P-WAVE FIRST MOTION ANALYSIS

Mine Collapse (Implosion)

Surface

P-wave
1st motion dilatational

Down

Seismograph

Normal-Faulting Earthquake (Slip on a fault)

Surface

P-wave
1st motion compressional

Down

P-wave
1st motion dilatational

Up

All first motions are dilatational (towards the source)

First motions are a mixture of dilatational and compressional (away from the source)

From J. C. Pechmann