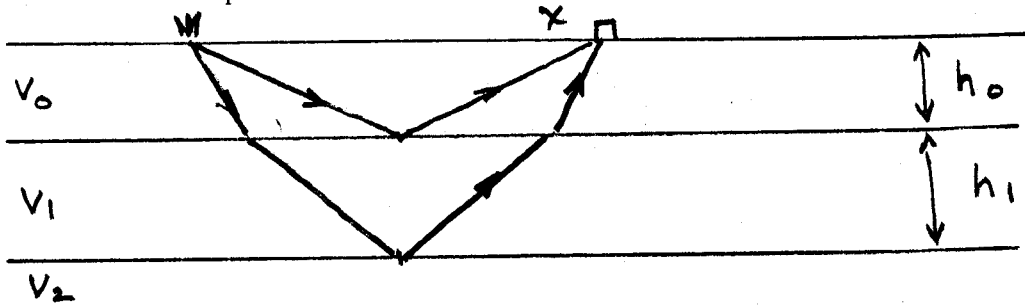


EARTH SCIENCES 734/834 EXAM II, 2003

Do #1, #2, #3 Plus Two Others. Total of Five

1. What are the Rayleigh reflection and transmission coefficients (include formulae). Why are they important to understand? Explain in detail.

2. Derive exact expressions for distance and reflection travel-times for this geometry:



3. What are the vertical and horizontal limits of resolution (include formulae)? Explain how we can derive one of them.

4. Explain the procedure for making the "dynamic correction" ("NMO") to common-mid-point data.

5. Use diagrams to illustrate some common long-path and short-path multiple echoes. Why should multiples be suppressed? How could we do it?

6. Compare and contrast seismic refraction and seismic reflection.

7. Divide this reflection record into seismic stratigraphic units. Explain how you differentiated the units and describe each one.

