Shallow subsurface structure on shore in the northward extention of the Kakudayama toen fault

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A shallow seismic reflection survey was carried out along the coastal area in Niigata Prefecture, central Japan to reveal the northern extension and subsurface structure of the Kakudayama toen fault. The target depth is about 500m. The survey area is between the Echizenhama and the Igarashihama and the surface is covered with sand dune. The length of survey line is about 10km and it is 200m to 300m apart from the coastline. The survey parameters are as follows. Seismic source: MiniVib T15000, shot point interval: 2.5m, sweep number/shot point: 2, sweep frequency: 15-120Hz, detector: bunching of six UM2s, detector point interval: 10m, maximum offset: 960m-1440m(variable), recorder: DAS1, number of channel: 144ch. The data quality is not good, perhaps because of hard traffic noise, presence of sand dune and so on. Up to now, a conventional data processing was applied to the data such as geometry, gain recovery, deconvolution, bandpass filter, constant velocity NMO and CMP stack. In the preliminary section, an eastward dipping event is detected in the western edge between 700ms and 900ms in two way time, layer events in the western quarter shallower than 600ms, and some events shallower than 300ms in the whole section. According to the previous seismic surveys, the Kakudayama toen faut extends to and crosses the present seismic line. We will apply static correction and velocity analysis to the data in detail and reveal the position of fault and shallow subsurface deformation caused by the fault.