

# **RESERVES ESTIMATION OF LIMESTONES USING CROSS SECTION METHOD AND CONTOUR METHOD ON MOUNTAIN POKERSO AT PT. SUGIH ALAMANUGROHO, KAB. GUNUNG KIDUL, PROVINCE DIY**

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## ***Abstrack***

*Increasing market needs will demand limestones at PT. Sugih Alamanugroho, Bedoyo Village, District Ponjong, Gunung Kidul, and reserves at Mount Sidowayah less and less, then do a calculation of reserves at Mount Pokerso so after reserves at Mount Sidowayah out then mining can proceed in Mount Pokerso so that the company can meet the limestones to the request. Calculation of reserves is necessary before mining operations. The selection of the method of calculation should be selected reserves of cheap, fast, easy to implement and the results are representative. In this case the selected method of Cross Section and Contour Method.*

*In Cross Section Method, conducted by making cross (incision). An incision is made as much as 15 incisions were divided into 14 blocks, from the incision A - A ', incision B - B', incision C - C 'until the incisions O - O'. An incision is made based on the topography of limestone sediment that consists of the topographic crest, slopes and valleys, with the slice spacing of 20 meters. While the method of Contour, contour spacing is 20 feet, divided into two blocks consisting of 3 pieces of the contour of the contours of 430, 410 and contour contour 390. Highest contour 430 meters above sea level and the lowest contour is 390 feet above sea level.*

*The area measurements with the aid of a computer program, which Software Autocad and Quicksurf. Then the volume using the formula Mean Area and Frustum Formulas.*

*Based on estimates using the method of Cross Section proven limestone reserves acquired tonnage of 1,304,343.18 tons, while the Contour Method with proven limestone reserves acquired tonnage of 1,216,335.25 tons. The results of both methods of reserve estimation obtained estimated values for Cross Section Method larger than the Contour Method, the estimated difference in the amount of 88007.93 Tons.*

*Got mine life calculation based on planned production targets, ie 36 288 tons / year. Life of the mine at Mount Pokerso using Method Cross Section is 35.94 years  $\approx$  36 years, while the Contour Method was 33.52 years  $\approx$  34 years.*

***Keywords: Limestone, Reserves Estimation, Cross Section Method, Contour Method***