IDENTIFICATION

Department	Position Title	
Industry, Tourism and Investment	Mineral Assessment Geologist	
Position Number	**Community**	**Division/Region**
63-14342	Yellowknife	Northwest Territories Geological Survey / HQ

PURPOSE OF THE POSITION

The Mineral Assessment Geologist provides authoritative geoscience advice and coordinates regulatory reviews for the Northwest Territories Geological Survey (NTGS). The incumbent applies broad geoscience expertise to evaluate, triage, and coordinate the technical review of prescribed geoscience submissions under mineral resource legislation, conducts site visits to exploration and development properties to assess geological conditions and engage with industry geoscientists, develops proposals for major collaborative geoscience research initiatives, and translates NTGS expertise for internal and external clients to inform mineral exploration and development as well as the regulatory and land-use planning systems in which the mineral industry operates. Operating in a context of economic constraint and competing policy objectives, the position aligns regulatory review and liaison activities with departmental priorities, ensures the scientific integrity of geological information entering the public record, and meets the needs of stakeholders across regulatory and economic development functions.

SCOPE

Located in Yellowknife and reporting to the Manager, Mineral Deposits, the Mineral Assessment Geologist is a professional geoscientist responsible for planning, conducting, and reporting on regulatory review coordination, collaborative research proposal development, and applied geoscience liaison activities, including the technical triage and quality assurance of prescribed geoscience submissions under mineral resource legislation and the development of proposals for major framework geoscience research initiatives within the Northwest Territories Geological Survey (NTGS). The position exercises professional autonomy over technical project design and execution within the policies, guidelines, and priorities established by the Manager and the NTGS.

The resource sector is a foundational contributor to the Northwest Territories' economy and socio-economic well-being, with direct and indirect economic impacts that account for up to a

third of the territory's Gross Domestic Product. It is essential that these resources are responsibly managed to ensure that northerners receive maximum benefits from the sector while negative impacts are minimized and effectively mitigated. Geoscience data produced by the NTGS underpins this objective: it drives mineral exploration investment, informs land-use planning, infrastructure routing and design, and environmental assessment, supports Indigenous Government processes, and sustains broader public-policy priorities for economic sustainability and responsible resource development for the Northwest Territories (NWT).

Geoscience assessment and client liaison projects are critical to advancing understanding of the NWT's mineral potential. Comprehensive quality-assured geological information entering the public record through legislated reporting, and well-developed framework geoscience proposals that secure funding for NWT geological knowledge programs reduce uncertainty in public and private decision-making and provides a scientific basis upon which industry can plan exploration investments in the NWT. These data also deliver significant economic returns by reducing risk for the private sector and informing the allocation of limited public resources—supporting government decision-making that competes for attention alongside demands for health care, education, and infrastructure. The Mineral Assessment Geologist work contributes directly to these outcomes by ensuring the scientific integrity of geological information entering the public record under mineral resource legislation, and by developing proposals for major collaborative geoscience research initiatives that advance the NTGS's knowledge-generation mandate.

The Mineral Assessment Geologist independently plans and leads one to three concurrent geoscience projects, each typically lasting two to five years. Core responsibilities include co-developing project scopes, timelines, and budgets with the Manager; receiving, triaging, and coordinating the technical review of prescribed geoscience submissions under the *Mineral Resources Act* and the *NWT Mining Regulations* — assigning reviews to subject-matter specialists, personally reviewing submissions requiring generalist or multi-disciplinary assessment, compiling and synthesizing review findings, and developing research proposals for major framework geoscience projects, contributing technical content to the Mineral Exploration Overview, producing and quality-controlling geoscience datasets for public release; and preparing peer-reviewed scientific publications, public-facing government reports, maps, and presentations that meet NTGS standards for scientific rigour and client utility. The position contributes to securing external funding and supports collaborative arrangements with academic, industry, and governmental partners, including through, negotiating of contribution agreements and participation in intergovernmental coordination mechanisms such as the Intergovernmental Geoscience Accord and the Pan-Canadian Geoscience Strategy.

