

APPENDIX

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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**APPENDIX A**  
**LITHOLOGIC LOG DATA**

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**Well C0791**

**Location:** Ban Talat Klang Kasettakon, Mu Thi 2, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 105 m.

		<b>Depth (m)</b>	
<b>Lithologic</b>		<b>from</b>	<b>to</b>
Silt:	bluish green, gravelly.	0	6
Silt:	yellowish brown, sandy.	6	11
Silt & sand:	yellowish brown, gravelly, very fine sand to very fine gravel, subangular, poorly sorted, consists of 50% silt, 50% sand, composed of quartz, feldspars.	11	63
Sand:	yellowish brown, gravelly, silty, very fine sand to very fine gravel, subangular, poorly sorted, composed of quartz, feldspars.	63	68
Silt & sand:	bluish green, gravelly, very fine sand to very fine gravel, subangular, poorly sorted, consists of 50% silt, 40% sand, composed of quartz, feldspars.	68	99
Shale:	black, brittle, composed of siltstone interbedded, slightly weathered to moderately weathered.	99	105

**Well DJ0014**

**Location:** Wat Nong Krapho, Mu Thi 3, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 105 m.

		<b>Depth (m)</b>	
<b>Lithologic</b>		<b>from</b>	<b>to</b>
Clay:	brownish gray, slightly plastic.	0	2
Clay:	black, slightly plastic to plastic.	2	8
Clay:	brownish gray, slightly plastic.	8	9
Clay:	brownish orange.	9	14
Clay:	light brownish gray and yellowish brown, sandy, gravelly.	14	77
Shale:	black, clayey, slightly weathered to moderately weathered,	77	105

hard to moderately hard.

### Well DJ0030

**Location:** Ban Kan Khlongi, Mu Thi 2, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 105 m.

		Depth (m)	
<b>Lithologic</b>		<b>from</b>	<b>to</b>
Top soil:	top soil.	0	1.5
Clay:	clay.	1.5	13.7
Laterite:	laterite.	13.7	30.4
Laterite:	laterite.	30.4	33.5
Clay:	sandy clay.	33.5	38.1
Clay & sand:	clay + sand.	38.1	39.6
Clay:	clay.	39.6	60.9
Clay:	clay.	60.9	80.7
Limestone:	limestone.	80.7	94.5
Limestone:	limestone.	94.5	105

### Well DJ0083

**Location:** Ban Mu Yai, Mu Thi 1, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 111 m.

		Depth (m)	
<b>Lithologic</b>		<b>from</b>	<b>to</b>
Clay:	gray and yellowish brown, slightly plastic.	0	32
Sand:	yellowish brown, medium sand, composed of quartz, feldspars.	32	38
Sand:	yellowish brown, moderately clayey, very fine sand to coarse sand, nonplastic, moderately compacted.	38	83
Sand & clay:	yellowish brown, medium sand to coarse sand, composed of quartz.	83	90

-:	gray, composed of quartz, feldspars, dark minerals, partially weathered, stiff to very hard.	90	93
Sand:	yellowish brown, moderately clayey, very fine sand to coarse sand.	93	102
-:	gray, composed of quartz, feldspars, dark minerals, partially weathered, stiff to very hard.	102	111

### Well DJ0144

**Location:** Ban Samnakwipatsana Sontawi, Mu Thi 2, Samet Nua Sub-district,  
Bang Khla District, Chachoengsao.

**Depth:** 144 m.

		Depth (m)	
	<b>Lithologic</b>	<b>from</b>	<b>to</b>
Clay:	grayish brown and dark brownish pink, slightly sandy, slightly plastic to plastic.	0	21
Sand:	yellowish orange, slightly clayey, fine sand to very coarse sand, subangular to subrounded, poorly sorted to moderately sorted, composed of quartz, dark minerals, feldspars.	21	26
Clay:	light yellowish orange, slightly sandy, moderately sandy, slightly plastic to plastic.	26	48
Sand & gravel:	light yellowish orange, slightly clayey, fine sand to very fine gravel, subangular to subrounded, poorly sorted to moderately sorted, composed of quartz, feldspars, dark minerals.	48	71
Limestone:	blackish brown, brittle, moderately gravelly, composed of rock fragments, quartz, moderately weathered, moderately hard.	71	144

**Well DJ0270**

**Location:** Wat Bang Ka Phoe, Mu Thi 6, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 125 m.

<b>Lithologic</b>		<b>Depth (m)</b>	
		<b>from</b>	<b>to</b>
Top soil:	top soil.	0	1.5
Clay:	clay.	1.5	13.8
Clay & gravel:	clay + gravel.	13.8	22.8
Clay:	clay.	22.8	45
Gravel:	gravel.	45	50
Gravel:	gravel.	50	55.5
Clay:	clay.	55.5	64.5
Gravel & clay:	gravel + clay.	64.5	73.8
Clay:	clay.	73.8	87
Shale:	shale.	87	90
Shale:	shale.	90	125

**Well DJ0431**

**Location:** Ban Plai Kong School, Mu Thi 4, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 76 m.

<b>Lithologic</b>		<b>Depth (m)</b>	
		<b>from</b>	<b>to</b>
Top soil:	top soil.	0	1.5
Clay:	clay.	1.5	33
Sand:	sand.	33	45
Gravel & clay:	gravel + clay.	45	69
Clay:	clay.	69	76

**Well DMR0126**

**Location:** Ban Samyak Nong Pratapian, Tha Thong Lang Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 48 m.

<b>Lithologic</b>		<b>Depth (m)</b>	
		<b>from</b>	<b>to</b>
Clay:	dark brown, plastic, compacted.	0	6
Clay:	moderated reddish brown, plastic, compacted.	6	12.1
Clay:	yellowish brown, limonite stained, plastic, compacted.	12.1	39.6
Limestone:	whitish brown, brittle, compacted, weathered.	39.6	50.9

**Well MD0572**

**Location:** Ban Tha Ratat School, Mu Thi 5, Tha Thong Lang Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 75 m.

<b>Lithologic</b>		<b>Depth (m)</b>	
		<b>from</b>	<b>to</b>
Clay:	brownish gray and black, silty, sandy, slightly plastic.	0	5
Clay:	brown, plastic.	5	12
Clay:	yellowish brown, silty, sandy, slightly plastic.	12	26
Gravel:	brownish pink, sandy, silty, very fine gravel, subangular to subrounded, moderately sorted, composed of quartz, chert fragments.	26	32
Clay:	yellowish brown, slightly plastic.	32	36.5
Gravel:	yellowish brown, sandy, silty, very fine gravel, subangular to sub rounded, moderately sorted, composed of quartz, chert fragments	36.5	45.7
Gravel & clay:	yellowish brown, very fine gravel to fine gravel subangular, consists of 55% gravel, 45% clay, composed of quartz, chert.	45.7	51.8
Gravel:	yellowish brown, very fine gravel to fine gravel subangular, well sorted, composed of quartz, chert.	51.8	54.8
Sand:	yellowish brown and yellow, gravelly, clayey, medium	54.8	62.5

sand to coarse sand, subangular to subrounded, poorly sorted, composed of quartz, chert.

Sand & gravel: yellow, clayey, medium sand to very fine gravel, 62.5 70.1  
subangular to subrounded, poorly sorted to moderately sorted, composed of quartz.

Clay: yellowish brown and light yellowish brown, sand, gravelly, 70.1 75  
slightly plastic.

#### Well X0725

**Location:** Ban Wat Samet Nua School, Mu Thi 1, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 99 m.

**Depth (m)**

#### Lithologic

**from to**

Clay:	gray, slightly sandy, nonplastic.	0	8
Gravel:	grayish brown, moderately gravelly, moderately clayey, medium sand to very coarse sand, subangular to rounded, moderately sorted, composed of quartz, feldspar.	8	99

#### Well X0726

**Location:** Ban Sutachot Prachasan School, Mu Thi 4, Tha Thong Lang Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 99 m.

**Depth (m)**

#### Lithologic

**from to**

Silt:	light yellowish brown and light orangish brown, slightly sandy, slightly clayey.	0	41
Gravel:	gray and yellowish brown, moderately clayey, slightly sandy, very fine gravel to fine gravel, subangular to subrounded, moderately sorted, composed of quartz, slate.	41	68
Shale:	blackish brown, silky luster, slightly weathered to	68	99

moderately weathered, hard.

#### Well TV0387

**Location:** Bang Khla Royal Development Project, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 178 m.

	<b>Lithologic</b>	<b>Depth (m)</b>	
		<b>from</b>	<b>to</b>
Top soil:	top soil.	0	12
Sand & gravel:	light yellowish brown, fine sand to medium sand, subangular to subrounded, composed of quartz.	12	28.5
Sand & gravel:	reddish brown, fine sand, subrounded, composed of quartz.	28.5	45
Sand & gravel:	yellowish brown, fine sand to medium sand, subangular to subrounded, composed of quartz.	45	54
Sand & gravel:	reddish brown, fine sand, subrounded, composed of quartz.	54	66
Gravel & weathered sandstone:	yellowish brown, fine grain, subrounded, composed of quartz	66	78
Gravel & weathered shale:	dark brown, subrounded.	78	87
Calcareous shale interbedded sandstone:	brownish black, slightly calcareous, composed of calcite, quartz, and clay mineral, slightly weathered to moderately weathered, hard to very hard	87	178

#### Well TV0390

**Location:** Bang Khla Royal Development Project, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 120 m.

	<b>Lithologic</b>	<b>Depth (m)</b>	
		<b>from</b>	<b>to</b>
Clay:	dark gray.	0	9
Clay:	brownish gray.	9	61.5
Sand & gravel:	brown.	61.5	72
Sand & gravel:	brownish gray.	72	111

