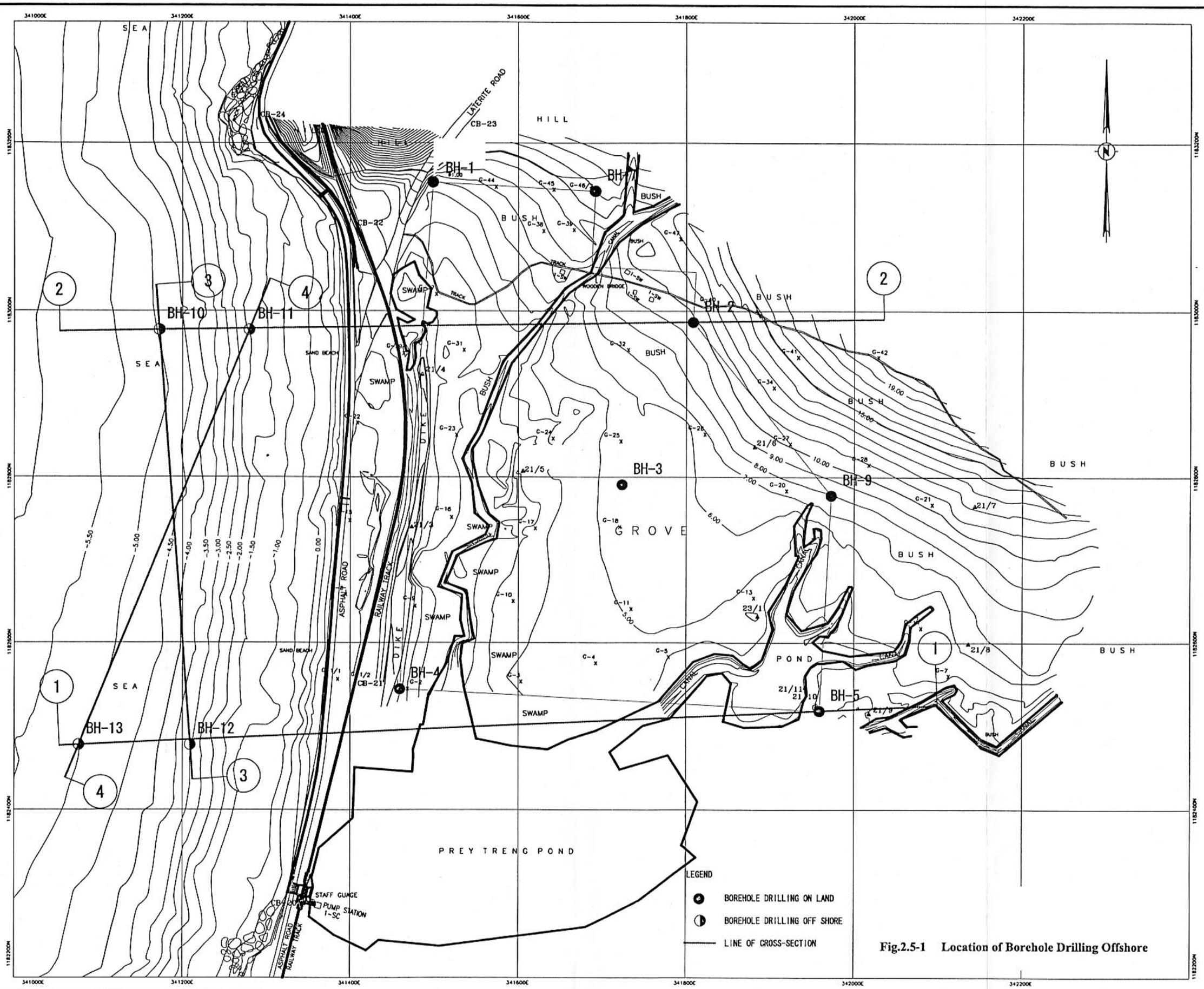


Fig.2.5-1 Location of Borehole Drilling Offshore

