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Appendices

Appendix A

Appendix A1 Lithologic log of 20 wells

Appendix A2 Groundwater temperature data

Appendix A3 Temperature-depth profiles

Appendix A1 Lithologic log of 20 wells

WELL No.2

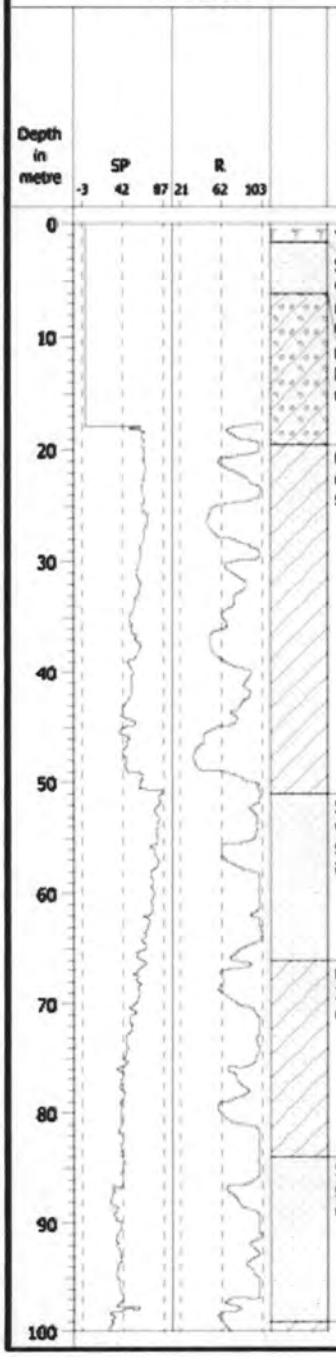
กรมทรัพยากรน้ำบาดาล
Department of Groundwater Resources

LOG OF BORING CM48 DL04

(Page 1 of 2)

Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Mond Huay Kaew	UTM N	: 1710848
Province	: Chiang Mai	UTM E	: 617129
Amphoe	: Ging Amphoe Doi Lor	Date started drilling	: 28/07/2546
Tambon	: Doi Lor	Date finished drilling	: 30/07/2546
Moo	: -	Well depth	: 189 metre



DESCRIPTION

TOP SOIL : brown color, composed of quartz, feldspar and rock fragment.

SAND : various color, yellowish brown to brown color, consisted of 70% very fine to very coarse sand(? 0.063 - 15 mm.) and 30% very fine pebbles(? 2- 2.5 mm.), moderately to poorly sorted, high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.

CLAYEY GRAVEL : various color, consisted of fine pebbles to very fine pebbles(? 2 - 8 mm.) and clay, moderately sorted, low to high sphericity, subangular to subrounded, composted of quartz, feldspar and rock fragment.

CLAYEY SAND : yellowish brown to brown color, consisted of very fine to very coarse sand(? 0.063 - 2 mm.) and clay, moderately to poorly sorted, subangular to subrounded, low to high sphericity

SAND : brown, consisted of 75% very fine to very coarse sand(? 0.063 - 2 mm.),15% very fine pebbles to fine pebbles(? 2 - 5 mm.) and 10% clay, moderately to poorly sorted, subangular to rounded, low to high sphericity, composted of quartz, feldspar and rock fragment.

CLAYEY SAND : brown color, consisted of very fine to very coarse sand(? 0.063 - 2mm.) and clay , moderately sorted, subangular to rounded, low to high sphericity, composted of quartz, feldspar and rock fragment.

SAND : yellowish brown to brown color, consisted of 80% very fine to very coarse sand and 20% fine pebbles(? 2 - 7 mm.), moderately sorted, subangular to rounded, composted of quartz, feldspar and rock fragment.

REMARKS

WELL No.2

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WELL LOCATION	: Wat Mond Huay Kaew	UTM N	: 1710848
Province	: Chiang Mai	UTM E	: 617129
Amphoe	: Ging Amphoe Doi Lor	Date started drilling	: 28/07/2546
Tambon	: Doi Lor	Date finished drilling	: 30/07/2546
Moo	: -	Well depth	: 189 metre

Depth in metre	SP -3 42	87	R 21 62	183	DESCRIPTION	REMARKS
100					CLAYEY SAND : brown color, consisted of very fine to sand and clay, poorly sorted, low to high sphericity, composted of quartz, feldspar and rock fragment.	
110					SAND : yellowish brown to brown color, consisted of 80% very fine to very coarse sand and 20% fine pebbles(? 2 - 7 mm.), moderately sorted, subangular to rounded, composted of quartz, feldspar and rock fragment.	
120					CLAYEY SAND : light gray to gray color, consisted of 75% very fine to very coarse sand(? 0.063- 1.5 mm.),15% very fine pebbles (? 2 - 4 mm.) and10% clay, moderately sorted, high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
130						
140					SAND : brown color, consisted of 80% very fine to medium sand(? 0.063-0.5 mm.) and 20% very fine pebbles(? 1 - 2 mm.), well sorted, high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
150					CLAYEY GRAVEL : brown color, pale gray to gray black, consisted of very fine to fine pebbles and clay , moderately sorted, medium to high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
160						
170						
180						
190						
200						

WELL No.4

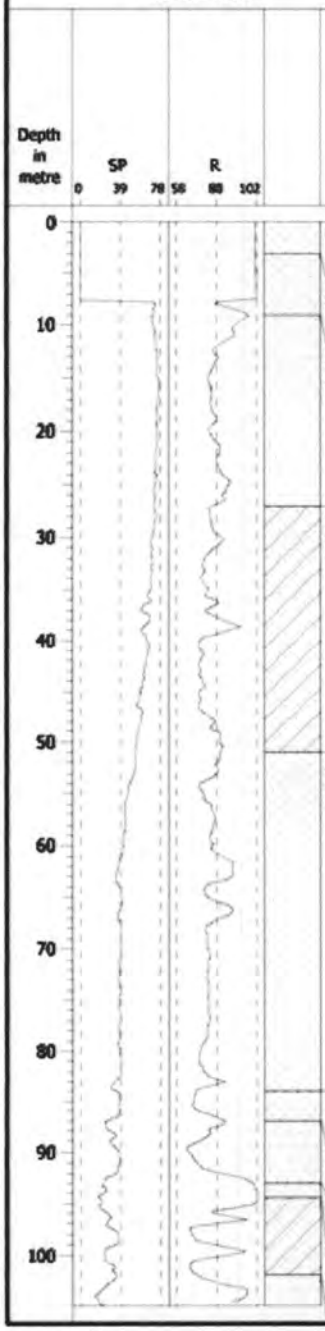
กรมทรัพยากรน้ำบาดาล
Department of Groundwater Resources

LOG OF BORING TNB46LN42

(Page 1 of 2)

Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Mai Nong Hoy	UTM N	: 1710848
Province	: Chiang Mai	UTM E	: 617129
Amphoe	: Doi Lo	Date started drilling	: 28/07/2546
Tambon	: Sun Ti Suk	Date finished drilling	: 30/07/2546
Moo	: 1	Well depth	: 210.00 metre



DESCRIPTION	REMARKS
GRAVEL/SAND, reddish brown color, consisted of 75% very fine to very coarse sand and 25% very fine to medium pebbles, subangular to subrounded, high sphericity, moderately sorted, composted of quartz and rock fragment.	
SAND/GRAVEL, reddish brown color, consisted of 65% very fine to very coarse sand, 35% very fine pebbles, subangular to subround, low to high sphericity, moderately sorted, composted of quartz and rock fragment.	
SAND, gray to dark gray color, very fine to very coarse sand, subangular to subrounded, low sphericity, moderately sorted, composted of quartz and rock fragment.	
CLAYEY SAND, yellowish brown color, consisted of very fine to medium sand and clay, subangular to subrounded, high sphericity, poor sorted, composted of quartz and rock fragment.	
SAND/GRAVEL, light brown color, consisted of 70% fine to very coarse sand, 30% [illegible] composted of quartz and rock fragment.	
CLAY/SAND, yellowish brown color, consisted of 60% clay, 40% very fine to very coarse sand, angular to subround, high sphericity, poor sorted, composted of quartz and rock fragment.	
SAND, yellowish brown color, fine to very coarse sand, subangular to rounded, high sphericity, moderately sorted, composted of quartz and rock fragment.	
CLAY/SAND, yellowish brown color, consisted of 60% clay, 40% very fine to very coarse sand, angular to subround, high sphericity, poor sorted, composted of quartz and rock fragment.	
CLAYEY SAND, yellowish brown color, medium to very coarse sand and clay, angular to subround, high sphericity, poor sorted, composted of quartz and rock fragment.	

WELL No.4

กรมทรัพยากรน้ำบาดาล
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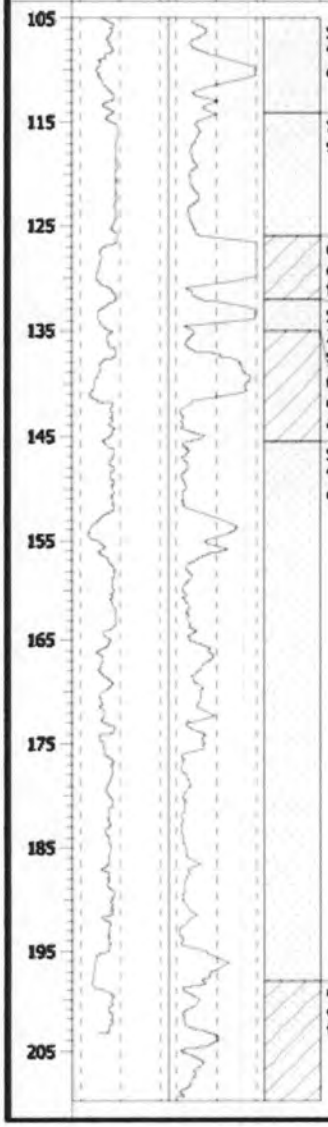
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Mai Nong Hoy	UTM N	: 1710848
Province	: Chiang Mai	UTM E	: 617129
Amphoe	: Doi Lo	Date started drilling	: 28/07/2546
Tambon	: Sun Ti Suk	Date finished drilling	: 30/07/2546
Moo	: 1	Well depth	: 210.00 metre



Depth in metre	DESCRIPTION	REMARKS
105	SAND/GRAVEL, yellowish brown color, consisted of 80% fine to very coarse sand, 20 % fine to medium pebbles, subangular to rounded, high sphericity, moderately sorted, composted of quartz and rock fragment.	
115	SAND, gray to dark gray color, fine to very coarse sand, subangular to subround, high sphericity, moderately sorted, composted of quartz and rock fragment.	
125	CLAYEY SAND, yellowish brown color, consisted of medium to very coarse sand and clay , angular to subround, high sphericity, poor sorted, composted of quartz and rock fragment.	
135	SAND/GRAVEL, gray to dark gray color, consis ted of 80% fine to very coarse sand, 20% very fine to fine pebbles, subangular to subround, hight sphericity, moderately sorted, composted of quartz and rock fragment.	
145	CLAY/SAND, yellowish brown color, consisted of 70% clay and 30% very fine to very coarse sand, angular to subround, high sphericity, poor sorted, composted of quartz and rock fragment.	
155	SAND/GRAVEL, yellowish brown color, consisted of 70% fine to very coarse sand, 30 % fine to medium pebbles, subangular to rounded, high sphericity, moderately sorted, composted of quartz and rock fragment.	
165		
175		
185		
195	CLAYEY SAND, yellowish brown color, cons isted of medium to very coarse sand and clay, angular to subround, high sphericity, poor sorted, composted of quartz and rock fragment.	
205		

WELL No.5

กรมทรัพยากรน้ำบาดาล
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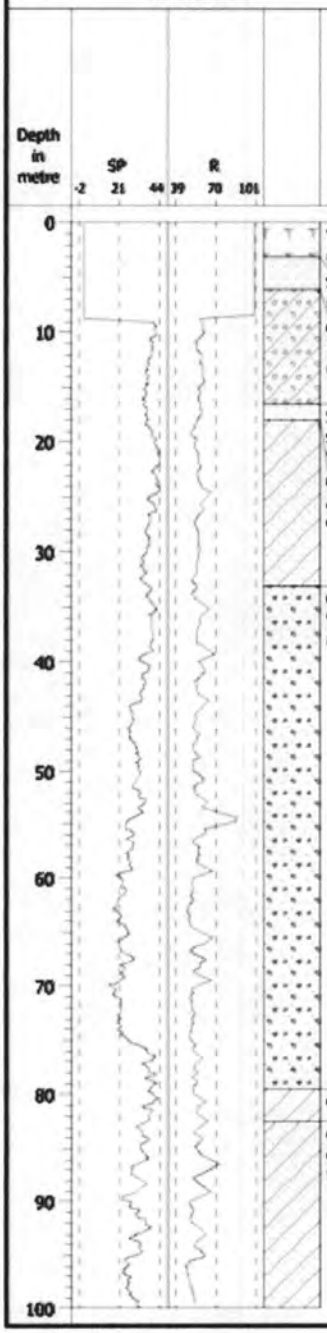
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Mai Sum Tung	UTM N	: 1710848
Province	: Chiang Mai	UTM E	: 617129
Amphoe	: Jom Tong	Date started drilling	: 28/07/2546
Tambon	: Khaung Poe	Date finished drilling	: 30/07/2546
Moo	: 8	Well depth	: 189 metre



Depth in metre	DESCRIPTION	REMARKS
0	TOP SOIL : brown and gray colors, composed of quartz, rock fragment and dark minerals.	
	SAND : brown color, very fine to very coarse sand, subangular to subrounded, moderately sorted, low sphericity, composted of quartz, feldspar, rock fragment.	
10	CLAYEY GRAVEL : brown color, consisted of 60% very fine to very coarse sand, 30% clay and 10% very fine to fine pebbles (2 - 6 mm.), subangular to subrounded, moderately sorted, low to high sphericity, composted of quartz, rock fragment.	
20	SAND : light brown to brown and gray colors, consisted of very fine to very coarse sand, subangular to subround, well sorted, low sphericity, composted of quartz, feldspar and rock fragmen	
	CLAYEY SAND : light brown and gray colors, consisted of fine to very coarse sand and clay, subangular to subrounded, poor sorted, low to medium sphericity, composted of quartz, rock fragment.	
30	GRAVEL : pale brown to brown and light gray colors, consisted of 75% very fine to fine pebbles, (2 - 5 mm.), 25% coarse tovery coarse sand, subangular to subrounded, moderately sorted, low to medium sphericity, composted of quartz, rock fragment.	
40		
50		
60		
70		
80	CLAY : pale brown to gray colors, compacted.	
	CLAYEY SAND : pale brown and light gray colors, consisted of 70% very fine to very coarse sand, 30% very fine pebbles, (2 - 4 mm.), subangular to subrounded, moderately sorted, low to medium sphericity, composted of quartz and rock fragment.	
90		
100		

WELL No.5

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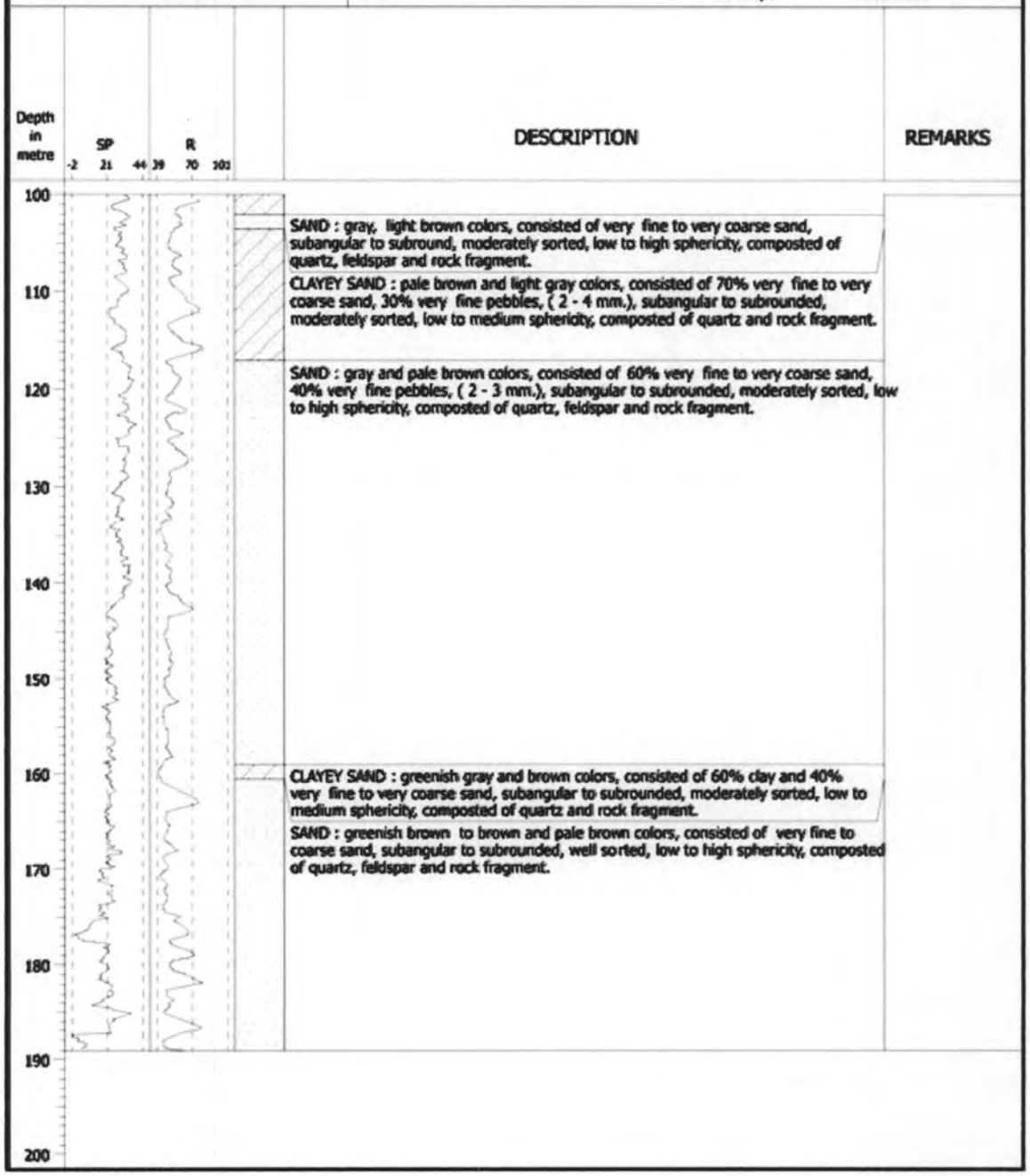
Tel. 202-3792

WELL LOCATION	: Wat Mai Sun Tung	UTM N	: 1710848
Province	: Chiang Mai	UTM E	: 617129
Amphoe	: Jom Tong	Date started drilling	: 28/07/2546
Tambon	: Khaung Poa	Date finished drilling	: 30/07/2546
Moo	: 8	Well depth	: 189 metre



DESCRIPTION

SAND : gray, light brown colors, consisted of very fine to very coarse sand, subangular to subround, moderately sorted, low to high sphericity, composted of quartz, feldspar and rock fragment.

CLAYEY SAND : pale brown and light gray colors, consisted of 70% very fine to very coarse sand, 30% very fine pebbles, (2 - 4 mm.), subangular to subrounded, moderately sorted, low to medium sphericity, composted of quartz and rock fragment.

SAND : gray and pale brown colors, consisted of 60% very fine to very coarse sand, 40% very fine pebbles, (2 - 3 mm.), subangular to subrounded, moderately sorted, low to high sphericity, composted of quartz, feldspar and rock fragment.

CLAYEY SAND : greenish gray and brown colors, consisted of 60% clay and 40% very fine to very coarse sand, subangular to subrounded, moderately sorted, low to medium sphericity, composted of quartz and rock fragment.

SAND : greenish brown to brown and pale brown colors, consisted of very fine to coarse sand, subangular to subrounded, well sorted, low to high sphericity, composted of quartz, feldspar and rock fragment.

REMARKS

WELL No.6

กรมทรัพยากรน้ำบาดาล
Department of Groundwater Resources

LOG OF BORING

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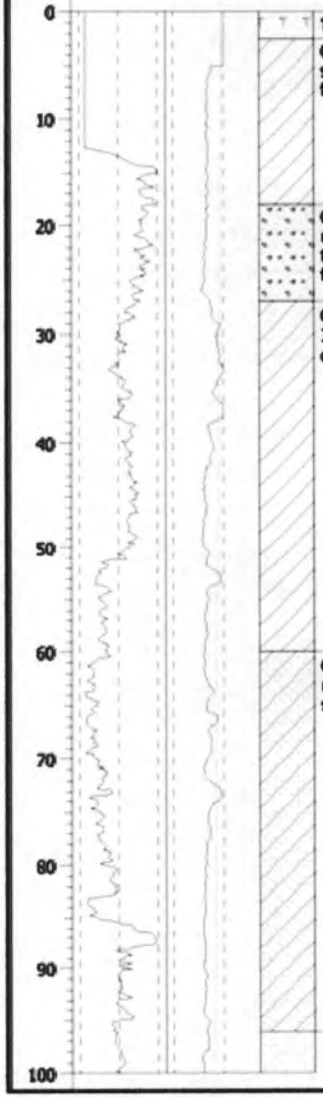
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Su San Sri Boon Ruang	UTM N	: 2057538
Province	: Chiang Mai	UTM E	: 491273
Amphoe	: Mae Rim	Date started drilling	: 28/07/2546
Tambon	: Mae Sa	Date finished drilling	: 30/07/2546
Moo	: 11	Well depth	: 203 metre



DESCRIPTION	REMARKS
TOP SOIL : reddish brown color, composted of quartz, feldspar, rock fragment	
CLAY : various color, consisted of 70% clay, 30% very fine to very coarse sand, subangular to subround, moderately sorted, low sphericity, composted of quartz, feldspar and rock fragment.	
GRAVEL : pale brown and greenish gray colors, consisted of 50% very fine to medium pebbles(? 2 - 7 mm.), 30% medium to very coarse and 20% clay, subangular to subround, poor sorted, high sphericity,composted of quartz, feldspar and rock fragment.	
CLAY : greenish gray and reddish brown to brown colors, consisted of 70% clay, 30% very fine to very coarse sand, subround, low to high sphericity, composted of quartz, feldspar and rock fragment.	
CLAYEY SAND : reddish brown to brown and greenish gray colors, consisted of 80% medium to very coarse sand, 20% clay, subangular to subround, poor to moderately sorted, high sphericity, composted of quartz, feldspar and rock fragment.	

WELL No.6

กรมทรัพยากรน้ำบาดาล
Department of Groundwater Resources

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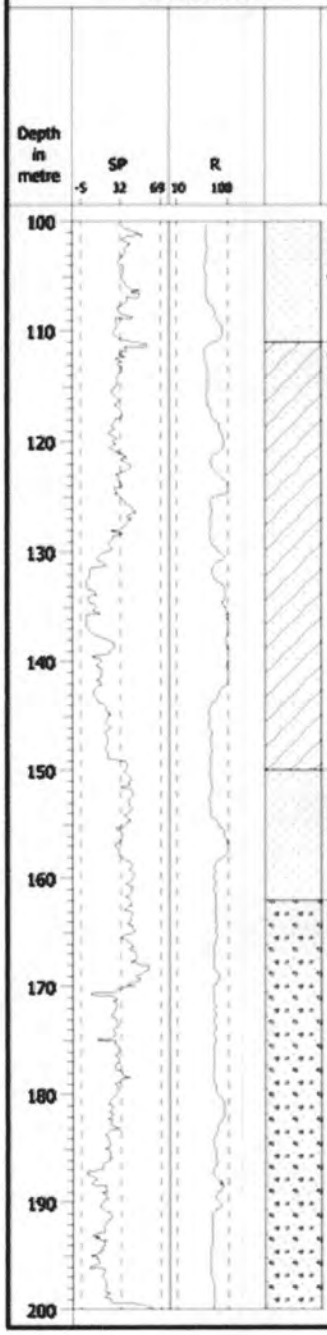
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Su San Sri Boon Ruang	UTM N	: 2057538
Province	: Chiang Mai	UTM E	: 491273
Amphoe	: Mae Rim	Date started drilling	: 28/07/2546
Tambon	: Mae Sa	Date finished drilling	: 30/07/2546
Moo	: 11	Well depth	: 203 metre



DESCRIPTION	REMARKS
SAND : light gray and brown colors, consisted of 90% medium to very coarse sand, subangular to subround, moderately sorted, low to high sphericity, composted of quartz and rock fragment.	
CLAYEY SAND : pale brown color, consisted of 70% clay, 30% very fine to fine sand, subangular to subround, moderately sorted, high sphericity, composted of quartz, feldspar and rock fragment.	
SAND : light gray and pale brown colors, consisted of 70% medium to very coarse sand and 30% very fine to fine pebbles (? 2 - 4 mm.), subangular to subround, moderately sorted, low to high sphericity, composted of quartz, feldspar and rock fragment.	
GRAVEL : pale brown and light gray colors, consisted of 70% very fine to fine pebbles (? 2 - 6 mm.), 20% coarse to very coarse sand and 10% clay, angular to subround, moderately sorted, high sphericity, composted of quartz and rock fragment.	

WELL No.8

กรมทรัพยากรน้ำบาดาล
Department of Groundwater Resources

LOG OF BORING TNB46LN42

(Page 1 of 2)

Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Chomlog	UTM N	: 2056040
Province	: Chiang Mai	UTM E	: 481125
Amphoe	: Mae Wang	Date started drilling	: 28/07/2546
Tambon	: Ban Kad	Date finished drilling	: 30/07/2546
Moo	: 5	Well depth	: 204.00 metre

Depth in metre	SP 3 26 49	R 41 56 7	DESCRIPTION	REMARKS
0			Gravel+ sand, reddish brown color, consisted of 80% very fine to medium pebbles(2 - 9 mm.) and 20% very fine to very coarse sand(? 0.063 - 2 mm.), poorly sorted, low to high sphericity, angular to rounded, composted of quartz, feldspar and rock fragment.	
10			Gravel + sand+ clay, reddish brown color, consisted of 70% very fine to coarse pebbles(? 2 - 25 mm.), 20% very fine to coarse sand(0.063 - 1 mm.) and 10% clay size, poorly sorted, low to high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
20			Clay + gravel, yellowish brown color, consisted of 85% clay and 15% very fine pebbles(? 2 - 10 mm.), poorly sorted, low to high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
30			Gravel + sand+ clay, yellowish brown color, consisted of 60% very fine to medium pebbles(? 2 - 12 mm.), 25% very fine to very coarse sand(? 0.063 - 2 mm.) and 20% clay, poorly sorted, low to high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
40			Gravel+ sand, yellowish brown and gray colors, consisted of 80% very fine to fine pebbles(? 2 - 7 mm.) and 20% very fine to very coarse sand(? 0.063 - 2 mm.), poorly sorted, low to high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
50				
60				
70				
80			Gravel + sand + clay, yellowish brown and reddish brown color, consisted of 60% very fine pebbles to medium pebbles(? 2 - 10 mm.), 30% very fine to very coarse sand(? 0.063 - 2 mm.) and 10% clay, moderate to poorly sorted, low to high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
90				
100				

WELL No.8

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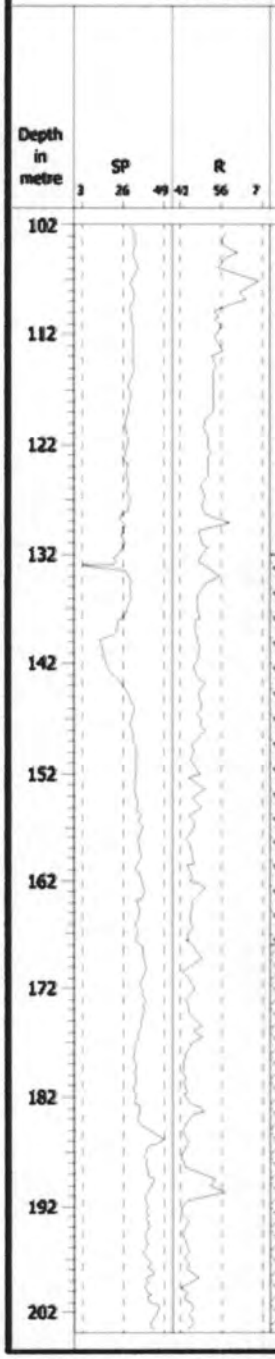
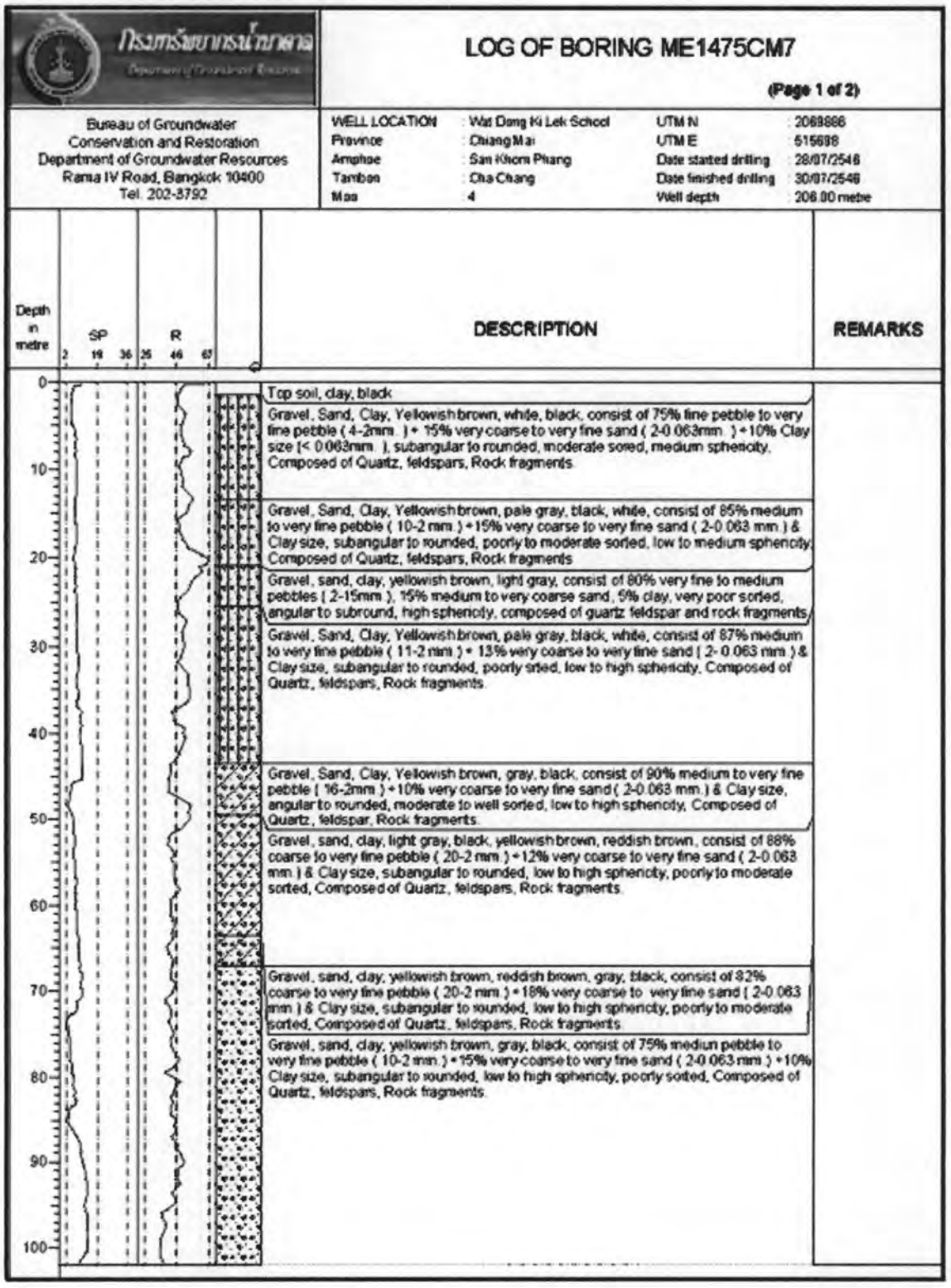
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Chomlog	UTM N	: 2056040
Province	: Chiang Mai	UTM E	: 481125
Amphoe	: Mae Wang	Date started drilling	: 28/07/2546
Tambon	: Ban Kad	Date finished drilling	: 30/07/2546
Moo	: 5	Well depth	: 204.00 metre



DESCRIPTION	REMARKS
Gravel + sand, yellowish brown to reddish brown color, consisted of 80% very fine to medium pebbles(? 2 - 16 mm.) and 20% very fine to very coarse sand, moderate to poorly sorted, low to high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	
Gravel + sand + clay, yellowish brown color, consisted of 65% very fine to fine pebbles(? 2 - 7 mm.), 25% very fine to very coarse sand(? 0.063 - 2 mm.) and 10% clay, moderate sorted, medium to high sphericity, subangular to rounded, composted of quartz, feldspar and rock fragment.	

WELL No.9



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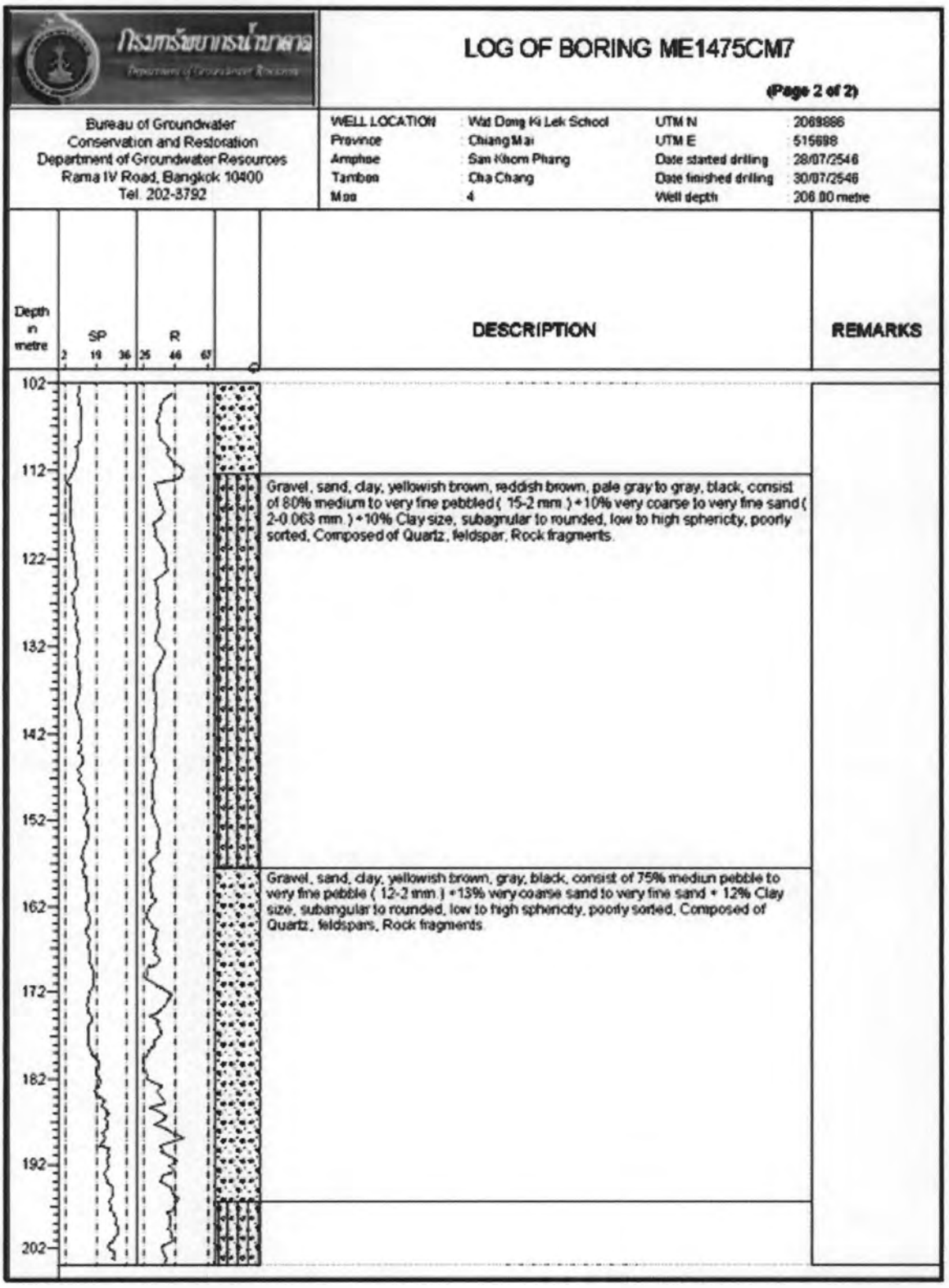
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Dong Ki Lek School	UTM N	: 2069886
Province	: Chiang Mai	UTM E	: 515698
Amphoe	: San Kham Phang	Date started drilling	: 28/07/2546
Tambon	: Cha Chang	Date finished drilling	: 30/07/2546
Moo	: 4	Well depth	: 206.00 metre

Depth in metre	SP 2 19 36	R 25 46 67	DESCRIPTION	REMARKS
0			Top soil, clay, black	
10			Gravel, Sand, Clay, Yellowish brown, white, black, consist of 75% fine pebble to very fine pebble (4-2mm.) + 15% very coarse to very fine sand (2-0.063mm.) +10% Clay size [< 0.063mm.], subangular to rounded, moderate sored, medium sphericity. Composed of Quartz, feldspars, Rock fragments.	
20			Gravel, Sand, Clay, Yellowish brown, pale gray, black, white, consist of 85% medium to very fine pebble (10-2 mm) +15% very coarse to very fine sand (2-0.063 mm) & Clay size, subangular to rounded, poorly to moderate sorted, low to medium sphericity. Composed of Quartz, feldspars, Rock fragments	
30			Gravel, sand, clay, yellowish brown, light gray, consist of 80% very fine to medium pebbles [2-15mm], 15% medium to very coarse sand, 5% clay, very poor sorted, angular to subround, high sphericity, composed of quartz feldspar and rock fragments.	
40			Gravel, Sand, Clay, Yellowish brown, pale gray, black, white, consist of 87% medium to very fine pebble (11-2 mm) + 13% very coarse to very fine sand [2- 0.063 mm) & Clay size, subangular to rounded, poorly srted, low to high sphericity. Composed of Quartz., feldspars, Rock fragments.	
50			Gravel, Sand, Clay, Yellowish brown, gray, black, consist of 90% medium to very fine pebble [16-2mm) +10% very coarse to very fine sand (2-0.063 mm.) & Clay size, angular to rounded, moderate to well sorted, low to high sphericity, Composed of Quartz., feldspar, Rock fragments.	
60			Gravel, sand, clay, light gray, black, yellowish brown, reddish brown, consist of 88% coarse to very fine pebble (20-2 mm) +12% very coarse to very fine sand (2-0.063 mm) & Clay size, subangular to rounded, low to high sphericity, poorly to moderate sorted, Composed of Quartz., feldspars, Rock fragments.	
70			Gravel, sand, clay, yellowish brown, reddish brown, gray, black, consist of 82% coarse to very fine pebble (20-2 mm) + 18% very coarse to very fine sand [2-0.063 mm] & Clay size, subangular to rounded, low to high sphericity, poorly to moderate sorted, Composed of Quartz., feldspars, Rock fragments.	
80			Gravel, sand, clay, yellowish brown, gray, black, consist of 75% medium pebble to very fine pebble (10-2 mm) + 15% very coarse to very fine sand (2-0.063 mm) +10% Clay size, subangular to rounded, low to high sphericity, poorly sorted, Composed of Quartz., feldspars, Rock fragments.	
90				
100				

WELL No.9



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Department of Groundwater Resources

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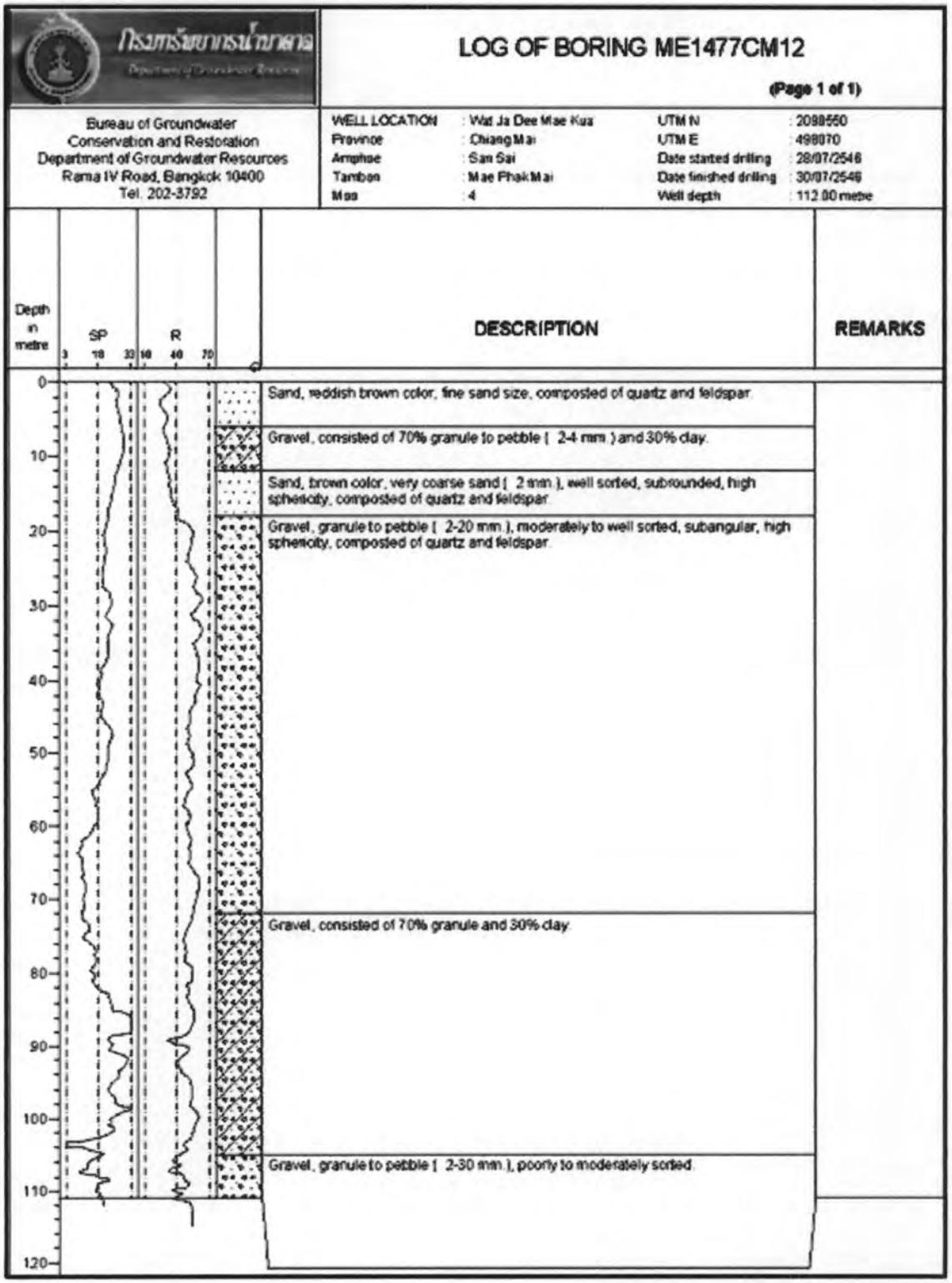
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	Wat Dong Ki Lek School	UTM N	2069886
Province	Chiang Mai	UTM E	515698
Amphoe	San Khom Phang	Date started drilling	28/07/2546
Tambon	Cha Chang	Date finished drilling	30/07/2546
Moo	4	Well depth	206.00 metre

Depth in metre	SP (2 19 36)	R (25 46 67)	DESCRIPTION	REMARKS
102				
112			Gravel, sand, clay, yellowish brown, reddish brown, pale gray to gray, black, consist of 80% medium to very fine pebbled (15-2 mm) +10% very coarse to very fine sand (2-0.063 mm) +10% Clay size, subagnular to rounded, low to high sphericity, poorly sorted, Composed of Quartz, feldspar, Rock fragments.	
122				
132				
142				
152				
162			Gravel, sand, clay, yellowish brown, gray, black, consist of 75% medium pebble to very fine pebble (12-2 mm) +13% very coarse sand to very fine sand + 12% Clay size, subangular to rounded, low to high sphericity, poorly sorted, Composed of Quartz, feldspars, Rock fragments.	
172				
182				
192				
202				

WELL No.11



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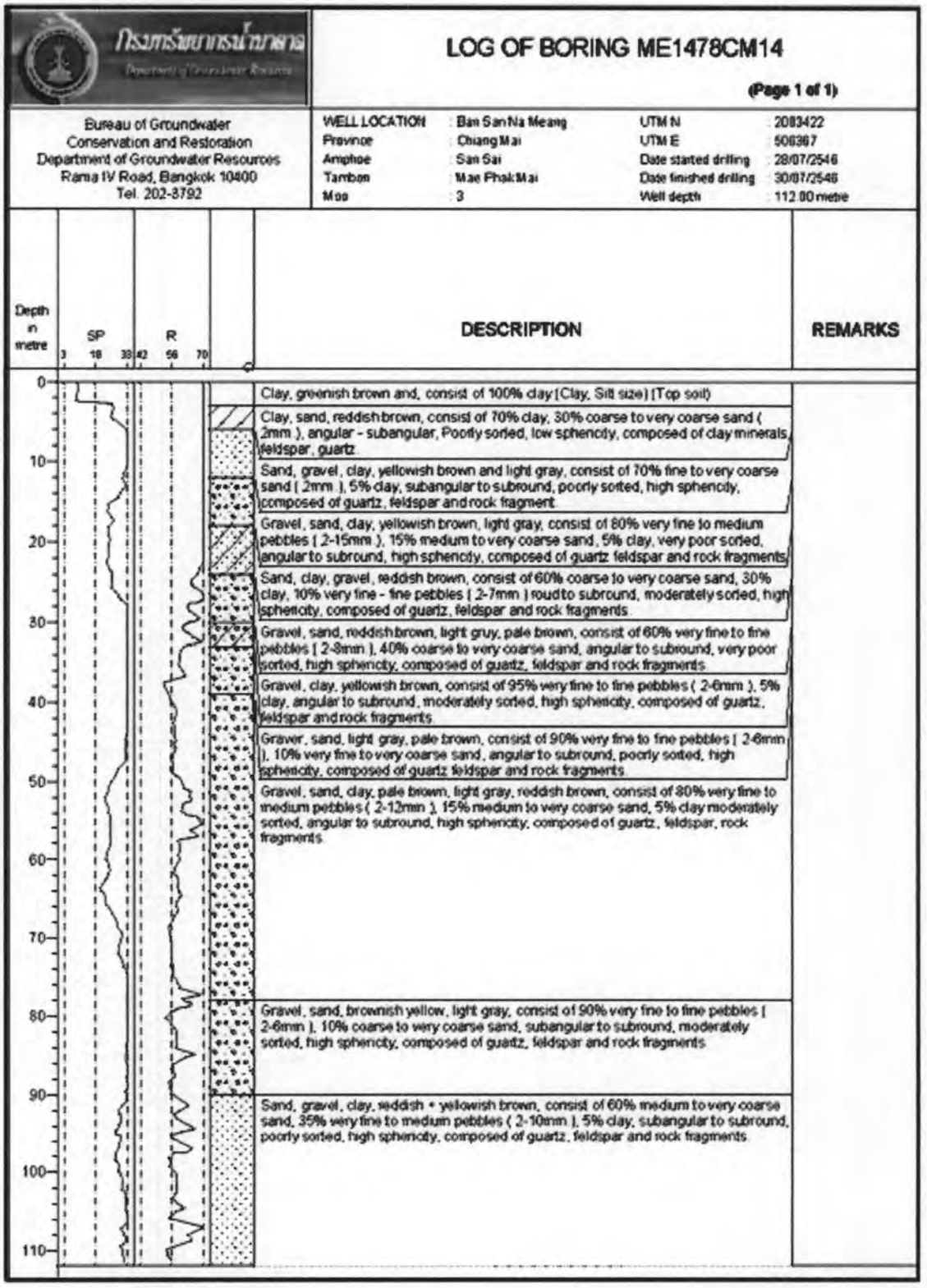
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Ja Dee Mae Kua	UTM N	: 2088550
Province	: Chiang Mai	UTM E	: 498070
Amphoe	: San Sai	Date started drilling	: 28/07/2546
Tambon	: Mae Phak Mai	Date finished drilling	: 30/07/2546
Moo	: 4	Well depth	: 112.00 metre

Depth in metre	SP 3 10 20	R 10 40 70	DESCRIPTION	REMARKS
0–10			Sand, reddish brown color, fine sand size, composted of quartz and feldspar.	
10–20			Gravel, consisted of 70% granule to pebble (2-4 mm) and 30% clay.	
20–30			Sand, brown color, very coarse sand (2 mm), well sorted, subrounded, high sphericity, composted of quartz and feldspar.	
30–70			Gravel, granule to pebble (2-20 mm), moderately to well sorted, subangular, high sphericity, composted of quartz and feldspar.	
70–80			Gravel, consisted of 70% granule and 30% clay.	
80–110			Gravel, granule to pebble (2-30 mm), poorly to moderately sorted.	
110–120				

WELL No.12



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Department of Groundwater Resources

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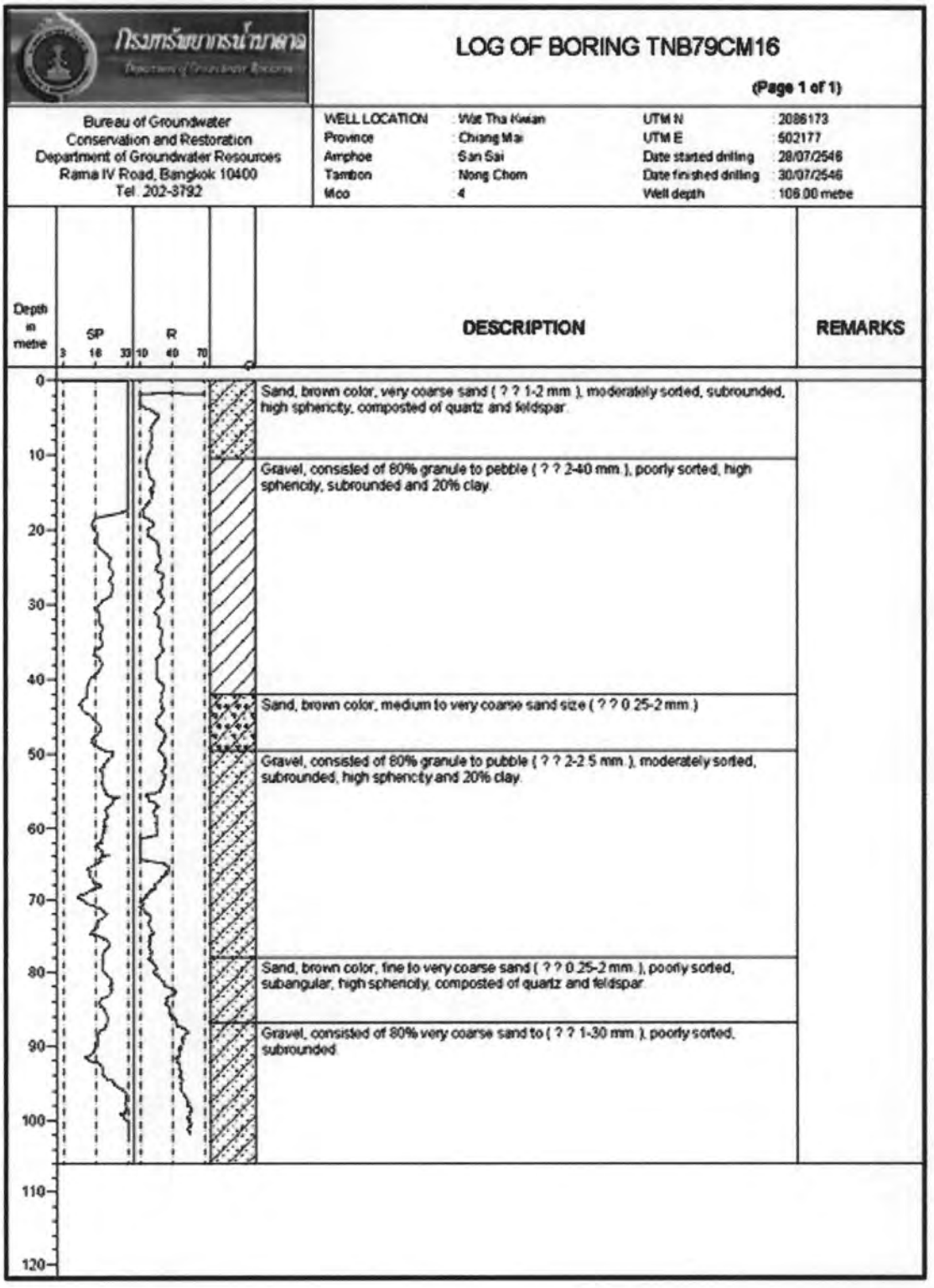
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Ban San Na Meang	UTM N	: 2083422
Province	: Chiang Mai	UTM E	: 506367
Amphoe	: San Sai	Date started drilling	: 28/07/2546
Tambon	: Mae Phak Mai	Date finished drilling	: 30/07/2546
Moo	: 3	Well depth	: 112.00 metre

Depth in metre	SP 3 18 38	R 42 56 70	DESCRIPTION	REMARKS
0			Clay, greenish brown and, consist of 100% clay [Clay, Silt size] [Top soil]	
10			Clay, sand, reddish brown, consist of 70% clay, 30% coarse to very coarse sand (2mm), angular - subangular, Poorly sorted, low sphericity, composed of clay minerals, feldspar, quartz	
20			Sand, gravel, clay, yellowish brown and light gray, consist of 70% fine to very coarse sand [2mm], 5% clay, subangular to subround, poorly sorted, high sphericity, composed of quartz, feldspar and rock fragment	
30			Gravel, sand, clay, yellowish brown, light gray, consist of 80% very fine to medium pebbles [2-15mm], 15% medium to very coarse sand, 5% clay, very poor sorted, angular to subround, high sphericity, composed of quartz feldspar and rock fragments	
40			Sand, clay, gravel, reddish brown, consist of 60% coarse to very coarse sand, 30% clay, 10% very fine - fine pebbles [2-7mm] roud to subround, moderately sorted, high sphericity, composed of quartz, feldspar and rock fragments	
50			Gravel, sand, reddish brown, light gray, pale brown, consist of 60% very fine to fine pebbles [2-8mm], 40% coarse to very coarse sand, angular to subround, very poor sorted, high sphericity, composed of quartz, feldspar and rock fragments	
60			Gravel, clay, yellowish brown, consist of 95% very fine to fine pebbles (2-6mm), 5% clay, angular to subround, moderately sorted, high sphericity, composed of quartz, feldspar and rock fragments	
70			Graver, sand, light gray, pale brown, consist of 90% very fine to fine pebbles [2-6mm], 10% very fine to very coarse sand, angular to subround, poorly sorted, high sphericity, composed of quartz feldspar and rock fragments	
80			Gravel, sand, clay, pale brown, light gray, reddish brown, consist of 80% very fine to medium pebbles (2-12mm), 15% medium to very coarse sand, 5% clay moderately sorted, angular to subround, high sphericity, composed of quartz, feldspar, rock fragments	
90			Gravel, sand, brownish yellow, light gray, consist of 90% very fine to fine pebbles [2-6mm], 10% coarse to very coarse sand, subangular to subround, moderately sorted, high sphericity, composed of quartz, feldspar and rock fragments	
100			Sand, gravel, clay, reddish + yellowish brown, consist of 60% medium to very coarse sand, 35% very fine to medium pebbles (2-10mm), 5% clay, subangular to subround, poorly sorted, high sphericity, composed of quartz, feldspar and rock fragments	
110				

WELL No.13



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LOG OF BORING TNB79CM16

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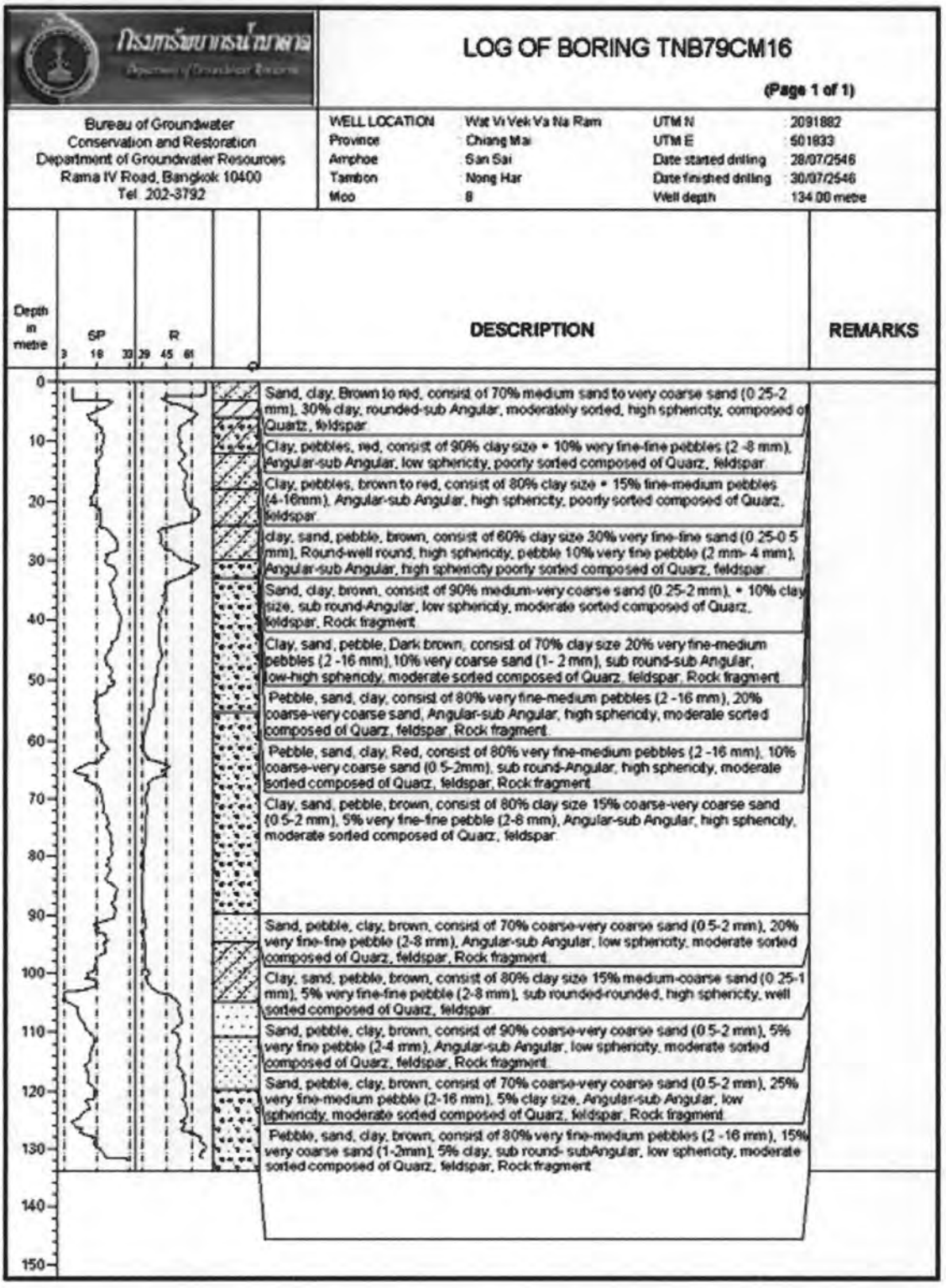
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Tha Kwian	UTM N	: 2086173
Province	: Chiang Mai	UTM E	: 502177
Amphoe	: San Sai	Date started drilling	: 28/07/2546
Tambon	: Nong Chom	Date finished drilling	: 30/07/2546
Moo	: 4	Well depth	: 106.00 metre

Depth in metre	SP (3 16 33)	R (10 40 70)	DESCRIPTION	REMARKS
0–10			Sand, brown color, very coarse sand (? ? 1-2 mm), moderately sorted, subrounded, high sphericity, composted of quartz and feldspar.	
10–40			Gravel, consisted of 80% granule to pebble (? ? 2-40 mm), poorly sorted, high sphericity, subrounded and 20% clay.	
40–50			Sand, brown color, medium to very coarse sand size (? ? 0.25-2 mm)	
50–80			Gravel, consisted of 80% granule to pubble (? ? 2-2.5 mm), moderately sorted, subrounded, high sphericity and 20% clay.	
80–90			Sand, brown color, fine to very coarse sand (? ? 0.25-2 mm), poorly sorted, subangular, high sphericity, composted of quartz and feldspar.	
90–100			Gravel, consisted of 80% very coarse sand to (? ? 1-30 mm), poorly sorted, subrounded.	
100–120				

WELL No.14



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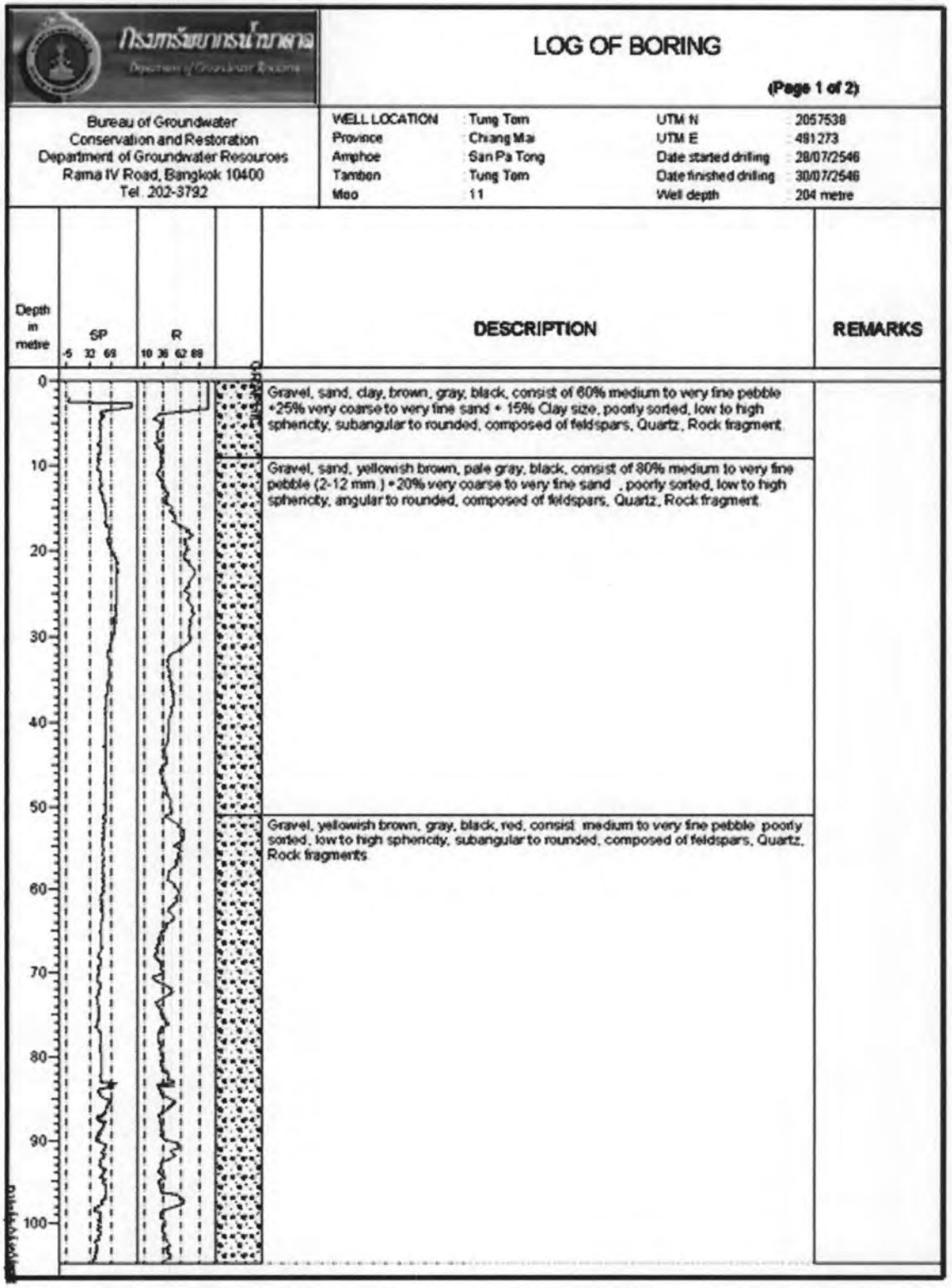
Bureau of Groundwater Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	Wat Vi Vek Va Na Ram	UTM N	2091882
Province	Chiang Mai	UTM E	501833
Amphoe	San Sai	Date started drilling	28/07/2546
Tambon	Nong Har	Date finished drilling	30/07/2546
Moo	8	Well depth	134.00 metre

Depth in metre	SP 3 18 33	R 29 45 61	Q	DESCRIPTION	REMARKS
0–10				Sand, clay, Brown to red, consist of 70% medium sand to very coarse sand (0.25-2 mm), 30% clay, rounded-sub Angular, moderately sorted, high sphericity, composed of Quartz, feldspar.	
10–20				Clay, pebbles, red, consist of 90% clay size + 10% very fine-fine pebbles (2 -8 mm), Angular-sub Angular, low sphericity, poorly sorted composed of Quarz, feldspar.	
20–30				Clay, pebbles, brown to red, consist of 80% clay size + 15% fine-medium pebbles (4-16mm), Angular-sub Angular, high sphericity, poorly sorted composed of Quarz, feldspar.	
30–40				clay, sand, pebble, brown, consist of 60% clay size 30% very fine-fine sand (0.25-0.5 mm), Round-well round, high sphericity, pebble 10% very fine pebble (2 mm- 4 mm), Angular-sub Angular, high sphericity poorly sorted composed of Quarz, feldspar.	
40–50				Sand, clay, brown, consist of 90% medium-very coarse sand (0.25-2 mm), + 10% clay size, sub round-Angular, low sphericity, moderate sorted composed of Quarz, feldspar, Rock fragment.	
50–60				Clay, sand, pebble, Dark brown, consist of 70% clay size 20% very fine-medium pebbles (2 -16 mm), 10% very coarse sand (1- 2 mm), sub round-sub Angular, low-high sphericity, moderate sorted composed of Quarz, feldspar, Rock fragment.	
60–70				Pebble, sand, clay, consist of 80% very fine-medium pebbles (2 -16 mm), 20% coarse-very coarse sand, Angular-sub Angular, high sphericity, moderate sorted composed of Quarz, feldspar, Rock fragment.	
70–80				Pebble, sand, clay, Red, consist of 80% very fine-medium pebbles (2 -16 mm), 10% coarse-very coarse sand (0.5-2mm), sub round-Angular, high sphericity, moderate sorted composed of Quarz, feldspar, Rock fragment.	
80–90				Clay, sand, pebble, brown, consist of 80% clay size 15% coarse-very coarse sand (0.5-2 mm), 5% very fine-fine pebble (2-8 mm), Angular-sub Angular, high sphericity, moderate sorted composed of Quarz, feldspar.	
90–100				Sand, pebble, clay, brown, consist of 70% coarse-very coarse sand (0.5-2 mm), 20% very fine-fine pebble (2-8 mm), Angular-sub Angular, low sphericity, moderate sorted composed of Quarz, feldspar, Rock fragment.	
100–110				Clay, sand, pebble, brown, consist of 80% clay size 15% medium-coarse sand (0.25-1 mm), 5% very fine-fine pebble (2-8 mm), sub rounded-rounded, high sphericity, well sorted composed of Quarz, feldspar.	
110–120				Sand, pebble, clay, brown, consist of 90% coarse-very coarse sand (0.5-2 mm), 5% very fine pebble (2-4 mm), Angular-sub Angular, low sphericity, moderate sorted composed of Quarz, feldspar, Rock fragment.	
120–130				Sand, pebble, clay, brown, consist of 70% coarse-very coarse sand (0.5-2 mm), 25% very fine-medium pebble (2-16 mm), 5% clay size, Angular-sub Angular, low sphericity, moderate sorted composed of Quarz, feldspar, Rock fragment.	
130–140				Pebble, sand, clay, brown, consist of 80% very fine-medium pebbles (2 -16 mm), 15% very coarse sand (1-2mm), 5% clay, sub round- subAngular, low sphericity, moderate sorted composed of Quarz, feldspar, Rock fragment.	
140–150					

WELL No.15



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Department of Groundwater Resources

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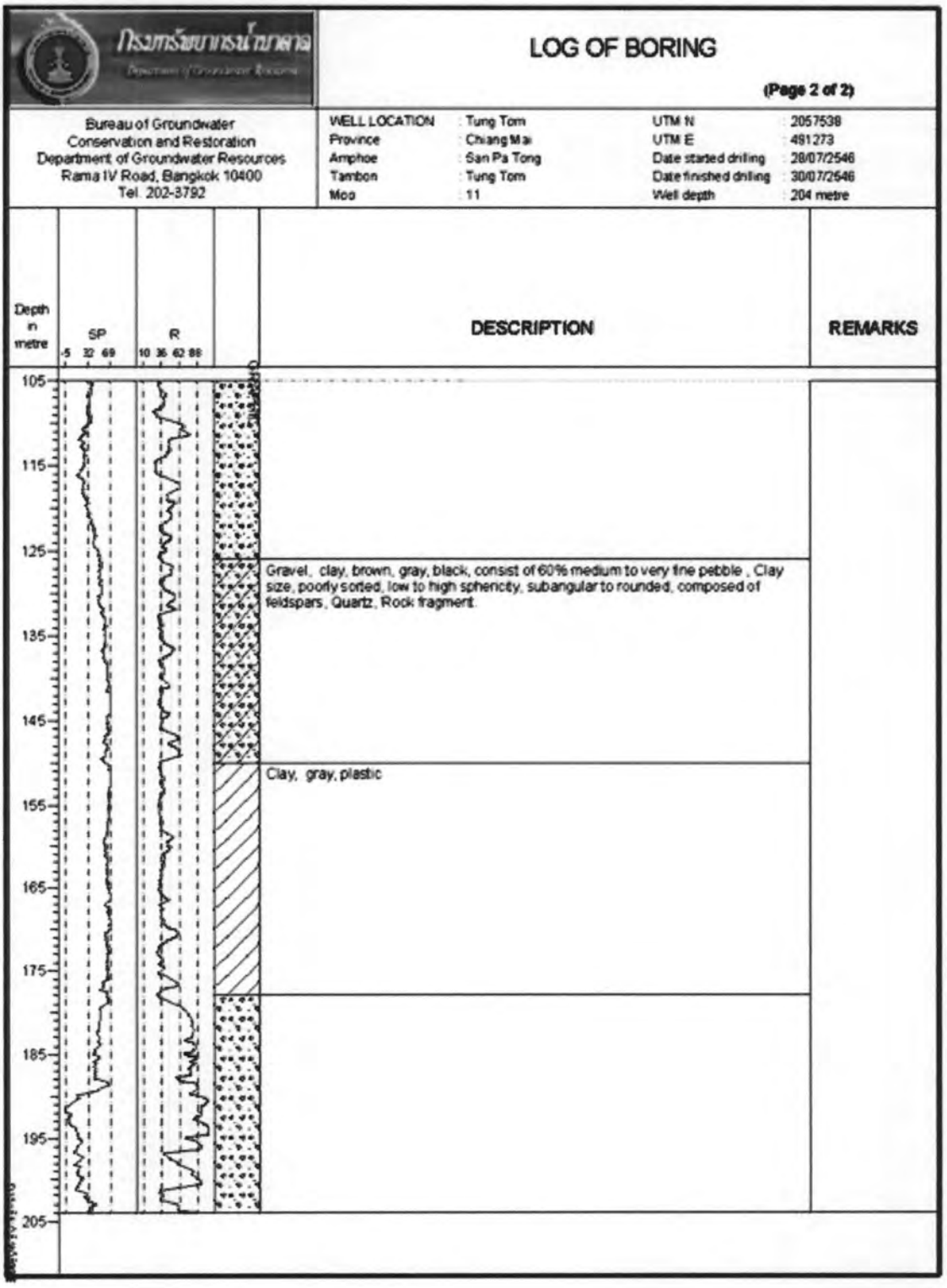
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3732

WELL LOCATION	Tung Tom	UTM N	2057538
Province	Chiang Mai	UTM E	491273
Amphoe	San Pa Tong	Date started drilling	28/07/2546
Tambon	Tung Tom	Date finished drilling	30/07/2546
Moo	11	Well depth	204 metre

Depth in metre	SP -5 32 69	R 10 36 62 88	DESCRIPTION	REMARKS
0–10			Gravel, sand, clay, brown, gray, black, consist of 60% medium to very fine pebble +25% very coarse to very fine sand + 15% Clay size, poorly sorted, low to high sphericity, subangular to rounded, composed of feldspars, Quartz, Rock fragment.	
10–50			Gravel, sand, yellowish brown, pale gray, black, consist of 80% medium to very fine pebble (2-12 mm.) +20% very coarse to very fine sand , poorly sorted, low to high sphericity, angular to rounded, composed of feldspars, Quartz, Rock fragment.	
50–100			Gravel, yellowish brown, gray, black, red, consist medium to very fine pebble poorly sorted, low to high sphericity, subangular to rounded, composed of feldspars, Quartz, Rock fragments.	