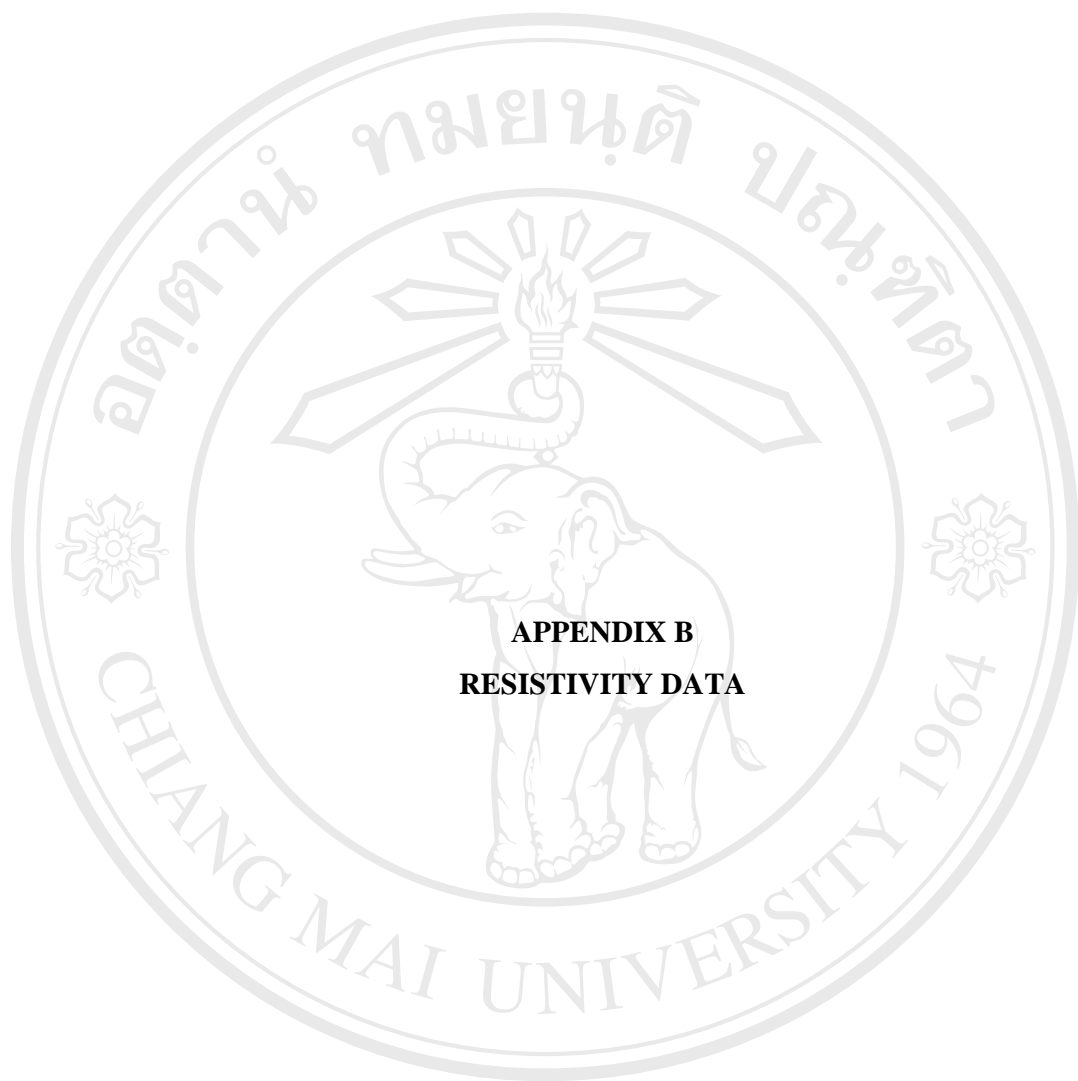
Shale: gray. 111 120

**Well TV0391**

**Location:** Bang Khla Royal Development Project, Samet Nua Sub-district, Bang Khla District, Chachoengsao.

**Depth:** 162 m.

<b>Lithologic</b>		<b>Depth (m)</b>	
		<b>from</b>	<b>to</b>
Clay:	gray.	0	21
Sand:	fine-medium sand, brown.	21	50.5
Sand:	fine-medium sand, yellowish brown.	50.5	60
Sand:	medium sand, yellowish brown.	60	100.5
Shale:	light gray.	100.5	162



**APPENDIX B**  
**RESISTIVITY DATA**

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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**APPENDIX B1**  
**RESISTIVITY FIELD DATA**

AB/2 (m)	MN (m)	K	Resistivity (Ohm-m)						
			ST 1	ST 2	ST 3	ST 4	ST 5	ST 6	ST 7
1	0.5	5.9	209.0	57.0	11.3	14.5	17.8	19.6	27.3
1.5	0.5	13.7	218.0	20.0	11.7	14.4	14.7	18.1	29.3
2	0.5	24.7	211.0	13.0	11.1	14.4	13.3	16.2	26.1
3	0.5	56.1	199.0	11.2	9.9	13.7	10.9	13.0	21.0
3	2.0	12.6	181.0	12.2	9.8	12.3	11.2	14.9	21.0
5	2.0	37.7	51.0	8.7	7.0	9.7	7.3	9.3	11.2
7	2.0	75.4	13.0	6.8	5.7	7.3	5.2	6.0	6.6
10	2.0	155.4	9.0	5.1	4.3	5.3	3.9	4.3	4.4
10	5.0	47.6	8.5	5.6	4.4	5.5	4.1	4.6	4.7
15	5.0	113.0	4.8	3.4	3.0	3.4	2.9	3.0	3.0
20	5.0	204.6	4.4	3.1	2.7	3.2	2.8	2.9	2.9
25	5.0	322.4	3.7	2.2	2.6	3.2	3.0	2.9	3.0
30	5.0	466.3	3.6	3.0	2.7	3.3	3.1	3.1	3.0
35	5.0	636.4	3.4	3.1	2.7	3.5	3.3	3.2	3.2
40	5.0	832.6	3.4	3.2	2.8	3.7	3.4	3.3	3.4
45	5.0	1055.0	3.4	3.3	2.7	3.9	3.4	3.4	3.5
50	5.0	1303.6	3.4	3.4	2.8	4.1	3.6	3.4	3.7
50	20.0	376.8	3.2	3.4	3.0	3.9	3.6	3.6	3.6
60	20.0	549.5	3.4	3.8	3.4	4.4	3.9	3.9	4.0
70	20.0	753.6	3.5	4.1	3.7	4.9	4.2	4.4	4.5
80	20.0	989.1	3.8	4.4	4.1	5.1	4.6	4.8	4.7
90	20.0	1256.0	3.8	4.8	4.4	5.7	5.0	5.3	5.3
100	20.0	1554.3	4.0	5.1	4.6	6.2	5.6	5.6	5.6
125	20.0	2437.4	5.0	5.8	4.8	7.1	5.1	6.3	6.6
150	20.0	3516.8	6.0	6.7	6.0	8.0	6.6	7.7	7.0

Appendix B1: (Continued).

AB/2 (m)	MN (m)	K	Resistivity (Ohm-m)						
			ST 8	ST 9	ST 10	ST 11	ST 12	ST 13	ST 14
1	0.5	5.9	20.6	66.0	15.5	22.3	8.1	9.8	6.5
1.5	0.5	13.7	14.4	33.0	14.9	15.5	9.1	8.8	7.4
2	0.5	24.7	11.6	14.0	4.1	11.2	9.1	8.9	7.7
3	0.5	56.1	9.0	10.5	12.5	8.9	8.3	8.7	8.6
3	2.0	12.6	10.8	9.8	12.6	11.6	8.8	8.1	7.9
5	2.0	37.7	6.1	6.8	9.7	8.1	7.1	6.5	7.8
7	2.0	75.4	4.6	6.9	7.1	7.0	5.4	5.5	6.8
10	2.0	155.4	4.0	5.1	5.2	6.7	3.8	4.0	4.9
10	5.0	47.6	3.8	5.1	5.3	7.0	4.2	4.1	5.1
15	5.0	113.0	3.0	3.4	3.1	3.6	2.7	2.6	2.9
20	5.0	204.6	3.0	2.9	2.9	2.9	2.5	2.5	2.6
25	5.0	322.4	2.9	2.9	2.9	2.9	2.5	2.5	2.4
30	5.0	466.3	2.9	2.9	3.0	3.0	2.6	2.5	2.5
35	5.0	636.4	3.0	2.9	3.1	3.1	2.9	2.7	2.7
40	5.0	832.6	3.2	3.0	3.2	3.2	2.9	2.9	2.7
45	5.0	1055.0	3.3	3.0	3.3	3.4	3.9	2.8	2.9
50	5.0	1303.6	3.4	3.1	3.4	3.7	3.3	2.6	2.9
50	20.0	376.8	3.5	3.2	3.2	3.2	3.3	3.2	3.2
60	20.0	549.5	3.9	3.7	3.6	3.5	3.9	3.7	3.6
70	20.0	753.6	4.1	4.2	4.0	3.9	4.0	3.8	3.9
80	20.0	989.1	4.5	4.6	4.3	4.2	4.4	4.1	4.1
90	20.0	1256.0	4.9	4.9	4.6	4.5	4.8	4.6	4.4
100	20.0	1554.3	5.4	5.7	4.9	4.8	4.9	4.6	4.6
125	20.0	2437.4	6.6	7.0	5.6	5.4	6.6	5.8	5.6
150	20.0	3516.8	6.6	9.5	7.0	6.3	7.0	5.9	7.7

Appendix B1: (Continued).

AB/2 (m)	MN (m)	K	Resistivity (Ohm-m)						
			ST 15	ST 16	ST 17	ST 18	ST 19	ST 20	ST 21
1	0.5	5.9	11.9	19.3	17.0	23.5	24.3	16.0	34.0
1.5	0.5	13.7	10.9	18.4	16.6	19.2	14.5	12.5	18.9
2	0.5	24.7	11.4	17.7	12.6	14.7	11.1	11.4	12.0
3	0.5	56.1	9.9	13.7	8.9	9.8	8.5	9.0	8.6
3	2.0	12.6	9.8	14.8	8.8	11.0	10.3	8.3	6.7
5	2.0	37.7	7.8	10.4	5.7	7.0	7.1	4.8	4.6
7	2.0	75.4	6.8	7.8	4.8	5.7	5.6	5.2	4.4
10	2.0	155.4	5.1	5.1	3.9	4.0	4.3	4.5	4.0
10	5.0	47.6	5.8	5.5	4.4	4.7	4.1	4.3	4.0
15	5.0	113.0	3.4	3.0	1.9	2.7	2.6	2.9	3.2
20	5.0	204.6	3.2	2.5	1.9	2.1	2.3	2.5	2.8
25	5.0	322.4	3.2	2.5	1.9	2.0	2.2	2.4	2.8
30	5.0	466.3	3.2	2.6	1.9	2.0	2.2	2.4	2.4
35	5.0	636.4	3.3	2.7	2.4	2.2	2.3	2.4	2.7
40	5.0	832.6	3.4	2.5	2.5	2.3	2.4	2.6	2.6
45	5.0	1055.0	3.5	2.7	2.3	2.4	2.4	2.7	2.6
50	5.0	1303.6	3.5	2.8	2.2	2.5	2.6	2.8	2.9
50	20.0	376.8	3.3	2.8	2.4	2.8	2.7	2.9	3.1
60	20.0	549.5	3.7	3.3	2.6	2.1	3.0	3.2	3.7
70	20.0	753.6	4.2	3.6	2.7	3.4	2.3	3.4	4.5
80	20.0	989.1	4.5	3.9	2.9	3.8	3.6	3.7	4.5
90	20.0	1256.0	4.9	4.1	3.1	4.1	4.1	4.1	5.5
100	20.0	1554.3	5.3	4.8	3.4	4.3	4.5	4.3	5.3
125	20.0	2437.4	5.3	6.8	4.6	5.1	5.1	4.9	6.6
150	20.0	3516.8	7.0	7.0	6.3	5.9	5.9	5.6	8.0

