Curiosity Rover Report: Curiosity Drills on Mars

Hi I'm Scott McCloskey, drill systems engineer for the Mars Science Laboratory and this is the Curiosity rover report.

We began our first drilling campaign at the site we named John Klein.

John Klein has an area that has a set of flat “plate-y” rocks that are perfect for the first use of the drill.

We were able to place the arm safely and drill vertically down into the rock to collect as much sample as possible.

We started by making a very small divot to test the hammering mechanism in the drill. This worked perfectly, so we proceeded on to make a mini hole.

Our mini drill test drilled 2 centimeters down into the rock

We compared the tailings created by the mini drill to the extensive set of test rocks that we drilled here on Earth here at JPL and determine that what we see on Mars are safe to ingest in the system.

After these preparations we were all very excited to move on to ready to move on to the big event.

We drilled 6-and-a-half centimeters down into the rock.

We used the camera at the end of the arm to take pictures.

Here we see two holes, first on the right is the mini drill hole and in the center of the picture, we have the full hole.

The gray tailing tells us that there’s something different about the inside of this rock than the surface of the rock.

In the coming weeks, one of the things we're trying to do with this first hole is to use this gray powder that we collect to clean the internal surfaces of the drill.

We do that by moving the arm and swishing the powder around.

This has been your Curiosity rover report. Check back for more updates.