

Geophysics 150: Home set due Nov. 8, 2000

2a. Refer to problem 1: Obtain the new free and new Bouguer anomalies at the new site. Use correction density 2.67 g/cc for Bouguer anomaly.

b. What would happen to the Bouguer anomaly change if you used the density of the lava flow as the Bouguer density for both before and after. Explain briefly.

c. Instead assume that a lava tube is under station. The surrounding rock has a density of 2.4 g/cc and the tube is 40 m deep to the center and 20 m in radius. What is the change in observed gravity, free air gravity, and Bouguer anomaly between the new and old sites. Assume infinite horizontal cylinder