WELL No.15



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Department of Groundwater Resources

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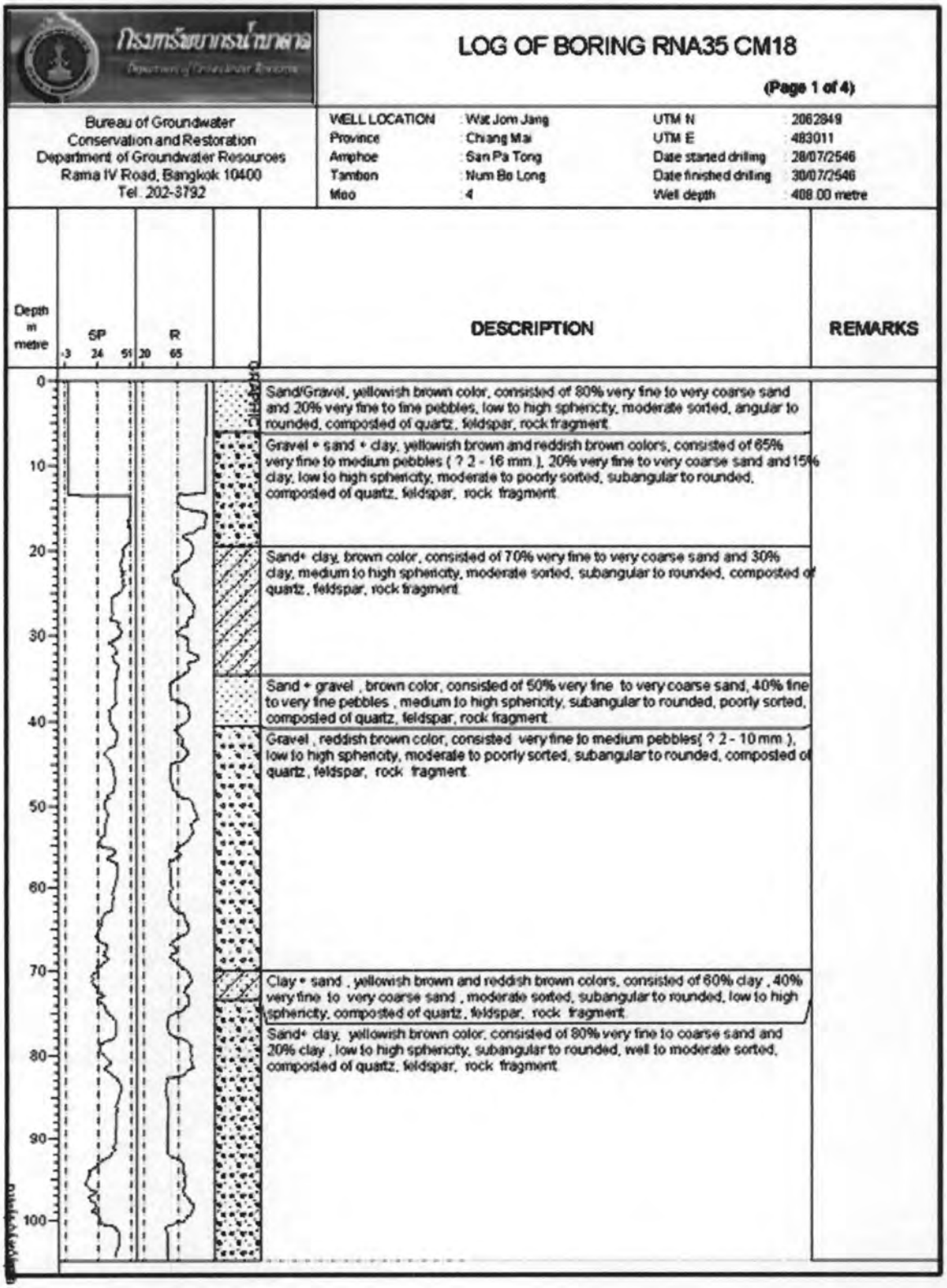
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Tung Tom	UTM N	: 2057538
Province	: Chiang Mai	UTM E	: 491273
Amphoe	: San Pa Tong	Date started drilling	: 28/07/2546
Tambon	: Tung Tom	Date finished drilling	: 30/07/2546
Moo	: 11	Well depth	: 204 metre

Depth in metre	SP -5 32 69	R 10 36 62 88	DESCRIPTION	REMARKS
105				
115				
125			Gravel, clay, brown, gray, black, consist of 60% medium to very fine pebble , Clay size, poorly sorted, low to high sphericity, subangular to rounded, composed of feldspars, Quartz, Rock fragment.	
135				
145				
155			Clay, gray, plastic	
165				
175				
185				
195				
205				

WELL No.16



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Department of Groundwater Resources

LOG OF BORING RNA35 CM18

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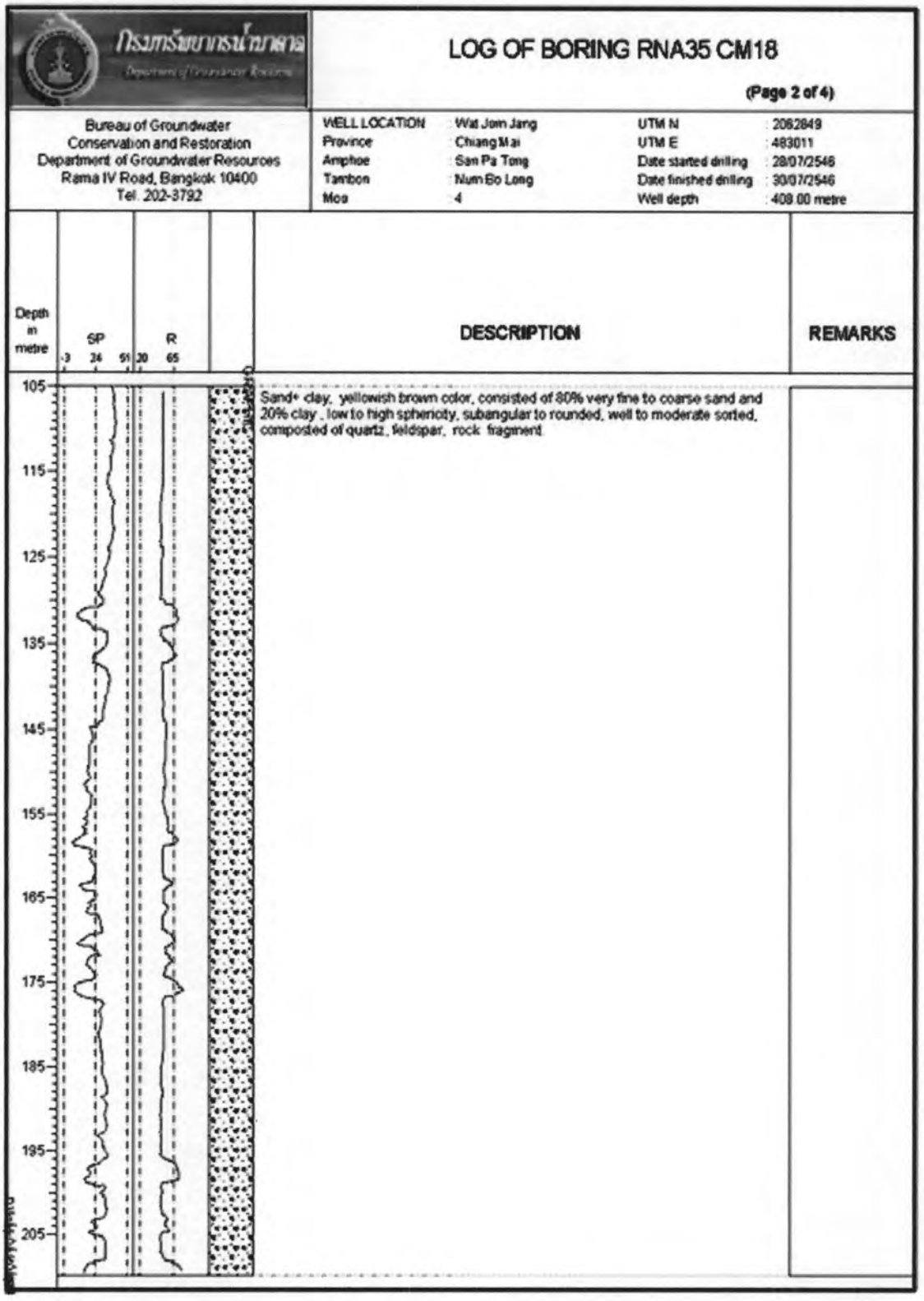
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	Wat Jom Jang	UTM N	2062949
Province	Chiang Mai	UTM E	483011
Amphoe	San Pa Tong	Date started drilling	28/07/2546
Tambon	Num Bo Long	Date finished drilling	30/07/2546
Moo	4	Well depth	408.00 metre

Depth m metre	SP -3 24 51	R 20 65	DESCRIPTION	REMARKS
0			Sand/Gravel, yellowish brown color, consisted of 80% very fine to very coarse sand and 20% very fine to fine pebbles, low to high sphericity, moderate sorted, angular to rounded, composted of quartz, feldspar, rock fragment.	
10			Gravel + sand + clay, yellowish brown and reddish brown colors, consisted of 65% very fine to medium pebbles (? 2 - 16 mm), 20% very fine to very coarse sand and 15% clay, low to high sphericity, moderate to poorly sorted, subangular to rounded, composted of quartz, feldspar, rock fragment.	
20			Sand+ clay, brown color, consisted of 70% very fine to very coarse sand and 30% clay, medium to high sphericity, moderate sorted, subangular to rounded, composted of quartz, feldspar, rock fragment.	
30				
40			Sand + gravel , brown color, consisted of 60% very fine to very coarse sand, 40% fine to very fine pebbles , medium to high sphericity, subangular to rounded, poorly sorted, composted of quartz, feldspar, rock fragment.	
50			Gravel , reddish brown color, consisted very fine to medium pebbles(? 2 - 10 mm), low to high sphericity, moderate to poorly sorted, subangular to rounded, composted of quartz, feldspar, rock fragment.	
60				
70			Clay + sand , yellowish brown and reddish brown colors, consisted of 60% clay , 40% very fine to very coarse sand , moderate sorted, subangular to rounded, low to high sphericity, composted of quartz, feldspar, rock fragment.	
80			Sand+ clay, yellowish brown color, consisted of 80% very fine to coarse sand and 20% clay , low to high sphericity, subangular to rounded, well to moderate sorted, composted of quartz, feldspar, rock fragment.	
90				
100				

WELL No.16



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Department of Groundwater Resources

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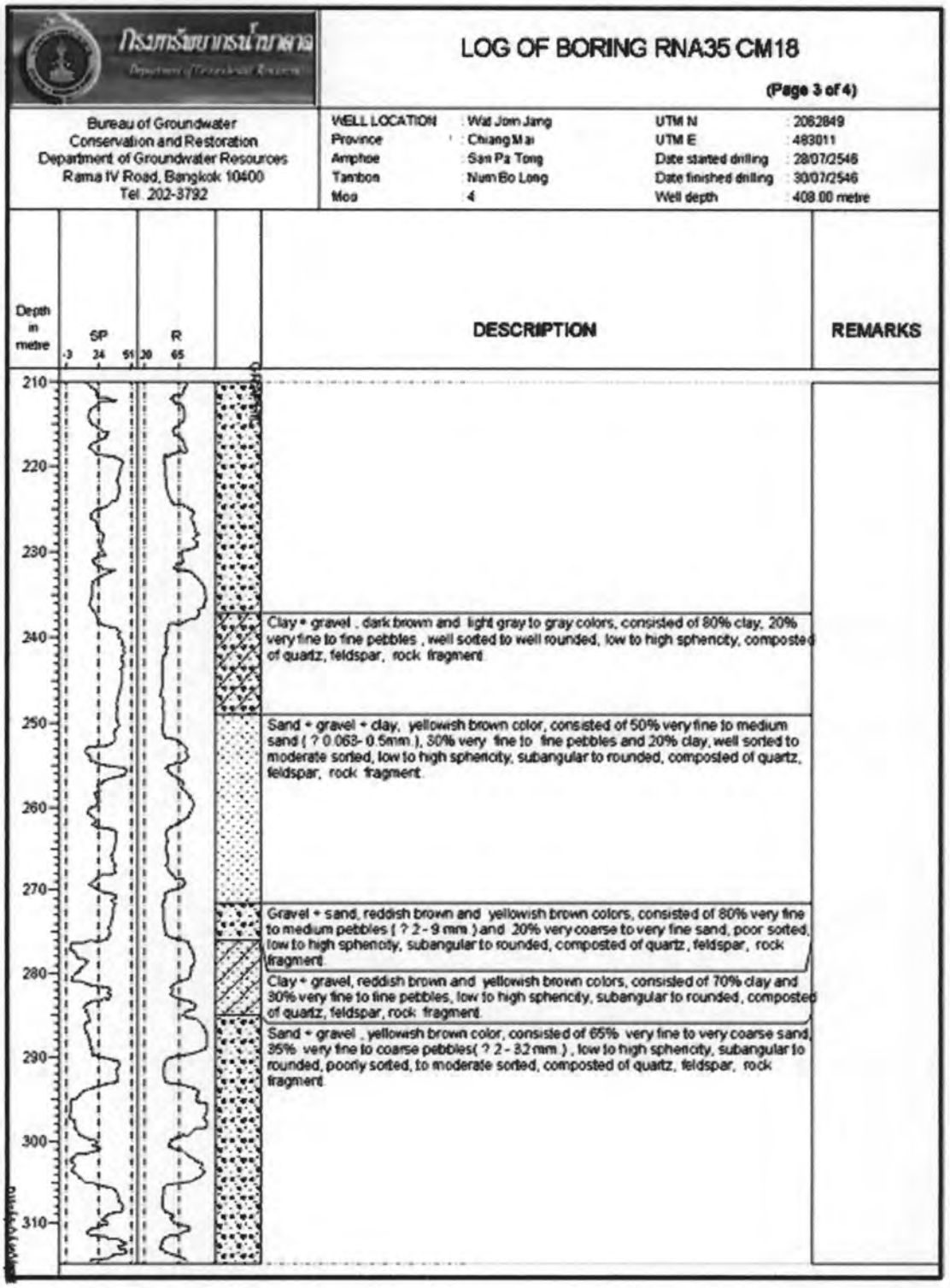
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	Wat Jom Jang	UTM N	2062849
Province	Chiang Mai	UTM E	483011
Amphoe	San Pa Tong	Date started drilling	28/07/2546
Tambon	Num Bo Long	Date finished drilling	30/07/2546
Moo	4	Well depth	408.00 metre

Depth in metre	SP			R		DESCRIPTION	REMARKS
	-3	24	51	20	65		
105						Sand+ clay, yellowish brown color, consisted of 80% very fine to coarse sand and 20% clay , low to high sphericity, subangular to rounded, well to moderate sorted, composted of quartz, feldspar, rock fragment	
115							
125							
135							
145							
155							
165							
175							
185							
195							
205							

WELL No.16



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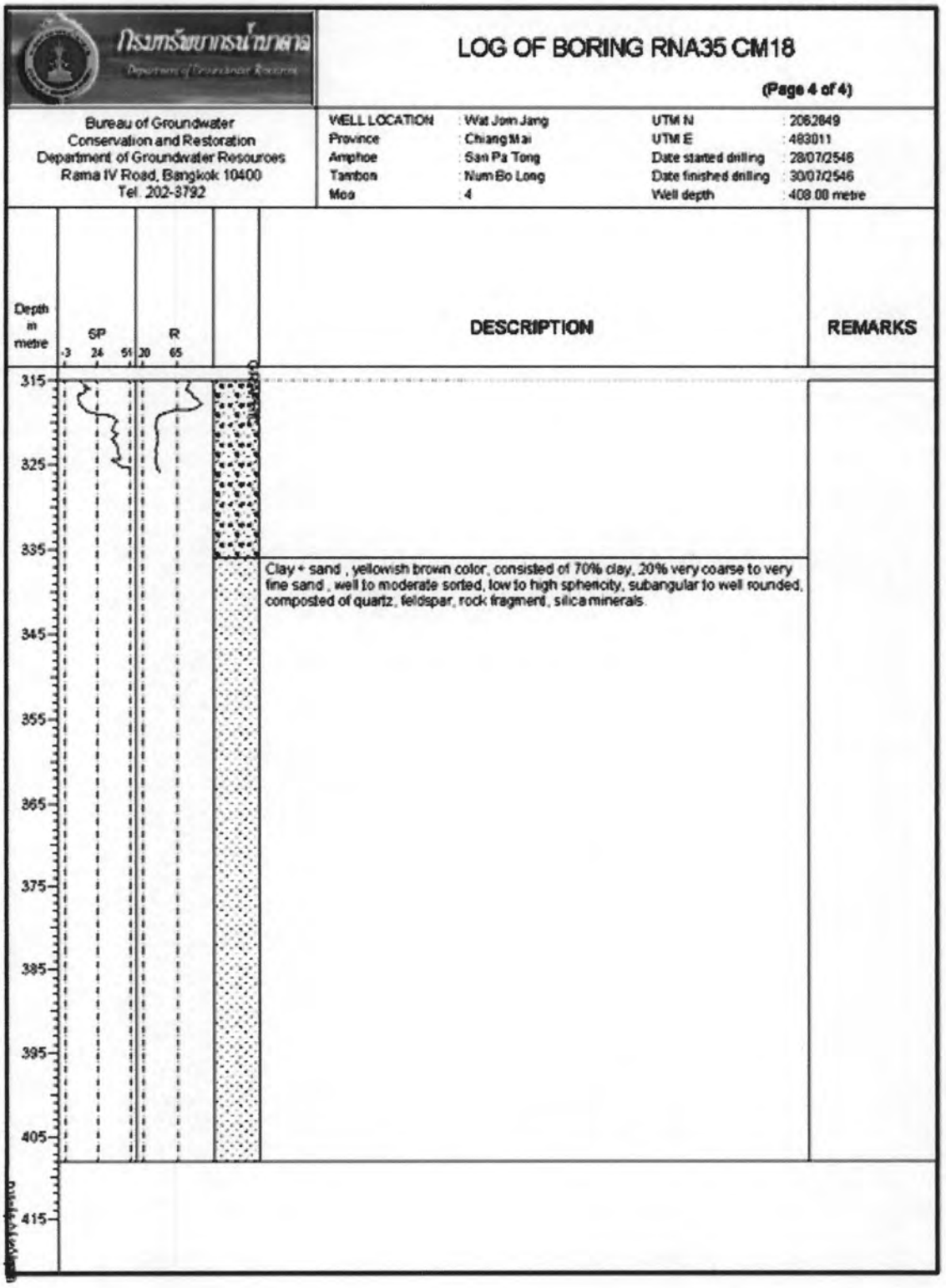
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Jom Jang	UTM N	: 2062849
Province	: Chiang Mai	UTM E	: 483011
Amphoe	: San Pa Tong	Date started drilling	: 28/07/2546
Tambon	: Num Bo Long	Date finished drilling	: 30/07/2546
Moo	: 4	Well depth	: 408.00 metre

Depth in metre	SP -3 24 51	R 20 65	DESCRIPTION	REMARKS
210				
220				
230				
240			Clay + gravel , dark brown and light gray to gray colors, consisted of 80% clay, 20% very fine to fine pebbles , well sorted to well rounded, low to high sphericity, composted of quartz, feldspar, rock fragment.	
250			Sand + gravel + clay, yellowish brown color, consisted of 50% very fine to medium sand (? 0.063- 0.5mm), 30% very fine to fine pebbles and 20% clay, well sorted to moderate sorted, low to high sphericity, subangular to rounded, composted of quartz, feldspar, rock fragment.	
260				
270			Gravel + sand, reddish brown and yellowish brown colors, consisted of 80% very fine to medium pebbles (? 2 - 9 mm) and 20% very coarse to very fine sand, poor sorted, low to high sphericity, subangular to rounded, composted of quartz, feldspar, rock fragment.	
280			Clay + gravel, reddish brown and yellowish brown colors, consisted of 70% clay and 30% very fine to fine pebbles, low to high sphericity, subangular to rounded, composted of quartz, feldspar, rock fragment.	
290			Sand + gravel , yellowish brown color, consisted of 65% very fine to very coarse sand, 35% very fine to coarse pebbles(? 2 - 8.2 mm) , low to high sphericity, subangular to rounded, poorly sorted, to moderate sorted, composted of quartz, feldspar, rock fragment.	
300				
310				

WELL No.16



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Tel. 202-3792

WELL LOCATION	: Wat Jom Jang	UTM N	: 2062849
Province	: Chiang Mai	UTM E	: 483011
Amphoe	: San Pa Tong	Date started drilling	: 28/07/2546
Tambon	: Num Bo Long	Date finished drilling	: 30/07/2546
Moo	: 4	Well depth	: 408.00 metre

Depth m metre	SP -3 24 51	R 20 65	DESCRIPTION	REMARKS
315				
325				
335			Clay + sand , yellowish brown color, consisted of 70% clay, 20% very coarse to very fine sand , well to moderate sorted, low to high sphericity, subangular to well rounded, composted of quartz, feldspar, rock fragment, silica minerals.	
345				
355				
365				
375				
385				
395				
405				
415				

WELL No.19

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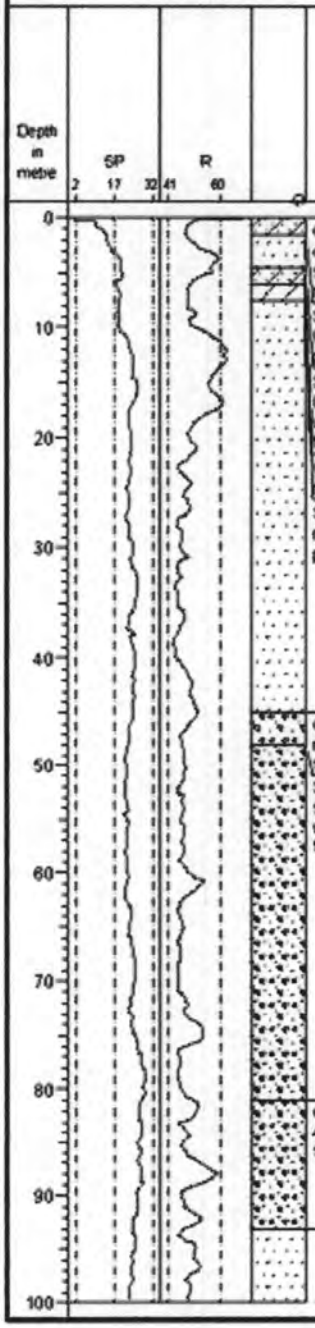
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Te Pa Ram	UTM N	: 2070819
Province	: Chiang Mai	UTM E	: 506589
Amphoe	: Sa Ra Pi	Date started drilling	: 28/07/2546
Tambon	: Pa Pong	Date finished drilling	: 30/07/2546
Moo	: 5	Well depth	: 200.00 mebe



DESCRIPTION	REMARKS
Clay + sand + gravel, reddish brown color, consisted of 65% clay, 25% fine to very coarse sand(0.125 - 2 mm) and 15% very fine to fine pebbles(? 2 - 8 mm), poorly sorted, high sphericity, subangular to subrounded, composted of quartz, feldspar and rock fragment.	
Sand + gravel, reddish brown color, consisted of 85% coarse to very coarse sand(0.5 - 20 mm), well sorted, high sphericity, subangular to well rounded, 15% very fine pebbles(? 2 - 42 mm), composted of quartz, feldspar and rock fragment.	
Sand + gravel + clay, brownish gray, consisted of 65% fine to very coarse sand(0.125 - 2 mm), moderately sorted, high sphericity, angular to subrounded, 20% gravel very fine pebbles(?2 - 4 mm) and 15% clay, composted of quartz, feldspar and rock fragment.	
Clay, brownwish gray, well sorted, well rounded, composted of quartz, feldspar and rock fragment.	
Sand + gravel, brown color, consisted of 90% fine to very coarse sand(0.125 - 0.5 mm), well sorted, high sphericity, angular to rounded, 10% very fine to medium pebbles(? 2 - 8 mm), composted of quartz, feldspar and rock fragment.	
Gravel + sand, brown color, consisted of 70% very fine to medium pebbles(? 2 - 16 mm), 30% fine to very coarse sand(0.125 - 2 mm), moderately sorted, low to high sphericity, angular to rounded, composted of quartz, feldspar and rock fragment.	
Sand + gravel, reddish brown to brown color, consisted of 80% fine to very coarse sand(0.125 - 2 mm), well sorted, low to high sphericity, angular to rounded and 20% very fine to medium pebbles(?2 - 16 mm), composted of quartz, feldspar and rock fragment.	
Gravel + sand, brown color, consisted of 60% fine to medium pebbles(2 - 10 mm) and 40% fine to very coarse sand(0.125 - 2 mm), moderately sorted, low to high sphericity, angular to rounded, composted of quartz, feldspar and rock fragment.	

WELL No.19

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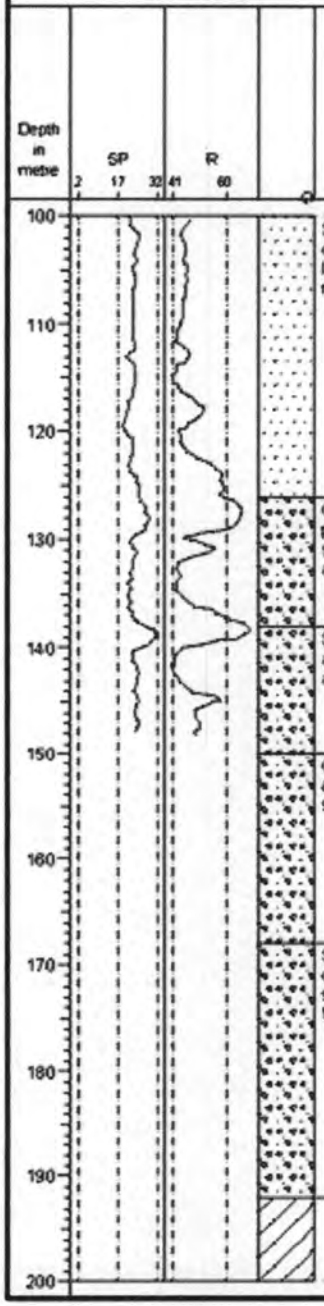
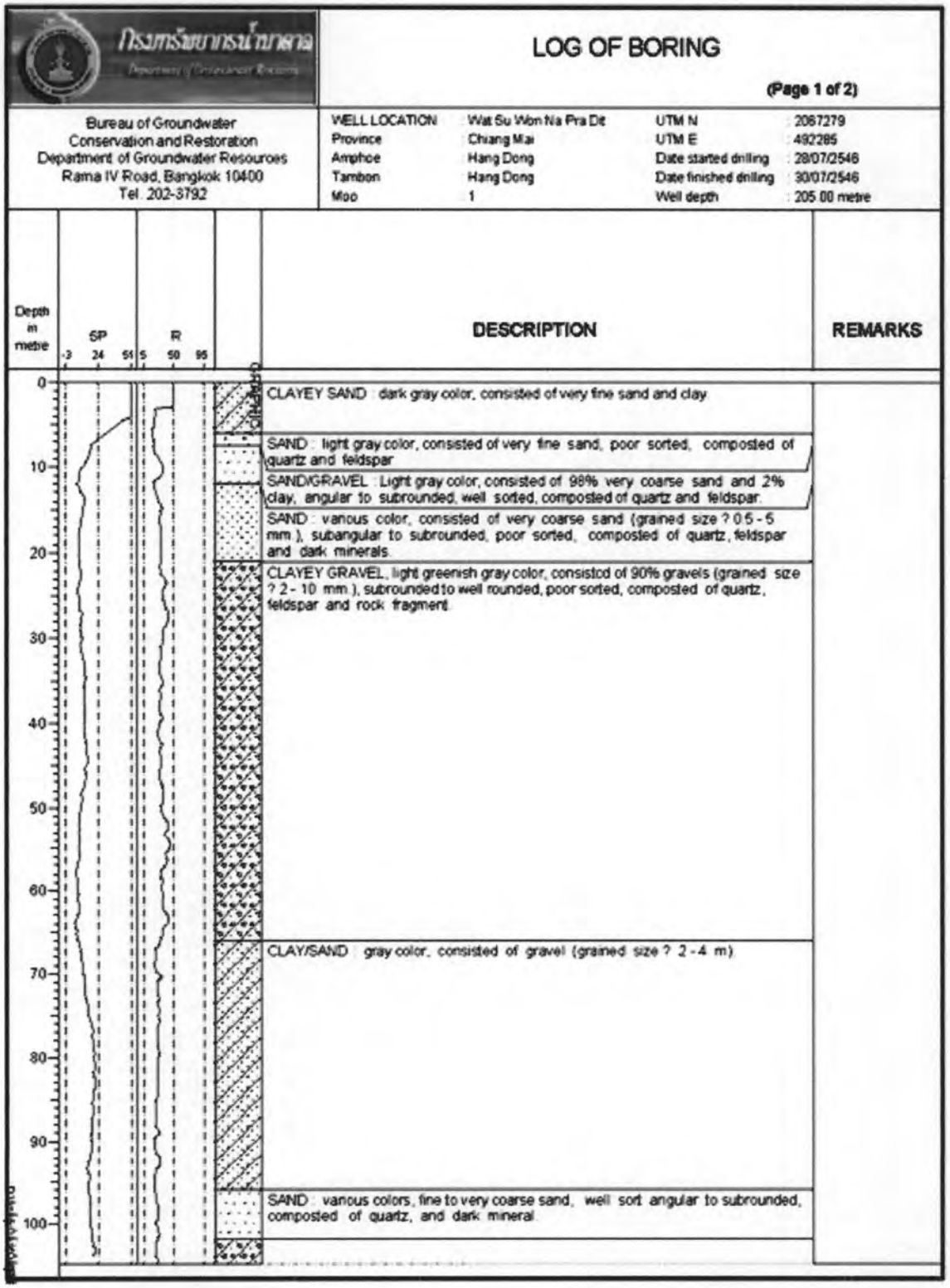
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Te Pa Ram	UTM N	: 2070819
Province	: Chiang Mai	UTM E	: 506589
Amphoe	: Sa Ra Pi	Date started drilling	: 28/07/2546
Tambon	: Pa Pong	Date finished drilling	: 30/07/2546
Moo	: 5	Well depth	: 200.00 metre



Depth in metre	DESCRIPTION	REMARKS
100 - 130	Sand + gravel, brown to reddish brown color, consisted of 80% medium to very coarse sand(0.25 - 2 mm) and 20% gravel very fine to medium pebbles, well sorted, low to high sphericity, angular to well rounded and composted of quartz, feldspar and rock fragment.	
130 - 140	Gravel + sand, brown to reddish brown color, consisted of 60% very fine to medium pebbles(2 - 16 mm) and 40% fine to very coarse sand(0.125 - 2 mm), moderately sorted, low to high sphericity, angular to well rounded, composted of quartz, feldspar and rock fragment.	
140 - 150	Sand + gravel, brown to reddish brown color, consisted of 80% sand(0.125 - 2 mm) and 20% very fine to medium pebbles(2 - 16 mm), well sorted, low to high sphericity, angular to rounded , composted of quartz, feldspar and rock fragment.	
150 - 170	Gravel + sand, brown color, consisted of 60% fine to medium pebbles(2 - 16 mm) and 40% very fine to medium sand(0.0625 - 2 mm), moderately sorted, low to high sphericity, angular to rounded, composted of quartz, feldspar and rock fragment.	
170 - 200	Sand + gravel, brown to reddish brown color, consisted of 80% very fine to very coarse sand(0.0625 - 2 mm) and 20% very fine to medium pebbles(2 - 16 mm), well sorted, low to high sphericity, subangular to well rounded, , composted of quartz, feldspar and rock fragment.	

WELL No.21



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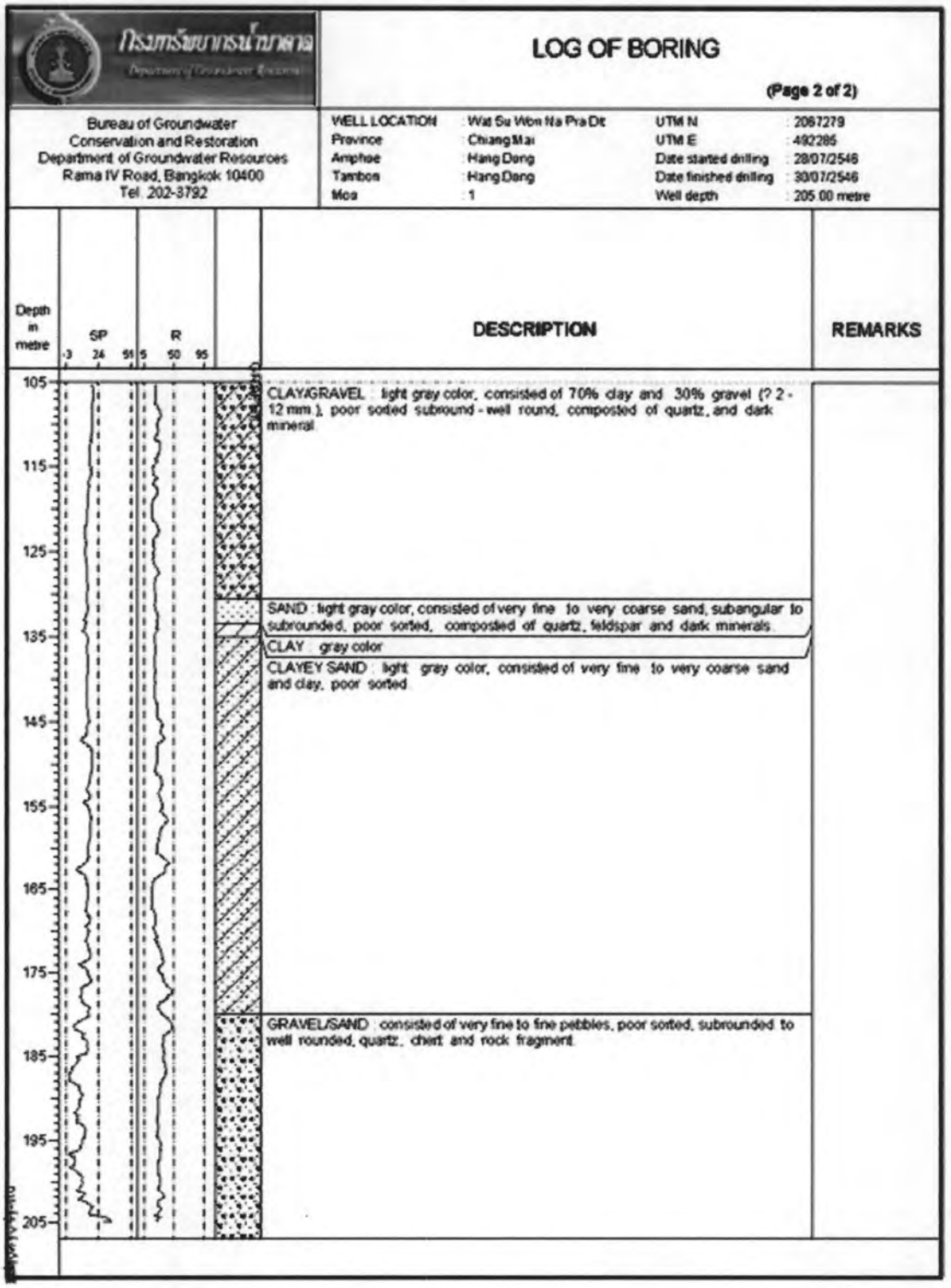
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Su Won Na Pra Dt	UTM N	: 2087279
Province	: Chiang Mai	UTM E	: 492285
Amphoe	: Hang Dong	Date started drilling	: 28/07/2546
Tambon	: Hang Dong	Date finished drilling	: 30/07/2546
Moo	: 1	Well depth	: 205.00 metre

Depth in metre	SP -3 24 51	R 5 50 95	DESCRIPTION	REMARKS
0			CLAYEY SAND : dark gray color, consisted of very fine sand and clay	
10			SAND : light gray color, consisted of very fine sand, poor sorted, composted of quartz and feldspar	
			SAND/GRAVEL : Light gray color, consisted of 98% very coarse sand and 2% clay, angular to subrounded, well sorted, composted of quartz and feldspar.	
20			SAND : various color, consisted of very coarse sand (grained size ? 0.5 - 5 mm), subangular to subrounded, poor sorted, composted of quartz, feldspar and dark minerals.	
30			CLAYEY GRAVEL : light greenish gray color, consisted of 90% gravels (grained size ? 2 - 10 mm), subrounded to well rounded, poor sorted, composted of quartz, feldspar and rock fragment.	
40				
50				
60				
70			CLAY/SAND : gray color, consisted of gravel (grained size ? 2 - 4 m)	
80				
90				
100			SAND : various colors, fine to very coarse sand, well sort angular to subrounded, composted of quartz, and dark mineral.	

WELL No.21



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Department of Groundwater Resources
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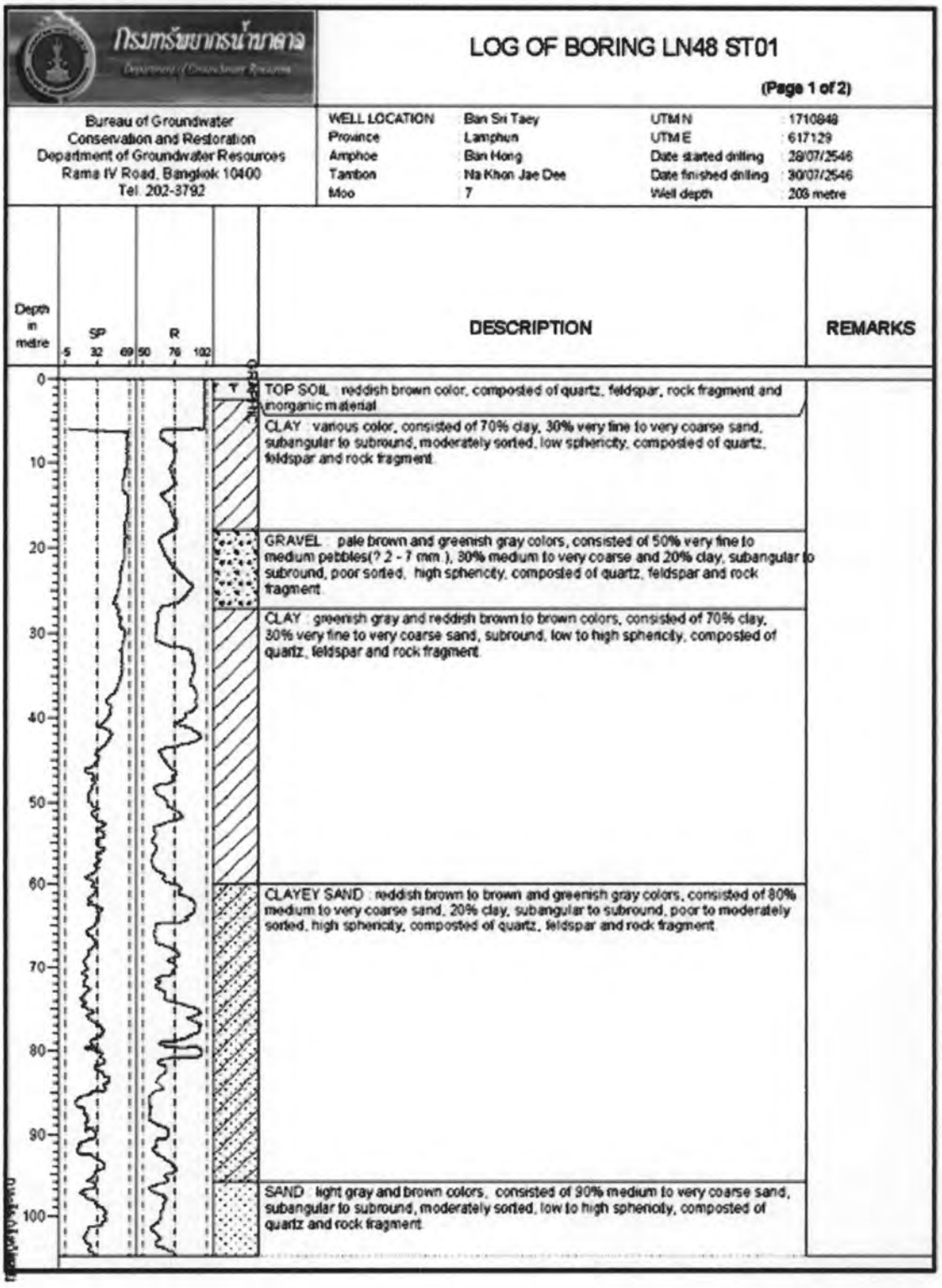
WELL LOCATION	: Wat Su Won Na Pra Dit	UTM N	: 2067279
Province	: Chiang Mai	UTM E	: 492285
Amphoe	: Hang Dong	Date started drilling	: 28/07/2546
Tambon	: Hang Dong	Date finished drilling	: 30/07/2546
Moo	: 1	Well depth	: 205.00 metre

Depth in metre	SP -3 24 51	R 5 50 95	DESCRIPTION	REMARKS
105			CLAYGRAVEL : light gray color, consisted of 70% clay and 30% gravel (? 2 - 12 mm.), poor sorted subround - well round, composted of quartz, and dark mineral.	
115				
125				
135			SAND : light gray color, consisted of very fine to very coarse sand, subangular to subrounded, poor sorted, composted of quartz, feldspar and dark minerals.	
			CLAY : gray color	
145			CLAYEY SAND : light gray color, consisted of very fine to very coarse sand and clay, poor sorted.	
155				
165				
175				
185			GRAVEL/SAND : consisted of very fine to fine pebbles, poor sorted, subrounded to well rounded, quartz, chert and rock fragment.	
195				
205				

WELL No.24



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Department of Groundwater Resources

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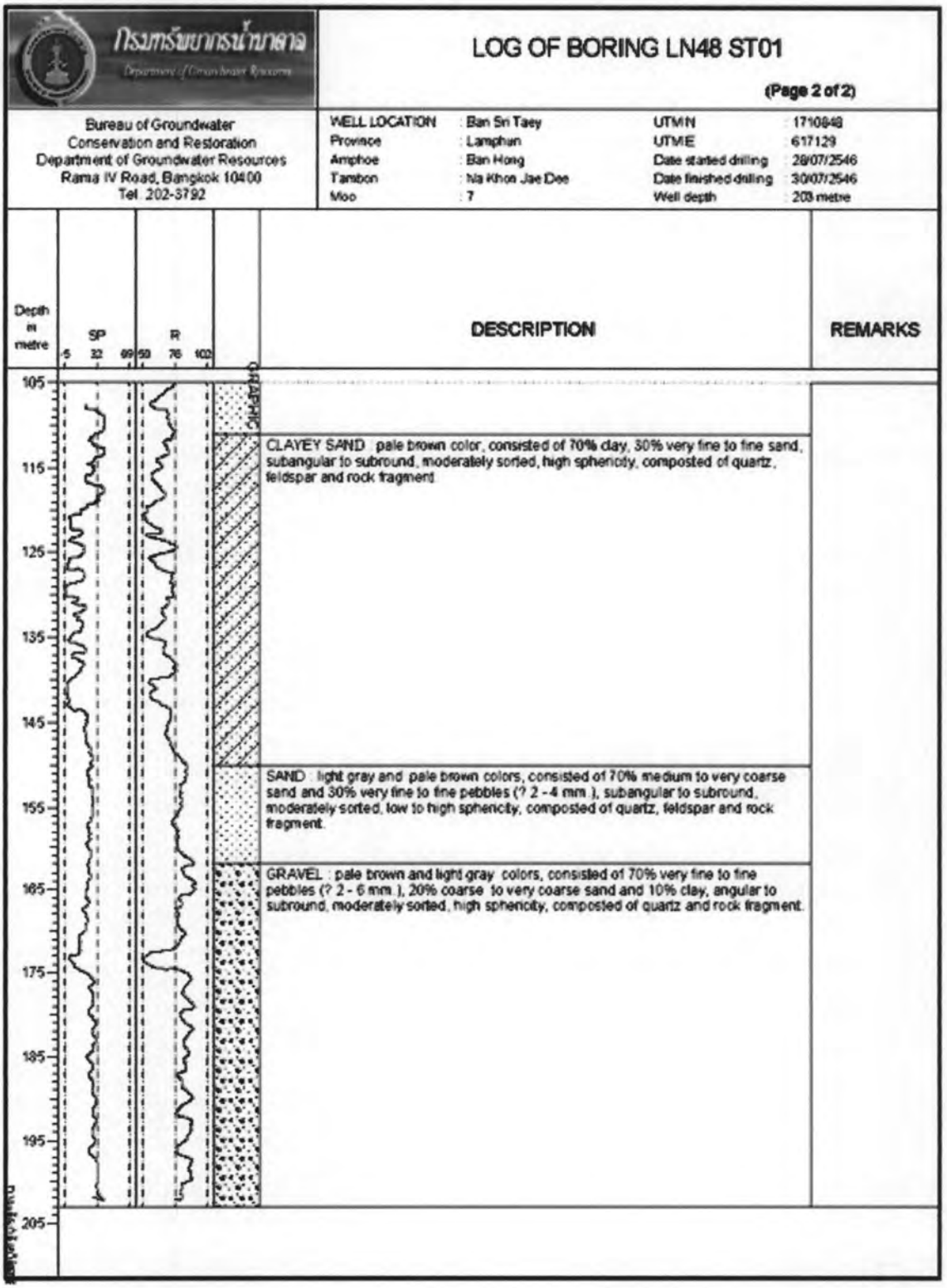
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	Ban Sri Taey	UTM N	1710848
Province	Lamphun	UTM E	617129
Amphoe	Ban Hong	Date started drilling	28/07/2546
Tambon	Na Khon Jae Dee	Date finished drilling	30/07/2546
Moo	7	Well depth	208 metre

Depth in metre	SP	R	DESCRIPTION	REMARKS
0	5 32 69	50 76 102	TOP SOIL : reddish brown color, composted of quartz, feldspar, rock fragment and inorganic material	
10			CLAY : various color, consisted of 70% clay, 30% very fine to very coarse sand, subangular to subround, moderately sorted, low sphericity, composted of quartz, feldspar and rock fragment.	
20			GRAVEL : pale brown and greenish gray colors, consisted of 50% very fine to medium pebbles(? 2 - 7 mm), 30% medium to very coarse and 20% clay, subangular to subround, poor sorted, high sphericity, composted of quartz, feldspar and rock fragment.	
30			CLAY : greenish gray and reddish brown to brown colors, consisted of 70% clay, 30% very fine to very coarse sand, subround, low to high sphericity, composted of quartz, feldspar and rock fragment.	
40				
50				
60			CLAYEY SAND : reddish brown to brown and greenish gray colors, consisted of 80% medium to very coarse sand, 20% clay, subangular to subround, poor to moderately sorted, high sphericity, composted of quartz, feldspar and rock fragment.	
70				
80				
90				
100			SAND : light gray and brown colors, consisted of 90% medium to very coarse sand, subangular to subround, moderately sorted, low to high sphericity, composted of quartz and rock fragment.	

WELL No.24



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Department of Groundwater Resources

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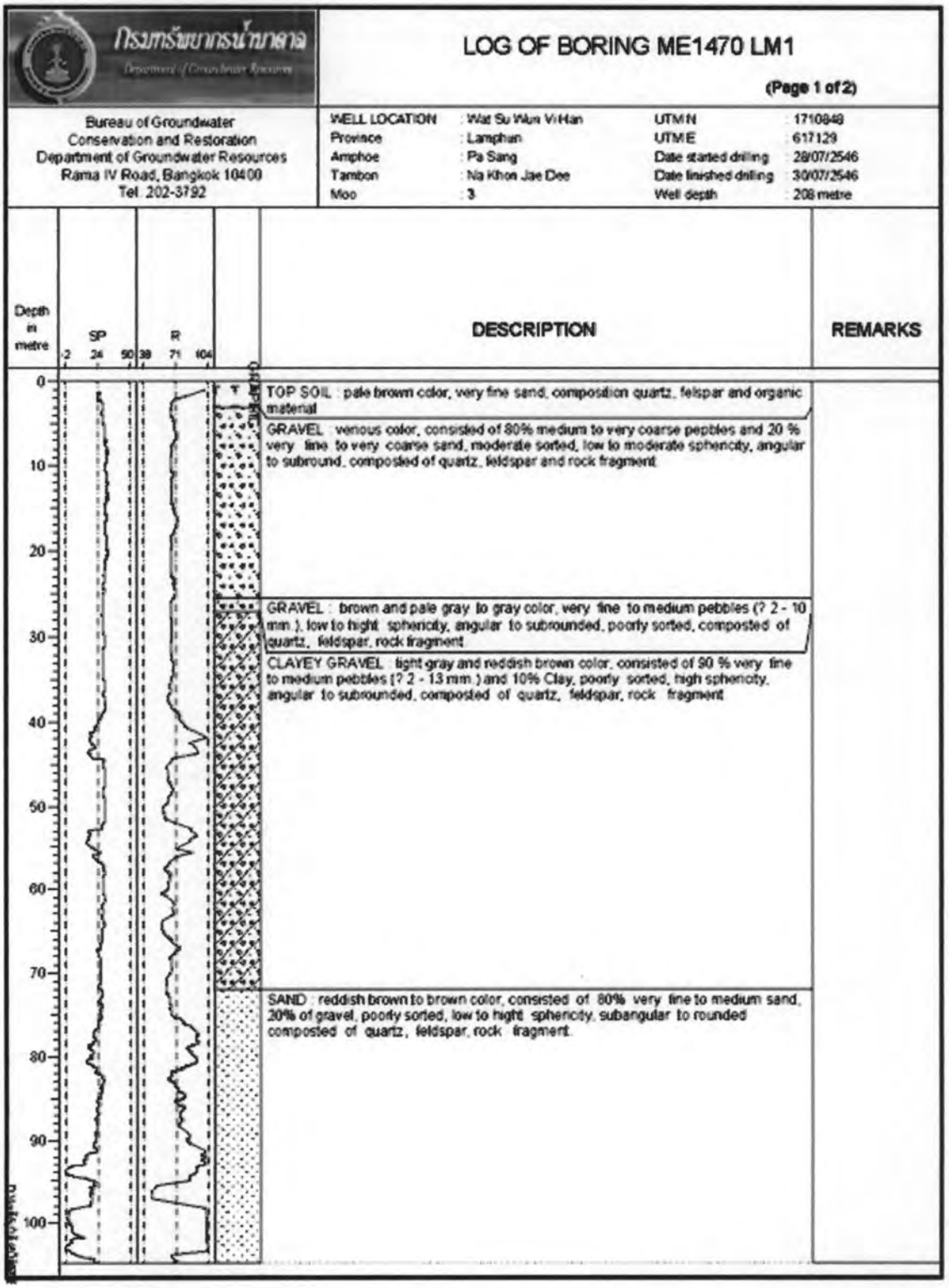
WELL LOCATION	: Ban Sri Taey	UTMN	: 1710848
Province	: Lamphun	UTME	: 617129
Amphoe	: Ban Hong	Date started drilling	: 28/07/2546
Tambon	: Ha Khon Jae Dee	Date finished drilling	: 30/07/2546
Moo	: 7	Well depth	: 203 metre

Depth in metre	SP -5 32 69	R 50 76 102	GRAPHIC	DESCRIPTION	REMARKS
105					
115				CLAYEY SAND : pale brown color, consisted of 70% clay, 30% very fine to fine sand, subangular to subround, moderately sorted, high sphericity, composted of quartz, feldspar and rock fragment	
125					
135					
145					
155				SAND : light gray and pale brown colors, consisted of 70% medium to very coarse sand and 30% very fine to fine pebbles (? 2 - 4 mm), subangular to subround, moderately sorted, low to high sphericity, composted of quartz, feldspar and rock fragment.	
165				GRAVEL : pale brown and light gray colors, consisted of 70% very fine to fine pebbles (? 2 - 6 mm), 20% coarse to very coarse sand and 10% clay, angular to subround, moderately sorted, high sphericity, composted of quartz and rock fragment.	
175					
185					
195					
205					

WELL No.27



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Department of Groundwater Resources
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Tel. 202-3792

WELL LOCATION	: Wat Su Wan Vi Han	UTM N	: 1710848
Province	: Lamphun	UTM E	: 617129
Amphoe	: Pa Sang	Date started drilling	: 28/07/2546
Tambon	: Na Khon Jae Dee	Date finished drilling	: 30/07/2546
Moo	: 3	Well depth	: 208 metre

Depth in metre	SP -2 24 50	R 38 71 104	Graphic Log	DESCRIPTION	REMARKS
0				TOP SOIL : pale brown color, very fine sand, composition quartz, felspar and organic material	
10				GRAVEL : various color, consisted of 80% medium to very coarse pebbles and 20 % very fine to very coarse sand, moderate sorted, low to moderate sphericity, angular to subround, composted of quartz, feldspar and rock fragment	
20					
30				GRAVEL : brown and pale gray to gray color, very fine to medium pebbles (? 2 - 10 mm.), low to hight sphericity, angular to subrounded, poorly sorted, composted of quartz, feldspar, rock fragment	
40				CLAYEY GRAVEL : light gray and reddish brown color, consisted of 90 % very fine to medium pebbles (? 2 - 13 mm.) and 10% Clay, poorly sorted, high sphericity, angular to subrounded, composted of quartz, feldspar, rock fragment	
50					
60					
70					
80				SAND : reddish brown to brown color, consisted of 80% very fine to medium sand, 20% of gravel, poorly sorted, low to hight sphericity, subangular to rounded composted of quartz, feldspar, rock fragment	
90					
100					

WELL No.27

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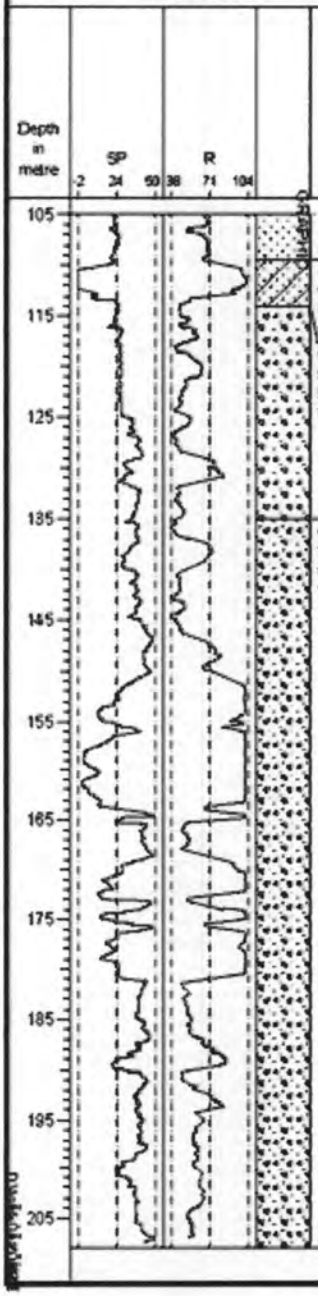
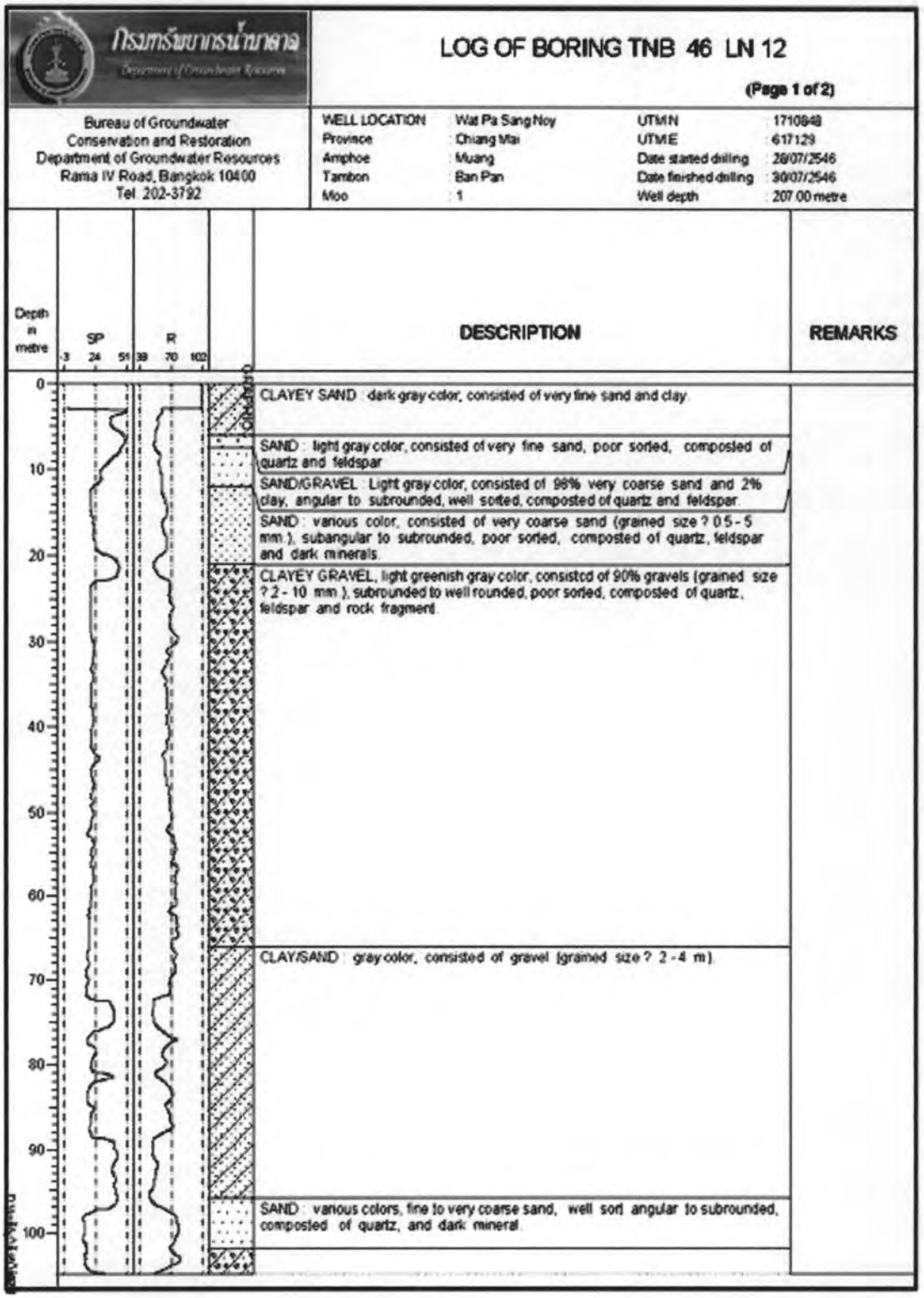
WELL LOCATION	Wat Su Wun Vi Han	UTM N	1710848
Province	Lamphun	UTM E	617129
Amphoe	Pa Sang	Date started drilling	28/07/2546
Tambon	Na Khon Jae Dee	Date finished drilling	30/07/2546
Moo	3	Well depth	208 metre



Depth in metre	DESCRIPTION	REMARKS
105 – 115	CLAYEY SAND : reddish brown to yellowish brown color, consisted of fine to very fine sand to very finn pebbles and clay, moderate sorted, hight sphericity, subangular to subrounded composted of quartz, feldspar, rock fragment (dark minerals)	
115 – 135	GRAVEL : reddish brown and gray colors, consisted of 80% of gravel very fine to medium pebbles (? 2 - 10 mm), 20% of very fine to coarse sand,well sorted, low to hight sphericity, subangular to rounded composted of quartz, feldspar, rock fragment (dark minerals)	
135 – 205	GRAVEL : reddish brown to yellowish brown color, consisted of 75% very fine to fine pebbles (? 2 - 7 mm), 15% sand fine to very fine sand (? 0.063 - 0.25 mm.),10% clay, moderate to poorly sorted, medium to hight sphericity, angular to subrounded, composted of quartz, feldspar, rock fragment	

WELL No.29



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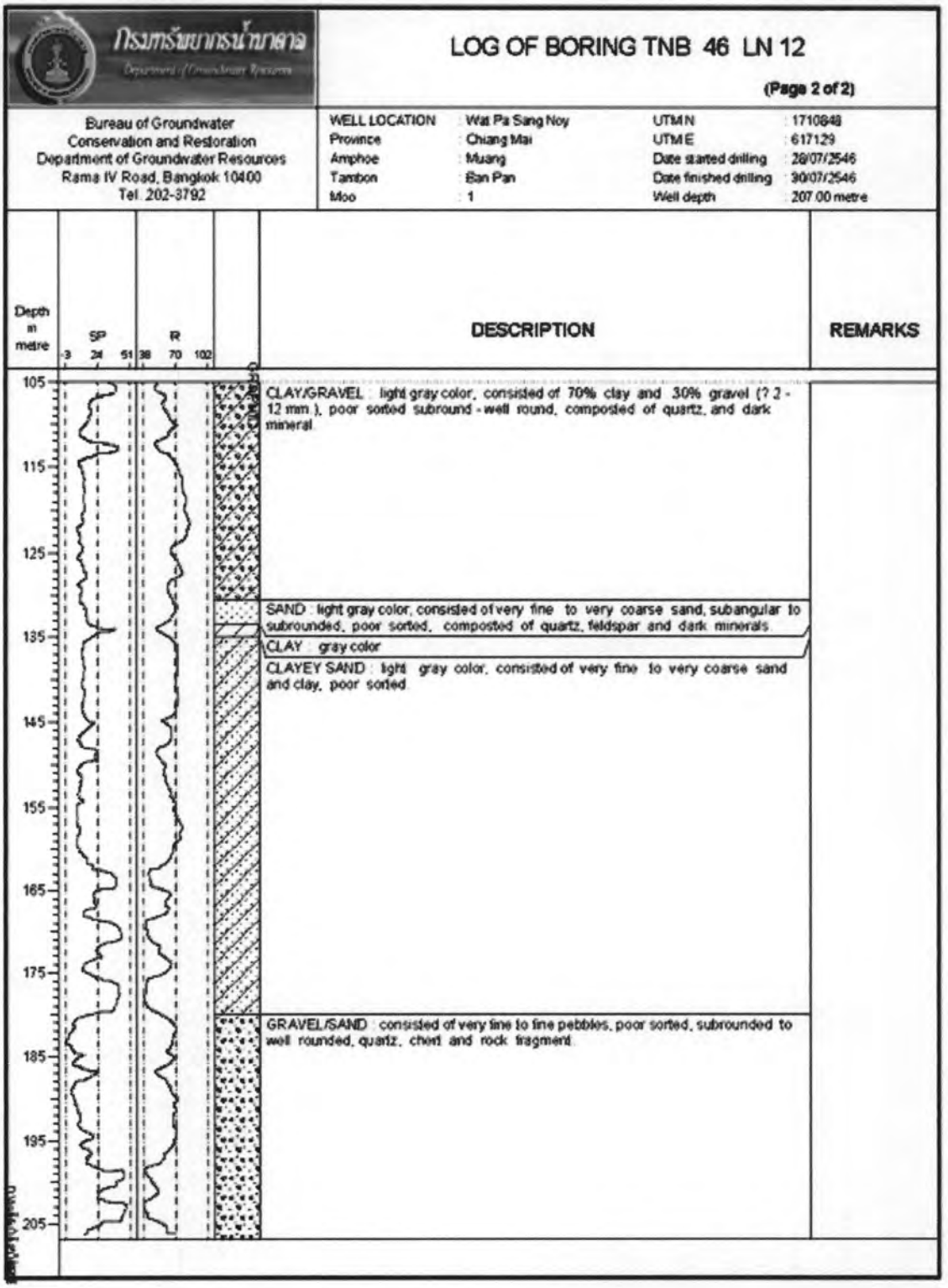
WELL LOCATION	Wat Pa Sang Noy	UTMN	1710848
Province	Chiang Mai	UTME	617128
Amphoe	Muang	Date started drilling	28/07/2546
Tambon	Ban Pan	Date finished drilling	30/07/2546
Moo	1	Well depth	207.00 metre

Depth in metre	SP -3 24 51	R 38 70 102	DESCRIPTION	REMARKS
0–10			CLAYEY SAND : dark gray color, consisted of very fine sand and clay.	
10–20			SAND : light gray color, consisted of very fine sand, poor sorted, composed of quartz and feldspar. SAND/GRAVEL : Light gray color, consisted of 98% very coarse sand and 2% clay, angular to subrounded, well sorted, composted of quartz and feldspar. SAND : various color, consisted of very coarse sand (grained size ? 0.5 - 5 mm.), subangular to subrounded, poor sorted, composted of quartz, feldspar and dark minerals.	
20–70			CLAYEY GRAVEL, light greenish gray color, consisted of 90% gravels (grained size ? 2 - 10 mm.), subrounded to well rounded, poor sorted, composed of quartz, feldspar and rock fragment.	
70–100			CLAY/SAND : gray color, consisted of gravel (grained size ? 2 - 4 m).	
100–			SAND : various colors, fine to very coarse sand, well sort angular to subrounded, composted of quartz, and dark mineral.	

