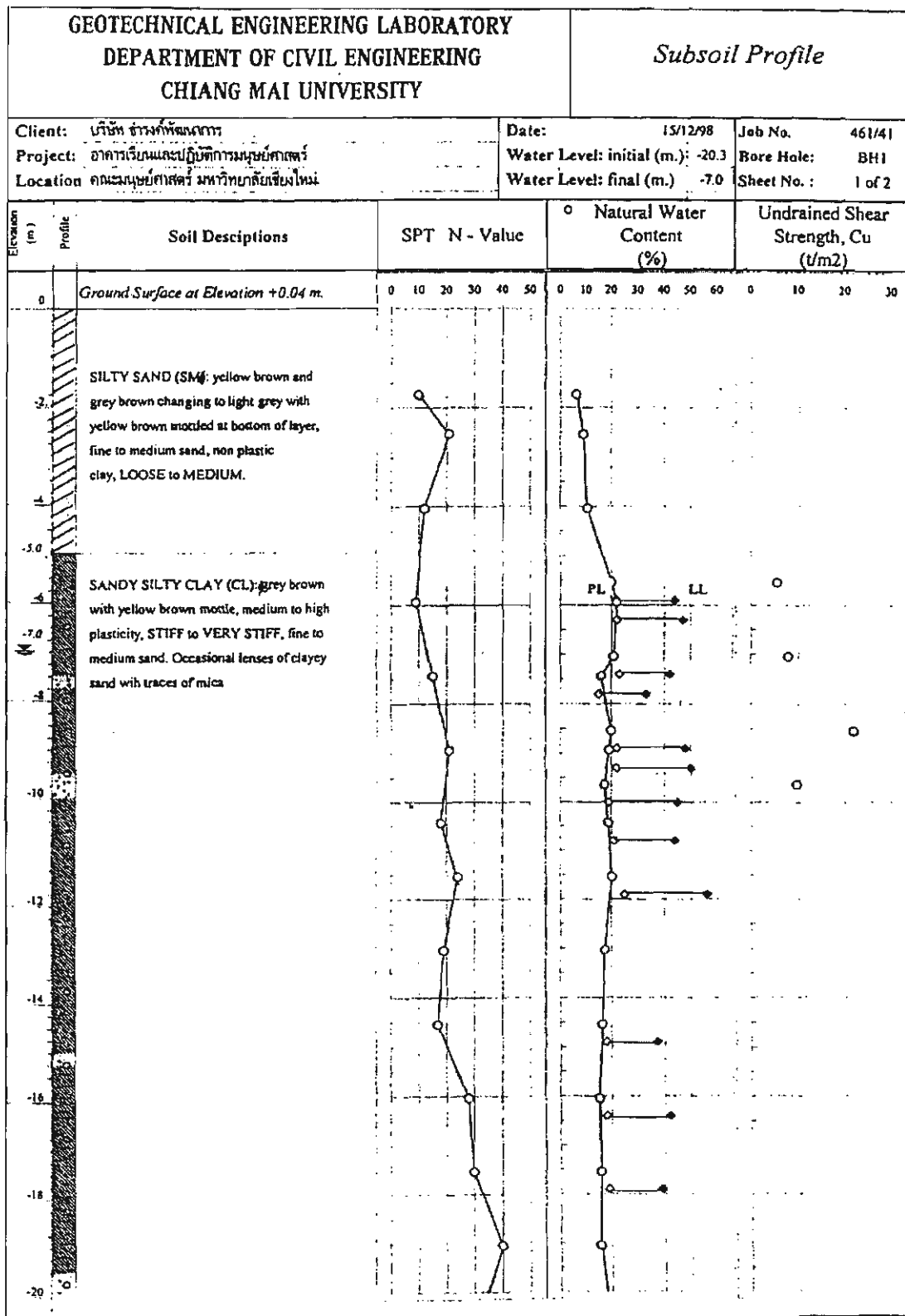
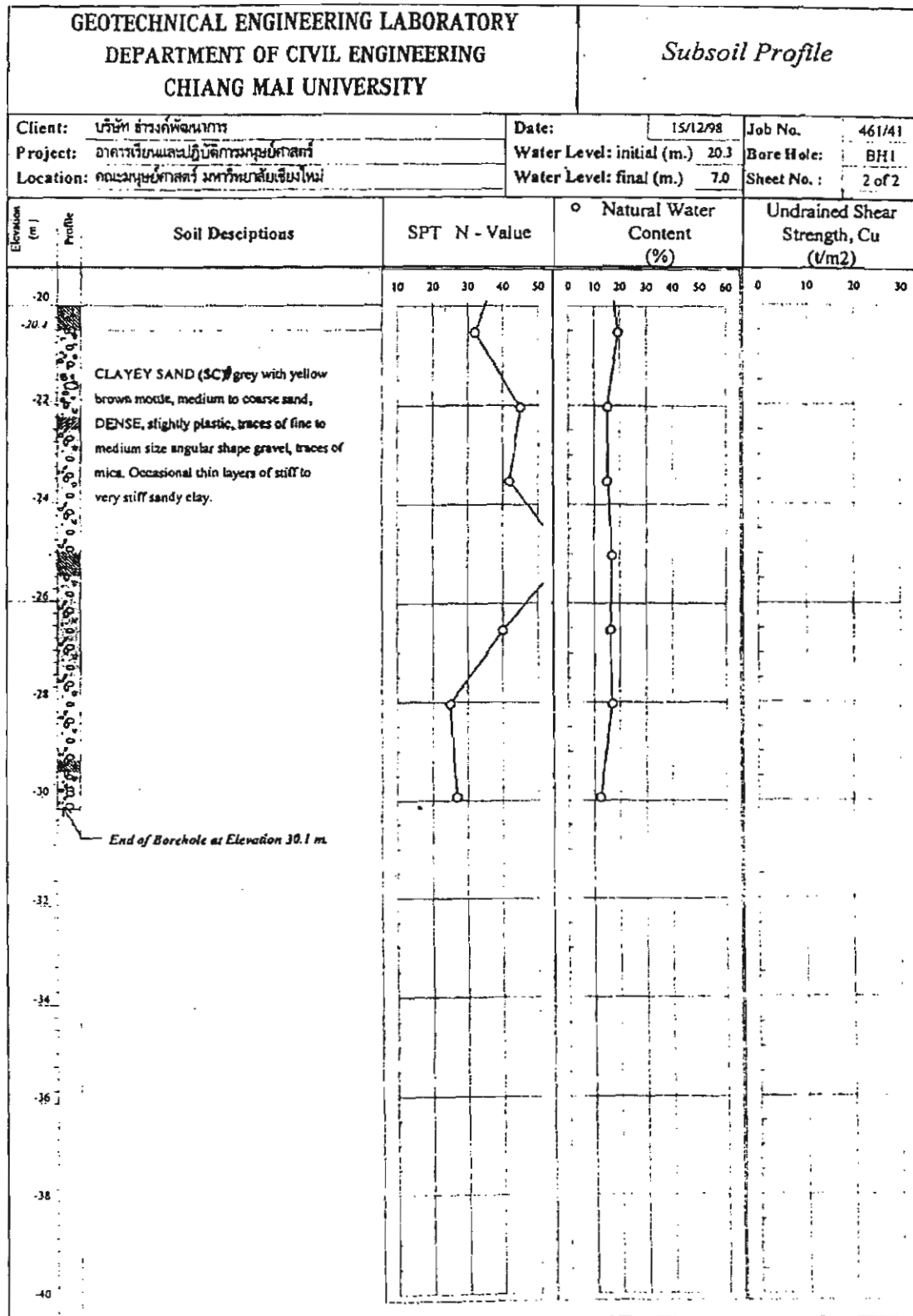
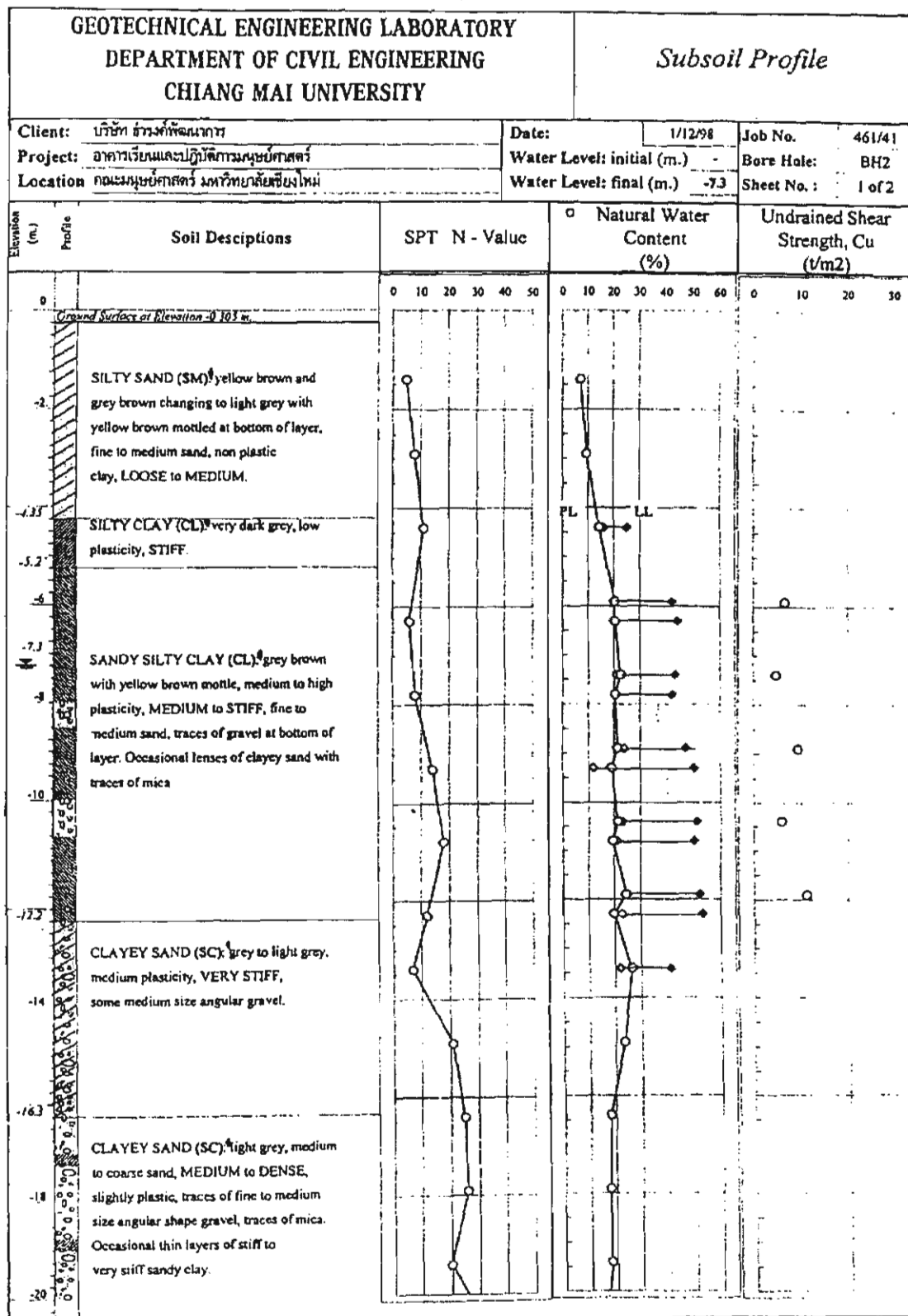
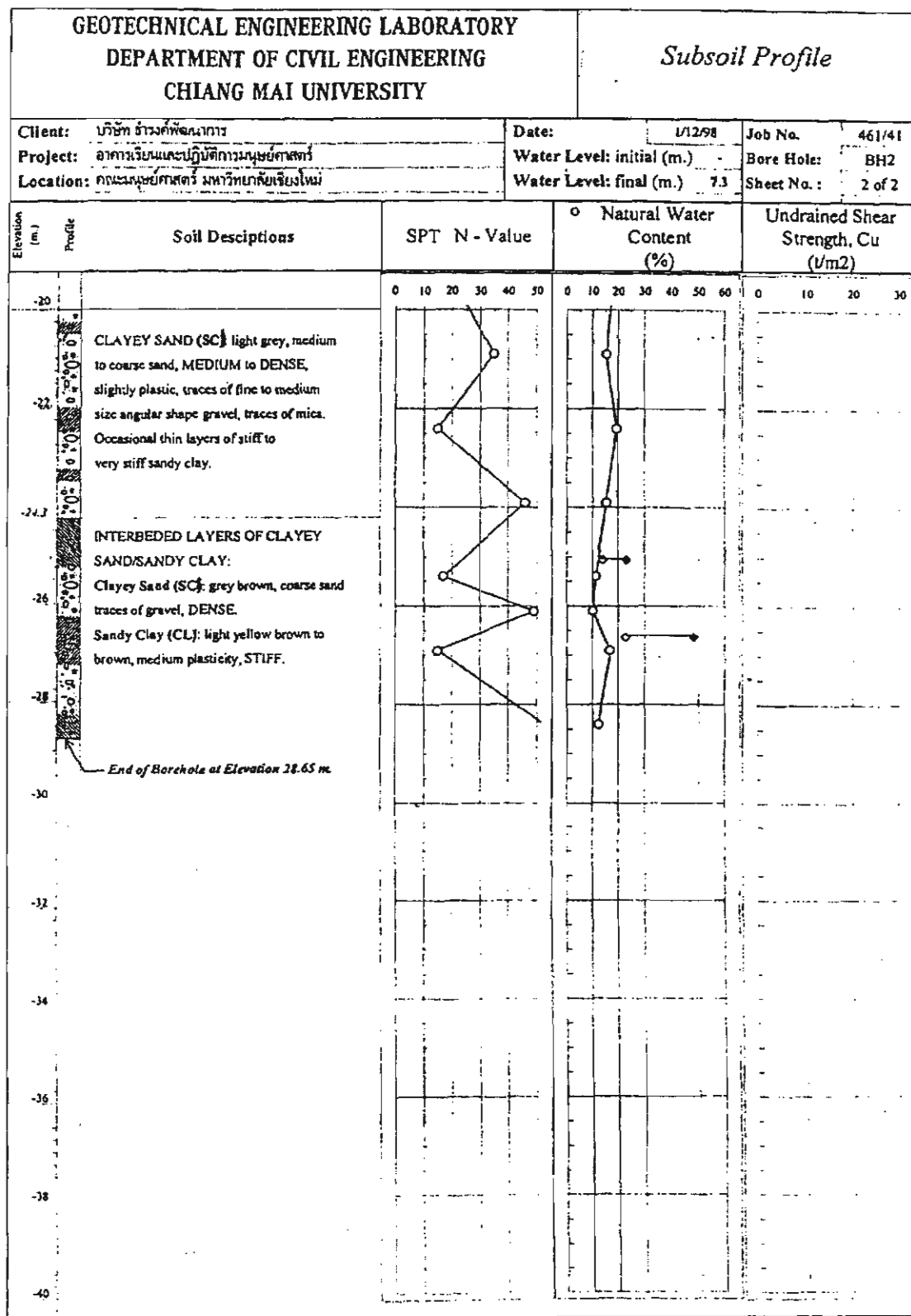
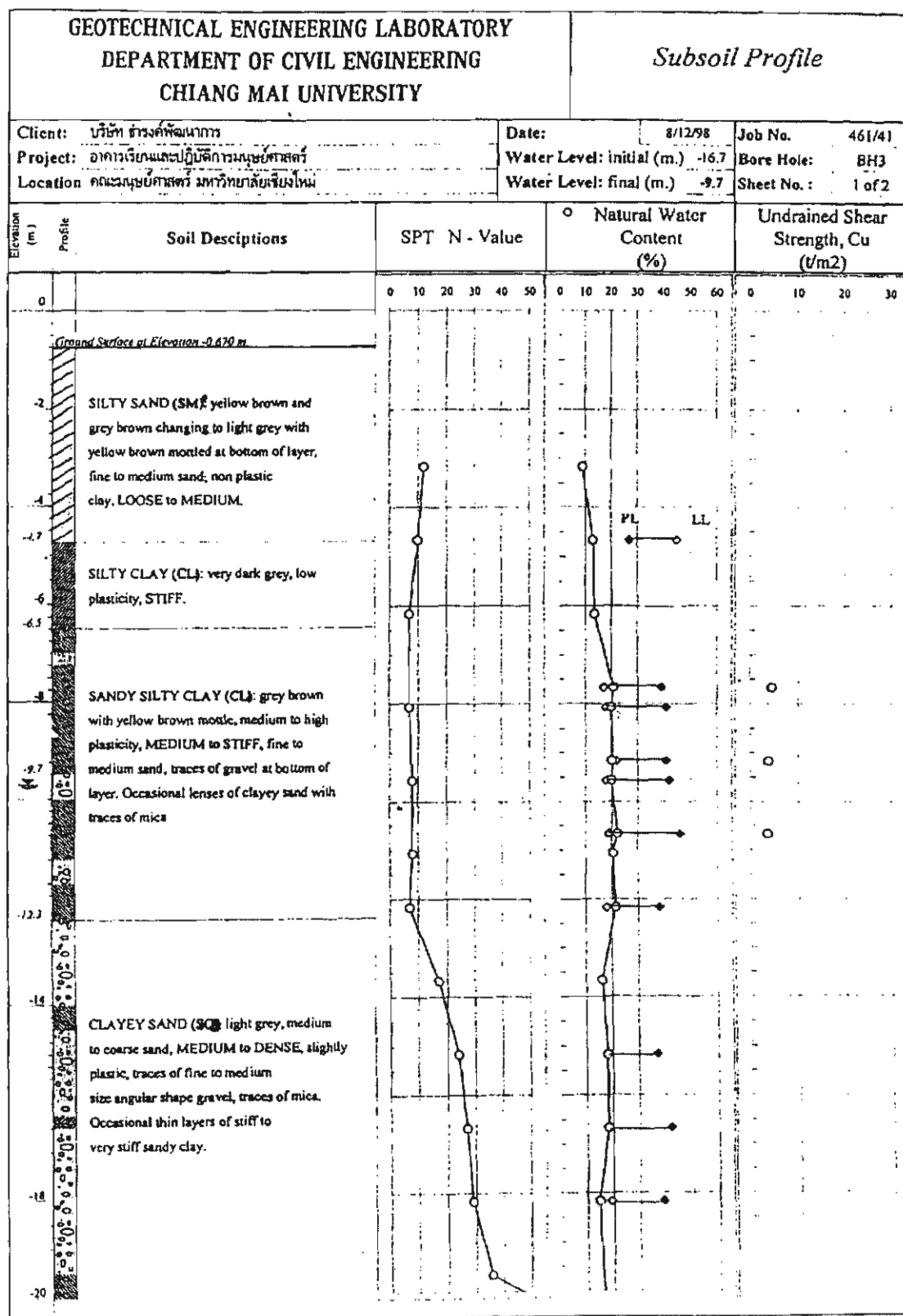


