Job Class Profile: Geologist III

Pay Level:		CG-43				Point Band:			1038-1081	
						Accountability		Development	Environmental	
		Interpersonal				& Decision		and	Working	Total
Factor	Knowledge	Skills	Physical Effort	Concentration	Complexity	Making	Impact	Leadership	Conditions	Points
Rating	7	6	3	5	8	6	6	3	4	
Points	327	100	19	24	240	130	124	64	43	1071

JOB SUMMARY

The Geologist III is responsible for conducting scientific research to acquire, analyze and interpret detailed geoscientific data, and disseminate the results of field and laboratory research to a variety of stakeholders.

Key and Periodic Activities:

- Manages and interprets geological field data including compiling rock types, structural measurements, photographs and observations; conducts petrographic analyses and interprets geochemical, isotopic and geochronological data. Utilizes database, statistical, spreadsheet, GIS, presentation and other software.
- Plans, implements and supervises geological field research projects including project proposals, compiling previous research, budget preparation and monitoring, staff hiring, supervision, orientation and evaluation, logistics, food equipment and other material requirements, plans actual daily field work, collects data and samples; operates various vehicles on land and water, records observations and analyses and identifies laboratory analytical requirements.
- Prepares scientific reports and findings including written analysis, maps to graphically represent findings, statistical analysis and laboratory results for editing and publication and/or release as current research.
- Ensures data integrity of the province's geoscientific knowledgebase and distributes as it is compiled to internal and external clients through publications, open-file reports, interactive CDs and customized mapping applications.
- Researches past, present and evolving geological concept models to accurately depict and represent data in light of current scientific thought and an expanded knowledge base.
- Presents scientific research and analytical findings at professional conferences, workshops, professional seminars and technical meetings.
- Collects new field and laboratory data, compiles historical data; synthesizes, analyses and prepares complete data set into a final report product.
- Collects, compiles, transports, identifies, interprets and curates fossils. Prepares and publishes
 paleontological reports. Maintains databases. Presents scientific results and findings.
- Conducts hands on analysis of geological material under investigation including sample preparation, microscopy, electron microprobe analysis and isotopic analysis.
- Organizes, manages and presents and makes available geoscientific data.

Key and Periodic Activities:

- Mentors senior undergraduate and postgraduate students.
- Provides consultation and technical advice for various clients including prospectors and exploration companies, academia, government and the general public.
- Prepares and submits monthly field reports.
- Develops and maintains databases.
- Represents the department and/or province on national initiatives regarding geoscience data, GIS technical committee regarding geospatial data.
- Attends professional development seminars.

SKILL

Knowledge

General and Specific Knowledge

- Technical knowledge of database design and management such as Mineral Deposits File
- Specific knowledge of geological field work such as sampling.
- Specific knowledge and use of Geographical Information Systems (GIS) software, database, spreadsheet, presentation, graphics, text and other customized software.
- Specialized knowledge of the fields of geochemistry, structural geology and tectonics and cognizance of the geological evolution of areas of the Province.

Formal Education and/or Certification(s):

- Minimum: Graduate Degree in Geology (Masters or PhD)

Years of Experience:

— Minimum: 4 to 6 years

Competencies:

- Strong research and writing skills
- Operate GPS and other technology
- Creative problem solving skills

Interpersonal Skills

- A range of interpersonal skills are used to communicate complex information, prepare concise, technical and scientific peer reviewed reports and publications, listen to staff for recent scientific and technical advice, provide expert advice and guidance to others, prepare and deliver presentations and technical talks, collaborate with exploration industry personnel, and provide instruction and direction to staff.
- Communication occurs with employees within the immediate work area and department, Senior Geologist/supervisor, management, students and industry clients.
- The most significant contact is with Senior Geologist/supervisor for discussion, procedures and time lines; professional employees within immediate work area for collaboration, theoretical and logistical scientific advice, thesis students to advise and supply quality data and industry clients and academia.

