

SOIL INVESTIGATION

A. TAU HU - BEN NGHE CANAL

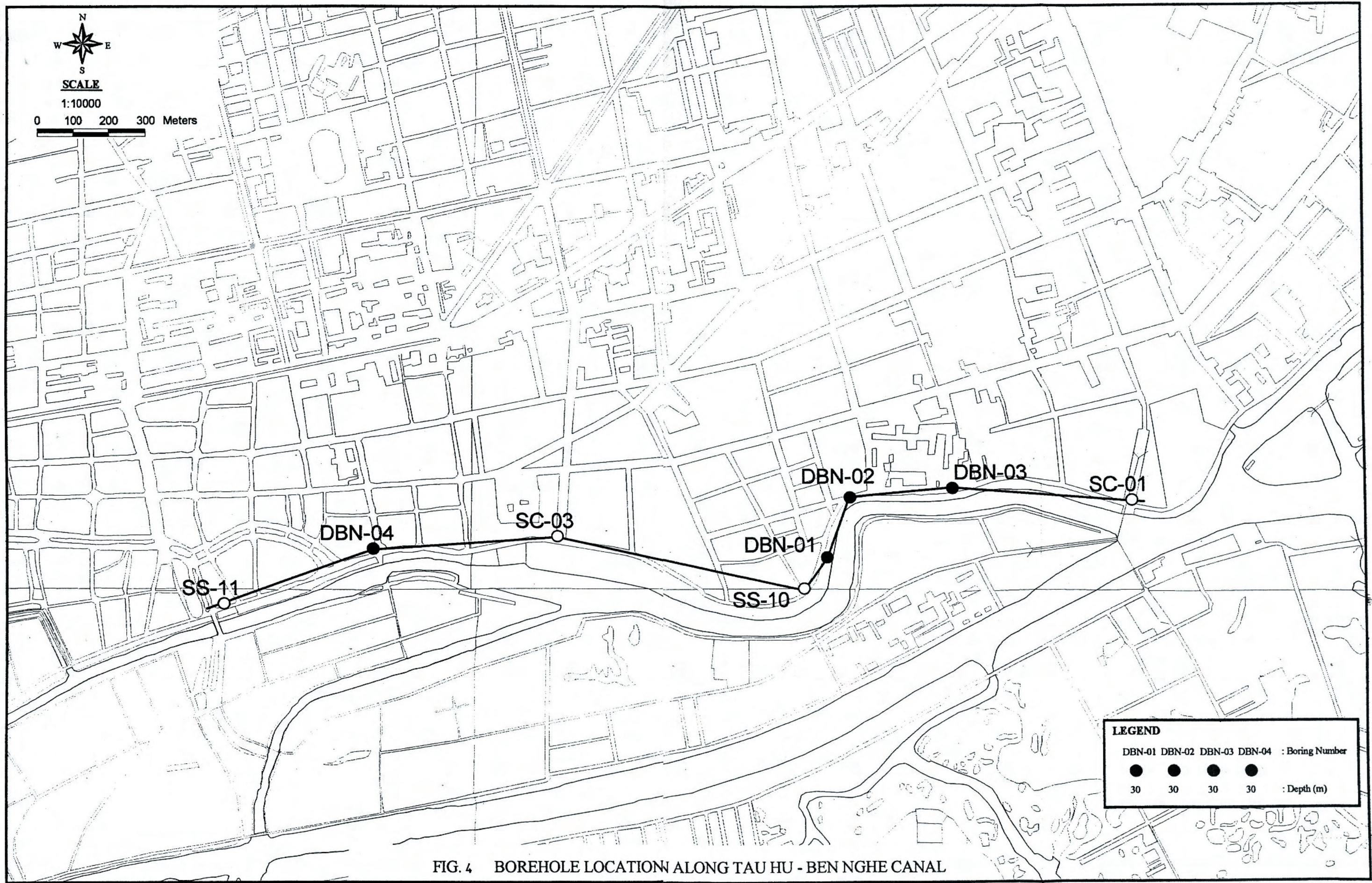


FIG. 4 BOREHOLE LOCATION ALONG TAU HU - BEN NGHE CANAL

(see average value of the physico-mechanical properties - table 5). The main characteristics of the layer are as follows :

Wet density	γ_w	=	1.951 g/cm ³
Unconfined compressive strength	q_u	=	1.925 Kg/cm ²
Compression index	C_c	=	0.302 cm ² /kg
Coefficient of consolidation	C_v	=	7.06 x 10 ⁻⁴ cm ² /s
Coefficient of volumetric compressibility	m_v	=	2.72 x 10 ⁻⁵ cm ² /g

1.7 . Layer 4b: Medium dense, yellowish brown grey CLAYEY GRAVEL with SAND (GC).

