

## ***ABSTRACT***

**Fadhilah Alkholik: Kajian Teknis Rancangan Area *Final Dump* Palapa di Pit Pinang South, Departemen Jupiter PT. Kaltim Prima Coal**

*One of the mining activities at PT. Kaltim Prima Coal is overburden materials dumping activities in an area until attain a final condition (final dump). Final dump areas must have a drainage system design to regulate runoff water in the area so it does not enter the front and disrupting mining activities. In October 2018, at the Pinang South Department of Jupiter Pit PT. Kaltim Prima Coal will be opened the Palapa dumping area with an area of 101,29 ha from the elevation of 40-160 mdpl and is expected to be final in the end of 2020. The maximum daily rainfall value from 5-years rainfall data (2013-2017) for the return period 25 years is 112,917 mm/day. In the final disposal area, Palapa was made into 3 open trapezoidal channels with dimensions of 2 m channel base widths and 1 m channel depths. Determination of water flow classification is calculated using the froude number indicator. The calculation results show a very critical flow ( $f > 1$ ) on all channel segments so reinforcement is needed by using the tyre drop structure from the Komatsu HD 785 dumptruck and CAT HD 785 used tires. Runoff from the disposal area then streamed by using open channels by utilizing gravity to Angsoka settling pond. Open channel is trapezoidal shape with 2 m channel widths and 2 m channel depths.*

**Keywords : *Final dump, rainfall, open channel, froude number, tyre drop structure***