BUKU KETERANGAN PETA SATUAN LAHAN DAN TANAH LEMBAR KOTAAGUNG, SUMATERA

EXPLANATORY BOOKLET OF THE LAND UNIT AND SOIL MAP OF THE KOTAAGUNG SHEET, SUMATRA

Oleh/*By* :

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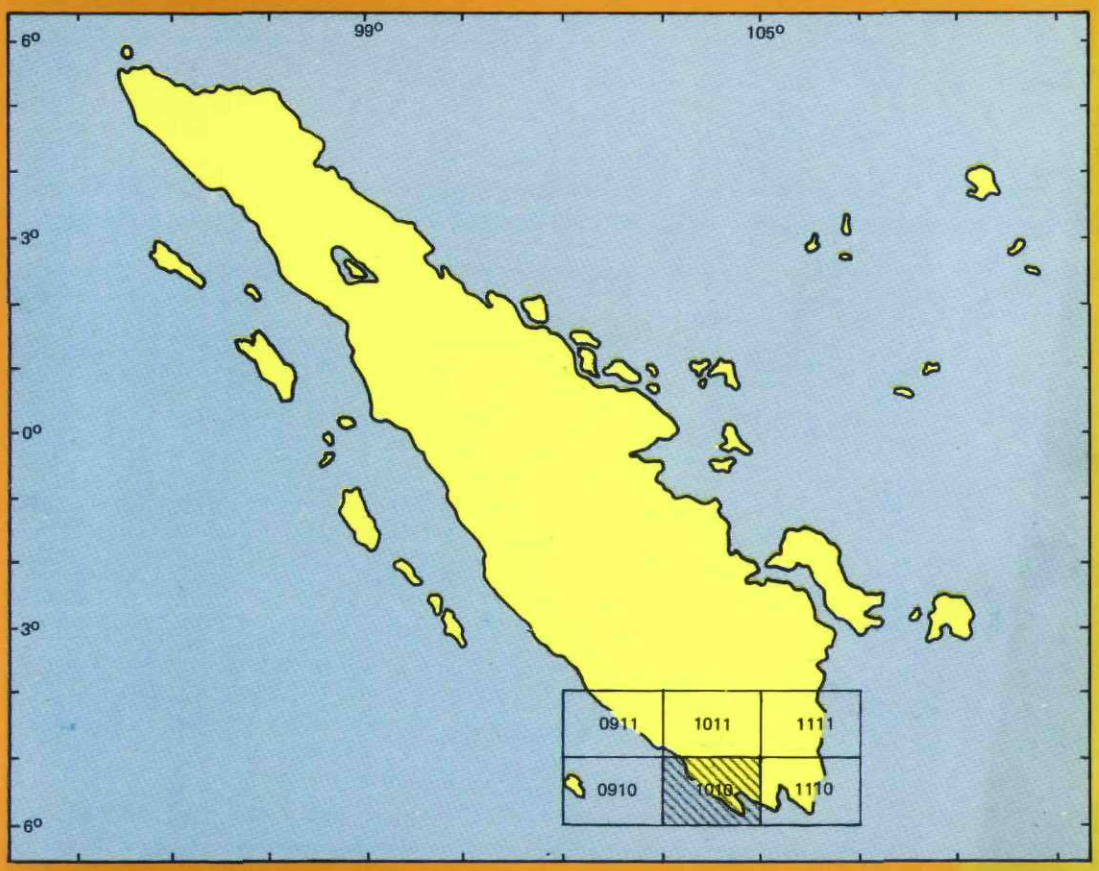
SEKALA/*SCALE* 1 : 250.000 LEMBAR/*SHEET* : 1010



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PENGELOLAAN DATA BASE TANAH
PUSAT PENELITIAN TANAH
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN

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BUKU KETERANGAN
PETA SATUAN LAHAN dan TANAH LEMBAR KOTAAGUNG (1010), SUMATERA

Explanatory booklet of the
LAND UNIT and SOIL map of the Kotaagung Sheet (1010), Sumatra

Sekala/Scale 1 : 250.000

Oleh/By:
A.Hidayat, H.Darul SWP, Junus Dai, H.Y.Sumulyadi, Hendra S., A.Hermawan, Yayat A.H., P.Buurman dan/and T.Balsem.

Buku Keterangan Peta Satuan Lahan dan Tanah ini dihasilkan oleh Tim Pengelolaan Data Base Tanah dari Proyek Perencanaan dan Evaluasi Sumber Daya Lahan, program kerja sama teknis antara Pemerintah Republik Indonesia dan Bank Pembangunan Asia, dilaksanakan oleh Pusat Penelitian Tanah (Badan Penelitian dan Pengembangan Pertanian, Departemen Pertanian) dan dikoordinasikan oleh Badan Koordinasi Survei dan Pemetaan Nasional (BAKOSURTANAL). Survei dan pemetaan dilaksanakan oleh Pusat Penelitian Tanah bekerjasama dengan konsultan dari HASKONING Royal Dutch Consulting Engineers and Architects.

This Explanatory Booklet and the accompanying Land Unit and Soil map have been produced by the Soil Data Base Management Team of the Land Resource Evaluation and Planning Project (LREP, part II), a technical cooperation programme between the Government of the Republic of Indonesia and the Asian Development Bank, executed by the Center for Soil Research (part of the Agency for Agricultural Research and Development of the Department of Agriculture) and supervised by the National Coordination Agency for Surveys and Mapping (BAKOSURTANAL). The survey and mapping were carried out by the Center for Soil Research, in cooperation with the consultants of HASKONING Royal Dutch Consulting Engineers and Architects.

PUSAT PENELITIAN TANAH

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Edisi pertama, 1989.

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PENUNTUN UNTUK PEMAKAI

Buku keterangan ini adalah penjelasan dari Peta Satuan Lahan dan Tanah lembar Kotaagung (1010), Sumatera, sekala 1:250.000.

Legenda peta berisikan satuan lahan yang merupakan satuan geomorfik dan dibatasi dengan cara menginterpretasi foto udara, citra satelit dan citra Radar. Isi dari tiap satuan lahan diperiksa di lapangan dan kemudian dicatat. Hanya sebagian dari semua informasi ini disajikan dalam peta, sedangkan sebagian lagi diberikan secara ringkas dalam Buku Keterangan ini; informasi yang lebih lengkap dapat tersedia jika diminta.

Simbol peta menunjukan grup fisiografi (huruf besar), tipe batuan (huruf kecil), dan pembagian lebih lanjut berdasarkan atas lereng dan tingkat torehan (pada daerah berlereng dan angkatan) atau berdasarkan lingkungan pengendapan/hidrologinya (pada daerah aluvial resen dan marin), yang ditunjukan oleh angka. Huruf kecil yang berada dimuka kode grup fisiografi menunjukan adanya tutupan dari bahan lain, seperti tutupan abu volkan pada perbukitan dari batuan sedimen atau lapisan bahan organik tipis pada dataran aluvial.

Grup fisiografi tersebut adalah : Kubah Gambut, Aluvial, Marin, Teras Marin, Dataran Tuf Masam, Dataran, Tuf Masam Toba, Volkan, Karst, Perbukitan, Pegunungan/Plato dan Aneka Bentuk. Grup Dataran Tuf Masam, Tuf Masam Toba, Volkan, Kubah Gambut dan Karst pembagiannya didasarkan pada tipe batuan dan morfologi yang spesifik yang hubungannya erat dengan sifat tanah yang spesifik. Grup yang lainnya sebagian besar hanya berdasarkan pada morfologi.

Untuk semua satuan lahan, data keadaan tanah dan hubungan tanah dengan bentang alam disajikan pada Uraian

USER MANUAL

This booklet is an explanation of the 1:250,000 scale Land Unit and Soil map of the Kotaagung mapsheet (1010), Sumatra.

The legend of the map consists of Land Units, which are geomorphic units, delineated by interpretation of images such as aerial photographs, satellite imagery and Synthetic Aperture Radar. The contents of each of the units is checked in the field and recorded. Only part of this information can be represented in the map; the remainder is briefly documented in the present explanatory notes, and more complete information is available upon request.

Map symbols indicate physiographic group (capital letter), rock type (lower case letter), and subdivisions according to slope and dissection (in sloping and uplifted areas) or to sedimentary/hydrological environment (in recent alluvial and marine areas), indicated with numbers. Lower case letters preceding the physiographic group code are used to indicate covers of material with differing composition, such as volcanic ash covers on hills of sedimentary rocks, or thin peat on alluvial plain units.

The physiographic groups are : Peat Domes, Alluvial, Marine, Marine Terrace, Acid Tuff Plains, Plains, Toba Acid Tuff, Volcanic, Karst, Hill, Mountain/Plateau and Miscellaneous. The Acid Tuff Plain, the Toba Acid Tuff, the Volcanic, the Peat Domes and the Karst group are based on rock type and specific morphology, with a close link to specific soil characterestics. The other groups are largely morphological.

For all land units, data on soils and soil/landscape relations are presented in the Land Unit Descriptions. These

Satuan Lahan. Uraian satuan lahan ini merupakan bagian terpenting dari Buku Keterangan ini sebab semua informasi yang diperlukan untuk mengevaluasi setiap satuan lahan untuk penggunaan tertentu disajikan disini.

descriptions form an essential part of the Explanatory Notes, because all information that is necessary to evaluate a land unit for specific uses is listed here.

Semua informasi geografik dapat diperoleh dalam format komputer (didigitasi). Semua data utama dari tanah (dari profil yang dianalisis) juga disimpan dalam komputer dan dapat tersedia bagi para pemakai yang memerlukan. Pada tahap selanjutnya. perangkat lunak untuk evaluasi lahan yang mempergunakan parameter-parameter yang ada pada uraian satuan lahan akan segera disediakan oleh Proyek Pengelolaan Data Base Tanah (PDBT).

All geographic information is available in computer (digitized) format. All primary soil information (analyzed profiles) is also computerized and can be made available to the user. At a later stage, land evaluation software which uses the parameters listed in the Land Unit Descriptions will be made available by the Soil Data Base Management Proyect (SDBM).

Permintaan untuk penilaian Kesesuaian Lahan dari tiap satuan lahan untuk berbagai keperluan dapat diajukan ke Pusat Penelitian Tanah, Bogor.

Requests for suitability ratings of the land units for various purposes can be submitted to the Center for Soil Research, Bogor.

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1. PENDAHULUAN

1.1. Latar belakang

Buku Keterangan dan Peta Satuan Lahan & Tanah ini merupakan sebagian hasil akhir survei tanah tinjau Sumatra yang dilaksanakan untuk Proyek Perencanaan dan Evaluasi Sumber Daya Lahan dan diprakarsai tahun 1985 oleh Pemerintah Indonesia serta dibiayai oleh Bank Pembangunan Asia.
Pelaksanaan survei dilakukan antara bulan Nopember dan Desember 1987 oleh Tim Survei Tanah dari Pusat Penelitian Tanah, sedangkan korelasinya dilakukan pada bulan Januari - Februari 1989.

1.2. Konsepsi legenda

Legenda untuk survei ini didasarkan pada pendekatan satuan lahan. Pendekatan ini dianggap paling sesuai untuk survei ini, sebab pada sekala 1:250.000 dengan intensitas pengamatan lapangan yang kurang, semua batas satuan dapat ditarik dengan cara menginterpretasi citra. Legenda satuan lahan memungkinkan adanya pembatasan setiap satuan dengan sembarang ukuran yang masih dapat dipetakan (tergantung skala peta) dengan memanfaatkan nama-nama morfologi sederhana dan berulang. Pendekatan ini menunjang struktur hirarki dan merupakan sistem terbuka sehingga dapat diperbaharui sesuai dengan penerapannya di Indonesia; ia tidak memuat parameter iklim (parameter iklim disimpan dalam data base terpisah dan dapat digabung dengan data base satuan lahan).
Tambahan pula legenda satuan lahan erat hubungannya dengan legenda terdahulu di Indonesia mengenai bentuk lahan, sistem lahan dan satuan lahan tanpa keliru penggunaannya (Desaunettes, 1977; RePPProT, 1985-1988; Kips *et al.*, 1981.

Satuan Lahan ini diberi batasan berupa lahan dimana satu atau lebih komponennya mempunyai ciri-ciri khusus dan merupakan satuan lingkungan dengan sembarang ukuran yang dapat dibatasi pada peta. Satuan terkecil yang masih

1. INTRODUCTION

1.1. Background

This explanatory booklet and the included maps are part of the final results of the reconnaissance soil survey of Sumatra, which was carried out for the Land Resources Evaluation and Planning Project (LREP), initiated in 1985 by the Goverment of the Republic Indonesia and financed by the Asian Development Bank.
The sheet was surveyed between November and December 1987, by teams of Center for Soil Research (CSR). Map correlation was done in January - February 1989.

1.2. Legend concept

The legend for this survey is based on the Land Unit approach. This approach is considered most suitable for this survey, because at a scale of 1:250,000 , with low-density field checks, all unit boundaries are obtained by image interpretation. The land unit legend allows the delineation of mappable units of any size (depending on map scale), it makes use of morphological names which are simple and recurrent, it supports an hierarchical structure, it is an open system that can be amended for use anywhere in Indonesia, and it does not contain climatic parameters (the climatic parameters are stored in a separate data base which can be combined with the land unit data base).

Furthermore, the land unit legend is closely related to previous Indonesian land form, land system and land unit legends (Desaunettes, 1977; RePPProT, 1985-1988; Kips et al., 1981) without being confusing.

A Land Unit is defined here as an area of land of which one or more attributes have special characteristics, and it refers to an environmental unit of any size that can be delineated. The smallest unit that can be

dapat dibatasi tanpa menghiraukan sekalanya berukuran 2 mm lebarnya bila bentuk memanjang dan kurang lebih 3 sampai 4 mm bila berbentuk bulat. Pada sekala 1:250.000, suatu satuan yang membulat dengan diagonal 4 mm meliputi kurang lebih 80 ha.
Satuan lahan dikelompokkan dalam grup-grup fisiografi dan kadang-kadang dibagi lagi kedalam sub-grup.
Untuk informasi lebih lengkap, lihat pada Buurman *et al* (1988) dan Balsem *et al*. (1989)

delineated on any map, irrespective of scale is about 2 mm wide if it is a linear feature and about 3 to 4 mm across if it is a circular feature.
At a scale of 1:250,000, a circular unit of 4 mm across has a surface of nearly 80 ha.
Land units are grouped together in Physiographic Groups and, in some cases, in Sub-Groups.
For more detailed information, see Buurman et al., *(1988) and Balsem* et al., *(1989)*

1.3.Struktur legenda satuan lahan

Semua satuan lahan diberi kode berupa huruf dan angka/dijit; masing-masing dengan konotasi khusus tergantung tingkat klasifikasinya.

Contoh:Au.1.1.3- Dataran aluvial luas, tanggul sungai/alur-alur drainase.

```
        ___ Grup Fisiografi
       |   ___ Relief, ukuran besarnya
       |  |
       Au.1.1.3—Bentuk lahan/torehan/vegetasi
       | |
Litologi—  —Sub-grup: Morfologi
```

Tabel 1 menyajikan Grup Fisiografi yang diidentifikasi di Sumatra dan pulau-pulau di luarnya. Contoh-contoh pembagian lanjut hanya disajikan untuk grup Kubah Gambut dan grup Dataran.

Tabel 1. Grup Fisiografi

A.	ALUVIAL
B.	MARIN
D.	KUBAH GAMBUT *
H.	PERBUKITAN
I.	DATARAN TUF MASAM
K.	KARST *
M.	PEGUNUNGAN/PLATO
P.	DATARAN
Q.	TUF MASAM TOBA *
T.	TERAS MARIN
V.	VOLKAN
X.	ANEKA BENTUK

*) Tidak dijumpai pada lembar peta ini.

1.3.Structure of the land unit legend

All mapping units are coded by means of a sequence of characters and digits, each with its specific connotation which depends on its level in the classification.

Example: Au.1.1.3 -Broad Alluvial Plain; levee/spillway.

```
        __Physiographic Group
       |   _Relief magnitude
       |  |
       Au.1.1.3 —Landform/dissection
                        /vegetation
       |  |_____
Lithology___|     Subgroup : morphology
```

Table 1 lists the Physiographic Groups which have been identified in Sumatra and the outer islands. Examples of subdivisions are given for the Peat Dome and Plain groups only.

Table 1 : Physiographic Groups

A.	*Alluvial*
B.	*Marine*
D.	*Peat Domes* *
H.	*Hilly*
I.	*Acid Tuff Plain*
K.	*Karst* *
M.	*Mountain/Plateau*
P.	*Plain*
Q.	*Toba Acid Tuff* *
T.	*Marine Terrace*
V.	*Volcanic*
X.	*Miscellaneous*

*) *Not present in this mapsheet.*

Pembagian lanjut grup Kubah Gambut dan Dataran adalah sebagai berikut.

```
                                  |tipis  <0,5m
                  air tawar-      |sedang 0,5-2m
                                  |tebal  >2m
          eutrofik ---
                                  |pasang surut/bagian tepi
                                   kubah bergaram -----|Sda
Kubah Gambut -
                                  |air tawar ------|Sda
          oligotrofik-
                                  |pasang surut/bagian tepi
                                   kubah bergaram ----|Sda
```

```
                 Bentuk wilayah        | Penorehan
                                       | tanpa
                                       | sedikit
                datar----------------  | sedang
                                       | sangat
                                       | ekstrim

                datar - berombak-------| Sda
                berombak ---------------| Sda
Dataran--litologi--berombak - bergelombang-|Sda
                bergelombang-----------| Sda
                datar berbukit kecil ---| Sda
                berombak berbukit kecil-| Sda
```

Struktur legenda disusun demikian rupa sehingga lanskap datar, melandai, tertoreh, bergunung, dsb. dengan mudah dapat dipilih oleh komputer. Struktur ini langsung berkaitan dengan potensi lahan untuk pertanian.

2. METODOLOGI

2.1.Peta dasar

Peta dasar untuk keperluan pencetakan Peta Satuan Lahan & Tanah disediakan oleh BAKOSURTANAL. Untuk lembar peta ini, peta dasar yang digunakan adalah peta JOINT OPERATIONS GRAPHICS (JOG), Lembar SB48-6, Seri 1501, Edisi 1, Kotaagung yang dikeluarkan oleh D. Survey. Ministry of Defence. United Kingdom, 1969.

Subdivision of the Peat Domes and Plain groups :

```
                                  |thin   <0,5m
                  fresh water     |medium 0,5-2m
                                  |thick  >2m
          eutrophic---
                                  |tidal/saline fringes
                                   of domes---|ditto
Peat Domes----
                                  |fresh water-|ditto
          oligotrophic
                                  |tidal/saline fringes
                                   of domes---|ditto
```

```
                 Land form             | Dissection
                                       | none
                                       | slight
                flat----------------   | moderate
                                       | strong
                                       | extreme

                flat to undulating------| ditto
                undulating--------------| ditto
Plain---lithology--undulating to rolling---|ditto
                rolling-----------------| ditto
                flat with hillocks------| ditto
                undulating with hillocks| ditto
```

The legend structure is such, that flat, sloping, dissected, mountainous landscapes, etc., are easily selected by computer. The structure is directly related to agricultural potential of the land.

2. METHODOLOGY

2.1.Base maps

Base maps for the printed Land Unit and Soil map were provided by BAKOSURTANAL. For the present sheet, the base map was the Joint Operations Graphics (JOG), Sheet SB48-6, Series 1501, Edition 1, Kotaagung, published by D. Survey. Ministry of Defence. United Kingdom, 1969.

2.2. Interpretasi citra

Survei tinjau ini sebagian besar didasarkan pada interpretasi citra dan batas-batas satuan sesungguhnya ditarik berdasarkan citra. Macam citra yang digunakan adalah sebagai berikut:

- potret udara hitam/putih sekala 1:100.000, Angkatan Udara Australia 1976 (umumnya kualitas rendah karena dicetak berulang kali dan pemrosesan yang kurang baik).
  LANDSAT komposit warna (band 5-7) sekala 1:250.000 tahun 1985 yang diperoleh dari LAPAN (kualitas bervariasi, sekala kurang teliti).
- citra Radar stereo STAR-1, 1988 (cetakan hitam putih, kualitas tak optimal).

2.3. Survei dan data lapangan.

Pelaksanaan survei tinjau dapat dibagi dalam beberapa tahapan kerja:

1. penelaahan data dan informasi dari peta dan laporan tersedia.
2. interpretasi citra dan penetapan daerah kunci
3. pengamatan lapangan dan pemasukan data ke komputer
4. penyusunan satuan lahan dan pemasukan data ke komputer.
5. analisis contoh tanah
6. melengkapi uraian satuan lahan dengan data analisis.
7. korelasi.verifikasi lapangan
8. produksi peta akhir
9. dijitasi peta dan pemrosesan data base lainnya.

Semua pengamatan di lapangan (pemboran dan profil) dicatat, diberi kode dan dimasukan sesuai dengan prosedur standar PDBT, seperti diuraikan dalam Laporan Tehnis PDBT No.5 (Balsem *et al.*,1988). Kode ini terutama diadaptasi dari standar FAO dan USDA (FAO, 1977; SCS, 1978; Gallup, 1978).

Contoh tanah yang representatif dianalisis sifat-sifatnya seperti yang disajikan pada Tabel 2.

2.2. Image interpretation

The surveys are extensively based on image interpretation and virtually all unit boundaries are imagery-based. The following imagery was used:

- *1:100,000 scale black/white aerial photography, Australian Airforce, 1976, (usually poor quality due to recopying and poor processing).*
- *1:250,000 LANDSAT colour composites (bands 5-7), 1985, obtained from LAPAN (varying quality, inacurate scale).*
- *1:250,000 STAR-1 stereo Radar imagery, 1988 (black/white positive prints, quality not optimal).*

2.3. Field survey and field data

The implementation of the reconnaissance survey can be split up into a number of essential steps :

1. *perusal of existing maps and reports*
2. *image interpretation and selection of sample/key areas*
3. *field observations and computer data entry*
4. *preliminary land unit descriptions and computer data entry*
5. *soil sample analyses*
6. *completion of land unit descriptions with analytical data*
7. *correlation/field verification*
8. *final map production*
9. *map digitizing and other data base operations.*

All observations in the field (augerings and profile pits) were described, coded and entered according to standard SDBM procedures as described in SDBM Technical Report No.5 (Balsem et al., *1988). These codes are mainly adapted from standard FAO and USDA codes (FAO, 1977; SCS,1978; Gallup, 1978).*

Representative soils were analyzed for the properties listed in Table 2.

Tabel 2. Analisis tanah standar dan tambahan PDBT.

Analisis Standar
1. tekstur
2. karbon organik
3. KTK NH4OAc pH 7
4. basa dapat ditukarkan dalam NH4OAc
5. Al dalam KCl 1M
6. kerapatan lindak pF 2,5
7. kadar air pF 4,2
8. pH (H2O, KCl , 1:2,5)
9. N total
10. K tersedia
11. P tersedia

Analisis tambahan
untuk tanah volkanik:
- kemasaman terekstraksi dalam $BaCl_2$-TEA (pH 8.2)
- Al, Fe dan Si terekstraksi oksalat
- mineralogi pasir
- retensi fosfat

untuk Oksisol:
- mineralogi pasir

untuk Spodosol:
- Fe, Al,C terekstraksi pirofosfat
- Fe, Al terekstraksi ditionit

untuk endapan marin:
- garam terlarut
- kadar sulfur
- kadar air lapangan (tanah belum matang)

untuk tanah berkapur:
- kadar karbonat

untuk tanah Gambut:
- kadar serat
- kadar abu
- kerapatan lindak

Table 2. Standard and additional SDBM soil analyses.

Standard Analyses
1. teksture
2. organic Carbon
3. CEC NH4OAc pH 7
4. exch. Bases in NH4OAc
5. Al in 1 M KCl
6. bulk density pF 2.5
7. water content pF 4.2
8. pH (H2O, KCl, 1:2.5
9. total N
10. available K
11. available P

Additional Analyses
for Volcanic soils:
- *extractable acidity in BaCl2-TEA*
- *oxalate extractable Al, Fe and Si*
- *sand mineralogy*
- *phosphate retention*

for Oxisols:
- *sand mineralogy*

for Spodosols:
- *pyrophosphate extractable Fe, Al, C*
- *dithionite extractable Fe, Al*

for marine deposits:
- *soluble salts*
- *sulphur content*
- *field moisture content (unripe soils)*

for calcareous soils:
- *carbonate content*

for peat soils:
- *fibre content*
- *ash content*
- *bulk density*

2.4. Uraian satuan lahan

Uraian satuan lahan berupa uraian umum yang dibuat untuk setiap satuan peta. Uraian yang dibuat ini merupakan generalisasi dari beberapa pengamatan. Atribut satuan lahan (lihat bab 5.2) digunakan untuk evaluasi lahan ybs. Struktur uraian satuan lahan didasarkan pada suatu cara yang telah dipublikasikan oleh RePPProT (1988) dengan beberapa tambahan. Disamping dari pengamatan di lapangan dalam penyusunan uraian satuan lahan ini,

2.4. Land unit description

Land Unit descriptions are general descriptions which are made for each of the mapping units. Such descriptions are generalizations of point observations. The land unit attibutes (5.2) are used for land evaluation. The structure of the land unit descriptions is based on those published by RePPProT (1988) with amendments. In addition to the field observations, the following sources were

juga dipergunakan beberapa informasi lain terutama dari :

- RePPProT, 1988: Review of Phase I Results, Sumatra.
- PPPG, 1978: Peta Geologi Lembar Kotaagung, Sumatera, Sekala 1:250.000.
- Semua laporan survei yang tersedia dari daerah ybs (Gambar 5).

used in the compilation of the land unit descriptions:

- *RePPProT, 1988 : Review of Phase I Results, Sumatra*
- *GRDC, 1978 : Geologic Map of the Kotaagung Quadrangle, Sumatra, Scale 1:250 000.*
- *All available survey reports for the area (Figure 5).*

2.5. Data Base dan Pengolahan Data.

Seperti disebutkan diatas, semua data lapangan dan analisis disimpan dalam data base. Data base yang utama ialah:
- pengamatan lapangan (pemboran dan penampang tanah).
- data analisis
- uraian satuan lahan

Data base pengamatan lapangan berisi semua parameter yang dapat diukur di lapangan dari setiap tempat pengamatan. Yang didiskripsi dan disimpan adalah nomor tempat/site, tempat, lereng, vegetasi/penggunaan lahan dan semua sifat-sifat tanah yang diukur di lapangan seperti struktur, porositas, tekstur, warna, dll. (lihat Laporan Teknis PDBT No 5a, Versi 1.1 - Balsem *et al.*, 1988).

Data base analisis berisi semua hasil analisis kimia, fisika dan mineralogi serta semua data hasil perhitungan dari analisis ini yang biasanya dipergunakan untuk menilai kesuburan atau klasifikasi tanah (Lihat Laporan Teknis No 7a - Buurman, 1988; Laporan Teknis No 17, Muslihat *et al.*, 1989).

Pada data base pengamatan lapangan dan data base analisis, data dapat dikeluarkan dengan cara memanggil /menuliskan nomor pengamatan, nomor lembar peta, satuan pada legenda, administrasi (kabupaten atau provinsi) atau dengan yang lainnya yang ditentukan oleh koordinat geografik.

Data base uraian satuan lahan berisi uraian umum dari tiap satuan peta untuk seluruh Pulau Sumatera yang dikatalogkan menurut lembar peta.

2.5. Data bases and data processing

As mentioned above, all field and analytical data are stored in computerized data bases. The main data bases are :
- *field observations (auger and pit).*
- *analytical data*
- *land unit descriptions*

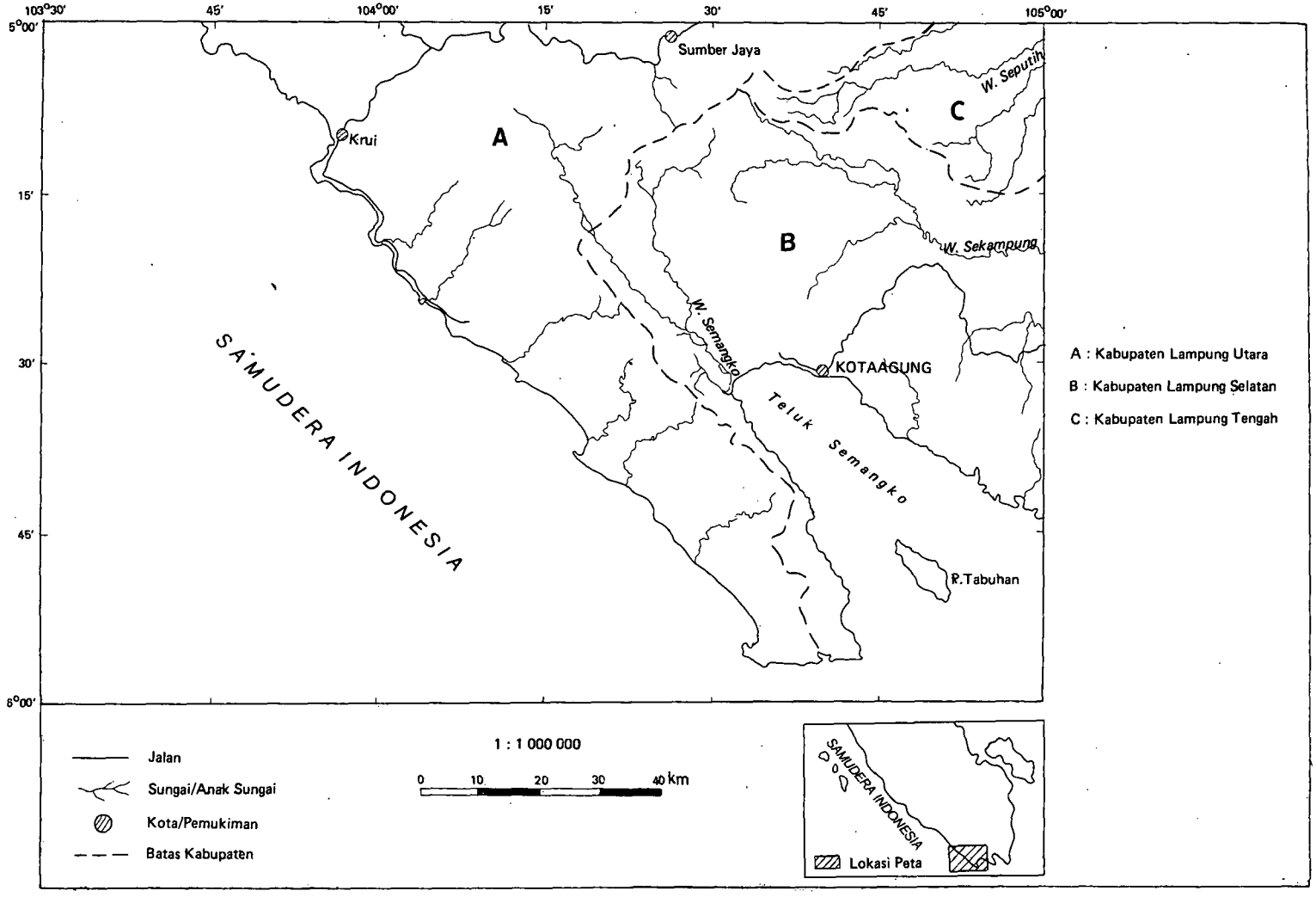
The field observations data base contains all parameters that were measured in the field, for each of the observations sites. Described and stored are site number, location, slope, vegetation/landuse and all soil properties that are measured in the field, such as structure, porosity, teksture, colour etc (see Technical Report No 5, Version 1.1 - Balsem et al., *1988).*

The analytical data base contains all results of chemical, physical and mineralogical analyses and all properties used for fertility appraisal or classification, that are calculated with these analyses (see Technical Report No 7 - Buurman, 1988; and Technical Report No 17 - Muslihat et al., *1989).*

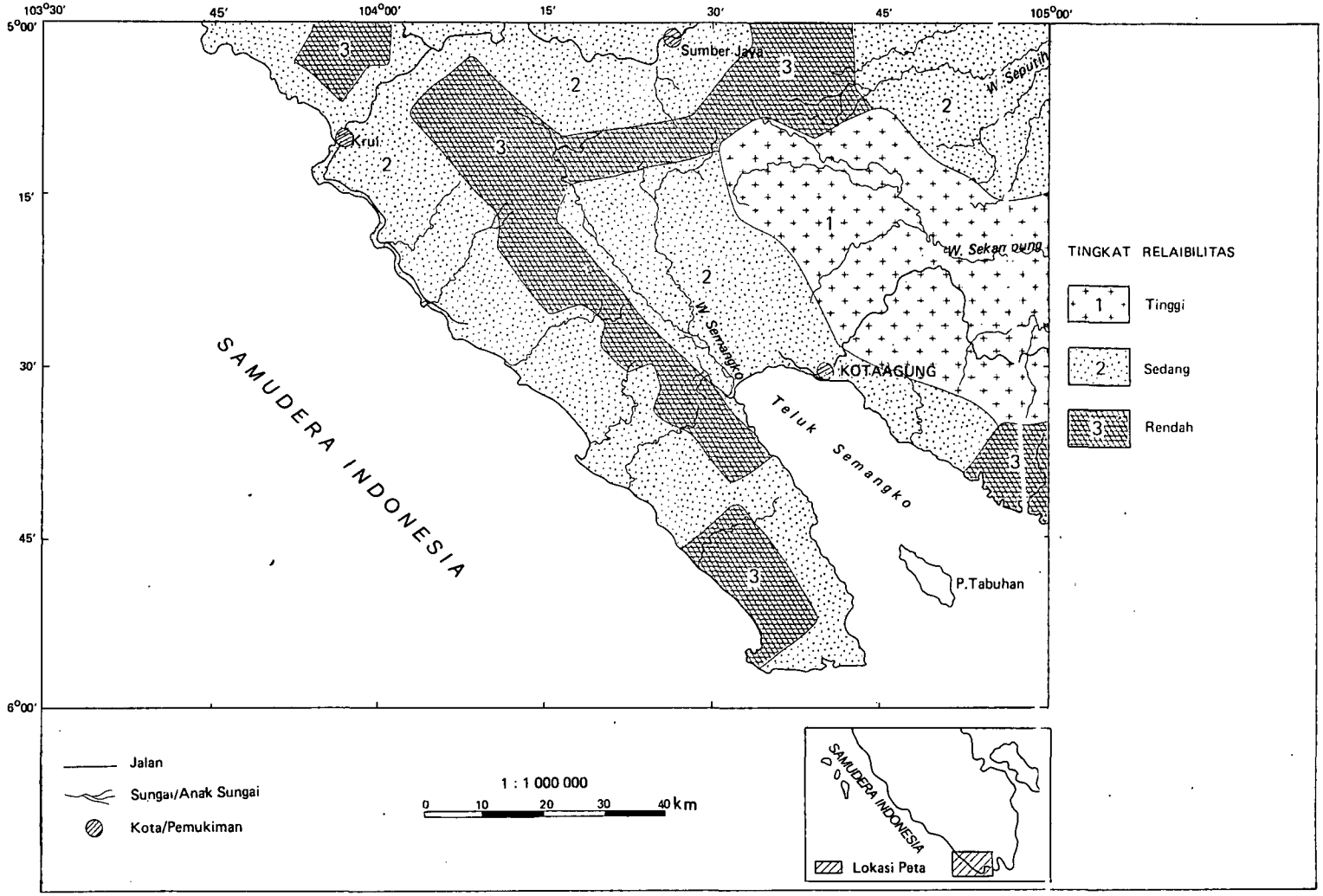
In both the field observations and in the analytical data base, data can be retrieved by observations number, mapsheet, legend unit, administrative area (province, kabupaten), and other areas defined by geographic coordinates.

