



**MITIGATION OF GROUNDWATER CRISIS AND
LAND SUBSIDENCE IN BANGKOK PROJECT (MGL PROJECT)**

REPORT NO.1

**RECORDS OF GROUNDWATER MONITORING WELLS
IN BANGKOK AND ADJACENT PROVINCES**

DEPARTMENT OF MINERAL RESOURCES, MINISTRY OF INDUSTRY

BANGKOK

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2528

PREFACE

Following the Cabinet approval in March 1983 of the Remedial Measures for mitigation of the groundwater crisis and land subsidence in Bangkok, the Department of Mineral Resources set up in October 1985, a project entitled the same as that of the Measures : Mitigation of Groundwater Crisis and Land Subsidence in Bangkok Metropolitan Area (MGL Project). The Project expenditure has been allocated from the annual national budget for groundwater monitoring and management study in Bangkok and its vicinity.

MGL Project is endorsed and supported by the Bangkok Flood Control Sub-Committee which has direct responsibility for the land subsidence problem in Bangkok. The work plan and MGL Project's budget requested during the 6th National Economic and Social Development Plan (1987-1991) were included in the same package of Flood Protection of Bangkok and Vicinity which was directly approved by the Committee for Development Planning of Bangkok Metropolis and Vicinity chaired by Deputy Prime-Minister.

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INTRODUCTION

This report presents well technical records, well logs and chemical analyses of a groundwater monitoring network of the MGL Project in Bangkok and adjacent provinces. Data of 231 monitoring wells in 98 groundwater monitoring stations out of the total number of 258 wells in 103 stations are presented in this report. The remaining wells have not yet been constructed. However, exact locations have already been fixed which are shown on maps and detailed locations in tables.

Of the 98 groundwater monitoring stations, there are 59 complete stations in which each station consists of 3 monitoring wells penetrating three different aquifers : Phra Pradaeng, Nakhon Luang and Nonthaburi; 14 stations consists of 2 wells and 25 stations has only one well.

Location of 86 surface benchmarks constructed by the Department of Mineral Resources during 1990 and 1991 are also presented.

DESCRIPTION OF THE MGL PROJECT AREA

The MGL Project area comprises of 7 administrative provinces of Bangkok Metropolis, Nonthaburi, Samut Prakan, Pathum Thani, some parts of Samut Sakhon, Nakhon Pathom and Phra Nakhon Si Ayutthaya. The total area of 5,600 square kilometers covers all 6 sheets of the 1:50,000 topographic maps, series L7017, sheets 5037 II, 5036 I, 5036 II, 5137 III, 5136 IV, 5136 III and half of each sheet 5137 II, 5136 I, 5136 II.

5037 II	5137 III	5137 II
5036 I	5136 IV	5136 I
5036 II	5136 III	5136 II

The study area is in the southern part of the Lower Chao Phraya River Basin, and is bounded on the south by the Gulf of Thailand. It is located at the latitudes $13^{\circ} 30' 0''$ N to $14^{\circ} 13' 22.2''$ N, and longitudes $100^{\circ} 15' 0''$ E to $100^{\circ} 53' 30.6''$ E; its altitude ranges from one to six meters above mean sea level.

DESIGNED GROUNDWATER MONITORING NETWORK

A network of 86 groundwater monitoring stations (258 wells) was designed by the MGL Project basing on the critical zones in the Remedial Measures for Mitigation of Groundwater Crisis and Land Subsidence in Bangkok. It was planned to be completed in the Sixth National Economic and Social Development Plan (1987-1991) to accommodate 86 groundwater monitoring stations in the 5,600 sq km of the MGL Project area. However, construction of the remaining 27 wells was delayed until 1992 due to unforeseen problems of drilling contractors.

A complete groundwater monitoring station consists of three monitoring wells penetrating three different aquifers: Phra Pradaeng (100-meter depth zone), Nakhon Luang (150-meter depth zone), and Nonthaburi (200-meter depth zone). Thus, the total number of the monitoring wells over the project area is 258. The number is already included the 60 monitoring wells installed in 1978 and 1979 during the first phase of the joint study between the Department of Mineral Resources and the Asian Institute of Technology on the Groundwater Resources Development and Management Study in the Bangkok Area. The study was one of the three independent project of the comprehensive investigation program for groundwater and land subsidence in Bangkok conducted from 1978 through early 1982. Of these 60 wells only one complete station of the three monitoring wells at different depths was constructed. Six stations consisted of two wells and 45 stations had only one well.

Critical Zone 1 covering an area of 900 sq km was planned to have 30 monitoring stations (90 wells), one station for each 30 sq km while Critical Zone 2, with an area of 170 sq km, would have 5 monitoring stations (15 wells), one for 36 sq km. The area of 4,500 sq km of the Critical Zone 3 has been separated into two zones, 3A and 3B. Critical Zone 3A, with an area of 1,000 sq km, was drawn for the area around the outskirts of Bangkok and adjoining provinces where there was a heavy utilization of the groundwater and 21 stations (63 wells) were planned for, one for each 48 sq km. The Zone 3B covering an area of 3,500 sq km would have 10 stations (30 wells), one for 120 sq km (Figure 1).

Location of the 198 monitoring wells installed by the MGL Project was planned in accordance with the designed network. However, the previous incomplete 51 stations are located over the study area and some are out of the project area due to the study on boundary conditions. Another problem was an unavailable space for installing additional one or two monitoring wells in the same compound of the existing ones. However, the nearest sites of the planned location were chosen. Thus, after completion of installation of all 258 monitoring wells, there will be 103 groundwater monitoring stations. Of the 103 stations, there are 71 complete stations, 12 stations for 2 wells and 20 stations for one well. Table 1 is the 98 groundwater monitoring stations presented in this report and Figure 2 is a map showing locations of the total 103 groundwater monitoring stations. PD, NL and NB in the Table 1 are wells in Phra Pradaeng, Nakhon Luang and Nonthaburi aquifers.

Table 1. Groundwater Monitoring Stations in Bangkok and Its Vicinity

Station	PD	NL	NB	Station	PD	NL	NB	Station	PD	NL	NB	Station	PD	NL	NB
1	8	62	5	26	12	37	29	51	58	72	19	76		53	
2	5	11	8	27	11	43	18	52		26	21	77	41	56	51
3	38	3	9	28			16	53	16	27	31	78		57	50
4	7			29	14			54		28		79		58	54
5	55	5	4	30	15			55	24	29	22	80	44	59	55
6	3			31	75	13	75	56	20	35	23	81	43	60	48
7	6		1	32	13			57	29	30	39	82		61	56
8	2	55	49	33	40	16	46	58		31		83		63	57
9	4			34		15		59		41	24	84	45	64	58
10	1	67	53	35	68	12	69	60	18	32	25	85	48		59
11		4		36	72	14	73	61	17	34	27	86	65	66	67
12	39	50	41	37	67	76	12	62	19	33	26	87	49		
13	22	10	30	38	74	78	13	63	21	36	28	88	54	69	61
14		1		39	59	71	15	64	25	39	32	89	56		63
15			3	40	47	65	14	65	23	38	33	90	57	70	62
16	51	7	7	41	33	47	17	66	50	40	34	91	60	74	64
17	28		11	42		17		67	27	42	35	92	61	73	65
18		2		43	64	22		68	30	44	37	93	63		
19	42	8	6	44	53	68	20	69	32	45	38	94	66	75	68
20		9		45		19		70	31	46	40	95	69	77	71
21	46		2	46		20		71	34	48	42	96	70	79	70
22	26	6	36	47		25		72	35	49	43	97	71	80	72
23	10			48	52	24	60	73	37	51	44	98	73		74
24	62	18	66	49	76	23	52	74	36	52	45				
25	9			50		21		75		54	47				

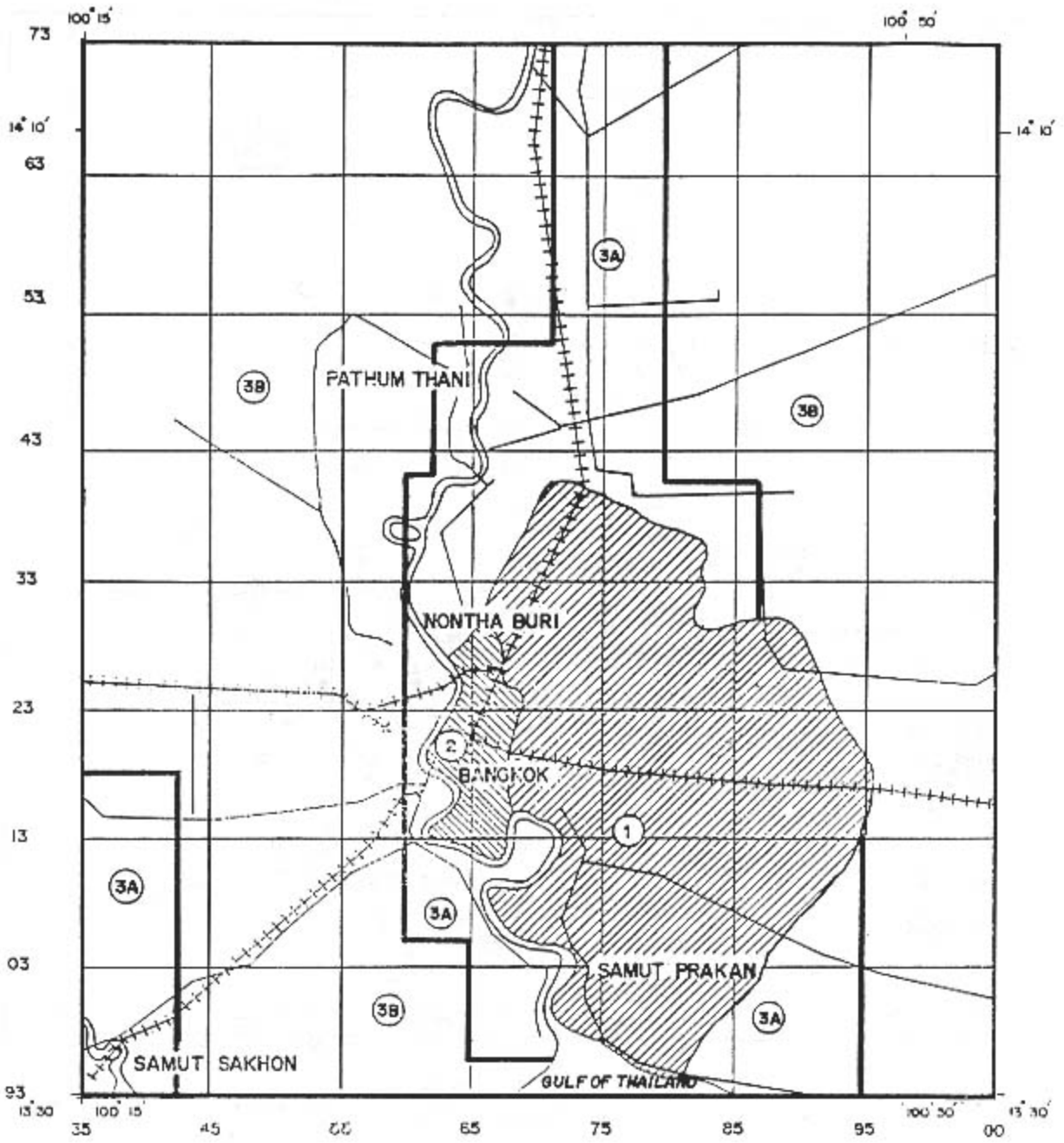


Figure 1. Critical Zones and Areas of Heavy Groundwater Development

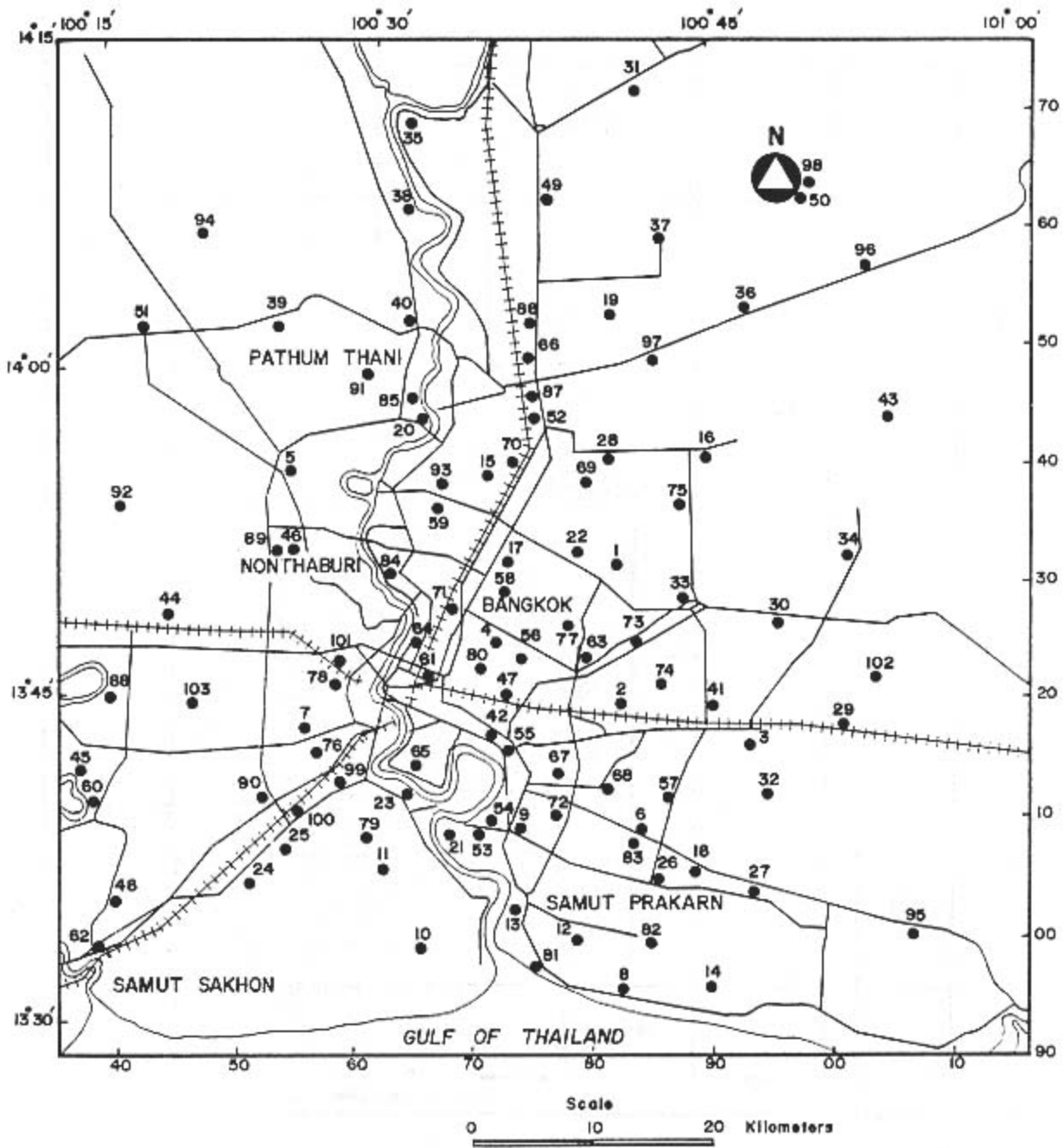


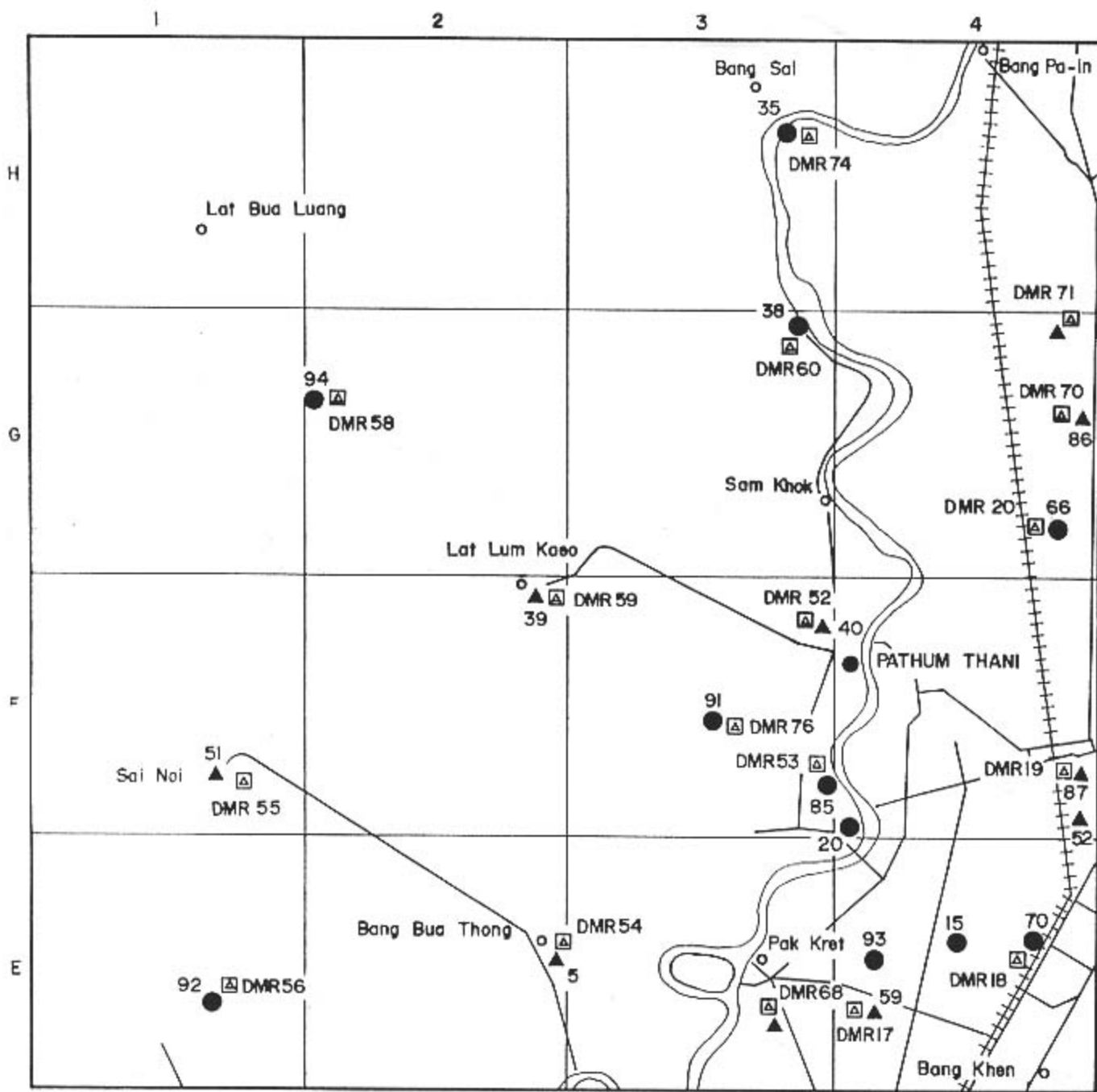
Figure 2. Location of Groundwater Monitoring Stations in Bangkok and Adjacent Provinces

WELL TECHNICAL RECORDS AND SURFACE BENCHMARKS

The monitoring well record consists mainly of well drilling data such as well depth, size and length of casing and slotted pipe and static water level in the well being measured right after well completion. Area code and co-ordinate presented including detailed location of the well help readers easily finding well stations on the maps. Figures 3, 4, 5, and 6 are maps showing locations in grid system of the groundwater monitoring stations and surface benchmarks, and listed in Table 2 while Table 3 presents records of the monitoring well construction.

In 1990, the MGL Project initiated land subsidence measurement activity with a cooperation of the Survey Division of DMR to conduct leveling survey for determination of soil consolidation and aquifer compaction at three layers. A network was designed basing on the existing groundwater monitoring stations. Sixty four (64) surface benchmarks were constructed within or near the groundwater monitoring stations, with an additional 24 installed in 1991. Top casing of the monitoring wells were modified to accommodate Invar staff. In fact, 2 set of first-order geodetic leveling instruments were purchased in 1989 and another 4 set were obtained in 1990. The precision level is 0.2 mm standard deviation for 1 km double-run.

The Survey Division classified leveling over the area into 4 loops. Due to financial constraint, none of the repeated survey has been conducted so far. Leveling results are, therefore, not shown in this report. Only locations of the surface benchmarks are presented in Table 4 and a sketch of designed construction of surface benchmarks modified from CI 1 of the National Environment Board is shown in Figure 7.



Index Map

EXPLANATION

35



Monitoring well and station number

39

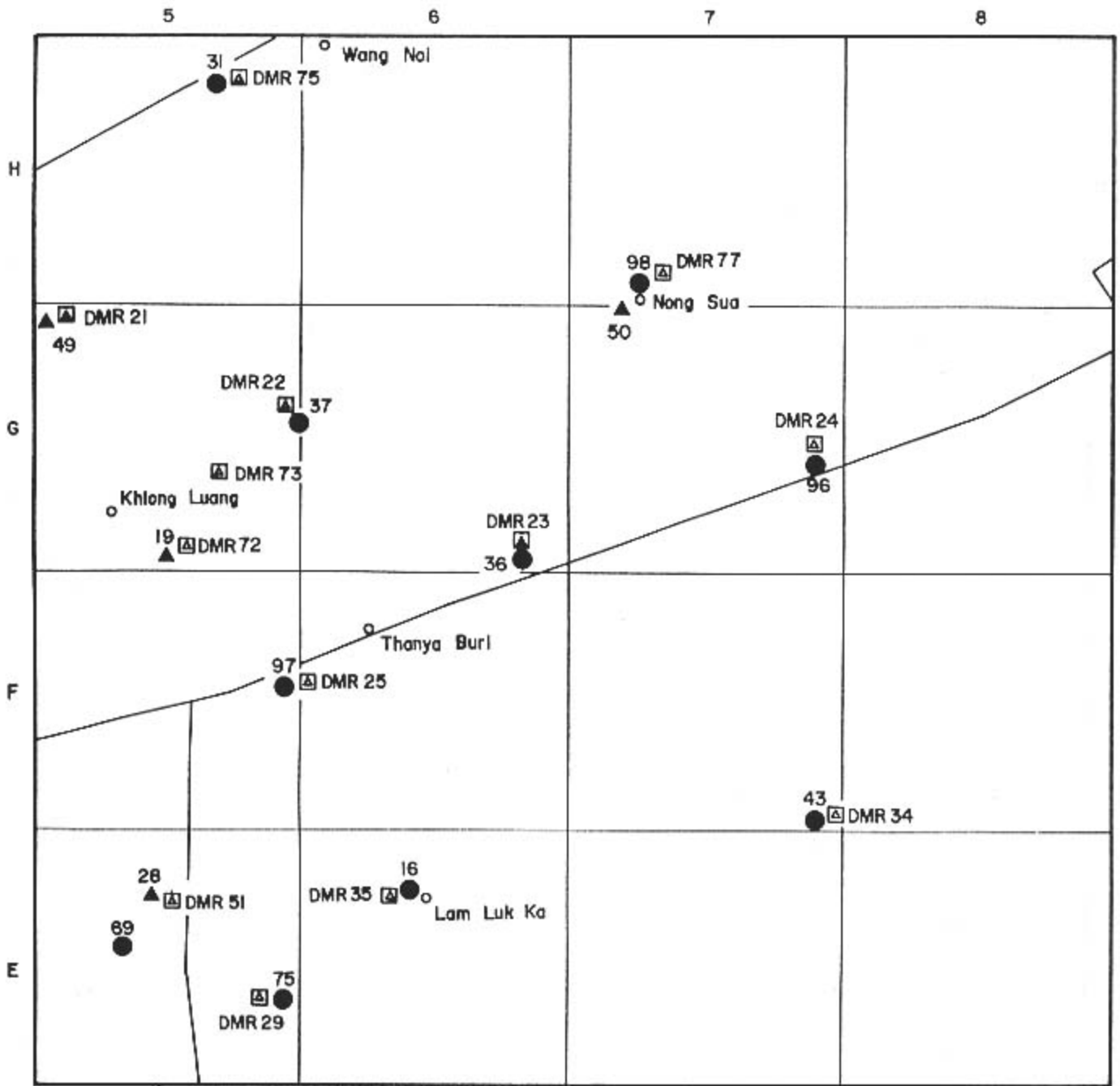


Monitoring well with continuous water level recorder, figure indicates station number



DMR 55 DMR surface benchmark

Figure 3. Location of Monitoring Wells in North-West of the Study Area



Index Map

EXPLANATION

36



Monitoring well and station number

19

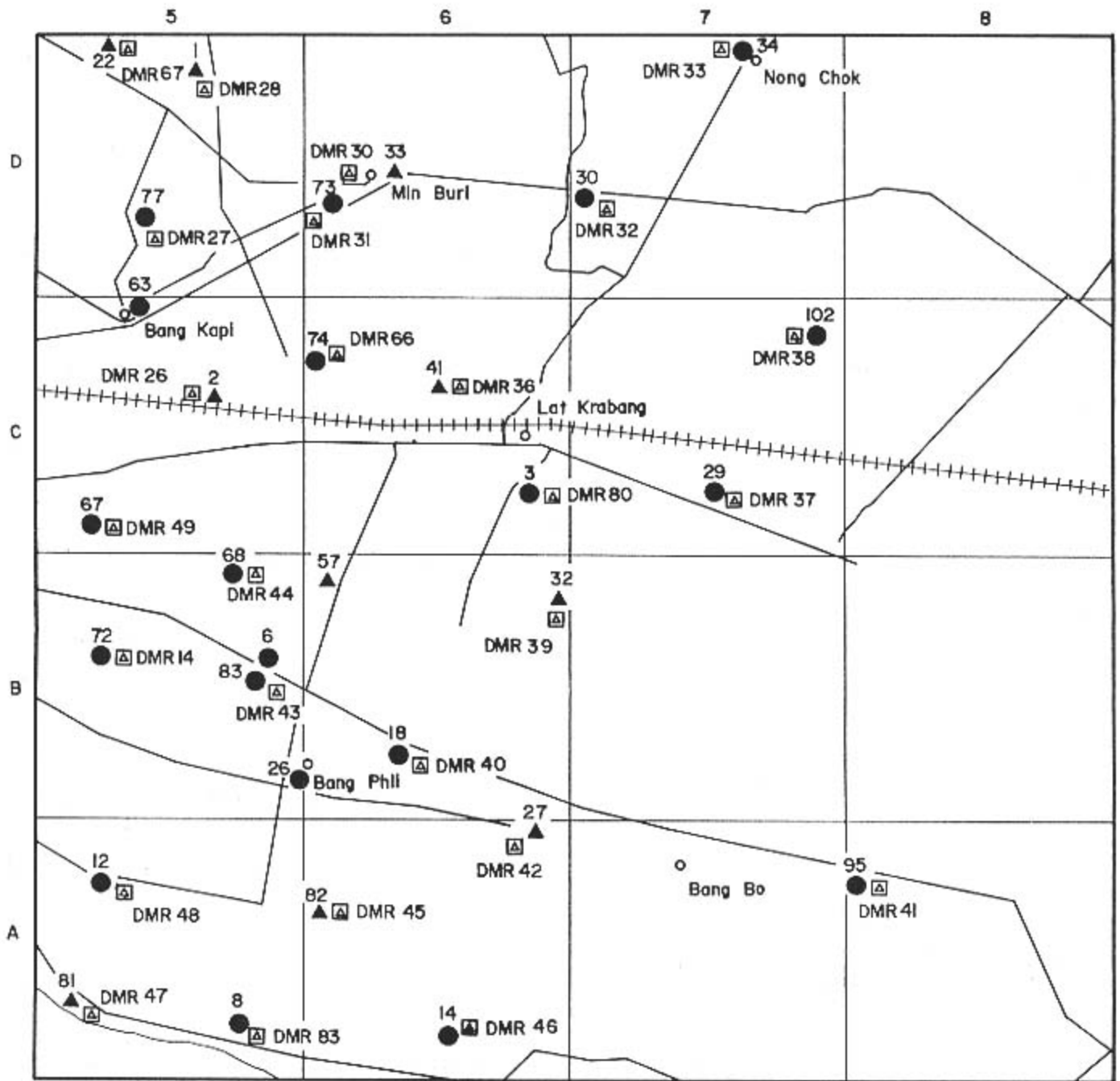


Monitoring well with continuous water level recorder, figure indicates station number



DMR 25 DMR surface benchmark

Figure 4. Location of Monitoring Wells in North-East of the Study Area



Index Map

EXPLANATION




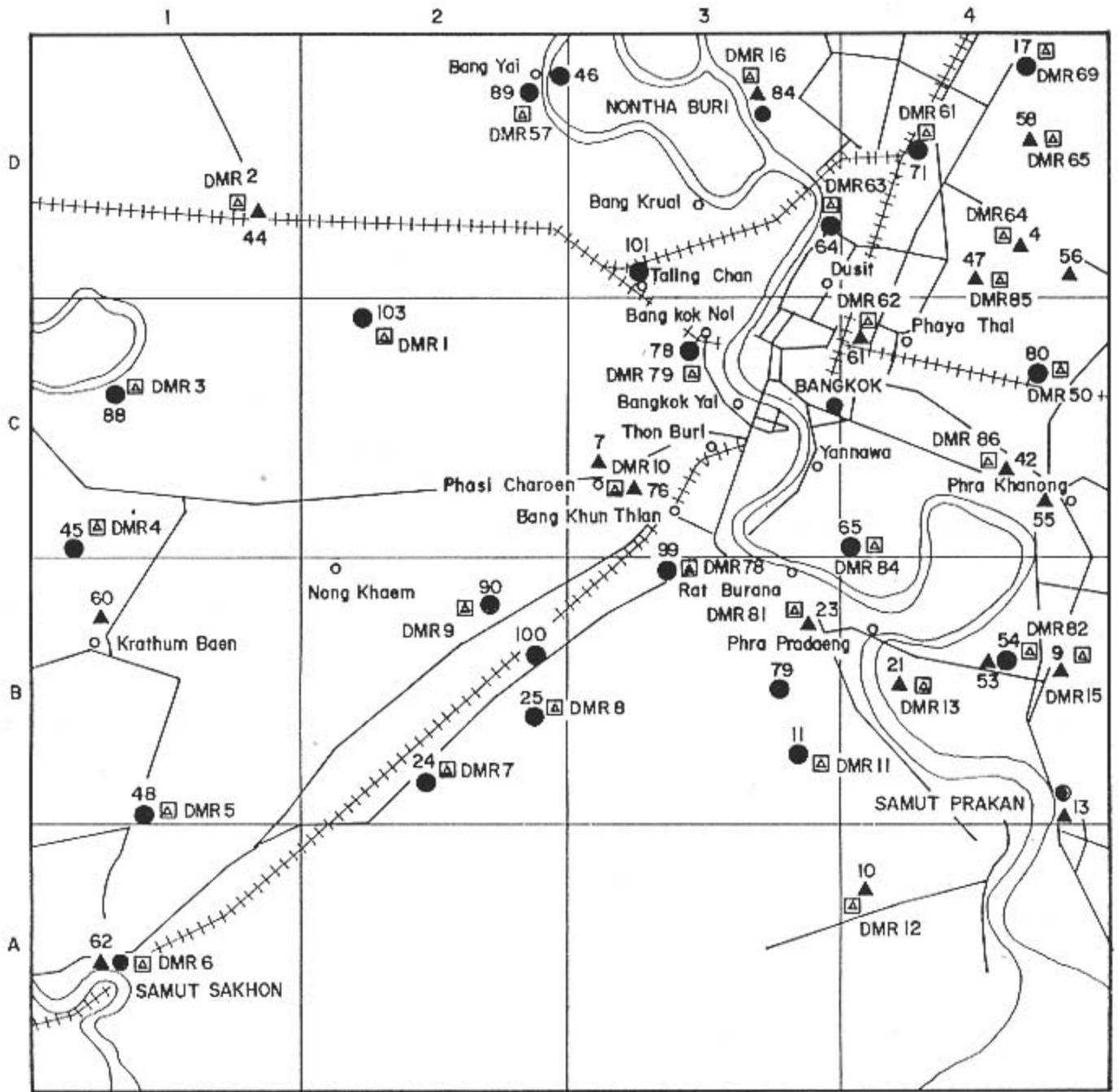
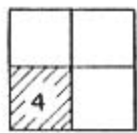
-  12 Monitoring well and station number
-  32 Monitoring well with continuous water level recorder, figure indicates station number
-  DMR 39 DMR surface benchmark

Figure 5. Location of Monitoring Wells in South-East of the Study Area



0 1 km

EXPLANATION



Index Map

90



Monitoring well and station number

10



Monitoring well with continuous water level recorder, figure indicates station number



DMR 25 DMR surface benchmark

Figure 6. Location of Monitoring Wells in South-West of the Study Area

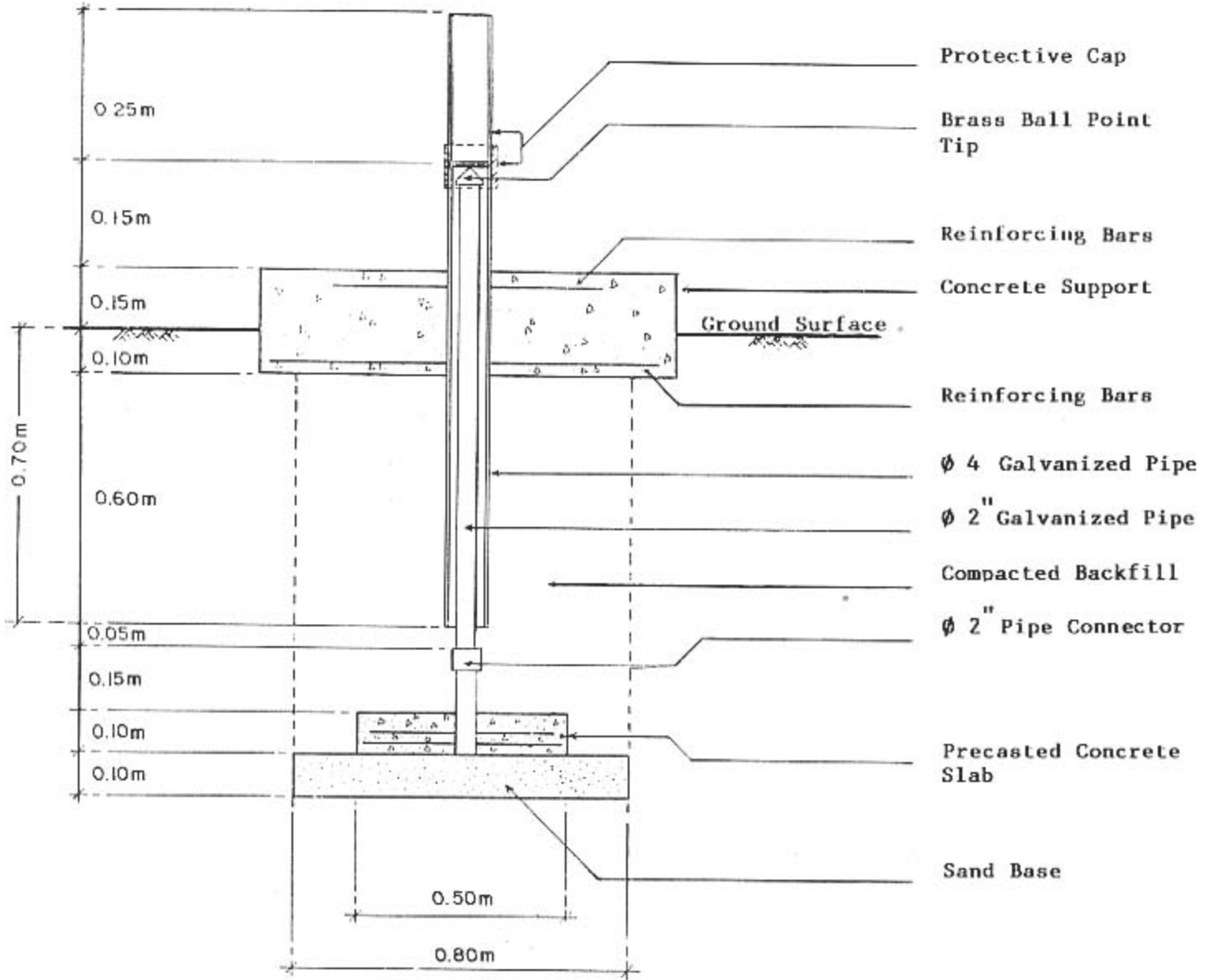


Figure 7. A Sketch of DMR Surface Benchmark

Table 2. List of Monitoring Well Stations and DMR Surface Benchmarks

Index Map	Area Code	Station No.	Monitoring Well No.			Benchmarks No.
			PD	NL	NB	
1	H-3	35	68	12	69	DMR 74
	G-2	94	66	75	68	DMR 58
	G-3	38	74	78	13	DMR 60
	G-4	-	C300	-	-	DMR 71
	G-4	86	65	66	67	DMR 70
	G-4	66	50	40	34	DMR 20
	F-1	51	58	72	19	DMR 55
	F-2	39	59	71	15	DMR 59
	F-3	40	47	65	14	DMR 52
	F-3	91	60	74	64	DMR 76
	F-3	85	48	-	59	DMR 53
	F-4	87	49	-	-	DMR 19
	F-4	52	-	26	21	-
	F-4	20	-	9	-	-
	E-1	92	61	73	65	DMR 56
	E-2	5	55	5	4	DMR 54
	E-3	-	TINBI	-	-	DMR 68
	E-4	70	31	46	40	DMR 18
	E-4	15	-	-	3	-
	E-4	93	63	-	-	-
2	E-4	59	-	41	24	DMR 17
	H-5	31	75	13	75	DMR 75
	H-7	98	73	-	74	DMR 77
	G-5	49	76	23	52	DMR 21
	G-5	37	67	76	12	DMR 22
	G-5	-	-	-	-	DMR 73
	G-5	19	42	8	6	DMR 72
	G-6	36	72	14	73	DMR 23
	G-7	50	-	21	-	-
	G-7	96	70	79	70	DMR 24
	F-5	97	71	80	72	DMR 25
	F-7	43	64	22	-	DMR 34
	E-5	28	-	-	16	DMR 51
	E-5	69	32	45	38	-
	E-5	75	84	54	47	DMR 29
	E-6	16	51	7	7	DMR 35

Table 2. (Continued)

Index Map	Area Code	Station No.	Monitoring Well No.			Benchmarks No.
			PD	NL	NB	
3	D-5	22	26	6	36	DMR 67
	D-5	1	8	62	5	DMR 28
	D-5	77	41	56	51	DMR 27
	D-6	33	40	16	46	DMR 30
	D-6	73	37	51	44	DMR 31
	D-7	34	85	15	82	DMR 33
	D-7	30	15	84	83	DMR 32
	C-5	63	21	36	28	-
	C-5	2	5	11	8	DMR 26
	C-5	67	27	42	35	DMR 49
	C-6	74	36	52	45	DMR 66
	C-6	41	33	47	17	DMR 36
	C-6	3	38	3	9	DMR 80
	C-7	102	86	85	84	DMR 38
	C-7	29	14	81	78	DMR 37
	B-5	68	30	44	37	DMR 44
	B-5	72	35	49	43	DMR 14
	B-5	6	3	-	-	-
	B-5	83	-	63	57	DMR 43
	B-5	26	12	37	29	-
	B-6	57	29	30	39	-
	B-6	32	13	-	-	DMR 39
	B-6	18	-	2	-	DMR 40
	A-5	12	39	50	41	DMR 48
	A-5	81	43	56	51	DMR 47
	A-5	8	2	55	49	DMR 83
	A-6	27	11	43	18	DMR 42
	A-6	82	79	61	56	DMR 45
	A-6	14	78	1	77	DMR 46
	A-8	95	69	77	71	DMR 41
	4	D-1	44	53	68	20
D-2		46	-	20	-	-
D-2		89	56	-	63	DMR 57
D-3		84	45	64	58	DMR 16
D-3		64	25	39	32	DMR 63
D-3		101	83	83	81	-

Table 2. (Continued)

Index Map	Area Code	Station No.	Monitoring Well No.			Benchmarks No.
			PD	NL	NB	
4	D-4	17	28	-	11	DMR 69
	D-4	58	-	31	-	DMR 65
	D-4	71	34	48	42	DMR 61
	D-4	4	7	-	-	DMR 64
	D-4	56	20	35	23	-
	D-4	47	-	25	-	DMR 85
	C-1	88	54	69	61	DMR 03
	C-1	45	-	19	-	DMR 04
	C-2	103	81	87	85	DMR 01
	C-3	78	82	57	50	DMR 79
	C-3	7	6	-	1	-
	C-3	76	-	53	-	DMR 10
	C-4	61	17	34	27	DMR 62
	C-4	80	44	59	55	DMR 50
	C-4	42	-	17	-	DMR 86
	C-4	55	24	29	22	-
	C-4	65	23	38	33	DMR 84
	B-1	60	18	32	25	-
	B-1	48	52	24	60	DMR 05
	B-2	90	57	70	62	DMR 09
	B-2	100	-	86	80	-
	B-2	25	9	-	-	DMR 08
	B-2	24	62	18	66	DMR 07
	B-3	99	80	82	79	DMR 78
	B-3	23	10	-	-	DMR 81
	B-3	79	-	58	54	-
	B-3	11	77	4	76	DMR 11
	B-4	54	-	28	-	DMR 82
	B-4	53	16	27	31	-
	B-4	9	4	-	-	DMR 15
	B-4	21	46	-	2	DMR 13
	B-4	13	22	10	30	-
A-1	62	19	33	26	DMR 06	
A-4	10	1	67	53	DMR 12	

Table 3. Record of Monitoring Well Construction in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Area code	Coordinates				Province District	Details	Dia. (In)	Interval (m)		
1 D5	PD8* 810318 5136 IV	Bangkok Min Buri	Wat Khu Bon (Ban Khu Bon), Khwaeng Bang Chan	4.24.78	104.00	99.65	4 3	0 - 72.00 72.00 - 90.00	3	90.00- 96.00	96.00- 99.65	25.01
	NL62 810318	Bangkok Min Buri	Wat Khu Bon (Ban Khu Bon), Khwaeng Bang Chan	4.24.89	166.15	163.00	4	0 -154.00	4	154.00 - 160.00	160.00 - 163.00	40.12
	NB5 810318	Bangkok Min Buri	Wat Khu Bon (Ban Khu Bon), Khwaeng Bang Chan	4.19.78	195.12	192.00	4 3	0 - 72.00 72.00 -183.00	3	183.00 - 189.00	189.00 - 192.00	43.72
2 C5	PD5* 801199 5136III	Bangkok Bang Kapi	Bangkok Golf Course, Khwaeng Hua Mak	5.29.78	117.00	112.50	4 3	0 - 72.00 72.00 - 91.50	3	91.50 - 97.50	97.50 - 112.50	23.58
	NL11* 801199	Bangkok Bang Kapi	Bangkok Golf Course, Khwaeng Hua Mak	4.29.78	150.00	138.00	4 3	0 - 72.00 72.00 -129.00	3	129.00 - 135.00	135.00 - 138.00	40.83
	NB8* 801199	Bangkok Bang Kapi	Bangkok Golf Course, Khwaeng Hua Mak	4.23.78	200.00	189.00	4 3	0 - 72.00 72.00 -180.00	3	180.00 - 186.00	186.00 - 189.00	37.75
3 C6	PD38 836156 5136III	Samut Prakan Bang Phli	Wat Hua Khu Wanaram (Ban Hua Khu), Tambon Sisa Chorakhe Noi	1.20.89	120.00	112.00	4	0 -103.00	4	103.00 - 109.00	109.00 - 112.00	44.62
	NL3 836156	Samut Prakan Bang Phli	Wat Hua Khu Wanaram (Ban Hua Khu), Tambon Sisa Chorakhe Noi	5.1.78	158.00	156.00	4 3	0 - 72.00 72.00 -144.00	3	144.00 - 150.00	150.00 - 156.00	36.04
	NB9 836156	Samut Prakan Bang Phli	Wat Hua Khu Wanaram (Ban Hua Khu), Tambon Sisa Chorakhe Noi	4.23.78	210.00	207.30	4 3	0 - 72.00 72.00 -186.30	3	186.30 - 192.30	192.30 - 207.30	25.99
4 D4	PD7* 721255 5136 IV	Bangkok Lat Phrao	Phibun Uppatham School, (Ban Lat Phrao), Mu Thi 9, Khwaeng Lat Phrao	4.27.78	105.15	104.15	4 3	0 - 72.00 72.00 - 92.15	3	92.15 - 98.15	98.15 - 104.15	28.62

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
5 E2	PD55 543385 5036 I	Nonthaburi Bang Bua Thong	Wat Lahan (Ban Sano Loi), Tambon Sano Loi	3.16.90	109.75	107.00	4	0 - 98.00	4	98.00 - 104.00	104.00 - 107.00	16.78
	NL5 543385	Nonthaburi Bang Bua Thong	Wat Lahan (Ban Sano Loi), Tambon Sano Loi	5.13.78	189.00	177.00	4 3	0 - 72.00 72.00 -168.00	3	168.00 - 174.00	174.00 - 177.00	23.11
	NB4* 543385	Nonthaburi Bang Bua Thong	Wat Lahan (Ban Sano Loi), Tambon Sano Loi	5.7.78	228.50	225.00	4 3	0 - 72.00 72.00 -213.00	3	213.00 - 219.00	219.00 - 225.00	20.74
6 B5	PD3 838092 5136III	Samut Prakan Bang Phli	Wat Khlong Salut (Ban Khlong Salut), Mu Thi 14, Tambon Bang Phli Yai	5.16.78	103.00	88.50	4 3	0 - 72.00 72.00 - 79.50	3	79.50 - 85.50	85.50 - 88.50	20.68
7 C3	PD6* 562168 5036 II	Bangkok Phasi Charoen	Wat Chan Pradittharam, Khwaeng Bang Duan	5.25.78	119.50	97.60	4 3	0 - 72.00 72.00 - 88.60	3	88.60 - 94.60	94.60 - 97.60	21.14
	NB1* 562168	Bangkok Phasi Charoen	Wat Chan Pradittharam, Khwaeng Bang Duan	5.28.78	228.60	204.60	4 3	0 - 72.00 72.00 -192.60	3	192.60 - 198.60	198.60 - 204.60	27.19
8 A5	PD2 825947 5136III	Samut Prakan Muang	Wat Tamru Sukhumvit-Khlong Dan Rd. Tambon Bang Pu Mai	6.4.78	102.00	100.65	4 3	0 - 72.00 72.00 - 87.15	3	87.15 - 93.15	93.15 - 100.65	15.46
	NL55 825947	Samut Prakan Muang	Wat Tamru Sukhumvit-Khlong Dan Rd. Tambon Bang Pu Mai	2.23.89	167.00	160.00	4	0 -151.00	4	151.00 - 157.00	157.00 - 160.00	27.76
	NB49 825947	Samut Prakan Muang	Wat Tamru Sukhumvit-Khlong Dan Rd. Tambon Bang Pu Mai	2.15.89	226.50	205.00	4	0 -196.00	4	196.00 - 202.00	202.00 - 205.00	27.56
9 B4	PD4* 733090 5136 III	Samut Prakan Muang	Wat Dan Samrong (Ban Samrong Nua), Tambon Samrong Nua	6.19.78	105.00	103.50	4 3	0 - 72.00 72.00 - 96.00	3	96.00 - 102.00	102.00 - 103.50	34.60

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
10 A4	PD1* 660007 5136 III	Samut Prakan Phra Samut Chedi	Wat Khu Sang (Rat Sattha Tham), Ban Khu Sang, Mu Thi 9, Tambon Nai Khlong Bang Pla Kot	6.25.78	107.00	105.20	4 3	0 - 72.00 72.00 - 97.70	3	97.70 - 103.70	103.70 - 105.20	24.82
	NL67* 660007	Samut Prakan Phra Samut Chedi	Wat Khu Sang (Rat Sattha Tham), Ban Khu Sang, Mu Thi 9, Tambon Nai Khlong Bang Pla Kot	6.24.89	140.24	139.00	4	0 -130.00	4	130.00 - 136.00	136.00 - 139.00	26.23
	NB53* 660007	Samut Prakan Phra Samut Chedi	Wat Khu Sang (Rat Sattha Tham), Ban Khu Sang, Mu Thi 9, Tambon Nai Khlong Bang Pla Kot	4.23.89	189.00	187.00	4	0 -178.00	4	178.00 - 184.00	184.00 - 187.00	35.93
11 B3	PD77 636058 5136 III	Bangkok Rat Burana	Wat Thung Khru (Thung Na Rat Sattha Tham), Ban Thung Khru, Mu Thi 5, Khwaeng Thung Khru									
	NL4 636058	Bangkok Rat Burana	Wat Thung Khru (Thung Na Rat Sattha Tham), Ban Thung Khru, Mu Thi 5, Khwaeng Thung Khru	6.30.78	160.00	158.60	4 3	0 - 72.00 72.00 -149.60	3	149.60 - 155.60	155.60 - 161.60	27.40
	NB76 636058	Bangkok Rat Burana	Wat Thung Khru (Thung Na Rat Sattha Tham), Ban Thung Khru, Mu Thi 5, Khwaeng Thung Khru									
12 A5	PD39 777007 5136 III	Samut Prakan Muang	Wat Phraek Sa (Ban Phraek Sa), Tambon Phraek Sa	2.1.89	135.00	135.00	4	0 -126.00	4	126.00 - 132.00	132.00 - 135.00	32.26
	NL50 777007	Samut Prakan Muang	Wat Phraek Sa (Ban Phraek Sa), Tambon Phraek Sa	1.6.89	177.00	177.00	4	0 -168.00	4	168.00 - 174.00	174.00 - 177.00	28.36
	NB10 777007	Samut Prakan Muang	Wat Phraek Sa (Ban Phraek Sa), Tambon Phraek Sa	7.5.78	208.00	204.35	4 3	0 - 72.00 72.00 -195.35	3	195.35 - 201.35	201.35 - 204.35	23.05
	NB41 777007	Samut Prakan Muang	Wat Phraek Sa (Ban Phraek Sa), Tambon Phraek Sa	12.17.88	232.00	221.00	4	0 -212.00	4	212.00 - 218.00	218.00 - 221.00	25.76

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (In)	Interval (m)	Dia. (In)	Interval (m)		
13 B4	PD22* 731039 5136 III	Samut Prakan Muang	Samut Prakan Provincial Hall, Tambon Pak Nam	12.26.87	143.00	142.00	4	0 -133.00	4	133.00 - 139.00	139.00 - 142.00	31.66
	NL10* 731039	Samut Prakan Muang	Samut Prakan Provincial Hall, Tambon Pak Nam	7.6.78	183.00	179.90	4 3	0 - 72.00 72.00 -170.90	3	170.90 - 176.90	176.90 - 179.90	26.60
	NB30* 731039	Samut Prakan Muang	Samut Prakan Provincial Hall, Tambon Pak Nam	12.20.87	235.00	217.00	4	0 -208.00	4	208.00 - 214.00	214.00 - 217.00	27.01
14 A6	PD78 906949 5136 II	Samut Prakan Muang	Bang Pla Aeronautical Transmission Station, Tambon Bang Pu Mai									
	NL1 906949	Samut Prakan Muang	Bang Pla Aeronautical Transmission Station, Tambon Bang Pu Mai	7.9.78	156.00	152.00	4 3	0 - 72.00 72.00 -140.00	3	140.00 - 146.00	146.00 - 152.00	19.14
	NB77 906949	Samut Prakan Muang	Bang Pla Aeronautical Transmission Station, Tambon Bang Pu Mai									
15 E4	NB3 697386 5136 IV	Bangkok Don Muang	Wat Weru Wanaram (Ban Si Kan), Mu Thi 1, Khwaeng Thung Song Hong	7.25.78	213.50	213.50	4 3	0 - 72.00 72.00 -204.50	3	204.50 - 210.50	210.50 - 213.50	32.20
16 E6	PD51 891407 5136 I	Pathum Thani Lam Luk Ka	Wat Nang Khan Chantri, Tambon Bung Kham Phroi	6.4.89	118.00	118.00	4	0 -109.00	4	109.00 - 115.00	115.00 - 118.00	32.48
	NL7 891407	Pathum Thani Lam Luk Ka	Wat Nang Khan Chantri, Tambon Bung Kham Phroi	9.5.78	158.60	152.50	4 3	0 - 72.00 72.00 -140.50	3	145.50 - 146.50	146.50 - 152.50	30.44
	NB7 891407	Pathum Thani Lam Luk Ka	Wat Nang Khan Chantri, Tambon Bung Kham Phroi	7.27.78	200.00	180.00	4 3	0 - 72.00 72.00 -171.00	3	171.00 - 177.00	177.00 - 180.00	31.57

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
17 D4	PD28 719319 5136 IV	Bangkok Bang Khen	Wat Bang Bua, Khwaeng Anusawari	12.6.88	118.59	103.00	4	0 - 94.00	4	94.00 - 100.00	100.00 - 103.00	23.87
	NB11 719319	Bangkok Bang Khen	Wat Bang Bua, Khwaeng Anusawari	7.27.78	195.20	195.20	4 3	0 - 72.00 72.00 -186.20	3	186.20 - 192.20	192.20 - 195.20	43.00
18 B6	NL2 888056 5136 III	Samut Prakan Bang Phli	Phun Charoen Withaya- khom School, Tambon Bang Chalong	7.30.78	153.00	148.90	4 3	0 - 72.00 72.00 -140.00	3	140.00 - 146.00	146.00 - 148.90	31.25
19 G5	PD42* 778520 5137 III	Pathum Thani Khlong Luang	Wat Kla Cha-um, Tambon Khlong Song	3.28.89	117.07	116.00	4	0 -107.00	4	107.00 - 113.00	113.00 - 116.00	28.22
	NL8* 778520	Pathum Thani Khlong Luang	Wat Kla Cha-um, Tambon Khlong Song	8.17.78	176.90	139.80	4 3	0 - 72.00 72.00 -122.30	3	122.30 - 128.30	128.30 - 139.80	25.25
	NB6* 778520	Pathum Thani Khlong Luang	Wat Kla Cha-um, Tambon Khlong Song	7.31.78	215.00	195.20	4 3	0 - 72.00 72.00 -186.20	3	186.20 - 192.20	192.20 - 195.20	29.90
20 F4	NL9 657433 5136 IV	Pathum Thani Muang	Wat Pa Klang Thung, Tambon Bang Khayaeng	8.2.78	157.38	143.35	4 3	0 - 72.00 72.00 -134.35	3	134.35 - 140.35	140.35 - 143.35	21.08
21 B4	PD46 673085 5136 III	Samut Prakan Phra Pradaeng	Wat Bang Ya Phraek (Ban Bang Ya Phraek), Mu Thi 16, Tambon Bang Ya Phraek	5.9.89	119.80	116.00	4	0 -107.00	4	107.00 - 113.00	113.00 - 116.00	31.04
	NB2* 673085	Samut Prakan Phra Pradaeng	Wat Bang Ya Phraek (Ban Bang Ya Phraek), Mu Thi 16, Tambon Bang Ya Phraek	8.14.78	196.00	189.00	4 3	0 - 72.00 72.00 -177.00	3	177.00 - 183.00	183.00 - 189.00	27.41
22 D5	PD26 777328 5136 IV	Bangkok Bang Khen	Wat Siri Phong Thamnimit (Ban Khlong Bua), Mu Thi 6, Khwaeng Tha Raeng	11.23.88	121.50	100.00	4	0 - 91.00	4	91.00 - 97.00	97.00 - 100.00	23.04

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
22 D5	NL6* 777328	Bangkok Bang Khen	Wat Siri Phong Thamnimit (Ban Khlong Bua), Mu Thi 6, Khwaeng Tha Raeng	8.15.78	151.00	137.20	4 3	0 - 72.00 72.00 -125.20	3	125.20 - 131.20	131.20 - 137.20	35.75
	NB36 777328	Bangkok Bang Khen	Wat Siri Phong Thamnimit (Ban Khlong Bua), Mu Thi 6, Khwaeng Tha Raeng	11.14.88	232.90	229.00	4	0 -220.00	4	220.00 - 226.00	226.00 - 229.00	37.82
23 B3	PD10* 643112 5136 III	Samut Prakan Phra Pradaeng	Wat Ruak, Tambon Bang Phuang	6.6.79	99.00	97.60	4 2.5	0 - 72.00 72.00 - 82.60	2.5	82.60 - 88.60	88.60 - 97.60	30.24
24 B2	PD62 498048 5036 II	Bangkok Bang Khun Thian	Wat Phromma Rangsi, Khwaeng Samae Dam	5.21.90	110.36	104.00	4	0 - 95.00	4	95.00 - 101.00	101.00 - 104.00	23.08
	NL18 498048	Bangkok Bang Khun Thian	Wat Phromma Rangsi, Khwaeng Samae Dam	6.27.79	173.70	173.70	4 2.5	0 - 72.00 72.00 -164.70	2.5	164.70 - 170.70	170.70 - 173.70	21.53
	NB66 498048	Bangkok Bang Khun Thian	Wat Phromma Rangsi, Khwaeng Samae Dam	5.15.90	238.00	217.00	4	0 -208.00	4	208.00 - 214.00	214.00 - 217.00	30.64
25 B2	PD9 539072 5036 II	Bangkok Bang Khun Thian	Wat Sakae Ngam (Ban Sakae Ngam), Mu Thi 1, Khwaeng Samae Dam	7.12.79	115.00	112.80	4 2.5	0 - 72.00 72.00 -103.80	2.5	103.80 - 109.80	109.80 - 112.80	21.84
26 B5	PD12 847047 5036 III	Samut Prakan Bang Phli	Wat Bang Phli Yai Klang (Ban Bang Phli Yai), Tambon Bang Phli Yai	7.18.79	121.95	115.85	4 2.5	0 - 72.00 72.00 -106.85	2.5	106.85 - 112.85	112.85 - 115.85	30.07
	NL37 847047	Samut Prakan Bang Phli	Wat Bang Phli Yai Klang (Ban Bang Phli Yai), Tambon Bang Phli Yai	12.18.87	164.00	163.00	4	0 -154.00	4	154.00 - 160.00	160.00 - 163.00	32.75
	NB29 847047	Samut Prakan Bang Phli	Wat Bang Phli Yai Klang (Ban Bang Phli Yai), Tambon Bang Phli Yai	12.6.87	229.00	211.00	4	0 -202.00	4	202.00 - 208.00	208.00 - 211.00	38.31

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
27 A6	PD11* 938029 5136 II	Samut Prakan Bang Phli	Wat Mongkhon Nimit (Ban Khlong Samrong), Mu Thi 1, Tambon Bang Sao Thong	7.22.79	118.59	82.35	4	0 - 70.35	2.5	70.35 - 76.35	76.35 - 82.35	16.29
	NL43* 938029	Samut Prakan Bang Phli	Wat Mongkhon Nimit (Ban Khlong Samrong), Mu Thi 1, Tambon Bang Sao Thong	11.22.88	171.00	160.00	4	0 -151.00	4	151.00 - 157.00	157.00 - 160.00	36.76
	NB18* 938029	Samut Prakan Bang Phli	Wat Mongkhon Nimit (Ban Khlong Samrong), Mu Thi 1, Tambon Bang Sao Thong	8.8.79	201.30	189.00	4 2.5	0 - 72.00 72.00 -180.00	2.5	180.00 - 186.00	186.00 - 189.00	23.22
28 E5	NB16* 796405 5136 IV	Pathum Thani Lam Luk Ka	Wat Sai Mai, Tambon Khu Khot	8.10.79	236.68	204.00	4 2.5	0 - 72.00 72.00 -195.00	2.5	195.00 - 201.00	201.00 - 204.00	36.86
29 C7	PD14 005150 5136 II	Bangkok Lat Krabang	Wat Ratcha Kosa, Khwaeng Khum Thong	8.20.79	109.80	109.00	4 2.5	0 - 72.00 72.00 - 91.00	2.5	91.00 - 97.00	97.00 - 109.00	20.27
	NL81 005150	Bangkok Lat Krabang	Wat Ratcha Kosa, Khwaeng Khum Thong									
	NB78 005150	Bangkok Lat Krabang	Wat Ratcha Kosa, Khwaeng Khum Thong									
30 D7	PD15 956260 5136 I	Bangkok Min Buri	Wat Mai Lam Nok Khwaek (Ban Lam Nok Khwaek), Mu Thi 10, Khwaeng Saen Saep	8.25.79	103.65	88.41	4 2.5	0 - 72.00 72.00 - 79.41	2.5	79.41 - 85.41	85.41 - 88.41	15.30
	NL84 956260	Bangkok Min Buri	Wat Mai Lam Nok Khwaek (Ban Lam Nok Khwaek), Mu Thi 10, Khwaeng Saen Saep	11.12.91	156.00	153.50	4	0 -144.00	4	144.00 - 150.00	150.00 - 153.50	
	NB83 956260	Bangkok Min Buri	Wat Mai Lam Nok Khwaek (Ban Lam Nok Khwaek), Mu Thi 10, Khwaeng Saen Saep	11.3.91	228.00	213.50	4	0 -204.00	4	204.00 - 210.00	210.00 - 213.50	

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
31 H5	PD75 819714 5137 III	Phra Nakhon Si Ayutthaya Wang Noi	Wat Lat Sai (Ban Lat Sai), Mu Thi 5, Tambon Lam Sai	3.5.91	122.00	119.00	4	0 - 110.00	4	110.00 - 116.00	116.00 - 119.00	14.37
	NL13 819714	Phra Nakhon Si Ayutthaya Wang Noi	Wat Lat Sai (Ban Lat Sai), Mu Thi 5, Tambon Lam Sai	8.25.79	170.00	168.00	4 2.5	0 - 72.00 72.00 - 155.00	2.5	155.00 - 161.00	161.00 - 168.00	2.40
	NB75 819714	Phra Nakhon Si Ayutthaya Wang Noi	Wat Lat Sai (Ban Lat Sai), Mu Thi 5, Tambon Lam Sai	3.5.91	231.70	229.00	4	0 - 220.00	4	220.00 - 226.00	226.00 - 229.00	51.70
32 B6	PD13* 950116 5136 II	Samut Prakan Bang Phli	Wat Si Wari Noi, Mu Thi 6, Tambon Sisa Chorakhe Yai	8.26.79	119.00	119.00	4 2.5	0 - 72.00 72.00 - 110.00	2.5	110.00 - 116.00	116.00 - 119.00	39.71
33 D6	PD40* 887280 5136 IV	Bangkok Min Buri	Wat Saen Suk (Ban Saen Suk), Mu Thi 2, Khwaeng Min Buri	2.11.89	85.00	85.00	4	0 - 67.00	4	67.00 - 73.00	73.00 - 85.00	21.62
	NL16* 887280	Bangkok Min Buri	Wat Saen Suk (Ban Saen Suk), Mu Thi 2, Khwaeng Min Buri	9.1.79	144.51	143.29	4 2.5	0 - 72.00 72.00 - 131.29	2.5	131.29 - 137.29	137.29 - 143.29	40.92
	NB46* 887280	Bangkok Min Buri	Wat Saen Suk (Ban Saen Suk), Mu Thi 2, Khwaeng Min Buri	1.23.89	232.00	217.00	4	0 - 208.00	4	208.00 - 214.00	214.00 - 217.00	42.32
34 D7	PD85 014323 5136 I	Bangkok Nong Chok	Wat Phakdi Noraset (Ban Krathum Rai), Khwaeng Krathum Rai	10.14.91	90.00	85.00	4	0 - 70.00	4	70.00 - 76.00	76.00 - 85.00	
	NL15 014323	Bangkok Nong Chok	Wat Phakdi Noraset (Ban Krathum Rai), Khwaeng Krathum Rai	9.2.79	155.00	155.00	4 2.5	0 - 72.00 72.00 - 146.00	2.5	146.00 - 152.00	152.00 - 155.00	12.06
	82 NB28 014323	Bangkok Nong Chok	Wat Phakdi Noraset (Ban Krathum Rai), Khwaeng Krathum Rai	10.8.91	230.00	213.00	4	0 - 204.00	4	204.00 - 210.00	210.00 - 213.00	

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
35 H3	PD68 652696 5137 III	Phra Nakhon Si Ayutthaya Bang Sai	Wat Bot Somphon Chai, Mu Thi 1, Tambon Ratcha Khram	9.22.90	102.10	98.00	4	0 - 89.00	4	89.00 - 95.00	95.00 - 98.00	14.84
	NL12 652696	Phra Nakhon Si Ayutthaya Bang Sai	Wat Bot Somphon Chai, Mu Thi 1, Tambon Ratcha Khram	9.6.79	162.00	152.00	4 2.5	0 - 72.00 72.00 -143.00	2.5	143.00 - 149.00	149.00 - 152.00	10.97
	NB69 652696	Phra Nakhon Si Ayutthaya Bang Sai	Wat Bot Somphon Chai, Mu Thi 1, Tambon Ratcha Khram	9.17.90	231.70	226.00	4	0 -217.00	4	217.00 - 223.00	223.00 - 226.00	19.59
36 G6	PD72 941529 5137 II	Pathum Thani Thanya Buri	Wat Aiyikaram (Ban Lam Phak Kut Khlong Paet), Mu Thi 4, Tambon Lam Phak Kut	1.31.91	114.60	113.40	4	0 -104.00	4	104.00 - 110.00	110.00 - 113.00	12.14
	NL14 941529	Pathum Thani Thanya Buri	Wat Aiyikaram (Ban Lam Phak Kut Khlong Paet), Mu Thi 4, Tambon Lam Phak Kut	9.23.79	161.65	140.30	4 2.5	0 - 72.00 72.00 -128.30	2.5	128.30 - 134.30	134.30 - 140.30	2.35
	NB73 941529	Pathum Thani Thanya Buri	Wat Aiyikaram (Ban Lam Phak Kut Khlong Paet), Mu Thi 4, Tambon Lam Phak Kut	1.24.91	230.48	220.08	4	0 -211.00	4	211.00 - 217.00	217.00 - 220.00	0.29
37 G5	PD67 872606 5137 III	Pathum Thani Khlong Luang	Wat Phalahan, Mu Thi 9, Tambon Khlong Hok	9.20.90	107.30	101.00	4	0 - 89.00	4	89.00 - 95.00	95.00 - 98.00	16.10
	NL76 872606	Pathum Thani Khlong Luang	Wat Phalahan, Mu Thi 9, Tambon Khlong Hok	10.14.90	176.80	156.00	4	0 -147.00	4	147.00 - 153.00	153.00 - 156.00	9.77
	NB12 872606	Pathum Thani Khlong Luang	Wat Phalahan, Mu Thi 9, Tambon Khlong Hok	10.8.79	202.90	195.00	4 2.5	0 - 72.00 72.00 -180.00	2.5	180.00 - 186.00	186.00 - 195.00	4.20
38 G3	PD74 639624 5137 III	Phra Nakhon Si Ayutthaya Bang Sai	Wat Pa Kha, Mu Thi 1, Tambon Khok Chang	3.4.90	120.40	118.00	4	0 -109.00	4	109.00 - 115.00	115.00 - 118.00	15.90

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
38 G3	NL78 639624	Phra Nakhon Si Ayutthaya Bang Sai	Wat Pa Kha Mu Thi 1, Tambon Khok Chang	10.2.90	225.60	173.00	4	0 -164.00	4	170.00 -	173.00 -	16.62
	NB13 639624	Phra Nakhon Si Ayutthaya Bang Sai	Wat Pa Kha (Ban Khok Chang), Mu Thi 1, Tambon Khok Chang	10.10.79	204.26	192.00	4 2.5 2.5	0 - 72.00 72.00 -177.00 180.00-186.00	2.5 2.5	177.00 - 180.00 186.00 189.00 -	189.00 - 192.00	14.74
39 F2	PD59 538523 5037 II	Pathum Thani Lat Lum Kaeo	Wat Bua Kaeo Keson (Ban Rahaeng), Mu Thi 4, Tambon Rahaeng	4.21.90	100.00	93.00	4	0 - 84.00	4	84.00 - 90.00	90.00 - 93.00	11.52
	NL 71 538523	Pathum Thani Lat Lum Kaeo	Wat Bua Kaeo Keson (Ban Rahaeng), Mu Thi 4, Tambon Rahaeng	4.7.90	175.00	148.00	4	0 -139.00	4	139.00 - 145.00	145.00 - 148.00	17.17
	NB15* 538523	Pathum Thani Lat Lum Kaeo	Wat Bua Kaeo Keson (Ban Rahaeng), Mu Thi 4, Tambon Rahaeng	10.12.79	201.82	201.00	4 2.5	0 - 72.00 72.00 -180.00	2.5	180.00 - 186.00	186.00 - 201.00	16.77
40 F3	PD47* 659503 5137 III	Pathum Thani Muang	Pathum Thani Provincial Hall, Tambon Bang Prok	5.19.89	107.03	107.00	4	0 - 98.00	4	98.00 - 104.00	104.00 - 107.00	17.45
	NL65* 659503	Pathum Thani Muang	Pathum Thani Provincial Hall, Tambon Bang Prok	5.15.89	152.65	152.00	4	0 -143.00	4	143.00 - 149.00	149.00 - 152.00	20.98
	NB14* 659503	Pathum Thani Muang	Pathum Thani Provincial Hall, Tambon Bang Prok	10.14.79	207.31	207.31	4 2.5	0 - 72.00 72.00 -198.31	2.5	198.31 - 204.31	204.31 - 207.31	24.20
41 C6	PD33* 901198 5136 II	Bangkok Lat Krabang	Wat Bamrung Run (Ban Khlong Sam), Khwaeng Khlong Sam Prawet	12.20.88	113.00	113.00	4	0 -104.00	4	104.00 - 110.00	110.00 - 113.00	47.06
	NL47* 901198	Bangkok Lat Krabang	Wat Bamrung Run (Ban Khlong Sam), Khwaeng Khlong Sam Prawet	12.14.88	170.00	156.00	4	0 -147.00	4	147.00 - 153.00	153.00 - 156.00	47.86