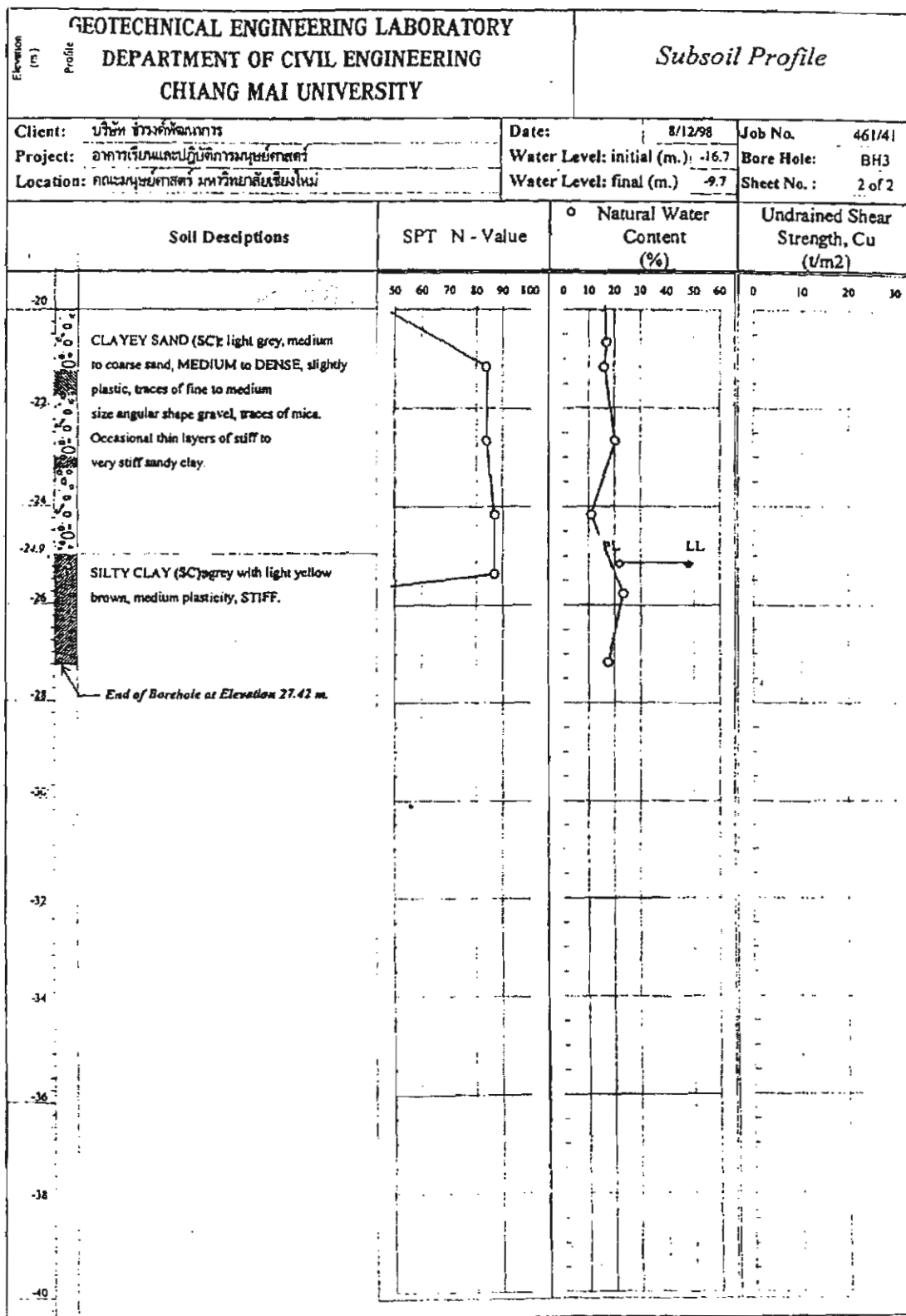












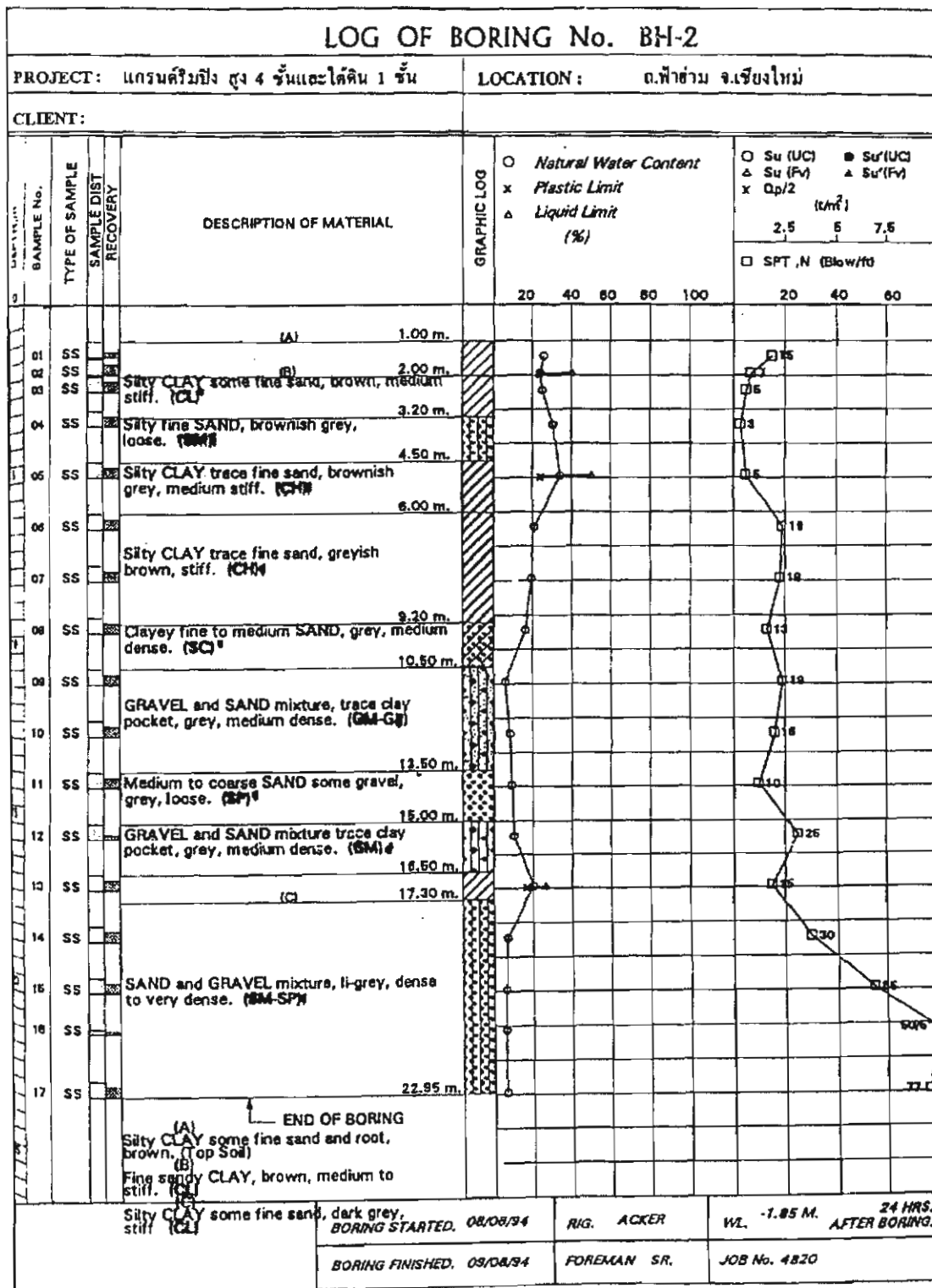
LOG OF BORING No. BH-1

PROJECT: แกรนด์ริมปิง สูง 4 ชั้นและใต้ดิน 1 ชั้น

LOCATION : ด.ฟ้าฮ่าม จ.เชียงใหม่

CLIENT:

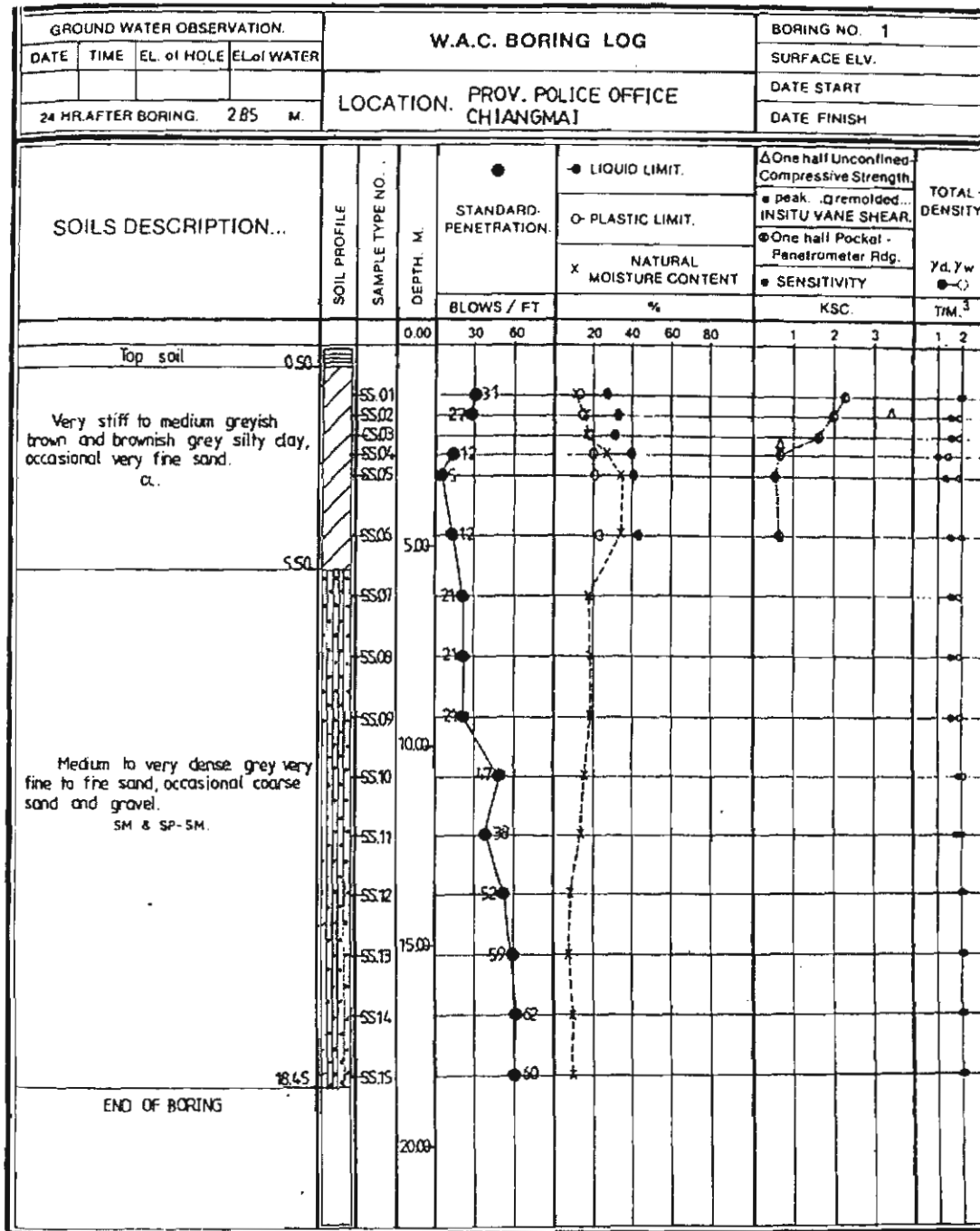
SAMPLE NO.	TYPE OF SAMPLE	SAMPLE DIST RECOVERY	DESCRIPTION OF MATERIAL	GRAPHIC LOG	Natural Water Content (%) Plastic Limit (%) Liquid Limit (%)	Su (UC) Su' (FC) Su (FC) Su' (FC) Qp/2 (t/m²)	SPT ,N (Blow/ft)
						2.5 5 7.5	20 40 60
01	SS		1.00 m.				
02	SS		1.80 m.				
03	SS		Silty fine SAND but fine to medium grain @ SS-3, brown, loose. (SM)				
04	SS		Clayey fine SAND some medium sand, grey, loose. (SC)				
05	SS		4.50 m. Silty CLAY trace fine sand, brownish grey, medium stiff. (CL)				
06	SS		6.00 m.				
07	SS		Silty CLAY trace fine sand, greyish brown, very stiff. (CU)				
08	SS						
09	SS		10.50 m.				
10	SS		Medium to coarse SAND but medium sand grain @ SS-9, some gravel @ SS-11 & 12, grey, medium to dense. (SM-SF)				
11	SS						
12	SS		18.50 m.				
13	SS						
14	SS		Fine to medium SAND trace coarse sand and gravel, grey, very dense. (SM-SF)				
15	SS		19.95 m.				
16	SS		END OF BORING Silty CLAY some fine sand and root, brown. (Top Soil) (B) Fine to medium sandy CLAY, brown, medium stiff. (CL) Silty CLAY trace fine sand, grey, medium stiff. (CH)				



LOG OF BORING No. BH-3													
PROJECT: แกรนด์ริมปิง ตูร 4 ชั้นและใต้ดิน 1 ชั้น					LOCATION: อ.ฟ้าฮ่าม จ.เชียงใหม่								
CLIENT:													
DEPTH m	SAMPLE No.	TYPE OF SAMPLE	SAMPLE DIST RECOVERY	DESCRIPTION OF MATERIAL	GRAPHIC LOG	Natural Water Content			Su (UC) Su' (UC)				
						x Plastic Limit	x Liquid Limit (%)		○ Su (UC)	● Su' (UC)	△ Su (Fv)	▲ Su' (Fv)	
									(t/m ²)				
									2.5	5	7.5		
									□ SPT, N (Blow/ft)				
						20	40	60	80	100	20	40	80
01	SS			(A) 1.00 m.									
02	SS			(B) 1.50 m.									
03	SS			(C) 2.20 m.									
04	SS			Clayey fine SAND, brown, loose. (SC)									
05	SS			(D) 3.00 m.									
06	SS			Silty fine SAND trace to some medium sand, brown, loose. (SM)									
07	SS			4.50 m.									
08	SS			Silty CLAY trace fine sand, grey, medium stiff. (CL)									
09	SS			6.00 m.									
10	SS			Silty CLAY trace fine sand, brownish grey, stiff to very stiff. (CL)									
11	SS			8.20 m.									
12	SS			Clayey fine SAND trace to some medium sand, grey, medium dense. (SC)									
13	SS			10.50 m.									
14	SS												
15	SS			Medium to coarse SAND some gravel, trace to some fine sand, gray, medium to very dense. (SM-SF)									
16	SS			19.58 m.									
END OF BORING													
(A) Silty CLAY some fine sand with root, brown. (Top Soil)													
(B) Clayey fine to coarse SAND and gravel, brown, loose. (SC)													
(C) Silty CLAY trace fine sand, greyish brown, medium stiff. (CL)													
(D) Silty CLAY trace fine sand, brown, stiff (CL)													
BORING STARTED. 10/08/94					RIG. ACKER	WL -2.35 M.			24 HRS. AFTER BORING.				
BORING FINISHED. 10/08/94					FOREMAN SR.	JOB No. 4820							

GROUND WATER OBSERVATION.				W.A.C. BORING LOG		BORING NO. ①	
DATE	TIME	EL. of HOLE	EL. of WATER	LOCATION.		SURFACE ELV.	
24 HR. AFTER BORING. 2.51 M.				SUANPRONG HOSPITAL, CHIANGMAI		DATE START	
						DATE FINISH	
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO. ...	DEPTH, M.	STANDARD-PENETRATION. BLOWS / FT.	● LIQUID LIMIT	△ One half Unconfined-Compressive Strength.	TOTAL DENSITY
					○ PLASTIC LIMIT.	□ peak... remolded... INSITU VANE SHEAR.	
					X NATURAL MOISTURE CONTENT.	● One half Pocket - Penetrometer Rdg.	
					%	KSC	γ _d , γ _v T/M
Top soil			0.00	30 60	20 40 60 80	1 2 3	1 2
Soft medium dark greyish brown silty clay. CL		SS.1	0.20	8			
Very stiff to hard light grey and brown silty clay, occasional very fine sand and gravel. CL		SS.2	0.65	25			
Dense greyish brown clayey very fine sand, trace of gravel. SC		SS.3	1.00	24			
		SS.4	1.50	39			
Hard to very stiff light grey and brown silty clay, occasional very fine sand and gravel. CL & ML-OL		SS.5	1.70	57			
		SS.6	2.00	39			
		SS.7	2.50	25			
		SS.8	3.00	48			
Dense greyish brown and brown clayey very fine sand, occasional gravel. SC		SS.9	3.30	30			
		SS.10	3.60	45			
Hard to very stiff brown silty clay. ML-OL & CL-ML		SS.11	4.00	25			
		SS.12	4.30	48			
		SS.13	4.60	82			
Dense to very dense grey, yellowish brown and brown silty very fine sand, occasional coarse sand and gravel. SM & SW-SM		SS.14	5.00	90			
		SS.15	5.30	93			
		SS.16	5.60	73			
		SS.17	5.90				
END OF BORING.			21.45				
			25.00				

GROUND WATER OBSERVATION.				W.A.C. BORING LOG				BORING NO. ②				
DATE	TIME	EL. OF HOLE	EL. OF WATER	SUANPHONG HOSPITAL CHIANGMAI				SURFACE ELEV.				
24 HRAFTER BORING. 3, 13 M.				LOCATION.				DATE START				
								DATE FINISH				
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO. ...	DEPTH, M.	STANDARD-PENETRATION	● LIQUID LIMIT.				Δ One half Unconfined-Compressive Strength.			
					○ PLASTIC LIMIT				■ peak... □ remolded... INSITU VANE SHEAR.			
					X NATURAL MOISTURE CONTENT				● One half Pocket - Penetrometer Rdg.			
				BLOWS / FT				KSC.				
				%				7d, 7w				
								TIM.				
Top soil			0.00	30 60	20 40 60 80	1 2 3	1 2					
Soft dark grey silty clay, occasional very fine sand. CL		SS.1	0.20	2								
		SS.2	0.50	5								
Very stiff to hard light grey, yellowish brown and brown silty clay, occasional very fine sand. CL		SS.3	2.15	26	40							
		SS.4		32								
		SS.5										
Medium light grey and brown clayey very fine sand. SC		SS.6	4.50	26								
		SS.7	6.00	56								
Hard grey and brown silt, trace of very fine sand. CL		SS.8	6.90									
		SS.9										
Dense to medium grey and brown very fine sand, occasional coarse sand. SM & SP-SM		SS.10	10.00	23								
		SS.11	12.00	34								
Dense yellowish brown silty very fine sand. SM		SS.12	12.80									
		SS.13	15.40	45								
Hard greyish brown silty clay, trace of very fine sand. ML-OL & CL		SS.14	16.20									
		SS.15		136								
Very dense brown silty very fine to coarse sand, occasional gravel. SM, SW-SM & GP-GM		SS.16	20.00	110								
		SS.17	21.45	98								
END OF BORING.			25.00	89								



