REPUBLIC OF THE PHILIPPINES

METROPOLITAN WATERWORKS AND SEWERAGE SYSTEM

# STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

## VOLUME 4
## DATA REPORT

1

JUNE 1992

JAPAN INTERNATIONAL COOPERATION AGENCY

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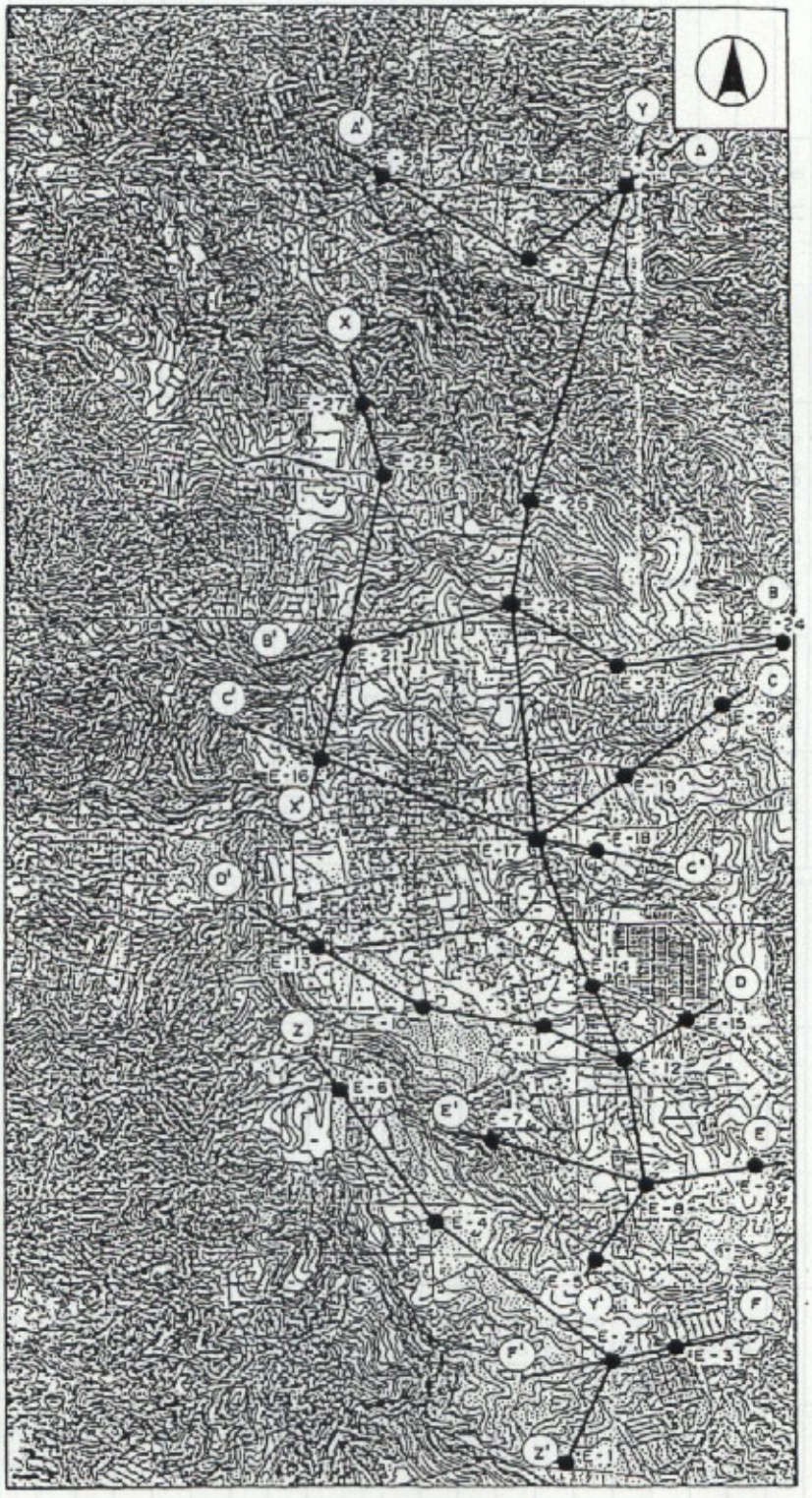



| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure MEASURING POINT & CROSS-SECTION LINE<br>MEASURING POINTS (E-1 ~ E-30)<br>CROSS-SECTION LINES (A-A' ~ Z-Z') |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-1 Date : Oct. 19, 90 Operated by : K.TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 58.3 | 19.9 | | 18.3 | |
| 2 | 12.6 | 21.3 | 19.9 | | 13.4 | |
| 4 | 25.1 | 12.2 | 19.9 | | 15.3 | |
| 6 | 37.7 | 8.91 | 19.9 | | 16.8 | |
| 8 | 50.3 | 6.91 | 19.9 | | 17.4 | |
| 10 | 62.8 | 5.39 | 19.9 | | 16.9 | |
| 12 | 75.4 | 11.6 | 49.9 | | 17.6 | |
| 14 | 88 | 9.60 | 49.9 | | 16.9 | |
| 16 | 100.5 | 8.98 | 49.9 | | 18.0 | |
| 18 | 113.1 | 8.12 | 49.9 | | 18.3 | |
| 20 | 125.7 | 7.42 | 49.9 | | 18.6 | |
| 22 | 138.2 | 6.89 | 49.9 | | 18.9 | |
| 24 | 150.8 | 6.40 | 49.9 | | 19.3 | |
| 26 | 163.4 | 5.89 | 49.9 | | 19.1 | |
| 28 | 175.9 | 5.56 | 49.9 | | 19.5 | |
| 30 | 188.5 | 5.08 | 49.9 | | 19.0 | |
| 32 | 201 | 4.72 | 49.9 | | 18.9 | |
| 34 | 214 | 4.30 | 49.9 | | 18.4 | |
| 36 | 226 | 6.37 | 99.8 | | 14.2 | |
| 40 | 251 | 7.33 | 99.8 | | 18.3 | |
| 44 | 276 | 6.33 | 99.8 | | 17.4 | |
| 48 | 302 | 5.29 | 99.8 | | 15.7 | |
| 52 | 327 | 4.87 | 99.8 | | 15.7 | |
| 56 | 352 | 4.66 | 99.8 | | 16.2 | |
| 60 | 377 | 4.45 | 99.8 | | 16.6 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 4.25 | 99.8 | | 16.9 | |
| 68 | 427 | 8.35 | 199 | | 17.5 | |
| 72 | 452 | 8.09 | 199 | | 18.1 | |
| 76 | 478 | 8.14 | 199 | | 19.1 | |
| 80 | 503 | 7.48 | 199 | | 18.6 | |
| 84 | 528 | 7.13 | 199 | | 18.5 | |
| 88 | 553 | 7.54 | 199 | | 20.5 | |
| 92 | 578 | 7.44 | 199 | | 21.4 | |
| 96 | 603 | 7.20 | 199 | | 21.7 | |
| 100 | 628 | 7.17 | 199 | | 22.0 | |
| 110 | 691 | 7.16 | 199 | | 24.2 | |
| 120 | 754 | 6.95 | 199 | | 25.6 | |
| 130 | 817 | 7.28 | 199 | | 29.4 | |
| 140 | 880 | 7.20 | 199 | | 31.7 | |
| 150 | 943 | 7.19 | 199 | | 33.9 | |
| 160 | 1005 | 6.58 | 199 | | 32.2 | |
| 170 | 1068 | 6.42 | 199 | | 34.2 | |
| 180 | 1131 | 8.41 | 199 | | 47.5 | |
| 190 | 1194 | 7.12 | 199 | | 41.8 | |
| 200 | 1257 | 7.08 | 199 | | 44.0 | |
| 220 | 1382 | 6.75 | 199 | | 45.6 | |
| 240 | 1508 | 7.24 | 199 | | 54.3 | |
| 260 | 1634 | 7.24 | 199 | | 58.8 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-2 Date : Oct. 23, 90 Operated by : K.TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine, rain later

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 363 | 19.9 | | 114.1 | |
| 2 | 12.6 | 160 | 19.9 | | 100.8 | |
| 4 | 25.1 | 95.8 | 19.9 | | 120.4 | |
| 6 | 37.7 | 58.5 | 19.9 | | 110.4 | |
| 8 | 50.3 | 34.5 | 19.9 | | 87.0 | |
| 10 | 62.8 | 23.4 | 19.9 | | 73.6 | |
| 12 | 75.4 | 17.3 | 19.9 | | 65.2 | |
| 14 | 88 | 13.0 | 19.9 | | 57.4 | |
| 16 | 100.5 | 10.1 | 19.9 | | 51.2 | |
| 18 | 113.1 | 21.5 | 49.9 | | 48.6 | |
| 20 | 125.7 | 15.6 | 49.9 | | 39.2 | |
| 22 | 138.2 | 14.6 | 49.9 | | 40.6 | |
| 24 | 150.8 | 13.0 | 49.9 | | 39.5 | |
| 26 | 163.4 | 10.8 | 49.9 | | 35.5 | |
| 28 | 175.9 | 10.5 | 49.9 | | 36.9 | |
| 30 | 188.5 | 9.0 | 49.9 | | 33.9 | |
| 32 | 201 | 9.06 | 49.9 | | 36.4 | |
| 34 | 214 | 8.07 | 49.9 | | 34.5 | |
| 36 | 226 | 7.80 | 49.9 | | 35.3 | |
| 40 | 251 | 7.41 | 49.9 | | 37.1 | |
| 44 | 276 | 7.20 | 49.9 | | 39.7 | |
| 48 | 302 | 7.48 | 49.9 | | 45.0 | |
| 52 | 327 | 6.44 | 49.9 | | 42.2 | |
| 56 | 352 | 6.40 | 49.9 | | 45.1 | |
| 60 | 377 | 6.25 | 49.9 | | 47.1 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 5.93 | 49.9 | | 47.4 | |
| 68 | 427 | 5.11 | 49.9 | | 43.6 | |
| 72 | 452 | 4.61 | 49.9 | | 41.6 | |
| 76 | 478 | 4.50 | 49.9 | | 43.0 | |
| 80 | 503 | 9.09 | 49.9 | | 45.8 | |
| 84 | 528 | 9.46 | 99.8 | | 49.6 | |
| 88 | 553 | 11.3 | 99.8 | | 62.5 | |
| 92 | 578 | 8.78 | 99.8 | | 50.9 | |
| 96 | 603 | 9.21 | 99.8 | | 55.5 | |
| 100 | 628 | 7.97 | 99.8 | | 49.6 | |
| 110 | 691 | 7.63 | 99.7 | | 52.5 | |
| 120 | 754 | 7.75 | 99.7 | | 58.1 | |
| 130 | 817 | 8.08 | 99.8 | | 66.2 | |
| 140 | 880 | 8.18 | 99.8 | | 72.2 | |
| 150 | 943 | 8.50 | 99.7 | | 80.2 | |
| 160 | 1005 | 9.25 | 99.8 | | 92.5 | |
| 170 | 1068 | 8.58 | 99.7 | | 90.8 | |
| 180 | 1131 | 8.33 | 99.8 | | 93.9 | |
| 190 | 1194 | 7.25 | 99.7 | | 86.0 | |
| 200 | 1257 | 6.37 | 99.7 | | 79.2 | |
| 220 | 1382 | 6.33 | 99.7 | | 87.1 | |
| 240 | 1508 | | | | | |
| 260 | 1634 | | | | | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-3 Date : Oct. 03, 90 Operated by : K.TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 28.0 | 9.99 | | 17.6 | |
| 2 | 12.6 | 11.5 | 9.99 | | 14.5 | |
| 4 | 25.1 | 7.03 | 9.99 | | 17.6 | |
| 6 | 37.7 | 4.45 | 9.99 | | 16.8 | |
| 8 | 50.3 | 2.83 | 9.99 | | 14.2 | |
| 10 | 62.8 | 2.22 | 9.90 | | 13.9 | |
| 12 | 75.4 | 3.29 | 19.9 | | 12.4 | |
| 14 | 88 | 3.27 | 19.9 | | 14.3 | |
| 16 | 100.5 | 2.82 | 19.9 | | 14.2 | |
| 18 | 113.1 | 1.69 | 9.98 | | 19.1 | |
| 20 | 125.7 | 2.50 | 19.9 | | 15.7 | |
| 22 | 138.2 | 2.66 | 19.9 | | 18.4 | |
| 24 | 150.8 | 2.70 | 19.9 | | 20.4 | |
| 26 | 163.4 | 2.64 | 19.9 | | 21.6 | |
| 28 | 175.9 | 2.64 | 19.9 | | 23.2 | |
| 30 | 188.5 | 2.60 | 19.9 | | 24.5 | |
| 32 | 201 | 2.58 | 19.9 | | 25.9 | |
| 34 | 214 | 2.60 | 19.9 | | 27.8 | |
| 36 | 226 | 2.60 | 19.9 | | 29.4 | |
| 40 | 251 | 2.62 | 19.9 | | 32.9 | |
| 44 | 276 | 2.42 | 19.9 | | 33.4 | |
| 48 | 302 | 2.20 | 19.9 | | 33.2 | |
| 52 | 327 | 4.78 | 49.9 | | 31.1 | |
| 56 | 352 | 4.54 | 49.9 | | 31.7 | |
| 60 | 377 | 4.51 | 49.9 | | 33.9 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 4.53 | 49.9 | | 36.2 | |
| 68 | 427 | 4.19 | 49.9 | | 35.4 | |
| 72 | 452 | 4.16 | 49.9 | | 37.5 | |
| 76 | 478 | 8.39 | 49.9 | | 80.3 | |
| 80 | 503 | 32.2 | 49.9 | | 324.9 | |
| 84 | 528 | 4.33 | 49.9 | | 45.4 | |
| 88 | 553 | 4.05 | 49.9 | | 44.8 | |
| 92 | 578 | 3.38 | 49.9 | | 38.7 | |
| 96 | 603 | 4.01 | 49.9 | | 48.2 | |
| 100 | 628 | 4.09 | 49.9 | | 51.5 | |
| 110 | 691 | 4.26 | 49.9 | | 58.7 | |
| 120 | 754 | 3.56 | 49.9 | | 53.5 | |
| 130 | 817 | 3.14 | 49.9 | | 50.7 | |
| 140 | 880 | 3.82 | 49.9 | | 66.9 | |
| 150 | 943 | 3.94 | 49.9 | | 73.6 | |
| 160 | 1005 | 4.27 | 49.9 | | 85.4 | |
| 170 | 1068 | 3.72 | 49.9 | | 79.0 | |
| 180 | 1131 | 3.30 | 49.9 | | 74.6 | |
| 190 | 1194 | 2.90 | 49.9 | | 69.3 | |
| 200 | 1257 | 2.75 | 49.9 | | 69.1 | |
| 220 | 1382 | 2.58 | 49.9 | | 70.5 | |
| 240 | 1508 | | | | | |
| 260 | 1634 | | | | | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-4 Date : Oct. 13, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 314 | 19.9 | | 98.8 | |
| 2 | 12.6 | 192 | 19.9 | | 120.8 | |
| 4 | 25.1 | 85.6 | 19.9 | | 107.6 | |
| 6 | 37.7 | 49.2 | 19.9 | | 93.0 | |
| 8 | 50.3 | 26.9 | 19.9 | | 68.1 | |
| 10 | 62.8 | 17.3 | 19.9 | | 54.6 | |
| 12 | 75.4 | 13.3 | 19.9 | | 50.4 | |
| 14 | 88 | 10.9 | 19.9 | | 48.3 | |
| 16 | 100.5 | 9.41 | 19.9 | | 47.3 | |
| 18 | 113.1 | 8.00 | 19.9 | | 45.4 | |
| 20 | 125.7 | 7.12 | 19.9 | | 44.7 | |
| 22 | 138.2 | 6.41 | 19.9 | | 44.2 | |
| 24 | 150.8 | 5.76 | 19.9 | | 43.4 | |
| 26 | 163.4 | 5.12 | 19.9 | | 41.8 | |
| 28 | 175.9 | 17.7 | 19.9 | | 156.0 | |
| 30 | 188.5 | 4.46 | 19.9 | | 42.0 | |
| 32 | 201 | 14.6 | 19.9 | | 147.1 | |
| 34 | 214 | 3.56 | 19.9 | | 38.1 | |
| 36 | 226 | 8.39 | 49.9 | | 38.0 | |
| 40 | 251 | 7.40 | 49.9 | | 37.1 | |
| 44 | 276 | 6.76 | 49.9 | | 37.3 | |
| 48 | 302 | 6.56 | 49.9 | | 39.6 | |
| 52 | 327 | 7.38 | 49.9 | | 48.1 | |
| 56 | 352 | 7.02 | 49.9 | | 49.3 | |
| 60 | 377 | 6.85 | 49.9 | | 51.6 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 6.11 | 49.9 | | 49.0 | |
| 68 | 427 | 5.13 | 49.9 | | 43.6 | |
| 72 | 452 | 4.47 | 49.9 | | 40.2 | |
| 76 | 478 | 8.00 | 99.7 | | 38.2 | |
| 80 | 503 | 7.33 | 99.7 | | 36.7 | |
| 84 | 528 | 6.51 | 99.7 | | 34.3 | |
| 88 | 553 | 5.69 | 99.7 | | 31.5 | |
| 92 | 578 | 5.22 | 99.7 | | 30.1 | |
| 96 | 603 | 4.82 | 99.7 | | 28.9 | |
| 100 | 628 | 4.67 | 99.7 | | 28.9 | |
| 110 | 691 | 4.37 | 99.7 | | 29.7 | |
| 120 | 754 | 3.94 | 99.7 | | 29.4 | |
| 130 | 817 | 7.81 | 199 | | 31.9 | |
| 140 | 880 | 7.50 | 199 | | 32.6 | |
| 150 | 943 | 6.87 | 199 | | 32.1 | |
| 160 | 1005 | 6.11 | 199 | | 30.2 | |
| 170 | 1068 | 5.96 | 199 | | 31.0 | |
| 180 | 1131 | 5.62 | 199 | | 31.7 | |
| 190 | 1194 | 5.74 | 199 | | 33.4 | |
| 200 | 1257 | 5.48 | 199 | | 33.9 | |
| 220 | 1382 | 5.08 | 199 | | 34.6 | |
| 240 | 1508 | 4.89 | 199 | | 37.1 | |
| 260 | 1634 | 5.02 | 199 | | 40.9 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-5 Date : Oct. 04, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 93.6 | 10.0 | | 58.8 | |
| 2 | 12.6 | 50.8 | 10.0 | | 63.9 | |
| 4 | 25.1 | 27.6 | 9.99 | | 69.5 | |
| 6 | 37.7 | 20.2 | 9.99 | | 76.5 | |
| 8 | 50.3 | 16.1 | 9.99 | | 81.2 | |
| 10 | 62.8 | 12.6 | 9.99 | | 79.7 | |
| 12 | 75.4 | 10.7 | 9.99 | | 81.3 | |
| 14 | 88 | 9.08 | 9.99 | | 80.0 | |
| 16 | 100.5 | 7.96 | 9.99 | | 80.0 | |
| 18 | 113.1 | 6.82 | 9.99 | | 77.1 | |
| 20 | 125.7 | 5.96 | 9.99 | | 74.9 | |
| 22 | 138.2 | 5.33 | 9.99 | | 73.8 | |
| 24 | 150.8 | 4.80 | 9.99 | | 72.5 | |
| 26 | 163.4 | 4.26 | 9.98 | | 69.6 | |
| 28 | 175.9 | 4.00 | 9.99 | | 70.5 | |
| 30 | 188.5 | 3.95 | 9.99 | | 74.5 | |
| 32 | 201 | 3.23 | 9.99 | | 64.9 | |
| 34 | 214 | 3.00 | 9.99 | | 64.2 | |
| 36 | 226 | 3.01 | 9.99 | | 68.0 | |
| 40 | 251 | 3.91 | 9.98 | | 98.1 | |
| 44 | 276 | 2.32 | 9.98 | | 64.0 | |
| 48 | 302 | 1.93 | 9.98 | | 58.3 | |
| 52 | 327 | 1.71 | 9.98 | | 55.9 | |
| 56 | 352 | 1.49 | 9.98 | | 52.4 | |
| 60 | 377 | 1.52 | 9.98 | | 57.3 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 1.30 | 9.98 | | 60.3 | |
| 68 | 427 | 1.42 | 9.98 | | 60.6 | |
| 72 | 452 | 1.32 | 9.98 | | 59.7 | |
| 76 | 478 | 1.41 | 9.98 | | 67.4 | |
| 80 | 503 | 1.28 | 9.98 | | 64.4 | |
| 84 | 528 | 1.24 | 9.98 | | 65.5 | |
| 88 | 553 | 1.19 | 9.98 | | 66.4 | |
| 92 | 578 | 1.13 | 9.98 | | 65.3 | |
| 96 | 603 | | | | | |
| 100 | 628 | 1.16 | 9.98 | | 72.8 | |
| 110 | 691 | 1.14 | 9.98 | | 78.8 | |
| 120 | 754 | 1.03 | 9.98 | | 77.7 | |
| 130 | 817 | 1.96 | 19.9 | | 80.1 | |
| 140 | 880 | 2.06 | 19.9 | | 90.6 | |
| 150 | 943 | 2.01 | 19.9 | | 95.2 | |
| 160 | 1005 | 2.45 | 19.9 | | 123.6 | |
| 170 | 1068 | 1.57 | 19.9 | | 83.3 | |
| 180 | 1131 | 1.42 | 19.9 | | 80.3 | |
| 190 | 1194 | 1.33 | 19.9 | | 78.8 | |
| 200 | 1257 | 1.29 | 19.9 | | 80.4 | |
| 220 | 1382 | 1.14 | 19.9 | | 78.8 | |
| 240 | 1508 | 1.17 | 19.9 | | 87.5 | |
| 260 | 1634 | 1.21 | 19.9 | | 99.7 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-6 Date : Oct. 18, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Rain, fine later

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 74.9 | 10.0 | | 47.1 | |
| 2 | 12.6 | 54.7 | 9.99 | | 68.8 | |
| 4 | 25.1 | 27.5 | 9.99 | | 69.2 | |
| 6 | 37.7 | 13.6 | 9.99 | | 51.6 | |
| 8 | 50.3 | 7.45 | 9.99 | | 37.5 | |
| 10 | 62.8 | 3.55 | 9.99 | | 22.3 | |
| 12 | 75.4 | 2.33 | 9.99 | | 17.6 | |
| 14 | 88 | 15.5 | 9.99 | | 137.1 | |
| 16 | 100.5 | 1.50 | 9.98 | | 15.1 | |
| 18 | 113.1 | 2.68 | 19.9 | | 15.2 | |
| 20 | 125.7 | 2.33 | 19.9 | | 14.6 | |
| 22 | 138.2 | 2.16 | 19.9 | | 14.9 | |
| 24 | 150.8 | 2.02 | 19.9 | | 15.2 | |
| 26 | 163.4 | 1.91 | 19.9 | | 15.5 | |
| 28 | 175.9 | 4.46 | 19.9 | | 15.7 | |
| 30 | 188.5 | 4.27 | 49.9 | | 16.0 | |
| 32 | 201 | 4.08 | 49.9 | | 16.3 | |
| 34 | 214 | 3.91 | 49.9 | | 16.7 | |
| 36 | 226 | 3.79 | 49.9 | | 17.0 | |
| 40 | 251 | 3.62 | 49.9 | | 18.1 | |
| 44 | 276 | 3.67 | 49.9 | | 20.1 | |
| 48 | 302 | 3.61 | 49.9 | | 21.7 | |
| 52 | 327 | 3.27 | 49.9 | | 21.3 | |
| 56 | 352 | 3.16 | 49.9 | | 22.2 | |
| 60 | 377 | 2.97 | 49.9 | | 22.2 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 2.72 | 49.9 | | 21.7 | |
| 68 | 427 | 2.45 | 49.9 | | 20.9 | |
| 72 | 452 | 1.99 | 49.9 | | 17.6 | |
| 76 | 478 | 4.16 | 99.8 | | 19.6 | |
| 80 | 503 | 4.04 | 99.7 | | 20.1 | |
| 84 | 528 | 3.84 | 99.7 | | 20.1 | |
| 88 | 553 | 7.92 | 199 | | 21.6 | |
| 92 | 578 | 7.73 | 199 | | 22.0 | |
| 96 | 603 | 7.41 | 199 | | 22.3 | |
| 100 | 628 | 7.19 | 199 | | 22.7 | |
| 110 | 691 | 5.86 | 199 | | 20.0 | |
| 120 | 754 | 5.77 | 199 | | 21.1 | |
| 130 | 817 | 4.64 | 199 | | 18.8 | |
| 140 | 880 | 4.99 | 199 | | 22.0 | |
| 150 | 943 | 5.00 | 199 | | 23.6 | |
| 160 | 1005 | 4.82 | 199 | | 24.1 | |
| 170 | 1068 | 4.79 | 199 | | 25.6 | |
| 180 | 1131 | 4.75 | 199 | | 26.0 | |
| 190 | 1194 | 4.45 | 199 | | 26.3 | |
| 200 | 1257 | 4.95 | 199 | | 30.2 | |
| 220 | 1382 | 4.56 | 199 | | 30.4 | |
| 240 | 1508 | 4.54 | 199 | | 33.2 | |
| 260 | 1634 | 4.79 | 199 | | 39.2 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-7 Date : Oct. 04, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 130 | 9.99 | | 81.8 | |
| 2 | 12.6 | 98.5 | 9.99 | | 123.9 | |
| 4 | 25.1 | 60.6 | 9.99 | | 152.2 | |
| 6 | 37.7 | 38.9 | 9.99 | | 222.4 | |
| 8 | 50.3 | 24.6 | 9.99 | | 124.1 | |
| 10 | 62.8 | 18.0 | 9.99 | | 113.4 | |
| 12 | 75.4 | 13.6 | 9.98 | | 102.7 | |
| 14 | 88 | 10.9 | 9.99 | | 96.1 | |
| 16 | 100.5 | 9.67 | 9.98 | | 97.4 | |
| 18 | 113.1 | 7.75 | 9.99 | | 87.8 | |
| 20 | 125.7 | 6.53 | 9.98 | | 82.1 | |
| 22 | 138.2 | 5.34 | 9.98 | | 78.9 | |
| 24 | 150.8 | 4.40 | 9.98 | | 66.4 | |
| 26 | 163.4 | 3.66 | 9.98 | | 59.8 | |
| 28 | 175.9 | 3.27 | 9.98 | | 57.5 | |
| 30 | 188.5 | 2.94 | 9.98 | | 55.4 | |
| 32 | 201 | 2.50 | 9.98 | | 50.3 | |
| 34 | 214 | 2.29 | 9.98 | | 49.0 | |
| 36 | 226 | 2.04 | 9.98 | | 46.1 | |
| 40 | 251 | 1.69 | 9.98 | | 42.4 | |
| 44 | 276 | 1.41 | 9.98 | | 38.9 | |
| 48 | 302 | 1.32 | 9.98 | | 39.9 | |
| 52 | 327 | 1.12 | 9.98 | | 36.6 | |
| 56 | 352 | 0.99 | 9.98 | | 34.5 | |
| 60 | 377 | 1.02 | 9.98 | | 38.5 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 0.95 | 9.98 | | 38.2 | |
| 68 | 427 | 1.85 | 19.9 | | 39.3 | |
| 72 | 452 | 1.78 | 19.9 | | 40.2 | |
| 76 | 478 | 1.72 | 19.9 | | 41.1 | |
| 80 | 503 | 1.77 | 19.9 | | 44.3 | |
| 84 | 528 | 1.89 | 19.9 | | 49.6 | |
| 88 | 553 | 1.56 | 19.9 | | 43.1 | |
| 92 | 578 | 1.40 | 19.9 | | 42.2 | |
| 96 | 603 | 1.34 | 19.9 | | 42.1 | |
| 100 | 628 | 1.37 | 19.9 | | 42.7 | |
| 110 | 691 | 1.24 | 19.9 | | 42.8 | |
| 120 | 754 | 1.22 | 19.9 | | 46.0 | |
| 130 | 817 | 1.04 | 19.9 | | 42.5 | |
| 140 | 880 | 1.09 | 19.9 | | 47.5 | |
| 150 | 943 | 0.89 | 19.9 | | 41.5 | |
| 160 | 1005 | 1.04 | 19.9 | | 52.3 | |
| 170 | 1068 | 0.96 | 19.9 | | 51.3 | |
| 180 | 1131 | 1.01 | 19.9 | | 56.6 | |
| 190 | 1194 | 1.49 | 19.9 | | 88.4 | |
| 200 | 1257 | 2.52 | 19.9 | | 158.4 | |
| 220 | 1382 | 0.83 | 19.9 | | 56.7 | |
| 240 | 1508 | 0.66 | 19.9 | | 49.8 | |
| 260 | 1634 | 0.74 | 19.9 | | 60.5 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-8 Date : Oct. 19, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 132 | 19.9 | | 41.8 | |
| 2 | 12.6 | 42.2 | 19.9 | | 26.5 | |
| 4 | 25.1 | 23.6 | 19.9 | | 29.6 | |
| 6 | 37.7 | 15.7 | 19.9 | | 29.7 | |
| 8 | 50.3 | 11.7 | 19.9 | | 29.5 | |
| 10 | 62.8 | 10.5 | 19.9 | | 33.3 | |
| 12 | 75.4 | 0.95 | 19.9 | | 33.8 | |
| 14 | 88 | 20.6 | 49.9 | | 36.3 | |
| 16 | 100.5 | 18.4 | 49.9 | | 37.1 | |
| 18 | 113.1 | 16.8 | 49.9 | | 38.2 | |
| 20 | 125.7 | 15.0 | 49.9 | | 37.7 | |
| 22 | 138.2 | 13.9 | 49.9 | | 38.4 | |
| 24 | 150.8 | 12.7 | 49.9 | | 38.5 | |
| 26 | 163.4 | 12.1 | 49.9 | | 39.7 | |
| 28 | 175.9 | 10.7 | 49.9 | | 37.6 | |
| 30 | 188.5 | 20.1 | 99.7 | | 38.1 | |
| 32 | 201 | 18.6 | 99.7 | | 37.4 | |
| 34 | 214 | 17.2 | 99.7 | | 36.8 | |
| 36 | 226 | 15.9 | 99.7 | | 35.9 | |
| 40 | 251 | 15.1 | 99.7 | | 38.2 | |
| 44 | 276 | 14.7 | 99.7 | | 40.6 | |
| 48 | 302 | 13.5 | 99.7 | | 40.8 | |
| 52 | 327 | 16.2 | 99.7 | | 53.0 | |
| 56 | 352 | 12.7 | 99.7 | | 44.7 | |
| 60 | 377 | 11.1 | 99.7 | | 42.2 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 13.1 | 99.7 | | 53.1 | |
| 68 | 427 | 13.3 | 99.7 | | 57.2 | |
| 72 | 452 | 11.6 | 99.7 | | 52.9 | |
| 76 | 478 | 10.5 | 99.7 | | 50.7 | |
| 80 | 503 | 11.1 | 99.7 | | 55.8 | |
| 84 | 528 | 11.2 | 99.7 | | 59.1 | |
| 88 | 553 | 11.0 | 99.7 | | 60.8 | |
| 92 | 578 | 10.1 | 99.7 | | 59.0 | |
| 96 | 603 | 9.92 | 99.7 | | 59.7 | |
| 100 | 628 | 8.07 | 99.7 | | 50.2 | |
| 110 | 691 | 5.70 | 99.7 | | 39.4 | |
| 120 | 754 | 4.87 | 99.7 | | 36.2 | |
| 130 | 817 | 4.44 | 99.7 | | 35.9 | |
| 140 | 880 | 4.66 | 99.7 | | 40.5 | |
| 150 | 943 | 4.83 | 99.7 | | 45.3 | |
| 160 | 1005 | 7.29 | 99.7 | | 73.4 | |
| 170 | 1068 | 4.78 | 99.7 | | 50.2 | |
| 180 | 1131 | 4.04 | 99.7 | | 45.2 | |
| 190 | 1194 | 4.16 | 99.7 | | 49.0 | |
| 200 | 1257 | 3.53 | 99.7 | | 44.0 | |
| 220 | 1382 | 6.72 | 199 | | 45.6 | |
| 240 | 1508 | 6.60 | 199 | | 49.8 | |
| 260 | 1634 | 6.90 | 199 | | 55.6 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-9 Date : Oct. 17, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Cloudy

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 108 | 19.9 | | 34.1 | |
| 2 | 12.6 | 48.5 | 19.9 | | 30.5 | |
| 4 | 25.1 | 21.7 | 19.9 | | 27.3 | |
| 6 | 37.7 | 15.1 | 19.9 | | 28.5 | |
| 8 | 50.3 | 13.1 | 19.9 | | 33.2 | |
| 10 | 62.8 | 11.9 | 19.9 | | 37.4 | |
| 12 | 75.4 | 10.0 | 19.9 | | 37.7 | |
| 14 | 88 | 8.87 | 19.9 | | 39.0 | |
| 16 | 100.5 | 7.83 | 19.9 | | 39.4 | |
| 18 | 113.1 | 7.00 | 19.9 | | 39.6 | |
| 20 | 125.7 | 16.0 | 49.9 | | 40.3 | |
| 22 | 138.2 | 15.2 | 49.9 | | 42.0 | |
| 24 | 150.8 | 13.3 | 49.9 | | 40.1 | |
| 26 | 163.4 | 24.6 | 99.8 | | 40.2 | |
| 28 | 175.9 | 22.9 | 99.8 | | 40.5 | |
| 30 | 188.5 | 21.8 | 99.8 | | 41.3 | |
| 32 | 201 | 20.6 | 99.8 | | 41.6 | |
| 34 | 214 | 21.2 | 99.8 | | 45.6 | |
| 36 | 226 | 19.3 | 99.8 | | 43.8 | |
| 40 | 251 | 16.6 | 99.8 | | 41.7 | |
| 44 | 276 | 14.6 | 99.7 | | 40.3 | |
| 48 | 302 | 12.6 | 99.8 | | 38.1 | |
| 52 | 327 | 11.5 | 99.7 | | 37.6 | |
| 56 | 352 | 10.5 | 99.8 | | 37.0 | |
| 60 | 377 | 9.85 | 99.7 | | 36.9 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 28.2 | 199 | | 36.6 | |
| 68 | 427 | 17.1 | 199 | | 36.3 | |
| 72 | 452 | 17.0 | 199 | | 38.4 | |
| 76 | 478 | 17.0 | 199 | | 40.6 | |
| 80 | 503 | 17.1 | 199 | | 42.8 | |
| 84 | 528 | 17.0 | 199 | | 44.9 | |
| 88 | 553 | 17.0 | 199 | | 47.0 | |
| 92 | 578 | 10.7 | 199 | | 31.2 | |
| 96 | 603 | 14.2 | 199 | | 42.8 | |
| 100 | 628 | 14.5 | 199 | | 45.8 | |
| 110 | 691 | 14.3 | 199 | | 49.8 | |
| 120 | 754 | 14.1 | 199 | | 53.5 | |
| 130 | 817 | 14.5 | 199 | | 58.8 | |
| 140 | 880 | 13.4 | 199 | | 59.0 | |
| 150 | 943 | 12.7 | 199 | | 59.4 | |
| 160 | 1005 | 10.4 | 199 | | 52.3 | |
| 170 | 1068 | 10.7 | 199 | | 56.6 | |
| 180 | 1131 | 9.32 | 199 | | 52.0 | |
| 190 | 1194 | 7.83 | 199 | | 46.6 | |
| 200 | 1257 | | | | | |
| 220 | 1382 | | | | | |
| 240 | 1508 | | | | | |
| 260 | 1634 | | | | | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-10 Date : Oct. 04, 90 Operated by : K. TAKAYAANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 33.5 | 9.98 | | 21.1 | |
| 2 | 12.6 | 38.2 | 9.98 | | 48.2 | |
| 4 | 25.1 | 22.6 | 9.98 | | 56.9 | |
| 6 | 37.7 | 12.3 | 9.98 | | 46.6 | |
| 8 | 50.3 | 8.0 | 9.98 | | 40.3 | |
| 10 | 62.8 | 5.69 | 9.98 | | 35.8 | |
| 12 | 75.4 | 4.49 | 9.98 | | 33.9 | |
| 14 | 88 | 3.63 | 9.98 | | 31.9 | |
| 16 | 100.5 | 2.55 | 9.98 | | 25.6 | |
| 18 | 113.1 | 3.17 | 9.98 | | 35.9 | |
| 20 | 125.7 | 2.88 | 9.98 | | 36.2 | |
| 22 | 138.2 | 2.71 | 9.98 | | 37.5 | |
| 24 | 150.8 | 2.66 | 9.98 | | 40.1 | |
| 26 | 163.4 | 2.62 | 9.98 | | 42.8 | |
| 28 | 175.9 | 2.55 | 9.98 | | 44.9 | |
| 30 | 188.5 | 2.45 | 9.98 | | 46.2 | |
| 32 | 201 | 2.25 | 9.98 | | 45.2 | |
| 34 | 214 | 2.19 | 9.98 | | 46.9 | |
| 36 | 226 | 1.69 | 9.98 | | 38.2 | |
| 40 | 251 | 1.18 | 9.98 | | 29.9 | |
| 44 | 276 | 0.81 | 9.98 | | 22.4 | |
| 48 | 302 | 0.81 | 9.98 | | 24.5 | |
| 52 | 327 | 0.64 | 9.98 | | 20.9 | |
| 56 | 352 | 0.62 | 9.98 | | 21.8 | |
| 60 | 377 | 1.15 | 19.9 | | 21.5 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 1.18 | 19.9 | | 23.7 | |
| 68 | 427 | 1.56 | 19.9 | | 33.3 | |
| 72 | 452 | 1.15 | 19.9 | | 25.8 | |
| 76 | 478 | 1.18 | 19.9 | | 28.2 | |
| 80 | 503 | 1.12 | 19.9 | | 28.2 | |
| 84 | 528 | 1.26 | 19.9 | | 33.3 | |
| 88 | 553 | 2.92 | 19.9 | | 80.7 | |
| 92 | 578 | 1.19 | 19.9 | | 34.1 | |
| 96 | 603 | 3.02 | 49.8 | | 36.2 | |
| 100 | 628 | 2.73 | 49.9 | | 33.9 | |
| 110 | 691 | 2.62 | 49.9 | | 35.9 | |
| 120 | 754 | 2.34 | 49.9 | | 35.4 | |
| 130 | 817 | 2.16 | 49.9 | | 35.1 | |
| 140 | 880 | 1.94 | 49.9 | | 33.4 | |
| 150 | 943 | 1.59 | 49.9 | | 30.2 | |
| 160 | 1005 | 1.47 | 49.9 | | 29.1 | |
| 170 | 1068 | 1.38 | 49.9 | | 28.8 | |
| 180 | 1131 | 1.40 | 49.9 | | 31.7 | |
| 190 | 1194 | 1.25 | 49.9 | | 29.9 | |
| 200 | 1257 | 2.59 | 99.7 | | 31.4 | |
| 220 | 1382 | 2.45 | 99.7 | | 33.2 | |
| 240 | 1508 | 2.49 | 99.7 | | 36.2 | |
| 260 | 1634 | 2.40 | 99.7 | | 39.2 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-11 Date : Oct. 18, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Rain

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 92.8 | 19.9 | | 29.2 | |
| 2 | 12.6 | 30.5 | 19.9 | | 19.2 | |
| 4 | 25.1 | 9.68 | 19.9 | | 12.1 | |
| 6 | 37.7 | 4.29 | 19.9 | | 8.11 | |
| 8 | 50.3 | 6.50 | 49.9 | | 6.54 | |
| 10 | 62.8 | 4.24 | 49.9 | | 5.34 | |
| 12 | 75.4 | 4.29 | 49.9 | | 6.48 | |
| 14 | 88 | 7.14 | 49.9 | | 12.6 | |
| 16 | 100.5 | 5.38 | 49.9 | | 10.8 | |
| 18 | 113.1 | 6.08 | 49.9 | | 13.7 | |
| 20 | 125.7 | 11.2 | 49.9 | | 28.3 | |
| 22 | 138.2 | 16.1 | 49.9 | | 44.5 | |
| 24 | 150.8 | 25.6 | 49.9 | | 77.4 | |
| 26 | 163.4 | 31.5 | 49.9 | | 103.3 | |
| 28 | 175.9 | 33.9 | 49.9 | | 119.4 | |
| 30 | 188.5 | 35.5 | 49.9 | | 134.0 | |
| 32 | 201 | 36.7 | 49.9 | | 147.7 | |
| 34 | 214 | 37.7 | 49.9 | | 161.6 | |
| 36 | 226 | 37.0 | 49.9 | | 167.5 | |
| 40 | 251 | 33.6 | 49.9 | | 168.9 | |
| 44 | 276 | 32.0 | 49.9 | | 177.2 | |
| 48 | 302 | 30.5 | 49.9 | | 184.5 | |
| 52 | 327 | 28.1 | 49.9 | | 184.4 | |
| 56 | 352 | 28.8 | 49.9 | | 203.5 | |
| 60 | 377 | 28.6 | 49.9 | | 216.4 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 30.0 | 49.9 | | 241.2 | |
| 68 | 427 | 30.8 | 49.9 | | 263.9 | |
| 72 | 452 | 30.8 | 49.9 | | 279.3 | |
| 76 | 478 | 15.2 | 49.9 | | 145.3 | |
| 80 | 503 | 15.1 | 49.9 | | 152.4 | |
| 84 | 528 | 13.4 | 49.9 | | 142.0 | |
| 88 | 553 | 12.4 | 49.9 | | 138.3 | |
| 92 | 578 | 11.4 | 49.9 | | 132.4 | |
| 96 | 603 | 9.81 | 49.9 | | 118.2 | |
| 100 | 628 | 9.08 | 49.9 | | 114.3 | |
| 110 | 691 | 8.25 | 49.9 | | 114.0 | |
| 120 | 754 | 8.37 | 49.9 | | 125.9 | |
| 130 | 817 | 3.96 | 49.9 | | 64.5 | |
| 140 | 880 | 8.02 | 49.9 | | 140.8 | |
| 150 | 943 | 7.40 | 49.9 | | 139.6 | |
| 160 | 1005 | 14.3 | 99.7 | | 143.7 | |
| 170 | 1068 | 13.5 | 99.7 | | 144.2 | |
| 180 | 1131 | 14.0 | 99.7 | | 159.5 | |
| 190 | 1194 | 13.5 | 99.7 | | 161.2 | |
| 200 | 1257 | 13.6 | 99.7 | | 171.0 | |
| 220 | 1382 | 18.4 | 199 | | 127.1 | |
| 240 | 1508 | 16.1 | 199 | | 122.1 | |
| 260 | 1634 | 14.2 | 199 | | 116.0 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-12 Date : Oct. 17, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Cloudy

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 157 | 20.0 | | 49.3 | |
| 2 | 12.6 | 68.9 | 19.9 | | 43.3 | |
| 4 | 25.1 | 36.7 | 19.9 | | 46.1 | |
| 6 | 37.7 | 52.1 | 49.9 | | 39.4 | |
| 8 | 50.3 | 35.5 | 49.9 | | 35.8 | |
| 10 | 62.8 | 28.3 | 49.9 | | 35.5 | |
| 12 | 75.4 | 24.7 | 49.9 | | 37.3 | |
| 14 | 88 | 23.1 | 49.9 | | 40.7 | |
| 16 | 100.5 | 21.6 | 49.9 | | 43.5 | |
| 18 | 113.1 | 20.6 | 49.9 | | 46.8 | |
| 20 | 125.7 | 21.5 | 49.9 | | 54.2 | |
| 22 | 138.2 | 39.0 | 99.8 | | 54.0 | |
| 24 | 150.8 | 37.2 | 99.8 | | 56.2 | |
| 26 | 163.4 | 35.0 | 99.8 | | 57.2 | |
| 28 | 175.9 | 31.4 | 99.8 | | 55.2 | |
| 30 | 188.5 | 28.9 | 99.8 | | 54.5 | |
| 32 | 201 | 27.9 | 99.8 | | 56.3 | |
| 34 | 214 | 27.4 | 99.8 | | 58.6 | |
| 36 | 226 | 25.4 | 99.8 | | 57.6 | |
| 40 | 251 | 23.7 | 99.8 | | 59.5 | |
| 44 | 276 | 22.1 | 99.8 | | 61.0 | |
| 48 | 302 | 20.9 | 99.7 | | 63.4 | |
| 52 | 327 | 18.8 | 99.8 | | 61.8 | |
| 56 | 352 | 18.2 | 99.7 | | 64.1 | |
| 60 | 377 | 17.6 | 99.7 | | 66.4 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 17.2 | 99.7 | | 69.5 | |
| 68 | 427 | 16.8 | 99.7 | | 72.2 | |
| 72 | 452 | 16.8 | 99.7 | | 76.4 | |
| 76 | 478 | 16.6 | 99.7 | | 79.3 | |
| 80 | 503 | 16.1 | 99.7 | | 81.0 | |
| 84 | 528 | 15.4 | 99.7 | | 81.3 | |
| 88 | 553 | 15.0 | 99.7 | | 83.0 | |
| 92 | 578 | 14.0 | 99.7 | | 80.9 | |
| 96 | 603 | 13.3 | 99.7 | | 80.2 | |
| 100 | 628 | 11.6 | 99.7 | | 72.8 | |
| 110 | 691 | 11.7 | 99.7 | | 81.5 | |
| 120 | 754 | 10.1 | 99.7 | | 76.9 | |
| 130 | 817 | 9.83 | 99.7 | | 80.1 | |
| 140 | 880 | 9.57 | 99.7 | | 83.6 | |
| 150 | 943 | 7.64 | 99.7 | | 71.7 | |
| 160 | 1005 | 8.19 | 99.7 | | 82.4 | |
| 170 | 1068 | 7.53 | 99.7 | | 80.1 | |
| 180 | 1131 | 5.69 | 99.7 | | 63.3 | |
| 190 | 1194 | 5.72 | 99.7 | | 68.1 | |
| 200 | 1257 | 4.82 | 99.7 | | 60.3 | |
| 220 | 1382 | 4.02 | 99.7 | | 55.3 | |
| 240 | 1508 | 3.47 | 99.7 | | 51.3 | |
| 260 | 1634 | 3.59 | 99.7 | | 47.4 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo  No. : E-13  Date : Oct. 22, 90  Operated by : K.TAKAYANAGI

