BUKU KETERANGAN
PETA SATUAN LAHAN DAN TANAH
LEMBAR TANJUNGKARANG, SUMATERA

EXPLANATORY BOOKLET OF THE LAND UNIT AND SOIL MAP OF THE TANJUNGKARANG SHEET, SUMATERA

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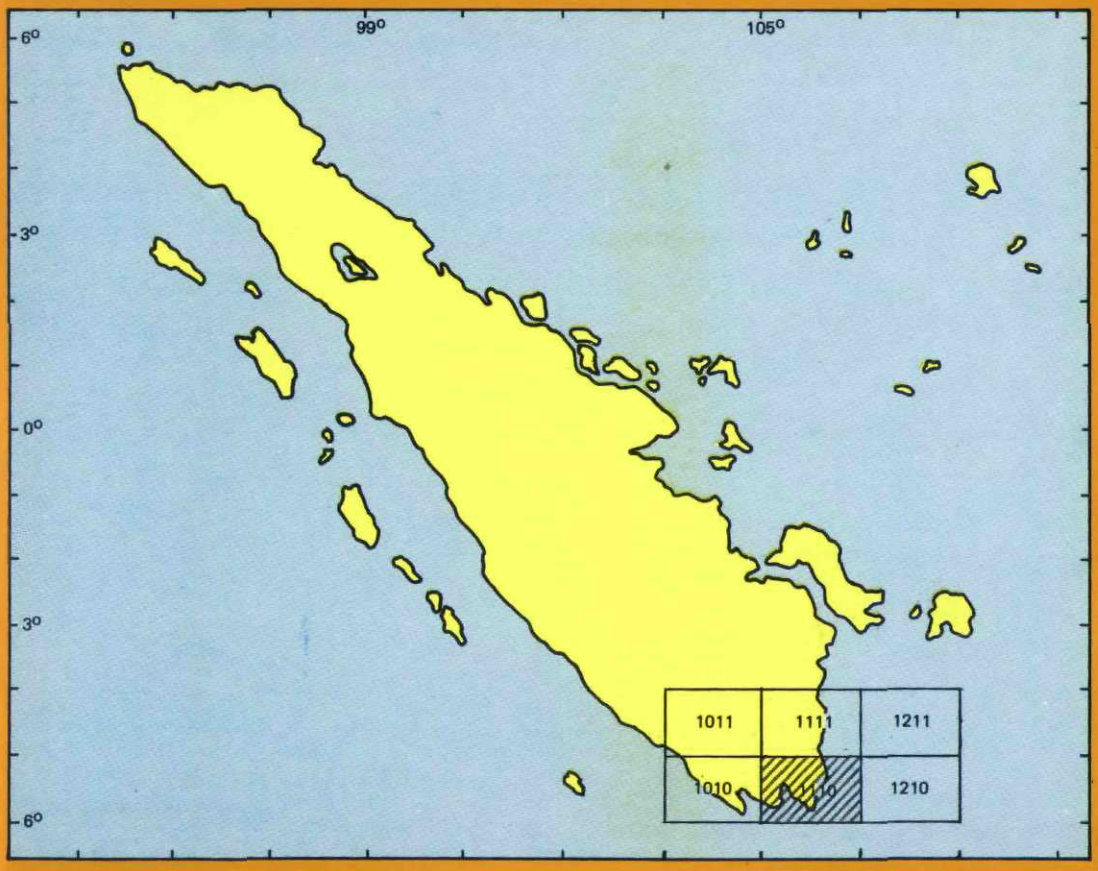
SEKALA/*SCALE* 1 : 250.000 LEMBAR/*SHEET* : 1110



PROYEK PERENCANAAN DAN EVALUASI SUMBER DAYA LAHAN
PENGELOLAAN DATA BASE TANAH
PUSAT PENELITIAN TANAH
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN
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SOIL DATA BASE MANAGEMENT
CENTER FOR SOIL RESEARCH
AGENCY FOR AGRICULTURAL RESEARCH AND DEVELOPMENT
1989

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BUKU KETERANGAN
PETA SATUAN LAHAN dan TANAH LEMBAR TANJUNGKARANG (1110), SUMATERA

Explanatory booklet of the
LAND UNIT and SOIL map of the Tanjungkarang Sheet (1110), Sumatra

Sekala/Scale 1 : 250.000

Oleh/By:
Junus Dai, H.Darul SWP, A.Hidayat, H.Y.Sumulyadi, Hendra S., Yayat A.H., A.Hermawan, 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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PENUNTUN UNTUK PEMAKAI

Buku keterangan ini adalah penjelasan dari Peta Satuan Lahan dan Tanah lembar Tanjungkarang (1110), 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 Tanjungkarang mapsheet (1110), 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 diskripsi satuan lahan akan segera disidiakan 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 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 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

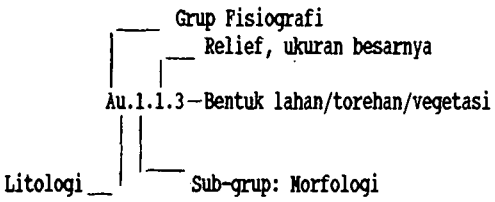
1.3 Structure of the land unit legend

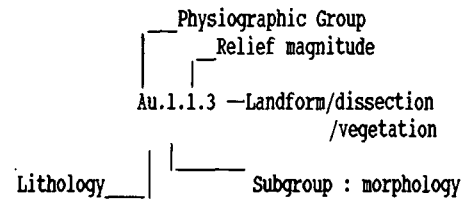
Semua satuan lahan diberi kode berupa huruf dan angka/dijit; masing-masing dengan konotasi khusus tergantung tingkat klasifikasinya.

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.

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

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





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.

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.

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	

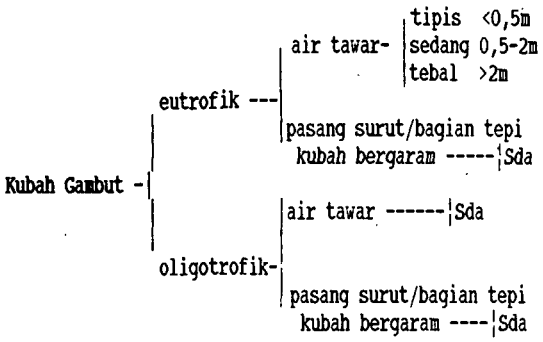
*) Tidak dijumpai pada lembar peta ini.

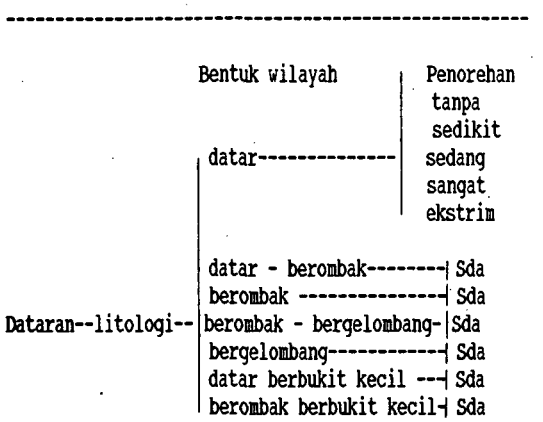
Table 1 : Physiographic Groups

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*	

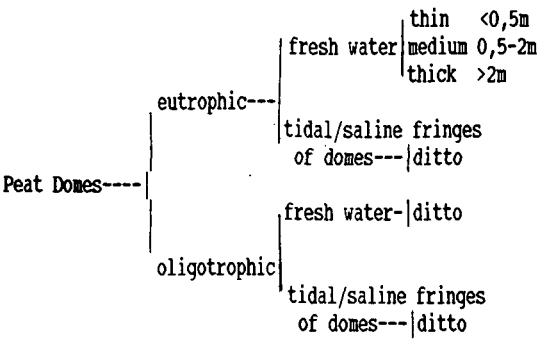
*) *Not present in this mapsheet.*

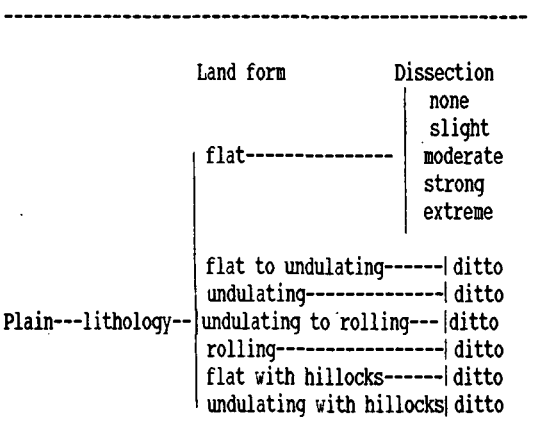
Pembagian lanjut grup Kubah Gambut dan Dataran adalah sebagai berikut.





Subdivision of the Peat Domes and Plain groups :





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.

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. 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 SB48-7, Seri 1501, Edisi 3, Tanjungkarang yang dikeluarkan oleh Royal Australian Survey Corps, 1988.

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 SB48-7, Series 1501, Edition 3, Tanjungkarang, published by The Royal Australian Survey Corps 1988.

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 4-5-6) sekala 1:250.000 tahun 1984/85 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 4-5-6), 1984/85, 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	*Standard Analyses*
1. tekstur	*1. texture*
2. karbon organik	*2. organic Carbon*
3. KTK NH4OAc pH 7	*3. CEC NH4OAc pH 7*
4. basa dapat ditukarkan dalam NH4OAc	*4. exch. Bases in NH4OAc*
5. Al dalam KCl 1M	*5. Al in 1 M KCl*
6. kerapatan lindak pF 2,5	*6. bulk density pF 2.5*
7. kadar air pF 4,2	*7. water content pF 4.2*
8. pH (H2O, KCl , 1:2,5)	*8. pH (H2O, KCl, 1:2.5*
9. N total	*9. total N*
10.K tersedia	*10.available K*
11.P tersedia	*11.available P*
Analisis tambahan	***Additional Analyses***
untuk tanah volkanik:	for Volcanic soils:
-kemasaman terekstraksi dalam $BaCl_2$-TEA (pH 8.2)	- *extractable acidity in BaCl2-TEA*
- Al, Fe dan Si terekstraksi oksalat	- *oxalate extractable Al, Fe and Si*
- mineralogi pasir	- *sand mineralogy*
- retensi fosfat	- *phosphate retention*
untuk Oksisol:	for Oxisols:
- mineralogi pasir	- *sand mineralogy*
untuk Spodosol:	for Spodosols:
- Fe, Al,C terekstraksi pirofosfat	- *pyrophosphate extractable Fe, Al, C*
- Fe, Al terekstraksi ditionit	- *dithionite extractable Fe, Al*
untuk endapan marin:	for marine deposits:
- garam terlarut	- *soluble salts*
- kadar sulfur	- *sulphur content*
- kadar air lapangan (tanah belum matang)	- *field moisture content (unripe soils)*
untuk tanah berkapur:	for calcareous soils:
- kadar karbonat	- *carbonate content*
untuk tanah Gambut:	for peat soils:
- kadar serat	- *fibre content*
- kadar abu	- *ash content*
- kerapatan lindak	- *bulk density*

2.4. Uraian satuan lahan

2.4.Land unit description

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,

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 Tanjungkarang, Sumatera, Sekala 1:250.000.
- Semua laporan survei yang tersedia dari daerah ybs (Gambar 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.

used in the compilation of the land unit descriptions:

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

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*

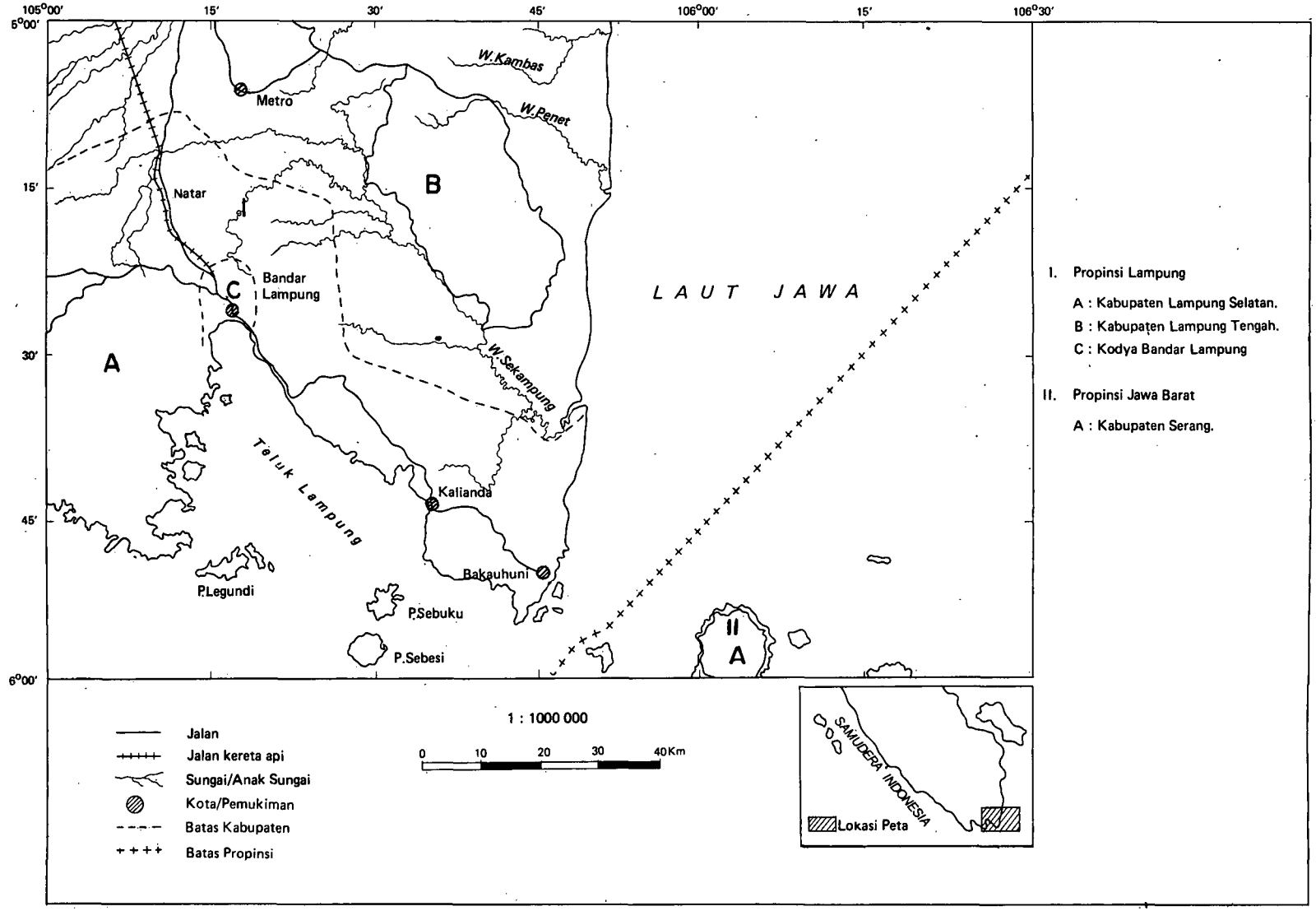
The field observations data base contains all parameters that were measured in the field, for each of the observations sites. Described and stored are site number, location, slope, vegetation/landuse and all soil properties that are measured in the field, such as structure, porosity, teksture, colour 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).*

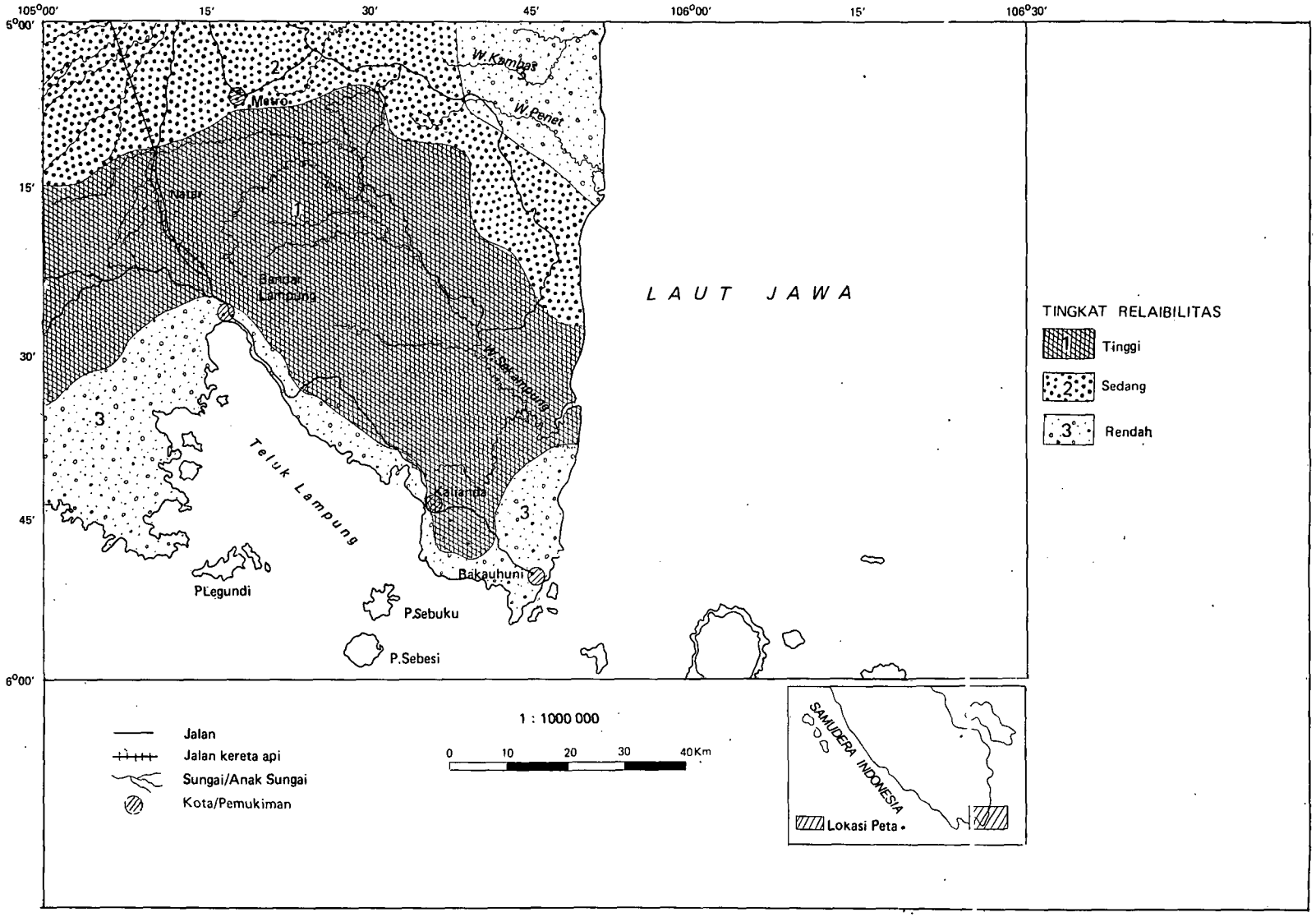
In both the field observations and in the analytical data base, data can be retrieved by observations number, mapsheet, legend unit, administrative area (province, kabupaten), and other areas defined by geographic coordinates.

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

2.6. Map reliability

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.

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.

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

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 Tanjungkarang (1110), terletak antara 105°00' dan 106°30' Bujur Timur dan antara 5°00' dan 6°00' Lintang Selatan.

Secara adminitratif daerah peta termasuk Propinsi Lampung yang meliputi Kabupaten Lampung Selatan, Lampung Tengah dan Kotamadya Bandarlampung. (Gambar 1)

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, 1985) digunakan pula peta topografi berskala 1:50.000 (BAKOSURTANAL, 1982).

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

11 Kiluan	41 Gedongtataan
12 -	42 Tanjungkarang
13 Padang Cermin	43 Bangunrejo
14 Tanjung Aqung	44 Metro
21 Penengahan	51 Jabung
22 Bakauheni	52 Labuhan Maringgai
23 Kalianda	53 Sukadana
24 Ketapang	54 Braja Luhur
31 -	61 -
32 -	62 -
33 -	63 -
34 -	64 -

Peta geologi yang digunakan ialah Peta geologi skala 1:250.000 dari Pusat Penelitian dan Pengembangan Geologi Bandung lembar Tanjungkarang 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 potret udara 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 tersebut, sedangkan judul laporan survei dicantumkan pada daftar pustaka.

4. KEADAAN UMUM FISIK DAERAH

4.1. Geologi

Secara geologi, lembar peta Tanjungkarang tersusun atas juluran-juluran (*outliers*) Pegunungan Barisan (di tenggara) yang sebagian besar tertutup oleh bahan volkan muda, batuan-batuan tua yang terbenam, dataran luas yang terdiri dari endapan ignimbrit serta endapan aluvial dan pantai muda (Gambar 6). Sebagian besar batuan-batuan permukaan berumur kuarter, namun batuan-batuan tua muncul pada beberapa tempat.

Pretersier

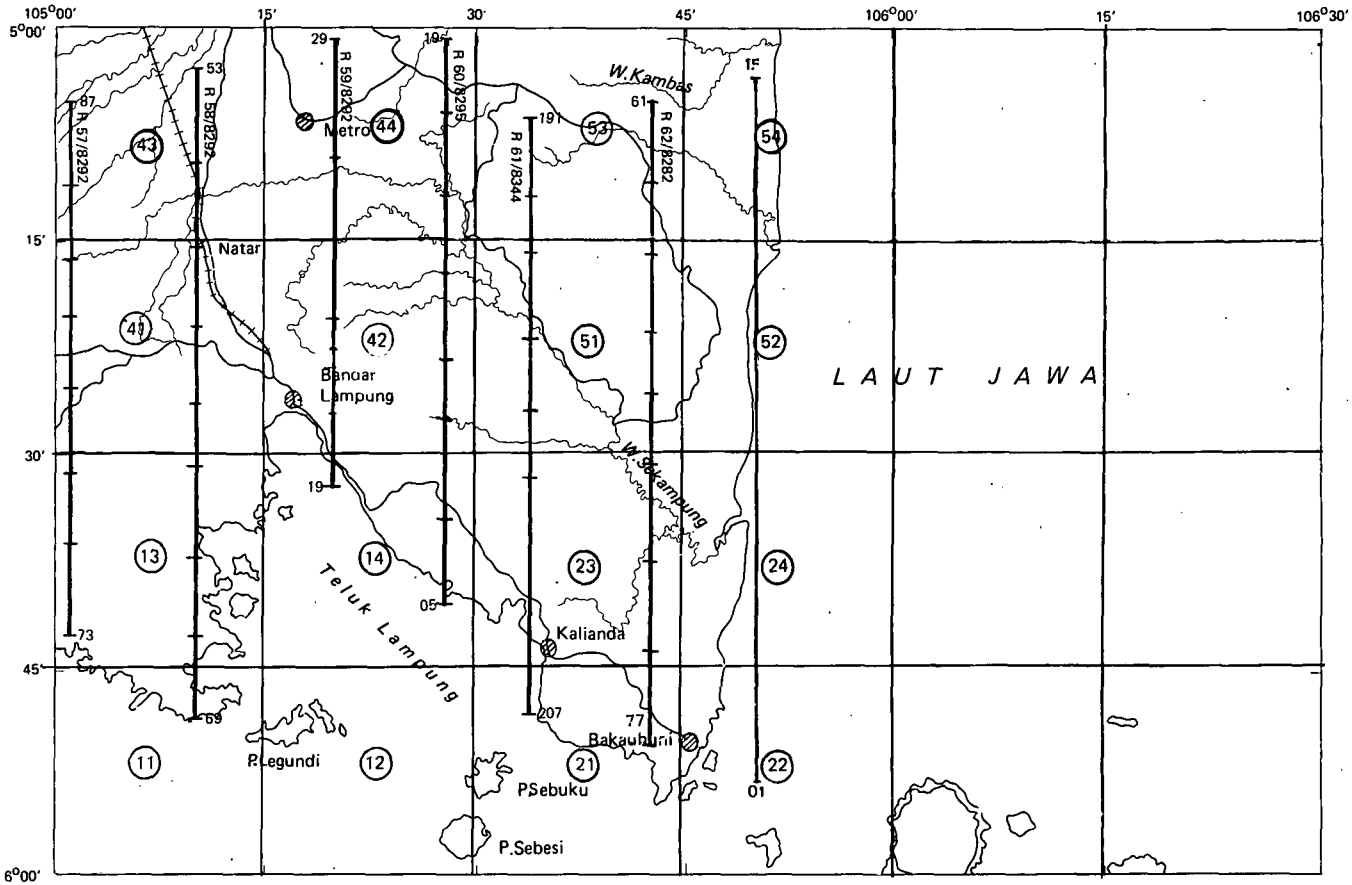
Batuan pretersier terdiri dari skis (pTse), menutupi batuan intrusif granit (Kgr). Seperti halnya pada lembar peta 1010 (Kotaagung), batuan-batuan ini terdapat disisi timur Pegunungan Barisan, yang luput dari penutupan oleh bahan volkan Tersier dan Kuarter.

Batuan skis bervariasi dalam komposisinya dari skis biotit hingga skis hornblende dan mengandung lapisan-lapisan berkapur dan lapisan-lapisan kuarsit. Setempat-setempat terdapat ortogneis, yang sangat terlipat.

Batuan-batuan intrusif yang terdapat di bagian bawah batuan-batuan metamorfik sebagian besar terdiri dari granit dan granodiorit dengan inklusi biotit dan gabro.

GAMBAR 3 : INDEKS PETA TOPOGRAFI DAN JALUR TERBANG POTRET UDARA

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



R 62/8282 : Nomor jalur terbang

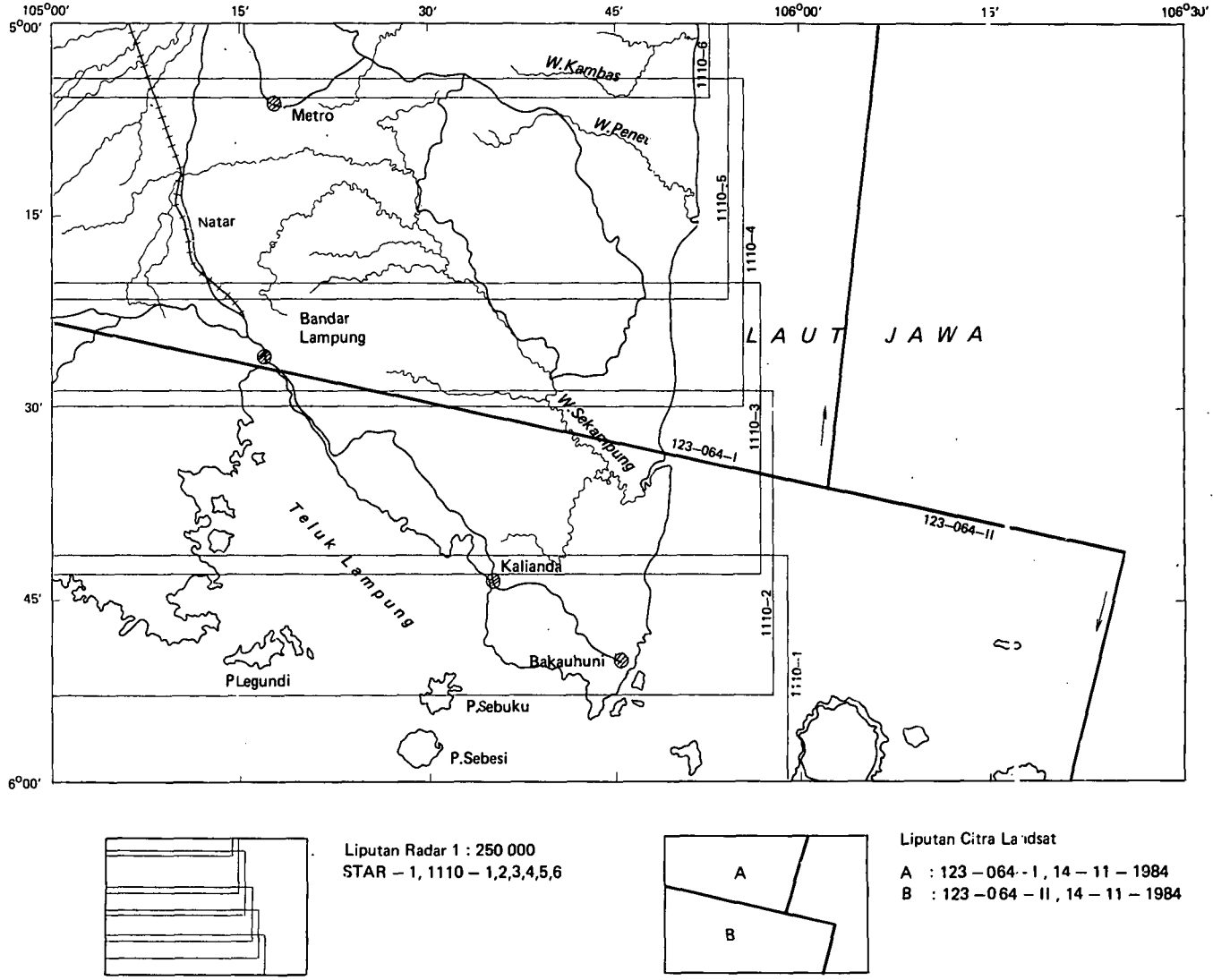
61~77 : Nomor foto udara

(54) : Nomer lembar

peta topografi 1 : 50 000

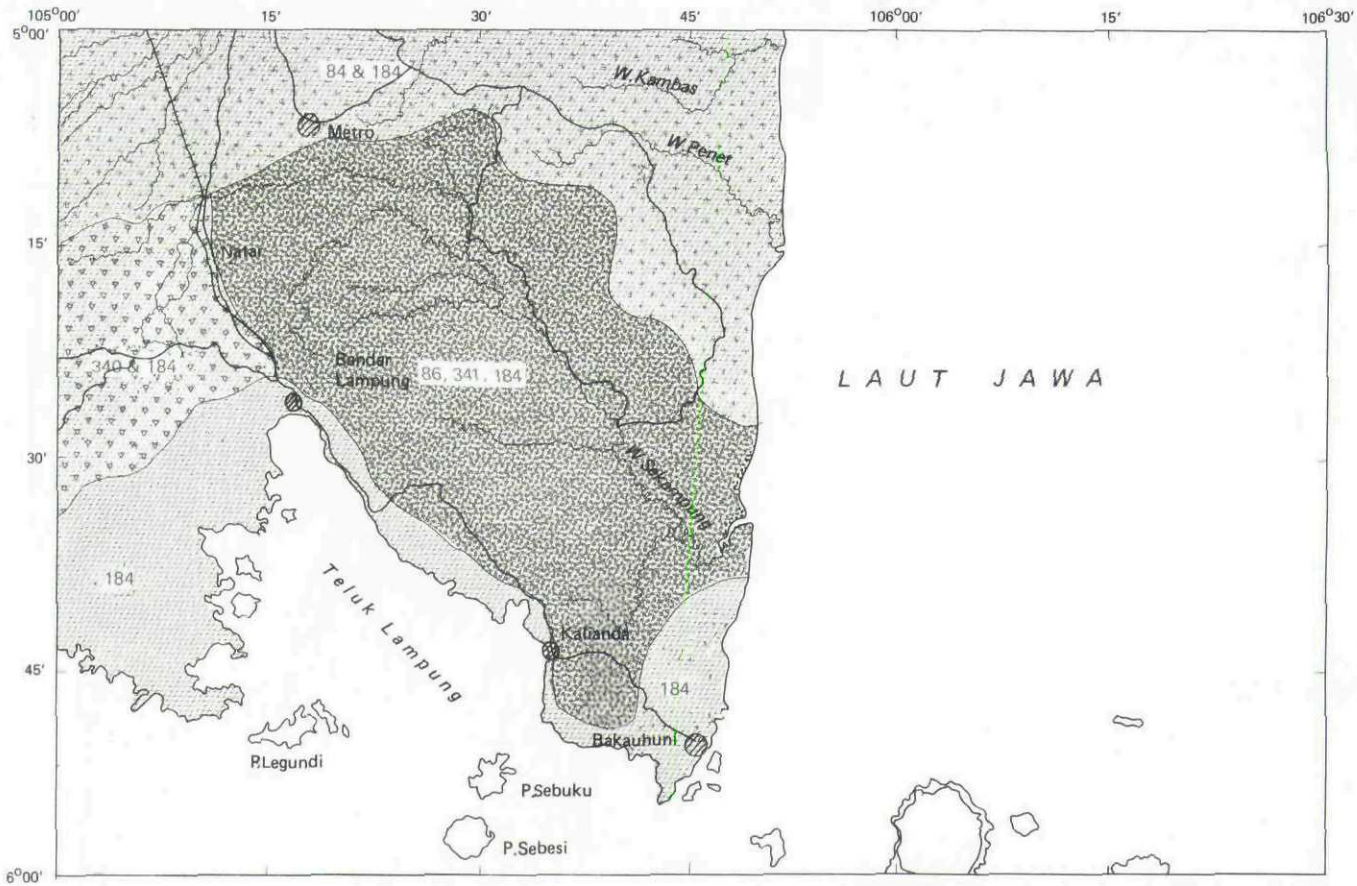
GAMBAR 4 : INDEKS CITRA RADAR STAR-I DAN LANDSAT

