

Interpretation of the seismic reflection survey at Kawajima, Saitama

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We conducted seismic reflection survey at Kawajima, Saitama in December 2010, and reported preliminary results with time profiles in the last meeting.

In this report, we show a depth profile with more accurate geometry, renewed velocity structure, and with static correction, post-stack migration, time to depth conversion.

Reflected event can be seen at around 300 to 600m depth of along whole survey line, and it can be the boundary between the Kazusa Group and the Miura Group. Kawajima 84KJ borehole locates at between CMP944 and CMP945. The top of the Miocene is at 578m at the borehole, and it is expected that an event is seen at the depth in the reflection profile. However, obvious event cannot be seen at around the depth in the profile. The reason why the event cannot be seen is unknown.

South dipped event can be seen at 50m depth around the north end, and at 150m depth around the south end of the survey line. It can be the boundary between the Shimosa Group and the Kazusa Group. South dipped event can be seen at 700m depth around the north end of the survey line, and at 1300m depth around the center of the line. South dipped event also can be seen at 700m depth around the north end of the survey line, and at 1300m depth around the center of the line. These events mentioned above is identified with the events seen in the previous survey along Kawagoe-1 Line by AIST.

Strong reflected events can be seen at around 1600m depth in the north of the survey line. Moreover, in the north of the survey line, clear events can be seen at around 1400m depth. These events can be clearly only in the north of the survey line, but can be barely traced to the south of the line.

Keywords: seismic reflection survey, seismic velocity structure, upper crust