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
41 C6	NB17* 901198	Bangkok Lat Krabang	Wat Bamrung Run (Ban Khlong Sam), Khwaeng Khlong Sam Prawet	10.15.79	210.00	198.17	4 2.5	0 - 72.00 72.00 -183.00	2.5	183.00 - 189.00	189.00 - 198.17	29.21
42 C4	NL17* 710174 5136 III	Bangkok Khlong Toei	Bangkok Planetorium, Khwaeng Phra Khanong	11.10.79	154.60	146.30	4 2.5	0 - 72.00 72.00 -134.30	2.5	134.30 - 140.30	140.30 - 146.30	44.59
43 F7	PD64 042435 5136 I	Pathum Thani Lam Luk Ka	Wat Phut Udom, Mu Thi 9, Tambon Phut Udom	8.15.90	121.30	106.00	4	0 - 97.00	4	97.00 - 103.00	103.00 - 106.00	8.17
	NL22 042435	Pathum Thani Lam Luk Ka	Wat Phut Udom, Mu Thi 9, Tambon Phut Udom	12.28.79	150.00	128.00	4 2.5	0 - 72.00 72.00 -116.00	2.5	116.00 - 122.00	122.00 - 128.00	6.28
44 D1	PD53 434265 5036 I	Nakhon Pathom Nakhon Chaisi	Wat Salawan School, Mu Thi 5, Tambon Sala Ya	1.25.90	104.80	101.00	4	0 - 92.00	4	92.00 - 98.00	98.00 - 101.00	21.00
	NL68 434265	Nakhon Pathom Nakhon Chaisi	Wat Salawan School, Mu Thi 5, Tambon Sala Ya	1.18.90	168.90	166.00	4	0 -152.00	4	152.00 - 158.00	158.00 - 161.00	25.04
	NB20* 434265	Nakhon Pathom Nakhon Chaisi	Wat Salawan School, Mu Thi 5, Tambon Sala Ya	1.11.80	207.31	201.21	4 2.5	0 - 72.00 72.00 -189.21	2.5	189.21 - 195.21	195.21 - 201.21	21.06
45 C1	NL19 367131 5036 II	Nakhon Pathom San Phran	Wat Om Yai (Ban Khlong Om Yai), Mu Thi 5, Tambon Om Yai	1.15.80	150.00	132.00	4 2.5	0 - 72.00 72.00 -123.00	2.5	123.00 - 129.00	129.00 - 132.00	24.27
46 D2	NL20 549316 5036 I	Nonthaburi Bang Yui	Wat Sakae (Ban Bang Sakae), Tambon Bang Len	1.20.80	158.53	152.00	4 2.5	0 - 72.00 72.00 -131.00	2.5	131.00 - 137.00	137.00 - 152.00	20.76
47 D4	NL25* 701235 5136 IV	Bangkok Huai Khwang	Wat Kurnathi Ruttharam, Khwaeng Huai Khwang	1.20.80	170.73	164.00	4 2.5	0 - 72.00 72.00 -152.00	2.5	152.00 - 158.00	158.00 - 164.00	51.76

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
48 B1	PD52 395034 5036 II	Samut Sakhon Muang	Wat Bang Ping (Ban Bang Ping), Mu Thi 2 Tambon Na Di	6.17.89	87.80	86.00	4	0 - 77.00	4	77.00 - 83.00	83.00 - 86.00	17.54
	NL24 395034	Samut Sakhon Muang	Wat Bang Ping (Ban Bang Ping), Mu Thi 2 Tambon Na Di	1.25.80 <i>25/54</i> <i>1980</i> <i>24/9</i>	152.43	146.00	4 2.5	0 - 72.00 72.00 -134.00	2.5	134.00 - 140.00	140.00 - 146.00	26.24
	NB60 395034	Samut Sakhon Muang	Wat Bang Ping (Ban Bang Ping), Mu Thi 2 Tambon Na Di	6.14.89 <i>24/9</i> <i>15/4</i>	231.70	230.00	4	0 -221.00	4	221.00 - 227.00	227.00 - 230.00	39.21
49 G5	PD76 751622 5137 III	Pathum Thani Khlung Luang	Wat Khun Ying Som Chin (Ban Chiang Rak Noi), Tambon Khlung Nung	3.20.91	115.85	85.00	4	0 - 71.00	4	71.00 - 77.00	77.00 - 85.00	7.50
	NL23* 751622	Pathum Thani Khlung Luang	Wat Khun Ying Som Chin (Ban Chiang Rak Noi), Tambon Khlung Nung	1.29.80	156.00	156.00	4 2.5	0 - 72.00 72.00 -144.00	2.5	144.00 - 150.00	150.00 - 156.00	17.42
	NB52* 751622	Pathum Thani Khlung Luang	Wat Khun Ying Som Chin (Ban Chiang Rak Noi), Tambon Khlung Nung	3.17.89	233.00	201.00	4	0 -192.00	4	192.00 - 198.00	198.00 - 201.00	23.08
50 G7	NL21* 971628 5137 II	Pathum Thani Nong Sua	Wat Bung Ba Praphasawat (Ban Khlung Sip), Tambon Bung Ba	2.6.80	176.82	137.00	4 2.5	0 - 72.00 72.00 -125.00	2.5	125.00 - 131.00	131.00 - 137.00	2.31
51 F1	PD58 419454 5036 I	Nonthaburi Sai Noi	Wat Sai Yai, Tambon Sai Noi	4.5.90	150.00	103.00	4	0 - 94.00	4	94.00 - 100.00	100.00 - 103.00	12.16
	NL72 419454	Nonthaburi Sai Noi	Wat Sai Yai, Tambon Sai Noi	4.11.90	176.00	158.00	4	0 -138.00	4	149.00 - 155.00	155.00 - 185.00	18.01
	NB19* 419454	Nonthaburi Sai Noi	Wat Sai Yai, Tambon Sai Noi	3.3.80	213.41	213.00	4 2.5	0 - 72.00 72.00 -204.00	2.5	204.00 - 210.00	210.00 - 213.00	18.32

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (In)	Interval (m)	Dia. (In)	Interval (m)		
52 F4	NL26* 743488 5136 IV	Pathum Thani Lam Luk Ka	Wat Prayun Thammaram, Mu Thi 4, Soi Wat Prayun, Phahonlayothin Road, Tambon Khu Khot	8.22.86	165.00	154.00	4	0 -145.00	4	145.00 - 151.00	151.00 - 154.00	27.50
	NB21* 743488	Pathum Thani Lam Luk Ka	Wat Prayun Thammaram, Mu Thi 4, Soi Wat Prayun, Phahonlayothin Road, Tambon Khu Khot	8.13.86	210.00	199.00	4	0 -187.00	4	187.00 - 193.00	193.00 - 199.00	32.50
53 B4	PD16* 704091 5136III	Samut Prakan Phra Pradaeng	Pig Quarantine Station, Pu Chao Saming Phrai Road, Tambon Samrong Tai	9.6.86	110.00	104.00	4	0 - 92.00	4	92.00 - 98.00	98.00 - 104.00	38.08
	NL27* 704091	Samut Prakan Phra Pradaeng	Pig Quarantine Station, Pu Chao Saming Phrai Road, Tambon Samrong Tai	8.31.86	166.00	148.00	4	0 -138.00	4	138.00 - 144.00	144.00 - 148.00	35.40
	NB31 704091	Samut Prakan Phra Pradaeng	Pig Quarantine station, Pu Chao Saming Phrai Road, Tambon Samrong Tai	12.22.87	228.00	209.00	4	0 -200.00	4	200.00 - 206.00	206.00 - 209.00	30.91
54 B4	NL28 714097 5136III	Samut Prakan Phra Pradaeng	Wat Mahawong, Soi Wat Mahawong, Pu Chao Saming Phrai Road, Tambon Samrong Tai	9.2.86	165.00	146.00	4	0 -134.00	4	134.00 - 140.00	140.00 - 146.00	34.94
55 C4	PD24* 728158 5136III	Bangkok Phra Khanong	Phra Khanong Flood Control Station, Soi Kasem Suwan (77), Sukhumvit Road	2.10.88	123.00	112.00	4	0 -103.00	4	103.00 - 109.00	109.00 - 112.00	30.51
	NL29* 728158	Bangkok Phra Khanong	Phra Khanong Flood Control Station, Soi Kasem Suwan (77), Sukhumvit Road	9.28.86	166.00	164.00	4	0 -155.00	4	155.00 - 161.00	161.00 - 164.00	40.40
	NB22* 728158	Bangkok Phra Khanong	Phra Khanong Flood Control Station, Soi Kasem Suwan (77), Sukhumvit Road	9.17.86	227.00	224.00	4	0 -215.00	4	215.00 - 221.00	221.00 - 224.00	32.45
56 D4	PD20 733240 5136 IV	Bangkok Lat Phrao	Wat Samakhi Tham, Soi Keinut (64), Lat Phrao Road	12.5.87	103.39	99.00	4	0 - 90.00	4	90.00 - 96.00	96.00 - 99.00	25.90

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
	NL35 733240	Bangkok Lat Phrao	Wat Samakkhi Tham, Soi Ketnut (64), Lat Phrao Road	11.28.87	168.00	168.00	4	0 -159.00	4	159.00 - 165.00	165.00 - 168.00	42.80
	NB23* 733240	Bangkok Lat Phrao	Wat Samakkhi Tham, Soi Ketnut (64), Lat Phrao Road	9.30.86	222.00	221.00	4	0 -212.00	4	212.00 - 218.00	218.00 - 221.00	37.78
57 B6	PD29* 861122 5136III	Samut Prakan Bang Phli	Wat King Kaeo, Soi Wat King Kaeo, Bangna-Trat Highway, Tambon Racha Thewa	12.8.88	115.00	113.00	4	0 -104.00	4	104.00 - 110.00	110.00 - 113.00	43.66
	NL30* 861122	Samut Prakan Bang Phli	Wat King Kaeo, Soi Wat King Kaeo, Bangna-Trat Highway, Tambon Racha Thewa	10.8.86	179.00	152.00	4	0 -143.00	4	143.00 - 149.00	149.00 - 152.00	38.70
	NB39* 861122	Samut Prakan Bang Phli	Wat King Kaeo, Soi Wat King Kaeo, Bangna-Trat Highway, Tambon Racha Thewa	12.3.88	230.00	198.00	4	0 -189.00	4	189.00 - 195.00	195.00 - 198.00	34.86
58 D4	NL31* 722289 5136 IV	Bangkok Lat Phrao	Wat Srikamalawat, Mu Thi 14, Soi Chok Chai 4, Lat Phrao Road, Khwaeng Lat Phrao	10.9.86	169.00	169.00	4	0 -160.00	4	160.00 - 166.00	166.00 - 169.00	39.16
59 E4	NL41* 668368 5136 IV	Nonthaburi Pak Kret	Khlong Klua School, Mu Thi 4, Chaeng Watthana Road, Tambon Pak Kret	3.5.88	155.00	153.00	4	0 -144.00	4	144.00 - 150.00	150.00 - 153.00	21.12
	NB24* 668368	Nonthaburi Pak Kret	Khlong Klua School, Mu Thi 4, Chaeng Watthana Road, Tambon Pak Kret	10.20.86	227.00	205.00	4	0 -196.00	4	196.00 - 202.00	202.00 - 205.00	28.20
60 B1	PD18* 375110 5036 II	Samut Sakhon Krathum Baen	Wat Nang Sao, Mu Thi 7, Soi Wat Nang Sao, Setthakit Road, Tambon Tha Mai	11.11.86	110.00	92.00	4	0 - 83.00	4	83.00 - 89.00	89.00 - 92.00	22.22
	NL32* 375110	Samut Sakhon Krathum Baen	Wat Nang Sao, Mu Thi 7, Soi Wat Nang Sao, Setthakit Road, Tambon Tha Mai	11.5.86	164.00	156.00	4	0 -147.00	4	147.00 - 153.00	153.00 - 156.00	37.20

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
60 B1	NB25* 375110	Samut Sakhon Krathum Baen	Wat Nang Sao, Mu Thi 7, Soi Wat Nang Sao, Setthakit Road	10.24.86	219.00	219.00	4	0 -210.00	4	210.00 - 216.00	216.00 - 219.00	26.00
61 C4	PD17* 564218 5136 IV	Bangkok Ratchathewi	Department of Mineral Resources, Rama VI Road, Khwaeng Thung Phayathai	11.3.86	110.00	93.00	4	0 - 84.00	4	84.00 - 90.00	90.00 - 93.00	22.99
	NL34* 564218	Bangkok Ratchathewi	Department of Mineral Resources, Rama VI Road, Khwaeng Thung Phayathai	11.24.86	166.00	140.00	4	0 -131.00	4	131.00 - 137.00	137.00 - 140.00	26.24
	NB27* 564218	Bangkok Ratchathewi	Department of Mineral Resources, Rama VI Road, Khwaeng Thung Phayathai	11.14.86	226.50	199.00	4	0 -190.00	4	190.00 - 196.00	196.00 - 199.00	30.08
62 A1	PD19* 383978 5036 II	Samut Sakhon Muang	Samut Sakhon Provincial Hall, Chetsadang Road, Tambon Mahachai	11.26.86	110.00	102.00	4	0 - 93.00	4	93.00 - 99.0	99.00 - 102.00	20.82
	NL33* 383978	Samut Sakhon Muang	Samut Sakhon Provincial Hall, Chetsadang Road, Tambon Mahachai	11.21.86	169.00	169.00	4	0 -160.00	4	160.00 - 166.00	166.00 - 169.00	51.30
	NB26* 383978	Samut Sakhon Muang	Samut Sakhon Provincial Hall, Chetsadang Road, Tambon Mahachai	11.10.86	226.00	211.00	4	0 -202.00	4	202.00 - 208.00	208.00 - 211.00	34.70
63 D5	PD21 788227 5136 IV	Bangkok Bang Kapi	National Housing Authority, Flat No.13, Khwaeng Khlong Chan	12.6.87	112.85	112.00	4	0 -103.00	4	103.00 - 109.00	109.00 - 112.00	25.30
	NL36 788227	Bangkok Bang Kapi	National Housing Authority, Flat No.13, Khwaeng Khlong Chan	11.30.87	166.00	166.00	4	0 -157.00	4	157.00 - 163.00	163.00 - 166.00	45.51
	NB28 788227	Bangkok Bang Kapi	National Housing Authority, Flat No. 13, Khwaeng Khlong Chan	11.21.87	237.90	220.00	4	0 -211.00	4	211.00 - 217.00	217.00 - 220.00	43.10

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (In)	Interval (m)	Dia. (In)	Interval (m)		
64 D3	PD25 645257 5136 IV	Bangkok Dusit	Wat Kaeo Fa Chula Mani, Thahan Road, Khwaeng Thanon Nakhon Chaisi	2.13.88	110.00	103.00	4	0 - 94.00	4	94.00 - 100.00	100.00 - 103.00	22.35
	NL39 645257	Bangkok Dusit	Wat Kaeo Fa Chula Mani, Thahan Road, Khwaeng Thanon Nakhon Chaisi	1.31.88	178.00	177.00	4	0 -168.00	4	168.00 - 174.00	174.00 - 177.00	28.77
	NB32 645257	Bangkok Dusit	Wat Kaeo Fa Chula Mani, Thahan Raod, Khwaeng Thanon Nakhon Chaisi	1.20.88	236.00	201.00	4	0 -192.00	4	192.00 - 198.00	198.00 - 201.00	30.85
65 C4	PD23 659148 5136III	Bangkok Yan Nawa	Mahamek Electrical Substation, Sathu Pradit Road, Khwaeng Chong Nonsi	2.4.88	124.00	123.00	4	0 -114.00	4	114.00 - 120.00	120.00 - 123.00	29.41
	NL38 659148	Bangkok Yan Nawa	Mahamek Electrical Substation, Sathu Pradit Road, Khwaeng Chong Nonsi	1.27.88	160.00	159.00	4	0 -150.00	4	150.00 - 156.00	156.00 - 159.00	28.02
	NB33 659148	Bangkok Yan Nawa	Mahamek Electrical Substation, Sathu Pradit Road, Khwaeng Chong Nonsi	1.20.88	234.00	220.00	4	0 -211.00	4	211.00 - 217.00	217.00 - 220.00	30.65
66 F4	PD50 742491 5137III	Pathum Thani Khlong Luang	Bun Khum Rat Bamrung School, Soi Bun Khum, Tambon Khlong Nung	5.31.89	101.00	101.00	4	0 - 92.00	4	92.00 - 98.00	98.00 - 101.00	34.37
	NL40 742491	Pathum Thani Khlong Luang	Bun Khum Rat Bamrung School, Soi Bun Khum, Tambon Khlong Nung	2.28.88	144.00	142.00	4	0 -133.00	4	133.00 - 139.00	139.00 - 142.00	27.10
	NB34 742491	Pathum Thani Khlong Luang	Bun Khum Rat Bamrung School, Soi Bun Khum, Tambon Khlong Nung	2.24.88	231.00	192.00	4	0 -183.00	4	183.00 - 189.00	189.00 - 192.00	39.95
67 CS	PD27 772139 5136III	Bangkok Phra Khunong	Wat Wachiratham Sathit, Soi Sukhumvit 101/1, Sukhumvit Road, Khwaeng Bang Chak	12.5.88	123.83	87.00	4	0 - 78.00	4	78.00 - 84.00	84.00 - 87.00	27.00

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (In)	Interval (m)	Dia. (In)	Interval (m)		
67 C5	NL42 772139	Bangkok Phra Khanong	Wat Wachiratham Sathit, Soi Sukhumvit 101/1, Sukhumvit Road, Khwaeng Bang Chak	11.25.88	181.00	181.00	4	0 -172.00	4	172.00 - 178.00	178.00 - 181.00	39.01
	NB35 772139	Bangkok Phra Khanong	Wat Wachiratham Sathit, Soi Sukhumvit 101/1, Sukhumvit Road, Khwaeng Bang Chak	11.12.88	234.24	217.00	4	0 -208.00	4	208.00 - 214.00	214.00 - 217.00	34.64
68 B5	PD30 822126 5136III	Bangkok Phra Khanong	Wat Thung Lan Na, Mu Thi 11, Khwaeng Dokmai	12.14.88	91.00	86.00	4	0 - 77.00	4	77.00 - 83.00	83.00 - 86.00	23.99
	NL44 822126	Bangkok Phra Khanong	Wat Thung Lan Na, Mu Thi 11, Khwaeng Dokmai	12.9.88	170.00	135.00	4	0 -126.00	4	126.00 - 132.00	132.00 - 135.00	45.14
	NB37 822126	Bangkok Phra Khanong	Wat Thung Lan Na, Mu Thi 11, Khwaeng Dokmai	11.17.88	232.00	218.00	4	0 -209.00	4	209.00 - 215.00	215.00 - 218.00	26.28
69 E5	PD32 768379 5136 IV	Bangkok Bang Khen	Wat Ko Suwannaram, Khwaeng Khlong Thanon	12.18.88	116.00	111.00	4	0 -102.00	4	102.00 - 108.00	108.00 - 111.00	25.91
	NL45 768379	Bangkok Bang Khen	Wat Ko Suwannaram, Khwaeng Khlong Thanon	12.6.88	177.00	172.00	4	0 -163.00	4	163.00 - 169.00	169.00 - 172.00	35.32
	NB38 768379	Bangkok Bang Khen	Wat Ko Suwannaram, Khwaeng Khlong Thanon	11.29.88	228.00	198.00	4	0 -189.00	4	189.00 - 195.00	195.00 - 198.00	36.76
70 E4	PD31 733394 5136 IV	Bangkok Don Muang	Wat Don Muang, Khwaeng Talat Bang Khen	12.18.88	114.00	110.00	4	0 -101.00	4	101.00 - 107.00	107.00 - 110.00	23.20
	NL46 733394 5136 VI	Bangkok Don Muang	Wat Don Muang, Khwaeng Talat Bang Khen	12.12.88	160.00	159.00	4	0 -150.00	4	150.00 - 156.00	156.00 - 159.00	31.91

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (In)	Interval (m)	Dia. (In)	Interval (m)		
70 E4	NB40 733394	Bangkok Don Muang	Wat Don Muang, Khwaeng Talat Bang Khen	12.6.88	231.40	199.00	4	0 -190.00	4	190.00 - 196.00	196.00 - 199.00	35.86
71 D4	PD34 686271 5136 IV	Bangkok Chatuchak	Chatuchak Park, Kamphaeng Phet Road, Khwaeng Lat Yao	1.9.89	128.35	122.00	4	0 -113.00	4	113.00 - 119.00	119.00 - 122.00	24.11
	NL48 686271	Bangkok Chatuchak	Chatuchak Park, Kamphaeng Phet Road, Khwaeng Lat Yao	1.3.89	173.00	169.00	4	0 -160.00	4	160.00 - 166.00	166.00 - 169.00	35.65
	NB42 686271	Bangkok Chatuchak	Chatuchak Park, Kamphaeng Phet Road, Khwaeng Lat Yao	12.26.88	226.00	223.00	4	0 -214.00	4	214.00 - 220.00	220.00 - 223.00	34.14
72 B5	PD35 767097 5136III	Bangkok Phra Khanong	Wat Phong Phloi, Khwaeng Bang Na	1.11.89	117.00	114.00	4	0 -105.00	4	105.00 - 111.00	111.00 - 114.00	32.18
	NL49 767097	Bangkok Phra Khanong	Wat Phong Phloi, Khwaeng Bang Na	1.6.89	153.00	153.00	4	0 -144.00	4	144.00 - 150.00	150.00 - 153.00	39.20
	NB43 767097 5136III	Bangkok Phra Khanong	Wat Phong Phloi, Khwaeng Bang Na	12.28.88	228.00	221.00	4	0 -212.00	4	212.00 - 218.00	218.00 - 221.00	30.80
73 D6	PD37 852262 5136 IV	Bangkok Min Buri	Wat Bamphen Nua, Khwaeng Bang Chan	1.13.89	96.64	94.00	4	0 - 85.00	4	85.00 - 91.00	91.00 - 94.00	22.42
	NL51 852262	Bangkok Min Buri	Wat Bamphen Nua, Khwaeng Bang Chan	1.6.89	159.00	158.00	4	0 -149.00	4	149.00 - 155.00	155.00 - 158.00	50.23
	NB44 852262	Bangkok Min Buri	Wat Bamphen Nua, Khwaeng Bang Chan	12.29.88	233.50	226.00	4	0 -217.00	4	217.00 - 223.00	223.00 - 226.00	40.17

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
74 C6	PD36 838212 5136 IV	Bangkok Prawet	Wat Lat Bua Khao (Ratchayotha), Khwaeng Prawet	1.12.89	100.60	99.00	4	0 - 90.00	4	90.00 - 96.00	96.00 - 99.00	21.76
	NL52 838212	Bangkok Prawet	Wat Lat Bua Khao (Ratchayotha), Khwaeng Prawet	1.8.89	161.50	160.00	4	0 -151.00	4	151.00 - 157.00	157.00 - 160.00	48.43
	NB45 838212	Bangkok Prawet	Wat Lat Bua Khao (Ratchayotha), Khwaeng Prawet	1.4.89	233.50	204.00	4	0 -195.00	4	195.00 - 201.00	201.00 - 204.00	42.16
75 E5	PD84 858354 5136 IV	Bangkok Min Buri	Wat Paen Thong Sopharam, Mu Thi 13, Tambon Sam Wa Tawan Tok									
	NL54 858354	Bangkok Min Buri	Wat Paen Thong Sopharam, Mu Thi 13, Tambon Sam Wa Tawan Tok	2.1.89	161.00	161.00	4	0 -152.00	4	152.00 - 158.00	158.00 - 161.00	40.51
	NB47 858354	Bangkok Min Buri	Wat Paen Thong Sopharam, Mu Thi 13, Tambon Sam Wa Tawan Tok	1.25.89	231.00	231.00	4 4	0 -200.00 203.00-225.00	4 4	200.00 - 203.00 225.00 - 228.00	228.00 - 231.00	37.91
76 C3	NL53* 576162 5036 II	Bangkok Phasi Charoen	Wat Kho Non, Phaithanakan Road, Khwaeng Bang Wa	1.29.89	178.00	156.00	4	0 -147.00	4	147.00 - 153.00	153.00 - 156.00	
77 D5	PD41 794259 5136 IV	Bangkok Bung Kum	Praphat Witthaya School, Sukhapiban Road, Khwaeng Khlong Kum	2.28.89	89.00	88.00	4	0 - 79.00	4	79.00 - 85.00	85.00 - 88.00	23.04
	NL56 794259	Bangkok Bung Kum	Praphat Witthaya School, Sukhapiban Road, Khwaeng Khlong Kum	2.25.89	170.73	170.00	4	0 -161.00	4	161.00 - 167.00	167.00 - 170.00	48.62
	NB51 794259	Bangkok Bung Kum	Praphat Witthaya School, Sukhapiban Road, Khwaeng Khlong Kum	2.21.89	232.00	223.00	4	0 -214.00	4	214.00 - 220.00	220.00 - 223.00	44.54

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
78 C3	PD82 576214 5036 I	Bangkok Bangkok Noi	Wat Chaiyathit, Soi Charan Sanitwong 37, Khwaeng Bang Khun Si									
	NL57 576214	Bangkok Bangkok Noi	Wat Chaiyathit, Soi Charan Sanitwong 37, Khwaeng Bang Khun Si	3.1.89	168.29	165.00	4	0 -156.00	4	156.00 - 162.00	162.00 - 165.00	25.92
	NB50 576214	Bangkok Bangkok Noi	Wat Chaiyathit, Soi Charan Sanitwong 37, Khwaeng Bang Khun Si	2.23.89	232.93	229.00	4	0 -220.00	4	220.00 - 226.00	226.00 - 229.00	26.79
79 B3	NL58 629075 5136III	Bangkok Rat Burana	Itsalam Withhayalai School, Pracha Uthit Road, Khwaeng Thung Khru	3.26.89	174.39	171.00	4	0 -162.00	4	162.00 - 168.00	168.00 - 171.00	27.77
	NB54 629075	Bangkok Rat Burana	Itsalam Withhayalai School, Pracha Uthit Road, Khwaeng Thung Khru	3.22.89	238.00	212.00	4	0 -203.00	4	203.00 - 209.00	209.00 - 212.00	28.90
80 C4	PD44 713198 5136III	Bangkok Huai Khwang	11th Channel Television Station, New Phetburi Rd, Khwaeng Bang Kapi	4.14.89	111.80	106.00	4	0 - 97.00	4	97.00 - 103.00	103.00 - 106.00	26.49
	NL59 713198	Bangkok Huai Khwang	11th Channel Television Station, New Phetburi Rd, Khwaeng Bang Kapi	4.9.89	179.69	169.00	4	0 -160.00	4	160.00 - 166.00	166.00 - 169.00	37.60
	NB55 713198	Bangkok Huai Khwang	11th Channel Television Station, New Phetburi Rd, Khwaeng Bang Kapi	4.3.89	231.70	215.00	4	0 -206.00	4	206.00 - 212.00	212.00 - 215.00	33.96
81 A5	PD43* 762966 5136III	Samut Prakan Muang	Wat Sip Song Thanwaram, Mu Thi 1, Tambon Bang Pu Mai	4.13.89	98.78	98.00	4	0 - 89.00	4	89.00 - 95.00	95.00 - 98.00	27.83
	NL60* 762966	Samut Prakan Muang	Wat Sip Song Thanwaram, Mu Thi 1, Tambon Bang Pu Mai	4.9.89	141.40	140.00	4	0 -131.00	4	131.00 - 137.00	137.00 - 140.00	28.41

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
81 A5	NB48* 762966	Samut Prakan Muang	Wat Sip Song Thanwaram, Mu Thi 1, Tambon Bang Pu Mai	4.4.89	239.00	215.00	4	0 -206.00	4	206.00 - 212.00	212.00 - 215.00	23.06
82 A6	PD79 825993 5136 III	Samut Prakan Bang Phli	Wat Noi Suwannaram									
	NL61* 825993	Samut Prakan Bang Phli	Wat Noi Suwannaram	4.14.89	161.89	159.00	4	0 -150.00	4	150.00 - 156.00	156.00 - 159.00	28.44
	NB56* 825993	Samut Prakan Bang Phli	Wat Noi Suwannaram	4.5.89	231.00	210.00	4	0 -201.00	4	201.00 - 207.00	207.00 - 210.00	26.37
83 B5	NL63 837085 5136 III	Samut Prakan Bang Phli	Bang Phli Switching Office	5.3.89	140.85	140.00	4	0 -131.00	4	131.00 - 137.00	137.00 - 140.00	40.80
	NB57 837085	Samut Prakan Bang Phli	Bang Phli Switching Office	4.30.89	235.36	204.00	4	0 -195.00	4	195.00 - 201.00	201.00 - 204.00	39.90
84 D3	PD45* 619315 5036 I	Nonthaburi Muang	Wat Bang Phraek Nua, Tambon Suan Yai	5.8.89	101.82	101.00	4	0 - 92.00	4	92.00 - 98.00	98.00 - 101.00	20.12
	NL64* 619315	Nonthaburi Muang	Wat Bang Phraek Nua, Tambon suan Yai	5.6.89	169.80	168.00	4	0 -159.00	4	159.00 - 165.00	165.00 - 168.00	25.68
	NB58* 619315	Nonthaburi Muang	Wat Bang Phraek Nua, Tambon Suan Yai	5.3.89	236.28	210.00	4	0 -201.00	4	201.00 - 207.00	207.00 - 210.00	26.09
85 F4	PD48 658442 5136 IV	Pathum Thani Muang	Wat Chinwanaram Worawihan, Tambon Bang Khayaeng	5.22.89	96.34	95.00	4	0 - 86.00	4	86.00 - 92.00	92.00 - 95.00	18.90

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
85 F4	NB59 658442	Pathum Thani Muang	Wat Chinwanaram Worawihan, Tambon Bang Khayaeng	5.20.89	239.32	217.00	4	0 -208.00	4	208.00 - 214.00	214.00 - 217.00	26.29
86 F4	PD65 748521 5137 III	Pathum Thani Khlong Luang	Rangsit Switching Office, Phahonlayothin Highway	8.27.90	116.70	115.00	4	0 -106.00	4	106.00 - 112.00	112.00 - 115.00	27.84
	NL66* 748521	Pathum Thani Khlong Luang	Rangsit Switching Office, Phahonlayothin Highway	5.26.89	172.25	165.00	4	0 -156.00	4	156.00 - 162.00	162.00 - 165.00	32.91
	NB67 748521	Pathum Thani Khlong Luang	Rangsit Switching Office, Phahonlayothin Highway	8.21.90	233.50	226.00	4	0 -217.00	4	217.00 - 223.00	223.00 - 226.00	41.90
87 F4	PD49* 745458 5136 IV	Pathum Thani Lam Luk Ka	Pathum Thani Agriculture College, Tambon Khu Khot	5.30.89	122.86	108.00	4	0 - 99.00	4	99.00 - 105.00	105.00 - 108.00	23.41
88 C1	PD54 383199 5036 II	Nakhon Pathom Sam Phran	Wat Tha Phut, Mu Thi 19, Tambon Rai Khing	3.2.90	100.60	95.00	4	0 - 86.00	4	86.00 - 92.00	92.00 - 95.00	27.25
	NL69 383199	Nakhon Pathom Sam Phran	Wat Tha Phut, Mu Thi 19, Tambon Rai Khing	2.25.90	156.00	154.00	4	0 -145.00	4	145.00 - 151.00	151.00 - 154.00	33.68
	NB61 383199	Nakhon Pathom Sam Phran	Wat Tha Phut, Mu Thi 19, Tambon Rai Khing	2.18.90	228.00	192.00	4	0 -186.00	4	186.00 - 192.00	192.00 - 195.00	36.90
89 D2	PD56 541312 5036 I	Nonthaburi Bang Yai	Wat Pikun Ngoen, Tambon Bang Muang	4.4.90	120.00	100.00	4	0 - 91.00	4	91.00 - 97.00	97.00 - 100.00	18.17
	NB63 541312	Nonthaburi Bang Yai	Wat Pikun Ngoen, Tambon Bang Muang	3.16.90	234.75	224.00	4	0 -215.00	4	215.00 - 221.00	221.00 - 224.00	24.26

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Area code	Coordinates				Province District	Details	Dia. (in)	Interval (m)		
90 B2	PD57 521118 5036 II	Bangkok Bang Khun Thian	Wat Ninsukharam, Mu Thi 10, Khwaeng Bang Bon	3.31.90	91.00	85.00	4	0 - 70.00	4	70.00 - 76.00	76.00 - 85.00	23.58
	NL70 521118	Nangkok Bang Khun Thian	Wat Ninsukharam, Mu Thi 10, Khwaeng Bang Bon	3.20.90	229.50	143.00	4	0 -143.00	4	134.00 - 140.00	140.00 - 143.00	25.46
	NB62 521118	Bangkok Bang Khun Thian	Wat Ninsukharam, Mu Thi 10, Khwaeng Bang Bon	3.26.90	230.00	228.00	4	0 -219.00	4	219.00 - 225.00	225.00 - 228.00	30.83
91 F3	PD60 605478 5036 I	Pathum Thani Muang	Wat Phrai Fa, Tambon Bang Dua	5.07.90	135.00	113.00	4	0 -104.00	4	104.00 - 110.00	110.00 - 113.00	14.97
	NL74 605478	Pathum Thani Muang	Wat Phrai Fa, Tambon Bang Dua	5.15.90	163.00	162.30	4	0 -154.00	4	154.00 - 160.00	160.00 - 163.00	19.43
	NB64 605478	Pathum Thani Muang	Wat Phrai Fa, Tambon Bang Dua	4.11.90	234.80	213.00	4	0 -204.00	4	204.00 - 210.00	210.00 - 213.00	20.41
92 E1	PD61 405347 5036 I	Nonthaburi Sai Noi	Limkun Watthana School	5.10.90	112.00	104.00	4	0 - 95.00	4	95.00 - 101.00	101.00 - 104.00	14.64
	NL73 405347	Nonthaburi Sai Noi	Limkun Watthana School	5.04.90	173.30	168.00	4	0 -159.00	4	159.00 - 165.00	165.00 - 168.00	21.00
	NB65 405347	Nonthaburi Sai Noi	Limkun Watthana School	4.27.90	231.00	221.00	4	0 -212.00	4	212.00 - 218.00	218.00 - 221.00	20.89
93 E4	PD63 668379 5236 IV	Nonthaburi Pak Kret	Wat Phasuk, Mu Thi 4, Tambon Pak Kret	8.6.90	118.00	110.00	4	0 -101.00	4	101.00 - 107.00	107.00 - 110.00	20.70

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
94 G2	PD66 451594 5037 II	Nonthaburi Sai Noi	Wat Lak Khon, Tambon Rat Niyom	9.17.90	91.00	90.00	4	0 - 81.00	4	81.00 - 87.00	87.00 - 90.00	7.19
	NL75 451594	Nonthaburi Sai Noi	Wat Lak Khon, Tambon Rat Niyom	9.12.90	153.00	153.00	4	0 -144.00	4	144.00 - 150.00	150.00 - 153.00	13.59
	NB68 451591	Nonthaburi Sai Noi	Wat Lak Khon, Tambon Rat Niyom	8.27.90	235.67	229.00	4	0 -220.00	4	220.00 - 226.00	226.00 - 229.00	14.60
95 A8	PD69 059009 5136 II	Samut Prakan Bang Bo	Wat Bang Phli Noi, Mu Thi 1, Tambon Bang Phli Noi	10.18.90	115.00	111.00	4	0 -101.00	4	101.00 - 107.00	107.00 - 111.00	
	NL77 059009	Samut Prakan Bang Bo	Wat Bang Phli Noi, Mu Thi 1, Tambon Bang Phli Noi	9.25.90	185.90	162.00	4	0 -153.00	4	153.00 - 159.00	159.00 - 162.00	
	NB71 059009	Samut Prakan Bang Bo	Wat Bang Phli Noi, Mu Thi 1, Tambon Bang Phli Noi	9.17.90	199.00	192.00	4	0 -183.00	4	183.00 - 189.00	189.00 - 192.00	
96 G7	PD70 046568 5137 II	Pathum Thani Thanyaburi	Wat Pichit Pitayaram, Khlong Sip Sam, Tambon Bung Nam Rak	11.2.90	118.90	117.00	4	0 -108.00	4	108.00 - 114.00	114.00 - 117.00	3.84
	NL79 046568	Pathum Thani Thanyaburi	Wat Pichit Pitayaram, Khlong Sip Sam, Tambon Bung Nam Rak	10.27.90	176.90	174.00	4	0 -165.00	4	165.00 - 171.00	171.00 - 174.00	0.57
	NB70 046568	Pathum Thani Thanyaburi	Wat Pichit Pitayaram, Khlong Sip Sam, Tambon Bung Nam Rak	10.11.90	232.90	207.00	4	0 -198.00	4	198.00 - 204.00	204.00 - 207.00	-0.47
97 F5	PD71 849489 5137 III	Pathum Thani Thanyaburi	Wat Mun Chindaram, Mu Thi 3, Tambon Bung Yitho	12.20.90	95.12	93.35	4	0 - 84.00	4	84.00 - 90.00	90.00 - 93.00	20.00

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
97 F5	NL80 849489	Pathum Thani Thanyaburi	Wat Mun Chindaram, Mu Thi 3, Tambon Bung Yiho	12.11.90	139.00	134.33	4	0 -125.00	4	125.00 - 131.00	131.00 - 134.00	30.50
	NB72 849489	Pathum Thani Thanyaburi	Wat Mun Chindaram, Mu Thi 3, Tambon Bung Yiho	11.22.90	234.00	175.00	4	0 -166.00	4	166.00 - 172.00	172.00 - 175.00	41.46
98 H7	PD73 971628 5137 II	Pathum Thani Nong Sua	Amphoe Nong Sua Office Compound, Tambon Bung Ba	2.7.91	85.90	85.00	4	0 - 76.00	4	76.00 - 82.00	82.00 - 85.00	5.74
	NB74 971628	Pathum Thani Nong Sua	Amphoe Nong Sua Office Compound, Tambon Bung Ba	1.29.91	231.70	227.00	4	0 -218.00	4	218.00 - 224.00	224.00 - 227.00	85.10
99 B2	PD80 580120 5036 II	Bangkok Bang Khun Thian	Bang Mot Witthaya School <i>wat kok</i>									
	NL82 580120	Bangkok Bang Khun Thian	Bang Mot Witthaya School <i>wat kok</i>									
	NB79 580120	Bangkok Bang Khun Thian	Bang Mot Witthaya School <i>wat kok</i>									
100 B2	NL86 535088 5036 II	Bangkok Bang Khun Thian	National Housing Authority, No. 3, Thon Buri-Pak Tho Road	10.17.91	167.00	162.00	4	0 -152.00	4	152.00 - 158.00	158.00 - 162.00	
	NB80 535088	Bangkok Bang Khun Thian	National Housing Authority, No. 3, Thon Buri-Pak Tho Road	10.10.91	240.00	228.50	4	0 -218.00	4	218.00 - 224.00	224.00 - 228.50	
101 D3	PD83 579234 5036 I	Bangkok Taling Chan	Wat Taling Chan	12.6.91	102.00	100.00	4	0 - 90.00	4	90.00 - 96.00	96.00 - 100.00	

* Water level recorder is installed

Table 3. (Continued)

Station number	Well number	Location		Date drilling completed	Depth drilled (m)	Well depth (m)	Casing		Slotted perforation		Sand collected pipe interval (m)	Static water level (m)
		Province District	Details				Dia. (in)	Interval (m)	Dia. (in)	Interval (m)		
101 D3	NL83 579234	Bangkok Taling Chan	Wat Taling Chan	11.25.91	180.00	178.00	4	0 -168.00	4	168.00 - 174.00	174.00 - 178.00	
	NB81 579234	Bangkok Taling Chan	Wat Taling Chan	11.3.91	234.00	220.00	4	0 -210.00	4	210.00 - 216.00	216.00 - 220.00	
102 C7	PD86 046212 5136 I	Bangkok Nong Chok	Wat Lam Toiting									
	NL85 046212	Bangkok Nong Chok	Wat Lam Toiting									
	NB84 046212	Bangkok Nong Chok	Wat Lam Toiting									
103 C2	PD81 461202 5036 II	Bangkok Taling Chan	Thawi Watthana School, Khwaeng Thawi Watthana									
	NL87 461202	Bangkok Taling Chan	Thawi Watthana School, Khwaeng Thawi Watthana									
	NB85 461202	Bangkok Taling Chan	Thawi Watthana School, Khwaeng Thawi Watthana	1.7.92	233.00	214.00	4	0 -204.00	4	204.00 - 210.00	210.00 - 214.00	

* Water level recorder is installed

Table 4 Location of DMR Surface Benchmarks in Bangkok and Adjacent Provinces

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR01 C2	103 461202 5036 II	Bangkok Taling Chan	Thawi Watthana School, Khwaeng Thawi Watthana
DMR02 D1	44 434265 5036 I	Nakhon Pathom Nakhon Chaisi	Wat Salawan School, Mu Thi 5, Tambon Sala Ya
DMR03 C1	88 383199 5036 II	Nakhon Pathom Sam Phran	Wat Tha Phut, Mu Thi 19, Tambon Rai Khing
DMR04 C1	45 367131 5036 II	Nakhon Pathom Sam Phran	Wat Om Yai Ban Khlong Om Yai, Mu Thi 5, Tambon Om Yai
DMR05 B1	48 395034 5036 II	Samut Sakhon Muang	Wat Bang Ping Ban Bang Ping, Mu Thi 2, Tambon Na Di
DMR06 A1	62 383978 5036 II	Samut Sakhon Muang	Samut Sakhon Provincial Hall, Chetsadang Road, Tambon Mahachai
DMR07 B2	24 498048 5036 II	Bangkok Bang Khun Thian	Wat Phromma Rangsi, Khwaeng Samae Dam
DMR08 B2	25 539072 5036 II	Bangkok Bang Khun Thian	Wat Sakae Ngam Ban Sakae Ngam, Mu Thi 1, Khwaeng Samae Dam
DMR09 B2	90 521118 5036 II	Bangkok Bang Khun Thian	Wat Ninsukharam, Mu Thi 10, Khwaeng Bang Bon
DMR10 C3	76 576162 5036 II	Bangkok Phasi Charoen	Wat Kho Non, Phatthanakan Road, Khwaeng Bang Wa

Table 4. (Continued)

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR11 B3	11 636058 5136 III	Bangkok Rat Burana	Wat Thung Khru (Thung Na Rat Sattha Tham), Ban Thung Khru, Mu Thi 5, Khwaeng Thung Khru
DMR12 A4	10 660007 5136 III	Samut Prakan Phra Samut Chedi	Wat Khu Sang Ban Khu Sang, Mu Thi 9, Tambon Nai Khlong Bang Plakot
DMR13 B4	21 673085 5136 III	Samut Prakan Phra Pradaeng	Wat Bang Ya Phraek Ban Bang Ya Phraek, Mu Thi 16, Tambon Bang Ya Phraek
DMR14 B5	74 767097 5136 III	Bangkok Prawet	Wat Phong Phloi, Khwaeng Bang Na
DMR15 B4	9 733090 5136 III	Samut Prakan Muang	Wat Dan Samrong Ban Samrong Nua, Tambon Samrong Nua
DMR16 D3	84 619315 5036 I	Nonthaburi Muang	Wat Bang Phraek Nua, Tambon Suan Yai
DMR17 E4	59 668368 5136 IV	Nonthaburi Pak Kret	Khlong Klua School, Mu Thi 4, Chaeng Watthana Road, Tambon Pak Kret
DMR18 E4	70 733394 5136 IV	Bangkok Don Muang	Wat Don Muang, Khwaeng Talat Bang Khen
DMR19 F4	87 745458 5136 IV	Pathum Thani Lam Luk Ka	Pathum Thani Agriculture College, Tambon Khu Kot
DMR20 F4	66 742491 5137 III	Pathum Thani Khlong Luang	Bun Khum Rat Bamrung School, Soi Bun Khum, Tambon Khlong Nung

Table 4. (Continued)

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR21 G5	49 751622 5137 III	Pathum Thani Khlong Luang	Wat Khun Ying Som Chin Ban Chaing Rak Noi, Tambon Khlong Nung
DMR22 G5	37 872606 5137 III	Pathum Thani Khlong Luang	Wat Phalahan, Mu Thi 9, Tambon Khlong Hok
DMR23 G6	36 941529 5137 II	Pathum Thani Thanyaburi	Wat Aiyikaram Ban Lam Phak Kut Khong Paet, Mu Thi 4, Tambon Lam Phak Kut
DMR24 G7	96 046568 5137 II	Pathum Thani Thanyaburi	Wat Pichit Pitayaram, Khlong Sip Sam, Tambon Bung Nam Rak
DMR25 F5	97 849489 5137 III	Pathum Thani Thanyaburi	Wat Mun Chindaram, Mu Thi 3, Tambon Bung Yitho
DMR26 C5	2 801199 5136 III	Bangkok Bang Kapi	Bangkok Golf Course, Khwaeng Hua Mak
DMR27 D5	77 794259 5136 IV	Bangkok Bung Kum	Praphat Witthaya School, Sukhapiban Road, Khwaeng Khlong Kum
DMR28 D5	1 810318 5136 IV	Bangkok Min Buri	Wat Khu Bon Ban Khu Bon, Khwaeng Bang Chan
DMR29 E5	75 858354 5136 IV	Bangkok Min Buri	Wat Paen Thong Sopharam, Mu Thi 13, Khwaeng Sam Wa Tawan Tok
DMR30 D6	33 887280 5136 IV	Bangkok Min Buri	Wat Saen Suk Ban Saen Suk, Mu Thi 2, Khwaeng Min Buri

Table 4. (Continued)

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR31 D6	73 852262 5136 IV	Bangkok Min Buri	Wat Bamphen Nua, Khwaeng Bang Chan
DMR32 D7	30 956260 5136 I	Bangkok Min Buri	Wat Mai Lam Nok Khwaek Ban Lam Nok Khwaek, Mu Thi 10, Khwaeng Saen Saep
DMR33 D7	34 014323 5136 I	Bangkok Nong Chok	Wat Phakdi Noraset Bang Krathum Rai, Khwaeng Krathum Rai
DMR34 F7	43 042435 5136 I	Pathum Thani Lam Luk Ka	Wat Phut Udom, Mu Thi 9, Tambon Phut Udom
DMR35 E6	16 891407 5136 I	Pathum Thani Lam Luk Ka	Wat Nang Khan Chantri, Tambon Bung Kham Phroi
DMR36 C6	41 901198 5136 II	Bangkok Lat Krabang	Wat Bamrung Run Ban Khlong Sam, Khwaeng Khlong Sam Prawet
DMR37 C7	29 005150 5136 II	Bangkok Lat Krabang	Wat Ratcha Kosa, Khwaeng Khun Thong
DMR38 C7	102 046212 5136 I	Bangkok Nong Chok	Wat Lam Toiting, Mu Thi 1, Khwaeng Lam Toiting
DMR39 B6	32 950116 5136 II	Samut Prakan Bang Phli	Wat Si Wari Noi, Mu Thi 6, Tambon Sisa Chorakhe Yai
DMR40 B6	18 888056 5136 III	Samut Prakan Bang Phli	Phun Charoen Witthayakhom School, Tambon Bang Chalong

Table 4. (Continued)

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR41 A8	95 059009 5136 II	Samut Prakan Bang Bo	Wat Bang Phli Noi, Mu Thi 1, Tambon Bang Phli Noi
DMR42 A6	27 938029 5136 II	Samut Prakan Bang Phli	Wat Mongkhon Nimit, Mu Thi 1, Tambon Bang Sao Thong
DMR43 B5	83 837085 5136 III	Samut Prakan Bang Phli	Bang Phli Switching Office Bang Na-Trat Tambon Bang Phli Yai
DMR44 B5	68 822126 5136 III	Bangkok Phra Khanong	Wat Thung Lan Na, Mu Thi 11, Khwaeng Dokmai
DMR45 A6	82 825993 5136 III	Samut Prakan Bang Phli	Wat Noi Suwannaram Tambon Bang Phli Yai
DMR46 A6	14 906949 5136 II	Samut Prakan Muang	Bang Pla Aeronautical Transmission Station, Tambon Bang Pu Mai
DMR47 A5	81 762966 5136 III	Samut Prakan Muang	Wat Sip Song Thanwaram, Mu Thi 1, Tambon Bang Pu Mai
DMR48 A5	12 777007 5136 III	Samut Prakan Muang	Wat Phraek Sa Ban Phraek Sa, Tambon Phraek Sa
DMR49 C5	67 772139 5136 III	Bangkok Phra Khanong	Wat Wachiratham Sathit, Soi Sukhumvit 101/1, Sukhumvit Road, Khwaeng Bang Chak
DMR50 C4	80 713198 5136 III	Bangkok Huai Khwang	11th Channel Television Station, New Phetchaburi Road, Khwaeng Bang Kapi

Table 4. (Continued)

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR51 E5	28 796405 5136 IV	Pathum Thani Lam Luk Ka	Wat Sai Mai, Tambon Khu Khot
DMR52 F3	40 659503 5137 III	Pathum Thani Muang	Pathum Thani Provincial Hall, Tambon Bang Prok
DMR53 F4	85 658442 5136 IV	Pathum Thani Muang	Wat Chinwanaram Worawihan, Tambon Bang Khayaeng
DMR54 E2	5 543385 5036 I	Nonthaburi Bang Bua Thong	Wat Lahan, Ban Sano Loi, Tambon Sano Loi
DMR55 F4	51 419454 5036 I	Nonthaburi Sai Noi	Wat Sai Yai, Tambon Sai Noi
DMR56 E1	92 405347 5036 I	Nonthaburi Sai Noi	Limkun Watthana School Tambon Nong Phlao Ngai
DMR57 D2	89 541312 5036 I	Nonthaburi Bang Yai	Wat Pikun Ngoen, Tambon Bang Muang
DMR58 G2	94 451594 5037 II	Nonthaburi Sai Noi	Wat Lak Khon, Tambon Rat Niyom
DMR59 F2	39 538523 5037 II	Pathum Thani Lat Lum Kaeo	Wat Bua Kaeo Keson Ban Rahaeng, Mu Thi 4, Tambon Rahaeng
DMR60 G3	38 639624 5137 III	Phra Nakhon Si Ayutthaya Bang Sai	Wat Pa Kha, Mu Thi 1, Tambon Khok Chang

Table 4. (Continued)

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR61 D4	71 686271 5136 IV	Bangkok Chatuchak	Chatuchak Park, Khwaeng Lat Yao
DMR62 C4	61 564218 5136 IV	Bangkok Ratchathewi	Department of Mineral Resources, Khwaeng Thung Phayathai
DMR63 D3	64 645257 5136 IV	Bangkok Dusit	Wat Kaeo Fa Chula Mani, Thahan Road, Khwaeng Thanon Nakhon Chaisi
DMR64 D4	4 721255 5136 IV	Bangkok Lat Phrao	Phibun Uppatham School Ban Lat Phrao, Mu Thi 9, Khwaeng Lat Phrao
DMR65 D4	58 722289 5136 IV	Bangkok Lat Phrao	Wat Sirikamalawat, Mu Thi 14, Soi Chok Chai 4, Lat Phrao Road, Khwaeng Lat Phrao
DMR66 C6	74 838212 5136 IV	Bangkok Phra Khanong	Wat Lat Bua Khao (Ratchayotha), Khwaeng Prawet
DMR67 D5	22 777328 5136 IV	Bangkok Bang Khen	Wat Siri Phong Thammimit Ban Khlong Bua, Mu Thi 6, Khwaeng Tha Raeng
DMR68 E3	630368 5136 IV	Nonthaburi Pak Kret	Si Sangwan School Tambon Pak Kret
DMR69 D4	17 719319 5136 IV	Bangkok Bang Khen	Wat Bang Bua, Khwaeng Anusawari
DMR70 F4	86 708521 5137 III	Pathum Thani Khlong Luang	Rangsit Switching Office, Phahonlayothin Highway

Table 4. (Continued)

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR71 G4	740625 5137 III	Phra Nakhon Si Ayutthaya Wang Noi	Phetchaburi Teacher College, Pratu Nam Phra In
DMR72 G5	19 778520 5137 III	Pathum Thani Khlong Luang	Wat Kla Cha-Um, Tambon Khlong Song
DMR73 G5	820560 5137 III	Pathum Thani Khlong Luang	Wat Phra Thammakai Tambon Khlong Sam
DMR74 H3	35 652696 5137 III	Phra Nakhon Si Ayutthaya Bang Sai	Wat Bot Somphon Chai, Mu Thi 1, Tambon Ratcha Khram
DMR75 H5	31 819714 5137 III	Phra Nakhon Si Ayutthaya Wang Noi	Wat Lat Sai, Ban Lat Sai, Mu Thi 5, Tambon Lam Sai
DMR76 F3	91 605478 5036 I	Pathum Thani Muang	Wat Phrai Fa, Tambon Bang Dua
DMR77 H7	98 971628 5137 II	Pathum Thani Nong Sua	Amphoe Nong Sua Office Compound, Tambon Bung Ba
DMR78 B2	99 580120 5036 II	Bangkok Bang Khun Thian	Bang Mot Witthaya School Khwaeng Khlong Bang Mot
DMR79 C3	78 576214 5036 I	Bangkok Bangkok Noi	Wat Chaiyathit, Soi Charan Sanit Wong 37, Khwaeng Bang Khun Si
DMR80 C6	3 836156 5136 III	Samut Prakan Bang Phli	Wat Hua Khu Wanaram Ban Hua Khu Tambon Sisa Chorakhe Noi

Table 4. (Continued)

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR81 B3	23 643112 5136 III	Samut Prakan Phra Pradaeng	Wat Ruak, Tambon Bang Phuang
DMR82 B4	54 714094 5136 III	Samut Prakan Phra Pradaeng	Wat Mahawong, Soi Wat Mahawong, Pu Chao Saming Phrai Road, Tambon Samrong Tai
DMR83 A5	8 825947 5136 III	Samut Prakan Muang	Wat Tamru, Sukhumvit-Khlong Dan Road, Tambon Bang Pu Mai
DMR84 C4	65 659148 5136 III	Bangkok Yan Nawa	Mahamek Electrical Substation, Sathu Pradit Road, Khwaeng Chong Nonsi
DMR85 D4	47 701235 5136 IV	Bangkok Huai Khwang	Wat Kunnathi Ruttharam, Khwaeng Huai Khwang
DMR86 C4	42 710174 5136 III	Bangkok Khlong Toei	Bangkok Planetorium, Khwaeng Phra Khanong

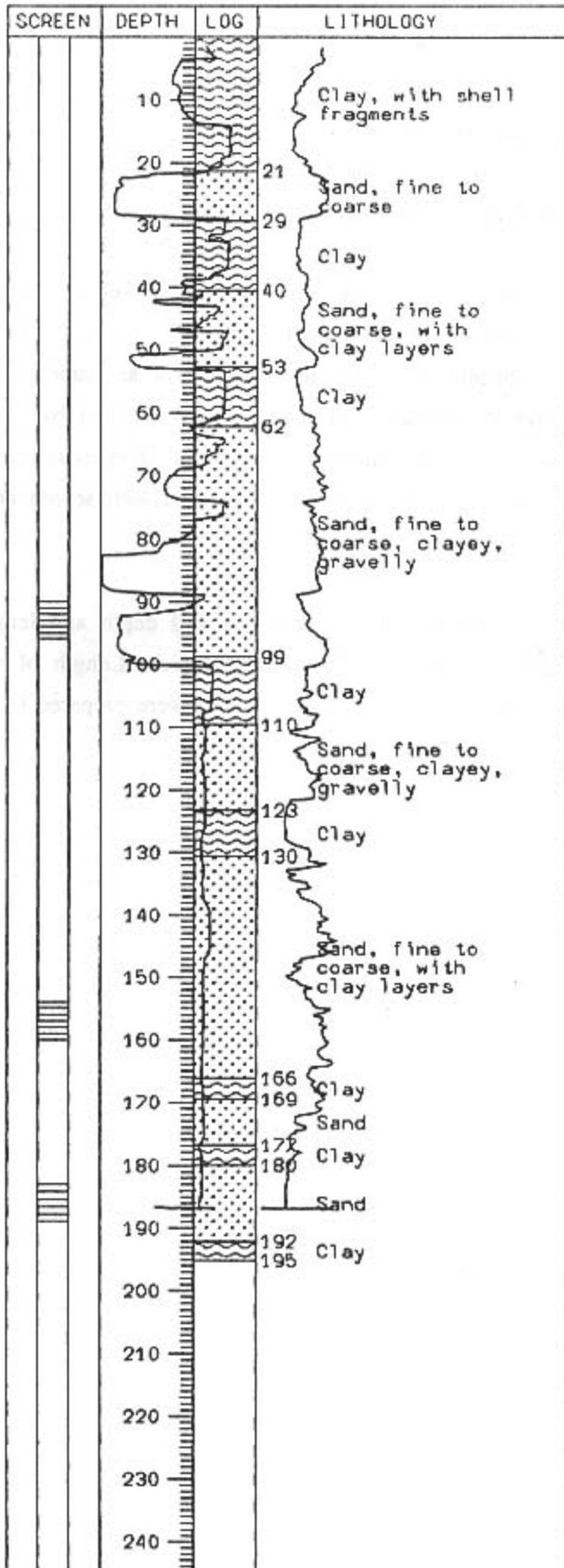
WELL LOGS

During drilling of each monitoring well, samples of cuttings are collected at 1.5 m interval and are analysed and studied by geologists. Detailed descriptions of geologic materials such as depth, colour, character, size of material, and structure of the strata penetrated are recorded.

Down-the-hole electric logging was carried out in each well recording self potential and electric resistivities of the surrounding media and their variation with depth. The result is an electric log which is affected by fluid within a well (drilling mud), by the character of surrounding strata, and by groundwater. Resistivity curve indicates the lithology of rock strata penetrated by the well and enable fresh and salt waters to be distinguished in the surrounding material. The most important uses of an electric log for this Project are to determine the proper place to set well screen and for correlation of geologic strata.

In this report, a well log consists of geologic log, electric log and depth and length of slotted pipes of the monitoring wells penetrated different aquifers at one station. Length of slotted perforation of each well is 6 m and only one interval is setting. The well logs were prepared by using the United Nations Groundwater Software.

W E L L L O G



D R I L L L O G

Station No: 1

Well No: PD8, NL62, NB5

Map Sheet: 5136 IV

Co-ordinate: 810318

Location: Wat Khu Bon

Tambon: Bang Chan

Amphoe: Min Buri

Changwat: Bangkok

Drilling Date: PD8: 4/24/78

NL62: 4/24/89

NB5: 4/19/78

Total Depth: PD8: 104.00 m.

NL62: 166.15 m.

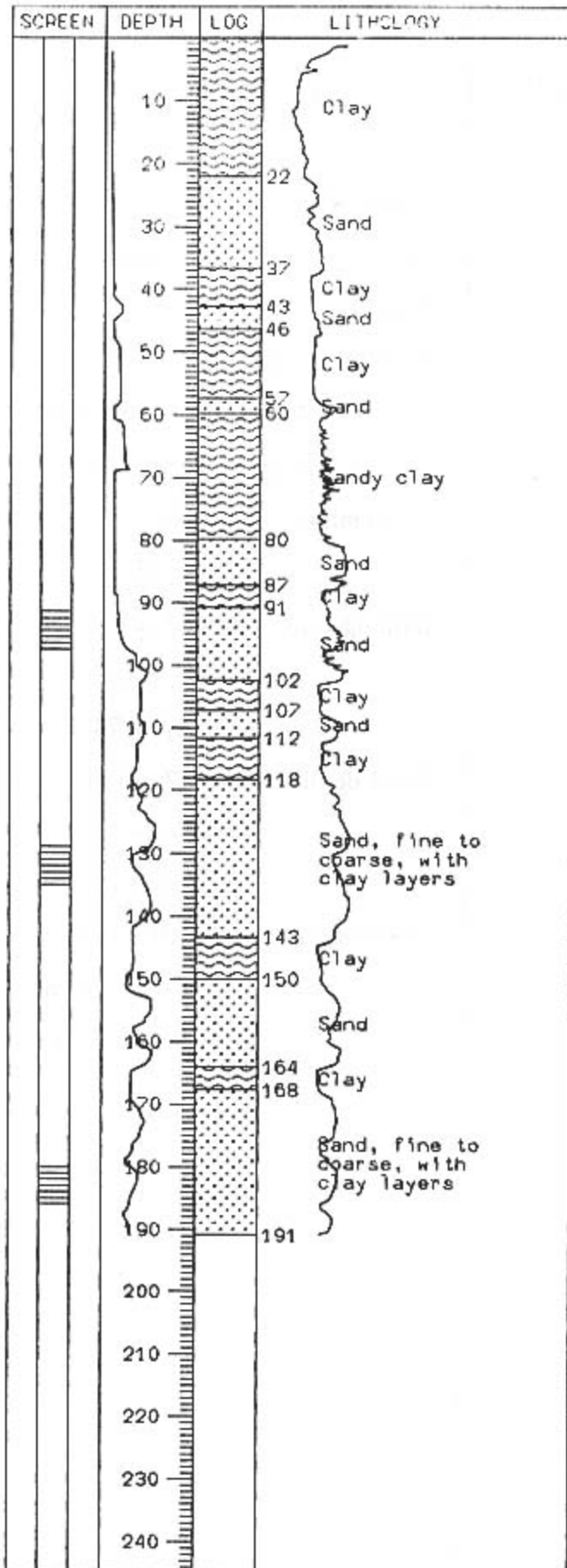
NB5: 195.12 m.

Perforation: PD8: 90.0-96.0 m.

NL62: 154.0-160.0 m.

NB5: 183.0-189.0 m.

W E L L L O G



DRILL LOG

Station No: 2

Well No: PD5, NL11, NB8

Map Sheet: 5136 III

Co-ordinate: 801199

Location: Bangkok Golf Course

Tambon: Hua Mak

Amphoe: Bang Kapi

Changwat: Bangkok

Drilling Date: PD5: 5/29/78

NL11: 4/29/78

NB8: 4/23/78

Total depth: PD5: 117.00 m.

NL11: 150.00 m.

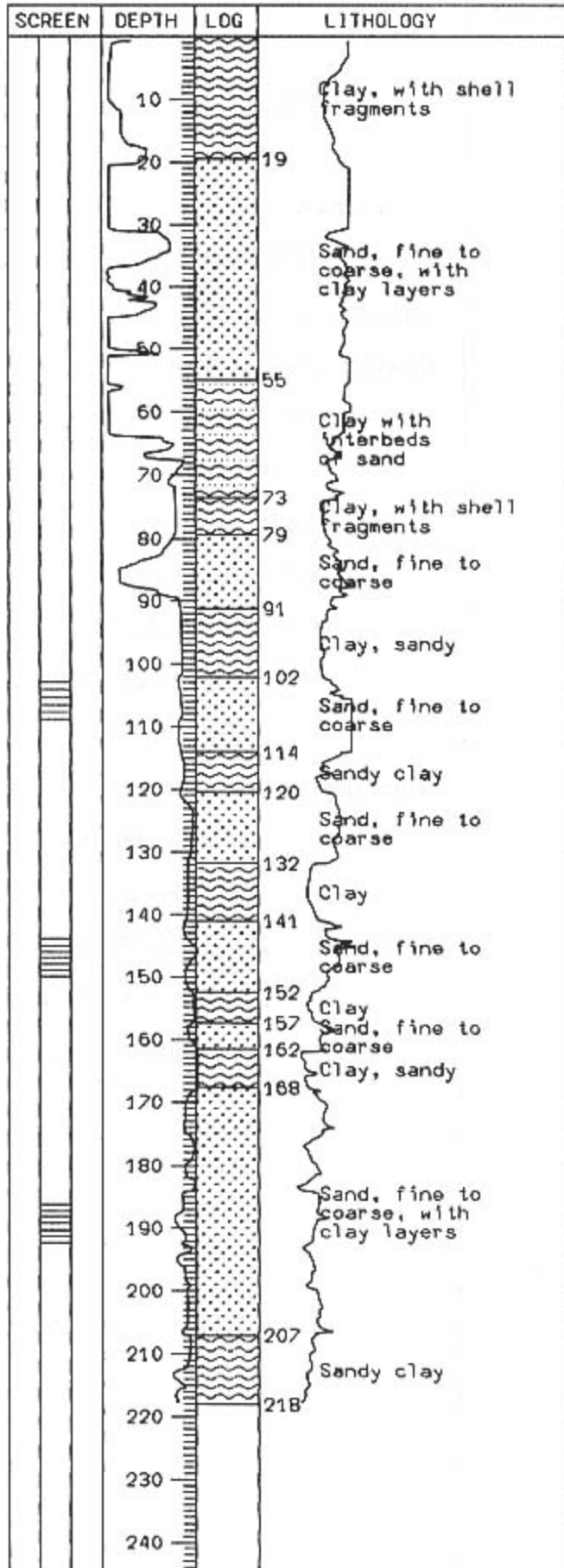
NB8: 200.00 m.

Perforation: PD5: 91.5-97.5 m.

NL11: 129.0-135.0 m.

NB8: 180.0-186.0 m.

WELL LOG



DRILL LOG

Station No: 3

Well No: PD38, NL3, NB9

Map Sheet: 5136 III

Co-ordinate: 836156

Location: Wat Hua Khu Wanaram

Tambon: Sisa Chorakhe Noi

Amphoe: Bang Phli

Changwat: Samut Prakan

Drilling Date: PD38: 1/20/89

NL3: 5/1/78

NB9: 4/23/78

Total depth: PD38: 120.00 m.

NL3: 158.00 m.

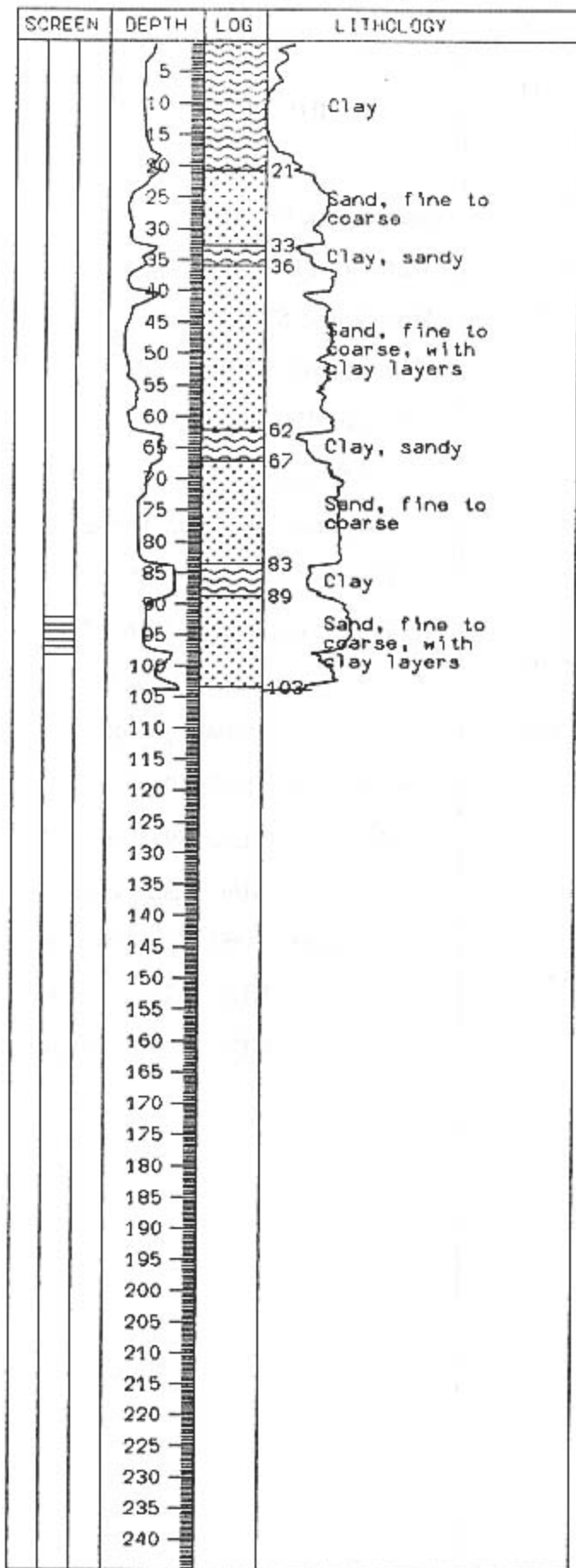
NB9: 210.00 m.