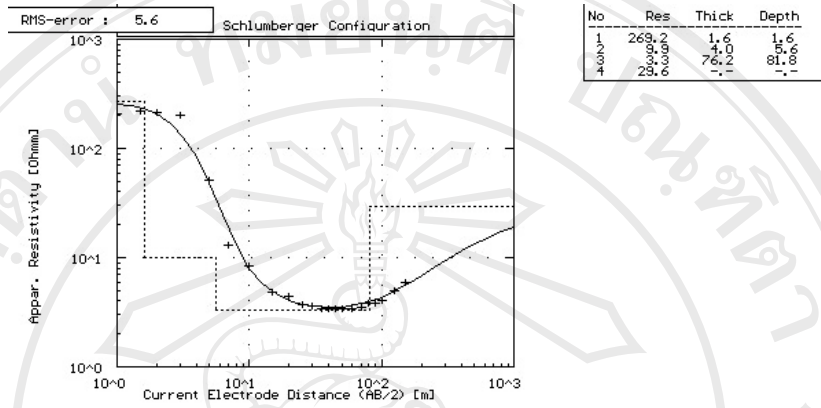
Appendix B1: (Continued).

AB/2 (m)	MN (m)	K	Resistivity (Ohm-m)						
			ST 22	ST 23	ST 24	ST 25	ST 26	ST 27	ST 28
1	0.5	5.9	30.0	19.0	35.1	35.8	33.0	53.0	199.7
1.5	0.5	13.7	19.2	14.4	20.5	25.7	26.0	25.0	76.63
2	0.5	24.7	13.0	12.2	17.7	18.6	21.0	20.0	21.93
3	0.5	56.1	8.3	9.7	14.6	15.3	13.4	16.0	9.34
3	2.0	12.6	10.0	12.2	18.7	15.1	16.7	15.4	11.18
5	2.0	37.7	5.8	9.2	13.6	10.0	11.0	11.0	7.38
7	2.0	75.4	4.5	6.6	10.0	7.8	7.9	9.0	5.45
10	2.0	155.4	4.0	4.7	6.6	4.9	5.0	6.3	3.9
10	5.0	47.6	3.8	5.3	7.1	5.1	5.2	5.8	3.67
15	5.0	113.0	3.1	3.1	4.0	3.1	3.0	2.9	2.74
20	5.0	204.6	3.0	2.8	3.4	2.9	2.7	2.5	2.57
25	5.0	322.4	2.7	2.8	3.2	2.9	2.7	2.5	2.72
30	5.0	466.3	3.0	2.8	3.0	3.0	3.4	2.6	2.63
35	5.0	636.4	3.1	2.9	3.2	2.9	3.3	2.6	3.13
40	5.0	832.6	3.0	3.0	3.2	3.1	3.2	3	3.1
45	5.0	1055.0	2.9	3.3	3.5	3.4	3.0	2	3.2
50	5.0	1303.6	3.7	3.4	3.6	3.6	3.6	3.3	3.4
50	20.0	376.8	3.5	3.4	3.6	3.3	3.2	3.3	3.3
60	20.0	549.5	3.8	3.6	3.9	3.9	3.3	3.7	3.5
70	20.0	753.6	4.2	3.9	4.3	4.2	3.7	3.8	3.5
80	20.0	989.1	4.5	4.1	4.5	4.2	4.0	4.1	3.5
90	20.0	1256.0	4.1	4.4	5.2	4.7	4.5	4.5	3.8
100	20.0	1554.3	4.7	4.6	5.5	4.9	4.8	5.3	4.0
125	20.0	2437.4	5.1	5.3	6.0	5.6	5.1	5.6	4.4
150	20.0	3516.8	6.6	5.9	6.3	6.3	6.0	6.7	4.9

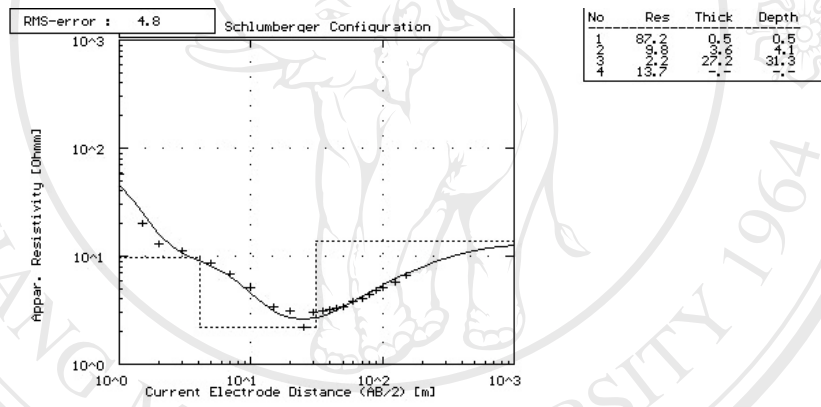
Appendix B1: (Continued).

AB/2 (m)	MN (m)	K	Resistivity (Ohm-m)						
			ST 29	ST 30	ST 31	ST 32	ST 33	ST 34	ST 35
1	0.5	5.9	79.0	12.4	27.0	610	825	13.5	8.4
1.5	0.5	13.7	44.0	14.2	29.0	169	196	11.4	7.8
2	0.5	24.7	29.0	15.5	30.0	81	69.7	10.5	7.9
3	0.5	56.1	21.0	15.8	27.0	29	31.0	9.6	7.9
3	2.0	12.6	26.0	18.8	25.6	38	31.0	8.4	7.7
5	2.0	37.7	15.0	16.6	17.8	21	16.0	8.0	6.8
7	2.0	75.4	12.0	11.5	11.6	13.4	10.5	7.5	6.1
10	2.0	155.4	8.8	7.4	6.9	6.7	6.1	6.4	5.0
10	5.0	47.6	8.9	7.7	7.2	7.4	6.9	6.7	5.2
15	5.0	113.0	4.2	3.7	3.4	2.6	3.2	3.8	3.0
20	5.0	204.6	3.2	3.4	2.9	2.3	3.1	3.1	2.7
25	5.0	322.4	3.0	3.5	2.8	2.3	3.2	2.8	2.6
30	5.0	466.3	3.0	3.2	2.8	2.5	3.5	2.8	2.6
35	5.0	636.4	2.8	3.0	2.9	2.4	3.8	2.8	2.7
40	5.0	832.6	2.7	2.8	2.4	2.9	4.1	3.1	2.9
45	5.0	1055.0	2.9	2.7	2.6	2.6	5.0	3.0	3.0
50	5.0	1303.6	2.8	2.4	2.3	2.5	4.5	3.3	3.1
50	20.0	376.8	3.0	3.1	3.3	3.3	4.0	3.5	3.2
60	20.0	549.5	3.0	3.0	3.5	3.5	4.3	4.0	3.2
70	20.0	753.6	3.5	3.0	4.0	3.8	5.2	4.5	3.4
80	20.0	989.1	3.7	3.3	4.5	4.0	6.5	5.1	3.9
90	20.0	1256.0	3.9	3.3	5.1	4.6	6.2	5.3	4.2
100	20.0	1554.3	4.2	3.4	5.6	4.5	7.3	5.6	4.9
125	20.0	2437.4	5.6	4.1	5.6	5.4	7.8	5.8	5.6
150	20.0	3516.8	8.4	4.2	6.7	5.6	9.8	5.9	7.4

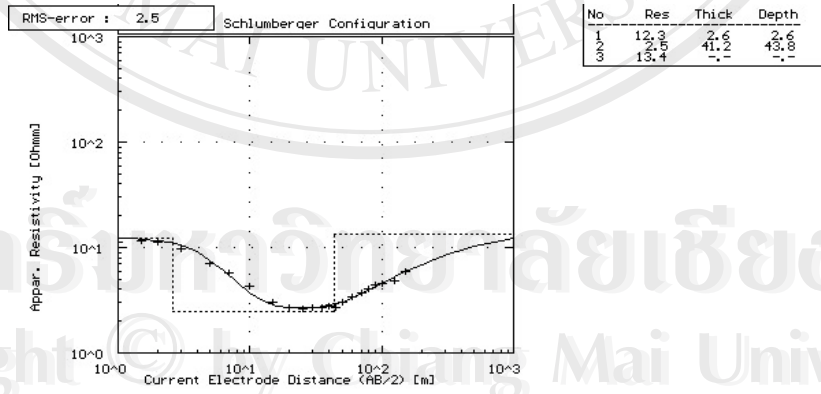
**APPENDIX B2**  
**RESISTIVITY MODEL DATA**