Geologic formation :  Surface Condition :  Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 298 | 49.9 | | 37.4 | |
| 2 | 12.6 | 147 | 49.9 | | 37.0 | |
| 4 | 25.1 | 63.3 | 49.9 | | 31.8 | |
| 6 | 37.7 | 35.9 | 49.9 | | 27.1 | |
| 8 | 50.3 | 25.1 | 49.9 | | 25.3 | |
| 10 | 62.8 | 19.2 | 49.9 | | 24.2 | |
| 12 | 75.4 | 17.8 | 49.9 | | 26.8 | |
| 14 | 88 | 12.7 | 49.9 | | 22.4 | |
| 16 | 100.5 | 10.5 | 49.9 | | 21.2 | |
| 18 | 113.1 | 8.64 | 49.9 | | 19.6 | |
| 20 | 125.7 | 7.39 | 49.9 | | 18.6 | |
| 22 | 138.2 | 6.37 | 49.9 | | 17.6 | |
| 24 | 150.8 | 5.07 | 49.9 | | 15.2 | |
| 26 | 163.4 | 4.53 | 49.9 | | 14.7 | |
| 28 | 175.9 | 8.97 | 49.9 | | 15.7 | |
| 30 | 188.5 | 8.29 | 99.8 | | 15.6 | |
| 32 | 201 | 7.73 | 99.8 | | 15.5 | |
| 34 | 214 | 6.93 | 99.8 | | 14.8 | |
| 36 | 226 | 6.16 | 99.7 | | 13.8 | |
| 40 | 251 | 5.49 | 99.7 | | 13.8 | |
| 44 | 276 | 5.12 | 99.7 | | 14.1 | |
| 48 | 302 | 4.95 | 99.7 | | 14.8 | |
| 52 | 327 | 4.49 | 99.7 | | 14.4 | |
| 56 | 352 | 8.60 | 199 | | 15.1 | |
| 60 | 377 | 8.45 | 199 | | 15.8 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 8.07 | 199 | | 16.1 | |
| 68 | 427 | 7.77 | 199 | | 16.2 | |
| 72 | 452 | 7.43 | 199 | | 16.7 | |
| 76 | 478 | 7.00 | 199 | | 16.7 | |
| 80 | 503 | 6.54 | 199 | | 16.1 | |
| 84 | 528 | 6.79 | 199 | | 18.0 | |
| 88 | 553 | 6.67 | 199 | | 18.2 | |
| 92 | 578 | 5.89 | 199 | | 16.8 | |
| 96 | 603 | 5.00 | 199 | | 15.1 | |
| 100 | 628 | 5.10 | 199 | | 15.7 | |
| 110 | 691 | 5.84 | 199 | | 20.0 | |
| 120 | 754 | 6.39 | 199 | | 24.1 | |
| 130 | 817 | 6.34 | 199 | | 25.3 | |
| 140 | 880 | 6.65 | 199 | | 29.0 | |
| 150 | 943 | 6.39 | 199 | | 30.2 | |
| 160 | 1005 | 6.52 | 199 | | 32.2 | |
| 170 | 1068 | 5.95 | 199 | | 31.0 | |
| 180 | 1131 | 5.67 | 199 | | 31.7 | |
| 190 | 1194 | 6.92 | 199 | | 40.6 | |
| 200 | 1257 | 4.98 | 199 | | 30.2 | |
| 220 | 1382 | 5.12 | 199 | | 34.6 | |
| 240 | 1508 | 5.70 | 199 | | 42.2 | |
| 260 | 1634 | 6.16 | 199 | | 49.0 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-14 Date : Oct. 08, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine, rain later

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 35.7 | 9.99 | | 22.4 | |
| 2 | 12.6 | 11.7 | 9.99 | | 14.8 | |
| 4 | 25.1 | 6.24 | 9.99 | | 15.7 | |
| 6 | 37.7 | 2.79 | 9.99 | | 10.5 | |
| 8 | 50.3 | 1.79 | 9.99 | | 9.00 | |
| 10 | 62.8 | 1.74 | 9.98 | | 10.9 | |
| 12 | 75.4 | 1.45 | 9.99 | | 10.9 | |
| 14 | 88 | 1.34 | 9.98 | | 11.8 | |
| 16 | 100.5 | 1.28 | 9.98 | | 12.9 | |
| 18 | 113.1 | 1.21 | 9.98 | | 13.8 | |
| 20 | 125.7 | 1.16 | 9.98 | | 14.6 | |
| 22 | 138.2 | 3.21 | 9.98 | | 44.4 | |
| 24 | 150.8 | 1.56 | 9.98 | | 23.5 | |
| 26 | 163.4 | 1.08 | 9.98 | | 17.6 | |
| 28 | 175.9 | 2.84 | 9.98 | | 50.0 | |
| 30 | 188.5 | 1.00 | 9.98 | | 18.9 | |
| 32 | 201 | 1.79 | 19.9 | | 17.9 | |
| 34 | 214 | 1.71 | 19.9 | | 18.2 | |
| 36 | 226 | 2.02 | 19.9 | | 22.8 | |
| 40 | 251 | 1.47 | 19.9 | | 18.3 | |
| 44 | 276 | 1.45 | 19.9 | | 19.9 | |
| 48 | 302 | 1.32 | 19.9 | | 19.9 | |
| 52 | 327 | 1.34 | 19.9 | | 22.0 | |
| 56 | 352 | 1.25 | 19.9 | | 21.8 | |
| 60 | 377 | 0.93 | 19.9 | | 17.3 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 0.84 | 19.9 | | 16.9 | |
| 68 | 427 | 0.82 | 19.9 | | 17.5 | |
| 72 | 452 | 0.76 | 19.9 | | 17.2 | |
| 76 | 478 | 0.74 | 19.9 | | 17.7 | |
| 80 | 503 | 1.83 | 49.9 | | 18.1 | |
| 84 | 528 | 1.66 | 49.9 | | 17.4 | |
| 88 | 553 | 1.59 | 49.9 | | 17.1 | |
| 92 | 578 | 1.48 | 49.9 | | 16.8 | |
| 96 | 603 | 0.55 | 19.9 | | 16.3 | |
| 100 | 628 | 0.56 | 19.9 | | 17.6 | |
| 110 | 691 | 0.53 | 19.9 | | 18.0 | |
| 120 | 754 | 0.49 | 19.9 | | 18.1 | |
| 130 | 817 | 0.42 | 19.9 | | 17.2 | |
| 140 | 880 | 0.93 | 49.9 | | 15.8 | |
| 150 | 943 | 1.00 | 49.9 | | 18.9 | |
| 160 | 1005 | 1.33 | 49.9 | | 26.1 | |
| 170 | 1068 | 0.91 | 49.9 | | 19.2 | |
| 180 | 1131 | 0.86 | 49.9 | | 19.2 | |
| 190 | 1194 | 0.79 | 49.9 | | 17.9 | |
| 200 | 1257 | 0.68 | 49.9 | | 16.3 | |
| 220 | 1382 | 0.82 | 49.9 | | 22.1 | |
| 240 | 1508 | 0.88 | 49.9 | | 25.6 | |
| 260 | 1634 | 0.32 | 49.9 | | 26.1 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-15 Date : Oct. 08, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 25.9 | 10.0 | | 16.3 | |
| 2 | 12.6 | 14.3 | 9.99 | | 18.1 | |
| 4 | 25.1 | 8.49 | 9.99 | | 21.3 | |
| 6 | 37.7 | 6.10 | 9.99 | | 23.0 | |
| 8 | 50.3 | 4.78 | 9.99 | | 24.0 | |
| 10 | 62.8 | 3.60 | 9.99 | | 23.1 | |
| 12 | 75.4 | 2.91 | 9.99 | | 22.0 | |
| 14 | 88 | 2.31 | 9.99 | | 20.3 | |
| 16 | 100.5 | 2.16 | 9.99 | | 21.7 | |
| 18 | 113.1 | 1.87 | 9.99 | | 21.1 | |
| 20 | 125.7 | 1.57 | 9.99 | | 19.7 | |
| 22 | 138.2 | 1.66 | 9.99 | | 22.9 | |
| 24 | 150.8 | 51.9 | 9.98 | | 784.6 | |
| 26 | 163.4 | 1.40 | 9.99 | | 22.9 | |
| 28 | 175.9 | 1.32 | 9.99 | | 23.2 | |
| 30 | 188.5 | 1.27 | 9.98 | | 23.9 | |
| 32 | 201 | 1.22 | 9.98 | | 24.7 | |
| 34 | 214 | 1.16 | 9.98 | | 24.8 | |
| 36 | 226 | 2.54 | 19.9 | | 28.7 | |
| 40 | 251 | 2.12 | 19.9 | | 26.6 | |
| 44 | 276 | 2.24 | 19.9 | | 30.9 | |
| 48 | 302 | 2.06 | 19.9 | | 31.1 | |
| 52 | 327 | 1.95 | 19.9 | | 31.7 | |
| 56 | 352 | 1.93 | 19.9 | | 33.8 | |
| 60 | 377 | 1.88 | 19.9 | | 35.4 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 1.58 | 19.9 | | 31.8 | |
| 68 | 427 | 1.18 | 19.9 | | 25.2 | |
| 72 | 452 | 1.33 | 19.9 | | 29.8 | |
| 76 | 478 | 1.29 | 19.9 | | 30.6 | |
| 80 | 503 | 1.22 | 19.9 | | 30.7 | |
| 84 | 528 | 1.30 | 19.9 | | 34.3 | |
| 88 | 553 | 1.15 | 19.9 | | 31.5 | |
| 92 | 578 | 1.11 | 19.9 | | 31.8 | |
| 96 | 603 | 1.09 | 19.9 | | 32.6 | |
| 100 | 628 | 1.08 | 19.9 | | 33.9 | |
| 110 | 691 | 1.05 | 19.9 | | 35.9 | |
| 120 | 754 | 0.95 | 19.9 | | 35.4 | |
| 130 | 817 | 1.17 | 19.9 | | 47.4 | |
| 140 | 880 | 0.84 | 19.9 | | 37.0 | |
| 150 | 943 | 0.61 | 19.9 | | 28.3 | |
| 160 | 1005 | 0.95 | 19.9 | | 47.2 | |
| 170 | 1068 | 2.79 | 19.9 | | 148.5 | |
| 180 | 1131 | 0.77 | 19.9 | | 43.0 | |
| 190 | 1194 | 0.76 | 49.9 | | 17.9 | |
| 200 | 1257 | 0.68 | 49.9 | | 16.3 | |
| 220 | 1382 | 0.98 | 49.9 | | 26.3 | |
| 240 | 1508 | 1.00 | 49.9 | | 30.2 | |
| 260 | 1634 | 1.04 | 49.9 | | 32.7 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-16 Date : Oct. 18, 90 Operated by : K.TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 113.58 | 9.99 | | 71.4 | |
| 2 | 12.6 | 27.9 | 9.99 | | 35.2 | |
| 4 | 25.1 | 9.50 | 9.99 | | 23.8 | |
| 6 | 37.7 | 14.9 | 19.9 | | 28.2 | |
| 8 | 50.3 | 12.0 | 19.9 | | 30.2 | |
| 10 | 62.8 | 10.4 | 19.9 | | 32.7 | |
| 12 | 75.4 | 8.75 | 19.9 | | 33.0 | |
| 14 | 88 | 8.76 | 19.9 | | 38.5 | |
| 16 | 100.5 | 7.63 | 19.9 | | 38.3 | |
| 18 | 113.1 | 6.87 | 19.9 | | 38.8 | |
| 20 | 125.7 | 6.31 | 19.9 | | 39.7 | |
| 22 | 138.2 | 5.94 | 19.9 | | 41.0 | |
| 24 | 150.8 | 14.0 | 49.9 | | 42.4 | |
| 26 | 163.4 | 13.0 | 49.9 | | 42.8 | |
| 28 | 175.9 | 10.6 | 49.9 | | 37.5 | |
| 30 | 188.5 | 10.1 | 49.9 | | 38.1 | |
| 32 | 201 | 8.96 | 49.9 | | 36.0 | |
| 34 | 214 | 7.21 | 49.9 | | 30.8 | |
| 36 | 226 | 8.06 | 49.9 | | 36.4 | |
| 40 | 251 | 7.40 | 49.9 | | 37.1 | |
| 44 | 276 | 6.63 | 49.9 | | 36.4 | |
| 48 | 302 | 5.81 | 49.9 | | 35.0 | |
| 52 | 327 | 4.09 | 49.9 | | 26.8 | |
| 56 | 352 | 3.86 | 49.9 | | 27.1 | |
| 60 | 377 | 3.69 | 49.9 | | 27.5 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 2.74 | 49.9 | | 21.7 | |
| 68 | 427 | 2.98 | 49.9 | | 25.2 | |
| 72 | 452 | 2.66 | 49.9 | | 24.0 | |
| 76 | 478 | 2.64 | 49.9 | | 25.3 | |
| 80 | 503 | 6.20 | 99.8 | | 31.2 | |
| 84 | 528 | 8.30 | 99.8 | | 43.8 | |
| 88 | 553 | 5.95 | 99.8 | | 32.6 | |
| 92 | 578 | 7.75 | 99.8 | | 44.5 | |
| 96 | 603 | 6.11 | 99.7 | | 36.8 | |
| 100 | 628 | 5.60 | 99.8 | | 35.2 | |
| 110 | 691 | 4.28 | 99.7 | | 29.7 | |
| 120 | 754 | 4.13 | 99.7 | | 28.3 | |
| 130 | 817 | 4.65 | 99.8 | | 37.6 | |
| 140 | 880 | 4.45 | 99.7 | | 38.7 | |
| 150 | 943 | 5.93 | 99.8 | | 55.6 | |
| 160 | 1005 | 7.37 | 99.7 | | 73.4 | |
| 170 | 1068 | 6.50 | 99.8 | | 69.4 | |
| 180 | 1131 | 6.47 | 99.7 | | 72.4 | |
| 190 | 1194 | 7.84 | 99.7 | | 93.1 | |
| 200 | 1257 | 8.83 | 99.8 | | 110.6 | |
| 220 | 1382 | 10.3 | 99.8 | | 142.3 | |
| 240 | 1508 | 7.38 | 99.8 | | 111.6 | |
| 260 | 1634 | 6.25 | 99.8 | | 101.3 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-17 Date : Oct. 13, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Cloudy

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 140 | 19.9 | | 44.1 | |
| 2 | 12.6 | 107.99 | 19.9 | | 68.2 | |
| 4 | 25.1 | 75.0 | 19.9 | | 94.3 | |
| 6 | 37.7 | 57.3 | 19.9 | | 108.2 | |
| 8 | 50.3 | 52.3 | 19.9 | | 131.9 | |
| 10 | 62.8 | 104 | 49.9 | | 131.9 | |
| 12 | 75.4 | 81.1 | 49.9 | | 122.4 | |
| 14 | 88 | 65.9 | 49.9 | | 116.2 | |
| 16 | 100.5 | 54.5 | 49.9 | | 109.6 | |
| 18 | 113.1 | 46.3 | 49.9 | | 105.0 | |
| 20 | 125.7 | 39.0 | 49.9 | | 98.3 | |
| 22 | 138.2 | 32.5 | 49.9 | | 90.0 | |
| 24 | 150.8 | 30.1 | 49.9 | | 91.1 | |
| 26 | 163.4 | 27.3 | 49.9 | | 89.4 | |
| 28 | 175.9 | 36.1 | 49.9 | | 127.2 | |
| 30 | 188.5 | 43.2 | 99.7 | | 81.6 | |
| 32 | 201 | 38.2 | 99.7 | | 77.0 | |
| 34 | 214 | 37.6 | 99.7 | | 80.7 | |
| 36 | 226 | 36.7 | 99.7 | | 83.2 | |
| 40 | 251 | 32.5 | 99.7 | | 81.6 | |
| 44 | 276 | 28.8 | 99.7 | | 79.5 | |
| 48 | 302 | 26.0 | 99.7 | | 78.5 | |
| 52 | 327 | 24.3 | 99.7 | | 79.8 | |
| 56 | 352 | 21.6 | 99.7 | | 76.0 | |
| 60 | 377 | 20.4 | 99.7 | | 77.3 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 18.1 | 99.7 | | 72.8 | |
| 68 | 427 | 17.1 | 99.7 | | 73.0 | |
| 72 | 452 | 16.3 | 99.7 | | 73.7 | |
| 76 | 478 | 30.7 | 199 | | 73.6 | |
| 80 | 503 | 14.1 | 99.7 | | 71.4 | |
| 84 | 528 | 13.3 | 99.7 | | 70.8 | |
| 88 | 553 | 12.4 | 99.7 | | 69.1 | |
| 92 | 578 | 11.7 | 99.7 | | 67.6 | |
| 96 | 603 | 22.3 | 199 | | 66.9 | |
| 100 | 628 | 20.6 | 199 | | 64.7 | |
| 110 | 691 | 17.2 | 199 | | 59.4 | |
| 120 | 754 | 13.1 | 199 | | 49.0 | |
| 130 | 817 | 11.0 | 199 | | 44.9 | |
| 140 | 880 | 7.98 | 199 | | 35.2 | |
| 150 | 943 | 7.17 | 199 | | 33.9 | |
| 160 | 1005 | 6.49 | 199 | | 32.2 | |
| 170 | 1068 | 5.97 | 199 | | 31.0 | |
| 180 | 1131 | 5.32 | 199 | | 29.4 | |
| 190 | 1194 | 5.48 | 199 | | 32.2 | |
| 200 | 1257 | 5.78 | 199 | | 35.2 | |
| 220 | 1382 | 5.87 | 199 | | 40.1 | |
| 240 | 1508 | 4.96 | 199 | | 36.2 | |
| 260 | 1634 | 4.42 | 199 | | 35.9 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-18 Date : Oct. 18, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Rain

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 120 | 20.0 | | 37.8 | |
| 2 | 12.6 | 70.1 | 18.3 | | 48.0 | |
| 4 | 25.1 | 47.4 | 19.9 | | 59.6 | |
| 6 | 37.7 | 40.0 | 19.9 | | 75.4 | |
| 8 | 50.3 | 29.3 | 19.9 | | 251.5 | |
| 10 | 62.8 | 23.5 | 19.9 | | 74.0 | |
| 12 | 75.4 | 21.0 | 19.9 | | 79.4 | |
| 14 | 88 | 20.0 | 19.9 | | 88.4 | |
| 16 | 100.5 | 17.3 | 19.9 | | 87.2 | |
| 18 | 113.1 | 14.6 | 19.9 | | 83.0 | |
| 20 | 125.7 | 13.3 | 19.9 | | 83.8 | |
| 22 | 138.2 | 12.4 | 19.9 | | 86.2 | |
| 24 | 150.8 | 11.5 | 19.9 | | 86.7 | |
| 26 | 163.4 | 26.4 | 19.9 | | 86.3 | |
| 28 | 175.9 | 23.5 | 19.9 | | 82.8 | |
| 30 | 188.5 | 21.4 | 19.9 | | 81.1 | |
| 32 | 201 | 20.3 | 19.9 | | 82.0 | |
| 34 | 214 | 19.3 | 19.9 | | 82.6 | |
| 36 | 226 | 17.1 | 19.9 | | 77.5 | |
| 40 | 251 | 14.9 | 19.9 | | 75.3 | |
| 44 | 276 | 13.6 | 19.9 | | 75.1 | |
| 48 | 302 | 12.3 | 49.9 | | 74.6 | |
| 52 | 327 | 11.0 | 49.9 | | 72.3 | |
| 56 | 352 | 9.40 | 49.9 | | 66.2 | |
| 60 | 377 | 8.17 | 49.9 | | 61.5 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 7.12 | 49.9 | | 57.1 | |
| 68 | 427 | 6.91 | 49.9 | | 58.9 | |
| 72 | 452 | 5.93 | 49.9 | | 53.3 | |
| 76 | 478 | 6.02 | 49.9 | | 57.4 | |
| 80 | 503 | 4.80 | 49.9 | | 48.3 | |
| 84 | 528 | 9.12 | 99.8 | | 48.0 | |
| 88 | 553 | 9.00 | 99.8 | | 49.8 | |
| 92 | 578 | 8.98 | 99.8 | | 51.4 | |
| 96 | 603 | 8.04 | 99.8 | | 48.2 | |
| 100 | 628 | 6.07 | 99.8 | | 37.7 | |
| 110 | 691 | 8.18 | 99.7 | | 56.7 | |
| 120 | 754 | 6.89 | 99.8 | | 52.0 | |
| 130 | 817 | 6.76 | 99.8 | | 54.7 | |
| 140 | 880 | 11.80 | 199 | | 51.9 | |
| 150 | 943 | 7.02 | 199 | | 33.0 | |
| 160 | 1005 | 6.71 | 199 | | 33.2 | |
| 170 | 1068 | 5.94 | 199 | | 31.0 | |
| 180 | 1131 | 5.42 | 199 | | 30.5 | |
| 190 | 1194 | 5.29 | 199 | | 31.0 | |
| 200 | 1257 | 4.97 | 199 | | 30.2 | |
| 220 | 1382 | 4.45 | 199 | | 30.4 | |
| 240 | 1508 | 4.32 | 199 | | 31.7 | |
| 260 | 1634 | 4.25 | 199 | | 34.3 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-19 Date : Oct. 09, 90 Operated by : K.TAKAYANAGI

Geologic formation : Surface Condition : Weather : Cloudy

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 94.8 | 10.0 | | 59.6 | |
| 2 | 12.6 | 45.3 | 9.99 | | 57.0 | |
| 4 | 25.1 | 22.2 | 9.99 | | 55.9 | |
| 6 | 37.7 | 16.0 | 9.99 | | 60.4 | |
| 8 | 50.3 | 13.1 | 9.99 | | 66.2 | |
| 10 | 62.8 | 10.8 | 9.99 | | 68.3 | |
| 12 | 75.4 | 9.05 | 9.99 | | 68.2 | |
| 14 | 88 | 7.83 | 9.99 | | 69.0 | |
| 16 | 100.5 | 6.06 | 9.99 | | 60.9 | |
| 18 | 113.1 | 5.29 | 9.99 | | 59.8 | |
| 20 | 125.7 | 4.56 | 9.99 | | 57.3 | |
| 22 | 138.2 | 4.22 | 9.99 | | 58.3 | |
| 24 | 150.8 | 3.35 | 9.98 | | 50.5 | |
| 26 | 163.4 | 3.39 | 9.98 | | 55.4 | |
| 28 | 175.9 | 3.45 | 9.99 | | 60.9 | |
| 30 | 188.5 | 2.71 | 9.99 | | 51.1 | |
| 32 | 201 | 2.96 | 9.99 | | 59.5 | |
| 34 | 214 | 2.80 | 9.99 | | 59.9 | |
| 36 | 226 | 2.23 | 9.98 | | 50.4 | |
| 40 | 251 | 2.39 | 9.98 | | 60.2 | |
| 44 | 276 | 2.10 | 9.98 | | 58.0 | |
| 48 | 302 | 1.87 | 9.98 | | 56.5 | |
| 52 | 327 | 1.59 | 9.98 | | 52.0 | |
| 56 | 352 | 1.36 | 9.98 | | 47.9 | |
| 60 | 377 | 1.22 | 9.98 | | 46.4 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 1.25 | 9.99 | | 50.3 | |
| 68 | 427 | 1.14 | 9.99 | | 48.7 | |
| 72 | 452 | 1.08 | 9.99 | | 48.8 | |
| 76 | 478 | 0.95 | 9.99 | | 45.4 | |
| 80 | 503 | 1.81 | 19.9 | | 45.3 | |
| 84 | 528 | 1.71 | 19.9 | | 44.9 | |
| 88 | 553 | 1.79 | 19.9 | | 49.2 | |
| 92 | 578 | 1.63 | 19.9 | | 46.8 | |
| 96 | 603 | 1.69 | 19.9 | | 50.7 | |
| 100 | 628 | 1.59 | 19.9 | | 49.6 | |
| 110 | 691 | 1.47 | 19.9 | | 50.4 | |
| 120 | 754 | 2.22 | 9.98 | | 167.4 | |
| 130 | 817 | 0.81 | 9.98 | | 66.2 | |
| 140 | 880 | 1.69 | 19.9 | | 73.9 | |
| 150 | 943 | 1.81 | 19.9 | | 84.9 | |
| 160 | 1005 | 2.10 | 19.9 | | 105.5 | |
| 170 | 1068 | 1.44 | 19.9 | | 76.9 | |
| 180 | 1131 | 1.54 | 19.9 | | 87.1 | |
| 190 | 1194 | 2.32 | 19.9 | | 138.5 | |
| 200 | 1257 | 2.14 | 19.9 | | 134.5 | |
| 220 | 1382 | 2.14 | 19.9 | | 147.9 | |
| 240 | 1508 | 2.52 | 19.9 | | 190.0 | |
| 260 | 1634 | 3.69 | 19.9 | | 300.7 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-20 Date : Oct. 09, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Rain

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 31.4 | 10.0 | | 19.7 | |
| 2 | 12.6 | 19.9 | 9.99 | | 25.1 | |
| 4 | 25.1 | 13.9 | 9.99 | | 35.0 | |
| 6 | 37.7 | 10.8 | 9.99 | | 40.9 | |
| 8 | 50.3 | 8.58 | 9.99 | | 43.2 | |
| 10 | 62.8 | 6.23 | 9.99 | | 39.1 | |
| 12 | 75.4 | 5.72 | 9.99 | | 43.1 | |
| 14 | 88 | 4.99 | 9.99 | | 43.9 | |
| 16 | 100.5 | 4.57 | 9.99 | | 45.9 | |
| 18 | 113.1 | 3.63 | 9.99 | | 41.1 | |
| 20 | 125.7 | 3.59 | 9.99 | | 45.1 | |
| 22 | 138.2 | 2.48 | 9.99 | | 34.3 | |
| 24 | 150.8 | 3.17 | 9.99 | | 47.8 | |
| 26 | 163.4 | 3.36 | 9.99 | | 54.9 | |
| 28 | 175.9 | 3.66 | 9.99 | | 64.4 | |
| 30 | 188.5 | 2.73 | 9.99 | | 51.5 | |
| 32 | 201 | 2.37 | 9.99 | | 47.6 | |
| 34 | 214 | 2.18 | 9.99 | | 46.7 | |
| 36 | 226 | 1.79 | 9.98 | | 40.5 | |
| 40 | 251 | 1.63 | 9.98 | | 40.9 | |
| 44 | 276 | 1.44 | 9.98 | | 39.7 | |
| 48 | 302 | 1.31 | 9.99 | | 39.6 | |
| 52 | 327 | 1.22 | 9.98 | | 40.2 | |
| 56 | 352 | 1.06 | 9.98 | | 37.3 | |
| 60 | 377 | 2.26 | 19.9 | | 42.6 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 2.15 | 19.9 | | 43.0 | |
| 68 | 427 | 1.88 | 19.9 | | 40.1 | |
| 72 | 452 | 1.75 | 19.9 | | 39.3 | |
| 76 | 478 | 1.68 | 19.9 | | 40.2 | |
| 80 | 503 | 1.61 | 19.9 | | 40.2 | |
| 84 | 528 | 1.47 | 19.9 | | 38.5 | |
| 88 | 553 | 1.34 | 19.9 | | 37.1 | |
| 92 | 578 | 1.22 | 19.9 | | 35.3 | |
| 96 | 603 | 1.21 | 19.9 | | 36.8 | |
| 100 | 628 | 2.94 | 49.9 | | 36.4 | |
| 110 | 691 | 2.64 | 49.9 | | 36.6 | |
| 120 | 754 | 2.45 | 49.9 | | 36.9 | |
| 130 | 817 | 2.18 | 49.9 | | 35.1 | |
| 140 | 880 | 2.06 | 49.9 | | 36.1 | |
| 150 | 943 | 1.89 | 49.9 | | 34.9 | |
| 160 | 1005 | 1.75 | 49.9 | | 35.2 | |
| 170 | 1068 | 1.36 | 49.9 | | 28.8 | |
| 180 | 1131 | 1.35 | 49.9 | | 30.5 | |
| 190 | 1194 | 1.34 | 49.9 | | 31.0 | |
| 200 | 1257 | 1.29 | 49.9 | | 31.4 | |
| 220 | 1382 | 1.21 | 49.9 | | 33.2 | |
| 240 | 1508 | 2.26 | 99.9 | | 33.2 | |
| 260 | 1634 | 2.06 | 99.8 | | 32.7 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-21 Date : Oct. 15, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 81.9 | 20.0 | | 25.7 | |
| 2 | 12.6 | 49.2 | 19.9 | | 30.9 | |
| 4 | 25.1 | 32.8 | 19.9 | | 41.3 | |
| 6 | 37.7 | 23.6 | 19.9 | | 44.6 | |
| 8 | 50.3 | 17.7 | 19.9 | | 44.6 | |
| 10 | 62.8 | 37.1 | 49.9 | | 46.7 | |
| 12 | 75.4 | 32.6 | 49.9 | | 49.2 | |
| 14 | 88 | 29.3 | 49.9 | | 51.7 | |
| 16 | 100.5 | 26.6 | 49.9 | | 53.6 | |
| 18 | 113.1 | 24.3 | 49.9 | | 55.1 | |
| 20 | 125.7 | 22.2 | 49.9 | | 56.1 | |
| 22 | 138.2 | 19.5 | 49.9 | | 54.0 | |
| 24 | 150.8 | 17.3 | 49.9 | | 52.2 | |
| 26 | 163.4 | 16.8 | 49.9 | | 55.1 | |
| 28 | 175.9 | 13.4 | 49.9 | | 47.1 | |
| 30 | 188.5 | 12.9 | 49.9 | | 48.6 | |
| 32 | 201 | 23.7 | 99.8 | | 47.6 | |
| 34 | 214 | 21.5 | 99.8 | | 46.0 | |
| 36 | 226 | 20.0 | 99.8 | | 45.2 | |
| 40 | 251 | 17.0 | 99.8 | | 42.7 | |
| 44 | 276 | 15.3 | 99.8 | | 42.5 | |
| 48 | 302 | 13.6 | 99.7 | | 41.4 | |
| 52 | 327 | 16.2 | 99.7 | | 53.0 | |
| 56 | 352 | 11.2 | 99.8 | | 39.4 | |
| 60 | 377 | 10.3 | 99.7 | | 39.2 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 9.54 | 99.7 | | 38.2 | |
| 68 | 427 | 8.76 | 99.7 | | 37.1 | |
| 72 | 452 | 8.10 | 99.7 | | 36.6 | |
| 76 | 478 | 7.46 | 99.7 | | 35.4 | |
| 80 | 503 | | | | | |
| 84 | 528 | 6.86 | 99.8 | | 35.9 | |
| 88 | 553 | 6.53 | 99.8 | | 35.9 | |
| 92 | 578 | 10.7 | 199 | | 31.2 | |
| 96 | 603 | 11.4 | 199 | | 34.4 | |
| 100 | 628 | 10.1 | 199 | | 31.4 | |
| 110 | 691 | 9.97 | 199 | | 33.9 | |
| 120 | 754 | 9.01 | 199 | | 33.9 | |
| 130 | 817 | 8.66 | 199 | | 35.1 | |
| 140 | 880 | 7.53 | 199 | | 32.6 | |
| 150 | 943 | 7.01 | 199 | | 33.0 | |
| 160 | 1005 | 6.82 | 199 | | 34.2 | |
| 170 | 1068 | 6.64 | 199 | | 35.2 | |
| 180 | 1131 | 6.09 | 199 | | 33.9 | |
| 190 | 1194 | 6.01 | 199 | | 35.8 | |
| 200 | 1257 | 4.73 | 199 | | 28.9 | |
| 220 | 1382 | 5.00 | 199 | | 34.6 | |
| 240 | 1508 | 5.35 | 199 | | 39.2 | |
| 260 | 1634 | 5.23 | 199 | | 42.5 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-22 Date : Oct. 15, 90 Operated by : K.TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 177 | 19.9 | | 55.6 | |
| 2 | 12.6 | 119 | 19.9 | | 75.1 | |
| 4 | 25.1 | 50.7 | 19.9 | | 63.7 | |
| 6 | 37.7 | 34.3 | 19.9 | | 64.9 | |
| 8 | 50.3 | 60.2 | 49.9 | | 60.7 | |
| 10 | 62.8 | 41.0 | 49.9 | | 51.6 | |
| 12 | 75.4 | 31.6 | 49.9 | | 47.7 | |
| 14 | 88 | 27.0 | 49.9 | | 47.6 | |
| 16 | 100.5 | 23.9 | 49.9 | | 48.1 | |
| 18 | 113.1 | 20.0 | 49.9 | | 45.5 | |
| 20 | 125.7 | 18.0 | 49.9 | | 45.4 | |
| 22 | 138.2 | 16.0 | 49.9 | | 44.2 | |
| 24 | 150.8 | 14.1 | 49.9 | | 42.8 | |
| 26 | 163.4 | 12.7 | 49.9 | | 41.7 | |
| 28 | 175.9 | 11.9 | 49.9 | | 41.9 | |
| 30 | 188.5 | 10.5 | 49.9 | | 39.6 | |
| 32 | 201 | 20.1 | 99.7 | | 40.4 | |
| 34 | 214 | 18.8 | 99.7 | | 40.2 | |
| 36 | 226 | 0.61 | 99.8 | | 1.4 | |
| 40 | 251 | 2.60 | 99.7 | | 6.3 | |
| 44 | 276 | 3.89 | 99.7 | | 8.0 | |
| 48 | 302 | 3.89 | 99.7 | | 11.8 | |
| 52 | 327 | 8.15 | 99.7 | | 26.5 | |
| 56 | 352 | 3.29 | 99.7 | | 11.3 | |
| 60 | 377 | 4.16 | 199 | | 7.5 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 10.5 | 199 | | 20.9 | |
| 68 | 427 | 1.12 | 199 | | 2.1 | |
| 72 | 452 | 6.54 | 199 | | 14.5 | |
| 76 | 478 | 6.29 | 199 | | 14.8 | |
| 80 | 503 | 1.82 | 199 | | 4.5 | |
| 84 | 528 | 15.6 | 199 | | 41.2 | |
| 88 | 553 | 2.30 | 199 | | 6.1 | |
| 92 | 578 | 3.79 | 199 | | 11.0 | |
| 96 | 603 | 6.26 | 199 | | 18.7 | |
| 100 | 628 | 16.8 | 199 | | 52.8 | |
| 110 | 691 | 5.53 | 199 | | 18.7 | |
| 120 | 754 | 3.00 | 199 | | 11.3 | |
| 130 | 817 | 0.79 | 199 | | 2.5 | |
| 140 | 880 | 5.42 | 199 | | 23.8 | |
| 150 | 943 | 7.04 | 199 | | 33.0 | |
| 160 | 1005 | 10.1 | 199 | | 50.3 | |
| 170 | 1068 | 11.1 | 199 | | 59.8 | |
| 180 | 1131 | 1.01 | 199 | | 5.7 | |
| 190 | 1194 | 7.02 | 199 | | 41.8 | |
| 200 | 1257 | 11.0 | 199 | | 69.1 | |
| 220 | 1382 | 6.14 | 199 | | 41.5 | |
| 240 | 1508 | 5.09 | 199 | | 37.7 | |
| 260 | 1634 | 6.13 | 199 | | 49.0 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-23 Date : Oct. 15, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 120 | 19.9 | | 37.8 | |
| 2 | 12.6 | 63.0 | 19.9 | | 39.6 | |
| 4 | 25.1 | 47.6 | 19.9 | | 47.6 | |
| 6 | 37.7 | 26.5 | 19.9 | | 50.1 | |
| 8 | 50.3 | 21.9 | 19.9 | | 55.1 | |
| 10 | 62.8 | 45.0 | 49.9 | | 56.6 | |
| 12 | 75.4 | 38.5 | 49.9 | | 58.1 | |
| 14 | 88 | 34.4 | 49.9 | | 60.6 | |
| 16 | 100.5 | 30.5 | 49.9 | | 61.4 | |
| 18 | 113.1 | 27.9 | 49.9 | | 63.2 | |
| 20 | 125.7 | 24.3 | 49.9 | | 61.1 | |
| 22 | 138.2 | 21.9 | 49.9 | | 60.8 | |
| 24 | 150.8 | 19.5 | 49.9 | | 59.1 | |
| 26 | 163.4 | 17.9 | 49.9 | | 58.5 | |
| 28 | 175.9 | 16.6 | 49.9 | | 58.6 | |
| 30 | 188.5 | 15.0 | 49.9 | | 56.7 | |
| 32 | 201 | 14.3 | 49.9 | | 57.5 | |
| 34 | 214 | 13.5 | 49.9 | | 58.0 | |
| 36 | 226 | 24.4 | 99.7 | | 55.1 | |
| 40 | 251 | 21.4 | 99.7 | | 54.0 | |
| 44 | 276 | 17.4 | 99.7 | | 48.0 | |
| 48 | 302 | 15.6 | 99.7 | | 47.1 | |
| 52 | 327 | 12.4 | 99.7 | | 40.5 | |
| 56 | 352 | 12.0 | 99.7 | | 42.2 | |
| 60 | 377 | 11.5 | 99.7 | | 43.7 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 11.2 | 99.7 | | 45.0 | |
| 68 | 427 | 10.6 | 99.7 | | 45.3 | |
| 72 | 452 | 19.3 | 199 | | 43.8 | |
| 76 | 478 | 18.3 | 199 | | 43.5 | |
| 80 | 503 | 17.0 | 199 | | 42.8 | |
| 84 | 528 | 15.8 | 199 | | 41.7 | |
| 88 | 553 | 14.9 | 199 | | 40.9 | |
| 92 | 578 | 13.3 | 199 | | 38.1 | |
| 96 | 603 | 13.0 | 199 | | 39.2 | |
| 100 | 628 | 12.9 | 199 | | 40.8 | |
| 110 | 691 | 12.6 | 199 | | 43.5 | |
| 120 | 754 | 12.1 | 199 | | 45.2 | |
| 130 | 817 | 12.6 | 199 | | 51.5 | |
| 140 | 880 | 14.2 | 199 | | 62.5 | |
| 150 | 943 | 10.1 | 199 | | 47.2 | |
| 160 | 1005 | 9.04 | 199 | | 45.2 | |
| 170 | 1068 | 7.59 | 199 | | 40.6 | |
| 180 | 1131 | 6.80 | 199 | | 38.5 | |
| 190 | 1194 | 6.43 | 199 | | 38.2 | |
| 200 | 1257 | 5.83 | 199 | | 36.5 | |
| 220 | 1382 | 5.86 | 199 | | 40.0 | |
| 240 | 1508 | 5.46 | 199 | | 40.7 | |
| 260 | 1634 | 5.33 | 199 | | 42.5 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-24 Date : Oct. 23, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 99.0 | 19.9 | | 31.1 | |
| 2 | 12.6 | 47.1 | 19.9 | | 29.7 | |
| 4 | 25.1 | 28.1 | 19.9 | | 35.3 | |
| 6 | 37.7 | 20.1 | 19.9 | | 38.1 | |
| 8 | 50.3 | 15.4 | 19.9 | | 38.9 | |
| 10 | 62.8 | 12.5 | 19.9 | | 39.4 | |
| 12 | 75.4 | 10.0 | 19.9 | | 37.9 | |
| 14 | 88 | 8.16 | 19.9 | | 35.9 | |
| 16 | 100.5 | 6.87 | 19.9 | | 34.6 | |
| 18 | 113.1 | 6.00 | 19.9 | | 33.9 | |
| 20 | 125.7 | 10.3 | 49.9 | | 26.0 | |
| 22 | 138.2 | 10.0 | 49.9 | | 27.8 | |
| 24 | 150.8 | 8.21 | 49.9 | | 24.7 | |
| 26 | 163.4 | 7.87 | 49.9 | | 25.7 | |
| 28 | 175.9 | 7.09 | 49.9 | | 25.0 | |
| 30 | 188.5 | 6.04 | 49.9 | | 22.8 | |
| 32 | 201 | 5.47 | 49.9 | | 21.9 | |
| 34 | 214 | 5.27 | 49.9 | | 22.5 | |
| 36 | 226 | 5.09 | 49.9 | | 23.1 | |
| 40 | 251 | 4.91 | 49.9 | | 24.6 | |
| 44 | 276 | 4.68 | 49.9 | | 25.7 | |
| 48 | 302 | 9.13 | 99.8 | | 27.5 | |
| 52 | 327 | 9.35 | 99.7 | | 30.4 | |
| 56 | 352 | 9.00 | 99.8 | | 31.7 | |
| 60 | 377 | 6.98 | 99.7 | | 26.0 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 8.89 | 99.8 | | 35.8 | |
| 68 | 427 | 8.80 | 99.7 | | 37.6 | |
| 72 | 452 | 8.69 | 99.7 | | 39.3 | |
| 76 | 478 | 8.41 | 99.8 | | 40.2 | |
| 80 | 503 | 8.31 | 99.7 | | 41.7 | |
| 84 | 528 | 8.43 | 99.7 | | 44.4 | |
| 88 | 553 | 9.23 | 99.7 | | 54.2 | |
| 92 | 578 | 8.25 | 99.7 | | 47.4 | |
| 96 | 603 | 8.23 | 99.7 | | 49.4 | |
| 100 | 628 | 8.88 | 99.7 | | 55.3 | |
| 110 | 691 | 6.11 | 99.7 | | 42.2 | |
| 120 | 754 | 6.53 | 99.7 | | 49.0 | |
| 130 | 817 | 5.91 | 99.7 | | 48.2 | |
| 140 | 880 | 6.10 | 99.7 | | 53.7 | |
| 150 | 943 | 5.20 | 99.7 | | 49.0 | |
| 160 | 1005 | 4.27 | 99.7 | | 42.2 | |
| 170 | 1068 | 4.01 | 99.7 | | 42.7 | |
| 180 | 1131 | 3.96 | 99.7 | | 44.1 | |
| 190 | 1194 | 4.01 | 99.7 | | 47.8 | |
| 200 | 1257 | 3.85 | 99.7 | | 47.8 | |
| 220 | 1382 | 3.08 | 99.7 | | 41.5 | |
| 240 | 1508 | 2.92 | 99.7 | | 43.7 | |
| 260 | 1634 | 5.08 | 199 | | 48.9 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-25 Date : Oct. 16, 90 Operated by : K.TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 54.7 | 10.0 | | 34.4 | |
| 2 | 12.6 | 34.22 | 10.0 | | 43.0 | |
| 4 | 25.1 | 44.8 | 19.9 | | 56.3 | |
| 6 | 37.7 | 35.2 | 19.9 | | 66.4 | |
| 8 | 50.3 | 28.8 | 19.9 | | 72.6 | |
| 10 | 62.8 | 57.7 | 49.9 | | 72.6 | |
| 12 | 75.4 | 49.1 | 49.9 | | 74.1 | |
| 14 | 88 | 41.7 | 49.9 | | 73.4 | |
| 16 | 100.5 | 35.7 | 49.9 | | 71.9 | |
| 18 | 113.1 | 30.0 | 49.9 | | 68.0 | |
| 20 | 125.7 | 25.8 | 49.9 | | 65.0 | |
| 22 | 138.2 | 21.6 | 49.9 | | 60.0 | |
| 24 | 150.8 | 19.0 | 49.9 | | 57.5 | |
| 26 | 163.4 | 16.6 | 49.9 | | 54.6 | |
| 28 | 175.9 | 14.6 | 49.9 | | 51.4 | |
| 30 | 188.5 | 12.9 | 49.9 | | 48.6 | |
| 32 | 201 | 11.3 | 49.9 | | 45.6 | |
| 34 | 214 | 9.97 | 49.9 | | 42.6 | |
| 36 | 226 | 9.11 | 49.9 | | 41.1 | |
| 40 | 251 | 7.80 | 49.9 | | 39.2 | |
| 44 | 276 | 7.00 | 49.9 | | 38.6 | |
| 48 | 302 | 6.25 | 49.9 | | 37.8 | |
| 52 | 327 | 5.74 | 49.9 | | 37.3 | |
| 56 | 352 | 10.2 | 99.8 | | 35.9 | |
| 60 | 377 | 10.0 | 99.8 | | 37.7 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 8.76 | 99.8 | | 35.0 | |
| 68 | 427 | 7.83 | 99.8 | | 33.3 | |
| 72 | 452 | 7.30 | 99.8 | | 33.0 | |
| 76 | 478 | 6.82 | 99.8 | | 32.5 | |
| 80 | 503 | 6.79 | 99.8 | | 34.2 | |
| 84 | 528 | 6.08 | 99.8 | | 32.2 | |
| 88 | 553 | 5.78 | 99.8 | | 32.1 | |
| 92 | 578 | 5.41 | 99.8 | | 31.2 | |
| 96 | 603 | 5.08 | 99.7 | | 30.8 | |
| 100 | 628 | 4.98 | 99.7 | | 30.8 | |
| 110 | 691 | 4.36 | 99.7 | | 29.7 | |
| 120 | 754 | 3.72 | 99.7 | | 27.9 | |
| 130 | 817 | 3.62 | 99.7 | | 29.4 | |
| 140 | 880 | 6.60 | 199 | | 29.0 | |
| 150 | 943 | 6.34 | 199 | | 29.2 | |
| 160 | 1005 | 0.02 | 0.99 | | 22.1 | |
| 170 | 1068 | 2.89 | 99.7 | | 29.9 | |
| 180 | 1131 | 5.65 | 199 | | 31.7 | |
| 190 | 1194 | 5.62 | 199 | | 33.4 | |
| 200 | 1257 | 5.54 | 199 | | 33.9 | |
| 220 | 1382 | 5.29 | 199 | | 35.9 | |
| 240 | 1508 | 5.08 | 199 | | 37.7 | |
| 260 | 1634 | 5.00 | 199 | | 40.9 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-26 Date : Oct. 19, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 115 | 19.9 | | 36.3 | |
| 2 | 12.6 | 60.7 | 19.9 | | 38.2 | |
| 4 | 25.1 | 30.3 | 19.9 | | 38.1 | |
| 6 | 37.7 | 17.8 | 19.9 | | 33.7 | |
| 8 | 50.3 | 9.99 | 19.9 | | 25.2 | |
| 10 | 62.8 | 8.02 | 19.9 | | 25.2 | |
| 12 | 75.4 | 6.73 | 19.9 | | 25.3 | |
| 14 | 88 | 5.84 | 19.9 | | 25.7 | |
| 16 | 100.5 | 5.23 | 19.9 | | 26.2 | |
| 18 | 113.1 | 4.62 | 19.9 | | 26.1 | |
| 20 | 125.7 | 10.4 | 19.9 | | 26.3 | |
| 22 | 138.2 | 9.67 | 49.9 | | 26.7 | |
| 24 | 150.8 | 9.27 | 49.9 | | 27.9 | |
| 26 | 163.4 | 9.00 | 49.9 | | 29.4 | |
| 28 | 175.9 | 8.48 | 49.9 | | 29.7 | |
| 30 | 188.5 | 8.08 | 49.9 | | 30.3 | |
| 32 | 201 | 8.27 | 49.9 | | 33.2 | |
| 34 | 214 | 8.06 | 49.9 | | 34.5 | |
| 36 | 226 | 7.96 | 49.9 | | 35.9 | |
| 40 | 251 | 8.55 | 49.9 | | 42.9 | |
| 44 | 276 | 7.95 | 49.9 | | 43.9 | |
| 48 | 302 | 7.66 | 49.9 | | 46.2 | |
| 52 | 327 | 7.61 | 49.9 | | 49.7 | |
| 56 | 352 | 6.81 | 49.9 | | 47.9 | |
| 60 | 377 | 7.41 | 49.9 | | 55.8 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 6.53 | 49.9 | | 52.3 | |
| 68 | 427 | 12.4 | 99.7 | | 52.9 | |
| 72 | 452 | 11.9 | 99.7 | | 53.8 | |
| 76 | 478 | 11.4 | 99.7 | | 54.5 | |
| 80 | 503 | 11.3 | 99.7 | | 57.3 | |
| 84 | 528 | 10.9 | 99.7 | | 57.6 | |
| 88 | 553 | 10.6 | 99.7 | | 58.6 | |
| 92 | 578 | 10.0 | 99.7 | | 57.8 | |
| 96 | 603 | 9.05 | 99.7 | | 56.1 | |
| 100 | 628 | 8.89 | 99.7 | | 55.9 | |
| 110 | 691 | 8.49 | 99.7 | | 58.7 | |
| 120 | 754 | 8.00 | 99.7 | | 60.3 | |
| 130 | 817 | 7.38 | 99.7 | | 60.5 | |
| 140 | 880 | 7.15 | 99.7 | | 62.5 | |
| 150 | 943 | 6.87 | 99.7 | | 64.1 | |
| 160 | 1005 | 7.07 | 99.7 | | 70.4 | |
| 170 | 1068 | 7.91 | 99.7 | | 84.4 | |
| 180 | 1131 | 7.05 | 99.7 | | 79.2 | |
| 190 | 1194 | 6.60 | 99.7 | | 78.8 | |
| 200 | 1257 | 5.73 | 99.7 | | 71.6 | |
| 220 | 1382 | 5.25 | 99.7 | | 71.9 | |
| 240 | 1508 | 4.85 | 99.7 | | 72.4 | |
| 260 | 1634 | 4.63 | 99.7 | | 75.2 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-27 Date : Oct. 16, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 145 | 19.9 | | 45.7 | |
| 2 | 12.6 | 85.2 | 19.9 | | 53.6 | |
| 4 | 25.1 | 36.4 | 19.9 | | 45.8 | |
| 6 | 37.7 | 20.9 | 19.9 | | 39.5 | |
| 8 | 50.3 | 14.4 | 19.9 | | 36.3 | |
| 10 | 62.8 | 11.6 | 19.9 | | 36.7 | |
| 12 | 75.4 | 10.3 | 19.9 | | 39.1 | |
| 14 | 88 | 8.86 | 19.9 | | 39.0 | |
| 16 | 100.5 | 18.8 | 49.9 | | 37.9 | |
| 18 | 113.1 | 17.1 | 49.9 | | 38.8 | |
| 20 | 125.7 | 14.9 | 49.9 | | 37.5 | |
| 22 | 138.2 | 13.7 | 49.9 | | 38.0 | |
| 24 | 150.8 | 12.3 | 49.9 | | 37.2 | |
| 26 | 163.4 | 11.3 | 49.9 | | 37.1 | |
| 28 | 175.9 | 10.3 | 49.9 | | 36.2 | |
| 30 | 188.5 | 9.26 | 49.9 | | 34.9 | |
| 32 | 201 | 17.2 | 99.7 | | 34.8 | |
| 34 | 214 | 15.9 | 99.8 | | 34.0 | |
| 36 | 226 | 15.1 | 99.8 | | 34.4 | |
| 40 | 251 | 13.3 | 99.7 | | 33.4 | |
| 44 | 276 | 12.3 | 99.8 | | 33.9 | |
| 48 | 302 | 11.3 | 99.7 | | 34.4 | |
| 52 | 327 | 10.6 | 99.8 | | 34.7 | |
| 56 | 352 | 9.75 | 99.8 | | 34.1 | |
| 60 | 377 | 4.63 | 49.9 | | 34.7 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 8.64 | 99.8 | | 34.6 | |
| 68 | 427 | 7.98 | 99.7 | | 33.7 | |
| 72 | 452 | 7.44 | 99.7 | | 33.4 | |
| 76 | 478 | 7.28 | 99.7 | | 34.4 | |
| 80 | 503 | 7.02 | 99.7 | | 35.2 | |
| 84 | 528 | 6.29 | 99.7 | | 33.3 | |
| 88 | 553 | 11.9 | 199 | | 33.1 | |
| 92 | 578 | 11.4 | 199 | | 32.9 | |
| 96 | 603 | 10.7 | 199 | | 32.0 | |
| 100 | 628 | 10.7 | 199 | | 33.3 | |
| 110 | 691 | 9.79 | 199 | | 33.9 | |
| 120 | 754 | 9.18 | 199 | | 34.7 | |
| 130 | 817 | 8.49 | 199 | | 34.3 | |
| 140 | 880 | 7.71 | 199 | | 33.4 | |
| 150 | 943 | 7.40 | 199 | | 34.9 | |
| 160 | 1005 | 6.71 | 199 | | 33.2 | |
| 170 | 1068 | 6.08 | 199 | | 32.0 | |
| 180 | 1131 | 5.39 | 199 | | 30.5 | |
| 190 | 1194 | 4.94 | 199 | | 28.7 | |
| 200 | 1257 | 5.08 | 199 | | 31.4 | |
| 220 | 1382 | 4.82 | 199 | | 33.2 | |
| 240 | 1508 | 5.03 | 199 | | 37.7 | |
| 260 | 1634 | 5.47 | 199 | | 44.1 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-28 Date : Oct. 23, 90 Operated by : K.TAKAYANAGI

Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 271 | 19.9 | | 85.3 | |
| 2 | 12.6 | 145 | 19.9 | | 91.6 | |
| 4 | 25.1 | 71.0 | 19.9 | | 89.2 | |
| 6 | 37.7 | 58.1 | 19.9 | | 109.6 | |
| 8 | 50.3 | 43.2 | 19.9 | | 108.7 | |
| 10 | 62.8 | 32.6 | 19.9 | | 102.4 | |
| 12 | 75.4 | 24.8 | 19.9 | | 93.6 | |
| 14 | 88 | 19.3 | 19.9 | | 85.0 | |
| 16 | 100.5 | 15.6 | 19.9 | | 78.7 | |
| 18 | 113.1 | 13.8 | 19.9 | | 78.4 | |
| 20 | 125.7 | 12.6 | 19.9 | | 79.8 | |
| 22 | 138.2 | 11.7 | 19.9 | | 81.1 | |
| 24 | 150.8 | 11.2 | 19.9 | | 85.1 | |
| 26 | 163.4 | 10.8 | 19.9 | | 88.6 | |
| 28 | 175.9 | 10.6 | 19.9 | | 93.8 | |
| 30 | 188.5 | 10.4 | 19.9 | | 98.0 | |
| 32 | 201 | 9.90 | 19.9 | | 99.5 | |
| 34 | 214 | 9.42 | 19.9 | | 101.0 | |
| 36 | 226 | 8.87 | 19.9 | | 100.3 | |
| 40 | 251 | 7.84 | 19.9 | | 98.6 | |
| 44 | 276 | 7.29 | 19.9 | | 95.2 | |
| 48 | 302 | 6.82 | 19.9 | | 103.0 | |
| 52 | 327 | 6.23 | 19.9 | | 101.7 | |
| 56 | 352 | 5.80 | 19.9 | | 102.1 | |
| 60 | 377 | 13.6 | 49.9 | | 103.3 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 12.8 | 49.9 | | 103.7 | |
| 68 | 427 | 12.4 | 49.9 | | 106.3 | |
| 72 | 452 | 12.1 | 49.9 | | 109.4 | |
| 76 | 478 | 11.9 | 49.9 | | 113.8 | |
| 80 | 503 | 11.6 | 49.9 | | 117.2 | |
| 84 | 528 | 11.2 | 49.9 | | 119.3 | |
| 88 | 553 | 11.3 | 49.9 | | 125.5 | |
| 92 | 578 | | | | | |
| 96 | 603 | | | | | |
| 100 | 628 | 6.86 | 49.9 | | 86.0 | |
| 110 | 691 | 14.3 | 99.7 | | 98.8 | |
| 120 | 754 | 13.6 | 99.7 | | 130.4 | |
| 130 | 817 | 12.7 | 99.7 | | 103.8 | |
| 140 | 880 | 12.6 | 99.7 | | 110.9 | |
| 150 | 943 | 13.5 | 99.7 | | 128.2 | |
| 160 | 1005 | 12.4 | 99.7 | | 124.6 | |
| 170 | 1068 | 13.2 | 99.7 | | 142.0 | |
| 180 | 1131 | 12.2 | 99.7 | | 138.0 | |
| 190 | 1194 | 11.3 | 99.7 | | 134.9 | |
| 200 | 1257 | 10.4 | 99.7 | | 130.7 | |
| 220 | 1382 | 11.9 | 99.7 | | 165.8 | |
| 240 | 1508 | 15.1 | 99.7 | | 229.2 | |
| 260 | 1634 | 11.1 | 99.7 | | 181.4 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-29 Date : Oct. 16, 90 Operated by : K. TAKAYANAGI

Geologic formation : Surface Condition : Weather : Cloudy

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 65.2 | 19.9 | | 20.5 | |
| 2 | 12.6 | 27.9 | 19.9 | | 17.6 | |
| 4 | 25.1 | 15.4 | 19.9 | | 19.4 | |
| 6 | 37.7 | 11.7 | 19.9 | | 22.2 | |
| 8 | 50.3 | 27.4 | 49.9 | | 27.7 | |
| 10 | 62.8 | 24.1 | 49.9 | | 30.3 | |
| 12 | 75.4 | 23.15 | 49.9 | | 35.0 | |
| 14 | 88 | 22.1 | 49.9 | | 39.0 | |
| 16 | 100.5 | 20.5 | 49.9 | | 41.3 | |
| 18 | 113.1 | 19.6 | 49.9 | | 44.3 | |
| 20 | 125.7 | 18.1 | 49.9 | | 45.6 | |
| 22 | 138.2 | 16.9 | 49.9 | | 47.0 | |
| 24 | 150.8 | 16.2 | 49.9 | | 49.0 | |
| 26 | 163.4 | 16.4 | 49.9 | | 53.8 | |
| 28 | 175.9 | 15.1 | 49.9 | | 53.3 | |
| 30 | 188.5 | 14.3 | 49.9 | | 53.9 | |
| 32 | 201 | 14.4 | 49.9 | | 57.9 | |
| 34 | 214 | 13.4 | 49.9 | | 57.8 | |
| 36 | 226 | 13.2 | 49.9 | | 60.0 | |
| 40 | 251 | 25.4 | 99.7 | | 63.8 | |
| 44 | 276 | 24.1 | 99.7 | | 66.8 | |
| 48 | 302 | 22.9 | 99.7 | | 69.2 | |
| 52 | 327 | 21.6 | 99.8 | | 70.6 | |
| 56 | 352 | 20.8 | 99.7 | | 73.2 | |
| 60 | 377 | 20.7 | 99.7 | | 78.0 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 20.2 | 99.7 | | 81.2 | |
| 68 | 427 | 19.8 | 99.8 | | 84.5 | |
| 72 | 452 | 19.5 | 99.7 | | 88.1 | |
| 76 | 478 | 15.7 | 99.7 | | 75.0 | |
| 80 | 503 | 13.8 | 99.7 | | 69.9 | |
| 84 | 528 | 16.1 | 99.7 | | 85.0 | |
| 88 | 553 | 21.4 | 99.7 | | 118.3 | |
| 92 | 578 | 15.0 | 99.7 | | 87.3 | |
| 96 | 603 | 14.5 | 99.7 | | 87.4 | |
| 100 | 628 | 14.2 | 99.7 | | 89.2 | |
| 110 | 691 | 13.9 | 99.7 | | 96.0 | |
| 120 | 754 | 12.8 | 99.7 | | 96.5 | |
| 130 | 817 | 12.8 | 99.7 | | 104.6 | |
| 140 | 880 | 11.9 | 99.7 | | 104.7 | |
| 150 | 943 | 11.4 | 99.7 | | 107.5 | |
| 160 | 1005 | 11.2 | 99.7 | | 112.6 | |
| 170 | 1068 | 11.0 | 99.7 | | 117.5 | |
| 180 | 1131 | 10.7 | 99.7 | | 121.0 | |
| 190 | 1194 | 10.1 | 99.7 | | 121.8 | |
| 200 | 1257 | 10.1 | 99.7 | | 127.0 | |
| 220 | 1382 | 10.2 | 99.7 | | 142.3 | |
| 240 | 1508 | 10.2 | 99.7 | | 155.3 | |
| 260 | 1634 | 10.4 | 99.7 | | 169.9 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

Date Sheet for Resistivity Sounding (Wenner's Configuration)

Name of Place : Antipolo No. : E-30 Date : Oct. 30, 90 Operated by : K. TAKAYANAGI

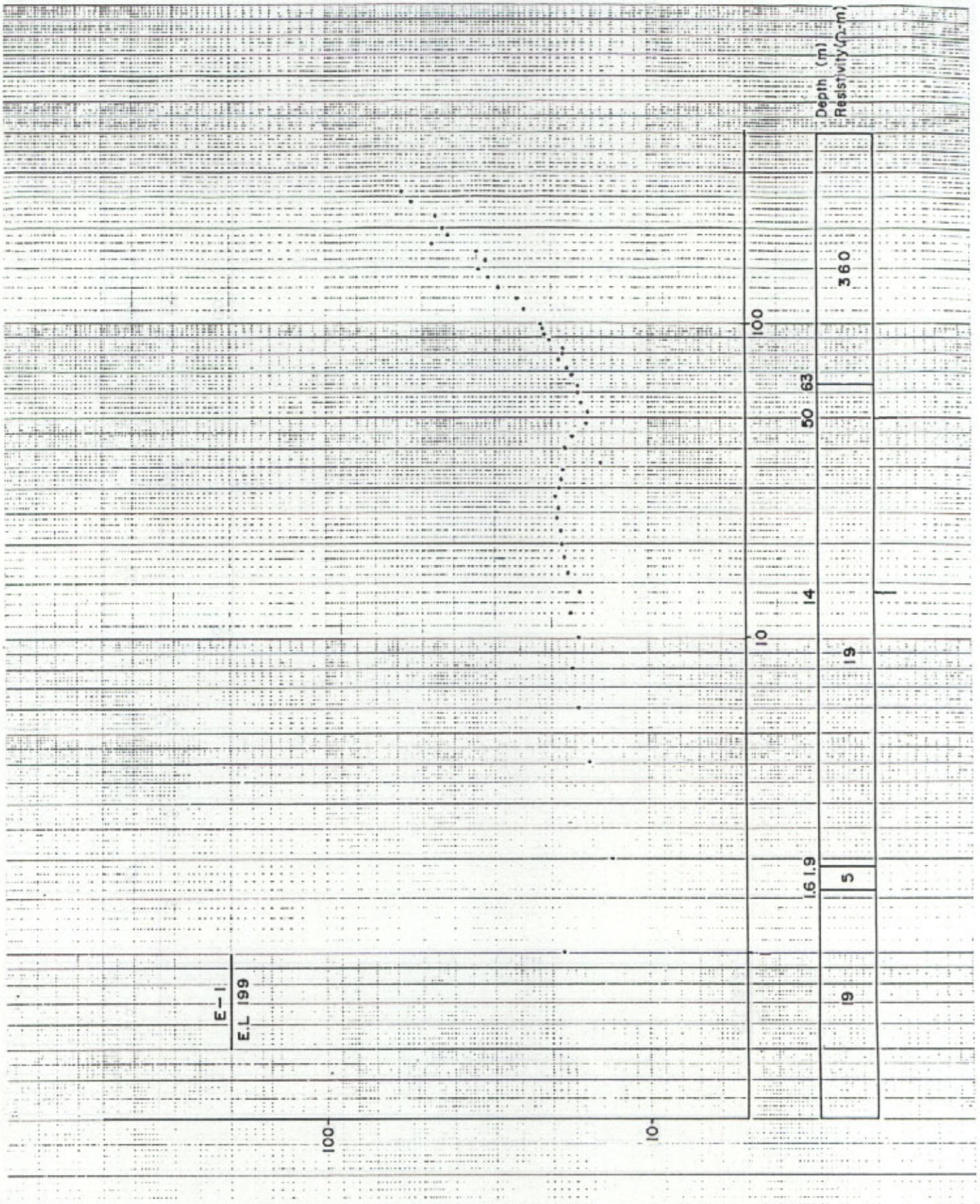
Geologic formation : Surface Condition : Weather : Fine

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 1 | 6.28 | 57.4 | 19.9 | | 18.0 | |
| 2 | 12.6 | 33.2 | 19.9 | | 20.9 | |
| 4 | 25.1 | 19.5 | 19.9 | | 24.5 | |
| 6 | 37.7 | 14.5 | 19.9 | | 27.4 | |
| 8 | 50.3 | 10.4 | 16.3 | | 32.1 | |
| 10 | 62.8 | 10.6 | 19.9 | | 34.0 | |
| 12 | 75.4 | 10.2 | 19.9 | | 38.5 | |
| 14 | 88 | 9.75 | 19.9 | | 42.9 | |
| 16 | 100.5 | 22.3 | 49.9 | | 44.9 | |
| 18 | 113.1 | 21.0 | 49.9 | | 47.6 | |
| 20 | 125.7 | 20.1 | 49.9 | | 50.7 | |
| 22 | 138.2 | 19.3 | 49.9 | | 53.5 | |
| 24 | 150.8 | 18.2 | 49.9 | | 55.0 | |
| 26 | 163.4 | 17.7 | 49.9 | | 58.0 | |
| 28 | 175.9 | 17.1 | 49.9 | | 60.5 | |
| 30 | 188.5 | 17.5 | 49.9 | | 66.2 | |
| 32 | 201 | 17.6 | 49.9 | | 71.0 | |
| 34 | 214 | 17.6 | 49.9 | | 75.8 | |
| 36 | 226 | 17.5 | 49.9 | | 79.1 | |
| 40 | 251 | 17.5 | 49.9 | | 88.1 | |
| 44 | 276 | 16.9 | 49.9 | | 93.3 | |
| 48 | 302 | 17.0 | 49.9 | | 103.0 | |
| 52 | 327 | 17.0 | 49.9 | | 111.5 | |
| 56 | 352 | 16.6 | 49.9 | | 117.2 | |
| 60 | 377 | 14.3 | 49.9 | | 107.8 | |

| a | 2πa | V | I | R | ρ=2πaR | Remarks |
|---|---|---|---|---|---|---|
| 64 | 402 | 14.4 | 49.9 | | 115.8 | |
| 68 | 427 | 13.2 | 49.9 | | 113.2 | |
| 72 | 452 | 12.7 | 49.9 | | 115.3 | |
| 76 | 478 | 12.5 | 49.9 | | 120.0 | |
| 80 | 503 | 17.0 | 49.9 | | 171.5 | |
| 84 | 528 | 11.5 | 49.9 | | 122.0 | |
| 88 | 553 | 74.4 | 49.9 | | 824.5 | |
| 92 | 578 | 17.8 | 99.8 | | 103.5 | |
| 96 | 603 | 15.27 | 99.8 | | 92.3 | |
| 100 | 628 | 14.6 | 99.8 | | 91.7 | |
| 110 | 691 | 12.4 | 99.8 | | 85.7 | |
| 120 | 754 | 12.1 | 99.8 | | 92.0 | |
| 130 | 817 | 11.3 | 99.8 | | 92.3 | |
| 140 | 880 | 10.9 | 99.8 | | 95.9 | |
| 150 | 943 | 10.4 | 99.8 | | 98.0 | |
| 160 | 1005 | 10.2 | 99.8 | | 102.5 | |
| 170 | 1068 | 10.4 | 99.7 | | 111.1 | |
| 180 | 1131 | 10.4 | 99.7 | | 117.6 | |
| 190 | 1194 | 10.0 | 99.7 | | 119.4 | |
| 200 | 1257 | 9.85 | 99.7 | | 123.2 | |
| 220 | 1382 | 10.1 | 99.7 | | 141.0 | |
| 240 | 1508 | 10.5 | 99.7 | | 158.3 | |
| 260 | 1634 | 11.2 | 99.7 | | 184.6 | |
| 280 | 1759 | | | | | |
| 300 | 1885 | | | | | |

# 1.2

# RESISTIVITY MEASUREMENT AND INTERPRETATION

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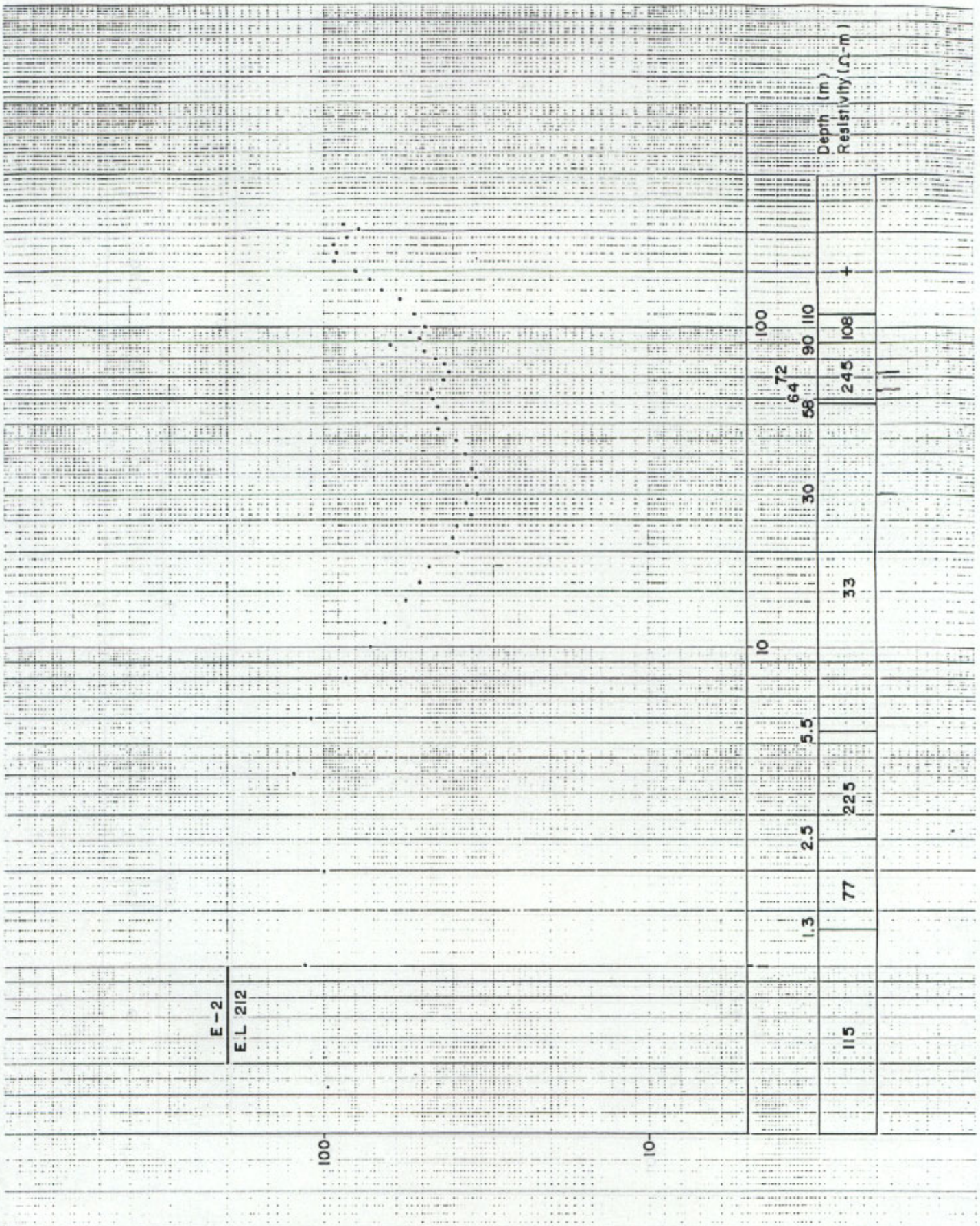
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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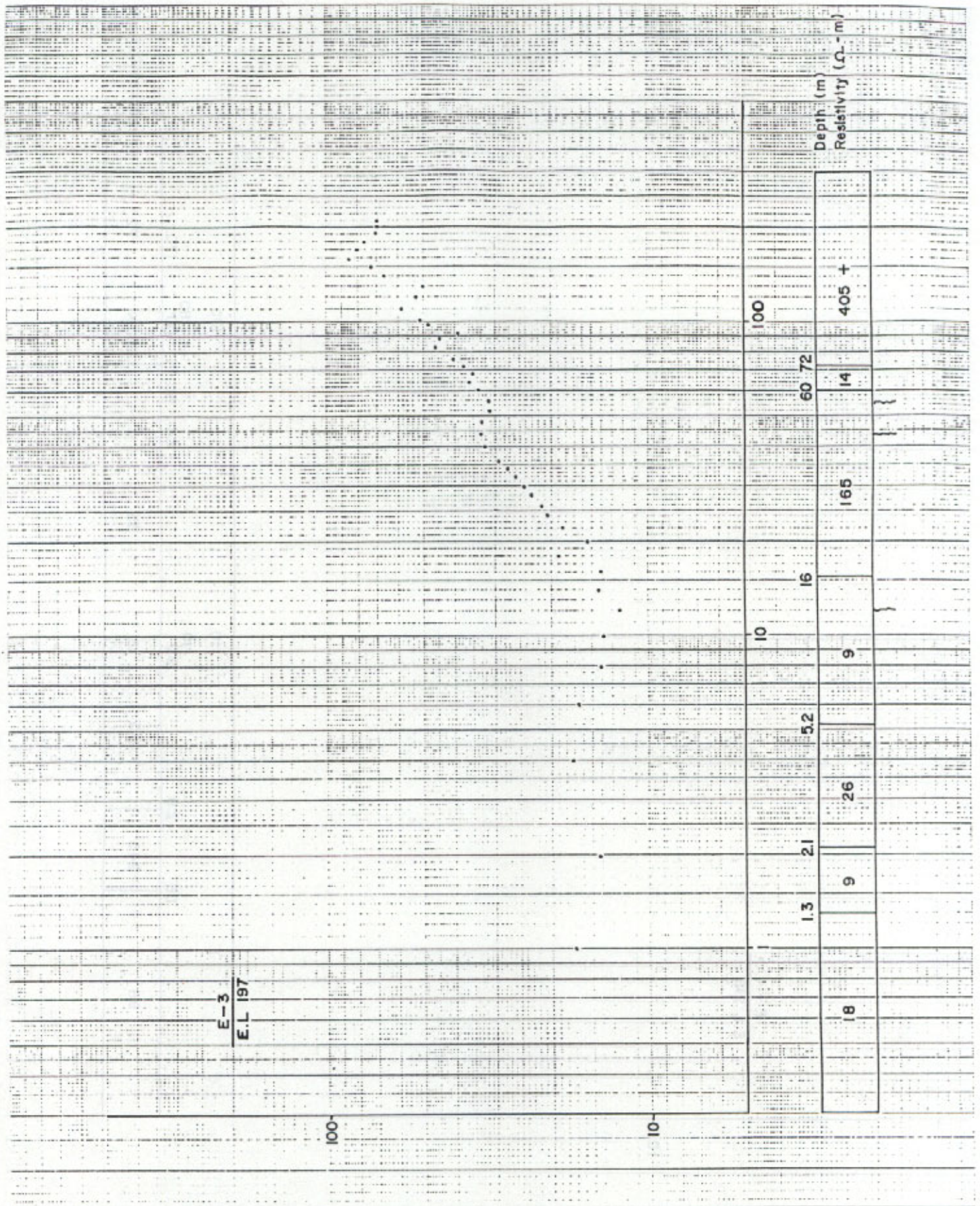
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ア－a CURVE |

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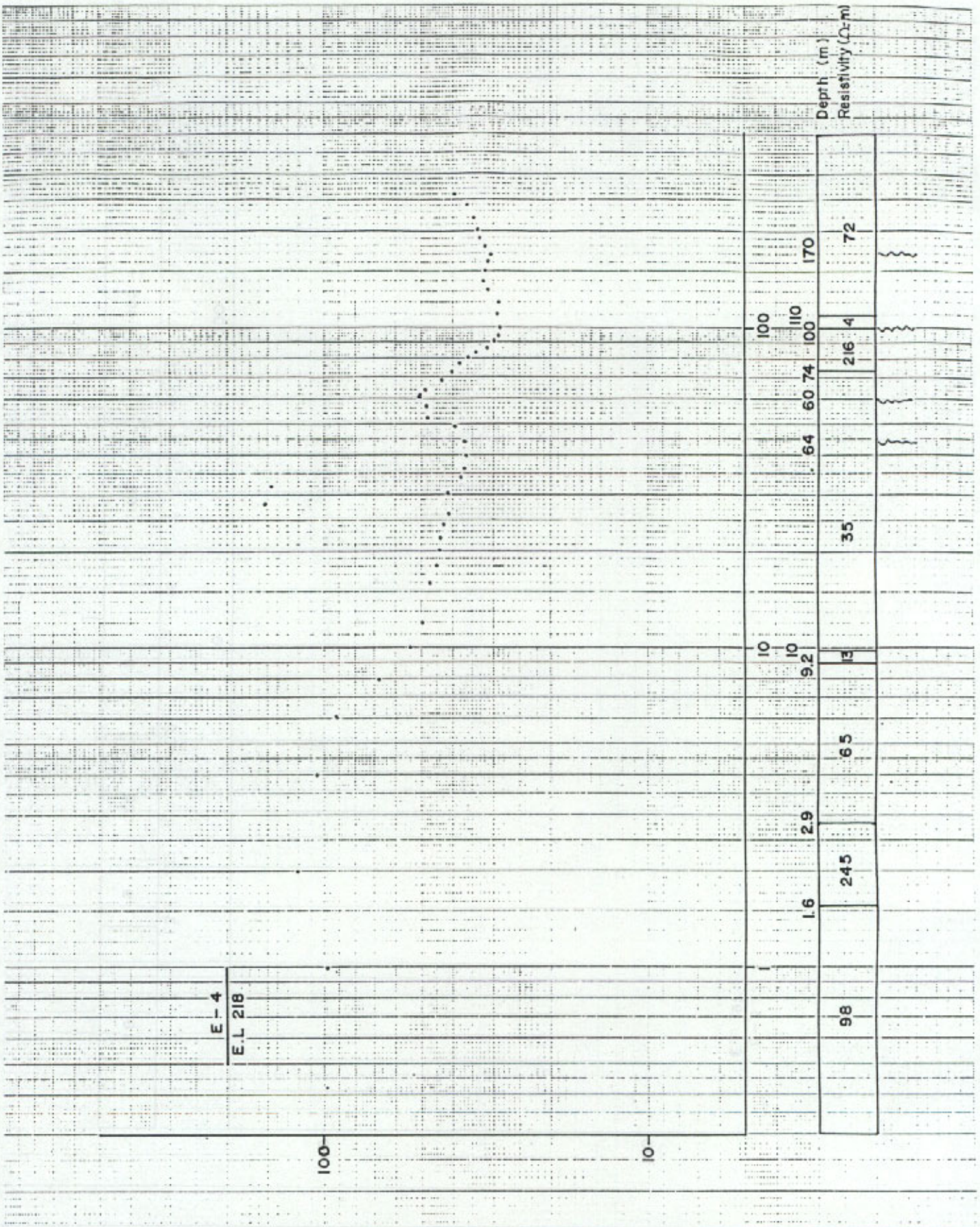
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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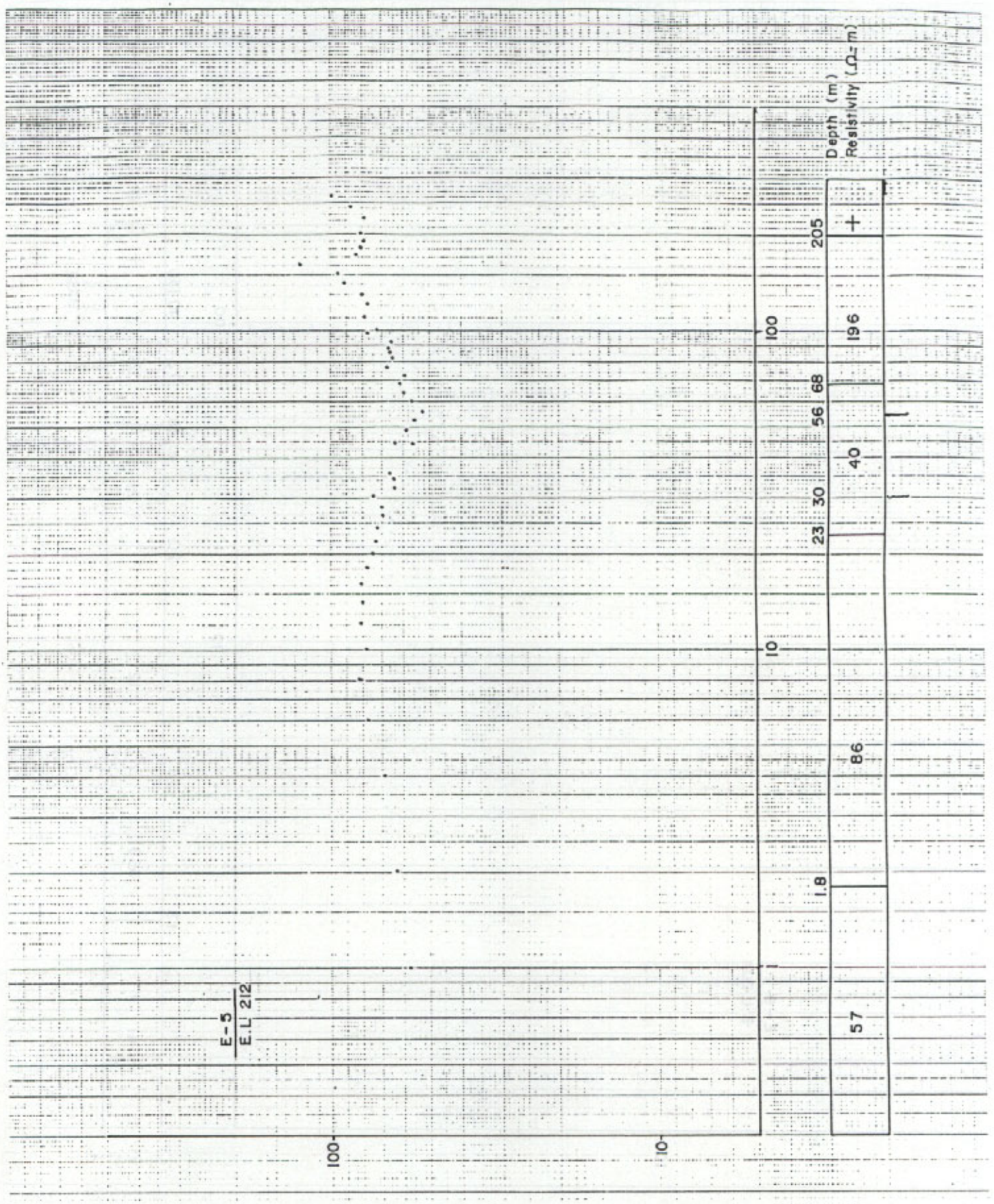
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | $\rho$ - a CURVE |

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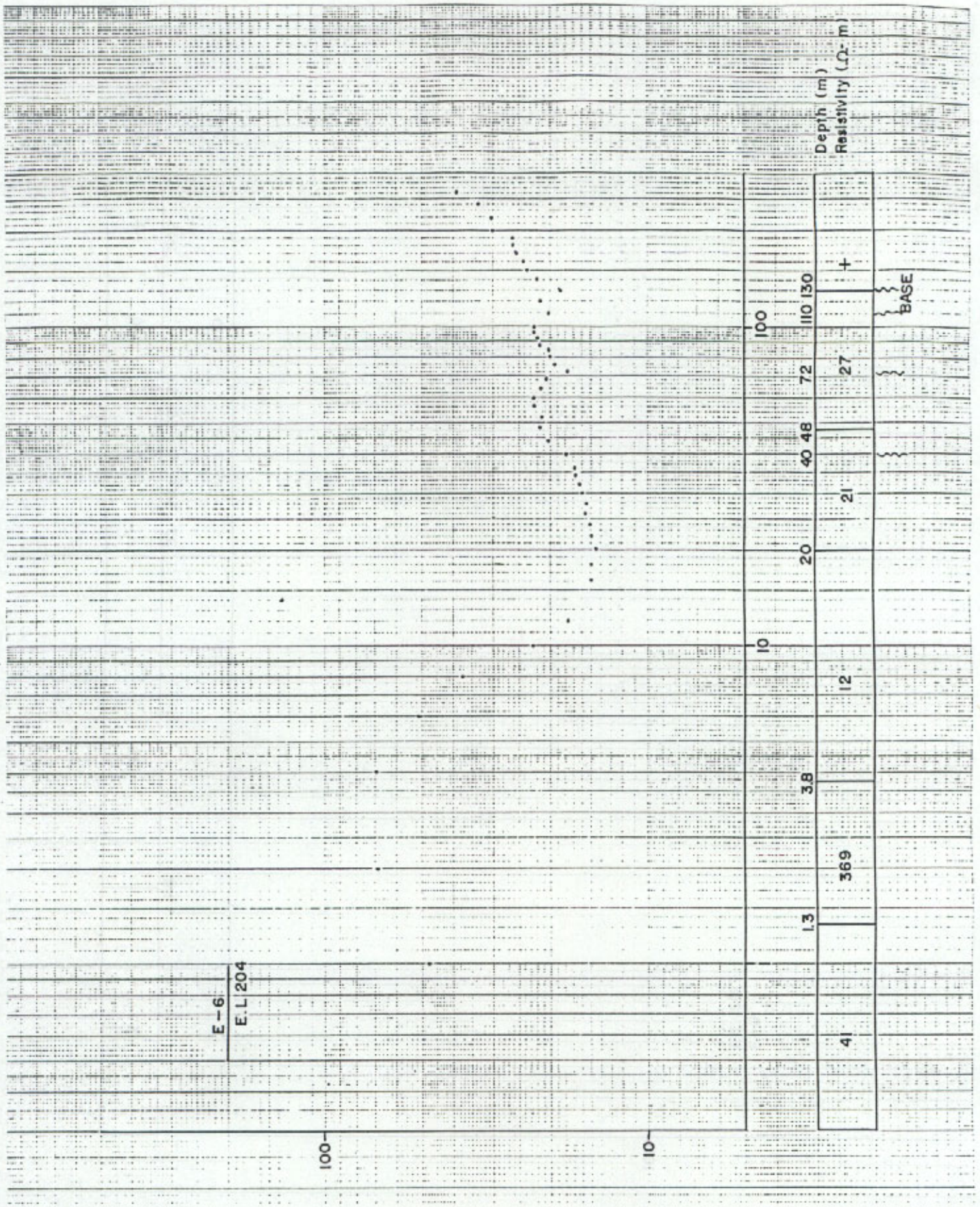
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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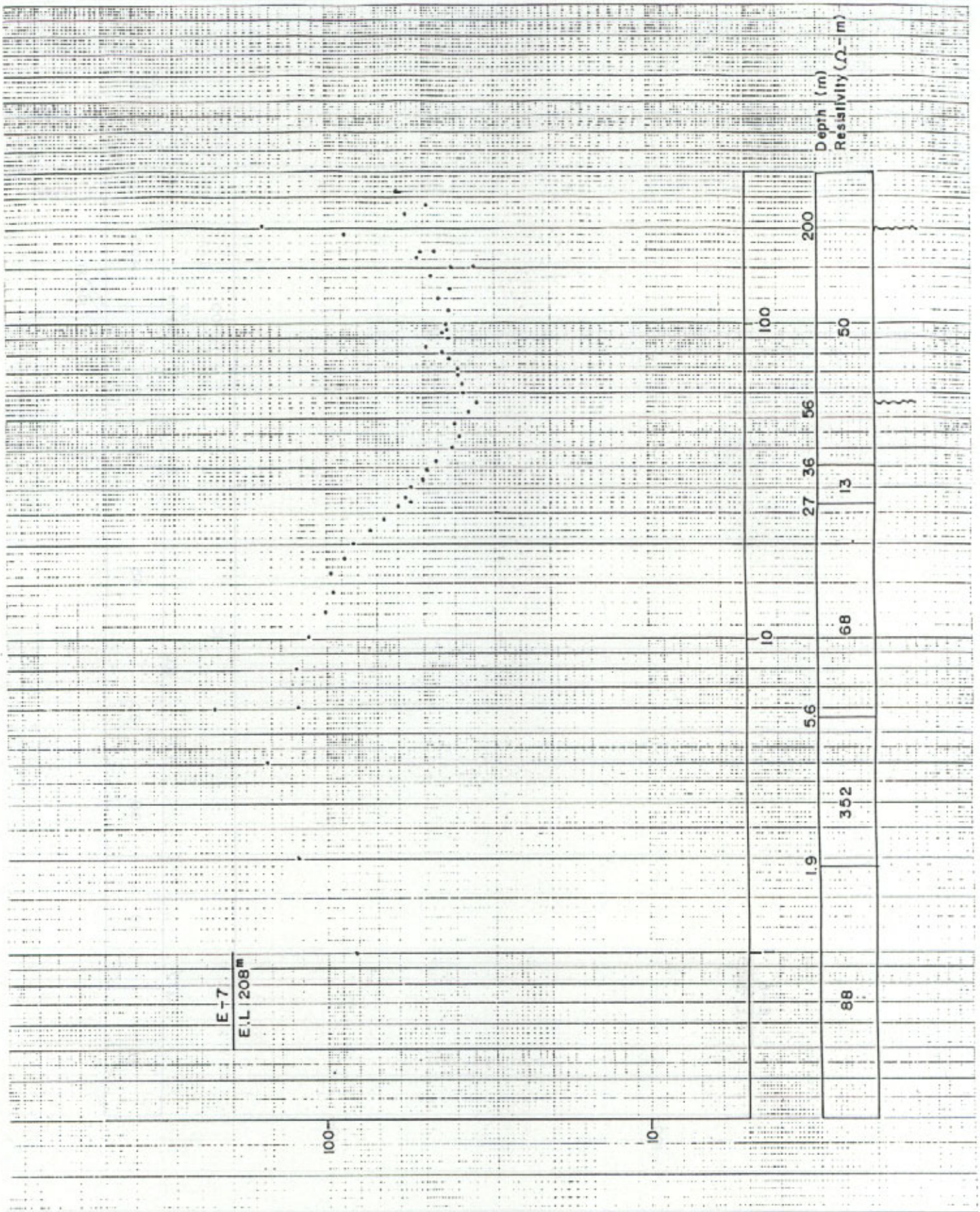
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY $\rho$ - a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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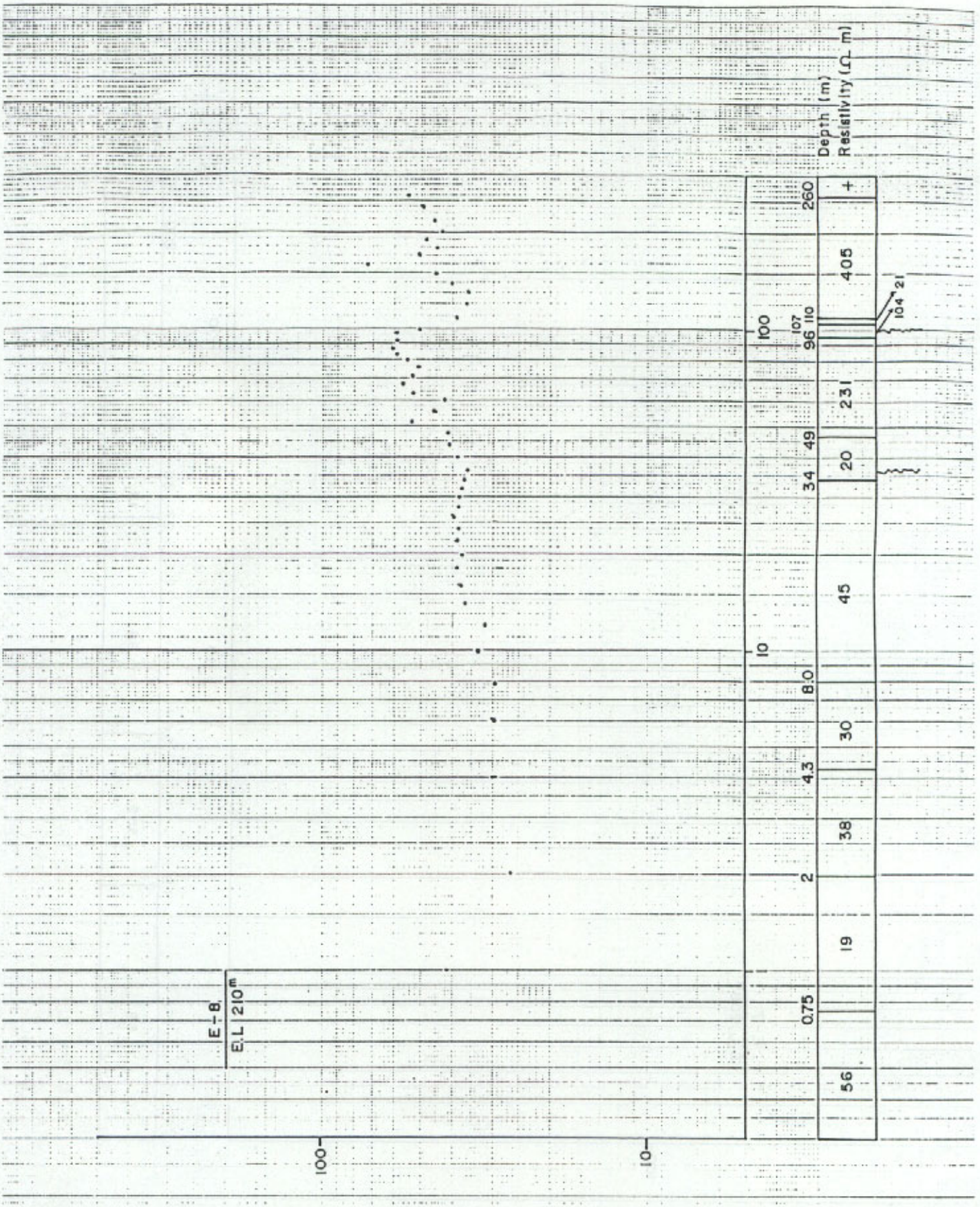
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ – a CURVE |