The land unit description data base contains the general description of each mapping unit for the whole island of Sumatra, catalogued by mapsheet.

GAMBAR 1 : LOKASI PETA DAN BATAS ADMINISTRASI
FIGURE 1 : LOCATION AND ADMINISTRATIVE BOUNDARIES



GAMBAR 2 : RELAIBILITAS PETA
FIGURE 2 : MAP RELIABILITY



Uraian umum berasal dari penyederhanaan semua pengamatan pada seluruh satuan peta, termasuk analisis laboratorium dari profil yang lain. Parameter yang disimpan berisi semua informasi yang diperlukan untuk penilaian evaluasi lahan (lihat Laporan Teknis No 13a - Balsem & Buurman, 1989). Uraian satuan lahan dari semua satuan peta yang terdapat dalam lembar peta ini disajikan pada Lampiran 1.

The general description is derived by generalizing information of all observations within the mapping unit, including laboratory analyses of separate profiles. The parameters stored contain all the information necessary for land evaluation procedures (see SDBM Technical Report No. 13, - Balsem & Buurman, 1989). The land unit descriptions of all mapping units relevant to the present sheet are listed in Appendix 1.

2.6.Relaibilitas peta

Relaibilitas dari peta tergantung pada beberapa faktor seperti: kerapatan pengamatan, keragaman tanah, kualitas dari citra penginderaan jauh, lokasi dari titik pengamatan atau daerah kunci, ketepatan dari batas tanah maupun batas satuan lahan, tingkat pengetahuan dan pengalaman surveyor. Tidak semua dari faktor faktor ini dapat diukur dan karena itu harus diperkirakan.

Berdasarkan faktor faktor tersebut diatas, terutama kerapatan pengamatan, maka diperkirakan mengenai relaibilitas peta, dan untuk itu dibagi menjadi 3 grup (Gambar 2).

2.6. Map reliability

The reliability of a map depends on many such factors as observation density, soil homogeneity or complexity, quality of the remote sensing imagery, the location of sample/key areas, accuracy of soil units and soil boundaries, the level of education and the amount of experience of the soil surveyor. Not all of these can be measured and so they have to be estimated.

Based on the above factors, but mainly on observation density, three classes of map reliability have been established (Figure 2).

3. LOKASI DAERAH PETA DAN SUMBER INFORMASI

3.1. Lokasi dan Batas Administrasi

Secara geografik daerah peta Kotaagung (1010), terletak antara 103°30 dan 105°00 Bujur Timur dan antara 5° dan 6° Lintang Selatan (Gambar 1).
Secara adminitratif daerah peta termasuk kedalam Provinsi Lampung yang terdiri dari Kabupaten Lampung Utara, Lampung Tengah dan Lampung Selatan.

3.2. Sumber Informasi

Dalam pelaksanaan survei dan pemetaan tanah tingkat tinjau ini sumber informasi yang telah digunakan adalah peta topografi, peta geologi, potret udara, citra landsat, citra Radar serta beberapa peta dan laporan survei terdahulu sebagai nara sumber.
Disamping peta topografi skala 1:250.000 (BAKOSURTANAL, 1986) digunakan pula peta topografi berskala 1:50.000 (1986) yang diperoleh dari BAKOSURTANAL. Lembaran peta dan nomornya disajikan pada Tabel 3.

Tabel 3. Nomor dan Nama Lembaran Peta Topografi Skala 1:50.000

11	-	41	-
12	-	42	Ujungtapuan
13	-	43	Krui
14	-	44	Krui
21	-	51	Banjarnegara
22	Kembangbanan	52	Sanggi
23	U. Sigin	53	Liwa
24	Bengkunat	54	Sumberjaya
31	Tampang	61	Kotaagung
32	P. Tabuan	62	Pringsewu
33	Kagungan	63	Airnaningan
34	Putihdoh	64	Padangratu

Peta geologi yang digunakan ialah Peta geologi skala 1:250.000 dari Pusat Penelitian dan Pengembangan Geologi Bandung lembar Kotaagung tahun 1978.
Potret udara yang dipakai ialah potret udara hitam/putih skala 1:100.000 (Royal Australian Air Force, 1976) berkualitas rendah sampai sedang dengan tutupan awan lk. 10%. Ikhtisar jalur terbang dan Nomor photo disajikan pada Gambar 3. Sumber informasi lain yang dipakai ialah dari Citra Landsat dan Radar seperti disajikan dalam Gambar 4.
Beberapa laporan survei tanah terdahulu beserta peta tanahnya telah ditelaah dalam pekerjaan kompilasi data untuk memperkokoh data base tanah daerah ybs. Gambar 5 menyajikan lokasi daerah survei, sedangkan judul laporan survei dicantumkan pada Daftar Pustaka.

4. KEADAAN UMUM FISIK DAERAH

4.1. Geologi

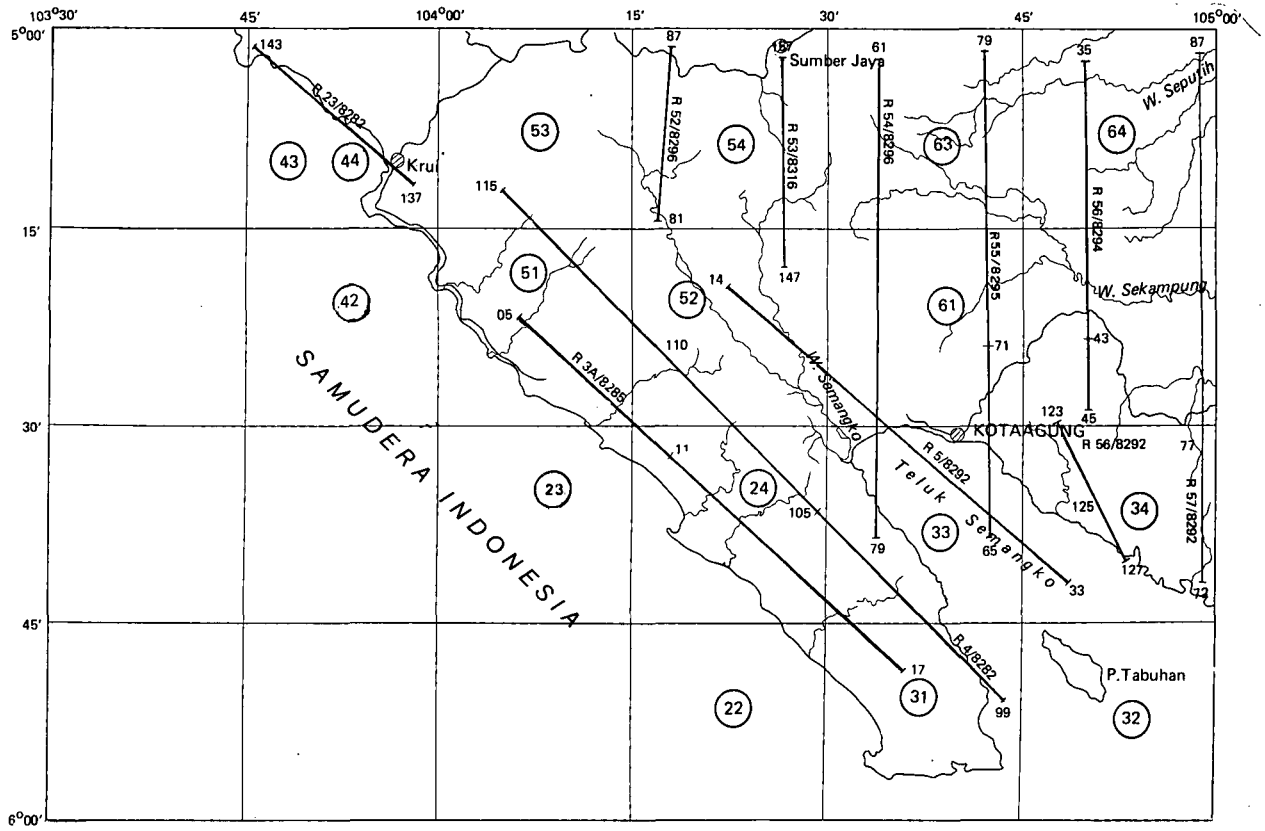
Menurut geologinya (Gambar 6) lembar peta Kotaagung ini dibangun atas dua rangkaian pegunungan Bukit Barisan (yakni satu rangkaian di sebelah barat patahan Semangko dan satu lagi di sebelah timurnya), jalur pantai terangkat di bagian barat, aktivitas volkanik yang luas di bagian tengah dan di bagian tepi timur pegunungan Barisan, batuan sedimen muda di timur dan batuan intrusi baik di timur maupun di barat rangkaian pegunungan.

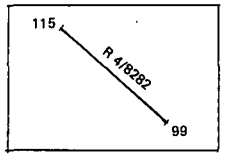
Pretersier
Di sisi timur rangkaian pegunungan batuan skis Pretersier dan granit Kretasius "terpangkas" oleh proses peneplanisasi. Batuan skis terdiri dari berbagai batuan: dari skis biotit dan muskovit hingga skis amfibol. Intrusi granit Kretasius bervariasi litologinya dari granit ke diorit.

Tersier
Sebagian besar rangkaian pegunungan Barisan terdiri dari batuan Tersier yang mengalami pelipatan dan patahan. Kebanyakan batuan ini asalnya volkanik dan biasanya berkomposisi intermedier (Tov: lava andesitik dan breksinya) atau felsik (Tmv: tuf dasitik dan liparitik). Kumpulan batuan ini dijumpai di dalam rangkaian pegunungan di kedua sisi Teluk Semangko.

GAMBAR 3 : INDEKS PETA TOPOGRAFI DAN JALUR TERBANG POTRET UDARA

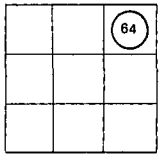
FIGURE 3 : INDEX OF TOPOGRAPHIC MAPS AND FLIGHT LINES OF AERIAL PHOTOGRAPHY





R 4/8282 : Nomor Jalur terbang

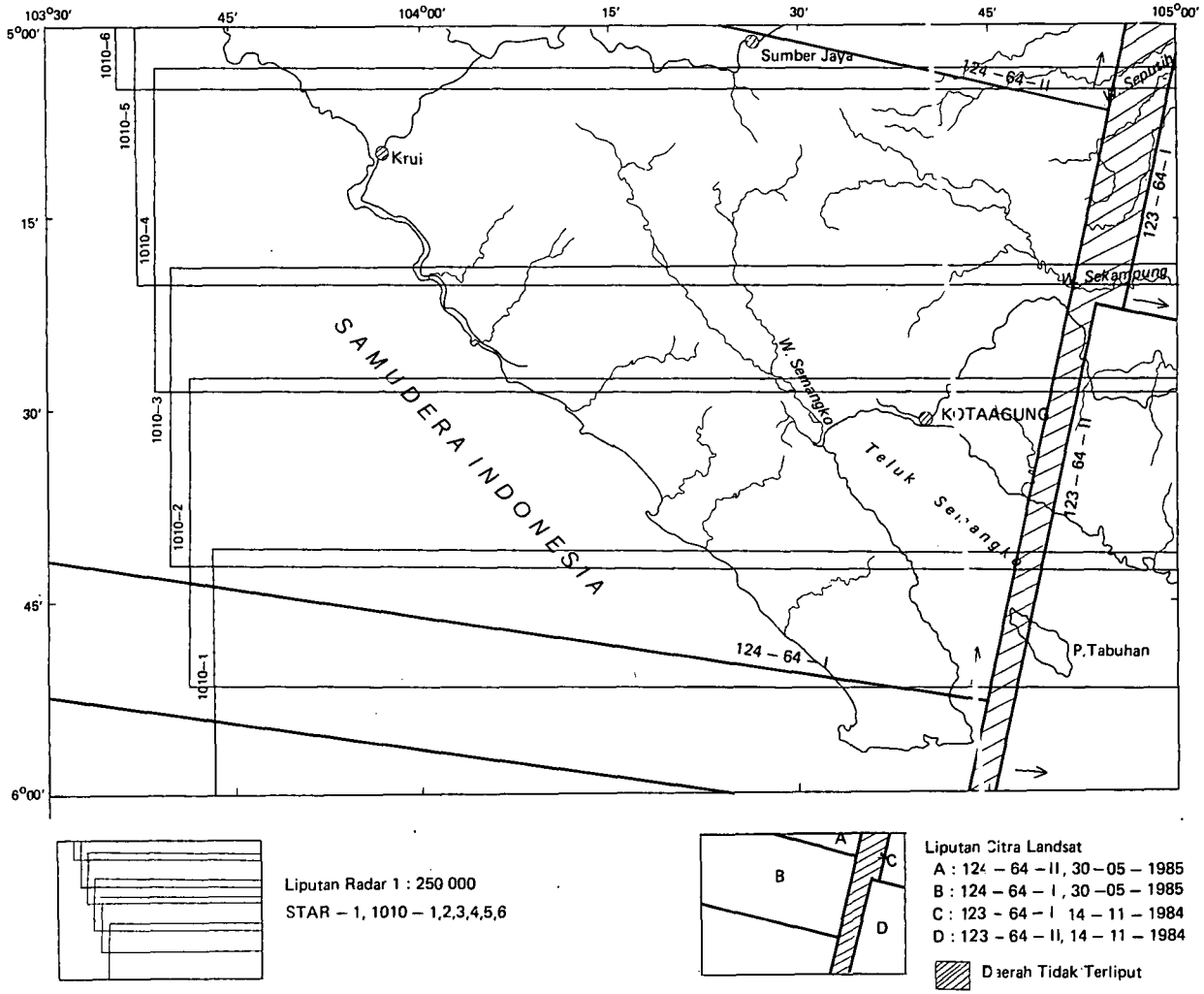
115 – 99 : Nomor foto udara



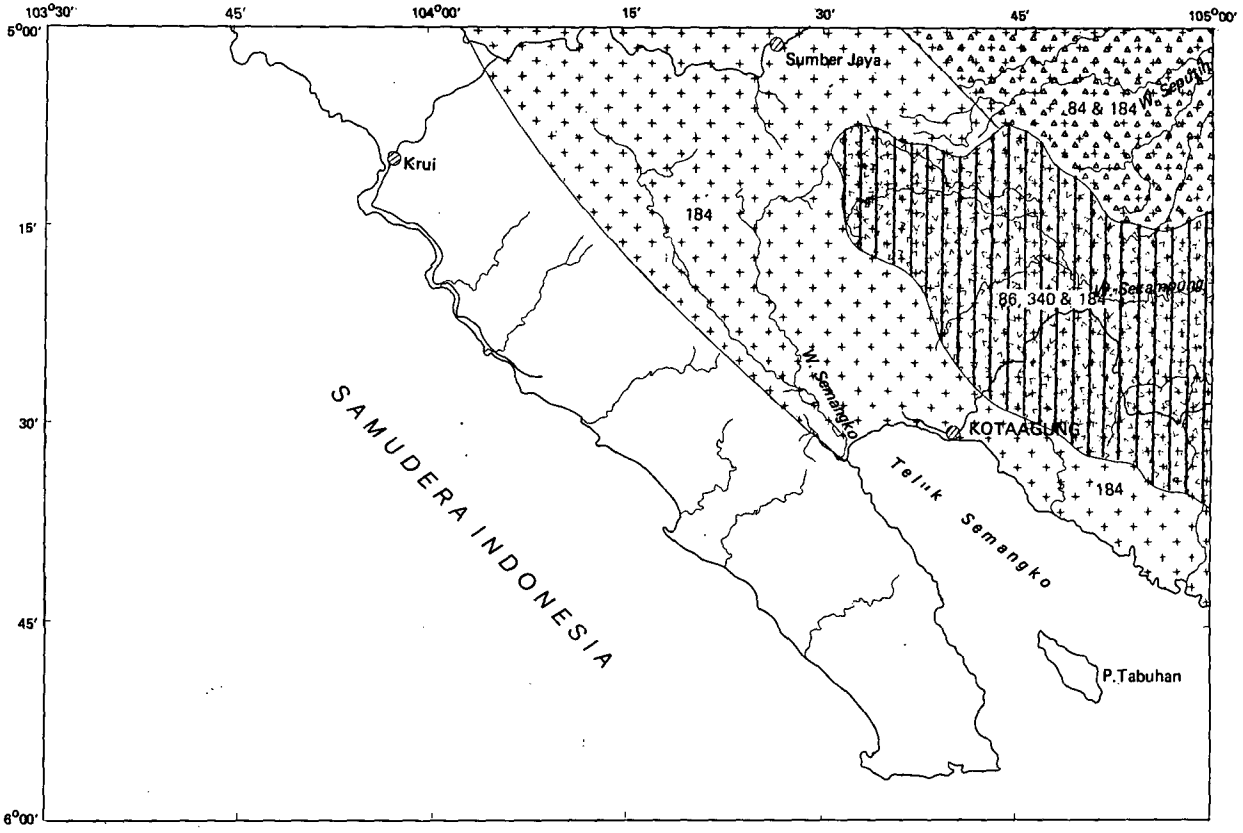
(64): Nomer Lembar Peta Topografi 1 : 50 000

GAMBAR 4 : INDEKS CITRA RADAR STAR-I DAN LANDSAT

FIGURE 4 : INDEX OF STAR-I RADAR AND LANDSAT IMAGERY



GAMBAR 5 : INDEKS LAPORAN SURVEI DAN PEMETAAN TANAH
FIGURE 5 : INDEX OF SOIL SURVEY REPORTS



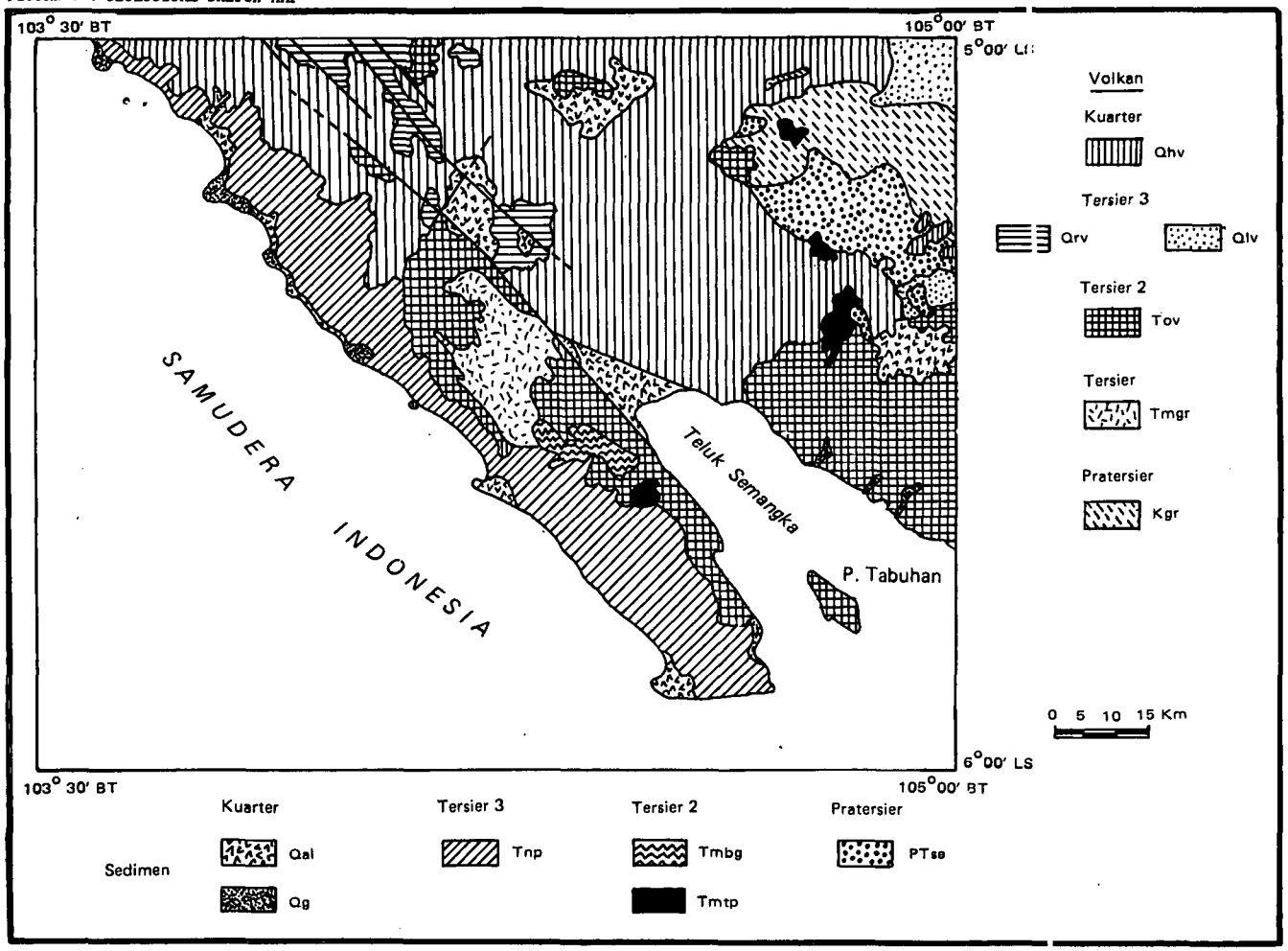
84 — Toboali - Mesuji
Pusat Penelitian Tanah, 1986

184 — Propinsi Lampung, Lembaga
Penelitian Tanah, 1968

86 — DAS Sekampung
Pusat Penelitian Tanah, 1981

340 — DAS Sekampung Atas
Lembaga Penelitian Tanah, 1971

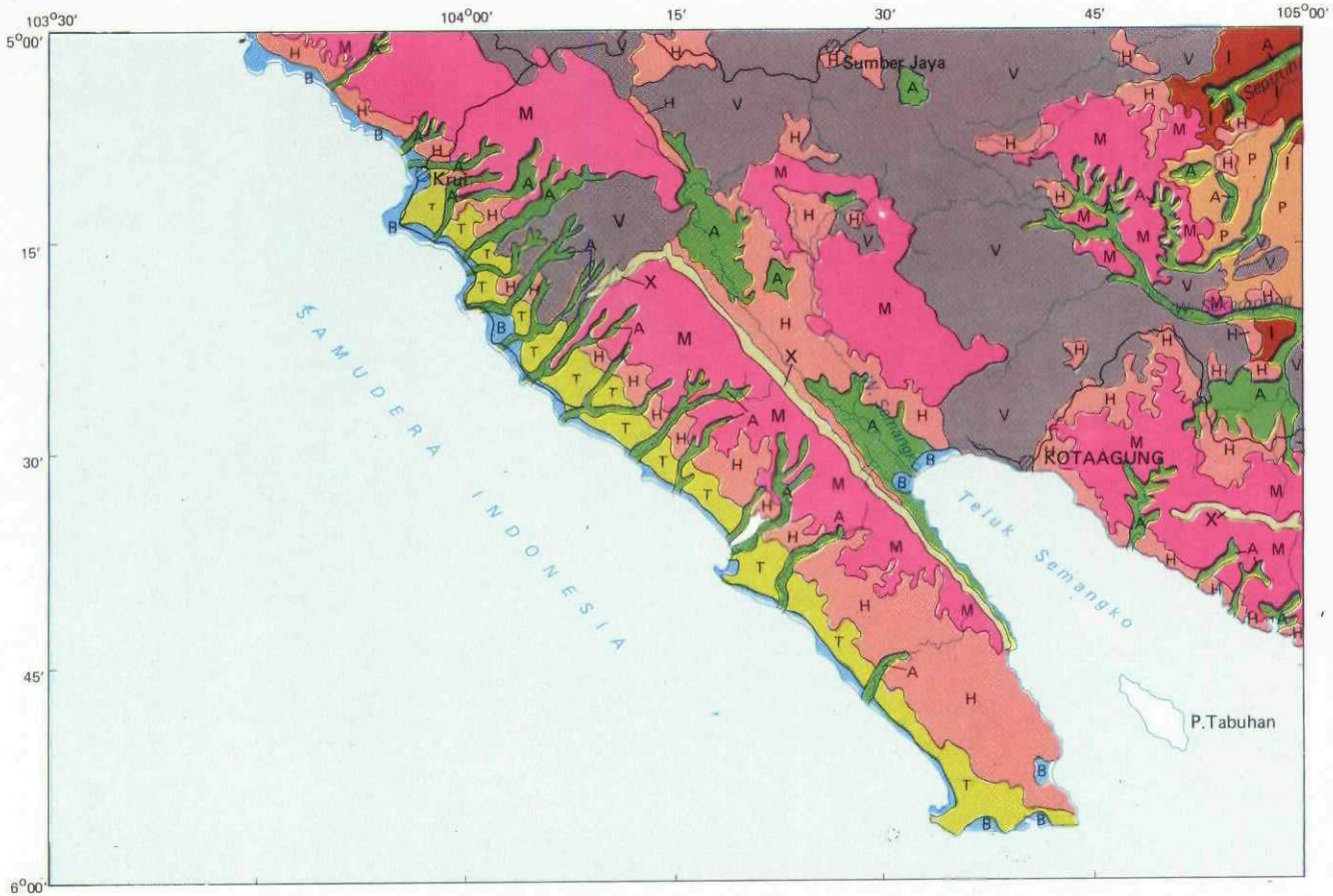
GAMBAR 6 : PETA GEOLOGI BAGAN
FIGURE 6 : GEOLOGICAL SKETCH MAP



Sumber : Geologi Lembar Kota Agung. *Geological Research and Development Centre, 1978*

GAMBAR 7 : GRUP FISIOGRAFI LEMBAR KOTAAGUNG

FIGURE 7 : PHYSIOGRAPHIC GROUPS OF THE KOTAAGUNG SHEET



A	Grup Aluvial / *Alluvial Group*	I	Grup Dataran Tuf Masam / *Acid Tuff Plain Group*	H	Grup Perbukitan / *Hilly Group*
B	Grup Marine / *Marine Group*	P	Grup Dataran / *Plain Group*	M	Grup Pegunungan / *Mountain Group*
T	Grup Teras Marin/*Marine Terrace Group*	V	Grup Volkan / *Volcanic Group*	X	Grup Aneka Bentuk / *Miscellaneous Group.*

Intrusi granit pada rangkaian barat berumur Tersier dan juga mengandung inklusi granodiorit dan diorit.
Bagian barat rangkaian pegunungan kebanyakan terdiri dari batuan sedimen Tersier Atas yang telah mengalami pelipatan (Tnp) yang tersusun dari batupasir, batulumpur, batuliat, napal dan biasanya mengandung campuran tuf felsik/masam. Meskipun peta geologi sekarang tidak menunjukkan hal ini, zone pantai kurang mengalami pelipatan serta terdiri dari teras marin terangkat seperti yang ditemukan di sebagian besar pantai Sumatera bagian barat.
Singkapan-singkapan kecil (sisa erosi) batuan Tersier tua dari Formasi Telisa Bawah (Tmtp) dijumpai tersebar di seluruh lembar peta ini. Batuan ini terdiri dari pasir kuarsa, serpih dan tuf masam/felsik serta kadang-kadang napal.

Kuarter
Sebagian besar batuan-batuan tua terselubung oleh deposit volkanik Kuarter. Lembar peta ini memuat sekitar tujuh pusat erupsi volkanik Kuarter utama dan beberapa pusat kecil.

Bahan volkanik Kuarter tertua berupa Tuf Lampung (Qlv) dan Tuf Ranau (Qrv). Keduanya bersusunan dasitik dan liparitik. Tuf Lampung terdapat di bagian tepi timur lembar peta ini dan tuf Ranau dijumpai ke arah selatan Danau Ranau (Lembar 1011) tepatnya di bagian baratlaut lembaran peta ini.
Tuf Lampung dan tuf Ranau pada gilirannya tertutup oleh bahan volkan muda (Qhv). Bahan volkan muda ini, yang menutupi lebih 40% lembar peta, bervariasi antara andesitik dan basaltik. Pusat erupsi utama adalah Gunung Tanggamus, Bukit Rindingan dan Gunung Sekincau.

Depresi-depresi di dalam patahan Semangko dan sekitar pinggiran timur lembaran peta ini terisi oleh endapan aluvial Kuarter, sedangkan di sepanjang pantai terdapat berselang-seling jalursempit endapan marin muda dan setempat-setempat beting kerang.

4.2. Fisiografi

Bentang alam pada lembar peta Kotaagung dapat digolongkan dalam sembilan grup: Aluvial, Marin, Teras Marin, Dataran, Dataran Tuf Masam, Perbukitan, Pegunungan, Volkanik dan Aneka Bentuk Wilayah.

Pegunungan
Sebagian besar rangkaian Pegunungan Barisan termasuk dalam grup Pegunungan. Sebagian besar lahan memiliki lereng lebih curam dari 30% dan sangat tertoreh. Pembagian lebih lanjut terutama berdasarkan litologinya.

Perbukitan
Satuan lahan yang termasuk dalam grup Perbukitan terdapat di bagian tepi rangkaian pegunungan dan di pinggiran kompleks skis tua dan granit di timur laut lembar peta. Semua pola perbukitan tergolong dalam tipe" *random*". Pembagian lanjut berdasarkan pada lereng dan bahan induk dan tingkat torehan pada kategori rendah:

H*.1.1:Perbukitan dengan pola random dan lereng melandai
H*.1.2:Perbukitan dengan pola random dengan lereng cukup curam.
H*.1.3:Perbukitan dengan pola random dengan lereng curam.
H*.1.5:Lahan bergelombang dengan bukit- bukit kecil
H*.1.6:Bukit-bukit kecil berpola wilayah bergelombang

Litologinya beraneka ragam (dinyatakan sebagai *), seperti: dasitik, basaltik, andesitik/basaltik (batuan volkanik), kasar masam, halus masam, halus masam/dasitik (batuan sedimen), skis dan gneis (batuan metamorfik) dan granit (batuan intrusi).

Volkan
Bentang alam yang berasal dari volkan yang masih mempertahankan bentuk aslinya (yakni belum berubah bentuk dan menjadi kompak oleh pelipatan) termasuk dalam Grup Volkan. Volkan-volkan muda pada lemba peta ini semuanya terdiri dari lapisan-lapisan berselang-seling lava dan piroklastika (kode

litologi *a* dan *b)*. Kebanyakan volkan ini termasuk cukup muda guna mempertahankan bentuk spesifik krucutnya. Di beberapa daerah dijumpai dataran volkan yang luas. Dataran volkan di baratlaut yang bersambung dengan kawah Ranau terdiri dari tutupan tuf dasitik. Pembagian lanjut berdasarkan morfologinya dari grup volkan pada lembar peta ini adalah sebagai berikut:

V*.1.2: Lereng atas volkan (lereng >30%)
V*.1.3: Lereng tengah volkan (16-50%)
V*.1.4: Lereng bawah volkan (<16%)
V*.2.2: Dataran volkan berombak
V*.2.3: Dataran volkan bergelombang
V*.2.6: Dataran volkan bergelombang dengan bukit-bukit kecil
V*.2.11: Sisa erosi daerah volkan bergunung

Semua satuan lahan ini dibagi lebih lanjut menurut tingkat torehannya.
Satuan V*.2.11 menyatakan lahan sisa erosi volkan tua yang telah kehilangan morfologi aslinya tapi belum mengalami lipatan.
Dataran volkan dijumpai di luar kaki volkan, yang menunjukkan penyebaran paling jauh abu volkan dan lahar, bahkan kadang-kadang merupakan tempat bertemunya bahan volkan yang berasal dari berbagai pusat erupsi di sekitarnya.

Dataran Tuf Masam
Dataran tuf masam yang tidak begitu luas di peta ini terdapat di sekitar batas timur lembar peta ini dan merupakan dataran sedimen dengan ignimbrit dari tuf Lampung dan tuf Ranau sebagai bahan induk. Dataran ini lebih luas penyebarannya pada lembar peta di sebelahnya yakni Tanjungkarang (1110) dan Menggala (1111). Pada lembar peta ini hanya tiga subunit yang ditemukan:

Idq.3.1: Dataran tuf masam berombak agak tertoreh
Idq.3.2: Dataran tuf masam berombak cukup tertoreh
Idq.4.2: Dataran tuf masam berombak sampai bergelombang cukup tertoreh

Litologi satuan-satuan ini dasitik hingga berpasir halus.

Dataran
Sisa peneplain yang terbentuk pada intrusi granitik yang tertutup oleh skis dan serpih dijumpai di bagian pojok timur laut lembaran peta ini. Ke arah barat peneplain ini berbatasan dengan pegunungan dengan bahan induk yang serupa dan ke arah selatan ia tertutup oleh bahan volkan muda. Sisa peneplain ini termasuk dalam grup Dataran. Pada lembar ini dibagi lebih lanjut menurut morfologinya ke dalam:

P*.3 : Dataran berombak
P*.4 : Dataran berombak sampai bergelombang
P*.5 : Dataran bergelombang

Setiap satuan ini selanjutnya dibagi menurut tingkat torehan.

Teras Marin
Pantai barat lembar peta ini dicirikan oleh jalur panjang dari sedimen pantai terangkat yang dalam hal ini diklasifikasikan sebagai Teras Marin. Berdasarkan peta geologi teras-teras ini termasuk pada sedimen Tersier Atas (*Neogene*). Berbagai tingkat/ tangga dapat diidentifikasi. Teras-teras tua di bagian yang paling timur menunjukkan adanya torehan yang paling kuat, sedangkan yang paling muda di bagian terdekat dengan pantai tampaknya masih utuh (tingkat penorehan klas 1). Satuan tersebut dibedakan atas:

Tdf.2: Teras marin berombak pada batuan sedimen halus dan tuf masam
Tdf.3: Teras marin bergelombang pada batuan sedimen halus dan tuf masam

Litologi dasitik (tuf masam), menunjuk kepada percampuran dengan bahan ignimbrit dalam sedimen marin dan pantai.

