volume 5
issue 9

An Island is Born

When you put your feet on the ground, it feels solid and still. However, it is not. In fact, the earth changes all the time. Geologists are scientists who study how the earth changes.

Earthquakes are one way the earth changes. In September, 2013, a large earthquake struck Pakistan. It destroyed homes and caused injuries and even deaths. However, the destruction also created something new: an island! Hours after the earthquake, an island, which was named the Gwadar mound, formed off the coast of Pakistan.

Scientists don't think it will last long. That's because islands like this, which are made of mud and sand, often appear and disappear after earthquakes. They form when the sea floor rises, and they disappear when it settles down. Ocean waves also quickly erode them away.

To explain why these islands form and disappear, geologists look at plate tectonics. Tectonic plates are massive pieces of rock underneath Earth's surface. All of the land and water on Earth lie on top of tectonic plates. Heat currents created by the melted rock inside of Earth cause the plates to move. Earthquakes and volcanoes can occur when tectonic plates move.

As they move, tectonic plates push against each other and trap energy. Trapped energy can be released in earthquakes or when volcanoes erupt. Volcanoes form when one tectonic plate gets pushed under another plate. The sinking plate melts, creating the lava that erupts from volcanoes.

The Gwadar mound is a mud volcano. Trapped gasses under Earth's crust cause mud volcanoes to form as tectonic plates move. Heat causes the gasses to explode, and the soil and rocks to melt. Mud volcanoes are really boiling earth.

The Gwadar mound is the fourth island created by mud volcanoes since 1945. Like the others, it will probably not last long. However, the Gwadar mound shows us how our amazing Earth changes.