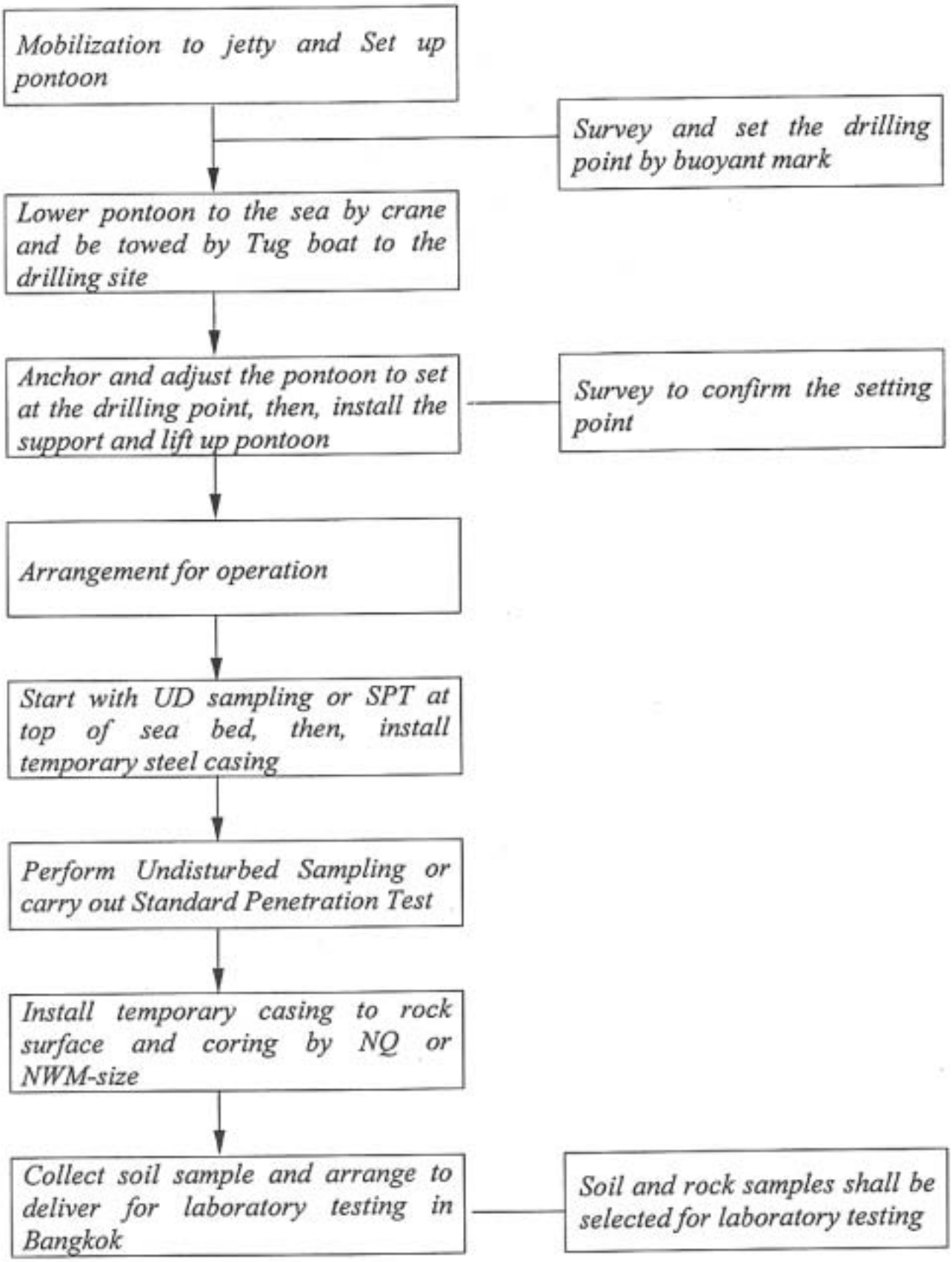


Fig.2.5-2 Flow Chart of Offshore Boring Work