Marin
Grup Marin ini terutama ditemukan berupa jalur sempit sepanjang pantai barat. Karena bagian pantai berangsur

naik sedangkan paparan (*shelf*) sempit dan terjal, maka penyebarannya terbatas. Satuan yang dijumpai adalah:

B*.1.2: Kompleks beting pantai dengan cekungan
B*.3: Beting karang dan dataran karang
B*.4: Dataran pasangsurut berlumpur
B*.7: Dataran dan kipas pantai sempit tak dibedakan

Oleh karena beting karang tidak disurvei oleh proyek sekarang ini maka penyebarannya diambil dari peta topografi dan geologi.

Aluvial

Grup Aluvial pada lembaran peta ini dinyatakan dalam lima subgrup. Lembah-lembah sungai sempit dalam lingkup grup Dataran dijumpai di bagian timur lembaran peta ini. Cekungan-cekungan tertutup ditemukan baik dalam patahan Semangko maupun di berbagai bagian dalam atau pada batas daerah volkan, dimana sedimentasi volkan membendung sistem drainase. Teras-teras sungai terdapat sepanjang aliran yang bercabang-cabang (*braided*) yang mengalir ke luar daerah lingkupan pegunungan sebelah barat. Satuan-satuan yang dijumpai adalah:

A*.1.2 : Pelembahan aluvial luas (non-salin)
A*.1.2.1: Jalur meander pelembahan aluvial luas (non-salin)
A*.2.2.1: Kipas aluvial dan koluvial agak tertoreh
A*.3.2 : Cekungan aluvial tertutup
A*.3.4 : Dataran danau (resen)
A*.3.5 : Dataran danau tua
A*.4.3.2: Teras sungai bergelombang cukup tertoreh
A*.5 : Dataran banjir sungai-sungai melebar/bercabang.

Aneka Bentuk

Di antara aneka bentuk wilayah hanya eskarpmen yang dijumpai. Bentuk ini menonjol terutama sepanjang patahan Semangko dan di bagian aliran atas berbagai sungai di kawasan tersebut.

4.3. Hidrologi

Dari uraian fisiografi dan geologi di atas ternyata wilayah yang dicakup lembar peta Kotaagung umumnya terdiri dari relief kasar pegunungan, perbukitan, kompleks volkan serta pelembahan yang memanjang di dalam kawasan patahan Semangko. Relief demikian memberikan keadaan hidrologi yang khas di daerah tersebut.

Umumnya kompleks pegunungan terutama di bagian timur patahan Semangko dengan litologi yang serupa dicirikan pola dendritik; sebagian besar pegunungan sebelah barat patahan mempunyai gradien lereng relatif besar sehingga pola drainase terutama di bagian tengah daerah aliran sungai didominasi pola paralel. Sebagian aliran bawah sungai-sungai tersebut disimpangkan arahnya hampir sejajar dengan garis pantai karena bagian ini merupakan jalur angkatan (*uplift*) pantai lama.

Pola aliran radial yang utuh terdapat di krucut volkan muda a.l Gunung Sekincau, G. Rindingan, G. Tanggamus. Pola aliran demikian tidak tampak lagi pada daerah volkan tua karena perubahan radikal bentuk krucutnya oleh gerakan tektonik/deformasi; sebaliknya disini ditemukan umumnya pola aliran dendritik.

Pelembahan yang terisi bahan volkanik di kawasan patahan Semangko didrainase ke arah selatan/tenggara oleh Way Semangko yang mendapat suplai air dari daerah sekitarnya termasuk DAS sempit eskarpmen patahan Semangko. Pelembahan Semangko ini ke arah tenggara meluas ke dataran aluvial yang merupakan pusat konsentrasi pemukiman disekitar Kotaagung.

Dataran tinggi berupa pelembahan yang agak luas terdapat di sekitar kaldera Gedongsurian (ketinggian >900m dpl) dan merupakan daerah hortikultura yang potensial di daerah ini karena keadaan drainase yang baik.
Jalur pantai di daerah yang dicakup

lembar peta ini memang relatif sempit dengan pola aliran pendek yakni sebatas dataran rendah yang umumnya langsung berbatasan dengan kaki perbukitan. Maka oleh sebab itu pola aliran serba lurus yang khas pada sungai-sungai di barat patahan Semangko menunjukkan dominasi desakan aliran keluar muaranya.

5.SATUAN LAHAN

5.1.Satuan lahan dan tanah.

Secara garis besar satuan lahan lembar peta Kotaagung (1010)) dapat dikelompokkan kedalam 9 (sembilan) grup yaitu: Grup Aluvial (A), Marin, (B), Teras Marin (T), Dataran Tuf Masam (I), Dataran (P), Volkan (V), Perbukitan (H), Pegunungan dan Plato (M) serta Aneka Bentuk (Gambar 7). Pada setiap satuan lahan umunya diketemukan lebih dari satu satuan tanah (pada tingkat Great Group), dan agar memudahkan pembacaannya maka setiap satuan tanah yang dijumpai pada setiap satuan lahan ditentukan luas penyebarannya secara kualitatif, yaitu:

- *Sangat dominan*: apabila penyebarannya >75% dari luasan Satuan Lahan.
- *Dominan*: apabila penyebarannya antara 50-75% dari luasan Satuan Lahan.
- *Cukup*: apabila penyebarannya antara 25-50% dari luasan Satuan Lahan.
- *Sedikit*: apabila penyebarannya 10-25% dari luasan Satuan Lahan.
- *Sedikit sekali*: apabila penyebarannya <10% dari luasan Satuan Lahan.

Dibawah ini akan diuraikan mengenai satuan lahan dan tanah yang dijumpai pada setiap grup fisiografi.

Grup Aluvial (A)
Terbentuk dari bahan endapan sungai, dan endapan hasil aluviasi/koluviasi di kaki lereng perbukitan/pegunungan yang landai.
Tersebar antara ketinggian 0-100m dpl. di sepanjang jalur aliran Way Seputih dan W.Waja yang merupakan jalur aliran sungai meander. Di kiri kanan aliran W.Semangka terdapat lembah aluvial luas yang merupakan dataran banjir. Di selatan Pringsewu terdapat pelembahan tertutup yang luas yang selalu tergenang air. Di kaki lereng perbukitan, di selatan Wonosobo dan sekitar Gunung Dempo terdapat kipas aluvial/koluvial yang menampung bahan dari daerah atasnya.

Di sebelah selatan G.Sekincau terdapat dataran danau bekas danau tua. Disepanjang sungai-sungai kecil di pantai barat terdapat dataran banjir dari sungai yang bercabang-cabang.

Bentuk wilayah umumnya datar, datar agak cekung dan datar agak melandai dengan lereng 0-3% . Meliputi luas 62.450 ha (7,95%).

Jenis tanah utama di daerah ini adalah jenis tanah yang relatif muda dan pada umumnya berasosiasi dengan lingkungan air/basah, antara lain Tropaquepts (telah berkembang), dan Fluvaquents (belum berkembang). Di daerah kipas atau peralihan dijumpai jenis tanah Dystropepts/Eutropepts berpenampang dalam, bertekstur halus sampai sedang, drainase baik.

Tanah berpenampang dalam mempunyai tekstur bervariasi dari halus sampai kasar, kadang-kadang berlapis-lapis. Drainase pada umumnya terhambat sampai sangat terhambat. Tingkat kesuburan tanahnya sangat tergantung pada bahan di daerah sekitarnya dan daerah dari mana bahan itu berasal. Umumnya unsur hara di daerah ini sedang sampai sangat rendah, dimana lapisan atas lebih baik daripada lapisan bawah. Dengan pengendalian air yang baik terutama untuk daerah pelembahan di timur lembar peta, daerahnya mempunyai potensi yang besar sebagai daerah persawahan. Penghambat utama adalah genangan air permanen, banjir dan kandungan unsur hara.

Grup Marin (B)
Merupakan dataran rendah yang memanjang dari utara ke selatan sepanjang/sejajar pantai barat lembar peta. Terletak pada ketinggian 0-20m dpl., berupa dataran pasang surut berlumpur,

beting-beting pasir pantai (*beach ridges*) dan cekungan-cekungan antar beting (*swales*). Bentuk wilayahnya datar, datar agak cekung, sedang beting pasir pantai umumnya datar agak cembung dengan lereng 0-3% . Meliputi luas 13.440 ha (1,70%).

Jenis tanah utama di daeran ini adalah Hydraquents dan Sulfaquents yang merupakan tanah-tanah belum berkembang di daerah dataran pasang surut yang selalu tergenang air. Sulfaquents merupakan jenis tanah yang mengandung pirit tinggi yang bila muncul di permukaan dalam jumlah di atas ambang toleransi tanaman akan sangat membahayakan. Ketiga jenis tanah ini berpenampang dalam, tekstur umumnya halus bercampur bahan organik, drainase sangat terhambat, hampir sepanjang tahun daerahnya tergenang air.

Di daerah beting pasir pantai dijumpai Tropopsamments, merupakan tanah belum berkembang, bertekstur kasar/pasir, drainase cepat. Beting pasir pantai cocok untuk perkebunan kelapa sedang cekungan antar beting untuk persawahan dengan jenis padi yang lebih toleran terhadap air asin.

Penghambat utama berupa genangan air/ banjir, keracunan sulfat, tekstur kasar di daerah beting pasir serta unsur hara tanaman (kesuburan tanah) yang rendah.

Grup Teras Marin (T)
Terdapat di bagian barat daerah peta dan hampir sejajar dengan garis pantai. Terletak pada ketinggian antara 0-200m dpl. Bentuk wilayah berombak sampai bergelombang dengan variasi lereng antara 3-5% . Terbentuk dari bahan tuf masam dan batuan sedimen. Meliputi luas 49.500 ha (6,30%).

Jenis tanah utama yang dijumpai adalah Dystropepts/Eutropepts, yaitu yang menempati daerah punggungnya. Pada daerah bawahnya dijumpai tanah Tropaquepts. Tanah umumnya berpenampang sedang sampai dalam, tekstur umumnya halus dan drainase baik. Daerah ini bisa dikembangkan untuk pertanian lahan kering baik semusim maupun tanaman tahunan dengan mengupayakan peningkatan kesuburan tanah.

Grup Dataran Tuf Masam
Dijumpai di timur laut lembar peta. Bentuk wilayahnya berombak sampai bergelombang dengan diselingi oleh cekungan-cekungan. Bahan pembentuknya berupa tuf masam bersusunan dasit sebagai hasil aktivitas volkan. Terletak pada ketinggian 50-170m dpl. dengan variasi lereng 3-15% . Meliputi luas 17.650 ha (2,20%).

Jenis tanah utamanya antara lain Kanhapludults dan Dystropepts, berpenampang sedang sampai dalam, tekstur umumnya halus, drainase baik. Kesuburan tanahnya rendah sampai sangat rendah demikian pula kandungan bahan organiknya. Dystropepts mempunyai kandungan hara yang relatif lebih baik. Sebagian besar jenis tanah Kanhapludults mempunyai sifat fisik yang jelek disebabkan banyak terdapatnya lapisan kedap air (lapisan dengan kandungan kongkresi besi dan mangan tinggi).

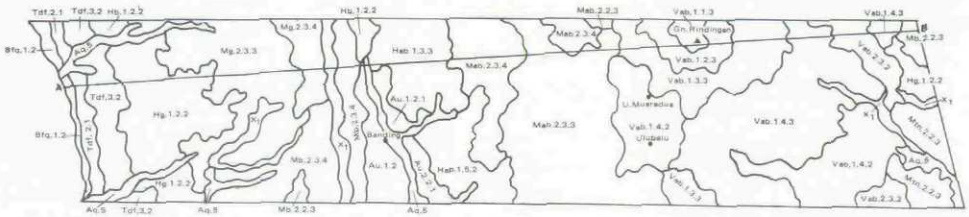
Dilain pihak adanya lapisan kedap air ini mempunyai dampak positif untuk daerah persawahan karena tidak membutuhkan air terlalu banyak disamping dapat menyimpan air. Di cekungan cekungan dan pelembahan (dataran rendah) dijumpai jenis tanah Tropaquepts, berpenampang sedang, tekstur halus, drainase terhambat. Dengan pengendalian air yang baik (perbaikan dan pengaturan air) daerahnya berpotensi baik untuk persawahan, sedang daerah berombak sampai bergelombang untuk pengembangan perkebunan terutama kelapa sawit dan karet dan pertanian lahan kering.

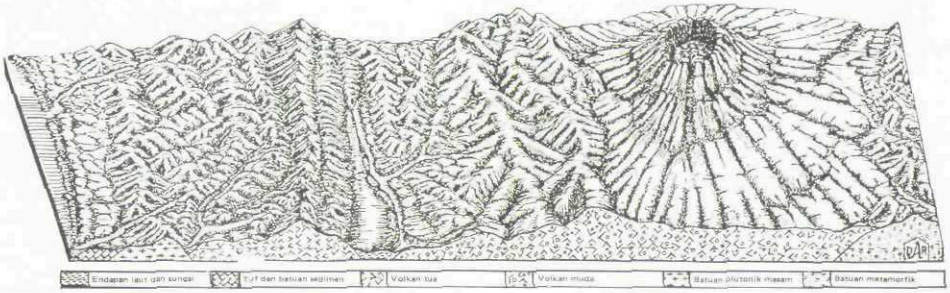
Penghambat utama antara lain kandungan hara tanaman rendah (miskin) dan sifat fisik tanah jelek.

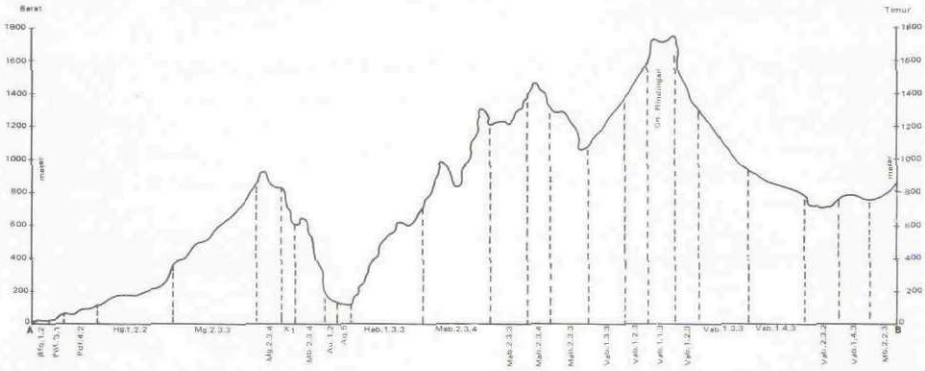
Grup Dataran
Bahan pembentuknya dataran ini berupa batuan intrusi masam terutama granit dan batuan metamorfik (skis). Penyebarannya terutama di sebelah

GAMBAR 8 : SATUAN LAHAN, BLOK DIAGRAM DAN PENAMPANG MELINTANG LEMBAR KOTA AGUNG

FIGURE 8 LAND UNITS, BLOCK DIAGRAM AND CROSS SECTION OF THE KOTA AGUNG SHEET







Satuan Lahan	Lahan aluvial lues (Au.1.2)	Dataran banjir (Aq.9)	Kompleks Beting partikel (Bfq.1.2)	Teras marin berombak agak tertoreh (Tdf, 2.1)	Teras marin bergelombang cukup tertoreh (Tdf, 3.2)	Lereng atas volkan (Vab.1.2.3)	Lereng tengah volkan (Vab.1.3.3)	Lereng bawah volkan (Vab.1.4.3)	Dataran volkan pergelombang (Vab.2.2.2)
Bahan Induk	Endapan sungai	Endapan sungai	Endapan laut	Tuf dan batuan sedimen	Tuf dan batuan sedimen	Tuf dan lava (volkan muda)	Tuf dan lava (volkan muda)	Tuf dan lava (volkan muda)	Tuf dan lava (volkan muda)
Komposisi Tanah (USDA)	Fluvaquents Troposaquepts	Troposaquepts Troporthents Dystropepts	Troposaprimments Troposaquepts	Dystropepts Eutropepts Troposaquepts	Dystropepts Eutropepts Troposaquepts	Dystrandepts Troporthents Humitropepts	Dystropepts Dystrandepts Humitropepts	Humitropepts Dystropepts Dystrandepts Troposaquepts	Dystropepts Humitropepts Hapludults

Satuan Lahan	Perbukitan cukup tertoreh (Hg.1.2.2)	Perbukitan sangat tertoreh (Hab.1.3.3)	Pegunungan sangat tertoreh curam (Mb.2.2.3)	Pegunungan sangat tertoreh sangat curam (Mab.2.3.3)	Pegunungan sangat tertoreh sangat curam Mg.2.3.3	Pegunungan sangat tertoreh sekali (Mab.2.3.4)	Pegunungan sangat tertoreh sekali (Mb.2.3.4)	Pegunungan sangat tertoreh sekali (Mg.2.3.4)	—
Bahan Induk	Batuan plutonik masam	Tuf dan lava (volkan muda)	Lava (volkan tua)	Tuf dan lava (volkan muda)	Batuan plutonik masam	Tuf dan lava (volkan muda)	Lava (volkan tua)	Batuan plutonik masam	—
Komposisi Tanah (USDA)	Dystropepts Hapludults Troporthents	Dystropepts Humitropepts Hapludults Hapludalfs	Dystropepts Hapludults	Humitropepts Dystropepts Hapludults	Dystropepts Troporthents	Humitropepts Dystropepts Hapludults	Dystropepts Hapludults	Dystropepts Eutropepts Troporthents	—

timur laut daerah peta dengan bentuk wilayah berombak sampai bergelombang. Terletak pada ketinggian antara 90-150m dpl, dengan variasi lereng antara 3-15%, meliputi luas 22.375 ha (2,85%).

Jenis tanah utama yang dijumpai di daerah ini adalah Kanhapludults, Dystropepts, Hapludults dan Tropaquepts. Kanhapludults dan Hapludults menempati lereng tengah punggungan, berpanampang dalam, tekstur bervariasi dari halus sampai sedang. Di lereng atas dan daerah berbukit kecil dijumpai Dystropepts, berpenampang dalam, tekstur bervariasi dari halus sampai kasar, drainase baik. Tropaquepts dijumpai di daerah pelembahan/cekungan, berpenampang sedang sampai dalam, tekstur bervariasi, drainase terhambat. Kandungan unsur hara dari tanah-tanah tersebut umunya rendah sampai sangat rendah, kandungan bahan organik juga rendah.

Kecuali daerah pelembahan/cekungan, daerah ini tidak cocok untuk persawahan. Tanaman pertanian lahan kering dapat dikembangkan di daerah berombak, berombak agak bergelombang, sedang perbukitan kecil hendaknya dihutankan untuk menjaga kondisi air di daerah bawahnya. Penghambat utama antara lain tingkat kesuburan tanah rendah dan keadaan topografi di daerah bergelombang agak berbukit.

Grup Volkan (V)

Grup volkan pada daerah peta ini umumnya terdiri dari lereng volkan, dataran volkan dan daerah volkan tererosi. Terletak pada ketinggian 25-2000m dpl. Lereng atas dan tengah telah mengalami pengikisan lanjut, berlereng curam sampai sangat curam dengan lereng >30%, sedang lereng bawahnya berlereng <16% . Bahan pembentuknya berupa tuf dan lava intermedier sampai basis, sedangkan dataran volkan disekitar Liwa terbentuk dari tuf masam. Meliputi luas 228.685 ha (29,10%).

Jenis tanah utama di lereng atas dan tengah terutama Dystrandepts, Dystropepts dan Troporthent yang merupakan tanah-tanah muda. Sedang di lereng bawah dan dataran dijumpai Dystropepts dan Humitropepts dengan kandungan bahan organik tinggi. Jenis-jenis tanah tersebut berpenampang dalam, tekstur halus sampai agak kasar di lereng atas, agak halus sampai halus di lereng tengah dan bawah dengan drainase baik. Di lereng bawah kadang-kadang dijumpai batuan besar (boulder) yang berasal dari lereng atas/tengah. Kesuburan tanahnya sedang sampai tinggi di daerah dataran rendah.

Dengan memperhatikan tindakan konservasi tanah, lereng-lereng bawah berpotensi sebagai pengembangan perkebunan kopi, lada, cengkeh dan pertanian lahan kering sedang di daerah dataran untuk persawahan. Lereng atas dan tengah hendaknya tetap sebagai hutan lindung/hutan tutupan. Penghambat utama adalah lereng dan batuan besar di lereng tengah dan bawah.

Grup Perbukitan (H)

Daerahnya terletak di lereng pegunungan dan volkan terutama di bagian selatan lembar peta. Bahan pembentuknya berupa bahan volkan (tuf dan batuan andesit), batuan sedimen, batuan plutonik masam (granit) dan batuan metamorf, sesetempat ditutupi oleh bahan tuf masam Ranau. Terletak pada ketinggian 5-1000m dpl, dengan perbedaan tinggi (amplitudo) <300m dari daerah sekitarnya. Bentuk wilayahnya berbukit, berlereng curam sampai sangat curam dengan lereng >16% Meliputi luas 145.530 ha (18,50%).

Di lereng atas perbukitan umumnya dijumpai jenis tanah Dystropepts, di lereng tengah Hapludults dan Kanhapludults, sedang di lereng bawah dijumpai Humitropepts.
Tanah umumnya berpenampang dalam, tekstur agak halus sampai halus. Kesuburan tanahnya rendah sampai sedang untuk yang berkembang dari bahan volkan, rendah sampai sangat rendah untuk yang terbentuk dari bahan lainnya.

Kecuali lereng melandai yang dapat digunakan sebagai lahan pengembangan pertanian lahan kering dengan memperhatian konservasi tanah, lereng curam hendaknya digunakan sebagai hutan. Pembatas utama berupa lereng dan bahaya erosi.

Grup Pegunungan dan Plato (M)
Terletak pada ketinggian antara 25-1.350m dpl, umumnya berlereng agak curam sampai sangat curam sekali, dengan lereng >30% . Bahan pembentuknya berupa bahan volkan Tersier, batuan plutonik masam, batuan metamorfik dan tuf masam. Meliputi luas 232.335 ha (29,55%).

Jenis tanah utamanya adalah Dystropepts yang menempati lereng atas. Hapludults menempati lereng tengah sedang di lereng bawah ditempati Humitropepts.
Tanah berpenampang dalam, bertekstur halus sesetempat di lereng atas bertekstur sedang dengan drainase baik.
Kandungan unsur hara tanaman dari tanah-tanah tersebut umumnya rendah sampai sangat rendah, sedang di lereng bawah dengan lereng <30% umumnya mempunyai kesuburan yang lebih baik.
Kecuali di lereng bawah yang landai daerah ini tidak berpotensi untuk pengembangan pertanian dan hendaknya dipertahankan sebagai daerah hutan. Penghambat utama berupa topografi/lereng, erosi dan kesuburan tanah yang rendah..

Grup Aneka Bentuk
Menempati luas 14.685 ha (1,85%), dan merupakan bentukkan spesifik terdiri dari X.1 berupa lembah sungai terjal tererosi atau lereng terjal/escarpment dan X3 berupa badan air (danau).

5.2. Isi Uraian Satuan Lahan.

Merupakan bagian terpenting dari buku penjelasan ini, menguraikan 59 satuan lahan yang terdapat pada lembar peta Kotaagung (1010)), secara detail dalam bentuk/format yang baku guna memudahkan para pemakai.
Uraian tersebut antara lain mencakup:

- Luas dan penyebarannya pada tiap Propinsi yang diliput.
- Bahan penunjang yang digunakan antara lain citra satelit, foto udara dan radar serta peta-peta
- Bahan induk sebagai bahan pembentuk tanah meliputi tingkat pelapukan, litologi dan formasi geologinya
- Sumber dan kualitas air serta kemungkinan pengembangan perikanan, bahaya banjir dan genangan.
- Vegetasi dan penggunaan lahan
- Tingkat bahaya erosi (yang dipercepat)
- Satuan tanah (tingkat great group) yang mencakup sifat kimia dan morfologinya.
- Ketinggian dari muka laut (meter)
- Bentuk profil satuan lahan
- Pola drainase
- Keadaan lereng dan distribusinya
- Perbedaan tinggi
- Bentuk wilayah serta pembagian yang lebih lanjut (land facet).
- Fragmentasi lahan guna pengembangan pertanian, dan
- Tingkat relaibilitas.

Disajikan pula gambaran satuan lahan berupa penampang melintang, yang memberikan gambaran keadaan dan letak tiap satuan lahan guna memudahkan pemakai.

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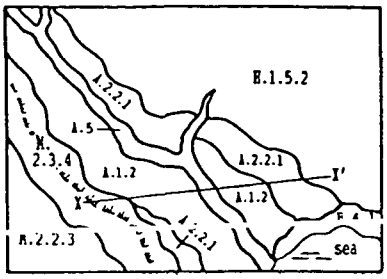
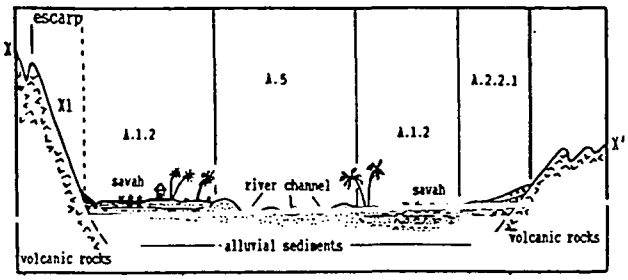
LAMPIRAN 1. URAIAN SATUAN LAHAN

APPENDIX 1. LAND UNIT DESCRIPTIONS

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Au.1.2 **2. MAP SHEET**: 1010 **3. AREA**: 54 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Broad alluvial valleys,mixed sediments, slopes 0-3%
7. **SATELLITE SCENES** : 124/64/30/05/85, 123/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 05/8292-027, 05/8292-029
9. **RADAR** : STAR 1/250/88/1010 3-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - a. **Weathering** : Slight
    - b. **Lithology** : clay, sand
    - c. **Formation** : Qal
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River, Shallow wells
13. **FISHERIES** : Sungai (river)
14. **RIVERS** a. **Floodrisk** : Medium
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : mixed gardens of fruit trees, upland crops, irrigated wetland rice (irigasi), rainfed wetland rice, towns, villages
    - **Area used** : 100 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : None
    - b. **Evidence** :

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	fluvaquents	70 %	yes
Associated 1	tropaquepts	30 %	yes
Associated 2			

---

32. **REPRESENTATIVE PROFILES**:

eqv/ / /87/sr/1010/52/ /29 / lqt/ / /87/tb/1010/33/ /2 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	moderately fine	--
	subsoil	fine	medium	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Poorly drained	Poorly drained	--
d. Exch. K:	topsoil	--	high	--
	subsoil	--	medium	--
e. Total K2O:	topsoil	--	very high	--
	subsoil	--	very high	--
f. Avail. P:	method	Olsen	Bray I	
	topsoil	very high	medium	--
	subsoil	very high	very low	--
g. Total P:	topsoil	very high	very high	--
	subsoil	high	medium	--
h. CEC pH 7	topsoil	medium	high	--
	subsoil	medium	medium	--
i. Soil Reaction:	topsoil	strong acid	moderately acid	--
	subsoil	moderately acid	neutral	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		16.2	20.9	0.0
q. TEB :		13.4	19.3	0.0
r. Total observations:		1	1	0

---

19. ALTITUDE: **Maximum:** 75 m **Minimum:** 2 m **Range:** 15 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** braided **b. density:** Very low
c. Variability: low

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: **d. Variability:**
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 100 %
Interfluves : 0-8%:0 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: **-1-** Alluvial valley, fluvaquents, 70%
-2- Levees, tropaquepts, 30%
-3-
-4-

29. FRAGMENTATION: **Valleys:** Medium blocks **Interfluves:**

---

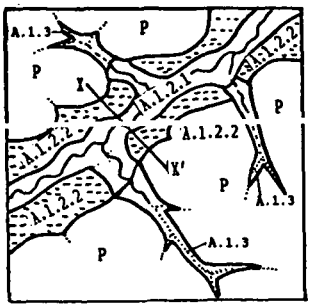
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 1 **12.a:** 1 **14.a:** 2 **14.b:** 2 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 1 **23:** 2 **24:** 1 **28:** 2 **29:** 2

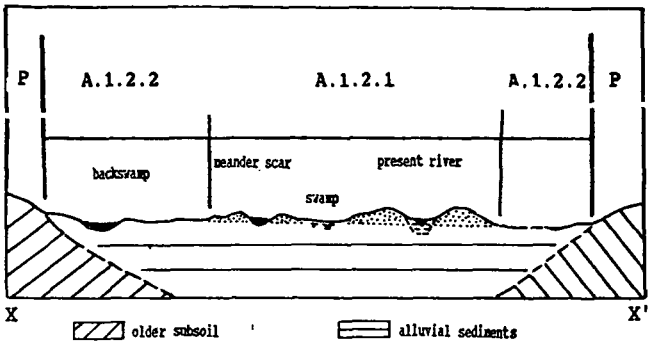
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Af.1.2.1 **2. MAP SHEET**: 1010 **3. AREA**: 28 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 28/04/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Meanderbelts of broad alluvial valleys,fine sediments,slopes 0-3%

7. SATELLITE SCENES : 124/64/30/05/85, 123/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56/8294-35 , 56/8294-39

9. RADAR : Star 1/250/88/1010 - 5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : Slight
- **b. Lithology** : clay
- **c. Formation** : Qal

12. WATER
- **a. Quality** : Fresh
- **b. Source** : Perennial River

13. FISHERIES : Sungai (river)

14. RIVERS
- **a. Floodrisk** : High
- **b. Inundation**: None

15. VEGETATION/LAND USE : bush, upland crops, rainfed wetland rice, coffee (kopi), towns, villages

Area used : 80 %

16. ACCELERATED EROSION
- **a. Occurence** : None
- **b. Evidence** :

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	tropaquepts	55 %	yes
Associated 1	fluvaquents	35 %	yes
Associated 2	dystropepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

iqt/ /341-18 /72/sk/1110/44/ /50 / eqv/ /341-18 /72/is/1010/23/ / /11
ity/ /184-05 /68/is/1110/51/ /60 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	fine
	subsoil	moderately fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	deep	moderately deep
c. Drainage:		Poorly drained	Moderately well	Imperfectly drained
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total K2O:	topsoil	very high	medium	medium
	subsoil	medium	very low	very low
f. Avail. P:	method	Olsen	Olsen	
	topsoil	very high	very high	--
	subsoil	very high	very low	--
g. Total P:	topsoil	very high	high	very low
	subsoil	very high	medium	very low
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	slightly acid	very strong acid	slightly acid
	subsoil	slightly acid	very strong acid	slightly acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		1.6	4.7	2.1
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 100 m **Minimum:** 40 m **Range:** 60 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** meandering **b. density:** Very low
c. Variability: low

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: short **d. Variability:** Medium
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 100 %
Interfluves : **0-8%:**0 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** **b. Variability:** Low

28. LAND FACETS: -1- Levees, tropaquepts, 55%
-2- Spillways and oxbow, fluvaquents, 35%
-3- Old meanderbelt, dystropepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Small blocks

---

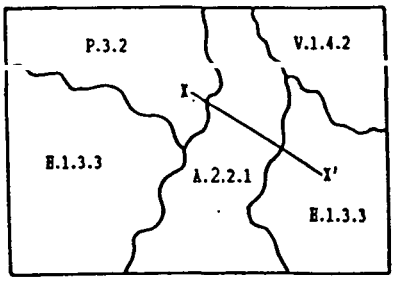
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 2 **14.b:** 2 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 3 **19:** 2 **22:** 1 **23:** 2 **24:** 2 **28:** 3 **29:** 2

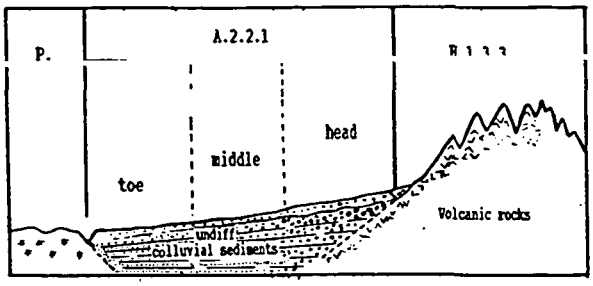
---

31. ADDITIONAL NOTES: All representative profiles are extrapolated from sheet 1110.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Au.2.2.1 **2. MAP SHEET**: 1010 **3. AREA**: 63 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Sligthly dissected alluvial and colluvial fans, mixed sediments, slopes 3-8%

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 5 /8292-27 , 56 /8296-77

9. RADAR : Star 1/250/88/1010 3-4

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

a. Weathering : Slight

b. Lithology : clay, sand, gravel

c. Formation : Qal

12. WATER **a. Quality** : Fresh

b. Source : Medium wells, Deep wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : bush, upland crops, rainfed wetland rice, coffee (kopi), lakes (danau), towns, villages

Area used : 80 %

16. ACCELERATED EROSION

a. Occurence : Localised

b. Evidence : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	eutropepts	70 %	yes
Associated 1	tropaquepts	30 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

ite/ / /87/er/1010/33/ /17 / iqt/ / /87/sr/1010/33/ /25 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	fine	--
	subsoil	moderately fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Poorly drained	--
d. Exch. K:	topsoil	medium	very low	--
	subsoil	low	low	--
e. Total K2O:	topsoil	medium	medium	--
	subsoil	low	low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	medium	--
	subsoil	very low	very high	--
h. CEC pH 7	topsoil	high	high	--
	subsoil	very high	high	--
i. Soil Reaction:	topsoil	very strong acid	strong acid	--
	subsoil	strong acid	slightly acid	--
j. Al Sat.	topsoil	very low	very low	--
	subsoil	low	very low	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		3.7	2.4	0.0
q. TEB :		37.2	24.0	0.0
r. Total observations:		3	1	0

---

19. ALTITUDE: **Maximum:** 450 m **Minimum:** 5 m **Range:** 30 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Low
c. Variability: low

22. SLOPE: **a. Steepness:**gently sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Low
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 30 %
Interfluves : **0-8%:**60 %, **9-25%:** 10 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Medium

25. TERRAIN: Undulating 2- 8%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** Medium

28. LAND FACETS: **-1-** Fan head & middle fans, eutropepts, 70%
-2- Toe & valley bottoms, tropaquepts, 30%
-3-
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

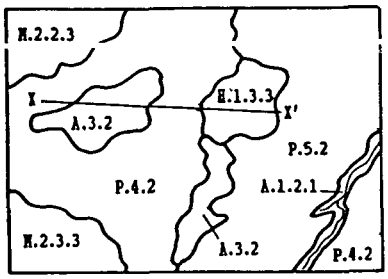
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

