ANALISIS KAPASITAS VOLUME KOLAM PENGENDAPAN PADA AT01 DI PT. ANTAM Tbk UBPN KECAMATAN MABA KABUPATEN HALMAHERA TIMUR PROVINSI MALUKU UTARA

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ABSTRAK

Penambangan dengan sistem terbuka dapat menyebabkan terjadinya banjir pada lokasi penambangan, sehingga menganggu kegiatan pertambangan penyaliran agar tidak menggangu kegiatan penambangan pada musim penghujan. Aktivitas penambangan memerlukan sistem penyaliran air tambang dan kolam pengendapan agar tidak menganggu aktivitas produksi maupun tercemarnya air limbah pada lokasi lain. Tujuan dilakukan penelitian ini adalah untuk menanggulangi potensi air ke dalam pit dan membuat rancangan dimensi saluran drainase dan kolam pengendapan. Kolam pengendapan yang berada dilokasi penelitian pada AT01 PT. Aneka Tambang (Antam) Tbk yang berlokasi di site Pulau Pakal, Kecamatan Maba, Kabupaten Halmahera Timur, Provinsi Maluku Utara. Waktu pelaksanaan, dilaksanakan dari bulan Agustus sampai dengan bulan September 2023. Lokasi penelitian kolam pengendapan AT01 memiliki 6 kompartemen yang memiliki volume tampung kompartemen yang berbeda-beda, pada kompartemen 1 dengan perhitungan Panjang kolam = 28.219m, Lebar kolam = 21.775m, Tinggi/kedalam Kolam = 4.001m, mendapatkan volume 2.458 m^3, kompartemen 2 Panjang kolam = 42.280m, Lebar kolam = 30.400m, Tinggi/kedalam Kolam = 4.807m, mendapatkan volume 2.115 m^3, kompartemen 3 Panjang kolam = 24.105m, Lebar kolam = 20.158m, Tinggi/kedalam, Kolam = 4.352m mendapatkan volume 2.115 m3, kompartemen 4 Panjang kolam = 23.442m, Lebar kolam = 20.511m, Tinggi/kedalam Kolam = 4.137m, mendapatkan volume 1.989 m^3, kompartemen 5 Panjang kolam = 43.794m, Lebar kolam = 21.379m, Tinggi/kedalam Kolam = 5.962m, mendapatkan volume 5.582 m^3, kompartemen 6 Panjang kolam = 36.333m, Lebar kolam = 26.732m, Tinggi/kedalam Kolam = 4.041m, mendapatkan volume 3.925 m^3. Dengan jumlah keseluruhan volume adalah 22.247 m^3 dan mampu menampung volume air limpasan yang masuk 4.637$m^3/_{hari}$ berdasarkan curah hujan tertinggi debit air limpasan selama periode 5 tahun.

Kata Kunci: Dimensi Kolam Pengendapan, Debit, Volume PT. Aneka Tambang Tbk.

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ABSTRACT

Mining with an open system can cause flooding at mining sites, thus disrupting drainage mining activities so as not to disrupt mining activities during the rainy season. Mining activities require a mine water distribution system and settling ponds so as not to disrupt production activities or pollute waste water at other locations. The aim of this research is to overcome the potential for water to enter the pit and create a dimensional design for drainage channels and settling ponds. The settling pond located at the research location at AT01 PT. Aneka Tambang (Antam) Tbk which is located on the Pakal Island site, Maba District, East Halmahera Regency, North Maluku Province. The implementation time is from August to September 2023. The AT01 settling pond research location has 6 compartments which have different compartment capacity volumes, in compartment 1 with a calculation of pond length = 28,219m, pond width = 21,775m, height/ into the pool = 4,001m, get a volume of 2,458 m3, compartment 2 Pool length = 42,280m, pool width = 30,400m, pool height/depth = 4,807m, get a volume of 2,115 m3, compartment 3 pool length = 24,105m, pool width = 20,158 m, Height/depth, Pool = 4,352m, get volume 2,115 m3, compartment 4 Pool length = 23,442m, Pool width = 20,511m, Pool height/depth = 4,137m, get volume 1,989 m3, compartment 5 Pool length = 43,794m, Pool width = 21,379m, pool height/depth = 5,962m, get volume 5,582 m3, compartment 6 Pool length = 36,333m, pool width = 26,732m, pool height/depth = 4,041m, get volume 3,925 m3. With a total volume of 22,247 m3 and able to accommodate a volume of incoming runoff water of 4,637m3/day based on the highest rainfall runoff water discharge over a 5 year period.

Keywords: Settling Pond Dimensions, Discharge, Volume PT. Aneka Tambang Tbk.