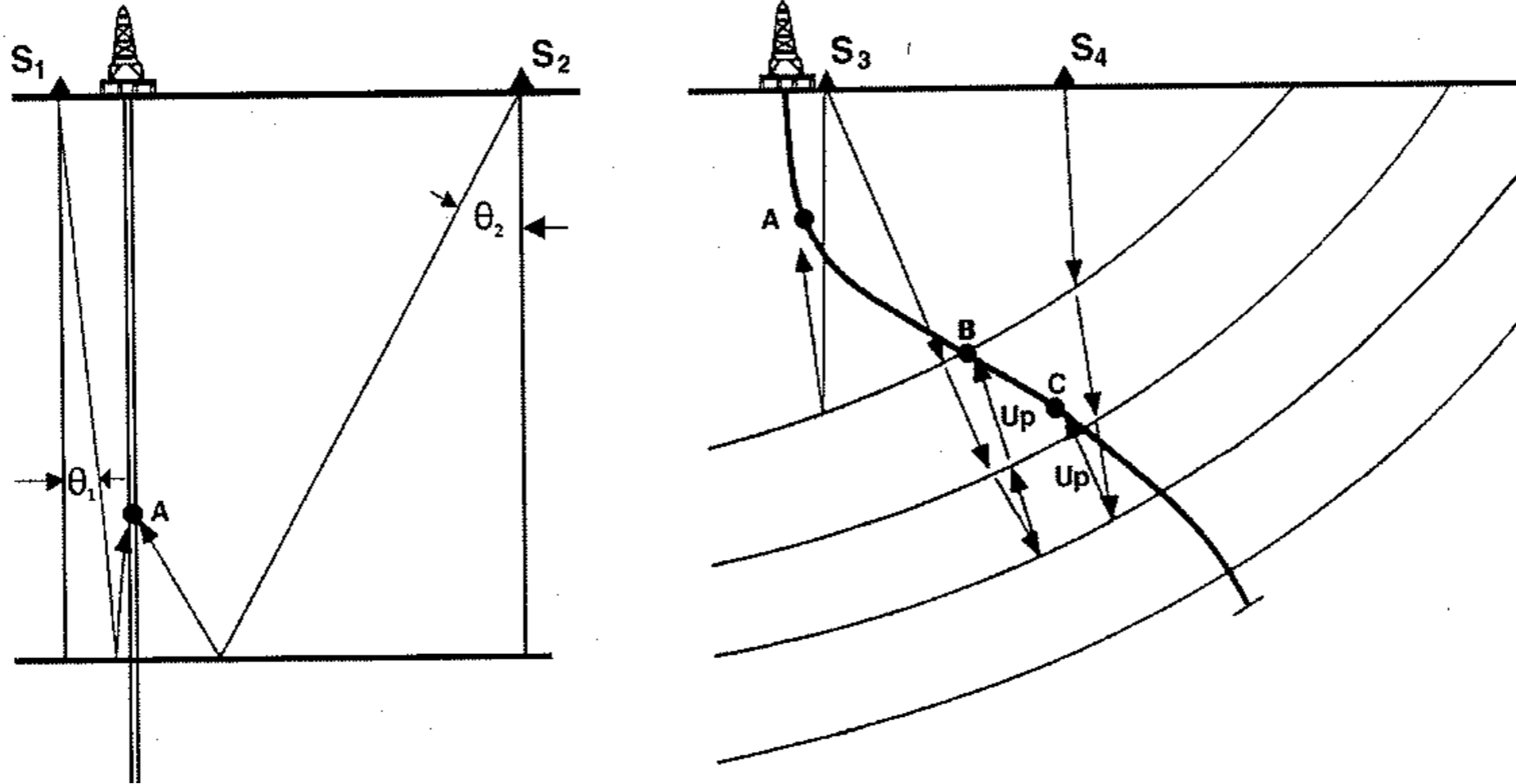


# Vertical Seismic Profiling (VSP) FUNDAMENTALS

# *BASIC CONCEPT*

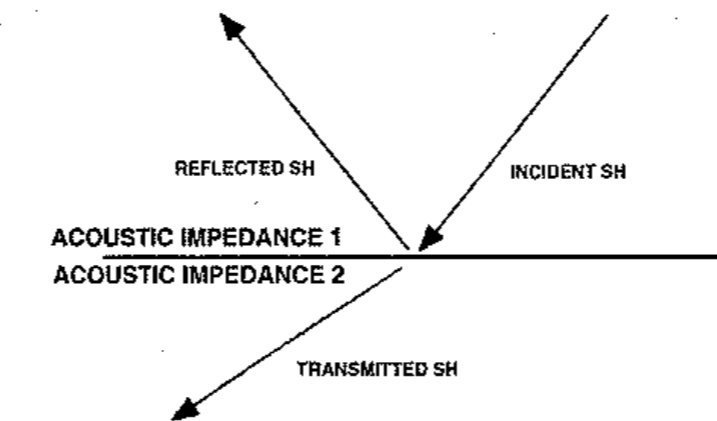
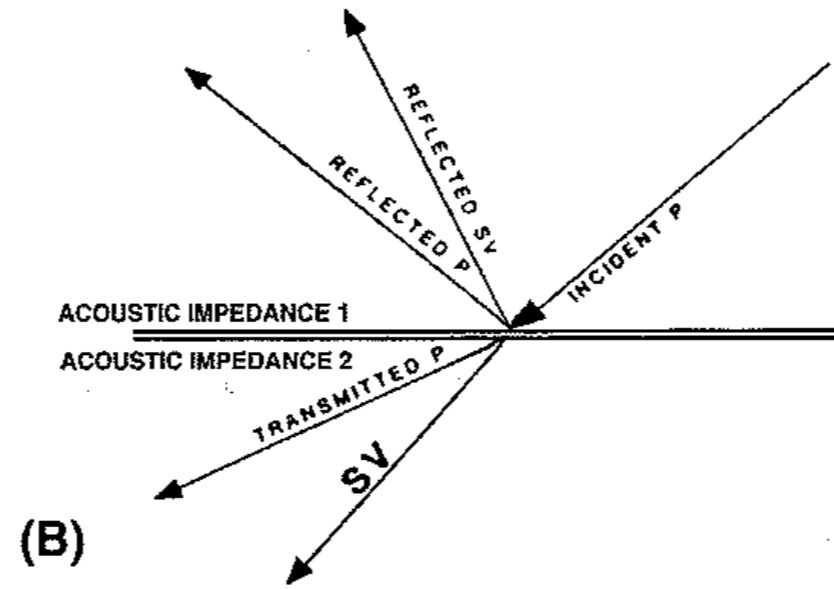
