

ABSTRACT

PT . Borneo Indobara is PKP2B company engaged in coal mining . Coal mining PT . Indobara Borneo began in November 2009 . Mining in PT . Borneo Indobara using open-pit mining system . A major characteristic that distinguishes the open pit with underground mining is the influence of climate on mining activities . Climatic elements are very influential in mining activities is raining . The main source of water in an open pit mine is rain water , so when it rains with frequent high intensity puddle at the pit bottom .

The main source of mine water at the mine site is rainwater After analysis of the data obtained 2001-2012 rainfall year rainfall of 106.88 mm with a plan with a rainfall intensity of 37.65 mm / hour in the rain for a return period of 3 years . where as actual rainfall field highest ever at 220 mm / day . Hydrological risks that occur at 86.83 % . From field observations and analysis of watershed maps are one catchment area of 338.82 km² of watershed batulaki and 1.39 km² for the catchment area of the mine plan entered into with total runoff coefficient of 0.28 is consists of the topography coefficient (C_t) 0.08 , coefficient of soil (C_s) 0.16 , and vegetation coefficient (C_v) of 0.04 .

At 220 mm rainfall / streamflow day at 362.35 m³/second batulaki with the long dimension of the channel (a) 10.08 m , water depth (h) of 4.38 m , the width of the base line (b) 13.2 m , width of upper tract (t) 30.66 m , channel depth (d) 5.04 m , and height surveillance (f) 0.66 m . and catchment discharge entering into the mining area of 1.49 m³/second with the long dimension of the channel (a) 1.28 m , water depth (h) 0.56 m , width of the base line (b) 1.68 m , over the channel width (t) 3.9 m , channel depth (d) 0.64 m , and height surveillance (f) 0.08 m

Transform and prevent water runoff into area rivers batulaki enter the mine plan area with made a dike that has a value of $FoS = 1.2$