

ESS103A  
Igneous Petrology  
April 28, 2005

Name \_\_\_\_\_

**Boundary conditions and heat conduction**

1. An eruption on Hawaii forms a large lava lake at the surface of the earth. The top half of this lava lake can be approximated by an infinite half space.

A) Draw a sketch of the top part of this lava lake. Include the Z (distance) axis.

B) List the boundary conditions for this system. Assume the lake is formed instantly and is homogeneous.