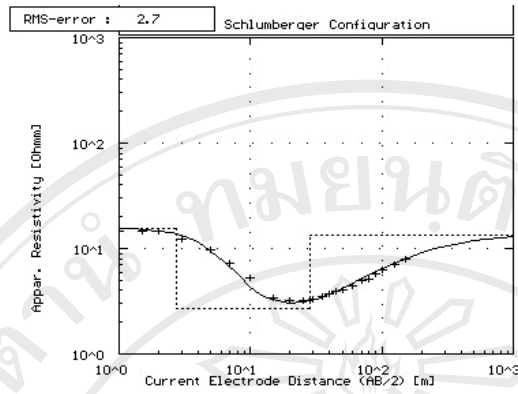
ST1



ST2

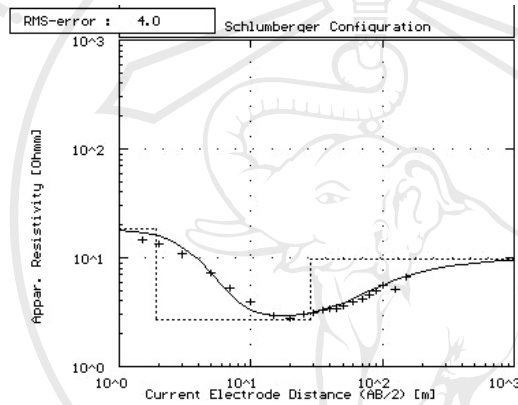


ST3



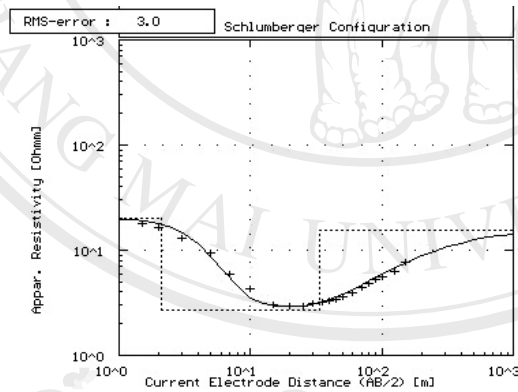
No	Res	Thick	Depth
1	15.5	2.7	2.7
2	2.7	25.6	28.3
3	13.4	-	-

ST4



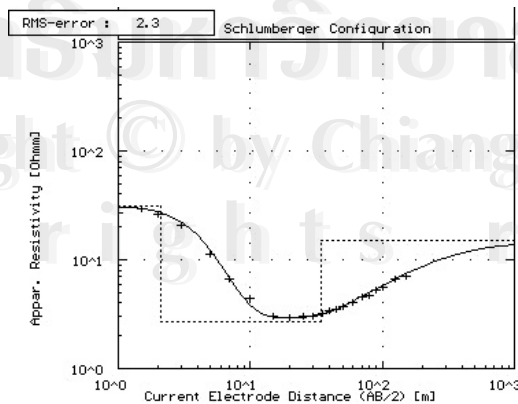
No	Res	Thick	Depth
1	18.2	1.9	1.9
2	2.7	26.4	28.3
3	9.7	-	-

ST5



No	Res	Thick	Depth
1	20.1	2.1	2.1
2	2.7	31.5	33.7
3	15.3	-	-

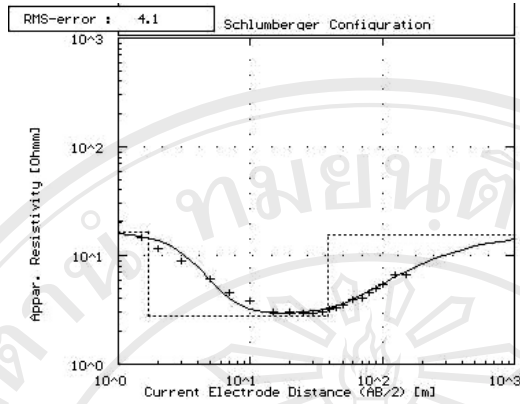
ST6



No	Res	Thick	Depth
1	31.3	2.1	2.1
2	2.7	32.3	34.4
3	14.9	-	-

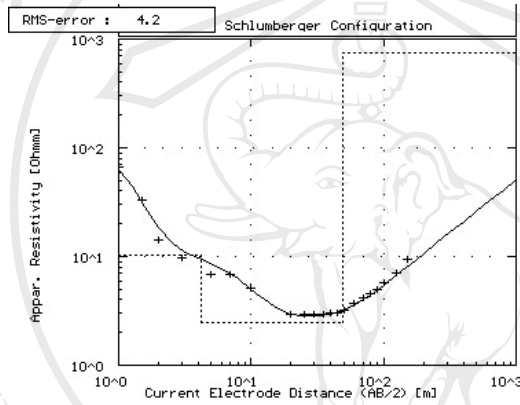
ST7

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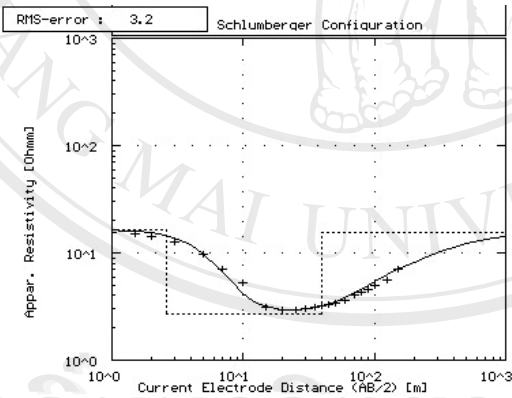
No	Res	Thick	Depth
1	16.4	1.7	1.7
2	27.8	36.6	38.3
3	15.3	-	-

ST8



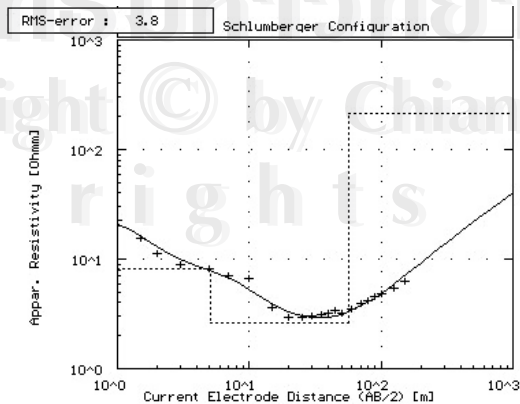
No	Res	Thick	Depth
1	125.2	0.5	0.5
2	10.6	3.7	4.2
4	756.1	-	-

ST9



No	Res	Thick	Depth
1	16.4	2.6	2.6
2	27.8	36.6	38.2
3	15.7	-	-

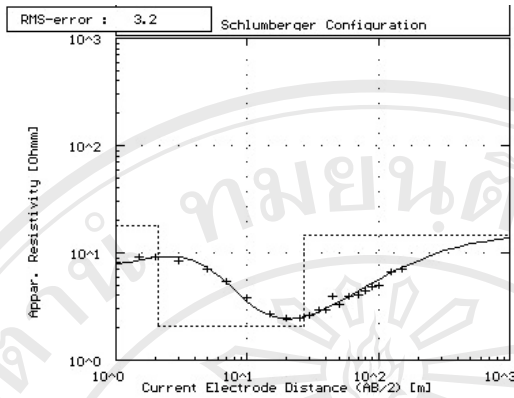
ST10



No	Res	Thick	Depth
1	25.3	0.7	0.7
2	9.1	4.4	5.1
4	212.4	-	-

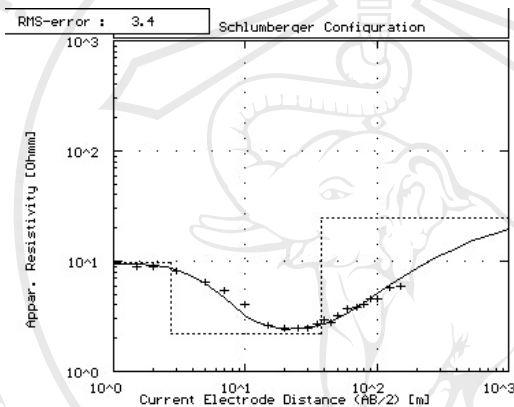
ST11

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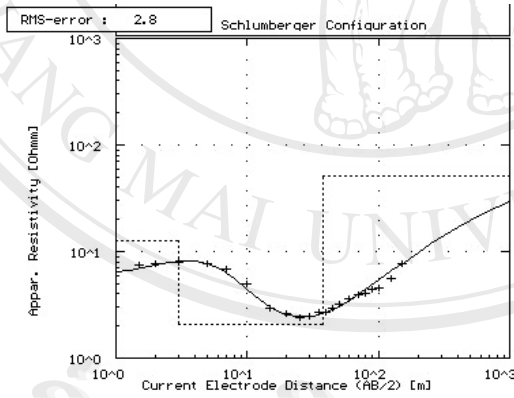
No	Res	Thick	Depth
1	7.3	0.9	0.9
2	17.7	1.2	2.1
3	2.1	25.1	27.2
4	14.8	--	--

ST12



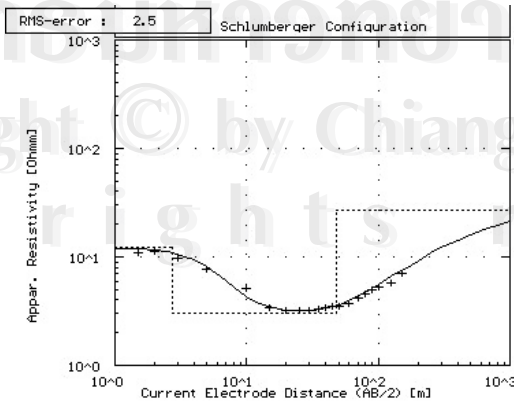
No	Res	Thick	Depth
1	9.6	2.7	2.7
2	3.6	35.5	38.2
3	24.5	--	--

ST13



No	Res	Thick	Depth
1	5.9	0.9	0.9
2	12.6	2.1	3.0
3	2.1	35.1	38.1
4	51.7	--	--

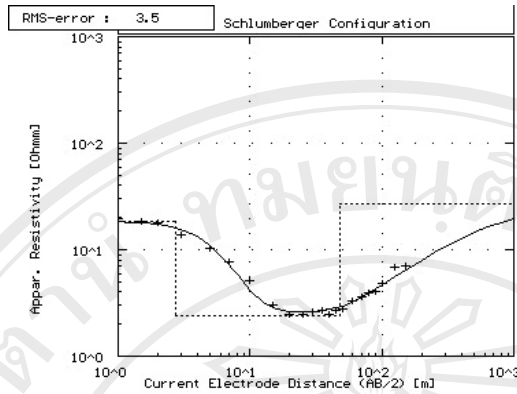
ST14



No	Res	Thick	Depth
1	12.1	2.7	2.7
2	3.0	45.6	48.3
3	26.8	--	--

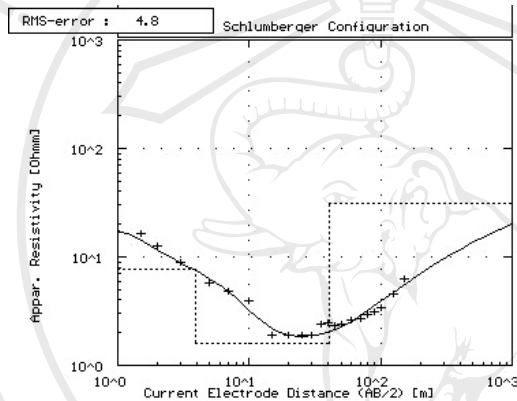
ST15

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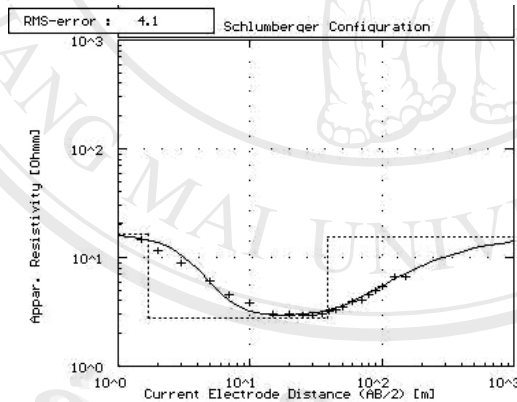
No	Res	Thick	Depth
1	18,4	2,7	2,7
3	2,4	44,8	47,5
4	26,7	-	-

