

POSITION DESCRIPTION

PART I - IDENTIFYING DATA

09-ST17-03

Position No.: <u>07-123</u>	Department: <u>Energy, Mines & Resources</u>
Working Title: <u>Surficial Geologist</u>	Branch/Unit: <u>Mineral Development</u>
Incumbent: <u>Vacant</u>	Location: <u>Whitehorse</u>
Supervisor's Name:	
Title: <u>Manager, Yukon Geological Survey</u>	Date Position Description
Position No.: <u>7030</u>	Completed: <u>2002. 06. 25</u>

PART II

SUMMARY (broad statement of why position exists):

Reporting to the Manager and the Chief Scientist, Yukon Geological Survey, this position is responsible for conducting original scientific research for the Yukon Geology Program by planning and carrying out detailed surficial deposit mapping of assigned areas and geochemical till surveys, co-ordinating laboratory and other studies, compiling and interpreting the results, preparing geological reports and maps for publication and poster and oral presentations, and providing scientific advisory services to prospectors and exploration and mining companies.

A. **Duties and Responsibilities**

1. Major function - the single most important activity or responsibility required (describe what is done, why it is done, and how it is done):

Plans and conducts till geochemical surveys and associated surficial mapping projects in assigned areas in order to achieve the objectives of the Yukon Geology Program by:

- Searching bibliographies and data-bases and compiling existing geoscientific data from all available sources on the Tertiary and Quaternary sedimentology, stratigraphy, structure, petrology, palaeontology, and glaciation and drainage patterns of, and known placer occurrences within, the assigned area;
- Preparing project proposals describing the work to be carried out for till geochemical surveys and surficial mapping within the assigned area, including budget estimates for the work, for approval by the Management Committee;
- In consultation with the Administrative Assistant, assembling necessary base-maps, aerial photographs, field equipment etc. required to carry out geological mapping in the area;
- Planning field mapping activities for each summer season in order to provide representative coverage of the area under study;
- Developing logistical support requirements and schedules for the project for each summer season;

- Participating in the recruitment of, and supervising, one senior or junior assistant recruited on an auxiliary or casual basis as required;
- Supervising the safe and efficient operation of a field crew of two persons, consisting of the incumbent plus one assistant, for a field season of approximately three months each summer;
- Recording appropriate geoscientific observations and measurements made in the field;
- Collecting samples and specimens of soils, gravels and associated materials for further study and analysis in the office or the laboratory.

Approximate percentage of time first major function is performed: 30%

Carries out scientific research, compiles data and prepares geological reports and maps for publication, by:

- Conducting and/or co-ordinating appropriate laboratory and other studies on samples and specimens collected (such as geochemistry of till; analysis of geochemical data; soil and gravel grain-size analyses; radio-carbon dating);
- Compiling all existing and newly-gathered geoscientific data, and developing scientific interpretations of the data (such as palaeosol facies analyses and classifications; sedimentology of fluvial and glacial deposits; history of glaciation and drainage patterns; potential sources of geochemical anomalies);
- Initiating and maintaining discussions with other geoscientists (colleagues within the Branch, the Geological Survey of Canada, provincial geological surveys, universities and industry) with the intent of solving problems and arriving at a better understanding of surficial deposits of the area;
- Preparing for publication an annual summary report and geological maps describing progress on the project and the results obtained to date;
- Preparing scientific papers and/or poster displays for presentation at geological conferences (e.g. Yukon Geoscience Forum, Cordilleran Roundup, Geological Association of Canada AGM);
- Preparing for publication a final project report manuscript and geological maps that describe the work carried out, the results obtained and the interpretations made.

Approximate percentage of time second major function is performed: 60%

2. Other principal activities, (describing for each what, why and how, and approximate percentage of job time required, rounded off to the nearest 5%, e.g. 20%):

Provides an advisory service to prospectors, exploration personnel and mine operators in order to assist clients with their projects, by:

- Meeting with clients who are working on properties within the incumbent's map areas to discuss the clients' projects;
- Providing information and advice to clients on the general geology of the area and specific information and interpretations of the geology of their properties that will assist them with their projects.

Approximate percentage of time activity is performed: 10%.