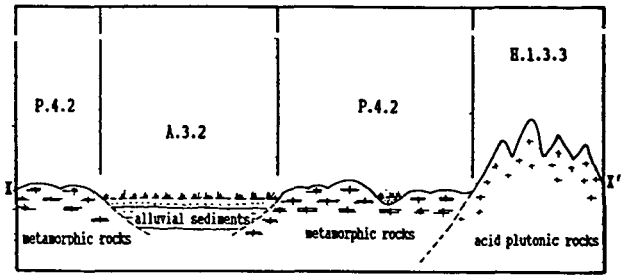
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Au.3.2 **2. MAP SHEET**: 1010 **3. AREA**: 113 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 28/04/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Closed basin / depression, mixed sediments, slopes 0-3%

7. SATELLITE SCENES : 123/64/30/05/85, 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-043, 56 /8294-037

9. RADAR : star 1/250/88/1010 -5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

a. Weathering : Slight

b. Lithology : clay, sand,

c. Formation : Qal ,

12. WATER **a. Quality** : Fresh

b. Source : Perennial River, Shallow wells

13. FISHERIES : Sungai (river)

14. RIVERS **a. Floodrisk** : None

b. Inundation: Seasonal

15. VEGETATION/LAND USE : upland crops, mixed gardens of fruit trees, irrigated wetland rice (irigasi), rainfed wetland rice, towns, villages

Area used : 100 %

16. ACCELERATED EROSION

a. Occurence : None

b. Evidence :

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	tropaquepts	80 %	yes
Associated 1	eutropepts	20 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	--
	subsoil	fine	moderately fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	--
c. Drainage:		Poorly drained	Imperfectly drained	--
d. Exch. K:	topsoil	high	high	--
	subsoil	medium	low	--
e. Total K2O:	topsoil	high	high	--
	subsoil	low	medium	--
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	high	very high	--
	subsoil	low	high	--
h. CEC pH 7	topsoil	very high	high	--
	subsoil	very high	medium	--
i. Soil Reaction:	topsoil	strong acid	slightly acid	--
	subsoil	strong acid	slightly acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		4.1	1.9	0.0
q. TEB :		30.1	16.5	0.0
r. Total observations:		4	2	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 95 m **Range:** 100 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** centripetal **b. density:** Very low
c. Variability: low

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: long **d. Variability:** Low
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 100 %
Interfluves : 0-8%:0 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** very wide **b. Variability:** Low

28. LAND FACETS: -1- Depressions, tropaquepts, 80%
-2- Transitions, eutropepts, 20%
-3-
-4-

29. FRAGMENTATION: **Valleys:** Large blocks **Interfluves:**

---

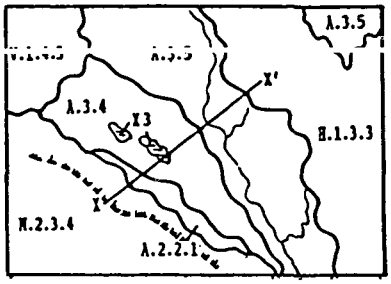
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 2 **14.b:** 2 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 1 **23:** 2 **24:** 1 **28:** 2 **29:** 2

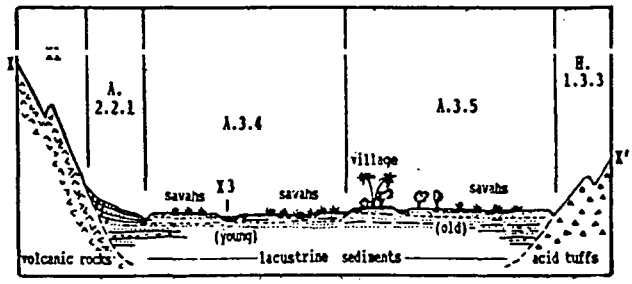
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Au.3.4 **2. MAP SHEET**: 1010 **3. AREA**: 18 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 29/04/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Lacustrine plain,mixed sediments, slopes 0-3%

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 /8296-81

9. RADAR : star 1/250/88/1010 - 4

10. PARENT MATERIAL **11. ROCK OUTCROP**: %

- **a. Weathering** : Slight
- **b. Lithology** : clay, sand, peat
- **c. Formation** : Qal

12. WATER **a. Quality** : Fresh

b. Source : Perennial River, Shallow wells

13. FISHERIES : Danau (lake)

14. RIVERS **a. Floodrisk** : High

b. Inundation: Seasonal

15. VEGETATION/LAND USE : , bush, swamp (rawa) including sedges, upland crops, rainfed wetland rice, lakes (danau), towns, villages

Area used : 40 %

16. ACCELERATED EROSION

- **a. Occurence** : None
- **b. Evidence** :

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	tropaquepts	90 %	yes
Associated 1	tropofluvents	10 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

iqt/ / /87/hj/1010/52/ /20 / evt/ / /87/af/1010/54/ /6 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	--
	subsoil	moderately fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	--
c. Drainage:		Very poorly drained	Well drained	--
d. Exch. K:	topsoil	low	medium	--
	subsoil	low	medium	--
e. Total K2O:	topsoil	medium	very high	--
	subsoil	high	very high	--
f. Avail. P:	method	Bray I	Olsen	
	topsoil	very low	high	--
	subsoil	very low	high	--
g. Total P:	topsoil	very high	very high	--
	subsoil	very high	very high	--
h. CEC pH 7	topsoil	high	high	--
	subsoil	high	high	--
i. Soil Reaction:	topsoil	strong acid	very strong acid	--
	subsoil	strong acid	very strong acid	--
j. Al Sat.	topsoil	very low	--	--
	subsoil	very low	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		4.4	3.3	0.0
q. TEB :		19.6	14.7	0.0
r. Total observations:		2	0	0

---

19. ALTITUDE: **Maximum:** 250 m **Minimum:** 230 m **Range:** 240 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** centripetal **b. density:** Very low
c. Variability: low

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: moderate **d. Variability:** Low
e. Curvature: concave

23. SLOPE DISTR.: **Valleybottoms:** 100 %
Interfluves : **0-8%:**0 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** wide **b. Variability:** Medium

28. LAND FACETS: -1- Lacustrine plains, tropaquepts, 90%
-2- Lacustrine plains, tropofluvents, 10%
-3-
-4-

29. FRAGMENTATION: **Valleys:** Large blocks **Interfluves:**

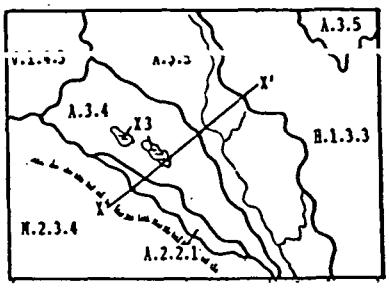
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 1 **12.a:** 2 **14.a:** 1 **14.b:** 2 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 1 **23:** 2 **24:** 1 **28:** 2 **29:** 2

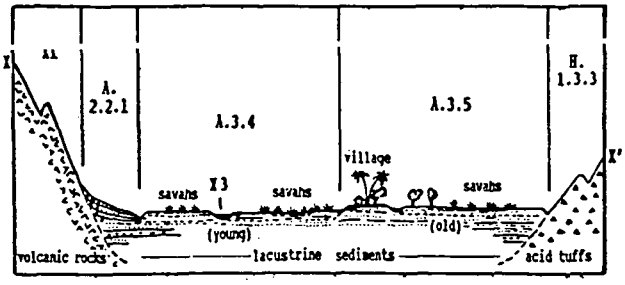
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Au.3.5 **2. MAP SHEET**: 1010 **3. AREA**: 84 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 29/04/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Ancient lake bottom,mixed sediments, slopes 0-3%

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 52 /8296-81 , 53 /8316-147, 54 /8296-61

9. RADAR : star 1/250/88/1010 4-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : Slight
- **b. Lithology** : clay, sand
- **c. Formation** : Qal

12. WATER **a. Quality** : Fresh

b. Source : Perennial River, Shallow wells.

13. FISHERIES : Sungai (river)

14. RIVERS **a. Floodrisk** : Low

b. Inundation: Seasonal

15. VEGETATION/LAND USE : , bush, alang-alang, upland crops, rainfed wetland rice, coffee (kopi), lakes (danau), towns, villages

Area used : 70 %

16. ACCELERATED EROSION

- **a. Occurence** : None
- **b. Evidence** :

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	tropaquepts	60 %	yes
Associated 1	tropofluvents	30 %	yes
Associated 2	eutropepts	10 %	no

---

32. REPRESENTATIVE PROFILES:

iqt/ / /87/hj/1010/52/ /23 / evt/ / /87/af/1010/52/ /4 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	coarse	--
	subsoil	fine	moderately coarse	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Poorly drained	Moderately well	--
d. Exch. K:	topsoil	very high	low	--
	subsoil	medium	medium	--
e. Total K2O:	topsoil	high	very high	--
	subsoil	low	very high	--
f. Avail. P:	method	Bray I	Olsen	
	topsoil	very low	very high	--
	subsoil	very low	high	--
g. Total P:	topsoil	medium	medium	--
	subsoil	very low	medium	--
h. CEC pH 7	topsoil	high	low	--
	subsoil	low	low	--
i. Soil Reaction:	topsoil	strong acid	strong acid	--
	subsoil	strong acid	strong acid	--
j. Al Sat.	topsoil	very low	--	--
	subsoil	very low	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer:		--	--	--
p. Organic Matter :		4.6	0.8	0.0
q. TEB :		5.3	4.2	0.0
r. Total observations:		1	1	0

---

19. ALTITUDE: **Maximum:** 400 m **Minimum:** 240 m **Range:** 260 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** centripetal **b. density:** Very low
c. Variability: low

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: moderate **d. Variability:** Low
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 100 %
Interfluves : **0-8%:**0 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: **-1-** Lake bottom, tropaquepts, 60%
-2- lake bottom, tropofluvents, 30%
-3- Transitions, eutropepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** Large blocks **Interfluves:**

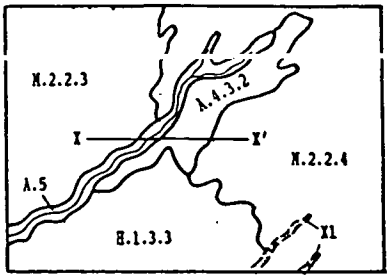
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 2 **14.b:** 3 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 1 **23:** 2 **24:** 1 **28:** 2 **29:** 2

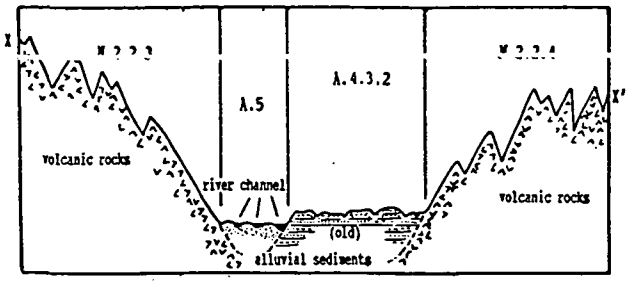
---

31. ADDITIONAL NOTES: No analysed profile for eutropepts

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Au.4.3.2 **2. MAP SHEET**: 1010 **3. AREA**: 52 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected rolling river terraces, mixed sediments, slopes 8-15%
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 4 /8282-115, 4 /8282-113
9. **RADAR** : Star 1/250/88/1010-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 20 %
    - a. **Weathering** : Partial
    - b. **Lithology** : clay, andesitic lavas, sand
    - c. **Formation** : Tnp , Qhv
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : moist primary lowland forest, bush
    - **Area used** : 0 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Localised
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab.. checked
Dominant >50%	dystropepts	99 %	yes
Associated 1		%	
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/Hj/1010/24/ / /46

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	--	--
	subsoil	fine	--	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	--	--
c. Drainage:		Moderately well	--	--
d. Exch. K:	topsoil	high	--	--
	subsoil	low	--	--
e. Total K2O:	topsoil	high	--	--
	subsoil	medium	--	--
f. Avail. P:	method	Bray I		
	topsoil	low	--	--
	subsoil	very low	--	--
g. Total P:	topsoil	high	--	--
	subsoil	medium	--	--
h. CEC pH 7	topsoil	high	--	--
	subsoil	high	--	--
i. Soil Reaction:	topsoil	strong acid	--	--
	subsoil	moderately acid	--	--
j. Al Sat.	topsoil	very low	--	--
	subsoil	very low	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		2.0	0.0	0.0
q. TEB :		11.7	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 300 m **Minimum:** 200 m **Range:** 250 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: low

22. SLOPE: **a. Steepness:**sloping **b. Variability:** Medium
c. Length: short **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**20 %, **9-25%:** 80 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** Medium

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: moderate **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- interfluves, dystropepts, 99%
-2-
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

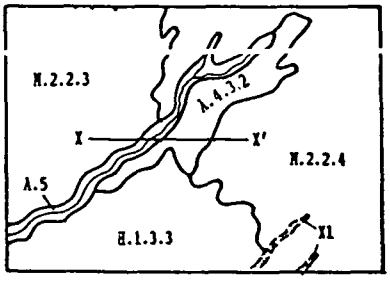
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 3 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 3 **18.a:** 3 **18.b:** 3 **18.c:** 2
18.d-q: 3 **19:** 2 **22:** 2 **23:** 3 **24:** 3 **28:** 3 **29:** 3

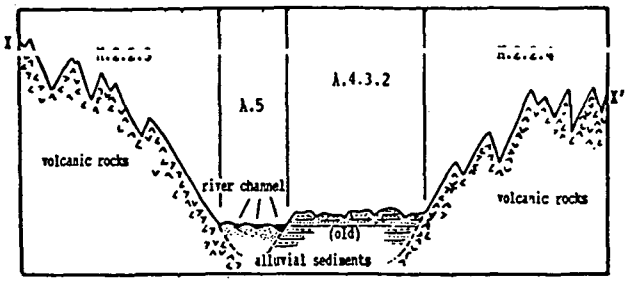
---

31. ADDITIONAL NOTES: Representative profile transfered from Aq.5.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Aq.5 **2. MAP SHEET**: 1010 **3. AREA**: 212 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Floodplain of braided river , coarse sediments, slopes 0-3%

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 4 /8282-115, 3A /8285-05 , 56 /8292-123

9. RADAR : Star 1/250/88/1010 2-4

10. PARENT MATERIAL **11. ROCK OUTCROP**: 20 %

- **a. Weathering** : Slight
- **b. Lithology** : sand, gravel
- **c. Formation** : Qal

12. WATER **a. Quality** : Fresh

b. Source : Perennial River

13. FISHERIES : Sungai (river)

14. RIVERS **a. Floodrisk** : Medium

b. Inundation: None

15. VEGETATION/LAND USE : bush, upland crops, coffee (kopi), towns, villages

Area used : 30 %

16. ACCELERATED EROSION

- **a. Occurence** : None
- **b. Evidence** : **Not relevant**

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	tropaquepts	60 %	yes
Associated 1	tropofluvents	30 %	no
Associated 2	dystropepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

iqt/ / /87/SR/1010/44/ /44 / ity/ / /87/HJ/1010/24/ / /46 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	--	moderately fine
	subsoil	fine	--	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	--	very deep
c. Drainage:		Poorly drained	--	Imperfectly drained
d. Exch. K:	topsoil	low	--	high
	subsoil	very low	--	low
e. Total K2O:	topsoil	low	--	high
	subsoil	low	--	medium
f. Avail. P:	method	Bray I		Bray I
	topsoil	very low	--	low
	subsoil	low	--	very low
g. Total P:	topsoil	very low	--	high
	subsoil	high	--	medium
h. CEC pH 7	topsoil	high	--	high
	subsoil	very high	--	high
i. Soil Reaction:	topsoil	moderately acid	--	strong acid
	subsoil	moderately acid	--	moderately acid
j. Al Sat.	topsoil	very low	--	very low
	subsoil	very low	--	very low
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		3.3	0.0	2.0
q. TEB :		25.2	0.0	11.7
r. Total observations:		1	0	4

---

19. ALTITUDE: **Maximum:** 400 m **Minimum:** 0 m **Range:** 150 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** braided **b. density:** Very low
c. Variability: low

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: **d. Variability:**
e. Curvature:

23. SLOPE DISTR.: **Valleybottoms:** 60 %
Interfluves : **0-8%:**40 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** moderate **b. Variability:** Medium

28. LAND FACETS: -1- Valleys/Low araes, tropaquepts, 30%
-2- Levees or bars, tropofluvents, 40%
-3- Levees or bars, dystropepts, 30%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Small blocks

---

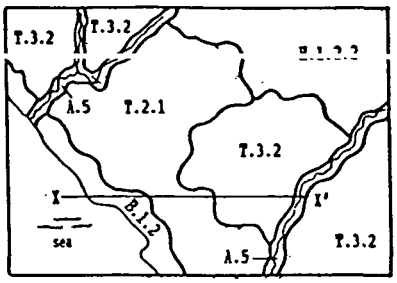
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 2 **14.b:** 2 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 1 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

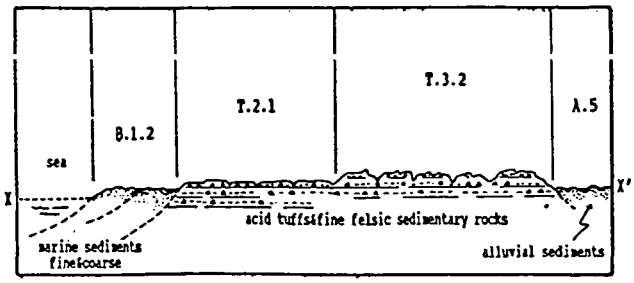
---

31. ADDITIONAL NOTES: No analysed profil for Tropofluvents

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Bfq.1.2 **2. MAP SHEET**: 1010 **3. AREA**: 88 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Complex of eroded beach ridges and filled in swales, fine and coarse sediments (partly ripened).
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 23 /8282-141, 23 /8282-139, 3A /8285-05
9. **RADAR** : Star-1/250/88/1010 3-4
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : Slight
    - b. **Lithology** : sand, clay
    - c. **Formation** : Qal , Qg
12. **WATER** a. **Quality** : Brackish
    - b. **Source** : Rain, Perennial River
13. **FISHERIES** : Laut (sea)
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : tidal forest, bush, alang-alang, mixed gardens of fruit trees, rainfed wetland rice, coconut (kelapa), reafforestation, beaches, towns, villages
    - **Area used** : 90 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Localised
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	tropopsamments	70 %	yes
Associated 1	tropaquepts	30 %	yes
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

est/ / /87/SR/1010/44/ /36 / iqt/ / /87/SR/1010/44/ /37 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	coarse	fine	--
	subsoil	coarse	moderately fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Somewhat excessively	Poorly drained	--
d. Exch. K:	topsoil	very low	low	--
	subsoil	very low	low	--
e. Total K2O:	topsoil	very low	low	--
	subsoil	very low	low	--
f. Avail. P:	method	Olsen	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	very low	--
	subsoil	medium	very low	--
h. CEC pH 7	topsoil	low	high	--
	subsoil	very low	low	--
i. Soil Reaction:	topsoil	moderately acid	strong acid	--
	subsoil	moderately acid	moderately acid	--
j. Al Sat.	topsoil	--	very low	--
	subsoil	--	very low	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		very slightly	very slightly	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		2.1	3.1	0.0
q. TEB :		2.1	12.7	0.0
r. Total observations:		1	1	0

---

19. ALTITUDE: **Maximum:** 20 m **Minimum:** 0 m **Range:** 10 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** parallel **b. density:** Low
c. Variability: low

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: **d. Variability:**
e. Curvature:

23. SLOPE DISTR.: **Valleybottoms:** 30 %
Interfluves : **0-8%:**70 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Short **c. Variability:** Medium
d. Width: narrow **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** Medium

28. LAND FACETS: **-1-** Ridges, tropopsamments, 70%
-2- Swales, tropaquepts, 30%
-3-
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Medium blocks

---

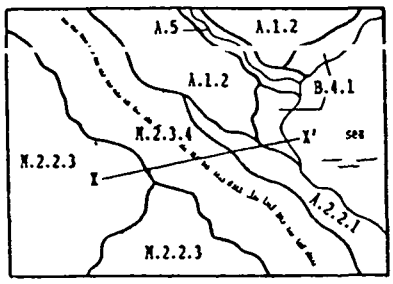
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 1 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 1 **19:** 2 **22:** 1 **23:** 2 **24:** 1 **28:** 2 **29:** 2

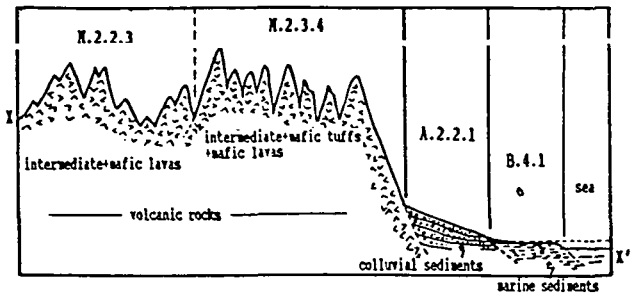
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Bf.4.1 **2. MAP SHEET**: 1010 **3. AREA**: 28 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Tidal mud flats, fine sediments (unripe)
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 3A /8285-09 , 4 /8282-99 , 54 /8296-75
9. **RADAR** : Star-1/250/88/1010 3-1
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : Slight
    - b. **Lithology** : sand, clay
    - c. **Formation** : Qal
12. **WATER** a. **Quality** : Brackish
    - b. **Source** : Rain
13. **FISHERIES** : Tambak (estuary)
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: Permanent
15. **VEGETATION/LAND USE** : tidal forest, bush, rainfed wetland rice, fishponds (tambak), beaches, towns, villages
    - **Area used** : 20 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : None
    - b. **Evidence** : Not relevant

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	hydraquents	65 %	yes
Associated 1	sulfaquents	35 %	no
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

eqw/ / /87/TB/1010/33/ /01 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	--	--
	subsoil	moderately fine	--	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	--	--
c. Drainage:		Poorly drained	--	--
d. Exch. K:	topsoil	very high	--	--
	subsoil	very high	--	--
e. Total K2O:	topsoil	very high	--	--
	subsoil	very high	--	--
f. Avail. P:	method	Olsen		
	topsoil	very high	--	--
	subsoil	very high	--	--
g. Total P:	topsoil	very high	--	--
	subsoil	very high	--	--
h. CEC pH 7	topsoil	high	--	--
	subsoil	high	--	--
i. Soil Reaction:	topsoil	slightly acid	--	--
	subsoil	slightly acid	--	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		deep	--	--
m. Salinity :		moderately	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		4.2	0.0	0.0
q. TEB :		24.0	0.0	0.0
r. Total observations:		1	0	0

---

19. ALTITUDE: **Maximum:** 5 m **Minimum:** 0 m **Range:** 5 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** **b. density:**
c. Variability:

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: **d. Variability:**
e. Curvature:

23. SLOPE DISTR.: **Valleybottoms:** 100 %
Interfluves : 0-8%:0 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Tidal flat, hydraquents, 65%
-2- Tidal flat, sulfaquents, 35%
-3-
-4-

29. FRAGMENTATION: **Valleys:** Large blocks **Interfluves:**

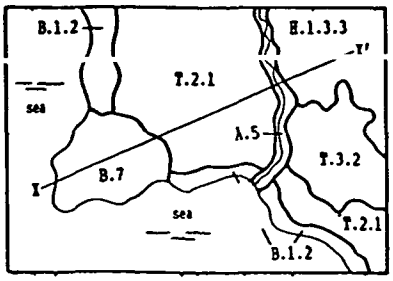
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 2 **14.a:** 2 **14.b:** 2 **17:** 3 **18.a:** 3 **18.b:** 3 **18.c:** 3
18.d-q: 3 **19:** 1 **22:** 1 **23:** 2 **24:** 2 **28:** 2 **29:** 2

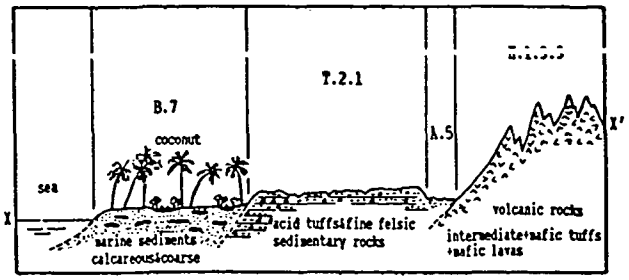
---

31. ADDITIONAL NOTES: No analysed profil for Sulfaquents

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Bcq.7 **2. MAP SHEET**: 1010 **3. AREA**: 19 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

. **LAND UNIT DESCRIPTION**: Undifferentiated marine deposits, calcareous and coarse sediments (unripe), slopes 0-3%.

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 23 /8282-143, 3A /8285-05 , 3A /8285-11

9. RADAR : Star-1/250/88/1010 4-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

a. Weathering : Partial

b. Lithology : limestone/marble, sand

c. Formation : Qg

12. WATER **a. Quality** : Brackish

b. Source : Rain

13. FISHERIES : Laut (sea)

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : bush, upland crops, coconut (kelapa), beaches, towns, villages

Area used : 60 %

16. ACCELERATED EROSION

a. Occurence : None

b. Evidence :

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	troporthents	85 %	yes
Associated 1	tropopsamments	15 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

eot/ / /87/SR/1010/44/ /48 / est/ / /87/SR/1010/44/ /36 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	coarse	coarse	--
	subsoil	coarse	coarse	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very shallow	very deep	--
c. Drainage:		Somewhat excessively	Somewhat excessively	--
d. Exch. K:	topsoil	low	very low	--
	subsoil	very low	very low	--
e. Total K2O:	topsoil	low	very low	--
	subsoil	low	very low	--
f. Avail. P:	method	Olsen	Olsen	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	high	medium	--
	subsoil	high	medium	--
h. CEC pH 7	topsoil	very low	low	--
	subsoil	very low	very low	--
i. Soil Reaction:	topsoil	strongly alkaline	moderately acid	--
	subsoil	strongly alkaline	moderately acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	very slightly	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		20 cm	--	--
p. Organic Matter :		3.3	2.1	0.0
q. TEB :		22.5	2.1	0.0
r. Total observations:		1	0	0

---

19. ALTITUDE: **Maximum:** 20 m **Minimum:** 0 m **Range:** 10 m

20. PLAN/PROFILE: **Dominant:** No pronounced highs/lows
Included:

21. L.U. DRAINAGE: **a. Pattern:** **b. density:**
c. Variability:

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: **d. Variability:**
e. Curvature: not recorded

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%**:100 %, **9-25%**: 0 %, **25-55%**: 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:**

25. TERRAIN: Flat, slope <2%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Marine deposits, troporthents, 85%
-2- Marine deposits, tropopsamments, 15%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks.

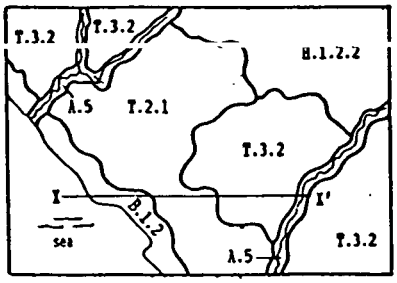
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 1 **12.a:** 2 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 1 **23:** 2 **24:** 2 **28:** 2 **29:** 2

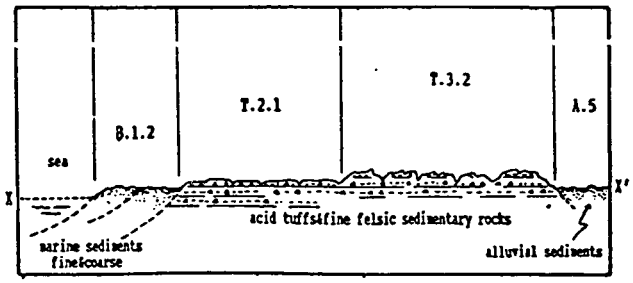
---

31. ADDITIONAL NOTES: Representative profile for tropopsamments is extrapolated from Bfq.1.2. Subsoil contain coral reef remnants.

BLOCK DIAGRAM:



CROSS SECTION:



1. **LAND UNIT**: Tdf.2.1 **2. MAP SHEET**: 1010 **3. AREA**: 156 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Slightly dissected undulating marine terraces, acid tuffs and fine felsic sedimentary rocks, slopes 3-8% .
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 23 /8282-137, 3A /8285-5 , 3A /8285-13
9. **RADAR** : Star-1/250/88/1010 2-3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : High
    - b. **Lithology** : dacite, claystone, sandstone
    - c. **Formation** : Tnp
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River, Medium wells
13. **FISHERIES** : Laut (sea)
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : secondary forest, bush, shifting cultivation, upland crops, rainfed wetland rice, coffee (kopi), towns, villages
    - **Area used** : 70 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Common
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	eutropepts	10 %	yes
Associated 2	tropaquepts	10 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/ER/1010/43/ /39 / iqt/ / /87/HJ/1010/24/ /43 /
ite/ / /87/ER/1010/24/ /45 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	moderately fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	very deep
c. Drainage:		Well drained	Moderately well	Poorly drained
d. Exch. K:	topsoil	high	high	medium
	subsoil	medium	very low	low
e. Total K2O:	topsoil	high	high	medium
	subsoil	medium	low	medium
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	very low	low	medium
	subsoil	very low	low	low
h. CEC pH 7	topsoil	medium	medium	medium
	subsoil	medium	medium	medium
i. Soil Reaction:	topsoil	moderately acid	slightly acid	strong acid
	subsoil	strong acid	moderately acid	strong acid
j. Al Sat.	topsoil	very low	very low	very low
	subsoil	low	very low	very low
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		2.2	1.2	3.9
q. TEB :		6.0	13.4	10.2
r. Total observations:		4	0	1

---

19. ALTITUDE: **Maximum:** 50 m **Minimum:** 0 m **Range:** 10 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Low
c. Variability: medium

22. SLOPE: **a. Steepness:**gently sloping **b. Variability:** Low
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**80 %, **9-25%:** 10 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** low **b. Variability:** Medium

25. TERRAIN: Undulating 2- 8%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** Low

28. LAND FACETS: -1- Interfluves, dystropepts, 80%
-2- Interfluves, eutropepts, 10%
-3- Valleys, tropaquepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

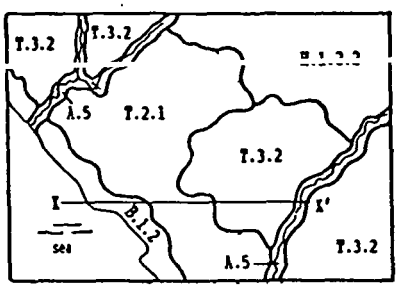
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 1 **23:** 2 **24:** 2 **28:** 2 **29:** 2

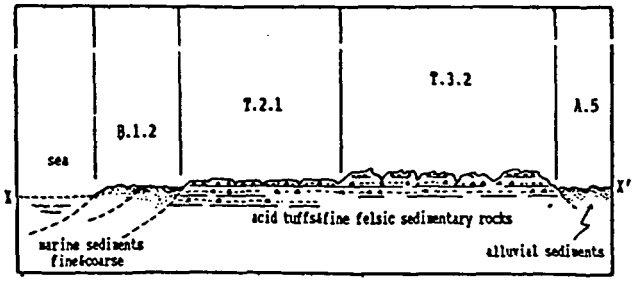
---

31. ADDITIONAL NOTES: Representative profile for Eutropepts is extrapolated from Tdf.3.2

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Tdf.3.2 **2. MAP SHEET**: 1010 **3. AREA**: 339 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Moderately dissected rolling marine terraces, acid tuffs and fine felsic sedimentary rocks, slopes 8-15%..

