

## **Slope stability study around kampung Kuala Abai, Kota Belud, Sabah, Malaysia**

### **ABSTRACT**

The study area is located in the northwestern part of Kota Belud, Sabah and underlain by Late Eocene-late Early Miocene of the Crocker formation. The objectives of this study are to determine the mode of failures, factors of safety and to propose slope designs. Engineering geological mapping, kinematic analysis, new approach of adjustment factor, dry density analysis, stereographic measurement, kinetic analysis and prescriptive measures were used to produce geological map and described rock mass characteristics, to determine the mode of failure and optimum slope angle, the most critical mode of failure, unit weight of the rock, wedge angle, factor of safety and slope protection and stabilization measures, respectively. Results of this study shows that the mode of failures are wedge failure, the factors of safety ranges from 1.93 to 4.43 which generally considered stable and the proposed slope design are flattening the slope angle between 31o-45o, installation of the wire mesh, rock trap ditch and spot rock bolting