



Hot and Cold Running Water in the Canadian Rockies: The influence of geology on the distribution, temperature, chemistry and microbiology of thermal springs

Field Trip Leader:

Steven Grasby, Geological Survey of Canada

Saturday, September 18, 2021

Field Course Outline:

The one day field course will visit multiple stops to examine a series of springs systems along the Bow River Corridor in the Front Ranges of the Canadian Rockies and to look at the role structural geology plays in the occurrence of thermal springs, and more importantly, the influence of fault plane geometry on spring temperatures in a low heat flow setting. In the Rocky Mountains, thermal springs are largely restricted to localised zones of complex deformation along major thrust faults in the front ranges, as well as Eocene normal faults just east of the Rocky Mountain Trench. The occurrence of deep penetrating brittle faults is the most important control on the occurrence of thermal springs in the Cordillera.

Who Should Attend:

Geoscientists, engineers, managers interested in geothermal resource potential, innovation in the field of geothermal research and development and how hydrogeology and water chemistry can be used to interpret fault systems.

*Meeting registration is **NOT** required to sign-up for this course*

Registration Rates: (rates do not include GST)

- CSPG Member rate: \$475
- Non-member rate: \$675

Registration Close: *September 9, 2021*

Registration includes: Transportation and Field course manual

Time: 7:30am– approximate return time 6:00pm

Meeting location: CSPG Office, 540-5th avenue SW, Calgary

About the Trip Leader

Dr. Grasby received a Ph.D. in Geochemistry from University of Calgary in 1997. He has worked on regional groundwater studies in the Canadian Prairies and in British Columbia, including climate change impacts of regional water supply. He has also conducted extensive studies on thermal and mineral springs in western and northern Canada. He is lead author of the 2012 GSC publication, "Geothermal Energy Resource Potential of Canada." He is currently the president on the board of directors for the non-profit, Geothermal Canada.