Seismic P and S wave velocity values within the weathering zone were obtained with using Shallow seismic refraction survey in various survey areas. In case of the data acquired with P wave source, the affect of the air filled zone and disturbance of the air wave are seen on the receivers located near to the source. Besides this, nonlinear deformations occur when source of small energy is utilized. It is possible to reduce the effect of the disturbance and obtain correct P and S wave velocities by means of reducing offset to some decimeters.

A seismograph with 12 channel and signal stacking ability and high frequency (100Hz) geophones, because of short spread length, were used in working areas. Geophones distance set 20 cm. Two dimensional models were constructed by applying two dimension inversions to the first arrival time of direct and refracted waves and these models were compared with the traditional layered models. It seen that Vp values is smaller than the velocity of the P wave in air (330 m/s). In addition, the ratio between P and S wave velocity is around 1.5 in dry environments.