3. Examples of additional activities which may be performed from time to time:
 - Undertake studies to address environmental issues including groundwater, land suitability, slope stability, etc.
 - On an occasional basis, may be required to act on behalf of the supervisor in his absence.
 - Other related duties as assigned.
4. Approximately how long will it take for a fully qualified employee from outside the work unit to reach the full working level of the position?

Approximately six months, to become familiar with YTG administrative procedures.

B. Problem-solving and decision-making

1. List any Acts, Regulations, and/or Policies/Procedures with which the incumbent must be fully familiar in order to perform the position's functions: (e.g. Motor Vehicle Act, Business Corporations Act)
 - YGEU Collective Agreement
 - Yukon Placer Mining Act
 - Quartz Mining Act
2. Is the position responsible for interpreting, administering, or enforcing any of the above? If yes, explain.

Responsible for administering YGEU collective agreement - for supervision of subordinate staff.

3. Describe the kinds of recommendations the incumbent is regularly required to make and to whom:

a) Recommendations to the supervisor:

- Scientific methodology to be employed during conduct of assigned project;
- Field methods to be used during geological mapping;
- Field equipment to be leased or purchased;
- Field activity schedules, and logistical requirements to support those activities;
- Tests, analyses and studies to be performed on samples of specimens collected during field mapping, and the appropriate agency to conduct them;
- Other geoscientific research projects that could be conducted in conjunction with assigned mapping project.

b) Who normally makes the final decisions with respect to those recommendations?

The Manager or the Chief Scientist make the final decisions in consultation with the Branch Director.

4. Describe the kinds of final decisions regularly made for which the incumbent is held accountable.

The incumbent will be held accountable for the accuracy of all scientific observations made in the field and in the office or laboratory, for the scientific integrity of all interpretations made, and for the accuracy and scientific integrity of reports and maps which are published as a result of the incumbent's program of study.

5. What is the direct impact of those decisions?

The decisions made by the incumbent directly impact upon the accuracy and quality of reports and maps to be published under the Yukon Geology Program and which are to be made available to the industry (prospectors and exploration and mining companies) for the purpose of assisting them in their work. This in turn impacts upon the credibility of the geoscience office and the Yukon government in conducting this type of scientific study as a means of promoting mineral exploration and development in Yukon.

C. Freedom to Act

1. Describe the way in which this position receives direction:
 - a) On all matters of an administrative nature, the incumbent receives direction by way of general directions from the supervisor and the Administrative Assistant.
 - b) The incumbent will participate (along with the supervisor and the scientific authority) in the selection of areas to be mapped or studied, and develops a project proposal for approval by Management. Upon approval of the project proposal, the incumbent is expected to plan and carry out the project to completion within the available time frame and budget.

2. What legislation, regulations, procedures or established practices guide, constrain, or limit the activities of this position?
 - a) As described in B(1)a above.

3. How is the work of the position normally checked or evaluated?

The incumbent will be preparing annual reports and maps showing progress and results to date. These will be scrutinized by the supervisor and the scientific authority as a means of measuring productivity and scientific competence. A formal employee appraisal will be completed by the supervisor in consultation with the Scientific Authority at least once annually.

4. What types of decisions are normally referred to the supervisor? (Give examples)

In general, the incumbent makes the following types of recommendations to the supervisor for approval. In particular, approval is required for purchase orders, contracts

- Areas to be selected for field mapping, geochemical or geological study;
- Appropriate field methods to be used during geological mapping;
- Appropriate field equipment to be leased or purchased;
- Appropriate field activity schedules, and logistical requirements to support those activities;
- Appropriate tests, analyses and studies to be performed on samples of specimens collected during field mapping, and the appropriate agency to conduct them.

D. Financial Accountability

1. Program dimensions:

a) Annual Budget (for unit under the direct control of the position):

The incumbent will be responsible for managing the annual budget assigned to his/her project. The budget amount is determined after the project proposal has been finalised and approved by the Management Committee.

b) Does position have authority/ability to reallocate resources?

The incumbent does not have general signing authority and therefore cannot reallocate resources.

c) Other expenditures or revenues influenced by this position and how.

