

**Technical Report**

**No. 1/2542**

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**Records of Groundwater and Land Subsidence  
Monitoring Stations in  
Bangkok and Adjacent Provinces**

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**Mitigation of Groundwater Crisis and Land  
Subsidence in Bangkok Project (MGL Project)  
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and Adjacent Provinces.

by Somkid Buapeng and Oranuj Lorphensri, Bangkok

Mitigation of Groundwater Crisis and Land  
Subsidence in Bangkok Project (MGL Project),

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Technical Report No. 1/2542

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## **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 6<sup>th</sup> 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.

The Study Project entitled "Management of Groundwater and Land Subsidence in the Bangkok, Metropolitan Area and Its Vicinity" was conducted from mid 1992 to early 1995 by the Japan International Cooperation Agency (JICA), together with the Department of Mineral Resources and Public Works Department. Three new monitoring stations were constructed with detailed hydrogeological investigations.

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## Introduction

This report presents well technical records, well logs and chemical analyses of the groundwater monitoring network of the MGL Project in Bangkok and adjacent provinces. Data of 303 monitoring wells in 117 groundwater monitoring stations are presented in this report. The first report of this kind was printed in 1992. This report intends to update the additional information which exist from 1992 to recent.

Of the 117 groundwater monitoring stations, there are 70 complete stations in which each station consists of 3 monitoring wells penetrating three different aquifers: Phra Pradaeng, Nakhon Luang and Nonthaburi; 15 stations consists of 2 wells and 27 stations has only one well, or wells drilling in the other aquifer.

Location of 86 surface benchmarks constructed by the Departments 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 part of each sheet 5137 II, 5136 I, 5136 II, 5037 III, 5036 IV, and 5036II

5037 III	5037II	5137III	5137 II
5036 IV	5036I	5136IV	5136 I
5036 III	5036II	5136III	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 30' 0" N to 15 00' 00" N, and longitudes 100 00' 00" E to 100 53' 30.6" E; its altitude ranges from zero to six meters above mean sea level.

## **Designed Groundwater Monitoring Network**

### **Period 1978-1992**

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 Managements 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 depth 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.

#### **Period 1992-1996**

Nineteen monitoring stations were added to the network in order to cover the Nakhon Pathom area. At some of these stations, the 3 monitoring wells were drilled in Bangkok Aquifer adding to the existing stations and at 7 stations, the well were drilled in the aquifer deeper than Nonthaburi. Table.1 is the 117 groundwater monitoring stations presented in this report and Figure. 2 is a map showing locations of the total 117 groundwater monitoring stations.

Table 1. Groundwater Monitoring Stations in Bangkok and Its Vicinity

Staion	PD	NL	NB	Others	Staion	PD	NL	NB	Others	Staion	PD	NL	NB	Others	Staion	PD	NL	NB	Others
1	8	62	5		31	75	13	75		61	17	34	27	BK2	91	60	74	64	
2	5	11	8		32	13				62	19	33	26		92	61	73	65	
3	38	3	9		33	40	16	46		63	21	36	28		93	63			
4	7				34	85	15	82		64	25	39	32		94	66	75	68	
5	55	5	4		35	68	12	69		65	23	38	33		95	69	77	71	
6	3				36	72	14	73		66	50	40	34		96	70	79	70	
7	6		1		37	67	76	12		67	27	42	35	BK3	97	71	80	72	
8	2	55	49		38	74	78	13		68	30	44	37		98	73		74	
9	4				39	59	71	15		69	32	45	38		99	80	82	79	
10	1	67	53		40	47	65	14		70	31	46	40		100		86	80	
11	77	4	76		41	33	47	17		71	34	48	42		101	83	83	81	
12	39	50	41,10		42		17			72	35	49	43		102	86	85	84	
13	22	10	30		43	64	22			73	37	51	44		103	81	87	85	
14	78	1	77		44	53	68	20		74	36	52	45		104				DMW1
15			3		45		19			75	84	54	47		105				DMW2
16	51	7	7		46		20			76		53			106				DMW3
17	28		11	BK1	47		25			77	41	56	51		107				A1-A8
18		2			48	52	24	60		78	82	57	50		108				B1-B5
19	42	8	6		49	76	23	52		79		58	54		109				C1-C5
20		9			50		21			80	44	59	55		110	87	88	86	
21	46		2		51	58	72	19		81	43	60	48		111	89	89	87	
22	26	6	36		52		26	21		82	79	61	56		112	88	91	88	
23	10				53	16	27	31		83		63	57		113	90	90	89	
24	62	18	66		54		28			84	45	64	58		114	91	92	90	
25	9				55	24	29	22		85	48		59		115	92	93	91	
26	12	37	29		56	20	35	23		86	65	66	67		116	93	94	92	
27	11	43	18		57	29	30	39		87	49				117				DMW4
28			16		58		31			88	54	69	61						
29	14	81	78		59		41	24		89	56		63						
30	15	84	83		60	18	32	25		90	57	70	62						

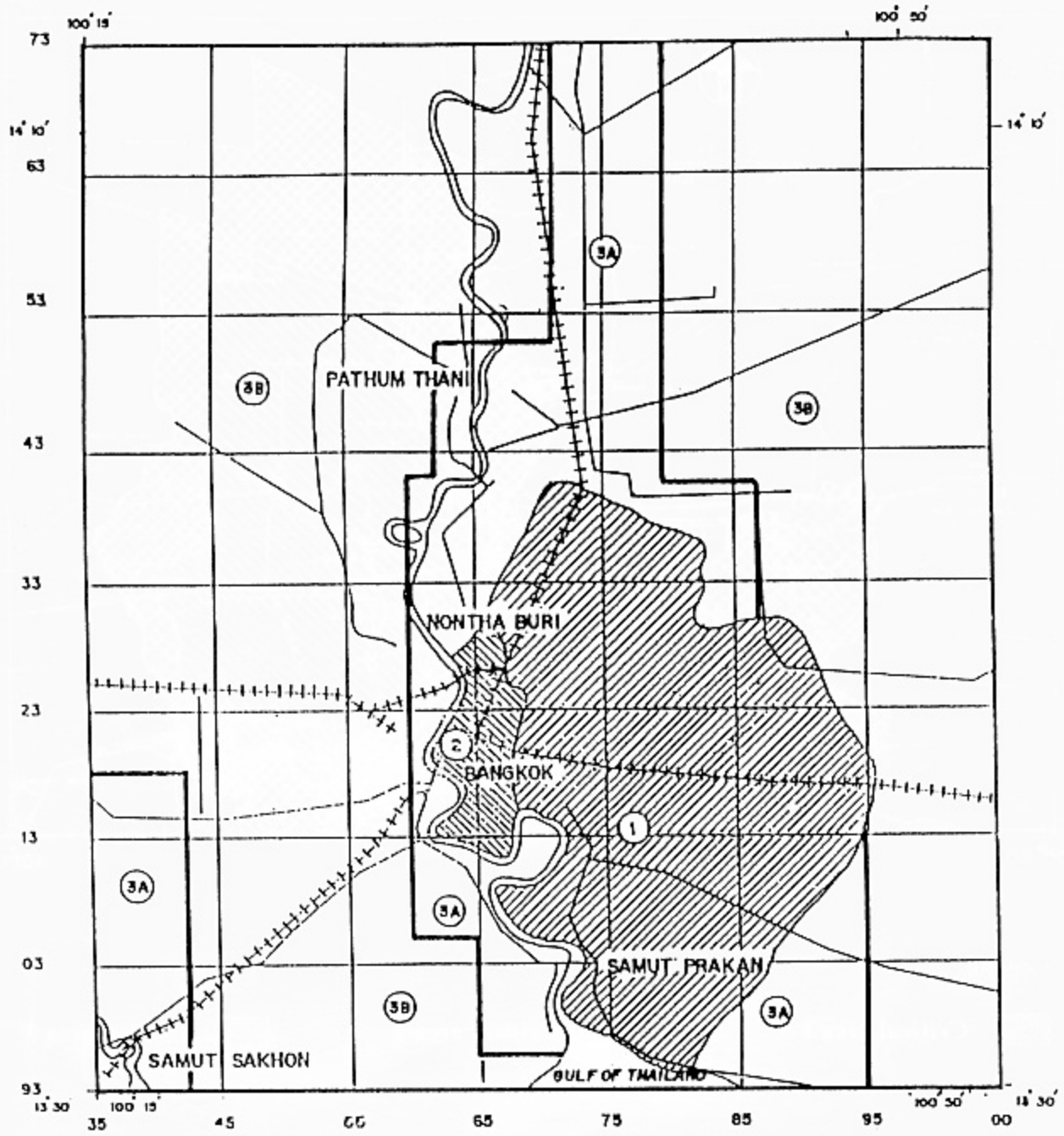


Figure 1. Critical Zones and Areas of Heavy Groundwater Development (1983)



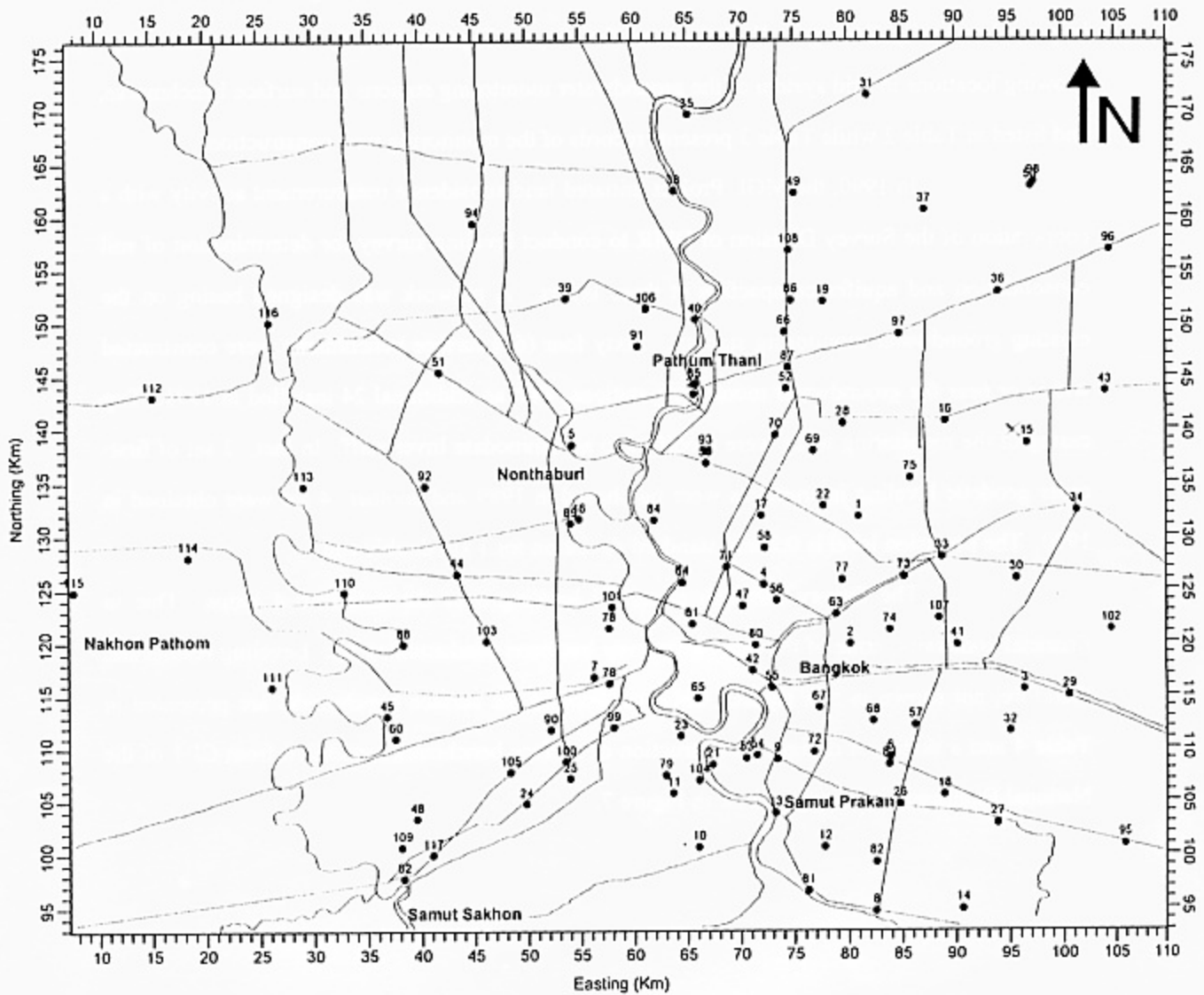


Figure 3. Location of Groundwater Monitoring Station in MGL Project

## 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 location of the well help readers easily finding well stations on the maps. Figures 4, 5, 6, 7, 8 and 9 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 Inver 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 show in Figure 7.

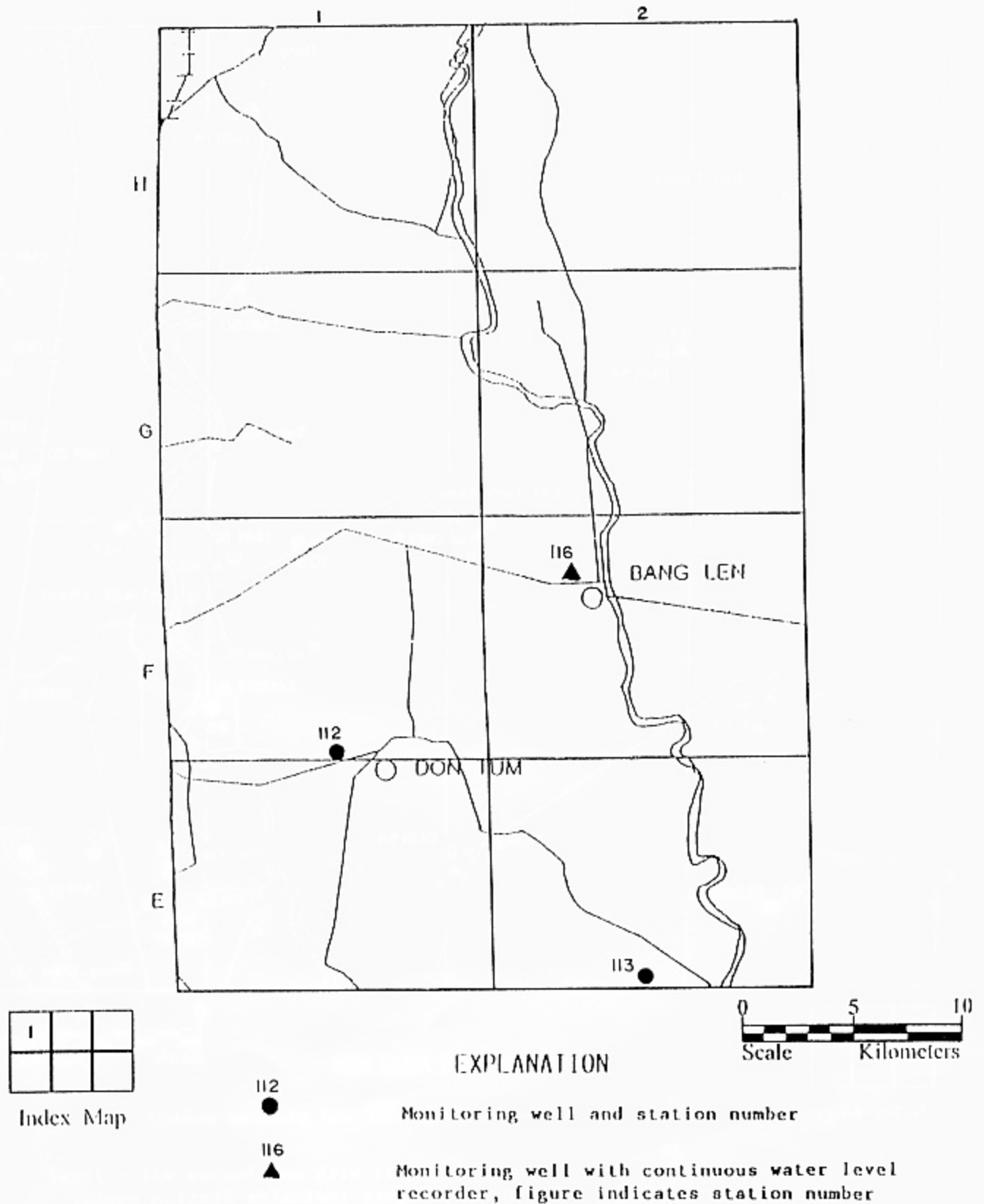


Figure 4. Location of Monitoring Stations and Subsurface Benchmarks

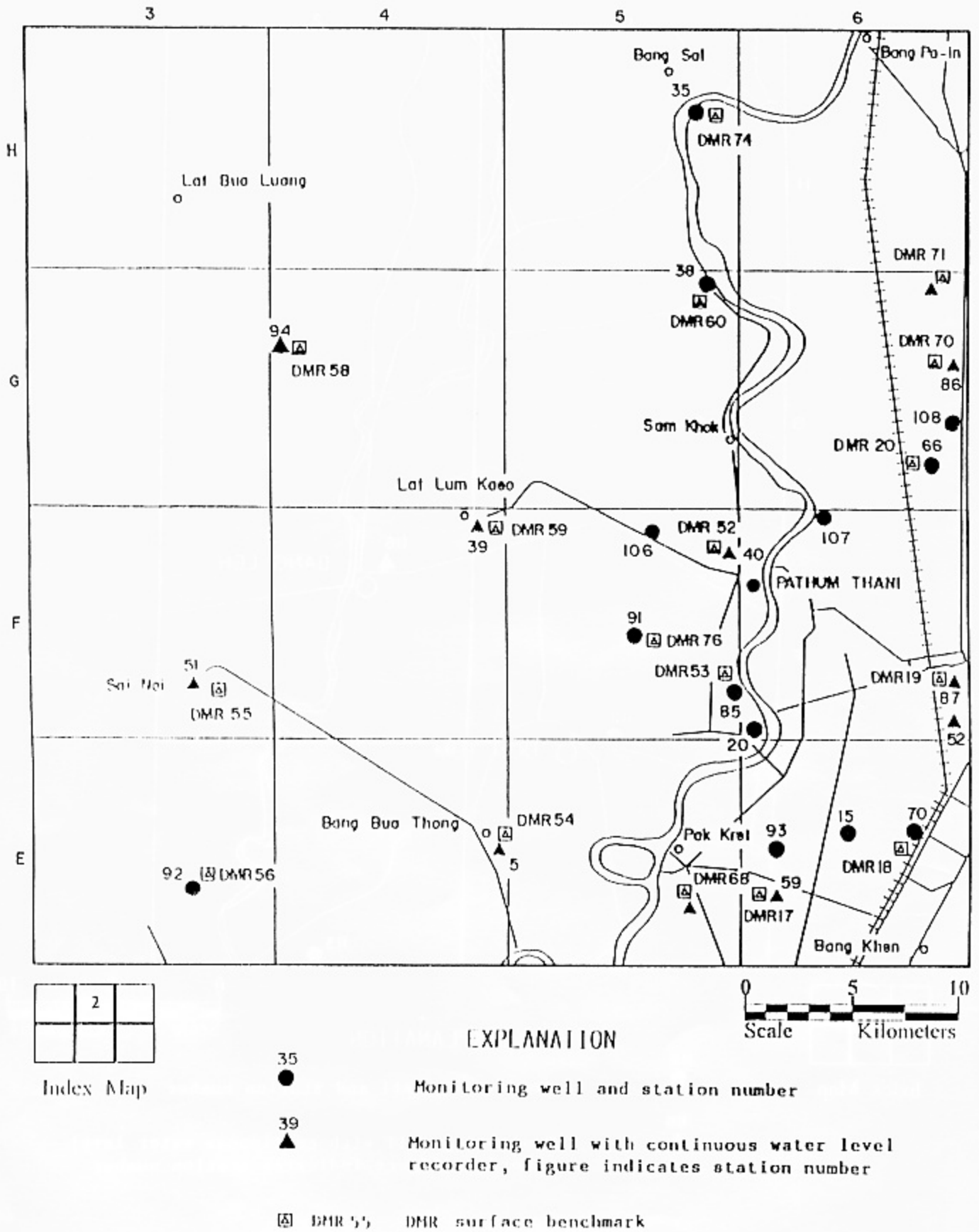
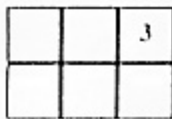
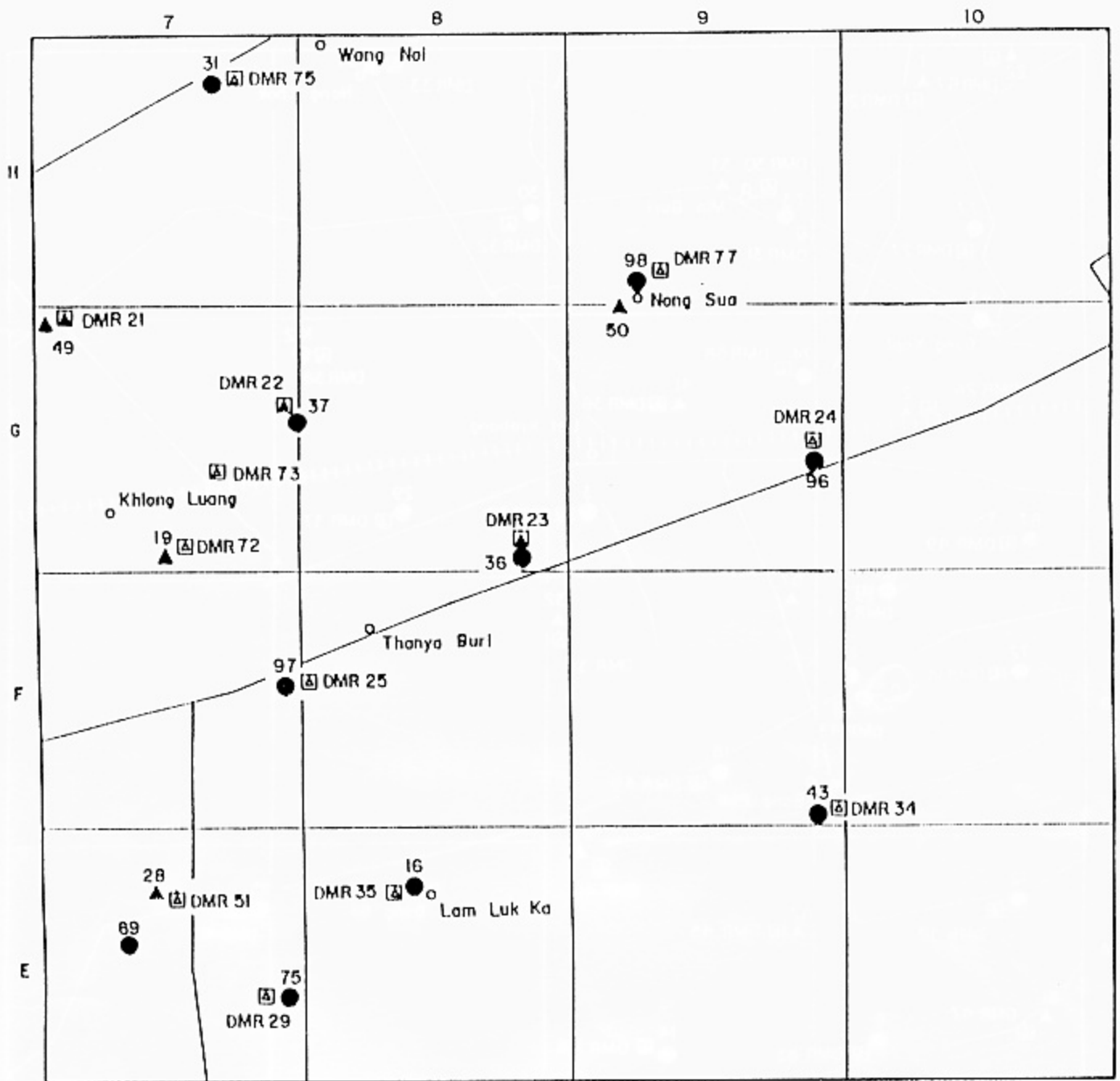


Figure 5. Location of Monitoring Stations and Subsurface Benchmarks



Index Map

Index Map



EXPLANATION



Monitoring well and station number

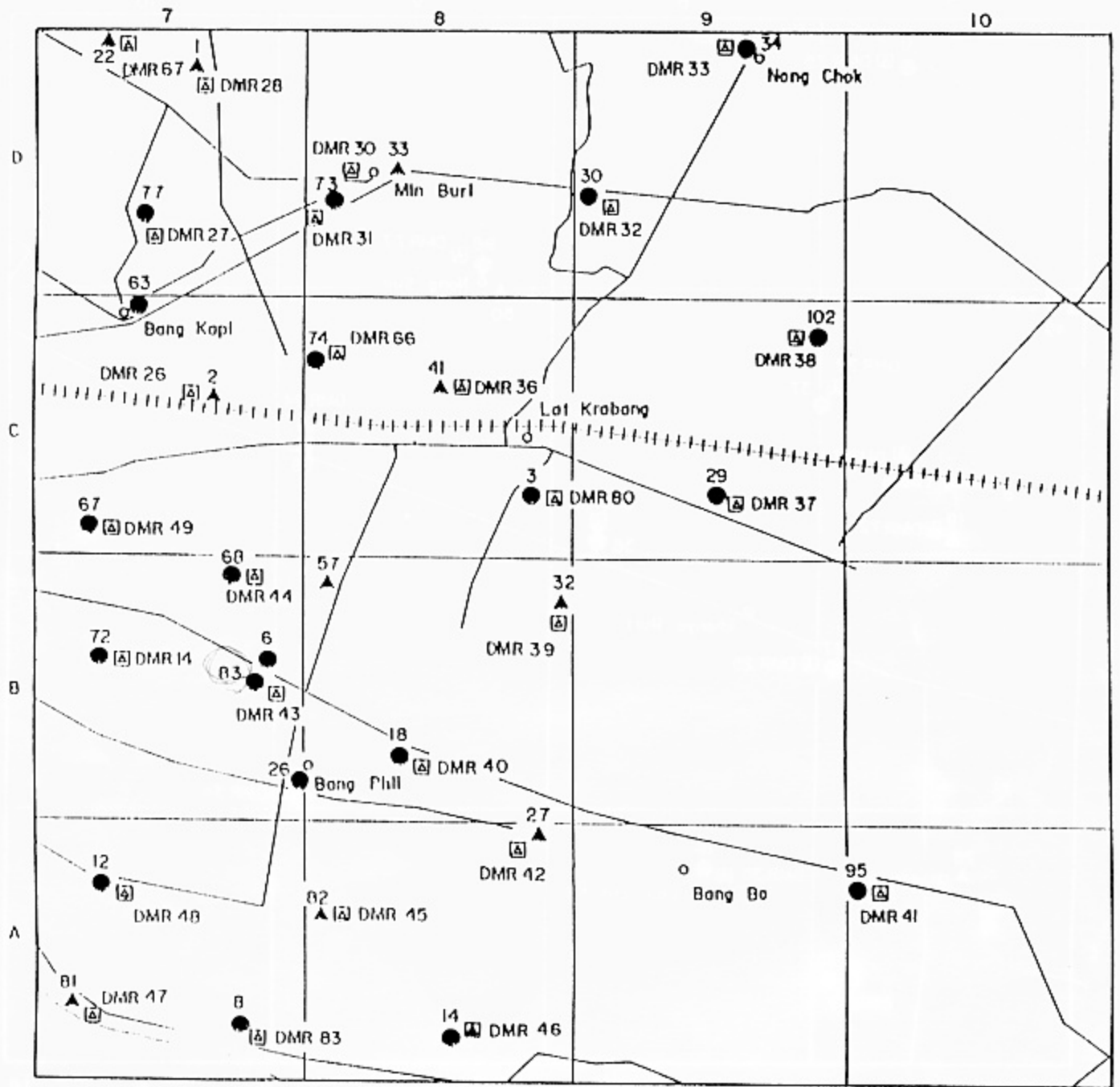


Monitoring well with continuous water level recorder, figure indicates station number



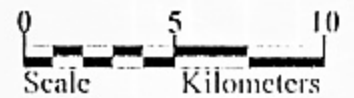
DMR surface benchmark

Figure 6. Location of Monitoring Stations and Subsurface Benchmarks



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 7. Location of Monitoring Stations and Subsurface Benchmarks

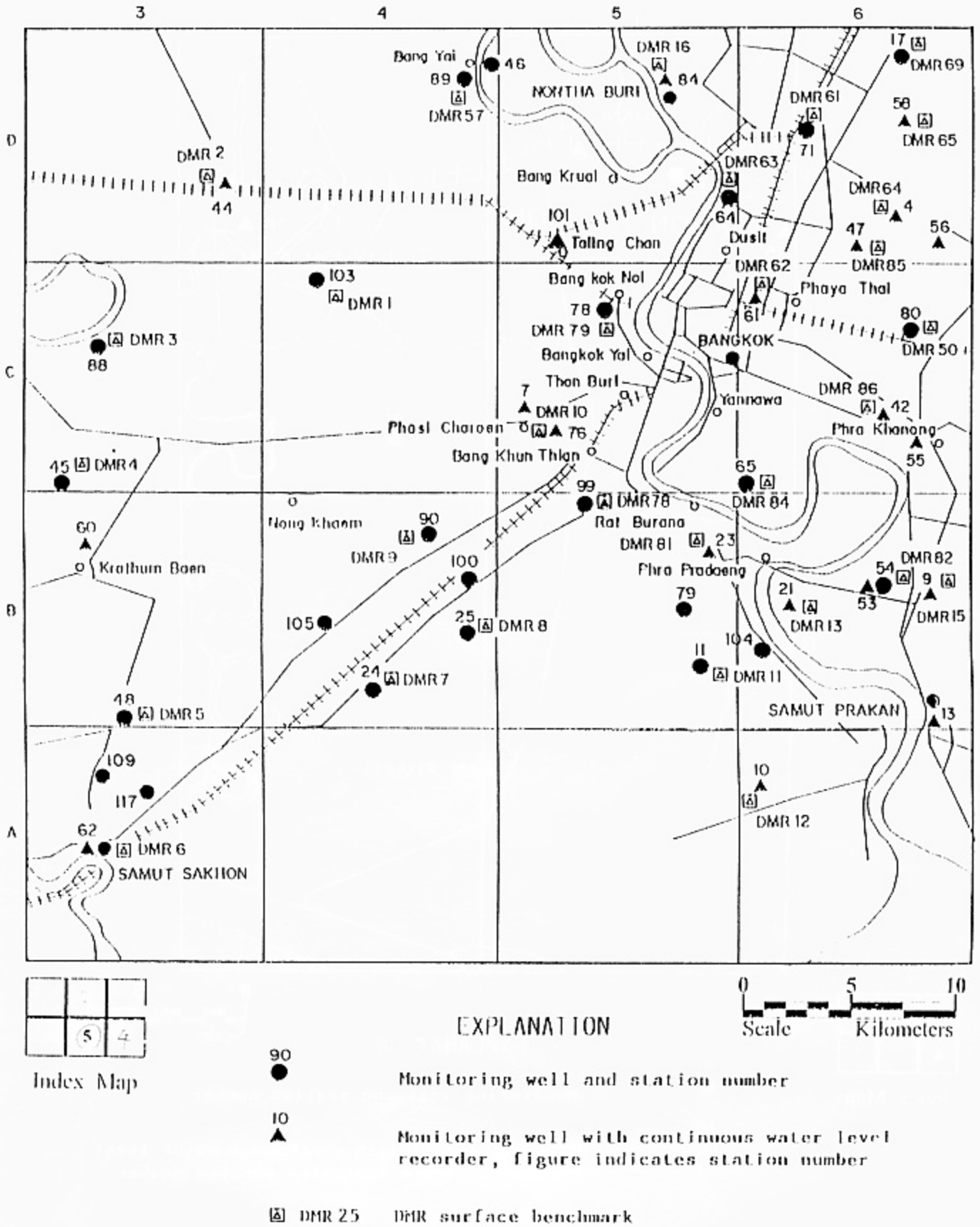


Figure 8. Location of Monitoring Stations and Subsurface Benchmarks

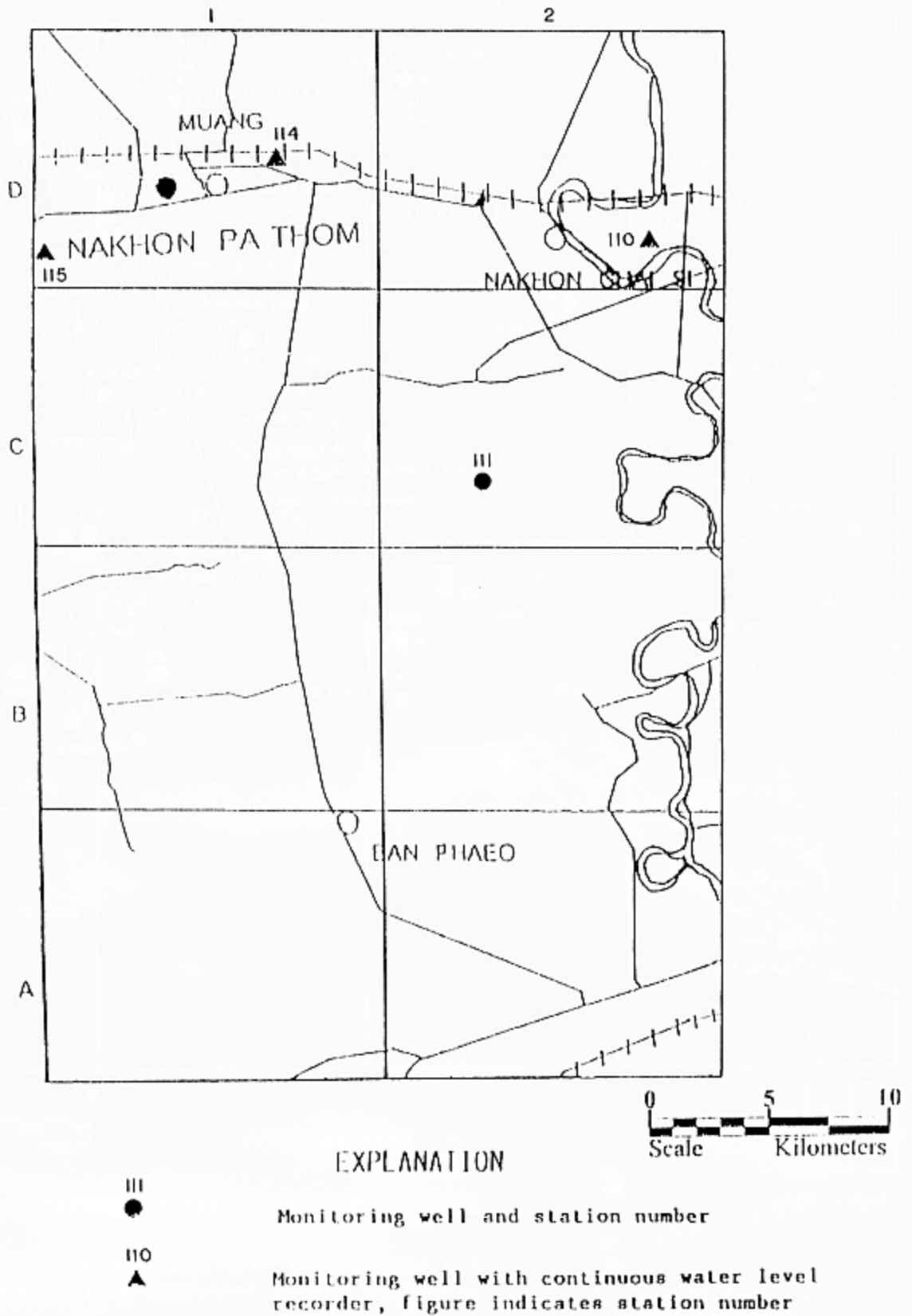


Figure 9. Location of Monitoring Stations and Subsurface Benchmarks

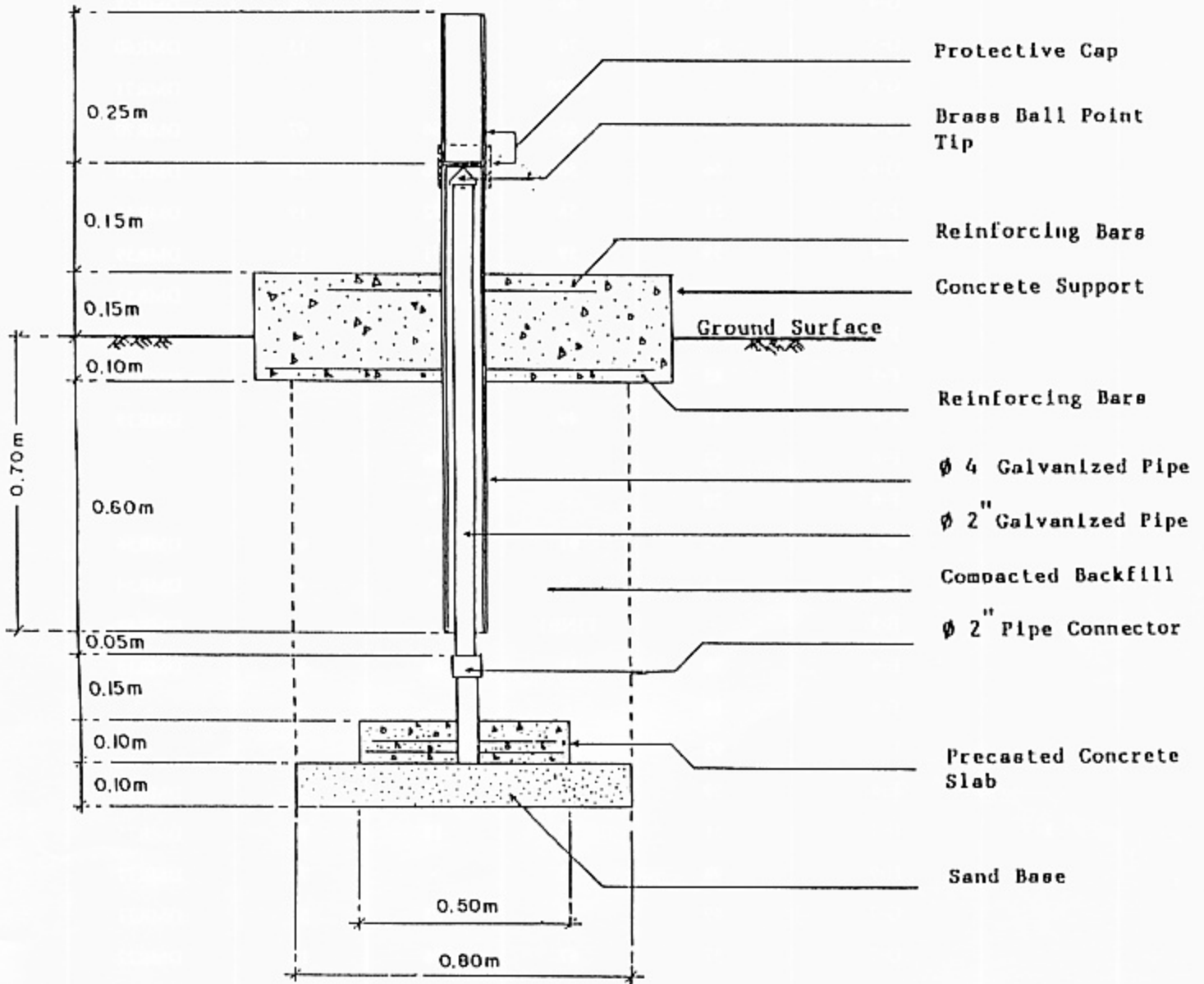


Figure 10. A Sketch of DMR Surface Benchmark

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	
2	H-5	35	68	12	69	DMR74
	G-4	95	66	75	68	DMR58
	G-5	38	74	78	13	DMR60
	G-6	-	C300	-	-	DMR71
	G-6	86	65	66	67	DMR70
	G-6	66	50	40	34	DMR20
	F-3	51	58	72	19	DMR55
	F-4	39	59	71	15	DMR59
	F-5	40	47	65	14	DMR52
	F-5	91	60	74	64	DMR76
	F-5	85	48	-	59	DMR53
	F-6	87	49	-	-	DMR19
	F-6	52	-	26	21	-
	F-6	20	-	9	-	-
	E-3	92	61	73	65	DMR56
	E-4	5	55	5	4	DMR54
	E-5	-	T1NB1	-	-	DMR68
	E-6	70	31	46	40	DMR18
	E-6	15	-	-	3	-
	E-6	93	63	-	-	-
3	E-6	59	-	41	24	DMR17
	H-7	31	75	13	75	DMR75
	H-9	98	73	-	74	DMR77
	G-7	49	76	23	52	DMR21
	G-7	37	67	76	12	DMR22
	G-7	-	-	-	-	DMR73
	G-7	19	42	8	6	DMR72
	G-8	36	72	14	73	DMR23
	G-9	50	-	21	-	-
	G-9	96	70	79	70	DMR24
	F-7	97	71	80	72	DMR25
	F-9	43	64	22	-	DMR34
	E-7	28	-	-	16	DMR51
	E-7	69	32	45	38	-
	E-7	75	84	54	47	DMR29
	E-8	16	51	7	7	DMR35

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	
4	D-7	22	26	6	36	DMR67
	D-7	1	8	62	5	DMR28
	D-7	77	41	56	51	DMR27
	D-8	33	40	16	46	DMR30
	D-8	73	37	51	44	DMR31
	D-9	34	85	15	82	DMR33
	D-9	30	15	84	83	DMR32
	C-7	63	21	36	28	-
	C-7	2	5	11	8	DMR26
	C-7	67	27	42	35	DMR49
	C-8	74	36	52	45	DMR66
	C-8	41	33	47	17	DMR36
	C-8	3	38	3	9	DMR80
	C-9	102	86	85	84	DMR38
	C-9	29	14	81	78	DMR37
	B-7	68	30	44	37	DMR44
	B-7	72	35	49	43	DMR14
	B-7	6	3	-	-	-
	B-7	83	-	63	57	DMR43
	B-7	26	12	37	29	-
	B-8	57	29	30	39	-
	B-8	32	13	-	-	DMR39
	B-8	18	-	2	-	DMR40
	A-7	12	39	50	41	DMR48
	A-7	81	43	56	51	DMR47
	A-7	8	2	55	49	DMR83
	A-8	27	11	43	18	DMR42
	A-8	82	79	61	56	DMR45
	A-8	14	78	1	77	DMR46
	A-10	95	69	77	71	DMR41
5	D-3	44	53	68	20	DMR02
	D-4	46	-	20	-	-
	D-4	89	56	-	63	DMR57
	D-5	84	45	64	58	DMR16
	D-5	64	25	39	32	DMR63
	D-5	101	83	83	81	-

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	
	D-6	17	28	-	11	DMR69
	D-6	58	-	31	-	DMR65
	D-6	71	34	48	42	DMR61
	D-6	4	7	-	-	DMR64
	D-6	56	20	35	23	-
	D-6	47	-	25	-	DMR85
	C-3	88	54	69	61	DMR03
	C-3	45	-	19	-	DMR04
	C-4	103	81	87	85	DMR01
	C-5	78	82	57	50	DMR79
	C-5	7	6	-	1	-
	C-5	76	-	53	-	DMR10
	C-6	61	17	34	27	DMR62
	C-6	80	44	59	55	DMR50
	C-6	42	-	17	-	DMR86
	C-6	55	24	29	22	-
	C-6	65	23	38	33	DMR84
	B-3	60	18	32	25	-
	B-3	48	52	24	60	DMR05
	B-4	90	57	70	62	DMR09
	B-4	100	-	86	80	-
	B-4	25	9	-	-	DMR98
	B-4	24	62	18	66	DMR07
	B-5	99	80	82	79	DMR78
	B-5	23	10	-	-	DMR81
	B-5	79	-	58	54	-
	B-5	11	77	4	76	DMR11
	B-6	54	-	28	-	DMR82
	B-6	53	16	27	31	-
	B-6	9	4	-	-	DMR15
	B-6	21	46	-	2	DMR13
	B-6	13	22	10	30	-
	A-3	62	19	33	26	DMR06
	A-6	10	1	67	53	DMR12

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
1 D7 5136IV	PD0008 681000 1531800	Min Buri Bangkok	Wat Khu Bon (Ban Khu Bon) Khwaeng Bang chan	4.24.78 Recorder	104.00 99.65	4 3	0-72.00 72.00-90.00	3	90.00-96.00	96.00-99.65	25.01
	NL0062	Min Buri Bangkok	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
	NB0005	Min Buri Bangkok	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 C7 5136III	PD0005 680100 1519900	Bang Kapi Bangkok	Bangkok Golf Course  Khwaeng Hua Mak	5.29.78 Recorder	117.00 112.50	4 3	0-72.00 72.00-91.50	3	91.50-97.50	97.50-112.50	23.58
	NL0011	Bang Kapi Bangkok	Bangkok Golf Course  Khwaeng Hua Mak	4.29.78 Recorder	150.00 138.00	4 3	0-72.00 72.00-129.00	3	129.00-135.00	135.00-138.00	40.83
	NB0008	Bang Kapi Bangkok	Bangkok Golf Course  Khwaeng Hua Mak	4.23.78 Recorder	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 C8 5136III	PD0038 683600 1515600	Bang Phli Samut Prakan	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
	NL0003	Bang Phli Samut Prakan	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
	NB0009	Bang Phli Samut Prakan	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 D6 5136IV	PD0007 672100 1525500	Lat Phrao Bangkok	Phibun Uppatham School (Ban Lat Phrao) Mu Thi 9 Khwaeng lat Phrao	4.27.78 Recorder	105.15 104.15	4 3	0-72.00 72.00-92.15	3	92.15-98.15	98.15-104.15	28.62
5 E4 5036I	PD0055 654300 1538500	Bang Bua Thong Nonthaburi	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
	NL0005	Bang Bua Thong Nonthaburi	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
	NB0004	Bang Bua thong Nonthaburi	Wat Khlong Salut (Ban Sano Loi) Tambon Sano Loi	5.7.78 Recorder	228.50 225.00	4 3	0-72.00 72.00-213.00	3	213.00-219.00	219.00-225.00	20.74

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)										
6 B7 5136III	PD0003	Bang Phli Samut Prakan	Wat Khlong Salut (Ban Khlong Salut) Mu Thi 4 Tambon Bang Phli Yai	5.16.78	103.00	4	0-72.00	3	79.50-85.50	85.50-88.50	20.68								
	683800 1509200				88.50		72.00-9.50												
7 C5 5036II	PD0006	Phasi Charoen Bangkok	Wat Chan Praditharam  Khwaeng Bang Duan	5.25.7	119.50	4	0-72.00	3	88.60-94.60	94.60-97.60	21.14								
	656200 1516800				97.60		72.00-8.60												
8 A7 5136III	NB0001	Phasi Charoen Bangkok	Wat Chan Praditharam  Khwaeng Bang Duan	5.28.78	228.60	4	0-72.00	3	192.60-198.60	198.60-204.60	27.19								
	PD0002				Muang Samut Prakan		Wat Tamru Sukhumvit-Khling Dan Rd Tambon Bang Pu Mai					6.4.78	102.00	4	0-72.00	3	87.15-93.15	93.15-100.65	15.46
	682500 1594700												100.65		72.00-87.15				
NL0055	Muang Samut Prakan	Wat Tamru Sukhumvit-Khling Dan Rd Tambon Bang Pu Mai	2.23.89	167.00	4	0-151.00	4	151.00-157.00	157.00-160.00	27.76									
				160.00															
NB0049	Muang Samut Prakan	Wat Tamru Sukhumvit-Khlong Dan Rd Tambon Bang Pu Mai	2.15.89	226.50	4	0-196.00	4	196.00-202.00	202.00-205.00	27.56									
205.00																			
9 B6 5136III	PD0004	Muang Samut Prakan	Wat Dan Samrong Ban Samrong Nua Tambon Samrong Nua	6.19.78 Recorder	105.00	4	0-72.00	3	96.00-102.00	102.00-103.50	34.60								
673300 1509000	103.50	72.00-96.00																	
10 A6 5136III	PD0001	Phra Samut Chedi Samut Prakan	Wat Khu Sang Ban Khu Sang Um Thi 9 Tambon Nai Khlong Bang Pla Kot	6.25.78	107.00	4	0-72.00	3	97.70-103.70	103.70-105.20	24.82								
	666000 1500700				105.20		72.00-97.70												
	NL0067				Phra Samut Chedi Samut Prakan	Wat Khu Sang Ban Khu Sang Mu Thi 9 Tambon Nai Khlong Bang Pla Kot	6.24.89 Recorder	140.24	4	0-130.00	4	130.00-136.00	136.00-139.00	26.23					
139.00																			
NB0053	Phra Samut Chedi Samut Prakan	Wat Khu Sang Ban Khu Sang Mu Thi 9 Tambon Nai Khlong Bang Pla Kot	4.23.89 Recorder	189.00	4	0-178.00	4	178.00-184.00	184.00-187.00	35.93									
187.00																			
11 B5 5136III	PD0077	Rat Burana Bangkok	Wat Thung Khru Ban Thung Khru Mu Thi 5 Khwaeng Thung Khru	10.1.92	98.50	4	0-88.00	4	88.00-94.00	94.00-98.50									
	663600 1505800				98.00														
	NL0004				Rat Burana Bangkok	Wat Thung Khru Ban Thung Khru Mu Thi 5 Khwaeng Thung Khru	6.30.78	160.00	4	0-72.00	3	149.60-155.60	155.60-161.60	27.40					
158.60	72.00-149.60																		
NB0076	Rat Burana Bangkok	Wat Thung Khru Ban Thung Khru Mu Thi 5 Khwaeng Thung Khru	9.24.92	230.00	4	0-210.00	4	210.00-216.00	216.00-219.00										
219.50																			



Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number Area code/ map	Well number Coordinates	Location		Date drilling Completed Recorder	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)		
16 E8	NL0007	Lam Luk Ka Pathum Thani	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
	NB0007	Lam Luk Ka Pathum Thani	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
17 D6 5136IV	PD0028 671900 1531900	Bang Khen Bangkok	Wat Bang Bua Khwaeng Anusawari <i>OK</i>	12.6.88	118.59 103.00	4	0-94.00	4	94.00-100.00	100.00-103.00	23.87
	NB0011	Bang Khen Bangkok	Wat Bang Bua Khwaeng Anusawari	04.21.94	235.00 227.00	4	0-218.00	4	218.00-224.00	224.00-227.00	43.00
	BK0001	Bang Khen Bangkok	Wat Bang Bua Khwaeng Anusawari <i>OK</i>	5.26.94	70.00 57.00	4	0-47.00	4	47.00-53.00	53.00-57.00	20.80
18 B8 5136III	NL0002 688800 1505600	Bang Phli Samut Prakan	Phun Charoen Wittayakom 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 G7 5137III	PD0042 677800 1552000	Khlong Luang Pathum Thani	Wat Kla Cha-um Tambon Khlong Song	3.28.89 Recorder	117.07 116.00	4	0-107.00	4	107.00-113.00	113.00-116.00	28.22
	NL0008	Khlong Luang Pathum Thani	Wat Kla Cha-um Tambon Khlong Song	8.17.78 Recorder	176.90 139.80	4 3	0-72.00 72.00-122.30	3	122.30-128.30	128.30-139.80	25.25
	NB0006	Khlong Luang Pathum Thani	Wat Kla Cha-um Tambon Khlong Song	07.31.78 Recorder	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 F6 5136IV	NL0009 665700 1543300	Muang Pathum Thani	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 B6 5136III	PD0046 667300 1508500	Phra Pradaeng Samut Prakan	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
	NB0002	Phra Pradaeng Samut Prakan	Wat Bang Ya Phraek Ban Bang Ya Phraek Mu Thi 16 Tambon Bang Ya Phraek	8.14.78 Recorder	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 D7 5136IV	PD0026 677700 1532800	Bang Khen Bangkok	Wat Siri Phong Thamnimmit 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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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 D7	NL0006	Bang Khen Bangkok	Wat Siri Phong Thamnimit Ban Khlong Bua Mu Thi 6 Khwaeng Tha Raeng	8.15.78 Recorder	151.00 137.20	4 3	0-72.00 72.00-125.20	3	125.20-131.20	131.20-137.20	35.75
	NB0036	Bang Khen Bangkok	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 B5 5136III	PD0010 664300 1511200	Phra Pradaeng Samut Prakan	Wat Ruak  Tambon Bang Phuang	6.6.79 Recorder	99.00 97.60	4 2.5	0-72.00 72.00-82.60	2.5	82.30-88.60	88.60-97.60	30.24
24 B4 5036II	PD0062 649800 1504800	Bang Khun Thian Bangkok	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
	NL0018	Bang Khun Thian Bangkok	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
	NB0066	Bang Khun Thian Bangkok	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 B4 5036II	PD0009 653900 1507200	Bang Khun Thian Bangkok  Abandoned	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 B7 5036III	PD0012 684700 1504700	Bang Phli Samut Prakan	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
	NL0037	Bang Phli Samut Prakan	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
	NB0029	Bang Phli Samut Prakan	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
27 A8 5136II	PD0011 693800 1502900	Bang Phli Samut Prakan	Wat Mongkhon Nimit Ban Khlong Samrong Mu thi 1 Tambon Bang Sao Thong	7.22.79 Recorder	118.59 82.35	4	0-70.35	2.5	70.35-76.35	76.35-82.35	16.29
	NL0043	Bang Phli Samut Prakan	Wat Mongkhon Nimit Ban Kntong Samrong Mu thi 1 Tambon Bang Sao Thong	11.22.88 Recorder	171.00 160.00	4	0-151.00	4	151.00-157.00	157.00-160.00	36.76
	NB0018	Bang Phli Samut Prakan	Wat Mongkhon Nimit Ban Khlong Samrong Mu thi 1 Tambon Bang Sao Thong	8.8.79 Recorder	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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
28 E7 5136IV	NB0016	Lam Luk Ka Pathum Thani	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
	PD0014	Lat Krabang Bangkok	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
29 C9 5136II	NL0081	Lat Krabang Bangkok	Wat Ratcha Kosa  Khwaeng Khom Thong  Abandoned	9.20.92	163.00 161.50	4	0-152.00	4	152.00-158.00	158.00-161.50	
	NB0078	Lat Krabang Bangkok	Wat Ratcha Kosa  Khwaeng Khom Thong	9.14.92	234.00 214.00	4	0-205.00	4	205.00-211.00	211.00-214.00	
30 D9 5136I	PD0015	Min Buri Bangkok	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
	NL0084	Min Buri Bangkok	Wat Mai Lam Nok Khwaek Ban Lam Nok Khwaek Mu Thi 10 Khwaeng Sain Saep	11.12.91	156.00 153.50	4	0-144.00	4	144.00-150.00	150.00-153.50	
	NB0083	Min Buri Bangkok	Wat Mai Lam Nok Khwaek Ban Lam Nok Khwaek Mu Thi 10 Khwaeng Sain Saep	11.3.91	228.00 213.50	4	0-204.00	4	204.00-210.00	210.00-213.50	
31 H7 5137III	PD0075	Wang Noi Phra Nakhon Si Ayutthaya	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
	NL0013	Wang Noi Phra Nakhon Si Ayutthaya	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
	NB0075	Wang Noi Phra Nokhon Si Ayutthaya	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 B8 5136II	PD0013	Bang Phli Samut Prakan	Wat Sri Wari Noi Mu Thi 6 Tambon Sisa Chorakhe Yai	8.26.79 Recorder	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 D8 5136IV	PD0040	Min Buri Bangkok	Wat Saen Suk Ban Saen Suk Mu Thi 2 Khwaeng Min Buri	2.11.89 Recorder	85.00 85.00	4	0-67.00	4	67.00-73.00	73.00-85.00	21.62
	NL0016	Min Buri Bangkok	Wat Saen Suk Ban Saen Suk Mu Thi 2 Khwaeng Min Buri	9.1.79 Recorder	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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
33 D8	NB0046	Min Buri Bangkok	Wat Saen Suk Ban Saen Suk Mu Thi 2 Khwaeng Min Buri	1.23.89 Recorder	232.00 217.00	4	0-208.00	4	208.00-214.00	214.00-217.00	42.32
34 D9 5136I	PD0085 601400 1532300	Nong Chok Bangkok	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	
	NL0015	Nong Chok Bangkok	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
	NB0082	Nong Chok Bangkok	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	
35 H5 5137III	PD0068 665200 1569600	Bang Sai Phra Nakhon Si Ayutthaya	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
	NL0012	Bang Sai Phra Nakhon Si Ayutthaya	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
	NB0069	Bang Sai Phra Nakhon Si Ayutthaya	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 G8 5137II	PD0072 694100 1552900	Thanya Buri Pathum Thani	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
	NL0014	Thanya Buri Pathum Thani	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
	NB0073	Thanya Buri Pathum Thani	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 G7 5137III	PD0067 687200 1560600	Khlong Luang Pathum Thani	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
	NL0076	Khlong Luang Pathum Thani	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
	NB0012	Khlong Luang Pathum Thani	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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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 G5 5137III	PD0074 663900 1562400	Bang Sai Phra Nakhon Si Ayutthaya	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
	NL0078	Bang Sai Phra Nakhon Si Ayutthaya	Wat Pa kha Mu Thi 1 Tambon Khok Chang	10.2.90	225.60 173.00	4	0-164.00	4	164.00-170.00	170.00-173.00	16.62
	NB0013	Bang Sai Phra Nakhon Si Ayutthaya	Wat Pa kha 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 F5 5037II	PD0059 653800 1552300	Lat Lam Kao Pathum Thani	Wat Bua Kao 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
	NL0071	Lat Lam Kao Pathum Thani	Wat Bua Kao 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
	NB0015	Lat Lam Kao Pathum Thani	Wat Bua Kao Keson Ban Rahaeng Mu Thi 4 Tambon Rahaeng	10.12.79 Recorder	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 F5 5137III	PD0047 665900 1550300	Muang Pathum Thani	Pathum Thani Provincial Hall Tambon Bang Prok	5.19.89 Recorder	107.03 107.00	4	0-98.00	4	98.00-104.00	104.00-107.00	17.45
	NL0065	Muang Pathum Thani	Pathum Thani Provincial Hall Tambon Bang Prok	5.15.89 Recorder	152.65 152.00	4	0-143.00	4	143.00-149.00	149.00-152.00	20.98
	NB0014	Muang Pathum Thani	Pathum Thani Provincial Hall Tambon Bang Prok	10.14.79 Recorder	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 C8 5136II	PD0033 690100 1519800	Lat Krabang Bangkok Abandoned	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
	NL0047	Lat Krabang Bangkok	Wat Bamrung Run Ban Khlong Sam Khwaeng Khlong Sam Prawet	12.14.88 Recorder	170.00 156.00	4	0-147.00	4	147.00-153.00	153.00-156.00	47.86
	NB0017	Lat Krabang Bangkok	Wat Bamrung Run Ban Khlong Sam Khwaeng Khlong Sam Prawet	10.15.79 Recorder	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 C6 5136III	NL0017 671000 1517400	Khlong Toei Bangkok	Bangkok Planetorium Khwaeng Phra Khanong	11.10.79 Recorder	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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
43 F9 5136I	PD0064 704200 1543500	Lum Luk Ka Pathum Thani	Wat Phut Udom Mu Thi 9 Tambon Phut Udom	8.15.90	121.30 106.00	4	0-97.00	4	97.00-10300	103.00-106.00	8.17
	NL0022	Lum Luk Ka Pathum Thani	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 D3 5036I	PD0053 643400 1526500	Nakhon Chaisi Nakhon Pathom	Wat Salawan School Mu Thi 5 Tambon Salaya	1.25.90	104.80 101.00	4	0-92.00	4	92.00-98.00	98.00-101.00	21.00
	NL0068	Nakhon Chaisi Nakhon Pathom	Wat Salawan School Mu Thi 5 Tambon Salaya	1.18.90	168.90 166.00	4	0-152.00	4	152.00-158.00	158.00-161.00	25.04
	NB0020	Nakhon Chaisi Nakhon Pathom	Wat Salawan School Mu Thi 5 Tambon Salaya	1.11.80 Recorder	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 C3 5036II	NL0019 636700 1513100	Sam Phran Nakhon Pathom	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 D4 5036I	NL0020 654900 1531600	Bang Yai Nonthaburi  Abandoned	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 D6 5136IV	NL0025 670100 1523500	Huai Khwang Bangkok	Wat Kunnathi Ruttharam  Khwaeng Huai Khwang	1.20.80 Recorder	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
48 B3 5036II	PD0052 639400 1503300	Muang Sumut Sakhon	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
	NL0024	Muang Sumut Sakhon	Wat Bang Ping Ban Bang Ping Mu Thi 2 Tambon Na Di	1.25.80	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
	NB0060	Muang Sumut Sakhon	Wat Bang Ping Ban Bang Ping Mu Thi 2 Tambon Na Di	6.14.89	231.70 230.00	4	0-221.00	4	221.00-227.00	227.00-230.00	39.21
49 G7 5137III	PD0076 675100 1562200	Khlong Luang Pathum Thani	Wat Khun Ying Som Chin Ban Chiang Rak Noi Tambon Khlong Nung	3.20.91	115.85 85.00	4 2.5	0-71.00	4	71.00-77.00	77.00-85.00	7.50
	NL0023	Khlong Luang Pathum Thani	Wat Khun Ying Sam Chin Ban Chiang Rak Noi Tambon Khlong Nung	1.29.80 Recorder	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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
49 G7	NB0052	Khlong Luang Pathum Thani	Wat Khun Ying Som Chin Ban Chiang Rak Noi Tambon Khlong Nung	3.17.89 Recorder	233.00 201.00	4	0-192.00	4	192.00-198.00	198.00-201.00	23.08
50 G9 5137II	NL0021 697100 1562800	Nong Sua Pathum Thani	Wat Bung Ba Praphasawat Ban Khlong Sip Tambon Bung Ba	2.6.80 Recorder	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 F3 5036I	PD0058 641900 1545400	Sai Noi Nonthaburi	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
	NL0072	Sai Noi Nonthaburi	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
	NB0019	Sai Noi Nonthaburi	Wat Sai Yai  Tambon Sai Noi	3.3.80 Recorder	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
52 F6 5136IV	NL0026 674300 1548800	Lam Luk Ka Pathum Thani	Wat Prayun Thammaram Mu Thi 4 Phahonyothin Rd. Tambon Khu Khot	8.22.86 Recorder	165.00 154.00	4	0-145.00	4	145.00-151.00	151.00-154.00	27.50
	NB0021	Lam Luk Ka Pathum Thani	Wat Prayun Thammaram Mu Thi 4 Phahonyothin Rd. Tambon Khu Khot	8.13.86 Recorder	210.00 199.00	4	0-187.00	4	187.00-193.00	193.00-199.00	32.50
53 B6 5136III	PD0016 670400 1509100	Phra Pradaeng Samut Prakan  Abandoned	Pig Quarantine Station Pu Chao Saming Phrai Rd. 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
	NL0027	Phra Pradaeng Samut Prakan  Abandoned	Pig Quarantine Station Pu Chao Saming Phrai Rd. Tambon Samrong Tai	8.13.86	166.00 148.00	4	0-138.00	4	138.00-144.00	144.00-148.00	35.40
	NB0031	Phra Pradaeng Samut Prakan  Abandoned	Pig Quarantine Station Pu Chao Saming Phrai Rd. 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 B6 5136III	NL0028 671400 1509700	Phra Pradaeng Samut Prakan	Wat Mahawong Pu Chao Saming Phrai Rd. 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 C6	PD0024 672800 1515800	Phra Khanong Bangkok	Phra Khanong Flood Control Soi Sukhumvit 50 Khwaeng Phrakanong	2.10.88 Recorder	123.00 112.00	4	0-103.00	4	103.00-109.00	109.00-112.00	30.51
	NL0029	Phra Khanong Bangkok	Phra Khanong Flood Control Soi Sukhumvit 50 Khwaeng Phrakanong	9.28.86 Recorder	166.00 164.00	4	0-155.00	4	155.00-161.00	161.00-164.00	40.40

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
55 C6	NB0022	Phra Khanong Bangkok	Phra Khanong Flood Control Soi Sukhumvit 50 Khwaeng Phra Khanong.	9.17.86 Recorder	227.00 224.00	4	0-215.00	4	215.00-221.00	221.00-224.00	32.45
56 D6 5136IV	PD0020 673300 1524000	Lat Phrao Bangkok	Wat Samakkehi Tham Soi Ketnut (64) Lat Phrao Rd.	12.5.87	103.39 99.00	4	0-90.00	4	90.00-96.00	96.00-99.00	25.90
	NL0035	Lat Phrao Bangkok	Wat Samakkehi Tham Soi Ketnut (64) Lat Phrao Rd.	11.28.87	168.00 168.00	4	0-159.00	4	159.00-165.00	165.00-168.00	42.80
	NB0023	Lat Phrao Bangkok	Wat Samakkehi Tham Soi Ketnut (64) Lat Phrao Rd.	9.30.86 Recorder	222.00 221.00	4	0-212.00	4	212.00-218.00	218.00-221.00	37.78
57 B8 5136III	PD0029 686100 1512200	Bang Phli Samut Prakan Abandoned	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
	NL0030	Bang Phli Samut Prakan Abandoned	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
	NB0039	Bang Phli Samut Prakan Abandoned	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 D6 5136IV	NL0031 672200 1528900	Lat Phrao Bangkok	Wat Srikamalawat Mu Thi4 Soi Chok Chai 4 Lat Phrao Rd. Khwaeng Lat Phrao	10.9.86 Recorder	169.00 169.00	4	0-160.00	4	160.00-166.00	166.00-169.00	39.16
59 E6 5136IV	NL0041 666800 1536800	Pak Kret Nonthaburi	Khlong Klua School Mu Thi 4 Chaeng Watthana Rd Tambon Pak Kret	3.5.88 Recorder	155.00 153.00	4	0-144.00	4	144.00-150.00	150.00-153.00	21.12
	NB0024	Pak Kret Nonthaburi	Khlong Klua School Mu Thi 4 Chaeng Watthana Rd Tambon Pak Kret	10.20.86 Recorder	227.00 205.00	4	0-196.00	4	196.00-202.00	202.00-205.00	28.20
60 B3 5036II	PD0018 637500 1511000	Krathum Baen Samut Sakhon	Wat Nang Sao Mu Thi 7 Soi Wat Nang Sao Setthakit Rd. Tambon Tha Mai	11.11.86 Recorder	110.00 92.00	4	0-83.00	4	83.00-89.00	89.00-92.00	22.22
	NL0032	Krathum Baen Samut Sakhon	Wat Nang Sao Mu Thi 7 Soi Wat Nang Sao Setthakit Rd. Tambon Tha Mai	11.5.86 Recorder	164.00 156.00	4	0-147.00	4	147.00-153.00	153.00-156.00	37.20
	NB0025	Krathum Baen Samut Sakhon	Wat Nang Sao Mu Thi 7 Soi Wat Nang Sao Setthakit Rd.	10.24.86 Recorder	219.00 219.00	4	0-210.00	4	210.00-216.00	216.00-219.00	26.00

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
61 C6 5136IV	PD0017 656400 1521800	Ratchathewi Bangkok	Department of Mineral Resources Rama VI Rd. Khwaeng Thung Phayathai	11.3.86 Recorder	110.00 93.00	4	0-84.00	4	84.00-90.00	90.00-93.00	22.99
	NL0034	Ratchathewi Bangkok	Department of Mineral Resources Rama VI Rd. Khwaeng Thung Phayathai	11.24.86 Recorder	166.00 140.00	4	0-131.00	4	131.00-137.00	137.00-140.00	26.24
	NB0027	Ratchathewi Bangkok	Department of Mineral Resources Rama VI Rd. Khwaeng Thung Phayathai	11.14.86 Recorder	226.50 199.00	4	0-190.00	4	190.00-196.00	196.00-199.00	30.08
	BK0002	Ratchathewi Bangkok	Department of Mineral Resources Rama VI Rd. Khwaeng Thung Phayathai	6.28.94	58.80 57.00	4	0-47.00	4	47.00-53.00	53.00-57.00	23.50
62 A3 5036II	PD0019 638300 1497800	Muang Samut Sakhon	Samut Sakhon Provincial Hall Chetsadang Rd. Tambon Mahachai	11.26.86 Recorder	110.00 102.00	4	0-93.00	4	93.00-99.00	99.00-102.00	20.82
	NL0033	Muang Samut Sakhon	Samut Sakhon Provincial Hall Chetsadang Rd. Tambon Mahachai	11.21.86 Recorder	169.00 169.00	4	0-160.00	4	160.00-166.00	166.00-169.00	51.30
	NB0026	Muang Samut Sakhon	Samut Sakhon Provincial Hall Chetsadang Rd. Tambon Mahachai	11.10.86 Recorder	226.00 211.00	4	0-202.00	4	202.00-208.00	208.00-211.00	34.70
63 D7 5136IV	PD0021 678800 1522700	Bang Kapi Bangkok	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
	NL0036	Bang Kapi Bangkok	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
	NB0028	Bang Kapi Bangkok	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
64 D5 5136IV	PD0025 664500 1525700	Dusit Bangkok	Wat Kaeo Fa Chula Mani Thahan Rd. Khwaeng Thanon Nakhon Chaisi	2.13.88	110.00 130.00	4	0-94.00	4	94.00-100.00	100.00-103.00	22.35
	NL0039	Dusit Bangkok	Wat Kaeo Fa Chula Mani Thahan Rd. 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
	NB0032	Dusit Bangkok	Wat Kaeo Fa Chula Mani Thahan Rd. Khwaeng Thanon Nakhon Chaisi	1.20.88	236.00 201.00	4	0-192.00	4	192.00-198.00	198.00-201.00	30.55

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
65 C6 5136III	PD0023 665900 1514800	Yan Nawa Bangkok	Mahamek Electrical Substation Sathu Pradit Rd. 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
	NL0038	Yan Nawa Bangkok	Mahamek Electrical Substation Sathu Pradit Rd. 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
	NB0033	Yan Nawa Bangkok	Mahamek Electrical Substation Sathu Pradit Rd. 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 F6 5137III	PD0050 674200 1549100	Khlong Luang Pathum Thani	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
	NL0040	Khlong Luang Pathum Thani	Bun Khum Rat Bamrung - Schpool 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
	NB0034	Khlong Luang Pathum Thani	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 C7 5136III	PD0027 677200 1513900	Phra Khanong Bangkok	Wat Wachiratham Sathit Soi Sukhumvit 101/1 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
	NL0042	Phra Khanong Bangkok	Wat Wachiratham Sathit Soi Sukhumvit 101/1 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
	NB0035	Phra Khanong Bangkok	Wat Wachiratham Sathit Soi Sukhumvit 101/1 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
	BK0003	Phra Khanong Bangkok	Wat Wachiratham Sathit Soi Sukhumvit 101/1 Khwaeng Bang Chak	13.7.94	57.00 50.00	4	0-40.00	4	40.00-46.00	46.00-50.00	23.35
68 B7 5136III	PD0030 682200 1512600	Phra Khanong Bangkok	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
	NL0044	Phra Khanong Bangkok	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
	NB0037	Phra Khanong Bangkok	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



Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
73 D8 5136IV	PD0037 685200 1526200	Min Buri Bangkok	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
	NL0051	Min Buri Bangkok	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
	NB0044	Min Buri Bangkok	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
74 C8 5136IV	PD0036 683800 1521200	Prawet Bangkok	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
	NL0052	Prawet Bangkok	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
	NB0045	Prawet Bangkok	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 E7 5136IV	PD0084 685800 1535400	Min Buri Bangkok	Wat Paen Thong Sopharam Mu Thi 13 Tambon Sam Wa Tawan Tok	8.5.92	117.00 88.50	4	0-79.00	4	79.00-85.00	85.00-88.50	
	NL0054	Min Buri Bangkok	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
	NB0047	Min Buri Bangkok	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 C5 5036II	NL0053 657600 1516200	Phasi Charoen Bangkok	Wat Kho Non Phattanakan Rd. Khwaeng Bang Wa	1.29.89 Recorder	178.00 156.00	4	0-147.00	4	147.00-153.00	153.00-156.00	25.82
77 D7 5136IV	PD0041 679400 1525900	Bung Kum Bangkok	Praphat Witthaya School Sukhapiban Rd. 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
	NL0056	Bung Kum Bangkok	Praphat Witthaya School Sukhapiban Rd. 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
	NB0051	Bung Kum Bangkok	Praphat Witthaya School Sukhapiban Rd. 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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number Area code/ map	Well number Coordinates	Location		Date drilling Completed Recorder	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 C5 5136I	PD0082 657600 1521400	Bangkok Noi Bangkok	Wat Chaiyathit Soi Charan Sanitwong 37 Khwaeng Bang Khum Si	10.18.92	115.00 100.53	4	0-90.00	4	90.00-96.00	96.00-100.53	
	NL0057	Bangkok Noi Bangkok	Wat Chaiyathit Soi Charan Sanitwong 37 Khwaeng Bang Khum Si	3.1.89	168.29 165.00	4	0-156.00	4	156.00-162.00	162.00-165.00	25.92
	NB0050	Bangkok Noi Bangkok	Wat Chaiyathit Soi Charan Sanitwong 37 Khwaeng Bang Khum Si	2.23.89	232.93 229.00	4	0-220.00	4	220.00-226.00	226.00-229.00	26.79
79 B5 5136III	NL0058 662900 1507500	Rat Burana Bangkok	Itsalam Witthayalai School Pracha Uthit Rd. 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
	NB0054	Rat Burana Bangkok	Itsalam Witthayalai School Pracha Uthit Rd. 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 C6 5136III	PD0044 671300 1519800	Huai Khwang Bangkok	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
	NL0059	Huai Khwang Bangkok	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
	NB0055	Huai Khwang Bangkok	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 A7 5136III	PD0043 676200 1596600	Muang Samut Prakan	Wat Sip Song Thanwaram Mu Thi I Tambon Bang Pu Mai	4.13.89 Recorder	98.78 98.00	4	0-89.00	4	89.00-95.00	95.00-98.00	27.83
	NL0060	Muang Samut Prakan	Wat Sip Song Thanwaram Mu Thi I Tambon Bang Pu Mai	4.9.89 Recorder	141.40 140.00	4	0-131.00	4	131.00-137.00	137.00-140.00	28.41
	NB0048	Muang Samut Prakan	Wat Sip Song Thanwaram Mu Thi I Tambon Bang Pu Mai	4.4.89 Recorder	239.00 215.00	4	0-206.00	4	206.00-212.00	212.00-215.00	23.06
82 A8 5136III	PD0079 682500 1499300	Bang Phli Samut Prakan	Wat Noi Suwannaram  Tambon Phraek Sa	10.9.92	116.00 116.00	4	0-106.00	4	106.00-112.00	112.00-116.00	
	NL0061	Bang Phli Samut Prakan	Wat Noi Suwannaram  Tambon Phraek Sa	4.14.89 Recorder	161.89 159.00	4	0-150.00	4	150.00-156.00	156.00-159.00	28.44

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
82 A8	NB0056	Bang Phli Samut Prakan	Wat Noi Suwannaram Tambon Phrack Sa	4.5.89 Recorder	231.00 210.00	4	0-201.00	4	201.00-207.00	207.00-210.00	26.37
83 B7 51361II	NL0063 683700 1508500	Bang Phli Samut Prakan	Bang Phli Telephone Exchange Station Bangna-Trat Highway	5.3.89	140.85 140.00	4	0-131.00	4	131.00-137.00	137.00-140.00	40.80
	NB0057	Bang Phli Samut Prakan	Bang Phli Telephone Exchange Station Bangna-Trat Highway	4.30.89	235.36 204.00	4	0-195.00	4	195.00-201.00	201.00-204.00	39.90
84 D5 50361	PD0045 661900 1531500	Muang Nonthaburi	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
	NL0064	Muang Nonthaburi	Wat Bang Phraek Nua Tambon Suan Yai	5.6.89 Recorder	169.80 168.00	4	0-159.00	4	159.00-165.00	165.00-168.00	25.68
	NB0058	Muang Nonthaburi	Wat Bang Phraek Nua Tambon Suan Yai	5.3.89 Recorder	236.28 210.00	4	0-201.00	4	201.00-207.00	207.00-210.00	26.09
85 F6 51361V	PD0048 665800 1544200	Muang Pathum Thani	Wat Chinwanaram Worawihan Tambon Bang Khayang	5.22.89 Recorder	96.34 95.00	4	0-86.00	4	86.00-92.00	92.00-95.00	18.90
	NB0059	Muang Pathum Thani	Wat Chinwanaram Worawihan Tambon Bang Khayang	5.20.89	239.32 217.00	4	0-208.00	4	208.00-214.00	214.00-217.00	26.29
86 F6 51371II	PD0065 674800 1552100	Khlong Luang Pathum Thani	Rangsit Switching Office Phahonyothin Highway	8.27.90 Recorder	116.70 115.00	4	0-106.00	4	106.00-112.00	112.00-115.00	27.84
	NL0066	Khlong Luang Pathum Thani	Rangsit Switching Office Phahonyothin Highway	5.26.89 Recorder	172.25 165.00	4	0-156.00	4	156.00-162.00	162.00-165.00	32.91
	NB0067	Khlong Luang Pathum Thani	Rangsit Switching Office Phahonyothin Highway	8.21.90	233.50 226.00	4	0-217.00	4	217.00-223.00	223.00-226.00	41.90
87 F6 51361V	PD0049 674500 1545800	Lam Luk Ka Pathum Thani	Pathum Thani Agriculture - College Tambon Khu Khot	5.30.89 Recorder	122.86 108.00	4	0-99.00	4	99.00-105.00	105.00-108.00	23.41
88 C3 50361II	PD0054 638300 1519900	Sam Phran Nakhon Pathom	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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
88 C3	NL0069	Sam Phran Nakhon Pathom	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
	NB0061	Sam Phran Nakhon Pathom	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 D4 5036I	PD0056 654100 1531200	Bang Yai Nonthaburi	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
	NB0063	Bang Yai Nonthaburi	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
90 B4 5036II	PD0057 652100 1511800	Bang Khun Thian Bangkok	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
	NL0070	Bang Khun Thian Bangkok	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
	NB0062	Bang Khun Thian Bangkok	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 F5 5036I	PD0060 660500 1547800	Muang Pathum Thani	Wat Phrai Fa  Tambon Bang Dua	5.07.90	135.00 113.00	4	0-104.00	4	104.00-110.00	110-113.00	14.97
	NL0074	Muang Pathum Thani	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
	NB0064	Muang Pathum Thani	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 E3 5036I	PD0061 640500 1534700	Sai Noi Nonthaburi	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
	NL0073	Sai Noi Nonthaburi	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
	NB0065	Sai Noi Nonthaburi	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

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	Depth drilled (m) Well depth (m)	casing		Slotted perforation		Sand collected pipe Interval (m)	Static water level (m)
		Province District	Details			Dia. (in)	Interval	Dia. (in)	Interval (m)		
93 F6 5236IV	PD0063 666800 1537900	Pak Kret Nonthaburi	Wat Phasuk Mu Thi 10 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
94 G4 5037II	PD0066 645100 1559400	Sai Noi Nonthaburi	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
	NL0075	Sai Noi Nonthaburi	Wat Lak Khon  Tambon Rat Niyom	9.12.90 Recorder	153.00 153.00	4	0-144.00	4	144.00-150.00	150.00-153.00	13.59
	NB0068	Sai Noi Nonthaburi	Wat Lak Khon  Tambon Rat Niyom	8.27.90 Recorder	235.67 229.00	4	0-220.00	4	220.00-226.00	226.00-229.00	14.60
95 A10 5136II	PD0069 705900 1500900	Bang Bo Samut Prakan	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	
	NL0077	Bang Bo Samut Prakan	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	
	NB0071	Bang Bo Samut Prakan	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 G9 5137II	PD0070 604600 1556800	Thanyaburi Pathum Thani	Wat Pichit Pitayaram Khlong Sip Sam Tambon Bung Nam Rak	11.2.90	118.00 117.00	4	0-108.00	4	108.00-114.00	114.00-117.00	3.84
	NL0079	Thanyaburi Pathum Thani	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
	NB0070	Thanyaburi Pathum Thani	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 F7 5137III	PD0071 684900 1548900	Thanyaburi Pathum Thani	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
	NL0080	Thanyaburi Pathum Thani	Wat Mun Chindaram Mu Thi 3 Tambon Bung Yitho	12.11.90	139.00 134.33	4	0-125.00	4	125.00-131.00	131.00-134.00	30.50
	NB0072	Thanyaburi Pathum Thani	Wat Mun Chindaram Mu Thi 3 Tambon Bung Yitho	11.22.90	234.00 175.00	4	0-166.00	4	166.00-172.00	172.00-175.00	41.46

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number Area code/ map	Well number Coordinates	Location		Date drilling Completed Recorder	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)		
98 H9 5137II	PD0073 697100 1562800	Nong Sua Pathum Thani	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
	NB0074	Nong Sua Pathum Thani	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 B4 5036II	PD0080 658000 1512000	Bang Khun Thian Bangkok	Wat Kok  Tambon Chom Thong	8.26.92	112.00 111.97	4	0-102.00	4	102.00-108.00	108.00-111.97	
	NL0082	Bang Khun Thian Bangkok	Wat Kok  Tambon Chom Thong	8.23.92	174.00 172.70	4	0-163.00	4	163.00-169.00	169.00-172.70	
	NB0079	Bang Khun Thian Bangkok	Wat Kok  Tambon Chom Thong	8.17.92	229.00 223.50	4	0-214.00	4	214.00-220.00	220.00-223.00	
100 B4 5036II	NL0086 653500 1508800	Bang Khun Thian Bangkok Abandoned	National Housing Authority No.3 Thon Buri-Pak Tho Rd.	10.17.91	167.00 162.00	4	0-152.00	4	152.00-158.00	158.00-162.00	
	NB0080	Bang Khun Thian Bangkok	National Housing Authority No.3 Thon Buri-Pak Tho Rd.	10.10.91	240.00 228.50	4	0-218.00	4	218.00-224.00	224.00-228.00	
101 D5 5036I	PD0083 657900 1523400	Taling Chan Bangkok	Wat Taling Chan	12.6.91	102.00 100.00	4	0-90.00	4	90.00-96.00	96.00-100.00	
	NL0083	Taling Chan Bangkok	Wat Taling Chan	11.25.91 Recorder	180.00 178.00	4	0-168.00	4	168.00-174.00	174.00-178.00	
	NB0081	Taling Chan Bangkok	War Taling Chan	11.3.91 Recorder	234.00 220.00	4	0-210.00	4	210.00-216.00	216.00-220.00	
102 C9 5136I	PD0086 704600 1521200	Nong Chok Bangkok	Wat Lam Toiting  Khwaeng Lam Toiting	9.27.92	109.00 106.61	4	0-96.00	4	96.00-102.00	102.00-106.61	
	NL0085	Nong Chok Bangkok	Wat Lam Toiting  Khwaeng Lam Toiting	9.22.92	164.00 159.46	4	0-150.00	4	150.00-156.00	156.00-159.46	
	NB0084	Nong Chok Bangkok	Wat Lam Toiting  Khwaeng Lam Toiting	9.12.92	237.00 214.90	4	0-205.00	4	205.00-210.00	210.00-214.90	

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number Area code/ map	Well number Coordinates	Location		Date drilling Completed Recorder	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)		
103 C4 5036II	PD0081 646100 1520200	Taling Chan Bangkok	Thawi Watthana School  Khwaeng Thawi Wattana	9.4.92 Recorder	116.00 116.00	4	0-106.00	4	106.00-112.00	112.00-116.00	
	NL0087	Taling Chan Bangkok  Abandoned	Thawi Watthana School  Khwaeng Thawi Wattana	8.23.92 Recorder	163.00 160.00	4	0-150.00	4	151.00-157.00	157.00-160.00	
	NB0085	Taling Chan Bangkok  Abandoned	Thawi Watthana School  Khwaeng Thawi Wattana	1.7.92 Recorder	233.00 214.00	4	0-204.00	4	204.00-210.00	210.00-214.00	
104 B6 5136III	DMW0001 666000 1507000	Phra Pradaeng Samut Prakan	Rat Pracha Samasai School  Tambon Bang Phung	6.14.93 Recorder	611.00 600.00	8 6	0-72.00 72.00-584.00	4	588.00-597.00	597.00-600.00	
105 B4 5036II	DMW0002 648300 1507800	Bang Khum Thian Bangkok	Technic Ratchasit College  Bang Bon	12.3.93 Recorder	600.00 581.00	6 4	0-560.00 560.00-572.00	4	572.00-578.00	578.00-581.00	24.28
106 F5 5037II	DMW0003 661300 1551300	Lat Lum Kaeo Pathum Thani	Provincial Electric Authority Lat Lum Kaeo	12.13.93 Recorder	400.00 384.00	6 4	0-363.00 363.00-375.00	4	375.00-381.00	381.00-384.00	25.71
107 C8 5136IV	A0008 688400 1522300	Lat Krabang Bangkok	Rom Klao National Housing Authority Khwaeng Khlong Song Ton Nun	5.23.93 Recorder	49.00 48.00	4	0-41.96	8	41.96-47.50		
	A0007	Lat Krabang Bangkok	Rom Klao National Housing Authority Khwaeng Khlong Song Ton Nun	5.20.93 Recorder	110.00- 108.00	4	0-101.96	8	10.96-107.50		
	A0006	Lat Krabang Bangkok	Rom Klao National Housing Authority Khwaeng Khlong Song Ton Nun	5.17.93 Recorder	146.00 145.00	4	0-136.19	8	136.19-144.50		
	A0005	Lat Krabang Bangkok	Rom Klao National Housing Authority Khwaeng Khlong Song Ton Nun	5.4.93 Recorder	218.00 215.00	4	0-206.19	8	206.19-214.50		
	A0004	Lat Krabang Bangkok	Rom Klao National Housing Authority Khwaeng Khlong Song Ton Nun	5.15.93 Recorder	302.00 302.00	4	0-293.19	8	293.19-301.50		
	A0003	Lat Krabang Bangkok	Rom Klao National Housing Authority Khwaeng Khlong Song Ton Nun	5.10.93 Recorder	362.00 360.00	4	0-351.19	8	351.19-359.50		
	A0002	Lat Krabang Bangkok	Rom Klao National Housing Authority Khwaeng Khlong Song Ton Nun	5.7.93 Recorder	439.00 437.00	4	0-428.00	8	428.20-436.50		

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
107 C8	A0001	Lat Krabang Bangkok	Rom Klao National Housing Authority Khwaeng Khlong Song Ton Num	5.14.93 Recorder	558.00 574.00	4	0-558.00	8	555.80-574.00		
108 G6 5137III	B0005 674600 1556800	Khlong Luang Pathum Thani	A.I.T. Phahon Yothin Rd. Tambon Khlong Nung	6.5.93 Recorder	49.00 47.00	4	0-40.96	8	40.96-46.50		
	B0004	Khlong Luang Pathum Thani	A.I.T. Phahon Yothin Rd. Tambon Khlong Nung	6.2.93 Recorder	96.00 94.00	4	0-87.96	8	87.96-93.50		
	B0003	Khlong Luang Pathum Thani	A.I.T. Phahon Yothin Rd. Tambon Khlong Nung	5.30.93 Recorder	154.00 153.00	4	0-146.97	8	146.97-152.50		
	B0002	Khlong Luang Pathum Thani	A.I.T. Phahon Yothin Rd. Tambon Khlong Nung	5.28.93 Recorder	193.00 192.00	4	0-188.97	8	185.97-191.50		
	B0001	Khlong Luang Pathum Thani	A.I.T. Phahon Yothin Rd. Tambon Khlong Nung	5.26.93 Recorder	273.00 272.00	4	0-263.08	8	263.18-271.50		
109 A3 5036II	C0005 638100 1500700	Muang Samut Sakhon	Wat Khlong Khru School Ekachai-Bang Bon Rd. Tambon Mahachai	5.18.93 Recorder	80.00 78.00	4	0-71.96	8	71.96-77.50		
	C0004	Muang Samut Sakhon	Wat Khlong Khru School Ekachai-Bang Bon Rd. Tambon Mahachai	5.10.93 Recorder	107.00 105.00	4	0-96.96	8	98.96-104.50		
	C0003	Muang Samut Sakhon	Wat Khlong Khru School Ekachai-Bang Bon Rd. Tambon Mahachai	5.14.93 Recorder	243.00 141.00	4	0-133.96	8	133.96-139.50		
	C0002	Muang Samut Sakhon	Wat Khlong Khru School Ekachai-Bang Bon Rd. Tambon Mahachai	6.12.93 Recorder	215.00 212.00	4	0-205.97	8	205.97-211.50		
	C0001	Muang Samut Sakhon	Wat Khlong Khru School Ekachai-Bang Bon Rd. Tambon Mahachai	6.8.93 Recorder	323.00 320.00	4	0-331.19	8	311.19-319.50		
110 D2 5136IV	PD0087 632900 1524800	Nakhon Chaisi Nakhon Pathom	Wat Thaiyawat Mu Thi 4 Tambon Thaiyawat	4.26.95 Recorder	90.00 85.90	4	0-74.00	4	74.00-80.00	80-85.90	5.00
	NL0088	Nakhon Chaisi Nakhon Pathom	Wat Thaiyawat Mu Thi 4 Tambon Thaiyawat	5.2.95 Recorder	130.00 131.00	4	0-122.00	4	122.00-128.00	128.00-131.00	30.00

Table 3. Records of Monitoring Wells in Bangkok and Adjacent Provinces

Station number	Well number	Location		Date drilling Completed Recorder	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)		
110	NB0086	Nakhon Chaisi Nakhon Pathom	Wat Thaiyawat Mu Thi 4 Tambon Thaiyawat	01.31.95	230.00 194.00	4	0-185.00	4	185.00-191.00	191.00-194.00	40.00
111 C2 5036III	PD0089 626100 1515900	Sam Phan Nakhon Pathom	Wat Wang Nam Khao Mu Thi 5 Tambon Khlong Chinda	06.02.95	96.00 95.00	4	0-86.00	4	86.00-92.00	92.00-95.00	23.00
	NL0089	Sam Phan Nakhon Pathom	Wat Wang Nam Khao Mu Thi 5 Tambon Khlong Chinda	05.13.95	162.00 159.00	4	0-150.00	4	150.00-156.00	156.00-159.00	
	NB0087	Sam Phan Nakhon Pathom	Wat Wang Nam Khao Mu Thi 5 Tambon Khlong Chinda	04.05.95	197.00 185.00	4	0-176.00	4	176.00-182.00	182.00-185.00	44.00
112 F1 5036IV	PD0088 615200 1543100	Don Tum Nakhon Pathom	Wat Thung Si Long Don Tum-Nong Pla Lai Rd., Km.2 Tambon Lam Hoei	05.24.95 Recorder	103.00 103.00	4	0-94.00	4	94.00-100.00	100.00-103.00	32.00
	NL0091	Don Tum Nakhon Pathom	Wat Thung Si Long Don Tum-Nong Pla Lai Rd., Km.2 Tambon Lam Hoei	01.06.95 Recorder	162.00 158.00	4	0-149.00	4	149.00-155.00	155.00-158.00	30.00
	NB0088	Don Tum Nakhon Pathom	Wat Thung Si Long Don Tum-Nong Pla Lai Rd., Km.2 Tambon Lam Hoei	05.15.95 Recorder	205.00 205.00	4	0-189.00	4	189.00-195.00	195.00-198.00	23.00
113 E2 5036IV	PD0090 629200 1534700	Nakhon Chaisi Nakhon Pathom	Wat Lamut Nakhon Chaisa-Dontum Rd. Tambon Wat Lamut	06.05.95	87.00 81.00	4	0-72.00	4	72.00-78.00	78.00-81.00	17.37
	NL0090	Nakhon Chaisi Nakhon Pathom	Wat Lamut Nakhon Chaisa-Dontum Rd. Tambon Wat Lamut	05.30.95	176.50 174.00	4	0-165.00	4	165.00-171.00	171.00-174.00	28.06
	NB0089	Nakhon Chaisi Nakhon Pathom	Wat Lamut Nakhon Chaisa-Dontum Rd. Tambon Wat Lamut	05.18.95	220.00 220.00	4	0-210.00	4	210.00-216.00	216.00-220.00	28.06
114 D1 5036IV	PD0091 618400 1528100	Muang Nakhon Pathom	Wat Rai Ko Ton Sam Rong  Tambon Phra Prathone	07.03.95 Recorder	106.00 105.00	4	0-96.00	4	96.00-102.00	102.00-105.00	25.00
	NL0092	Muang Nakhon Pathom	Wat Rai Ko Ton Sam Rong  Tambon Phra Prathone	06.28.95 Recorder	182.00 175.00	4	0-166.00	4	166.00-172.00	172.00-175.00	33.06
	NB0090	Muang Nakhon Pathom	Wat Rai Ko Ton Sam Rong  Tambon Phra Prathone	06.21.95	205.00 202.00	4	0-193.00	4	193.00-199.00	199.00-202.00	



Table 4. List of Monitoring Well Stations and DMR Surface Benchmarks.

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR01 C2	103 646100 1520200	Bangkok Taling Chan	Thawi Watthana School, Khwaeng Thawi Watthana
DMR02 D1	44 643400 1526500	Nakhon Pathom Nakhon Chaisi	Wat Salawan School, Mu Thi 5, Tambon Sala Ya
DMR03 C1	88 638300 1519900	Nakhon Pathom Sam Phran	Wat Tha Phut, Mu Thi 19, Tambon Rai Khing
DMR04 C1	45 636700 1513100	Nakhon Pathom Sam Phran	Wat Om Yai Ban Khlong Om Yai, Mu Thi 5, Tambon Om Yai
DMR05 B1	48 639400 1503300	Samut Sakhon Muang	Wat Bang Ping Ban Bang Ping, mu Thi 2, Tambon Na Di
DMR06 A1	62 638300 1497800	Samut Sakhon Muang	Samut Sakhon Provincial Hall, Chetsadang Road, Tambon Mahachai
DMR07 B2	24 649800 1504800	Bangkok Bang Khun Thian	Wat Phromma Rangsi, Khwaeng Samae Dam
DMR08 B2	25 653900 1507200	Bangkok Bang Khun Thian	Wat Sakae Ngam, Ban Sakae Ngam, Mu Thi 1, Khwaeng Samae Dam
DMR09 B2	90 652100 1511800	Bangkok Bang Khun Thian	Wat Ninsukharam, Mu Thi 10, Khwaeng Bang Bon
DMR10 C3	76 657600 1516200	Bangkok Phasi Charoen	Wat Kho Non, Phatthanakan Road, Khwaeng Bang Wa
DMR11 B3	11 663600 1500700	Bangkok Rat Burana	Wat Thung Khru (Thung Na Rat Sattha Tham), Ban Thung Khru, Mu Thi 5, Khwaeng Thung Khru
DMR12 A4	10 666000 1500700	Samut Prakan Phra Samut Chedi	Wat Khu Sang Ban Khu Sang, Mu Thi 9, Tambon Nai Khlong Bang Plakot
DMR13 B4	21 667300 1508500	Samut Prakan Phra Pradaeng	Wat Bang Ya Phraek Ban Bang Ya Phraek, Mu Thi 16, Tambon Bang Ya Phraek
DMR14 B5	74 683800 41521200	Bangkok Prawet	Wat Phong Phloi, Khwaeng Bang Na

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Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR15 B4	9 673300 1509000	Samut Prakan Muang	Wat Dan Samrong Ban Samrong Nua, Tambon Samrong Nua
DMR16 D3	84 660900 1531500	Nonthaburi Muang	Wat Bang Phraek Nua, Tambon Suan Yai
DMR17 E4	59 666800 1536800	Nonthaburi Pak Kret	Khlong Klua School, Mu Thi 4, Chacng Watthana Road, Tambon Pak Kret
DMR18 E4	70 673300 1539400	Bangkok Don Muang	Wat Don Muang, Khwaeng Talat Bang Khen
DMR19 F4	87 674500 1545800	Pathum Thani Lam Luk Ka	Pathum Thani Agriculture College, Tambon Khu Kot
DMR20 F4	66 674200 1549100	Pathum Thani Klong Luang	Bun Khum Rat Bamrung School, Soi Bun Khum, Tambon Khlong Nung
DMR21 G5	49 675100 1562200	Pathum Thani Khlong Luang	Wat Khun Ying Som Chin Ban Chaing Rak Noi, Tambon Khlong Nung
DMR22 G5	37 687200 1560600	Pathum Thani Khlong Luang	Wat Phalahan, Mu Thi 9, Tambon Khlong Hok
DMR23 G6	36 694100 1552900	Pathum Thani Thanyaburi	Wat Aiyikaram Ban Lam Phak Kut Khong Pact, Mu Thi 4, Tambon Lam Phak Kut
DMR24 G7	96 604600 14556800	Pathum Thani Thanyaburi	Wat Pichit Pitayaram, Khlong Sip Sam, Tambon Bung Nam Rak
DMR25 F5	97 684900 1548900	Pathum Thani Thanyaburi	Wat Mun Chindaram, Mu Thi 3, Tambon Bung Yitho
DMR26 C5	2 680100 1519900	Bangkok Bang Kapi	Bangkok Golf Course, Khwaeng Hua Mak
DMR27 D5	77 679400 1525900	Bangkok Bung Kum	Praphat Witthaya School, Sukhapiban Road, Khwaeng Khlong Kum
DMR28 D5	1 681000 1531800	Bangkok Min Buri	Wat Khu Bon Ban Khu Bon, Khwaeng Bang Chan

Table 4. List of Monitoring Well Stations and DMR Surface Benchmarks.

Benchmark number	Station number	Location	
		Province District	Details
DMR29 E5	75 685800 1535400	Bangkok Min Buri	Wat Paen Thong Sopharam, Mu Thi 13, Khwaeng Sam Wa Tawan Tok
DMR30 D6	33 688700 1528000	Bangkok Min Buri	Wat Saen Suk Ban Saen Suk, Mu Thi 2, Khwaeng Min Buri
DMR31 D6	73 685200 1526200	Bangkok Min Buri	Wat Bamphen Nua, Khwaeng Bang Chan
DMR32 D7	30 695600 1526000	Bangkok Min Buri	Wat Mai Lam Nok Khwaek Ban Lam Nok Khwaek, Mu Thi 10, Khwaeng Saen Saep
DMR33 D7	34 601400 1532300	Bangkok Nong Chok	Wat Phakdi Noraset Bang Krathum Rai, Khwaeng Krathum Rai
DMR34 F7	43 704200 1543500	Pathum Thani Lam Luk Ka	Wat Phum Udom, Mu Thi 9, Tambon Phut Udom
DMR35 E6	16 654900 1531600	Pathum Thani Lam Luk Ka	Wat Nang Khan Chantri, Tambon Bung Kham Phroi
DMR36 C6	41 690100 1519800	Bangkok Lat Krabang	Wat Bamrung Run Ban Khlong Sam, Khwaeng Khlong Sam Prawet
DMR37 C7	29 600500 1515000	Bangkok Lat Krabang	Wat Ratcha Kosa, Khwaeng Khun Thong
DMR38 C7	102 704600 1521200	Bangkok Nong Chok	Wat Lam Toiting, Mu Thi 1, Khwaeng Lam Toiting
DMR39 B6	32 695000 1511600	Samut Prakan Bang Phli	Wat Si Wari Noi, Mu Thi 6, Tambon Sisa Chorakhe Yai
DMR40 B6	18 688800 1552000	Samut Prakan Bang Phli	Phun Charoen Witthayakhom School, Tambon Bang Chalong
DMR41 A8	95 705900 1500900	Samut Prakan Bang Bo	Wat Bang Phli, Noi, Mu Thi 1, Tambon Bang Phli Noi
DMR42 A6	27 693800 1502900	Samut Prakan Bang Phli	Wat Mongkhon Nimit, Mu Thi 1, Tambon Bang Sao Thong

Table 4. List of Monitoring Well Stations and DMR Surface Benchmarks.

Benchmark number	Station number	Location	
		Province District	Details
DMR43 B5	83 683700 1508500	Samut Prakan Bang Phli	Bang Phli Switching Office Bang Na-Trat Tambon Bang phli Yai
DMR44 B5	68 682200 1512600	Bangkok Phra Khanong	Wat Thung Lan Na, Mu Thi 11, Khwaeng Dokmai
DMR45 A6	82 682500 1599300	Samut Prakan Bang Phli	Wat Noi Suwannaram Tambon Bang phli Yai
DMR46 A6	14 690600 1594900	Samut Prakan Muang	Bang Pla Aeronautical Transmission Station, Tambon Bang Pu Mai
DMR47 A5	81 676200 1596600	Samut Prakan Muang	Wat Sip Song Thanwaram, Mu Thi 1, Tambon Bang Pu Mai
DMR48 A5	12 677700 1500700	Samut Prakan Muang	Wat Phraek Sa Ban Phraek Sa, Tambon Phraek Sa
DMR49 C5	67 677200 153900	Bangkok Phra Khanong	Wat Wachiratham Sathit, Soi Sukhumvit 101/1, Sukhumvit Road, Khwaeng Bang Chak
DMR50 C4	80 671300 1519800	Bangkok Huai Khwang	11th Channel Television Station New Phetchaburi Road, Khwaeng Bang Kapi
DMR51 E5	28 679600 1540500	Pathum Thani Lam Luk Ka	Wat Sai Mai, Tambon Khu Khot
DMR52 F3	40 665900 1550300	Pathum Thani Muang	Pathum Thani Provincial Hall, Tambon Bang Prok
DMR53 F4	85 665800 1544200	Pathum Thani Muang	Wat Chinwanaram Worawihan, Tambon Bang Khayaeng
DMR54 E2	5 654300 1538500	Nonthaburi Bang Bua Thong	Wat Lahan, Ban Sano Loi, Tambon Sano Loi
DMR55 F4	51 641900 1545400	Nonthaburi Sai Noi	Wat Sai Yai, Tambon Sai Noi
DMR56 E1	92 640500 1534700	Nonthaburi Sai Noi	Limkun Watthana School Tambon Nong Phlao Ngai

Table 4. List of Monitoring Well Stations and DMR Surface Benchmarks.

Benchmark number	Station number	Location	
		Province District	Details
Area code	Coordinates		
DMR57 D2	89 654100 1531200	Nonthaburi Bang Yai	Wat Pikun Ngoen, Tambon Bang Muang
DMR58 G2	94 645100 1559400	Nonthaburi Sai Noi	Wat Lak Khon, Tambon Rat Niyom
DMR59 F2	39 653800 1552300	Pathum Thani Lat Lum Kao	Wat Bua Kao Keson Ban Rahaeng, Mu Thi 4, Tambon Rahaeng
DMR60 G3	38 663900 1562400	Phra Nakhon Si Ayutthaya Bang Sai	Wat Pa Kha, Mu Thi 1, Tambon Khok Chang
DMR61 D4	71 668600 1527100	Bangkok Chatuchak	Chatuchak Park, Khwaeng Lat Yao
DMR62 C4	61 656400 1521800	Bangkok Ratchathewi	Department of Mineral Resources, Khwaeng Thung Phayathai
DMR63 D3	64 664500 1525700	Bangkok Dusit	Wat Kao Fa Chula Mani, Thahan Road, Khwaeng Thanon Nakhon Chaisi
DMR64 D4	4 672100 1525500	Bangkok Lat Phrao	Phibun Uppatham School Ban Lat Phrao, Mu Thi 9, Khwaeng Lat Phrao
DMR65 D4	58 672200 1528900	Bangkok Lat Phrao	Wat Sirikamalawat, Mu Thi 14, Soi Chok Chai 4, Lat Phrao Road, Khwaeng Lat Phrao
DMR66 C6	74 683800 1521200	Bangkok Phra Khanong	Wat Lat Bua Khao (Ratchayotha), Khwaeng Prawet
DMR67 D5	22 677700 1532800	Bangkok Bang Khen	Wat Siri Phong Thamnitmit Ban Khlong Bua, Mu Thi 6, Khwaeng Tha Raeng
DMR68 E3	6630000 1536800	Nonthaburi Pak Kret	Si Sangwan School Tambon Pak Kret
DMR69 D4	17 671900 1531900	Bangkok Bang Khen	Wat Bang Bua, Khwaeng Anusawari
DMR70 F4	86 674800 1552100	Pathum Thani Khlong Luang	Rangsit Switching Office, Phahonlayothin Highway

Table 4. List of Monitoring Well Stations and DMR Surface Benchmarks.

Benchmark number	Station number	Location	
		Province District	Details
DMR71 G4	674000 1562500	Phra Nakhon Si Ayutthaya Wang Noi	Phetchaburi Teacher College, Pratu Nam Phra In
DMR72 G5	19 677800 1552000	Pathum Thani Khlung Luang	Wat Kla Cha-Um, Tambon Khlung Song
DMR73 G5	682000 1556000	Pathum Thani Khlung Luang	Wat Phra Thammakai Tambon Khlung Sam
DMR74 H3	35 665200 1569600	Phra Nakhon Si Ayutthaya Bang Sai	Wat Bot Somphon Chai, Mu Thi 1, Tambon Ratcha Khram
DMR75 H5	31 681900 1571400	Phra Nakhon Si Ayutthaya Wang Noi	Wat Lat Sai, Ban Lat Sai, Mu Thi 5, Tambon Lam Sai
DMR76 F3	91 660500 1547800	Pathum Thani Muang	Wat Phrai Fa, Tambon Bang Dua
DMR77 H7	98 697100 1562800	Pathum Thani Nong Sua	Amphoe Nong Sua Office Compound, Tambon Bung Ba
DMR78 B2	99 658000 1512000	Bangkok Bang Khum Thian	Bang Mot Witthaya School Khwaeng Khlung Bang Mot
DMR79 C3	78 657600 1521400	Bangkok Bangk Noi	Wat Chaiyathit, Soi Charan Sanit Wong 37, Khwaeng Bang Khun Si
DMR80 C6	3 683600 1515600	Samut Prakan Bang Phli	Wat Hua Khu Wanaram Ban Hua Khu Tambon Sisa Chorakhe Noi
DMR81 B3	23 664300 1511200	Samut Prakan Phra Pradaeng	Wat Ruak, Tambon Bang Phuang
DMR82 B4	54 671400 1509700	Samut Prakan Phra Pradaeng	Wat Mahawong, Soi Wat Mahawong, Pu Chao Saming Phrai Road, Tambon Samrong Tai
DMR83 A5	8 682500 1594700	Samut Prakan Muang	Wat Tamru, Sukhumvit-Khlung Dan Road, Tambon Bang Pu Mai
DMR84 C4	65 665900 1514800	Bangkok Yan Nawa	Mahamek Electrical Substation, Sathu Pradit Road, Khwaeng Chong Nonsi

Table 4. List of Monitoring Well Stations and DMR Surface Benchmarks.

Benchmark number	Station number	Location	
		Province District	Details
DMR85 D4	47 670100 1523500	Bangkok Huai Khwang	Wat Kunnathi Ruttharam, Khwaeng Huai Khwang
DMR86 C4	42 671000 1517400	Bangkok Klong Toei	Bangkok Planetarium, Khwaeng Phra Khanong

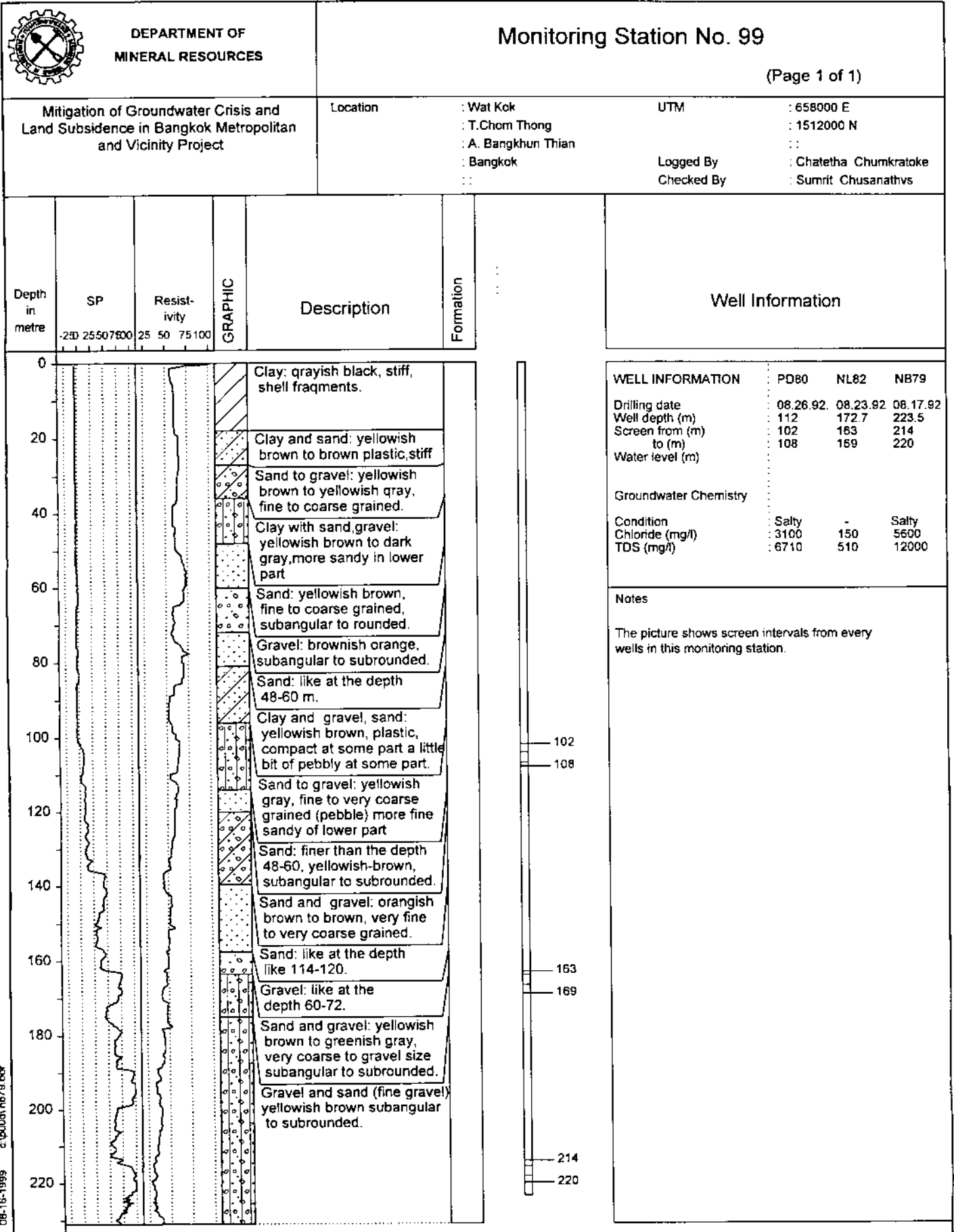
## Well log

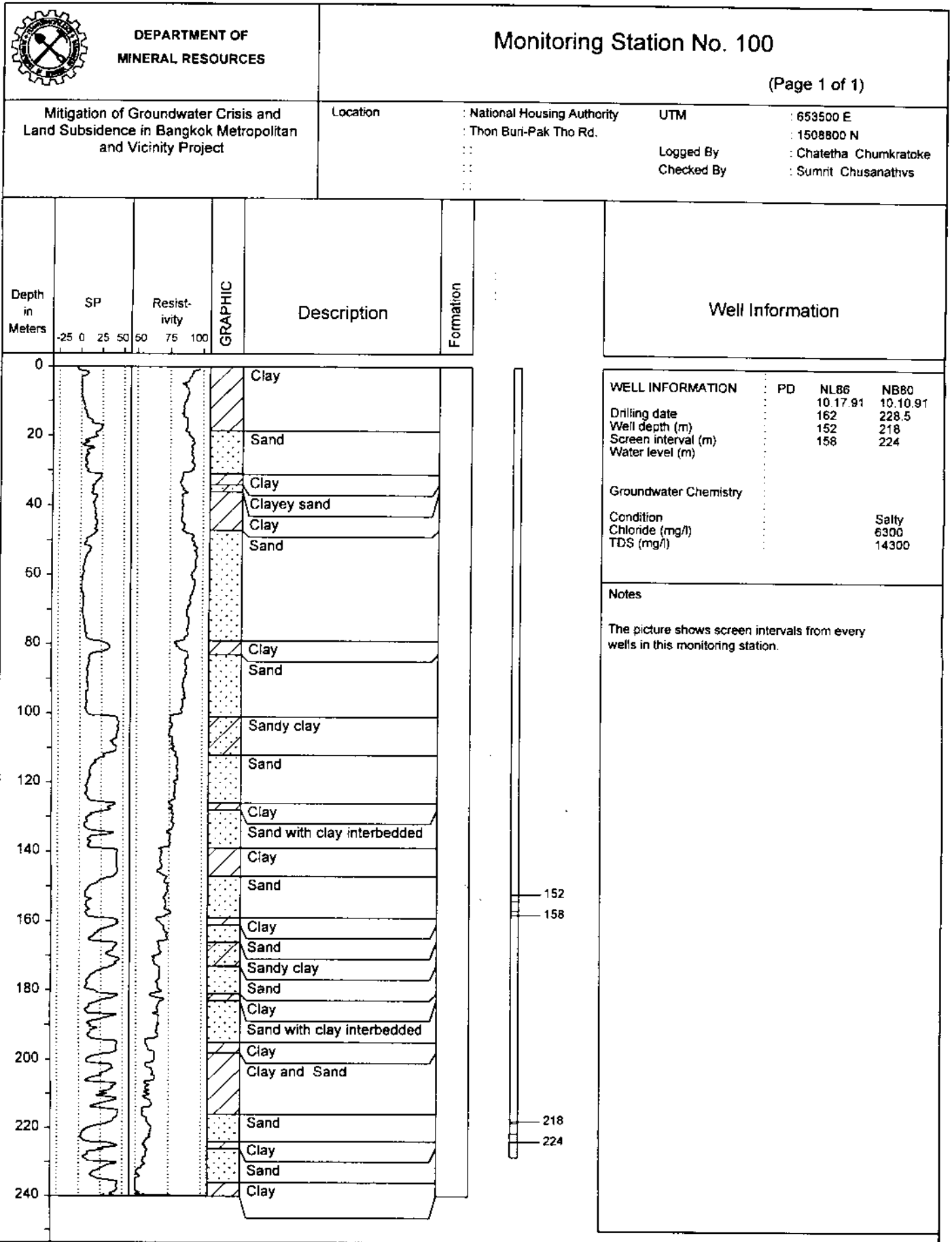
During drilling of each monitoring well, samples of cuttings are collected at 1.5 m interval and are analyzed and studied by geologists, Detailed descriptions of geologic materials such as depth, color, character, size of material, and structure of the strata penetrated are recorder.

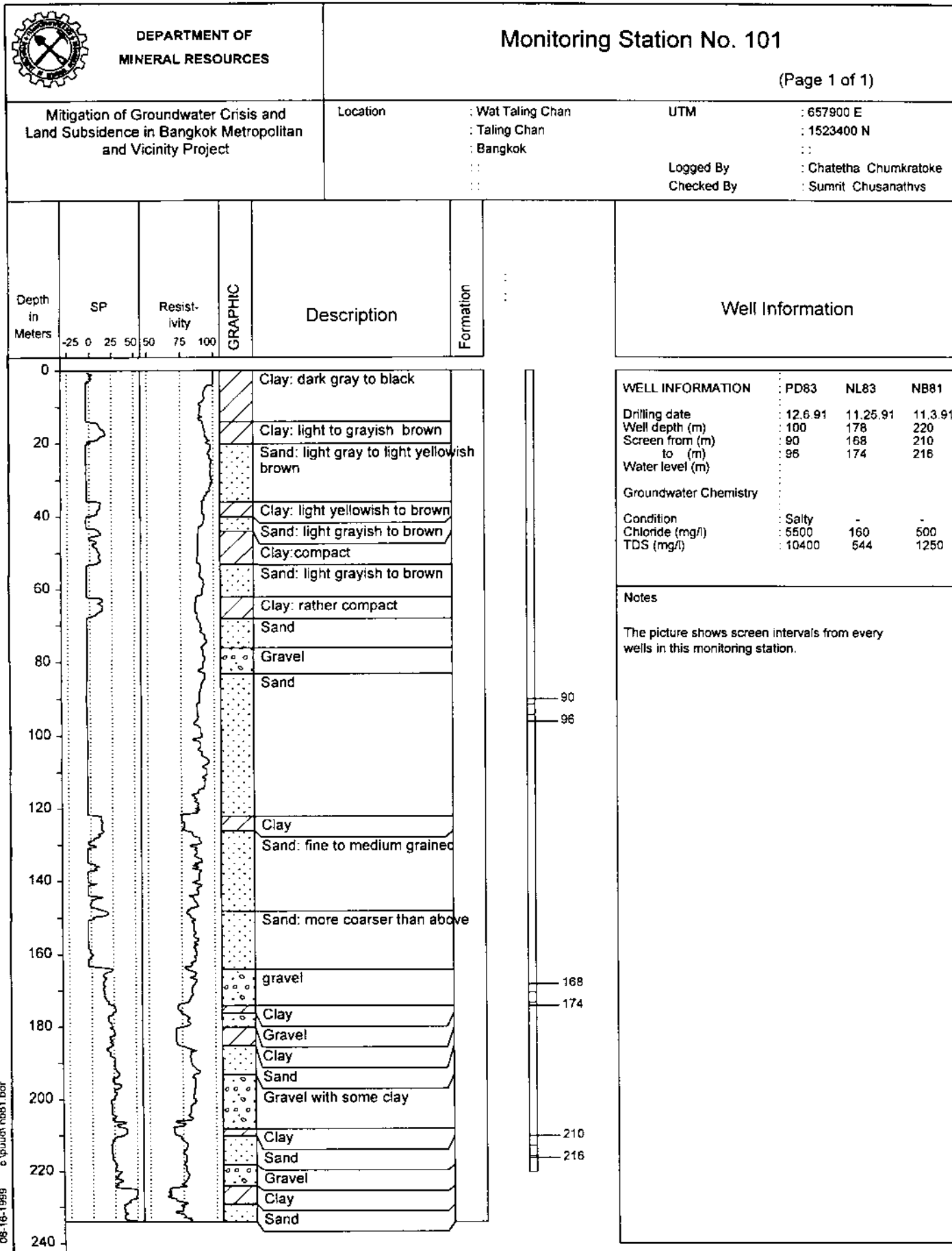
Down-the-hole electric logging was carried out in each well recording self potential and electric resistivities of the surrounding media and their variation with depth. The result is an electric log, which is affected by fluid within a well (drilling mud), by the character of surrounding strata, and by groundwater. Resistivity cure 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.

Only, nineteen well logs from monitoring station number 99 -117 are presented in this report . The well logs of the early monitoring stations were well documented in the first edition.









DEPARTMENT OF  
MINERAL RESOURCES

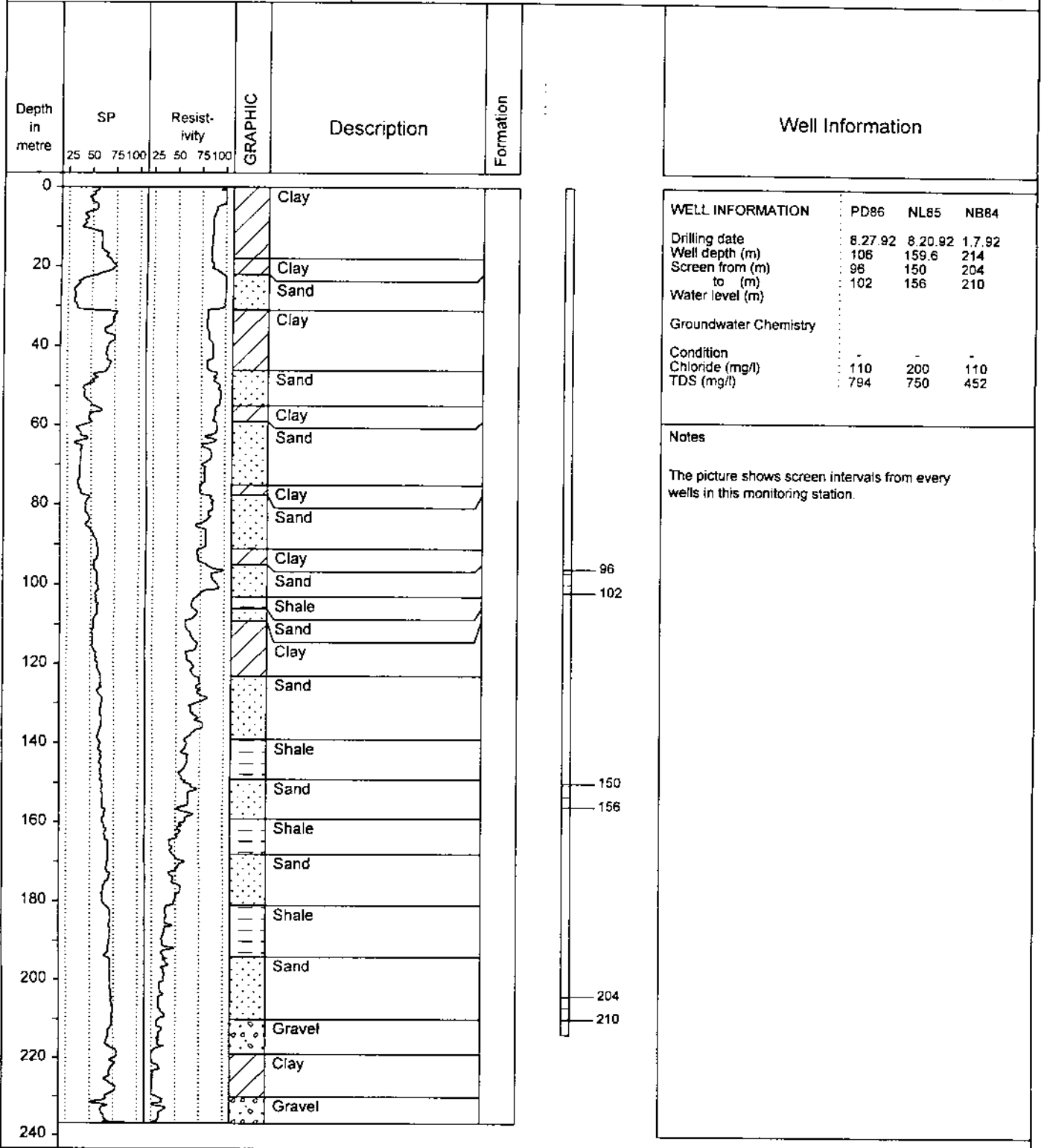
Monitoring Station No. 102

(Page 1 of 1)

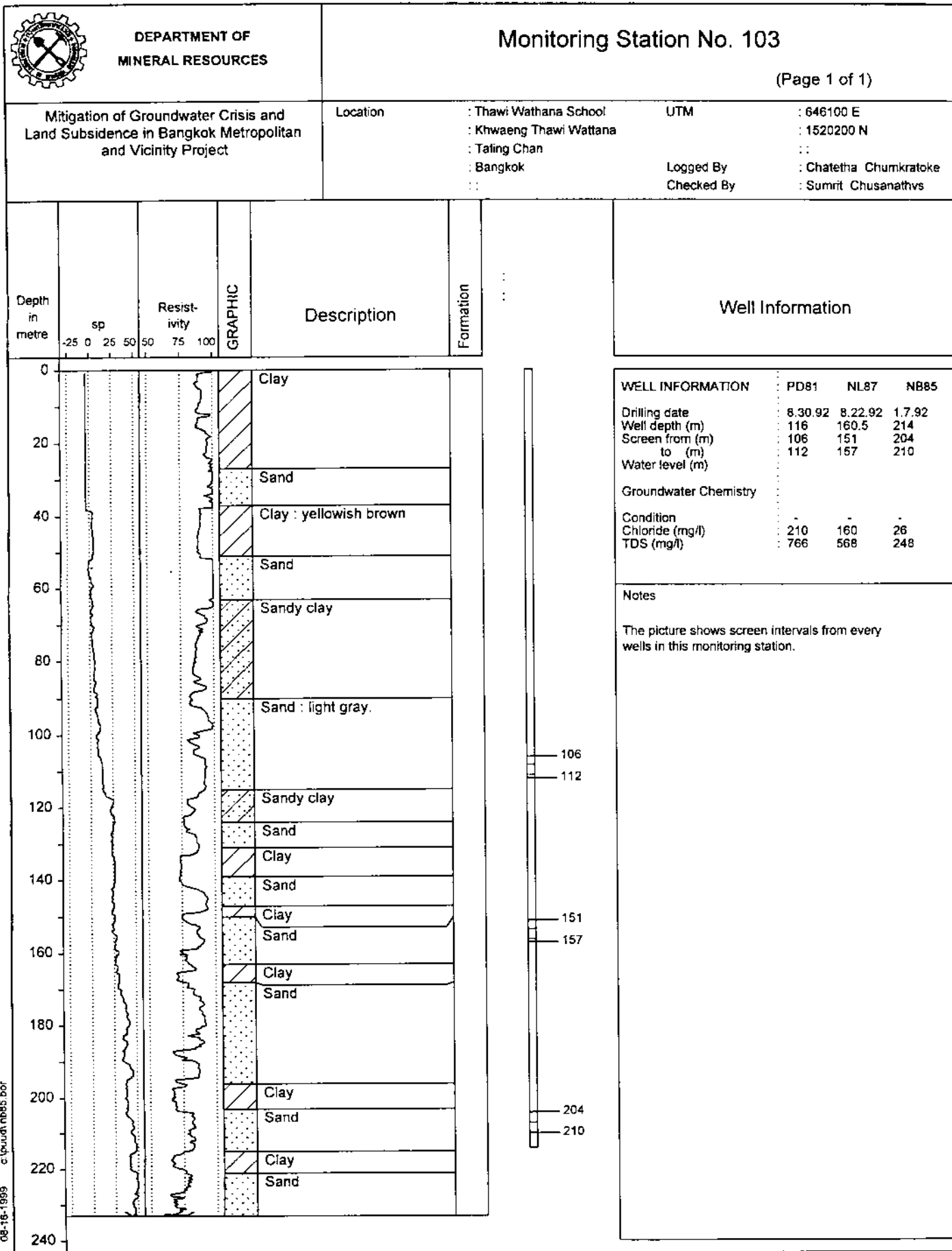
Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Wat Lam Toiting  
: Khwaeng Lam Toiting  
: Nong Chok  
: Bangkok

UTM : 604600 E  
: 1521200 N  
:  
:  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathvs



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DEPARTMENT OF  
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### Monitoring Station No. 104


(Page 1 of 3)

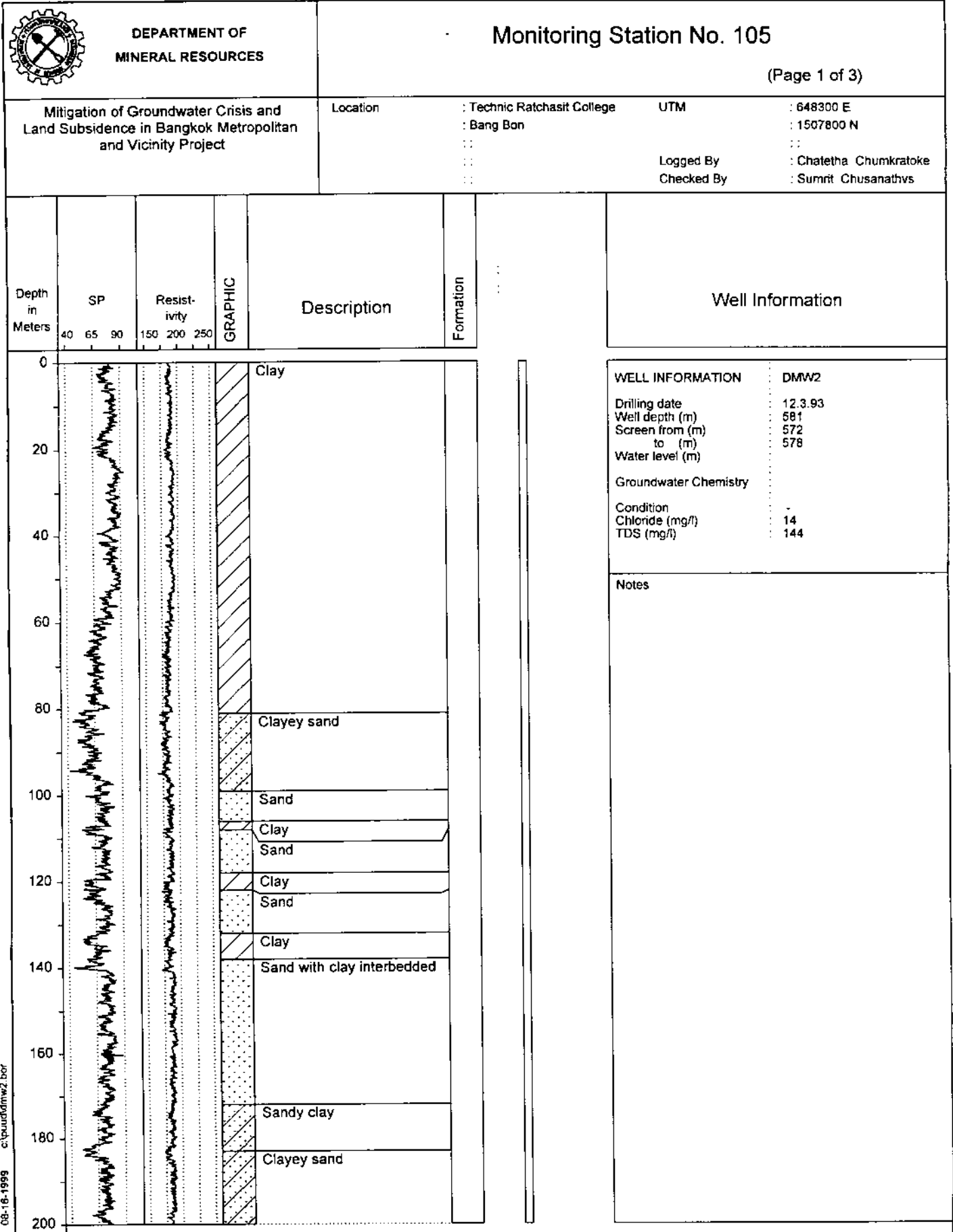
Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Rat Pracha Samasai School UTM : 666000 E  
: Tambon Bang Phung : 1507000 N  
: Phra Pradaeng :  
: Samut Prakan :  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathys

Depth in Meters	SP	Resistivity	GRAPHIC	Description	Formation	Well Information
0	25 50	50 75 100				<p><b>WELL INFORMATION</b></p> <p>Drilling date Well depth (m) Screen from (m) to (m) Water level (m)</p> <p>Groundwater Chemistry</p> <p>Condition Chloride (mg/l) TDS (mg/l)</p> <p><b>Notes</b></p> <p>The picture shows screen intervals from every wells in this monitoring station.</p>
40						
80						
120						
160						
200						

 <b>DEPARTMENT OF MINERAL RESOURCES</b>		<b>Monitoring Station No. 104</b> (Page 2 of 3)				
Mitigation of Groundwater Crisis and Land Subsidence in Bangkok Metropolitan and Vicinity Project		Location : Rat Pracha Samasai School UTM : 666000 E : Tambon Bang Phung : 1507000 N : Phra Pradaeng : : Samut Prakan : : Logged By : Chatetha Chumkratoke Checked By : Sumrit Chusanathys				
Depth in Meters	SP	Resistivity	GRAPHIC	Description	Formation	Well Information
0 25 50 50 75 100						<b>WELL INFORMATION</b> Drilling date Well depth (m) Screen from (m) to (m) Water level (m) Groundwater Chemistry Condition Chloride (mg/l) TDS (mg/l)
200						<b>Notes</b> The picture shows screen intervals from every wells in this monitoring station.
240						
280						
320						
360						
400						

 <b>DEPARTMENT OF MINERAL RESOURCES</b>				<b>Monitoring Station No. 104</b>			
Mitigation of Groundwater Crisis and Land Subsidence in Bangkok Metropolitan and Vicinity Project				Location : Rat Pracha Samasai School UTM : 666000 E : Tambon Bang Phung : 1507000 N : Phra Pradaeng : : Samut Prakan : :		(Page 3 of 3)	
				Logged By : Chatetha Chumkratoke Checked By : Sumrit Chusanathvs			
Depth in Meters	SP	Resistivity	GRAPHIC	Description	Formation	Well Information	
0 25 50 50 75 100							
400						WELL INFORMATION Drilling date Well depth (m) Screen from (m) to (m) Water level (m) Groundwater Chemistry Condition Chloride (mg/l) TDS (mg/l)	
440							
480							
520							
560							
600						Notes The picture shows screen intervals from every wells in this monitoring station.	





