

The characteristics of the Thoen fault along the southeastern margin of the Lampang basin, Northern Thailand

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This research has been done to study characteristics of the Thoen fault along the southeastern margin of the Lampang basin, northern Thailand. Remote sensing technique and aerial photographs were applied to interpreting lineament, locating the fault and interpreting the morphotectonic landforms respectively. Subsequently, Ground penetrating Radar (GPR) investigation was used to check the location of fault in the field. The results from Landsat 7 interpretation show that the major trend of lineaments along the Thoen fault is NE-SW direction. Aerial photograph interpretation clearly reveals normal-fault scarps in the several areas along the fault line. Morphotectonic landforms suggesting normal active faulting in these areas are triangular facet spurs, wine glass canyons and linear mountain fronts. Stream length-gradient index (SL) can indicate steep slopes of streams that may relate to active tectonic zone. The valley floor width to valley height (Vf) and mountain front sinuosity (Smf) are low. These geomorphic indices seem to support rapid uplift feature. In fact, the results of GPR investigation reveal the displaced reflection surfaces in some site of GPR investigation lines.