

ABSTRACT

Mining design is obtained through the calculation and analysis of the exploration data that have been obtained in the form of drilling data, strike, dip, thickness of coal, economic constraints and technical given by the company. Mining design is conducted to find out the optimal design by generating as much tonnage of coal as possible, also profitable and safe to be mined by PT. Energi Dua Rajawali blok A1 the width 465 Ha located in Gurun Tua, Mandiangin Sub-district, Sarolangun Regency, Province of Jambi

Making of this mining design used software minescape 4.118 with Digital Terrain Modeling (DTM) method to create three-dimensional surface of each layer and each layer is use as horizontal cross-section within the estimation reserve. Mining design and estimation of mined coal reserve used as horizontal cross-section method and conducted with connecting the cross section with each other by the formula mean area as equation in calculating the volume of coal reserve.

After calculated and analyzed of mining design, researcher recommends mining B design as the best mining design because the design produces the largest stripping ratio value among other design that is 4,9 : 1, short depth probably the lowest price of dismantling and hauling overburden or coal, and only have 7 stages conciliator to mining. This is because the more levels of stage conciliator could make safety and work comfort higher.