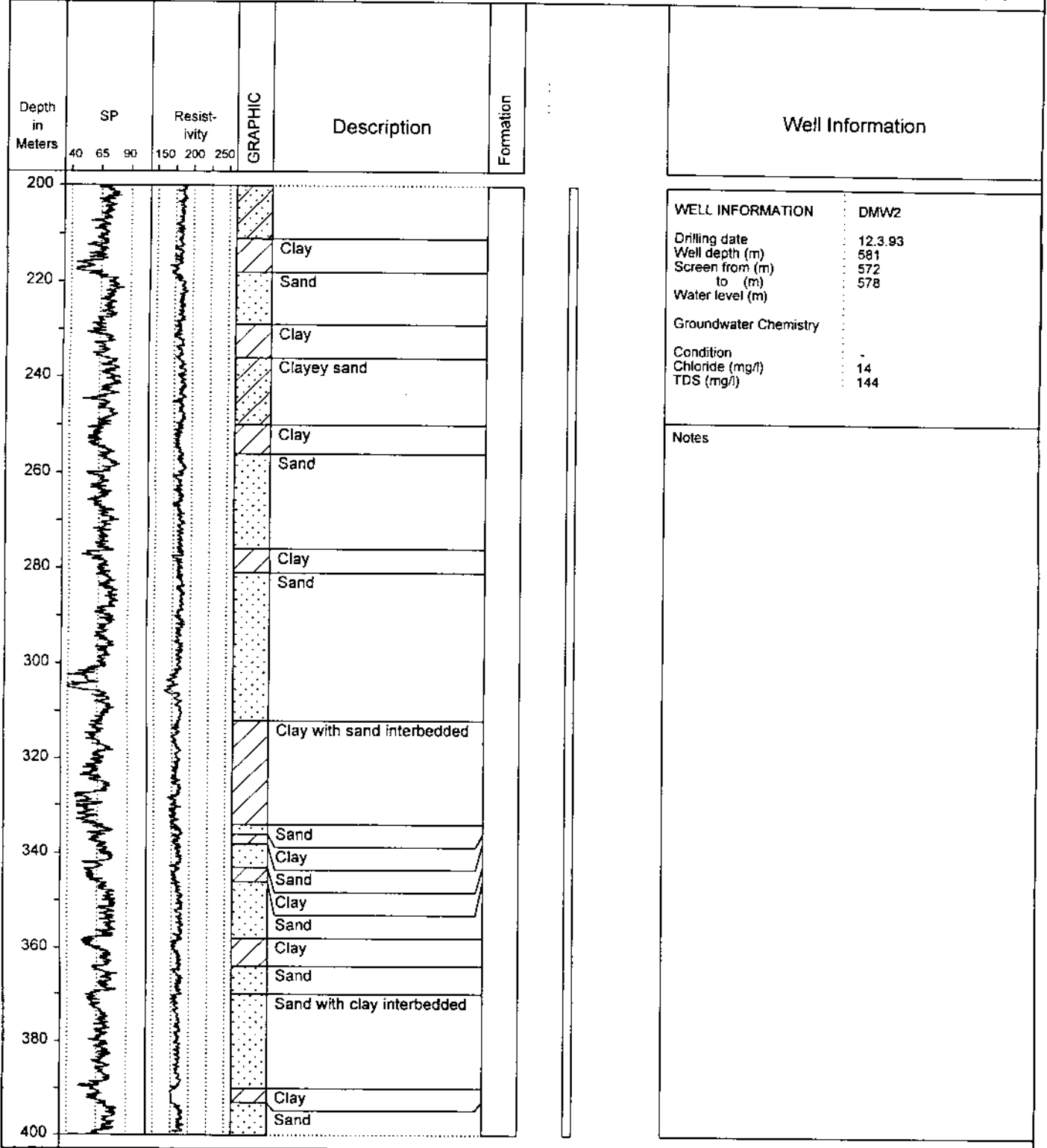
DEPARTMENT OF  
MINERAL RESOURCES

Monitoring Station No. 105

(Page 2 of 3)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Technic Ratchasit College  
: Bang Bon  
: :  
: :  
: :  
UTM : 648300 E  
: 1507800 N  
: :  
: :  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathvs





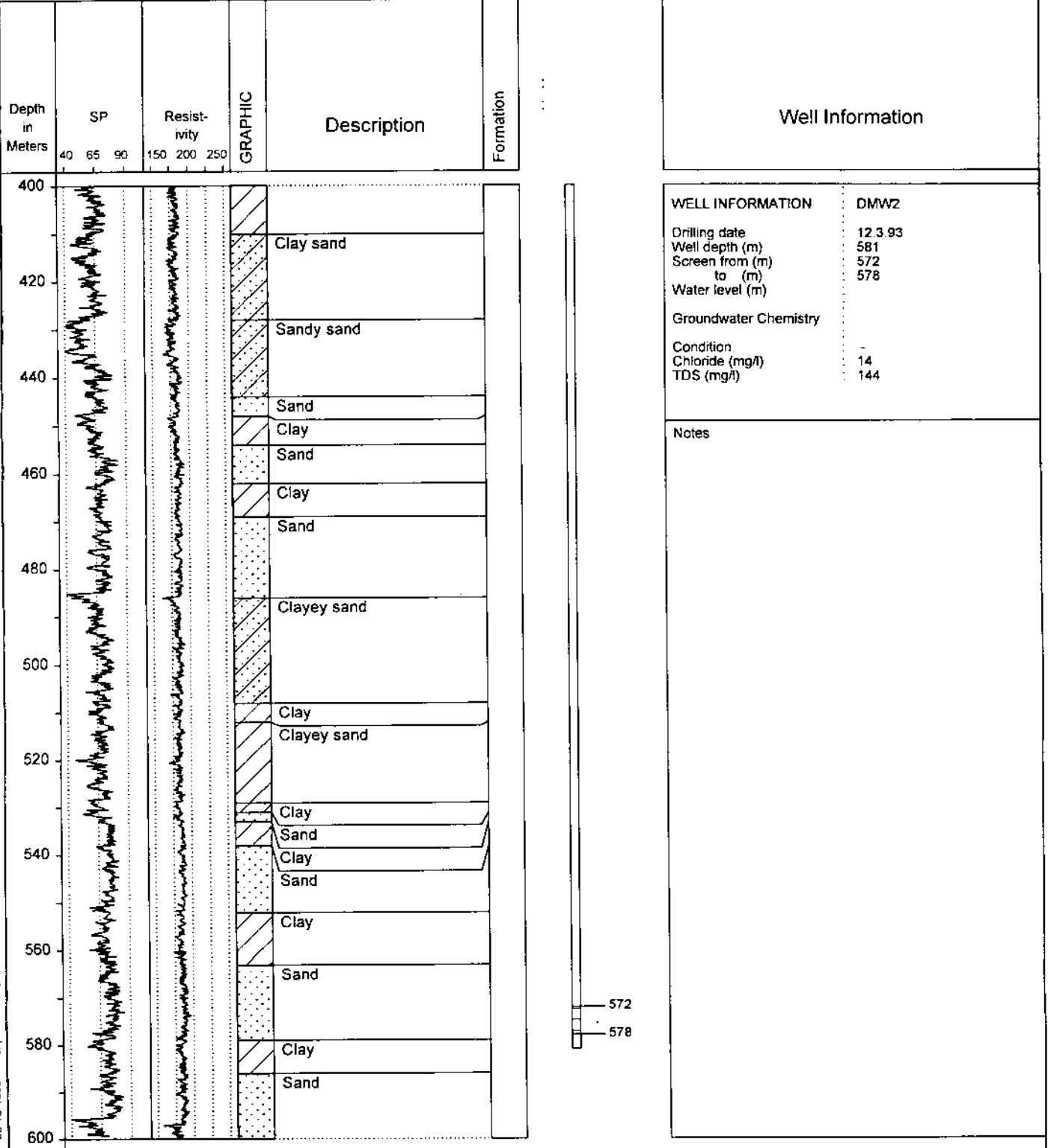
DEPARTMENT OF  
MINERAL RESOURCES

Monitoring Station No. 105

(Page 3 of 3)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Technic Ratchasit College  
: Bang Bon  
: :  
: :  
: :  
UTM : 648300 E  
: 1507800 N  
: :  
: :  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathv





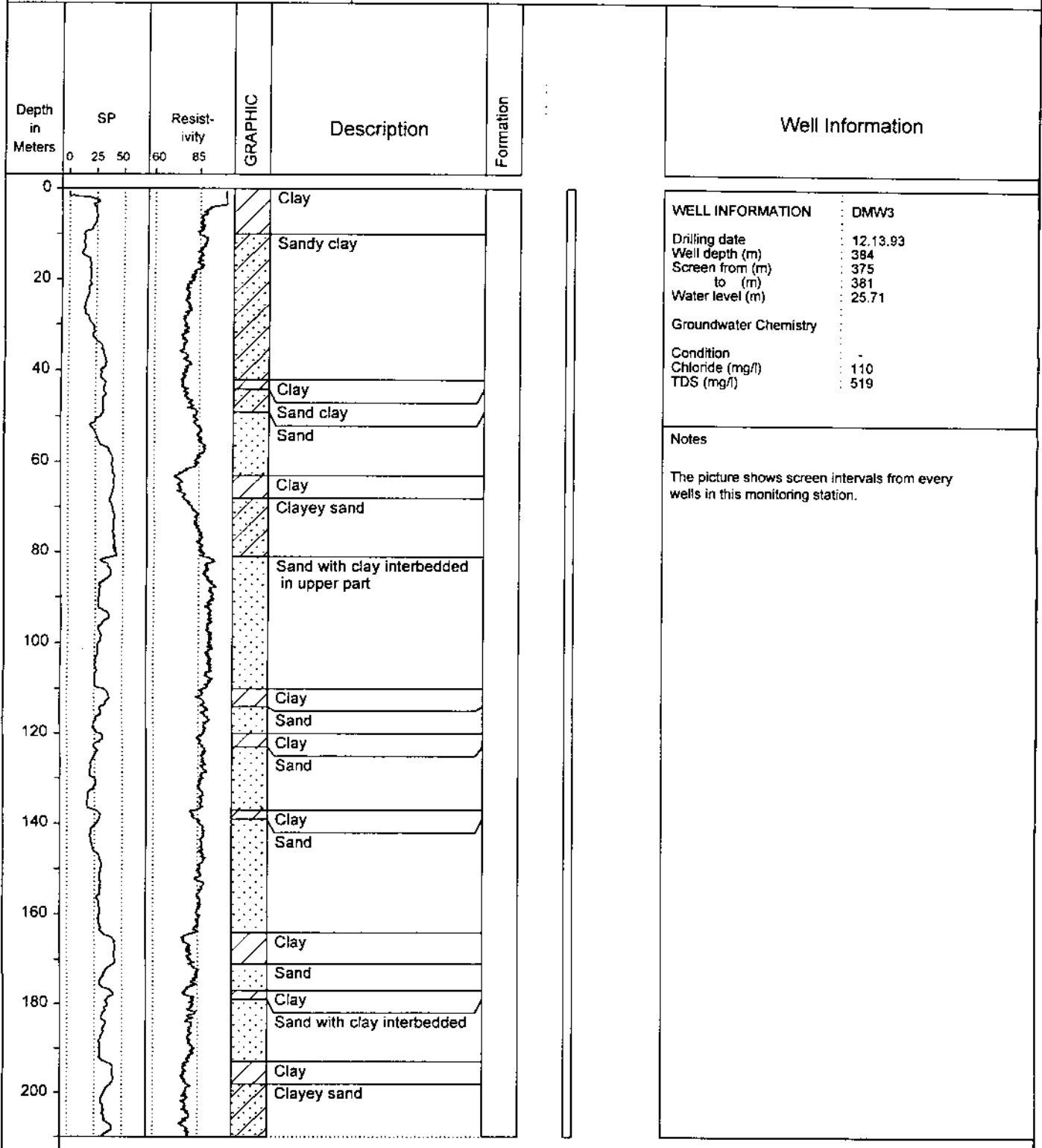
DEPARTMENT OF  
MINERAL RESOURCES

Monitoring Station No. 106

(Page 1 of 2)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Electricity Authority-Jad tum Kaco UTM : 661300 E  
: Raingsit-lat lumkaeo : 1507800 N  
: Pathum thani :  
: :  
: :  
: :  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathvs





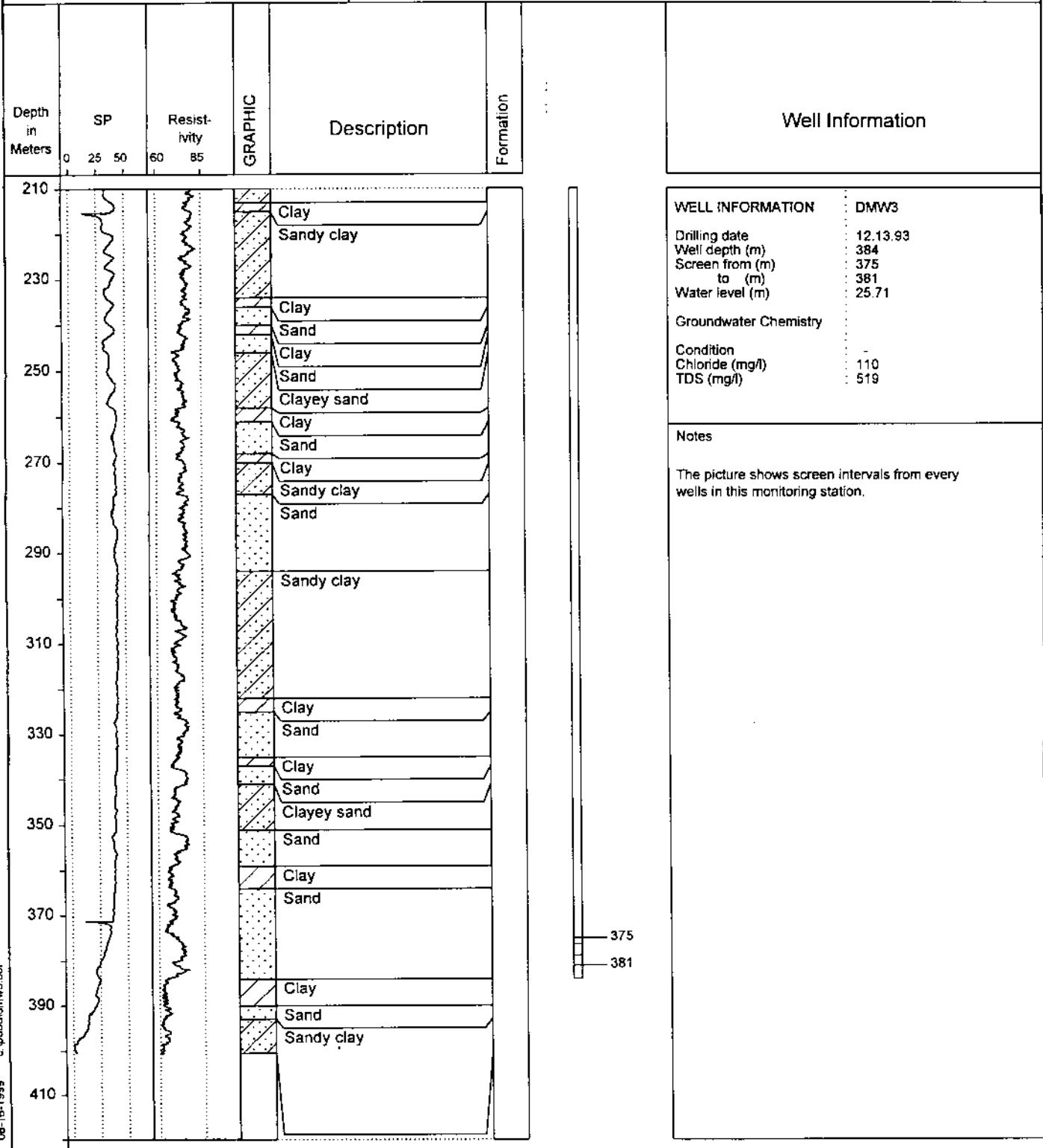
**DEPARTMENT OF  
MINERAL RESOURCES**

### Monitoring Station No. 106

(Page 2 of 2)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Electricity Authority-Iad lum Kao UTM : 661300 E  
 : Raingsit-lat lumkaeo : 1507800 N  
 : Pathum thani :  
 : :  
 : :  
 : :  
 Logged By : Chatetha Chumkratoke  
 Checked By : Sumrit Chusanathys



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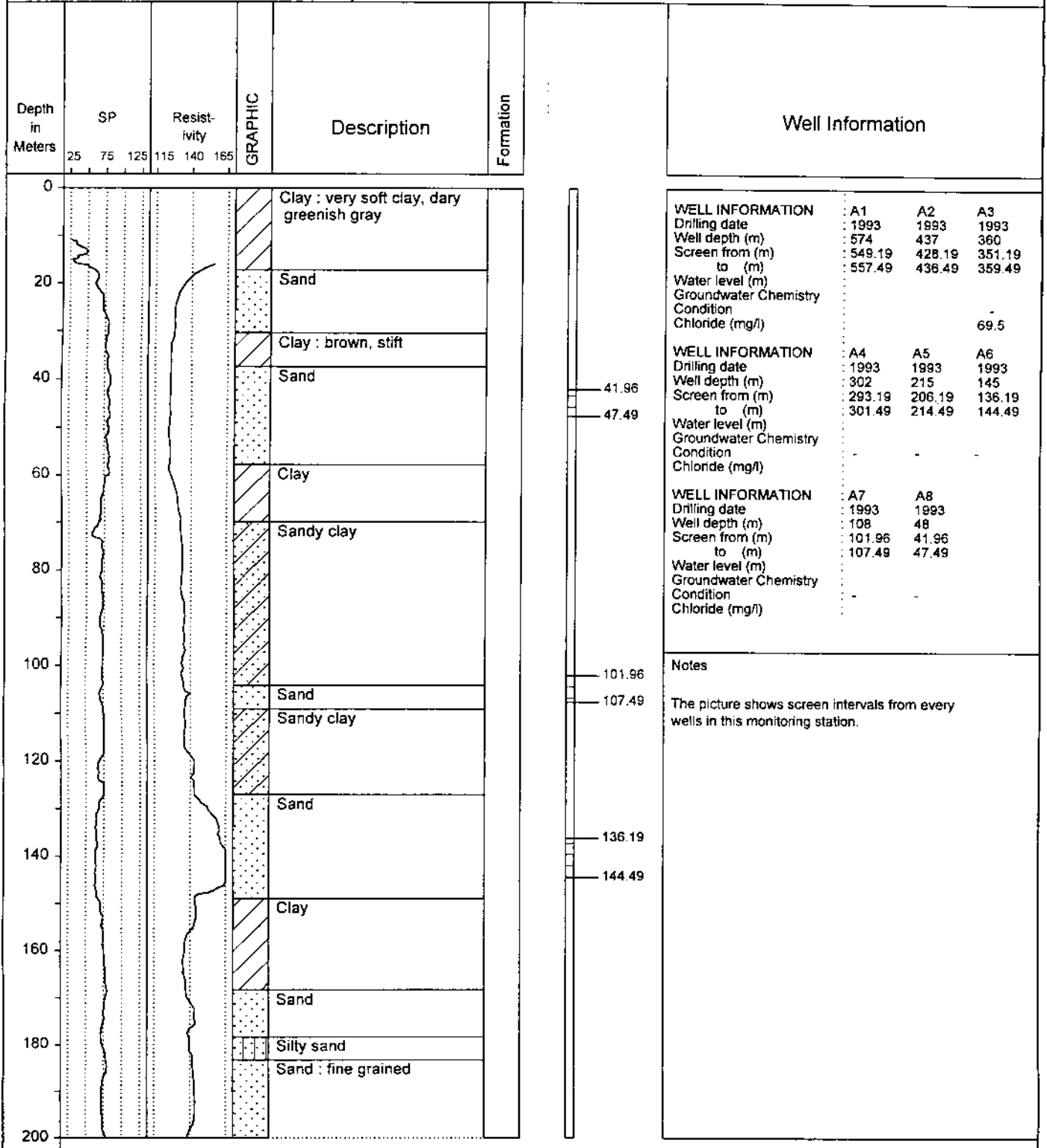
DEPARTMENT OF  
MINERAL RESOURCES

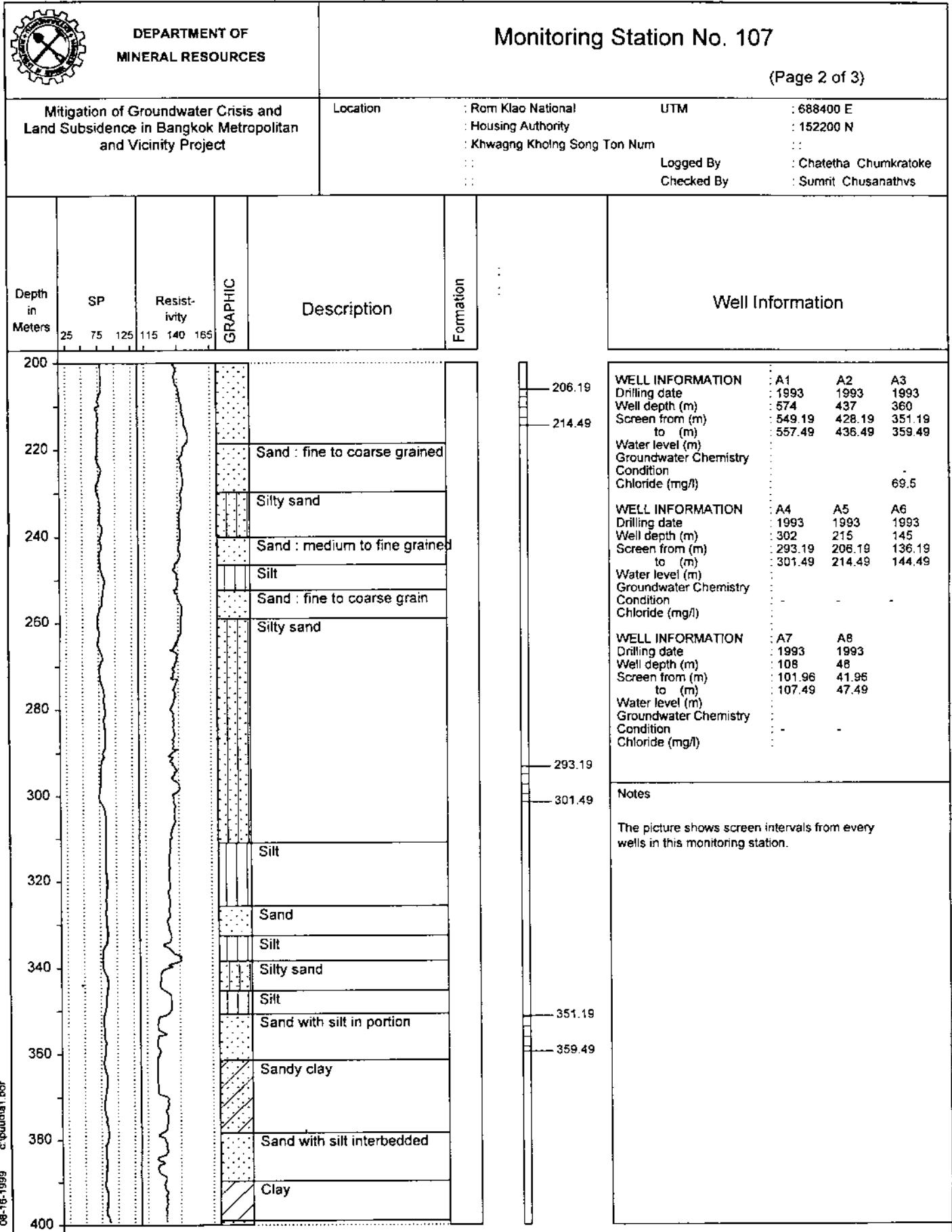
Monitoring Station No. 107

(Page 1 of 3)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Rom Klao National Housing Authority  
: Khwagng Khoing Song Ton Num  
UTM : 688400 E  
: 152200 N  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathvts





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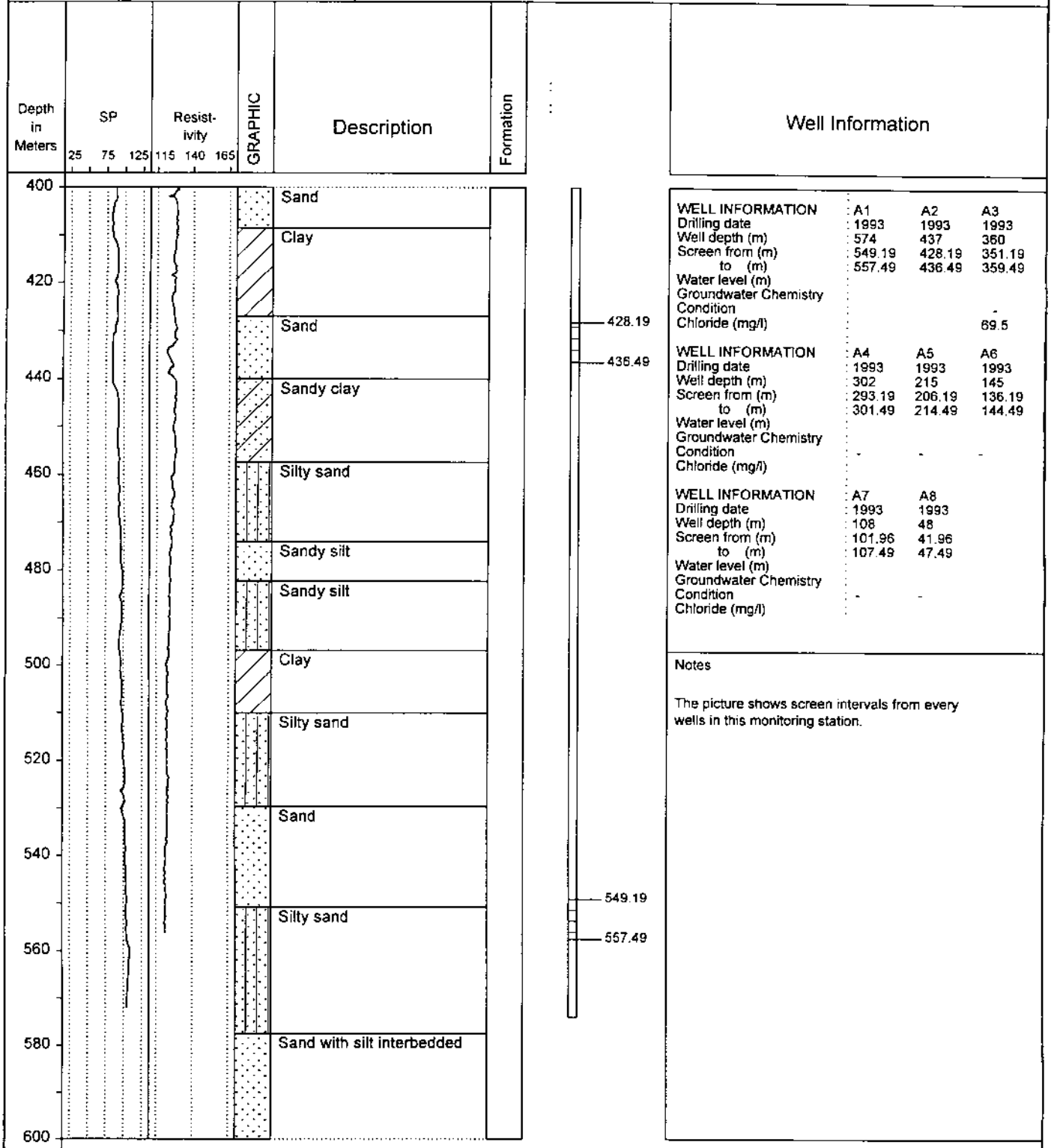
DEPARTMENT OF  
MINERAL RESOURCES

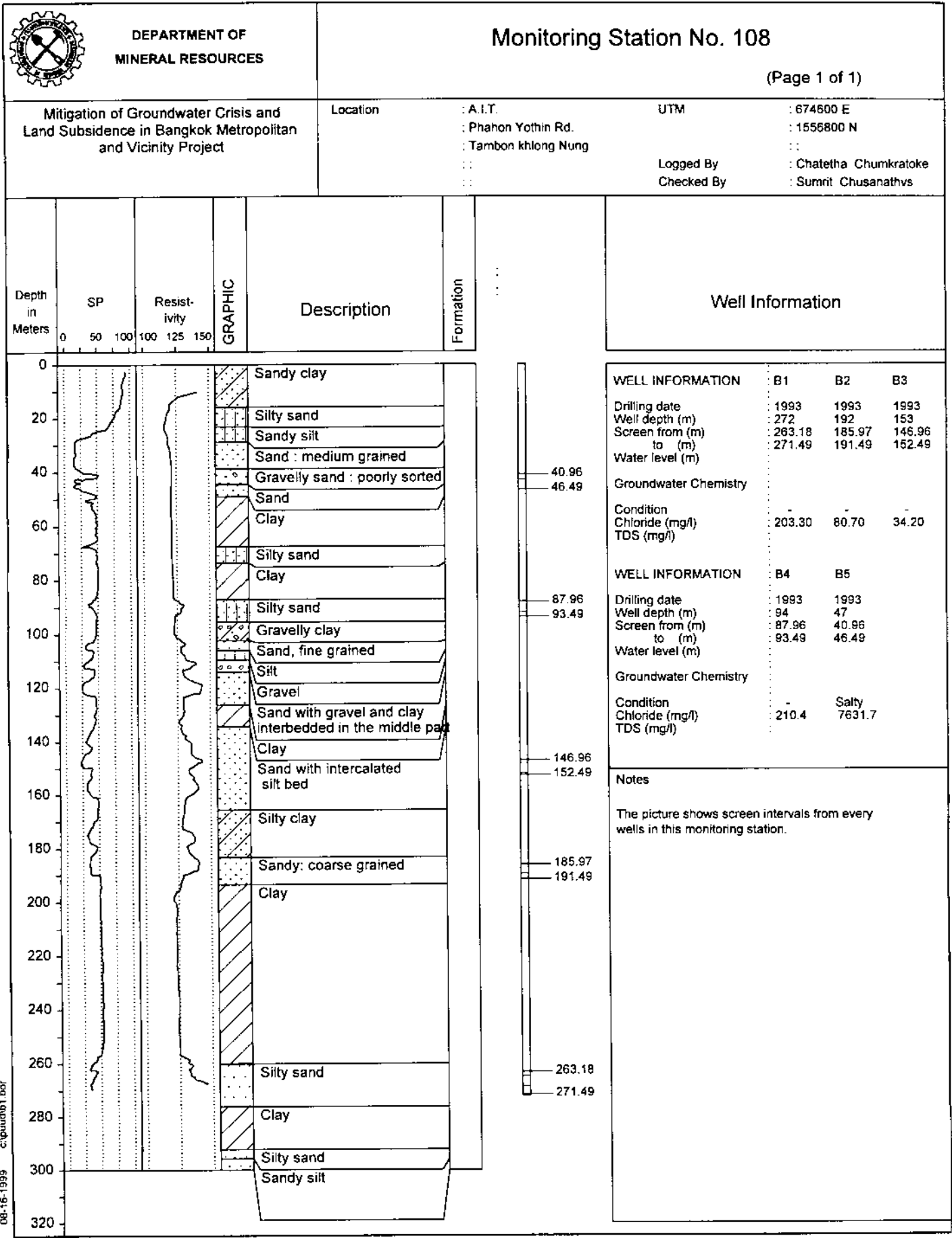
Monitoring Station No. 107

(Page 3 of 3)

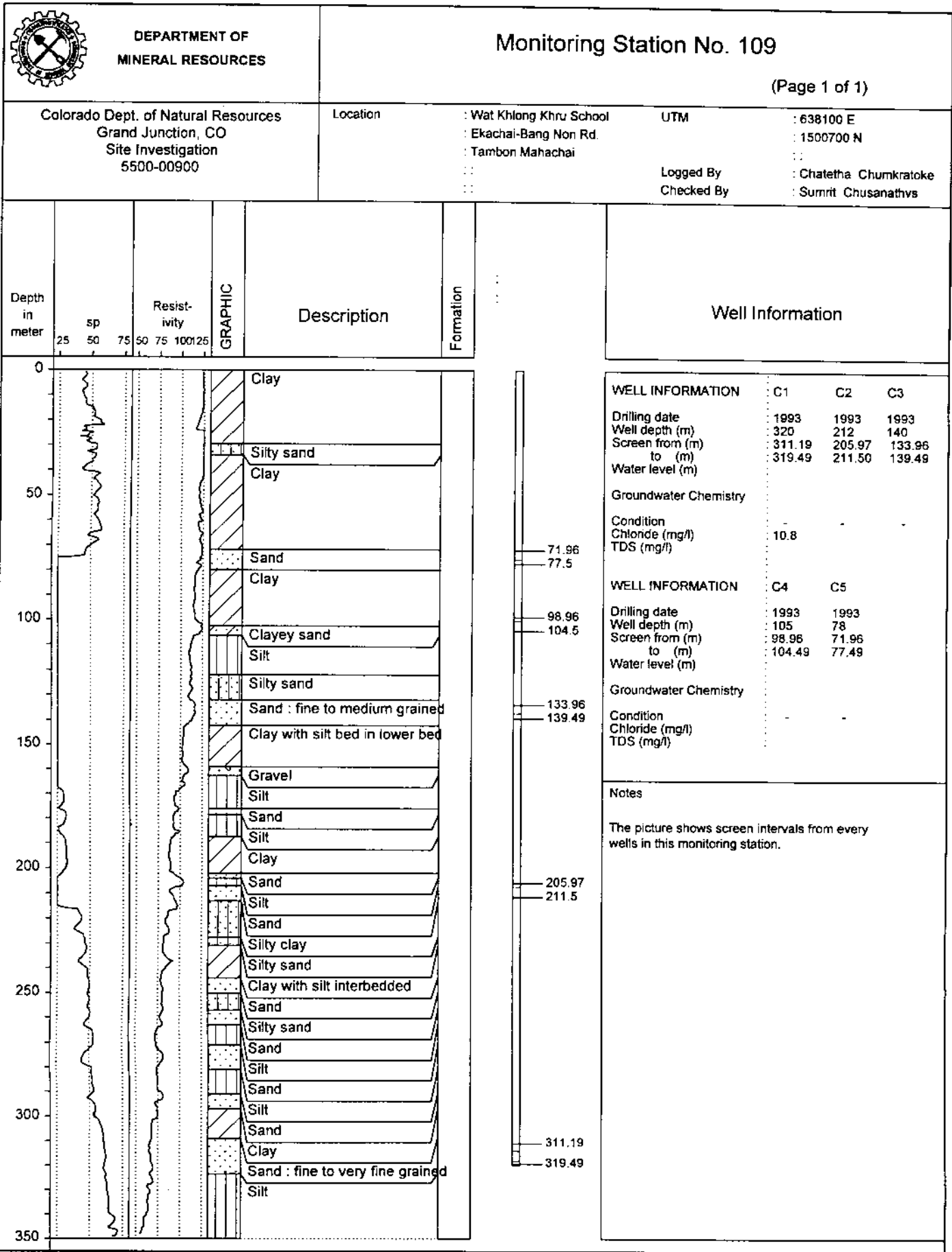
Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

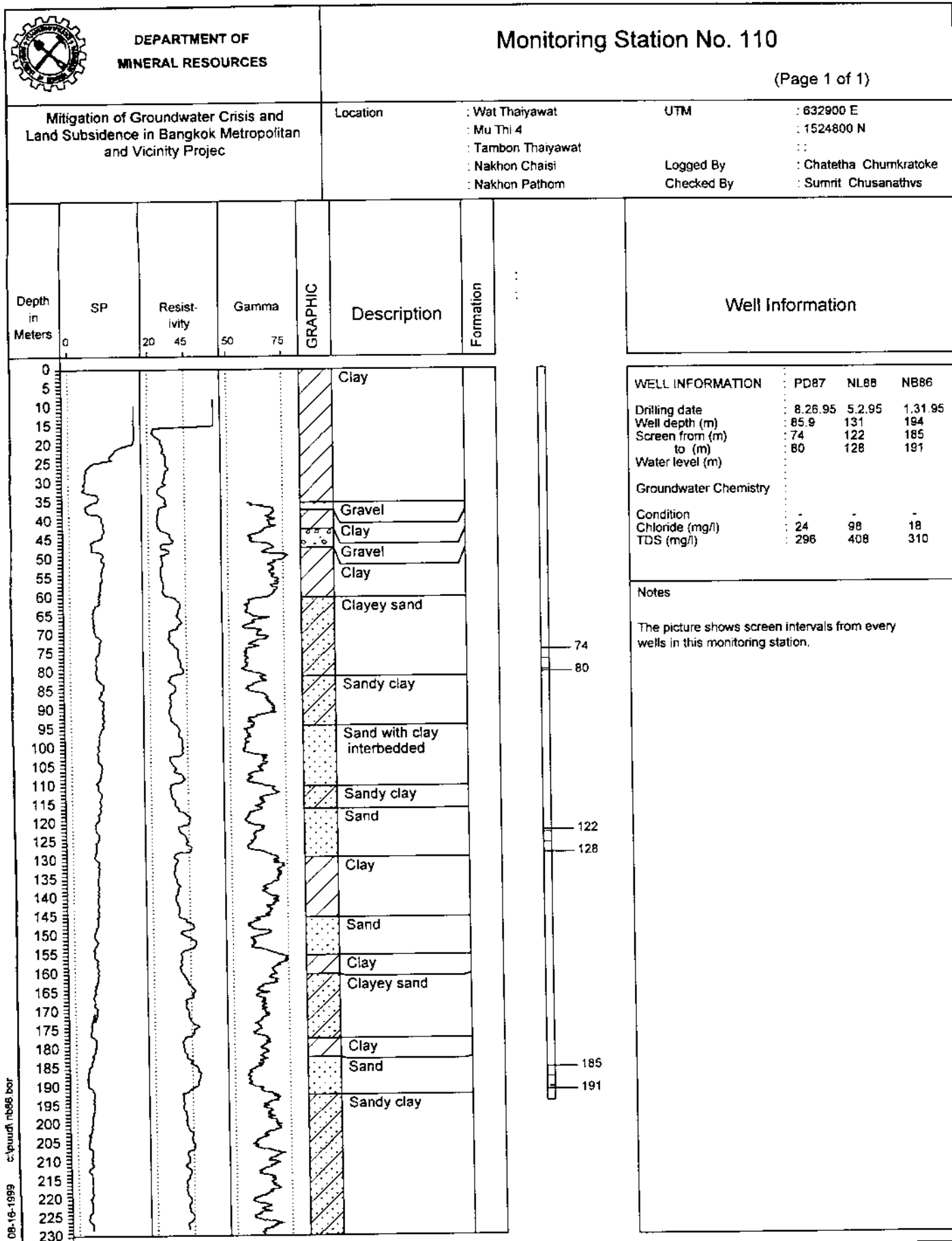
Location : Rom Klao National UTM : 688400 E  
: Housing Authority : 152200 N  
: Khwagng Kholng Song Ton Num :  
: :  
: : Logged By : Chatetha Chumkratoke  
: : Checked By : Sumrit Chusanathys





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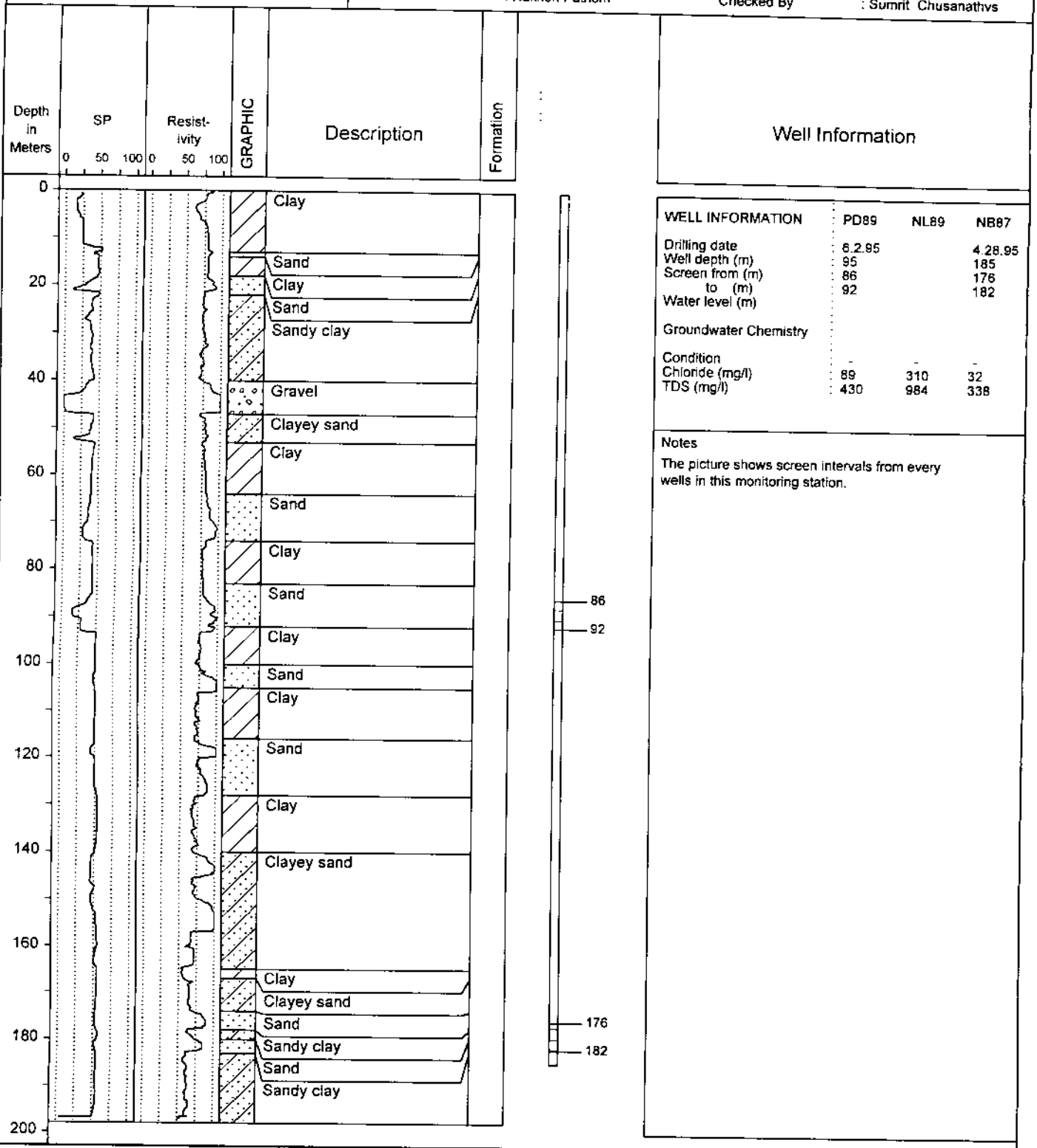
DEPARTMENT OF  
MINERAL RESOURCES

Monitoring Station No. 111

(Page 1 of 1)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Wat Wang Nam Khao UTM : 626100 E  
: Mu Thi 5 : 1515900 N  
: Tambon Khlong Chinda  
: Sam Phan  
: Nakhon Pathom  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathvis



WELL INFORMATION	PD89	NL89	NB87
Drilling date	6.2.85		4.28.95
Well depth (m)	95		185
Screen from (m)	86		176
to (m)	92		182
Water level (m)			
Groundwater Chemistry			
Condition			
Chloride (mg/l)	89	310	32
TDS (mg/l)	430	984	338

Notes  
The picture shows screen intervals from every wells in this monitoring station.

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DEPARTMENT OF  
MINERAL RESOURCES

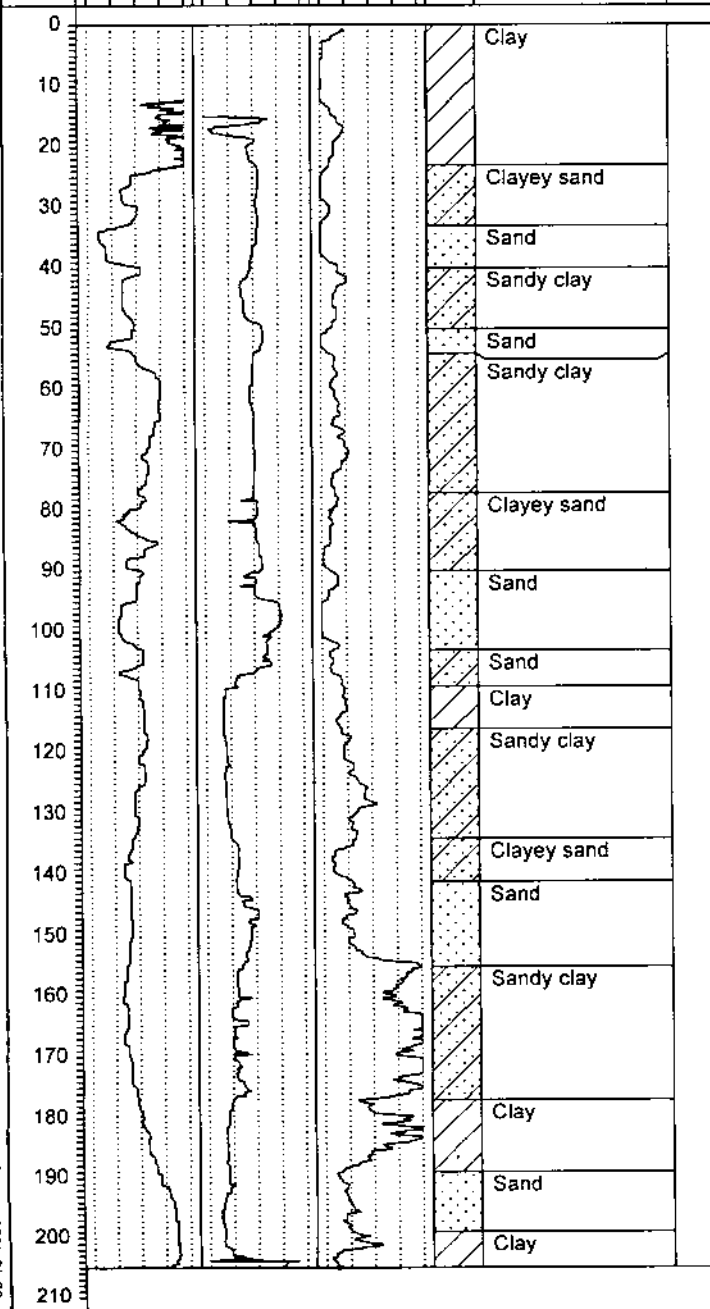
Monitoring Station No. 112

(Page 1 of 1)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Wat Thung Si Long UTM : 615200 E  
: Don Tum-Nong Pla Lai Rd., Km.2 : 1543100 N  
: Tambon Lam Hoei :  
: Don Tum : Logged By : Chatetha Chumkratoke  
: Nakhon Pathom : Checked By : Sumrit Chusanathv

Depth in Meters	SP	Short Normal	Gamma	GRAPHIC	Description	Formation
-----------------------	----	-----------------	-------	---------	-------------	-----------

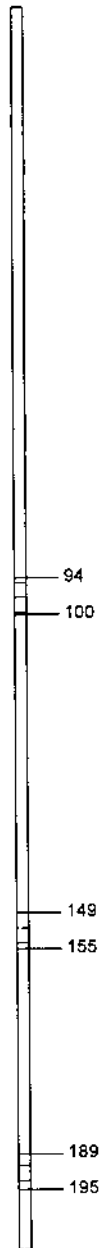


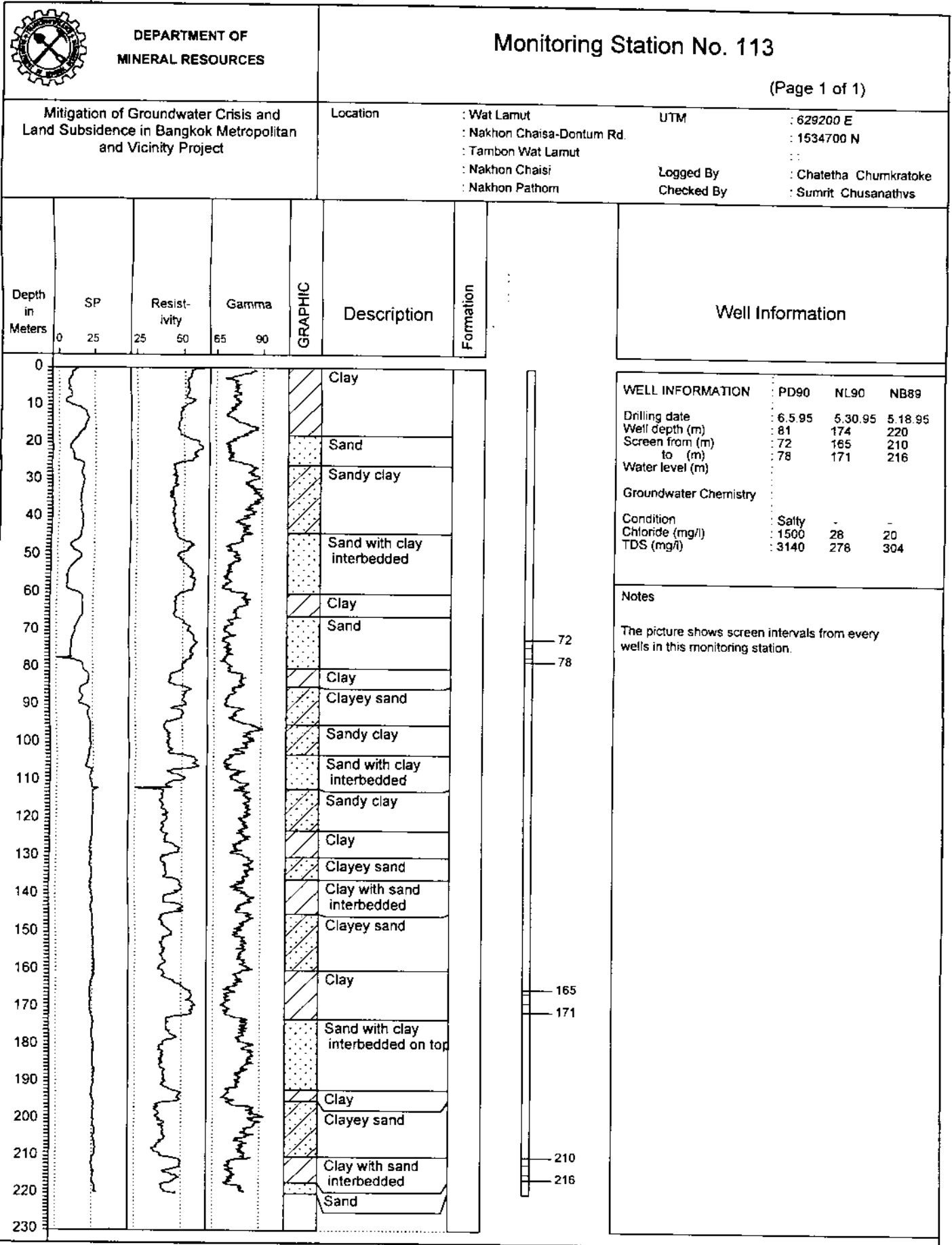
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Well Information

WELL INFORMATION	PD88	NL91	NB88
Drilling date	5.24.95	5.1.95	5.10.95
Well depth (m)	103	158	205
Screen from (m)	94	149	189
to (m)	100	155	195
Water level (m)			
Groundwater Chemistry			
Condition	-	-	-
Chloride (mg/l)	480	56	75
TDS (mg/l)	1370	580	582

Notes  
The picture shows screen intervals from every wells in this monitoring station.





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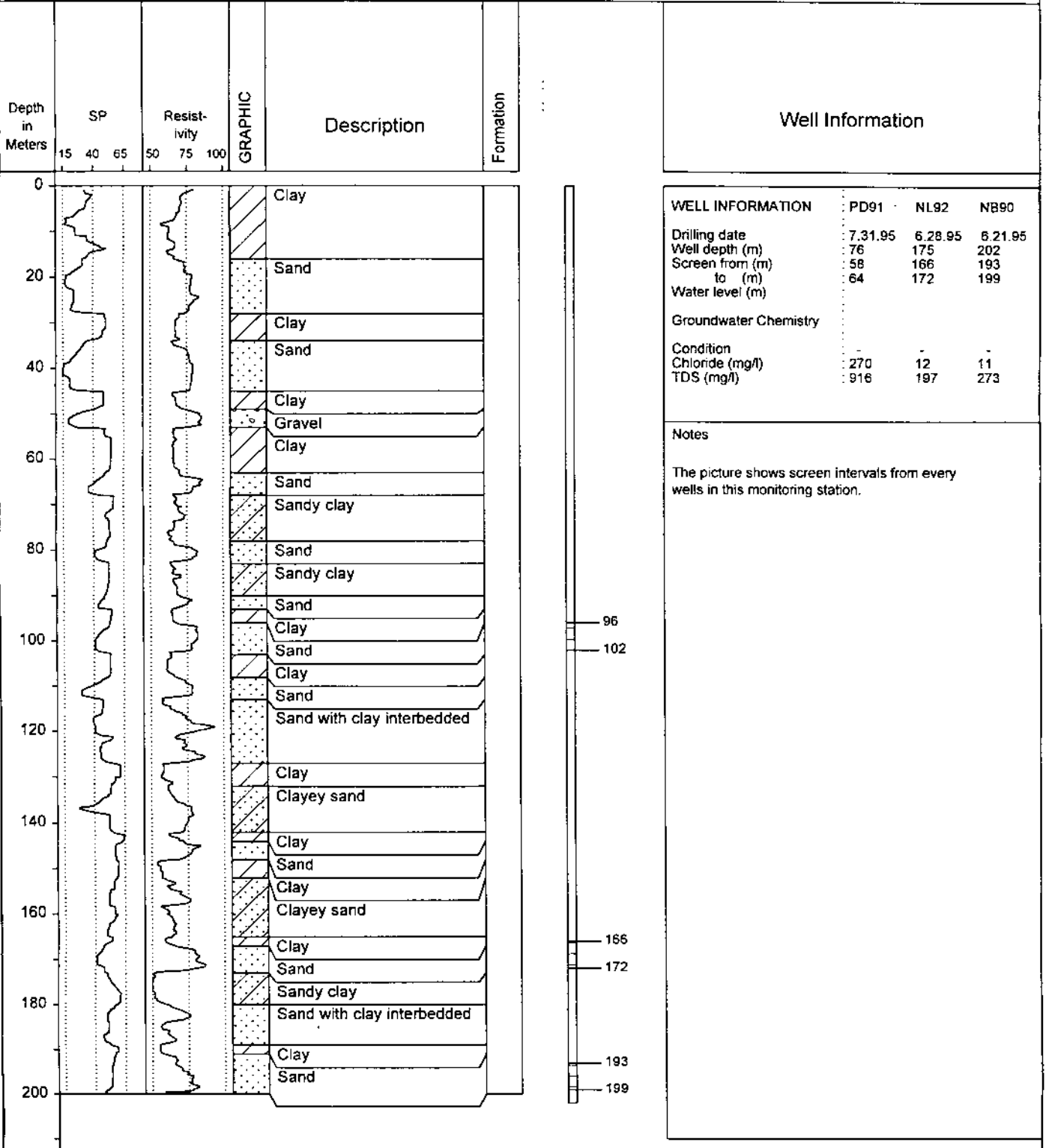
DEPARTMENT OF  
MINERAL RESOURCES

Monitoring Station No. 114

(Page 1 of 1)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Wat Rai Ko Ton Sam Rong UTM : 618400 E  
: Tambon Phra Prathone : 1528100 N  
: Muang :  
: Nakhon Pathom  
: :  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathys



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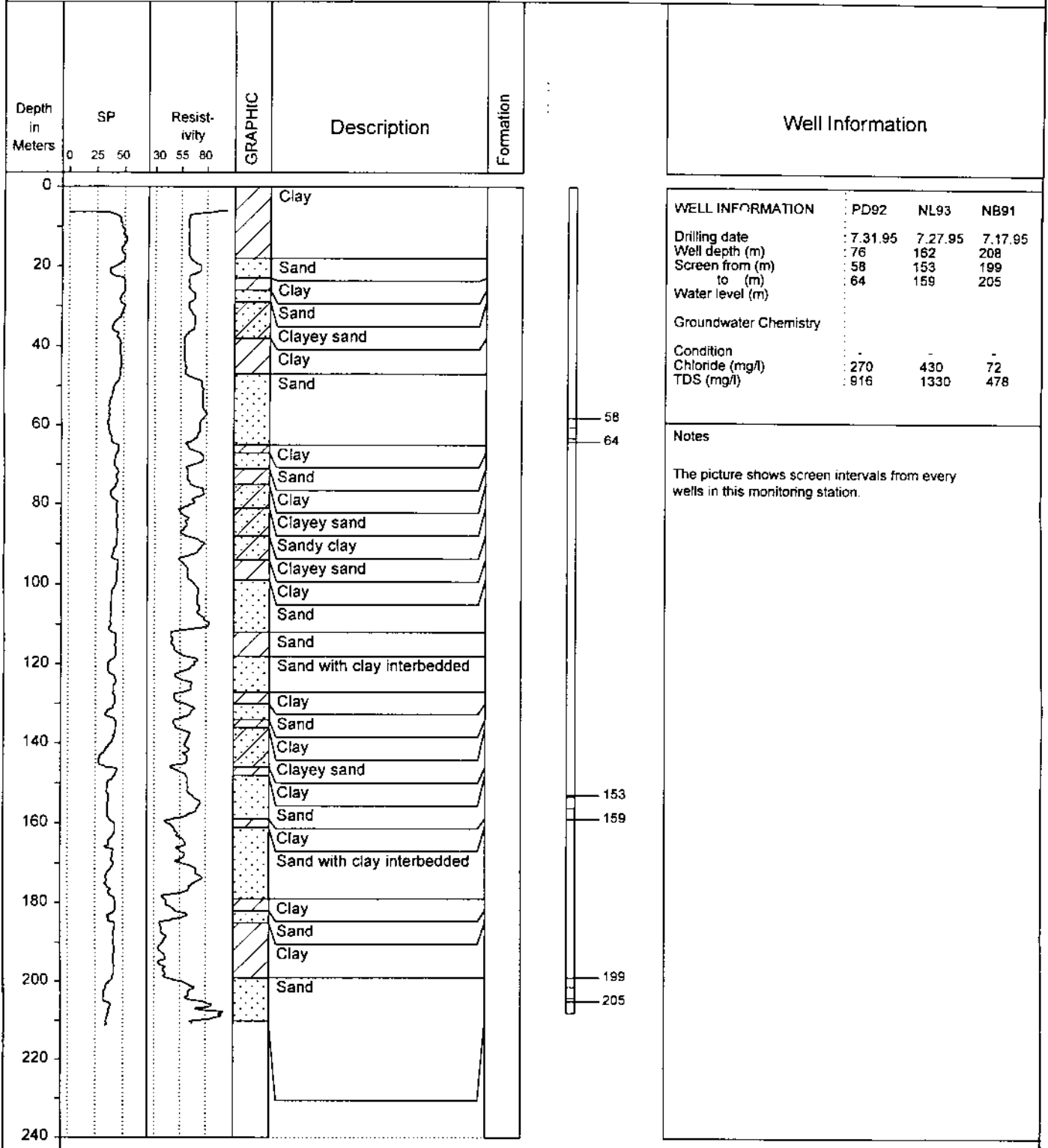
DEPARTMENT OF  
MINERAL RESOURCES

Monitoring Station No. 115

(Page 1 of 1)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Wat Nong Din Daeng UTM : 618400 E  
: Mu Thi 3 Phet Kasem Rd. : 1528100 N  
: Tambon Nong Din Daeng :  
: Muang :  
: Nakhon Pathom :  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathys





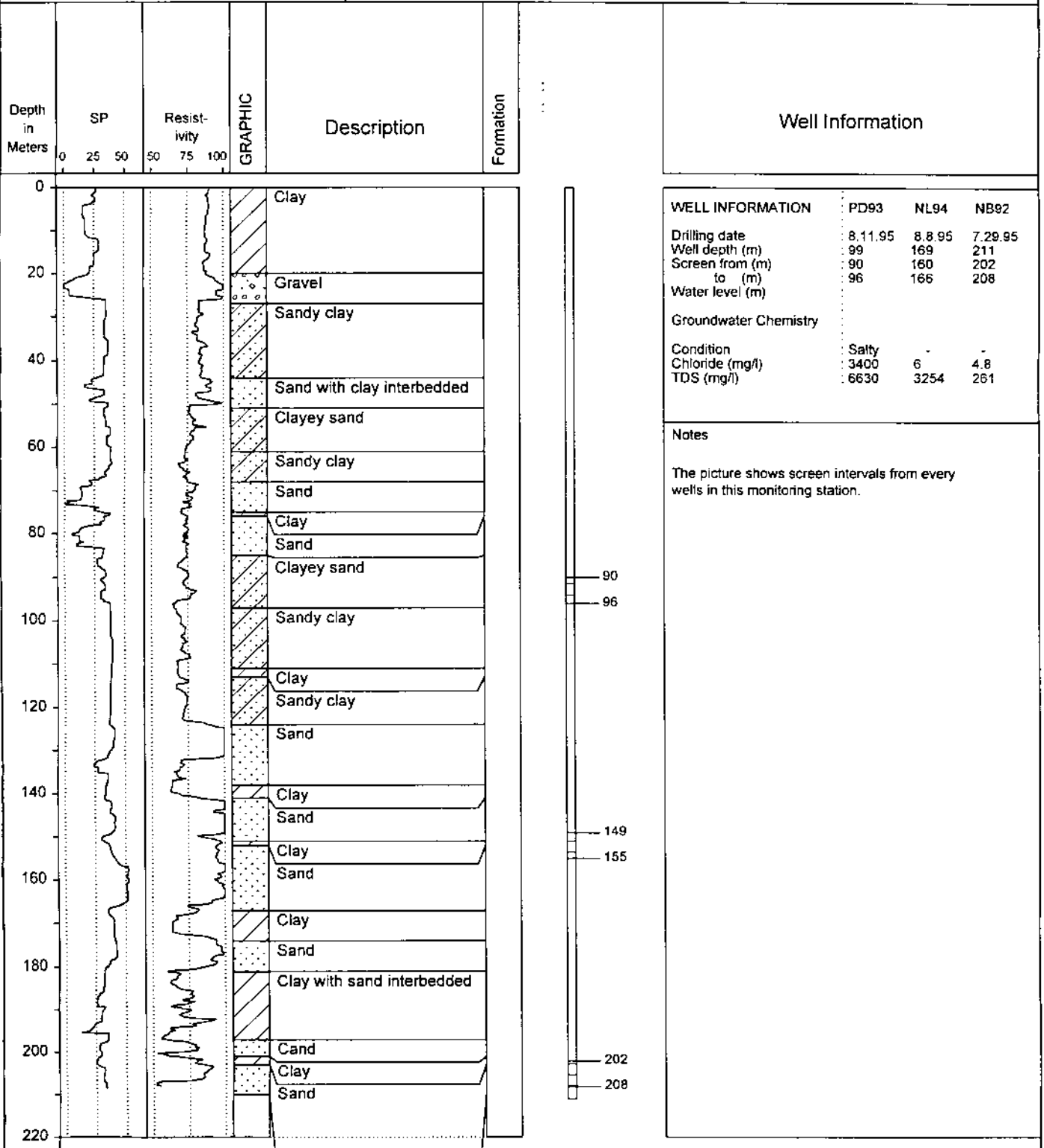
DEPARTMENT OF  
MINERAL RESOURCES


Monitoring Station No. 116

(Page 1 of 1)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location : Bang Len District office Compound/UTM : 626100 E  
: Tambon sam Ngam : 1550100 N  
: Bang Len :  
: Nakhon pathom  
Logged By : Chatetha Chumkratoke  
Checked By : Sumrit Chusanathys



 <b>DEPARTMENT OF MINERAL RESOURCES</b>		<b>Monitoring Station No. 117</b>				
<b>Mitigation of Groundwater Crisis and Land Subsidence in Bangkok Metropolitan and Vicinity Project</b>		(Page 1 of 2)				
		Location : Wat Pantai Norasing : Tambon Bang Nam Jud : Muang : Samut Sakhon :		UTM : 641000 E : 150000 N : : Logged By : Chatetha Chumkratoke Checked By : Sumrit Chusanathvs		
Depth in Meters	SP	Resistivity	GRAPHIC	Description	Formation	Well Information
0	25 50	50 75 100				WELL INFORMATION : DMW 4 Drilling date : 10.06.96 Well depth (m) : 498.00 Screen from (m) : 477.00 to (m) : 495.00 Water level (m) Groundwater Chemistry Condition Chloride (mg/l) TDS (mg/l)
20						Notes The picture shows screen intervals from every wells in this monitoring station.
40						
60						
80						
100						
120						
140						
160						
180						
200						
220						
240						



DEPARTMENT OF  
MINERAL RESOURCES

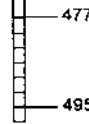
Monitoring Station No. 117

(Page 2 of 2)

Mitigation of Groundwater Crisis and  
Land Subsidence in Bangkok Metropolitan  
and Vicinity Project

Location	: Wat Pantai Norasing	UTM	: 641000 E
	: Tambon Bang Nam Jud		: 150000 N
	: Muang		:
	: Samut Sakhon	Logged By	: Chatetha Chumkratoke
	:	Checked By	: Sumrit Chusanathvs

Depth in Meters	SP		Resistivity		GRAPHIC	Description	Formation	Well Information																				
	0	25	50	50					75	100																		
250								<table border="0"> <tr> <td><b>WELL INFORMATION</b></td> <td>DMW 4</td> </tr> <tr> <td>Drilling date</td> <td>10.06.96</td> </tr> <tr> <td>Well depth (m)</td> <td>498.00</td> </tr> <tr> <td>Screen from (m)</td> <td>477.00</td> </tr> <tr> <td>to (m)</td> <td>495.00</td> </tr> <tr> <td>Water level (m)</td> <td></td> </tr> <tr> <td colspan="2"><b>Groundwater Chemistry</b></td> </tr> <tr> <td>Condition</td> <td></td> </tr> <tr> <td>Chloride (mg/l)</td> <td></td> </tr> <tr> <td>TDS (mg/l)</td> <td></td> </tr> </table> <p><b>Notes</b></p> <p>The picture shows screen intervals from every wells in this monitoring station.</p>	<b>WELL INFORMATION</b>	DMW 4	Drilling date	10.06.96	Well depth (m)	498.00	Screen from (m)	477.00	to (m)	495.00	Water level (m)		<b>Groundwater Chemistry</b>		Condition		Chloride (mg/l)		TDS (mg/l)	
<b>WELL INFORMATION</b>	DMW 4																											
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<b>Groundwater Chemistry</b>																												
Condition																												
Chloride (mg/l)																												
TDS (mg/l)																												
270																												
290																												
310																												
330																												
350																												
370																												
390																												
410																												
430																												
450																												
470																												
490																												



## Chemical Analysis of Groundwater

Groundwater samples of the monitoring wells in Bangkok and its vicinity were periodically collected for chemical analysis during 1978-1998. 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 Nanthaburi 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 sample 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 non-representative sample of stagnant water may be obtained when sampling by a water-sampler. Thus, in using chemical data for interpretation, careful consideration should be emphasized. 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	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH	
	(m/d/y)							(Total)										
PD0001	05/07/81	7.5	2400	84	8.8	350	11	0.63	0.04	708	2.2	0	20	0.5	0	1272	246	
	05/06/86	7.7	2160	66	23	372	9.8	1.2	0.03	872	2.1	0	20	7.6	0.2	1456	258	
	10/13/87	8	2540	94	49	329	7.4	0.58	0.34	734	12	0	106	3.5	0	1770	436	
	02/16/88	8	2640	104	44	327	7.4	0.92	0.44	694	12	0	141	4.3	0	1608	440	
	07/18/88	8.1	2420	84	39	313	8.6	0.82	0.09	710	7.1	0	69	3.2	0	1199	372	
	11/15/88	8	2450	77	51	324	7.4	0.48	0.19	706	6.6	0	72	3.5	0.2	1210	402	
	03/15/89	7.8	2370	98	40	324	8.6	1.4	0.07	738	4.9	0	70	4.5	0.2	1250	410	
	03/19/90	7.5	2360	84	43	317	7.4	1.3	0.15	749	2.3	0	65	4.5	0.1	1470	388	
	12/17/90	7.4	2380	68	41	320	7.3	1	0.18	680	2	0	55	4	0.1	1500	340	
	03/21/97	7.6	26200						45	0	9000	1100					17000	3100
PD0002	06/20/78	7.7	1400	30	17	241	0	0.24	0	254	11	0	364	0	0.2	793	144	
	02/10/80	7.4	1650	35	22	223		2.9	0.17	283	1	0	319	0	0.3	904	176	
	04/20/81	8.2	1380	12	9.3	250	4.7	1.5	0	248	6.4	0	328	1.1	0.2	698	68	
	02/19/86	8.9	1157	8.8	15	239	3.5	0.98	0.01	231	2.9	32	226	0	0.3	658	85	
	07/20/87	8.7	1140	6	3.7	239	3.1	1	0	232	4	31	214	0.4	0.3	640	30	
	10/13/87	8.7	1166	3.2	3.4	242	3.9	0.3	0	227	4.5	29	235	0	0.2	632	22	
	12/07/88	8.7	1620	28	15	287	5.1	0.26	0.02	358	4.3	23	280	2	0.2	1009	132	
	06/09/89	8.6	1620	23	14	297	4.3	0.49	0	336	3.8	30	256	1.6	0.2	1010	117	
	03/15/90	8.2	1620	21	13	288	5.5	0.9	0.01	349	3	0	285	0.4	0.3	800	107	
	08/28/90	8.4	1470	17	16	283	5.1	0.27	0.02	343	2.3	22	221	1.1	0.3	786	107	
	12/12/90	8.8	1520	9.8	14	280	3.1	0.63	0	330	3	15	242	0.9	0.3	844	82	
	10/18/91	7.8	1580	21	8	230	5.7	0.76	0.01	370	5	0	249	1.1	0.3	818	86	
	12/08/92	8.5	1510	6.2	8.2	300	4.7	0.4	0.01	350	3	5	198	0.9	0.3	770	49	
	02/22/93	8.7	1490	12	5.2	280	4.7	0.62	0.01	340	5	28	148	0.9	0.2	822	51	
	06/18/93	8.6	1480	8	20	290	4.3	0.49	0.02	350	2	11	206	0.4	0.2	800	100	
	04/25/94	9.1	1530	30	6.9	320	3.5	0.82	0.01	370	31	18	200	2.6	0.2	858	100	
	12/22/94	8.7	1560	8.5	12	320	5.9	0.8	0	380	5	13	190	0.7	0.3	870	70	
	04/20/95	8.6	1520	6	47	230	0	0.21	0.01	380	2	21	190	2.7	0.2	880	210	
	03/26/96	8.4	1580						0.58	0	400	3					1030	130
	06/18/97	8.6	1570						0.69	0	390	4					1020	87
02/19/98	8.8	1490						1.5	0	390	2					968	72	
PD0003	09/13/78	7.3	7900	488	168			4.4		2640	241	0	110	0	0.1	4672	1910	
	02/09/80	6.5	16000	952	468	1360		12	0	4660	501	0	183	14	0.1	10720	4300	
	04/20/81	8.1	15200	856	405	1760	39	1.3	0.04	5070	401	0	9	0	0	9650	3800	
	02/18/86	7.2	14400	673	302	2001	35	1.2	0.4	5101	88	0	4	0	0.1	10678	2920	
	07/16/87	7.6	15300	524	309	2340	42	3.9	0.39	5180	114	0	17	0	0.1	10100	2580	
	10/19/87	8.1	15400	620	460	2007	38	30	1.8	5340	169	0	20	0	0	11232	3440	
	12/08/88	7.5	15500	648	426	2000	39	13	1.3	5360	126	0	36	0.3	0	9657	3370	
	06/16/89	7.9	15700	704	448	1930	38	30	1.1	5390	150	0	23	1.4	0.1	9780	3600	
	03/16/90	7.2	15300	694	381	2010	39	11	0.07	5420	57	0	25	0	0.1	12800	3300	
	01/22/91	7.5	15200	580	330	2100	37	2	0.17	5300	0	0	28	0.1	0.1	11000	2800	
	10/10/91	7.3	14700	480	330	1900	64	4.2	0.56	5300	4	0	19	0.2	0.1	10700	2600	
	12/16/92	7.5	14500	390	310	2060	36	32	0.68	5030	8	0	32	0.4	0.1	10820	2240	
	02/23/93	7.7	14400	380	270	2150	42	8.3	0.19	4980	4	0	29	0	0.1	10200	2050	
	06/11/93	7.7	14300	310	500	2200	37	3.6	0.36	5100	3	0	28	0	0.1	9800	2820	
	04/07/94	7.7	14400	430	380	2200	78	18	0.78	5100	4	0	36	0.1	0.1	9960	2700	
	12/23/94	7.8	14600	410	180	2300	40	13	0.33	5200	7	0	42	0.4	0.01	10000	1800	
	04/24/95	7.8	14800	480	780	1300	38	11	0.06	5200	5	0	51	0.23	0.1	9320	4400	
	03/27/96	7.9	14500						2.7	0	5300	2					9420	2000
	06/11/97	7.6	14300						5.1	0.41	5100	4					9290	2020

