

Speaker Resumes

(Alphabetical)

Event:

“Geothermal Heating and Cooling Innovations:
Design, Financing and Regulation”

Location and Date:

Seattle, Washington – May 7, 2014

Convener:

American Ground Water Trust
Concord, New Hampshire



Speaker List

Geothermal Heating and Cooling Innovations: Design, Financing and Regulation
Seattle, Washington, ~ May 7, 2014

<u>First Name</u>	<u>Last Name</u>	<u>Job Title</u>	<u>Company</u>
Trey	Austin	President / CEO	Geo-Energy Services LLC
Dan	Bernstein	President	GAIA Geothermal
Paul	Bony	Director of Residential Market Development	ClimateMaster
Ted	Clutter	Manager- Communication and Outreach Services	Geothermal Exchange Organization
Kirby	Donald	Lead Account Representative	Baroid IDP
Jay	Egg	President	Egg Geothermal Systems
John	Geyer	President	John Geyer & Associates, Inc
Garret	Graaskamp	Hydrogeologist	American Ground Water Trust
David	Neale	VP of Marketing and Business Development	EnergyWise Partners LLC
Mike	Springer	Texas Territory Manager	WaterFurnace International

RESUME

Warren (Trey) Austin, III, PE, CGD

President/CEO

Geo-Energy Services, LLC

He has 16 years of experience with research, design, and consulting for ground source heat pump (GSHP) systems. The Native American owned company he leads, Geo-Energy Services, LLC, is a provider of leading and innovative GeoExchange solutions. Our services for GeoExchange systems include consulting, feasibility studies, design, design/build, and LEED building commissioning projects of several different types of GeoExchange applications including: hot water/chilled water, vertical/horizontal, central and distributed systems, and a variety of ground heat exchanger configurations: vertical boreholes, horizontal (slinky), pond/lake loops, and hybrid configurations. He also currently serves on the Advisory Council of the International Ground Source Heat Pump Association.

Daniel Bernstein
President
GAIA Geothermal, LLC

Mr. Bernstein founded Gaia Geothermal in 2001 to address the market need for accurate and easy-to-use ground source heat pump system design software.

He has trained designers and engineers in the UK, Korea, China, Canada, Jordan, Japan and throughout the US, including personnel at some of the world's major heat pump manufacturers. Class sizes have ranged from 1 to 65 people. In addition, Mr. Bernstein has presented on a wide range of issues including CO2 emissions reductions and geothermal lifecycle costing. He also has been involved with The Green Mechanical Council as their "expert" on geothermal and has written several articles on geothermal for GeoDrilling International magazine.

Education:

Master of Arts, International Environmental Policy, Johns Hopkins University 2004

Bachelor of Arts, Physics, Chemistry and Biology, cum laude.
Pomona College. 1997

Paul Bony

**Director of Residential Market Development
ClimateMaster**

As the world's largest manufacturer of geothermal heat pumps, ClimateMaster offers financing solutions to home and business owners through its authorized dealer network. Paul Bony has responsibility for ClimateMaster's technical installer and loop installation training, utility relations, and other market development efforts. He became involved in the industry in the late 1980's as a utility demand side program developer. Paul founded and served as the Operating Manager of a utility-owned geothermal heat pump (GHP) installation company, and managed the development of several innovative financing tools including loop leases, a second mortgage "Co-Z Energy Plan" and a ground breaking Geo loop utility tariff. Paul's energy efficiency and renewable energy market development efforts have earned the Association of Energy Services Professionals' "Achievement in Energy Services" Award, the US Environmental protection Agency's Excellence in ENERGY STAR Outreach award, and recognition from the Alliance to Save Energy.

Paul has served on the Electric Power Research Institute's Demand Side Management Advisory Committee, the Cooperative Research Network's Energy Efficiency and Demand Response Advisory Group, the Board of the California Utility Energy Forum, The Utility Geothermal Working Group and the Colorado GeoPowering the West state wide working group.