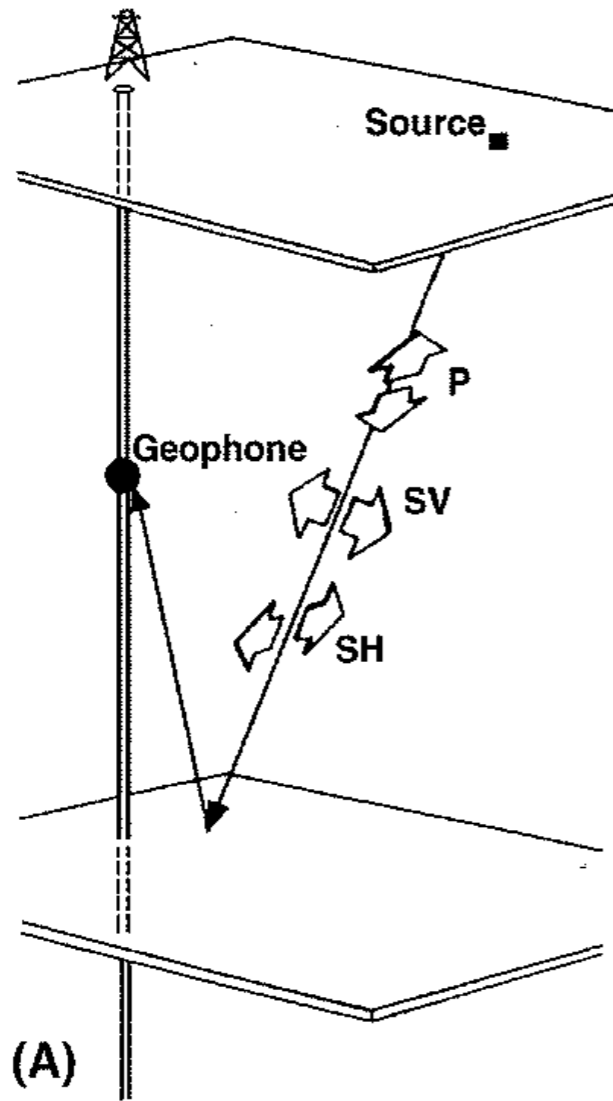
- \* Surface sources
- \* Borehole receivers
- \* Recording of both up- and down-going wavefields
- \* Multicomponent measurements (tri-axial sensors + pressure)