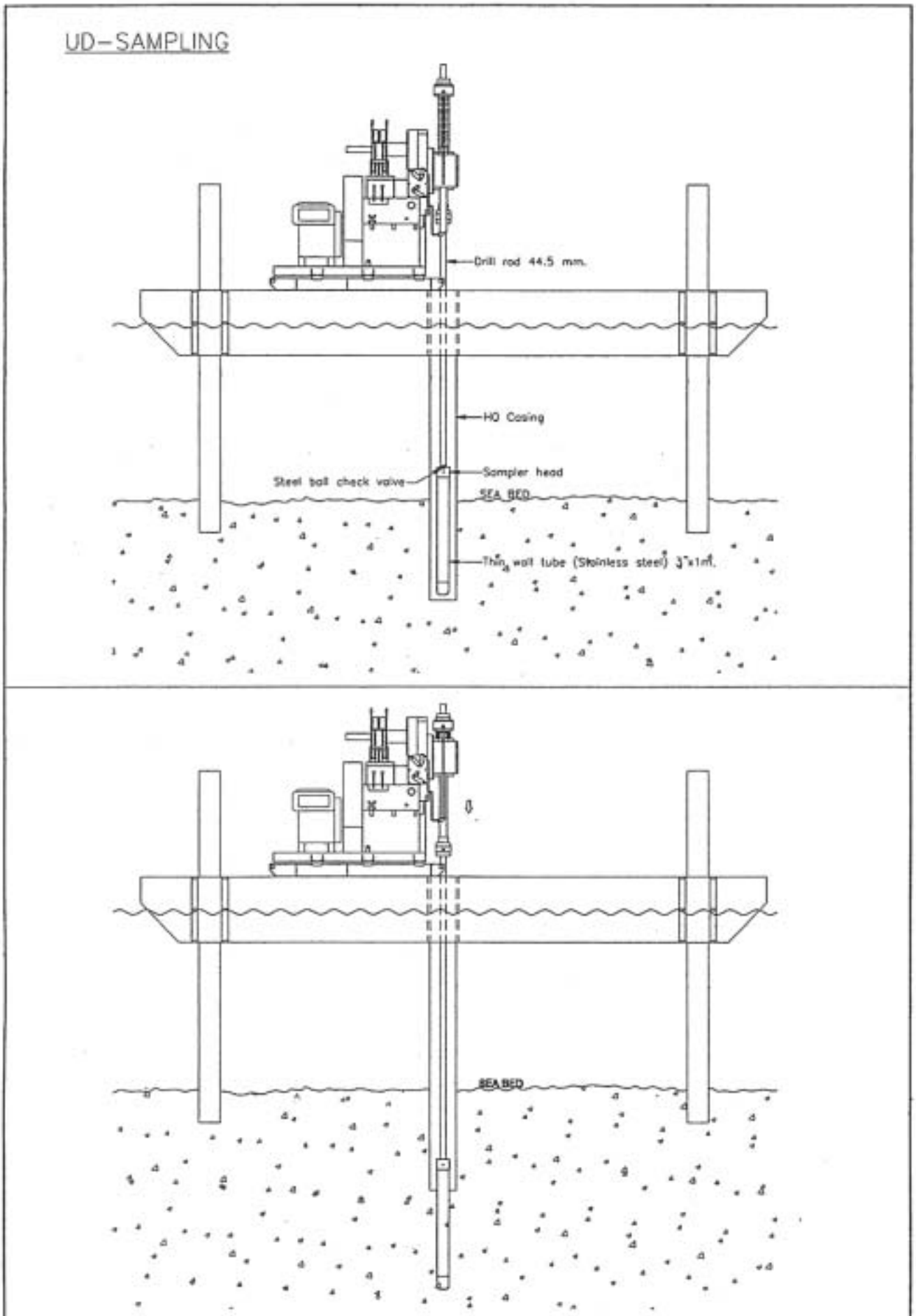
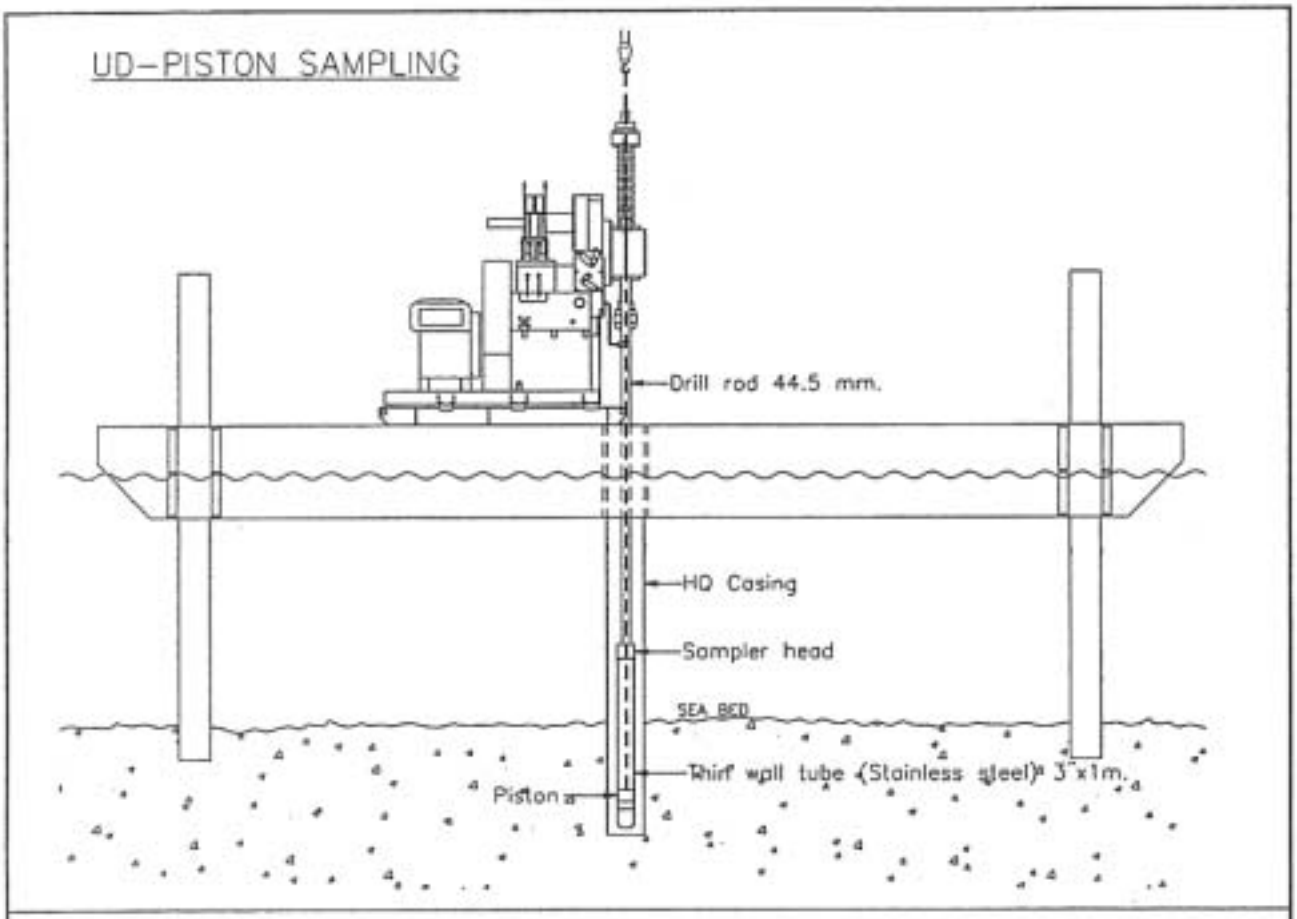


