Mineralogy Scientist

Have you been waiting for an opportunity to use world-class mineralogy equipment and technology? Look no further, the GeoServices Section has the following:

1. JEOL JXA-8530F field emission EPMA equipped with 5 WD spectrometers (with Probe for EPMA software option).
2. Cameca SX-100 EPMA equipped with 5 WD spectrometers (with Probe for EPMA software option).
3. JEOL JSM-IT500 field emission SEM equipped with an Oxford X-Max ED X-ray detector and AZTEC software.
4. Zeiss EVO-50 SEM with an Oxford X-Max ED X-ray detector and AZTEC software.
5. Panalytical XPERT Pro XRD equipped with a high-speed detector and advanced search/match plus Rietveld capable software.

This is an exciting opportunity as very few facilities around the world have these!

The Division:

The Mines and Minerals Division, Ministry of Mines, focuses on the provision of basic geological information gathering and interpretation in support of Ontario's exploration, mine development and mining sectors, and the administration of Ontario's Mining Act in a fair and consistent fashion. The Division also works with the industry to stimulate job creation, eliminate barriers to growth in the mining sector and reduce the regulatory burden on the industry.

The Branch:

The Ontario Geological Survey collects, distributes and applies geoscience data and information to attract and guide mineral investment and to help inform broad provincial land-use planning decisions related to the environment, ecology, climate change, and public health and safety.

Ontario Public Service (OPS) jobs offer:

- A defined benefit pension plan
- Maternity and parental leave top-up benefits, which include adoptive parents
- Comprehensive Health Plan
- Life and Disability insurance
- Flexible work arrangements
- Collegial and professional work culture
- Career growth and development opportunities across multiple business areas
- On-the-job training to support your success in the role

OPS Commitment to Diversity, Inclusion, Accessibility, and Anti-Racism:

We are committed to build a workforce that reflects the communities we serve and to promote a diverse, anti-racist, inclusive, accessible, merit-based, respectful and equitable workplace.

We invite all interested individuals to apply and encourage applications from people with disabilities, Indigenous, Black, and racialized individuals, as well as people from a diversity of ethnic and cultural origins, sexual orientations, gender identities and expressions.

Visit the OPS Anti-Racism Policy < https://www.ontario.ca/page/ontario-public-service-anti-racism-policy > and the OPS Diversity and Inclusion Blueprint < https://www.ontario.ca/page/ops-inclusion-diversity-blueprint > pages to learn more about the OPS commitment to advance racial equity, accessibility, diversity, and inclusion in the public service.

We offer employment accommodation across the recruitment process and all aspects of employment consistent with the requirements of Ontario's Human Rights Code < http://www.ohrc.on.ca/en/ontario-human-rights-code >. Refer to the application instructions below if you require a disability-related accommodation.

What can I expect to do in this role?

In this role, you will:

- Conduct mineralogical analyses on a variety of geological samples, using Electron Probe Micro-Analyzer (EPMA), Scanning Electron Microscopy (SEM) and X-ray Diffraction (XRD).
- Use your knowledge of X-ray spectroscopy to create quantitative analytical routines for specific

minerals on the EPMA based on the needs of our client groups.
• Develop SOPs and maintain quality control protocols, including the characterization of in-house standard reference minerals to be used for quality control purposes.
• Carry out automated analysis of heavy mineral concentrates and other geological materials by energy dispersive X-ray analysis using the SEM.
• Modify the heavy mineral classification schemes as needed to accommodate changes to sample mineralogy resulting from a diversity of regional sampling programs.
• Carry out analysis of minerals and whole rock powders by XRD, including methods for clay mineral analysis and Rietveld analysis.
• Interpret and analyze data and communicate results to our client groups.
• Collaborate with staff geoscientists and academic partners on research and mapping projects.
• Present the results of your work to stakeholders and at scientific conferences.
• Use your expert knowledge of mineralogy to support Ontario's critical mineral strategy.
• Provide technical guidance and group leadership to junior scientists, technicians and visitors to the unit.

Location: Sudbury

How do I qualify?

Knowledge:

• You have extensive knowledge of mineralogy, with an excellent understanding of X-ray spectroscopy.
• You have extensive experience working with electron microbeam instrumentation, and an excellent understanding of energy dispersive and wavelength dispersive X-ray detection methods.
• You have knowledge of, and experience with, XRD analysis.
• You have knowledge of the Occupational Health and Safety Act and Workplace Hazardous Materials Information System (WHMIS) regulations.

Technical Skills:

• You can perform routine maintenance tasks associated with the daily operation of the microbeam instrumentation and XRD.
• You can work effectively with engineers to troubleshoot problems with instrumentation.
• You have experience with computers and computer-controlled instrumentation in a laboratory setting, and demonstrated familiarity with specialized micro-mineralogical software.
• You have demonstrated an ability to properly construct quantitative EPMA routines for minerals with challenging spectral interferences and for minerals that are beam sensitive.
• You have experience with a variety of sample preparation methods associated with a mineralogy laboratory, including mounting and polishing samples, conductive coating techniques and specialized approaches for removing preferred orientation in XRD samples.

Research and Leadership Skills:

• You have a proven ability to initiate and carry out advanced mineralogical research projects.
• You have experience compiling reports, presenting results, and working with client groups to overcome challenges that may be encountered with the analysis of complex minerals.
• You are an effective communicator and have proven leadership skills with the ability to lead a team of individuals in a laboratory setting.

General Skills:

• You have well developed oral and written communication skills.
• You have well developed organizational skills to manage multiple priorities.
• You can work independently and as part of a team.
• You have well developed judgement skills to make informed decisions.

Salary Range: $1,347.02 - $1,694.24 Per Week

Additional Information:

- 1 Permanent, 933 Ramsey Lake Rd, Sudbury, North Region

Please apply online, only, at **www.ontario.ca/careers**, quoting **Job ID 196789**, by **Thursday, May 25, 2023**. Please follow the instructions to submit your application. Faxes are not being accepted at

this time.

If you require accommodation in order to participate in the recruitment process, please contact us at www.gojobs.gov.on.ca/ContactUs.aspx to provide your contact information. Recruitment Services staff will contact you within 48 hours. Only those applicants selected for an interview will be contacted.

The Ontario Public Service is an inclusive employer. Accommodation will be provided in accordance with Ontario's *Human Rights Code*.

www.ontario.ca/careers