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 3A /8285-15 , 3A /8285-09 , 23 /8282-137

9. RADAR : Star-1/250/88/1010 1-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : dacite, claystone, sandstone
- **c. Formation** : Tnp

12. WATER **a. Quality** : Fresh

b. Source : Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : , bush, alang-alang, shifting cultivation, upland crops, coffee (kopi), towns, villages

Area used : 30 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	eutropepts	10 %	yes
Associated 2	tropaquepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/ER/1010/44/ /34 / iqt/ / /87/Hj/1010/24/ /43 /

ite/ / /87/HJ/1010/24/ /45 / ite/ / /87/ER/1010/24/ /45 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	moderately fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	very deep
c. Drainage:		Moderately well	Moderately well	Poorly drained
d. Exch. K:	topsoil	very low	high	medium
	subsoil	very low	very low	low
e. Total K2O:	topsoil	very low	high	medium
	subsoil	low	low	medium
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	very low	low	medium
	subsoil	very low	low	low
h. CEC pH 7	topsoil	low	medium	medium
	subsoil	low	medium	medium
i. Soil Reaction:	topsoil	strong acid	slightly acid	strong acid
	subsoil	very strong acid	moderately acid	strong acid
j. Al Sat.	topsoil	very low	very low	very low
	subsoil	high	very low	very low
k. Al toxicity :		yes	no	no
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		100 cm	--	--
p. Organic Matter :		1.8	1.2	3.9
q. TEB :		4.8	13.4	10.2
r. Total observations:		5	1	0

---

19. ALTITUDE: **Maximum:** 200 m **Minimum:** 5 m **Range:** 50 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included: linear and random 40-60% of area crested/peaked

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**sloping **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**25 %, **9-25%:** 45 %, **25-55%:** 20 %

24. RELIEF AMPLI.: **a. Amplitude:** low **b. Variability:** High

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Upper & middle slopes, dystropepts, 80%
-2- Foot slopes, eutropepts, 10%
-3- Valley bottoms, tropaquepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Medium blocks

---

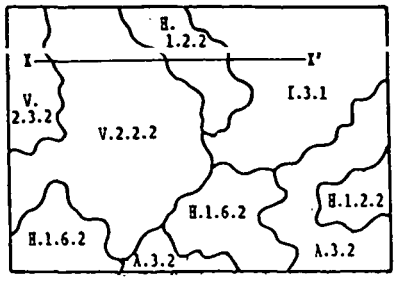
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 2 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

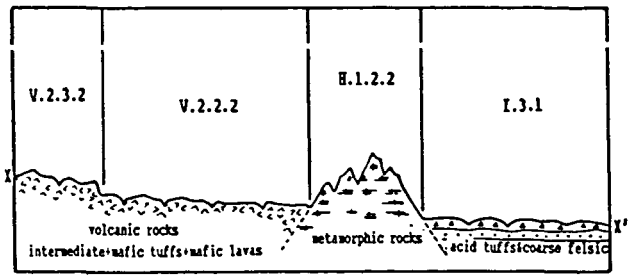
---

31. ADDITIONAL NOTES: Representative profile for Dystropepts is extrapolated from Tdf.2.1

BLOCK DIAGRAM:



CROSS SECTION:



1. **LAND UNIT**: Idq.3.1 **2. MAP SHEET**: 1010 **3. AREA**: 29 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Slightly dissected undulating acid tuff plain, acid tuffs and coarse felsic sedimentary rocks, slopes 3-8%
7. **SATELLITE SCENES** : 123/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000
9. **RADAR** : Star-1/250/88/1010 - 3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - **a. Weathering** : High
    - **b. Lithology** : liparite, dacite, sandstone
    - **c. Formation** : Qlv
12. **WATER** **a. Quality** : Fresh
    - **b. Source** : Perennial River
13. **FISHERIES** : Sungai (river)
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: None
15. **VEGETATION/LAND USE** : , horticultural crops, upland crops, rainfed wetland rice, irrigated wetland rice (irigasi), coffee (kopi), towns, villages
    - **Area used** : 100 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Localised
    - **b. Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	kanhapludults	60 %	yes
Associated 1	dystropepts	30 %	yes
Associated 2	tropaquepts	10 %	yes

---

32. **REPRESENTATIVE PROFILES**:

udh/ /84-13 /85/AH/1111/13/ /03 / ity/ /340-13 /71/Dn/1010/62/ /26 /
iqt/ /84-16 /85/dn/1111/23/ /11 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	medium	moderately fine
	subsoil	moderately fine	fine	moderately fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	very deep
c. Drainage:		Well drained	Well drained	Poorly drained
d. Exch. K:	topsoil	low	--	low
	subsoil	very low	--	very low
e. Total K2O:	topsoil	very low	low	very low
	subsoil	very low	very low	very low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	high	--	low
	subsoil	very low	--	low
g. Total P:	topsoil	low	low	very low
	subsoil	very low	very low	very low
h. CEC pH 7	topsoil	low	--	low
	subsoil	very low	--	low
i. Soil Reaction:	topsoil	excessive acid	moderately acid	very strong acid
	subsoil	very strong acid	strong acid	very strong acid
j. Al Sat.	topsoil	high	--	medium
	subsoil	very low	--	high
k. Al toxicity :		yes	--	yes
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		140 cm	--	125 cm
p. Organic Matter :		1.6	1.6	1.9
q. TEB :		1.0	0.0	0.9
r. Total observations:		0	1	0

---

19. ALTITUDE: **Maximum:** 170 m **Minimum:** 50 m **Range:** 70 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Low
c. Variability: low

22. SLOPE: **a. Steepness:**gently sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%**:75 %, **9-25%**: 15 %, **25-55%**: 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Undulating 2- 8%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Moderately long **c. Variability:** Low
d. Width: moderate **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** Low

28. LAND FACETS: -1- Flat top/upper slopes, kanhapludults, 60%
-2- Middle & lower slopes, dystropepts, 30%
-3- Valleys bottoms, tropaquepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

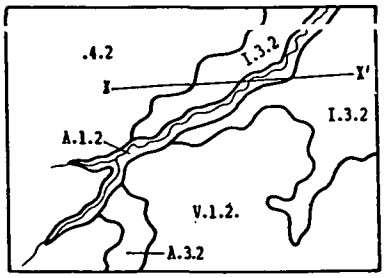
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 3 **18.a:** 3 **18.b:** 3 **18.c:** 3
18.d-q: 3 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

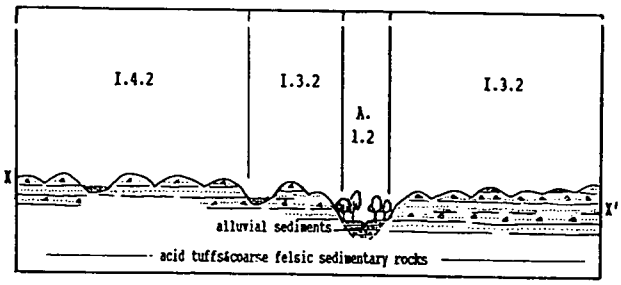
---

31. ADDITIONAL NOTES: Representative profiles for Kanhapludults and Tropaquepts are exrtrapolated from sheet 1111.

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Idq.3.2 **2. MAP SHEET**: 1010 **3. AREA**: 36 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected undulating acid tuff plain, acid tuffs and coarse felsic sedimentary rocks, slopes 3-8%.

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-35

9. RADAR : Star-1/250/88/1010-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : dacite, sand, claystone
- **c. Formation** : Qlv

12. WATER
- **a. Quality** : Fresh
- **b. Source** : Perennial River, Medium wells

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : alang-alang, upland crops, rainfed wetland rice, coffee (kopi), coconut (kelapa), towns, villages

Area used : 80 %

16. ACCELERATED EROSION
- **a. Occurence** : Common
- **b. Evidence** : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	kanhapludults	60 %	yes
Associated 1	dystropepts	30 %	no
Associated 2	tropaquepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

udh/ /84-20 /85/dn/1111/12/ /17 / ity/ / /86/AH/1010/64/ /06 /
iqt/ /14-1 /75/F /1111/13/ /12 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	--	medium
	subsoil	fine	--	moderately fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	--	very deep
c. Drainage:		Well drained	--	Poorly drained
d. Exch. K:	topsoil	low	--	low
	subsoil	low	--	low
e. Total K2O:	topsoil	low	--	very low
	subsoil	very low	--	very low
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	very low	--	very low
	subsoil	very low	--	very low
h. CEC pH 7	topsoil	low	--	medium
	subsoil	low	--	low
i. Soil Reaction:	topsoil	strong acid	--	strong acid
	subsoil	strong acid	--	very strong acid
j. Al Sat.	topsoil	very low	--	very low
	subsoil	very low	--	very low
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		1.4	0.0	2.5
q. TEB :		2.5	0.0	1.1
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 90 m **Minimum:** 50 m **Range:** 70 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: low

22. SLOPE: **a. Steepness:**gently sloping **b. Variability:** Low
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**80 %, **9-25%:** 10 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** very low **b. Variability:** Low

25. TERRAIN: Undulating 2- 8%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Moderately long **c. Variability:** Low
d. Width: moderate **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Flat top/upper slopes, kanhapludults, 60%
-2- middle & lower slopes, dystropepts, 30%
-3- Valley bottoms, tropaquepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

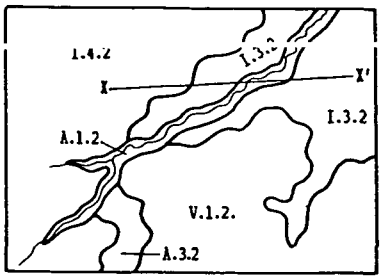
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 3 **19:** 2 **22:** 3 **23:** 3 **24:** 3 **28:** 2 **29:** 3

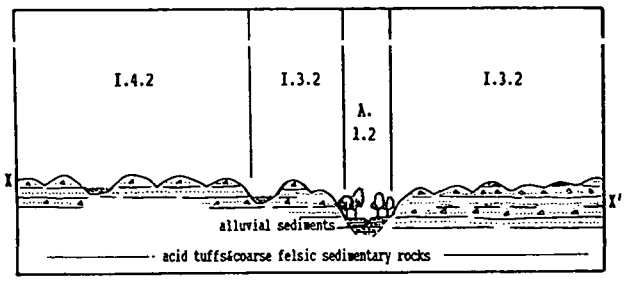
---

31. ADDITIONAL NOTES: Representative profiles for Kanhapudults and Tropaquepts are extrapolated from sheet 1111.

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Idq.4.2 **2. MAP SHEET**: 1010 **3. AREA**: 111 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Moderately dissected undulating to rolling acid tuff plain, acid tuffs and coarse felsic sedimentary rocks, slopes 3-15%

7. SATELLITE SCENES :

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-35

9. RADAR : Star-1/250/88/1010-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : dacite, liparite, sandstone
- **c. Formation** : Qlv

12. WATER · **a. Quality** : Fresh

- **b. Source** : Perennial River, Medium wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

- **b. Inundation**: None

15. VEGETATION/LAND USE : , alang-alang, upland crops, mixed gardens of fruit trees, rainfed wetland rice, coffee (kopi), towns, villages

Area used : 90 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	kanhapludults	55 %	yes
Associated 1	dystropepts	35 %	yes
Associated 2	tropaquepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

udh/ /84-19 /85/us/1010/14/ /9 / ity/ /340-31 /85/dn/1010/62/ /26 /
iqt/ /84-17 /75/dn/1010/23/ /16 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	medium	fine
	subsoil	fine	--	moderately fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	deep
c. Drainage:		Well drained	Well drained	Poorly drained
d. Exch. K:	topsoil	low	--	very low
	subsoil	low	--	very low
e. Total K2O:	topsoil	very low	low	very low
	subsoil	very low	very low	very low
f. Avail. P:	method	Bray I		Bray I
	topsoil	very low	--	very low
	subsoil	very low	--	very low
g. Total P:	topsoil	very low	low	very low
	subsoil	very low	very low	very low
h. CEC pH 7	topsoil	low	--	low
	subsoil	very low	--	low
i. Soil Reaction:	topsoil	strong acid	moderately acid	very strong acid
	subsoil	very strong acid	strong acid	very strong acid
j. Al Sat.	topsoil	very high	--	very high
	subsoil	very high	--	very high
k. Al toxicity :		yes	--	yes
l. Acid sulph. pot.:		very shallow	--	--
m. Salinity :		salt free	--	salt free
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		125 cm	--	125 cm
p. Organic Matter :		1.9	1.6	1.9
q. TEB :		0.4	0.0	0.7
r. Total observations:		0	2	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 60 m **Range:** 80 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**gently sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**55 %, **9-25%:** 35 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** Medium

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Moderately long **c. Variability:** Low
d. Width: moderate **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Crest/upper slopes, kanhapludults, 55%
-2- Middle & lower slopes, dystropepts, 35%
-3- Valleys bottoms, tropaquepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

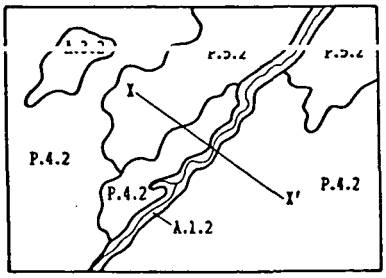
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

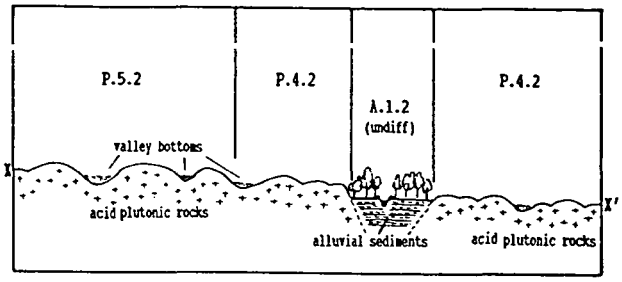
---

31. ADDITIONAL NOTES: Representative profiles for Kandihapludults and Tropaquepts are extrapolated from sheet 1111.

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Pg.4.2 **2. MAP SHEET**: 1010 **3. AREA**: 66 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected undulating to rolling plain, acid plutonic rock, slopes3-15%

7. SATELLITE SCENES : 123/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-39

9. RADAR : Star-1/250/88/1010 - 5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : sand, granodiorite, diorite
- **c. Formation** : Kgr

12. WATER **a. Quality** : Fresh

- **b. Source** : Perennial River, Deep wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

- **b. Inundation**: None

15. VEGETATION/LAND USE : upland crops, mixed gardens of fruit trees, rainfed wetland rice, coffee (kopi), towns, villages

Area used : 90 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	65 %	yes
Associated 1	hapludults	30 %	yes
Associated 2	tropaquepts	5 %	no

---

32. REPRESENTATIVE PROFILES:

ity/ /84-2 /85/ah/1010/64/ /7a / uda/ / /87/er/1010/24/ /42 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	medium	medium	--
	subsoil	medium	medium	--
e. Total K2O:	topsoil	medium	very low	--
	subsoil	medium	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	low	--
	subsoil	low	medium	--
h. CEC pH 7	topsoil	medium	very low	--
	subsoil	medium	medium	--
i. Soil Reaction:	topsoil	very strong acid	very strong acid	--
	subsoil	very strong acid	very strong acid	--
j. Al Sat.	topsoil	very low	high	--
	subsoil	very low	very high	--
k. Al toxicity :		no	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	98 cm	--
p. Organic Matter :		2.7	1.6	0.0
q. TEB :		0.9	3.3	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 100 m **Range:** 110 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: low

22. SLOPE: **a. Steepness:**sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**60 %, **9-25%:** 35 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** low **b. Variability:** Medium

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Moderately long **c. Variability:** Low
d. Width: moderate **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Slopes, dystropepts, 65%
-2- Convex Top/Crests, hapludults, 30%
-3- Valleys bottoms, tropaquepts, 5%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Medium blocks

---

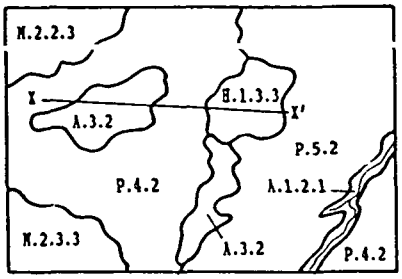
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

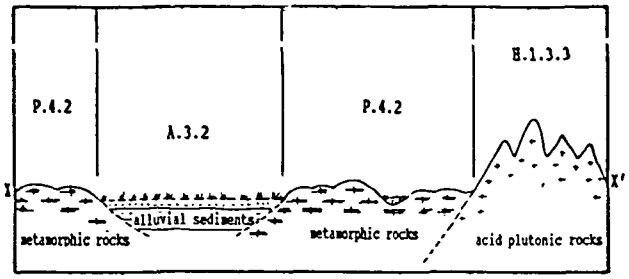
---

31. ADDITIONAL NOTES: Representative profiles for Dystropepts and Hapludults are extra polated from other L.U.

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Ptn.4.2 **2. MAP SHEET**: 1010 **3. AREA**: 116 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Moderately dissected undulating to rolling plain, metamorphic rocks, slopes 3-15%.

7. SATELLITE SCENES : 123/64/30/05/85, 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-39

9. RADAR : Star-1/250/88/1010 - 5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : gneiss, schists
- **c. Formation** : pTse

12. WATER **a. Quality** : Fresh

b. Source : Perennial River, Medium wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : upland crops, mixed gardens of fruit trees, rainfed wetland rice, irrigated wetland rice (irigasi), coconut (kelapa), towns, villages

Area used : 99 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	kanhapludults	60 %	yes
Associated 1	dystropepts	35 %	yes
Associated 2	tropaquepts	5 %	yes

---

32. REPRESENTATIVE PROFILES:

udh/ /340-52 /71/SD/1010/62/ /14 / ity/ /184-1 /68/IS/1010/64/ /50 /
iqt/ /340 /71/DN/1010/64/ /23 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	medium	medium
	subsoil	moderately fine	fine	moderately fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	moderately deep	deep
c. Drainage:		Well drained	Well drained	Poorly drained
d. Exch. K:	topsoil	very low	very low	--
	subsoil	very low	very low	--
e. Total K2O:	topsoil	low	medium	very low
	subsoil	low	very low	very low
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	medium	low
	subsoil	very low	medium	very low
h. CEC pH 7	topsoil	very low	very low	--
	subsoil	very low	very low	--
i. Soil Reaction:	topsoil	slightly acid	moderately acid	strong acid
	subsoil	moderately acid	very strong acid	strong acid
j. Al Sat.	topsoil	very low	--	--
	subsoil	very low	--	--
k. Al toxicity :		no	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		2.1	3.3	0.5
q. TEB :		0.0	1.8	0.0
r. Total observations:		2	2	1

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 90 m **Range:** 120 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**gently sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**70 %, **9-25%:** 25 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** low **b. Variability:** Medium

25. TERRAIN: Undulating 2- 8%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Undulating **b. Length:**Short **c. Variability:** Medium
d. Width: moderate **e. Variability:** Low

27. VALLEY FLOOR **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Interfluves, kanhapludults, 60%
-2- Interfluves, dystropepts, 35%
-3- Valleys bottoms, tropaquepts, 5%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Medium blocks

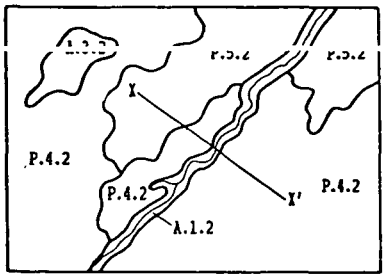
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

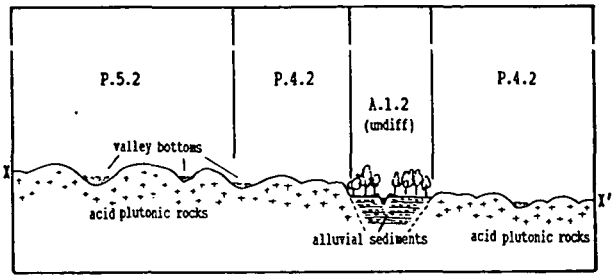
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Pg.5.2 **2. MAP SHEET**: 1010 **3. AREA**: 42 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Moderately dissected rolling plain, acid plutonic rocks, slopes 8-15%.

7. SATELLITE SCENES :

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-37

9. RADAR : Star-1/250/88/1010-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : granite, granodiorite,
- **c. Formation** : Kgr

12. WATER **a. Quality** : Fresh

- **b. Source** : Perennial River, Deep wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

- **b. Inundation**: None

15. VEGETATION/LAND USE : bush, upland crops, mixed gardens of fruit trees, rainfed wetland rice, coconut (kelapa), towns, villages

Area used : 90 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	65 %	yes
Associated 1	hapludults	30 %	yes
Associated 2	tropaquepts	5 %	no

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/ER/1010/24/ /42 / uda/ /84-2 /85/AH/1010/64/ /7a /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	medium	medium	--
	subsoil	medium	medium	--
e. Total K2O:	topsoil	medium	very low	--
	subsoil	medium	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	low	--
	subsoil	low	medium	--
h. CEC pH 7	topsoil	medium	very low	--
	subsoil	medium	medium	--
i. Soil Reaction:	topsoil	very strong acid	very strong acid	--
	subsoil	very strong acid	very strong acid	--
j. Al Sat.	topsoil	very low	high	--
	subsoil	very low	very high	--
k. Al toxicity :		no	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	98 cm	--
p. Organic Matter :		2.7	1.6	0.0
q. TEB :		0.9	3.3	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 100 m **Range:** 120 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**sloping **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**20 %, **9-25%:** 65 %, **25-55%:** 10 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** Medium

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Slopes, dystropepts, 65%
-2- Convex tops/Crests, hapludults, 30%
-3- Valleys bottoms, tropaquepts, 5%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Medium blocks

---

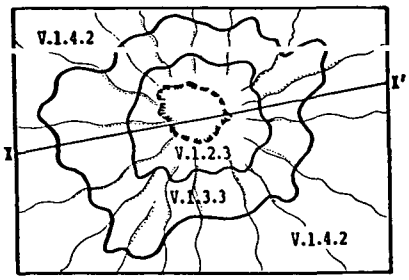
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 2 **23:** 3 **24:** 2 **28:** 3 **29:** 3

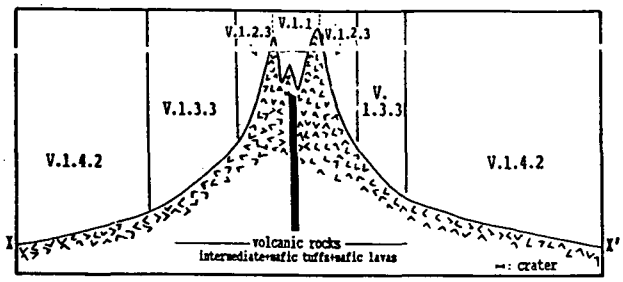
---

31. ADDITIONAL NOTES: Repesentative profiles for Dystropepts and Hapludults are extrapo lated from other L.U.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Vab.1.2.3 **2. MAP SHEET**: 1010 **3. AREA**: 193 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected upper slopes of volcanoes,intermidiate and mafic tuffs an d lavas, slopes >30%

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 55 /8295-71 , 52 /8296-85 , 54 /8296-63

9. RADAR : Star-1/250/88/1010 4-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

a. Weathering : Slight

b. Lithology : andesitic tuffs, andesitic lavas, basalt

c. Formation : Qhv

12. WATER **a. Quality** : Fresh

b. Source : Rain, Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, moist primary submontane forest, bush, coffee (kopi)

Area used : 15 %

16. ACCELERATED EROSION

a. Occurence : Common

b. Evidence : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystrandepts	50 %	yes
Associated 1	troporthents	30 %	no
Associated 2	humitropepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

iny/ / /87/hj/1010/61/ /30 / ith/ /340-47 /71/H /1010/61/ /73 /
ith/ /340-47 /71/H /1010/61/ /73 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	--	medium
	subsoil	medium	--	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	--	moderately deep
c. Drainage:		--	--	Well drained
d. Exch. K:	topsoil	very low	--	very low
	subsoil	very low	--	very low
e. Total K2O:	topsoil	medium	--	low
	subsoil	very low	--	low
f. Avail. P:	method	Bray I		Bray I
	topsoil	very low	--	very low
	subsoil	very low	--	very low
g. Total P:	topsoil	high	--	very high
	subsoil	medium	--	very high
h. CEC pH 7	topsoil	very low	--	very low
	subsoil	very low	--	very low
i. Soil Reaction:	topsoil	excessive acid	--	strong acid
	subsoil	moderately acid	--	slightly acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		11.2	0.0	14.3
q. TEB :		2.0	0.0	0.0
r. Total observations:		2	0	2

---

19. ALTITUDE: **Maximum:** 2000 m **Minimum:** 600 m **Range:** 800 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** radial **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**very steep **b. Variability:** High
c. Length: short **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**0 %, **9-25%:** 10 %, **25-55%:** 40 %, **>55%:** 50 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** High

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Very irregular **b. Length:**Long **c. Variability:** High
d. Width: moderate **e. Variability:** High

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Middle parts, dystrandepts, 50%
-2- Upper parts/Crests, troporthents, 30%
-3- Lower parts, humitropepts, 10%
-4- Rock out crop, 10%

29. FRAGMENTATION: **Valleys:** **Interfluves:**

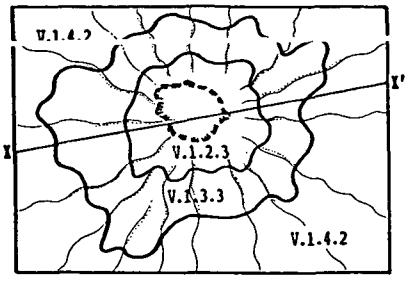
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

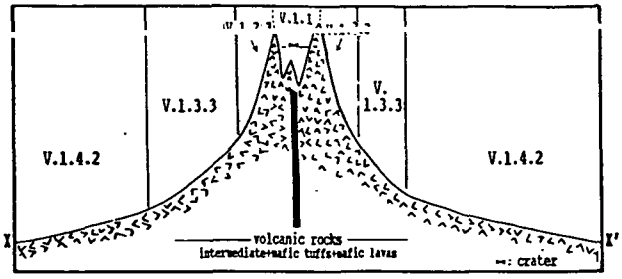
---

31. ADDITIONAL NOTES: no analysed profile for Troporthents (eot)

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Vab.1.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 424 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected middle slopes of volcanoes, intermediate and mafic tuffs and lavas, slopes 16-50%

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 54 /8296-69 , 52 /8296-83 , 55 /8296-71

9. RADAR : Star-1/250/88/1010 4-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

- **a. Weathering** : Partial
- **b. Lithology** : andesitic tuffs, basalt, andesitic lavas
- **c. Formation** : Qhv

12. WATER **a. Quality** : Fresh

b. Source : Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, upland crops, horticultural crops, coffee (kopi), towns, villages

Area used : 50 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	55 %	yes
Associated 1	dystrandepts	20 %	yes
Associated 2	troporthents	15 %	no

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/hk/1010/54/ /17 / iny/ / /87/hj/1010/61/ /30 /
ith/ /86-17 /81/sr/1010/21/ /01 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	medium	--
	subsoil	fine	medium	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	medium	very low	--
	subsoil	low	very low	--
e. Total K2O:	topsoil	medium	medium	--
	subsoil	very low	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	very high	high	--
	subsoil	very high	medium	--
h. CEC pH 7	topsoil	medium	very low	--
	subsoil	low	very low	--
i. Soil Reaction:	topsoil	excessive acid	excessive acid	--
	subsoil	excessive acid	moderately acid	--
j. Al Sat.	topsoil	high	--	--
	subsoil	medium	--	--
k. Al toxicity :		yes	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	--	--
p. Organic Matter :		5.0	11.2	0.0
q. TEB :		1.3	2.0	0.0
r. Total observations:		4	0	0

---

19. ALTITUDE: **Maximum:** 1000 m **Minimum:** 200 m **Range:** 800 m

20. PLAN/PROFILE: **Dominant:** linear and random 40-60% of area crested/peaked
Included: linear and random < 40% of area flat-topped

21. L.U. DRAINAGE: **a. Pattern:** radial **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** High
c. Length: long **d. Variability:** High
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%:**5 %, **9-25%:** 20 %, **25-55%:** 50 %, **>55%:** 25 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Long **c. Variability:** High
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Lower& middle parts, humitropepts, 55%
-2- Middle parts, dystrandepts, 20%
-3- Upper patrs, troporthents, 15%
-4- Rock out crops, 10%

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Small blocks

---

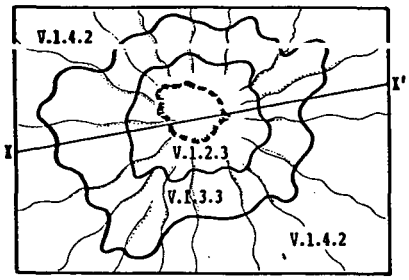
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

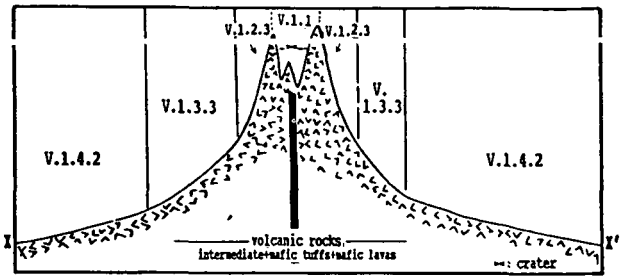
---

31. ADDITIONAL NOTES: Representative profile for Dystrandepts is extrapolated from other LU.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Vab.1.4.2 **2. MAP SHEET**: 1010 **3. AREA**: 523 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Moderately dissected lower slopes of volcanoes, intermediate and mafic tuffs and lavas, slopes 8-15%.

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 52 /8296-83 , 55 /8295-79 , 55 /8295-71

9. RADAR : Star-1/250/88/1010,4-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 5 %

- **a. Weathering** : Partial
- **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
- **c. Formation** : Qhv

12. WATER **a. Quality** : Fresh

b. Source : Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, shifting cultivation, upland crops, horticultural crops, rainfed wetland rice, irrigated wetland rice (irigasi), coffee (kopi), coconut (kelapa), towns, villages

Area used : 70 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	50 %	yes
Associated 1	dystropepts	20 %	yes
Associated 2	dystrandepts	20 %	yes

---

32. REPRESENTATIVE PROFILES:

ith/ / /87/ua/1010/54/ /6 / ity/ / /87/us/1010/53/. /16 /

iny/ / /87/ua/1010/54/ /14 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	moderately coarse	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	moderately deep
c. Drainage:		Well drained	Somewhat excessively	Well drained
d. Exch. K:	topsoil	high	medium	very low
	subsoil	very high	very low	very low
e. Total K2O:	topsoil	very high	very high	low
	subsoil	very high	high	medium
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	very low	medium
	subsoil	very low	very low	low
h. CEC pH 7	topsoil	medium	low	very low
	subsoil	low	low	very low
i. Soil Reaction:	topsoil	moderately acid	very strong acid	very strong acid
	subsoil	strong acid	strong acid	very strong acid
j. Al Sat.	topsoil	very low	high	low
	subsoil	very low	high	medium
k. Al toxicity :		--	yes	yes
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	120 cm	120 cm
p. Organic Matter :		4.3	1.6	3.9
q. TEB :		8.0	1.0	2.0
r. Total observations:		1	5	2

---

19. ALTITUDE: **Maximum:** 1000 m **Minimum:** 100 m **Range:** 750 m

20. PLAN/PROFILE: **Dominant:** linear and random 40-60% of area crested/peaked
Included: non-linear and random 40-60% of area crested/peaked

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**sloping **b. Variability:** High
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**10 %, **9-25%:** 60 %, **25-55%:** 20 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** High

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: very wide **e. Variability:** High

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Medium

28. LAND FACETS: -1- Lower parts, humitropepts, 50%
-2- upper parts, dystropepts, 20%
-3- middle parts, dystrandepts, 20%
-4- Valleys bottoms, tropaquepts, 10%

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

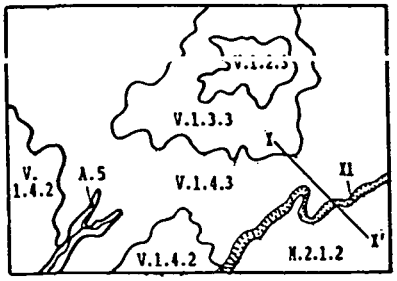
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

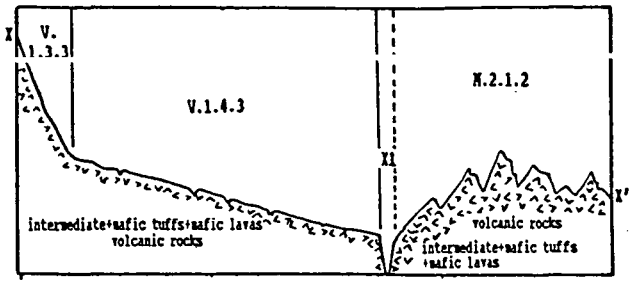
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Vab.1.4.3 **2. MAP SHEET**: 1010 **3. AREA**: 446 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected lower slopes of volcanoes, intermediate and mafic tuffs and lavas, slopes 8-15%
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 54 /8296-65 , 54 /8296-69 , 4 /8282-113
9. **RADAR** : Star-1/250/88/1010 4-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 5 %
    - **a. Weathering** : Partial
    - **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
    - **c. Formation** : Qhv
12. **WATER** **a. Quality** : Fresh
    - **b. Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: None
15. **VEGETATION/LAND USE** : moist primary lowland forest, bush, shifting cultivation, upland crops, horticultural crops, rainfed wetland rice, coffee (kopi), towns, villages
    - **Area used** : 60 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Common
    - **b. Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	50 %	yes
Associated 1	dystropepts	25 %	yes
Associated 2	dystrandepts	20 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ith/ / /87/ua/1010/63/ /5 / ity/ /340-1 /71/dn/1010/63/ /3 /
iny/ / /87/ua/1010/54/ /14 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	moderately deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	medium	medium	very low
	subsoil	medium	low	very low
e. Total K2O:	topsoil	medium	low	low
	subsoil	medium	very low	medium
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	medium	low	medium
	subsoil	medium	low	low
h. CEC pH 7	topsoil	medium	medium	very low
	subsoil	low	low	very low
i. Soil Reaction:	topsoil	very strong acid	strong acid	very strong acid
	subsoil	excessive acid	very strong acid	very strong acid
j. Al Sat.	topsoil	very low	--	low
	subsoil	high	--	medium
k. Al toxicity :		yes	--	yes
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	--	120 cm
p. Organic Matter :		3.3	4.2	3.9
q. TEB :		3.0	3.6	2.0
r. Total observations:		1	4	0

---

19. ALTITUDE: **Maximum:** 800 m **Minimum:** 300 m **Range:** 500 m

20. PLAN/PROFILE: **Dominant:** linear and random > 60% of area crested/peaked
Included: non-linear and random > 60% of area crested/peaked

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**sloping **b. Variability:** High
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**15 %, **9-25%:** 60 %, **25-55%:** 20 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** High

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Long **c. Variability:** High
d. Width: wide **e. Variability:** High

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Lower parts, humitropepts, 50%
-2- Upper parts, dystropepts, 25%
-3- Middle patrs, dystrandepts, 20%
-4- Valleys bottoms, tropaquepts, 5%

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Medium blocks

---

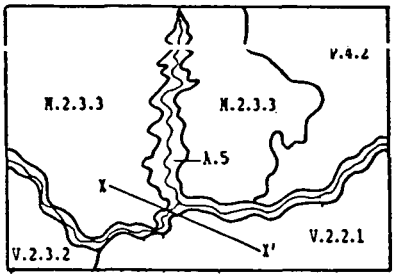
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 2 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

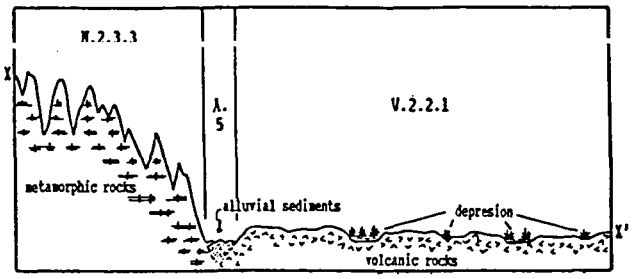
---

31. ADDITIONAL NOTES: Representative profile for Dystrandepts is extrapolated from other L.U.

MAP IMAGE:



CROSS SECTION



1. **LAND UNIT**: Vab.2.2.1 2. **MAP SHEET**: 1010 3. **AREA**: 81 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Slightly dissected undulating volcanic plain, intermediate and mafic tuffs and lavas, slopes 3-8%
7. **SATELLITE SCENES** : 123/64/30/05/85, 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 56 /8294-41 , 57 /8292-77
9. **RADAR** : Star-1/250/88/1010-4-3
10. **PARENT MATERIAL** 11. **ROCK OUTCROP**: 0 %
    - a. **Weathering** : High
    - b. **Lithology** : andesitic tuffs, andesitic lavas, basalt
    - c. **Formation** : Qhv
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : upland crops, rainfed wetland rice, irrigated wetland rice (irigasi), coconut (kelapa), towns, villages
    - **Area used** : 100 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Common
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	50 %	yes
Associated 1	humitropepts	20 %	yes
Associated 2	hapludults	20 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ity/ /340-17 /71/DN/1010/62/ /39 / ith/ / /87/US/1010/54/ /002/
uda/ /340-14 /71/DN/1010/62/ /030/

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	moderately fine
	subsoil	fine	moderately fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	deep
c. Drainage:		Well drained	Well drained	Moderately well
d. Exch. K:	topsoil	very low	high	very low
	subsoil	very low	medium	very low
e. Total K2O:	topsoil	low	high	high
	subsoil	very low	medium	very high
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	medium	high
	subsoil	low	very low	medium
h. CEC pH 7	topsoil	very low	medium	very low
	subsoil	very low	medium	very low
i. Soil Reaction:	topsoil	moderately acid	very strong acid	neutral
	subsoil	very strong acid	very strong acid	neutral
j. Al Sat.	topsoil	--	medium	--
	subsoil	--	medium	--
k. Al toxicity :		--	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	120 cm	--
p. Organic Matter :		1.3	3.6	1.5
q. TEB :		0.0	3.1	0.0
r. Total observations:		1	0	0