Fig.2.5-3 (1) Arrangement of UD Sampling Equipment



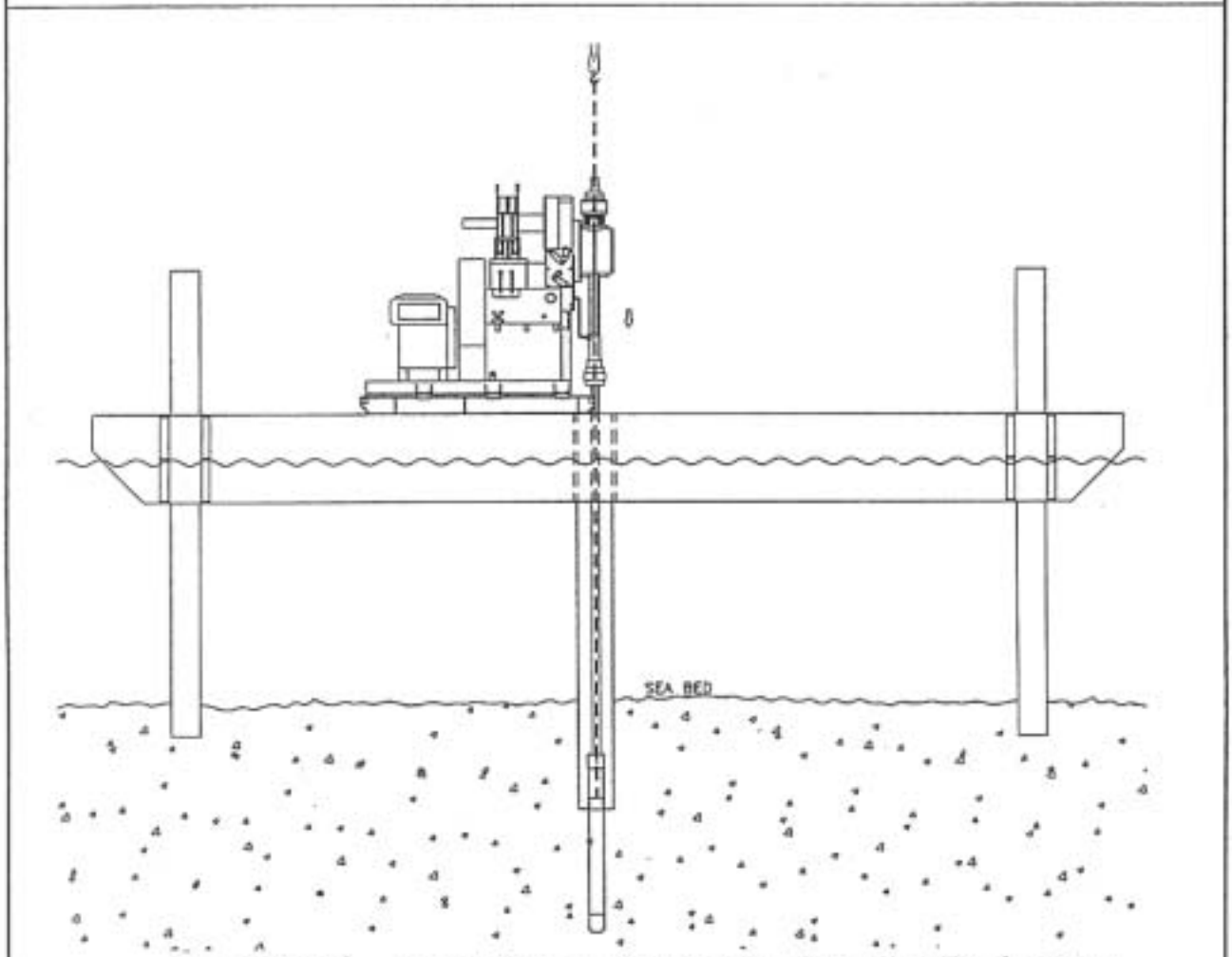


Fig.2.5-3 (2) Arrangement of UD-Piston Sampling Equipment

STANDARD PENETRATION TEST (SPT)