GROUND WATER OBSERVATION.				W.A.C. BORING LOG		BORING NO. (2)		
DATE	TIME	EL. of HOLE	EL. of WATER	LOCATION		SURFACE ELV. +0.20 m.		
				VOV LAI SQUARE BRANCH AMPHOE MUANG, CHIENG MAI		DATE START 5 / 10 / 39		
24 HR AFTER BORING 0.20 M						DATE FINISH 6 / 10 / 39		
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO. ...	DEPTH M.	STANDARD PENETRATION.	● LIQUID LIMIT		Δ One half Unconfined-Compressive Strength.	TOTAL DENSITY.
					○ PLASTIC LIMIT			
					X NATURAL MOISTURE CONTENT			
				BLOWS / FT	%	KSC	γ _d , γ _w	
				30 60	20 40 60 80	1 2 3	1 2	
Fill soil			0.00	30 60	20 40 60 80	1 2 3	1 2	
Shrt dark brown silty clay		SS.1	0.60	10	20			
CL								
Medium brownish yellow clayey very fine sand.		SS.2	2.00	25	40			
SC								
		SS.3	3.00	48	60			
Very stiff to hard brownish yellow, brown and light grey silty clay, occasional very fine sand.		SS.4	5.00	41	40			
CL								
		SS.5		54	40			
Very dense to dense light grey and brown clayey very fine sand.		SS.6	7.40	63	40			
SC								
		SS.7		48	40			
Dense light grey very fine sand.		SS.8	9.80	33	40			
SM								
Very dense brownish yellow very fine to fine sand.		SS.9	12.00	50	40			
SP-SM			12.85					
		SS.10		64	40			
Hard brownish yellow and light grey silty clay, occasional very fine sand								
CL		SS.11	15.00	65	40			
		SS.12			40			
END OF BORING			16.95					
			20.00					

BORING LOG				BORING NO. : BH-1		ELEVATION (m.)			
PROJECT : SELF SUPPORT TOWER				DEPTH (m) : 25.45		GWL (m) : -3.20			
LOCATION : A MUANG, CHIANGMAI				COORD. N : -		DATE STARTED			
				E. : -		DATE FINISHED			
SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLE NO	RECOVERY (cm)	SPT-N VALUE (blows/ft)	NATURAL MOISTURE CONTENT (%)	Su (t/sq.m)	TOTAL UNIT WEIGHT (t/cu.m)
1.0	1.50		PA						
HARD FINE TO MEDIUM SANDY CLAY, GREY (CL)	1.50		SS	1	10		38		
	2.0		SS	2	20		38		
	2.5		SS	3	10		17		
STIFF CLAY, GREY (CL)	3.0		SS	4	15		8		
	3.5		PA						
	4.0		SS	5	25		9		
LOOSE CLAYEY FINE SAND, GREY (SC)	4.50		WO						
	5.0		SS	6	20		8		
	5.5		WO						
MEDIUM DENSE FINE TO MEDIUM SAND, GREY (SP-SM)	6.0		SS	7	25		8		
	6.5		WO						
	7.0		SS	8	10		16		
STIFF FINE SANDY CLAY, GREY (CL/SC)	7.5		WO						
	8.0		SS	9	30		8		
	8.5		WO						
MEDIUM DENSE TO DENSE SAND WITH GRAVEL, GREY (SP-SM)	9.0		SS	10	10		29		
	9.5		WO						
	10.0		SS	11	10		24		
	10.5		WO						
	11.0		SS	12	10		19		
	11.5		WO						
	12.0		SS	13	10		28		
	12.5		WO						
	13.0		SS	14	15		46		
	13.5		WO						
	14.0		SS	15	30		26		
	14.5		WO						
VERY STIFF CLAY, GREY (CL)	15.0		SS	16	30		28		
	15.5		WO						
	16.0		SS	17	30		28		
	16.5		WO						
	17.0		SS	18	30		28		
	17.5		WO						
	18.0		SS	19	30		28		
	18.5		WO						
	19.0		SS	20	30		28		
	19.5		WO						
	20.0		SS	21	30		28		
	20.5		WO						

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF : SAMAI B	MADE BY : DUSSADEE C.	GEOLOGIST : PANYAL	FILE : SUPPORT	DESK : 9/1 CHIANG MAI

BORING LOG				BORING NO. : BH-1		GROUND ELEV (m) : _____			
PROJECT : โครงการพัฒนาพื้นที่ 2				DEPTH (m) : 27.05		WATER LEVEL (m) : -0.40			
LOCATION : อ.เมือง จ.เชียงใหม่				COORD : _____		DATE STARTED : 28/6/95			
						DATE FINISHED : 30/6/95			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT-N (blows/m)	PL wn LL (%)	Su (Usq.m) OUCT Δ PP X FVT □ TV	TOTAL UNIT WEIGHT γ _t (N/cm ³)
MEDIUM SANDY CLAY, BROWN (CL)	2.00		PA	SS 1		4			
LOOSE SILTY FINE SAND, GREY (SM)	2.50		PA	SS 2		8			
MEDIUM FINE SANDY CLAY, GREY (CL)	4.00		PA	SS 3		6			
STIFF CLAY WITH FINE SAND, GREY (CL)	5.00		PA	SS 4		7			
MEDIUM DENSE CLAYEY FINE TO MEDIUM SAND, BROWN (SC/CL)	6.00		PA	ST 1		5			
VERY STIFF TO HARD FINE TO MEDIUM SANDY CLAY, BROWN (CL/SC)	8.50		PA	SS 5		13			
VERY STIFF CLAY WITH FINE SAND, GREY (CL)	12.00		PA	SS 6		20			
VERY STIFF TO HARD FINE SANDY CLAY, BROWN (CL)	14.00		PA	SS 7		38			
HARD CLAY, BROWN (CL)	16.00		PA	SS 8		17			
DENSE CLAYEY FINE TO MEDIUM SAND, BROWN (SC/CL)	18.00		PA	SS 9		26			
VERY STIFF CLAY, GREY (CL)	19.30		PA	SS 10		38			
VERY DENSE SILTY FINE SAND, GREY (SM)			PA	SS 11		29			
			PA	SS 12		39			
			PA	SS 13		41			
			PA	SS 14		26			
			PA	SS 15		50			

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF : SONGSAK S	DRILLER : BOONSONG C	GEOLOGIST : PANYA I	DRAFTMAN : SS	TYPIST : WS

BORING LOG				BORING NO. : BH-1		GROUND ELEV (m) :			
PROJECT : โครงการศึกษาพื้นที่ 2				DEPTH (m) : 27.05		WATER LEVEL (m) : -0.40			
LOCATION : อ.เมือง จ.เชียงใหม่				COORD. :		DATE STARTED : 28/6/95			
						DATE FINISHED : 30/6/95			
SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT-N (blows/ft)	PL Wn LL (%)	Su (lb/sq.ft)	TOTAL UNIT WEIGHT Y _t (lb/cu.ft.)
						10 20 30 40	20 40 60 80	0 VCT Δ PP X FVT □ TV	1.8 1.8 2.0
VERY DENSE SILTY FINE SAND, BROWN (SM)	21		WO						
	22.50		SS 17			50.8	0.0		
	22		WO						
	23		SS 18			50.9	0.0		
VERY DENSE SILTY FINE TO MEDIUM SAND, GREY (SM)	24		WO						
	25.00		SS 19			50.6	0.0		
	25		WO						
	26		SS 20			50.4	0.0		
VERY DENSE GRAVELLY SAND, GREY, BROWN (SP-SM)	27		WO						
	27.05		SS 21			50.2	0.0		
END OF BORING									

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF :	DRILLER :	GEOLOGIST :	DRAFTMAN :	TYPIST : WS

BORING LOG				BORING NO. : BH-2		GROUND ELEV. (m) :			
PROJECT : โครงการพัฒนาพื้นที่ 2				DEPTH (m) : 28.70		WATER LEVEL (m) :			
LOCATION : อ.เมือง จ.สุพรรณบุรี				COORD. :		DATE STARTED 25/6/58			
						DATE FINISHED 26/6/58			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT-N (blows/ft)	PL wn LL (%)	Su (t/eq.m)	TOTAL UNIT WEIGHT T ₁ (Vcu.m.)
SOFT FINE TO MEDIUM SANDY CLAY, GREY (CL/SC) 1.00	1	SS 1	PA			4	1		
MEDIUM CLAY WITH FINE TO MEDIUM SAND, GREY (CL) 1.80	2	SS 2	SS			5	1		
MEDIUM DENSE SILTY FINE TO MEDIUM SAND, GREY (SM) 2.00	3	SS 3	SS			11	1		
SOFT FINE TO MEDIUM SANDY CLAY, GREY (CL/SC) 3.40	4	SS 4	PA			3	1		
MEDIUM DENSE SILTY FINE TO MEDIUM SAND, GREY (SM) 4.50	5	SS 5	SS			11	1		
VERY STIFF CLAY, BROWN (CH) 7.50	6	WO	WO						
DENSE CLAYEY SAND TRACE GRAVEL, BROWN (SC) 8.50	7	SS 6	SS			19	1		
MEDIUM DENSE CLAYEY SAND, BROWN (SC) 10.00	8	WO	WO						
HARD CLAY, BROWN (CL) 12.00	9	ST 1	ST			28	1		
VERY STIFF FINE TO MEDIUM SANDY CLAY, BROWN (CL) 13.50	10	SS 7	SS						
VERY STIFF TO HARD CLAY, BROWN (CH) 17.80	11	WO	WO						
DENSE FINE SANDY SILT, GREY (ML/SM) 19.50	12	SS 8	SS			36	1		
VERY DENSE SILTY SAND, GREY (SM)	13	WO	WO						
	14	SS 9	SS			25	1		
	15	WO	WO						
	16	SS 10	SS			39	1		
	17	WO	WO						
	18	SS 11	SS			25	1		
	19	WO	WO						
	20	SS 12	SS			29	1		
	21	WO	WO						
	22	ST 2	ST			47	1		
	23	SS 13	SS						
	24	WO	WO						
	25	SS 14	SS			40	1		
	26	WO	WO						
	27	SS 15	SS			46	1		
	28	WO	WO						
	29	SS 16	SS			50	10		
	30	WO	WO						

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF: SONGSAKS	DRILLER: BOONSONG C	GEOLOGIST:	DRAFTMAN: SS	TYPIST: WS

BORING LOG				BORING NO : BH-1		GROUND ELEV (m) : -			
PROJECT : ธนาคารไทยพาณิชย์ สาขาย่อยนคร				DEPTH (m) : 15.16		WATER LEVEL (m) : -0.40			
LOCATION : อำเภอเมือง จังหวัดเชียงใหม่				COORD : -		DATE STARTED : 4/12/94			
						DATE FINISHED : 4/12/94			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT-N (blows/m)	PL wn LL (%)	Su (t/sq.m)	TOTAL UNIT WEIGHT γ _t (t/cu.m.)
VERY SOFT TO SOFT CLAY, WITH FINE SAND, BROWN, DARK BROWN (CL)	3.00		PA	SS 1		1			
			SS 2			2			
			SS 3			3			
MEDIUM CLAY, DARK BROWN (CH)	4.50		PA	SS 4		5			
			WO						
VERY STIFF CLAY, DARK BROWN (CH)	5.90		SS 5			26			
			WO						
DENSE CLAYEY FINE TO MEDIUM SAND, DARK BROWN (SC)	7.30		SS 6			44			
			WO						
STIFF TO VERY STIFF CLAY, DARK BROWN (CL)	10.00		SS 7			25			
			WO						
			SS 8			9			
			WO						
MEDIUM DENSE SILTY SAND, GREY, BROWN (SP-SM)	13.50		SS 9			25			
			WO						
			SS 10			25			
			WO						
VERY DENSE SANDY GRAVEL, BROWN (GP-GM)	15.16		SS 11			55			
			WO						
END OF BORING			SS 12			50			
			WO			74			

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF : PK	DRILLER : SARAWUT Y	GEOLOGIST : PANYA T.	DRAFTMAN : SS	TYPIST : WS

BORING LOG				BORING NO. : BH-2		GROUND ELEV. (m)						
PROJECT : ธนาคารไทยพาณิชย์ สาขาขอนแก่น				DEPTH (m) : 15.00		WATER LEVEL (m) : -0.50						
LOCATION : อำเภอเมือง จังหวัดเชียงใหม่				COORD. :		DATE STARTED : 3/12/94						
						DATE FINISHED : 3/12/94						
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT-N (blows/ft)	PL (%)	Wn (%)	LL (%)	Su (Veq.m)	OUCT X FVT Δ PP □ TV	TOTAL UNIT WEIGHT γ _t (Vcu.m)
VERY SOFT CLAY, DARK GREY (CL)	1.50		PA	SS 1		2						
MEDIUM CLAY WITH FINE SAND, DARK BROWN (CL)	4.50		PA	SS 2		4						
			WO	ST 2								
			WO									
VERY STIFF CLAY, DARK BROWN (CL)	5.90		SS 3			23						
DENSE CLAYEY FINE TO MEDIUM SAND, DARK BROWN (SC)	7.30		WO									
VERY STIFF CLAY, DARK BROWN (CH)	9.00		SS 4			12						
			WO									
MEDIUM CLAY, DARK BROWN (CH)	10.00		SS 5			25						
			WO									
MEDIUM DENSE TO DENSE FINE TO MEDIUM SAND, DARK BROWN (SP-SM)	13.50		SS 6			7						
			WO									
			SS 7			27						
			WO									
			SS 8			31						
			WO									
VERY DENSE SANDY GRAVEL, BROWN (GP-GM)	15.00		SS 9			55						
			WO									
END OF BORING			SS 0			50.0						

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF : PK	DRILLER : SARAWUT Y.	GEOLOGIST : PANYA I.	DRAFTMAN : SS	TYPIST : WS

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT อาคารบ้านพักข้าราชการ (วทบ. 33)
LOCATION อำเภอมือง จังหวัดเชียงใหม่

BORING NO. BH-1

DEPTH (m.) 12.45

COORD.

GROUND ELEV. (m.)

OBSERVED WL (m.) - 0.90

DATE STARTED 21/10/94

DATE FINISHED 21/10/94

[illegible]

PROJECT อาคารบ้านพักข้าราชการ (มทบ.33)
LOCATION อำเภอมะนัง จังหวัดยะลา

BORING NO. BH-2

DEPTH (m.) 16.95

COORD.

GROUND ELEV. (m.)

OBSERVED WL (m.) - 1.60

DATE STARTED 21/10/94

DATE FINISHED 21/10/94

[illegible]

K. ENGINEERING CONSULTANTS CO., LTD.											
BORING LOG PROJECT อาคารบ้านพักกองพันตำรวจ กส.พ. LOCATION อำเภอมะนัง จังหวัดเชียงใหม่					BORING NO. BH-3 DEPTH (m.) 13.95 COORD. _____		GROUND ELEV.(m.) _____ OBSERVED WL (m.) -9.80 DATE STARTED 22 / 10 / 94 DATE FINISHED 22 / 10 / 94				
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING & RECOVERY	SPT - N (blows / ft) 10 20 30 40	PL W _n LL (%) 20 40 60 80	S _v (t/m ²) ○ UCT △ PP X FVT □ TV 1 2 3 4				γ _t (t/m ³) 1.6 1.8 2.0
STIFF TO VERY STIFF FINE TO MEDIUM SANDY CLAY, BROWN (CL)	1		PA								
	2		SS 1	15							
	3		SS 2	15							
	4		SS 3	10							
	5		PA								
MEDIUM DENSE CLAYEY SAND, BROWN (SC/CH) 6.00	6		SS 4	10							
	7	PA									
VERY STIFF SANDY CLAY WITH GRAVEL, BROWNISH GREY (CL/SC) 7.50	8		SS 5	13							
	9	PA									
MEDIUM DENSE TO DENSE CLAYEY SAND, GREYISH BROWN (SC) 8.50	10		SS 6	18							
	11		PA								
	12		SS 7	29							
	13		PA								
	14		SS 8	23							
	15		PA								
	16		SS 9	44							
	17		PA								
	18		SS 10	22							
	19		PA								
END OF BORING	20		SS 11	39							

LOCATION อำเภอมะนัง จังหวัดยะลา

COORD.

DATE FINISHED 22 /10/94

SOIL DESCRIPTION

DEPTH

GRAPHIC
LOG

METHOD

^aRECOVERY

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182

2

STIFF TO VERY STIFF FINE TO
MEDIUM SANDY CLAY, BROWN
(CL)

6.00

MEDIUM DENSE CLAYEY SAND,
BROWN (SC/CH)

7.50

VERY STIFF SANDY CLAY WITH
GRAVEL, BROWNISH GREY
(CL/SC)

8.50

MEDIUM DENSE TO DENSE
CLAYEY SAND, GREYISH BROWN
(SC)

13.95

END OF BORING

BORING LOG				BORING NO. BH-1		ELEVATION (m)			
PROJECT : UNDERPASS ตอนเชื่อมทางเข้าออก				DEPTH (m) 18.45		GWL (m) -1.30			
LOCATION : ถนนเชียงใหม่				COORD N		DATE STARTED 27/10/96			
				E		DATE FINISHED 27/10/96			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLE NO	RECOVERY (m)	SPT-N VALUE (blows/ft)	NATURAL MOISTURE CONTENT (%)	3 _u (t/sq m)	TOTAL UNIT WEIGHT (t/cu m)
						10 20 30 40	20 40 60 80	1 2 3 4	1.6 1.8 2.0
VERY SOFT FINE TO MEDIUM SANDY CLAY, BROWN (CL/SC)	1.0		PA						
	1.50		SS 1	25		2			
	2.0		SS 2	25		7			
VERY STIFF CLAY WITH FINE SAND, BROWN (CL)	3.0		ST 1	25				16.77	
	4.0		ST 2	25				12.00	2.22
	5.00		PA					10.72	
LOOSE CLAYEY-SILTY FINE SAND, BROWN (SC-SM)	6.0		SS 3			6			
	7.00		WO						
	8.0		SS 4	25		8			
VERY STIFF FINE SANDY CLAY, BROWN (CL)	9.00		WO						
	10.0		SS 5	40		18			
MEDIUM DENSE TO DENSE FINE TO MEDIUM SAND, GREY (SP)	11.0		WO						
	12.0		SS 6	40		14			
	13.0		WO						
	14.0		SS 7	30		36			
MEDIUM DENSE SAND WITH GRAVEL, BROWN (SP-SM)	15.0		WO						
	16.0		SS 8	25		19			
	17.0		WO						
	18.00		SS 9	25		17			
DENSE SILTY/GRAVELLY SAND, BROWN (SM/GM)	19.0		WO						
	20.0		SS 10	25		22			
	21.0		WO						
	22.0		SS 11	25		15			
	23.0		WO						
	24.0		SS 12	25		35			
END OF BORING									

PA - POWER AUGERING	HA - HAND AUGERING	WO - WASH OUT	ST - SHIELLY TUBE	SS - SPLIT SPOON
PARTY CHIEF SAYAN K.	MADE BY PACHAREE C.	GEOLOGIST PANYA I.	FILE UNDER-1	DISK 9 CHIANG MAI

