The short course Exploration Geochemistry: Fundamentals and Case Histories was held 2–3 March 2018. It was taught as two back-to-back one-day courses that could be taken together or individually. The material reviewed principles, methods, and developments in the application of low-temperature exploration geochemistry for surficial media by some of the most experienced practitioners in the field. Day 1 reviewed the fundamentals of exploration geochemistry; day 2 presented case studies for different deposit types and exploration methods in various parts of the world.

Below is a summary of the topics presented at the short course.

**Day 1 (2 March 2018)**  
**Exploration Geochemistry Basics**  
**Introduction to Exploration Geochemistry**  
Lynda Bloom, Analytical Solutions Ltd.

**Design of a Successful Geochemical Survey**  
Lynda Bloom, Analytical Solutions Ltd

**Stream Sediments, Lake Sediments, Aqueous Geochemical Methods**  
Matt Leybourne, Queen’s University

**Indicator Mineral Methods**  
Beth McClenaghan, Geological Survey of Canada

**Geochemistry Data Validation**  
Pim van Geffen, Vancouver Geochemistry

**Exploratory Data Analysis**  
Pim van Geffen, Vancouver Geochemistry

**Day 2 (3 March 2018) **  
**Case Histories**
**Exploration Targeting using Stream Sediments in British Columbia and Yukon, Canada**  
Dennis Arne, Telemark Geosciences

**The Sakatti Ni–Cu–PGE Sulphide Discovery (Finland) – The Role of Geochemistry from Early Stage Exploration through to Resource Definition**  
Christian Ihlenfeld, Anglo American

**From Treetops to Massive Sulphide Mineralization using a Spectrum of Geochemical and Prospecting Techniques – the TL story, British Columbia, Canada**  
Colin Dunn, Colin Dunn Consulting Inc

**Extent of Glacial Dispersal of Gold Mineralization from the Naartok Gold Deposit, Hope Bay Greenstone Belt, Nunavut, Canada as Determined from Sampling Till in Frost Boils**  
Stu Averill, Overburden Drilling Management Ltd.

**Croteau Est and Ti-pa-haa-kaa-ning Mineral Properties (Quebec and Ontario, Canada): Discovery through Two Different Approaches to Exploration**  
Tom Morris, Northern Superior Resources

**Use of Artificial Intelligence in Interpreting Partial Extractions for Peat and Soils Survey: Examples from the Abitibi Clay Belt, Canada**  
Réjean Girard, IOS Services Géoscientifiques Inc.

**Soil Geochemistry of Extremely Weathered Terrains: A Comparison of Fusion and Aqua Regia Digestion**  
Juan Carlos Ordóñez Calderón, Kinross Gold Corporation

**Role of Geochemistry in the Discovery of the Salares Norte Gold Deposit, Chile**  
Chris Benn, Chris Benn Consulting

**Exploration geochemistry in deeply weathered terrains**  
Dennis Arne, Telemark Geosciences

**Short-course convenors were Beth McClenaghan (Geological Survey of Canada) and Lynda Bloom (Analytical Solutions Ltd)**

Beth McClenaghan is a graduate of the University of Waterloo and Queen’s University (both Canada) and is a research scientist at the Geological Survey of Canada (GSC) where she has worked for the past 25 years. In addition to being a research scientist, Beth is Head of the Geochemistry Section at GSC. Her research has focused on developing geochemical prospecting methods in areas of glacial till and on researching indicator minerals for mineral exploration in glaciated terrains, with particular emphasis on diamonds, and precious, base, and strategic metals. She is an adjunct professor at Queen’s University and supervises the indicator mineral research of several graduate students at Queen’s and other Canadian universities.

Lynda Bloom, gained experience as a laboratory manager and chemist to implement assay quality control programs for many of the world's largest mining corporations and junior exploration companies. She has published extensively and participated in many technical workshops on the application of exploration geochemistry and assay quality control.