

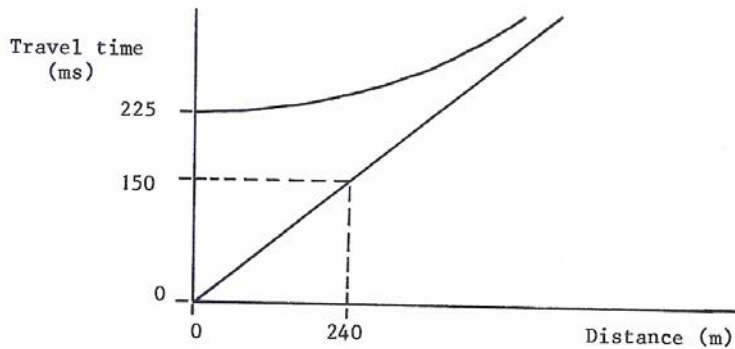
Homework Assignment

Seismic Surveying

(Problems taken from *Computational Engineering Geology*, by E. Derringham, 1998)

Due Wednesday February 28, 2007

1. When one face of a slab is struck with a hammer, a detector at the opposite face 0.85 m away receives waves 230 μ s and 425 μ s later. Find the speeds of (a) the S waves, (b) the P waves in this rock.
2. Explorers are conducting a seismic reflection survey in a region in which a horizontal interface between two rock types is known to exist at some depth h . A geophone 186 m from the shot point receives P waves 62.0 ms and 87.7 ms after detonation. Find the depth to the interface.
3. A seismic survey yields the results shown below. Travel times are in ms and distances in meters. Find the depth to the horizontal interface.



4. A seismic refraction survey results in data fitting the lines shown on the graph below. Find the depth to the horizontal interface.