BORING LOG				BORING NO. BH-2		ELEVATION (m)			
PROJECT : UNDERPASS อนุบาลนนทบุรี				DEPTH (m) 15.45		GWL (m) -4.80			
LOCATION : 0.0084 0.1984111				COORD N		DATE STARTED 27/10/96			
				E		DATE FINISHED 27/10/96			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLE NO	RECOVERY (cm)	SPT-N VALUE (blows/ft)	NATURAL MOISTURE CONTENT (%)	Su (t/sq m)	TOTAL UNIT WEIGHT (t/cu m)
						10 20 30 40	20 40 60 80	1 2 3 4	1.4 1.8 2.2
MEDIUM FINE SANDY CLAY, BROWN (CL)	1.0		PA						
	2.00		SS 1	30		7			
			SS 2	30		3			
			SS 3	30		10			
STIFF TO VERY STIFF CLAY WITH FINE SAND, GREY, BROWN (CL)	3.0		PA						
	4.0		SS 4	25		10			
			PA						
	4.80		ST 1,2	25				10.48	
			ST 3	25					22.2
MEDIUM DENSE CLAYEY-SILT FINE SAND, GREY, BROWN (SC-SM)	6.00		SS 5	30		26			
			WO						
			SS 6	25		21			
	7.0		WO						
	8.0		SS 7	25		34			
			WO						
MEDIUM DENSE TO DENSE SAND, BROWN (SP-SM)	9.0		SS 8	25		26			
	10.0		WO						
	11.0		SS 9	30		32			
			WO						
	12.00		SS 10	30		37			
	13.0		WO						
DENSE TO VERY DENSE SAND WITH GRAVEL, GREY, BROWN (SP-SM)	14.0		SS 11	25		38			
	15.0		WO						
	15.45		SS 12	25		52			
END OF BORING									

PA - POWER AUGERING	HA - HAND AUGERING	WO - WASH OUT	ST - SHELBY TUBE	SS - SPLIT SPOON
PARTY CHIEF SAYAN K	MADE BY PACHAREE C	GEOLOGIST PANYA I	FILE : UNDER-2	DISK : 9 CH BANG MAJ

BORING LOG				BORING NO : BH - 1		GROUND ELEV (m)			
PROJECT : สถานีบริการน้ำมันบางจาก BCP - ราชเทวีเชียงใหม่				DEPTH (m) : 15.45		WATER LEVEL (m) : -1.80			
LOCATION : อ.เมือง จ.เชียงใหม่				COORD :		DATE STARTED : 21/3/96			
						DATE FINISHED : 21/3/96			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT-N (blows/ft)	PL w _n LL (%)	Su (T/sq m) OUCT Δ PP X FVT □ TV	TOTAL UNIT WEIGHT T ₁ (T/cu.m.)
						10 20 30 40	20 40 60 80	1 2 3 4	16 18 20
MEDIUM FINE TO MEDIUM SANDY CLAY, GREY (CL)	1.00		PA	SS 1		6			
SOFT FINE TO MEDIUM SANDY CLAY, GREY (CL)	2.80		SS 2			2			
			SS 3			4			
			SS 4			4			
STIFF TO VERY STIFF FINE TO MEDIUM SANDY CLAY, GREY (CL)	5.80		PA	SS 5		11			22
			WO						
			SS 6			18			
MEDIUM DENSE CLAYEY FINE TO MEDIUM SAND, GREY (SC)	7.00		SS 7			15			
			WO						
STIFF TO VERY STIFF FINE TO MEDIUM SANDY CLAY, GREY (CL)	13.50		SS 8			25			
			WO						
			SS 9			28			
			WO						
			SS 10			18			
			WO						
			SS 11			14			
			WO						
MEDIUM DENSE SILTY FINE TO MEDIUM SAND, GREY (SM)	14.50		SS 12			29			
VERY DENSE SILTY FINE TO MEDIUM SAND, GREY (SM)	15.45		SS 13			52			
END OF BORING									

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF : SAYAN K.	DRILLER : LERTCHAI S.	GEOLOGIST : UC.	DRAFTMAN : PN.	TYPIST : WS

BORING LOG					BORING NO. BH-1		ELEVATION (m)		
PROJECT : เรือนำพันห้วยเชียงใหม่ (นร/อ.ใหม่)					DEPTH (m) 16.00		GWL (m) -0.10		
LOCATION : ต.บ้านผือ อ.เมือง จ.เชียงใหม่					COORD N -		DATE STARTED 11/10/96		
					E -		DATE FINISHED 01/11/96		
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLE NO	RECOVERY (m)	SPT-N VALUE (blows/ft)	NATURAL MOISTURE CONTENT (%)	S _u (t/m ²)	TOTAL UNIT WEIGHT (t/cu m)
						10 20 30 40	20 40 60 80	1 2 3 4	1.6 1.8 2.0
GARBAGE	1.0		PA						
	2.0								
	3.0								
	4.0								
	5.0								
	6.00								
VERY STIFF FINE SANDY CLAY, GREY (CL/SC)	7.0		SS	1	40	17			
	WO								
	SS		2	40	29				
	WO								
	SS		3	30	40				
	WO								
MEDIUM DENSE TO DENSE CLAYEY FINE SAND, BROWN (SC, FC/CL)	11.0		SS	4	35	19			
	WO								
	SS		5	40	41				
	WO								
	SS		6	25	53				
VERY DENSE SILTY FINE TO MEDIUM SAND, BROWN (SM)	15.0		WO						
	SS	7	20	50/8"					
	WO								
END OF BORING	16.00	SS	8	-	50/4"				
	ROCK								

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF : SAYAN K.	MADE BY : DUSSADEE C.	GEOLOGIST : PANYA I.	FILE : CHANG-1	DISK : 9 CHIANG MAI

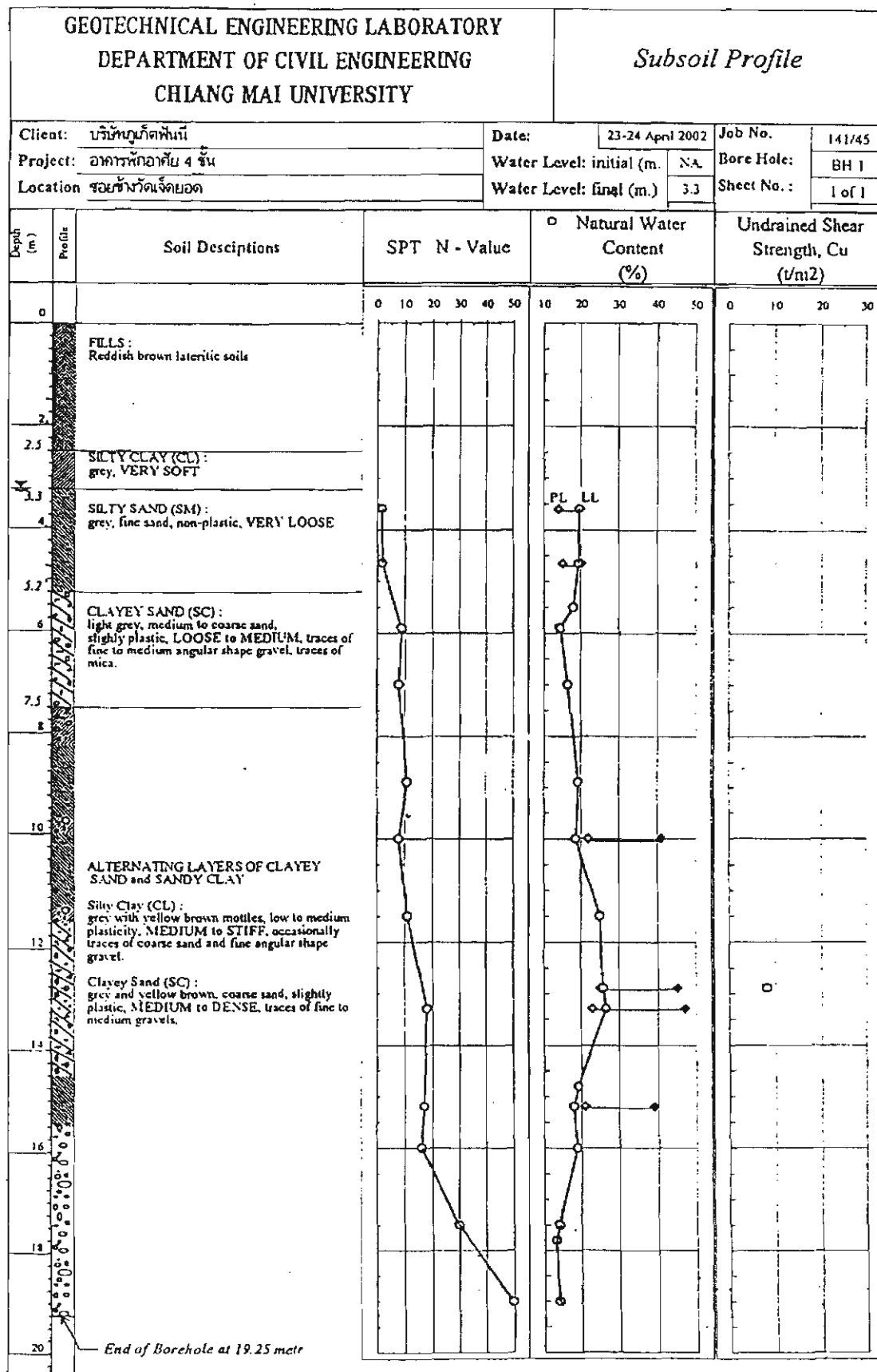
BORING LOG						BORING NO. BH-3		ELEVATION (m)												
PROJECT : (โครงการพัฒนาระบบชลประทาน) (น้ำชลประทาน)						DEPTH (m) 18.50		GWL (m) -2.45												
LOCATION : ต.บ้านดง อ.เมือง จ.บุรีรัมย์						COORD. N		DATE STARTED 03/11/96												
						E		DATE FINISHED 03/11/96												
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLE NO.	RECOVERY (cm)	SPT-N VALUE (blows/ft.)	NATURAL MOISTURE CONTENT (%)				Su (t/sq m)				TOTAL UNIT WEIGHT (t/cu m)					
							10	20	30	40	20	40	60	80	1	2	3	4	1.6	1.8
DENSE CLAYEY SAND, BROWN (SC)	1.0		PA																	
	1.50		SS	1	40	47														
VERY STIFF FINE TO MEDIUM SANDY CLAY, BROWN (CH)	2.00		SS	2	40	25														
	2.50		SS	3	40	48														
DENSE CLAYEY FINE TO MEDIUM SAND, BROWN (SC)	3.00		PA																	
	3.50		SS	4	40	35														
	4.00		WO																	
VERY STIFF FINE SANDY CLAY, BROWN (CL/SC)	4.50		SS	5	40	25														
	5.00		WO																	
MEDIUM DENSE CLAYEY SAND, BROWN (SC)	5.50		SS	6	35	28														
	6.00		WO																	
HARD FINE TO MEDIUM SANDY CLAY, BROWN (CH)	6.50		SS	7	35	32														
	7.00		WO																	
MEDIUM DENSE CLAYEY FINE TO MEDIUM SAND, GREY (SC/CL)	7.50		SS	8	45	17														
	8.00		WO																	
	8.50		SS	9	45	55														
VERY DENSE SILTY FINE TO MEDIUM SAND, GREY (SM)	9.00		WO																	
	9.50		SS	10	40	14														
	10.00		WO																	
MEDIUM DENSE TO DENSE CLAYEY FINE SAND, GREY, BROWN (SC, SC/CL)	10.50		SS	11	40	26														
	11.00		WO																	
	11.50		SS	12	35	40														
	12.00		WO																	
	12.50		SS	13	40	13														
STIFF CLAY WITH SAND, GREY (CH)	13.00		WO																	
	13.50		SS	14	15	55/6														
	14.00		WO																	
VERY DENSE SILTY SAND WITH GRAVEL, BROWN, GREY (SM)	14.50		SS	15		50/1														
	15.00		SS	16		50/0														
END OF BORING	ROCK																			
PA = POWER AUGERING		HA = HAND AUGERING		WO = WASH OUT		ST = SHELBY TUBE		SS = SPLIT SPOON												
PARTY CHIEF: SAYAN K.		MADE BY: DUSSADEE C.		GEOLOGIST: PANYAT		FILE: CHANG-J		DESK: 9 CHIANG MAI												

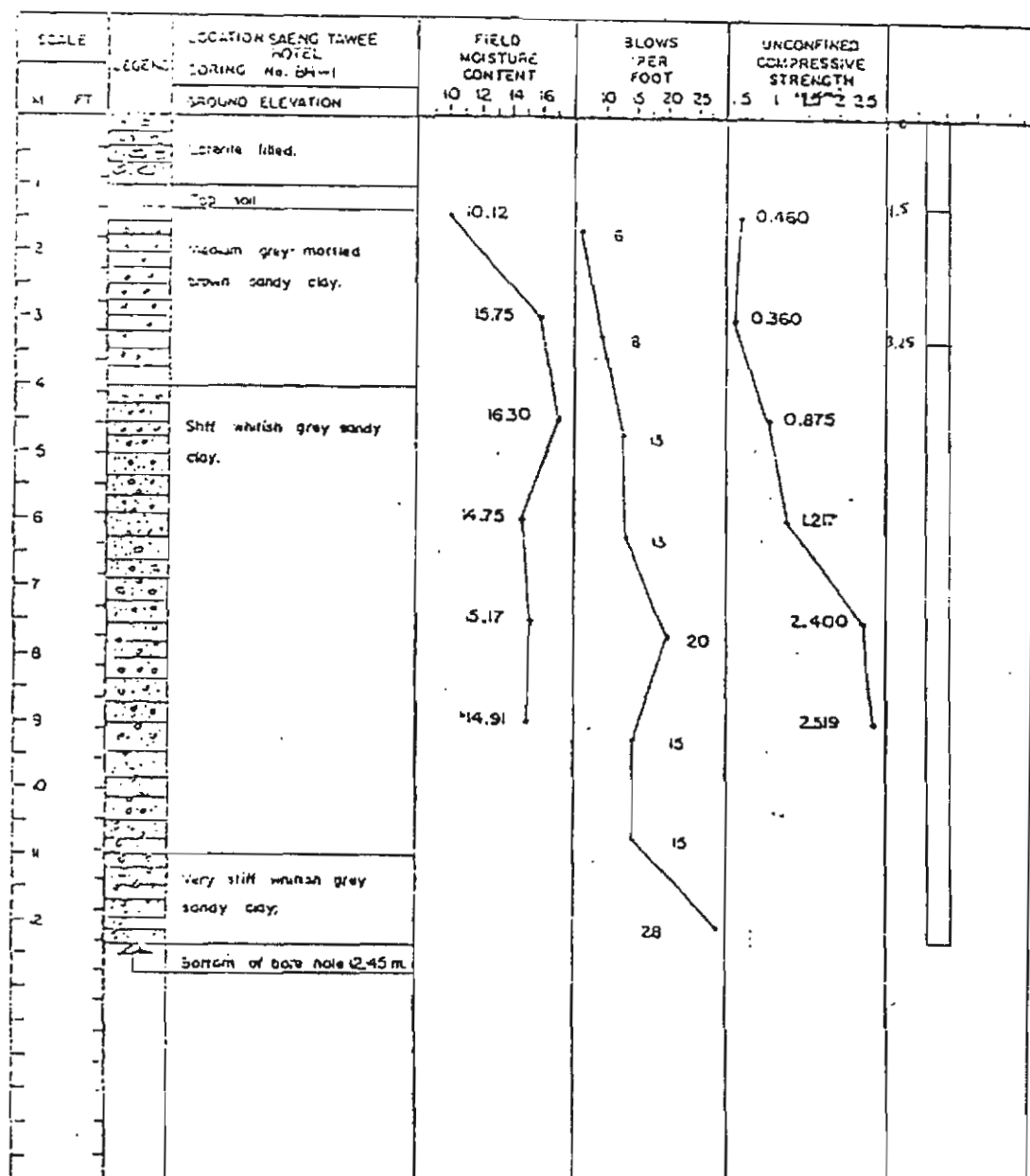
BORING LOG					BORING NO. BH-5		ELEVATION (m)		
PROJECT : เวียงจันทน์-เชียงใหม่ (แนวใหม่)					DEPTH (m) 14.23		GWL (m)		
LOCATION : ค.จ.น.ค.ก. อ.เมือง จ.เชียงใหม่					COORD. N		DATE STARTED 04/11/96		
					E		DATE FINISHED 05/11/96		
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLE NO	RECOVERY (cm)	SPT-N VALUE (blows/ft.)	NATURAL MOISTURE CONTENT (%)	Su (t/sq.m)	TOTAL UNIT WEIGHT (t/cum)
						10 20 30 40	20 40 60 80	1 2 3 4	1.6 1.8 2.0
GARBAGE	1.0		PA						
	2.0								
	3.0								
	4.0								
	5.0								
	6.00								
MEDIUM DENSE CLAYEY FINE TO MEDIUM SAND, GREY (SC)	7.00		SS	1	40	28			
VERY STIFF CLAY, BROWN (CH)	8.00		WO			28			
	8.80		SS	2	40				
DENSE CLAYEY FINE TO MEDIUM SAND, GREY (SC)	9.00		WO						
	10.00		SS	3	40	30			
DENSE TO VERY DENSE SILTY SAND WITH GRAVEL, GREY (SM.SP-SM)	11.00		WO						
	12.00		SS	4	35	45			
	13.00		WO						
	14.00		SS	5	35	31			
	15.00		WO						
	16.00		SS	6	40	48			
	16.33		WO						
END OF BORING			SS	7	30	50/8"			
			WO			50/1"			

