# Geologist (GS-9)

## Major Duties

A Forest Service Geologist conducts geologic studies and investigations on many different projects where minerals and geology impact the development or management of the forest resource (trees, range land, soil, water systems, wildlife). A Forest Service Geologist job involves

- Examining the forest to see what changes might do to forest recourses (like changes in water runoff, land sliding, etc.).
- Inspecting mineral operations (like mining), to see if companies are following guidelines and plans for using the area properly.
- Monitoring the actions of those who lease National Forest system lands to gather minerals.
- Providing information for Forest Service land management planning on geological resources of the impact of management activities
- Participating in verifying the discovery of minerals on Forest Service land.
- Collecting and analyzing field data and doing field geologic mapping
- Writing reports and making presentations describing findings

Working in the field gathering samples to study requires hiking over rough, steep, and often rocky surfaces. The job can require lifting heavy objects. A Geologist may work outside in cold or hot weather drilling and exploring under the surface with equipment that can be dangerous if not used properly.

A person at this level may also supervise other employees. This can require monitoring employee performance, conducting performance appraisals, developing budgets, coordinating staff efforts. Etc.

## A Typical Day

For the past couple weeks, Brad (a Forest Service Geologist), has been studying what impact mining might have on a portion of National Forest land. At first Brad hiked to investigate the natural resources in the area. He gathered a number of mineral samples and checked out the location of water resources, vegetation, and wildlife. He took many notes and photos of the area. Brad also did some rough drawings showing the elevation and slope of the land. After returning to the office, Brad has been running tests on the soils and minerals he had collected, and recording his results for a report he will start writing today.

In his report, Brad intends to say that harvesting timber in the area would be too damaging to the environment, and that serious landslides and erosion would result from logging operations. Brad plans to spend three full days writing the report, producing graphics, and enlarging photographs for a presentation he will make to a Forest Service planning committee. The planning committee will recommend whether or not to grant logging rights to the area.

## Knowledge and Education

A college degree is required for those interested in becoming a Forest Service geologist. Courses leading to a college degree in Geology include;

- Biology
- Statistics
- Geology
- Chemistry
- Physics
- Mathematics (Algebra, Geometry, Trigonometry, Calculus, etc.)

## Career Path

One job that leads to becoming a Geologist (GS-9) is:

- **Geologist Trainee (GS-5) –** This is a trainee position leading to the next geologist level (GS-9). The person holding this job participates in many on-the-job training activates to increase their basic knowledge of the job as practiced in the Forest Service. Types of things this person does includes;
    - Participating in geologic studies
    - Making observations and prepare reports about geological conditions
    - Evaluating the geology of an area collecting data on the landforms, and soil and rock samples for further testing in a lab.