

## ***ABSTRACT***

Pit TW 1 is a coal mining project owned by PT . Sharpening Prima Coal carried out by PT . Arkananta Apta Pratista as a contractor with a production target of 700,000 BCM / Month . The project is located in the village Girimukti , District Penajam , Penajam Paser Utara , East Kalimantan .

Mining system applied to take Coal mine is an open system with a method Strip Mine . One of the additional activities on mining operations to remove the water that has entered the area flooded mine ( Mine Dewatering ) , because the mine water that is not dealt with properly can disrupt mining operations . The progress of mining cause mine penyaliran system change. Hence the need for a review of the existing mine penyaliran system .

Based on the analysis of precipitation data in 2005-2014 , obtained rainfall plan is 124,21 mm / day , the intensity of rainfall is 43,06 mm / h with a 3-year return period rainfall and hydrology risk by 86.83 % .

Catchment research sites there is only one catchment , which is 0.19 km<sup>2</sup> with . runoff coefficient of 0.7

Pit mine water source TW 1 comes from rain water directly into the Pit area . Rain water discharge flow of 1.59 m<sup>3</sup> / sec

Volume Water wells are ( sump ) which serves to accommodate the temporary water flowing in opening the mine amounted to 7.872 m<sup>3</sup> with the long dimension of the surface of the sump 108 m , width of the surface of the sump 32m , the length of the base sump 102 m , a width of the base sump 26 m , a depth of 4 m .

KSB pumps used is 150 LCC - H 150-500 with 450 pump discharge m<sup>3</sup> / hour , the pump lies in a puddle of water and water pumped directly to the settling pond .

There is accumulation of 86886.87 m<sup>3</sup> of water volume , the time required to drain stagnant water use KSB pumps LCC- H 150-500 is 10 days .

Settling ponds owned by PT . Arkananta Apta Pratista very good , because it is designed with 4 compartments with a total value of Suspended Solid used is 238 mg / l . Based on the results of the calculation of settling ponds should be treated in the first compartment of each 256hari once , the second compartment 312 days , the third compartment 260 days , and the fourth compartment 291 days