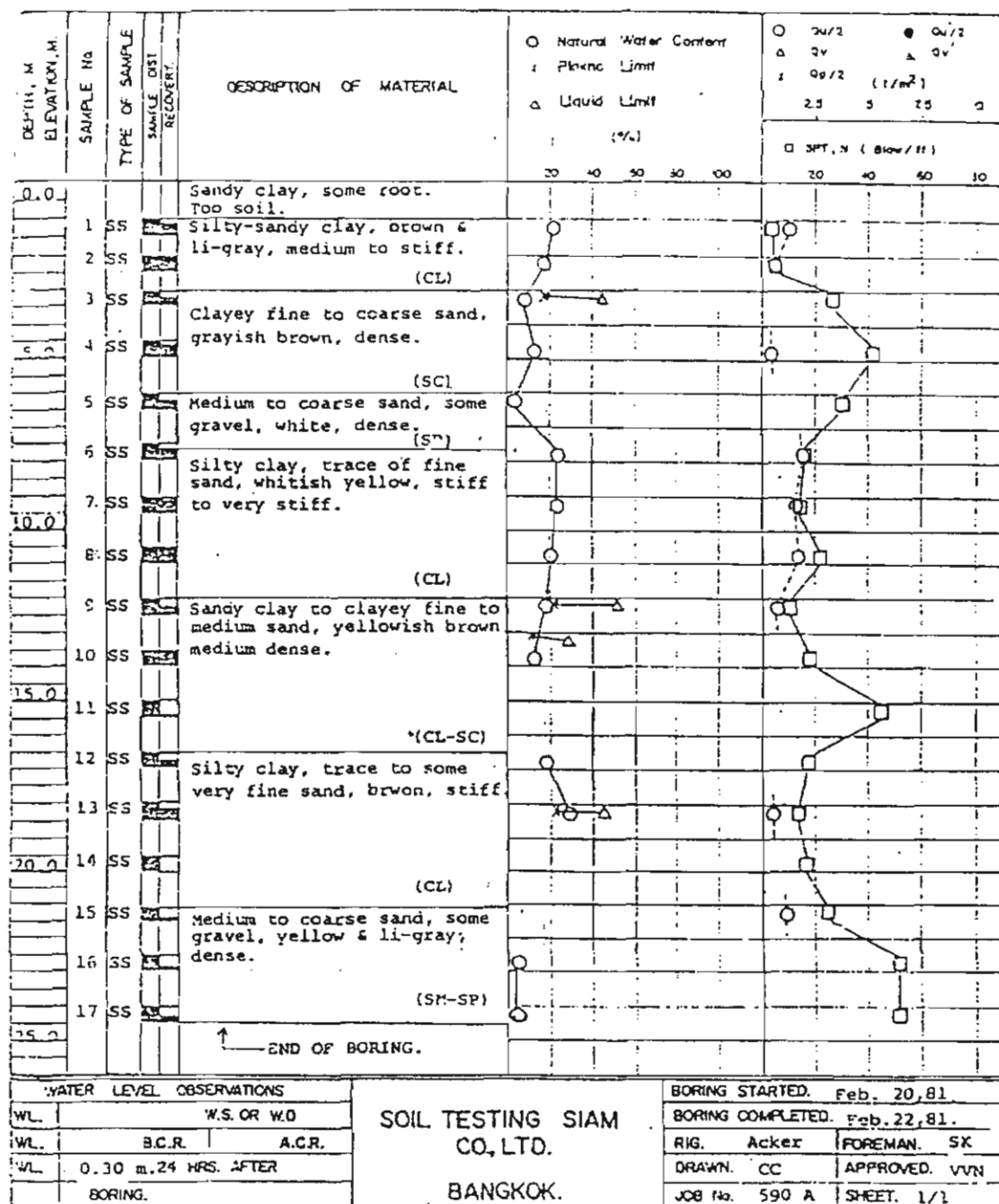
PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF SAYAN K	MADE BY DUSSADEE C	GEOLOGIST PANYA I	FILE CHANG-S	DISK 9/1 CHIANG MAI

BORING LOG				BORING NO. BH-7		ELEVATION (m)			
PROJECT : เรือรบพิทักษ์เมืองใหม่ (ม.ร.อ.ใหม่)				DEPTH (m) 16.30		GWL (m) -1.10			
LOCATION : อ.วังน้ำเย็น อ.เมือง เชียงใหม่				COORD N		DATE STARTED 05/11/96			
				E		DATE FINISHED 05/11/96			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLE NO	RECOVERY (cm)	SPT-N VALUE (blows/ft)	NATURAL MOISTURE CONTENT (%)	Su (t/sq m)	TOTAL UNIT WEIGHT (Vcu m)
						10 20 30 40	20 40 60 80	1 2 3 4	1.6 18 20
MEDIUM FINE TO MEDIUM SANDY CLAY, GREY, BROWN (CL/SC)	1.0		PA						
	1.50		SS	1	40	5			
	2.0		SS	2	30	15			
	2.5		SS	3	35	18			
	3.0		PA						
	3.5		SS	4	40	33			
	4.0		PA						
	4.5		SS	5	40	33			
	5.0		PA						
	5.5		SS	6	35	25			
	6.0		PA						
	6.5		SS	7	40	17			
	7.0		WO						
	7.5		SS	8	40	17			
	8.0		WO						
	8.5		SS	9	40	27			
	9.0		WO						
	9.5		SS	10	40	31			
	10.0		WO						
	10.5		SS	11	45	38			
	11.0		WO						
	11.5		SS	12	35	45			
	12.0		WO						
	12.5		SS	13	25	45			
	13.0		WO						
	13.5		SS	14		50/0*			
	14.0		WO						
	14.5		SS						
	15.0		WO						
	15.5		SS						
	16.0		WO						
	16.30		SS						
END OF BORING									

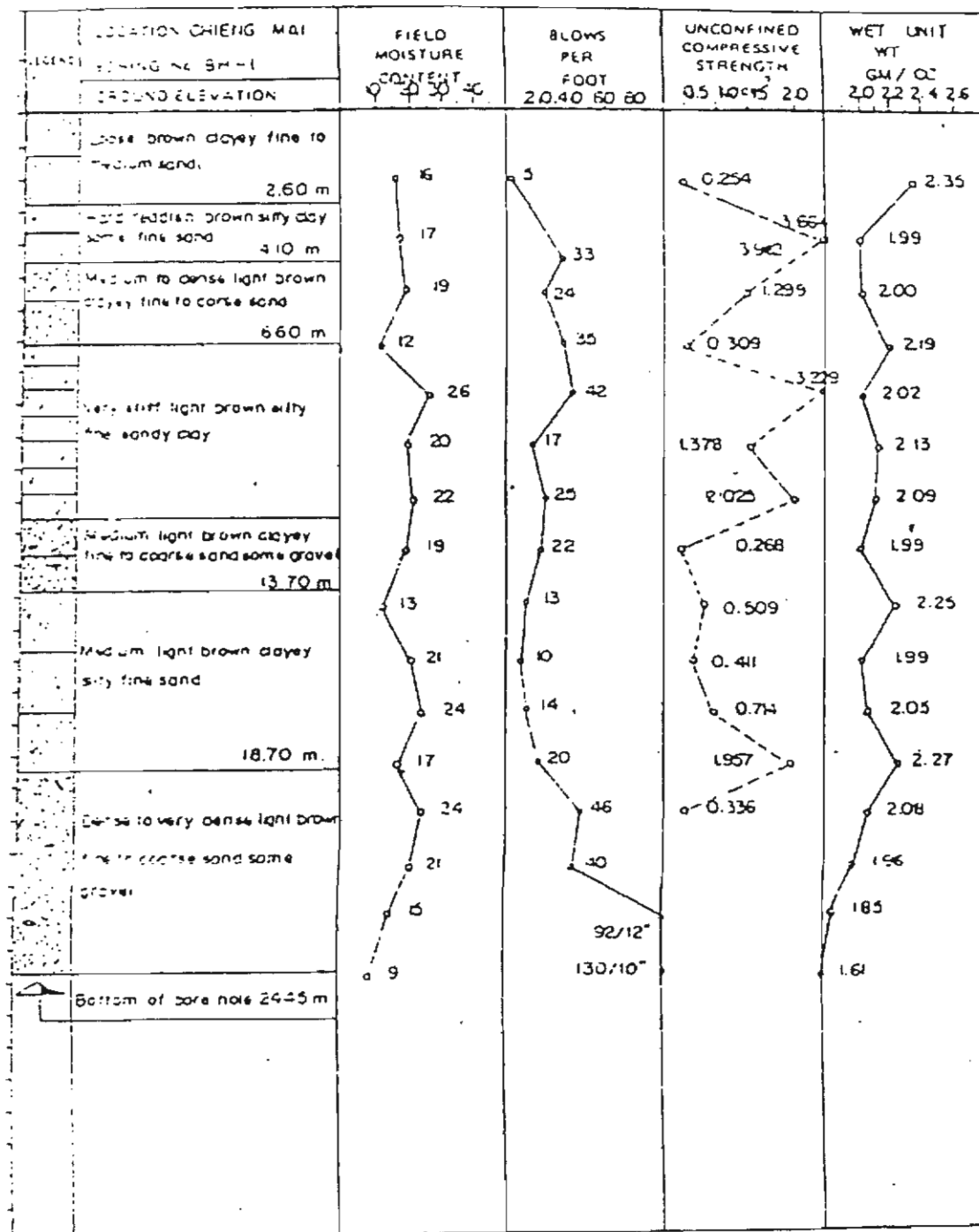
PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF SATAN K	MADE BY DUSSADEE C	GEOLOGIST PANYAI	FILE CHANG-7	DISK 9/1 CHIANG MAI