The Mineral Assessment Geologist supports regulatory functions in three capacities. First, the position provides authoritative geoscientific evaluation of all categories of prescribed geoscience submissions under mineral resource legislation, conducting initial technical assessment to determine the geological discipline, methods, commodity focus, and geographic

context of each submission; assigning reviews to the NTGS geoscientist with the most relevant expertise; reviewing submissions personally where a generalist or multi-disciplinary assessment is required; monitoring review progress against prescribed timelines; and compiling consolidated technical recommendations for the Manager and designated authority, ensuring that industry submissions meet statutory requirements and providing technical recommendations to those with approval authority. Second, as a proponent of field programs, the position ensures that its own field activities comply with applicable legislation governing safety, conduct of scientific activities, and professional practice accreditation, integrating regulatory compliance and stakeholder engagement into project design, permitting, and execution. Third, the position serves as a primary coordination point for NTGS geoscience input to external regulatory and development processes — including those operating under the Mackenzie Valley Resource Management Act — mobilizing the appropriate subject-matter specialist when external parties require NTGS expertise on development initiatives, resource assessments, or regulatory questions spanning multiple disciplines. The position also contributes to or coordinates the NTGS response to information requests, briefing notes, and ministerial correspondence related to mineral resource development.

The Mineral Assessment Geologist collaborates with colleagues within and between NTGS work units, mentors junior staff and students engaged in field programs, and contributes to a safe, supportive, and inclusive workplace. The position may provide day-to-day technical guidance to field assistants and project students but does not hold formal supervisory authority over professional staff. The position often serves as the project safety officer and ensures that field operations adhere to health-and-safety plans and safe work practices appropriate for remote northern environments.

The position maintains an active professional profile through contributing to NTGS publications through synthesis and editorial support, presentation on regulatory and geoscience program development at professional forums, participation in inter-survey coordination on regulatory review and reporting standards, development and refinement of internal quality standards for prescribed submissions, and professional registration as a geoscientist, contributing to the credibility and reputation of government science in the NWT.

NTGS geoscientists are core contributors to the annual Yellowknife Geoscience Forum and play a central role in shaping the credibility of the conference's technical program. They provide authoritative geoscience knowledge, present current research, and help translate technical findings into information that is directly useful for exploration companies, Indigenous governments, regulators, educators, and northern communities. Their participation ensures the Forum, the NWT's largest annual conference, remains grounded in the realities of northern priorities—supporting responsible resource development, improved land-use decision-making, and a stronger shared understanding of the NWT's mineral potential. The Mineral Assessment Geologist may also represent the NTGS at national and international technical and intergovernmental forums relevant to their area of expertise and participates in the broader

land and resource management regime grounded in settled land-claim and self-government agreements, particularly as these address land-use planning, environmental assessment, and economic measures under land claims.

Overall, the Mineral Assessment Geologist portfolio combines scientific excellence with applied service delivery, regulatory support, and collaborative partnership to advance responsible resource development, sustain economic opportunity, support land-use decisions, and maintain the long-term credibility of government geoscience in the Northwest Territories.

RESPONSIBILITIES

1. **Applies broad geoscience expertise and field-based technical knowledge to evaluate the quality and significance of geological information generated through NWT mineral resource activities and develops proposals for major collaborative geoscience projects to advance territorial geological knowledge.**
   - Maintains and applies current and credible technical knowledge across the range of geoscience disciplines practiced in the NWT mineral exploration and mining sector to critically evaluate the scientific quality, completeness and regulatory compliance of geological data and interpretations in work assessment reports submitted by industry.
   - Conducts site visits to active exploration and development properties to observe geological conditions, review geological work in progress, and assess the geological context of operations that will generate submissions under mineral resource legislation — serving as a knowledgeable technical representative of the NTGS whose geological judgment is recognized and respected by industry geoscientists.
   - Engages with industry geoscientists during site visits and at technical forums as a peer-level professional, providing informed geological discussion that builds productive working relationships between the NTGS and the exploration and mining community and that supports industry compliance with reporting standards.
   - Draws on direct field observations, industry engagement, and broad geoscience knowledge to identify emerging geological trends, knowledge gaps, and research opportunities across the NWT — feeding this intelligence into NTGS program planning and proposal development.
   - Develops detailed proposals for major framework geoscience projects, translating the Manager's strategic direction into technically sound, fundable research programs — including defining scientific objectives, scope, methodology, partnerships, timelines, and budgets for initiatives that may involve multi-year, multi-partner collaboration with federal agencies, other geological surveys, and academic institutions.
   - Maintains awareness of current research in NWT geology and mineral deposits through the scientific literature, peer-review when appropriate, conference participation, and engagement with the broader Canadian and international geoscience community.

