PT. Kaltim Prima Coal is a company engaged in Coal mining, mining activities carried out is surface mining system by the method of Strip Mine. Department of Pit J is one of the departments of mining operations at PT. Kaltim Prima Coal. Based on the life of the mine in Pit J, production activities will be finished by the end of year 2013. The problems arise in the first quarter (Q1) in February 2012, which is one of the waste dump in Pit J named Swampy Dump suffered landslide that caused the capacity of the waste dump owned by Pit J is not sufficient to accommodate all the remaining overburden until the end of the life of the mine in pit J.

Pit J has two mining alternatives in solving the problem of mining until the end of the life of the mine in pit J at the end of 2013. The first alternative is to mine basalt seam BE that will have an impact on many things, such as land clearing, blending the mud, and the cycle time will be increases. The second alternative is only up to the basalt mining seam E2 (which is above the seam BE) which will impact on the potential for seam reserves BE decreased and E2 seam reserves decreased slightly.

In the first alternative, the production scheduling in Pit J based on forecast F2 June 2012 is 59.554 Kbcm and mineable coal is 5.871 Kton with stripping ratio is 10.14 : 1. In first alternative mining, will also be done in the process of moving mud by inpit sump in first panel to Swampy Dump. Blending mud conducted for 5.6 months with a system comparison between mud with overburden material that is 1 : 3. Executions carried out by the system opening and closing the pool blending mud. Excavator used is Backhoe Hitachi 3.600B, Hitachi 3.500B, and Liebherr R996B, while haul dump used is Komatsu 785, Cat 789, and Hitachi 4.500. After the execution is completed, the seam can be mined and BE are inpit dump stage 3 activities also can be held in June 2013. Cycle time for the first alternative in 2012 is 37.78 minutes and in 2013 is 37.59 minutes.

In the second alternative, the production scheduling in Pit J based on forecast F2 June 2012 is 57.554 Kbcm and mineable coal is 5.641 Kton with stripping ratio is 10.2 : 1. Mining activity is only done through basalt seam E2 and no need for removal of mud that inpit dump stage 3 can be expedited in January 2013. Cycle time for the two alternatives in 2012 is 29.66 minutes and in 2013 is 37.78 minutes. Excavator used is Backhoe Hitachi 3.600B, Hitachi 3.500B, and Liebherr R996B, while haul dump used is Komatsu 785, Cat 789, and Hitachi 4.500.