Perforation: PD38: 103.0-109.0 m.

NL3: 144.0-150.0 m.

NB9: 186.3-192.3 m.

W E L L L O G



DRILL LOG

Station No: 4

Well No: PD7

Map Sheet: 5136 IV

Co-ordinate: 721255

Location: Phibun Uppatham

School

Tambon: Lat Phrao

Amphoe: Bang Kapi

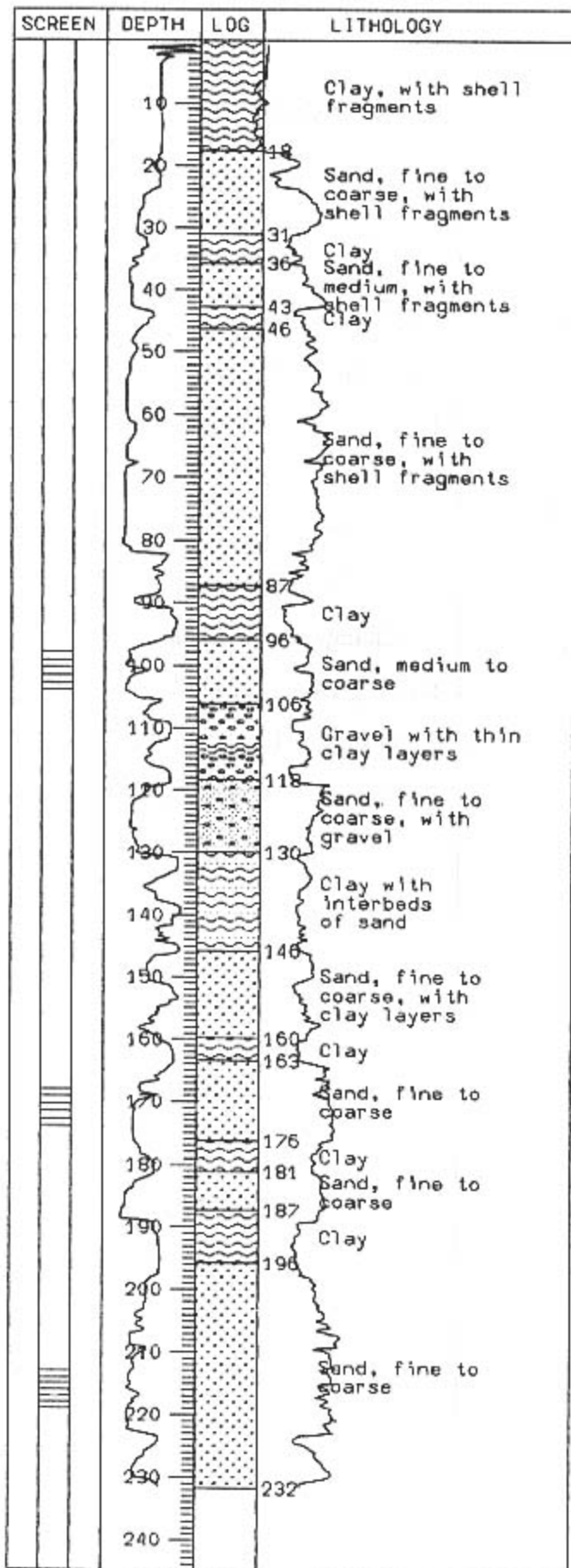
Changwat: Bangkok

Drilling Date: 4/27/78

Total depth: 105.15 m.

Perforation: 92.1-98.1 m.

WELL LOG



DRILL LOG

Station No: 5

Well No: PD55, NL5, NB4

Map Sheet: 5036 I

Co-ordinate: 543385

Location: Wat Lahan

Tambon: Sano Loi

Amphoe: Bang Bua Thong

Changwat: Nonthaburi

Drilling Date: PD55: 3/16/90

NL5: 5/13/78

NB4: 5/7/78

Total depth: PD55: 109.75 m.

NL5: 189.00 m.

NB4: 228.50 m.

Perforation: PD55: 98.0-104.0 m.

NL5: 168.0-174.0 m.

NB4: 213.0-219.0 m.

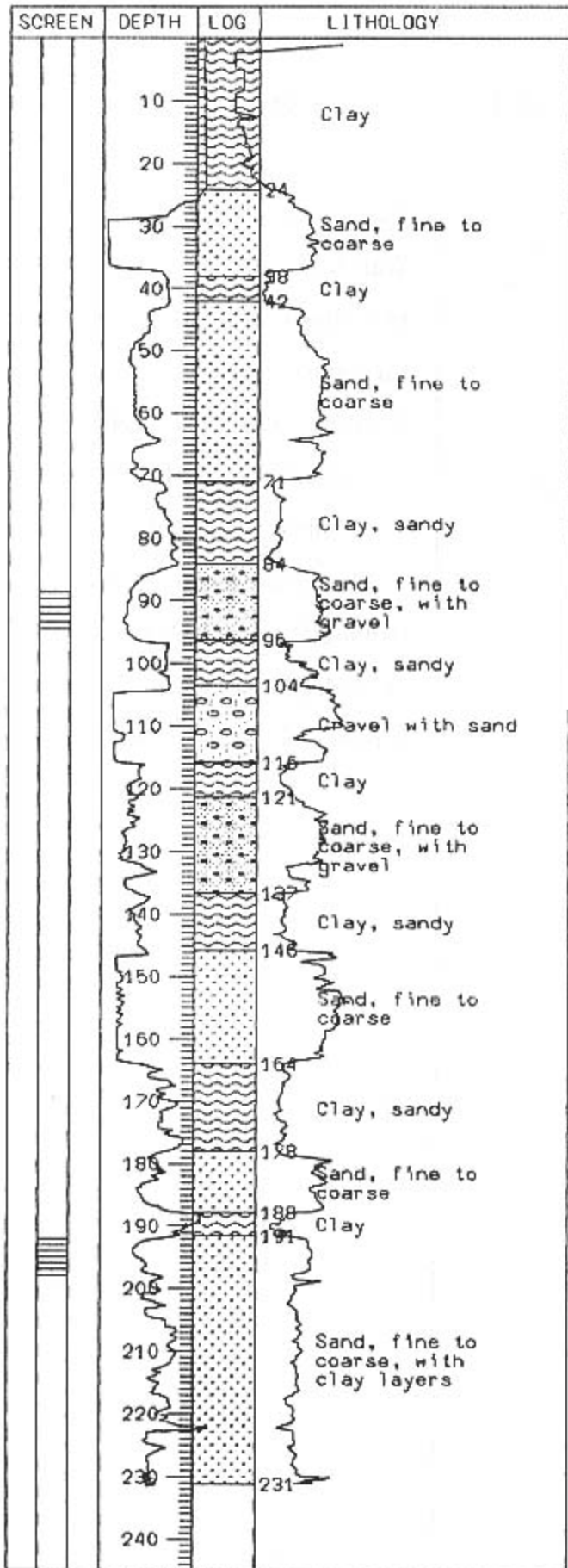
W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	5		Clay, with shell fragments
	10		
	15		
	20		
	24		
	25		Sand, fine to coarse, with shell fragments
	30		
	35		
	40		
	45		
	48		Clay, sandy
	50		
	55		
	59		Sand, fine to coarse, with clay layers
	60		
	65		
	70		
	75		
	80		Clay, sandy
	85		
	86		Sand
	89		
	97		Clay, sandy
	102		
	105		
	110		
	115		
	120		
	125		
	130		
	135		
	140		
	145		
	150		
	155		
	160		
	165		
	170		
	175		
	180		
	185		
	190		
	195		
	200		
	205		
	210		
	215		
	220		
	225		
	230		
	235		
	240		

DRILL LOG

Station No: 6
 Well No: PD3
 Map Sheet: 5136 III
 Co-ordinate: 838092
 Location: Wat Khlong Salut
 Tambon: Bang Phli Yai
 Amphoe: Bang Phli
 Changwat: Samut Prakan
 Drilling Date: 5/16/78
 Total depth: 103.00 m.
 Perforation: 79.5-85.5 m.

WELL LOG



DRILL LOG

Station No: 7

Well No: PD6, NB1

Map Sheet: 5036 II

Co-ordinate: 562168

Location: Wat Chan Pradittharam

Tambon: Bang Duan

Amphoe: Phasi Charoen

Changwat: Bangkok

Drilling Date: PD6: 5/25/78

NB1: 5/28/78

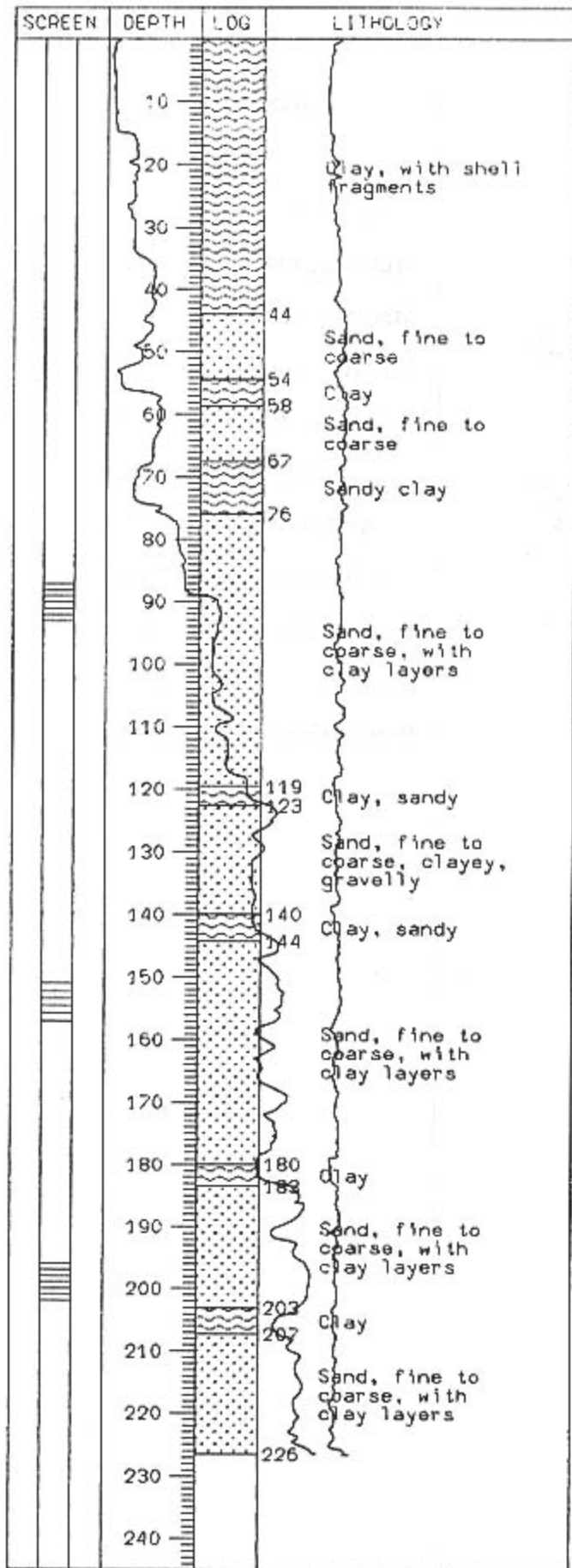
Total depth: PD6: 119.50 m.

NB1: 228.60 m.

Perforation: PD6: 88.6-94.6 m.

NB1: 192.6-198.6 m.

WELL LOG



DRILL LOG

Station No: 8

Well No: PD2, NL55, NB49

Map Sheet: 5136 III

Co-ordinate: 825947

Location: Wat Tamru

Tambon: Bang Pu Mai

Amphoe: Muang

Changwat: Samut Prakan

Drilling Date: PD2: 6/4/78

NL55: 2/23/89

NB49: 2/15/89

Total depth: PD2: 102.00 m.

NL55: 167.00 m.

NB49: 226.50 m.

Perforation: PD2: 87.1-93.1 m.

NL55: 151.0-157.0 m.

NB49: 196.0-202.0 m.

WELL LOG

SCREEN	DEPTH	LOG	LITHOLOGY
	5		
	10		
	15		Clay, with shell fragments
	20		
	25		
	30	29	
	35		Sandy clay
	40	46	
	45		Sand, fine to coarse, with clay layers
	50		
	55		
	60	62	
	65	66	Clay, sandy
	70		Sand, fine to coarse, with clay layers
	75		
	80		
	85	82	
	90	87	Clay, sandy
	95		Sand, fine to coarse, with clay layers
	100		
	105	103	
	110		
	115		
	120		
	125		
	130		
	135		
	140		
	145		
	150		
	155		
	160		
	165		
	170		
	175		
	180		
	185		
	190		
	195		
	200		
	205		
	210		
	215		
	220		
	225		
	230		
	235		
	240		

DRILL LOG

Station No: 9
Well No: PD4
Map Sheet: 5136 III
Co-ordinate: 733090
Location: Wat Dan Samrong
 Tambon: Samrong Nua
 Amphoe: Muang
 Changwat: Samut Prakan
Drilling Date: 6/19/78
Total depth: 105.00 m.
Perforation: 96.0-102.0 m.

W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay, with shell fragments
	20		
	26		Sand, fine to coarse, with shell fragments
	30	31	Clay, with shell fragments
	39		Sand, fine to coarse
	43		Clay, sandy, with shell fragments
	50	52	Sand, with gravel and shell fragments
	60	61	Clay, with shell fragments
	67		Sand, fine to coarse, with gravel
	80		Clay, with shell fragments
	87		Gravel with sand
	90	96	Clay, with shell fragments
	100		Clay, with shell fragments
	105		Sand, with gravel and shell fragments
	110	112	Clay, with shell fragments
	120		Clay, with shell fragments
	127	129	Sand, fine to coarse
	140		Clay, with shell fragments
	147		Sand
	150	152	Clay
	157		Sand
	160	161	Clay
	164		Sand
	167		Clay
	170		Sand, fine to coarse, with clay layers
	180	187	Clay
	190		Sand
	193		
	198		
	200		Clay with interbeds of sand
	210		
	220	221	Sand, fine to coarse, with gravel
	227		
	230		
	240		

DRILL LOG

Station No: 10

Well No: PD1, NL67, NB 53

Map Sheet: 5136 III

Co-ordinate: 660007

Location: Wat Khu Sang

Tambon: Nai Khlong Bang

Pla Kot

Amphoe: Phra Samut Chedi

Changwat: Samut Prakan

Drilling Date: PD1: 6/25/78

NL67: 6/24/89

NB53: 4/23/89

Total depth: PD1: 107.00 m.

NL67: 140.24 m.

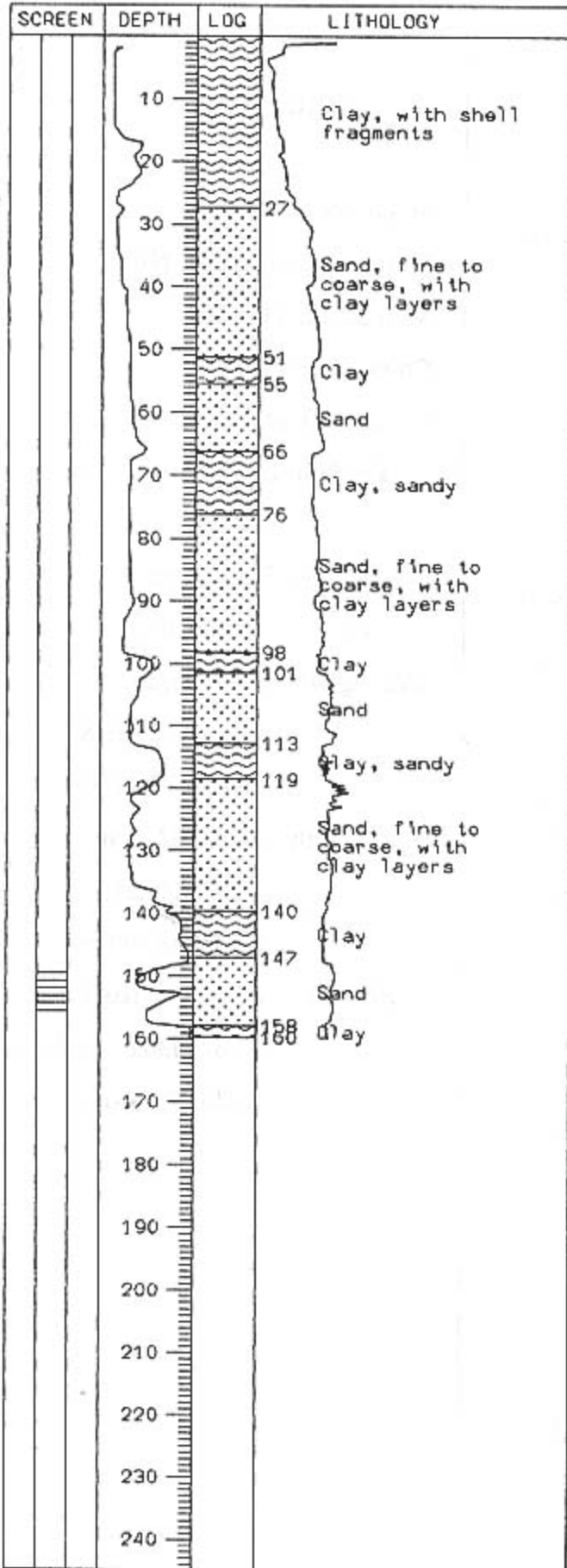
NB53: 189.00 m.

Perforation: PD1: 97.7-103.7 m.

NL67: 130.0-136.0 m.

NB53: 178.0-184.0 m.

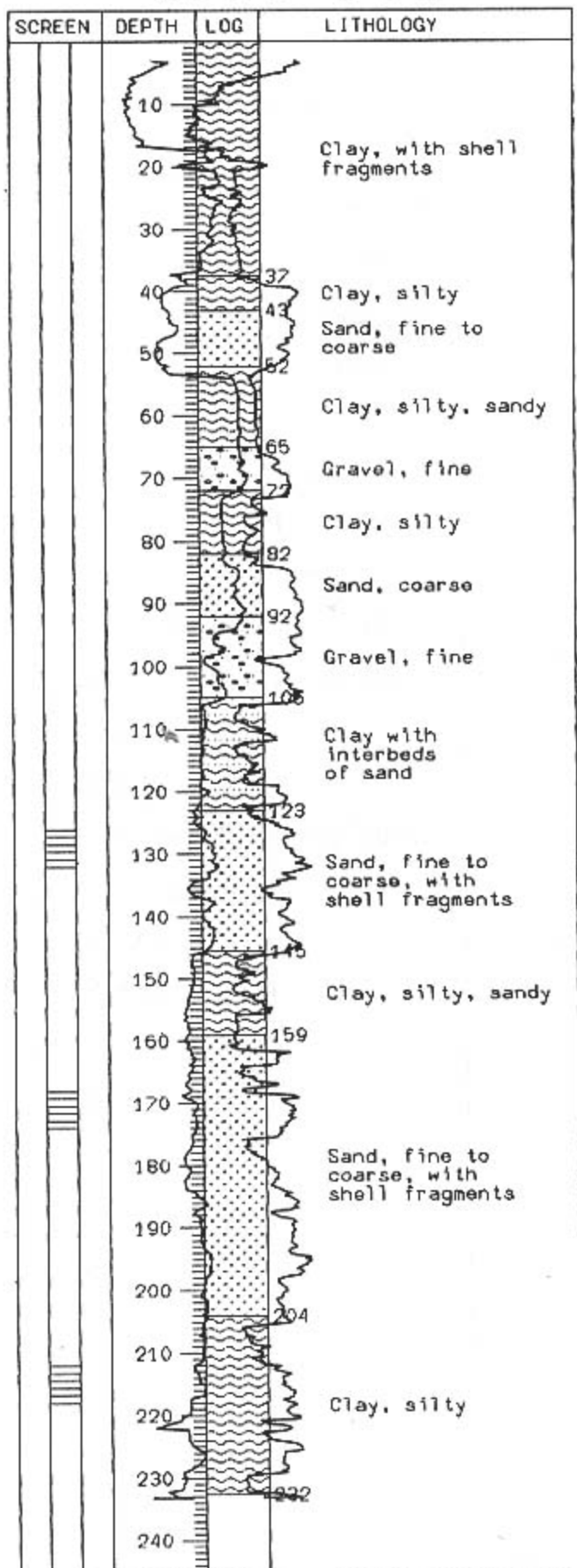
W E L L L O G



DRILL LOG

Station No: 11
 Well No: PD77, NL4, NB76
 Map Sheet: 5136 III
 Co-ordinate: 636058
 Location: Wat Thung Khru
 Tambon: Thung Khru
 Amphoe: Rat Burana
 Changwat: Bangkok
 Drilling Date: PD77:
 NL4: 6/30/78
 NB76:
 Total depth: PD77:
 NL4: 160.00 m.
 NB76:
 Perforation: PD77:
 NL4: 149.6-155.6 m.
 NB76:

W E L L L O G



D R I L L L O G

Station No: 12

Well No: PD39, NL50, NB41

Map Sheet: 5136 III

Co-ordinate: 777007

Location: Wat Phraek Sa

Tambon: Phraek Sa

Amphoe: Muang

Changwat: Samut Prakan

Drilling Date: PD39: 2/1/89

NL50: 1/6/89

NB41: 12/17/88

Total depth: PD39: 135.00 m.

NL50: 177.00 m.

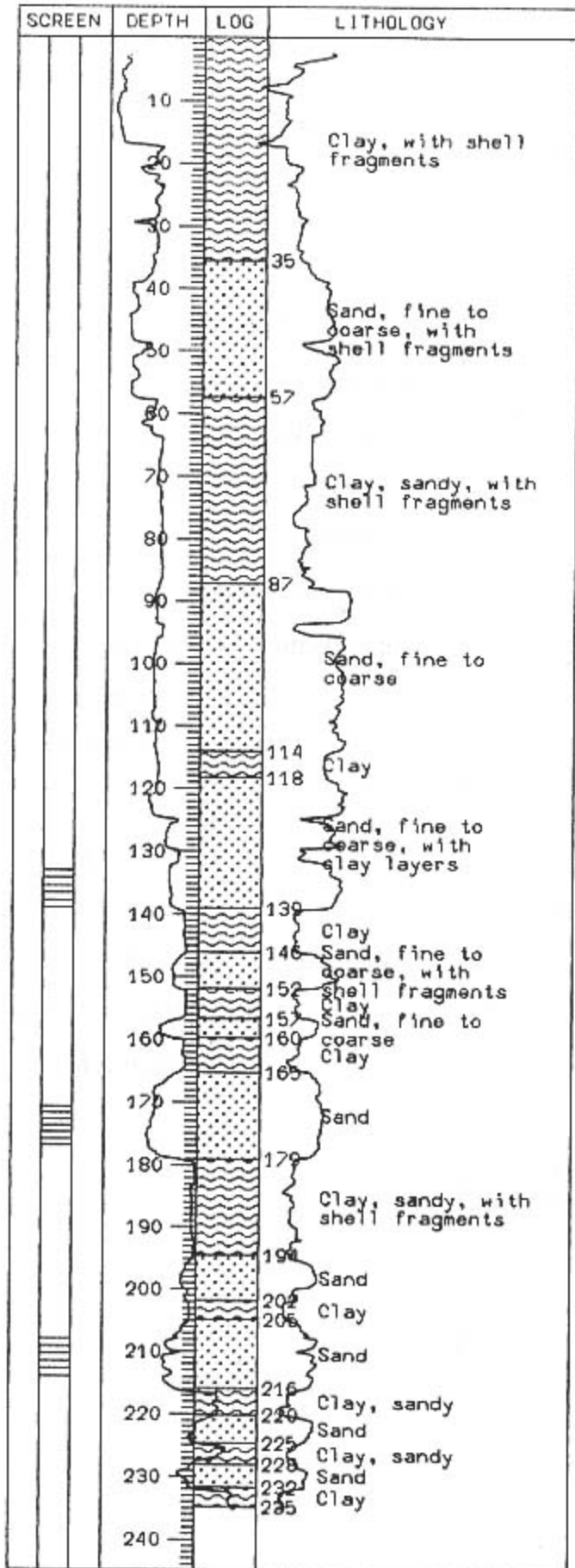
NB41: 232.00 m.

Perforation: PD39: 126.0-132.0 m.

NL50: 168.0-174.0 m.

NB41: 212.0-218.0 m.

WELL LOG



DRILL LOG

Station No: 13

Well No: PD22, NL10, NB30

Map Sheet: 5136 III

Co-ordinate: 731039

Location: Samut Prakan

Provincial Hall

Tambon: Pak Nam

Amphoe: Muang

Changwat: Samut Prakan

Drilling Date: PD22: 12/26/87

NL10: 7/6/78

NB30: 12/20/87

Total depth: PD22: 143.00 m.

NL10: 183.00 m.

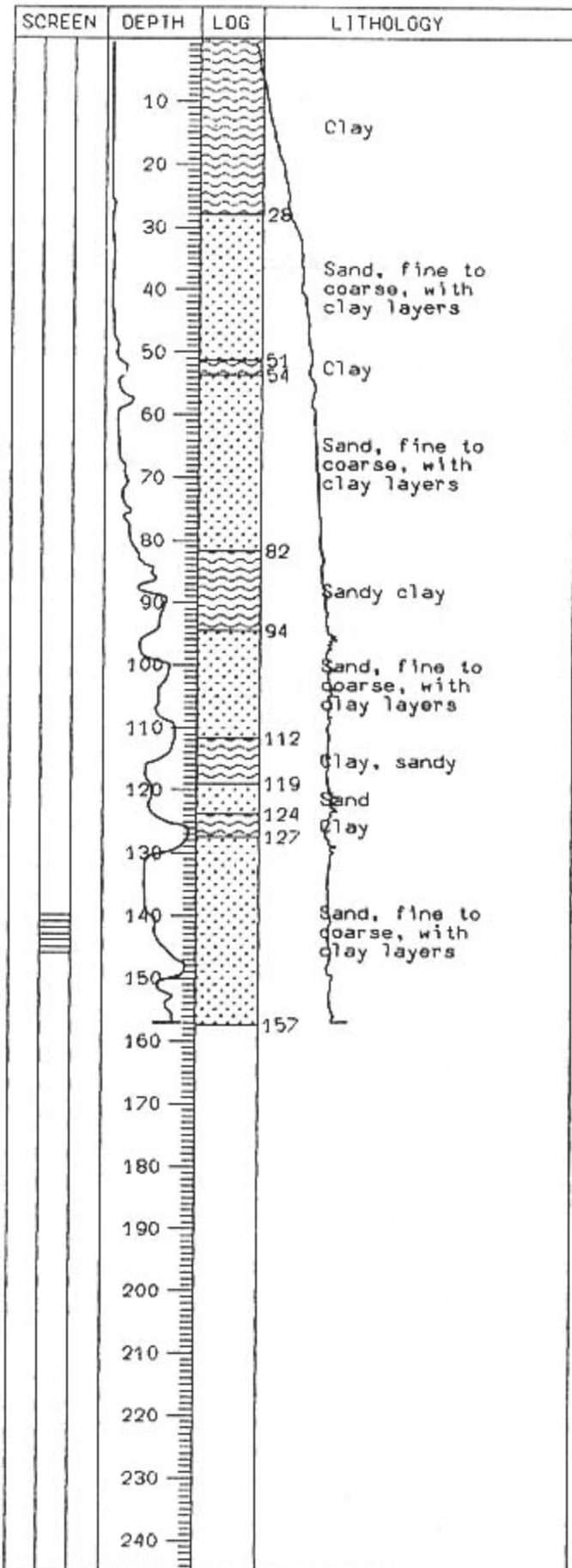
NB30: 235.00 m.

Perforation: PD22: 133.0-139.0 m.

NL10: 170.9-176.9 m.

NB30: 208.0-214.0 m.

W E L L L O G



DRILL LOG

Station No: 14

Well No: PD78, NL1, NB77

Map Sheet: 5136 II

Co-ordinate: 906949

Location: Bang Pla Aeronautical
Transmission Station

Tambon: Bang Pu Mai

Amphoe: Muang

Changwat: Samut Prakan

Drilling Date: PD78:

NL1: 7/9/78

NB77:

Total depth: PD78:

NL1: 156.00 m.

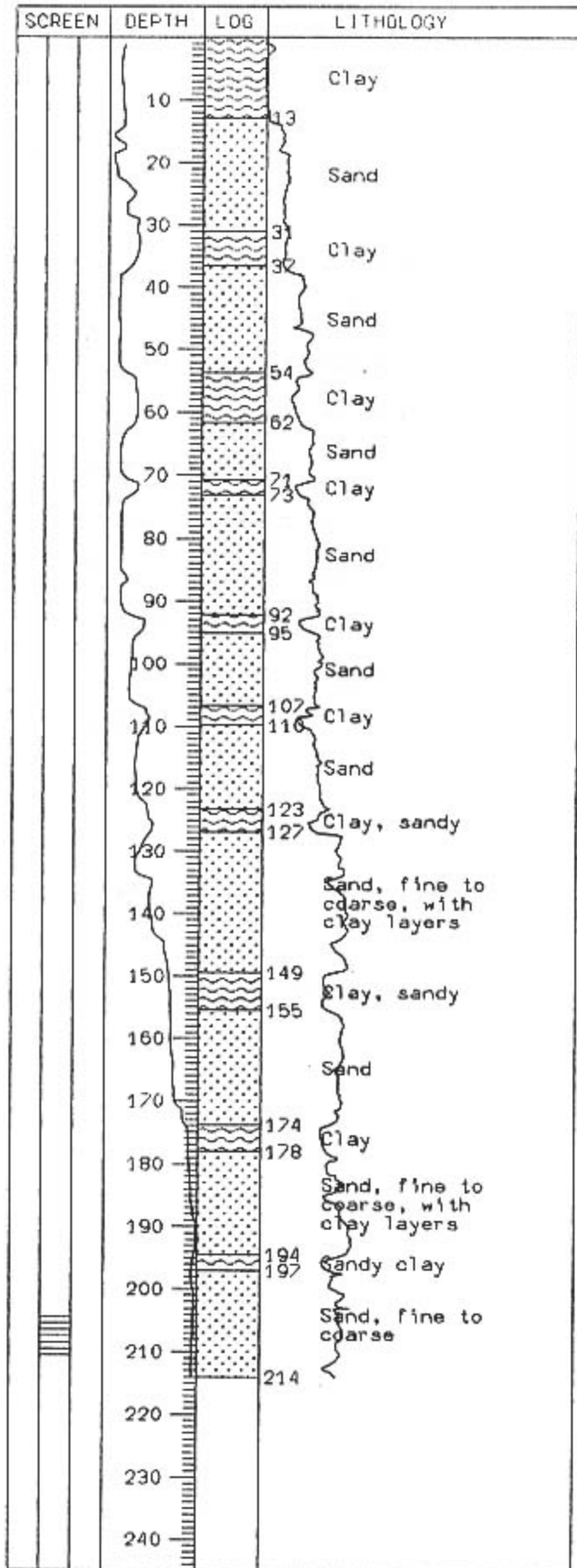
NB77:

Perforation: PD78:

NL1: 140.0-146.0 m.

NB77:

WELL LOG



DRILL LOG

Station No: 15

Well No: NB3

Map Sheet: 5136 IV

Co-ordinate: 697386

Location: Wat Weru Wanaram

Tambon: Thung Song Hong

Amphoe: Bang Khen

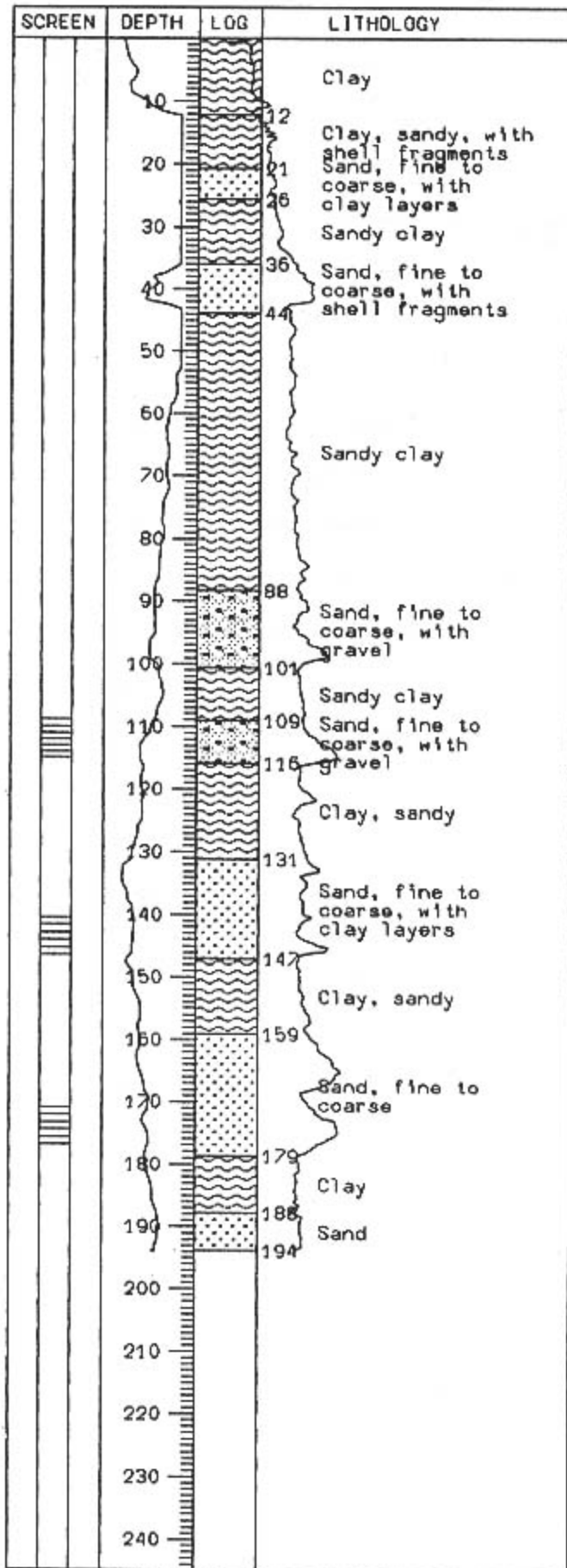
Changwat: Bangkok

Drilling Date: 7/25/78

Total depth: 213.50 m.

Perforation: 204.5-210.5 m.

WELL LOG



DRILL LOG

Station No: 16

Well No: PD51, NL7, NB7

Map Sheet: 5136 I

Co-ordinate: 891407

Location: Wat Nang Khan

Chantri

Tambon: Bung Kham Phroi

Amphoe: Lam Luk Ka

Changwat: Pathum Thani

Drilling Date: PD51: 6/4/89

NL7: 9/5/78

NB7: 7/27/78

Total depth: PD51: 118.00 m.

NL7: 158.60 m.

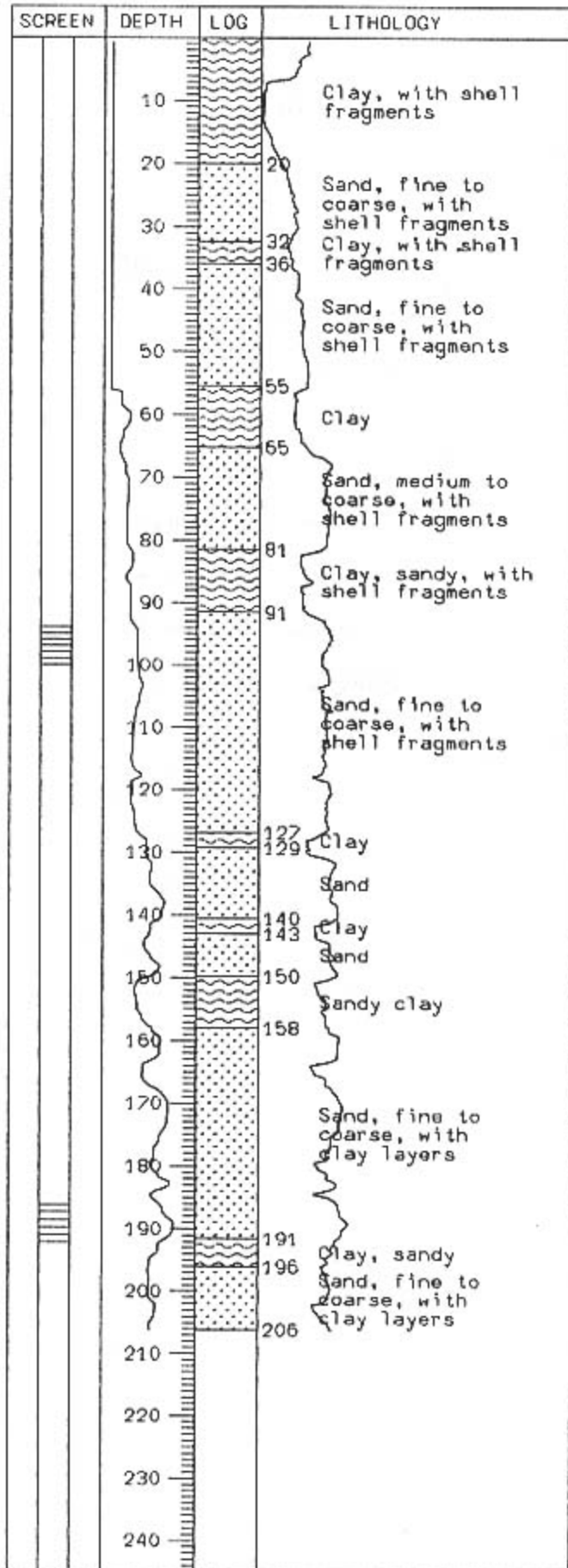
NB7: 200.00 m.

Perforation: PD51: 109.0-115.0 m.

NL7: 140.5-146.5 m.

NB7: 171.0-177.0 m.

W E L L L O G



DRILL LOG

Station No: 17

Well No: PD28, NB11

Map Sheet: 5136 IV

Co-ordinate: 719319

Location: Wat Bang Bua

Tambon: Anusawari

Amphoe: Bang Khen

Changwat: Bangkok

Drilling Date: PD28: 12/6/88

NB11: 7/27/78

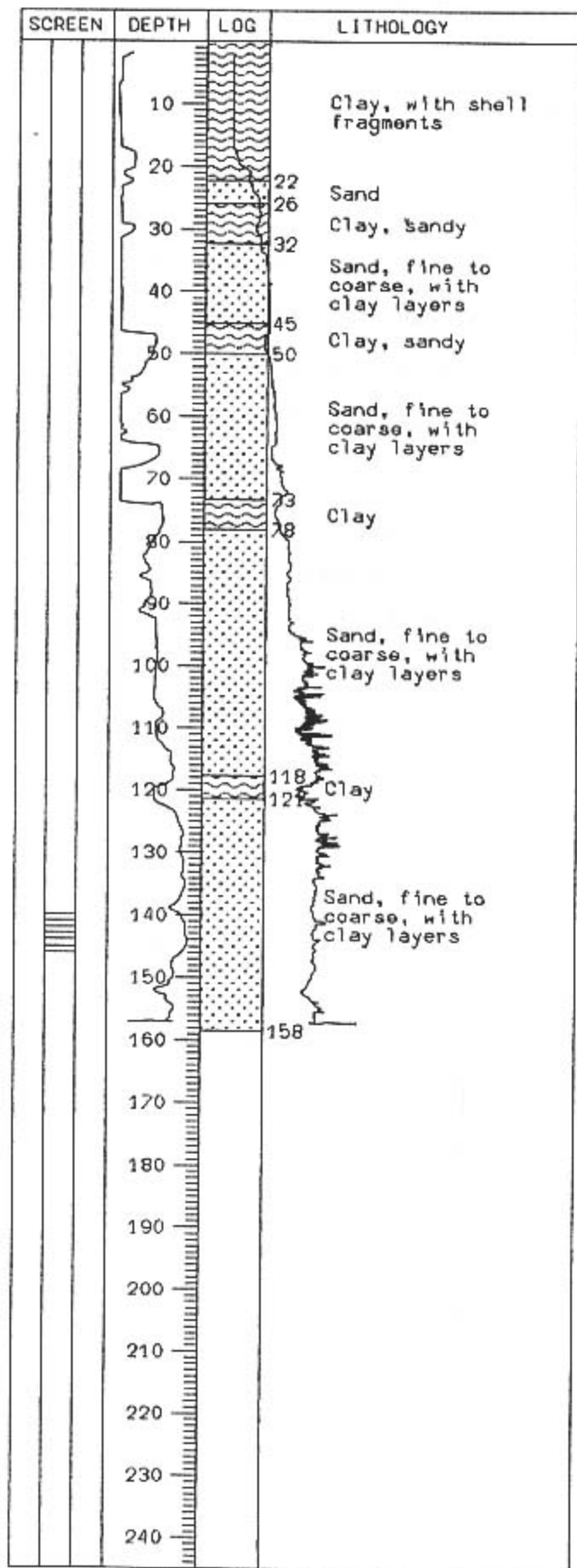
Total depth: PD28: 118.59 m.

NB11: 195.20 m.

Perforation: PD28: 94.0-100.0 m.

NB11: 186.2-192.2 m.

WELL LOG



DRILL LOG

Station No: 18

Well No: NL2

Map Sheet: 5136 III

Co-ordinate: 888056

Location: Phun Charoen

Witthayakhom School

Tambon: Bang Chalong

Amphoe: Bang Phli

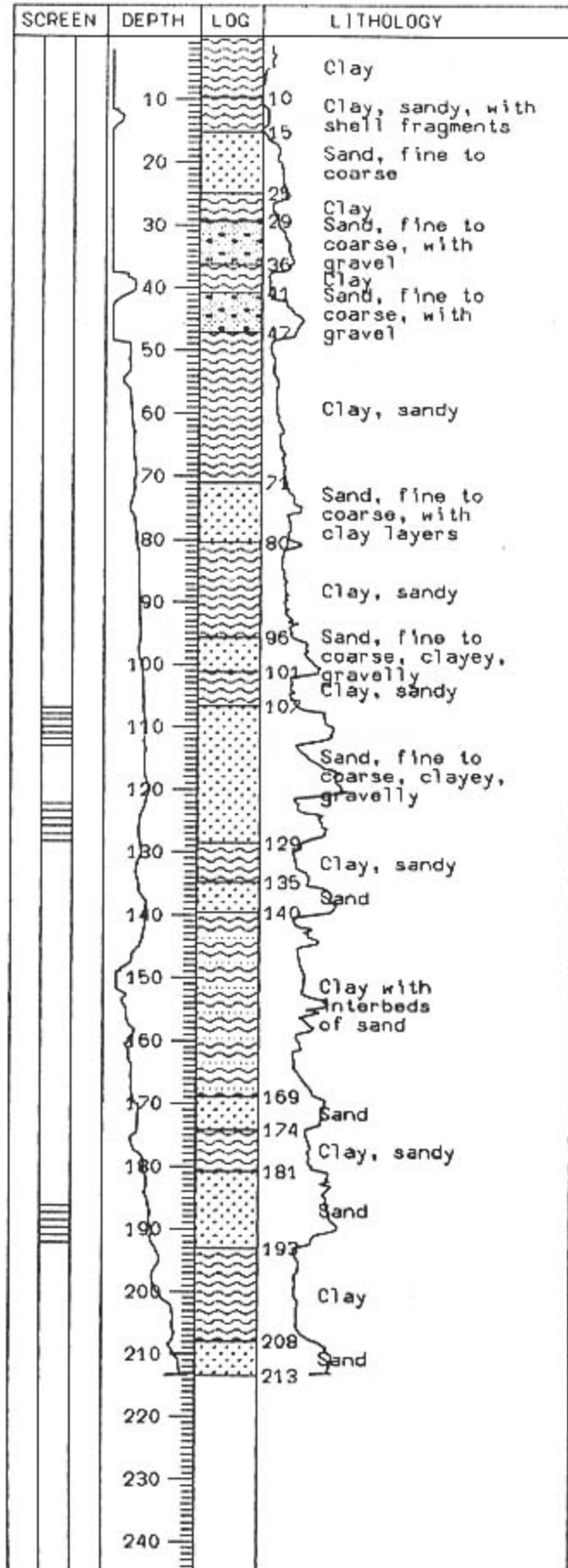
Changwat: Samut Prakan

Drilling Date: 7/30/78

Total depth: 153.00 m.

Perforation: 140.0-146.0 m.

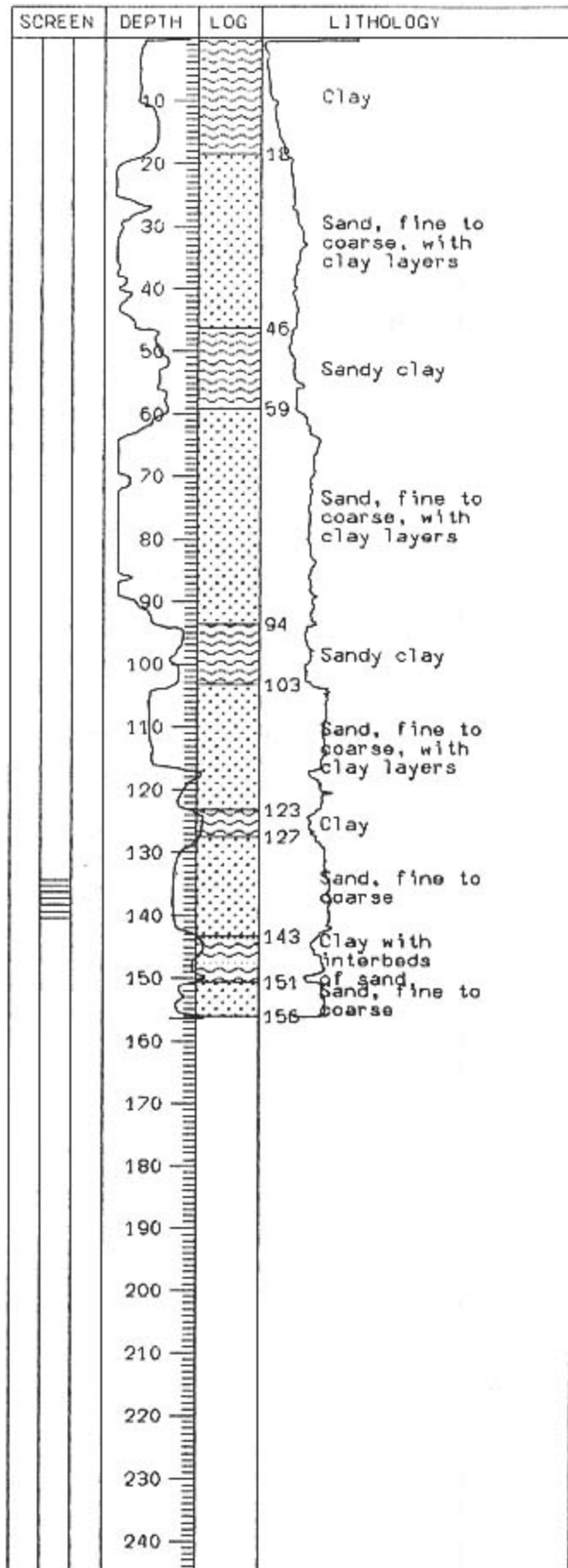
W E L L L O G



D R I L L L O G

Station No: 19
 Well No: PD42, NL8, NB6
 Map Sheet: 5137 III
 Co-ordinate: 778520
 Location: Wat Kla Cha-um
 Tambon: Khlong Song
 Amphoe: Khlong Luang
 Changwat: Pathum Thani
 Drilling Date: PD42: 3/28/89
 NL8: 8/17/78
 NB6: 7/31/78
 Total depth: PD42: 117.07 m.
 NL8: 176.90 m.
 NB6: 215.00 m.
 Perforation: PD42: 107.0-113.0 m.
 NL8: 122.3-128.3 m.
 NB6: 186.2-192.2 m.

WELL LOG



DRILL LOG

Station No: 20

Well No: NL9

Map Sheet: 5136 IV

Co-ordinate: 657433

Location: Wat Pa Klang Thung

Tambon: Bang Khayaeng

Amphoe: Muang

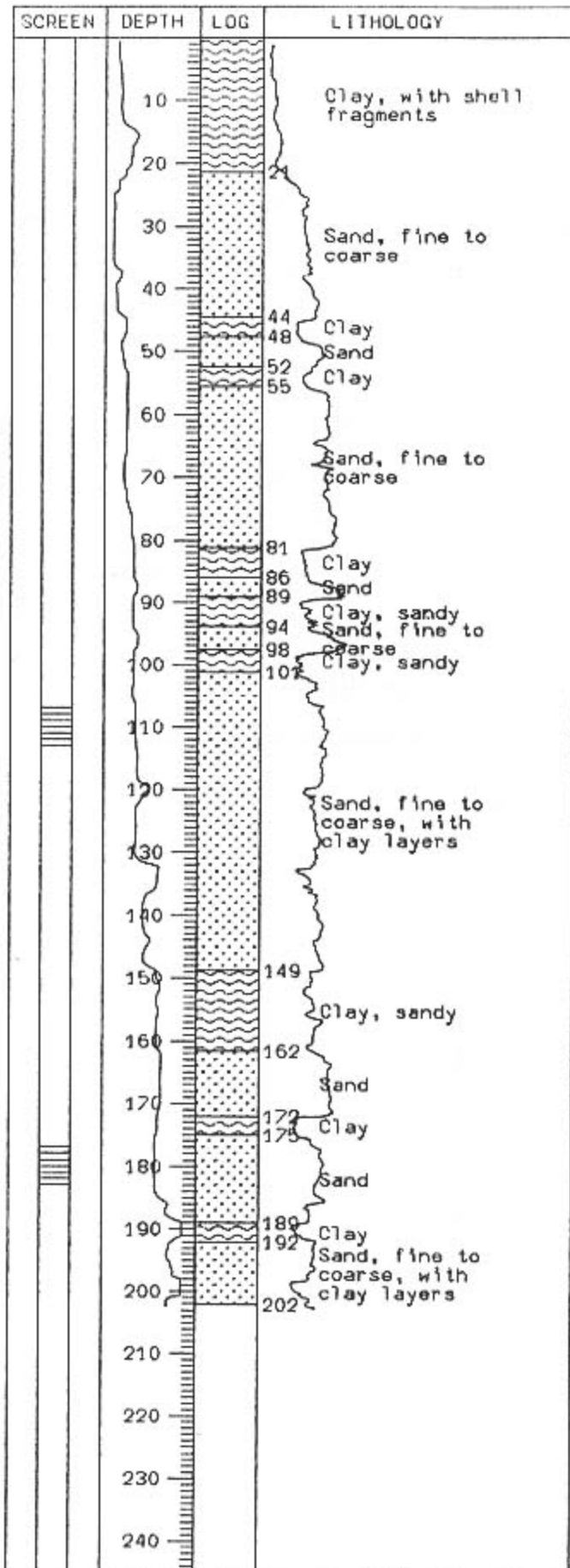
Changwat: Pathum Thani

Drilling Date: 8/2/78

Total depth: 157.38 m.

Perforation: 134.3-140.3 m.

W E L L L O G



DRILL LOG

Station No: 21

Well No: PD46, NB2

Map Sheet: 5136 III

Co-ordinate: 673085

Location: Wat Bang Ya Phraek

Tambon: Bang Ya Phraek

Amphoe: Phra Pradaeng

Changwat: Samut Prakan

Drilling Date: PD46: 5/9/89

NB2: 8/14/78

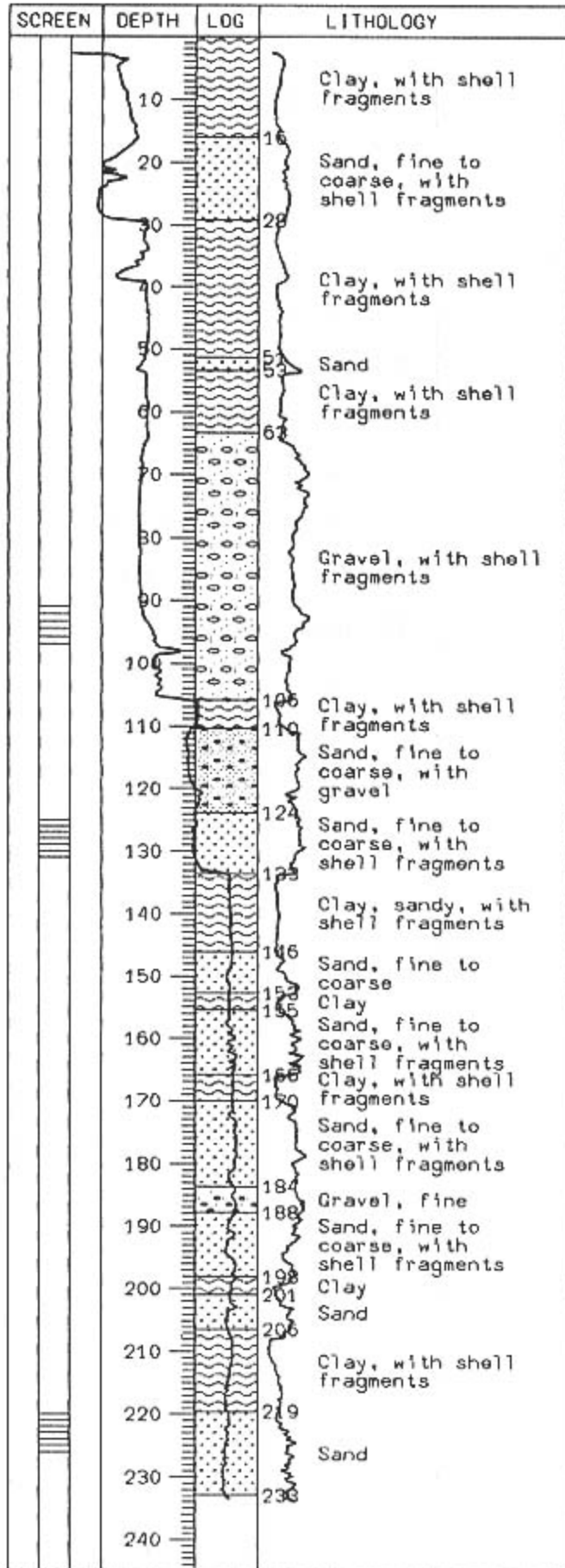
Total depth: PD46: 119.80 m.

NB2: 196.00 m.

Perforation: PD46: 107.0-113.0 m.

NB2: 177.0-183.0 m.

W E L L L O G



DRILL LOG

Station No: 22

Well No: PD26, NL6, NB36

Map Sheet: 5136 IV

Co-ordinate: 777328

Location: Wat Siri Phong

Thamnimit

Tambon: Tha Raeng

Amphoe: Bang Khen

Changwat: Bangkok

Drilling Date: PD26: 11/23/88

NL6: 8/15/78

NB36: 11/14/88

Total depth: PD26: 121.50 m.

NL6: 151.00 m.

NB36: 232.90 m.

Perforation: PD26: 91.0-97.0 m.

NL6: 125.2-131.2 m.

NB36: 220.0-226.0 m.

WELL LOG

SCREEN	DEPTH	LOG	LITHOLOGY
	5		Clay, with shell fragments
	10		
	15		
	20	17.7	Sand, fine to coarse, with gravel
	25	26.8	
	30	29.3	Clay
	35		Sand, fine to coarse, with gravel
	40		
	45	42.1	Clay
	50	46.3	
	55		Sand, fine to coarse
	60		
	65		Clay, hard
	70	68.3	
	75	74.4	Sand, fine to coarse, with clay layers
	80		
	85		
	90		
	95		
	100	99.1	
	105		
	110		
	115		
	120		
	125		
	130		
	135		
	140		
	145		
	150		
	155		
	160		
	165		
	170		
	175		
	180		
	185		
	190		
	195		
	200		
	205		
	210		
	215		
	220		
	225		
	230		
	235		
	240		

DRILL LOG

Station No: 23

Well No: PD10

Map Sheet: 5136 III

Co-ordinate: 643112

Location: Wat Ruak

Tambon: Bang Phuang

Amphoe: Phra Pradaeng

Changwat: Samut Prakan

Drilling Date: 6/6/79

Total depth: 99.00 m.

Perforation: 82.6-88.6 m.

W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay, with shell fragments
	20	19	Sand, fine to coarse, with shell fragments
	40	38	Clay, silty, sandy
	43	43	Sand
	46	46	Sand
	50		Clay, sandy
	57	57	Sand, fine to coarse
	73	73	Clay, sandy
	83	83	Sand, medium to coarse
	130	130	Clay, sandy
	144	144	Sand, fine to coarse
	180	180	Clay, sandy
	188	188	Sand, fine to coarse
	201	201	Clay
	205	205	Sand, fine to coarse
	217	217	Clay, sandy
	230	230	Sand, fine to coarse
	238	238	Sand, fine to coarse

DRILL LOG

Station No: 24

Well No: PD62, NL18, NB66

Map Sheet: 5036 II

Co-ordinate: 498048

Location: Wat Phromma Rangsi

Tambon: Samae Dam

Amphoe: Bang Khun Thian

Changwat: Bangkok

Drilling Date: PD62: 5/21/90

NL18: 6/27/79

NB66: 5/15/90

Total depth: PD62: 110.36 m.

NL18: 173.70 m.

NB66: 238.00 m.

Perforation: PD62: 95.0-101.0 m.

NL18: 164.7-170.7 m.

NB66: 208.0-214.0 m.

W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	5		Clay, with shell fragments
	10		
	15		
	20	21	
	25		
	30		Sand, fine to coarse, with clay layers
	35		
	40		
	45	44	
	50		
	55		Clay
	60	59	Sand, fine to coarse, with clay layers
	65		
	70		
	75		
	80	82	
	85		Sandy clay
	90	91	Sand, fine to coarse, with gravel
	95	97	
	100	101	Clay, sandy
	105		Sand, fine to coarse, with clay layers
	110		
	115	115	
	120		
	125		
	130		
	135		
	140		
	145		
	150		
	155		
	160		
	165		
	170		
	175		
	180		
	185		
	190		
	195		
	200		
	205		
	210		
	215		
	220		
	225		
	230		
	235		
	240		

DRILL LOG

Station No: 25

Well No: PD9

Map Sheet: 5036 II

Co-ordinate: 539072

Location: Wat Sakae Ngam

Tambon: Samae Dam

Amphoe: Bang Khun Thian

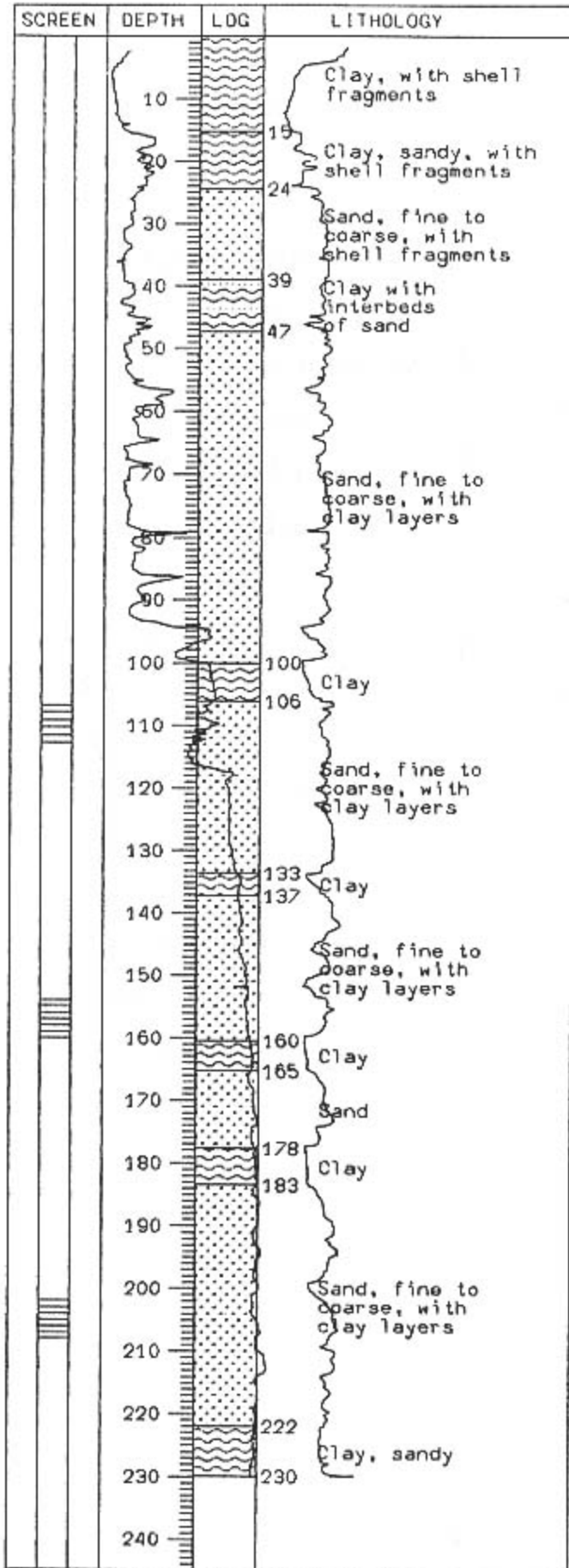
Changwat: Bangkok

Drilling Date: 7/12/79

Total depth: 115.00 m.

Perforation: 103.8-109.8 m.

W E L L L O G



DRILL LOG

Station No: 26

Well No: PD12, NL37, NB29

Map Sheet: 5036 III

Co-ordinate: 847047

Location: Wat Bang Phli Yai

Klang

Tambon: Bang Phli Yai

Amphoe: Bang Phli

Changwat: Samut Prakan

Drilling Date: PD12: 7/18/79

NL37: 12/18/87

NB29: 12/6/87

Total depth: PD12: 121.95 m.

NL37: 164.00 m.

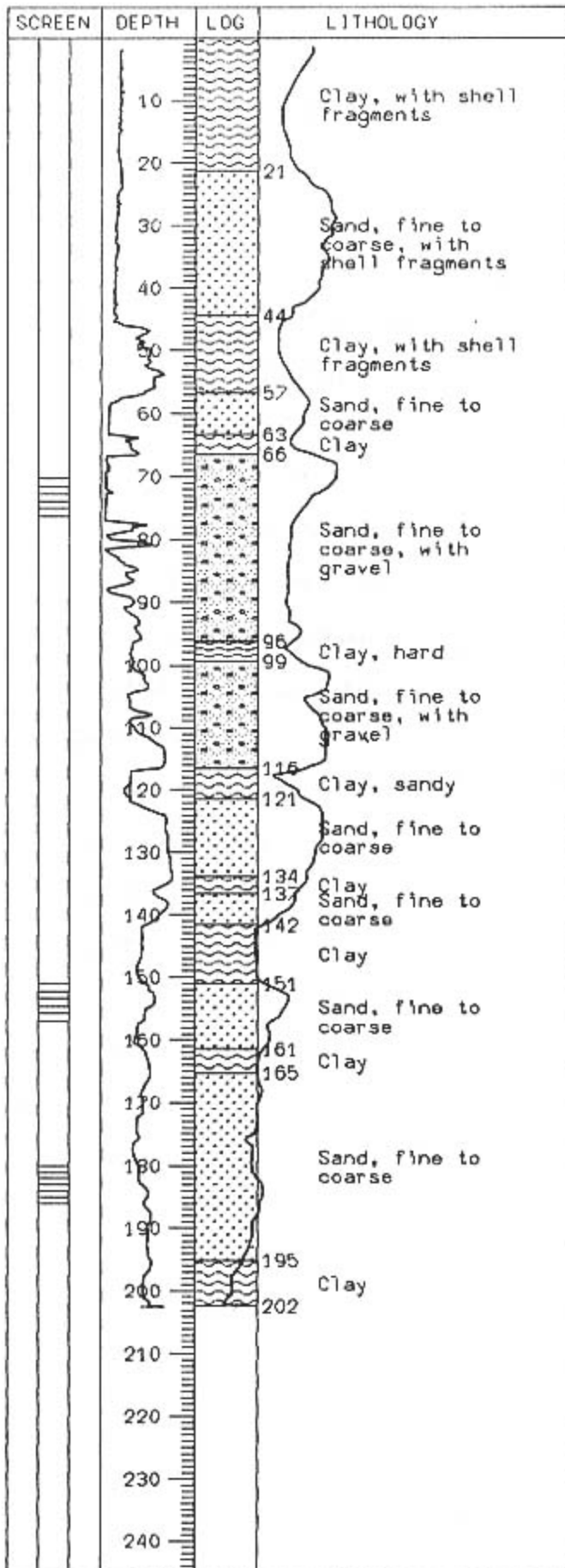
NB29: 229.00 m.

Perforation: PD12: 106.8-112.8 m.

NL37: 154.0-160.0 m.

NB29: 202.0-208.0 m.

W E L L L O G



DRILL LOG

Station No: 27

Well No: PD11, NL43, NB18

Map Sheet: 5136 II

Co-ordinate: 938029

Location: Wat Mongkhon Nimit

Tambon: Bang Sao Thong

Amphoe: Bang Phli

Changwat: Samut Prakan

Drilling Date: PD11: 7/22/79

NL43: 11/22/88

NB18: 8/8/79

Total depth: PD11: 118.95 m.

NL43: 171.00 m.

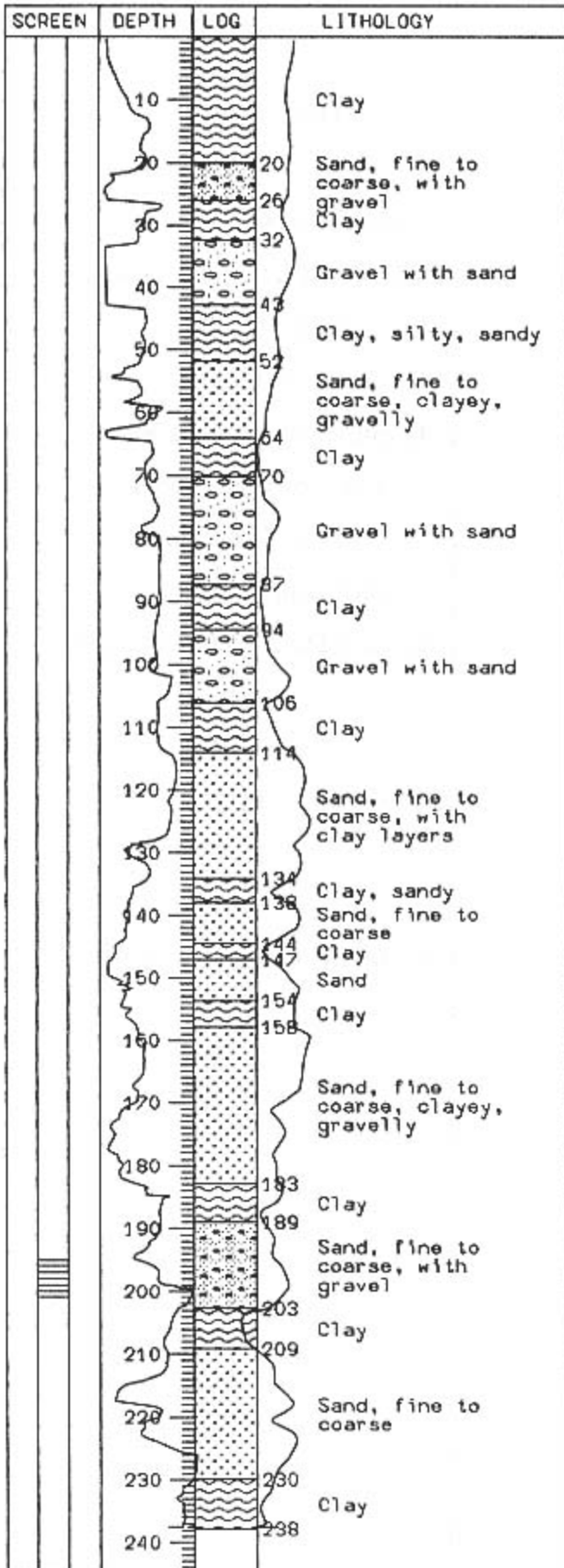
NB18: 201.30 m.

Perforation: PD11: 70.3-76.3 m.

NL43: 151.0-157.0 m.

NB18: 180.0-186.0 m.

W E L L L O G



DRILL LOG

Station No: 28

Well No: NB16

Map Sheet: 5136 IV

Co-ordinate: 796405

Location: Wat Sai Mai

Tambon: Khu Khot

Amphoe: Lum Luk Ka

Changwat: Pathum Thani

Drilling Date: 8/10/79

Total depth: 236.68 m.