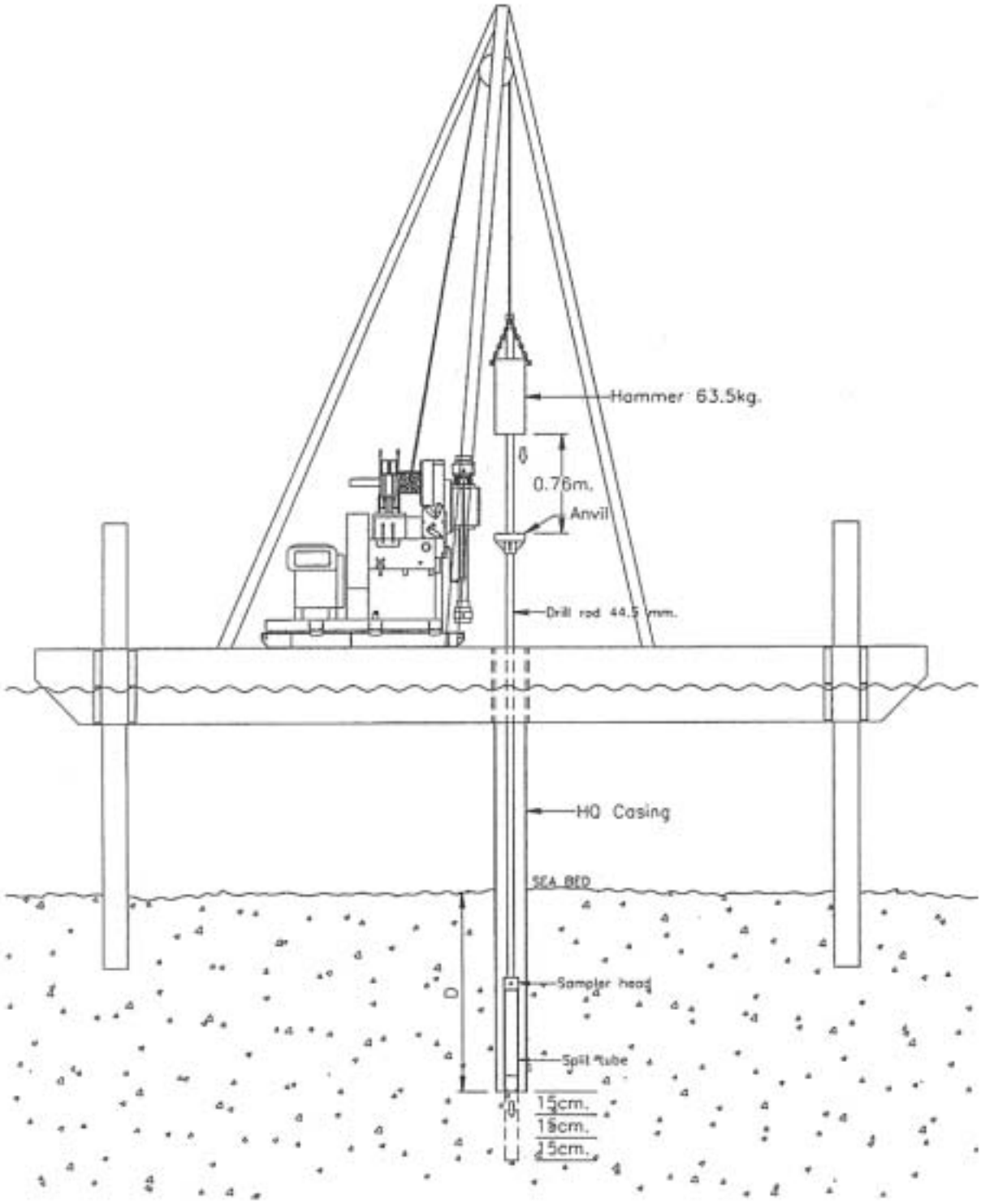


Fig.2.5-4 Arrangement of Standard Penetration Test Equipment

SIAM TONE CO., LTD.	BORING LOG	BORING NO. 10
		SHEET 1 OF 1
PROJECT : SIHANOUKVILLE CCGT	Coordinates : N 1,182,977.327	Water Level: - m
	E 341,173.277	
LOCATION : SIHANOUKVILLE CAMBODIA	Sea bed Elevation: -5.00 msl.	Starting Date: 12/11/00
CLIENT : NEWJEC INC.	Max.DrillingDepth: 20.00 m	Finishing Date: 13/11/00

