



As a mining engineer, I am responsible for mine design, safety, earth-moving equipment, calculations, and developing plans that are economical and time-efficient. Mining engineers compile data from geology, hydrology, and other factors related to mine development and production.

**Ruby B. Johnson**  
Mining Engineer  
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## Ruby B. Johnson



### Important Engineer Characteristics:

My science, technology, engineering, and math (STEM) knowledge and skills contribute the most to my work. Those skills are essential in problem-solving, critical thinking, attention to detail, as well as in being environmentally, socially, and economically responsible.

### Example of a simple question I have tried to answer:

I redesigned a screen shaker for a company's test lab with the polyurethane and rubber screen media they produce. During the research and development process, I collected and tested samples from nearby mines to perfect the media installations and ensure efficient material sizing.

### Technology or equipment used in my work:

I use Microsoft Excel to review and revise reclamation bonds for exploration projects, as well as mines inside and outside Nevada. With the ability to do calculations and use various tabs to break down areas of interest, Excel spreadsheets make an engineer's job a little easier.

### Most Exciting Work

In 2013, I got to work at a diamond mine in Sierra Leone in western Africa. I worked in the operations section of the mine. The operations section involved surveying, drilling, and blasting, as well as loading and hauling of the kimberlite (diamond-bearing rock) at the operation's two open pits.

**When did you know you wanted to be an engineer?** I knew I wanted to be an engineer after taking a foundations of technology class in 9th grade. I gained a desire to learn how to use machines and tools in class, like the band saw and drills. My teacher encouraged me to join my school's award-winning robotics team and study engineering in college.