Was found at borehole DBN-2. The thickness 2.3m and the depth of the layer bottom is 4.8m. Standard penetration resistance N from 10 to 12. One sample were taken from this layer, the obtained physical, mechanical properties of the samples have shown that, natural moisture is 20.37%, wet density 2.012g/cm³, liquid limit is 42.9%, plasticity index 20.1%, (see average value of the physico-mechanical properties - table 6). The main characteristics of the layer are as follows :

Wet density	γ_w	=	2.012 g/cm ³
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1.8 . Layer 4c: Medium stiff, high plasticity, yellowish whitish SILT (MH).

Was found at borehole DBN-2. Thickness is 2.5m and the depth of the layer bottom is 8.5m. Standard penetration resistance N from 7 to 10. With one sample was taken from this layer, the obtained physico-mechanical properties of the sample has shown that, natural moisture is 55.60%, wet density 1.630g/cm³, liquid limit is 65.0%, plasticity index 16.7%, (see average value of the physico-mechanical properties - table 7). The main characteristics of the layer are as follows :

Wet density	γ_w	=	1.630 g/cm ³
Unconfined compressive strength	q_u	=	0.563 Kg/cm ²
Compression index	C_c	=	0.7326 cm ² /kg
Coefficient of consolidation	C_v	=	4.43 x 10 ⁻⁴ cm ² /s
Coefficient of volumetric compressibility	m_v	=	5.42 x 10 ⁻⁵ cm ² /g

1.9 . Layer 4d: Loose, yellowish whitish grey CLAYEY SAND (SC).

Was found at all the boreholes. Thickness is from 4.5m (SS-11) to 14.0m (SC-01) and the depth of the layer bottom is from 9.5m (SS-10) to 23.0m (SC-01). Standard penetration resistance N from 7 to 10. In total, 10 samples were taken from this layer, the obtained physical, mechanical properties of the samples have shown that, natural moisture is from 14.95% to 22.40%, wet density from 1.900 to 2.113g/cm³, liquid limit from 18.0 to 33.3%, plasticity index 4.3% to 17.7%, (see

average value of the physico-mechanical properties - table 8). The main characteristics of the layer are as follows :

Wet density	γ_w	=	2.057 g/cm ³
Unconfined compressive strength	q_u	=	0.394 Kg/cm ²
Compression index	C_c	=	0.271 cm ² /kg
Coefficient of consolidation	C_v	=	4.54 x 10 ⁻⁴ cm ² /s
Coefficient of volumetric compressibility	m_v	=	5.81 x 10 ⁻⁵ cm ² /g

1.10 . Layer 4e: Medium dense, yellowish brownish grey SILTY SAND (SM).

Was found at all the boreholes. Thickness is from 13.5m (DEN-2) to more 22.5 (SC-03) and the depth of the layer bottom is from 28.5m (DBN-2) to more 30.0m (SC-01, SC-03, SS-10, SS-11 and DBN-4). Standard penetration resistance N from 13 to 27. In total, 23 samples were taken from this layer, the obtained physical, mechanical properties of the samples have shown that, natural moisture is from 12.42% to 18.66%, wet density from 1.903 to 2.160g/cm³ (see average value of the physico-mechanical properties - table 9).

Wet density	γ_w	=	2.008 g/cm ³
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1.11 . Layer 4f: Medium dense, pinkish yellow well graded SAND with SILT (SW-SM).

Was found at boreholes DBN-1, DBN-2 and DBN-3. Thickness is more 2.0m and the depth of the layer bottom is more 30.0m. Standard penetration resistance N from 18 to 27. In total, 2 samples were taken from this layer, the obtained physico-mechanical properties of the samples have shown that, natural moisture is 10.65%, wet density from 1.877 to 2.037g/cm³, liquid limit from 20.5 to 22.5%, plasticity index 3.7% to 5.9%, (see average value of the physico-mechanical properties - table 10).

Hydrogeological conditions

At the surveying area, the groundwater level is affected by the tide and changable according to seasons. The groundwater level in the boreholes during the investigation time is from -0.5m to -0.9m. (The underground water level measured from ground surface).