The incumbent, as manager of a geological mapping project, will be responsible for planning and carrying out the project within the available budget. The manner in which the incumbent plans and carries out his activities will strongly influence the effectiveness of the project (i.e. the amount and quality of work that can be produced for the amount of money available).

E. Management Supervision of Human Resources

 1. No supervisory duties.

 X 2. Supervisory duties.

a) Number of positions supervised directly: 0 Permanent
 1-3 Aux/Casual

Number of positions supervised indirectly: 0 Permanent
 0 Aux/Casual

b) Nature of supervision:

 a) show colleagues how to do tasks

 X b) train other employees in work procedures

 X c) assign work and review for quality/quantity

 X d) establish work priorities and schedules

 e) change duties and responsibilities

 f) participate with supervisor in employees' performance evaluations, or

 formally appraise employees' work performance and discuss appraisal with them, making a final recommendation to advance or withhold merit increments

- _____ g) recommend appointment or rejection upon completion of probationary period
- X h) interview employees with attendance or performance problems
- _____ i) act as first formal step in the grievance procedure
- _____ j) interview candidates for vacant positions in the unit
- _____ k) give opinion to supervisor on selection of new employees, or make final decision on selection of new employees
- _____ l) other _____

F. Key Personal Contacts

<u>Who (what positions or groups)</u>	<u>Purpose</u>	<u>Frequency</u>
Subordinate members of field crew (senior and/or junior assistants)	Provide direction on field procedures, establish work priorities and schedules, assign tasks	20% of the time
Other geoscientists in government and industry	Professional discussions on geoscientific techniques, theories and interpretations, particularly when working on joint projects	10% of the time
Administrative Assistant	Ordering field equipment & supplies, determining logistical requirements, preparing reports, maps and poster displays	10% of the time
Prospectors and exploration companies	Providing assistance and advice regarding client exploration projects within the map area	10% of the time

G. Tools, Equipment, or Machinery Used

<u>Name</u>	<u>Purpose</u>	<u>Frequency</u>
Field measuring tools and instruments (e.g. compass, clinometer, chain, sieves)	Measuring field geological data	Regularly and frequently during field season
Reflecting microscopes	Study of soil and till components	5% of the time
Computer/word processor	Accessing geological and other databases, recording geological data, performing calculations, drafting reports	25% of the time
Telephone, facsimile	Contact with other geoscientists in government, universities and industry	10% of the time

H. Working Conditions

Describe any adverse conditions that are normal and expected in the job.

1. Describe weights lifted:

<u>Type</u>	<u>How Heavy</u>	<u>What percentage of the time?</u>
Field camping gear, soil samples	Up to 20 kg.	10% of the time

2. What working conditions (sitting, standing, bending, reaching) or types of physical effort (hiking, walking, driving) are required?

<u>Type</u>	<u>What percentage of the time?</u>
Walking, hiking, climbing	25% of the time
Sitting at a desk	75% of the time

3. Describe any physical hazards present:

<u>Type</u>	<u>What percentage of the time?</u>
Flying in and out of remote camps by helicopter or light aircraft	5% of the time
Field mapping includes traversing remote terrain on foot, including steep bush slopes, scree slopes and swampy areas; may include wading across mountain streams; may include travel by off-road all-terrain vehicles or boats. Some potential for accident and injury. Some potential for conflict with wild animals, particularly bears.	15% of the time

4. Describe special physical conditions leading to discomfort:

<u>Type</u>	<u>What percentage of the time?</u>
During the three-month summer field season the incumbent will be expected to spend extended periods of time away from home, family and friends, with only brief visits to the headquarters area, and will be expected to work some overtime - up to ten hours per day, seven days per week. Much of the field season may be spent working in and around remote field camps in relatively inaccessible areas, during which time crews may be subjected to extended periods of inclement weather, including extreme heat, unseasonable cold, and rain, snow and wind storms, and to attacks by swarms of biting and stinging insects.	25% of the time.

5. Interpersonal Conditions: Check any of the following conditions which are normal and expected in the job and give examples:

high level of dissatisfied clients
 high level of emotional clients
 potential physical abuse from clients
 regular critical deadlines
 high level of irregular critical deadlines
 constant interruptions
 instructions from more than one source
 other _____

Examples:

Regular critical deadlines involved in preparing annual project summaries for publication and presentation at conferences and final project report and maps.

