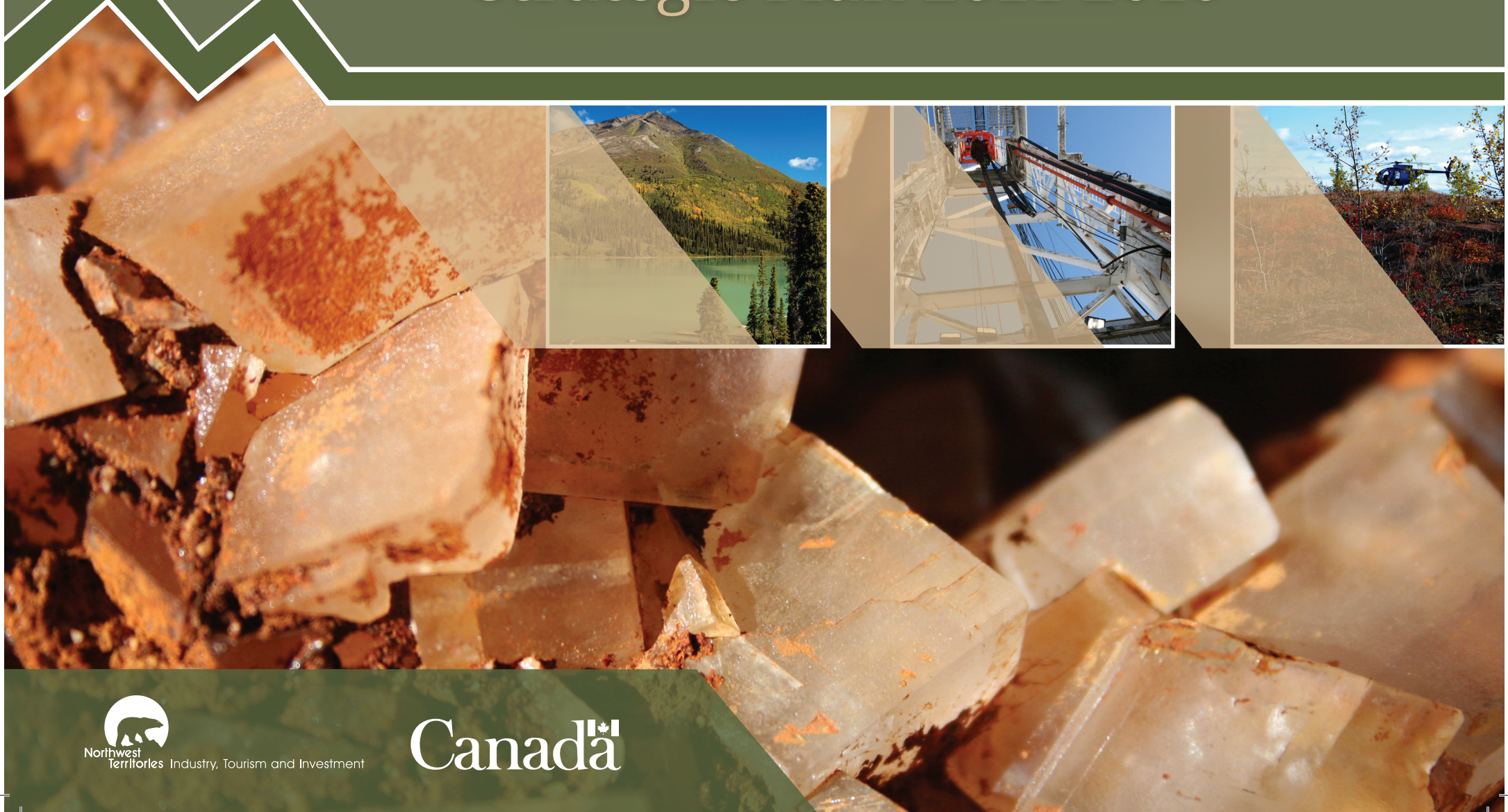


NORTHWEST TERRITORIES  
**GEOSCIENCE OFFICE**  
RESEARCH • ANALYSIS • INFORMATION

# Strategic Plan 2011-2016







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*This document summarizes the results of a Strategic Planning exercise carried out by the NWT Geoscience Office during 2011. The detailed plan, titled Northwest Territories Geoscience Office Strategic Plan 2011-2016, can be downloaded using the Gateway web application found at [www.nwtgeoscience.ca](http://www.nwtgeoscience.ca).*

*A French version is also available.*

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# Introduction

The Northwest Territories Geoscience Office is a partnership between the Government of the Northwest Territories (Department of Industry, Tourism and Investment) and the Government of Canada (Aboriginal Affairs and Northern Development Canada). The NWT Geoscience Office receives funding from AANDC, ITI and the Canadian Northern Economic Development Agency.

ITI and AANDC manage the NWT Geoscience Office together. A written **Memorandum of Understanding** exists between the two departments. The most recent version was signed in January 2010.

