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SSS034-P03

Room:Convention Hall

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Seismic Reflection Survey at Kawajima Saitama

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We conducted seismic reflection survey at Kawajima, Saitama in December 2010. The length of survey line is about 7600m from the Iruma River to the Ichino River by way of a well for subsidence monitoring, and the direction of the survey line is South to North. AIST conducted another survey along the Iruma River in 2007. The purpose of this survey is the revelation of the geologic structure between the previous survey line and the well. We used 10Hz geophones, and deployed them at intervals of 10m. We used distributed seismic recording system DSS-12 produced by SuncoH Consultants Co., Ltd. We recorded traces at intervals of 1ms. We used IVI T-15000 mini-Vibrator. We shot 6times at intervals of 10m with sweep frequency of 15 to 120Hz, sweep length of 16s, and listening length of 3s. Each shot is recorded at 156 geophones. First arrivals can be clearly seen in shot gathers along whole survey line. Reflected events can be seen at around 0.6 to 0.8s of two way time along whole survey line. Strong reflected events can be seen at around 1.6s in the north of the survey line. In the results of the constant velocity stack with <math><2\text{km/s}</math>, south dipped event can be seen at 0.2s to 0.4s around the north end, and at 0.4s to 0.7s around the south end of the survey line. In the results of the constant velocity stack with 2.1km/s, south dipped event also can be seen at 0.7s around the north end of the survey line, and at 1.3s around the center of the line. Moreover, in the north of the survey line, clear events can be seen at around 1.4s. These events can be clearly only in the north of the survey line, but can be barely traced to the south of the line.

It is expected that these events become clearly with the detailed processing.

Keywords: seismic reflection survey, Saitama, Kawajima