Slope assessment of Sikuati-Tajau member, Kudat formation using modified d-slope method

ABSTRACT

Slope assessment using modified D-Slope method is conducted on five (5) selected rock slopes of Sikuati-Tajau Member (Kudat Formation). Modified D-Slope method comprises of G-rating determination and potential instability which include 17 parameters of field observation and laboratory analysis, and kinematic analysis for determine the type of failure for each slope. Based on the result, slope S3, S4 and S5 showed the presence of planar, wedge and toppling failure respectively, with G-rating value of more than 0.4. Slope S1 and S2 is considered as No Risk due to low value of G-Rating and no presence of failure. Slope S3 and S5 are categorised as Moderate Risk with suggested mitigations of rock anchor and soil nailing with further actions required, while slope S4 is considered as High Risk with immediate actions and retaining wall construction are required.