

## GEOP 501- Fall 2017 - HW # 9 - (Due on 12/12/2017)

Given Figure 1 that shows two VSP shot records in the same borehole:

1. Estimate the velocity of the tube wave.
2. Estimate the velocity of the P-wave in Figures 1-A and 1-B.
3. Estimate the distance of the shot from the wellhead in Figures 1-A and 1-B.
4. Use your answer to question 3 to justify why the direct P-wave arrival shows a curved T-Z trend in survey (A) and almost a linear one in survey (B).

