ABSTRACT

This research do PT. Bintangdelapan Mineral (BDM) at Kabupaten Morowali, Province Sulawesi Tengah. Nickel mine using surface mining system with open pit method. BDM will enlarge the mine to blok 5 a pit 1 for request complete market will nickel, before doing mine must stripping overburden technic plan. Grade zone OB with COG < 0.77 % Ni and grade zone Waste with COG < 0.99 % Ni, to judge as an overburden.

The calculation result, total volume overburden at blok 5 a pit 1 = 1,193,283 BCM, while volume zone OB = 1,332,500 BCM and volume zone Waste = 157,500 BCM. Technic of stripping overburden at blokn 5 a pit 1 plant doing in this away class from high contour to low contour.

Plan of geometry slope pit limit OB and Waste have bench height = 10 m with face angle = 63° and overall slope = 50°. Plan of geometry slope disposal have bench height = 10 m with face angle = 40° and overall slope = 34°.

Machinery tool to need is load tool Excavator Back Hoe Volvo EC 460 CL with capacity production 323,46 BCM/hours amount to 4 units and haul tool Articulated Dump Truck (ADT) Volvo A 40 E with capacity production 83,36 BCM/hours amount to 14 units.