B. THANH DA AND BEN ME COC (1) PUMPING STATION

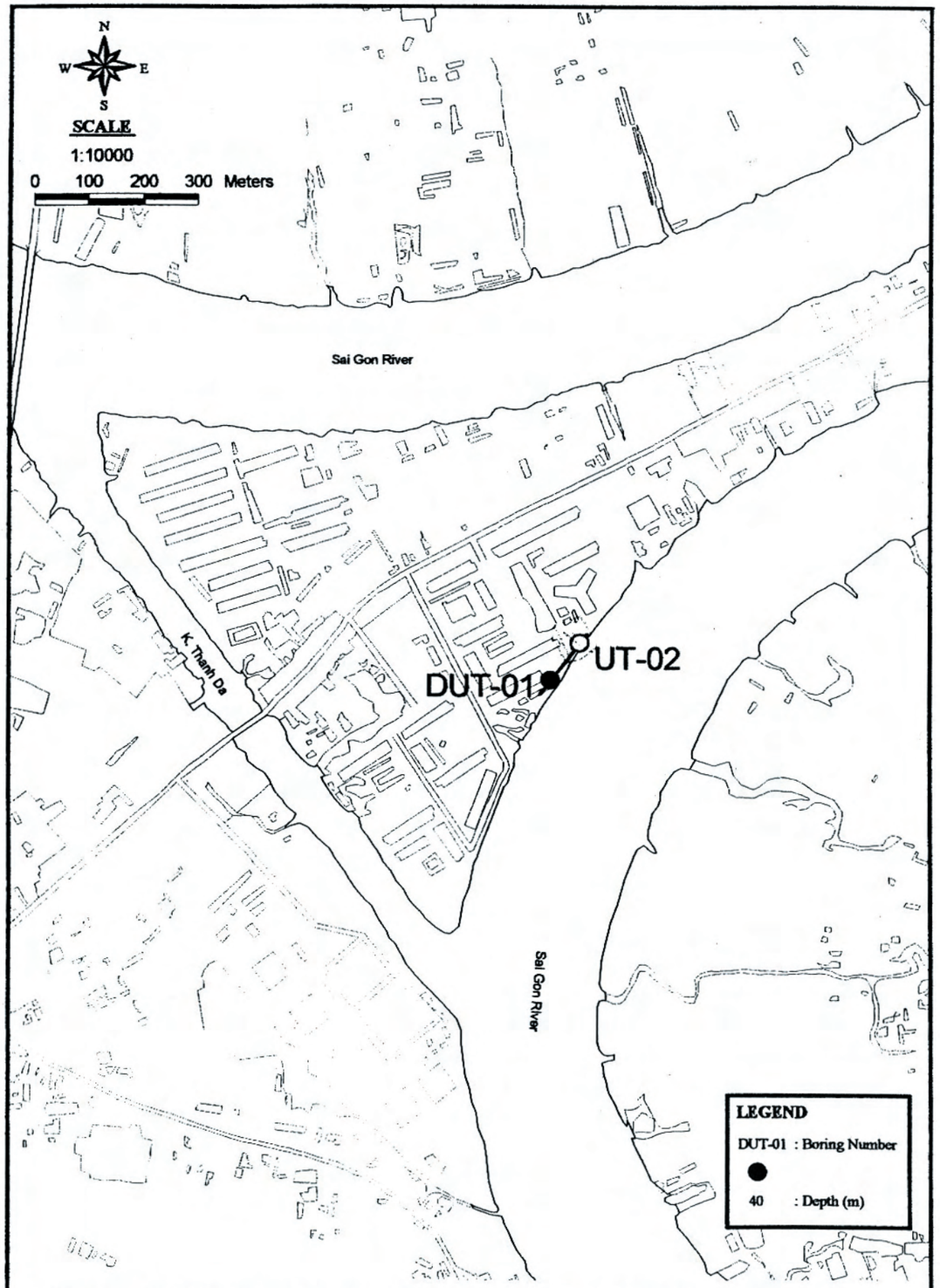

FIG. BOREHOLE LOCATION AT THANH DA PUMP DRAINAGE AREA

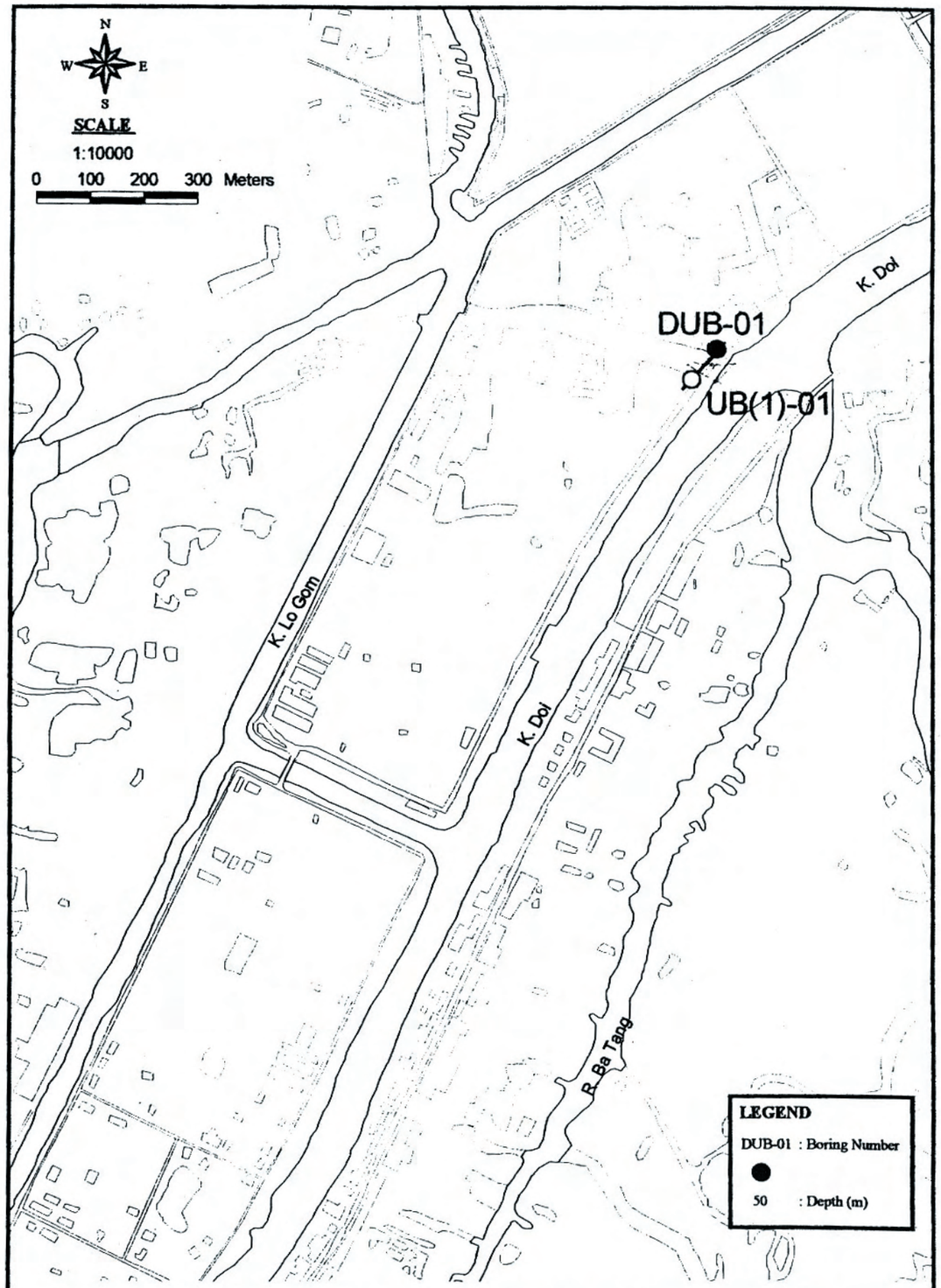

FIG. BOREHOLE LOCATION AT BEN ME COC (1) PUMP DRAINAGE AREA

II. ANLYSIS OF THE INVESTIGATION RESULT

A.THANH DA DRAINAGE STATION

II ANLYSIS OF THE INVESTIGATION RESULT

A . THANH DA DRAINAGE STATION.

1 . STRUCTURE OF THE BASE SOIL.

Based on, in-situ survey, drilling documents and the results obtained from the soil tests, we have noticed that basic soil on the surveying site (up to 40.0m deep) was composed by Holocene deposits of 21.5m thick and Pleistocene deposits, which the thickness has not been determined yet (boreholes of 40.0m depth did not excess these deposits), and on the surface there is made ground on the surface with the thickness from 0.5. From the surface downwards there are the following layers:

1.1 . Layer 1: Made ground - Soft, blackish grey SANDY CLAY

This layer lies right on the surface found at all boreholes, with the thickness 0.5m.

