



Technical Program Call for Abstracts

The 51th Annual Yellowknife Geoscience Forum November 15th – 17th, 2023

This year's Yellowknife Geoscience Forum will provide an intimate setting for delegates from industry, academia, and government to exchange information on resource exploration, mining activities, and geoscience research in Canada's North. The Forum consists of a trade show and a technical program. The technical program for the 2023 Yellowknife Geoscience Forum is seeking oral and poster presentations on the following topics:

- ❖ Geoscience and Exploration
- ❖ Diamond Geology and Exploration
- ❖ Energy in Canada's North
- ❖ Environmental Monitoring and Research
- ❖ Changing Permafrost Landscapes
- ❖ Permafrost Monitoring and Data Management
- ❖ Community Engagement
- ❖ Regulatory and Policy Updates
- ❖ Mining and Advanced Project Updates
- ❖ Critical Minerals Geology and Exploration
- ❖ Surficial Geology Mapping
- ❖ Northern Lakes in a Changing Climate

YKGSF Updates

- Look out for future updates, including registration and submission deadlines:
<https://www.nwtgeoscience.ca/gforum/>

Contact

- [Landen Powell](#) with questions about the Technical Program/Abstract Submission.

Registration

- Registration for the Yellowknife Geoscience Forum will be available in October.
- All speakers, poster presenters, and session chairs must register for the conference.
- Badges will be checked at every venue.

Session Descriptions

Geoscience and Exploration

This session will showcase a variety of mineral prospects in the Northwest Territories and Nunavut, summarize mineral-exploration activities that took place in both territories over the past year, and provide the latest results of geoscience research and mapping projects. Presenters are from government, academia, and industry.

Diamond Geology and Exploration

Exploration for, and the development of, diamond resources have played an enormous role in the evolution of the Northwest Territories for nearly 25 years. As the diamond mines mature, exploration for new diamond resources is also becoming more mature. A depressed exploration market around the world has slowed diamond exploration for several years. Now exploration financings are showing signs of recovery and diamonds are returning as an exploration target of choice. This session will explore the state of existing mines and producers, as well as showcase the latest diamond exploration projects and techniques at play in the Northwest Territories and Nunavut.

Energy in Canada's North

This year's Energy Geoscience Session will feature energy resource topics that will range from petroleum geoscientific studies in the Mackenzie Valley and Mackenzie Delta regions, to geoscience-related alternative energy resources such as geothermal energy and natural gas. Speakers from government, academia, and industry will highlight current research pertaining to resource exploration and energy-related issues.

Environmental Monitoring and Research

This session will focus on topics of direct interest to the oil and gas and mining sectors, including research on environmental geochemistry, ecotoxicology, legacy contamination, permafrost, hydrology, reclamation and remediation and the design of monitoring and management programs. Presentations will highlight targeted decision-makers and how they may apply this information.

Changing Permafrost Landscapes

Permafrost thaw is the main cause of climate-driven landscape change in the north and has a major effect on ecosystems and infrastructure. This session will showcase research that contributes to understanding the distribution of thaw-sensitive terrain across the north. This is critical to predict the future state of the environment and water resources of the Northwest Territories and for climate change adaptation planning.

Permafrost Monitoring and Data Management

Data collection, processing, storage, and dissemination strategies are essential to address permafrost-thaw-related issues in the north effectively. This session will feature monitoring efforts across the Northwest Territories, data management and database development, and strategies to coordinate the workflows. We invite northerners, data generators, data users, and other permafrost practitioners to contribute to this session.

Community Engagement

This session targets presenters involved in community engagement, outreach programs, and capacity-building initiatives in resource development. We invite abstracts and summaries that showcase a variety of perspectives for community training and learning, and supporting the development of sustainable communities related to exploration, mining, and petroleum development in the north.

Regulatory and Policy Updates

This session will feature talks on the regulatory operating environment in the Northwest Territories and Nunavut including recent changes in legislation, policies and guidelines, both to the territorial and federal regimes. This session will also focus on some important aspects of land use planning and the linkages with northern regulatory boards.

Mining and Advanced Project Updates

Northern operating mines are the largest private-sector contributor to the territorial economies and provide significant benefits to the north. Operating mines and projects in advanced phases will provide operation updates over the past year and outlooks for the coming year.

Critical Minerals Geology and Exploration

Canada is primed to capitalize on the rising global demand for critical minerals, driven in large part by their role in the transition to a low-carbon and digitized economy. Essential for renewable energy and clean technology applications (batteries, permanent magnets, solar panels, and wind turbines), they are also required inputs for advanced manufacturing supply chains, including defence and security technologies, consumer electronics, agriculture, medical applications, and critical infrastructure.

Surficial Geology Mapping – A lot more than dirt!

From detailed studies to regional surveys, surficial geology maps play a crucial role in understanding the geological history and future of the land. This session welcomes submissions related to recent and ongoing mapping projects, advances in mapping methodologies and remote mapping technologies, feature mapping and compilations, and applications of surficial geology maps towards infrastructure development and adaptation.

Northern Lakes in a Changing Climate

Lakes are an essential resource supporting cultural, subsistence, and recreational activities for communities in the Northwest Territories. Lakes are also under increased and cumulative pressures from climate change and municipal and industrial activities. This session will showcase research across a diverse spectrum of disciplines that address emerging threats to lakes in the Northwest Territories.