ST16



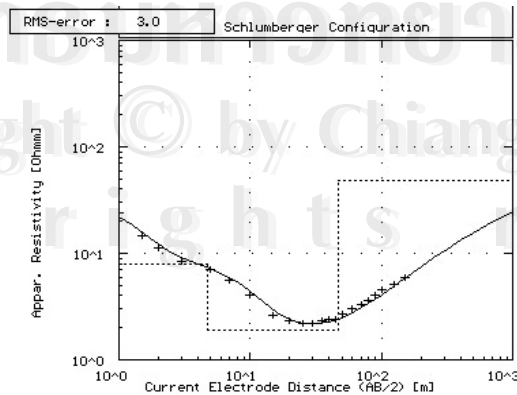
No	Res	Thick	Depth
1	21,3	0,7	0,7
3	7,7	36,2	38,9
4	31,4	-	-

ST17



No	Res	Thick	Depth
1	16,4	1,7	1,7
3	15,0	36,6	38,3
4	15,0	-	-

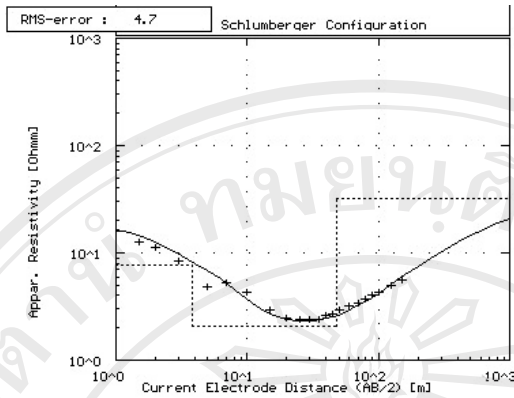
ST18



No	Res	Thick	Depth
1	30,0	0,6	0,6
3	1,0	42,5	47,2
4	48,4	-	-

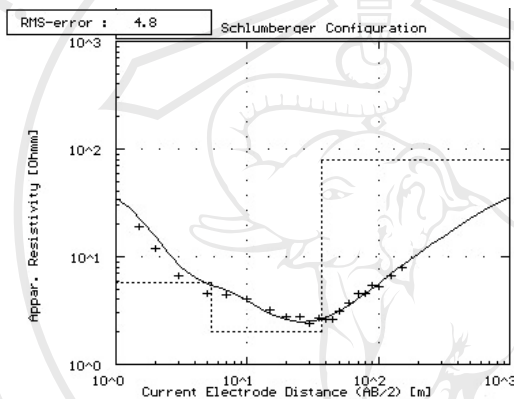
ST19

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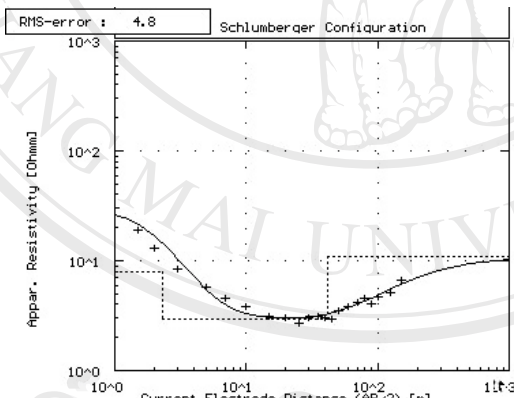
No	Res	Thick	Depth
1	18.2	0.9	0.9
2	7.7	2.9	3.9
3	2.1	44.0	47.8
4	32.4	-	-

ST20



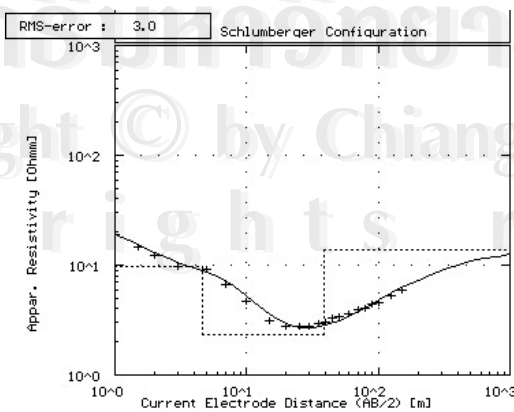
No	Res	Thick	Depth
1	47.5	0.7	0.7
2	6.7	4.6	2.9
3	22.0	31.6	36.9
4	78.9	-	-

ST21



No	Res	Thick	Depth
1	29.9	0.9	0.9
2	2.9	1.4	2.9
3	10.9	38.3	41.8
4	10.9	-	-

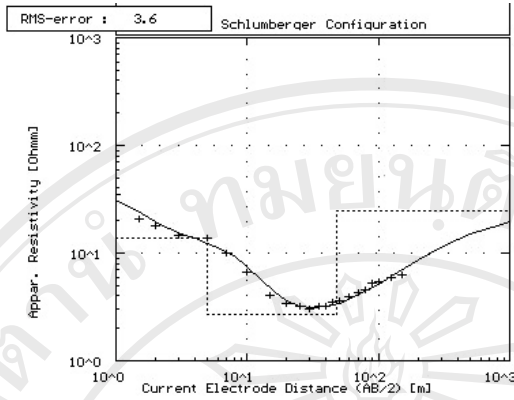
ST22



No	Res	Thick	Depth
1	24.2	0.6	0.6
2	9.7	4.0	4.6
3	2.3	33.9	38.5
4	13.7	-	-

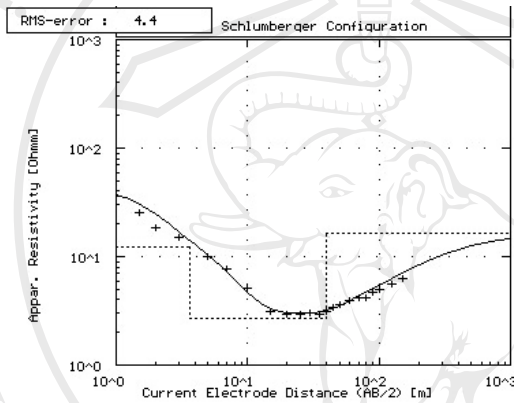
ST23

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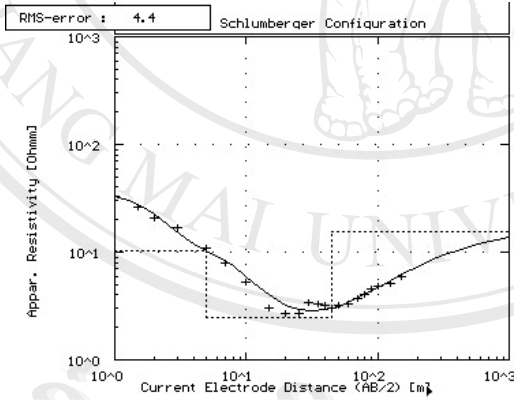
No	Res	Thick	Depth
1	10.7	0.6	0.6
2	13.7	4.0	4.0
3	22.7	43.2	48.1
4	24.5	-	-

ST24



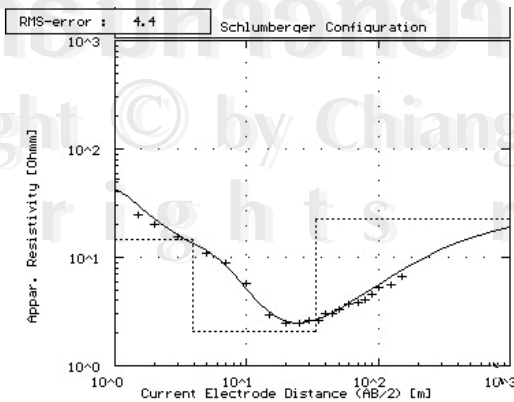
No	Res	Thick	Depth
1	11.8	0.9	0.9
2	12.1	2.7	3.6
3	2.7	36.0	39.6
4	16.3	-	-

ST25



No	Res	Thick	Depth
1	37.9	0.9	0.9
2	10.7	4.1	5.0
3	15.4	40.1	45.1
4	4.7	-	-

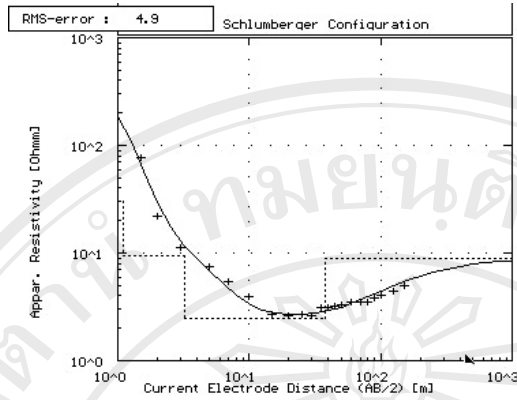
ST26



No	Res	Thick	Depth
1	59.0	0.0	0.0
2	14.0	0.0	0.0
3	22.7	0.0	0.0
4	22.7	-	-

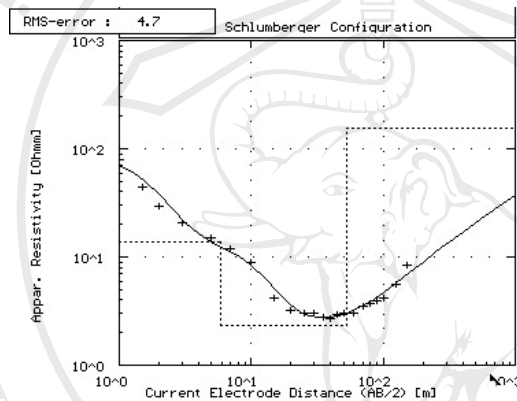
ST27

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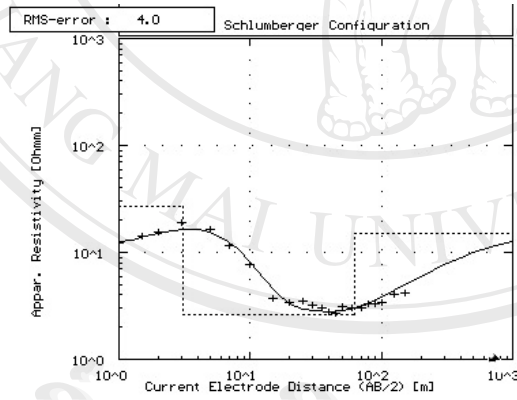
No	Res	Thick	Depth
1	529.2	0.4	0.4
2	30.1	0.7	1.1
3	10.1	2.1	3.2
4	1.2	-	-

