



## **The Study of Subsurface Geology and Geological Factors Contributing to Sinkhole Collapses in Nong Bua Lam Phu, Thailand**

Tatsanaporn Ruansorn and Rungroj Arjwech  
Geotechnology, Khon Kaen University, Thailand (qoo\_pooh@hotmail.com)

Severe sinkhole collapses have been found around a limestone quarry in Nong Bua Lum Phu Province, Thailand. The recent collapses arise anxiety to agricultural activity around the quarry. The objective of this study was to study subsurface geology and geological factors as well as to find out the relationship contributing to sinkhole collapses. Aerial photo interpretation was carried out and Electrical Resistivity Tomography was used to investigate subsurface geological structure in the area. The ERT results show vertical anomaly of low resistivity values interpreted as fracture zone running through to the quarry. The near surface cavities are found related to the collapses on the surface. The direction of fracture is NW-SE. An activity in the quarry mainly causes sinkhole collapses that have been developed along the fracture zones in limestone.