

ABSTRACT

Gumelar area is an area of good prospects of gold ore. At this time the mining activity has been going on artisanal mining is done by citizens around. Mining activities are carried out by forming groups consisting of 6-10 people. Technical design Gumelar mining in the area has not been made resulting in poorly coordinated management of mining activities and production unstable. Draft mining is an important step in mining operations. Therefore, the draft mining is necessary for mining activities conducted to obtain optimal results.

Based on laboratory test data of rock mechanics, rock mechanics characteristics can be known of the region Gumelar, namely (a) the ore / ore zone has a value of Rock Mass Rating (RMR): 59% is included in the moderate group, (b) the hanging wall has a value of Rock Mass Rating (RMR): 62% belonging to the strong, (c) the footwall has a value of Rock Mass Rating (RMR): 67% belonging to the strong. From the results of observations made, the appropriate mining method with topography and geology of Gumelar is gophering method. The selection of the method is adapted to the circumstances in the form of spotty sediment deposits that mining can not be done with an industrial scale. Based on their designs obtained probable reserves of 33 kg Au. Mining methods are applied using a support system in working order security is guaranteed.

Support of timber is used to make it easier to know when the support is less robust than that induced cracks. Mining activities are conducted requires a large capital investment. In underground mining activities there are initial cost which mean the cost of preparation of mining, namely the calculation of the cost before the work begins. Based on that it would require cooperative artisanal miners for easy capital before mining operations.

Keywords: gophering, reserves, support, cost.