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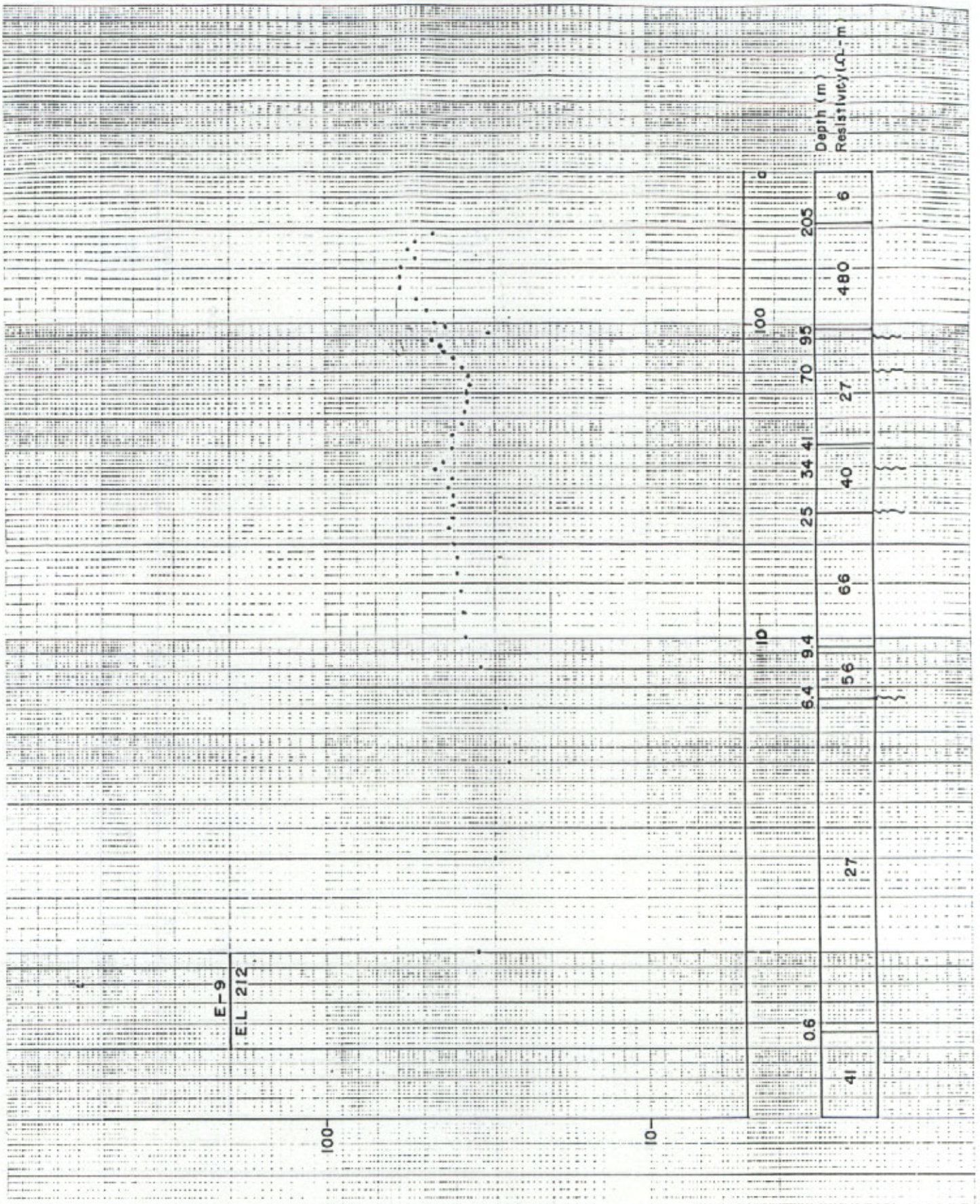
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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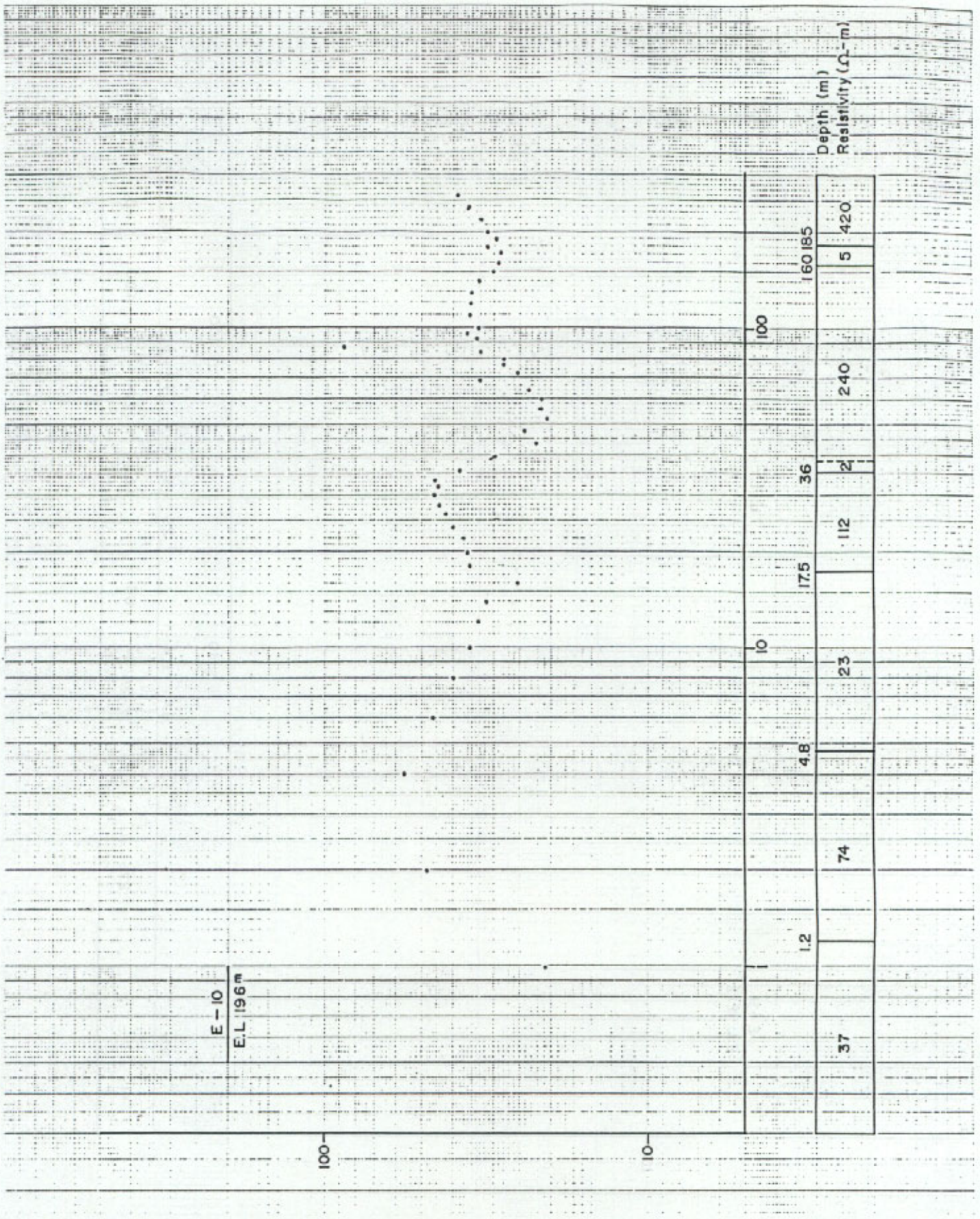
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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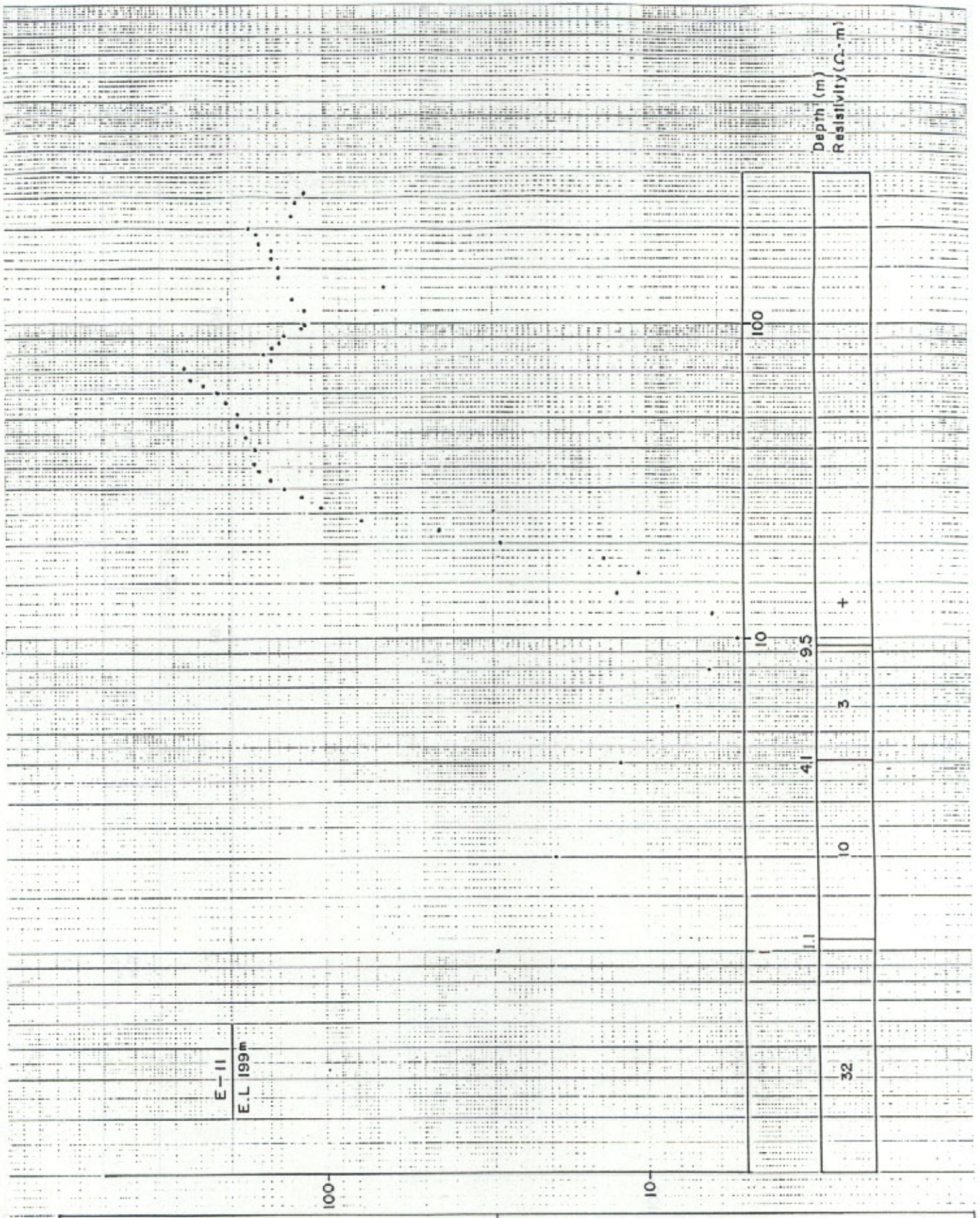
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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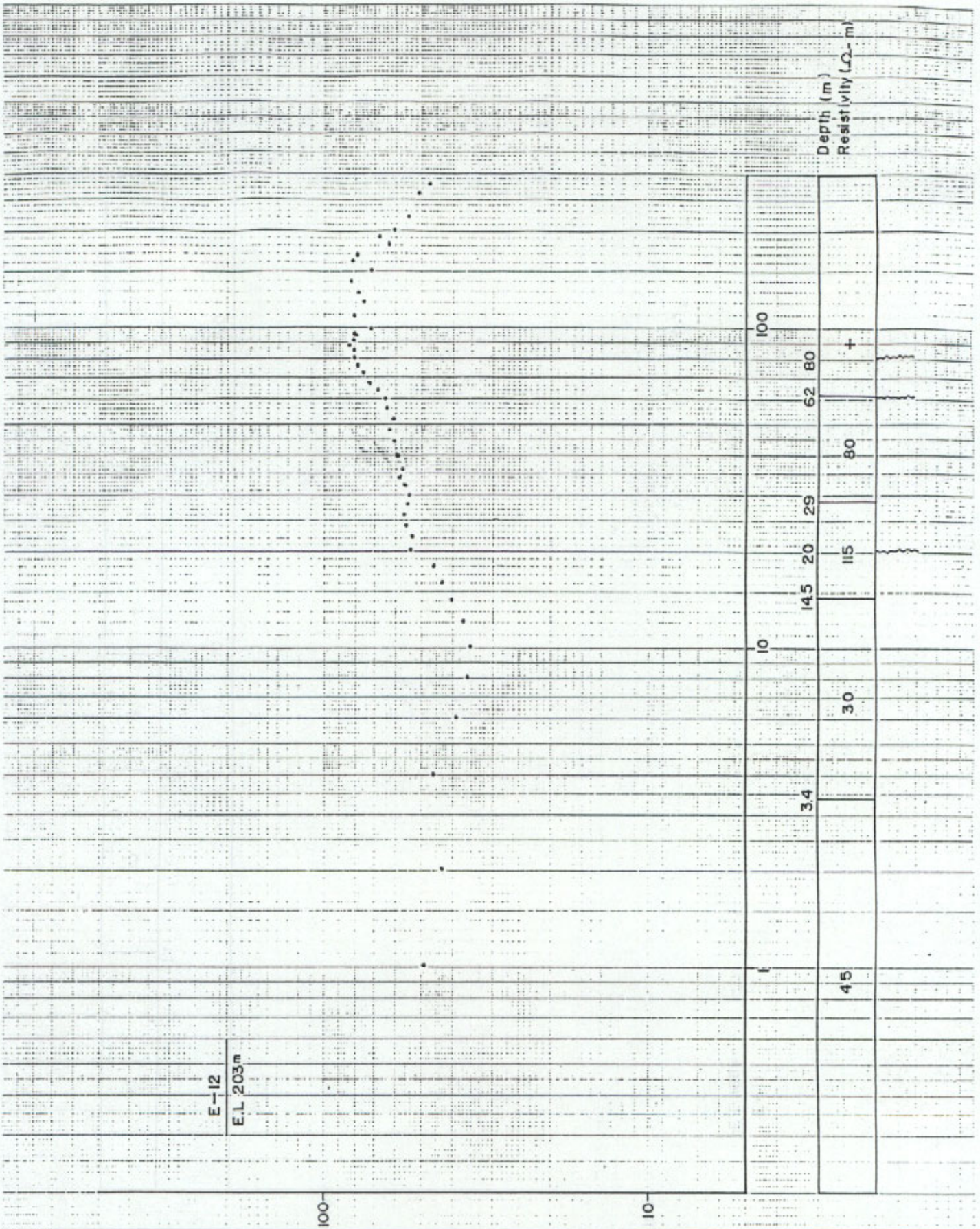
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | $\rho$ - a CURVE |

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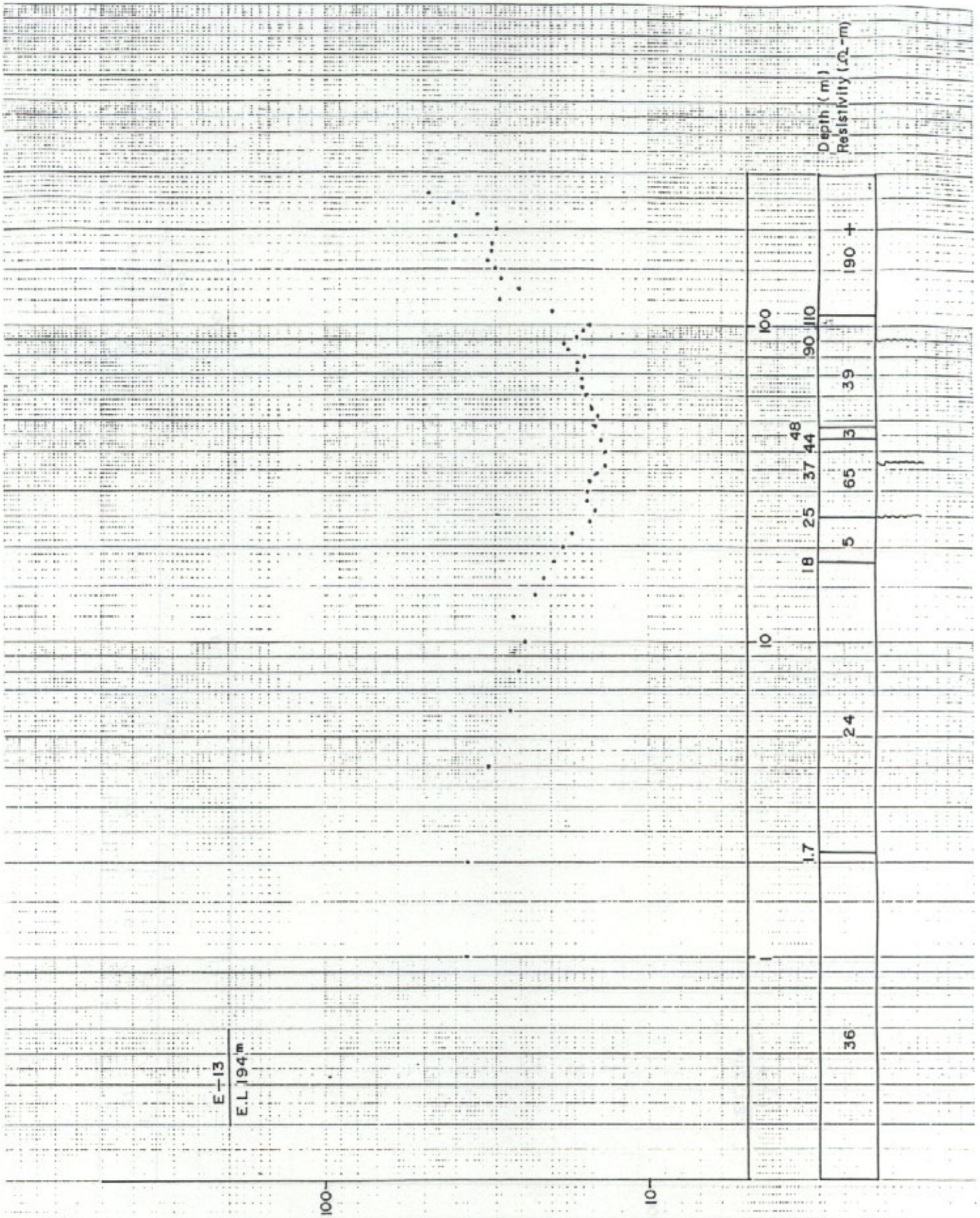
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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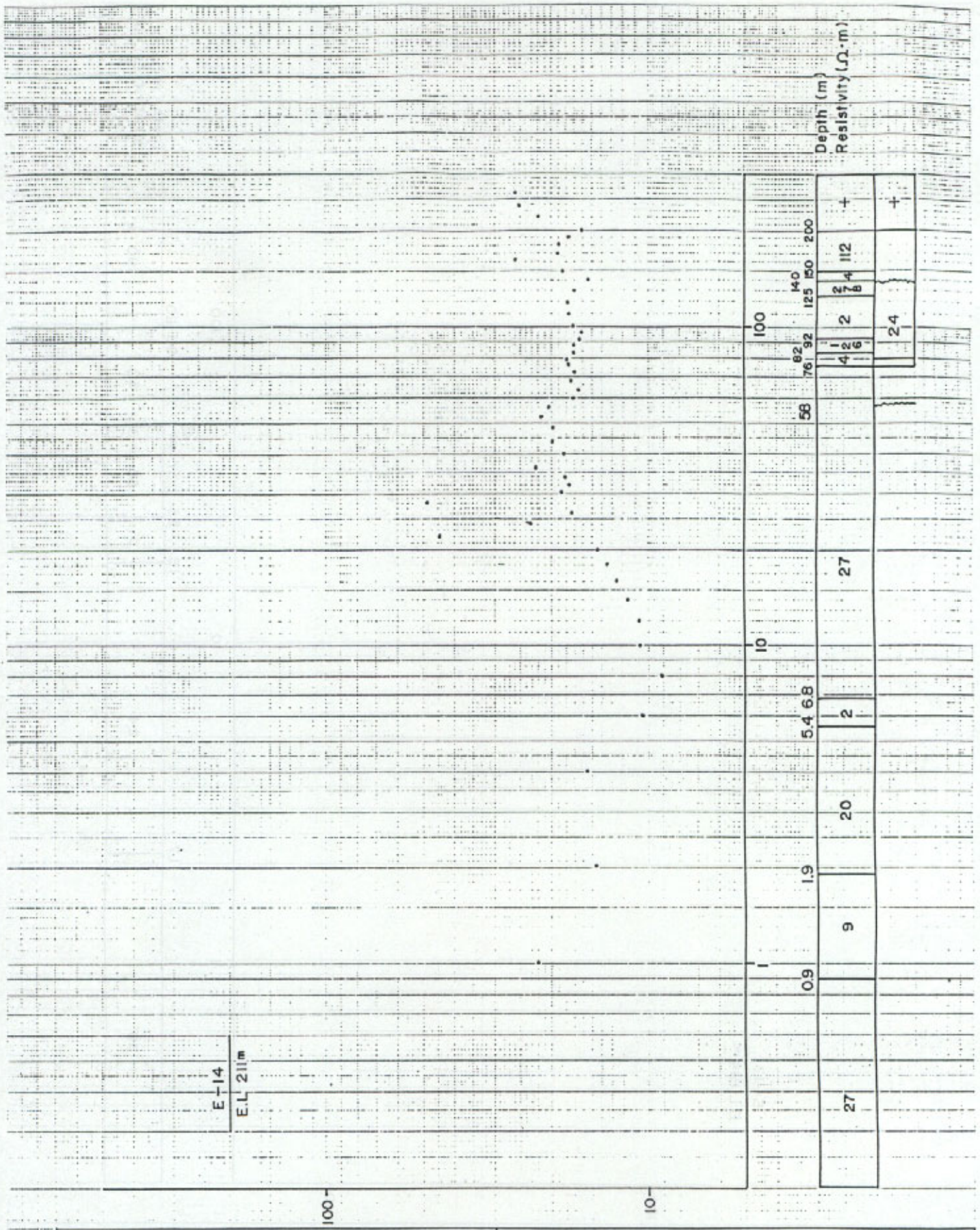
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY ρ - a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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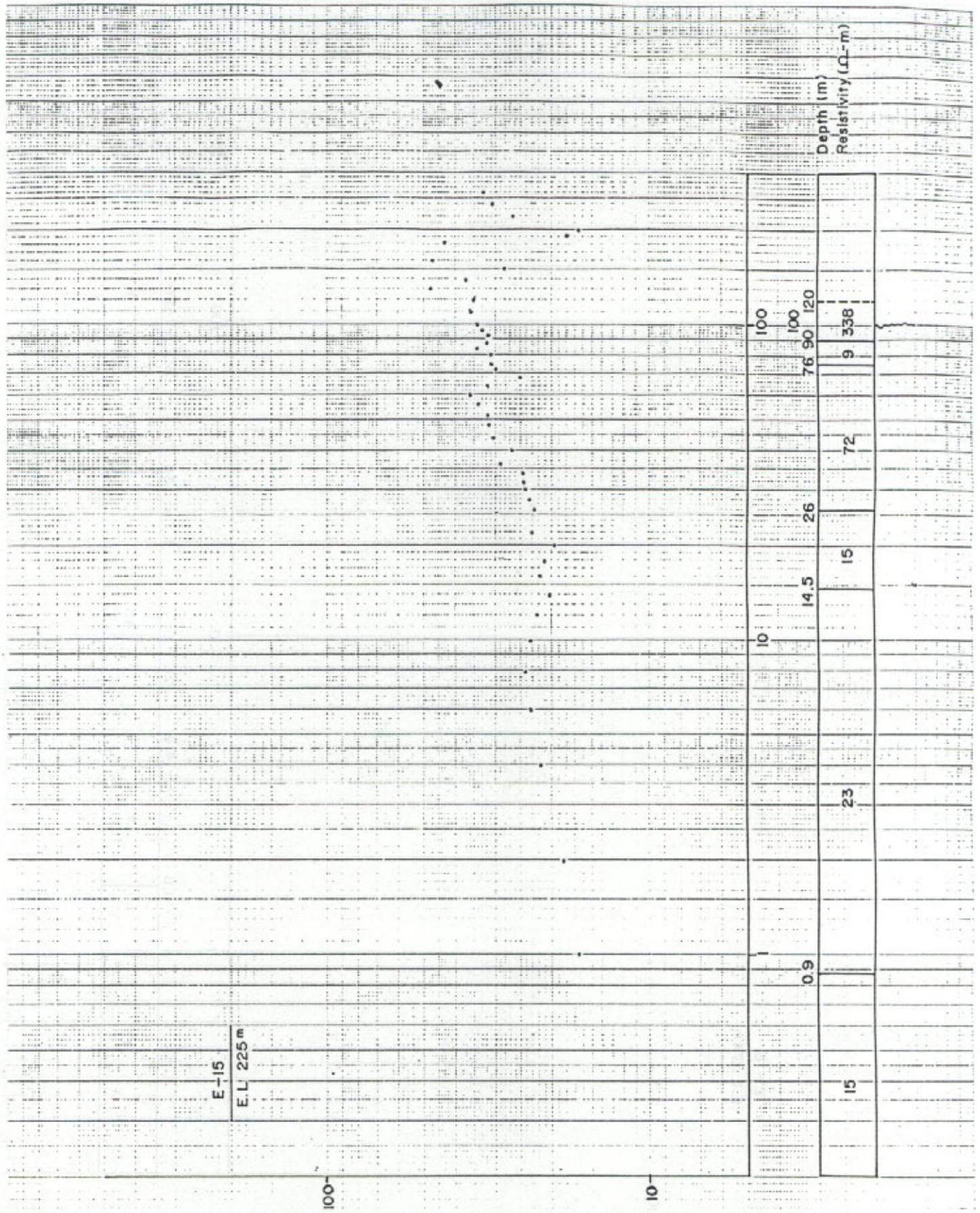
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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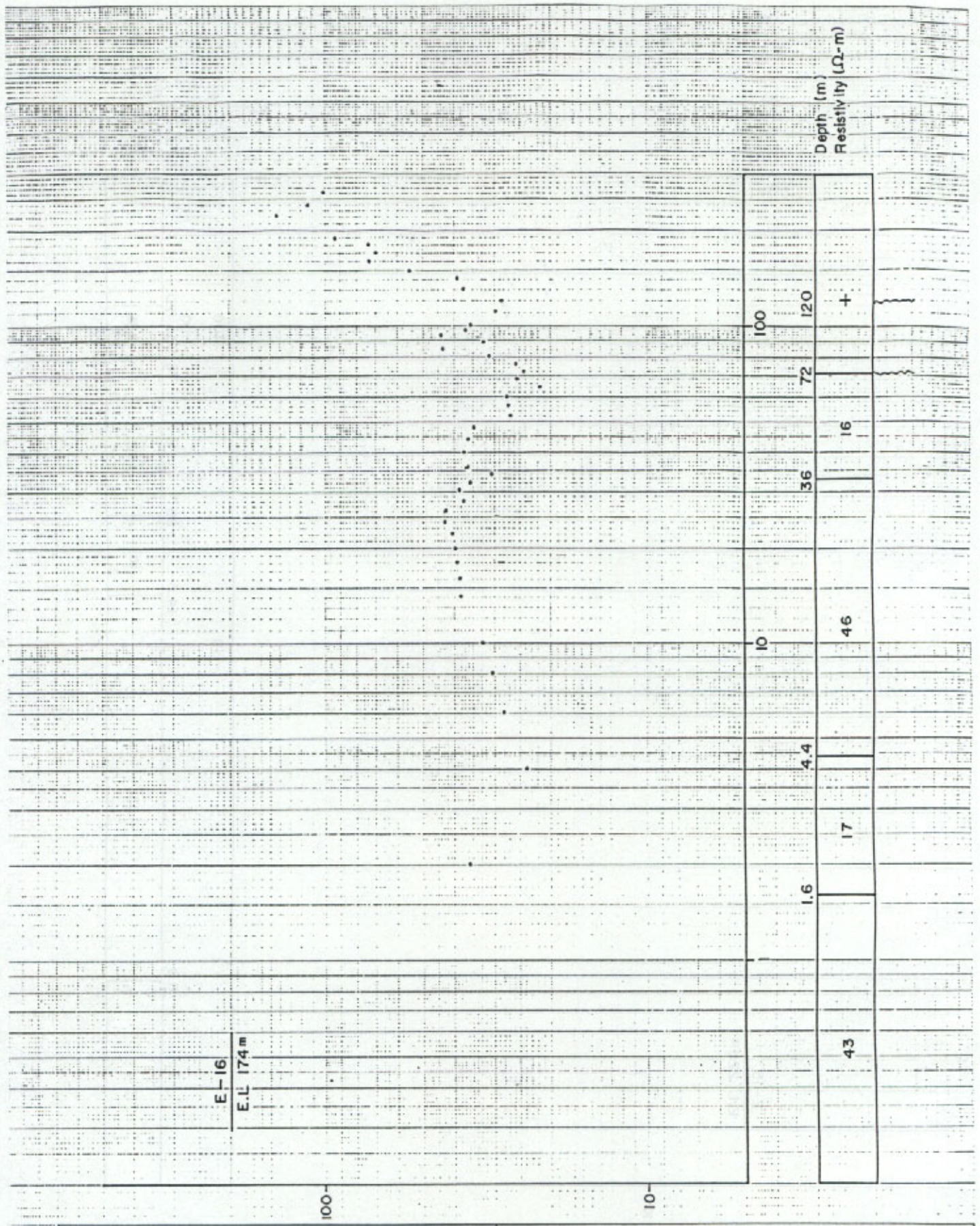
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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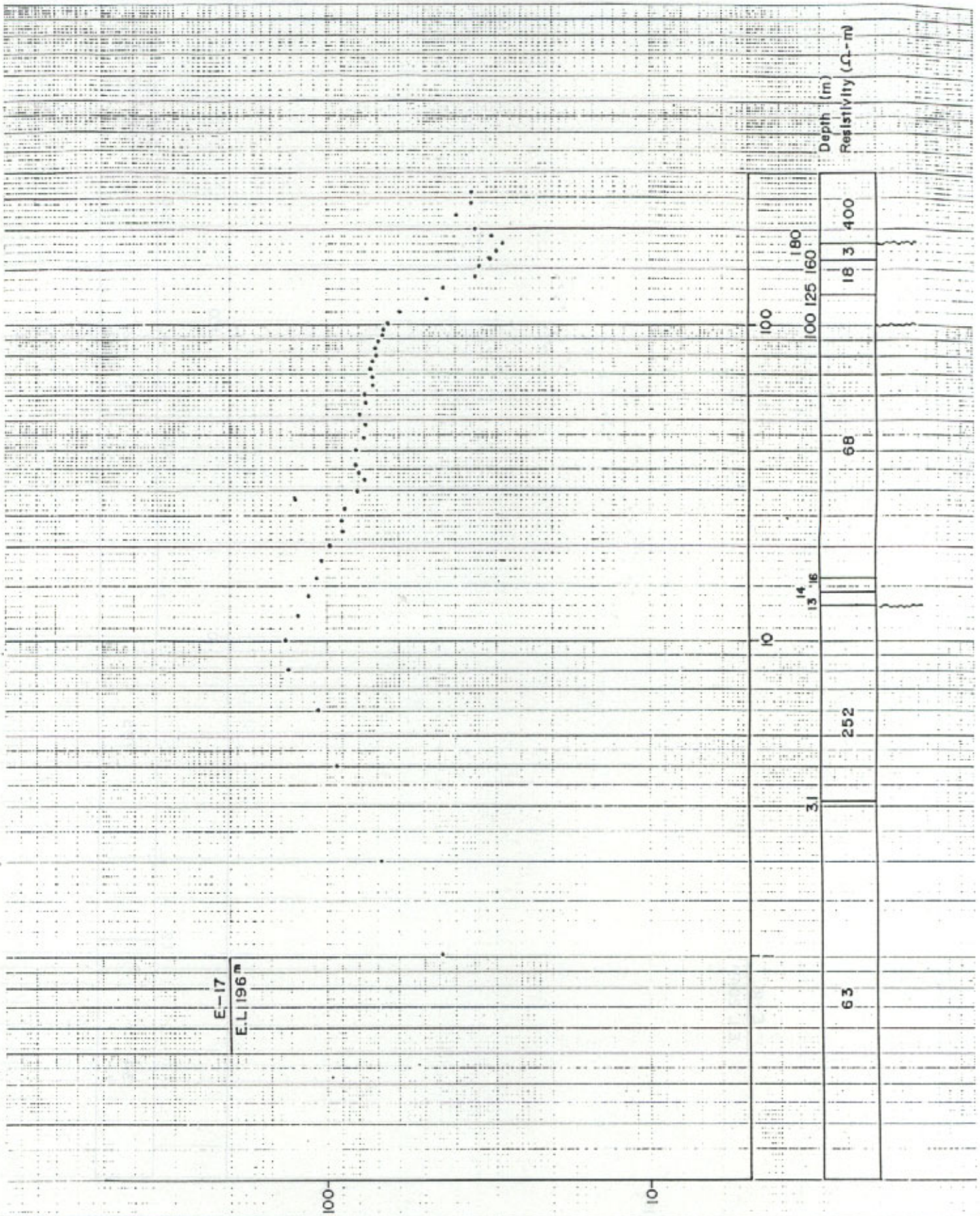
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY ρ-a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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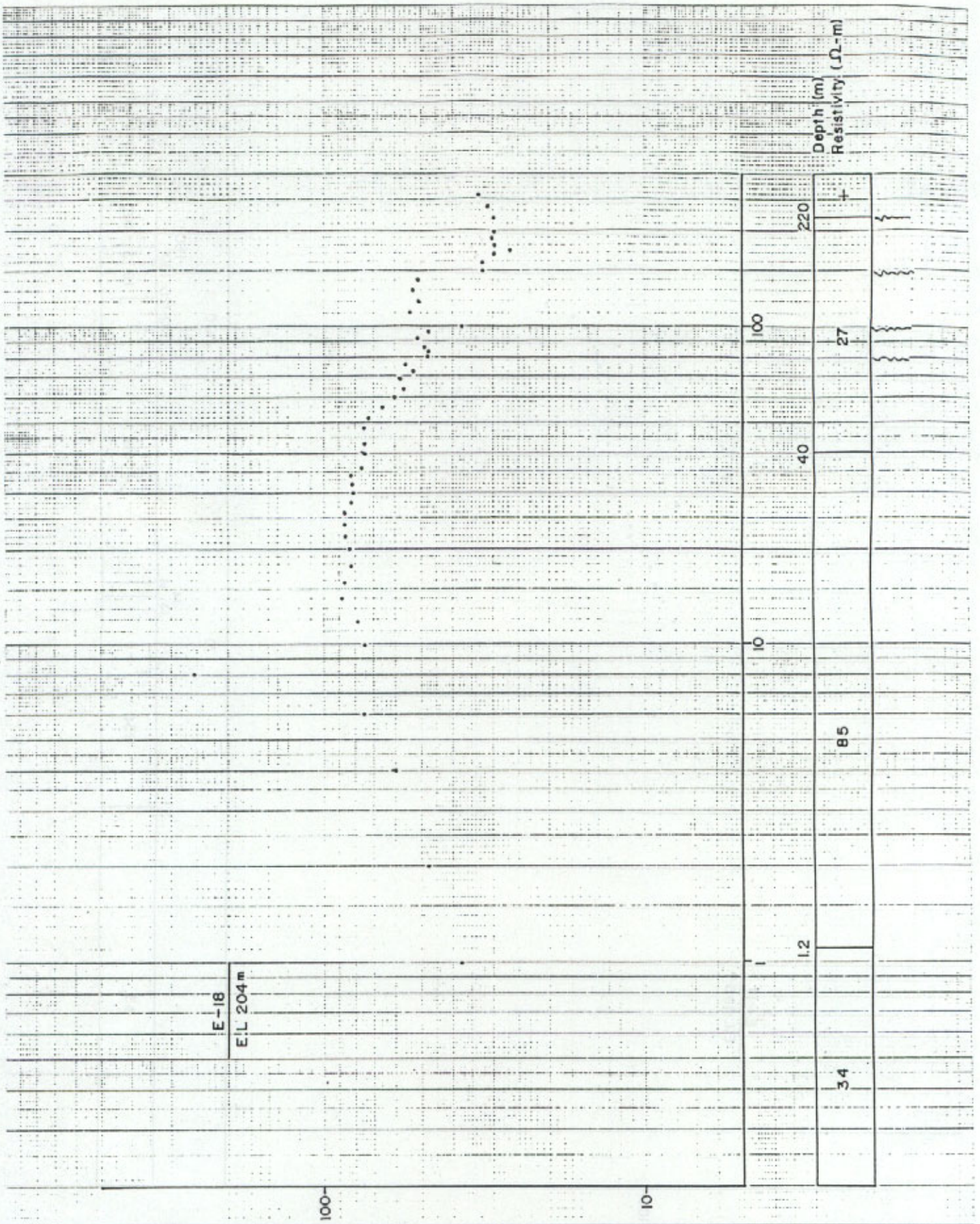
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | $\rho$ - a CURVE |

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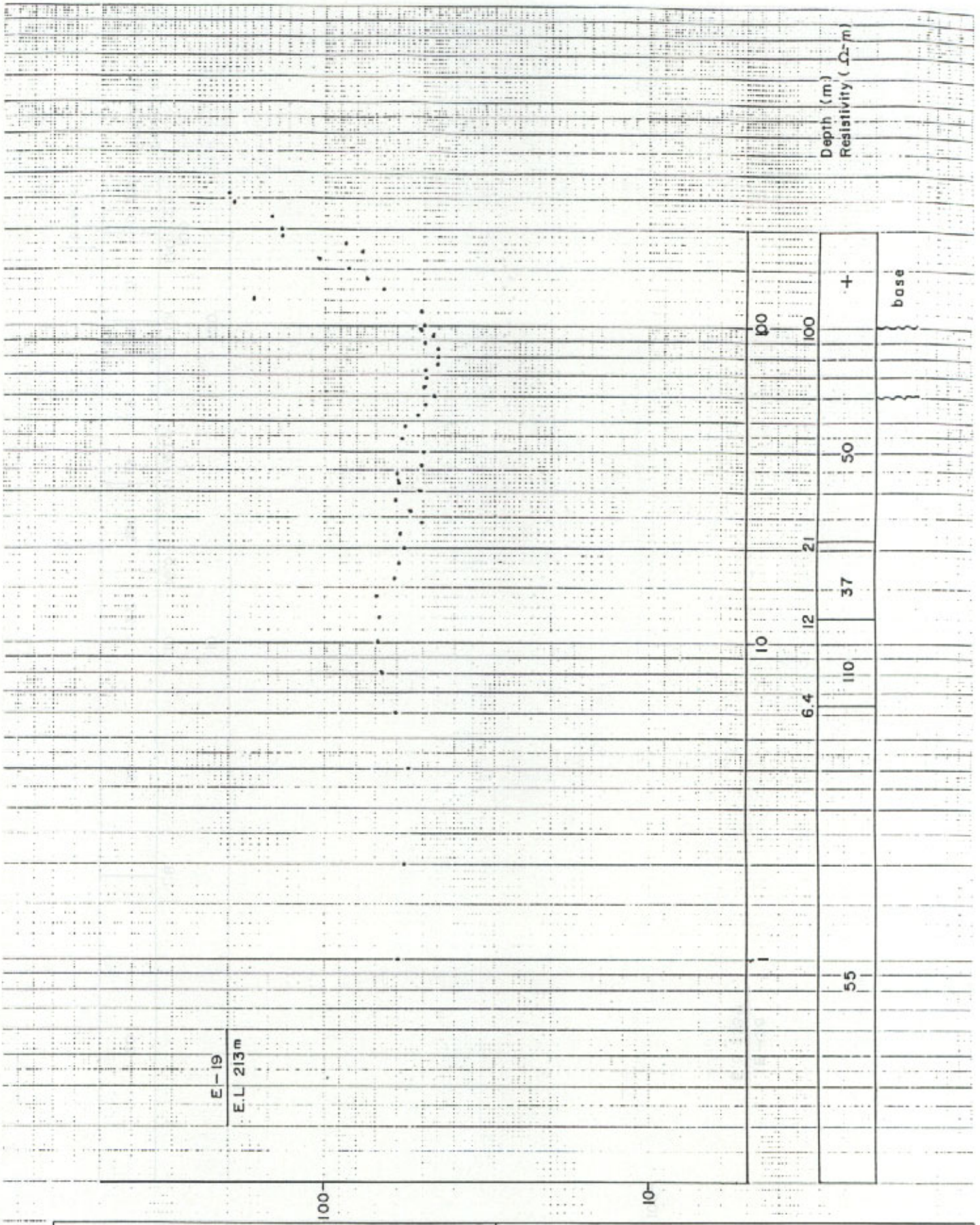
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY ρ-a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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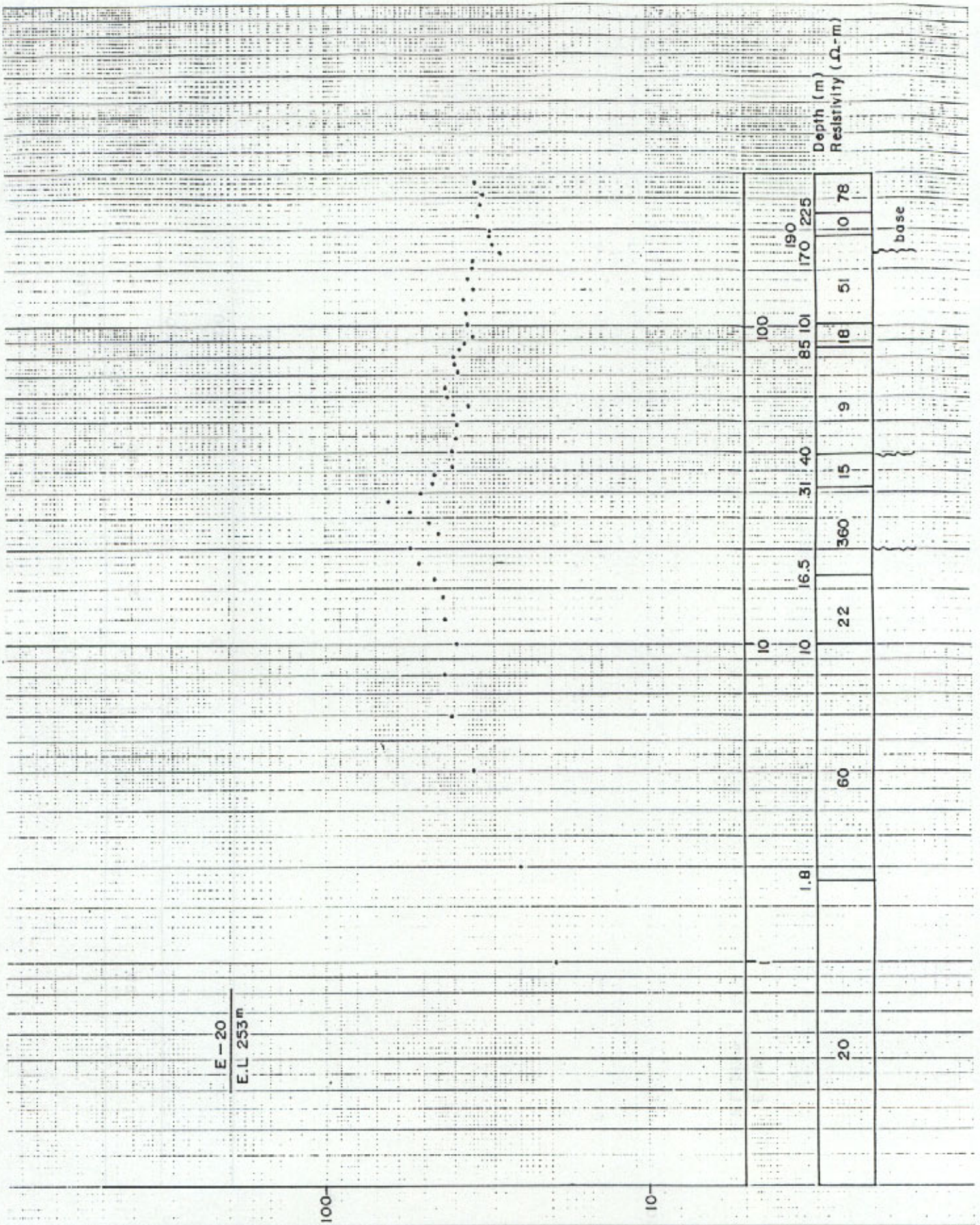
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ-a CURVE |

