**Job Class Profile:** 

**Cartographic Technician III (Draughting)** 

**Pay Level:** 

CG-32

**Point Band:** 

704-717

						Accountability		Development	Environmental	
		Interpersonal				& Decision		and	Working	Total
Factor	Knowledge	Skills	Physical Effort	Concentration	Complexity	Making	Impact	Leadership	Conditions	Points
Rating	5	3	4	6	4	4	4	2	4	
Points	233	50	25	29	120	87	83	43	43	713

# **JOB SUMMARY**

The Cartographic Technician III (Draughting) performs highly specialized technical work in preparing, constructing and correcting graphic depiction of geological data, including detailed and complex, preliminary and final, multicolor and black and white maps, graphics, diagrams and illustrations for publication using both digital and conventional technologies. Duties involve map production, design and production of illustrative materials, maintaining an efficient and modern cartographic/GIS laboratory and maintaining a graphic arts and custom colour laboratory.

#### **Key and Periodic Activities**

- Prepares complex geological, topographical and colour separation overlays in the production of multi-colour geological maps; compiles base maps, prepares legends, symbols and mineral abbreviation lists and reproduction negatives.
- Maintains and operates a photo-mechanical unit used in the compilation and production of multi-coloured cartographic maps.
- Drafts and colours various multi-coloured illustrations including charts, diagrams, graphs, etc. for publication, projection or display; prepares Ruby Lith overlays; maintains liaison with geologists for interpretation and clarification of geological data.
- Operates vertical camera, automatic film processors, vacuum printing frame to produce a variety of photographic material. Produces colour proofs, peel coats, colour keys, negatives, positives, various film and paper prints. Mixes various chemical solutions. Performs quality control functions.
- Assists with the maintenance of cameras, processors, vacuum print frames, densitometers, and light integrators. Monitors usage of films and chemicals to ensure a ready supply is available. Performs various tests on new films so as to determine optimum exposure times.
- Performs a variety of administrative duties; keeps an up-to-date file of jobs performed and materials used. Participates in the training and guiding of staff when requested. Conducts experiments and research on instruments, materials and procedures for the purpose of improving quality and production time.

#### SKILL

Knowledge

- GIS applications software.
- Computerized draughting software.
- Maintenance of cameras, and other cartographic equipment.

### Formal Education and/or Certification(s):

- Minimum: Bachelor's Degree in Cartographic Services

### **Years of Experience**

 Minimum: 3 years in the operation of a photo-mechanical laboratory devoted to the production of multi-coloured geographical maps and figures with experience in the use of computer-aided draughting work.

#### **Interpersonal Skills**

- Interpersonal skills are used mainly to listen to receive instructions and obtain guidance, and ask questions to gain information for work processes, as well as reporting routine information and communicating complex ideas to others.
- Most significant interactions are with geologists for interpretation and clarification of geological data; employees in the immediate work unit to share ideas, collaborate on work processes and training; and immediate Supervisor for guidance and instructions regarding the operation and maintenance of labs. There is also contact with customers/clients to take and fill orders for maps.

# EFFORT

#### **Physical Effort**

- Requires fine finger precision work constantly using the computer mouse and keyboard.
- Constantly sitting at a computer for long periods and constant use of a mouse and keyboard to prepare, construct and correct graphic depiction of geological data.
- Occasional fieldwork may require lifting objects ranging from 10-25 lbs. (photo-mechanical equipment).

#### Concentration

- Visual concentration or alertness is required as is the need for exact results and precision and eye/hand coordination while digitizing features of photos; while inspecting work for Quality Control; and maintenance of photo-mechanical equipment.
- Field work requires the use of precision technology that uses various levels of eye/hand coordination.
- Tasks can be repetitive and require alertness to verify that every small component is correct.
- There are occasional **time pressures and interruptions**.

#### Complexity

- Tasks and activities can be different but allow for similar skills and knowledge to perform.
   Produces maps, designs and produces illustrative materials and maintains a laboratory which includes operating and maintaining different photo-mechanical equipment.
- Work requires some interpretation to select from a number of possible solutions which may require some analysis especially as it relates to type of technology to use on end product and

can be highly technical in regard to use of GIS software. Work is performed with defined and standard work processes, and/or can be addressed by following procedures or guidelines.

- There are also challenges or problems that must be defined and practical solutions found as well as challenges with limited opportunity for standardized solutions. Occasionally there is a requirement for creative problem definition and development of complex solutions where discussions with geologists would be required for interpretation of geological data.
- There are highly specialized technical tasks or problems in preparing, constructing and correcting graphic depiction of geological data, including detailed and complex, preliminary and final, multicolour and black and white maps, graphics, diagrams and illustrations for publication using both digital and conventional technologies.
- Manuals, user guides, specifications, computer support and specialized staff are available as references or resources.
- Supervisor reviews work through observation and quality produced.

# RESPONSIBILITY

### Accountability and Decision-Making

- Work tasks are generally prescribed or controlled.
- Activities can be carried out under some discretion within predetermined limits and procedures. These decisions include quality control, creation and maintenance of maps and illustrative materials.
- A high degree of independent discretion and judgement is exercised in the daily operation and maintenance of the laboratory and whether digital or conventional technologies are required for end product.

#### Impact

- Daily operations of the laboratory are performed independently. Supervisor reviews work through observation and quality of work performed.
- Results are directly felt within the immediate work area, department, within and outside the
  organization and by clients.
- Results directly impact equipment and information; geographic information and the computer equipment used to collect and manage it.
- Consequences of errors could be felt on equipment, information, facilities health and safety and the natural resources.

# **Development and Leadership of Others**

- Not responsible for the supervision of staff.
- Provides feedback to supervisors and other employees, as well as guidance, direction and training to other employees working on similar tasks.

# **WORKING CONDITIONS**

#### **Environmental Working Conditions**

- Required to wear survey vests and steel toe boots occasionally when working in the field.

— The likelihood of minor injury or illness and fractures is limited.

- There is constant glare from computer screens.
- Occasional vehicle travel may be required while conducting field work with varying and unexpected weather conditions, temperature extremes, dangerous heights, wet surfaces and isolation.
- Exposure to hazardous chemicals, dust, noise, limited lighting and sharp objects during scanning procedures as class works in a cartographic/GIS laboratory and a graphic arts and custom colour laboratory.