WELL No.29



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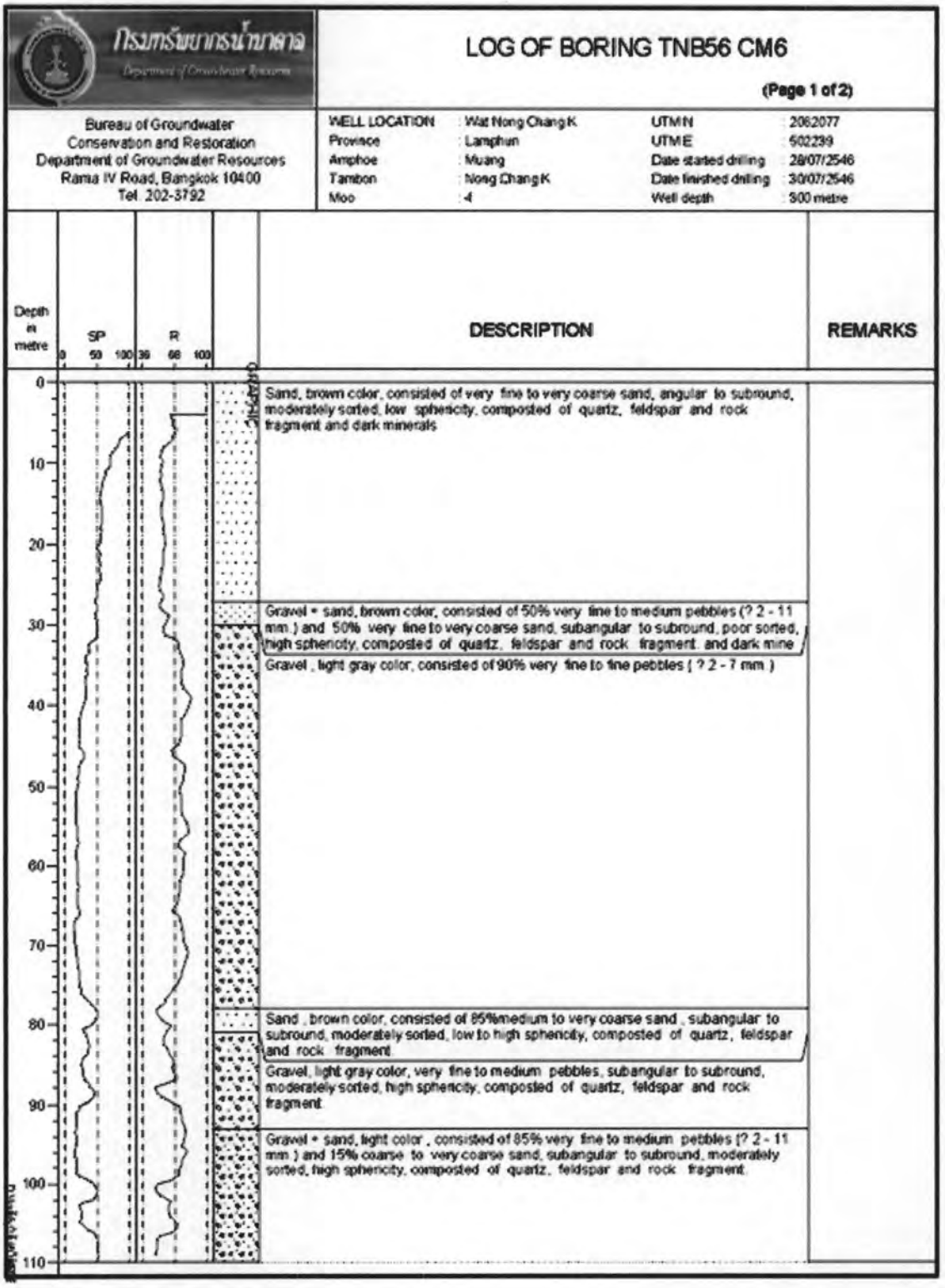
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Pa Sang Noy	UTM N	: 1710848
Province	: Chiang Mai	UTM E	: 617129
Amphoe	: Muang	Date started drilling	: 28/07/2546
Tambon	: San Pan	Date finished drilling	: 30/07/2546
Moo	: 1	Well depth	: 207.00 metre

Depth in metre	SP -3 24 51	R 38 70 102	DESCRIPTION	REMARKS
105			CLAY/GRAVEL : light gray color, consisted of 70% clay and 30% gravel (? 2 - 12 mm), poor sorted subround - well round, composted of quartz, and dark mineral.	
115				
125				
135			SAND : light gray color, consisted of very fine to very coarse sand, subangular to subrounded, poor sorted, composted of quartz, feldspar and dark minerals CLAY : gray color CLAYEY SAND : light gray color, consisted of very fine to very coarse sand and clay, poor sorted.	
145				
155				
165				
175			GRAVEL/SAND : consisted of very fine to fine pebbles, poor sorted, subrounded to well rounded, quartz, chert and rock fragment.	
185				
195				
205				

WELL No.30



กรมทรัพยากรน้ำบาดาล
Department of Groundwater Resources

LOG OF BORING TNB56 CM6

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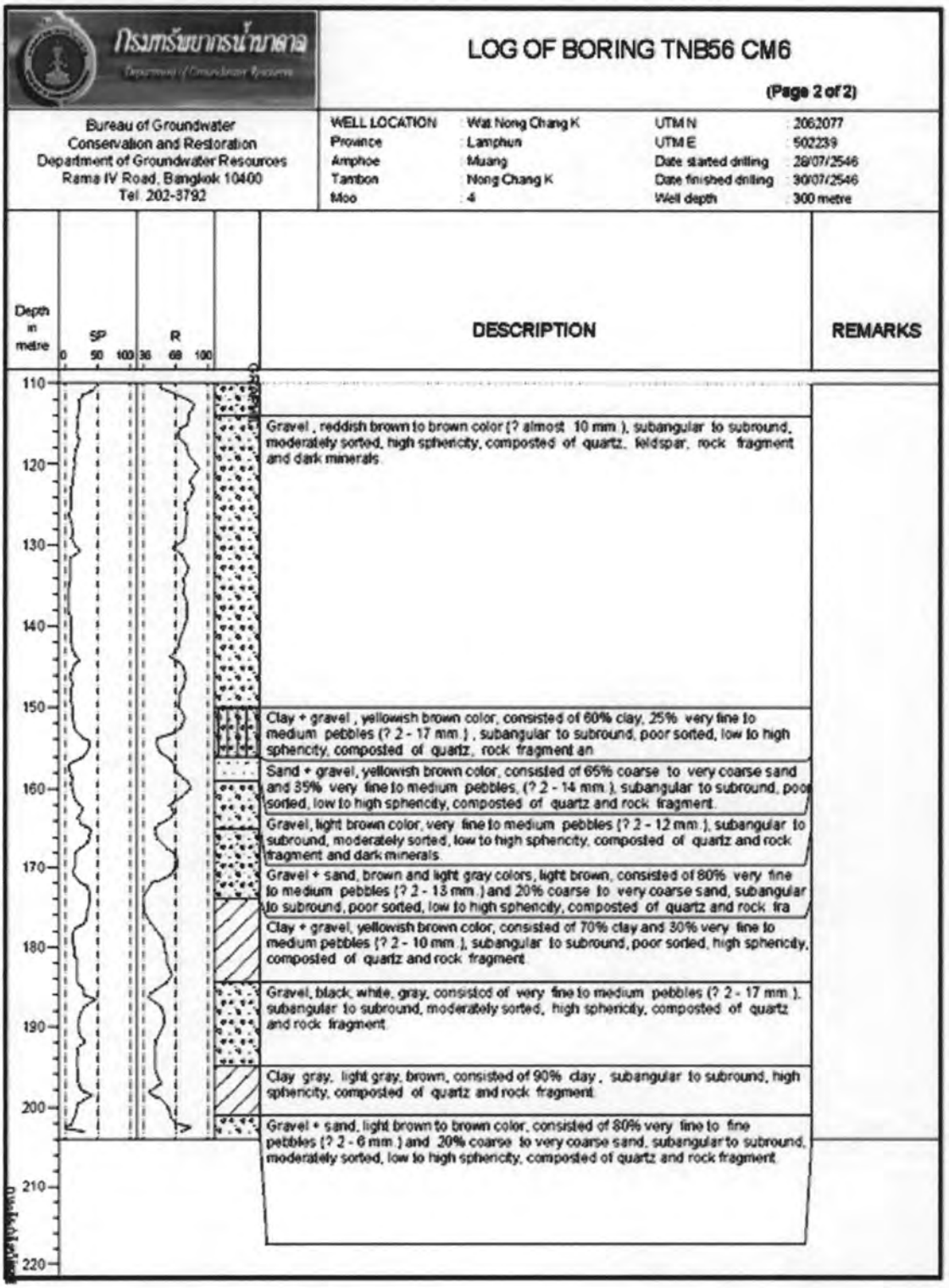
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Nong Chang K.	UTM N	: 2062077
Province	: Lamphun	UTM E	: 502239
Amphoe	: Muang	Date started drilling	: 28/07/2546
Tambon	: Nong Chang K.	Date finished drilling	: 30/07/2546
Moo	: 4	Well depth	: 300 metre

Depth in metre	SP 0 50 100	R 30 60 100	DESCRIPTION	REMARKS
0–10			Sand, brown color, consisted of very fine to very coarse sand, angular to subround, moderately sorted, low sphericity, composted of quartz, feldspar and rock fragment and dark minerals	
10–20				
20–30			Gravel + sand, brown color, consisted of 50% very fine to medium pebbles (? 2 - 11 mm.) and 50% very fine to very coarse sand, subangular to subround, poor sorted, high sphericity, composted of quartz, feldspar and rock fragment and dark mine	
30–40			Gravel, light gray color, consisted of 90% very fine to fine pebbles (? 2 - 7 mm)	
40–50				
50–60				
60–70				
70–80				
80–90			Sand, brown color, consisted of 85%medium to very coarse sand, subangular to subround, moderately sorted, low to high sphericity, composted of quartz, feldspar and rock fragment	
90–100			Gravel, light gray color, very fine to medium pebbles, subangular to subround, moderately sorted, high sphericity, composted of quartz, feldspar and rock fragment	
100–110			Gravel + sand, light color, consisted of 85% very fine to medium pebbles (? 2 - 11 mm.) and 15% coarse to very coarse sand, subangular to subround, moderately sorted, high sphericity, composted of quartz, feldspar and rock fragment	

WELL No.30



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Department of Groundwater Resources

LOG OF BORING TNB56 CM6

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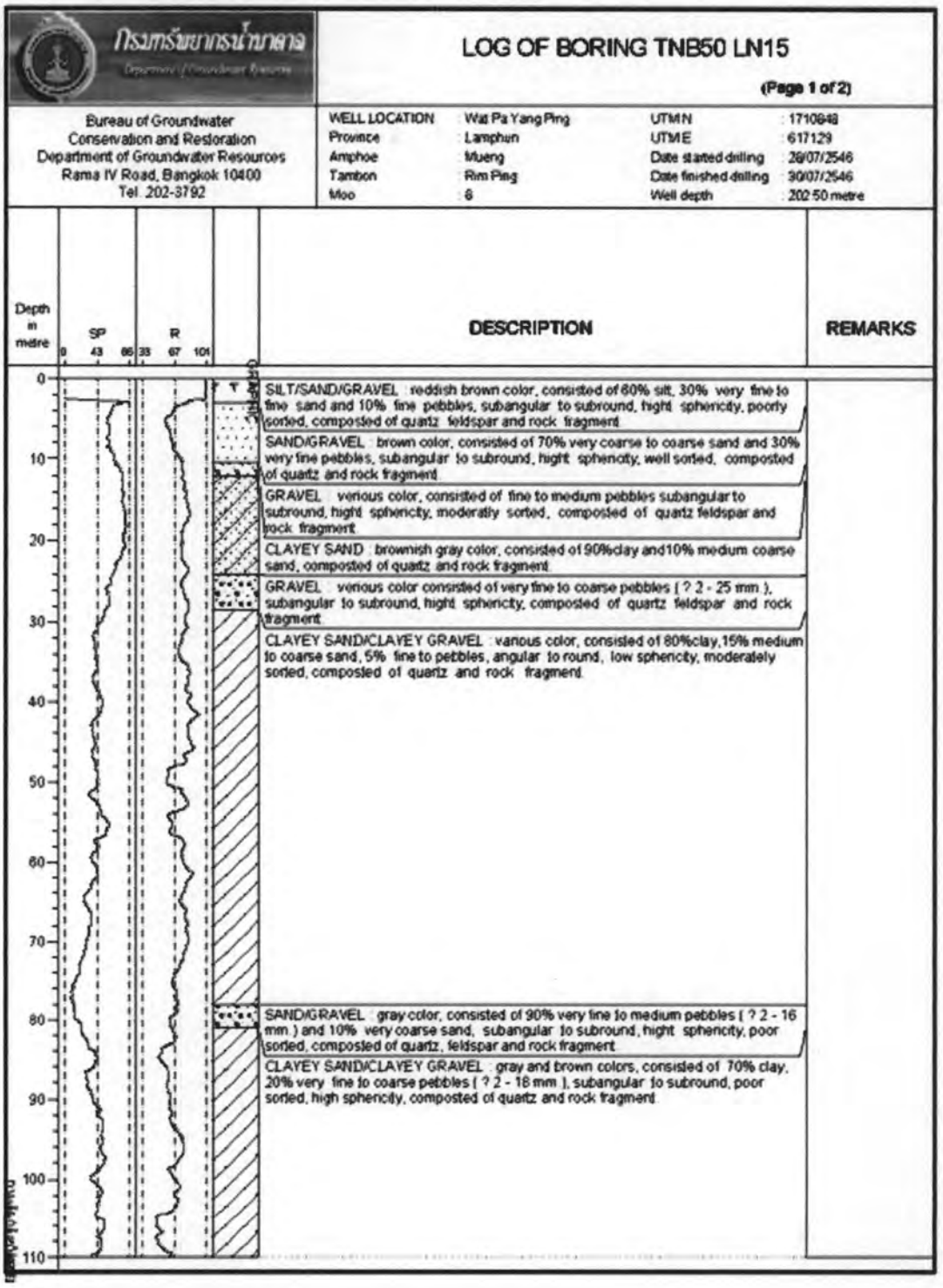
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel 202-3792

WELL LOCATION	Wat Nong Chang K	UTM N	2062077
Province	Lamphun	UTM E	502239
Amphoe	Muang	Date started drilling	28/07/2546
Tambon	Nong Chang K	Date finished drilling	30/07/2546
Moo	4	Well depth	300 metre

Depth in metre	SP 0 50 100	R 36 68 100	DESCRIPTION	REMARKS
110				
120			Gravel , reddish brown to brown color (? almost 10 mm), subangular to subround, moderately sorted, high sphericity, composted of quartz, feldspar, rock fragment and dark minerals.	
130				
140				
150			Clay + gravel , yellowish brown color, consisted of 60% clay, 25% very fine to medium pebbles (? 2 - 17 mm) , subangular to subround, poor sorted, low to high sphericity, composted of quartz, rock fragment an	
160			Sand + gravel, yellowish brown color, consisted of 65% coarse to very coarse sand and 35% very fine to medium pebbles, (? 2 - 14 mm), subangular to subround, poo sorted, low to high sphericity, composted of quartz and rock fragment.	
170			Gravel, light brown color, very fine to medium pebbles (? 2 - 12 mm), subangular to subround, moderately sorted, low to high sphericity, composted of quartz and rock fragment and dark minerals.	
180			Gravel + sand, brown and light gray colors, light brown, consisted of 80% very fine to medium pebbles (? 2 - 13 mm) and 20% coarse to very coarse sand, subangular to subround, poor sorted, low to high sphericity, composted of quartz and rock fra	
190			Clay + gravel, yellowish brown color, consisted of 70% clay and 30% very fine to medium pebbles (? 2 - 10 mm), subangular to subround, poor sorted, high sphericity, composted of quartz and rock fragment.	
200			Gravel, black, white, gray, consisted of very fine to medium pebbles (? 2 - 17 mm), subangular to subround, moderately sorted, high sphericity, composted of quartz and rock fragment.	
210			Clay gray, light gray, brown, consisted of 90% clay , subangular to subround, high sphericity, composted of quartz and rock fragment.	
220			Gravel + sand, light brown to brown color, consisted of 80% very fine to fine pebbles (? 2 - 6 mm) and 20% coarse to very coarse sand, subangular to subround, moderately sorted, low to high sphericity, composted of quartz and rock fragment.	

WELL No.31



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LOG OF BORING TNB50 LN15

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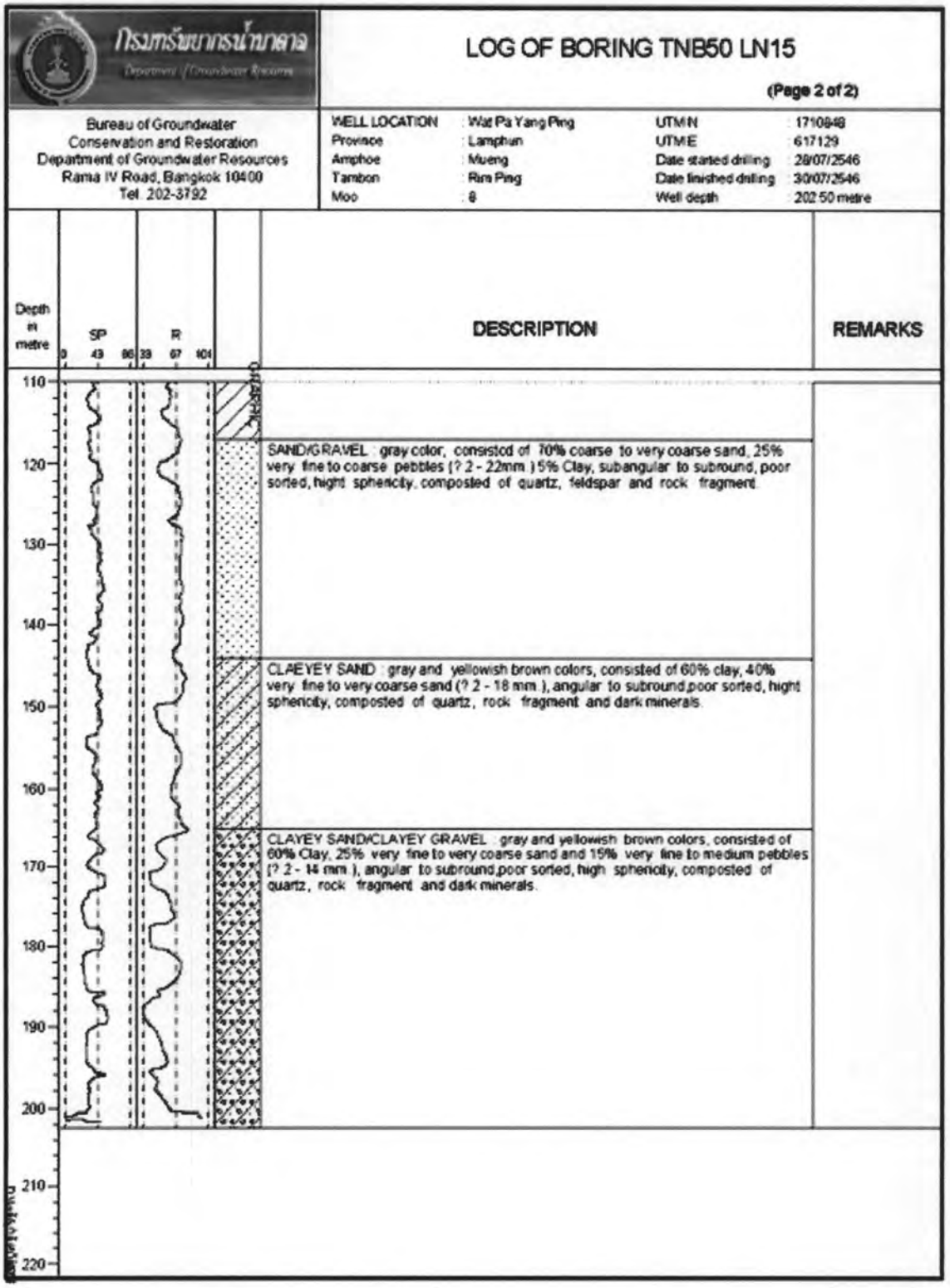
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	Wat Pa Yang Ping	UTMN	1710948
Province	Lamphun	UTME	617129
Amphoe	Mueng	Date started drilling	26/07/2546
Tambon	Rim Ping	Date finished drilling	30/07/2546
Moo	6	Well depth	202.50 metre

Depth in metre	SP (0, 43, 86)	R (33, 67, 101)	DESCRIPTION	REMARKS
0 – 10			SILT/SAND/GRAVEL : reddish brown color, consisted of 60% silt, 30% very fine to fine sand and 10% fine pebbles, subangular to subround, hight sphericity, poorly sorted, composted of quartz feldspar and rock fragment.	
10 – 20			SAND/GRAVEL : brown color, consisted of 70% very coarse to coarse sand and 30% very fine pebbles, subangular to subround, hight sphericity, well sorted, composted of quartz and rock fragment.	
20 – 30			GRAVEL : various color, consisted of fine to medium pebbles subangular to subround, hight sphericity, moderatly sorted, composted of quartz feldspar and rock fragment.	
30 – 40			CLAYEY SAND : brownish gray color, consisted of 90%clay and10% medium coarse sand, composted of quartz and rock fragment.	
40 – 50			GRAVEL : various color consisted of very fine to coarse pebbles (? 2 - 25 mm), subangular to subround, hight sphericity, composted of quartz feldspar and rock fragment.	
50 – 60			CLAYEY SAND/CLAYEY GRAVEL : various color, consisted of 80%clay,15% medium to coarse sand, 5% fine to pebbles, angular to round, low sphericity, moderately sorted, composted of quartz and rock fragment.	
60 – 70				
70 – 80				
80 – 90			SAND/GRAVEL : gray color, consisted of 90% very fine to medium pebbles (? 2 - 16 mm) and 10% very coarse sand, subangular to subround, hight sphericity, poor sorted, composted of quartz, feldspar and rock fragment.	
90 – 100			CLAYEY SAND/CLAYEY GRAVEL : gray and brown colors, consisted of 70% clay, 20% very fine to coarse pebbles (? 2 - 16 mm), subangular to subround, poor sorted, high sphericity, composted of quartz and rock fragment.	
100 – 110				

WELL No.31



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Department of Groundwater Resources

LOG OF BORING TNB50 LN15

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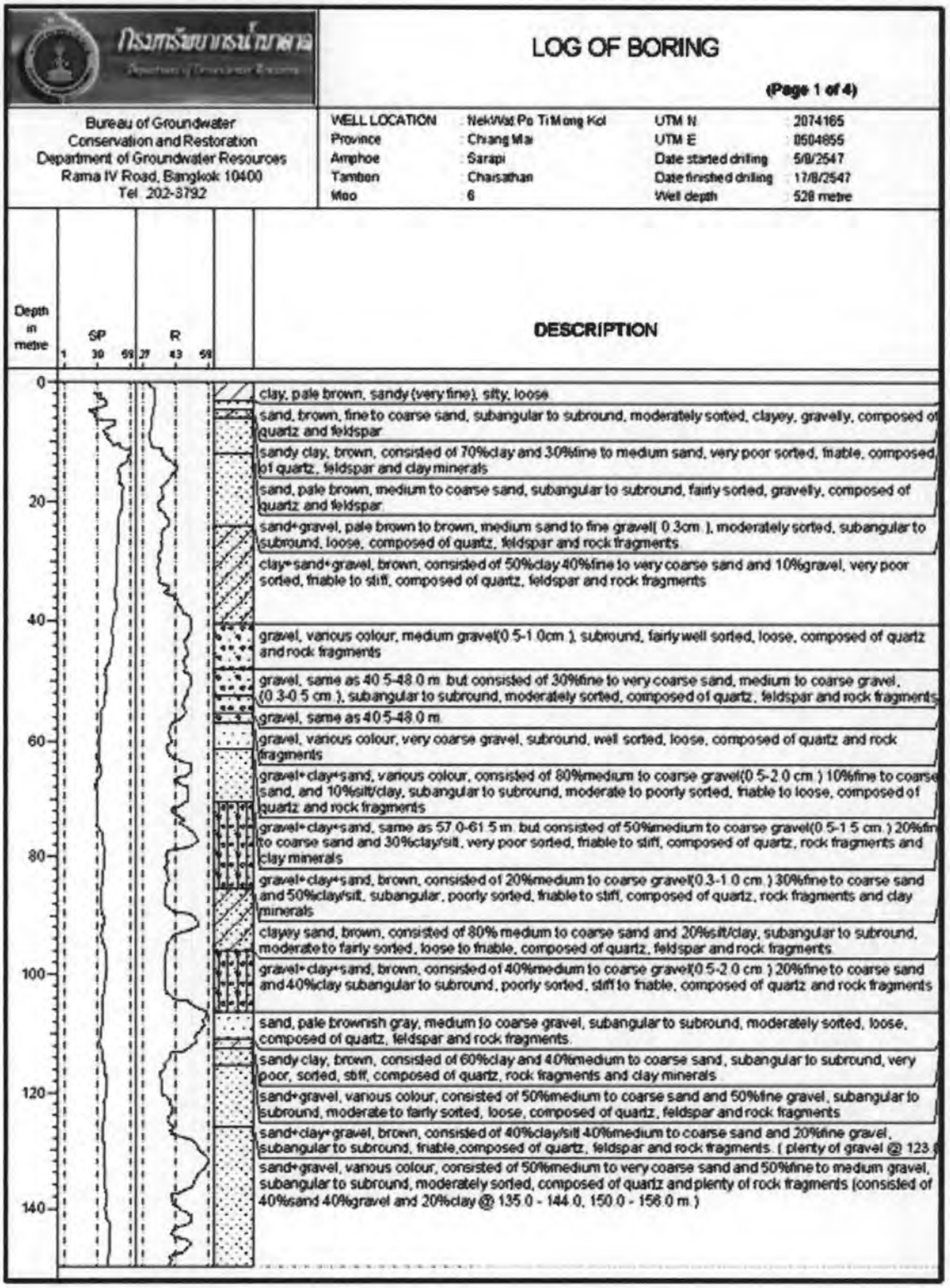
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: Wat Pa Yang Ping	UTM N	: 1710948
Province	: Lamphun	UTM E	: 617129
Amphoe	: Mueng	Date started drilling	: 28/07/2546
Tambon	: Rim Ping	Date finished drilling	: 30/07/2546
Moo	: 8	Well depth	: 202.50 metre

Depth in metre	SP 0 43 86	R 33 67 104	DESCRIPTION	REMARKS
110				
120			SAND/GRAVEL : gray color, consisted of 70% coarse to very coarse sand, 25% very fine to coarse pebbles (? 2 - 22mm) 5% Clay, subangular to subround, poor sorted, hight sphericity, composted of quartz, feldspar and rock fragment.	
130				
140				
150			CLAEYEY SAND : gray and yellowish brown colors, consisted of 60% clay, 40% very fine to very coarse sand (? 2 - 18 mm), angular to subround,poor sorted, hight sphericity, composted of quartz, rock fragment and dark minerals.	
160				
170			CLAYEY SAND/CLAYEY GRAVEL : gray and yellowish brown colors, consisted of 60% Clay, 25% very fine to very coarse sand and 15% very fine to medium pebbles (? 2 - 14 mm), angular to subround,poor sorted, high sphericity, composted of quartz, rock fragment and dark minerals.	
180				
190				
200				
210				
220				

WELL No.42



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LOG OF BORING

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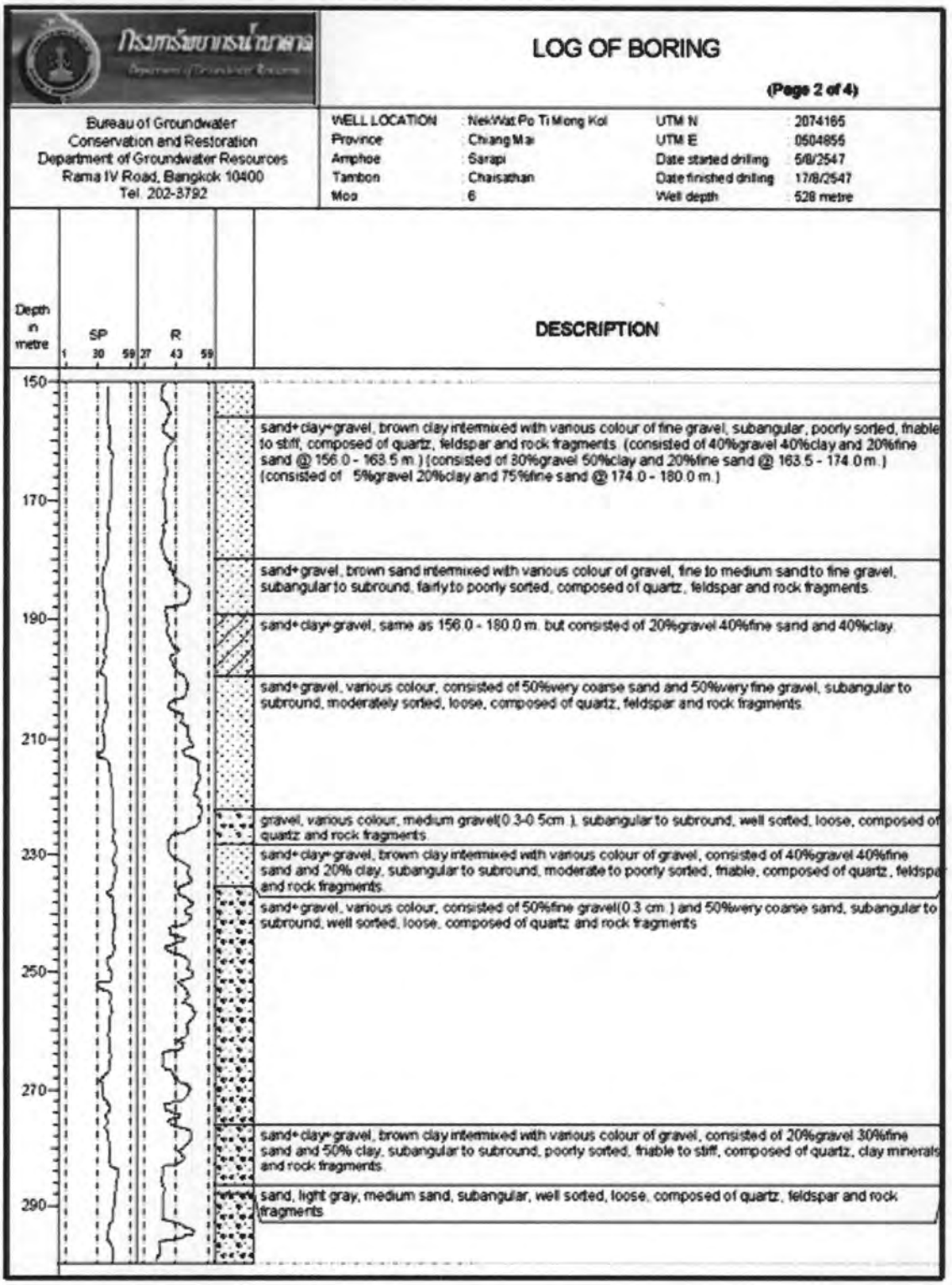
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel 202-3792

WELL LOCATION	Nek/Wat Po TiMong Kol	UTM N	2074165
Province	Chiang Mai	UTM E	0504855
Amphoe	Sarapi	Date started drilling	5/8/2547
Tambon	Charsathan	Date finished drilling	17/8/2547
Moo	6	Well depth	528 metre

Depth in metre	SP 1 30 58	R 27 43 58	DESCRIPTION
0			clay, pale brown, sandy (very fine), silty, loose
			sand, brown, fine to coarse sand, subangular to subround, moderately sorted, clayey, gravelly, composed of quartz and feldspar
			sandy clay, brown, consisted of 70%clay and 30%fine to medium sand, very poor sorted, friable, composed of quartz, feldspar and clay minerals
20			sand, pale brown, medium to coarse sand, subangular to subround, fairly sorted, gravelly, composed of quartz and feldspar
			sand+gravel, pale brown to brown, medium sand to fine gravel(0.3cm), moderately sorted, subangular to subround, loose, composed of quartz, feldspar and rock fragments
			clay+sand+gravel, brown, consisted of 50%clay 40%fine to very coarse sand and 10%gravel, very poor sorted, friable to stiff, composed of quartz, feldspar and rock fragments
40			gravel, various colour, medium gravel(0.5-1.0cm), subround, fairly well sorted, loose, composed of quartz and rock fragments
			gravel, same as 40.5-48.0 m. but consisted of 30%fine to very coarse sand, medium to coarse gravel, (0.3-0.5 cm), subangular to subround, moderately sorted, composed of quartz, feldspar and rock fragments
			gravel, same as 40.5-48.0 m.
60			gravel, various colour, very coarse gravel, subround, well sorted, loose, composed of quartz and rock fragments
			gravel+clay+sand, various colour, consisted of 80%medium to coarse gravel(0.5-2.0 cm) 10%fine to coarse sand, and 10%silt/clay, subangular to subround, moderate to poorly sorted, friable to loose, composed of quartz and rock fragments
			gravel+clay+sand, same as 57.0-61.5 m. but consisted of 50%medium to coarse gravel(0.5-1.5 cm.) 20%fine to coarse sand and 30%clay/silt, very poor sorted, friable to stiff, composed of quartz, rock fragments and clay minerals
80			gravel+clay+sand, brown, consisted of 20%medium to coarse gravel(0.3-1.0 cm.) 30%fine to coarse sand and 50%clay/silt, subangular, poorly sorted, friable to stiff, composed of quartz, rock fragments and clay minerals
			clayey sand, brown, consisted of 80% medium to coarse sand and 20%silt/clay, subangular to subround, moderate to fairly sorted, loose to friable, composed of quartz, feldspar and rock fragments
100			gravel+clay+sand, brown, consisted of 40%medium to coarse gravel(0.5-2.0 cm) 20%fine to coarse sand and 40%clay subangular to subround, poorly sorted, stiff to friable, composed of quartz and rock fragments
			sand, pale brownish gray, medium to coarse gravel, subangular to subround, moderately sorted, loose, composed of quartz, feldspar and rock fragments.
			sandy clay, brown, consisted of 60%clay and 40%medium to coarse sand, subangular to subround, very poor, sorted, stiff, composed of quartz, rock fragments and clay minerals
120			sand+gravel, various colour, consisted of 50%medium to coarse sand and 50%fine gravel, subangular to subround, moderate to fairly sorted, loose, composed of quartz, feldspar and rock fragments
			sand+clay+gravel, brown, consisted of 40%clay/silt 40%medium to coarse sand and 20%fine gravel, subangular to subround, friable,composed of quartz, feldspar and rock fragments. (plenty of gravel @ 123
140			sand+gravel, various colour, consisted of 50%medium to very coarse sand and 50%fine to medium gravel, subangular to subround, moderately sorted, composed of quartz and plenty of rock fragments (consisted of 40%sand 40%gravel and 20%clay @ 135.0 - 144.0, 150.0 - 156.0 m.)

WELL No.42



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LOG OF BORING

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Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

WELL LOCATION	: NekWat Po Ti Mong Kol	UTM N	: 2074165
Province	: Chiang Mai	UTM E	: 0504856
Amphoe	: Sarapi	Date started drilling	: 5/8/2547
Tambon	: Chaisathan	Date finished drilling	: 17/8/2547
Moo	: 6	Well depth	: 528 metre

Depth in metre	SP 1 30 59	R 27 43 59	DESCRIPTION
150			
			sand+clay+gravel, brown clay intermixed with various colour of fine gravel, subangular, poorly sorted, friable to stiff, composed of quartz, feldspar and rock fragments. (consisted of 40%gravel 40%clay and 20%fine sand @ 156.0 - 168.5 m.) (consisted of 30%gravel 50%clay and 20%fine sand @ 163.5 - 174.0 m.) (consisted of 5%gravel 20%clay and 75%fine sand @ 174.0 - 180.0 m.)
170			
			sand+gravel, brown sand intermixed with various colour of gravel, fine to medium sand to fine gravel, subangular to subround, fairly to poorly sorted, composed of quartz, feldspar and rock fragments.
190			sand+clay+gravel, same as 156.0 - 180.0 m. but consisted of 20%gravel 40%fine sand and 40%clay.
			sand+gravel, various colour, consisted of 50%very coarse sand and 50%very fine gravel, subangular to subround, moderately sorted, loose, composed of quartz, feldspar and rock fragments.
210			
			gravel, various colour, medium gravel(0.3-0.5cm.), subangular to subround, well sorted, loose, composed of quartz and rock fragments.
230			sand+clay+gravel, brown clay intermixed with various colour of gravel, consisted of 40%gravel 40%fine sand and 20% clay, subangular to subround, moderate to poorly sorted, friable, composed of quartz, feldspar and rock fragments.
			sand+gravel, various colour, consisted of 50%fine gravel(0.3 cm.) and 50%very coarse sand, subangular to subround, well sorted, loose, composed of quartz and rock fragments.
250			
270			
			sand+clay+gravel, brown clay intermixed with various colour of gravel, consisted of 20%gravel 30%fine sand and 50% clay, subangular to subround, poorly sorted, friable to stiff, composed of quartz, clay minerals and rock fragments.
290			sand, light gray, medium sand, subangular, well sorted, loose, composed of quartz, feldspar and rock fragments.

WELL No.42

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Department of Groundwater Resources

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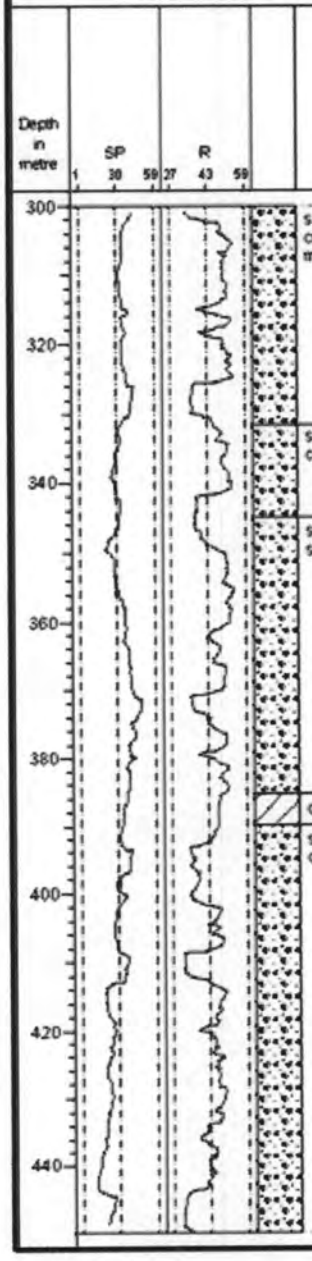
Bureau of Groundwater
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-8792

WELL LOCATION	: Nek Wat Po Ti Mong Kol	UTM N	: 2074165
Province	: Chiang Mai	UTM E	: 0504855
Amphoe	: Sarapi	Date started drilling	: 5/8/2547
Tambon	: Chaisathan	Date finished drilling	: 17/8/2547
Moo	: 6	Well depth	: 528 metre



DESCRIPTION

sand+gravel, various colour, consisted of 50%medium to coarse sand and 50%fine to medium gravel(0.3-0.5 cm.), subangular, moderate to well sorted, loose, composed of quartz and rock fragments. (@ 324.0 - 327.0 m. light gray-medium sand, angular, well sorted (no gravel) (@ 327.0 - 330.0 m. composed of coal)

sand+clay+gravel, brown, consisted of 60%clay 30%sand and 20%gravel, subangular, poorly sorted, friable, composed of quartz and rock fragments.

sand+clay+gravel, various colour, consisted of 50%fine gravel 30%medium to coarse sand and 20%clay, subangular to subround, moderately sorted, friable to loose, composed of quartz and rock fragments.

clay, brown, high plastic, soft.

sand+clay+gravel, various colour, very coarse sand to very fine gravel, subangular, fairly well sorted, loose, composed of quartz and rock fragments. (clay interlayered @ 400.5 - 405, 438.0 -442.5 m.)

WELL No.42

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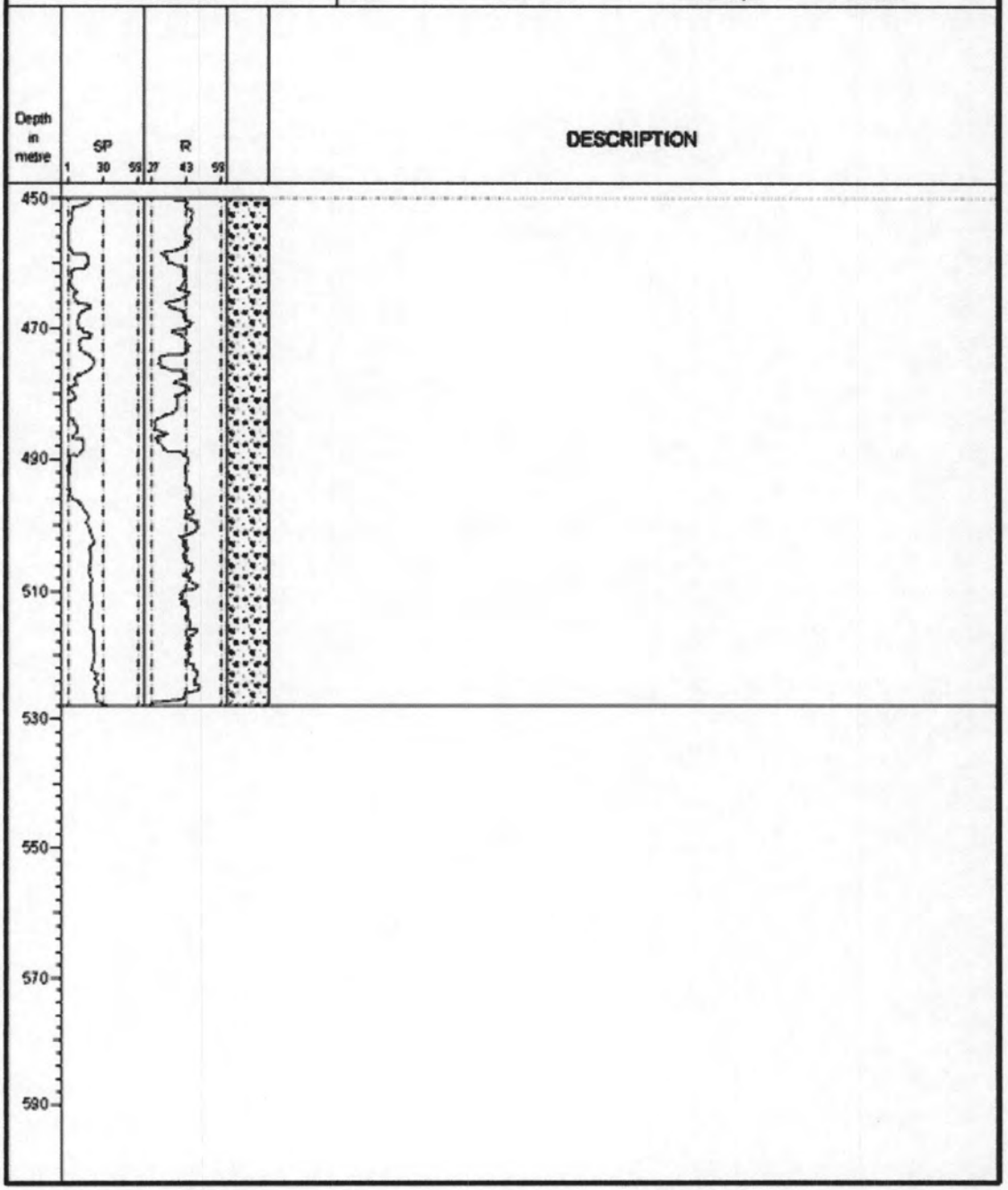
Conservation and Restoration
Department of Groundwater Resources
Rama IV Road, Bangkok 10400
Tel. 202-3792

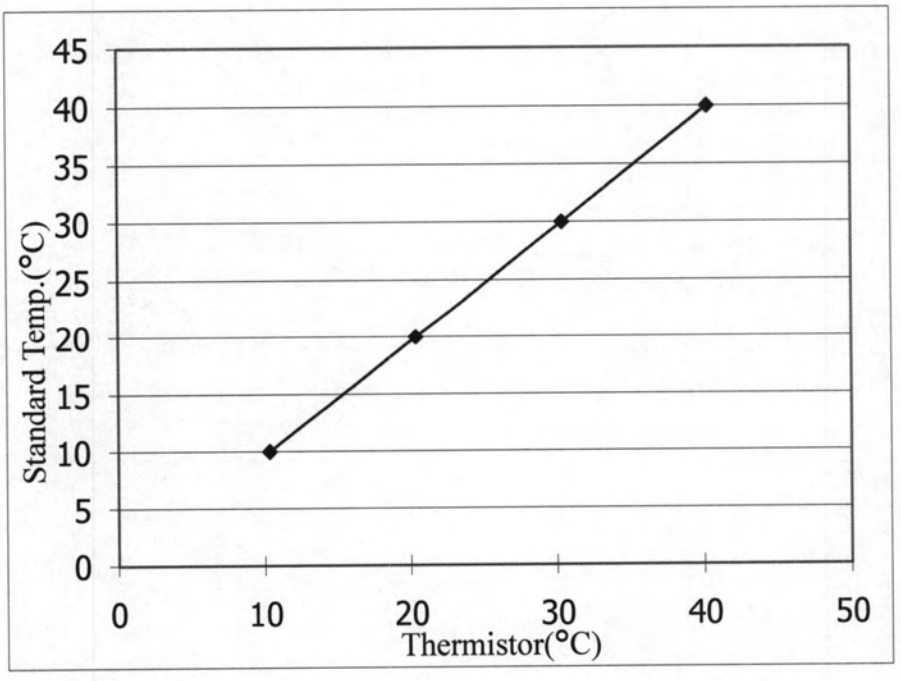
WELL LOCATION	: Nek Wat Po Ti Mong Kol	UTM N	: 2074165
Province	: Chiang Mai	UTM E	: 0504855
Amphoe	: Sarapi	Date started drilling	: 5/8/2547
Tambon	: Chairsathan	Date finished drilling	: 17/8/2547
Moo	: 6	Well depth	: 528 metre

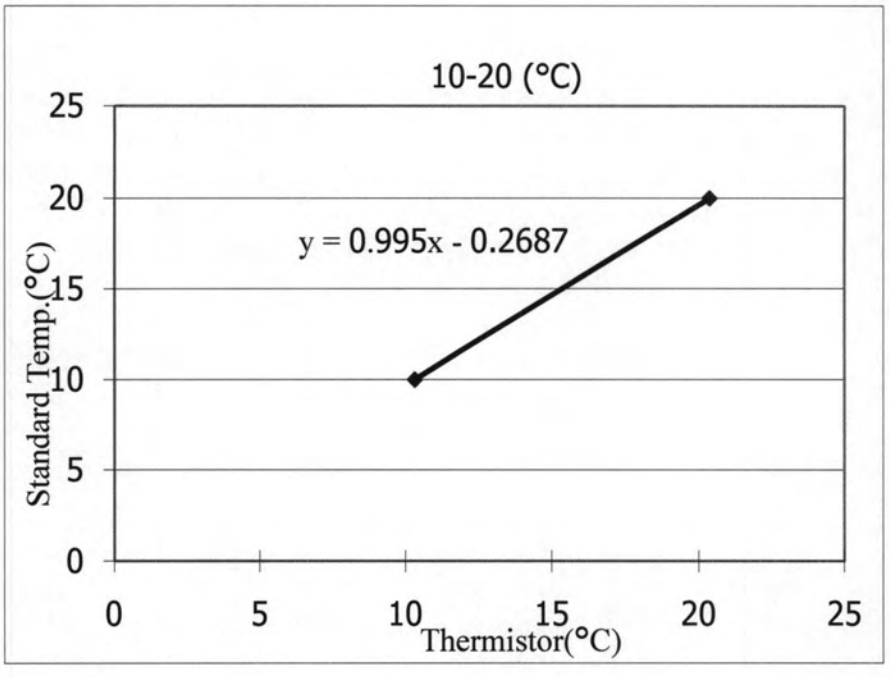


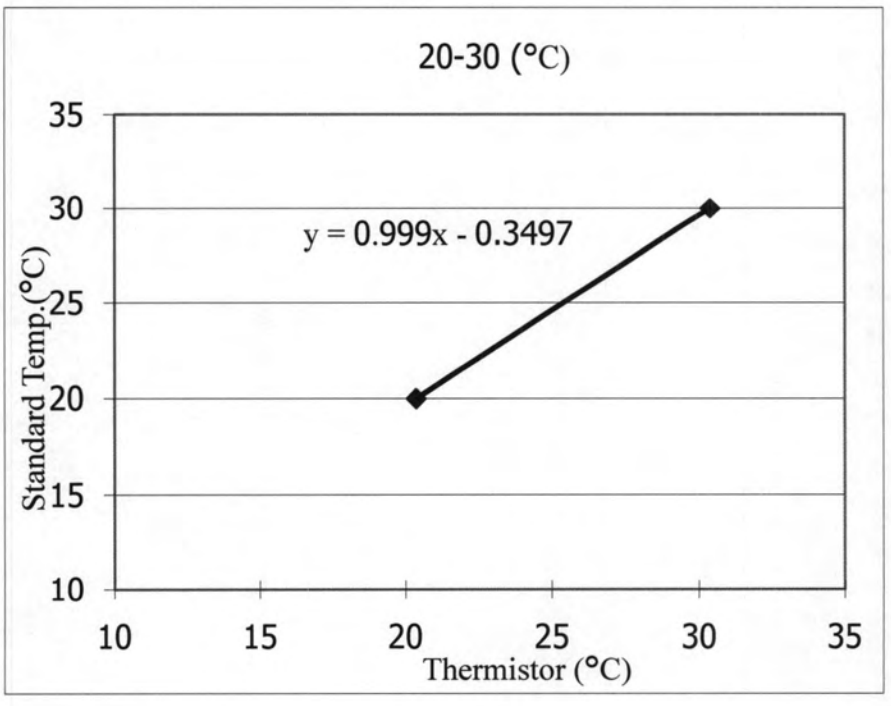
Appendix A2 Groundwater temperature data

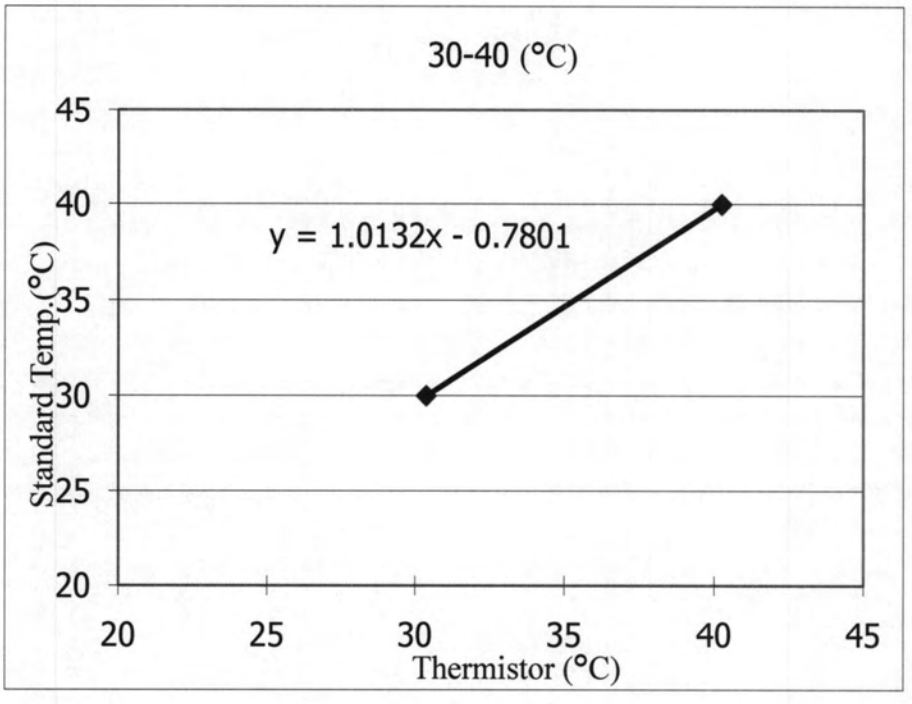
Thermistor Calibration

Thermistor Temperature(°C)	Standard Temperature(°C)
10.32	10
20.37	20
30.38	30
40.25	40




10-20 (°C)
y = 0.995x - 0.2687
Standard Temp.(°C)
Thermistor(°C)
0
5
10
15
20
25


20-30 (°C)
y = 0.999x - 0.3497
Standard Temp.(°C)
Thermistor (°C)
10
15
20
25
30
35


30-40 (°C)
y = 1.0132x - 0.7801
Standard Temp.(°C)
45
40
35
30
25
20
20
25
30
35
40
45
Thermistor (°C)

WELL No. 2

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	30.639232	88	31.216756	132		176		220		264	
2		46	30.659496	90		134		178		222		266	
4		48	30.669628	92		136		180		224		268	
6		50	30.689892	94		138		182		226		270	
8		52	30.710156	96		140		184		228		272	
10		54	30.73042	98		142		186		230		274	
12		56	30.750684	100		144		188		232		276	
14		58	30.770948	102		146		190		234		278	
16		60	30.791212	104		148		192		236		280	
18		62	30.83174	106		150		194		238		282	
20		64	30.852004	108		152		196		240		284	
22		66	30.872268	110		154		198		242		286	
24		68	30.902664	112		156		200		244		288	
26		70	30.93306	114		158		202		246		290	
28		72	30.963456	116		160		204		248		292	
30		74	31.003984	118		162		206		250		294	
32		76	31.03438	120		164		208		252		296	
34		78	31.054644	122		166		210		254		298	
36		80	31.095172	124		168		212		256		300	
38		82	31.125568	126		170		214		258			
40		84	31.166096	128		172		216		260			
42	30.6291	86	31.196492	130		174		218		262			

WELL No. 4

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44		88	29.646296	132	30.841872	176	32.229956	220	33.729492	264	35.168236
2		46		90	29.686824	134	30.902664	178	32.290748	222	33.790284	266	
4		48		92	29.747616	136	30.963456	180	32.371804	224	33.851076	268	
6		50		94	29.798276	138	31.014116	182	32.432596	226	33.911868	270	
8		52		96	29.838804	140	31.08504	184	32.50352	228	33.992924	272	
10		54	29.05157	98	29.889464	142	31.145832	186	32.584576	230	34.063848	274	
12		56	29.07155	100	29.950256	144	31.206624	188	32.6555	232	34.12464	276	
14		58	29.10152	102	30.011048	146	31.28768	190	32.726424	234	34.185432	278	
16		60	29.14148	104	30.07184	148	31.348472	192	32.797348	236	34.246224	280	
18		62	29.16146	106	30.132632	150	31.419396	194	32.868272	238	34.317148	282	
20		64	29.18144	108	30.193424	152	31.480188	196	32.949328	240	34.388072	284	
22		66	29.21141	110	30.244084	154	31.54098	198	33.020252	242	34.448864	286	
24		68	29.24138	112	30.294744	156	31.601772	200	33.091176	244	34.509656	288	
26		70	29.27135	114	30.335272	158	31.662564	202	33.151968	246	34.570448	290	
28		72	29.31131	116	30.396064	160	31.723356	204	33.233024	248	34.641372	292	
30		74	29.34128	118	30.446724	162	31.79428	206	33.293816	250	34.702164	294	
32		76	29.36126	120	30.497384	164	31.865204	208	33.354608	252	34.773088	296	
34		78	29.41121	122	30.57844	166	31.925996	210	33.425532	254	34.83388	298	
36		80	29.45117	124	30.6291	168	31.986788	212	33.486324	256	34.894672	300	
38		82	29.49113	126	30.689892	170	32.037448	214	33.547116	258	34.975728		
40		84	29.54108	128	30.750684	172	32.09824	216	33.597776	260	35.03652		
42		86	29.60102	130	30.791212	174	32.1489	218	33.6687	262	35.097312		

WELL No. 5

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	29.808408	88	31.145832	132		176		220		264	
2		46	29.879332	90	31.196492	134		178		222		266	
4		48	29.940124	92	31.257284	136		180		224		268	
6		50	30.000916	94	31.318076	138		182		226		270	
8		52	30.061708	96	31.378868	140		184		228		272	
10	28.51211	54	30.1225	98	31.449792	142		186		230		274	
12	28.57205	56	30.183292	100	31.510584	144		188		232		276	
14	28.622	58	30.244084	102	31.561244	146		190		234		278	
16	28.69193	60	30.304876	104	31.622036	148		192		236		280	
18	28.77185	62	30.355536	106	31.682828	150		194		238		282	
20	28.86176	64	30.42646	108	31.733488	152		196		240		284	
22	28.95167	66	30.487252	110	31.804412	154		198		242		286	
24	29.04158	68	30.548044	112	31.855072	156		200		244		288	
26	29.15147	70	30.598704	114	31.936128	158		202		246		290	
28	29.20142	72	30.669628	116	31.986788	160		204		248		292	
30	29.28134	74	30.73042	118	32.057712	162		206		250		294	
32	29.37125	76	30.791212	120	32.108372	164		208		252		296	
34	29.45117	78	30.852004	122	32.159032	166		210		254		298	
36	29.53109	80	30.902664	124	32.19956	168		212		256		300	
38	29.60102	82	30.973588	126	32.219824	170		214		258			
40	29.676692	84	31.03438	128	32.25022	172		216		260			
42	29.747616	86	31.08504	130	32.290748	174		218		262			

WELL No. 6

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.18344	88	28.34228	132		176		220		264	
2		46	27.23339	90	28.40222	134		178		222		266	
4		48	27.27335	92	28.47215	136		180		224		268	
6		50	27.31331	94	28.5221	138		182		226		270	
8		52	27.36326	96	28.65197	140		184		228		272	
10		54	27.40322	98	28.73189	142		186		230		274	
12		56	27.46316	100	28.86176	144		188		232		276	
14		58	27.50312	102	29.00162	146		190		234		278	
16		60	27.56306	104	29.19143	148		192		236		280	
18		62	27.61301	106	29.20142	150		194		238		282	
20		64	27.66296	108	29.21141	152		196		240		284	
22		66	27.70292	110	29.2214	154		198		242		286	
24		68	27.74288	112	29.23139	156		200		244		288	
26		70	27.79283	114	29.25137	158		202		246		290	
28	26.96366	72	27.85277	116	29.26136	160		204		248		292	
30	26.98364	74	27.90272	118		162		206		250		294	
32	26.99363	76	27.96266	120		164		208		252		296	
34	27.01361	78	28.03259	122		166		210		254		298	
36	27.04358	80	28.09253	124		168		212		256		300	
38	27.08354	82	28.16246	126		170		214		258			
40	27.11351	84	28.2224	128		172		216		260			
42	27.14348	86	28.28234	130		174		218		262			

WELL No. 9

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	28.75187	88	30.598704	132	32.55418	176		220		264	
2	25.33529	46	28.83179	90	30.659496	134	32.645368	178		222		266	
4	25.88474	48	28.9217	92	30.73042	136	32.726424	180		224		268	
6	26.53409	50	29.00162	94	30.78108	138	32.837876	182		226		270	
8	26.95367	52	29.06156	96	30.83174	140	32.939196	184		228		272	
10	27.21341	54	29.1215	98	30.943192	142	33.06078	186		230		274	
12	27.34328	56	29.19143	100	31.054644	144	33.172232	188		232		276	
14	27.44318	58	29.27135	102	31.145832	146	33.273552	190		234		278	
16	27.5231	60	29.36126	104	31.247152	148	33.385004	192		236		280	
18	27.61301	62	29.47115	106	31.33834	150	33.476192	194		238		282	
20	27.68294	64	29.56106	108	31.43966	152	33.56738	196		240		284	
22	27.77285	66	29.66656	110	31.551112	154	33.648436	198		242		286	
24	27.85277	68	29.757748	112	31.632168	156	33.729492	200		244		288	
26	27.96266	70	29.838804	114	31.703092	158	33.82068	202		246		290	
28	28.06256	72	29.940124	116	31.804412	160	33.901736	204		248		292	
30	28.15247	74	30.02118	118	31.8956	162	33.992924	206		250		294	
32	28.24238	76	30.152896	120	31.986788	164	34.07398	208		252		296	
34	28.34228	78	30.254216	122	32.077976	166	34.165168	210		254		298	
36	28.43219	80	30.345404	124	32.169164	168	34.256356	212		256		300	
38	28.50212	82	30.416328	126	32.270484	170	34.32728	214		258			
40	28.59203	84	30.497384	128	32.371804	172	34.337412	216		260			
42	28.68194	86	30.548044	130	32.473124	174	34.337412	218		262			

WELL No. 8

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.96266	88	29.40122	132	31.014116	176		220		264	
2		46	28.01261	90	29.48114	134	31.08504	178		222		266	
4		48	28.06256	92	29.55107	136	31.18636	180		224		268	
6		50	28.11251	94	29.6159	138	31.247152	182		226		270	
8		52	28.17245	96	29.686824	140	31.328208	184		228		272	
10		54	28.2224	98	29.757748	142	31.429528	186		230		274	
12		56	28.28234	100	29.828672	144	31.49032	188		232		276	
14		58	28.33229	102	29.909728	146	31.551112	190		234		278	
16	27.64298	60	28.40222	104	30.000916	148	31.622036	192		236		280	
18	27.65297	62	28.46216	106	30.07184	150		194		238		282	
20	27.66296	64	28.54208	108	30.203556	152		196		240		284	
22	27.66296	66	28.61201	110	30.193424	154		198		242		286	
24	27.67295	68	28.68194	112	30.233952	156		200		244		288	
26	27.68294	70	28.75187	114	30.345404	158		202		246		290	
28	27.69293	72	28.84178	116	30.416328	160		204		248		292	
30	27.71291	74	28.91171	118	30.517648	162		206		250		294	
32	27.73289	76	28.98164	120	30.568308	164		208		252		296	
34	27.75287	78	29.05157	122	30.639232	166		210		254		298	
36	27.79283	80	29.13149	124	30.720288	168		212		256		300	
38	27.8228	82	29.19143	126	30.791212	170		214		258			
40	27.87275	84	29.27135	128	30.862136	172		216		260			
42	27.91271	86	29.33129	130	30.943192	174		218		262			

WELL No. 11

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	26.87375	88	27.80282	132		176		220		264	
2		46	26.91371	90	27.84278	134		178		222		266	
4		48	26.94368	92	27.89273	136		180		224		268	
6		50	26.99363	94	27.94268	138		182		226		270	
8		52	27.03359	96	27.98264	140		184		228		272	
10		54	27.07355	98	28.01261	142		186		230		274	
12		56	27.11351	100		144		188		232		276	
14		58	27.16346	102		146		190		234		278	
16		60	27.21341	104		148		192		236		280	
18		62	27.25337	106		150		194		238		282	
20		64	27.30332	108		152		196		240		284	
22		66	27.35327	110		154		198		242		286	
24		68	27.39323	112		156		200		244		288	
26		70	27.43319	114		158		202		246		290	
28	26.64398	72	27.47315	116		160		204		248		292	
30	26.67395	74	27.51311	118		162		206		250		294	
32	26.69393	76	27.55307	120		164		208		252		296	
34	26.7239	78	27.60302	122		166		210		254		298	
36	26.75387	80	27.64298	124		168		212		256		300	
38	26.77385	82	27.68294	126		170		214		258			
40	26.81381	84	27.7229	128		172		216		260			
42	26.84378	86	27.77285	130		174		218		262			

WELL No. 12

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.41321	88		132		176		220		264	
2		46	27.45317	90		134		178		222		266	
4		48	27.48314	92		136		180		224		268	
6		50	27.5231	94		138		182		226		270	
8		52	27.57305	96		140		184		228		272	
10		54	27.63299	98		142		186		230		274	
12		56	27.68294	100		144		188		232		276	
14		58	27.74288	102		146		190		234		278	
16	26.94368	60	27.80282	104		148		192		236		280	
18	26.96366	62	27.85277	106		150		194		238		282	
20	26.98364	64	27.90272	108		152		196		240		284	
22	27.0236	66	27.96266	110		154		198		242		286	
24	27.04358	68	28.0226	112		156		200		244		288	
26	27.08354	70	28.06256	114		158		202		246		290	
28	27.11351	72	28.10252	116		160		204		248		292	
30	27.14348	74	28.15247	118		162		206		250		294	
32	27.19343	76	28.21241	120		164		208		252		296	
34	27.2234	78	28.26236	122		166		210		254		298	
36	27.26336	80	28.30232	124		168		212		256		300	
38	27.29333	82	28.36226	126		170		214		258			
40	27.33329	84	28.41221	128		172		216		260			
42	27.37325	86	28.41221	130		174		218		262			

WELL No. 13

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.66296	88	28.64198	132		176		220		264	
2		46	27.69293	90	28.71191	134		178		222		266	
4		48	27.71291	92	28.77185	136		180		224		268	
6		50	27.74288	94	28.83179	138		182		226		270	
8		52	27.77285	96	28.89173	140		184		228		272	
10		54	27.80282	98	28.95167	142		186		230		274	
12		56	27.85277	100	29.00162	144		188		232		276	
14		58	27.90272	102	29.06156	146		190		234		278	
16		60	27.95267	104	29.09153	148		192		236		280	
18		62	27.99263	106		150		194		238		282	
20		64	28.03259	108		152		196		240		284	
22		66	28.08254	110		154		198		242		286	
24		68	28.13249	112		156		200		244		288	
26		70	28.16246	114		158		202		246		290	
28		72	28.21241	116		160		204		248		292	
30		74	28.26236	118		162		206		250		294	
32		76	28.31231	120		164		208		252		296	
34	27.54308	78	28.36226	122		166		210		254		298	
36	27.56306	80	28.41221	124		168		212		256		300	
38	27.59303	82	28.45217	126		170		214		258			
40	27.61301	84	28.5221	128		172		216		260			
42	27.64298	86	28.58204	130		174		218		262			

