



Learning Basic Geophysical Methods in a Mélange Geological Complex

Rachmat Sule (1), Eko J. Wahyudi (1), Wawan G. A. Kadir (1), Djoko Santoso (1), and Tri Hartono (2)

(1) Institut Teknologi Bandung, Geophysical Engineering, Bandung, Indonesia (rachmat@gf.itb.ac.id, +62-22-253-4137), (2) Indonesian Institute of Sciences, Unit Karang Sambung, Karang Sambung Village, Kebumen, Indonesia

At the end of 6th Semester, each undergraduate student of Geophysical Engineering Department – ITB must take an obligatory course of Geophysical Field Camp. This course is carried out in the *mélange* geological complex of Karang Sambung, Central Java Province – Indonesia. An extra-ordinary geosciences campus was built by the government of Indonesia in 1960s and managed by LIPI (Indonesian Institute for Sciences). This campus in Karang Sambung was the initiative of Sukendar Asikin, a former professor from Geology Department of ITB, and aimed as the second campus for all Indonesian geosciences students to learn earth sciences in field camp, which is served as “live laboratory”. The funding for maintenance and further development purposes was mainly obtained from the government of Republic Indonesia and donation from some local oil and gas industries, such as Medco Oil Group and Pertamina.

The *mélange* geological complex of Karang Sambung is situated around 320 km eastern of Bandung. Geophysical engineering students of ITB will stay in this area for 15 days. This area could be reached by using public train up to Kebumen city for around 6.5 hours, and is continued by public bus to the northern part of the city for about 30 minutes (19 km from the city of Kebumen). During their study in this campus, the course material for geophysical engineering students can be divided into three categories, namely:

1. Basic geological observation and mapping,
2. Integrated geology, gravity and magnetic investigations for solving geodynamical problem,
3. Application of geophysical methods in engineering problem.

This geosciences campus is visited through the years not only by the geophysical students of ITB; but students from other major subjects such as geology, mining engineering, petroleum engineering, geography from the same, even from other universities also came every year and learned from this site. They stayed for several days and even for one month to learn and absorb the uniqueness of past history of earth processes. Sometimes this field site is also used as a training center for students from other disciplines or government institutions.

After conducting and observing the learning process of this course for several years and after the students passed the course, their knowledge and understanding of the earth phenomena as well as geophysical methods had increased significantly. Since then, this course is judged as a success indicator of geophysical education in ITB. One of many positive implications of this course is that the alumni from geophysical department of ITB are accepted and employed worldwide. This paper will mainly highlight the students’ activities and their achievements during and after the course conduction.