

## The developmental process of the Kazusa basin inferred by high-resolutional seismic reflection data

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The Kazusa Group distributed in the middle part of Boso peninsula includes strata deposited from basin to coastal area and the thickness of this group is over 3000 meters (Ito and Katsura, 1992). The forearc basin depositing the Kazusa Group is called the Kazusa basin (Watanabe et al., 1987) and this basin migrated toward northwest (Mitsunashi, 1990). However the cause of this migration is not understood sufficiently. This study provides a high-resolutional data from the coastal area in the eastern part of Boso peninsula and discusses a tectonic background of the migration.

The survey area is 35°10'N~35°50'N and 140°20'E~141°10'E (the Kujukuri-oki area). We obtained seismic data of ca. 1100 km in total length with a boomer and multi-channel streamer (24 channel with 3.125 m spacing). Seismic data are processed by SPW (Parallel Geoscience Corporation) and provide seismic reflections at 100 m below seafloor.

In the Kujukuri-oki area, we recognize three strata bounded by distinct unconformity and define them as the Kujukuri-oki C Formation, the Kujukuri-oki B Formation and the Kujukuri-oki A Formation in ascending order. Calcareous nannofossils (Nishida et al., 2016) from the Kujukuri-oki B Formation show that this formation correlates to the Kazusa Group. In the Kujukuri-oki B Formation, some anticlines at shelf edge and normal faults dipping eastward off Taitouzaki extend from north to south. Seismic facies of the Kujukuri-oki B Formation is distinct stratification deformed by these anticlines and faults. In addition, the characteristics of normal faults in Kujukuri-oki area are consistent with those of normal faults recognized in the Kazusa Group. Some faults in sea area dip westward and then they compose a graben with normal faults dipping eastward off Kujukuri town.

Our high-resolutional seismic data show that anticlines formed in compressive stress field and normal faults formed in tensile stress field exist closely in the Kujukuri-oki area. The anticlines at shelf edge would work outer ridge and migrate the Kazusa basin toward northwest.

Keywords: Seismic reflections, the Kazusa Group, tectonics