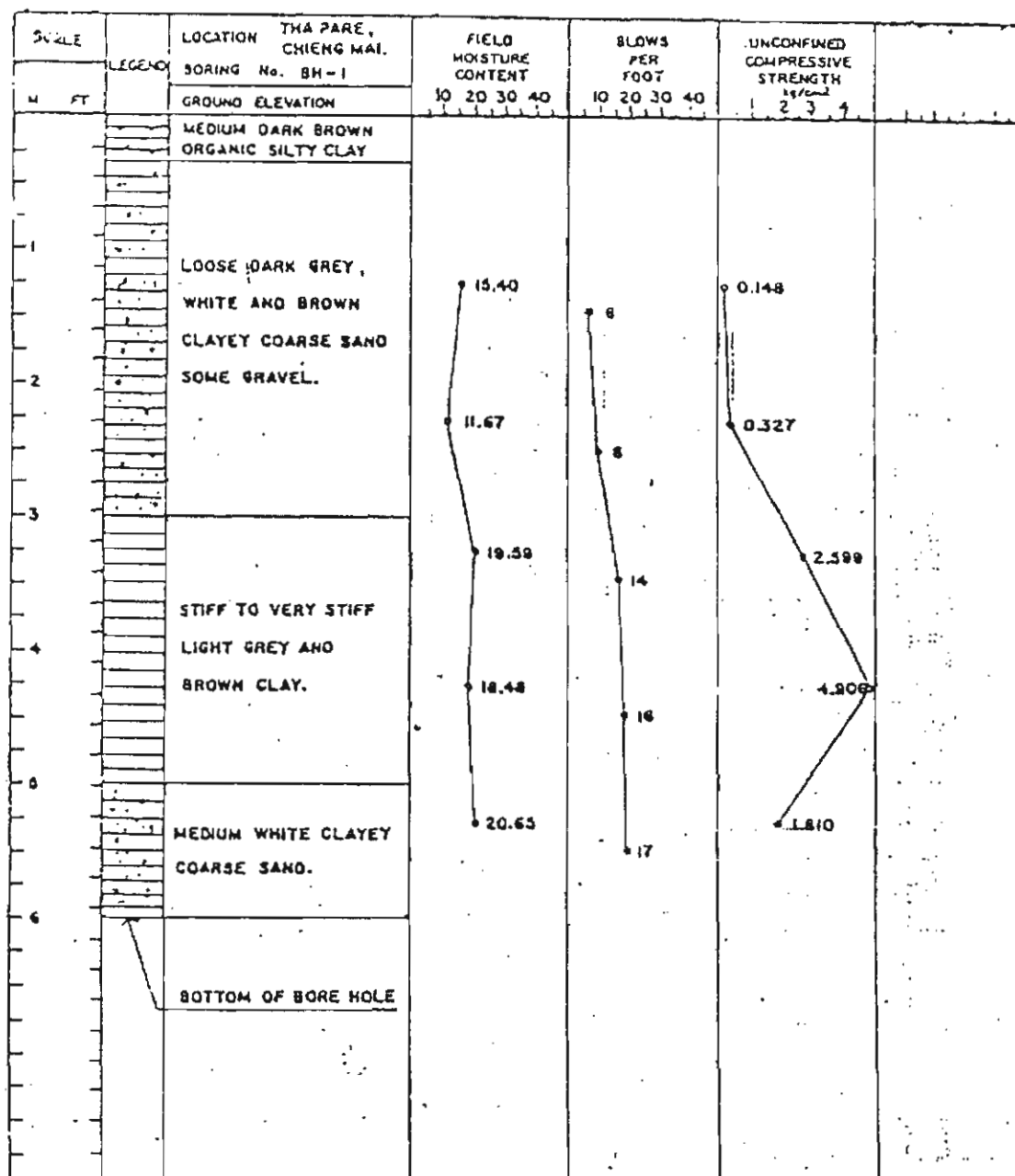


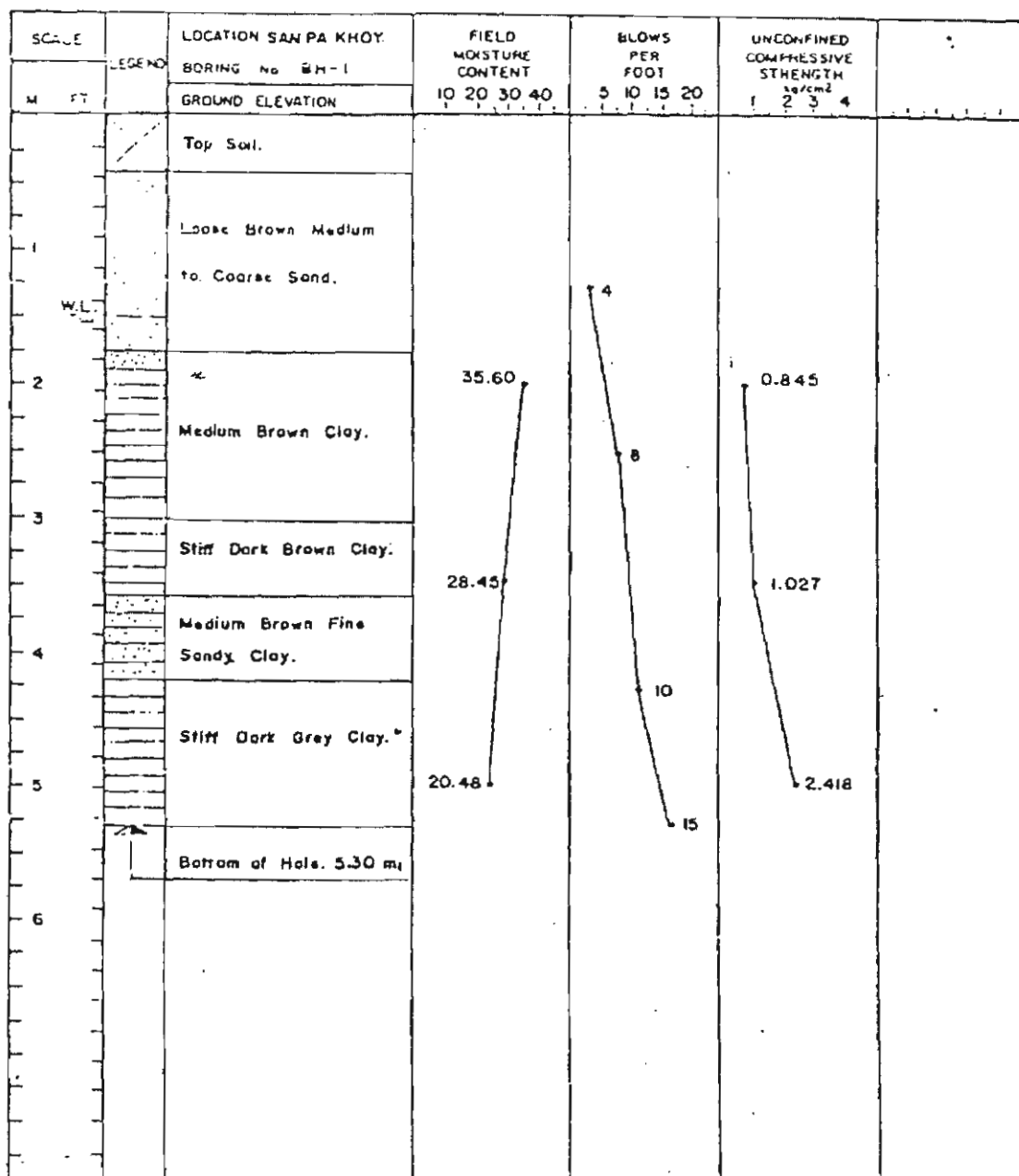


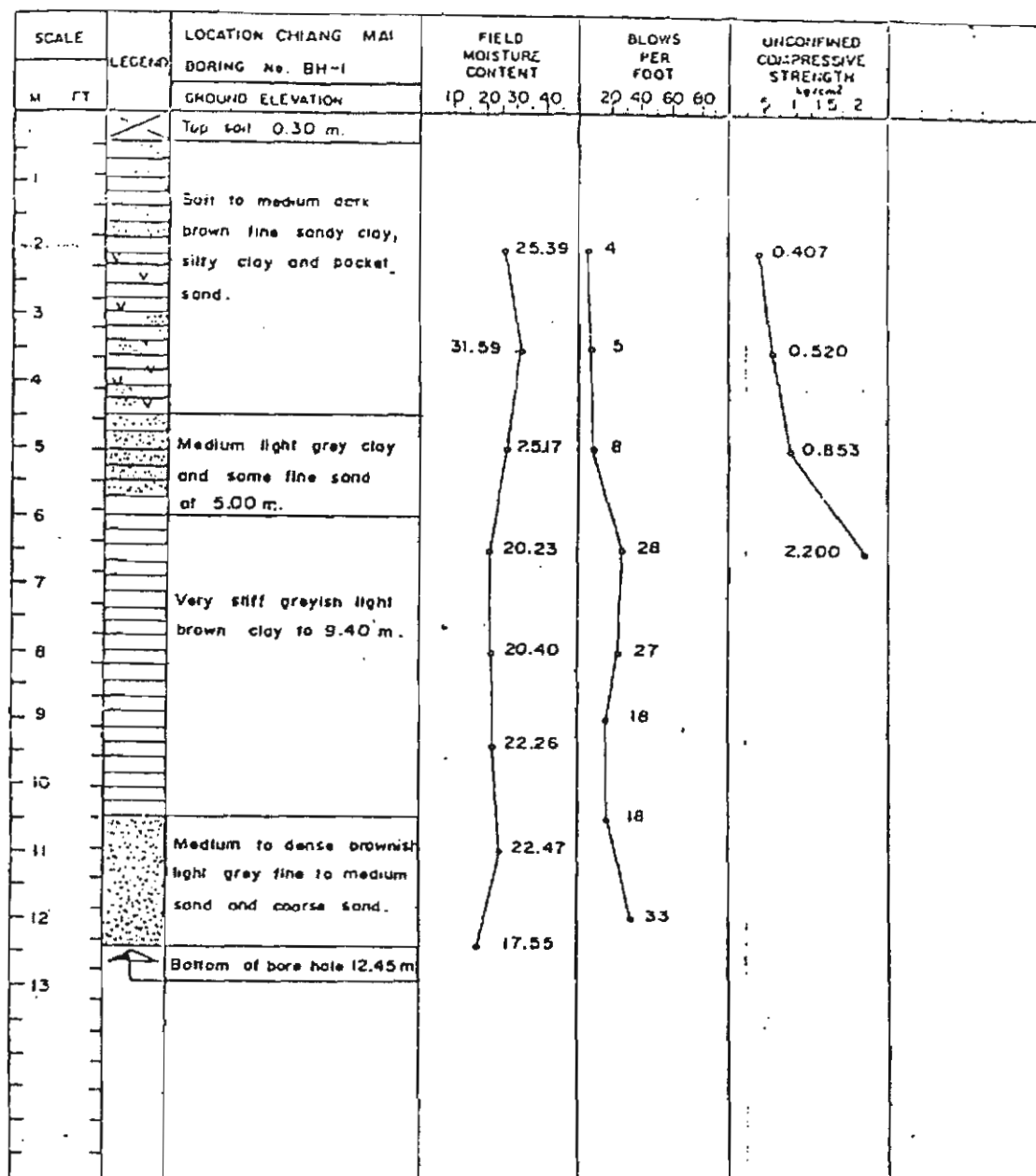


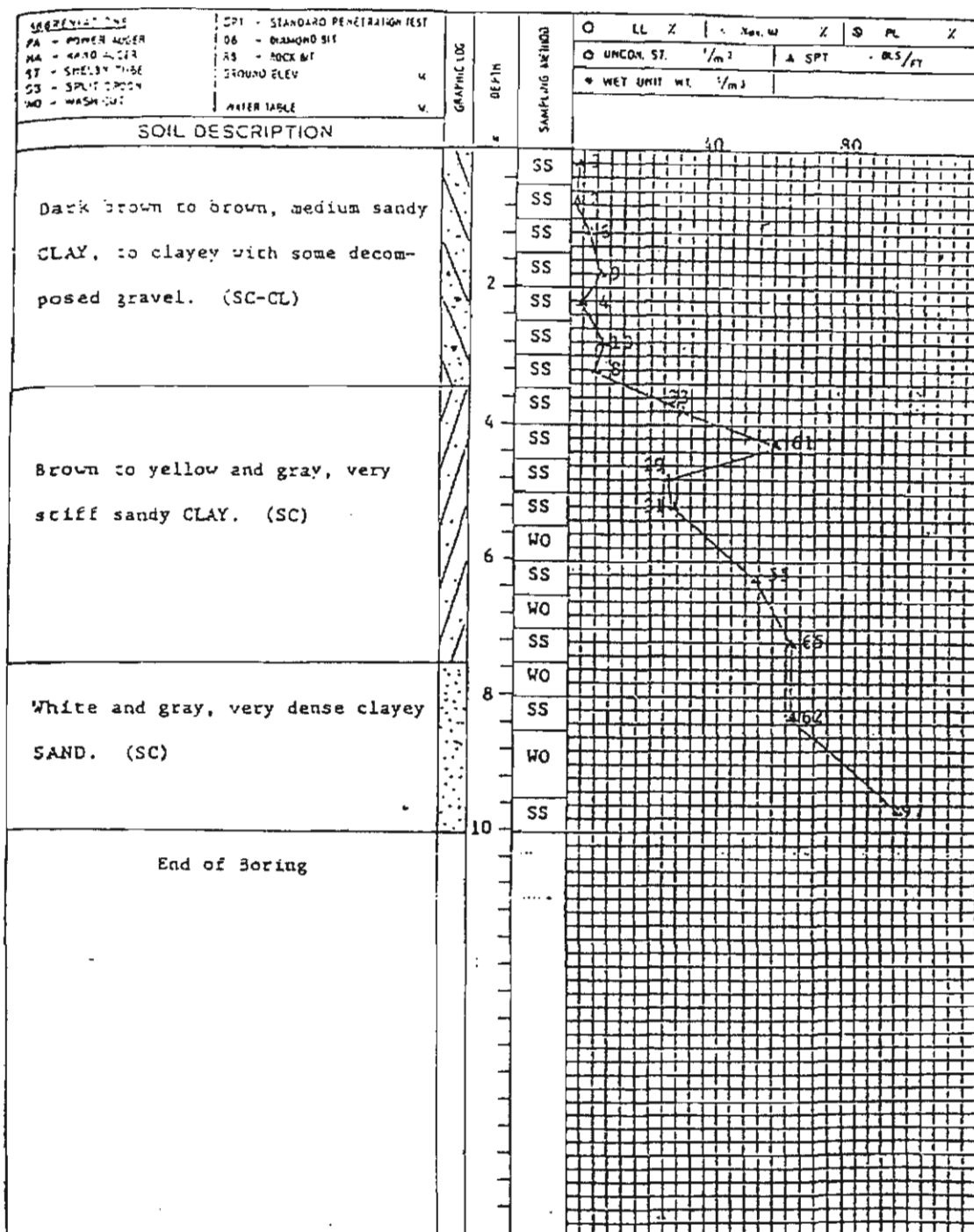
SCALE		LOCATION CHIENG MAI.		FIELD MOISTURE CONTENT	BLOWS PER FOOT	UNCONFINED COMPRESSIVE STRENGTH	Wet Unit Wt. 1 Gm/cc.
M	FT	BORING No. 1	GROUND ELEVATION				
			Top soil 0.30 M				
1			Dense to medium light brown				
2			clayey fine to medium sand	16	30		2.14
3			some coarse sand.				
			3.40 M	23	25		2.06
4			Hard brownish light grey clay				
5			same fine sand.	26	31	3.33	1.99
6			5.00 M				
7			Very dense to medium light	14	51	0.907	2.05
8			greyish brown clayey fine				
9			to medium sand.	15	29	1.079	2.08
10			8.00 M				
11			Hard reddish brownish light	23	42	3.886	2.06
12			grey clay same decompose				
13			gravel.	23	40	3.669	2.01
14			11.50 M				
15			Very stiff greyish brown fine	22	18	2.162	2.01
16			sandy clay.				
17			13.85 M				
18			Hard reddish light brown clay	24	20	2.402	2.02
19			trace of fine sand.				
20			Bottom of bore hole 15.45 M	28	38	4.514	1.96

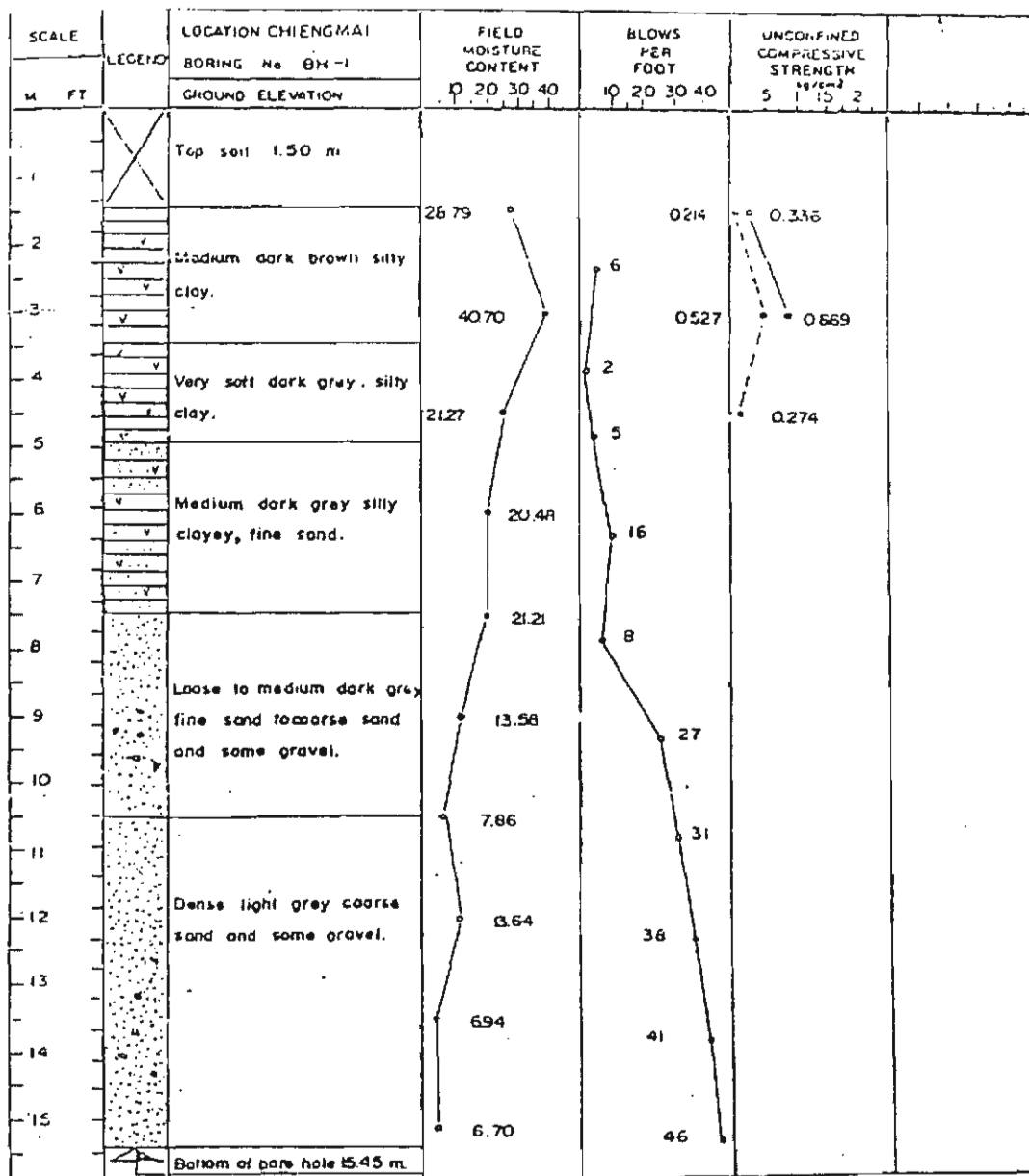




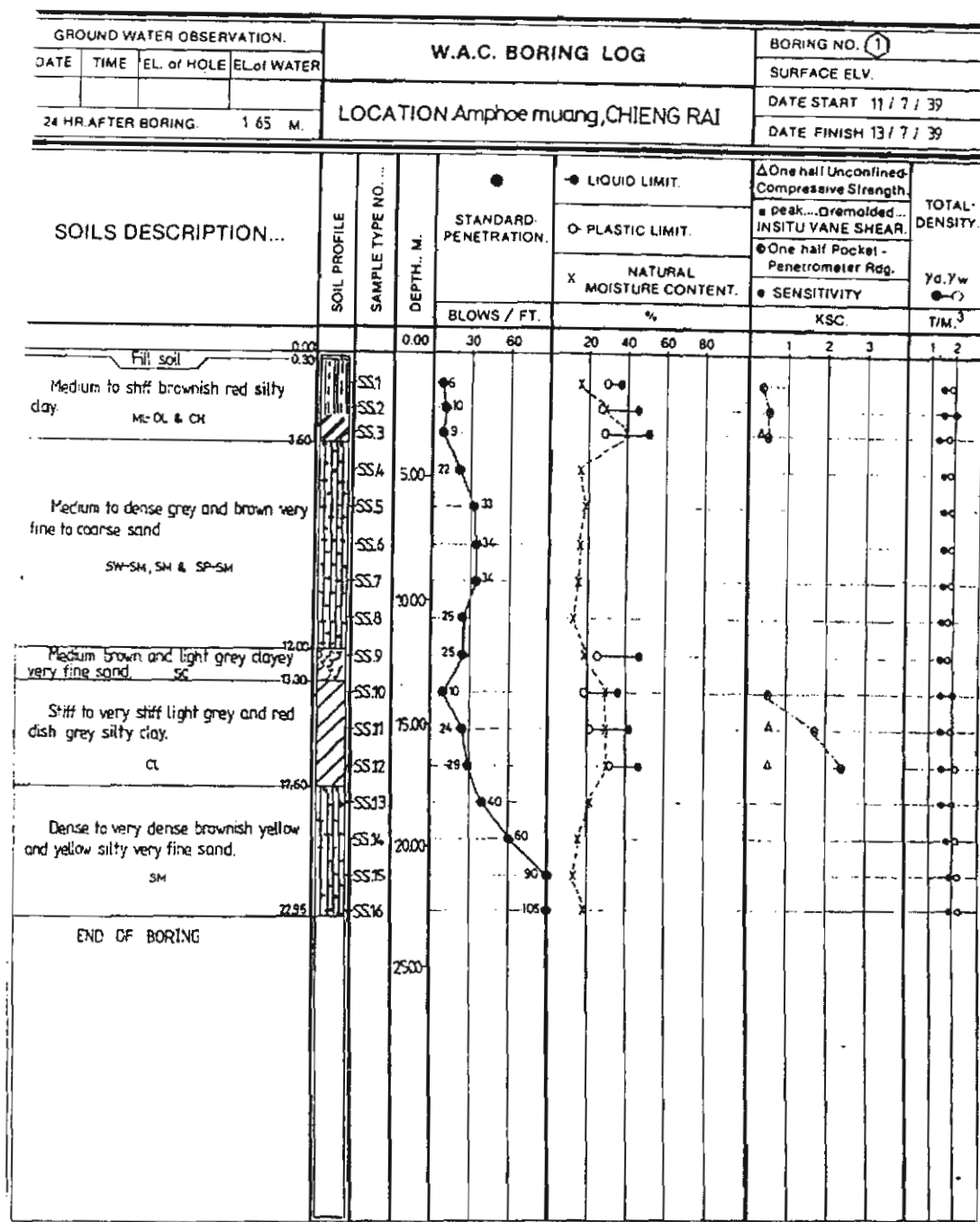


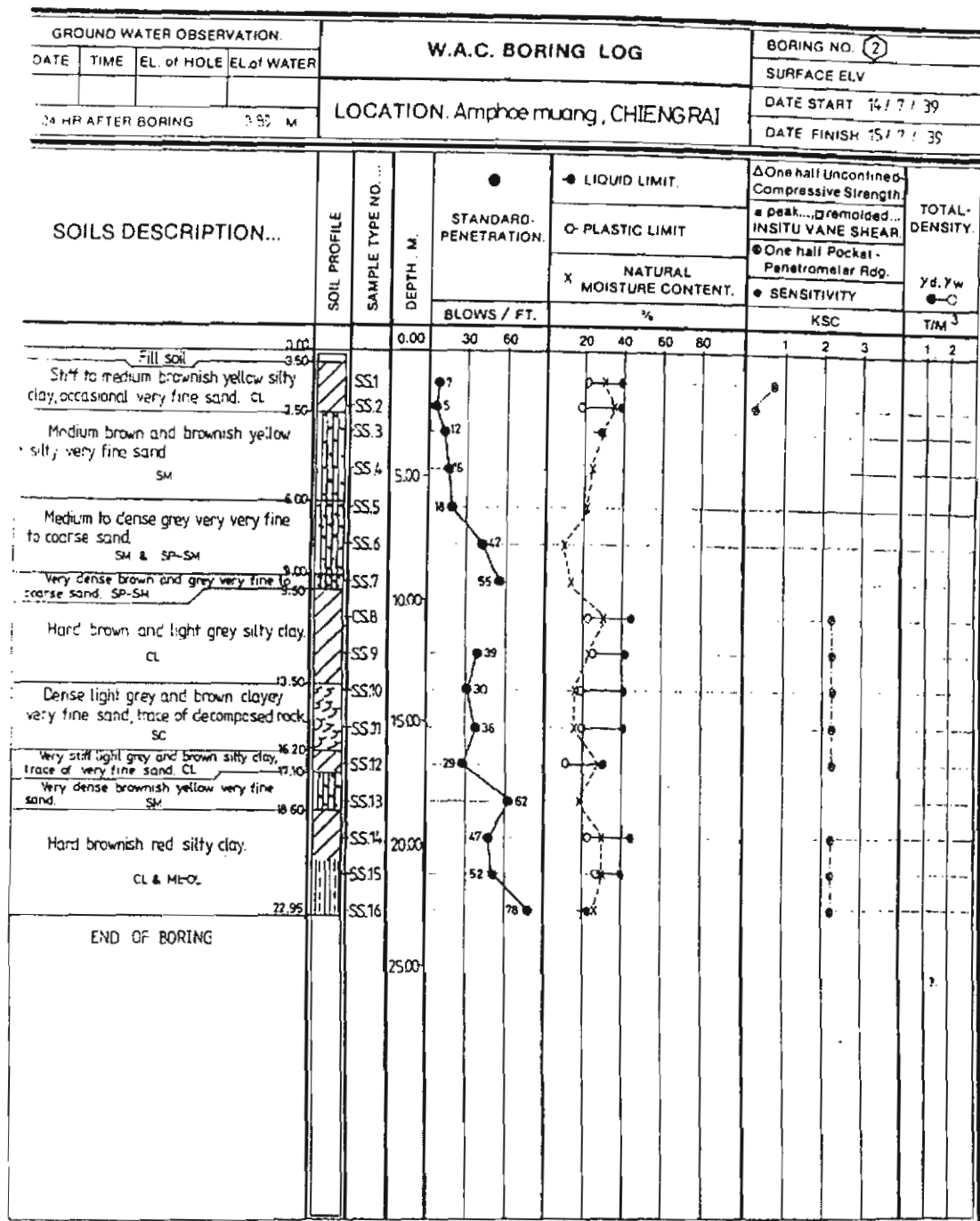






APPENDIX B.2
CHIANG RAI





GROUND WATER OBSERVATION				W.A.C. BORING LOG		BORING NO. 1		
DATE	TIME	CL. OF HOLE	EL. of WATER	LOCATION CHIAINGRAI PRACHANDKROK CHIAINGRAI		SURFACE ELV.		
24 HR AFTER BORING. 1.75 M						DATE START		
						DATE FINISH 31-OCT-43		
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO	DEPTH - M	STANDARD-PENETRATION BLOWS / FT.	● LIQUID LIMIT	Δ One half Unconfined Compressive Strength	TOTAL DENSITY	
					○ PLASTIC LIMIT	■ peak remolded INSITU VANE SHEAR		
					x NATURAL MOISTURE CONTENT	⊗ One half Pocket Penetrometer Rdg.		
						● SENSITIVITY		
					%	KSC	T/M.	
Filled Soil 0.35					0.00	20	1	1
Medium dark brown silty very fine sand.	1.60	SS 5	11	25	2	2	2	
SM			6	30	2	2	2	
Medium to stiff dark brown and reddish brown silty clay, trace of very fine sand.	3.60	SS 6	7	35	2	2	2	
ML-OL			10	40	2	2	2	
Soft dark grey silty clay, trace of very fine sand.	7.00	SS 7	12	45	2	2	2	
ML-OL			4	50	2	2	2	
Very stiff grey silty clay, trace of very fine sand.	8.90	SS 8	29	55	2	2	2	
ML-OL			38	60	2	2	2	
Very stiff grey silty clay, trace of very fine sand.	10.00	SS 9	63	65	2	2	2	
ML-OL			13	70	2	2	2	
Medium to very dense light grey silty very fine to fine sand, occasional coarse sand and pea gravel.	12.00	SS 10	46	75	2	2	2	
SM & SP-SM			53	80	2	2	2	
Dense to very dense yellowish brown silty very fine sand, occasional pea gravel.	13.95	SS 11	71	85	2	2	2	
SM			88	90	2	2	2	
	19.95	SS 12	77	95	2	2	2	
		SS 13			2	2	2	
		SS 14			2	2	2	
		SS 15			2	2	2	
		SS 16			2	2	2	
END OF BORING.								