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

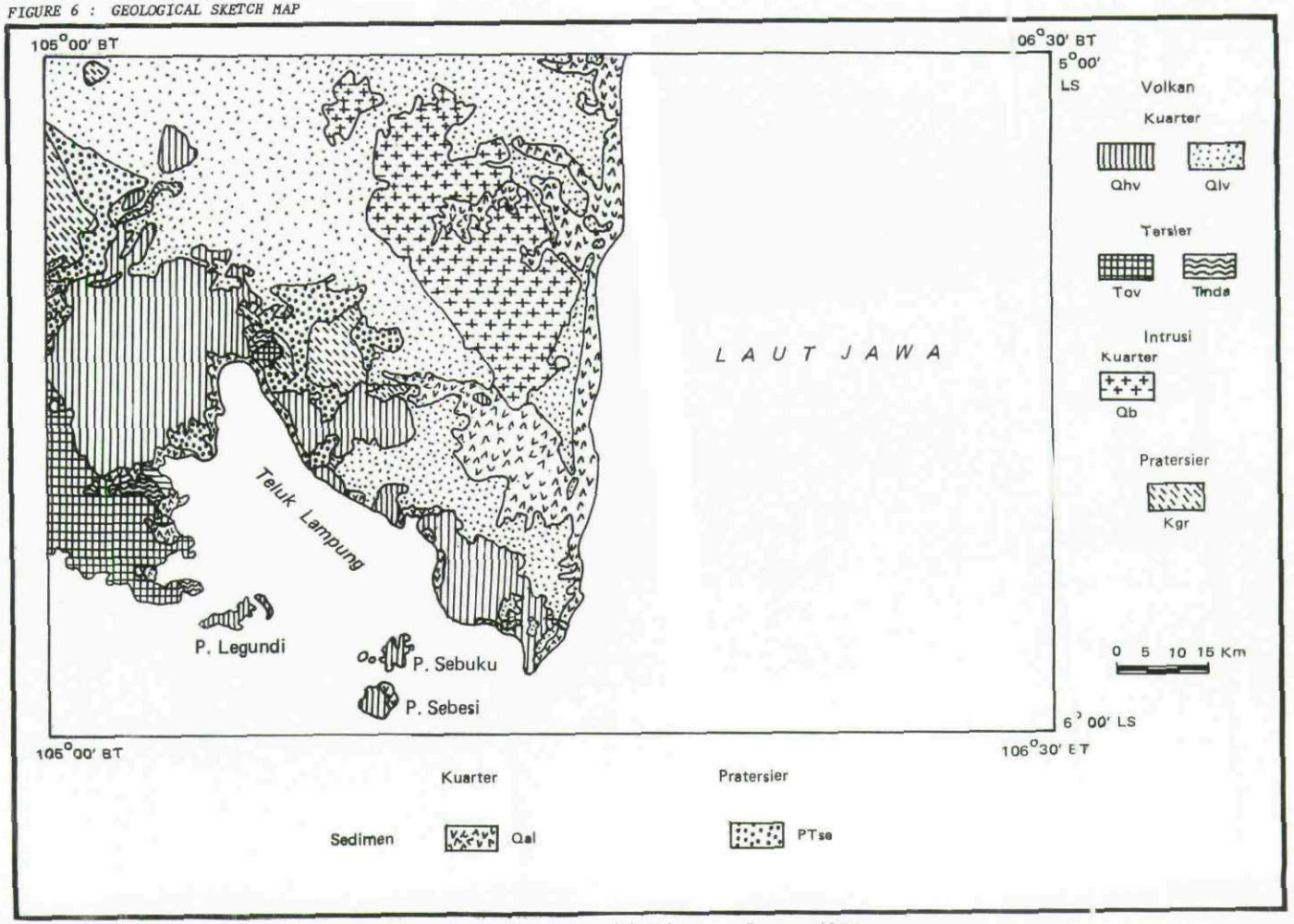
86 — DAS Sekampung
Pusat Penelitian Tanah, 1981

184 — Propinsi Lampung
Lembaga Penelitian Tanah, 1968

340 — DAS Sekampung Atas
Lembaga Penelitian Tanah, 1971

341 — DAS Sekampung Bawah
Lembaga Penelitian Tanah, 1972

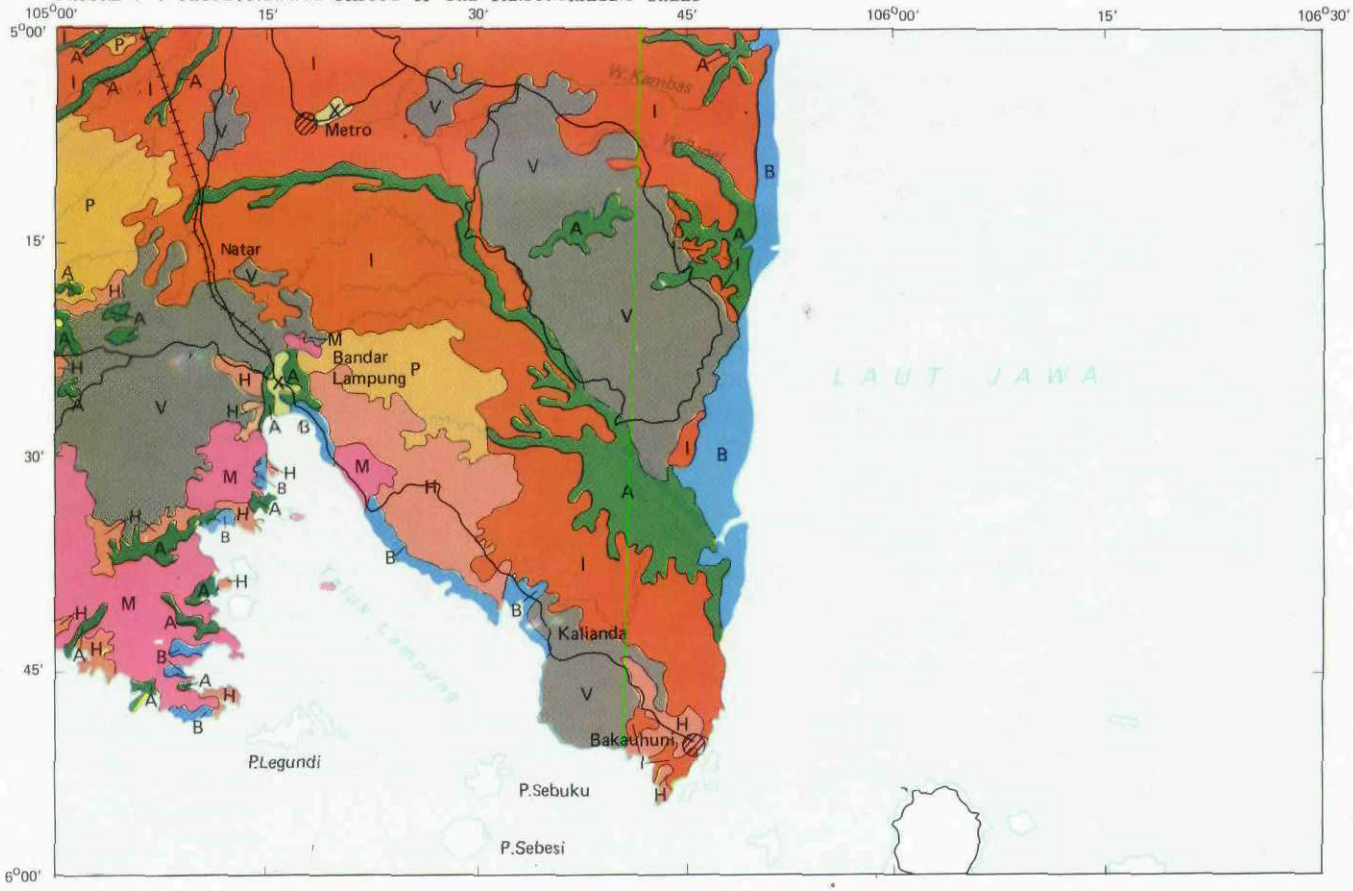
GAMBAR 6 : PETA GEOLOGI BAGAN
FIGURE 6 : GEOLOGICAL SKETCH MAP



Sumber : Geologi Lembar Tanjung Karang . *Geological Research and Development Centre, 1978*

GAMBAR 7 : GRUP FISIOGRAFI LEMBAR TANJUNGKARANG

FIGURE 7 : PHYSIOGRAPHIC GROUPS OF THE TANJUNGKARANG SHEET



A : Grup Aluvial/*Alluvial Group*

B : Grup Marin/*Marine Group*

I : Grup Dataran Tuf Masam / *Acid Tuff Plain Group*

P : Grup Dataran/*PlainGroup*

V : Grup Volkan/*Volcanic Group*

H : Grup Perbukitan/*Hilly Group*

M : Grup Pegunungan/*Mountain Group*

X : Grup Aneka Bentuk / *Miscellaneous Group*

Tersier

Dari batuan Tersier, batuan yang mempunyai penyebaran luas hanyalah dasit dan liparit formasi Tmda (*Tertiary-middle-dacite*) dan batuan volkan andesit tua formasi Tov (*Tertiary-older-volcanics*). Batuan-batuan ini telah mengalami perubahan hidrotermal dan deformasi tektonik. Batuan Tov umumnya berkomposisi andesitik. Batuan-batuan Tersier non-volkan sangat jarang dijumpai pada lembar peta ini.

Kuarter

Endapan Kuarter dapat dibagi dalam empat grup utama :

(a) Tuf Lampung (Qlv)
(b) Basal Sukadana (Qb)
(c) Batuan andesit muda (Qhv)
(d) Endapan aluvial dan marin (Qal)

a. Tuf Lampung yang menutupi bagian terluas di timur dan utara lembar peta ini merupakan endapan ignimbrit yang sebagian besar diendapkan dalam lingkungan marin dan setempat-setempat secara erat bercampur dengan endapan marin halus. Tuf mempunyai komposisi dasitik sampai liparitik dengan kadar tinggi gelas dan batuapung. Karena diduga pusat erupsi berada di Teluk Lampung, maka keadaan tuf dari endapan berangsur berkurang kearah utara.

b. Basal Sukadana membentuk jalur lebar (lebar lk. 25 km) dengan arah tenggara-baratlaut di bagian timur lembar peta ini.
Basal ini mempunyai umur hampir sama dengan Tuf Lampung. Batuan ini sebagian besar basal olivin. Pada plato basal terdapat sejumlah krucut sinder kecil-kecil dan muda.

c. Sebagian besar batuan volkan andesitik muda termasuk dalam tiga pusat erupsi utama : Volkan Ratai, Betung dan Rajabasa.
Beberapa pusat erupsi tua dan kecil juga ditemukan, misalnya di bagian baratlaut lembar peta ini. Setempat-setempat bahan volkan muda merupakan lapisan penutup tipis di atas batuan tua seperti Tuf Lampung, misalnya di baratlaut kompleks Rajabasa.

d. Aluvium marin dan sungai dijumpai di sepanjang sungai-sungai utama dan pantai. Cekungan aluvial utama adalah sungai Sekampung (Rawa Sragi).
Pantai timur sebagian besar terdiri dari dataran pasang surut dan kompleks beting pantai; beting-beting pasir dan beting-beting karang kecil ditemukan sepanjang pantai di barat dan selatan Tanjungkarang.
Teras sungai setempat-setempat dijumpai di atas Tuf Lampung, tetapi teras-teras ini belum dikemukakan dalam peta geologi yang ada sekarang.

4.2. Fisiografi

Lembar peta Tanjungkarang dapat dibagi dalam tujuh grup fisiografi utama: grup Pegunungan, Perbukitan, Volkan, Dataran, Dataran Tuf Masam, Marin, Aluvial dan Aneka Bentuk. (Gambar 7).

Pegunungan

Bentang alam yang termasuk dalam grup ini terdapat di bagian sudut baratdaya lembar peta ini dan sedikit terdapat di timurlaut Tanjungkarang. Pegunungan ini termasuk dalam punggung/blok lipatan (*blockfaulted*) Pegunungan Barisan, namun karena terdapat di bagian ujung rangkaian pegunungan, maka kurang terpengaruh deformasi.

Pegunungan ini sebagian besar terdiri dari batuan volkan tua (basal, andesit, dasit). Sub grup yang dijumpai adalah:

M*.2.2: Pegunungan berlereng curam sampai sangat curam
M*.2.3: Pegunungan berlereng sangat curam sekali

Tingkat torehannya berkisar antara sangat tertoreh sampai sangat tertoreh sekali (kelas 3 dan 4).

Perbukitan

Bentang alam yang termasuk dalam grup perbukitan berdampingan pada sisi pegunungan. Perbedaan utama terdapat dalam amplitudonya, dimana perbukitan lebih kecil (<300m) dibandingkan dengan pegunungan. Perbukitan sebagian

besar terbentuk dari bahan yang sama dengan pegunungan, tetapi beberapa perbukitan terdapat pada batuan intrusif (granit) dan batuan metamorfik (skis, gneis). Subgrup yang dijumpai adalah:

H*.1.2: Perbukitan dengan pola random dan lereng cukup curam
H*.1.3: Perbukitan dengan pola random dan lereng curam
H*.1.5: Lahan bergelomang dengan bukit-bukit kecil
H*.1.6: Bukit-bukit kecil berpola wilayah bergelombang.
H*.4.4: Pelembahan tektonik

Semua satuan ini mempunyai tingkat torehan agak tertoreh hingga sangat tertoreh sekali.

Grup Volkan

Grup ini dibagi lebih lanjut dalam dua subgrup: Kerucut Volkan dan bagian-bagiannya (V*.1) dan dataran volkan, plato serta volkan tua tererosi (V*.2).

Dua kompleks volkan utama: Rajabasa dan Ratai/Betung tergolong dalam grup V*.1; plato Sukadana dan dataran volkanik kecil di perbatasan barat lembar peta ini termasuk dalam grup V*.2. Kerucut volkan terutama dibagi lebih lanjut menurut keadaan lerengnya, sedangkan satuan-satuan volkan lainnya dibagi menurut morfologi umum. Sub grup yang dijumpai dalam lembar peta ini adalah:

V*.1.2 :Lereng atas volkan (>30%)
V*.1.3 :Lereng tengah volkan (16-50%)
V*.1.4 :Lereng bawah volkan (<16%)
V*.2.1 :Dataran volkan datar
V*.2.2 :Dataran volkan berombak
V*.2.3 :Dataran volkan bergelombang
V*.2.6 :Dataran volkan bergelombang dengan bukit-bukit kecil
V*.2.9 :Lahar
V*.2.10:Volkan tua tererosi dengan relief berbukit

Subgrup di atas dibagi lebih lanjut berdasarkan tingkat torehannya.

Dataran

Bentang alam yang termasuk dalam grup ini terdapat di sekitar tepi timur lembar peta ini dan di jalur sempit sebelah timur Tanjungkarang. Bentang alam ini merupakan sisa dataran yang terbentuk pada sisi timur Pegunungan Barisan serta terbentuk pada batuan induk granit dan skis. Umumnya batuan skis terdapat dalam depresinya sedangkan granit menempati daerah-daerah lebih tinggi. Bagian-bagian yang sangat tahan terhadap erosi membentuk bukit-bukit kecil yang muncul di atas dataran sekelilingnya. Subgrup yang dijumpai pada lembar peta ini adalah:

P*.3.2: Dataran berombak cukup tertoreh
P*.4.2: Dataran berombak sampai bergelombang cukup tertoreh
P*.8.2 : Dataran bergelombang dengan bukit-bukit kecil cukup tertoreh.

Dataran Tuf Masam

Grup Dataran Tuf Masam dipisahkan dari grup Dataran karena penyebarannya yang luas dan perbedaan yang menyolok bahan induk serta karakteristik tanah secara kimiawi. Bentuk lahan kedua grup sama, meskipun di Dataran Tuf Masam kadang-kadang dijumpai lebih banyak sisa-sisa erosi resisten.

Grup Dataran Tuf Masam berkembang pada endapan ignimbrit yang termasuk dalam tuf Lampung. Tuf ini ke arah utara agak kasar, namun pada lembar peta sekarang tuf ini mengandung bahan dasitik (kuarsa, batuapung, gelas volkan). Litologi bersifat campuran ini termasuk sisa teras sungai setempat dinyatakan dengan kode litologi *dq* (dasitik/sedimen kasar). Sisa-sisa pelapukan secara menyeluruh berbutir halus. Pembagian lanjut Dataran Tuf Masam dilakukan berdasarkan morfologi umum dan sama dengan pembagian grup Dataran. Subgrup yang ditemukan adalah sebagai berikut:

I*.1: Dataran tuf masam datar
I*.2: Dataran tuf masam datar sampai berombak
I*.3: Dataran tuf masam berombak
I*.4: Dataran tuf masam berombak

sampai bergelombang
I*.5: Dataran tuf masam bergelombang
I*.8: Dataran tuf masam bergelombang dengan bukit-bukit kecil.

Semua satuan ini dibagi lebih lanjut menurut tingkat torehannya.

Marin
Grup ini meliputi jalur sempit sepanjang pantai timur dan luasan-luasan kecil sepanjang pantai selatan. Di timur, jalur sempit yang terdiri dari beting pantai dan cekungan antar beting pantai dipisahkan dari jalur pantai sekarang oleh dataran mangrove dan rawa belakang pantai bervegetasi rendah. Dataran lumpur estuarin (nipah dan vegetasi campuran) terdapat sepanjang beberapa sungai. Jalur beting pantai dan cekungannya berbatasan dengan lahan atasnya, namun kerapkali terpisah dari lahan ini dengan rawa belakang payau bervegetasi hutan rawa campuran.

Di pantai selatan dataran lumpur tidak dijumpai dan disini grup ini dicirikan oleh dataran pantai dan karang yang sempit. Subgrup berikut ini dijumpai pada lembar peta ini:

Bfq.1.1:Kompleks beting pantai dan cekungan antar beting
Bfq.1.2:Kompleks beting pantai tererosi dan cekungannya
Bf.4.3:Dataran pasang surut bervegetasi bakau
Bf.4.4:Dataran estuarin
Bf.5.1:Rawa belakang dipengaruhi air asin bervegetasi rumput-rumputan
Bf.5.2:Rawa belakang dipengaruhi air asin bervegetasi hutan campuran
Bcq.7: Endapan marin tak dibedakan

Aluvial
Grup ini dicirikan oleh endapan sungai, endapan di lembah tertutup, endapan sungai melebar (*braided*) dan endapan kipas.
Yang luas penyebarannya adalah endapan sungai Sekampung, yang membentuk dataran aluvial luas dengan rawa-rawa yang menjulur di bagian tenggara lembar peta ini. Rawa-rawa ini terbentuk di belakang garis pantai dan mungkin disebabkan oleh gradien sungai yang rendah dan pembendungan sungai-sungai oleh deposit marin. Endapan volkan menyebabkan terbentuknya beberapa cekungan tertutup, yang dijumpai di perbatasan barat lembar peta dan di plato Sukadana. Kipas tersebar luas di daerah bergunung dan berbukit di barat daya peta. Subgrup yang dijumpai adalah:
Au.1.1.1:Rawa dari dataran aluvial luas
Af.1.2.1:Jalur meander dari lembah aluvial luas
Au.1.3: Pelembahan sempit (erosif) di daerah *upland*
Au.2.2: Kipas aluvial dan koluvial
Au.3.2: Cekungan/lembah tertutup
Aq.5 : Dataran banjir sungai melebar

Aneka Bentuk
Di daerah bergunung terdapat lembah-lembah sungai yang terjal (X.1). Disebelah tenggara Sukadana dijumpai danau (X3)

4.3. Hidrologi

Daerah lembar peta Tanjungkarang mempunyai ketinggian antara 0m (pantai) sampai 1.700m dpl (Gunung Ratai). Topografinya menurun ke arah timur membentuk dataran/ dataran rendah yang diselingi daerah plato dari basal Sukadana.
Sungai-sungai utama di daerah ini a.l. Way Sekampung, W.Kambas, W.Penet yang bermuara di Laut Jawa dan beberapa sungai kecil yang mengalir ke arah utara.

W.Sekampung merupakan sungai terbesar dan terpanjang, berasal dari mata air di sekitar volkan Ratai dan Betung. Sungai ini mula-mula mengalir ke arah timur/timurlaut. Plato basal Sukadana menyebabkan aliran sungai ini terbendung dan alirannya beralih ke arah tenggara. Akibat pembendungan ini terbentuk daerah-daerah banjir dan rawa yang luas seperti rawa Selapan, rawa Keramat/Subud dan rawa Sragi.

Bentukan morfologi, jenis batuan,

proses-proses geomorfik serta keadaan tata air di daerah ini sangat menentukan keadaan pola drainasenya.
Daerah pegunungan dan perbukitan yang pada umumnya mempunyai gradient yang cukup besar membentuk pola drainase dendritik, sedang di daerah dimana proses tektonik nyata mempunyai pola drainase rectangular (structural control).
Daerah volkan dengan bentukan-bentukan kerucut yang masih utuh membentuk pola radial di daerah puncak dan lereng atas, sedang di lereng tengah dan bawah paralel atau sub-paralel.
Basal Sukadana yang banyak mempunyai rekahan dan dengan sifat tanahnya yang porous, mempunyai drainase internal sangat baik yang banyak menghasilkan mata air di kaki sekeliling plato (spring). Danau Jepara di utara plato diduga merupakan bekas kawah yang telah mati, membentuk danau yang merupakan sumber air utama di daerah ini.
Daerah tuf Lampung umumnya mempunyai pola drainase dendritik sedang sesetempat dimana dijumpai bentukan lahan yang memanjang dijumpai pola drainase paralel.
W. Sekampung yang mempunyai pola aliran meandering, di dataran rendah membentuk dataran banjir/rawa yang cukup luas dengan pola drainase tidak nyata (sesetempat meandering). Rawa Sragi merupakan daerah rawa terluas yang sedang direklamasi guna dijadikan areal pertanian.

5. SATUAN LAHAN

5.1. Satuan lahan dan tanah.

Secara garis besar satuan lahan lembar peta Tanjungkarang (1110) dapat dikelompokkan kedalam 8 (delapan) grup yaitu: Grup Aluvial (A), Marin (B), 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 kwalitatif, 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, endapan rawa dan endapan hasil aluviasi/koluviasi di kaki lereng perbukitan/pegunungan yang landai.

Tersebar antara ketinggian 5-150m dpl. di sepanjang jalur aliran Way Sekampung, W.Penet dan W.Kambas yang merupakan jalur aliran sungai meander. Di kiri kanan aliran W.Sekampung terdapat dataran aluvial luas berawa yang merupakan dataran banjir membentuk rawa Sragi, rawa Selapan dan rawa Keramat/Subud. Di timur Sribawono daerah ini berbatasan dengan dataran pantai. Di selatan Danau Jepara dan sebelah barat Gedongtataan terdapat pelembahan tertutup yang luas yang selalu tergenang air. Di kaki lereng perbukitan, di selatan Padang Cermin dan sekitar Bandarlampung terdapat kipas aluvial/koluvial yang menampung bahan dari daerah atasnya.

Bentuk wilayah datar, datar agak cembung dan datar agak melandai dengan lereng 0-3% . Meliputi luas 56.615 ha (7,90%).

Vegetasi/penggunaan lahan utamanya antara lain rumput rawa, hutan jalur aliran, persawahan dan semak belukar.

Jenis tanah utama di daerah ini adalah tanah yang relatif muda dan pada umum-

nya berasosiasi dengan lingkungan air/basah, antara lain Tropaquepts (telah berkembang), Fluvaquents dan Hydraquents (belum berkembang), serta Tropohemists yang merupakan tanah organik di daerah berawa. Didaerah tanggul sepanjang sungai atau peralihan ke dataran dijumpai jenis tanah Dystropepts/Eutropepts berpenampang dalam, bertekstur halus sampai sedang, drainase baik.

Tanah berpenampang dalam dengan 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 rendah di timur lembar peta daerahnya mempunyai potensi yang besar sebagai daerah persawahan, seperti halnya daerah rawa Sragi di sekitar aliran W.Sekampung yang telah direklamasi. 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 timur lembar peta yang sebagain besar daerahnya dipengaruhi pasang surut. Terletak pada ketinggian 0-25m dpl., berupa dataran pasang surut berlumpur yang diselingi oleh 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 45.070 ha (6.30%).

Vegetasi dan penggunaan lahan utamanya berupa hutan mangrove, rawa pasang surut, sawah, kebun kelapa, tambak dan daerah pemukiman.

Jenis tanah utama di daerah ini adalah Hydraquents, Sulfaquents dan Fluvaquents yang merupakan tanah-tanah belum berkembang di daerah cekungan sepanjang pantai yang selalu tergenang air. Sulfaquents merupakan jenis tanah yang mengandung sulfat 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 pasir pantai muda dijumpai Tropopsamments, yang merupakan tanah belum berkembang, bertekstur kasar/pasir, drainase cepat. Tropohumods dan Tropaquods merupakan tanah yang telah berkembang, dijumpai di daerah beting pasir pantai tua yang terletak lebih kepedalaman. Daerah ini terutama sepanjang pantai berpotensi baik sebagai daerah tambak, tanpa melupakan kelestarian alam antara lain perlunya hutan mangrove sebagai *buffer zone* disepanjang pantai. Beting pasir pantai cocok untuk perkebunan kelapa sedang pelembahan antar beting untuk persawahan dengan jenis padi yang lebih toleran terhadap air asin.

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

Grup Dataran Tuf Masam

Merupakan daerah terluas yang menyebar dari arah tenggara-baratdaya terutama di bagian tengah dan utara lembar peta. Bentuk wilayahnya datar, berombak sampai bergelombang dengan diselingi oleh cekungan-cekungan. Bahan pembentuknya berupa tuf masam bersusunan dasit/ignimbrit sebagai hasil aktivitas volkan. Aliran abu masam ini sangat tebal dan luas mencapai >1000 km^2. Tuf masam ini membentukkan dataran rendah di pantai timur. Terletak pada ketinggian 10-100m dpl. dengan variasi lereng 0-25% . Meliputi luas 288.130 ha (40,15%).

Vegetasi dan penggunaan lahannya

adalah pertanian lahan kering (ladang dan tegalan), persawahan, kebun campuran, kebun karet, semak belukar dan padang alang-alang.

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).

Di lain 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), fisik tanah jelek dan kekurangan air di daerah bergelombang.

Grup Dataran

Dataran ini merupakan daerah peralihan antara dataran tuf masam dan daerah perbukitan/pegunungan. Bahan pembentuknya berupa batuan intrusi masam terutama granit dan batuan metamorfik (skis). Penyebarannya terutama di sebelah timur Bandar Lampung dan di sebelah barat Natar dengan bentuk wilayah berombak sampai bergelombang dengan bukit-bukit kecil. Terletak pada ketinggian antara 50-125m dpl., dengan variasi lereng antara 3-25%, meliputi luas 49.075 ha (6,85%).

Jenis tanah utama yang dijumpai di daerah ini adalah Kanhapludults, Dystropepts, Hapludults dan Tropaquepts.

Kanhapludults dan Hapludults menempati lereng tengah atau punggungan, berpenampang 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 tanaman (kesuburan) 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 hara tanaman yang rendah keadaan topografi/erosi di daerah bergelombang agak berbukit.

Grup Volkan (V)

Grup volkan dapat dibagi menjadi subgrup volkan muda dan subgrup basal Sukadana. Grup volkan muda terdiri dari stratovolkan Rajabasa, Betung dan Ratai menyebar di bagian selatan lembar peta. Puncak-puncak pegunungan tersebut terletak pada ketinggian 1.282m (Rajabasa), 1.300m (Betung) dan 1.681m dpl. (Ratai). 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. Meliputi luas 76.780 ha (10,70%).

Vegetasi dan penggunaan lahannya berupa hutan primer dataran tinggi dan hutan lindung (lereng atas dan tengah), sedang di lereng bawah berupa perkebunan kopi dan lada, pertanian

lahan kering, semak belukar dan persawahan.

Jenis tanah utama di lereng atas dan tengah terutama Dystrandepts, Dystropepts dan Troporthent yang merupakan tanah-tanah muda. Sedang di lereng bawah 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 banyak dijumpai batuan besar (boulder) yang berasal dari lereng atas/tengah. Kesuburan tanahnya sedang sampai tinggi di daerah dataran rendah sampai sangat rendah. Diperkirakan adanya tutupan bahan lain di daerah ini.

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, erosi dan batuan besar di lereng tengah dan bawah.

Plato basal Sukadana terdapat di sebelah timur lembar peta, menyembul di atas dataran tuf masam dengan bentuk wilayah berombak-bergelombang, berlereng melandai, terdapat pada ketinggian antara 50-100m dpl. Puncak-puncaknya yang berupa kerucut-kerucut volkan (*cindercone*) dan leher volkan (*volcanic neck*) mencapai ketinggian 250m dpl. Meliputi luas 106.420 ha (14,80%). Daerah transisi ke dataran berupa lereng terjal yang merupakan batas antara lapisan atas lava basal yang porous dan lapisan tuf masam yang kedap air, dimana terdapat banyak mata air.

Jenis tanah utama adalah Hapludalfs, Eutropepts dan Humitropepts berpenampang dalam, tekstur agak halus sampai halus, drainase baik, kandungan unsur haranya sedang sampai tinggi dengan kandungan bahan organik rendah sampai sedang. Di beberapa tempat di bagian selatan terdapat hamparan lava di permukaan dengan lapisan tanah yang tipis dari jenis Troporthents.

Daerahnya mempunyai potensi yang tinggi terutama untuk perkebunan kopi, cengkeh dan lada serta pertanian lahan kering/tegalan. Sedang daerah perbukitannya hendaknya dipertahankan sebagai hutan lindung. Kecuali batu dipermukaan daerah ini hampir tidak mempunyai penghambat. Erosi di daerah ini hampir tidak nampak karena sifat tanahnya yang sangat mudah menyerap air/"*internal drainage*"nya baik.

Grup Perbukitan (H)

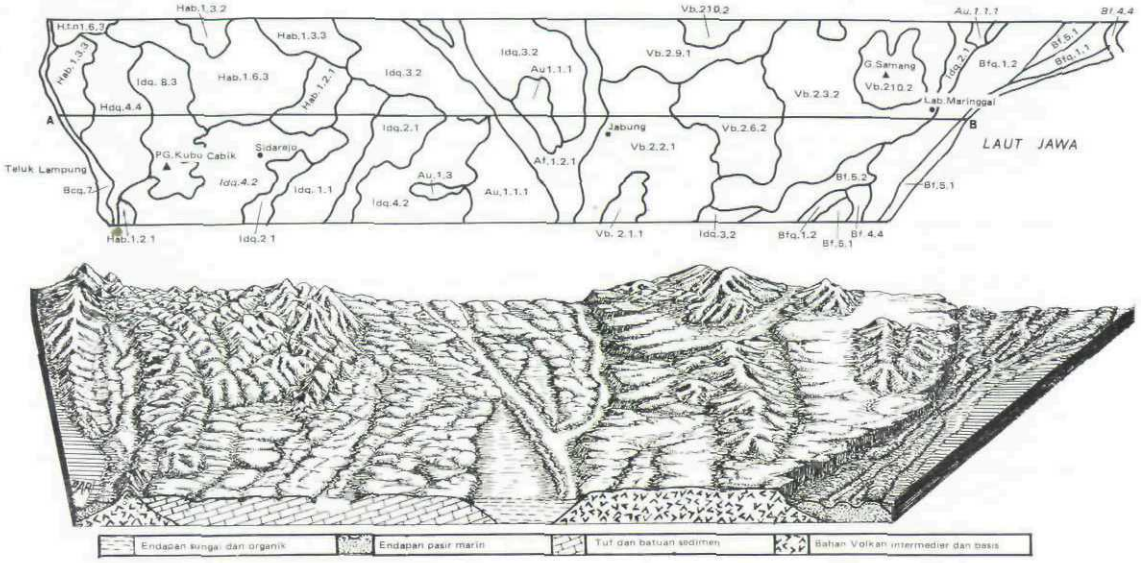
Daerahnya terbentuk karena aktivitas tektonik, terletak di lereng pegunungan dan volkan terutama di bagian selatan lembar peta. Bahan pembentuknya berupa bahan volkan (tuf dan batuan andesit), batuan sedimen, batuan plutonik masam (granit) dan batuan metamorf, sesetempat ditempati oleh bahan tuf masam Lampung. Terletak pada ketinggian 15-375m dpl, dengan perbedaan tinggi (amplitudo) <300m dari daerah sekitarnya. Bentuk wilayahnya berbukit, berlereng curam sampai sangat curam dengan lereng >16% . Meliputi luas 50.975 ha (7.10%).

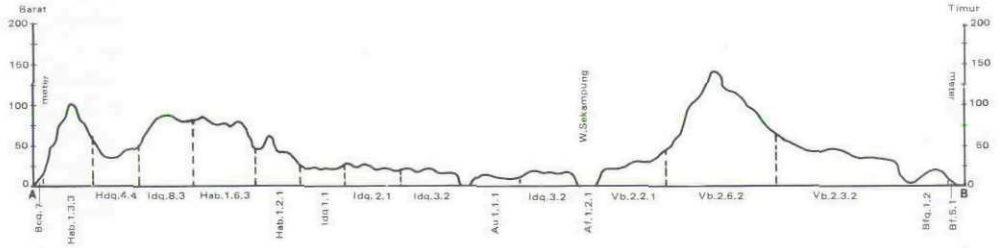
Vegetasi dan penggunaan lahannya berupa hutan sekunder, kebun karet, kelapa, pertanian lahan kering (ladang dan tegalan) sedang di pelembahan berupa persawahan.

Di lereng atas perbukitan 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.

GAMBAR 8 : SATUAN LAHAN, BLOK DIAGRAM DAN PENAMPANG MELINTANG LEMBAR TANJUNGKARANG
FIGURE 8 LAND UNITS, BLOCK DIAGRAM AND CROSS SECTION OF THE TANJUNGKARANG SHEET





Satuan Lahan	Rawa vegetasi rendah (Au,1,1,1)	Jalur meander (Af,1.2.1)	Kompleks beting pasir pantai (Bfq,1.2)	Rawa belakang terpengaruh air asin (Bf.5.1)	Endapan marin tak dibedakan (Bcq.7)	Dataran tuf masam (Idq.1.1)	Dataran tuf masam datar-berombak (Idq.2.1)	Dataran tuf masam berombak (Idq.3.2)
Bahan induk	Endapan sungai dan organik	Endapan sungai	Endapan marin	Endapan marin	Endapan marin	Tuf dan batuan sedimen	Tuf dan batuan sedimen	Tuf dan batuan sedimen
Komposisi Tanah (USDA)	Hydraquents Fluvaquents Tropohemists Sulfaquents	Tropaquepts Fluvaquents Dystropepts	Tropopsamments Tropaquepts Tropohumods	Hydraquents Sulfi hemists Sulfaquents	Troporthents Tropopsamments	Kanhapludults Tropaquepts Dystropepts	Kanhapludults Tropaquepts Dystropepts	Kanhapludults Dystropepts Tropaquepts

Satuan Lahan	Dataran tuf masam bergelombang berbukit (Idq.8.3)	Dataran volkan berombak (Vb.2.2.1)	Dataran volkan bergelombang (Vb.2.3.2)	Dataran volkan bergelombang berbukit kecil (Vb.2.6.2)	Perbukitan cukup curam (Hab.1.2.1)	Perbukitan curam sangat curam (Hab.1.3.3)	Perbukitan kecil di daerah bergelombang (Hab.1.6.3)	Pelembahan tektonik (Hdq.4.4)
Bahan induk	Tuf dan batuan sedimen	Lava intermedier dan basis	Lava intermedier dan basis	Lava intermedier dan basis	Tuf dan lava intermedier dan basis	Tuf dan lave intermedier dan basis	Tuf dan lava intermedier dan basis	Tuf dan batuan sedimen
Komposisi Tanah (USDA)	Troporthents Eutropepts	Hapludalfs Dystropepts Tropaquepts	Dystropepts Hapludalfs Tropaquepts	Eutropepts Hapludalfs	Dystropepts Hapludults Humitropepts	Dystropepts Humitropepts Hapludults	Dystropepts Hapludults	Dystropepts Hapludults

Kecuali lereng bawah yang dapat digunakan sebagai lahan pengembangan pertanian lahan kering dengan memperhatian konservasi tanah, lereng atas dan tengah hendaknya digunakan sebagai hutan. Pembatas utama berupa lereng, erosi dan kekurangan air.

Grup Pegunungan dan Plato (M)
Terletak antara ketinggian antara 500-1.225m dpl, berlereng curam sampai sangat curam, dengan lereng >30% . Bahan pembentuknya berupa bahan volkan Tersier, tetapi keadaan morfologinya tidak memperlihatkan morfologi volkan yang jelas. Terletak di bagian selatan daerah peta yang merupakan bagian paling selatan dari pegunungan Barisan yang membujur sejajar Pulau Sumatera. Meliputi luas 39.990 ha (5.55%).
Vegetasi dan penggunaan lahannya berupa hutan lindung, semak belukar. Sedang di lereng bawah berupa perkebunan kopi, cengkeh, lada dan pertanian lahan kering (ladang dan tegalan).

Jenis tanah utamanya adalah Dystropepts yang menempati lereng atas. Hapludults menempati lereng tengah sedang di lereng bawah ditempati Humitropepts dan Eutropepts.

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, kandungan bahan organiknya rendah.

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
Merupakan grup tersendiri diluar satuan lahan yang telah diuraikan. Menempati luas 4.545 ha (0,65%), merupakan bentukkan spesifik terdiri dari X1 berupa lembah sungai terjal tererosi atau lereng terjal/ escarpment. X2 daerah pemukiman dan X3 berupa badan air (danau).

5.2. Isi Uraian Satuan Lahan.

Merupakan bagian terpenting dari buku penjelasan ini, menguraikan 58 satuan lahan yang terdapat pada lembar peta Tanjungkarang (1110), 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 (fisik).
- 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

6. DAFTAR PUSTAKA

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(Nomor adalah nomor laporan dalam file SUMREP)

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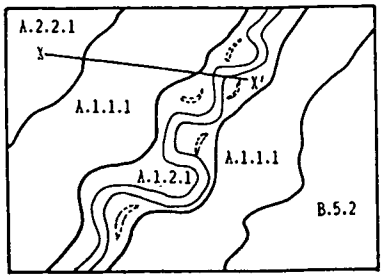
LAMPIRAN 1. URAIAN SATUAN LAHAN

APPENDIX 1. LAND UNIT DESCRIPTIONS

MAP IMAGE:



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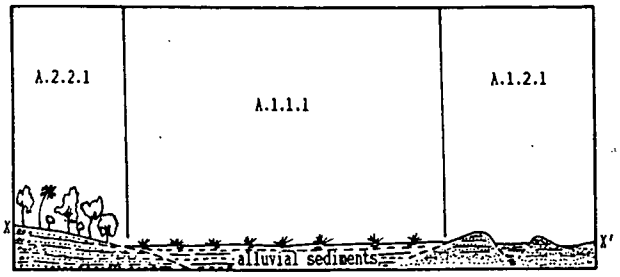


1. LAND UNIT: Au.1.1.1 **2. MAP SHEET**: 1110 **3. AREA**: 168 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 29/05/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Marshes of broad alluvial plains with open low vegetation, mixed sediments, slopes 0-3%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 62 /8282-071, 62 /8282-065

9. RADAR : Star-I/250/88/1110-2,3

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 : Rawa (swamp)

14. RIVERS a. Floodrisk : High

b. Inundation: Permanent

15. VEGETATION/LAND USE : , swamp (rawa) including sedges, tidal wetland rice (pasang surut)

Area used : 60 %

16. ACCELERATED EROSION

a. Occurence : None

b. Evidence :

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	hydraquents	60 %	yes
Associated 1	fluvaquents	30 %	yes
Associated 2	tropohemists	10 %	yes

---

32. REPRESENTATIVE PROFILES:

eqw/ /341-71 /72/IS/1110/23/ /16 / eqv/ /86-18 /81/SR/1110/44/ /03 /

het/ /341-20 /72/SK/1110/23/ /59 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	organic
	subsoil	fine	fine	organic
b. Depth:	peatsoil	--	--	extremely deep
	mineralsoil	very deep	extremely deep	--
c. Drainage:		Very poorly drained	Very poorly drained	Very poorly drained
d. Exch. K:	topsoil	--	very high	--
	subsoil	--	high	--
e. Total K2O:	topsoil	low	very low	medium
	subsoil	medium	medium	very low
f. Avail. P:	method	Olsen		Olsen
	topsoil	very high	--	very high
	subsoil	low	--	high
g. Total P:	topsoil	very high	very high	very high
	subsoil	low	medium	medium
h. CEC pH 7	topsoil	--	very high	--
	subsoil	--	very high	--
i. Soil Reaction:	topsoil	strong acid	strong acid	slightly acid
	subsoil	moderately acid	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 :		125 cm	200 cm	100 cm
p. Organic Matter :		13.5	23.1	68.4
q. TEB :		0.0	26.5	0.0
r. Total observations:		1	3	1

---

19. ALTITUDE: **Maximum:** 15 m **Minimum:** 5 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: straight

23. SLOPE DISTR.: **Valleybottoms:** 100 %
Interfluves : 0-8%:0 %, **8-25%:** 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-** Marshes, hydraquents, 60%
-2- Marshes, fluvaquents, 30%
-3- Marshes, tropohemists, 10%
-4-

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

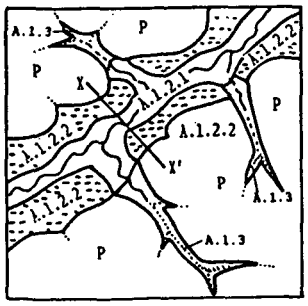
---

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

---

31. ADDITIONAL NOTES:

MAP IMAGE:



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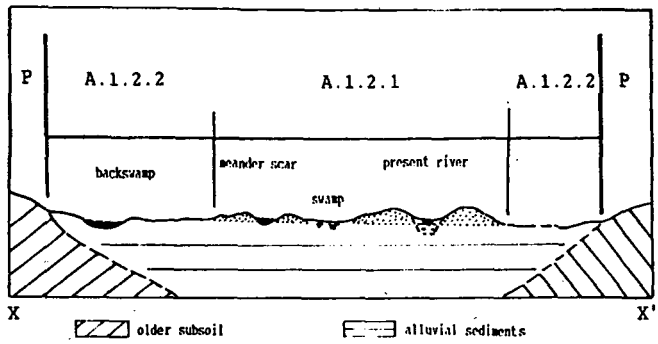


1. **LAND UNIT**: Af.1.2.1 **2. MAP SHEET**: 1110 **3. AREA**: 194 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date**: 29/05/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Meanderbelts of broad alluvial valleys fine sediments, slopes 0-3%
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 62 /8282-071, 60 /8295-015, 61 /8344-197
9. **RADAR** : Star-I/250/88/1110-2,3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - a. **Weathering** : Slight
    - b. **Lithology** : clay
    - c. **Formation** : Qal
12. **WATER** a. **Quality** : Fresh
    b. **Source** : Perennial River, Shallow wells
13. **FISHERIES** : Rawa (swamp)
14. **RIVERS** a. **Floodrisk** : High
    b. **Inundation**: Seasonal
15. **VEGETATION/LAND USE** : bush, swamp (rawa) including sedges, shifting cultivation, rainfed wetland rice, deepwater rice (lebak), rubber (karet)
    Area used : 50 %
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/ /341-68 /72/IS/1110/23/ /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 :		100 cm	80 cm	50 cm
p. Organic Matter :		1.6	4.7	2.1
q. TEB :		0.0	0.0	0.0
r. Total observations:		4	1	1

---

19. ALTITUDE: **Maximum:** 60 m **Minimum:** 5 m **Range:** 30 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: **d. Variability:**
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 90 %
Interfluves : 0-8%:10 %, **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:** narrow **b. Variability:**

28. LAND FACETS: **-1-** Levees, tropaquepts, 55%
-2- Spillway & oxbow, fluvaquents, 35%
-3- Old meanderbelts, dystropepts, 10%
-4-

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

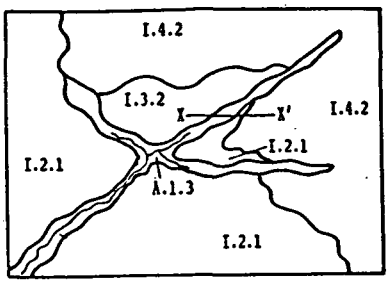
---

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

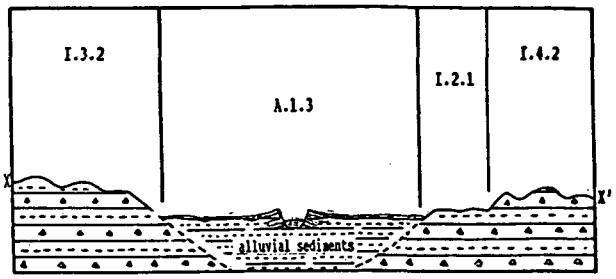
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Au.1:3 **2. MAP SHEET**: 1110 **3. AREA**: 40 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 29/05/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Narrow valley bottoms,mixed sediments,slopes 0-3%.
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 62 /8282-75
9. **RADAR** :.Star-I/250/88/1110-2,6
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
13. **FISHERIES** : Rawa (swamp)
14. **RIVERS** **a. Floodrisk** : High
    - **b. Inundation**: Seasonal
15. **VEGETATION/LAND USE** : , swamp (rawa) including sedges, deepwater rice (lebak)
    - **Area used** : 30 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : None
    - **b. Evidence** :

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	tropaquepts	65 %	yes
Associated 1	fluvaquents	30 %	yes
Associated 2	eutropepts	5 %	yes

---

32. **REPRESENTATIVE PROFILES**:

iqt/ /341-18 /72/SK/1110/44/ /50 /
ite/ /341-70 /72/IS/1110/23/ /15 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	moderately coarse
	subsoil	moderately fine	fine	moderately fine
b. Depth:	peatsoil	--	Shallow	--
	mineralsoil	deep	extremely deep	extremely deep
c. Drainage:		Poorly drained	Poorly drained	Well drained
d. Exch. K:	topsoil	--	low	--
	subsoil	--	low	--
e. Total K20:	topsoil	very high		low
	subsoil	medium	--	low
f. Avail. P:	method	Olsen		
	topsoil	very high	medium	--
	subsoil	very high	low	--
g. Total P:	topsoil	very high	--	very low
	subsoil	very high	--	very low
h. CEC pH 7	topsoil	--	medium	--
	subsoil	--	medium	--
i. Soil Reaction:	topsoil	slightly acid	strong acid	slightly acid
	subsoil	slightly acid	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 :		--	--	--
p. Organic Matter :		1.6	0.0	1.8
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	0	1

---

19. ALTITUDE: **Maximum:** 40 m **Minimum:** 10 m **Range:** 30 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: concave

23. SLOPE DISTR.: **Valleybottoms:** 95 %
Interfluves : 0-8%: 5 %, **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- Flood plain, tropaquepts, 65%
-2- Flood plain, fluvaquents, 30%
-3- Transition, eutropepts, 5%
-4-

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

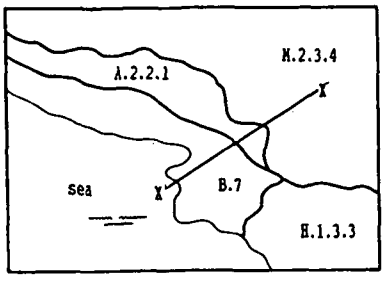
---

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:** 3 **18.b:** 2 **18.c:** 2
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 3

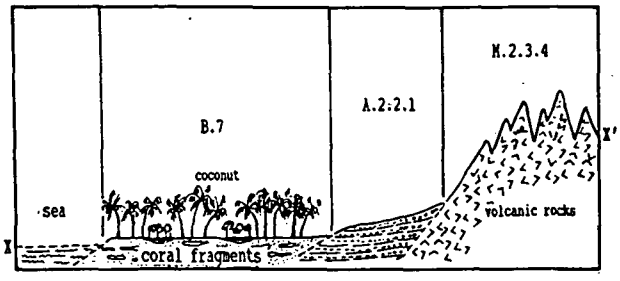
---

31. ADDITIONAL NOTES: Tropaquepts transpered from Af.1.2.1 and Fluvaquents extrapolation based on RePPProT land System BLI

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Au.2.2.1 **2. MAP SHEET**: 1110 **3. AREA**: 113 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 29/05/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Slightly dissected alluvial and colluvial fans,mixed sediments, slopes 3-8%
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 58 /8292-67 , 58 /8292-65
9. **RADAR** : Star-I/250/88/1110-1,3
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, Medium wells
13. **FISHERIES** : Sungai (river)
14. **RIVERS** a. **Floodrisk** : Low
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : bush, alang-alang, shifting cultivation, upland crops, rainfed wetland rice, irrigated wetland rice (irigasi), coconut (kelapa)
    Area used : 60 %
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 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	coarse	--
	subsoil	medium	moderately coarse	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Poorly drained	--
d. Exch. K:	topsoil	medium	--	--
	subsoil	low	--	--
e. Total K2O:	topsoil	medium	low	--
	subsoil	low	very low	--
f. Avail. P:	method	Bray I		
	topsoil	very high	--	--
	subsoil	low	--	--
g. Total P:	topsoil	low	low	--
	subsoil	very low	very low	--
h. CEC pH 7	topsoil	high	medium	--
	subsoil	very high	medium	--
i. Soil Reaction:	topsoil	very strong acid	strong acid	--
	subsoil	strong acid	moderately acid	--
j. Al Sat.	topsoil	very low	--	--
	subsoil	low	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		102 cm	--	--
p. Organic Matter :		3.8	0.0	0.0
q. TEB :		94.4	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 100 m **Minimum:** 5 m **Range:** 40 m

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

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

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

23. SLOPE DISTR.: **Valleybottoms:** 20 %
Interfluves : 0-8%:80 %, **9-25%:** 0 %, **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:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

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

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

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

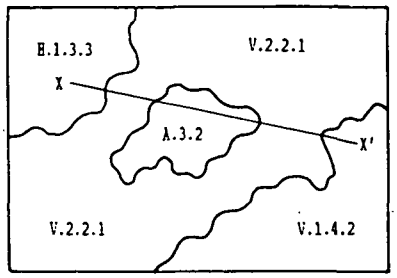
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 2 **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:** 3 **29:** 2

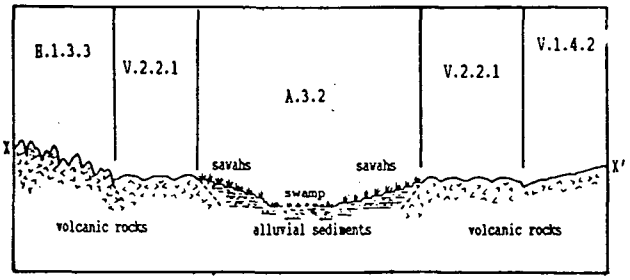
---

31. ADDITIONAL NOTES: Tropaquepts extrapolation based on RePPProt Land System KNJ.Representative profiles for Eutropepts is extrapolated from other LU.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Au.3.2 **2. MAP SHEET**: 1110 **3. AREA**: 39 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 29/05/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Closed basin/depression,mixed sediments, slopes 0-3%.
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 61 /8344-195, 57 /8292-81 , 57 /8292-79
9. **RADAR** : Star-I/250/88/1110-4
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** : Rawa (swamp)
14. **RIVERS** a. **Floodrisk** : Low
    - b. **Inundation**: Seasonal
15. **VEGETATION/LAND USE** : , swamp (rawa) including sedges, rainfed wetland rice, irrigated wetland rice (irigasi)
    - **Area used** : 90 %
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**:

iqt/ /340-12 /71/SK/1110/41/ /35a/ ite/ /340-22 /71/DN/1010/ / /60 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	moderately fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	moderately deep	--
c. Drainage:		Irrigated	Well drained	--
d. Exch. K:	topsoil	low	very high	--
	subsoil	low	high	--
e. Total K2O:	topsoil	low	very high	--
	subsoil	very low	high	--
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	medium	high	--
	subsoil	medium	medium	--
h. CEC pH 7	topsoil	high	high	--
	subsoil	very high	high	--
i. Soil Reaction:	topsoil	slightly acid	strong acid	--
	subsoil	moderately alkaline	slightly acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		105 cm	65 cm	--
p. Organic Matter :		1.3	1.4	0.0
q. TEB :		31.5	26.6	0.0
r. Total observations:		2	1	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 100 m **Range:** 125 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: 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:** **b. Variability:**

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

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

---

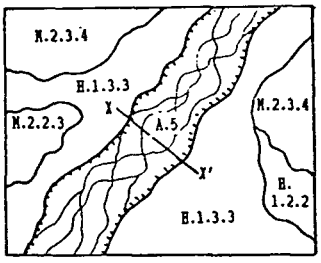
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 2 **14.a:** 2 **14.b:** 2 **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

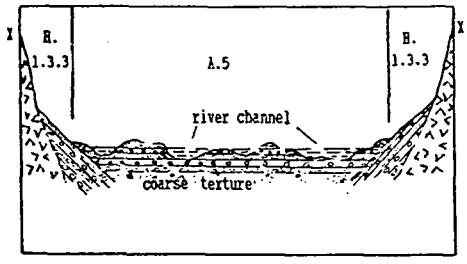
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Aq.5 **2. MAP SHEET**: 1110 **3. AREA**: 6 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 29/05/89 **Status:** Final

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

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-73 , 58 /8292-67

9. RADAR : Star-I/250/88/1110-3,4

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

a. Weathering : Slight

b. Lithology : sand

c. Formation :

12. WATER a. Quality : Fresh

b. Source : Perennial River, Shallow wells

13. FISHERIES : Sungai (river)

14. RIVERS a. Floodrisk : High

b. Inundation: Seasonal

15. VEGETATION/LAND USE : , bush, upland crops, tea (teh)

Area used : 20 %

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 %	no
Associated 2	dystropepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

iqt/ / /87/SR/1010/44/ /44 / evt/ / /87/SR/1010/ / /43 /

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	--	Moderately well
d. Exch. K:	topsoil	low	--	high
	subsoil	very low	--	low
e. Total K2O:	topsoil	low	--	high
	subsoil	very low	--	medium
f. Avail. P:	method	Bray I		Bray I
	topsoil	very low	--	high
	subsoil	very low	--	very low
g. Total P:	topsoil	low	--	very high
	subsoil	very low	--	medium
h. CEC pH 7	topsoil	very 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 :		120 cm	--	120 cm
p. Organic Matter :		3.3	0.0	2.0
q. TEB :		25.5	0.0	11.9
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 100 m **Minimum:** 5 m **Range:** 40 m

20. PLAN/PROFILE: **Dominant:**
Included:

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

22. SLOPE: **a. Steepness:**flat **b. Variability:** Medium
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:** 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:** **b. Variability:**

28. LAND FACETS: -1-
-2-
-3-
-4-

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

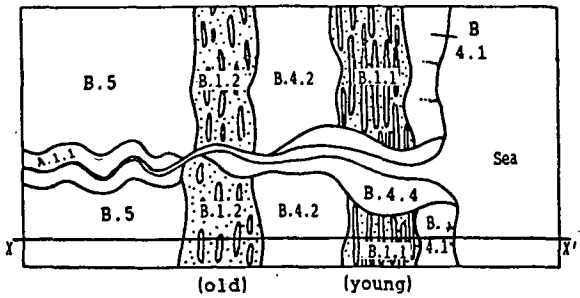
---

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

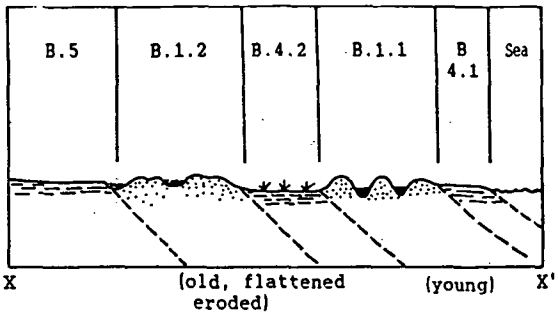
---

31. ADDITIONAL NOTES: Representative profiles are extrapolated from sheet Kotaagung

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Bfq.1.1 **2. MAP SHEET**: 1110 **3. AREA**: 9 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 29/05/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Complex of beach ridges and swales,fine and coarse sediments (unripe)
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000
9. **RADAR** : Star_I/250/88/1110-4
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - a. **Weathering** :
    - b. **Lithology** : sand, clay
    - c. **Formation** : Qal
12. **WATER** a. **Quality** : Brackish
    - b. **Source** : Rain
13. **FISHERIES** : Laut (sea)
14. **RIVERS** a. **Floodrisk** : Low
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : coastal forest on beaches, bush, coconut (kelapa)
    - **Area used** : 60 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : None
    - b. **Evidence** :

---

17. **SOIL GREAT GROUP** :

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

---

32. **REPRESENTATIVE PROFILES**:

est/ /341-7 /72/SK/1110/24/ /09 / eqv/ /341-5 /72/SK/1110/24/ /07 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	coarse	fine	--
	subsoil	coarse	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	moderately deep	very deep	--
c. Drainage:		Excessively drained	Moderately well	--
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total Mag.	topsoil	low	very high	--
	subsoil	low	very high	--
f. Avail. P:	method	Olsen	Olsen	
	topsoil	low	medium	--
	subsoil	low	very low	--
g. Total P:	topsoil	low	low	--
	subsoil	low	very low	--
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	neutral	slightly acid	--
	subsoil	slightly alkaline	neutral	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		40 cm	100 cm	--
p. Organic Matter :		0.2	2.6	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		1	1	0

---

19. ALTITUDE: **Maximum:** 5 m **Minimum:** 1 m **Range:** 2 m

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

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

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

23. SLOPE DISTR.: **Valleybottoms:** 15 %
Interfluves : 0-8%:85 %, **9-25%:** 0 %, **25-55%:** 0 %

24. RELIEF AMPLI.: **a. Amplitude:** 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- Sandridges, tropopsamments, 85%
-2- Swales, fluvaquents, 15%
-3-
-4-

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

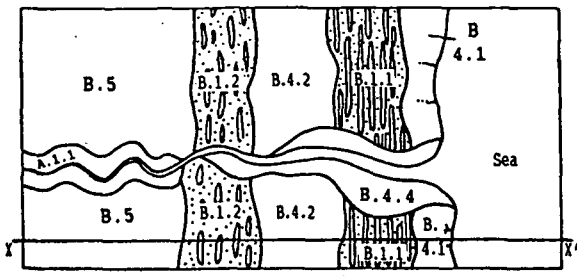
---

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

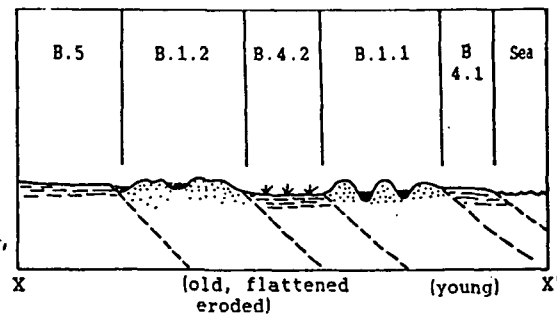
---

31. ADDITIONAL NOTES: Fluvaquents transfered from Bf.4.4

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Bfq.1.2 **2. MAP SHEET**: 1110 **3. AREA**: 149 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date**: 29/05/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Complex of eroded beach ridges and filled in swales,fine and coarse sediments (partly ripened)
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000
9. **RADAR** : Star-I/250/88/1110-2,4
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - a. **Weathering** : Slight
    - b. **Lithology** : clay, sand
    - c. **Formation** : Qal
12. **WATER** a. **Quality** : Brackish
    - b. **Source** : Rain, Perennial River
13. **FISHERIES** : Laut (sea)
14. **RIVERS** a. **Floodrisk** : Low
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : coastal forest on beaches, bush, alang-alang, irrigated wetland rice (irigasi), rainfed wetland rice, coconut (kelapa), towns, villages
    - **Area used** : 60 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : None
    - b. **Evidence** :

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	tropopsamments	70 %	yes
Associated 1	tropaquepts	25 %	yes
Associated 2	tropohumods	5 %	yes

---

32. **REPRESENTATIVE PROFILES**:

est/ /341-98 /72/IS/1110/51/ /62 / iqt/ /184-6 /68/IS/1110/24/ /63 /
sht/ /341-4 /72/SK/1110/24/ /06 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	coarse	fine	coarse
	subsoil	coarse	moderately fine	coarse
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	moderately deep	very deep
c. Drainage:		Somewhat excessively	Poorly drained	Somewhat excessively
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total P2O5:	topsoil	very low	high	low
	subsoil	low	medium	very low
f. Avail. P:	method	Olsen		Olsen
	topsoil	very low	--	low
	subsoil	very low	--	very low
g. Total P:	topsoil	low	very high	low
	subsoil	very low	medium	very low
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	strong acid	moderately acid	moderately acid
	subsoil	strong acid	moderately acid	strong acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		100 cm	80 cm	110 cm
p. Organic Matter :		1.8	2.1	1.5
q. TEB :		0.0	0.0	0.0
r. Total observations:		3	1	1

---

19. ALTITUDE: **Maximum:** 25 m **Minimum:** 5 m **Range:** 15 m

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

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

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

23. SLOPE DISTR.: **Valleybottoms:** 25 %
Interfluves : 0-8%:75 %, **8-25%:** 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-** Ridges, tropopsamments, 70%
-2- Swales, tropaquepts, 25%
-3- Ridges, tropohumods, 5%
-4-

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

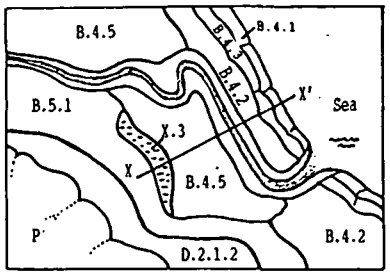
---

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:** 1 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

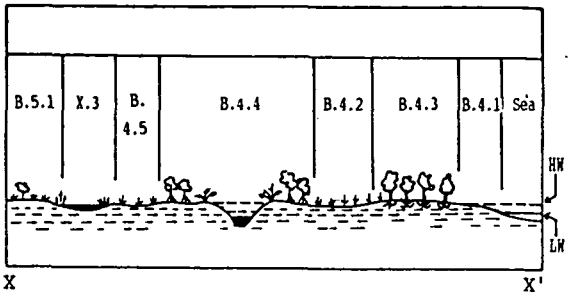
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Bf.4.3 **2. MAP SHEET**: 1110 **3. AREA**: 43 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date**: 29/05/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Tidal flats with mangrove vegetation,fine sediments(unripe).
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000
9. **RADAR** : Star-I/250/88/1110-2,4
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - **a. Weathering** :
    - **b. Lithology** : clay
    - **c. Formation** : Qal
12. **WATER** **a. Quality** : Saline
    b. Source : Rain
13. **FISHERIES** : Laut (sea)
14. **RIVERS** **a. Floodrisk** : None
    b. Inundation: Permanent
15. **VEGETATION/LAND USE** : mangrove forest (bakau), swamp (rawa) including sedges, fishponds (tambak)
    Area used : 20 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : None
    - **b. Evidence** :

---

17. **SOIL GREAT GROUP** :

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

---

32. **REPRESENTATIVE PROFILES**:

eqw/ /184-8 /68/IS/1110/52/ /67 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	very shallow	--
	mineralsoil	moderately deep	moderately deep	--
c. Drainage:		Very poorly drained	Very poorly drained	--
d. Exch. K:	topsoil	--	very high	--
	subsoil	--	very high	--
e. Total K2O:	topsoil	low	very high	--
	subsoil	low	very high	--
f. Avail. P:	method			
	topsoil	--	medium	--
	subsoil	--	high	--
g. Total P:	topsoil	medium	low	--
	subsoil	very low	medium	--
h. CEC pH 7	topsoil	--	low	--
	subsoil	--	medium	--
i. Soil Reaction:	topsoil	strong acid	slightly acid	--
	subsoil	very strong acid	slightly acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	very shallow	--
m. Salinity :		--	saline	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		6.4	0.0	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 2 m **Minimum:** 1 m **Range:** 2 m

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

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

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: short **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-** Tidal flats, hydraquents, 75%
-2- Tidal flats, sulfaquents, 25%
-3-
-4-

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

---

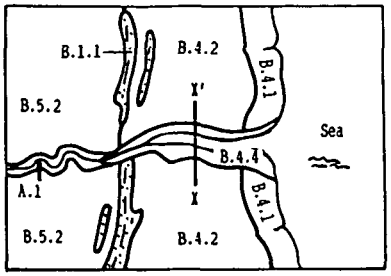
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

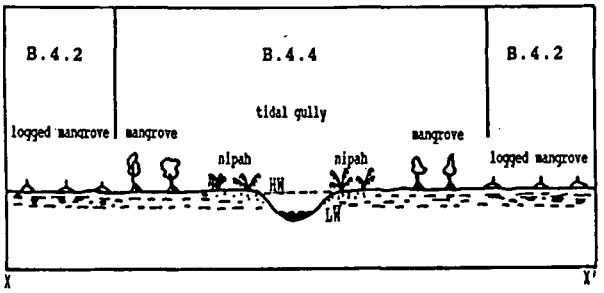
---

31. ADDITIONAL NOTES: Hydraquents transfered from landunit Bf.5.1 and Sulfaquents from RePPProt (KJ Land System).

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Bf.4.4 **2. MAP SHEET**: 1110 **3. AREA**: 43 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Estuarine flat along rivers with nipa vegetation,fine sediments (unripe)
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000
9. **RADAR** : Star-I/250/88/1110-2,4
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - a. **Weathering** :
    - b. **Lithology** : clay
    - c. **Formation** : Qal
12. **WATER** a. **Quality** : Brackish
    - b. **Source** : Rain
13. **FISHERIES** : Laut (sea)
14. **RIVERS** a. **Floodrisk** : High
    - b. **Inundation**: Permanent
15. **VEGETATION/LAND USE** : nipah forest (nipah), heath forest (kerangas), bush, swamp (rawa) including sedges
    - **Area used** : 0 %
16. **ACCELERATED EROSION**
    - a. **Occurence** :
    - b. **Evidence** :

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	hydraquents	80 %	yes
Associated 1	fluvaquents	15 %	yes
Associated 2	sulfaquents	5 %	yes

---

32. **REPRESENTATIVE PROFILES**:

eqw/ /184-8 /68/IS/1110/52/ /67 / eqv/ /341-5 /72/SK/1110/24/ /07 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	moderately deep	very deep	very deep
c. Drainage:		Very poorly drained	Moderately well	Very poorly drained
d. Exch. K:	topsoil	--	--	very high
	subsoil	--	--	very high
e. Total K2O:	topsoil	low	very high	very high
	subsoil	low	very high	very high
f. Avail. P:	method		Olsen	
	topsoil	--	medium	medium
	subsoil	--	very low	high
g. Total P:	topsoil	medium	low	low
	subsoil	very low	very low	medium
h. CEC pH 7	topsoil	--	--	low
	subsoil	--	--	medium
i. Soil Reaction:	topsoil	strong acid	slightly acid	slightly acid
	subsoil	very strong acid	neutral	slightly acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	shallow depth
m. Salinity :		--	--	saline
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		50 cm	100 cm	--
p. Organic Matter :		6.4	2.6	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	3	0

---

19. ALTITUDE: **Maximum:** 5 m **Minimum:** 1 m **Range:** 3 m

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

21. L.U. DRAINAGE: **a. Pattern:** none **b. density:** Very low
c. Variability: low

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

23. SLOPE DISTR.: **Valleybottoms:** 100 %
Interfluves : 0-8%:0 %, **8-25%:** 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- Flats with nipa, hydraquents, 80%
-2- Flats with nipa, sulfaquents, 5%
-3- Backswamps, fluvaquents, 15%
-4-

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

---

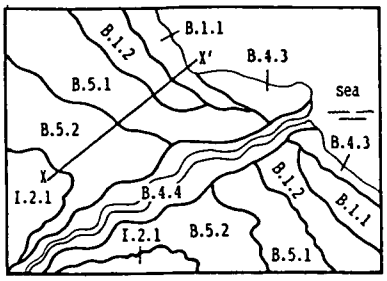
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

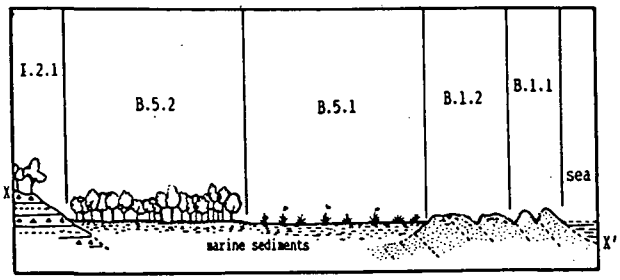
---

31. ADDITIONAL NOTES: Hydraquents transfered from Bf.5.1 and Sulfaquents from RePPProT (KJP Land System).

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Bf.5.1 **2. MAP SHEET**: 1110 **3. AREA**: 92 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Saline b ackswamps with grass vegetation ,fine sediments (unripe)

7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1: .000
9. **RADAR** : Star-I/250/88/1110-2,4
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - **a. Weathering** :
    - **b. Lithology** : clay
    - **c. Formation** : Qal
12. **WATER** **a. Quality** : Saline
    - **b. Source** : Rain
13. **FISHERIES** : Laut (sea)
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: Permanent
15. **VEGETATION/LAND USE** : swamp (rawa) including sedges
    - **Area used** : 0 %
16. **ACCELERATED EROSION**
    - **a. Occurence** :
    - **b. Evidence** :

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	hydraquents	60 %	yes
Associated 1	sulfihemists	30 %	yes
Associated 2	sulfaquents	10 %	yes

---

32. **REPRESENTATIVE PROFILES**:

eqw/ /184-8 /68/IS/1110/52/ /67 / hei/ /112-12 /79/P /1110/53/F18/12 /
eqi/ /84-1 /86/F /1110/53/ /15 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	organic	moderately fine
	subsoil	fine	organic	fine
b. Depth:	peatsoil	--	extremely deep	--
	mineralsoil	moderately deep	--	very deep
c. Drainage:		Very poorly drained	Very poorly drained	Very poorly drained
d. Exch. K:	topsoil	--	high	medium
	subsoil	--	high	medium
e. Total K2O:	topsoil	low		high
	subsoil	low	--	medium
f. Avail. P:	method			Bray I
	topsoil	--	--	very low
	subsoil	--	--	very low
g. Total P:	topsoil	medium	--	very high
	subsoil	very low	--	very low
h. CEC pH 7	topsoil	--	very high	very high
	subsoil	--	very high	high
i. Soil Reaction:	topsoil	strong acid	very strong acid	very strong acid
	subsoil	very strong acid	excessive acid	excessive acid
j. Al Sat.	topsoil	--	very low	very low
	subsoil	--	low	very low
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	shallow depth	shallow depth
m. Salinity :		--	salt free	moderately
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		50 cm	--	--
p. Organic Matter :		6.4	47.5	15.3
q. TEB :		0.0	40.6	9.4
r. Total observations:		2	0	0

---

19. ALTITUDE: **Maximum:** 5 m **Minimum:** 1 m **Range:** 2 m

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

21. L.U. DRAINAGE: **a. Pattern:** none **b. density:**
c. Variability:

22. SLOPE: **a. Steepness:**flat **b. Variability:** Low
c. Length: long **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:** **b. Variability:**

28. LAND FACETS: **-1-** Swamps, hydraquents, 60%
-2- Swamps, sulfihemists, 30%
-3- Swamps, sulfaquents, 10%
-4-

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

---

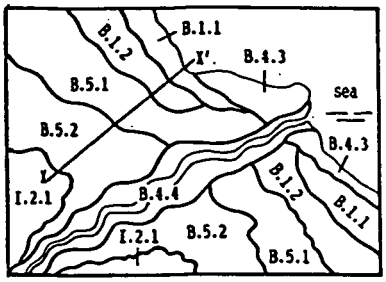
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 1 **12.a:** 2 **14.a:** 2 **14.b:** 2 **17:** 2 **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

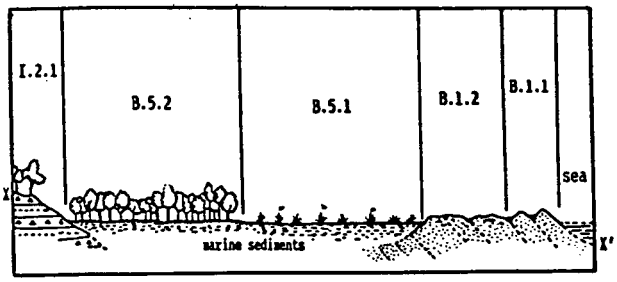
---

31. ADDITIONAL NOTES: Representative profiles for Sulfihemist and Sulfaquents are extrapolated from other LU.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Bf.5.2 **2. MAP SHEET**: 1110 **3. AREA**: 41 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date**: 30/05/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Saline backswamps with mixed forest,fine sediments (unripe)
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1: .000
9. **RADAR** : Star-I/250/88/1110-2,4
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - a. **Weathering** :
    - b. **Lithology** : clay
    - c. **Formation** : Qal
12. **WATER** a. **Quality** : Saline
    - b. **Source** : Rain
13. **FISHERIES** : Laut (sea)
14. **RIVERS** a. **Floodrisk** :
    - b. **Inundation**: Permanent
15. **VEGETATION/LAND USE** : peat swamp forest (gambut), swamp (rawa) including sedges
    Area used : 0 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : None
    - b. **Evidence** :

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	sulfihemists	65 %	yes
Associated 1	hydraquents	35 %	yes
Associated 2			

---

32. REPRESENTATIVE PROFILES:

hei/ /112-1 /79/P /1111/53/Fo1/01 / eqw/ /112-11 /79/P /1111/53/F16/11 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	organic	moderately fine	--
	subsoil	organic	fine	--
b. Depth:	peatsoil	extremely deep	--	--
	mineralsoil	--	very deep	--
c. Drainage:		Very poorly drained	Very poorly drained	--
d. Exch. K:	topsoil	very high	very low	--
	subsoil	high	very low	--
e. Total K2O:	topsoil	--	--	
	subsoil	--	--	--
f. Avail. P:	method			
	topsoil	very high	--	--
	subsoil	--	--	--
g. Total P:	topsoil	--	--	--
	subsoil	--	--	--
h. CEC pH 7	topsoil	very high	high	--
	subsoil	very high	very high	--
i. Soil Reaction:	topsoil	very strong acid	very strong acid	--
	subsoil	excessive acid	very strong acid	--
j. Al Sat.	topsoil	very low	very low	--
	subsoil	medium	very high	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		shallow depth	very deep	--
m. Salinity :		--	moderately	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	120 cm	--
p. Organic Matter :		55.2	22.3	0.0
q. TEB :		44.5	26.4	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 5 m **Minimum:** 1 m **Range:** 2 m

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

21. L.U. DRAINAGE: **a. Pattern:** none **b. density:**
c. Variability:

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

28. LAND FACETS: -1- Swamps, sulfihemists, 65%
-2- Swamps, hydraquents, 35%
-3-
-4-

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

---

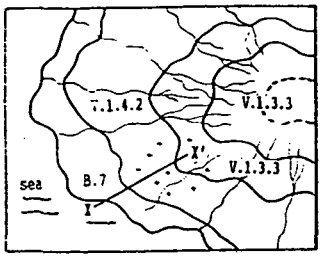
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 1 **12.a:** 2 **14.a:** 2 **14.b:** 2 **17:** 2 **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

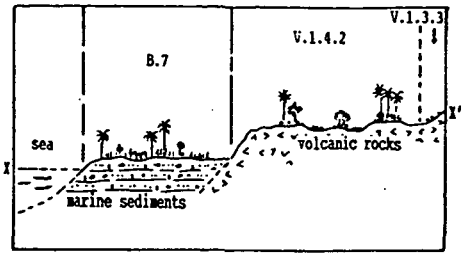
---

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

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Bcq.7 **2. MAP SHEET**: 1110 **3. AREA**: 75 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Undifferentiated marine deposits,calcareous and coarse sediments, slopes 0-3%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 59 /8292-19 , 60 /8295-05 , 61 /8344-207

9. RADAR : Star-I/250/88/1110-1,3

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

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

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

b. Source : Rain, Not known

13. FISHERIES : Laut (sea)

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

b. Inundation: Seasonal

15. VEGETATION/LAND USE : mangrove forest (bakau), bush, alang-alang, coconut (kelapa), towns, villages

Area used : 90 %

16. ACCELERATED EROSION

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

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

eot/ / /88/SR/1010/44/ /48 / est/ /184-15 /68/IS/1110/43/ /95 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	coarse	fine	--
	subsoil	coarse	coarse	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	moderately deep	moderately deep	--
c. Drainage:		Somewhat excessively	Somewhat excessively	--
d. Exch. K:	topsoil	very low	--	--
	subsoil	very low	--	--
e. Total K2O:	topsoil	low	medium	--
	subsoil	low	low	--
f. Avail. P:	method	Olsen		
	topsoil	very low	--	--
	subsoil	very low	--	--
g. Total P:	topsoil	high	high	--
	subsoil	high	high	--
h. CEC pH 7	topsoil	very low	--	--
	subsoil	very low	--	--
i. Soil Reaction:	topsoil	strongly alkaline	slightly alkaline	--
	subsoil	strongly alkaline	neutral	--
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 :		75 cm	70 cm	--
p. Organic Matter :		3.4	3.4	0.0
q. TEB :		22.5	0.0	0.0
r. Total observations:		0	1	0

---

19. ALTITUDE: **Maximum:** 10 m **Minimum:** 1 m **Range:** 5 m

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

21. L.U. DRAINAGE: **a. Pattern:** none **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:** 20 %
Interfluves : 0-8%:80 %, **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 narrow **b. Variability:** Medium

28. LAND FACETS: -1- Elevated, troporthents. 80%
-2- Depression, tropopsamments, 20%
-3-
-4-

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

---

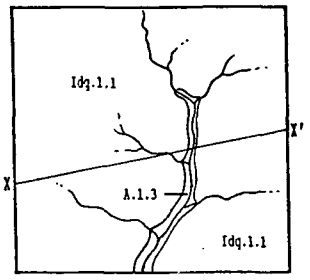
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 2 **12.a:** 2 **14.a:** 2 **14.b:** 2 **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

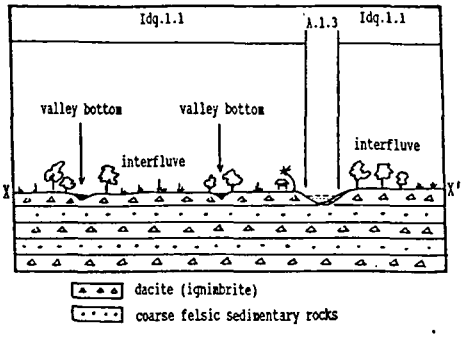
---

31. ADDITIONAL NOTES: Representative profile for Troporthents is extrapolated from other sheet (KotaAgung, Bcq.7).

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Idq.1.1 **2. MAP SHEET**: 1110 **3. AREA**: 174 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Slightly dissected flat acid tuff plain,acid tuffs and felsic coarse sedimentary rocks, slopes 0-3%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 61 /8344-197, 60 /8295-017, 59 /8292-029

9. RADAR : Star-I/250/88/1110-2.3

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

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

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

b. Source : Perennial River, Shallow wells

13. FISHERIES : Sungai (river)

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

b. Inundation: None

15. VEGETATION/LAND USE : , bush, alang-alang, upland crops, rainfed wetland rice, towns, villages

Area used : 90 %

16. ACCELERATED EROSION

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

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

udh/ /84-14 /85/DN/1111/12/ /09 / iqt/ /84-12 /86/DK/1110/53/ /22 /

ity/ /184-1 /68/IS/1110/44/ /52 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	medium
	subsoil	fine	fine	moderately fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	moderately deep	very deep
c. Drainage:		Well drained	Poorly drained	Imperfectly drained
d. Exch. K:	topsoil	low	low	--
	subsoil	low	low	--
e. Total K20:	topsoil	low	very low	medium
	subsoil	very low	very low	very low
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	medium	--
	subsoil	very low	low	--
g. Total P:	topsoil	very low	very high	low
	subsoil	very low	very high	very low
h. CEC pH 7	topsoil	low	high	--
	subsoil	low	high	--
i. Soil Reaction:	topsoil	moderately acid	moderately acid	moderately acid
	subsoil	very strong acid	neutral	very strong acid
j. Al Sat.	topsoil	very low	very low	--
	subsoil	medium	very low	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		salt free	salt free	salt free
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	60 cm	120 cm
p. Organic Matter :		1.8	0.9	2.7
q. TEB :		1.9	18.2	0.0
r. Total observations:		0	1	3

---

19. ALTITUDE: **Maximum:** 60 m **Minimum:** 40 m **Range:** 50 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:**flat **b. Variability:** Low
c. Length: extremely **d. Variability:** Low
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 10%
Interfluves : 0-8%: 85%, **9-25%:** 5 %, **25-55%:** 0 %

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

28. LAND FACETS: **-1-** Interfluves, kanhapludults, 60%
-2- Deppressions on interf, tropaquepts, 20%
-3- Interfluves, dystropepts, 10%
-4- Valley bottoms, dystropepts, 10%

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

---

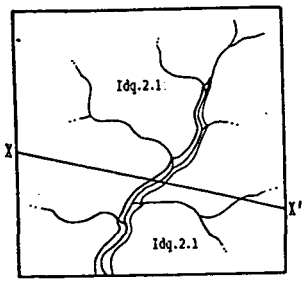
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

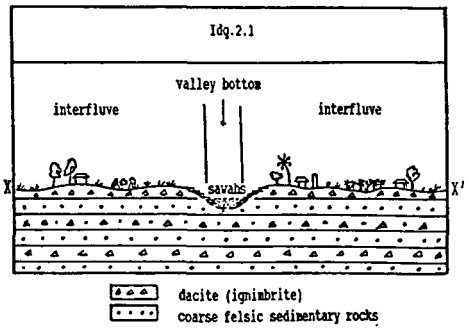
---

31. ADDITIONAL NOTES: Representative profile for Kanhapludults is extrapolated from other sheet (Menggala, Idq.1.1).

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Idq.2.1 **2. MAP SHEET**: 1110 **3. AREA**: 792 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Slightly dissected flat to undulating acid tuff plain,acid tuffs and felsic coarse sedimentary rocks, slopes 0-8%

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 62 /8282-061, 60 /8295-013

9. RADAR : Star-I/250/88/1110-2,4

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

a. Weathering : High

b. Lithology : dacite, liparite, sandstone

c. Formation : Qlv

12. WATER a. Quality : Fresh

b. Source : Perennial River, Shallow wells

13. FISHERIES : Sungai (river)

14. RIVERS a. Floodrisk : None

b. Inundation: None

15. VEGETATION/LAND USE : , bush, alang-alang, upland crops, mixed gardens of fruit trees, rainfed wetland rice, coconut (kelapa), 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%	kanhapludults	60 %	yes
Associated 1	tropaquepts	25 %	yes
Associated 2	dystropepts	15 %	yes

---

32. REPRESENTATIVE PROFILES:

udh/ /86-33 /81/SR/1110/43/ /26 / iqt/ /86-36 /81/DK/1110/23/ /04 /

ity/ /340-6 /71/SK/1110/41/ /19 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	medium	moderately coarse
	subsoil	fine	medium	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	moderately deep	deep
c. Drainage:		Well drained	Imperfectly 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			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	very low	very low	low
	subsoil	very low	very low	very low
h. CEC pH 7	topsoil	medium	very low	--
	subsoil	low	very low	--
i. Soil Reaction:	topsoil	strong acid	very strong acid	neutral
	subsoil	strong acid	very strong acid	neutral
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		138 cm	75 cm	90 cm
p. Organic Matter :		1.4	0.8	2.1
q. TEB :		2.8	1.4	0.0
r. Total observations:		1	4	9

---

19. ALTITUDE: **Maximum:** 60 m **Minimum:** 10 m **Range:** 40 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:** Low
c. Length: long **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**85 %, **9-25%:** 5 %, **25-55%:** 0 %

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

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:** very narrow **b. Variability:** Low

28. LAND FACETS: **-1-** Interfluves, kanhapludults, 60%
-2- Depression on interflu, tropaquepts, 15%
-3- Valley bottoms, tropaquepts, 10%
-4- Interfluves, dystropepts, 15%

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

---

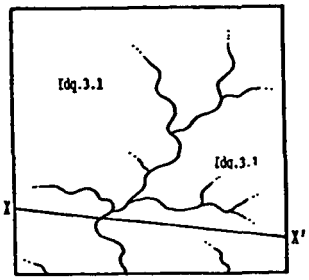
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

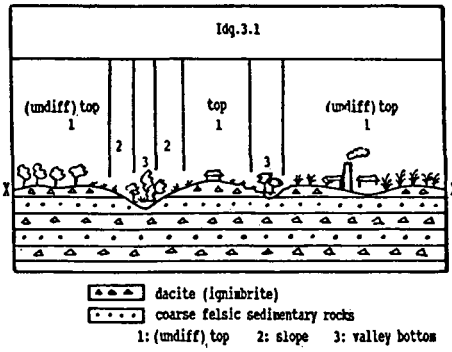
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Idq.3.1 **2. MAP SHEET**: 1110 **3. AREA**: 219 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 07/06/89 **Status:** Final

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

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 59 /8292-29 , 59 /8292-27 , 60 /8295-19

9. RADAR : Star-I/250/88/1110-5

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

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

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

b. Source : Perennial River, Medium wells

13. FISHERIES : Not known

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

b. Inundation: None

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

Area used : 95 %

16. ACCELERATED EROSION

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

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	kanhapludults	65 %	yes
Associated 1	dystropepts	30 %	yes
Associated 2	tropaquepts	5 %	yes

---

32. REPRESENTATIVE PROFILES:

udh/ /184-14 /68/IS/1110/43/ /92 / ity/ /341-90 /72/IS/1110/44/ /52 /

iqt/ /86-16 /81/NS/1110/42/ /25 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	**topsoil**	fine	moderately fine	moderately coarse
	subsoil	fine	fine	moderately fine
b. Depth:	**peatsoil**	--	--	--
	mineralsoil	deep	deep	very deep
c. Drainage:		Moderately well	Well drained	Well drained
d. Exch. K:	**topsoil**	--	--	low
	subsoil	--	--	low
e. Total K2O:	**topsoil**	medium	medium	very low
	subsoil	very low	very low	very low
f. Avail. P:	**method**			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	**topsoil**	low	medium	low
	subsoil	very low	low	very low
h. CEC pH 7	**topsoil**	--	--	low
	subsoil	--	--	low
i. Soil Reaction:	**topsoil**	strong acid	neutral	very strong acid
	subsoil	strong acid	strong acid	moderately acid
j. Al Sat.	**topsoil**	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		85 cm	80 cm	120 cm
p. Organic Matter :		2.2	1.7	1.0
q. TEB :		0.0	0.0	3.2
r. Total observations:		1	2	1

---

19. ALTITUDE: **Maximum:** 70 m **Minimum:** 40 m **Range:** 50 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:** 5 %
Interfluves : 0-8%:80 %, **9-25%:** 15 %, **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:** 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, 65%
-2- Mid & lower slopes, dystropepts, 30%
-3- Valley bottoms, tropaquepts, 5%
-4-

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

---

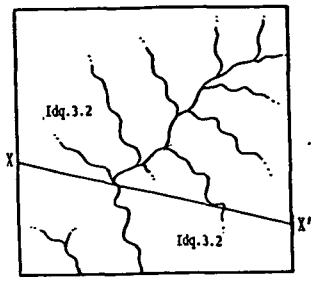
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

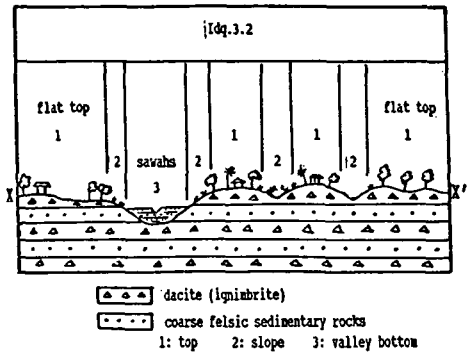
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Idq.3.2 **2. MAP SHEET**: 1110 **3. AREA**: 505 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final

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

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 58 /8292-53 , 60 /8295-19 , 62 /8282-61

9. RADAR : Star-I/250/88/1110-3,5

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

a. Weathering : Partial

b. Lithology : dacite, liparite, sandstone

c. Formation : Qlv

12. WATER a. Quality : Fresh

b. Source : Perennial River, Medium wells

13. FISHERIES : Sungai (river)

14. RIVERS a. Floodrisk : None

b. Inundation: None

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

Area used : 90 %

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 %	yes
Associated 2	tropaquepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

udh/ /184-14 /68/IS/1110/43/ /92 / ity/ /86-28 /81/SR/1110/51/ /16 /

iqt/ /341-58 /72/DR/1110/53/ /63 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately coarse	medium
	subsoil	fine	moderately fine	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	extremely deep	deep
c. Drainage:		Well drained	Moderately well	Moderately well
d. Exch. K:	topsoil	--	low	--
	subsoil	--	low	--
e. Total N:	topsoil	medium	very low	low
	subsoil	very low	very low	very low
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	low	very low	medium
	subsoil	very low	very low	low
h. CEC pH 7	topsoil	--	very low	--
	subsoil	--	very low	--
i. Soil Reaction:	topsoil	strong acid	moderately acid	very strong acid
	subsoil	strong acid	very strong acid	strong acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		85 cm	180 cm	100 cm
p. Organic Matter :		2.2	1.0	1.5
q. TEB :		0.0	2.1	0.0
r. Total observations:		1	4	2

---

19. ALTITUDE: **Maximum:** 60 m **Minimum:** 20 m **Range:** 40 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:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : 0-8%:75 %, **9-25%:** 15 %, **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:** 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, kannapiudults, 60%
-2- Mid & lower slopes, dystropepts, 30%
-3- Valley bottoms, tropaquepts, 10%
-4-

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

---

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

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

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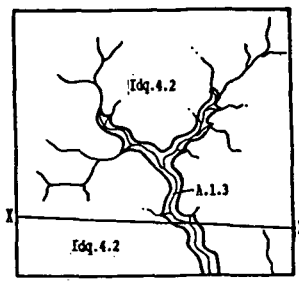
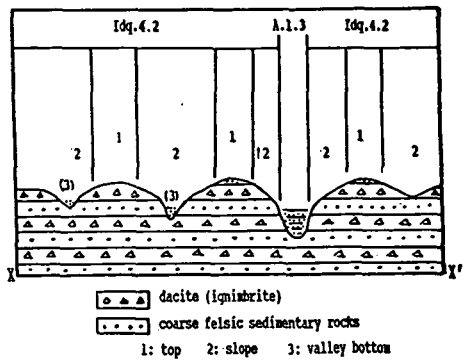
31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Idq.4.2 **2. MAP SHEET**: 1110 **3. AREA**: 702 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 30/05/89 **Status**: Final

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

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 60 /8295-011, 60 /8295-019, 58 /8292-057

9. RADAR : Star-I/250/88/1110-2,5

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

- **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 : , bush, alang-alang, shifting cultivation, upland crops, rainfed wetland rice, rubber (karet), towns, villages

Area used : 90 %

16. ACCELERATED EROSION

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

---

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:

ity/ /86-25 /81/SR/1110/51/ /13 / udh/ /84-19 /85/US/1111/14/ /09 /

iqt/ /341-15 /72/SK/1110/43/ /43 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately coarse	medium
	subsoil	fine	moderately coarse	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	very deep	deep
c. Drainage:		Well drained	Moderately well	Well drained
d. Exch. K:	topsoil	low	high	--
	subsoil	low	low	--
e. Total K2O:	topsoil	very low	medium	medium
	subsoil	very low	very low	very low
f. Avail. P:	method	Bray I		Olsen
	topsoil	very low	--	low
	subsoil	very low	--	very low
g. Total P:	topsoil	very low	low	medium
	subsoil	very low	very low	low
h. CEC pH 7	topsoil	low	low	--
	subsoil	very low	very low	--
i. Soil Reaction:	topsoil	strong acid	moderately acid	moderately acid
	subsoil	very strong acid	very strong acid	very strong acid
j. Al Sat.	topsoil	very high	--	--
	subsoil	very high	--	--
k. Al toxicity :		yes	--	--
l. Acid sulph. pot.:		not relevant	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		125 cm	150 cm	100 cm
p. Organic Matter :		1.0	1.0	1.6
q. TEB :		0.4	1.7	0.0
r. Total observations:		1	3	3

---

19. ALTITUDE: **Maximum:** 100 m **Minimum:** 10 m **Range:** 70 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:** 10 %
Interfluves : 0-8%:55 %, **8-25%:** 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- Mid & lower slopes, dystropepts, 35%
-3- Valley bottoms, tropaquepts, 10%
-4-

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

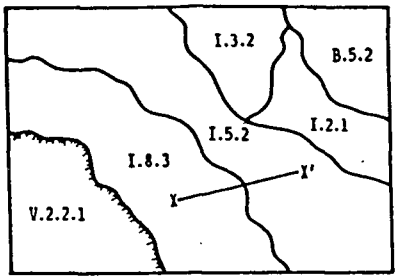
---

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:** 1 **18.b:** 1 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

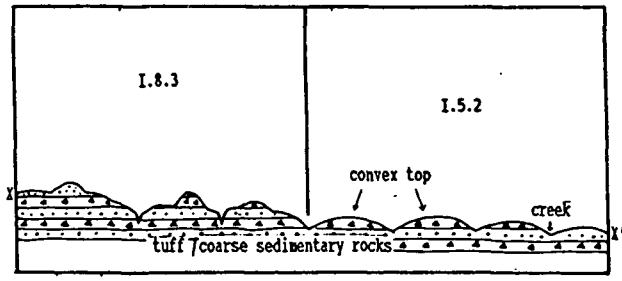
---

31. ADDITIONAL NOTES: Representative profile for Kanhapludults is extrapolated from sheet Menggala (Idq.4.2).

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Idq.5.2 **2. MAP SHEET**: 1110 **3. AREA**: 395 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected rolling acid tuff plain,acid tuffs and felsic coarse sedimentary rocks, slopes 8-15%.
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 59 /8292-025, 60 /8295-015, 82 /8282-73
9. **RADAR** : Star-I/250/88/1110-2.4
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - a. **Weathering** : Partial
    - b. **Lithology** : dacite, liparite, sandstone
    - c. **Formation** : Qlv
12. **WATER** a. **Quality** : Fresh
    - b. **Source** : Perennial River, Medium wells
13. **FISHERIES** : Sungai (river)
14. **RIVERS** a. **Floodrisk** : None
    - b. **Inundation**: None
15. **VEGETATION/LAND USE** : , bush, alang-alang, upland crops, mixed gardens of fruit trees, towns, villages
    - **Area used** : 90 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Common
    - b. **Evidence** : Gulleys

---

17. **SOIL GREAT GROUP** :

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

---

32. **REPRESENTATIVE PROFILES**:

udk/ /86-26 /81/SR/1110/42/ /14 / ity/ /341-81 /72/IS/1110/42/ /35 /
ite/ /341-28 /72/DR/1110/23/ /09 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately coarse	medium	medium
	subsoil	moderately fine	medium	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	moderately deep
c. Drainage:		Well drained	Well drained	Moderately well
d. Exch. K:	topsoil	low	--	--
	subsoil	low	--	--
e. Total K20:	topsoil	very low	very low	high
	subsoil	very low	very low	very high
f. Avail. P:	method		Olsen	Olsen
	topsoil	--	very low	medium
	subsoil	--	very low	very low
g. Total P:	topsoil	low	very low	low
	subsoil	very low	very low	very low
h. CEC pH 7	topsoil	low	--	--
	subsoil	very low	--	--
i. Soil Reaction:	topsoil	strong acid	strong acid	neutral
	subsoil	very strong acid	strong acid	moderately acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		125 cm	100 cm	55 cm
p. Organic Matter :		1.4	0.8	1.3
q. TEB :		1.7	0.0	0.0
r. Total observations:		3	2	1

---

19. ALTITUDE: **Maximum:** 70 m **Minimum:** 40 m **Range:** 50 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%:30 %, **9-25%:** 65 %, **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:** Undulating **b. Length:**Short **c. Variability:** Medium
d. Width: moderate **e. Variability:** Medium

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

28. LAND FACETS: **-1-** Crest/upper slopes, kandiudults, 60%
-2- Middle slopes, dystropepts, 30%
-3- Lower slopes, eutropepts, 10%
-4-

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

---

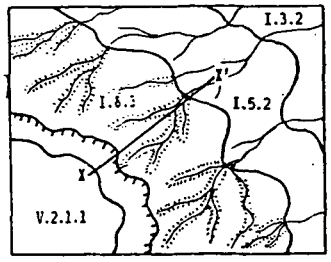
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

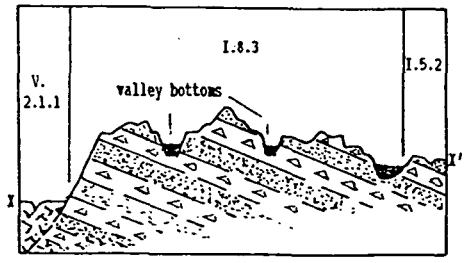
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Idq.8.3 **2. MAP SHEET**: 1110 **3. AREA**: 98 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 07/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Strongly dissected rolling acid tuff plain with hillocks,acid tuffs and coarse felsic sedimentary rocks,slopes 8-25%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 62 /8282-075

9. RADAR : Star-I/250/88/1110-3

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

- **a. Weathering** : Partial
- **b. Lithology** : dacite, liparite, 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 : , bush, grazing land, upland crops

Area used : 20 %

16. ACCELERATED EROSION

- **a. Occurence** : Extensive
- **b. Evidence** : Gulleys

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

eot/ /86-3 /81/NS/1110/23/ /04 / ite/ /86-35 /81/DK/1110/23/ /03 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	medium	--
	subsoil	moderately coarse	medium	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	mod. shallow	moderately deep	--
c. Drainage:		Well drained	Somewhat excessively	--
d. Exch. K:	topsoil	high	low	--
	subsoil	high	very low	--
e. Total P2O:	topsoil	high	low	--
	subsoil	high	low	--
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	very low	low	--
	subsoil	very low	very low	--
h. CEC pH 7	topsoil	low	high	--
	subsoil	low	high	--
i. Soil Reaction:	topsoil	moderately acid	very strong acid	--
	subsoil	slightly acid	strong acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		32 cm	50 cm	--
p. Organic Matter :		1.5	1.0	0.0
q. TEB :		6.5	22.9	0.0
r. Total observations:		1	2	0

---

19. ALTITUDE: **Maximum:** 70 m **Minimum:** 25 m **Range:** 40 m

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

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

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

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : 0-8%:10 %, **9-25%:** 75 %, **25-55%:** 10 %

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

25. TERRAIN: hillocKy >16%, 0-50 m

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

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

28. LAND FACETS: **-1-** Crests, up & mid slope, troporthents, 80%
-2- Lower slopes, eutropepts, 20%
-3-
-4-

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

---

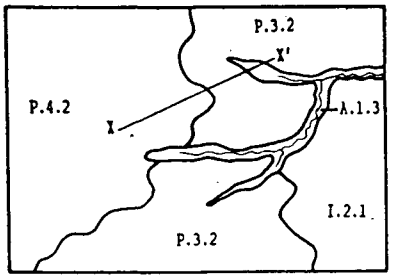
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

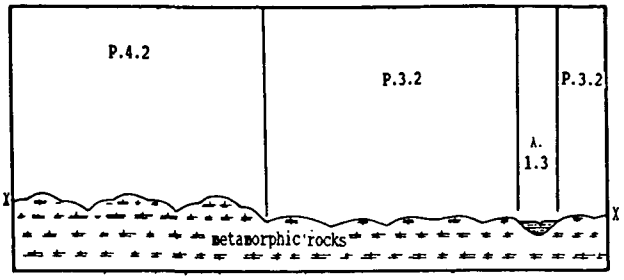
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Ptn.3.2 **2. MAP SHEET**: 1110- **3. AREA**: 158 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 30/05/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected undulating plain,metamorphic rocks, slopes 3-8%

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-85 , 59 /8292-23 , 60 /8295-11

9. RADAR : Star-I/250/88/1110-5

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

- **a. Weathering** : High
- **b. Lithology** : schists, gneiss
- **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 : , bush, alang-alang, upland crops, rubber (karet)

Area used : 60 %

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

---

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/ /340-52 /71/SD/1010/62/ /14 / ity/ /341-13 /72/SK/1110/42/ /36 /
iqt/ /86-41 /81/DK/1110/42/ /10 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	medium	moderately coarse
	subsoil	moderately fine	medium	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	mod. shallow	very deep
c. Drainage:		Well drained	Well drained	Imperfectly drained
d. Exch. K:	topsoil	--	--	low
	subsoil	--	--	low
e. Total K2O:	topsoil	low	high	very low
	subsoil	low	low	very low
f. Avail. P:	method		Olsen	
	topsoil	--	medium	--
	subsoil	--	very low	--
g. Total P:	topsoil	low	medium	very low
	subsoil	very low	low	very low
h. CEC pH 7	topsoil	--	--	very low
	subsoil	--	--	very low
i. Soil Reaction:	topsoil	slightly acid	slightly acid	very strong acid
	subsoil	moderately acid	slightly acid	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	40 cm	150 cm
p. Organic Matter :		2.1	3.0	1.0
q. TEB :		0.0	0.0	3.3
r. Total observations:		0	1	2

---

19. ALTITUDE: **Maximum:** 100 m **Minimum:** 50 m **Range:** 70 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:** Low
c. Length: moderate **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**90 %, **9-25%:** 0 %, **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:** 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-** Interfluves, kanhapludults, 60%
-2- Interfluves, dystropepts, 30%
-3- Valley bottoms, tropaquepts, 10%
-4-

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

---

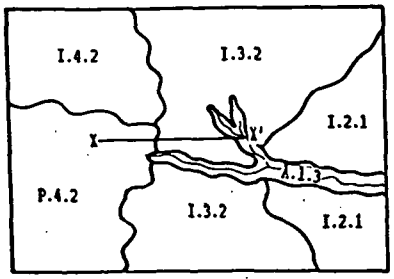
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

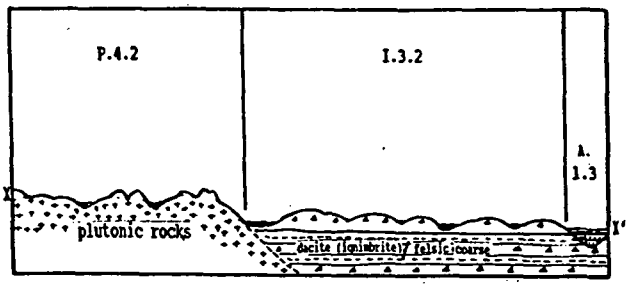
---

31. ADDITIONAL NOTES: Representative profile for Kanhapludults is extrapolated from sheet 1010 (Ptn.4.2).

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Pg.4.2 **2. MAP SHEET**: 1110 **3. AREA**: 86 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected undulating to rolling plain,acid plutonic rocks, slopes 3-15%
7. **SATELLITE SCENES** : 123/63/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 57 /8292-83 , 57 /8292-85
9. **RADAR** : Star-I/250/88/1110-4,5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - **a. Weathering** : High
    - **b. Lithology** : granite
    - **c. Formation** : Kgr
12. **WATER** **a. Quality** : Fresh
    - **b. Source** : Perennial River, Medium wells
13. **FISHERIES** : Not known
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: None
15. **VEGETATION/LAND USE** : , bush, alang-alang, shifting cultivation, upland crops, towns, villages
    - **Area used** : 90 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Common
    - **b. Evidence** : Gulleys

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	65 %	yes
Associated 1	hapludults	30 %	yes
Associated 2	tropaquepts	5 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /88/ER/1010/ / /42 / uda/ / /86/AH/1010/ / /7a /
iqt/ /341-11 /72/SK/1010/42/ /34 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	**topsoil**	fine	fine	medium
	subsoil	fine	fine	medium
b. Depth:	**peatsoil**	--	--	--
	mineralsoil	very deep	deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	**topsoil**	medium	medium	--
	subsoil	medium	medium	--
e. Total K2O:	**topsoil**	medium	medium	low
	subsoil	medium	medium	very low
f. Avail. P:	**method**	Bray I	Bray I	Olsen
	topsoil	very low	very low	low
	subsoil	very low	very low	very low
g. Total P:	**topsoil**	low	very low	low
	subsoil	low	very low	very low
h. CEC pH 7	**topsoil**	medium	low	--
	subsoil	medium	medium	very high
i. Soil Reaction:	**topsoil**	very strong acid	very strong acid	moderately acid
	subsoil	very strong acid	very strong acid	very strong acid
j. Al Sat.	**topsoil**	very low	high	--
	subsoil	very low	very high	--
k. Al toxicity :		--	no	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	98 cm	80 cm
p. Organic Matter :		2.9	1.6	1.9
q. TEB :		6.9	3.3	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 125 m **Minimum:** 70 m **Range:** 100 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: moderate **d. Variability:** Low
e. Curvature: convex

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

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

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/crest, hapludults, 30%
-3- Valley bottoms, tropaquepts, 5%
-4-

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

---

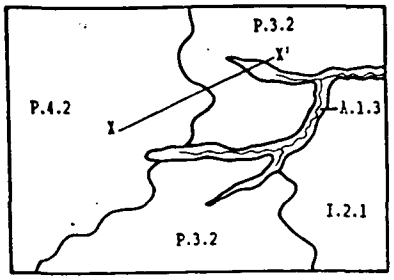
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

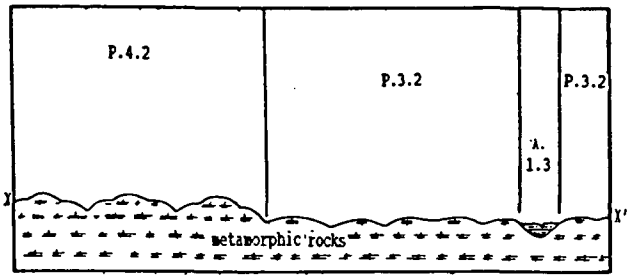
---

31. ADDITIONAL NOTES: All representative profiles are extrapolated from other Sheet/ LU.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Ptn.4.2 **2. MAP SHEET**: 1110 **3. AREA**: 129 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 30/05/89 **Status:** Final

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

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-085, 57 /8292-083

9. RADAR : Star-I/250/88/1110-5

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

a. Weathering : High

b. Lithology : gneiss, schists

c. Formation : PTse

12. WATER a. Quality : Fresh

b. Source : Perennial River, Medium wells

13. FISHERIES : Sungai (river)

14. RIVERS a. Floodrisk : None

b. Inundation: None

15. VEGETATION/LAND USE : , bush, alang-alang, upland crops, mixed gardens of fruit trees, rubber (karet), coconut (kelapa)

Area used : 60 %

16. ACCELERATED EROSION

a. Occurence : Localised

b. Evidence : Gulleys

---

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/ /184-12 / 0/IS/1110/43/ /86 /

iqt/ /340-07 / 0/SK/1110/41/ /20 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	medium	medium
	subsoil	moderately fine	moderately fine	moderately fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	mod. shallow	mod. shallow
c. Drainage:		Well drained	Well drained	Poorly drained
d. Exch. K:	topsoil	--	--	very low
	subsoil	--	--	very low
e. Total K2O:	topsoil	low	medium	very low
	subsoil	low	low	medium
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	low	low	very low
	subsoil	very low	very low	medium
h. CEC pH 7	topsoil	--	--	low
	subsoil	--	--	high
i. Soil Reaction:	topsoil	slightly acid	neutral	very strong acid
	subsoil	moderately acid	slightly acid	slightly acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		110 cm	40 cm	30 cm
p. Organic Matter :		2.1	2.4	0.4
q. TEB :		0.0	0.0	11.4
r. Total observations:		0	1	1

---

19. ALTITUDE: **Maximum:** 125 m **Minimum:** 50 m **Range:** 80 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:**gently sloping **b. Variability:** Medium
c. Length: moderate **d. Variability:** Low
e. Curvature: convex

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

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

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:**

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

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

---

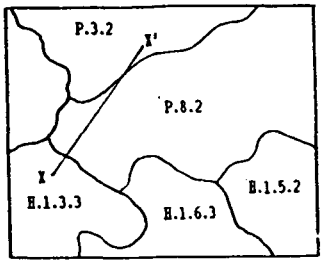
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

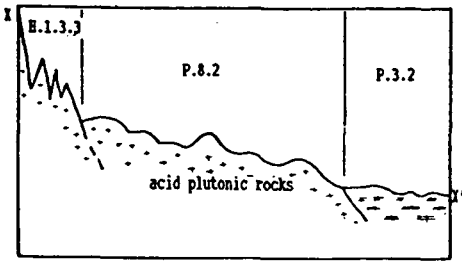
---

31 **ADDITIONAL NOTES:** Representative profile for Kanhapludults is extrapolated from Sheet 10.. (1:n...2).

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Pg.8.2 **2. MAP SHEET**: 1110- **3. AREA**: 119 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 01/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected rolling plain with hillocks,acid plutonic rocks, slopes 9-25%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 60 /8295-009, 57 /8292-87

9. RADAR : Star-I/250/88/1110-3

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

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

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

b. Source : Perennial River, Medium wells

13. FISHERIES : Sungai (river)

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

b. Inundation: None

15. VEGETATION/LAND USE : , alang-alang, shifting cultivation, upland crops, rubber (karet), 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%	dystropepts	65 %	yes
Associated 1	hapludults	30 %	yes
Associated 2	tropaquepts	5 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ /86-43 /81/DK/1110/42/ /12 / uda/ / /86/AH/1010/ / /7a /

iqt/ /341-11 /72/SK/1110/42/ /34 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately coarse	fine	medium
	subsoil	medium	fine	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	very deep
c. Drainage:		Poorly drained	--	Well drained
d. Exch. K:	topsoil	low	medium	--
	subsoil	low	medium	-
e. Total K2O:	topsoil	low	medium	low
	subsoil	low	medium	very low
f. Avail. P:	method		Bray I	Olsen
	topsoil	--	very low	low
	subsoil	--	very low	very low
g. Total P:	topsoil	very low	very low	low
	subsoil	very low	very low	very low
h. CEC pH 7	topsoil	low	low	--
	subsoil	very low	medium	--
i. Soil Reaction:	topsoil	slightly acid	very strong acid	moderately acid
	subsoil	neutral	very strong acid	very strong acid
j. Al Sat.	topsoil	--	high	--
	subsoil	--	very high	--
k. Al toxicity :		--	no	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		125 cm	98 cm	80 cm
p. Organic Matter :		0.6	1.6	1.9
q. TEB :		4.0	3.3	0.0
r. Total observations:		5	0	2

---

19. ALTITUDE: **Maximum:** 100 m **Minimum:** 50 m **Range:** 75 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:** 10 %
Interfluves : **0-8%**:20 %, **9-25%**: 50 %, **25-55%**: 10 %, **>55%**: 10 %

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:**Short **c. Variability:** Medium
d. Width: moderate **e. Variability:** Medium

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

28. LAND FACETS: -1- Upper + lower slopes, dystropepts, 65%
-2- Middle slopes, hapludults, 30%
-3- Valley bottoms, tropaquepts, 5%
-4-

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

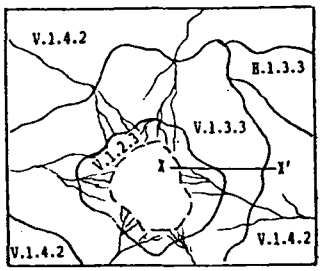
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **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:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

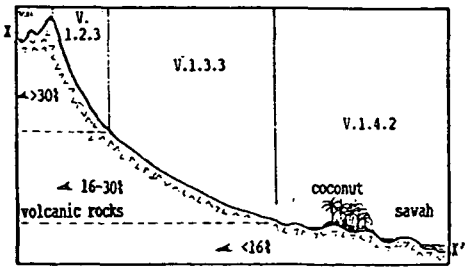
---

31. ADDITIONAL NOTES: Representative profile for Hapludults is extrapolated from Sheet . 1010 (Hg.1.2.2).

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vab.1.2.3 **2. MAP SHEET**: 1110- **3. AREA**: 74 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 01/06/89 **Status**: Final

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

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 61 /8344-20 , 58 /8292-061

9. RADAR : Star-I/250/88/1110-1,3

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

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

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

b. Source : Rain

13. FISHERIES :

14. RIVERS **a. Floodrisk** :

b. Inundation: None

15. VEGETATION/LAND USE : moist primary submontane 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%	dystrandepts	50 %	yes
Associated 1	troporthents	30 %	no
Associated 2	humitropepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

iny/ / /88/HJ/1010/ / /30 /

ith/ /340-26 /71/H /1110/43/ /60 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	--	moderately fine
	subsoil	medium	--	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	--	moderately deep
c. Drainage:		Well drained	--	Well drained
d. Exch. K:	topsoil	medium	--	high
	subsoil	very low	--	very low
e. Total K2O:	topsoil	medium	--	medium
	subsoil	very low	--	very low
f. Avail. P:	method	Bray I		
	topsoil	very low	--	--
	subsoil	very low	--	--
g. Total P:	topsoil	high	--	high
	subsoil	medium	--	high
h. CEC pH 7	topsoil	high	--	high
	subsoil	low	--	medium
i. Soil Reaction:	topsoil	excessive acid	--	excessive acid
	subsoil	strong acid	--	excessive 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 :		150 cm	--	70 cm
p. Organic Matter :		11.3	0.0	5.9
q. TEB :		3.0	0.0	1.8
r. Total observations:		0	0	1

---

19. ALTITUDE: **Maximum:** 1800 m **Minimum:** 750 m **Range:** 1150 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:**Steep **b. Variability:** Medium
c. Length: long **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : 0-8%:0 %, **9-25%:** 5 %, **25-55%:** 40 %, **>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:**Short **c. Variability:** Medium
d. Width: moderate **e. Variability:** Medium

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

28. LAND FACETS: -1- Middle parts, dystrandepts, 50%
-2- Crest/upper parts, eroporthents, 30%
-3- Lower parts, humitropepts, 10%
-4-

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

---

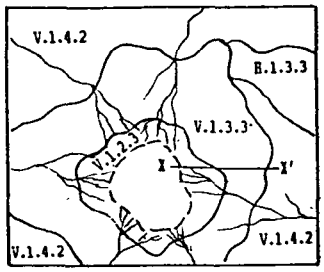
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

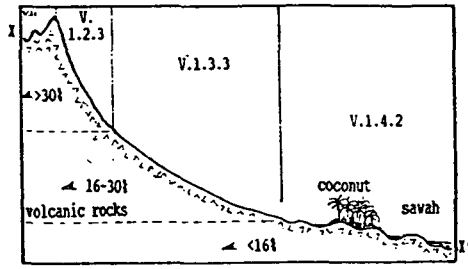
---

31. ADDITIONAL NOTES: Representative profile for Dystrandepts is extrapolated from Sheet 1010 (Vab.1.2.3).

BLOCK DIAGRAM:



CROSS SECTION:



1. **LAND UNIT**: Vab.1.3.3 **2. MAP SHEET**: 1110- **3. AREA**: 139 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected middle slopes of volcanoes,intermediate and mafic tuffs and lavas, slopes 16-50%.
7. **SATELLITE SCENES** : 123/64/14/11/88
8. **AERIAL PHOTOGRAPHS** : 1:100.000 57 /8292-077, 58 /8292-063
9. **RADAR** : Star-I/250/88/1110-3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 15 %
    - a. **Weathering** : Partial
    - b. **Lithology** : andesitic tuffs, andesitic lavas,
    - c. **Formation** : Qhv
12. **WATER** a. **Quality** : Fresh
    b. **Source** : Rain
13. **FISHERIES** :
14. **RIVERS** a. **Floodrisk** : None
    b. **Inundation**: None
15. **VEGETATION/LAND USE** : moist primary lowland forest, bush, shifting cultivation, upland crops, mixed gardens of fruit trees, coffee (kopi)
    Area used : 30 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Extensive
    - b. **Evidence** : Gulleys

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	50 %	yes
Associated 1	dystrandepts	25 %	yes
Associated 2	humitropepts	10 %	yes

---

32. **REPRESENTATIVE PROFILES**:

ity/ /86-17 /81/SR/1110/21/ /01 /
ith/ /341-64 /72/IS/1110/21/ /06 /

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	very deep	deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	high	medium	--
	subsoil	very low	low	--
e. Total K2O:	topsoil	low	high	low
	subsoil	very low	low	low
f. Avail. P:	method			Olsen
	topsoil	very high	very low	very high
	subsoil	very high	very low	very high
g. Total P:	topsoil	high	medium	very high
	subsoil	low	low	very high
h. CEC pH 7	topsoil	medium	medium	--
	subsoil	low	low	--
i. Soil Reaction:	topsoil	slightly acid	slightly acid	excessive acid
	subsoil	strong acid	slightly acid	excessive acid
j. Al Sat.	topsoil	--	very low	--
	subsoil	--	low	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		130 cm	--	90 cm
p. Organic Matter :		1.4	0.0	5.8
q. TEB :		11.9	0.0	0.0
r. Total observations:		2	0	2

---

19. ALTITUDE: **Maximum:** 750 m **Minimum:** 250 m **Range:** 500 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:**Steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**5 %, **9-25%:** 35 %, **25-55%:** 10 %

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

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

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

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

28. LAND FACETS: -1- Upper part, dystropepts, 50%
-2- Middle part, dystrandepts, 25%
-3- Lower part, humitropepts, 10%
-4-

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

---

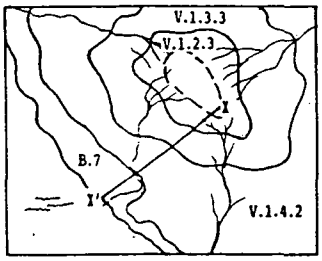
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

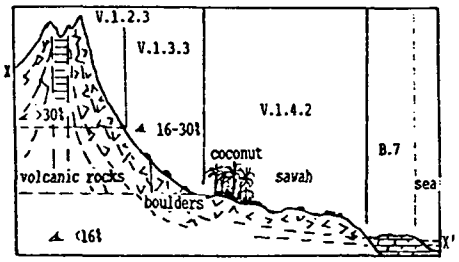
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vab.1.4.2 **2. MAP SHEET**: 1110 **3. AREA**: 347 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 01/06/89 **Status**: Final

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

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-077, 58 /8292-063, 61 /8295-207

9. RADAR : Star-I/250/88/1110-2,3

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

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

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

b. Source : Rain

13. FISHERIES :

14. RIVERS **a. Floodrisk** :

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, alang-alang, shifting cu ltivation, upland crops, irrigated wetland rice (irigasi), coffee (kopi), clove (cengkeh), rubber (karet), towns, villages

Area used : 80 %

16. ACCELERATED EROSION

- **a. Occurence** : Localised
- **b. Evidence** : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	40 %	yes
Associated 1	hapludults	30 %	yes
Associated 2	humitropepts	10 %	no

---

32. REPRESENTATIVE PROFILES:

ity/ /86-4 /81/NS/1110/21/ /05 / uda/ /341-59 /72/IS/1110/21/ /01 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	moderately fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	high	--	--
	subsoil	low	--	--
e. Total K2O:	topsoil	very high	very high	--
	subsoil	medium	high	--
f. Avail. P:	method		Olsen	
	topsoil	--	medium	--
	subsoil	--	low	--
g. Total P:	topsoil	high	medium	--
	subsoil	low	medium	--
h. CEC pH 7	topsoil	medium	--	--
	subsoil	medium	--	--
i. Soil Reaction:	topsoil	strong acid	neutral	--
	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 :		120 cm	100 cm	--
p. Organic Matter :		1.8	1.7	0.0
q. TEB :		6.9	0.0	0.0
r. Total observations:		4	1	0

---

19. ALTITUDE: **Maximum:** 500 m **Minimum:** 20 m **Range:** 200 m

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

21. L.U. DRAINAGE: a. **Pattern:** parallel **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%:**80 %, **9-25%:** 10 %, **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:** narrow **b. Variability:** Low

28. LAND FACETS: -1- Upper & lower part, dystropepts, 40%
-2- Middle part, hapludults, 30%
-3- Valleys, humitropepts, 10%
-4-

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

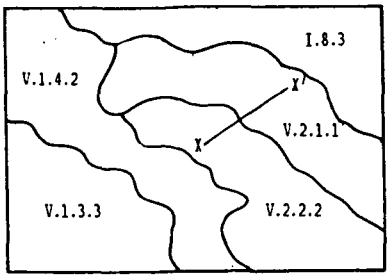
---

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

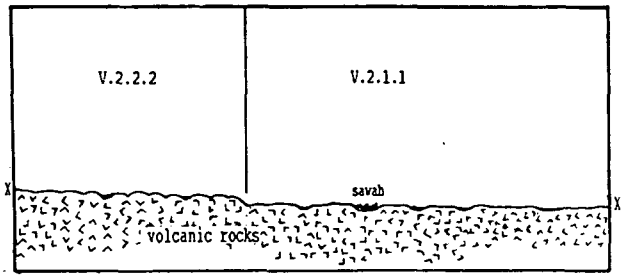
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vab.2.1.1 **2. MAP SHEET**: 1110 **3. AREA**: 19 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Slightly dissected flat volcanic plain,intermediate and mafic tuffs and lavas, slopes 0-3%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 62 /8282-075

9. RADAR : Star-I/250/88/1110-2

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

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

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

13. FISHERIES :

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 : 90 %

16. ACCELERATED EROSION
- **a. Occurence** : Localised
- **b. Evidence** : Landslips

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

ada/ /341-61 /72/IS/1110/21/ /03 / ity/ /341-66 /72/IS/1110/23/ /08 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	moderately fine	--
	subsoil	moderately fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	moderately deep	--
c. Drainage:		Well drained	Poorly drained	--
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total K2O:	topsoil	low	low	
	subsoil	low	very low	--
f. Avail. P:	method	Olsen	Olsen	
	topsoil	very low	low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	low	--
	subsoil	low	very low	--
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	moderately acid	moderately acid	--
	subsoil	slightly acid	slightly acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		100 cm	80 cm	--
p. Organic Matter :		1.4	2.1	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		1	4	0

---

19. ALTITUDE: **Maximum:** 125 m **Minimum:** 50 m **Range:** 75 m

20. PLAN/PROFILE: **Dominant:** 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:**flat **b. Variability:** Low
c. Length: extremely **d. Variability:** Low
e. Curvature: straight

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

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

28. LAND FACETS: **-1-** Interfluves, hapludalfs, 80%
-2- Valley bottoms, tropaquepts, 20%
-3-
-4-

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

---

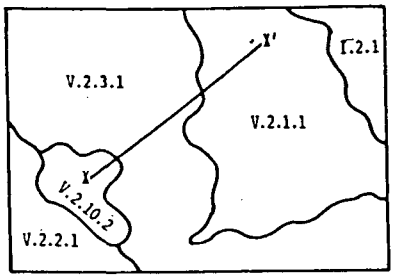
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

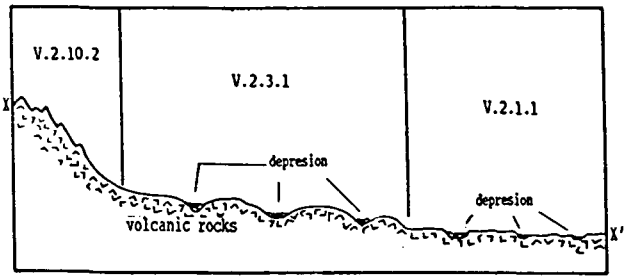
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vb.2.1.1 **2. MAP SHEET**: 1110 **3. AREA**: 52 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Slightly dissected flat volcanic plain,intermediate and mafic lavas, slopes 0-3%

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 62 /8282-65 , 62 /8282-63

9. RADAR : Star-I/250/88/1110-4,5

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

- **a. Weathering** : High
- **b. Lithology** : basalt
- **c. Formation** : Tov

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

13. FISHERIES :

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

15. VEGETATION/LAND USE : , upland crops, irrigated wetland rice (irigasi), clove (cengkeh), towns, villages

Area used : 100 %

16. ACCELERATED EROSION
- **a. Occurence** : Localised
- **b. Evidence** : Landslips

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	hapludalfs	60 %	yes
Associated 1	dystropepts	20 %	yes
Associated 2	tropaquepts	20 %	yes

---

32. REPRESENTATIVE PROFILES:

ada/ /341-56 /72/DR/1110/51/ /56 / ity/ /341-21 /72/SK/1110/51/ /62 /
iqt/ /341-91 /72/IS/1110/51/ /53 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	fine	medium
	subsoil	fine	fine	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	mod. shallow	deep	very deep
c. Drainage:		Well drained	Moderately well	Poorly drained
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total K2O:	topsoil	very high	medium	medium
	subsoil	very high	very low	medium
f. Avail. P:	method	Olsen	Olsen	Olsen
	topsoil	high	very low	medium
	subsoil	medium	very low	low
g. Total P:	topsoil	high	high	very high
	subsoil	high	high	very high
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	neutral	strong acid	strong acid
	subsoil	neutral	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 :		50 cm	100 cm	125 cm
p. Organic Matter :		4.7	1.9	18.7
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 60 m **Minimum:** 25 m **Range:** 40 m

20. PLAN/PROFILE: **Dominant:** 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:**flat **b. Variability:** Low
c. Length: extremely **d. Variability:** Low
e. Curvature: straight

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

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

28. LAND FACETS: -1- Interfluves, hapludalfs, 60%
-2- Interfluves, dystropepts, 20%
-3- Valley bottoms, tropaquepts, 20%
-4-

29. FRAGMENTATION: **Valleys:** Small blocks **Interfluves:** Large 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:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

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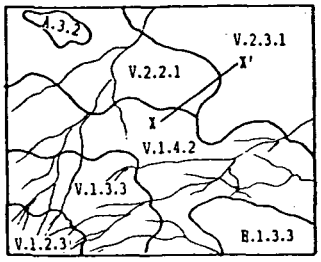
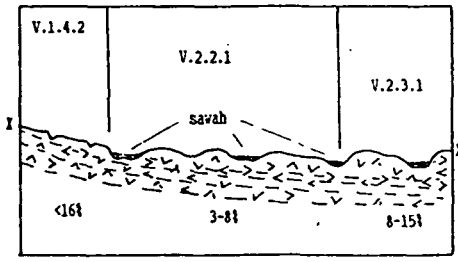
31. ADDITIONAL NOTES: All representative profiles are extrapolated from Vb.2.2.1.

BLOCK DIAGRAM:



CROSS SECTION:



1. **LAND UNIT**: Vab.2.2.1 **2. MAP SHEET**: 1110- **3. AREA**: 140 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Slightly dissected undulating volcanic plain intermediate and mafic tuffs and lavas, slopes 3-8%.
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 58 /8292-57 , 57 /8292-81
9. **RADAR** : Star-I/250/88/1110-1,3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    - **a. Weathering** : High
    - **b. Lithology** : andesitic tuffs, basalt,
    - **c. Formation** : Qhv
12. **WATER** **a. Quality** : Fresh
    - **b. Source** : Perennial River, Medium wells
13. **FISHERIES** :
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: None
15. **VEGETATION/LAND USE** : , bush, alang-alang, irrigated wetland rice (irigasi), towns, villages
    - **Area used** : 95 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Localised
    - **b. Evidence** : Landslips

---

17. **SOIL GREAT GROUP** :

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

---

32. **REPRESENTATIVE PROFILES**:

ity/ /184-9 /68/IS/1110/41/ /77 /
iqt/ /341-45 /72/DR/1110/41/ /33 /
uda/ /184-10 /68/IS/1110/41/ /79 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	fine	medium
	subsoil	moderately fine	fine	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	moderately deep	deep	very deep
c. Drainage:		Well drained	Well drained	Poorly drained
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total K20:	topsoil	medium	low	very low
	subsoil	low	low	very low
f. Avail. P:	method			Olsen
	topsoil	--	--	low
	subsoil	--	--	low
g. Total P:	topsoil	medium	low	very low
	subsoil	low	very low	very low
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	moderately acid	moderately acid	moderately acid
	subsoil	moderately acid	moderately acid	slightly alkaline
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		70 cm	100 cm	120 cm
p. Organic Matter :		0.9	1.6	1.6
q. TEB :		0.0	0.0	0.0
r. Total observations:		1	2	2

---

19. ALTITUDE: **Maximum:** 175 m **Minimum:** 100 m **Range:** 125 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:** Medium
c. Length: extremely **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**90 %, **8-25%:** 0 %, **25-55%:** 0 %

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

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:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Interfluves, dystropepts, 60%
-2- Interfluves, hapludults, 30%
-3- Valleys bottoms, tropaquepts, 10%
-4-

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

---

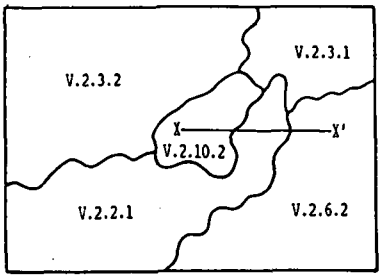
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

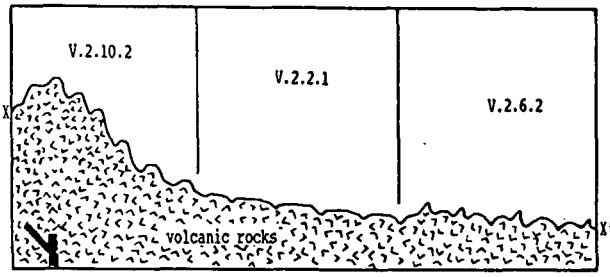
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vb.2.2.1 **2. MAP SHEET**: 1110 **3. AREA**: 303 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final

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

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 61 /8344-195, 61 /8344-191, 62 /8282-069

9. RADAR : Star-I/250/88/1110-4,5

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

a. Weathering : Partial

b. Lithology : basalt

c. Formation : Qb

12. WATER a. Quality : Fresh

b. Source : Perennial River, Medium wells

13. FISHERIES : Sungai (river)

14. RIVERS a. Floodrisk : None

b. Inundation: None

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

Area used : 90 %

16. ACCELERATED EROSION

a. Occurence : Localised

b. Evidence : Landslips

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

ada/ /341-56 /72/DR/1110/51/ /56 / ity/ /341-21 /72/SK/1110/51/ /62 /

iqt/ /341-93 /85/IS/1110/51/ /53 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	fine	medium
	subsoil	fine	fine	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	mod. shallow	deep	very deep
c. Drainage:		Well drained	Moderately well	Poorly drained
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total K2O:	topsoil	very high	medium	medium
	subsoil	very high	very low	medium
f. Avail. P:	method	Olsen	Olsen	Olsen
	topsoil	high	very low	medium
	subsoil	medium	very low	low
g. Total P:	topsoil	high	high	very high
	subsoil	high	high	very high
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	neutral	strong acid	strong acid
	subsoil	neutral	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 :		50 cm	100 cm	125 cm
p. Organic Matter :		4.7	1.9	18.7
q. TEB :		0.0	0.0	0.0
r. Total observations:		1	1	1

---

19. ALTITUDE: **Maximum:** 75 m **Minimum:** 25 m **Range:** 40 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:** Low
c. Length: extremely **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : 0-8%:90 %, **9-25%:** 0 %, **25-55%:** 0 %

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

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:** very narrow **b. Variability:** Low

28. LAND FACETS: -1- Interfluves, hapludalfs, 60%
-2- Interfluves, dystropepts, 30%
-3- Valleys, tropaquepts, 10%
-4-

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

---

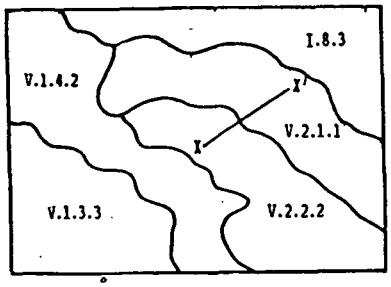
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

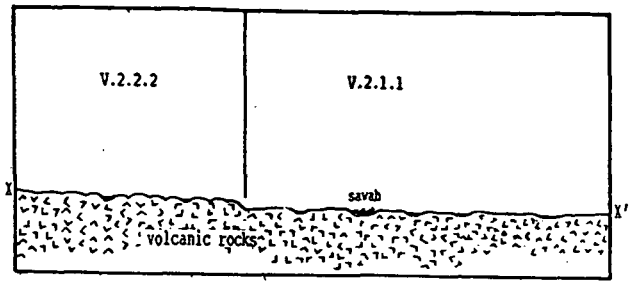
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vab.2.2.2 **2. MAP SHEET**: 1110- **3. AREA**: 50 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final

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

7. SATELLITE SCENES : 123/64/14/11/84,

8. AERIAL PHOTOGRAPHS : 1:100.000 61 /8344-205, 62 /8282-77 , 62 /8282-75

9. RADAR : Star-I/250/88/1110-2

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

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

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

13. FISHERIES : Not known

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

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

Area used : 100 %

16. ACCELERATED EROSION
- **a. Occurence** : Localised
- **b. Evidence** : Landslips

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

ity/ /184-9 /68/IS/1110/41/ /77 / uda/ /341-62 /72/IS/1110/ / /04 /

iqt/ /341-45 /72/DR/1110/41/ /33 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	medium	fine	medium
	subsoil	moderately fine	fine	medium
b. Depth:	peatsoil	--	--	--
	mineralsoil	moderately deep	very deep	very deep
c. Drainage:		Well drained	Well drained	Poorly drained
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total K2O:	topsoil	medium	very high	very low
	subsoil	low	high	very low
f. Avail. P:	method		Olsen	Olsen
	topsoil	--	very high	low
	subsoil	--	low	low
g. Total P:	topsoil	medium	very high	very low
	subsoil	low	medium	very low
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	moderately acid	slightly acid	moderately acid
	subsoil	moderately acid	moderately acid	slightly alkaline
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		70 cm	100 cm	120 cm
p. Organic Matter :		0.9	2.1	1.6
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	1	0

---

19. ALTITUDE: **Maximum:** 250 m **Minimum:** 10 m **Range:** 200 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:**gently sloping **b. Variability:** Medium
c. Length: moderate **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : 0-8%:90 %, **9-25%:** 0 %, **25-55%:** 0 %

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

28. LAND FACETS: **-1-** Interfluves, dystropepts, 60%
-2- Interfluves, hapludults, 30%
-3- Valley bottoms, tropaquepts, 10%
-4-

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

---

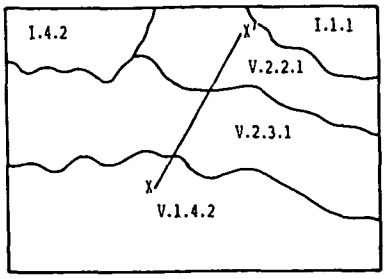
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

10.b : 1 **12.a:** 2 **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

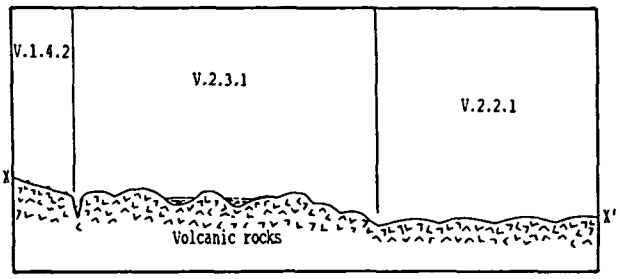
---

31. ADDITIONAL NOTES: Representative profiles for Dystropepts and Tropaquepts are extrapolated from other LU (Vab.2.2.1).

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vab.2.3.1 **2. MAP SHEET**: 1110- **3. AREA**: 154 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 01/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Slightly dissected rolling volcanic plain,intermediate and mafic tuffs and lavas, slopes 8-15%.

7. SATELLITE SCENES : 123/64/14/11/84,

8. AERIAL PHOTOGRAPHS : 1:100.000 58 /8292-59 , 61 /8344-205,

9. RADAR : Star-I/250/88/1110-2,4

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

a. Weathering : High

b. Lithology : andesitic tuffs, basalt,

c. Formation : Qhv ,

12. WATER a. Quality : Fresh

b. Source : Perennial River, Medium wells

13. FISHERIES :

14. RIVERS a. Floodrisk : None

b. Inundation: None

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

Area used : 100 %

16. ACCELERATED EROSION

a. Occurence : Localised

b. Evidence : Landslips

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

ity/ /341-44 /72/DR/1110/41/ /32 / uda/ /86-32 /81/SR/1110/41/ /23 /

iqt/ /341-46 /72/DR/1110/41/ /35 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	fine	medium
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	very deep	deep
c. Drainage:		Well drained	Well drained	Poorly drained
d. Exch. K:	topsoil	--	high	--
	subsoil	--	medium	--
e. Total K2O:	topsoil	high	medium	very low
	subsoil	low	low	very low
f. Avail. P:	method	Olsen		Olsen
	topsoil	low	--	medium
	subsoil	very low	--	very low
g. Total P:	topsoil	medium	low	medium
	subsoil	low	very low	very low
h. CEC pH 7	topsoil	--	low	--
	subsoil	--	low	--
i. Soil Reaction:	topsoil	neutral	strong acid	strong acid
	subsoil	neutral	strong acid	strong acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		85 cm	125 cm	100 cm
p. Organic Matter :		1.6	2.1	2.6
q. TEB :		0.0	7.2	0.0
r. Total observations:		1	2	2

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 20 m **Range:** 100 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:** Low
c. Variability: medium

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

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : 0-8%:60 %, **9-25%:** 30 %, **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:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

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

28. LAND FACETS: -1- Interfluves, dystropepts, 60%
-2- Interfluves, hapludults, 30%
-3- Valleys bottoms, tropaquepts, 10%
-4-

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

---

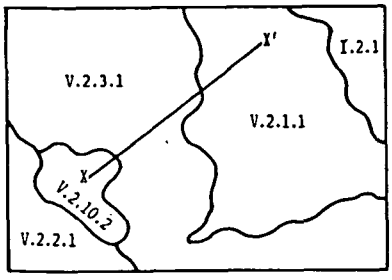
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

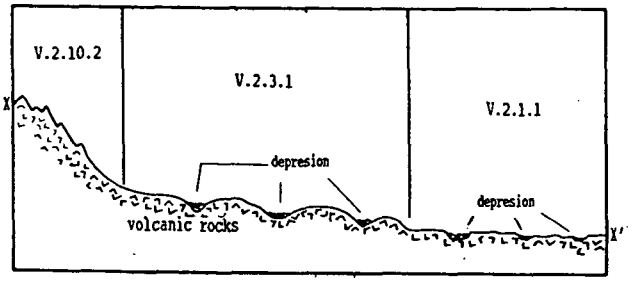
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vb.2.3.1 **2. MAP SHEET**: 1110- **3. AREA**: 172 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Slightly dissected rolling volcanic plain,intermediate and mafic lavas, slopes 8-15%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 62 /8282-65 , 62 /8282-67 , 62 /8282-69

9. RADAR : Star-I/250/88/1110-4

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

- **a. Weathering** : High
- **b. Lithology** : basalt,
- **c. Formation** : Qb

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

13. FISHERIES :

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

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

Area used : 100 %

16. ACCELERATED EROSION
- **a. Occurence** : Localised
- **b. Evidence** : Landslips

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

ity/ /84-10 /86/DK/1110/51/ /20a/ ada/ /341-56 /72/DR/1110/51/ /56 /
iqt/ /84-12 /86/DK/1110/53/ /22a/

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	medium	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	mod. shallow	very deep
c. Drainage:		Well drained	Well drained	Poorly drained
d. Exch. K:	topsoil	very high	--	very low
	subsoil	very high	--	low
e. Total K2O:	topsoil	very high	very high	very low
	subsoil	very high	very high	very low
f. Avail. P:	method	Olsen	Olsen	Olsen
	topsoil	very high	high	high
	subsoil	low	medium	high
g. Total P:	topsoil	very high	high	very high
	subsoil	very high	high	very high
h. CEC pH 7	topsoil	medium	--	high
	subsoil	medium	--	high
i. Soil Reaction:	topsoil	neutral	neutral	moderately acid
	subsoil	moderately acid	neutral	neutral
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 :		125 cm	50 cm	60 cm
p. Organic Matter :		1.4	4.7	0.9
q. TEB :		11.3	0.0	18.2
r. Total observations:		1	0	1

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 20 m **Range:** 75 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:**sloping **b. Variability:** Medium
c. Length: long **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%**:60 %, **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:** no crests **b. Length:** **c. Variability:**
d. Width: **e. Variability:**

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

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

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

---

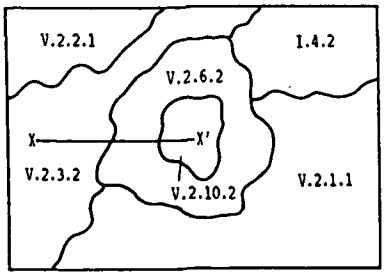
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

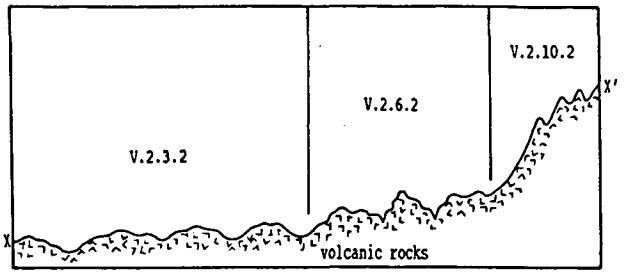
---

31. ADDITIONAL NOTES: Representative profile for Hapludalfs is extrapolated from Vb.2.2.1

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vb.2.3.2 **2. MAP SHEET**: 1110- **3. AREA**: 151 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 01/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected rolling volcanic plain,intermediate and mafic lavas, slopes 8-15%

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 62 /8282-063, 60 /8295-017, 60 /8295-15

9. RADAR : Star-I/250/88/1110-5,6

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

- **a. Weathering** : Partial
- **b. Lithology** : basalt
- **c. Formation** : Qb

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

13. FISHERIES :

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

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

Area used : 100 %

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

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	50 %	yes
Associated 1	hapludalfs	40 %	yes
Associated 2	tropaquepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ /86-14 /81/NS/1110/53/ /22 / ada/ /341-56 /72/DR/1110/51/ /56 /
iqt/ /84-11 /86/DK/1110/53/ /21a/

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	medium	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	very deep	mod. shallow	very deep
c. Drainage:		Well drained	Well drained	Irrigated
d. Exch. K:	topsoil	medium	--	very low
	subsoil	low	--	very low
e. Total N2O:	topsoil	high	very high	very low
	subsoil	medium	very high	very low
f. Avail. P:	method		Olsen	Bray I
	topsoil	--	high	very low
	subsoil	--	medium	very low
g. Total P:	topsoil	medium	high	very low
	subsoil	medium	high	very low
h. CEC pH 7	topsoil	low	--	high
	subsoil	low	--	very high
i. Soil Reaction:	topsoil	strong acid	neutral	slightly acid
	subsoil	very strong acid	neutral	slightly 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 :		--	50 cm	110 cm
p. Organic Matter :		2.2	4.7	0.6
q. TEB :		7.5	0.0	33.9
r. Total observations:		1	0	2

---

19. ALTITUDE: **Maximum:** 100 m **Minimum:** 25 m **Range:** 50 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:** Low
c. Length: long **d. Variability:** Low
e. Curvature: convex

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

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

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

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

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

28. LAND FACETS: -1- Interfluves, dystropepts, 50%
-2- Interfluves, hapludalfs, 40%
-3- Valleys, tropaquepts, 10%
-4-

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

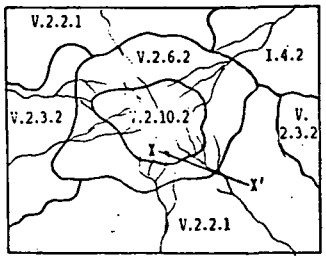
---

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

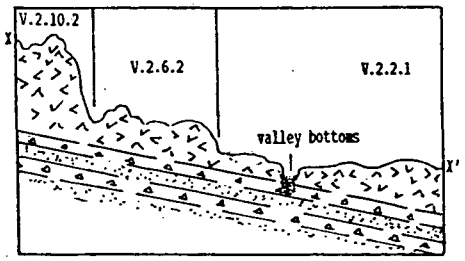
---

31. ADDITIONAL NOTES: Hapludalfs transpered from Vb.2.2.1

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vb.2.6.2 **2. MAP SHEET**: 1110- **3. AREA**: 104 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Moderately dissected rolling volcanic plain with hillock,intermediate and mafic lavas, slopes 8-25%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 61 /8344-191, 62 /8282-69 , 61 /8344-193

9. RADAR : Star-I/250/88/1110-6

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

a. Weathering : High

b. Lithology : basalt

c. Formation : Qb

12. WATER a. Quality : Fresh

b. Source : Perennial River, Medium wells

13. FISHERIES :

14. RIVERS a. Floodrisk : None

b. Inundation: None

15. VEGETATION/LAND USE : , alang-alang, upland crops, mixed gardens of fruit trees, clove (cengkeh), coconut (kelapa)

Area used : 100 %

16. ACCELERATED EROSION

a. Occurence : Common

b. Evidence : Gulleys

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

ite/ /84-9 /86/DK/1110/53/ /19a/ ada/ /341-87 /72/IS/1110/53/ /47 /

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	Moderately well	--
d. Exch. K:	**topsoil**	very high	--	--
	subsoil	high	--	--
e. Total [illegible]:	**topsoil**	very high	medium	--
	subsoil	high	high	--
f. Avail. P:	**method**	Olsen	Olsen	
	topsoil	low	high	--
	subsoil	very low	medium	--
g. Total P:	**topsoil**	very high	medium	--
	subsoil	very high	high	--
h. CEC pH 7	**topsoil**	medium	--	--
	subsoil	medium	--	--
i. Soil Reaction:	**topsoil**	neutral	moderately alkaline	--
	subsoil	neutral	neutral	--
j. Al Sat.	**topsoil**	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		78 cm	100 cm	--
p. Organic Matter :		1.4	1.3	0.0
q. TEB :		9.2	0.0	0.0
r. Total observations:		5	1	0

---

19. ALTITUDE: **Maximum:** 230 m **Minimum:** 40 m **Range:** 150 m

20. PLAN/PROFILE: **Dominant:** non-linear and random 40-60% of area flat-topped
Included: non-linear and random > 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:** 5 %
Interfluves : **0-8%:**60 %, **9-25%:** 30 %, **25-55%:** 5 %

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:**Short **c. Variability:** Low
d. Width: moderate **e. Variability:** Low

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

28. LAND FACETS: -1- Rounded top/crest, eutropepts, 50%
-2- Hillock part, eutropepts, 30%
-3- Slopping, hapludalfs, 20%
-4-

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

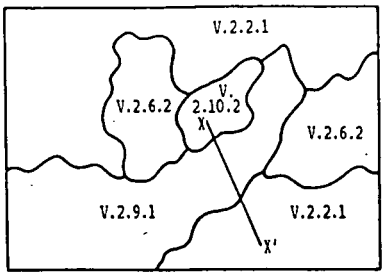
---

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

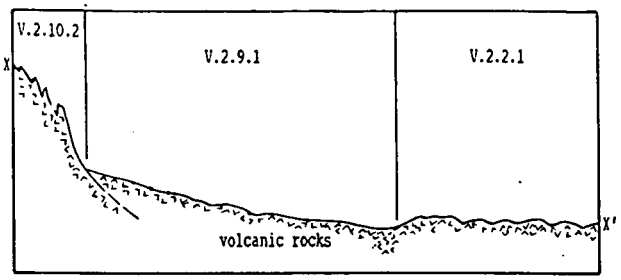
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. LAND UNIT: Vb.2.9.1 **2. MAP SHEET**: 1110- **3. AREA**: 43 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 01/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Slightly dissected lahars,intermediate and mafic lavas,slopes 3-15%.

7. SATELLITE SCENES : 123/64/14/11/84,

8. AERIAL PHOTOGRAPHS : 1:100.000 62 /8282-67

9. RADAR : Star-I/250/88/1110-5,6

10. PARENT MATERIAL **11. ROCK OUTCROP**: 35 %

- **a. Weathering** : High
- **b. Lithology** : basalt
- **c. Formation** : Qb

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

b. Source : Rain, Not known

13. FISHERIES : None

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

b. Inundation: None

15. VEGETATION/LAND USE : , bush, alang-alang, mixed gardens of fruit trees, upland crops

Area used : 10 %

16. ACCELERATED EROSION

- **a. Occurence** : Localised
- **b. Evidence** : Va[illegible]

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	troporthents	55 %	no
Associated 1	eutropepts	10 %	no
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	--	--	--
	subsoil	--	--	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	--	--	--
c. Drainage:		--	--	--
d. Exch. K:	topsoil	--	--	--
	subsoil	--	--	--
e. Total K_2O:	topsoil	--		
	subsoil	--	--	--
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	--	--	--
	subsoil	--	--	--
h. CEC pH 7	topsoil	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	topsoil	--	--	--
	subsoil	--	--	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		0.0	0.0	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 120 m **Minimum:** 30 m **Range:** 70 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:** Low
c. Variability: low

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

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%**:60 %, **9-25%**: 30 %, **25-55%**: 0 %, **>55%**: 5 %

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

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:** **b. Variability:**

28. LAND FACETS: -1- Flat & rounded top, troporthents, 55%
-2- Gentle sloping, eutropepts, 10%
-3- Rock outcrops, 35%
-4-

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

---

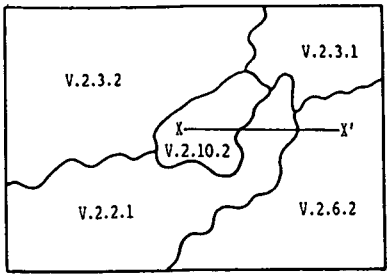
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

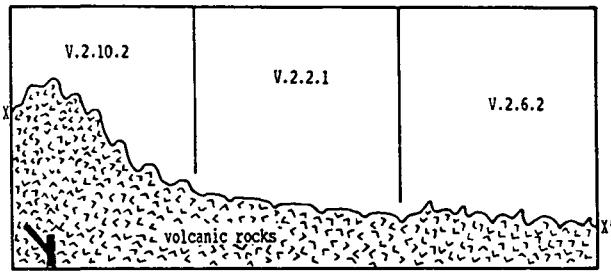
---

31. ADDITIONAL NOTES:

BLOCK DIAGRAM:



CROSS SECTION:



1. **LAND UNIT**: Vb.2.10.2 **2. MAP SHEET**: 1110 **3. AREA**: 87 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 02/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Moderately dissected eroded volcanoes,intermediate and mafic lavas, hilly relief, slopes (15-30%).
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 61 /8344-195
9. **RADAR** : Star-I/250/88/1110-5
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 20 %
    - **a. Weathering** : Partial
    - **b. Lithology** : basalt
    - **c. Formation** : Qb
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, upland crops, reafforestation, towns, villages
    - **Area used** : 40 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Common
    - **b. Evidence** : Gulleys

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	kandiudults	60 %	yes
Associated 1	humitropepts	20 %	yes
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

udk/ /86-13 /81/NS/1110/51/ /20 / ith/ /341-57 /72/DR/1110/51/ /57 /

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	very low	--	--
	subsoil	very low	--	--
e. Total K2O:	topsoil	very low	very high	--
	subsoil	very low	medium	--
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	very high	high	--
	subsoil	very high	high	--
h. CEC pH 7	topsoil	low	--	--
	subsoil	low	--	--
i. Soil Reaction:	topsoil	moderately acid	slightly alkaline	--
	subsoil	strong acid	neutral	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	100 cm	--
p. Organic Matter :		1.6	4.3	0.0
q. TEB :		5.8	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 290 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:** radial **b. density:** Moderate
c. Variability: medium

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

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : **0-8%:**30 %, **9-25%:** 50 %, **25-55%:** 20 %

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

25. TERRAIN: hillocKy >16%, 0-50 m

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

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

28. LAND FACETS: -1- Upper & middle slopes, kandiudults, 60%
-2- Lower slopes, humitropepts, 20%
-3- Rock outcrops, 20%
-4-

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

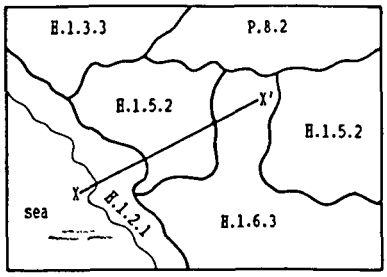
---

30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**
10.b : 2 **12.a:** 2 **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

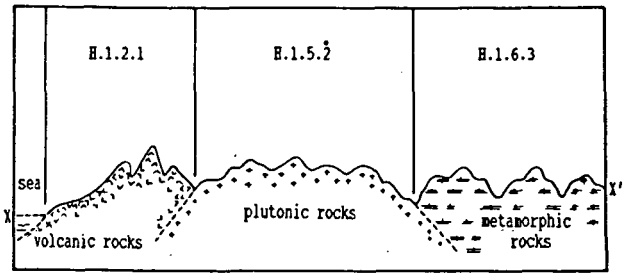
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hab.1.2.1 **2. MAP SHEET**: 1110 **3. AREA**: 54 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 02/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Slightly dissected hills,intermediate and mafic tuffs and lavas, moderately steep slopes (16-30%)

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-075, 62 /8282-77 , 60 /8295-05

9. RADAR : Star-I/250/88/1110-2,3

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

- **a. Weathering** : High
- **b. Lithology** : andesitic tuffs, 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 : secondary forest, bush, alang-alang, upland crops, mixed gardens of fruit trees, clove (cengkeh), coffee (kopi)

Area used : 50 %

16. ACCELERATED EROSION

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

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	75 %	yes
Associated 1	hapludults	20 %	yes
Associated 2	humitropepts	5 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ / /88/HJ/1010/ / /26 / uda/ /341-33 /72/DR/1110/23/ /16 /

ith/ / /88/HK/1010/54/ /22 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	moderately 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
	subsoil	low	--	medium
e. Total K2O:	topsoil	medium	high	low
	subsoil	very low	very low	medium
f. Avail. P:	method	Bray I	Olsen	Bray I
	topsoil	very low	low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	low	medium	medium
	subsoil	low	low	medium
h. CEC pH 7	topsoil	high	--	medium
	subsoil	high	--	high
i. Soil Reaction:	topsoil	very strong acid	slightly acid	strong acid
	subsoil	excessive acid	neutral	strong acid
j. Al Sat.	topsoil	very low	--	very low
	subsoil	high	--	very low
k. Al toxicity :		no	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	62 cm	110 cm
p. Organic Matter :		1.9	3.1	4.6
q. TEB :		3.1	0.0	9.8
r. Total observations:		0	1	0

---

19. ALTITUDE: **Maximum:** 290 m **Minimum:** 25 m **Range:** 75 m

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

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

22. SLOPE: **a. Steepness:**mod. steep. **b. Variability:** Medium
c. Length: short **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:** high **b. Variability:** Medium

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

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

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

28. LAND FACETS: **-1-** Crests & upper slopes, dystropepts, 75%
-2- Middle slopes, hapludults, 20%
-3- Lower slopes/valleys, humitropepts, 5%
-4-

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

---

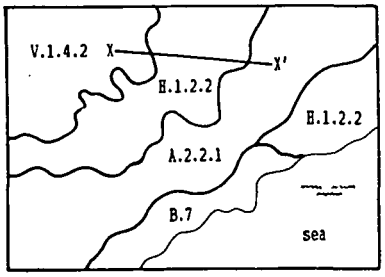
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

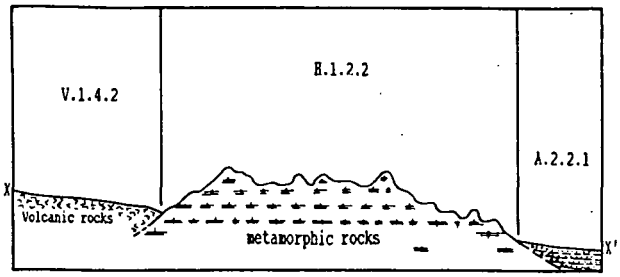
---

31. ADDITIONAL NOTES: Representative profile for Dystropepts and Humitropepts are extrapolated from sheet 1010 (Hab.1.3.3).

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Htn.1.2.2 **2. MAP SHEET**: 1110- **3. AREA**: 23 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 07/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected hills,metamorphic rocks,moderatelly steep slopes (16-30%).

7. SATELLITE SCENES : 123/64/14/11/84,

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-083,

9. RADAR : Star-I/250/88/1110-3

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

- **a. Weathering** : Partial
- **b. Lithology** : gneiss, schists,
- **c. Formation** : Ptse ,

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

b. Source : Rain

13. FISHERIES : None

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

b. Inundation: None

15. VEGETATION/LAND USE : , bush, upland crops, mixed gardens of fruit trees, rubber (karet)

Area used : 75 %

16. ACCELERATED EROSION

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

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	75 %	yes
Associated 1	kanhapludults	20 %	yes
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ /340-16 /71/DN/1110/42/ /80 / udh/ /340-14 /71/SK/1110/42/ /45 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	medium	--
	subsoil	fine	medium	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	medium	--	--
	subsoil	medium	--	--
e. Total S2O:	topsoil	high	very high	--
	subsoil	medium	very high	--
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	medium	medium	--
	subsoil	low	medium	--
h. CEC pH 7	topsoil	low	--	--
	subsoil	low	--	--
i. Soil Reaction:	topsoil	moderately acid	slightly alkaline	--
	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 :		80 cm	80 cm	--
p. Organic Matter :		1.2	1.3	0.0
q. TEB :		5.1	0.0	0.0
r. Total observations:		1	1	0

---

19. ALTITUDE: **Maximum:** 250 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:** Moderate
c. Variability: low

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

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

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

25. TERRAIN: hillocKy >16%, 0-50 m

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

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

28. LAND FACETS: **-1-** Crest, up & low slopes, dystropepts, 75%
-2- Middle slopes, kanhapludults, 20%
-3-
-4-

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

---

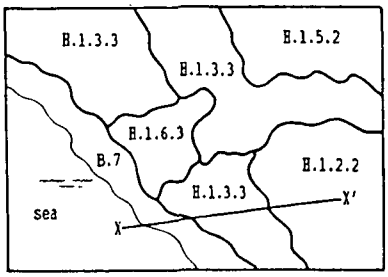
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

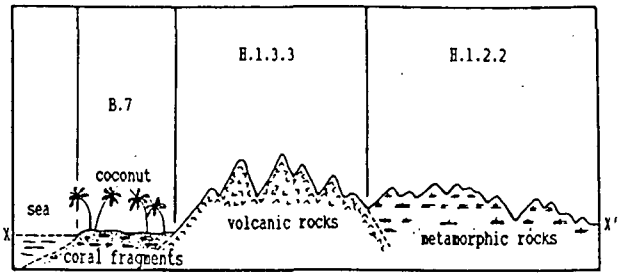
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Hab.1.3.3 **2. MAP SHEET**: 1110- **3. AREA**: 121 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date**: 03/06/89 **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** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 60 /8295-005, 58 /8292-65 , 62 /8282-77
9. **RADAR** : Star-I/250/88/1110-2,3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 10 %
    - **a. Weathering** : Partial
    - **b. Lithology** : andesitic tuffs, 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** : secondary forest, alang-alang, shifting cultivation, upland crops, mixed gardens of fruit trees, clove (cengkeh), coffee (kopi)
    Area used : 60 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Extensive
    - **b. Evidence** : Various

---

17. **SOIL GREAT GROUP** :

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

---

32. **REPRESENTATIVE PROFILES**:

ity/ /340-10 /71/SK/1110/ / /26a/ uda/ /184-16 /68/IS/1110/ / /96 /
ith/ / /87/HK/1010/ / /22 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	medium	moderately fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	moderately deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	high	--	medium
	subsoil	medium	--	medium
e. Total K2O:	topsoil	medium	very high	low
	subsoil	low	low	medium
f. Avail. P:	method			Bray I
	topsoil	--	--	very low
	subsoil	--	--	very low
g. Total P:	topsoil	very high	very high	medium
	subsoil	high	medium	medium
h. CEC pH 7	topsoil	medium	--	medium
	subsoil	low	--	high
i. Soil Reaction:	topsoil	slightly acid	moderately acid	strong acid
	subsoil	strong acid	very 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 :		60 cm	50 cm	110 cm
p. Organic Matter :		1.4	3.6	4.6
q. TEB :		0.0	0.0	0.0
r. Total observations:		1	1	0

---

19. ALTITUDE: **Maximum:** 300 m **Minimum:** 15 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:** Mod. high
c. Variability: high

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

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : 0-8%:0 %, **9-25%:** 20 %, **25-55%:** 30 %, **>55%:** 40 %

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

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

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

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

28. LAND FACETS: **-1-** Crests & upper slopes, dystropepts, 55%
-2- Middle slopes, hapludults, 35%
-3- Lw. slope & Vl. bottom, humitropepts, 10%
-4-

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

---

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:** 1 **18.b:** 2 **18.c:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

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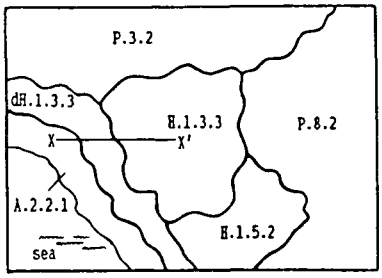
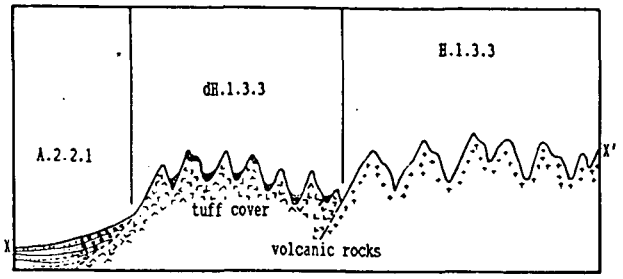
31. **ADDITIONAL NOTES:** Representative profiles for Humitropepts is extrapolated from other Sheet (KotaAgung,Hab.1.3.3).

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: dHab.1.3.3 **2. MAP SHEET**: 1110- **3. AREA**: 11 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 03/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected hills,intermediate and mafic tuffs and lavas covered by acid tuffs, steep to very steep slopes (30-75%)
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 62 /8282-75
9. **RADAR** : Star-I/250/88/1110-1
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 10 %
    - a. **Weathering** : High
    - b. **Lithology** : andesitic tuffs, basalt, dacite
    - 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, alang-alang, shifting cultivation, mixed gardens of fruit trees, clove (cengkeh)
    Area used : 60 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Extensive
    - b. **Evidence** : Various

---

17. **SOIL GREAT GROUP** :

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

---

32. **REPRESENTATIVE PROFILES**:

ity/ /340-10 /71/SK/1110/ / /26a/

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	high	very low	--
	subsoil	medium	very low	--
e. Total K2O:	topsoil	medium	very low	--
	subsoil	low	very low	--
f. Avail. P:	method			
	topsoil	--	very low	--
	subsoil	--	very low	--
g. Total P:	topsoil	very high	low	--
	subsoil	high	very low	--
h. CEC pH 7	topsoil	medium	medium	--
	subsoil	low	low	--
i. Soil Reaction:	topsoil	slightly acid	excessive acid	--
	subsoil	strong acid	excessive acid	--
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		60 cm	--	--
p. Organic Matter :		1.4	0.0	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 25 m **Range:** 75 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: high

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

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : **0-8%:**0 %, **9-25%:** 20 %, **25-55%:** 30 %, **>55%:** 40 %

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

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

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

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

28. LAND FACETS: **-1-** Crests & upper slopes, dystropepts, 50%
-2- Middle slopes, hapludults, 30%
-3- Lw. slope & Vl. bottom, humitropepts, 10%
-4-

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

---

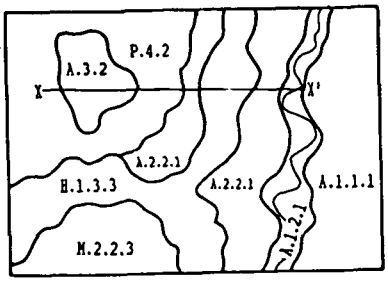
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

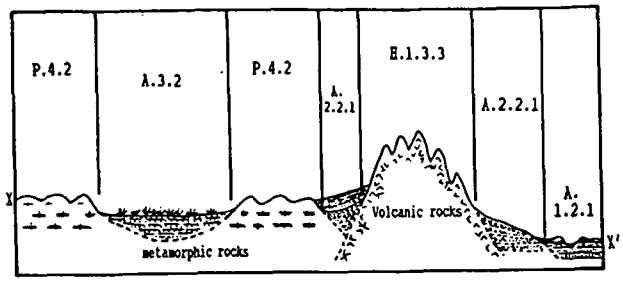
---

31. ADDITIONAL NOTES: Representative profiles for Dystropepts is extrapolated from Hb.1. 3.3. Hapludults extrapolation based on RePPProt (Land System BMS).

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hb.1.3.3 **2. MAP SHEET**: 1110 **3. AREA**: 36 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 03/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Strongly dissected hills,intermediate and mafic lavas,steep to very steep slopes (30-75%).

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 58 /8292-65 , 57 /8292-73

9. RADAR : Star-I/250/88/1110-1,2

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

- **a. Weathering** : High
- **b. Lithology** : basalt
- **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 : bush, clove (cengkeh), banana

Area used : 60 %

16. ACCELERATED EROSION

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

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/US/1010/53/ /17 / uda/ / /87/TB/1010/ / /10 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	fine	fine
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	moderately deep	very deep	very deep
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	low	low	very low
	subsoil	low	low	very low
e. Total K2O:	topsoil	low	low	low
	subsoil	low	very low	very low
f. Avail. P:	method	Bray I	Bray I	
	topsoil	very low	very low	very low
	subsoil	very low	very low	very low
g. Total P:	topsoil	medium	low	low
	subsoil	medium	very low	very low
h. CEC pH 7	topsoil	medium	medium	medium
	subsoil	low	high	low
i. Soil Reaction:	topsoil	strong acid	very strong acid	excessive acid
	subsoil	excessive acid	very strong acid	very strong acid
j. Al Sat.	topsoil	high	medium	very high
	subsoil	very high	medium	very high
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	8.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 350 m **Minimum:** 25 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:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 10 %
Interfluves : 0-8%:0 %, **9-25%:** 20 %, **25-55%:** 30 %, **>55%:** 40 %

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

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

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

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

28. LAND FACETS: **-1-** Crests & upper slopes, dystropepts, 55%
-2- Middle slopes, hapludults, 35%
-3- Lw. slope & Vl. bottom, humitropepts, 10%
-4-

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

---

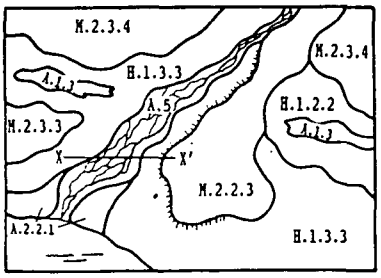
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

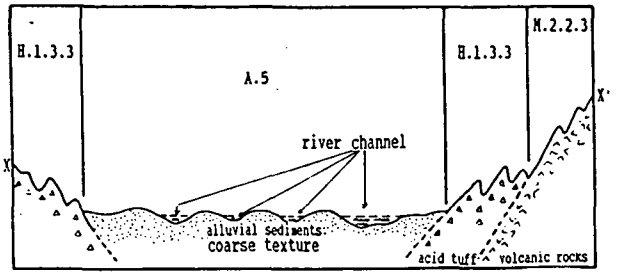
---

31. ADDITIONAL NOTES: Humitropepts extrapolation based on RePPProt (LS BB6). Dystropepts and Hapludults extrapolation based on L U Hb.1.3.3 ,sheet 1010.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Hd.1.3.3 **2. MAP SHEET**: 1110 **3. AREA**: 26 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date**: 03/06/89 **Status**: Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected hills,acid tuffs,steep to very steep slopes (30-75%)
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 58 /8292-69 , 57 /8292-73
9. **RADAR** : Star-I/250/88/1110-1,2
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 10 %
    - a. **Weathering** : High
    - b. **Lithology** : dacite
    - c. **Formation** : Tmda
12. **WATER** a. **Quality** : Fresh
    b. **Source** : Rain
13. **FISHERIES** : None
14. **RIVERS** a. **Floodrisk** : None
    b. **Inundation**: None
15. **VEGETATION/LAND USE** : secondary forest, bush, banana, clove (cengkeh)
    Area used : 50 %
16. **ACCELERATED EROSION**
    - a. **Occurence** : Extensive
    - b. **Evidence** : Various

---

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/HJ/1010/52/ /06 /

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	--	--
	subsoil	medium	--	--
e. Total K2O:	topsoil	medium	low	--
	subsoil	low	low	--
f. Avail. P:	method	Bray I		
	topsoil	very low	--	--
	subsoil	very low	--	--
g. Total P:	topsoil	low	low	--
	subsoil	low	very low	--
h. CEC pH 7	topsoil	high	low	--
	subsoil	--	very low	--
i. Soil Reaction:	topsoil	very strong acid	strong acid	--
	subsoil	very strong acid	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:		0	0	0

---

19. ALTITUDE: **Maximum:** 375 m **Minimum:** 15 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:**very steep **b. Variability:** Medium
c. Length: moderate **d. Variability:** Medium
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : 0-8%:0 %, **9-25%:** 0 %, **25-55%:** 15 %, **>55%:** 85 %

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

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

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

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

28. LAND FACETS: **-1-** Crests & upper slopes, dystropepts, 60%
-2- Middle & lower slopes, hapludults, 30%
-3-
-4-

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

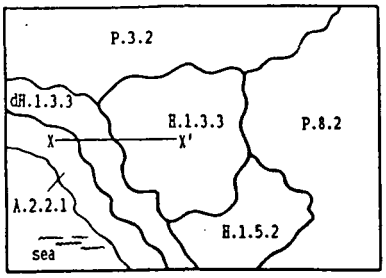
---

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

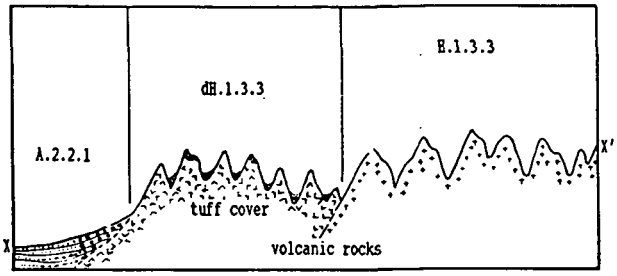
---

31. ADDITIONAL NOTES: Representatative profile for Dystropepts is extrapolated from sheet 1010. Hapludults extrapolation based on RePPProT (Land Sys B6A)

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Hg.1.3.3 **2. MAP SHEET**: 1110- **3. AREA**: 8 km2
4. **OCCURENCE by PROVINCE**: Lampung: 0%
5. **STATUS IDENTIFIERS** .: **Updated by**: DR **edit date:** 03/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected hills,acid plutonic rocks,steep to very steep slopes(30-75%)
7. **SATELLITE SCENES** : 123/64/14/11/84
8. **AERIAL PHOTOGRAPHS** : 1:100.000 59 /8292-21
9. **RADAR** : Star-I/250/88/1110-3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 10 %
    - **a. Weathering** : High
    - **b. Lithology** : granite
    - **c. Formation** : Kgr
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, alang-alang, shifting cu ltivation, upland crops
    - **Area used** : 20 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Extensive
    - **b. Evidence** : Various

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	65 %	yes
Associated 1	hapludults	20 %	yes
Associated 2	troporthents	5 %	no

---

32. **REPRESENTATIVE PROFILES**:

ity/ / /88/ER/1010/24/ /42 / uda/ / /86/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 :		--	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		110 cm	98 cm	--
p. Organic Matter :		2.1	1.6	0.0
q. TEB :		7.0	3.4	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 100 m **Range:** 125 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:**Steep **b. Variability:** Medium
c. Length: short **d. Variability:** Medium
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : 0-8%:0 %, **9-25%:** 10 %, **25-55%:** 40 %, **>55%:** 45 %

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:** Medium
d. Width: narrow **e. Variability:** Medium

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

28. LAND FACETS: **-1-** Upper & lower slopes, dystropepts, 65%
-2- Middle slopes, hapludults, 20%
-3- Crest, troporthents, 5%
-4-

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

---

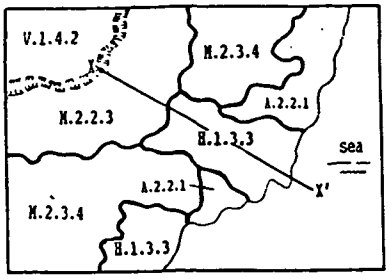
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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: 3 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 0

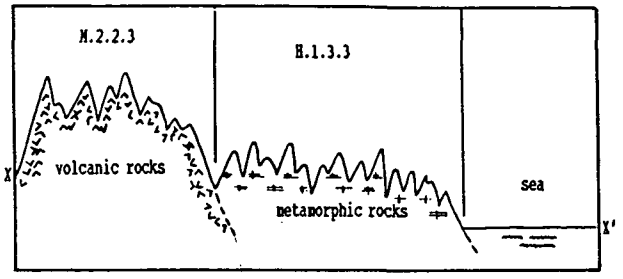
---

31. ADDITIONAL NOTES: Representative profiles are extrapolated from sheet 1010(Hg.1.2.2 and Hg.1.3.3)

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Htn.1.3.3 **2. MAP SHEET**: 1110- **3. AREA**: 14 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 03/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Strongly dissected hills,metamorphic rocks,steep to very steep slopes (30-75%).

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 60 /8292-005,

9. RADAR : Star-I/250/88/1110-3

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

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

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

b. Source : Rain

13. FISHERIES : None

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

b. Inundation: None

15. VEGETATION/LAND USE : , bush, alang-alang, upland crops, banana, clove (cengkeh)

Area used : 70 %

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	kanhapludults	10 %	yes
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ /340-16 /71/DN/1110/42/ /80 / udh/ /340-14 /71/SK/1110/42/ /45 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	medium	--
	subsoil	fine	medium	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	medium	--	--
	subsoil	medium	--	--
e. Total EZU:	topsoil	high	very high	--
	subsoil	medium	very high	--
f. Avail. P:	method			
	topsoil	--	--	--
	subsoil	--	--	--
g. Total P:	topsoil	medium	medium	--
	subsoil	low	medium	--
h. CEC pH 7	topsoil	low	--	--
	subsoil	low	--	--
i. Soil Reaction:	topsoil	moderately acid	slightly alkaline	--
	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 :		80 cm	80 cm	--
p. Organic Matter :		1.1	1.3	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 270 m **Minimum:** 10 m **Range:** 225 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: short **d. Variability:** High
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : 0-8%:0 %, **9-25%:** 20 %, **25-55%:** 30 %, **>55%:** 45 %

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

25. TERRAIN: hillocKy >16%, 0-50 m

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

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

28. LAND FACETS: -1- Crests & upper slopes, dystropepts, 80%
-2- Middle & lower slopes, kanhapludults, 10%
-3-
-4-

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

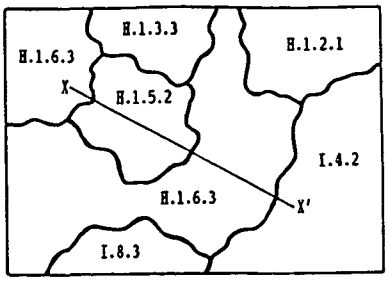
---

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:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 2 **29:** 2

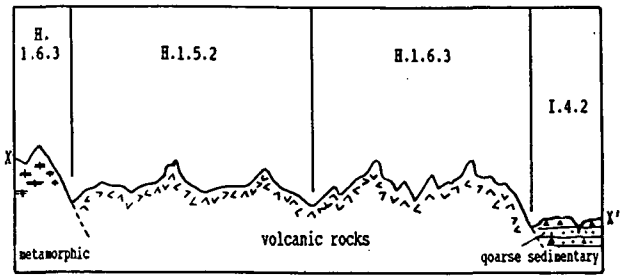
---

31. ADDITIONAL NOTES: All representative profiles are extrapolated from Htn.1.2.2

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hab.1.5.2 **2. MAP SHEET**: 1110- **3. AREA**: 19 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 03/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Moderately dissected rolling land with hillocks,intermediate and mafic tuffs and lavas, slopes 8-25%.