2. **Applies geoscience expertise to triage, coordinate, and quality-assure the technical review of prescribed geoscience submissions under mineral resource legislation, ensuring reviews are assigned to appropriate subject-matter specialists and that recommendations to decision-makers are scientifically sound and consistent**
   - Receives and conducts an initial technical assessment of incoming work assessment reports and other prescribed geoscience submissions under mining legislation, evaluating the geological discipline, methods, commodity focus, and geographic context of each submission to determine specialist review team for a competent review.
   - Assigns reviews to the NTGS geoscientist with the most relevant technical knowledge — routing submissions based on discipline, methods, commodity, and geographic context — drawing on a working understanding of each colleague's disciplinary strengths and current capacity.
   - Reviews submissions personally where the geological content falls within the position's own competence or where the submission requires a generalist assessment spanning multiple disciplines, rather than deep expertise in a single area.
   - Monitors review progress against prescribed or administrative timelines, follows up with assigned reviewers, and resolves scheduling conflicts or capacity issues in consultation with the Manager.
   - Compiles and synthesizes review findings from multiple reviewers where a submission spans disciplines, ensuring the consolidated technical recommendation to the Manager or designated authority is coherent, internally consistent, and supported by the specialist assessments.
   - Identifies recurring quality issues, common deficiencies, or emerging trends in submissions and brings these to the Manager's attention to inform the development of technical guidance, reporting standards, or proponent communication.
   - Contributes to the development and refinement of internal review procedures, checklists, and quality standards for the assessment of prescribed submissions, ensuring processes are efficient, transparent, and defensible.
   - Supports the transition from the current representation work review process under the NWT Mining Regulations to the new assessment and reporting requirements under the MRA by contributing to the development of transitional procedures, staff orientation, and proponent guidance materials.

3. **Serves as a point of coordination for NTGS geoscience input to NWT development initiatives and translates unit expertise to support regulatory, economic development, and public decision-making**
   - Serves as the primary coordination point when external clients — development proponents, other government departments, Indigenous governments, federal agencies — need NTGS geoscience input on development initiatives, resource assessments, or regulatory questions that span multiple disciplines, mobilizing the appropriate subject-matter specialists.

- Provides trusted technical advice that integrates broad geoscience knowledge with an understanding of government mandates and decision-making processes relevant to mineral exploration, development, and the broader regulatory regime — including land-use planning, land and water regulation, and environmental assessment under the NWT integrated resource management regulatory regime
- Contributes to or coordinates the NTGS response to information requests, briefing notes, and ministerial correspondence related to mineral deposits and resource development, ensuring responses are accurate, timely, and reflect the NTGS's collective technical position.
- Represents and advances NTGS capability by maintaining productive relationships with development proponents, regulatory bodies, land and water boards, and partner organizations involved in NWT resource development — positioning the NTGS as a credible, responsive source of geoscience expertise.
- Engages with Indigenous governments and community organizations on matters related to mineral potential, development activities, and NTGS geoscience programs within their traditional territories and settlement areas, ensuring engagement is respectful, timely, and consistent with obligations under land claim and self-government agreements.

