PENATAGUNAAN DAN REVEGETASI LAHAN PASCATAMBANG BATUGAMPING DI BUKIT SIDOWAYAH PT SUGIH ALAMANUGROHO DESA BEDOYO, KECAMATAN PONJONG, KABUPATEN GUNUNGKIDUL, DAERAH ISTIMEWA YOGYAKARTA

Oleh
Agustin Sintya Suharto
114130013

INTISARI

Kegiatan penambangan batugamping di PT Sugih Alamanugroho mengakibatkan perubahan bentuklahan dan fungsi lahan di daerah tersebut, sehingga lahan tersebut perlu adanya penatagunaan lahan dan revegetasi. Penelitian ini bertujuan untuk menggambarkan kondisi geofisik lahan operasi produksi, menghitung ketersediaan tanah pucuk dan desain teknis untuk penatagunaan lahan dan revegetasi di area operasi produksi Bukit Sidowayah.

Metode penelitian yang digunakan yaitu observasi, analisis laboratorium, dan matematis. Penelitian ini dilakukan dengan pemetaan topografi, pengambilan sampel tanah pucuk, pengukuran ketebalan tanah pucuk, pengamatan batuan, pengamatan bentuklahan, dan pengamatan vegetasi. Gambaran kondisi geofisik di daerah penelitian didapatkan dengan analisis data-data Desa Bedoyo dan pemetaan topografi dengan *Total Station.* Ketersediaan tanah pucuk didapatkan dengan melakukan pengukuran ketebalan tanah pucuk yang ada di lokasi daerah penelitian. Tanah pucuk tersebut akan dilanjutkan pengujian laboratorium untuk mengetahui sifat fisik dan kimia tanah. Desain teknis penatagunaan lahan dan revegetasi didapatkan melalui analisis dari beberapa parameter. Parameter yang berkaitan yaitu curah hujan, topografi, kemiringan lereng, penggunaan lahan, satuan batuan, dan jenis tanah.

Kondisi geofisik lahan operasi produksi di Bukit Sidowayah memiliki tipe iklim C (agak sedang), tanah mediteran, batugamping kalkarenit, berpotensi kekeringan, tebing galian setinggi 22 meter dengan kemiringan lereng yang curam atau 80^0 dan terdapat lubang galian dengan diameter 44 meter dan sedalam 5 meter. Ketersediaan *top soil* cukup untuk merevegetasi sebanyak 561,4676 m^3 dengan kebutuhan *top soil* di Bukit Sidowayah sebanyak 583,1 m^3. Jenjang yang direncanakan di Bukit Sidowayah adalah tinggi jenjang 3 meter, lebar jenjang 10 meter dengan kemiringan lereng 26^0 atau 49 % dan *backslope* 2^0 atau 3,5%. Sistem drainase berupa parit dan saluran pembuangan air berbentuk trapesium, dimana parit memiliki lebar bawah saluran selebar 0,5105 meter, lebar atas saluran selebar 0,9089 meter, dan tinggi saluran sebesar 0,4085 meter. Sedangkan saluran pembuangan air memiliki lebar bawah saluran selebar 1 meter, lebar atas saluran selebar 1,4 meter, dan tinggi saluran sebesar 0,9 meter. Penanaman untuk revegetasi yaitu tanaman jati dan rumput gajah dengan metode segitiga sama sisi dengan jarak tanam 2 meter x 2 meter dengan rancangan sistem pot/lubang tanam menggunakan ukuran 0,7 m x 0,7 m x0,7 m sebanyak 1700 pot di luas lahan reklamasi sebesar 6788 m^3 pada bulan penanaman Oktober hingga Desember.

Kata kunci: *Penambangan, Penataagunaan Lahan, Revegetasi, Jenjang, Sistem Drainase.*

STEWARDSHIP AND REVEGETATION LAND ON LIMESTONE POST-MINE IN SIDOWAYAH HILL PT SUGIH ALAMANUGROHO, BEDOYO VILLAGE, PONJONG DISTRICT, GUNUNGKIDUL REGENCY, SPECIAL REGION OF YOGYAKARTA

By
Agustin Sintya Suharto
114130013

ABSTRACT

Limestone mining activity in PT Sugih Alamanugroho resulted in changes of land forms and functions of land in the area, so the land needs to be land stewardship and revegetation. The purpose of this study have knowing of the gophysical conditions of the production operation, calculating the availability of top soil and the technical design for land stewardship and revegetation in Sidowayah Hill of the production operation.

The methods used in this research are the method of observation, laboratory analysis, and mathematical. This research done topographic mapping, top soil sampling, top soil thickness measurement, observation of rock, observation of landform and observation of vegetation. Description of geophysical conditions in the research area was obtained by analyzes from the data of Bedoyo Village and mapping the topography using Total Station. The availability of top soil was obtained by measuring the thickness of top soil in the research area. The top soil will be analyzes by laboratory testing to determine the physical and chemical properties of the soil. The technical design of land use and revegetation are obtained through analysis of several parameters. Related parameters are rainfall, topography, slope, land use, rock unit, and soil type.

The geophysical conditions of the production operation land in Sidowayah Hill have climate type is C (rather moderate), mediteran soil, kalkarenit limestone, potentially drought, a minerals cliff as high as 22 meters with a slope is sheer or 80^0 and there is a pit with a diameter of 44 meters and deep of 5 meters. The availability of top soil is enough to revegetation as much as 561.4676 m^3 with the needs of top soilin Sidowayah Hill as much as 583,1 m^3. The bench planned for Sidowayah Hill are high wall minning 3 meters, width of ladder 6 meters, with the slope is 26^0 or 49% and the backslope 2^0 or 3,5%. The drainage system are trench and water disposal channel from of trapezoidal, where trench have the width of the bottom channels is 0,5105 meters, the width of the top channels is 0,9089 metes, and channel height of 0,4085 meters. Meanwhile, the water disposal channel have the width of the bottom channels is 1 meters, the width of the top channels is 1,4 metes, and channel height of 0,9 meters. Planting for revegetation is teak tree and elephant grass with equilateral triangle method spacing plant 2 meters x 2 meters, with pot system design using the dimension of 0,7 m x 0,7 m x 0,7 m as many as 1700 pot in total reclamation area as big as 6788 m^3during the planting periode, October-December.

Keywords: Mining, Land Stewardship, Revegetation, Bench, Drainage System.