

**Kaersutite inclusion in Tertiary Nobiru quartz diorite sheet from Miyagi prefecture**

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Boring for hot spring was performed at Nobiru, Miyagi prefecture, the core sample included andesite - quartz diorite as sheet (depth; 1373.8 - 1613.1 m). The whole rock K-Ar age is 13.5-14.5 Ma (Kanisawa and Kato, 1998), the Bulk chemical composition indicate sub-alkaline rock series. Phenocrysts of the sheet are mainly plagioclase, orthopyroxene and clinopyroxene, particularly orthopyroxene phenocryst include various inclusion. Kaersutite is a typical constituent of alkaline rock series, nevertheless, One type of these inclusion shows kaersutite with glass and apatite. We report formation process for the kaersutite based on petrography and geochemistry.