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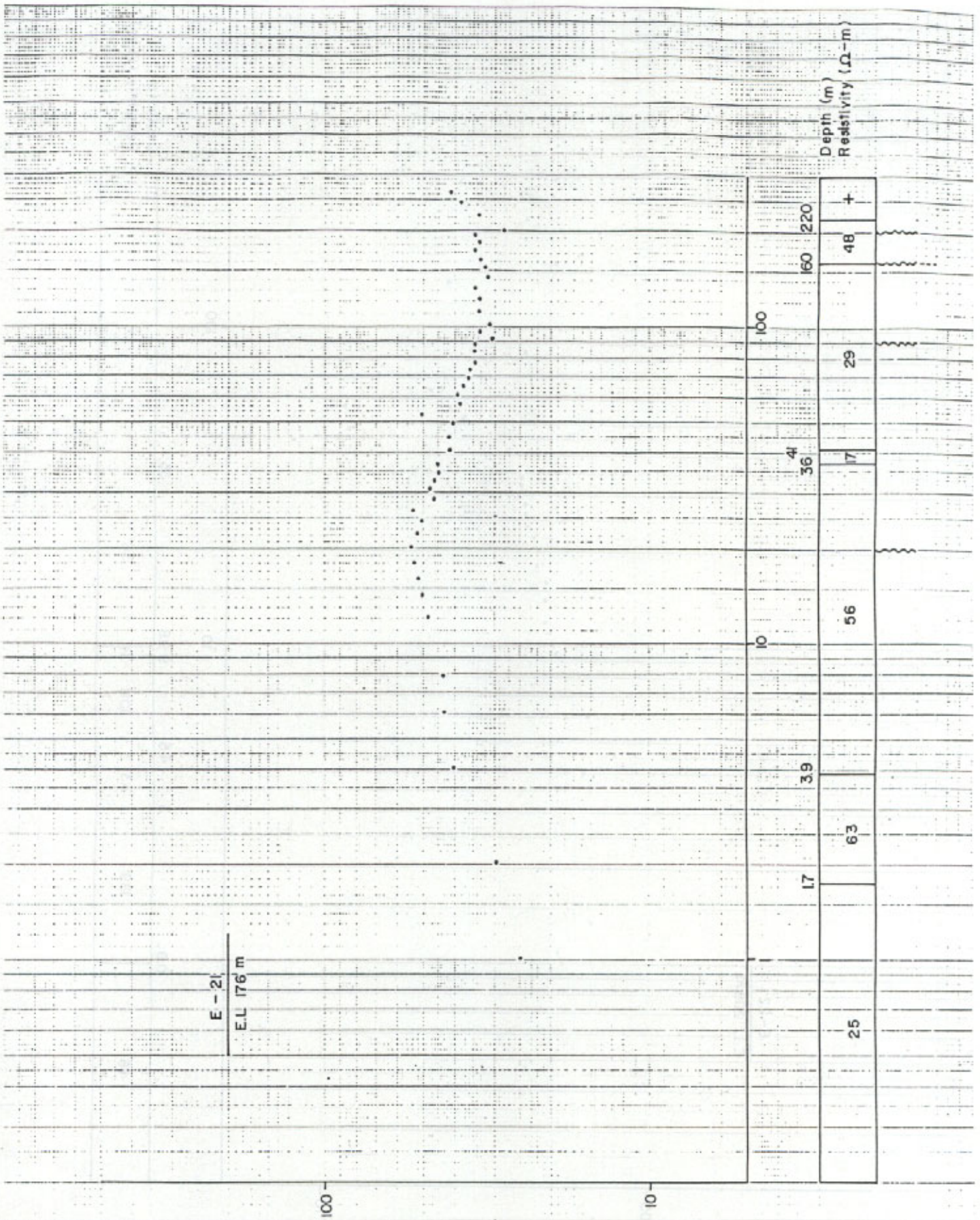
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRONIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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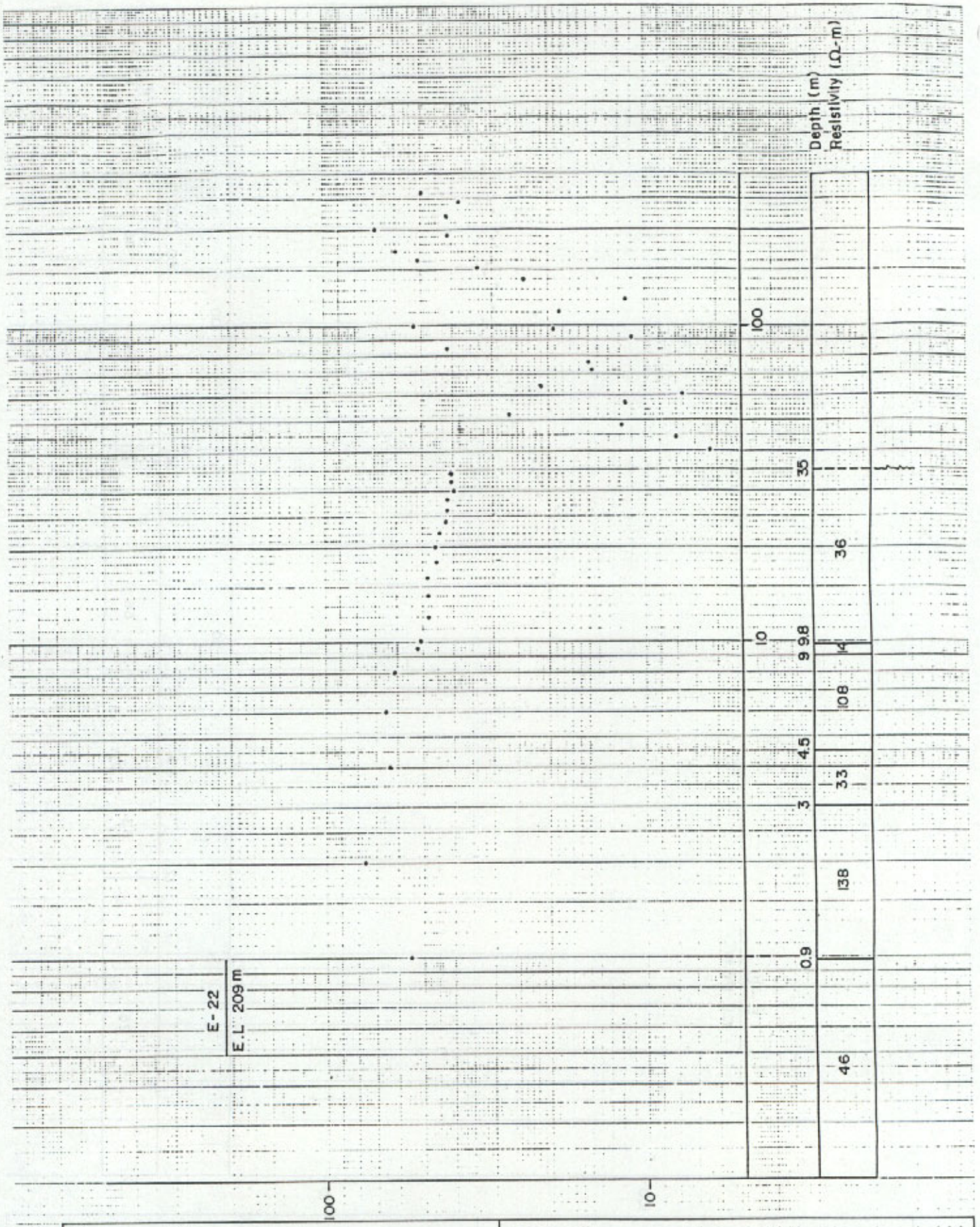
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY ρ - a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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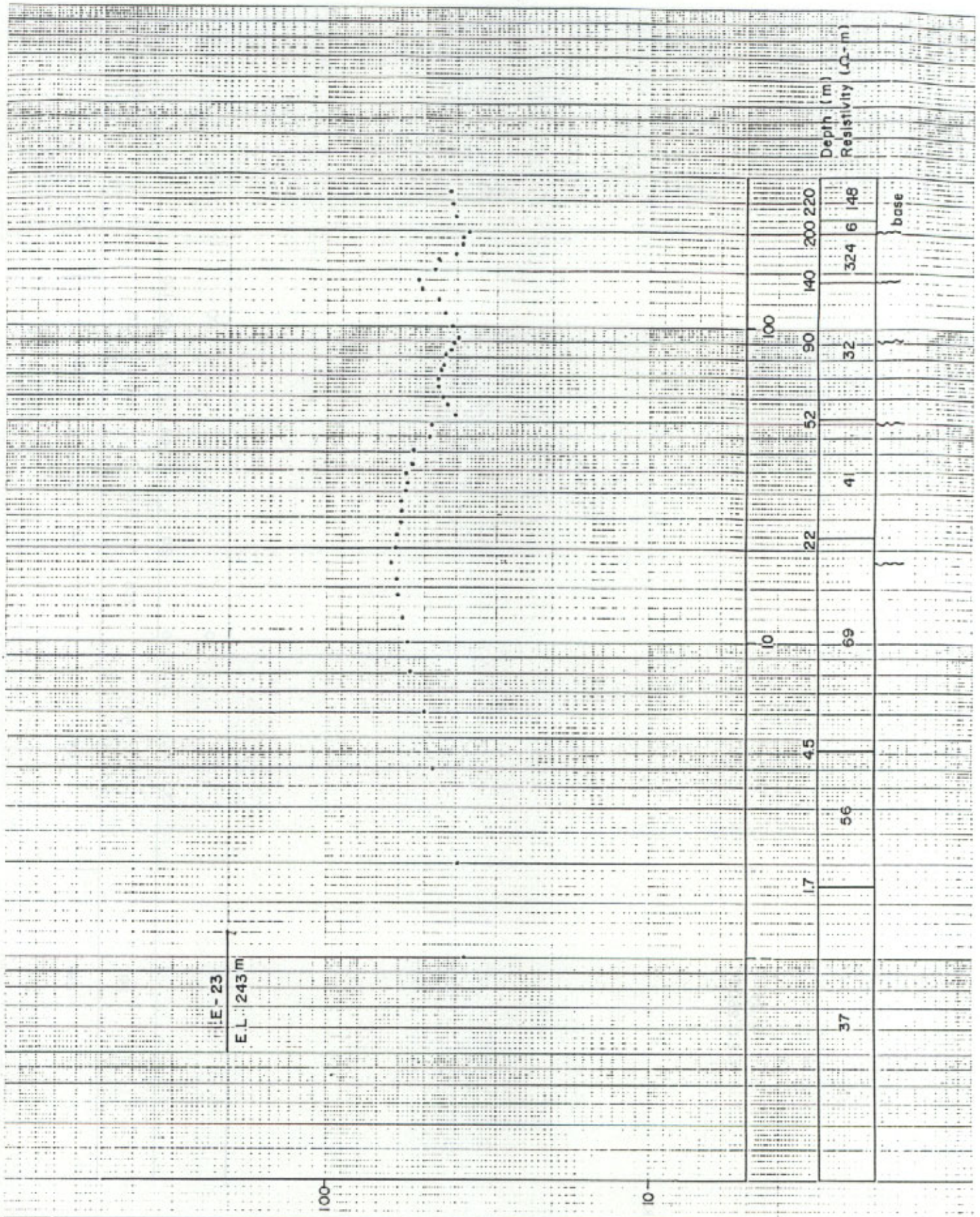
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY $\rho - a$ CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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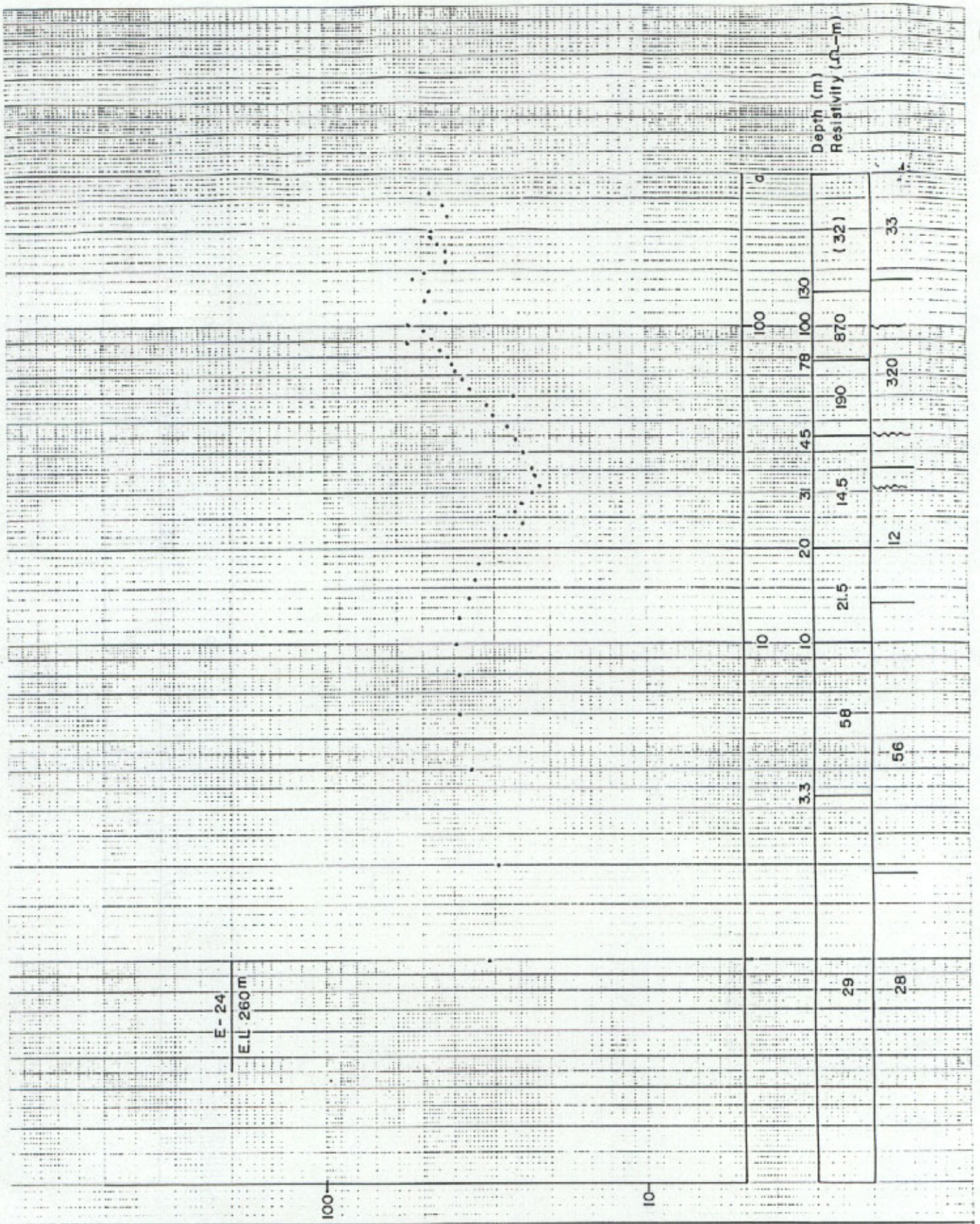
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | ρ - a CURVE |

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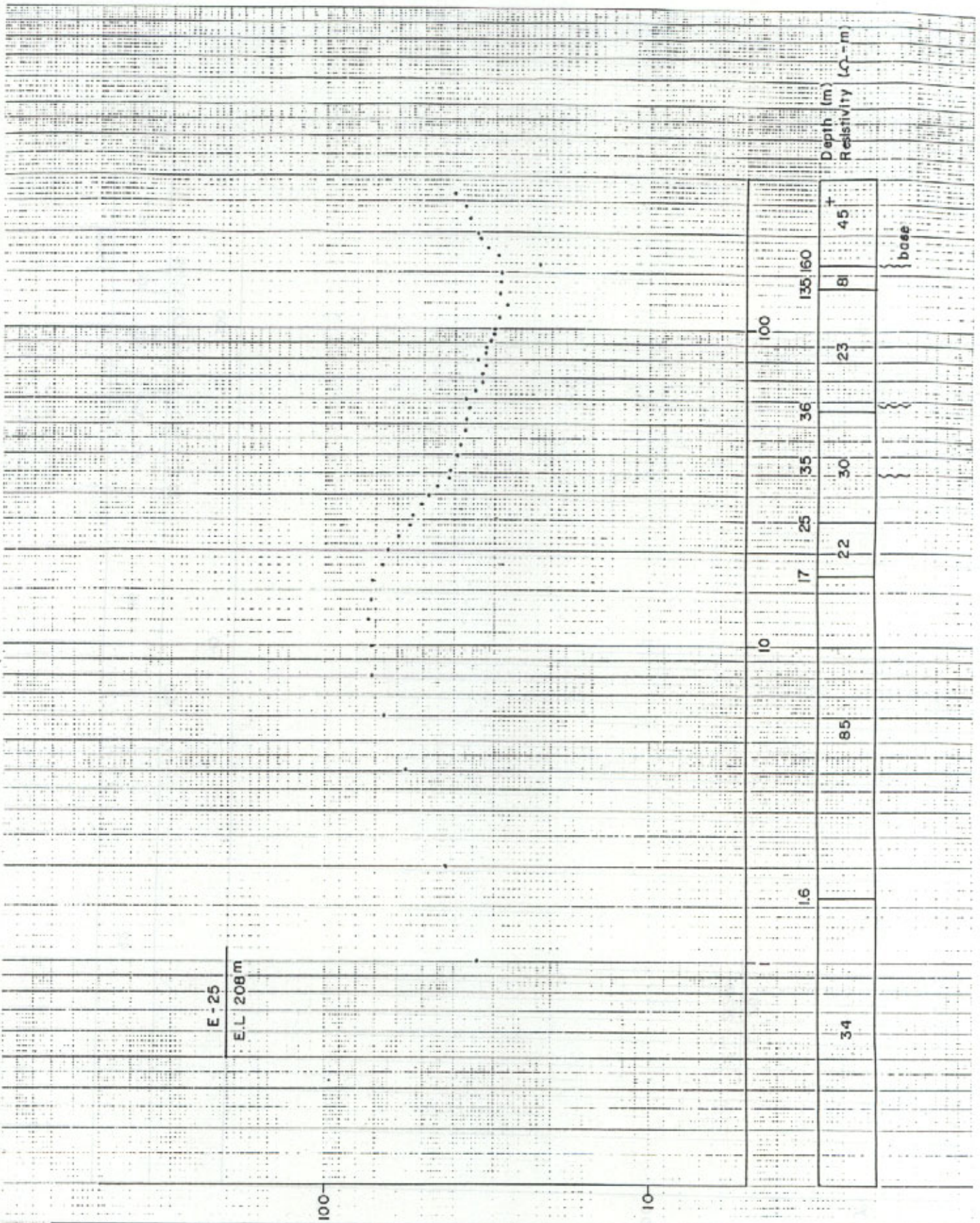
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY ρ - a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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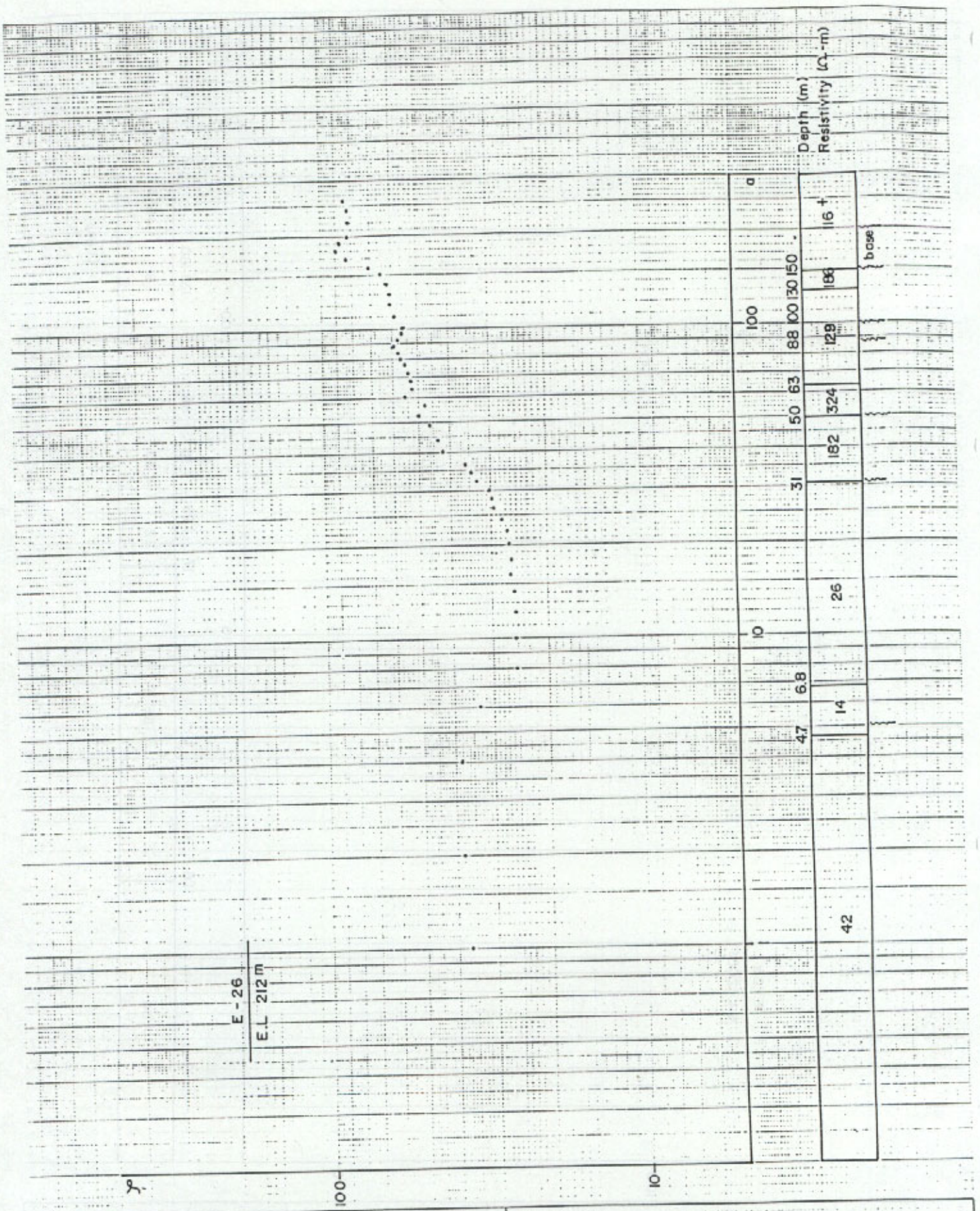
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY ρ-a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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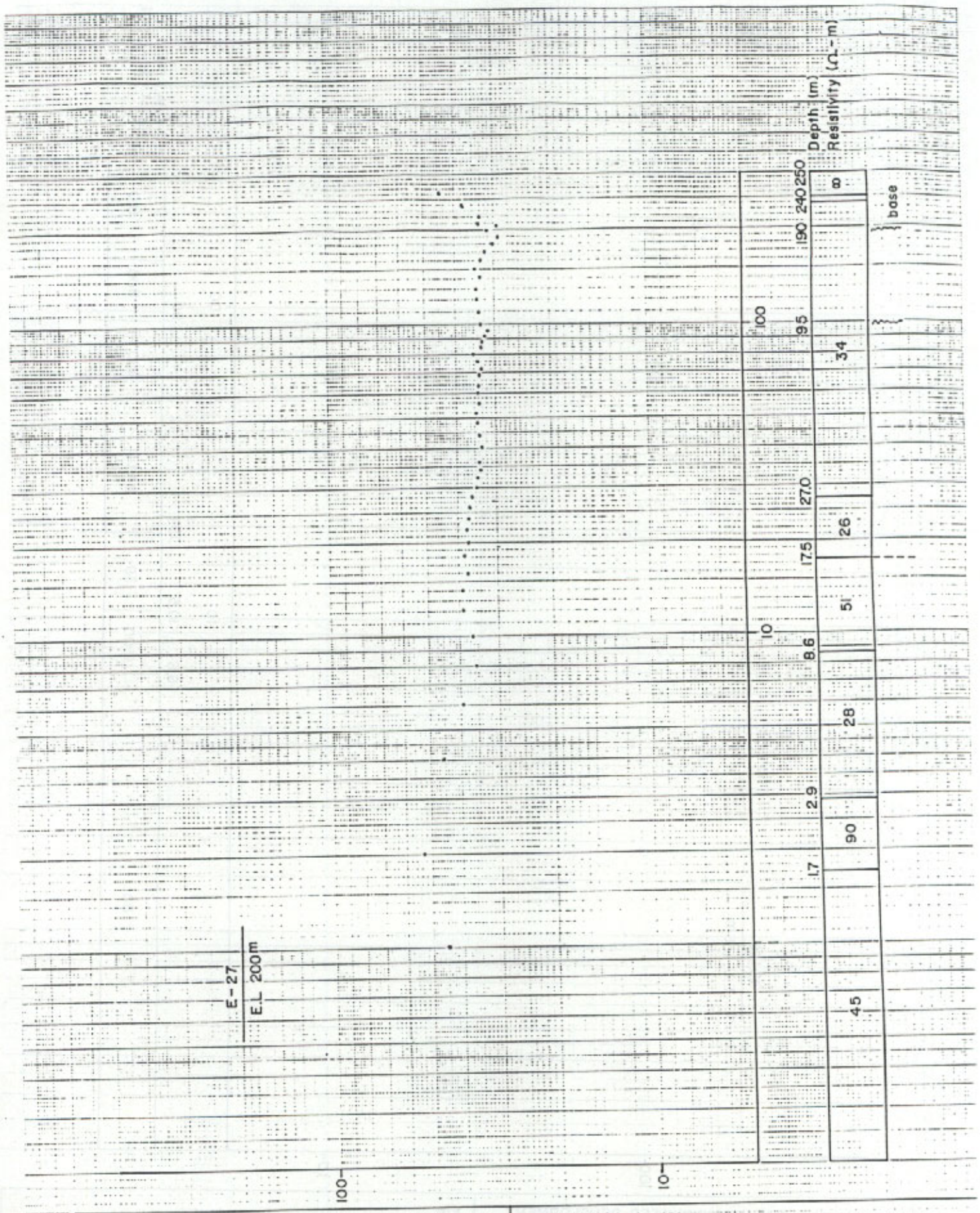
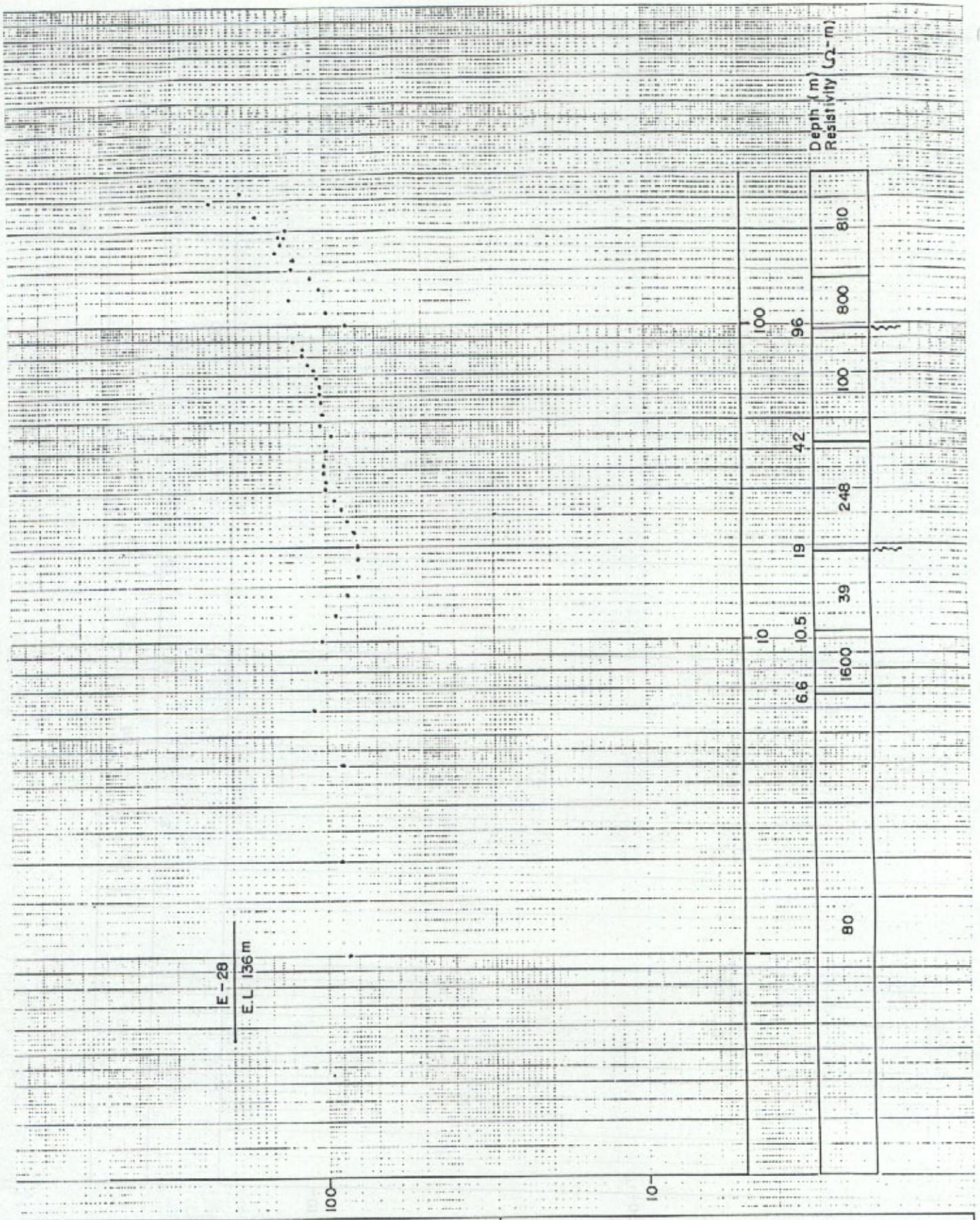
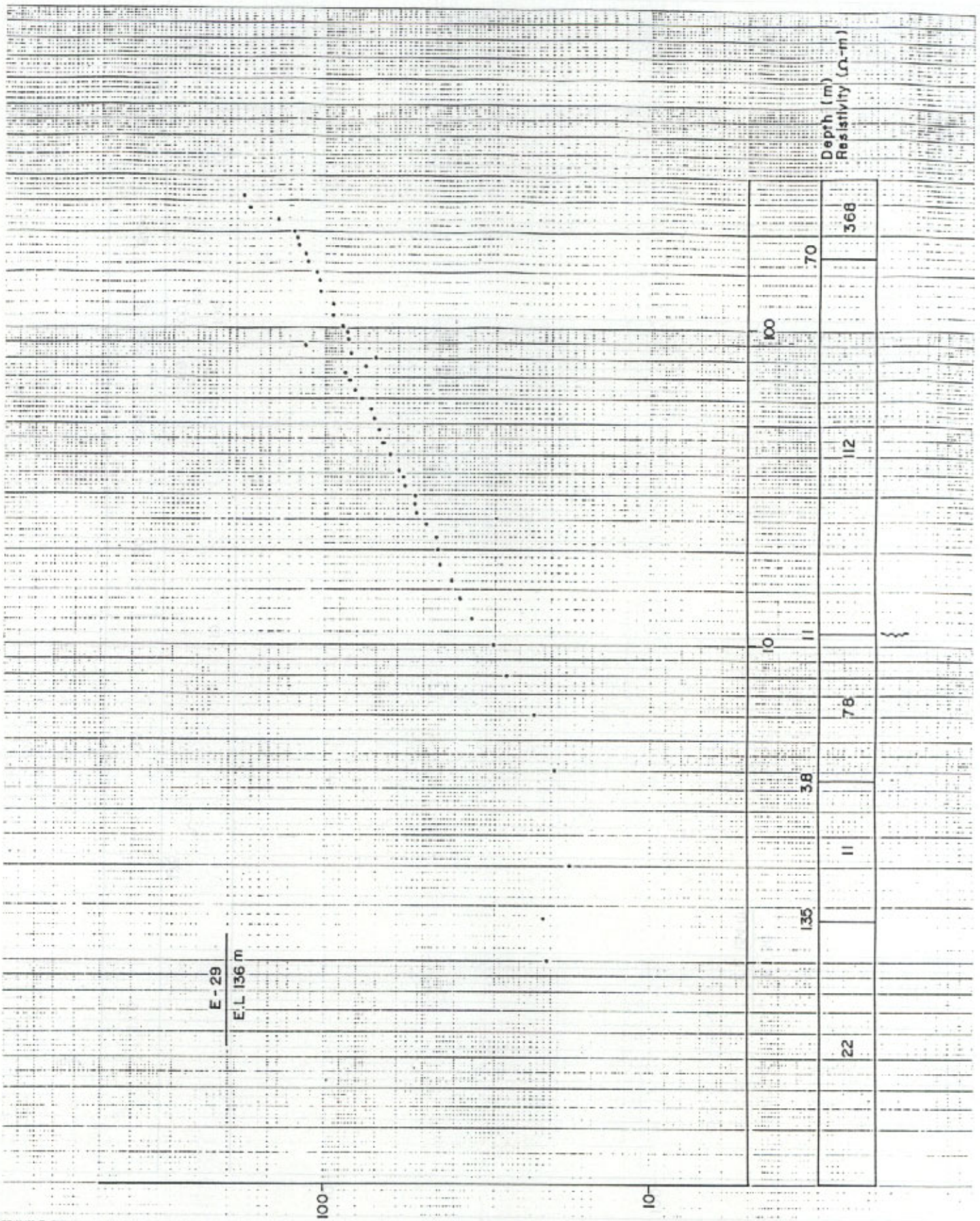
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY ρ - a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY $\rho$-a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY $\rho - a$ CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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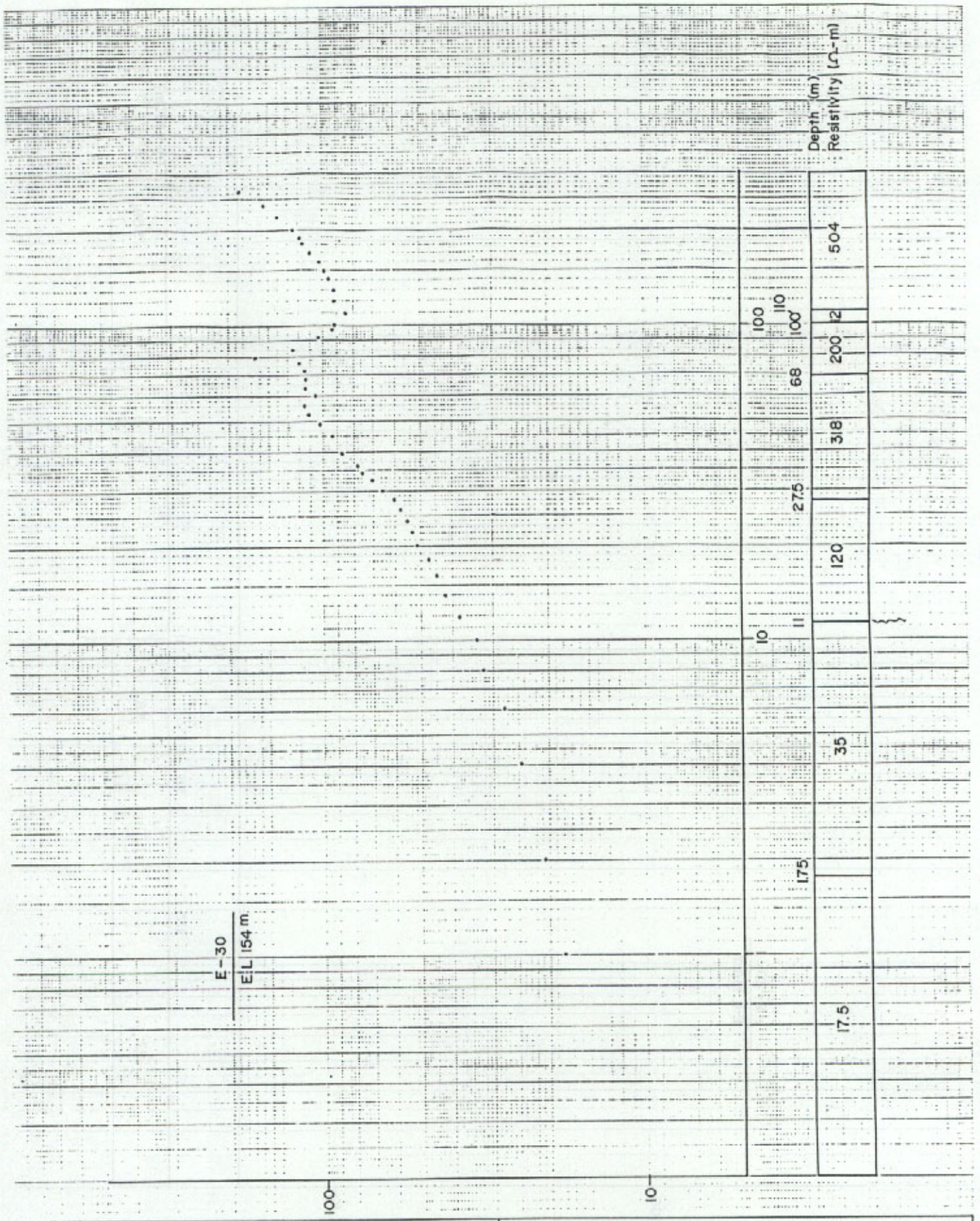
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY $\rho - a$ CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Fig. ELECTRIC RESISTIVITY SURVEY ρ - a CURVE |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

# CHAPTER 2

# RECORDS OF

# PUMPING TEST AND FIGURES

# 2.1

# JICA TEST WELLS

2.1.1

# PUMPING TEST RECORDS

STEP DRAWDOWN TEST DATA SHEET
WELL LOCATLAS PINAS
SITE NO.: 1
WELL NO.: 1
WELL DEPTH 300M
CASING DIA 20.32cm
SWL: 44.48m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 44.48 | 0 | 0 | | |
| 1 | 1 | 48.94 | -4.46 | 85 | 2.9 | |
| 2 | 2 | 49.23 | -4.75 | 87 | 3.1 | |
| 3 | 3 | 49.32 | -4.84 | 89 | 3.3 | |
| 4 | 4 | 49.23 | -4.75 | 89 | 3.3 | |
| 5 | 5 | 49.55 | -5.07 | 89 | 3.3 | |
| 6 | 6 | 52.14 | -7.66 | 89 | 3.3 | |
| 7 | 7 | 52.34 | -7.86 | 89 | 3.3 | |
| 8 | 8 | 52.55 | -8.07 | 89 | 3.3 | |
| 9 | 9 | 52.71 | -8.23 | 90 | 3.4 | |
| 10 | 10 | 52.85 | -8.37 | 90 | 3.4 | |
| 12 | 12 | 52.87 | -8.39 | 89 | 3.3 | |
| 14 | 14 | 52.89 | -8.41 | 89 | 3.3 | |
| 16 | 16 | 52.71 | -8.23 | 89 | 3.3 | |
| 18 | 18 | 52.67 | -8.19 | 89 | 3.3 | |
| 20 | 20 | 52.67 | -8.19 | 89 | 3.3 | |
| 25 | 25 | 52.61 | -8.13 | 88 | 3.2 | |
| 30 | 30 | 52.58 | -8.10 | 88 | 3.2 | |
| 35 | 35 | 52.74 | -8.26 | 88 | 3.2 | |
| 40 | 40 | 52.77 | -8.29 | 89 | 3.3 | |
| 45 | 45 | 52.74 | -8.26 | 89 | 3.3 | |
| 50 | 50 | 52.78 | -8.30 | 88 | 3.2 | |
| 55 | 55 | 52.80 | -8.32 | 88 | 3.2 | |
| 60 | 60 | 52.91 | -8.43 | 89 | 3.3 | |
| 70 | 70 | 52.94 | -8.46 | 88 | 3.2 | |
| 80 | 80 | 53.00 | -8.52 | 89 | 3.3 | |
| 90 | 90 | 53.03 | -8.55 | 89 | 3.3 | |
| 100 | 100 | 53.06 | -8.58 | 89 | 3.3 | |
| 110 | 110 | 52.99 | -8.51 | 89 | 3.3 | |
| 120 | 120 | 53.10 | -8.62 | 89 | 3.3 | Q=198 /min |
| 121 | 1 | 55.00 | -10.52 | 113 | 6.0 | |
| 122 | 2 | 57.87 | -13.39 | 118 | 6.7 | |
| 123 | 3 | 60.67 | -16.19 | 118 | 6.7 | |
| 124 | 4 | 61.65 | -17.17 | 116 | 6.4 | |
| 125 | 5 | 62.01 | -17.53 | 118 | 6.7 | |
| 126 | 6 | 62.24 | -17.76 | 118 | 6.7 | |
| 127 | 7 | 62.33 | -17.85 | 118 | 6.7 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 128 | 8 | 62.24 | -17.76 | 117 | 6.6 | |
| 129 | 9 | 62.21 | -17.73 | 120 | 7.0 | |
| 130 | 10 | 62.34 | -17.86 | 120 | 7.0 | |
| 132 | 12 | 62.33 | -17.85 | 118 | 6.7 | |
| 134 | 14 | 62.20 | -17.72 | 118 | 6.7 | |
| 136 | 16 | 62.04 | -17.56 | 118 | 6.7 | |
| 138 | 18 | 62.47 | -17.99 | 118 | 6.7 | |
| 140 | 20 | 62.89 | -18.41 | 122 | 7.3 | |
| 145 | 25 | 61.75 | -17.27 | 119 | 6.8 | |
| 150 | 30 | 62.46 | -17.98 | 117 | 6.6 | |
| 155 | 35 | 62.25 | -17.77 | 118 | 6.7 | |
| 160 | 40 | 62.63 | -18.15 | 118 | 6.7 | |
| 165 | 45 | 62.63 | -18.15 | 118 | 6.7 | |
| 170 | 50 | 62.68 | -18.20 | 119 | 6.8 | |
| 175 | 55 | 62.70 | -18.22 | 119 | 6.8 | |
| 180 | 60 | 62.70 | -18.22 | 118 | 6.7 | |
| 190 | 70 | 62.69 | -18.21 | 118 | 6.7 | |
| 200 | 80 | 62.70 | -18.22 | 118 | 6.7 | |
| 210 | 90 | 63.08 | -18.60 | 118 | 6.7 | |
| 220 | 100 | 62.51 | -18.03 | 117 | 6.6 | |
| 230 | 110 | 62.80 | -18.32 | 118 | 6.7 | |
| 240 | 120 | 62.68 | -18.20 | 117 | 6.6 | Q=402 /min |
| 241 | 1 | 66.75 | -22.27 | 138 | 9.9 | |
| 242 | 2 | 69.00 | -24.52 | 137 | 9.7 | |
| 243 | 3 | 69.40 | -24.92 | 138 | 9.9 | |
| 244 | 4 | 69.88 | -25.40 | 137 | 9.7 | |
| 245 | 5 | 69.88 | -25.40 | 139 | 10.1 | |
| 246 | 6 | 70.05 | -25.57 | 139 | 10.1 | |
| 247 | 7 | 70.25 | -25.77 | 139 | 10.1 | |
| 248 | 8 | 70.26 | -25.78 | 139 | 10.1 | |
| 249 | 9 | 70.17 | -25.69 | 139 | 10.1 | |
| 250 | 10 | 70.25 | -25.77 | 139 | 10.1 | |
| 252 | 12 | 70.16 | -25.68 | 138 | 9.9 | |
| 254 | 14 | 70.08 | -25.60 | 139 | 10.1 | |
| 256 | 16 | 70.03 | -25.55 | 139 | 10.1 | |
| 258 | 18 | 69.95 | -25.47 | 139 | 10.1 | |
| 260 | 20 | 70.02 | -25.54 | 139 | 10.1 | |
| 265 | 25 | 70.11 | -25.63 | 139 | 10.1 | |
| 270 | 30 | 70.14 | -25.66 | 139 | 10.1 | |
| 275 | 35 | 70.17 | -25.69 | 139 | 10.1 | |
| 280 | 40 | 70.05 | -25.57 | 139 | 10.1 | |
| 285 | 45 | 70.39 | -25.91 | 139 | 10.1 | |
| 290 | 50 | 70.58 | -26.10 | 139 | 10.1 | |
| 295 | 55 | 70.52 | -26.04 | 139 | 10.1 | |
| 300 | 60 | 70.41 | -25.93 | 139 | 10.1 | |
| 310 | 70 | 70.25 | -25.77 | 139 | 10.1 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 320 | 80 | 70.47 | -25.99 | 139 | 10.1 | |
| 330 | 90 | 70.34 | -25.86 | 138 | 9.9 | |
| 340 | 100 | 70.55 | -26.07 | 139 | 10.1 | |
| 350 | 110 | 70.39 | -25.91 | 139 | 10.1 | |
| 360 | 120 | 70.39 | -25.91 | 139 | 10.1 | Q=606 /min |
| 361 | 1 | 71.74 | -27.26 | 143 | 10.8 | |
| 362 | 2 | 72.27 | -27.79 | 143 | 10.8 | |
| 363 | 3 | 72.52 | -28.04 | 143 | 10.8 | |
| 364 | 4 | 72.56 | -28.08 | 143 | 10.8 | |
| 365 | 5 | 72.59 | -28.11 | 143 | 10.8 | |
| 366 | 6 | 72.57 | -28.09 | 143 | 10.8 | |
| 367 | 7 | 72.59 | -28.11 | 143 | 10.8 | |
| 368 | 8 | 72.59 | -28.11 | 143 | 10.8 | |
| 369 | 9 | 72.63 | -28.15 | 143 | 10.8 | |
| 370 | 10 | 72.65 | -28.17 | 143 | 10.8 | |
| 372 | 12 | 72.66 | -28.18 | 143 | 10.8 | |
| 374 | 14 | 72.68 | -28.20 | 143 | 10.8 | |
| 376 | 16 | 72.57 | -28.09 | 143 | 10.8 | |
| 378 | 18 | 72.61 | -28.13 | 143 | 10.8 | |
| 380 | 20 | 72.91 | -28.43 | 144 | 11.0 | |
| 385 | 25 | 73.14 | -28.66 | 144 | 11.0 | |
| 390 | 30 | 73.02 | -28.54 | 144 | 11.0 | |
| 395 | 35 | 73.03 | -28.55 | 143 | 10.8 | |
| 400 | 40 | 73.05 | -28.57 | 143 | 10.8 | |
| 405 | 45 | 73.14 | -28.66 | 143 | 10.8 | |
| 410 | 50 | 72.86 | -28.38 | 143 | 10.8 | |
| 415 | 55 | 72.90 | -28.42 | 143 | 10.8 | |
| 420 | 60 | 72.95 | -28.47 | 143 | 10.8 | |
| 430 | 70 | 72.95 | -28.47 | 143 | 10.8 | |
| 440 | 80 | 73.03 | -28.55 | 143 | 10.8 | |
| 450 | 90 | 73.11 | -28.63 | 143 | 10.8 | |
| 460 | 100 | 73.23 | -28.75 | 143 | 10.8 | |
| 470 | 110 | 73.53 | -29.05 | 143 | 10.8 | |
| 480 | 120 | 73.85 | -29.37 | 143 | 10.8 | |
| 495 | 135 | 72.87 | -28.39 | 143 | 10.8 | |
| 510 | 150 | 73.43 | -28.95 | 143 | 10.8 | |
| 525 | 165 | 73.62 | -29.14 | 143 | 10.8 | |
| 540 | 180 | 73.18 | -28.70 | 143 | 10.8 | Q=648 /min |

