

Spotlight on Geoscience Technologists



As a Geoscience Technologist colourful display of charts, maps and graphs greet you when you turn on your monitor each day. Your analytical skills and computer savvy are put to the test when you synthesize data from various sources into meaningful and useful information. Alternatively, you may choose to oversee seismic operations in field locations out in the open prairie or deep in the forest. Whichever you choose, you will play an important role in the search for oil and gas.

Before oil and gas wells are drilled, an area is surveyed to determine the extent of oil and gas deposits. Geoscience Technologists analyze the data generated by these surveys and create detailed maps to guide the exploration process.



Seismic data.



What do Geoscience Technologists do?

Geoscience Technologists are involved in two important stages of seismic analyses: data acquisition, and data processing and interpretation. There are many jobs to choose from in this occupation. They include:

- **Seismic Field Technologists:** Acquire the necessary land access and drilling approvals from the government, regulating bodies and other key stakeholders. They choose seismic contractors and monitor their work.
- **Seismic Technologists – Approvals and Permits:** Research land titles, legal survey plans, aerial photographs and satellite imagery to develop detailed survey plans and initial maps. They coordinate the formal submission process to obtain necessary government approvals.
- **Seismic Geographic Information Systems Technologists:** Use surveying and computer equipment to conduct field surveys, record key information and develop detailed maps.
- **Geophysical Technologists:** Transfer seismic data from the field into imaging software programs that create seismic reports and contour maps. They also collect and compile data from aerial photos, survey notes, records, reports and maps.
- **Geological Technologists:** Collate, analyze and present geological information about wells, rock formations, core, topography, log analysis, mapping and contouring needed for an exploration project.



How do I become a Geoscience Technologist

A two year Technologist diploma from a recognized technical institute is the minimum requirement. You can pursue various disciplines that include geology, petroleum, petroleum engineering, hydrogeology or groundwater technology, mineralogy and metallurgy. A full list of the nationally accredited programs is available at the Canadian Council of Technologists and Technicians (CCTT) at www.cctt.ca.

Through the CCTT, technologists are granted certification by the provincial associations. For instance in Alberta, where the majority of the jobs in this occupation are located, technologists become certified as a Registered Geological or Geophysical Professional Technologist (RPT).

You will need a valid driver's license in good standing as travel to worksites may be required.





What are the working conditions like?

Many Geoscience Technologists perform their work indoors in office settings. They work regular business hours with some overtime. Other Geoscience Technologists find seismic field operations more attractive as it offers the opportunity to work outdoors. Field jobs involve extensive travel, absence from home, variable weather conditions, irregular shifts and potentially, exposure to hazardous conditions. Following safety protocols is essential.



A seismic crew laying geophone cables.



Do I fit the bill?

Do you think you have what it takes to become a Geoscience Technologist?

- I am very interested in mathematics, physics and earth sciences.
- I pay special attention to detail and accuracy and am not easily distracted.
- I am a good problem solver and think quickly on my feet.
- I am a great multi-tasker.
- I have a strong interest in scientific computer software.
- I enjoy studying maps, charts, graphs and tables.
- I am quite versatile and can work on my own or with a team.
- I have well developed communication skills.
- I can follow safety rules and precautions, and understand their importance when dealing with potentially hazardous material and equipment.
- I can work rotational shifts and long hours, and do not mind changes in routine.
- I am able to travel to and from work locations.
- I have the tolerance, stamina and flexibility to work outdoors in any weather conditions.
- I can work and live in isolated regions for extended periods of time.
- I believe that I have what it takes to be an excellent Geoscience Technologist!



Quick tips and next steps!

- Visit career fairs and talk to employers who offer jobs and careers in this occupation. Check with employment centres, educational institutions, newspapers, petroleum-related magazines and the internet for information on career fairs.
- To learn more about a career in seismic operations, check out career videos at www.cagc.ca.
- Participate in *National Technology Week* which is held annually during November and offers a host of activities along with interactive and fun resources to help students, teachers and parents explore technical careers.
- Participate in *National Engineering and Geoscience Week*. For more information, check out the Association of Professional Engineers, Geologists, and Geophysicists of Alberta website at www.apegga.com.
- Check out the Canadian Society of Exploration Geophysicists' website www.cseg.ca. Go to the Students section for more information about careers in geophysics, including photos of this fascinating work.
- Look for summer jobs in assisting Seismic Operators in the field.



A seismic drilling crew.

Want more info?

For information on other industry occupations check out www.careersinoilandgas.com.