He earned his M.B.A. from University of Nevada, Reno with Beta Gamma Sigma honors, and a B.S. with honors from Kansas State University's College of Agriculture. He is an International Ground Source Heat Pump Association certified GHP trainer and serves on the Association's Training Committee.

Resume

Ted J. Clutter

Ted J. Clutter is a communications and association professional, with expertise in the resource production and power industries that spans fossil fuels and renewable alternatives. He has been a widely published author on resource issues for over three decades.

He currently manages Outreach and Member Services for GEO — the Geothermal Exchange Organization —a national advocacy association for the U.S. geothermal heat pump industry.

From 1997 to 2006, Ted served as Executive Director of the GRC — the Geothermal Resources Council — an international association focused on technical outreach for geothermal power producers, direct use facilities and geothermal heat pumps. He worked closely with the Geothermal Energy Association and GRC Board Members on both technical and political issues concerning geothermal development.

Prior to his experience with geothermal energy, he served as Director of Communications for the Pennsylvania Coal Association, and as an Information Liaison for the Virginia Center for Coal & Energy Research, where he was involved in issues ranging from clean air legislation to abandoned mine land reclamation.

Ted earned a BS in Geography, and an MS in Industrial Communications, at the University of Idaho College of Mines & Earth Resources. An accomplished journalist and photographer, Clutter's work on natural resources, industrial, and energy topics has regularly appeared in regional and national publications since 1979.



Geothermal Exchange Organization, Ted J. Clutter, Manager of Outreach and Member Services



Baroid Industrial Drilling Products

Kirby Donald
Account Representative Lead

Background

Kirby has been involved in the drilling industry for over 15 years. While attending college, he roughnecked during summer breaks in the Geysers Geothermal field in northern California. After graduation he started on the ground floor of the mud business as the Warehouse Manager for Desert Drilling Fluids in Winnemucca Nevada. On the job training led to a Field Service Representative position, checking mud in Nevada, and the western U.S. He has worked for Baroid since the acquisition of DDF in 1996.

Experience

- Worked floors for Grace Drilling, gained experience mixing mud, and running basic mud tests.
- Managed inventory and oversaw delivery of drilling fluid products to remote minerals exploration sites in Nevada, and the western U.S.
- Was responsible for all facets related to drilling fluids on several large exploration projects in Nevada.
- Currently responsible for creating demand for, assisting customer distribution network, and servicing drilling fluids related activities.
- Kirby has experience in Minerals Exploration, Diamond Core Drilling, both surface and underground, Air Rotary, Conventional, Reverse Circulation, and Flooded Reverse, Water Wells, Domestic and Municipal, Horizontal Directional Drilling from 4" to 54", Coal Bed Methane Drilling, Geotechnical Drilling, large diameter De Watering wells, Micro Tunneling, Pipe Ramming, and Drilled Shafts.

Education

- Bachelor of Arts in Economics, New Mexico State University, 1993
- Dresser Industries, Drilling Fluid Technology, Houston Texas 1997

Kirby and his family currently live in Castle Rock Washington. He is responsible for sales and service in Oregon, Washington, British Columbia, and Alaska. He can be reached by telephone at 503-702-5731, or e-mail at kirby.donald@halliburton.com



Qualifications Statement of Jay Egg, EggGeothermal Consulting Authors/Consultants/Speakers

Writer/Instructors

Name: Jay Egg, CMC
Co-author of *Geothermal HVAC, Green Heating and Cooling*
(McGraw-Hill, 2010 Egg-Howard)
Co-author of *Modern Geothermal HVAC Engineering and
Control Applications* (McGraw-Hill, 2013 Egg – Cunniff – Orio)
109 Madeira Beach Blvd
Kissimmee, FL 34647
727-423-8462
jayegg.geo@gmail.com

Biographical profile:

Jay Egg: Jay's passion for geothermal air-conditioning and heating started during a repair to his own home air-conditioning system 1989. Frustrated by the extreme tropical climate which had added to the premature failure of his air-conditioning system, he modified his home air conditioner to become a ground water-cooled system.

