

2019 PROFESSIONAL DEVELOPMENT SESSIONS

Friday, February 22, 2019

8:30 am to 9:30 am

Working with Indigenous Communities – Maggie Stothart, PEng



Maggie Stothart, PEng

This presentation will provide information and perspectives on how to work with indigenous communities. Topics for discussion are cultural importance of land and water, communication and interactions with community, and working on reserve. This session is meant to increase awareness and understanding of the Truth and Reconciliation Commission of Canada among engineers and geoscientists to improve their professional efforts while working with indigenous communities.

Maggie Stothart, PEng graduated from the Civil Engineering program at the University of New Brunswick in 2007. Maggie is a Professional Engineer and works for the North Shore Mi'kmaq District Council where she assists their member communities in the administration of capital infrastructure projects and planning. Maggie is an active member of the APEGNB at both the branch and provincial level. She is Treasurer of the Northeast Branch and helps organize events with the members and works to engage the public, school district and students in raising the profile of the engineering profession. At the provincial level, Maggie completed a two-year term on Council and is currently the Vice Co-Chair for the Diversity and Inclusion Committee. She is a strong supporter of diversity and believes in a diverse workplace which enriches culture and enhances team productivity and growth.

9:30 am to 10:30 am

Assessing potential impacts of shale gas development on shallow aquifers through upward fluid migration: A multi-disciplinary approach applied to the shales in New Brunswick and Quebec – Christine Rivard, Ph. D. and Denis Lavoie, Ph.D.



Christine Rivard, Ph.D.

In Eastern Canada, all provincial jurisdictions have had a moratorium on hydraulic fracturing because of the concerns voiced about its potential environmental impacts, especially on shallow groundwater resources. The Geological Survey of Canada has carried out two projects to assess the potential for fluid migration from deep hydrocarbon-rich shale or tight sandstone units to shallow aquifers: one in southern Quebec and one in southern New Brunswick. In these two areas, regional faults are present and dissolved hydrocarbons have been found in shallow groundwater, but the geological and hydrogeological contexts of these areas are very different. Throughout the world, very little is known about the intermediate zone located between shallow aquifers and deep hydrocarbon reservoirs even though this domain controls the vulnerability of shallow aquifers to deep industrial activities. In both projects, data collected, and their interpretation do not provide any evidence that large-scale hydraulic connections are present in these study areas. In the ongoing McCully-Elgin project, the intermediate zone does not seem to be affected by major brittle structures in the hydrocarbon field and adjacent area, but a fault zone located outside the producing field, at the basin margin, was found to bring hydrocarbons at or close to the surface. This specific region is currently being studied more to understand the significance of brittle faults at basin-margin as potential natural escape pathways for hydrocarbons and its potential hydrogeological connection with the gas field.



Denis Lavoie, Ph.D.

Christine Rivard, Ph.D. obtained her Ph.D. in hydrogeology in 2001 from the Institut national de la recherche scientifique (INRS) in Quebec City. She joined the Geological Survey of Canada as a research scientist. She has led and participated to several regional aquifer characterization projects in Eastern Canada and notably worked on recharge assessment. Since 2012, she has been leading projects on potential impacts of shale gas development on groundwater, mainly investigating the possibility of upward fluid migration. Christine is an adjunct professor at INRS.

Denis Lavoie, Ph.D. obtained a Ph.D. in sedimentary geology and geochemistry from Laval University in 1988 and is a research scientist for the Geological Survey of Canada. His research focuses on sedimentary environments, organic and inorganic geochemistry as they pertain to conventional hydrocarbon systems in the Canadian North and on resource and environmental aspects of unconventional hydrocarbon systems in southern Canada. He is a member of the Canadian Society of Petroleum Geologists (CSPG), American Association of Petroleum Geologists, International Association of Sedimentologists and past Editor-in-Chief of the CSPG Bulletin. He is the 2016 recipient of the Middleton Medal from the Geological Association of Canada and the 2016 CSPG Medal of Merit.

10:30 am to 11:30 am

Confidential Information: Professional Regulation, Professional Ethics and Legal Considerations – Bob McDonald, PEng, MBA, LL.B.



*Bob McDonald, PEng,
MBA, LL.B.*

Professional engineers, professional geoscientists, and members-in-training often deal with confidential information in the context of their employment and/or consulting activities. The possession and knowledge of confidential information may establish the opportunity for creating a conflict of interest. This presentation will look at ethical and legal obligations relating to confidential information and provide guidance for practitioners as they change employers or accept engagements from clients.

Bob McDonald, PEng, MBA, LL.B. is the Executive Director and Registrar at the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS). He graduated with a B.Sc. in Chemical Engineering from the University of Saskatchewan in 1978 and was registered as a professional engineer in 1980. He also has both an MBA and LL.B., and he is currently a member of both APEGS and the Law Society of Saskatchewan. Bob taught engineering law and professionalism at the University of Regina, guest lectured at the University of Saskatchewan and the University of Regina, served on the Body of Knowledge Task Team of Engineers Canada to establish the syllabus for the professional practice examination and has made presentations in professionalism and ethics for regulators across Canada. Prior to joining APEGS in 1999, Bob was a partner in a Regina law firm.