

ABSTRACT

PT. Sitasa Energi is a national private company that engaged in mining iron ore which is located in the Pulau Layang village, Merangin, Jambi Province. Exploitation IUP territory prospects area I PT. Sitasa Energi is 400 hectares, with its geographical, the area of PT. Sitasa Energi is located at coordinates 102°05'52,4" East Longitude to 102°9'46,3" East Longitude and 2°1'40" South Latitude to 2°4'22,9" South Latitude.

The deposits of Iron ore which is to be mined are generally exposed at ground level on the slopes of the basin between the hills, and it's the kolovial deposit. The mining plan in this area is done by open cast mining method. The draft mining - based on computerized system, uses Autocad Software and Surpac 6.5, for good and purposeful design.

Based on the design, it is known that reserves of mined iron ore in the research area of pit gunung es blocks is 643,485 tons. The mining geometry obtained from geotechnical recommendation is a single level 5 meters; width of the bench is 2 meters and slope of bench level is 65°, for interramp slope angle 50° and overall slope angle with ramp 43°. Mine haul road width is 8 meters on a straight road and 11 meters in the bend, a maximum gradient is 9 %. Based on the results of mining technical design found the number of sequence of mining in the pit gunung es block until the pit bottom elevation that is numbered 12 stages of mining at the pit bottom elevation 128 meters above sea level (dpl), with the step of sequence based on the high bench level 5 meters to pit bottom elevation. The cumulative Stripping ratio design obtained draft of 0.48 : 1. The amount of the target sequence per semester production as much as 3 semesters with production in the 1st half of 210,000 tons, 210,000 tons for the semester 2, and semester 3 of 223 845 tonnes. Overburden stockpiling draft conducted at 2 locations of dump which is dump 1 and 2, one dump site is located in the west of the mine site with the highest elevation dump is 173 meters (dpl) and the dump 2 site is located in the east of the mine site with the highest elevation level of dump is 169 meters (dpl), with the number of cumulative overburden is 307.579 BCM .