4. **Manages review workflows, proposal development processes, and project-level resources to support effective delivery of regulatory and liaison functions**
   - Plans and tracks personal and project resources — time, workflows, and expenditures — to ensure timely, efficient delivery of review coordination, proposal development, and liaison services aligned with approved work plans and the Manager's priorities.
   - Manages the intake, tracking, and filing of prescribed geoscience submissions and associated review documentation, maintaining organized records that support audit, reporting, and process improvement.
   - Assists with financial, contractual, and funding activities by preparing estimates and forecasts for proposal development and liaison activities, supporting the administration of external funding for framework geoscience projects, and contributing to contribution agreements in compliance with financial and administrative requirements.
   - Supports a diverse, inclusive, and supportive scientific workforce by mentoring colleagues, providing constructive feedback to peers, and fostering a culture of mutual support, teamwork, knowledge-sharing, and professional development.
   - Conducts periodic site visits related to development projects or exploration properties when direct geological observation is needed to support the review, liaison, or proposal development functions — maintaining field competency and credibility as a practising geoscientist.

5. **Contributes broad geoscience and regulatory knowledge to NTGS, departmental, and intergovernmental initiatives to support alignment of mineral deposits programs with policy objectives and collaborative management frameworks**

- Participates in NTGS coordination by working with peer scientists and managers to adopt common approaches, shared standards, and mutual accountability for geoscience programs and regulatory functions — with particular emphasis on ensuring the review and liaison functions are integrated with the scientific program rather than operating in isolation.
- Represents NTGS in interdepartmental and intergovernmental technical forums related to mineral resource regulation, MRA implementation, and development project coordination — acting as a bridge between NTGS technical staff and the governance/policy experts.
- Participates in MRA implementation working groups, intergovernmental technical committees under the Intergovernmental Council, and departmental planning processes, engaging in these settings more frequently than the other NTGS scientists who participate primarily when their specific discipline is at issue.
- Maintains awareness of evolving policy priorities, land claim obligations, and governance frameworks that affect NTGS programs and incorporates this awareness into review processes, proposal development, and stakeholder engagement.
- Contributes to strategic planning by highlighting emerging geoscience issues, client and partner needs, and interjurisdictional trends, and by helping translate long-term organizational vision into coherent, achievable priorities across business units — drawing on the unique vantage point afforded by the liaison and review coordination functions.

WORKING CONDITIONS

Physical Demands

Office work involves minimal physical demands.

Fieldwork involves sustained physical exertion over extended periods, including hiking over rough and uneven terrain for full workdays while carrying field equipment and geological samples (with individual loads up to 25 kg) for 8 hours a day. Field operations also require participation in physically demanding logistical activities typical of remote camps, such as equipment handling, camp setup, loading and unloading vehicles, boats and aircraft. The physical demands are experienced daily during field deployments, which may extend several consecutive weeks.

Environmental Conditions

Normal office environment for most of the year, with periodic extended field deployments of up to approximately eight weeks annually in remote locations.

During fieldwork, the incumbent is regularly exposed to uncontrolled outdoor environments and occupational hazards inherent to remote operations including: rapid and adverse changing

weather; uneven terrain; aviation-supported, off-road and/or marine travel; wildlife and other safety risks. These conditions are experienced daily during field deployments.

Sensory Demands

Normal office environment outside of the field season.

Field work requires sustained vigilance, situational awareness, and a heightened state of alertness to the safety of the team and operations in dynamic, potentially hazardous environments. Workdays may be extended requiring continues monitoring of environmental and operational conditions. The incumbent is subject to impacts associated with long hours of field work (e.g. fatigue). These demands are present throughout field assignments.

Mental Demands

Ongoing management of multiple concurrent responsibilities including scientific leadership, regulatory oversight, human and financial resource management and stakeholder engagement, often under time constraints.

During field deployments, the incumbent assumes continuous responsibility for scientific decision-making, logistical coordination, and staff safety, requiring real-time judgment under conditions of uncertainty and risk. The incumbent is also subject to substantial disruption of family life. These demands are experienced daily during field assignments, which may extend for a couple of months.

The incumbent is also responsible for the timely delivery of reports and results, presenting research or work plans to scientific peers, collaborators, community groups, etc. and attending geoscience meetings in Southern Canada two to four times per year.

