ABSTRACT

PT. Sugih Alamanugroho is one of the Gamping mining companies in the Gunung Kidul Regency area, which has an IUP with an area of 25 hectares. In 2018 PT. Sugih Alamanugroho will carry out Gamping rock mining activities on Mount Dengkeng to meet the needs of limestone as a raw material for cement for the construction of New Yogyakarta International Airport infrastructure with a target market of 100,000 tons / year.

To meet the needs of the production target, it is necessary to design the progress of mining, because the direction of progress of the mine plays an important role in the continuation of mining operations. Planning the progress of mining must be planned carefully, according to the topography and geological structure in the mining area. Careful planning will certainly help in the process of land acquisition owned by local residents, so the mining process can run more effectively.

PT. Sugih Alamanugraha needs to make a five-year annual pushback design that refers to the target of limestone production of 100,000 tons / year. So that it can be used as a reference in the limestone mining process in the research area.

Based on the results of observations, calculations and analysis, it can be concluded that limestone mining in the PT Sugih Alam Anugraha uses an open pit mining system with quarry methods, from the two design miners that the two designs are the most optimal design, the haul road dimensions are wide on the road straight 10 meters, at 19 meters bend while the grade of slope (grade) is 10%, Superelevance 0.84 mm / m and cross slope 0.4 mm / m.

The tools used and the needs of the tool are the digging tool-loading using the Hitachi EX-200V Excavator. The need for loading and unloading equipment is 1 unit of operation and transportation using the Mitsubishi Colt Diesel 100 PS Dump Truck. Transportation equipment needs every year 1 operating unit.