CONTINUPUS PUMPING TEST DATA SHEET

WELL LOCATION: LAS PINAS

SITE NO.: 1

WELL NO.: 1

WELL DEPTH: 300M

CASING DIAMETER: 20.32cm

SWL: 44.93m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARG (l/sec) | TEMP (Deg.C) | ECt | EC18 |
|---|---|---|---|---|---|---|---|
| 0 | 44.93 | 0 | | | | | |
| 1 | 58.65 | -13.72 | 140 | 10.3 | | | |
| 2 | 60.60 | -15.67 | 140 | 10.3 | | | |
| 3 | 62.90 | -17.97 | 139 | 10.1 | | | |
| 4 | 64.36 | -19.43 | 139 | 10.1 | | | |
| 5 | 65.00 | -20.07 | 140 | 10.3 | | | |
| 6 | 65.14 | -20.21 | 139 | 10.1 | | | |
| 7 | 65.38 | -20.45 | 139 | 10.1 | | | |
| 8 | 65.53 | -20.60 | 139 | 10.1 | | | |
| 9 | 65.58 | -20.65 | 139 | 10.1 | | | |
| 10 | 65.65 | -20.72 | 139 | 10.1 | 34.4 | 1010 | 742 |
| 12 | 65.43 | -20.50 | 139 | 10.1 | | | |
| 14 | 65.71 | -20.78 | 139 | 10.1 | | | |
| 16 | 65.31 | -20.38 | 135 | 9.4 | | | |
| 18 | 65.03 | -20.10 | 137 | 9.7 | | | |
| 20 | 65.34 | -20.41 | 139 | 10.1 | 34.5 | 1100 | 807 |
| 25 | 65.72 | -20.79 | 137 | 9.7 | | | |
| 30 | 66.11 | -21.18 | 140 | 10.3 | 34.5 | 1190 | 873 |
| 35 | 65.78 | -20.85 | 138 | 9.9 | | | |
| 40 | 65.90 | -20.97 | 138 | 9.9 | 34.7 | 1210 | 885 |
| 45 | 66.72 | -21.79 | 140 | 10.3 | | | |
| 50 | 66.80 | -21.87 | 140 | 10.3 | 34.7 | 1250 | 914 |
| 55 | 66.39 | -21.46 | 139 | 10.1 | | | |
| 60 | 66.37 | -21.44 | 139 | 10.1 | 34.7 | 1250 | 914 |
| 70 | 66.55 | -21.62 | 138 | 9.9 | 34.9 | 1280 | 933 |
| 80 | 66.57 | -21.64 | 138 | 9.9 | 34.7 | 1280 | 936 |
| 90 | 66.99 | -22.06 | 138 | 9.9 | 34.6 | 1280 | 938 |
| 100 | 67.58 | -22.65 | 139 | 10.1 | 34.8 | 1280 | 935 |
| 110 | 67.41 | -22.48 | 139 | 10.1 | 34.4 | 1280 | 941 |
| 120 | 67.30 | -22.37 | 139 | 10.1 | 34.9 | 1280 | 933 |
| 135 | 67.22 | -22.29 | 139 | 10.1 | | | |
| 150 | 67.26 | -22.33 | 139 | 10.1 | 34.9 | 1250 | 911 |
| 165 | 67.73 | -22.80 | 139 | 10.1 | | | |
| 180 | 68.81 | -23.88 | 139 | 10.1 | 34.6 | 1250 | 916 |
| 210 | 67.82 | -22.89 | 139 | 10.1 | 34.6 | 1280 | 938 |
| 240 | 67.98 | -23.05 | 139 | 10.1 | 34.9 | 1250 | 911 |
| 270 | 68.84 | -23.91 | 139 | 10.1 | 34.9 | 1250 | 911 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 300 | 68.64 | -23.71 | 139 | 10.1 | 34.9 | 1250 | 911 |
| 360 | 68.80 | -23.87 | 139 | 10.1 | 34.6 | 1210 | 886 |
| 420 | 68.28 | -23.35 | 139 | 10.1 | 33.9 | 1240 | 919 |
| 480 | 68.16 | -23.23 | 139 | 10.1 | 34.5 | 1240 | 910 |
| 540 | 68.68 | -23.75 | 139 | 10.1 | 34.6 | 1200 | 879 |
| 600 | 68.59 | -23.66 | 138 | 9.9 | 35.0 | 1200 | 873 |
| 660 | 69.33 | -24.40 | 139 | 10.1 | 34.8 | 1270 | 927 |
| 720 | 69.29 | -24.36 | 139 | 10.1 | 34.6 | 1230 | 901 |
| 780 | 69.49 | -24.56 | 139 | 10.1 | 34.5 | 1210 | 888 |
| 840 | 69.52 | -24.59 | 139 | 10.1 | 34.7 | 1220 | 892 |
| 900 | 69.72 | -24.79 | 139 | 10.1 | 34.0 | 1230 | 910 |
| 960 | 69.87 | -24.94 | 139 | 10.1 | 34.5 | 1220 | 895 |
| 1020 | 69.98 | -25.05 | 139 | 10.1 | 34.0 | 1200 | 888 |
| 1080 | 69.78 | -24.85 | 136 | 9.5 | 34.1 | 1230 | 908 |
| 1140 | 70.59 | -25.66 | 139 | 10.1 | 34.6 | 1220 | 894 |
| 1200 | 70.58 | -25.65 | 139 | 10.1 | 36.8 | 1290 | 913 |
| 1260 | 70.44 | -25.51 | 139 | 10.1 | 36.2 | 1260 | 900 |
| 1320 | 70.68 | -25.75 | 139 | 10.1 | 34.6 | 1240 | 908 |
| 1380 | 70.29 | -25.36 | 139 | 10.1 | 34.9 | 1240 | 904 |
| 1440 | 71.13 | -26.20 | 139 | 10.1 | 34.7 | 1250 | 914 |
| 1500 | 71.27 | -26.34 | 139 | 10.1 | 34.8 | 1230 | 898 |
| 1560 | 71.63 | -26.70 | 139 | 10.1 | 34.7 | 1240 | 907 |
| 1620 | 71.48 | -26.55 | 139 | 10.1 | 34.8 | 1230 | 898 |
| 1680 | 71.92 | -26.99 | 140 | 10.3 | 34.9 | 1240 | 904 |
| 1740 | 71.87 | -26.94 | 139 | 10.1 | 34.9 | 1240 | 904 |
| 1800 | 71.66 | -26.73 | 139 | 10.1 | 34.5 | 1190 | 873 |
| 1860 | 72.22 | -27.29 | 139 | 10.1 | 34.6 | 1190 | 872 |
| 1920 | 72.66 | -27.73 | 139 | 10.1 | 34.7 | 1230 | 900 |
| 1980 | 71.92 | -26.99 | 139 | 10.1 | 34.8 | 1220 | 891 |
| 2040 | 72.43 | -27.50 | 139 | 10.1 | 34.6 | 1200 | 879 |
| 2100 | 72.70 | -27.77 | 139 | 10.1 | 34.8 | 1220 | 891 |
| 2160 | 72.03 | -27.10 | 139 | 10.1 | 34.7 | 1190 | 870 |
| 2220 | 71.66 | -26.73 | 139 | 10.1 | 34.6 | 1200 | 879 |
| 2280 | 71.38 | -26.45 | 139 | 10.1 | 34.5 | 1200 | 880 |
| 2340 | 71.57 | -26.64 | 139 | 10.1 | 34.6 | 1230 | 901 |
| 2400 | 71.71 | -26.78 | 139 | 10.1 | 34.6 | 1210 | 886 |
| 2460 | 71.79 | -26.86 | 139 | 10.1 | 34.6 | 1230 | 901 |
| 2520 | 71.72 | -26.79 | 139 | 10.1 | 34.5 | 1200 | 880 |
| 2580 | 72.46 | -27.53 | 139 | 10.1 | 34.2 | 1200 | 885 |
| 2640 | 71.70 | -26.77 | 139 | 10.1 | 34.9 | 1260 | 919 |
| 2700 | 72.84 | -27.91 | 139 | 10.1 | 35.0 | 1250 | 910 |
| 2760 | 71.41 | -26.48 | 139 | 10.1 | 34.8 | 1260 | 920 |
| 2820 | 71.67 | -26.74 | 139 | 10.1 | 35.0 | 1250 | 910 |
| 2880 | 71.69 | -26.76 | 139 | 10.1 | 35.0 | 1260 | 917 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' | log(t/t') |
|---|---|---|---|---|---|
| 0 | 71.69 | 26.76 | 2880 | | |
| 1 | 55.73 | 10.80 | 2881 | 2881 | 3.4595 |
| 2 | 53.35 | 8.42 | 2882 | 1441 | 3.1587 |
| 3 | 52.57 | 7.64 | 2883 | 961 | 2.9827 |
| 4 | 52.34 | 7.41 | 2884 | 721 | 2.8579 |
| 5 | 52.19 | 7.26 | 2885 | 577 | 2.7612 |
| 6 | 52.05 | 7.12 | 2886 | 481 | 2.6821 |
| 7 | 52.00 | 7.07 | 2887 | 412.429 | 2.6153 |
| 8 | 51.91 | 6.98 | 2888 | 361 | 2.5575 |
| 9 | 51.82 | 6.89 | 2889 | 321 | 2.5065 |
| 10 | 51.78 | 6.85 | 2890 | 289 | 2.4609 |
| 12 | 51.56 | 6.63 | 2892 | 241 | 2.382 |
| 14 | 51.48 | 6.55 | 2894 | 206.714 | 2.3154 |
| 16 | 51.38 | 6.45 | 2896 | 181 | 2.2577 |
| 18 | 51.27 | 6.34 | 2898 | 161 | 2.2068 |
| 20 | 51.18 | 6.25 | 2900 | 145 | 2.1614 |
| 25 | 51.00 | 6.07 | 2905 | 116.2 | 2.0652 |
| 30 | 50.79 | 5.86 | 2910 | 97 | 1.9868 |
| 35 | 50.61 | 5.68 | 2915 | 83.2857 | 1.9206 |
| 40 | 50.44 | 5.51 | 2920 | 73 | 1.8633 |
| 45 | 50.28 | 5.35 | 2925 | 65 | 1.8129 |
| 50 | 50.14 | 5.21 | 2930 | 58.6 | 1.7679 |
| 55 | 50.02 | 5.09 | 2935 | 53.3636 | 1.7272 |
| 60 | 49.90 | 4.97 | 2940 | 49 | 1.6902 |
| 70 | 49.68 | 4.75 | 2950 | 42.1429 | 1.6247 |
| 80 | 49.50 | 4.57 | 2960 | 37 | 1.5682 |
| 90 | 49.34 | 4.41 | 2970 | 33 | 1.5185 |
| 100 | 49.20 | 4.27 | 2980 | 29.8 | 1.4742 |
| 110 | 49.07 | 4.14 | 2990 | 27.1818 | 1.4343 |
| 120 | 48.96 | 4.03 | 3000 | 25 | 1.3979 |
| 135 | 48.81 | 3.88 | 3015 | 22.3333 | 1.349 |
| 150 | 48.61 | 3.68 | 3030 | 20.2 | 1.3054 |
| 165 | 48.54 | 3.61 | 3045 | 18.4545 | 1.2661 |
| 180 | 48.43 | 3.50 | 3060 | 17 | 1.2304 |
| 210 | 48.22 | 3.29 | 3090 | 14.7143 | 1.1677 |
| 240 | 48.03 | 3.10 | 3120 | 13 | 1.1139 |
| 270 | 47.87 | 2.94 | 3150 | 11.6667 | 1.0669 |
| 300 | 47.73 | 2.80 | 3180 | 10.6 | 1.0253 |
| 360 | 47.48 | 2.55 | 3240 | 9 | .95424 |
| 420 | 47.26 | 2.33 | 3300 | 7.85714 | .89526 |
| 480 | 47.08 | 2.15 | 3360 | 7 | .8451 |
| 540 | | | 3420 | 6.33333 | .80163 |
| 600 | | | 3480 | 5.8 | .76343 |

| | | | | | |
|---|---|---|---|---|---|
| 660 | | | 3540 | 5.36364 | .72946 |
| 720 | | | 3600 | 5 | .69897 |
| 780 | | | 3660 | 4.69231 | .67139 |
| 840 | | | 3720 | 4.42857 | .64626 |
| 900 | | | 3780 | 4.2 | .62325 |
| 960 | | | 3840 | 4 | .60206 |
| 1020 | | | 3900 | 3.82353 | .58246 |
| 1080 | | | 3960 | 3.66667 | .56427 |
| 1140 | | | 4020 | 3.52632 | .54732 |
| 1200 | | | 4080 | 3.4 | .53148 |
| 1260 | | | 4140 | 3.28571 | .51663 |
| 1320 | | | 4200 | 3.18182 | .50268 |
| 1380 | 46 | 1.07 | 4260 | 3.08696 | .48953 |
| 1440 | 45.96 | 1.03 | 4320 | 3 | .47712 |
| 1500 | | | 4380 | 2.92 | .46538 |
| 1560 | | | 4440 | 2.84615 | .45426 |
| 1620 | | | 4500 | 2.77778 | .4437 |
| 1680 | | | 4560 | 2.71429 | .43366 |
| 1740 | | | 4620 | 2.65517 | .42409 |
| 1800 | | | 4680 | 2.6 | .41497 |
| 1860 | | | 4740 | 2.54839 | .40627 |
| 1920 | | | 4800 | 2.5 | .39794 |
| 1980 | | | 4860 | 2.45455 | .38997 |
| 2040 | | | 4920 | 2.41176 | .38233 |
| 2100 | | | 4980 | 2.37143 | .37501 |
| 2160 | | | 5040 | 2.33333 | .36798 |
| 2220 | | | 5100 | 2.2973 | .36122 |
| 2280 | | | 5160 | 2.26316 | .35471 |
| 2340 | | | 5220 | 2.23077 | .34845 |
| 2400 | | | 5280 | 2.2 | .34242 |
| 2460 | | | 5340 | 2.17073 | .33661 |
| 2520 | | | 5400 | 2.14286 | .33099 |
| 2580 | | | 5460 | 2.11628 | .32557 |
| 2640 | | | 5520 | 2.09091 | .32034 |
| 2700 | | | 5580 | 2.06667 | .31527 |
| 2760 | | | 5640 | 2.04348 | .31037 |
| 2820 | | | 5700 | 2.02128 | .30563 |
| 2880 | | | 5760 | 2 | .30103 |

PUMPING TEST DATA SHEET

WELL LOCATION: LAS PINAS

SITE NO.: 1

WELL NO.: 2

WELL DEPTH: 200M

CASING DIAMETER: 10.16cm

SWL: 37.34m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 37.34 | 0 | 0 | |
| 1 | 39.23 | -1.89 | 65 | 1.51 |
| 2 | 39.34 | -2.00 | 65 | 1.51 |
| 3 | 39.39 | -2.05 | 65 | 1.51 |
| 4 | 39.50 | -2.16 | 65 | 1.51 |
| 5 | 39.53 | -2.19 | 65 | 1.51 |
| 6 | 39.63 | -2.29 | 65 | 1.51 |
| 7 | 39.64 | -2.30 | 65 | 1.51 |
| 8 | 39.65 | -2.31 | 65 | 1.51 |
| 9 | 39.69 | -2.35 | 65 | 1.51 |
| 10 | 39.74 | -2.40 | 65 | 1.51 |
| 12 | 39.75 | -2.41 | 65 | 1.51 |
| 14 | 39.88 | -2.54 | 66 | 1.57 |
| 16 | 39.95 | -2.61 | 65 | 1.51 |
| 18 | 40.03 | -2.69 | 66 | 1.57 |
| 20 | 40.03 | -2.69 | 65 | 1.51 |
| 25 | 40.08 | -2.74 | 65 | 1.51 |
| 30 | 40.16 | -2.82 | 65 | 1.51 |
| 35 | 40.16 | -2.82 | 65 | 1.51 |
| 40 | 40.16 | -2.82 | 65 | 1.51 |
| 45 | 40.25 | -2.91 | 65 | 1.51 |
| 50 | 40.32 | -2.98 | 65 | 1.51 |
| 55 | 40.25 | -2.91 | 63 | 1.39 |
| 60 | 40.34 | -3.00 | 65 | 1.51 |
| 70 | 40.45 | -3.11 | 65 | 1.51 |
| 80 | 40.44 | -3.10 | 65 | 1.51 |
| 90 | 40.48 | -3.14 | 65 | 1.51 |
| 100 | 40.54 | -3.20 | 65 | 1.51 |
| 110 | 40.55 | -3.21 | 65 | 1.51 |
| 120 | 40.75 | -3.41 | 65 | 1.51 |
| 135 | 40.65 | -3.31 | 65 | 1.51 |
| 150 | 40.73 | -3.39 | 64 | 1.45 |
| 165 | 40.78 | -3.44 | 64 | 1.45 |
| 180 | 40.90 | -3.56 | 65 | 1.51 |
| 210 | 40.99 | -3.65 | 65 | 1.51 |
| 240 | 40.89 | -3.55 | 64 | 1.45 |
| 270 | 40.89 | -3.55 | 65 | 1.51 |

| | | | | |
|---|---|---|---|---|
| 300 | 40.93 | -3.59 | 64 | 1.45 |
| 360 | 40.89 | -3.55 | 65 | 1.51 |
| 420 | 40.93 | -3.59 | 63 | 1.39 |
| 480 | 40.88 | -3.54 | 63 | 1.39 |
| 540 | 40.63 | -3.29 | 59 | 1.18 |
| 600 | 40.41 | -3.07 | 58 | 1.13 |
| 660 | 40.58 | -3.24 | 60 | 1.23 |
| 720 | 40.76 | -3.42 | 61 | 1.29 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 40.76 | 3.42 | 720 | |
| 1 | 39.17 | 1.83 | 721 | 721 |
| 2 | 39.03 | 1.69 | 722 | 361 |
| 3 | 38.95 | 1.61 | 723 | 241 |
| 4 | 38.87 | 1.53 | 724 | 181 |
| 5 | 38.80 | 1.46 | 725 | 145 |
| 6 | 38.75 | 1.41 | 726 | 121 |
| 7 | 38.71 | 1.37 | 727 | 103.85714 |
| 8 | 38.66 | 1.32 | 728 | 91 |
| 9 | 38.62 | 1.28 | 729 | 81 |
| 10 | 38.59 | 1.25 | 730 | 73 |
| 12 | 38.53 | 1.19 | 732 | 61 |
| 14 | 38.48 | 1.14 | 734 | 52.428571 |
| 16 | 38.43 | 1.09 | 736 | 46 |
| 18 | 38.39 | 1.05 | 738 | 41 |
| 20 | 38.39 | 1.05 | 740 | 37 |
| 25 | 38.27 | .93 | 745 | 29.8 |
| 30 | 38.20 | .86 | 750 | 25 |
| 35 | 38.15 | .81 | 755 | 21.571429 |
| 40 | 38.11 | .77 | 760 | 19 |
| 45 | 38.07 | .73 | 765 | 17 |
| 50 | 38.04 | .70 | 770 | 15.4 |
| 55 | 38.02 | .68 | 775 | 14.090909 |
| 60 | 37.99 | .65 | 780 | 13 |
| 70 | 37.95 | .61 | 790 | 11.285714 |
| 80 | 37.92 | .58 | 800 | 10 |
| 90 | 37.90 | .56 | 810 | 9 |
| 100 | 37.85 | .51 | 820 | 8.2 |
| 110 | 37.85 | .51 | 830 | 7.5454545 |
| 120 | 37.82 | .48 | 840 | 7 |
| 135 | 37.79 | .45 | 855 | 6.3333333 |
| 150 | 37.77 | .43 | 870 | 5.8 |

| | | | | |
|---|---|---|---|---|
| 165 | 37.75 | .41 | 885 | 5.3636364 |
| 180 | 37.74 | .40 | 900 | 5 |
| 210 | 37.71 | .37 | 930 | 4.4285714 |
| 240 | 37.69 | .35 | 960 | 4 |
| 270 | 37.68 | .34 | 990 | 3.6666667 |
| 300 | 37.66 | .32 | 1020 | 3.4 |
| 360 | 37.63 | .29 | 1080 | 3 |
| 420 | 37.60 | .26 | 1140 | 2.7142857 |
| 480 | 37.58 | .24 | 1200 | 2.5 |
| 540 | | | 1260 | 2.3333333 |
| 600 | | | 1320 | 2.2 |
| 660 | | | 1380 | 2.0909091 |
| 720 | | | 1440 | 2 |

PUMPING TEST DATA SHEET

WELL LOCATION: LAS PINAS

SITE NO.: 1

WELL NO.: 3

WELL DEPTH: 100M

CASING DIAMETER: 10.16cm

SWL: 4.60m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 4.60 | 0 | 0 | |
| 1 | 8.29 | -3.69 | 80 | 2.53 |
| 2 | 8.56 | -3.96 | 80 | 2.53 |
| 3 | 8.60 | -4.00 | 80 | 2.53 |
| 4 | 8.75 | -4.15 | 80 | 2.53 |
| 5 | 8.85 | -4.25 | 82 | 2.70 |
| 6 | 8.90 | -4.30 | 82 | 2.70 |
| 7 | 8.97 | -4.37 | 81 | 2.61 |
| 8 | 8.96 | -4.36 | 81 | 2.61 |
| 9 | 8.97 | -4.37 | 81 | 2.61 |
| 10 | 9.00 | -4.40 | 82 | 2.70 |
| 12 | 9.02 | -4.42 | 82 | 2.70 |
| 14 | 9.14 | -4.54 | 81 | 2.61 |
| 16 | 9.15 | -4.55 | 81 | 2.61 |
| 18 | 9.10 | -4.50 | 80 | 2.53 |
| 20 | 9.18 | -4.58 | 80 | 2.53 |
| 25 | 9.22 | -4.62 | 81 | 2.61 |
| 30 | 9.23 | -4.63 | 81 | 2.61 |
| 35 | 9.28 | -4.68 | 80 | 2.53 |
| 40 | 9.31 | -4.71 | 81 | 2.61 |
| 45 | 9.34 | -4.74 | 80 | 2.53 |
| 50 | 9.37 | -4.77 | 80 | 2.53 |
| 55 | 9.38 | -4.78 | 80 | 2.53 |
| 60 | 9.38 | -4.78 | 80 | 2.53 |
| 70 | 9.41 | -4.81 | 80 | 2.53 |
| 80 | 9.43 | -4.83 | 80 | 2.53 |
| 90 | 9.43 | -4.83 | 80 | 2.53 |
| 100 | 9.45 | -4.85 | 80 | 2.53 |
| 110 | 9.45 | -4.85 | 80 | 2.53 |
| 120 | 9.45 | -4.85 | 80 | 2.53 |
| 135 | 9.47 | -4.87 | 80 | 2.53 |
| 150 | 9.49 | -4.89 | 80 | 2.53 |
| 165 | 9.53 | -4.93 | 80 | 2.53 |
| 180 | 9.55 | -4.95 | 80 | 2.53 |
| 210 | 9.56 | -4.96 | 80 | 2.53 |
| 240 | 9.60 | -5.00 | 80 | 2.53 |
| 270 | 9.57 | -4.97 | 80 | 2.53 |

| | | | | |
|---|---|---|---|---|
| 300 | 9.58 | -4.98 | 80 | 2.53 |
| 360 | 9.64 | -5.04 | 80 | 2.53 |
| 420 | 9.70 | -5.10 | 80 | 2.53 |
| 480 | 9.69 | -5.09 | 80 | 2.53 |
| 540 | 9.67 | -5.07 | 80 | 2.53 |
| 600 | 9.68 | -5.08 | 80 | 2.53 |
| 660 | 9.72 | -5.12 | 80 | 2.53 |
| 720 | 9.69 | -5.09 | 81 | 2.61 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 9.69 | 5.09 | 720 | |
| 1 | 5.49 | .89 | 721 | 721 |
| 2 | 5.25 | .65 | 722 | 361 |
| 3 | 5.12 | .52 | 723 | 241 |
| 4 | 5.31 | .71 | 724 | 181 |
| 5 | 5.43 | .83 | 725 | 145 |
| 6 | 5.35 | .75 | 726 | 121 |
| 7 | 5.31 | .71 | 727 | 103.85714 |
| 8 | 4.91 | .31 | 728 | 91 |
| 9 | 5.21 | .61 | 729 | 81 |
| 10 | 5.26 | .66 | 730 | 73 |
| 12 | 5.15 | .55 | 732 | 61 |
| 14 | 5.16 | .56 | 734 | 52.428571 |
| 16 | 5.09 | .49 | 736 | 46 |
| 18 | 5.01 | .41 | 738 | 41 |
| 20 | 5.07 | .47 | 740 | 37 |
| 25 | 5.06 | .46 | 745 | 29.8 |
| 30 | 5.01 | .41 | 750 | 25 |
| 35 | 4.93 | .33 | 755 | 21.571429 |
| 40 | 4.95 | .35 | 760 | 19 |
| 45 | 4.94 | .34 | 765 | 17 |
| 50 | 4.91 | .31 | 770 | 15.4 |
| 55 | 4.91 | .31 | 775 | 14.090909 |
| 60 | 4.86 | .26 | 780 | 13 |
| 70 | 4.85 | .25 | 790 | 11.285714 |
| 80 | 4.83 | .23 | 800 | 10 |
| 90 | 4.82 | .22 | 810 | 9 |
| 100 | 4.80 | .20 | 820 | 8.2 |
| 110 | 4.80 | .20 | 830 | 7.5454545 |
| 120 | 4.79 | .19 | 840 | 7 |
| 135 | 4.79 | .19 | 855 | 6.3333333 |
| 150 | 4.76 | .16 | 870 | 5.8 |

| | | | | |
|---|---|---|---|---|
| 165 | 4.74 | .14 | 885 | 5.3636364 |
| 180 | 4.73 | .13 | 900 | 5 |
| 210 | 4.72 | .12 | 930 | 4.4285714 |
| 240 | 4.71 | .11 | 960 | 4 |
| 270 | 4.70 | .10 | 990 | 3.6666667 |
| 300 | 4.69 | .09 | 1020 | 3.4 |
| 360 | 4.67 | .07 | 1080 | 3 |
| 420 | 4.66 | .06 | 1140 | 2.7142857 |
| 480 | 4.64 | .04 | 1200 | 2.5 |
| 540 | | | 1260 | 2.3333333 |
| 600 | | | 1320 | 2.2 |
| 660 | | | 1380 | 2.0909091 |
| 720 | | | 1440 | 2 |

STEP DRAWDOWN TEST DATA SHEET

WELL LOCATION: LAS PINAS

SITE NO.: 2

WELL NO.: 1

WELL DEPTH 300M

CASING DIA 20.32cm

SWL: 50.03m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 50.03 | 0 | 0 | | |
| 1 | 1 | 57.21 | -7.18 | 68 | 1.69 | |
| 2 | 2 | 57.84 | -7.81 | 68 | 1.69 | |
| 3 | 3 | 58.33 | -8.30 | 68 | 1.69 | |
| 4 | 4 | 59.30 | -9.27 | 68 | 1.69 | |
| 5 | 5 | 58.94 | -8.91 | 68 | 1.69 | |
| 6 | 6 | 59.49 | -9.46 | 68 | 1.69 | |
| 7 | 7 | 59.84 | -9.81 | 68 | 1.69 | |
| 8 | 8 | 60.16 | -10.13 | 68 | 1.69 | |
| 9 | 9 | 60.45 | -10.42 | 68 | 1.69 | |
| 10 | 10 | 60.68 | -10.65 | 68 | 1.69 | |
| 12 | 12 | 61.08 | -11.05 | 68 | 1.69 | |
| 14 | 14 | 61.42 | -11.39 | 68 | 1.69 | |
| 16 | 16 | 61.62 | -11.59 | 68 | 1.69 | |
| 18 | 18 | 61.59 | -11.56 | 65 | 1.51 | |
| 20 | 20 | 61.57 | -11.54 | 64 | 1.45 | |
| 25 | 25 | 61.95 | -11.92 | 68 | 1.69 | |
| 30 | 30 | 62.47 | -12.44 | 68 | 1.69 | |
| 35 | 35 | 62.72 | -12.69 | 68 | 1.69 | |
| 40 | 40 | 62.86 | -12.83 | 68 | 1.69 | |
| 45 | 45 | 62.98 | -12.95 | 68 | 1.69 | |
| 50 | 50 | 63.10 | -13.07 | 68 | 1.69 | |
| 55 | 55 | 63.19 | -13.16 | 68 | 1.69 | |
| 60 | 60 | 63.28 | -13.25 | 68 | 1.69 | |
| 70 | 70 | 63.41 | -13.38 | 68 | 1.69 | |
| 80 | 80 | 63.49 | -13.46 | 68 | 1.69 | |
| 90 | 90 | 63.63 | -13.60 | 68 | 1.69 | |
| 100 | 100 | 63.73 | -13.70 | 68 | 1.69 | |
| 110 | 110 | 63.86 | -13.83 | 68 | 1.69 | |
| 120 | 120 | 63.91 | -13.88 | 68 | 1.69 | Q=102 /min |
| 121 | 1 | 67.79 | -17.76 | 89 | 3.31 | |
| 122 | 2 | 68.14 | -18.11 | 89 | 3.31 | |
| 123 | 3 | 69.07 | -19.04 | 89 | 3.31 | |
| 124 | 4 | 69.81 | -19.78 | 89 | 3.31 | |
| 125 | 5 | 70.33 | -20.30 | 89 | 3.31 | |
| 126 | 6 | 70.73 | -20.70 | 89 | 3.31 | |
| 127 | 7 | 71.01 | -20.98 | 89 | 3.31 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 128 | 8 | 71.23 | -21.20 | 89 | 3.31 | |
| 129 | 9 | 71.41 | -21.38 | 89 | 3.31 | |
| 130 | 10 | 71.56 | -21.53 | 89 | 3.31 | |
| 132 | 12 | 71.75 | -21.72 | 89 | 3.31 | |
| 134 | 14 | 72.02 | -21.99 | 89 | 3.31 | |
| 136 | 16 | 72.23 | -22.20 | 89 | 3.31 | |
| 138 | 18 | 72.36 | -22.33 | 89 | 3.31 | |
| 140 | 20 | 72.44 | -22.41 | 89 | 3.31 | |
| 145 | 25 | 72.70 | -22.67 | 89 | 3.31 | |
| 150 | 30 | 72.85 | -22.82 | 89 | 3.31 | |
| 155 | 35 | 72.93 | -22.90 | 89 | 3.31 | |
| 160 | 40 | 73.00 | -22.97 | 89 | 3.31 | |
| 165 | 45 | 73.01 | -22.98 | 89 | 3.31 | |
| 170 | 50 | 73.09 | -23.06 | 89 | 3.31 | |
| 175 | 55 | 73.15 | -23.12 | 89 | 3.31 | |
| 180 | 60 | 73.31 | -23.28 | 89 | 3.31 | |
| 190 | 70 | 73.41 | -23.38 | 89 | 3.31 | |
| 200 | 80 | 73.45 | -23.42 | 89 | 3.31 | |
| 210 | 90 | 73.60 | -23.57 | 89 | 3.31 | |
| 220 | 100 | 73.66 | -23.63 | 89 | 3.31 | |
| 230 | 110 | 73.73 | -23.70 | 89 | 3.31 | |
| 240 | 120 | 73.76 | -23.73 | 89 | 3.31 | Q=198 /min |
| 241 | 1 | 77.95 | -27.92 | 105 | 5.00 | |
| 242 | 2 | 80.62 | -30.59 | 105 | 5.00 | |
| 243 | 3 | 82.37 | -32.34 | 105 | 5.00 | |
| 244 | 4 | 83.58 | -33.55 | 105 | 5.00 | |
| 245 | 5 | 84.39 | -34.36 | 105 | 5.00 | |
| 246 | 6 | 85.02 | -34.99 | 105 | 5.00 | |
| 247 | 7 | 85.50 | -35.47 | 105 | 5.00 | |
| 248 | 8 | 85.84 | -35.81 | 105 | 5.00 | |
| 249 | 9 | 86.11 | -36.08 | 105 | 5.00 | |
| 250 | 10 | 86.32 | -36.29 | 105 | 5.00 | |
| 252 | 12 | 86.95 | -36.92 | 105 | 5.00 | |
| 254 | 14 | 87.36 | -37.33 | 105 | 5.00 | |
| 256 | 16 | 87.61 | -37.58 | 105 | 5.00 | |
| 258 | 18 | 87.79 | -37.76 | 105 | 5.00 | |
| 260 | 20 | 87.89 | -37.86 | 105 | 5.00 | |
| 265 | 25 | 88.05 | -38.02 | 105 | 5.00 | |
| 270 | 30 | 88.14 | -38.11 | 105 | 5.00 | |
| 275 | 35 | 88.14 | -38.11 | 105 | 5.00 | |
| 280 | 40 | 88.03 | -38.00 | 105 | 5.00 | |
| 285 | 45 | 87.83 | -37.80 | 105 | 5.00 | |
| 290 | 50 | 87.69 | -37.66 | 103 | 4.77 | |
| 295 | 55 | 89.11 | -39.08 | 105 | 5.00 | |
| 300 | 60 | 89.25 | -39.22 | 105 | 5.00 | |
| 310 | 70 | 88.47 | -38.44 | 105 | 5.00 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 320 | 80 | 88.84 | -38.81 | 105 | 5.00 | |
| 330 | 90 | 89.98 | -39.95 | 106 | 5.12 | |
| 340 | 100 | 89.91 | -39.88 | 106 | 5.12 | |
| 350 | 110 | 88.29 | -38.26 | 105 | 5.00 | |
| 360 | 120 | 88.12 | -38.09 | 105 | 5.00 | Q=300 /min |
| 361 | 1 | 91.35 | -41.32 | 118 | 6.70 | |
| 362 | 2 | 94.40 | -44.37 | 118 | 6.70 | |
| 363 | 3 | 95.89 | -45.86 | 118 | 6.70 | |
| 364 | 4 | 96.78 | -46.75 | 118 | 6.70 | |
| 365 | 5 | 97.33 | -47.30 | 118 | 6.70 | |
| 366 | 6 | 97.68 | -47.65 | 118 | 6.70 | |
| 367 | 7 | 97.90 | -47.87 | 118 | 6.70 | |
| 368 | 8 | 98.29 | -48.26 | 118 | 6.70 | |
| 369 | 9 | 98.74 | -48.71 | 118 | 6.70 | |
| 370 | 10 | 99.09 | -49.06 | 118 | 6.70 | |
| 372 | 12 | 99.49 | -49.46 | 118 | 6.70 | |
| 374 | 14 | 99.74 | -49.71 | 118 | 6.70 | |
| 376 | 16 | 99.93 | -49.90 | 118 | 6.70 | |
| 378 | 18 | 100.20 | -50.17 | 118 | 6.70 | |
| 380 | 20 | 100.43 | -50.40 | 118 | 6.70 | |
| 385 | 25 | 100.86 | -50.83 | 118 | 6.70 | |
| 390 | 30 | 101.14 | -51.11 | 118 | 6.70 | |
| 395 | 35 | 101.43 | -51.40 | 118 | 6.70 | |
| 400 | 40 | 101.47 | -51.44 | 118 | 6.70 | |
| 405 | 45 | 101.38 | -51.35 | 118 | 6.70 | |
| 410 | 50 | 101.32 | -51.29 | 118 | 6.70 | |
| 415 | 55 | 101.66 | -51.63 | 118 | 6.70 | |
| 420 | 60 | 102.03 | -52.00 | 118 | 6.70 | |
| 430 | 70 | 102.13 | -52.10 | 118 | 6.70 | |
| 440 | 80 | 102.05 | -52.02 | 118 | 6.70 | |
| 450 | 90 | 101.44 | -51.41 | 118 | 6.70 | |
| 460 | 100 | 101.68 | -51.65 | 118 | 6.70 | |
| 470 | 110 | 99.15 | -49.12 | 118 | 6.70 | |
| 480 | 120 | 98.99 | -48.96 | 118 | 6.70 | Q=402 /min |
| 481 | 1 | 101.27 | -51.24 | 127 | 8.05 | |
| 482 | 2 | 102.69 | -52.66 | 126 | 7.89 | |
| 483 | 3 | 103.59 | -53.56 | 125 | 7.73 | |
| 484 | 4 | 104.21 | -54.18 | 125 | 7.73 | |
| 485 | 5 | 104.54 | -54.51 | 125 | 7.73 | |
| 486 | 6 | 104.73 | -54.70 | 124 | 7.58 | |
| 487 | 7 | 104.89 | -54.86 | 124 | 7.58 | |
| 488 | 8 | 104.86 | -54.83 | 124 | 7.58 | |
| 489 | 9 | 105.04 | -55.01 | 124 | 7.58 | |
| 490 | 10 | 104.82 | -54.79 | 123 | 7.43 | |
| 492 | 12 | 104.57 | -54.54 | 123 | 7.43 | |
| 494 | 14 | 104.66 | -54.63 | 124 | 7.58 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 496 | 16 | 104.80 | -54.77 | 124 | 7.58 | |
| 498 | 18 | 104.79 | -54.76 | 124 | 7.58 | |
| 500 | 20 | 104.82 | -54.79 | 124 | 7.58 | |
| 505 | 25 | 104.77 | -54.74 | 123 | 7.43 | |
| 510 | 30 | 104.74 | -54.71 | 123 | 7.43 | |
| 515 | 35 | 104.65 | -54.62 | 123 | 7.43 | |
| 520 | 40 | 104.64 | -54.61 | 123 | 7.43 | |
| 525 | 45 | 104.60 | -54.57 | 123 | 7.43 | |
| 530 | 50 | 104.27 | -54.24 | 123 | 7.43 | |
| 535 | 55 | 104.76 | -54.73 | 123 | 7.43 | |
| 540 | 60 | 104.98 | -54.95 | 123 | 7.43 | |
| 550 | 70 | 105.35 | -55.32 | 123 | 7.43 | |
| 560 | 80 | 105.36 | -55.33 | 123 | 7.43 | |
| 570 | 90 | 105.26 | -55.23 | 123 | 7.43 | |
| 580 | 100 | 105.18 | -55.15 | 123 | 7.43 | |
| 590 | 110 | 105.23 | -55.20 | 123 | 7.43 | |
| 600 | 120 | 105.23 | -55.20 | 123 | 7.43 | Q=446 /min |

CONTINUPUS PUMPING TEST DATA SHEET
WELL LOCATION: LAS PINAS
SITE NO.: 2
WELL NO.: 1
WELL DEPTH: 300M
CASING DIAMETER 20.32cm
SWL: 51.23m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | TEMP (Deg.C) | ECt | EC18 |
|---|---|---|---|---|---|---|---|
| 0 | 51.23 | 0 | | | | | |
| 1 | 63.86 | -12.63 | 105 | 5.0 | | | |
| 2 | 63.82 | -12.59 | 105 | 5.0 | | | |
| 3 | 66.79 | -15.56 | 105 | 5.0 | | | |
| 4 | 69.07 | -17.84 | 105 | 5.0 | | | |
| 5 | 70.84 | -19.61 | 105 | 5.0 | | | |
| 6 | 72.05 | -20.82 | 105 | 5.0 | | | |
| 7 | 72.91 | -21.68 | 105 | 5.0 | | | |
| 8 | 73.70 | -22.47 | 105 | 5.0 | | | |
| 9 | 74.42 | -23.19 | 105 | 5.0 | | | |
| 10 | 75.13 | -23.90 | 105 | 5.0 | 34.5 | 1050 | 770 |
| 12 | 76.16 | -24.93 | 105 | 5.0 | | | |
| 14 | 76.76 | -25.53 | 105 | 5.0 | | | |
| 16 | 77.21 | -25.98 | 105 | 5.0 | | | |
| 18 | 77.54 | -26.31 | 105 | 5.0 | | | |
| 20 | 77.87 | -26.64 | 105 | 5.0 | 34.6 | 1100 | 806 |
| 25 | 78.80 | -27.57 | 105 | 5.0 | | | |
| 30 | 79.15 | -27.92 | 105 | 5.0 | 34.6 | 1180 | 864 |
| 35 | 79.48 | -28.25 | 105 | 5.0 | | | |
| 40 | 79.64 | -28.41 | 105 | 5.0 | 34.7 | 1290 | 943 |
| 45 | 79.76 | -28.53 | 105 | 5.0 | | | |
| 50 | 79.88 | -28.65 | 105 | 5.0 | 34.7 | 1280 | 936 |
| 55 | 80.13 | -28.90 | 105 | 5.0 | | | |
| 60 | 80.60 | -29.37 | 105 | 5.0 | 34.9 | 1240 | 904 |
| 70 | 81.19 | -29.96 | 105 | 5.0 | 34.9 | 1220 | 889 |
| 80 | 81.35 | -30.12 | 105 | 5.0 | 34.9 | 1220 | 889 |
| 90 | 82.60 | -31.37 | 105 | 5.0 | 34.9 | 1210 | 882 |
| 100 | 82.73 | -31.50 | 105 | 5.0 | 34.9 | 1210 | 882 |
| 110 | 82.83 | -31.60 | 105 | 5.0 | 35.0 | 1210 | 881 |
| 120 | 82.98 | -31.75 | 105 | 5.0 | 34.8 | 1200 | 876 |
| 135 | 83.39 | -32.16 | 105 | 5.0 | | | |
| 150 | 83.17 | -31.94 | 105 | 5.0 | 35.0 | 1190 | 866 |
| 165 | 83.00 | -31.77 | 105 | 5.0 | | | |
| 180 | 83.10 | -31.87 | 105 | 5.0 | 35.1 | 1190 | 865 |
| 210 | 83.13 | -31.90 | 105 | 5.0 | 35.1 | 1180 | 857 |
| 240 | 83.62 | -32.39 | 105 | 5.0 | 35.0 | 1200 | 873 |
| 270 | 83.78 | -32.55 | 105 | 5.0 | 35.0 | 1180 | 859 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 300 | 84.64 | -33.41 | 105 | 5.0 | 35.0 | 1180 | 859 |
| 360 | 85.92 | -34.69 | 105 | 5.0 | 35.3 | 1180 | 855 |
| 420 | 83.65 | -32.42 | 105 | 5.0 | 35.2 | 1170 | 849 |
| 480 | 87.34 | -36.11 | 105 | 5.0 | 34.5 | 1100 | 807 |
| 540 | 87.64 | -36.41 | 105 | 5.0 | 34.8 | 1120 | 818 |
| 600 | 86.67 | -35.44 | 105 | 5.0 | 34.9 | 1140 | 831 |
| 660 | 87.78 | -36.55 | 105 | 5.0 | 34.6 | 1120 | 820 |
| 720 | 88.18 | -36.95 | 105 | 5.0 | 34.7 | 1120 | 819 |
| 780 | 89.85 | -38.62 | 105 | 5.0 | 34.8 | 1100 | 803 |
| 840 | 90.02 | -38.79 | 105 | 5.0 | 34.6 | 1120 | 820 |
| 900 | 91.12 | -39.89 | 105 | 5.0 | 35.0 | 1120 | 815 |
| 960 | 90.45 | -39.22 | 105 | 5.0 | 34.8 | 1100 | 803 |
| 1020 | 90.07 | -38.84 | 105 | 5.0 | 34.8 | 1100 | 803 |
| 1080 | 90.69 | -39.46 | 105 | 5.0 | 34.6 | 1105 | 809 |
| 1140 | 90.51 | -39.28 | 105 | 5.0 | 34.6 | 1100 | 806 |
| 1200 | 90.72 | -39.49 | 105 | 5.0 | 34.9 | 1100 | 802 |
| 1260 | 90.99 | -39.76 | 105 | 5.0 | 34.6 | 1100 | 806 |
| 1320 | 91.31 | -40.08 | 105 | 5.0 | 34.7 | 1100 | 804 |
| 1380 | 91.77 | -40.54 | 105 | 5.0 | 34.9 | 1100 | 802 |
| 1440 | 90.04 | -38.81 | 105 | 5.0 | 34.8 | 1110 | 810 |
| 1500 | 90.09 | -38.86 | 105 | 5.0 | 34.9 | 1110 | 809 |
| 1560 | 90.35 | -39.12 | 105 | 5.0 | 34.9 | 1070 | 780 |
| 1620 | 90.55 | -39.32 | 105 | 5.0 | 35.2 | 1070 | 776 |
| 1680 | 92.24 | -41.01 | 105 | 5.0 | 35.0 | 1070 | 779 |
| 1740 | 91.74 | -40.51 | 105 | 5.0 | 35.0 | 1110 | 808 |
| 1800 | 93.05 | -41.82 | 105 | 5.0 | 35.0 | 1080 | 786 |
| 1860 | 93.78 | -42.55 | 105 | 5.0 | 35.1 | 1080 | 785 |
| 1920 | 94.70 | -43.47 | 105 | 5.0 | 34.9 | 1100 | 802 |
| 1980 | 94.64 | -43.41 | 105 | 5.0 | 35.1 | 1090 | 792 |
| 2040 | 94.74 | -43.51 | 105 | 5.0 | 34.7 | 1030 | 753 |
| 2100 | 95.00 | -43.77 | 105 | 5.0 | 34.8 | 1040 | 759 |
| 2160 | 94.66 | -43.43 | 105 | 5.0 | 35.0 | 1050 | 764 |
| 2220 | 95.05 | -43.82 | 105 | 5.0 | 34.9 | 1040 | 758 |
| 2280 | 95.24 | -44.01 | 105 | 5.0 | 34.8 | 1030 | 752 |
| 2340 | 95.04 | -43.81 | 105 | 5.0 | 34.9 | 1050 | 765 |
| 2400 | 94.37 | -43.14 | 105 | 5.0 | 34.9 | 1080 | 787 |
| 2460 | 94.11 | -42.88 | 105 | 5.0 | 34.9 | 1080 | 787 |
| 2520 | 95.61 | -44.38 | 105 | 5.0 | 34.8 | 1080 | 789 |
| 2580 | 94.66 | -43.43 | 105 | 5.0 | 34.8 | 1080 | 789 |
| 2640 | 94.75 | -43.52 | 105 | 5.0 | 34.9 | 1080 | 787 |
| 2700 | 95.57 | -44.34 | 105 | 5.0 | 35.0 | 1080 | 786 |
| 2760 | 95.75 | -44.52 | 105 | 5.0 | 34.9 | 1050 | 765 |
| 2820 | 95.73 | -44.50 | 105 | 5.0 | | | |
| 2880 | 95.00 | -43.77 | 105 | 5.0 | | | |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' | log(t/t') |
|---|---|---|---|---|---|
| 0 | 95.00 | 43.77 | 2880 | | |
| 1 | 78.33 | 27.10 | 2881 | 2881 | 3.46 |
| 2 | 72.89 | 21.66 | 2882 | 1441 | 3.159 |
| 3 | 69.39 | 18.16 | 2883 | 961 | 2.983 |
| 4 | 66.93 | 15.70 | 2884 | 721 | 2.858 |
| 5 | 65.00 | 13.77 | 2885 | 577 | 2.761 |
| 6 | 63.66 | 12.43 | 2886 | 481 | 2.682 |
| 7 | 62.67 | 11.44 | 2887 | 412.42857 | 2.615 |
| 8 | 62.02 | 10.79 | 2888 | 361 | 2.558 |
| 9 | 60.99 | 9.76 | 2889 | 321 | 2.507 |
| 10 | 60.96 | 9.73 | 2890 | 289 | 2.461 |
| 12 | 60.31 | 9.08 | 2892 | 241 | 2.382 |
| 14 | 59.85 | 8.62 | 2894 | 206.71429 | 2.315 |
| 16 | 59.34 | 8.11 | 2896 | 181 | 2.258 |
| 18 | 58.97 | 7.74 | 2898 | 161 | 2.207 |
| 20 | 58.71 | 7.48 | 2900 | 145 | 2.161 |
| 25 | 58.20 | 6.97 | 2905 | 116.2 | 2.065 |
| 30 | 57.61 | 6.38 | 2910 | 97 | 1.987 |
| 35 | 57.32 | 6.09 | 2915 | 83.285714 | 1.921 |
| 40 | 57.02 | 5.79 | 2920 | 73 | 1.863 |
| 45 | 56.61 | 5.38 | 2925 | 65 | 1.813 |
| 50 | 56.39 | 5.16 | 2930 | 58.6 | 1.768 |
| 55 | 56.35 | 5.12 | 2935 | 53.363636 | 1.727 |
| 60 | 55.66 | 4.43 | 2940 | 49 | 1.69 |
| 70 | 55.61 | 4.38 | 2950 | 42.142857 | 1.625 |
| 80 | 55.56 | 4.33 | 2960 | 37 | 1.568 |
| 90 | 55.34 | 4.11 | 2970 | 33 | 1.519 |
| 100 | 55.13 | 3.90 | 2980 | 29.8 | 1.474 |
| 110 | 54.85 | 3.62 | 2990 | 27.181818 | 1.434 |
| 120 | 54.84 | 3.61 | 3000 | 25 | 1.398 |
| 135 | 54.53 | 3.30 | 3015 | 22.333333 | 1.349 |
| 150 | 54.26 | 3.03 | 3030 | 20.2 | 1.305 |
| 165 | 54.21 | 2.98 | 3045 | 18.454545 | 1.266 |
| 180 | 54.20 | 2.97 | 3060 | 17 | 1.23 |
| 210 | 53.91 | 2.68 | 3090 | 14.714286 | 1.168 |
| 240 | 53.70 | 2.47 | 3120 | 13 | 1.114 |
| 270 | 53.47 | 2.24 | 3150 | 11.666667 | 1.067 |
| 300 | 53.30 | 2.07 | 3180 | 10.6 | 1.025 |
| 360 | 53.05 | 1.82 | 3240 | 9 | .9542 |
| 420 | 52.85 | 1.62 | 3300 | 7.8571429 | .8953 |
| 480 | 52.64 | 1.41 | 3360 | 7 | .8451 |
| 540 | | | 3420 | 6.3333333 | .8016 |
| 600 | | | 3480 | 5.8 | .7634 |

| | | | | | |
|---|---|---|---|---|---|
| 660 | | | 3540 | 5.3636364 | .7295 |
| 720 | | | 3600 | 5 | .699 |
| 780 | | | 3660 | 4.6923077 | .6714 |
| 840 | | | 3720 | 4.4285714 | .6463 |
| 900 | | | 3780 | 4.2 | .6232 |
| 960 | | | 3840 | 4 | .6021 |
| 1020 | | | 3900 | 3.8235294 | .5825 |
| 1080 | | | 3960 | 3.6666667 | .5643 |
| 1140 | | | 4020 | 3.5263158 | .5473 |
| 1200 | | | 4080 | 3.4 | .5315 |
| 1260 | | | 4140 | 3.2857143 | .5166 |
| 1320 | | | 4200 | 3.1818182 | .5027 |
| 1380 | | | 4260 | 3.0869565 | .4895 |
| 1440 | 51.7 | .47 | 4320 | 3 | .4771 |
| 1500 | | | 4380 | 2.92 | .4654 |
| 1560 | | | 4440 | 2.8461538 | .4543 |
| 1620 | | | 4500 | 2.7777778 | .4437 |
| 1680 | | | 4560 | 2.7142857 | .4337 |
| 1740 | | | 4620 | 2.6551724 | .4241 |
| 1800 | | | 4680 | 2.6 | .415 |
| 1860 | | | 4740 | 2.5483871 | .4063 |
| 1920 | | | 4800 | 2.5 | .3979 |
| 1980 | | | 4860 | 2.4545455 | .39 |
| 2040 | | | 4920 | 2.4117647 | .3823 |
| 2100 | | | 4980 | 2.3714286 | .375 |
| 2160 | | | 5040 | 2.3333333 | .368 |
| 2220 | | | 5100 | 2.2972973 | .3612 |
| 2280 | | | 5160 | 2.2631579 | .3547 |
| 2340 | | | 5220 | 2.2307692 | .3485 |
| 2400 | | | 5280 | 2.2 | .3424 |
| 2460 | | | 5340 | 2.1707317 | .3366 |
| 2520 | | | 5400 | 2.1428571 | .331 |
| 2580 | | | 5460 | 2.1162791 | .3256 |
| 2640 | | | 5520 | 2.0909091 | .3203 |
| 2700 | | | 5580 | 2.0666667 | .3153 |
| 2760 | | | 5640 | 2.0434783 | .3104 |
| 2820 | | | 5700 | 2.0212766 | .3056 |
| 2880 | | | 5760 | 2 | .301 |

