ABSTRACT

At this time PT.Timah Tbk. mining in the area Permis Sea using Dredges Singkep 1 which has the capacity to bowl 24 CUFT (0.68 m3), with the location of astronomical 2^{o}57'00 "- 3^{o}00'20" LS and 105^{o}56'00 "- 106^{o}03'50" BT. The rate of soil excavation (LPT) on the dredger Singkep 1 850 m^3/hr targeted for topsoil and 350 m^3/hr for leaded sand layer.

Excavation systems used Dredges Singkep 1 currently is the system press perlapisan ground while extracting method is applied shortface method. This method is done by dividing the work into the vault slices with a slice width of 30 meters from 90 meters under the work that is intended to perform a selective excavation.

Based on field observations and calculations made from data that has been collected, the rate of transfer of land is currently at 833.33 m3/hr for topsoil and 364.96 m^3/hr for leaded sand layer. It shows the rate of transfer of land specifically for the topsoil has not been achieved from targeted.

The factors that affect excavation of the dredger, among others: the conditions of major equipment and support equipment, high-tensile wire side, the depth of suppression ladder, weather conditions, excavation system and method used. Weather conditions is a factor that can not be controlled while other factors may be regulated in accordance with the limits and capabilities of dredgers.

To optimize the excavation can be done in two ways, namely by changing the method of excavation methods Longface the overburden and use a combination of methods and Shortface Longface leaded sand layer. By using this method the rate of transfer of land acquired for topsoil 873.28 m^3/hr and 373.83 m^3/hr for leaded sand layer. Meanwhile, by increasing the speed of the wire pull aside to increase the rate of transfer of land acquired for topsoil 892.85 m^3/hr and 394.73 m^3/hr leaded to the sand layer.