WELL No. 14

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.89273	88	28.88174	132		176		220		264	
2		46	27.9227	90	28.94168	134		178		222		266	
4		48	27.96266	92	29.00162	136		180		224		268	
6		50	28.00262	94	29.05157	138		182		226		270	
8		52	28.03259	96	29.09153	140		184		228		272	
10		54	28.08254	98	29.17145	142		186		230		274	
12		56	28.1225	100	29.23139	144		188		232		276	
14		58	28.16246	102	29.31131	146		190		234		278	
16		60	28.21241	104	29.36126	148		192		236		280	
18		62	28.26236	106	29.41121	150		194		238		282	
20		64	28.30232	108	29.46116	152		196		240		284	
22		66	28.35227	110	29.50112	154		198		242		286	
24		68	28.40222	112	29.54108	156		200		244		288	
26		70	28.43219	114	29.58104	158		202		246		290	
28		72	28.48214	116	29.621	160		204		248		292	
30		74	28.5221	118	29.68094	162		206		250		294	
32	27.59303	76	28.57205	120	29.7209	164		208		252		296	
34	27.63299	78	28.622	122	29.74088	166		210		254		298	
36	27.68294	80	28.67195	124	29.78084	168		212		256		300	
38	27.74288	82	28.7219	126	29.84078	170		214		258			
40	27.79283	84	28.78184	128	29.90072	172		216		260			
42	27.84278	86	28.83179	130	29.95067	174		218		262			

WELL No. 15

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.91271	88	28.95167	132	30.17316	176	31.6423	220		264	
2		46	27.95267	90	29.00162	134	30.22382	178	31.703092	222		266	
4		48	28.00262	92	29.05157	136	30.284612	180	31.763884	224		268	
6		50	28.04258	94	29.11151	138	30.355536	182	31.814544	226		270	
8		52	28.08254	96	29.16146	140	30.42646	184	31.8956	228		272	
10		54	28.1225	98	29.20142	142	30.487252	186	31.956392	230		274	
12		56	28.15247	100	29.25137	144	30.548044	188	32.007052	232		276	
14		58	28.19243	102	29.31131	146	30.6291	190	32.067844	234		278	
16		60	28.23239	104	29.37125	148	30.689892	192		236		280	
18		62	28.27235	106	29.4212	150	30.750684	194		238		282	
20		64	28.3223	108	29.48114	152	30.811476	196		240		284	
22		66	28.37225	110	29.54108	154	30.872268	198		242		286	
24	27.67295	68	28.43219	112	29.60102	156	30.943192	200		244		288	
26	27.69293	70	28.47215	114	29.656428	158	31.024248	202		246		290	
28	27.70292	72	28.54208	116	29.696956	160	31.095172	204		248		292	
30	27.71291	74	28.59203	118	29.757748	162	31.155964	206		250		294	
32	27.7229	76	28.65197	120	29.828672	164	31.23702	208		252		296	
34	27.74288	78	28.70192	122	29.899596	166	31.297812	210		254		298	
36	27.75287	80	28.75187	124	29.960388	168	31.378868	212		256		300	
38	27.77285	82	28.81181	126	29.990784	170	31.43966	214		258			
40	27.8228	84	28.85177	128	30.051576	172	31.510584	216		260			
42	27.87275	86	28.90172	130	30.092104	174	31.571376	218		262			

WELL No. 16

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	28.21241	88	28.94168	132	30.152896	176	31.49032	220	32.898668	264	34.256356
2		46	28.2224	90	29.00162	134	30.213688	178	31.561244	222	32.949328	266	34.307016
4		48	28.25237	92	29.05157	136	30.27448	180	31.622036	224	32.999988	268	34.367808
6		50	28.26236	94	29.09153	138	30.335272	182	31.69296	226	33.040516	270	34.4286
8		52	28.28234	96	29.15147	140	30.406196	184	31.753752	228	33.091176	272	34.489392
10		54	28.31231	98	29.2214	142	30.466988	186	31.824676	230	33.141836	274	34.540052
12		56	28.34228	100	29.29133	144	30.537912	188	31.8956	232	33.192496	276	34.590712
14		58	28.37225	102	29.33129	146	30.608836	190	31.966524	234	33.243156	278	34.641372
16		60	28.37225	104	29.35127	148	30.659496	192	32.027316	236	33.293816	280	34.692032
18		62	28.41221	106	29.37125	150	30.73042	194	32.088108	238	33.344476	282	34.722428
20		64	28.43219	108	29.39123	152	30.78108	196	32.138768	240	33.425532	284	34.742692
22		66	28.47215	110	29.43119	154	30.841872	198	32.19956	242	33.486324	286	34.762956
24		68	28.50212	112	29.54108	156	30.902664	200	32.260352	244	33.56738	288	34.813616
26		70	28.5221	114	29.636164	158	30.963456	202	32.331276	246	33.638304	290	34.88454
28		72	28.55207	116	29.696956	160	31.024248	204	32.4022	248	33.699096	292	34.9352
30		74	28.59203	118	29.76788	162	31.08504	206	32.462992	250	33.790284	294	
32	28.13249	76	28.63199	120	29.828672	164	31.145832	208	32.523784	252	33.851076	296	
34	28.14248	78	28.67195	122	29.879332	166	31.206624	210	32.574444	254	33.932132	298	
36	28.15247	80	28.71191	124	29.940124	168	31.267416	212	32.645368	256	33.982792	300	
38	28.16246	82	28.76186	126	30.000916	170	31.328208	214	32.696028	258	34.043584		
40	28.17245	84	28.81181	128	30.061708	172	31.378868	216	32.777084	260	34.12464		
42	28.19243	86	28.89173	130	30.102236	174	31.429528	218	32.827744	262	34.195564		

WELL No. 19

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.90272	88	29.11151	132	30.517648	176		220		264	
2		46	27.96266	90	29.17145	134	30.608836	178		222		266	
4		48	27.99263	92	29.24138	136	30.689892	180		224		268	
6		50	28.03259	94	29.30132	138	30.750684	182		226		270	
8		52	28.08254	96	29.34128	140	30.852004	184		228		272	
10	27.94268	54	28.13249	98	29.40122	142	30.943192	186		230		274	
12	27.80282	56	28.17245	100	29.46116	144	31.003984	188		232		276	
14	27.7229	58	28.23239	102	29.53109	146	31.064776	190		234		278	
16	27.64298	60	28.28234	104	29.59103	148	31.1357	192		236		280	
18	27.58304	62	28.33229	106	29.656428	150	31.196492	194		238		282	
20	27.57305	64	28.39223	108	29.71722	152	31.277548	196		240		284	
22	27.58304	66	28.45217	110	29.788144	154	31.368736	198		242		286	
24	27.60302	68	28.51211	112	29.848936	156	31.43966	200		244		288	
26	27.63299	70	28.57205	114	29.91986	158	31.510584	202		246		290	
28	27.65297	72	28.63199	116	29.990784	160	31.581508	204		248		292	
30	27.68294	74	28.68194	118	30.051576	162	31.652432	206		250		294	
32	27.70292	76	28.73189	120	30.112368	164	31.713224	208		252		296	
34	27.74288	78	28.79183	122	30.17316	166	31.814544	210		254		298	
36	27.77285	80	28.86176	124	30.233952	168	31.875336	212		256		300	
38	27.80282	82	28.93169	126	30.294744	170	31.885468	214		258			
40	27.85277	84	28.98164	128	30.365668	172		216		260			
42	27.86276	86	29.05157	130	30.446724	174		218		262			

WELL No. 21

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	28.95167	88	31.43966	132	34.094244	176	36.86028	220		264	
2		46	29.10152	90	31.561244	134	34.22596	178	36.9616	222		266	
4		48	29.19143	92	31.682828	136	34.347544	180	37.103448	224		268	
6		50	29.25137	94	31.79428	138	34.489392	182		226		270	
8		52	29.29133	96	31.936128	140	34.63124	184		228		272	
10		54	29.36126	98	32.067844	142	34.773088	186		230		274	
12		56	29.41121	100	32.169164	144	34.904804	188		232		276	
14	27.95267	58	29.46116	102	32.311012	146	35.026388	190		234		278	
16	28.00262	60	29.59103	104	32.422464	148	35.117576	192		236		280	
18	28.05257	62	29.71722	106	32.55418	150	35.23916	194		238		282	
20	28.09253	64	29.828672	108	32.675764	152	35.360744	196		240		284	
22	28.14248	66	29.950256	110	32.766952	154	35.451932	198		242		286	
24	28.19243	68	30.07184	112	32.868272	156	35.573516	200		244		288	
26	28.23239	70	30.22382	114	32.979724	158	35.6951	202		246		290	
28	28.29233	72	30.345404	116	33.101308	160	35.826816	204		248		292	
30	28.36226	74	30.466988	118	33.233024	162	35.928136	206		250		294	
32	28.43219	76	30.588572	120	33.354608	164	36.059852	208		252		296	
34	28.49213	78	30.73042	122	33.476192	166	36.211832	210		254		298	
36	28.58204	80	30.872268	124	33.597776	168	36.333416	212		256		300	
38	28.69193	82	30.993852	126	33.729492	170	36.475264	214		258			
40	28.77185	84	31.155964	128	33.840944	172	36.60698	216		260			
42	28.86176	86	31.297812	130	33.97266	174	36.738696	218		262			

WELL No. 24

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.1235	88	27.4232	132	27.71291	176	28.20242	220	28.96166	264	29.909728
2		46	27.1235	90	27.4232	134	27.7229	178	28.23239	222	28.99163	266	29.960388
4		48	27.13349	92	27.44318	136	27.74288	180	28.26236	224	29.04158	268	30.011048
6		50	27.14348	94	27.45317	138	27.76286	182	28.29233	226	29.08154	270	30.061708
8		52	27.15347	96	27.46316	140	27.78284	184	28.3223	228	29.13149	272	30.102236
10		54	27.16346	98	27.47315	142	27.80282	186	28.35227	230	29.17145	274	30.152896
12		56	27.17345	100	27.49313	144	27.8228	188	28.39223	232	29.21141	276	30.213688
14		58	27.18344	102	27.49313	146	27.85277	190	28.4222	234	29.26136	278	30.254216
16		60	27.20342	104	27.51311	148	27.87275	192	28.45217	236	29.31131	280	30.294744
18		62	27.24338	106	27.5231	150	27.89273	194	28.48214	238	29.34128	282	30.345404
20	27.00362	64	27.26336	108	27.53309	152	27.9227	196	28.51211	240	29.38124	284	30.396064
22	27.01361	66	27.27335	110	27.54308	154	27.94268	198	28.55207	242	29.4212	286	30.436592
24	27.03359	68	27.29333	112	27.55307	156	27.96266	200	28.58204	244	29.46116	288	30.487252
26	27.04358	70	27.29333	114	27.57305	158	27.99263	202	28.622	246	29.50112	290	30.52778
28	27.06356	72	27.27335	116	27.59303	160	28.01261	204	28.65197	248	29.55107	292	30.558176
30	27.07355	74	27.3233	118	27.60302	162	28.03259	206	28.69193	250	29.59103	294	30.598704
32	27.08354	76	27.33329	120	27.61301	164	28.05257	208	28.73189	252	29.636164	296	30.659496
34	27.09353	78	27.35327	122	27.63299	166	28.07255	210	28.76186	254	29.676692	298	30.720288
36	27.10352	80	27.36326	124	27.64298	168	28.10252	212	28.80182	256	29.727352	300	30.770948
38	27.11351	82	27.37325	126	27.66296	170	28.1225	214	28.84178	258	29.76788		
40	27.11351	84	27.39323	128	27.68294	172	28.15247	216	28.87175	260	29.81854		
42	27.11351	86	27.40322	130	27.69293	174	28.17245	218	28.9217	262	29.859068		

WELL No. 27

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	28.65197	88	29.38124	132	30.47712	176		220		264	
2		46	28.68194	90	29.4212	134	30.537912	178		222		266	
4		48	28.69193	92	29.45117	136	30.608836	180		224		268	
6		50	28.7219	94	29.49113	138	30.659496	182		226		270	
8		52	28.77185	96	29.54108	140	30.720288	184		228		272	
10		54	28.81181	98	29.60102	142	30.78108	186		230		274	
12		56	28.84178	100	29.636164	144	30.841872	188		232		276	
14		58	28.88174	102	29.676692	146	30.922928	190		234		278	
16		60	28.91171	104	29.71722	148	30.973588	192		236		280	
18		62	28.94168	106	29.757748	150	31.024248	194		238		282	
20		64	28.97165	108	29.798276	152	31.08504	196		240		284	
22		66	29.01161	110	29.848936	154	31.125568	198		242		286	
24		68	29.04158	112	29.899596	156	31.196492	200		244		288	
26		70	29.07155	114	29.950256	158	31.257284	202		246		290	
28		72	29.11151	116	30.000916	160	31.307944	204		248		292	
30		74	29.15147	118	30.061708	162	31.368736	206		250		294	
32		76	29.18144	120	30.1225	164	31.429528	208		252		296	
34		78	29.21141	122	30.17316	166	31.49032	210		254		298	
36		80	29.24138	124	30.244084	168	31.551112	212		256		300	
38	28.58204	82	29.28134	126	30.304876	170	31.622036	214		258			
40	28.61201	84	29.31131	128	30.365668	172		216		260			
42	28.64198	86	29.35127	130	30.416328	174		218		262			

WELL No. 29

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	28.57205	88	30.244084	132	31.74362	176	33.293816	220		264	
2		46	28.66196	90	30.335272	134	31.804412	178	33.374872	222		266	
4		48	28.73189	92	30.406196	136	31.875336	180	33.455928	224		268	
6		50	28.80182	94	30.466988	138	31.925996	182	33.526852	226		270	
8		52	28.87175	96	30.548044	140	31.99692	184	33.577512	228		272	
10		54	28.96166	98	30.639232	142	32.057712	186	33.648436	230		274	
12		56	29.03159	100	30.720288	144	32.118504	188	33.699096	232		276	
14		58	29.09153	102	30.78108	146	32.179296	190	33.759888	234		278	
16		60	29.18144	104	30.852004	148	32.240088	192	33.800416	236		280	
18		62	29.25137	106	30.912796	150	32.311012	194	33.830812	238		282	
20	27.7229	64	29.31131	108	30.98372	152	32.371804	196	33.891604	240		284	
22	27.78284	66	29.39123	110	31.044512	154	32.432596	198		242		286	
24	27.83279	68	29.47115	112	31.125568	156	32.493388	200		244		288	
26	27.89273	70	29.54108	114	31.18636	158	32.55418	202		246		290	
28	27.96266	72	29.636164	116	31.267416	160	32.625104	204		248		292	
30	28.04258	74	29.707088	118	31.328208	162	32.70616	206		250		294	
32	28.11251	76	29.798276	120	31.389	164	32.797348	208		252		296	
34	28.19243	78	29.879332	122	31.449792	166	32.868272	210		254		298	
36	28.28234	80	29.950256	124	31.500452	168	32.95946	212		256		300	
38	28.36226	82	30.02118	126	31.561244	170	33.050648	214		258			
40	28.46216	84	30.102236	128	31.622036	172	33.131704	216		260			
42	28.5221	86	30.17316	130	31.682828	174	33.21276	218		262			

WELL No. 30

Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.25337	88	28.11251	132	29.56106	176	31.003984	220		264	
2		46	27.29333	90	28.16246	134	29.626032	178	31.074908	222		266	
4		48	27.3233	92	28.20242	136	29.686824	180	31.1357	224		268	
6		50	27.35327	94	28.25237	138	29.737484	182	31.18636	226		270	
8		52	27.39323	96	28.30232	140	29.798276	184	31.28768	228		272	
10		54	27.43319	98	28.38224	142	29.848936	186	31.33834	230		274	
12		56	27.46316	100	28.44218	144	29.91986	188	31.389	232		276	
14		58	27.50312	102	28.51211	146	29.990784	190	31.43966	234		278	
16		60	27.53309	104	28.60202	148	30.051576	192	31.500452	236		280	
18		62	27.57305	106	28.67195	150	30.112368	194	31.551112	238		282	
20		64	27.61301	108	28.76186	152	30.183292	196	31.601772	240		284	
22		66	27.65297	110	28.85177	154	30.254216	198		242		286	
24	26.91371	68	27.68294	112	28.91171	156	30.32514	200		244		288	
26	26.93369	70	27.7229	114	28.98164	158	30.396064	202		246		290	
28	26.96366	72	27.76286	116	29.06156	160	30.456856	204		248		292	
30	26.99363	74	27.80282	118	29.1215	162	30.507516	206		250		294	
32	27.0236	76	27.84278	120	29.19143	164	30.57844	208		252		296	
34	27.07355	78	27.89273	122	29.25137	166	30.649364	210		254		298	
36	27.11351	80	27.93269	124	29.31131	168	30.73042	212		256		300	
38	27.14348	82	27.98264	126	29.36126	170	30.791212	214		258			
40	27.18344	84	28.0226	128	29.43119	172	30.852004	216		260			
42	27.21341	86	28.06256	130	29.49113	174	30.93306	218		262			

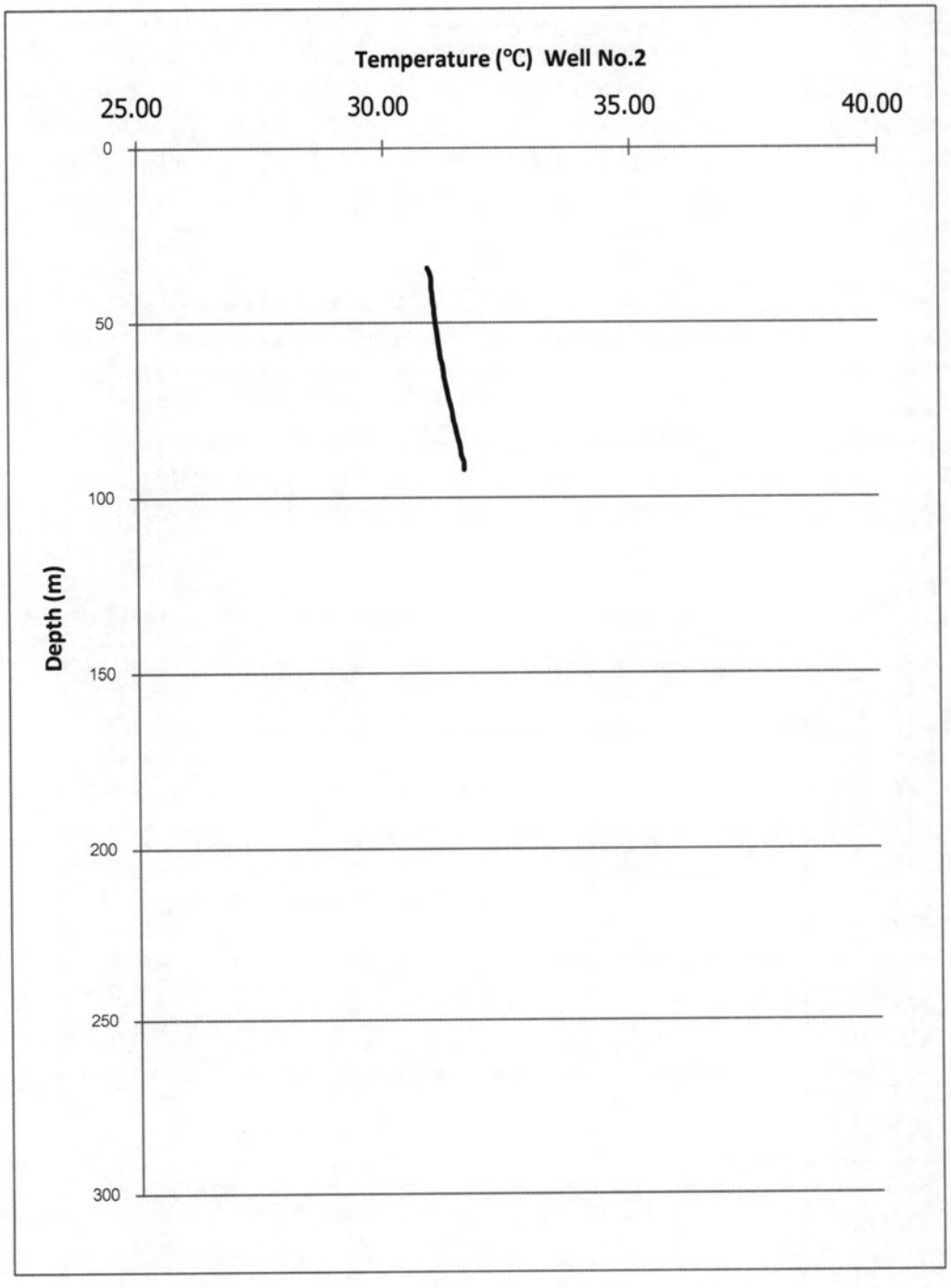
WELL No. 31

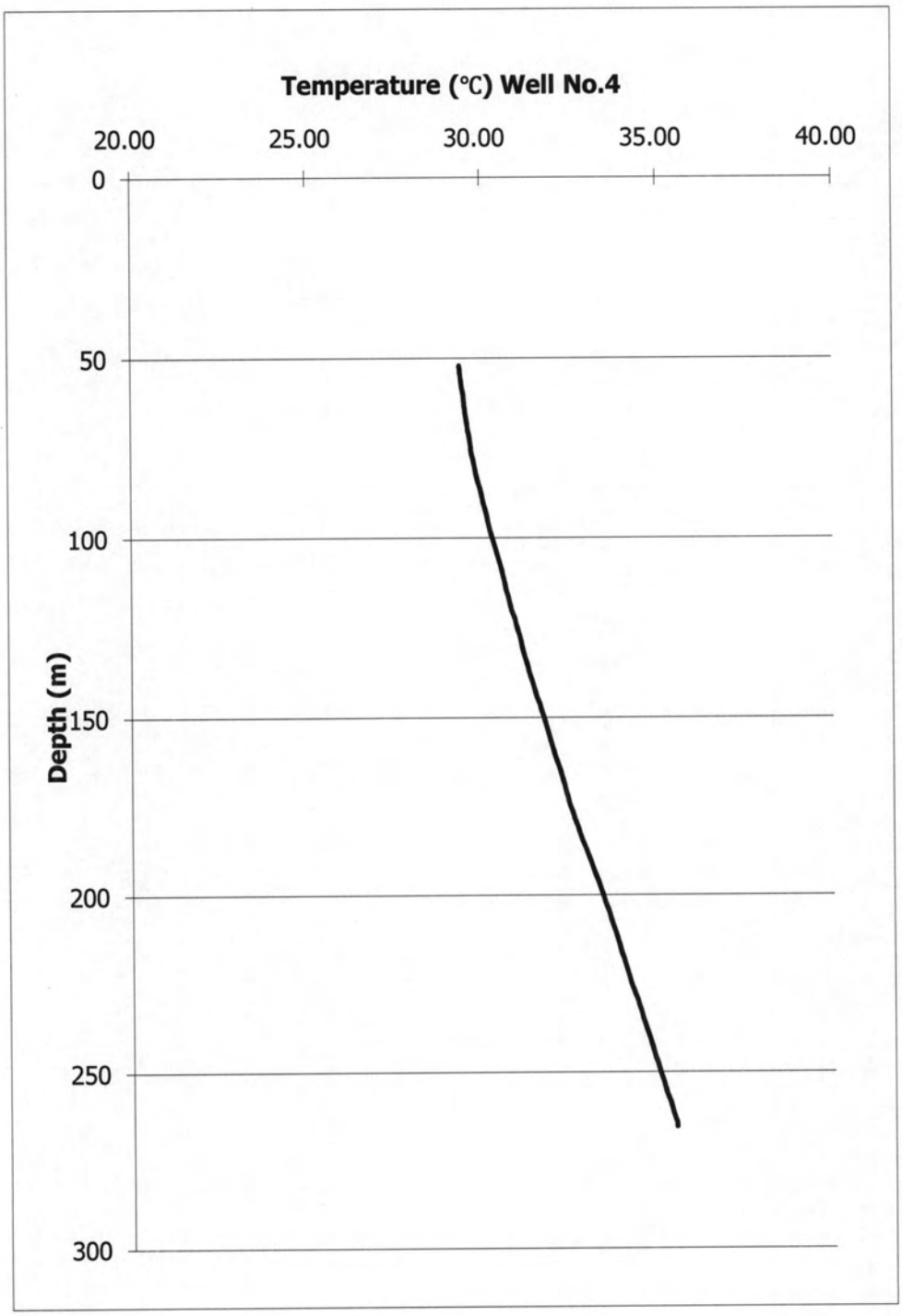
Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	28.24238	88	29.686824	132	31.257284	176	32.736556	220		264	
2		46	28.30232	90	29.76788	134	31.328208	178	32.817612	222		266	
4		48	28.36226	92	29.828672	136	31.399132	180	32.898668	224		268	
6		50	28.43219	94	29.909728	138	31.459924	182		226		270	
8		52	28.49213	96	29.980652	140	31.530848	184		228		272	
10		54	28.57205	98	30.061708	142	31.601772	186		230		274	
12		56	28.63199	100	30.1225	144	31.652432	188		232		276	
14		58	28.70192	102	30.183292	146	31.713224	190		234		278	
16		60	28.79183	104	30.254216	148	31.774016	192		236		280	
18		62	28.84178	106	30.345404	150	31.84494	194		238		282	
20		64	28.91171	108	30.42646	152	31.915864	196		240		284	
22		66	28.97165	110	30.487252	154	31.976656	198		242		286	
24		68	29.04158	112	30.548044	156	32.037448	200		244		288	
26	27.58304	70	29.08154	114	30.618968	158	32.09824	202		246		290	
28	27.61301	72	29.13149	116	30.689892	160	32.159032	204		248		292	
30	27.67295	74	29.18144	118	30.750684	162	32.229956	206		250		294	
32	27.73289	76	29.23139	120	30.83174	164	32.30088	208		252		296	
34	27.8228	78	29.31131	122	30.912796	166	32.361672	210		254		298	
36	27.91271	80	29.37125	124	30.993852	168	32.432596	212		256		300	
38	27.99263	82	29.45117	126	31.054644	170	32.513652	214		258			
40	28.08254	84	29.54108	128	31.125568	172	32.594708	216		260			
42	28.16246	86	29.6159	130	31.18636	174	32.6555	218		262			

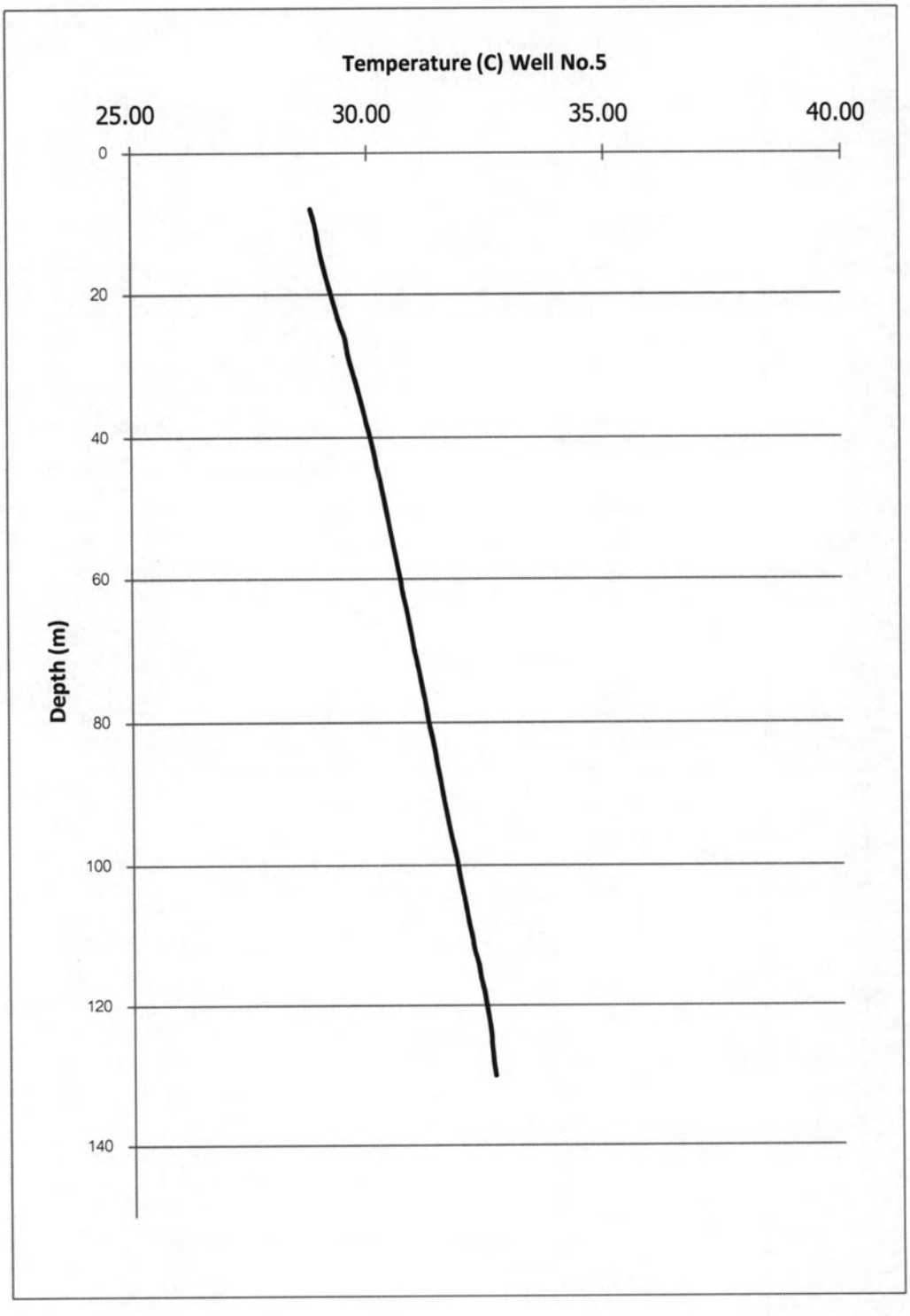
WELL No. 42

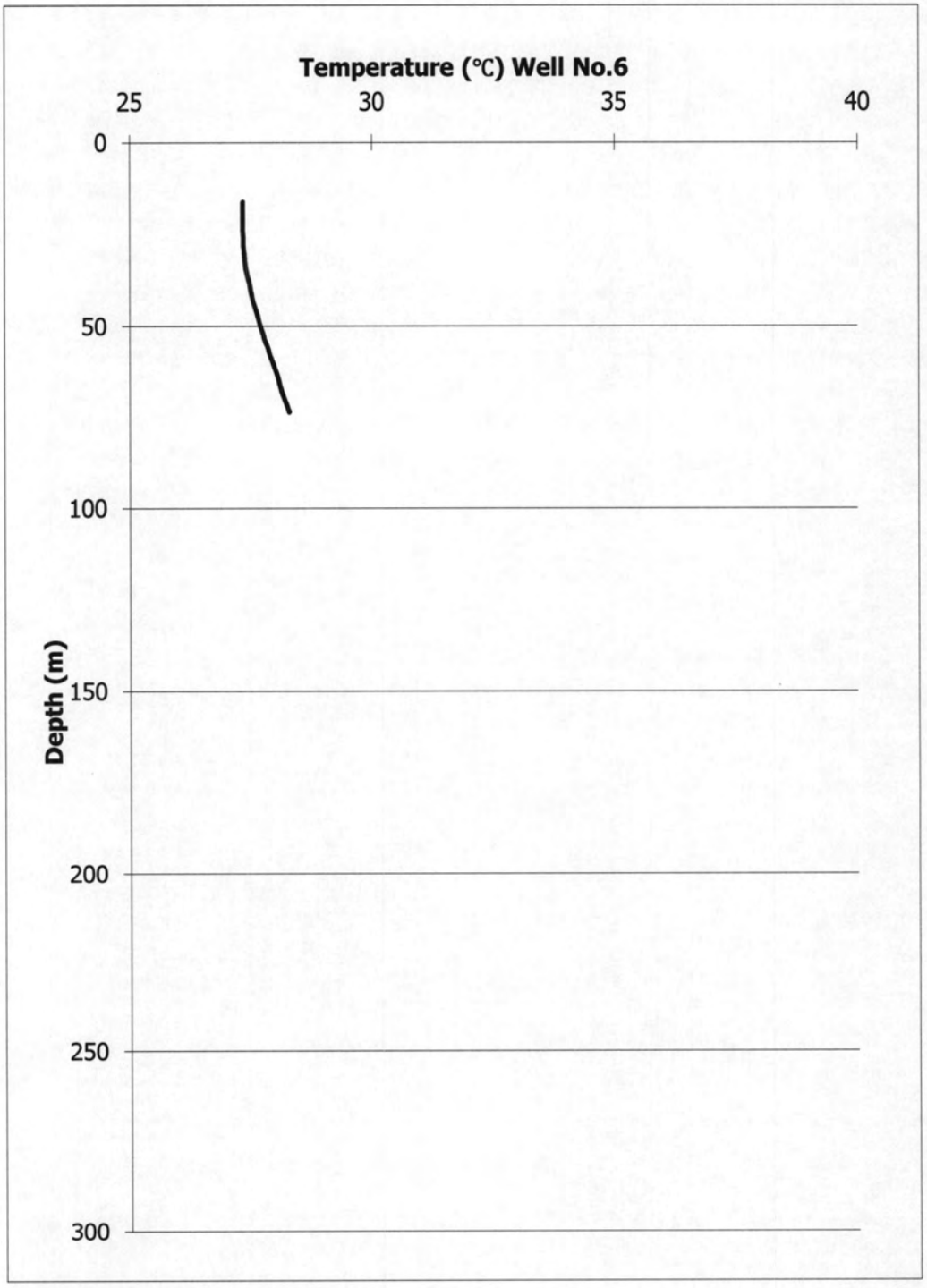
Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)	Depth (m)	Temperature (C)
0		44	27.2234	88	28.30232	132	29.50112	176	31.277548	220	32.209692	264	33.486324
2		46	27.25337	90	28.36226	134	29.55107	178	31.33834	222	32.260352	266	33.557248
4		48	27.28334	92	28.40222	136	29.59103	180	31.409264	224	32.321144	268	33.61804
6		50	27.3233	94	28.45217	138	29.636164	182	31.470056	226	32.371804	270	33.658568
8		52	27.35327	96	28.51211	140	29.686824	184	31.54098	228	32.45286	272	33.71936
10		54	27.40322	98	28.56206	142	29.747616	186	31.59164	230	32.513652	274	33.780152
12		56	27.44318	100	28.622	144	30.22382	188	31.277548	232	32.574444	276	33.830812
14		58	27.49313	102	28.70192	146	30.304876	190	31.33834	234	32.645368	278	33.891604
16		60	27.55307	104	28.75187	148	30.365668	192	31.409264	236	32.696028	280	33.942264
18		62	27.61301	106	28.81181	150	30.42646	194	31.470056	238	32.746688	282	34.003056
20		64	27.67295	108	28.85177	152	30.497384	196	31.54098	240	32.80748	284	34.063848
22		66	27.73289	110	28.89173	154	30.568308	198	31.59164	242	32.85814	286	34.12464
24		68	27.78284	112	28.93169	156	30.6291	200	31.652432	244	32.918932	288	34.185432
26		70	27.8228	114	28.99163	158	30.700024	202	31.703092	246	32.979724	290	34.246224
28		72	27.87275	116	29.05157	160	30.770948	204	31.763884	248	33.040516	292	34.317148
30		74	27.9227	118	29.10152	162	30.83174	206	31.824676	250	33.091176	294	34.388072
32		76	27.98264	120	29.17145	164	30.902664	208	31.875336	252	33.141836	296	34.4286
34		78	28.0226	122	29.23139	166	30.973588	210	31.925996	254	33.202628	298	34.47926
36		80	28.07255	124	29.28134	168	31.044512	212	31.99692	256	33.253288	300	34.560316
38		82	28.13249	126	29.34128	170	31.105304	214	32.04758	258	33.31408		
40		84	28.19243	128	29.39123	172	31.166096	216	32.09824	260	33.36474		
42		86	28.23239	130	29.45117	174	31.216756	218	32.1489	262	33.425532		

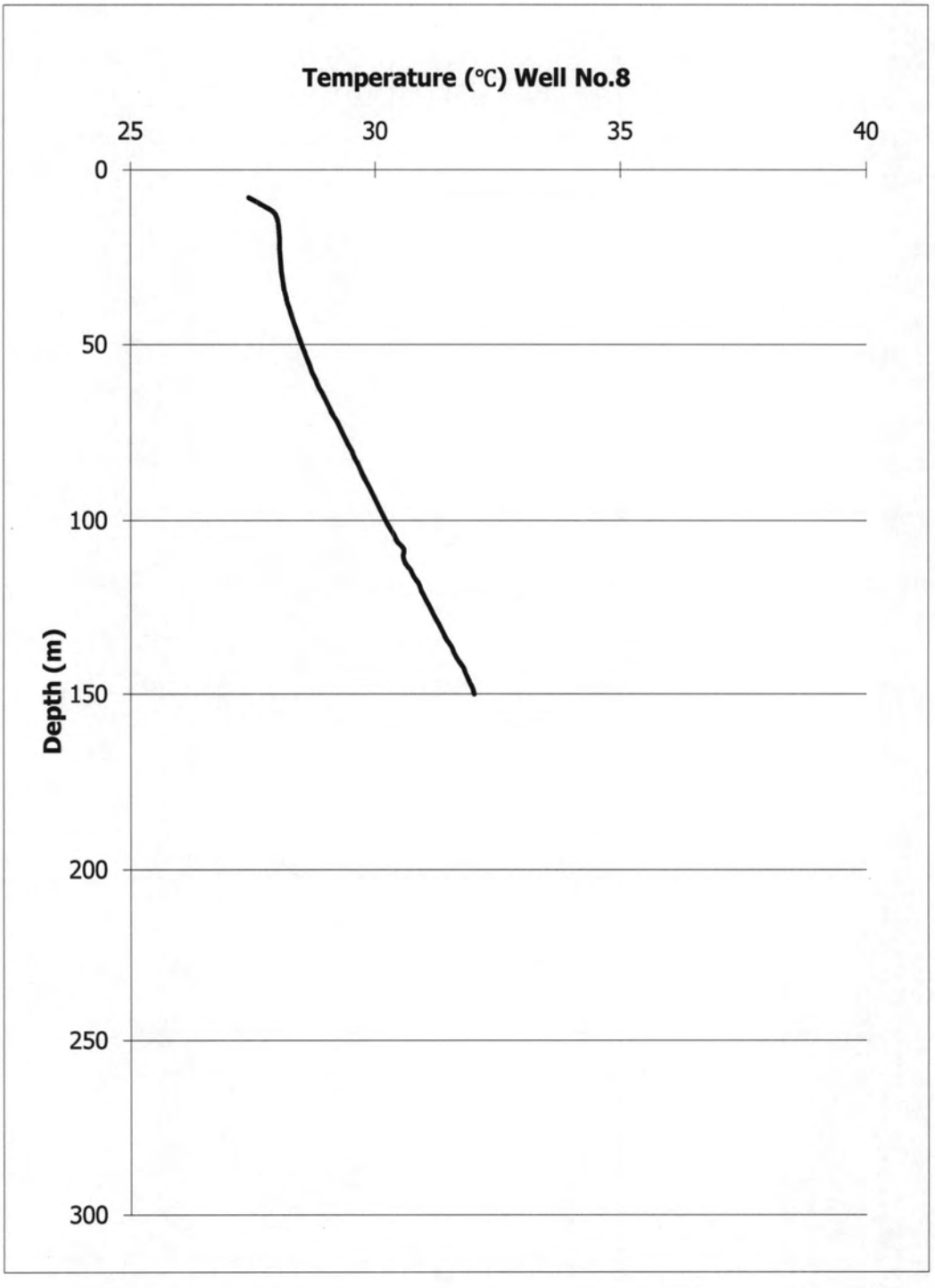
Appendix A3 Temperature-depth profiles

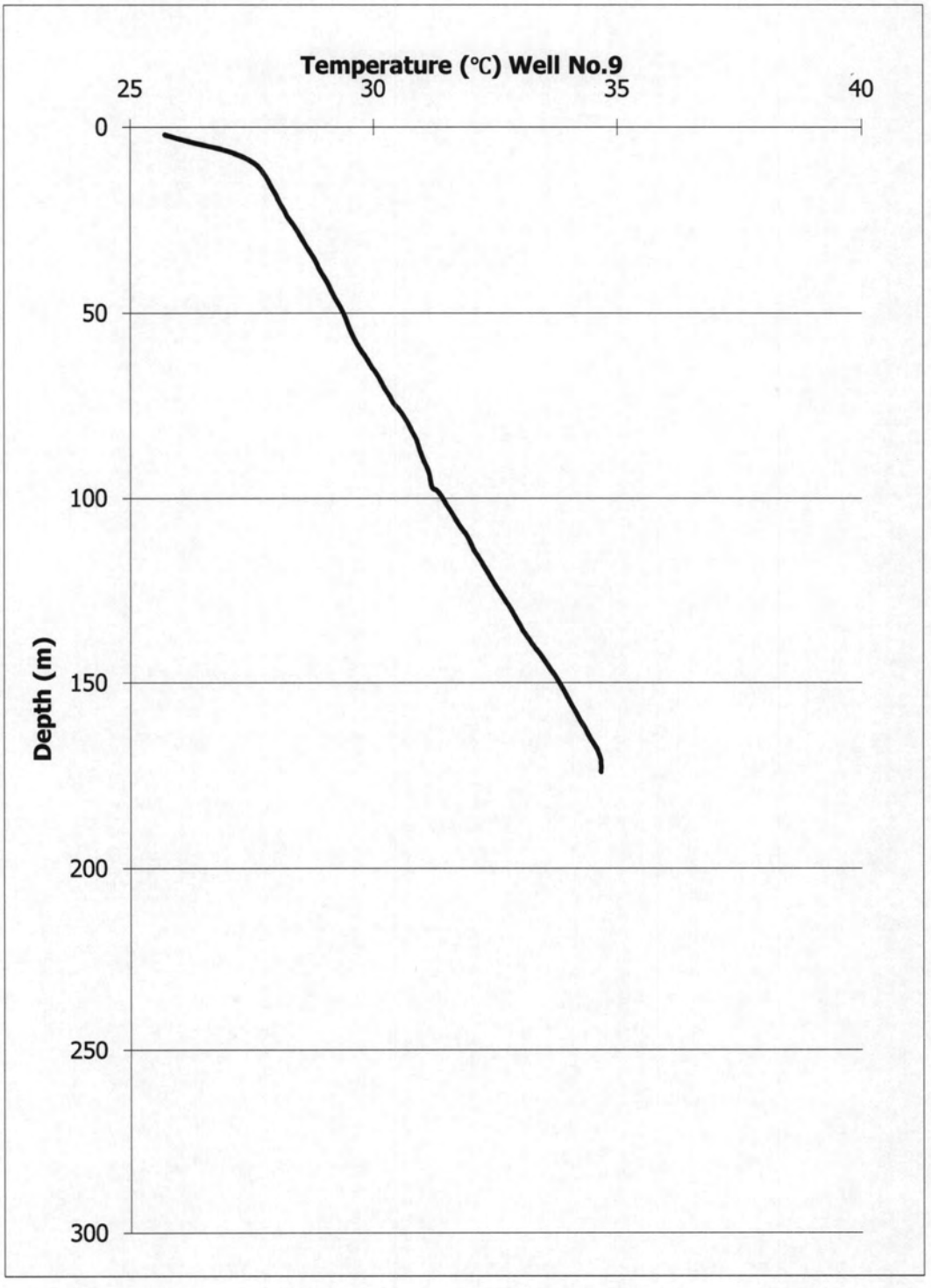


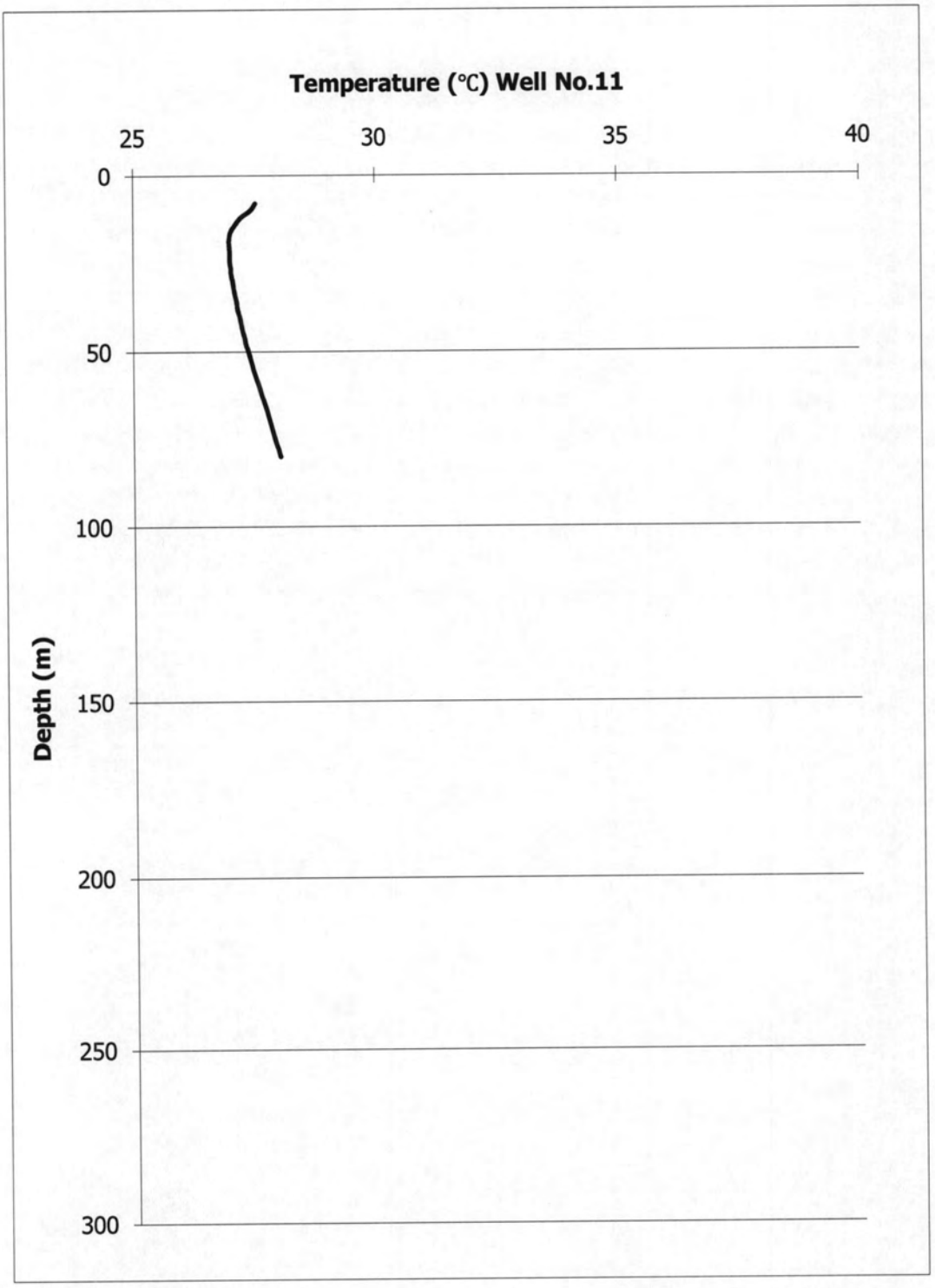

Temperature (°C) Well No.4
20.00
25.00
30.00
35.00
40.00
0
50
100
150
200
250
300
Depth (m)

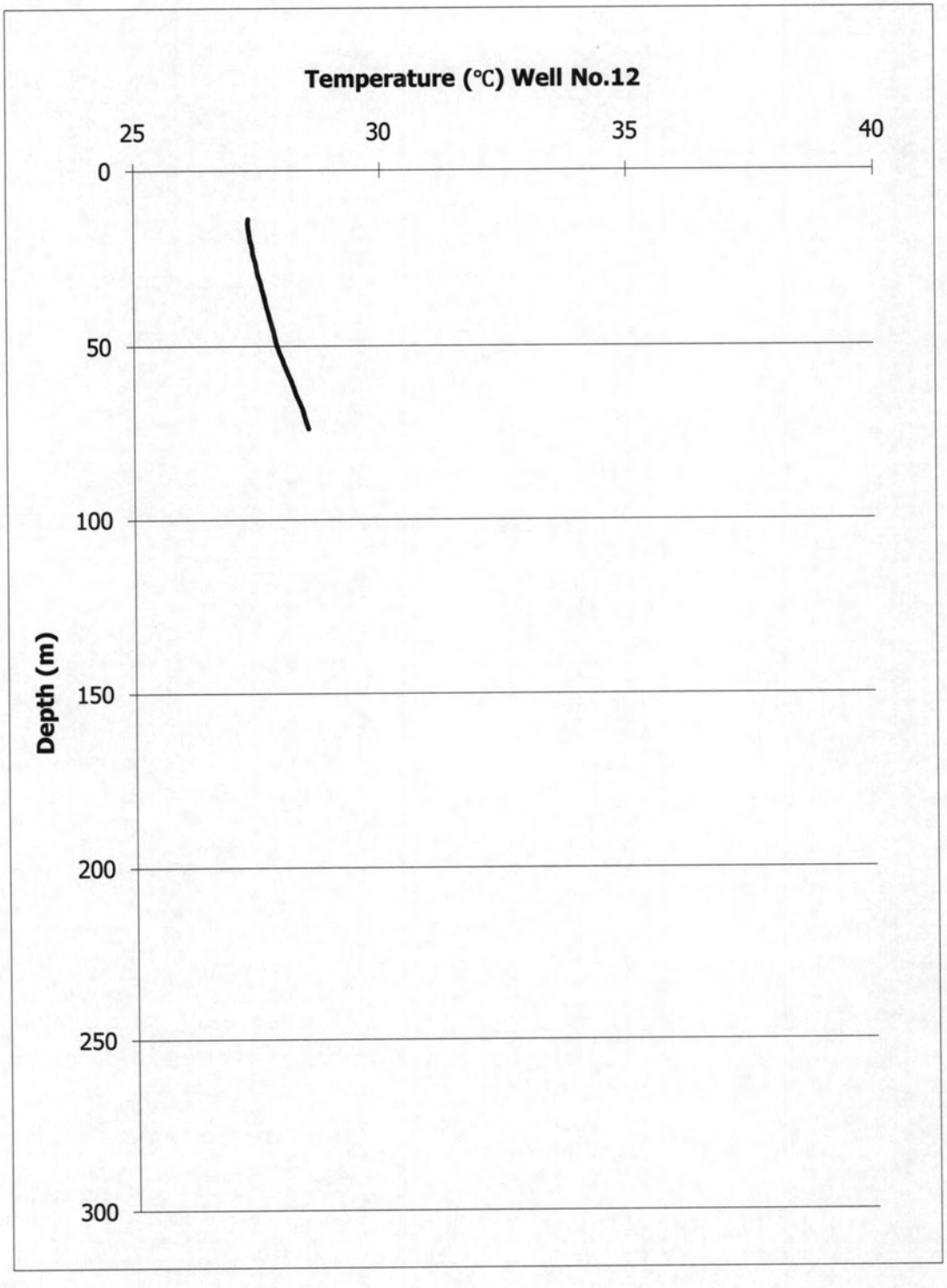

Temperature (C) Well No.5
25.00
30.00
35.00
40.00
0
20
40
60
80
100
120
140
Depth (m)

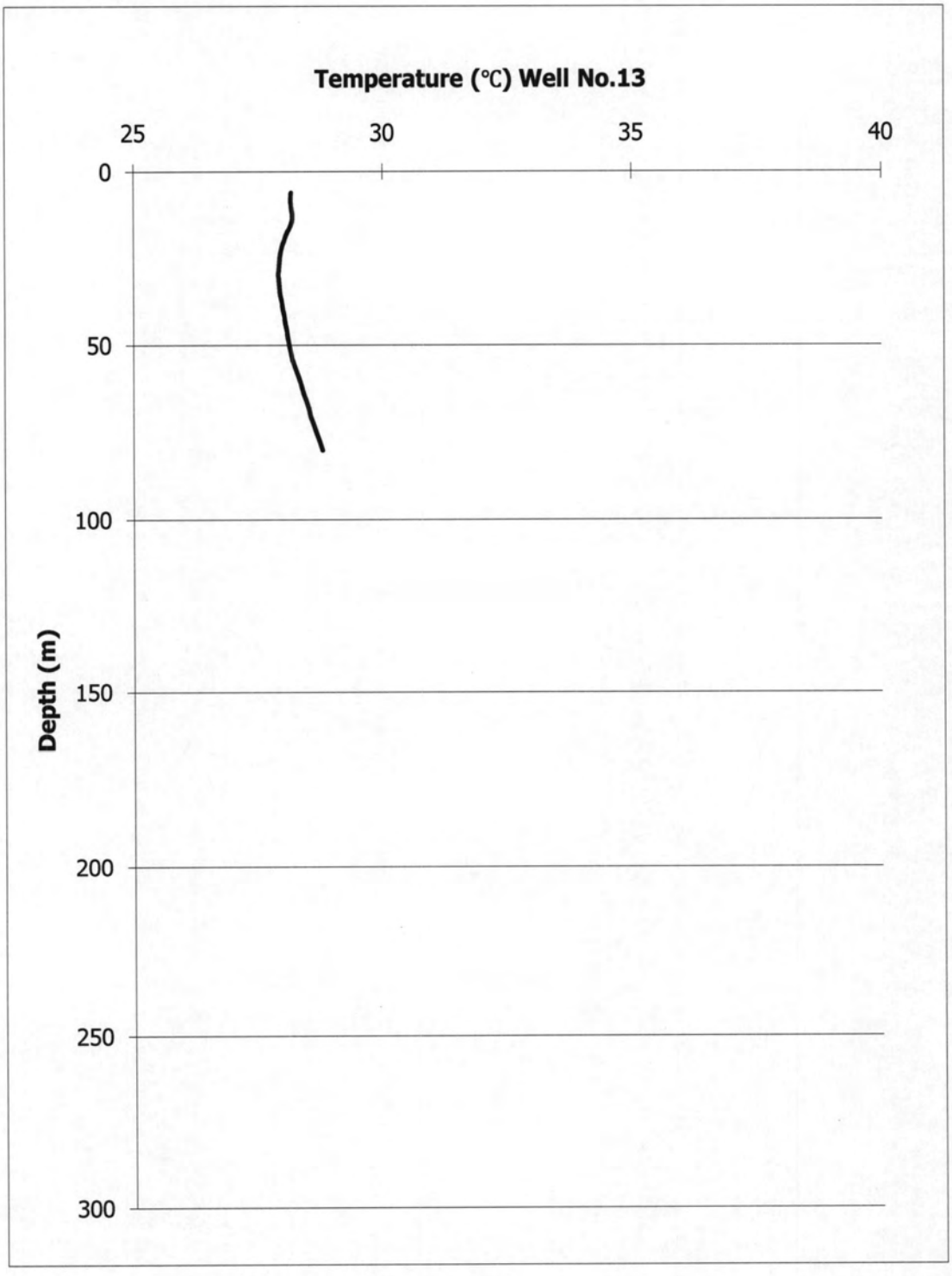

Temperature (℃) Well No.6
25
30
35
40
0
50
100
150
200
250
300
Depth (m)

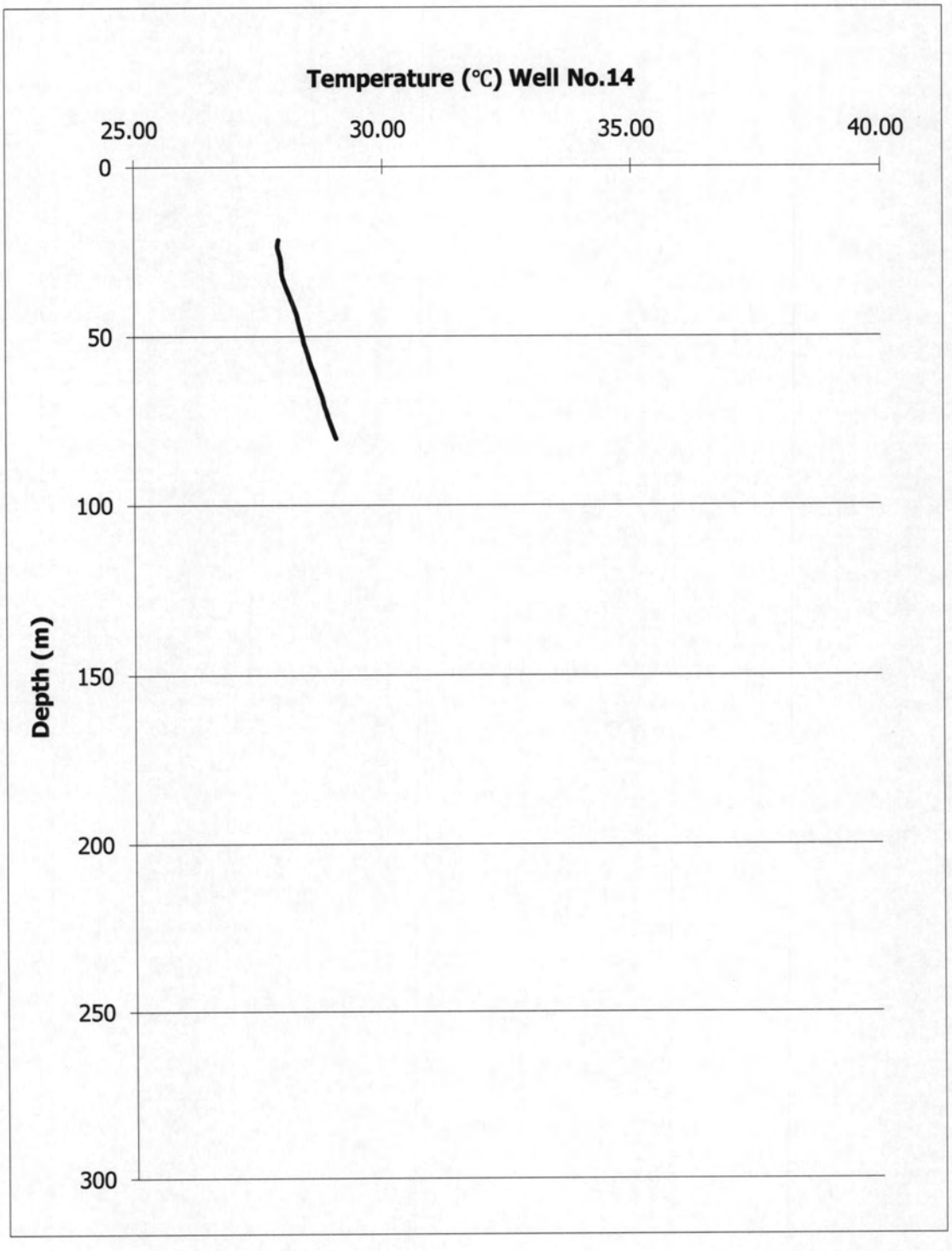

Temperature (℃) Well No.8
25
30
35
40
0
50
100
150
200
250
300
Depth (m)

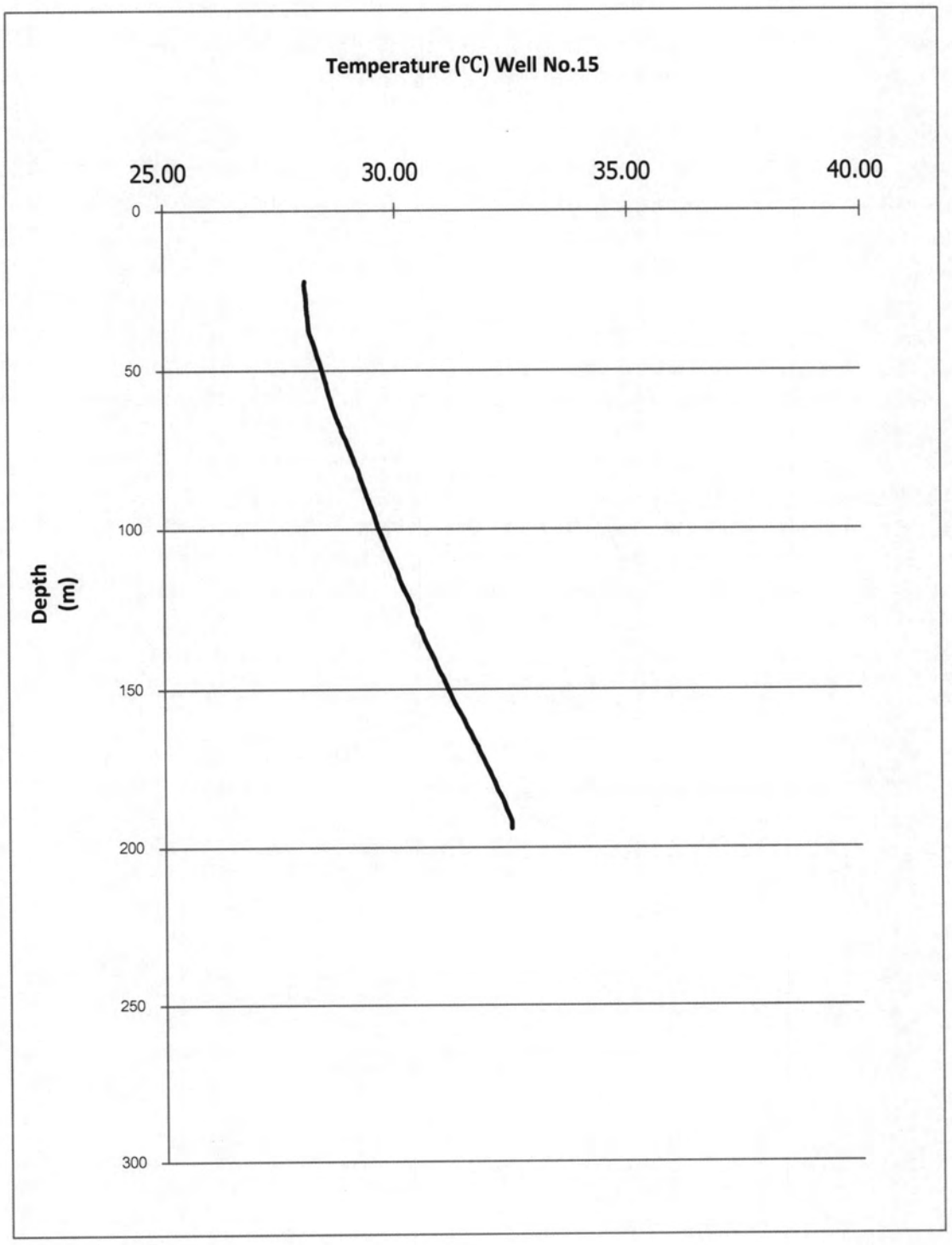

Temperature (°C) Well No.9
25
30
35
40
0
50
100
150
200
250
300
Depth (m)

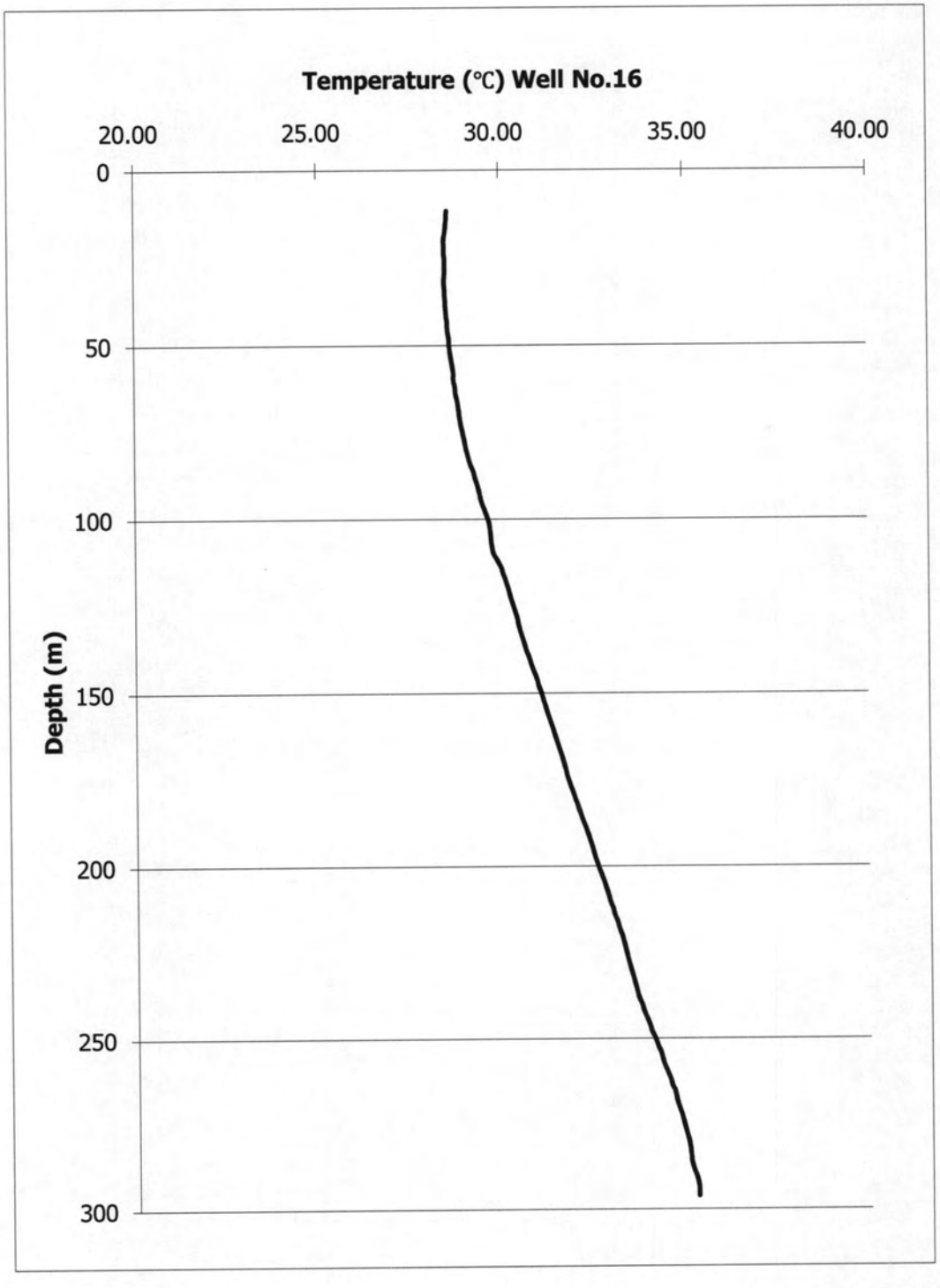

Temperature (℃) Well No.11
25
30
35
40
0
50
100
150
200
250
300
Depth (m)

