Job Class Profile: Geologist I

Pay Level: CG-29 Point Band: 622-675

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	5	4	2	6	4	4	4	1	2	
Points	233	67	13	29	120	87	83	21	21	674

JOB SUMMARY

The Geologist I provides Geographical Information System (GIS) support of geophysical, geochemical and geological databases for a broad range of geoscience data management projects.

Key and Periodic Activities:

- Provides GIS support to all project geologists for the compilation of geoscientific data and geological databases for a broad range of geosciences data management projects and may include digitizing data directly from the original source, extracting data from a networked database or finding alternative means.
- Assists geological staff, cartography, with any issues related to GIS databases, data interpretation and map production.
- Uses model building and python scripting to make custom tools that can be used for batch processing.
- Prepares topographic, geological, satellite and aerial photography data for project geologists during the field season.
- Installs appropriate software and guides staff in the correct operation and instructions on how to copy, transfer and back up their data.
- Digitizes bedrock geology maps by creating a database and digitizing the point, line and polygon data and coding attributes.
- Incorporates digital geoscience, topographic layers and spatially related databases for specific projects using GIS.
- Provides Geographical Information System support to project geologists when working in the field.
- Uses DOS to batch process certain data.
- Writes help notes for common software/technical issues.
- Converts bedrock geology PDF's into Geotiffs for online use and distribution.
- Updates the Water Resource Atlas online.

SKILL

Knowledge

General and Specific Knowledge:

— Geographic Information Systems

— Geophysics, geology or physical geography

Formal Education and/or Certification(s):

— Minimum: Undergraduate Degree in Science (Geology)

Years of Experience:

— Minimum: 2 - 3 years

Competencies:

— Ability to apply established techniques to complete activities; coordinate a range of related work or project activities; develop new solutions and provide advice to others on how to solve a problem or address an issue (GIS).

— Written and verbal communications skills.

— Ability to conduct analysis and assessment.

Interpersonal Skills

— A range of interpersonal skills such as listening and asking questions; providing routine and complex information to cartography and project geologists for the development of data and maps; and may instruct and/or train staff in the use of GIS.

— Communications occur with employees/peers/supervisor, general public, students, other government representatives, with employees/peers in other departments and professional advisors.

— Most significant contacts are: Senior Geologist, Geoscience Data Management (to discuss assignment to various projects); other project geologists (to assist with various tasks); Geologist (GIS) (to discuss upcoming projects).

EFFORT

Physical Effort

— The demands of the job do not result in considerable fatigue, requiring periods of rest.

— The use of fine finger/precision work and sitting at a computer to complete tasks and activities is required.

— Driving occurs on an occasional basis.

Concentration

— **Visual** concentration is required when producing accurate, clean data.

— **Auditory** demands are experienced when dealing with geologists working in the field as communications with the office typically require the use of satellite or cell phones.

— **Time pressures and deadlines** are experienced when having to ensure that all the necessary data required by geologists is available for a specific timeframe. All the necessary software and data must be included in their GPS's in order for them to complete their field work.

— Digitizing geological data requires **eye/hand coordination**.

— Creating data and manually entering data attributes requires **exact results and precision**.

Complexity

- Tasks and activities are mostly highly technical where challenges/problems/issues must be defined and practical solutions found such as building models, customizing tools and troubleshooting GIS data. Both require analysis and problem solving.
- Required to keep abreast of trends and developments in technology field to ensure the latest software and tools are being used.
- Challenges/problems/issues can be addressed by following procedures and guidelines and may be provided in a team setting.
- Reference material available includes manuals, internet on-line forums and software development representatives.

RESPONSIBILITY

Accountability and Decision-Making

- Can provide GIS support to project geologists as the need arises on matters such as transferring data and converting data tables from one format to another.
- The purchase of computer software or accessories, and changes to data structure or networked database, that could affect a large number of individuals who use the particular data, must be approved by supervisor.

Impact

- Impacts are felt internally within the immediate work area/department/government as well as externally with the general public, as the data provided is used by staff and is available on the internet. Resources affected primarily include processes and systems and information.
- The consequences of a mistake or error can have a significant impact on the above noted people and resources. If incorrect information is provided to project geologists on their handheld GPS, then it will affect the data they collect in the field. Should this occur, it would also have a financial impact.
- The risk or consequences of an error relating to the uploading of data is mitigated and can be resolved quickly as the result of this type of error would be known quickly due to the malfunctioning of the database. As a result, errors are easy to detect.

Development and Leadership of Others

- There is no supervision of staff.
- May provide some advice and guidance to employees.

WORKING CONDITIONS

Environmental Working Conditions

- Work is primarily performed in an open office environment. Therefore, safety equipment and/or precautions are not required.
- There is no likelihood for injuries or illnesses resulting from hazards.
- Travel is required on an occasional basis.
- Exposure to glare of a computer screen occurs on an occasional basis.