---

19. ALTITUDE: **Maximum:** 400 m **Minimum:** 150 m **Range:** 170 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included: No pronounced highs/lows

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Low
c. Variability: medium

22. SLOPE: **a. Steepness:** gently sloping **b. Variability:** Medium
c. Length: extremely **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:** 60 %, **9-25%:** 20 %, **25-55%:** 10 %

24. RELIEF AMPLI.: **a. Amplitude:** low **b. Variability:** Low

25. TERRAIN: Undulating 2- 8%, 0-50 m

26. CREST/RIDGES: **a. Shape:** **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** Low

28. LAND FACETS: -1- Interfluves, dystropepts, 55%
-2- Interfluves, humitropepts, 15%
-3- Interfluves, hapludults, 20%
-4- Valley bottoms, tropaquepts, 10%

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

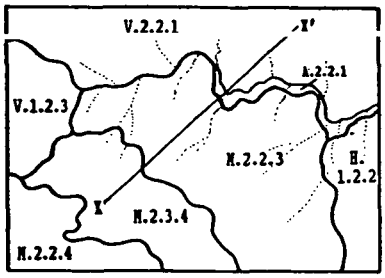
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

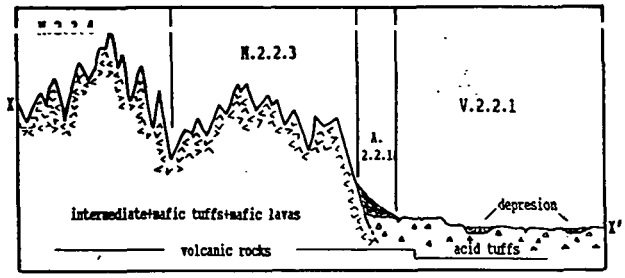
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 1 **23:** 2 **24:** 1 **28:** 2 **29:** 2

---

31. ADDITIONAL NOTES: Representative profiles for Humitropepts and Hapludults are extrapolated from other L.U.

MAP IMAGE: CROSS SECTION





1. LAND UNIT: Vd.2.2.1 **2. MAP SHEET**: 1010 **3. AREA**: 74 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: Ah **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Slightly dissected undulating volcanic plain, acid tuffs, slopes 3-8%

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 52 /8296-87

9. RADAR : Star-1/250/88/1010-5-6

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

a. Weathering : Partial

b. Lithology : dacite

c. Formation : Qrv

12. WATER **a. Quality** : Fresh

b. Source : Perennial River, Medium wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : bush, upland crops, horticultural crops, rainfed wetland rice, coffee (kopi), towns, villages

Area used : 90 %

16. ACCELERATED EROSION

a. Occurence : Localised

b. Evidence : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystrandepts	60 %	yes
Associated 1	humitropepts	30 %	yes
Associated 2	eutrandepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

iny/ / /87/HK/1010/53/ /11 / ith/ / /87/US/1010/53/ /21 /

ine/ / /87/US/1010/53/ /20 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	moderately fine	moderately coarse
	subsoil	moderately coarse	moderately fine	moderately coarse
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	very deep
c. Drainage:		Well drained	Well drained	Imperfectly drained
d. Exch. K:	topsoil	medium	medium	low
	subsoil	very high	low	medium
e. Total K2O:	topsoil	high	very high	very high
	subsoil	high	high	very high
f. Avail. P:	method		Bray I	Bray I
	topsoil	--	very low	medium
	subsoil	--	very low	medium
g. Total P:	topsoil	very high	very high	low
	subsoil	low	medium	low
h. CEC pH 7	topsoil	high	medium	low
	subsoil	high	medium	medium
i. Soil Reaction:	topsoil	moderately acid	strong acid	moderately acid
	subsoil	slightly acid	moderately acid	moderately acid
j. Al Sat.	topsoil	low	very low	very low
	subsoil	--	very low	very low
k. Al toxicity :		no	no	no
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		6.7	6.3	5.6
q. TEB :		3.7	2.5	8.1
r. Total observations:		2	2	1

---

19. ALTITUDE: **Maximum:** 1100 m **Minimum:** 800 m **Range:** 850 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Low
c. Variability: low

22. SLOPE: **a. Steepness:**gently sloping **b. Variability:** Medium
c. Length: long **d. Variability:** High
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**70 %, **9-25%:** 20 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** low **b. Variability:** Medium

25. TERRAIN: Undulating 2- 8%, 0-50 m

26. CREST/RIDGES: **a. Shape:** **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** High

28. LAND FACETS: -1- Interfluves, dystrandepts, 60%
-2- Interfluves & valleys, humitropepts, 30%
-3- Interfluves, eutrandepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

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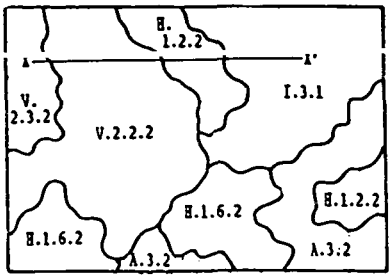
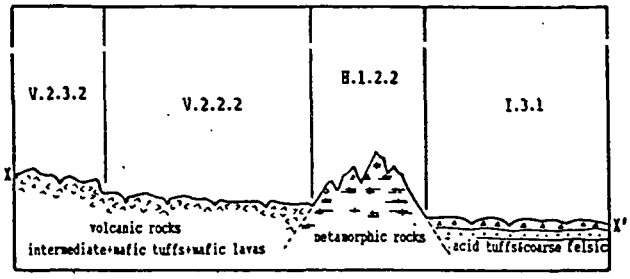
31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION



1. LAND UNIT: Vab.2.2.2 **2. MAP SHEET**: 1010 **3. AREA**: 198 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected undulating volcanic plain, intermediate and mafic tuffs and lavas, slopes 3-8%.

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-43 , 53 /8316-155

9. RADAR : Star-1/250/88/1010-3-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
- **c. Formation** : Qhv

12. WATER
- **a. Quality** : Fresh
- **b. Source** : Perennial River, Deep wells

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : secondary forest, bush, alang-alang, upland crops, mixed gardens of fruit trees, irrigated wetland rice (irigasi), coconut (kelapa), coffee (kopi), towns, villages

Area used : 90 %

16. ACCELERATED EROSION
- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	50 %	yes
Associated 1	humitropepts	20 %	yes
Associated 2	hapludults	20 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ /340-55 /71/SK/1010/62/ /32 / ith/ / /87/US/1010/54/ /02 /
uda/ /340-14 /71/DN/1010/62/ /30 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	moderately fine	moderately fine
	subsoil	moderately fine	moderately fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	deep
c. Drainage:		Moderately well	Well drained	Moderately well
d. Exch. K:	topsoil	--	high	very low
	subsoil	--	medium	very low
e. Total K2O:	topsoil	very high	high	high
	subsoil	very high	medium	very high
f. Avail. P:	method		Bray I	Bray I
	topsoil	--	very low	very low
	subsoil	--	very low	very low
g. Total P:	topsoil	low	medium	high
	subsoil	very low	very low	medium
h. CEC pH 7	topsoil	--	medium	very low
	subsoil	--	medium	very low
i. Soil Reaction:	topsoil	slightly acid	very strong acid	neutral
	subsoil	slightly acid	very strong acid	neutral
j. Al Sat.	topsoil	--	medium	--
	subsoil	--	medium	--
k. Al toxicity :		--	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	120 cm	--
p. Organic Matter :		11.2	3.6	1.5
q. TEB :		0,0	3.1	0.0
r. Total observations:		5	2	4

---

19. ALTITUDE: **Maximum:** 925 m **Minimum:** 150 m **Range:** 850 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area flat-topped
Included: No pronounced highs/lows

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**gently sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**65 %, **9-25%:** 25 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** low **b. Variability:** Medium

25. TERRAIN: Undulating 2- 8%, 0-50 m

26. CREST/RIDGES: **a. Shape:** **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Interfluves, dystropepts, 50%
-2- Interfluves, humitropepts, 20%
-3- Interfluves, hapludults, 20%
-4- Valley bottoms, tropaquepts, 10%

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large blocks

---

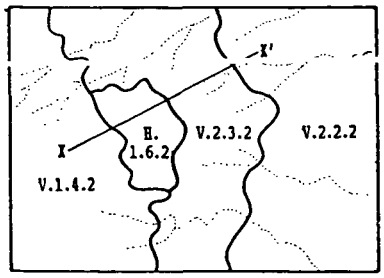
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 1 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

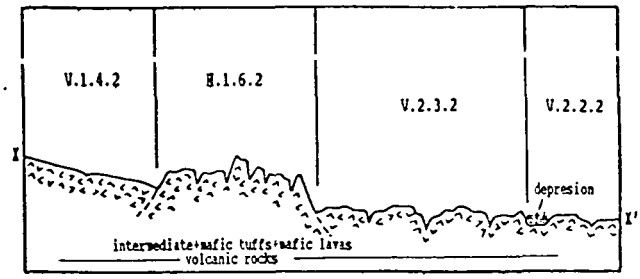
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION



1. **LAND UNIT**: Vab.2.3.2 **2. MAP SHEET**: 1010 **3. AREA**: 233 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected rolling volcanic plain, imtermediate and mafic tuffs and lavas, slopes 8-15%.
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 56 /8294-35 , 55 /8295-73 , 54 /8296-67
9. **RADAR** : Star-1/250/88/1010 4-5
10. **PARENT MATERIAL** 11. **ROCK OUTCROP**: 0 %
    - **a. Weathering** : Partial
    - **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
    - **c. Formation** : Qhv
12. **WATER** **a. Quality** : Fresh
    - **b. Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: None
15. **VEGETATION/LAND USE** : secondary forest, bush, upland crops, coffee (kopi), towns, villages
    - **Area used** : 60 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Common
    - **b. Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	55 %	yes
Associated 1	humitropepts	30 %	yes
Associated 2	hapludults	10 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/ES/1010/54/ /06 / ith/ / /87/HK/1010/54/ /28 /
uda/ / /87/UA/1010/54/ /08 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	medium	fine
	subsoil	fine	moderately fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	very low	high	very low
	subsoil	very low	very low	low
e. Total K2O:	topsoil	low	very high	low
	subsoil	high	high	low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	high	very high	medium
	subsoil	low	very low	low
h. CEC pH 7	topsoil	very low	very high	medium
	subsoil	very low	high	medium
i. Soil Reaction:	topsoil	very strong acid	very strong acid	excessive acid
	subsoil	excessive acid	moderately acid	excessive acid
j. Al Sat.	topsoil	very low	very low	high
	subsoil	very low	very low	very high
k. Al toxicity :		no	no	yes
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	120 cm
p. Organic Matter :		4.0	5.3	2.7
q. TEB :		2.0	6.1	1.1
r. Total observations:		2	1	3

---

19. ALTITUDE: **Maximum:** 1250 m **Minimum:** 200 m **Range:** 750 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%**:20 %, **9-25%**: 60 %, **25-55%**: 15 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** Medium

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** Low

28. LAND FACETS: -1- Interfluves, dystropepts, 55%
-2- Interfluves, humitropepts, 30%
-3- Interfluves, hapludults, 10%
-4- Valley bottoms, 5%

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Medium blocks

---

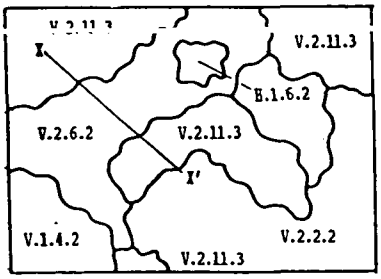
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 1 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 1 . **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

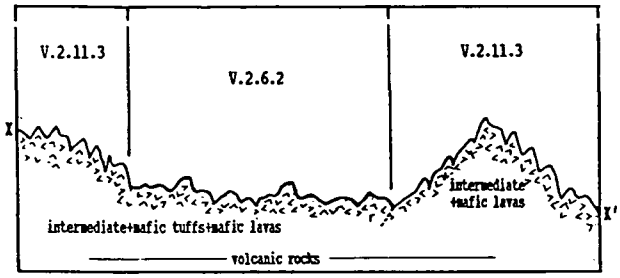
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION



1. **LAND UNIT**: Vab.2.6.2 **2. MAP SHEET**: 1010 **3. AREA**: 33 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected rolling volcanic plain with hillocks,in termediate and mafic tuffs and lavas, slopes 8-25%
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 53 /8216-157, 53 /8316-155
9. **RADAR** : Star-1/250/88/1010-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : High
    - b. **Lithology** : andesitic tuffs, andesitic lavas, basalt
    - c. **Formation** : Qhv
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : secondary forest, bush, shifting cultivation, upland crops, coffee (kopi), towns, villages
    - **Area used** : 40 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Common
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	60 %	yes
Associated 1	humitropepts	35 %	yes
Associated 2	hapludults	5 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/es/1010/54/ /6 / ith/ / /87/hk/1010/54/ /15 /
uda/ / /87/ua/1010/54/ /8 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	very low	very low	very low
	subsoil	very low	very low	low
e. Total K2O:	topsoil	low	high	low
	subsoil	high	high	low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	high	low	medium
	subsoil	low	very low	low
h. CEC pH 7	topsoil	very low	medium	medium
	subsoil	very low	low	medium
i. Soil Reaction:	topsoil	very strong acid	strong acid	excessive acid
	subsoil	excessive acid	strong acid	excessive acid
j. Al Sat.	topsoil	very low	very low	high
	subsoil	very low	very low	very high
k. Al toxicity :		no	no	yes
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	120 cm
p. Organic Matter :		4.0	4.6	2.7
q. TEB :		2.0	5.2	1.1
r. Total observations:		0	1	0

---

19. ALTITUDE: **Maximum:** 875 m **Minimum:** 725 m **Range:** 800 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** High
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**10 %, **9-25%:** 65 %, **25-55%:** 20 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** High

25. TERRAIN: Rolling 9-15%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Middle & upper slopes, dystropepts, 60%
-2- Tops and lower slopes, humitropepts, 35%
-3- Foot slopes, hapludults, 5%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Small blocks

---

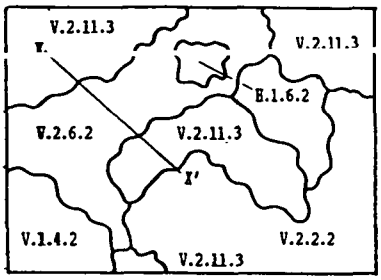
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

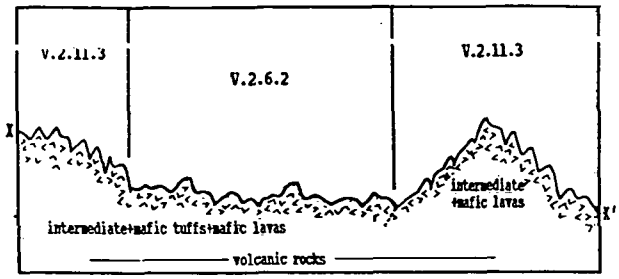
---

31. ADDITIONAL NOTES: Dystropepts and Hapludults are compiled from Vab.2.3.2

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Vab.2.11.3 **2. MAP SHEET**: 1010 **3. AREA**: 54 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected eroded volcanoes, intermediate and mafic tuffs and lavas,mountainous relief (slopes 30-75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 53 /8316-157, 53 /8316-153, 52 /8296-87

9. RADAR : Star-1/250/88/1010-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

a. Weathering : Partial

b. Lithology : andesitic tuffs, andesitic lavas, basalt

c. Formation : Qhv

12. WATER **a. Quality** : Fresh

b. Source : Rain, Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, secondary forest, bush

Area used : 0 %

16. ACCELERATED EROSION

a. Occurence : Extensive

b. Evidence : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	50 %	yes
Associated 1	dystropepts	40 %	yes
Associated 2	troporthents	10 %	no

---

32. REPRESENTATIVE PROFILES:

ith/ / /87/HK/1010/54/ /28 / ity/ / /87/ES/1010/54/ /12 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	fine	--
	subsoil	moderately fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	high	medium	--
	subsoil	very low	low	--
e. Total K2O:	topsoil	very high	medium	--
	subsoil	high	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	very high	low	--
	subsoil	very low	low	--
h. CEC pH 7	topsoil	very high	medium	--
	subsoil	high	low	--
i. Soil Reaction:	topsoil	very strong acid	very strong acid	--
	subsoil	moderately acid	very strong acid	--
j. Al Sat.	topsoil	very low	very low	--
	subsoil	very low	high	--
k. Al toxicity :		no	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	142 cm	--
p. Organic Matter :		5.3	3.9	0.0
q. TEB :		6.1	2.6	0.0
r. Total observations:		0	3	0

---

19. ALTITUDE: **Maximum:** 1600 m **Minimum:** 800 m **Range:** 1000 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**very steep **b. Variability:** High
c. Length: moderate **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**0 %, **9-25%:** 10 %, **25-55%:** 40 %, **>55%:** 50 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** High

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: moderate **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Lower slopes, humitropepts, 50%
-2- Upper & middle slopes, dystropepts, 40%
-3- Crest, troporthents, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

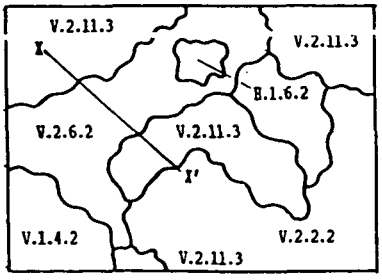
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 3 **23:** 3 **24:** 2 **28:** 3 **29:** 2

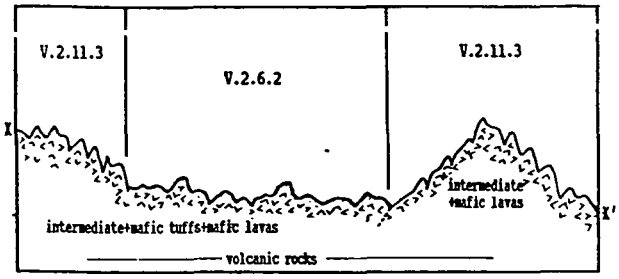
---

31. ADDITIONAL NOTES: Representative profile for Humitropepts is extrapolated from Vab.2.3.2

MAP IMAGE:



CROSS SECTION



1. **LAND UNIT**: Vb.2.11.3 **2. MAP SHEET**: 1010 **3. AREA**: 28 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected eroded volcanoes, intermediate and mafic lavas, mountainous relief(slopes 30-75%.)
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 53 /8316-155, 53 /8316-157
9. **RADAR** : Star-1/250/88/1010-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : High
    - b. **Lithology** : basalt, andesitic lavas,
    - c. **Formation** : Tov
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : secondary forest, moist primary lowland forest, bush, upland crops, coffee (kopi)
    - **Area used** : 30 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Extensive
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	humitropepts	30 %	yes
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/SR/1010/34/ /03 / ith/ / /87/ES/1010/54/ /01 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	high	medium	--
	subsoil	high	very low	--
e. Total K2O:	topsoil	high	medium	--
	subsoil	high	very high	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	low	--
	subsoil	low	very low	--
h. CEC pH 7	topsoil	low	high	--
	subsoil	low	low	--
i. Soil Reaction:	topsoil	moderately acid	strong acid	--
	subsoil	strong acid	strong acid	--
j. Al Sat.	topsoil	very low	low	--
	subsoil	very low	low	--
k. Al toxicity :		no	no	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		3.8	5.5	0.0
q. TEB :		7.7	1.2	0.0
r. Total observations:		0	2	0

---

19. ALTITUDE: **Maximum:** 1395 m **Minimum:** 875 m **Range:** 1000 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**very steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**0 %, **9-25%:** 15 %, **25-55%:** 60 %, **>55%:** 25 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Medium

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** High
d. Width: moderate **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Middle & upper slopes, dystropepts, 70%
-2- Lower slopes, humitropepts, 30%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

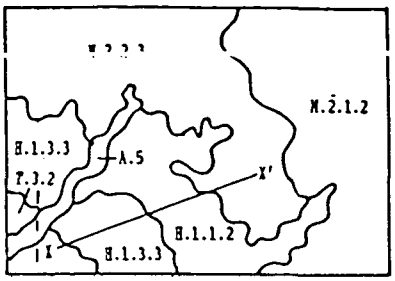
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 1 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 3 **23:** 3 **24:** 2 **28:** 3 **29:**

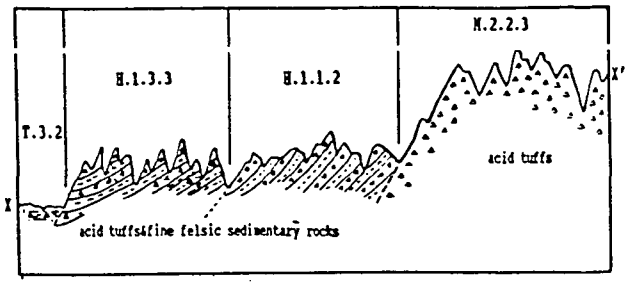
---

31. ADDITIONAL NOTES: Representative profile for Dystropepts extrapolated from Mb.2.2.3.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Hdf.1.1.2 **2. MAP SHEET**: 1010 **3. AREA**: 82 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected hills, acid tuffs and fine felsic sedimentary rocks, gentle slopes (0-15%).
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 4 /8282-103, 4 /8282-99 , 3A /8285-13
9. **RADAR** : Star-1/250/88/1010-1-2
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : High
    - b. **Lithology** : dacite, claystone, sandstone
    - c. **Formation** : Tnp
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : bush, shifting cultivation
    - **Area used** : 5 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Localised
    - b. **Evidance** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	hapludults	30 %	yes
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/ER/1010/31/ /33 / uda/ / /87/TB/1010/33/ /13 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately coarse	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Moderately well	Moderately well	--
d. Exch. K:	topsoil	medium	medium	--
	subsoil	very low	medium	--
e. Total K2O:	topsoil	medium	medium	--
	subsoil	low	medium	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	medium	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	very high	low	--
	subsoil	very low	low	--
h. CEC pH 7	topsoil	low	medium	--
	subsoil	high	medium	--
i. Soil Reaction:	topsoil	moderately acid	very strong acid	--
	subsoil	strong acid	very strong acid	--
j. Al Sat.	topsoil	very low	very low	--
	subsoil	high	medium	--
k. Al toxicity :		yes	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		110 cm	100 cm	--
p. Organic Matter :		1.8	2.2	0.0
q. TEB :		6.1	6.5	0.0
r. Total observations:		1	2	0

---

19. ALTITUDE: **Maximum:** 200 m **Minimum:** 5 m **Range:** 75 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included: non-linear and random 40-60% of area crested/peaked

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: low

22. SLOPE: **a. Steepness:**sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%**:20 %, **9-25%**: 80 %, **25-55%**: 0 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: hillocKy >16%, 0-50 m

26. CREST/RIDGES: **a. Shape:** **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Upper and lower slopes, dystropepts, 70%
-2- Middle slopes, hapludults, 30%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

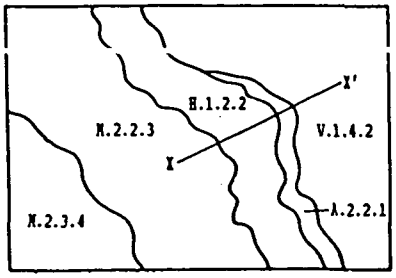
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

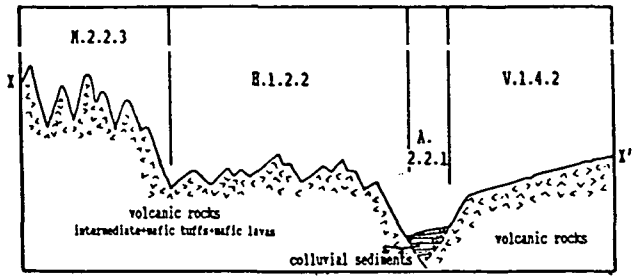
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Hab.1.2.2 **2. MAP SHEET**: 1010 **3. AREA**: 13 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected hills, intermediate and mafic tuffs and lavas, moderately steep slopes (16-30%).
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 55 /8295-71 , 52 /8296-83
9. **RADAR** : Star-1/250/88/1010-5-3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : High
    - b. **Lithology** : andesitic tuffs, andesitic lavas, basalt
    - c. **Formation** : Qhv
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : secondary forest, bush, shifting cultivation, upland crops, coffee (kopi), towns, villages
    - **Area used** : 70 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Common
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	55 %	yes
Associated 1	humitropepts	25 %	yes
Associated 2	hapludults	20 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/Hj/1010/52/ /26 / ith/ / /87/HK/1010/54/ /22 /
uda/ / /87/AF/1010/54/ /12 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	medium	medium	low
	subsoil	low	medium	very low
e. Total K2O:	topsoil	medium	low	very low
	subsoil	very low	medium	very low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	medium	medium
	subsoil	low	medium	low
h. CEC pH 7	topsoil	high	high	low
	subsoil	high	medium	low
i. Soil Reaction:	topsoil	very strong acid	strong acid	moderately acid
	subsoil	excessive acid	strong acid	very strong acid
j. Al Sat.	topsoil	very low	very low	very low
	subsoil	high	very low	very low
k. Al toxicity :		yes	no	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	--	--
p. Organic Matter :		2.0	5.4	3.0
q. TEB :		2.9	11.3	11.2
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 400 m **Minimum:** 100 m **Range:** 200 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included: non-linear and random < 40% of area crested/peaked

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%:**15 %, **9-25%:** 70 %, **25-55%:** 15 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Crest and upper slopes, dystropepts, 55%
-2- Middle slopes, hapludults, 20%
-3- Lower slopes, humitropepts, 25%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

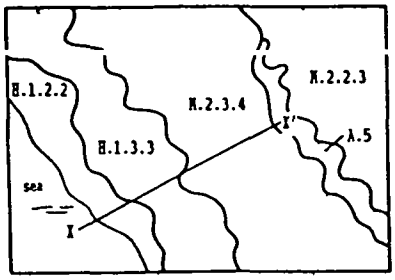
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

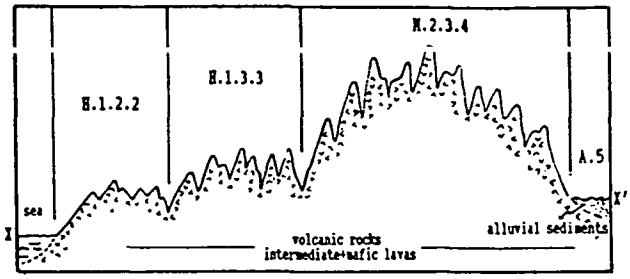
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hb.1.2.2 **2. MAP SHEET**: 1010 **3. AREA**: 154 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected hills, intermediate and mafic lavas, moderately steep slope (16-30%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8292-123, 3A /8285-09 , 4 /8282-101

9. RADAR : Star-1/250/88/1010-3-2

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : andesitic lavas
- **c. Formation** : Tov

12. WATER **a. Quality** : Fresh

- **b. Source** : Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

- **b. Inundation**: None

15. VEGETATION/LAND USE : secondary forest, bush, upland crops, coffee (kopi), coconut (kelapa), towns, villages

Area used : 50 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidance** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	hapludults	30 %	yes
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ /340-21 /71/DN/1010/34/ /57 / uda/ / /87/TB/1010/33/ /10 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	--	low	--
	subsoil	--	low	--
e. Total K2O:	topsoil	high	low	--
	subsoil	low	very low	--
f. Avail. P:	method		Bray I	
	topsoil	--	very low	--
	subsoil	--	very low	--
g. Total P:	topsoil	medium	low	--
	subsoil	low	very low	--
h. CEC pH 7	topsoil	--	medium	--
	subsoil	--	high	--
i. Soil Reaction:	topsoil	neutral	very strong acid	--
	subsoil	neutral	strong acid	--
j. Al Sat.	topsoil	--	medium	--
	subsoil	--	low	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		75 cm	142 cm	--
p. Organic Matter :		1.7	2.1	0.0
q. TEB :		0.0	7.8	0.0
r. Total observations:		1	0	0

---

19. ALTITUDE: **Maximum:** 350 m **Minimum:** 5 m **Range:** 200 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : 0-8%:15 %, **9-25%:** 70 %, **25-55%:** 10 %, **>55%:** 5 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Low
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Upper and lower slopes, dystropepts, 70%
-2- Middle slopes, hapludults, 30%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**Small blocks

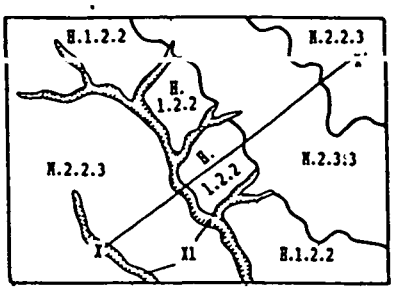
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 1 **23:** 2 **24:** 2 **28:** 2 **29:** 2

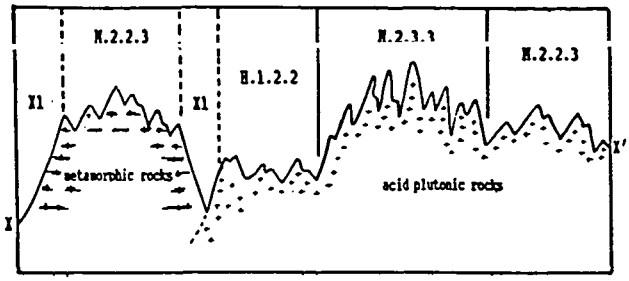
---

31. ADDITIONAL NOTES: Hapludults is compiled from Hb.1.3.3.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hg.1.2.2 **2. MAP SHEET**: 1010- **3. AREA**: 83 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected hills, acid plutonic rocks, moderately steep slopes (16-30%).

7. SATELLITE SCENES : 124/64/30/05/85.

8. AERIAL PHOTOGRAPHS : 1:100.000 3A /8285-11 , 55 /8295-75

9. RADAR : star-1/250/88/1010-2-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : granite, granodiorite, diorite
- **c. Formation** : Kgr

12. WATER
- **a. Quality** : Fresh
- **b. Source** : Deep wells

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, upland crops, coffee (kopi), towns, villages

Area used : 70 %

16. ACCELERATED EROSION
- **a. Occurence** : Common
- **b. Evidance** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	hapludults	25 %	yes
Associated 2	troporthents	5 %	no

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/ER/1010/24/ /42 / uda/ /84-2 /85/AH/1010/64/ /7a /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	medium	medium	--
	subsoil	medium	medium	--
e. Total K2O:	topsoil	medium	medium	--
	subsoil	medium	medium	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	very low	--
	subsoil	low	very low	--
h. CEC pH 7	topsoil	medium	low	--
	subsoil	medium	medium	--
i. Soil Reaction:	topsoil	very strong acid	very strong acid	--
	subsoil	very strong acid	very strong acid	--
j. Al Sat.	topsoil	very low	high	--
	subsoil	very low	very high	--
k. Al toxicity :		no	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	98 cm	--
p. Organic Matter :		2.1	1.6	0.0
q. TEB :		6.9	3.3	0.0
r. Total observations:		3	1	0

---

19. ALTITUDE: **Maximum:** 300 m **Minimum:** 75 m **Range:** 100 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: low

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%:**15 %, **9-25%:** 60 %, **25-55%:** 25 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Undulating **b. Length:**Moderately long **c. Variability:** Medium
d. Width: moderate **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Upper and lower slopes, dystropepts, 70%
-2- Middle slopes, hapludults, 25%
-3- Crest, troporthents, 5%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

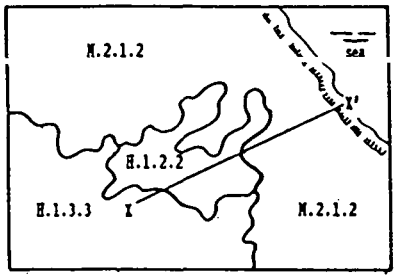
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 1 **23:** 2 **24:** 1 **28:** 2 **29:** 2

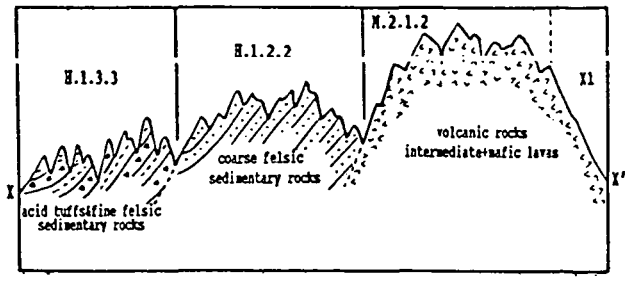
---

31. ADDITIONAL NOTES: Hapludults is compiled from Hg.1.3.3.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hq.1.2.2 **2. MAP SHEET**: 1010 **3. AREA**: 50 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected hills, coarse felsic sedimentary rocks, moderately steep slopes (16-30%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 54 /8296-79 , 56 /8294-43 , 54 /8296-103

9. RADAR : Star-1/250/88/1010-2

10. PARENT MATERIAL **11. ROCK OUTCROP**: %

- **a. Weathering** : Partial
- **b. Lithology** : sandstone
- **c. Formation** : Tmtp

12. WATER **a. Quality** : Fresh

b. Source : Deep wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : secondary forest, bush, alang-alang, shifting cultivation, upland crops, coffee (kopi), rubber (karet), towns, villages

Area used : 40 %

16. ACCELERATED EROSION

a. Occurence : Common

b. Evidance : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	90 %	yes
Associated 1	troporthents	10 %	no
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ /340-8 /71/DN/1010/62/ /16 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	--	--
	subsoil	moderately fine	--	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	--	--
c. Drainage:		Well drained	--	--
d. Exch. K:	topsoil	high	--	--
	subsoil	very low	--	--
e. Total K2O:	topsoil	very high	--	--
	subsoil	medium	--	--
f. Avail. P:	method	Bray I		
	topsoil	very low	--	--
	subsoil	very low	--	--
g. Total P:	topsoil	medium	--	--
	subsoil	low	--	--
h. CEC pH 7	topsoil	very low	--	--
	subsoil	very low	--	--
i. Soil Reaction:	topsoil	slightly acid	--	--
	subsoil	strong acid	--	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		110 cm	--	--
p. Organic Matter :		1.6	0.0	0.0
q. TEB :		11.8	0.0	0.0
r. Total observations:		1	0	0

---

19. ALTITUDE: **Maximum:** 450 m **Minimum:** 200 m **Range:** 300 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: low

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%:**15 %, **9-25%:** 65 %, **25-55%:** 20 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Slopes, dystropepts, 90%
-2- Crest, troporthents, 10%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

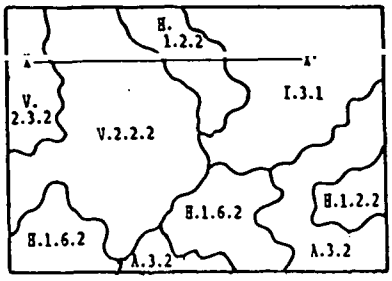
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 1 **28:** 3 **29:** 2