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
	(m/d/y)							(Total)										
PD0004	06/23/78	8.2	1000	20	30	151	0.4	0.44	0	130	1.6	3	379	0	0.2	592	172	
	04/20/81	7.7	8200	334	304	910	23	1.1	4.3	2640	8.3	0	322	0	0.2	4620	2090	
	04/09/86	7.2	4550	168	180	474	13	25	1.7	1450	4.2	0	300	1.4	0.3	3390	1160	
	08/11/87	7.8	3210	113	138	327	11	16	0.74	910	0	0	309	2.2	0.2	2292	850	
	10/10/87	8.1	3050	107	111	317	11	8.4	0.66	810	3.6	0	317	1.4	0.2	2086	724	
	03/05/90	7.7	2550	84	90	271	11	16	0.05	652	2.7	0	287	3.4	0.2	1634	580	
	08/03/90	8	2100	98	65	230	11	11	0.26	541	1.7	0	292	4.4	0.2	1320	510	
	12/04/90	7.9	1840	67	57	230	12	4.5	0.22	440	2	0	320	4.6	0.2	1110	400	
	10/04/91	8.1	1630	54	63	200	10	2.3	0.11	370	2	0	343	3.4	0.3	964	400	
	12/14/92	7.8	1540	51	49	180	11	2	0.02	320	3	0	304	6.4	0.3	824	330	
	02/15/93	8.1	1500	57	39	180	11	50	0	310	4	0	274	8	0.3	870	300	
	06/09/93	8.6	1400	39	67	170	9.8	3.4	0.01	310	4	20	230	11	0.3	822	370	
	04/08/94	8.5	1100	25	56	150	7.4	5.1	0.01	210	3	25	254	0	0.2	602	290	
	12/08/94	8.6	1030	9.6	32	160	9.4	2.4	0	200	3	18	217	6.8	0.3	584	150	
	04/11/95	8.5	1060	17	32	150	8.6	1.9	0	200	2	19	228	6.2	0.3	578	170	
	03/19/96	8.7	1060						2.2	0	240	2					689	190
	06/05/97	8.6	1200						3.5	0	250	2					780	250
	02/19/98	7	1280						8.5	0	260	1					832	280
PD0005	09/04/78	8	1640	105	28	153		0.38		319	0.8	9	294	2.4	0.1	882	376	
	03/23/80	7.3	2300	136	56	189		2.5	1.5	519	3.3	0	334	2.6	0	1156	570	
	03/23/80	8	1380	38	26	166		14	0.4	300	87	0	58	0	0.2	736	200	
	08/25/80	7.2	2500	134	59	204		4.9	0.69	599	3.2	0	207	3.4	0	1384	576	
	04/17/81	7.2	2600	94	65	294	9.8	2.1	0.09	792	2.4	0	54	0.3	0	1424	500	
	04/09/86	7.7	2440	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	2540	128	38	290	8.6	0.62	0.01	774	0	2	10	0	0	1576	474	
	12/12/88	7.7	2550	166	24	271	9.8	0.26	0	784	0	0	14	0	0.1	1589	516	
	06/13/89	8.3	2620	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	2600	137	59	271	8.2	1.7	0.03	800	1.4	0	17	5.1	0.1	1612	584	
	12/07/90	7.9	2560	170	27	290	9.8	0.26	0.02	800	2	0	31	4.5	0.1	1770	540	
	11/11/91	8	2580	150	40	180	11	0.56	0.01	810	1	0	27	0.1	0.1	1640	540	
	12/18/92	7.7	2630	140	49	270	10	1.5	0.06	790	2	0	20	6.4	0.1	2100	550	
	02/17/93	7.4	2650	160	46	270	9.4	1.3	0.11	790	1	0	26	7.5	0.1	2000	590	
	06/17/93	7.8	2570	150	42	260	8.2	1.1	0.14	800	1	0	32	6.6	0.1	2020	550	
	04/18/94	8	2550	150	60	230	9.8	5.9	0.02	740	6	0	50	5.2	0.1	1700	620	
	12/07/94	7.7	2500	130	68	240	9	1.8	0.06	770	5	0	31	7.1	0.1	1790	620	
	03/22/96	7.9	2160						3.7	0	680	10					1400	390
06/05/97	8.4	608						0.29	0	23	2					395	150	
PD0006	04/25/78	7.4	1150	28	9.5			0.24		201	0	0	324	0	0.1	633	109	
	04/11/86	7.7	2260	88	63	235	15	1.5	0.01	690	3.5	0	25	0.1	0.1	1606	480	
	07/15/87	7.5	2130	72	40	269	19	1.5	0.2	653	0	0	53	0	0.1	1390	344	
	10/13/87	8.1	2160	74	33	274	20	0.36	0	654	3.1	0	39	0	0	1390	320	
	02/16/88	8.1	2230	73	43	274	19	0.44	0.02	640	4.5	0	23	0	0	1418	360	
	07/18/88	7.6	2200	85	39	271	20	0.32	0.07	646	2.2	0	38	0.3	0	1082	372	
	11/17/88	7.8	2250	80	34	271	20	0.54	0.05	620	4.3	0	29	3.4	0.1	1402	340	
	03/16/89	7.7	2370	111	54	287	20	1.4	0.02	724	5.1	0	86	2.9	0.1	1250	500	
	03/26/90	7.6	2220	90	48	276	19	1.3	0	705	2.3	0	26	4	0.1	1590	420	
	12/16/90	8	2180	86	38	280	23	0.53	0	650	1	0	21	1.6	0.1	1280	370	
	10/14/91	7.8	2220	74	38	280	20	0.52	0.01	690	4	0	14	0.2	0.1	1410	340	
	02/13/92	7.9	2260	81	40	290	20	1.6	0	680	1	0	22	2.2	0.1	1560	370	
	10/21/92	8.2	2240	130	12	262	18	2.1	0.03	680	3	0	15	2.5	0.1	1390	360	
	01/18/93	7.9	2290	110	78	260	18	0.47	0.03	700	2	0	42	3	0.1	1530	600	
	08/31/93	7.7	2320	82	39	270	18	1.8	0.01	720	2	0	34	3.5	0.1	1580	360	
	11/28/94	7.9	2520	170	80	150	18	0.22	0.1	760	0	0	39	0.6	0.2	1700	750	
	03/29/96	7.4	2160						0.3	0.01	790	3					1400	510
	04/23/97	8.4	2340						0.52	0.04	690	1					1520	400
03/17/98	8.3	2200						1	0	760	2					1430	430	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
	(m/d/y)							(Total)										
PD0007	02/14/80	7.3	4850	326	104	390		7.1	2.2	1374	6.4	0	178	0.4	0.1	2844	1242	
	04/03/86	7.5	446	26	11	44	7	0.94	0.06	56	4.3	0	174	7	0.2	274	112	
	03/11/87	7.3	4720	297	121	435	13	8.6	2.5	1450	32	0	166	4.1	0	3296	1240	
	03/11/87	7.5	445	24	9.9	48	7	5.9	0.07	64	5.3	0	147	9.5	0.2	262	100	
	10/16/87	7.6	1330	74	34	120	7.8	1	0.01	327	3.6	0	146	9.3	0.1	862	325	
	12/12/88	7.9	1300	70	32	126	9.4	0.62	0.05	339	3.1	0	113	13	0.1	810	305	
	06/18/89	7.9	1380	72	34	129	8.6	0.2	0.04	338	3.5	0	129	6.6	0.1	860	318	
	03/01/90	7.7	1420	69	41	138	9	0.68	0.1	376	2.6	0	88	16	0.2	880	341	
	08/01/90	7.9	1340	77	25	133	8.6	0.3	0.17	361	1.3	0	97	14	0.2	850	296	
	11/30/90	7.8	1330	76	26	140	8.6	0.46	0.12	360	2	0	86	13	0.2	978	300	
	07/01/91	6.9	1260	67	24	130	10	0.74	0.12	360	2	0	38	14	0.1	990	270	
	03/03/92	7.4	1240	47	31	150	9	0.32	0.1	360	1	0	27	13	0.2	892	240	
	02/03/93	7.7	1310	84	38	130	8.6	0.27	0.08	390	3	0	67	0.6	0.1	790	360	
	05/04/93	7.1	1300	60	17	140	9.4	0.44	0.14	370	1	0	49	12	0.1	896	220	
	11/02/93	7.6	1270	46	28	140	9	0.53	0.1	360	1	0	19	16	0.1	848	230	
	04/04/94	7.2	1280	55	25	140	11	0.43	0.12	360	3	0	25	4.2	0.1	876	240	
	02/02/95	7.4	1270	40	43	170	9.4	0.47	0.09	390	2	0	60	7.8	0.1	1020	280	
	04/02/95	7.1	1260					0.66	0.08	390	2						817	230
	05/03/95	7.4	1220	47	35	140	11	0.49	0.15	370	2	0	26	11	0.1	864	260	
	04/10/97	7.8	4650					4.8	2.5	1500	22						3020	1200
02/13/98	6.4	1660					0.62	0.57	510	6						1080	300	
PD0008	05/06/81	7.8	11600	920	303	1080	10	13	0.01	4145	66	0	18	0.2	0	7756	3540	
	07/16/87	6.9	11760	960	232	1093	15	5.3	0.27	3990	32	0	16	0	0	10716	3350	
	10/16/87	7.2	11310	952	237	1035	15	2.6	2.7	4070	27	0	12	0	0	9262	3350	
	12/02/88	7.1	11470	976	253	1046	15	2.6	2.6	3928	33	0	7	0	0	7146	3480	
	06/02/89	7.5	11700	968	293	1040	16	3	0.43	3980	35	0	21	0	0	7260	3620	
	03/02/90	7.1	11680	932	268	1035	16	14	0.23	3976	39	0	31	11	0.1	8716	3430	
	08/02/90	7.5	11400	1070	173	1050	17	6.6	0.08	408	38	0	12	0.1	0.1	8160	3380	
	12/03/90	7.4	10200	940	240	1000	15	4.9	0.05	4000	46	0	22	0	0.1	6840	3400	
	07/02/91	7.8	11400	1120	230	1020	18	13	0.03	4050	24	0	14	0.2	0.1	11100	3740	
	03/05/92	6.4	11580	930	270	1040	15	5.5	0.5	3900	50	0	10	0	0.1	8380	3500	
	11/03/92	7.8	12400	950	320	1100	15	2.8	0.12	4200	42	0	44	0.2	0.1	9320	3700	
	02/05/93	6.4	12200	960	330	1100	16	12	1.4	4300	51	0	11	2.5	0.1	11600	3800	
	05/06/93	7.6	12000	900	250	1100	16	28	2.2	4200	46	0	51	0	0.1	9680	3300	
	04/05/94	7.4	12900	1000	370	1100	15	13	1.9	4500	74	0	33	3.5	1	9970	4000	
	02/06/95	7.5	13100	1000	45	1100	15	17	3.2	3700	45	0	60	1.9	0.1	11400	2800	
	04/03/95	7.9	12900					50	2.8	4850	65						8410	4220
	05/04/95	7.1	12800	1000	400	1300	16	32	3.1	4700	62	0	13	0.2	0	10600	4130	
	02/13/98	7.8	12500					29	0.15	4300	82						8130	2900
	PD0009	08/08/79	6.3	14600	878	479	702		14		4540	509	0	113	27	0	10214	4160
		03/30/80	7	15000	1080	451	1480		14	0	5033	490	0	143	12	0	10116	4500
03/30/80		6.7	16000	1080	439	1510		14	0	5059	522	0	129	15	0	10312	4500	
08/26/80		7.5	16000	920	414	1440		4.1	0	4848	258	0	13	37	0	10468	4000	
12/16/81		6.8	16500	1040	427	1830	22	13	6.6	5254	605	0	124	0	0.2	12534	4350	
02/14/86		8.1	14900	936	313	1770	20	6.8	0.27	5230	63	0	14	0	0.1	11600	3620	
02/26/87		7.3	18500	1048	227	2300	16	17	7.1	6350	719	0	125	0.1	0.1	14578	3550	
02/26/87		7.7	15000	920	328	1725	16	37	1.1	5250	41	0	41	25	0.8	11838	3645	
10/15/87		8.5	15800	940	342	1947	22	3.7	0.02	5500	76	2	9	0	0	12014	3750	
02/03/88		7.3	19000	960	548	2415	24	4.6	0.73	6300	619	0	29	0	0	13954	4650	
07/11/88		7.1	18200	968	608	2345	24	2.4	0.57	6340	670	0	20	5.9	0	10971	4920	
11/15/88		7.7	18000	906	507	2300	16	2	0.09	6210	568	0	30	0	0.1	10500	4350	
03/14/89		7.5	17600	1110	618	2280	25	4	0.11	6520	517	0	24	0	0.1	11080	5320	
03/26/90		7.8	18100	1060	458	2280	23	5.9	0.55	6240	620	0	24	0	0.1	13900	4540	
08/29/90		7.1	17600	1140	468	2320	23	11	0.32	6560	500	0	21	0	0.1	13900	4770	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
	(m/d/y)							(Total)									
PD0009	01/23/91	7.7	16500	980	450	2200	22	3	0.13	6500	580	0	19	0	0	13800	4310
	10/18/91	7.4	17200	980	500	2180	20	1.8	0.29	6000	560	0	26	0.1	0.1	13400	4480
	01/20/92	7.2	17300	880	480	2000	23	1.2	0.46	5800	510	0	21	0	0.5	15100	4200
	09/09/92	7.4	17100	830	480	1700	20	1.3	0.17	5900	510	0	17	0	0.1	14600	4000
	01/08/93	7.7	16900	860	620	2100	27	3	0.16	5700	520	0	25	0.2	0.1	1500	4700
	12/02/93	7.5	16400	820	520	2100	22	0.76	0.06	5700	510	0	24	0	0.1	14600	4200
	12/08/94	8.4	15400	1000	340	1700	20	0.78	0.4	5000	360	5.9	27	0	0.1	11400	3900
PD0010	07/17/79	8.3	1667	62	58	152		1.6		397	0	4	195	1.9	0	1013	395
	04/24/80	7.5	1700	68	45	163		3.2	0.8	345	6	0	267	0	0.2	868	356
	04/24/80	6.8	1670	56	47	300		3.6	0.86	349	2.3	0	601	0	0.1	904	334
	05/26/86	7.7	1380	37	18	230	13	2.3	0.04	529	2.3	0	21	4	0.2	886	166
	02/26/87	7.6	1690	60	70	184	3.9	3.3	0.75	530	19	0	219	0.5	0.1	1072	404
	02/26/87	7.6	1860	56	49	207	3.9	3.8	0.18	550	14	0	39	1.5	0.2	1018	340
	10/13/87	8.8	1520	40	20	218	12	1.1	0	449	3.1	2	13	0	0.1	982	181
	02/16/88	8.2	1570	27	35	200	11	0.92	0.02	425	8.5	0	56	0	0.1	934	211
	07/18/88	8.1	1510	29	35	200	12	0.94	0	424	2.5	0	31	2.1	0	720	216
	11/15/88	7.7	1530	26	32	207	109	0.52	0	444	2.4	0	27	2.8	0.1	837	198
	03/15/89	7.5	1500	43	24	209	12	0.88	0.01	450	3.7	0	34	2	0.1	761	207
	03/12/90	7.8	1570	48	34	207	10	2.2	0	466	2	0	35	4.7	0.1	978	260
	09/10/90	7.4	1580	50	27	214	11	0.74	0	476	2.3	0	23	0.1	0.1	940	236
	10/10/91	7.7	1660	54	26	210	14	1.6	0.21	490	7	0	42	6.7	0.1	1100	240
	02/07/92	7.9	1720	51	31	250	12	0.76	0.01	480	2	0	52	8.5	0.1	1000	260
	10/13/92	7.2	1730	42	28	220	11	0.63	0.03	490	2	0	27	5.1	0.1	1120	280
	01/11/93	8.1	1800	66	28	230	12	0.87	0.02	500	3	0	64	14	0.1	1240	280
	08/19/93	8	1780	53	34	240	11	0.44	0.05	510	3	0	64	12	0.1	1230	270
	12/05/94	7.5	1770	50	38	250	12	0.43	0.01	520	2	0	42	7.8	0.1	1140	280
	03/26/96	7.2	233						1.9	0	35	15					150
03/21/97	8.1	264						0.24	0	48	8					171	58
03/17/98	8.1	445						0.32	0	110	1					289	150
PD0011	09/05/79	7.2	19400	1064	692	1415		0.08		5655	465	0	143	0.8	0	12471	5500
	04/18/81	6.7	16000	1184	264	1840	52	3.2	1.5	5540	74	0	13	0	0	10450	4040
	04/09/86	7	13700	760	572	1430	39	19	4.5	5040	176	0	31	17	0.1	11308	4250
	08/11/87	7.3	14300	696	623	1379	36	16	3.7	5100	312	0	17	17	0	11924	4300
	10/10/87	7.7	14400	704	553	1421	11	11	3	4890	199	0	16	8.9	0	11092	4030
	12/08/88	7.4	14400	720	577	1425	38	3.8	0.63	5040	290	0	20	0	0	8971	4170
	06/08/89	7.7	14600	800	563	1400	40	0	0.18	5070	313	0	34	0	0	9100	4310
	03/08/90	7.7	14600	688	764	1417	37	4.8	0.17	5136	310	0	31	6.1	0	11548	4860
	12/07/90	7.1	12800	780	540	1370	42	3	1.3	4950	32	0	13	15	0.1	11200	4160
	10/09/91	7.2	14400	770	580	1400	56	3.6	0.96	5100	290	0	49	2	0	11200	4300
	12/16/92	7.5	14500	890	530	1320	36	6.2	0.94	5010	300	0	9	2.4	0	11420	4380
	02/15/93	7.3	14500	790	560	1360	39	2.9	0.69	5020	290	0	18	17	0	13600	4290
	06/16/93	7.7	12400	620	690	1220	33	4.2	0.4	4300	260	0	58	0	0.1	9730	4380
	04/22/94	7.4	14700	820	730	1300	34	4.8	1.8	5100	460	0	22	12	0.1	11600	5100
	12/13/94	7.3	14700	910	550	1300	39	6.7	1.5	5200	460	0	21	19	0.1	11800	4500
	04/11/95	7.2	147000	880	600	1300	29	8	1.6	5200	460	0	22	4	0.1	11800	4600
	03/25/96	6.4	14700						8.3	3	5300	440					9560
06/11/97	5	15300						12	0.14	5320	370					9950	4500
PD0012	09/03/79	7.7	1440	65	28	174		0.03		251	3.9	0	366	0	0	832	279
	03/24/80	7.5	2100	48	58	237		11	0.23	437	5	0	312	0.4	0	1028	360
	03/24/80	8	1850	88	17	224		1.2	0.57	437	0	0	198	0	0	996	290
	04/18/81	7.7	1880	20	37	267	11	1.1	0.13	525	2	0	139	0	0	982	204
	02/24/86	7.3	1980	49	35	294	9.4	0.71	0.01	619	0	0	29	0	0.1	1260	265

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
	(m/d/y)							(Total)									
PD0012	07/16/87	9.1	2140	50	30	300	10	0.4	0.01	717	4.5	10	0	0	0.1	1220	250
	10/12/87	9	2090	64	25	283	9.8	0.38	0	625	0	2	12	0	0	1286	262
	12/08/88	10.7	1440	33	1.2	218	2.3	1.3	0	382	4	21	0	0	0.6	897	86
	06/16/89	9.2	2250	77	24	301	11	0.54	0	666	4.1	0	15	0.2	0.1	1400	290
	03/16/90	8	2230	117	13	315	10	3.4	0	693	6.1	0	22	0	0.1	1540	346
	08/30/90	9.7	2260	104	21	311	11	0.51	0.01	693	2.8	12	0	0.1	0.2	1490	346
	01/22/91	7.9	2350	100	17	310	10	1	0.02	700	1	0	37	0	0.1	1520	320
	10/10/91	9.5	3370	110	20	500	18	5.3	0	1100	5	10	2	0.2	0.1	2150	360
	12/22/92	7.9	4300	120	35	640	18	1.9	0.02	1400	4	0	17	0.1	0.1	2810	450
	02/15/93	7.7	4380	160	40	620	180	0.67	0.03	1400	4	0	38	0.2	0.1	2770	560
	06/16/93	7.9	4300	140	44	630	16	2	0.02	1400	6	0	29	0.9	0.1	2650	520
	04/18/94	8	4290	160	59	540	16	4.6	0.01	1300	22	0	44	3.4	0.1	2720	640
	12/13/94	8.1	4290	160	59	610	15	4.3	0.02	1400	17	0	35	0.5	0.1	2780	640
	04/18/95	7.7	4290	170	54	520	16	5	0.02	1300	15	0	25	0.4	0.1	2750	640
	03/25/96	7.9	5130						1.9	0.04	1800	6				3330	820
	06/11/97	8	5060						1.7	0.01	1650	2				3300	740
PD0013	09/05/79	8.2	1100	21	13	198		0.13		96	54	0	420	0.7	0.2	646	105
	04/09/80	7.1	5850	54	79	917		53	0.86	1612	104	0	90	0	0.1	3130	460
	04/09/80	7.3	5850	58	79	907		34	0.63	1593	99	0	114	0	0.1	3192	470
	04/18/81	8	2850	11	7	510	11	1.2	0.02	783	2.1	0	61	1.9	0.2	1348	56
	04/03/86	10.8	2230	62	1	329	5.9	5.6	0	610	6.5	13	0	0.2	0.6	1270	160
	02/26/87	7.4	2180	90	5.9	317	4.3	38	0.1	610	18	0	60	11	0.6	1348	250
	02/26/87	9.3	1860	68	2.5	273	3.5	8.8	0.01	535	21	20	24	0	0.7	1094	180
	10/12/87	10.4	1440	22	1.6	230	2.7	0.72	0	376	5.7	20	0	0	0.5	784	61
	12/06/88	9.7	2190	75	24	294	10	0.4	0	662	3.5	5	5	0	0.1	1364	286
	06/05/89	10.9	1490	31	2.3	228	3.5	1.8	0	376	3.9	56	0	0	0.7	928	87
	03/05/90	8.9	1330	26	2	216	2.3	3.7	0	377	1.8	13	7	0.2	0.7	672	73
	08/03/90	9.4	1310	26	3.2	209	3.5	1.9	0.02	390	1.8	20	0	0	0.7	726	78
	12/04/90	10.3	1340	38	0	230	2.7	3.2	0	380	2	37	0	0	0.7	720	94
	11/04/91	10.5	1400	46	2.9	230	3.1	11	0	400	4	39	0	0.1	0.7	794	130
	12/09/92	8.1	10800	310	120	1670	33	4.1	0.19	3610	19	0	23	0.1	0.2	6910	1250
	02/09/93	3.9	13900	330	160	2200	45	54	2.4	4700	25	0	17	0.3	0.1	10000	1500
	06/07/93	6.8	24500	560	700	4050	90	15	3.4	8900	130	0	13	0	0.1	16700	4280
	12/12/94	9.2	16200	0	51	3400	110	26	0.03	5400	9	29	84	25	0	9710	210
03/17/96	9.7	11800						46	0.03	3500	490				7670	50	
06/13/97	8.9	12500						6.6	0	3850	480				8130	40	
PD0014	09/05/79	8.1	2110	48	27	325		0.38		405	55	0	377	0	0.2	1149	230
	08/25/80	9.2	2150	10	12	398		3.4	0	513	2.4	45	167	2.2	0.4	1088	74
	04/18/81	9.5	2260	3.5	7.6	420	5.4	1.4	0	546	2.8	45	122	0.6	0.2	1070	40
	02/18/86	11	2110	8	0	400	4.3	1.3	0.01	571	4	106	0	0.1	0.3	1120	20
	07/16/87	10.5	2290	16	9.7	416	4.3	1.8	0.01	606	5.5	46	0	0	0.2		80
	10/08/87	10.4	2180	1.9	1.6	405	4.7	0.38	0	560	4.3	39	0	0	0.2	1054	11
	12/15/88	10.4	2130	9.9	0.7	418	4.3	0.78	0	575	4.3	41	83	0	0.2	1327	28
	06/14/89	10.8	2210	0	7.8	416	5.1	0.72	0	576	4.7	68	0	0.2	0.3	1380	32
	03/14/90	10.3	2170	5	0.6	403	4.7	1.6	0	613	2.8	32	0	0.1	0.4	1090	15
	12/14/90	10.4	2050	6.4	1.5	430	4.3	3	0.01	610	4	50	6	0.1	0.3	988	22
	10/08/91	10.9	2160	18	1.5	460	4.8	7.6	0	600	4	82	0	0.1	0.3	1056	52
	12/18/92	10.6	2340	4.3	1.3	420	5.9	3.1	0	640	5	58	0	0.1	0.3	1160	16
	02/17/93	10.8	2630	4.8	0	480	7.8	3	0	680	6	49	0	0.1	0.3	1360	12
	06/22/93	10.2	2480	4.8	1.5	470	6.3	5.6	0	730	17	43	26	0	0.3	1330	18

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
								(Total)										
PD0015	09/03/79	8.2	2420	25	14	427		0.45		551	0	0	327	2.6	0	1320	118	
	03/05/80	8.8	1720	6	16	312		17	0.23	330	80	22	224	16	0.5	946	81	
	04/17/81	7.5	3900	122	45	560	12	0.49	0.03	1160	6.6	0	61	0.1	0	2182	490	
	02/24/86	9.1	3720	174	31	541	8.6	1.7	0.02	1216	3.3	9	19	0	0.2	2346	560	
	03/11/87	6.9	3970	180	27	533	10	12	0.31	1224	8.2	0	62	0	0.1	2374	560	
	03/11/87	7.6	3220	160	66	386	5.9	1.5	1.4	832	143	0	249	3.8	0.4	2076	672	
	10/19/87	8.7	1440	40	43	161	5.5	1.9	0	377	68	2	36	0	0.1	942	277	
	12/15/88	7.9	2210	79	56	255	6.3	1.8	0.01	651	76	0	33	0.6	0.2	1377	426	
	06/14/89	8.1	1990	24	75	221	6.3	0.98	0	541	68	0	27	0	0.2	1240	369	
	03/14/90	7.9	2570	87	86	304	7.4	1.1	0	745	73	0	31	0	0.2	1850	572	
	02/27/91	7.9	2750	19	120	310	7	2.3	0.09	760	56	0	43	4	0.2	1970	560	
	07/16/91	7.6	2830	90	74	330	5	4.9	0.16	840	62	0	25	1.2	0.2	1830	530	
	03/24/92	7.7	3120	120	83	360	7	1.5	0.03	930	69	0	35	6.1	0.1	2030	630	
	11/25/92	7.6	3580	110	110	400	7	3.6	0.58	1100	66	0	26	0.2	0.3	2300	730	
	01/25/93	7.8	3250	120	84	390	6.6	1.2	0.1	980	60	0	33	8.1	0.2	2190	640	
	05/24/93	8.1	3300	110	78	390	7.4	1.4	0.06	990	58	0	45	0.1	0.2	2140	590	
	02/07/95	7.8	4380	180	113	500	8.2	2.8	0.69	1300	65	0	23	0	0.2	3130	900	
	04/10/95	8.8	4300						7.1	0.89	1430	60					2800	1180
	05/15/95	7.6	3520	26	160	450	7.4	1.1	0.15	1200	55	0	27	1.9	0.2	2530	720	
	02/16/98	6.6	5030						14	1.4	1500	62					3270	450
PD0016	09/07/86	7.8	931	35	17	138	5.9	0.25	0.05	152	12	0	332	0	0.2	538	158	
	07/20/87	8.6	833	9	12	149	6.3	1.2	0	147	4	31	181	0	0.2	458	74	
	10/19/87	8.8	813	6.6	17	147	6.3	0.88	0.01	143	4	18	197	0	0	450	88	
	12/14/88	8.6	743	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	866	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	917	31	21	145	6.2	0.62	0.26	108	2.4	30	298	1.4	0.2	504	163	
	12/11/90	8.3	818	17	14	160	7	0.58	0.17	100	2	22	290	2.5	0.2	460	100	
	10/11/91	8.2	948	28	16	180	7.1	0.82	0.21	120	2	0	382	3.8	0.2	548	140	
	12/15/92	8.2	1010	22	21	180	6.3	3.4	0.15	130	6	0	343	5.1	0.2	572	140	
	04/08/94	8.8	936	14	12	170	4.3	1.8	0	140	4	59	216	2.8	0.2	532	86	
	PD0017	11/03/86	7.1	4400	334	169	244	18	11	4.1	1314	86	0	143	1.3	0	3350	1526
		10/19/87	7.9	4170	296	146	264	19	0.8	0.07	1294	17	0	32	0	0	3046	1352
12/01/87		7.1	4620	328	214	258	18	11	4	1400	130	0	144	0	0.1	3000	1700	
02/17/88		8	4450	304	151	267	19	1.3	0.69	1356	13	0	35	0	0	3390	1380	
07/18/88		7.9	4140	304	134	267	20	0.4	0.02	1324	8.5	0	14	2.8	0	2067	1310	
11/15/88		7.6	4180	291	145	276	19	3.7	0	1350	17	0	28	0	0.1	2110	1330	
03/20/89		6.2	4210	315	138	283	20	11	0.03	1380	19	0	42	2.2	0.1	2180	1350	
03/13/90		7.3	4590	324	158	303	18	33	1.7	1480	36	0	46	0	0	2860	1460	
12/11/90		7.9	4650	330	130	380	20	2.5	0	1500	11	0	30	2.2	0.1	3590	1400	
10/16/91		8.4	2430	120	15	290	11	1.3	0.01	750	1	0	18	0.2	0.1	1400	350	
12/23/92		7.9	4770	360	180	270	19	3.8	4.1	1500	110	0	118	5.2	0.1	4690	1600	
02/24/93		7.7	4810	340	200	270	18	1.76	0.51	1500	34	0	50	5.7	0.1	3660	1600	
06/23/93		7.7	4420	330	170	270	18	5.5	0.81	1400	79	0	24	0	0.1	3750	1500	
04/25/94		7.6	4850	380	190	290	21	2.5	3.8	1400	96	0	197	4.1	0.1	3610	1710	
12/22/94		8.1	4970	310	210	350	21	10	0	1600	26	0	33	0.2	0.4	3830	1600	
04/24/95		7	4680	290	290	190	22	2.8	0.7	1600	52	0	39	6.9	0.1	2860	1900	
04/03/96		7.3	4040						25	2.4	1400	18					2630	1300
02/23/98	4.6	4510						42	2.2	1500	3					2930	1200	
PD0018	11/05/86	7.9	1610	132	59	110	5.5	0.46	0.01	360	15	0	358	0.5	0.4	1154	570	
	10/15/87	7.9	1340	90	50	101	4.7	0.44	0.49	265	3.4	0	335	0	0.2	894	430	
	02/03/88	7.8	1266	80	48	99	5.1	0.24	0.47	235	5.3	0	316	0	0.4	752	397	
	07/11/88	8	1061	70	35	99	6.3	1.3	0.42	203	3.6	0	264	0.3	0.4	547	319	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
	(m/d/y)							(Total)									
PD0018	11/14/88	8.3	964	38	36	94	4.7	2.1	0.32	182	1.8	21	195	0.4	0.5	572	242
	03/14/89	8.3	1010	72	33	90	5.3	13	0	186	23	63	165	0.3	0.6	555	316
	03/27/90	7.9	1060	78	32	90	4.7	132	0.29	164	23	0	314	1.4	0.6	634	326
	08/15/90	8	983	80	30	90	4.7	18	0.03	167	9.8	0	330	0.6	0.6	546	325
	01/23/91	7.9	1040	93	30	87	4.3	1.2	0.31	170	4	0	290	0.6	0.2	630	360
	10/10/91	7.9	934	55	34	79	4.8	0.26	0.02	150	19	0	274	0.2	0.5	558	280
	02/11/92	8.1	907	39	38	100	4.3	0.31	0.23	150	13	0	234	1.1	0.5	514	260
	10/19/92	8.3	862	36	34	78	3.9	0.14	0.22	170	7	18	130	1.8	0.4	488	230
	01/19/93	8.5	867	26	41	85	4.3	0.1	0.18	190	9	15	107	1	0.3	540	230
	08/27/93	8.4	1050	35	32	120	15	1.4	0	180	130	4	141	10	0.5	650	220
	12/23/94	9	790	15	41	89	4.3	0.22	0.02	180	1	15	130	0.1	0	440	200
	03/20/96	8.2	788						0.34	0.01	180	2				512	170
	12/19/96	8.2	912						0.16	0.3	200	13				592	230
	03/18/98	8.2	725						0.56	0.03	190	1				471	220
PD0019	11/29/86	7.9	1400	72	41	150	4.3	0.23	0.18	250	35	0	385	0	0.8	820	350
	10/15/87	6.9	38500	880	1037	6805	154	1.8	7.2	14560	546	0	451	0	0.7	31790	6460
	02/03/88	7	32200	712	930	5198	122	1.4	4.6	11360	245	0	183	0	0.6	22956	5600
	07/11/88	7.1	37800	1024	1041	6667	151	7.7	5.9	14680	320	0	138	0	0.4	23952	6840
	11/14/88	9.4	41000	864	1080	6720	156	25	7.1	15300	223	0	394	0	0.6	30400	6600
	03/14/89	7.1	37000	1080	1470	6550	147	53	4.8	17200	310	0	347	0	0.5	27000	8750
	03/26/90	7.4	34800	552	963	6000	142	58	4.9	13100	126	0	192	0	0.4	25700	5340
	01/17/91	7.3	22100	960	660	4250	90	57	4.8	10100	180	0	190	0	0.1	20400	5110
	12/23/94	7.7	19000	800	650	2200	47	4.2	0.41	6600	25	0	72	6	0.2	14200	4700
	03/20/96	7.5	11440						14	2.3	4200					7440	3400
	12/18/96	7.7	10400						22	1.2	3500	3				6760	3100
03/18/98	6.9	10200						2.2	45	3900	1				6600	3400	
PD0020	12/05/87	7.5	3510	226	55	333	10	3	1	990	15	0	212	0.7	0	2748	792
	12/01/88	7.5	2950	164	52	331	11	0.26	0.05	936	3.7	0	28	0	0.1	1838	622
	06/01/89	7.9	2930	194	15	331	11	0.18	0.03	886	2.8	0	24	0	0.1	1830	544
	03/01/90	7.8	2840	168	17	324	11	0.5	0	874	1.7	0	10	0.1	0.1	1712	490
	08/01/90	8	2790	167	25	331	9.4	0.2	0.03	891	1.1	0	16	0.1	0.1	1660	518
	11/30/90	7.6	2710	170	22	340	10	0.22	0.02	820	2	0	34	1.7	0.1	2170	520
	07/01/91	8.4	2840	180	29	330	12	0.26	0.01	900	1	0	26	0.1	0.1	2180	570
	03/03/92	8.6	555	1.6	3.5	150	1.6	0.22	0	15	2	26	271	0.3	0.2	258	18
	11/02/92	7.7	2990	170	38	320	10	0.9	0.03	910	1	0	26	1	0.1	2060	580
	02/03/93	7.6	3000	210	33	320	10	0.13	0.07	950	1	0	36	1.3	0.1	2240	650
	05/04/93	7.6	3020	170	25	320	11	0.36	0.14	920	1	0	33	0.6	0.1	2130	530
	03/21/94	7.8	2940	140	83	300	11	0.38	0.1	900	3	0	40	1.4	0.1	1890	690
	02/02/95	8.1	2860	130	110	230	9.4	0.25	0.04	910	2	0	36	0.2	0.1	2050	800
	05/03/95	7.7	2770	150	66	290	7.8	0.16	0.02	890	2	0	36	2.2	0.1	1990	650
	04/02/96	7.7	2820						0.56	0.01	920	2				1830	790
	04/10/97	8	3010						0.36	0.08	900	1				1950	660
	02/13/98	7	2760						0.7	0.06	890	3				1790	600
PD0021	12/09/87	7.5	2950	234	70	212	9	0.88	2.4	796	12	0	276	1.6	0	2310	874
	12/02/88	7.9	2590	168	74	202	8.2	0.52	2.1	772	3.5	0	146	0.1	0.1	1614	722
	06/19/89	8	2570	164	70	209	9.8	0.26	1.7	730	3.8	0	132	0	0	1600	698
	03/06/90	8.4	2360	125	108	200	9.4	0.23	0.04	729	1.9	0	35	0.1	0.1	1600	756
	12/18/90	8.2	2270	200	19	220	9.8	0.17	0.02	740	0.1	0	32	0	0.1	1470	590
	07/16/91	9.4	2300	130	51	200	9.8	0.11	0	700	1	1	16	0	0	2630	540
	03/24/92	7.6	2240	160	41	200	8.6	0.54	0.02	690	3	0	17	3.8	0.1	1520	560
	11/25/92	7.6	2260	150	47	190	8.6	0	0.06	700	1	0	28	2.2	0.1	1870	570
	02/28/93	7.6	2200	170	31	200	9	0.22	0.08	680	2	0	28	2.2	0.1	1860	560

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH
	(m/d/y)							(Total)									
PD0021	05/26/93	7.9	2280	160	32	190	9.4	0.34	0	680	3	0	41	2.9	0.1	1810	540
	03/21/94	8.3	2390	180	42	210	9	0.28	0.01	710	3	0	18	3.1	0.1	1580	620
	01/13/95	8.1	2560	200	40	220	9	0.23	0.02	800	4	0	26	0	0.1	1900	660
	04/22/95	6.8	2410					0.34	0.04	780	3					1570	990
	05/09/95	8.9	680	4	7.3	140	2.7	0.44	0	110	3	9	222	0.7	0.2	422	39
	02/13/98	7.2	2570					0.16	0.01	830	3					1670	660
PD0022	12/26/87	7.9	1560	41	15	258	5.1	0.28	0.33	320	11	0	322	2.1	0.1	862	162
	12/07/88	10	1480	2.4	9.1	276	5.5	0.14	0	367	3.5	48	62	0	0.2	922	44
	06/08/89	8.7	1460	7.6	6.8	292	5.5	0.32	0	360	3.5	12	129	0	0.2	910	47
	03/07/90	9.5	1440	6.4	1	278	4.7	0.54	0	357	1.9	50	34	0.2	0.2	724	20
	08/06/90	10.4	1430	2.4	7.3	274	5.5	0.16	0	373	2.1	83	0	0.2	0.2	752	36
	12/06/90	10	1440	3.2	0	300	5.5	0.5	0	370	3	57	25	0	0.2	750	8
	07/07/91	10.3	1450	3.4	3.2	320	6.2	0.82	0.01	380	3	60	13	0	0.2	716	22
	12/14/92	9.8	1470	1.9	1.2	280	5.5	1.5	0.02	380	3	21	68	0.3	0.2	734	10
	02/11/93	9.3	1470	3.2	0.6	280	5.1	0.9	0	370	3	20	70	3.2	0.2	804	10
	06/09/93	9.6	1480	4	19	260	4.3	0.87	0	380	4	40	63	2.6	0.2	806	88
	04/08/94	9.6	1400	7.2	19	260	3.9	2.1	0	370	3	16	119	0	0.2	736	98
	12/08/94	8.5	1420	12	0.2	300	5.5	5.8	0	360	3	9	148	2.4	0.3	782	30
	03/19/96	8.7	1600					0.66	0	440	3					1040	17
	02/19/98	7.9	12780					35	0.38	4500	150					8310	2300
	PD0023	02/04/88	7.4	3540	220	127	283	14	5.1	2.4	1000	55	0	203	0.5	0	2406
07/12/88		7.5	2930	142	86	267	15	0.42	0.37	898	2	0	51	0.3	0	1434	708
11/01/88		7.7	2880	150	77	269	15	0.92	0.09	870	2.4	0	54	1.6	0.1	2020	690
03/21/89		7.1	2640	83	114	267	15	0.4	0.01	834	4	0	29	0.5	0.1	1330	678
03/19/90		8	2300	136	35	251	14	0.65	0	709	2.2	0	30	1.2	0.1	1430	484
01/16/91		8.2	2000	110	20	240	14	0.42	0.01	630	1	0	14	0	0	1400	360
10/12/91		9.5	1910	91	21	230	14	0.4	0	580	1	10	0	0.3	0.1	1380	320
12/22/92		7.8	2130	110	21	230	12	3.4	0.03	640	4	0	17	0.4	0.1	1360	370
02/18/93		8	2050	120	18	230	13	0.68	0.01	590	2	0	42	0.9	0.1	1490	360
06/23/93		8	2030	110	62	230	12	0.84	0.01	590	8	0	31	0.1	0.1	1570	520
04/07/94		8	2010	120	15	220	14	0.71	0	610	2	0	33	1.5	0.1	1340	370
12/20/94		7.9	2140	110	34	240	11	1.4	0.04	650	3	0	41	0.3	0.1	1510	420
04/25/95		8	2080	100	88	160	14	0.52	0.02	680	1	0	30	0.1	0.1	1190	620
03/27/96		7.8	2130					0.42	0.01	670	2					1380	520
PD0024		02/02/88	7.7	720	35	20	97	5.9	0.34	0.01	34	15	0	389	0.6	0.2	432
	03/10/88	7.4	884	53	21	115	14	3.6	0.7	52	29	0	437	7.9	0.2	538	218
	03/10/88	7.5	700	37	19	99	6.6	0.76	0.27	33	14	0	387	1.5	0.2	410	171
	12/14/88	8.4	670	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	615	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	665	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	642	38	16	87	5.5	0.51	0.14	20	1.4	22	330	0.7	0.7	374	162
	12/06/90	8.5	540	12	14	99	6.6	0.74	0.08	19	2	24	290	0.6	0.3	320	88
	10/07/91	8	641	35	19	110	7	0.67	0.25	21	3	0	407	1.5	0.4	376	170
	02/11/93	8.5	577	19	16	92	6.3	5.3	0.03	22	3	28	240	1.3	0.3	374	120
	06/09/93	8.5	546	16	18	94	6.6	2.5	0.08	16	3	21	282	1.4	0.3	368	110
	07/08/94	8.4	585	21	22	94	3.5	1.9	0.04	29	3	21	310	1.9	0.2	358	140
	12/08/94	8.7	512	4	17	94	6.3	1.2	0	16	3	18	273	2.3	0.3	360	78
	06/05/97	7.8	3310					0.24	0.39	1040	2					2150	750
	02/17/98	8	647					0.38	0.1	20	1					421	160

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
	(m/d/y)							(Total)									
PD0025	02/13/88	6.7	7470	496	263	725	19	16	0.1	2340	255	0	93	5.2	0	6632	2320
	07/12/88	7.7	6100	360	185	579	19	2.3	0.87	1964	122	0	39	3.7	0	3252	1660
	11/01/88	8	5950	333	170	547	19	0.8	0.05	1880	85	0	19	0	0	4500	1530
	03/16/89	7.8	5680	456	170	566	19	2.4	0.04	2200	25	0	36	0	0.1	3450	1840
	03/14/90	7.5	5420	401	80	547	18	0.84	0.65	1780	4.3	0	13	0	0	3380	1330
	08/08/90	7.8	5410	438	38	559	18	1.4	0.58	1820	5.1	0	11	0	0.1	3540	1250
	12/20/90	6.8	5340	360	73	560	18	1.1	0.95	1700	5	0	23	0	0	3500	1200
	10/22/91	7	5300	380	63	580	19	3	0.73	1730	4	0	8	0.3	0.1	3390	1200
	08/03/92	6.8	5420	410	41	530	17	0.64	0.75	1730	5	0	12	0.2	0.1	4480	1190
	02/03/93	7	5340	370	27	550	19	0.12	0.71	1800	4	0	15	0.1	0.1	4340	1000
	06/02/93	6.8	5440	370	68	550	19	0.35	0.74	1730	5	0	29	3.1	0.1	4340	1210
	04/04/94	7.9	5490	470	12	570	18	2.3	0.14	1730	3	0	45	0.1	0	3540	1220
	12/26/94	7.6	5440	340	110	570	20	0.86	0.78	1800	13	0	24	0.5	0.1	4040	1300
	04/09/96	7.1	5730					1.9	0.05	2000	22					3720	1500
	02/16/98	8.1	483					0.58	0.01	11	3					314	96
PD0026	11/23/88	7.5	4780	355	98	400	12	4.9	3.2	1410	41	0	270	2.6	0.2	3490	1290
	03/02/90	7.6	1830	96	59	163	7.8	0.52	1.4	483	1.9	0	166	2.5	0.1	1334	483
	08/02/90	7.8	1720	110	44	159	7.8	0.61	1.4	483	0.8	0	133	3.1	0.1	1280	456
	12/03/90	8	1940	140	51	160	7.4	0.6	1.4	480	2	0	300	2.5	0.2	1540	570
	07/02/91	7.5	2030	150	61	160	9	0.46	0.53	500	2	0	309	0.1	0.2	1500	620
	03/05/92	8.7	649	4.8	11	130	2.7	0.23	0	35	90	11	197	0.1	0.2	390	58
	11/03/92	8.1	1880	120	70	60	7.8	0.51	1.4	500	2	0	199	3	0.1	1380	590
	02/05/93	7.6	2000	190	41	160	7	0.4	1.4	500	2	0	271	3.9	0.1	1540	650
	05/06/93	8	1950	110	66	170	7.4	0.68	1.4	500	2	0	259	0.4	0.1	1270	550
	04/05/94	7.9	2030	160	46	170	7.4	0.8	1.3	510	4	0	309	0.8	0.2	1380	590
	02/06/95	8.1	2000	170	73	140	6.6	0.86	1.2	510	2	0	320	2.7	0.2	1410	730
	04/03/95	7.9	1890					0.46	0.86	520	5					1230	590
	05/04/95	8.2	1790	110	60	160	11	0.43	1.1	500	3	0	179	4.8	0.1	1310	510
	06/09/97	8.2	1710					0.4	0.6	490	2					1110	400
	02/13/98	8.7	1980					0.42	0.99	500	3					1290	550
PD0027	12/06/88	7.3	7330	565	177	644	12	2.8	0	2260	168	0	231	1.6	0.2	5510	2140
	03/09/90	7.8	8230	516	253	748	22	3.6	0.04	2840	1.5	0	25	0.1	0.1	7090	2330
	12/18/90	7.8	7750	710	120	770	27	5.4	0.04	2800	2	0	22	0	0.1	6140	2300
	10/21/91	8.2	7700	510	210	770	22	6.8	0.02	2610	4	0	21	0.3	0.1	5890	2120
	12/11/92	7.9	7610	550	170	640	19	2.9	0.04	2480	10	0	16	0.1	0.1	5640	2070
	02/02/93	8	7430	480	150	700	20	0	0.05	2500	11	0	24	0.2	0.1	6080	1800
	06/22/93	7.5	7640	560	240	670	21	0.47	0.06	2560	13	0	31	5.2	0.1	5250	2380
	04/27/94	7.6	7370	550	160	640	21	6.1	0.07	2500	14	0	25	6.1	0.1	5230	2000
	01/17/95	7.8	7320	550	170	670	20	1.4	0.04	2500	11	0	26	0.5	0.1	5460	2000
	04/18/95	8	7670	530	190	680	21	1.3	0.04	2500	22	0	27	0.4	0.1	5810	2100
	03/06/96	8.9	523					1.2	0	29	2					340	100
	02/17/98	8.4	7630					0.54	0	2600	4					4960	2200
PD0028	12/06/88	8	1290	106	28	101	6.3	3.9	1.1	275	16	0	259	1.7	0.2	890	382
	03/16/90	8.2	972	34	17	110	7.4	3.4	0	268	1.8	0	40	0	0.1	600	157
	12/18/90	7.9	959	41	12	110	7.4	0.24	0.02	260	1	0	37	0.6	0.1	574	150
	07/01/91	7.8	1260	100	35	98	6.9	0.8	0.18	300	2	0	210	1.8	0.1	970	390
	03/03/92	8.2	1160	74	35	110	5.5	0.46	0.06	280	2	0	166	2.8	0.2	774	330
	11/02/92	8.3	1140	64	34	100	5.1	0.61	0.05	280	2	1	119	0.31	0.1	768	300
	02/03/93	8.2	1150	63	36	120	6.3	0.18	0.04	300	3	0	99	2.6	0	868	300
	05/04/93	7.8	1250	37	35	140	6.3	0.34	0.1	330	3	0	112	0.9	0.1	766	240
	04/04/94	8.2	1510	46	35	200	7.8	2.7	0.04	410	4	0	104	2.3	0.1	958	260
	02/02/95	8.1	1650	38	46	250	7.4	2.2	0.2	500	2	0	105	1.1	0.1	1270	280

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
	(m/d/y)							(Total)									
PD0028	04/02/95	8.2	2020					0.76	0.11	640	2					1310	450
	05/03/95	8	1690	47	41	220	11	1.5	0.13	520	2	0	69	0.6	0	1120	290
	02/16/98	7.7	14700					0.14	3	5100	260					9560	3000
PD0029	12/09/88	8.1	725	28	8	133	2.7	1.2	0.01	14	26	0	404	0.7	0.3	426	102
	03/08/90	8.4	658	8	7.3	140	2	0.76	0.02	28	2.9	15	329	0.4	0.3	364	50
	08/07/90	8.7	631	6.2	4.5	150	2.7	0.75	0.01	29	3.9	29	305	0.6	0.3	314	34
	12/07/90	8.4	672	8	4.7	140	3.5	0.42	0.01	32	3	22	350	2.8	0.3	410	39
	10/09/91	8.4	687	11	5.9	140	5.1	1.3	0.02	26	5	37	321	5.9	0.3	426	51
	12/16/92	8.5	733	16	8.5	140	3.9	0.62	0.04	34	3	22	306	0.57	0.4	452	74
	02/15/93	8.4	736	17	7.8	150	3.9	2.3	0.04	35	3	23	313	4.6	0.3	468	75
	06/16/93	8.6	725	17	15	130	3.5	1	0.04	31	7	19	382	4.8	0.4	494	100
	04/21/94	5.2	679	7	18	150	2.7	0.32	0.02	42	9	21	340	5.2	0.3	414	92
PD0030	12/14/88	7.5	19800	788	475	2830	35	2.6	1.4	6710	500	0	137	18	0.1	13900	3920
	03/09/90	7.5	17800	680	392	2600	39	1.3	4.8	6250	385	0	145	4	0	13800	3610
	12/27/90	7.7	17500	960	300	2700	39	0.5	2.4	6300	400	0	57	0	0	13000	3600
	10/21/91	7.5	17500	610	440	2810	39	0.4	0.17	6270	340	0	14	0.2	0	12800	3310
	02/02/93	7.4	17700	640	320	2600	33	0.44	0.23	6200	330	0	27	5.4	0.1	12700	2900
	06/22/93	7.9	17900	710	560	2690	39	0.07	0.07	6330	280	0	40	0	0.1	12700	4050
	04/27/94	7.6	17300	670	570	3200	39	0.88	0.12	6300	280	0	38	0.1	0	13000	4000
	12/14/94	7.8	17400	610	440	2600	34	0.54	0.03	6200	0	0	28	0.5	0	12500	3300
	04/18/95	7.9	17500	600	450	2400	25	0.72	0.07	6200	270	0	31	0.4	0.2	12700	3300
	03/25/96	7.7	17800					0.12	0.07	6400	170					11600	3700
PD0031	12/16/88	7	19000	1300	424	2070	24	29	5.9	6620	236	0	207	0	0.1	14200	5000
	03/15/90	7.5	5820	273	121	660	11	0.4	0.06	1850	29	0	49	0.2	0.1	3790	1180
	08/17/90	8.2	5680	346	121	672	11	0.38	0.05	1920	16	0	34	0	0.1	3890	1360
	12/21/90	7.8	5700	300	120	650	11	0.42	0.09	1910	12	0	47	0	0.2	3920	1240
	07/05/91	7.9	5930	310	130	630	14	0.15	0	1940	7	0	57	0.1	0.1	4330	1300
	03/11/92	7	5910	320	120	670	12	0.38	0.09	2000	6	0	80	0	0	4700	1300
	11/10/92	7.7	6580	410	140	730	12	0.2	0.08	2100	4	0	69	0.8	0.1	4400	1600
	02/09/93	7.9	6900	390	140	710	11	0.02	0.08	2300	4	0	44	0.2	0.1	5790	1500
	05/10/93	7.9	6990	430	120	710	12	0.18	0.03	2300	4	0	51	0	0.1	5340	1600
	03/28/94	7.9	7830	460	1500	830	13	0.23	0.08	2500	11	0	39	0	0.1	5390	1750
	01/25/95	7.8	9260	580	230	950	14	0.17	0.06	3100	15	0	102	0.2	0.1	6570	2400
	04/11/95	7.3	11000					0.22	0.06	3950	27					7150	3490
	05/24/95	7.7	8960	700	180	1100	12	0.41	0.06	3400	15	0	52	0.5	0	5820	2500
03/19/98	8	11300					0.38	0.02	4400	1					7300	3200	
PD0032	12/18/88	7.2	4860	344	61	446	9.4	1.3	0.04	1430	30	0	234	1.4	0.1	3110	1110
	03/15/90	7.4	8290	478	211	948	17	0.54	0.09	2670	169	0	34	0	0.3	5650	2060
	09/10/90	8	7110	470	145	805	16	0.53	0.08	2410	56	0	29	0	0.1	5480	1770
	12/20/90	7.8	6140	380	130	660	7.8	0.36	0.49	2000	38	0	5	0	0.1	4380	1500
	07/05/91	8.6	5400	320	98	570	16	0.95	0	1700	15	0	26	0.1	0.1	4500	1200
	03/12/92	7.8	5230	300	100	550	9.4	0.14	0.02	1700	5	0	16	0	0.1	3480	1200
	11/10/92	7.7	5220	330	100	520	9.8	0.28	0.3	1600	4	0	29	1	0.1	4210	1200
	02/09/93	8	5120	300	110	510	9.4	0	0.01	1700	4	0	20	0.1	0.1	3800	1200
	05/10/93	7.8	5080	300	110	470	10	0.2	0.02	1600	3	0	27	0	0.1	3720	1200
	03/31/94	7.2	4830	290	94	480	11	0.17	0.15	1500	4	0	19	0	0.1	3230	1110
	01/25/95	8	4560	340	61	480	9.4	0.08	0	1500	4	0	45	0.1	0.1	3200	1100
	04/10/95	8.5	4340					0.68	0.05	1450	3					2820	1190
	05/24/95	7.7	4050	290	130	450	2	0.48	0.04	1500	4	0	32	0.5	0.1	2630	1200
	02/16/98	8.2	4380					0.08	0.03	1500	4					2850	1000

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	(Total)								F	TDS	TOH
								Fe	Mn	Cl	SO4	CO3	HCO3	NO3				
PD0033	12/21/88	7.7	5980	98	179	952	46	0.98	1.2	1200	600	0	1000	0	0.6	3740	980	
	03/05/90	7.7	2880	110	52	414	3.5	2.2	0.63	656	178	0	317	4.3	0.5	1696	490	
	08/03/90	7.9	2780	147	28	419	4.3	0.66	0.35	687	171	0	287	2.3	0.3	1690	484	
	12/04/90	8	493	28	17	44	7.8	0.9	0.76	49	93	0	94	0.7	0.3	320	140	
	10/04/91	7.9	563	32	19	66	8.3	0.79	0.16	74	66	0	127	4.9	0.3	312	160	
PD0034	01/09/89	8.1	382	34	13	30	5.1	0.54	0.04	46	16	0	125	0.5	0.3	220	136	
	03/15/90	8.7	2320	77	27	311	15	0.64	0.01	688	25	11	5	0	0.3	1440	304	
	07/10/90	8.1	1490	50	4.4	239	15	0.37	0.01	427	47	0	46	0.1	0.3	872	143	
	12/21/90	8.6	1570	29	19	240	16	0.54	0	430	42	4	30	0	0.2	870	150	
	07/08/91	8.9	1750	30	11	150	15	0.56	0	250	31	17	5	0.1	0.3	1130	120	
	03/23/92	8.7	2070	85	75	270	14	0.36	0	570	14	10	168	0.2	0.1	127	520	
	11/13/92	8.1	2030	94	19	250	14	0.96	0.01	620	6	0	27	0.1	0.3	1240	310	
	12/24/92	7.9	673	36	18	94	5.9	1.6	0.25	19	3	0	354	2.5	0.3	384	160	
	02/04/93	8	2010	95	25	260	14	0.1	0	610	4	0	32	0.2	0.2	1410	340	
	05/21/93	8.8	587	11	2.9	130	3.9	0.36	0.02	24	2	15	299	0	0.2	3298	40	
	03/28/94	7.9	2100	100	24	240	13	0.67	0.03	600	3	0	28	0	0.2	1360	350	
	01/25/95	7.9	2330	160	63	220	12	0.96	0.04	700	3	0	66	2.3	0.1	1650	660	
	04/11/95	8.1	2220					0.86	0	720	3					1440	660	
	05/12/95	7.6	2060	130	71	220	9.4	0.32	0.01	700	4	0	33	0.4	0.1	1330	620	
	03/19/98	8.1	2110					0.76	0.02	730	10					1370	640	
PD0035	01/11/89	7.5	2000	94	36	248	11	0.34	0	446	31	0	386	0.4	0.2	1240	381	
	03/09/90	7.3	3800	62	117	511	18	0.32	0.04	1210	5.6	0	34	0	0	2630	634	
	09/01/90	8.6	3600	114	85	490	17	0.29	0.01	1210	3.9	3	15	0	0.1	2610	634	
	05/22/91	8.5	3390	120	61	470	16	0.19	0.01	1100	2	4	15	0.6	0.1	2200	550	
	10/21/91	8.1	2690	150	14	380	16	0.6	0.01	840	2	0	17	0.2	0.1	1360	440	
	12/11/92	7.9	2950	170	0	360	16	5.8	0.05	870	2	0	16	5.5	0.1	1970	430	
	02/02/93	7.6	2930	140	7.3	370	17	0.36	0.04	880	2	0	23	4.4	0.2	1970	380	
	04/18/95	8.1	3530	190	41	400	18	5.6	0.03	1100	5	0	32	0.4	0.3	2420	640	
	03/04/96	7.8	3920					0.45	0.1	1300	7					2550	790	
	02/19/98	4.4	5910					37	1.2	2000	1					3370	1000	
PD0036	01/15/89	8	2230	135	52	248	5.5	0.13	0.41	566	34	0	312	2.7	0.2	1200	552	
	03/06/90	8.3	1910	56	46	255	6.3	0.2	0.04	565	2.1	2	54	0	0.1	1180	328	
	12/17/90	7.9	1890	69	32	280	5.9	1.5	0.01	570	2	0	60	0	0.1	1180	310	
	10/08/91	7.4	1870	50	36	250	7.1	0.28	0.03	560	2	0	51	0.2	0.1	1190	270	
	02/08/92	8	4320	290	140	350	11	0.08	4.2	1300	48	0	195	5.7	0.2	3920	1300	
	12/18/92	7.8	1920	68	24	260	6.3	0.29	0.01	560	1	0	43	0.1	0.1	1210	270	
	02/17/93	7.9	1950	100	7.3	250	5.5	0.9	0.03	560	2	0	56	0.3	0.1	1370	280	
	07/17/93	7.7	1860	74	18	250	5.1	0.4	0.01	570	1	0	37	0	0.1	1350	260	
	04/18/94	8.1	2350	88	46	290	5.9	0.39	0.03	680	11	0	47	0	0.1	1500	410	
	12/12/94	8.1	2350	96	34	300	7	1.2	0.02	710	11	0	42	2.8	0.2	1490	380	
	03/27/96	7.6	2380					0.04	0.03	750	10					1550	460	
PD0037	01/15/89	7.5	4000	306	63	363	7.8	1.1	0.25	1220	39	0	184	2.7	0.1	1100	1020	
	03/12/90	7.9	3920	212	129	382	9.4	0.43	0.06	1250	13	0	32	2.1	0.1	3090	1060	
	12/17/90	7.5	3890	250	93	420	9.8	1	0.05	1300	13	0	23	0	0.1	2670	1000	
	07/16/91	9.2	3940	210	99	370	5	0.45	0.01	1200	10	1	17	0	0.1	2630	920	
	03/24/92	7.7	3860	220	84	370	9.4	0.38	0.02	1220	11	0	17	0.2	0.1	2850	900	
	11/25/92	7.6	3840	200	95	370	9	0.3	0.08	1200	9	0	22	0.2	0.1	2660	890	
	01/28/93	7.7	3810	230	86	390	9.8	0.16	0.1	1210	9	0	26	2.5	0.1	3250	940	
	05/26/93	7.5	3880	210	95	350	9	0.7	0.07	1200	11	0	31	2.5	0.1	3060	920	
	03/21/94	7.9	3880	210	110	370	9.4	0.4	0.05	1200	16	0	33	2.8	1	2570	960	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
PD0037	01/13/95	8.1	3720	220	80	380	9	2.1	0.02	1200	14	0	24	0.5	0.1	2730	870
	04/22/95	7.7	3450					0.3	0.05	1170	10					2240	1100
	05/09/95	7.7	3510	42	200	350	5.5	0.46	0.02	1200	12	0	23	1.2	0.1	2620	890
	02/13/98	8.3	3550					0.14	0.02	1200	3					2310	770
PD0038	01/22/89	8.3	970	22	8.3	200	1.6	0.17	0	52	66	64	314	0.2	0.5	569	88
	03/14/90	8.8	1970	8	40	354	5.1	3.9	0	486	2.8	27	215	1.3	0.5	1070	185
	12/14/90	9.5	1890	6.9	27	390	4.7	29	0	490	2	43	169	1.7	0.4	966	130
	07/08/91	10.1	2020	15	14	450	7.1	11	0	540	2	115	33	0	0.5	1050	96
	02/09/93	9.8	2210	0	4.9	430	5.9	5.3	0.01	590	5	88	32	3.2	0.4	1170	20
	02/16/93	10.8	2280	1.6	3.8	410	6.3	2.2	0	540	3	110	0	0.2	0.4	1180	20
	06/07/93	8.8	1780	4.8	38	350	5.5	1.3	0	400	49	24	225	5	0.4	986	170
	04/22/94	8.9	1520	12	28	290	5.1	23	0	320	34	60	229	2.3	0.4	860	140
	12/12/94	8.6	1890	6.1	38	350	3.1	9.5	0.01	450	41	17	256	1.4	0.5	1040	170
	03/22/96	8.4	1990					1.1	0.27	510	52					1290	230
	06/13/97	7.7	7270					0.64	8.2	2220	240					4730	1800
PD0039	02/02/89	8.1	787	12	2.3	175	0.4	2.1	0	36	52	0	387	0.4	0.4	469	39
	03/15/90	8.3	1780	9.6	26	320	5.5	0.28	0	383	42	39	230	1.1	0.4	940	129
	12/12/90	8.3	4450	64	170	630	7.4	0.37	0.02	1400	130	3	168	0.4	0.2	2980	860
	10/18/91	7.8	6600	150	200	940	15	0.48	0.38	2200	160	0	137	0.1	0.1	4520	1200
	12/08/92	7.9	3760	27	110	560	6.6	0.25	0.02	1100	65	0	165	1.4	0.3	2260	530
	02/22/93	8.5	2730	25	68	440	4.7	0.94	0.03	690	37	31	139	2.5	0.3	1550	340
	06/18/93	8.8	1860	8.5	39	330	4.3	0.39	0	440	24	17	260	9	0.4	1020	180
	04/25/94	9.2	672	9.8	5.7	150	0.8	1.2	0.01	39	15	33	295	0.2	0.4	462	48
	12/22/94	9.1	782	2.2	4.7	170	3.5	0.9	0	48	12	40	331	0.4	0.5	502	25
	04/20/95	8.7	830	3.2	17	180	0	0.64	0.01	66	16	35	360	0	0.4	540	78
	03/25/96	8.9	758					0.52	0	46	15					493	32
	06/18/97	9	750					0.55	0	31	20					488	28
	02/19/98	8.1	724					0.24	0	29	22					471	23
	PD0040	02/12/89	7.8	2610	92	48	322	6.6	0.35	0.24	640	51	0	301	2.3	0.3	1550
03/02/90		7.9	2130	33	45	322	5.9	0.14	0.65	568	41	0	129	3.1	0.2	1182	268
08/02/90		8.1	2200	122	15	327	4.7	0.43	0.89	606	29	0	263	2	0.3	1240	366
12/03/90		8	2190	62	42	350	7.8	0.34	0.79	590	23	0	210	3.1	0.3	1300	330
07/02/91		8.1	2220	54	60	290	9.5	0.28	0.23	610	2	0	220	2.5	0.2	1300	380
11/03/92		8.4	2480	67	85	350	7.4	0.52	0.01	650	3	22	189	6.6	0.2	1350	540
02/05/93		7.9	2450	59	45	360	7	0.32	0.32	660	3	0	228	6.2	0.3	1400	330
05/06/93		8.4	2390	81	33	350	7	0.76	0.66	670	2	21	205	5.1	0.2	1330	340
03/05/94		8.3	2190	40	44	380	7.4	0.26	0.06	610	3	15	160	3.9	0.2	1220	280
04/05/94		8.3	2250	55	59	330	6.3	0.21	0.66	600	5	12	204	6.4	0.2	1310	380
02/06/95		8.4	2580	130	66	310	5.9	1.4	1.1	670	28	27	250	4.3	0.3	1660	600
04/03/95		6.8	2280					1.1	0.83	650	30					1480	530
05/04/95		8.3	2290	64	55	330	5.1	0.44	1.1	660	33	11	164	3.9	0.1	1520	390
06/09/97		8.3	2070					0.46	0.46	590	20					1350	310
02/16/98	8.1	2410					0.1	0.54	660	1					1570	350	
PD0041	03/02/89	7.5	2540	212	62	172	8.6	0.21	2.2	656	15	0	275	2.1	0.2	1880	782
	03/12/90	8.1	2460	144	116	283	11	0.8	1.3	617	39	0	325	5.7	0.3	1650	650
	12/17/90	8.3	1870	100	37	240	8.6	0.78	0.01	500	2	2	181	3.6	0.2	1190	410
	07/16/91	7.9	1770	43	47	220	9.5	0.42	0.04	490	1	0	102	4.4	0.2	1080	300

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
	(m/d/y)							(Total)									
PD0041	03/24/92	7.6	1720	30	41	230	8.6	0.64	0.08	500	2	0	46	4.8	0.1	1010	250
	11/25/92	7.3	2110	41	61	270	9.4	0.08	0.16	640	2	0	32	4.6	0.2	1490	350
	01/28/93	7	2020	55	43	270	9	0.3	0.16	620	2	0	25	0	4.2	1310	320
	05/26/93	8.1	2220	52	52	290	9	0.24	0.01	670	3	0	48	0	0.2	1590	350
	03/21/94	8.1	2240	80	80	240	7	0.18	0.03	650	3	0	57	4.6	0.2	1450	530
	01/13/95	7.8	1920	73	52	210	8.2	0.96	0.05	580	2	0	30	0.2	0.1	1386	390
	04/22/95	8.1	1980					0.62	0.19	650	2					1290	500
	05/09/95	7	1800	29	77	200	7.4	0.22	0	580	2	0	26	0.7	0.1	1480	380
02/13/98	7.6	2130					0.64	0.03	670	3					1380	400	
PD0042	03/30/89	8.3	810	24	12	159	1.2	0.34	0.03	8	38	0	455	0.2	0.4	505	108
	03/28/90	8.3	2220	18	64	391	5.9	1.9	0.07	476	142	20	250	0	0.3	1260	308
	08/13/90	9.7	1940	8	37	400	8.6	1.1	0.01	332	135	126	164	0.1	0.2	1090	171
	12/19/90	10	2070	0	20	420	9.8	1.4	0	390	140	140	147	0.1	0.3	1140	83
	07/11/91	10.2	2280	1	13	450	11	4.2	0	410	71	77	312	1	0.3	1250	54
	03/18/92	8.7	1580	6.4	17	320	3.5	3.6	0.01	260	93	30	304	2.2	0.3	846	85
	11/17/92	8.5	1040	3.2	20	210	1.2	0.94	0.03	74	93	29	293	0.7	0.4	624	91
	02/18/93	8.6	980	11	15	210	1.6	4.9	0.04	63	96	31	288	0.1	0.4	646	92
	05/18/93	8.9	1020	8.8	22	220	2	2.9	0	66	100	8	388	0.8	0.4	604	110
	03/22/94	8.6	952	8.6	15	200	1.2	4.2	0	48	69	25	372	0.8	0.04	588	84
	01/23/95	8.9	1030	8	8.8	210	1.2	1.7	0.01	140	42	22	290	0.1	0.3	670	55
	04/19/95	7.2	1670					3.8	0.21	350	120					1090	310
	05/17/95	9.2	1130	2.6	20	240	0	2	0	170	41	32	314	1.5	0.4	778	86
	03/16/98	8.4	1970					2.2	0.18	430	130					1280	270
PD0043	04/15/89	8.1	1410	37	25	228	5.9	0.58	0.24	241	31	0	333	2	0.3	878	195
	03/15/90	8	2290	37	35	377	7.4	86	0.08	573	32	0	318	0.1	0.3	1210	238
	09/01/90	8.5	1410	32	12	271	6.3	55	0.15	317	4.1	30	261	0.7	0.3	788	129
	12/12/90	8.5	1390	14	22	240	5.5	91	0.05	280	2	64	194	1.5	0.3	704	120
	10/17/91	8	1280	21	15	200	6.8	45	0.09	240	3	0	337	3.6	0.3	698	114
	12/23/92	8	1320	21	18	230	5.5	17	0.15	240	6	0	293	2.8	0.3	696	130
	02/22/93	8.5	1290	19	13	230	5.1	40	0.01	250	8	19	223	4.5	0.3	732	100
	06/17/93	8.3	1770	27	39	300	8.2	21	0.07	430	10	12	222	2.6	0.2	992	230
	12/22/94	8.5	1270	26	11	220	5.9	33	0.05	230	10	17	302	3.9	0.4	754	110
	04/20/95	8.6	1210	10	45	180	1.2	0.92	0.04	240	14	24	250	3.8	0.3	714	210
PD0044	04/14/89	7.7	2430	149	85	168	15	3.8	1.4	634	62	0	233	0.2	0.1	1750	720
	03/09/90	8	2600	134	90	235	16	0.54	0.86	755	2.3	0	157	0.2	0.1	1830	706
	03/18/90	7.9	3200	170	88	350	17	1.4	1	1000	2	0	155	7	0.1	2100	800
	12/03/92	7.9	2530	110	93	220	15	1.3	0.63	750	2	0	70	4.4	0.1	2120	640
	02/02/93	8.1	2440	110	80	200	15	1.1	1.1	720	2	0	129	4.7	0.1	1700	600
	06/22/93	7.5	2500	98	110	230	16	0.76	0.41	760	2	0	62	3.1	0.1	1900	700
	04/27/94	7.5	2470	130	60	220	14	1.3	0.06	750	4	0	23	4.8	0.1	1630	580
	10/21/94	8.1	2590	150	79	240	18	1.4	1.2	740	1	0	200	0.3	0.1	2000	690
	12/14/94	7.9	2620	89	100	270	17	1.6	0.1	810	2	0	38	4.3	0.1	1870	650
	04/18/95	8	2470	97	77	220	14	0.87	0.18	760	1	0	54	0.9	0.1	1940	550
	03/06/96	7.9	2440					0.1	0.02	790	11					1590	660
	02/17/98	8.2	2360					0.48	0	740	0					1530	560
PD0045	05/10/89	7.4	7190	508	212	633	22	18	4.1	2178	185	0	131	0.7	0.1	4479	2138
	03/22/90	7.2	6130	299	168	690	23	1.1	0.05	2017	21	0	29	0	0	3819	1436
	08/28/90	6.2	6100	270	172	667	23	1.9	0.02	2050	10	0	17	0	0.1	4320	1380
	01/17/91	7.8	5630	280	150	670	24	1	0.05	1990	2	0	19	0	0	4220	1310
	07/03/91	8.7	6030	300	130	640	29	0.63	0	2000	2	0	24	0	0.1	4270	1300

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	(Total)							F	TDS	TOH
								Fe	Mn	Cl	SO4	CO3	HCO3	NO3			
PD0045	03/09/92	6.4	5980	310	120	660	24	1.2	0.3	2000	3	0	13	0	0	4080	1300
	11/05/92	7.6	6110	390	110	670	25	3.9	1.8	2000	10	0	69	5.3	0.2	4200	1400
	02/08/93	7.4	6020	330	100	660	24	0.74	0.29	2000	4	0	26	0.7	0.1	4690	1200
	06/28/93	7	5980	330	79	680	26	0.42	0.21	2000	3	0	10	0	0.01	4460	1100
	04/07/94	7	7330	380	210	790	25	2.6	1.2	2500	44	0	11	1.3	0	5140	1800
	02/08/95	7.1	7240	460	160	780	24	0.39	1.9	2400	2	0	60	0.2	0	4960	1800
	04/09/95	7	6820					0.78	1.8	2360	33					4430	1670
	05/08/95	7	6850	410	160	810	23	0.31	1.6	2400	11	0	14	0	0	5400	1700
03/09/98	6.1	6700					1.1	0.65	2400	33					4360	1800	
PD0046	05/11/89	7.4	5450	389	136	446	15	2.4	3.6	1610	74	0	161	2.6	0.1	3395	1530
	03/13/90	7.9	1740	37	46	221	11	1	0.07	492	1.4	0	64	0.3	0.1	1090	282
	12/11/90	7.9	1420	26	29	210	11	0.98	0.1	390	2	0	110	1.6	0.1	830	180
	10/11/91	7.7	1420	19	32	160	12	1.7	0.08	400	2	0	84	3.1	0.1	844	180
	12/15/92	8.2	1410	25	20	10	11	1.8	0.03	420	2	0	22	2.3	0.1	824	150
	06/09/93	8.2	1470	41	20	210	11	2.4	0.01	430	2	0	58	1.8	0.1	998	190
	04/08/94	8.8	1510	40	17	200	10	0.47	0	430	3	7.4	17	2.3	0.1	900	170
	12/08/94	7.9	1510	50	11	210	10	0.56	0.01	450	3	0	47	1.8	0.2	940	170
	04/10/96	8.1	1500					0.84	0	460	1					975	220
	02/19/98	8.2	1530					0.3	0	470	6					994	190
PD0047	05/20/89	7.2	19300	776	575	2898	43	21	2.5	6260	560	0	351	0.1	0.1	15247	4300
	03/29/90	7	18000	550	405	2815	38	3.2	1.8	6149	475	0	176	8.7	0	14220	3040
	08/28/90	7	17900	696	412	2900	43	0.98	1.6	6130	402	0	149	0	0	13100	3430
	12/06/90	7.6	18000	540	380	2780	35	2.5	1.4	6100	430	0	59	0.1	0	12200	2900
	10/07/91	7.5	17500	460	390	2900	48	2.2	0.32	6200	300	0	39	0.2	0	12300	2800
	02/06/92	8.1	17600	500	340	2700	34	2.7	0.06	6100	300	0	30	0	0.1	13400	2700
	10/07/92	7.1	17100	470	340	2600	32	2.2	0.55	5900	220	0	17	0	0	13200	2600
	01/05/93	7	17700	540	290	2900	31	0.98	0.55	6100	170	0	13	0.1	0	13500	2500
	08/09/93	7.1	15300	420	260	2400	37	3.7	0.54	5300	170	0	24	4.5	0	11700	2100
	12/15/94	7.1	17300	840	340	1900	35	0.73	0.7	5800	110	0	51	0.3	0.1	11400	3500
	03/22/96	6.7	15700					4.3	0.57	5930	60					10200	3020
	04/07/97	6.3	16800					7.6	0.99	5800	140					10900	2200
	03/11/98	7.5	16400					3.2	0.43	6100	15					10700	2700
PD0048	05/25/89	7.2	11510	876	480	1104	20	14	5.7	3670	300	0	190	0	0.1	7171	4160
	03/16/90	7.3	11040	765	285	1127	23	75	4.2	3717	280	0	69	7.1	0	6878	3080
	08/20/90	7.2	10800	824	295	1200	30	348	3	3750	268	0	85	0	0.1	7920	3270
	12/21/90	7.8	10700	620	320	1130	24	0.7	0.08	3700	210	0	24	0	0	8460	2870
	10/16/91	7.4	10700	690	270	1100	20	0.42	1.4	3600	140	0	20	0.1	0	7970	2850
	01/27/92	6.7	10800	680	250	1100	23	0.64	1.2	3500	87	0	13	0	0.1	7900	2700
	09/07/92	7	10600	650	290	1000	20	0.88	1.1	3700	34	0	13	0	0	9180	2800
	12/15/92	7.2	10600	680	180	1100	27	1.3	1.1	3600	29	0	17	0	0	9340	2400
	08/11/93	7.4	10300	690	160	1100	23	2.3	1	3500	27	0	29	4.5	0.1	8880	2400
	12/12/94	7.7	3430	230	50	380	10	1.3	0.05	1100	2	0	96	0.1	0.1	2220	780
	03/06/96	7	9790					0.04	1.3	3460	50					6360	2600
	03/19/97	7	10500					10	2.8	3600	48					6820	2700
	03/11/98	7.8	10000					4	0.26	3800	51					6500	3100
	PD0049	06/01/89	8.1	977	44	10	168	2	0.68	0.15	60	32	0	453	0.9	0.2	609
03/28/90		8.4	971	10	13	191	2.7	0.52	0.02	122	3.9	35	301	0.4	0.2	605	78
08/21/90		8.6	976	11	9.8	193	3.1	0.84	0.02	134	3.8	22	318	1.1	0.2	536	68
12/13/90		8.6	963	6.6	2.3	200	6.6	0.18	0	1330	2	22	307	0.1	0.3	520	26
07/08/91		8.3	971	0	13	190	7.4	0.71	0	140	2	23	303	0.6	0.2	596	53