The NWT Geoscience Office provides information to governments, industry and the general public about the **geology** of the NWT. This information may be used to make decisions about activities that could affect the NWT's land, natural resources and environment.

This strategic plan will position the NWT Geoscience Office as the main source of geological information for the NWT.

The NWT Geoscience Office's mission is focused on **mineral** and **petroleum** resources. Information about **mineral** and **petroleum** resources is used to help make decisions about:

- **economic development**
- how the land is managed
- how communities can grow and protect the environment at the same time
- how to adapt to the changing climate

Sometimes, **stakeholders** have different opinions about the best use of NWT lands and resources. The NWT Geoscience Office provides neutral scientific information to help stakeholders make decisions. The NWT Geoscience Office strives to be an honest source of geoscience information, without taking sides on any topic.

Northwest Territories (NWT)

Government of the Northwest Territories (GNWT)

Industry, Tourism and Investment (ITI)

Aboriginal Affairs and Northern Development Canada (AANDC)

**Memorandum of Understanding** - an agreement.

**Geology** - science of the earth.

**Mineral** - a solid substance of natural materials from the Earth, such as diamonds or gold.

**Petroleum** - a liquid mixture that can be extracted from rocks and refined to produce fuels such as gas and oil.

**Economic Development** - increasing economic and social well-being of people.

**Stakeholder** - a person or group who holds an interest in a particular activity or topic.



## Mission and Vision

### Mission

To investigate, understand and explain the **geology** of the NWT. This information is provided to governments, industry and the general public to help them make decisions about:

- responsible development of **mineral** and energy resources
- use of the land
- protecting the environment

### Vision

To be the principal source of geoscience information for the NWT.

### Strategic Outcome

The people of the NWT benefit when their land, **mineral** and energy resources are used in a responsible way.



## Things That Might Affect This Strategic Plan

### The NWT Economy

**Mineral** and **petroleum** resources are the main source of economic growth in the NWT. They make up about 67 percent of the **Gross Domestic Product for the NWT**. In 2010, **mineral** production was valued at \$2 billion and oil and gas production was valued at \$477 million.

**Mineral** production in the NWT is mainly from diamond mining. Looking to the future, this means two things. We need to:

- continue mining diamonds
- look at mining other **minerals** so we are not relying on a single **mineral** resource

The Mackenzie Gas Project could be a large part of the NWT's natural gas production. By 2020, it could increase oil and gas production each year to \$2.2 billion.

Other important projects could increase **economic development** as well. Many are close to existing **infrastructure**, which may make development easier. For example, the existing oil pipeline from Norman Wells could carry newly found oil to southern markets.

Some NWT communities may also be able to develop resources for **hydroelectric power** and **geothermal energy**. Using the NWT's own energy resources means we do not have to import as much energy from other places.

The NWT Geoscience Office provides geoscience information to governments, industry and the general public. This information is very important to help stakeholders make decisions about how the land is used in the NWT. This information service means that companies do not have to repeat the same studies over and over again. This saves money for the companies and there is less impact on the environment.

Geoscience information helps governments and companies understand the **geology** of the land when they are planning and building **infrastructure**. It can tell:

- the strength of the ground
- where natural dangers are
- if natural building materials in the area can be used

This knowledge can also help in making decisions about where to build **infrastructure** needed for transportation in the future.

## The NWT Environment

Northerners place great importance on taking care of the land. This is especially true of indigenous peoples who continue to lead traditional lifestyles.

Federal, territorial and Aboriginal governments must work together to create **economic development** opportunities and to protect the environment. They use geoscience information to make decisions about these topics.

## The Changing Climate

Many people say Northern Canada will be one of the first places in the world to see the effects of climate change. The effects of climate change in the North may include:

- decreased thickness and extent of sea, lake and river ice
- ice roads that are open for a shorter amount of time
- trucks that have to take smaller loads so they aren't as heavy on the ice roads
- melting of **permafrost** that could result in **infrastructure** failures
- rising sea levels could change coastlines and cause flooding in some communities

## Science Capacity

The NWT Geoscience Office seeks to address science **capacity** gaps that the GNWT and the Government of Canada have identified. The GNWT's science priorities are identified in the document *Building a Path for Northern Science*. The Government of Canada's science priorities are identified in *Canada's Northern Strategy*.

Many of these NWT science priorities require geoscience information. The NWT Geoscience Office already contributes to this process by studying:

- natural resource potential
- new **mineral** resources that help to diversify **economic development**
- alternative energy sources
- how development might impact the environment

Other geoscience information that addresses these priorities are:

- information on the movement of ground water
- information about how changes in **permafrost** impact **infrastructure**

The NWT Geoscience Office should consider how it can assist in providing groundwater and **permafrost** information that addresses NWT science properties.

## Gross Domestic Product

**for the NWT** - how much the NWT is worth. This is based on the total value of goods produced and services provided during one year.

