

Example of essay on types of volcanoes and geological records

[Environment](#), [Water](#)



Abstract

In this essay, it is presented a resumed description of the different volcano types that can be identified, according to the types of rock layers they leave behind after their erosion.

The main types of volcanoes that can be identified are the stratovolcanoes, which leave behind layers of rock of different components, according to the eruption of pyroclastic nature, ash, water, or tephra; the shield volcanoes, that leave behind large layers of smooth basalt; the cinder, or scoria, cones that leave behind thick basaltic blocks, which can be interbedded with ash or cinder layers.

Keywords: volcanoes, types, stratovolcanoes, shield volcanoes, scoria volcanoes, cinder, tephra, basalt, pyroclastic, rock layers.

Since volcanoes generally suffer erosion, it is not often for them to be preserved and have a geologic record, but one can conclude on what different types of volcanoes have been present by differentiation of the volcanic deposits that were left behind.

The first type, stratovolcanoes, is characterized by being large and violent, which often produce pyroclastic type of flows. From these flows, which can be of water, ash and also tephra (the so called lahars) and have a rapid flow down the stratovolcanoes steeps, thick layered deposits of these components can be formed. Two examples are Mount St. Helens, which created pyroclastic flow deposits, and Mt. Vesuvius, which eruption covered Pompeii with the recognized thick deposits of ash. Thus, when observing pyroclastic flow deposits and ash, this should be perceived as indicative of a

stratovolcano.

Another type, the shield volcanoes, which can be found in the Hawaiian islands for example, produce large amounts of lava, but not that much ash.

From these shield volcanoes result layers made of smooth basalt.

The cinder cones, or scoria cones, on their turn, are almost entirely composed of ejected basaltic tephra of lapilli size, although there can be found some fragments of bomb-size and also lava spatter. Thus, these volcanoes produce blocky deposits of basalt, which tend to have interbedded layers of ash and also cinder.

Conclusion

In conclusion, there are three main types of volcanoes that can be identified by the rock layers that they leave behind after their erosion: stratovolcanoes, which can be identified by the stratified different layers of rock, composed by pyroclastic deposits, ash, water or tephra; shield volcanoes that leave behind large layers of smooth basalt; and scoria, or cinder, volcanoes that leave behind thick blocks of basalt, which can also be interbedded with ash or cinder layers.

References

Lutgens, Frederick K., Tarbuck, Edward J., Tasa, Dennis G. (22nd March 2010). Foundations of Earth Science (6th Edition). New Jersey: Prentice Hall.