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH
	(m/d/y)							(Total)									
PD0049	03/13/92	8.6	987	0	16	200	3.5	0.27	0	140	2	38	258	0.2	0.1	606	67
	11/11/92	8.8	962	5	16	190	2.7	0.25	0	140	2	31	227	1.2	0.2	500	77
	02/11/93	8.9	956	1.4	9.3	200	2	0.12	0	140	2	31	222	1.1	0.3	526	42
	05/11/93	8.9	962	1.6	9.2	180	2.7	0.38	0	140	3	16	284	0.8	2	516	42
	04/08/94	8.4	1040	0	14	200	4.3	1.6	0	140	6	10	324	2.3	0.2	600	56
	02/10/95	8.6	1030	4	32	210	3.9	0.28	0.02	171	3	35	303	3.6	0.2	596	140
	04/11/95	7.9	1110					0.54	0.01	220	3					722	180
	08/29/95	7.9	1000	7.7	13	220	12	1.4	0.02	200	4	0	316	3.1	0.2	650	71
	05/21/96	8.7	645					1.6	0.02	73	34					419	71
	06/12/97	9.1	1190					0.23	0	240	3					774	68
	03/16/98	8.5	1210					0.58	0.01	260	2					787	110
PD0050	06/02/89	7.8	2150	95	84	281	2.7	1.3	0.34	528	22	0	314	1.5	0.2	1339	582
	03/20/90	7.7	1820	71	36	271	5.1	0.47	0.5	413	18	0	360	0	0.2	1130	327
	09/11/90	8.2	1640	59	17	265	6.3	0.43	0.71	400	4.9	0	275	0	0.2	832	218
	01/17/91	8.1	1710	57	31	270	9	0.3	0.01	380	6	0	260	0.4	0.2	920	270
	07/08/91	9	1860	0	33	300	22	0.42	0	410	35	44	209	0.1	0.2	1060	140
	03/13/92	8.3	1940	30	36	310	11	0.37	0.21	440	20	24	202	2	0.1	1160	220
	11/26/92	8.5	1800	6.4	19	320	13	0.22	0.01	450	22	31	121	0.5	0.2	934	92
	02/11/93	8.6	1770	12	17	330	14	0.38	0.01	450	21	17	132	0	0.2	966	100
	05/11/93	8.1	1860	9.9	24	300	10	0.38	0.05	480	19	0	181	0.8	0.2	988	120
	03/17/94	8.2	2630	39	47	380	5.5	1.2	0.11	700	17	0	140	0.5	0.2	1570	290
	01/26/95	8.7	2460	21	48	390	6.3	0.6	0.01	750	2	4	59	0.1	0.2	1470	250
	04/11/95	8.3	2380					0.36	0.06	800	2					1550	680
	05/11/95	8.7	2270	2.7	46	410	0	0.22	0	760	1	1	28	0.2	0.1	1430	190
	PD0051	06/09/89	8.2	1440	37	13	267	0.4	0.36	0.02	109	215	0	380	0.1	0.7	897
03/14/90		8.4	1530	12	17	299	1.2	0.72	0	152	280	35	232	0	0.6	946	100
07/10/90		8.9	1490	7.8	8.6	320	1.6	0.56	0	176	233	35	246	0	0.5	820	55
12/20/90		9.6	1500	0	12	320	2.7	0.35	0.01	180	250	94	140	0	0.6	840	48
07/05/91		9.9	1500	0	11	270	28	0.45	0	190	140	140	107	0	0.6	908	46
03/12/92		9.8	1460	0	7.3	310	1.6	0.26	0	180	98	156	97	0	0.4	818	30
11/10/92		9.9	1390	0	40	260	2.3	0.71	0	200	67	145	95	0.1	0.4	790	160
02/09/93		9.5	1450	0	5.1	320	1.6	0.18	0	200	67	86	217	0.2	0.6	866	21
05/10/93		10.1	1470	2	5.4	310	1.6	0.62	0	190	62	187	77	0	0.6	842	27
03/30/94		7.1	3810	120	95	42	8.6	1.3	0.49	1100	53	0	12	4.8	0.2	2460	690
03/31/94		9.4	1160	0	1.9	250	0.8	0.48	0	120	14	68	313	0	0.5	670	8
01/25/95		9.4	1560	4	29	330	1.2	0.61	0	210	110	80	282	0.7	0.5	924	130
04/10/95		7.9	1420					1.1	0.02	190	140					923	170
05/24/95		8.9	1440	4.4	22	330	0	2.3	0.01	210	150	43	291	0.8	0.5	936	100
02/16/98	9.4	1180					0.26	0	160	2					767	12	
03/11/98	8	3840					7.7	0.04	310	1300					2500	1100	
PD0052	06/20/89	7.5	5360	413	210	283	14	0.8	0.82	1600	62	0	161	4.3	0.4	3339	1896
	03/27/90	6.3	4940	326	196	315	14	14	1.2	1587	5.5	0	51	4	0.2	3078	1618
	08/15/90	7.6	4870	429	158	340	15	334	1.4	1660	21	0	82	0.5	0.3	3720	1720
	01/17/91	7.5	4660	340	170	340	14	22	0.16	1610	1	0	11	4.4	0.1	3730	1540
	10/11/91	6.5	4830	360	140	350	16	1.4	0.33	1600	4	0	7	0.3	0.1	3780	1500
	01/28/92	6.7	4870	360	120	370	15	5.4	0.4	1600	3	0	12	0	1	4260	1400
	09/14/92	7	4890	360	120	350	14	8.2	0.44	1600	2	0	6	0	0.1	4170	1400
	12/22/92	7.2	4940	380	96	440	16	3.2	0.53	1600	3	0	25	5.7	0.1	4030	1400
	08/20/93	7.5	4990	370	110	400	17	0.7	0.44	1600	4	0	24	5.6	0.1	3670	1400
	12/23/94	7.6	5460	430	180	360	17	0.46	0.12	1800	12	0	42	0.9	0.2	4020	1800
	03/20/96	7.5	5040					1.4	0.28	1700	23					3280	1600
	12/18/96	7.7	7590					9.2	4.2	2500	44					4930	2300
	03/18/98	7.2	4540					0.9	0.26	1600	3					2900	1700

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
	(m/d/y)							(Total)									
PD0053	01/24/91	9.4	784	3.2	3.9	150	4.7	1.2	0	170	2	20	69	2.2	0.5	420	24
	06/14/91	7.9	1390	130	30	97	7.4	1.5	0.01	300	11	0	260	1.7	0.2	930	440
	10/11/91	7.9	1230	56	49	92	7.7	0.57	0.01	320	16	0	111	0.6	0.1	848	340
	02/12/92	7.9	1400	93	46	99	7	0.49	0	320	11	0	229	1.4	0.2	1060	420
	09/15/92	8.1	1420	100	45	94	6.6	0.14	0.01	320	10	0	223	1.1	0.3	942	440
	05/12/93	8	1430	130	41	99	6.3	0.17	0.02	330	10	0	214	0.6	0.2	926	500
	08/26/93	8.1	1330	79	48	100	6.6	0.43	0	330	16	0	191	1.9	0.3	1080	390
	12/02/94	8.4	1220	86	29	100	6.3	0.2	0.01	300	9	5.9	140	0	0.3	880	340
	03/18/96	8.4	1330					0.44	0.01	310	36					864	470
PD0054	06/28/91	8.2	1160	92	33	100	5.1	1.6	0.01	200	31	0	300	1.4	0.3	740	370
	10/15/91	8.2	873	43	32	84	4.6	0.48	0	160	26	0	193	0.1	0.4	560	240
	01/23/92	8.3	836	31	32	94	5.1	0.63	0	160	21	5	160	2.5	0.4	540	210
	09/22/92	8.1	1000	62	37	74	4.3	0.95	0	160	22	0	240	1.1	0.5	590	310
	01/26/93	8.4	962	51	37	87	5.1	1.1	0	170	24	2	188	1.5	0.5	634	280
	08/23/93	8.5	841	19	37	87	4.3	0.24	0	190	27	9	113	1.2	0.4	568	200
	03/29/96	8.4	1210					1.1	0	250	33					786	300
	04/11/97	8.1	1190					3.2	0	240	32					773	230
	03/18/98	8	6640					1.3	0.01	1800	490					4320	620
PD0055	04/20/91	7.6	25700	900	550	3800	55	0.25	10	8700	33	0	265	0	0.1	18600	4500
	07/04/91	7.5	25100	880	56	4200	80	6.1	11	9200	460	0	289	14	0	18500	2400
	02/04/92	7.8	25500	780	700	3800	58	4	11	9200	660	0	91	16	0.1	19300	4800
	02/05/92	7.6	25300	880	660	4000	62	5.8	11	9300	480	0	128	15	0	18400	4900
	01/04/93	7.7	25500	800	630	3900	59	31	2.2	8900	460	0	132	15	0.1	18700	4600
	08/04/93	7.6	25100	800	970	5100	60	22	9.3	10000	400	0	225	2.9	0	16300	6000
	04/18/96	7.7	23700					4.9	8.3	900	560					15400	490
	01/14/97	7.1	25100					27	9.3	17000	470					16300	9300
	03/10/98	7.3	23000					25	8.9	8800	320					15000	5600
PD0056	09/04/90	7.7	6450	644	113	644	12	16	3.6	2230	115	0	119	0	0.2	4820	2070
	12/11/90	7.8	4180	320	100	370	12	0.2	1.9	1300	62	0	140	0.1	0.2	3000	1200
	01/24/91	7.8	4200	300	120	360	11	0.82	2.9	1280	61	0	140	4.6	0.1	3190	1220
	07/04/91	8.2	287	10	3	45	3.9	0.64	0.01	31	13	0	102	0.2	0.3	190	38
	02/06/92	8	5280	350	150	460	13	1.3	2	1700	45	0	118	4.8	0.1	4610	1500
	12/16/92	8	5550	340	140	510	12	2.5	0.03	1800	29	0	89	4.4	0.1	4790	1400
	08/06/93	7.6	4620	300	130	390	13	1.1	4.1	1400	33	0	250	6.5	0.2	4120	1300
	03/07/96	7.9	4090					0.58	0.25	1300	34					2660	1100
	03/18/97	6.9	13500					18	10	4600	250					8770	4300
	03/10/98	8.2	4530					0.88	3.4	1500	2					2940	1300
	PD0057	06/28/91	7.7	13600	940	370	1470	17	1.2	6.2	4550	380	0	160	5.6	0.1	10400
10/16/91		7.7	1180	790	420	1260	13	0.44	5.9	4300	370	0	83	1.1	0.1	8860	3720
01/24/92		7.5	11600	780	270	1200	16	3.6	1.3	3800	340	0	150	0.6	0.2	8620	3100
09/09/92		7.6	11200	710	370	1000	14	4.7	5.5	3700	340	0	144	1.7	0.1	9480	3300
01/08/93		7.9	11100	710	300	1100	16	3.9	0.03	3600	320	0	127	3.3	0.1	9080	3000
08/13/93		7.9	10800	580	390	1100	13	7.2	4.8	3600	320	0	47	2.7	0.1	8850	3000
12/12/94		8	10400	670	300	980	13	2.6	1.7	3400	280	0	108	1.4	0.1	7530	2900
03/28/96		7.4	9180					5.2	4.4	3100	270					5970	2700
03/13/97		7.6	12900					7.2	1.6	4200	370					8380	3300
03/13/98		8.9	8300					2	1.7	2900	660					5390	3100

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	(Total)								F	TDS
								Fe	Mn	Cl	SO4	CO3	HCO3	NO3			
PD0058	11/25/90	7.4	15600	1250	390	1580	20	4	14	5490	250	0	230	0.1	0.1	11100	
	07/04/91	7.7	6100	420	170	560	13	0.78	3.7	2000	140	0	170	3.3	0.3	5000	
	02/05/92	8	6070	440	170	560	11	0.46	1.7	2000	130	0	95	3.1	0.1	4250	
	09/04/92	7.8	6160	420	170	530	11	0.12	2.1	2000	140	0	118	4	0.2	5550	
	01/04/93	8	6210	420	150	600	12	1.2	1.2	2000	130	0	76	2.1	0.2	4760	
	08/04/93	8.1	710	26	3.2	120	4.7	0	0.04	190	4	0	42	0.2	0.2	462	
	03/07/96	7.3	5930					0.36	0.01	1900	120					3850	
	02/21/97	7.2	16100					5.1	2.3	6700	280					10500	
PD0059	10/10/90	7.2	14500	1370	350	1220	17	16	20	5160	270	0	110	0	0.1	10400	
	12/25/90	6.7	8910	860	250	780	16	10	12	3320	180	0	92	3.6	0.1	7290	
	07/04/91	7.5	9770	830	280	770	17	9.8	12	3400	160	0	116	0.5	0.1	7420	
	02/06/92	7.5	9720	850	260	770	14	10	12	3300	160	0	119	4.5	0.1	9350	
	10/07/92	7.2	10000	850	310	710	14	7.4	13	3300	180	0	121	5.7	0.1	9630	
	01/05/93	7.7	10000	850	280	800	7.8	11	12	3300	160	0	123	5.4	0.1	8900	
	08/09/93	7.8	9640	790	270	730	16	5.2	6.9	3200	180	0	68	5.1	0.1	7000	
	12/15/94	7.8	10000	860	180	790	15	0.45	7.2	3300	160	0	144	1.8	0.1	7280	
	03/08/96	7.7	4020					34	4.5	290	1600					2610	
	03/18/97	7.3	13700					14	2.5	4400	720					8900	
PD0060	08/04/90	7.2	20300	1450	550	2320	29	2	24	7360	630	0	36	0	0	16300	
	10/15/91	7.4	10760	720	170	1200	24	1.1	0.13	3800	4	0	31	0.3	0.1	7260	
	01/27/92	7.6	12200	910	160	1400	20	1	0.14	4200	5	0	43	0.7	0.1	8470	
	01/19/93	7.9	4920	390	120	360	13	0.28	0.01	1600	3	0	28	0	0.1	4400	
	03/15/97	7.6	21800					72	22	7500	690					14200	
PD0061	03/05/91	7.6	7740	560	270	630	14	0.31	5.3	2200	140	0	152	0.2	0.3	4660	
	10/17/91	8	6880	480	200	630	12	2.4	2.8	2200	200	0	104	5.1	0.3	5010	
	02/04/92	7.2	7430	520	230	610	14	2	4.8	2300	170	0	174	2.9	0.3	5400	
	09/15/92	7.9	7500	520	220	530	25	1.6	3.8	2400	230	0	132	2.8	0.3	5470	
	12/22/92	7.8	7500	550	220	670	35	0.7	2.4	2300	220	0	124	2	0.3	6660	
	08/25/93	8.2	6340	370	210	540	42	3.1	1.6	2000	290	0	84	8.5	0.2	5660	
	12/28/94	8	7210	530	320	640	59	0.12	1.3	2700	200	0	99	1	0.2	5230	
	03/18/96	7.5	7150					0.34	0.02	2300	30					4650	
	02/22/97	6.5	11800					17	8	4000	270					7670	
	03/10/98	7.6	7200					0.52	0.01	2500	190					4680	
PD0062	06/14/91	7.6	16800	1240	450	1810	29	1.9	6	5780	590	0	140	8.1	0.1	13200	
	10/18/91	8.1	2260	500	430	3920	91	16	0.61	8100	270	0	187	2.5	0.1	15700	
	10/18/91	8.1	22660	500	430	3920	91	16	0.61	8100	270	0	187	2.5	0.1	15700	
	01/20/92	7.2	36600	820	790	6600	120	1	3.4	1300	1400	0	28	0.1	0.1	28400	
	09/09/92	8.2	24200	420	460	4100	100	170	0.7	8900	210	0	166	58	0.1	17500	
	01/08/93	7.7	24200	370	430	4300	100	83	0.25	8500	200	0	184	57	0.1	16400	
	08/13/93	8.4	24200	310	550	4200	99	93	0.72	8700	230	32	148	49	0.1	17300	
	12/23/94	7.9	26000	440	440	2400	110	23	0.16	6100	160	0	165	43	0.1	16000	
	03/28/96	6.9	24300					29	2.2	9200	200					15800	
	03/13/97	7.9	24700					18	1.1	8700	200					16000	
	03/13/98	7.5	23600					0.88	1.8	9000	150					15300	
	PD0063	03/11/91	7.4	1810	100	68	150	6.6	2.9	0.86	440	38	0	156	2.9	0.2	1240
		07/03/91	7.5	1890	130	58	140	12	0.63	0	480	49	0	163	0.8	0.2	1330
03/09/92		8.1	1920	130	55	170	7.8	0.89	0.77	500	58	0	147	1.3	0.1	1380	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
PD0063	11/05/92	8.4	2020	160	60	170	8.6	0.28	0.76	540	48	17	94	6	0.1	1360	640
	02/08/93	8.2	2060	140	62	170	8.2	0.08	1	540	54	0	143	0.6	0.2	1670	590
	05/07/93	8.2	2010	110	65	180	7.8	0.32	1	550	59	0	124	0.3	0.1	1480	550
	04/07/94	8	2050	130	55	180	8.6	4.7	1	540	56	0	138	1.8	0.1	1420	550
	02/08/95	7.3	2040	160	110	71	8.2	0.4	1.3	560	42	0	180	0.3	0.1	1590	860
	04/09/95	7.8	2060					0.56	1	600	75					1340	780
	08/05/95	7.9	1830	120	76	200	5.9	0.24	1	570	54	0	135	0.7	0.1	1190	620
	03/09/98	7.4	2220					0.42	1.3	640	43					1440	640
PD0064	12/21/90	8.5	1930	74	18	380	1.6	0.91	0.01	220	280	43	379	0.1	0.6	1190	260
	07/16/91	8.3	1900	27	20	360	1.6	0.57	0	210	280	1	432	0	0.7	1190	150
	03/24/92	8.2	1860	28	15	370	1.6	0.42	0	210	280	0	411	1.2	0.4	1120	130
	11/25/92	8.4	1950	39	19	370	1.2	0.44	0.01	230	270	36	345	1.2	0.7	1220	180
	01/25/93	7.8	1910	47	16	370	2	0.72	0	220	260	0	416	1.8	0.7	1250	180
	05/24/93	8.5	1920	32	16	340	1.2	0	0	220	300	9	421	1.3	0.6	1190	150
	03/30/94	8.4	2060	32	17	370	1.2	0.18	0	230	260	21	424	1.1	0.77	1300	150
	02/07/95	8.1	2020	48	20	380	1.6	0.14	0.01	250	260	0	508	0.1	0.7	1230	200
	04/10/95	7	3580					0.82	0.19	500	1040					2330	850
	05/15/95	8.7	1880	14	31	400	0	0.5	0	250	270	12	438	1.5	0.7	1250	160
	12/21/96	8.5	4510					0.32	0	1100	400					2930	370
	02/16/98	7.6	9140					0.42	0.67	2400	450					5940	1100
	PD0065	04/03/91	8.6	774	9.1	11	160	2.3	3.5	0	21	44	17	333	0.4	0.3	472
07/08/91		8.4	1100	46	27	160	12	0.36	0	110	92	36	291	1.2	0.3	694	230
03/13/92		8.3	830	28	18	160	2.3	0.33	0	25	40	49	329	1.6	0.3	472	140
11/11/92		8.7	735	15	15	150	1.6	1.3	0	12	30	48	279	0.7	0.3	446	99
02/11/93		8.8	702	2.7	9.6	150	0.4	0.08	0	10	30	41	273	0.3	0.4	454	46
05/11/93		8.5	725	8	9.7	160	1.6	1.4	0	16	30	30	345	0.3	0.3	446	60
03/17/94		8	790	22	11	150	1.2	0.18	0	52	29	0	490	0.4	0.3	532	99
02/10/95		7.8	782	26	13	170	1.2	0.19	0.01	10	30	0	528	0.9	0.3	524	120
04/11/95		7.7	843					0.42	0	39	36					548	170
05/11/95		8.7	599	5.3	13	150	8.2	0.42	0.01	200	29	30	346	0.4	0.4	389	68
06/12/97		9	745					0.98	0	20	38					484	72
03/16/98	8.4	884					0.58	0	36	55					575	150	
PD0066	11/15/90	7.4	17400	1320	500	1760	29	17	27	6110	490	0	94	0	0	14000	5330
	10/17/91	7.8	11300	940	250	1080	40	28	16	3600	470	0	170	0.1	0.1	8580	3400
	01/22/92	7.4	7220	510	210	630	37	15	13	2200	36	0	150	3.9	0.2	5580	2100
	09/23/92	8.1	7100	560	180	620	34	13	5.3	2150	440	0	77	5.1	0.2	5340	2120
	08/29/93	8.1	7240	470	210	630	34	17	4	2200	440	0	73	5.4	0.1	5440	2100
	12/03/93	7.3	10600	820	250	940	33	14	13	3400	1	0	189	2.5	0.1	8030	3100
	03/22/96	7.5	7020					10	11	2200	460					4560	2200
	03/15/97	7.5	15800					39	21	5300	410					10300	4400
	03/10/98	7.5	6230					0.64	0	2100	80					4050	2200
PD0067	04/03/91	8.6	1060	17	12	190	1.2	0.19	0.01	70	150	15	262	0.1	0.3	646	93
	07/11/91	8.5	855	15	10	150	1.9	1	0	40	120	4	295	0.7	0.3	522	80
	03/23/92	8	924	39	10	160	1.6	0.26	0	40	120	0	374	1.2	0.02	560	140
	11/16/92	8.3	1010	31	17	180	1.6	0.56	0.02	66	120	30	275	2.2	0.4	614	150
	02/16/93	8.6	936	18	11	180	1.6	0.56	0.01	59	120	20	259	1.9	0.3	632	90
	05/13/93	8.7	1030	55	7.6	180	2.3	0.48	0.04	54	130	43	307	2.3	0.3	672	170
	03/25/94	8.4	1000	13	15	190	3.9	0.86	0	40	130	17	362	0	0.3	656	94
	01/23/95	8.7	969	4	17	210	2	1.1	0.01	60	130	59	336	0.5	0.3	638	80

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
PD0067	04/19/95	7.8	1140					0.58	0.01	84	130					741	230
	05/19/95	8.7	820	6.4	16	180	0	0.86	0.02	40	150	27	292	0.8	0.3	533	84
	03/16/98	8.3	1220					2.5	0	110	140					793	200
PD0068	03/11/91	7.6	3220	240	97	270	12	0.19	3.8	940	13	0	181	2.1	0.1	2100	1000
	07/09/91	8	1610	230	48	90	17	0.15	0	700	34	0	189	0	0.3	1110	780
	03/16/92	7.7	1690	130	65	140	16	0.31	0	360	33	0	274	2.8	0.2	1090	600
	11/26/92	7.7	1670	130	44	140	16	0.31	0.02	390	16	0	270	3.2	0.3	1210	500
	02/19/93	7.6	1550	130	30	140	16	0.23	0.02	370	28	0	232	4	0.3	1300	440
	05/21/93	8.3	1630	100	41	140	15	0.08	0	370	25	6	262	2.1	0.3	1150	430
	03/28/94	7.9	1670	88	39	140	16	0.71	0.01	360	12	0	234	1.8	0.3	1150	380
	01/26/95	8.4	1640	110	50	170	16	0.68	0.56	400	13	16	217	1.2	0.3	1080	470
	04/13/95	7.7	1630					2.2	0.01	410	3					1060	590
	05/12/95	7.8	1560	48	110	150	24	0.72	0	390	9	0	286	1.3	0.3	1180	450
	03/19/98	7.9	1610					5	0	470	1					1050	550
PD0069	10/25/90	8	2150	46	16	390	5.1	0.24	0.41	450	92	0	370	1.8	0.5	1240	180
	04/07/94	8.7	2510	14	26	450	7.8	0.76	0.15	520	150	29	241	1	0.2	1450	140
	12/23/94	8.3	2680	35	50	470	5.9	0.04	0.01	600	160	0	335	0	0.3	1560	290
	06/14/95	8.3	2750	32	100	410	10	0.34	0.03	600	170	53	380	0.9	0.3	1730	500
	03/25/96	8.7	2550					2.9	0.03	560	170					1660	220
PD0070	04/22/91	8.2	274	30	8.5	11	3.1	0.19	0.03	13	31	22	69	0	0.1	200	110
	07/15/91	8.5	236	30	5	9.2	4.7	0.62	0	6	8	1	122	0	0.2	144	95
	03/18/92	7.4	298	34	3.9	16	15	1.1	0	10	8	0	154	0.1	0.1	163	100
	11/16/92	7.6	317	28	6.5	21	15	0.06	0	13	7	0	144	0.4	0.2	166	98
	02/16/93	8.2	312	31	5.3	21	15	0.36	0.02	15	6	0	145	0	0.02	220	99
	05/13/93	8.6	321	30	6	25	14	0.1	0	14	6	2	166	0.2	0.2	162	99
	03/25/94	8.4	363	30	6.1	41	18	0.16	0.01	18	11	13	157	1	0.2	216	100
	01/23/95	8.6	379	32	12	44	21	0.89	0	26	10	24	222	1.9	0.2	270	130
	04/19/95	8.5	1230					0.26	0	120	3					800	200
	05/19/95	8.5	365	30	6.3	34	22	0.4	0	21	13	8	164	0.9	0.2	290	100
PD0071	04/03/91	8.2	1430	44	22	260	2.3	1.2	0	54	340	0	343	1.2	0.3	942	200
	07/11/91	8.3	1050	45	18	160	5	1.3	0	60	210	1	282	1.7	0.4	652	180
	03/23/92	8.1	1540	70	20	230	22	1.5	0.31	130	350	0	281	2.8	0.3	940	260
	12/17/92	7.6	1610	65	28	230	22	0.6	0	140	330	0	262	3.6	0.4	1010	280
	02/18/93	7.7	1560	68	21	240	23	0.48	0.01	150	330	0	258	2.9	0.3	1040	260
	05/18/93	8.4	1610	64	31	250	24	1.1	0	160	260	6	269	3	0.4	994	290
	07/01/94	8.3	1690	65	31	260	16	0.93	0.04	170	330	12	272	3.1	0.04	1060	290
	01/23/95	8.4	1770	78	29	290	5.5	1	0	200	330	20	313	0.6	0.3	1210	310
	04/19/95	7	1550					0.42	0.02	190	340					1010	320
	05/17/95	8.5	1610	16	43	280	9.4	0.44	0	210	310	3	236	1.8	0.3	1130	210
PD0072	04/03/91	8.3	1180	27	10	230	0.8	0.14	0	80	130	17	361	0.5	0.3	736	110
	07/15/91	8.5	656	29	11	95	3.8	0.61	0	39	70	3	236	0.1	0.3	388	120
	03/18/92	8.4	703	42	11	110	3.1	1.6	0.08	43	52	23	255	2.7	0.3	410	150
	03/18/92	8.4	703	42	11	110	3.1	1.6	0.08	43	52	23	255	2.7	0.3	410	150
	11/16/92	8.4	729	40	12	100	2.7	0.48	0.26	46	46	22	243	2.8	0.4	438	150
	02/16/93	8.3	668	29	8.2	110	2.3	0.14	0.01	46	46	20	213	2.4	0.3	444	110
	05/13/93	8.3	710	32	10	110	2.7	0.2	0.34	46	50	4	291	2.4	0.3	418	120

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
PD0072	03/25/94	8.3	748	30	11	120	5.1	0.2	0	46	56	14	292	2.2	3	480	120
	01/23/95	8.3	794	46	8.6	130	3.1	0.46	0	54	55	24	366	1.3	0.3	534	150
	04/19/95	8.1	891					0.68	0	68	98					579	160
	05/19/95	8.7	756	37	14	130	4.3	1.1	0.01	50	73	26	278	0.8	0.4	572	150
PD0073	04/03/91	8	975	49	12	150	1.2	1	0	100	82	0	293	0.6	0.2	580	170
	07/15/91	7.5	1030	55	14	150	2.9	0.47	0.13	110	35	0	385	0	0.2	656	190
	03/18/92	8.4	893	25	11	150	2.7	0.56	0	110	54	23	230	2.1	0.2	512	110
	02/16/93	8.5	930	37	13	150	3.1	0.16	0.16	110	50	28	231	2.8	0.2	604	150
	05/13/93	8.3	898	18	15	160	2.3	0.02	0	110	44	2	286	0.1	0.2	510	100
	11/16/93	8.3	957	36	16	150	2.7	0.54	0.02	110	47	22	244	3.6	0.3	554	150
	03/25/94	8.6	886	17	13	160	2.7	0.9	0	110	87	26	229	2.8	0.2	528	96
	01/23/95	8.5	602	27	11	90	14	1.3	0.09	61	24	11	206	0.6	0.2	498	110
	04/19/95	7.9	833					0.9	0.02	110	34					541	150
	05/19/95	8.6	785	8.6	12	160	0	0.22	0	110	32	10	241	3.5	0.2	650	70
PD0074	03/15/91	7.8	3630	290	91	290	11	0.49	6	1100	37	0	123	3.4	0.1	2570	1100
	10/16/91	7.2	12000	800	230	1400	15	0.9	2.3	4000	340	0	84	0.1	0.1	9130	2960
	10/16/91	7.2	12000	800	230	1400	15	0.9	2.3	4000	340	0	84	0.1	0.1	9130	2960
	02/10/92	7.9	12700	830	280	1500	16	0.51	0.37	4200	340	0	26	0	0.1	10100	3200
	09/23/92	8	1760	140	33	150	8.6	0.2	0.15	470	21	0	129	2.8	0.2	1210	470
	01/15/93	8.2	1890	180	44	140	8.2	0.37	0.01	470	20	0	216	4.7	0.1	1490	640
	09/01/93	8.3	1790	110	47	160	7.4	0.51	0.09	500	21	2	126	5.8	0.2	1350	470
	03/22/96	6.8	896					1.3	1.5	19	320					580	470
	03/19/97	7.2	4580					19	39	540	2200					2970	2300
	03/11/98	7.2	5230					110	0.02	1900	360					3400	1900
PD0075	03/24/91	8.2	878	27	18	150	0.39	0.21	0.02	64	3	22	329	2	0.3	552	140
	07/09/91	8.3	926	30	11	150	1.8	2	0	85	40	3	366	1	0.4	566	120
	03/16/92	8	956	37	21	160	1.6	0.4	0	85	39	0	385	0.9	0.2	530	180
	02/19/93	8.3	874	25	11	160	1.2	0.18	0.01	84	89	25	260	0.9	0.3	674	110
	05/21/93	8	1180	50	26	160	3.5	0.92	0	91	250	0	292	2.1	0.2	750	230
	11/26/93	7.9	931	37	9.9	160	0.8	0.25	0	86	46	0	343	1.1	0.3	564	130
	03/28/94	7.9	11400	200	240	1900	55	12	0.01	2600	1300	0	605	7.8	0.2	7680	1480
	01/26/95	8.1	11400	190	280	2000	58	18	0.01	2900	1400	0	642	7.2	0.3	7960	1600
	05/12/95	8.2	10600	7.7	350	2100	57	12	0.01	2800	1700	0	685	14	0.3	8220	1400
	03/19/98	7.4	12800					22	0.01	3800	2500					8320	2400
PD0076	03/20/91	7.9	2630	120	66	310	2.7	16	0.03	620	880	0	358	2.8	0.3	1720	570
	07/09/91	8	3420	170	72	400	4.6	0.72	0.02	980	55	0	188	0	0.3	2400	730
	03/16/92	7.5	3510	200	61	390	4.3	0.26	0.01	980	4	0	172	2.2	0.1	2380	750
	11/17/92	7.9	3390	150	72	390	8.2	0.16	0.22	980	28	0	182	2.3	0.3	2180	660
	02/18/93	8.2	3330	160	75	410	18	0.24	0.07	970	35	0	165	2.9	0.2	2210	700
	05/18/93	8.3	3400	130	83	420	18	0.02	0	970	34	2	178	1.6	0.2	2260	670
	03/22/94	7.9	3530	170	82	410	5.1	1.4	0.39	940	76	0	223	5.1	0.3	2270	760
	01/18/95	8.2	2400	68	48	330	3.9	1.1	1.2	650	87	0	134	1.1	0.2	1700	360
	04/19/95	6.8	2640					0.4	1.4	770	85					1720	820
	05/17/95	8.7	2570	22	110	370	0.8	0.7	193	740	89	6	200	4.7	0.3	1910	500
	03/16/98	8.1	2860					0.78	0	780	62					1860	640

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
PD0077	08/19/93	8.2	1590	86	42	160	9.4	0.58	0.72	410	51	0	122	2	0.2	1210	390
	03/26/96	7.5	1720					2.5	0.02	490	47					1120	480
	03/17/98	8.9	18500					0.26	0	660	2					12000	1800
PD0078	06/18/93	8	11300	620	270	1300	36	1.5	0.03	3800	220	0	28	0	0.2	8860	2700
	09/21/94	8.2	29300	1100	630	4400	100	3	0.09	10000	380	0	131	48	0.1	22100	5300
	12/22/94	8	29400	1300	930	4700	93	4.3	4.8	11000	760	0	194	36	0.2	25200	7200
	04/20/95	7.7	28200	1300	2200	2300	74	2.8	2.7	11000	820	0	260	27	0.2	19700	12000
	04/23/96	7.8	29400					0.72	0.04	11000	1000					19100	13000
	06/18/97	7.7	36500					2	0.01	13200	1510					23700	5300
	02/19/98	6.9	36900					1.3	0.11	14000	790					24000	
PD0079	06/18/93	8.5	1720	38	29	290	9.8	0.24	0.58	320	79	38	335	8.9	0.4	1040	210
	04/25/94	8.9	2070	25	19	360	9	7.3	0	430	55	39	288	3.3	0.4	1170	140
	12/22/94	8.7	1150	20	33	240	1.2	3	0	440	52	39	270	0.2	0.5	704	180
	04/20/95	8.7	1223	16	46	200	0	0.93	0.02	180	48	30	370	0.2	0.4	868	230
	03/25/96	8.9	1160					0.72	0.03	190	35					750	110
PD0080	09/04/92	8.6	906	23	11	160	5.9	0.12	0	150	14	16	240	0.5	0.2	510	100
	09/07/93	7.9	4050	220	79	450	13	0.49	0.55	1200	42	0	177	5.2	0.1	3160	880
	12/22/94	9	1010	2	28	190	5.9	0.38	0.03	200	5	18	309	0.1	0.3	596	120
	03/28/96	7.6	8200					0.58	0.05	2800	84					5330	1700
	03/13/97	8.6	949					0.46	0.01	130	9					616	100
	03/13/98	8.1	851					0.92	0	150	9					553	110
PD0081	08/30/92	8.7	1180	99	28	87	6.6	0.18	0.03	210	81	18	206	3.3	0.5	766	360
	09/06/93	8.5	1070	44	23	120	12	1.1	0	210	47	9	167	9.8	0.5	686	210
	12/22/94	8.3	917	28	24	130	10	0.34	0.01	210	28	6	117	1.1	0.5	578	170
	03/18/96	7.5	1110					0.38	0.15	210	22					722	320
	04/11/97	7.9	1060					3.6	0	200	6					689	250
	03/18/98	8.7	885					0.26	0	220	1					575	240
PD0082	09/03/93	8.3	6300	210	130	780	19	0.85	2.1	2000	18	7	208	48	0.2	4290	1100
	12/01/95	8.1	6100	200	170	800	24	0.12	0.06	1900	4	0	90	0.6	0.2	4010	1200
	03/28/96	7.7	5830					0.82	1.7	1930	5					3790	1290
	02/15/97	7.3	13500					14	4.4	4600	42					8770	2400
	03/20/98	8.2	5960					0.14	2.8	2100	1					3870	1100
PD0083	09/03/93	8.2	406	19	5.8	53	4.7	0.4	0	72	14	0	79	1.4	0.1	250	72
	12/07/94	8.1	13100	480	320	1800	31	0.21	3.8	4400	230	0	87	2.2	0.1	9000	2500
	03/28/96	6.9	14600					1.1	2.3	5360	260					9490	4030
	02/15/97	7.2	16100					15	8.5	5500	410					10400	3300
	03/20/98	7.7	14300					0.76	6	5500	50					9290	3800
PD0084	08/11/92	7.9	8600	710	210	740	8.6	0.11	3.2	2900	110	0	215	1.1	0.2	6780	2600
	11/03/92	7.3	8730	660	330	760	9	0.42	6.1	2700	81	0	135	0.1	0.2	6380	3000
	02/05/93	7.3	8590	630	240	710	9.4	1.3	7.5	2800	86	0	205	1.4	0.2	7670	2600
	05/06/93	7.5	8570	620	200	740	9.8	0.92	7	2800	100	0	159	0	0.2	7700	2400
	04/05/94	7.7	8510	540	280	740	10	0.2	4.6	2800	77	0	210	6.5	0.2	6240	2500
	02/06/95	7.9	8460	150	520	760	9.4	0.28	5.2	2760	61	0	250	5.1	0.2	6330	2500

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
PD0084	05/04/95	8.4	8710	420	340	1200	25	0.38	3	2900	190	76	430	22	0.2	6440	2400
	04/03/96	8.5	8770					0.44	0.02	2940	33					5700	2180
	02/13/98	8.1	9420					0.32	0.04	3300	110					6120	2500
PD0085	09/14/92	8.4	2650	82	34	420	2.3	0.6	0	500	320	18	330	4.2	0.5	1600	340
	11/25/92	8.3	2250	57	35	380	4.3	3.2	0.02	360	3	21	275	9.5	0.5	1370	290
	01/25/93	8.4	2200	82	7.3	390	2.3	1.8	0.01	300	320	28	327	3.4	0.5	1430	230
	05/24/93	8	2220	64	24	380	2.3	1.5	0.15	260	380	0	478	1.7	0.5	1400	260
	03/30/94	8.3	2120	37	19	380	2	1.5	0	230	330	23	354	0.6	0.5	1340	170
	02/07/95	7.7	2300	79	29	420	2.3	0.86	0.19	340	330	0	463	0.7	0.5	1430	320
	04/10/95	7.9	2040					0.74	0	310	340					1330	490
	05/15/95	8.5	2060	7.2	46	390	0.4	0.42	0	290	370	3	363	0.3	0.4	1340	200
	02/16/98	8.1	2410					0.16	0.01	370	320					1570	320
PD0086	05/24/93	8.4	1200	13	18	250	2.3	0.22	0.06	120	240	60	333	0.3	0.6	778	110
	03/30/94	8.8	1220	4	7.5	250	1.6	0.15	0.02	110	76	40	348	0.5	0.6	794	41
	01/26/95	8.2	1350	22	13	290	0	0.54	0.01	190	64	0	443	0.4	0.6	786	110
	05/15/95	9.4	1240	9	15	260	8.2	0.3	0	180	70	11	401	0.3	0.5	848	81
	02/16/98	8.1	2030					0.22	0.83	400	67					1320	220
PD0087	06/05/95	8	45	34	22	50	6.3	0.56	0.01	24	12	0	275	1.2	0.5	296	170
	04/11/97	8.3	909					0.18	0	190	12					590	270
PD0088	06/11/93	8.2	2310	32	31	430	5.9	0.44	0.01	480	150	0	394	1.9	0.3	1370	210
	06/04/95	7.7	835	33	11	140	3.5	1	0.04	78	42	0	309	17	2.4	544	130
	04/23/97	8.5	643					0.24	0	39	29					417	100
PD0089	06/05/95	8	658	69	21	48	7.4	0.34	0.01	89	10	0	272	2	0.3	430	260
	04/22/97	8	2040					0.44	0.08	560	5					1320	630
	06/11/97	8.7	2500					0.29	0	570	180					1630	140
PD0090	07/18/95	7.4	4620	480	210	160	6.3	0.16	0.56	1400	63	0	175	0.6	0.3	3810	2100
	04/23/97	7.6	4840					0.24	1.7	1500	73					3140	1900
PD0091	07/04/95	7.4	2970					0.34	0.01	900						1930	1000
	04/22/97	7.8	2470					0.22	0	650	29					1600	1000
PD0092	07/19/94	7.5	1410					0.34	0	270						916	400
	04/22/97	7.9	1250					0.34	0	250	66					812	300
PD0093	08/12/95	7.6	10200					1.9	1.28	3400	270					6630	3400
	04/22/97	7.5	16600					0.42	3.7	5800	560					10800	6200

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
NL0001	09/04/78	7.9	5000	306	70	541		0.61		1430	61	5	163	8.8	0.1	2913	1052
	02/12/80	6.8	53000	1080	1050	7360		6.2	0	14700	2080	0	149	15	0.1	31560	7020
	04/21/81	6.7	45000	952	735	7900	165	2.1	6.8	16020	1733	0	17	0.2	0.2	28134	5400
	02/19/86	8.2	42500	862	989	8234	140	3	0.26	16113	2042	0	20	0.1	0.1	33998	6220
	02/26/87	7	45000	920	998	7940	141	14	3.1	15840	1910	0	48	0.3	0.1	33348	6400
	02/26/87	7.2	46000	1000	993	8050	141	5.5	12	16000	2050	0	143	0	0.1	24336	6600
	10/13/87	8.4	44000	840	1095	8184	146	2.8	0.06	15860	2028	2	18	0	0.2	34116	6600
	12/07/88	7.7	43700	904	1095	9886	149	1.7	0.18	16340	2663	0	20	0	0.2	34523	6760
	06/09/89	7.8	44200	952	1120	8510	152	0	0.12	16500	2340	0	18	0.1	0	34900	6980
	03/15/90	7.2	44400	1060	1200	8370	149	2.6	0.18	16300	2280	0	26	0	0	34200	7580
	08/12/90	7.7	44200	920	1000	8100	140	3	0.11	16000	0	0	28	0.1	0	33800	6600
	08/28/90	8.1	43000	1980	576	8740	70	2.8	0.09	17000	2440	0	22	0	0.1	33300	7160
	10/18/91	7.7	42800	950	1200	8600	200	3.5	0.25	16000	1600	0	21	0.2	0	34200	7200
	12/08/92	7.9	43600	880	1100	8100	140	3.4	0.11	16000	2400	0	22	0.2	0	33800	6600
	02/22/93	7.5	43800	1140	880	7820	140	1.8	0.11	16000	1990	0	34	0.4	0	33900	6480
	06/17/93	7.6	43800	1020	940	7720	140	6.5	0.2	16200	2150	0	27	0.1	0.1	33700	6400
	04/25/94	7.9	43100	1000	1100	7300	130	2.8	0.09	16000	4	0	44	0	0	33900	7200
	12/22/94	7.3	42600	1100	1000	8000	120	3.9	0.52	1600	2000	0	37	1.7	0	33100	7000
	04/20/95	7.9	42300	480	4400	3700	130	12	0.05	17000	1500	0	51	2.7	0.1	27500	19000
	04/23/96	7.7	41600					3.3	0.11	16000	2220					27000	13000
06/18/97	7.8	41900					4.9	0.15	15400	2000					27200	6900	
02/19/98	7.2	41000					2.1	0.06	16000	2400					26700	6400	
NL0002	09/01/78	8.7	850	12	8.5	154		0.23	0	89	44	17	245	0	0.2	477	65
	09/04/78	8.3	896	6.6	8.6	163	4.7	0.32	0	172	3.5	9	191	1.1	0.2	558	52
	04/20/81	8.5	860	6.7	9.3	177	10	0.73	0.02	137	3.5	13	264	0	0.2	496	55
	10/13/87	8.6	872	7.2	12	159	4.7	0.54	0	163	5	27	202	0.2	0.2	468	66
	06/16/89	8.7	895	6.1	8	168	4.7	0.23	0.02	164	3.8	12	203	1.3	0.3	558	48
	03/16/90	8.2	4120	16	128	713	20	0.49	0.08	855	573	0	519	1.4	0.5	2570	568
	01/22/91	8.6	885	4.8	6.3	170	4	0.36	0.02	170	1	24	157	0.5	0.2	402	38
	10/10/91	9.4	3230	110	15	450	17	2.3	0.01	1000	5	0	11	0.2	0.1	2070	340
	06/11/93	8.3	886	10	13	170	3.5	0.25	0.01	180	3	8	170	0	0.3	506	80
	12/23/94	8.6	911	10	7.1	180	2.3	0.64	0	190	3	8	186	0.3	0.3	480	54
	04/24/95	8.2	891	0	21	160	6.6	0.16	0.02	180	3	0	240	0.2	0.2	597	110
	02/25/96	8.6	869					0.46	0	190	3					564	78
	06/14/97	8.5	918					0.27	0	200	2					597	520
NL0003	02/13/80	8.6	1770	16	7.8	327		0.37	0.11	240	86	36	357	0	1	1002	72
	08/25/80	9.7	880	2.8	2.4	186		13	0	142	3.2	75	114	0	0.5	496	17
	04/18/81	9.4	850	3	2.3	180	8	8.8	0.01	146	3.3	37	161	11	0.5	522	17
	11/25/81	7.9	1950	26	13	387	3	2.6	0	300	116	0	458	1	1.1	1072	117
	02/18/86	9.9	801	1.8	1.3	159	2.7	13	0.01	138	15	85	44	0	0.8	482	10
	02/26/87	7.9	990	17	2.7	166	5.1	17	0.12	154	12	0	193	11	0.6	452	54
	02/26/87	8.4	780	3.8	1.1	154	5.9	8	0.01	132	7	17	156	8.5	0.5	408	14
	10/19/87	9	812	2.7	8.5	159	8.6	0.38	0	93	21	38	224	0.4	0.3	486	42
	12/12/88	7.5	774	3	4.7	159	9.8	0.54	0	94	4	0	298	0	0.3	482	27
	06/14/89	9.4	800	7.2	4.1	163	8.2	0.18	0	91	4	36	218	9.6	0.5	498	35
	03/14/90	9.2	797	3.5	5.2	166	9	0.95	0.01	101	2.4	29	225	9.3	0.6	488	30
	12/14/90	8.5	777	8.6	2.3	170	8.6	0.74	0.02	100	2	6	284	8.1	0.5	422	31
	10/08/91	9.1	780	5	3.8	180	9.1	5	0	110	2	34	213	12	0.6	436	28
	12/09/92	8.7	823	7.4	2.9	160	7.8	0.74	0.01	110	2	19	201	13	0.5	498	30
	02/09/93	8.6	843	4.5	2.8	170	9	5.3	0	120	3	21	205	15	0.5	510	23
	06/07/93	7.9	1250	14	24	230	15	0.66	0.05	250	5	0	273	27	0.9	724	130
	04/22/94	8.8	1220	11	20	220	14	3.7	0	240	4	38	200	39	0.9	670	110
	12/12/94	8.6	1220	10	12	230	13	3.8	0	230	5	8	258	33	1.1	694	76
	03/22/96	8.9	1040					0.92	0	150	7					676	32
06/13/97	3.6	24000					64	15	8820	600					15600	5600	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
																		(Total)
NL0004	02/19/80	7	22000	1752	581	2178		11	0	7423	882	0	133	0	0.1	15932	6760	
	08/26/80	6.5	27000	1750	592	2190		6.8	0	7552	849	0	8	40	0	15258	6800	
	04/21/81	6.8	23800	1720	488	2430	33	1.5	9	7860	756	0	19	0	0	14406	6300	
	03/11/86	7.7	20700	1520	556	2530	23	7.4	0.08	7080	1470	0	21	0.1	0	16450	6080	
	02/26/87	6.8	23500	1710	493	2710	31	35	8.5	8300	886	0	31	0.3	0.1	18168	6300	
	02/26/87	6.9	24000	1680	610	2970	27	14	18	8500	629	0	93	0.1	0.1	18484	6700	
	02/16/88	7.7	24000	1744	576	3174	27	4.1	6.2	8040	863	0	23	0.9	0	19368	6720	
	07/18/88	7.1	23100	1720	647	2713	27	4.3	8.2	8240	930	0	3	6.6	0	14285	6960	
	11/15/88	7.6	23300	1670	584	2760	31	4.1	7.7	8290	756	0	14	4.1	0	14100	6580	
	03/15/89	7.2	22600	1860	744	2600	28	4.8	4.6	8380	946	0	33	3.9	0	14600	7700	
	03/29/90	7.3	22400	1670	621	2570	28	9.2	0.55	8040	828	0	24	0	0	17700	6720	
	09/11/90	7.6	22300	1810	521	2620	31	7.1	2.2	8050	728	0	16	0	0	18300	6660	
	01/21/91	6.8	20600	1660	610	2620	27	6.1	3.1	8550	730	0	12	0	0	19200	6650	
	10/10/91	7.3	22200	1680	530	2510	30	1.4	0.45	7900	860	0	24	0.1	0	17900	6390	
	01/21/92	7.4	22400	1600	530	2500	28	1.7	1.5	8100	750	0	26	0.1	0	17800	6200	
	09/14/92	7.2	22600	1500	580	2100	25	1.5	1.8	8100	790	0	16	0	0	20800	6200	
	08/19/93	7	22100	1500	710	2500	28	1	2.3	8000	830	0	17	7.3	0	17900	6600	
	03/26/96	7.9	20800						0.1	0.61	7900	660					13500	7500
	03/17/98	7.8	13700						0.96	0.45	5200	10					8900	4500
	NL0005	04/01/80	6.8	17000	1272	498	1183		3.1	0	5176	285	0	239	1.5	0	10730	5220
03/11/86		7.4	13800	1092	375	1310	27	1	4.7	4680	129	0	13	0.1	0.1	12014	4270	
07/14/87		7.4	8100	648	203	759	23	6.6	3.4	2680	215	0	39	0	0.1	7500	2450	
10/07/87		7.6	1810	182	38	143	32	3.9	0.44	171	186	0	394	108	0.2	1284	610	
02/09/88		8	1510	117	48	117	28	1.1	0.43	139	195	0	453	0	0.3	932	490	
07/07/88		7.9	1630	91	50	168	35	0.94	0	236	277	0	249	3.4	0.4	983	432	
11/09/88		8.4	953	83	25	76	18	8.4	0.07	91	112	25	237	2	0.4	606	308	
03/10/89		8.4	1240	115	33	101	20	4.1	0	165	170	45	204	11	0.3	761	405	
03/29/90		7	1118	68	44	97	20	7.4	0.01	109	18	0	481	10	0.4	697	352	
08/21/90		7.8	3610	285	55	380	37	4.7	1.6	913	154	0	464	8.3	0.3	2400	936	
12/25/90		8	2100	110	60	240	29	20	0.65	390	140	0	350	12	0.1	1320	510	
10/04/91		7.4	2020	95	71	180	35	15	0.07	310	77	0	629	34	0.3	1200	530	
02/05/92		7.9	1830	80	62	190	30	16	0.01	290	36	0	535	35	0.2	1060	450	
09/04/92		8	2950	140	110	320	57	4.7	0.02	450	770	0	396	8.1	0.2	2060	820	
01/04/93		8.1	2050	62	72	210	33	7.8	0	340	220	0	280	38	0.2	1330	450	
08/04/93		8	3540	200	93	440	43	0.26	0.28	600	340	0	773	12	0.1	2300	880	
03/07/96		8.3	727						6.4	0.96	64	25					473	260
03/10/98	8.3	2660						3.7	0.01	470	490					1730	690	
NL0006	09/04/78	8.4	685	30	5.9	118		0.19		8	24	21	348	0	0.2	415	99	
	03/04/80	8	780	25	18	102		3.8	0.11	69	6.7	0	311	0	0.1	478	136	
	03/04/80	8.2	800	23	15	104		5.1	0.23	63	6.7	0	307	0	0.1	504	120	
	06/17/86	9.9	742	3.2	0	138	4.7	2	0	164	3.4	57	0	0.5	0.2	414	8	
	03/11/87	7.4	2470	166	60	228	4.7	0.24	1.9	676	16	0	215	0.5	0	1702	662	
	03/11/87	7.4	760	10	1	140	3.5	15	0.04	170	6.7	0	120	6.1	0.2	420	30	
	10/16/87	8.6	1001	10	12	159	3.9	1.3	0	274	2.9	3	53	0	0	548	75	
	12/02/88	7.7	1027	17	8.1	166	3.9	0.6	0.04	293	3.2	0	37	7.4	0.1	640	76	
	06/02/89	8.5	1080	20	9.5	175	5.1	0	0.02	293	2.6	3	38	9.4	0.1	673	89	
	03/02/90	7.6	1074	24	3.2	175	5.1	0.58	0.04	298	1.6	0	23	12	0.1	578	73	
	08/02/90	8	1090	44	5.6	173	4.7	0.37	0.02	308	1	0	41	12	0.1	632	133	
	12/03/90	7.3	1080	16	12	170	4.3	0.54	0.02	300	2	0	25	13	0.1	582	90	
	07/02/91	7.4	1120	23	14	170	7.7	0.41	0	310	1	0	38	11	0.1	692	120	
	03/05/92	7.7	767	12	2.8	120	19	0.77	0.01	200	3	0	36	10	0.1	416	42	
	11/03/92	7.2	895	52	37	67	33	2.6	0.88	52	230	0	159	4	0.1	524	280	
	02/05/93	8.1	757	42	25	60	24	0.88	0.14	68	150	0	80	2.7	0.1	466	210	
	05/06/93	8.1	778	39	25	64	25	0.4	0.08	70	180	90	103	2.1	0.1	474	200	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0006	04/05/94	7.6	796	29	26	74	25	0.52	0.05	93	200	0	49	5.6	0.1	500	180
	02/06/95	8.1	478	27	29	25	11	2.4	0.04	50	83	0	120	2.5	0.1	342	190
	04/03/95	6.9	311					3	0.02	42	42					202	100
	05/04/95	8.1	484	27	18	37	16	0.28	0.05	62	82	0	73	4.5	0	338	140
	06/09/97	8.1	347					0.29	0.02	50	32					226	99
	02/13/98	8.3	1960					1.1	0.39	320	500					1270	680
NL0007	11/01/78	8.3	1100	20	7.8	212		0.53		79	0.8	0	297	0	0	462	82
	02/08/80	10	1360	1.6	1.9	256		5.1	0.11	130	5	146	168	0	0.5	748	12
	04/17/81	9.1	1050	3	4	248	2.1	9	0.01	108	93	37	296	0.4	0.4	656	24
	02/12/86	9.6	1150	2.4	2.9	253	2	0.49	0	111	46	121	190	0.1	0.5	660	18
	02/15/88	9.4	1207	0	9.7	255	0.8	0.58	0	110	45	105	226	0	0.4	642	40
	07/14/88	8.8	1126	1.1	1.8	248	4.3	1.1	0.01	112	46	38	342	0.1	0.5	621	10
	03/14/90	9.1	1140	0	6.1	235	1.2		0	122	40	58	298	0.9	0.5	670	25
	07/10/90	9.3	1130	3.2	0.2	269	1.6	4	0	143	38	70	272	0	0.5	622	9
	12/20/90	9.5	1180	0	6.6	260	2	0.62	0	140	34	98	289	0	0.6	786	27
	07/05/91	9.6	1150	0	4.1	230	10	0.46	0	130	28	120	207	0	0.6	692	17
	03/12/92	9.4	1160	0	4.4	250	1.2	0.42	0	140	19	97	233	0	0.4	652	18
	11/10/92	9.4	1180	0	15	260	2	1.7	0	140	18	86	222	0.1	0.4	600	63
	02/09/93	9.6	1170	0.3	2.9	260	1.2	0.34	0	140	10	106	177	0.2	6	660	12
	05/10/93	9.5	1160	1.2	5.1	280	1.6	0.36	0	150	8	115	216	0	0.6	638	24
	03/31/94	9.8	1500	0	3.2	320	0.8	0.57	0.01	170	73	120	225	0	0.5	884	13
	01/25/95	9.3	1177	2	26	250	2.3	0.86	0.04	140	13	86	306	1.6	0.5	684	110
	04/10/95	8.3	1100					0.7	0	140	12					715	170
	05/24/95	9	1020	4.8	7.1	260	0	2.5	0.01	140	12	46	355	1.3	0.6	663	41
	02/16/98	9.8	1470					0.3	0	190	110					956	18
	NL0008	09/04/78	8.4	810	13	8.9	154		0.09		19	53	19	364	0	0.4	481
02/07/80		7.9	840	23	10	147		51		15	47	0	425	0	0.3	502	99
05/06/81		8.7	590	2.4	1.2	133	3	5.2	0.01	59	8.3	14	244	0.9	0.6	396	11
05/19/86		8.5	667	1.1	3.7	175	3.1	1.3	0	34	3.9	37	350	0.8	0.4	400	18
07/14/87		8.7	1520	15	33	248	3.1	1.6	0	382	4.5	23	179	0	0.2	838	175
10/05/87		8.7	718	2.4	2.9	166	2.3	0.4	0	26	3.7	34	360	1.6	0.2	404	18
02/08/88		8.5	739	2.7	5.2	170	1.6	0.24	0.01	24	6.3	39	347	1.2	0.2	480	28
07/06/88		8.5	717	3.2	3.5	172	1.6	0.32	0	23	4.4	18	370	1	0.3	410	22
11/07/88		8.5	715	1.8	3.3	168	2.3	0.52	0	32	1.6	35	355	1.4	0.4	426	18
03/08/89		9	705	4.3	4.2	168	1.6	0.86	0	51	3.1	84	265	3.4	0.4	451	28
11/15/89		8	898	32	11	163	1.2	1.6	0.14	36	52	0	459	0.2	0.4	559	126
03/28/90		8.7	708	4	5.8	170	1.6	1.4	0	22	3.8	30	342	1.8	0.4	418	34
08/13/90		9.1	676	9.1	1.3	168	2	0.8	0	26	3.7	30	346	1.7	0.3	366	28
12/19/90		8	710	0	5.8	170	5.9	0.4	0	21	16	0	398	0.8	0.4	402	24
07/11/91		8.9	719	2.2	2.9	160	1.9	0.98	0	26	2	8	398	0.6	0.3	434	18
03/18/92		8.9	712	2.4	3.9	170	0.8	1.3	0	28	5	30	337	2.7	0.3	406	22
11/17/92		8.8	712	0.8	5.3	170	1.2	0.34	0	30	3	37	285	1.8	0.4	414	24
02/18/93		8.6	738	5	4	180	2	0.52	0	44	4	31	289	1.9	0.4	472	29
05/18/93		8.9	857	5.8	7.2	180	1.6	1.3	0	78	6	20	390	2	0.4	460	44
03/22/94		8.5	996	13	12	200	0.2	0.88	0	120	8	24	392	25	0.4	570	83
01/23/95	8.9	994	11	10	210	0.8	0.62	0	140	3	25	327	0.5	0.3	638	68	
04/19/95	8.3	1190					1.1	0.04	260	3					772	290	
05/17/95	9	941	9.9	11	200	4.3	0.52	0	150	5	20	306	2.3	0.4	638	69	
NL0009	11/08/78	7.7	2550	175	24	306		0.29		730	69	0	120	2.9	0	1780	535
	02/06/80	7	3200	193	88	220		7.5	2.6	758	57	0	237	0	0.1	1750	843
	04/23/81	7.4	320	28	8.3	23	3.4	17	0.02	42	6.9	0	110	4	0.1	212	104
	07/13/83	6.6	3140	226	84	260	11	4.7	2.7	870	56	0	251	0	0.1	2272	908

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
																		(Total)
NL0009	03/19/86	7.4	550	41	11	34	5.9	4.8	1.1	72	3.2	0	137	0	0.1	308	147	
	03/11/87	7.2	645	46	13	46	8.6	2.3	0.87	87	6.1	0	229	0	0.2	356	170	
	03/11/87	7.2	4630	294	144	389	14	8	2.1	1370	98	0	216	2.6	0	3284	1326	
	10/19/87	7.6	4400	266	150	395	15	6.1	2.9	1346	20	0	150	0	0	3032	1280	
	02/12/88	7.9	4430	222	136	382	14	5.1	2.2	1320	5	0	65	0	0	2874	1116	
	07/07/88	7.5	4210	224	129	377	15	1.7	0.09	1358	2.9	0	20	2.4	0	2118	1090	
	11/04/88	7.7	4270	228	123	382	15	2.1	0	1350	1.2	0	43	1.5	0	2980	1070	
	03/10/89	7.6	4270	246	142	377	14	1.7	0.17	1410	4	0	48	1.7	0.1	2220	1200	
	03/16/90	7.4	4240	262	108	386	15	1.1	0.01	1355	2.3	0	25	1.5	0	2642	1098	
	08/20/90	7.7	4040	304	90	407	14	1.1	0.08	1370	4	0	31	0.7	0.1	2980	1130	
	12/21/90	7.8	4260	250	110	400	15	1.1	0.05	1380	1	0	25	1	0	3210	1080	
	10/16/91	8	4340	250	110	430	13	2	0.03	1400	3	0	22	1.4	0.1	2970	1100	
	01/27/92	7.4	4440	250	110	440	15	1.1	0.09	1400	2	0	49	1.9	0.1	2970	1100	
	09/07/92	7.4	4460	260	120	400	12	0.3	0.25	1400	2	0	19	0.5	0.1	3750	1100	
	12/15/92	7.4	4630	250	140	480	16	1.3	0.37	1500	2	0	22	2.4	0.1	3530	1200	
	08/11/93	7.2	4660	250	120	450	13	0.38	0.28	1500	3	0	22	2.1	0.1	3720	1100	
	12/01/94	8.4	6970	100	210	970	19	5.8	0.18	2100	8	18	165	57	0.4	4480	1100	
	03/08/96	7.6	10800						55	3.2	3880	140					7040	2570
	03/19/97	7.4	13300						77	4.3	4500	200					8640	2700
	03/11/98	8.5	5740						1.7	0.05	1800	0					3730	790
NL0010	09/04/78	7.6	4950	289	73	540		0.34		1436	58	0	128	11	0.1	2822	1023	
	04/07/80	7.5	5300	322	89	599		1.4	3.1	1564	73	0	230	0.3	0.1	3128	1168	
	06/17/86	8.1	9170	102	132	1609	31	18	0.06	3060	106	0	35	2.5	0.3	5603	796	
	02/26/87	7.4	6100	436	103	598	7.8	1.4	3.9	1860	111	0	174	0.5	0.1	4365	1512	
	02/26/87	7.4	9120	180	122	1470	27	18	1.9	2840	348	0	72	1.8	0.2	5500	950	
	10/13/87	7.5	7790	182	96	1288	25	36	1.6	2506	88	0	34	0	0	5430	850	
	12/07/88	8.9	7900	162	66	1379	29	23	0	2572	65	3	11	0	0.1	4922	676	
	06/08/89	7.8	12600	144	209	2300	61	179	0.6	4200	48	0	45	0.3	0.1	7880	1220	
	03/07/90	7.6	12420	164	209	2254	57	79	0.37	4116	31	0	49	11	0.1	7378	1270	
	08/06/90	8.2	11000	203	85	1980	55	187	0.41	3770	22	0	40	0.2	0.2	7140	856	
	12/06/90	7.8	9430	230	64	1740	49	48	0.04	3380	24	0	55	28	0.1	6360	840	
	10/07/91	8	8620	200	140	1550	37	346	0.04	2940	31	0	42	0	0.1	5800	1080	
	02/11/93	7.9	3940	210	17	490	8.2	3.9	0	1210	2		15	3.3	0.1	2950	600	
	NL0011	09/04/78	8.2	620	32	7.9	95		0.25		5	21	17	318	1.3	0.2	381	112
03/20/80		8	650	42	10	89		0.12	0.23	6	1.7	0	402	0	0	412	146	
03/20/80		8.3	610	29	9.4	88		11	0.17	13	3.3	21	301	0	0	340	112	
08/25/80		7.4	680	39	8.9	101		24	0.57	9	3.2	0	412	0	0.2	416	134	
04/17/81		7.6	700	34	10	107	3.3	3.5	0.03	14	11	0	408	0	0.1	378	128	
11/25/81		7.9	1950	26	23	397	3	2.6	0	300	116	0	930	1	1.3	1.72	17	
04/09/86		8.3	593	18	11	112	2.7	0.98	0.03	18	5	31	341	0	0.2	388	90	
03/11/87		8	600	17	10	113	3.9	18	0.03	13	6	0	374	3	0.2	336	86	
03/11/87		7.4	1000	38	28	133	12	3	0.35	102	105	0	327	3.7	0.6	604	210	
10/10/87		8.3	781	37	16	113	7	0.48	0.09	54	31	22	342	0.3	0.2	428	159	
12/12/88		8.3	687	36	12	108	4.3	0.3	0	21	4.5	20	362	2.9	0.1	428	136	
06/12/89		8.5	660	31	12	115	3.1	0.4	0.27	12	6.9	35	338	3.2	0.1	411	128	
03/13/90		7.9	667	39	12	101	1.6	2.2	0.53	5	2.7	0	419	0.1	0.2	396	146	
12/07/90		7.4	658	42	7.9	110	3.1	0.62	0.44	6.8	3	0	430	7.2	0.1	420	140	
12/18/92		8.1	679	40	10	110	3.5	0.55	0.42	10	5	0	363	15	0.2	430	140	
02/17/93		7.6	1160	67	17	150	6.3	0.58	0.13	210	2	0	269	11	0.1	672	240	
06/17/93		8.5	631	14	10	120	1.6	0.51	0.16	39	2	14	295	12	0.1	416	77	
04/18/94		8.6	978	28	19	150	5.5	0.36	0.43	160	3	20	236	14	0.1	568	150	
12/07/94		8.1	5830	170	110	850	11	1.6	1.2	1900	8	0	156	11	0.2	3770	860	
03/22/96		7.1	12100						28	4.7	4500	19					7860	2900
06/05/97	6.8	11100						13	3.7	4000	5					7220	1960	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
(Total)																		
NL0012	03/29/80	7	6300	508	131	533		5.3	0	1870	138	0	219	6.8	0	4080	1806	
	04/16/81	7	8600	520	149	1080	16	11	0.64	2975	126	0	60	0	0	5378	1912	
	11/21/81	7.8	15500	1268	410	1460	23	2.6	22	5249	135	0	109	0	0	9304	4850	
	02/20/86	8.2	9270	422	189	1210	16	10	0.1	3050	4.4	0	18	0.6	0.1	4860	1830	
	07/14/87	8.6	8480	400	190	1030	14	3.1	0.01	2970	4	5	8	0	0.1	6000	1780	
	10/01/87	7.6	8590	414	177	1048	13	2.5	0.01	2862	2.9	0	16	0	0	5920	1760	
	02/04/88	7.6	8810	408	174	1047	14	1.8	0.03	2814	5.3	0	25	0	0	6392	1734	
	07/04/88	7.6	8260	435	160	1012	13	1	0	2800	3.7	0	7	0	0	4427	1744	
	11/04/88	7.8	8240	396	169	957	13	1.7	0.05	2650	2.2	0	22	0	0	5590	1680	
	03/03/89	7.6	8120	540	146	989	14	1.2	0.04	2890	4.5	0	19	0	0.1	4590	1950	
	03/15/90	7.7	7830	409	165	908	13	1.9	0.03	2620	2.8	0	30	0	0	4880	1740	
	09/11/90	8	7810	483	162	943	12	1.7	0.04	2670	3.4	0	27	0	0.1	6290	1870	
	12/19/90	8.1	7860	340	210	920	2	0.76	0.01	2600	3	0	30	0	0	5710	1700	
	07/09/91	8.2	7180	450	150	770	14	1.5	0.04	2300	150	0	44	3.4	0	5480	1760	
	03/16/92	7.2	8460	420	270	900	14	3.7	2.7	2600	180	0	34	7.6	0	5600	2200	
	11/26/92	7.4	8090	400	270	920	15	0.22	2.2	2710	170	0	32	6.4	0.1	5890	2100	
	02/19/93	7.8	7920	410	190	970	14	2.4	0.2	2700	180	0	47	0.7	0.1	7050	1820	
	05/21/93	7.8	8330	380	230	940	15	3	1.3	2700	170	0	37	0	0.16	6250	1900	
	03/28/94	7.2	8710	430	190	1000	15	10	3.6	2700	190	0	53	4.8	0.1	6020	1860	
	01/26/95	7.3	9160	480	220	1100	15	16	4.5	3100	170	0	39	3.9	0.1	6790	2100	
	04/23/95	8	8870						24	3.2	3030	250					5770	2310
05/12/95	7.8	8700	92	440	1200	25	3.7	3.9	3100	230	0	35	7.7	0	6810	2000		
03/19/98	3.8	10300						16	6.3	3600	250					6660	2300	
NL0013	05/08/81	9.3	4000	3.2	59	735	29	1.7	0.01	877	438	63	177	0.2	0.1	2358	249	
	12/13/81	8.8	800	6.6	7.2	173	1.7	1.2	0	20	55	28	348	0	0.4	494	46	
	02/12/86	8.6	2110	1.9	51	414	7	2.7	0.06	426	9.3	64	371	0.1	0.1	1210	216	
	10/30/87	7.7	1870	10	29	356	5.9	1.3	0.08	360	3.7	0	494	0	0	1026	143	
	02/04/88	8.2	1890	15	24	345	5.1	0.54	0.31	337	6.3	0	502	0	0	1229	135	
	07/04/88	8.4	1730	3.7	20	336	5.1	0.56	0	328	3.8	33	364	0.3	0	909	92	
	11/04/88	8.2	1770	14	24	336	4.7	0.48	0	317	2.3	0	435	0	0.1	970	134	
	03/03/89	7.9	1700	8.8	35	336	3.9	1	0	326	3.1	0	510	0.1	0.1	964	167	
	03/15/90	8.2	1780	10	31	347	4.3	1.3	0.4	369	20	0	420	0.5	0.1	1110	153	
	09/11/90	8.5	1970	18	38	377	4.3	0.85	0.49	423	30	27	343	0	0.1	1060	202	
	12/19/90	8	1940	30	28	360	5.1	0.52	0.41	400	25	0	446	0	0.1	1080	190	
	07/09/91	8.5	2170	11	31	370	5.4	0.43	0.53	470	36	11	374	0	0.1	1180	160	
	03/16/92	8.5	2290	33	74	350	4.7	0.11	0.42	500	33	48	279	0.6	0.1	1180	390	
	02/19/93	8.4	1970	25	35	370	3.9	2.1	0.41	440	4	39	302	0.33	0.2	1240	210	
	05/21/93	8.5	1980	12	27	360	3.1	0.12	0.45	430	4	11	393	0	0.1	1080	140	
	12/24/93	8.3	2090	38	32	350	2.7	0.23	0.39	450	2	28	351	0.7	0.1	1140	230	
	03/28/94	8.4	1910	12	24	360	4.7	0.62	0.16	370	3	31	368	0.01	0.01	1090	130	
	01/26/95	8.2	2490	32	48	460	4.3	0.48	0.51	590	48	0	417	0	0.1	1360	280	
	04/04/95	8.6	2450						1.6	0.05	650	33					1590	570
	05/12/95	8.6	2420	4.6	55	420	14	0.2	0.41	600	52	15	356	0.2	0.1	1440	230	
	03/19/98	8.2	2680						0.52	0	800	27					1740	380
NL0014	01/25/80									163								
	04/26/80	9.2	1380	2.6	3.5	255		9	0	171	0.7	64	277	0	0.2	676	21	
	04/16/81	9.7	1280	1.8	1.6	281	2.8	2.6	0	211	5.3	105	195	0	0.1	716	11	
	12/24/81	7.9	660	38	19	75	3.9	0.08	0	16	25	0	367	0	0.9	376	175	
	03/11/86	10.5	1400	2	0	320	2.7	1.1	0	260	4.3	169	0	0.1	0.3	716	5	
	03/11/87	8.1	1191	22	7.6	230	1.2	1	0.09	122	126	0	384	0.6	0.4	684	86	
	03/11/87	7.9	1350	11	2	260	3.9	28	0.06	300	15	0	226	0.3	0.3	756	36	
	10/02/87	8.1	1380	10	12	278	2.3	0.44	0	182	59	0	451	0	0.1	782	74	
	02/08/88	8.4	1410	5.3	13	288	1.6	0.36	0.01	190	45	31	375	0	0.2	754	65	
	07/06/88	8.5	1320	2.1	5.2	285	2.7	0.38	0	179	49	33	349	0.1	0	728	26	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
NL0014	11/07/88	9.1	1380	1.6	9	292	2.3	0.22	0	204	31	52	319	0.3	0.2	786	41
	03/09/89	8.8	1370	5.2	9	297	2	2.1	0	216	31	32	309	0	0.2	744	50
	03/15/90	9	1380	0	15	297	2.7	2.2	0	214	18	52	312	1.5	0.2	782	62
	08/17/90	9.4	1360	4.5	6.1	304	2.3	0.31	0	220	8.8	90	253	0.5	0.1	740	36
	12/20/90	9.4	1400	0	7.8	300	2.3	0.33	0	220	4	84	265	0.1	0.3	766	32
	07/15/91	9.6	1430	1.3	2.5	300	2.6	0.26	0	220	2	36	367	0	0.2	790	14
	03/18/92	9.7	1420	2.4	6.8	310	1.2	0.48	0.01	220	31	84	262	2.2	0.2	759	34
	11/16/92	9.5	1460	0	6.3	310	1	0.36	0.01	230	2	110	160	1.5	0.3	784	26
	02/16/93	9.6	1410	1.6	11	310	1.6	1.1	0	230	3	82	219	1	0.2	820	48
	05/13/93	9.5	1440	0.3	2.4	300	2	0.12	0	230	2	50	342	4	0.2	776	11
	03/25/94	9.2	1450	0	4.4	310	4.3	0.21	0	210	20	46	343	0.9	0.2	822	18
	01/23/95	9	1400	2	19	310	2.3	0.38	0	240	12	53	360	0.8	0.2	844	85
	04/19/95	8.4	1340					0.32	0	240	9					871	240
05/19/95	8.9	1320	2.2	11	310	47	0.7	0	230	4	34	393	2.2	0.2	880	50	
NL0015	03/10/80	8.2	1900	10	0	344		8.8	0	336	72	15	242	0	0.4	966	25
	03/10/80	8.2	2100	8	3.7			8.8	0.11	336	79	13	240	0	0.4		35
	02/07/95	9.2	1690	3	7	360	3.5	0.6	0	330	34	42	302	0.1	0.7	892	36
	04/10/95	8.5	1820					1.3	0	420	35					1180	190
	05/15/95	8.6	1950	2	66	420	3.9	1.2	0.01	450	64	19	346	0.9	0.9	1250	90
	02/16/98	10	2270					0.92	0	540	3					1480	28
NL0016	05/06/81	9.7	810	0.8	3.2	171	2.6	0.62	0	56	3.3	86	210	0	0.2	450	15
	07/23/87	9.5	710	2.4	1.3	159	1.6	1.8	0	50	5	76	212	0	0.2	428	11
	10/16/87	9.3	712	1.1	2.6	156	1.2	0.42	0	48	3.5	69	224	0	0.2	394	14
	12/02/88	9.2	693	1.4	2.7	159	0.4	0.28	0	44	4	35	279	1	0.2	432	15
	06/02/89	9.3	704	1.9	2.2	168	2	0.37	0	40	3.4	50	257	1.1	0.3	439	14
	03/02/90	8.2	693	3.4	4	159	2.3	2.1	0.01	39	3.2	25	304	0.1	0.4	372	25
	08/02/90	9.1	654	3	0.1	166	0.8	0.35	0	39	4.1	42	259	0.3	0.4	336	8
	12/03/90	8.9	707	9	1	170	1.6	0.32	0	41	3	41	320	0	0.4	430	26
	07/02/91	9.1	670	1.8	1.3	150	1.8	1.2	0.01	36	2	58	240	0.5	0.4	440	10
	03/05/92	8.9	669	1	2.4	170	2.7	0.36	0.01	35	2	46	260	0.6	0.4	378	12
	11/03/92	8.8	697	2.6	4.5	140	2	0.79	0	42	2	38	240	0.4	0.3	366	25
	02/05/93	9.1	666	0.6	1.7	150	1.2	0.22	0	35	2	40	231	0.6	0.4	366	9
	05/06/93	9	672	0.8	3.3	140	1.6	0.56	0.01	43	2	44	263	0.9	0.3	340	16
	04/05/94	8.6	694	6.1	3.6	160	2.3	0.67	0.02	22	7	22	384	1.9	0.3	420	30
	02/06/95	8.7	673	1.6	7.8	170	2	0.29	0	20	5	44	360	0.2	0.4	430	36
	04/03/95	6.5	670					2.6	0	24	7					436	45
	05/04/95	8.9	649	1.1	5.3	160	2.3	0.47	0.04	20	6	40	324	0	0.3	470	24
	03/16/98	8.6	760					0.38	0	54	2					494	24
	NL0017	05/06/81	10.1	500	3.2	2.2	84	5.7	2	0	70	2.7	51	39	0	0.2	
05/26/86		9.9	510	3.2	1.9	101	4.7	3	0	143	2.6	35	15	0.3	0.6	280	16
08/11/87		9.9	433	7.7	8	64	3.5	1	0	109	0	16	11	0	0.6	244	52
10/07/87		9.8	437	8.6	2.5	64	3.5	0.32	0	105	4.8	21	0	0	0.8	202	32
12/06/88		9.2	1053	57	27	92	6.3	0.3	0	309	3.1	3	14	0	0.4	656	252
06/05/89		8.7	613	23	7.9	78	4.3	0.56	0.01	162	2.6	0	27	0	0.5	382	90
03/05/90		7.8	1470	89	40	110	6.6	1.1	0.04	420	2	0	34	0.1	0.5	984	388
11/17/90		8.4	785	47	5.7	81	5.5	0.34	0.04	220	0.9	2	28	0.4	0.5	568	142
12/04/90		8.3	832	53	5.5	97	5.5	0.34	0.01	230	2	0	40	0	0.6	550	160
10/04/91		7.6	870	50	11	98	6.3	0.53	0.01	250	1	0	24	0	0.5	540	170
12/09/92		7.9	1010	63	11	92	5.5	0.68	0.01	290	2	0	15	0.2	0.4	736	200
02/11/93		7.8	994	54	13	94	5.5	0.8	0.01	290	2	0	17	1	0.4	760	190
06/09/93		7.7	1020	61	29	100	5.9	0.35	0	320	2	0	19	0.4	0.4	525	270
04/08/94		7.3	1890	110	74	130	11	0.66	0.02	580	2	0	32	17	0.3	1350	570

