

DESIGN OF RECLAMATION TECHNIQUE ON LIMESTONE MINING AREA AT GOMBANG VILLAGE, PONJONG DISTRICT, GUNUNGKIDUL REGENCY, SPECIAL REGION OF YOGYAKARTA

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ABSTRACT

Karst Sewu Mountain area has a very distinctive landscape, in the form of tens of thousands of limestone hills with an altitude between 20-50 meters stretching from the southern part of the Special Region of Yogyakarta (Gunungkidul Regency), Central and East Java whose existence is protected by the Ministry of Energy and Resources Minerals, but currently there are some changes in karst areas caused by mining activities. Most mining do not pay attention to environmental management, have effect to environmental damage and potential negative impacts on the environment, which one is mining Limestone in Gombang Village, Ponjong District, Gunungkidul Regency. This research aims to determine the level of damage to environmental caused by limestone mining and to design the appropriate of technical management of reclamation to preserve the Karst function..

These research used many kinds of method. The method used is the survey method and field mapping method to determine the original condition of the mining area. Purposive sampling was used for soil sampling techniques based on the presence of soil before and after mining which will be continued by laboratory analysis methods including parameters of H₂O, Texture, C-org, N-total, K-Total, P-Total, CEC. The interview method was conducted to determine the impact that occurred due to mining activities. Descriptive method is used to describe and assess the criteria for each parameter of environmental damage based on Governor Regulation No. 63 of 2003. Determination of the design and technical reclamation using an evaluation method adapted to land use in the Gunungkidul Regency Spatial Plan.

Based on location measurements and the results of the analysis, the level of environmental damage is severely damaged. The recommended of the reclamation technique is to create a terrace with a level of 3 meters, a width of 6 meters, 3% back slope, equipped with a ditch, drainage canal and reservoir. The cultivated method uses the pot method with size of 0.3m x 0.3m x 0.3m, vetiver selected as a cover crop, teak as a pioneer plant or community forest plant with a spacing of 3m x 3m and Banana Tree are used as economically valuable plants.

Key words: Mining, Environmental Damage, Reclamation, Karst, Limestone