



IDENTIFICATION

Department	Position Title	
Industry, Tourism and Investment (ITI)	Project Geologist	
Position Number(s)	Community(s)	Division/Region(s)
63-14340	Yellowknife	NWT Geoscience Office

PURPOSE OF THE POSITION

The Project Geologist leads bedrock geological mapping and sampling projects in the Northwest Territories (NWT) and supervises or coordinates the activities of all project workers. The Project Geologist also carries out or arranges related administrative, logistical, research, and laboratory work as required to contribute to the geoscientific knowledge base of the NWT.

SCOPE

Located in Yellowknife, the Northwest Territories Geoscience Office (NTGO) is part of the Department of Industry, Tourism and Investment (ITI).

NTGO provides expertise on the mineral and petroleum resources of the NWT. It also carries out mineral and energy potential studies and non-renewable resource assessments in support of land use planning, land claim processes, and conservation initiatives. NTGO also compiles, manages and makes available a variety of geoscientific data, and provides public education and outreach services.

Reporting to the Manager Mineral Deposits and Bedrock Mapping at NTGO, the Project Geologist develops and leads bedrock mapping projects that increase knowledge of the geology and mineral potential of the NWT and assist industry in identifying non-renewable resource exploration and development opportunities, helping to reduce their investment risk. These projects also contribute to land-use planning and resource management decisions. Mapping projects are normally carried out in conjunction with other NTGO staff, summer student employees, and external partners.

The Project Geologist will be responsible for supervising some project staff, coordinating the work activities of other project workers, planning logistically complex field work, making financial decisions, and managing the project budget (up to \$500,000). Due to the isolation

of field camps, plans and decisions made during field work will be typically carried out without direct input from NTGO senior managers. The Project Geologist will also be responsible for the production of geographic information system (GIS) digital compilations and atlases, maps, and original reports of high technical and professional quality, and will provide geoscientific data and advice to industry, Aboriginal groups, NWT communities, government agencies, university researchers, and the public that may aid in development of the mineral resources of the NWT.

RESPONSIBILITIES

1. Develops, leads, and/or participates in original geoscience research projects in mineral-prospective areas of the NWT.

- Under the direction of NTGO management, design and plan new bedrock mapping projects and related activities in conjunction with other NTGO staff and external colleagues. Projects may vary from complex, regional-scale mapping to small, independent thematic studies.
- Supervise and/or coordinate the work duties of all project workers. These include NTGO staff, contractors, project partners, and university students hired by the incumbent for project-related summer employment.
- Supervise the field component of graduate and undergraduate thesis research in collaboration with university-based supervisors.
- Supervise sub-projects linked to the field program, including contracted services (e.g., geochemical and isotopic analyses). Multiple sub-projects may run concurrently, with some of these normally carried out by the Project Geologist.
- Work in conjunction with GIS technical staff to prepare GIS databases and remote predictive maps from existing information to provide a comprehensive framework for new field and/or analytical work.
- Organize, undertake and report on field research programs, often as the project leader. This involves responsibility for the financial, scientific and logistical management of the field program, which is often located in remote fly-in locations, contributing to obtaining field support services (e.g. aircraft charters, contributions agreements for research partners, etc.), and responsibility for human resource management of field crews (numbering up to 6-8 participants and potentially including summer students) and the safe conduct of all field operations. The incumbent leads or participates in pre- and post- fieldwork research activities and fosters ongoing healthy and productive partnerships with external research partners. The incumbent may also participate fully in collaborative field research activities organized by other groups (e.g. universities and the Geological Survey of Canada).
- In conjunction with NTGO's Mineral Deposits Geologist, accurately describe any significant mineral showings or deposits within the study area, and publish these findings along with relevant assay data obtained by NTGO or its partners.
- Track and account for all project-related expenses and complete project activities within budget and according to GNWT financial regulations.
- Ensure cost-effective, efficient, and safe work activities in the field and office.
- Participate in arranging project-related contracts.