Perforation: 195.0-201.0 m.

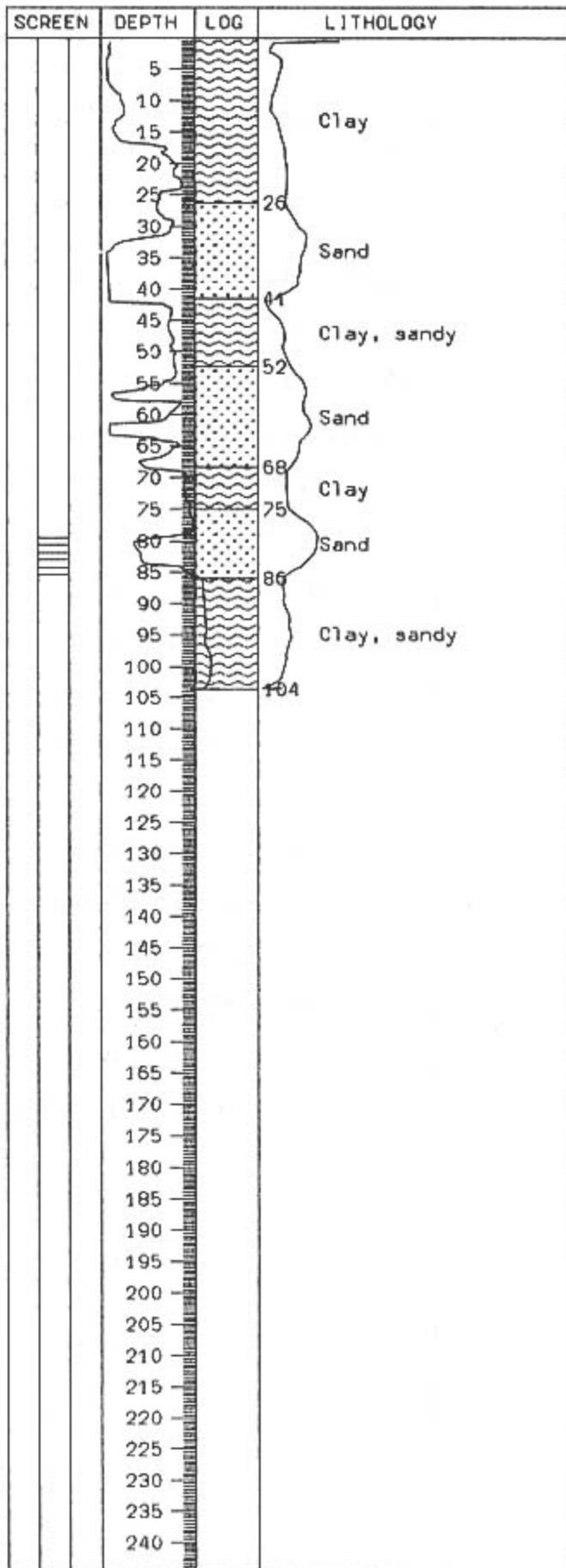
W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	5		
	10		
	15		
	20		
	21		
	25		
	30		Sand
	35		
	37		
	40		
	45		Clay
	50		
	55		
	60		Sand
	65		
	65		
	70		
	75		Clay, sandy
	80		
	85		
	85		
	90		
	95		Sand, fine to coarse, with clay layers
	100		
	105		
	110		
	110		
	115		
	120		
	125		
	130		
	135		
	140		
	145		
	150		
	155		
	160		
	165		
	170		
	175		
	180		
	185		
	190		
	195		
	200		
	205		
	210		
	215		
	220		
	225		
	230		
	235		
	240		

DRILL LOG

Station No: 29
 Well No: PD14, NL81, NB78
 Map Sheet: 5136 II
 Co-ordinate: 005150
 Location: Wat Ratcha Kosa
 Tambon: Khun Thong
 Amphoe: Lat Krabang
 Changwat: Bangkok
 Drilling Date: PD14: 8/20/79
 NL81:
 NB78:
 Total depth: PD14: 109.80 m.
 NL81:
 NB78:
 Perforation: PD14: 91.0-97.0 m.
 NL81:
 NB78:

W E L L L O G



DRILL LOG

Station No: 30

Well No: PD15, NL84, NB83

Map Sheet: 5136 I

Co-ordinate: 956260

Location: Wat Mai Lam Nok

Khwaek

Tambon: Saen Saep

Amphoe: Min Buri

Changwat: Bangkok

Drilling Date: PD15: 8/25/79

NL84:

NB83:

Total depth: PD15: 103.65 m.

NL84:

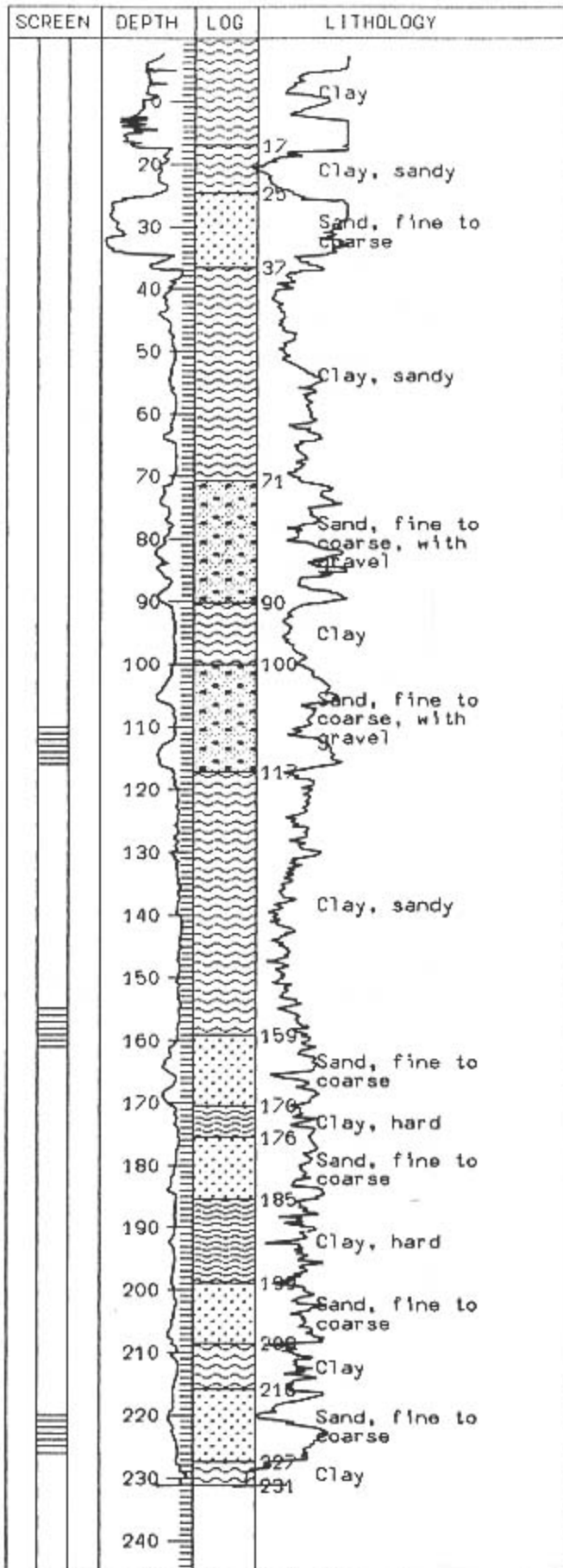
NB83:

Perforation: PD15: 79.4-85.4 m.

NL84:

NB83:

WELL LOG



DRILL LOG

Station No: 31
 Well No: PD75, NL13, NB75
 Map Sheet: 5137 III
 Co-ordinate: 819714
 Location: Wat Lat Sai
 Tambon: Lam Sai
 Amphoe: Wang Noi
 Changwat: Phra Nakhon
 Si Ayutthaya
 Drilling Date: PD75: 3/12/91
 NL13: 8/25/79
 NB75: 3/5/91
 Total depth: PD75: 122.00 m.
 NL13: 170.00 m.
 NB75: 231.70 m.
 Perforation: PD75: 110.0-116.0 m.
 NL13: 155.0-161.0 m.
 NB75: 220.0-226.0 m.

WELL LOG

SCREEN	DEPTH	LOG	LITHOLOGY
	5		
	10		Clay
	15		
	20	20	
	25		
	30		
	35		Sand, fine to coarse, with clay layers
	40		
	45		
	50		
	55		
	60	60	Clay
	65		
	70	68	
	75		Sand
	80	80	Clay
	85	8X	
	90		Sand
	95	9	
	100	102	Clay
	105		
	110		Sand
	115		
	120	119	
	125		
	130		
	135		
	140		
	145		
	150		
	155		
	160		
	165		
	170		
	175		
	180		
	185		
	190		
	195		
	200		
	205		
	210		
	215		
	220		
	225		
	230		
	235		
	240		

DRILL LOG

Station No: 32

Well No: PD13

Map Sheet: 5136 II

Co-ordinate: 950116

Location: Wat Si Wari Noi

Tambon: Sisa Chorakhe Yai

Amphoe: Bang Phli

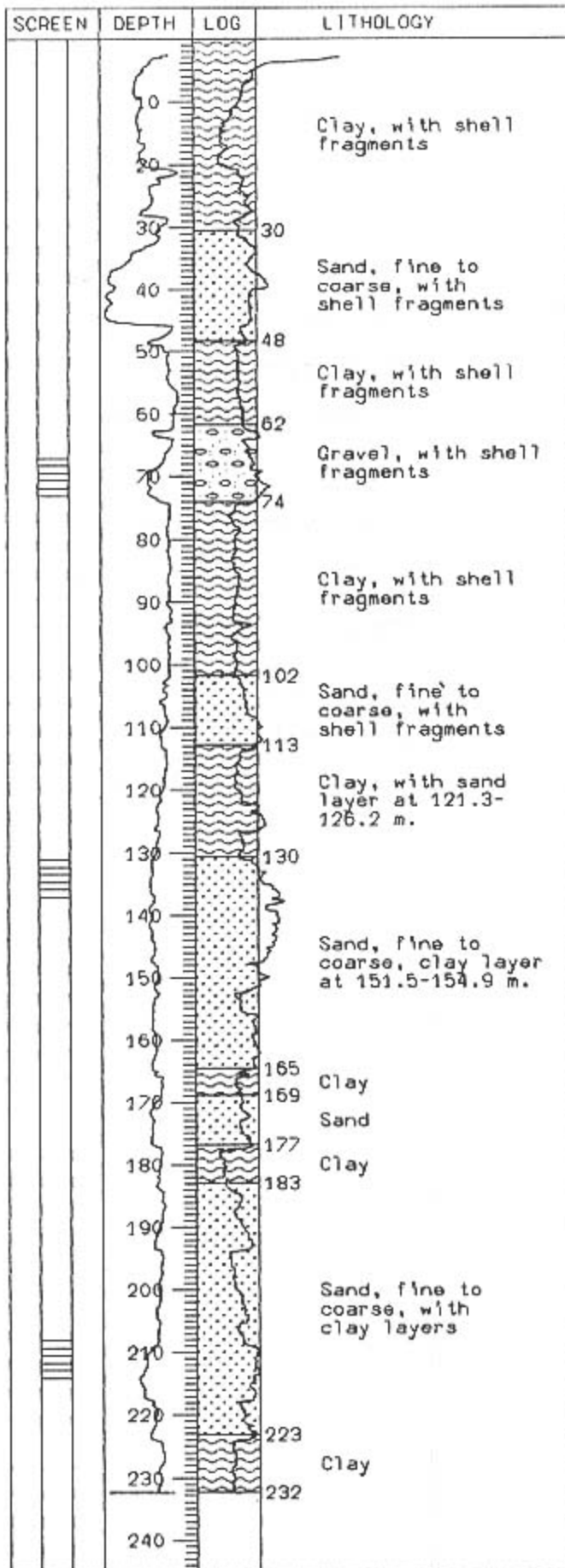
Changwat: Samut Prakan

Drilling Date: 8/26/79

Total depth: 119.00 m.

Perforation: 110.0-116.0 m.

W E L L L O G



DRILL LOG

Station No: 33

Well No: PD40, NL16, NB46

Map Sheet: 5136 IV

Co-ordinate: 887280

Location: Wat Saen Suk

Tambon: Min Buri

Amphoe: Min Buri

Changwat: Bangkok

Drilling Date: PD40: 2/11/89

NL16: 9/1/79

NB46: 1/23/89

Total depth: PD40: 85.00 m.

NL16: 144.51 m.

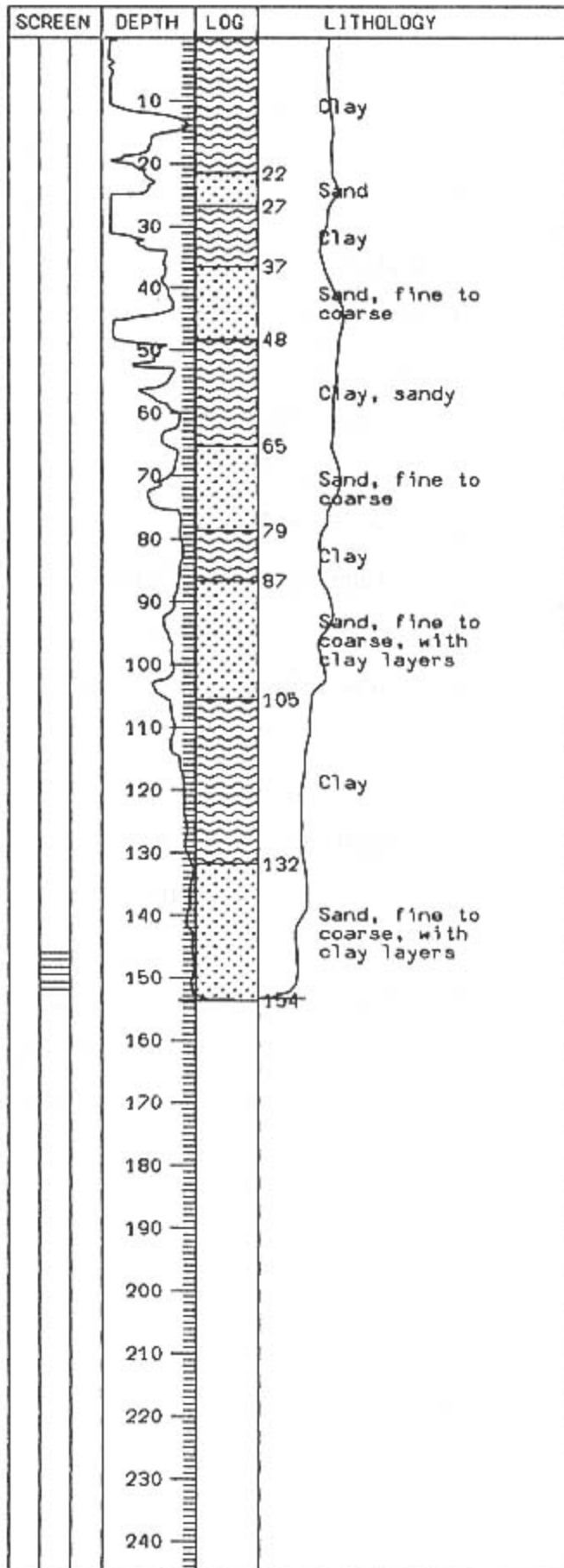
NB46: 232.00 m.

Perforation: PD40: 67.0-73.0 m.

NL16: 131.1-137.1 m.

NB46: 208.0-214.0 m.

W E L L L O G



DRILL LOG

Station No: 34

Well No: PD85, NL15, NB82

Map Sheet: 5136 I

Co-ordinate: 014323

Location: Wat Phakdi Noraset

Tambon: Krathum Rai

Amphoe: Nong Chok

Changwat: Bangkok

Drilling Date: PD85:

NL15: 9/2/79

NB82:

Total depth: PD85:

NL15: 155.00 m.

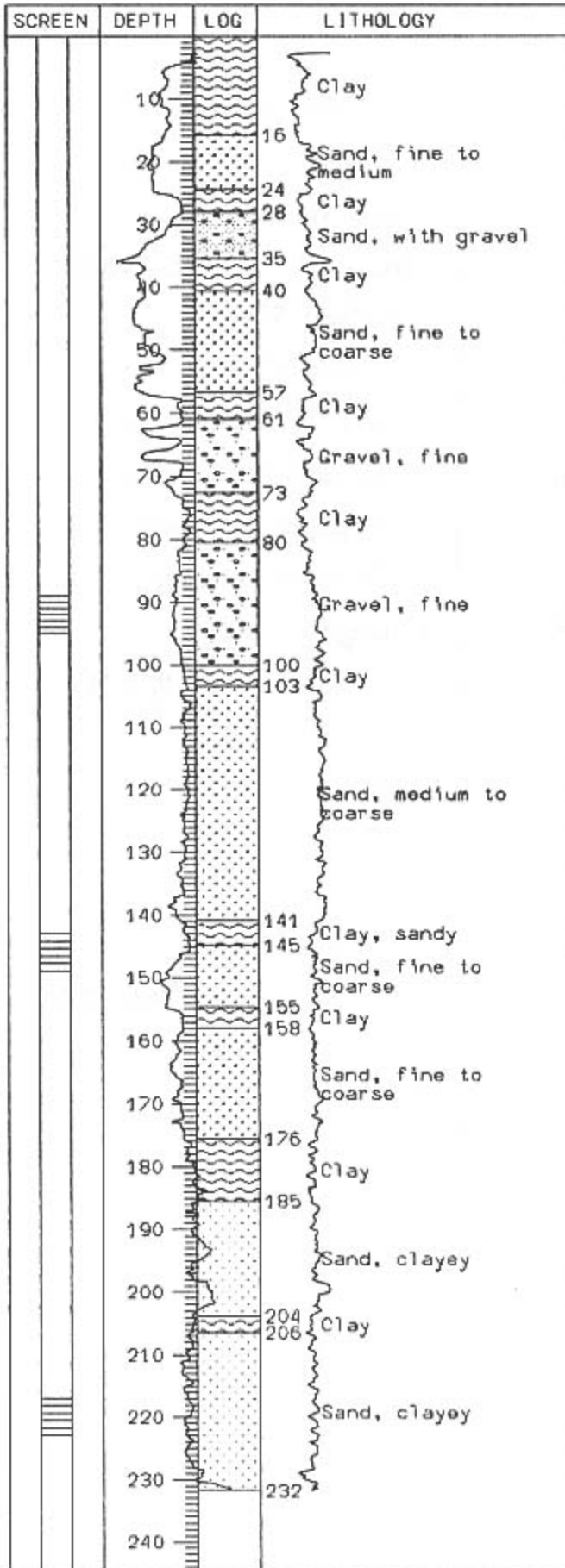
NB82:

Perforation: PD85:

NL15: 146.0-152.0 m.

NB82:

W E L L L O G



DRILL LOG

Station No: 35

Well No: PD68, NL12, NB69

Map Sheet: 5137 III

Co-ordinate: 652696

Location: Wat Bot Somphon Chai

Tambon: Ratcha Khram

Amphoe: Bang Sai

Changwat: Phra Nakhon

Si Ayutthaya

Drilling Date: PD68: 9/22/90

NL12: 9/6/79

NB69: 9/17/90

Total depth: PD68: 102.10 m.

NL12: 162.00 m.

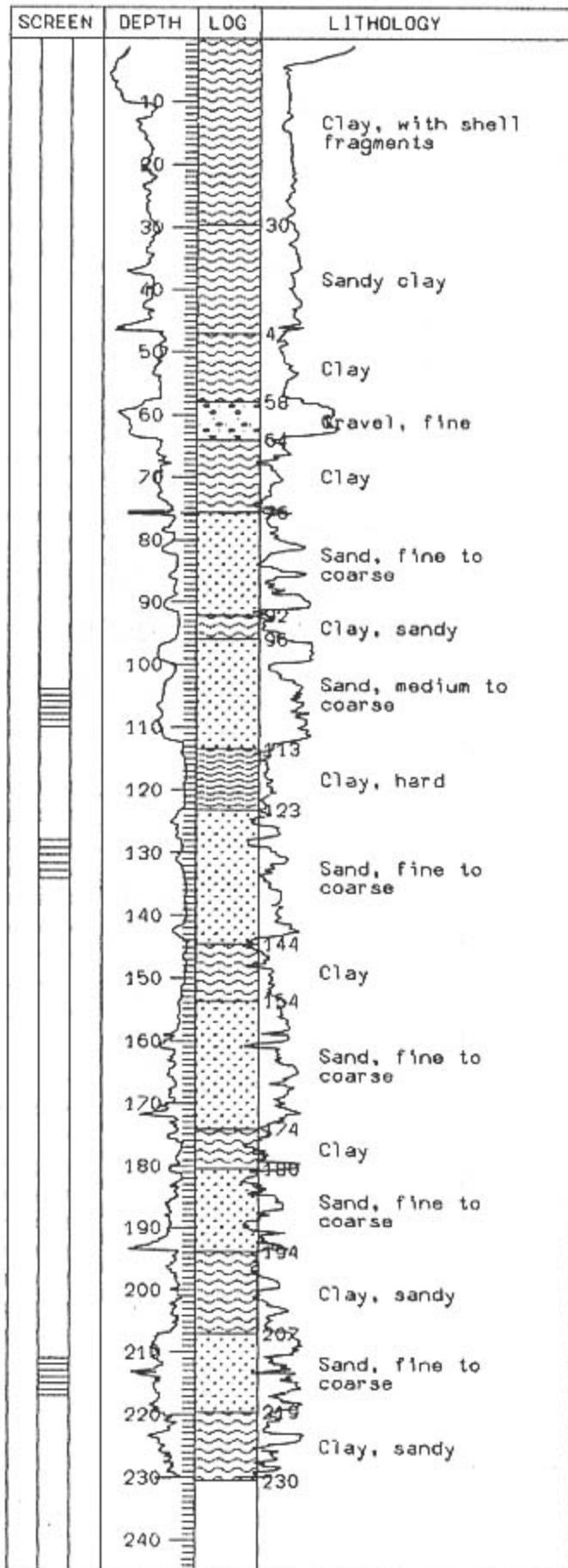
NB69: 231.70 m.

Perforation: PD68: 89.0-95.0 m.

NL12: 143.0-149.0 m.

NB69: 217.0-223.0 m.

WELL LOG



DRILL LOG

Station No: 36

Well No: PD72, NL14, NB73

Map Sheet: 5137 II

Co-ordinate: 941529

Location: Wat Aiyikaram

Tambon: Lam Phak Kut

Amphoe: Thanyaburi

Changwat: Pathum Thani

Drilling Date: PD72: 1/31/91

NL14: 9/23/79

NB73: 1/24/91

Total depth: PD72: 114.60 m.

NL14: 161.65 m.

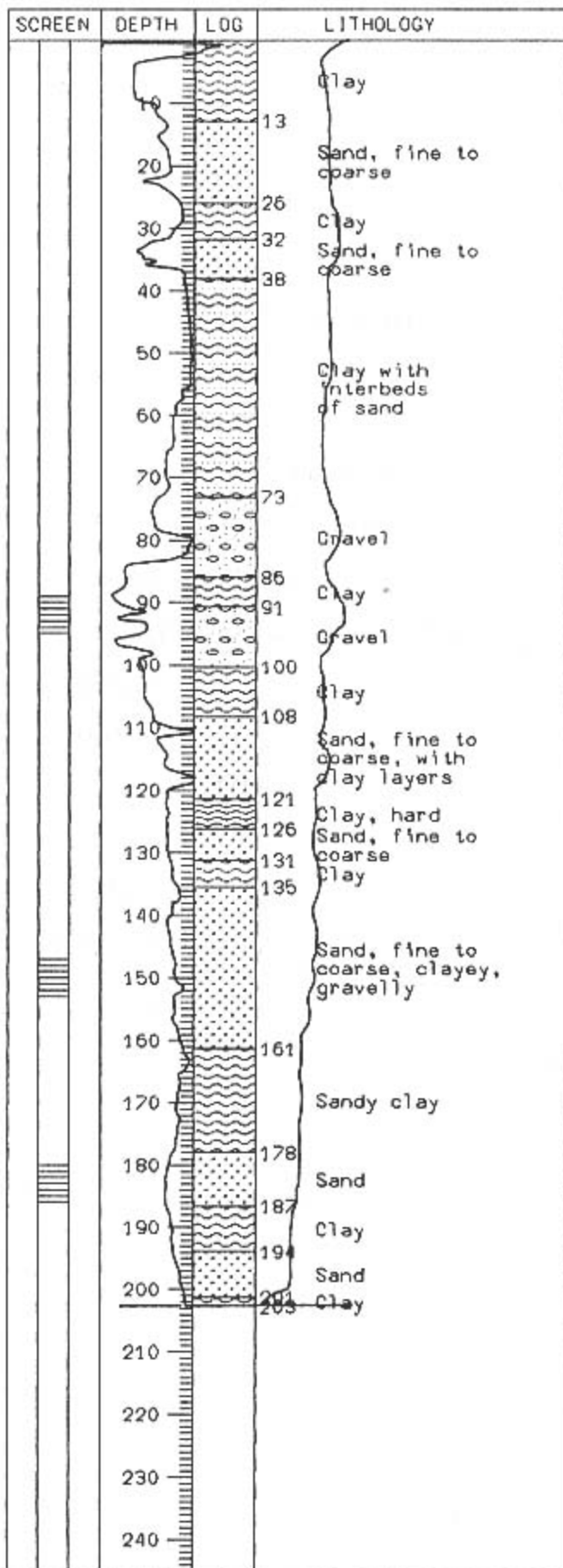
NB73: 230.48 m.

Perforation: PD72: 104.0-110.0 m.

NL14: 128.3-134.3 m.

NB73: 211.0-217.0 m.

W E L L L O G



DRILL LOG

Station No: 37

Well No: PD67, NL76, NB12

Map Sheet: 5137 III

Co-ordinate: 872606

Location: Wat Phalahan

Tambon: Khlong Hok

Amphoe: Khlong Luang

Changwat: Pathum Thani

Drilling Date: PD67: 9/20/90

NL76: 10/14/90

NB12: 10/8/79

Total depth: PD67: 107.30 m.

NL76: 176.80 m.

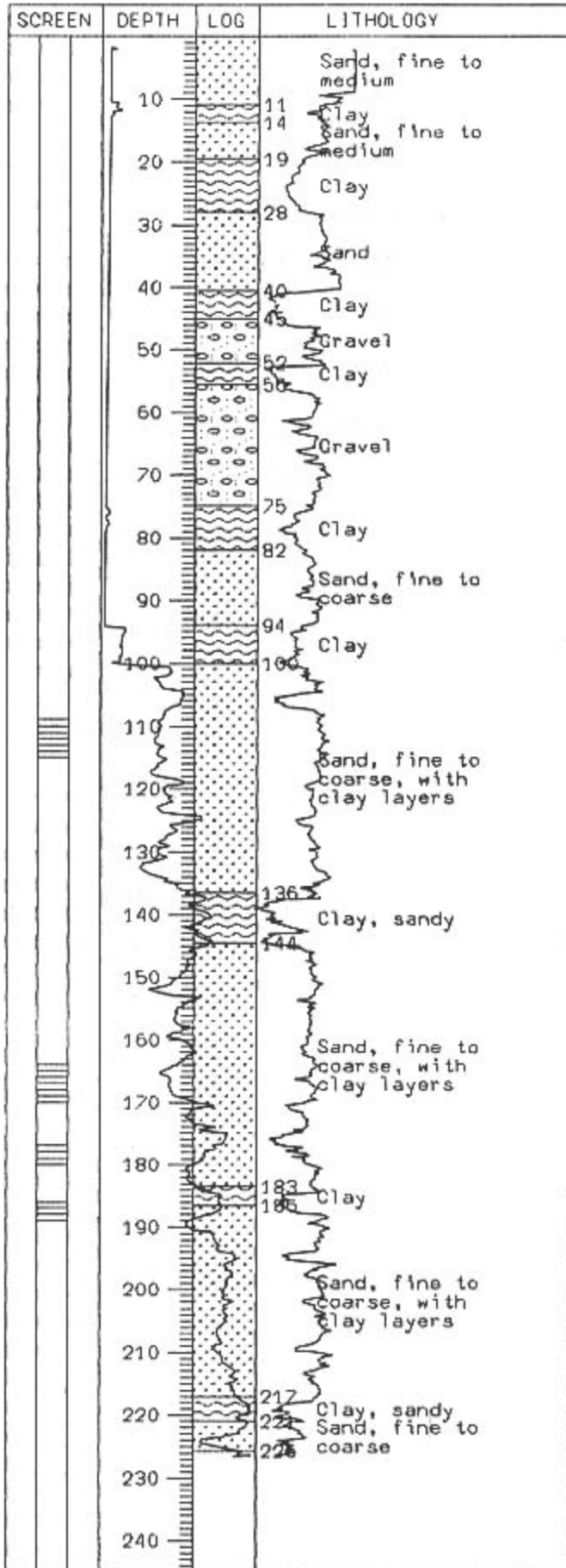
NB12: 202.90 m.

Perforation: PD67: 89.0-95.0 m.

NL76: 147.0-153.0 m.

NB12: 180.0-186.0 m.

W E L L L O G



D R I L L L O G

Station No: 38

Well No: PD74, NL78, NB13

Map Sheet: 5137 III

Co-ordinate: 639624

Location: Wat Pa Kha

Tambon: Khok Chang

Amphoe: Bang Sai

Changwat: Phra Nakhon

Si Ayutthaya

Drilling Date: PD74: 3/4/90

NL78: 10/2/90

NB13: 10/10/79

Total depth: PD74: 120.40 m.

NL78: 225.60 m.

NB13: 204.26 m.

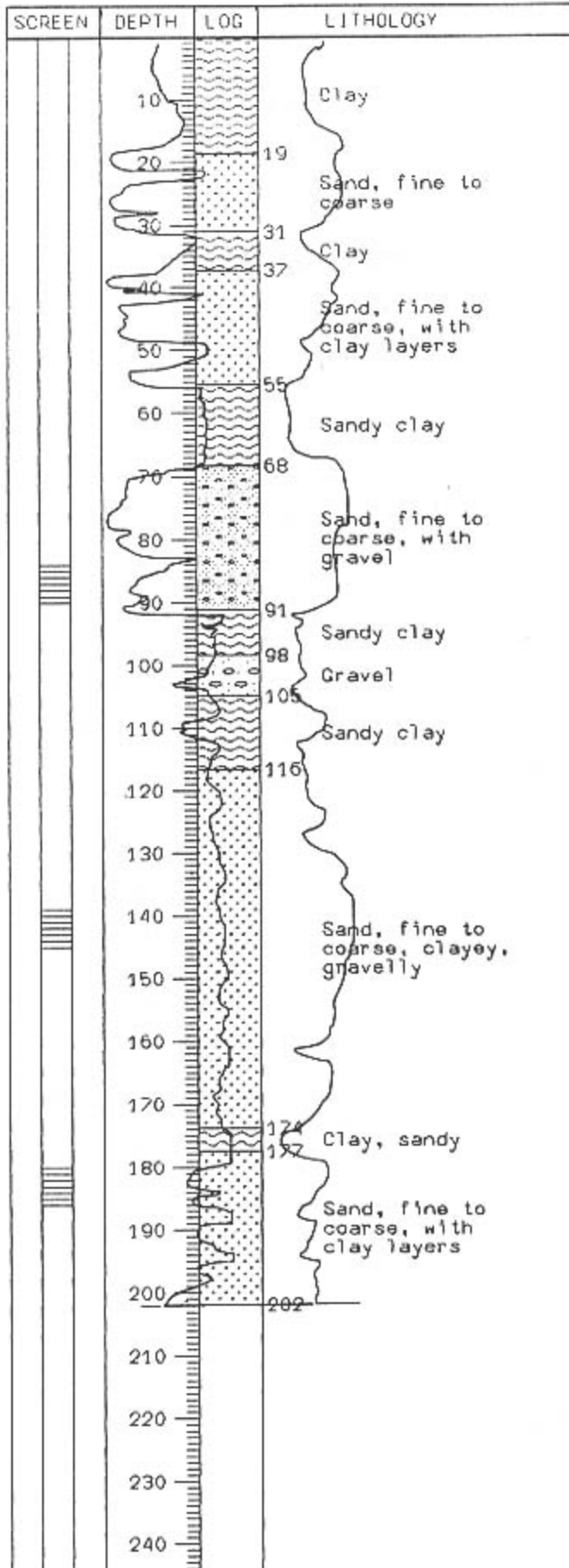
Perforation: PD74: 109.0-115.0 m.

NL78: 164.0-170.0 m.

NB13: 177.0-180.0 m.

186.0-189.0 m.

W E L L L O G



D R I L L L O G

Station No: 39

Well No: PD59, NL71, NB15

Map Sheet: 5037 II

Co-ordinate: 538523

Location: Wat Bua Kaeo Keson

Tambon: Rahaeng

Amphoe: Lat Lum Kaeo

Changwat: Pathum Thani

Drilling Date: PD59: 4/21/90

NL71: 4/7/90

NB15: 10/12/79

Total depth: PD59: 100.00 m.

NL71: 175.00 m.

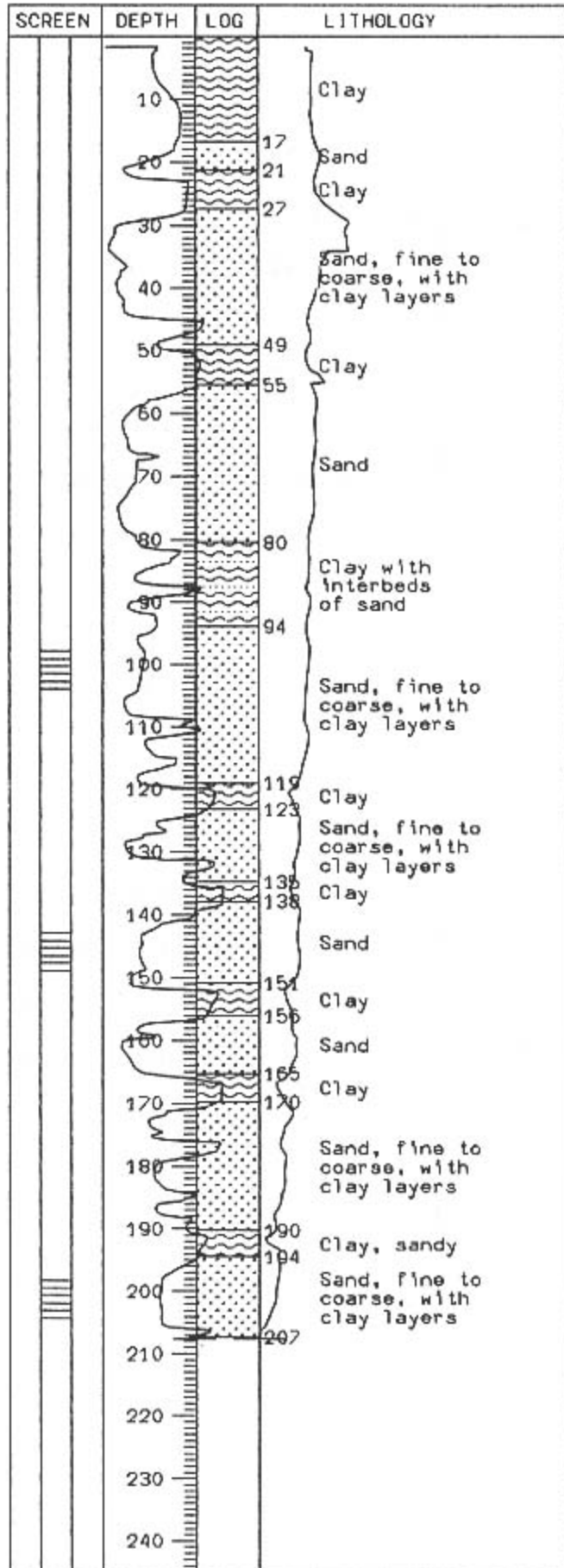
NB15: 201.82 m.

Perforation: PD59: 84.0-90.0 m.

NL71: 139.0-145.0 m.

NB15: 180.0-186.0 m.

W E L L L O G



DRILL LOG

Station No: 40

Well No: PD47, NL65, NB14

Map Sheet: 5137 III

Co-ordinate: 659503

Location: Pathum Thani

Provincial Hall

Tambon: Bang Prok

Amphoe: Muang

Changwat: Pathum Thani

Drilling Date: PD47: 5/19/89

NL65: 5/15/89

NB14: 10/14/79

Total depth: PD47: 107.03 m.

NL65: 152.65 m.

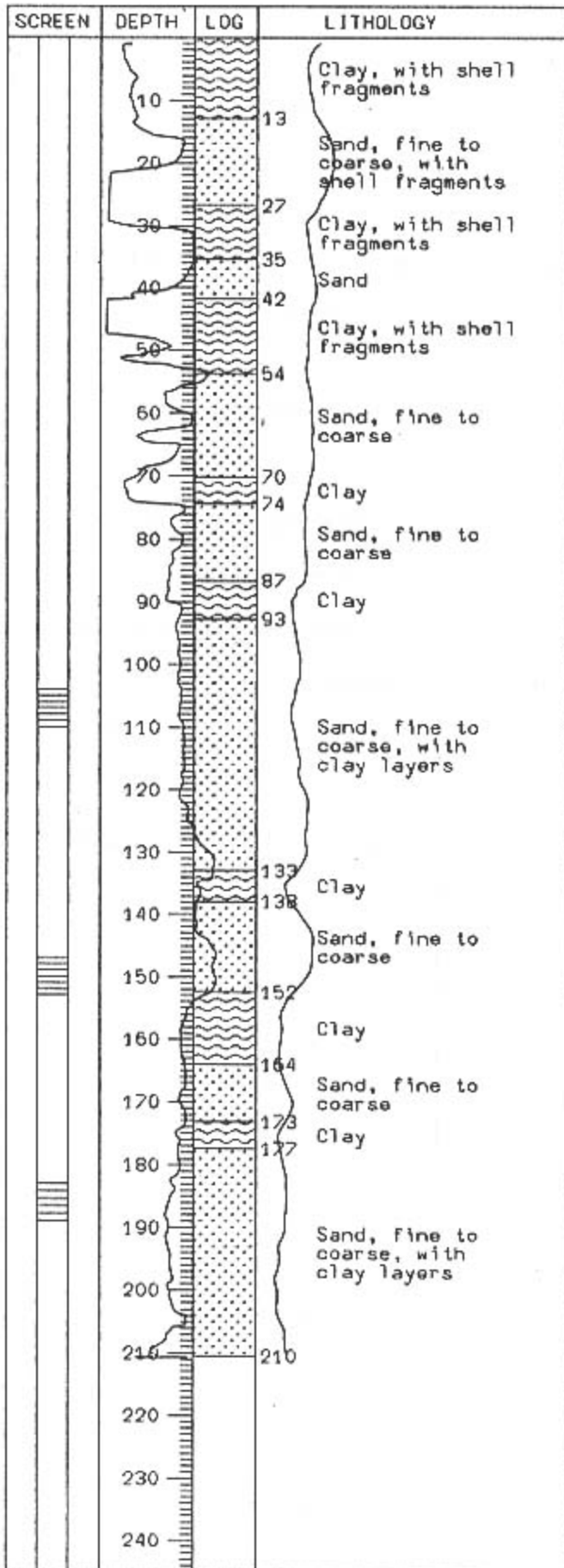
NB14: 207.31 m.

Perforation: PD47: 98.0-104.0 m.

NL65: 143.0-149.0 m.

NB14: 198.3-204.3 m.

W E L L L O G



D R I L L L O G

Station No: 41

Well No: PD33, NL47, NB17

Map Sheet: 5136 II

Co-ordinate: 901198

Location: Wat Bamrung Run

Tambon: Khlong Sam Prawet

Amphoe: Lat Krabang

Changwat: Bangkok

Drilling Date: PD33: 12/20/88

NL47: 12/14/88

NB17: 10/15/79

Total depth: PD33: 113.00 m.

NL47: 170.00 m.

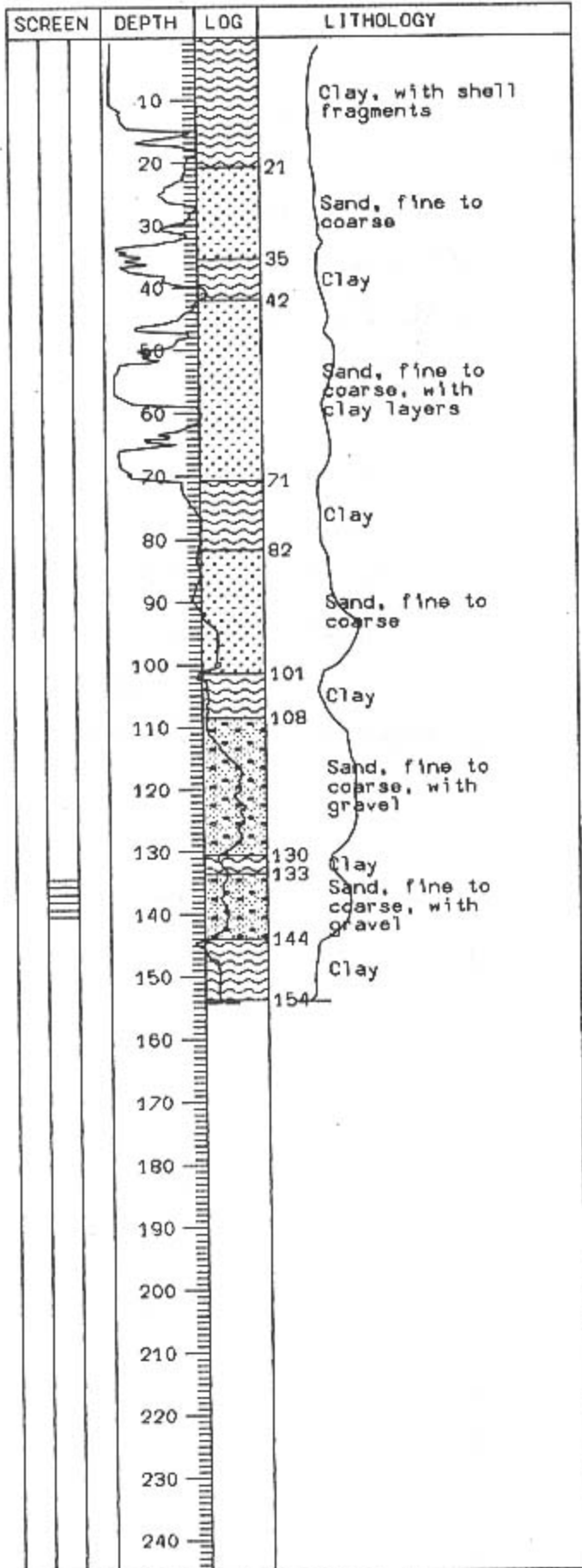
NB17: 210.00 m.

Perforation: PD33: 104.0-110.0 m.

NL47: 147.0-153.0 m.

NB17: 183.0-189.0 m.

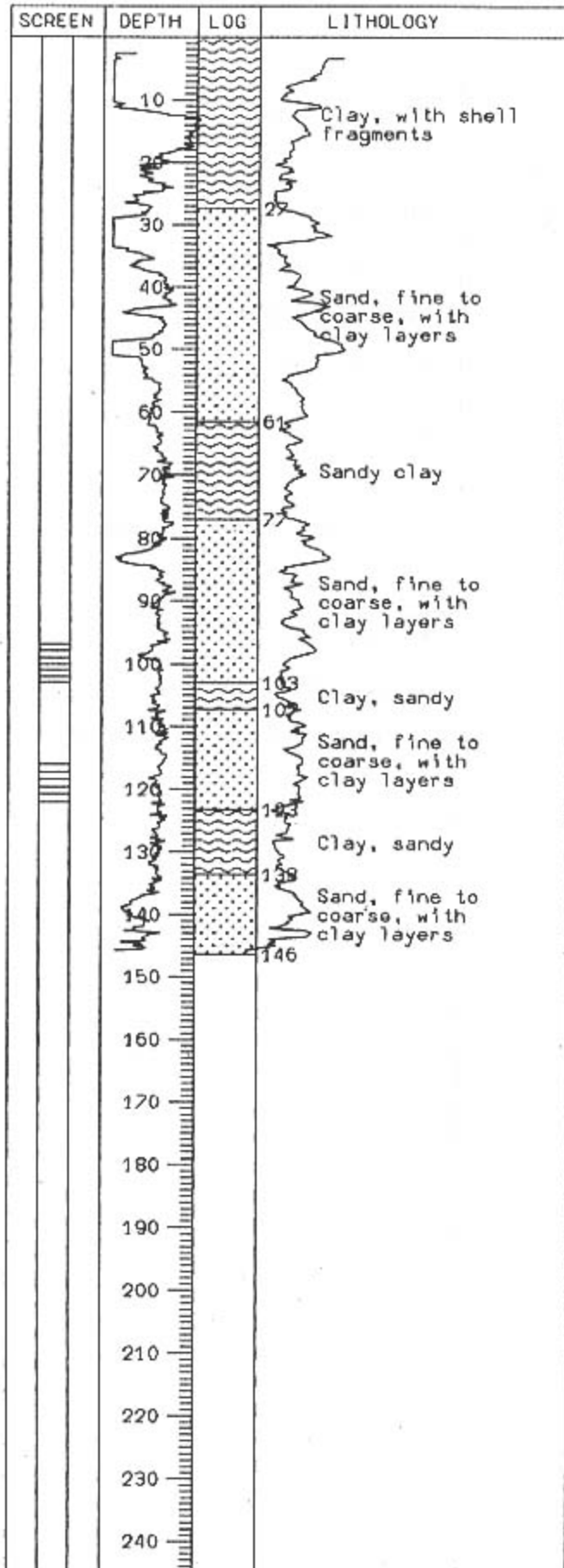
WELL LOG



DRILL LOG

Station No: 42
Well No: NL17
Map Sheet: 5136 III
Co-ordinate: 710174
Location: Bangkok Planetorium
Tambon: Phra Khanong
Amphoe: Phra Khanong
Changwat: Bangkok
Drilling Date: 11/10/79
Total depth: 154.60 m.
Perforation: 134.3-140.3 m.

W E L L L O G



DRILL LOG

Station No: 43

Well No: PD64, NL22

Map Sheet: 5136 I

Co-ordinate: 042435

Location: Wat Phut Udom

Tambon: Phut Udom

Amphoe: Lam Luk Ka

Changwat: Pathum Thani

Drilling Date: PD64: 8/15/90

NL22: 12/28/79

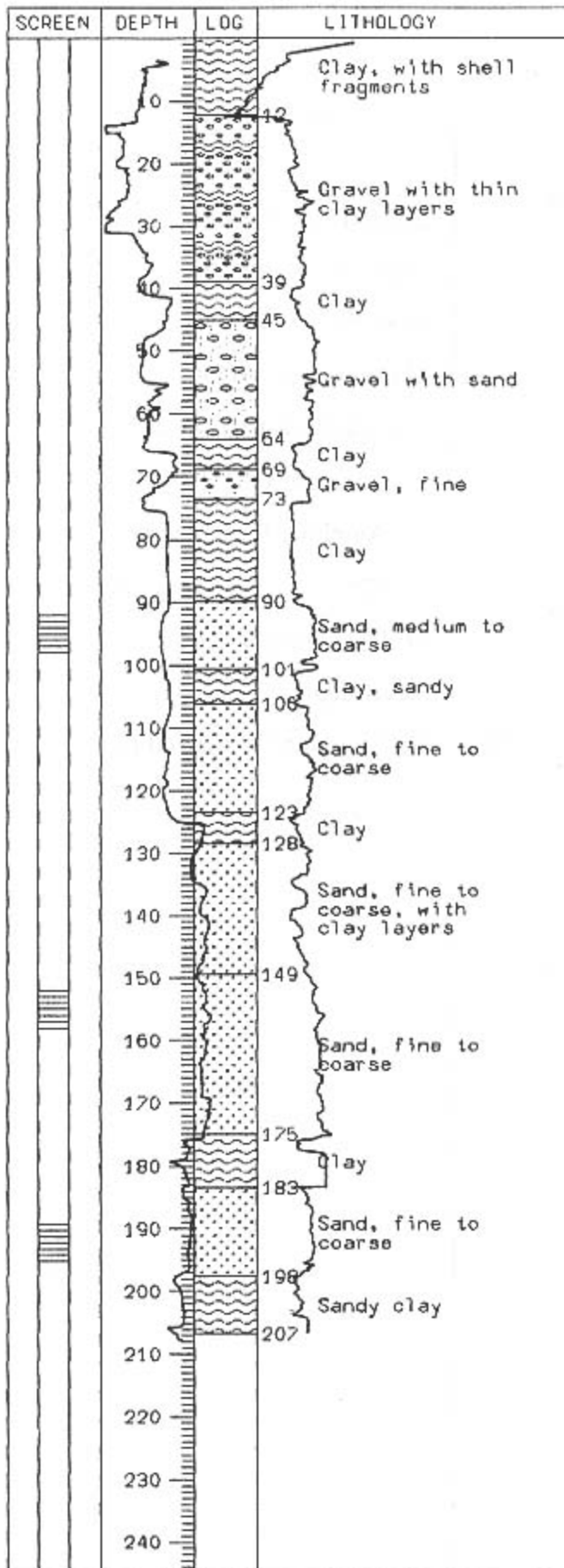
Total depth: PD64: 121.30 m.

NL22: 150.00 m.

Perforation: PD64: 97.0-103.0 m.

NL22: 116.0-122.0 m.

W E L L L O G



D R I L L L O G

Station No: 44

Well No: PD53, NL68, NB20

Map Sheet: 5036 I

Co-ordinate: 434265

Location: Wat Salawan

Tambon: Sala Ya

Amphoe: Nakhon Chaisi

Changwat: Nakhon Pathom

Drilling Date: PD53: 1/25/90

NL68: 1/18/90

NB20: 1/11/80

Total depth: PD53: 104.80 m.

NL68: 168.90 m.

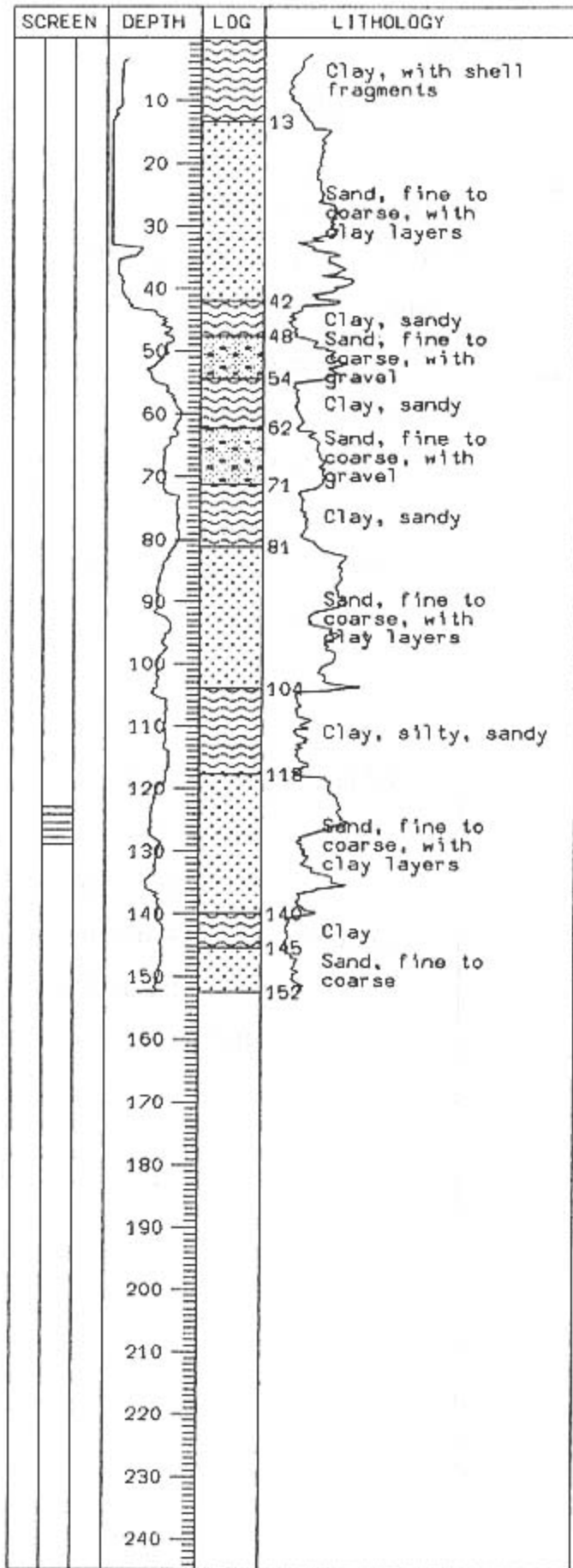
NB20: 207.31 m.

Perforation: PD53: 92.0-98.0 m.

NL68: 152.0-158.0 m.

NB20: 189.2-195.2 m.

WELL LOG



DRILL LOG

Station No: 45

Well No: NL19

Map Sheet: 5036 II

Co-ordinate: 367131

Location: Wat Om Yai

Tambon: Om Yai

Amphoe: Sam Phran

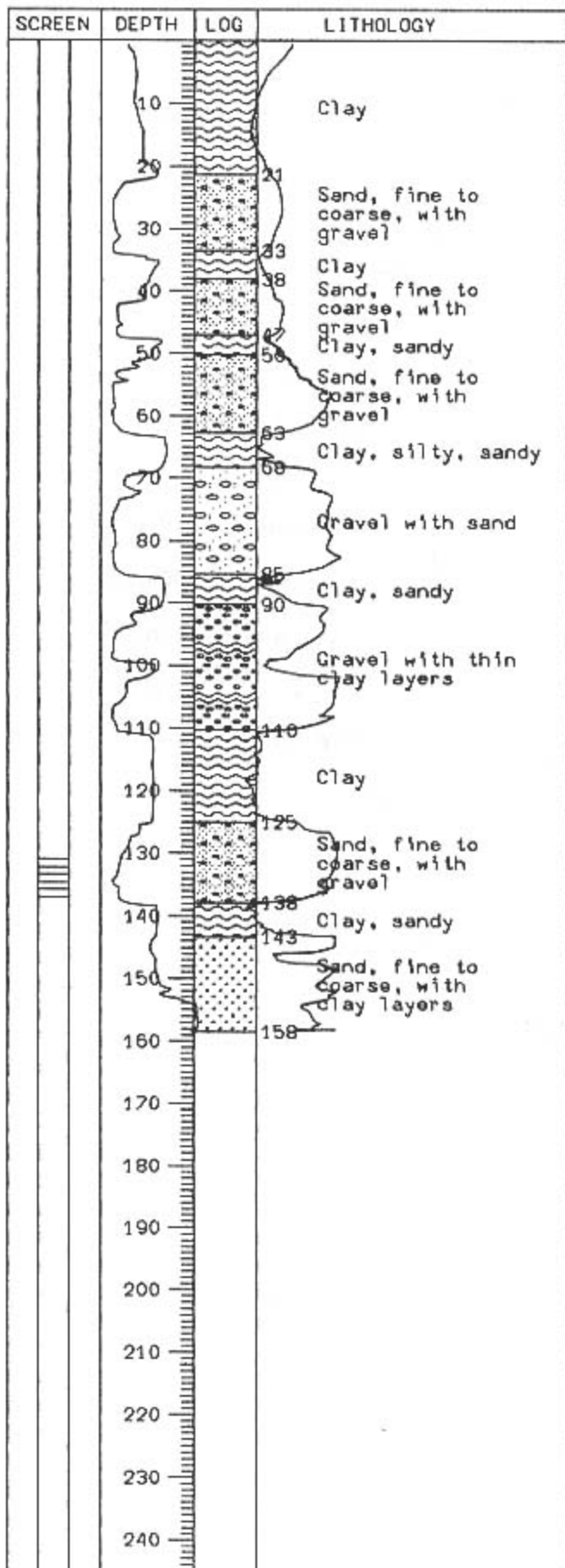
Changwat: Nakhon Pathom

Drilling Date: 1/15/80

Total depth: 150.00 m.

Perforation: 123.0-129.0 m.

WELL LOG



DRILL LOG

Station No: 46

Well No: NL20

Map Sheet: 5036 I

Co-ordinate: 549316

Location: Wat Sakae

Tambon: Bang Len

Amphoe: Bang Yai

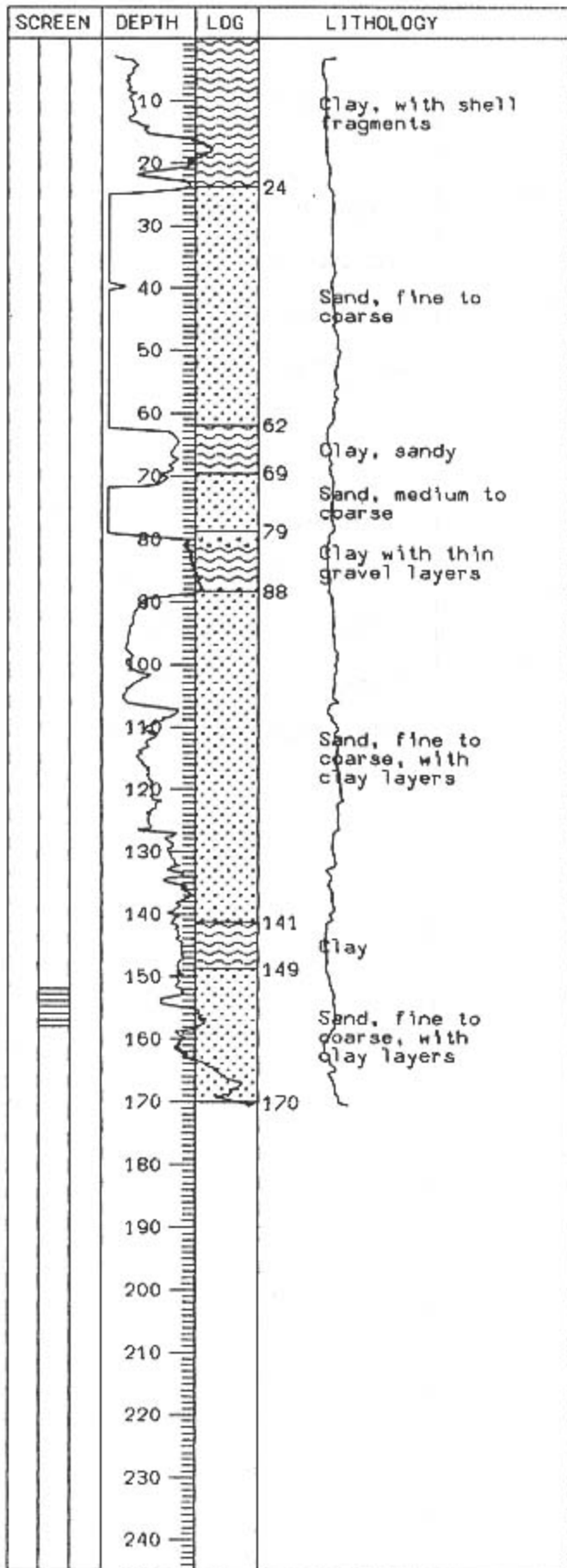
Changwat: Nonthaburi

Drilling Date: 1/20/80

Total depth: 158.53 m.

Perforation: 131.0-137.0 m.

WELL LOG



DRILL LOG

Station No: 47

Well No: NL25

Map Sheet: 5136 IV

Co-ordinate: 701235

Location: Wat Kunnathi

Ruttharam

Tambon: Huai Khwang

Amphoe: Huai Khwang

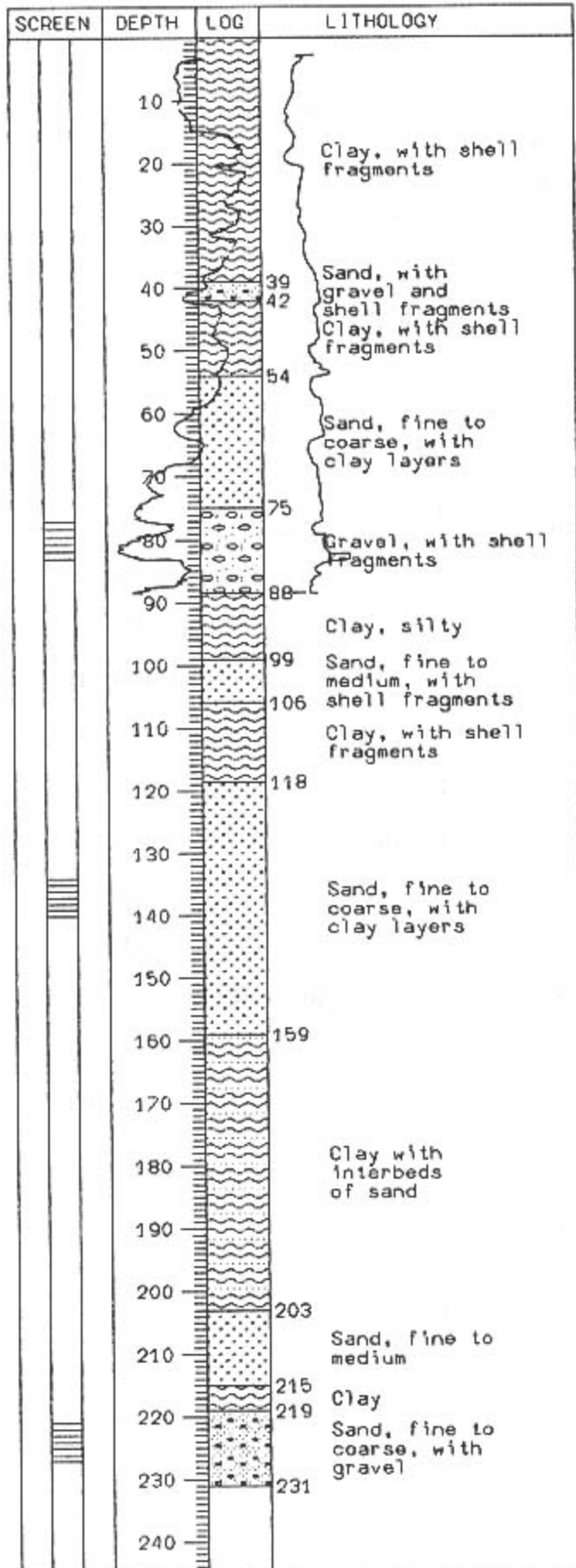
Changwat: Bangkok

Drilling Date: 1/20/80

Total depth: 170.73 m.

Perforation: 152.0-158.0 m.

WELL LOG



DRILL LOG

Station No: 48

Well No: PD52, NL24, NB60

Map Sheet: 5036 II

Co-ordinate: 395034

Location: Wat Bang Ping

Tambon: Na Di

Amphoe: Muang

Changwat: Samut Sakhon

Drilling Date: PD52: 6/17/89

NL24: 1/25/80

NB60: 6/14/89

Total depth: PD52: 87.80 m.

NL24: 152.43 m.

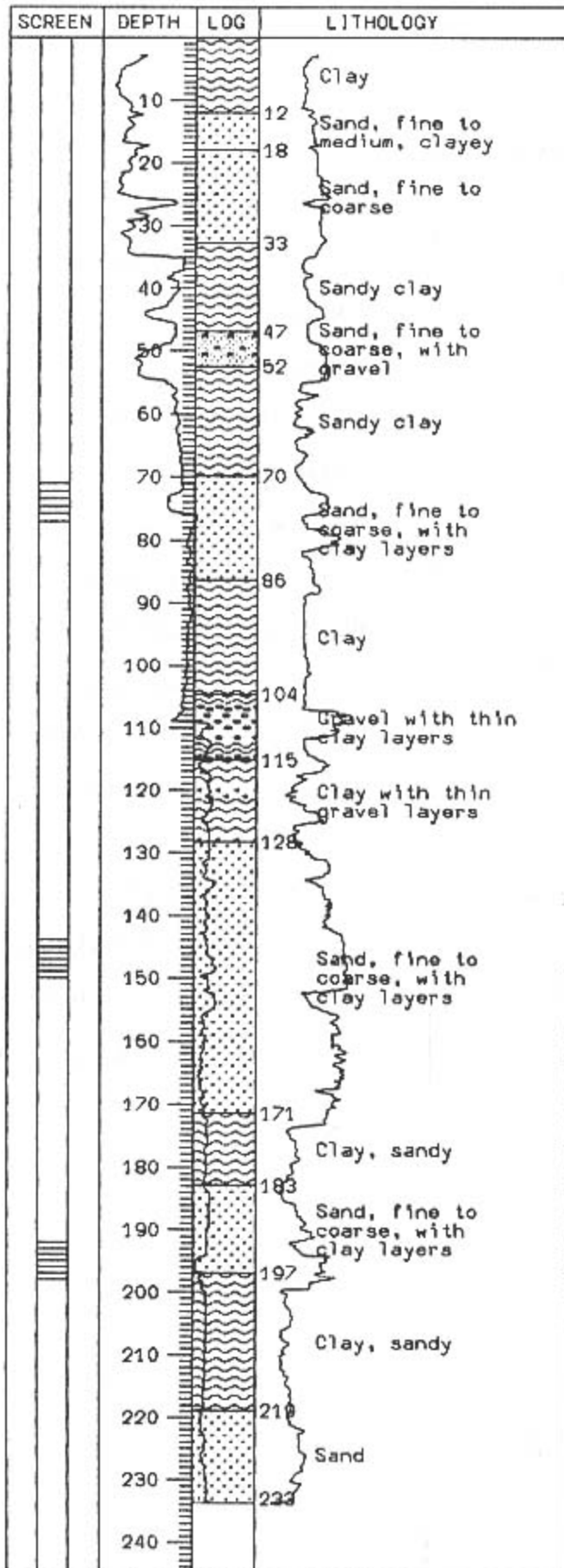
NB60: 231.70 m.

Perforation: PD52: 77.0-83.0 m.

NL24: 134.0-140.0 m.

NB60: 221.0-227.0 m.

W E L L L O G



D R I L L L O G

Station No: 49

Well No: PD76, NL23, NB52

Map Sheet: 5137 III

Co-ordinate: 751622

Location: Wat Khun Ying

Som Chin

Tambon: Khlong Nung

Amphoe: Khlong Luang

Changwat: Pathum Thani

Drilling Date: PD76: 3/20/91

NL23: 1/29/80

NB52: 3/17/89

Total depth: PD76: 115.85 m.

NL23: 156.00 m.

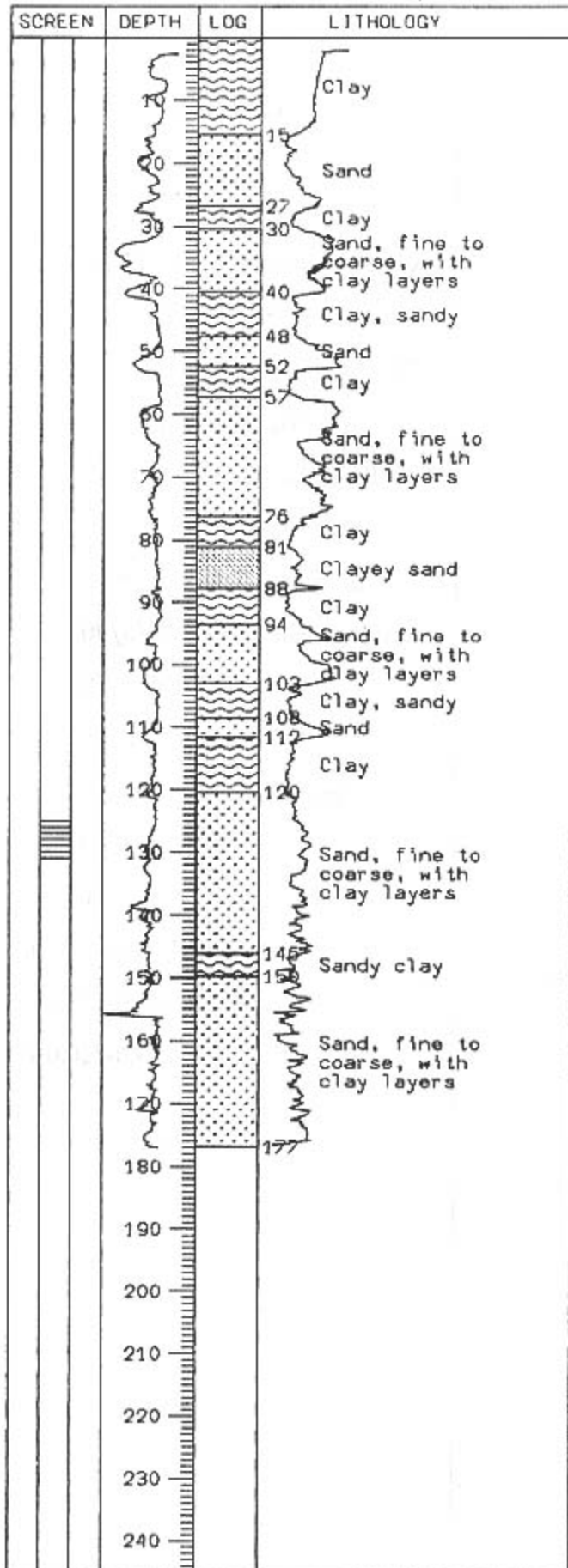
NB52: 233.00 m.