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
																		(Total)
NL0017	12/08/94	7.5	2060	62	110	150	9.4	2.1	0.04	620	2	0	22	11	0.2	1430	620	
	03/06/96	7.8	2350					2.3	0.07	750	2					1530	730	
	02/17/98	7.9	2480					0.08	0.02	780	0					1610	730	
NL0018	07/17/79	6.7	38460	960	840	5518		5.3		11444	1467	0	148	76	0.2	22898	5850	
	03/27/80	7	40000	480	426	6920		7.7	0	11720	1392	0	21	19	0.3	23810	2950	
	03/27/80	8.1	40000	440	438	7340		8.5	0	11980	1406	0	21	5.7	0.3	22542	2900	
	08/26/80	7	41000	1000	791	5620		4.8	0	11677	1395	0	9	78	0.4	23836	5750	
	02/14/86	8.1	32700	804	723	6070	109	5.5	0.31	11700	1000	0	14	0	0.1	24000	4980	
	02/26/87	6.9	34000	880	672	6050	110	12	3	12080	1170	0	59	0.2	0.1	24470	4960	
	02/26/87	7.1	35300	904	833	6000	110	10	5.1	12280	1340	0	161	4.2	0.1	25690	5680	
	10/15/87	8.2	33500	832	726	5977	116	1.7	0.03	12060	1292	0	20	0	0.1	25236	5060	
	02/03/88	7.2	35100	880	940	6026	113	2.2	0.18	12000	1538	0	34	0	0.2	25676	6060	
	07/15/88	7.4	33600	944	983	6092	113	1.6	0.05	12240	1670	0	16	0.1	0.1	22051	6400	
	11/15/88	8.1	34300	832	828	5890	109	1.4	0.09	12600	1280	0	26	0	0.1	21500	5490	
	03/14/89	7.6	33500	920	1200	6090	127	3	0.1	13200	1570	0	23	1.9	0.1	23100	7250	
	03/26/90	7.3	33700	1140	657	6670	117	2.9	0.04	12800	1550	0	20	0	0.1	26600	5550	
	08/29/90	7.4	33600	1050	870	5910	117	3	0.08	12200	1280	0	23	0	0.1	25900	6200	
	01/23/91	8.3	29200	860	860	5860	110	6.3	0.06	12500	1430	3	11	0	0	25700	5680	
	10/18/91	7.5	33400	910	910	5760	100	1.4	0.06	12100	1360	0	29	0.2	0.1	25400	6020	
	10/18/91	7.5	33400	910	910	5760	100	1.4	0.06	12100	1360	0	29	0.2	0.1	25400	6020	
	01/23/92	7.4	33900	730	850	5800	110	1.7	0.06	12000	1300	0	25	0.1	0.1	26700	5300	
	01/23/92	7.4	33900	730	850	5800	110	1.7	0.06	12000	1300	0	25	0.1	0.1	26700	5300	
	09/09/92	7.6	34000	1000	840	5600	100	1.8	0.12	12000	1600	0	32	9.5	0.1	26800	6100	
	01/08/93	7.8	34300	700	980	5900	110	5.1	0.05	12000	1400	0	20	0.6	0.1	25900	5800	
	08/13/93	7.9	34100	660	1000	6000	110	0.8	0.06	13000	1500	0	44	0.1	0.1	27000	5900	
	12/23/94	7.8	34500	1600	440	6200	120	5.5	0.06	12000	1200	0	45	0.1	0.1	26000	5800	
	03/28/96	6.8	32400						3.8	1	12000	22					21100	6200
	03/13/97	8.2	34400						0.56	0.04	12000	1300					22400	5600
	03/13/98	7	30700						5.2	1.5	13000	26000					20000	5200
	NL0019	04/07/80	7.9	330	12	7.3	39		0.73	0.06	55	4.7	0	77	1.1	0	184	60
04/19/80		7.3	640	43	23	46		0.98	0.17	6	6.4	0	349	0	0.9	328	202	
04/19/80		7.4	630	41	24	46		0.73	0.17	7	5	0	348	0	0.9	334	201	
08/26/80		7.9	560	41	12	68		0.67	0	16	3.2	0	336	0	0.6	318	153	
04/22/81		7.8	540	12	18	74	6.3	0.92	0.01	44	5.4	0	250	0	0.6	312	102	
02/14/86		8.5	491	10	11	78	4.3	1.6	0	73	3.8	20	119	0	0.8	280	72	
02/26/87		7.8	659	22	8	67	7	40	0.13	68	16	0	141	2.5	0.4	236	89	
02/26/87		8.1	548	12	20	62	3.1	1.1	0.06	8	17	0	315	0	0.7	266	110	
10/15/87		8.1	434	19	11	53	5.9	0.74	0	60	3.1	0	159	0	0.4	244	91	
02/03/88		7.7	477	18	13	53	6.2	1.1	0	64	5.5	0	158	0	0.4	310	99	
07/11/88		8.7	462	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	481	17	13	55	6.3	0.44	0	75	0.6	0	144	0.2	0.6	328	94	
03/14/89		8.4	500	24	16	55	7.4	4.4	0	83	4.9	13	125	0	0.6	264	122	
02/07/90		8.4	387	16	26	32	4.3	0.6	0.07	6	18	18	183	0	1.3	218	145	
03/27/90		8	538	22	14	71	6.6	0.69	0	97	2.3	0	134	0.5	0.6	335	112	
10/25/90		8.5	622	24	15	74	6.3	1.6	0.01	131	2.9	11	106	0.1	0.5	282	123	
11/20/90		8.3	565	20	16	67	5.1	2.2	0.01	110	3	11	99	0.4	0	300	120	
10/18/91		8.3	555	18	16	62	6.2	0.84	0	110	3	13	94	0.2	0.6	294	110	
02/23/92		8.3	590	18	17	76	6.6	0.58	0	120	1	3	113	1	0.5	304	120	
09/22/92		8.3	567	14	15	67	5.5	0.85	0.03	110	1	1	95	0	0.5	286	99	
08/23/93		8.3	561	13	18	87	6.6	0.48	0.02	120	4	0	117	0.2	0.5	320	100	
01/26/94		8.6	696	20	27	83	5.1	9.8	0.02	100	3	4	190	0.5	0.6	414	160	
02/02/95		8.5	580	26	30	57	4.3	0.39	0.02	70	2	12	230	0.4	0.7	332	190	
03/29/96		7.9	523						0.74	0.01	60	3					340	130
04/22/97		8.3	529						0.84	0.03	26	17					343	130
03/18/98		8.2	485						0.62	0.02	51	2					315	150

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0020	04/07/80	7.2	11600	898	371	813		2.6	0	3645	268	0	142	0	0	7626	3768
	04/28/80	7.3	12200	973	373	858		8	0	3904	190	0	150	0	0	8228	3960
	04/28/80	7.4	12200	995	381	852		6.4	0	3915	240	0	160	0	0	8154	4048
	02/26/87	6.7	18400	852	407	2160	27	60	11	6000	214	0	26	0	0.1	12490	3800
	02/26/87	6.4	13500	317	317	1660	20	62	8.7	4580	171	0	52	0.1	0.1	9400	2950
	10/09/87	7.5	16100	808	276	2359	33	27	0.58	5550	17	0	39	0	0	11486	3150
	02/09/88	8.1	16500	840	273	2254	32	33	0.28	5480	55	0	21	0	0	11748	3220
	07/11/88	7.3	15700	924	183	2230	32	29	0.19	5470	55	0	11	0.1	0	8899	3060
	11/09/88	7.7	16200	844	205	2120	31	52	0.24	5500	36	0	20	0.1	0.2	10800	2950
	03/10/89	7.3	15600	1100	146	2230	35	73	0.17	5780	43	0	25	5.4	0.2	9340	3340
	03/22/90	6.5	15700	918	182	2185	32	45	0.06	5536	20	0	16	0	0.2	9781	3040
	01/17/91	7.6	14300	940	150	2180	32	53	0.08	5360	0	0	19	2.1	0.1	12200	2950
NL0021	04/07/80	7.7	1750	47	18	294		0.12	0.29	286	62	0	446	0	0.3	968	193
	04/24/80	7.4	1730	36	21	268		0.38	0.69	278	65	0	365	0	0.2	894	175
	05/19/86	10	1291	1.1	0.5	292	3.1	0.66	0	360	2.9	92	54	1.3	0.2	664	48
	03/11/87	8.1	1580	50	12	264	1.6	1	0	258	84	0	417	0.2	0.3	928	174
	03/11/87	8.5	1350	5	1	264	3.1	24	0	312	9.2	14	178	4	0.2	750	16
	10/02/87	8.6	1380	4.6	3	271	2.7	0.92	0	295	20	18	204	0.7	0	766	24
	02/08/88	8.2	1480	10	12	283	2.3	0.5	0.01	293	19	0	285	0.1	0.2	962	75
	11/07/88	8.7	1420	4	15	281	2.7	0.57	0	292	13	31	211	0.6	0.2	764	73
	03/09/89	8.7	1410	8.4	16	283	2	0.54	0	308	14	40	207	0.2	0.2	771	81
	03/28/90	8.7	1400	22	0	281	2.7	1.1	0	295	4.6	32	216	0.6	0.2	754	54
	08/13/90	8.8	1370	18	4.9	283	2.3	0.16	0.01	300	5	22	237	1	0.2	726	65
	12/20/90	8.6	1400	0	4	280	2.3	0.27	0	300	7	20	230	0.6	0.2	728	41
	03/18/92	8.5	1450	6	10	290	2	1.4	0.02	310	13	22	210	2.1	0.2	759	57
	07/15/92	9	1430	4.6	8.2	290	2.5	0.83	0	310	9	8	257	0	0.2	782	45
	11/16/92	8.1	1550	16	16	280	2.3	2.1	0.08	340	18	0	241	1.5	0.3	806	100
	02/16/93	8.4	1470	9.2	11	290	1.6	1.8	0.01	340	19	18	169	0.5	0.2	832	66
	05/13/93	8.7	1500	4.5	8.8	290	2.7	0.44	0	340	29	9	208	0.2	0.2	828	47
	03/25/94	8.5	1620	7.8	13	310	3.1	1.1	0.01	380	21	14	161	0.4	0.2	842	74
	01/23/95	8.5	1370	5.2	9.3	270	2.7	4.2	0	330	39	6	144	0.1	0.2	886	50
	04/19/95	7.2	1650						12	0.08	470	66				1070	350
NL0022	03/07/80	8.9	250	13	7.7	9		1.5	0	20	4	4	55	0	0.1	170	64
	04/07/80	8.1	670	26	14	75		0.41	0.06	3	21	0	317	0.7	0.2	408	122
	05/12/80	8.1	1340	12	15	239		62	0.8	109	108	0	422	0	0.1	796	92
	04/17/81	9	1260	2.8	8	262	4	1.3	0	125	106	38	339	0	0.2	728	40
	02/18/86	10	1231	2.8	6.8	258	2.7	0.99	0.01	123	61	168	102	0	0.4	714	35
	07/16/87	10.1	1340	4.4	15	267	3.5	5	0	153	56	193	69	0	0.2	740	73
	10/19/87	9.8	1244	1.8	2.8	260	2.3	0.34	0	138	36	129	181	0	0.2	714	16
	12/15/88	9.7	1250	3.2	4.3	264	2.3	0.14	0	157	28	92	248	0.4	0.2	779	26
	06/14/89	9.9	1260	0	3.9	267	2.3	0.19	0	133	10	133	167	0	0.3	782	16
	03/14/90	9.1	1260	6.4	2.9	267	2.7	0.37	0	166	22	97	228	0	0.4	738	28
	12/14/90	9.9	1210	21	4.4	280	2.7	0.3	0.02	150	31	104	231	0	0.4	656	23
	07/16/91	9.9	1250	0.6	2.5	220	2.3	0.91	0	150	35	41	308	0	0.5	710	12
	03/24/92	8.7	1250	4.8	12	270	2	0.46	0.01	190	7	31	333	1.2	0.3	684	61
	11/25/92	8.8	1270	0	8	270	1.2	0.12	0	200	4	39	281	0.1	0.5	708	33
	01/25/93	8.8	1240	4.4	13	280	2	0.34	0	210	3	28	297	0.1	0.4	726	65
	05/24/93	8.8	1230	2.6	4.9	250	1.2	0	0	200	4	14	375	0	0.4	724	26
	03/30/94	8.9	1300	0	6.6	260	0.88	0.34	0	200	4	34	334	0.4	0.4	814	27
	02/07/95	9.1	1260	0	6.7	280	1.6	0.28	0	220	3	32	327	0	0.5	680	28
	04/10/95	8.6	1370						0.5	0	270	5				891	270
	05/15/95	9.4	1150	1.3	3.9	260	0	0.12	0	210	5	24	336	0.1	0.4	678	19
12/21/96	9	1670						0.48	0	290	9				1080	72	
02/16/98	8.8	1590						0.18	0	290	2				1030	54	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
NL0023	04/07/80	8.3	770	15	13	133		0.31	0.11	15	41	14	355	0	0.3	438	89
	04/23/80	7.6	720	5.8	5.5	137		36	0.17	22	0.7	0	370	0	0.3	396	37
	04/23/80	7.8	815	14	8.5	132		0.98	0	15	8.7	0	400	0	0.3	432	70
	04/16/81	9.1	720	2.9	2.4	155	2.3	0.78	0	35	9.2	46	281	0	0	394	17
	02/12/86	8.7	712	3.8	9.6	159	1.2	0.41	0	55	0.5	46	270	0.1	0.3	420	49
	07/15/87	8.7	798	6.7	6.6	163	1.6	0.97	0	97	4.5	33	262	0	0.3	442	44
	10/01/87	8	832	6.7	9	163	2	0.3	0.03	110	3.1	0	324	0	0.1	464	54
	02/04/88	8.2	894	9.9	9.4	175	1.6	0.62	0.06	121	5.8	0	321	0	0.2	581	63
	07/04/88	8.6	880	7.2	11	177	2.3	1	0	132	3.2	19	277	0	0.3	489	63
	11/04/88	8.7	915	9	11	175	1.6	1.4	0	136	1.4	33	248	0.1	0.3	514	68
	11/15/89	7.8	807	27	7.9	156	1.2	0.52	0.01	10	49	0	448	0	0.3	503	100
	01/18/95	8.8	816	10	11	170	3.5	0.5	0	110	3	21	280	0.5	0.3	458	71
	04/19/95	7.9	776					2	0.01	90	5					504	110
	05/17/95	8.8	860	4.8	92	160	1.2	0.75	0.11	120	5	39	286	0.5	0.3	634	130
	03/16/98	8.7	859					1	0	94	1					556	110
		7.1	934	15	13	182	1.2	2.3	0	146	3.8	0	313	0.1	0.3	575	89
	NL0024	04/07/80	7.5	320	6.2	6.7	42		0.39	0	55	5.3	0	62	0.8	0	178
04/14/80		7.9	600	22	24	56		1.5	0.11	14	4.3	0	303	0	0.9	340	152
04/14/80		7.9	620	21	21	64		2.3	0.06	17	6	0	301	0	0.9	318	140
08/26/80		7.8	1080	46	26	139		0.61	0	190	3.2	0	306	0	0.6	600	220
02/14/86		8.2	958	25	36	124	4.7	1.9	0.07	162	4.6	0	290	0	0.7	510	212
02/26/87		7.3	1910	40	60	230	0	31	0.77	430	65	0	267	21	0.6	1337	348
02/26/87		8	687	12	25	76	3	0.24	0.13	40	25	0	327	0	0.8	352	134
10/15/87		8.3	913	34	34	104	5.1	1.5	0.15	142	3.5	18	278	0.2	0.5	508	226
02/03/88		7.6	931	34	36	101	4.3	0.7	0.14	131	5.3	0	316	0.5	0.6	605	232
07/11/88		8.4	858	30	34	104	7.8	0.52	0.02	131	3.2	9	255	0	0.6	445	215
11/15/88		8.4	876	29	34	99	4.3	0.5	0	135	3	12	271	0.1	0.7	451	215
03/14/89		8.4	810	19	34	94	5.5	1.2	0.01	140	7.6	0	212	0.3	0.7	406	187
03/27/90		7.4	1013	34	49	110	4.3	1.2	0.01	192	4	0	259	0	0.8	631	288
08/13/90		7.6	11200	512	190	1730	23	3.9	2.2	3880	62	0	256	0.2	0.4	7660	2060
01/17/91		7.6	17000	470	510	2980	41	7.1	3.5	6530	87	0	200	0.2	0.2	13300	3270
10/11/91		7.3	20100	400	550	3400	60	6	3.3	7300	31	0	178	0.3	0.3	14300	3300
01/28/92		7.6	15400	320	390	2300	37	4.8	2.3	5200	62	0	232	0.1	0.3	11500	2400
09/14/92		7	8950	590	320	590	17	150	6	2900	220	0	45	0	0.3	8120	2800
12/22/92		8.1	6830	200	210	850	27	3.6	0.75	2200	12	0	78	3.1	0.4	4740	1400
08/20/93		8.3	4930	150	180	500	18	0.72	0.03	1600	6	0	106	5.3	0.4	3430	1100
12/23/94	7.9	9890	420	410	1100	3.9	3.5	1.4	3300	13	0	75	1.2	0.3	7050	2700	
03/20/96	7.3	6470					1.6	1.2	2200	6					4210	1700	
03/18/98	7.1	6060					1	0.11	2200	1					3900	400	
NL0025	04/07/80	7.6	680	20	14	102		0.96	0.17	6	5	0	384	0	0.2	412	107
	04/09/86	7.6	3690	120	82	476	10	0.78	0.02	1152	3.5	0	31	0.2	0.2	2412	638
	03/11/87	8.1	476	20	9	76	3.1	1.1	0	22	15	0	256	0.6	0.3	268	87
	03/11/87	7.3	3370	117	56	435	9.4	5.4	0.3	1044	6.1	0	21	0.1	0.2	2106	520
	10/19/87	9.1	718	3.5	18	104	3.9	3.2	0	176	3.8	13	63	0.2	0.2	388	82
	12/01/88	7.2	1182	18	32	152	5.5	2.2	0.02	340	3.1	0	31	2.4	0.2	736	179
	06/01/89	6.9	1590	45	42	193	7.4	10	0.01	452	2.4	0	30	3.8	0.2	991	283
	03/01/90	6	2330	76	57	269	7	7.4	0.04	706	2.1	0	23	4.3	0.2	1450	424
	08/01/90	7.9	2090	81	47	251	6.6	2.1	0.01	647	1.1	0	17	0.2	0.2	1320	396
	11/30/90	7.6	1960	64	38	240	7	1.8	0.01	580	2	0	25	5.2	0.2	1450	320
	10/03/91	7.2	1910	77	38	240	8.2	1.7	0.03	590	2	0	29	4.9	0.4	1180	350
	12/03/92	8	2150	81	41	250	7.4	0.96	0.03	650	2	0	14	0.2	0.2	1570	370
	02/03/93	7.6	2210	80	34	260	7.8	0.98	0.01	690	1	0	24	2.7	0.2	1630	340
	06/02/93	7.7	2380	99	47	280	9.4	1.8	0.02	700	2	0	41	2.5	0.2	1770	440
	04/04/94	8.1	2610	150	32	320	8.4	2.5	0.01	780	4	0	60	4.4	0.2	1620	510

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH	
																		(Total)
NL0025	12/07/94	7.3	3870	150	110	480	11	1.5	0.16	1200	3	0	24	4.1	0.1	2660	820	
	03/06/96	7.4	2860					12	0.27	930	1					1860	480	
	06/05/97	6.4	2790					2.3	0.17	870	2					1810	390	
	02/17/98	6.7	2250					1.5	0.04	680	0					1460	320	
NL0026	08/22/86	7	7390	622	143	680	8.2	0.19	6.4	2360	120	0	260	0.3	0.1	5632	2140	
	10/01/87	7.5	6400	461	107	579	11	0.56	0.25	1914	38	0	22	0	0	4086	1590	
	02/17/88	8	6250	480	96	587	11	0.46	0.33	1920	64	0	21	0	0	4828	1592	
	11/16/88	7	5560	456	40	552	10	0.56	0.36	1720	27	0	12	0	0	3464	1300	
	03/17/89	7.2	5620	480	73	575	11	0.7	1.1	1950	31	0	14	0	0	3120	1500	
	07/14/89	7.8	6260	491	98	616	11	0.48	1.5	2000	62	0	22	0	0	3290	1632	
	03/28/90	7.3	5180	422	35	543	9.4	0.34	0.5	1669	16	0	11	0	0	3227	1196	
	08/21/90	8.2	5220	464	22	543	9.4	1.2	0.63	1730	18	0	19	0	0.1	3540	1250	
	12/13/90	7.4	5090	410	43	520	10	0.37	0.29	1600	15	0	18	0	0.1	4080	1200	
	07/08/91	7.6	5540	410	46	510	11	0.61	0	1700	17	0	23	2.4	0.1	4430	1200	
	03/13/92	7.2	5820	400	110	560	9	0.72	0.13	1800	13	0	23	0	0.2	3690	1400	
	11/11/92	7.9	5570	480	46	560	8.2	0.48	0.03	1800	8	0	30	0.1	0.1	4540	1400	
	02/11/93	7.7	5650	450	56	570	7.8	0.56	0.06	1800	7	0	25	5.5	0.1	4400	1300	
	05/11/93	7.8	5660	420	58	540	8.2	0.42	0.01	1800	6	0	30	0	0.1	4370	1300	
	04/08/94	7.8	5840	430	62	600	9	0.57	0.07	1800	7	0	22	0	0.1	3830	1330	
	02/10/95	7.9	3940	230	28	520	7	0.47	0.01	1300	6	0	54	0.2	0.1	2500	690	
	04/11/95	7.7	3010						1.7	0.02	990	3					1960	510
	05/11/95	7.5	3300	190	37	480	12	0.42	0.01	1200	5	0	29	2.6	0.1	2140	640	
	06/12/97	7.5	1750						0.33	0.02	530						1160	120
	03/16/98	8.1	1680						0.62	0.01	530	0					1090	140
NL0027	09/01/86	8.4	882	18	10	168	3.1	0.17	0.1	121	14	42	278	0	0.3	510	86	
	07/20/87	8.4	3940	29	75	655	11	0.66	0.11	1170	4	37	209	0	0.2	2330	380	
	10/19/87	8	3160	24	64	524	9	0.42	0.15	876	4.1	0	271	0	0	1732	320	
	04/01/88	7.8	2060	19	49	368	6.2	4.5	0.07	508	7.5	0	257	3.2	0	1066	250	
	04/01/88	7.7	1016	28	12	193	2.5	1.5	0.04	130	15	0	378	0.4	0.2	574	118	
	12/14/88	8.6	997	9	6.6	198	3.1	1.9	0	162	3.5	18	274	0.1	0.1	621	50	
	06/12/89	8.6	1040	7.2	8.5	205	3.1	10	0.04	174	3.8	32	233	0.4	0.2	647	53	
	03/13/90	8.5	1060	8.8	5.4	209	3.5	13	0.01	198	2	28	200	0.3	0.2	558	44	
	12/11/90	8.3	1080	14	0	240	3.9	5.5	0	220	4	15	230	0.5	0.2	620	34	
	10/11/91	8.2	1070	8.8	4.1	180	4.5	5.2	0.01	240	2	0	223	0.4	0.1	570	39	
	12/15/92	8.1	1160	9.3	5.1	220	3.5	2.8	0.1	250	2	0	179	1.5	0.2	612	44	
	04/08/94	8.5	1180	10	7.8	230	3.1	1.4	0	260	3	18	168	0.8	0.2	644	57	
	NL0028	09/03/86	7.9	643	12	6.3	133	3.1	0.3	0.21	21	13	0	397	0	0.2	402	56
07/20/87		8.4	2080	25	43	356	9	3.3	0.03	513	4	49	275	0.3	0.2	1180	240	
10/19/87		8.2	1690	18	34	287	7	0.4	0.17	346	4.2	0	381	0	0	922	185	
04/02/88		7.9	1147	18	22	212	6.6	1.8	0.07	177	7	0	375	2.9	0.2	624	135	
04/02/88		8.1	590	14	6.2	124	3.9	0.28	0.18	18	11	0	350	0.1	0.1	350	60	
12/14/88		8.2	654	16	7.4	124	3.9	0.28	0.06	37	3.9	25	304	0.3	0.1	407	71	
06/09/89		8.2	656	11	8.4	133	4.3	0.33	0	35	3.7	0	354	0.2	0.2	409	62	
03/16/90		8.2	610	12	2.2	131	3.5	0.3	0.02	37	3.8	0	327	0.9	0.1	352	39	
12/13/90		8.7	611	5.6	6.3	140	4	0.48	0.03	32	2	79	169	0.4	0.2	280	40	
10/11/91		8.1	590	4.3	4.9	120	4.2	0.22	0.02	37	2	0	313	0.3	0.1	318	31	
12/15/92		8.5	602	3.2	6	130	4.3	0.58	0	39	2	5	259	0.7	0.2	338	33	
02/11/93		8	608	7.5	2.7	130	3.9	1.5	0.02	51	3	0	270	0.6	0.2	382	30	
06/09/93		8.8	594	5.1	4.3	130	3.9	0.62	0.01	42	2	15	271	0.3	0.2	364	30	
04/08/94		9	588	3.2	5.6	130	2.7	0.5	0	40	3	32	244	0	0.2	348	31	
12/08/94		8.7	561	10	8.3	110	4.7	1.2	0.01	28	3	18	267	1.8	0.2	378	60	
03/22/96		8.2	736						9.8	0.01	93	6					478	180
02/19/98	7	25800						110	3.6	9800	170					16800	4200	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0029	10/27/86	8.3	687	17	12	133	5.9	0.32	0.21	20	14	32	377	0.2	0.2	418	92
	10/19/87	8.9	690	3.5	7.4	149	5.5	0.44	0	28	4.4	53	323	0	0.1	444	39
	07/16/87	8.4	713	6.1	7.5	152	5.9	3.5	0.01	20	4.5	30	362	0	0.3	372	46
	12/14/88	8.7	1247	12	19	221	7	12	0	229	3.6	22	283	1.8	0.1	777	105
	06/08/89	8.5	1210	22	27	200	8.6	4.8	0.24	220	3.6	32	265	2	0.2	754	164
	03/07/90	8.3	1700	33	46	230	9.4	29	0.02	421	2.3	24	154	0.2	0.2	946	271
	08/06/90	8.3	3540	122	124	398	11	38	0.12	1090	7	1	116	2.5	0.2	2660	814
	12/06/90	8.1	4470	120	180	460	16	6	0.03	1480	18	0	79	4.4	0.1	3590	1030
	10/07/91	7.4	5900	180	290	660	14	95	1.6	2050	22	0	55	1	0.1	4830	1630
	06/05/97	8.7	786						0.55	0	76	7				511	46
NL0030	10/27/86	8.5	669	31	7.9	120	2	0.4	0.03	14	38	34	334	0	0.2	450	110
	07/16/87	8.5	701	9	6.9	143	2.7	0.94	0.01	45	4	34	299	0	0.3	394	51
	10/19/87	8.7	595	4.8	7.8	131	2.3	0.4	0	19	4.3	25	316	0	0.1	360	44
	12/08/88	8.8	656	5.6	8.4	136	2.3	0.46	0	31	3.5	28	307	0.2	0.1	409	48
	06/08/89	8.6	685	7.2	12	145	2.3	0.89	0	35	3.9	24	328	1	0.2	427	68
	03/08/90	8.7	677	5.8	14	136	1.6	116	0	40	2.6	32	279	2.6	0.2	368	72
	08/07/90	8.5	668	16	5.6	143	2	12	0.02	50	3.8	35	271	1.7	0.2	350	63
	12/07/90	8.7	706	11	11	140	2.7	2.1	0	52	3	29	310	2.1	0.2	410	72
	10/09/91	8.1	711	12	12	120	3.2	2	0.03	48	3	0	359	3.7	0.2	408	80
	12/16/92	8.4	774	14	10	140	2.3	31	0.05	68	3	21	268	2.7	0.2	468	77
	02/15/93	8.5	931	16	7.8	180	3.1	46	0.01	120	4	25	262	2.5	0.2	560	73
	06/16/93	8.8	921	8.2	16	170	2.3	6.1	0	120	5	25	299	2.1	0.3	568	86
	04/21/94	9.1	1120	11	44	210	2.7	3.7	0.01	200	4	28	265	4.2	0.2	622	210
	12/13/94	8.7	1160	6.1	21	230	2.7	4.4	0	220	4	13	293	3.8	0.2	670	100
	04/11/95	7.7	29400	980	710	4500	56	34	6.4	11000	600	0	318	8.8	0.1	22700	5300
NL0031	10/27/86	8.1	583	30	6.4	104	3.1	0.57	0.28	10	11	0	394	0.2	0.2	394	10
	07/16/87	8.6	899	4.2	13	173	5.1	0.46	0.02	127	8	29	279	0	0	474	64
	04/02/88	8	602	31	8.6	108	3.1	0.02	0.4	4	11	0	392	0.5	0.2	344	112
	12/01/88	7.7	2170	63	36	331	5.9	0.72	0.51	543	3.8	0	304	2	0.1	1352	305
	06/01/89	8.3	1420	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	941	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	763	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	707	11	9.7	130	3.5	0.7	0.01	72	2	18	290	13	0.1	372	68
	07/01/91	8.6	631	14	9.4	120	4.2	2.3	0	48	2	31	250	2.5	0.1	390	74
	03/03/92	8.5	619	15	9.2	130	3.1	0.4	0.01	41	2	30	266	3.2	0.2	322	75
	02/03/93	8.7	790	14	17	140	3.5	0.44	0	110	4	29	205	2.7	0.1	584	100
	02/17/93	8.5	677	14	9.2	120	3.1	0.88	0.06	54	2	5	274	2.8	0.1	388	74
	05/04/93	8.3	1100	29	19	180	3.9	0.68	0.32	180	2	0	349	4.1	0.2	580	150
	04/04/94	8.2	907	34	11	150	3.9	0.74	0.3	110	4	0	376	2.6	0.2	540	130
	02/02/95	8.5	1060	56	29	140	3.1	0.41	0.53	160	3	50	320	4	0.2	652	260
	04/02/95	8	1150					1	0.49	240	3					750	240
	05/03/95	8.2	1080	32	23	170	6.3	0.4	0.39	200	4	0	324	4.1	0.1	648	170
	04/10/97	8.3	882					0.44	0.54	120	2					573	160
	02/13/98	6.9	2960					0.9	0.91	810	10					1920	550
NL0032	11/10/86	8.2	571	46	20	60	3.5	0.78	0	8	25	0	388	0	0.8	384	197
	10/15/87	9	511	2.2	18	85	3.9	0.36	0	45	3.3	32	186	0	0.8	280	78
	02/03/88	8.6	515	2.4	17	85	4.7	0.14	0	44	5.3	34	165	0	0.8	335	77
	07/11/88	8.5	497	5.8	13	90	6.6	0.42	0	52	4.2	10	180	0.3	0.8	271	68
	11/14/88	8.9	485	2.4	11	85	4.7	0.41	0	40	0.6	20	159	0	0.9	278	50
	03/14/89	9.2	465	3	9.8	85	5.1	0.18	0	56	3.6	41	107	0	0.9	257	48
	03/27/90	8.6	482	3.2	7.1	92	4.3	0.66	0	70	1.5	22	108	0	0.8	276	37
	08/15/90	8.5	489	10	2.4	99	4.7	0.37	0	83	3.7	12	121	0	0.8	226	35

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
NL0032	01/23/91	9.2	542	3.2	4.7	100	3.9	0.5	0	100	1	16	72	0	0.4	300	27
	10/11/91	8	610	5.3	4.6	110	5.2	0.46	0.01	130	5	0	113	0.2	0.7	340	32
	02/11/92	8.2	652	11	6.1	120	5.1	0.59	0	140	2	0	119	1.3	0.8	358	52
	10/19/92	7.8	687	14	3.4	120	3.9	2	0.03	160	4	0	81	0.7	0.7	346	49
	01/19/93	8.4	724	14	4	120	4.7	0.2	0.03	170	4	12	71	0.8	0.7	398	51
	08/27/93	8.1	722	3.8	6	130	5.1	0.54	0.06	180	2	0	80	0.2	0.7	386	34
	12/23/94	8.3	747	12	13	140	3.5	0.21	0.03	190	2	6	93	0	0.8	420	84
	03/20/96	7.9	1290					21	0.04	360	37					838	90
	12/19/96	7.8	5380					0.16	0.07	1700	4					3500	970
03/18/98	8.4	654					1.6	0	110	1					425	180	
NL0033	11/21/86	8.1	657	39	23	78	3.5	0.23	0.06	20	26	0	410	0	0.8	390	194
	06/20/88	8	578	18	26	81	3.9	0.06	0.06	20	30	0	312	0.4	0.8	316	152
	07/11/88	8.5	612	16	27	85	7	0.18	0.08	42	4.4	8	292	0	0.9	333	149
	11/14/88	8.7	644	15	25	87	3.9	0.28	0.06	49	2.7	22	292	0	0.9	350	140
	06/27/89	8.6	753	12	27	117	5.1	0.6	0	82	5.9	126	135	0	0.5	489	88
	03/26/90	8.7	655	5.8	28	99	3.5	1.7	0.02	68	2.2	29	226	0.1	0.9	368	129
	01/17/91	8.4	710	21	29	100	3.5	20	0.09	79	1	14	220	0.6	0.6	390	170
	03/20/96	8.3	824					1.9	0.11	120	9					536	230
	12/18/96	8.4	1000					0.78	0.01	180	2					650	240
	02/18/98	8.1	915					1	0	240	1					594	320
NL0034	11/25/86	7.5	2350	190	53	175	8.2	0.9	4.3	618	14	0	267	0	0	1672	692
	10/19/87	8.1	1610	94	37	149	8.6	0.32	1.6	403	2.9	0	169	0	0	1012	386
	12/02/87	7.3	2320	192	59	172	9	1.9	4.6	640	12	0	221	0	0.1	1500	720
	02/17/88	8.1	2110	142	45	175	8.6	1.2	2.4	618	4.5	0	143	0	0.1	1444	540
	07/18/88	8.1	1720	100	44	154	9.4	0.68	0.03	448	2.4	0	77	1.7	0	837	430
	11/15/88	8	1450	72	35	140	7.4	0.14	0.69	400	12	0	104	0.5	0.1	719	325
	03/20/89	6.9	1170	56	33	129	7.8	0.46	0	349	4	0	96	1.3	0.1	627	275
	03/13/90	7.9	1060	30	35	122	6.3	0.53	0	322	2.4	0	32	0	0	660	220
	12/11/90	8.6	1050	36	34	130	6.6	0.28	0	310	3	2	27	0.9	0	724	230
	10/16/91	7.7	1010	29	25	98	8	0.36	0	310	1	0	19	0.2	0.1	710	180
	11/25/92	8.1	794	22	17	110	6.3	0.28	0.03	74	190	0	74	1.2	0.4	488	120
	12/23/92	7.9	2250	170	50	180	8.6	0.53	3.7	610	16	0	149	2.9	0.1	1960	640
	02/24/93	7.1	1580	81	36	150	11	0.36	0.3	480	9	0	34	1.1	0	1210	350
	06/23/93	9	637	1.9	6	140	1.6	0.91	0	46	4	38	232	0	0.4	414	30
	06/23/93	8.2	2770	180	88	200	15	3.2	0.01	860	32	0	30	0	0.1	2240	800
	04/25/94	8.3	1480	68	41	150	8.6	0.16	0	410	2	6.1	66	1.4	0	998	340
	12/22/94	8.2	1400	70	39	150	8.2	0.42	0	420	1	0	32	0	0.1	1000	330
	04/24/95	8.1	1300	50	62	110	9.8	0.38	0	400	1	0	51	0.1	0.1	819	380
	04/03/96	7.8	1100					0.76	0.13	340	1					715	230
	02/23/98	5.8	1040					0.32	0	310	6					676	240
NL0035	11/28/87	8	644	20	6.3	127	2.7	0.34	0.15	8	12	0	382	0	0.2	419	77
	12/01/88	8.3	603	9.6	4.9	133	3.1	0.24	0	12	4.2	13	350	0	0.1	376	44
	06/01/89	8.6	597	6.4	6.8	136	3.1	0.29	0	12	3.3	26	319	0.3	0.1	372	44
	03/01/90	8.3	585	7.8	2.3	136	3.1	0.46	0	10	2.5	29	285	0.4	0.2	310	29
	08/01/90	8.9	557	6.2	1.3	133	1.2	0.25	0.01	14	1.6	29	266	0.1	0.2	310	21
	11/30/90	8.2	556	9.6	0	130	2.3	0.22	0	16	2	0	350	0.1	0.2	296	12
	07/01/91	8.9	559	1.4	4.8	130	3.2	0.26	0	14	2	38	260	0.1	0.2	340	23
	11/02/92	8.7	571	3.5	1.7	130	2.3	0.53	0	19	3	13	268	1.4	0.2	342	16
	02/03/93	8.8	562	5.3	5.9	130	2.3	0.15	0	16	4	29	237	0.8	0.1	320	42
	05/04/93	8.4	558	0.6	2.8	130	2.7	0.24	0.02	20	2	24	290	0.4	0.2	300	13
	03/21/94	8.1	563	6.6	6.4	130	3.9	0.12	0	13	4	0	348	0.5	0.2	336	43
	02/02/95	8.4	544	0.8	12	130	1.6	0.51	0	16	3	24	320	0.3	0.2	360	50

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0035	04/02/95	8.2	534					1.5	0	15	3					350	55
	05/03/95	8.1	523	4.8	2.8	120	1.2	0.14	0	12	4	0	335	0	0.1	342	24
	04/10/97	8.8	552					0.18	0	7.2	2					358	28
	02/13/98	7.7	593					0.54	0.01	28	7					385	39
NL0036	11/30/87	8	665	34	7.8	113	2.3	0.47	0.12	9	26	0	381	0	0.2	432	118
	12/02/88	8.8	617	2.9	11	126	3.9	0.18	0	43	3.9	14	285	0	0.1	384	53
	06/19/89	9.4	619	2.6	8.6	131	3.5	0.2	0.01	36	4.3	100	167	0	0.2	386	42
	03/06/90	9.4	610	1.3	8.5	129	3.5	0.36	0	42	2.7	72	140	0.1	0.2	312	38
	12/18/90	10	584	4	3.7	130	4.7	1.4	0.01	40	2	91	110	0	0.2	334	25
	07/16/91	10.1	616	2.2	1.1	130	3.2	0.18	0	39	2	38	21	0	0.2	306	10
	03/24/92	9.8	589	1.4	2	130	2.7	0.98	0	40	3	69	127	0.2	0.1	308	12
	11/25/92	9.5	588	0	2.4	120	2.7	0.18	0.01	47	1	66	110	0.1	0.2	334	10
	01/28/93	9.3	567	2.9	5.4	130	3.5	0.06	0	50	2	33	168	0	0.2	356	29
	05/26/93	9.6	609	0.3	4.6	120	3.1	0.08	0	52	3	47	174	0	0.2	330	20
	03/21/94	8.8	688	3.5	4.9	140	3.1	0.14	0	84	5	23	209	0.02	0.2	402	29
	01/13/95	8.9	781	2.7	8.8	140	3.5	3.4	0.01	120	7	15	211	0.8	0.2	405	42
	04/22/95	6.5	690					0.58	0	110	2					449	96
	02/13/98	8	688					0.24	0.03	89	6					447	54
NL0037	12/18/87	8.2	720	28	6.8	140	1.6	0.54	0	10	26	0	437	0.2	0.2	452	97
	12/08/88	9	632	2.7	5.1	143	2.3	0.4	0	14	3.5	29	321	0	0.2	394	28
	06/16/89	9.5	644	2.4	4.1	147	2.7	0.13	0	11	4.3	62	250	0	0.3	401	23
	03/16/90	9.4	636	2.1	2.2	147	2.7	0.38	0	14	4	98	166	0	0.4	360	14
	08/30/90	10.2	651	1.6	3.4	143	3.5	0.3	0	15	2.4	127	110	0.2	0.4	340	18
	01/22/91	9.7	639	0.8	3.4	140	2.7	0.26	0.01	12	2	91	188	0	0.3	302	16
	10/10/91	9.8	693	1.8	3.1	120	5	0.42	0	34	2	135	71	0.2	0.3	370	17
	12/22/92	9.6	672	0.8	1.8	150	2.3	0.41	0	35	2	47	207	0.1	0.3	372	10
	02/15/93	9.2	992	5.3	3	190	4.7	0.34	0.03	170	4	41	157	1	0.2	534	26
	06/16/93	9.6	663	3	3.2	150	2.3	0.42	0	36	2	86	175	0	0.3	382	21
	04/18/94	8.9	636	3.2	4.9	140	3.1	1.4	0	15	13	29	352	0	0.3	400	28
	12/13/94	8.7	636	5.4	6.7	150	2.7	0.02	0	24	2	48	292	0.1	0.4	416	41
	04/18/95	8.9	664	4	6	150	2.7	0.37	0	24	4	26	325	0.9	0.3	398	34
	03/25/96	9	608					0.4	0	16	2					395	41
06/11/97	8.9	789					0.28	0	77	3					513	73	
NL0038	01/27/88	7.8	733	13	8.7	147	2	0.24	0.1	40	19	0	376	0	0	420	68
	07/12/88	8.3	668	6.4	4	149	3.1	0.26	0	42	3.2	18	306	0	0.3	377	32
	11/01/88	8.7	655	4	3.6	147	2.3	0.22	0	40	1.6	30	285	0.4	0.4	372	25
	03/21/89	9	635	2.9	4.7	149	2.7	0.34	0.1	44	5.8	69	201	0.4	0.4	375	26
	03/19/90	9	632	4.5	1.2	145	2	0.44	0	45	3.3	6	292	0.6	0.4	394	16
	10/22/91	9.1	805	6.4	0	190	2.5	0.26	0	43	14	42	330	0.2	0.4	520	16
	12/22/92	9.1	635	5.4	0	130	2	0.26	0	43	2	34	207	0.2	0.4	376	14
	02/18/93	8.7	638	3.7	0.9	150	1.6	0.52	0	46	3	25	226	0	0.3	390	13
	04/07/94	9	637	4.6	12	140	2.3	0.64	0.01	58	3	24	285	0.9	0.4	384	61
	12/20/94	8.8	648	3.5	3.5	160	0	0.64	0	41	3	13	320	0.9	0.4	410	23
	04/25/95	8.6	624	3.2	13	140	3.9	0.09	0.03	38	2	18	340	0.7	0.4	381	62
	03/27/96	8.9	644					0.16	0.01	49	2					419	33
	NL0039	01/31/88	7.7	562	42	12	69	4.7	0.24	0.4	13	12	0	338	1.6	0	342
07/12/88		8.4	441	18	11	71	5.1	0.46	0.05	5	2.9	7	257	0	0	246	88
11/01/88		8	543	40	9.8	71	5.1	0.67	0	4	1.9	0	352	0.2	0.2	320	140
03/16/89		8.6	420	18	9.4	76	5.5	0.44	0	8	4	37	196	0.8	0.1	255	84
03/14/90		8.4	380	9.6	9.7	71	5.1	0.28	0	6	2.8	2	233	0.6	0.1	236	64

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0039	08/08/90	8.3	513	21	5	71	4.7	0.28	0	7	3.1	15	233	0.6	0.1	229	73
	12/20/90	7.5	409	13	10	71	5.1	0.28	0	11	2	0	246	0.3	0.1	290	74
	10/22/91	8.2	387	17	2.3	72	5	0.26	0.02	5.6	2	0	250	0.3	0.1	230	53
	12/03/91	8.5	718	31	8.4	100	5.5	0.46	0.03	110	2	19	160	0.4	0.1	418	110
	02/03/93	7.9	438	17	6	74	5.1	0.06	0.15	12	2	0	230	0.5	0.2	294	70
	06/02/93	8.7	407	12	17	69	1.6	0.01	0.01	8.8	2	18	213	0.6	0.1	296	98
	04/04/94	8.7	400	18	8.8	74	4.7	1	0	10	6	23	197	0.7	0.1	230	80
	12/26/94	8.4	470	16	8.7	83	5.5	0.48	0.01	9.2	1	13	242	0.7	0.1	262	76
	04/09/96	8.7	382					0.34	0.01	15	2					248	68
	02/16/98	7.9	5650					0.52	0	1900	6						3670
NL0040	02/25/88	7.9	1081	8.8	22	207	2	0.1	0	180	22	0	298	0.5	0.2	614	114
	07/04/88	8.3	1092	16	17	207	2.7	0.14	0	182	2.9	11	298	0	0.1	585	110
	11/04/88	8.1	1140	16	17	205	2	0.17	0	196	1.6	0	336	0	0.2	646	111
	03/07/89	8.6	1110	9.2	20	214	1.2	0.34	0	215	3	85	145	0	0.2	618	103
	03/20/90	8.4	1090	5.1	12	214	2.7	0.26	0.01	218	3.3	1	256	0	0.1	679	60
	09/11/90	8.8	1050	10	13	212	2.7	0.39	0.01	224	3.1	27	195	0	0.2	530	78
	12/13/90	8.7	1080	0	18	210	5.1	0.11	0	230	2	16	200	0	0.1	730	75
	07/08/91	9.2	1090	0	16	200	5.2	0.13	0	220	2	48	148	0	0.2	606	66
	03/13/92	8.8	1120	0	26	210	2.3	0.27	0	220	2	32	165	0.6	0.1	624	110
	11/26/92	9.3	1060	2.9	11	210	1.6	0.18	0	230	1	33	125	0.1	0.2	544	51
	02/11/93	9.1	1050	6.4	6.8	220	3.1	0.2	0	230	2	22	141	0.1	0.2	576	44
	05/11/93	8.7	1080	1.9	3.7	210	2	0.56	0	230	4	8	194	0	0.2	578	20
	03/17/94	9	1150	0	5.3	210	1.2	0.16	0	240	3	23	148	0.1	0.1	670	22
	01/26/95	8.9	1190	3	6.4	240	1.2	0.5	0	290	2	18	136	0.2	0.2	600	34
	04/11/95	7.3	1200					0.7	0.01	320	2					778	160
05/11/95	9.1	1170	1.6	8.7	240	0	0.28	0	300	2	6	151	0.3	0.1	656	39	
NL0041	03/06/88	7.4	3470	224	103	336	12	5.6	0.58	1010	84	0	175	2.9	0	2864	982
	11/01/88	8.1	3200	160	71	333	12	0.64	0.02	978	21	0	40	0	0	2080	690
	03/07/89	7.8	3010	125	93	342	12	0.48	0	972	7.7	0	52	0	0.1	1580	694
	07/04/89	7.8	3330	172	94	327	13	0.44	0.65	988	56	0	99	0	0	1698	818
	03/16/90	7.4	3010	187	36	331	13	0.3	0.04	917	4.6	0	38	0	0	1875	614
	12/06/90	7.9	2970	190	26	370	14	0.41	0	920	6	0	45	0	0	2270	590
	07/03/91	7.9	2960	200	29	310	14	0.31	0	910	5	0	54	0.1	0.1	2210	620
	03/09/92	7.6	2910	180	20	340	13	0.71	0.06	890	6	0	49	0	0.1	1990	540
	11/05/92	7.7	3000	210	36	330	12	0.66	0.05	910	3	0	35	0.1	0.1	1880	670
	02/08/93	8.2	2990	180	35	330	12	0.36	0.03	900	3	0	40	0.2	0.1	2300	590
	05/07/93	7.7	2990	170	33	340	12	0.24	0.02	920	2	0	41	0	0.1	2180	550
	04/07/94	7.8	3060	180	56	340	13	0.28	0.27	960	5	0	38	1.5	0.1	1960	680
	02/08/95	7.3	3180	200	83	330	12	0.34	0.03	1000	1	0	60	3.2	0.1	2260	840
	04/09/95	7.5	3130					2.4	0.04	1020	0					2030	800
	05/08/95	7.6	2900	180	75	350	10	0.21	0.03	1000	3	0	38	1.3	0.1	1880	770
	03/09/98	7.4	3180					1.6	0.01	1000	0					2070	790
	NL0042	11/13/88	8.4	720	22	3.3	147	2	0.36	0	2	22	31	403	0.2	0.3	436
03/09/90		8.8	1030	10	20	216	5.1	0.76	0.01	133	2.8	48	296	2	0.2	584	106
12/18/90		8.8	906	17	4.5	210	4.7	0.48	0.01	100	3	19	388	0.5	0.2	476	60
10/21/91		8.5	898	16	9	180	3.8	0.7	0.04	88	3	31	360	0.3	0.2	510	76
12/11/92		8.5	869	21	9.1	160	2.7	3.8	0.08	71	2	36	297	2.2	0.2	532	89
02/02/93		8.8	783	2.6	8.3	160	2	0.14	0.03	64	2	31	270	1.5	0.2	472	40
06/22/93		8.6	916	6.7	17	170	3.1	0.01	0.01	110	4	27	310	1.2	0.2	484	88
04/27/94		8.8	885	9.8	14	160	6.6	1.5	0	110	2	52	237	1.3	0.2	452	83
12/14/94		8.2	2090	58	88	280	5.5	4.7	0.97	600	3	0	169	1.3	0.1	1400	510
04/18/95		8.2	1830	53	62	210	7.8	1.6	0.86	470	3	0	227	0.9	0.2	1180	380

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0042	03/06/96	8.8	1090					3.7	0.01	240	2					708	170
	02/17/98	8.6	797					0.24	0.13	62	1					518	92
NL0043	11/24/88	7.6	2850	144	25	375	4.3	0.31	0.02	726	84	0	245	0.5	0.3	1760	462
	03/08/90	9	1123	5.6	13	230	2	0.72	0	173	41	35	216	0.1	0.5	582	68
	12/07/90	9.2	1090	4	6	220	2.7	0.58	0	1	30	37	240	0	0.5	600	35
	10/09/91	9.2	1090	8	1.2	220	3.9	1.2	0.01	180	16	55	199	0.7	0.4	602	25
	12/16/92	9.5	1140	5.1	1.7	220	3.1	0.88	0	190	18	47	162	2.3	0.4	644	20
	02/15/93	8.4	1830	21	33	290	5.1	2.9	0.01	440	35	17	135	1.6	0.3	990	190
	06/16/93	8.2	4840	200	140	580	10	28	0.01	1460	74	0	103	3.1	0.3	3310	1040
	12/13/94	8.7	1070	4.8	10	240	2.7	0.78	0	170	47	16	251	1.8	0.5	646	54
	04/11/95	8.8	1080	4	6	210	0	0.6	0	180	45	19	226	3.1	0.4	618	33
	03/25/96	8.8	1070					0.42	0.01	200	51					696	63
	06/11/97	8.4	1060					0.3	0	190	35	689	40				
NL0044	12/09/88	8.2	790	32	1.5	136	3.1	2.5	0.02	61	19	0	378	0.4	0.2	460	87
	03/09/90	8.5	789	11	13	150	3.5	0.24	0.02	96	2.7	25	267	1.3	0.2	478	80
	12/27/90	8.8	753	7.8	9.8	160	3.1	0.09	0.05	100	3	18	282	1	0.1	444	60
	10/21/91	8.2	1230	38	20	210	4	1.1	0.23	220	4	0	380	0.2	0.2	670	180
	12/11/92	7.9	983	47	6.1	150	2.7	1.8	0.21	120	4	0	341	1.6	0.2	588	140
	02/02/93	8.8	791	6.6	9.2	160	3.1	0.34	0.03	98	4	28	219	1.1	0.2	474	54
	06/22/93	8.2	883	28	13	140	3.1	0.31	0.1	98	11	0	369	0.8	0.2	624	120
	04/27/94	8.7	1150	19	22	180	6.6	0.96	0.01	240	4	32	155	2.2	0.1	574	140
	12/14/94	8.5	2420	25	48	420	9	1.5	0.15	670	31	10	165	0.7	0.1	1400	260
	04/18/95	8.4	1120	21	14	190	3.1	11	0.01	180	15	18	291	1.8	0.2	606	110
03/25/96	8.9	737					0.02	0.01	91	14					479	69	
NL0045	12/10/88	8.4	728	26	6.4	142	2.7	6.4	0.01	5	41	24	387	0.3	0.3	418	92
	03/15/90	9.1	820	2.6	5.5	161	6.3	0.96	0	102	107	31	84	0	1	468	29
	09/10/90	9.4	800	5.4	3	161	6.6	0.49	0	114	81	53	43	0	0.9	408	26
	12/20/90	10	887	0	3.2	170	6.6	0.3	0	150	73	56	20	0	1.1	584	13
	07/05/91	9.8	902	0	4.5	170	12	0.42	0	170	92	45	57	0	1	524	18
	03/12/92	9.7	963	0	6.3	180	5.5	0.32	0	200	38	40	46	0	0.6	504	26
	11/10/92	9.2	990	4.5	8.5	190	6.3	0.32	0	230	18	21	77	0.1	0.7	526	46
	02/09/93	9.2	1000	2	2.9	190	5.9	0.32	0	230	8	15	82	0.2	0.9	524	17
	05/10/93	9.2	1020	8	1.9	180	6.6	0.3	0	240	4	15	93	0	0.8	514	28
	03/31/94	9.6	1110	0	5.3	200	7	0.19	0	270	2	18	56	0	0.8	608	22
	01/25/95	8.2	1250	4	39	190	7	0.27	0.01	350	2	0	75	0.3	0.8	696	170
	04/10/95	7.1	1410					0.5	0.01	430	3					920	190
	08/29/95	148	1200	16	21	230	4.7	0.31	0	380	2	0	71	0.7	0.8	780	130
	02/16/98	8.2	3720					0.74	0.03	1200	0					2420	810
NL0046	12/12/88	7.7	1660	123	29	166	5.5	0.8	1.3	360	18	0	322	0.8	0.1	1090	424
	03/15/90	7.7	1750	51	42	219	7.4	0.6	0.07	490	9.8	0	74	0	0.1	1100	300
	08/17/90	7.8	6940	552	156	665	12	1.7	4.9	2410	15	0	62	0	0.1	5340	2020
	12/21/90	7.3	5700	350	160	530	11	1.1	3.2	1910	11	0	25	0	0.1	4030	1540
	07/05/91	7.5	3180	190	60	300	10	0.15	0	1020	2	0	74	3.3	0.1	2520	730
	03/11/92	7.3	2550	98	56	300	8.2	0.22	0.09	770	2	0	33	0	0.1	1940	480
	11/10/92	7.8	5270	210	94	670	11	0.36	0.08	1700	12	0	54	0	0.1	3340	920
	02/09/93	7.9	6710	240	120	880	11	0.08	0.06	2200	12	0	32	0.3	0.1	4490	1100
	05/10/93	7.8	7000	250	100	900	11	0.1	0.07	2400	3	0	32	0	0.1	4770	1000
	03/28/94	7.8	6030	300	130	640	8.6	1.4	1.6	1900	2	0	53	4.1	0.1	4130	1300
	01/25/95	7.9	6120	340	110	660	13	0.62	0.08	2000	2	0	51	0.2	0.1	4210	1300
	04/11/95	7.9	6150					0.32	0.41	2110	29					4000	1670

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
NL0046	05/24/95	7.6	5500	340	150	660	0	0.42	0.75	2100	3	0	43	0.5	0.1	3570	1500
	03/19/98	7.8	6270					0.28	1.1	2320	5					4070	1800
NL0047	12/16/88	8.3	821	21	7	166	2	1.6	0.08	10	42	43	366	0.3	0.4	476	80
	03/05/90	8.7	745	5.4	6.9	170	2	1.3	0.01	10	14	38	358	0.4	0.4	432	42
	08/03/90	8.7	715	11	5.5	163	2.3	0.67	0.08	10	16	45	327	0.5	0.3	422	50
	12/04/90	8.1	391	18	14	41	8.2	1.1	0.01	36	70	0	79	1.7	0.2	240	100
	10/04/91	8	424	21	13	56	8	1.7	0.04	38	76	0	86	1.3	0.2	210	100
	12/09/92	7.9	461	24	9.1	48	6.6	1.8	0.02	47	61	0	94	1.3	0.2	286	96
	02/09/93	8.3	465	19	11	55	7	2.1	0.04	53	54	9	82	2.1	0.2	280	93
	06/07/93	8.1	476	19	17	55	8.2	0.23	0.01	52	50	0	127	3.5	0.3	298	120
	12/12/94	8.4	521	23	8	78	5.5	1.9	0	57	48	6	143	4.2	0.3	304	90
	03/17/96	8.6	561					0.52	0.05	63	31					365	99
NL0048	01/03/89	8.1	548	22	6.9	115	3.5	0.55	0.13	4	12	0	366	0.9	0.2	356	83
	03/15/90	8.8	791	3.8	2.6	168	5.5	1	0	91	6	19	258	0	0.2	484	20
	07/10/90	8.7	651	5.1	1.8	154	5.1	0.99	0	58	4.6	29	265	0.7	0.2	380	20
	07/08/91	8.7	592	0	6.6	130	7.6	0.83	0	32	2	32	262	0	0.2	372	27
	12/21/91	8	635	3.5	0.8	140	5.9	0.86	0.02	44	1	20	230	0.3	0.1	330	12
	03/23/92	8.3	609	11	11	130	3.1	0.37	0	27	2	21	307	1	0.2	362	74
	11/13/92	8.5	587	5.6	6.1	130	3.5	0.94	0.01	26	2	23	244	1.4	0.3	330	39
	02/11/93	8.9	567	5.9	3.8	130	2.7	1.3	0.02	22	2	25	245	0.9	0.2	362	30
	05/21/93	8.1	2020	88	20	270	16	0.72	0.01	600	3	0	33	0	0.2	1350	300
	03/28/94	8.6	578	8	6.8	120	3.1	0.88	0	15	2	18	316	0.8	0.2	380	48
	01/25/95	8.5	597	11	13	130	4.3	1.2	0.01	24	3	35	351	1.5	0.2	370	82
	04/11/95	7.4	532					1.4	0	28	3					346	95
	05/12/95	7.9	535	16	18	120	0	2.4	0	66	3	0	355	1.4	0.2	347	120
	03/19/98	9	522					1.2	0	42	1						339
NL0049	01/06/89	8.6	820	17	7.5	182	4.7	2.9	0	22	35	28	393	1	0.5	500	72
	03/09/90	7.8	4200	28	148	690	20	0.29	0.1	861	542	0	526	1.6	0.5	2610	678
	09/01/90	8.4	2700	47	59	497	13	0.2	0.05	521	245	34	461	0.6	0.4	1620	362
	12/18/90	9	1930	17	42	380	10	0.4	0	320	150	45	427	1.1	0.4	1100	210
	10/21/91	9	1860	15	11	380	12	0.82	0.01	300	39	75	420	1.8	0.3	1070	84
	12/11/92	8.2	1450	15	7.3	280	8.2	9.4	0.05	200	3	0	459	3.6	0.3	860	67
	02/02/93	8.7	1380	6.8	14	280	8.2	0.04	0.03	200	3	40	368	3.6	0.3	792	74
	02/19/98	7.4	1100					0.72	0	150	2					715	110
NL0050	01/09/89	8.9	2410	18	34	448	9.8	0.09	0	574	73	71	236	3.2	0.4	1350	188
	03/15/90	8.1	3360	22	49	547	12	0.39	0	921	60	0	264	2.9	0.4	1780	256
	12/12/90	8.9	2280	5.8	13	410	7	0.15	0.02	550	37	18	289	1.8	0.4	1250	69
	10/18/91	8.4	1670	6	19	310	7.5	0.46	0.01	340	21	48	261	0.1	0.3	932	95
	12/08/92	8.8	1190	1.6	11	230	3.1	0.72	0.02	180	9	11	326	1.5	0.4	643	50
	02/22/93	8.7	1150	4.3	8.9	240	2.7	1.4	0	170	8	27	295	1.8	0.4	672	48
	06/18/93	8.5	1040	3.8	7.8	220	3.1	0.72	0.01	140	4	20	370	1.3	0.4	608	42
	04/25/94	8.9	868	1.6	6.1	190	0.8	1.1	0	71	7	37	349	2.4	0.4	492	29
	12/22/94	9.2	850	4.2	4.7	190	2	1	0.02	68	4	40	338	0.3	0.5	524	30
	04/20/95	8.9	807	2.4	16	170	3.9	0.22	0	68	4	41	340	0.1	0.4	484	74
	03/25/96	9	769					0.28	0	47	3					500	41
	06/18/97	9	760					0.57	0	45	3					494	32
	02/19/98	8.1	762					0.38	0	48	2					495	28

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
																		(Total)
NL0051	01/08/89	8.3	766	24	7.9	156	1.6	0.45	0.01	10	36	41	364	0.1	0.3	456	92	
	03/12/90	8.5	1200	18	26	225	5.5	0.32	0	138	27	37	397	1.1	0.3	712	151	
	12/17/90	8.2	1170	54	20	200	2.7	0.48	0.25	160	29	0	474	1.1	0.3	624	220	
	07/16/91	8.4	1070	16	24	180	3	0.19	0.14	150	23	1	362	0	0.3	612	140	
	03/24/92	7.8	1130	48	20	180	2.7	0.66	0.27	130	27	0	430	1.3	0.1	638	200	
	11/25/92	8.2	1070	27	25	170	2	0.1	0.01	140	28	0	349	0.3	0.3	610	170	
	01/28/93	8.4	984	29	13	180	1.6	1.2	0.02	130	27	27	247	0.1	0.2	588	120	
	05/26/93	8.2	1190	48	24	180	2.3	0.12	0.22	160	29	0	430	0.3	0.3	692	220	
	03/21/94	8.1	1230	40	24	180	3.1	0.11	0.15	180	31	0	385	0.1	0.3	700	200	
	01/13/95	7.9	2660	150	76	290	4.7	0.3	2	720	45	0	281	0.1	0.1	1960	680	
	04/22/95	7.2	6510					0.7	6.7	2210	54						4230	2420
	05/09/95	8.3	24440	21	130	270	1.2	0.34	1.8	760	42	2	139	0.2	0.1	1880	590	
02/13/98	7.9	3810					0.68	4	1100	15						2480	1000	
NL0052	01/11/89	8.3	687	23	9.6	136	2	0.09	0	5	29	39	341	0	0.2	411	97	
	03/06/90	8.1	5650	130	136	828	16	0.72	0.92	1780	22	0	107	0.1	0.2	3600	884	
	12/17/90	8.5	3820	76	79	580	8.6	0.56	0.03	1200	10	1	139	0	0.2	2330	520	
	10/08/91	8.2	2420	30	56	460	7.5	1.4	0.18	680	2	0	234	0	0.2	1340	300	
	12/18/92	8.6	1180	4	18	220	3.9	1.4	0.02	210	3	11	279	1.7	0.2	652	84	
	02/17/93	8.6	1110	12	19	210	3.1	3.7	0.02	170	4	25	255	1.7	0.2	666	110	
	06/17/93	8.7	972	8	16	180	2	1.4	0.02	140	2	19	315	1.2	0.2	570	84	
	04/18/94	8.8	760	5.6	9.7	150	1.6	1.2	0.01	60	8	35	309	0.9	0.2	466	54	
	12/12/94	8.5	1630	27	27	290	3.1	1.8	0.34	360	10	15	293	1.6	0.2	928	180	
	03/08/96	8.9	974					0.06	0.02	160	11						633	91
NL0053	01/29/89	7.9	656	59	31	21	7.8	0.5	0.11	69	13	0	263	0.5	1.2	331	273	
	03/19/90	8.2	1310	13	22	230	7.8	0.59	0	325	2.7	0	190	1.1	0.1	816	122	
	12/17/90	7.9	3610	49	67	560	9.4	0.95	0.18	1000	3	0	123	2.3	0.3	2180	400	
	10/14/91	8.1	2790	9.3	50	480	8.9	0.51	0.06	830	4	0	179	0.3	0.1	1570	230	
	02/13/92	8.2	2450	14	32	440	7.4	1.5	0.01	650	2	0	214	3.1	0.2	1270	170	
	10/21/92	8.7	2060	18	16	360	5.5	1	0	520	3	19	198	2.2	0.2	1050	110	
	01/21/93	8.3	1990	13	38	350	5.5	0.27	0.01	480	3	21	235	3	0.2	1070	190	
	08/31/93	8.7	1860	10	23	330	5.1	0.36	0	470	3	10	236	2.1	0.2	1030	120	
	12/26/94	9.4	1560	2	50	310	3.9	0.43	0	410	2	89	264	0.2	0.2	866	210	
	03/29/96	6.7	1310					0.88	0	240	4						850	200
	03/17/98	9	1270					0.88	0	240	19						825	130
NL0054	02/02/89	8.2	796	24	6.9	163	0	0.3	0.01	14	44	0	454	0.4	0.4	476	88	
	03/12/90	9	1220	8.8	6.6	242	3.9	0.62	0	275	2.4	34	130	0.2	1.2	594	49	
	12/17/90	9.1	887	5.1	8.3	210	2	0.37	0.01	86	3	35	344	0.1	0.4	454	47	
	07/02/91	9	825	0	9	100	2.2	0	0	62	2	65	290	0.5	0.4	510	39	
	03/05/92	9.3	820	0.3	5.1	190	1.2	0.37	0.01	58	3	28	348	0	0.3	472	22	
	11/03/92	9.2	855	5.4	14	170	1.2	1.5	0.01	68	4	57	243	0.2	0.3	444	70	
	02/05/93	9	832	1	4.9	180	1.6	0.22	0	67	4	46	267	1.5	4	474	22	
	05/06/93	9.2	843	2.4	2	180	2	0.9	0.01	72	3	68	270	0	0.3	428	14	
	04/05/94	8.9	790	3.2	7	180	2.3	1.7	0.02	44	15	33	351	1.3	0.3	450	37	
	02/06/95	9.1	767	2.4	7.8	180	1.6	0.59	0.01	48	3	62	310	0.6	0.4	480	38	
	04/03/95	7.7	819					2.2	0	91	5						532	69
	05/08/95	8.9	729	1	7.5	170	0	0.6	0.02	50	5	45	312	0.7	0.2	466	33	
	02/13/98	8.9	948					0.42	0.02	140	6						616	51