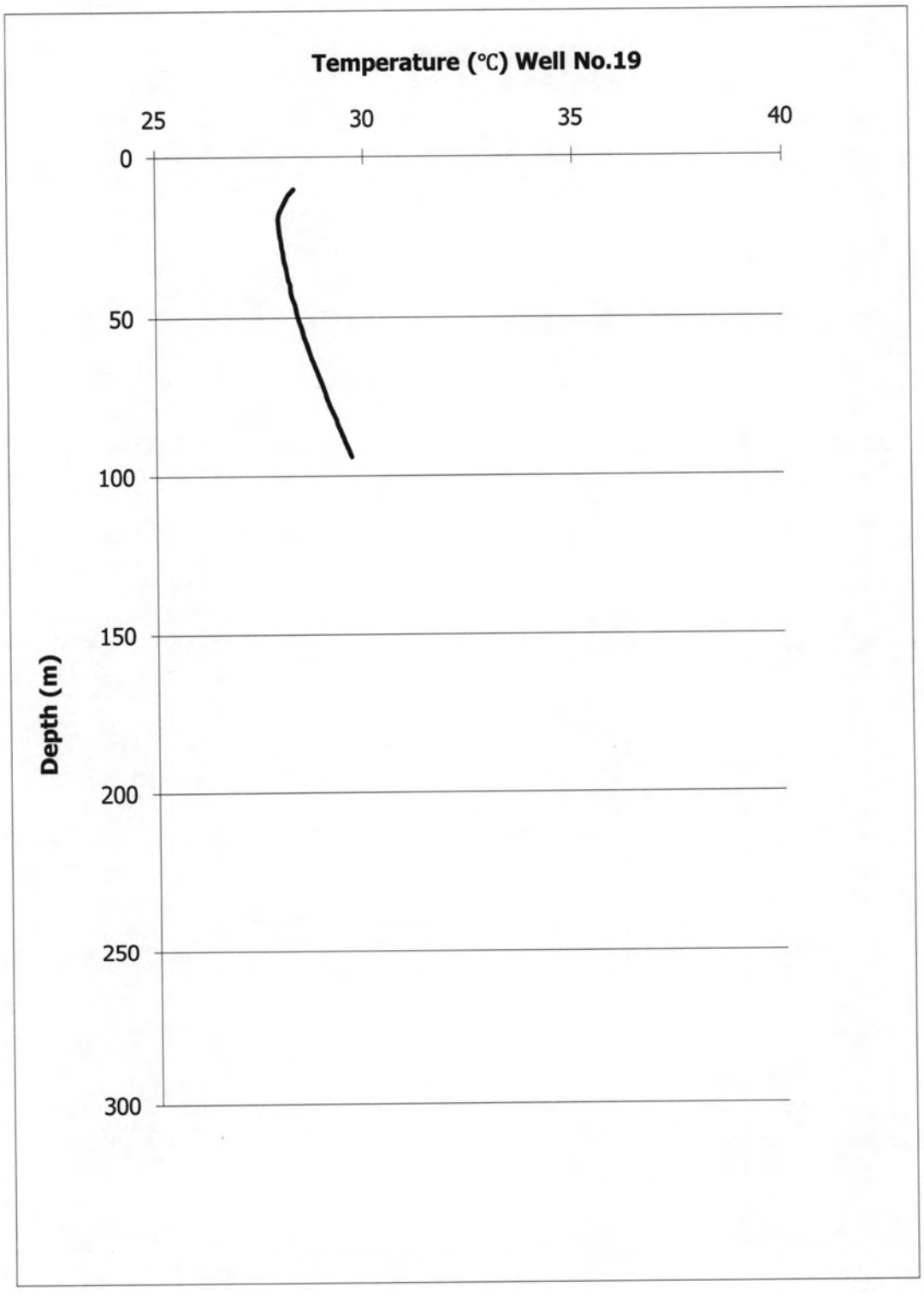

Temperature (℃) Well No.12
25
30
35
40
0
50
100
150
200
250
300
Depth (m)

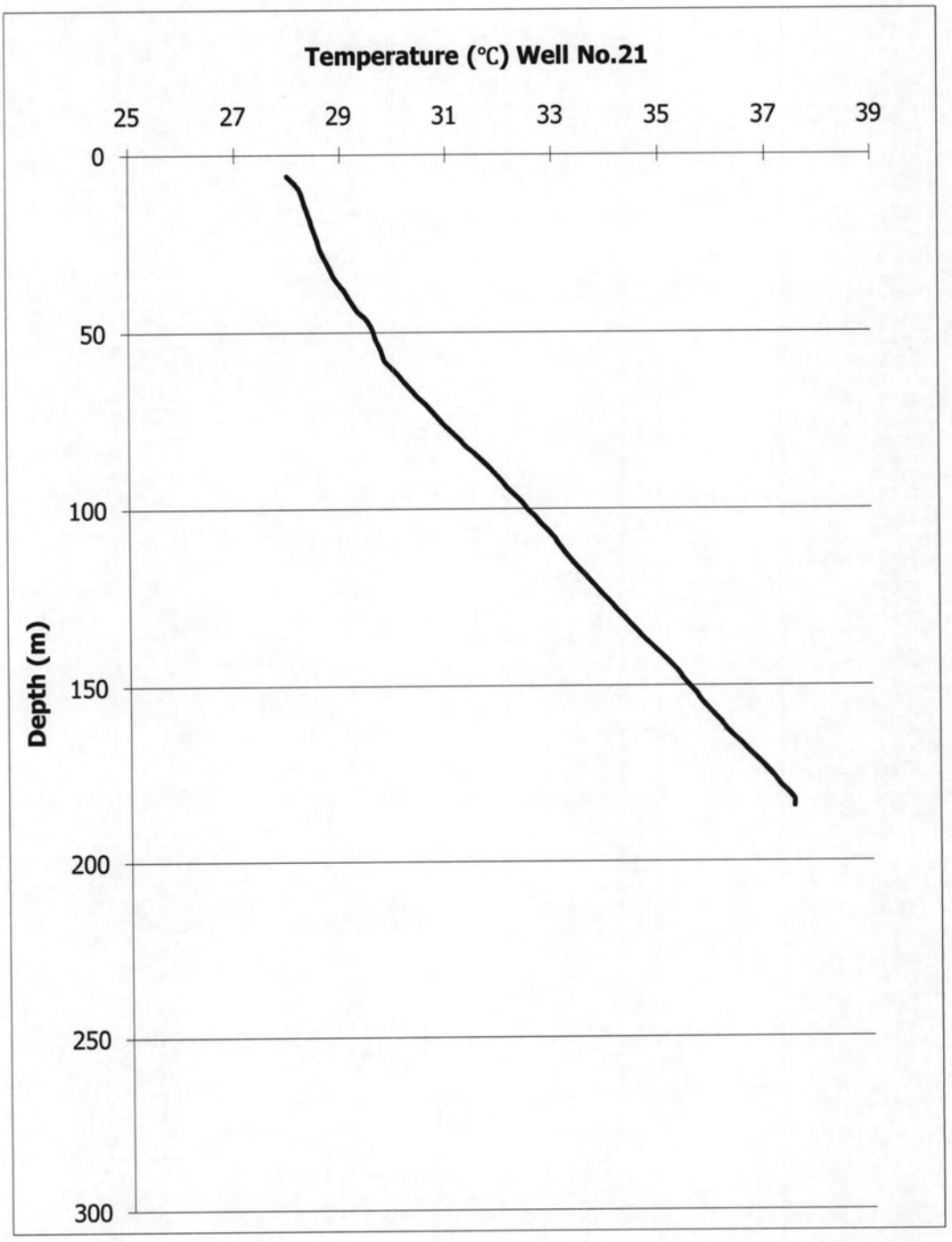

Temperature (℃) Well No.13
25
30
35
40
0
50
100
150
200
250
300
Depth (m)

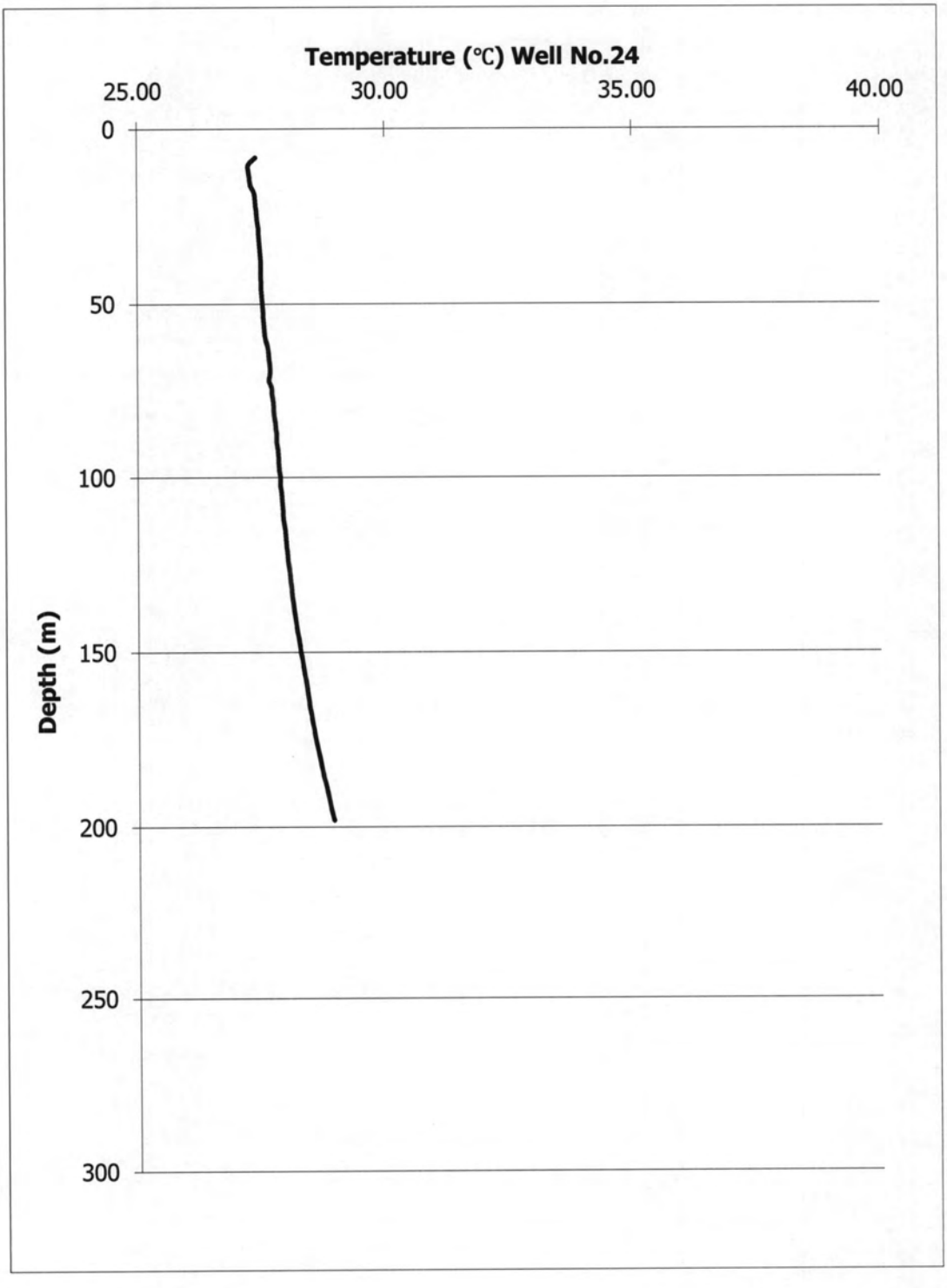

Temperature (℃) Well No.14
25.00
30.00
35.00
40.00
0
50
100
150
200
250
300
Depth (m)

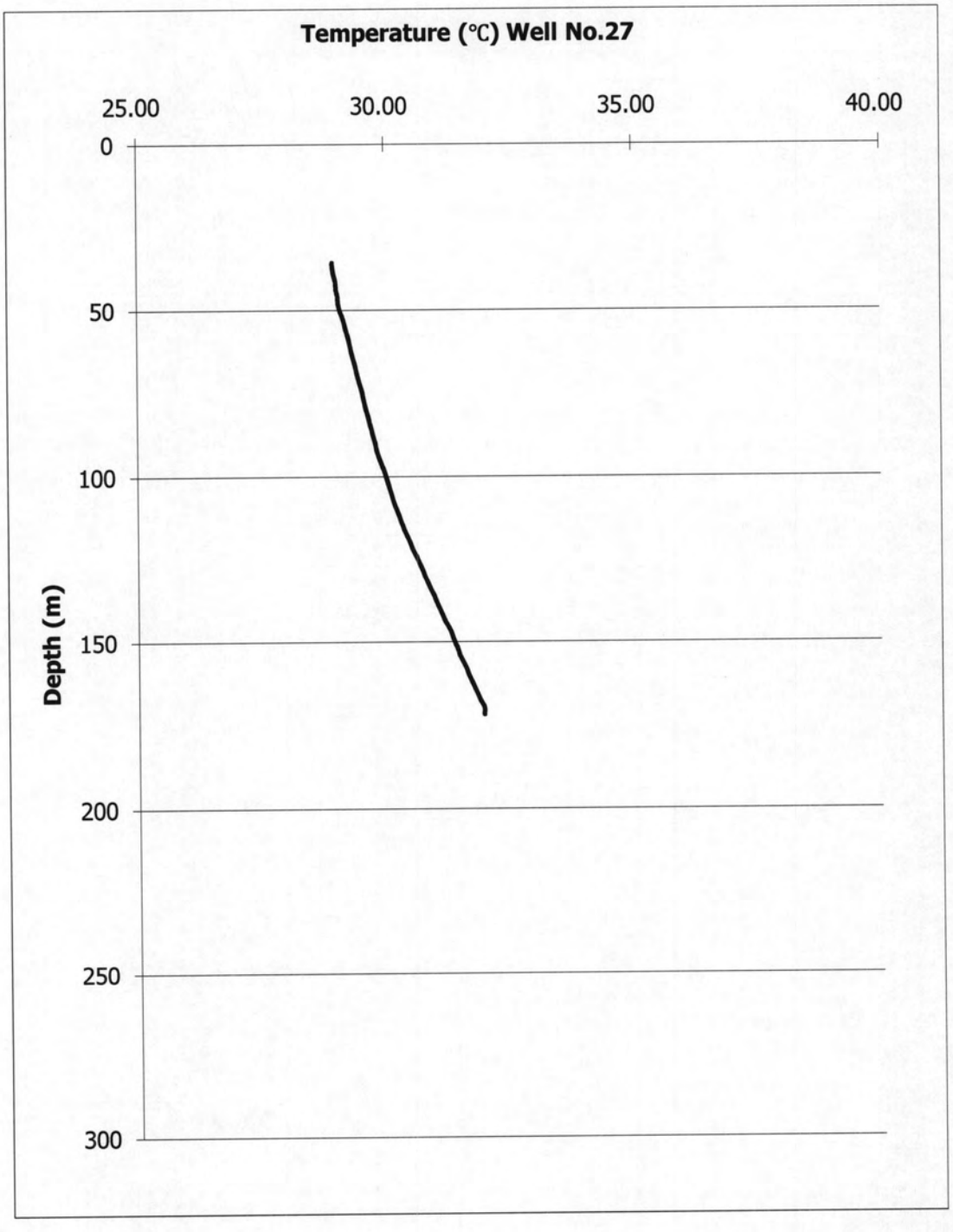

Temperature (°C) Well No.15
25.00
30.00
35.00
40.00
0
50
100
150
200
250
300
Depth (m)

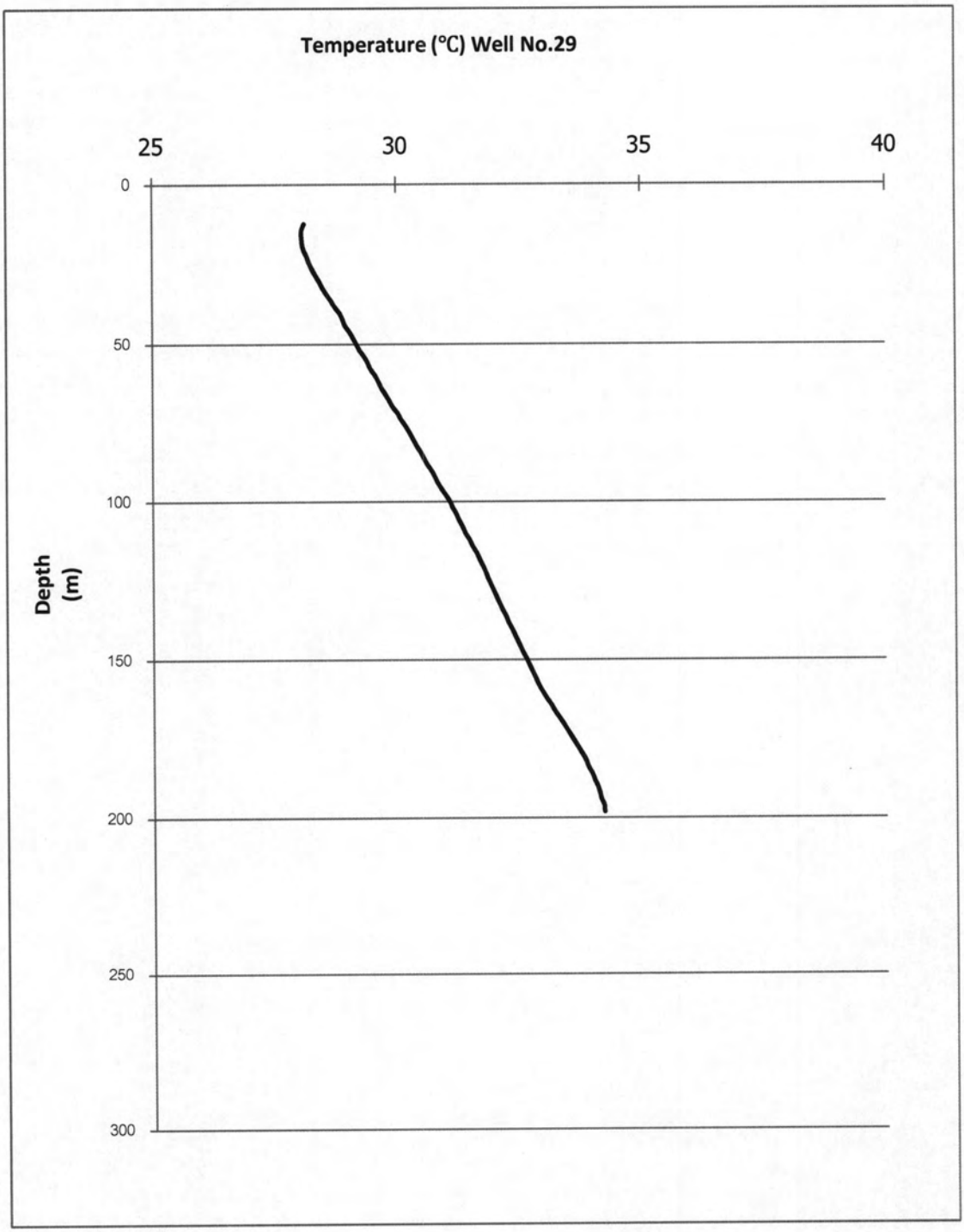

Temperature (℃) Well No.16
20.00
25.00
30.00
35.00
40.00
0
50
100
150
200
250
300
Depth (m)

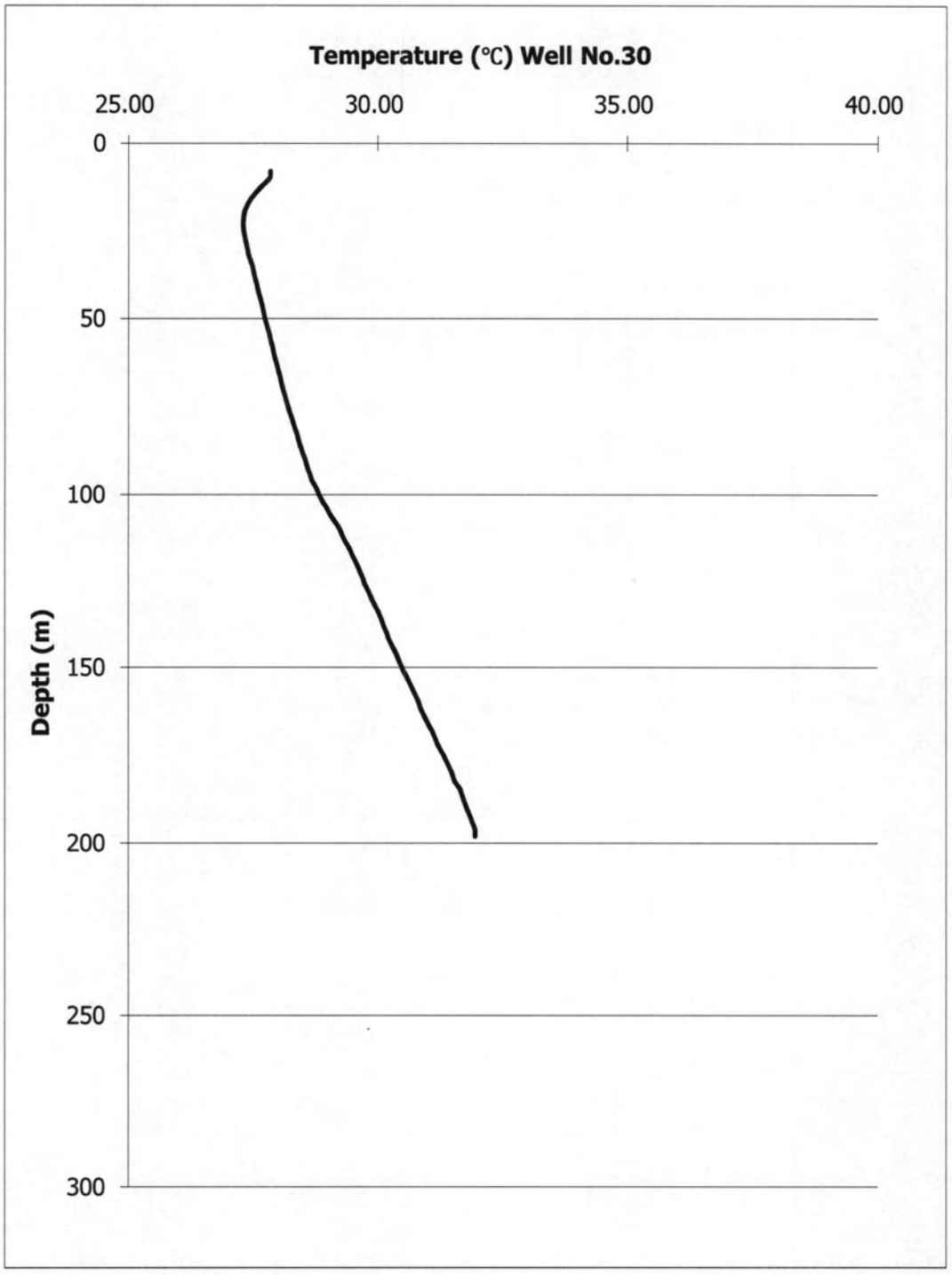

Temperature (℃) Well No.19
25
30
35
40
0
50
100
150
200
250
300
Depth (m)

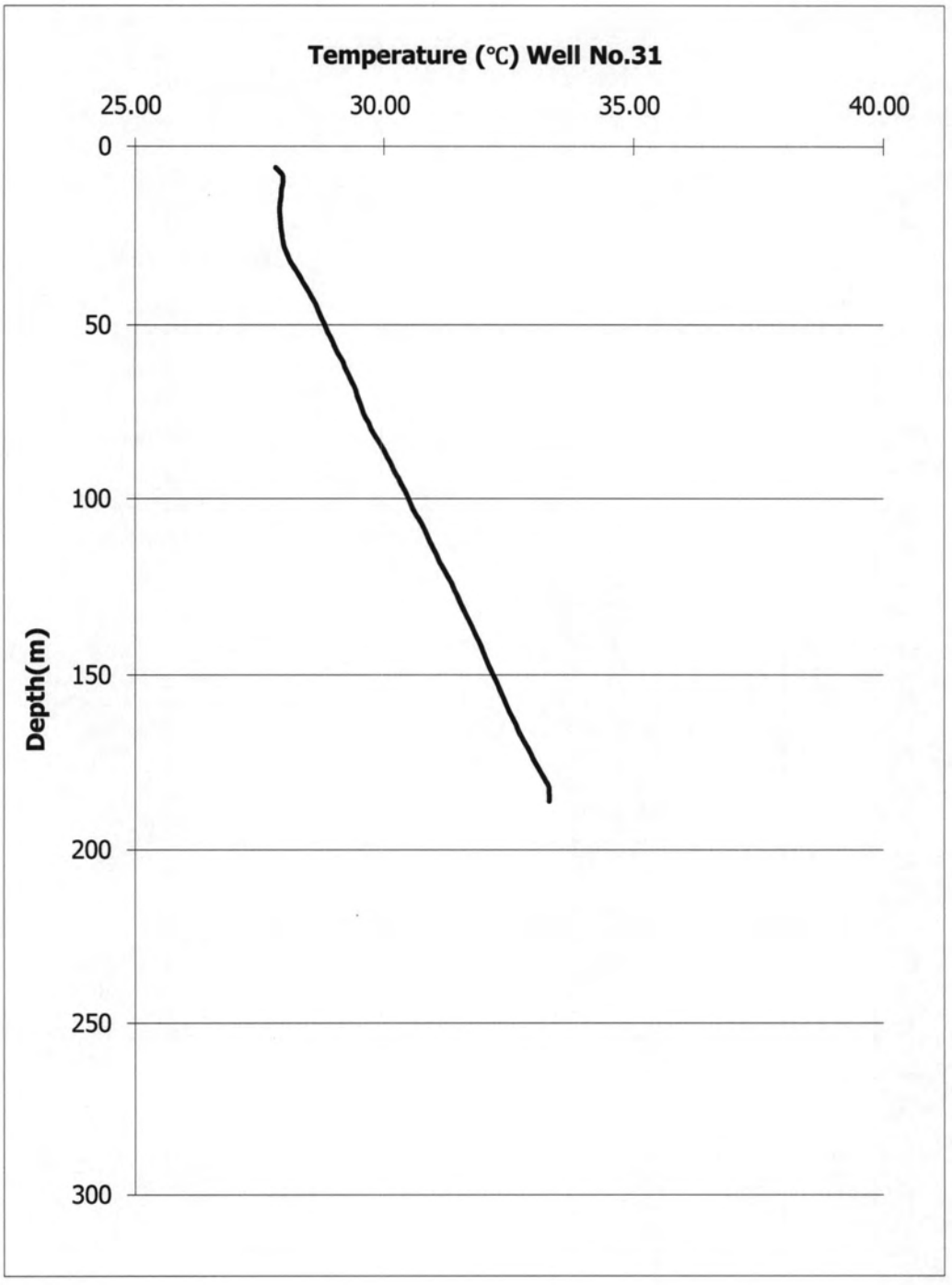

Temperature (℃) Well No.21
25
27
29
31
33
35
37
39
0
50
100
150
200
250
300
Depth (m)

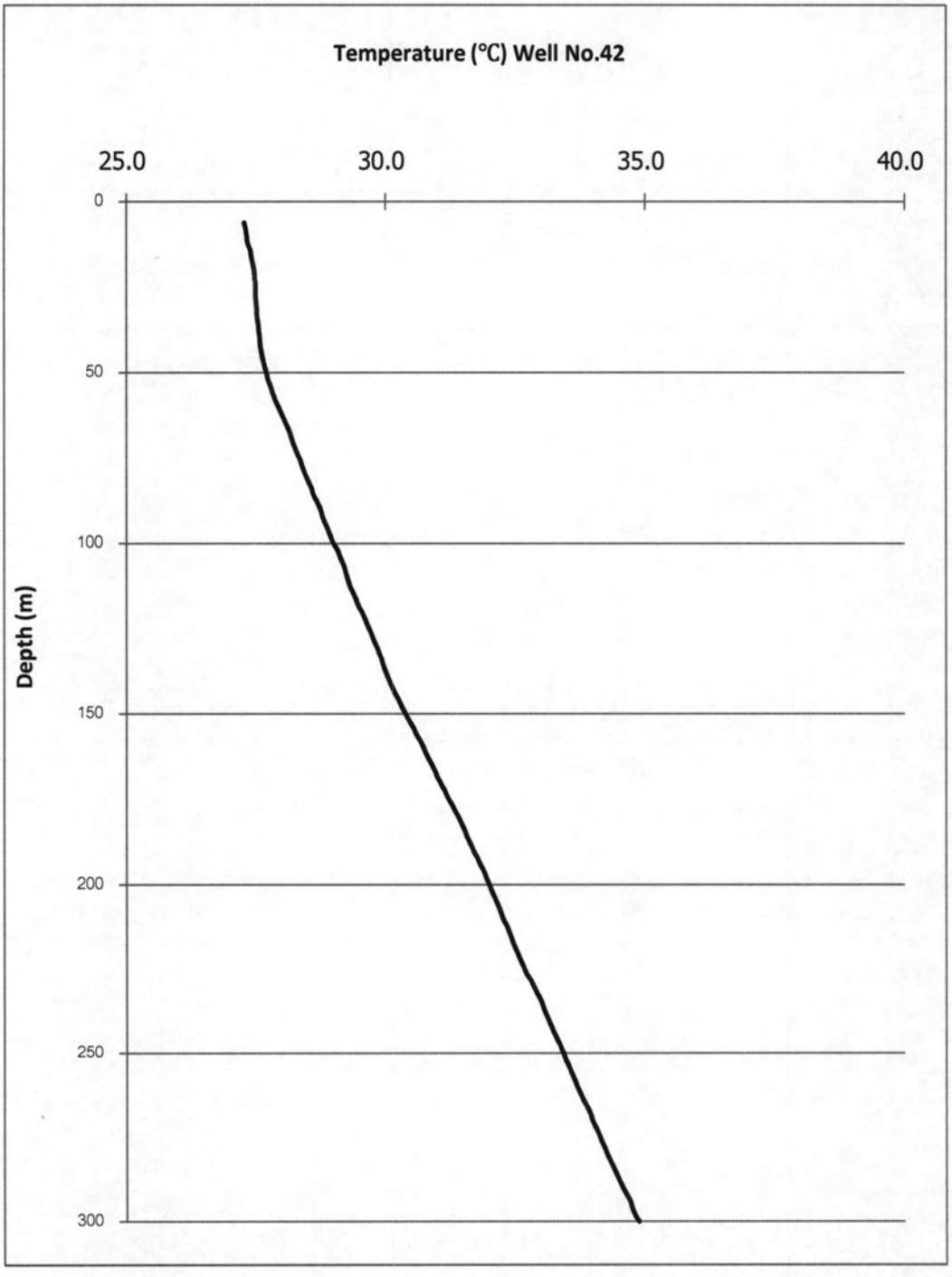

Temperature (°C) Well No.24
25.00
30.00
35.00
40.00
0
50
100
150
200
250
300
Depth (m)


Temperature (°C) Well No.27
25.00
30.00
35.00
40.00
0
50
100
150
200
250
300
Depth (m)


Temperature (°C) Well No.29
25
30
35
40
0
50
100
150
200
250
300
Depth (m)


Temperature (°C) Well No.30
25.00
30.00
35.00
40.00
0
50
100
150
200
250
300
Depth (m)


Temperature (℃) Well No.31
25.00
30.00
35.00
40.00
0
50
100
150
200
250
300
Depth(m)


Temperature (°C) Well No.42
25.0
30.0
35.0
40.0
0
50
100
150
200
250
300
Depth (m)

Appendix B

Appendix B1	Calculated β values using T_z, T_0, T_L, z and L parameters
Appendix B2	Type curve of β values
Appendix B3	Calculated vertical groundwater velocities (V_z) in cm/yr using β values, k, c_o, $p_o$and L parameters

Appendix B1 Calculated β values using T_z, T_0, T_L, z and L parameters

Well2/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	20	26.98364	26.98364	27.5231	15	0	0.000	1
1	22	27.0236	26.98364	27.5231	15	0.07407407	0.067	4.05E-18
2	24	27.04358	26.98364	27.5231	15	0.11111111	0.133	0.405265
3	26	27.08354	26.98364	27.5231	15	0.18518519	0.200	0.188826
4	28	27.11351	26.98364	27.5231	15	0.24074074	0.267	0.271187
5	30	27.14348	26.98364	27.5231	15	0.2962963	0.333	0.340475
6	32	27.19343	26.98364	27.5231	15	0.38888889	0.400	0.092892
7	34	27.2234	26.98364	27.5231	15	0.44444444	0.467	0.179038
8	36	27.26336	26.98364	27.5231	15	0.51851852	0.533	0.118924
9	38	27.29333	26.98364	27.5231	15	0.57407407	0.600	0.214713
10	40	27.33329	26.98364	27.5231	15	0.64814815	0.667	0.165233
11	42	27.37325	26.98364	27.5231	15	0.72222222	0.733	0.11267
12	44	27.41321	26.98364	27.5231	15	0.7962963	0.800	0.046083
13	46	27.45317	26.98364	27.5231	15	0.87037037	0.867	-0.06462
14	48	27.48314	26.98364	27.5231	15	0.92592593	0.933	0.230487
15	50	27.5231	26.98364	27.5231	15	1	1.000	1
							β average	0.268823

Well 2/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	50	27.5231	27.5231	27.96266	8	0	0.000	1
1	52	27.57305	27.5231	27.96266	8	0.11363636	0.125	0.213559
2	54	27.63299	27.5231	27.96266	8	0.25	0.250	-9.7E-06
3	56	27.68294	27.5231	27.96266	8	0.36363636	0.375	0.097375
4	58	27.74288	27.5231	27.96266	8	0.5	0.500	-4.1E-06
5	60	27.80282	27.5231	27.96266	8	0.63636364	0.625	-0.09739
6	62	27.85277	27.5231	27.96266	8	0.75	0.750	-1.2E-06
7	64	27.90272	27.5231	27.96266	8	0.86363636	0.875	0.202733
8	66	27.96266	27.5231	27.96266	8	1	1.000	1
							β average	0.059466

Well 2/3

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	66	27.96266	27.96266	28.41221	9	0	0.000	1
1	68	28.0226	27.96266	28.41221	9	0.13333333	0.111	-7.4E-18
2	70	28.06256	27.96266	28.41221	9	0.22222222	0.222	4.65E-06
3	72	28.10252	27.96266	28.41221	9	0.31111111	0.333	0.202429
4	74	28.15247	27.96266	28.41221	9	0.42222222	0.444	0.180727
5	76	28.21241	27.96266	28.41221	9	0.55555556	0.556	-2E-06
6	78	28.26236	27.96266	28.41221	9	0.66666667	0.667	-9.3E-07
7	80	28.30232	27.96266	28.41221	9	0.75555556	0.778	0.251515
8	82	28.36226	27.96266	28.41221	9	0.88888889	0.889	-1.9E-05
9	84	28.41221	27.96266	28.41221	9	1	1.000	1
							β average	0.090665

Well 4/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	54	29.05157	29.05157	29.79828	20	0	0.000	1
1	56	29.07155	29.05157	29.79828	20	0.02675752	0.050	1.193132
2	58	29.10152	29.05157	29.79828	20	0.0668938	0.100	0.830575
3	60	29.14148	29.05157	29.79828	20	0.12040884	0.150	0.493732
4	62	29.16146	29.05157	29.79828	20	0.14716635	0.200	0.715875
5	64	29.18144	29.05157	29.79828	20	0.17392387	0.250	0.886311
6	66	29.21141	29.05157	29.79828	20	0.21406015	0.300	0.880877
7	68	29.24138	29.05157	29.79828	20	0.25419643	0.350	0.894691
8	70	29.27135	29.05157	29.79828	20	0.29433271	0.400	0.923765
9	72	29.31131	29.05157	29.79828	20	0.34784775	0.450	0.849683
10	74	29.34128	29.05157	29.79828	20	0.38798403	0.500	0.911588
11	76	29.36126	29.05157	29.79828	20	0.41474154	0.550	1.100173
12	78	29.41121	29.05157	29.79828	20	0.48163534	0.600	0.973657
13	80	29.45117	29.05157	29.79828	20	0.53515038	0.650	0.98033
14	82	29.49113	29.05157	29.79828	20	0.58866542	0.700	1.011646
15	84	29.54108	29.05157	29.79828	20	0.65555922	0.750	0.94731
16	86	29.60102	29.05157	29.79828	20	0.73583177	0.800	0.751928
17	88	29.6463	29.05157	29.79828	20	0.79646608	0.850	0.775435
18	90	29.68682	29.05157	29.79828	20	0.85074179	0.900	0.976785
19	92	29.74762	29.05157	29.79828	20	0.93215536	0.950	0.6832

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
20	94	29.79828	29.05157	29.79828	20	1	1.000	1
							β average	0.883194

Well 4/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	144	31.20662	31.20662	32.94933	26	0	0.000	1
1	146	31.28768	31.20662	32.94933	26	0.04651163	0.038	-0.40978
2	148	31.34847	31.20662	32.94933	26	0.08139535	0.077	-0.12383
3	150	31.4194	31.20662	32.94933	26	0.12209302	0.115	-0.12931
4	152	31.48019	31.20662	32.94933	26	0.15697674	0.154	-0.04784
5	154	31.54098	31.20662	32.94933	26	0.19186047	0.192	0.00577
6	156	31.60177	31.20662	32.94933	26	0.22674419	0.231	0.045527
7	158	31.66256	31.20662	32.94933	26	0.26162791	0.269	0.077756
8	160	31.72336	31.20662	32.94933	26	0.29651163	0.308	0.105716
9	162	31.79428	31.20662	32.94933	26	0.3372093	0.346	0.079375
10	164	31.8652	31.20662	32.94933	26	0.37790698	0.385	0.056815
11	166	31.926	31.20662	32.94933	26	0.4127907	0.423	0.084478
12	168	31.98679	31.20662	32.94933	26	0.44767442	0.462	0.111765
13	170	32.03745	31.20662	32.94933	26	0.47674419	0.500	0.186184
14	172	32.09824	31.20662	32.94933	26	0.51162791	0.538	0.215557
15	174	32.1489	31.20662	32.94933	26	0.54069767	0.577	0.295125
16	176	32.22996	31.20662	32.94933	26	0.5872093	0.615	0.236198
17	178	32.29075	31.20662	32.94933	26	0.62209302	0.654	0.277062
18	180	32.3718	31.20662	32.94933	26	0.66860465	0.692	0.219644
19	182	32.4326	31.20662	32.94933	26	0.70348837	0.731	0.271968
20	184	32.50352	31.20662	32.94933	26	0.74418605	0.769	0.275664
21	186	32.58458	31.20662	32.94933	26	0.79069767	0.808	0.214246
22	188	32.6555	31.20662	32.94933	26	0.83139535	0.846	0.22121
23	190	32.72642	31.20662	32.94933	26	0.87209302	0.885	0.238211
24	192	32.79735	31.20662	32.94933	26	0.9127907	0.923	0.278895
25	194	32.86827	31.20662	32.94933	26	0.95348837	0.962	0.409793
26	196	32.94933	31.20662	32.94933	26	1	1.000	1
							β average	0.127848

Well 5/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	10	28.51211	28.51211	29.45117	12	0	0.000	1
1	12	28.57205	28.51211	29.45117	12	0.063829787	0.083	0.554075
2	14	28.622	28.51211	29.45117	12	0.117021277	0.167	0.788596
3	16	28.69193	28.51211	29.45117	12	0.191489362	0.250	0.665118
4	18	28.77185	28.51211	29.45117	12	0.276595745	0.333	0.528769
5	20	28.86176	28.51211	29.45117	12	0.372340426	0.417	0.369537
6	22	28.95167	28.51211	29.45117	12	0.468085106	0.500	0.255668
7	24	29.04158	28.51211	29.45117	12	0.563829787	0.583	0.159859
8	26	29.15147	28.51211	29.45117	12	0.680851064	0.667	-0.12862
9	28	29.20142	28.51211	29.45117	12	0.734042553	0.750	0.167937
10	30	29.28134	28.51211	29.45117	12	0.819148936	0.833	0.199909
11	32	29.37125	28.51211	29.45117	12	0.914893617	0.917	0.046108
12	34	29.45117	28.51211	29.45117	12	1	1.000	1
							β average	0.327905

Well 5/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	34	29.45117	29.45117	30.90266	23	0	0.000	1
1	36	29.53109	29.45117	30.90266	23	0.05506051	0.043	-0.51702
2	38	29.60102	29.45117	30.90266	23	0.103238456	0.087	-0.38969
3	40	29.67669	29.45117	30.90266	23	0.155372327	0.130	-5.4E-17
4	42	29.74762	29.45117	30.90266	23	0.204235085	0.174	-0.40512

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
5	44	29.80841	29.45117	30.90266	23	0.246117449	0.217	-0.32809
6	46	29.87933	29.45117	30.90266	23	0.294980207	0.261	-0.34501
7	48	29.94012	29.45117	30.90266	23	0.336862571	0.304	-0.30172
8	50	30.00092	29.45117	30.90266	23	0.378744935	0.348	-0.2693
9	52	30.06171	29.45117	30.90266	23	0.420627298	0.391	-0.24435
10	54	30.1225	29.45117	30.90266	23	0.462509662	0.435	-0.22479
11	56	30.18329	29.45117	30.90266	23	0.504392026	0.478	-0.20932
12	58	30.24408	29.45117	30.90266	23	0.54627439	0.522	-0.1971
13	60	30.30488	29.45117	30.90266	23	0.588156754	0.565	-0.18759
14	62	30.35554	29.45117	30.90266	23	0.623058724	0.609	-0.12117
15	64	30.42646	29.45117	30.90266	23	0.671921482	0.652	-0.17578
16	66	30.48725	29.45117	30.90266	23	0.713803846	0.696	-0.17353
17	68	30.54804	29.45117	30.90266	23	0.75568621	0.739	-0.17423
18	70	30.5987	29.45117	30.90266	23	0.79058818	0.783	-0.09466
19	72	30.66963	29.45117	30.90266	23	0.839450938	0.826	-0.19005
20	74	30.73042	29.45117	30.90266	23	0.881333302	0.870	-0.21321
21	76	30.79121	29.45117	30.90266	23	0.923215666	0.913	-0.26613
22	78	30.852	29.45117	30.90266	23	0.96509803	0.957	-0.44244
23	80	30.90266	29.45117	30.90266	23	1	1.000	1
							β average	-0.26049

Well 5/3

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	80	30.90266	30.90266	32.29075	25	0	0.000	1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
1	82	30.97359	30.90266	32.29075	25	0.051094891	0.040	-0.53476
2	84	31.03438	30.90266	32.29075	25	0.094890511	0.080	-1.5E-17
3	86	31.08504	30.90266	32.29075	25	0.131386861	0.120	-0.21016
4	88	31.14583	30.90266	32.29075	25	0.175182482	0.160	-0.22053
5	90	31.19649	30.90266	32.29075	25	0.211678832	0.200	-0.14396
6	92	31.25728	30.90266	32.29075	25	0.255474453	0.240	-0.16731
7	94	31.31808	30.90266	32.29075	25	0.299270073	0.280	-0.18867
8	96	31.37887	30.90266	32.29075	25	0.343065693	0.320	-0.20954
9	98	31.44979	30.90266	32.29075	25	0.394160584	0.360	-0.29301
10	100	31.51058	30.90266	32.29075	25	0.437956204	0.400	-0.31365
11	102	31.56124	30.90266	32.29075	25	0.474452555	0.440	-0.27854
12	104	31.62204	30.90266	32.29075	25	0.518248175	0.480	-0.30646
13	106	31.68283	30.90266	32.29075	25	0.562043796	0.520	-0.33846
14	108	31.73349	30.90266	32.29075	25	0.598540146	0.560	-0.31545
15	110	31.80441	30.90266	32.29075	25	0.649635036	0.600	-0.42099
16	112	31.85507	30.90266	32.29075	25	0.686131387	0.640	-0.40955
17	114	31.93613	30.90266	32.29075	25	0.744525547	0.680	-0.62019
18	116	31.98679	30.90266	32.29075	25	0.781021898	0.720	-0.63939
19	118	32.05771	30.90266	32.29075	25	0.832116788	0.760	-0.86385
20	120	32.10837	30.90266	32.29075	25	0.868613139	0.800	-0.95916
21	122	32.15903	30.90266	32.29075	25	0.905109489	0.840	-1.12326
22	124	32.19956	30.90266	32.29075	25	0.934306569	0.880	-1.2299
23	126	32.21982	30.90266	32.29075	25	0.948905109	0.920	-0.90196
24	128	32.25022	30.90266	32.29075	25	0.97080292	0.960	-0.62245
25	130	32.29075	30.90266	32.29075	25	1	1.000	1
							β average	-0.49179

Well 6/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	28	27.33	27.33	28.9	34	0	0.000	1
1	30	27.34	27.33	28.9	34	0.006369427	0.029	2.601769
2	32	27.34	27.33	28.9	34	0.006369427	0.059	3.654812
3	34	27.36	27.33	28.9	34	0.01910828	0.088	2.721638
4	36	27.37	27.33	28.9	34	0.025477707	0.118	2.786783
5	38	27.39	27.33	28.9	34	0.038216561	0.147	2.563537
6	40	27.42	27.33	28.9	34	0.057324841	0.176	2.253161
7	42	27.46	27.33	28.9	34	0.082802548	0.206	1.930824
8	44	27.49	27.33	28.9	34	0.101910828	0.235	1.847167
9	46	27.52	27.33	28.9	34	0.121019108	0.265	1.797639
10	48	27.56	27.33	28.9	34	0.146496815	0.294	1.678396
11	50	27.61	27.33	28.9	34	0.178343949	0.324	1.513378
12	52	27.65	27.33	28.9	34	0.203821656	0.353	1.461065
13	54	27.69	27.33	28.9	34	0.229299363	0.382	1.425884
14	56	27.74	27.33	28.9	34	0.261146497	0.412	1.340468
15	58	27.78	27.33	28.9	34	0.286624204	0.441	1.333592
16	60	27.88	27.33	28.9	34	0.350318471	0.471	0.994889
17	62	27.94	27.33	28.9	34	0.388535032	0.500	0.906949
18	64	27.99	27.33	28.9	34	0.420382166	0.529	0.881774
19	66	28.04	27.33	28.9	34	0.452229299	0.559	0.863397
20	68	28.08	27.33	28.9	34	0.477707006	0.588	0.903779
21	70	28.12	27.33	28.9	34	0.503184713	0.618	0.951337
22	72	28.17	27.33	28.9	34	0.535031847	0.647	0.953754
23	74	28.23	27.33	28.9	34	0.573248408	0.676	0.909182
24	76	28.28	27.33	28.9	34	0.605095541	0.706	0.926804
25	78	28.34	27.33	28.9	34	0.643312102	0.735	0.895054
26	80	28.41	27.33	28.9	34	0.687898089	0.765	0.805192
27	82	28.47	27.33	28.9	34	0.72611465	0.794	0.77954
28	84	28.54	27.33	28.9	34	0.770700637	0.824	0.681307
29	86	28.6	27.33	28.9	34	0.808917197	0.853	0.654897
30	88	28.66	27.33	28.9	34	0.847133758	0.882	0.630479
31	90	28.72	27.33	28.9	34	0.885350318	0.912	0.607824

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
32	92	28.78	27.33	28.9	34	0.923566879	0.941	0.586771
33	94	28.85	27.33	28.9	34	0.968152866	0.971	0.166269
34	96	28.9	27.33	28.9	34	1	1.000	1
							β average	1.363919

Well 8/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	38	27.8228	27.8228	31.62204	55	0	0.000	1
1	40	27.87275	27.8228	31.62204	55	0.01314738	0.018	0.627011
2	42	27.91271	27.8228	31.62204	55	0.023665284	0.036	0.83206
3	44	27.96266	27.8228	31.62204	55	0.036812664	0.055	0.778735
4	46	28.01261	27.8228	31.62204	55	0.049960045	0.073	0.758689
5	48	28.06256	27.8228	31.62204	55	0.063107425	0.091	0.751906
6	50	28.11251	27.8228	31.62204	55	0.076254805	0.109	0.751907
7	52	28.17245	27.8228	31.62204	55	0.092031661	0.127	0.697469
8	54	28.2224	27.8228	31.62204	55	0.105179041	0.145	0.710767
9	56	28.28234	27.8228	31.62204	55	0.120955897	0.164	0.678283
10	58	28.33229	27.8228	31.62204	55	0.134103278	0.182	0.696517
11	60	28.40222	27.8228	31.62204	55	0.15250961	0.200	0.637268
12	62	28.46216	27.8228	31.62204	55	0.168286466	0.218	0.624767
13	64	28.54208	27.8228	31.62204	55	0.189322274	0.236	0.550119
14	66	28.61201	27.8228	31.62204	55	0.207728606	0.255	0.517372
15	68	28.68194	27.8228	31.62204	55	0.226134939	0.273	0.489789
16	70	28.75187	27.8228	31.62204	55	0.244541271	0.291	0.466358
17	72	28.84178	27.8228	31.62204	55	0.268206555	0.309	0.393796
18	74	28.91171	27.8228	31.62204	55	0.286612887	0.327	0.378561

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
19	76	28.98164	27.8228	31.62204	55	0.30501922	0.345	0.365416
20	78	29.05157	27.8228	31.62204	55	0.323425552	0.364	0.354063
21	80	29.13149	27.8228	31.62204	55	0.34446136	0.382	0.32124
22	82	29.19143	27.8228	31.62204	55	0.360238216	0.400	0.335849
23	84	29.27135	27.8228	31.62204	55	0.381274025	0.418	0.306523
24	86	29.33129	27.8228	31.62204	55	0.397050881	0.436	0.322566
25	88	29.40122	27.8228	31.62204	55	0.415457213	0.455	0.317502
26	90	29.48114	27.8228	31.62204	55	0.436493021	0.473	0.292033
27	92	29.55107	27.8228	31.62204	55	0.454899353	0.491	0.28893
28	94	29.6159	27.8228	31.62204	55	0.471963311	0.509	0.2974
29	96	29.68682	27.8228	31.62204	55	0.490631274	0.527	0.29375
30	98	29.75775	27.8228	31.62204	55	0.509299238	0.545	0.290874
31	100	29.82867	27.8228	31.62204	55	0.527967202	0.564	0.288779
32	102	29.90973	27.8228	31.62204	55	0.549302018	0.582	0.265746
33	104	30.00092	27.8228	31.62204	55	0.573303685	0.600	0.221059
34	106	30.07184	27.8228	31.62204	55	0.591971649	0.618	0.220388
35	108	30.20356	27.8228	31.62204	55	0.626640725	0.636	0.083724
36	110	30.19342	27.8228	31.62204	55	0.623973873	0.655	0.267097
37	112	30.23395	27.8228	31.62204	55	0.634641281	0.673	0.340058
38	114	30.3454	27.8228	31.62204	55	0.663976652	0.691	0.248577
39	116	30.41633	27.8228	31.62204	55	0.682644616	0.709	0.252256
40	118	30.51765	27.8228	31.62204	55	0.709313136	0.727	0.178762
41	120	30.56831	27.8228	31.62204	55	0.722647395	0.745	0.236041
42	122	30.63923	27.8228	31.62204	55	0.741315359	0.764	0.242383
43	124	30.72029	27.8228	31.62204	55	0.762650175	0.782	0.220334
44	126	30.79121	27.8228	31.62204	55	0.781318139	0.800	0.228461

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
45	128	30.86214	27.8228	31.62204	55	0.799986102	0.818	0.23875
46	130	30.94319	27.8228	31.62204	55	0.821320918	0.836	0.214767
47	132	31.01412	27.8228	31.62204	55	0.839988882	0.855	0.228183
48	134	31.08504	27.8228	31.62204	55	0.858656846	0.873	0.245978
49	136	31.18636	27.8228	31.62204	55	0.885325365	0.891	0.113239
50	138	31.24715	27.8228	31.62204	55	0.901326477	0.909	0.183353
51	140	31.32821	27.8228	31.62204	55	0.922661293	0.927	0.134203
52	142	31.42953	27.8228	31.62204	55	0.949329813	0.945	-0.15384
53	144	31.49032	27.8228	31.62204	55	0.965330924	0.964	-0.09823
54	146	31.55111	27.8228	31.62204	55	0.981332036	0.982	0.053958
55	148	31.62204	27.8228	31.62204	55	1	1.000	1
							β average	0.362621

Well 9/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	24	28.15	28.15	30.05	22	0	0.000	1
1	26	28.23	28.15	30.05	22	0.04210526	0.045	0.158161
2	28	28.34	28.15	30.05	22	0.1	0.091	-0.21383
3	30	28.44	28.15	30.05	22	0.15263158	0.136	-0.26779
4	32	28.53	28.15	30.05	22	0.2	0.182	-0.23858
5	34	28.62	28.15	30.05	22	0.24736842	0.227	-0.22445
6	36	28.72	28.15	30.05	22	0.3	0.273	-0.26981
7	38	28.81	28.15	30.05	22	0.34736842	0.318	-0.26516
8	40	28.88	28.15	30.05	22	0.38421053	0.364	-0.1765
9	42	28.97	28.15	30.05	22	0.43157895	0.409	-0.18515
10	44	29.06	28.15	30.05	22	0.47894737	0.455	-0.19641
11	46	29.13	28.15	30.05	22	0.51578947	0.500	-0.12636
12	48	29.21	28.15	30.05	22	0.55789474	0.545	-0.10053
13	50	29.3	28.15	30.05	22	0.60526316	0.591	-0.11922

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
14	52	29.38	28.15	30.05	22	0.64736842	0.636	-0.09554
15	54	29.44	28.15	30.05	22	0.67894737	0.682	0.026423
16	56	29.5	28.15	30.05	22	0.71052632	0.727	0.16682
17	58	29.57	28.15	30.05	22	0.74736842	0.773	0.2819
18	60	29.65	28.15	30.05	22	0.78947368	0.818	0.371973
19	62	29.74	28.15	30.05	22	0.83684211	0.864	0.433176
20	64	29.85	28.15	30.05	22	0.89473684	0.909	0.332566
21	66	29.94	28.15	30.05	22	0.94210526	0.955	0.531384
22	68	30.05	28.15	30.05	22	1	1.000	1
							β average	-0.00843

Well 9/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	68	30.05	30.05	31.91	22	0	0.000	1
1	70	30.14	30.05	31.91	22	0.048387	0.045	-0.13256
2	72	30.22	30.05	31.91	22	0.091398	0.091	-0.0118
3	74	30.32	30.05	31.91	22	0.145161	0.136	-0.14681
4	76	30.4	30.05	31.91	22	0.188172	0.182	-0.08468
5	78	30.53	30.05	31.91	22	0.258065	0.227	-0.34073
6	80	30.63	30.05	31.91	22	0.311828	0.273	-0.38406
7	82	30.72	30.05	31.91	22	0.360215	0.318	-0.37979
8	84	30.79	30.05	31.91	22	0.397849	0.364	-0.2923
9	86	30.87	30.05	31.91	22	0.44086	0.409	-0.26115
10	88	30.92	30.05	31.91	22	0.467742	0.455	-0.1063
11	90	30.97	30.05	31.91	22	0.494624	0.500	0.043009
12	92	31.03	30.05	31.91	22	0.526882	0.545	0.14955
13	94	31.1	30.05	31.91	22	0.564516	0.591	0.217142
14	97	31.15	30.05	31.91	22	0.591398	0.636	0.383067
15	98	31.2	30.05	31.91	22	0.61828	0.682	0.569588
16	100	31.31	30.05	31.91	22	0.677419	0.727	0.486746
17	102	31.42	30.05	31.91	22	0.736559	0.773	0.39843
18	104	31.51	30.05	31.91	22	0.784946	0.818	0.428422

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
19	106	31.61	30.05	31.91	22	0.83871	0.864	0.404226
20	108	31.7	30.05	31.91	22	0.887097	0.909	0.499289
21	110	31.8	30.05	31.91	22	0.94086	0.955	0.580742
22	112	31.91	30.05	31.91	22	1	1.000	1
							β average	0.096192

Well 9/3

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	112	31.91	31.91	34.49	28	0	0.000	1
1	114	31.99	31.91	34.49	28	0.031008	0.036	0.286084
2	116	32.06	31.91	34.49	28	0.05814	0.071	0.42713
3	118	32.16	31.91	34.49	28	0.096899	0.107	0.220622
4	120	32.25	31.91	34.49	28	0.131783	0.143	0.185024
5	122	32.34	31.91	34.49	28	0.166667	0.179	0.165313
6	124	32.43	31.91	34.49	28	0.20155	0.214	0.153587
7	126	32.52	31.91	34.49	28	0.236434	0.250	0.146548
8	128	32.62	31.91	34.49	28	0.275194	0.286	0.103899
9	130	32.72	31.91	34.49	28	0.313953	0.321	0.068837
10	132	32.82	31.91	34.49	28	0.352713	0.357	0.038663
11	134	32.9	31.91	34.49	28	0.383721	0.393	0.076821
12	136	32.99	31.91	34.49	28	0.418605	0.429	0.081563
13	138	33.07	31.91	34.49	28	0.449612	0.464	0.118191
14	140	33.18	31.91	34.49	28	0.492248	0.500	0.062018
15	142	33.28	31.91	34.49	28	0.531008	0.536	0.037826
16	144	33.4	31.91	34.49	28	0.577519	0.571	-0.0498
17	146	33.51	31.91	34.49	28	0.620155	0.607	-0.10956
18	148	33.61	31.91	34.49	28	0.658915	0.643	-0.14088
19	150	33.72	31.91	34.49	28	0.70155	0.679	-0.2136
20	152	33.81	31.91	34.49	28	0.736434	0.714	-0.22071
21	154	33.9	31.91	34.49	28	0.771318	0.750	-0.23207
22	156	33.98	31.91	34.49	28	0.802326	0.786	-0.2013
23	158	34.06	31.91	34.49	28	0.833333	0.821	-0.1653
24	160	34.15	31.91	34.49	28	0.868217	0.857	-0.18502

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
25	162	34.23	31.91	34.49	28	0.899225	0.893	-0.13556
26	164	34.32	31.91	34.49	28	0.934109	0.929	-0.1712
27	166	34.4	31.91	34.49	28	0.965116	0.964	-0.04862
28	168	34.49	31.91	34.49	28	1	1.000	1
							β average	0.011055

Well 11/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	72	27.81	27.81	28.32	12	0	0.000	1
1	74	27.85	27.81	28.32	12	0.078431	0.083	0.130741
2	76	27.89	27.81	28.32	12	0.156863	0.167	0.14349
3	78	27.93	27.81	28.32	12	0.235294	0.250	0.159037
4	80	27.98	27.81	28.32	12	0.333333	0.333	7.09E-06
5	82	28.02	27.81	28.32	12	0.411765	0.417	0.040379
6	84	28.06	27.81	28.32	12	0.490196	0.500	0.078439
7	86	28.1	27.81	28.32	12	0.568627	0.583	0.12064
8	88	28.15	27.81	28.32	12	0.666667	0.667	-9.3E-07
9	90	28.18	27.81	28.32	12	0.72549	0.750	0.256233
10	92	28.22	27.81	28.32	12	0.803922	0.833	0.406051
11	94	28.27	27.81	28.32	12	0.901961	0.917	0.366706
12	96	28.32	27.81	28.32	12	1	1.000	1
							β average	0.154702

Well 13/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	34	27.91	27.91	29.44	35	0	0.000	1
1	36	27.92	27.91	29.44	35	0.00653595	0.029	2.519387
2	38	27.94	27.91	29.44	35	0.01960784	0.057	1.945494
3	40	27.97	27.91	29.44	35	0.03921569	0.086	1.50844
4	42	27.99	27.91	29.44	35	0.05228758	0.114	1.547622
5	44	28.02	27.91	29.44	35	0.07189542	0.143	1.414688
6	46	28.04	27.91	29.44	35	0.08496732	0.171	1.483366

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
7	48	28.07	27.91	29.44	35	0.10457516	0.200	1.422203
8	50	28.09	27.91	29.44	35	0.11764706	0.229	1.496858
9	52	28.12	27.91	29.44	35	0.1372549	0.257	1.468492
10	54	28.15	27.91	29.44	35	0.15686275	0.286	1.456008
11	56	28.18	27.91	29.44	35	0.17647059	0.314	1.455642
12	58	28.23	27.91	29.44	35	0.20915033	0.343	1.31407
13	60	28.28	27.91	29.44	35	0.24183007	0.371	1.202379
14	62	28.33	27.91	29.44	35	0.2745098	0.400	1.112284
15	64	28.37	27.91	29.44	35	0.30065359	0.429	1.098713
16	66	28.41	27.91	29.44	35	0.32679739	0.457	1.093218
17	68	28.46	27.91	29.44	35	0.35947712	0.486	1.038396
18	70	28.51	27.91	29.44	35	0.39215686	0.514	0.993173
19	72	28.54	27.91	29.44	35	0.41176471	0.543	1.065116
20	74	28.59	27.91	29.44	35	0.44444444	0.571	1.03433
21	76	28.64	27.91	29.44	35	0.47712418	0.600	1.011026
22	78	28.69	27.91	29.44	35	0.50980392	0.629	0.994856
23	80	28.74	27.91	29.44	35	0.54248366	0.657	0.98582
24	82	28.79	27.91	29.44	35	0.5751634	0.686	0.984267
25	84	28.83	27.91	29.44	35	0.60130719	0.714	1.049917
26	86	28.9	27.91	29.44	35	0.64705882	0.743	0.945491
27	88	28.96	27.91	29.44	35	0.68627451	0.771	0.904086
28	90	29.02	27.91	29.44	35	0.7254902	0.800	0.866225
29	92	29.09	27.91	29.44	35	0.77124183	0.829	0.751198
30	94	29.15	27.91	29.44	35	0.81045752	0.857	0.707225
31	96	29.21	27.91	29.44	35	0.8496732	0.886	0.659154
32	98	29.27	27.91	29.44	35	0.88888889	0.914	0.600171
33	100	29.33	27.91	29.44	35	0.92810458	0.943	0.510016
34	102	29.38	27.91	29.44	35	0.96078431	0.971	0.692958
35	104	29.44	27.91	29.44	35	1	1.000	1
							β average	1.156832

Well 14/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	32	27.95	27.95	28.41	12	0	0.000	1
1	34	27.96	27.95	28.41	12	0.02173913	0.083	2.424965

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
2	36	27.97	27.95	28.41	12	0.043478261	0.167	2.601511
3	38	28.01	27.95	28.41	12	0.130434783	0.250	1.503872
4	40	28.06	27.95	28.41	12	0.239130435	0.333	0.905901
5	42	28.12	27.95	28.41	12	0.369565217	0.417	0.393074
6	44	28.17	27.95	28.41	12	0.47826087	0.500	0.174029
7	46	28.22	27.95	28.41	12	0.586956522	0.583	-0.02984
8	48	28.27	27.95	28.41	12	0.695652174	0.667	-0.26512
9	50	28.3	27.95	28.41	12	0.760869565	0.750	-0.11711
10	52	28.34	27.95	28.41	12	0.847826087	0.833	-0.21389
11	54	28.38	27.95	28.41	12	0.934782609	0.917	-0.5113
12	56	28.41	27.95	28.41	12	1	1.000	1
							β average	0.62419

Well 14/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	58	28.5	28.5	29.26	16	0	0.000	1
1	60	28.54	28.5	29.26	16	0.052631579	0.063	0.355473
2	62	28.59	28.5	29.26	16	0.118421053	0.125	0.12219
3	64	28.64	28.5	29.26	16	0.184210526	0.188	0.043388
4	66	28.68	28.5	29.26	16	0.236842105	0.250	0.142085
5	68	28.73	28.5	29.26	16	0.302631579	0.313	0.092419
6	70	28.78	28.5	29.26	16	0.368421053	0.375	0.056277
7	72	28.81	28.5	29.26	16	0.407894737	0.438	0.242117
8	74	28.86	28.5	29.26	16	0.473684211	0.500	0.210716
9	76	28.9	28.5	29.26	16	0.526315789	0.563	0.292799
10	78	28.95	28.5	29.26	16	0.592105263	0.625	0.277907
11	80	29	28.5	29.26	16	0.657894737	0.688	0.271361
12	82	29.05	28.5	29.26	16	0.723684211	0.750	0.274741
13	84	29.1	28.5	29.26	16	0.789473684	0.813	0.29365
14	86	29.16	28.5	29.26	16	0.868421053	0.875	0.118555
15	88	29.21	28.5	29.26	16	0.934210526	0.938	0.110495
16	90	29.26	28.5	29.26	16	1	1.000	1
							β average	0.193612

Well 14/3

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	106	29.74	29.74	30.28	12	0	0.000	1
1	108	29.79	29.74	30.28	12	0.092592593	0.083	-3E-17
2	110	29.84	29.74	30.28	12	0.185185185	0.167	-0.25939
3	112	29.88	29.74	30.28	12	0.259259259	0.250	-0.09798
4	114	29.92	29.74	30.28	12	0.333333333	0.333	7.09E-06
5	116	29.96	29.74	30.28	12	0.407407407	0.417	0.076358
6	118	30	29.74	30.28	12	0.481481481	0.500	0.148215
7	120	30.06	29.74	30.28	12	0.592592593	0.583	-0.07636
8	122	30.1	29.74	30.28	12	0.666666667	0.667	-9.3E-07
9	124	30.12	29.74	30.28	12	0.703703704	0.750	0.476683
10	126	30.16	29.74	30.28	12	0.777777778	0.833	0.744
11	128	30.22	29.74	30.28	12	0.888888889	0.917	0.667774
12	130	30.28	29.74	30.28	12	1	1.000	1
							β average	0.167931

Well 15/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	24	27.67295	27.67295	29.99078	51	0	0.000	1
1	26	27.69293	27.67295	29.99078	51	0.00862	0.020	1.491083
2	28	27.70292	27.67295	29.99078	51	0.01293	0.039	1.980503
3	30	27.71291	27.67295	29.99078	51	0.01724	0.059	2.197857
4	32	27.7229	27.67295	29.99078	51	0.02155	0.078	2.334467
5	34	27.74288	27.67295	29.99078	51	0.03017	0.098	2.190635
6	36	27.75287	27.67295	29.99078	51	0.03448	0.118	2.306842
7	38	27.77285	27.67295	29.99078	51	0.043101	0.137	2.231707
8	40	27.8228	27.67295	29.99078	51	0.064651	0.157	1.79882
9	42	27.87275	27.67295	29.99078	51	0.086201	0.176	1.518318
10	44	27.91271	27.67295	29.99078	51	0.103441	0.196	1.399085

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
11	46	27.95267	27.67295	29.99078	51	0.120682	0.216	1.309528
12	48	28.00262	27.67295	29.99078	51	0.142232	0.235	1.175883
13	50	28.04258	27.67295	29.99078	51	0.159472	0.255	1.12747
14	52	28.08254	27.67295	29.99078	51	0.176712	0.275	1.089498
15	54	28.1225	27.67295	29.99078	51	0.193953	0.294	1.05979
16	56	28.15247	27.67295	29.99078	51	0.206883	0.314	1.085726
17	58	28.19243	27.67295	29.99078	51	0.224123	0.333	1.065909
18	60	28.23239	27.67295	29.99078	51	0.241363	0.353	1.051218
19	62	28.27235	27.67295	29.99078	51	0.258604	0.373	1.040977
20	64	28.3223	27.67295	29.99078	51	0.280154	0.392	0.993232
21	66	28.37225	27.67295	29.99078	51	0.301704	0.412	0.951771
22	68	28.43219	27.67295	29.99078	51	0.327564	0.431	0.877162
23	70	28.47215	27.67295	29.99078	51	0.344805	0.451	0.884123
24	72	28.54208	27.67295	29.99078	51	0.374975	0.471	0.783293
25	74	28.59203	27.67295	29.99078	51	0.396525	0.490	0.760535
26	76	28.65197	27.67295	29.99078	51	0.422386	0.510	0.705227
27	78	28.70192	27.67295	29.99078	51	0.443936	0.529	0.68829
28	80	28.75187	27.67295	29.99078	51	0.465486	0.549	0.673665
29	82	28.81181	27.67295	29.99078	51	0.491347	0.569	0.626217
30	84	28.85177	27.67295	29.99078	51	0.508587	0.588	0.650865
31	86	28.90172	27.67295	29.99078	51	0.530137	0.608	0.642526
32	88	28.95167	27.67295	29.99078	51	0.551687	0.627	0.636194
33	90	29.00162	27.67295	29.99078	51	0.573238	0.647	0.631893
34	92	29.05157	27.67295	29.99078	51	0.594788	0.667	0.629698
35	94	29.11151	27.67295	29.99078	51	0.620648	0.686	0.591769
36	96	29.16146	27.67295	29.99078	51	0.642199	0.706	0.593147
37	98	29.20142	27.67295	29.99078	51	0.659439	0.725	0.637363
38	100	29.25137	27.67295	29.99078	51	0.680989	0.745	0.645614
39	102	29.31131	27.67295	29.99078	51	0.70685	0.765	0.61362
40	104	29.37125	27.67295	29.99078	51	0.73271	0.784	0.581109
41	106	29.4212	27.67295	29.99078	51	0.75426	0.804	0.597062
42	108	29.48114	27.67295	29.99078	51	0.780121	0.824	0.565351
43	110	29.54108	27.67295	29.99078	51	0.805981	0.843	0.531425
44	112	29.60102	27.67295	29.99078	51	0.831841	0.863	0.493811
45	114	29.65643	27.67295	29.99078	51	0.855746	0.882	0.483901
46	116	29.69696	27.67295	29.99078	51	0.873232	0.902	0.603024
47	118	29.75775	27.67295	29.99078	51	0.89946	0.922	0.567832