Jay founded EggGeothermal in 1990 to provide geothermal HVAC systems. As a result of the American Recovery and Reinvestment Act of 2009, EggGeothermal entered into a new age of acceptance.

Jay currently focuses his professional efforts on geothermal consulting, writing, and speaking engagements. Among his clients are federal, state and local governments, developers, associations, and private entities.

Reference(s) for instructor(s) teaching/writing/public speaking ability:

Bettina Faltermeier, Senior Manager McGraw-Hill Professional 212-512-4014
Jack DiEnna, GEA Executive Director (Geothermal Energy Association) 610-659-4998
Ted Clutter, Geo-Exchange Executive (GHP's Primary Advocacy Group) 217-414-0341
Brian Clark, National Geographic Society Editor & Producer 202-862-8660

Provide an Introduction for speaker(s):

Jay Egg is founder of EggGeothermal, a mechanical services company focused on geothermal HVAC consulting and contracting technologies. The company works internationally and is a sought-after and regularly retained for their expertise in the field of mechanical design, hydronic, and ground coupled air conditioning and heating. Jay and his team have written numerous articles, abstracts and papers on the topic.

Author of two McGraw-Hill Professional books; *Geothermal HVAC, Green Heating and Cooling* and *Modern Geothermal HVAC Engineering and Control Applications*, to date the most comprehensive text on the subject of geothermal heating and air conditioning technologies. Columnist for numerous trade magazines including *Plumbing Engineer* and *Plumbing and Heating Contractor News*.

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JG & A, Inc.

ENERGY MARKETING AND TECHNOLOGY CONSULTANTS

JOHN D. GEYER
Energy and Technology Marketing Consultant

JOHN GEYER & ASSOCIATES, INC.
P.O. Box 821085 Vancouver, WA 98662
360.882.5050 jgeyer@jgainc.com

Education:

B.S., Forestry Oregon State University, 1969 (Honors)

M.S., Management – Marylhurst College, 1988 (Honors)

GeoExchange Credentials:

International Ground Source Heat Pump Association - *member* No.
14266-596.

International Ground Source Heat Pump Association - *Certified Installer,*
No. 13100/400

International Ground Source Heat Pump Association - *Certified Trainer,*
No. 1071/1196

Association of Energy Engineers - *Certified Geothermal Designer,*
No. 0076

Geothermal Heat Pump Consortium - *charter member (1994)*
Chevron/Phillips Performance Pipe - *Factory Representative &*
Trainer

Geo Bore Technologies, Inc - *Distributor*

Geo Pro Grout, Geothermal Supply Co. - *Territory Sales Manager*

Geo Resource Technologies, Inc. – *Soil Conductivity Test*
Technician

Memberships:

Association of Energy Engineers (AEE)

Geothermal Resources Council (GRC), 1976 – Present; 3 years as Regional Chapter Officer

International Geothermal Association (IGA), 1988 - Present

International Ground-Source Heat Pump Association (IGSHPA) - 1996, Present

Geothermal Heat Pump Consortium (GHPC) – Charter member, 1994 - Present

Work Experience:

John Geyer is an electric-industry marketing consultant, based in Vancouver, Washington, U.S.A.. Involved with renewable and efficient energy technologies since the oil embargo of 1973, John has been closely tied to U.S. utility industry changes since 1987 (i.e. deregulation and wholesale marketing). After 13 years of renewable energy work for U.S.D.A., Forest Service and nine years for U.S. Department of Energy's Bonneville Power Administration, he has spent 18 years as an independent consultant. In the latter role, Mr. Geyer has been a leader in geothermal heat pump market development since 1992. He is a founder and principal of Sound Geothermal and Northwest Geothermal corporations and co-designer of the Western Regional Training Center in Davis, CA. Mr. Geyer has served as factory representative for HDPE geothermal products from Chevron-Phillips Chemical Company's *Performance Pipe* and territory sales manager for other geothermal products and services. While not aligned with any single heat pump

manufacturer, he provides turnkey soil conductivity testing, training and system design support to architects and engineers.

