

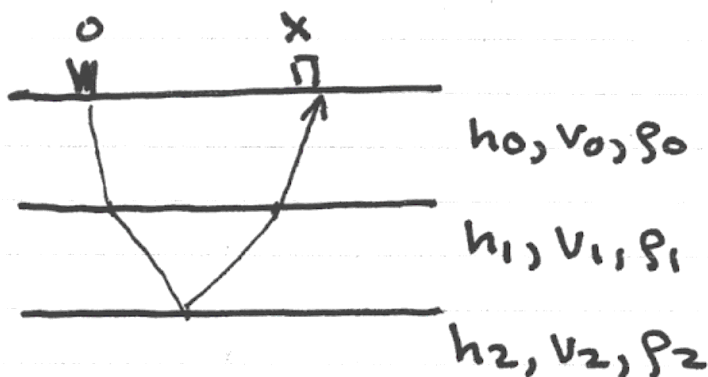
ES734/834

Hour Exam II, 2001

Do # 1, 2, 3 Plus Two More

1. Give formulae for Rayleigh reflection and transmission coefficients. Explain their meaning and importance.

2. Derive an exact OR approximate formula for travel-time versus distance.



3. What are the vertical and horizontal limits of resolution? Explain how one of these is derived.

4. Explain how a common-mid-point stack is produced (field work through corrections and processing).

5. Explain how we can determine velocities from CMP data. $\Delta t^2 \propto \Delta x^2$

6. Explain Kirchhoff (diffraction) migration. What is the purpose of migration?

7. Draw a seismic reflection record to illustrate the concept of "seismic unit" (seismic stratigraphic unit). Explain the term and how they are recognized on a record.