ST28



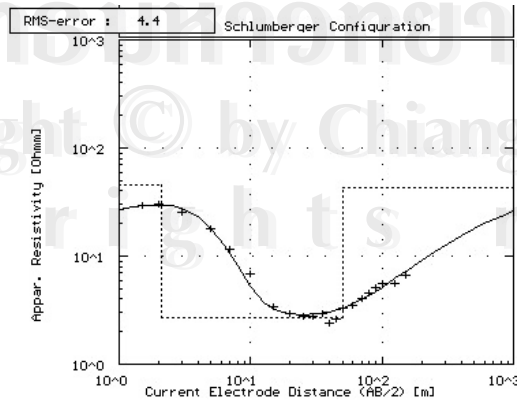
No	Res	Thick	Depth
1	88.2	0.8	0.8
2	17.3	1.3	5.3
3	4.7	4.4	-
4	154.8	-	-

ST29



No	Res	Thick	Depth
1	11.4	0.9	0.9
2	26.9	2.2	3.1
3	17.9	59.6	62.7
4	10.1	-	-

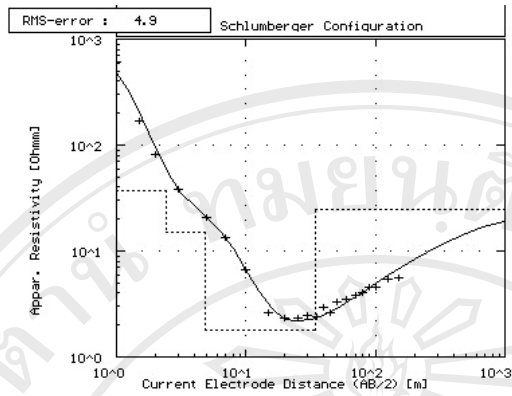
ST30



No	Res	Thick	Depth
1	24.6	0.7	0.7
2	42.1	1.4	2.1
3	2.7	47.7	48.8
4	42.5	-	-

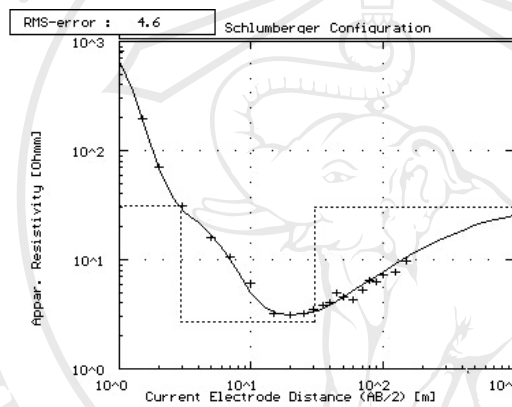
ST31

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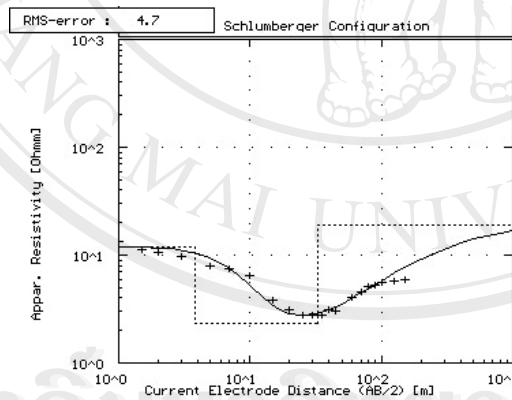
No	Res	Thick	Depth
1	1051.6	0.5	0.5
2	36.8	1.5	2.4
3	15.1	2.4	4.8
4	1.8	4.8	9.6
5	24.4	1.8	1.8

ST32



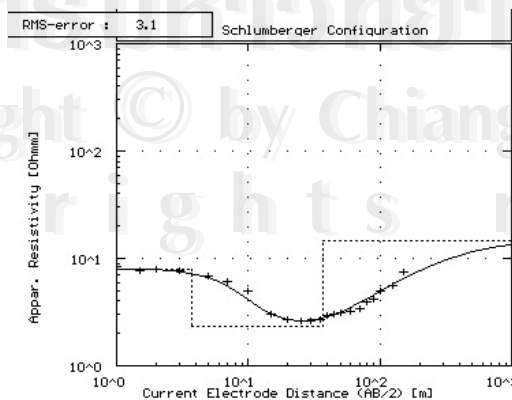
No	Res	Thick	Depth
1	2337.5	0.4	0.4
2	31.6	2.7	2.3
3	30.3	-	30.1

ST33



No	Res	Thick	Depth
1	11.9	3.8	3.8
2	2.3	29.1	32.9
3	18.8	-	-

ST34



No	Res	Thick	Depth
1	8.0	3.7	3.7
2	12.3	33.5	37.2
3	14.8	-	-

ST35

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**APPENDIX B3**  
**RESISTIVITY INTERPRETATION DATA**

Station No.	Model				Interpretation
	RMS-error	Resistivity (Ohm-m)	Thickness (m)	Depth (m)	
ST1	5.6	269.2	1.6	1.6	Top soil
		9.9	4.0	5.6	Sandy clay
		3.3	76.2	81.8	Sand
		29.6	-	-	Clayey sand
ST2	4.8	87.2	0.5	0.5	Sand
		9.8	3.6	4.1	Sandy clay
		2.2	27.2	31.3	Sand
		13.7	-	-	Sandy clay
ST3	2.5	12.3	2.6	2.6	Sandy clay
		2.5	41.2	43.8	Sand
		13.4	-	-	Sandy clay
ST4	2.7	15.5	2.7	2.7	Sandy clay
		2.7	25.6	28.3	Sand
		13.4	-	-	Sandy clay
ST5	4.0	18.2	1.9	1.9	Sandy clay
		2.7	26.4	28.3	Sand
		9.7	-	-	Sandy clay
ST6	3.0	20.1	2.1	2.1	Clayey sand
		2.6	31.6	33.7	Sand
		15.3	-	-	Sandy clay
ST7	2.3	31.3	2.1	2.1	Clayey sand
		2.7	32.3	34.4	Sand
		14.9	-	-	Sandy clay
ST8	4.1	16.4	1.7	1.7	Sandy clay
		2.8	36.6	38.3	Clay
		15.3	-	-	Sandy clay

## Appendix B3: (Continued).

Station No.	Model				Interpretation
	RMS-error	Resistivity (Ohm-m)	Thickness (m)	Depth (m)	
ST9	4.2	125.2	0.5	0.5	Top soil
		10.2	3.7	4.2	Sandy clay
		2.5	45.4	49.6	Clay
		756.1	-	-	Shale
ST10	3.2	16.4	2.6	2.6	Sand clay
		2.7	36.6	39.2	Clay
		15.7	-	-	Sandy clay
ST11	3.8	25.3	0.7	0.7	Clayey sand
		8.1	4.4	5.1	Sandy clay
		2.6	52.2	57.3	Clay
		212.4	-	-	shale
ST12	3.2	7.3	0.9	0.9	Clay
		17.7	1.2	2.1	Sandy clay
		2.1	25.1	27.2	Clay
		14.8	-	-	Sandy clay
ST13	3.4	9.6	2.7	2.7	Sand clay
		2.2	35.5	38.2	Clay
		24.5	-	-	Clayey sand
ST14	2.8	5.9	0.9	0.9	Clay
		12.6	2.1	3.0	Sandy clay
		2.1	35.1	38.1	Sand
		51.7	-	-	Sand
ST15	2.5	12.1	2.7	2.7	Sandy clay
		3.0	45.6	48.3	Clay
		26.8	-	-	Clayey sand
ST16	3.5	18.4	2.7	2.7	Sandy clay
		2.4	44.8	47.5	Sand
		26.7	-	-	Clayey sand
ST17	4.8	21.3	0.7	0.7	Clayey sand
		7.6	3.2	3.9	Sandy clay
		1.6	36.2	40.1	Sand
		31.4	-	-	Clayey sand

Appendix B3: (Continued).