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0055	02/26/89	8.3	856	23	5.5	159	2.7	2.1	0	56	61	27	306	0.3	0.5	480	80
	03/15/90	7.4	36900	536	982	6850	156	11	2.4	13400	988	0	101	0.1	0.8	27400	5380
	08/28/90	7.4	36500	580	961	6760	164	12	1.4	13400	1030	0	464	0.2	1.1	27100	5450
	12/12/90	7.3	36700	480	920	6700	150	37	2.8	13000	1100	0	418	0.2	1	27500	5000
	10/18/91	6.5	34900	610	980	6600	190	81	2.2	13000	1000	0	433	0.3	0.9	26800	5600
	12/08/92	7.1	35100	430	1100	6400	130	120	1.7	13000	1100	0	349	0.1	0.9	26500	5500
	02/22/93	7.9	32400	670	840	5610	120	51	1.8	11600	970	0	165	0.1	0.6	24500	5120
	06/18/93	7.1	34400	530	970	5800	130	230	1.5	13000	1300	0	294	0	0.9	26600	5300
	12/22/94	7.4	28300	460	890	4700	81	120	2.5	10000	790	0	235	0.5	0.5	21300	4800
	04/20/95	7.9	321000	400	1900	3700	100	30	1.2	12000	1000	0	180	0.1	0.5	19300	9000
NL0056	02/28/89	8.3	767	32	8.3	133	2.7	1.2	0.07	12	62	28	345	0.8	0.3	430	114
	03/12/90	8.6	1530	16	34	258	5.1	1.1	0.01	356	11	18	198	3.1	0.3	780	178
	12/17/90	8.7	1670	13	30	300	4.3	0.58	0.01	430	3	12	186	0.7	0.2	882	160
	07/16/91	9.4	1350	1.3	21	240	4.9	2.5	0	300	2	12	219	0.5	0.3	688	91
	03/24/92	8.7	1090	12	29	200	3.1	1.1	0	210	3	19	227	2.2	0.2	591	150
	11/25/92	8.5	1040	2.8	19	190	3.5	0.42	0	190	2	21	199	0.1	0.3	562	86
	01/28/93	8.6	1010	8.4	14	190	3.5	2.4	0.03	180	2	27	196	2.3	0.2	574	78
	05/26/93	8.5	3.8	3.8	25	200	3.1	1.3	0.02	180	3	7	275	0.01	0.3	556	110
	03/21/94	8.2	1040	10	23	17	2	2.3	0.08	180	5	0	298	2	0.3	548	120
	01/13/95	8.4	2210	52	60	320	5.9	1.5	0.43	620	3	10	179	0.7	0.2	1600	370
	04/22/95	7.8	2550					4.8	0.79	800	2					1660	680
	05/09/95	8.4	2150	7.7	83	300	5.1	1.1	0.04	650	3	3	141	0.6	0.2	1510	350
	02/13/98	7.4	3780					1.5	4.1	1200	0					2460	960
	NL0057	03/01/89	7.6	2850	138	73	317	12	3.6	1.7	786	38	0	239	0	0.1	1480
03/22/90		7.8	2480	84	55	331	12	0.16	0.02	785	2.5	0	65	0	0	1550	436
08/08/90		7.5	2460	107	36	334	12	0.18	0.03	769	2.3	0	55	0	0.1	1550	414
01/16/91		8.1	2420	86	41	330	13	0.7	0.02	750	1	0	43	0	0.1	1520	380
10/15/91		8.2	2320	80	42	320	11	0.72	0.02	710	2	0	37	0.1	0.1	1440	370
01/24/92		7.8	2320	61	37	330	13	0.39	0	710	1	0	26	1	0.1	1410	300
09/21/92		8.2	2300	100	22	300	12	0.12	0.01	720	3	0	27	0.6	1	1430	350
01/11/93		7.5	2350	72	71	300	12	0.15	0.02	700	2	0	50	1.6	0.1	1410	470
09/03/93		7.9	2360	70	35	320	11	0.27	0.12	730	2	0	47	1.3	0.1	1590	320
12/01/94		8.1	2400	100	90	200	16	0.23	0.08	700	1	0	84	0.5	0.1	1440	630
03/28/96		6.6	2180					0.48	0.05	720	4					1420	540
02/15/97		7.6	2310					0.16	0	680	2					1500	330
03/20/98		8.3	2000					0.32	0.03	670	1					1300	470
NL0058		03/27/89	7.5	11900	1020	327	874	21	4.1	9	4000	214	0	154	0	0.1	8560
	03/19/90	7.1	10900	1000	216	874	21	0.47	1.4	3860	16	0	11	0	0	6790	3390
	09/11/90	7.3	10500	1150	175	897	23	0.67	1.2	3760	22	0	16	0	0	8030	3590
	01/21/91	6.9	9950	1140	88	880	21	1.2	1.2	3680	8	0	23	0	0	8990	3220
	10/10/91	6.7	10100	950	150	880	4.6	0.58	1.3	3600	30	0	11	0.2	0	7460	3000
	01/21/92	6.8	10200	930	150	870	22	1.2	1.4	3500	25	0	19	0.1	0	7210	3000
	09/14/92	7.1	10050	900	120	710	20	0.85	1.3	3400	26	0	13	0	0	8970	2800
	01/11/93	7.5	10100	970	93	920	24	0.81	1.3	3400	25	0	29	0.3	0.1	9000	2800
	08/19/93	7.3	9910	880	150	860	20	0.88	1.3	3400	28	0	25	0	0	7550	2800
	03/26/96	7.8	9490					0.1	0.08	3440	28					6170	3300
	03/17/98	8.3	8880					0.32	0.04	3400	2					5770	3200
	NL0059	04/09/89	8.4	700	12	2.9	152	2.3	0.55	0.1	24	15	26	329	0	0.2	450
03/09/90		8.5	727	7.5	4.7	161	3.1	0.31	0.01	58	2.3	19	317	0.1	0.2	418	38
03/18/90		8.7	2410	35	35	440	6.3	0.23	0.01	670	2	17	247	4.9	0.2	1230	230

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	(Total)			SO4	CO3	HCO3	NO3	F	TDS	TOH
								Fe	Mn	Cl							
NL0059	10/21/91	8.4	2130	21	18	400	6.4	0.68	0	540	2	26	230	0.3	0.2	1140	120
	12/03/92	9	1950	4.5	14	350	6.3	1.4	0.02	450	2	31	208	0.1	0.2	1080	68
	02/02/93	8.8	1870	2.4	12	350	6.3	0.64	0.02	440	2	35	200	4.4	0.2	1020	57
	06/22/93	8.8	1970	8.5	33	360	6.3	1.9	0	460	2	28	256	4.3	0.2	1070	160
	04/27/94	8.6	2210	27	42	400	2.7	5.2	0.01	560	5	28	217	1	0.1	1150	240
	12/14/94	8.9	1810	11	24	350	5.1	1.6	0.01	430	1	31	256	0.7	0.1	994	120
	04/18/95	8.6	1660	10	16	320	3.9	1.4	0.04	370	2	9	302	1.3	0.2	882	87
	03/06/96	8.6	1200					0.16	0.03	220	2					780	100
02/17/98	8.7	902					1.4	0	140	1					586	42	
NL0060	04/10/89	8.1	1500	40	13	242	3.9	0.26	0.27	287	33	0	292	2	0.3	935	153
	03/15/90	8.6	3380	19	11	621	16	29	0	1020	2.9	31	59	0.1	0.2	1710	93
	09/01/90	7.9	20100	556	419	3400	82	39	1.2	7310	294	0	83	0	0.3	14300	3110
	12/11/90	7.7	30500	460	950	6760	230	67	2	14300	36	0	320	32	0.5	27900	5080
	10/17/91	6.7	34900	660	970	6900	230	77	2.3	13000	640	0	327	4.9	0.5	27400	5700
	12/23/92	7.7	34900	920	1000	5000	78	79	2.2	13000	1100	0	205	13	0.2	27000	6500
	02/22/93	7.7	34900	1110	960	5590	81	11	2.1	12600	940	0	104	13	0.3	27000	6740
	06/17/93	7.6	29800	870	1240	4600	67	2.4	1.7	10700	810	0	293	0	0.2	22500	7280
	12/22/94	7.8	7240	260	110	940	17	6.3	0.84	2400	98	0	59	1.5	0.1	4770	1100
	04/20/95	7.8	5660	180	260	640	9.4	0.18	0.23	1800	66	0	75	3	0.1	3740	1500
NL0061	04/15/89	8.4	858	16	6.8	170	2	0.2	0.07	43	48	23	339	0	0.5	535	68
	03/15/90	8	7210	101	141	1201	29	0.84	0.69	2196	110	0	264	0.3	0.3	4300	832
	10/17/91	8.5	2080	7.2	22	350	10	1.1	0.02	510	18	42	282	2.6	0.2	1120	110
	12/23/92	8.8	1150	7.4	2	230	3.9	7.4	0.02	170	5	13	301	2.7	0.5	614	27
	02/22/93	8.7	1130	5.3	5.2	240	3.1	3.8	0	170	5	39	252	2.2	0.4	664	34
	06/18/93	8.9	982	3.8	5.1	210	3.1	2.9	0	130	4	19	345	0.9	0.5	576	30
	12/12/93	8.6	3630	14	56	630	15	0.46	0	1020	26	21	230	0.1	0.4	1970	270
	04/25/94	9.2	917	11	13	200	0	2.5	0.01	99	13	30	338	2	0.4	542	83
	12/22/94	8.8	906	3.4	7.3	200	3.5	5.6	0	92	12	15	363	2.4	0.5	564	38
	04/20/95	8.9	846	2.4	13	180	0	0.48	0.04	80	4	41	320	2.1	0.4	584	60
	03/25/96	9	794					8.8	0	64	3					516	35
	06/18/97	9	794					0.75	0	64	7					516	26
02/19/98	8.4	733					0.22	0	46	3					476	22	
NL0062	04/25/89	8.4	784	25	8.2	150	1.6	0.2	0.15	8	34	0	450	0	0.3	488	96
	03/02/90	8.3	884	3.8	13	184	3.1	1.2	0.01	78	2.7	43	313	0.3	0.2	480	62
	08/02/90	8.9	752	8.6	6	168	2.3	2	0.04	48	1.6	33	315	0.4	0.2	426	46
	12/03/90	9	753	0.8	6.8	170	2	0.96	0	44	2	36	340	0	0.3	424	30
	07/02/91	9.5	747	0	6.7	160	2.5	2.9	0	40	2	87	237	0.1	0.3	444	28
	03/05/92	9.2	731	100	7.8	170	1.6	0.61	0.01	43	3	22	338	0.2	0.2	424	34
	11/03/92	9.1	757	5	18	150	1.6	1.2	0	53	4	51	239	0.9	2	400	88
	02/05/93	9.1	756	1	4.1	170	2	0.46	0	51	4	48	231	0.8	0.3	422	19
	05/06/93	9.2	751	0.8	3.6	180	1.2	0.88	0.01	61	2	61	241	0	0.3	404	17
	04/05/94	9	796	3.5	5.4	180	2	0.69	0	86	6	34	273	1	0.2	474	31
	02/06/95	8.4	909	6.4	17	190	2.3	1.3	0.03	130	8	30	280	2.6	0.2	548	84
	04/03/95	7.1	23200					1.3	6.9	8960	190					15100	7550
	08/23/95	8.7	860	7.7	14	170	3.1	1.9	0.02	130	4	37	237	0.6	0.1	522	77
	02/13/98	7.5	22900					0.26	4.4	8700	75					149000	6100
NL0063	05/06/89	8.4	936	29	4.8	166	2.3	0.4	0.14	82	23	23	333	0	0.3	583	92
	03/16/90	8.4	1300	20	17	255	5.5	0.67	0.01	245	12	34	264	0	0.2	722	121
	01/22/91	9.4	1580	0	18	300	7.4	2	0.02	330	8	91	126	0.2	0.2	778	75
	10/10/91	8.4	1520	6.8	26	240	7.4	0.88	0.02	330	8	48	193	1.3	0.2	810	120

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
(Total)																		
NL0063	12/22/92	8.8	1160	7.4	12	210	3.9	0.88	0	210	3	30	172	0.2	0.2	654	66	
	02/23/93	8.6	1180	6.2	14	220	4.3	2.4	0.01	220	4	26	207	1.1	0.2	642	72	
	06/11/93	8.9	1210	1.6	34	230	3.9	0.74	0	250	3	31	224	0.6	0.2	682	140	
	04/07/94	8.9	1410	23	36	260	5.5	2	0.01	330	6	16	211	0.2	0.2	760	210	
	12/13/94	8.9	1450	4.5	16	280	3.5	2.8	0	350	4	14	200	0.2	0.2	800	74	
	04/24/95	8.7	1490	8	46	230	10	0.85	0	380	4	27	170	0.1	0.2	1040	210	
	03/25/96	8.6	1650					0.04	0.03	440	5					1070	120	
	06/11/97	8.5	1730					0.44	0	477	2					1120	120	
NL0064	05/08/89	8	546	38	9.3	71	4.3	0.54	0.28	3	11	0	327	0	0.1	340	133	
	03/22/90	7.9	613	37	9.9	87	5.9	0.72	0.13	46	3	0	303	0.5	0.1	382	133	
	08/28/90	7.3	614	37	12	81	5.9	0.69	0.31	54	2.8	0	295	0.4	0.1	284	140	
	01/17/91	8.2	558	22	13	81	5.5	0.72	0.14	59	1	0	200	0.6	0.1	300	110	
	07/03/91	7.7	636	34	14	81	7	0.38	0	74	2	0	279	0.6	0.1	368	140	
	03/09/92	8.3	610	29	16	81	5.5	0.52	0.23	65	2	2	260	0.8	0.1	336	140	
	03/09/92	8.3	610	29	16	81	5.5	0.52	0.23	65	2	2	260	0.8	0.1	336	140	
	11/05/92	8.6	592	24	19	85	7	1.8	0.02	77	7	19	149	4.5	0.2	398	140	
	02/08/93	8.4	611	29	15	78	5.1	0.34	0.38	74	2	17	183	1.4	0.1	342	140	
	04/07/93	8	739	60	15	76	5.5	0.94	0.45	72	6	0	344	2.3	0.1	404	210	
	05/07/93	8.1	696	48	13	85	5.1	0.39	0.58	79	2	0	293	0.1	0.1	364	170	
	02/08/95	7.6	723	64	20	78	4.3	0.19	0.12	78	2	0	350	0.2	0.1	450	240	
	04/09/95	7.6	580					1.7	0.14	96	31					377	140	
	05/08/95	8.5	519	19	13	76	0.8	0.48	0.25	83	2	12	159	1.2	0	328	100	
	03/09/98	8	701					0.48	0.01	160	2					456	120	
	NL0065	05/19/89	7.2	16900	1124	371	2093	31	27	8.7	5640	410	0	183	0.1	0	13351	4330
03/29/90		7.4	9290	496	69	1265	138	2.6	0.04	3005	220	0	19	0	0	5788	1520	
12/06/90		7.3	11900	730	110	1600	74	14	0.44	4200	100	0	31	0	0	8390	2300	
10/07/91		7.1	11400	670	65	1700	79	2.2	0.48	4000	50	0	20	0.2	0.1	7630	2000	
02/06/92		8.2	10900	640	78	1400	61	120	0.01	3700	58	0	19	0.1	0.1	8310	1900	
10/07/92		7.7	11400	600	160	1400	56	12	0.03	3900	110	0	18	0	0.1	8880	2200	
01/05/93		8.3	11390	400	49	1500	55	12	0.02	3800	110	2	16	0	0	8960	1200	
08/09/93		7.7	10400	580	110	1400	52	3.6	0.07	3400	120	0	40	15	0	8220	1900	
03/22/96		7.1	12300					58	0.07	4430	210					7970	3480	
04/07/97		6.6	12900					1.4	0.02	4400	210					8380	2800	
03/11/98		7.9	12100					7.1	0.02	4500	19					7860	3100	
NL0066		05/29/89	8.2	940	24	17	170	1.6	0.2	0.02	80	32	0	394	0.3	0.1	586	131
		03/28/90	8.3	1110	12	25	202	3.5	2.8	0.01	137	106	35	230	0.3	0.2	652	131
	08/06/90	8.9	942	8.3	11	191	3.5	0.69	0	116	35	34	271	0.3	0.2	512	64	
	01/17/91	9.2	883	2.9	8.3	190	3.5	1	0	100	10	41	210	0.2	0.2	500	41	
	07/08/91	8.3	1390	70	56	240	7.8	0.19	0	700	2	30	108	0	0.2	756	410	
	03/13/92	8.4	150	35	6	200	2	0.31	0	200	2	32	243	0.4	0.1	748	110	
	11/11/92	8.6	1000	6	16	190	2	0.68	0.02	170	2	28	223	0.5	0.3	544	79	
	02/11/93	8.6	1010	3.6	15	190	1.6	0.34	0	170	5	23	233	0.9	0.3	556	71	
	05/11/93	8.9	1020	2	17	200	2.7	0.72	0	220	3	15	267	0.8	0.2	534	75	
	03/17/94	8.5	1020	0	15	200	2.3	0.46	0	160	3	13	290	0.4	0.2	604	62	
	04/11/95	8.1	12900					4.3	6.3	4600	320					8390	3690	
	05/11/95	7.9	1130	10	33	230	11	0.34	0.01	260	6	0	270	0.9	0.2	734	170	
	06/12/97	7.6	11200					0.24	7.2	3820	280					7280	2900	
	03/16/98	7.9	16200					3.3	8.1	6200	240					10500	4900	
NL0067	06/26/89	7.1	22900	1888	795	2254	27	16	20	7840	720	0	66	0.1	0.1	18091	7980	
	03/19/90	6.9	21800	1940	428	2280	30	2.3	1.3	8300	306	0	13	0	0	13600	6600	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
NL0067	09/10/90	6.7	21000	1890	259	2390	31	2	1.9	7680	107	0	14	0	0	17200	5780
	12/17/90	6.9	20700	1800	390	2400	27	1.8	2.3	7600	150	0	19	0	0	18000	6100
	10/10/91	6.8	20700	1700	310	2400	35	0.89	2.8	7700	110	0	14	0.2	0	15700	5500
	02/07/92	6.9	20600	1600	270	2300	31	0.82	3	7500	100	0	16	0	0	15300	5200
	10/13/92	7.2	20800	1700	300	2000	28	1.6	2.7	7400	140	0	12	0	0	18700	5500
	01/11/93	7.3	20900	1700	290	2400	31	1.4	2.7	7400	150	0	14	0.1	0	18600	5500
	08/17/93	5.8	20500	1600	390	2400	30	0.6	2.3	7600	190	0	11	7.4	0	18900	5500
	03/26/96	7.3	20100					3.6	0.72	3880	500					13100	4170
	03/22/97	7.3	24900					0.52	1.6	9000	740					16200	7100
03/17/98	6.8	20400					3.1	0.91	8100	450					13200	6500	
NL0068	06/14/91	8	1620	91	45	160	4.7	0.68	0.01	390	36	0	190	0.4	0.3	1180	410
	10/11/91	7.9	1580	880	56	150	5.6	0.38	0.35	430	6	0	160	0.3	0.3	1080	390
	02/12/92	8.1	1610	63	54	160	5.1	0.38	0.12	430	2	0	137	0.7	0.3	1140	380
	09/15/92	7.5	1540	50	52	160	4.7	0.12	0.05	430	3	0	80	0.5	0.3	972	340
	01/12/93	8	1530	60	45	150	4.7	0.16	0.12	440	2	0	64	0.6	0.8	1100	340
	08/26/93	7.7	1500	28	54	160	4.7	0.19	0.01	470	6	0	30	0.3	0.3	1150	290
	12/02/94	7.9	2260	120	150	64	5.9	0.25	0.11	670	1	0	66	0.4	0.3	1550	930
	03/18/96	7.6	3540					0.24	0.11	1200	7					2300	970
	02/22/97	7.7	38600					0.5	0.02	6300	8					25000	5100
NL0069	06/28/91	7.9	1890	110	47	200	5.5	5.7	0	450	26	0	280	0	0.3	1210	470
	10/15/91	8	1090	64	34	110	4.6	0.66	0.2	200	13	0	289	0.1	0.5	634	300
	01/23/92	7.8	1090	58	39	120	4.3	0.82	0	180	3	0	319	0.3	0.5	596	310
	09/22/92	8.2	1060	41	38	110	4.7	0.5	0.28	200	2	0	227	0.3	0.5	570	260
	01/26/93	8.2	1030	39	39	120	4.7	1.1	0.22	210	3	0	208	0.8	0.5	608	260
	08/23/93	8.6	1600	38	60	250	16	2.1	0.04	340	180	15	128	8.8	0.3	1040	340
	03/29/96	8.3	1000					0.72	0.23	190	3					650	280
	04/11/97	8.3	715					0.24	0.19	66	2					464	200
	03/18/98	8.3	589					1.2	0.03	100	4					382	160
NL0070	06/28/91	7.5	13600	920	400	1460	21	3.6	4.5	4680	350	0	83	0	0.1	10500	3940
	10/16/91	7.1	13300	860	380	1470	18	1.5	3.3	4600	320	0	18	2.1	0.1	9740	3730
	01/24/92	6.7	13300	810	300	1400	21	0.38	2.9	4400	270	0	12	0	0.1	9700	3300
	09/09/92	6.9	13100	830	310	1400	19	0.28	2.4	4600	65	0	14	0	0.1	11300	3400
	01/08/93	7	13000	760	330	1500	24	0.87	2	4500	44	0	13	0.2	0.1	10600	3300
	08/13/93	7	12700	720	300	1900	18	0.72	1.7	4400	46	0	22	0	0.1	10600	3000
	12/12/94	6.5	12900	800	290	1400	18	0.31	2.6	4500	51	0	90	0.1	0.1	9160	3200
	03/28/96	7.6	12310					0.7	0.45	4500	96					8000	3100
	03/13/97	7.5	13000					0.18	0.14	4500	90					8450	3200
02/13/98	8.5	12100					1.6	0.05	4700	180					7800	3300	
NL0071	10/18/90	7.7	1590	110	27	160	3.9	1.8	1.1	390	11	0	200	2.1	0.1	1050	380
	12/25/90	8.1	864	50	18	85	7	1.3	0.05	210	37	0	48	0.7	0.1	580	200
	10/07/91	8.6	813	46	6.3	85	7.3	0.39	0.02	230	17	2	25	0.2	0.1	562	140
	02/06/92	8.7	855	54	4.4	92	6.3	0.22	0.01	230	11	0	26	1	0.2	534	150
	09/07/92	7.9	866	57	3.5	90	5.1	0.18	0.02	230	13	0	33	0	0.3	646	160
	01/05/93	7.7	874	54	3.1	92	6.6	0.16	0.02	230	9	0	25	0.5	0.2	694	150
	08/09/93	7.6	859	53	4.3	94	7	0.32	0.05	230	8	0	31	1.2	0.2	656	150
	12/15/94	7.5	1140	56	18	150	5.1	0.35	0.05	340	2	0	81	1.9	0.2	754	210
	03/08/96	7.7	1070					1.8	0.05	320	8						696
	03/18/97	8.1	1310					0.32	0.02	370	1					851	220
	03/11/98	7.9	1290					2.1	0.02	400	6					839	250

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0072	11/22/90	7.7	544	32	7	87	2.7	0.18	0.14	6	13	0	330	0	0.2	320	110
	10/04/91	9.2	257	4	2.9	44	3.5	1.1	0.02	27	18	7	67	0.2	0.3	172	22
	02/04/92	7.8	437	6.1	3.9	67	3.1	0.2	0.02	110	3	0	40	0.7	0.3	240	31
	02/05/92	8.5	299	6.9	1.3	55	3.1	1.4	0	46	4	4	82	0.6	0.2	114	22
	01/04/93	8.9	599	15	3.1	87	3.1	1.5	0.01	160	2	1	29	0.8	0.3	354	51
	08/04/93	7.6	6260	440	170	540	12	0.55	4.5	2000	140	0	200	1.2	0.2	4420	1800
	03/07/96	7.7	1380					0.2	0	430	11					897	210
	02/21/97	8.4	1220					0.38	0.03	320	5					793	200
NL0073	05/03/91	8	1440	91	30	160	5.9	0.43	0.06	330	22	0	221	0.6	0.2	988	350
	10/17/91	9.3	632	12	6.8	100	7.6	2.6	0.01	150	25	10	31	0.1	0.4	354	58
	02/04/92	8	429	23	7	55	5.1	1.2	0	62	27	0	105	1	0.3	246	87
	09/15/92	9.3	669	6.4	1.3	110	6.6	0.61	0.01	160	13	6	34	0.1	0.6	342	21
	12/22/92	9.8	665	6.7	0.8	120	7	1	0	160	13	9	25	0	0.6	380	20
	08/25/93	8.2	701	14	3.2	120	7	0.91	0.02	170	16	0	77	1.8	0.6	420	47
	12/28/94	8.1	1030	66	26	94	7.4	0.2	0.01	280	6	0	78	0.1	0.4	602	270
	03/18/96	7.9	961					0.52	0	280	10					625	120
	02/22/97	8.5	997					0.5	0	270	4					648	120
	03/10/98	7.9	1110					0.78	0	330	1					722	190
NL0074	07/28/90	7.5	6880	620	190	480	18	0.38	7.7	2230	60	0	150	0	0	3680	2330
	12/21/90	7.3	5260	450	140	380	16	1	2.1	1670	60	0	62	0	0.1	4290	1680
	10/15/91	7.7	5010	420	130	370	13	1.2	0.05	1600	3	0	35	0.1	0.1	3540	1570
	01/27/92	8.1	5000	400	120	390	14	0.26	0.03	1600	3	0	32	0	0.1	3400	1500
	12/15/92	7.9	4970	400	110	410	20	0.94	0.05	1600	3	0	25	4.1	0.1	4440	1400
	12/15/94	7.6	5130	460	110	400	14	0.41	0.04	1600	3	0	135	0.5	0.1	3460	1600
	03/08/96	7.9	4680					0.06	0.04	1600	3					3040	1580
	03/15/97	7.4	5240					0.56	0.27	1700	0					3400	1500
NL0075	11/14/90	8.1	512	23	2.5	99	2	2.2	0	6	14	0	310	0	0.2	330	67
	12/25/90	8	575	32	13	58	16	0.8	0.08	20	190	0	59	0.7	0.1	380	130
	10/17/91	9.7	388	5	3.8	75	8.2	0.98	0	12	37	48	61	0.1	0.2	250	28
	01/22/92	9.7	396	2.7	3	83	6.6	0.46	0.01	14	22	41	100	0	0.2	178	19
	09/23/92	9.2	495	4.3	6.8	99	4.7	0.54	0.03	52	9	24	140	0.6	0.2	262	40
	12/23/92	8.8	482	8.3	7.1	100	4.3	0.19	0.02	35	25	22	174	1.7	0.2	266	50
	08/29/93	9.2	484	2.6	3.4	100	3.5	0.55	0	32	3	18	209	1.2	0.2	300	20
	03/22/96	8.6	585					0.62	0	72	6					380	49
	03/15/97	8.8	569					0.1	0.01	48	2					369	60
	03/10/98	8.1	713					0.42	0	200	1					463	62
03/10/98	8.7	512					0.82	0	44	1					333	56	
NL0076	04/03/91	8.5	1260	15	11	250	2	0.28	0	170	62	12	325	0.5	0.2	754	83
	07/11/91	8.8	641	5.6	6.3	120	3.1	0.68	0	87	25	5	179	0	0.2	342	40
	03/23/92	9.8	620	1.6	4.5	120	2.3	0.82	0	90	24	38	78	0.3	0.2	320	22
	11/16/92	9.3	621	0.8	1.7	120	2.3	0.32	0.01	100	13	27	82	0.3	0.3	314	9
	02/16/93	10.3	658	2.1	1.3	130	2.3	0.32	0	110	11	57	28	0	0.2	360	10
	05/13/93	9.4	652	4.5	0	130	3.1	0.4	0	110	9	30	92	1	0.2	354	11
	03/25/94	8.7	953	0	6.6	180	5.5	0.16	0.01	200	2	11	163	0.3	0.2	522	27
	01/23/95	8.6	1068	2	35	210	4.3	0.27	0	250	5	27	231	1.6	0.2	590	150
	04/19/95	7.9	1030					0.76	0	250	3					670	180
	05/19/95	8.6	952	3.5	18	200	1.2	0.42	0	260	5	12	147	0.8	0.2	618	84

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	(Total)		Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								Fe	Mn								
NL0077	04/07/94	8.2	4050	33	33	660	20	0.53	0.02	1200	73	0	66	0	0.3	2300	220
	06/14/95	8.5	2650	64	110	340	11	0.58	0	680	82	32	320	1.8	0.5	1560	600
	03/25/96	8.4	3130					1	0.03	890	54					2030	370
	06/11/97	8.3	2920					0.06	0	850	3					1900	230
NL0078	03/17/91	7.5	14500	1100	230	80	7.8	1	12	4600	36	0	92	5.9	0	11300	3700
	10/16/91	8.2	1730	120	48	140	8.7	0.92	0.38	450	38	0	142	2.6	0.2	1190	510
	02/10/92	8.6	1870	150	53	147	8.6	0.88	0.13	460	37	18	175	5.5	0.2	1500	590
	09/23/92	7.5	12900	970	170	1380	16	0.54	0.74	4300	260	0	22	0.1	0.1	9450	3120
	01/15/93	7.5	13000	940	230	1400	16	0.26	0.9	4400	0	0	35	0.2	0.1	11200	3300
	09/01/93	7.5	13000	900	180	1400	15	0.32	2.2	4400	180	0	29	3	0	10300	3000
	12/27/94	7.2	12600	1100	40	1400	20	0.67	1.9	4200	47	0	36	0.1	0.1	8780	3000
	03/22/96	6.8	12200					0.5	1.9	4460	58					7940	3860
	03/19/97	6.9	21200					18	7.5	7200	970					13700	5500
	03/11/98	6.8	13700					0.66	0.28	5100	220					8900	4000
NL0079	04/22/91	8.2	162	11	5.5	9.2	2	1	0.03	7.6	7	0	58	0.6	0.2	88	50
	07/15/91	8.6	120	6.6	2.2	12	2.9	0.61	0	9	3	1	50	0	0.1	70	26
	03/18/92	7.7	139	6.2	0	25	2	0.52	0.01	14	2	0	60	0.2	0.2	80	16
	11/16/92	9.3	161	1.8	1.1	30	2.3	0	0	17	1	12	30	0.1	0.3	62	9
	02/16/93	8.1	155	3.4	0.7	30	1.2	0.12	0	19	2	0	56	0	0.2	114	11
	05/13/93	8.5	171	3.2	2.8	37	1.6	0.08	0	20	2	1	71	0	0.2	100	20
	03/25/94	10	392	0.8	0.5	83	1.7	0.8	0.02	53	4	41	23	0	0.4	192	4
	01/23/95	9.1	373	1.6	0.5	80	1.2	0.58	0	54	2	13	96	0	0.4	200	6
	04/19/95	8.9	475					0.36	0	78	2					309	12
	05/19/95	10.1	361	1	0.3	76	2	0.34	0	53	3	33	51	0.1	0.4	288	4
NL0080	12/24/90	8.2	1170	47	16	210	1.6	0.57	0.16	120	110	0	395	0.1	0.5	722	180
	07/11/91	9.1	769	5.1	12	140	5	1.3	0	86	71	8	175	0	0.3	432	63
	03/23/92	9.8	862	4.5	5	170	6.6	3	0	140	31	51	96	0.6	0.3	452	32
	11/17/92	9.8	1040	0	9.2	200	6.6	1.5	0	220	8	71	32	0.1	0.4	548	38
	05/18/93	9.5	1070	1.8	6.7	210	6.6	3.3	0	230	3	28	127	0	0.3	600	32
	05/20/93	9.9	1040	3.6	9.2	200	6.6	1.8	0	230	3	47	69	0	0.3	566	47
	03/22/94	8.1	3330	81	63	480	3.9	1.1	0.05	990	7	0	84	0.4	0.2	2000	460
	01/23/95	9	1000	4	3.8	200	4.7	4.5	0	190	21	22	182	0.2	0.3	660	25
	04/19/95	6.9	879					2.1	0.02	130	44					571	110
	05/17/95	9.6	921	2.1	3.9	190	4.7	1.9	0	170	22	28	191	0.5	0.3	600	21
	03/13/98	6.8	7560					1	0.11	2700	28					4910	1500
	NL0081	06/22/93	9.9	1010	3.2	4.4	210	3.5	2.2	0	140	34	89	128	0	0.4	596
04/22/94		9.1	18800	64	530	3400	130	6.6	0.03	5800	9	380	0	120	0.4	12410	2360
NL0082	09/09/92	8	9490	610	270	1100	14	0.51	4.8	3100	220	0	160	4.9	0.2	6710	2600
	09/07/93	6.8	12600	790	250	1300	22	0.58	0.4	4200	230	0	21	7.6	0.1	10900	3000
	12/22/94	7.2	11400	750	150	1300	20	0.89	0.61	3800	62	0	81	0.3	0.1	8200	2500
	03/28/96	8.1	1010					0.86	0.65	160	10					656	140
	03/13/97	7.6	8820					0.24	0.36	2900	34					5700	1600
NL0083	09/03/93	8.1	2360	180	59	170	6.3	1.2	0.02	680	48	0	70	2.9	0.1	1860	680
	12/07/94	9	788	0.8	7.8	160	9.4	0.24	0.01	200	2	15	138	0	0.1	440	34
	03/28/96	7.7	711					0.8	0	160	9					460	10
	02/15/97	10.8	838					0.18	0	160	1					544	9
	03/20/98	8.1	690					0.7	0	180	1					348	28

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
(Total)																	
NL0084	09/20/92	8.9	975	27	12	170	3.5	0.72	0.01	87	190	14	178	1.3	0.6	588	120
	01/25/93	8.2	766	15	9.7	130	5.1	1.2	0.01	98	150	0	53	0.1	0.3	468	78
	05/24/93	10.1	681	1.6	3.4	120	4.7	0.06	0	84	96	31	35	0	0.4	376	18
	03/30/94	8.8	2040	0	9	380	4.3	1.3	0	480	3	15	184	0	1	1120	37
	02/07/95	10.7	783	0	1.1	130	3.1	0.44	0	100	2	111	0	0	0.5	390	4
	04/10/95	8	646					1.1	0	120	4					420	18
	05/15/95	10.7	650	0.8	0.3	140	2	0.24	0	100	4	78	36	0.1	0.5	388	3
	02/16/98	10.5	797					0.28	0	180	2					518	31
NL0085	05/24/93	8.9	959	7.2	9.8	180	13	0.53	0.01	140	140	38	177	0	0.4	566	58
	03/30/94	10	1050	0	1.9	200	10	1.1	0	150	4	100	63	0.1	0.5	640	8
	02/07/95	10.5	1130	2.2	0.5	220	10	0.42	0.01	180	3	138	15	0.1	0.6	578	8
	05/15/95	10.3	1030	2	12	220	5.1	0.38	0.01	200	5	139	14	2.1	0.5	750	20
	02/16/98	10.6	1320					0.12	0	210	2					858	4
NL0087	09/03/92	8.3	995	69	23	110	4.7	0.14	0	160	37	16	242	1	0.6	568	270
	09/06/93	8.4	722	5.6	11	120	6.3	0.54	0.03	160	2	2	102	2.3	0.5	386	59
NL0088	05/05/95	7.9	656	44	31	57	7.4	0.18	0.01	98	12	0	246	0.3	0.5	408	230
	04/11/97	8.4	609					0.16	0.01	66	2					395	160
NL0089	04/05/95	7.8	1310	95	47	120	9	0.7	0.02	310	27	0	246	608	0.7	984	430
	04/22/97	8.3	282					0.22	0	8	1					183	74
NL0090	06/07/95	8.2	990	80	36	62	2.7	0.12	0.08	170	27	0	271	0.4	0.7	686	350
	04/23/97	8.6	429					0.18	0	28	2					278	110
NL0091	06/03/95	8	868	24	12	160	3.1	0.72	0.03	56	46	0	380	5.4	1.7	580	110
	04/23/97	9.7	817					0.4	0	100	2					531	15
NL0092	06/29/95	7.6	402					0.3	0	4.8						261	180
	04/22/97	8.5	304					0.2	0	12	1					197	120
NL0093	07/28/95	7.5	2040					0.88	0.09	430						1330	560
	04/22/97	7.9	945					0.22	0.03	190	1					614	370
NL0094	08/09/95	8.3	500					2.6	0	6						325	34
	04/22/97	9.6	534					0.2	0	32	2					347	24

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
NB0001	05/30/78	7.6	6220	468	173			0.18		2100	17.0	0	96	0.0	0.0	4471	1880
	03/11/80	7.2	6600	580	178	334		5.40	0.00	1988	18.0	0	91	13.0	0.0	4030	2180
	03/11/80	7.1	6600	592	188	345		3.90	0.00	2008	23.0	0	168	13.0	0.0	4268	2252
	08/27/80	7.6	6500	564	169	354		2.10	0.00	2015	9.2	0	15	10.0	0.0	4420	2102
	12/20/81	7.6	6600	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	2160	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	2200	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	2260	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	2350	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	2330	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	2360	104	63	248	15.0	1.20	0.08	690	4.2	0	12	0.0	0.1	1470	520
	03/16/89	8.1	2300	134	56	244	16.0	27.00	0.00	730	3.8	0	19	3.0	0.2	1200	564
	03/26/90	7.8	2310	116	69	232	14.0	22.00	0.00	741	2.5	0	17	0.0	0.1	1440	572
	12/16/90	8.3	2320	100	54	240	15.0	0.82	0.00	710	1.0	0	22	0.0	0.1	1580	470
	10/14/91	7.3	2300	110	50	240	16.0	0.44	0.08	710	4.0	0	10	0.3	0.2	1440	470
	02/13/92	8.2	2340	120	42	260	16.0	22.00	0.00	710	5.0	0	18	2.0	0.1	1740	460
	10/21/92	7.7	2300	130	35	240	15.0	0.42	0.06	700	3.0	0	11	0.1	0.1	1490	470
	08/31/93	7.9	2380	120	51	240	15.0	0.80	0.04	740	1.0	0	46	0.3	0.1	1730	500
	11/28/94	7.6	2210	92	110	140	21.0	0.48	0.04	670	0.0	0	42	1.7	0.1	1450	700
	03/29/96	7.6	2380					0.08	0.11	790	3.0					1550	130
04/23/97	8.0	2710					0.44	0.18	820	5.0					1760	590	
03/07/98	8.5	2420					1.00	0.00	820	1.0					1570	560	
NB0002	02/17/81	6.9	3500	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	2840	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	12600	1268	264	920	1.6	2.60	12.00	4250	352.0	0	124	4.1	0.1	4912	4250
	02/26/87	6.6	4310	310	65	392	16.0	8.00	0.40	1300	90.0	0	39	2.4	0.1	2892	1040
	10/07/87	7.8	5880	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	12590	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	12200	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	12580	1240	279	929	16.0	11.00	7.40	4306	242.0	0	84	0.2	0.0	9636	4240
	12/11/90	7.6	9760	400	350	1240	32.0	41.00	1.80	3550	22.0	0	130	2.0	0.1	7520	2450
	10/11/91	7.3	10800	440	340	1100	41.0	0.63	2.40	3700	27.0	0	282	9.0	0.1	7500	2500
	12/15/92	8.0	10660	370	320	1300	29.0	67.00	1.90	3600	27.0	0	221	11.0	0.2	7380	2200
	06/09/93	8.4	4920	160	140	610	18.0	19.00	0.51	1600	9.0	4	96	4.1	0.1	3920	960
	04/08/94	7.3	10670	420	280	1300	28.0	3.60	1.20	3500	8.0	0	175	5.4	0.2	7410	2200
	12/08/94	7.5	10450	440	200	1300	25.0	44.00	0.93	3600	8.0	0	35	6.9	0.2	7340	1900
	04/10/96	8.3	315					2.30	0.03	34	12.0					205	120
	02/19/98	8.4	396					0.78	0.00	73	7.0					257	90
NB0003	11/08/78	7.9	750	28	18	97		0.37		79	0.8	0	297	0.0	0.0	462	144
	02/21/80	7.1	855	55	11	100		0.19	0.63	75	4.3	0	352	0.4	0.1	490	181
	04/23/81	7.5	825	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	7160	614	96	789	26.0	0.84	1.30	83		0	20	0.7	0.1	5406	1926
NB0004	04/01/86	7.6	400	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	426	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	441	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	501	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	535	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	524	35	7	41	5.1	0.72	0.02	136	1.1	0	23	1.2	0.3	348	116
	03/10/89	8.1	800	52	14	78	4.3	0.86	0.02	216	6.0	0	42	1.0	0.3	393	188
	03/29/90	6.9	620	44	5	55	5.1	0.56	0.02	167	3.2	0	20	1.4	0.3	386	131
	10/04/91	7.6	727	52	6	64	5.5	2.20	0.03	200	12.0	0	27	0.3	0.2	586	160
	02/05/92	7.7	776	65	4	71	5.1	0.42	0.03	200	6.0	0	58	2.6	0.2	486	180

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
								(Total)										
NB0004	01/04/93	7.7	813	61	3	76	4.7	0.66	0.02	220	6.0	0	30	3.7	0.3	636	160	
	03/07/96	7.5	13200					0.00	0.02	400	5.0					858	300	
	03/14/97	7.9	5220					0.58	1.40	1700	2.0					3390	1500	
	03/10/98	7.7	2450					0.54	0.03	800	15.0					1590	690	
NB0005	04/18/81	9.2	1140	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	770	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	1900	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	2030	24	52	304	5.1	3.70	0.03	570	12.0	0	74	0.0	0.1	1270	272	
	03/02/90	7.6	2570	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	2610	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	2550	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	2340	57	69	280	6.8	8.80	0.00	680	16.0	0	58	0.5	0.2	1680	420	
	03/05/92	8.1	2450	62	61	320	3.9	12.00	0.05	720	25.0	0	74	1.1	0.1	1650	400	
	11/03/92	8.1	3020	110	120	360	5.1	9.10	0.43	910	30.0	0	92	3.4	0.2	1870	780	
	02/05/93	8.1	3450	150	81	380	6.3	2.70	1.50	1000	22.0	0	108	3.3	0.2	2670	710	
	05/06/93	7.9	3810	170	92	420	6.3	4.00	2.10	1200	18.0	0	133	1.6	0.2	2600	800	
	04/05/94	8.0	4030	210	120	420	6.2	5.80	2.00	1200	10.0	0	170	1.1	0.1	2860	1000	
	02/06/95	7.7	3110	180	100	340	4.3	4.60	1.50	920	4.0	0	220	2.2	0.2	2380	860	
	04/03/95	7.8	1540						2.00	0.22	400	8.0					1000	350
	05/04/95	8.1	2520	99	79	300	3.9	2.90	0.94	760	4.0	0	152	2.2	0.1	1730	570	
02/13/98	8.5	1260						1.50	0.23	250	20.0					819	170	
NB0006	09/01/78	8.2	800	30	7	139		0.05		3	27.0	19	414	0.0	0.4	500	102	
	04/16/81	7.9	930	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	1600	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	710	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	1580	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	1670	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	1650	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	1720	27	33	267	4.3	20.00	0.00	418	5.3	0	222	0.3	0.3	934	204	
	03/08/89	8.5	1630	12	38	269	3.5	7.70	0.00	436	16.0	25	116	0.8	0.2	858	187	
	03/28/90	7.8	3640	169	102	432	2.3	6.00	2.60	1020	97.0	0	237	0.7	0.2	2600	842	
	08/13/90	8.9	846	9	15	173	1.6	0.36	0.02	74	19.0	50	284	0.2	0.3	462	84	
	12/19/90	8.7	861	7	13	170	3.5	3.30	0.01	73	7.0	32	320	0.0	0.3	506	70	
	07/11/91	8.9	877	5	13	170	1.8	2.20	0.00	88	3.0	7	377	0.0	0.3	488	68	
	03/18/92	8.8	906	6	14	180	0.8	0.86	0.01	100	5.0	32	312	1.6	0.3	496	73	
	11/17/92	8.6	930	6	16	180	1.2	0.34	0.01	120	2.0	17	297	0.2	0.4	512	82	
	02/18/93	8.7	924	6	16	190	1.6	1.30	0.01	120	3.0	25	271	0.5	0.3	554	81	
	05/18/93	8.8	968	6	18	200	2.0	0.56	0.01	130	3.0	15	347	0.3	0.3	510	88	
	03/22/94	8.7	1000	9	24	190	1.2	0.35	0.00	140	8.0	27	312	1.0	0.3	542	120	
	01/23/95	8.8	1040	4	19	200	0.8	1.90	0.00	170	3.0	22	287	0.2	0.2	650	85	
	04/19/95	8.2	1010						0.50	0.01	170	3.0					655	250
05/17/95	9.0	1030	4	22	190	3.9	0.74	0.00	200	3.0	19	280	0.7	0.3	682	99		
03/16/98	8.8	1100						2.70	0.00	220	9.0					715	140	
NB0007	02/12/80	8.5	1300	13	6	223		0.31	0.17	87	80.0	25	359	0.0	0.4	728	56	
	04/17/81	8.5	1130	3	5	260	1.8	4.00	0.00	117	65.0	16	419	0.0	0.4	682	27	
	02/12/86	7.0	14700	504	280	2280	16.0	69.00	4.50	4860	167.0	0	138	0.0	0.1	7330	2410	
	02/15/88	7.8	15600	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	15600	620	333	2345	16.0	6.80	1.60	5450	163.0	0	57	0.0	0.0	8955	2920	
	03/14/90	7.8	15800	704	234	2420	12.0	5.00	2.80	5520	140.0	0	60	0.0	0.1	12500	2720	
	07/10/90	7.9	13400	708	181	2160	12.0	12.00	2.30	4860	141.0	0	142	0.0	0.2	9540	2510	
	12/20/90	7.6	11000	420	230	1700	16.0	1.20	1.80	3600	130.0	0	134	0.0	0.2	7410	2000	
	07/05/91	8.2	8580	290	150	1140	14.0	1.10	0.00	2650	36.0	0	80	0.1	0.2	5740	1300	

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH
	(m/d/y)							(Total)									
NB0007	03/12/92	7.7	6560	220	110	940	4.7	1.50	0.95	2100	88.0	0	114	0.2	2.0	4200	1000
	11/10/92	8.0	5260	200	88	760	4.7	7.40	0.85	1600	73.0	0	126	3.3	0.2	3260	850
	02/09/93	8.1	5110	150	84	720	3.9	4.10	0.63	1600	70.0	0	112	1.7	0.3	3240	720
	05/10/93	8.2	4700	120	61	690	3.5	17.00	0.50	1400	70.0	0	115	0.0	0.3	2930	550
	03/31/94	8.3	2500	31	37	410	0.1	11.00	0.08	580	77.0	18	256	0.9	0.4	1370	230
	02/16/98	8.4	1630					1.10	0.20	330	52.0					1060	120
NB0008	09/04/78	8.9	575	9	6	116		0.28		2	17.0	32	275	0.0	0.2	363	47
	09/04/78	8.8	560	9	5	106		0.95		3	0.0	29	269	1.9	0.3	345	44
	03/25/80	8.0	730	34	9	112		0.42	0.23	6	1.7	0	435	0.0	0.0	424	122
	03/25/80	8.4	700	34	6	117		0.69	0.17	5	3.3	31	371	0.0	0.0	338	108
	04/09/86	8.0	608	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	747	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	707	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	738	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	806	20	21	129	5.5	0.78	0.01	95	2.1	40	237	3.6	0.2	426	136
	12/07/90	8.2	855	22	20	150	6.3	0.42	0.00	120	3.0	0	330	6.2	0.1	490	140
	12/18/92	8.2	1030	27	24	150	7.0	0.88	0.01	180	2.0	0	250	8.2	0.2	560	170
	02/17/93	8.4	1060	32	23	150	8.2	1.40	0.00	190	2.0	11	222	8.2	0.2	610	170
	06/17/93	8.7	1050	25	26	170	5.1	0.74	0.01	190	2.0	12	255	6.3	0.2	608	170
	04/18/94	8.6	1210	20	27	170	8.6	0.79	0.00	260	4.0	9	190	7.2	0.1	660	160
	12/07/94	8.6	1240	22	30	180	6.6	1.00	0.02	280	3.0	15	193	11.0	0.2	700	180
	03/22/96	8.2	1650						1.00		4.0					1070	300
06/05/97	8.1	1900					0.70	0.01	530	4.0					1240	390	
NB0009	02/18/86	9.1	1600	5	10	359	3.9	0.91	0.01	312	3.6	71	325	0.3	1.1	968	53
	02/10/87	8.8	1830	5	6	354	3.1	0.81	0.01	345	7.8	0	401	2.1	1.1	926	37
	02/10/87	8.8	1170	4	4	234	4.7	33.00	0.01	323	7.3	45	310	3.9	1.2	892	27
	10/19/87	8.3	1125	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	1098	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	1200	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	1140	10	19	207	14.0	0.52	0.00	212	2.3	22	221	34.0	1.0	692	105
	12/14/90	7.2	1150	19	10	230	15.0	0.55	0.06	220	6.0	0	285	26.0	0.9	652	88
	10/08/91	7.5	1150	9	19	220	13.0	0.84	0.04	220	2.0	0	275	32.0	0.9	664	98
	12/09/92	8.0	1280	22	11	210	13.0	2.30	0.06	220	4.0	0	257	34.0	0.9	742	100
	06/07/93	8.2	845	4	9	180	8.6	0.49	0.01	115	6.0	0	290	12.0	0.6	510	48
	04/21/94	8.9	884	4	6	190	8.2	2.50	0.00	100	15.0	49	265	16.0	0.5	510	36
	NB0010	02/12/80	7.4	1360	40	11	198		0.85	0.23	209	22.0	0	313	0.0	0.3	772
04/18/81		7.6	1300	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	1017	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	947	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	991	28	6	182	2.3	0.74	0.18	117	49.0	0	346	0.4	0.2	588	92
NB0011	09/04/78	8.5	550	19	7	88		0.18		9	0.0	15	283	0.3	0.3	351	78
	03/14/80	7.9	670	42	10	95		20.00	0.02	13	10.0	0	394	0.0	0.0	320	144
	03/14/80	7.5	620	42	6	90		2.80	0.63	4	10.0	0	378	0.0	0.0	354	128
	04/23/81	7.7	860	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	1320	8	41	202	5.9	14.00	0.23	301	6.5	0	174	0.2	0.1	680	189
	02/02/95	8.5	1590	19	28	290	14.0	0.42	0.02	340	76.0	18	225	2.1	0.3	876	160
	04/02/95	8.2	1220					0.52	0.03	290	8.0					791	220
	05/03/95	8.7	1500	20	230	200	4.3	0.15	0.02	360	61.0	28	185	4.7	0.3	936	340
	02/16/98	8.6	928					0.40	0.02	180	7.0					603	90

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
NB0012	05/10/80	6.8	4350	195	119	416		79.00	1.30	1185	172.0	0	34	0.0	0.1	2544	974
	04/16/81	7.4	2720	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	2060	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	2100	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	2110	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	2180	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	1890	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	1770	5	4	333	4.3	0.50	0.00	501	2.3	16	30	0.1	0.4	1030	29
	03/09/89	9.3	1720	7	7	331	3.5	4.80	0.01	484	5.6	32	35	11.0	0.4	899	45
	03/15/90	9.4	1370	0	7	290	2.7	1.30	0.00	217	23.0	95	190	0.0	0.3	764	30
	08/17/90	9.5	1340	10	7	292	2.3	0.51	0.00	224	22.0	95	186	1.3	0.2	732	470
	12/19/90	8.0	2050	30	30	360	3.9	24.00	0.06	480	33.0	0	277	0.3	0.3	1080	200
	07/11/91	9.3	1430	2	3	300	2.5	0.67	0.00	270	24.0	16	298	0.7	0.3	788	16
	03/23/92	8.4	1410	5	6	300	2.0	0.54	0.01	270	27.0	46	211	1.9	0.2	757	36
	11/16/92	9.4	1460	2	4	290	1.6	1.10	0.02	300	25.0	68	118	1.2	0.4	774	20
	02/16/93	9.5	1410	9	0	300	1.2	1.40	0.00	290	25.0	41	169	0.3	0.3	800	22
	05/13/93	9.3	1460	0	5	300	2.0	3.70	0.00	300	23.0	14	264	0.9	0.3	778	20
	03/25/94	9.4	1510	0	3	300	3.9	0.34	0.00	300	25.0	37	187	0.3	0.3	842	14
	01/23/95	8.7	1240	2	35	240	7.0	2.60	0.00	260	22.0	24	300	1.1	0.3	704	150
	04/19/95	8.0	1750					1.20	0.02	490	31.0					1140	250
05/19/95	8.7	1320	7	26	300	0.0	0.31	0.01	340	26.0	19	190	1.0	0.3	858	130	
10/15/97	6.5	1120					0.00	0.00	250	13.0					728	280	
NB0013	11/29/79	7.4	4600	236	59	504		0.07		1164	100.0	0	219	1.3	0.0	2508	830
	04/23/81	7.5	13000	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	12080	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	13000	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	13100	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	13700	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	13100	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	13300	840	178	1610	12.0	6.00	0.03	4460	0.7	0	13	0.0	0.0	9070	2830
	03/13/89	7.6	13200	964	202	1680	20.0	2.40	0.04	4750	5.4	0	17	0.0	0.1	7620	3240
	03/16/90	7.8	13200	883	176	1633	14.0	2.90	0.03	4645	3.0	0	13	0.0	0.0	8224	2928
	12/25/90	7.6	12500	930	130	1670	15.0	3.80	0.05	4530	1.0	0	15	0.0	0.0	9090	2880
	10/16/91	7.6	13100	920	170	1610	12.0	2.40	0.06	4400	3.0	0	24	0.1	0.0	8770	2990
	02/10/92	3.0	13000	860	210	1600	14.0	1.90	0.05	4600	1.8	0	28	0.1	0.1	11500	3000
	09/23/92	7.6	13100	1020	73	1520	14.0	1.60	0.05	4500	8.0	0	23	0.2	0.0	9400	2850
	01/15/93	7.6	13100	880	180	1500	14.0	2.10	0.04	4600	0.0	0	25	0.2	0.0	11200	3000
	09/01/93	7.6	13300	850	170	1600	13.0	2.70	0.09	4700	7.0	0	33	5.8	0.0	10500	2800
	01/04/95	8.0	11400	730	200	1400	17.0	1.50	0.10	3800	0.0	0	51	0.0	0.0	7970	2600
03/22/96	6.9	10300					0.30	0.03	3810	2.0					6710	3420	
03/11/98	7.0	8780					2.70	0.04	3200	5.0					5700	2400	
NB0014	05/08/81	7.0	6400	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	5890	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	5780	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	5990	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	6230	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	6020	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	6070	476	76	552	16.0	1.70	0.01	1970	1.0	0	16	0.0	0.1	4340	1500
	03/13/89	7.8	6000	540	168	579	19.0	3.40	0.04	2120	4.3	0	18	13.0	0.1	3450	2040
	03/29/90	7.4	6110	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	5970	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	6140	520	81	550	16.0	3.10	0.03	2100	3.0	0	30	0.1	0.1	4250	1600
	10/07/91	7.7	6150	480	90	570	19.0	1.20	0.02	2100	5.0	0	19	0.4	0.1	4080	1600
	02/06/92	7.6	6090	530	77	570	16.0	1.70	0.09	2100	3.0	0	29	14.0	0.1	5280	1600

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
NB0014	10/07/92	7.6	6250	490	100	540	15.0	1.70	0.03	2100	3.0	0	23	2.3	0.1	5430	1600
	08/09/93	7.5	5270	410	67	480	15.0	14.00	0.09	1700	5.0	0	30	19.0	0.1	4540	1300
	10/05/93	7.6	6360	520	100	620	16.0	4.60	0.17	2100	2.0	0	36	117.0	0.1	5370	1700
	03/22/96	6.5	6060					12.00	0.25	2070	3.0					3940	1670
	04/07/97	6.6	11000					1.00	0.34	3700	140.0					7150	3200
	03/11/98	7.7	6260					13.00	0.05	2200	0.0					4070	2200
NB0015	11/29/79	7.9	4500	297	50	579		0.04		1106	89.0	0	365	1.2	0.0	2546	946
	05/15/80	7.4	6950	538	161	545		4.10	0.00	2120	97.0	0	120	0.0	0.0	4622	2004
	05/15/80	6.8	6600	486	143	550		3.90	0.00	2053	77.0	0	28	0.0	0.0	4202	1802
	04/23/81	7.6	6600	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	817	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	6570	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	2280	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	2430	165	36	219	12.0	2.30	0.02	680	49.0	0	23	0.0	0.2	1608	560
	07/07/88	7.7	2340	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	2380	166	34	225	13.0	1.20	0.03	704	29.0	0	28	1.9	0.2	1560	552
	03/13/89	7.6	2360	182	37	230	14.0	7.00	0.04	740	33.0	0	26	3.0	0.1	1250	608
	03/29/90	7.8	2400	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	2440	180	30	240	12.0	1.30	0.00	750	19.0	0	24	0.0	0.1	1840	570
	10/07/91	7.5	2440	170	30	230	15.0	0.32	0.03	770	17.0	0	31	1.2	0.1	1530	560
	02/06/92	7.7	2450	180	31	230	11.0	2.60	0.08	750	28.0	0	25	3.6	0.1	1610	580
	10/07/92	7.7	2490	180	36	230	12.0	0.40	0.08	760	8.0	0	30	6.5	0.2	1980	600
	01/05/93	7.8	2520	170	32	230	13.0	0.27	0.09	750	6.0	0	28	5.9	0.1	2120	550
	08/09/93	7.3	7740	430	79	960	17.0	0.56	0.32	2500	74.0	0	22	6.9	0.1	6040	1400
	12/15/94	7.2	2620	230	11	260	12.0	0.72	0.09	820	2.0	0	63	6.8	0.1	1730	620
	03/08/96	7.8	2550					1.50	0.11	810	3.0					1660	620
03/18/97	7.6	4930					0.40	1.00	1500	39.0					3200	1200	
03/11/98	7.8	2810					4.40	0.17	900	8.0					1830	710	
NB0016	04/28/80	10.4	1700	2	1	300		1.70	0.00	269	2.0	167	0	0.0	0.3	762	7
	04/28/80	7.6	900	24	7	161		0.09	0.00	28	82.0	0	384	0.0	0.4	480	90
	04/17/81	9.9	845	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	32600	1160	867	5704	66.0	36.00	8.60	65	473.0	0	573	0.0	0.1	29238	6460
	07/14/87	7.5	40000	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	34200	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	35100	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	33600	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	34800	880	731	5773	70.0	34.00	3.50	12600	66.0	0	12	0.1	0.0	21680	5200
	03/17/89	3.0	34600	1040	1280	5920	68.0	80.00	4.30	14000	99.0	0	0	0.0	0.0	22400	7850
	03/28/90	7.3	28800	982	606	5520	50.0	76.00	0.74	10957	5.8	0	20	0.0	0.0	17942	4944
	08/21/90	7.8	25900	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	22500	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	17500	760	350	3000	28.0	12.00	0.00	6330	4.0	0	33	0.1	0.1	13800	3340
	03/12/92	7.3	14000	550	310	1900	20.0	45.00	1.00	4900	40.0	0	46	0.0	0.1	9620	2600
	04/10/95	8.0	32300					0.94	1.80	13000	180.0					21000	6750
05/24/95	7.8	34000	1300	3700	4100	31.0	7.00	3.60	12000	5.0	0	94	1.3	0.1	25500	8000	
02/16/98	7.2	34300					1.00	2.10	15000	190.0					22300	5700	
NB0017	03/17/80	7.7	3400	116	83	342		3.50	0.06	941	5.0	0	46	5.4	0.0	1666	630
	03/17/80	7.5	3500	116	93	346		12.00	0.23	981	3.3	0	41	3.9	0.0	1956	670
	02/18/86	11.0	1420	5	5	267	2.3	1.70	0.01	345	3.2	106	0	0.0	0.8	748	32
	03/11/87	6.9	481	25	13	53	4.7	2.80	0.08	53	60.0	0	127	1.2	0.3	266	114
	03/11/87	7.7	1360	46	2	258	3.5	9.90	0.03	361	12.0	0	94	0.0	0.7	758	19

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
		(Total)															
NB0017	10/19/87	9.2	694	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	676	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	714	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	724	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	709	8	0	127	4.7	0.71	0.02	190	0.9	18	15	0.1	0.4	340	20
	12/04/90	7.7	455	25	15	41	9.0	0.90	0.05	42	89.0	0	85	2.7	0.2	290	130
	07/04/91	7.9	322	12	8	52	8.3	1.30	0.02	52	3.0	0	93	8.1	0.3	146	63
	12/09/92	7.4	355	16	2	44	7.0	1.50	0.05	64	1.0	0	64	13.0	0.2	216	47
	02/09/93	7.7	365	14	3	51	8.2	1.90	0.03	68	2.0	0	67	13.0	0.2	228	48
	06/07/93	7.9	375	12	10	51	8.6	0.28	0.00	66	13.0	0	79	9.1	0.2	252	72
	04/22/94	8.5	499	18	14	71	7.4	1.40	0.01	54	50.0	24	110	4.4	0.2	268	100
	12/12/94	7.8	438	21	1	62	7.0	4.30	0.05	88	10.0	0	64	15.0	0.3	244	57
	03/17/96	7.9	929						0.38	0.03	260	3.0					604
NB0018	09/05/79	8.3	1820	28	9	322		0.32		307	46.0	20	355	0.7	0.2	998	105
	03/21/80	8.1	1800	20	13	319		1.80	0.34	318	28.0	0	392	1.0	0.4	800	105
	03/21/80	8.9	1680	80	7	333		1.20	0.23	315	40.0	41	268	1.1	0.3	786	50
	04/18/81	9.1	1750	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	5560	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	4480	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	4380	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	4100	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	4220	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	4460	76	25	764	14.0	0.88	0.01	1394	6.7	0	23	0.1	0.2	2426	292
	12/07/90	7.6	5070	140	36	810	17.0	0.64	0.04	1660	23.0	0	28	0.4	0.2	3180	510
	10/09/91	3.0	23700	530	450	4000	160.0	100.00	4.30	8400	590.0	0	0	0.3	0.1	16900	3200
	12/16/92	2.8	10800	580	230	1070	24.0	120.00	3.50	3550	170.0	0	0	0.1	0.1	7390	2390
	02/15/93	3.0	10580	540	230	1100	25.0	72.00	3.50	3400	150.0	0	0	0.3	0.1	8960	2310
	06/16/93	7.7	10300	580	530	1100	24.0	42.00	2.30	3550	140.0	0	46	0.1	0.2	8060	3630
	04/22/94	7.2	17300	920	480	2000	41.0	10.00	3.70	6000	60.0	0	17	15.0	0.1	12900	4300
	12/13/94	7.3	10520	640	220	1200	27.0	6.30	2.40	3700	78.0	0	35	0.7	0.2	7720	2500
	04/11/95	7.2	10500	480	300	1100	20.0	10.00	2.40	3600	57.0	0	19	0.9	0.1	7870	2400
03/25/96	7.0	12300						4.00	1.80	4500	27.0					7900	2200
06/11/97	7.0	12880						5.90	1.70	4520	47.0					8370	2400
NB0019	02/26/87	8.2	562	26	0	90	2.0	1.70	0.00	8	13.0	0	317	0.0	0.3	272	66
	02/26/87	7.5	1250	36	12	168	7.0	11.00	0.22	295	29.0	0	91	0.0	0.5	596	138
	02/18/81	7.5	475	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	495	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	714	2	2	129	6.6	0.84	0.00	157	5.0	48	0	0.0	0.4	346	16
	10/07/87	10.1	791	2	1	138	6.3	0.42	0.00	169	3.4	52	1	0.2	0.2		8
	02/09/88	9.8	821	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	767	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	811	2	1	147	5.9	0.35	0.00	186	0.6	33	30	0.1	0.3	420	10
	03/10/89	7.9	812	7	4	159	7.0	0.56	0.00	198	3.3	0	115	5.1	0.3	440	34
	03/29/90	8.2	927	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	975	5	1	177	6.3	0.36	0.00	253	4.0	39	0	0.0	0.3	442	17
	12/07/90	8.6	985	9	0	210	7.8	0.33	0.00	260	5.0	10	57	0.1	0.3	524	25
	10/04/91	7.8	1280	28	3	210	8.0	0.15	0.02	360	8.0	0	95	0.3	0.3	690	83
	02/05/92	8.9	1300	14	5	230	6.6	1.30	0.01	380	7.0	3	37	0.2	0.2	652	55
	10/05/92	8.1	1600	26	10	240	6.6	0.12	0.01	460	7.0	0	47	0.1	0.3	938	110
	01/04/93	8.5	1580	25	4	260	6.6	0.33	0.00	450	6.0	1	26	6.8	0.2	882	80
	08/04/93	8.3	1480	30	3	250	8.2	0.70	0.03	410	6.0	3	91	0.1	0.3	818	88
	03/07/96	10.5	1730						1.30	0.00	500	11.0					1120
02/21/97	9.6	1610						0.10	0.02	460	7.0					1050	82

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

Well No.	Date	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
	(m/d/y)							(Total)									
NB0020	04/07/80	8.0	566	24	9	90	2.7	0.94	0.05	8	41.0	0	314	0.0	1.2	298	95
	04/22/81	9.5	850	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	1620	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	1700	30	10	280	7.4	25.00	0.29	450	35.0	0	102	0.0	0.8	856	115
	02/26/87	7.3	2000	85	73	163		0.85	0.69	471	6.0	0	240	2.4	0.1	1100	512
	10/15/87	10.1	962	1	6	179	5.1	0.68	0.00	194	2.9	68	34	0.0	0.7		26
	02/03/88	9.8	956	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	849	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	859	2	2	161	5.1	0.64	0.00	162	0.6	66	33	0.0	1.0	554	14
	03/14/89	9.6	764	4	5	154	5.9	1.70	0.00	158	3.7	96	13	2.9	1.0	437	29
	03/27/90	9.5	786	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	791	3	5	152	4.7	0.63	0.00	156	2.9	59	35	0.2	0.9	364	25
	10/11/91	9.0	851	3	5	150	5.4	0.71	0.01	210	5.0	10	70	2.9	0.8	460	26
	02/12/92	8.9	990	5	10	170	5.1	0.56	0.00	270	2.0	2	49	2.1	0.6	546	53
	09/15/92	8.1	1820	80	18	220	6.3	0.22	0.02	530	5.0	0	43	3.5	0.5	1070	270
	01/19/93	7.6	2100	77	52	520	6.3	0.35	0.03	630	4.0	0	25	2.6	0.3	1430	410
	08/26/93	7.6	6680	310	150	680	12.0	4.50	0.02	2200	8.0	0	21	1.7	0.2	5340	1400
	12/02/94	7.2	10600	660	360	1100	20.0	10.00	1.90	3500	50.0	0	42	0.0	0.1	7620	3100
	03/18/96	3.2	12550					59.00	2.70	4600	24.0					8160	3400
	02/22/97	6.9	16700					55.00	2.50	5800	73.0					10800	3800
NB0021	08/21/86	7.4	2920	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	1610	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	4740	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	5720	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	6030	440	129	520	6.6	0.98	4.00	1840	44.0	0	82	0.3	0.0	3757	1630
	03/17/89	7.8	4800	314	118	462	6.6	1.40	0.07	1560	20.0	0	52	0.8	0.0	2510	1270
	03/28/90	7.4	5810	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	5710	509	83	529	7.0	0.18	0.03	1960	2.6	0	16	0.0	0.0	4220	1610
	12/13/90	7.8	5830	420	130	530	9.0	0.21	0.03	1800	2.0	0	20	0.0	0.2	5060	1600
	07/08/91	8.0	5750	420	120	490	8.6	0.21	0.00	1900	2.0	0	17	0.0	0.1	3130	1500
	03/13/92	7.7	6060	520	120	520	7.4	0.40	0.05	1900	2.0	0	26	0.2	0.0	3880	1800
	11/11/92	7.6	5890	540	61	520	7.4	1.90	0.06	1900	4.0	0	35	2.8	0.1	5010	1600
	02/11/93	7.6	5860	460	96	520	5.9	0.16	0.07	1800	2.0	0	19	1.0	0.1	4730	1500
	05/11/93	7.7	5840	440	97	480	7.4	0.64	0.04	1900	3.0	0	16	0.0	0.1	4580	1500
	04/08/94	7.5	5880	450	87	530	7.4	0.90	0.04	1800	3.0	0	16	0.0	0.0	3910	1480
	02/10/95	8.2	5840	460	86	520	7.0	0.23	0.03	1900	5.0	0	78	0.2	0.1	3900	1500
	04/11/95	6.9	5570					3.00	0.11	1900	9.0					3620	1570
	05/11/95	7.6	5100	510	62	530	13.0	0.21	0.02	1900	8.0	0	29	0.4	0.0	3310	1500
	06/12/98	7.6	23600					22.00	0.69	7880	1100.0					15300	3400
	03/16/98	7.6	21000					8.10	0.66	7000	100.0					13700	3600
NB0022	10/27/89	8.3	716	18	8	150	2.3	0.20	0.08	30	18.0	18	396	0.0	0.2	470	78
	10/19/87	9.0	697	4	6	159	2.3	0.32	0.00	34	4.3	38	317	0.0	0.0	414	34
	07/16/87	8.5	720	6	4	163	2.7	2.80	0.01	32	5.0	32	342	0.1	0.3	402	29
	12/14/88	8.8	671	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	686	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	675	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	656	3	5	150	2.0	0.81	0.02	28	1.1	50	255	0.0	0.2	364	27
	12/06/90	9.1	667	4	0	150	2.7	3.30	0.01	30	3.0	41	300	0.4	0.2	380	10
	10/07/91	9.1	646	2	6	150	2.0	7.40	0.01	31	2.0	57	260	0.1	0.3	356	29
	12/14/92	9.0	698	2	4	160	2.3	1.40	0.03	38	2.0	9	309	1.5	0.2	388	19
	02/11/93	9.0	709	4	3	160	2.0	4.50	0.00	44	3.0	34	250	1.7	0.2	428	22
	06/09/93	8.9	871	4	24	170	3.5	1.90	0.00	110	3.0	30	265	1.2	0.2	556	100
	04/08/94	9.1	744	16	15	150	2.7	1.20	0.01	72	2.0	25	332	2.1	0.2	450	100