Depth (m) -5.00 msl.	Soil Description	Sampling Method	Sample No.	Recovery (cm.)	RQD (%)
	SAND, greenish gray, fine to coarse sand, subangular to subrounded, some shells, very loose.	SS	1	35	
		SS	2	40	
		SS	3	15	
		SS	4	30	
		SS	5	30	
		SS	6	45	
		SS	7	45	
		SS	8	30	
		SS	9	40	
4.50 m.	CLAYEY SAND, dark brown, very fine to fine high organic material, very loose. (UD-1 : 5.00-6.00 m.)	SS	10	15	
		SS	11	10	
5.50 m.	SAND, light gray, fine sand, subangular to subround, very loose to dense	SS	12	20	
		SS	13	10	
		SS	14	8	
7.15 m.	SANDSTONE, light gray to yellowish brown, very fine to fine sand, highly fracture, slightly weathered.	C	1	75/90	62.22
7.45 m.	CLAY, light gray to dark reddish brown, stiff.	C	2	25/150	0
8.05 m.	SANDSTONE, light brown to brown very fine to fine, well graded subangular to subrounded, highly weathered.	C	3	60/90	56
9.65 m.		C	4	150/150	74.67
		C	5	150/150	89.33
	SILTSTONE, pale reddish brown, slightly weathered, fracture incline, about 80 - 90°	C	6	137/150	74
		C	7	150/150	32
		C	8	150/150	67.33
17.25 m.	SANDSTONE, light gray to greenish gray, very fine to fine, size increasing with depth, fracture incline about 20° - 45° and 90°, moderate to highly weathered.	C	9	150/150	38
20.00 m.	END OF BOREHOLE AT DEPTH 20.00 M.	C	10	95/95	47.37

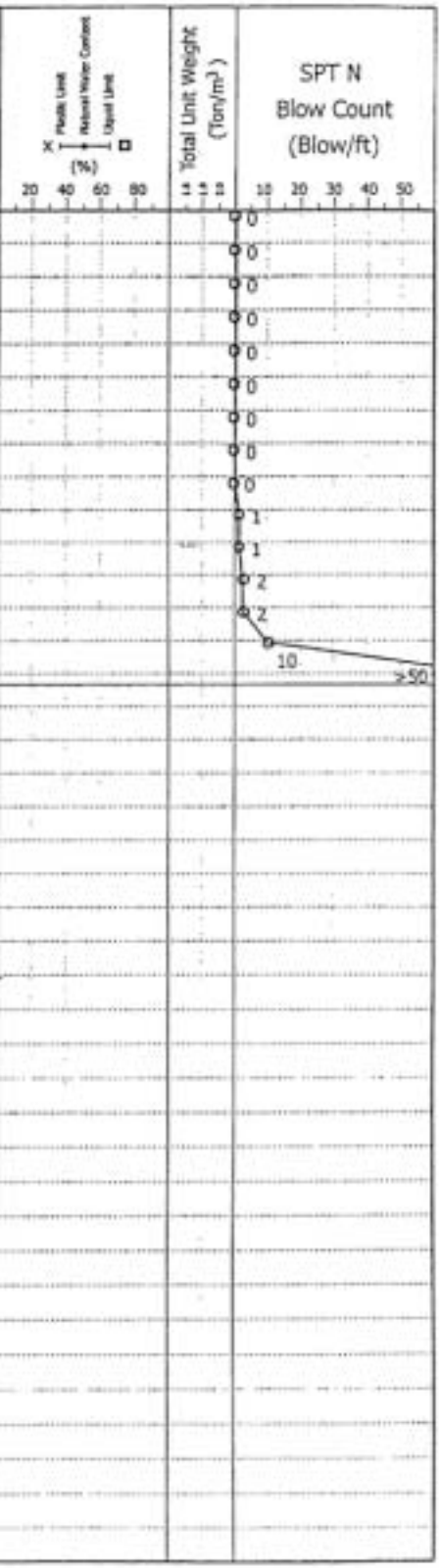


Fig.2.5-5 Boring Log of Offshore Borehole

SIAM TONE CO., LTD.	BORING LOG	BORING NO. 11
		SHEET 1 OF 1
PROJECT : SIHANOUKVILLE CCGT	Coordinates : N 1,182,977.327	Water Level: - m
	E 341,279.777	
LOCATION : SIHANOUKVILLE CAMBODIA	Sea bed Elevation: -2.00 msl.	Starting Date: 14/11/00
CLIENT : NEWJEC INC.	Max.DrillingDepth: 20.00 m	Finishing Date: 17/11/00

