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Report on a Semi-Detailed Soil Survey of the  
Pujut-Lopeng Area, 4th Division.

by

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RT ON SUNGEI  
NG SURVEY.

The Agricultural Reserve comprises an area of approximately 1400 acres. The object of the survey is to determine whether the land within it can be used for agriculture, specifically for wet padi.

Part of the Reserve, mainly that part lying between the hills and Sungei Lopeng, has been used for padi cultivation immediately after the war. Although the yield obtained then was very satisfactory - in fact it is said that the yield was so good that there were not enough people to harvest all the paddy - the risk of flooding by Sg. Lopeng and Sg. Miri was great. The government then attempted to drain the area by constructing several drains, but these failed to improve the drainage sufficiently. Furthermore, the oil fields nearby absorbed a large number of the local populace so that, eventually the area was almost abandoned. At present, the reverse process has occurred; large number of unskilled workers are retrenched, and this Agricultural Reserve is considered as a potential area for resettling these people.

NT LAND USE

The land lying between Sungei Lopeng and Sungei Dalam is under primary forest. This forest is characterised by scattered small-sized, tall, straight trees, with whitish or silvery bark; undergrowth consists of thick "Rassau" and asam paya. When viewed from a distance the tall forest trees give the impression that they are dying.

The land use previously for cultivation is now under secondary vegetation, consisting chiefly of coarse grasses and ferns. Padi cultivation is still carried out on the clay soil, particularly near the northern and southern ends of the area. On the narrow strip of alluvium/colluvium, some Chinese own market gardens and citrus plantations.

AGE CONDI-

Sungei Lopeng and Sungei Dalam are the only two large streams draining the area. Heavy concentrated rainfall causes the water table to rise above the surface as was found on the soil type "over 36" peat on clay" where water was found to be the two to three feet above the surface; this condition persists for several days before all the water finds its way to the stream. High tides result in the backing up of river water and consequent worsening of flood conditions.

Four soil types are found in the area, namely:

- (i) colluvium/alluvium
- (ii) clay
- (iii) peat overlying clay
- (iv) clay overlying peat.

(i) Colluvium/alluvium

A profile description is as follows:

0 - 40" : Undecomposed grasses and leaves.

40"+ : Dark grey silty clay, plastic and sticky

The greatest depth of the peat found is eight feet, but this occurs in a few places only. The average peat depth is between 3 - 6 feet. The existing drainage conditions of the deeper peat above 3 feet in depth prohibits the use of the land for any crops, except perhaps sago, as the land is submerged under water for several days after a heavy rainfall.

(iv) Clay on Peat

The boundary of this soil group is tentative as the courses of Sungei Lopeng and Sungei Dalam are not accurately marked on the map. As the clay on the peat is deposited by the streams, it follows that this soil group is subjected to frequent flooding. A profile description of the soil is as follows:

0 - 6" : Dark brown organic silt loam, many fine roots.

6 - 20" : Dark grey silty clay, with much finely divided organic matter, thoroughly mixed in the soil.

20 - 40"+ : A mixture of well decomposed peat and silty clay.

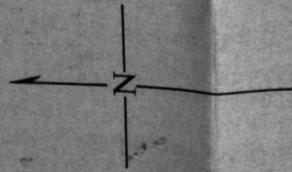
CONCLUSION

The proximity of the area to Miri and its accessibility are favourable points for agricultural development. The soils, except for the deeper peats, are all physically suitable for wet padi cultivation. With appropriate drainage and controlled flooding it is estimated that within the 1400 acres of the Reserve approximately 1000 acres are potentially cultivable for wet padi. Chemical analyses of soil samples are not yet completed, but it is not expected that they will prove the soils to be unsuitable for cultivation. If the deep peats are to be used, sago is the only practical possibility.

Lim Chin Pang.

**PUJUT - LOPENG  
AGRICULTURAL RESERVE**

Scale 8 Chains to 1 Inch



Padang Kerbau Road

Light Railway

Sungai Dalom

Sungai Lopeng

MIRI  
SUNGAI

51112

51118

51115

54517

**LEGEND**

	Colluvium / Alluvium		Soil Samples with Numbers
	Clay		Boundary of Surveyed Area
	Clay on shallow Peat		Rentis
	0 - 3 ft. Peat on Clay		
	> 3 ft. Peat on Clay		

Based on map prepared by  
Drainage and Irrigation Department,  
F. W. D.

