



## CAREER PROFILE

# Geologist<sup>1</sup>

## JOB OUTLOOK

Employment in this field is expected to grow by 14% by 2026. Geologists are finding the demand for their services in horizontal drilling and hydraulic fracturing. They are also involved in finding new sites for geothermal energy. Some geologists find their fortune in the search for gold in the Alaskan Kenai Peninsula.<sup>2</sup>

## SALARY RANGE

\$49,000-\$187,000

## EDUCATION/TRAINING

In addition to a bachelor's degree, this position may require:

- A license is required in 31 states if working for public service.
- A passing score on National Association of State Boards of Geology (ASBOG)
- Field experience working under a licensed Geologist.<sup>2</sup>

## WHO ARE THEY?

Geologists, also called Geoscientists, study the physical aspects of the Earth. Earth research includes the study of composition, structure, and the processes of the planet. They use their research to learn about the past, present, and future of our world. Geologists can be found looking for natural resources, mitigating natural disasters, and examining the effects of weather on the earth over time. Geologists can find themselves working for government agencies, companies, industries such as oil and gas, and academic institutions.

## WHAT DO THEY DO?

A Geologist goes to locations, collects samples, and conducts surveys. They will analyze aerial photographs, records of geologic formations, rock samples, and other data sources looking for natural resources. They perform more detailed analysis in the lab to extract further detail on the resource deposit. Geologists create geologic maps, prepare reports, and present their findings to the communities they serve. They can also specialize in the structure of rock (stratigraphers) and the structure of minerals (mineralogists). Geological specialists can focus on the chemistry of earth material and are called Geochemists. There are also specialists called Geophysicists who study physics to explore the magnetic, gravitational and electric fields the Earth emits. There are also Paleontologists, Petroleum Geologists, and Seismologists all exploring different aspects of the Earth.

## HOW DO I BECOME ONE?

A Geologist typically needs a bachelor's degree in geosciences. However, some begin their careers with degrees in environmental engineering. Advancement in the field can include further education, such as a master's degree in a geoscience specialization. Students with a strong background in physical sciences, mathematics, engineering, and computer science will do well. Developing strong communication skills and critical-thinking skills is a must. Outdoor skills and physical ability are needed to reach the field study locations.

<sup>1</sup> Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Geoscientists, on the Internet at <https://www.bls.gov/ooh/life-physical-and-social-science/geoscientists.htm> (visited August 06, 2019).

<sup>2</sup> Gold Rush Nugget Bucket, Where to Gold Pan in Alaska, on the internet <https://www.goldrushnuggetbucket.com/blogs/gold-panning-news/70577093-where-to-gold-pan-in-alaska> (August 20, 2019)