Station No.	Model				Interpretation
	RMS-error	Resistivity (Ohm-m)	Thickness (m)	Depth (m)	
ST18	3.3	32.2	0.7	0.7	Clayey sand
		8.7	4.1	4.8	Sandy clay
		1.8	36.6	41.4	Clay
		46.7	-	-	Sand
ST19	3.0	30.3	0.6	0.6	Clayey sand
		7.9	4.1	4.7	Sandy clay
		1.9	42.5	47.2	Clay
		48.4	-	-	Sand
ST20	4.7	18.2	0.9	0.9	Clayey sand
		7.7	2.9	3.8	Sandy clay
		2.1	44.0	47.8	Clay
		32.4	-	-	Clayey sand
ST21	4.8	47.5	0.7	0.7	Sand
		5.7	4.6	5.3	Sandy clay
		2.0	31.6	36.9	Clay
		78.9	-	-	Sand
ST22	4.8	29.9	0.9	0.9	Clayey sand
		7.9	1.4	2.3	Sandy clay
		2.9	39.3	41.6	Clay
		10.9	-	-	Sandy clay
ST23	3.0	24.2	0.6	0.6	Clayey sand
		9.7	4.0	4.6	Sandy clay
		2.3	33.9	38.5	Clay
		13.7	-	-	Sandy clay
ST24	3.6	40.7	0.6	0.6	Sand
		13.7	4.3	4.9	Sandy clay
		2.7	43.2	48.1	Clay
		24.5	-	-	Clayey sand
ST25	4.4	41.8	0.9	0.9	Sand
		12.1	2.7	3.6	Sandy clay
		2.7	36.0	39.6	Clay
		16.3	-	-	Sandy clay

## Appendix B3: (Continued).

Station No.	Model				Interpretation
	RMS-error	Resistivity (Ohm-m)	Thickness (m)	Depth (m)	
ST26	4.4	41.8	0.9	0.9	Sand
		12.1	2.7	3.6	Sandy clay
		2.7	36.0	39.6	Clay
		16.3	-	-	Sandy clay
ST27	4.4	59.6	0.6	0.6	Sand
		14.5	3.3	3.9	Sandy clay
		2.1	29.3	33.2	Clay
		22.7	-	-	Clayey sand
ST28	4.9	579.2	0.4	0.4	Top soil
		30.1	0.7	1.1	Clayey sand
		9.3	2.1	3.2	Sandy clay
		2.5	34.2	37.4	Clay
		8.8	-	-	Sandy clay
ST29	4.7	88.2	0.8	0.8	Sand
		13.7	5.0	5.8	Sandy clay
		2.3	47.4	53.2	Clay
		154.8	-	-	Shale
ST30	4.0	11.4	0.9	0.9	Sandy clay
		26.9	2.2	3.1	Clayey sand
		2.6	59.6	62.7	Sand
		15.2	-	-	Sandy clay
ST31	4.4	24.6	0.7	0.7	Clayey sand
		46.1	1.4	2.1	Sand
		2.7	47.7	49.8	Clay
		42.5	-	-	Sand
ST32	4.9	1051.6	0.5	0.5	Top soil
		36.8	1.9	2.4	Clayey sand
		15.1	2.4	4.8	Sandy clay
		1.8	29.8	34.0	Clay
		24.4	-	-	Clayey sand

Appendix B3: (Continued).

Station No.	Model				Interpretation
	RMS-error	Resistivity (Ohm-m)	Thickness (m)	Depth (m)	
ST33	4.6	2337.5	0.4	0.4	Top soil
		31.6	2.5	2.9	Clayey sand
		2.7	27.2	30.1	Sand
		30.3	-	-	Clayey sand
ST34	4.7	11.9	3.8	3.6	Sandy clay
		2.3	29.1	32.9	Sand
		18.8	-	-	Sandy clay
ST35	3.1	8.0	3.7	3.7	Sandy clay
		2.3	33.5	37.2	Clay
		14.8	-	-	Sandy clay



**APPENDIX C**  
**PUMPING TEST DATA**

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**APPENDIX C1**  
**PUMPING TEST DATA**

Pumping test No. TV0387		
Discharge: 5.140 m <sup>3</sup> /h	Distance from the pumping well: 0.150 m	Static water level : 17.25 m below datum
Pumping test duration (min)	Water level (m)	Drawdown (m)
1	20.95	3.70
2	23.94	6.69
3	26.00	8.75
4	27.49	10.24
5	28.79	11.54
6	29.65	12.40
7	30.61	13.36
8	31.62	14.37
9	32.35	15.10
10	32.90	15.65
15	35.17	17.92
20	36.50	19.25
25	36.86	19.61
30	37.31	20.06
40	38.44	21.19
50	39.41	22.16
60	40.26	23.10
80	41.67	24.42
100	42.75	25.50
120	43.75	26.50
140	44.75	27.50
160	46.37	29.12
180	46.50	29.25
200	46.66	29.41
220	47.36	30.11
240	47.85	30.60
260	48.42	31.17
280	48.67	31.42
300	48.53	31.28
320	58.54	41.29
340	48.53	31.28
360	48.50	31.25
380	48.53	31.28
400	48.56	31.31
420	48.55	31.30
450	48.53	31.28
480	48.53	31.28
510	48.52	31.27
540	48.55	31.30
570	48.53	31.28
600	48.54	31.29
660	48.53	31.28
720	48.54	31.29
780	48.55	31.30
840	48.53	31.28
900	48.54	31.29
960	48.54	31.29
1020	48.55	31.30
1080	48.55	31.30

## Appendix C1: (Continued).

Pumping test No. TV0388		
Discharge: 1.0 m <sup>3</sup> /h	Distance from the pumping well: 0.150 m	Static water level : 10.70 m below datum
Pumping test duration (min)	Water level (m)	Drawdown (m)
1	15.10	4.40
2	18.56	7.86
3	21.95	11.25
4	24.46	13.76
5	26.81	16.11
6	29.45	18.75
7	31.46	20.76
8	33.38	22.68
9	35.30	24.60
10	36.72	26.02
15	43.70	33.00
20	49.00	38.30
25	52.05	41.35
30	54.96	44.26
40	59.14	48.44
50	62.26	51.56
60	63.28	52.58
80	64.30	53.60
100	65.66	54.96
120	67.92	57.22
140	67.86	57.16
160	68.05	57.35
180	68.32	57.62
200	68.79	58.06
220	69.00	58.30
240	69.34	58.64
260	69.73	59.03
280	70.11	59.41
300	70.08	59.38
320	70.70	60.00
340	70.84	60.14
360	71.51	60.81
380	71.82	61.12
400	71.92	61.22
420	72.02	61.32
450	72.11	61.41
480	72.18	61.48
510	72.26	61.56
540	72.31	61.61
570	72.45	61.75
600	72.53	61.83
660	72.63	61.93
720	72.71	62.01
780	72.80	62.10
840	72.94	62.24
900	73.04	62.34
960	73.08	62.38
1020	73.10	62.40
1080	73.10	62.40

## Appendix C1: (Continued).

Pumping test No. TV0389		
Discharge: 1.26 m <sup>3</sup> /h	Distance from the pumping well: 0.150 m	Static water level : 7.10 m below datum
Pumping test duration (min)	Water level (m)	Drawdown (m)
1	12.50	5.40
2	14.80	7.70
3	16.88	9.78
4	18.95	11.85
5	20.84	13.74
6	22.64	15.54
7	23.35	16.25
8	24.78	17.68
9	26.09	18.99
10	27.48	20.38
15	33.71	26.61
20	33.82	26.72
25	44.00	36.90
30	47.52	40.42
40	53.58	46.48
50	54.70	47.60
60	56.13	49.03
80	57.87	50.77
100	59.62	52.52
120	60.91	53.81
140	61.71	54.61
160	62.48	55.38
180	63.02	55.92
200	63.43	56.33
220	63.70	56.60
240	63.92	56.82
260	64.92	57.82
280	64.28	57.18
300	64.39	57.29
320	64.48	57.98
340	64.57	57.47
360	65.12	58.02
380	65.36	58.26
400	66.16	59.06
420	66.32	59.22
450	66.92	59.82
480	67.15	60.05
510	67.33	60.23
540	67.47	60.37
570	67.57	60.47
600	67.70	60.60
660	61.81	54.71
720	67.88	60.78
780	67.92	60.82
840	67.94	60.84
900	67.95	60.85
960	67.96	60.86
1020	67.96	60.86
1080	67.96	60.86

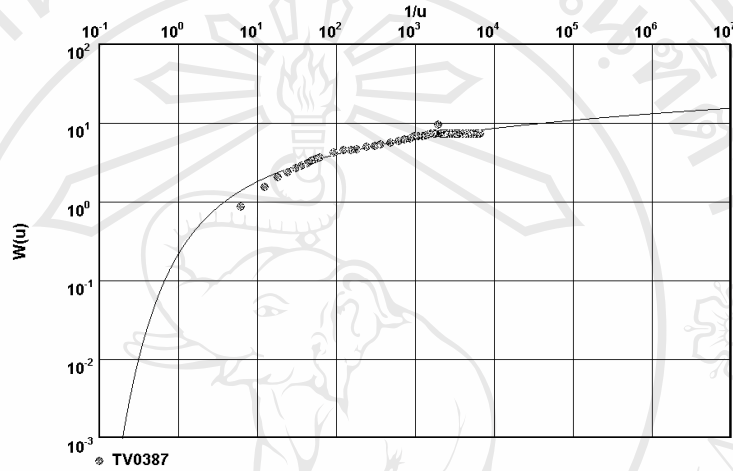
## Appendix C1: (Continued).

Pumping test No. TV0390		
Discharge: 0.65 m <sup>3</sup> /h	Distance from the pumping well: 0.150 m	Static water level : 11.80 m below datum
Pumping test duration (min)	Water level (m)	Drawdown (m)
1	15.90	4.10
2	18.56	6.76
3	20.50	8.70
4	22.00	10.20
5	23.30	11.50
6	24.50	12.70
7	25.85	14.05
8	27.00	15.20
9	28.02	16.22
10	29.14	17.34
15	34.65	22.85
20	37.81	26.01
25	41.50	29.70
30	44.21	32.41
40	47.74	35.94
50	50.93	39.13
60	53.38	41.58
80	54.13	42.33
100	54.92	43.12
120	55.32	43.52
140	55.99	44.19
160	56.30	44.50
180	56.60	44.80
200	56.60	44.80
220	56.76	44.96
240	57.02	45.22
260	57.19	45.39
280	57.34	45.54
300	57.50	45.70
320	59.24	47.44
340	59.73	47.93
360	60.03	48.23
380	60.35	48.55
400	60.54	48.74
420	60.77	48.97
450	60.93	49.13
480	61.49	49.69
510	61.85	50.05
540	61.90	50.10
570	62.96	51.16
600	63.63	51.83
660	63.47	51.67
720	63.71	51.91
780	64.68	52.88
840	64.77	52.97
900	64.83	53.03
960	64.90	53.10
1020	63.94	52.14
1080	63.96	52.16

APPENDIX C2  
PUMPING TEST ANALYTICAL DATA

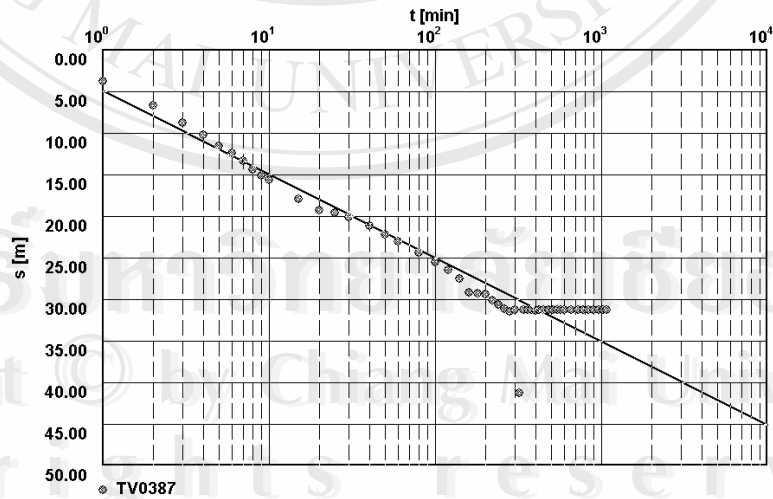
TV0387

Theis method



Transmissivity ( $m^2/min$ ):  $1.58 \times 10^{-3}$   
Storage coefficient:  $4.59 \times 10^{-2}$

