RINGKASAN

PT. Kaltim Prima Coal (KPC) adalah salah satu perusahaan tambang yang bergerak sebagai produsen batubara untuk dipasarkan di dalam negeri maupun luar negeri.. Penambangan batubara di PT.KPC dilakukan oleh departemen *coal mining* dengan beberapa pit yang dikelola sendiri yaitu Bendili, Bendili Prima, Pinang *South*, Inul *Middle*, Inul *East* dan Koala.

Kegiatan dalam penambangan batubara terdiri pembongkaran, pemuatan dan pengangkutan. Untuk menunjang kegiatan tersebut maka diperlukan perencanaan yang baik. Termasuk dalam hal perencanaan *cycle time* alat angkut batubara. *Cycle time* alat angkut terbagi menjadi dua yaitu *fixed time* dan *variabel time*. *Fixed time* terdiri dari *spotting time at loading point, loading time, spotting time at dumping point* dan *dumping time* sedangkan *variabel time* hanya terdiri dari *travel time*. Departemen *coal mining* menggunakan data *history* yang berasal dari *dispatch system* dalam membuat perencanaan *fixed time* sedangkan dalam membuat perencanaan *travel time*, departemen *coal mining* menggunakan aplikasi *Truck and Loader Productivity Analysys and costing* (TALPAC).

Permasalahan yang terjadi adalah hasil perencanaan *cycle time* alat angkut batubara yang tidak sesuai harapan karena *cycle time* aktual di tiap pit selalu lebih tinggi dari perencanaan (berdasarkan data semester pertama 2017). Kondisi seperti ini terjadi baik pada segmen *fixed time* maupun *travel time* padahal kondisi lapangan sudah cukup baik. Hal tersebut mengindikasikan terjadi kesalahan pada saat membuat perencanaan *cycle time.* Oleh karena itu perlu dilakukan analisis mengenai data perencanaan *cycle time* agar diketahui apabila ada data yang kurang tepat dan bisa diperoleh perbaikan dari data tersebut.

Dari hasil analisis diketahui data perencanaan *spotting time at loading point, loading time* dan *spotting time at crusher area* sudah baik sedangkan untuk perencanaan *dumping time* di *crush*er perlu dilakukan pembaruan untuk perencanaan-perencanaan berikutnya. Dari hasil perhitungan didapatkan pembaruan rencana *dumping time* yaitu 4,4 menit.

Untuk perencanaan *travel time*, hasil aplikasi TALPAC saja tidak cukup karena kurang memperhatikan hambatan-hambatan di lapangan. Oleh karena itu untuk perencanaan *travel time* di waktu-waktu berikutnya perlu ditambahkan dengan estimasi waktu hambatan agar lebih menggambarkan kondisi di lapangan. Dari hasil perhitungan didapatkan estimasi hambatan Pit Bendili 0,77 menit per kilometer, Pit Bendili Prima 0,55 menit per kilometer, Pit Inul *East* 0,66 menit per kilometer, Pit Inul *Middle* 0,61 menit per kilometer, Pit Koala 0,74 menit per kilometer dan Pit Pinang *South* 0,29 menit per kilometer.

ABSTRACT

PT. Kaltim Prima Coal (KPC) is one of the mining companies engaged as a coal producer to be marketed domestically and abroad. Coal mining at PT. KPC is carried out by the coal mining department with several self-managed pits, Bendili, Bendili Prima, Pinang South, Inul Middle, Inul East and Koala.

Activities in coal mining consist of dismantling, loading and transporting. To support these activities, good planning is needed. Including in terms of cycle time planning of coal hauling equipment. Cycle time of transport means is divided into two, namely fixed time and time variables. Fixed time consists of spotting time at loading point, loading time, spotting time at dumping point and dumping time while the time variable only consists of travel time. The coal mining department uses history data derived from the dispatch system in making fixed time planning while in making travel time planning, the coal mining department uses the Truck and Loader Productivity Analysis and costing (TALPAC) application.

The problems that occur are the results of the cycle time planning of coal transport equipment that is not as expected because the actual cycle time in each pit is always higher than planning (based on the first semester of 2017). Conditions like this occur both in the fixed time and travel time segments even though the field conditions are good enough. This indicates an error occurred when making cycle time planning. Therefore, it is necessary to do an analysis of the cycle time planning data so that it is known if there is an incorrect data and an improvement can be obtained from the data.

From the results of the analysis, it is known that the planning data for spotting time at loading point, loading time and spotting time at the crusher area are good, while for planning dumping time in the crusher, an update is needed for subsequent planning. From the results of the calculation, it was found that the dumping time plan was 4,4 minutes.

To plan travel time, the results of the TALPAC application alone are not enough because of lack of attention to obstacles in the field. Therefore, for planning travel time in the following times, it is necessary to add an estimation of the time constraints to better describe the conditions in the field. From the calculation results obtained an estimate of the obstacles Pit Bendili 0,77 minutes per kilometer, Pit Bendili Prima 0,55 minutes per kilometer, Pit Inul East 0,66 minutes per kilometer, Pit Inul Middle 0,61 minutes per kilometer, Koala Pit 0,74 minutes per kilometer and Pinang South Pit 0,29 minutes per kilometer.