Perforation: PD76: 71.0-77.0 m.

NL23: 144.0-150.0 m.

NB52: 192.0-198.0 m.

W E L L L O G



DRILL LOG

Station No: 50

Well No: NL21

Map Sheet: 5137 II

Co-ordinate: 971628

Location: Wat Bung Ba

Praphasawat

Tambon: Bung Ba

Amphoe: Nong Sua

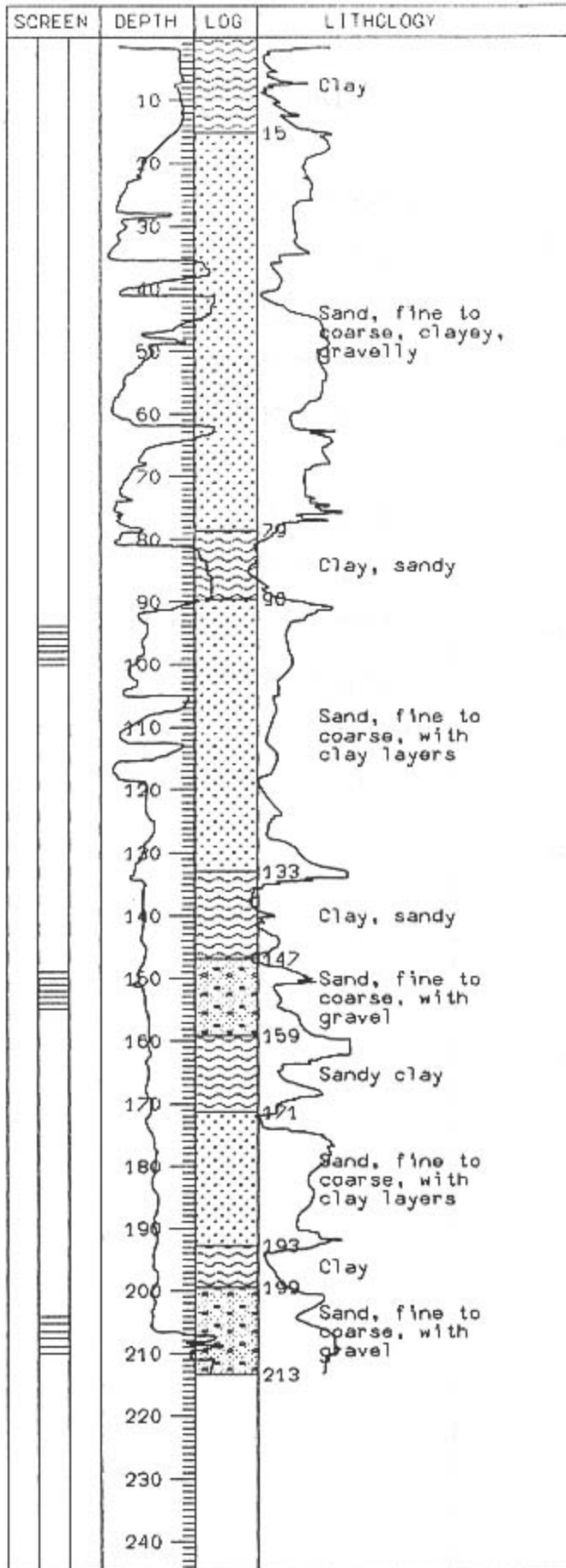
Changwat: Pathum Thani

Drilling Date: 2/6/80

Total depth: 176.82 m.

Perforation: 125.0-131.0 m.

WELL LOG



DRILL LOG

Station No: 51

Well No: PD58, NL72, NB19

Map Sheet: 5026 I

Co-ordinate: 419454

Location: Wat Sai Yai

Tambon: Sai Noi

Amphoe: Sai Noi

Changwat: Nonthaburi

Drilling Date: PD58: 4/5/90

NL72: 4/11/90

NB19: 3/3/80

Total depth: PD58: 150.00 m.

NL72: 176.00 m.

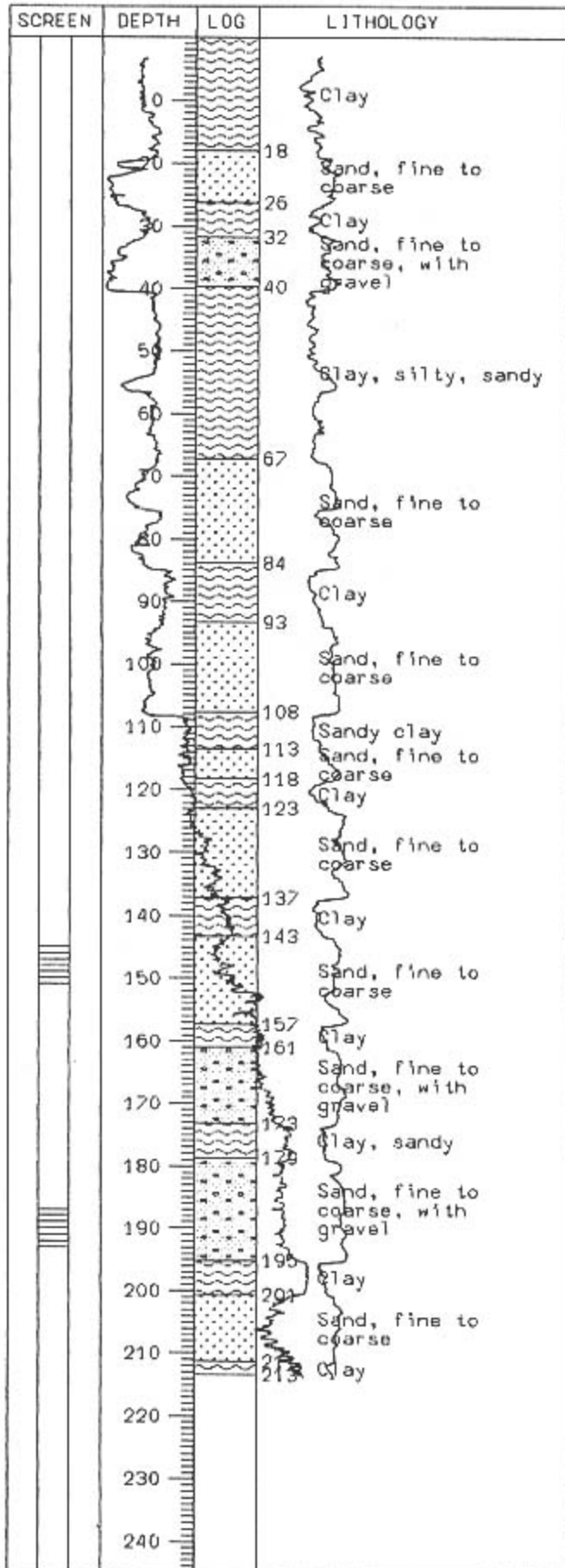
NB19: 213.41 m.

Perforation: PD58: 94.0-100.0 m.

NL72: 149.0-155.0 m.

NB19: 204.0-210.0 m.

WELL LOG



DRILL LOG

Station No: 52

Well No: NL26, NB21

Map Sheet: 5136 IV

Co-ordinate: 743488

Location: Wat Prayun Thammaram

Tambon: Khu Khot

Amphoe: Lam Luk Ka

Changwat: Pathum Thani

Drilling Date: NL26: 8/22/86

NB21: 8/13/86

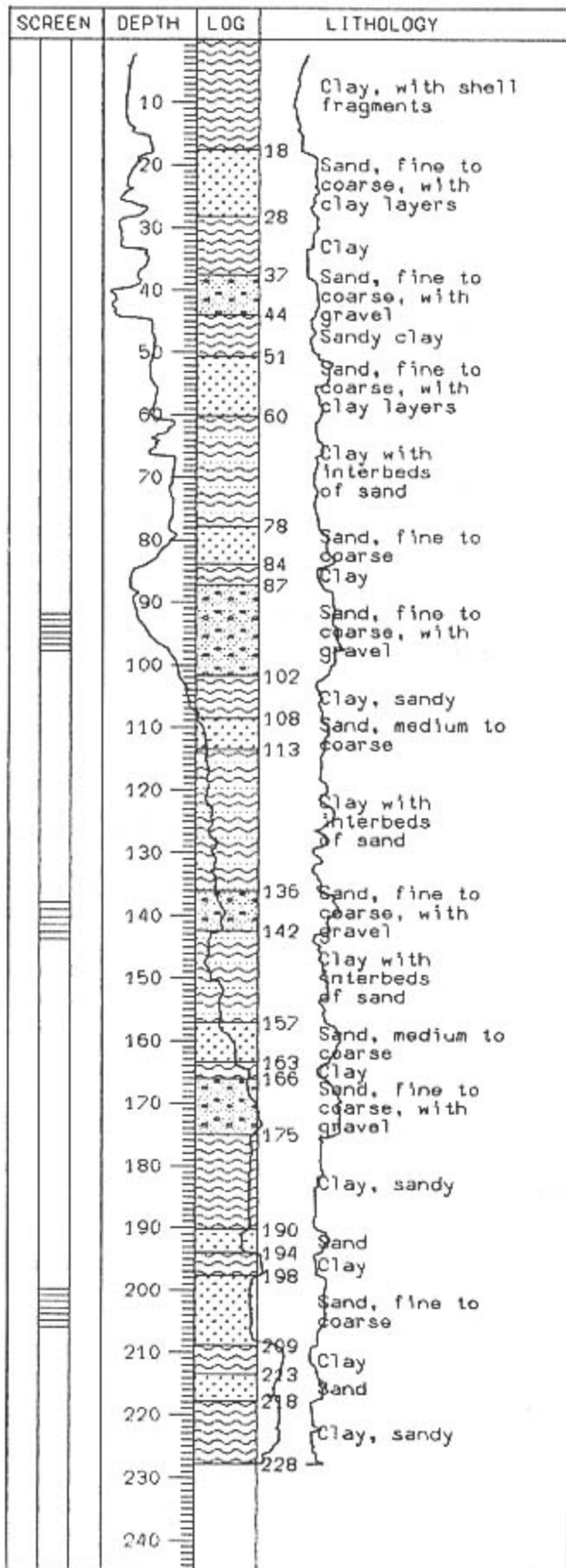
Total depth: NL26: 165.00 m.

NB21: 210.00 m.

Perforation: NL26: 145.0-151.0 m.

NB21: 187.0-193.0 m.

W E L L L O G



DRILL LOG

Station No: 53

Well No: PD16, NL27, NB31

Map Sheet: 5136 III

Co-ordinate: 704091

Location: Pig Quarantine Station

Tambon: Samrong Tai

Amphoe: Phra Pradaeng

Changwat: Samut Prakan

Drilling Date: PD16: 9/6/86

NL27: 8/31/86

NB31: 12/22/87

Total depth: PD16: 110.00 m.

NL27: 166.00 m.

NB31: 228.00 m.

Perforation: PD16: 92.0-98.0 m.

NL27: 138.0-144.0 m.

NB31: 200.0-206.0 m.

W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay, with shell fragments
	20	19	Sand
	30		Clay
	33		Sand
	37		Clay, sandy
	41		Sand, fine to coarse, with shell fragments
	48		Clay
	50		Sand, fine to coarse, with gravel
	59		Clay, hard
	62		Clayey sand
	67		
	70		
	80		Clay, hard
	90		
	92		Sand, fine to coarse, with gravel
	99		Clay, hard
	106		
	110		Sand, fine to coarse, with gravel
	120		Clay, hard
	122		
	124		
	130		Sand, fine to coarse, with gravel
	140		Clay, hard
	148		Clay with interbeds of sand
	158		Sand, medium to coarse
	163		Clay
	165		
	170		
	180		
	190		
	200		
	210		
	220		
	230		
	240		

DRILL LOG

Station No: 54

Well No: NL28

Map Sheet: 5136 III

Co-ordinate: 714094

Location: Wat Mahawong

Tambon: Samrong Tai

Amphoe: Phra Pradaeng

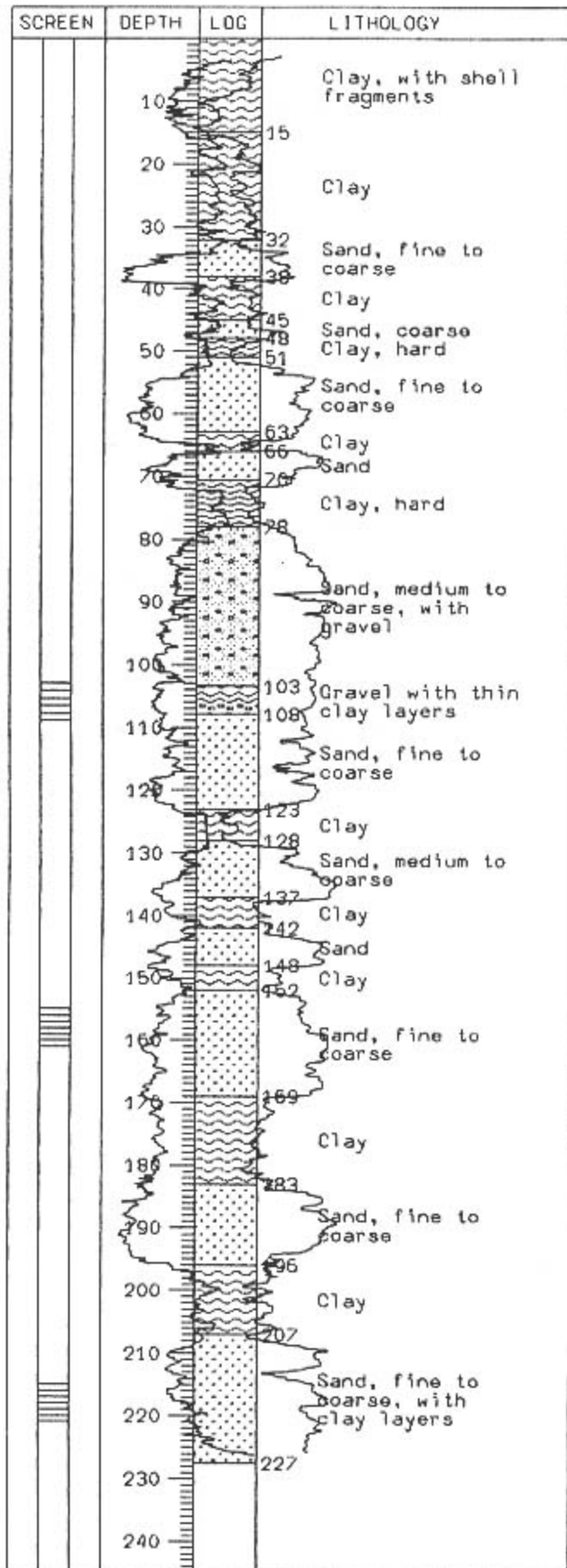
Changwat: Samut Prakan

Drilling Date: 9/2/86

Total depth: 165.00 m.

Perforation: 134.0-140.0 m.

WELL LOG



DRILL LOG

Station No: 55

Well No: PD24, NL29, NB22

Map Sheet: 5136 III

Co-ordinate: 728158

Location: Phra Khanong Flood

Control Station

Tambon: -

Amphoe: Phra Khanong

Changwat: Bangkok

Drilling Date: PD24: 2/10/88

NL29: 9/28/86

NB22: 9/17/86

Total depth: PD24: 123.00 m.

NL29: 166.00 m.

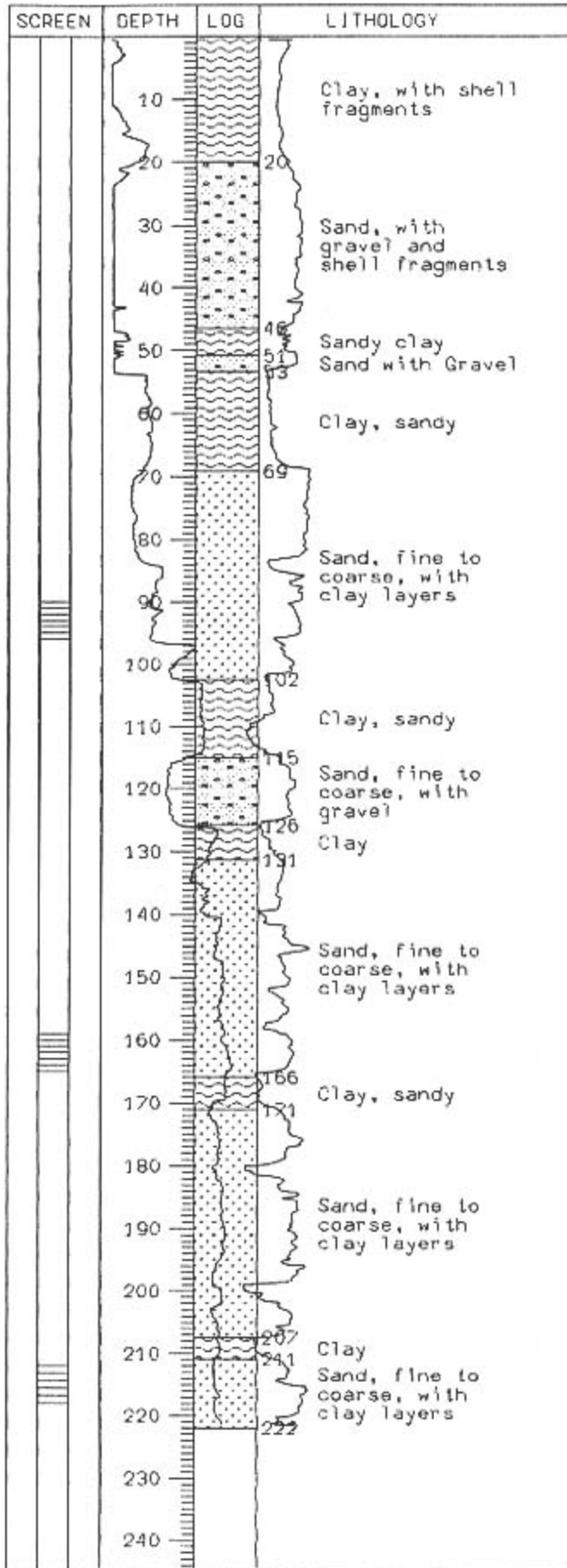
NB22: 227.00 m.

Perforation: PD24: 103.0-109.0 m.

NL29: 155.0-161.0 m.

NB22: 215.0-221.0 m.

W E L L L O G



DRILL LOG

Station No: 56

Well No: PD20, NL35, NB23

Map Sheet: 5136 IV

Co-ordinate: 733240

Location: Wat Samakkhi Tham

Tambon: -

Amphoe: Bang Kapi

Changwat: Bangkok

Drilling Date: PD20: 12/5/87

NL35: 11/28/87

NB23: 9/30/86

Total depth: PD20: 103.39 m.

NL35: 168.00 m.

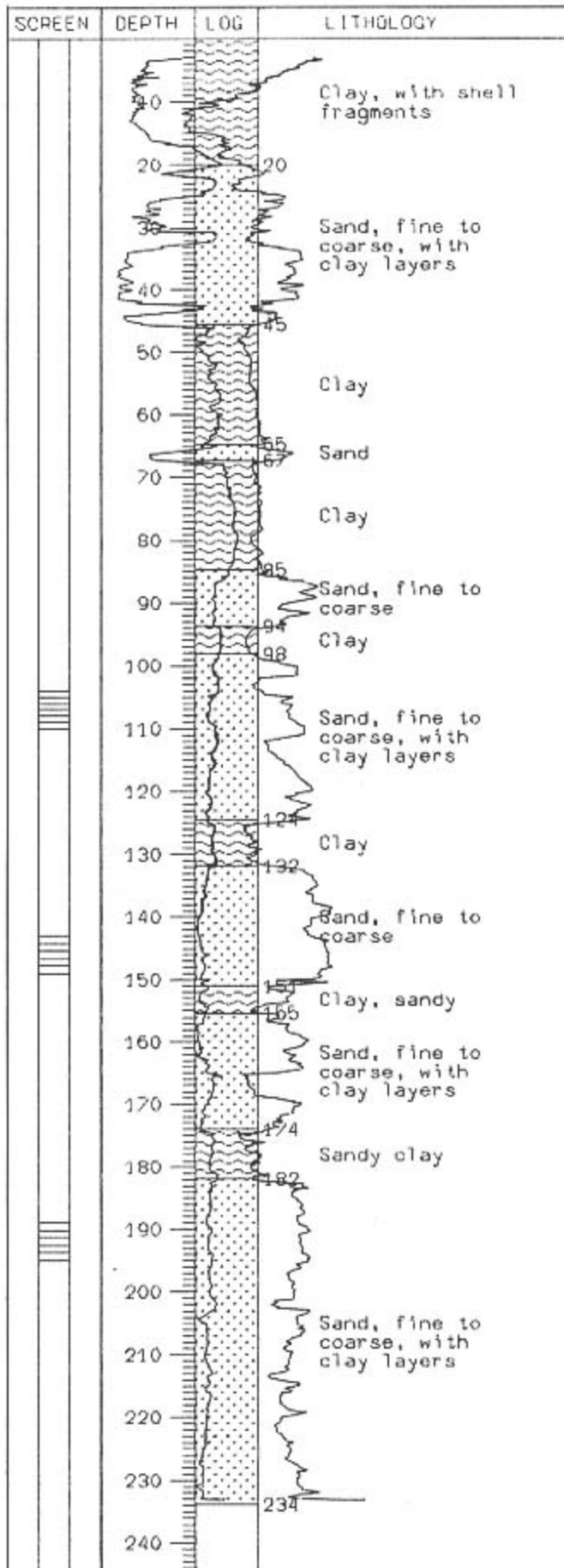
NB23: 222.00 m.

Perforation: PD20: 90.0-96.0 m.

NL35: 159.0-165.0 m.

NB23: 212.0-218.0 m.

W E L L L O G



DRILL LOG

Station No: 57

Well No: PD29, NL30, NB39

Map Sheet: 5136 III

Co-ordinate: 861122

Location: Wat King Kaeo

Tambon: Racha Thewa

Amphoe: Bang Phli

Changwat: Samut Prakan

Drilling Date: PD29: 12/8/88

NL30: 10/8/86

NB39: 12/3/88

Total depth: PD29: 115.00 m.

NL30: 179.00 m.

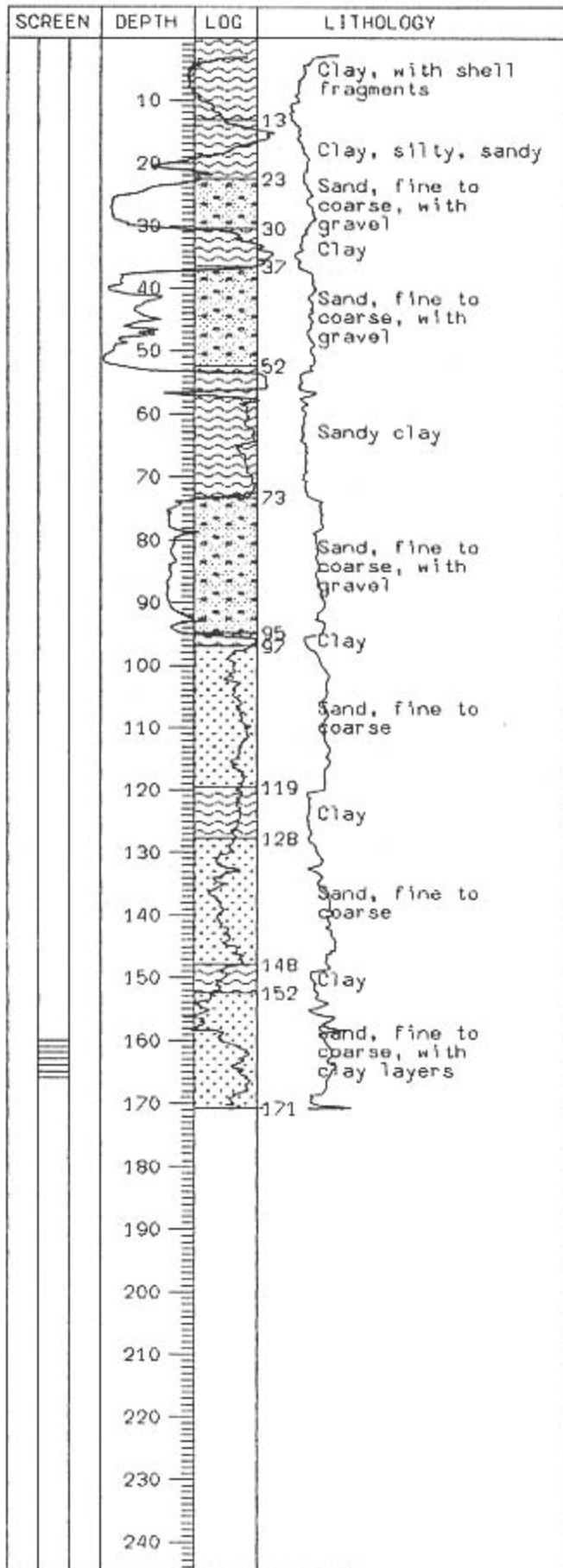
NB39: 230.00 m.

Perforation: PD29: 104.0-110.0 m.

NL30: 143.0-149.0 m.

NB39: 189.0-195.0 m.

WELL LOG



DRILL LOG

Station No: 58

Well No: NL31

Map Sheet: 5136 IV

Co-ordinate: 722289

Location: Wat Sirikamalawat

Tambon: Lat Phrao

Amphoe: Bang Kapi

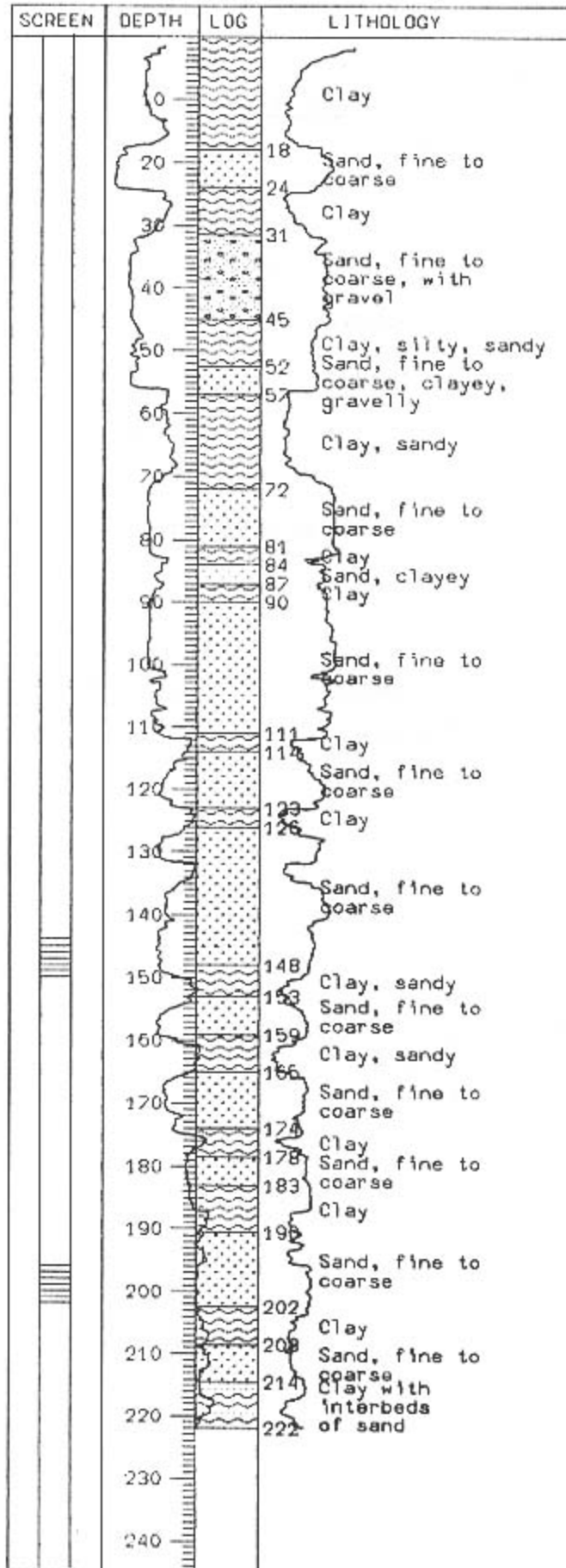
Changwat: Bangkok

Drilling Date: 10/9/86

Total depth: 169.00 m.

Perforation: 160.0-166.0 m.

W E L L L O G



D R I L L L O G

Station No: 59

Well No: NL41, NB24

Map Sheet: 5136 IV

Co-ordinate: 668368

Location: Khlong Klua School

Tambon: Pak Kret

Amphoe: Pak Kret

Changwat: Nonthaburi

Drilling Date: NL41: 3/5/88

NB24: 10/20/86

Total depth: NL41: 155.00 m.

NB24: 227.00 m.

Perforation: NL41: 144.0-150.0 m.

NB24: 196.0-202.0 m.

WELL LOG

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay, with shell fragments
	16		Clay, sandy, with shell fragments
	19		Sand
	22		Clay
	30		Clay
	31		Sand, fine
	40		Sand, fine to coarse
	45		Clay, hard
	50		Sand, fine to coarse
	51		Sand, fine to coarse
	60		Sand, fine to coarse
	64		Clay, sandy, with shell fragments
	70		Clay, sandy, with shell fragments
	76		Sand, fine to coarse
	80		Sand, fine to coarse
	88		Clay, hard
	96		Sand, fine to coarse
	99		Sand, fine to coarse
	110		Clay, hard
	120		Clay, hard
	130		Clay, hard
	132		Sand, fine to coarse
	139		Sand, fine to coarse
	140		Clay, sandy
	147		Sand, fine to coarse
	154		Clay
	159		Sand
	160		Clay
	170		Clay
	175		Sand, fine to coarse
	178		Sand, fine to coarse
	180		Clay, hard
	187		Sand, fine
	190		Clay
	195		Sand, fine to coarse
	200		Clay, sandy
	201		Sand, fine to coarse
	205		Clay, sandy
	210		Sand, fine to coarse
	216		Clay, hard
	219		Clay, hard
	230		
	240		

DRILL LOG

Station No: 60

Well No: PD18, NL32, NB25

Map Sheet: 5036 II

Co-ordinate: 375110

Location: Wat Nang Sao

Tambon: Tha Mai

Amphoc: Krathum Baen

Changwat: Samut Sakhon

Drilling Date: PD18: 11/11/86

NL32: 11/5/86

NB25: 10/24/86

Total depth: PD18: 110.00 m.

NL32: 164.00 m.

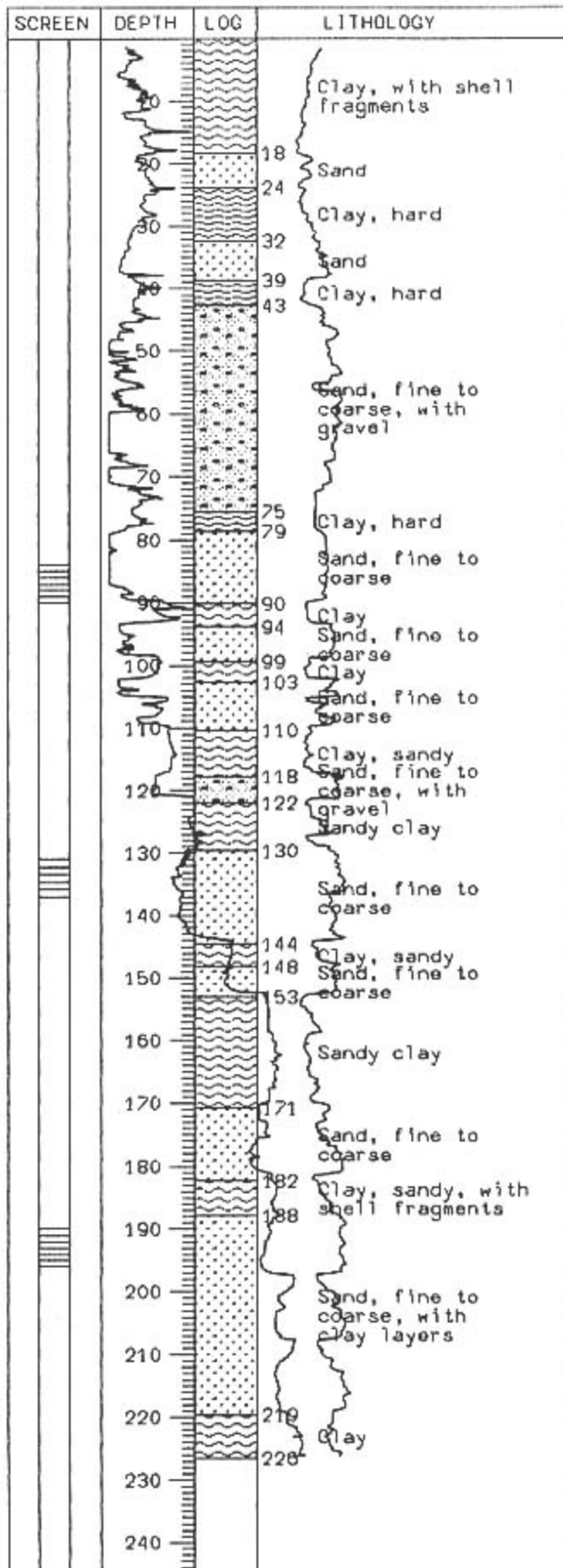
NB25: 219.00 m.

Perforation: PD18: 83.0-89.0 m.

NL32: 147.0-153.0 m.

NB25: 210.0-216.0 m.

W E L L L O G



United Nations GW Software

DRILL LOG

Station No: 61

Well No: PD17, NL34, NB27

Map Sheet: 5136 IV

Co-ordinate: 564218

Location: Department of Mineral Resources

Tambon: Thung Phaya Thai

Amphoe: Phaya Thai

Changwat: Bangkok

Drilling Date: PD17: 11/3/86

NL34: 11/24/86

NB27: 11/14/86

Total depth: PD17: 110.00 m.

NL34: 166.00 m.

NB27: 226.50 m.

Perforation: PD17: 84.0-90.0 m.

NL34: 131.0-137.0 m.

NB27: 190.0-196.0 m.

W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay, with shell fragments
	20	19	
	30		Clay, hard
	40	42	Sand, fine to medium, with shell fragments
	50	49	
	60		Clay, hard
	70	72	Sand, fine to coarse, with gravel
	80	84	Clay
	90	90	Sand, fine to coarse, with gravel
	100	102	
	110		Clay with interbeds of sand
	120		
	130	129	Sand, fine to coarse
	140	138	
	150		Clay with interbeds of sand
	160	157	Sand, fine to coarse, with shell fragments
	170	168	
	180		Clay with interbeds of sand
	190	184	Sand, fine to coarse
	200	193	Clay, sandy
	210	201	
	220		Sand, fine to coarse, clayey, gravelly
	220	220	Clay, hard
	230	224	
	240		

DRILL LOG

Station No: 62

Well No: PD19, NL33, NB26

Map Sheet: 5036 II

Co-ordinate: 383978

Location: Samut Sakhon

Provincial Hall

Tambon: Mahachai

Amphoe: Muang

Changwat: Samut Sakhon

Drilling Date: PD19: 11/26/86

NL33: 11/21/86

NB26: 11/10/86

Total depth: PD19: 110.00 m.

NL33: 169.00 m.

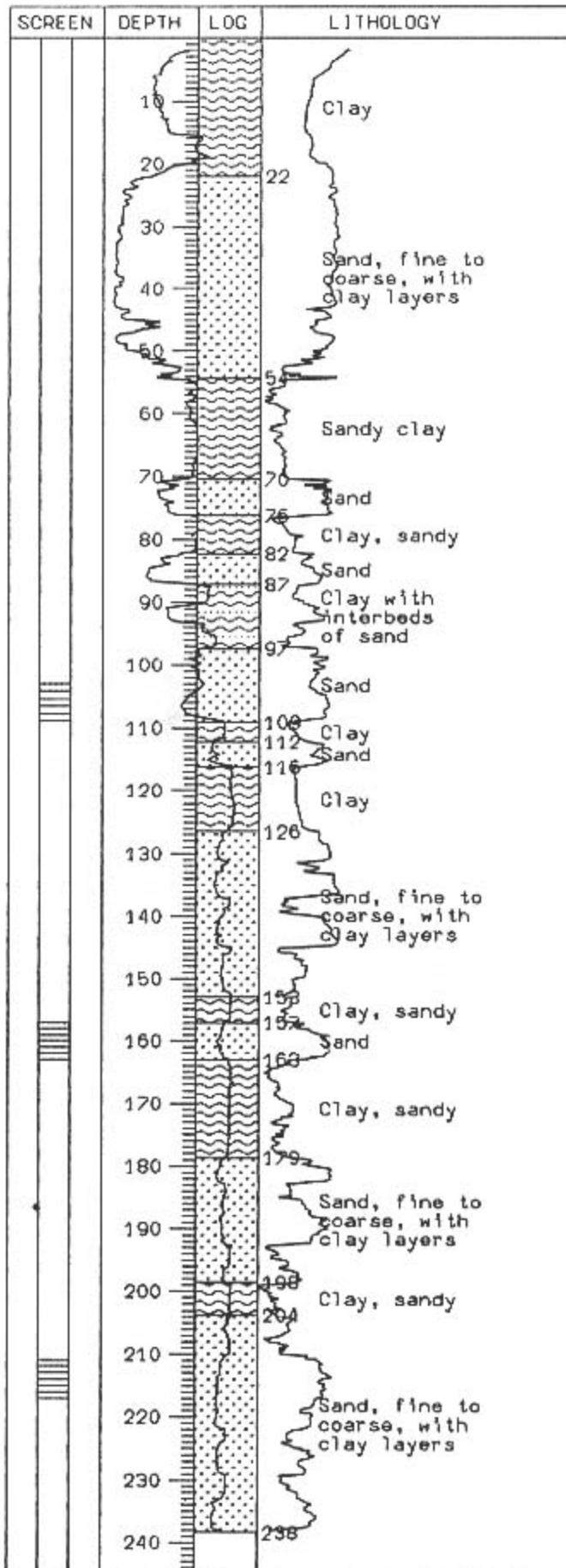
NB26: 226.00 m.

Perforation: PD19: 93.0-99.0 m.

NL33: 160.0-166.0 m.

NB26: 202.0-208.0 m.

W E L L L O G



D R I L L L O G

Station No: 63

Well No: PD21, NL36, NB28

Map Sheet: 5136 IV

Co-ordinate: 788227

Location: National Housing

Authority

Tambon: Khlong Chan

Amphoe: Bang Kapi

Changwat: Bangkok

Drilling Date: PD21: 12/6/87

NL36: 11/30/87

NB28: 11/21/87

Total depth: PD21: 112.85 m.

NL36: 166.00 m.

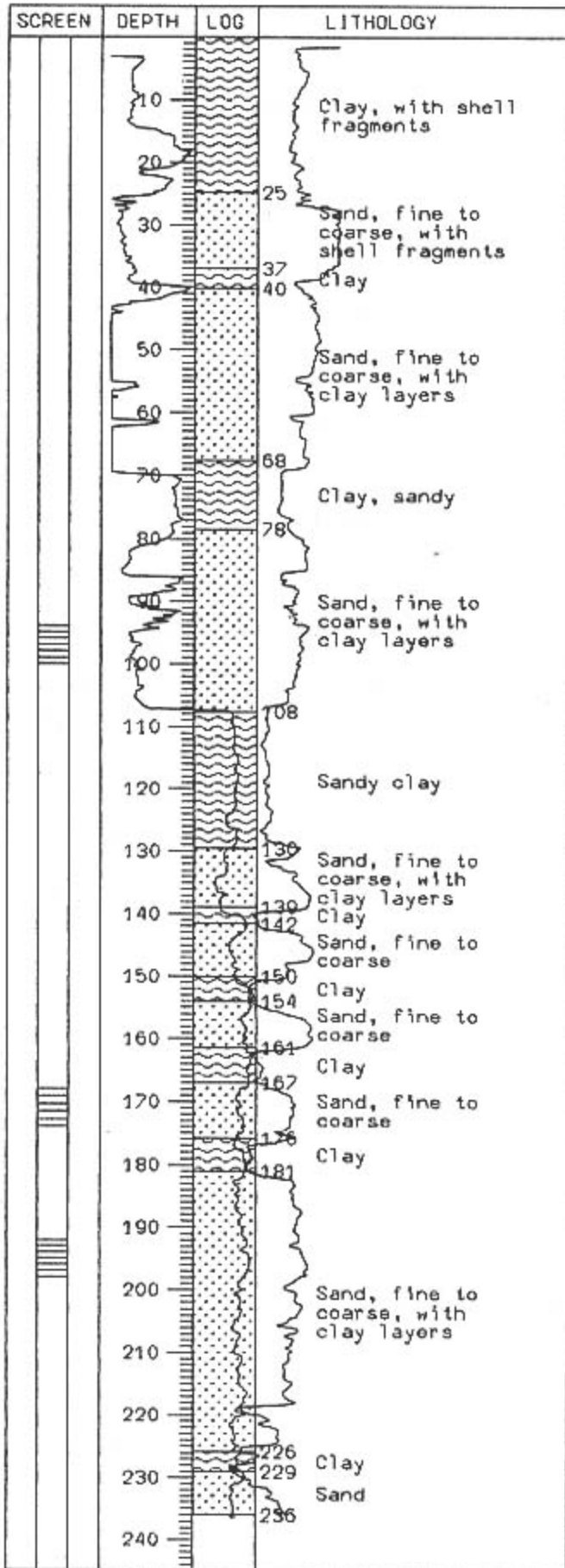
NB28: 237.90 m.

Perforation: PD21: 103.0-109.0 m.

NL36: 157.0-163.0 m.

NB28: 211.0-217.0 m.

W E L L L O G



D R I L L L O G

Station No: 64

Well No: PD25, NL39, NB32

Map Sheet: 5136 IV

Co-ordinate: 645257

Location: Wat Kaeo Fa Chula Mani

Tambon: Thanon Nakhon Chaisi

Amphoe: Dusit

Changwat: Bangkok

Drilling Date: PD25: 2/13/88

NL39: 1/31/88

NB32: 1/20/88

Total depth: PD25: 110.00 m.

NL39: 178.00 m.

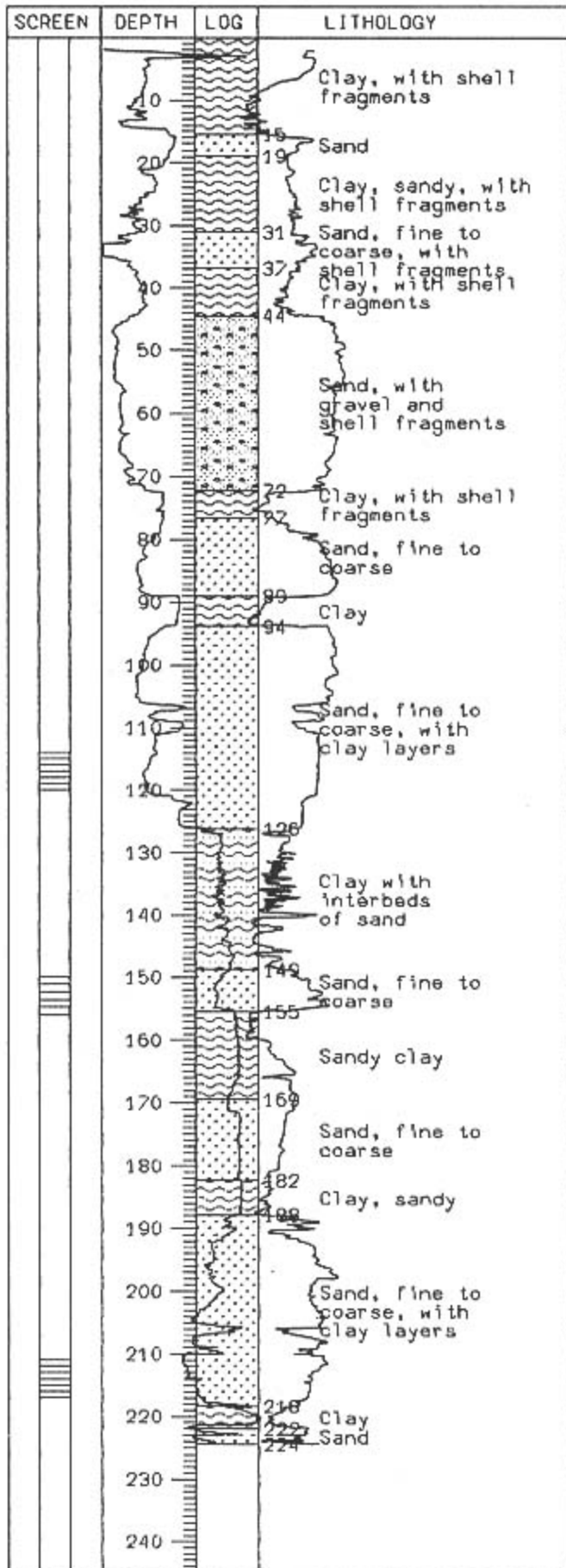
NB32: 236.00 m.

Perforation: PD25: 94.0-100.0 m.

NL39: 168.0-174.0 m.

NB32: 192.0-198.0 m.

W E L L L O G



D R I L L L O G

Station No: 65

Well No: PD23, NL38, NB33

Map Sheet: 5136 III

Co-ordinate: 659148

Location: Mahamek Electrical
Substation

Tambon: Chong Nonsi

Amphoe: Yan Nawa

Changwat: Bangkok

Drilling Date: PD23: 2/4/88

NL38: 1/27/88

NB33: 1/20/88

Total depth: PD23: 124.00 m.

NL38: 160.00 m.

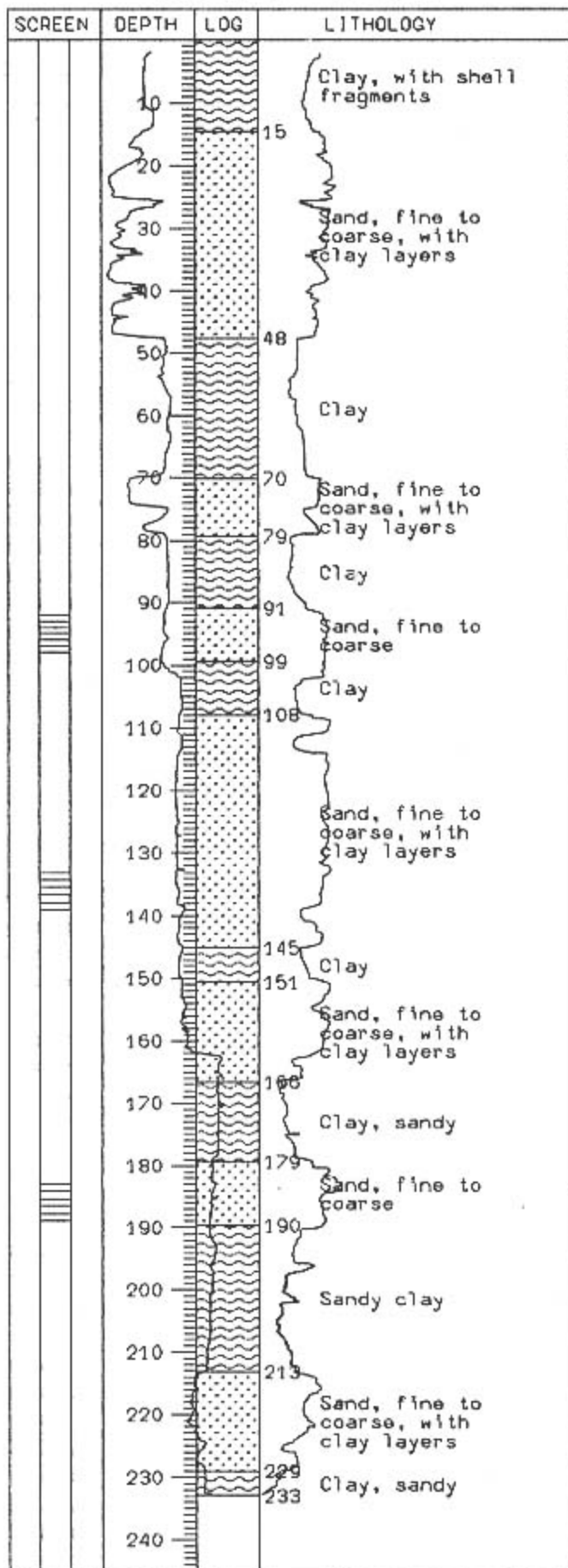
NB33: 234.00 m.

Perforation: PD23: 114.0-120.0 m.

NL38: 150.0-156.0 m.

NB33: 211.0-217.0 m.

WELL LOG



DRILL LOG

Station No: 66

Well No: PD50, NL40, NB34

Map Sheet: 5137 III

Co-ordinate: 742491

Location: Bunkhum Rat Bamrung

School

Tambon: Khlong Nung

Amphoe: Khlong Luang

Changwat: Pathum Thani

Drilling Date: PD50: 5/31/89

NL40: 2/28/88

NB34: 2/24/88

Total depth: PD50: 101.00 m.

NL40: 144.00 m.

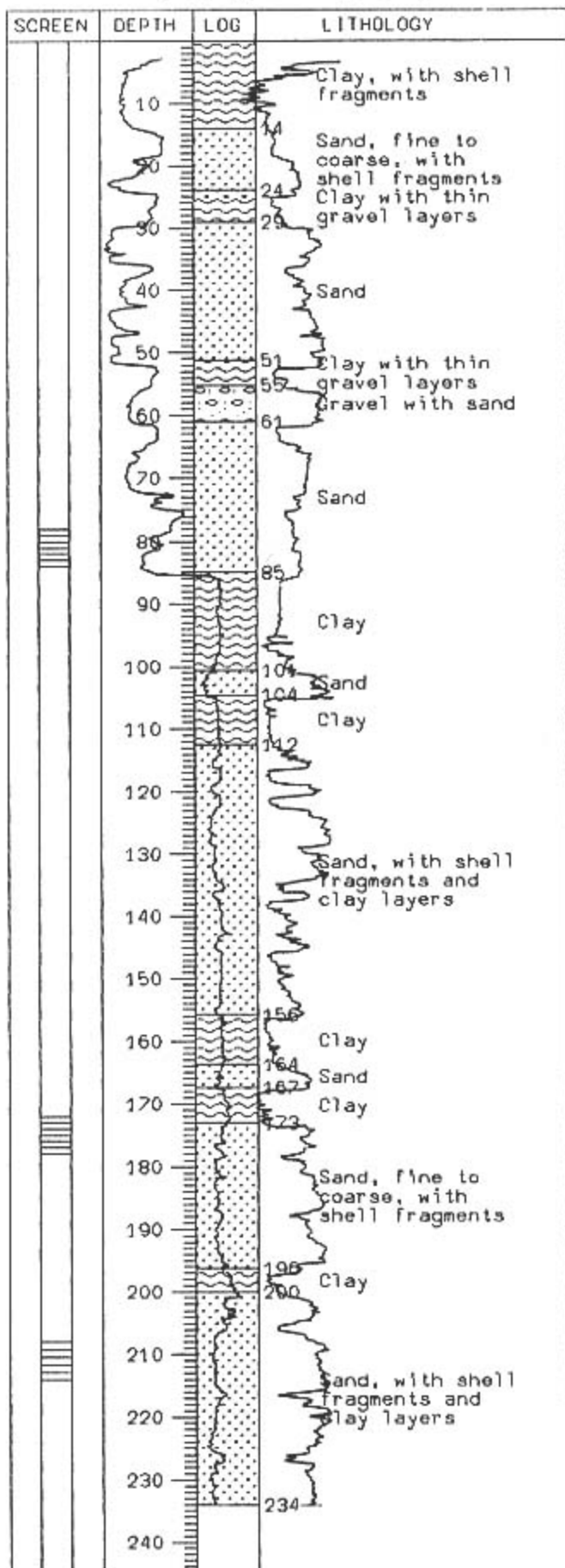
NB34: 231.00 m.

Perforation: PD50: 92.0-98.0 m.

NL40: 133.0-139.0 m.

NB34: 183.0-189.0 m.

W E L L L O G



DRILL LOG

Station No: 67

Well No: PD27, NL42, NB35

Map Sheet: 5136 III

Co-ordinate: 772139

Location: Wat Wachiratham Sathit

Tambon: Bang Chak

Amphoe: Phra Khanong

Changwat: Bangkok

Drilling Date: PD27: 12/5/88

NL42: 11/25/88

NB35: 11/12/88

Total depth: PD27: 123.83 m.

NL42: 181.00 m.

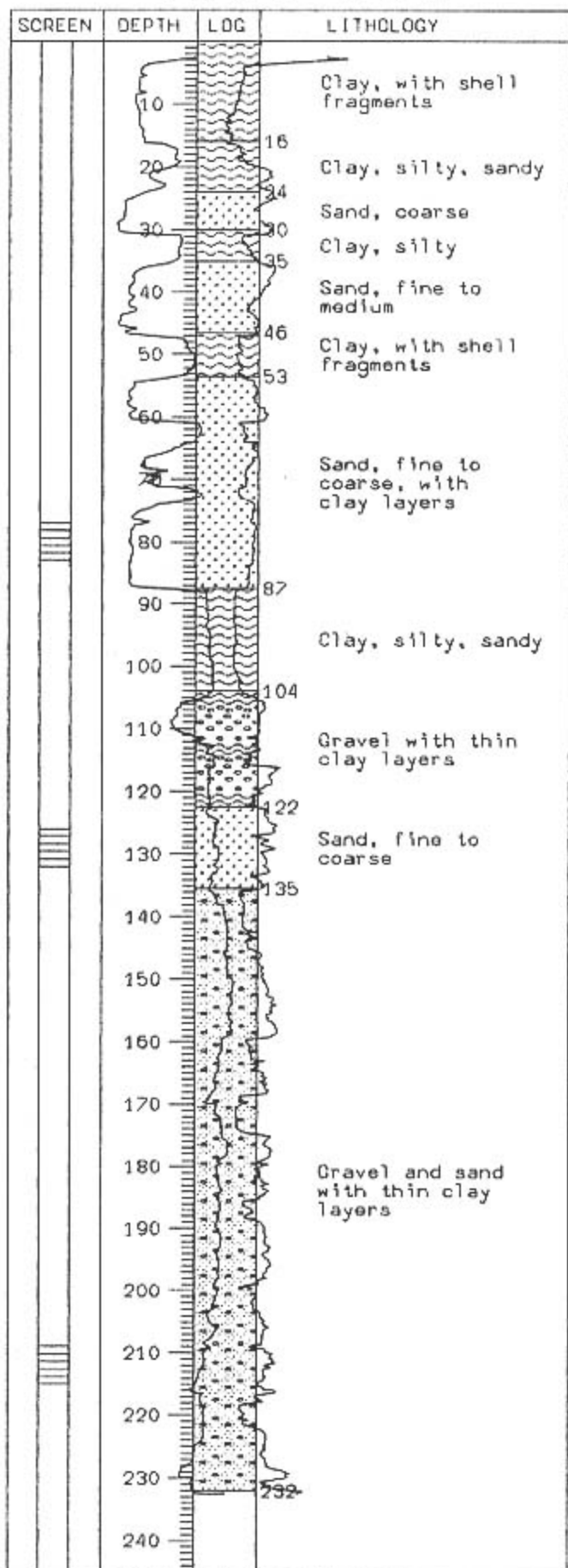
NB35: 234.24 m.

Perforation: PD27: 78.0-84.0 m.

NL42: 172.0-178.0 m.

NB35: 208.0-214.0 m.

W E L L L O G



DRILL LOG

Station No: 68

Well No: PD30, NL44, NB37

Map Sheet: 5136 III

Co-ordinate: 822126

Location: Wat Thung Lan Na

Tambon: -

Amphoe: Phra Khanong

Changwat: Bangkok

Drilling Date: PD30: 12/14/88

NL44: 12/9/88

NB37: 11/17/88

Total depth: PD30: 91.00 m.

NL44: 170.00 m.

NB37: 232.00 m.

Perforation: PD30: 77.0-83.0 m.

NL44: 126.0-132.0 m.

NB37: 209.0-215.0 m.

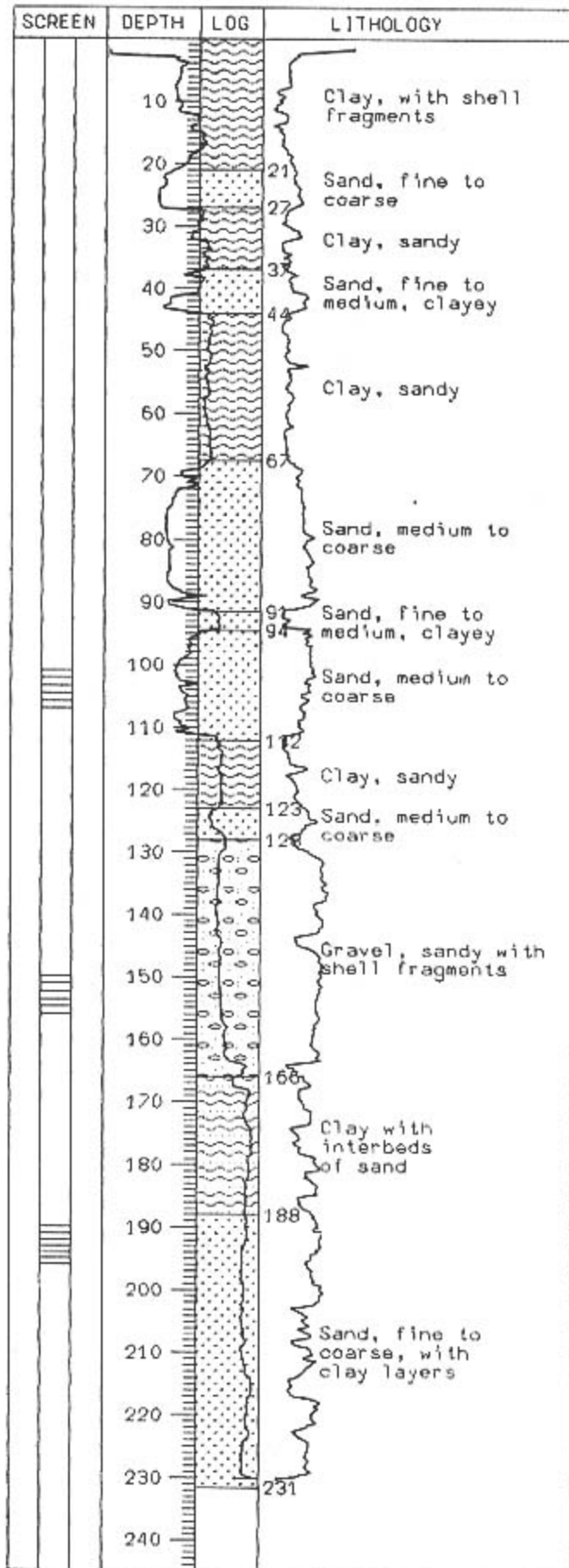
W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay, with shell fragments
	15		Clay
	20		Sand, medium to coarse
	28		Clay
	38		Sand, fine to medium
	51		Clay, sandy
	60		Sand, fine to coarse
	78		Clay, sandy
	86		Sand
	90		Clay, sandy
	96		Gravel with sand
	108		Clay
	112		Sand, gravelly
	114		Clay
	120		Gravel with sand
	128		Sand, clayey
	133		Gravel with sand, clay layer at 139.6-141.2 m.
	135		Clay
	150		Sand, medium, gravelly
	170		Clay, sandy
	175		Gravel, fine with coarse sand
	183		Clay
	185		Sand, fine to coarse
	201		Clay, sandy
	206		Sand, fine to coarse
	211		Clay, sandy
	221		Gravel, medium with coarse sand
	232		

D R I L L L O G

Station No: 69
 Well No: PD32, NL45, NB38
 Map Sheet: 5136 IV
 Co-ordinate: 768379
 Location: Wat Ko Suwannaram
 Tambon: Khlong Thanon
 Amphoe: Bang Khen
 Changwat: Bangkok
 Drilling Date: PD32: 12/18/88
 NL45: 12/6/88
 NB38: 11/29/88
 Total depth: PD32: 116.00 m.
 NL45: 177.00 m.
 NB38: 228.00 m.
 Perforation: PD32: 102.0-108.0 m.
 NL45: 163.0-169.0 m.
 NB38: 189.0-195.0 m.

WELL LOG



United Nations GW Software

DRILL LOG

Station No: 70

Well No: PD31, NL46, NB40

Map Sheet: 5136 IV

Co-ordinate: 733394

Location: Wat Don Muang

Tambon: Talat Bang Khen

Amphoe: Bang Khen

Changwat: Bangkok

Drilling Date: PD31: 12/18/88

NL46: 12/12/88

NB40: 12/6/88

Total depth: PD31: 114.00 m.

NL46: 160.00 m.

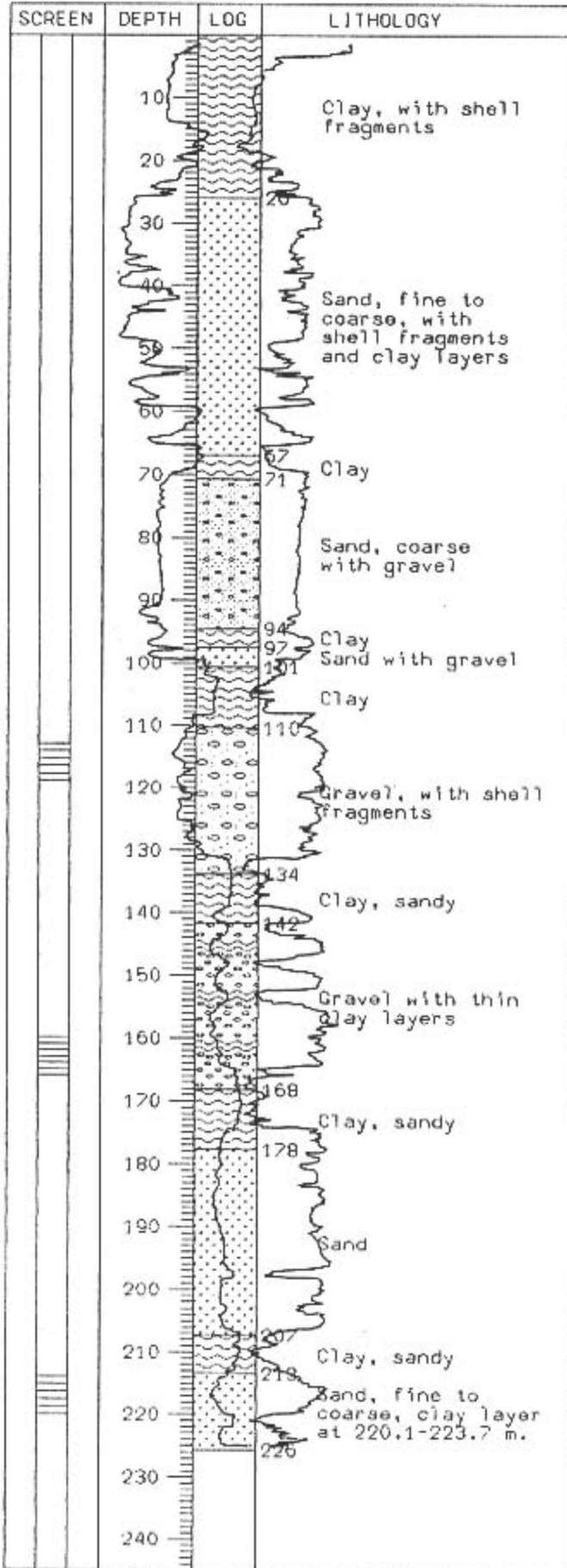
NB40: 231.40 m.

Perforation: PD31: 101.0-107.0 m.

NL46: 150.0-156.0 m.

NB40: 190.0-196.0 m.

W E L L L O G



United Nations GW Software

DRILL LOG

Station No: 71

Well No: PD34, NL48, NB42

Map Sheet: 5136 IV

Co-ordinate: 686271

Location: Chatuchak Park

Tambon: Lat Phrao

Amphoe: Bang Khen

Changwat: Bangkok

Drilling Date: PD34: 1/9/89

NL48: 1/3/89

NB42: 12/26/88

Total depth: PD34: 128.35 m.

NL48: 173.00 m.

NB42: 226.00 m.

Perforation: PD34: 113.0-119.0 m.

NL48: 160.0-166.0 m.

NB42: 214.0-220.0 m.

W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay, with shell fragments
	20	18	Sand, fine to coarse
	24	24	Clay, sandy, with shell fragments
	30	28	
	40		Sand, fine to coarse, with gravel
	50	54	
	60		Clay, silty, sandy
	70	68	
	80		Sand, with gravel and shell fragments
	90	83	
	100		Clay, sandy
	110	105	Sand, fine to coarse
	120	116	
	130		Clay, sandy
	140	128	
	150		Sand, fine to coarse, with gravel
	160	155	
	170	162	Sand, fine to coarse, with clay layers
	180	174	
	190		Clay, sandy
	200	187	
	210	202	Sand, fine to coarse, with shell fragments
	220	206	Clay
	230		Sand, fine to coarse, with clay layers
	240	232	

D R I L L L O G

Station No: 72

Well No: PD35, NL49, NB43

Map Sheet: 5136 III

Co-ordinate: 767097

Location: Wat Phong Phloi

Tambon: Bang Na

Amphoe: Phra Khanong

Changwat: Bangkok

Drilling Date: PD35: 1/11/89

NL49: 1/6/89

NB43: 12/28/88

Total depth: PD35: 117.00 m.

NL49: 153.00 m.

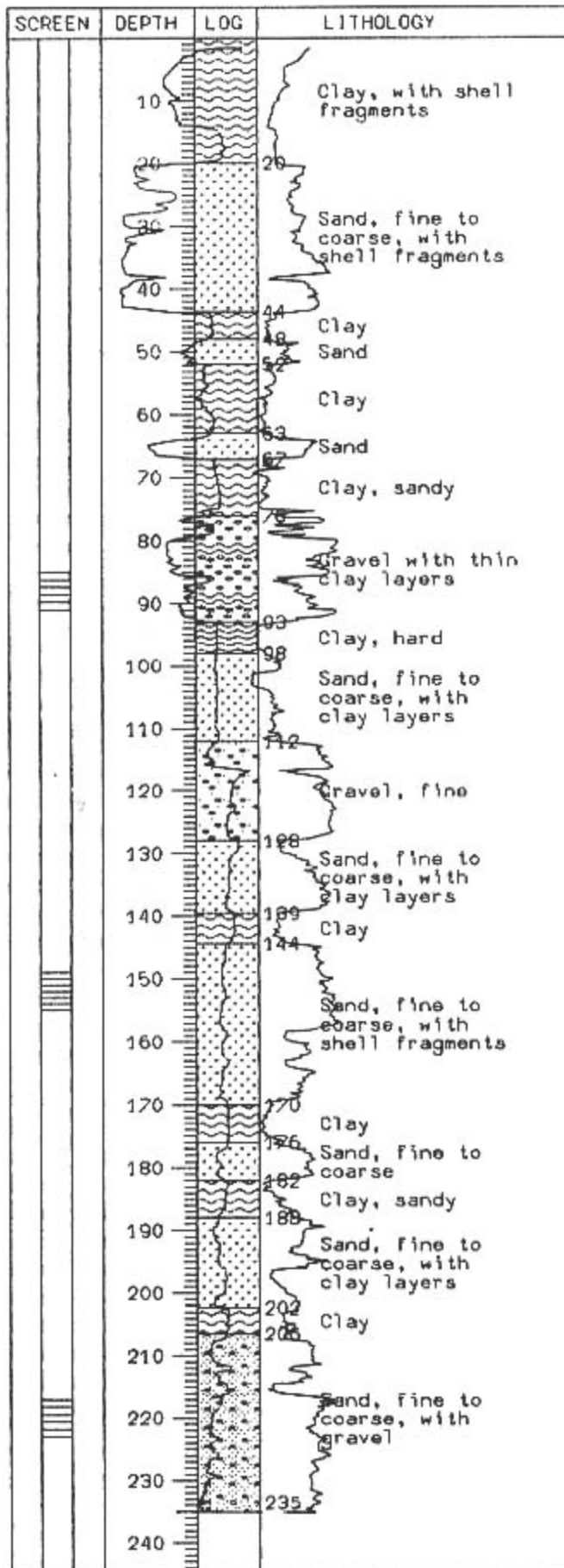
NB43: 228.00 m.