Depth (m)	Soil Description	Sampling Method	Sample No.	Recovery (cm.)	RQD (%)
-2.00 msl.					
1	SAND, light greenish gray to light brown, very fine to fine sand, well graded, subangular to subrounded, loose. (UD-1 : 1.50 - 2.50 m.)	SS	1		
		SS	2		
		SS	3		
2		SS	4		
	2.50 m.	SS	5		
3	SAND, greenish gray, very fine to fine sand, well graded, subangular to subrounded, loose.	SS	6		
		SS	7		
		SS	8		
4		SS	9		
	4.75 m.	SS	10		
5	SANDSTONE, yellowish brown to light gray, very fine to very coarse sand, subangular to subrounded, graded bedding, fresh to slightly weathered, and thin layer of clay : greenish gray (8.40 - 8.50 m.), some gravel at 8.50-10.25 m. highly fracture, incline 0° to core axis.	C	1	25/25	0
		C	2	100/100	25
6		C	3	35/35	28.57
7		C	4	90/90	58.89
8		C	5	27/27	33.77
		C	6	70/70	47.14
9		C	7	140/140	86.43
10	10.25 m.				
	SANDSTONE INTERBED with CLAY, light gray to gray, very fine to medium sand, fresh rock highly fracture, incline about 0° - 20° to core axis and bed plane incline about 90° - 80° to core axis, with clay, greenish gray to gray, soft to stiff, at 11.10-11.25, 11.50-11.52, 11.75-12.75, 12.90-13.30, 13.40-13.65, 14.15-14.25, 15.65-15.85, 16.05-16.10, 16.30-16.34, 18.00-18.10 m.	C	8	80/80	72.5
11		C	9	35/40	35
12		C	10	050/150	10
13		C	11	0/35	0
		C	12	0/50	0
14		C	13	25/25	0
		C	14	80/90	0
15	18.85 m.	C	15	0/60	0
	SANDSTONE, yellowish brown, very fine to very coarse sand, subangular to subround, graded bedding and thin bed coal (about 0.1-0.2 cm.)	C	16	0/45	0
16		C	17	45/45	22.22
17	19.75 m.	C	18	100/100	50
18	SANDSTONE, light gray, very fine to fine sand.	C	19	90/90	11.11
	20.00 m.	C	20	0/40	0
19		C	21	0/75	0
	END OF BOREHOLE AT DEPTH 20.00 M.	C	22	50/50	96

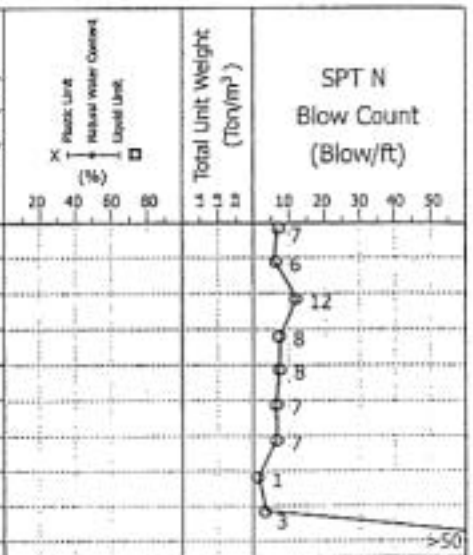


Fig.2.5-6 Boring Log of Offshore Borehole

SIAM TONE CO., LTD.	BORING LOG	BORING NO. 12
		SHEET 1 OF 2
PROJECT : SIHANOUKVILLE CCGT	Coordinates : N 1,182,477.327	Water Level: - m
	E 341,209.277	
LOCATION : SIHANOUKVILLE CAMBODIA	Sea bed Elevation: -3.00 msl.	Starting Date: 09/11/00
CLIENT : NEWJEC INC.	Max.DrillingDepth: 22.55 m	Finishing Date: 10/11/00

Depth (m)	Graphic Log	Soil Description	Sampling Method	Sample No.	Recovery (cm.)	RQD (%)	Plastic Limit / Natural Water Content / Liquid Limit (%)	Total Unit Weight (Ton/m³)	SPT N Blow Count (Blow/ft)
-3.00 msl.									
		SAND, greenish gray, very fine to medium sand, poorly sorted subangular to subrounded, some shells, very loose.	SS	1	20				0
			SS	2	30				0
			SS	3	38				0
			SS	4	25				0
			SS	5	32				0
			SS	6	40				0
			SS	7	45				0
			SS	8	23				0
		5.45 m.	SS	9	20				0
		CLAYEY SAND, dark brown, very fine to fine sand, low plastic and high organic material, very loose. (UD-1 : 6.00-7.00 m.)	SS	10	15				0
			SS	11	28				0
			SS	12	30				1
		6.50 m.	SS	13	20				2
		SAND, light gray, very fine to fine sand, well graded subangular to subrounded, very loose to dense.	SS	14	45				8
			SS	15	14				14
			SS	16	38				38
		8.30 m.	SS	17	-				>50
		SANDSTONE INTERBED with CLAY, yellowish gray to light gray, very fine to medium sand, subangular to subrounded, slightly to moderately weathered and some thin bed coal (<0.5 m.), cross bedding at depth 11.30-13.00, 16.80-17.00 m. low fracture incline about 20° and bedding plane about 80° - 90° to core axis, clay, light gray to gray soft to stiff.	C	1	110/150	16.67			
			C	2	20/150	0			
			C	3	110/150	25.33			
			C	4	120/140	53.57			
			C	5	120/130	40.77			
			C	6	70/150	33.33			
			C	7	20/50	0			
			C	8	40/150	0			
			C	9	80/80	0			
			C	10					

