



Thursday, November 4, 2010

Ground Source Heat Pump Construction (advanced)

(All day workshop that will cover more advanced aspects of GSHP construction)

Takeaways: As a result of this workshop, you will have

- earned 7 CEUs to fulfill requirements for any license or certification renewal,
- made contacts with groundwater professionals who can offer assistance with future problems or opportunities,
- increased your technical knowledge of concepts/procedures important in high quality ground source heat pump system design,
- learned about grout qualities and mixing procedures to avoid problem installations,
- increased your knowledge of GSHP grout pumps and pressure limitations with tremie pipes used on these projects,
- better understanding of geothermal loop grouting
- learned about the equipment needed to be efficient.

Coursework:

- benefits from test hole drilling
- procedures for drilling test holes
- sampling and thermal conductivity testing
- design concepts to allow you to go beyond a "this oughta work" installation
- proper grout mixing procedures
- conductivity testing of grout samples
- types and capabilities of GSHP grout pumps
- capabilities and pressure limitations of tremie pipes
- maintaining hole stability from start to finish
- procedures for proper loop and tremie pipe installation and grouting

Instructors:

David Henrich, Geothermal Division Manager, Bergerson-Caswell, Inc. Maple Plan, MN

Mr. Henrich started working for Bergerson Caswell in 1993. He has gained experience in water well drilling, pump installation, environmental drilling and sampling, and geothermal design and construction. In addition to managing the geothermal division of Bergerson Caswell, he is the vice-president and COO of Thermal Dynamics, and is the vice-president in charge of production for Precision Geothermal. His responsibilities include designing geothermal systems, managing and training personnel, implementing the procedures for constructing ground source systems, software technical support, sales and marketing.

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Stewart Krause, Senior Sales Engineer, Wyo-Ben, Inc., Billings, MT

Mr. Krause has over 30 years in drilling fluids and grouting applications. He is recognized by the Petroleum Extension Service, University of TX / Austin as an instructor of drilling fluids application, and is past chair of the manufacturers board of NGWA, a member of IGSHPA, CGA and many state groundwater associations.

Contact info: Phone: 406-652-6361; Fax: 406-656-0748; email: skrause@wyoben.com

Jeff Bowen, President, Geo-Loop Inc., Aureila, IA

Mr. Bowen has 21 years experience in the geothermal grouting business. His company, Geo-Loop Inc. makes several different geo-loop grout pumps and accessories such as hose reels and loop reels. He is an IGSHPA member.

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Additional Notes: Stewart Krause notes "My portion of the workshop will discuss the importance of properly choosing grouting material for ground source applications. Grouting products currently available to the ground source industry. The importance of proper mixing of grouting materials and also what happens to improperly mixed products. We will use bench top demonstrations so attendees can see first hand consistency of grout blends. Proper sample collection, documentation and test reporting will also be discussed.

If you are currently in the ground source business and are a designer, contractor or are considering a move into the industry you should attend. As a designer you will have a better understanding of the drilling and backfill process and it's overall impact on the finished project. As a contractor you will have a better understanding of what you will be required of you to place the backfill to meet design expectations. Fully understanding these requirements during the bidding phase of the project is important to your bottom line."