1.2 . Layer 2: Very soft, high plasticity blackish grey ORGANIC CLAY (OH).

It is covered by layer 1 with thickness from 15.0m and the bottom is 15.8m deep. Standard penetration resistance N from 0 to 1. In total, 6 samples were taken from this layer, the obtained physico-mechanical properties of the samples have shown that, natural moisture is from 88.99% to 110.39%, wet density from 1.289 to 1.461g/cm^3, liquid limit from 87.5 to 107.4%, plasticity index from 42.1 to 58.4%, high compressibility (see average value of the physico-mechanical properties - table 1a). The main characteristics of the layer are as follows :

Wet density	γ_w	=	1,402 g/cm^3
Unconfined compressive strength	q_u	=	0.105 Kg/cm^2
Compression index	Cc	=	1.227 cm^2/kg
Coefficient of consolidation	Cv	=	4.50 x 10^{-4} cm^2/s
Coefficient of volume compressibility	mv	=	1.06 x 10^{-4} cm^2/g

1.3 . Layer 3: Soft, low plasticity blackish grey SANDY CLAY (CL).

It is covered by layer 2 with the thickness is 1.7m and the bottom of layer is 17.5m deep. Standard penetration resistance N = 4. 1 samples were taken from this layer, the obtained physical, mechanical properties of the samples have shown that, natural moisture is 28.61%, wet density 1.934g/cm^3 , liquid limit 34.6%, plasticity index 17.9% (see average value of the physico-mechanical properties - table 2a). The main characteristics of the layer are as follows :

Wet density	γw	=	1,934 g/cm^3
Unconfined compressive Strength	q_u	=	0.359 Kg/cm^2

1.4 . Layer 3a: Loose, greenish grey SILTY, CLAYEY SAND (SM-SC).

Was found only at the borehole UT-02. The thickness is 3.5m and the depth of the layer bottom is 22.0m. Standard penetration resistance from 2 to 4. In total, 2 samples were taken from this layer, the obtained physico-mechanical properties of the samples have shown that, natural moisture is from 19.81% to 20.21%, wet density from 2.051 to 2.080g/cm^3 , liquid limit 24.7%, plasticity index is 6.8%. The main characteristics of the layer are as follows :

Wet density	γ_w	=	1,721 g/cm^3
Unconfined compressive strength	q_u	=	0.336 Kg/cm^2
Compression index	Cc	=	0.0785 cm^2/kg
Coefficient of consolidation	Cv	=	7.15 x 10^{-4} cm^2/s
Coefficient of volume compressibility	mv	=	2.42 x 10^{-5} cm^2/g

1.5 . Layer 4b: Medium dense, greenish grey CLAYEY SAND (SC).

It is covered by layer 3 with the thickness is 4.5m and the bottom of layer is 22.0m deep. Standard penetration resistance from 11 to 12. In total, 2 samples were taken from this layer, the obtained physico-mechanical properties of the samples have shown that, natural moisture is from 19.40% to 21.80%, wet density from 1.932 to 2.068g/cm^3 , liquid limit is from 20.8 to 27.2%, plasticity index is from 7.2 to 8.0%, (see average value of the physico-mechanical properties - table 3a). The main characteristics of the layer are as follows :

Wet density	γ_w	=	2,000 g/cm^3

1.6 . Layer 4: Stiff, low plasticity, greenish grey SANDY CLAY (CL).

It is covered by layer 4a with the thickness is 3.1m and the bottom of layer is 28.6m deep. Standard penetration resistance from 12 to 15. In total, 2 samples were taken from this layer, the obtained physico-mechanical properties of the samples have shown that, natural moisture is from 15.48% to 16.38%, wet density from 2.075 to 2.105g/cm^3 , liquid limit is from 27.9 to 29.8%, plasticity index is from 12.6 to 14.1%, (see average value of the physico-mechanical properties - table 4a). The main characteristics of the layer are as follows :

Wet density	γ_w	=	2,090 g/cm^3

1.7 . Layer 4a: Medium dense, yellowish grey SILTY SAND (SM)

The thickness is more 14.9m and the depth of the layer bottom is more 40.0m. At the boreholes with 40.0m depth, its thickness has not been determined yet. Standard penetration resistance from 10 to 23. In total, 5 samples were taken from this layer, the obtained physico-mechanical properties of the samples have