

POTENTIAL MINERAL RESOURCES AND THEIR LIMITATIONS FOR THE MINERAL INDUSTRY- A CASE STUDY FROM MATALE DISTRICT

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Present study revealed that Matale district is characterized by many mineral resources than currently reported in the literature. However, their economic potential has not yet been properly evaluated. Depletion of known mineral resources of the district and the increasing demand for minerals requires development of new technologies to exploit the identified low-grade mineral deposits. Therefore, this study focuses on the economic potential of low-grade mineral resources in the district, and discusses the limitation of their use in the industry.

A pegmatitic body containing fluorite with an aerial extend of 60 m² found at Owela near Kaikawela. Although the subsurface extend of this deposit not yet known, increasing model percentage of fluorite with depth and mode of occurrence suggest that the subsurface may possibly fluorite rich. These fluorites can be used in manufacturing hydrofluoric acid and other fluorine based industries. Kaolin deposit found at Kaikawela cover nearly 150-200 m² in aerial extent. Although the kaolin, due to iron oxide cannot be used for the high quality ceramics, it is a suitable source of raw materials for paint industry and to produce ceramic stains.

High-grade regional metamorphic rocks such as quartzite and coarse-grained garnet-bearing sillimanite gneiss covering more than one fourth of the Matale District have high economic potential. Crushed quartzite will be a better alternative for river sands for construction purposes. Less fractured, coarse-grained garnets found as a major mineral constituent (>30%) in gneisses of the area will also be an important raw material for many industries. A thick deposit of tremolite-actinolite extending more than 300m found at Elahera area can be used for small-scale industries to produce frictional products.

Most of the mineral deposits mentioned above are not yet been exploited and some of them are treated as waste materials during exploration of other industrial minerals. However they have high economic value as raw materials for small-scale industries. Therefore the possible industries, which can be started with the locally available technologies, must be introduced.

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