# VSP configurations



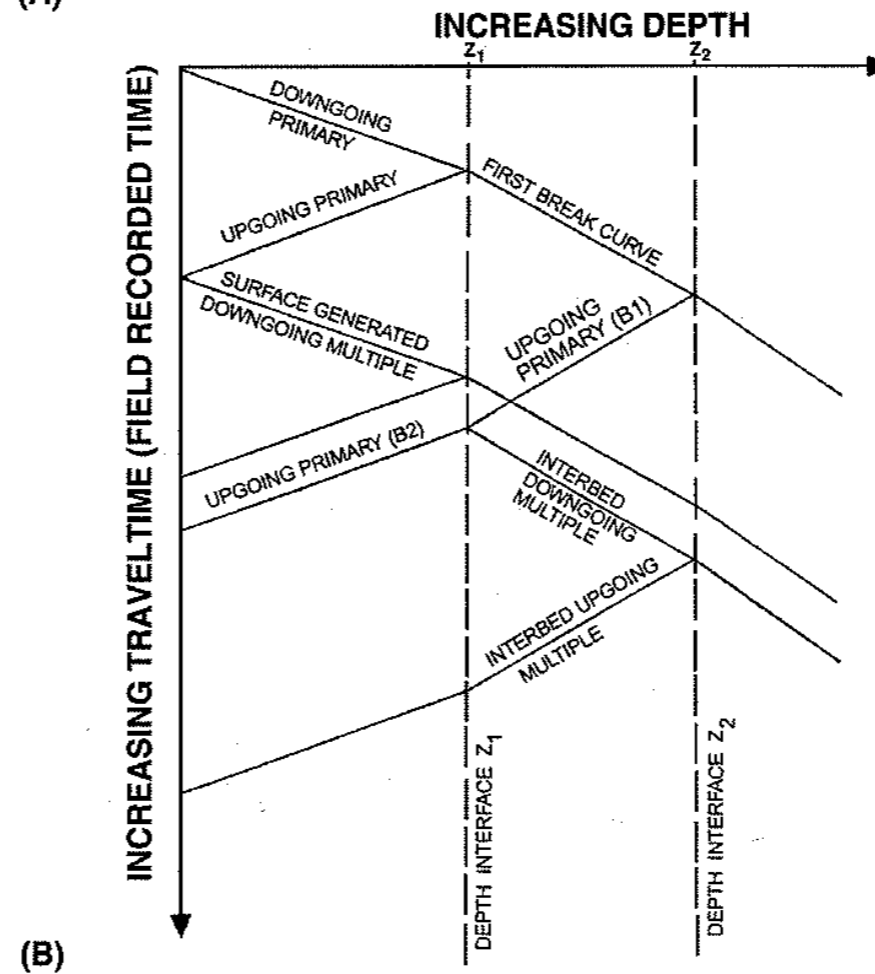
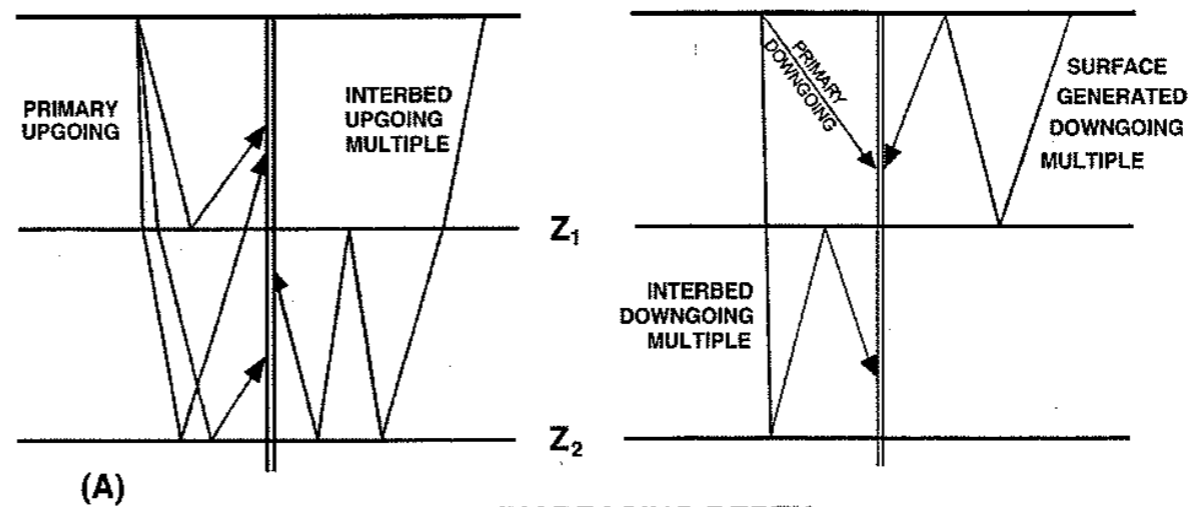
zero-, near-, far- offset VSP

