, Drew L. & Mayhew, Brett & Faulds, James.

**Exploration 3** – *Why Are the Only Volcano-Hosted Vapor-Dominated Geothermal Systems in West Java, Indonesia?*, Raharjo, Imam & Allis, Rick & Chapman, David.

**Exploration 4** – *Diffuse Degassing Measurements As a Geochemical Exploration Tool: A Case Study From the Brady's Geothermal System (Nevada, USA)*, Jolie, Egbert & Klinkmueller, Matthias & Moeck, Inga.

**Exploration 5** – *Assessment of the Geothermal System Near Stanley, Idaho for Direct-Use Development*, Welhan, John & Autenrieth, Kathleen & Ginsbach, Michael &

Ohly, Rebecca & Koster, Adam & Armstrong, Trent & Heath, Gail & McCurry, Michael & Mink, Leland (Roy) & Beckwith, Robert & Aumeler, Steven E.

**Exploration 6** – *Thermostратigraphy of the Williston Basin*, Gosnold, Will & McDonald, Mark & Klenner, Robert & Merriam, Daniel.

**Exploration 7** – *Correlating Resistivity With Temperature and Alteration Mineralogy in Menengai Geothermal Field: Case Study of Menengai Exploration Wells*, Noor, Yusuf & Suwai, Janet & Kangogo, Deflorah.

**Geochemistry** – *Laboratory Experiments on Inhibition of Silica Particulate Deposition in a Porous Column by Dosing of Chemical Regents into Reinjection Water (2): Prevention and Dissolution of Silica Deposits By Alkali Dosing*, Fukuda, Daisuke & Kawahara, Yoshitaka & Osada, Kazuyoshi & Maetou, Kotaro & Hishi, Yasuyuki & Kato, Osamu & Yokoyama, Takushi & Itoi, Ryuichi & Myogan, Ichiro.

**Geology 1** – *Preliminary Assessment of the Structural Controls of Neal Hot Springs Geothermal Field, Malheur County, OR*, Edwards, Joel & Faulds, James.

**Geophysics 1** – *Three-Dimensional Inversion of ZTEM Data at the Elevenmile Canyon Geothermal System, Nevada*, Devriese, Sarah G.R. & Oldenburg, Douglas W. & Shoffner, Jeffrey.

**Geophysics 2** – *Estimation of Stress State at Yanaizu-Nishiyama Geothermal Field Using Microseismic Multiplets*, Asanuma, Hiroshi & Mitsumori, Soichiro & Adachi, Masaho & Saeki, Kazuhiro & Aoyama, Kengo & Ozaki, Hitoshi.

**Heat Pumps** – *Measuring the Costs and Benefits of Nationwide Geothermal Heat Pump Deployment – A Progress Report*, Battocletti, Elizabeth & Glassley, William E.

**Power Operations 1** – *Pamukuren Geothermal ORC Power Plant in Turkey*, Celik, Tahir & Spadachini, Claudio & Agahi, Reza.

**Power Operations 2** – *Improved Energy Utilization in the Cerro Prieto Geothermal Field Fluid Transportation Network*, Garcia-Gutierrez, Alfonso & Martinez-Estrella, Juan I. & Ovando-Castelar, Rosember & Canchola-Felix, Ismael & Mora-Perez, Othon & Gutierrez-Espericueta, Sergio A.

**Production Technology** – *Technical Assessment of the Combined Heat and Power Plant at the Oregon Institute of Technology, Klamath Falls, Oregon*, Boyd, Toni & DiPippo, Ronald.

**Reservoir Management 1** – *Analytical Model for Thermal Response in a Fracture Due to a Change in Flow Rate*, Juliusson, Egill & Horne, Roland.

**Reservoir Management 2** – *Integrated Services Achieves Multi-String Casing Exit and Re-Drill in Geothermal Well*, Abraham, Samuel & Rickard, Bill & Spielman, Paul & Otto, Michael & Pahler, Mark & Phillips, Ronald & Guidry, Christopher.

**Resource Assessment 2** – *An Integrated Multidisciplinary Re-Evaluation of the Geothermal System at Valles Caldera, New Mexico, Using an Immersive Three- Dimensional (3D) Visualization Environment*, Fowler, Andrew & Bennett, Scott & Wildgoose, Maya & Cantwell, Carolyn.



**NOTE:** All 214 papers that were presented at the 36th GRC Annual Meeting in Reno, including from the winning presentations above, are now available for members only, in the GRC Geothermal Library at: [www.geothermal-library.org](http://www.geothermal-library.org). Papers from previous years' meetings are available for all.

The Geothermal Resources Council invites you to present your latest technical work in geothermal research, exploration, development and utilization at GRC's 37th Annual Meeting September 29 - October 2, 2013 at the MGM Grand in Las Vegas, Nevada, USA. Our theme this year is "A Global Resource, from Larderello to Las Vegas."

More information is at [geothermal.org/meet-new.html](http://geothermal.org/meet-new.html)

*Anyone who wants to present a paper at the GRC Annual Meeting must submit a paper!*

**Please note: the GRC is no longer requiring an abstract to be submitted first. We are requiring completed draft papers as the first step. The Draft Paper submission deadline is May 3, 2013.**

### *Time is running out!*

In order to be included in the 2013 GRC Membership Roster & Registry of Geothermal Services & Equipment, you must submit your membership renewal or application form by February 28.

Go to [www.geothermal.org/membership.html](http://www.geothermal.org/membership.html)



## Photo Contest Winners

In total, 58 photos were entered in the 33<sup>rd</sup> Annual Geothermal Amateur Photography Contest where they were judged for impact, relevance, composition, and technical quality.

In appreciation of their achievement, GRC awarded cash prizes to photo contest winners. GRC appreciates the creativity and quality of all contest submissions and looks forward to next year's photo contest to be announced and showcased at the 37th GRC Annual Meeting at the MGM Grand Hotel in Las Vegas, September 29 - October 2, 2013.

To view all the entries,  
go to <http://bit.ly/Q9OBah>



**1st Place (tie)** – *Steam Pipework*, by Alan Ofsoski of Totorua, New Zealand.

**1st Place (tie)** – *Steam Separators at Night*, by Alan Ofsoski of Totorua, New Zealand.

**2nd Place** – *Iron-Stained Boiling Spring at Borateras Geothermal Area, Peru*, by Joe LaFleur of Springfield, Oregon.

**Honorable Mention** – *Geothermal Village Totorura taken from Te Puia*, by Duncan Foley of University Place, Washington State.

**Honorable Mention** – *Beautiful Hot Waterfalls of Guelma, Algeria*, by Hichem Chenaker of Khenchela, Algeria.

**Honorable Mention** – *Aftermath of an early winter storm on Tolhuaca, Chile*, Jim Stimac of Santa Rosa, California.

**Honorable Mention** – *Steam Plume at the Tolhuaca Project*, by Anna Colvin of Santa Rosa, California. ■



1st Place (tie).



1st Place (tie).



2nd Place.



Honorable Mention.



Honorable Mention.



Honorable Mention.



Honorable Mention.