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
48	120	29.82867	27.67295	29.99078	51	0.930059	0.941	0.380622
49	122	29.8996	27.67295	29.99078	51	0.960658	0.961	0.006646
50	124	29.96039	27.67295	29.99078	51	0.986886	0.980	-0.77047
51	126	29.99078	27.67295	29.99078	51	1	1.000	1
							β average	0.954237

Well 15/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	126	29.99078	29.99078	31.57138	24	0	0.000	1
1	128	30.05158	29.99078	31.57138	24	0.038462	0.042	0.164667
2	130	30.0921	29.99078	31.57138	24	0.064103	0.083	0.545604
3	132	30.17316	29.99078	31.57138	24	0.115385	0.125	0.179935
4	134	30.22382	29.99078	31.57138	24	0.147436	0.167	0.286295
5	136	30.28461	29.99078	31.57138	24	0.185897	0.208	0.279978
6	138	30.35554	29.99078	31.57138	24	0.230769	0.250	0.2089
7	140	30.42646	29.99078	31.57138	24	0.275641	0.292	0.156917
8	142	30.48725	29.99078	31.57138	24	0.314103	0.333	0.174869
9	144	30.54804	29.99078	31.57138	24	0.352564	0.375	0.19315
10	146	30.6291	29.99078	31.57138	24	0.403846	0.417	0.105827
11	148	30.68989	29.99078	31.57138	24	0.442308	0.458	0.129382
12	150	30.75068	29.99078	31.57138	24	0.480769	0.500	0.153921
13	152	30.81148	29.99078	31.57138	24	0.519231	0.542	0.180412
14	154	30.87227	29.99078	31.57138	24	0.557692	0.583	0.209954
15	156	30.94319	29.99078	31.57138	24	0.602564	0.625	0.19008
16	158	31.02425	29.99078	31.57138	24	0.653846	0.667	0.114677
17	160	31.09517	29.99078	31.57138	24	0.698718	0.708	0.092501
18	162	31.15596	29.99078	31.57138	24	0.737179	0.750	0.135264
19	164	31.23702	29.99078	31.57138	24	0.788462	0.792	0.038719
20	166	31.29781	29.99078	31.57138	24	0.826923	0.833	0.091386
21	168	31.37887	29.99078	31.57138	24	0.878205	0.875	-0.05905
22	170	31.43966	29.99078	31.57138	24	0.916667	0.917	-5.6E-06
23	172	31.51058	29.99078	31.57138	24	0.961538	0.958	-0.16472
24	174	31.57138	29.99078	31.57138	24	1	1.000	1
							β average	0.148203

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
6	56	28.34228	28.21241	28.5221	13	0.419355	0.462	0.341802
7	58	28.37225	28.21241	28.5221	13	0.516129	0.538	0.17943
8	60	28.37225	28.21241	28.5221	13	0.516129	0.615	0.823947
9	62	28.41221	28.21241	28.5221	13	0.645161	0.692	0.432166
10	64	28.43219	28.21241	28.5221	13	0.709677	0.769	0.638558
11	66	28.47215	28.21241	28.5221	13	0.83871	0.846	0.112912
12	68	28.50212	28.21241	28.5221	13	0.935484	0.923	-0.36891
13	70	28.5221	28.21241	28.5221	13	1	1.000	1
							β average	0.535112

Well 16/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	78	28.67195	28.67195	32.331276	62	0	0.000	1
1	80	28.71191	28.67195	32.331276	62	0.01092004	0.016	0.74577
2	82	28.76186	28.67195	32.331276	62	0.0245701	0.032	0.537774
3	84	28.81181	28.67195	32.331276	62	0.03822015	0.048	0.475987
4	86	28.89173	28.67195	32.331276	62	0.06006024	0.065	0.150956
5	88	28.94168	28.67195	32.331276	62	0.0737103	0.081	0.192252
6	90	29.00162	28.67195	32.331276	62	0.09009036	0.097	0.156224
7	92	29.05157	28.67195	32.331276	62	0.10374042	0.113	0.187572
8	94	29.09153	28.67195	32.331276	62	0.11466046	0.129	0.264597
9	96	29.15147	28.67195	32.331276	62	0.13104052	0.145	0.234211
10	98	29.2214	28.67195	32.331276	62	0.1501506	0.161	0.167927
11	100	29.29133	28.67195	32.331276	62	0.16926068	0.177	0.113191
12	102	29.33129	28.67195	32.331276	62	0.18018072	0.194	0.174468
13	104	29.35127	28.67195	32.331276	62	0.18564074	0.210	0.299115
14	106	29.37125	28.67195	32.331276	62	0.19110077	0.226	0.413651
15	108	29.39123	28.67195	32.331276	62	0.19656079	0.242	0.520042
16	110	29.43119	28.67195	32.331276	62	0.20748083	0.258	0.55581
17	112	29.54108	28.67195	32.331276	62	0.23751095	0.274	0.380411
18	114	29.63616	28.67195	32.331276	62	0.26349497	0.290	0.265664
19	116	29.69696	28.67195	32.331276	62	0.28010787	0.306	0.252271
20	118	29.76788	28.67195	32.331276	62	0.29948958	0.323	0.214226
21	120	29.82867	28.67195	32.331276	62	0.31610247	0.339	0.204265

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
22	122	29.87933	28.67195	32.331276	62	0.32994655	0.355	0.220007
23	124	29.94012	28.67195	32.331276	62	0.34655945	0.371	0.211305
24	126	30.00092	28.67195	32.331276	62	0.36317234	0.387	0.203401
25	128	30.06171	28.67195	32.331276	62	0.37978524	0.403	0.196216
26	130	30.10224	28.67195	32.331276	62	0.3908605	0.419	0.235808
27	132	30.1529	28.67195	32.331276	62	0.40470458	0.435	0.252102
28	134	30.21369	28.67195	32.331276	62	0.42131748	0.452	0.24594
29	136	30.27448	28.67195	32.331276	62	0.43793037	0.468	0.2404
30	138	30.33527	28.67195	32.331276	62	0.45454327	0.484	0.235436
31	140	30.4062	28.67195	32.331276	62	0.47392498	0.500	0.208786
32	142	30.46699	28.67195	32.331276	62	0.49053788	0.516	0.204895
33	144	30.53791	28.67195	32.331276	62	0.50991959	0.532	0.179229
34	146	30.60884	28.67195	32.331276	62	0.5293013	0.548	0.153823
35	148	30.6595	28.67195	32.331276	62	0.54314538	0.565	0.173321
36	150	30.73042	28.67195	32.331276	62	0.56252709	0.581	0.148291
37	152	30.78108	28.67195	32.331276	62	0.57637117	0.597	0.16876
38	154	30.84187	28.67195	32.331276	62	0.59298406	0.613	0.166955
39	156	30.90266	28.67195	32.331276	62	0.60959696	0.629	0.165487
40	158	30.96346	28.67195	32.331276	62	0.62620985	0.645	0.164345
41	160	31.02425	28.67195	32.331276	62	0.64282275	0.661	0.163543
42	162	31.08504	28.67195	32.331276	62	0.65943564	0.677	0.163098
43	164	31.14583	28.67195	32.331276	62	0.67604854	0.694	0.163033
44	166	31.20662	28.67195	32.331276	62	0.69266144	0.710	0.163379
45	168	31.26742	28.67195	32.331276	62	0.70927433	0.726	0.164179
46	170	31.32821	28.67195	32.331276	62	0.72588723	0.742	0.165499
47	172	31.37887	28.67195	32.331276	62	0.73973131	0.758	0.196712
48	174	31.42953	28.67195	32.331276	62	0.75357539	0.774	0.231178
49	176	31.49032	28.67195	32.331276	62	0.77018828	0.790	0.237718
50	178	31.56124	28.67195	32.331276	62	0.78956999	0.806	0.21185
51	180	31.62204	28.67195	32.331276	62	0.80618289	0.823	0.219655
52	182	31.69296	28.67195	32.331276	62	0.8255646	0.839	0.190323
53	184	31.75375	28.67195	32.331276	62	0.84217749	0.855	0.199438
54	186	31.82468	28.67195	32.331276	62	0.86155921	0.871	0.164139
55	188	31.8956	28.67195	32.331276	62	0.88094092	0.887	0.121045
56	190	31.96652	28.67195	32.331276	62	0.90032263	0.903	0.065834
57	192	32.02732	28.67195	32.331276	62	0.91693552	0.919	0.064663
58	194	32.08811	28.67195	32.331276	62	0.93354842	0.935	0.063531

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
59	196	32.13877	28.67195	32.331276	62	0.9473925	0.952	0.178525
60	198	32.19956	28.67195	32.331276	62	0.96400539	0.968	0.231054
61	200	32.26035	28.67195	32.331276	62	0.98061829	0.984	0.386029
62	202	32.33128	28.67195	32.331276	62	1	1.000	1
							β average	0.229923

Well 19/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	22	27.58304	27.58304	31.87534	73	0	0.000	1
1	24	27.60302	27.58304	31.87534	73	0.00465485	0.014	1.894539
2	26	27.63299	27.58304	31.87534	73	0.01163713	0.027	1.557279
3	28	27.65297	27.58304	31.87534	73	0.01629198	0.041	1.688199
4	30	27.68294	27.58304	31.87534	73	0.02327426	0.055	1.593225
5	32	27.70292	27.58304	31.87534	73	0.02792911	0.068	1.680367
6	34	27.74288	27.58304	31.87534	73	0.03723881	0.082	1.520601
7	36	27.77285	27.58304	31.87534	73	0.04422109	0.096	1.508285
8	38	27.80282	27.58304	31.87534	73	0.05120337	0.110	1.503901
9	40	27.85277	27.58304	31.87534	73	0.06284049	0.123	1.365534
10	42	27.86276	27.58304	31.87534	73	0.06516792	0.137	1.509751
11	44	27.90272	27.58304	31.87534	73	0.07447762	0.151	1.458938
12	46	27.96266	27.58304	31.87534	73	0.08844218	0.164	1.317575
13	48	27.99263	27.58304	31.87534	73	0.09542445	0.178	1.343642
14	50	28.03259	27.58304	31.87534	73	0.10473416	0.192	1.325124
15	52	28.08254	27.58304	31.87534	73	0.11637128	0.205	1.271126
16	54	28.13249	27.58304	31.87534	73	0.12800841	0.219	1.226601
17	56	28.17245	27.58304	31.87534	73	0.13731812	0.233	1.224945
18	58	28.23239	27.58304	31.87534	73	0.15128267	0.247	1.158898
19	60	28.28234	27.58304	31.87534	73	0.1629198	0.260	1.133268
20	62	28.33229	27.58304	31.87534	73	0.17455693	0.274	1.111934
21	64	28.39223	27.58304	31.87534	73	0.18852148	0.288	1.06587
22	66	28.45217	27.58304	31.87534	73	0.20248604	0.301	1.025454
23	68	28.51211	27.58304	31.87534	73	0.21645059	0.315	0.989827
24	70	28.57205	27.58304	31.87534	73	0.23041514	0.329	0.958307
25	72	28.63199	27.58304	31.87534	73	0.2443797	0.342	0.930345
26	74	28.68194	27.58304	31.87534	73	0.25601683	0.356	0.928845

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
27	76	28.73189	27.58304	31.87534	73	0.26765395	0.370	0.928865
28	78	28.79183	27.58304	31.87534	73	0.28161851	0.384	0.908035
29	80	28.86176	27.58304	31.87534	73	0.29791049	0.397	0.867888
30	82	28.93169	27.58304	31.87534	73	0.31420247	0.411	0.830865
31	84	28.98164	27.58304	31.87534	73	0.3258396	0.425	0.837965
32	86	29.05157	27.58304	31.87534	73	0.34213158	0.438	0.805301
33	88	29.11151	27.58304	31.87534	73	0.35609613	0.452	0.794916
34	90	29.17145	27.58304	31.87534	73	0.37006069	0.466	0.78599
35	92	29.24138	27.58304	31.87534	73	0.38635267	0.479	0.758896
36	94	29.30132	27.58304	31.87534	73	0.40031722	0.493	0.752844
37	96	29.34128	27.58304	31.87534	73	0.40962692	0.507	0.786516
38	98	29.40122	27.58304	31.87534	73	0.42359148	0.521	0.782661
39	100	29.46116	27.58304	31.87534	73	0.43755603	0.534	0.780038
40	102	29.53109	27.58304	31.87534	73	0.45384801	0.548	0.75961
41	104	29.59103	27.58304	31.87534	73	0.46781256	0.562	0.759437
42	106	29.65643	27.58304	31.87534	73	0.4830487	0.575	0.750073
43	108	29.71722	27.58304	31.87534	73	0.49721175	0.589	0.750653
44	110	29.78814	27.58304	31.87534	73	0.51373531	0.603	0.733057
45	112	29.84894	27.58304	31.87534	73	0.52789836	0.616	0.735984
46	114	29.91986	27.58304	31.87534	73	0.54442191	0.630	0.720529
47	116	29.99078	27.58304	31.87534	73	0.56094547	0.644	0.706025
48	118	30.05158	27.58304	31.87534	73	0.57510852	0.658	0.712498
49	120	30.11237	27.58304	31.87534	73	0.58927157	0.671	0.720398
50	122	30.17316	27.58304	31.87534	73	0.60343462	0.685	0.72984
51	124	30.23395	27.58304	31.87534	73	0.61759767	0.699	0.740965
52	126	30.29474	27.58304	31.87534	73	0.63176072	0.712	0.753945
53	128	30.36567	27.58304	31.87534	73	0.64828427	0.726	0.74707
54	130	30.44672	27.58304	31.87534	73	0.66716834	0.740	0.718866
55	132	30.51765	27.58304	31.87534	73	0.6836919	0.753	0.713797
56	134	30.60884	27.58304	31.87534	73	0.70493647	0.767	0.661902
57	136	30.68989	27.58304	31.87534	73	0.72382054	0.781	0.632621
58	138	30.75068	27.58304	31.87534	73	0.73798359	0.795	0.654749
59	140	30.852	27.58304	31.87534	73	0.76158867	0.808	0.570849
60	142	30.94319	27.58304	31.87534	73	0.78283324	0.822	0.508104
61	144	31.00398	27.58304	31.87534	73	0.79699629	0.836	0.53251
62	146	31.06478	27.58304	31.87534	73	0.81115934	0.849	0.561684
63	148	31.1357	27.58304	31.87534	73	0.8276829	0.863	0.561547

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
64	150	31.19649	27.58304	31.87534	73	0.84184595	0.877	0.601956
65	152	31.27755	27.58304	31.87534	73	0.86073001	0.890	0.568108
66	154	31.36874	27.58304	31.87534	73	0.88197459	0.904	0.480484
67	156	31.43966	27.58304	31.87534	73	0.89849815	0.918	0.480627
68	158	31.51058	27.58304	31.87534	73	0.9150217	0.932	0.483839
69	160	31.58151	27.58304	31.87534	73	0.93154526	0.945	0.492221
70	162	31.65243	27.58304	31.87534	73	0.94806882	0.959	0.510616
71	164	31.71322	27.58304	31.87534	73	0.96223187	0.973	0.702166
72	166	31.81454	27.58304	31.87534	73	0.98583695	0.986	0.067961
73	168	31.87534	27.58304	31.87534	73	1	1.000	1
							β average	0.913026

Well 21/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	20	28.43	28.43	32.15	38	0	0.000	1
1	22	28.47	28.43	32.15	38	0.010752688	0.026	1.618986
2	24	28.52	28.43	32.15	38	0.024193548	0.053	1.457672
3	26	28.57	28.43	32.15	38	0.037634409	0.079	1.428348
4	28	28.61	28.43	32.15	38	0.048387097	0.105	1.526731
5	30	28.67	28.43	32.15	38	0.064516129	0.132	1.447253
6	32	28.74	28.43	32.15	38	0.083333333	0.158	1.345726
7	34	28.81	28.43	32.15	38	0.102150538	0.184	1.284902
8	36	28.87	28.43	32.15	38	0.11827957	0.211	1.294097
9	38	28.96	28.43	32.15	38	0.142473118	0.237	1.188204
10	40	29.07	28.43	32.15	38	0.172043011	0.263	1.040679
11	42	29.15	28.43	32.15	38	0.193548387	0.289	1.021895
12	44	29.24	28.43	32.15	38	0.217741935	0.316	0.981902
13	46	29.33	28.43	32.15	38	0.241935484	0.342	0.952565
14	48	29.48	28.43	32.15	38	0.282258065	0.368	0.775433
15	50	29.57	28.43	32.15	38	0.306451613	0.395	0.768305
16	52	29.63	28.43	32.15	38	0.322580645	0.421	0.837755
17	54	29.67	28.43	32.15	38	0.333333333	0.447	0.955695
18	56	29.74	28.43	32.15	38	0.352150538	0.474	1.004075
19	58	29.79	28.43	32.15	38	0.365591398	0.500	1.102354
20	60	29.84	28.43	32.15	38	0.379032258	0.526	1.204362

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
21	62	29.97	28.43	32.15	38	0.413978495	0.553	1.128822
22	64	30.1	28.43	32.15	38	0.448924731	0.579	1.061701
23	66	30.21	28.43	32.15	38	0.478494624	0.605	1.046147
24	68	30.33	28.43	32.15	38	0.510752688	0.632	1.014422
25	70	30.45	28.43	32.15	38	0.543010753	0.658	0.988509
26	72	30.6	28.43	32.15	38	0.583333333	0.684	0.898105
27	74	30.72	28.43	32.15	38	0.615591398	0.711	0.881276
28	76	30.84	28.43	32.15	38	0.647849462	0.737	0.869788
29	78	30.96	28.43	32.15	38	0.680107527	0.763	0.86424
30	80	31.1	28.43	32.15	38	0.717741935	0.789	0.808345
31	82	31.24	28.43	32.15	38	0.755376344	0.816	0.750729
32	84	31.36	28.43	32.15	38	0.787634409	0.842	0.759257
33	86	31.52	28.43	32.15	38	0.830645161	0.868	0.617048
34	88	31.66	28.43	32.15	38	0.86827957	0.895	0.526667
35	90	31.8	28.43	32.15	38	0.905913978	0.921	0.394928
36	92	31.92	28.43	32.15	38	0.938172043	0.947	0.350741
37	94	32.04	28.43	32.15	38	0.970430108	0.974	0.244526
38	96	32.15	28.43	32.15	38	1	1.000	1
							β average	0.984924

Well 21/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	98	32.06784	32.06784	37.10345	41	0	0.000	1
1	100	32.16916	32.06784	37.10345	41	0.020120724	0.024	0.382084
2	102	32.31101	32.06784	37.10345	41	0.048289738	0.049	0.021184
3	104	32.42246	32.06784	37.10345	41	0.070422535	0.073	0.082037
4	106	32.55418	32.06784	37.10345	41	0.096579477	0.098	0.022348
5	108	32.67576	32.06784	37.10345	41	0.120724346	0.122	0.022973
6	110	32.76695	32.06784	37.10345	41	0.138832998	0.146	0.121963
7	112	32.86827	32.06784	37.10345	41	0.158953722	0.171	0.169601
8	114	32.97972	32.06784	37.10345	41	0.181086519	0.195	0.182194
9	116	33.10131	32.06784	37.10345	41	0.205231388	0.220	0.169468
10	118	33.23302	32.06784	37.10345	41	0.23138833	0.244	0.137377
11	120	33.35461	32.06784	37.10345	41	0.255533199	0.268	0.131369
12	122	33.47619	32.06784	37.10345	41	0.279678068	0.293	0.12679

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
13	124	33.59778	32.06784	37.10345	41	0.303822938	0.317	0.123347
14	126	33.72949	32.06784	37.10345	41	0.329979879	0.341	0.102717
15	128	33.84094	32.06784	37.10345	41	0.352112676	0.366	0.119114
16	130	33.97266	32.06784	37.10345	41	0.378269618	0.390	0.101033
17	132	34.09424	32.06784	37.10345	41	0.402414487	0.415	0.101001
18	134	34.22596	32.06784	37.10345	41	0.428571429	0.439	0.085045
19	136	34.34754	32.06784	37.10345	41	0.452716298	0.463	0.086154
20	138	34.48939	32.06784	37.10345	41	0.480885312	0.488	0.055404
21	140	34.63124	32.06784	37.10345	41	0.509054326	0.512	0.025135
22	142	34.77309	32.06784	37.10345	41	0.53722334	0.537	-0.00514
23	144	34.9048	32.06784	37.10345	41	0.563380282	0.561	-0.01954
24	146	35.02639	32.06784	37.10345	41	0.587525151	0.585	-0.0178
25	148	35.11758	32.06784	37.10345	41	0.605633803	0.610	0.034604
26	150	35.23916	32.06784	37.10345	41	0.629778672	0.634	0.037586
27	152	35.36074	32.06784	37.10345	41	0.653923541	0.659	0.040942
28	154	35.45193	32.06784	37.10345	41	0.672032193	0.683	0.100033
29	156	35.57352	32.06784	37.10345	41	0.696177062	0.707	0.106854
30	158	35.6951	32.06784	37.10345	41	0.720321932	0.732	0.114995
31	160	35.82682	32.06784	37.10345	41	0.746478873	0.756	0.103416
32	162	35.92814	32.06784	37.10345	41	0.766599598	0.780	0.159795
33	164	36.05985	32.06784	37.10345	41	0.792756539	0.805	0.152058
34	166	36.21183	32.06784	37.10345	41	0.822937626	0.829	0.088572
35	168	36.33342	32.06784	37.10345	41	0.847082495	0.854	0.104012
36	170	36.47526	32.06784	37.10345	41	0.875251509	0.878	0.051898
37	172	36.60698	32.06784	37.10345	41	0.901408451	0.902	0.023319
38	174	36.7387	32.06784	37.10345	41	0.927565392	0.927	-0.02178
39	176	36.86028	32.06784	37.10345	41	0.951710262	0.951	-0.02123
40	178	36.9616	32.06784	37.10345	41	0.971830986	0.976	0.303101
41	180	37.10345	32.06784	37.10345	41	1	1.000	1
							β average	0.092601

Well 24/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	26	27.04358	27.04358	27.20342	17	0	0.000	1
1	28	27.06356	27.04358	27.20342	17	0.125	0.059	-1.91642

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
2	30	27.07355	27.04358	27.20342	17	0.1875	0.118	-1.18594
3	32	27.08354	27.04358	27.20342	17	0.25	0.176	-0.93007
4	34	27.09353	27.04358	27.20342	17	0.3125	0.235	-0.80918
5	36	27.10352	27.04358	27.20342	17	0.375	0.294	-0.74846
6	38	27.11351	27.04358	27.20342	17	0.4375	0.353	-0.7224
7	40	27.11351	27.04358	27.20342	17	0.4375	0.412	-0.21139
8	42	27.11351	27.04358	27.20342	17	0.4375	0.471	0.266718
9	44	27.1235	27.04358	27.20342	17	0.5	0.529	0.235832
10	46	27.1235	27.04358	27.20342	17	0.5	0.588	0.720975
11	48	27.13349	27.04358	27.20342	17	0.5625	0.647	0.722404
12	50	27.14348	27.04358	27.20342	17	0.625	0.706	0.748454
13	52	27.15347	27.04358	27.20342	17	0.6875	0.765	0.809182
14	54	27.16346	27.04358	27.20342	17	0.75	0.824	0.930073
15	56	27.17345	27.04358	27.20342	17	0.8125	0.882	1.185942
16	58	27.18344	27.04358	27.20342	17	0.875	0.941	1.916421
17	60	27.20342	27.04358	27.20342	17	1	1.000	1
							β average	0.837334

Well 24/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	62	27.24338	27.24338	27.46316	17	0	0.000	1
1	64	27.26336	27.24338	27.46316	17	0.090909	0.059	-1.01522
2	66	27.27335	27.24338	27.46316	17	0.136364	0.118	-0.34576
3	68	27.29333	27.24338	27.46316	17	0.227273	0.176	-0.65651
4	70	27.29333	27.24338	27.46316	17	0.227273	0.235	0.089879
5	72	27.27335	27.24338	27.46316	17	0.136364	0.294	1.827896
6	74	27.3233	27.24338	27.46316	17	0.363636	0.353	-0.09325
7	76	27.33329	27.24338	27.46316	17	0.409091	0.412	0.022088
8	78	27.35327	27.24338	27.46316	17	0.5	0.471	-0.23584
9	80	27.36326	27.24338	27.46316	17	0.545455	0.529	-0.129
10	82	27.37325	27.24338	27.46316	17	0.590909	0.588	-0.02209
11	84	27.39323	27.24338	27.46316	17	0.681818	0.647	-0.30966
12	86	27.40322	27.24338	27.46316	17	0.727273	0.706	-0.20922
13	88	27.4232	27.24338	27.46316	17	0.818182	0.765	-0.6332
14	90	27.4232	27.24338	27.46316	17	0.818182	0.824	0.07302

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
15	92	27.44318	27.24338	27.46316	17	0.909091	0.882	-0.55574
16	94	27.45317	27.24338	27.46316	17	0.954545	0.941	-0.52378
17	96	27.46316	27.24338	27.46316	17	1	1.000	1
							β average	0.503221

Well 24/3

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	116	27.59303	27.59303	27.89273	17	0	0.000	1
1	118	27.60302	27.59303	27.89273	17	0.033333	0.059	1.101063
2	120	27.61301	27.59303	27.89273	17	0.066667	0.118	1.162891
3	122	27.63299	27.59303	27.89273	17	0.133333	0.176	0.640651
4	124	27.64298	27.59303	27.89273	17	0.166667	0.235	0.831198
5	126	27.66296	27.59303	27.89273	17	0.233333	0.294	0.615268
6	128	27.68294	27.59303	27.89273	17	0.3	0.353	0.476756
7	130	27.69293	27.59303	27.89273	17	0.333333	0.412	0.666428
8	132	27.71291	27.59303	27.89273	17	0.4	0.471	0.573754
9	134	27.7229	27.59303	27.89273	17	0.433333	0.529	0.775028
10	136	27.74288	27.59303	27.89273	17	0.5	0.588	0.720975
11	138	27.76286	27.59303	27.89273	17	0.566667	0.647	0.687297
12	140	27.78284	27.59303	27.89273	17	0.633333	0.706	0.673372
13	142	27.80282	27.59303	27.89273	17	0.7	0.765	0.683259
14	144	27.8228	27.59303	27.89273	17	0.766667	0.824	0.730397
15	146	27.85277	27.59303	27.89273	17	0.866667	0.882	0.291613
16	148	27.87275	27.59303	27.89273	17	0.933333	0.941	0.27251
17	150	27.89273	27.59303	27.89273	17	1	1.000	1
							β average	0.681404

Well 24/4

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	150	27.89273	27.89273	28.622	26	0	0.000	1
1	152	27.9227	27.89273	28.622	26	0.041096	0.038	-0.13953
2	154	27.94268	27.89273	28.622	26	0.068493	0.077	0.246082
3	156	27.96266	27.89273	28.622	26	0.09589	0.115	0.403325
4	158	27.99263	27.89273	28.622	26	0.136986	0.154	0.26749
5	160	28.01261	27.89273	28.622	26	0.164384	0.192	0.374583

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
6	162	28.03259	27.89273	28.622	26	0.191781	0.231	0.459552
7	164	28.05257	27.89273	28.622	26	0.219178	0.269	0.532954
8	166	28.07255	27.89273	28.622	26	0.246575	0.308	0.600524
9	168	28.10252	27.89273	28.622	26	0.287671	0.346	0.534157
10	170	28.1225	27.89273	28.622	26	0.315068	0.385	0.605993
11	172	28.15247	27.89273	28.622	26	0.356164	0.423	0.559784
12	174	28.17245	27.89273	28.622	26	0.383562	0.462	0.63801
13	176	28.20242	27.89273	28.622	26	0.424658	0.500	0.607363
14	178	28.23239	27.89273	28.622	26	0.465753	0.538	0.584891
15	180	28.26236	27.89273	28.622	26	0.506849	0.577	0.569666
16	182	28.29233	27.89273	28.622	26	0.547945	0.615	0.561315
17	184	28.3223	27.89273	28.622	26	0.589041	0.654	0.56
18	186	28.35227	27.89273	28.622	26	0.630137	0.692	0.566516
19	188	28.39223	27.89273	28.622	26	0.684932	0.731	0.451842
20	190	28.4222	27.89273	28.622	26	0.726027	0.769	0.468666
21	192	28.45217	27.89273	28.622	26	0.767123	0.808	0.498616
22	194	28.48214	27.89273	28.622	26	0.808219	0.846	0.549946
23	196	28.51211	27.89273	28.622	26	0.849315	0.885	0.6416
24	198	28.55207	27.89273	28.622	26	0.90411	0.923	0.499912
25	200	28.58204	27.89273	28.622	26	0.945205	0.962	0.789882
26	202	28.622	27.89273	28.622	26	1	1.000	1
							β average	0.497326

Well 27/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	38	28.57205	28.57205	29.07155	17	0	0.000	1
1	40	28.58204	28.57205	29.07155	17	0.02	0.059	1.96291
2	42	28.61201	28.57205	29.07155	17	0.08	0.118	0.812942
3	44	28.64198	28.57205	29.07155	17	0.14	0.176	0.534311
4	46	28.65197	28.57205	29.07155	17	0.16	0.235	0.921824
5	48	28.68194	28.57205	29.07155	17	0.22	0.294	0.760603
6	50	28.69193	28.57205	29.07155	17	0.24	0.353	1.065409
7	52	28.7219	28.57205	29.07155	17	0.3	0.412	0.967534
8	54	28.77185	28.57205	29.07155	17	0.4	0.471	0.573754

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
9	56	28.81181	28.57205	29.07155	17	0.48	0.529	0.396422
10	58	28.84178	28.57205	29.07155	17	0.54	0.588	0.39496
11	60	28.88174	28.57205	29.07155	17	0.62	0.647	0.234517
12	62	28.91171	28.57205	29.07155	17	0.68	0.706	0.245459
13	64	28.94168	28.57205	29.07155	17	0.74	0.765	0.268546
14	66	28.97165	28.57205	29.07155	17	0.8	0.824	0.313599
15	68	29.01161	28.57205	29.07155	17	0.88	0.882	0.045064
16	70	29.04158	28.57205	29.07155	17	0.94	0.941	0.042211
17	72	29.07155	28.57205	29.07155	17	1	1.000	1
							β average	0.596254

Well 27/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	72	29.11151	29.11151	29.79828	18	0	0.000	1
1	74	29.15147	29.11151	29.79828	18	0.058186	0.056	-0.09884
2	76	29.18144	29.11151	29.79828	18	0.101825	0.111	0.192903
3	78	29.21141	29.11151	29.79828	18	0.145464	0.167	0.316817
4	80	29.24138	29.11151	29.79828	18	0.189104	0.222	0.398811
5	82	29.28134	29.11151	29.79828	18	0.247289	0.278	0.311627
6	84	29.31131	29.11151	29.79828	18	0.290929	0.333	0.391206
7	86	29.35127	29.11151	29.79828	18	0.349115	0.389	0.339757
8	88	29.38124	29.11151	29.79828	18	0.392754	0.444	0.423555
9	90	29.4212	29.11151	29.79828	18	0.45094	0.500	0.393753
10	92	29.45117	29.11151	29.79828	18	0.494579	0.556	0.491888
11	94	29.49113	29.11151	29.79828	18	0.552765	0.611	0.484623
12	96	29.54108	29.11151	29.79828	18	0.625497	0.667	0.364081
13	98	29.60102	29.11151	29.79828	18	0.712776	0.722	0.09354
14	100	29.63616	29.11151	29.79828	18	0.763949	0.778	0.157773
15	102	29.67669	29.11151	29.79828	18	0.822962	0.833	0.146982
16	104	29.71722	29.11151	29.79828	18	0.881974	0.889	0.137584
17	106	29.75775	29.11151	29.79828	18	0.940987	0.944	0.129306
18	108	29.79828	29.11151	29.79828	18	1	1.000	1
							β average	0.275022

Well 27/3

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	112	29.8996	29.8996	31.62204	29	0	0.000	1
1	114	29.95026	29.8996	31.62204	29	0.029412	0.034	0.320684
2	116	30.00092	29.8996	31.62204	29	0.058824	0.069	0.331925
3	118	30.06171	29.8996	31.62204	29	0.094118	0.103	0.206919
4	120	30.1225	29.8996	31.62204	29	0.129412	0.138	0.145881
5	122	30.17316	29.8996	31.62204	29	0.158824	0.172	0.194707
6	124	30.24408	29.8996	31.62204	29	0.2	0.207	0.084758
7	126	30.30488	29.8996	31.62204	29	0.235294	0.241	0.066846
8	128	30.36567	29.8996	31.62204	29	0.270588	0.276	0.05301
9	130	30.41633	29.8996	31.62204	29	0.3	0.310	0.097287
10	132	30.47712	29.8996	31.62204	29	0.335294	0.345	0.084782
11	134	30.53791	29.8996	31.62204	29	0.370588	0.379	0.074325
12	136	30.60884	29.8996	31.62204	29	0.411765	0.414	0.016728
13	138	30.6595	29.8996	31.62204	29	0.441176	0.448	0.057469
14	140	30.72029	29.8996	31.62204	29	0.476471	0.483	0.050381
15	142	30.78108	29.8996	31.62204	29	0.511765	0.517	0.043853
16	144	30.84187	29.8996	31.62204	29	0.547059	0.552	0.037701
17	146	30.92293	29.8996	31.62204	29	0.594118	0.586	-0.06535
18	148	30.97359	29.8996	31.62204	29	0.623529	0.621	-0.02415
19	150	31.02425	29.8996	31.62204	29	0.652941	0.655	-1E-06
20	152	31.08504	29.8996	31.62204	29	0.688235	0.690	-1E-06
21	154	31.12557	29.8996	31.62204	29	0.711765	0.724	-1E-06
22	156	31.19649	29.8996	31.62204	29	0.752941	0.759	0.061699
23	158	31.25728	29.8996	31.62204	29	0.788235	0.793	0.058996
24	160	31.30794	29.8996	31.62204	29	0.817647	0.828	0.137277
25	162	31.36874	29.8996	31.62204	29	0.852941	0.862	0.150807
26	164	31.42953	29.8996	31.62204	29	0.888235	0.897	0.175308
27	166	31.49032	29.8996	31.62204	29	0.923529	0.931	0.226465
28	168	31.55111	29.8996	31.62204	29	0.958824	0.966	0.379901
29	170	31.62204	29.8996	31.62204	29	1	1.000	1
							β average	0.106007

Well 29/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	20	28.07	28.07	30.84	38	0	0.000	1
1	22	28.1	28.07	30.84	38	0.010830325	0.026	1.607411
2	24	28.16	28.07	30.84	38	0.032490975	0.053	0.941186
3	26	28.21	28.07	30.84	38	0.050541516	0.079	0.89665
4	28	28.27	28.07	30.84	38	0.072202166	0.105	0.786075
5	30	28.34	28.07	30.84	38	0.097472924	0.132	0.651165
6	32	28.42	28.07	30.84	38	0.126353791	0.158	0.504727
7	34	28.49	28.07	30.84	38	0.151624549	0.184	0.456717
8	36	28.57	28.07	30.84	38	0.180505415	0.211	0.375549
9	38	28.66	28.07	30.84	38	0.21299639	0.237	0.270568
10	40	28.74	28.07	30.84	38	0.241877256	0.263	0.223611
11	42	28.84	28.07	30.84	38	0.277978339	0.289	0.112702
12	44	28.9	28.07	30.84	38	0.299638989	0.316	0.150958
13	46	28.95	28.07	30.84	38	0.317689531	0.342	0.219696
14	48	29.04	28.07	30.84	38	0.350180505	0.368	0.157948
15	50	29.11	28.07	30.84	38	0.375451264	0.395	0.162449
16	52	29.18	28.07	30.84	38	0.400722022	0.421	0.167644
17	54	29.25	28.07	30.84	38	0.42599278	0.447	0.173559
18	56	29.34	28.07	30.84	38	0.458483755	0.474	0.122111
19	58	29.41	28.07	30.84	38	0.483754513	0.500	0.130009
20	60	29.47	28.07	30.84	38	0.505415162	0.526	0.16752
21	62	29.56	28.07	30.84	38	0.537906137	0.553	0.118909
22	64	29.63	28.07	30.84	38	0.563176895	0.579	0.128995
23	66	29.69	28.07	30.84	38	0.584837545	0.605	0.170068
24	68	29.77	28.07	30.84	38	0.613718412	0.632	0.152564
25	70	29.85	28.07	30.84	38	0.642599278	0.658	0.135002
26	72	29.92	28.07	30.84	38	0.667870036	0.684	0.14993
27	74	30.02	28.07	30.84	38	0.703971119	0.711	0.063462
28	76	30.09	28.07	30.84	38	0.729241877	0.737	0.077915
29	78	30.18	28.07	30.84	38	0.761732852	0.763	0.015745
30	80	30.26	28.07	30.84	38	0.790613718	0.789	-0.01374
31	82	30.33	28.07	30.84	38	0.815884477	0.816	-0.00127
32	84	30.4	28.07	30.84	38	0.841155235	0.842	0.014259
33	86	30.48	28.07	30.84	38	0.870036101	0.868	-0.02838
34	88	30.55	28.07	30.84	38	0.895306859	0.895	-0.01213

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
35	90	30.62	28.07	30.84	38	0.920577617	0.921	0.013014
36	92	30.71	28.07	30.84	38	0.953068592	0.947	-0.23711
37	94	30.78	28.07	30.84	38	0.97833935	0.974	-0.38715
38	96	30.84	28.07	30.84	38	1	1.000	1
							β average	0.233469

Well 29/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	96	30.84	30.84	34.16	50	0	0.000	1
1	98	30.92	30.84	34.16	50	0.0240964	0.020	-5.4E-17
2	100	31.01	30.84	34.16	50	0.0512048	0.040	-0.53969
3	102	31.09	30.84	34.16	50	0.0753012	0.060	-3.4E-17
4	104	31.15	30.84	34.16	50	0.0933735	0.080	-1.5E-17
5	106	31.22	30.84	34.16	50	0.1144578	0.100	-2E-17
6	108	31.28	30.84	34.16	50	0.1325301	0.120	-0.2307
7	110	31.35	30.84	34.16	50	0.1536145	0.140	-0.22044
8	112	31.41	30.84	34.16	50	0.1716867	0.160	-0.17066
9	114	31.49	30.84	34.16	50	0.1957831	0.180	-0.2093
10	116	31.55	30.84	34.16	50	0.2138554	0.200	-0.17037
11	118	31.63	30.84	34.16	50	0.2379518	0.220	-0.20542
12	120	31.69	30.84	34.16	50	0.2560241	0.240	-0.17318
13	122	31.75	30.84	34.16	50	0.2740964	0.260	-0.1449
14	124	31.81	30.84	34.16	50	0.2921687	0.280	-0.11971
15	126	31.86	30.84	34.16	50	0.3072289	0.300	-0.06854
16	128	31.92	30.84	34.16	50	0.3253012	0.320	-0.04859
17	130	31.98	30.84	34.16	50	0.3433735	0.340	-0.03001
18	132	32.04	30.84	34.16	50	0.3614458	0.360	-0.01254
19	134	32.1	30.84	34.16	50	0.3795181	0.380	0.004094
20	136	32.16	30.84	34.16	50	0.3975904	0.400	0.020087
21	138	32.23	30.84	34.16	50	0.4186747	0.420	0.01088
22	140	32.28	30.84	34.16	50	0.4337349	0.440	0.050906
23	142	32.35	30.84	34.16	50	0.4548193	0.460	0.041742
24	144	32.41	30.84	34.16	50	0.4728916	0.480	0.056988
25	146	32.47	30.84	34.16	50	0.4909639	0.500	0.072295
26	148	32.53	30.84	34.16	50	0.5090361	0.520	0.087811

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
27	150	32.59	30.84	34.16	50	0.5271084	0.540	0.103675
28	152	32.66	30.84	34.16	50	0.5481928	0.560	0.095672
29	154	32.72	30.84	34.16	50	0.5662651	0.580	0.112458
30	156	32.78	30.84	34.16	50	0.5843373	0.600	0.130007
31	158	32.84	30.84	34.16	50	0.6024096	0.620	0.148506
32	160	32.9	30.84	34.16	50	0.6204819	0.640	0.168199
33	162	32.97	30.84	34.16	50	0.6415663	0.660	0.162958
34	164	33.05	30.84	34.16	50	0.6656627	0.680	0.130785
35	166	33.14	30.84	34.16	50	0.6927711	0.700	0.068538
36	168	33.21	30.84	34.16	50	0.7138554	0.720	0.060689
37	170	33.3	30.84	34.16	50	0.7409639	0.740	-0.01004
38	172	33.39	30.84	34.16	50	0.7680723	0.760	-0.08922
39	174	33.47	30.84	34.16	50	0.7921687	0.780	-0.1438
40	176	33.55	30.84	34.16	50	0.8162651	0.800	-0.20775
41	178	33.63	30.84	34.16	50	0.8403614	0.820	-0.28483
42	180	33.71	30.84	34.16	50	0.8644578	0.840	-0.38098
43	182	33.79	30.84	34.16	50	0.8885542	0.860	-0.5062
44	184	33.86	30.84	34.16	50	0.9096386	0.880	-0.61009
45	186	33.91	30.84	34.16	50	0.9246988	0.900	-0.59774
46	188	33.98	30.84	34.16	50	0.9457831	0.920	-0.7899
47	190	34.03	30.84	34.16	50	0.9608434	0.940	-0.84532
48	192	34.09	30.84	34.16	50	0.9789157	0.960	-1.20893
49	194	34.13	30.84	34.16	50	0.9909639	0.980	-1.44665
50	196	34.16	30.84	34.16	50	1	1.000	1
							β average	-0.16817

Well 30/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	30	26.99363	26.99363	30.93306	72	0	0.000	1
1	32	27.0236	26.99363	30.93306	72	0.007608	0.014	1.116579
2	34	27.07355	26.99363	30.93306	72	0.020287	0.028	0.614164
3	36	27.11351	26.99363	30.93306	72	0.030431	0.042	0.622328
4	38	27.14348	26.99363	30.93306	72	0.038038	0.056	0.752564
5	40	27.18344	26.99363	30.93306	72	0.048182	0.069	0.737414
6	42	27.21341	26.99363	30.93306	72	0.05579	0.083	0.815715

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
7	44	27.25337	26.99363	30.93306	72	0.065933	0.097	0.80188
8	46	27.29333	26.99363	30.93306	72	0.076077	0.111	0.794161
9	48	27.3233	26.99363	30.93306	72	0.083685	0.125	0.849835
10	50	27.35327	26.99363	30.93306	72	0.091292	0.139	0.898479
11	52	27.39323	26.99363	30.93306	72	0.101436	0.153	0.891053
12	54	27.43319	26.99363	30.93306	72	0.11158	0.167	0.887024
13	56	27.46316	26.99363	30.93306	72	0.119187	0.181	0.929365
14	58	27.50312	26.99363	30.93306	72	0.129331	0.194	0.927415
15	60	27.53309	26.99363	30.93306	72	0.136939	0.208	0.96671
16	62	27.57305	26.99363	30.93306	72	0.147082	0.222	0.966765
17	64	27.61301	26.99363	30.93306	72	0.157226	0.236	0.968723
18	66	27.65297	26.99363	30.93306	72	0.167369	0.250	0.972347
19	68	27.68294	26.99363	30.93306	72	0.174977	0.264	1.00988
20	70	27.7229	26.99363	30.93306	72	0.185121	0.278	1.015074
21	72	27.76286	26.99363	30.93306	72	0.195264	0.292	1.021655
22	74	27.80282	26.99363	30.93306	72	0.205408	0.306	1.029526
23	76	27.84278	26.99363	30.93306	72	0.215551	0.319	1.038613
24	78	27.89273	26.99363	30.93306	72	0.228231	0.333	1.021513
25	80	27.93269	26.99363	30.93306	72	0.238375	0.347	1.033608
26	82	27.98264	26.99363	30.93306	72	0.251054	0.361	1.020894
27	84	28.0226	26.99363	30.93306	72	0.261198	0.375	1.035616
28	86	28.06256	26.99363	30.93306	72	0.271341	0.389	1.051316
29	88	28.11251	26.99363	30.93306	72	0.284021	0.403	1.043827
30	90	28.16246	26.99363	30.93306	72	0.2967	0.417	1.038273
31	92	28.20242	26.99363	30.93306	72	0.306844	0.431	1.057774
32	94	28.25237	26.99363	30.93306	72	0.319523	0.444	1.055374
33	96	28.30232	26.99363	30.93306	72	0.332203	0.458	1.05468
34	98	28.38224	26.99363	30.93306	72	0.35249	0.472	0.98926
35	100	28.44218	26.99363	30.93306	72	0.367705	0.486	0.970833
36	102	28.51211	26.99363	30.93306	72	0.385457	0.500	0.9329
37	104	28.60202	26.99363	30.93306	72	0.40828	0.514	0.854987
38	106	28.67195	26.99363	30.93306	72	0.426031	0.528	0.821692
39	108	28.76186	26.99363	30.93306	72	0.448854	0.542	0.748588
40	110	28.85177	26.99363	30.93306	72	0.471677	0.556	0.677346
41	112	28.91171	26.99363	30.93306	72	0.486893	0.569	0.669222
42	114	28.98164	26.99363	30.93306	72	0.504644	0.583	0.641495
43	116	29.06156	26.99363	30.93306	72	0.524931	0.597	0.5939

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
44	118	29.1215	26.99363	30.93306	72	0.540147	0.611	0.588508
45	120	29.19143	26.99363	30.93306	72	0.557898	0.625	0.562975
46	122	29.25137	26.99363	30.93306	72	0.573113	0.639	0.559188
47	124	29.31131	26.99363	30.93306	72	0.588329	0.653	0.556289
48	126	29.36126	26.99363	30.93306	72	0.601008	0.667	0.576164
49	128	29.43119	26.99363	30.93306	72	0.61876	0.681	0.553271
50	130	29.49113	26.99363	30.93306	72	0.633975	0.694	0.55325
51	132	29.56106	26.99363	30.93306	72	0.651726	0.708	0.531115
52	134	29.62603	26.99363	30.93306	72	0.668219	0.722	0.520771
53	136	29.68682	26.99363	30.93306	72	0.683651	0.736	0.521179
54	138	29.73748	26.99363	30.93306	72	0.69651	0.750	0.548258
55	140	29.79828	26.99363	30.93306	72	0.711942	0.764	0.551945
56	142	29.84894	26.99363	30.93306	72	0.724802	0.778	0.584499
57	144	29.91986	26.99363	30.93306	72	0.742805	0.792	0.564247
58	146	29.99078	26.99363	30.93306	72	0.760809	0.806	0.543548
59	148	30.05158	26.99363	30.93306	72	0.776241	0.819	0.553681
60	150	30.11237	26.99363	30.93306	72	0.791672	0.833	0.566602
61	152	30.18329	26.99363	30.93306	72	0.809676	0.847	0.54745
62	154	30.25422	26.99363	30.93306	72	0.82768	0.861	0.527248
63	156	30.32514	26.99363	30.93306	72	0.845683	0.875	0.505487
64	158	30.39606	26.99363	30.93306	72	0.863687	0.889	0.481365
65	160	30.45686	26.99363	30.93306	72	0.879119	0.903	0.505883
66	162	30.50752	26.99363	30.93306	72	0.891978	0.917	0.598367
67	164	30.57844	26.99363	30.93306	72	0.909982	0.931	0.588466
68	166	30.64936	26.99363	30.93306	72	0.927986	0.944	0.578883
69	168	30.73042	26.99363	30.93306	72	0.948561	0.958	0.457868
70	170	30.79121	26.99363	30.93306	72	0.963993	0.972	0.560628
71	172	30.852	26.99363	30.93306	72	0.979424	0.986	0.859065
72	174	30.93306	26.99363	30.93306	72	1	1.000	1
							β average	0.768825

Well 31/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	28	27.61301	27.61301	30.689892	44	0	0	1
1	30	27.67295	27.61301	30.689892	44	0.01948076	0.022727	0.307452

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
2	32	27.73289	27.61301	30.689892	44	0.03896152	0.045455	0.314398
3	34	27.8228	27.61301	30.689892	44	0.06818266	0.068182	-1.3E-05
4	36	27.91271	27.61301	30.689892	44	0.0974038	0.090909	-0.15398
5	38	27.99263	27.61301	30.689892	44	0.123378147	0.113636	-0.18891
6	40	28.08254	27.61301	30.689892	44	0.152599287	0.136364	-0.26727
7	42	28.16246	27.61301	30.689892	44	0.178573634	0.159091	-0.28245
8	44	28.24238	27.61301	30.689892	44	0.204547981	0.181818	-0.29659
9	46	28.30232	27.61301	30.689892	44	0.224028741	0.204545	-0.23428
10	48	28.36226	27.61301	30.689892	44	0.243509501	0.227273	-0.18199
11	50	28.43219	27.61301	30.689892	44	0.266237054	0.25	-0.17084
12	52	28.49213	27.61301	30.689892	44	0.285717814	0.272727	-0.12975
13	54	28.57205	27.61301	30.689892	44	0.311692161	0.295455	-0.15446
14	56	28.63199	27.61301	30.689892	44	0.331172921	0.318182	-0.11894
15	58	28.70192	27.61301	30.689892	44	0.353900475	0.340909	-0.11497
16	60	28.79183	27.61301	30.689892	44	0.383121615	0.363636	-0.16722
17	62	28.84178	27.61301	30.689892	44	0.399355581	0.386364	-0.10917
18	64	28.91171	27.61301	30.689892	44	0.422083135	0.409091	-0.10718
19	66	28.97165	27.61301	30.689892	44	0.441563895	0.431818	-0.07931
20	68	29.04158	27.61301	30.689892	44	0.464291448	0.454545	-0.07853
21	70	29.08154	27.61301	30.689892	44	0.477278622	0.477273	-4E-05
22	72	29.13149	27.61301	30.689892	44	0.493512588	0.5	0.051899
23	74	29.18144	27.61301	30.689892	44	0.509746555	0.522727	0.104
24	76	29.23139	27.61301	30.689892	44	0.525980522	0.545455	0.156797
25	78	29.31131	27.61301	30.689892	44	0.551954869	0.568182	0.131926
26	80	29.37125	27.61301	30.689892	44	0.571435629	0.590909	0.160418
27	82	29.45117	27.61301	30.689892	44	0.597409975	0.613636	0.136229
28	84	29.54108	27.61301	30.689892	44	0.626631116	0.636364	0.083807
29	86	29.6159	27.61301	30.689892	44	0.65094794	0.659091	0.072205
30	88	29.68682	27.61301	30.689892	44	0.673998548	0.681818	0.071783
31	90	29.76788	27.61301	30.689892	44	0.7003421	0.704545	0.040274
32	92	29.82867	27.61301	30.689892	44	0.720099763	0.727273	0.071938
33	94	29.90973	27.61301	30.689892	44	0.746443315	0.75	0.037811
34	96	29.98065	27.61301	30.689892	44	0.769493923	0.772727	0.036699
35	98	30.06171	27.61301	30.689892	44	0.795837474	0.795455	-0.00471
36	100	30.1225	27.61301	30.689892	44	0.815595138	0.818182	0.034645
37	102	30.18329	27.61301	30.689892	44	0.835352802	0.840909	0.082298
38	104	30.25422	27.61301	30.689892	44	0.85840341	0.863636	0.087933

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
39	106	30.3454	27.61301	30.689892	44	0.888039905	0.886364	-0.03343
40	108	30.42646	27.61301	30.689892	44	0.914383457	0.909091	-0.13043
41	110	30.48725	27.61301	30.689892	44	0.934141121	0.931818	-0.07393
42	112	30.54804	27.61301	30.689892	44	0.953898785	0.954545	0.029639
43	114	30.61897	27.61301	30.689892	44	0.976949392	0.977273	0.028934
44	116	30.68989	27.61301	30.689892	44	1	1	1
							β average	-0.02412

Well 31/2

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	116	30.68989	30.68989	31.65243	14	0	0	1
1	118	30.75068	30.68989	31.65243	14	0.063157895	0.071429	0.259092
2	120	30.83174	30.68989	31.65243	14	0.147368421	0.142857	-0.07307
3	122	30.9128	30.68989	31.65243	14	0.231578947	0.214286	-0.20167
4	124	30.99385	30.68989	31.65243	14	0.315789474	0.285714	-0.28918
5	126	31.05464	30.68989	31.65243	14	0.378947368	0.357143	-0.18837
6	128	31.12557	30.68989	31.65243	14	0.452631579	0.428571	-0.19574
7	130	31.18636	30.68989	31.65243	14	0.515789474	0.5	-0.12636
8	132	31.25728	30.68989	31.65243	14	0.589473684	0.571429	-0.14796
9	134	31.32821	30.68989	31.65243	14	0.663157895	0.642857	-0.17847
10	136	31.39913	30.68989	31.65243	14	0.736842105	0.714286	-0.22485
11	138	31.45992	30.68989	31.65243	14	0.8	0.785714	-0.17261
12	140	31.53085	30.68989	31.65243	14	0.873684211	0.857143	-0.27971
13	142	31.60177	30.68989	31.65243	14	0.947368421	0.928571	-0.6232
14	144	31.65243	30.68989	31.65243	14	1	1	1
							β average	-0.18785

Well 31/3

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	144	31.65243	31.65243	32.89867	18	0	0	1
1	146	31.71322	31.65243	32.89867	18	0.048780488	0.055556	0.269079

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
2	148	31.77402	31.65243	32.89867	18	0.097560976	0.111111	0.28512
3	150	31.84494	31.65243	32.89867	18	0.154471545	0.166667	0.179252
4	152	31.91586	31.65243	32.89867	18	0.211382114	0.222222	0.126953
5	154	31.97666	31.65243	32.89867	18	0.260162602	0.277778	0.178041
6	156	32.03745	31.65243	32.89867	18	0.308943089	0.333333	0.222459
7	158	32.09824	31.65243	32.89867	18	0.357723577	0.388889	0.265242
8	160	32.15903	31.65243	32.89867	18	0.406504065	0.444444	0.309697
9	162	32.22996	31.65243	32.89867	18	0.463414634	0.5	0.293209
10	164	32.30088	31.65243	32.89867	18	0.520325203	0.555556	0.284341
11	166	32.36167	31.65243	32.89867	18	0.569105691	0.611111	0.349831
12	168	32.4326	31.65243	32.89867	18	0.62601626	0.666667	0.359555
13	170	32.51365	31.65243	32.89867	18	0.691056911	0.722222	0.304318
14	172	32.59471	31.65243	32.89867	18	0.756097561	0.777778	0.245504
15	174	32.6555	31.65243	32.89867	18	0.804878049	0.833333	0.393329
16	176	32.73656	31.65243	32.89867	18	0.869918699	0.888889	0.367126
17	178	32.81761	31.65243	32.89867	18	0.93495935	0.944444	0.344203
18	180	32.89867	31.65243	32.89867	18	1	1	1
							β average	0.281015

Well 42/1

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	58	27.49313	27.49313	28.81181	24	0	0	1
1	60	27.55307	27.49313	28.81181	24	0.045454545	0.041667	-1E-17
2	62	27.61301	27.49313	28.81181	24	0.090909091	0.083333	-0.19324
3	64	27.67295	27.49313	28.81181	24	0.136363636	0.125	-0.20274
4	66	27.73289	27.49313	28.81181	24	0.181818182	0.166667	-0.21324
5	68	27.78284	27.49313	28.81181	24	0.21969697	0.208333	-0.13604
6	70	27.8228	27.49313	28.81181	24	0.25	0.25	-9.7E-06
7	72	27.87275	27.49313	28.81181	24	0.287878788	0.291667	0.036761
8	74	27.9227	27.49313	28.81181	24	0.325757576	0.333333	0.068452
9	76	27.98264	27.49313	28.81181	24	0.371212121	0.375	0.03237
10	78	28.0226	27.49313	28.81181	24	0.401515152	0.416667	0.125148
11	80	28.07255	27.49313	28.81181	24	0.439393939	0.458333	0.152976
12	82	28.13249	27.49313	28.81181	24	0.484848485	0.5	0.121248
13	84	28.19243	27.49313	28.81181	24	0.53030303	0.541667	0.091442

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
14	86	28.23239	27.49313	28.81181	24	0.560606061	0.583333	0.186187
15	88	28.30232	27.49313	28.81181	24	0.613636364	0.625	0.096598
16	90	28.36226	27.49313	28.81181	24	0.659090909	0.666667	0.067931
17	92	28.40222	27.49313	28.81181	24	0.689393939	0.708333	0.181168
18	94	28.45217	27.49313	28.81181	24	0.727272727	0.75	0.23792
19	96	28.51211	27.49313	28.81181	24	0.772727273	0.791667	0.224904
20	98	28.56206	27.49313	28.81181	24	0.810606061	0.833333	0.31653
21	100	28.622	27.49313	28.81181	24	0.856060606	0.875	0.332837
22	102	28.70192	27.49313	28.81181	24	0.916666667	0.916667	-5.6E-06
23	104	28.75187	27.49313	28.81181	24	0.954545455	0.958333	0.184533
24	106	28.81181	27.49313	28.81181	24	1	1	1
							β average	0.077806

Well 42/2

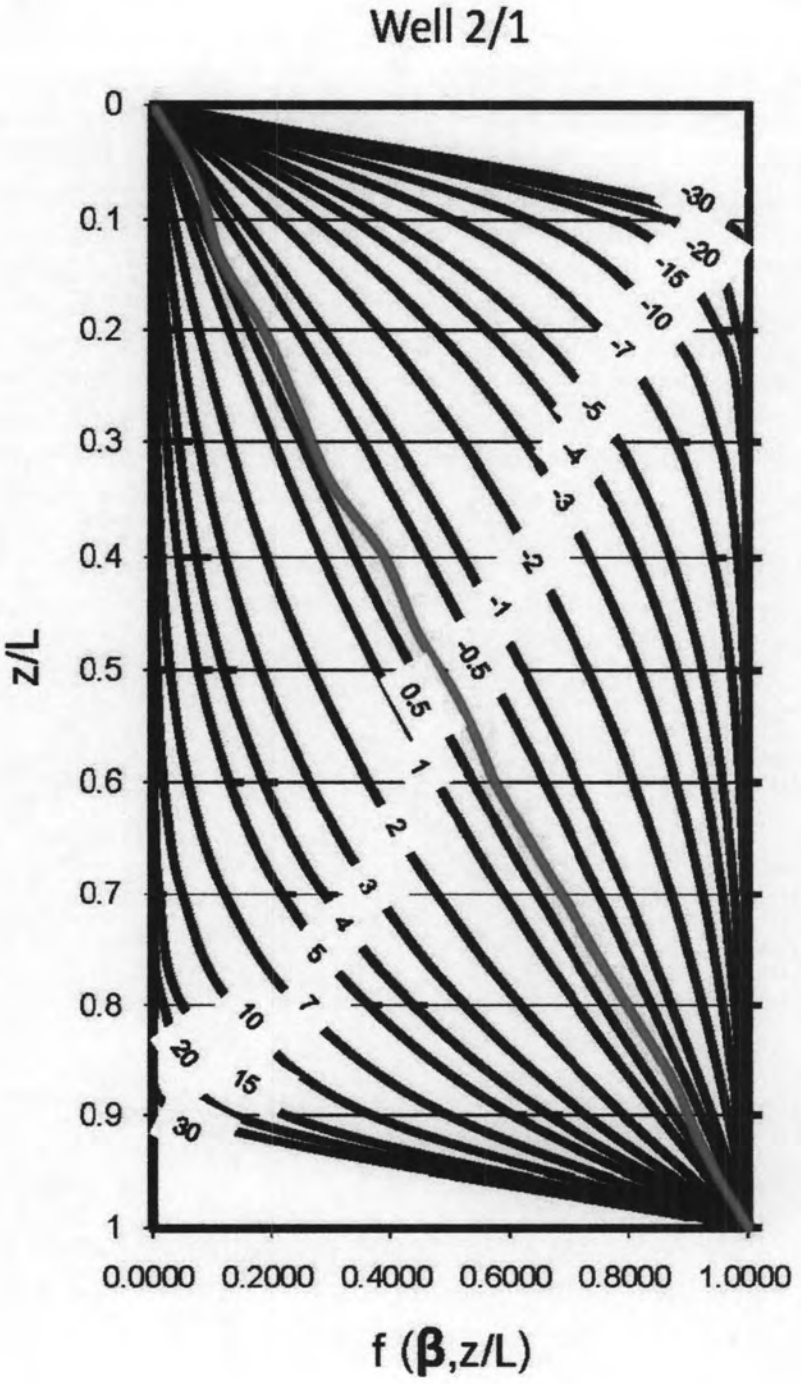
z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
0	106	28.81181	28.81181	34.56032	97	0	0	1
1	108	28.85177	28.81181	34.56032	97	0.006951371	0.010309	0.749219
2	110	28.89173	28.81181	34.56032	97	0.013902743	0.020619	0.75639
3	112	28.93169	28.81181	34.56032	97	0.020854114	0.030928	0.763536
4	114	28.99163	28.81181	34.56032	97	0.031281171	0.041237	0.55019
5	116	29.05157	28.81181	34.56032	97	0.041708228	0.051546	0.430404
6	118	29.10152	28.81181	34.56032	97	0.050397442	0.061856	0.421098
7	120	29.17145	28.81181	34.56032	97	0.062562342	0.072165	0.299761
8	122	29.23139	28.81181	34.56032	97	0.072989399	0.082474	0.260228
9	124	29.28134	28.81181	34.56032	97	0.081678614	0.092784	0.274211
10	126	29.34128	28.81181	34.56032	97	0.092105671	0.103093	0.245761
11	128	29.39123	28.81181	34.56032	97	0.100794885	0.113402	0.259621
12	130	29.45117	28.81181	34.56032	97	0.111221942	0.123711	0.237623
13	132	29.50112	28.81181	34.56032	97	0.119911156	0.134021	0.250982
14	134	29.55107	28.81181	34.56032	97	0.12860037	0.14433	0.263127
15	136	29.59103	28.81181	34.56032	97	0.135551742	0.154639	0.302875
16	138	29.63616	28.81181	34.56032	97	0.143403173	0.164948	0.325011
17	140	29.68682	28.81181	34.56032	97	0.152215897	0.175258	0.331107
18	142	29.74762	28.81181	34.56032	97	0.162791167	0.185567	0.311971
19	144	29.80841	28.81181	34.56032	97	0.173366436	0.195876	0.294969

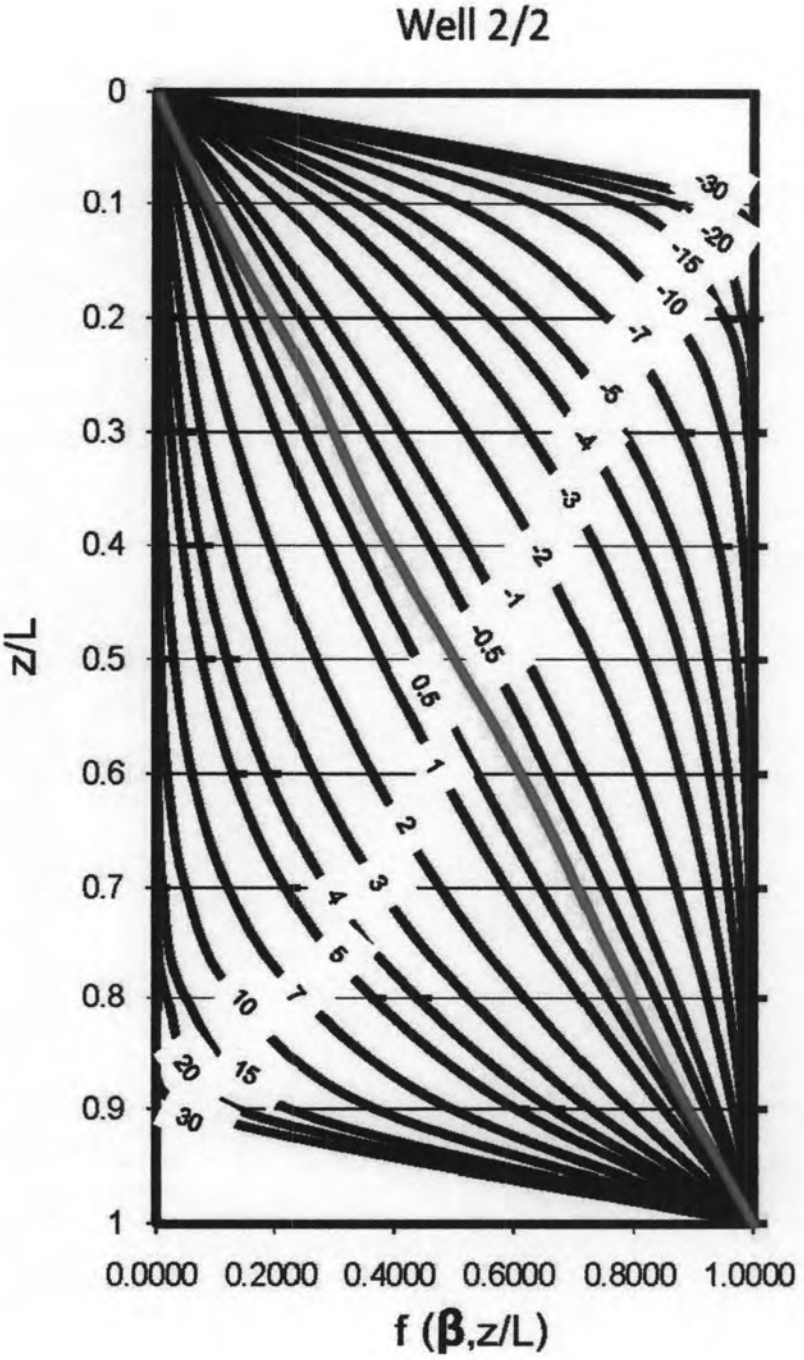
z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
20	146	29.87933	28.81181	34.56032	97	0.185704251	0.206186	0.256964
21	148	29.94012	28.81181	34.56032	97	0.19627952	0.216495	0.24419
22	150	30.01105	28.81181	34.56032	97	0.208617335	0.226804	0.211624
23	152	30.08197	28.81181	34.56032	97	0.220955149	0.237113	0.181634
24	154	30.16303	28.81181	34.56032	97	0.235055508	0.247423	0.134402
25	156	30.22382	28.81181	34.56032	97	0.245630778	0.257732	0.127874
26	158	30.30488	28.81181	34.56032	97	0.259731137	0.268041	0.085282
27	160	30.36567	28.81181	34.56032	97	0.270306407	0.278351	0.080578
28	162	30.42646	28.81181	34.56032	97	0.280881676	0.28866	0.076174
29	164	30.49738	28.81181	34.56032	97	0.29321949	0.298969	0.05507
30	166	30.56831	28.81181	34.56032	97	0.305557305	0.309278	0.034913
31	168	30.6291	28.81181	34.56032	97	0.316132574	0.319588	0.031847
32	170	30.70002	28.81181	34.56032	97	0.328470389	0.329897	0.012922
33	172	30.77095	28.81181	34.56032	97	0.340808203	0.340206	-0.00536
34	174	30.83174	28.81181	34.56032	97	0.351383473	0.350515	-0.00762
35	176	30.90266	28.81181	34.56032	97	0.363721287	0.360825	-0.02509
36	178	30.97359	28.81181	34.56032	97	0.376059101	0.371134	-0.04213
37	180	31.04451	28.81181	34.56032	97	0.388396916	0.381443	-0.05881
38	182	31.1053	28.81181	34.56032	97	0.398972185	0.391753	-0.06047
39	184	31.1661	28.81181	34.56032	97	0.409547455	0.402062	-0.06215
40	186	31.21676	28.81181	34.56032	97	0.418360179	0.412371	-0.04937
41	188	31.27755	28.81181	34.56032	97	0.428935449	0.42268	-0.05121
42	190	31.33834	28.81181	34.56032	97	0.439510718	0.43299	-0.05307
43	192	31.40926	28.81181	34.56032	97	0.451848532	0.443299	-0.06921
44	194	31.47006	28.81181	34.56032	97	0.462423802	0.453608	-0.07106
45	196	31.54098	28.81181	34.56032	97	0.474761616	0.463918	-0.08713
46	198	31.59164	28.81181	34.56032	97	0.483574341	0.474227	-0.07494
47	200	31.65243	28.81181	34.56032	97	0.49414961	0.484536	-0.07696
48	202	31.70309	28.81181	34.56032	97	0.502962335	0.494845	-0.06495
49	204	31.76388	28.81181	34.56032	97	0.513537604	0.505155	-0.06709
50	206	31.82468	28.81181	34.56032	97	0.524112874	0.515464	-0.0693
51	208	31.87534	28.81181	34.56032	97	0.532925598	0.525773	-0.05741
52	210	31.926	28.81181	34.56032	97	0.541738323	0.536082	-0.04551
53	212	31.99692	28.81181	34.56032	97	0.554076137	0.546392	-0.06208
54	214	32.04758	28.81181	34.56032	97	0.562888862	0.556701	-0.0502
55	216	32.09824	28.81181	34.56032	97	0.571701586	0.56701	-0.03825
56	218	32.1489	28.81181	34.56032	97	0.580514311	0.57732	-0.0262