# Recorded wavefields



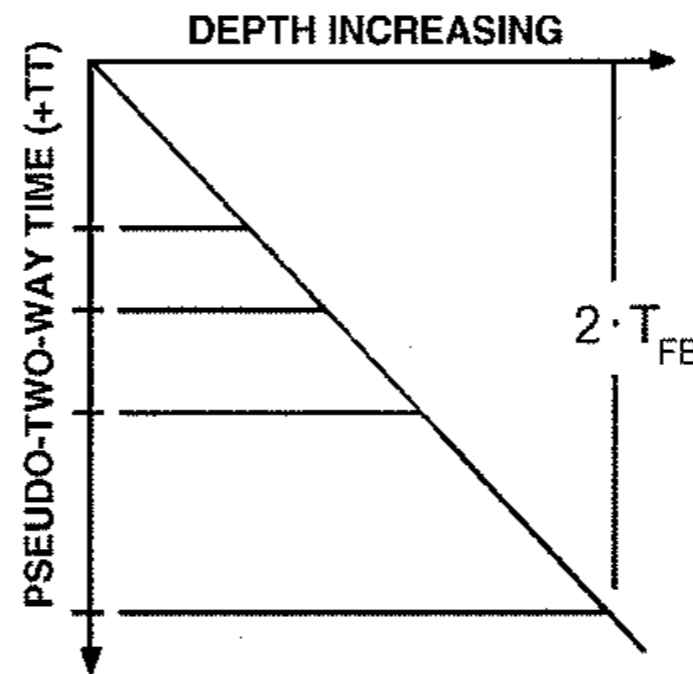