Receives instructions on administrative matters from the supervisor and the Administrative Assistant. Receives instructions on scientific matters from the supervisor and the scientific authority.

6. Travel Required

Required to travel regularly within Yukon during the summer months, in order to conduct field-mapping projects.

a)	average number of trips annually	<u>6</u>
b)	average number of days per trip	<u>14</u>
c)	average distance per trip	<u>500 km</u>
d)	most frequent mode of transportation	<u>4x4 truck, helicopter,</u> <u>light aircraft</u>

Required to travel occasionally outside Yukon in order to present talks and/or poster displays at geological conferences.

e)	average number of trips annually	<u>2</u>
f)	average number of days per trip	<u>5</u>
g)	average distance per trip	<u>2,000 km</u>
h)	most frequent mode of transportation	<u>scheduled airline</u>

I. **Organisational Chart**

- Complete portion above dashed line whether this position supervises others or not.
- Complete portion below dashed line if position supervises others.

Title: Director, Mineral Development Branch
 Pos. No: 07-037
 Classification:
 Rating:

Title: Chief Scientist, Yukon Geological Survey	Title: Manager, Yukon Geological Survey
Pos. No:	Pos. No: 07-030
Classification:	Classification:
Rating:	Rating:

SUPERVISOR POSITIONS

Title: Senior Project Geologist	Title: Project Geologists (4)	Title: Surficial Geologist	Title: Placer Geologist	Title: Mineral Assessment Geologist (3)
Pos. No: 07-013	Pos. No:07-015/017/049/100562	Pos. No: 100561	Pos. No: 07-024	Pos. No:
Classification:	Classification:	Classification:	Classification:	Classification:
Rating:	Rating:	Rating:	Rating:	Rating:
PEER POSITION	PEER POSITION	SUBJECT POSITION	PEER POSITION	PEER POSITION

N.B. Position will be supervising one or more auxiliary and/or casual employees - usually 1 senior geological assistant (graduate geologist) and/or 1 or 2 junior geological assistants (geology students), depending upon the project and the area to be mapped. These requirements are yet to be finalised

Subordinate Summaries

- | | |
|--|--|
| 1. Position Title:
Position No.:
No. of Employees Supervised:
Major Duties: | 2. Position Title:
Position No.:
No. of Employees Supervised:
Major Duties: |
|--|--|
-

PART III - SIGNATURES

- | | |
|--|---|
| 1. <u>Supervisor</u> : I have reviewed (with the incumbent, where applicable) the duties and responsibilities assigned to this position. | 2. <u>Incumbent</u> (where applicable): I have read the foregoing position description and understand that it is a general description of the duties assigned to the position occupied by me. |
|--|---|

Immediate Supervisor or
Branch Head

Incumbent's Signature

Date: _____

Date: _____

PART IV - QUALIFICATIONS

A. Knowledge and Skills required:

Expert knowledge on some aspect of Tertiary and/or Quaternary glacial and fluvial sedimentology and/or surficial studies

Intimate familiarity with field, laboratory research techniques required in conducting surficial mapping projects for publication at 1:50,000 scale.

Intimate familiarity with field, laboratory research techniques required in conducting geochemical surveys.

Familiarity with computer word processing, spreadsheet, database and graphic presentation programs.

Good interpersonal skills (tact, diplomacy, working in a team environment)

Ability to work effectively with client group and the general public

Ability to work in a cross-cultural environment

Good oral and written communication skills

Good presentation skills

B. Licences, certificates required

Give title and section of any legislation, regulations, or other authority where applicable.

Valid Class 5 driver's licence to be obtained within six months of hire

Standard First Aid certificate to be obtained within six months of hire

C. Other skills and/or knowledge which may be desirable, but not necessarily essential to the performance of the position's duties.

N/A

Departmental Administrator:
Comments:

Deputy Head: I approve this position description as being representative of the work I require to be performed and that the responsibility levels identified have been delegated to this position.

Signature

Deputy Head

Date: _____

Date: _____