Symposia and Conferences Convened and Major Publications:

Chair, GRC Annual Conference “Special Section” on Geothermal Heat Pumps, 1996-1999/2006

Panelist, US DOE Geothermal Program Review – Geothermal Heat Pump Round Table, 1998, 2001-3

Trainer, IGSHPA 3-Day Installer Training and Certification courses, 1996 – Present

Trainer, Polyethylene Pipe Fusion Training and Certification courses, 1997 – Present

Speaker, (9) published & (~20) unpublished formal papers at industry conferences, 1990-2007

Consulting Focus:

Energy markets’ assessment and evaluation (alternative and renewal energy emphasis)

Utility-scale Geothermal Heat Pump program design and development (incl. infrastructure, market transformation and economics)

Renewable energy technology applications’ development and feasibility studies

Strategic Planning and business plan development for independent energy companies

Independent Power Producers’ Power Sales and Transmission Agreements

Technical support for IPP respondents to electric utility RFPs for new generation.



GARRET W. GRAASKAMP, P.G., A.I.

Hydrogeologist; American Ground Water Trust, Concord, NH

BACKGROUND SUMMARY

Extensive experience as a professional geologist working on educational forums, environmental, regulatory and economic development projects. Past project management positions required close interaction with technical staff, clients and Federal and State regulatory agencies. Responsibilities have included technical and financial management of hydrogeologic and geological site investigations, environmental permitting projects, environmental property assessments, environmental compliance audits, underground storage tank closures, project health and safety and new client/business development.

PROFESSIONAL EXPERIENCE

HYDROGEOLOGIST / ACCREDITED GSHP INSTALLER:

American Ground Water Trust (Concord, NH), April 1999 to Present.

Technical specialist covering ground source heat pump applications and ground water science education. Responsible for developing educational outreach programs and responding to direct information requests from the public. Develops and implements education programs focused on ground water-related innovative technologies, public health, public policy issues and resource sustainability. Mr. Graaskamp is currently managing the Trust's "Public Health, Ground Water and Water Wells" Workshop Series that focuses on specific state well issues across the United States, the "Ground Source Heating and Cooling for Commercial and Residential Properties" national technology forum and the Trust's outreach programs for Real Estate Professionals. Mr. Graaskamp is a member of the National Ground Water Association technical committee to develop "Guidelines for the Construction of Boreholes for Closed Loop Heat Pump Systems."

EDUCATION

COLORADO SCHOOL OF MINES: M.S., Geology

AMHERST COLLEGE: B.A., magna cum laude, Geology

PROFESSIONAL LICENSES AND TRAINING

Baroid Industrial Drilling Products: Geothermal Loop Mud School - 2010

International Ground Source Heat Pump Association

Member #: 25046-0309

Accredited Installer #: 19329-0309

Maine Certified Geologist: #269

New Hampshire Licensed Geologist: #293

North Carolina Licensed Geologist: #593

PROFESSIONAL AFFILIATIONS

NGWA - Association of Groundwater Scientists and Engineers - Member

Geological Society of America - Member

Geothermal Exchange Organization - Member

Sigma Xi Research Society - Associate Member

PUBLICATIONS

Graaskamp, G.W., Fall 2009, "Ground Source Heat Pumps - Conditioning a Building Near You" in Licensed Architect: Association of Licensed Architects, Barrington, IL, v. 13, no. 3, p. 34-38.

Geissman, J.W., Snee, L.W., **Graaskamp, G.W.**, Carten, R.B., Geraghty, E.P., 1992, Deformation and age of the Red Mountain intrusive system (Urad-Henderson molybdenum deposits), Colorado: Evidence from paleomagnetic and $^{40}\text{Ar}/^{39}\text{Ar}$ data: Geological Society of America Bulletin, v. 104, no. 8, p. 1031-1047.