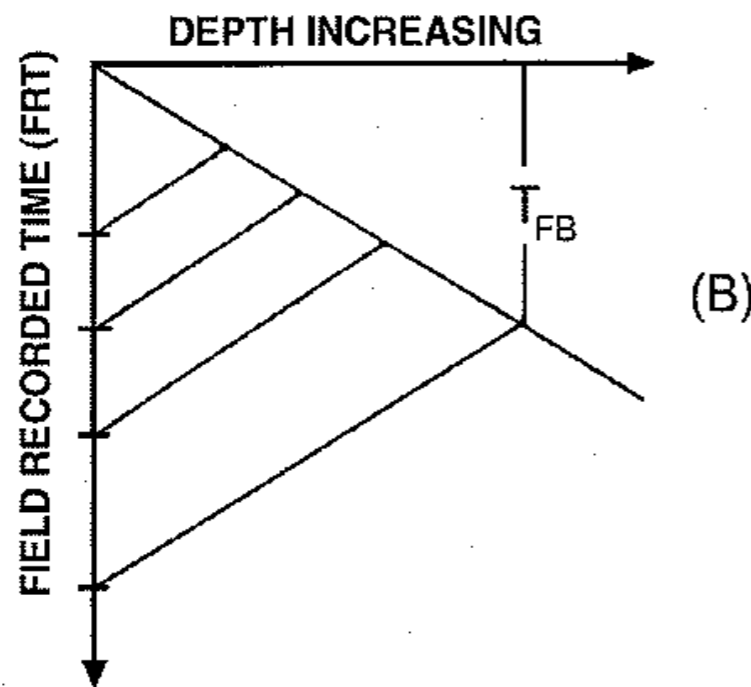
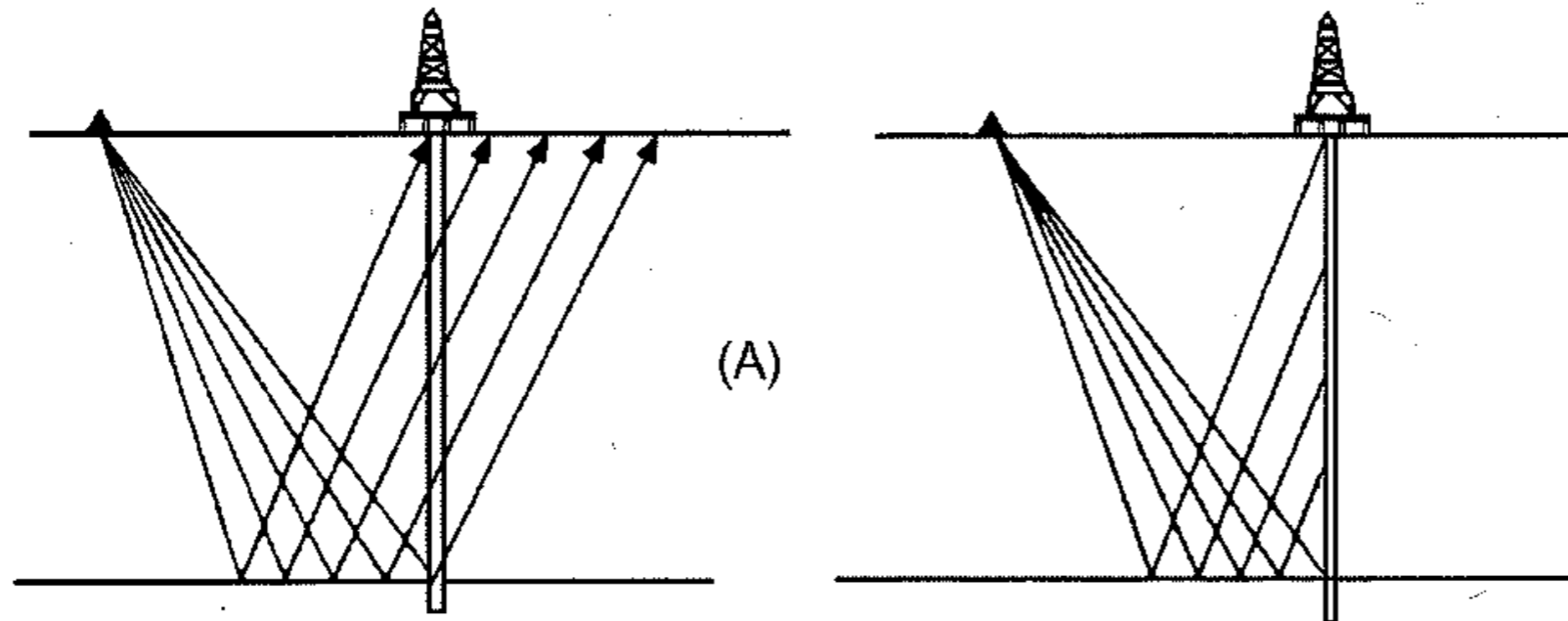
**P, SV, SH**