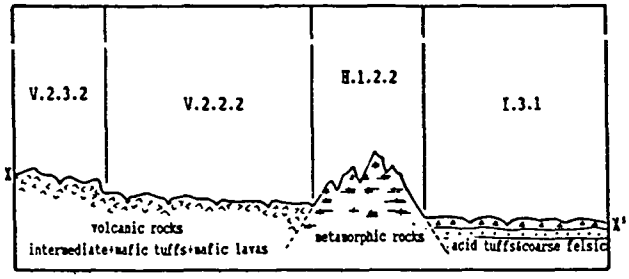
---

31. ADDITIONAL NOTES: No analysed profile for Troporthents

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Htn.1.2.2 **2. MAP SHEET**: 101C **3. AREA**: 44 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected hills, metamorphic rocks, moderately steep slopes (16-30%).
7. **SATELLITE SCENES** : 124/64/30/05/85, 123/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 56 /8294-39
9. **RADAR** : Star-1/250/88/1010-4-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : High
    - b. **Lithology** : gneiss, schists,
    - c. **Formation** : pTse
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : teak forest (jati), bush, shifting cultivation, upland crops, coffee (kopi), coconut (kelapa)., towns, villages
    - **Area used** : 60 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Common
    - b. **Evidance** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	kanhapludults	20 %	yes
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

ity/ /340-18 /71/DN/1010/62/ /41 / udh/ /340-11 /71/DN/1010/62/ /22 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	medium	--
	subsoil	fine	moderately fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total K2O:	topsoil	medium	high	--
	subsoil	low	high	--
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	medium	medium	--
	subsoil	low	low	--
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	slightly acid	moderately acid	--
	subsoil	moderately acid	moderately acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		1.6	1.6	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		2	1	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 75 m **Range:** 100 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**15 %, **9-25%:** 80 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Low
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Interfluves, dystropepts, 80%
-2- Interfluves, kanhapludults, 20%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

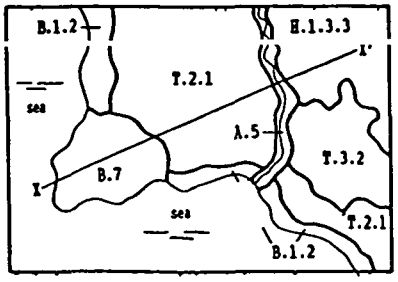
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 1 **23:** 2 **24:** 1 **28:** 2 **29:** 2

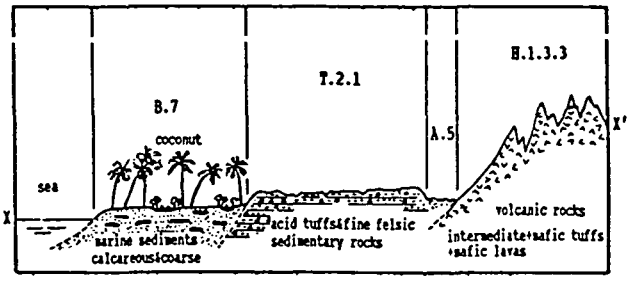
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hab.1.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 140 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected hills, intermediate and mafic tuffs and lavas, steep to very steep slopes (30-75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 5 /8292-25 , 53 /8316-15 , 23 /8282-137

9. RADAR : Star-1/250/88/1010-3-4

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
- **c. Formation** : Qhv

12. WATER **a. Quality** : Fresh

b. Source : Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : secondary forest, bush, shifting cultivation, upland crops, coffee (kopi), replanting of forestry areas, towns, villages

Area used : 50 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidance** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	humitropepts	20 %	yes
Associated 2	hapludults	10 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/HJ/1010/52/ /26 / ith/ / /87/HK/1010/54/ /22 /
uda/ / /87/AF/1010/54/ /12 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	medium	medium	low
	subsoil	low	medium	very low
e. Total K2O:	topsoil	medium	low	very low
	subsoil	very low	medium	very low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	medium	medium
	subsoil	low	medium	low
h. CEC pH 7	topsoil	high	high	low
	subsoil	high	medium	low
i. Soil Reaction:	topsoil	very strong acid	strong acid	moderately acid
	subsoil	excessive acid	strong acid	very strong acid
j. Al Sat.	topsoil	very low	very low	very low
	subsoil	high	very low	very low
k. Al toxicity :		yes	no	no
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	--	--
p. Organic Matter :		2.0	5.4	3.0
q. TEB :		2.9	11.3	11.2
r. Total observations:		1	1	1

---

19. ALTITUDE: **Maximum:** 525 m **Minimum:** 25 m **Range:** 200 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**very steep **b. Variability:** Medium
c. Length: long **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**5 %, **9-25%:** 10 %, **25-55%:** 50 %, **>55%:** 30 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Low
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- crest and upper slopes, dystropepts, 70%
-2- Lower slopes, humitropepts, 20%
-3- Middle slopes, hapludults, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

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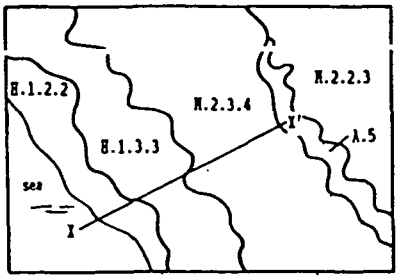
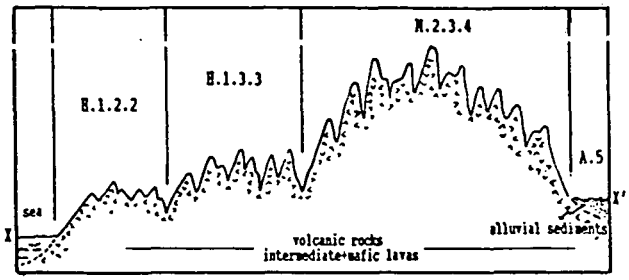
31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hb.1.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 166 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected hills , intermediate and mafic lavas, steep to very steep slopes (30-75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 4 /8282-101, 56 /8292-125, 52 /8296-87

9. RADAR : Star-1/250/88/1010-2

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : andesitic lavas
- **c. Formation** : Tov

12. WATER
- **a. Quality** : Fresh
- **b. Source** : Perennial River

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : secondary forest, bush, shifting cultivation, upland crops, coffee (kopi), towns, villages

Area used : 50 %

16. ACCELERATED EROSION
- **a. Occurence** : Common
- **b. Evidance** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	hapludults	20 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/US/1010/53/ /17 / uda/ / /87/TB/1010/33/ /10 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	moderately deep	very deep	--
c. Drainage:		Well drained	Moderately well	--
d. Exch. K:	topsoil	low	low	--
	subsoil	low	low	--
e. Total K2O:	topsoil	low	low	--
	subsoil	low	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	low	--
	subsoil	medium	very low	--
h. CEC pH 7	topsoil	medium	medium	--
	subsoil	low	high	--
i. Soil Reaction:	topsoil	very strong acid	very strong acid	--
	subsoil	very strong acid	strong acid	--
j. Al Sat.	topsoil	high	medium	--
	subsoil	very high	medium	--
k. Al toxicity :		yes	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		67 cm	142 cm	--
p. Organic Matter :		1.8	2.1	0.0
q. TEB :		2.6	7.8	0.0
r. Total observations:		4	2	0

---

19. ALTITUDE: **Maximum:** 325 m **Minimum:** 5 m **Range:** 200 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**very steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**5 %, **9-25%:** 10 %, **25-55%:** 65 %, **>55%:** 20 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Interfluves, dystropepts, 80%
-2- Interfluves, hapludults, 20%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

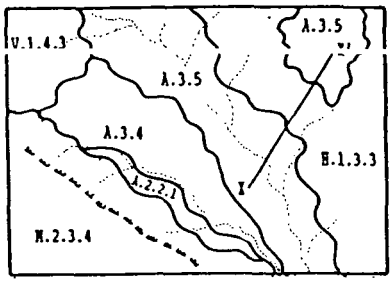
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 2 **18.c:** 1
18.d-q: 1 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

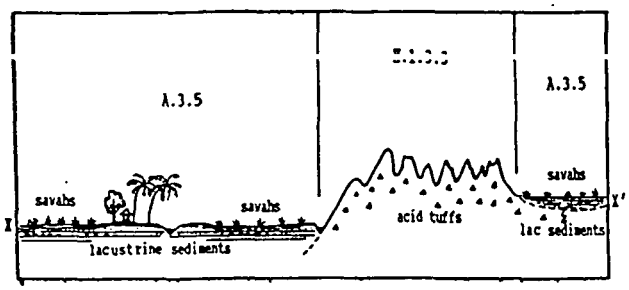
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hd.1.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 83 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected hills, acid tuffs, steep to very steep slopes 30-75%

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 53 /8316-147, 53 /8316-149

9. RADAR : Star-1/250/88/1010-4

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : Partial
- **b. Lithology** : dacite
- **c. Formation** : Qrv

12. WATER **a. Quality** : Fresh

- **b. Source** : Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

- **b. Inundation**: None

15. VEGETATION/LAND USE : secondary forest, bush, alang-alang, shifting cultivation, upland crops, coffee (kopi), replanting of forestry areas, towns, villages

Area used : 20 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidance** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	99 %	yes
Associated 1		%	
Associated 2			

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/HJ/1010/52/ /06 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	--	--
	subsoil	fine	--	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	--	--
c. Drainage:		Well drained	--	--
d. Exch. K:	topsoil	high	--	--
	subsoil	medium	--	--
e. Total K2O:	topsoil	medium	--	--
	subsoil	low	--	--
f. Avail. P:	method	Bray I		
	topsoil	very low	--	--
	subsoil	very low	--	--
g. Total P:	topsoil	very low	--	--
	subsoil	very low	--	--
h. CEC pH 7	topsoil	low	--	--
	subsoil	low	--	--
i. Soil Reaction:	topsoil	very strong acid	--	--
	subsoil	very strong acid	--	--
j. Al Sat.	topsoil	very low	--	--
	subsoil	high	--	--
k. Al toxicity :		yes	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		140 cm	--	--
p. Organic Matter :		1.8	0.0	0.0
q. TEB :		2.5	0.0	0.0
r. Total observations:		2	0	0

---

19. ALTITUDE: **Maximum:** 775 m **Minimum:** 250 m **Range:** 500 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**very steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**5 %, **9-25%:** 10 %, **25-55%:** 60 %, **>55%:** 25 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: wide **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Interfluves, dystropepts, 80%
-2- Interfluves, dystropepts, 20%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

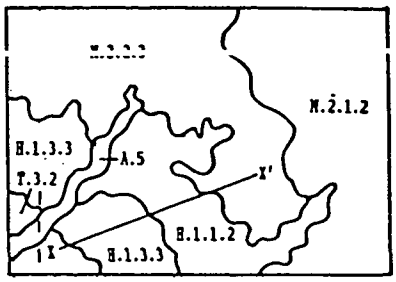
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

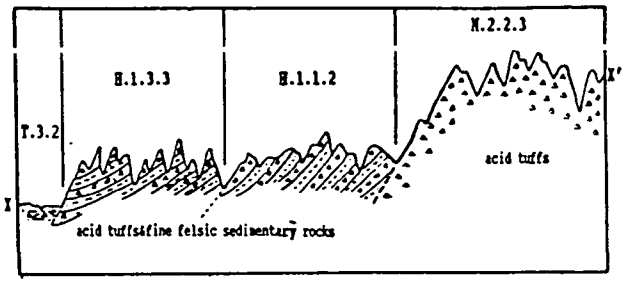
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Hdf.1.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 388 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected hills, acid tuffs and fine felsic sedimentary rocks,steep to very steep slopes(30-90%).
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 3A /8285-15 , 23 /8282-137
9. **RADAR** : star-1/250/88/1010-2,3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - a. **Weathering** : High
    - b. **Lithology** : dacite, claystone, sandstone
    - c. **Formation** : Tnp
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : secondary forest, moist primary lowland forest, bush, shifting cultivation, coffee (kopi)
    - **Area used** : 5 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Common
    - b. **Evidance** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	99 %	yes
Associated 1		%	
Associated 2			

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/AF/1010/51/ /32 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	--	--
	subsoil	fine	--	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	--	--
c. Drainage:		Well drained	--	--
d. Exch. K:	topsoil	medium	--	--
	subsoil	low	--	--
e. Total K2O:	topsoil	medium	--	--
	subsoil	low	--	--
f. Avail. P:	method	Bray I		
	topsoil	low	--	--
	subsoil	very low	--	--
g. Total P:	topsoil	low	--	--
	subsoil	very low	--	--
h. CEC pH 7	topsoil	low	--	--
	subsoil	low	--	--
i. Soil Reaction:	topsoil	very strong acid	--	--
	subsoil	very strong acid	--	--
j. Al Sat.	topsoil	low	--	--
	subsoil	high	--	--
k. Al toxicity :		yes	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	--	--
p. Organic Matter :		2.0	0.0	0.0
q. TEB :		2.4	0.0	0.0
r. Total observations:		3	0	0

---

19. ALTITUDE: **Maximum:** 325 m **Minimum:** 100 m **Range:** 150 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**very steep **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**0 %, **9-25%:** 10 %, **25-55%:** 60 %, **>55%:** 25 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** Medium

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Long **c. Variability:** High
d. Width: moderate **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Slopes, dystropepts, 99%
-2-
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

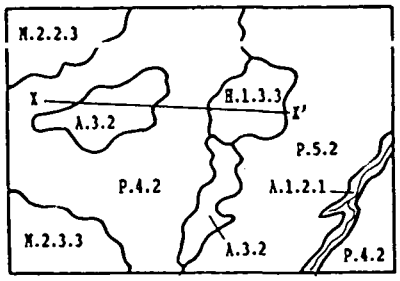
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 1 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 0

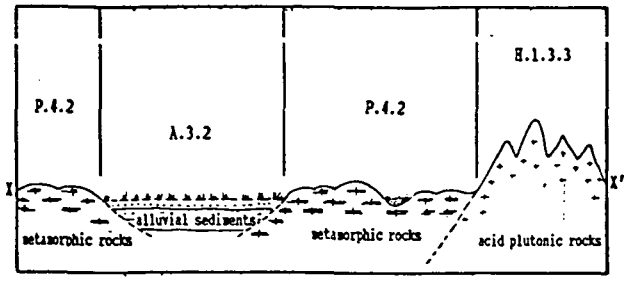
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hg.1.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 44 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: Ah **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected hills, acid plutonic rocks, steep to very steep slopes 30-70%.

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-35 , 56 /8294-37

9. RADAR : Star-1/250/88/1010-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : High
- **b. Lithology** : granite, granodiorite, diorite
- **c. Formation** : Kgr

12. WATER
- **a. Quality** : Fresh
- **b. Source** : Perennial River

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : secondary forest, bush, coffee (kopi), replanting of forestry areas, towns, villages

Area used : 60 %

16. ACCELERATED EROSION
- **a. Occurence** : Extensive
- **b. Evidance** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	hapludults	20 %	yes
Associated 2	troporthents	10 %	no

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/ER/1010/24/ /42 / uda/ /84-2 /85/AH/1010/64/ /7a /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	--
c. Drainage:		Well drainea	Well drained	--
d. Exch. K:	topsoil	medium	medium	--
	subsoil	medium	medium	--
e. Total K2O:	topsoil	medium	medium	--
	subsoil	medium	medium	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	very low	--
	subsoil	low	very low	--
h. CEC pH 7	topsoil	medium	low	--
	subsoil	medium	medium	--
i. Soil Reaction:	topsoil	very strong acid	very strong acid	--
	subsoil	very strong acid	very strong acid	--
j. Al Sat.	topsoil	very low	high	--
	subsoil	very low	very high	--
k. Al toxicity :		no	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	98 cm	--
p. Organic Matter :		2.1	1.6	0.0
q. TEB :		6.9	3.3	0.0
r. Total observations:		0	1	0

---

19. ALTITUDE: **Maximum:** 385 m **Minimum:** 100 m **Range:** 150 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**very steep **b. Variability:** Medium
c. Length: short **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**5 %, **9-25%:** 10 %, **25-55%:** 60 %, **>55%:** 25 %

24. RELIEF AMPLI.: **a. Amplitude:** high **b. Variability:** High

25. TERRAIN: Hilly >16%,51-300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Low
d. Width: wide **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Crest and upper slopes, dystropepts, 70%
-2- Middle slopes, hapludults, 20%
-3- Lowerslopes, troporthents, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

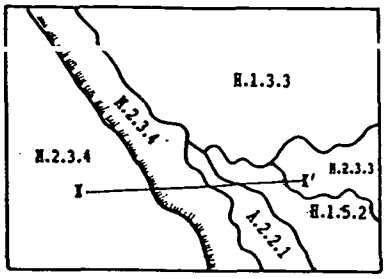
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

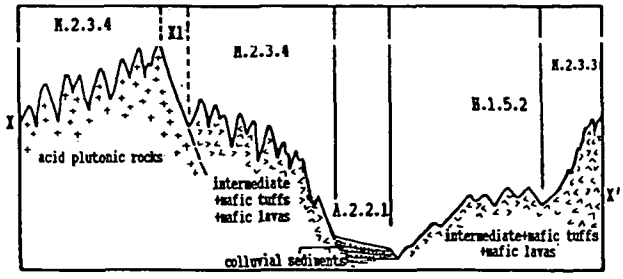
---

31. ADDITIONAL NOTES: Representative profile for Dystropepts is extrapolated - from Hg.1.2.2.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hab.1.5.2 **2. MAP SHEET**: 1010- **3. AREA**: 56 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Moderately dissected rolling land with hillocks, intermediate and mafic tuffs and lavas, slopes 8-25%.

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 005 /8292-027, 54 /8296-073

9. RADAR : Star-1/250/88/1010-3

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

a. Weathering : High

b. Lithology : andesitic tuffs, andesitic lavas, basalt

c. Formation : Qhv

12. WATER **a. Quality** : Fresh

b. Source : Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : secondary forest, bush, alang-alang, shifting cultivation, upland crops, coffee (kopi), towns, villages

Area used : 70 %

16. ACCELERATED EROSION

a. Occurence : Common

b. Evidance : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	humitropepts	20 %	yes
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/hj/1010/61/ /2 / ith/ / /87/es/1010/54/ /17 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	very high	low	--
	subsoil	medium	low	--
e. Total K2O:	topsoil	very high	very low	--
	subsoil	medium	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	very low	medium	--
	subsoil	very low	low	--
h. CEC pH 7	topsoil	medium	medium	--
	subsoil	medium	medium	--
i. Soil Reaction:	topsoil	moderately acid	excessive acid	--
	subsoil	moderately acid	excessive acid	--
j. Al Sat.	topsoil	very low	medium	--
	subsoil	very low	high	--
k. Al toxicity :		no	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	160 cm	--
p. Organic Matter :		2.9	2.7	0.0
q. TEB :		11.5	1.8	0.0
r. Total observations:		2	0	0

---

19. ALTITUDE: **Maximum:** 330 m **Minimum:** 15 m **Range:** 175 m

20. PLAN/PROFILE: **Dominant:** non-linear and random < 40% of area flat-topped
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: low

22. SLOPE: **a. Steepness:**sloping **b. Variability:** High
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**20 %, **9-25%:** 60 %, **25-55%:** 15 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** Medium

25. TERRAIN: hillocKy >16%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Undulating **b. Length:**Long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Hillocky area&upper sl, dystropepts, 40%
-2- Middle slopes, dystropepts, 40%
-3- Lower slopes, humitropepts, 20%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Medium blocks

---

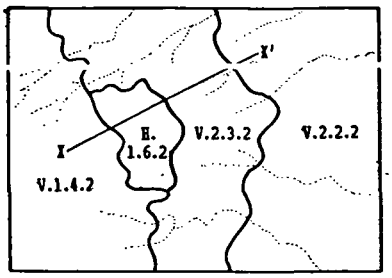
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

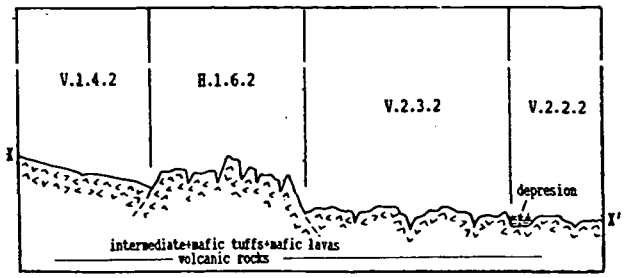
---

31. ADDITIONAL NOTES: Representative profile for Humitropepts is extrapolated from Hab.1.6.2

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hab.1.6.2 **2. MAP SHEET**: 1010- **3. AREA**: 90 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: Ah **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected hillocks in rolling pattern, intermediate and mafic tuffs and lavas, slopes 0-30%.

7. SATELLITE SCENES : 124/64/30/05/85, 123/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 052 /8296-087, 053 /8316-149

9. RADAR : Star-1/250/88/1010-4-3

10. PARENT MATERIAL **11. ROCK OUTCROP**: 0 %

- **a. Weathering** : Partial
- **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
- **c. Formation** : Qhv

12. WATER
- **a. Quality** : Fresh
- **b. Source** : Perennial River

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : secondary forest, bush, shifting cultivation, upland crops, rainfed wetland rice, coffee (kopi), coconut (kelapa), towns, villages

Area used : 30 %

16. ACCELERATED EROSION
- **a. Occurence** : Common
- **b. Evidance** : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	humitropepts	20 %	yes
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/HK/1010/54/ /34 / ith/ / /87/ES/1010/54/ /17 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	low	low	--
	subsoil	low	low	--
e. Total K2O:	topsoil	low	very low	--
	subsoil	very low	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	high	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	medium	--
	subsoil	very low	low	--
h. CEC pH 7	topsoil	low	medium	--
	subsoil	low	medium	--
i. Soil Reaction:	topsoil	very strong acid	excessive acid	--
	subsoil	very strong acid	excessive acid	--
j. Al Sat.	topsoil	high	medium	--
	subsoil	high	high	--
k. Al toxicity :		yes	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		85 cm	160 cm	--
p. Organic Matter :		2.5	2.7	0.0
q. TEB :		2.7	1.8	0.0
r. Total observations:		1	1	0

---

19. ALTITUDE: **Maximum:** 1000 m **Minimum:** 100 m **Range:** 650 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: low

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** High
c. Length: long **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**5 %, **9-25%:** 60 %, **25-55%:** 35 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** Medium

25. TERRAIN: hillocKy >16%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Upper & middle slopes, dystropepts, 80%
-2- Lower slopes, humitropepts, 20%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

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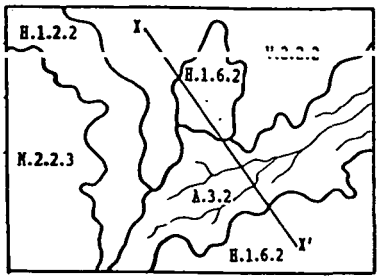
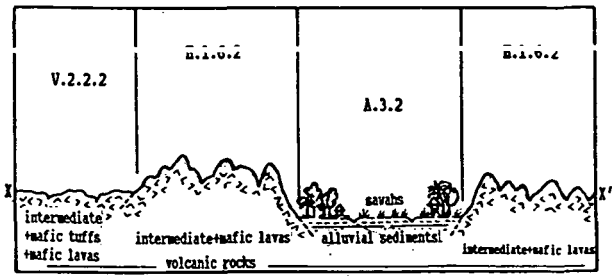
31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Hb.1.6.2 **2. MAP SHEET**: 1010 **3. AREA**: 63 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected hillocks in rolling pattern, intermediate and mafic lavas, slopes 8-30%.
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 056 /8294-045, 057 /8292-077
9. **RADAR** : star-1/250/88/1010-3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 0 %
    - **a. Weathering** : High
    - **b. Lithology** : andesitic lavas
    - **c. Formation** : Tov
12. **WATER** **a. Quality** : Fresh
    - **b. Source** : Perennial River, Deep wells
13. **FISHERIES** : None
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: None
15. **VEGETATION/LAND USE** : , bush, upland crops, irrigated wetland rice (irigasi), rainfed wetland rice, coffee (kopi), coconut (kelapa), reafforestation, towns, villages
    - **Area used** : 90 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Common
    - **b. Evidance** : Gulleys

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	humitropepts	25 %	yes
Associated 2	tropaquepts	5 %	no

---

32. **REPRESENTATIVE PROFILES**:

ity/ /340-44 /71/H /1010/62/ /42 / ith/ / /87/ES/1010/54/ /17 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	very low	low	--
	subsoil	very low	low	--
e. Total K2O:	topsoil	low	very low	--
	subsoil	low	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	medium	--
	subsoil	low	low	--
h. CEC pH 7	topsoil	very low	medium	--
	subsoil	very low	medium	--
i. Soil Reaction:	topsoil	moderately acid	excessive acid	--
	subsoil	moderately acid	excessive acid	--
j. Al Sat.	topsoil	--	medium	--
	subsoil	--	high	--
k. Al toxicity :		--	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	160 cm	--
p. Organic Matter :		1.6	3.7	0.0
q. TEB :		0.0	1.9	0.0
r. Total observations:		2	0	0

---

19. ALTITUDE: **Maximum:** 300 m **Minimum:** 100 m **Range:** 150 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**sloping **b. Variability:** Medium
c. Length: long **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**10 %, **9-25%:** 70 %, **25-55%:** 15 %

24. RELIEF AMPLI.: **a. Amplitude:** medium **b. Variability:** Medium

25. TERRAIN: hillocKy >16%, 0-50 m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Very long **c. Variability:** Medium
d. Width: very wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Upper & middle slopes, dystropepts, 70%
-2- Lower slopes, humitropepts, 25%
-3- Valley bottoms, tropaquepts, 5%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Small blocks

---

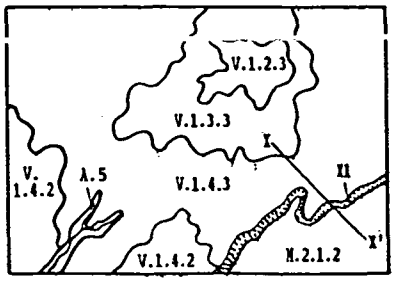
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

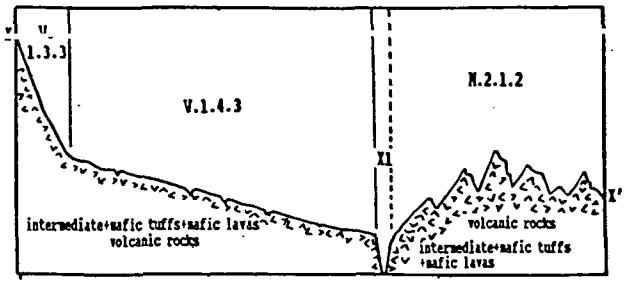
---

31. ADDITIONAL NOTES: Representative profile for Humitropepts is extrapolated from-
Hab.1.6.2.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mab.2.1.2 **2. MAP SHEET**: 1010 **3. AREA**: 42 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected mountains,intermediate and mafic tuffs and lavas, gentle to moderately steep slopes(<30%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 3A /8285-07 , 3A /8285-05 , 04 /8282-113

9. RADAR : star 1/250/88/1010-4

10. PARENT MATERIAL **11. ROCK OUTCROP**: 5 %

- **a. Weathering** : High
- **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
- **c. Formation** : Qhv , Tnp

12. WATER **a. Quality** : Fresh

- **b. Source** : Perennial River, Deep wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

- **b. Inundation**: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, coffee (kopi)

Area used : 15 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	65 %	yes
Associated 1	dystropepts	25 %	yes
Associated 2	hapludults	10 %	yes

---

32. REPRESENTATIVE PROFILES:

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	deep	very deep
c. Drainage:		Moderately well	Moderately well	Well drained
d. Exch. K:	topsoil	low	low	very low
	subsoil	low	medium	very low
e. Total K2O:	topsoil	low	low	very low
	subsoil	low	low	very low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	very low	medium
	subsoil	low	very low	medium
h. CEC pH 7	topsoil	low	medium	medium
	subsoil	low	high	medium
i. Soil Reaction:	topsoil	very strong acid	very strong acid	strong acid
	subsoil	very strong acid	very strong acid	strong acid
j. Al Sat.	topsoil	high	medium	very low
	subsoil	very high	high	high
k. Al toxicity :		yes	yes	yes
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		90 cm	94 cm	120 cm
p. Organic Matter :		3.0	2.3	2.1
q. TEB :		2.5	4.5	4.2
r. Total observations:		0	2	0

---

19. ALTITUDE: **Maximum:** 525 m **Minimum:** 100 m **Range:** 350 m

20. PLAN/PROFILE: **Dominant:** linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** High
c. Length: moderate **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**15 %, **9-25%:** 45 %, **25-55%:** 35 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** High

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Long **c. Variability:** High
d. Width: wide **e. Variability:** High

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- humitropepts, 65%
-2- dystropepts, 25%
-3- hapludults, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

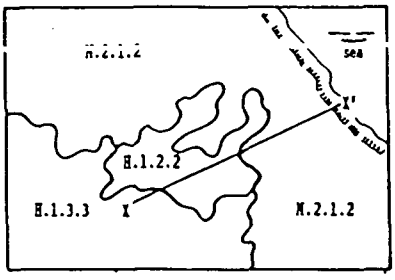
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 2 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 3
18.d-q: 2 **19:** 2 **22:** 3 **23:** 3 **24:** 3 **28:** 3 **29:** 2

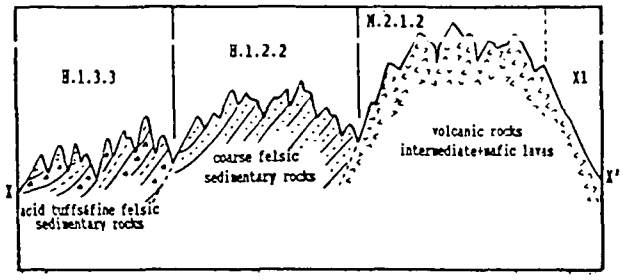
---

31. ADDITIONAL NOTES: Representative profiles for Humitropepts and Hapludults are extrapolated from orther L-U.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mb.2.1.2 **2. MAP SHEET**: 1010 **3. AREA**: 166 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected mountains, intermediate and mafic lavas, gentle to moderately steep slopes (<30%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 3A /8285-09 , 54 /8296-79 , 56 /8294-43

9. RADAR : Star-1/250/88/1010-2-3

10. PARENT MATERIAL **11. ROCK OUTCROP**: 5 %

a. Weathering : High

b. Lithology : andesitic lavas

c. Formation : Tov , Tnv

12. WATER **a. Quality** : Fresh

b. Source : Deep wells

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, coffee (kopi)

Area used : 20 %

16. ACCELERATED EROSION

a. Occurence : Common

b. Evidence : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	hapludults	30 %	yes
Associated 2		0 %	

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/SR/1010/33/ /22 / uda/ / /87/TB/1010/34/ /05 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	very high	very low	--
	subsoil	medium	very low	--
e. Total K2O:	topsoil	very high	very low	--
	subsoil	medium	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	medium	--
	subsoil	medium	medium	--
h. CEC pH 7	topsoil	medium	medium	--
	subsoil	high	medium	--
i. Soil Reaction:	topsoil	strong acid	strong acid	--
	subsoil	very strong acid	strong acid	--
j. Al Sat.	topsoil	medium	very low	--
	subsoil	high	high	--
k. Al toxicity :		yes	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		130 cm	120 cm	--
p. Organic Matter :		1.3	2.1	0.0
q. TEB :		9.8	4.2	0.0
r. Total observations:		2	0	0

---

19. ALTITUDE: **Maximum:** 500 m **Minimum:** 25 m **Range:** 250 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Moderate
c. Variability: medium

22. SLOPE: **a. Steepness:**mod. steep **b. Variability:** High
c. Length: moderate **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**15 %, **9-25%:** 45 %, **25-55%:** 35 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Medium

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Lower & upper slopes, dystropepts, 60%
-2- Middle slopes, hapludults, 30%
-3- Crest, dystropepts, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:** Small blocks

---

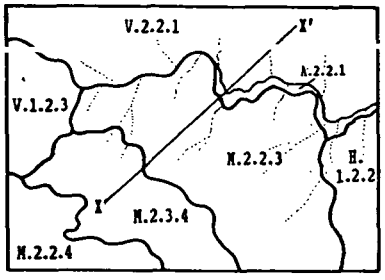
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

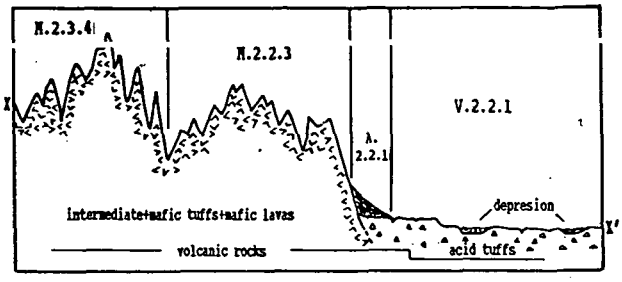
---

31. ADDITIONAL NOTES: Representative profile for Hapludults is extrapolated from orther L-U.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Mab.2.2.3 **2. MAP SHEET**: 1010 **3. AREA**: 297 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected mountains, intermediate and mafic tuffs and lavas, steep to very steep slopes(30-75%).
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 23 /8282-141, 52 /8296-83 , 53 /8316-149
9. **RADAR** : Star-1/250/88/1010-4-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 10 %
    - a. **Weathering** : High
    - b. **Lithology** : andesitic tuffs, andesitic lavas, basalt
    - c. **Formation** : Qhv
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Rain
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : moist primary lowland forest, bush, coffee (kopi)
    - **Area used** : 15 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Extensive
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	65 %	yes
Associated 1	dystropepts	25 %	yes
Associated 2	hapludults	10 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ith/ / /87/SR/1010/ / /31 / ity/ / /87/US/1010/53/ /19 /
uda/ / /87/tb/1010/34/ /05 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	very deep
c. Drainage:		Moderately well	Well drained	Well drained
d. Exch. K:	topsoil	low	medium	very low
	subsoil	low	low	very low
e. Total K2O:	topsoil	low	low	very low
	subsoil	low	low	very low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	low	medium
	subsoil	low	very low	medium
h. CEC pH 7	topsoil	low	low	medium
	subsoil	low	low	medium
i. Soil Reaction:	topsoil	very strong acid	--	strong acid
	subsoil	very strong acid	--	strong acid
j. Al Sat.	topsoil	high	--	very low
	subsoil	very high	--	high
k. Al toxicity :		yes	--	yes
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		90 cm	--	120 cm
p. Organic Matter :		3.0	2.2	2.1
q. TEB :		2.6	2.0	4.2
r. Total observations:		1	5	0

---

19. ALTITUDE: **Maximum:** 1240 m **Minimum:** 200 m **Range:** 650 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**very steep **b. Variability:** High
c. Length: long **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**5 %, **9-25%:** 10 %, **25-55%:** 40 %, **>55%:** 45 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** High

