

**Introduction to Dr. Rondi Davies**VIDEO TRANSCRIPT

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My name is Rondi Davies. I'm a research fellow at the Museum of Natural History. I work in the Department of Earth and Planetary Sciences and I've been working here for three years. Primarily I conduct research. My research involves working on high-pressure minerals that form in the Earth's mantle. I look at diamonds and the inclusions that they trap when they grow.

Diamonds are our deepest samples of the mantle. They form between about 100 kilometers and 670 kilometers deep. Diamonds can be as old as three and a half billion years old. And they're usually older than two billion years old. So, not only are we sampling the deep Earth, we're also sampling the ancient Earth. So we are able to learn about how the Earth formed, and how it's been evolving.

I also do high-pressure experiments in the laboratory where I recreate rocks that are equivalent to the deep Earth.

My sample is about two millimeters by two millimeters, encased in a little capsule of gold. In that capsule I put powdered mantle rock. I cut it open and I polish it.

There are two ways that I analyze my sample. One is through using X-ray, which is a means to identify the minerals in the sample. And the other way is using the electron microprobe, which is a way of analyzing the compositions of the minerals and looking at the trace amounts of elements inside them.

I've always loved nature and being outdoors. I love to travel. My father's a geologist and I grew up going on field trips to really amazing places. I actually spent the first year of my life in a field camp in the mountains of Papua, New Guinea.

I'd like to continue studying mantle minerals. There are so many unanswered questions that we need to chip away at and find answers for.