Perforation: PD35: 105.0-111.0 m.

NL49: 144.0-150.0 m.

NB43: 212.0-218.0 m.

W E L L L O G



D R I L L L O G

Station No: 73

Well No: PD37, NL51, NB44

Map Sheet: 5136 IV

Co-ordinate: 852262

Location: Wat Bamphen Nua

Tambon: -

Amphoe: Min Buai

Changwat: Bangkok

Drilling Date: PD37: 1/13/89

NL51: 1/6/89

NB44: 12/29/88

Total depth: PD37: 96.64 m.

NL51: 159.00 m.

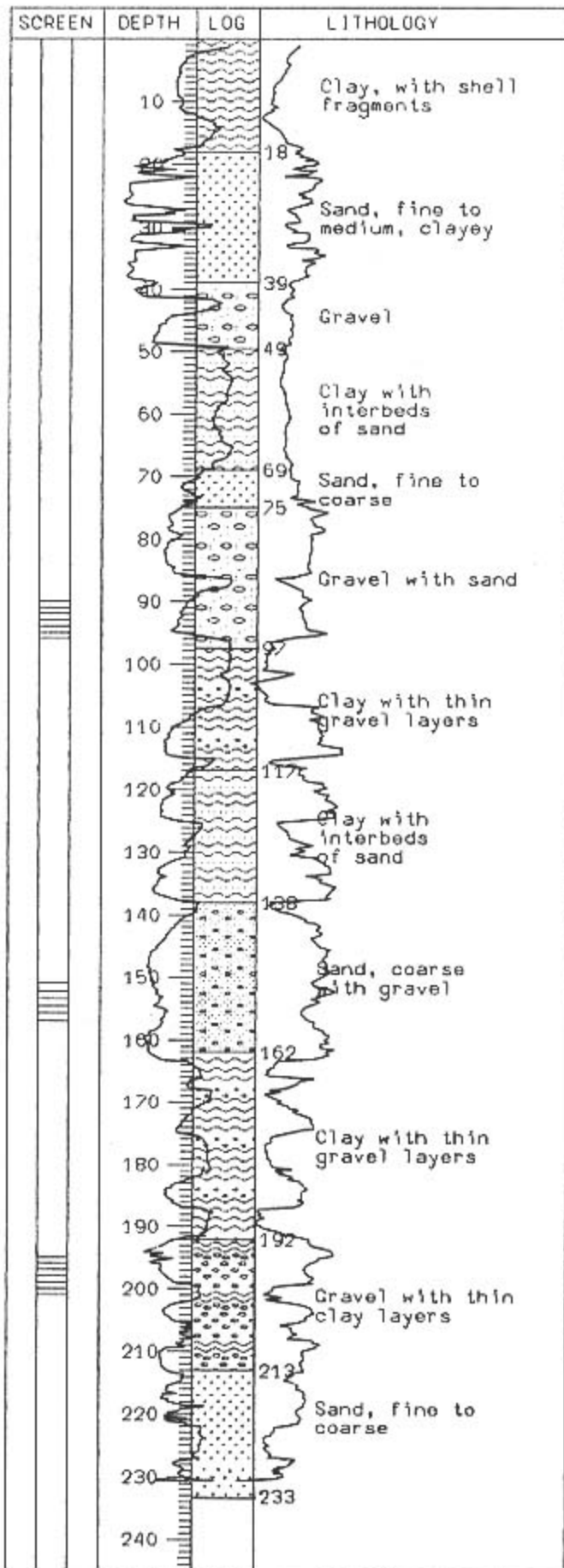
NB44: 233.50 m.

Perforation: PD37: 85.0-91.0 m.

NL51: 149.0-155.0 m.

NB44: 217.0-223.0 m.

W E L L L O G



United Nations GW Software

DRILL LOG

Station No: 74

Well No: PD36, NL52, NB45

Map Sheet: 5136 IV

Co-ordinate: 838212

Location: Wat Lat Bua Khao

Tambon: Prawet

Amphoe: Phra Khanong

Changwat: Bangkok

Drilling Date: PD36: 1/12/89

NL52: 1/8/89

NB45: 1/4/89

Total depth: PD36: 100.60 m.

NL52: 161.50 m.

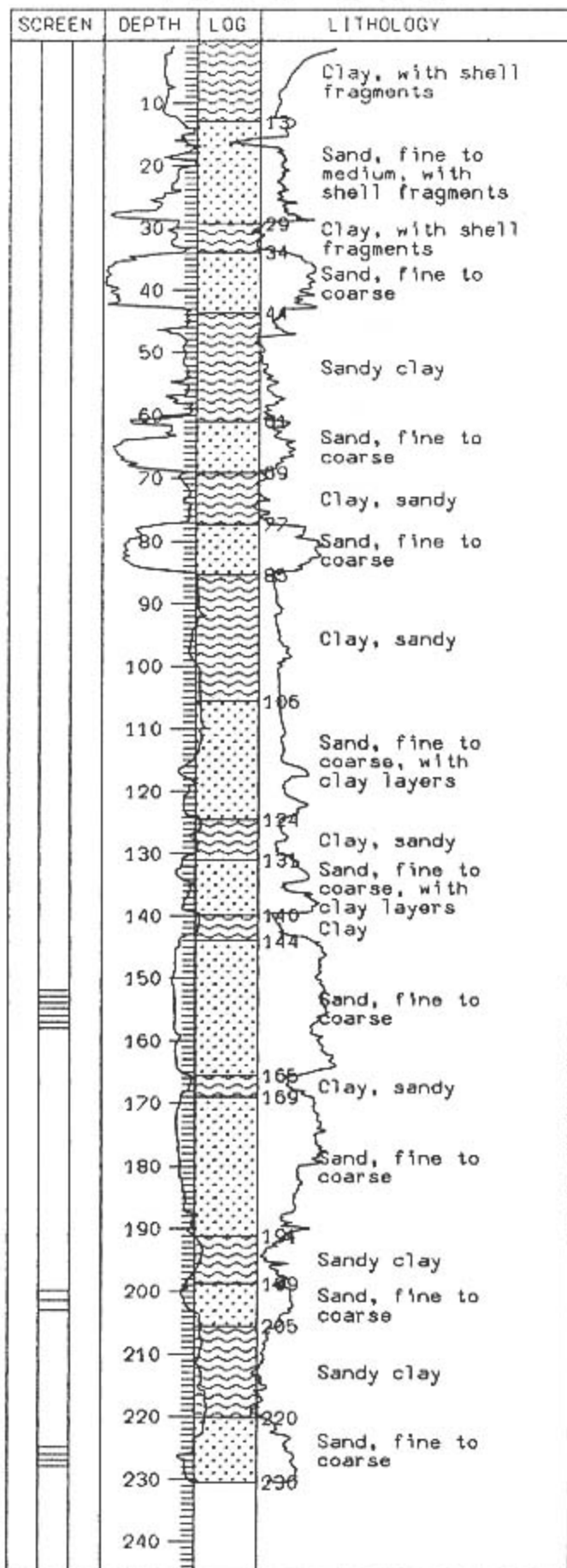
NB45: 233.50 m.

Perforation: PD36: 90.0-96.0 m.

NL52: 151.0-157.0 m.

NB45: 195.0-201.0 m.

W E L L L O G



D R I L L L O G

Station No: 75

Well No: PD84, NL54, NB47

Map Sheet: 5136 IV

Co-ordinate: 858354

Location: Wat Paen Thong Sopharam

Tambon: Sam Wa Tawan Tok

Amphoe: Min Buri

Changwat: Bangkok

Drilling Date: PD84:

NL54: 2/1/89

NB47: 1/25/89

Total depth: PD84:

NL54: 161.00 m.

NB47: 231.00 m.

Perforation: PD84:

NL54: 152.0-158.0 m.

NB47: 200.0-203.0 m.

225.0-228.0 m.

WELL LOG

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay, with shell fragments
	20	23	
	30		Sand, fine to coarse, with shell fragments
	40	36	Clay, with shell fragments
	43		Sand
	50		Clay, with shell fragments
	56		
	60		Sand, fine to coarse, with shell fragments
	67		Clay, with shell fragments
	70	70	
	80		Sand, fine to coarse, with shell fragments
	85		
	90		Clay, with shell fragments
	100		
	103		Sand, medium to coarse, with shell fragments
	110		
	120		Clay, with shell fragments
	126		
	130		Sand, fine to coarse
	134		
	140		Clay, sandy
	144		
	150		Sand, fine to coarse, with shell fragments
	157		
	160		Clay, sandy
	160		Sand
	163		
	169		Clay
	170		Sand, fine to coarse, with gravel
	178		
	180		
	190		
	200		
	210		
	220		
	230		
	240		

DRILL LOG

Station No: 76

Well No: NL53

Map Sheet: 5036 II

Co-ordinate: 576162

Location: Wat Kho Non

Tambon: Bang Wa

Amphoe: Phasi Charoen

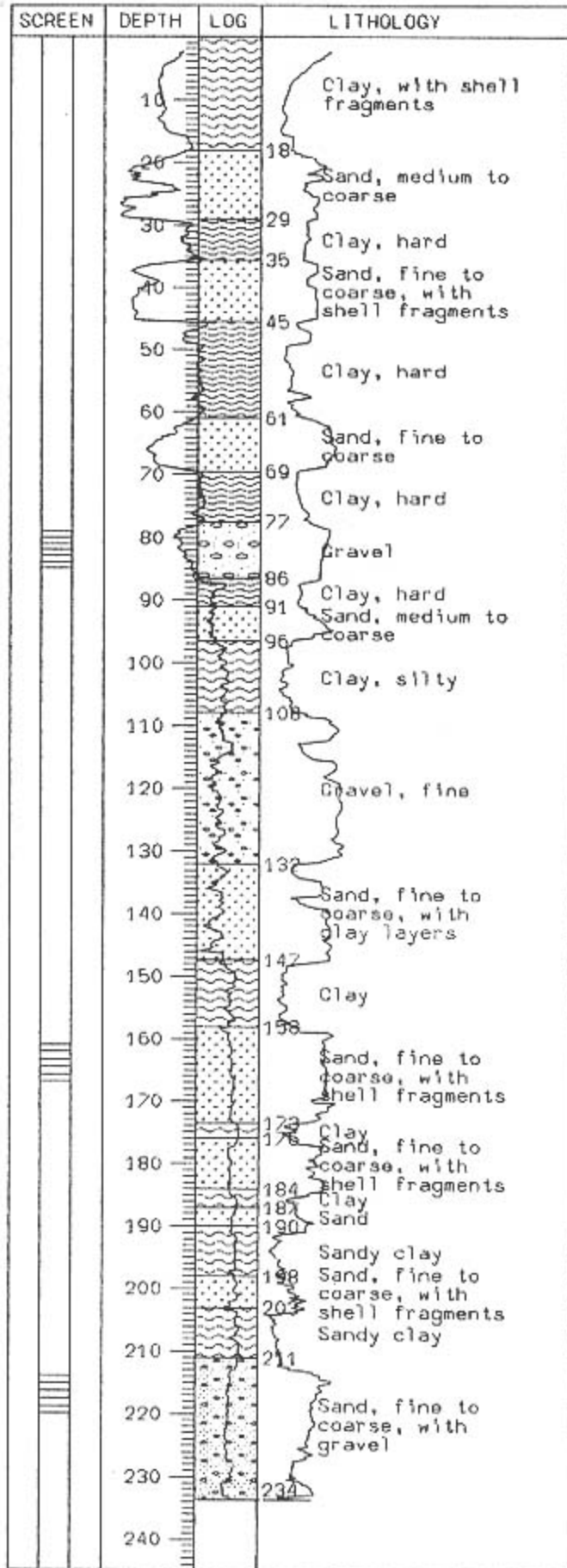
Changwat: Bangkok

Drilling Date: 1/29/89

Total depth: 178.00 m.

Perforation: 147.0-153.0 m.

W E L L L O G



D R I L L L O G

Station No: 77

Well No: PD41, NL56, NB51

Map Sheet: 5136 IV

Co-ordinate: 794259

Location: Praphat Witthaya School

Tambon: Khlong Kum

Amphoe: Bang Kapi

Changwat: Bangkok

Drilling Date: PD41: 2/28/89

NL56: 2/25/89

NB51: 2/21/89

Total depth: PD41: 89.00 m.

NL56: 170.73 m.

NB51: 232.00 m.

Perforation: PD41: 79.0-85.0 m.

NL56: 161.0-167.0 m.

NB51: 214.0-220.0 m.

W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	10		Clay
	17		Sand, clayey
	24		Sand, fine to coarse, clayey
	37		Sand, fine to medium, with shell fragments
	43		Sand, medium to coarse, clayey
	55		Sand, fine to medium
	60		Sand, clayey
	71		Sand, fine to coarse
	79		Clay, sandy
	116		Sand, fine to coarse, with clay layers
	126		Gravel with sand
	130		Clay
	140		Gravel with sand
	146		Clay, sandy, gravelly
	164		Gravel with sand
	170		Clay, sandy
	176.5-178.0		Sand, fine to coarse, clay layer at 176.5-178.0 m.
	181		Clay, sandy
	198		Sand, fine to coarse
	208		Clay
	213		Sand, fine to coarse
	217		Clay, sandy
	233		Sand, fine to coarse, clayey in some parts

DRILL LOG

Station No: 78

Well No: PD82, NL57, NB50

Map Sheet: 5036 I

Co-ordinate: 576214

Location: Wat Chaiyathit

Tambon: Bang Khunsi

Amphoe: Bangkok Noi

Changwat: Bangkok

Drilling Date: PD82:

NL57: 3/1/89

NB50: 2/23/89

Total depth: PD82:

NL57: 168.29 m.

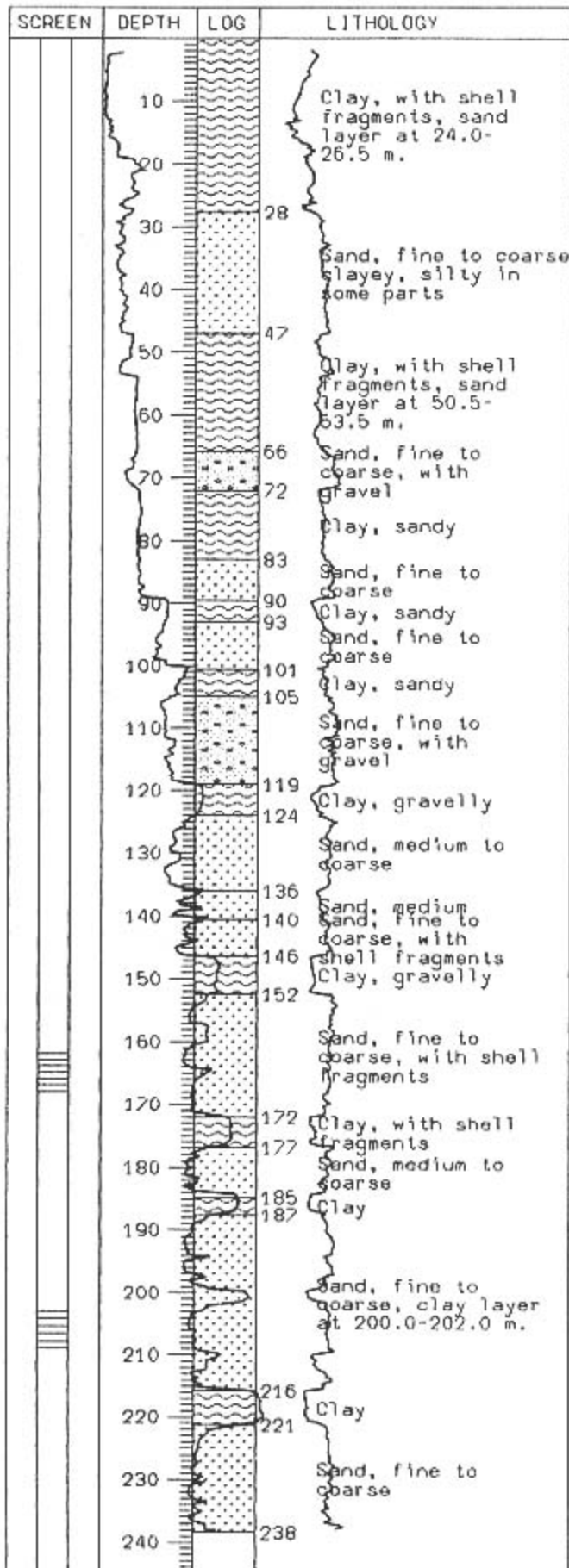
NB50: 232.93 m.

Perforation: PD82:

NL57: 156.0-162.0 m.

NB50: 220.0-226.0 m.

W E L L L O G



D R I L L L O G

Station No: 79

Well No: NL58, NB54

Map Sheet: 5136 III

Co-ordinate: 629075

Location: Itsalam Witthayalai

School

Tambon: Thung Khru

Amphoe: Rat Burana

Changwat: Bangkok

Drilling Date: NL58: 3/26/89

NB54: 3/22/89

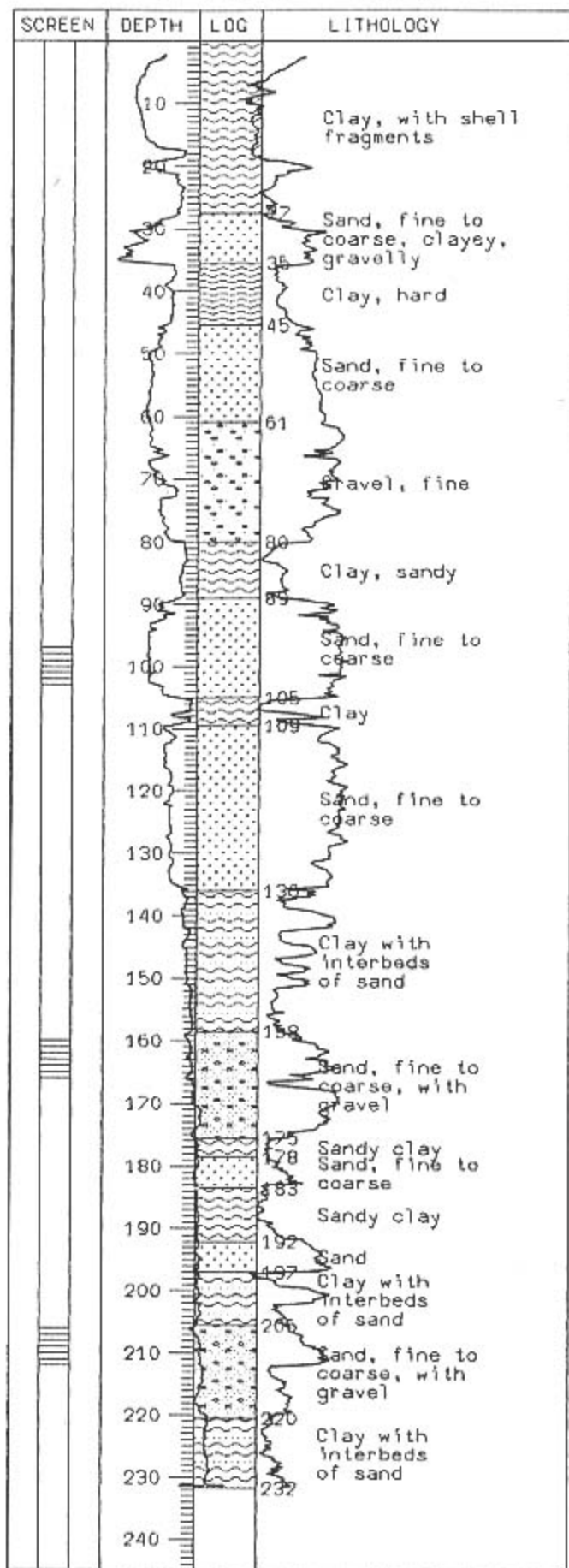
Total depth: NL58: 174.39 m.

NB54: 238.00 m.

Perforation: NL58: 162.0-168.0 m.

NB54: 203.0-209.0 m.

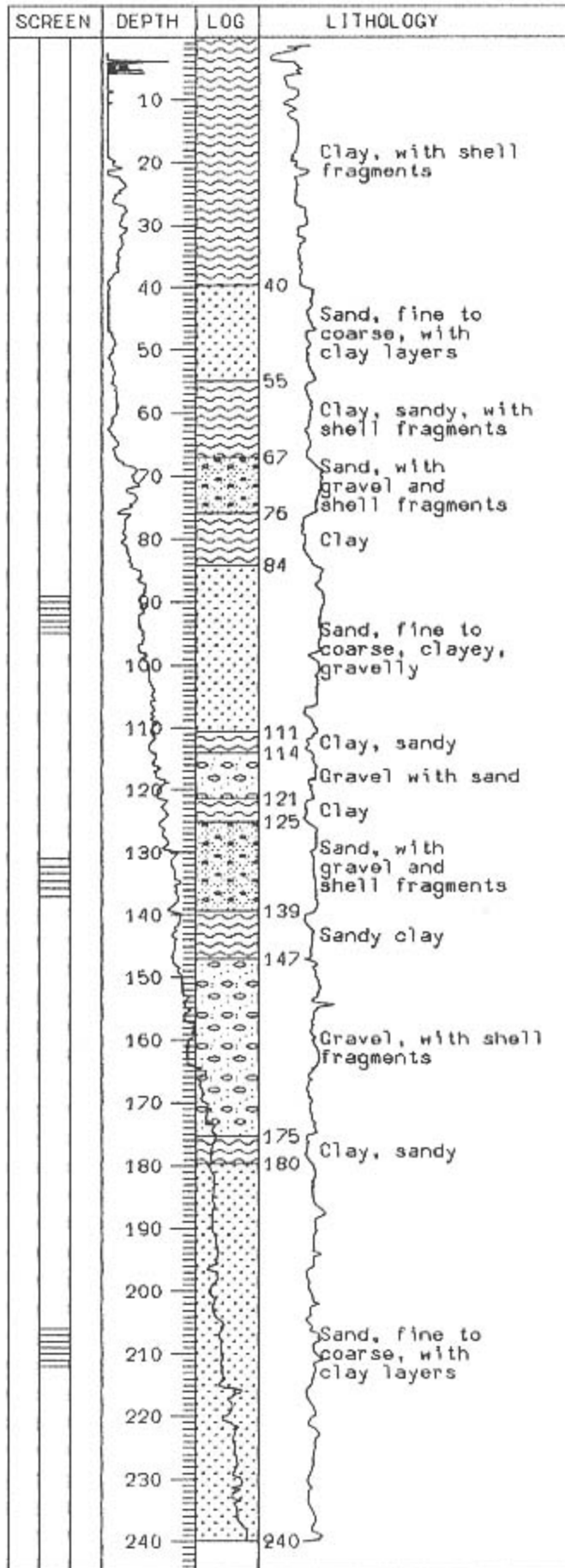
WELL LOG



DRILL LOG

Station No: 80
 Well No: PD44, NL59, NB55
 Map Sheet: 5136 III
 Co-ordinate: 713198
 Location: 11th Channel Television Station
 Tambon: Bang Kapi
 Amphoe: Huai Khwang
 Changwat: Bangkok
 Drilling Date: PD44: 4/14/89
 NL59: 4/9/89
 NB55: 4/3/89
 Total depth: PD44: 111.80 m.
 NL59: 179.69 m.
 NB55: 231.70 m.
 Perforation: PD44: 97.0-103.0 m.
 NL59: 160.0-166.0 m.
 NB55: 206.0-212.0 m.

W E L L L O G



DRILL LOG

Station No: 81

Well No: PD43, NL60, NB48

Map Sheet: 5136 III

Co-ordinate: 762966

Location: Wat Sip Song

Thanwaram

Tambon: Bang Pu Mai

Amphoe: Muang

Changwat: Samut Prakan

Drilling Date: PD43: 4/13/89

NL60: 4/9/89

NB48: 4/4/89

Total depth: PD43: 98.78 m.

NL60: 141.40 m.

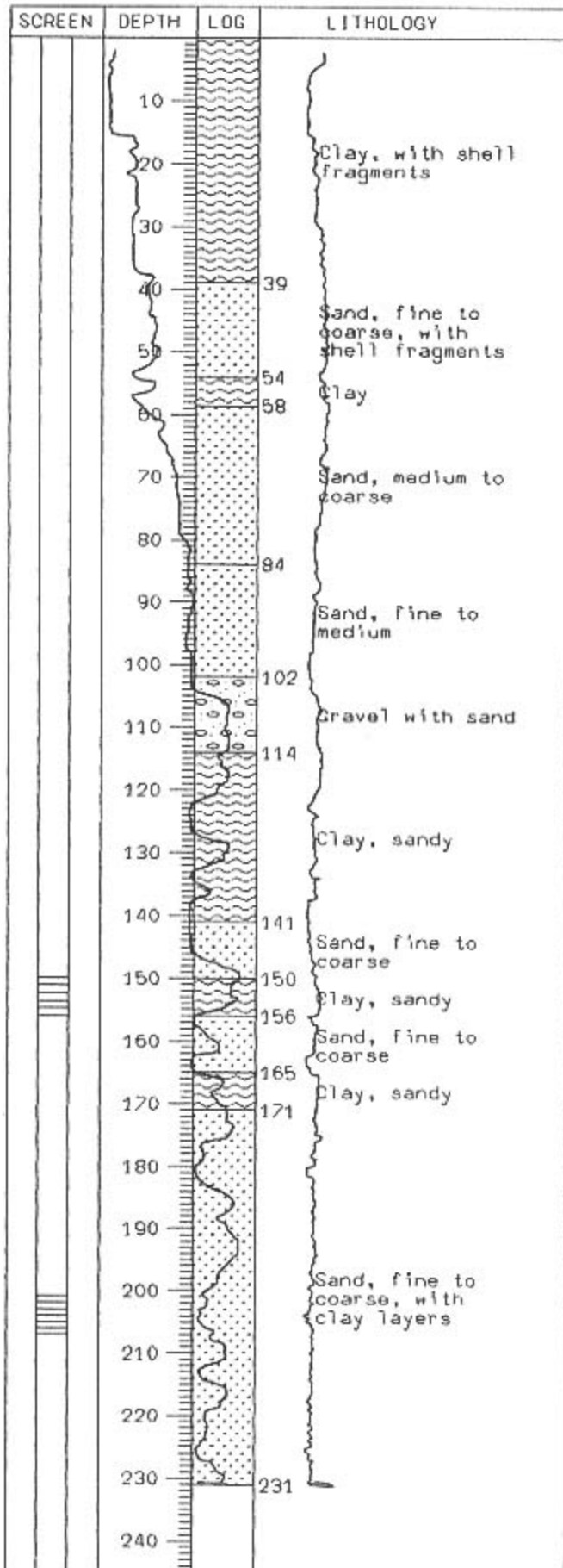
NB48: 239.00 m.

Perforation: PD43: 89.0-95.0 m.

NL60: 131.0-137.0 m.

NB48: 206.0-212.0 m.

WELL LOG



DRILL LOG

Station No: 82

Well No: PD79, NL61, NB56

Map Sheet: 5136 III

Co-ordinate: 825993

Location: Wat Noi Suwannaram

Tambon: -

Amphoe: Bang Phli

Changwat: Samut Prakan

Drilling Date: PD79:

NL61: 4/14/89

NB56: 4/5/89

Total depth: PD79:

NL61: 161.89 m.

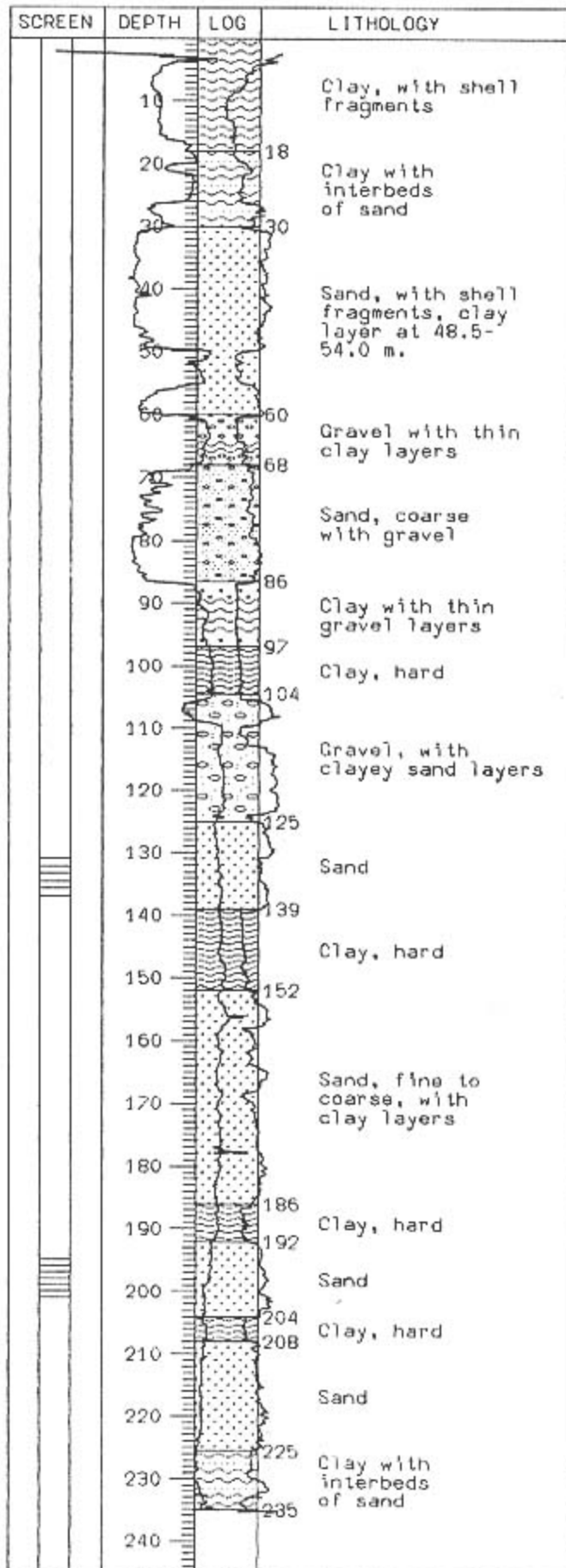
NB56: 231.00 m.

Perforation: PD79:

NL61: 150.0-156.0 m.

NB56: 201.0-207.0 m.

W E L L L O G



DRILL LOG

Station No: 83

Well No: NL63, NB57

Map Sheet: 5136 III

Co-ordinate: 837085

Location: Bang Phli Switching
Office

Tambon: -

Amphoe: Bang Phli

Changwat: Samut Prakan

Drilling Date: NL63: 5/3/89

NB57: 4/30/89

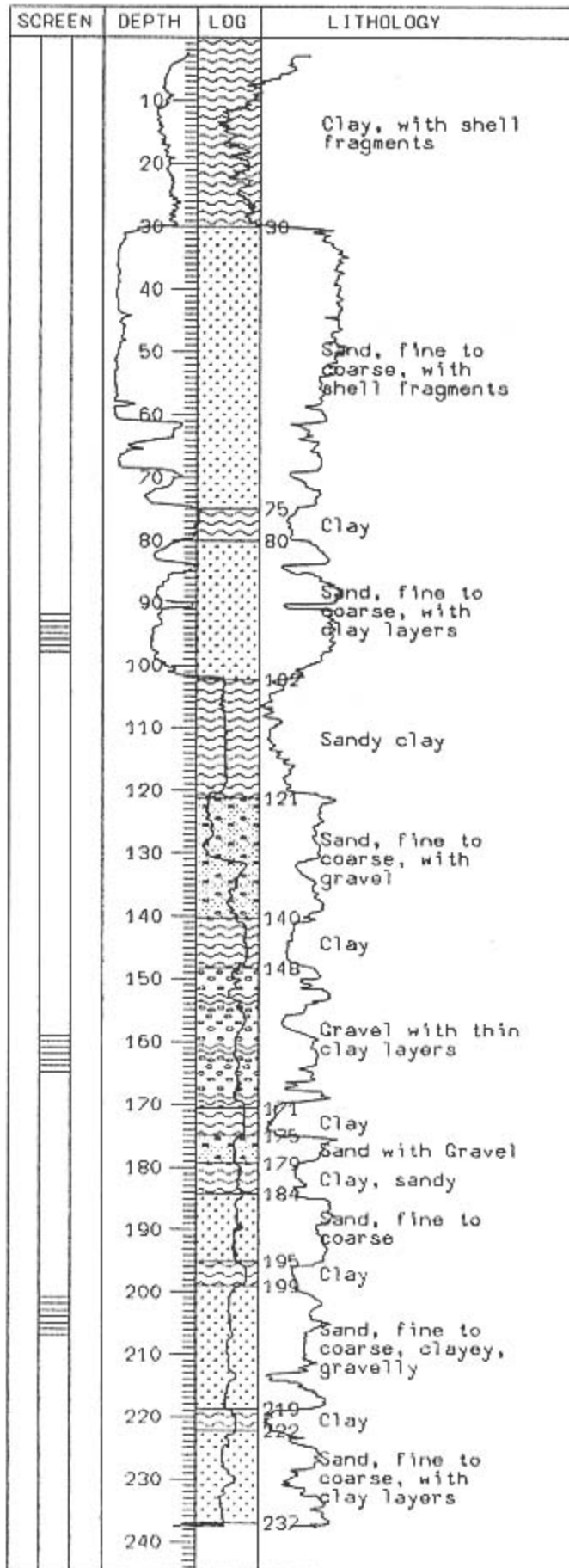
Total depth: NL63: 140.85 m.

NB57: 235.36 m.

Perforation: NL63: 131.0-137.0 m.

NB57: 195.0-201.0 m.

W E L L L O G



DRILL LOG

Station No: 84

Well No: PD45, NL64, NB58

Map Sheet: 5036 I

Co-ordinate: 619315

Location: Wat Bang Phraek Nua

Tambon: Suan Yai

Amphoe: Muang

Changwat: Nonthaburi

Drilling Date: PD45: 5/8/89

NL64: 5/6/89

NB58: 5/3/89

Total depth: PD45: 101.82 m.

NL64: 169.80 m.

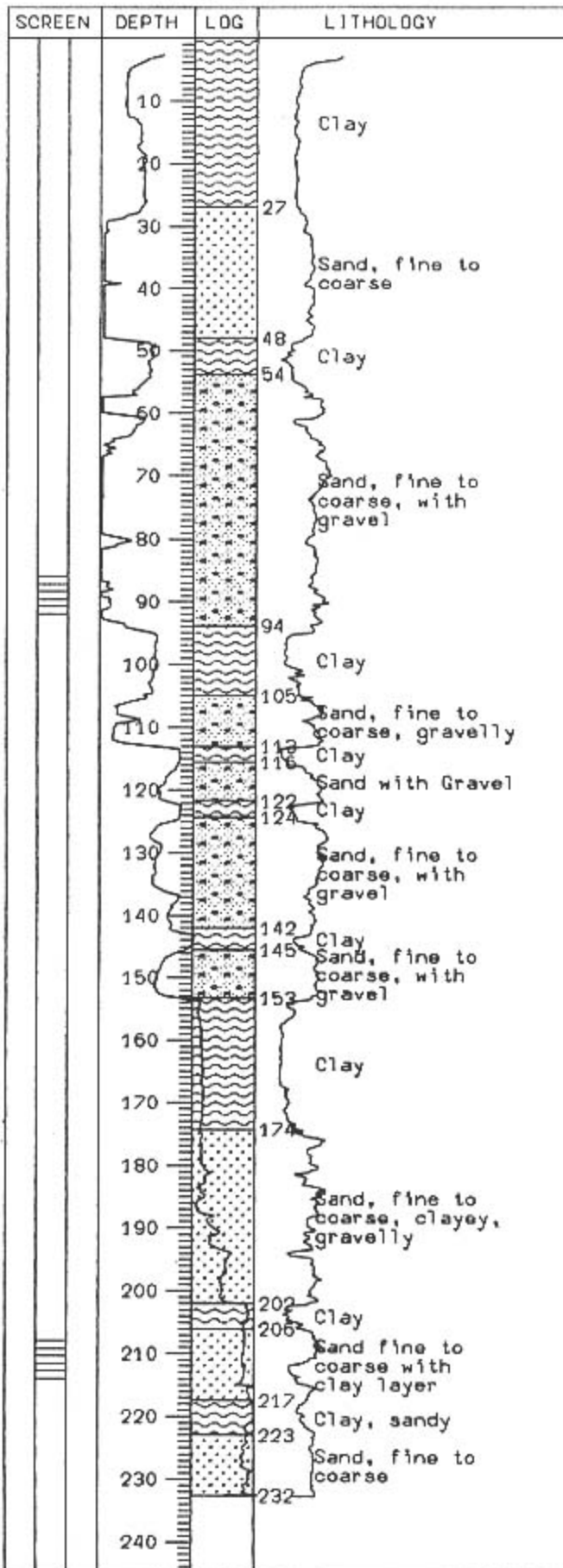
NB58: 236.28 m.

Perforation: PD45: 92.0-98.0 m.

NL64: 159.0-165.0 m.

NB58: 201.0-207.0 m.

WELL LOG



United Nations GM Software

DRILL LOG

Station No: 85

Well No: PD48, NB59

Map Sheet: 5136 IV

Co-ordinate: 658442

Location: Wat Chinwanaram

Worawihan

Tambon: Bang Khayaeng

Amphoe: Muang

Changwat: Pathum Thani

Drilling Date: PD48: 5/22/89

NB59: 5/20/89

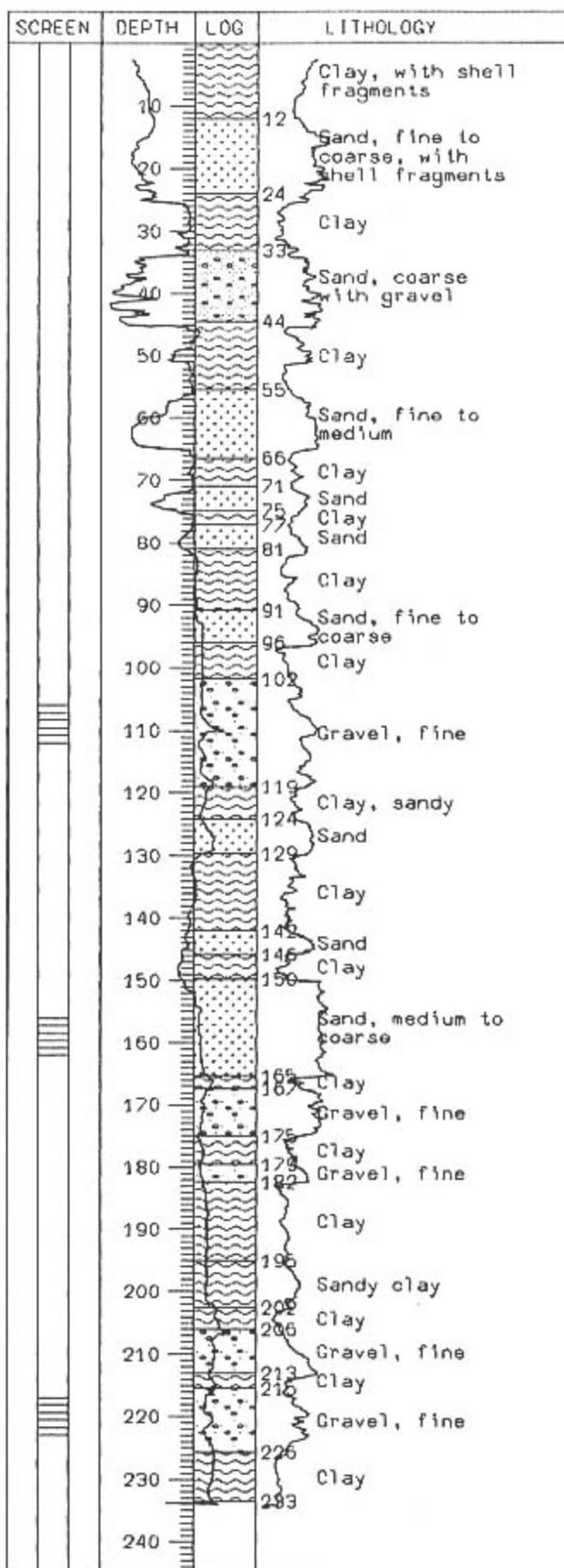
Total depth: PD48: 96.34 m.

NB59: 239.32 m.

Perforation: PD48: 86.0-92.0 m.

NB59: 208.0-214.0 m.

W E L L L O G



DRILL LOG

Station No: 86

Well No: PD65, NL66, NB67

Map Sheet: 5137 III

Co-ordinate: 748521

Location: Rangsit Switching

Office

Tambon: -

Amphoe: Khlong Luang

Changwat: Pathum Thani

Drilling Date: PD65: 8/27/90

NL66: 5/26/89

NB67: 8/21/90

Total depth: PD65: 116.70 m.

NL66: 172.25 m.

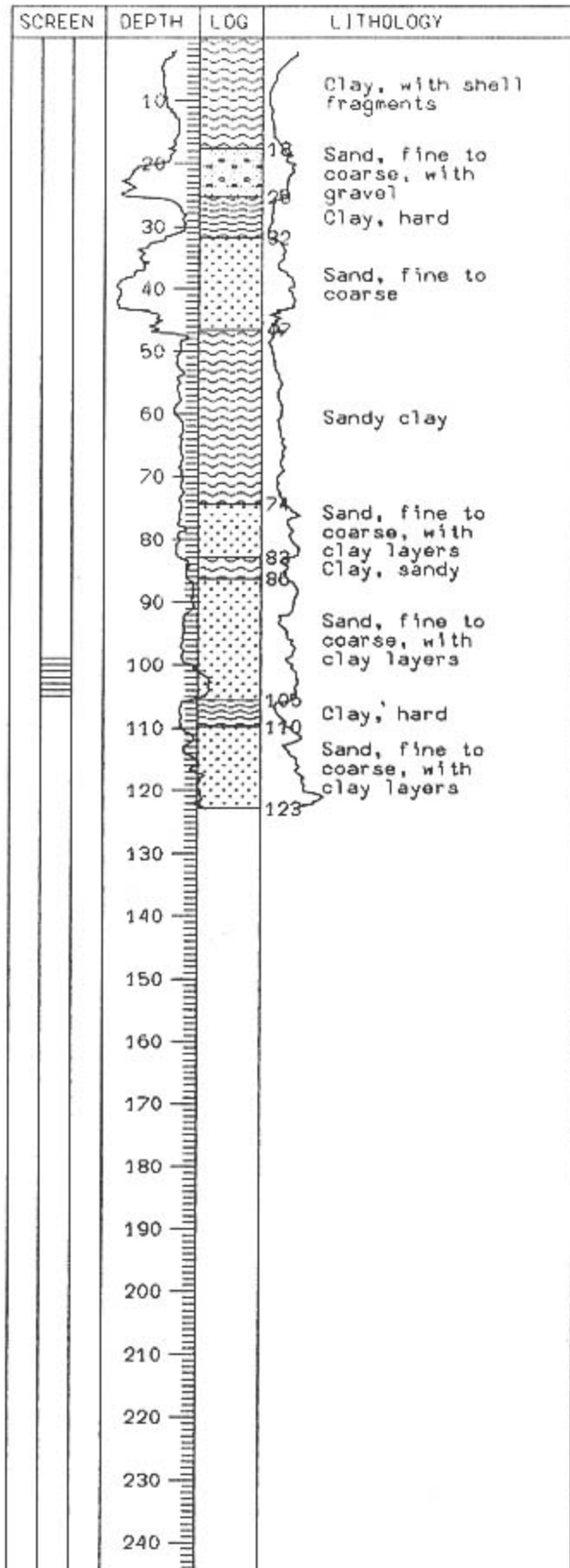
NB67: 233.50 m.

Perforation: PD65: 106.0-112.0 m.

NL66: 156.0-162.0 m.

NB67: 217.0-223.0 m.

W E L L L O G



DRILL LOG

Station No: 87

Well No: PD49

Map Sheet: 5136 IV

Co-ordinate: 745458

Location: Pathum Thani

Agriculture College

Tambon: Khu Khot

Amphoe: Lam Luk Ka

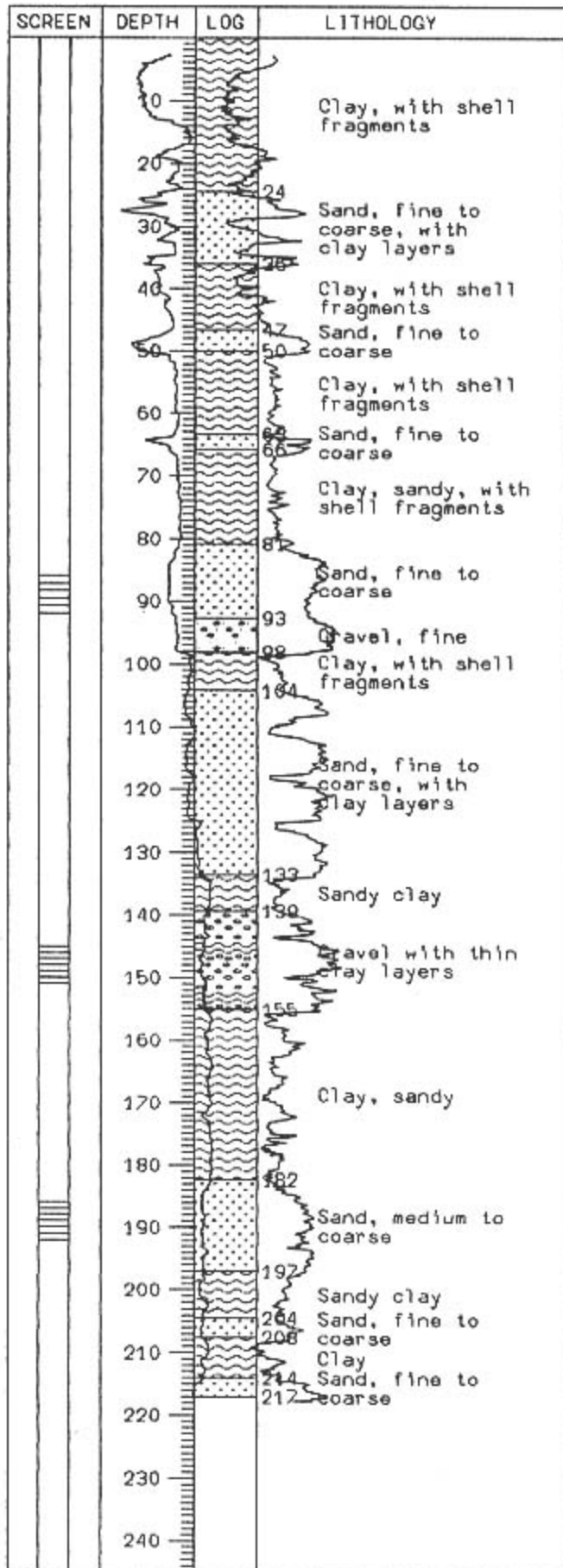
Changwat: Pathum Thani

Drilling Date: 5/30/89

Total depth: 122.86 m.

Perforation: 99.0-105.0 m.

W E L L L O G



D R I L L L O G

Station No: 88

Well No: PD54, NL69, NB61

Map Sheet: 5036 II

Co-ordinate: 383199

Location: Wat Tha Phut

Tambon: Rai Khing

Amphoe: Sam Phran

Changwat: Nakhon Pathum

Drilling Date: PD54: 3/2/90

NL69: 2/25/90

NB61: 2/18/90

Total depth: PD54: 100.60 m.

NL69: 156.00 m.

NB61: 228.00 m.

Perforation: PD54: 86.0-92.0 m.

NL69: 145.0-151.0 m.

NB61: 186.0-192.0 m.

W E L L L O G



D R I L L L O G

Station No: 89

Well No: PD56, NB63

Map Sheet: 5036 I

Co-ordinate: 541312

Location: Wat Phikun Ngoen

Tambon: Bang Muang

Amphoe: Bang Yai

Changwat: Nonthaburi

Drilling Date: PD56: 4/4/90

NB63: 3/16/90

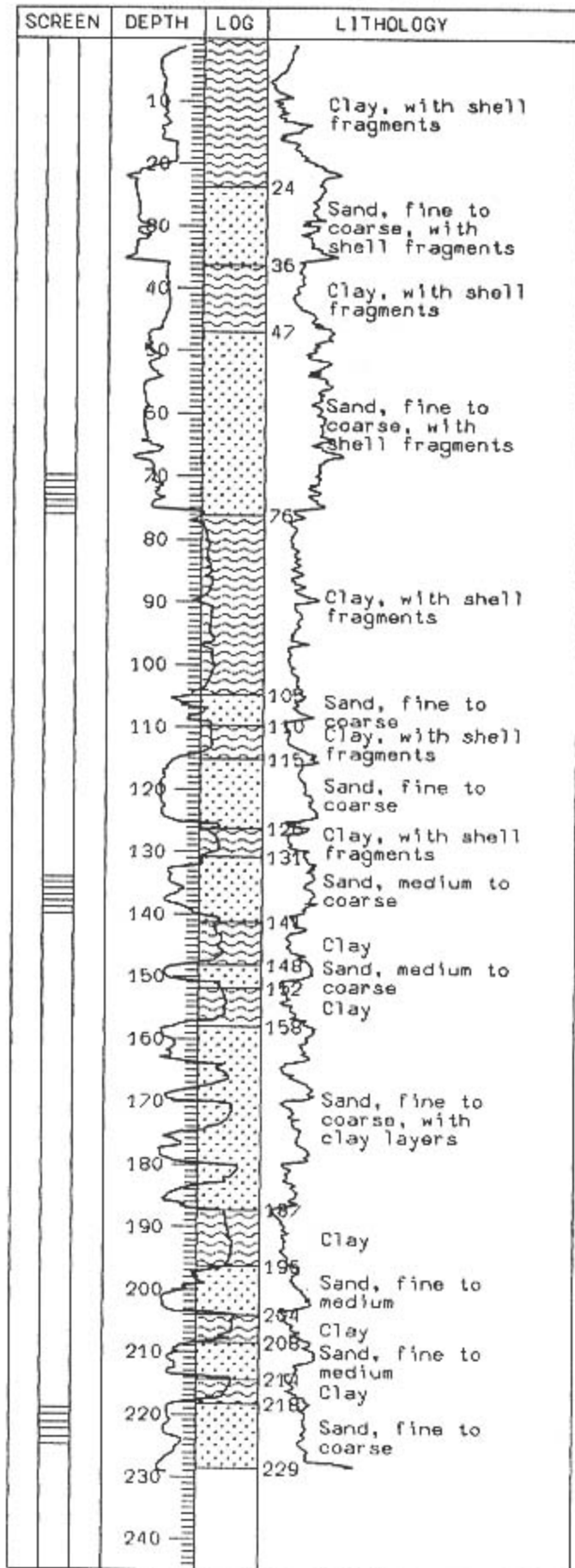
Total depth: PD56: 120.00 m.

NB63: 234.75 m.

Perforation: PD56: 91.0-97.0 m.

NB63: 215.0-221.0 m.

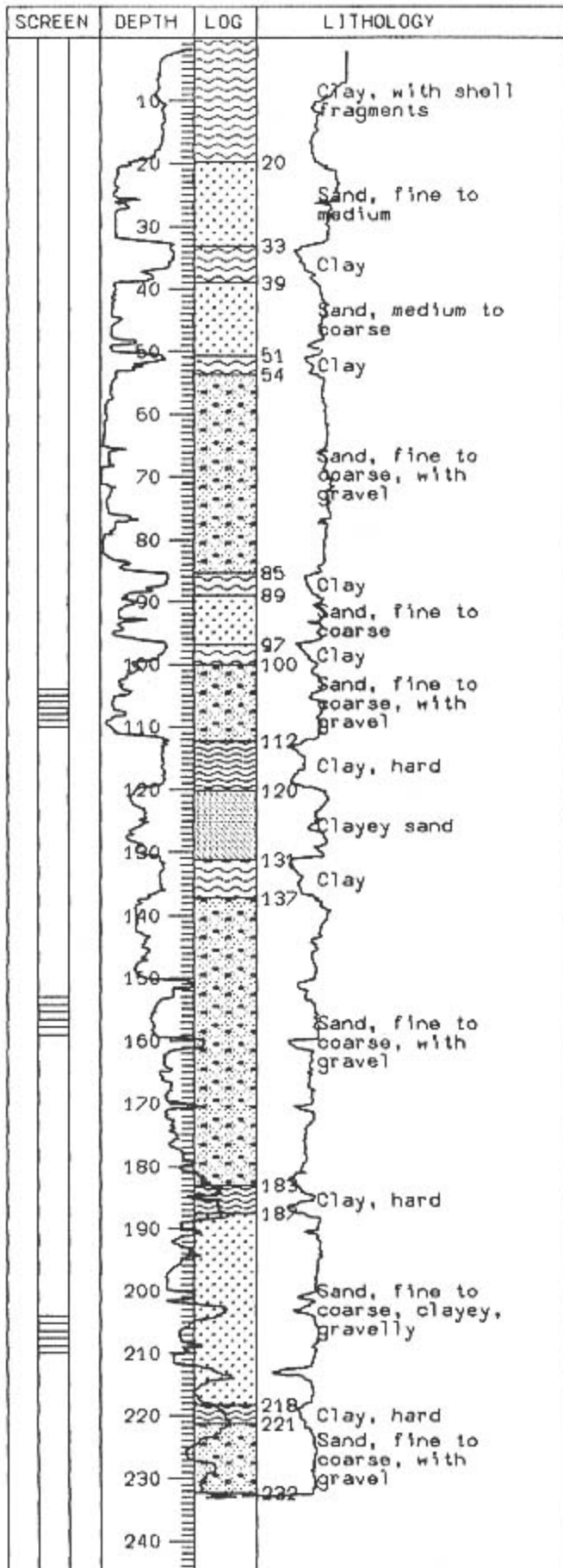
W E L L L O G



D R I L L L O G

Station No: 90
 Well No: PD57, NL70, NB62
 Map Sheet: 5036 II
 Co-ordinate: 521118
 Location: Wat Ninsukharam
 Tambon: Bang Bon
 Amphoe: Bang Khun Thian
 Changwat: Bangkok
 Drilling Date: PD57: 3/31/90
 NL70: 3/20/90
 NB62: 3/26/90
 Total depth: PD57: 91.00 m.
 NL70: 229.50 m.
 NB62: 230.00 m.
 Perforation: PD57: 70.0-76.0 m.
 NL70: 134.0-140.0 m.
 NB62: 219.0-225.0 m.

W E L L L O G



D R I L L L O G

Station No: 91

Well No: PD60, NL74, NB64

Map Sheet: 5036 I

Co-ordinate: 605478

Location: Wat Phrai Fa

Tambon: Bang Dua

Amphoe: Muang

Changwat: Pathum Thani

Drilling Date: PD60: 5/7/90

NL74: 5/15/90

NB64: 4/11/90

Total depth: PD60: 135.00 m.

NL74: 163.00 m.

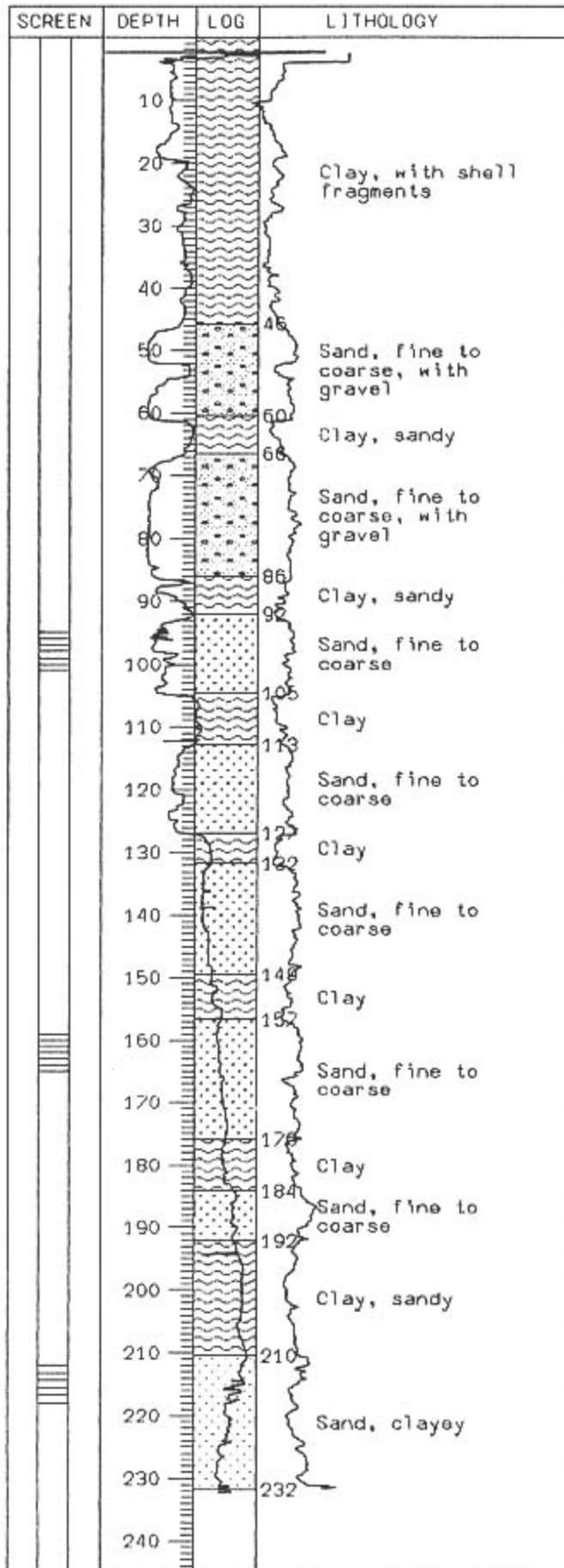
NB64: 234.80 m.

Perforation: PD60: 104.0-110.0 m.

NL74: 153.3-159.3 m.

NB64: 204.0-210.0 m.

W E L L L O G



DRILL LOG

Station No: 92

Well No: PD61, NL73, NB65

Map Sheet: 5036 I

Co-ordinate: 405347

Location: Limkun Watthana

School

Tambon: -

Amphoe: Sai Noi

Changwat: Nonthaburi

Drilling Date: PD61: 5/10/90

NL73: 5/4/90

NB65: 4/27/90

Total depth: PD61: 112.00 m.

NL73: 173.30 m.

NB65: 231.00 m.

Perforation: PD61: 95.0-101.0 m.

NL73: 159.0-165.0 m.

NB65: 212.0-218.0 m.

W E L L L O G

SCREEN	DEPTH	LOG	LITHOLOGY
	5		
	10		Clay
	15		
	19	19	Sand, fine to coarse, with clay layers
	24	24	
	25		Sandy clay
	30		
	35	35	
	40		Sand, fine to coarse
	45		
	50		
	55	55	
	60		Sandy clay
	65		
	67	67	Sand
	70	70	Clay
	73	73	
	75		Sand, fine to coarse
	80		
	85		
	90		
	94	94	Sandy clay
	100	100	
	105		Sand, fine to coarse, with clay layers
	110		
	115		
	119	119	
	120		
	125		
	130		
	135		
	140		
	145		
	150		
	155		
	160		
	165		
	170		
	175		
	180		
	185		
	190		
	195		
	200		
	205		
	210		
	215		
	220		
	225		
	230		
	235		
	240		

DRILL LOG

Station No: 93

Well No: PD63

Map Sheet: 5236 IV

Co-ordinate: 668379

Location: Wat Phasuk

Tambon: Pak Kret

Amphoe: Pak Kret

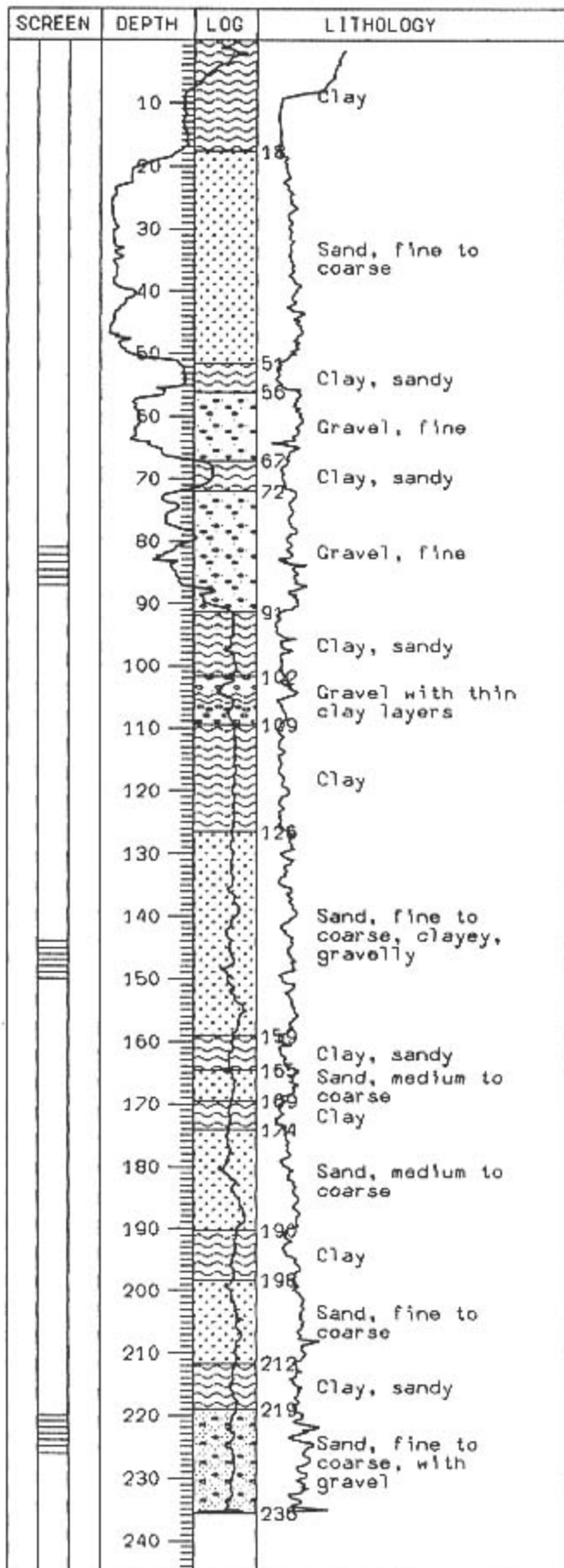
Changwat: Nonthaburi

Drilling Date: 8/6/90

Total depth: 118.00 m.

Perforation: 101.0-107.0 m.

W E L L L O G



D R I L L L O G

Station No: 94

Well No: PD66, NL75, NB68

Map Sheet: 5037 II

Co-ordinate: 451594

Location: Wat Lak Khong

Tambon: Rat Niyom

Amphoe: Sai Noi

Changwat: Nonthaburi

Drilling Date: PD66: 9/17/90

NL75: 9/12/90

NB68: 8/27/90

Total depth: PD66: 91.00 m.

NL75: 153.00 m.

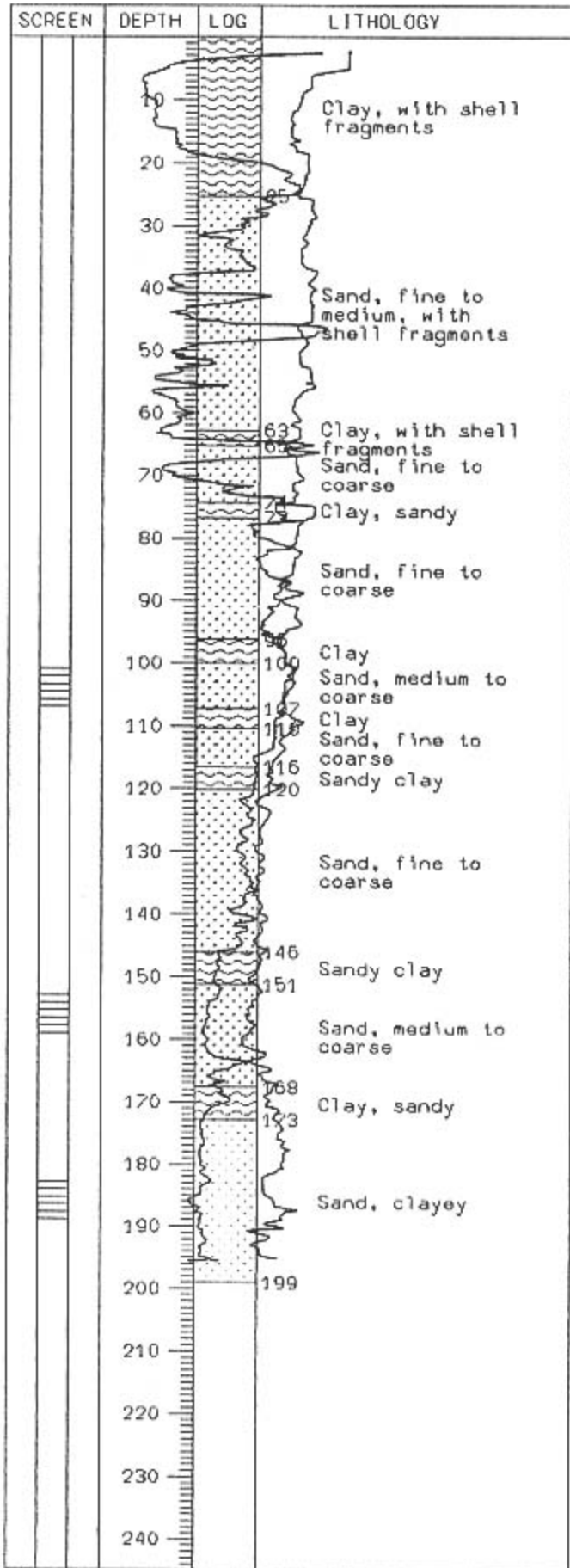
NB68: 235.67 m.

Perforation: PD66: 81.0-87.0 m.

NL75: 144.0-150.0 m.

NB68: 220.0-226.0 m.

WELL LOG



DRILL LOG

Station No: 95

Well No: PD69, NL77, NB71

Map Sheet: 5136 II

Co-ordinate: 059009

Location: Wat Bang Phli Noi

Tambon: Bang Phli Noi

Amphoe: Bang Bo

Changwat: Samut Prakan

Drilling Date: PD69: 10/18/90

NL77: 9/25/90

NB71: 9/17/90

Total depth: PD69: 115.00 m.

NL77: 185.90 m.

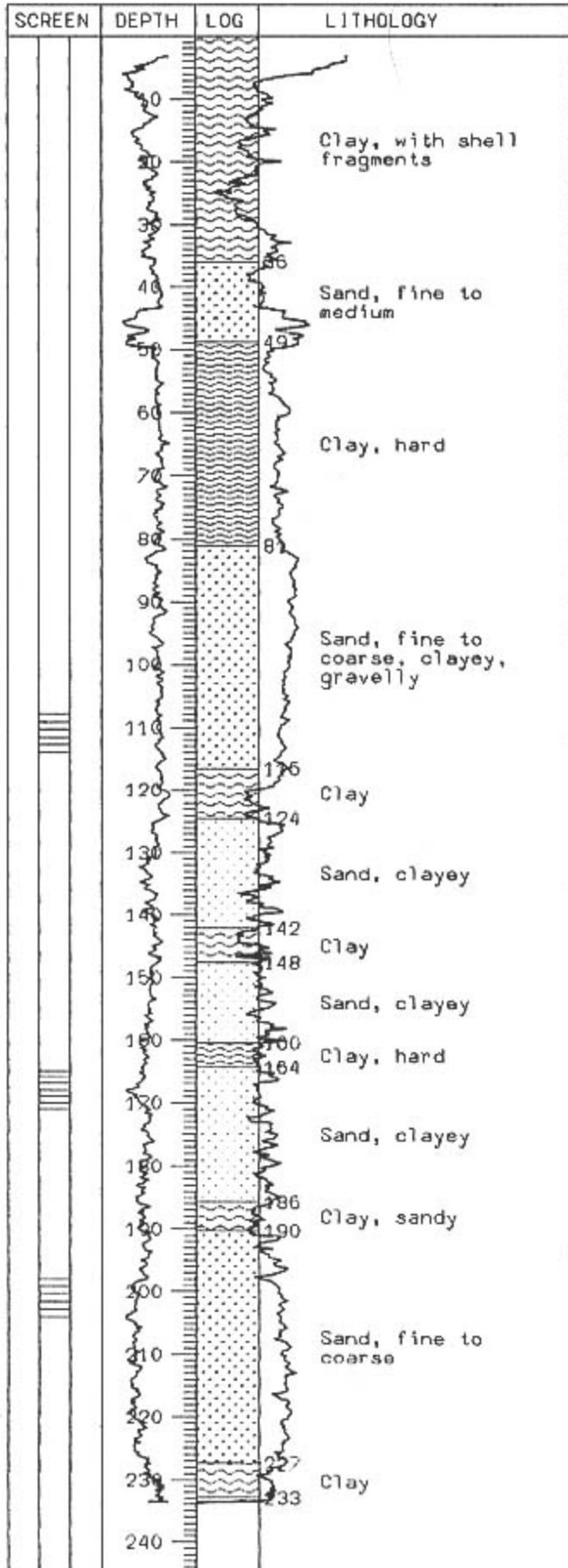
NB71: 199.00 m.

