Survey

Seismic body waves travel away from their source, into the ground. As we have discussed earlier, the energy spreads in all possible directions away from the source, heading directly toward geophones or propagating down into the earth where it might be reflected or refracted. When setting up a seismic survey, one must consider the type of sources and receivers to employ and how to arrange them in order to capture enough information to address the geological question at hand. For example, refraction surveys are only useful where velocity generally increases with depth and one should not choose to perform one when there is a priori information indicating that that is unlikely to be the case. Once one has decided to perform a particular type of survey, the survey layout must be chosen.

We will give an overview of some common source and receiver types, followed by an introduction to understanding survey geometry.

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