David Neale

David Neale founded, The EnergySmart Partnership in 2007, a clean energy sales organization in western New York. While there, he sold and designed residential geothermal, solar thermal and solar electric systems. He is recognized as a leading renewable energy expert in the residential and small commercial market and brings that operational experience to marketing and business development at EnergyWise Partners. He speaks frequently on the topic of renewable thermal energy and third party financing approaches, and has provided continuing education courses and seminars for building industry professionals. David graduated in Physics from Lancaster University in the UK and began his career at Xerox Corporation, moving to the United States in 1990. David was a leader in driving change throughout his career at Xerox Center of Excellence and to a greater degree driving organizational culture change as a Senior Productivity Consultant at System Software Consortium Inc. of Henderson VA.

F. MICHAEL SPRINGER
1505 CEDAR COURT
SOUTHLAKE, TEXAS 76092
817-329-1525

Experience:

- 2013 – Present **WaterFurnace International- Texas Territory Manager**

Manager a dealer distribution network for the state of TX for Geothermal HVAC Equipment and services.

Promote Geothermal HVAC to Architects, Builders, School Boards, Engineers and Homeowners.

- 2000 – 2013 **Thermal Enterprises Inc. - Owner and Managing Director**

- Geothermal HVAC sales, design, installation, consulting & service.
- Medical/Radiology HVAC and Chiller sales, design, installation & service.
- Setup and manage national mechanical service contracts funded by Fleet Bank, Chicago Illinois.
- Provide national tech support for Entegry branded proprietary roof top equipment manufactured by Trane. Design and install automation systems to control & monitor HVAC, lighting and entire site power usage utilizing remote monitoring.
- Negotiate with builders, owners and code officials to provide cost effective geothermal systems that meet or exceed their expectations.

- 1995 - 2000 **Entergy Integrated Services**

- National Sales Support for HVAC projects, building/facility site surveys, energy audits, proposal generation and presentation to building/facility decision makers.
- Setup and manage national mechanical service contracts funded by Fleet Bank, Chicago Illinois.

- Provide national tech support for Entegriy branded proprietary roof top equipment manufactured by Trane. Install automation systems to control & monitor HVAC, lighting and entire site power usage remote monitoring.
- Management team member for installing 1200 Climate Master geothermal units serving the base housing at Little Rock Air Force Base, Little Rock, Arkansas.
- 1993 - 1995 **Honeywell Building Services - Operations Manager San Antonio, TX Area**
 - Centrifugal chiller sales, installation/refrigerant retrofit and service
 - Included Centrifugal water chiller overhaul & service, refrigerant retrofit conversions for Industrial, Hospitals and Military base.
 - Consistently delivered customer satisfaction rating greater than 95% while meeting profit margin goals set by upper management team.
- 1992 - 1993 **Honeywell Building Services- Mechanical Service Manager Dallas, TX Area**
 - Sales support & delivery of full service mechanical contracts for schools, hospitals & commercial buildings
 - Included Centrifugal Chiller overhaul & service, Variable Frequency Drives for cooling tower fans & water pumps, building automation integration & pneumatic control systems. Install and maintain conventional HVAC equipment.
 - Consistently delivered customer satisfaction rating greater than 95% while meeting profit margin goals set by upper management team.

Education:

- Oklahoma State University- Geothermal ground loop heat exchanger designer
- Oklahoma State University- Certified geothermal ground loop installer
- Hillsborough Community College- Studies in Math and Computer Science
- 5 year apprentice program for United Association of Plumbers, Pipefitters & Sprinkler fitters HVAC Division.
- Shelton State Community College- Associates Degree in HVAC technology
- Tuscaloosa County High School- Graduated with Honors

Associations, Licenses, Other:

- Association of Energy Engineers
- Certified Energy Manager
- International Ground Source Heat Pump Association
- Radiant Panel Association

- Texas Class A Mechanical Contractor- TACLA13688C
- Florida Class A Mechanical Contractor- inactive

- Planning & Zoning Commissioner City of Southlake, TX