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
57	220	32.20969	28.81181	34.56032	97	0.59108958	0.587629	-0.02858
58	222	32.26035	28.81181	34.56032	97	0.599902305	0.597938	-0.01635
59	224	32.32114	28.81181	34.56032	97	0.610477575	0.608247	-0.01873
60	226	32.3718	28.81181	34.56032	97	0.619290299	0.618557	-0.00622
61	228	32.45286	28.81181	34.56032	97	0.633390658	0.628866	-0.03884
62	230	32.51365	28.81181	34.56032	97	0.643965928	0.639175	-0.04163
63	232	32.57444	28.81181	34.56032	97	0.654541197	0.649485	-0.04453
64	234	32.64537	28.81181	34.56032	97	0.666879012	0.659794	-0.06335
65	236	32.69603	28.81181	34.56032	97	0.675691736	0.670103	-0.05071
66	238	32.74669	28.81181	34.56032	97	0.684504461	0.680412	-0.03773
67	240	32.80748	28.81181	34.56032	97	0.69507973	0.690722	-0.04091
68	242	32.85814	28.81181	34.56032	97	0.703892455	0.701031	-0.02736
69	244	32.91893	28.81181	34.56032	97	0.714467724	0.71134	-0.03053
70	246	32.97972	28.81181	34.56032	97	0.725042994	0.721649	-0.03388
71	248	33.04052	28.81181	34.56032	97	0.735618263	0.731959	-0.03741
72	250	33.09118	28.81181	34.56032	97	0.744430988	0.742268	-0.02266
73	252	33.14184	28.81181	34.56032	97	0.753243712	0.752577	-0.00716
74	254	33.20263	28.81181	34.56032	97	0.763818982	0.762887	-0.01032
75	256	33.25329	28.81181	34.56032	97	0.772631706	0.773196	0.006428
76	258	33.31408	28.81181	34.56032	97	0.783206976	0.783505	0.003512
77	260	33.36474	28.81181	34.56032	97	0.7920197	0.793814	0.021881
78	262	33.42553	28.81181	34.56032	97	0.80259497	0.804124	0.01937
79	264	33.48632	28.81181	34.56032	97	0.813170239	0.814433	0.016677
80	266	33.55725	28.81181	34.56032	97	0.825508054	0.824742	-0.01062
81	268	33.61804	28.81181	34.56032	97	0.836083323	0.835052	-0.01502
82	270	33.65857	28.81181	34.56032	97	0.843133503	0.845361	0.033937
83	272	33.71936	28.81181	34.56032	97	0.853708772	0.85567	0.031636
84	274	33.78015	28.81181	34.56032	97	0.864284042	0.865979	0.029101
85	276	33.83081	28.81181	34.56032	97	0.873096766	0.876289	0.058451
86	278	33.8916	28.81181	34.56032	97	0.883672036	0.886598	0.057763
87	280	33.94226	28.81181	34.56032	97	0.89248476	0.896907	0.094475
88	282	34.00306	28.81181	34.56032	97	0.90306003	0.907216	0.097466
89	284	34.06385	28.81181	34.56032	97	0.913635299	0.917526	0.10139
90	286	34.12464	28.81181	34.56032	97	0.924210569	0.927835	0.106637
91	288	34.18543	28.81181	34.56032	97	0.934785838	0.938144	0.113854
92	290	34.24622	28.81181	34.56032	97	0.945361108	0.948454	0.124201
93	292	34.31715	28.81181	34.56032	97	0.957698922	0.958763	0.053356

z	Depth	Tz	To	TL	L	Tz-To/TL-To	z/L	β
94	294	34.38807	28.81181	34.56032	97	0.970036737	0.969072	-0.06505
95	296	34.4286	28.81181	34.56032	97	0.977086916	0.979381	0.219539
96	298	34.47926	28.81181	34.56032	97	0.985899641	0.989691	0.670453
97	300	34.56032	28.81181	34.56032	97	1	1	1
							β average	0.091652

Appendix B2 Type curve of β values

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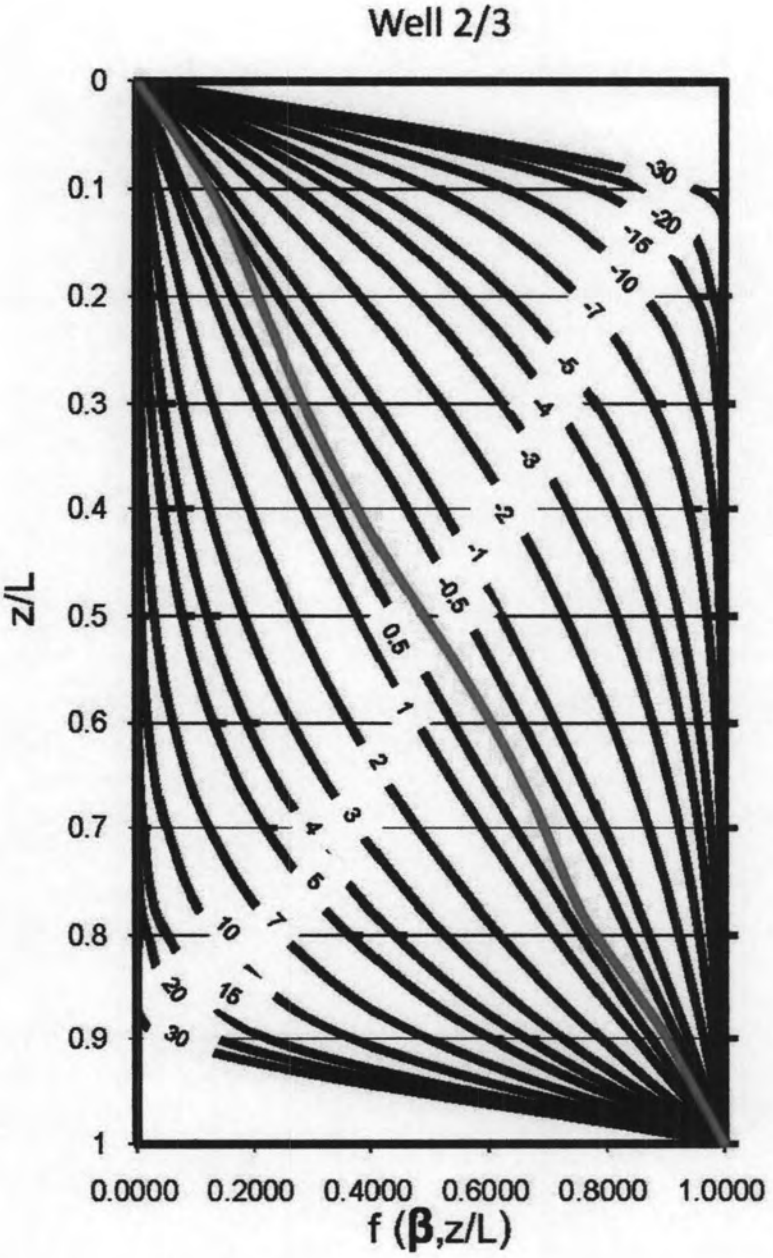
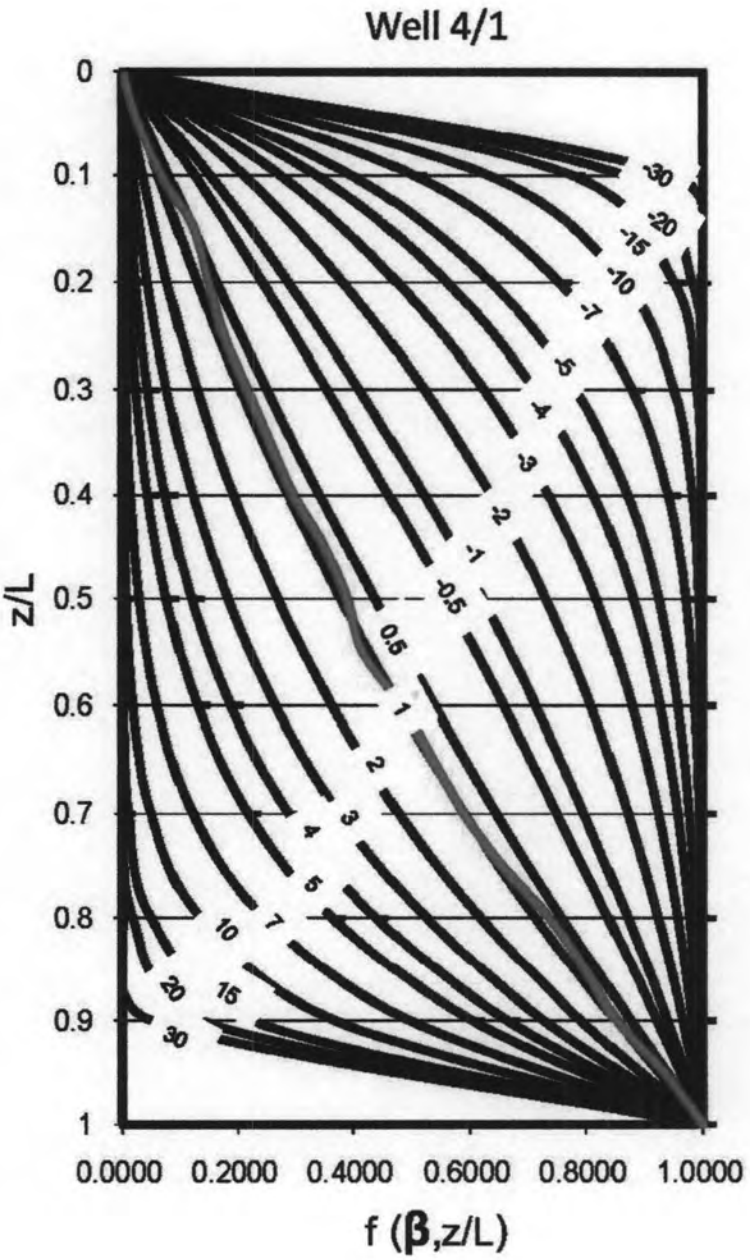
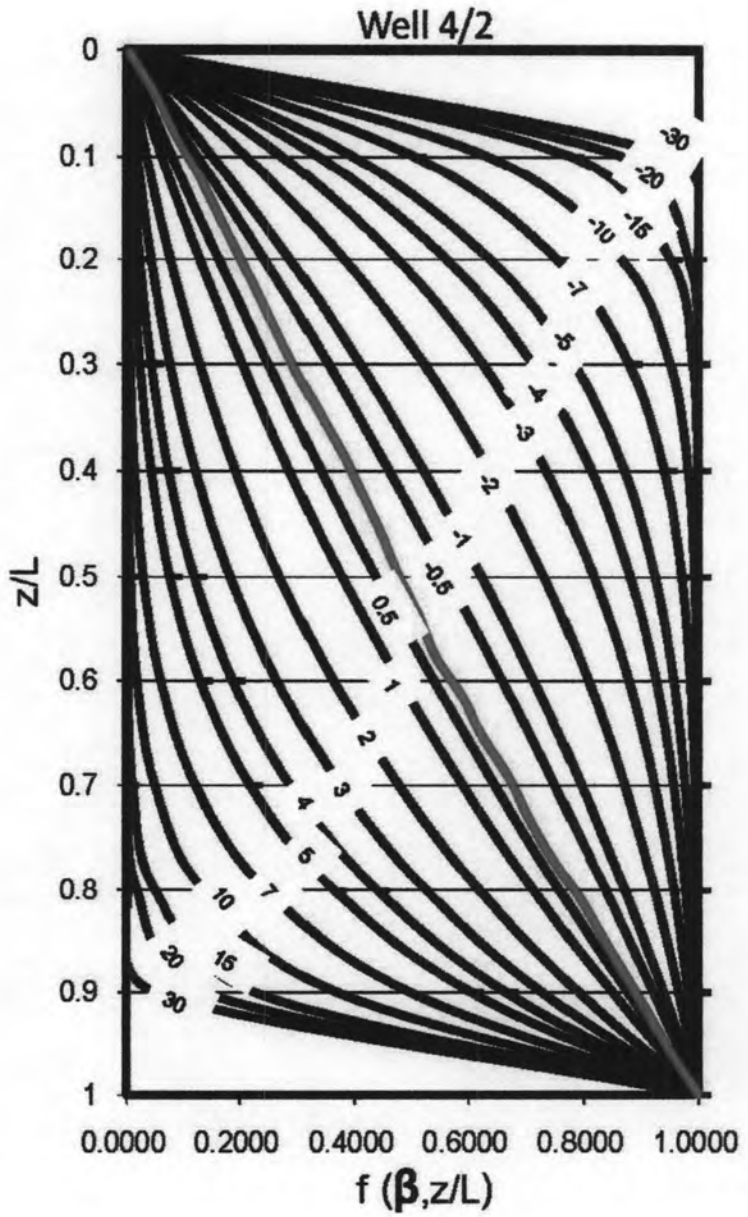
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30


Well 2/3
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30


Well 4/1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
z/L
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30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0.2
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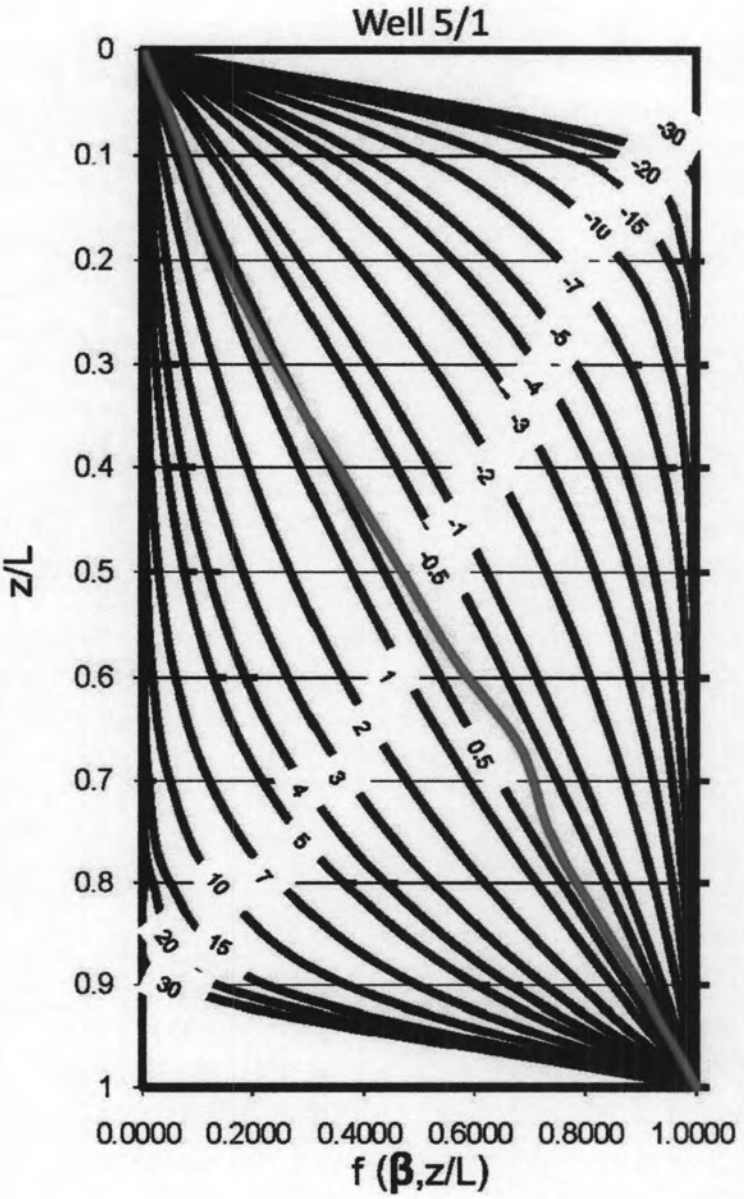
0.4
0.5
0.6
0.7
0.8
0.9
1
z/L
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30


Well 5/1
z/L
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0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
1
2
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4
5
7
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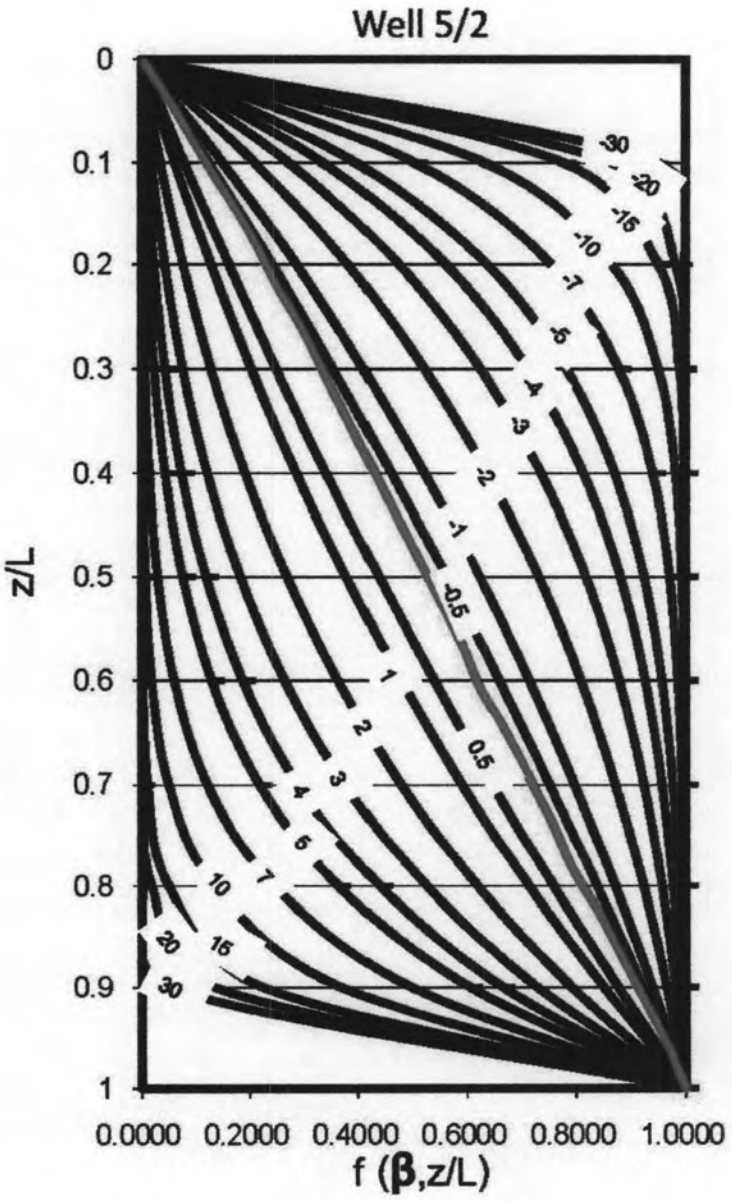
15
20
30
0.5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z/L
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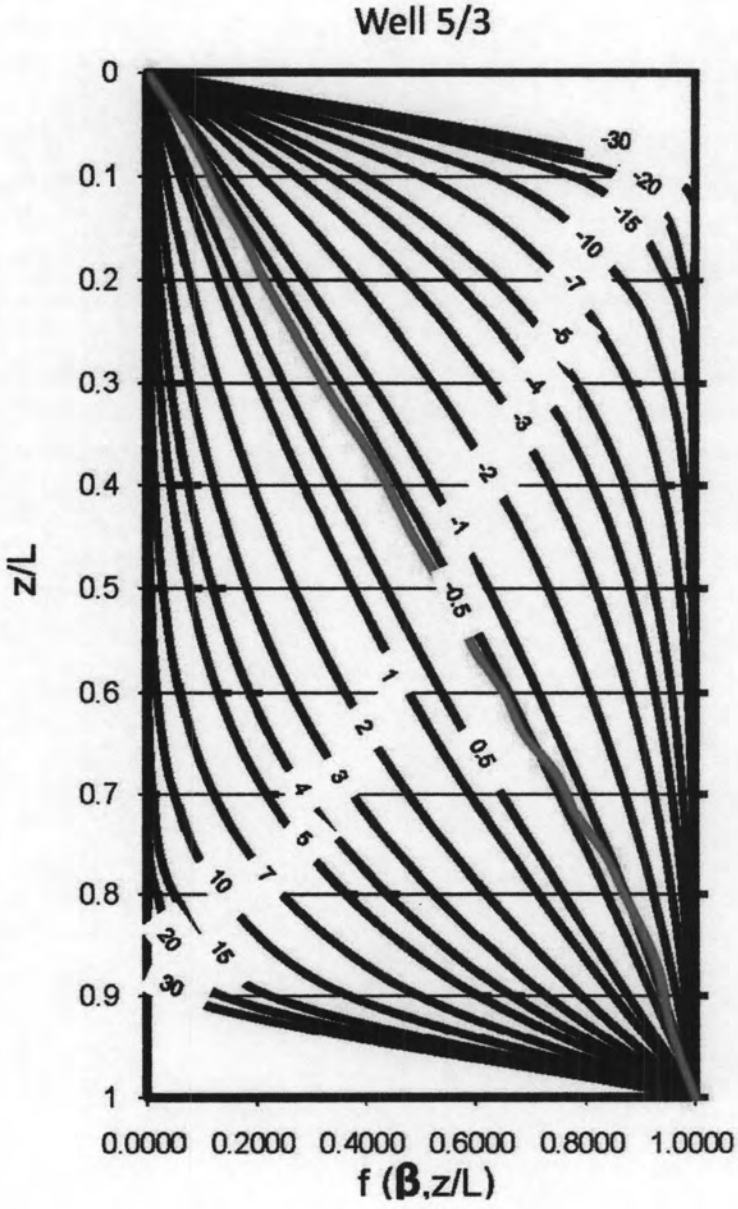
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
6
7
10
15
20
30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z/L
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0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
1
2
3
4
5
7
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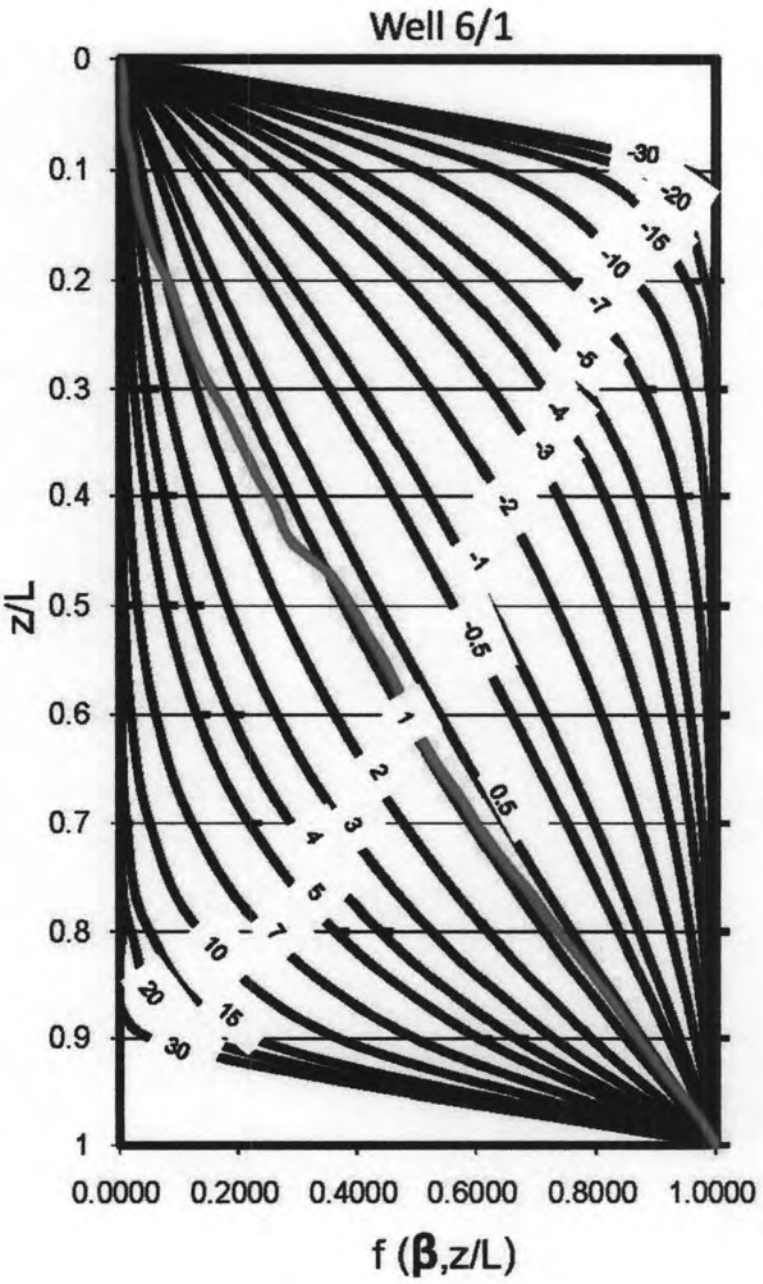
15
20
30
0.5


Well 6/1
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0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
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-1
-0.5
1
2
3
4
5
7
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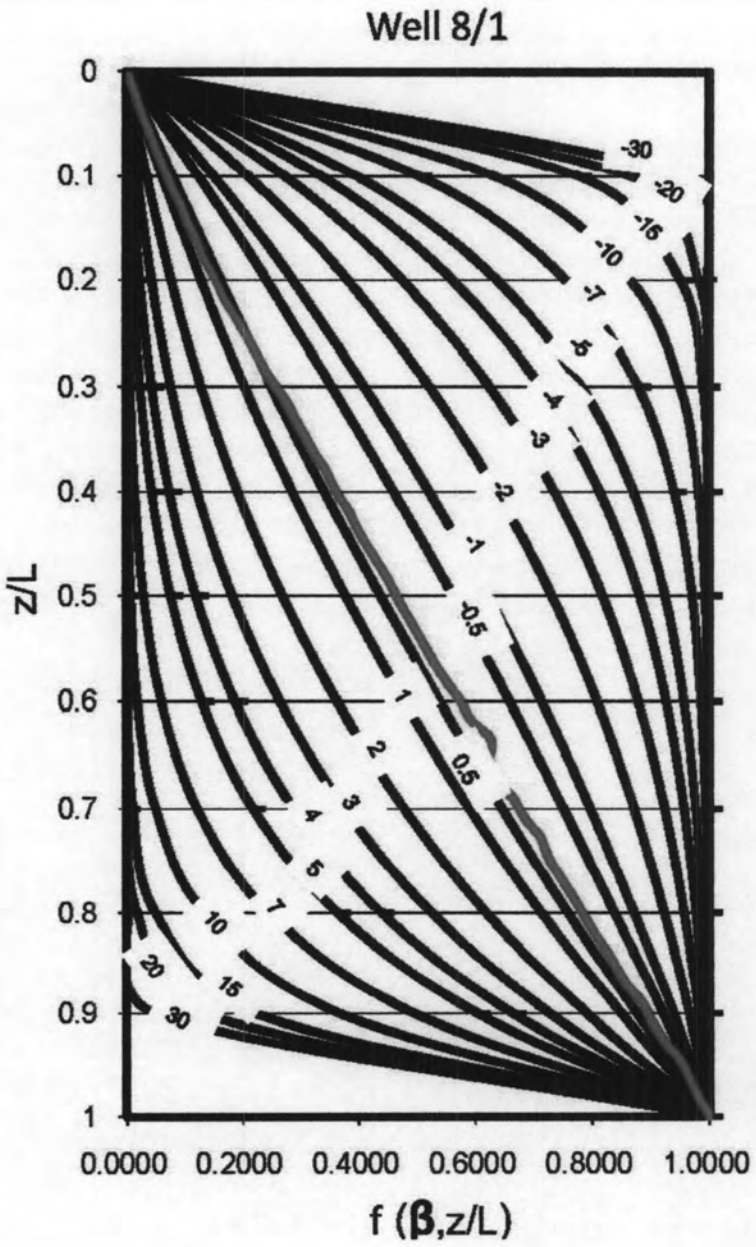
15
20
30
0.5


Well 8/1
z/L
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0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
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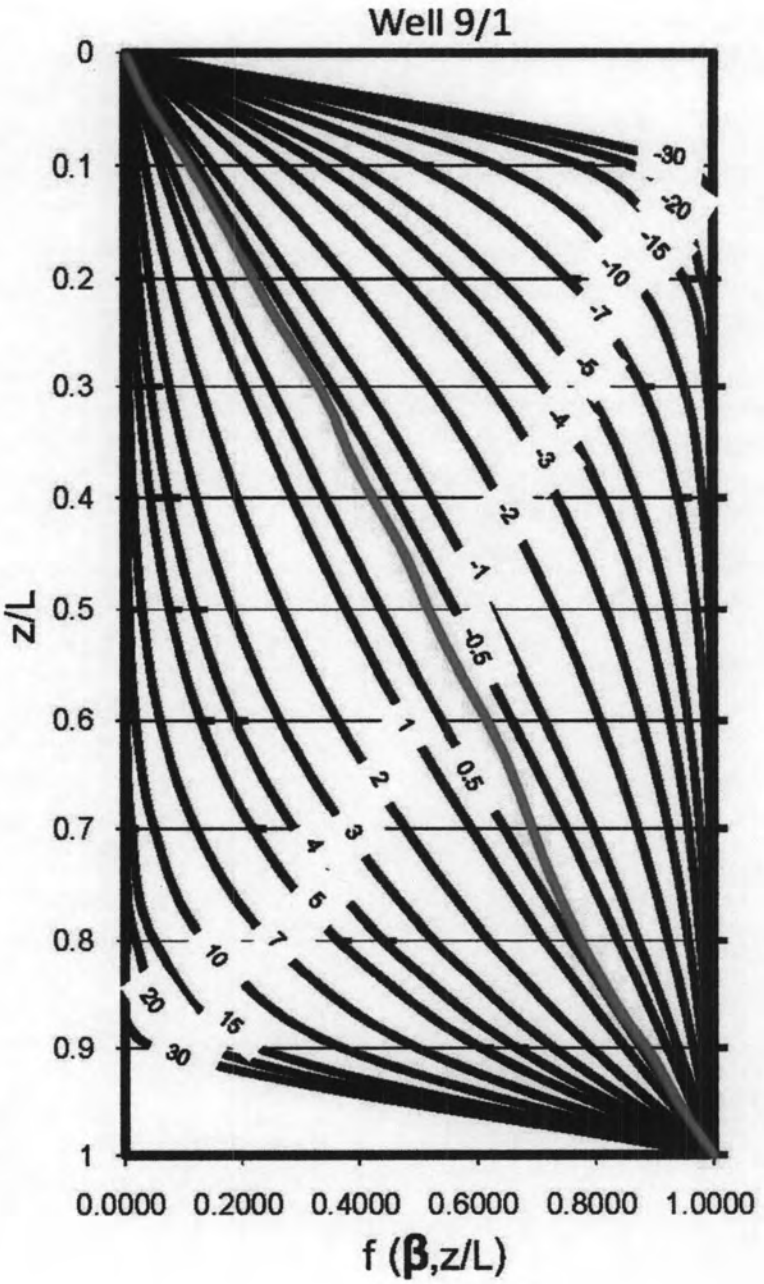
-2
-1
-0.5
1
2
3
4
5
7
10
15
20
30
0.5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0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
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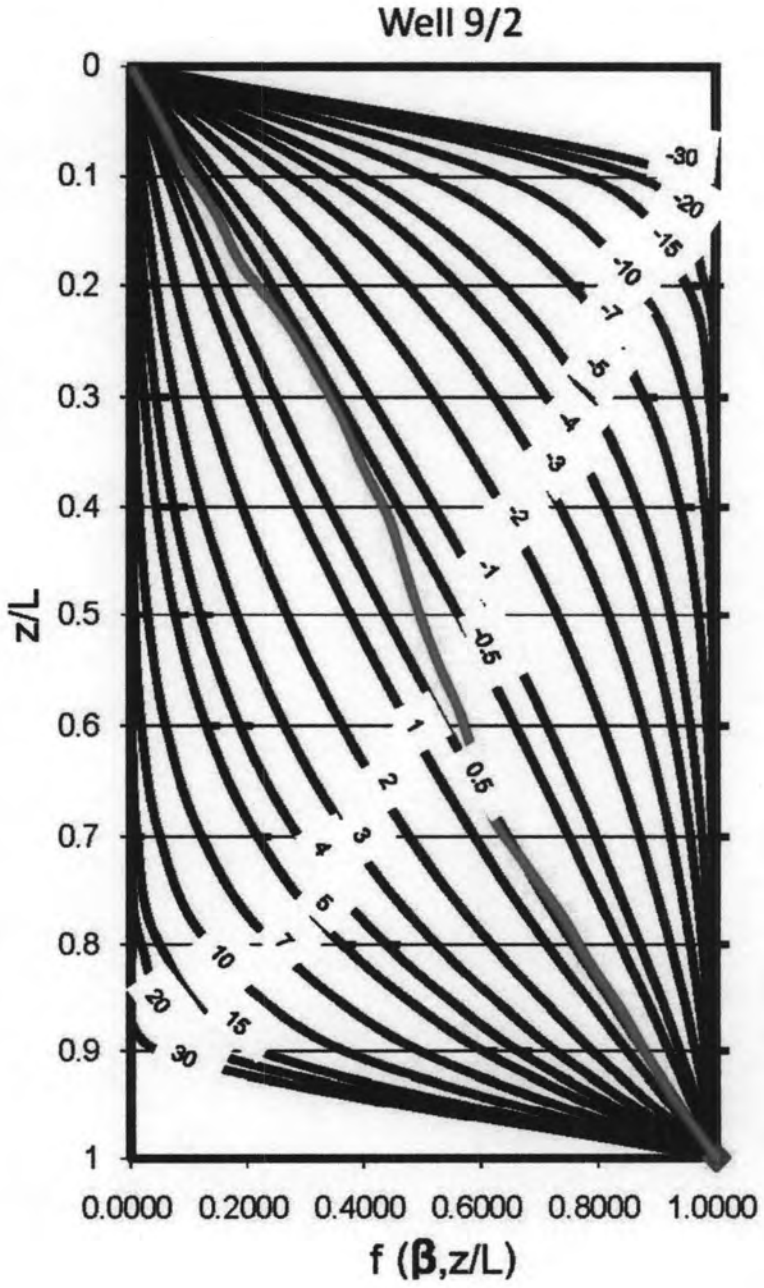
20
30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0.6
0.7
0.8
0.9
1
z/L
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
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-3
-2
-1
-0.5
1
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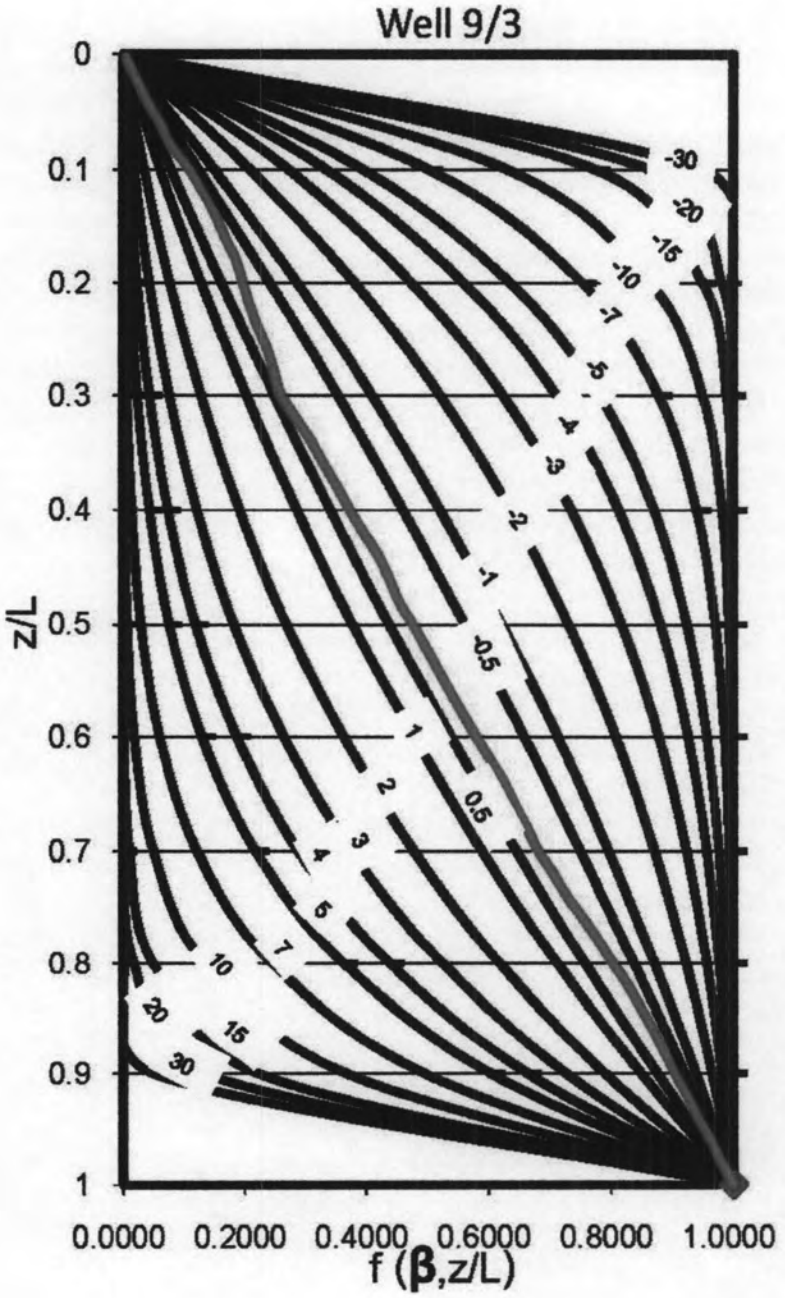
3
4
5
7
10
15
20
30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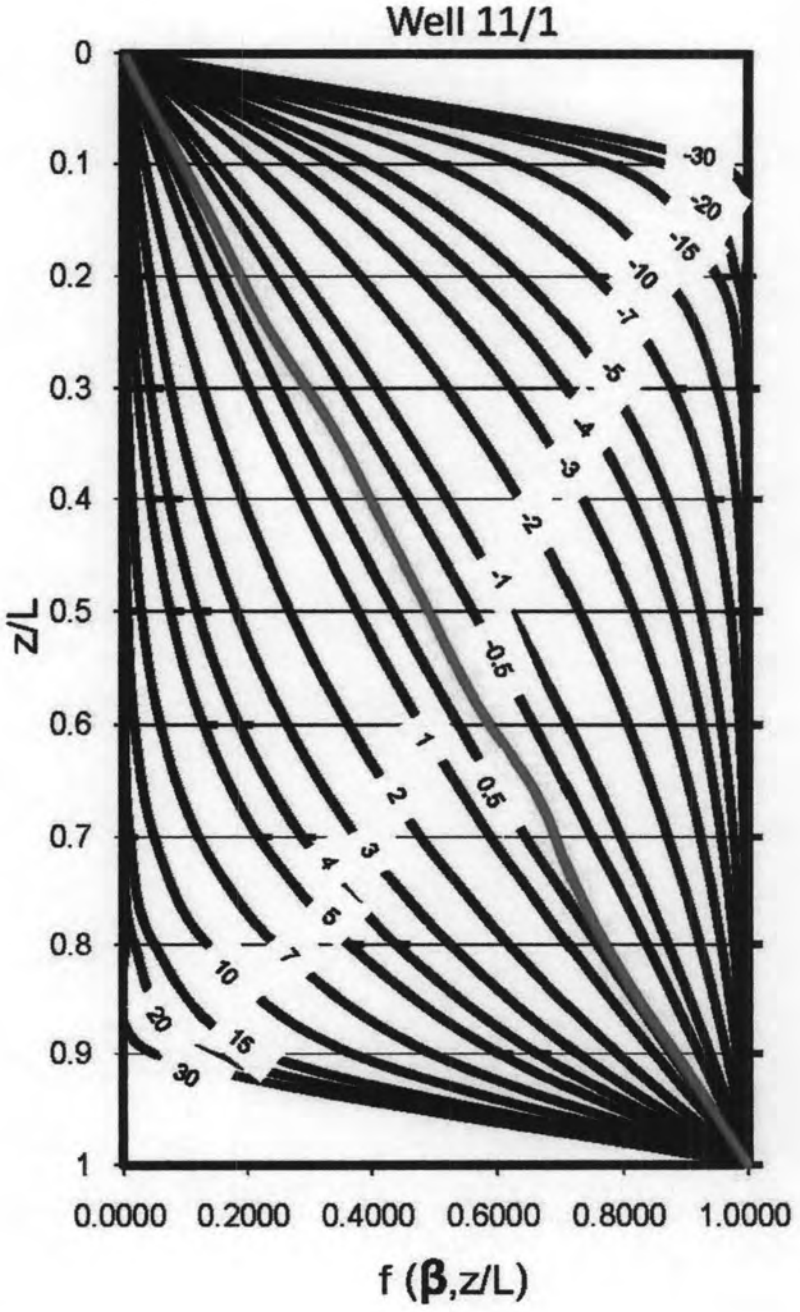
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
1
2
0.5
3
4
5
7
10
20
15
30


Well 11/1
z/L
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0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
-30
-20
-15
-10
-7
-5
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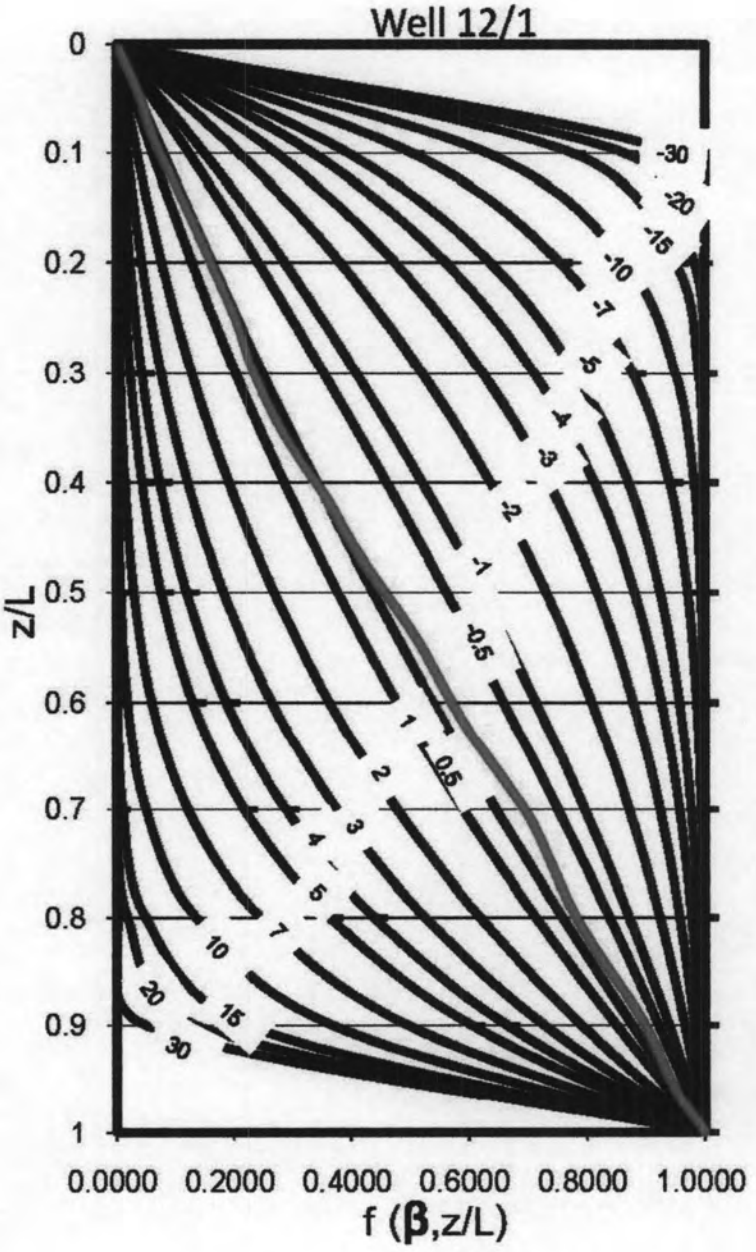
-3
-2
-1
-0.5
1
2
3
4
5
7
10
15
20
30


Well 12/1
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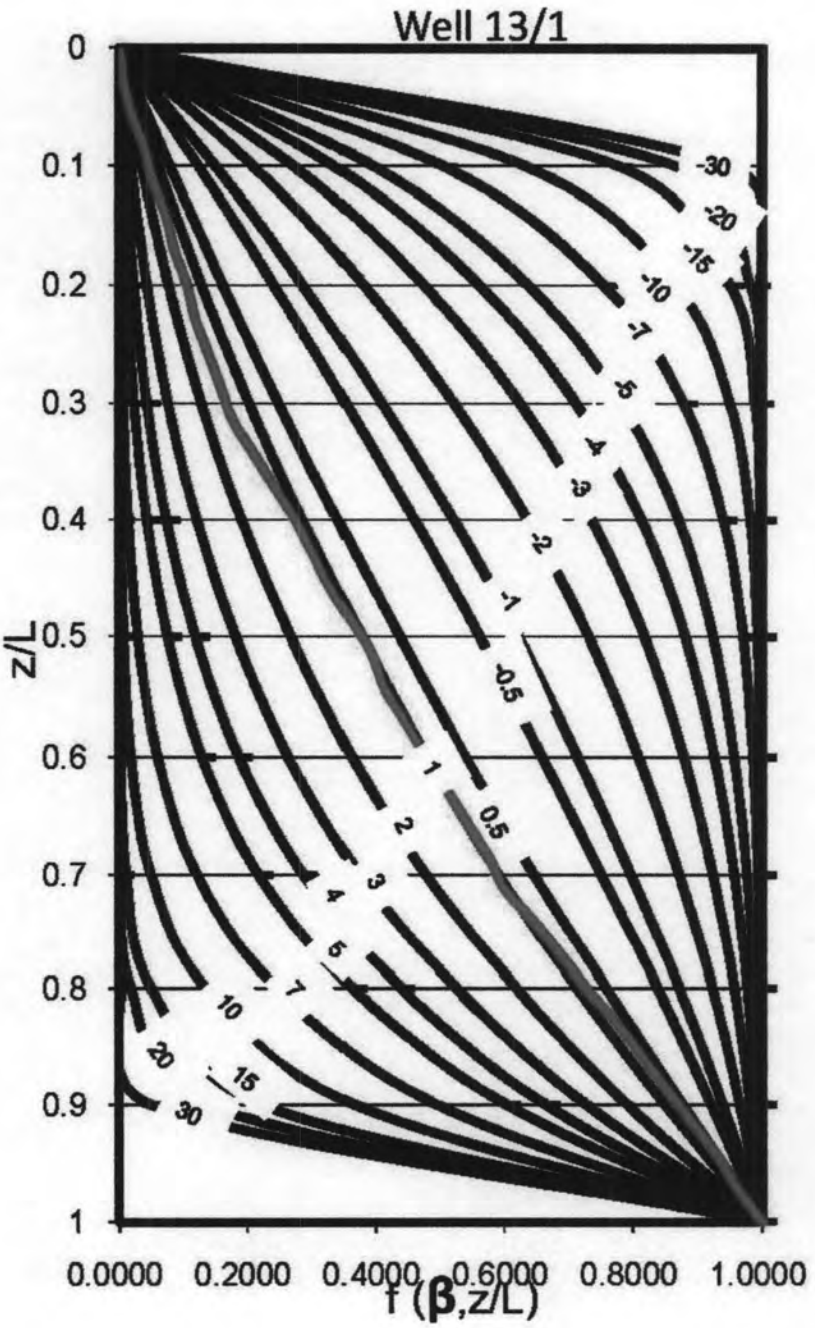
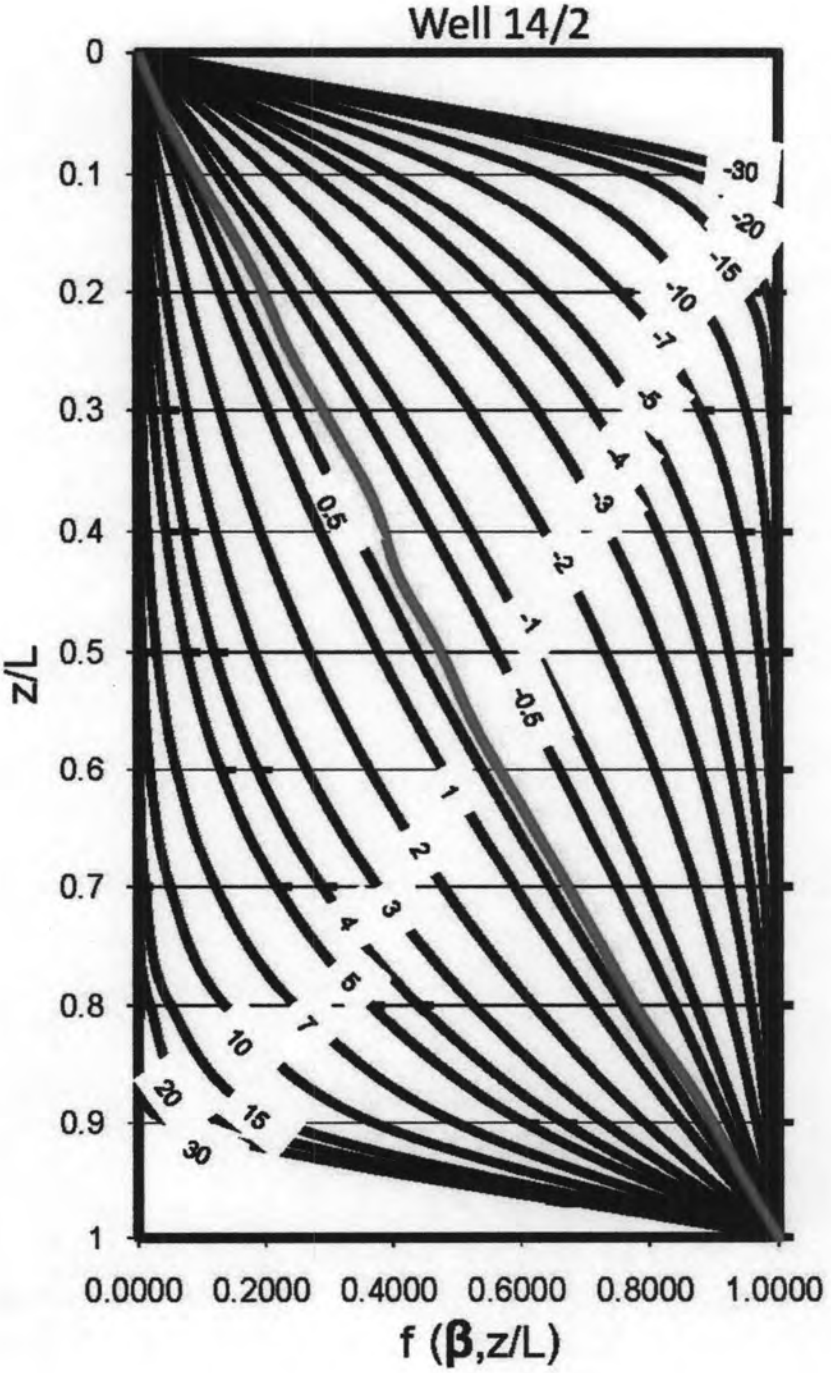
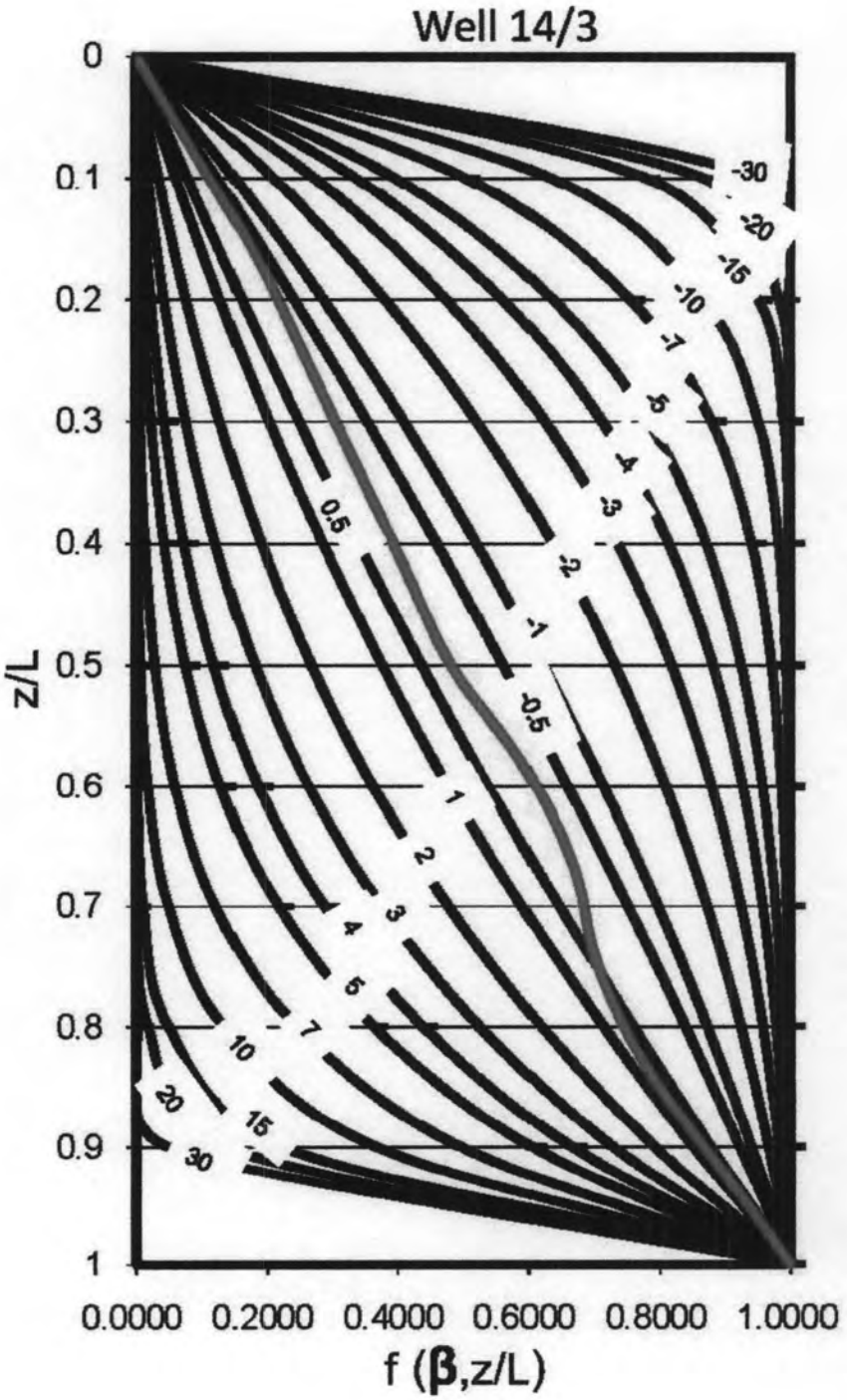
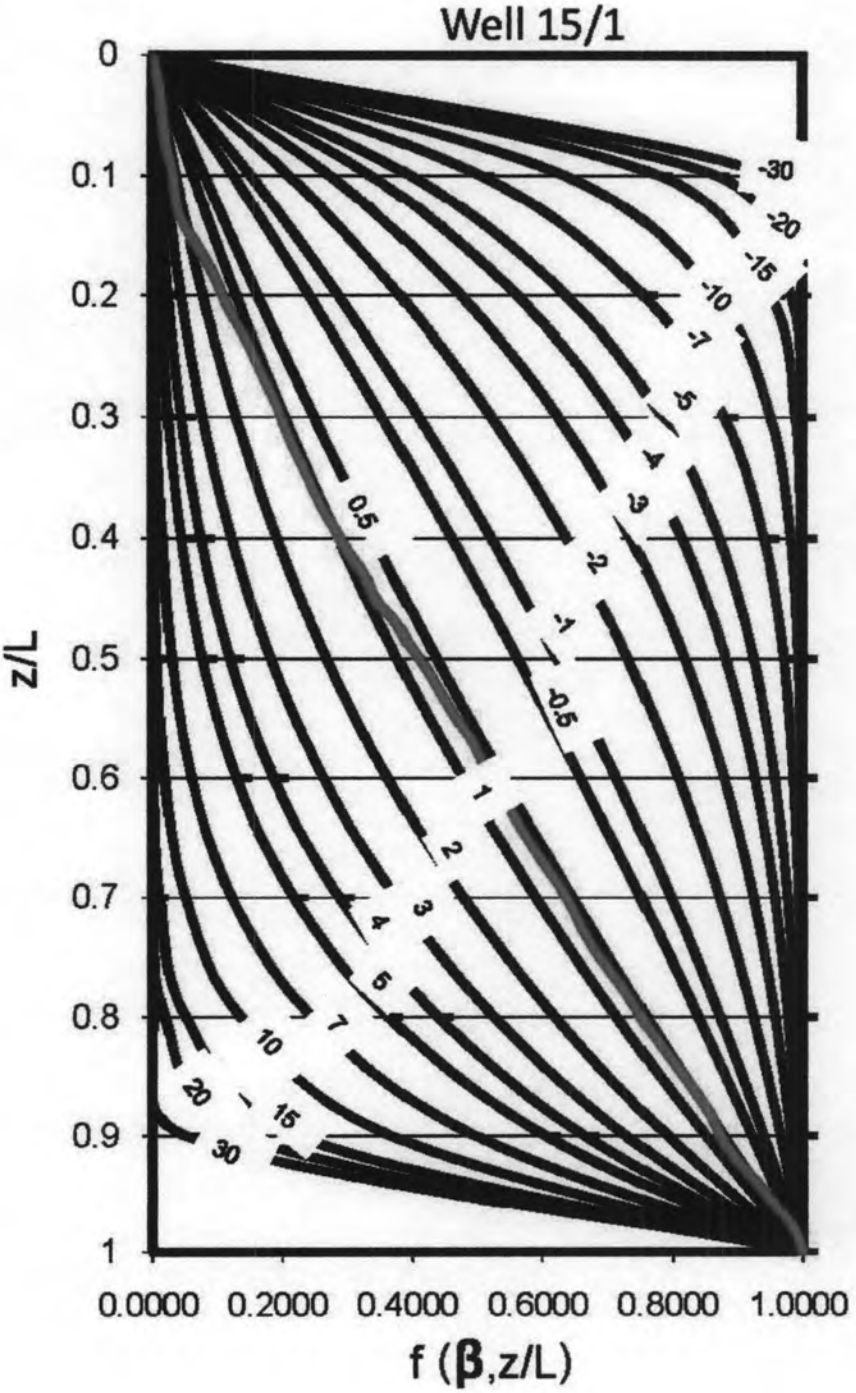
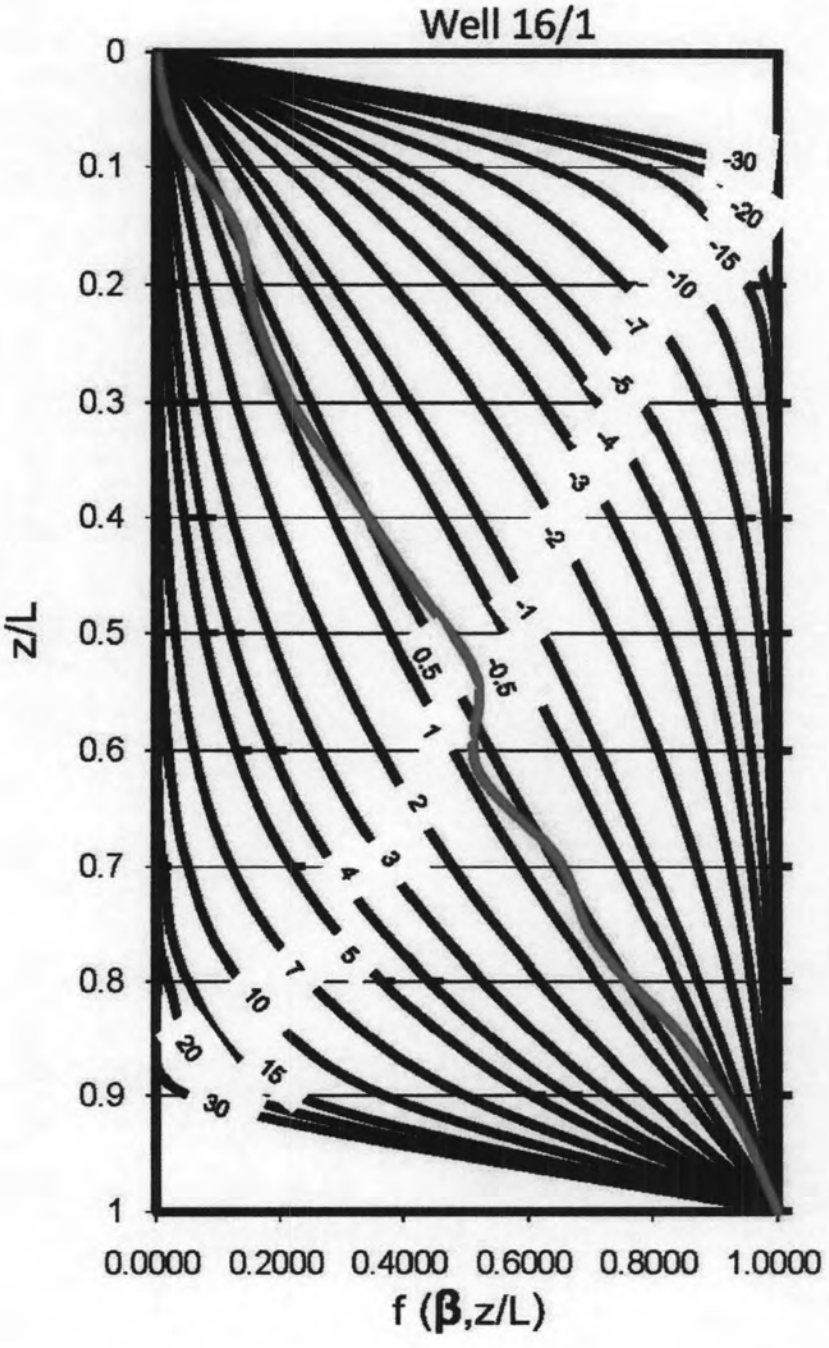
0.4
0.5
0.6
0.7
0.8
0.9
1
z/L
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
1
0.5
2
3
4
5
7
10
15
20
30
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)

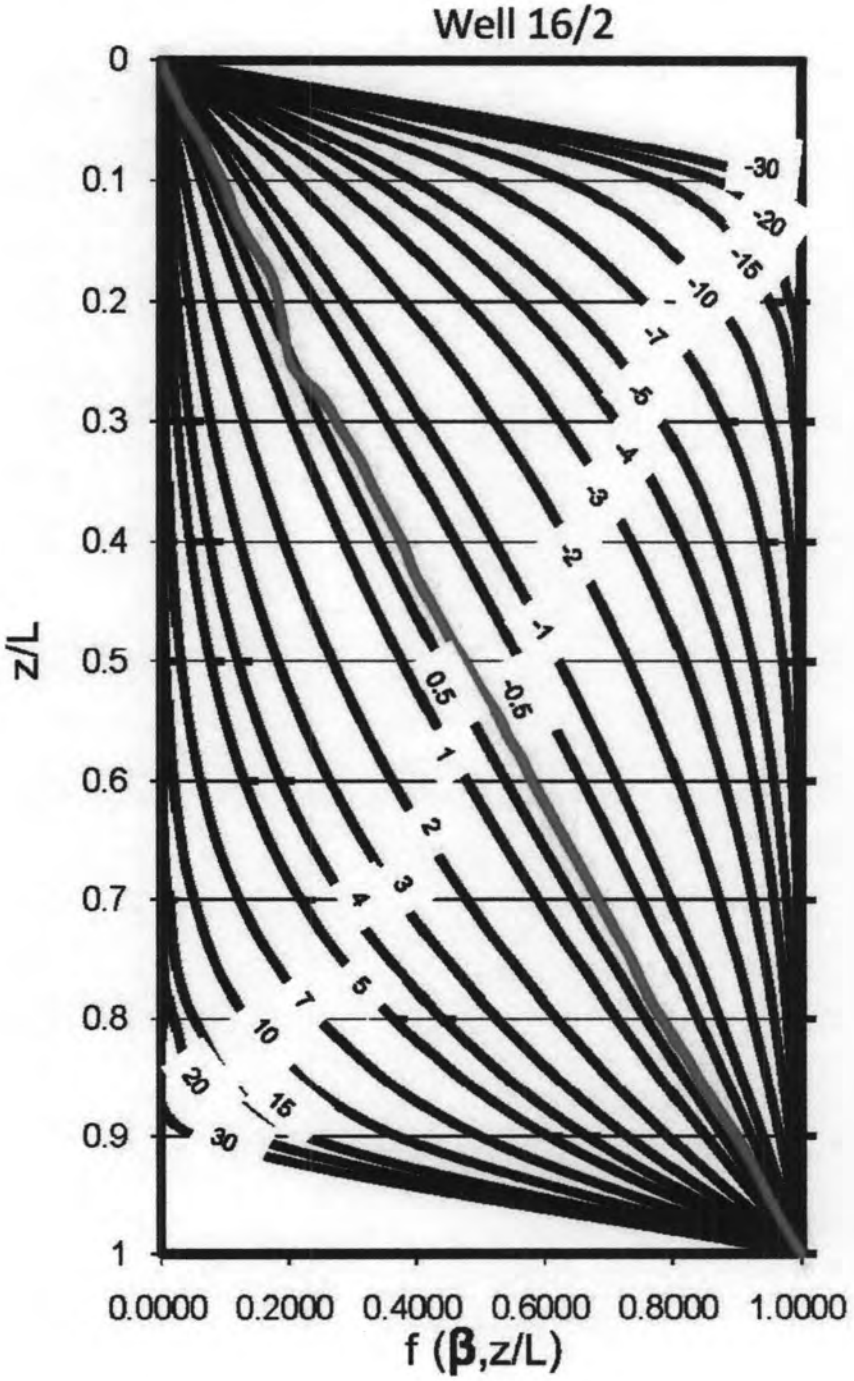

Well 13/1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
z/L
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
1
0.5
2
3
4
5
7
10
20
15
30