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Long **c. Variability:** Medium
d. Width: wide **e. Variability:** High

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Lower & middle slopes, humitropepts, 65%
-2- Crest and upper slopes, dystropepts, 25%
-3- Middle slopes, hapludults, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

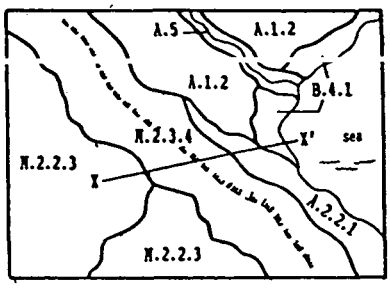
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 3 **24:** 2 **28:** 3 **29:** 2

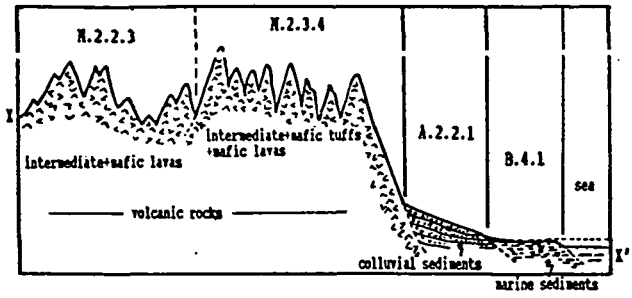
---

31. ADDITIONAL NOTES: Representative profile for Hapludults is extrapolated from other LU.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Mb.2.2.3 **2. MAP SHEET**: 1010 **3. AREA**: 366 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected mountains, intermediate and mafic lavas, steep to very steep slopes(30-75%).
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 4 /8282-111, 4 /8282-107, 57 /8293-77
9. **RADAR** : Star-1/250/88/1010-2-3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 10 %
    - a. **Weathering** : High
    - b. **Lithology** : andesitic lavas
    - c. **Formation** : Tov
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Rain, Perennial River
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : moist primary lowland forest, bush, coffee (kopi)
    - **Area used** : 5 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Common
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	55 %	yes
Associated 1	hapludults	35 %	yes
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/SR/1010/34/ /03 / uda/ / /87/TB/1010/34/ /05 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	high	very low	--
	subsoil	high	very low	--
e. Total K2O:	topsoil	high	very low	--
	subsoil	high	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	medium	--
	subsoil	low	medium	--
h. CEC pH 7	topsoil	low	medium	--
	subsoil	low	medium	--
i. Soil Reaction:	topsoil	moderately acid	strong acid	--
	subsoil	strong acid	strong acid	--
j. Al Sat.	topsoil	very low	very low	--
	subsoil	very low	high	--
k. Al toxicity :		no	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	120 cm	--
p. Organic Matter :		3.8	2.1	0.0
q. TEB :		7.7	4.2	0.0
r. Total observations:		4	1	0

---

19. ALTITUDE: **Maximum:** 700 m **Minimum:** 50 m **Range:** 400 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**very steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**0 %, **9-25%:** 10 %, **25-55%:** 40 %, **>55%:** 50 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Medium

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Long **c. Variability:** High
d. Width: very wide **e. Variability:** High

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Crest and upper slopes, dystropepts, 55%
-2- Middle & lower slopes, hapludults, 35%
-3- Rock out crop, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

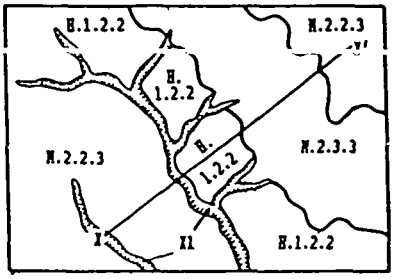
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 2 **19:** 1 **22:** 2 **23:** 3 **24:** 2 **28:** 3 **29:** 2

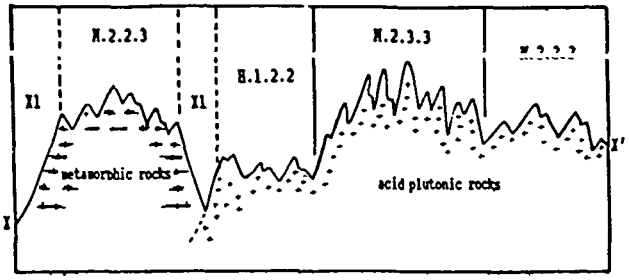
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mg.2.2.3 **2. MAP SHEET**: 1010 **3. AREA**: 80 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Strongly dissected mountains, acid plutonic rocks, steep to very steep slopes (30-75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 55 /8295-77 , 56 /8294-37

9. RADAR : Star-1/250/88/1010-5

10. PAREET MATERIAL **11. ROCK OUTCROP**: 10 %

- **a. Weathering** : Partial
- **b. Lithology** : granite, granodiorite, diorite
- **c. Formation** : Kgr

12. WATER **a. Quality** : Fresh

b. Source : Rain, Pèrennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush

Area used : 0 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	90 %	yes
Associated 1	troporthents	10 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

ity/ /84-3 /86/DK/1010/64/ /7a / eot/ / /87/AF/1010/52/ /17 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately coarse	moderately coarse	--
	subsoil	moderately fine	moderately coarse	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	shallow	--
c. Drainage:		Well drained	Somewhat excessively	--
d. Exch. K:	topsoil	low	low	--
	subsoil	low	very low	--
e. Total K2O:	topsoil	high	very high	--
	subsoil	very high	very high	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	low	--
	subsoil	very low	very low	--
h. CEC pH 7	topsoil	low	low	--
	subsoil	low	low	--
i. Soil Reaction:	topsoil	very strong acid	strong acid	--
	subsoil	very strong acid	strong acid	--
j. Al Sat.	topsoil	low	very low	--
	subsoil	medium	very low	--
k. Al toxicity :		yes	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		110 cm	30 cm	--
p. Organic Matter :		1.4	1.2	0.0
q. TEB :		1.7	9.3	0.0
r. Total observations:		1	0	0

---

19. ALTITUDE: **Maximum:** 1000 m **Minimum:** 200 m **Range:** 500 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**very steep **b. Variability:** High
c. Length: moderate **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%:**0 %, **9-25%:** 10 %, **25-55%:** 30 %, **>55%:** 55 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Medium

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Long **c. Variability:** High
d. Width: wide **e. Variability:** High

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Slopes, dystropepts, 90%
-2- Crest, troporthents, 10%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

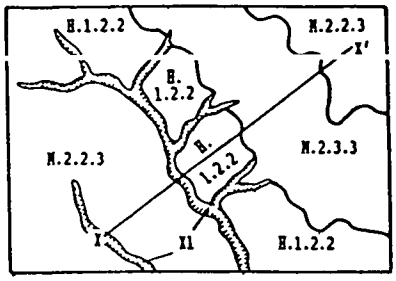
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 2 **23:** 3 **24:** 2 **28:** 3 **29:** 2

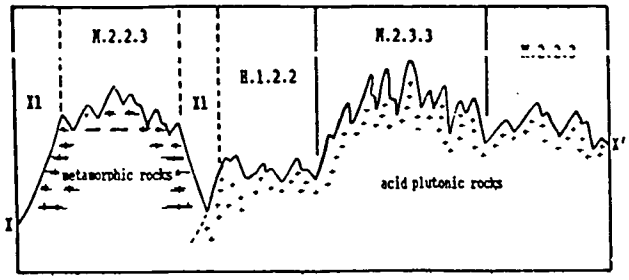
---

31. ADDITIONAL NOTES: Representative profile for Troporthents is extrapolated from orther L-U

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mtn.2.2.3 **2. MAP SHEET**: 1010 **3. AREA**: 41 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Strongly dissected mountains, metamorphic rock, steep to very steep slopes (30-75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 55 /8295-73 , 56 /8294-41

9. RADAR : Star-1/250/88/1010-4

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

- **a. Weathering** : Partial
- **b. Lithology** : gneiss, schists
- **c. Formation** : pTsb

12. WATER **a. Quality** : Fresh

b. Source : Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : , bush, coffee (kopi), coconut (kelapa), reafforestation, towns, villages

Area used : 10 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	hapludults	20 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

ity/ /340-43 /71/h /1010/62/ /32 / uda/ /340-4 /71/dr/1010/63/ /6 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	mod. shallow	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	very low	medium	--
	subsoil	very low	low	--
e. Total K2O:	topsoil	low	medium	--
	subsoil	low	low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	medium	--
	subsoil	very low	low	--
h. CEC pH 7	topsoil	very low	very low	--
	subsoil	very low	very low	--
i. Soil Reaction:	topsoil	strong acid	strong acid	--
	subsoil	very strong acid	very strong acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		35 cm	--	--
p. Organic Matter :		2.6	2.0	0.0
q. TEB :		0.0	2.5	0.0
r. Total observations:		3	2	0

---

19. ALTITUDE: **Maximum:** 580 m **Minimum:** 125 m **Range:** 300 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**very steep **b. Variability:** High
c. Length: long **d. Variability:** High
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**0 %, **9-25%:** 15 %, **25-55%:** 40 %, **>55%:** 45 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** High

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Long **c. Variability:** High
d. Width: wide **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: **-1-** Slopes and crests, dystropepts, 80%
-2- Slopes, kanhapludults, 20%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

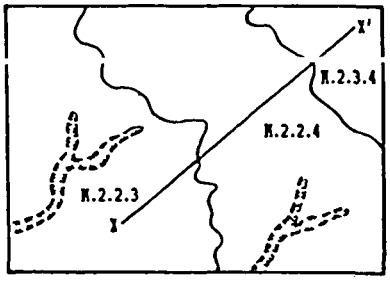
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 3 **24:** 2 **28:** 3 **29:** 2

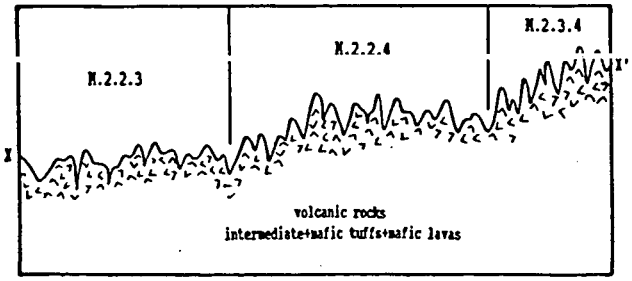
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mab.2.2.4 **2. MAP SHEET**: 1010 **3. AREA**: 78 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Extremely dissected mountains, intermediate and mafic tuffs and lavas, steep to very steep slopes (30-75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 4 /8282-115,

9. RADAR : Star-1/250/88/1010-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

- **a. Weathering** : Partial
- **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
- **c. Formation** : Qhv

12. WATER **a. Quality** : Fresh

b. Source : Rain, Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush

Area used : 0 %

16. ACCELERATED EROSION

- **a. Occurence** : Common
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	70 %	yes
Associated 1	dystropepts	20 %	yes
Associated 2	troporthents	10 %	no

---

32. REPRESENTATIVE PROFILES:

ith/ / /87/Hj/1010/53/ /37 / ity/ / /87/US/1010/53/ /19 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	low	medium	--
	subsoil	low	low	--
e. Total K2O:	topsoil	low	low	--
	subsoil	very low	low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	low	--
	subsoil	medium	very low	--
h. CEC pH 7	topsoil	high	low	--
	subsoil	high	low	--
i. Soil Reaction:	topsoil	very strong acid	very strong acid	--
	subsoil	very strong acid	very strong acid	--
j. Al Sat.	topsoil	medium	medium	--
	subsoil	very high	high	--
k. Al toxicity :		yes	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		110 cm	120 cm	120 cm
p. Organic Matter :		3.7	2.2	0.0
q. TEB :		3.4	2.0	0.0
r. Total observations:		1	0	0

---

19. ALTITUDE: **Maximum:** 1100 m **Minimum:** 500 m **Range:** 700 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** High
c. Variability: low

22. SLOPE: **a. Steepness:**very steep **b. Variability:** High
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%**:0 %, **9-25%**: 10 %, **25-55%**: 20 %, **>55%**: 70 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Medium

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: **-1-** Slopes, humitropepts, 70%
-2- Slopes, dystropepts, 20%
-3- Crest, troporthents, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

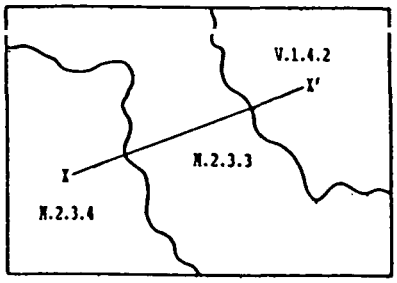
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 2 **23:** 3 **24:** 2 **28:** 3 **29:** 2

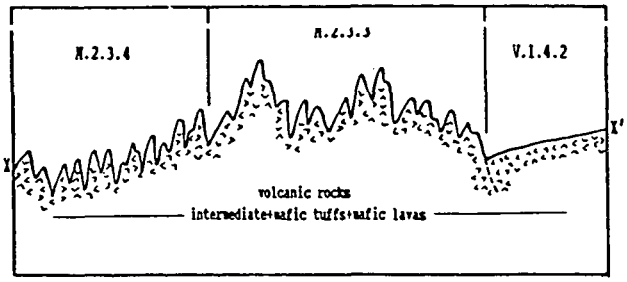
---

31. ADDITIONAL NOTES: Representative profile for Dystropepts is extrapolated from orther L-U

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mab.2.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 141 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Strongly dissected mountains, intermediate and tuffs and lavas, abrupt slopes (>75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 53 /8316-47 , 54 /8296-71

9. RADAR : Star-1/250/88/1010 -4

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

- **a. Weathering** : Partial
- **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
- **c. Formation** : Qhv

12. WATER **a. Quality** : Fresh

- **b. Source** : Rain, Perennial River

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None

- **b. Inundation**: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, coffee (kopi)

- **Area used** : 5 %

16. ACCELERATED EROSION

- **a. Occurence** : Extensive
- **b. Evidence** : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	65 %	yes
Associated 1	dystropepts	25 %	yes
Associated 2	hapludults	10 %	yes

---

32. REPRESENTATIVE PROFILES:

ith/ / /87/hj/1010/52/ /24 / ity/ / /87/us/1010/53/ /19 /
uda/ / /87/hj/1010/52/ /11 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	low	medium	low
	subsoil	very low	low	very low
e. Total K2O:	topsoil	low	low	low
	subsoil	very low	low	very low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	low	medium
	subsoil	low	very low	medium
h. CEC pH 7	topsoil	high	low	low
	subsoil	high	low	low
i. Soil Reaction:	topsoil	excessive acid	very strong acid	moderately acid
	subsoil	very strong acid	very strong acid	strong acid
j. Al Sat.	topsoil	high	medium	very low
	subsoil	high	high	very low
k. Al toxicity :		yes	yes	no
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	120 cm	--
p. Organic Matter :		3.5	2.2	21.3
q. TEB :		1.0	2.0	11.2
r. Total observations:		1	0	0

---

19. ALTITUDE: **Maximum:** 1250 m **Minimum:** 300 m **Range:** 500 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**extremely steep **b. Variability:** High
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** . %
Interfluves : **0-8%**:0 %, **9-25%**: 10 %, **25-55%**: 20 %, **>55%**: 70 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Low

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: wide **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Slopes, humitropepts, 70%
-2- Crest and slopes, dystropepts, 20%
-3- Slopes, hapludults, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

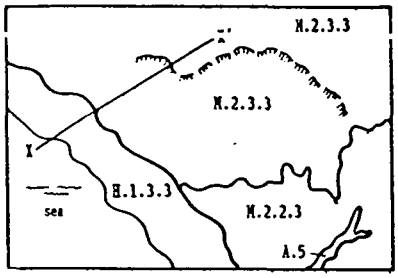
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

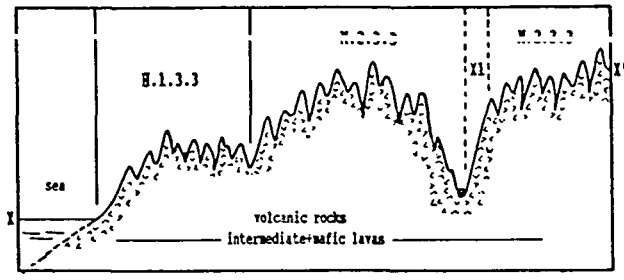
---

31. ADDITIONAL NOTES: Representative profiles Dystropepts and Hapludults are extrapolated from other L.U.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mb.2.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 71 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected mountains, intermediate and mafic lavas, abrupt slopes (>75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 55 /8295-75 , 56 /8292-125, 57 /8292-73

9. RADAR : Star-1/250/88/1010 -3

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

- **a. Weathering** : Partial
- **b. Lithology** : andesitic lavas
- **c. Formation** : Tov

12. WATER **a. Quality** : Fresh
- **b. Source** : Rain

13. FISHERIES : None

14. RIVERS **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush
- **Area used** : 0 %

16. ACCELERATED EROSION
- **a. Occurence** : Extensive
- **b. Evidence** : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	60 %	yes
Associated 1	hapludults	30 %	yes
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/sr/1010/34/ /3 / uda/ / /87/hj/1010/52/ /11 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	high	low	--
	subsoil	high	very low	--
e. Total K2O:	topsoil	high	low	--
	subsoil	high	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	medium	--
	subsoil	low	medium	--
h. CEC pH 7	topsoil	low	low	--
	subsoil	low	low	--
i. Soil Reaction:	topsoil	moderately acid	moderately acid	--
	subsoil	moderately acid	moderately acid	--
j. Al Sat.	topsoil	very low	very low	--
	subsoil	very low	very low	--
k. Al toxicity :		no	no	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		3.8	2.3	0.0
q. TEB :		7.7	11.7	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 750 m **Minimum:** 250 m **Range:** 350 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**extremely steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**0 %, **9-25%**: 10 %, **25-55%**: 20 %, **>55%**: 70 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Low

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** High
d. Width: moderate **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Crest & upper slopes, dystropepts, 60%
-2- Lower & middle slopes, hapludults, 30%
-3- Rock out crop, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

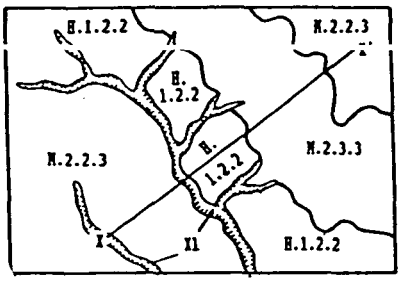
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 3 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

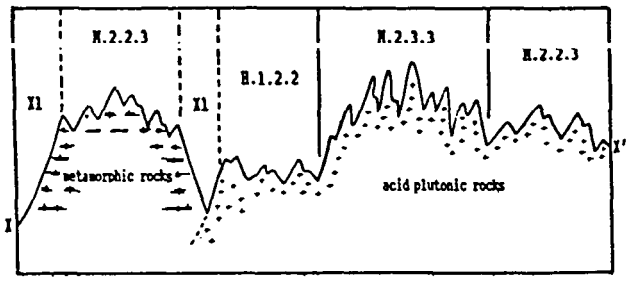
---

31. ADDITIONAL NOTES: All representative profiles are extrapolated from other L.U.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mg.2.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 161 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Strongly dissected mountains, acid plutonic rocks, abrupt s lopes(>75%).

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 04 /8282-109, 55 /8295-77

9. RADAR : Star-1/250/88/1010 3-5

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

- **a. Weathering** : Partial
- **b. Lithology** : granite, granodiorite, diorite
- **c. Formation** : Tmgr , Kgr

12. WATER
- **a. Quality** : None
- **b. Source** : Rain

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, coffee (kopi)

Area used : 0 %

16. ACCELERATED EROSION
- **a. Occurence** : Extensive
- **b. Evidence** : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	troporthents	10 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/hj/1010/52/ /42 / eot/ / /87/af/1010/52/ /17 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately coarse	--
	subsoil	fine	moderately coarse	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	shallow	--
c. Drainage:		Well drained	Somewhat excessively	--
d. Exch. K:	topsoil	medium	low	--
	subsoil	medium	very low	--
e. Total K2O:	topsoil	very high	very high	--
	subsoil	medium	very high	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	low	--
	subsoil	low	very low	--
h. CEC pH 7	topsoil	medium	low	--
	subsoil	medium	low	--
i. Soil Reaction:	topsoil	very strong acid	strong acid	--
	subsoil	very strong acid	strong acid	--
j. Al Sat.	topsoil	low	very low	--
	subsoil	high	very low	--
k. Al toxicity :		yes	no	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		130 cm	30 cm	--
p. Organic Matter :		1.4	1.2	0.0
q. TEB :		3.8	9.3	0.0
r. Total observations:		2	0	0

---

19. ALTITUDE: **Maximum:** 1175 m **Minimum:** 500 m **Range:** 700 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: low

22. SLOPE: **a. Steepness:**extremely steep **b. Variability:** Medium
c. Length: long **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%**:0 %, **9-25%**: 5 %, **25-55%**: 50 %, **>55%**: 45 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Low

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Level **b. Length:**Long **c. Variability:** Medium
d. Width: moderate **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Medium

28. LAND FACETS: **-1-** Slopes, dystropepts, 80%
-2- Crest, troporthents, 10%
-3- Rock out crop, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

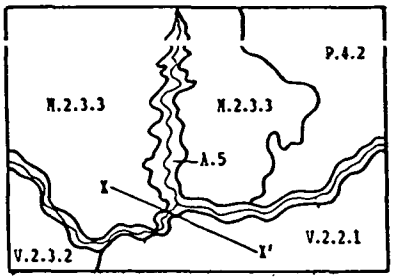
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 1 **23:** 2 **24:** 2 **28:** 3 **29:** 2

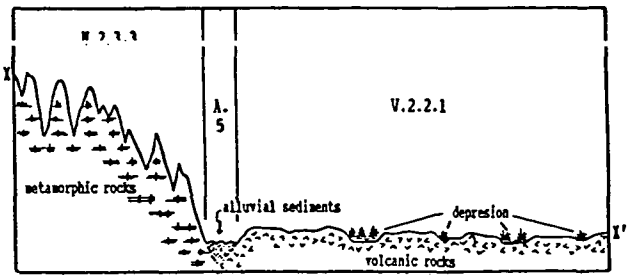
---

31. ADDITIONAL NOTES: Represesntative profile for Troporthents is extrapolated from other L.U.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mtn.2.3.3 **2. MAP SHEET**: 1010 **3. AREA**: 86 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date**: 20/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Strongly dissected mountains, metamorphic rocks, abrupt slopes (>75%)

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 56 /8294-39 , 56 /8294-41

9. RADAR : Star-1/250/88/1010-5-4

10. PARENT MATERIAL **11. ROCK OUTCROP**: 10 %

- **a. Weathering** : High
- **b. Lithology** : gneiss, schists
- **c. Formation** : pTse

12. WATER
- **a. Quality** : Not known
- **b. Source** : Rain, Perennial River

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : secondary forest, bush, shifting cultivation, coffee (kopi)

Area used : 10 %

16. ACCELERATED EROSION
- **a. Occurence** : Extensive
- **b. Evidence** : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	90 %	yes
Associated 1	kanhapludults	10 %	yes
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ /340-43 /71/H /1010/62/ /32 / udh/ /340-4 /71/DN/1010/63/ /06 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	shallow	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	very low	medium	--
	subsoil	very low	low	--
e. Total K2O:	topsoil	low	medium	--
	subsoil	low	low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	medium	--
	subsoil	very low	low	--
h. CEC pH 7	topsoil	very low	very low	--
	subsoil	very low	very low	--
i. Soil Reaction:	topsoil	strong acid	strong acid	--
	subsoil	very strong acid	very strong acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		35 cm	--	--
p. Organic Matter :		2.6	2.0	0.0
q. TEB :		0.0	2.5	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 625 m **Minimum:** 200 m **Range:** 400 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** Mod. high
c. Variability: medium

22. SLOPE: **a. Steepness:**extremely steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%**:0 %, **9-25%**: 10 %, **25-55%**: 25 %, **>55%**: 65 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Low

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Medium
d. Width: moderate **e. Variability:** Low

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Slopes and crest, dystropepts, 90%
-2- Slopes, kanhapludults, 10%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

---

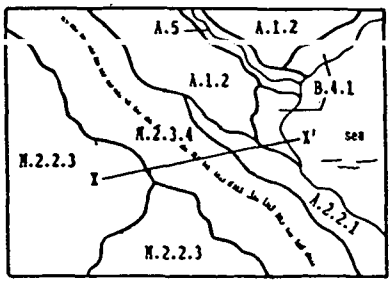
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 1 **22:** 3 **23:** 3 **24:** 2 **28:** 3 **29:** 2

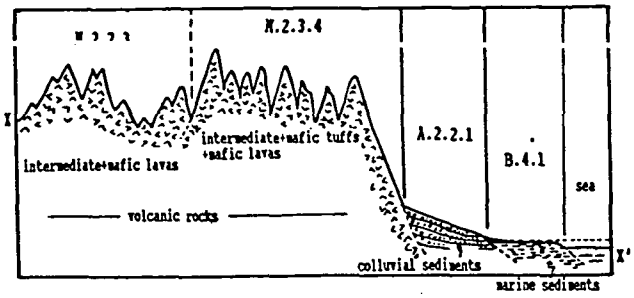
---

31. ADDITIONAL NOTES: All representative profiles are extrapolated from orther L-U.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Mab.2.3.4 **2. MAP SHEET**: 1010 **3. AREA**: 408 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Extremely dissected mountains, intermediate and mafic tuffs and lavas, abrupt slopes (>75%).
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 23 /8282-143, 04 /8282-115, 53 /8316-147
9. **RADAR** : Star-1/250/88/1010-4-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 10 %
    - **a. Weathering** : Partial
    - **b. Lithology** : andesitic tuffs, andesitic lavas, basalt
    - **c. Formation** : Qhv
12. **WATER** **a. Quality** : Fresh
    - **b. Source** : Rain
13. **FISHERIES** : None
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: None
15. **VEGETATION/LAND USE** : moist primary lowland forest, bush
    - **Area used** : 0 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Extensive
    - **b. Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	humitropepts	65 %	yes
Associated 1	dystropepts	25 %	yes
Associated 2	kanhapludults	10 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ith/ / /87/AF/1010/53/ /58 / ity/ / /87/US/1010/53/ /19 /
udh/ / /87/AF/1010/53/ /50 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	low	medium	low
	subsoil	very low	low	very low
e. Total K2O:	topsoil	very low	low	very low
	subsoil	very low	low	very low
f. Avail. P:	method	Bray I	Bray I	Bray I
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	low	low
	subsoil	very low	very low	low
h. CEC pH 7	topsoil	high	low	low
	subsoil	medium	low	low
i. Soil Reaction:	topsoil	excessive acid	very strong acid	very strong acid
	subsoil	very strong acid	very strong acid	strong acid
j. Al Sat.	topsoil	high	medium	medium
	subsoil	low	high	high
k. Al toxicity :		yes	yes	yes
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	120 cm	120 cm
p. Organic Matter :		8.2	2.2	3.3
q. TEB :		0.8	2.0	3.0
r. Total observations:		3	0	1

---

19. ALTITUDE: **Maximum:** 1350 m **Minimum:** 200 m **Range:** 600 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** High
c. Variability: high

22. SLOPE: **a. Steepness:**extremely steep **b. Variability:** Low
c. Length: moderate **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**5 %, **9-25%:** 10 %, **25-55%:** 20 %, **>55%:** 65 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Low

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** High
d. Width: moderate **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Lower & middle slopes, humitropepts, 65%
-2- Crest & upper slopes, dystropepts, 25%
-3- Middle slopes, kanhapludults, 10%
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

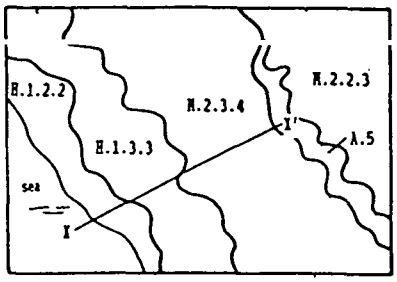
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

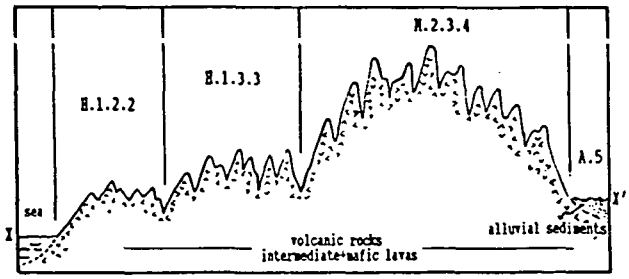
---

31. ADDITIONAL NOTES: Representative profile for Dystropepts is extrapolated from Mab.2.2.3.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Mb.2.3.4 **2. MAP SHEET**: 1010 **3. AREA**: 248 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Extremely dissected mountains,intermediate mafic lavas, abrupt slopes (>75%)
7. **SATELLITE SCENES** : 124/64/30/05/85
8. **AERIAL PHOTOGRAPHS** : 1:100.000 57 /8292-75 , 04 /8282-107
9. **RADAR** : Star-1/250/88/1010-3-2
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 15 %
    - a. **Weathering** : Partial
    - b. **Lithology** : andesitic lavas
    - c. **Formation** : Tov
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Rain
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : moist primary lowland forest, bush
    - **Area used** : 0 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Extensive
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	70 %	yes
Associated 1	hapludults	30 %	yes
Associated 2			

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /87/sr/1010/34/ /3 / uda/ / /87/hj/1010/52/ /11 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	high	low	--
	subsoil	high	very low	--
e. Total K2O:	topsoil	high	low	--
	subsoil	high	very low	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	medium	--
	subsoil	low	medium	--
h. CEC pH 7	topsoil	low	low	--
	subsoil	low	low	--
i. Soil Reaction:	topsoil	moderately acid	moderately acid	--
	subsoil	strong acid	strong acid	--
j. Al Sat.	topsoil	very low	very low	--
	subsoil	very low	very low	--
k. Al toxicity :		no	no	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		3.8	2.3	0.0
q. TEB :		7.7	11.2	0.0
r. Total observations:		0	2	0

---

19. ALTITUDE: **Maximum:** 1105 m **Minimum:** 150 m **Range:** 600 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** High
c. Variability: medium

22. SLOPE: **a. Steepness:**extremely steep **b. Variability:** Low
c. Length: moderate **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**0 %, **9-25%:** 5 %, **25-55%:** 20 %, **>55%:** 75 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Low

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** High
d. Width: moderate **e. Variability:** Medium

27. VALLEY FLOOR: **a. Width:** **b. Variability:**

28. LAND FACETS: -1- Crest upp.& low. slp., dystropepts, 70%
-2- Middle slopes, hapludults, 30%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

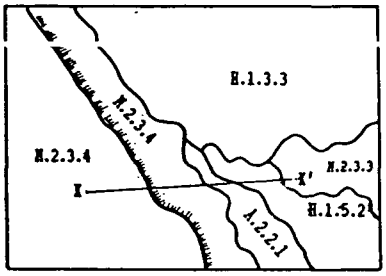
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 2 **18.a:** 2 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

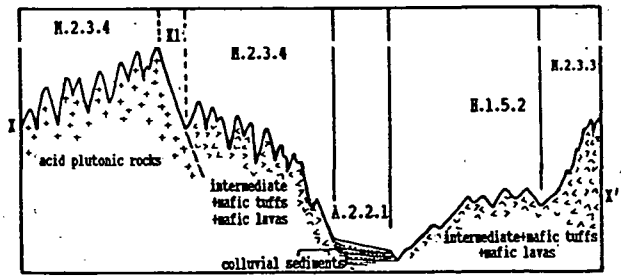
---

31. ADDITIONAL NOTES: Representative profile for Dystropepts is extrapolated from Mb.233

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mg.2.3.4 **2. MAP SHEET**: 1010 **3. AREA**: 73 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: AH **edit date:** 20/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Extremely dissected mountains, acid plutonic rocks, abrupt slopes (>75%)

7. SATELLITE SCENES : 124/64/30/05/85

8. AERIAL PHOTOGRAPHS : 1:100.000 04 /8282-q09, 04 /8282-111

9. RADAR : Star-1/250/88/1010-4-3

10. PARENT MATERIAL **11. ROCK OUTCROP**: 25 %

- **a. Weathering** : Partial
- **b. Lithology** : granite
- **c. Formation** : Tmgr

12. WATER
- **a. Quality** : Fresh
- **b. Source** : Rain

13. FISHERIES : None

14. RIVERS
- **a. Floodrisk** : None
- **b. Inundation**: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush

Area used : 0 %

16. ACCELERATED EROSION
- **a. Occurence** : Extensive
- **b. Evidence** : Various

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	80 %	yes
Associated 1	troporthents	20 %	yes
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/AF/1010/52/ /16 / eot/ / /87/AF/1010/52/ /17 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately coarse	--
	subsoil	fine	moderately coarse	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	shallow	--
c. Drainage:		Well drained	Somewhat excessively	--
d. Exch. K:	topsoil	high	low	--
	subsoil	medium	very low	--
e. Total K2O:	topsoil	high	very high	--
	subsoil	medium	very high	--
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	low	--
	subsoil	very low	very low	--
h. CEC pH 7	topsoil	low	low	--
	subsoil	low	low	--
i. Soil Reaction:	topsoil	strong acid	strong acid	--
	subsoil	very strong acid	strong acid	--
j. Al Sat.	topsoil	very low	very low	--
	subsoil	medium	very low	--
k. Al toxicity :		yes	no	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		100 cm	30 cm	--
p. Organic Matter :		1.7	1.2	0.0
q. TEB :		4.2	9.3	0.0
r. Total observations:		1	1	0

---

19. ALTITUDE: **Maximum:** 1040 m **Minimum:** 400 m **Range:** 600 m

20. PLAN/PROFILE: **Dominant:** non-linear and random > 60% of area crested/peaked
Included:

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** High
c. Variability: medium

22. SLOPE: **a. Steepness:**extremely steep **b. Variability:** Low
c. Length: moderate **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%**:0 %, **9-25%**: 10 %, **25-55%**: 20 %, **>55%**: 70 %

24. RELIEF AMPLI.: **a. Amplitude:** very high **b. Variability:** Low

25. TERRAIN: Mountainous >16%, >300m

26. CREST/RIDGES: **a. Shape:** Irregular **b. Length:**Moderately long **c. Variability:** Low
d. Width: wide **e. Variability:** High

27. VALLEY FLOOR: **a. Width:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- slopes, dystropepts, 80%
-2- Crest, troporthents, 20%
-3-
-4-

29. FRAGMENTATION: **Valleys:** **Interfluves:**

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30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 1 **14.a:** 1 **14.b:** 1 **17:** 1 **18.a:** 2 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 1 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

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31. ADDITIONAL NOTES: