Report No. 14/1

42452

Terrain Classification
of

BELAGA - TUBAU AREA

3 rd. & 4th. Division

by

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TERRAIN CLASSIFICATION OF THE BELAGA-TUBAU AREA, THIRD AND FOURTH DIVISIONS.

1. A Terrain Classification map of the area between Belaga in Third Division and Tubau in Fourth Division was requested as it is proposed to link these two centres by road and a preliminary assessment was required of the agricultural potential in the belt which would be opened up by such a road.

2. The boundaries of the area covered by the map have been dictated by the availability of air photographs of usable quality. Base maps on a scale of 1:50,000 are not available east of Long. 113° 45'. In some localities it has been possible to interpolate from the air photographs beyond this line. In others, however, the photograph coverage barely extends to the line itself and the stereoscopic pairs required for interpretation do not reach it. The area covered is thus somewhat irregular in shape. It has been calculated by planimeter as 503 square miles.

Terrain Classification

3. A brief key to the classification units is included on the map. These units are defined below in greater detail.

Class 1: Land which is flat or almost flat. There is no appreciable amplitude of relief. Some of the best agricultural land falls within this Class but it also includes peat swamps.

Class 2: Land with up to 150 feet amplitude of relief but not more than 10° slope. Most land in this Class is low rolling country.

Class 3: Land with an amplitude of relief greater than 150 feet but slopes not exceeding 20°. Such a combination of features is rarely found. The Class is included mainly to cater for very long dip slopes in country of inclined sedimentary strata.

Class 4: Land with less than 50 feet amplitude of relief but slopes of 10 - 35°. Much moderately rolling country falls within this Class, as do some dissected terrace remnants.

Class 5: Land with an amplitude of relief of 50 - 150 feet and slopes of 10 - 20°.

Class 6: Land with an amplitude of relief of 50 - 150 feet and slopes of 20 - 35°.

Land in Classes 1 - 6 is considered - on the grounds of topography - to be suitable for agriculture. (It may, of course, be unsuitable on other grounds, such as poor soil or drainage conditions.)

Class 7: Land with an amplitude of relief in excess of 150 feet and slopes of 20 - 35°. Land in this Class is considered marginal for agriculture.

Class 8: All land, regardless of amplitude of relief, in which slopes are greater than 35°. Such land is considered unsuitable for agriculture.

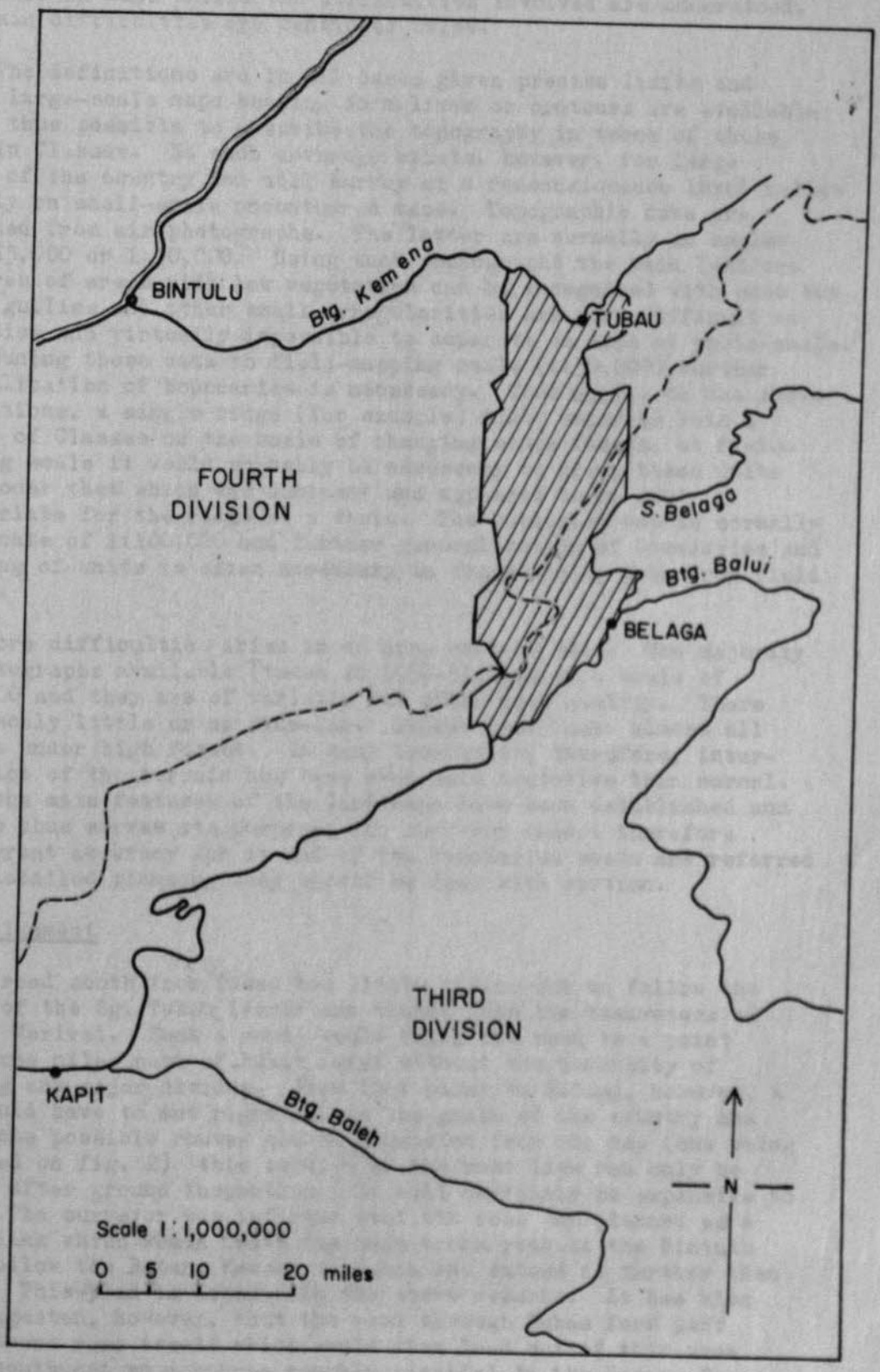


Fig. 1 : LOCATION

4. Exact application of the system at a reconnaissance level is hardly possible and it is easy to make unwarranted assumptions from Terrain Maps unless the difficulties involved are understood. The main difficulties are mentioned below.

5. The definitions are in all cases given precise limits and where large-scale maps bearing form-lines or contours are available it is thus possible to describe the topography in terms of these Terrain Classes. No such coverage exists, however, for large areas of the country and soil survey at a reconnaissance level relies largely on small-scale uncontoured maps. Topographic data are obtained from air photographs. The latter are normally on scales of 1:25,000 or 1:30,000. Using such photographs the main landform features of areas with low vegetation can be recognised with ease but minor gullies and other small irregularities are more difficult to recognise and virtually impossible to separate on maps at photo-scale. In reducing these data to field-mapping scale (1:50,000) further generalization of boundaries is necessary. Thus while, on the above definitions, a single ridge (for example) might separate into a number of Classes on the basis of changing slope facets, at field-mapping scale it would probably be necessary to group these units under one: that which was dominant and appeared to be most appropriate for the ridge as a whole. The published map is normally on a scale of 1:100,000 and further generalization of boundaries and grouping of units is often necessary in transferring data from field sheets.

6. More difficulties arise in an area such as this. The majority of photographs available (taken in 1950-51) are on a scale of 1:35,000 and they are of variable but often poor quality. There is commonly little or no side-lap. Except near Tubau almost all land is under high forest. In many localities, therefore, interpretation of the terrain has been even more tentative than normal. While the main features of the landscape have been established and the map thus serves its purpose, the surveyor cannot therefore claim great accuracy for it and if the boundaries shown are referred to in detailed planning they should be used with caution.

Road alignment

7. A road south from Tubau has little choice but to follow the valley of the Sg. Tubau itself and thence into the headwaters of the Sg. Merirai. Such a route would bring the road to a point some three miles east of Bukit Lumut without the necessity of crossing any major divides. From that point to Belaga, however, a road would have to cut right across the grain of the country and while some possible routes can be suggested from the map (one being indicated on fig. 2) this section of the road line can only be decided after ground inspection. It will certainly be expensive to build. The surveyor was informed that the road was planned as a feeder link which would leave the main trunk road in the Bintulu area, follow the Batang Kemena to Tubau and extend no further than Belaga. This plan is assumed in the above remarks. It has also been suggested, however, that the road through Tubau form part of the trunk road itself which would then lead out of this area to the southwest on a course roughly parallel to the Batang Rajang. Were Belaga to be linked with this road by a spur road it might be more practicable for the spur road to follow river valleys towards the southwest, joining the main road possibly in the ulu Sg. Burok locality. Such a route more or less follows the grain of the country and, while longer than a road from Belaga towards Bukit Lumut, might well be cheaper to construct.

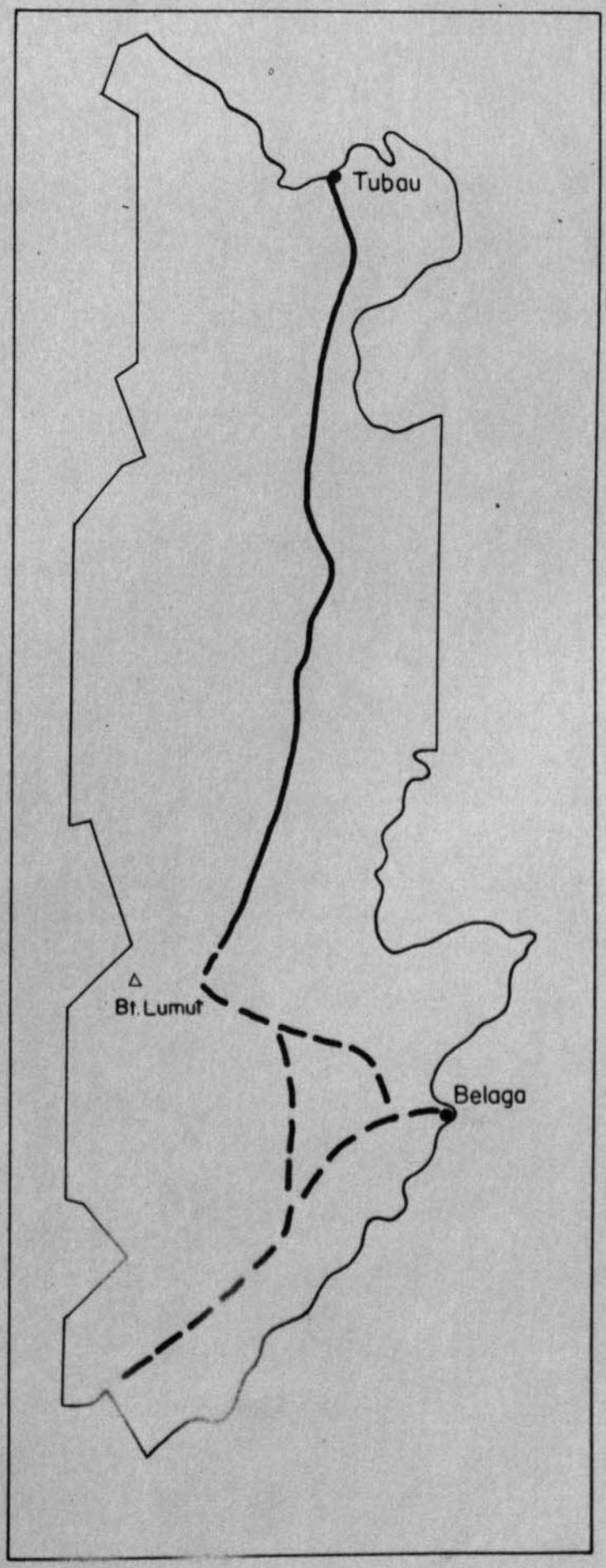
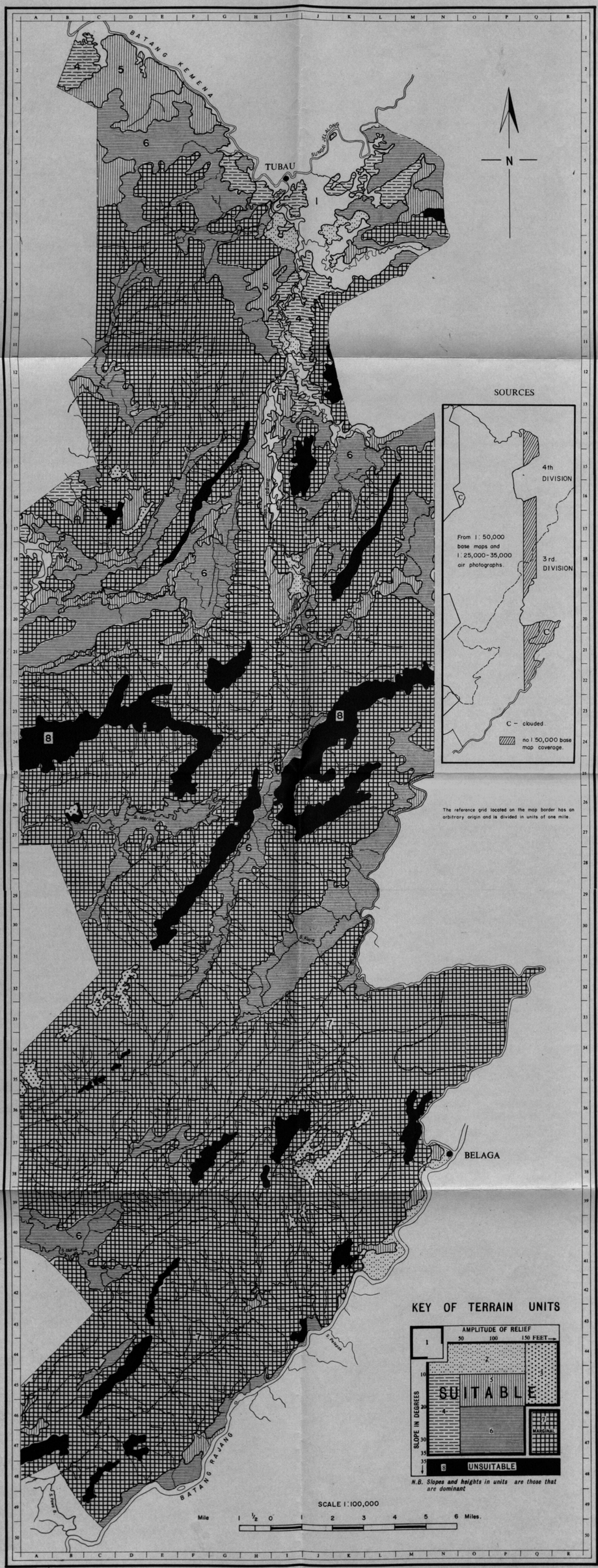


Fig 2 : Sketch map indicating possible road routes

BELAGA – TUBAU AREA TERRAIN MAP



Soil Survey Drawing No. 118. Survey Area 14/1. Base map derived from D.O.S. 34

Compiled by : I. M. Scott.

Drawn by : Sebli Mohd. Ap.

BELAGA – TUBAU AREA TERRAIN MAP

BATANG KEMENA

SUNGAI JELALONG

TUBAU

S. Pelepok

BATANG RAJANG

S. Rowa B

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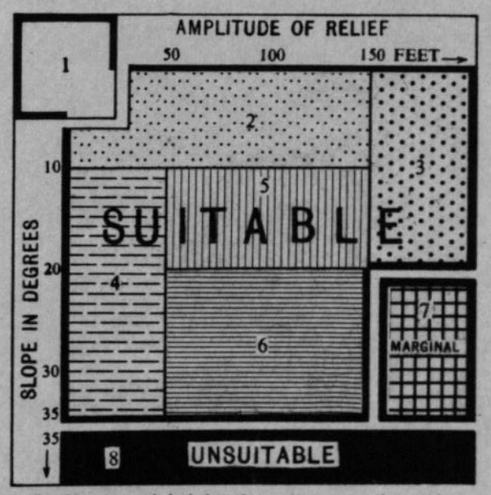
KEY OF TERRAIN UNITS



N.B. Slopes and heights in units are those that are dominant

SCALE 1:100,000

Mile 1 ½ 0 1 2 3 4 5 6 Miles.

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