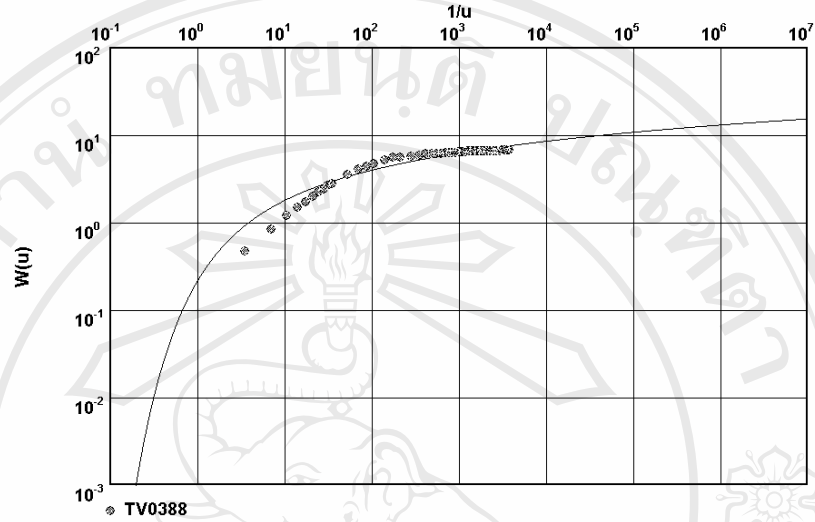
Cooper & Jacob method



Transmissivity ( $m^2/min$ ):  $1.55 \times 10^{-3}$   
Storage coefficient:  $5.08 \times 10^{-2}$

**TV0388**

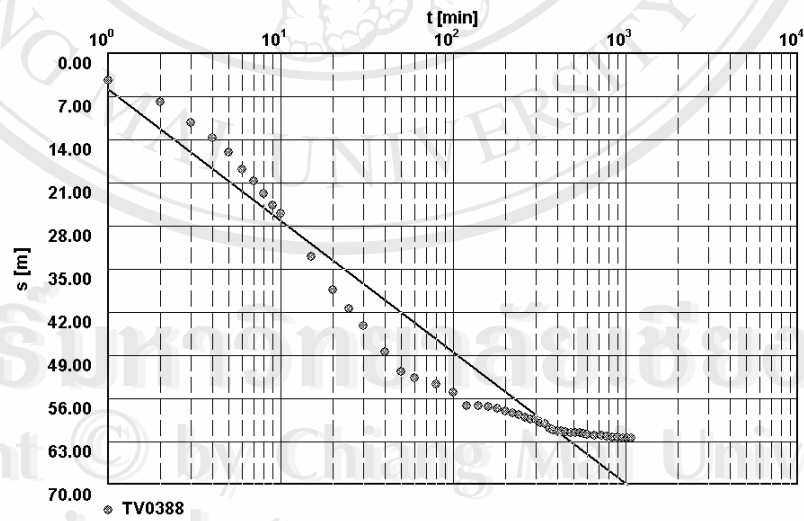
**Theis method**



Transmissivity ( $m^2/min$ ):  $1.43 \times 10^{-4}$

Storage coefficient:  $7.35 \times 10^{-3}$

**Cooper & Jacob method**

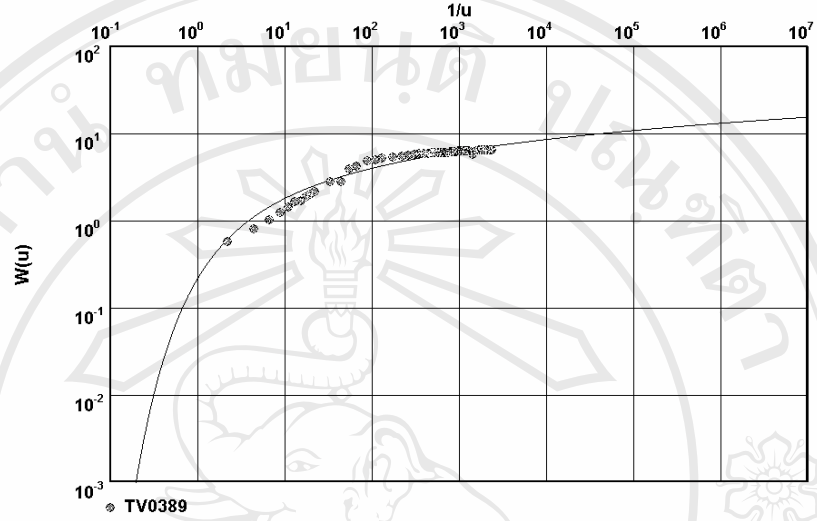


Transmissivity ( $m^2/min$ ):  $1.43 \times 10^{-4}$

Storage coefficient:  $7.61 \times 10^{-3}$

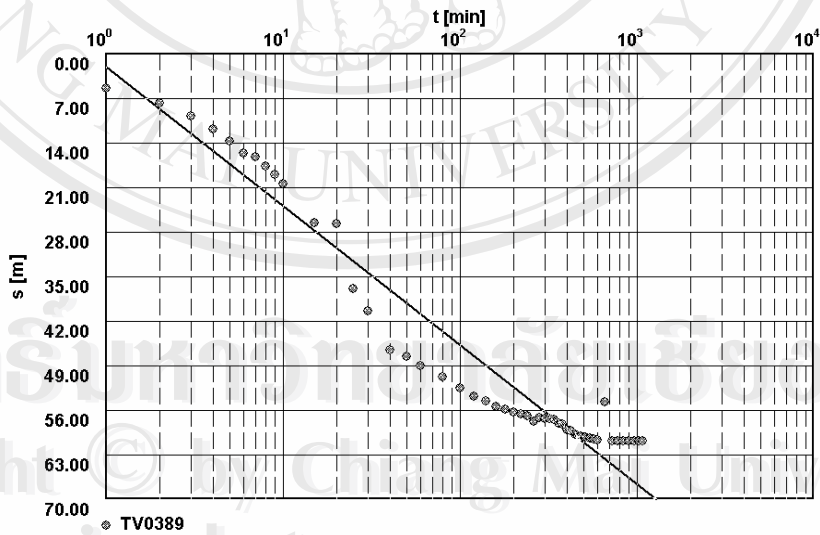
TV0389

Theis method



Transmissivity ( $m^2/min$ ):  $1.76 \times 10^{-4}$   
 Storage coefficient:  $1.43 \times 10^{-2}$

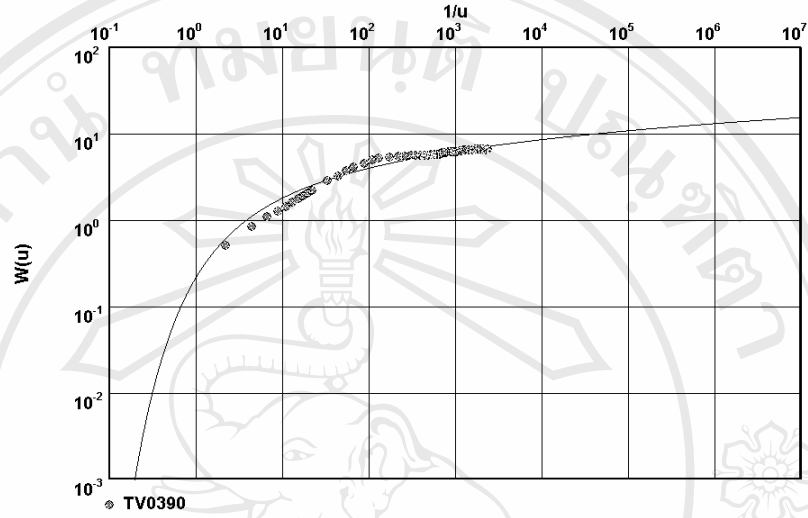
Cooper & Jacob method



Transmissivity ( $m^2/min$ ):  $1.75 \times 10^{-4}$   
 Storage coefficient:  $1.41 \times 10^{-2}$

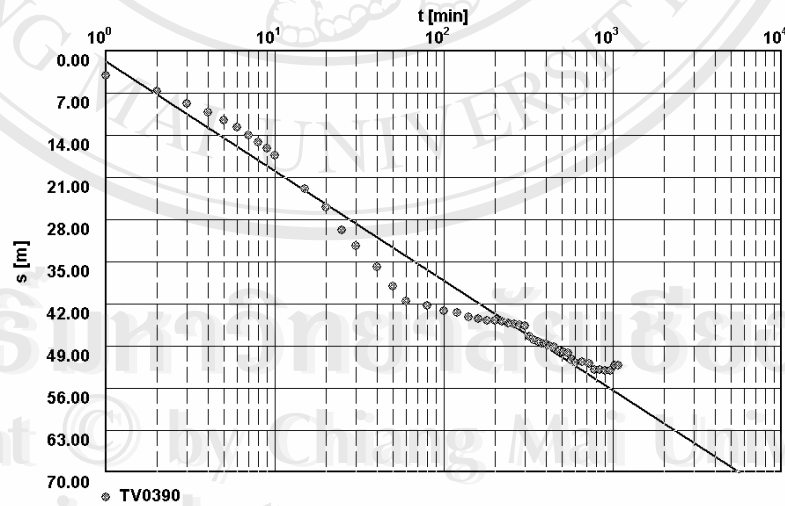
**TV0390**

**Theis method**



Transmissivity ( $m^2/min$ ):  $1.08 \times 10^{-4}$   
 Storage coefficient:  $8.80 \times 10^{-3}$

**Cooper & Jacob method**



Transmissivity ( $m^2/min$ ):  $1.08 \times 10^{-4}$   
 Storage coefficient:  $8.70 \times 10^{-3}$

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