## Study of the Landslide and Stability of Open Pit Quarry: Case of Open Pite Quarry of Chouf Amar M'sila, Algeria

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**Abstract :** Mining operations open induce risks of instability that can cause landslides and collapse at the bleachers slope. These risks may occur both during and after the operation phase. The magnitude of these risks depends on the mechanical and physical characteristics of the rock mass, the geometrical dimensions of ore bodies, their spatial arrangement, and the state of the operated area. If security and technology measures are not taken into account for this purpose, the environment will be affected. The main objective of this work is to assess these risks by analytical and numerical methods. The study is based on the geological, hydrogeological and geotechnical rock mass of the open pit quarry of Chouf Amar M'sila. The results obtained have allowed us to obtain an acceptable factor of safety and stability study of the open pit.

Keywords : stability, land sliding, numerical modeling, safety factor, open-pit quarry

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