Perforation: PD69: 101.0-107.0 m.

NL77: 153.0-159.0 m.

NB71: 183.0-189.0 m.

W E L L L O G



D R I L L L O G

Station No: 96

Well No: PD70, NL79, NB70

Map Sheet: 5137 II

Co-ordinate: 046568

Location: Wat Phichit Pittayaram

Tambon: Bung Nam Rak

Amphoe: Thanyaburi

Changwat: Pathum Thani

Drilling Date: PD70: 11/2/90

NL79: 10/27/90

NB70: 10/11/90

Total depth: PD70: 118.90 m.

NL79: 176.90 m.

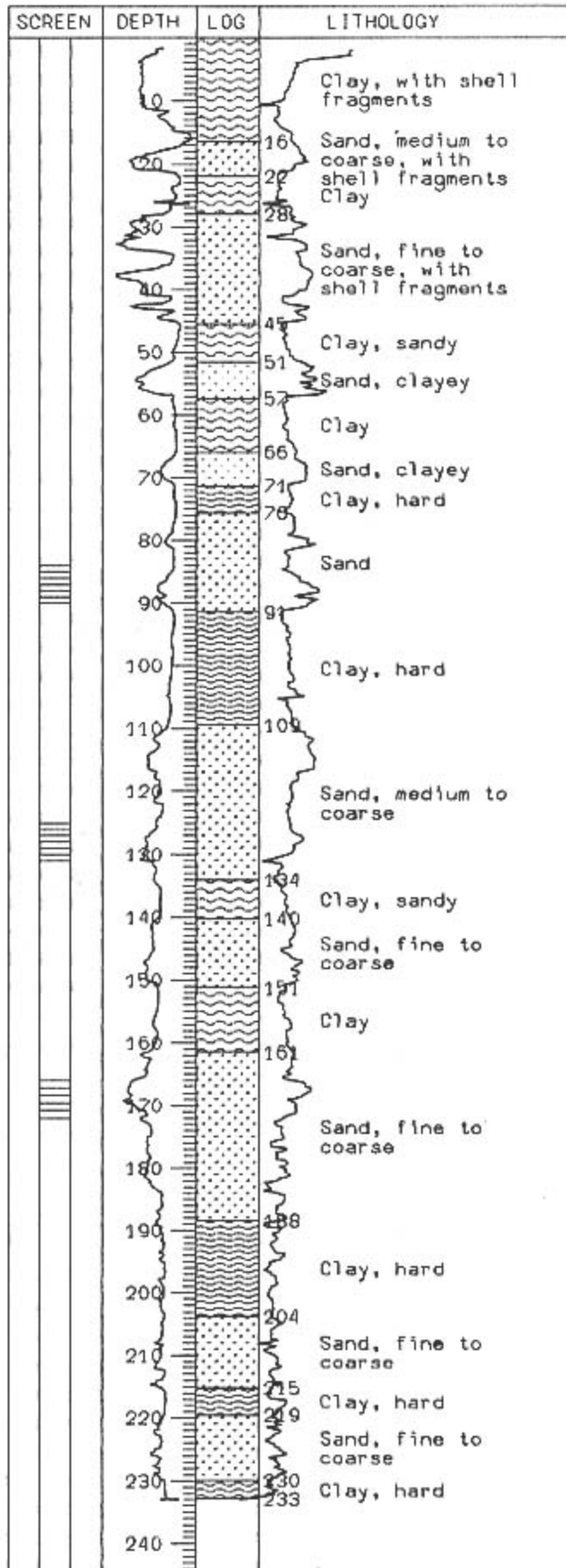
NB70: 232.90 m.

Perforation: PD70: 108.0-114.0 m.

NL79: 165.0-171.0 m.

NB70: 198.0-204.0 m.

W E L L L O G



DRILL LOG

Station No: 97

Well No: PD71, NL80, NB72

Map Sheet: 5137 III

Co-ordinate: 849489

Location: Wat Mun Chindaram

Tambon: Bung Yitho

Amphoe: Thanyaburi

Changwat: Pathum Thani

Drilling Date: PD71: 12/20/90

NL80: 12/11/90

NB72: 11/22/90

Total depth: PD71: 95.12 m.

NL80: 139.00m.

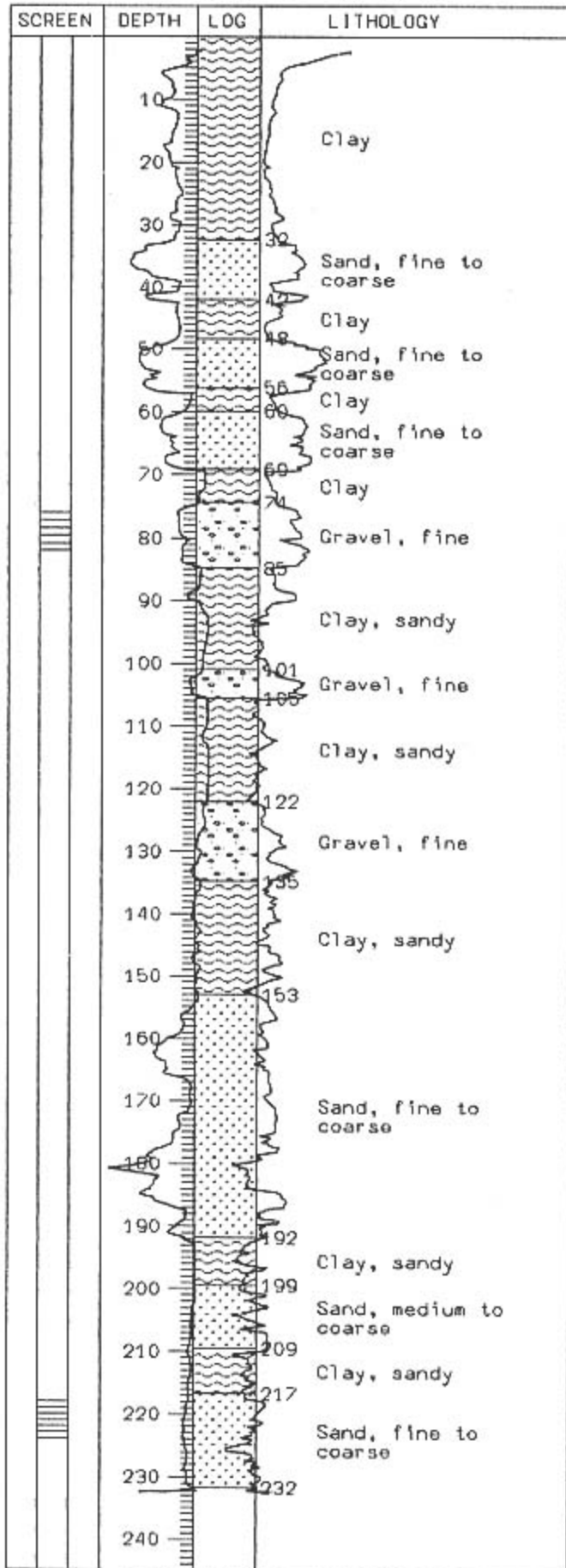
NB72: 234.00 m.

Perforation: PD71: 84.0-90.0 m.

NL80: 125.0-131.0 m.

NB72: 166.0-172.0 m.

WELL LOG



DRILL LOG

Station No: 98

Well No: PD73, NB74

Map Sheet: 5137 II

Co-ordinate: 971628

Location: Amphoe Nong Sua

Office Compound

Tambon: Bung Ba

Amphoe: Nong Sua

Changwat: Pathum Thani

Drilling Date: PD73: 2/7/91

NB74: 1/29/91

Total depth: PD73: 85.90 m.

NB74: 231.70 m.

Perforation: PD73: 76.0-82.0 m.

NB74: 218.0-224.0 m.

CHEMICAL ANALYSIS OF GROUNDWATER

Groundwater samples of the monitoring wells in Bangkok and its vicinity were periodically collected for chemical analysis during 1978-1986. Since 1987, water samples from most wells were collected two to three times annually for determinations of the changes in chemical quality. However, water quality determinations are annually planned for. This report presents the chemical analysis data of the groundwater in separate aquifers as shown in Table 5 for the Phra Pradaeng aquifer, Table 6 for the Nakhon Luang aquifer, and Table 7 for the Nonthaburi aquifer.

The first results of analysis of the chemical parameters of each well are obtained from water samples collected by air-lifting during well development at the time of construction. The second, third, fourth, and so forth, are the results of analysis of water samples collected by water-sampler, with an exception of the analysis results in 1987 that the wells installed during 1978 - 1979 were re-developed, and the samples were taken by air-lifting process. It should be noted that nonrepresentative samples of stagnant water may be obtained when sampling by a water-sampler. Thus, in using chemical data for interpretation, careful consideration should be emphasised. Most of the data used for preparation of the isochlor maps of groundwater by MGL Project were obtained from the analyses of water samples collected from private production wells in which pumping of water is almost continuously operated.

Table 5. Chemical Analysis of Water (in mg/l) from Monitoring Wells in Phra Pradaeng Aquifer

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
PD 1	05-07-81	7.5	84	9	350	11.0	0.63	0.04	708	2.2	0	20	0.5	0.0	1272	246
105.20	05-06-86	7.7	66	23	372	9.8	1.20	0.03	872	2.1	0	20	7.6	0.2	1456	258
	10-13-87	8.0	94	49	329	7.4	0.58	0.34	734	12.0	0	106	3.5	0.0	1770	436
	02-16-88	8.0	104	44	327	7.4	0.92	0.44	694	12.0	0	141	4.3	0.0	1608	440
	07-18-88	8.1	84	39	313	8.6	0.82	0.09	710	7.1	0	69	3.2	0.0	1199	372
	11-15-88	8.0	77	51	324	7.4	0.48	0.19	706	6.6	0	72	3.5	0.2	1210	402
	03-19-90	7.5	84	43	317	7.4	1.30	0.15	749	2.3	0	65	4.5	0.1	1470	388
PD 2	06-20-78	7.7	30	17	241	0.0	0.24	0.00	254	11.0	0	364	0.0	0.2	793	144
100.65	02-10-80	7.4	35	22	223		2.90	0.17	283	1.0	0	319	0.0	0.3	904	176
	04-20-81	8.2	12	9	250	4.7	1.50	0.00	248	6.4	0	328	1.1	0.2	698	68
	02-19-86	8.9	9	15	239	3.5	0.98	0.01	231	2.9	32	226	0.0	0.3	658	85
	07-20-87	8.7	6	4	239	3.1	1.00	0.00	232	4.0	31	214	0.4	0.3	640	30
	10-13-87	8.7	3	3	242	3.9	0.30	0.00	227	4.5	29	235	0.0	0.2	632	22
	12-07-88	8.7	28	15	287	5.1	0.26	0.02	358	4.3	23	280	2.0	0.2	1009	132
	06-09-89	8.6	23	14	297	4.3	0.49	0.00	336	3.8	30	256	1.6	0.2	1010	117
	03-15-90	8.2	21	13	288	5.5	0.90	0.01	349	3.0	0	285	0.4	0.3	800	107
	08-28-90	8.4	17	16	283	5.1	0.27	0.02	343	2.3	22	221	1.1	0.3	786	107
	10-18-91	7.8	21	8	230	5.7	0.76	0.01	370	5.0	0	249	1.1	0.3	818	86
PD 3	09-13-78	7.3	488	168			4.40		2640	241.0	0	110	0.0	0.1	4672	1910
88.50	02-09-80	6.5	952	468	1360		12.00	0.00	4660	501.0	0	183	14.0	0.1	10720	4300
	04-20-81	8.1	856	405	1760	39.0	1.30	0.04	5070	401.0	0	9	0.0	0.0	9650	3800
	02-18-86	7.2	673	302	2001	35.0	1.20	0.40	5101	88.0	0	4	0.0	0.1	10678	2920
	07-16-87	7.6	524	309	2340	42.0	3.90	0.39	5180	114.0	0	17	0.0	0.1	10100	2580
	10-19-87	8.1	620	460	2007	38.0	30.00	1.80	5340	169.0	0	20	0.0	0.0	11232	3440
	12-08-88	7.5	648	426	2000	39.0	13.00	1.30	5360	126.0	0	36	0.3	0.0	9657	3370
	06-16-89	7.9	704	448	1930	38.0	30.00	1.10	5390	150.0	0	23	1.4	0.1	9780	3600
	03-16-90	7.2	694	381	2010	39.0	11.00	0.07	5420	57.0	0	25	0.0	0.1	12800	3300
	01-22-91	7.5	580	330	2100	37.0	2.00	0.17	5300		0	28	0.1	0.1	11000	2800
	10-10-91	7.3	480	330	1900	64.0	4.20	0.56	5300	4.0	0	19	0.2	0.1	10700	2600
PD 4	06-23-78	8.2	20	30	151	0.4	0.44	0.00	130	1.6	3	379	0.0	0.2	592	172
103.50	08-11-87	7.8	113	138	327	11.0	16.00	0.74	910	0.0	0	309	2.2	0.2	2292	850
	10-10-87	8.1	107	111	317	11.0	8.40	0.66	810	3.6	0	317	1.4	0.2	2086	724
	03-05-90	7.7	84	90	271	11.0	16.00	0.05	652	2.7	0	287	3.4	0.2	1634	580
	08-03-90	8.0	98	65	230	11.0	11.00	0.26	541	1.7	0	292	4.4	0.2	1320	510
PD 5	09-04-78	8.0	105	28	153		0.38		319	0.8	9	294	2.4	0.1	882	376
112.50	03-23-80	8.0	38	26	166		14.00	0.40	300	87.0	0	58	0.0	0.2	736	200
	08-25-80	7.2	134	59	204		4.90	0.69	599	3.2	0	207	3.4	0.0	1384	576
	04-17-81	7.2	94	65	294	9.8	2.10	0.09	792	2.4	0	54	0.3	0.0	1424	500
	04-09-86	7.7	122	38	294	8.6	0.81	0.02	780	3.5	0	22	0.1	0.1	1664	460
	10-10-87	8.9	128	38	290	8.6	0.62	0.01	774	0.0	2	10	0.0	0.0	1576	474

Table 5. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
PD 5 112.50	12-12-88	7.7	166	24	271	9.8	0.26	0.00	784	0.0	0	14	0.0	0.1	1589	516
	06-13-89	8.3	146	55	290	9.4	0.08	0.01	776	3.3	0	16	2.7	0.1	1630	590
	03-13-90	7.9	137	59	271	8.2	1.70	0.03	800	1.4	0	17	5.1	0.1	1612	584
	11-11-91	8.0	150	40	180	11.0	0.56	0.01	810	1.0	0	27	0.1	0.1	1640	540
PD 6 97.60	04-25-78	7.4	28	10			0.24		201	0.0	0	324	0.0	0.1	633	109
	04-11-86	7.7	88	63	235	15.0	1.50	0.01	690	3.5	0	25	0.1	0.1	1606	480
	07-15-87	7.5	72	40	269	19.0	1.50	0.20	653	0.0	0	53	0.0	0.1	1390	344
	10-13-87	8.1	74	33	274	20.0	0.36	0.00	654	3.1	0	39	0.0	0.0	1390	320
	02-16-88	8.1	73	43	274	19.0	0.44	0.02	640	4.5	0	23	0.0	0.0	1418	360
	07-18-88	7.6	85	39	271	20.0	0.32	0.07	646	2.2	0	38	0.3	0.0	1082	372
	11-17-88	7.8	80	34	271	20.0	0.54	0.05	620	4.3	0	29	3.4	0.1	1402	340
	03-26-90	7.6	90	48	276	19.0	1.30	0.00	705	2.3	0	26	4.0	0.1	1590	420
PD 7 104.15	02-14-80	7.3	326	104	390		7.10	2.20	1374	6.4	0	178	0.4	0.1	2844	1242
	03-11-87	7.3	297	121	435	13.0	8.60	2.50	1450	32.0	0	166	4.1	0.0	3296	1240
	10-16-87	7.6	74	34	120	7.8	1.00	0.01	327	3.6	0	146	9.3	0.1	862	325
	12-12-88	7.9	70	32	126	9.4	0.62	0.05	339	3.1	0	113	13.0	0.1	810	305
	06-18-89	7.9	72	34	129	8.6	0.20	0.04	338	3.5	0	129	6.6	0.1	860	318
	03-01-90	7.7	69	41	138	9.0	0.68	0.10	376	2.6	0	88	16.0	0.2	880	341
	08-01-90	7.9	77	25	133	8.6	0.30	0.17	361	1.3	0	97	14.0	0.2	850	296
	11-30-90	7.8	76	26	140	8.6	0.46	0.12	360	2.0	0	86	13.0	0.2	978	300
PD 8 99.65	05-06-81	7.8	920	303	1080	10.0	13.00	0.01	4145	66.0	0	18	0.2	0.0	7756	3540
	07-16-87	6.9	960	232	1093	15.0	5.30	0.27	3990	32.0	0	16	0.0	0.0	10716	3350
	10-16-87	7.2	952	237	1035	15.0	2.60	2.70	4070	27.0	0	12	0.0	0.0	9262	3350
	12-02-88	7.1	976	253	1046	15.0	2.60	2.60	3928	33.0	0	7	0.0	0.0	7146	3480
	06-02-89	7.5	968	293	1040	16.0	3.00	0.43	3980	35.0	0	21	0.0	0.0	7260	3620
	03-02-90	7.1	932	268	1035	16.0	14.00	0.23	3976	39.0	0	31	11.0	0.1	8716	3430
	12-03-90	7.4	940	240	1000	15.0	4.90	0.05	4000	46.0	0	22	0.0	0.1	6840	3400
PD 9 112.80	08-08-79	6.3	878	479	702		14.00		4540	509.0	0	113	27.0	0.0	10214	4160
	03-30-80	7.0	1080	451	1480		14.00	0.00	5033	490.0	0	143	12.0	0.0	10116	4500
	08-26-80	7.5	920	414	1440		4.10	0.00	4848	258.0	0	13	37.0	0.0	10468	4000
	12-16-81	6.8	1040	427	1830	22.0	13.00	6.60	5254	605.0	0	124	0.0	0.2	12534	4350
	02-14-86	8.1	936	313	1770	20.0	6.80	0.27	5230	63.0	0	14	0.0	0.1	11600	3620
	02-26-87	7.7	920	328	1725	16.0	37.00	1.10	5250	41.0	0	41	25.0	0.8	11838	3645
	02-26-87	7.3	1048	227	2300	16.0	17.00	7.10	6350	719.0	0	125	0.1	0.1	14578	3550
	10-15-87	8.5	940	342	1947	22.0	3.70	0.02	5500	76.0	2	9	0.0	0.0	12014	3750
	02-03-88	7.3	960	548	2415	24.0	4.60	0.73	6300	619.0	0	29	0.0	0.0	13954	4650
	07-11-88	7.1	968	608	2345	24.0	2.40	0.57	6340	670.0	0	20	5.9	0.0	10971	4920
	11-15-88	7.7	906	507	2300	16.0	2.00	0.09	6210	568.0	0	30	0.0	0.1	10500	4350
	08-29-90	7.1	1140	468	2320	23.0	11.00	0.32	6560	500.0	0	21	0.0	0.1	13900	4770

Table 5. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
PD 10	07-17-79	8.3	62	58	152		1.60		397	0.0	4	195	1.9	0.0	1013	395
97.60	04-24-80	6.8	56	47	300		3.60	0.86	349	2.3	0	601	0.0	0.1	904	334
	05-26-86	7.7	37	18	230	13.0	2.30	0.04	529	2.3	0	21	4.0	0.2	886	166
	02-26-87	7.6	60	70	184	3.9	3.30	0.75	530	19.0	0	219	0.5	0.1	1072	404
	10-13-87	8.8	40	20	218	12.0	1.10	0.00	449	3.1	2	13	0.0	0.1	982	181
	02-16-88	8.2	27	35	200	11.0	0.92	0.02	425	8.5	0	56	0.0	0.1	934	211
	07-18-88	8.1	29	35	200	12.0	0.94	0.00	424	2.5	0	31	2.1	0.0	720	216
	11-15-88	7.7	26	32	207	109.0	0.52	0.00	444	2.4	0	27	2.8	0.1	837	198
	03-12-90	7.8	48	34	207	10.0	2.20	0.00	466	2.0	0	35	4.7	0.1	978	260
	09-10-90	7.4	50	27	214	11.0	0.74	0.00	476	2.3	0	23	0.1	0.1	940	236
PD11	09-05-79	7.2	1064	692	1415		0.08		5655	465.0	0	143	0.8	0.0	12471	5500
82.35	04-18-81	6.7	1184	264	1840	52.0	3.20	1.50	5540	74.0	0	13	0.0	0.0	10450	4040
	04-09-86	7.0	760	572	1430	39.0	19.00	4.50	5040	176.0	0	31	17.0	0.1	11308	4250
	08-11-87	7.3	696	623	1379	36.0	16.00	3.70	5100	312.0	0	17	17.0	0.0	11924	4300
	10-10-87	7.7	704	553	1421	11.0	11.00	3.00	4890	199.0	0	16	8.9	0.0	11092	4030
	12-08-88	7.4	720	577	1425	38.0	3.80	0.63	5040	290.0	0	20	0.0	0.0	8971	4170
	06-08-89	7.7	800	563	1400	40.0	0.00	0.18	5070	313.0	0	34	0.0	0.0	9100	4310
	03-08-90	7.7	688	764	1417	37.0	4.80	0.17	5136	310.0	0	31	6.1	0.0	11548	4860
	10-09-91	7.2	770	580	1400	56.0	3.60	0.96	5100	290.0	0	49	2.0	0.0	11200	4300
PD 12	09-03-79	7.7	65	28	174		0.03		251	3.9	0	366	0.0	0.0	832	279
115.85	03-24-80	8.0	88	17	224		1.20	0.57	437	0.0	0	198	0.0	0.0	996	290
	04-18-81	7.7	20	37	267	11.0	1.10	0.13	525	2.0	0	139	0.0	0.0	982	204
	02-24-86	7.3	49	35	294	9.4	0.71	0.01	619	0.0	0	29	0.0	0.1	1260	265
	07-16-87	9.1	50	30	300	10.0	0.40	0.01	717	4.5	10	0	0.0	0.1	1220	250
	10-12-87	9.0	64	25	283	9.8	0.38	0.00	625	0.0	2	12	0.0	0.0	1286	262
	12-08-88	10.7	33	1	218	2.3	1.30	0.00	382	4.0	21	0	0.0	0.6	897	86
	06-16-89	9.2	77	24	301	11.0	0.54	0.00	666	4.1	0	15	0.2	0.1	1400	290
	03-16-90	8.0	117	13	315	10.0	3.40	0.00	693	6.1	0	22	0.0	0.1	1540	346
	08-30-90	9.7	104	21	311	11.0	0.51	0.01	693	2.8	12	0	0.1	0.2	1490	346
	01-22-91	7.9	100	17	310	10.0	1.00	0.02	700	1.0	0	37	0.0	0.1	1520	320
	10-10-91	9.5	110	20	500	18.0	5.30	0.00	1100	5.0	10	2	0.2	0.1	2150	360
PD 13	09-05-79	8.2	21	13	198		0.13		96	54.0	0	420	0.7	0.2	646	105
119.00	04-18-81	8.0	11	7	510	11.0	1.20	0.02	783	2.1	0	61	1.9	0.2	1348	56
	04-03-86	10.8	62	1	329	5.9	5.60	0.00	610	6.5	13	0	0.2	0.6	1270	160
	02-26-87	7.4	90	6	317	4.3	38.00	0.10	610	18.0	0	60	11.0	0.6	1348	250
	02-26-87	9.3	68	3	273	3.5	8.80	0.01	535	21.0	20	24	0.0	0.7	1094	180
	10-12-87	10.4	22	2	230	2.7	0.72	0.00	376	5.7	20	0	0.0	0.5	784	61
	12-06-88	9.7	75	24	294	10.0	0.40	0.00	662	3.5	5	5	0.0	0.1	1364	286
	06-05-89	10.9	31	2	228	3.5	1.80	0.00	376	3.9	56	0	0.0	0.7	928	87
	03-05-90	8.9	26	2	216	2.3	3.70	0.00	377	1.8	13	7	0.2	0.7	672	73
	08-03-90	9.4	26	3	209	3.5	1.90	0.02	390	1.8	20	0	0.0	0.7	726	78

Table 5. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
PD 14	09-05-79	8.1	48	27	325		0.38		405	55.0	0	377	0.0	0.2	1149	230
109.00	08-25-80	9.2	10	12	398		3.40	0.00	513	2.4	45	167	2.2	0.4	1088	74
	04-18-81	9.5	4	8	420	5.4	1.40	0.00	546	2.8	45	122	0.6	0.2	1070	40
	02-18-86	11.0	8	0	400	4.3	1.30	0.01	571	4.0	106	0	0.1	0.3	1120	20
	07-16-87	10.5	16	10	416	4.3	1.80	0.01	606	5.5	46	0	0.0	0.2		80
	10-08-87	10.4	2	2	405	4.7	0.38	0.00	560	4.3	39	0	0.0	0.2	1054	11
	12-15-88	10.4	10	1	418	4.3	0.78	0.00	575	4.3	41	83	0.0	0.2	1327	28
	06-14-89	10.8	0	8	416	5.1	0.72	0.00	576	4.7	68	0	0.2	0.3	1380	32
	03-14-90	10.3	5	1	403	4.7	1.60	0.00	613	2.8	32	0	0.1	0.4	1390	15
PD 15	09-03-79	8.2	25	14	427		0.45		551	0.0	0	327	2.6	0.0	1320	118
88.41	03-05-80	8.8	6	16	312		17.00	0.23	330	80.0	22	224	16.0	0.5	946	81
	04-17-81	7.5	122	45	560	12.0	0.49	0.03	1160	6.6	0	61	0.1	0.0	2182	490
	02-24-86	9.1	174	31	541	8.6	1.70	0.02	1216	3.3	9	19	0.0	0.2	2346	560
	03-11-87	7.6	160	66	386	5.9	1.50	1.40	832	143.0	0	249	3.8	0.4	2076	672
	10-19-87	8.7	40	43	161	5.5	1.90	0.00	377	68.0	2	36	0.0	0.1	942	277
	12-15-88	7.9	79	56	255	6.3	1.80	0.01	651	76.0	0	33	0.6	0.2	1377	426
	06-14-89	8.1	24	75	221	6.3	0.98	0.00	541	68.0	0	27	0.0	0.2	1240	369
	03-14-90	7.9	87	86	304	7.4	1.10	0.00	745	73.0	0	31	0.0	0.2	1850	572
	02-27-91	7.9	19	120	310	7.0	2.30	0.09	760	56.0	0	43	4.0	0.2	1970	560
	07-16-91	7.6	90	74	330	5.0	4.90	0.16	840	62.0	0	25	1.2	0.2	1830	530
PD 16	09-07-86	7.8	35	17	138	5.9	0.25	0.05	152	12.0	0	332	0.0	0.2	538	158
104.00	07-20-87	8.6	9	12	149	6.3	1.20	0.00	147	4.0	31	181	0.0	0.2	458	74
	10-19-87	8.8	7	17	147	6.3	0.88	0.01	143	4.0	18	197	0.0	0.0	450	88
	12-14-88	8.6	15	13	131	5.5	0.46	0.01	74	3.6	20	290	0.1	0.1	463	91
	06-12-89	8.3	19	16	150	5.9	0.24	0.06	108	3.9	25	286	0.7	0.1	540	114
	03-13-90	8.3	31	21	145	6.2	0.62	0.26	108	2.4	30	298	1.4	0.2	504	163
	10-11-91	8.2	28	16	180	7.1	0.82	0.21	120	2.0	0	382	3.8	0.2	548	140
PD 17	11-03-86	7.1	334	169	244	18.0	11.00	4.10	1314	86.0	0	143	1.3	0.0	3350	1526
93.00	10-19-87	7.9	296	146	264	19.0	0.80	0.07	1294	17.0	0	32	0.0	0.0	3046	1352
	12-01-87	7.1	328	214	258	18.0	11.00	4.00	1400	130.0	0	144	0.0	0.1	3000	1700
	02-17-88	8.0	304	151	267	19.0	1.30	0.69	1356	13.0	0	35	0.0	0.0	3390	1380
	07-18-88	7.9	304	134	267	20.0	0.40	0.02	1324	8.5	0	14	2.8	0.0	2067	1310
	11-15-88	7.6	291	145	276	19.0	3.70	0.00	1350	17.0	0	28	0.0	0.1	2110	1330
	03-13-90	7.3	324	158	303	18.0	33.00	1.70	1480	36.0	0	46	0.0	0.0	2860	1460
	12-11-90	7.9	330	130	380	20.0	2.50	0.00	1500	11.0	0	30	2.2	0.1	3590	1400
	10-16-91	8.4	120	15	290	11.0	1.30	0.01	750	1.0	0	18	0.2	0.1	1400	350
PD 18	11-05-86	7.9	132	59	110	5.5	0.46	0.01	360	15.0	0	358	0.5	0.4	1154	570
92.00	10-15-87	7.9	90	50	101	4.7	0.44	0.49	265	3.4	0	335	0.0	0.2	894	430
	02-03-88	7.8	80	48	99	5.1	0.24	0.47	235	5.3	0	316	0.0	0.4	752	397
	07-11-88	8.0	70	35	99	6.3	1.30	0.42	203	3.6	0	264	0.3	0.4	547	319

Table 5. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
PD 18	11-14-88	8.3	38	36	94	4.7	2.10	0.32	182	1.8	21	195	0.4	0.5	572	242
92.00	08-15-90	8.0	80	30	90	4.7	18.00	0.03	167	9.8	0	330	0.6	0.6	546	325
PD 19	11-29-86	7.9	72	41	150	4.3	0.23	0.18	250	35.0	0	385	0.0	0.8	820	350
102.00	10-15-87	6.9	880	1037	6805	154.0	1.80	7.20	14560	546.0	0	451	0.0	0.7	31790	6460
	02-03-88	7.0	712	930	5198	122.0	1.40	4.60	11360	245.0	0	183	0.0	0.6	22956	5600
	07-11-88	7.1	1024	1041	6667	151.0	7.70	5.90	14680	320.0	0	138	0.0	0.4	23952	6840
	11-14-88	9.4	864	1080	6720	156.0	25.00	7.10	15300	223.0	0	394	0.0	0.6	30400	6600
PD 20	12-05-87	7.5	226	55	333	10.0	3.00	1.00	990	15.0	0	212	0.7	0.0	2748	792
103.39	12-01-88	7.5	164	52	331	11.0	0.26	0.05	936	3.7	0	28	0.0	0.1	1838	622
	06-01-89	7.9	194	15	331	11.0	0.18	0.03	886	2.8	0	24	0.0	0.1	1830	544
	03-01-90	7.8	168	17	324	11.0	0.50	0.00	874	1.7	0	10	0.1	0.1	1712	490
	08-01-90	8.0	167	25	331	9.4	0.20	0.03	891	1.1	0	16	0.1	0.1	1660	518
	11-30-90	7.6	170	22	340	10.0	0.22	0.02	820	2.0	0	34	1.7	0.1	2170	520
PD 21	12-09-87	7.5	234	70	212	9.0	0.88	2.40	796	12.0	0	276	1.6	0.0	2310	874
112.83	12-02-88	7.9	168	74	202	8.2	0.52	2.10	772	3.5	0	146	0.1	0.1	1614	722
	06-19-89	8.0	164	70	209	9.8	0.26	1.70	730	3.8	0	132	0.0	0.0	1600	698
	03-06-90	8.4	125	108	200	9.4	0.23	0.04	729	1.9	0	35	0.1	0.1	1600	756
	07-16-91	9.4	130	51	200	9.8	0.11	0.00	700	1.0	1	16	0.0	0.0	1630	540
PD 22	12-26-87	7.9	41	15	258	5.1	0.28	0.33	320	11.0	0	322	2.1	0.1	862	162
142.00	12-07-88	10.0	2	9	276	5.5	0.14	0.00	367	3.5	48	62	0.0	0.2	922	44
	06-08-89	8.7	8	7	292	5.5	0.32	0.00	360	3.5	12	129	0.0	0.2	910	47
	03-07-90	9.5	6	1	278	4.7	0.54	0.00	357	1.9	50	34	0.2	0.2	724	20
	08-06-90	10.4	2	7	274	5.5	0.16	0.00	373	2.1	83	0	0.2	0.2	752	36
PD 23	02-04-88	7.4	220	127	283	14.0	5.10	2.40	1000	55.0	0	203	0.5	0.0	2406	1070
123.49	07-12-88	7.5	142	86	267	15.0	0.42	0.37	898	2.0	0	51	0.3	0.0	1434	708
	11-01-88	7.7	150	77	269	15.0	0.92	0.09	870	2.4	0	54	1.6	0.1	2020	690
	03-19-90	8.0	136	35	251	14.0	0.65	0.00	709	2.2	0	30	1.2	0.1	1430	484
PD 24	02-02-88	7.7	35	20	97	5.9	0.34	0.01	34	15.0	0	389	0.6	0.2	432	170
112.60	03-10-88	7.5	37	19	99	6.6	0.76	0.27	33	14.0	0	387	1.5	0.2	410	171
	12-14-88	8.4	37	18	92	6.3	0.44	0.26	24	3.9	26	346	0.7	0.2	417	166
	06-08-89	8.6	22	16	99	6.3	0.82	0.02	20	3.8	29	306	0.7	0.3	383	120
	03-07-90	8.2	34	20	92	6.2	0.76	0.21	19	2.4	26	340	0.1	0.4	386	165
	08-06-90	8.4	38	16	87	5.5	0.51	0.14	20	1.4	22	330	0.7	0.7	374	162
PD 25	02-13-88	6.7	496	263	725	19.0	16.00	5.70	2340	255.0	0	93	5.2	0.0	6632	2320
103.75	07-12-88	7.7	360	185	579	19.0	2.30	0.87	1964	122.0	0	39	3.7	0.0	3252	1660
	11-01-88	8.0	333	170	547	19.0	0.80	0.05	1880	85.0	0	19	0.0	0.0	4500	1530

Table 5. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
PD 25	03-14-90	7.5	401	80	547	18.0	0.84	0.65	1780	4.3	0	13	0.0	0.0	3380	1330
103.75	08-08-90	7.8	438	38	559	18.0	1.40	0.58	1820	5.1	0	11	0.0	0.1	3540	1250
PD 26	11-23-88	7.5	355	98	400	12.0	4.90	3.20	1410	41.0	0	270	2.6	0.2	3490	1290
100.00	03-02-90	7.6	96	59	163	7.8	0.52	1.40	483	1.9	0	166	2.5	0.1	1334	483
	08-02-90	7.8	110	44	159	7.8	0.61	1.40	483	0.8	0	133	3.1	0.1	1280	456
	12-03-90	8.0	140	51	160	7.4	0.60	1.40	480	2.0	0	300	2.5	0.2	1540	570
	07-02-91	7.5	150	61	160	9.0	0.46	0.53	500	2.0	0	309	0.1	0.2	1500	620
PD 27	12-06-88	7.3	565	177	644	12.0	2.80	0.00	2260	168.0	0	231	1.6	0.2	5510	2140
87.00	03-09-90	7.8	516	253	748	22.0	3.60	0.04	2840	1.5	0	25	0.1	0.1	7090	2330
PD 28	12-06-88	8.0	106	28	101	6.3	3.90	1.10	275	16.0	0	259	1.7	0.2	890	382
103.00	03-16-90	8.2	34	17	110	7.4	3.40	0.00	268	1.8	0	40	0.0	0.1	600	157
	12-18-90	7.9	41	12	110	7.4	0.24	0.02	260	1.0	0	37	0.6	0.1	574	150
PD 29	12-09-88	8.1	28	8	133	2.7	1.20	0.01	14	26.0	0	404	0.7	0.3	426	102
115.00	03-08-90	8.4	8	7	140	2.0	0.76	0.02	28	2.9	15	329	0.4	0.3	364	50
	08-07-90	8.7	6	5	150	2.7	0.75	0.01	29	3.9	29	305	0.6	0.3	314	34
	10-09-91	8.4	11	6	140	5.1	1.30	0.02	26	5.0	37	321	5.9	0.3	426	51
PD 30	12-14-88	7.5	788	475	2830	35.0	2.60	1.40	6710	500.0	0	137	18.0	0.1	13900	3920
86.00	03-09-90	7.5	680	392	2600	39.0	1.30	4.80	6250	385.0	0	145	4.0	0.0	13800	3610
PD 31	12-16-88	7.0	1300	424	2070	24.0	29.00	5.90	6620	236.0	0	207	0.0	0.1	14200	5000
110.00	03-15-90	7.5	273	121	660	11.0	0.40	0.06	1850	29.0	0	49	0.2	0.1	3790	1180
	08-17-90	8.2	346	121	672	11.0	0.38	0.05	1920	16.0	0	34	0.0	0.1	3890	1360
	07-05-91	7.9	310	130	630	14.0	0.15	0.00	1940	7.0	0	57	0.1	0.1	4330	1300
PD 32	12-18-88	7.2	344	61	446	9.4	1.30	0.04	1430	30.0	0	234	1.4	0.1	3110	1110
111.00	03-15-90	7.4	478	211	948	17.0	0.54	0.09	2670	169.0	0	34	0.0	0.3	5650	2060
	09-10-90	8.0	470	145	805	16.0	0.53	0.08	2410	56.0	0	29	0.0	0.1	5480	1770
	07-05-91	8.6	320	98	570	16.0	0.95	0.00	1700	15.0	0	26	0.1	0.1	4500	1200
PD 33	12-21-88	7.7	98	179	952	46.0	0.98	1.20	1200	600.0	0	1000	0.0	0.6	3740	980
113.00	03-05-90	7.7	110	52	414	3.5	2.20	0.63	656	178.0	0	317	4.3	0.5	1696	490
	08-03-90	7.9	147	28	419	4.3	0.66	0.35	687	171.0	0	287	2.3	0.3	1690	484
PD 34	01-09-89	8.1	34	13	30	5.1	0.54	0.04	46	16.0	0	125	0.5	0.3	220	136
122.00	03-15-90	8.7	77	27	311	15.0	0.64	0.01	688	25.0	11	5	0.0	0.3	1440	304
	07-10-90	8.1	50	4	239	15.0	0.37	0.01	427	47.0	0	46	0.1	0.3	872	143
	07-08-91	8.9	30	11	150	15.0	0.56	0.00	250	31.0	17	5	0.1	0.3	1130	120

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Table 5. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₂	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
PD 35	01-11-89	7.5	94	36	248	11.0	0.34	0.00	446	31.0	0	386	0.4	0.2	1240	381
114.00	03-09-90	7.3	62	117	511	18.0	0.32	0.04	1210	5.6	0	34	0.0	0.0	2630	634
	09-01-90	8.6	114	85	490	17.0	0.29	0.01	1210	3.9	3	15	0.0	0.1	2610	634
PD 36	01-15-89	8.0	135	52	248	5.5	0.13	0.41	566	34.0	0	312	2.7	0.2	1200	552
99.00	03-06-90	8.3	56	46	255	6.3	0.20	0.04	565	2.1	2	54	0.0	0.1	1180	328
	10-08-91	7.4	50	36	250	7.1	0.28	0.03	560	2.0	0	51	0.2	0.1	1190	270
PD 37	01-15-89	7.5	306	63	363	7.8	1.10	0.25	1220	39.0	0	184	2.7	0.1	1100	1020
94.00	03-12-90	7.9	212	129	382	9.4	0.43	0.06	1250	13.0	0	32	2.1	0.1	3090	1060
	07-16-91	9.2	210	99	370	5.0	0.45	0.01	1200	10.0	1	17	0.0	0.1	2630	920
PD 38	01-22-89	8.3	22	8	200	1.6	0.17	0.00	52	66.0	64	314	0.2	0.5	569	88
112.00	03-14-90	8.8	8	40	354	5.1	3.90	0.00	486	2.8	27	215	1.3	0.5	1070	185
PD 39	02-02-89	8.1	12	2	175	0.4	2.10	0.00	36	52.0	0	387	0.4	0.4	469	39
135.00	03-15-90	8.3	10	26	320	5.5	0.28	0.00	383	42.0	39	230	1.1	0.4	940	129
	10-18-91	7.8	150	200	940	15.0	0.48	0.38	2200	160.0	0	137	0.1	0.1	4520	1200
PD 40	02-12-89	7.8	92	48	322	6.6	0.35	0.24	640	51.0	0	301	2.3	0.3	1550	426
85.00	03-02-90	7.9	33	45	322	5.9	0.14	0.65	568	41.0	0	129	3.1	0.2	1182	268
	08-02-90	8.1	122	15	327	4.7	0.43	0.89	606	29.0	0	263	2.0	0.3	1240	366
PD 41	03-02-89	7.5	212	62	172	8.6	0.21	2.20	656	15.0	0	275	2.1	0.2	1880	782
88.00	03-12-90	8.1	144	116	283	11.0	0.80	1.30	617	39.0	0	325	5.7	0.3	1650	650
	07-16-91	7.9	43	47	220	9.5	0.42	0.04	490	1.0	0	102	4.4	0.2	1080	300
PD 42	03-30-89	8.3	24	12	159	1.2	0.34	0.03	8	38.0	0	455	0.2	0.4	505	108
116.00	08-13-90	9.7	8	37	400	8.6	1.10	0.01	332	135.0	126	164	0.1	0.2	1090	171
	07-11-91	10.2	1	13	450	11.0	4.20	0.00	410	71.0	77	312	1.0	0.3	1250	54
PD 43	04-15-89	8.1	37	25	228	5.9	0.58	0.24	241	31.0	0	333	2.0	0.3	878	195
98.00	03-15-90	8.0	37	35	377	7.4	86.00	0.08	573	32.0	0	318	0.1	0.3	1210	238
	09-01-90	8.5	32	12	271	6.3	55.00	0.15	317	4.1	30	261	0.7	0.3	788	129
	12-12-90	8.5	14	22	240	5.5	91.00	0.05	280	2.0	64	194	1.5	0.3	704	120
	10-17-91	8.0	21	15	200	6.8	45.00	0.09	240	3.0	0	337	3.6	0.3	698	114
PD 44	04-14-89	7.7	149	85	168	15.0	3.80	1.40	634	62.0	0	233	0.2	0.1	1750	720
106.00	03-09-90	8.0	134	90	235	16.0	0.54	0.86	755	2.3	0	157	0.2	0.1	1830	706
PD 45	05-10-89	7.4	508	212	633	22.0	18.00	4.10	2178	185.0	0	131	0.7	0.1	4479	2138
101.00	03-22-90	7.2	299	168	690	23.0	1.10	0.05	2017	21.0	0	29	0.0	0.0	3819	1436
	08-28-90	6.2	270	172	667	23.0	1.90	0.02	2050	10.0	0	17	0.0	0.1	4320	1380
	07-03-91	8.7	300	130	640	29.0	0.63	0.00	2000	2.0	0	24	0.0	0.1	4270	1300

Table 6. Chemical Analysis of Water (in mg/l) from Monitoring Wells in Nakhon Luang Aquifer

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)							(Total)									
NL 1 152.00	09-04-78	7.9	306	70	541		0.61		1430	61.0	5	163	8.8	0.1	2913	1052
	02-12-80	6.8	1080	1050	7360		6.20	0.00	14700	2080.0	0	149	15.0	0.1	31560	7020
	04-21-81	6.7	952	735	7900	165.0	2.10	6.80	16020	1733.0	0	17	0.2	0.2	28134	5400
	02-19-86	8.2	862	989	8234	140.0	3.00	0.26	16113	2042.0	0	20	0.1	0.1	33998	6220
	02-26-87	7.2	1000	993	8050	141.0	5.50	1200	16000	2050.0	0	143	0.0	0.1	24336	6600
	10-13-87	8.4	840	1095	8184	146.0	2.80	0.06	15860	2028.0	2	18	0.0	0.2	34116	6600
	12-07-88	7.7	904	1095	9886	149.0	1.70	0.18	16340	2663.0	0	20	0.0	0.2	34523	6760
	06-09-89	7.8	952	1120	8510	152.0	0.00	0.12	16500	2340.0	0	18	0.1	0.0	34900	6980
	03-15-90	7.2	1060	1200	8370	149.0	2.60	0.18	16300	2280.0	0	26	0.0	0.0	34200	7580
	08-28-90	7.7	920	1000	8100	140.0	3.00	0.11	16000		0	28	0.1	0.0	33800	6600
	08-12-90	8.1	1980	576	8740	70.0	2.80	0.09	17000	2440.0	0	22	0.0	0.1	33300	7160
	10-18-91	7.7	950	1200	8600	200.0	3.50	0.25	16000	1600.0	0	21	0.2	0.0	34200	7200
NL 2 148.90	09-01-78	8.7	12	9	154		0.23		89	44.0	17	245	0.0	0.2	477	65
	09-04-78	8.3	7	9	163	4.7	0.32	0.00	172	3.5	9	191	1.1	0.2	558	52
	04-20-81	8.5	7	9	177	10.0	0.73	0.02	137	3.5	13	264	0.0	0.2	496	55
	10-13-87	8.6	7	12	159	4.7	0.54	0.00	163	5.0	27	202	0.2	0.2	468	66
	06-16-89	8.7	6	8	168	4.7	0.23	0.02	164	3.8	12	203	1.3	0.3	558	48
	03-16-90	8.2	16	128	713	20.0	0.49	0.08	855	573.0	0	519	1.4	0.5	2570	568
	01-22-91	8.6	5	6	170	4.0	0.36	0.02	170	1.0	24	157	0.5	0.2	402	38
	10-10-91	9.4	110	15	450	17.0	2.30	0.01	1000	5.0	0	11	0.2	0.1	2070	340
NL 3 156.00	02-13-80	8.6	16	8	327		0.37	0.11	240	86.0	36	357	0.0	1.0	1002	72
	08-25-80	9.7	3	2	186		13.00	0.00	142	3.2	75	114	0.0	0.5	496	17
	04-18-81	9.4	3	2	180	8.0	8.80	0.01	146	3.3	37	161	11.0	0.5	522	17
	11-25-81	7.9	26	13	387	3.0	2.60	0.00	300	116.0	0	458	1.0	1.1	1072	117
	02-18-86	9.9	2	1	159	2.7	13.00	0.01	138	15.0	85	44	0.0	0.8	482	10
	02-26-87	8.4	4	1	154	5.9	8.00	0.01	132	7.0	17	156	8.5	0.5	408	14
	10-19-87	9.0	3	9	159	8.6	0.38	0.00	93	21.0	38	224	0.4	0.3	486	42
	12-12-88	7.5	3	5	159	9.8	0.54	0.00	94	4.0	0	298	0.0	0.3	482	27
	06-14-89	9.4	7	4	163	8.2	0.18	0.00	91	4.0	36	218	9.6	0.5	498	35
	03-14-90	9.2	4	5	166	9.0	0.95	0.01	101	2.4	29	225	9.3	0.6	488	30
	12-03-90	7.3	16	12	170	4.3	0.54	0.02	300	2.0	0	25	13.0	0.1	582	90
	07-02-91	7.4	23	14	170	7.7	0.41	0.00	310	1.0	0	38	11.0	0.1	692	120
NL 4 161.60	02-19-80	7.0	1752	581	2178		11.00	0.00	7423	882.0	0	133	0.0	0.1	15932	6760
	08-26-80	6.5	1750	592	2190		6.80	0.00	7552	849.0	0	8	40.0	0.0	15258	6800
	04-21-81	6.8	1720	488	2430	33.0	1.50	9.00	7860	756.0	0	19	0.0	0.0	14406	6300
	03-11-86	7.7	1520	556	2530	23.0	7.40	0.08	7080	1470.0	0	21	0.1	0.0	16450	6080
	02-26-87	6.9	1680	610	2970	27.0	14.00	18.00	8500	629.0	0	93	0.1	0.1	18484	6700
	02-16-88	7.7	1744	576	3174	27.0	4.10	6.20	8040	863.0	0	23	0.9	0.0	19368	6720
	07-18-88	7.1	1720	647	2713	27.0	4.30	8.20	8240	930.0	0	3	6.6	0.0	14285	6960
	11-15-88	7.6	1670	584	2760	31.0	4.10	7.70	8290	756.0	0	14	4.1	0.0	14100	6580

Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)							(Total)									
NL 4	03-29-90	7.3	1670	621	2570	28.0	9.20	0.55	8040	828.0	0	24	0.0	0.0	17700	6720
161.60	09-11-90	7.6	1810	521	2620	31.0	7.10	2.20	8050	728.0	0	16	0.0	0.0	18300	6660
NL 5	04-01-80	6.8	1272	498	1183		3.10	0.00	5176	285.0	0	239	1.5	0.0	10730	5220
177.00	11-21-81	7.3	1268	410	1460	23.0	2.60	22.00	5249	135.0	0	109	0.0	0.0	9304	4850
	03-11-86	7.4	1092	375	1310	27.0	1.00	4.70	4680	129.0	0	13	0.1	0.1	12014	4270
	07-14-87	7.4	648	203	759	23.0	6.60	3.40	2680	215.0	0	39	0.0	0.1	7500	2450
	10-07-87	7.6	182	38	143	32.0	3.90	0.44	171	186.0	0	394	108.0	0.2	1284	610
	02-09-88	8.0	117	48	117	28.0	1.10	0.43	139	195.0	0	453	0.0	0.3	932	490
	07-07-88	7.9	91	50	168	35.0	0.94	0.00	236	277.0	0	249	3.4	0.4	983	432
	11-09-88	8.4	83	25	76	18.0	8.40	0.07	91	112.0	25	237	2.0	0.4	606	308
	03-29-90	7.0	68	44	97	20.0	7.40	0.01	109	18.0	0	481	10.0	0.4	697	352
	08-21-90	7.8	285	55	380	37.0	4.70	1.60	913	154.0	0	464	8.3	0.3	2400	936
NL 6	09-04-78	8.4	30	6	118		0.19		8	24.0	21	348	0.0	0.2	415	99
137.20	03-04-80	8.0	25	18	102		3.80	0.11	69	6.7	0	311	0.0	0.1	478	136
	06-17-86	9.9	3	0	138	4.7	2.00	0.00	164	3.4	57	0	0.5	0.2	414	8
	03-11-87	7.4	166	60	228	4.7	0.24	1.90	676	16.0	0	215	0.5	0.0	1702	662
	10-16-87	8.6	10	12	159	3.9	1.30	0.00	274	2.9	3	53	0.0	0.0	548	75
	12-02-88	7.7	17	8	166	3.9	0.60	0.04	293	3.2	0	37	7.4	0.1	640	76
	06-02-89	8.5	20	10	175	5.1	0.00	0.02	293	2.6	3	38	9.4	0.1	673	89
	03-02-90	7.6	24	3	175	5.1	0.58	0.04	298	1.6	0	23	12.0	0.1	578	73
	08-02-90	8.0	44	6	173	4.7	0.37	0.02	308	1.0	0	41	12.0	0.1	632	133
	12-03-90	7.3	16	12	170	4.3	0.54	0.02	300	2.0	0	25	13.0	0.1	582	90
	07-02-91	7.4	23	14	170	7.7	0.41	0.00	310	1.0	0	38	11.0	0.1	692	120
NL 7	11-01-78	8.3	20	8	212		0.53		79	0.8	0	297	0.0	0.0	462	82
152.50	02-12-80	8.5	13	6	223		0.31	0.17	87	80.0	25	359	0.0	0.4	728	56
	04-17-81	9.1	3	4	248	2.1	9.00	0.01	108	93.0	37	296	0.4	0.4	656	24
	02-12-86	9.6	2	3	253	2.0	0.49	0.00	111	46.0	121	190	0.1	0.5	60	18
	07-14-87	9.5	2	2	251	2.0	0.31	0.00	125	46.0	112	290	0.0	0.5	686	15
	08-11-87	9.2	2	5	244	1.2	1.00	0.00	117	51.0	61	302	0.0	0.4	674	24
	10-02-87	9.5	1	2	251	1.6	0.46	0.00	104	40.0	97	241	0.1	0.3	648	10
	02-15-88	9.4	0	10	255	0.8	0.58	0.00	110	45.0	105	226	0.0	0.4	642	40
	07-14-88	8.8	1	2	248	4.3	1.10	0.01	112	46.0	38	342	0.1	0.5	621	10
	11-16-88	9.8	0	13	258	1.2	1.50	0.01	110	45.0	80	263	0.0	0.6	748	55
	07-10-90	9.3	3	0	269	1.6	4.00	0.00	143	38.0	70	272	0.0	0.5	622	9
	07-05-91	9.6	0	4	230	1.0	0.46	0.00	130	28.0	120	207	0.0	0.6	692	17
NL 8	09-04-78	8.4	13	9	154		0.09		19	53.0	19	364	0.0	0.4	481	69
139.80	02-07-80	7.9	23	10	147		51.00		15	47.0	0	425	0.0	0.3	502	99
	05-06-81	8.7	2	1	133	3.0	5.20	0.01	59	8.3	14	244	0.9	0.6	396	11
	12-13-81	8.8	7	7	173	1.7	1.20	0.00	20	55.0	28	348	0.0	0.4	494	46

Table 6. (Continued)

Well No.	Date	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)	(M-D-Y)						(Total)									
NL 8	05-19-86	8.5	1	4	175	3.1	1.30	0.00	34	3.9	37	350	0.8	0.4	400	18
139.80	10-05-87	8.7	2	3	166	2.3	0.40	0.00	26	3.7	34	360	1.6	0.2	404	18
	07-06-88	8.5	3	4	172	1.6	0.32	0.00	23	4.4	18	370	1.0	0.3	410	22
	11-07-88	8.5	2	3	168	2.3	0.52	0.00	32	1.6	35	355	1.4	0.4	426	18
	08-13-90	9.1	9	1	168	2.0	0.80	0.00	26	3.7	30	346	1.7	0.3	366	28
	07-11-91	8.9	2	3	160	1.9	0.98	0.00	26	2.0	8	398	0.6	0.3	434	18
NL 9	11-08-78	7.7	175	24	306		0.29		730	69.0	0	120	2.9	0.0	1780	535
143.35	02-06-80	7.0	193	88	220		7.50	2.60	758	57.0	0	237	0.0	0.1	1750	843
	07-13-83	6.6	226	84	260	11.0	4.70	2.70	870	56.0	0	251	0.0	0.1	2272	908
	03-11-87	7.2	294	144	389	14.0	8.00	2.10	1370	98.0	0	216	2.6	0.0	3284	1326
	10-19-87	7.6	266	150	395	15.0	6.10	2.90	1346	20.0	0	150	0.0	0.0	3032	1280
	02-12-88	7.9	222	136	382	14.0	5.10	2.20	1320	5.0	0	65	0.0	0.0	2874	1116
	07-07-88	7.5	224	129	377	15.0	1.70	0.09	1358	2.9	0	20	2.4	0.0	2118	1090
	11-04-88	7.7	228	123	382	15.0	2.10	0.00	1350	1.2	0	43	1.5	0.0	2980	1070
	03-16-90	7.4	262	108	386	15.0	1.10	0.01	1355	2.3	0	25	1.5	0.0	2642	1098
	08-20-90	7.7	304	90	407	14.0	1.10	0.08	1370	4.0	0	31	0.7	0.1	2980	1130
NL 10	09-04-78	7.6	289	73	540		0.34		1436	58.0	0	128	11.0	0.1	2822	1023
179.90	04-07-80	7.5	322	89	599		1.40	3.10	1564	73.0	0	230	0.3	0.1	3128	1168
	06-17-86	8.1	102	132	1609	31.0	18.00	0.06	3060	106.0	0	35	2.5	0.3	5603	796
	02-26-87	7.4	180	122	1470	27.0	18.00	1.90	2840	348.0	0	72	1.8	0.2	5500	950
	10-13-87	7.5	182	96	1288	25.0	36.00	1.60	2506	88.0	0	34	0.0	0.0	5430	850
	12-07-88	8.9	162	66	1379	29.0	23.0	0.00	2572	65.0	3	11	0.0	0.1	4922	676
	06-08-89	7.8	144	209	2300	61.0	179.00	0.60	4200	48.0	0	45	0.3	0.1	7880	1220
	03-07-90	7.6	164	209	2254	57.0	79.00	0.37	4116	31.0	0	49	11.0	0.1	7378	1270
	08-06-90	8.2	203	85	1980	55.0	187.00	0.41	3770	22.0	0	40	0.2	0.2	7140	856
NL 11	09-04-78	8.2	32	8	95		0.25		5	21.0	17	318	1.3	0.2	381	112
138.00	03-20-80	8.0	42	10	89		0.12	0.23	6	1.7	0	402	0.0	0.0	412	146
	08-25-80	7.4	39	9	101		24.00	0.57	9	3.2	0	412	0.0	0.2	416	134
	04-17-81	7.6	34	10	107	3.3	3.50	0.03	14	11.0	0	408	0.0	0.1	378	128
	04-09-86	8.3	18	11	112	2.7	0.98	0.03	18	5.0	31	341	0.0	0.2	388	90
	03-11-87	8.0	17	10	113	3.9	18.00	0.03	13	6.0	0	374	3.0	0.2	336	86
	03-11-87	7.4	38	28	133	12.0	3.00	0.35	102	105.0	0	327	3.7	0.6	604	210
	10-10-87	8.3	37	16	113	7.0	0.48	0.09	54	31.0	22	342	0.3	0.2	428	159
	12-12-88	8.3	36	12	108	4.3	0.30	0.00	21	4.5	20	362	2.9	0.1	428	136
	06-12-89	8.5	31	12	115	3.1	0.40	0.27	12	6.9	35	338	3.2	0.1	411	128
	03-13-90	7.9	39	12	101	1.6	2.20	0.53	5	2.7	0	419	0.1	0.2	396	146
NL 12	03-29-80	7.0	508	131	533		5.30	0.00	1870	138.0	0	219	6.8	0.0	4080	1806
152.00	04-16-81	7.0	520	149	1080	16.0	11.00	0.64	2975	126.0	0	60	0.0	0.0	5378	1912
	02-20-86	8.2	422	189	1210	16.0	10.00	0.10	3050	4.4	0	18	0.6	0.1	4860	1830

Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)							(Total)									
NL 12	07-14-87	8.6	400	190	1030	14.0	3.10	0.01	2970	4.0	5	8	0.0	0.1	6000	1780
152.00	10-01-87	7.6	414	177	1048	13.0	2.50	0.01	2862	2.9	0	16	0.0	0.0	5920	1760
	02-04-88	7.6	408	174	1047	14.0	1.80	0.03	2814	5.3	0	25	0.0	0.0	6392	1734
	07-04-88	7.6	435	160	1012	13.0	1.00	0.00	2800	3.7	0	7	0.0	0.0	4427	1744
	11-04-88	7.8	396	169	957	13.0	1.70	0.05	2650	2.2	0	22	0.0	0.0	5590	1680
	03-15-90	7.7	409	165	908	13.0	1.90	0.03	2620	2.8	0	30	0.0	0.0	4880	1740
	09-11-90	8.0	483	162	943	12.0	1.70	0.04	2670	3.4	0	27	0.0	0.1	6290	1870
NL 13	05-08-81	9.3	3	59	735	29.0	1.70	0.01	877	438.0	63	177	0.2	0.1	2358	249
168.00	02-12-86	8.6	2	51	414	7.0	2.70	0.06	426	9.3	64	371	0.1	0.1	1210	216
	10-30-87	7.7	10	29	356	5.9	1.30	0.08	360	3.7	0	494	0.0	0.0	1026	143
	02-04-88	8.2	15	24	345	5.1	0.54	0.31	337	6.3	0	502	0.0	0.0	1229	135
	07-04-88	8.4	4	20	336	5.1	0.56	0.00	328	3.8	33	364	0.3	0.0	909	92
	11-04-88	8.2	14	24	336	4.7	0.48	0.00	317	2.3	0	435	0.0	0.1	970	134
	03-15-90	8.2	10	31	347	4.3	1.30	0.40	369	20.0	0	420	0.5	0.1	1110	153
	09-11-90	8.5	18	38	377	4.3	0.85	0.49	423	30.0	27	343	0.0	0.1	1060	202
	07-09-91	8.5	11	31	370	5.4	0.43	0.53	470	36.0	11	374	0.0	0.1	1180	160
NL 14	04-26-80	9.2	3	4	255		9.00	0.00	171	0.7	64	277	0.0	0.2	676	21
140.30	04-16-81	9.7	2	2	281	2.8	2.60	0.00	211	5.3	105	195	0.0	0.1	716	11
	03-11-86	10.5	2	0	320	2.7	1.10	0.00	260	4.3	169	0	0.1	0.3	716	5
	03-11-87	8.1	22	8	230	1.2	1.00	0.09	122	126.0	0	384	0.6	0.4	684	86
	10-02-87	8.1	10	12	278	2.3	0.44	0.00	182	59.0	0	451	0.0	0.1	782	74
	02-08-88	8.4	5	13	288	1.6	0.36	0.01	190	45.0	31	375	0.0	0.2	754	65
	07-06-88	8.5	2	5	285	2.7	0.38	0.00	179	49.0	33	349	0.1	0.0	728	26
	11-07-88	9.1	2	9	292	2.3	0.22	0.00	204	31.0	52	319	0.3	0.2	786	41
	08-17-90	9.4	5	6	304	2.3	0.31	0.00	220	8.8	90	253	0.5	0.1	740	36
	07-15-91	9.6	1	3	300	2.6	0.26	0.00	220	2.0	36	367	0.0	0.2	790	14
NL 15	03-10-80	8.2	10	0	344		8.80	0.00	336	72.0	15	242	0.0	0.4	966	25
155.00																
NL 16	05-06-81	9.7	1	3	171	2.6	0.62	0.00	56	3.3	86	210	0.0	0.2	450	15
143.29	07-23-87	9.5	2	1	159	1.6	1.80	0.00	50	5.0	76	212	0.0	0.2	428	11
	10-16-87	9.3	1	3	156	1.2	0.42	0.00	48	3.5	69	224	0.0	0.2	394	14
	12-02-88	9.2	1	3	159	0.4	0.28	0.00	44	4.0	35	279	1.0	0.2	432	15
	06-02-89	9.3	2	2	168	2.0	0.37	0.00	40	3.4	50	257	1.1	0.3	439	14
	03-02-90	8.2	3	4	159	2.3	2.10	0.01	39	3.2	25	304	0.1	0.4	372	25
	08-02-90	9.1	3	0	166	0.8	0.35	0.00	39	4.1	42	259	0.3	0.4	336	8
NL 17	05-06-81	10.1	3	2	84	5.7	2.00	0.00	70	2.7	51	39	0.0	0.2		17
146.30	05-26-86	9.9	3	2	101	4.7	3.00	0.00	143	2.6	35	15	0.3	0.6	280	14
	08-11-87	9.9	8	8	64	3.5	1.00	0.00	109	0.0	16	11	0.0	0.6	244	52

Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₂	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)							(Total)									
NL 17	10-07-87	9.8	9	3	64	3.5	0.32	0.00	105	4.8	21	0	0.0	0.8	202	32
146.30	12-06-88	9.2	57	27	92	6.3	0.30	0.00	309	3.1	3	14	0.0	0.4	656	252
	06-05-89	8.7	23	8	78	4.3	0.56	0.01	162	2.6	0	27	0.0	0.5	382	90
	03-05-90	7.8	89	40	110	6.6	1.10	0.04	420	2.0	0	34	0.1	0.5	984	388
	11-17-90	8.4	47	6	81	5.5	0.34	0.04	220	0.9	2	28	0.4	0.5	568	142
NL 18	07-17-79	6.7	960	840	5518		5.30		11444	1467.0	0	148	76.0	0.2	22898	5850
173.70	03-27-80	7.0	480	426	6920		7.70	0.00	11720	1392.0	0	21	19.0	0.3	23810	2950
	08-26-80	7.0	1000	791	5620		4.80	0.00	11677	1395.0	0	9	78.0	0.4	23936	5750
	02-14-86	8.1	804	723	6070	109.0	5.50	0.31	11700	1000.0	0	14	0.0	0.1	24000	4980
	02-26-87	7.1	904	833	6000	110.0	10.00	5.10	12280	1340.0	0	161	4.2	0.1	25690	5680
	10-15-87	8.2	832	726	5977	116.0	1.70	0.03	12060	1292.0	0	20	0.0	0.1	25236	5060
	02-03-88	7.2	880	940	6026	113.0	2.20	0.18	12000	1538.0	0	34	0.0	0.2	25676	6060
	07-15-88	7.4	944	983	6092	113.0	1.60	0.05	12240	1670.0	0	16	0.1	0.1	22051	6400
	11-15-88	8.1	832	828	5890	109.0	1.40	0.09	12600	1280.0	0	26	0.0	0.1	21500	5490
	03-26-90	7.3	1140	657	6670	117.0	2.90	0.04	12800	1550.0	0	20	0.0	0.1	26600	5550
	08-29-90	7.4	1050	870	5910	117.0	3.00	0.08	12200	1280.0	0	23	0.0	0.1	25900	6200
NL 19	04-07-80	7.9	12	7	39		0.73	0.06	55	4.7	0	77	1.1	0.0	184	60
132.00	04-19-80	7.4	41	24	46		0.73	0.17	7	5.0	0	348	0.0	0.9	334	201
	08-26-80	7.9	41	12	68		0.67	0.00	16	3.2	0	336	0.0	0.6	318	153
	04-22-81	7.8	12	18	74	6.3	0.92	0.01	44	5.4	0	250	0.0	0.6	312	102
	02-14-86	8.5	10	11	78	4.3	1.60	0.00	73	3.8	20	119	0.0	0.8	280	72
	02-26-87	7.8	22	8	67	7.0	40.00	0.13	68	16.0	0	141	2.5	0.4	236	89
	02-26-87	8.1	12	20	62	3.1	1.10	0.06	8	17.0	0	315	0.0	0.7	266	110
	10-15-87	8.1	19	11	53	5.9	0.74	0.00	60	3.1	0	159	0.0	0.4	244	91
	02-03-88	7.7	18	13	53	6.2	1.10	0.00	64	5.5	0	158	0.0	0.4	310	99
	07-11-88	8.7	18	12	67	9.8	0.46	0.01	71	2.5	4	125	0.1	0.5	245	92
	11-10-88	7.9	17	13	55	6.3	0.44	0.00	75	0.6	0	144	0.2	0.6	328	94
	02-07-90	8.4	16	26	32	4.3	0.60	0.07	6	18.0	18	183	0.0	1.3	218	145
	03-27-90	8.0	22	14	71	6.6	0.69	0.00	97	2.3	0	134	0.5	0.6	335	112
	10-25-90	8.5	24	15	74	6.3	1.60	0.01	131	2.9	11	106	0.1	0.5	282	123
NL 20	04-07-80	7.2	898	371	813		2.60	0.00	3645	268.0	0	142	0.0	0.0	7626	3768
152.00	04-28-80	7.3	973	373	858		8.00	0.00	3904	190.0	0	150	0.0	0.0	8228	3960
	02-26-87	6.7	852	407	2160	27.0	60.00	11.00	6000	214.0	0	26	0.0	0.1	12490	3800
	02-26-87	6.4	317	317	1660	20.0	62.00	8.70	4580	171.0	0	52	0.1	0.1	9400	2950
	10-09-87	7.5	808	276	2359	33.0	27.00	0.58	5550	17.0	0	39	0.0	0.0	11486	3150
	02-09-88	8.1	840	273	2254	32.0	33.00	0.28	5480	55.0	0	21	0.0	0.0	11748	3220
	07-11-88	7.3	924	183	2230	32.0	29.00	0.19	5470	55.0	0	11	0.1	0.0	8899	3060
	11-09-88	7.7	844	205	2120	31.0	52.00	0.24	5500	36.0	0	20	0.1	0.2	10800	2950
	03-22-90	6.5	918	182	2185	32.0	45.00	0.06	5536	20.0	0	16	0.0	0.2	9781	3040

