



Geology is the study of Earth, the materials of which it is made, the structure of those materials, and the processes acting upon them. An important part of geology is the study of how Earth's materials, structures, processes and organisms have changed over time.

**Dr. Sabry Hanna**  
Geologist  
Ph.D., Cairo University (Egypt)  
USDA Forest Service scientist



## Dr. Sabry Hanna



**Important Scientist Characteristics:** Careful observation is an important skill in the field of geology because details are important in science. Through careful observation, we can continue to better understand the natural phenomena around us and add to existing knowledge.

### **Example of a simple research question I have tried**

**to answer:** Since the 1960s, companies found more oil than anticipated while developing wells in the Gulf of Suez. I studied the surface rocks in the area to understand the relationship between igneous intrusion and sedimentary rocks. I developed a theory of source rock maturity based on the size and distribution of igneous intrusions that gave us a better idea of how much oil the rocks contained.

**Technology or equipment used in research:** I often use Stoner Engineering Software (SES). SES is a practical oil and gas drilling software with advanced, yet easy-to-use, tools. The software helps us determine where different sections are located in the rock layers, and if used while drilling, how to steer to or through your payzone (i.e., area where oil and gas is located).

### **Most Exciting Discovery**

- In Madagascar, I worked with a
- team to report the hydrocarbon
- reserves and resources in an
- exploration block. Hydrocarbons
- are chemical compounds that
- are the main part of oil and gas.
- I liked this project because I
- worked on a multi-disciplinary
- team of experts from different
- countries to come up with the
- most accurate results.

### **When did you know you wanted to be a scientist?**

- I did not know
- I wanted to be a scientist until I
- went to college and started to
- work in laboratories for physics,
- chemistry, geology, biology, and
- anatomy. I found science fun and
- challenging at the same time, so
- in my second year I joined the
- geology program.