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe		Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH
									(Total)									
NB0022	12/08/94	8.8	808	6	10	160	3.5	2.10	0.00	75	3.0	15	358	1.8	0.3	504	54	
	03/06/96	8.9	780					0.18	0.02	82	2.0					507	74	
	02/17/98	8.8	776					0.68	0.00	77	1.0					504	37	
NB0023	10/27/86	8.1	625	29	8	115	26.0	0.61	0.00	10	15.0	0	418	0.0	0.2	446	105	
	10/19/87	8.3	561	9	8	120	3.1	0.24	0.00	11	4.2	13	337	0.0	0.0	344	52	
	07/16/87	7.6	615	13	8	124	2.7	0.20	0.03	13	5.3	0	414	0.0	0.0	366	65	
	12/01/88	8.6	519	3	6	120	2.7	0.14	0.00	9	3.8	17	288	0.3	0.1	323	32	
	06/01/89	8.8	534	2	4	122	3.5	0.13	0.00	8	3.1	22	285	0.9	0.2	333	22	
	03/01/90	8.3	532	4	3	122	3.1	0.60	0.00	8	2.4	31	253	0.6	0.2	266	22	
	11/30/90	8.6	508	2	2	120	2.7	0.48	0.02	28	2.0	12	300	0.7	0.2	274	14	
	07/01/91	8.4	514	5	4	120	3.4	0.75	0.00	11	2.0	26	270	0.1	0.2	330	28	
	11/17/91	8.9	512	8	2	120	2.3	0.32	0.01	12	1.2	29	250	0.9	0.2	288	26	
	03/03/92	8.6	518	2	2	130	2.7	0.34	0.00	12	2.0	28	249	1.3	0.2	252	15	
	11/02/92	8.6	534	3	2	120	2.3	1.00	0.00	18	2.0	11	250	1.4	0.2	316	15	
	02/03/93	8.6	518	11	3	120	2.7	0.29	0.00	22	4.0	28	219	2.2	0.1	292	42	
	05/04/93	8.4	531	2	4	120	2.7	0.26	0.02	21	2.0	24	261	0.1	0.2	282	19	
	03/21/94	8.5	528	6	1	120	31.0	0.23	0.00	17	4.0	16	285	1.3	0.2	350	2	
	02/02/95	8.4	567	2	15	120	2.4	0.37	0.01	30	3.0	33	260	0.8	0.2	370	66	
	04/02/95	6.6	566					0.36	0.00	43	2.0					370	80	
	05/03/95	7.8	529	6	4	120	4.7	0.14	0.02	30	3.0	0	304	0.4	0.1	352	32	
	04/10/97	8.7	602					0.18	0.00	36	2.0					391	46	
02/13/98	7.6	648					0.24	0.05	59	7.0					421	66		
NB0024	11/24/86	8.7	690	21	9	136	3.1	0.23	0.00	34	27.0	55	308	0.0	0.0	488	88	
	10/01/87	8.6	627	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	679	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	645	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	661	2	5	143	3.6	0.20	0.00	50	1.4	50	209	0.0	0.2	354	27	
	03/07/89	9.7	656	3	6	140	4.3	0.24	0.00	51	2.5	96	126	0.4	0.2	367	33	
	03/16/90	9.1	659	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	677	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	688	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	689	0	4	140	9.5	0.48	0.00	70	2.0	96	100	0.3	0.2	398	16	
	03/09/92	9.7	700	1	3	150	3.9	0.27	0.01	75	3.0	41	195	0.0	0.2	376	14	
	11/05/92	9.6	724	4	12	150	5.1	0.40	0.00	82	3.0	66	117	0.1	0.1	392	58	
	02/08/93	9.6	719	2	3	140	3.9	0.08	0.00	85	2.0	58	128	0.3	0.2	398	16	
	05/07/93	9.3	705	1	4	140	3.9	0.28	0.00	88	2.0	55	169	0.0	0.2	380	17	
	04/07/94	9.2	718	2	3	150	4.3	0.19	0.00	84	2.0	36	207	0.0	0.2	398	18	
	02/08/95	8.8	734	2	7	160	5.1	0.48	0.00	96	4.0	47	213	2.5	0.2	402	32	
	04/09/95	7.6	691					0.32	0.00	96	3.0					449	70	
	05/08/95	8.6	626	4	6	160	2.0	0.32	0.00	96	3.0	19	236	1.3	0.2	406	32	
03/09/98	8.5	723					0.46	0.00	110	-2.0					470	44		
NB0025	11/03/86	7.8	537	54	23	35	4.3	0.18	0.11	12	16.0	0	367	0.0	0.6	344	231	
	10/15/87	8.3	353	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	336	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	319	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	315	4	15	39	5.1	0.43	0.00	12	0.4	13	148	0.1	0.7	186	71	
	03/14/89	8.9	303	4	18	41	5.9	0.40	0.00	14	3.7	26	119	0.2	0.6	172	83	
	03/27/90	8.6	295	5	9	44	5.1	0.96	0.00	17	1.7	17	113	0.0	0.6	182	50	
	08/15/90	9.1	272	7	13	41	5.1	0.65	0.00	18	3.9	37	75	0.0	0.6	112	69	
	01/23/91	9.2	281	3	13	41	4.7	0.82	0.02	21	1.0	14	85	0.0	0.3	170	59	
	10/11/91	8.8	273	6	6	42	5.1	0.31	0.01	18	4.0	10	112	0.2	0.5	164	39	
	02/11/92	8.9	279	2	9	0	44.0	5.10	0.71	19	2.0	7	113	0.6	0.5	166	44	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe		Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH
								(Total)	(Total)									
NB0025	10/19/92	8.5	290	8	9	44	4.3	0.22	0.03	30	3.0	14	81	1.2	0.6	153	55	
	01/19/93	8.5	202	6	9	44	4.7	0.54	0.01	32	4.0	9	90	1.0	0.5	202	52	
	08/27/93	8.6	794	17	33	87	4.7	0.61	0.06	160	7.0	5	155	2.1	0.5	480	180	
	12/23/94	8.4	410	13	25	39	3.9	0.35	0.05	60	4.0	6	140	0.0	0.7	240	130	
	03/20/96	8.3	553					0.66	0.08	110	3.0					359	130	
	12/19/96	8.3	711					0.16	0.00	140	1.0					462	170	
	02/17/98	6.6	292					0.40	0.00	28	18.0					190	69	
	03/18/98	8.1	887					1.00	0.00	250	5.0					576	270	
NB0026	11/11/86	8.2	587	48	24	53	3.9	0.09	0.03	12	22.0	0	398	0.0	0.8	378	216	
	10/15/87	9.0	597	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	589	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	550	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	546	3	21	85	5.1	1.40	0.00	42	3.7	17	237	0.3	0.9	295	94	
	03/14/89	8.6	546	1	24	87	8.3	4.50	0.00	48	4.0	44	191	0.4	0.9	316	118	
	03/26/90	8.3	828	11	34	110	5.5	81.00	0.01	136	4.6	16	203	0.4	0.8	450	166	
	01/17/91	8.8	1140	6	30	190	6.6	73.00	0.00	210	3.0	27	180	0.9	0.5	610	140	
	03/18/98	7.1	9410					16.00	0.00	3600	5.0					6200	3900	
NB0027	11/14/86	7.7	3090	210	57	306	9.4	0.59	2.60	846	17.0	0	249	0.6	0.0	2104	760	
	10/19/87	8.1	2620	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	2860	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	2650	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	2540	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	2570	129	27	315	11.0	0.96	0.00	776	20.0	0	28	1.3	0.1	1290	434	
	03/20/89	6.9	2480	113	22	315	10.0	0.68	0.01	794	4.1	0	16	1.3	0.1	1270	374	
	03/13/90	7.9	2400	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	2420	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	5030	310	170	350	21.0	3.10	0.54	1600	11.0	0	17	0.2	0.1	3600	1500	
	12/23/92	8.0	2470	110	18	340	11.0	0.50	0.03	730	4.0	0	26	0.3	0.1	1730	360	
	02/24/93	7.5	1990	63	32	250	7.8	2.70	0.05	610	3.0	0	31	3.9	0.1	1240	290	
	06/23/93	7.7	1920	68	30	260	7.4	2.40	0.02	590	3.0	0	30	2.6	0.1	1350	300	
	04/25/94	8.2	1850	70	30	230	8.2	1.30	0.71	500	16.0	0	109	1.4	0.1	1160	300	
	12/22/94	7.8	1610	52	44	210	7.8	5.90	0.00	480	2.0	0	31	0.5	0.1	1060	310	
	04/24/95	7.7	1730	44	46	220	9.8	0.76	0.04	530	1.0	0	45	0.3	0.1	1140	300	
	04/03/96	7.7	1730					1.40	0.03	540	2.0					1120	230	
	02/23/98	5.8	1730					1.40	0.00	540	5.0					1120	290	
	NB0028	11/21/87	8.0	678	23	8	122	2.3	0.28	0.03	12	48.0	0	347	0.0	0.2	440	90
12/02/88		9.2	654	2	6	145	3.5	0.26	0.00	39	4.0	33	283	0.0	0.1	407	27	
06/19/89		9.6	663	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	636	2	5	145	3.1	0.47	0.00	37	3.3	71	183	0.1	0.3	322	25	
12/18/90		9.2	596	5	0	150	4.3	0.67	0.01	35	2.0	50	237	0.0	0.2	365	13	
10/16/91		9.6	653	2	4	140	2.8	0.75	0.01	45	1.0	22	268	0.0	0.2	336	20	
03/24/92		9.0	686	3	5	150	2.3	1.20	0.00	68	3.0	27	242	0.2	0.1	375	26	
11/25/92		8.8	747	2	8	150	2.7	0.22	0.02	90	2.0	35	198	0.2	0.3	416	38	
01/28/93		9.0	726	4	8	150	3.5	0.32	0.02	85	2.0	27	211	0.0	0.2	436	42	
05/26/93		8.8	726	2	8	150	2.7	0.20	0.00	75	3.0	17	279	0.8	0.2	406	38	
03/21/94		8.7	885	5	15	170	3.1	0.29	0.00	120	4.0	22	258	0.1	0.2	486	76	
01/13/95		8.8	780	2	11	160	2.7	1.20	0.00	99	2.0	22	274	0.1	0.2	568	50	
04/22/95		8.0	659					0.80	0.02	68	2.0					428	100	
05/09/95		8.8	710	2	10	140	0.0	1.60	0.00	85	3.0	14	283	0.4	0.2	460	46	
02/13/98		8.1	773					0.46	0.02	96	7.0					502	58	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
								(Total)										
NB0029	12/06/87	7.9	733	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	613	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	620	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	608	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	629	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	622	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	655	4	2	150	3.6	0.62	0.00	38	2.0	150	13	0.1	0.3	344	17	
	12/22/92	9.8	663	1	2	140	2.7	0.85	0.00	49	3.0	51	156	0.1	0.3	360	11	
	02/15/93	9.6	679	8	3	140	2.7	0.19	0.02	58	6.0	67	124	0.2	0.3	360	29	
	06/16/93	9.7	685	3	4	140	3.1	0.30	0.00	70	5.0	79	126	0.3	0.3	390	26	
	04/18/94	8.9	677	4	6	140	3.5	5.60	0.00	54	6.0	41	250	0.0	0.3	406	33	
	12/13/94	8.7	727	4	10	160	3.1	0.58	0.00	78	2.0	45	238	2.1	0.4	446	50	
	04/18/95	8.9	757	2	7	150	3.9	5.20	0.01	87	4.0	29	248	1.3	0.3	438	30	
	03/25/96	8.8	804						0.10	0.00	120	2.0					522	47
	06/11/97	8.7	932						0.09	0.00	178	3.0					606	49
	NB0030	12/19/87	7.3	6800	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	5450	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	5010	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	4090	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	3630	206	2	499	9.0	0.75	0.00	1180	2.2	0	13	0.2	0.1	2610	520	
10/07/91		7.6	3780	210	30	530	9.1	1.40	0.02	1200	2.0	0	25	1.7	0.1	2670	640	
12/06/92		7.6	3630	210	3	480	9.0	0.22	0.02	1160	2.0	0	28	1.4	1.0	2470	540	
12/14/92		7.9	3940	210	26	490	8.2	5.80	0.03	1200	2.0	0	13	0.1	0.1	2330	630	
06/09/93		8.1	3660	200	36	440	6.6	1.60	0.00	1120	4.0	0	61	0.0	0.2	2510	650	
04/08/94		7.7	3830	210	26	500	6.6	2.90	0.02	1200	3.0	0	26	3.4	0.1	2300	640	
12/08/94		7.8	3900	230	14	510	8.6	6.20	0.02	1200	2.0	0	43	8.7	0.1	2430	630	
03/19/96		7.8	4030						4.40	0.01	1300	1.0					2620	730
02/19/98		7.8	3970						1.60	0.00	1300	3.0					2580	700
NB0031		14491215	7.9	7260	620	100	630	14.0	5.70	0.03	2400	45.0	0	13	0.1	0.1	5720	2000
	12/22/87	7.0	9640	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	7390	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	7200	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	7140	634	132	616	13.0	1.00	0.03	2340	35.0	0	17	0.1	0.0	4824	2124	
	12/11/90	7.9	7060	650	80	620	15.0	0.84	0.02	2380	30.0	0	17	0.0	0.1	5950	1940	
	10/11/91	7.5	7090	630	104	480	16.0	1.70	0.05	2400	36.0	0	19	0.2	0.0	4760	2000	
	04/08/94	7.9	5660	450	92	500	9.8	3.50	13.00	1800	30.0	0	54	3.2	0.1	3780	1500	
NB0032	01/20/88	7.2	572	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	535	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	565	26	10	92	4.3	0.55	0.01	14	2.1	36	276	0.3	0.2	340	106	
	03/16/89	8.6	524	32	10	87	5.5	0.76	0.00	6	4.0	57	247	1.1	0.2	324	120	
	03/14/90	8.2	499	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	423	24	9	87	5.1	0.49	0.02	7	3.4	18	286	0.9	0.2	256	95	
	12/20/90	7.9	522	21	12	90	5.5	0.50	0.04	10	2.0	0	314	1.0	0.2	272	100	
	10/22/91	8.4	551	28	8	95	5.1	0.26	0.09	9	2.0	27	300	0.6	0.2	320	110	
	12/03/92	8.4	594	30	8	94	4.7	0.12	0.10	11	2.0	23	274	0.7	0.2	390	110	
	02/03/93	8.5	589	27	10	97	4.7	0.04	0.10	8	2.0	3	256	0.9	0.2	374	110	
	06/02/93	8.0	612	29	16	94	5.5	0.03	0.02	14	2.0	0	368	0.9	0.2	406	140	
	04/04/94	8.5	535	19	9	100	4.7	0.54	0.03	10	6.0	37	259	0.9	0.2	320	87	
	12/26/94	8.4	580	26	10	110	5.1	0.50	0.00	14	1.0	20	318	0.7	0.2	360	110	
	04/09/96	8.2	594						0.12	0.01	15	2.0					386	120
	02/16/98	8.3	573						0.18	0.00	11	1.0					372	100

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	(Total)		Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
								Fe	Mn									
NB0033	01/21/88	6.8	5260	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	4580	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	4440	355	74	354	12.0	0.46	0.02	1400	2.2	0	23	0.0	0.1	3370	1190	
	03/21/89	7.1	3900	378	28	368	13.0	0.28	0.08	1320	3.6	0	27	1.0	0.1	2120	1060	
	03/19/90	7.4	3870	325	41	356	11.0	0.57	0.35	1260	4.6	0	10	0.8	0.1	2410	978	
	01/16/91	7.1	3660	330	30	350	12.0	1.50	0.24	1220	1.0	0	10	0.0	0.0	2840	950	
	10/22/91	7.2	3790	340	25	360	12.0	0.40	0.25									
	12/22/92	7.6	3910	360	16	320	11.0	1.50	0.21	1190	3.0	0	23	0.2	0.1	2510	960	
	02/18/93	6.9	3910	350	20	350	11.0	0.48	0.16	1200	3.0	0	22	3.0	0.1	3190	960	
	06/23/93	8.0	3860	330	55	350	11.0	1.80	0.01	1200	4.0	0	24	0.0	0.1	3130	1050	
	04/07/94	7.9	3850	400	8	350	11.0	0.74	0.15	1200	3.0	0	31	3.1	0.1	3490	1000	
	12/20/94	7.8	3900	350	26	350	11.0	2.10	0.01	1200	4.0	0	28	0.4	0.1	3040	970	
	04/25/95	7.7	3960	340	93	260	13.0	0.27	0.01	1300	2.0	0	63	0.2	0.1	2690	1200	
	03/27/96	7.4	4040						0.94	0.03	1300	2.0					2630	1100
	NB0034	02/24/88	7.4	812	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	722	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	714	2	7	161	2.0	0.61	0.00	38	8.8	41	291	0.0	0.2	392	32	
03/07/89		9.1	710	3	7	163	1.6	1.40	0.00	54	3.1	76	228	0.0	0.3	420	36	
03/20/90		8.9	742	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	746	6	3	166	2.3	0.46	0.00	72	3.6	55	216	0.0	0.2	376	27	
12/13/90		9.2	746	0	5	170	4.3	0.13	0.00	90	2.0	42	230	0.0	0.2	390	20	
07/08/91		9.3	755	0	4	160	9.1	0.31	0.00	77	2.0	66	192	0.3	0.2	446	16	
03/13/92		8.8	842	6	8	170	2.7	0.14	0.00	120	2.0	45	103	0.2	0.1	466	50	
11/26/92		8.7	951	4	9	180	2.2	0.18	0.00	180	3.0	17	182	0.3	0.2	498	46	
02/11/93		8.7	983	7	11	200	4.3	0.44	0.00	200	3.0	20	154	0.1	0.2	560	63	
05/11/93		8.6	1030	4	9	180	2.7	0.24	0.00	210	5.0	6	213	0.3	0.2	558	46	
03/17/94		8.6	1140	0	14	190	2.0	0.46	0.01	230	3.0	18	165	0.1	0.2	666	56	
01/26/95		8.5	1310	12	20	230	2.3	2.80	0.01	330	4.0	10	153	0.1	0.2	666	110	
04/11/95		7.5	1240						0.78	0.01	360	2.0					805	260
05/11/95	8.7	1160	2	18	220	0.0	0.30	0.00	310	2.0	2	147	0.4	0.2	662	77		
NB0035	11/13/88	8.4	713	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	567	5	2	113	15.0	1.00	0.00	22	46.0	23	207	1.7	0.3	354	20	
	12/18/90	9.5	362	5	1	71	19.0	0.80	0.02	16	29.0	28	105	2.1	0.2	223	14	
	10/21/91	9.0	402	11	3	56	21.0	2.20	0.00	34	59.0	18	58	6.1	0.1	210	39	
	12/11/92	8.6	774	9	9	140	8.2	1.80	0.01	91	4.0	24	216	1.5	0.2	456	59	
	02/02/93	8.7	765	6	10	140	7.0	0.10	0.04	84	3.0	27	221	1.1	0.3	442	56	
	06/22/93	8.6	847	10	18	160	8.2	0.66	0.00	100	3.0	25	2	1.1	0.3	482	99	
	04/27/94	8.8	1240	10	34	210	6.3	1.70	0.01	280	3.0	42	184	2.4	0.2	662	160	
	12/14/94	8.9	880	6	17	180	6.6	7.80	0.01	120	3.0	29	270	0.7	0.2	498	85	
	04/18/95	8.7	916	15	18	140	14.0	1.00	0.01	100	43.0	15	290	2.6	0.3	528	110	
03/06/96	8.9	825						4.60	0.01	110	17.0					536	110	
NB0036	11/14/88	8.4	758	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	712	12	2	104	5.5	0.22	0.02	45	149.0	0	139	0.1	0.2	394	125	
	08/02/90	8.4	666	17	13	110	4.7	0.21	0.02	43	127.0	7	154	0.0	0.2	388	97	
	12/03/90	8.2	667	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	652	6	14	120	8.5	0.28	0.00	35	98.0	19	179	0.1	0.3	406	74	
	03/05/92	7.9	1850	110	53	160	7.8	0.60	1.50	490	3.0	0	180	3.4	0.1	1450	490	
	11/03/92	8.5	665	8	22	120	2.7	0.57	0.01	39	68.0	27	166	1.0	0.2	360	110	
	02/05/93	8.6	670	4	12	120	2.3	0.42	0.01	40	78.0	28	167	0.6	0.3	392	58	
	05/06/93	8.7	678	4	9	130	2.0	0.23	0.01	45	73.0	22	217	0.0	0.3	372	48	
	04/05/94	8.5	707	9	11	130	2.0	1.90	0.00	54	69.0	20	228	1.3	0.3	432	64	
	02/06/95	8.1	703	13	16	140	2.0	1.80	0.03	54	52.0	0	320	1.7	0.3	454	98	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
								(Total)										
NB0036	05/04/95	8.7	652	12	8	130	1.6	0.52	0.03	55	45.0	23	216	1.9	0.2	422	64	
	04/03/96	8.2	707					2.10	0.00	74	53.0					460	94	
	06/09/97	7.8	787					2.80	0.00	90	52.0					514	110	
	02/13/98	7.8	5690					24.00	6.10	660	2000.0					3700	2200	
NB0037	11/16/88	8.4	1000	26	10	182	4.7	0.94	0.01	89	43.0	23	373	0.7	0.4	542	105	
	03/09/90	8.1	3800	86	102	557	18.0	0.46	0.19	1130	63.0	0	199	3.3	0.2	2520	634	
	12/27/90	8.7	3370	34	49	570	53.0	0.39	0.00	1000	51.0	18	150	0.0	0.1	1880	290	
	10/21/91	8.4	3700	22	65	600	49.0	0.44	0.01	1130	32.0	5	76	1.9	0.2	2150	320	
	02/02/93	8.0	3870	6	57	630	45.0	0.00	0.04	1200	2.0	0	43	4.1	0.1	2220	250	
	06/22/93	7.8	3950	11	89	660	50.0	0.60	0.01	1220	3.0	0	50	1.6	0.1	2350	390	
	04/27/94	8.4	4250	59	51	690	50.0	3.80	0.01	1400	2.0	7	41	0.3	0.1	2510	360	
	04/18/95	8.4	4560	80	38	720	50.0	1.20	0.01	1400	3.0	2	29	0.4	0.1	2780	350	
	03/25/96	7.7	5740					0.06	0.05	1900	5.0					3730	710	
NB0038	14510331	9.2	575	0	2	120	4.7	0.25	0.02	40	30.0	28	181	0.0	0.5	346	10	
	11/29/88	8.2	870	31	7	154	2.7	1.20	0.01	24	100.0	0	388	0.0	0.3	494	107	
	03/15/90	9.3	617	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	578	6	2	177	5.5	0.45	0.01	48	42.0	46	103	0.0	0.5	274	23	
	12/20/90	9.8	597	0	6	120	5.5	0.31	0.00	52	39.0	60	140	0.0	0.6	318	26	
	07/05/91	9.9	612	0	5	120	10.0	0.22	0.00	50	35.0	75	65	0.4	0.6	362	20	
	03/12/92	9.7	601	0	6	120	5.5	0.11	0.00	45	35.0	53	106	0.2	0.4	338	23	
	11/10/92	9.4	586	4	5	120	5.1	0.20	0.00	53	33.0	57	88	0.1	0.4	298	30	
	02/09/93	9.4	580	1	2	120	4.7	0.06	0.00	50	33.0	39	108	0.3	0.5	322	10	
	05/10/93	9.5	580	4	1	120	5.1	0.42	0.00	48	32.0	30	132	0.0	0.5	312	12	
	01/25/95	9.3	629	2	13	140	4.3	0.22	0.00	66	29.0	33	198	0.1	0.5	362	58	
	04/10/95	6.9	689					0.20	0.00	110	29.0					448	61	
	05/24/95	8.5	566	3	4	140	0.8	0.30	0.01	85	29.0	17	180	0.4	0.5	367	25	
	02/16/98	9.0	809					0.10	0.01	150	24.0					526	45	
	NB0039	12/04/88	8.2	838	26	8	152	3.1	1.00	0.00	54	78.0	0	324	0.4	0.4	490	95
		03/08/90	8.7	716	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	693	6	3	166	2.7	0.58	0.00	55	37.0	27	234	0.0	0.4	354	28	
12/07/90		8.7	712	5	4	15	2.7	0.28	0.00	58	34.0	42	220	0.2	0.4	420	29	
10/09/91		8.7	732	5	5	160	4.4	0.26	0.01	62	34.0	31	236	1.8	0.3	430	33	
12/16/92		8.7	796	7	5	150	2.7	0.40	0.02	74	42.0	22	217	1.3	0.3	478	39	
02/15/93		8.8	792	7	6	160	2.7	1.50	0.00	74	38.0	25	217	1.8	0.3	490	43	
06/16/93		8.9	765	6	16	150	2.0	0.83	0.00	68	3.6	26	241	0.7	0.3	484	80	
04/21/94		9.1	956	10	16	180	1.6	0.76	0.01	140	39.0	31	229	2.0	0.3	546	90	
12/13/94		8.7	1000	8	2	220	2.7	1.90	0.00	130	48.0	18	252	1.6	0.4	636	88	
04/11/95		8.1	999	14	14	190	0.0	0.89	0.03	140	51.0	0	301	1.3	0.4	536	89	
03/25/96		8.9	883					1.10	0.02	130	46.0					574	74	
NB0040	12/06/88	8.1	675	33	7	122	3.1	0.27	0.28	6	14.0	0	437	0.4	0.2	386	111	
	03/15/90	7.5	3300	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	2340	162	39	262	14.0	0.36	0.01	761	2.3	0	26	1.0	0.1	1590	566	
	12/21/90	8.5	2260	86	55	260	12.0	0.18	0.01	690	1.0	3	17	0.0	0.1	1450	440	
	07/05/91	8.2	2150	91	46	210	14.0	0.55	0.00	660	2.0	0	25	0.0	0.1	1690	420	
03/11/92	7.8	1800	43	44	220	7.4	0.15	0.02	550	2.0	0	23	0.0	0.1	1320	290		
NB0041	12/18/88	8.6	764	16	4	154	3.1	0.42	0.00	52	52.0	50	214	0.0	0.5	434	57	
	03/15/90	8.6	737	5	0	154	2.3	0.42	0.00	44	28.0	48	222	0.0	0.5	378	14	
	12/12/90	9.4	704	3	3	150	2.0	0.22	0.01	41	8.0	42	275	0.0	0.5	392	20	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	(Total)		Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								Fe	Mn								
NB0041	10/21/91	9.3	679	4	0	150	2.9	1.20	0.00	42	5.0	63	220	0.5	0.4	380	10
	12/08/92	9.2	680	1	3	140	2.3	0.86	0.02	38	6.0	20	261	3.0	0.5	376	13
	02/22/93	9.1	675	5	3	160	2.0	2.00	0.00	39	5.0	30	240	0.0	0.4	430	26
	06/18/93	8.9	658	4	3	150	2.3	1.60	0.00	37	7.0	25	29	0.0	0.5	404	19
	04/25/94	8.8	666	2	3	150	1.6	0.43	0.00	32	15.0	29	316	0.9	0.4	378	16
	12/22/94	9.4	716	3	3	170	2.3	1.80	0.01	43	12.0	45	267	0.2	0.5	450	20
	04/20/95	8.9	660	2	11	140	4.3	0.01	0.01	36	11.0	30	300	0.0	0.4	389	50
	03/25/96	8.9	671					0.50	0.00	38	10.0					436	41
	06/18/97	8.9	650					0.42	0.00	40	6.0					422	18
	02/19/98	8.4	636					0.46	0.00	34	4.0					413	22
NB0042	10/25/88	8.4	668	21	1	140	2.3	1.10	0.08	1	10.0	54	306	0.0	0.3	452	54
	03/15/90	8.7	384	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	421	5	1	99	3.5	1.50	0.00	29	6.6	18	177	0.1	0.2	200	15
	12/21/90	9.0	434	3	0	99	4.7	0.58	0.00	23	2.0	17	150	0.0	0.1	230	8
	07/08/91	9.3	454	0	4	100	8.0	0.60	0.00	19	2.0	53	148	0.0	0.3	286	14
	03/23/92	9.2	489	4	6	100	3.1	0.37	0.00	20	2.0	53	147	0.2	0.1	298	33
	11/13/92	8.9	466	1	3	100	2.3	0.82	0.01	21	2.0	33	161	1.0	3.0	262	15
	02/04/93	8.8	463	3	1	110	2.7	1.10	0.00	21	2.0	25	179	1.2	0.3	314	10
	05/21/93	9.0	459	3	1	120	3.1	0.76	0.00	20	2.0	30	210	0.0	0.3	258	10
	03/28/94	8.8	501	0	3	110	2.7	0.47	0.00	28	2.0	22	225	0.0	0.2	326	11
	01/25/95	9.0	515	1	11	140	3.9	0.77	0.00	36	3.0	35	312	0.2	0.2	312	46
	04/11/95	7.3	550					1.60	0.01	64	3.0					358	99
	05/12/95	9.0	455	3	6	120	0.4	0.31	0.01	46	2.0	23	209	0.4	0.2	295	32
	03/19/98	8.8	961					1.00	0.00	240	1.0					624	130
	NB0043	12/28/88	8.1	776	23	3	156	3.5	1.60	0.14	17	41.0	0	402	0.0	0.3	456
03/09/90		8.8	665	4	4	152	3.1	0.60	0.01	24	2.8	43	298	0.4	0.3	386	27
03/18/90		9.1	649	5	1	170	2.7	0.55	0.00	27	3.0	28	342	0.3	0.3	404	16
09/01/90		9.0	639	4	2	161	2.0	4.90	0.00	26	4.0	38	303	0.0	0.3	334	17
10/21/91		8.9	655	6	0	170	2.8	28.00	0.00	26	2.0	41	300	0.3	0.3	380	16
NB0044	12/30/88	8.0	1060	20	11	212	2.7	0.58	0.02	185	88.0	0	235	0.1	0.5	634	95
	03/12/90	9.3	1100	9	8	223	2.3	0.24	0.00	196	50.0	76	61	0.1	0.5	576	57
	12/17/90	10.2	1080	3	1	230	2.3	0.43	0.00	190	39.0	83	68	0.0	0.4	583	9
	07/16/91	10.5	1140	0	1	260	2.7	0.24	0.00	190	27.0	57	150	0.0	0.4	582	4
	03/24/92	10.3	1100	1	0	220	2.3	0.72	0.00	180	32.0	91	42	0.2	0.3	550	3
	11/25/92	10.0	1100	0	2	210	1.6	0.12	0.01	190	26.0	92	24	0.1	0.5	572	6
	01/22/93	9.9	1030	2	0	210	1.6	0.20	0.00	190	24.0	56	88	0.0	0.5	590	7
	05/26/93	10.2	1110	1	1	200	2.3	0.52	0.00	200	22.0	76	92	0.0	0.4	584	6
	03/21/94	10.0	1120	0	1	210	2.0	0.25	0.00	190	16.0	96	58	0.1	0.5	574	5
	01/13/95	10.2	1080	3	0	220	2.3	0.30	0.00	190	12.0	86	73	0.0	0.4	684	7
	04/22/95	7.1	974					0.64	0.00	200	6.0					633	78
	05/09/95	10.3	980	1	0	210	0.8	0.28	0.00	190	11.0	74	94	0.2	0.4	582	4
	02/13/98	9.4	1060					0.68	0.02	220	6.0					689	7
NB0045	01/05/89	7.9	818	28	7	152	2.0	0.34	0.00	46	78.0	0	323	1.1	0.4	473	99
	03/06/90	9.0	706	4	9	152	2.7	0.51	0.00	44	59.0	30	219	0.1	0.4	396	46
	12/17/90	9.7	695	5	4	160	2.3	0.02	0.00	44	46.0	54	197	0.0	0.4	412	28
	07/08/91	9.4	689	5	6	140	1.8	0.36	0.01	46	40.0	85	146	0.0	0.4	400	34
	12/18/92	9.1	715	1	5	150	2.7	0.90	0.00	42	41.0	28	215	1.1	0.3	400	23
	02/17/93	8.3	718	6	6	150	2.3	0.72	0.01	47	38.0	14	244	1.0	0.3	472	40
	06/17/93	9.0	696	3	7	140	0.8	0.61	0.00	44	41.0	18	273	0.6	0.3	428	34
	04/18/94	8.9	758	4	8	160	2.0	0.21	0.00	59	46.0	26	263	0.3	0.3	432	41

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe		Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH
									(Total)									
NB0045	12/12/94	8.8	824	6	11	170	2.0	1.20	0.02	92	42.0	12	271	0.8	0.4	510	57	
	03/27/96	8.6	1930					0.04	0.02	520	32.0					1250	260	
NB0046	01/29/89	7.4	1390	14	7	262	2.7	1.50	0.02	251	52.0	0	278	0.0	2.1	804	65	
	03/02/90	7.8	1550	37	26	225	10.0	0.52	0.10	336	69.0	0	181	1.3	0.7	802	201	
	08/02/90	8.3	1360	37	12	239	8.2	0.45	0.01	318	58.0	8	159	1.5	1.0	744	141	
	12/03/90	8.5	1340	21	11	260	7.8	0.24	0.03	290	53.0	29	120	1.6	1.3	730	98	
	07/02/91	9.1	1250	6	23	240	6.8	0.22	0.00	270	36.0	35	130	0.1	1.5	720	110	
	03/05/92	8.6	1220	6	9	270	5.5	0.32	0.00	260	30.0	18	175	2.0	1.4	612	50	
	11/03/92	8.0	1240	16	12	250	3.9	0.43	0.03	250	25.0	0	220	0.1	1.6	670	90	
	02/05/93	8.4	1240	4	8	240	3.1	0.54	0.00	260	24.0	18	183	1.9	1.7	662	41	
	05/06/93	8.9	1220	4	9	230	3.5	0.18	0.01	250	23.0	27	189	2.0	1.7	614	46	
	04/05/94	8.7	1210	5	5	250	3.1	1.10	0.02	220	23.0	15	234	3.8	1.7	668	32	
	02/06/95	8.7	1170	8	37	200	2.4	0.54	0.01	250	18.0	35	220	3.4	2.3	692	170	
	04/03/95	7.4	1150					0.66	0.00	230	21.0					748	150	
	05/04/95	8.8	1120	0	9	230	2.3	0.35	0.00	220	19.0	36	192	3.0	2.4	680	35	
	02/16/98	9.0	1160					0.14	0.00	220	18.0					754	46	
NB0047	01/29/89	8.3	1410	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	1160	8	29	232	3.1	0.44	0.00	188	12.0	35	292	0.1	0.4	662	140	
	12/17/90	8.7	3370	110	47	500	4.7	1.30	0.02	1100	5.0	3	18	0.1	0.7	2300	460	
	07/02/91	8.8	2740	77	18	430	6.8	0.46	0.00	850	2.0	0	16	0.2	0.7	1760	260	
	03/05/92	9.3	1990	11	3	380	2.7	0.21	0.00	590	2.0	1	36	0.0	0.8	1030	41	
	03/05/92	9.3	1990	11	3	380	2.7	0.21	0.00	590	2.0	1	36	0.0	0.8	1030	41	
	11/03/92	10.0	1810	13	11	340	2.3	1.10	0.00	500	6.0	31	13	0.2	0.8	914	78	
	02/05/93	10.5	1750	3	6	320	2.3	0.86	0.00	470	9.0	37	0	0.2	0.9	872	30	
	05/06/93	9.9	1670	0	6	310	2.7	0.76	0.00	450	11.0	45	21	0.0	1.0	794	25	
	04/05/94	9.8	1500	3	2	300	2.7	0.28	0.00	370	16.0	58	38	2.0	1.0	790	14	
	02/06/95	10.2	1450	4	32	290	2.4	0.42	0.01	380	7.0	100	6	0.3	1.3	792	140	
	04/03/95	7.0	1390					2.50	0.00	350	2.0					904	140	
	05/08/95	9.0	1340	2	9	280	3.9	0.43	0.01	350	5.0	25	120	1.1	1.2	774	40	
	02/13/98	9.6	1490					2.30	0.02	390	6.0					969	27	
NB0048	04/07/89	7.9	1580	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	1270	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	1180	4	4	246	4.7	1.40	0.00	290	3.7	50	85	0.0	0.3	626	26	
	12/12/90	9.7	1230	2	2	230	5.1	0.58	0.00	290	2.0	33	135	0.1	0.3	688	15	
	10/17/91	9.8	1210	7	2	210	6.8	0.52	0.00	270	2.0	0	84	0.2	0.3	626	26	
	12/23/92	8.1	5240	88	110	860	14.0	37.00	0.16	1600	100.0	0	113	6.7	0.3	3260	680	
	02/22/93	8.2	9830	230	200	1410	22.0	10.00	0.34	3110	210.0	0	89	6.1	0.3	6520	1410	
	06/17/93	9.6	1850	6	37	330	8.2	6.70	0.00	490	14.0	39	65	4.7	0.3	1000	170	
	04/20/95	8.7	1130	4	33	170	0.0	0.36	0.00	270	2.0	18	140	3.9	0.3	712	150	
	06/18/97	8.3	1100					0.49	0.00	280	2.0					715	16	
	02/19/98	8.8	2230					6.90	0.00	640	11.0					1450	150	
	NB0049	02/18/89	8.2	804	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	38000	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	35100	356	888	6600	172.0	1.60	2.60	13200	260.0	0	142	0.2	0.8	25600	4540	
12/12/90		7.6	28800	210	630	5300	130.0	0.59	0.23	10000	690.0	0	54	0.0	0.7	20200	3100	
10/18/91		7.7	17500	200	320	2700	94.0	9.30	0.03	6100	240.0	0	40	0.2	0.5	11800	1800	
12/08/92		7.1	35100	430	1100	6400	130.0	120.00	1.70	13000	1100.0	0	349	0.1	0.9	26500	5500	
02/22/93		7.6	9380	51	280	1580	41.0	4.60	0.03	2960	110.0	0	25	7.3	0.3	5830	1260	
06/18/93		8.1	7320	29	82	1200	33.0	1.10	0.01	2400	68.0	0	35	0.1	0.4	4420	410	
04/25/94		8.9	1240	20	22	240	3.1	3.30	0.00	260	53.0	18	154	1.8	0.5	704	140	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO <sub>4</sub>	CO <sub>3</sub>	HCO <sub>3</sub>	NO <sub>3</sub>	F	TDS	TOH
								(Total)									
NB0049	12/22/94	9.7	1060	1	9	210	5.5	1.40	0.00	200	19.0	44	147	0.4	0.8	600	40
	04/20/95	9.6	977	2	16	180	0.0	0.39	0.00	180	6.0	56	150	0.1	0.7	703	68
	03/26/96	9.0	840					6.20	0.00	130	15.0					546	53
	06/18/97	9.2	814					0.26	0.00	100	17.0					529	43
	02/19/98	9.0	849					3.30	0.00	120	27.0					552	58
NB0050	12/07/93	8.2	957	19	5	160	4.3	0.47	0.00	250	1.0	0	77	2.0	0.1	512	66
	02/23/89	7.8	1440	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	1080	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	1050	38	8	161	0.3	0.27	6.30	287	2.4	0	74	0.0	0.1	510	128
	01/16/91	7.2	1000	36	6	160	6.6	0.24	0.01	270	1.0	0	64	0.0	0.1	570	110
	10/15/91	8.1	988	32	3	150	6.7	0.24	0.01	260	2.0	0	76	0.1	0.1	560	90
	10/15/91	8.1	988	32	3	150	6.7	0.24	0.01	260	2.0	0	76	0.1	0.1	560	90
	01/24/92	8.2	988	25	3	160	6.6	0.25	0.00	260	1.0	0	67	0.7	0.1	496	74
	09/21/92	8.2	939	28	0	150	6.6	0.12	0.00	250	3.0	0	66	0.2	0.1	466	69
	01/11/93	7.3	953	23	3	150	5.5	0.14	0.03	250	3.0	0	76	0.2	0.1	458	70
	12/01/94	7.9	953	16	7	160	7.4	0.37	0.03	250	1.0	0	72	0.2	0.1	530	70
	03/28/96	8.0	875					0.86	0.01	250	4.0					570	84
	02/15/97	7.8	911					0.18	0.00	240	1.0					592	53
	03/20/98	8.4	805					0.32	0.00	250	1.0					523	66
	NB0051	02/23/89	8.2	779	23	9	138	2.3	0.67	0.07	28	92.0	28	269	0.4	0.4	438
03/12/90		9.4	652	4	5	140	2.7	0.39	0.00	44	10.0	72	156	1.6	0.4	370	28
12/17/90		10.3	665	5	0	150	2.0	0.78	0.02	45	2.0	111	95	0.0	0.4	362	13
10/16/91		10.3	734	1	3	150	2.7	0.65	0.00	67	3.0	51	173	0.0	0.4	404	12
03/24/92		10.2	816	3	2	160	2.7	0.60	0.01	120	4.0	88	61	0.2	0.2	409	15
11/25/92		9.7	779	1	4	150	2.7	0.20	0.00	120	2.0	66	74	0.1	0.4	408	19
01/28/93		10.0	763	2	3	150	2.7	0.36	0.01	110	3.0	70	61	0.0	0.3	434	15
05/26/93		10.2	788	0	5	170	2.0	0.08	0.00	110	3.0	74	88	0.0	0.3	402	21
03/21/94		9.8	751	3	2	150	1.2	0.09	0.02	96	5.0	70	104	0.4	0.4	410	16
01/13/95		9.5	731	2	4	160	3.1	0.69	0.00	110	11.0	40	148	0.1	0.3	518	18
04/22/95		7.4	802					0.64	0.03	180	5.0					521	100
05/09/95		9.1	687	2	4	140	2.3	0.28	0.00	120	9.0	16	181	2.0	0.3	428	18
02/13/98		9.2	883					0.18	0.02	220	5.0					574	47
NB0052	03/19/89	8.2	1350	22	11	237	2.7	0.63	0.00	221	38.0	20	307	0.0	0.3	732	102
	03/28/90	7.9	6720	196	249	1020	23.0	3.40	2.00	1100	2140.0	0	221	28.0	0.2	5230	1510
	08/06/90	7.5	5520	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	2870	83	67	430	13.0	0.30	0.00	430	710.0	1	19	7.9	0.6	1990	480
	03/16/92	8.9	2700	50	8	510	13.0	0.66	0.00	460	590.0	5	12	9.9	0.3	1600	160
	11/17/92	10.4	3990	140	0	620	14.0	0.28	0.01	1000	320.0	27	0	0.1	0.3	2330	360
	02/18/93	7.8	4780	240	0	740	14.0	0.12	0.01	1420	200.0	0	33	9.4	0.2	3000	590
	05/18/93	10.8	5110	230	14	700	13.0	0.14	0.00	1500	170.0	44	0	0.0	0.2	3250	630
	03/22/94	7.7	4930	240	15	720	9.8	0.75	0.02	1400	150.0	0	22	12.0	0.3	2960	660
	01/18/95	7.8	4390	180	118	680	8.2	0.56	0.05	1300	100.0	0	51	1.3	0.3	2720	920
	04/19/95	8.0	5670					0.76	0.07	1900	120.0					3690	910
	05/17/95	8.0	5250	53	150	840	39.0	0.28	0.03	1700	130.0	0	28	8.9	0.3	3630	730
03/16/98	7.6	4890					0.40	0.09	1700	0.0					3180	1600	
NB0053	03/19/90	6.7	35200	1580	1010	6440	78.0	4.60	3.20	13600	686.0	0	14	0.0	0.0	27800	8100
	12/17/90	6.8	34600	1500	640	5300	82.0	1.20	4.30	13000	560.0	0	33	0.0	0.0	27500	6400
	10/10/91	6.5	34600	1400	680	5900	0.8	0.90	4.00	13000	34.0	0	10	0.3	0.0	26200	6400
	02/07/92	6.7	34900	1400	570	5700	68.0	8.40	3.90	13000	540.0	0	18	0.1	0.0	25800	5900
	10/13/92	6.9	35300	1400	660	4800	57.0	2.00	3.80	13000	580.0	0	14	0.0	0.0	29100	6200

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
								(Total)										
NB0053	01/11/93	7.1	35200	1500	600	5800	67.0	2.00	3.70	13000	560.0	0	17	0.2	0.0	30100	6200	
	08/17/93	6.9	34700	1300	720	5700	62.0	0.68	3.90	13000	620.0	0	16	0.0	0.0	29300	6200	
	03/26/96	6.7	33000					4.30	3.10	13200	870.0					21500	8600	
	03/21/97	7.2	36900					1.20	1.70	14000	1600.0					23900	7700	
	03/23/89	7.3	27800	1570	644	3630	28.0	0.45	8.50	10000	1050.0	0	141	0.0	0.1	20800	6560	
	03/17/98	6.9	32400					1.00	0.90	13000	490.0					21000	6700	
NB0054	03/19/90	7.0	26300	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	25900	1670	249	3890	35.0	2.20	1.20	9580	198.0	0	10	0.0	0.0	20600	5240	
	10/10/91	6.8	25800	1400	300	3900	0.2	1.10	1.30	9500	58.0	0	11	0.2	0.0	18700	4700	
	02/21/92	7.0	25800	1400	270	3800	37.0	1.60	1.40	9100	180.0	0	16	0.5	0.0	18200	4500	
	09/14/92	7.5	26100	1300	330	3300	33.0	5.30	1.20	9500	240.0	0	28	0.0	0.0	21200	4640	
	01/11/93	7.4	26000	1300	390	3900	39.0	3.70	1.40	9200	280.0	0	17	0.1	0.0	20400	4900	
	08/19/93	7.5	25500	1300	400	4000	34.0	2.10	1.20	9400	320.0	0	24	0.0	0.0	18900	4800	
	03/26/96	7.9	24600					7.60	1.20	9500	540.0					16000	6050	
	03/17/98	7.9	24100					0.80	0.81	5000	420.0					15600	3300	
NB0055	04/03/89	8.4	745	16	4	156	2.0	4.20	0.09	21		26	368	0.4	0.3	488	58	
	03/09/90	8.7	665	5	5	154	3.9	0.50	0.00	33	2.4	37	293	0.1	0.4	384	33	
	12/18/90	8.8	663	9	2	170	2.7	0.43	0.01	40	2.0	16	348	0.0	0.3	410	32	
	10/21/91	8.7	686	6	1	160	3.0	0.48	0.01	48	3.0	28	300	0.3	0.3	390	21	
	12/03/92	8.9	922	5	2	150	2.3	0.20	0.01	54	2.0	35	237	0.1	0.3	446	21	
	02/02/93	8.6	708	2	2	160	2.3	0.14	0.02	56	2.0	24	256	1.1	0.3	428	15	
	06/22/93	8.7	726	2	10	160	3.9	0.12	0.00	57	2.0	26	295	0.6	0.3	482	48	
	04/27/94	8.9	727	2	7	170	2.0	0.74	0.00	67	2.0	58	252	1.1	0.2	418	34	
	12/14/94	8.7	770	4	6	180	3.1	0.92	0.04	77	1.0	26	298	0.8	0.2	454	31	
	04/18/95	8.0	781	4	4	170	2.0	0.38	0.00	80	2.0	0	347	0.9	0.3	448	26	
	03/06/96	8.7	832					0.08	0.01	100	2.0					540	42	
	02/17/98	8.5	876					0.20	0.00	120	1.0					569	40	
	NB0056	04/06/89	8.4	857	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	952	4	3	193	4.3	2.00	0.00	116	32.0	40	234	0.0	0.5	500	20
12/11/90		9.7	874	3	2	210	3.5	3.40	0.00	100	12.0	83	160	0.0	0.5	500	17	
10/17/91		9.6	863	1	2	150	5.6	7.50	0.00	98	2.0	129	54	0.3	0.4	436	11	
12/23/92		10.0	937	1	2	180	4.3	4.50	0.01	110	3.0	0	294	0.2	0.5	460	9	
02/22/93		10.0	1060	3	0	220	4.7	4.00	0.00	120	4.0	110	110	0.5	0.5	610	8	
06/18/93		11.7	6850	3	3	1200	38.0	4.90	0.00	1700	9.0	244	0	0.0	0.5	3520	17	
04/25/94		8.7	10400	200	160	1900	55.0	5.40	0.02	3500	35.0	9	137	37.0	0.3	6230	1200	
12/22/94		8.3	10490	35	93	1900	56.0	6.10	0.00	3500	38.0	3	113	38.0	0.4	6200	470	
04/20/95		7.4	16200	400	1100	1600	65.0	9.00	0.43	6200	140.0	0	69	5.1	0.2	9230	5400	
03/25/96		8.2	10900					0.06	0.31	3800	34.0					7080	1400	
06/18/97		7.3	19500					2.90	0.64	6980	240.0					12800	2560	
02/19/98		7.0	27000					4.30	3.70	10000	430.0					17600	4200	
NB0057	14491222	8.8	2110	12	27	340	6.6	0.24	0.01	540	9.0	18	156	0.1	0.2	1120	140	
	05/03/89	8.2	694	20	6	133	2.3	0.24	0.00	12	35.0	0	374	0.3	0.3	432	75	
	03/16/90	8.7	1030	12	3	214	4.7	0.48	0.00	152	49.0	43	195	2.7	0.3	570	44	
	01/22/91	9.3	1390	10	7	260	6.6	1.00	0.02	270	0.0	51	212	3.0	0.3	692	55	
	10/10/91	9.4	1340	2	14	270	8.2	1.10	0.02	270	3.0	94	122	0.2	0.2	708	63	
	02/23/93	8.2	3890	49	67	590	10.0	3.80	0.05	1110	25.0	0	133	3.1	0.2	2360	400	
	06/11/93	7.6	12300	390	490	1850	29.0	4.30	1.40	4120	190.0	0	218	0.2	0.2	8470	2990	
	04/07/94	7.8	13200	350	420	2100	55.0	1.10	1.80	4500	260.0	0	194	1.2	0.2	9420	2600	
	12/13/94	7.9	11270	340	210	1600	25.0	5.00	0.82	3800	160.0	0	146	1.9	0.2	7850	1700	
	04/24/95	8.1	12950	400	1300	1300	37.0	0.56	0.03	6000	260.0	0	340	0.3	0.2	9580	6400	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH	
								(Total)										
NB0057	03/25/96	8.1	7790					1.60	0.94	2600	100.0					5060	1300	
	06/11/97	8.1	5490					1.40	0.87	1730	34.0					3570	810	
NB0058	05/03/89	8.2	622	37	7	97	4.3	0.16	0.13	2	14.0	0	380	0.0	0.2	388	122	
	03/22/90	8.1	583	10	11	113	4.3	0.78	0.04	29	2.7	0	316	0.8	0.1	362	69	
	08/28/90	8.3	584	9	10	113	5.1	0.63	0.00	37	3.2	23	249	1.2	0.1	268	62	
	07/03/91	8.1	587	6	12	110	7.1	0.68	0.00	45	2.0	0	307	0.6	0.1	360	62	
	03/09/92	8.6	593	2	10	120	4.7	0.36	0.01	56	3.0	6	255	1.0	0.1	346	46	
	11/05/92	8.6	716	7	15	140	5.9	0.92	0.02	95	5.0	22	183	2.9	0.2	424	78	
	02/08/93	8.6	700	2	11	130	5.5	0.16	0.00	100	4.0	18	180	1.2	1.0	390	50	
	05/07/93	8.6	695	2	11	140	4.7	0.22	0.01	100	3.0	19	212	1.6	0.1	366	52	
	04/07/94	8.6	746	5	13	140	5.9	0.22	0.03	110	8.0	15	221	2.8	0.1	414	66	
	02/08/95	8.1	911	3	28	170	5.1	0.35	0.06	180	4.0	0	230	0.2	0.1	528	120	
	04/09/95	7.9	1250					14.00	0.09	310	32.0					813	260	
	05/08/95	8.4	908	10	21	170	4.3	0.62	0.62	200	4.0	25	190	2.2	0.1	590	110	
	03/09/98	7.8	1750					13.00	0.49	480	6.0					1140	340	
	NB0059	05/21/89	7.8	2230	124	54	271	5.5	0.56	1.00	514	22.0	0	314	1.8	0.1	1389	530
03/16/90		7.5	3400	202	60	366	9.4	0.72	0.01	1029	2.4	0	104	1.2	0.1	2118	752	
08/20/90		7.9	3110	212	40	373	8.6	0.36	0.91	1010	3.7	0	70	0.0	0.1	2120	694	
12/21/90		7.7	564	8	9	110	5.5	0.44	0.00	32	1.0	0	250	0.5	0.1	310	58	
01/27/92		6.8	3170	150	72	380	9.8	0.26	0.25	980	1.0	0	56	0.0	0.1	2020	670	
09/07/92		7.5	3130	160	55	340	8.2	0.18	0.06	990	2.0	0	17	0.0	0.1	2400	620	
10/16/92		7.7	3100	160	50	360	9.3	0.80	0.06	960	2.0	0	33	0.1	0.1	2010	610	
12/15/92		8.2	3170	170	40	350	11.0	0.47	0.03	960	2.0	0	22	1.4	0.1	2420	590	
08/11/93		7.2	3090	170	40	360	8.6	0.24	0.13	1000	2.0	0	20	1.7	0.1	2260	590	
12/12/94		7.3	10800	700	230	1100	22.0	0.79	2.10	3600	37.0	0	96	3.2	0.0	7280	2700	
03/06/96		6.9	3720					0.08	0.07	1200	37.0					2420	900	
03/19/97		7.5	4890					0.32	0.01	1600	7.0					3170	1200	
NB0060		06/15/89	8.0	587	49	24	46	4.3	0.32	0.01	21	20.0	0	307	1.2	0.8	366	221
		03/27/90	7.0	38100	784	1114	7130	95.0	23.00	3.30	14677	255.0	0	166	0.0	0.4	23736	6540
	08/15/90	7.2	37900	1450	895	7110	106.0	24.00	3.50	14900	270.0	0	582	0.0	0.5	29100	7300	
	01/17/91	7.3	32200	980	1000	6510	95.0	42.00	3.70	14900	170.0	0	250	0.0	0.2	28900	6550	
	10/11/91	6.9	38300	850	1100	6900	150.0	23.00	3.90	15000	10.0	0	535	0.3	0.4	29800	6700	
	01/28/92	7.7	10300	590	400	950	22.0	25.00	5.30	3400	110.0	0	154	4.6	0.3	9160	3100	
	12/22/92	7.8	8960	610	320	760	20.0	48.00	5.80	3000	160.0	0	62	0.6	0.3	7270	2800	
	01/20/93	8.0	7950	290	250	760	25.0	9.50	2.10	2600	29.0	0	188	5.1	0.5	6110	1800	
	08/20/93	7.9	12000	560	420	1300	27.0	6.70	3.80	4100	81.0	0	71	6.4	0.1	8970	3100	
	12/23/94	7.8	12800	720	260	1500	35.0	3.40	0.03	4400	190.0	0	39	0.1	0.0	9010	2900	
	03/20/96	7.9	8220					8.60	5.20	2800	37.0					5340	2700	
	12/18/96	7.6	9070					0.46	6.30	3000	46.0					5890	2700	
	03/18/98	7.2	8020					16.00	6.50	3000	20.0					5200	3300	
	NB0061	06/28/91	8.3	681	52	20	67	5.1	1.40	0.08	53	18.0	16	300	0.1	0.4	380	210
10/15/91		8.3	613	33	23	63	4.7	1.60	0.01	63	14.0	21	22	0.1	0.5	364	180	
01/23/92		8.3	567	14	26	76	4.7	1.80	0.01	62	2.0	9	217	0.2	0.5	296	140	
09/22/92		8.3	688	25	26	71	5.1	3.90	0.02	86	2.0	3	222	0.1	0.6	372	170	
01/26/93		8.4	756	37	26	81	5.5	1.80	0.07	99	3.0	2	243	0.3	0.6	456	200	
08/23/93		8.7	662	7	30	85	4.7	2.20	0.00	110	5.0	18	153	0.7	0.5	360	140	
03/29/96		7.7	21200					3.20	10.00	8100	250.0					13800	6400	
04/11/97		6.8	22400					13.00	15.00	7800	230.0					14600	6100	
03/18/98		7.0	20000					6.30	12.00	8700	200.0					13000	7100	

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
NB0066	03/13/98	7.5	23400					22.00	0.30	9400	440.0					15200	3200
NB0067	04/03/91	8.5	1590	39	13	250	2.3	0.72	0.04	370	76.0	5	118	0.8	0.3	874	150
	07/08/91	9.7	1300	0	71	180	6.5	0.29	0.00	180	25.0	29	32	0.1	0.4	740	29
	03/13/92	10.0	1370	18	2	250	3.1	0.61	0.00	340	4.0	55	0	0.2	0.3	824	52
	11/11/92	10.0	1320	5	0	250	3.5	1.30	0.02	350	6.0	37	8	0.1	0.5	648	12
	02/11/93	9.6	1290	3	2	260	3.9	0.10	0.03	340	6.0	26	29	0.3	0.5	656	16
	05/11/93	9.3	1310	4	3	270	3.9	0.64	0.00	350	6.0	15	60	0.0	0.4	662	22
	03/17/94	9.9	1460	9	3	270	3.1	0.61	0.00	380	10.0	22	16	0.0	0.4	798	36
	02/10/95	10.4	1410	2	22	270	3.9	1.00	0.01	400	10.0	41	120	0.1	0.4	770	95
	04/11/95	8.0	1390					1.20	0.02	400	15.0					904	64
	05/11/95	8.5	1290	12	1	280	12.0	3.20	0.01	390	12.0	5	90	0.4	0.5	838	33
	06/12/97	7.0	26200					60.00	7.40	9520	760.0					17000	6000
	03/16/98	7.5	24900					91.00	7.00	10000	480.0					16200	6600
NB0068	11/01/90	-8.1	566	23	8	100	3.5	0.80	0.01	10	35.0	0	300	0.4	0.4	360	91
	12/25/90	7.5	843	59	26	69	18.0	0.58	0.10	27	330.0	0	52	0.0	0.2	610	250
	10/17/91	9.1	459	9	1	74	12.0	0.50	0.01	24	130.0	5	41	0.1	0.2	277	26
	01/22/92	8.2	474	8	7	78	12.0	0.62	0.02	26	100.0	10	65	0.0	0.3	232	48
	09/23/92	10.0	444	4	0	8	9.4	0.88	0.00	25	51.0	43	34	0.1	0.3	216	9
	12/23/92	9.5	422	12	2	60	9.4	0.51	0.00	21	28.0	37	79	1.3	0.3	226	38
	08/29/93	9.1	416	1	1	90	9.4	0.58	0.00	19	12.0	15	171	1.1	0.3	256	7
	03/22/96	9.1	408					0.40	0.00	18	29.0					265	24
	03/15/97	8.9	449					0.12	0.01	15	2.0					291	25
NB0069	03/09/91	8.2	683	23	15	120	3.5	0.38	0.03	35	37.0	21	261	0.0	0.3	472	120
	07/09/91	8.8	590	6	9	96	11.0	0.46	0.00	68	36.0	4	158	0.0	0.3	350	54
	03/16/92	9.5	578	6	8	100	9.0	0.32	0.00	91	3.0	47	49	0.7	0.1	330	49
	02/19/93	9.9	595	5	1	120	6.6	0.01	0.01	110	7.0	44	38	0.3	0.3	410	15
	05/21/93	8.8	648	5	2	120	7.8	0.24	0.00	130	5.0	36	85	0.9	0.3	448	23
	11/26/93	9.2	589	3	3	120	6.6	0.88	0.00	110	5.0	18	92	0.1	0.3	304	18
	03/28/94	9.4	632	0	2	120	5.5	0.39	0.01	110	3.0	25	87	0.4	0.4	414	7
	01/26/95	9.6	630	2	1	130	3.5	1.10	0.00	120	4.0	29	79	0.6	0.4	356	7
	04/23/95	6.6	577					0.52	0.03	120	3.0					375	10
	05/12/95	9.6	585	2	1	120	13.0	0.48	0.00	120	4.0	5	126	2.1	0.4	354	9
	03/19/98	7.3	606					0.34	0.00		2.0					393	15
NB0070	04/23/91	8.5	547	10	2	110	1.6	0.80	0.03	45	18.0	19	191	0.2	0.2	350	32
	07/15/91	9.0	229	19	6	12	3.4	0.82	0.00	9	35.0	1	67	0.0	0.2	144	74
	03/18/92	8.4	146	11	3	16	3.1	0.94	0.01	10	5.0	3	60	0.7	0.1	81	41
	11/16/92	7.6	151	6	1	25	3.1	0.06	0.01	17	2.0	0	59	0.5	0.2	60	21
	02/16/93	8.5	154	6	1	28	2.0	0.22	0.05	16	2.0	4	48	0.6	0.2	126	18
	05/13/93	8.0	152	2	3	35	2.0	0.04	0.00	16	2.0	0	67	0.1	0.2	96	16
	03/25/94	8.7	199	2	1	46	3.5	0.11	0.01	17	7.0	5	74	0.4	0.2	100	10
	01/23/95	8.7	348	4	1	78	2.7	0.69	0.01	32	2.0	7	133	0.3	0.2	193	14
	04/19/95	8.6	1150					0.28	0.00	140	110.0					748	250
	05/19/95	8.6	375	2	1	85	3.9	0.38	0.00	35	3.0	5	162	1.3	0.2	308	7
NB0071	04/07/94	8.5	4280	43	110	620	20.0	0.34	0.14	1100	280.0	19	192	0.7	0.7	2590	550
	12/23/94	7.9	3400	86	62	560	9.4	0.86	0.27	930	68.0	0	289	0.1	0.8	2030	470
	06/14/95	8.2	3350	56	140	460	15.0	0.08	0.00	930	43.0	0	370	0.3	0.7	1880	700
	03/25/96	8.6	3130					0.18	0.04	950	2.0					2030	330
	06/11/97	8.6	3140					0.10	0.00	970	3.0					2040	380

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
NB0072	04/03/91	8.5	946	14	5	200	1.6	1.20	0.00	56	80.0	13	328	0.1	0.3	580	54
	07/11/91	9.1	643	1	3	130	5.0	4.80	0.00	52	49.0	5	200	0.0	0.4	364	14
	03/23/92	10.3	739	2	0	150	4.3	3.00	0.00	76	6.0	100	49	0.2	0.3	366	4
	11/17/92	7.9	5660	200	120	690	8.0	2.50	0.14	1860	21.0	0	31	0.2	0.2	4320	1000
	02/18/93	7.8	5730	250	110	740	8.6	0.34	0.28	1850	22.0	0	58	2.0	0.1	4000	1070
	05/18/93	7.8	5650	190	170	650	7.4	1.80	0.05	1800	14.0	0	24	0.0	0.1	4310	1200
	03/22/94	9.7	1070	2	7	200	4.7	0.77	0.01	210	7.0	55	88	0.1	0.3	560	28
	01/23/95	9.0	2920	88	10	460	4.7	2.50	0.00	910	3.0	6	14	0.0	0.2	1796	260
	04/19/95	7.0	1220					2.40	0.01	240	50.0					792	170
05/17/95	8.6	2510	12	45	420	4.7	2.40	0.00	840	5.0	2	22	0.9	0.2	1720	210	
NB0073	04/03/91	8.4	1170	27	10	230	0.8	0.09	0.00	84	140.0	17	349	0.1	0.4	730	110
	07/15/91	8.1	340	26	8	26	5.0	0.45	0.00	22	51.0	0	100	0.0	0.2	208	96
	03/18/92	7.9	325	18	5	39	6.3	0.84	0.01	0	40.0	0	91	1.6	0.2	185	67
	11/16/92	8.2	282	5	4	46	4.7	0.03	0.03	33	14.0	0	79	0.3	0.2	134	28
	02/16/93	8.4	290	8	3	51	4.7	0.30	0.00	36	10.0	8	74	0.2	0.2	192	32
	05/13/93	8.4	306	4	3	62	5.1	0.16	0.00	37	8.0	1	109	0.0	0.2	188	24
	03/25/94	8.7	389	0	2	80	7.4	0.17	0.01	44	3.0	6	157	0.2	0.2	250	10
	01/23/95	8.7	471	4	11	99	5.1	2.10	0.00	70	4.0	65	96	1.5	0.2	294	54
	04/19/95	8.2	1040					0.44	0.00	130	3.0					673	170
05/19/95	8.5	409	2	2	87	5.9	0.34	0.00	55	3.0	6	144	3.7	0.2	312	12	
NB0074	04/03/91	8.4	752	36	15	90	18.0	0.15	0.00	76	92.0	4	171	0.4	0.2	438	150
	07/15/91	8.6	661	16	3	93	9.6	0.39	0.00	170	8.0	1	39	0.0	0.1	362	53
	03/18/92	8.5	604	14	1	100	8.2	0.90	0.01	150	7.0	3	56	3.0	0.1	314	36
	11/16/92	7.9	572	5	1	100	7.4	0.12	0.01	140	5.0	0	52	0.7	0.2	268	16
	02/16/93	8.3	587	12	0	100	8.2	0.28	0.03	140	6.0	6	56	0.0	0.1	342	31
	05/13/93	8.2	605	9	3	110	7.0	0.16	0.00	140	6.0	0	81	0.0	0.2	334	34
	03/25/94	7.8	588	4	0	120	7.0	0.17	0.03	130	9.0	4	76	0.0	0.2	296	11
	01/23/95	8.4	556	9	1	110	4.3	0.44	0.00	100	7.0	3	114	0.2	0.2	290	24
	04/19/95	7.7	657					0.50	0.00	150	9.0					427	18
05/19/95	8.4	572	2	1	120	0.3	0.00	0.00	130	9.0	2	86	0.1	0.2	388	7	
NB0075	03/31/91	8.4	912	34	13	160	0.4	0.11	0.02	66	36.0	33	342	0.0	0.4	588	140
	07/09/91	9.6	206	5	1	28	5.0	1.20	0.00	26	20.0	2	33	0.0	0.2	116	15
	03/16/92	8.3	217	4	1	39	3.5	0.50	0.00	29	2.0	5	69	0.2	0.1	134	13
	02/19/93	9.6	242	5	0	48	3.5	0.27	0.01	34	3.0	20	38	0.3	0.3	236	13
	05/21/93	9.1	271	4	1	55	2.7	0.00	0.00	36	5.0	5	83	0.0	0.3	158	12
	11/26/93	9.4	230	5	1	44	2.0	0.55	0.00	33	2.0	14	43	0.1	0.2	96	18
	03/28/94	8.2	826	40	3	100	4.3	0.78	0.01	210	8.0	0	28	0.3	0.3	558	110
	01/26/95	9.0	685	29	4	110	2.3	2.50	0.00	180	12.0	2	45	1.0	0.3	380	89
	04/04/95	8.0	507					2.80	0.01	140	3.0					330	56
05/12/95	10.1	539	17	1	83	12.0	0.24	0.00	150	3.0	5	16	0.2	0.3	322	45	
03/19/98	8.2	500	1	0			1.30	0.00	140	4.0					325	45	
NB0076	08/19/93	8.4	1220	27	11	180	11.0	0.46	0.01	350	8.0	0	39	0.0	0.3	760	110
	03/26/96	6.6	1760					2.00	0.01	540	10.0					1140	200
NB0077	04/25/94	8.5	3620	16	22	620	32.0	1.30	0.00	1000	6.0	10	125	3.7	0.5	1980	130
	04/20/95	8.3	3530	32	54	610	22.0	0.94	0.04	1000	4.0	6	140	2.5	0.4	2370	300
	04/23/96	8.4	3270					0.92	0.00	1000	5.0					2120	44
	06/18/97	8.2	3340					0.28	0.02	1020	7.0					2170	86
	02/19/98	9.3	3160					0.78	0.00	990	4.0					2050	52

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
NB0078	02/18/93	7.9	809	25	7	160	4.3	2.30	0.07	74	3.0	0	332	12.0	0.3	526	93
	06/22/93	9.5	1100	4	6	240	3.5	2.90	0.00	150	28.0	84	211	0.0	0.4	650	37
	04/22/94	8.7	870	7	1	190	9.4	10.00	0.00	130	6.0	18	241	6.1	0.7	522	22
	12/12/94	8.3	856	7	4	180	8.2	4.60	0.00	140	5.0	0	267	7.2	0.8	566	32
	03/17/96	8.7	962					17.00	0.04	140	21.0					625	70
NB0079	09/11/92	7.7	16100	1200	440	1800	22.0	1.10	4.00	5600	570.0	0	129	1.2	0.2	12000	4800
	09/07/93	7.6	8660	470	140	990	17.0	0.56	0.09	2800	140.0	0	26	0.6	0.1	6950	1800
	03/28/96	7.2	9630					0.50	0.43	3400	35.0					6260	2000
	03/13/97	7.6	8630					0.24	0.03	2800	66.0					5610	1600
	12/22/95	7.8	8600	540	110	1100	15.0	0.32	0.05	2800	110.0	0	123	0.1	0.1	5990	1800
	03/17/98	10.4	1760					0.14	0.00	550	1.0					1100	160
NB0080	09/07/93	7.2	1800	840	240	2500	33.0	1.00	0.76	6300	87.0	0	19	0.5	0.0	14300	3100
	03/28/96	6.9	17100					0.50	0.17	6300	160.0					11100	3200
	03/13/97	8.0	18200					0.38	0.03	6200	120.0					11800	3000
	03/13/98	6.7	16700					1.60	0.05	6400	84.0					10800	3100
NB0081	09/03/93	8.2	1840	66	40	210	9.0	0.46	0.00	500	18.0	0	116	12.0	0.1	1250	330
	12/07/95	8.0	1360	52	17	230	8.2	0.23	0.04	480	1.0	0	81	0.3	0.4	848	200
	03/28/96	6.8	1160					1.70	0.01	340	5.0					760	110
	02/15/97	9.8	1210					0.14	0.00	320	1.0					786	84
	03/20/98	9.0	1040					0.54	0.00	320	2.0					676	83
NB0082	09/10/92	7.9	804	28	15	96	13.0	0.78	0.01	110	99.0	0	126	4.9	0.3	466	130
	11/25/92	7.8	309	12	7	34	14.0	0.34	0.02	34	30.0	0	65	7.6	0.4	170	57
	01/25/93	8.0	338	19	2	37	15.0	7.50	0.00	43	27.0	0	73	8.3	0.3	210	56
	05/24/93	7.8	532	13	7	69	12.0	0.06	0.01	83	44.0	0	78	21.0	0.3	308	62
	03/30/94	8.1	257	10	2	34	11.0	0.70	0.00	31	3.0	0	78	5.4	0.2	180	34
	02/07/95	7.8	248	7	4	35	7.4	0.38	0.01	34	7.0	0	80	4.8	0.2	148	32
	04/10/95	7.8	319					0.92	0.00	55	18.0					207	75
	05/15/95	8.6	490	6	1	90	12.0	0.14	0.00	93	6.0	2	89	26.0	0.3	312	20
	02/16/98	8.1	345					0.10	0.00	54	3.0					224	25
	03/13/98	6.8	8240					0.70	0.03	3000	62.0					5360	1900
NB0083	09/16/92	8.8	2090	33	37	340	5.5	0.51	0.00	610	34.0	0	81	0.3	0.8	1170	240
	11/25/92	8.0	1860	15	39	290	6.3	1.40	0.07	440	130.0	0	89	1.5	0.6	1040	200
	01/25/93	8.2	2110	45	32	330	5.9	0.44	0.02	560	120.0	0	65	0.4	0.6	1270	240
	05/24/93	8.1	1940	5	27	320	5.9	0.96	0.01	540	52.0	0	61	0.7	0.5	1070	120
	03/30/94	10.4	772	0	1	140	3.9	0.65	0.00	92	5.0	96	11	0.1	0.5	422	4
	02/07/95	10.0	2170	2	12	410	3.5	1.30	0.00	560	16.0	81	70	0.0	1.3	1120	56
	04/10/95	8.5	3660					3.00	0.01	1190	20.0					2380	670
	05/15/95	9.7	2200	2	16	430	1.2	1.10	0.00	610	24.0	32	158	0.4	1.1	1260	70
	02/16/98	7.1	19800					19.00	7.00	7200	180.0					12900	4900
NB0084	05/24/93	9.5	758	8	4	140	16.0	0.16	0.00	110	32.0	77	81	0.0	0.2	452	37
	03/30/94	9.2	933	3	1	170	13.0	0.22	0.00	100	39.0	40	221	1.3	0.3	602	12
	02/07/95	9.8	914	3	2	200	14.0	0.62	0.00	110	32.0	79	159	0.0	0.3	482	16
	05/15/95	9.1	820	1	27	190	8.6	0.20	0.01	110	32.0	37	248	1.0	0.3	614	36
	02/16/98	10.0	955					0.28	0.00	100	21.0					621	7

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

Well No.	Date (m/d/y)	pH	E.C.	Ca	Mg	Na	K	Fe	Mn	Cl	SO4	CO3	HCO3	NO3	F	TDS	TOH
								(Total)									
NB0085	09/08/92	9.6	434	2	1	91	4.7	3.80	0.00	26	4.0	39	123	1.5	0.9	248	8
	09/06/93	8.7	423	1	0	97		5.90	0.62	25	2.0	6	203	1.8	0.7	280	4
NB0086	04/05/95	8.0	499	45	22	39	8.6	0.02	0.02	18	13.0	0	290	0.4	0.4	310	210
	04/11/97	8.5	2180					0.20	0.00	360	6.0					1420	680
NB0087	03/05/95	8.0	496	36	20	64	7.4	0.46	0.02	32	21.0	0	287	2.8	0.8	338	170
	04/22/97	8.4	314					0.30	0.00	6	1.0					204	120
NB0088	06/02/95	8.6	840	24	16	160	4.3	0.90	0.01	75	53.0	17	319	8.7	2.0	582	130
	04/23/97	9.4	1320					0.32	0.00	290	2.0					858	34
NB0089	06/06/95	8.0	496	48	15	30	3.5	0.12	0.01	20	11.0	0	248	0.3	0.7	304	180
	04/23/97	8.7	319					0.18	0.00	18	1.0					207	92
NB0090	06/23/95	7.5	364					0.68	0.00	11						237	160
	04/22/97	8.4	376					0.24	0.01	15	1.0					244	160
NB0091	08/01/95	7.7	736					0.38	0.00	72						478	340
	04/22/97	8.0	793					0.38	0.13	85	1.0					515	340
NB0092	08/05/95	8.5	596					2.90	0.00	14						387	40
	04/22/97	9.4	909					0.22	0.00	150	2.0					590	68