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Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NL 21	04-07-80	7.7	47	18	294		0.12	0.29	286	62.0	0	446	0.0	0.3	968	193
137.00	04-24-80	7.4	36	21	268		0.38	0.69	278	65.0	0	365	0.0	0.2	894	175
	05-19-86	10.0	1	1	292	3.1	0.66	0.00	360	2.9	92	54	1.3	0.2	664	48
	03-11-87	8.1	50	12	264	1.6	1.00	0.00	258	84.0	0	417	0.2	0.3	928	174
	10-02-87	8.6	5	3	271	2.7	0.92	0.00	295	20.0	18	204	0.7	0.0	766	24
	02-08-88	8.2	10	12	283	2.3	0.50	0.01	293	19.0	0	285	0.1	0.2	962	75
	11-07-88	8.7	4	15	281	2.7	0.57	0.00	292	13.0	31	211	0.6	0.2	764	73
	08-13-90	8.8	18	5	283	2.3	0.16	0.01	300	5.0	22	237	1.0	0.2	726	65
	07-15-91	9.0	5	8	290	2.5	0.83	0.00	310	9.0	8	257	0.0	0.2	782	45
NL 22	03-07-80	8.9	13	8	9		1.50	0.00	20	4.0	4	55	0.0	0.1	170	64
128.00	04-07-80	8.1	26	14	75		0.41	0.06	3	21.0	0	317	0.7	0.2	408	122
	05-12-80	8.1	12	15	239		62.00	0.80	109	108.0	0	422	0.0	0.1	796	92
	04-17-81	9.0	3	8	262	4.0	1.30	0.00	125	106.0	38	339	0.0	0.2	728	40
	02-18-86	10.0	3	7	258	2.7	0.99	0.01	123	61.0	168	102	0.0	0.4	714	35
	07-16-87	10.1	4	15	267	3.5	5.00	0.00	153	56.0	193	69	0.0	0.2	740	73
	10-19-87	9.8	2	3	260	2.3	0.34	0.00	138	36.0	129	181	0.0	0.2	714	16
	12-15-88	9.7	3	4	264	2.3	0.14	0.00	157	28.0	92	248	0.4	0.2	779	26
	06-14-89	9.9	0	4	267	2.3	0.19	0.00	133	10.0	133	167	0.0	0.3	782	16
	03-14-90	9.1	6	3	267	2.7	0.37	0.00	166	22.0	97	228	0.0	0.4	738	28
	07-16-91	9.9	1	3	220	2.3	0.91	0.00	150	35.0	41	308	0.0	0.5	710	12
NL 23	04-07-80	8.3	15	13	133		0.31	0.11	15	41.0	14	355	0.0	0.3	438	89
156.00	04-23-80	7.6	6	6	137		36.00	0.17	22	0.7	0	370	0.0	0.3	396	37
	04-16-81	9.1	3	2	155	2.3	0.78	0.00	35	9.2	46	281	0.0	0.0	394	17
	02-12-86	8.7	4	10	159	1.2	0.41	0.00	55	0.5	46	270	0.1	0.3	420	49
	07-15-87	8.7	7	7	163	1.6	0.97	0.00	97	4.5	33	262	0.0	0.3	442	44
	10-01-87	8.0	7	9	163	2.0	0.30	0.03	110	3.1	0	324	0.0	0.1	464	54
	02-04-88	8.2	10	9	175	1.6	0.62	0.06	121	5.8	0	321	0.0	0.2	581	63
	07-04-88	8.6	7	11	177	2.3	1.00	0.00	132	3.2	19	277	0.0	0.3	489	63
	11-04-88	8.7	9	11	175	1.6	1.40	0.00	136	1.4	33	248	0.1	0.3	514	68
	11-15-89	7.8	27	8	156	1.2	0.52	0.01	10	49.0	0	448	0.0	0.3	503	100
NL 24	04-07-80	7.5	6	7	42		0.39	0.00	55	5.3	0	62	0.8	0.0	178	43
146.00	04-14-80	7.9	22	24	56		1.50	0.11	14	4.3	0	303	0.0	0.9	340	152
	08-26-80	7.8	46	26	139		0.61	0.00	190	3.2	0	306	0.0	0.6	600	220
	12-24-81	7.9	38	19	75	3.8	0.08	0.00	16	25.0	0	367	0.0	0.9	376	175
	02-14-86	8.2	25	36	124	4.7	1.90	0.07	162	4.6	0	290	0.0	0.7	510	212
	02-26-87	7.3	40	60	230	0.0	31.00	0.77	430	65.0	0	267	21.0	0.6	1337	348
	02-26-87	8.0	12	25	76	3.0	0.24	0.13	40	25.0	0	327	0.0	0.8	352	134
	10-15-87	8.3	34	34	104	5.1	1.50	0.15	142	3.5	18	278	0.2	0.5	508	226
	02-03-88	7.6	34	36	101	4.3	0.70	0.14	131	5.3	0	316	0.5	0.6	605	232
	07-11-88	8.4	30	34	104	7.8	0.52	0.02	131	3.2	9	255	0.0	0.6	445	215

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Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NL 24 146.00	11-15-88	8.4	29	34	99	4.3	0.50	0.00	135	3.0	12	271	0.1	0.7	451	215
	03-27-90	7.4	34	49	110	4.3	1.20	0.01	192	4.0	0	259	0.0	0.8	631	288
NL 25 164.00	04-07-80	7.6	20	14	102		0.96	0.17	6	5.0	0	384	0.0	0.2	412	107
	03-11-87	8.1	20	9	76	3.1	1.10	0.00	22	15.0	0	256	0.6	0.3	268	87
	10-19-87	9.1	4	18	104	3.9	3.20	0.00	176	3.8	13	63	0.2	0.2	388	82
	12-01-88	7.2	18	32	152	5.5	2.20	0.02	340	3.1	0	31	2.4	0.2	736	179
	06-01-89	6.9	45	42	193	7.4	10.00	0.01	452	2.4	0	30	3.8	0.2	991	283
	03-01-90	6.0	76	57	269	7.0	7.40	0.04	706	2.1	0	23	4.3	0.2	1450	424
	08-01-90	7.9	81	47	251	6.6	2.10	0.01	647	1.1	0	17	0.2	0.2	1320	396
	11-30-90	7.6	64	38	240	7.0	1.80	0.01	580	2.0	0	25	5.2	0.2	1450	320
NL 26 154.00	08-22-86	7.0	622	143	680	8.2	0.19	6.40	2360	120.0	0	260	0.3	0.1	5632	2140
	10-01-87	7.5	461	107	579	11.0	0.56	0.25	1914	38.0	0	22	0.0	0.0	4086	1590
	02-17-88	8.0	480	96	587	11.0	0.46	0.33	1920	64.0	0	21	0.0	0.0	4828	1592
	11-16-88	7.0	456	40	552	10.0	0.56	0.36	1720	27.0	0	12	0.0	0.0	3464	1300
	07-14-89	7.8	491	98	616	11.0	0.48	1.50	2000	62.0	0	22	0.0	0.0	3290	1632
	03-28-90	7.3	422	35	543	9.4	0.34	0.50	1669	16.0	0	11	0.0	0.0	3227	1196
	08-21-90	8.2	464	22	543	9.4	1.20	0.63	1730	18.0	0	19	0.0	0.1	3540	1250
	07-08-91	7.6	410	46	510	11.0	0.61	0.00	1700	17.0	0	23	2.4	0.1	4430	1200
NL 27 148.00	09-01-86	8.4	18	10	168	3.1	0.17	0.10	121	14.0	42	278	0.0	0.3	510	86
	04-01-88	7.8	19	49	368	6.2	4.50	0.07	508	7.5	0	257	3.2	0.0	1066	250
	12-14-88	8.6	9	7	198	3.1	1.90	0.00	162	3.5	18	274	0.1	0.1	621	50
	06-12-89	8.6	7	9	205	3.1	10.00	0.04	174	3.8	32	233	0.4	0.2	647	53
	03-13-90	8.5	9	5	209	3.5	13.00	0.01	198	2.0	28	200	0.3	0.2	558	44
	10-11-91	8.2	9	4	180	4.5	5.20	0.01	240	2.0	0	223	0.4	0.1	570	39
NL 28 146.00	09-03-86	7.9	12	6	133	3.1	0.30	0.21	21	13.0	0	397	0.0	0.2	402	56
	04-02-88	8.1	14	6	124	3.9	0.28	0.18	18	11.0	0	350	0.1	0.1	350	60
	12-14-88	8.2	16	7	124	3.9	0.28	0.06	37	3.9	25	304	0.3	0.1	407	71
	06-09-89	8.2	11	8	133	4.3	0.33	0.00	35	3.7	0	354	0.2	0.2	409	62
	03-16-90	8.2	12	2	131	3.5	0.30	0.02	37	3.8	0	327	0.9	0.1	352	39
	12-13-90	8.7	6	6	140	4.0	0.48	0.03	32	2.0	79	169	0.4	0.2	280	40
	10-11-91	8.1	4	5	120	4.2	0.22	0.02	37	2.0	0	313	0.3	0.1	318	31
NL 29 164.00	10-27-86	8.3	17	12	133	5.9	0.32	0.21	20	14.0	32	377	0.2	0.2	418	92
	07-16-87	8.4	6	8	152	5.9	3.50	0.01	20	4.5	30	362	0.0	0.3	372	46
	10-19-87	8.9	4	7	149	5.5	0.44	0.00	28	4.4	53	323	0.0	0.1	444	39
	12-14-88	8.7	12	19	221	7.0	12.00	0.00	229	3.6	22	283	1.8	0.1	777	105
	06-08-89	8.5	22	27	200	8.6	4.80	0.24	220	3.6	32	265	2.0	0.2	754	164
	03-07-90	8.3	33	46	230	9.4	29.00	0.02	421	2.3	24	154	0.2	0.2	946	271
	08-06-90	8.3	122	124	398	11.0	38.00	0.12	1090	7.0	1	116	2.5	0.2	2660	814

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Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)						(Total)										
NL 30	10-27-86	8.5	31	8	120	2.0	0.40	0.03	14	38.0	34	334	0.0	0.2	450	110
152.00	07-16-87	8.5	9	7	143	2.7	0.94	0.01	45	4.0	34	299	0.0	0.3	394	51
	10-19-87	8.7	5	8	131	2.3	0.40	0.00	19	4.3	25	316	0.0	0.1	360	44
	12-08-88	8.8	6	8	136	2.3	0.46	0.00	31	3.5	28	307	0.2	0.1	409	48
	06-08-89	8.6	7	12	145	2.3	0.89	0.00	35	3.9	24	328	1.0	0.2	427	68
	03-08-90	8.7	6	14	136	1.6	116.00	0.00	40	2.6	32	279	2.6	0.2	368	72
	08-07-90	8.5	16	6	143	2.0	12.00	0.02	50	3.8	35	271	1.7	0.2	350	63
	10-09-91	8.1	12	12	120	3.2	2.00	0.03	48	3.0	0	359	3.7	0.2	408	80
NL 31	10-27-86	8.1	30	6	104	3.1	0.57	0.28	10	11.0	0	394	0.2	0.2	394	10
169.00	07-16-87	8.6	4	13	173	5.1	0.46	0.02	127	8.0	29	279	0.0	0.0	474	64
	04-02-88	8.0	31	9	108	3.1	0.02	0.40	4	11.0	0	392	0.5	0.2	344	112
	12-01-88	7.7	63	36	331	5.9	0.72	0.51	543	3.8	0	304	2.0	0.1	1352	305
	06-01-89	8.3	27	32	230	5.5	0.23	0.23	291	3.1	21	255	0.3	0.1	885	200
	03-01-90	8.1	13	15	168	4.3	0.74	0.01	150	2.2	0	286	0.7	0.1	464	92
	08-01-90	8.3	13	12	143	3.1	0.96	0.04	95	1.4	19	250	1.5	0.2	376	80
	11-30-90	8.4	11	10	130	3.5	0.70	0.01	72	2.0	18	290	13.0	0.1	372	68
NL 32	11-10-86	8.2	46	20	60	3.5	0.78	0.00	8	25.0	0	388	0.0	0.8	384	197
156.00	10-15-87	9.0	2	18	85	3.9	0.36	0.00	45	3.3	32	186	0.0	0.8	280	78
	02-03-88	8.6	2	17	85	4.7	0.14	0.00	44	5.3	34	165	0.0	0.8	335	77
	07-11-88	8.5	6	13	90	6.6	0.42	0.00	52	4.2	10	180	0.3	0.8	271	68
	11-14-88	8.9	2	11	85	4.7	0.41	0.00	40	0.6	20	159	0.0	0.9	278	50
	08-15-90	8.5	10	2	99	4.7	0.37	0.00	83	3.7	12	121	0.0	0.8	226	35
NL 33	11-21-86	8.1	39	23	78	3.5	0.23	0.06	20	26.0	0	410	0.0	0.8	390	194
169.00	06-20-88	8.0	18	26	81	3.9	0.06	0.06	20	30.0	0	312	0.4	0.8	316	152
	07-11-88	8.5	16	27	85	7.0	0.18	0.08	42	4.4	8	292	0.0	0.9	333	149
	11-14-88	8.7	15	25	87	3.9	0.28	0.06	49	2.7	22	292	0.0	0.9	350	140
NL 34	11-25-86	7.5	190	53	175	8.2	0.90	4.30	618	14.0	0	267	0.0	0.0	1672	692
140.00	10-19-87	8.1	94	37	149	8.6	0.32	1.60	403	2.9	0	169	0.0	0.0	1012	386
	12-02-87	7.3	192	59	172	9.0	1.90	4.60	640	12.0	0	221	0.0	0.1	1500	720
	02-17-88	8.1	142	45	175	8.6	1.20	2.40	618	4.5	0	143	0.0	0.1	1444	540
	07-18-88	8.1	100	44	154	9.4	0.68	0.03	448	2.4	0	77	1.7	0.0	837	430
	11-15-88	8.0	72	35	140	7.4	0.14	0.69	400	12.0	0	104	0.5	0.1	719	325
	03-13-90	7.9	30	35	122	6.3	0.53	0.00	322	2.4	0	32	0.0	0.0	660	220
	12-11-90	8.6	36	34	130	6.6	0.28	0.00	310	3.0	2	27	0.9	0.0	724	230
	10-16-91	7.7	29	25	98	8.0	0.36	0.00	310	1.0	0	19	0.2	0.1	710	180
NL 35	11-28-87	8.0	20	6	127	2.7	0.34	0.15	8	12.0	0	382	0.0	0.2	419	77
168.00	12-01-88	8.3	10	5	133	3.1	0.24	0.00	12	4.2	13	350	0.0	0.1	376	44
	06-01-89	8.6	6	7	136	3.1	0.29	0.00	12	3.3	26	319	0.3	0.1	372	44

Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NL 35 168.00	03-01-90	8.3	8	2	136	3.1	0.46	0.00	10	2.5	29	285	0.4	0.2	310	29
	08-01-90	8.9	6	1	133	1.2	0.25	0.01	14	1.6	29	266	0.1	0.2	310	21
	11-30-90	8.2	10	0	130	2.3	0.22	0.00	16	2.0	0	350	0.1	0.2	296	12
NL 36 166.00	11-30-87	8.0	34	8	113	2.3	0.47	0.12	9	26.0	0	381	0.0	0.2	432	118
	12-02-88	8.8	3	11	126	3.9	0.18	0.00	43	3.9	14	285	0.0	0.1	384	53
	06-19-89	9.4	3	9	131	3.5	0.20	0.01	36	4.3	100	167	0.0	0.2	386	42
	03-06-90	9.4	1	9	129	3.5	0.36	0.00	42	2.7	72	140	0.1	0.2	312	38
	07-16-91	10.1	2	1	130	3.2	0.18	0.00	39	2.0	38	212	0.0	0.2	306	10
NL 37 163.00	12-18-87	8.2	28	7	140	1.6	0.54	0.00	10	26.0	0	437	0.2	0.2	452	97
	12-08-88	9.0	3	5	143	2.3	0.40	0.00	14	3.5	29	321	0.0	0.2	394	28
	06-16-89	9.5	2	4	147	2.7	0.13	0.00	11	4.3	62	250	0.0	0.3	401	23
	03-16-90	9.4	2	2	147	2.7	0.38	0.00	14	4.0	98	166	0.0	0.4	360	14
	08-30-90	10.2	2	3	143	3.5	0.30	0.00	15	2.4	127	110	0.2	0.4	340	18
	01-22-91	9.7	1	3	140	2.7	0.26	0.01	12	2.0	91	188	0.0	0.3	302	16
	10-10-91	9.8	2	3	120	5.0	0.42	0.00	34	2.0	135	71	0.2	0.3	370	17
NL 38 159.00	01-27-88	7.8	13	9	147	2.0	0.24	0.10	40	19.0	0	376	0.0	0.0	420	68
	07-12-88	8.3	6	4	149	3.1	0.26	0.00	42	3.2	18	306	0.0	0.3	377	32
	11-01-88	8.7	4	4	147	2.3	0.22	0.00	40	1.6	30	285	0.4	0.4	372	25
	03-19-90	9.0	5	1	145	2.0	0.44	0.00	45	3.3	6	292	0.6	0.4	394	16
NL 39 177.00	01-31-88	7.7	42	12	69	4.7	0.24	0.40	13	12.0	0	338	1.6	0.0	342	155
	07-12-88	8.4	18	11	71	5.1	0.46	0.05	5	2.9	7	257	0.0	0.0	246	88
	11-01-88	8.0	40	10	71	5.1	0.67	0.00	4	1.9	0	352	0.2	0.2	320	140
	03-14-90	8.4	10	10	71	5.1	0.28	0.00	6	2.8	2	233	0.6	0.1	236	64
	08-08-90	8.3	21	5	71	4.7	0.28	0.00	7	3.1	15	233	0.6	0.1	229	73
NL 40 142.00	02-25-88	7.9	9	22	207	2.0	0.10	0.00	180	22.0	0	298	0.5	0.2	614	114
	07-04-88	8.3	16	17	207	2.7	0.14	0.00	182	2.9	11	298	0.0	0.1	585	110
	11-04-88	8.1	16	17	205	2.0	0.17	0.00	196	1.6	0	336	0.0	0.2	646	111
	03-20-90	8.4	5	12	214	2.7	0.26	0.01	218	3.3	1	256	0.0	0.1	679	60
	09-11-90	8.8	10	13	212	2.7	0.39	0.01	224	3.1	27	195	0.0	0.2	530	78
	07-08-91	9.2	0	16	200	5.2	0.13	0.00	220	2.0	48	148	0.0	0.2	606	66
NL 41 153.00	03-06-88	7.4	224	103	336	12.0	5.60	0.58	1010	84.0	0	175	2.9	0.0	2864	982
	11-01-88	8.1	160	71	333	12.0	0.64	0.02	978	21.0	0	40	0.0	0.0	2080	690
	07-04-89	7.8	172	94	327	13.0	0.44	0.65	988	56.0	0	99	0.0	0.0	1698	818
	03-16-90	7.4	187	36	331	13.0	0.30	0.04	917	4.6	0	38	0.0	0.0	1875	614
	12-06-90	7.9	190	26	370	14.0	0.41	0.00	920	6.0	0	45	0.0	0.0	2270	590
	07-03-91	7.5	200	29	310	14.0	0.31	0.00	910	5.0	0	54	0.1	0.1	2210	620

Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NL 53	01-29-89	7.9	59	31	21	7.8	0.50	0.11	69	13.0	0	263	0.5	1.2	331	273
156.00	03-19-90	8.2	13	22	230	7.8	0.59	0.00	325	2.7	0	190	1.1	0.1	816	122
NL 54	02-02-89	8.2	24	7	163	0.0	0.30	0.01	14	44.0	0	454	0.4	0.4	476	88
161.00	03-12-90	9.0	9	7	242	3.9	0.62	0.00	275	2.4	34	130	0.2	1.2	594	49
NL 55	02-26-89	8.3	23	6	159	2.7	2.10	0.00	56	61.0	27	306	0.3	0.5	480	80
160.00	03-15-90	7.4	536	982	6850	156.0	11.00	2.40	13400	988.0	0	101	0.1	0.8	27400	5380
	08-28-90	7.4	580	961	6760	164.0	12.00	1.40	13400	1030.0	0	464	0.2	1.1	27100	5450
	10-18-91	6.5	610	980	6600	190.0	81.00	2.20	13000	1000.0	0	433	0.3	0.9	26800	5600
NL 56	02-28-89	8.3	32	8	133	2.7	1.20	0.07	12	62.0	28	345	0.8	0.3	430	114
170.00	03-12-90	8.6	16	34	258	5.1	1.10	0.01	356	11.0	18	198	3.1	0.3	780	178
	07-16-91	9.4	1	21	240	4.9	2.50	0.00	300	2.0	12	219	0.5	0.3	688	91
NL 57	03-01-89	7.6	138	73	317	12.0	3.60	1.70	786	38.0	0	239	0.0	0.1	1480	646
165.00	03-22-90	7.8	84	55	331	12.0	0.16	0.02	785	2.5	0	65	0.0	0.0	1550	436
	08-08-90	7.5	107	36	334	12.0	0.18	0.03	769	2.3	0	55	0.0	0.1	1550	414
NL 58	03-27-89	7.5	1020	327	874	21.0	4.10	9.00	4000	214.0	0	154	0.0	0.1	8560	3900
171.00	03-19-90	7.1	1000	216	874	21.0	0.47	1.40	3860	16.0	0	11	0.0	0.0	6790	3390
	09-11-90	7.3	1150	175	897	23.0	0.67	1.20	3760	22.0	0	16	0.0	0.0	8030	3590
NL 59	04-09-89	8.4	12	3	152	2.3	0.55	0.10	24	15.0	26	329	0.0	0.2	450	42
169.00	03-09-90	8.5	8	5	161	3.1	0.31	0.01	58	2.3	19	317	0.1	0.2	418	38
NL 60	04-10-89	8.1	40	13	242	3.9	0.26	0.27	287	33.0	0	292	2.0	0.3	935	153
140.00	03-15-90	8.6	19	11	621	16.0	29.00	0.00	1020	2.9	31	59	0.1	0.2	1710	93
	09-01-90	7.9	556	419	3400	82.0	39.00	1.20	7310	294.0	0	83	0.0	0.3	14300	3110
	10-17-91	6.7	660	970	6900	230.0	77.00	2.30	13000	640.0	0	327	4.9	0.5	27400	5700
NL 61	04-15-89	8.4	16	7	170	2.0	0.20	0.07	43	48.0	23	339	0.0	0.5	535	68
159.00	03-15-90	8.0	101	141	1201	29.0	0.84	0.69	2196	110.0	0	264	0.3	0.3	4300	832
	10-17-91	8.5	7	22	350	10.0	1.10	0.02	510	18.0	42	282	2.6	0.2	1120	110
NL 62	04-25-89	8.4	25	8	150	1.6	0.20	0.15	8	34.0	0	450	0.0	0.3	488	96
163.00	03-02-90	8.3	4	13	184	3.1	1.20	0.01	78	2.7	43	313	0.3	0.2	480	62
	08-02-90	8.9	9	6	168	2.3	2.00	0.01	48	1.6	33	315	0.4	0.2	426	46
	12-03-90	9.0	1	7	170	2.0	0.96	0.00	44	2.0	36	340	0.0	0.3	424	30
	07-02-91	9.5	0	7	160	2.5	2.90	0.00	40	2.0	87	237	0.1	0.3	444	28
NL 63	05-06-89	8.4	29	5	166	2.3	0.40	0.14	82	23.0	23	333	0.0	0.3	583	92
140.00	03-16-90	8.4	20	17	255	5.5	0.67	0.01	245	12.0	34	264	0.0	0.2	722	121

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Table 6. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₂	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NL 63	01-22-91	9.4	0	18	300	7.4	2.00	0.02	330	8.0	91	126	0.2	0.2	778	75
140.00	10-10-91	8.4	7	26	240	7.4	0.88	0.02	330	8.0	48	193	1.3	0.2	810	120
NL 64	05-08-89	8.0	38	9	71	4.3	0.54	0.28	3	11.0	0	327	0.0	0.1	340	133
168.00	03-22-90	7.9	37	10	87	5.9	0.72	0.13	46	3.0	0	303	0.5	0.1	382	133
	08-28-90	7.3	37	12	81	5.9	0.69	0.31	54	2.8	0	295	0.4	0.1	284	140
	07-03-91	7.7	34	14	81	7.0	0.38	0.00	74	2.0	0	279	0.6	0.1	368	140
NL 65	05-19-89	7.2	1124	371	2093	31.0	27.00	8.70	5640	410.0	0	183	0.1	0.0	13351	4330
152.00	03-29-90	7.4	496	69	1265	138.0	2.60	0.04	3005	220.0	0	19	0.0	0.0	5788	1520
	12-06-90	7.3	730	110	1600	74.0	14.00	0.44	4200	100.0	0	31	0.0	0.0	8390	2300
NL 66	05-29-89	8.2	24	17	170	1.6	0.20	0.02	80	32.0	0	394	0.3	0.1	586	131
165.00	08-06-90	8.9	8	11	191	3.5	0.69	0.00	116	35.0	34	271	0.3	0.2	512	64
	07-08-91	8.3	70	56	240	7.8	0.19	0.00	700	2.0	30	108	0.0	0.2	756	410
NL 67	06-26-89	7.1	1888	795	2254	27.0	16.00	20.00	7840	720.0	0	66	0.1	0.1	18091	7980
139.00	03-19-90	6.9	1940	428	2280	30.0	2.30	1.30	8300	306.0	0	13	0.0	0.0	13600	6600
	09-10-90	6.7	1890	259	2390	31.0	2.00	1.90	7680	107.0	0	14	0.0	0.0	17200	5780
NL 71	10-18-90	7.7	110	27	160	3.9	1.80	1.10	390	11.0	0	200	2.1	0.1	1050	380
148.00																
NL 72	11-22-90	7.7	32	7	87	2.7	0.18	0.14	6	13.0	0	330	0.0	0.2	320	110
158.00																
NL 74	07-28-90	7.5	620	190	480	18.0	0.38	7.70	2230	60.0	0	150	0.0	0.0	3680	2330
163.00																
NL 75	11-14-90	8.1	23	3	99	2.0	2.20	0.00	6	14.0	0	310	0.0	0.2	330	67
153.00																
NL 76	07-11-91	8.8	6	6	120	3.1	0.68	0.00	87	25.0	5	179	0.0	0.2	342	40
156.00																
NL 79	07-15-91	8.6	7	2	12	2.9	0.61	0.00	9.0	3.0	1	50	0.0	0.1	70	26
174.00																
NL 80	12-24-90	8.2	47	16	210	1.6	0.57	0.16	120	110.0	0	395	0.1	0.5	722	180
134.00	07-11-91	9.1	5	12	140	5.0	1.30	0.00	86	71.0	8	175	0.0	0.3	432	63

Table 7. Chemical Analysis of Water (in mg/l) from Monitoring Wells in Nonthaburi Aquifer

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)							(Total)									
NB 1 204.60	05-30-78	7.6	468	173			0.18		2100	17.0	0	96	0.0	0.0	4471	1880
	03-11-80	7.1	592	188	345		3.90	0.00	2008	23.0	0	168	13.0	0.0	4268	2252
	08-27-80	7.6	564	169	354		2.10	0.00	2015	9.2	0	15	10.0	0.0	4420	2102
	12-20-81	7.6	592	152	420	16.0	4.60	4.40	1995	40.0	0	151	1.7	0.1	3660	2102
	04-10-86	7.5	70	43	271	19.0	1.00	0.05	650	3.5	0	31	3.7	0.1	1456	352
	07-15-87	8.5	96	55	225	15.0	1.80	0.00	697	0.0	13	27	0.0	0.1	1550	466
	10-13-87	8.6	94	58	232	15.0	1.00	0.00	686	3.3	2	9	0.1	0.0	1544	474
	02-16-88	8.0	99	58	237	15.0	0.90	0.01	680	4.5	0	17	0.0	0.0	1592	488
	07-18-88	7.6	106	63	235	15.0	0.98	0.04	706	2.2	0	22	0.0	0.0	1138	524
	11-17-88	7.4	104	63	248	15.0	1.20	0.08	690	4.2	0	12	0.0	0.1	1470	520
03-26-90	7.8	116	69	232	14.0	22.00	0.00	741	2.5	0	17	0.0	0.1	1440	572	
NB 2 189.00	02-17-81	6.9	240	32	401	11.0	6.90	0.05	1080	6.8	0	25	0.5	0.0	1960	730
	05-06-86	7.8	103	28	467	14.0	3.60	0.03	1128	2.5	0	49	0.0	0.1	1906	372
	02-26-87	6.7	1268	264	920	1.6	2.60	12.00	4250	352.0	0	124	4.1	0.1	4912	4250
	10-07-87	7.8	476	115	529	12.0	6.70	0.02	1890	31.0	0	20	0.0	0.0	5302	1662
	12-14-88	7.6	1270	307	943	17.0	15.00	0.61	4328	270.0	0	31	0.0	0.0	7844	4436
	06-12-89	7.5	1180	310	943	18.0	62.00	2.70	4160	240.0	0	33	0.1	0.0	7610	4220
	03-13-90	7.4	1240	279	929	16.0	11.00	7.40	4306	242.0	0	84	0.2	0.0	9636	4240
10-11-91	7.3	440	340	1100	41.0	63.00	2.40	3700	27.0	0	282	9.0	0.1	7500	2500	
NB 3 213.50	11-08-78	7.9	28	18	97		0.37		79	0.8	0	297	0.0	0.0	462	144
	02-21-80	7.1	55	11	100		0.19	0.63	75	4.3	0	352	0.4	0.1	490	181
	04-23-81	7.5	45	12	118	4.2	3.00	0.00	83	11.0	0	361	1.9	0.1	458	160
	05-19-86	7.2	614	96	789	26.0	0.84	1.30	83		0	20	0.7	0.1	5406	1926
NB 4 225.00	04-01-86	7.6	33	5	28	4.7	0.76	0.04	105	5.3	0	32	0.0	0.3	300	105
	07-14-87	7.7	35	6	34	5.1	1.50	0.01	114	5.0	0	25	0.0	0.2	320	109
	10-07-87	8.0	33	5	35	5.1	0.98	0.00	118	4.2	0	17	0.0	0.2	308	101
	02-09-88	8.2	37	6	39	4.3	0.40	0.00	124	6.8	0	29	0.0	0.2	338	115
	07-07-88	8.1	45	7	41	4.7	0.50	0.01	131	4.4	0	39	1.6	0.3	254	140
	11-09-88	7.9	35	7	41	5.1	0.72	0.02	136	1.1	0	23	1.2	0.3	348	116
	03-29-90	6.9	44	5	55	5.1	0.56	0.02	167	3.2	0	20	1.4	0.3	386	131
	12-07-90	7.9	54	3	62	4.7	0.79	0.03	180	5.0	0	36	1.3	0.3	323	150
NB 5 192.00	04-18-81	9.2	3	9	219	4.3	1.90	0.00	239	3.2	29	166	0.9	0.2	600	44
	06-17-82	7.8	24	6	156	1.9	0.73	0.00	18	42.0	0	455	0.4	0.3	538	86
	12-02-88	8.0	26	47	278	3.1	2.20	0.17	535	23.0	0	117	0.2	0.1	1184	258
	06-02-89	8.1	24	52	304	5.1	3.70	0.03	370	12.0	0	74	0.0	0.1	1270	272
	03-02-90	7.6	49	68	350	5.9	11.00	0.02	770	1.6	0	47	0.2	0.1	1644	400
	08-02-90	8.0	97	52	357	5.9	6.00	0.02	825	0.8	0	40	0.3	0.2	1670	458
	12-03-90	7.5	60	54	350	5.5	4.90	0.00	800	2.0	0	28	0.7	0.2	1780	370
	07-02-91	7.8	57	69	280	6.8	8.80	0.00	680	16.0	0	58	0.5	0.2	1680	420

Table 7. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NB 6 195.20	09-01-78	8.2	30	7	139		0.05		3	27.0	19	414	0.0	0.4	500	102
	04-16-81	7.9	8	15	185	2.5	5.40	0.00	112	4.1	0	403	0.0	0.2	518	82
	03-11-86	8.0	14	41	288	2.7	3.90	0.24	350	4.5	0	295	0.2	0.2	844	205
	07-14-87	8.1	4	3	161	2.0	1.80	0.00	30	4.5	0	431	3.8	0.3	444	22
	10-05-87	8.0	13	36	248	3.5	0.40	0.06	383	2.9	0	224	0.4	0.1	874	180
	02-08-88	8.1	18	34	258	3.1	7.50	0.01	395	5.5	0	214	0.0	0.2	1086	185
	07-06-88	8.0	18	41	258	3.1	3.00	0.01	414	4.2	0	199	0.3	0.3	837	214
	11-07-88	7.8	27	33	267	4.3	20.00	0.00	418	5.3	0	222	0.3	0.3	934	204
	08-13-90	8.9	9	15	173	1.6	0.36	0.02	74	19.0	50	284	0.2	0.3	462	84
	07-11-91	8.9	5	13	170	1.8	2.20	0.00	88	3.0	7	377	0.0	0.3	488	68
NB 7 180.00	02-12-86	7.0	504	280	2280	16.0	69.00	4.50	4860	167.0	0	138	0.0	0.1	7330	2410
	07-14-87	7.2	656	319	2620	16.0	114.00	2.60	6000	195.0	0	101	0.0	0.1	14000	2950
	08-11-87	7.3	632	387	2453	13.0	17.00	2.50	5900	151.0	0	95	0.0	0.0	12726	3170
	10-02-87	7.3	608	324	2469	13.0	11.00	2.40	5560	109.0	0	79	0.0	0.0	11194	2850
	02-15-88	7.8	584	361	2277	12.0	6.80	2.70	5170	128.0	0	79	0.0	0.0	10310	2940
	07-14-88	7.7	620	333	2345	16.0	6.80	1.60	5450	163.0	0	57	0.0	0.0	8955	2920
	11-16-88	7.5	664	293	2345	13.0	15.00	3.60	5480	163.0	0	161	0.0	0.2	10220	2860
	07-10-90	7.9	708	181	2160	12.0	12.00	2.30	4860	141.0	0	142	0.0	0.2	9540	2510
	07-05-91	8.2	290	150	1140	14.0	1.10	0.00	2650	36.0	0	80	0.1	0.2	5740	1300
NB 8 189.00	09-04-78	8.9	9	6	116		0.28		2	17.0	32	275	0.0	0.2	363	47
	09-04-78	8.8	9	5	106		0.95		3	0.0	29	269	1.9	0.3	345	44
	03-25-80	8.0	34	9	112		0.42	0.23	6	1.7	0	435	0.0	0.0	424	122
	04-09-86	8.0	16	7	129	2.3	0.77	0.05	20	4.8	0	429	0.0	0.3	466	67
	10-10-87	8.4	15	11	138	2.7	0.32	0.00	68	3.2	21	323	3.0	0.2	418	82
	12-12-88	8.0	20	15	117	6.3	0.26	0.00	56	3.6	0	342	0.9	0.2	440	110
	06-12-89	8.6	20	17	124	5.5	0.06	0.01	66	3.9	29	280	2.0	0.2	460	120
	03-13-90	8.3	20	21	129	5.5	0.78	0.01	95	2.1	40	237	3.6	0.2	426	136
NB 9 207.30	02-18-86	9.1	5	10	359	3.9	0.91	0.01	312	3.6	71	325	0.3	1.1	968	53
	02-26-87	8.8	5	6	354	3.1	0.81	0.01	345	7.8	0	401	2.1	1.1	926	37
	10-19-87	8.3	8	20	195	13.0	0.38	0.02	199	23.0	13	272	0.6	0.6	652	102
	12-12-88	7.6	7	10	202	13.0	0.68	0.00	204	3.6	0	254	16.0	0.6	684	59
	06-14-89	7.8	6	20	207	13.0	0.12	0.05	204	4.4	0	329	38.0	0.9	747	100
	03-14-90	8.8	10	19	207	14.0	0.52	0.00	212	2.3	22	221	34.0	1.0	692	105
NB 10 204.35	02-12-80	7.4	40	11	198		0.85	0.23	209	22.0	0	313	0.0	0.3	772	144
	04-18-81	7.6	41	9	232	3.8	0.01	0.18	232	44.0	0	333	0.0	0.3	766	141
	02-19-86	7.9	32	25	191	2.7	0.53	0.02	130	50.0	0	359	0.7	0.4	640	184
	07-20-87	8.1	28	6	184	2.0	1.20	0.00	114	51.0	0	350	1.2	0.4	592	92
	10-13-87	8.1	28	6	182	2.3	0.74	0.18	117	49.0	0	346	0.4	0.2	588	92

Table 7. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NB 11 195.20	09-04-78	8.5	19	7	88		0.18		9	0.0	15	283	0.3	0.3	351	78
	03-14-80	7.5	42	6	90		2.80	0.63	4	10.0	0	378	0.0	0.0	354	128
	04-23-81	7.7	21	19	137	5.8	16.00	0.06	139	3.2	0	295	0.0	0.1	474	132
	02-12-86	8.0	8	41	202	5.9	14.00	0.23	301	6.5	0	174	0.2	0.1	680	189
NB 12 195.00	05-10-80	6.8	195	119	416		79.00	1.30	1185	172.0	0	34	0.0	0.1	2544	974
	04-16-81	7.4	46	58	397	6.9	1.90	0.05	788	74.0	0	48	0.0	0.2	1456	354
	03-11-86	9.2	36	8	418	7.4	0.92	0.01	564	3.8	8	14	0.1	0.2	1254	122
	07-14-87	8.2	40	8	350	5.5	3.60	0.02	645	0.0	0	26	0.0	0.3	1250	132
	10-05-87	9.0	36	9	354	5.5	0.50	0.00	632	0.0	3	29	0.0	0.1	1180	128
	02-17-88	8.5	52	3	357	4.7	0.34	0.00	620	4.3	7	10	0.0	0.2	1202	142
	07-06-88	8.1	19	5	336	5.1	0.20	0.01	550	3.6	0	45	0.0	0.3	941	68
	11-07-88	9.5	5	4	333	4.3	0.50	0.00	501	2.3	16	30	0.1	0.4	1030	29
	08-17-90	9.5	10	7	292	2.3	0.51	0.00	224	22.0	95	186	1.3	0.2	732	470
	07-11-91	9.3	2	3	300	2.5	0.67	0.00	270	24.0	16	298	0.7	0.3	788	16
NB 13 192.00	04-23-81	7.5	912	252	1660	18.0	2.70	0.02	4850	175.0	0	22	0.0	0.0	9120	3310
	05-06-86	8.3	820	198	1793	15.0	45.00	0.02	5530	4.1	7	4	0.0	0.0	9108	2860
	07-15-87	8.2	840	174	1700	20.0	8.30	0.02	4620	4.5	0	16	0.0	0.0	11100	2810
	10-19-87	8.5	848	213	1674	15.0	12.00	0.01	4520	0.0	2	7	0.0	0.0	9148	2990
	02-12-88	7.7	884	174	1656	15.0	3.10	0.03	4490	0.0	0	21	0.0	0.0	9212	2920
	07-07-88	7.5	888	158	1632	15.0	1.80	0.02	4580	4.7	0	3	0.1	0.0	7280	2870
	11-09-88	8.2	840	178	1610	12.0	6.00	0.03	4460	0.7	0	13	0.0	0.0	9070	2830
	03-16-90	7.8	883	176	1633	14.0	2.90	0.03	4645	3.0	0	13	0.0	0.0	8224	2928
NB 14 207.31	05-08-81	7.0	558	84	585	12.0	0.90	0.33	2075	64.0	0	38	0.0	0.0	4110	1736
	04-01-86	7.5	450	69	612	17.0	1.70	0.21	1926	39.0	0	21	0.0	0.1	3820	1404
	07-15-87	8.2	462	75	586	20.0	2.20	0.01	1990	4.5	0	17	0.0	0.1	5090	1460
	10-09-87	8.5	470	75	589	17.0	4.60	0.00	1944	3.1	2	10	0.2	0.0	4568	1482
	02-12-88	7.9	480	81	557	17.0	2.30	0.01	1946	0.0	0	20	0.0	0.0	3956	1532
	07-07-88	7.6	498	70	570	19.0	1.00	0.04	1940	3.2	0	13	4.4	0.0	3111	1532
	11-09-88	8.3	476	76	552	16.0	1.70	0.01	1970	1.0	0	16	0.0	0.1	4340	1500
	03-29-90	7.4	498	84	570	18.0	2.00	0.02	2025	2.6	0	18	0.0	0.1	3807	1588
	08-28-90	8.2	651	35	577	18.0	2.40	0.02	2070	2.5	0	19	0.0	0.3	3900	1770
12-06-90	7.8	520	81	550	16.0	3.10	0.03	2100	3.0	0	30	0.1	0.1	4250	1600	
NB 15 201.00	11-29-79	7.9	297	50	579		0.04		1106	89.0	0	365	1.2	0.0	2546	946
	05-15-80	7.4	538	161	545		4.10	0.00	2120	97.0	0	120	0.0	0.0	4622	2004
	04-23-81	7.6	506	124	625	11.0	4.50	0.01	2272	84.0	0	19	0.0	0.0	4328	1772
	03-19-86	7.6	56	12	71	12.0	4.50	0.00	190	71.0	0	29	0.0	0.2	552	188
	02-26-87	7.6	467	121	566	8.6	1.40	5.50	1950	115.0	0	217	0.0	0.1	4582	1660
	10-19-87	8.6	158	34	221	13.0	3.90	0.00	672	43.0	2	12	0.0	0.1	1434	532
	02-12-88	8.0	165	36	219	12.0	2.30	0.02	680	49.0	0	23	0.0	0.2	1608	560

Table 7. (Continued)

Well No.	Date	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)	(M-D-Y)						(Total)									
NB 15 201.00	07-07-88	7.7	178	32	218	13.0	2.70	0.03	692	42.0	0	16	2.2	0.0	1186	578
	11-09-88	8.0	166	34	225	13.0	1.20	0.03	704	29.0	0	28	1.9	0.2	1560	552
	03-29-90	7.8	181	27	230	12.0	3.50	0.08	715	24.0	0	32	2.1	0.1	1495	562
	12-07-90	7.9	180	30	240	12.0	1.30	0.00	750	19.0	0	24	0.0	0.1	1840	570
NB 16 204.00	04-28-80	7.6	24	7	161		0.09	0.00	28	82.0	0	384	0.0	0.4	480	90
	04-17-81	9.9	2	2	187	2.4	6.50	0.00	65	31.0	96	168	0.0	0.2	488	10
	05-19-86	6.9	1160	867	5704	66.0	36.00	8.60	12800	473.0	0	573	0.0	0.1	29238	6460
	07-14-87	7.5	952	745	6070	78.0	5.10	2.00	13100	72.0	0	29	0.0	0.0	28100	5440
	10-09-87	7.6	952	833	5885	68.0	14.00	1.70	12860	0.0	0	25	0.2	0.0	25516	5800
	02-15-88	7.9	928	770	6440	69.0	8.70	0.15	12600	0.0	0	24	0.0	0.0	25530	5480
	07-14-88	7.2	1008	710	5977	69.0	13.00	0.47	12960	6.9	0	27	0.0	0.0	20745	5440
	11-16-88	7.1	880	731	5773	70.0	34.00	3.50	12600	66.0	0	12	0.1	0.0	21680	5200
	08-21-90	7.8	972	604	4160	51.0	20.00	0.12	9700	5.5	0	31	0.0	0.0	20000	4910
	12-06-90	7.7	890	530	3500	39.0	40.00	0.13	8600	2.0	0	44	0.0	0.0	16300	4400
	07-05-91	7.7	760	350	3000	28.0	12.00	0.00	6330	4.0	0	33	0.1	0.1	13800	3340
NB 17 198.17	03-17-80	7.7	116	83	342		3.50	0.06	941	5.0	0	46	5.4	0.0	1666	630
	03-17-80	7.5	116	93	346		12.00	0.23	981	3.3	0	41	3.9	0.0	1956	670
	02-18-86	11.0	5	5	267	2.3	1.70	0.01	345	3.2	106	0	0.0	0.8	748	32
	03-11-87	7.7	46	2	258	3.5	9.90	0.03	361	12.0	0	94	0.0	0.7	758	19
	03-11-87	6.9	25	13	53	4.7	2.80	0.08	53	60.0	0	127	1.2	0.3	266	114
	10-19-87	9.2	9	13	110	3.9	0.52	0.00	150	30.0	13	38	0.0	0.2	384	74
	12-15-88	8.8	5	4	122	3.9	0.50	0.00	166	3.4	5	64	0.0	0.3	421	26
	06-19-89	9.9	4	6	127	3.9	0.43	0.01	167	3.4	21	24	0.1	0.3	445	33
	03-05-90	9.2	5	5	131	3.5	1.40	0.00	182	1.4	17	22	0.1	0.5	451	32
08-03-90	9.3	8	0	127	4.7	0.71	0.02	190	0.9	18	15	0.1	0.4	340	20	
NB 18 189.00	09-05-79	8.3	28	9	322		0.32		307	46.0	20	355	0.7	0.2	998	105
	03-21-80	8.1	20	13	319		1.80	0.34	318	28.0	0	392	1.0	0.4	800	105
	03-21-80	8.9	80	7	333		1.20	0.23	315	40.0	41	268	1.1	0.3	786	50
	04-18-81	9.1	2	8	358	7.0	1.70	0.00	408	11.0	29	264	0.0	0.2	966	38
	04-09-86	9.7	94	11	1070	20.0	1.50	0.00	1900	4.0	8	14	0.2	0.1	3390	280
	08-11-87	9.7	44	2	793	14.0	11.00	0.00	1426	13.0	9	13	0.0	0.0	2486	119
	10-10-87	10.4	42	1	793	15.0	0.38	0.00	1304	2.6	13	0	0.0	0.0	2290	108
	12-08-88	10.7	34	0	759	13.0	0.10	0.00	1250	3.9	19	0	0.0	0.2	2554	83
	06-08-89	10.6	42	15	759	14.0	0.40	0.00	1260	4.1	28	0	0.0	0.2	2630	168
03-08-90	8.3	76	25	764	14.0	0.88	0.01	1394	6.7	0	23	0.1	0.2	2426	292	
NB 19 213.00	02-18-81	7.5	13	2	74	8.0	6.00	0.00	120	4.8	0	36	0.0	0.2	284	42
	05-07-81	9.0	8	2	80	7.8	1.30	0.00	130	2.9	5	27	0.2	0.3	282	30
	04-01-86	10.2	2	2	129	6.6	0.84	0.00	157	5.0	48	0	0.0	0.4	346	16

Table 7. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NB 19 213.00	02-26-87	7.5	36	12	168	7.0	11.00	0.22	295	29.0	0	91	0.0	0.5	596	138
	02-26-87	8.2	26	0	90	2.0	1.70	0.00	8	13.0	0	317	0.0	0.3	272	66
	10-07-87	10.1	2	1	138	6.3	0.42	0.00	169	3.4	52	1	0.2	0.2		8
	02-09-88	9.8	3	2	143	5.9	0.28	0.00	177	5.8	52	0	0.0	0.2	534	18
	07-07-88	8.4	3	2	147	6.6	0.26	0.00	181	2.9	0	85	4.6	0.4	389	14
	11-10-88	10.1	2	1	147	5.9	0.35	0.00	186	0.6	33	30	0.1	0.3	420	10
	03-29-90	8.2	6	2	175	6.6	0.62	0.00	238	2.9	7	57	5.2	0.3	578	23
	08-21-90	10.2	5	1	177	6.3	0.36	0.00	253	4.0	39	0	0.0	0.3	442	17
	12-03-90	8.6	9	0	210	7.8	0.33	0.00	260	5.0	10	57	0.1	0.3	524	25
NB 20 201.21	04-07-80	7.3	85	73	163		0.85	0.69	471	6.0	0	240	2.4	0.1	1100	512
	04-22-81	9.5	5	5	160	7.0	0.93	0.00	188	3.8	29	94	0.0	0.7	474	32
	02-14-86	10.4	5	6	304	6.6	1.50	0.00	443	3.5	17	0	0.0	0.8	820	36
	02-26-87	7.6	30	10	280	7.4	25.00	0.29	450	35.0	0	102	0.0	0.8	856	115
	02-26-87	8.0	24	9	90	2.7	0.94	0.05	8	41.0	0	314	0.0	1.2	298	95
	10-15-87	10.1	1	6	179	5.1	0.68	0.00	194	2.9	68	34	0.0	0.7		26
	02-03-88	9.8	2	8	173	5.9	0.24	0.00	183	5.0	67	40	0.0	0.9	621	40
	07-11-88	8.5	3	4	170	8.2	0.68	0.00	175	2.6	10	138	3.0	0.9	445	24
	11-10-88	10.3	2	2	161	5.1	0.64	0.00	162	0.6	66	33	0.0	1.0	554	14
	03-27-90	9.5	2	5	154	5.5	1.40	0.00	152	2.6	26	59	0.0	1.0	490	24
	08-25-90	10.1	3	5	152	4.7	0.63	0.00	156	2.9	59	35	0.2	0.9	364	25
NB 21 199.00	08-21-86	7.4	172	51	320	3.5	0.14	0.13	800	50.0	0	228	0.0	0.1	2020	640
	10-01-87	7.8	24	34	258	3.9	0.22	0.04	390	3.5	0	227	0.0	0.0	890	200
	02-17-88	7.7	342	90	430	5.5	0.92	2.70	1356	29.0	0	240	0.0	0.0	3484	1224
	07-14-88	7.6	448	124	497	7.4	0.96	4.10	1808	59.0	0	146	0.0	0.0	3015	1628
	11-16-88	7.6	440	129	520	6.6	0.98	4.00	1840	44.0	0	82	0.3	0.0	3757	1630
	03-28-90	7.4	432	122	524	7.0	1.90	0.07	1917	3.7	0	20	0.7	0.0	3620	1580
	08-21-90	8.2	509	83	529	7.0	0.18	0.03	1960	2.6	0	16	0.0	0.0	4220	1610
	07-08-91	8.0	420	120	490	8.6	0.21	0.00	1900	2.0	0	17	0.0	0.1	3130	1500
NB 22 224.00	10-27-86	8.3	18	8	150	2.3	0.20	0.08	30	18.0	18	396	0.0	0.2	470	78
	07-16-87	8.5	6	4	163	2.7	2.80	0.01	32	5.0	32	342	0.1	0.3	402	29
	10-19-87	9.0	4	6	159	2.3	0.32	0.00	34	4.3	38	317	0.0	0.0	414	34
	12-14-88	8.8	4	4	152	4.3	0.70	0.00	26	3.9	27	336	0.0	0.1	418	26
	06-08-89	9.1	3	2	163	2.3	1.40	0.00	24	3.8	29	332	0.5	0.2	427	16
	03-07-90	8.9	3	7	152	2.0	1.00	0.00	24	2.3	37	299	0.2	0.2	380	34
	08-06-90	9.5	3	5	150	2.0	0.81	0.02	28	1.1	50	255	0.0	0.2	364	27
NB 23 221.00	10-27-86	8.1	29	8	115	26.0	0.61	0.00	10	15.0	0	418	0.0	0.2	446	105
	07-16-87	7.6	13	8	124	2.7	0.20	0.03	13	5.3	0	414	0.0	0.0	366	65
	10-19-87	8.3	9	8	120	3.1	0.24	0.00	11	4.2	13	337	0.0	0.0	344	52
	12-01-88	8.6	3	6	120	2.7	0.14	0.00	9	3.8	17	288	0.3	0.1	323	32

Table 7. (Continued)

Well No.	Date	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)	(M-D-Y)						(Total)									
NB 23	06-01-89	8.8	2	4	122	3.5	0.13	0.00	8	3.1	22	285	0.9	0.2	333	22
221.00	03-01-90	8.3	4	3	122	3.1	0.60	0.00	8	2.4	31	253	0.6	0.2	266	22
	11-17-90	8.9	8	2	120	2.3	0.32	0.01	12	1.2	29	250	0.9	0.2	288	26
	11-30-90	8.6	2	2	120	2.7	0.48	0.02	28	2.0	12	300	0.7	0.2	274	14
NB 24	11-24-86	8.7	21	9	136	3.1	0.23	0.00	34	27.0	55	308	0.0	0.0	488	88
205.00	10-01-87	8.6	4	6	133	4.3	0.18	0.00	39	3.1	29	288	0.0	0.0	354	33
	02-04-88	8.6	2	7	140	3.9	0.12	0.00	38	6.3	38	264	0.0	0.2	441	34
	07-04-88	8.6	2	7	143	3.5	0.16	0.00	43	3.0	19	278	0.3	0.1	358	34
	11-01-88	9.4	2	5	143	3.6	0.20	0.00	50	1.4	50	209	0.0	0.2	354	27
	03-16-90	9.1	2	4	140	4.3	0.42	0.01	52	3.0	47	200	0.0	0.2	411	23
	08-25-90	9.9	4	2	145	4.3	0.49	0.00	59	3.5	90	110	0.3	0.1	310	18
	12-06-90	9.7	5	3	150	4.7	0.38	0.00	63	3.0	77	121	0.3	0.2	402	25
	07-03-91	9.9	0	4	140	9.5	0.48	0.00	70	2.0	96	100	0.3	0.2	398	16
NB 25	11-03-86	7.8	54	23	35	4.3	0.18	0.11	12	16.0	0	367	0.0	0.6	344	231
219.00	10-15-87	8.3	5	19	41	5.1	0.16	0.00	18	2.8	14	174	0.0	0.5	202	92
	02-03-88	8.6	2	19	41	5.1	0.12	0.00	16	5.0	28	126	0.0	0.6	218	84
	07-11-88	8.5	4	18	41	7.0	0.62	0.00	15	2.9	10	147	0.1	0.6	171	83
	11-14-88	8.7	4	15	39	5.1	0.43	0.00	12	0.4	13	148	0.1	0.7	186	71
	08-15-90	9.1	7	13	41	5.1	0.65	0.00	18	3.9	37	75	0.0	0.6	112	69
NB 26	11-11-86	8.2	48	24	53	3.9	0.09	0.03	12	22.0	0	398	0.0	0.8	378	216
211.00	10-15-87	9.0	2	23	101	5.9	0.78	0.00	50	3.5	29	238	0.0	0.8	354	98
	02-03-88	8.6	2	22	94	5.9	0.48	0.00	48	5.5	36	212	0.0	0.8	383	96
	07-11-88	8.6	3	23	90	8.6	0.78	0.00	88	3.3	17	218	0.0	0.8	340	100
	11-14-88	9.0	3	21	85	5.1	1.40	0.00	42	3.7	17	237	0.3	0.9	295	94
	07-01-90	8.5	6	31	131	5.5	27.00	0.01	150	31.0	42	158	0.3	0.9	460	144
NB 27	11-14-96	7.7	210	57	306	9.4	0.59	2.60	846	17.0	0	249	0.6	0.0	2104	760
199.00	10-19-87	8.1	142	23	317	9.8	0.98	0.00	790	2.6	0	27	0.0	0.0	1564	450
	12-01-87	7.2	186	4	290	3.1	3.10	2.40	800	16.0	0	232	0.1	0.1	1860	480
	02-17-88	8.0	130	46	306	9.4	0.78	0.00	770	4.5	0	17	0.0	0.0	1818	514
	07-18-88	8.0	134	28	299	9.8	1.20	0.00	776	2.5	0	10	1.4	0.0	1255	450
	11-15-88	8.2	129	27	315	11.0	0.96	0.00	776	20.0	0	28	1.3	0.1	1290	434
	03-13-90	7.9	126	19	310	8.6	2.30	0.00	771	2.6	0	15	0.0	0.1	1500	394
	12-11-90	8.0	140	15	340	9.4	0.37	0.00	770	3.0	0	22	0.0	0.1	1620	410
	10-16-91	7.3	310	170	350	21.0	3.10	0.54	1600	11.0	0	17	0.2	0.1	3600	1500
NB 28	12-02-88	9.2	2	6	145	3.5	0.26	0.00	39	4.0	33	283	0.0	0.1	407	27
220.00	06-19-89	9.6	2	4	147	3.1	0.19	0.02	30	4.3	65	219	0.0	0.2	413	21
	03-06-90	9.4	2	5	145	3.1	0.47	0.00	37	3.3	71	183	0.1	0.3	322	25
	07-16-91	9.6	2	4	140	2.8	0.75	0.01	45	1.0	22	268	0.0	0.2	336	20

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Table 7. (Continued)

Well No.	Date (M-D-Y)	pH	Ca	Mg	Na	K	Fe (Total)	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
NB 29 211.00	12-06-87	7.9	30	7	129	2.7	0.24	0.07	29	38.0	0	378	1.1	0.2	448	104
	12-08-88	9.0	4	4	131	2.3	0.28	0.00	28	3.5	25	283	0.0	0.2	382	26
	06-16-89	9.4	2	6	140	3.1	0.24	0.00	28	4.1	54	224	0.0	0.3	386	29
	03-16-90	9.4	4	0	136	2.7	0.35	0.00	30	3.9	74	167	0.0	0.3	356	12
	08-30-90	10.2	1	3	133	3.5	0.23	0.00	30	2.2	113	84	0.1	0.4	330	15
	01-22-91	9.8	2	2	130	2.7	0.26	0.02	24	2.0	91	138	0.0	0.3	266	12
	10-10-91	9.9	4	2	150	3.6	0.62	0.00	38	2.0	150	13	0.1	0.3	344	17
NB 30 217.00	12-19-87	7.3	554	109	648	11.0	0.64	4.10	2070	103.0	0	208	1.4	0.0	4594	1828
	12-07-88	7.6	374	61	607	10.0	0.16	0.27	1788	4.0	0	17	0.0	0.0	3395	1186
	06-08-89	8.1	348	30	552	9.4	0.08	0.01	1560	3.5	0	15	0.0	0.1	3120	990
	03-07-90	8.2	245	18	504	7.8	0.78	0.01	1272	1.9	0	17	0.1	0.1	2420	684
	08-06-90	8.5	206	2	499	9.0	0.75	0.00	1180	2.2	0	13	0.2	0.1	2610	520
NB 31 209.00	12-22-87	7.0	936	228	718	15.0	4.60	4.10	3240	170.0	0	167	7.2	0.0	6952	3272
	12-14-88	8.4	726	75	662	13.0	0.58	0.02	2462	42.0	0	12	0.0	0.0	4604	2122
	06-12-89	7.4	134	384	621	14.0	0.40	0.03	2340	8.3	0	12	0.0	0.0	4490	1910
	03-13-90	7.7	634	132	616	13.0	1.00	0.03	2340	35.0	0	17	0.1	0.0	4824	2124
10-11-91	7.5	630	104	480	16.0	1.70	0.05	2400	36.0	0	19	0.2	0.0	4760	2000	
NB 32 201.00	01-20-88	7.2	30	20	87	4.3	0.90	0.39	6	14.0	0	360	0.0	0.1	356	156
	07-12-88	8.3	25	9	90	5.1	0.80	0.00	8	3.4	5	318	0.0	0.0	301	100
	11-01-88	8.3	26	10	92	4.3	0.55	0.01	14	2.1	36	276	0.3	0.2	340	106
	03-14-90	8.2	21	9	85	5.5	0.80	0.01	6	3.3	0	321	1.6	0.2	311	90
08-08-90	8.3	24	9	87	5.1	0.49	0.02	7	3.4	18	286	0.9	0.2	256	95	
NB 33 220.00	01-21-88	6.8	471	52	386	12.0	3.00	1.10	1568	22.0	0	196	0.0	0.0	3848	1390
	07-12-88	7.7	368	92	368	13.0	0.58	0.03	1472	6.4	0	18	0.0	0.0	2327	1296
	11-01-88	7.9	355	74	354	12.0	0.46	0.02	1400	2.2	0	23	0.0	0.1	3370	1190
	03-19-90	7.4	325	41	356	11.0	0.57	0.35	1260	4.6	0	10	0.8	0.1	2410	978
NB 34 192.00	02-24-88	7.4	28	10	156	2.0	0.14	0.01	30	54.0	0	419	0.0	0.2	502	112
	07-12-88	8.3	7	7	159	2.7	0.32	0.00	33	31.0	12	339	0.0	0.3	417	44
	11-04-88	9.1	2	7	161	2.0	0.61	0.00	38	8.8	41	291	0.0	0.2	392	32
	03-20-90	8.9	5	4	163	2.7	0.77	0.00	65	3.2	17	278	0.0	0.2	462	30
	09-11-90	9.4	6	3	166	2.3	0.46	0.00	72	3.6	55	216	0.0	0.2	376	27
	07-08-91	9.3	0	4	160	9.1	0.31	0.00	77	2.0	66	192	0.3	0.2	446	16
NB 35 217.00	11-13-88	8.4	27	4	140	2.3	0.20	0.18	5	34.0	27	387	0.0	0.3	440	82
	03-09-90	8.7	5	2	113	15.0	1.00	0.00	22	46.0	23	207	1.7	0.3	354	20
NB 36 229.00	11-14-88	8.4	24	7	138	2.3	0.39	0.00	30	94.0	23	271	0.3	0.3	442	90
	03-02-90	7.9	12	2	104	5.5	0.22	0.02	45	149.0	0	139	0.1	0.2	394	125

Table 7. (Continued)

Well No.	Date	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)	(M-D-Y)						(Total)									
NB 36	08-02-90	8.4	17	13	110	4.7	0.21	0.02	43	127.0	7	154	0.0	0.2	388	97
229.00	12-03-90	8.2	5	14	120	4.3	0.12	0.02	40	110.0	0	190	0.0	0.3	378	72
	07-02-91	8.5	6	14	120	8.5	0.28	0.00	35	98.0	19	179	0.1	0.3	406	74
NB 37	11-16-88	8.4	26	10	182	4.7	0.94	0.01	89	43.0	23	373	0.7	0.4	542	105
218.00	03-09-90	8.1	86	102	557	18.0	0.46	0.19	1130	63.0	0	199	3.3	0.2	2520	634
NB 38	11-29-88	8.2	31	7	154	2.7	1.20	0.01	24	100.0	0	388	0.0	0.3	494	107
198.00	03-15-90	9.3	2	5	120	5.5	0.58	0.00	52	62.0	41	104	0.1	0.5	358	25
	09-10-90	9.6	6	2	177	5.5	0.45	0.01	48	42.0	46	103	0.0	0.5	274	23
	07-05-91	9.9	0	5	120	10.0	0.22	0.00	50	35.0	75	65	0.4	0.6	362	20
NB 39	12-04-88	8.2	26	8	152	3.1	1.00	0.00	54	78.0	0	324	0.4	0.4	490	95
198.00	03-08-90	8.7	3	10	152	1.6	0.60	0.00	53	40.0	28	227	0.2	0.4	390	48
	08-07-90	8.8	6	3	166	2.7	0.58	0.00	55	37.0	27	234	0.0	0.4	354	28
	10-09-91	8.7	5	5	160	4.4	0.26	0.01	62	34.0	31	236	1.8	0.3	430	33
NB 40	12-06-88	8.1	33	7	122	3.1	0.27	0.28	6	14.0	0	437	0.4	0.2	386	111
199.00	03-15-90	7.5	170	86	313	9.8	0.58	0.06	1030	3.7	0	32	1.8	0.1	2340	778
	08-17-90	8.2	162	39	262	14.0	0.36	0.01	761	2.3	0	26	1.0	0.1	1590	566
	07-05-91	8.2	91	46	210	14.0	0.55	0.00	660	2.0	0	25	0.0	0.1	1690	420
NB 41	12-18-88	8.6	16	4	154	3.1	0.42	0.00	52	52.0	50	214	0.0	0.5	434	57
221.00	03-15-90	8.6	5	0	154	2.3	0.42	0.00	44	28.0	48	222	0.0	0.5	378	14
NB 42	10-25-88	8.4	21	1	140	2.3	1.10	0.08	1	10.0	54	306	0.0	0.3	452	54
223.00	03-15-90	8.7	4	1	83	3.1	1.00	0.00	19	14.0	20	157	0.7	0.2	258	14
	07-10-90	8.7	5	1	99	3.5	1.50	0.00	29	6.6	18	177	0.1	0.2	200	15
	07-08-91	9.3	0	4	100	8.0	0.60	0.00	19	2.0	53	148	0.0	0.3	286	14
NB 43	12-28-88	8.1	23	3	156	3.5	1.60	0.14	17	41.0	0	402	0.0	0.3	456	70
221.00	03-09-90	8.8	4	4	152	3.1	0.60	0.01	24	2.8	43	298	0.4	0.3	386	27
	09-01-90	9.0	4	2	161	2.0	4.90	0.00	26	4.0	38	303	0.0	0.3	334	17
NB 44	12-30-88	8.0	20	1	212	2.7	0.58	0.02	185	88.0	0	235	0.1	0.5	634	95
226.00	03-12-90	9.3	9	8	223	2.3	0.24	0.00	196	50.0	76	61	0.1	0.5	576	57
	07-16-91	10.5	0	1	260	2.7	0.24	0.00	190	27.0	57	150	0.0	0.4	582	4
NB 45	01-05-89	7.9	28	7	152	2.0	0.34	0.00	46	78.0	0	323	1.1	0.4	473	99
204.00	03-06-90	9.0	4	9	152	2.7	0.51	0.00	44	59.0	30	219	0.1	0.4	396	46
NB 46	01-29-89	7.4	14	7	262	2.7	1.50	0.02	251	52.0	0	278	0.0	2.1	804	65
217.00	03-02-90	7.8	37	26	225	10.0	0.52	0.10	336	69.0	0	181	1.3	0.7	802	201

Table 7. (Continued)

Well No.	Date	pH	Ca	Mg	Na	K	Fe	Mn	Cl	SO ₄	CO ₃	HCO ₃	NO ₃	F	TDS	Hardness as CaCO ₃
Depth (m)	(M-D-Y)						(Total)									
NB 46 217.00	08-02-90	8.3	37	12	239	8.2	0.45	0.01	318	58.0	8	159	1.5	1.0	744	141
NB 47 231.00	01-29-89	8.3	19	2	267	0.8	0.41	0.05	306	42.0	28	170	0.0	1.2	749	56
	03-12-90	8.8	8	29	232	3.1	0.44	0.00	188	12.0	35	292	0.1	0.4	662	140
NB 48 215.00	04-07-89	7.9	54	20	242	5.1	0.32	0.26	304	45.0	0	280	1.2	0.3	984	216
	03-15-90	8.5	13	1	241	5.5	1.10	0.00	300	2.5	16	164	0.0	0.3	626	38
	09-01-90	9.7	4	4	246	4.7	1.40	0.00	290	3.7	50	85	0.0	0.3	626	26
	10-07-91	9.8	7	2	210	6.8	0.52	0.00	270	2.0	0	84	0.2	0.3	626	26
NB 49 205.00	02-18-89	8.2	26	6	145	3.5	0.17	0.01	45	65.0	28	288	0.0	0.6	432	88
	03-15-90	7.3	440	963	7270	180.0	11.00	1.70	1400	888.0	0	282	0.0	1.0	27900	5060
	08-28-90	7.8	356	888	6600	172.0	1.60	2.60	13200	260.0	0	142	0.2	0.8	25600	4540
	10-18-91	7.7	200	320	2700	94.0	9.30	0.03	6100	240.0	0	40	0.2	0.5	11800	1800
NB 50 229.00	02-23-89	7.8	86	23	161	5.8	1.40	0.48	314	14.0	0	278	0.3	0.1	741	310
	03-22-90	7.9	30	15	159	5.9	0.30	0.04	299	2.3	0	71	0.0	0.1	673	137
	08-08-90	7.7	38	8	161	0.3	0.27	6.30	287	2.4	0	74	0.0	0.1	510	128
NB 51 223.00	02-23-89	8.2	23	9	138	2.3	0.67	0.07	28	92.0	28	269	0.4	0.4	438	96
	03-12-90	9.4	4	5	140	2.7	0.39	0.00	44	10.0	72	156	1.6	0.4	370	28
	07-16-91	10.3	1	3	150	2.7	0.65	0.00	67	3.0	51	173	0.0	0.4	404	12
NB 52 201.00	03-19-89	8.2	22	11	237	2.7	0.63	0.00	221	38.0	20	307	0.0	0.3	732	102
	08-06-90	7.5	296	149	966	27.0	0.69	1.30	1070	1480.0	0	133	11.0	0.2	4170	1350
	07-09-91	8.4	83	67	430	13.0	0.30	0.00	430	710.0	1	19	7.9	0.6	1990	480
NB 53 187.00	04-24-89	7.3	2040	1160	5497	60.0	27.00	0.17	13140	1375.0	0	22	0.0	0.0	28914	9860
	03-19-90	6.7	1580	1010	6440	78.0	4.60	3.20	13600	686.0	0	14	0.0	0.0	27800	8100
NB 54 212.00	03-23-89	7.3	1570	644	3630	28.0	0.45	8.50	10000	1050.0	0	141	0.0	0.1	20800	6560
	03-19-90	7.0	1760	537	3840	38.0	5.00	1.20	10200	53.0	0	19	0.0	0.0	16400	6600
	09-11-90	7.2	1670	249	3890	35.0	2.20	1.20	9580	198.0	0	10	0.0	0.0	20600	5240
NB 55 215.00	04-03-89	8.4	16	4	156	2.0	4.20	0.09	21	18.0	26	368	0.4	0.3	488	58
	03-09-90	8.7	5	5	154	3.9	0.50	0.00	33	2.4	37	293	0.1	0.4	384	33
NB 56 210.00	04-06-89	8.4	27	8	152	3.1	0.18	0.03	67	56.0	17	292	0.6	0.5	534	100
	03-15-90	8.5	4	3	193	4.3	2.00	0.00	116	32.0	40	234	0.0	0.5	500	20
	10-17-91	9.6	1	2	150	5.6	7.50	0.00	98	2.0	129	54	0.3	0.4	436	11
NB 57 204.00	05-03-89	8.2	20	6	133	2.3	0.24	0.00	12	35.0	0	374	0.3	0.3	432	75

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