7. SATELLITE SCENES : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-081, 60 /8295-007

9. RADAR : Star-I/250/88/1110-2,3

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

a. Weathering : Partial

b. Lithology : andesitic tuffs, 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 : , bush, shifting cultivation, upland crops, mixed gardens of fruit trees

Area used : 90 %

16. ACCELERATED EROSION

a. Occurence : Localised

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/HJ/1010/61/ /02 / 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 P2O:	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	low	--
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 :		--	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		140 cm	160 cm	--
p. Organic Matter :		2.9	2.7	0.0
q. TEB :		11.5	1.8	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 155 m **Minimum:** 100 m **Range:** 125 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:** Low
c. Length: short **d. Variability:** Low
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : **0-8%**:10 %, **9-25%**: 85 %, **25-55%**: 0 %

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

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

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

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

28. LAND FACETS: **-1-** Hilly area&upper slope, dystropepts, 70%
-2- Middle & lower slopes, humitropepts, 30%
-3-
-4-

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

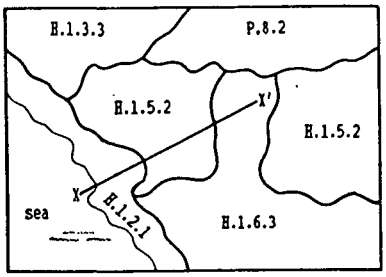
---

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:** 1
18.d-q: 2 **19:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 2

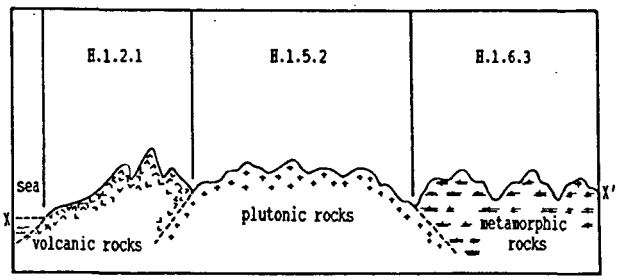
---

31. ADDITIONAL NOTES: Representative profiles are extrapolated from sheet 1010(Hab.1.5.2 and Hab.1.6.2)

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hg.1.5.2 **2. MAP SHEET**: 1110- **3. AREA**: 46 km2
4. OCCURENCE by PROVINCE: Lampung: 99%
5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 03/06/89 **Status:** Final
6. LAND UNIT DESCRIPTION: Moderatelly dissected rolling land with hillociks,acid plutonic rocks, slopes 8-25%.
7. SATELLITE SCENES : 123/64/14/11/84,
8. AERIAL PHOTOGRAPHS : 1:100.000 59 /8292-021,
9. RADAR : Star-I/250/88/1110-2,3
10. PARENT MATERIAL **11. ROCK OUTCROP**: %
a. Weathering : Partial
b. Lithology : granite,
c. Formation : Kgr
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, alang-alang, upland crops, clove (cengkeh)
Area used : 50 %
16. ACCELERATED EROSION
a. Occurence : Common
b. Evidence : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	75 %	yes
Associated 1	hapludults	20 %	yes
Associated 2	troporthents	5 %	no

---

32. REPRESENTATIVE PROFILES:
ity/ / /88/ER/1010/24/ /42 / uda/ /86-24 /81/SR/1110/ / /11 /

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	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	medium	very low	--
	subsoil	medium	very low	--
e. Total K2O:	topsoil	medium	very low	--
	subsoil	medium	very low	--
f. Avail. P:	method	Bray I		
	topsoil	very low	--	--
	subsoil	very low	--	--
g. Total P:	topsoil	low	very 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	very low	--	--
	subsoil	very low	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		110 cm	--	--
p. Organic Matter :		2.1	0.9	0.0
q. TEB :		7.0	3.4	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 100 m **Range:** 125 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:** Medium
c. Length: short **d. Variability:** Medium
e. Curvature: straight

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : 0-8%:0 %, **9-25%:** 80 %, **25-55%:** 15 %

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

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

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

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

28. LAND FACETS: **-1-** Hilly area&upper slope, dystropepts, 75%
-2- Middle slopes, hapiuduits, 20%
-3- Lower slopes, troporthents, 5%
-4-

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

---

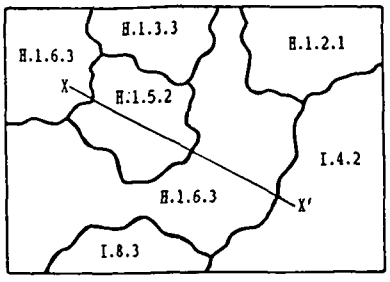
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

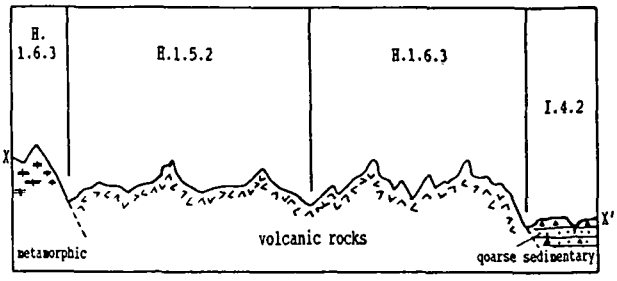
---

31. ADDITIONAL NOTES: Representative profile for Dystropepts is extrapolated from sheet 1010.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Hab.1.6.3 **2. MAP SHEET**: 1110-14 **3. AREA**: 75 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 07/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected hillocks in rolling pattern,intermediate and mafic tuffs and lavas, slopes 8-30%.
7. **SATELLITE SCENES** : 123/64/14/11/84,
8. **AERIAL PHOTOGRAPHS** : 1:100.000 60 /8295-007,
9. **RADAR** : Star-I/250/88/1110-2,3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: %
    a. **Weathering** : High
    b. **Lithology** : andesitic tuffs, 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** : , bush, upland crops, rainfed wetland rice, coffee (kopi), coconut (kelapa)
    Area used : 80 %
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	hapludults	10 %	yes
Associated 2		%	

---

32. **REPRESENTATIVE PROFILES**:

ity/ /86-50 /81/DK/1110/14/ /14 / uda/ /341-49 /72/DR/1110/14/ /41 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	**topsoil**	moderately fine	medium	--
	subsoil	fine	fine	--
b. Depth:	**peatsoil**	--	--	--
	mineralsoil	very deep	very deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	**topsoil**	--	--	--
	subsoil	--	--	--
e. Total N2O:	**topsoil**	high	very low	--
	subsoil	low	medium	--
f. Avail. P:	**method**		Olsen	
	topsoil	--	medium	--
	subsoil	--	very low	--
g. Total P:	**topsoil**	high	very low	--
	subsoil	low	low	--
h. CEC pH 7	**topsoil**	--	--	--
	subsoil	--	--	--
i. Soil Reaction:	**topsoil**	moderately acid	neutral	--
	subsoil	strong 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 :		2.1	2.2	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	1	0

---

19. ALTITUDE: **Maximum:** 200 m **Minimum:** 50 m **Range:** 75 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:** Mod. high
c. Variability: medium

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

23. SLOPE DISTR.: **Valleybottoms:** 5 %
Interfluves : 0-8%:5 %, **9-25%:** 85 %, **25-55%:** 5 %

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

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

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

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

28. LAND FACETS: **-1-** Crest & hilly area, dystropepts, 80%
-2- Rolling area, hapludults, 10%
-3-
-4-

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

---

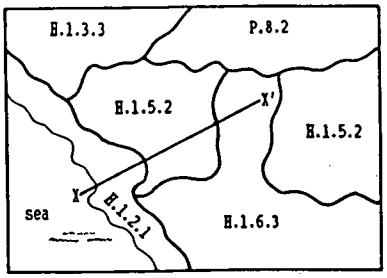
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

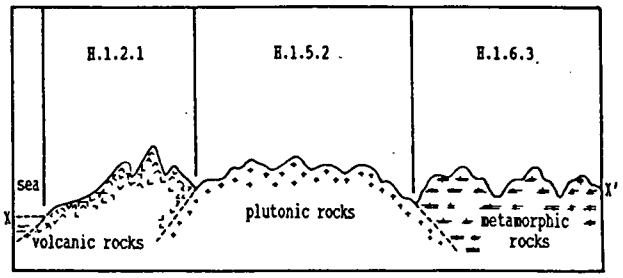
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Htn.1.6.3 **2. MAP SHEET**: 1110- **3. AREA**: 43 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 03/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected hillocks in rolling pattern,metamorfic rocks, slopes 8-30%.

7. SATELLITE SCENES : 123/64/14/11/84,

8. AERIAL PHOTOGRAPHS : 1:100.000 59 /8292-021,

9. RADAR : Star-I/250/88/1110-2,3

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

a. Weathering : High

b. Lithology : gneiss, schists,

c. Formation : PTse

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, alang-alang, upland crops, mixed gardens of fruit trees, rubber (karet)

Area used : 80 %

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	hapludults	30 %	yes
Associated 2	eutropepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ /341-37 /72/DR/1110/42/ /020/ uda/ /341-10 /72/SK/1110/14/ /26 /

ite/ /86-39 /81/DK/1110/14/ /07 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	fine	moderately fine	medium
	subsoil	fine	fine	fine
b. Depth:	peatsoil	--	--	--
	mineralsoil	moderately deep	deep	mod. shallow
c. Drainage:		Well drained	Well drained	Well drained
d. Exch. K:	topsoil	--	--	medium
	subsoil	--	--	very low
e. Total N2O:	topsoil	high	medium	medium
	subsoil	low	very low	low
f. Avail. P:	method	Olsen	Olsen	Bray I
	topsoil	medium	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	medium	medium	medium
	subsoil	medium	low	low
h. CEC pH 7	topsoil	--	--	low
	subsoil	--	--	low
i. Soil Reaction:	topsoil	neutral	neutral	very strong acid
	subsoil	neutral	slightly acid	strong acid
j. Al Sat.	topsoil	--	--	--
	subsoil	--	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		50 cm	120 cm	42 cm
p. Organic Matter :		2.2	1.4	2.4
q. TEB :		0.0	0.0	6.2
r. Total observations:		1	2	2

---

19. ALTITUDE: **Maximum:** 125 m **Minimum:** 100 m **Range:** 110 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:** Mod. high
c. Variability: high

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%:20 %, **9-25%:** 55 %, **25-55%:** 20 %

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

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

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

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

28. LAND FACETS: -1- Crests & upper slopes, dystropepts, 60%
-2- Middle slopes, hapludults, 30%
-3- Lower slopes, eutropepts, 15%
-4-

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

---

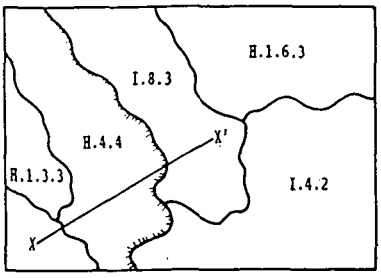
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

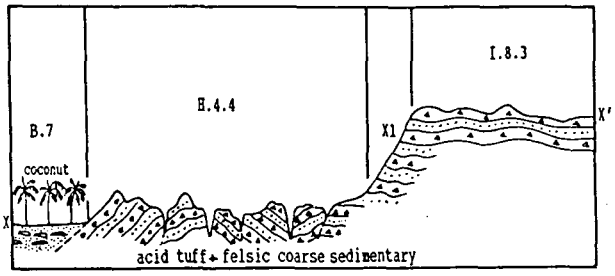
---

31. ADDITIONAL NOTES:

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Hdq.4.4 **2. MAP SHEET**: 1110 **3. AREA**: 34 km2
4. OCCURENCE by PROVINCE: Lampung: 99%
5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 03/06/89 **Status:** Final
6. LAND UNIT DESCRIPTION: Extremely dissected tectonic valley,acid tuffss and coarse felsic sedimentary rocks, slopes 16-30%.
7. SATELLITE SCENES : 123/64/14/11/84,
8. AERIAL PHOTOGRAPHS : 1:100.000 60 /8295-005,
9. RADAR : Star-I/250/88/1110-2
10. PARENT MATERIAL **11. ROCK OUTCROP**: %
a. Weathering : High
b. Lithology : liparite, sandstone,
c. Formation : Qlv
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, upland crops, coffee (kopi), coconut (kelapa)
Area used : 80 %
16. ACCELERATED EROSION
a. Occurence : Common
b. Evidence : Gulleys

---

17. SOIL GREAT GROUP :

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

---

32. REPRESENTATIVE PROFILES:

uda/ /341-8 ./72/SK/1110/14/ /11 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately fine	medium	--
	subsoil	fine	fine	--
b. Depth:	peatsoil	--	--	--
	mineralsoil	deep	deep	--
c. Drainage:		Well drained	Well drained	--
d. Exch. K:	topsoil	low	--	--
	subsoil	very low	--	--
e. Total KZO:	topsoil	--	very high	--
	subsoil	--	medium	--
f. Avail. P:	method	Bray I	Olsen	
	topsoil	low	very high	--
	subsoil	very low	very low	--
g. Total P:	topsoil	--	very high	--
	subsoil	--	medium	--
h. CEC pH 7	topsoil	low	--	--
	subsoil	very low	--	--
i. Soil Reaction:	topsoil	strong acid	neutral	--
	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 :		--	100 cm	--
p. Organic Matter :		0.0	3.1	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	1	0

---

19. ALTITUDE: **Maximum:** 150 m **Minimum:** 25 m **Range:** 75 m

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

21. L.U. DRAINAGE: **a. Pattern:** dendritic **b. density:** High
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%:**0 %, **9-25%:** 60 %, **25-55%:** 35 %

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

25. TERRAIN: hillocKy >16%, 0-50 m

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

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

28. LAND FACETS: **-1-** Crests & lower slopes, dystropepts, 80%
-2- Middle Slopes, hapludults, 10%
-3-
-4-

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

---

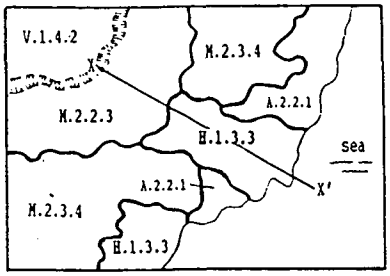
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

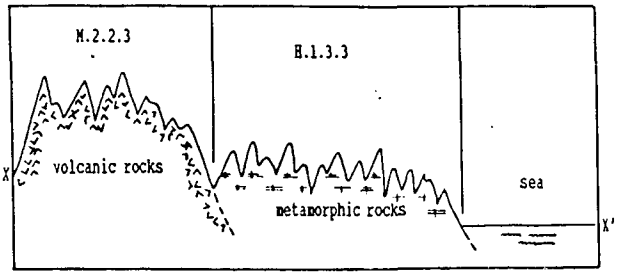
---

31. ADDITIONAL NOTES: Dystropepts extrapolation based on RePPProT (Land System SAA).

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mab.2.2.3 **2. MAP SHEET**: 1110- **3. AREA**: 39 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 05/06/89 **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 : 123/64/14/11/84

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-073, 57 /8292-077, 58 /8292-063

9. RADAR : Star-I/250/88/1110-2,3

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

- **a. Weathering** : Partial
- **b. Lithology** : andesitic tuffs, andesitic lavas,
- **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, alang-alang, shifting cu ltivation, upland crops, clove (cengkeh), banana, towns, villages

Area used : 40 %

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

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	50 %	yes
Associated 1	hapludults	40 %	yes
Associated 2	humitropepts	10 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/US/1010/ / /19 / uda/ / /87/TB/1010/ / /05

ith/ / /87/SR/1010/ / /31 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	**topsoil**	moderately fine	fine	fine
	subsoil	fine	fine	fine
b. Depth:	**peatsoil**	--	--	--
	mineralsoil	very deep	very deep	deep
c. Drainage:		Well drained	Well drained	Moderately well
d. Exch. K:	**topsoil**	medium	very low	low
	subsoil	low	very low	low
e. Total K2O:	**topsoil**	low	very low	low
	subsoil	low	very low	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	low
	subsoil	very low	medium	low
h. CEC pH 7	**topsoil**	low	medium	low
	subsoil	low	medium	low
i. Soil Reaction:	**topsoil**	very strong acid	strong acid	very strong acid
	subsoil	very strong acid	strong acid	very strong acid
j. Al Sat.	**topsoil**	medium	very low	high
	subsoil	high	high	very high
k. Al toxicity :		no	no	no
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		120 cm	120 cm	90 cm
p. Organic Matter :		2.2	2.1	3.0
q. TEB :		2.0	4.2	2.5
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 450 m **Minimum:** 100 m **Range:** 300 m

20. PLAN/PROFILE: **Dominant:** 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:**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%:** 50 %, **>55%:** 40 %

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: moderate **e. Variability:** Medium

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

28. LAND FACETS: -1- Crest & upper slopes, dystropepts, 50%
-2- Middle slopes, hapludults, 40%
-3- Lower slopes, humitropepts, 10%
-4-

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

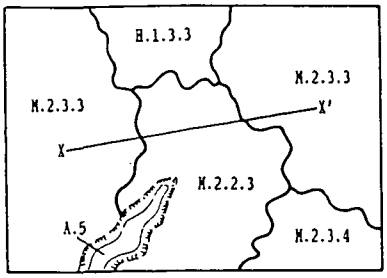
---

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

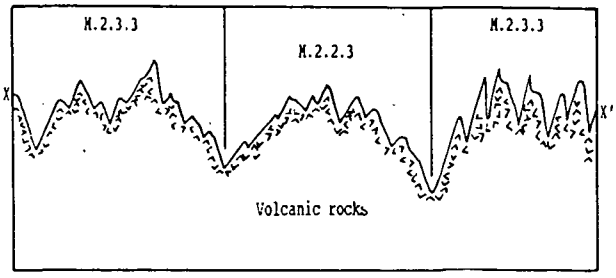
---

31. ADDITIONAL NOTES: Representative profiles are extrapolated from sheet 1010.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mb.2.2.3 **2. MAP SHEET**: 1110- **3. AREA**: 93 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 05/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected mountains,intermediate and mafic lavas, steep to very steep slopes (30-75%).

7. SATELLITE SCENES : 123/64/14/11/84,

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-77 , 58 /8292-67

9. RADAR : Star-I/250/88/1110-2,3

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

- **a. Weathering** : High
- **b. Lithology** : andesitic lavas,
- **c. Formation** : Tov

12. WATER **a. Quality** : None

b. Source : Rain, Perennial River

13. FISHERIES : None

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

b. Inundation: None

15. VEGETATION/LAND USE : secondary forest, bush, clove (cengkeh)

Area used : 40 %

16. ACCELERATED EROSION

- **a. Occurence** : Extensive
- **b. Evidence** : Gulleys

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	55 %	
Associated 1	hapludults	35 %	
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/US/1010/ / /19 / uda/ / /87/TB/1010/ / /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**	medium	very low	--
	subsoil	low	very 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	very low	medium	--
h. CEC pH 7	**topsoil**	low	medium	--
	subsoil	low	medium	--
i. Soil Reaction:	**topsoil**	very 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 :		120 cm	120 cm	--
p. Organic Matter :		2.2	2.1	0.0
q. TEB :		2.0	4.2	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 400 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:** 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:** %
Interfluves : 0-8%:10 %, **9-25%:** 15 %, **25-55%:** 30 %, **>55%:** 45 %

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:** Medium
d. Width: wide **e. Variability:** High

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

28. LAND FACETS: **-1-** Crest & upper slopes, dystropepts, 55%
-2- Middle & lower slopes, hapludults, 35%
-3-
-4-

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

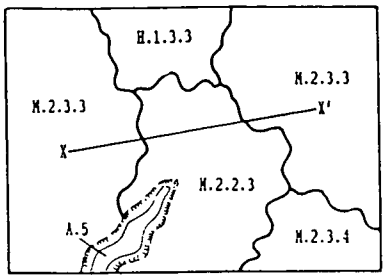
---

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

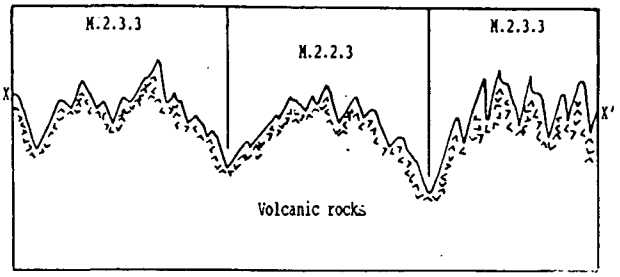
---

31. ADDITIONAL NOTES: Representative profiles are extrapolated from sheet 1010.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mb.2.3.3 **2. MAP SHEET**: 1110- **3. AREA**: 113 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 05/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Strongly dissected mountain, intermediate and mafic lavas, ubrupts slopes (>75%)

7. SATELLITE SCENES : 123/64/14/11/88,

8. AERIAL PHOTOGRAPHS : 1:100.000 57 /8292-073, 58 /8292-069,

9. RADAR : Star-I/250/88/1110-2,3

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

13. FISHERIES : None

14. RIVERS **a. Floodrisk** :

b. Inundation: None

15. VEGETATION/LAND USE : moist primary lowland forest, bush, upland crops, clove (cengkeh), coffee (kopi)

Area used : 40 %

16. ACCELERATED EROSION

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

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	60 %	no
Associated 1	hapludults	30 %	no
Associated 2		%	

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/SR/1010/ / /3 / uda/ / /87/HJ/1010/ / /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 :		--	--	--
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	0	0

---

19. ALTITUDE: **Maximum:** 450 m **Minimum:** 25 m **Range:** 300 m

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

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

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

23. SLOPE DISTR.: **Valleybottoms:** %
Interfluves : 0-8%:0 %, **9-25%:** 0 %, **25-55%:** 10 %, **>55%:** 90 %

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

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

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

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

28. LAND FACETS: **-1-** Crests & upper slopes, dystropepts, 60%
-2- Middle & lower slopes, hapludults, 30%
-3-
-4-

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

---

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:** 2 **22:** 2 **23:** 2 **24:** 2 **28:** 3 **29:** 0

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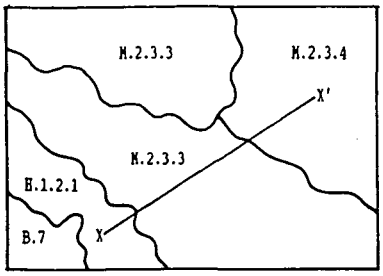
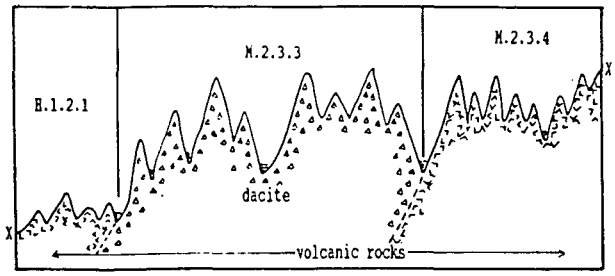
31. ADDITIONAL NOTES: Representative profiles are extrapolated from sheet 1010.

MAP IMAGE:



CROSS SECTION:



1. **LAND UNIT**: Md.2.3.3 **2. MAP SHEET**: 1110 **3. AREA**: 19 km2
4. **OCCURENCE by PROVINCE**: Lampung: 99%
5. **STATUS IDENTIFIERS** : **Updated by**: DR **edit date:** 05/06/89 **Status:** Final
6. **LAND UNIT DESCRIPTION**: Strongly dissected mountains, acid tuffs,abrupt slopes (>75%).

7. **SATELLITE SCENES** : 123/64/14/11/88,
8. **AERIAL PHOTOGRAPHS** : 1:100.000 58 /8292-65
9. **RADAR** : Star-I/250/88/1110-2,3
10. **PARENT MATERIAL** **11. ROCK OUTCROP**: 10 %
    - **a. Weathering** : High
    - **b. Lithology** : dacite,
    - **c. Formation** : Tmda
12. **WATER** **a. Quality** : Fresh
    - **b. Source** : Rain
13. **FISHERIES** : None
14. **RIVERS** **a. Floodrisk** : None
    - **b. Inundation**: None
15. **VEGETATION/LAND USE** : secondary forest, bush, upland crops
    - **Area used** : 0 %
16. **ACCELERATED EROSION**
    - **a. Occurence** : Extensive
    - **b. Evidence** : Gulleys

---

17. **SOIL GREAT GROUP** :

	Classification	% of area	Lab. checked
Dominant >50%	hapludults	50 %	yes
Associated 1	dystropepts	40 %	no
Associated 2	troporthents	10 %	no

---

32. **REPRESENTATIVE PROFILES**:

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**	low	--	--
	subsoil	low	--	--
e. Total K2O:	**topsoil**	low	--	--
	subsoil	very low	--	--
f. Avail. P:	**method**	Bray I		
	topsoil	very low	--	--
	subsoil	very low	--	--
g. Total P:	**topsoil**	medium	--	--
	subsoil	low	--	--
h. CEC pH 7	**topsoil**	medium	--	--
	subsoil	low	--	--
i. Soil Reaction:	**topsoil**	strong acid	--	--
	subsoil	strong acid	--	--
j. Al Sat.	**topsoil**	medium	--	--
	subsoil	medium	--	--
k. Al toxicity :		--	--	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		0.0	0.0	0.0
q. TEB :		0.0	0.0	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 600 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: medium

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%:** 0 %, **25-55%:** 15 %, **>55%:** 85 %

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

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

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

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

28. LAND FACETS: -1- Upper & middle slopes, hapludults, 50%
-2- Crest & lower slopes, dystropepts, 40%
-3- lower slopes, troporthents, 10%
-4-

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

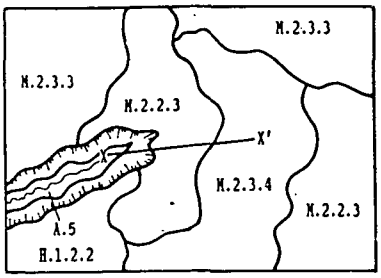
---

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

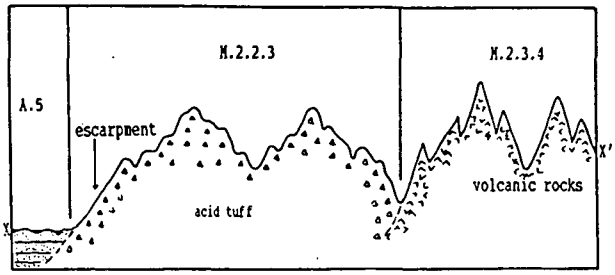
---

31. ADDITIONAL NOTES: Hapludults extrapolation based on RePPProT (Land System TWI).

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mab.2.3.4 **2. MAP SHEET**: 1110 **3. AREA**: 67 km2

4. OCCURENCE by PROVINCE: Lampung: 99%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date:** 05/06/89 **Status:** Final

6. LAND UNIT DESCRIPTION: Extremely dissected mountains,intermediate and mafic tuffs and lavas, abrupts slopes (>75%).

7. SATELLITE SCENES : 123/64/14/11/84,

8. AERIAL PHOTOGRAPHS : 1:100.000 59 /8292-19

9. RADAR : Star-I/250/88/1110-2,3

10. PARENT MATERIAL **11. ROCK OUTCROP**: 15 %

- **a. Weathering** : Partial
- **b. Lithology** : andesitic tuffs, andesitic lavas,
- **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, alang-alang, clove (cengkeh)

Area used : 45 %

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

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	50 %	yes
Associated 1	humitropepts	20 %	yes
Associated 2	eutropepts	15 %	yes

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/US/1010/ / /19 /

ite/ /184-4 /81/NS/1110/14/ /11 /

18. SOIL CHARACTERISTICS

Properties		Dominant > 50%	Associated 1	Associated 2
a. Texture:	topsoil	moderately 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	low	low
	subsoil	low	low	very low
e. Total K2O:	topsoil	low	low	low
	subsoil	low	very low	low
f. Avail. P:	method	Bray I		
	topsoil	very low	very low	--
	subsoil	very low	very low	--
g. Total P:	topsoil	low	low	low
	subsoil	very low	very low	very low
h. CEC pH 7	topsoil	low	medium	medium
	subsoil	low	low	medium
i. Soil Reaction:	topsoil	very strong acid	excessive acid	slightly acid
	subsoil	very strong acid	very strong acid	slightly acid
j. Al Sat.	topsoil	medium	very high	--
	subsoil	high	very high	--
k. Al toxicity :		yes	yes	--
l. Acid sulph. pot.:		--	--	--
m. Salinity :		--	--	--
n. Other Toxicity:		--	--	--
o. Root obstr. layer :		--	--	--
p. Organic Matter :		2.2	0.0	2.4
q. TEB :		2.0	0.0	14.2
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 550 m **Minimum:** 25 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:** High
c. Variability: medium

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

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

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: narrow **e. Variability:** Medium

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

28. LAND FACETS: -1- Crest,upper&mid slopes, dystropepts, 50%
-2- Lower slopes, humitropepts, 20%
-3- Lower slopes, eutropepts, 15%
-4-

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

---

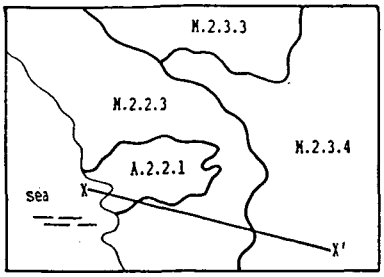
30. RELIABILITY: **1= reliable, 2= probable, 3= tenable, 4= plausible**

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

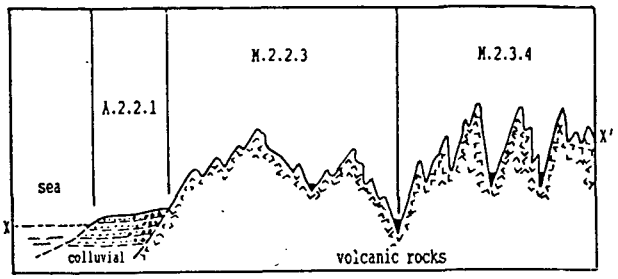
---

31. ADDITIONAL NOTES: Representative profiles for Dystropepts is extrapolated from sheet 1010. Humitropepts extrapolation based on RePPProT.

MAP IMAGE:



CROSS SECTION:



1. LAND UNIT: Mb.2.3.4 **2. MAP SHEET**: 1110 **3. AREA**: 70 km2

4. OCCURENCE by PROVINCE: : 0%

5. STATUS IDENTIFIERS : **Updated by**: DR **edit date**: 05/06/89 **Status**: Final

6. LAND UNIT DESCRIPTION: Extremely dissected mountains,intermediate and mafic lavas, abrupts slopes (>75%).

7. SATELLITE SCENES : 123/63/14/11/84,

8. AERIAL PHOTOGRAPHS : 1:100.000 58 /8292-67

9. RADAR : Star-I/250/88/1110-2,3

10. PARENT MATERIAL **11. ROCK OUTCROP**: 15 %

- **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, alang-alang, upland crops, clove (cengkeh)

Area used : 40 %

16. ACCELERATED EROSION

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

---

17. SOIL GREAT GROUP :

	Classification	% of area	Lab. checked
Dominant >50%	dystropepts	50 %	no
Associated 1	eutropepts	20 %	yes
Associated 2	humitropepts	15 %	

---

32. REPRESENTATIVE PROFILES:

ity/ / /87/SR/1010/ / /3 / ite/ /184-4 /81/NS/1110/14/ /011/

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	high	low	low
	subsoil	high	very low	low
e. Total K2O:	topsoil	high	low	low
	subsoil	high	low	very low
f. Avail. P:	method	Bray I		
	topsoil	very low	--	very low
	subsoil	very low	--	very low
g. Total P:	topsoil	medium	low	low
	subsoil	low	very low	very low
h. CEC pH 7	topsoil	low	medium	medium
	subsoil	low	medium	low
i. Soil Reaction:	topsoil	moderately acid	slightly acid	excessive acid
	subsoil	strong acid	slightly acid	very strong acid
j. Al Sat.	topsoil	very low	--	very high
	subsoil	very low	--	very high
k. Al toxicity :		--	--	--
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	14.2	0.0
r. Total observations:		0	0	0

---

19. ALTITUDE: **Maximum:** 1225 m **Minimum:** 250 m **Range:** 800 m

20. PLAN/PROFILE: **Dominant:** 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:** Medium
c. Length: short **d. Variability:** High
e. Curvature: convex

23. SLOPE DISTR.: **Valleybottoms:** 0 %
Interfluves : **0-8%:**15 %, **9-25%:** 0 %, **25-55%:** 5 %, **>55%:** 80 %

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: narrow **e. Variability:** Medium

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

28. LAND FACETS: -1- Crest & upper slopes, dystropepts, 50%
-2- Middle & lower slopes, eutropepts, 20%
-3- Lower slopes, humitropepts, 15%
-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:** 3 **18.a:** 3 **18.b:** 3 **18.c:** 3
18.d-q: 3 **19:** 1 **22:** 1 **23:** 2 **24:** 1 **28:** 3 **29:** 0

---

31. ADDITIONAL NOTES: This LU is extrapolated from sheet 1010 and RePPProT.