- Monitor the maintenance and responsible storage of field equipment, identify requirements for equipment acquisition, and order new equipment and supplies by accepted administrative procedures.
 - Arrange the timely acquisition of land use permits and research licenses for field-based projects. Consult with local communities and land use groups as required to obtain required clearances.
 - Arrange travel for field work, to attend conferences, meet with scientific collaborators, and perform outreach-related activities.
 - Maintain regular contact with colleagues at NTGO, other government geoscience agencies, universities, and industry to ensure a constant critical review of work underway and a high technical quality of completed work.
 - Organize planning and scientific workshops for all project participants and prepare reports on workshop outcomes for stakeholders and management.
 - Interpret data produced from contracted services such as geochemical and isotopic analyses.
- 2. Prepares interim and final maps and reports for publication to ensure that project information is available to project partners, mineral industry, and other clients in an efficient and timely manner.**
- Prepare and edit reports, GIS maps, and GIS digital atlases as needed to meet project requirements and deadlines.
 - Prepare diagrams, maps, and reports for NTGO senior staff or the NTGO website.
 - Author or co-author scientific reports suitable for publication in refereed scientific journals or as NTGO publications.
 - Prepare and give oral and poster presentations at industry meetings, scientific conferences, and to Aboriginal and other community organizations.
 - Assist with the NTGO publication review process by providing constructive feedback on draft reports and presentations.
 - Lead or contribute to NTGO outreach initiatives that highlight the work activities of the Project Geologist.
 - Prepare or assist in preparing informative promotional materials.
 - Promote the resource potential of the NWT at public and professional events such as industry conferences.
- 3. Ensures that maximum advantage is taken of the potential benefits for the NWT economy from NTGO geoscience projects.**
- Prepare or assist in preparing support documents for the department.
 - Assist in planning the work program of the NTGO to ensure that approved objectives and budgets are met in an effective manner.
 - Provide specialist advice and guidance in response to client questions.
 - Through project-related activities and when possible, contribute to the employment of NWT residents and support of NWT businesses and service providers.
 - Lead or participate in geoscience-related outreach that increases public knowledge of the role of NTGO and promotes basic geoscience knowledge.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge of basic geological principles, sedimentology, stratigraphy, metamorphism, magmatic processes, geophysics, structural geology, and tectonics.
- Knowledge of economic geology and the application of mineral deposit models.
- Knowledge of the principles behind and construction of remote predictive maps.
- Detailed knowledge of NWT geology, and of current mineral industry activities and issues within the NWT.
- Knowledge of field-related safety issues and safe-work practices, and ability to design, implement, and enforce a safe work program.
- Ability to lead logistically complex, multidisciplinary field-based projects in remote locations.
- Ability to supervise or coordinate the work activities of all project workers (assistants, partners, contractors, NTGO staff) in the field and office. Up to 6 to 8 workers may be involved at any given time.
- Ability to manage large budgets and track and account for all project expenses.
- Ability to coordinate worker activities and scientific roles and responsibilities as described in formal collaborative arrangements with other government geoscience agencies (e.g., Geological Survey of Canada).
- Ability to research and compile previous work by industry, government, and the academic community, and effectively use this information in planning field-based activities.
- Ability to incorporate geological knowledge, field and laboratory data, and reference materials in developing sound geological interpretations.
- Ability to use Microsoft software (Word, Excel, Powerpoint), graphics programs (e.g., CoreIDRAW, Illustrator, Photoshop), GIS software (e.g., MapInfo, ArcGIS), and specialized geology software (e.g., Newpet, Rockware, Spheristat).
- Ability to prepare and present visual (i.e. maps and diagrams), oral, and written presentations and reports of high quality.
- Ability to conduct critical peer reviews of geoscience projects and reports.
- Ability to pleasantly and effectively collaborate with colleagues, student employees, community members, Aboriginal groups, school children, industry representatives, prospectors, and the scientific community.
- Organizational, logistical, and time management skills required to effectively deal with the breadth and scope of the position and, at times, prioritize assignments which may have conflicting priorities and deadlines.
- Writing and editorial skills required to convey information in a concise manner.
- Skilled in using the Internet to conduct research and discover resources that are required or useful for project goals.
- Knowledge of basic techniques of wilderness survival, first aid, aircraft safety, water craft and land vehicle operation and firearms operation in order to ensure safety and well-being of field crews and successful execution of field activities in remote areas.
- Knowledge of the *Financial Administration Manual* is required in order to award contracts and monitor funds designated for geoscience research.

Typically, the above qualifications would be attained by:

Completion of a Masters Degree in Earth Sciences (bedrock geology specialization) and 3 or more years of work experience in bedrock geological mapping and related activities.

The incumbent must be eligible for registration in the NWT and Nunavut Association of Professional Engineers and Geoscientists (NAPEG) as a Professional Geologist.

WORKING CONDITIONS

(Working Conditions identify the *unusual and unavoidable*, externally imposed conditions under which the work must be performed and which create hardship for the incumbent.)

Physical Demands

Normal office environment for most of the time.

Fieldwork is physically taxing and the logistics of accommodation in the field (sleeping arrangements, travel arrangements, meals, etc.) can be demanding.

Field activities may be performed from camps in isolated locations. Camp quality is variable but can include overcrowding, dirty, dusty or wet conditions, exposure to insects, and extreme weather conditions.

Travel by fixed-wing or rotary aircraft and boats results in noise, confinement, risk to life, and may take place in poor weather.

Field activities continually present the risk of animal or insect attacks, and occasionally the risk of drowning, rock falls, vehicle accidents, explosions and environmental hazards related to bad weather and rough terrain. Insect bites, fatigue and minor injuries (cuts, abrasions, sore muscles) are common. Serious incidents are rare but unpredictable and can result in illness, serious injury or death.

Environmental Conditions

Normal office environment for most of the time.

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Sensory Demands

Normal office environment outside of field season.

Fieldwork requires a state of heightened alertness to ensure a safe working environment for the team.

Mental Demands

Multiple concurrent and conflicting tasks, leading to conflicting work priorities and time pressures. Field activities can include periods of prolonged isolation with one or fewer individuals, which may lead to mild or moderate psychological discomfort.

ADDITIONAL REQUIREMENTS

Position Security (check one)

- No criminal records check required
- Position of Trust – criminal records check required
- Highly sensitive position – requires verification of identity and a criminal records check