GROUND WATER OBSERVATION.				W.A.C. BORING LOG		BORING NO. 2		
DATE	TIME	EL. of HOLE	EL. of WATER	LOCATION. CHAINGRAI PRACHANUROK CHAINGRAI		SURFACE ELV.		
24 HR AFTER BORING. 1.75 M						DATE START		
						DATE FINISH 31-OCT-43		
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO	DEPTH M	STANDARD PENETRATION	● LIQUID LIMIT	Δ One half Unconfined Compressive Strength		TOTAL DENSITY
					○ PLASTIC LIMIT	■ peak, ◻ remolded INSITU VANE SHEAR		
					x NATURAL MOISTURE CONTENT	⊙ One half Pocket Penetrometer Rdg.		
					● SENSITIVITY			
				BLOWS / FT	KSC		T/M ³	
Filled Soil				0.00	30 60	20 40 60 80	1 2 3	1 2
Soft to stiff light grey and brown silty clay, trace of very fine sand.	SS 1	SS 1	0.00	6				
	SS 2	SS 2	0.05	7				
	SS 3	SS 3	0.10	12				
	SS 4	SS 4	0.15	17				
	SS 5	SS 5	0.20	11				
ML-OL	SS 6	SS 6	0.30	10				
	SS 7	SS 7	0.40	11				
Loose dark grey silty very fine sand.	SS 8	SS 8	0.50	43				
SM & SP	SS 9	SS 9	0.60	34				
	SS 10	SS 10	0.70	17				
	SS 11	SS 11	0.80	52				
Medium to dense light grey very fine to fine sand, occasional coarse sand.	SS 12	SS 12	0.90	52				
SM	SS 13	SS 13	1.00	53				
	SS 14	SS 14	1.10	56				
	SS 15	SS 15	1.20	50				
	SS 16	SS 16	1.30	66				
END OF BORING.			19.95					

K. ENGINEERING CONSULTANTS CO., LTD.										
BORING LOG				BORING NO. BH-1		GROUND ELEV.(m) -0.13				
PROJECT แผนพัฒนาการขึ้นประตูนว 60 กรุงเทพมหานคร				DEPTH (m.) 9.28		OBSERVED WL (m.) -2.80				
LOCATION อ.เมือง เชียงราย				COORD.		DATE STARTED 14/6/86				
						DATE FINISHED 14/6/86				
SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING RECOVERY	SPT - N (blows/ft)	PL (%)	W _n (%)	LL	S _u (t/m ²) ○ UCT △ PP X FVT □ TV	γ _t (t/m ³) 1.6 1.8 2.0
LATERITIC CLAY (FILL), REDDISH BROWN	1.00	1	PA							
MEDIUM SILTY CLAY, BROWN (CL)	2.00	2	SS 1		8				△	○
		3	PA							
		4	SS 2		11					
MEDIUM DENSE FINE TO COARSE SAND, BROWN (SP-SM)	7.00	5	WO		15					
		6	SS 3		15					
		7	WO							
		8	SS 4		15					
HARD CLAY, DARK BROWN AND GREY (CL)	9.28	9	WO							
		10	SS 5							
END OF BORING			SS							

K. ENGINEERING CONSULTANTS CO., LTD.							
BORING LOG				BORING NO. BH-2	GROUND ELEV.(m.) -0.08		
PROJECT : การขุดลอกและปรับปรุงพื้นที่บริเวณท่าเรือ				DEPTH (m) 12.38	OBSERVED WL (m) -2.75		
LOCATION : ถนนสุขุมวิท กรุงเทพมหานคร				COORD.	DATE STARTED 13/6/86		
					DATE FINISHED 13/6/86		
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD SAMPLING RECOVERY	SPT-N (blows/ft) 10 20 30 40	PL W _n LL (%) 20 40 60 80	S _u (t/m ²) ○ UCT △ PP x FVT □ TV	γ _s (t/m ³) 1.6 1.8 2.0
LATERITIC CLAY (FILL), REDDISH BROWN	1.00	[Pattern]	PA				
STIFF SILTY CLAY, BROWN (CL)	2.00	[Pattern]	SS 1	9	10		
LOOSE TO MEDIUM DENSE FINE TO COARSE SAND, BROWN AND GREY (SP-SM, SC)		[Pattern]	PA				
		[Pattern]	SS 2	8	10		
		[Pattern]	WO				
		[Pattern]	SS 3	10	10		
		[Pattern]	WO				
		[Pattern]	SS 4	18	10		
		[Pattern]	WO				
		[Pattern]	SS 5	28	10		
		[Pattern]	WO				
VERY STIFF CLAY, BROWN (CH)	8.50	[Pattern]	SS 6	18	10		
		[Pattern]	SS 7	50/9"	10		
HARD CLAY, BROWN (CH, CL)	10.00	[Pattern]	SS 8	50/7"	10		
		[Pattern]	SS 9	50/5"	10		
END OF BORING	12.38						

Detailed description of the boring log: The log shows a series of soil layers. From 0 to 1.00m is Lateritic Clay (Fill), Reddish Brown. From 1.00 to 2.00m is Stiff Silty Clay, Brown (CL). From 2.00 to 8.50m is Loose to Medium Dense Fine to Coarse Sand, Brown and Grey (SP-SM, SC). This sand layer contains several silty clay lenses (SS 1, SS 2, SS 3, SS 4, SS 5) and woody material (WO). From 8.50 to 10.00m is Very Stiff Clay, Brown (CH). From 10.00 to 12.38m is Hard Clay, Brown (CH, CL). Test results include SPT blow counts ranging from 8 to 28 blows/ft in the sand section and higher values (e.g., 50/9") in the clay sections. Plasticity indices (PL, Wn, LL) are plotted as percentages. Shear strength (Su) is indicated by symbols like UCT, PP, FVT, and TV. Unit weight (gamma_s) is also noted at various depths.

END OF BORING

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT แม่กกวัดเจ็ย ไร่ฮอร์ต
LOCATION อ. เมือง จ. เชียงราย

BORING NO. BH-2

DEPTH (m.) 15.45

COORD.

GROUND ELEV.(m.)

OBSERVED WL (m.) -2.00

DATE STARTED 28 / 9 / 92

DATE FINISHED 28 / 9 / 92

[illegible]

K. ENGINEERING CONSULTANTS CO., LTD.									
BORING LOG				BORING NO. BH-3		GROUND ELEV.(m.)			
PROJECT <u>ขุดเจาะและปรับปรุงถนน</u>				DEPTH (m.) 15.45		OBSERVED WL (m.) -2.00			
LOCATION <u>อ. เมือง จ. เชียงใหม่</u>				COORD.		DATE STARTED 27/ 9/ 92			
						DATE FINISHED 27/ 9/ 92			
SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT - N (blows/ft)	PL W _n LL (%)	S _u (t/m ²) OUCT Δ PP X FVT □ TV	γ _i (t/m ³)
						10 20 30 40	20 40 60 80	1 2 3 4	1.6 1.8 2.0
SOFT TO MEDIUM CLAY REDDISH BROWN (CH)	1		PA						
	2		SS 1			3			
	2.80		PA						
	3		SS 2			7			
	4		PA						
STIFF CLAY, GREY, REDDISH BROWN (CH)	4.40		SS 3			10			
	5		WO						
MEDIUM DENSE SILTY FINE TO MEDIUM SAND, GREY (SM)	6.00		SS 4			13			
	7		WO						
DENSE SAND WITH GRAVEL, GREY (SP-SM)	10.00		SS 5			32			
	8		WO						
	9		SS 6			34			
	10		WO						
MEDIUM DENSE SAND WITH GRAVEL, GREY (SP-SM)	12.00		SS 7			32			
	11		WO						
	12		SS 8			13			
	13		WO						
DENSE SILTY FINE TO MEDIUM SAND, GREY (SM)	15.45		SS 9			33			
	14		WO						
	15		SS 10			44			
			WO						
END OF BORING			SS 11			45			

[illegible]

END OF BORING

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT OVERBROOK HOSPITAL
LOCATION A.MUANG, CHIANGRAI

BORING NO. BH-1

DEPTH (m) 18.45

COORD.

GROUND ELEV.(m.)

OBSERVED WL (m) = 1.50

DATE STARTED 12 / 1 / 92

DATE FINISHED 12 / 1 / 92

[illegible]

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT OVERBROOK HOSPITAL
LOCATION A. MUANG, CHIANGRAI

BORING NO 8H-2

DEPTH (m.) 15.15

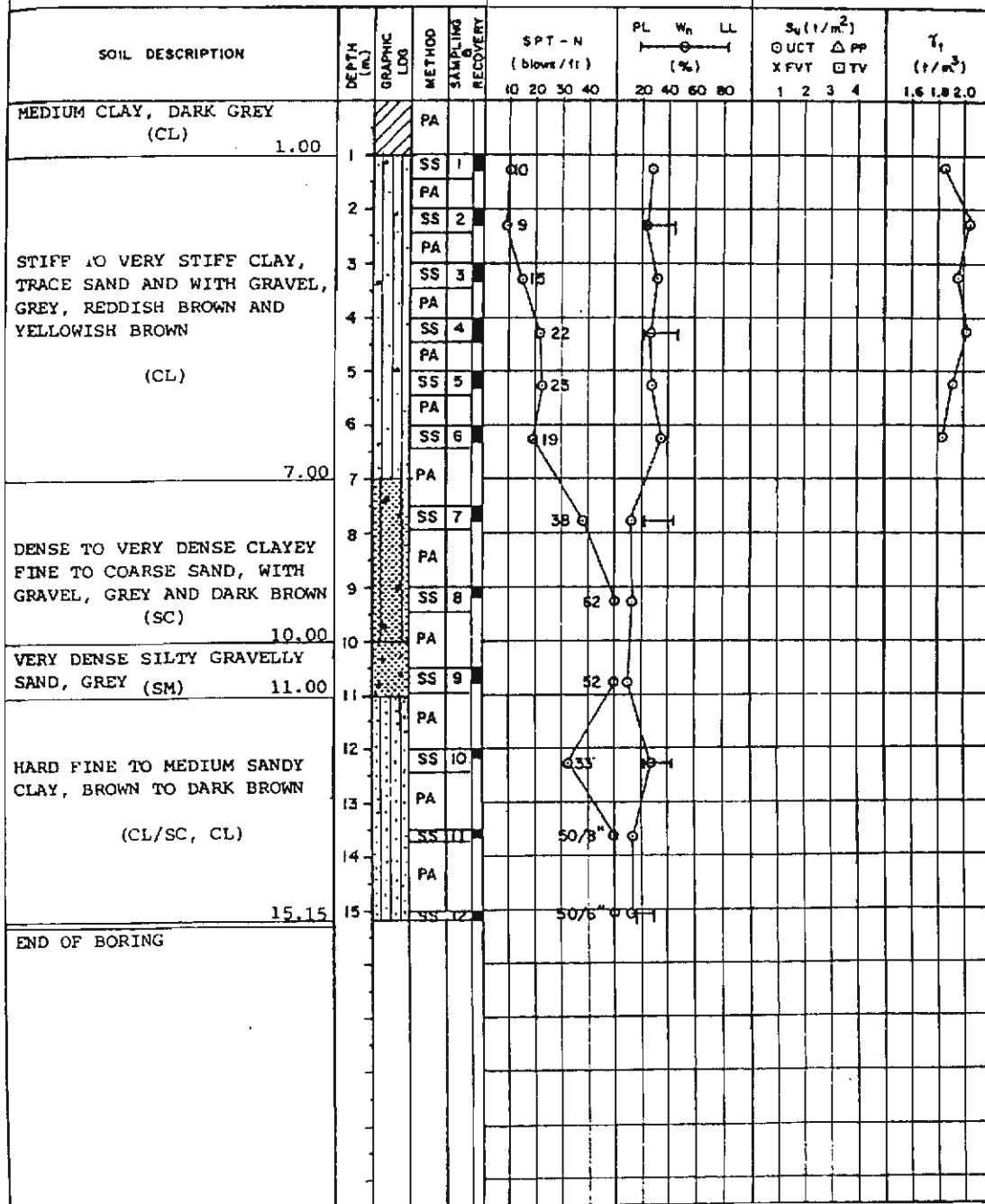
COORD.

GROUND ELEV.(m.)

OBSERVED WL (m.) -1.50

DATE STARTED 11/1/92

DATE FINISHED 11/1/92



K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT OVERBROOK HOSPITAL

LOCATION A. MUANG, CHIANGRAI

BORING NO. BH-3

DEPTH (m.) 16.50

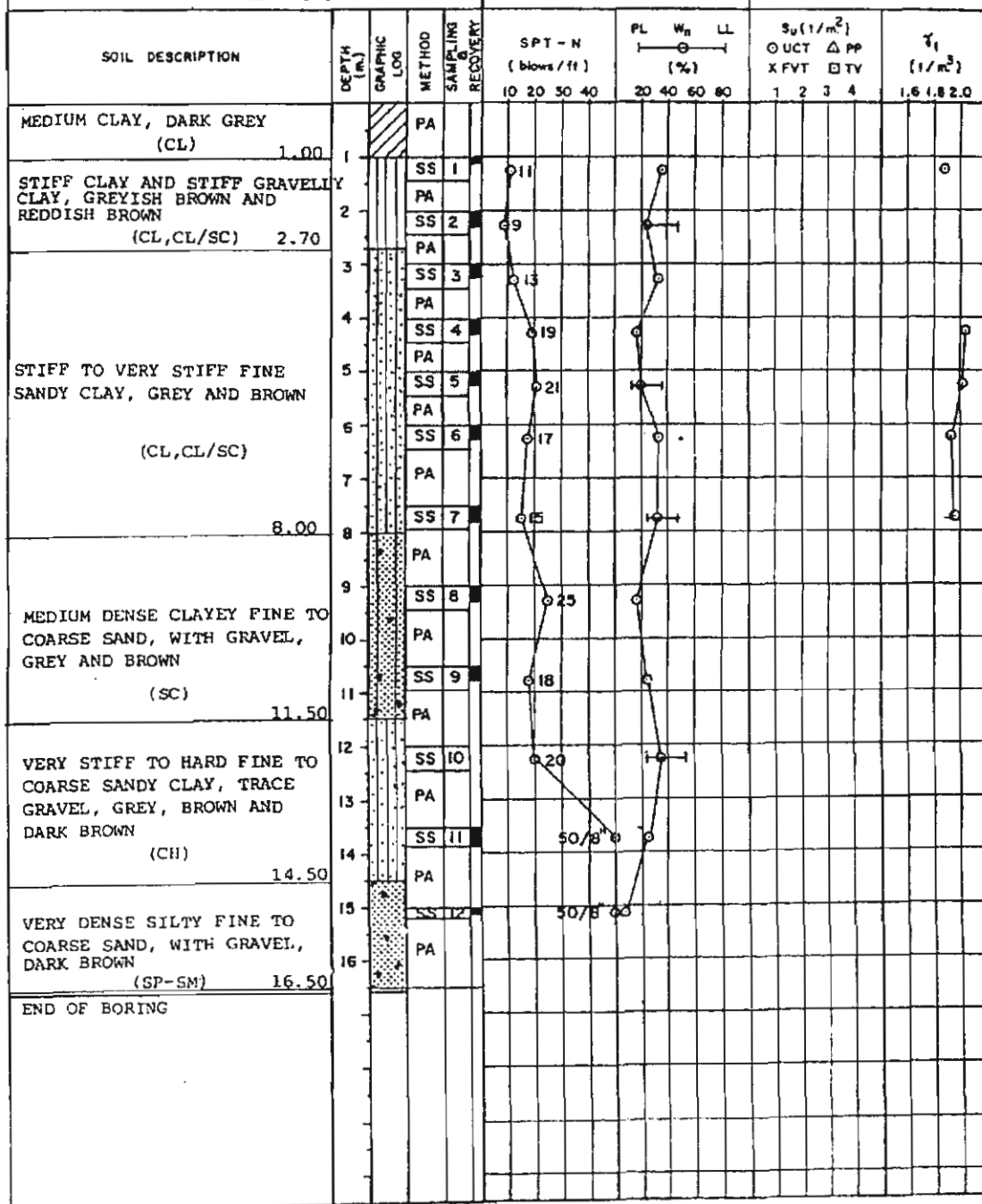
COORD.

GROUND ELEV.(m)

OBSERVED WL (m.) - 1.20

DATE STARTED 13 / 1 / 92

DATE FINISHED 13 / 1 / 92



BORING LOG				BORING NO. : BH-1		GROUND ELEV. (m)			
PROJECT : ธนาคารไทยพาณิชย์ สาขาแม่กว๋น				DEPTH (m) : 16.95		WATER LEVEL (m) : -0.70			
LOCATION : อ.เมือง จ.เชียงราย				COORD :		DATE STARTED : 20/6/95			
						DATE FINISHED : 20/6/95			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT-N (blows/m)	PL wt LL (%)	Su (t/sq.m)	TOTAL UNIT WEIGHT γ _t (t/cu.m)
						10 20 30 40	20 40 60 80	1 2 3 4	1 2 3 4
VERY SOFT SANDY CLAY TRACE GRAVEL, BROWN (CL)	1.00		PA	SS 1		2			
LOOSE CLAYEY SAND WITH GRAVEL, BROWN (SC)	1.50		SS 2			9			
			SS 3			12			
			SS 4			6			
LOOSE AND MEDIUM DENSE CLAYEY SAND TRACE GRAVEL (SC)	4.50		PA	SS 5		16			
			WO						
MEDIUM DENSE SILTY SAND, BROWN (SM)	5.20		SS 6			19			
			WO						
STIFF CLAY WITH SAND, BROWN (CL)	7.80		SS 7			12			
			WO						
MEDIUM DENSE CLAYEY FINE SAND, BROWN (SC)	8.60		SS 8			17			
			WO						
SOFT CLAY, GREY (CL)	10.00		SS 9			5			
			WO						
STIFF CLAY WITH SAND, GREY (CL)	12.80		SS 10			13			
			WO						
			SS 11			15			
			WO						
DENSE SAND TRACE SILT AND GRAVEL, BROWN (SM)	16.95		SS 12			35			
			WO						
			SS 13			44			
			WO						
END OF BORING			SS 14			47			

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF : SONG SAK S	DRILLER : BOONSONG C	GEOLOGIST : UB.	DRAFTMAN : SS	TYPIST :

BORING LOG				BORING NO : BH-2		GROUND ELEV (m) :			
PROJECT : ธนาคารไทยพาณิชย์ สาขาแม่งร่น				DEPTH (m) : 16.95		WATER LEVEL (m) : -0.60			
LOCATION : อ.เมือง จ.เชียงราย				COORD :		DATE STARTED : 21/6/95			
						DATE FINISHED : 21/6/95			
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT-N (blows/m)	PL w% LL (%)	Su (Vsq.m)	TOTAL UNIT WEIGHT γ _t (Kou.m.)
LOOSE CLAYEY FINE TO MEDIUM SAND, BROWN (SC)	1.00		PA	SS 1		5			
VERY LOOSE CLAYEY SAND WITH GRAVEL, BROWN (SC)	2.00		SS 2			4			
			SS 3			3			
			SS 4			8			
VERY LOOSE TO LOOSE CLAYEY SAND, BROWN (SC)	4.50		PA	SS 5		3			
			WO						
MEDIUM DENSE SILTY SAND, BROWN (SM)	5.50		SS 6			18			
			WO						
VERY STIFF CLAY WITH SAND TRACE GRAVEL, BROWN (CL)	8.20		SS 7			15			
			WO						
			SS 8			18			
			WO						
MEDIUM DENSE TO DENSE SILTY FINE TO MEDIUM SAND, BROWN AND GREY (SM)	13.00		SS 9			32			
			WO						
			SS 10			31			
			WO						
			SS 11			25			
			WO						
DENSE TO VERY DENSE SILTY SAND TRACE GRAVEL, BROWN (SM)	16.95		SS 12			47			
			WO						
			SS 13			47			
			WO						
			SS 14			54			
END OF BORING									

PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF : SONGSAK S	DRILLER : BOONSONG C	GEOLOGIST : UB	DRAFTMAN : SS	TYPIST : WS

BORING LOG					BORING NO. BH-2		ELEVATION (m)		
PROJECT : BCP มทท. ห้วยสัก 1 โครงการ					DEPTH (m) 10.65		GWL (m) -1.40		
LOCATION : อ.เมือง จ.เชียงใหม่					COORD N		DATE STARTED 06/04/97		
					E		DATE FINISHED 06/04/97		
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLE NO	RECOVERY (cm)	SPT-N VALUE (blows/ft)	NATURAL MOISTURE CONTENT (%)	Su (t/sq m)	TOTAL UNIT WEIGHT (t/cu m)
MEDIUM DENSE SILTY FINE SAND, BROWN (SM/ML)	1.00	3.0	PA	1	25	25	0		
STIFF FINE SANDY CLAY, BROWN (CL)	1.50	2.0	SS	2	24	13	0		
			SS	3	30	8	0		
			SS	4	30	6	0		
MEDIUM FINE SANDY CLAY, BROWN (CL, CL/SC)	3.00	3.0	PA						
			SS	5	25	7	0		
MEDIUM DENSE SILTY FINE TO MEDIUM SAND, REDDISH BROWN AND LI-GREY (SM)	5.50	5.0	WO						
			SS	6	35	28	0		
			WO						
			SS	7	20	10/7.5	0		
			WO						
			SS	8	15	11/6	0		
			WO						
			SS	9	10	10/4	0		
			WO						
			SS	10	10	12/6	0		
END OF BORING	10.65								

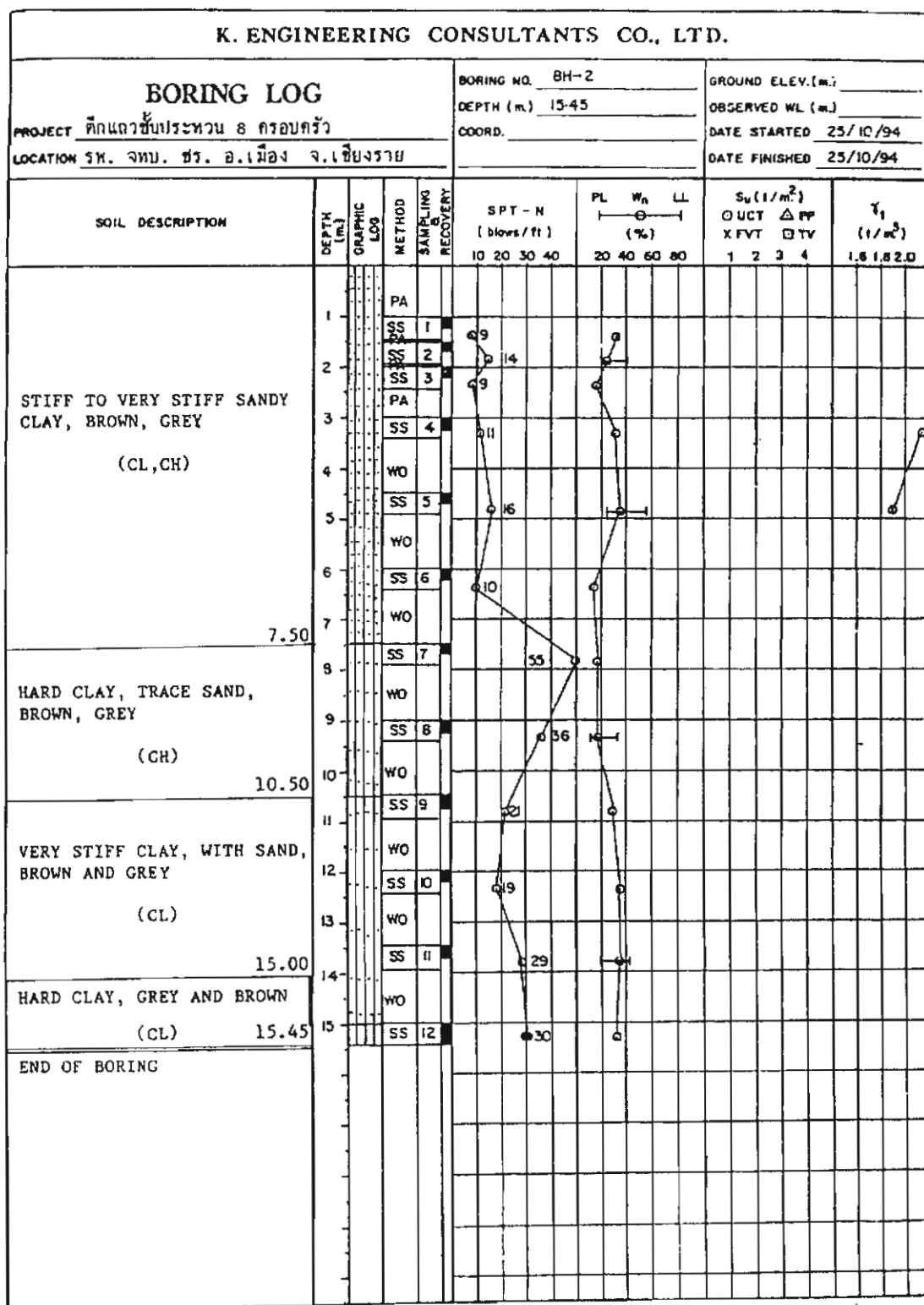
PA = POWER AUGERING	HA = HAND AUGERING	WO = WASH OUT	ST = SHELBY TUBE	SS = SPLIT SPOON
PARTY CHIEF SURADECH CH	MADE BY PACHAREE C	GEOLOGIST NATTAPHON	FILE HUAYSAXI	DISK 10 CHANG RAI

GROUND WATER OBSERVATION.				W.A.C. BORING LOG		BORING NO. 1	
DATE	TIME	EL. OF HOLE	EL. OF WATER			SURFACE ELV.	
				LOCATION. CHAINGRAI PRACHANUKROK CHAINGRAI		DATE START	
24 HR AFTER BORING 1.75 M						DATE FINISH 11-OCT-43	
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO.	DEPTH M	STANDARD PENETRATION BLOWS / FT.	● LIQUID LIMIT	Δ One half Unconfined Compressive Strength	TOTAL DENSITY γ _d , γ _w T/M
					○ PLASTIC LIMIT	● peak Remolded... INSITU VANE SHEAR.	
					x NATURAL MOISTURE CONTENT	⊗ One half Pocket Penetrometer Rdg	
					%	KSC	
			0.00	30 60	20 40 60 80	1 2 3	1 2
Filled Soil	0.35						
Medium dark brown silty very fine sand.	1.60	SS 1		11	24		
SM		SS 2		6	24		
		SS 3		7	24		
		SS 4		10	24		
		SS 5		12	24		
Medium to stiff dark brown and reddish brown silty clay, trace of very fine sand.	3.60	SS 6		5	24		
ML-OL		SS 7		4	24		
Soft dark grey silty clay, trace of very fine sand.	7.00	SS 8		29	24		
ML-OL		SS 9		38	24		
Very stiff grey silty clay, trace of very fine sand.	8.90	SS 10	10.00	63	24		
ML-OL		SS 11		13	24		
Medium to very dense light grey silty very fine to fine sand, occasional coarse sand and pea gravel.	12.00	SS 12		46	24		
SM & SP-SM		SS 13		53	24		
		SS 14		71	24		
Dense to very dense yellowish brown silty very fine sand, occasional pea gravel.		SS 15		86	24		
SM		SS 16	20.00	77	24		
19.95							
END OF BORING.							

GROUND WATER OBSERVATION				W.A.C. BORING LOG		BORING NO. 2			
DATE	TIME	EL. OF HOLE	EL. OF WATER			SURFACE ELV.			
24 HR AFTER BORING 1.75 M <th colspan="2">LOCATION. CHAINGRAI PRACHANUROK CHAINGRAI</th> <th colspan="2">DATE START</th>				LOCATION. CHAINGRAI PRACHANUROK CHAINGRAI		DATE START			
						DATE FINISH 31-OCT-43			
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO. ...	DEPTH. M.	STANDARD PENETRATION.	● LIQUID LIMIT	Δ One half Unconfined Compressive Strength.			TOTAL DENSITY.
					O PLASTIC LIMIT	• Peak ... Remolded ... INSITU VANE SHEAR.			
					X NATURAL MOISTURE CONTENT	• One half Pocket Penetrometer Rdg.			
				BLOWS / FT	%	KSC			Yd. Yw
									T/M
Filled Soil	0.35		0.00	30 50	20 40 60 80	1 2 3	1 2		
Soft to stiff light grey and brown silty clay, trace of very fine sand.			0.35	7					
ML-OL			0.50	12					
			0.60	13					
			0.70	11					
			0.80	10					
			0.90	11					
Loose dark grey silty very fine sand.			1.00	43					
SM & SP			1.10	34					
			1.20	17					
			1.30	52					
Medium to dense light grey very fine to fine sand, occasional coarse sand.			1.40	52					
SM			1.50	53					
			1.60	55					
			1.70	60					
			1.80	56					
END OF BORING.			19.95	56					
			20.00						

K. ENGINEERING CONSULTANTS CO., LTD.										
BORING LOG				BORING NO. BH-1		GROUND ELEV.(m.)				
PROJECT: อาคาร ๓๓, ศูนย์การฝึก นศท. จทบ. เชียงราย				DEPTH (m.) 13.15		OBSERVED WL (m.) -4.50				
LOCATION: อ.เมือง เชียงราย				COORD.		DATE STARTED 24/7/93				
						DATE FINISHED 25/7/93				
SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING & RECOVERY	SPT - N (blows/11)	PL (%)	W _n (%)	LL	S _u (1/m ²) OUCT Δ PP X FVT □ TV	γ _i (1/m ³)
					10 20 30 40	20 40 60 80			1 2 3 4	1.6 1.8 2.0
VERY LOOSE SILTY FINE TO MEDIUM SAND, DARK GREY (SM)	1		PA							
			SS 1		23					
	2		PA							
			SS 2		3					
MEDIUM DENSE SILTY FINE TO MEDIUM SAND, BROWN (SM)	3		PA							
			SS 3		4					
	4		PA							
			SS 4		13					
LOOSE SILTY FINE TO MEDIUM SAND, GREY (SM)	5		WO							
			SS 5		5					
	6		WO							
			SS 6		10					
MEDIUM DENSE SILTY FINE TO MEDIUM SAND, GREY (SM)	7		WO							
			SS 7		20					
	8		WO							
			SS 8		21					
VERY DENSE SILTY GRAVEL, GREY (GP-GM)	9		WO							
			SS 9		27					
	10		WO							
			SS 10		26					
END OF BORING	13.15		SS 11		50/6					

PANYA CONSULTANTS CO., LTD.											
BORING LOG				BORING NO. BH-1		GROUND ELEV.(m.)					
PROJECT ค้างคืนบ้านขีเมณฑนครหลวง				DEPTH (m.) 15.08		OBSERVED WL (m.) -0.60					
LOCATION อำเภอเมือง จังหวัดเชียงราย				COORD.		DATE STARTED 31/7/93					
						DATE FINISHED 31/7/93					
SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING & RECOVERY	SPT - N (blows/ft)	PL W _n LL (%)	S _u (1/m ²) ○ UCT △ PP x FVT □ TV				T ₁ (1/m ³)
					10 20 30 40	20 40 60 80	1	2	3	4	1.6 1.8 2.0
MEDIUM CLAY, YELLOWISH BROWN (CL) 1.70	1	PA	SS 1	PA	5	1					
STIFF CLAY, BROWN, REDDISH BROWN AND GREY (CL) 3.80	2	PA	SS 2	PA	11	1					
	3	PA	SS 3	PA	14	1					
MEDIUM DENSE CLAYEY GRAVEL, GREY AND REDDISH BROWN (GC) 4.75	4	PA	SS 4	PA	19	1					
	5	PA	SS 5	PA	15	1					
VERY STIFF CLAY, REDDISH BROWN AND GREY (CL) 8.50	6	PA	SS 6	PA	26	1					
	7	PA	SS 7	PA	29	1					
	8	PA	SS 8	PA	50	1					
	9	PA	SS 9	PA	50	1					
	10	PA	SS 10	PA	50/5	1					
HARD CLAY, DARK GREY (CL) 15.08	11	PA	SS 11	PA	50/5	1					
	12	PA	SS 12	PA	50/5	1					
	13	PA	SS 13	PA	50/5	1					
	14	PA	SS 14	PA	50/5	1					
END OF BORING	15	PA	SS 15	PA	50/5	1					



K. ENGINEERING CONSULTANTS CO., LTD.											
BORING LOG				BORING NO. BH-1		GROUND ELEV.(m.)					
PROJECT <u>บริษัท จก. จม. ช.ร. ปี ๖๕</u>				DEPTH (m) <u>23.45</u>		OBSERVED WL (m.) <u>-1.20</u>					
LOCATION <u>ท่าเรือเมือง จังหวัดเชียงราย</u>				COORD.		DATE STARTED <u>11/11/93</u>					
						DATE FINISHED <u>11/11/93</u>					
SOIL DESCRIPTION	DEPTH (m)	GRAPHIC LOG	METHOD	SAMPLING	RECOVERY	SPT - N (blows / ft)	PL (%)	W _n (%)	LL	S _u (t/m ²) ○ UCT △ PF X FVT □ TV	γ _t (t/m ³)
						10 20 30 40	20 40 60 80			1 2 3 4	1.6 1.8 2.0
HARD CLAY, DARK GREY (CL)	21		W0								
	22.00		SS 16			50/10	6				
DENSE CLAYEY FINE TO MEDIUM SAND, GREY (SC/CL)	22		W0								
	23		SS 17			47	6				
END OF BORING											

GROUND WATER OBSERVATION.				W.A.C. BORING LOG		BORING NO. 1		
DATE	TIME	EL. of HOLE	EL. of WATER			SURFACE ELV		
				LOCATION. DENHA SQUARE BRANCH CHAINGRAJ		DATE START		
24 HRAFTER BORING. 0.62 M.						DATE FINISH		
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO	DEPTH - M.	STANDARD- PENETRATION.	● LIQUID LIMIT		△ One half Unconfined Compressive Strength.	TOTAL- DENSITY
					○ PLASTIC LIMIT			
					X NATURAL MOISTURE CONTENT			
					% KSC			
Fill soil			0.00					
Stiff light grey silty clay. (MH-OH)			0.50					
		SS.01						
		SS.02						
		SS.03						
		SS.04						
		SS.05						
		SS.06	5.00					
		SS.07						
Shift to hard light grey, reddish and yellowish brown silty clay, occa- sional very fine sand. (CH, MH-OH, CL & ML-OL)		SS.08						
		SS.09	10.00					
		SS.10						
		SS.11						
		SS.12						
		SS.13	15.00					
END OF BORING								
			20.00					

GROUND WATER OBSERVATION.				W.A.C. BORING LOG		BORING NO. ①	
DATE	TIME	EL. of HOLE	EL. of WATER	LOCATION. EDUC. OCCUP. COLLEGE CHAINGRAI		SURFACE ELV. -0.45 m.	
24 HR. AFTER BORING. 2.10 M						DATE START	
						DATE FINISH	
SOILS DESCRIPTION...	SOIL PROFILE	SAMPLE TYPE NO.	DEPTH M	STANDARD PENETRATION	LIQUID LIMIT		One half Unconfined Compressive Strength
					PLASTIC LIMIT		
					NATURAL MOISTURE CONTENT		
				BLOWS / FT	%	KSC	TOTAL DENSITY
Concrete pavement	0.05		0.00				
Top soil	0.20						
Soft dark grey silty clay.							
CL							
	2.00	SS.1		4	0		
		SS.2		10	0		
		SS.3		55	0		
		SS.4	5.00	22	0		
Stiff to very stiff light grey, yellowish brown and brown silty clay, occasional decomposed rock.		SS.5		15	0		
CL, CH & ML-OL		SS.6		33	0		
	9.00	SS.7		100	0		
Hard grey and yellowish brown silty clay.		SS.8	10.00				
ML-OL	10.20	SS.8		150			
		SS.9		150			
Very dense grey, yellowish brown and brown cemented silty very fine sand, occasional decomposed rock.		SS.10		120			
SM		SS.11	15.00	150			
	15.45						
END OF BORING.							

GROUND WATER OBSERVATION.				W.A.C. BORING LOG		BORING NO. ②				
DATE	TIME	EL. of HOLE	EL. of WATER	EDUC. OCCUP. COLLEGE		SURFACE ELV -0.40 m.				
24 HRAFTER BORING 2.20 M.				LOCATION. CHAINGRAI		DATE START				
						DATE FINISH				
SOILS DESCRIPTION...				SOIL PROFILE	SAMPLE TYPE NO	DEPTH - M	STANDARD PENETRATION	● LIQUID LIMIT	△ One half Unconfined Compressive Strength	TOTAL DENSITY
								○ PLASTIC LIMIT		
								x NATURAL MOISTURE CONTENT	⊙ One half Pocket Penetrometer Rdg	y _d , y _w
								%	• SENSITIVITY	T/M ³
							BLOWS / FT		KSC	1 2
Concrete pavement 0.05						0.00	30 60	20 40 60 80	1 2 3	1 2
Top soil 0.25										
Soft grey and yellowish brown silty clay. ML-OL						1.80				
Very stiff light grey, yellowish brown and brown silty clay, occasional decomposed rock.						SS.1	4	0		
ML-OL & CH						SS.2	19	0		
						CS.3		0		
						SS.4	32	0		
						5.00				
Very stiff to hard brown white and brown silty clay.						SS.5	19	0		
CH & ML-OL						SS.6	57	0		
						SS.7	44	0		
						10.00				
						SS.8	82	0		
Hard grey, white, yellowish brown and brown compacted silty clay, occasional decomposed rock.						SS.9	97	0		
ML-OL						SS.10	> 150	0		
						15.00				
						SS.11	> 150	0		
15.45										
END OF BORING.										

VITAE

Pichai Pattararattanakul was born in Trang, a southern province of Thailand, on April 3, 1974. He attended Prince of Songkla University, one of the most prestigious universities in southern Thailand, where he obtained a bachelor's degree in civil engineering in 1995. He received a master's degree from Chulalongkorn University with a major in structural engineering in 1998. His master's thesis title was "Effects of Different Shear Reinforcement Detailings on Behavior of Reinforced Concrete Shear Walls Subjected to Cyclic Loadings" and was published in the ACI Structural Journal in 2001. After graduation, he worked as a research assistant at the earthquake engineering and vibration research laboratory of Chulalongkorn University from 1998 to 1999, conducting the full-scale behavior of reinforced concrete columns subjected to cyclic loadings.

Pichai began his engineering career when he studied in the last year of master's degree with an engineering consulting firm. In 1999, he has started his Ph.D. in the area of geotechnical engineering at Chulalongkorn University, together with working as part time structural engineer with many consulting firms in Bangkok. He has been involved in design of various types of structure both concrete and steel structures, including low- and high-rise buildings, industrial buildings, water treatment tanks, machine foundations, and etc.