**Infrastructure** - things that provide basic services for people, such as buildings, roads and power supplies.

**Hydroelectric Power** - power made by flowing water.

**Geothermal Energy** - energy from the heat of the Earth.

**Permafrost** - a layer of soil and / or rock under the Earth's surface that stays frozen all the time.

**Capacity** - a specific role or position.





# NWT Geoscience Office Goals and Plans

## Goal 1

To be the principal resource for NWT geoscience information.

### Plan

### What We Plan To Do

1 Continue to investigate NWT geology.

- Look at existing geoscience maps and information in order to prioritize additional areas to be mapped.
- Work with partners to increase mapping in priority areas.
- Continue to develop geoscience maps and information.
- Continue to update the NWT geoscience database.

2 Understand and explain the NWT's geology.

Work with partners in universities and the Geological Survey of Canada to determine what information still needs to be gathered.  
Interpret, report and compile NWT geoscience information.



## Goal 2

To learn about the mineral resources of the NWT.

### Plan

1 Increase general awareness about NWT mineral resources and mining.

### What We Plan To Do

- Conduct geoscience studies that assist in locating mineral resources, particularly those that can increase the variety of minerals produced.
- Track exploration activity, and continue to develop information databases that compile and interpret industry data.
- Provide geoscience information to help mineral development projects.
- Keep the Northern Minerals Database and other publications up-to-date.

### Goal 3

To learn about the energy resources of the NWT.

#### Plan

1 Gather geoscience information to help companies look for oil and gas resources.

#### What We Plan To Do

- Complete studies and reports that examine the petroleum potential in the Mackenzie Plain and in other areas, especially those with existing infrastructure.
- Provide data and information to companies to support Calls for Nominations and Calls for Bids.
- Lead the development of an NWT petroleum information database.

2 Help find energy resources that are currently not developed in the NWT.

Conduct studies that examine the potential for unconventional oil and gas resources.  
Work with partners to provide information about geothermal energy.

3 Support the development of local energy sources.

- Work with partners to develop local natural gas supplies.
- Work with partners to develop geothermal energy.

## Goal 4

To provide information to decision-makers about activities that could affect the land, environment and infrastructure of the NWT.

### Plan

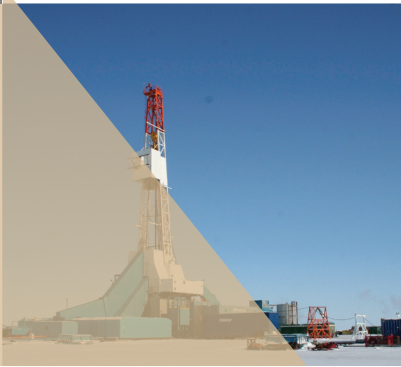
1 Provide resource information to decision makers.

### What We Plan To Do

- Provide resource information required in the Protected Areas Strategy and other initiatives.
- Talk to stakeholders to determine their geoscience needs.
- Provide information to help stakeholders make informed decisions.
- Reply to requests for geoscience information.

2 Help stakeholders understand climate change impacts on the environment and infrastructure.

- Support transportation and infrastructure decisions.
- Support territorial and community infrastructure planning.



## Goal 5

To use modern methods and best practices in managing geoscience information for the NWT.

### Plan

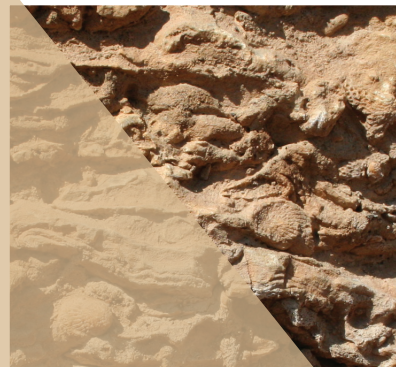
### What We Plan To Do

- 1 Provide high quality geoscience information, data and knowledge.

  - Keep databases updated with new information and results.
- 2 Further develop a user-friendly website to get information to stakeholders.

  - Strive to continually use the most effective technologies to meet client needs.
  - Continue to solicit feedback and advice from clients to support their information needs.
- 3 Support stakeholder awareness on the importance of NWT geoscience information.

  - Make and apply a plan to inform stakeholders about NWT geoscience projects.
  - Continue to provide geoscience educational materials to NWT schools and teachers.
  - Promote geoscience as a career path.



## Goal 6

To continually improve and expand the services provided to NWT stakeholders.

### Plan

### What We Plan To Do

1

Find ways to ensure that the NWT Geoscience Office can meet the expanding needs of its client base.

- Develop a business case to ensure that adequate resources are available for publicly-funded geosciences initiatives in the NWT.
- Promote opportunities to house publicly-funded geoscience expertise at the NWT Geoscience Office.

2

Increase the awareness of the NWT Geoscience Office and use of geoscience information by stakeholders.

- Engage new stakeholders to understand their geoscience needs.
- Continue to co-organize the NWT and Nunavut Geoscience Forum to increase awareness of NWT geoscience.
- Actively contribute to the ongoing evolution of NWT science priorities.



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