# Recorded wavefields



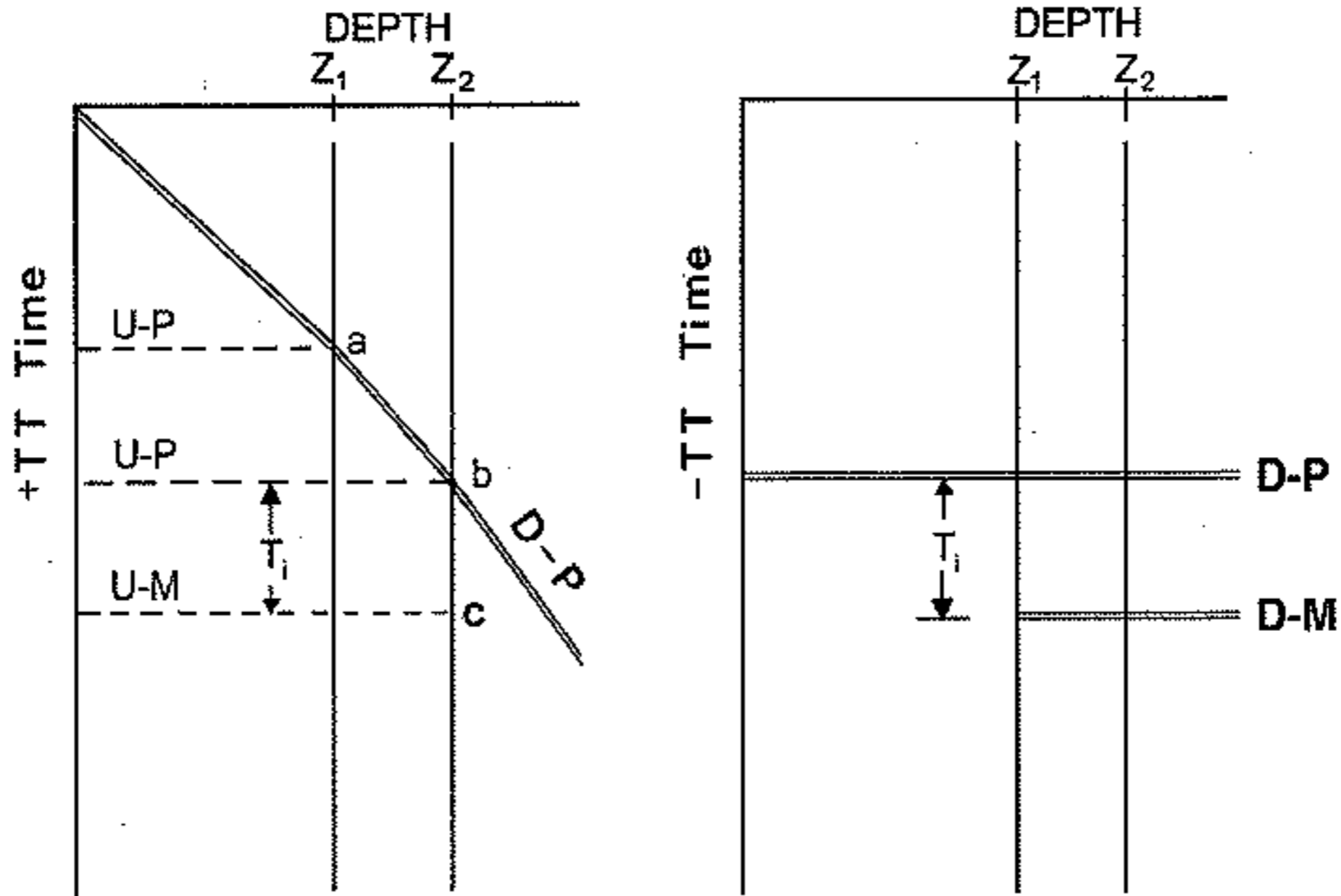
## UP-, DOWN-GOING; Primary/multiple

# VSP displays: traveltimes



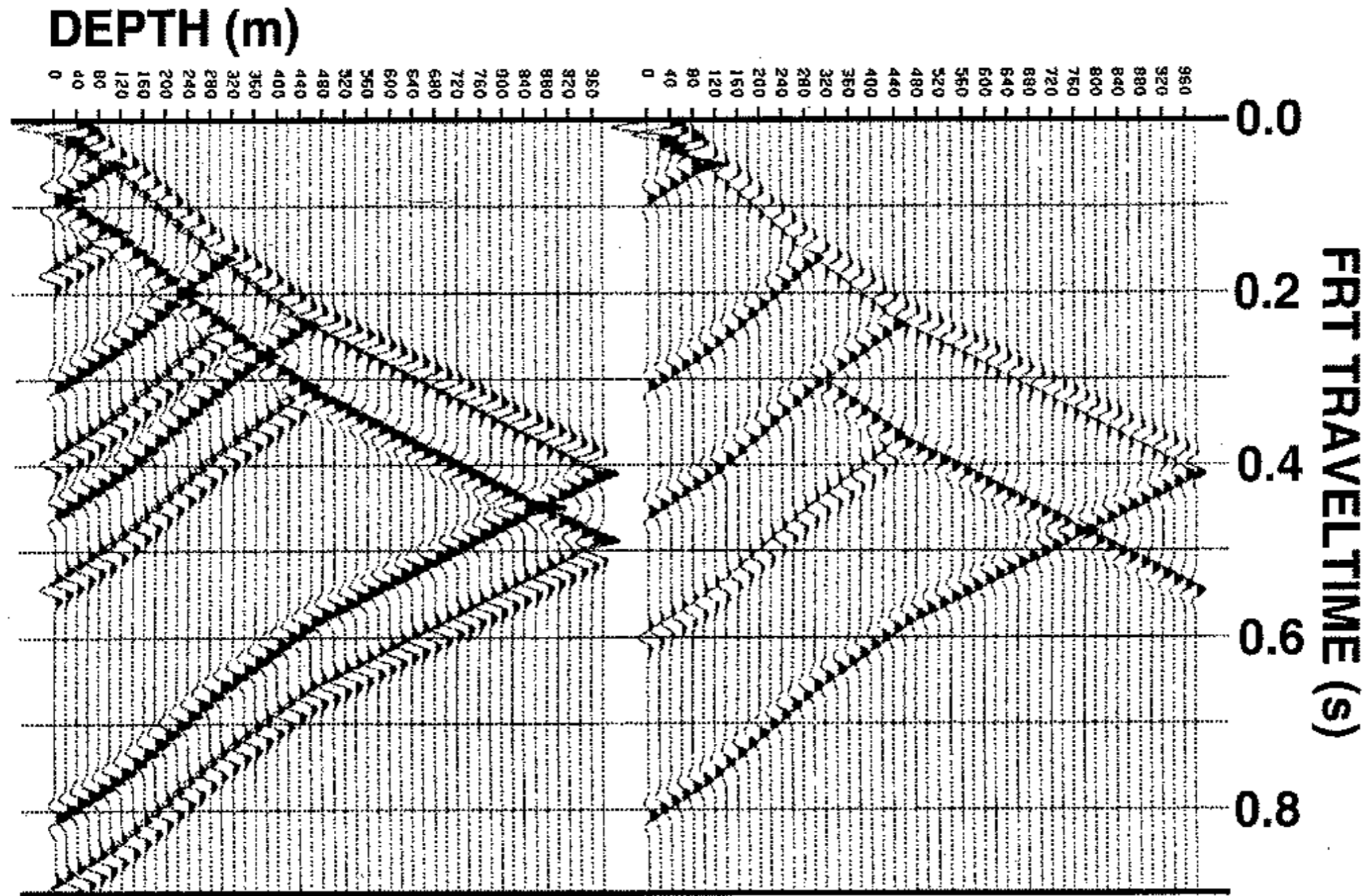
## Field Recorded (FRT) and Pseudo-Two-Way (+TT)

# VSP displays: multiples/primaries in +TT and -TT



**DIM only below UGI - UIM only above BGI**

# VSP displays: synthetic example



Surface and interbed generated multiples