## Volcano - the coast is toast

Science, Geography



The paper "Volcano - the Coast Is Toast" is a breathtaking example of a movie review on visual arts & film studies. The movie is thrilling, with fiery action throughout, although it involves loss of lives and property. It is an excellent depiction of how nature is uncontrollable, and how dangerous it can be when it brings out its full force and energy in the human population.

Geologically speaking, the volcanic activity in this movie has a huge impact on the environment. It comes with lava, which is a mixture of molten rock. This lava is so hot that it melts everything on its way, including rocks, and thus it always increases in volume and debris content. The flowing lava changes the city's rock profile by inserting new materials underground. It also melts the already existing soil and rocks as it flows underneath the city. This fluid can in turn cause instability of already erected structures, such as skyscrapers, and lead to their collapse or damage. The ground becomes loose due to the heat of the magma. Railroads can no longer support the weight of trains, and some of them derail. The molten rock also burrows through the ground, creating tunnels and ditches where they never existed. This flowing magma leaves a trail of the molten material, which forms a crust on cooling. This crust can form an excellent river bed when water flows over it since the crust formed is hard.

The movie also shows the appearance of cracks in the concrete walls of the subway. These cracks form due to the pressure exerted by gases produced by the magma. Flowing magma is hot and contains gases, some of the sulfur, which is also hot. These gases are very fluid and expand when

heated. Since they accumulate underground, they try to fit in small spaces and the pressure becomes exceedingly high. They break into these little areas to create room for themselves. The result of this expansion is the formation of large cracks where small ones existed. Weak walls can also be shattered by this pressurized air. The pressure can build to very high proportions that it can cause explosions.

The magma flowing underneath the city creates the two earthquakes experienced in the movie. These earthquakes are due to the formation of a volcano. The volcano forms rapidly and unnoticed until geologists decide to investigate the phenomena taking place in the city. The earthquakes are due to the shifting of rock materials underneath the city. These rocks form the foundation of the town. Their shifting shakes the entire stable city. They shift due to changes in their crystalline structure, which is an effect of excessive heat. They also shift because they are pushed by the magma and the pressurized gases underground. The magma also leaves some vacuum spaces on its way out of the ground, and these spaces cannot remain as vacuums. Some rocks, therefore, break and fall into these vacuum spaces. These activities result in the shaking of the ground and contribute to the formation of earthquakes.

Water is seen to boil on the surface of the city. The heat from the magma heats the sewer and causes the water in it to boil. The closeness of the magma to the surface also causes water in ponds and fountains to heat up, boil, and even start to evaporate. A lot of steam is seen coming from the

sewer, and this is all due to the hot lava.

The heat and toxic gases coming from underground have adverse effects on passengers of a derailed train. These emissions cause the passengers to blackout in the derailed train. A special team has to go and rescue them before the magma gets to them, melts the train and kills them.

It was wise to use explosives for the creation of trenches in which the lava would flow to the Pacific Ocean. The volume of the ocean's water would be enough to quench the magma and solidify it into solid and immobile rock. The explosives weaken the ground and the neighboring buildings due to the vibrations they cause. The explosives are arranged in such a way that they dig out a trench. The use of concrete to form a dam of lava enables helicopters to target water on the magma and to cool it. Concrete is difficult to melt and manages to hold the lava long enough to get it cooled. The rest of it flows through the man-made trenches to the Pacific Ocean.

When the street starts to slope on one side, it is necessary to take action and prevent magma from getting onto it. The sloping is due to the melting and removal of rock on one side of the street more than on the opposite side. This tilting calls for the demolishing of a story building using explosives. The demolished building creates a path for the magma to flow away from the street to the ocean.

Formation of volcanic mountains is quite a violent process, with lava bombs

exploding now and then. The heat that accompanies this activity does not favor life, regardless of the environment in which it takes place. The producers of the movie did an excellent job in trying to bring out graphics. Extensive special effects were used, and Wilshire Boulevard was partially assembled for the sake of the film.