PUMPING TEST DATA SHEET
WELL LOCATION: LAS PINAS
SITE NO.: 2
WELL NO.: 2
WELL DEPTH: 200m
CASING DIAMETER: 10.16cm
SWL: 43.44m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 43.44 | 0 | 0 | |
| 1 | 50.41 | -6.97 | 66 | 1.57 |
| 2 | 50.54 | -7.1 | 66 | 1.57 |
| 3 | 50.69 | -7.25 | 66 | 1.57 |
| 4 | 50.8 | -7.36 | 66 | 1.57 |
| 5 | 50.8 | -7.36 | 66 | 1.57 |
| 6 | 50.97 | -7.53 | 67 | 1.63 |
| 7 | 51.02 | -7.58 | 67 | 1.63 |
| 8 | 50.98 | -7.54 | 67 | 1.63 |
| 9 | 50.93 | -7.49 | 66 | 1.57 |
| 10 | 51.07 | -7.63 | 66 | 1.57 |
| 12 | 51.08 | -7.64 | 66 | 1.57 |
| 14 | 51.01 | -7.57 | 65 | 1.51 |
| 16 | 51.15 | -7.71 | 65 | 1.51 |
| 18 | 51.22 | -7.78 | 65 | 1.51 |
| 20 | 51.06 | -7.62 | 66 | 1.57 |
| 25 | 51.15 | -7.71 | 65 | 1.51 |
| 30 | 51.11 | -7.67 | 66 | 1.57 |
| 35 | 51.07 | -7.63 | 66 | 1.57 |
| 40 | 51.03 | -7.59 | 67 | 1.63 |
| 45 | 51.02 | -7.58 | 66 | 1.57 |
| 50 | 50.95 | -7.51 | 66 | 1.57 |
| 55 | 51.05 | -7.61 | 66 | 1.57 |
| 60 | 51.03 | -7.59 | 66 | 1.57 |
| 70 | 50.98 | -7.54 | 65 | 1.51 |
| 80 | 51.14 | -7.7 | 67 | 1.63 |
| 90 | 51.12 | -7.68 | 66 | 1.57 |
| 100 | 51.15 | -7.71 | 66 | 1.57 |
| 110 | 51.15 | -7.71 | 66 | 1.57 |
| 120 | 51.14 | -7.7 | 67 | 1.63 |
| 135 | 51.12 | -7.68 | 66 | 1.57 |
| 150 | 51.1 | -7.66 | 66 | 1.57 |
| 165 | 51.14 | -7.7 | 66 | 1.57 |
| 180 | 51.19 | -7.75 | 67 | 1.63 |
| 210 | 51.14 | -7.7 | 66 | 1.57 |
| 240 | 51.05 | -7.61 | 65 | 1.51 |
| 270 | 51.07 | -7.63 | 65 | 1.51 |

| | | | | |
|---|---|---|---|---|
| 300 | 51.14 | -7.7 | 66 | 1.57 |
| 360 | 51.21 | -7.77 | 65 | 1.51 |
| 420 | 51.21 | -7.77 | 65 | 1.51 |
| 480 | 51.26 | -7.82 | 65 | 1.51 |
| 540 | 51.14 | -7.7 | 65 | 1.51 |
| 600 | 51.15 | -7.71 | 65 | 1.51 |
| 660 | 51.19 | -7.75 | 65 | 1.51 |
| 720 | 51.17 | -7.73 | 65 | 1.51 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 51.17 | 7.73 | 720 | |
| 1 | 48.12 | 4.68 | 721 | 721 |
| 2 | 47.95 | 4.51 | 722 | 361 |
| 3 | 47.71 | 4.27 | 723 | 241 |
| 4 | 47.56 | 4.12 | 724 | 181 |
| 5 | 47.43 | 3.99 | 725 | 145 |
| 6 | 47.37 | 3.93 | 726 | 121 |
| 7 | 47.33 | 3.89 | 727 | 103.85714 |
| 8 | 47.14 | 3.7 | 728 | 91 |
| 9 | 46.81 | 3.37 | 729 | 81 |
| 10 | 46.59 | 3.15 | 730 | 73 |
| 12 | 46.47 | 3.03 | 732 | 61 |
| 14 | 46.39 | 2.95 | 734 | 52.428571 |
| 16 | 46.25 | 2.81 | 736 | 46 |
| 18 | 46.23 | 2.79 | 738 | 41 |
| 20 | 46.21 | 2.77 | 740 | 37 |
| 25 | 46.11 | 2.67 | 745 | 29.8 |
| 30 | 45.99 | 2.55 | 750 | 25 |
| 35 | 45.93 | 2.49 | 755 | 21.571429 |
| 40 | 45.77 | 2.33 | 760 | 19 |
| 45 | 45.6 | 2.16 | 765 | 17 |
| 50 | 45.45 | 2.01 | 770 | 15.4 |
| 55 | 45.24 | 1.8 | 775 | 14.090909 |
| 60 | 45.09 | 1.65 | 780 | 13 |
| 70 | 44.86 | 1.42 | 790 | 11.285714 |
| 80 | 44.72 | 1.28 | 800 | 10 |
| 90 | 44.64 | 1.2 | 810 | 9 |
| 100 | 44.54 | 1.1 | 820 | 8.2 |
| 110 | 44.47 | 1.03 | 830 | 7.5454545 |
| 120 | 44.42 | .98 | 840 | 7 |
| 135 | 44.32 | .88 | 855 | 6.3333333 |
| 150 | 44.23 | .79 | 870 | 5.8 |

| | | | | |
|---|---|---|---|---|
| 165 | 44.18 | .74 | 885 | 5.3636364 |
| 180 | 44.14 | .7 | 900 | 5 |
| 210 | 44.07 | .63 | 930 | 4.4285714 |
| 240 | 44.01 | .57 | 960 | 4 |
| 270 | 43.96 | .52 | 990 | 3.6666667 |
| 300 | 43.93 | .49 | 1020 | 3.4 |
| 360 | 43.86 | .42 | 1080 | 3 |
| 420 | 43.8 | .36 | 1140 | 2.7142857 |
| 480 | 43.77 | .33 | 1200 | 2.5 |
| 540 | | | 1260 | 2.3333333 |
| 600 | | | 1320 | 2.2 |
| 660 | | | 1380 | 2.0909091 |
| 720 | | | 1440 | 2 |

PUMPING TEST DATA SHEET

WELL LOCATION: LAS PINAS

SITE NO.: 2

WELL NO.: 3

WELL DEPTH: 100m

CASING DIAMETER: 10.16cm

SWL: 3.66m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 3.66 | 0 | 0 | |
| 1 | 4.76 | -1.1 | 75 | 2.07 |
| 2 | 4.89 | -1.23 | 81 | 2.51 |
| 3 | 4.85 | -1.19 | 81 | 2.51 |
| 4 | 4.73 | -1.07 | 80 | 2.44 |
| 5 | 4.79 | -1.13 | 80 | 2.44 |
| 6 | 4.8 | -1.14 | 80 | 2.44 |
| 7 | 4.76 | -1.1 | 80 | 2.44 |
| 8 | 4.71 | -1.05 | 80 | 2.44 |
| 9 | 4.75 | -1.09 | 80 | 2.44 |
| 10 | 4.75 | -1.09 | 80 | 2.44 |
| 12 | 4.78 | -1.12 | 80 | 2.44 |
| 14 | 4.82 | -1.16 | 80 | 2.44 |
| 16 | 4.8 | -1.14 | 80 | 2.44 |
| 18 | 4.78 | -1.12 | 80 | 2.44 |
| 20 | 4.87 | -1.21 | 80 | 2.44 |
| 25 | 4.85 | -1.19 | 79 | 2.36 |
| 30 | 4.88 | -1.22 | 80 | 2.44 |
| 35 | 4.89 | -1.23 | 80 | 2.44 |
| 40 | 4.89 | -1.23 | 80 | 2.44 |
| 45 | 4.89 | -1.23 | 80 | 2.44 |
| 50 | 4.91 | -1.25 | 80 | 2.44 |
| 55 | 4.97 | -1.31 | 80 | 2.44 |
| 60 | 4.98 | -1.32 | 80 | 2.44 |
| 70 | 4.98 | -1.32 | 80 | 2.44 |
| 80 | 4.98 | -1.35 | 80 | 2.44 |
| 90 | 5.01 | -1.35 | 80 | 2.44 |
| 100 | 5.01 | -1.36 | 80 | 2.44 |
| 110 | 5.02 | -1.36 | 80 | 2.44 |
| 120 | 5.02 | -1.36 | 80 | 2.44 |
| 135 | 5.02 | -1.37 | 81 | 2.51 |
| 150 | 5.03 | -1.38 | 80 | 2.44 |
| 165 | 5.04 | -1.39 | 80 | 2.44 |
| 180 | 5.05 | -1.4 | 81 | 2.51 |
| 210 | 5.06 | -1.41 | 80 | 2.44 |
| 240 | 5.07 | -1.41 | 80 | 2.44 |
| 270 | 5.07 | -1.38 | 81 | 2.51 |

| | | | | |
|---|---|---|---|---|
| 300 | 5.04 | -1.41 | 80 | 2.44 |
| 360 | 5.07 | -1.41 | 80 | 2.44 |
| 420 | 5.06 | -1.4 | 80 | 2.44 |
| 480 | 5.07 | -1.41 | 80 | 2.44 |
| 540 | 5.06 | -1.4 | 80 | 2.44 |
| 600 | 5.07 | -1.41 | 81 | 2.51 |
| 660 | 5.07 | -1.41 | 80 | 2.44 |
| 720 | 5.07 | -1.41 | 80 | 2.44 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 5.07 | 1.41 | 720 | |
| 1 | 4.12 | .46 | 721 | 721 |
| 2 | 4.03 | .37 | 722 | 361 |
| 3 | 4.01 | .35 | 723 | 241 |
| 4 | 4 | .34 | 724 | 181 |
| 5 | 3.99 | .33 | 725 | 145 |
| 6 | 4 | .34 | 726 | 121 |
| 7 | 4 | .34 | 727 | 103.85714 |
| 8 | 3.98 | .32 | 728 | 91 |
| 9 | 3.97 | .31 | 729 | 81 |
| 10 | 3.97 | .31 | 730 | 73 |
| 12 | 3.97 | .31 | 732 | 61 |
| 14 | 3.97 | .31 | 734 | 52.428571 |
| 16 | 3.96 | .3 | 736 | 46 |
| 18 | 3.95 | .29 | 738 | 41 |
| 20 | 3.95 | .29 | 740 | 37 |
| 25 | 3.94 | .28 | 745 | 29.8 |
| 30 | 3.93 | .27 | 750 | 25 |
| 35 | 3.92 | .26 | 755 | 21.571429 |
| 40 | 3.91 | .25 | 760 | 19 |
| 45 | 3.9 | .24 | 765 | 17 |
| 50 | 3.89 | .23 | 770 | 15.4 |
| 55 | 3.89 | .23 | 775 | 14.090909 |
| 60 | 3.89 | .23 | 780 | 13 |
| 70 | 3.88 | .22 | 790 | 11.285714 |
| 80 | 3.87 | .21 | 800 | 10 |
| 90 | 3.86 | .2 | 810 | 9 |
| 100 | 3.85 | .19 | 820 | 8.2 |
| 110 | 3.84 | .18 | 830 | 7.5454545 |
| 120 | 3.83 | .17 | 840 | 7 |
| 135 | 3.82 | .16 | 855 | 6.3333333 |
| 150 | 3.82 | .16 | 870 | 5.8 |

| | | | | |
|---|---|---|---|---|
| 165 | 3.81 | .15 | 885 | 5.3636364 |
| 180 | 3.8 | .14 | 900 | 5 |
| 210 | 3.8 | .14 | 930 | 4.4285714 |
| 240 | 3.79 | .13 | 960 | 4 |
| 270 | 3.79 | .13 | 990 | 3.6666667 |
| 300 | 3.79 | .13 | 1020 | 3.4 |
| 360 | 3.78 | .12 | 1080 | 3 |
| 420 | 3.78 | .12 | 1140 | 2.7142857 |
| 480 | 3.77 | .11 | 1200 | 2.5 |
| 540 | 3.77 | .11 | 1260 | 2.3333333 |
| 600 | | | 1320 | 2.2 |
| 660 | | | 1380 | 2.0909091 |
| 720 | | | 1440 | 2 |

STEP DRAWDOWN TEST DATA SHEET

WELL LOCATION: LAS PINAS

SITE NO.: 3

WELL NO.: 1

WELL DEPTH 300M

CASING DIA 20.32cm

SWL: 64.43m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 64.43 | 0 | 0 | | |
| 1 | 1 | 70.63 | -6.20 | 68 | 1.69 | |
| 2 | 2 | 70.03 | -5.60 | 68 | 1.69 | |
| 3 | 3 | 69.25 | -4.82 | 68 | 1.69 | |
| 4 | 4 | 68.96 | -4.53 | 68 | 1.69 | |
| 5 | 5 | 69.58 | -5.15 | 68 | 1.69 | |
| 6 | 6 | 70.02 | -5.59 | 68 | 1.69 | |
| 7 | 7 | 70.23 | -5.80 | 68 | 1.69 | |
| 8 | 8 | 70.39 | -5.96 | 68 | 1.69 | |
| 9 | 9 | 70.43 | -6.00 | 68 | 1.69 | |
| 10 | 10 | 70.47 | -6.04 | 68 | 1.69 | |
| 12 | 12 | 70.56 | -6.13 | 68 | 1.69 | |
| 14 | 14 | 70.62 | -6.19 | 68 | 1.69 | |
| 16 | 16 | 70.69 | -6.26 | 68 | 1.69 | |
| 18 | 18 | 70.75 | -6.32 | 68 | 1.69 | |
| 20 | 20 | 70.80 | -6.37 | 68 | 1.69 | |
| 25 | 25 | 71.35 | -6.92 | 72 | 1.95 | |
| 30 | 30 | 72.16 | -7.73 | 72 | 1.95 | |
| 35 | 35 | 70.99 | -6.56 | 68 | 1.69 | |
| 40 | 40 | 71.03 | -6.60 | 68 | 1.69 | |
| 45 | 45 | 70.92 | -6.49 | 67 | 1.63 | |
| 50 | 50 | 71.05 | -6.62 | 68 | 1.69 | |
| 55 | 55 | 71.01 | -6.58 | 67 | 1.63 | |
| 60 | 60 | 71.07 | -6.64 | 68 | 1.69 | |
| 70 | 70 | 71.44 | -7.01 | 68 | 1.69 | |
| 80 | 80 | 71.48 | -7.05 | 68 | 1.69 | |
| 90 | 90 | 71.52 | -7.09 | 68 | 1.69 | |
| 100 | 100 | 71.53 | -7.10 | 68 | 1.69 | |
| 110 | 110 | 71.79 | -7.36 | 68 | 1.69 | |
| 120 | 120 | 71.83 | -7.40 | 68 | 1.69 | Q=102 /min |
| 121 | 1 | 77.33 | -12.90 | 89 | 3.31 | |
| 122 | 2 | 80.17 | -15.74 | 95 | 3.89 | |
| 123 | 3 | 81.10 | -16.67 | 95 | 3.89 | |
| 124 | 4 | 81.12 | -16.69 | 95 | 3.89 | |
| 125 | 5 | 81.10 | -16.67 | 89 | 3.31 | |
| 126 | 6 | 81.04 | -16.61 | 89 | 3.31 | |
| 127 | 7 | 80.84 | -16.41 | 89 | 3.31 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 128 | 8 | 80.79 | -16.36 | 89 | 3.31 | |
| 129 | 9 | 80.72 | -16.29 | 89 | 3.31 | |
| 130 | 10 | 80.76 | -16.33 | 89 | 3.31 | |
| 132 | 12 | 80.86 | -16.43 | 89 | 3.31 | |
| 134 | 14 | 80.89 | -16.46 | 89 | 3.31 | |
| 136 | 16 | 80.92 | -16.49 | 89 | 3.31 | |
| 138 | 18 | 80.86 | -16.43 | 89 | 3.31 | |
| 140 | 20 | 80.87 | -16.44 | 89 | 3.31 | |
| 145 | 25 | 80.92 | -16.49 | 89 | 3.31 | |
| 150 | 30 | 80.95 | -16.52 | 89 | 3.31 | |
| 155 | 35 | 80.98 | -16.55 | 89 | 3.31 | |
| 160 | 40 | 80.98 | -16.55 | 89 | 3.31 | |
| 165 | 45 | 81.08 | -16.65 | 90 | 3.40 | |
| 170 | 50 | 81.28 | -16.85 | 90 | 3.40 | |
| 175 | 55 | 81.39 | -16.96 | 90 | 3.40 | |
| 180 | 60 | 81.41 | -16.98 | 90 | 3.40 | |
| 190 | 70 | 81.46 | -17.03 | 90 | 3.40 | |
| 200 | 80 | 81.52 | -17.09 | 90 | 3.40 | |
| 210 | 90 | 81.58 | -17.15 | 90 | 3.40 | |
| 220 | 100 | 80.64 | -16.21 | 89 | 3.31 | |
| 230 | 110 | 79.60 | -15.17 | 89 | 3.31 | |
| 240 | 120 | 79.49 | -15.06 | 89 | 3.31 | Q=198 /min |
| 241 | 1 | 82.81 | -18.38 | 105 | 5.00 | |
| 242 | 2 | 84.35 | -19.92 | 105 | 5.00 | |
| 243 | 3 | 85.11 | -20.68 | 105 | 5.00 | |
| 244 | 4 | 85.57 | -21.14 | 105 | 5.00 | |
| 245 | 5 | 85.81 | -21.38 | 105 | 5.00 | |
| 246 | 6 | 86.04 | -21.61 | 105 | 5.00 | |
| 247 | 7 | 86.37 | -21.94 | 105 | 5.00 | |
| 248 | 8 | 86.66 | -22.23 | 105 | 5.00 | |
| 249 | 9 | 86.86 | -22.43 | 105 | 5.00 | |
| 250 | 10 | 86.91 | -22.48 | 105 | 5.00 | |
| 252 | 12 | 86.98 | -22.55 | 105 | 5.00 | |
| 254 | 14 | 87.15 | -22.72 | 105 | 5.00 | |
| 256 | 16 | 87.26 | -22.83 | 105 | 5.00 | |
| 258 | 18 | 87.31 | -22.88 | 105 | 5.00 | |
| 260 | 20 | 87.53 | -23.10 | 105 | 5.00 | |
| 265 | 25 | 87.53 | -23.10 | 105 | 5.00 | |
| 270 | 30 | 87.44 | -23.01 | 105 | 5.00 | |
| 275 | 35 | 87.64 | -23.21 | 105 | 5.00 | |
| 280 | 40 | 87.52 | -23.09 | 105 | 5.00 | |
| 285 | 45 | 87.48 | -23.05 | 105 | 5.00 | |
| 290 | 50 | 87.51 | -23.08 | 105 | 5.00 | |
| 295 | 55 | 87.73 | -23.30 | 105 | 5.00 | |
| 300 | 60 | 87.68 | -23.25 | 105 | 5.00 | |
| 310 | 70 | 87.84 | -23.41 | 105 | 5.00 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 320 | 80 | 87.82 | -23.39 | 105 | 5.00 | |
| 330 | 90 | 88.01 | -23.58 | 105 | 5.00 | |
| 340 | 100 | 88.11 | -23.68 | 105 | 5.00 | |
| 350 | 110 | 87.99 | -23.56 | 105 | 5.00 | |
| 360 | 120 | 88.13 | -23.70 | 105 | 5.00 | Q=300 /min |
| 361 | 1 | 91.17 | -26.74 | 118 | 6.70 | |
| 362 | 2 | 92.66 | -28.23 | 118 | 6.70 | |
| 363 | 3 | 93.37 | -28.94 | 118 | 6.70 | |
| 364 | 4 | 93.87 | -29.44 | 118 | 6.70 | |
| 365 | 5 | 94.22 | -29.79 | 118 | 6.70 | |
| 366 | 6 | 94.36 | -29.93 | 118 | 6.70 | |
| 367 | 7 | 94.53 | -30.10 | 118 | 6.70 | |
| 368 | 8 | 94.61 | -30.18 | 118 | 6.70 | |
| 369 | 9 | 94.92 | -30.49 | 118 | 6.70 | |
| 370 | 10 | 95.67 | -31.24 | 120 | 6.98 | |
| 372 | 12 | 94.90 | -30.47 | 118 | 6.70 | |
| 374 | 14 | 94.78 | -30.35 | 118 | 6.70 | |
| 376 | 16 | 94.73 | -30.30 | 118 | 6.70 | |
| 378 | 18 | 94.68 | -30.25 | 118 | 6.70 | |
| 380 | 20 | 94.51 | -30.08 | 118 | 6.70 | |
| 385 | 25 | 94.27 | -29.84 | 118 | 6.70 | |
| 390 | 30 | 94.20 | -29.77 | 118 | 6.70 | |
| 395 | 35 | 95.39 | -30.96 | 118 | 6.70 | |
| 400 | 40 | 94.45 | -30.02 | 118 | 6.70 | |
| 405 | 45 | 94.42 | -29.99 | 118 | 6.70 | |
| 410 | 50 | 94.39 | -29.96 | 118 | 6.70 | |
| 415 | 55 | 94.07 | -29.64 | 118 | 6.70 | |
| 420 | 60 | 94.08 | -29.65 | 118 | 6.70 | |
| 430 | 70 | 93.98 | -29.55 | 118 | 6.70 | |
| 440 | 80 | 93.55 | -29.12 | 118 | 6.70 | |
| 450 | 90 | 94.30 | -29.87 | 118 | 6.70 | |
| 460 | 100 | 94.17 | -29.74 | 118 | 6.70 | |
| 470 | 110 | 93.43 | -29.00 | 118 | 6.70 | |
| 480 | 120 | 93.98 | -29.55 | 118 | 6.70 | Q=402 /min |
| 481 | 1 | 93.88 | -29.45 | 121 | 7.13 | |
| 482 | 2 | 94.25 | -29.82 | 121 | 7.13 | |
| 483 | 3 | 94.37 | -29.94 | 121 | 7.13 | |
| 484 | 4 | 94.59 | -30.16 | 121 | 7.13 | |
| 485 | 5 | 94.69 | -30.26 | 121 | 7.13 | |
| 486 | 6 | 94.72 | -30.29 | 121 | 7.13 | |
| 487 | 7 | 94.77 | -30.34 | 121 | 7.13 | |
| 488 | 8 | 94.72 | -30.29 | 121 | 7.13 | |
| 489 | 9 | 94.73 | -30.30 | 121 | 7.13 | |
| 490 | 10 | 94.79 | -30.36 | 121 | 7.13 | Q=428 /min |

CONTINUPUS PUMPING TEST DATA SHEET
WELL LOCATION: LAS PINAS
SITE NO.: 3
WELL NO.: 1
WELL DEPTH: 300M
CASING DIAMETER 20.32cm
SWL: 64.90m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | TEMP (Deg.C) | ECt | EC18 |
|---|---|---|---|---|---|---|---|
| 0 | 64.90 | 0 | | | | | |
| 1 | 76.69 | -11.79 | 105 | 5.0 | | | |
| 2 | 77.47 | -12.57 | 105 | 5.0 | | | |
| 3 | 77.97 | -13.07 | 105 | 5.0 | | | |
| 4 | 78.39 | -13.49 | 105 | 5.0 | | | |
| 5 | 78.89 | -13.99 | 105 | 5.0 | | | |
| 6 | 79.66 | -14.76 | 105 | 5.0 | | | |
| 7 | 80.34 | -15.44 | 105 | 5.0 | | | |
| 8 | 80.84 | -15.94 | 105 | 5.0 | | | |
| 9 | 81.32 | -16.42 | 105 | 5.0 | | | |
| 10 | 81.64 | -16.74 | 105 | 5.0 | 33.5 | 740 | 552 |
| 12 | 82.04 | -17.14 | 105 | 5.0 | | | |
| 14 | 82.42 | -17.52 | 105 | 5.0 | | | |
| 16 | 82.88 | -17.98 | 105 | 5.0 | | | |
| 18 | 83.14 | -18.24 | 105 | 5.0 | | | |
| 20 | 83.34 | -18.44 | 105 | 5.0 | 34.0 | 800 | 592 |
| 25 | 83.67 | -18.77 | 105 | 5.0 | | | |
| 30 | 83.97 | -19.07 | 105 | 5.0 | 34.5 | 750 | 550 |
| 35 | 83.50 | -18.60 | 105 | 5.0 | | | |
| 40 | 82.67 | -17.77 | 103 | 4.8 | 34.3 | 740 | 545 |
| 45 | 82.73 | -17.83 | 103 | 4.8 | | | |
| 50 | 82.79 | -17.89 | 105 | 5.0 | 34.3 | 740 | 545 |
| 55 | 82.95 | -18.05 | 105 | 5.0 | | | |
| 60 | 82.99 | -18.09 | 105 | 5.0 | 34.5 | 740 | 543 |
| 70 | 83.14 | -18.24 | 105 | 5.0 | 34.4 | 730 | 536 |
| 80 | 83.70 | -18.80 | 105 | 5.0 | 34.4 | 740 | 544 |
| 90 | 83.78 | -18.88 | 105 | 5.0 | 34.3 | 730 | 537 |
| 100 | 83.81 | -18.91 | 105 | 5.0 | 34.3 | 730 | 537 |
| 110 | 83.82 | -18.92 | 105 | 5.0 | 34.5 | 730 | 536 |
| 120 | 83.92 | -19.02 | 105 | 5.0 | 34.4 | 730 | 536 |
| 135 | 84.10 | -19.20 | 105 | 5.0 | | | |
| 150 | 84.09 | -19.19 | 105 | 5.0 | 34.5 | 730 | 536 |
| 165 | 83.92 | -19.02 | 105 | 5.0 | | | |
| 180 | 83.63 | -18.73 | 105 | 5.0 | 34.5 | 730 | 536 |
| 210 | 83.85 | -18.95 | 105 | 5.0 | 34.5 | 720 | 528 |
| 240 | 84.13 | -19.23 | 105 | 5.0 | 34.5 | 730 | 536 |
| 270 | 84.12 | -19.22 | 105 | 5.0 | 34.4 | 730 | 536 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 300 | 84.53 | -19.63 | 105 | 5.0 | 34.3 | 750 | 552 |
| 360 | 84.72 | -19.82 | 105 | 5.0 | 34.5 | 720 | 528 |
| 420 | 85.46 | -20.56 | 105 | 5.0 | 34.3 | 720 | 530 |
| 480 | 85.40 | -20.50 | 105 | 5.0 | 34.6 | 740 | 542 |
| 540 | 85.28 | -20.38 | 105 | 5.0 | 34.4 | 740 | 544 |
| 600 | 85.54 | -20.64 | 105 | 5.0 | 34.4 | 720 | 529 |
| 660 | 85.58 | -20.68 | 105 | 5.0 | 34.3 | 730 | 537 |
| 720 | 86.29 | -21.39 | 105 | 5.0 | 34.3 | 720 | 530 |
| 780 | 86.23 | -21.33 | 105 | 5.0 | 34.3 | 700 | 515 |
| 840 | 86.26 | -21.36 | 105 | 5.0 | 34.3 | 700 | 515 |
| 900 | 86.19 | -21.29 | 105 | 5.0 | 34.1 | 700 | 517 |
| 960 | 86.10 | -21.20 | 105 | 5.0 | 34.1 | 700 | 517 |
| 1020 | 86.30 | -21.40 | 105 | 5.0 | 34.2 | 700 | 516 |
| 1080 | 86.38 | -21.48 | 105 | 5.0 | 34.1 | 700 | 517 |
| 1140 | 86.32 | -21.42 | 105 | 5.0 | 34.4 | 700 | 514 |
| 1200 | 86.20 | -21.30 | 105 | 5.0 | 34.2 | 700 | 516 |
| 1260 | 86.80 | -21.90 | 105 | 5.0 | 34.1 | 700 | 517 |
| 1320 | 86.91 | -22.01 | 105 | 5.0 | 34.0 | 700 | 518 |
| 1380 | 87.50 | -22.60 | 105 | 5.0 | 34.5 | 700 | 514 |
| 1440 | 86.56 | -21.66 | 105 | 5.0 | 33.9 | 700 | 519 |
| 1500 | 86.63 | -21.73 | 105 | 5.0 | 34.1 | 710 | 524 |
| 1560 | 86.54 | -21.64 | 105 | 5.0 | 34.0 | 710 | 525 |
| 1620 | 86.50 | -21.60 | 105 | 5.0 | 34.5 | 720 | 528 |
| 1680 | 86.74 | -21.84 | 105 | 5.0 | 34.5 | 720 | 528 |
| 1740 | 86.72 | -21.82 | 105 | 5.0 | 34.5 | 710 | 521 |
| 1800 | 86.69 | -21.79 | 105 | 5.0 | 34.5 | 720 | 528 |
| 1860 | 86.84 | -21.94 | 105 | 5.0 | 34.5 | 700 | 514 |
| 1920 | 86.01 | -21.11 | 105 | 5.0 | 34.3 | 700 | 515 |
| 1980 | 86.12 | -21.22 | 105 | 5.0 | 34.3 | 700 | 515 |
| 2040 | 86.96 | -22.06 | 105 | 5.0 | 34.5 | 710 | 521 |
| 2100 | 86.90 | -22.00 | 105 | 5.0 | 34.3 | 700 | 515 |
| 2160 | 86.85 | -21.95 | 105 | 5.0 | 34.4 | 690 | 507 |
| 2220 | 86.78 | -21.88 | 105 | 5.0 | 34.2 | 700 | 516 |
| 2280 | 86.64 | -21.74 | 105 | 5.0 | 34.0 | 690 | 510 |
| 2340 | 86.77 | -21.87 | 105 | 5.0 | 34.2 | 710 | 523 |
| 2400 | 86.82 | -21.92 | 105 | 5.0 | 34.0 | 700 | 518 |
| 2460 | 87.05 | -22.15 | 105 | 5.0 | 34.4 | 700 | 514 |
| 2520 | 86.96 | -22.06 | 105 | 5.0 | 34.3 | 700 | 515 |
| 2580 | 86.90 | -22.00 | 105 | 5.0 | 34.3 | 690 | 508 |
| 2640 | 87.35 | -22.45 | 105 | 5.0 | 34.3 | 700 | 515 |
| 2700 | 86.97 | -22.07 | 105 | 5.0 | 34.0 | 710 | 525 |
| 2760 | 86.99 | -22.09 | 105 | 5.0 | 34.0 | 720 | 533 |
| 2820 | 86.63 | -21.73 | 105 | 5.0 | 33.9 | 700 | 519 |
| 2880 | 86.83 | -21.93 | 105 | 5.0 | 33.9 | 710 | 526 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' | log(t/t') |
|---|---|---|---|---|---|
| 0 | 86.83 | 21.93 | 2880 | | |
| 1 | 73.85 | 8.95 | 2881 | 2881 | 3.46 |
| 2 | 71.82 | 6.92 | 2882 | 1441 | 3.159 |
| 3 | 71.14 | 6.24 | 2883 | 961 | 2.983 |
| 4 | 70.95 | 6.05 | 2884 | 721 | 2.858 |
| 5 | 70.82 | 5.92 | 2885 | 577 | 2.761 |
| 6 | 70.76 | 5.86 | 2886 | 481 | 2.682 |
| 7 | 70.62 | 5.72 | 2887 | 412.42857 | 2.615 |
| 8 | 70.41 | 5.51 | 2888 | 361 | 2.558 |
| 9 | 70.32 | 5.42 | 2889 | 321 | 2.507 |
| 10 | 70.09 | 5.19 | 2890 | 289 | 2.461 |
| 12 | 69.88 | 4.98 | 2892 | 241 | 2.382 |
| 14 | 69.83 | 4.93 | 2894 | 206.71429 | 2.315 |
| 16 | 69.63 | 4.73 | 2896 | 181 | 2.258 |
| 18 | 69.54 | 4.64 | 2898 | 161 | 2.207 |
| 20 | 69.49 | 4.59 | 2900 | 145 | 2.161 |
| 25 | 69.38 | 4.48 | 2905 | 116.2 | 2.065 |
| 30 | 69.28 | 4.38 | 2910 | 97 | 1.987 |
| 35 | 69.15 | 4.25 | 2915 | 83.285714 | 1.921 |
| 40 | 69.07 | 4.17 | 2920 | 73 | 1.863 |
| 45 | 68.89 | 3.99 | 2925 | 65 | 1.813 |
| 50 | 68.74 | 3.84 | 2930 | 58.6 | 1.768 |
| 55 | 68.68 | 3.78 | 2935 | 53.363636 | 1.727 |
| 60 | 68.65 | 3.75 | 2940 | 49 | 1.69 |
| 70 | 68.63 | 3.73 | 2950 | 42.142857 | 1.625 |
| 80 | 68.41 | 3.51 | 2960 | 37 | 1.568 |
| 90 | 68.29 | 3.39 | 2970 | 33 | 1.519 |
| 100 | 68.23 | 3.33 | 2980 | 29.8 | 1.474 |
| 110 | 68.15 | 3.25 | 2990 | 27.181818 | 1.434 |
| 120 | 68.02 | 3.12 | 3000 | 25 | 1.398 |
| 135 | 67.92 | 3.02 | 3015 | 22.333333 | 1.349 |
| 150 | 67.88 | 2.98 | 3030 | 20.2 | 1.305 |
| 165 | 67.78 | 2.88 | 3045 | 18.454545 | 1.266 |
| 180 | 67.65 | 2.75 | 3060 | 17 | 1.23 |
| 210 | 67.54 | 2.64 | 3090 | 14.714286 | 1.168 |
| 240 | 67.43 | 2.53 | 3120 | 13 | 1.114 |
| 270 | 67.34 | 2.44 | 3150 | 11.666667 | 1.067 |
| 300 | 67.24 | 2.34 | 3180 | 10.6 | 1.025 |
| 360 | 67.08 | 2.18 | 3240 | 9 | .9542 |
| 420 | 67.00 | 2.10 | 3300 | 7.8571429 | .8953 |
| 480 | 66.88 | 1.98 | 3360 | 7 | .8451 |
| 540 | | | 3420 | 6.3333333 | .8016 |
| 600 | | | 3480 | 5.8 | .7634 |

| | | | | | |
|---|---|---|---|---|---|
| 660 | | | 3540 | 5.3636364 | .7295 |
| 720 | | | 3600 | 5 | .699 |
| 780 | | | 3660 | 4.6923077 | .6714 |
| 840 | | | 3720 | 4.4285714 | .6463 |
| 900 | | | 3780 | 4.2 | .6232 |
| 960 | | | 3840 | 4 | .6021 |
| 1020 | | | 3900 | 3.8235294 | .5825 |
| 1080 | | | 3960 | 3.6666667 | .5643 |
| 1140 | | | 4020 | 3.5263158 | .5473 |
| 1200 | | | 4080 | 3.4 | .5315 |
| 1260 | | | 4140 | 3.2857143 | .5166 |
| 1320 | | | 4200 | 3.1818182 | .5027 |
| 1380 | | | 4260 | 3.0869565 | .4895 |
| 1440 | 66.03 | 1.13 | 4320 | 3 | .4771 |
| 1500 | | | 4380 | 2.92 | .4654 |
| 1560 | | | 4440 | 2.8461538 | .4543 |
| 1620 | | | 4500 | 2.7777778 | .4437 |
| 1680 | | | 4560 | 2.7142857 | .4337 |
| 1740 | | | 4620 | 2.6551724 | .4241 |
| 1800 | | | 4680 | 2.6 | .415 |
| 1860 | | | 4740 | 2.5483871 | .4063 |
| 1920 | | | 4800 | 2.5 | .3979 |
| 1980 | | | 4860 | 2.4545455 | .39 |
| 2040 | | | 4920 | 2.4117647 | .3823 |
| 2100 | | | 4980 | 2.3714286 | .375 |
| 2160 | | | 5040 | 2.3333333 | .368 |
| 2220 | | | 5100 | 2.2972973 | .3612 |
| 2280 | | | 5160 | 2.2631579 | .3547 |
| 2340 | | | 5220 | 2.2307692 | .3485 |
| 2400 | | | 5280 | 2.2 | .3424 |
| 2460 | | | 5340 | 2.1707317 | .3366 |
| 2520 | | | 5400 | 2.1428571 | .331 |
| 2580 | | | 5460 | 2.1162791 | .3256 |
| 2640 | | | 5520 | 2.0909091 | .3203 |
| 2700 | | | 5580 | 2.0666667 | .3153 |
| 2760 | | | 5640 | 2.0434783 | .3104 |
| 2820 | | | 5700 | 2.0212766 | .3056 |
| 2880 | | | 5760 | 2 | .301 |

EC AND TEMPERATURE LOGS DATA SHEET

WELL LOCATION: LAS PINAS
SITE NO.: 1
WELL NO.: 1
WELL DEPTH 300M
INTERVAL: 1M

| Depth (m) | Temp. (deg.C) | E.C. (us/cm) | E.C.18 (us/cm) |
|---|---|---|---|
| 201 | 34.2 | 1850 | 1364 |
| 202 | 34.1 | 1875 | 1385 |
| 203 | 34.1 | 1890 | 1396 |
| 204 | 34.1 | 1890 | 1396 |
| 205 | 34.2 | 1910 | 1408 |
| 206 | 34.2 | 1900 | 1401 |
| 207 | 34.2 | 1910 | 1408 |
| 208 | 34.3 | 1920 | 1413 |
| 209 | 34.2 | 1940 | 1430 |
| 210 | 34.2 | 1940 | 1430 |
| 211 | 34.2 | 1950 | 1438 |
| 212 | 34.1 | 1960 | 1447 |
| 213 | 34.1 | 1960 | 1447 |
| 214 | 34.2 | 1970 | 1452 |
| 215 | 34.2 | 1990 | 1467 |
| 216 | 34.3 | 2000 | 1472 |
| 217 | 34.3 | 2010 | 1479 |
| 218 | 34.2 | 2015 | 1486 |
| 219 | 34.2 | 2030 | 1497 |
| 220 | 34.2 | 1960 | 1445 |
| 221 | 34.2 | 2050 | 1511 |
| 222 | 34.2 | 2070 | 1526 |
| 223 | 34.2 | 2090 | 1541 |
| 224 | 34.3 | 2100 | 1546 |
| 225 | 34.3 | 2110 | 1553 |
| 226 | 34.4 | 2110 | 1551 |
| 227 | 34.3 | 2130 | 1568 |
| 228 | 34.3 | 2145 | 1579 |
| 229 | 34.4 | 2175 | 1598 |
| 230 | 34.4 | 2180 | 1602 |
| 231 | 34.4 | 2195 | 1613 |
| 232 | 34.4 | 2200 | 1617 |
| 233 | 34.4 | 2210 | 1624 |
| 234 | 34.4 | 2230 | 1639 |
| 235 | 34.4 | 2250 | 1653 |
| 236 | 34.4 | 2270 | 1668 |

| | | | |
|---|---|---|---|
| 237 | 34.4 | 2290 | 1683 |
| 238 | 34.4 | 2310 | 1698 |
| 239 | 34.5 | 2315 | 1698 |
| 240 | 34.5 | 2320 | 1702 |
| 241 | 34.5 | 2320 | 1702 |
| 242 | 34.5 | 2340 | 1717 |
| 243 | 34.5 | 2350 | 1724 |
| 244 | 34.5 | 2380 | 1746 |
| 245 | 34.6 | 2400 | 1758 |
| 246 | 34.6 | 2400 | 1758 |
| 247 | 34.6 | 2450 | 1795 |
| 248 | 34.6 | 2460 | 1802 |
| 249 | 34.6 | 2460 | 1802 |
| 250 | 34.6 | 2470 | 1809 |
| 251 | 34.6 | 2480 | 1817 |
| 252 | 34.6 | 2500 | 1831 |
| 253 | 34.7 | 2500 | 1828 |
| 254 | 34.7 | 2520 | 1843 |
| 255 | 34.7 | 2540 | 1858 |
| 256 | 34.8 | 2550 | 1862 |
| 257 | 34.8 | 2590 | 1891 |
| 258 | 34.8 | 2590 | 1891 |
| 259 | 34.9 | 2600 | 1895 |
| 260 | 34.9 | 2630 | 1917 |
| 261 | 34.9 | 2640 | 1924 |
| 262 | 34.9 | 2670 | 1946 |
| 263 | 34.9 | 2690 | 1961 |
| 264 | 34.9 | 2695 | 1965 |
| 265 | 35.0 | 2720 | 1980 |
| 266 | 35.0 | 2750 | 2001 |
| 267 | 35.0 | 2790 | 2031 |
| 268 | 35.0 | 2800 | 2038 |
| 269 | 35.1 | 2810 | 2042 |
| 270 | 35.1 | 2840 | 2064 |
| 271 | 35.1 | 2880 | 2093 |
| 272 | 35.1 | 2895 | 2104 |
| 273 | 35.1 | 2910 | 2115 |
| 274 | 35.2 | 2920 | 2118 |
| 275 | 35.2 | 2940 | 2133 |
| 276 | 35.2 | 2960 | 2147 |
| 277 | 35.3 | 2990 | 2166 |
| 278 | 35.4 | 2990 | 2162 |
| 279 | 35.4 | 3000 | 2170 |
| 280 | 35.4 | 3050 | 2206 |
| 281 | 35.4 | 3050 | 2206 |
| 282 | 35.4 | 3090 | 2235 |

| | | | |
|---|---|---|---|
| 283 | 35.4 | 3090 | 2235 |
| 284 | 35.4 | 3100 | 2242 |
| 285 | 35.5 | 3100 | 2238 |
| 286 | 35.5 | 3110 | 2245 |
| 287 | 35.5 | 3140 | 2267 |
| 288 | 35.5 | 3230 | 2332 |
| 289 | 35.5 | 3260 | 2354 |
| 290 | 35.6 | 3300 | 2379 |
| 291 | 35.6 | 3310 | 2386 |
| 292 | 35.6 | 3330 | 2401 |
| 293 | 35.6 | 2150 | 1550 |
| 294 | 35.6 | 2150 | 1550 |
| 295 | 35.6 | 2160 | 1557 |
| 296 | 35.6 | 2160 | 1557 |
| 297 | 35.6 | 2170 | 1564 |
| 298 | 35.6 | 2170 | 1564 |
| 299 | 35.6 | 2160 | 1557 |
| 300 | 35.6 | 2170 | 1564 |

EC AND TEMPERATURE LOGS DATA SHEET

WELL LOCATION: LAS PINAS
SITE NO.: 1
WELL NO.: 2
WELL DEPTH 200M
INTERVAL: 1M

| Depth (m) | Temp. (deg.C) | E.C. (us/cm) | E.C.18 (us/cm) |
|---|---|---|---|
| 101 | 30.5 | 12900 | 10118 |
| 102 | 30.6 | 12700 | 9944 |
| 103 | 30.6 | 12500 | 9787 |
| 104 | 30.6 | 13000 | 10179 |
| 105 | 30.7 | 12400 | 9692 |
| 106 | 30.7 | 14000 | 10943 |
| 107 | 30.7 | 12200 | 9536 |
| 108 | 30.7 | 13100 | 10239 |
| 109 | 30.7 | 11800 | 9223 |
| 110 | 30.7 | 11500 | 8989 |
| 111 | 30.8 | 13200 | 10300 |
| 112 | 30.8 | 11400 | 8895 |
| 113 | 30.8 | 11300 | 8817 |
| 114 | 30.9 | 11300 | 8802 |
| 115 | 30.9 | 11200 | 8724 |
| 116 | 30.9 | 10800 | 8413 |
| 117 | 30.9 | 10500 | 8179 |
| 118 | 31.0 | 10300 | 8009 |
| 119 | 31.0 | 10100 | 7854 |
| 120 | 31.1 | 9600 | 7452 |
| 121 | 31.1 | 9700 | 7530 |
| 122 | 31.1 | 9600 | 7142 |
| 123 | 31.2 | 9200 | 7130 |
| 124 | 31.2 | 8900 | 6897 |
| 125 | 31.2 | 8900 | 6897 |
| 126 | 31.2 | 8500 | 6587 |
| 127 | 31.3 | 8200 | 6344 |
| 128 | 31.3 | 7900 | 6112 |
| 129 | 31.4 | 7600 | 5870 |
| 130 | 31.3 | 7300 | 5648 |
| 131 | 31.4 | 7000 | 5406 |
| 132 | 31.4 | 6800 | 5252 |
| 133 | 31.4 | 6400 | 4943 |
| 134 | 31.5 | 6200 | 4780 |
| 135 | 31.5 | 6100 | 4703 |
| 136 | 31.5 | 6100 | 4703 |

| | | | |
|---|---|---|---|
| 137 | 31.6 | 5900 | 4541 |
| 138 | 31.6 | 5600 | 4310 |
| 139 | 31.6 | 4400 | 3387 |
| 140 | 31.7 | 4300 | 3304 |
| 141 | 31.7 | 4000 | 3074 |
| 142 | 31.7 | 3800 | 2920 |
| 143 | 31.7 | 3400 | 2613 |
| 144 | 31.7 | 3100 | 2382 |
| 145 | 31.7 | 2600 | 1998 |
| 146 | 31.8 | 2400 | 1841 |
| 147 | 31.8 | 2100 | 1611 |
| 148 | 31.8 | 2130 | 1634 |
| 149 | 31.8 | 1900 | 1458 |
| 150 | 31.8 | 1660 | 1273 |
| 151 | 31.9 | 1500 | 1149 |
| 152 | 31.9 | 1360 | 1042 |
| 153 | 32.0 | 1160 | 887 |
| 154 | 32.0 | 1160 | 887 |
| 155 | 32.0 | 1150 | 879 |
| 156 | 32.0 | 1150 | 879 |
| 157 | 32.0 | 1110 | 849 |
| 158 | 32.0 | 1150 | 879 |
| 159 | 32.0 | 1120 | 856 |
| 160 | 32.1 | 1180 | 901 |
| 161 | 32.1 | 1190 | 908 |
| 162 | 32.1 | 1210 | 924 |
| 163 | 32.2 | 1280 | 975 |
| 164 | 32.2 | 1260 | 960 |
| 165 | 32.3 | 1280 | 974 |
| 166 | 32.3 | 1330 | 1012 |
| 167 | 32.4 | 1360 | 1033 |
| 168 | 32.4 | 1380 | 1048 |
| 169 | 32.4 | 1440 | 1094 |
| 170 | 32.4 | 1460 | 1109 |
| 171 | 32.4 | 1480 | 1124 |
| 172 | 32.5 | 1460 | 1107 |
| 173 | 32.5 | 1480 | 1122 |
| 174 | 32.5 | 1580 | 1198 |
| 175 | 32.6 | 1580 | 1196 |
| 176 | 32.6 | 1590 | 1203 |
| 177 | 32.6 | 1600 | 1211 |
| 178 | 32.6 | 1600 | 1211 |
| 179 | 32.7 | 1610 | 1217 |
| 180 | 32.7 | 1680 | 1269 |
| 181 | 32.8 | 1600 | 1207 |
| 182 | 32.8 | 1590 | 1199 |

| | | | |
|---|---|---|---|
| 183 | 32.8 | 1630 | 1230 |
| 184 | 32.9 | 1780 | 1341 |
| 185 | 32.8 | 1790 | 1350 |
| 186 | 32.8 | 1720 | 1298 |
| 187 | 32.8 | 1790 | 1350 |
| 188 | 32.8 | 1790 | 1350 |
| 189 | 32.8 | 1720 | 1298 |
| 190 | 32.9 | 1730 | 1303 |
| 191 | | | |
| 192 | | | |
| 193 | | | |
| 194 | | | |
| 195 | | | |
| 196 | | | |
| 197 | | | |
| 198 | | | |
| 199 | | | |
| 200 | | | |