EFFORT

Physical Effort							
 Work occasionally results in considerable fatigue requiring periods of rest during field work. Field work requires almost constant physical movement and exertion; hiking with heavy backpack in rugged terrain in variable weather conditions, collecting and carrying rock samples, using hammers and digging, recording data using hand held computer and GPS. Als while in the field may have to unload equipment and supplies from planes, helicopters, trucks and boats, setting up field camp and using mechanical equipment and general camp maintenance. Field work entails working long days to maximize the season. Lifting items suc as equipment, supplies and samples. Physical effort can vary based on involvement in field and office based tasks. Typically have occasional visits to the field but majority of time is in the office environment. When in the office, fine finger work is required for computer use, operate microscopes, and u cameras. Occasionally uses rock saws to prepare rocks for processing. 	;o, ?h se						
Concentration							
 Visual concentration is required when staring at a computer screen, staring at samples throug a microscope, reading reports and conducting field, office and literature and database research Auditory concentration may include awareness of unique hazards and machines in the field and listening to client questions. Time pressures to write reports, analyze data and present findings for industry use. Also, during field work transportation interruptions due to weather cause additional time pressures to complete required work in the remaining time. Eye/hand coordination is required both in office and field work to use equipment such as hammers to extract samples, drive ATVs, boats and trucks, digitizing data in map creation, using microscopes. Exact results and precision are regular requirements while conducting analytical work using scientific equipment; for navigating in the field; sample processing and data entry; using hammers. Concentration effort may include sample extraction (fossils and minerals), navigation on land and water; determine exact location in dense woods, computerized drawing of complex 3D models and detailed map preparation. 	1 1.						
Complexity							
 Tasks and activities are usually different and unrelated, calling upon a broad range of skills ar knowledge to define new problems and their solutions. Prepares scientific reports and findings including written analysis, maps to graphically represent findings, statistical analysis and laboratory results for editing and publication and/or release as current research. Problems are often unique and require creative problem definition and analysis and the development of complex solutions when planning, implementing and supervising geological field research projects including project proposals. 	ıd						

 Reference material available to assist in solving problems including policies and procedures, external documents and advice from colleagues and subject matter experts.

RESPONSIBILITY

Accountability and Decision-Making — Many decisions can be made without formal approval including project planning and implementation; organization and execution of project plan; interviewing, hiring and training temporary employees; and delegating tasks to junior staff. - Scientific interpretation and findings based on professional research, analysis and investigation stimulate industry action and investment, affect departmental initiatives and policy. Formal approval may be required for travel to present scientific results, representing the department on national committees, media requests for interviews and major financial purchases. — Unsupervised in most of the daily tasks, require the use of independent decision making and exercise a high degree of discretion when deciding details of projects and scientific methodology, interpretation and analysis. — In isolated field situations, provides support to and ensures the safety of all field staff, especially students. Impact Generally have an impact within immediate work area, department and group, outside the organization and on customers and clients. Results impact information, processes and systems, and corporate image.

- Analysis and recommendations resulting from scientific research and the successful completion and implementation of projects have a direct impact on industries such as Mineral Exploration Industry, potentially providing economic stimulus through investment.
- In the event of an error or mistake, time and financial investment can be lost.

Development and Leadership of Others

- There is no direct supervision of staff.
- Supervises staff on field projects, serves as project leader on field research and technical projects. Also, serves as subject matter expert. As team leader provides on the job training, organizes students and reviews the work of others.

WORKING CONDITIONS

Environmental Working Conditions

- Upon occasional field visits, requires operational training, extensive safety equipment, safety and first aid (standard and wilderness) courses prior to beginning of field work.
- At times, there may be a high likelihood for job-related injury.
- May be exposed to undesirable conditions and natural dangers during field work (i.e. glare, dirt, hazardous chemicals, temperature extremes, biting insects and potentially dangerous animals, sharp objects, noisy and vibrating mechanical equipment, heavy machinery, travel and adverse weather conditions.
- Majority of time is spent in office where there is limited adverse environmental conditions.