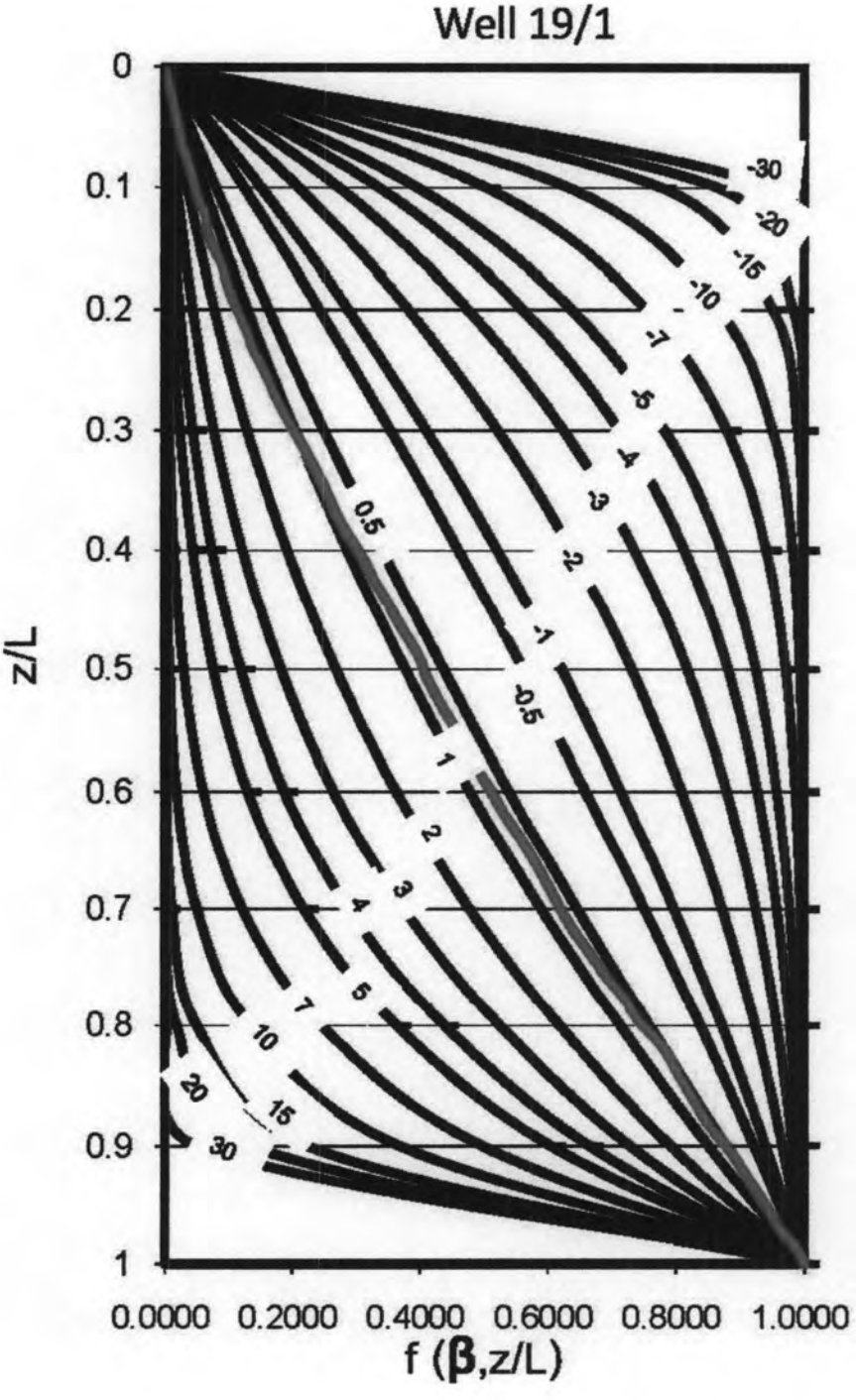

Well 14/2
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

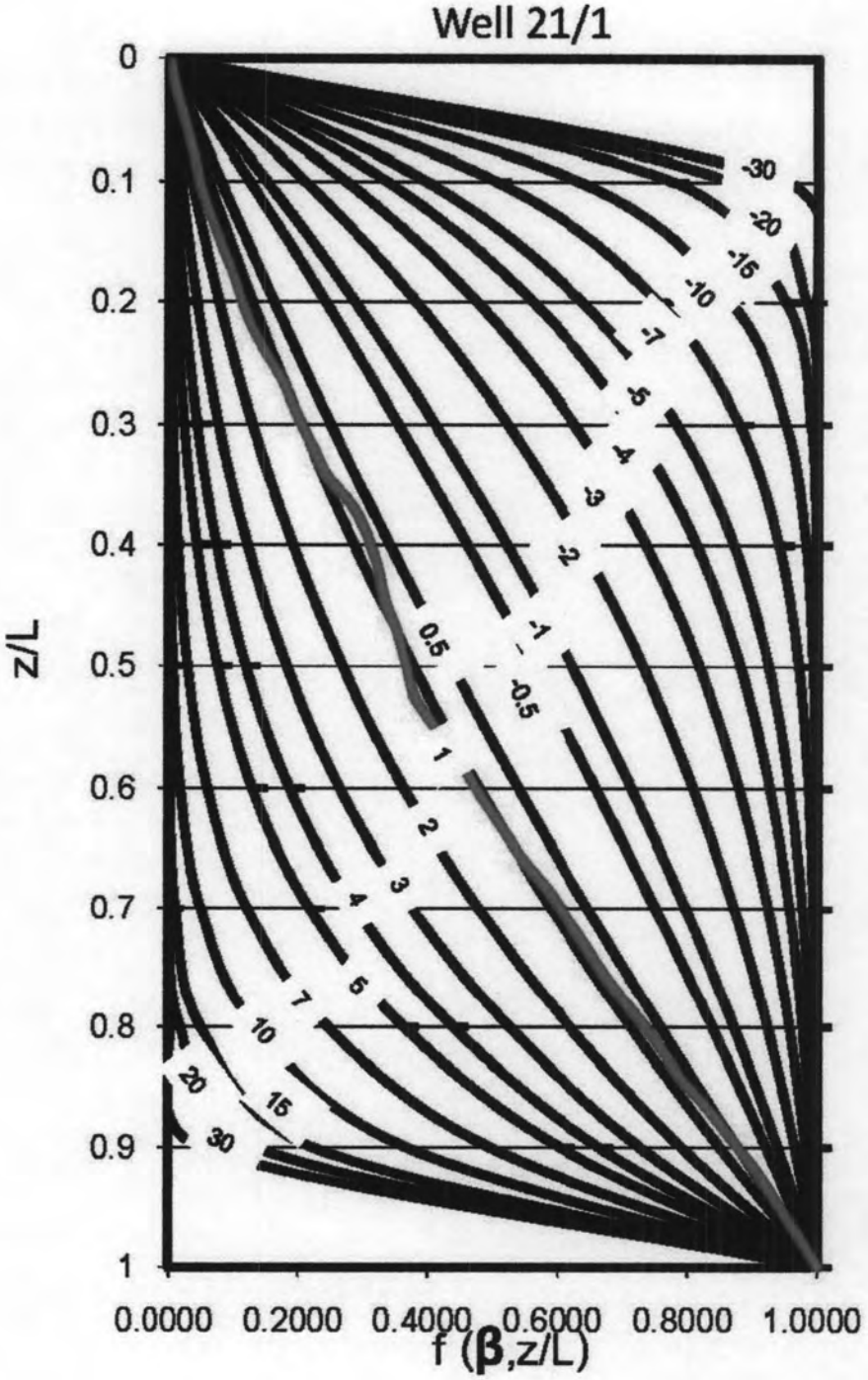

Well 14/3
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
z/L
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

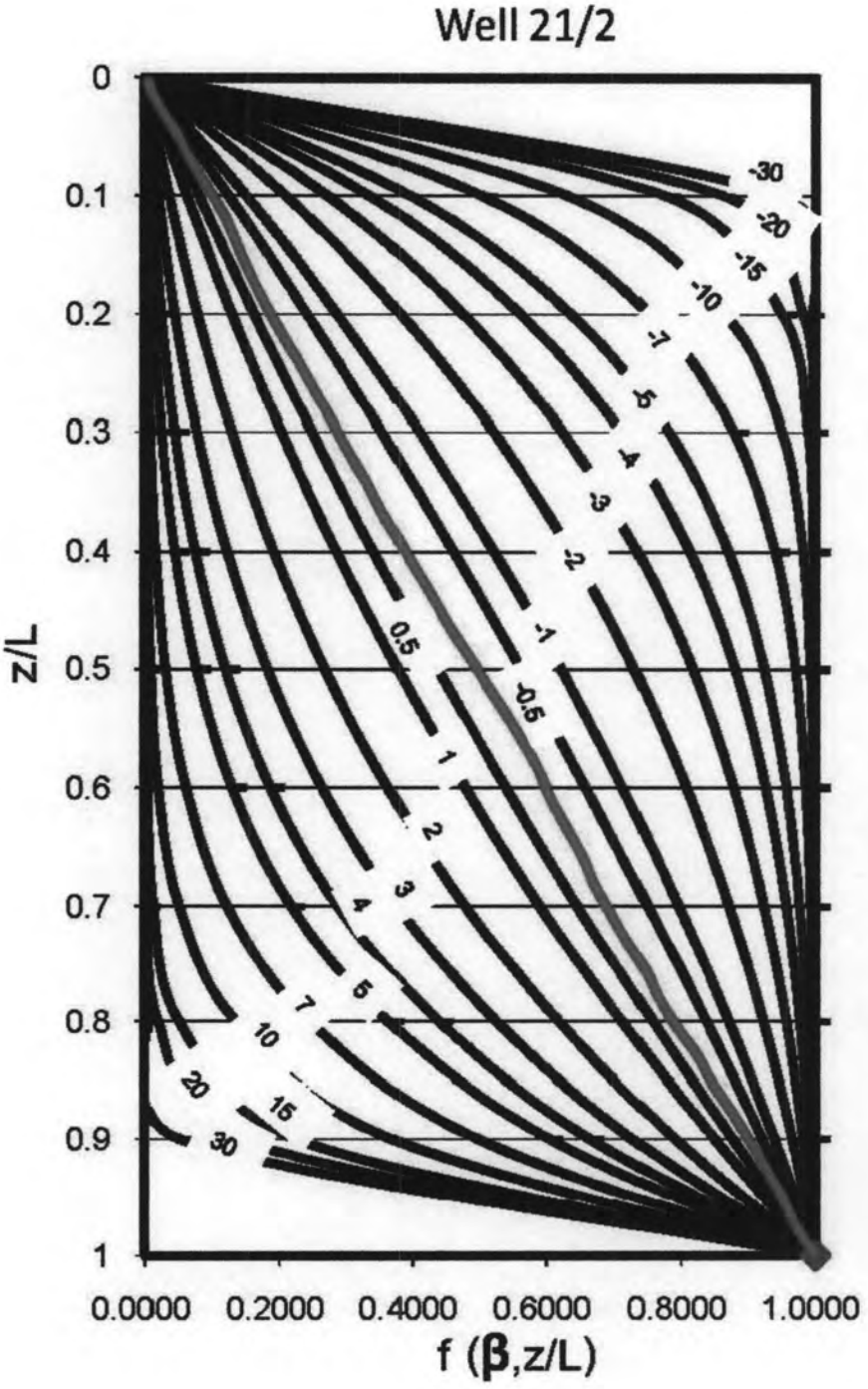

Well 15/1
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

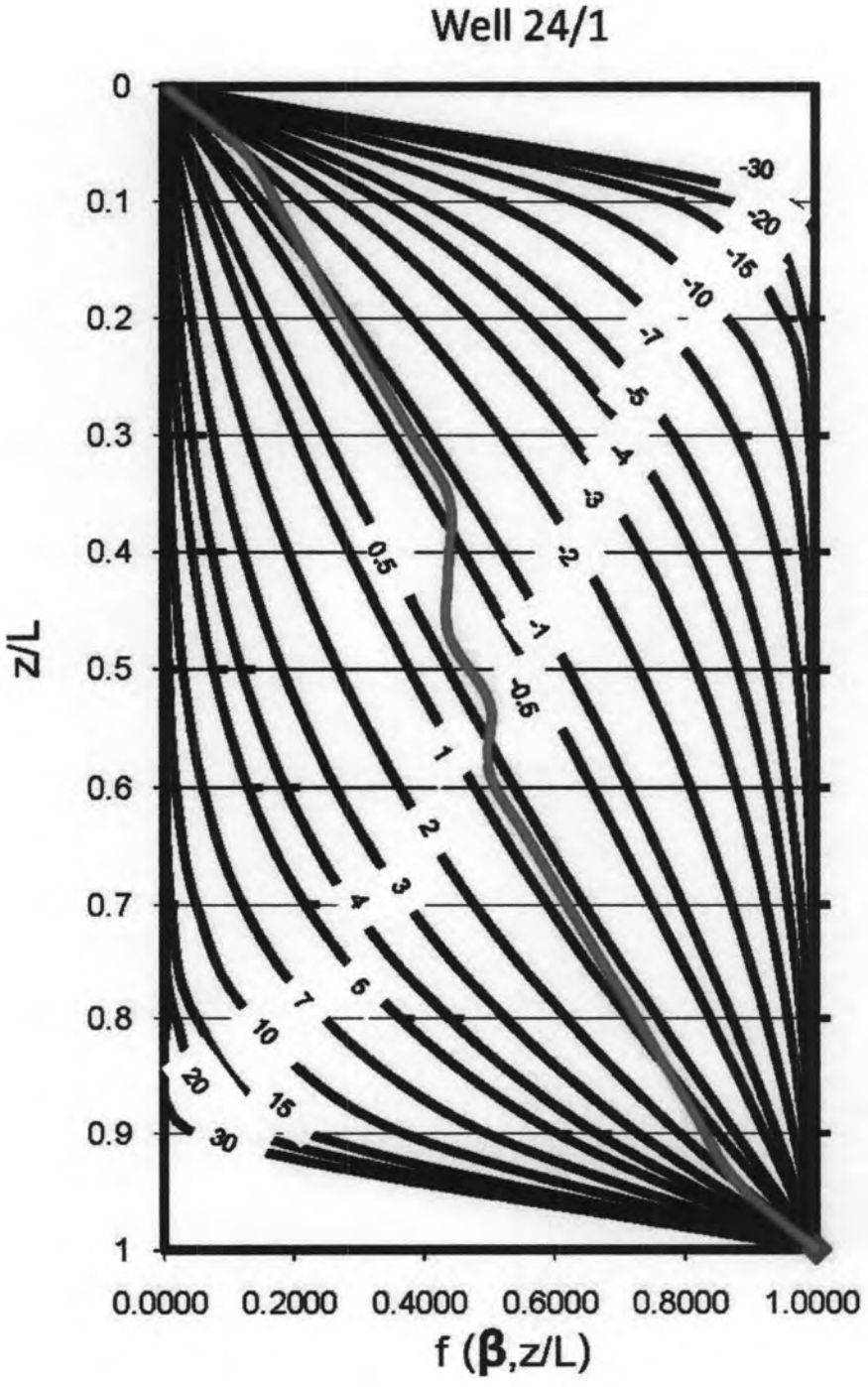

Well 16/1
z/L
f (β,z/L)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

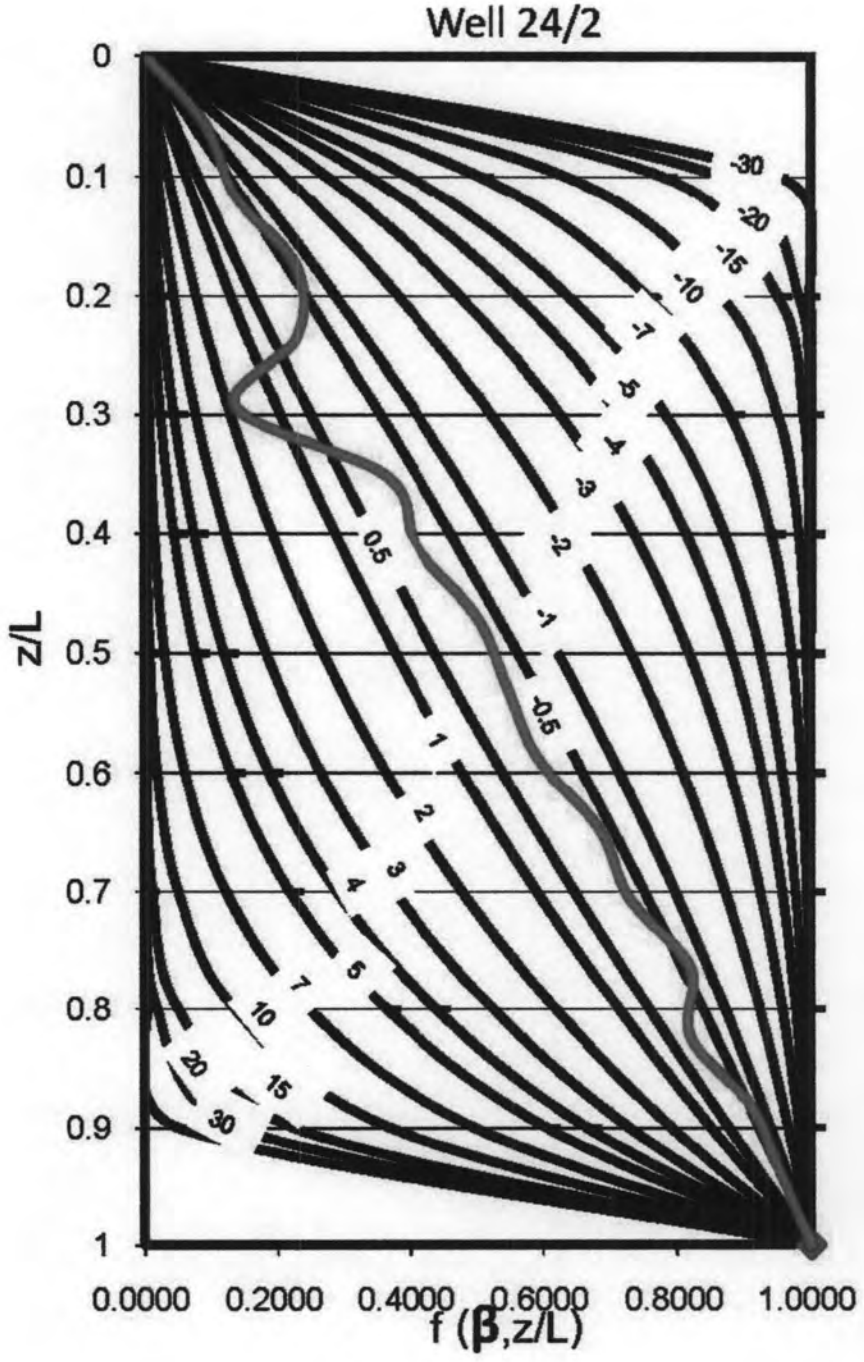

Well 16/2
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

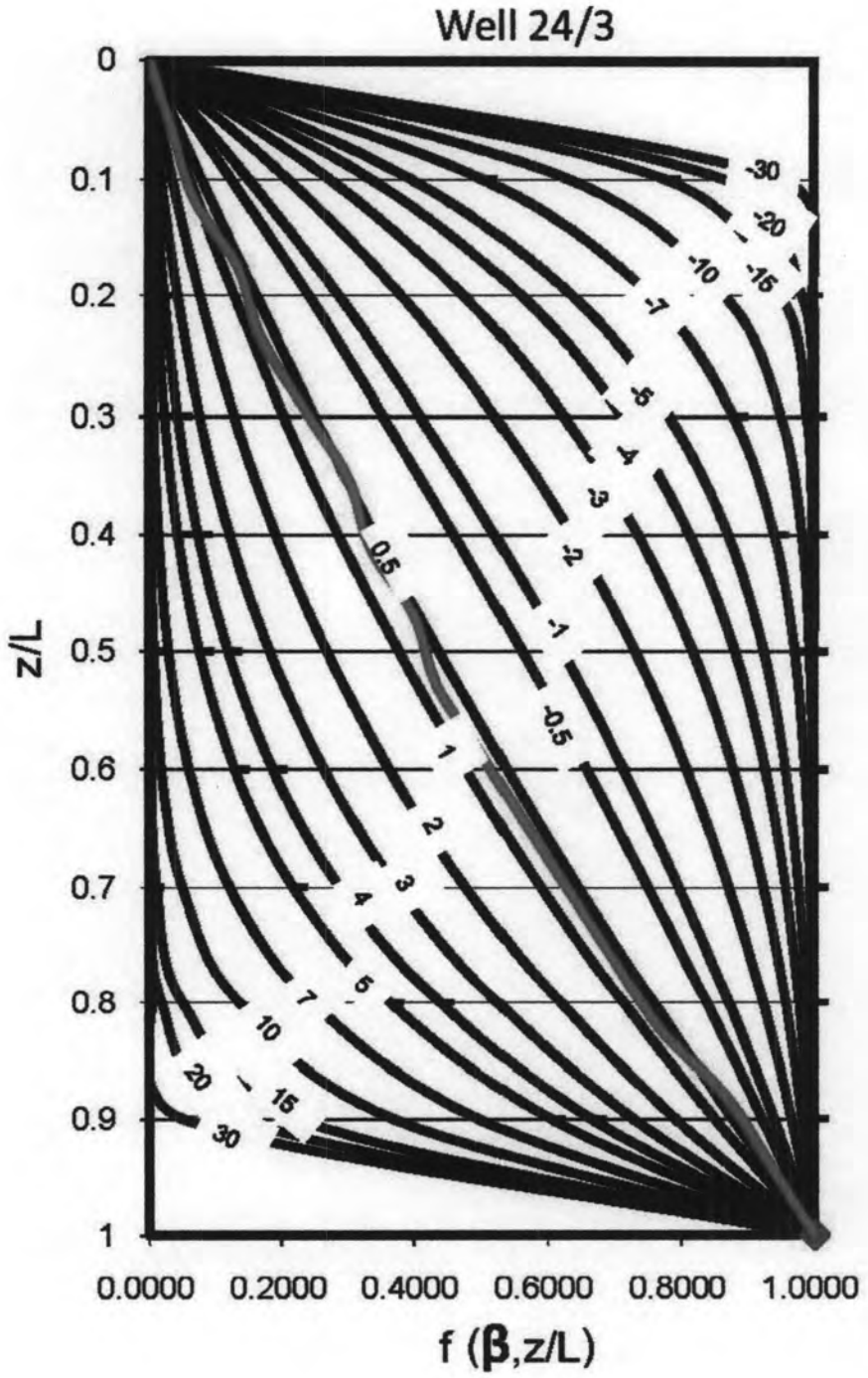

Well 19/1
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

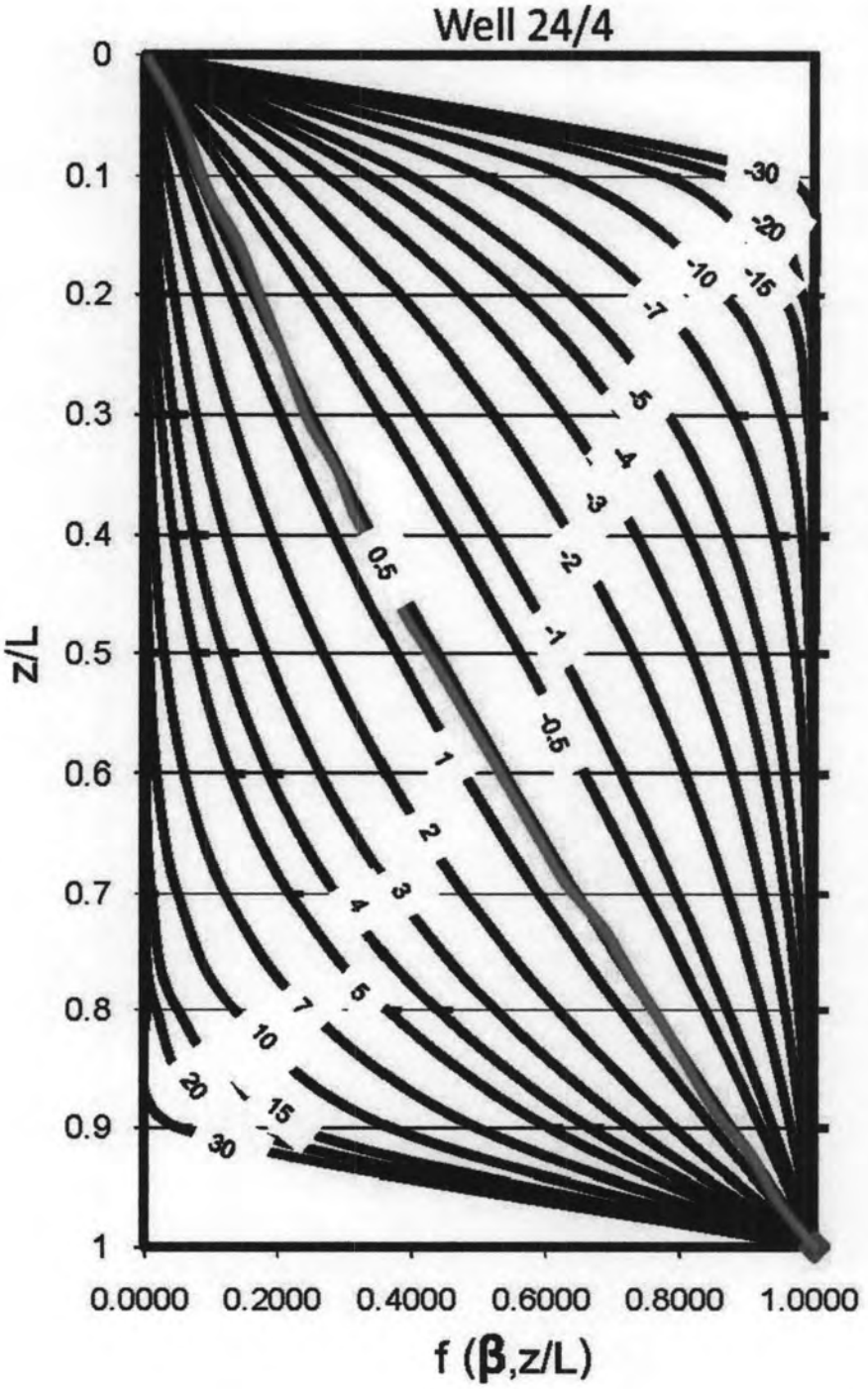

Well 21/1
z/L
f (β,z/L)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

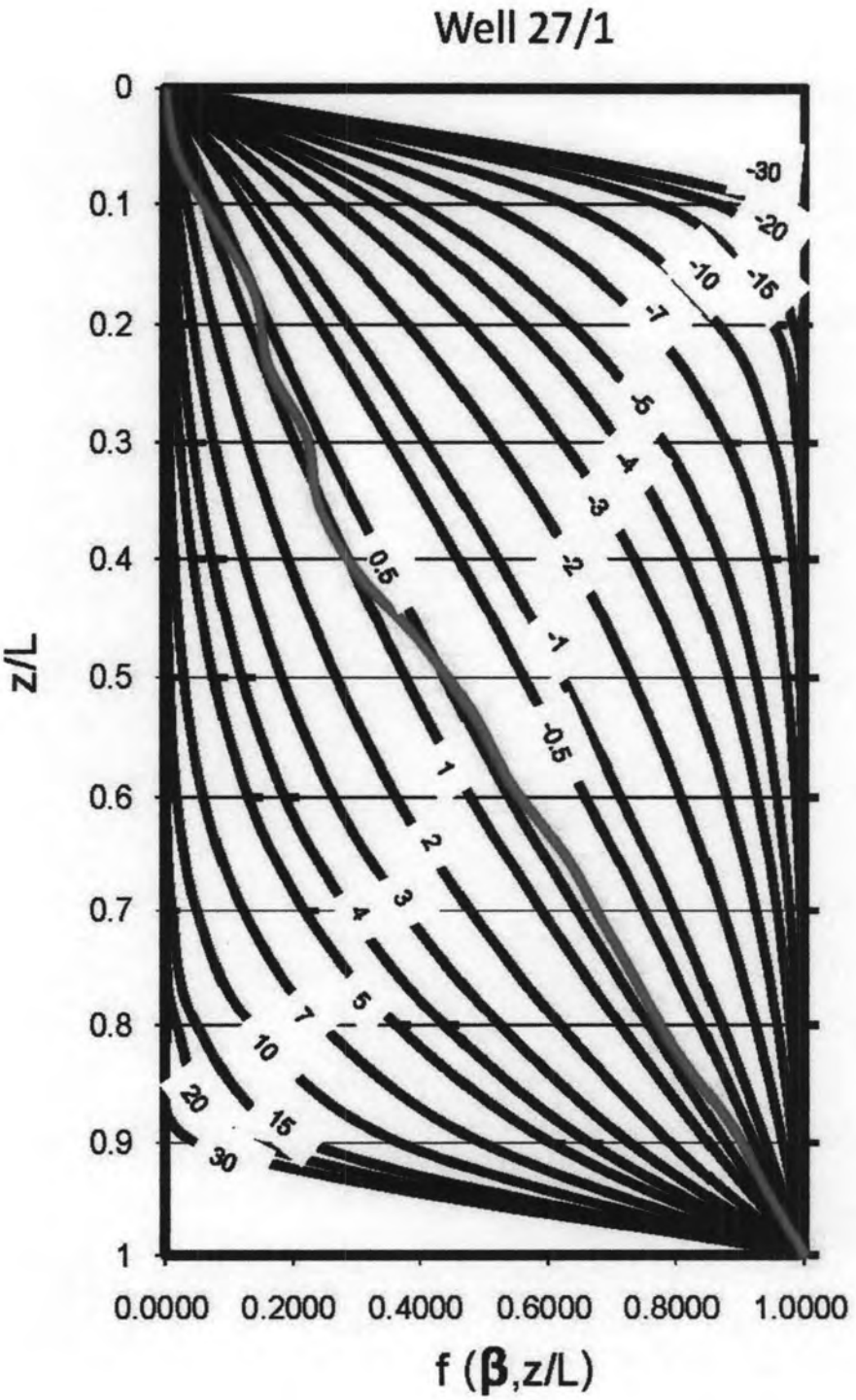

Well 21/2
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

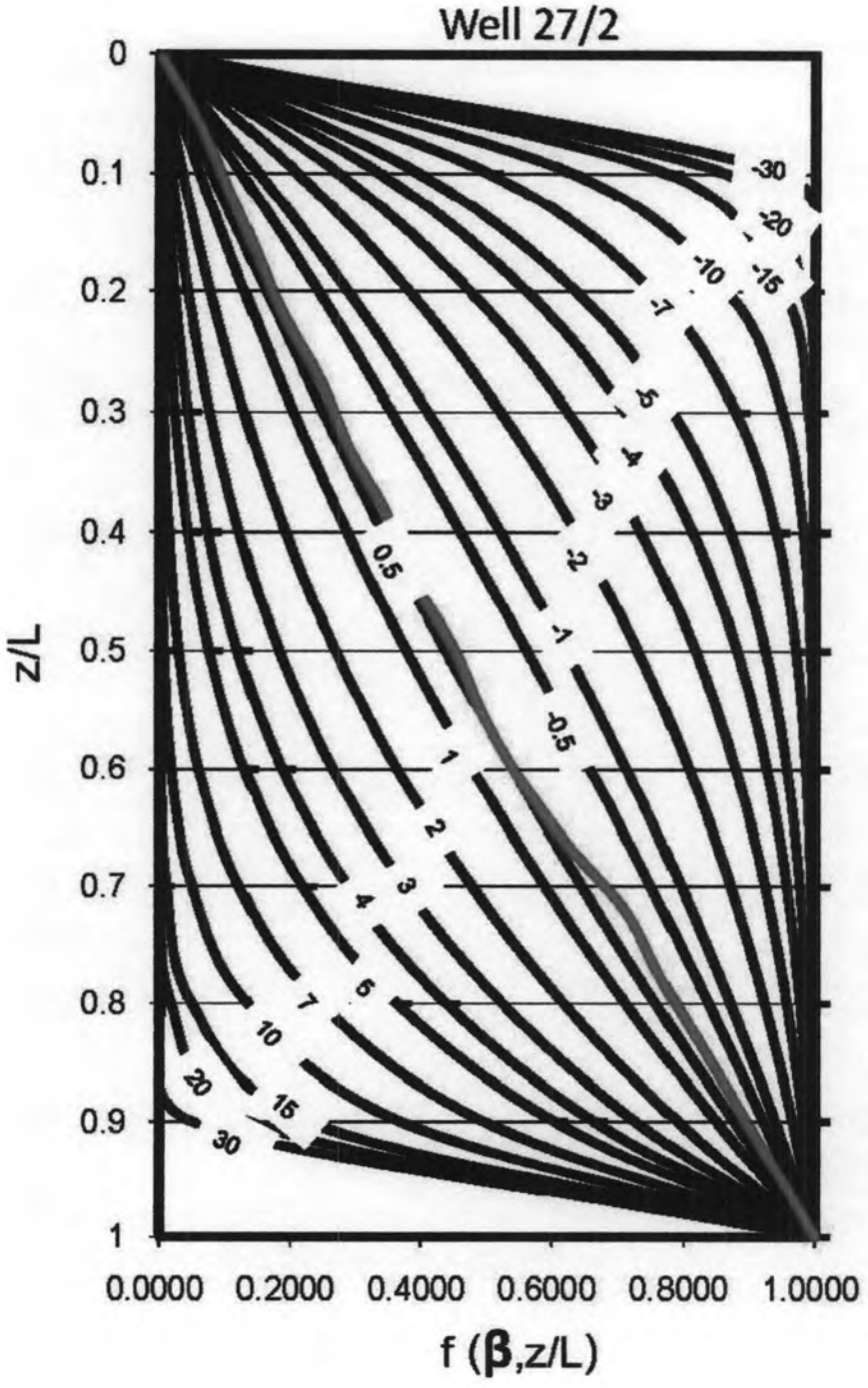

Well 24/1
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
6
7
10
15
20
30

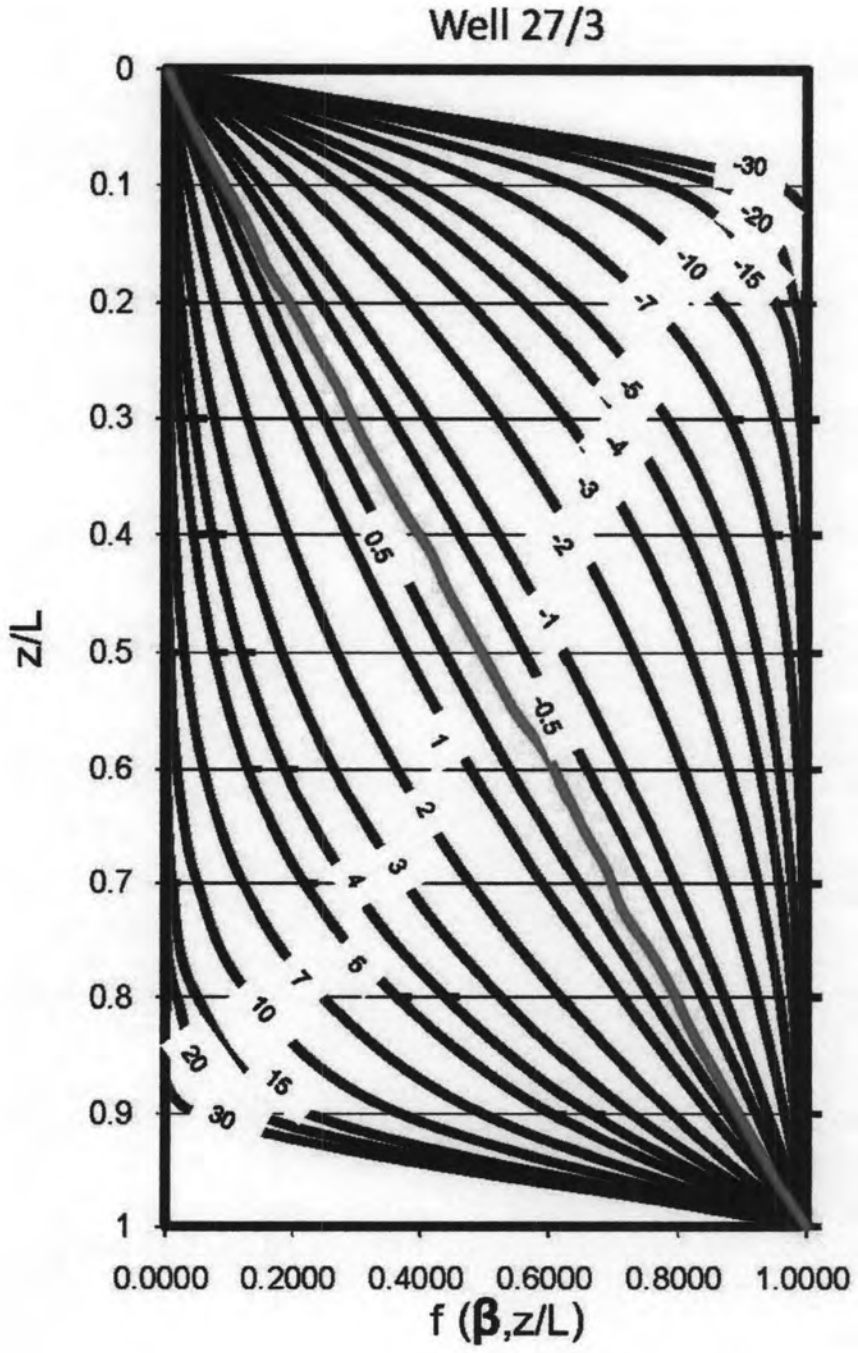

Well 24/2
z/L
f (β,z/L)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

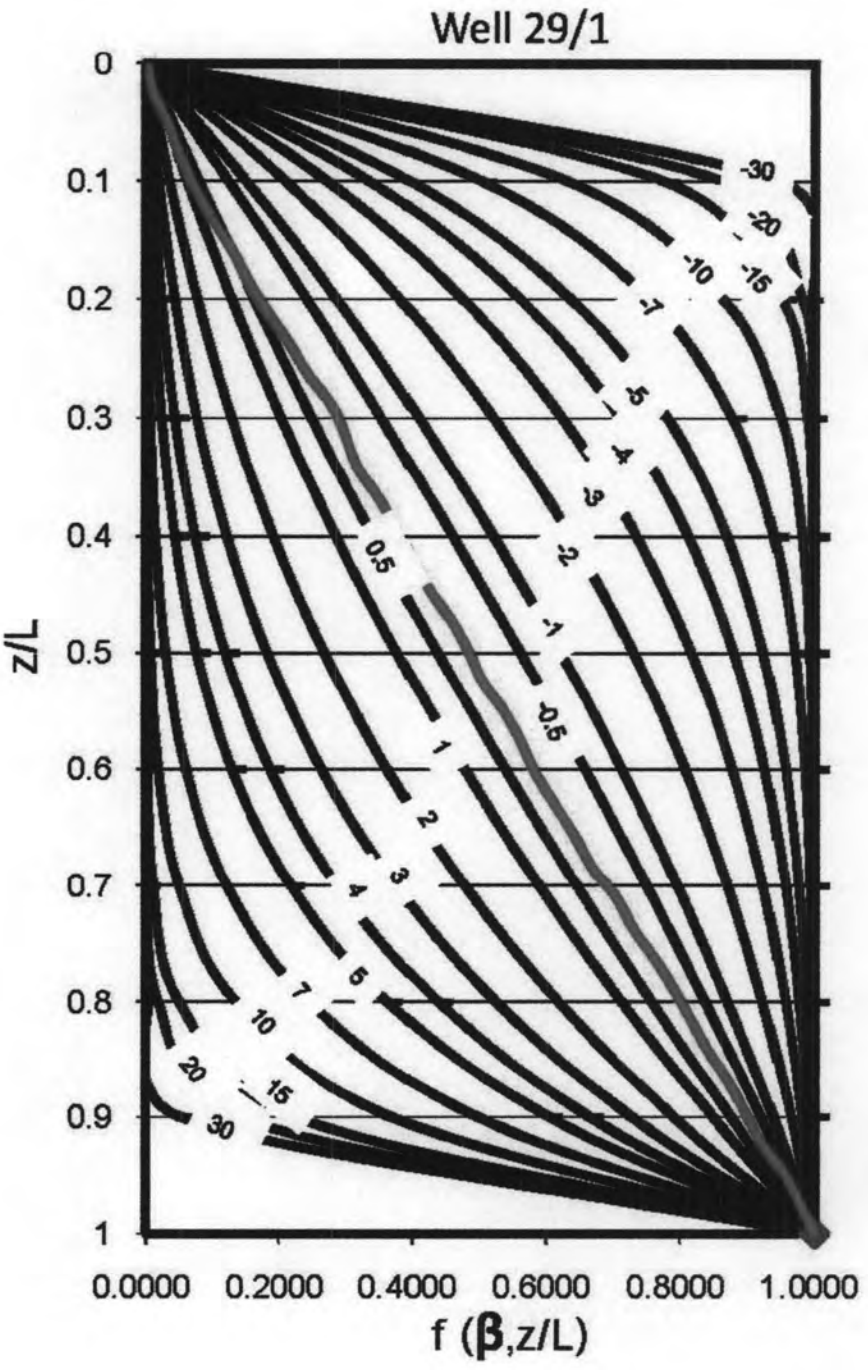

Well 24/3
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
z/L
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

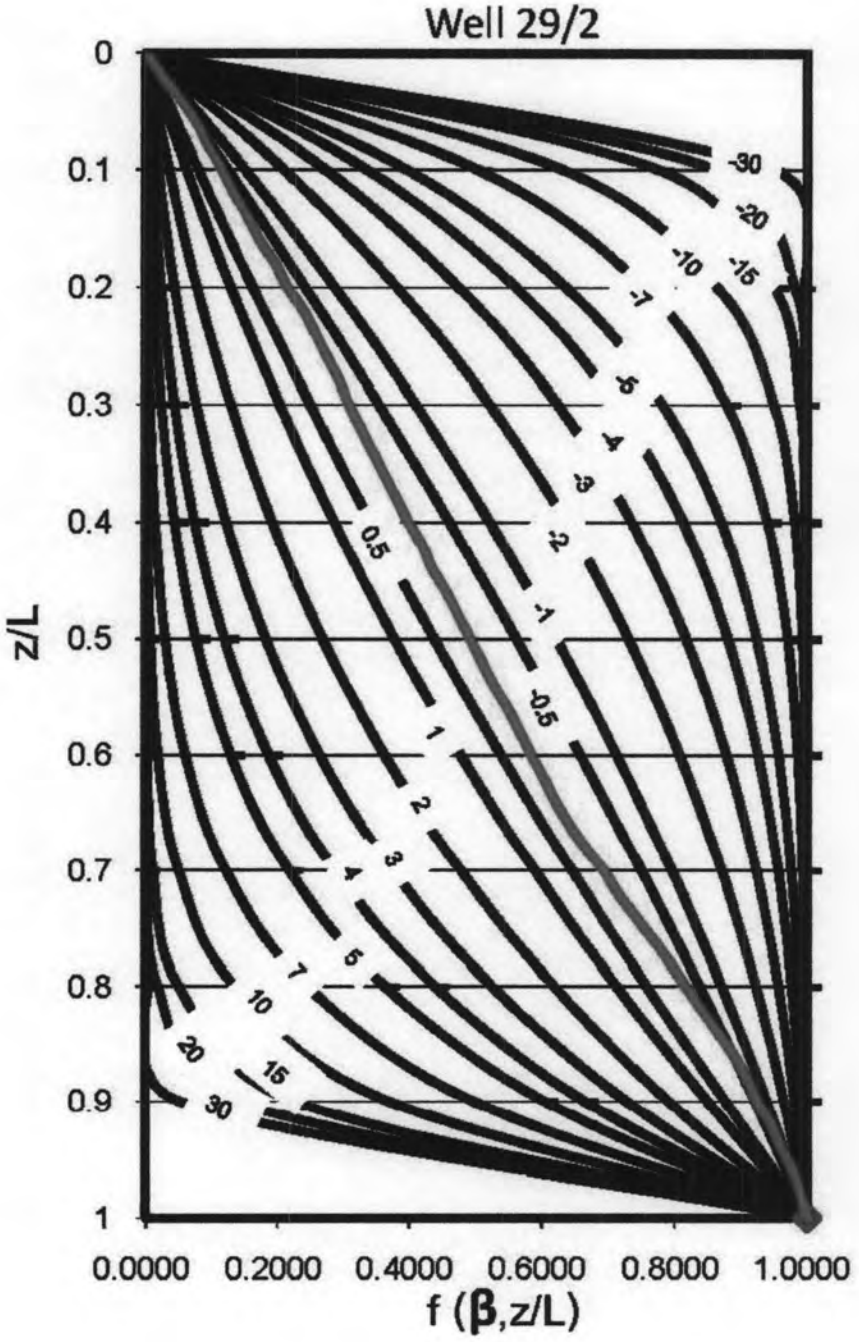

Well 24/4
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

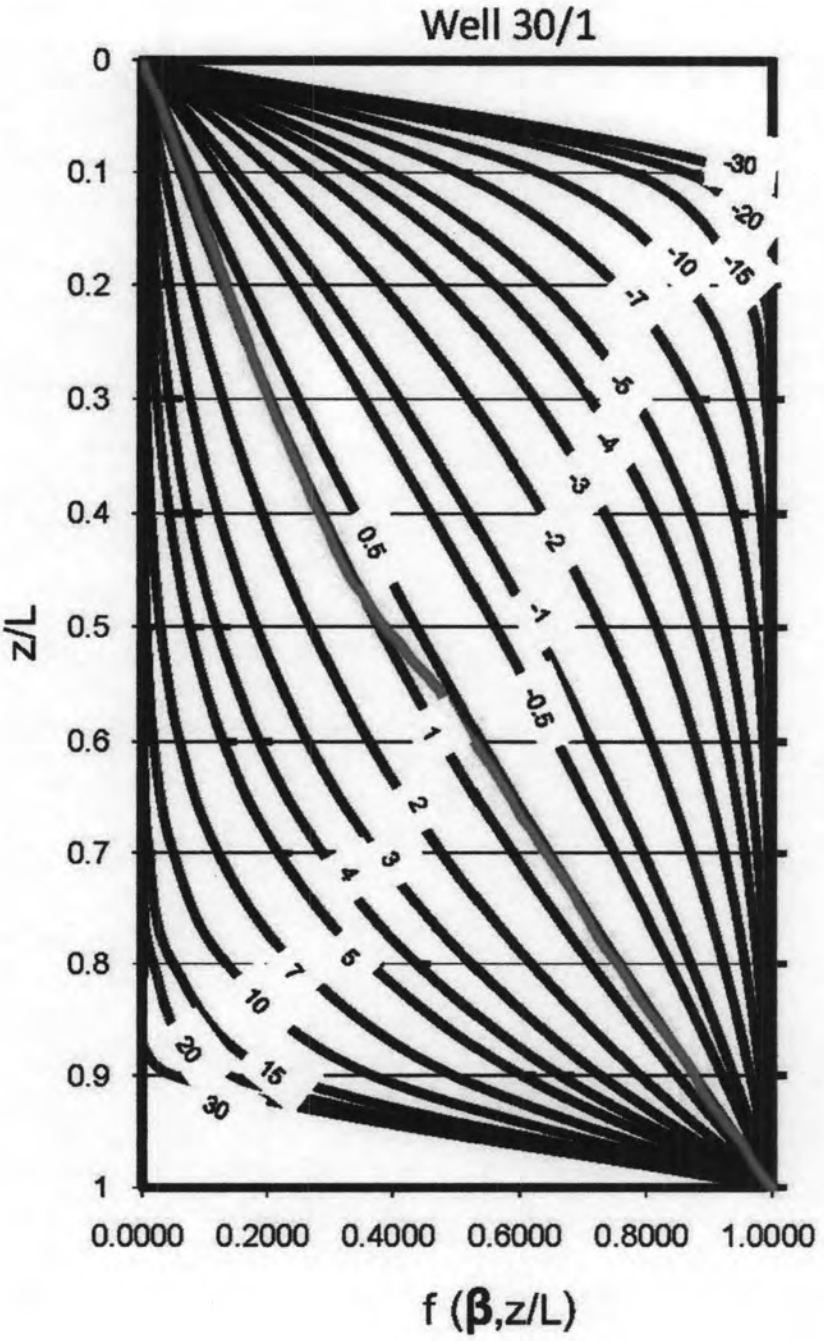

Well 27/1
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

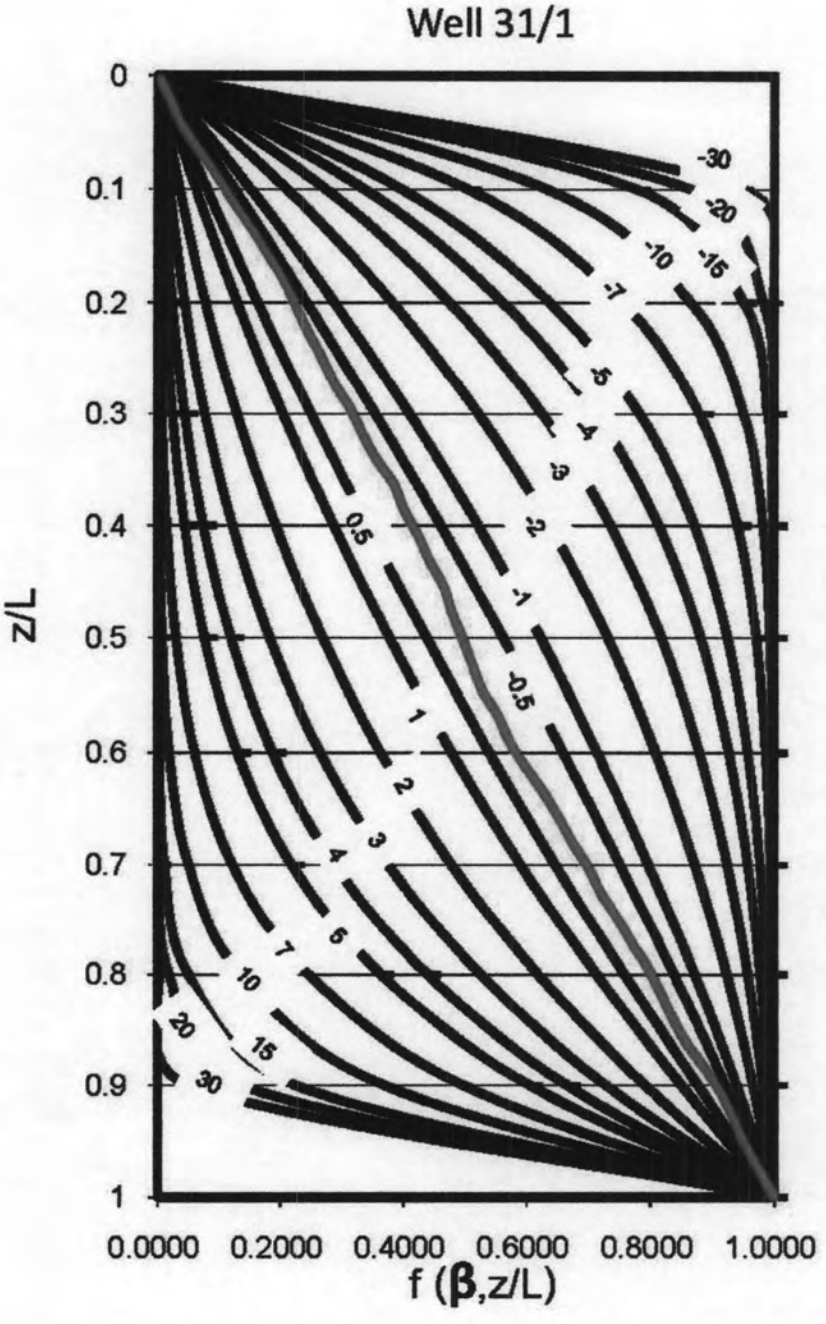

Well 27/2
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

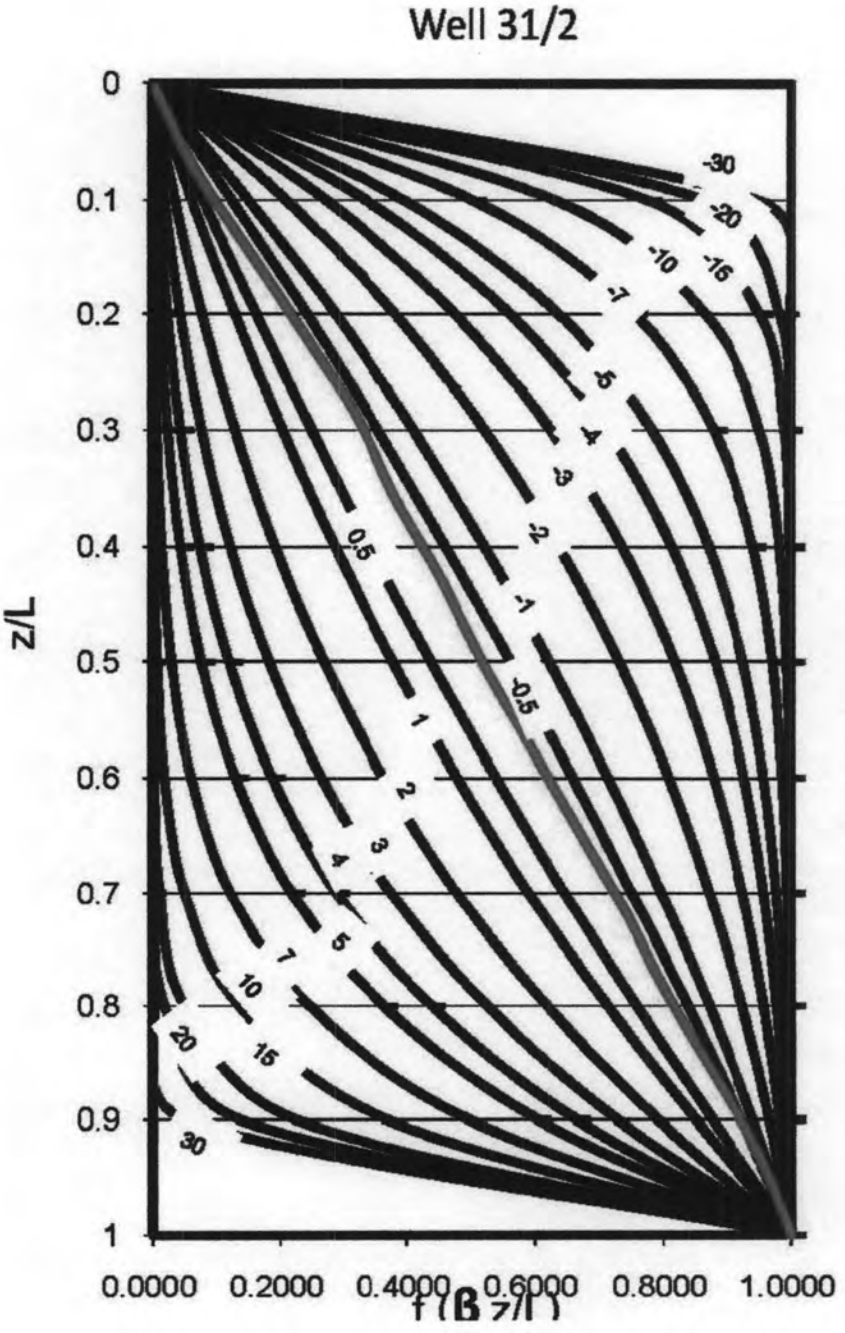

Well 27/3
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

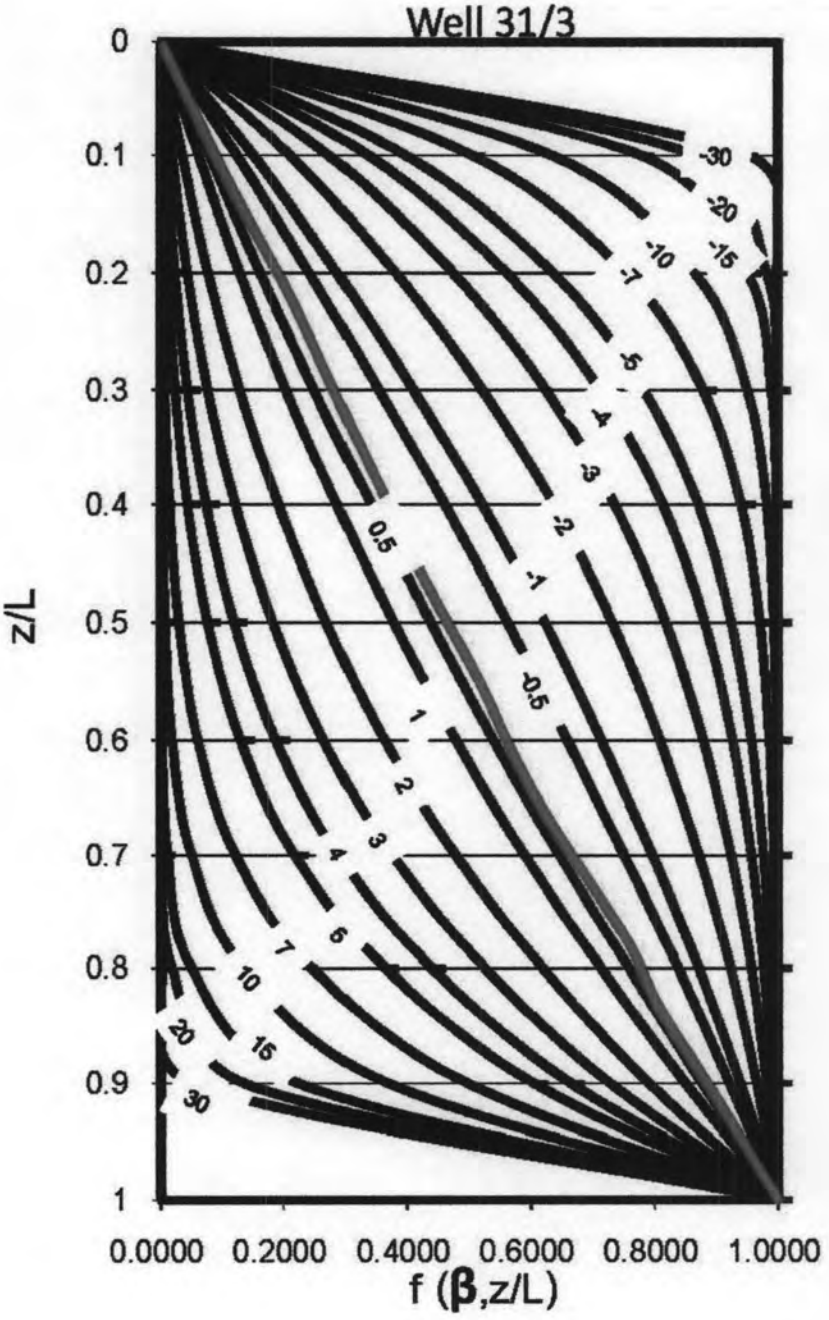

Well 29/1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
z/L
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

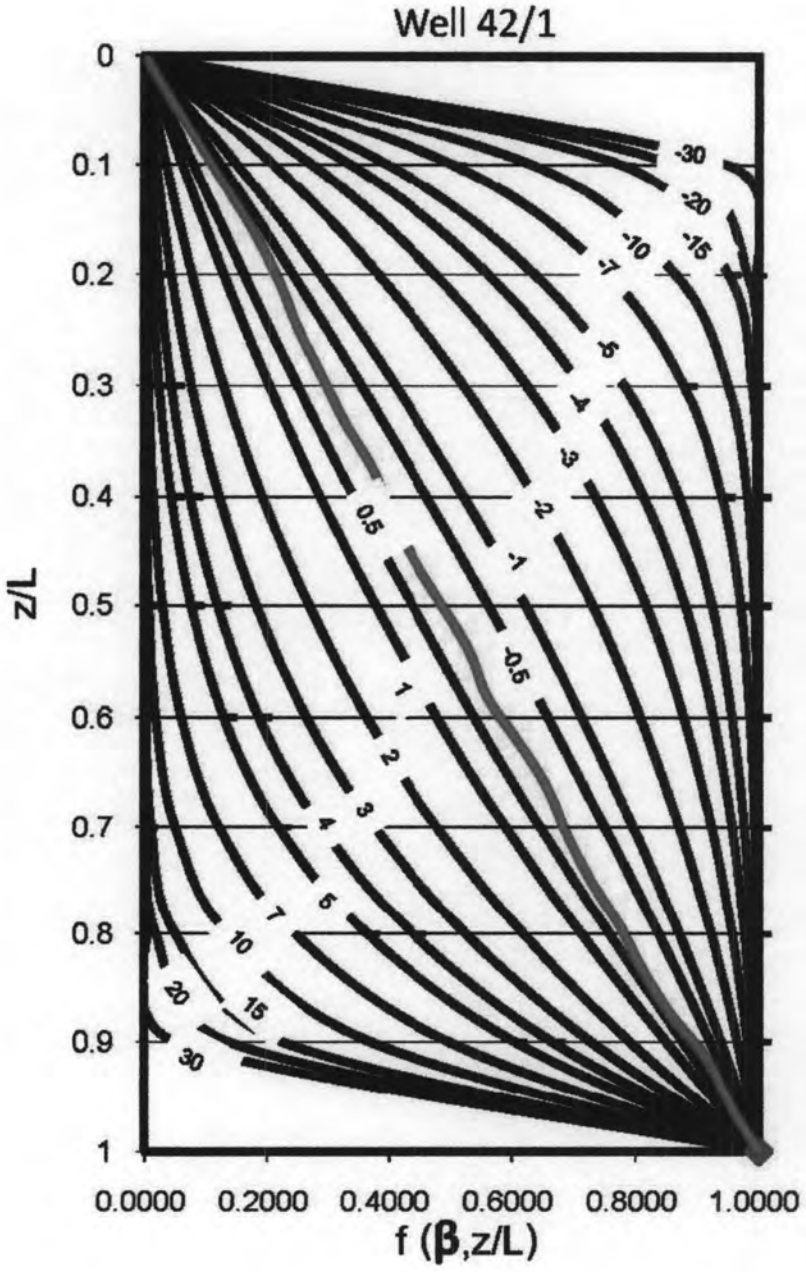

Well 29/2
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
z/L
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

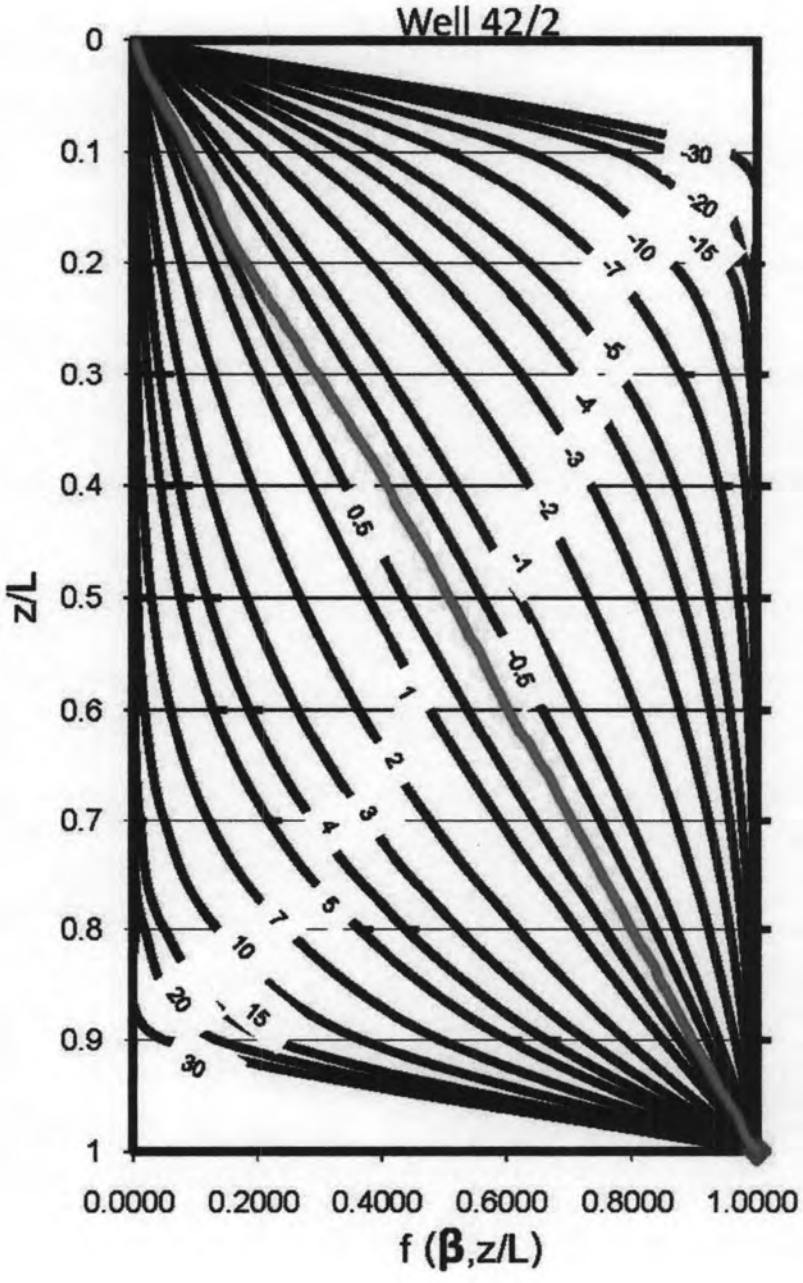

Well 30/1
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30


Well 31/1
z/L
f (β,z/L)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30


Well 31/2
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
-30
-20
-10
-15
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30


Well 31/3
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30


Well 42/1
z/L
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
f (β,z/L)
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30


Well 42/2
z/L
f (β,z/L)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0.0000
0.2000
0.4000
0.6000
0.8000
1.0000
-30
-20
-15
-10
-7
-5
-4
-3
-2
-1
-0.5
0.5
1
2
3
4
5
7
10
15
20
30

Appendix B3 Calculated vertical groundwater velocities (V_z) in cm/yr using β values, k, c_o, p_o, and L parameters

Well no.	β	Cw (cal/g)	pw (g/cm^3)	L (meter)	Percentage of k (0.002 cal/cm sec °C)	Percentage of k (0.004 cal/cm sec °C)	Vz (k=0.002) cm/yr	Vz (k=0.004) cm/yr	Vz (k=0.002+0.004) cm/yr
2	0.268	1	1	15	60	40	3.39104523	4.521393641	7.91
2	0.059	1	1	8	0	100	0	4.688296825	4.68
2	0.09	1	1	9	60	40	1.906137979	2.541517306	4.44
4	0.883	1	1	20	0	100	0	27.85241811	27.852
4	0.127	1	1	26	0	100	0	3.101392056	3.101
5	0.327	1	1	12	30	70	2.585204319	12.06428682	14.64
5	-0.26	1	1	23	0	100	0	-7.143337538	-7.143
5	-0.491	1	1	25	70	30	-4.342563245	-3.722197067	-8.064
6	1.36	1	1	34	70	30	8.855521849	7.590447299	16.44
8	0.362	1	1	55	0	100	0	4.158406487	4.158
9	-0.008	1	1	22	5	95	-0.006039468	-0.229499782	-0.235
9	0.096	1	1	22	0	100	0	2.757743505	2.757
9	0.011	1	1	28	10	90	0.058156775	1.046821948	1.105
11	0.154	1	1	12	30	70	1.219670167	5.691794111	6.91
12	0.37	1	1	24	0	100	0	9.916252094	9.91
13	1.156	1	1	35	20	80	2.084677391	16.67741913	18.76
14	0.624	1	1	12	0	100	0	32.80745223	32.807
14	0.193	1	1	16	80	20	1.526434236	3.052868473	4.579
14	0.167	1	1	12	5	95	8.385140852	0.220661601	8.605
15	0.95	1	1	51	0	100	0	11.80110157	11.8
15	0.148	1	1	24	40	60	0.778952692	2.336858077	3.11
16	0.53	1	1	13	0	100	0	25.96197579	25.96
16	0.22	1	1	62	0	100	0	2.338986499	2.33
19	0.913	1	1	73	0	100	0	7.888541998	7.8
21	0.98	1	1	38	10	90	1.22607494	13.89551598	15.1
21	0.092	1	1	41	70	30	0.255522534	0.219019315	0.47
24	0.837	1	1	17	70	30	10.87312106	9.319818051	20.19
24	0.503	1	1	17	20	80	1.867007894	14.93606315	16.8
24	0.681	1	1	17	70	30	8.848307148	7.58426327	16.43
24	0.497	1	1	26	0	100	0	12.06435684	12.06
27	0.396	1	1	17	20	80	2.212172394	17.69737915	19.9
27	0.275	1	1	18	0	100	0	9.636762257	9.64
27	0.106	1	1	29	0	100	0	2.305546457	2.3
29	0.233	1	1	38	15	85	0.290631737	3.293826355	3.584
29	-0.168	1	1	50	70	30	-0.742480182	-0.636411585	-1.378
30	0.768	1	1	72	0	100	0	6.734906179	6.734
31	-0.024	1	1	44	80	20	-0.138831861	-0.069159305	-0.207
31	-0.187	1	1	14	0	100	0	-8.463095694	-8.463
31	0.281	1	1	18	60	40	2.954031823	3.938709097	6.892
42	0.077	1	1	24	42	58	0.42939506	1.185948262	1.615
42	0.091	1	1	97	0	100	0	0.595944026	0.595

VITAE

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