Fig.2.5-7 (1) Boring Log of Offshore Borehole

SIAM TONE CO., LTD.	BORING LOG	BORING NO. 12 SHEET 2 OF 2
PROJECT : SIHANOUKVILLE CCGT LOCATION : SIHANOUKVILLE CAMBODIA CLIENT : NEWJEC INC.	Coordinates : N 1,182,477.327 E 341,209.277 Sea bed Elevation: -3.00 msl. Max.DrillingDepth: 22.55 m	Water Level: - m Starting Date: 09/11/00 Finishing Date: 10/11/00

Depth (m)	Graphic Log	Soil Description	Sampling Method	Sample No.	Recovery (cm.)	RQD (%)	Plastic Limit / Natural Water Content / Liquid Limit (%)	Total Unit Weight (Ton/m³)	SPT N Blow Count (Blow/ft)
-3.00	msl.								
21		SANDSTONE INTERBED with CLAY, yellowish gray to light gray, very fine to medium sand, subangular to subrounded, slightly to moderately weathered and some thin bed coal (<0.5 m.), cross bedding at depth 11.30-13.00, 16.80-17.00 m. low fracture incline about 20° and bedding plane about 80° - 90° to core axis, clay, light gray to gray soft to stiff. 21.80 m.	C	10					
22			C	11					
23			C	12	150/150	61.33			
24									
25		SILTSTONE, light greenish gray thin bed, plane incline about 85° - 90° to core axis. 22.35 m.							
26									
27		SANDSTONE, yellowish gray, fine to coarse sand. 22.55 m.							
28									
29		END OF BOREHOLE AT DEPTH 22.55 M.							
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									

Fig.2.5-7 (2) Boring Log of Offshore Borehole

SIAM TONE CO., LTD.	BORING LOG	BORING NO. 13
		SHEET 1 OF 1
PROJECT : SIHANOUKVILLE CCGT	Coordinates : N 1,182,477.327	Water Level: - m
	E 341,077.277	
LOCATION : SIHANOUKVILLE CAMBODIA	Sea bed Elevation: -5.00 msl.	Starting Date: 05/11/00
CLIENT : NEWJEC INC.	Max.DrillingDepth: 17.50 m	Finishing Date: 08/11/00

Depth (m) -5.00 msl.	Soil Description	Sampling Method	Sample No.	Recovery (cm.)	RQD (%)
	SAND, greenish gray, very fine to coars sand, some shells subangular to subrounded, loose. (UD-1 : 2.00-3.00 m.)	SS	1	45	
		SS	2	45	
		SS	3	45	
		SS	4	30	
		SS	5	25	
		SS	6	30	
		SS	7	20	
		SS	8	35	
		SS	9	30	
		SS	10	35	
		SS	11	30	
		SS	12	21	
		SS	13	22	
		SS	14	30	
8.50 m.	SAND, light gray, fine to medium sand, well graded, subangular to subrounded dense.	SS	15	31	
		SS	16	20	
		SS	17	17	
		SS	18	20	
9.50 m.		SS	19	15	
	SANDSTONE, yellowish gray to light gray, very fine to fine sand, well sorted, slightly weathered.	C	1	75/150	35.33
11.95 m.		C	2	100/150	42
	SANDSTONE INTERBED with CLAY, light yellowish gray, fine sand, slightly weathered, clay, light gray, soft.	C	3	40/130	0
13.80 m.					
	SANDSTONE, light gray, very fine to fine sand, slightly weathered to fresh.	C	4	150/150	76
		C	5	70/70	71.43
16.70 m.	CLAY, gray, stiff. (Decomposed Mudstone)	C	6	125/150	59.33
17.35 m.	SANDSTONE, light gray, very fine to fine sand, slightly weathered to fresh.				
17.50 m.	END OF BOREHOLE AT DEPTH 17.50 M.				

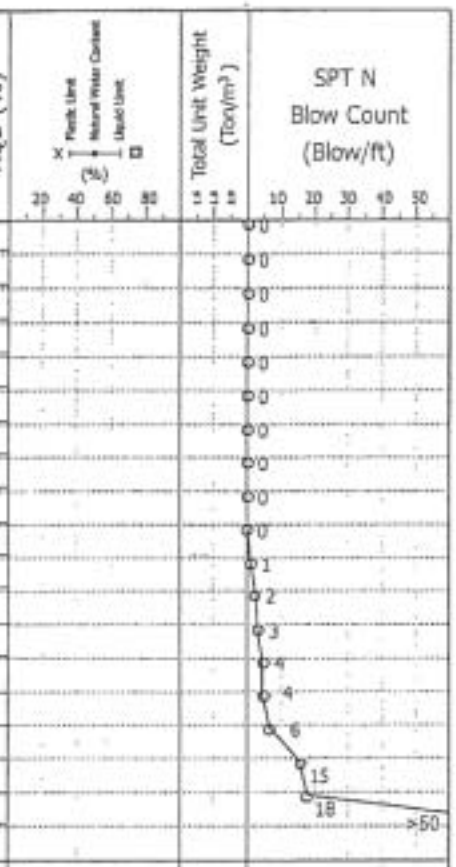


Fig.2.5-8 Boring Log of Offshore Borehole