

## ABSTRACT

*PT. Dewa Ruci Mandiri is a private coal mining company located in Sebuk, Nunukan North, North Kalimantan, with a mining system that is applied to take the coal mine is an open system with the method of Strip Mine. In the mining activities of PT. Dewa Ruci Self is always related to water issues. If the water is not controlled it will cause problems. One problem that can arise is acid mine drainage. Therefore, PT. Dewa Ruci Mandiri has Settling pond that is used to perform the management of acid mine water settling pond located in Pit 1 and the Stock ROM.*

*The cause of acid mine water is the presence of sulfide minerals are exposed to air and reacts with water. Water is classified as acid mine water is water that is below a pH of 6, where the measurement of pH using a pH meter, and pH indicator strips (non-bleeding) pH 0-14. The way of handling and prevention of acid mine drainage in the PT. Dewa Ruci Mandiri using quicklime 75-150 kg per day, where one day more or less done once liming for an hour. Capsulation done to prevent it (encapsulation), with NAF volume while PAF 62551.29 2296379.40 BCM BCM. Based on laboratory calculations needs quicklime obtained as follows:*

- 1. Settling pond pH at the beginning of the Pit 1 = 5.7, end = 6.5 with 0.0005 grams/liters of quicklime needs.*
- 2. Settling pond pH = 5.6 Stock ROM beginning, end = 6.1 with 0.0003 grams/liters of quicklime needs .*

*while the actual calculation is based on the pH obtained as follows:*

- 1. Settling pond pH at the beginning of the Pit 1 = 5.7, end = 6.5 with quicklime need 276.8 grams / hour.*
- 2. Settling pond pH = 5.6 Stock ROM beginning, end = 6.1 with quicklime need 166.08 grams / hour.*