KNOWLEDGE, SKILLS AND ABILITIES

- Knowledge of the geology of the NWT.
- Knowledge of geological principles, sedimentology, stratigraphy, metamorphism, magmatic processes, geophysics, structural geology, and tectonics.
- Knowledge of mineral deposit models and the relation between ore-forming and crustal processes on regional scales.
- Knowledge of field and laboratory studies to advance data, information and knowledge of the NWT's mineral wealth.
- Knowledge of integrating mineral deposit studies with geological mapping, geochemistry, geophysics and remote sensing datasets in a GIS format.
- Knowledge of the NWT's mineral deposits to serve as a subject matter resource for clients, academia and senior management, and to represent the organization within national and international geoscience communities.
- Knowledge of mineral exploration approaches and the resulting geoscience data, metadata and documentation practices.

- Knowledge of the legal, ethical, and professional obligations of a registered professional geoscientist (P.Geo.), including standards of independence, impartiality, and evidence-based decision making.
- Knowledge of federal and territorial legislation, regulations, and policy frameworks governing mineral exploration, mining, and field-based research and operations, and the role of geoscience within regulatory systems.
- Knowledge of how scientific evidence informs government policy, regulatory decision-making, and public interest outcomes.
- Knowledge of the balance between scientific independence and the organizational mandate of public geoscience dissemination.
- Knowledge of intergovernmental roles, responsibilities, and collaboration mechanisms under geoscience accords and related agreements.
- Working knowledge of human resource and financial frameworks sufficient to support compliant procurement, contracting, and reporting for assigned activities.
- Knowledge of health, safety, and risk management principles related to remote field operations, including ensuring appropriate training, planning, and mitigation measures.
- Knowledge of standard office and project management tools required to deliver complex programs and reporting obligations.
- Data management skills to organize, archive, and disseminate large volumes of geological information.
- Field skills grounded in best practices in safety management and geoscience research.
- Skills in scientific writing, peer review, and quality assurance to ensure authoritative, defensible public-sector geoscience outputs.
- Interpersonal and relationship-building skills to establish and maintain effective working relationships with Indigenous Governments and Organizations, industry, academia, other governments, and internal stakeholders.
- Demonstrated skills in conducting fieldwork, writing and reviewing geoscience technical reports and publications, collaborating effectively with research teams, and presenting the results of their original scientific work to colleagues and stakeholders.
- Ability to develop sound geological interpretations by incorporating geological knowledge, field and laboratory data, and reference materials.
- Ability to design, execute, and report on large framework geoscience data initiatives.
- Ability to funding opportunities, develop comprehensive proposals, and complete deliverables and required reporting within the designated schedule and budget.
- Ability to anticipate emerging issues, opportunities, and risks affecting geoscience programs and to adapt strategies accordingly.
- Ability to work independently and in collaboration with others in a team.
- Ability to foster a collaborative, respectful, and inclusive workplace that values teamwork, and knowledge sharing, while maintaining high scientific and ethical standards.
- Ability to facilitate and participate in solution-focused meetings and workshops.

- Ability to leverage external and intergovernmental partnerships and funding sources to deliver cost-effective geoscience programs.
- Ability to communicate complex scientific concepts, evidence, and uncertainty clearly and credibly to a range of audiences, including senior decision-makers, regulators, scientific peers, Indigenous Organizations, and non-technical audiences.
- Ability to translate scientific programs and results into information, tools, and practices applicable across disciplines and policy domains.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

Typically, the above qualifications would be attained by:
A Master of Science degree with a specialization relevant to geology, and three years of work experience in industry, academia, or a government agency in a related capacity.

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

Equivalent combinations of education and experience will be considered.

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

French language (check one if applicable)

☐ French required (must identify required level below)
Level required for this Designated Position is:
ORAL EXPRESSION AND COMPREHENSION
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
READING COMPREHENSION:
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
WRITING SKILLS:
Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
☐ French preferred

Indigenous language: Select language

☐ Required
☐ Preferred