EC AND TEMPERATURE LOGS DATA SHEET

WELL LOCATION: LAS PINAS
SITE NO.: 1
WELL NO.: 3
WELL DEPTH 100M
INTERVAL: 1M

| Depth (m) | Temp. (deg.C) | E.C. (us/cm) | E.C.18 (us/cm) |
|---|---|---|---|
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
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| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | 29.9 | 36900 | 29244 |
| 22 | 29.9 | 36900 | 29244 |
| 23 | 29.9 | 36900 | 29244 |
| 24 | 29.6 | 36900 | 29398 |
| 25 | 29.6 | 36900 | 29398 |
| 26 | 29.6 | 36900 | 29398 |
| 27 | 29.6 | 36900 | 29398 |
| 28 | 29.6 | 37000 | 29477 |
| 29 | 29.6 | 36000 | 28681 |
| 30 | 29.7 | 36200 | 28790 |
| 31 | 29.6 | 36600 | 29159 |
| 32 | 29.7 | 36600 | 29108 |
| 33 | 29.5 | 36900 | 29449 |
| 34 | 29.7 | 36200 | 28790 |
| 35 | 29.7 | 37000 | 29426 |

| | | | |
|---|---|---|---|
| 36 | 29.7 | 37000 | 29426 |
| 37 | 29.6 | 36900 | 29398 |
| 38 | 29.7 | 37000 | 29426 |
| 39 | 29.7 | 37000 | 29426 |
| 40 | 29.7 | 37200 | 29585 |
| 41 | 29.6 | 37400 | 29796 |
| 42 | 29.7 | 37500 | 29823 |
| 43 | 29.7 | 37500 | 29823 |
| 44 | 29.7 | 37900 | 30142 |
| 45 | 29.7 | 38000 | 30221 |
| 46 | 30.0 | 37400 | 29589 |
| 47 | 29.6 | 38000 | 30274 |
| 48 | 29.7 | 38000 | 30221 |
| 49 | 29.7 | 38000 | 30221 |
| 50 | 29.7 | 38400 | 30539 |
| 51 | 29.7 | 38600 | 30698 |
| 52 | 29.7 | 38200 | 30380 |
| 53 | 29.7 | 38500 | 30619 |
| 54 | 29.7 | 38500 | 30619 |
| 55 | 29.8 | 38900 | 30883 |
| 56 | 29.7 | 38900 | 30937 |
| 57 | 29.7 | 39000 | 31016 |
| 58 | 29.9 | 38900 | 30829 |
| 59 | 29.8 | 39000 | 30962 |
| 60 | 29.9 | 39000 | 30908 |
| 61 | 29.9 | 39200 | 31067 |
| 62 | 29.8 | 39800 | 31597 |
| 63 | 29.8 | 39800 | 31597 |
| 64 | 29.8 | 39800 | 31597 |
| 65 | 29.9 | 39900 | 31621 |
| 66 | 29.9 | 39900 | 31621 |
| 67 | 29.9 | 40000 | 31701 |
| 68 | 29.9 | 40000 | 31701 |
| 69 | 29.9 | 40000 | 31701 |
| 70 | 29.9 | 40000 | 31701 |
| 71 | 29.9 | 39200 | 31067 |
| 72 | 29.9 | 40200 | 31859 |
| 73 | 29.9 | 38400 | 30433 |
| 74 | 29.9 | 40000 | 31701 |
| 75 | 29.9 | 40000 | 31701 |
| 76 | 29.9 | 40000 | 31701 |
| 77 | 30.0 | 40000 | 31646 |
| 78 | 30.0 | 40000 | 31646 |
| 79 | 30.0 | 40000 | 31646 |
| 80 | 30.0 | 40200 | 31804 |
| 81 | 30.0 | 40200 | 31804 |

| | | | |
|---|---|---|---|
| 82 | 30.1 | 40200 | 31749 |
| 83 | 30.1 | 40200 | 31749 |
| 84 | 30.1 | 40200 | 31749 |
| 85 | 30.1 | 40200 | 31749 |
| 86 | 30.1 | 40200 | 31749 |
| 87 | 30.2 | 40200 | 31693 |
| 88 | 30.2 | 40200 | 31693 |
| 89 | 30.2 | 40200 | 31693 |
| 90 | 30.2 | 40200 | 31693 |
| 91 | 30.3 | 40200 | 31639 |
| 92 | 30.2 | 40200 | 31693 |
| 93 | 30.3 | 40200 | 31639 |
| 94 | 30.4 | 40200 | 31584 |
| 95 | 30.4 | 40200 | 31584 |
| 96 | 30.4 | 40200 | 31584 |
| 97 | 30.4 | 40200 | 31584 |
| 98 | 30.4 | 34200 | 26870 |
| 99 | 30.4 | 28900 | 22706 |
| 100 | 30.4 | 28900 | 22706 |

EC AND TEMPERATURE LOGS DATA SHEET

WELL LOCATION: LAS PINAS
SITE NO.: 2
WELL NO.: 1
WELL DEPTH 300M
INTERVAL: 1M

| Depth (m) | Temp. (deg.C) | E.C. (us/cm) | E.C.18 (us/cm) |
|---|---|---|---|
| 201 | 33.2 | 1510 | 1132 |
| 202 | 33.2 | 1540 | 1154 |
| 203 | 33.2 | 1740 | 1304 |
| 204 | 33.4 | 1770 | 1322 |
| 205 | 33.4 | 1780 | 1330 |
| 206 | 33.4 | 1780 | 1330 |
| 207 | 33.4 | 1790 | 1337 |
| 208 | 33.4 | 1790 | 1337 |
| 209 | 33.5 | 1790 | 1335 |
| 210 | 33.5 | 1790 | 1335 |
| 211 | 33.5 | 1800 | 1342 |
| 212 | 33.5 | 1800 | 1342 |
| 213 | 33.6 | 1800 | 1340 |
| 214 | 33.6 | 1730 | 1288 |
| 215 | 33.7 | 1800 | 1338 |
| 216 | 33.7 | 1810 | 1345 |
| 217 | 33.7 | 1820 | 1353 |
| 218 | 33.8 | 2970 | 2204 |
| 219 | 33.8 | 3020 | 2241 |
| 220 | 33.8 | 3020 | 2241 |
| 221 | 33.8 | 3020 | 2241 |
| 222 | 33.9 | 3030 | 2245 |
| 223 | 33.9 | 3030 | 2245 |
| 224 | 33.9 | 3040 | 2252 |
| 225 | 34.0 | 3040 | 2249 |
| 226 | 34.0 | 3050 | 2256 |
| 227 | 34.1 | 3060 | 2260 |
| 228 | 34.1 | 3070 | 2267 |
| 229 | 34.2 | 3080 | 2271 |
| 230 | 34.2 | 3070 | 2263 |
| 231 | 34.2 | 3080 | 2271 |
| 232 | 34.2 | 3080 | 2271 |
| 233 | 34.3 | 3080 | 2267 |
| 234 | 34.3 | 3090 | 2274 |
| 235 | 34.3 | 3090 | 2274 |
| 236 | 34.3 | 3100 | 2282 |

| | | | |
|---|---|---|---|
| 237 | 34.4 | 3100 | 2278 |
| 238 | 34.4 | 3100 | 2278 |
| 239 | 34.4 | 3100 | 2278 |
| 240 | 34.5 | 3110 | 2282 |
| 241 | 34.5 | 3120 | 2289 |
| 242 | 34.7 | 3730 | 2728 |
| 243 | 34.8 | 3820 | 2789 |
| 244 | 34.8 | 3800 | 2775 |
| 245 | 34.8 | 3810 | 2782 |
| 246 | 34.8 | 3820 | 2789 |
| 247 | 34.8 | 3810 | 2782 |
| 248 | 34.8 | 3820 | 2789 |
| 249 | 34.9 | 3820 | 2785 |
| 250 | 34.9 | 3820 | 2785 |
| 251 | 35.0 | 3820 | 2780 |
| 252 | 35.1 | 3830 | 2783 |
| 253 | 35.2 | 3830 | 2779 |
| 254 | 35.2 | 3820 | 2771 |
| 255 | 35.2 | 3830 | 2779 |
| 256 | 35.3 | 3830 | 2774 |
| 257 | 35.3 | 3830 | 2774 |
| 258 | 35.4 | 3830 | 2770 |
| 259 | 35.4 | 3830 | 2770 |
| 260 | 35.4 | 3830 | 2770 |
| 261 | 35.4 | 3830 | 2770 |
| 262 | 35.6 | 3800 | 2739 |
| 263 | 35.6 | 3800 | 2739 |
| 264 | 35.6 | 3790 | 2732 |
| 265 | 35.6 | 3790 | 2732 |
| 266 | 35.7 | 3790 | 2728 |
| 267 | 35.7 | 3790 | 2728 |
| 268 | 35.7 | 3800 | 2735 |
| 269 | 35.7 | 3800 | 2735 |
| 270 | 35.7 | 3800 | 2735 |
| 271 | 35.7 | 3800 | 2735 |
| 272 | 35.7 | 3800 | 2735 |
| 273 | 35.7 | 3730 | 2685 |
| 274 | 35.7 | 3800 | 2735 |
| 275 | 35.8 | 3800 | 2731 |
| 276 | 35.8 | 3800 | 2731 |
| 277 | 35.8 | 3790 | 2723 |
| 278 | 35.8 | 3800 | 2731 |
| 279 | 35.8 | 3800 | 2731 |
| 280 | 35.9 | 3800 | 2726 |
| 281 | 35.9 | 3810 | 2734 |
| 282 | 35.9 | 3810 | 2734 |

| | | | |
|---|---|---|---|
| 283 | 36.3 | 3800 | 2709 |
| 284 | 36.2 | 3800 | 2714 |
| 285 | 36.2 | 3800 | 2714 |
| 286 | 36.1 | 3800 | 2718 |
| 287 | 36.1 | 3800 | 2718 |
| 288 | 36.1 | 3800 | 2718 |
| 289 | 36.1 | 3800 | 2718 |
| 290 | 36.1 | 3800 | 2718 |
| 291 | 36.1 | 3800 | 2718 |
| 292 | 36.1 | 3800 | 2718 |
| 293 | 36.1 | 3800 | 2718 |
| 294 | 36.1 | 3800 | 2718 |
| 295 | 36.1 | 3800 | 2718 |
| 296 | 36.1 | 3800 | 2718 |
| 297 | 36.0 | 3800 | 2722 |
| 298 | 36.0 | 3800 | 2722 |
| 299 | 36.0 | 3800 | 2722 |
| 300 | 36.0 | 3800 | 2722 |

EC AND TEMPERATURE LOGS DATA SHEET

WELL LOCATION: LAS PINAS
SITE NO.: 2
WELL NO.: 2
WELL DEPTH 200M
INTERVAL: 1M

| Depth (m) | Temp. (deg.C) | E.C. (us/cm) | E.C.18 (us/cm) |
|---|---|---|---|
| 101 | 32.0 | 21300 | 16284 |
| 102 | 30.3 | 21700 | 17079 |
| 103 | 30.4 | 22500 | 17678 |
| 104 | 30.4 | 22300 | 17520 |
| 105 | 30.5 | 22500 | 17647 |
| 106 | 30.4 | 22500 | 17678 |
| 107 | 30.4 | 22500 | 17678 |
| 108 | 30.5 | 22500 | 17647 |
| 109 | 30.5 | 22500 | 17647 |
| 110 | 30.5 | 22800 | 17882 |
| 111 | 30.5 | 22900 | 17961 |
| 112 | 30.5 | 22900 | 17961 |
| 113 | 30.6 | 23200 | 18165 |
| 114 | 30.6 | 23200 | 18165 |
| 115 | 30.7 | 23200 | 18134 |
| 116 | 30.7 | 23300 | 18212 |
| 117 | 30.7 | 23300 | 18212 |
| 118 | 30.7 | 23300 | 18212 |
| 119 | 30.7 | 23300 | 18212 |
| 120 | 30.7 | 23300 | 18212 |
| 121 | 30.8 | 23500 | 18336 |
| 122 | 30.8 | 23500 | 18336 |
| 123 | 30.8 | 23700 | 18493 |
| 124 | 30.9 | 23800 | 18539 |
| 125 | 30.9 | 23900 | 18617 |
| 126 | 30.9 | 24000 | 18695 |
| 127 | 30.9 | 24100 | 18772 |
| 128 | 31.0 | 24300 | 18896 |
| 129 | 31.0 | 24600 | 19129 |
| 130 | 31.0 | 24800 | 19285 |
| 131 | 31.1 | 24800 | 19252 |
| 132 | 31.1 | 25000 | 19407 |
| 133 | 31.1 | 25100 | 19485 |
| 134 | 31.2 | 25500 | 19761 |
| 135 | 31.2 | 25800 | 19994 |
| 136 | 31.2 | 26000 | 20149 |

| | | | |
|---|---|---|---|
| 137 | 31.2 | 26100 | 20226 |
| 138 | 31.2 | 26500 | 20536 |
| 139 | 31.2 | 26900 | 20846 |
| 140 | 31.2 | 27000 | 20924 |
| 141 | 31.2 | 27400 | 21234 |
| 142 | 31.2 | 27700 | 21466 |
| 143 | 31.2 | 28200 | 21854 |
| 144 | 31.2 | 28500 | 22086 |
| 145 | 31.2 | 28800 | 22319 |
| 146 | 31.4 | 29800 | 23015 |
| 147 | 31.5 | 29800 | 22976 |
| 148 | 31.4 | 29800 | 23015 |
| 149 | 31.5 | 29900 | 23053 |
| 150 | 31.5 | 29800 | 22976 |
| 151 | 31.5 | 29900 | 23053 |
| 152 | 31.5 | 29900 | 23053 |
| 153 | 31.6 | 27800 | 21398 |
| 154 | 31.6 | 28100 | 21629 |
| 155 | 31.6 | 28200 | 21706 |
| 156 | 31.6 | 28000 | 21552 |
| 157 | 31.6 | 28400 | 21860 |
| 158 | 31.6 | 28800 | 22167 |
| 159 | 31.6 | 28900 | 22244 |
| 160 | 31.6 | 28900 | 22244 |
| 161 | 31.7 | 29800 | 22898 |
| 162 | 31.7 | 29900 | 22975 |
| 163 | 31.7 | 29900 | 22975 |
| 164 | 31.7 | 29900 | 22975 |
| 165 | 31.7 | 29900 | 22975 |
| 166 | 31.7 | 29900 | 22975 |
| 167 | 31.7 | 29900 | 22975 |
| 168 | 31.7 | 29900 | 22975 |
| 169 | 31.7 | 29900 | 22975 |
| 170 | 31.7 | 29900 | 22975 |
| 171 | 31.7 | 29800 | 22898 |
| 172 | 31.7 | 30000 | 23052 |
| 173 | 31.7 | 29800 | 22898 |
| 174 | 31.8 | 29900 | 22936 |
| 175 | 32.0 | 30000 | 22936 |
| 176 | 32.0 | 30000 | 22936 |
| 177 | 32.0 | 30100 | 23012 |
| 178 | 32.0 | 29900 | 22859 |
| 179 | 32.6 | 30000 | 22707 |
| 180 | 32.4 | 30100 | 22858 |
| 181 | 32.4 | 30000 | 22783 |
| 182 | 32.5 | 30000 | 22745 |

| | | | |
|---|---|---|---|
| 183 | 32.6 | 30100 | 22782 |
| 184 | 32.6 | 30100 | 22782 |
| 185 | 32.7 | 30100 | 22744 |
| 186 | 32.7 | 30100 | 22744 |
| 187 | 32.7 | 30100 | 22744 |
| 188 | 32.8 | 30000 | 22631 |
| 189 | 32.8 | 25000 | 18859 |
| 190 | 32.9 | 25100 | 18903 |
| 191 | 32.9 | 25200 | 18979 |
| 192 | 32.9 | 24700 | 18602 |
| 193 | 32.9 | 23600 | 17774 |
| 194 | 32.9 | 23700 | 17849 |
| 195 | 32.9 | 23600 | 17774 |
| 196 | 32.9 | 23600 | 17774 |
| 197 | 32.9 | 23600 | 17774 |
| 198 | 32.9 | 23600 | 17774 |
| 199 | 32.9 | 23600 | 17774 |
| 200 | 33.0 | 23600 | 17744 |

EC AND TEMPERATURE LOGS DATA SHEET

WELL LOCATION: LAS PINAS
SITE NO.: 2
WELL NO.: 3
WELL DEPTH 100M
INTERVAL: 1M

| Depth (m) | Temp. (deg.C) | E.C. (us/cm) | E.C.18 (us/cm) |
|---|---|---|---|
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
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| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | 28.7 | 32000 | 25903 |
| 22 | 28.7 | 32200 | 26064 |
| 23 | 28.7 | 32100 | 25983 |
| 24 | 28.8 | 32200 | 26018 |
| 25 | 28.6 | 32200 | 26111 |
| 26 | 28.8 | 32200 | 26018 |
| 27 | 28.8 | 32300 | 26099 |
| 28 | 29.9 | 32400 | 25678 |
| 29 | 29.9 | 32800 | 25995 |
| 30 | 29.9 | 32800 | 25995 |
| 31 | 29.9 | 33900 | 26866 |
| 32 | 29.9 | 33500 | 26549 |
| 33 | 29.9 | 34000 | 26946 |
| 34 | 29.9 | 33000 | 26153 |
| 35 | 29.9 | 34100 | 27025 |

| | | | |
|---|---|---|---|
| 36 | 29.9 | 33200 | 26312 |
| 37 | 29.9 | 34200 | 27104 |
| 38 | 29.9 | 33500 | 26549 |
| 39 | 29.9 | 33700 | 26708 |
| 40 | 29.0 | 33800 | 27214 |
| 41 | 28.9 | 33800 | 27262 |
| 42 | 29.0 | 33800 | 27214 |
| 43 | 29.0 | 34000 | 27375 |
| 44 | 28.9 | 34200 | 27585 |
| 45 | 29.0 | 34800 | 28019 |
| 46 | 29.0 | 34800 | 28019 |
| 47 | 29.0 | 35600 | 28663 |
| 48 | 29.0 | 35800 | 28824 |
| 49 | 29.0 | 35800 | 28824 |
| 50 | 29.0 | 35800 | 28824 |
| 51 | 29.0 | 35800 | 28824 |
| 52 | 29.0 | 35900 | 28905 |
| 53 | 29.0 | 35900 | 28905 |
| 54 | 29.0 | 35900 | 28905 |
| 55 | 29.1 | 35800 | 28774 |
| 56 | 29.1 | 35900 | 28854 |
| 57 | 29.1 | 35900 | 28854 |
| 58 | 29.1 | 35900 | 28854 |
| 59 | 29.2 | 35900 | 28803 |
| 60 | 29.1 | 35900 | 28854 |
| 61 | 29.2 | 35900 | 28803 |
| 62 | 29.2 | 35900 | 28803 |
| 63 | 29.2 | 35900 | 28803 |
| 64 | 29.2 | 36000 | 28883 |
| 65 | 29.2 | 39800 | 31932 |
| 66 | 29.3 | 39700 | 31796 |
| 67 | 29.8 | 39200 | 31121 |
| 68 | 29.2 | 39700 | 31852 |
| 69 | 29.3 | 39700 | 31796 |
| 70 | 29.4 | 39400 | 31500 |
| 71 | 29.4 | 39400 | 31500 |
| 72 | 29.4 | 39300 | 31420 |
| 73 | 29.4 | 39300 | 31420 |
| 74 | 29.4 | 39300 | 31420 |
| 75 | 29.4 | 39500 | 31580 |
| 76 | 29.4 | 39300 | 31420 |
| 77 | 29.4 | 39300 | 31420 |
| 78 | 29.4 | 39400 | 31500 |
| 79 | 29.4 | 39300 | 31420 |
| 80 | 29.5 | 39300 | 31365 |
| 81 | 29.4 | 39200 | 31340 |

| | | | |
|---|---|---|---|
| 82 | 29.6 | 39200 | 31230 |
| 83 | 29.6 | 39200 | 31230 |
| 84 | 29.7 | 39200 | 31175 |
| 85 | 29.7 | 39200 | 31175 |
| 86 | 29.7 | 39200 | 31175 |
| 87 | 29.7 | 39200 | 31175 |
| 88 | 29.8 | 39200 | 31121 |
| 89 | 29.8 | 39200 | 31121 |
| 90 | 29.7 | 39000 | 31016 |
| 91 | 29.8 | 39200 | 31121 |
| 92 | 29.9 | 39200 | 31067 |
| 93 | 29.8 | 39200 | 31121 |
| 94 | 29.8 | 39200 | 31121 |
| 95 | 30.0 | 39200 | 31013 |
| 96 | 30.0 | 39200 | 31013 |
| 97 | 30.0 | 32800 | 25949 |
| 98 | 31.0 | 29500 | 22939 |
| 99 | 31.0 | 28000 | 21773 |
| 100 | 31.0 | 28000 | 21773 |

EC AND TEMPERATURE LOGS DATA SHEET

WELL LOCATION: LAS PINAS
SITE NO.: 3
WELL NO.: 1
WELL DEPTH 300M
INTERVAL: 1M

| Depth (m) | Temp. (deg.C) | E.C. (us/cm) | E.C.18 (us/cm) |
|---|---|---|---|
| 65 | 30.2 | 760 | 599 |
| 66 | 30.4 | 760 | 597 |
| 67 | 30.5 | 760 | 596 |
| 68 | 30.5 | 760 | 596 |
| 69 | 30.6 | 765 | 599 |
| 70 | 30.5 | 770 | 604 |
| 71 | 30.6 | 770 | 603 |
| 72 | 30.6 | 775 | 607 |
| 73 | 30.6 | 780 | 611 |
| 74 | 30.7 | 780 | 610 |
| 75 | 30.7 | 785 | 614 |
| 76 | 30.8 | 785 | 613 |
| 77 | 30.7 | 780 | 610 |
| 78 | 30.9 | 780 | 608 |
| 79 | 30.9 | 780 | 608 |
| 80 | 30.9 | 780 | 608 |
| 81 | 31.0 | 780 | 607 |
| 82 | 31.0 | 780 | 607 |
| 83 | 31.0 | 780 | 607 |
| 84 | 31.1 | 780 | 605 |
| 85 | 31.1 | 780 | 605 |
| 86 | 31.1 | 785 | 609 |
| 87 | 31.1 | 780 | 605 |
| 88 | 31.2 | 780 | 604 |
| 89 | 31.2 | 785 | 608 |
| 90 | 31.2 | 780 | 604 |
| 91 | 31.3 | 780 | 603 |
| 92 | 31.3 | 785 | 607 |
| 93 | 31.3 | 785 | 607 |
| 94 | 31.3 | 785 | 607 |
| 95 | 31.3 | 785 | 607 |
| 96 | 31.4 | 790 | 610 |
| 97 | 31.4 | 785 | 606 |
| 98 | 31.4 | 785 | 606 |
| 99 | 31.4 | 785 | 606 |
| 100 | 31.5 | 785 | 605 |

| | | | |
|---|---|---|---|
| 101 | 31.5 | 785 | 605 |
| 102 | 31.5 | 785 | 605 |
| 103 | 31.5 | 785 | 605 |
| 104 | 31.5 | 785 | 605 |
| 105 | 31.5 | 785 | 605 |
| 106 | 31.5 | 785 | 605 |
| 107 | 31.5 | 785 | 605 |
| 108 | 31.5 | 785 | 605 |
| 109 | 31.5 | 785 | 605 |
| 110 | 31.5 | 780 | 601 |
| 111 | 31.6 | 785 | 604 |
| 112 | 31.6 | 785 | 604 |
| 113 | 31.6 | 785 | 604 |
| 114 | 31.6 | 785 | 604 |
| 115 | 31.7 | 785 | 603 |
| 116 | 31.7 | 785 | 603 |
| 117 | 31.7 | 785 | 603 |
| 118 | 31.7 | 785 | 603 |
| 119 | 31.7 | 785 | 603 |
| 120 | 31.7 | 790 | 607 |
| 121 | 31.7 | 790 | 607 |
| 122 | 31.7 | 790 | 607 |
| 123 | 31.7 | 785 | 603 |
| 124 | 31.6 | 785 | 604 |
| 125 | 31.6 | 785 | 604 |
| 126 | 31.6 | 785 | 604 |
| 127 | 31.6 | 785 | 604 |
| 128 | 31.6 | 790 | 608 |
| 129 | 31.7 | 790 | 607 |
| 130 | 31.7 | 790 | 607 |
| 131 | 31.7 | 790 | 607 |
| 132 | 31.7 | 790 | 607 |
| 133 | 31.8 | 790 | 606 |
| 134 | 31.8 | 790 | 606 |
| 135 | 31.8 | 790 | 606 |
| 136 | 31.9 | 790 | 605 |
| 137 | 32.0 | 795 | 608 |
| 138 | 32.0 | 800 | 612 |
| 139 | 32.0 | 800 | 612 |
| 140 | 32.0 | 800 | 612 |
| 141 | 32.1 | 800 | 611 |
| 142 | 32.1 | 800 | 611 |
| 143 | 32.1 | 800 | 611 |
| 144 | 32.2 | 800 | 610 |
| 145 | 32.2 | 805 | 613 |
| 146 | 32.2 | 805 | 613 |

| | | | |
|---|---|---|---|
| 147 | 32.3 | 805 | 612 |
| 148 | 32.3 | 810 | 616 |
| 149 | 32.3 | 810 | 616 |
| 150 | 32.4 | 810 | 615 |
| 151 | 32.4 | 810 | 615 |
| 152 | 32.4 | 810 | 615 |
| 153 | 32.5 | 810 | 614 |
| 154 | 32.5 | 815 | 618 |
| 155 | 32.5 | 815 | 618 |
| 156 | 32.5 | 820 | 622 |
| 157 | 32.5 | 820 | 622 |
| 158 | 32.5 | 820 | 622 |
| 159 | 32.5 | 820 | 622 |
| 160 | 32.6 | 820 | 621 |
| 161 | 32.6 | 820 | 621 |
| 162 | 32.6 | 825 | 624 |
| 163 | 32.6 | 825 | 624 |
| 164 | 32.6 | 825 | 624 |
| 165 | 32.7 | 825 | 623 |
| 166 | 32.7 | 825 | 623 |
| 167 | 32.7 | 830 | 627 |
| 168 | 32.7 | 830 | 627 |
| 169 | 32.8 | 830 | 626 |
| 170 | 32.8 | 830 | 626 |
| 171 | 32.8 | 830 | 626 |
| 172 | 32.8 | 830 | 626 |
| 173 | 32.8 | 830 | 626 |
| 174 | 32.9 | 830 | 625 |
| 175 | 32.9 | 830 | 625 |
| 176 | 32.9 | 830 | 625 |
| 177 | 32.9 | 830 | 625 |
| 178 | 33.0 | 830 | 624 |
| 179 | 33.0 | 830 | 624 |
| 180 | 33.0 | 830 | 624 |
| 181 | 33.0 | 830 | 624 |
| 182 | 33.1 | 830 | 623 |
| 183 | 33.1 | 830 | 623 |
| 184 | 33.1 | 830 | 623 |
| 185 | 33.1 | 830 | 623 |
| 186 | 33.1 | 830 | 623 |
| 187 | 33.2 | 830 | 622 |
| 188 | 33.2 | 830 | 622 |
| 189 | 33.2 | 830 | 622 |
| 190 | 33.2 | 825 | 618 |
| 191 | 33.2 | 825 | 618 |
| 192 | 33.2 | 825 | 618 |

| | | | |
|---|---|---|---|
| 193 | 33.3 | 825 | 617 |
| 194 | 33.3 | 825 | 617 |
| 195 | 33.3 | 825 | 617 |
| 196 | 33.3 | 830 | 621 |
| 197 | 33.4 | 830 | 620 |
| 198 | 33.4 | 830 | 620 |
| 199 | 33.4 | 830 | 620 |
| 200 | 33.5 | 830 | 619 |
| 201 | 33.5 | 830 | 619 |
| 202 | 33.5 | 830 | 619 |
| 203 | 33.5 | 835 | 623 |
| 204 | 33.5 | 840 | 626 |
| 205 | 33.5 | 840 | 626 |
| 206 | 33.5 | 845 | 630 |
| 207 | 33.6 | 850 | 633 |
| 208 | 33.6 | 850 | 633 |
| 209 | 33.6 | 855 | 637 |
| 210 | 33.6 | 865 | 644 |
| 211 | 33.7 | 870 | 647 |
| 212 | 33.7 | 875 | 650 |
| 213 | 33.7 | 880 | 654 |
| 214 | 33.8 | 885 | 657 |
| 215 | 33.8 | 890 | 660 |
| 216 | 33.8 | 895 | 664 |
| 217 | 33.8 | 895 | 664 |
| 218 | 33.9 | 900 | 667 |
| 219 | 33.9 | 905 | 670 |
| 220 | 34.3 | 955 | 703 |
| 221 | 34.3 | 1000 | 736 |
| 222 | 34.3 | 1005 | 740 |
| 223 | 34.4 | 1010 | 742 |
| 224 | 34.4 | 1010 | 742 |
| 225 | 34.4 | 1010 | 742 |
| 226 | 34.5 | 1010 | 741 |
| 227 | 34.5 | 1010 | 741 |
| 228 | 34.5 | 1010 | 741 |
| 229 | 34.5 | 1010 | 741 |
| 230 | 34.5 | 1010 | 741 |
| 231 | 34.5 | 1010 | 741 |
| 232 | 34.5 | 1010 | 741 |
| 233 | 34.5 | 1010 | 741 |
| 234 | 34.6 | 1010 | 740 |
| 235 | 34.6 | 1015 | 743 |
| 236 | 34.7 | 1020 | 746 |
| 237 | 34.7 | 1020 | 746 |
| 238 | 34.7 | 1020 | 746 |

| | | | |
|---|---|---|---|
| 239 | 34.7 | 1020 | 746 |
| 240 | 34.8 | 1020 | 745 |
| 241 | 34.8 | 1020 | 745 |
| 242 | 34.8 | 1020 | 745 |
| 243 | 34.8 | 1020 | 745 |
| 244 | 34.8 | 1020 | 745 |
| 245 | 34.8 | 1020 | 745 |
| 246 | 34.8 | 1020 | 745 |
| 247 | 34.8 | 1020 | 745 |
| 248 | 34.9 | 1025 | 747 |
| 249 | 34.9 | 1050 | 765 |
| 250 | 34.9 | 1170 | 853 |
| 251 | 35.0 | 1640 | 1194 |
| 252 | 35.0 | 1660 | 1208 |
| 253 | 35.0 | 1670 | 1215 |
| 254 | 35.0 | 1680 | 1223 |
| 255 | 35.1 | 1820 | 1322 |
| 256 | 35.1 | 1870 | 1359 |
| 257 | 35.2 | 1900 | 1378 |
| 258 | 35.1 | 1900 | 1381 |
| 259 | 35.2 | 1720 | 1248 |
| 260 | 35.2 | 1710 | 1241 |
| 261 | 35.2 | 1700 | 1233 |
| 262 | 35.2 | 1700 | 1233 |
| 263 | 35.2 | 1700 | 1233 |
| 264 | 35.2 | 1700 | 1233 |
| 265 | | | |
| 266 | | | |
| 267 | | | |
| 268 | | | |
| 269 | | | |
| 270 | | | |
| 271 | | | |
| 272 | | | |
| 273 | | | |
| 274 | | | |
| 275 | | | |
| 276 | | | |
| 277 | | | |
| 278 | | | |
| 279 | | | |
| 280 | | | |
| 281 | | | |
| 282 | | | |
| 283 | | | |
| 284 | | | |

EC & TEMPERATURE DURING PUMPING

| TIME (min) | LP1-2 Temp (Deg.C) | (200m) ECt (us/cm) | EC18 (us/cm) | LP1-3 Temp (Deg.C) | (100m) ECt (us/cm) | EC18 (us/cm) | LP2-2 Temp (Deg.C) | (200m) ECt (us/cm) | EC18 (us/cm) | LP2-3 Temp (Deg.C) | (100m) ECt (us/cm) | EC18 (us/cm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | 29.0 | 38200 | 30757 |
| 10 | 31.1 | 770 | 598 | 29.9 | 39800 | 31542 | 30.6 | 29100 | 22784 | 28.9 | 37200 | 30005 |
| 20 | 31.6 | 750 | 577 | 29.8 | 40000 | 31756 | 30.9 | 26000 | 20252 | 29.0 | 38000 | 30596 |
| 30 | 32.0 | 755 | 577 | 29.7 | 40000 | 31812 | 30.5 | 24500 | 19216 | 29.1 | 37800 | 30381 |
| 40 | 31.6 | 735 | 566 | 29.7 | 39500 | 31414 | 32.1 | 29000 | 22134 | 29.0 | 37800 | 30435 |
| 50 | 32.0 | 740 | 566 | 29.6 | 39400 | 31389 | 30.1 | 22800 | 18007 | 29.0 | 37800 | 30435 |
| 60 | 31.7 | 755 | 580 | 29.7 | 39200 | 31175 | 31.1 | 21500 | 16690 | 28.9 | 38000 | 30650 |
| 70 | 31.7 | 740 | 569 | 29.7 | 39100 | 31096 | 31.4 | 28500 | 22011 | 28.9 | 37400 | 30166 |
| 80 | 31.5 | 740 | 571 | 29.7 | 39000 | 31016 | 31.4 | 17900 | 13825 | 28.9 | 37200 | 30005 |
| 90 | 31.8 | 750 | 575 | 29.7 | 39100 | 31096 | 31.5 | 17300 | 13338 | 28.9 | 37200 | 30005 |
| 100 | 31.8 | 740 | 568 | 29.7 | 38900 | 30937 | 31.5 | 17800 | 13724 | 28.9 | 37200 | 30005 |
| 110 | 31.8 | 750 | 575 | 29.8 | 39100 | 31042 | 31.6 | 17500 | 13470 | 28.9 | 37100 | 29924 |
| 120 | 31.6 | 749 | 577 | 29.8 | 39100 | 31042 | 31.4 | 16500 | 12743 | 28.9 | 37100 | 29924 |
| 150 | 31.7 | 760 | 584 | 29.7 | 39100 | 31096 | 31.5 | 15200 | 11719 | 28.9 | 37200 | 30005 |
| 180 | 31.6 | 740 | 570 | 29.9 | 39000 | 30908 | 31.5 | 23200 | 17887 | 29.0 | 37100 | 29871 |
| 210 | 31.6 | 720 | 554 | 30.0 | 39000 | 30854 | 31.6 | 14800 | 11392 | 28.7 | 37000 | 29950 |
| 240 | 31.6 | 735 | 566 | 30.0 | 39000 | 30854 | 31.5 | 14700 | 11334 | 28.9 | 37000 | 29844 |
| 270 | 31.9 | 730 | 559 | 30.0 | 38900 | 30775 | 31.7 | 14100 | 10834 | 29.0 | 36800 | 29630 |
| 300 | 31.9 | 720 | 551 | 30.0 | 38900 | 30775 | 31.6 | 14100 | 10853 | 28.8 | 36800 | 29735 |
| 360 | 31.6 | 735 | 566 | 29.9 | 38000 | 30116 | 31.8 | 14500 | 11123 | 29.0 | 36900 | 29710 |
| 420 | 31.9 | 725 | 555 | 29.6 | 37800 | 30115 | 31.6 | 13500 | 10391 | 29.0 | 36800 | 29630 |
| 480 | 31.9 | 720 | 551 | 29.9 | 37000 | 29323 | 31.6 | 12800 | 9852 | 28.9 | 37000 | 29844 |
| 540 | 31.6 | 755 | 581 | 29.6 | 38000 | 30274 | 31.5 | 12900 | 9946 | 28.9 | 36200 | 29198 |
| 600 | 31.6 | 760 | 585 | 29.7 | 37100 | 29505 | 31.5 | 12600 | 9715 | 28.8 | 36100 | 29169 |
| 660 | 31.4 | 705 | 544 | 29.5 | 37000 | 29529 | 31.5 | 12300 | 9483 | 28.9 | 36800 | 29682 |
| 720 | 31.6 | 710 | 546 | 29.6 | 37500 | 29876 | 31.5 | 12300 | 9483 | 28.8 | 36700 | 29654 |

EC AND TEMPERATURE LOGS DATA SHEET

WELL LOCATION: ANTIPOLO
WELL NO.: 2
WELL DEPTH 200M
INTERVAL: 1M

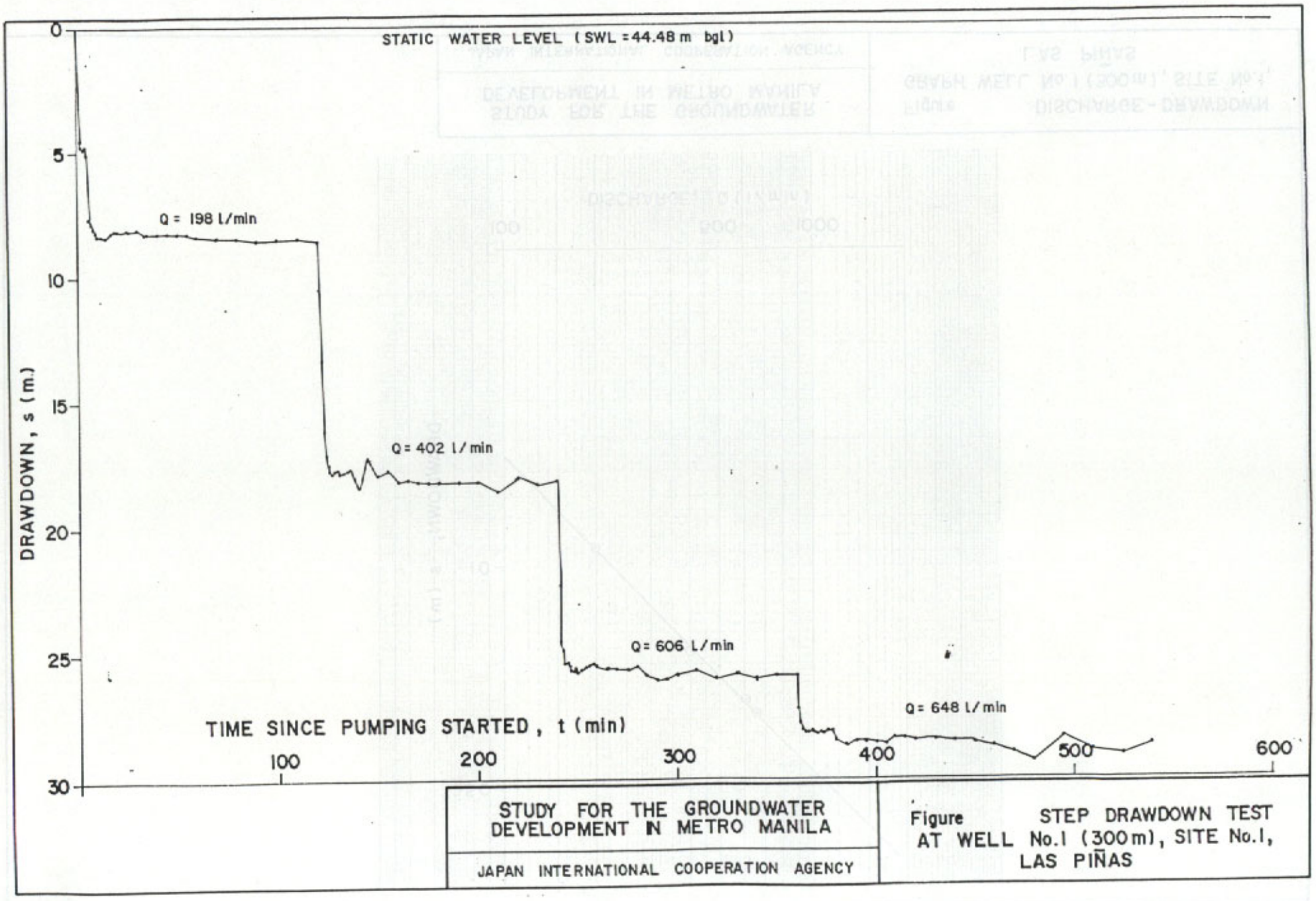
| Depth (m) | Temp. (deg.C) | E.C. (us/cm) | E.C.18 (us/cm) |
|---|---|---|---|
| 61 | 27.6 | 25 | 21 |
| 62 | 27.6 | 23 | 19 |
| 63 | 27.6 | 23 | 19 |
| 64 | | | |
| 65 | | | |
| 66 | | | |
| 67 | | | |
| 68 | | | |
| 69 | | | |
| 70 | | | |
| 71 | | | |
| 72 | | | |
| 73 | | | |
| 74 | | | |
| 75 | | | |
| 76 | 27.4 | 27 | 22 |
| 77 | 27.3 | 27 | 22 |
| 78 | 27.2 | 355 | 295 |
| 79 | 27.2 | 351 | 292 |
| 80 | 27.2 | 352 | 293 |
| 81 | 27.2 | 352 | 293 |
| 82 | 27.2 | 352 | 293 |
| 83 | 27.2 | 350 | 291 |
| 84 | 27.2 | 349 | 290 |
| 85 | 27.2 | 346 | 288 |
| 86 | 27.3 | 344 | 286 |
| 87 | 27.3 | 348 | 289 |
| 88 | 27.4 | 349 | 289 |
| 89 | 27.4 | 351 | 291 |
| 90 | 27.4 | 351 | 291 |
| 91 | 27.4 | 352 | 292 |
| 92 | 27.4 | 355 | 294 |
| 93 | 27.4 | 354 | 293 |
| 94 | 27.4 | 355 | 294 |
| 95 | 27.4 | 356 | 295 |
| 96 | 27.4 | 355 | 294 |
| 97 | 27.4 | 353 | 293 |
| 98 | 27.4 | 353 | 293 |
| 99 | 27.4 | 350 | 290 |
| 100 | 27.4 | 351 | 291 |
| 101 | 27.4 | 351 | 291 |

| | | | |
|---|---|---|---|
| 102 | 27.3 | 351 | 291 |
| 103 | 27.3 | 351 | 291 |
| 104 | 27.3 | 351 | 291 |
| 105 | 27.3 | 351 | 291 |
| 106 | 27.3 | 350 | 291 |
| 107 | 27.2 | 349 | 290 |
| 108 | 27.2 | 348 | 289 |
| 109 | 27.2 | 348 | 289 |
| 110 | 27.2 | 348 | 289 |
| 111 | 27.2 | 346 | 288 |
| 112 | 27.2 | 343 | 285 |
| 113 | 27.2 | 340 | 283 |
| 114 | 27.2 | 332 | 276 |
| 115 | 27.2 | 330 | 274 |
| 116 | 27.2 | 330 | 274 |
| 117 | 27.2 | 330 | 274 |
| 118 | 27.2 | 330 | 274 |
| 119 | 27.2 | 330 | 274 |
| 120 | 27.2 | 329 | 274 |
| 121 | 27.2 | 328 | 273 |
| 122 | 27.2 | 328 | 273 |
| 123 | 27.2 | 328 | 273 |
| 124 | 27.2 | 327 | 272 |
| 125 | 27.2 | 326 | 271 |
| 126 | 27.2 | 326 | 271 |
| 127 | 27.2 | 325 | 270 |
| 128 | 27.2 | 324 | 269 |
| 129 | 27.2 | 324 | 269 |
| 130 | 27.2 | 322 | 268 |
| 131 | 27.2 | 322 | 268 |
| 132 | 27.2 | 320 | 266 |
| 133 | 27.2 | 320 | 266 |
| 134 | 27.2 | 319 | 265 |
| 135 | 27.2 | 319 | 265 |
| 136 | 27.2 | 318 | 264 |
| 137 | 27.2 | 318 | 264 |
| 138 | 27.2 | 318 | 264 |
| 139 | 27.2 | 318 | 264 |
| 140 | 27.2 | 317 | 264 |
| 141 | 27.2 | 317 | 264 |
| 142 | 27.2 | 316 | 263 |
| 143 | 27.2 | 316 | 263 |
| 144 | 27.2 | 315 | 262 |
| 145 | 27.2 | 315 | 262 |
| 146 | 27.2 | 315 | 262 |
| 147 | 27.2 | 314 | 261 |
| 148 | 27.2 | 313 | 260 |
| 149 | 27.2 | 312 | 259 |
| 150 | 27.1 | 311 | 259 |
| 151 | 27.1 | 310 | 258 |

| | | | |
|---|---|---|---|
| 152 | 27.1 | 310 | 258 |
| 153 | 27.1 | 308 | 257 |
| 154 | 27.1 | 307 | 256 |
| 155 | 27.1 | 305 | 254 |
| 156 | 27.1 | 305 | 254 |
| 157 | 27.1 | 307 | 256 |
| 158 | 27.2 | 308 | 256 |
| 159 | 27.2 | 308 | 256 |
| 160 | 27.2 | 307 | 255 |
| 161 | 27.2 | 307 | 255 |
| 162 | 27.2 | 307 | 255 |
| 163 | 27.1 | 306 | 255 |
| 164 | 27.1 | 306 | 255 |
| 165 | 27.1 | 305 | 254 |
| 166 | 27.1 | 308 | 257 |
| 167 | 27.1 | 308 | 257 |
| 168 | 27.2 | 309 | 257 |
| 169 | 27.2 | 310 | 258 |
| 170 | 27.2 | 310 | 258 |
| 171 | 27.2 | 312 | 259 |
| 172 | 27.2 | 315 | 262 |
| 173 | 27.2 | 317 | 264 |
| 174 | 27.2 | 317 | 264 |
| 175 | 27.2 | 318 | 264 |
| 176 | 27.2 | 317 | 264 |
| 177 | 27.2 | 317 | 264 |
| 178 | 27.2 | 317 | 264 |
| 179 | 27.2 | 318 | 264 |
| 180 | 27.2 | 318 | 264 |
| 181 | 27.2 | 318 | 264 |
| 182 | 27.2 | 318 | 264 |
| 183 | 27.2 | 318 | 264 |
| 184 | 27.2 | 322 | 268 |
| 185 | 27.3 | 465 | 386 |
| 186 | 27.2 | 468 | 389 |
| 187 | 27.3 | 470 | 390 |
| 188 | 27.2 | 470 | 391 |
| 189 | 27.2 | 472 | 393 |
| 190 | 27.2 | 470 | 391 |
| 191 | 27.2 | 470 | 391 |
| 192 | 27.2 | 471 | 392 |
| 193 | 27.2 | 472 | 393 |
| 194 | 27.3 | 473 | 393 |
| 195 | 27.2 | 473 | 393 |
| 196 | 27.2 | 474 | 394 |
| 197 | 27.2 | 474 | 394 |
| 198 | 27.2 | 475 | 395 |
| 199 | 27.2 | 474 | 394 |
| 200 | | | |

2.1.2

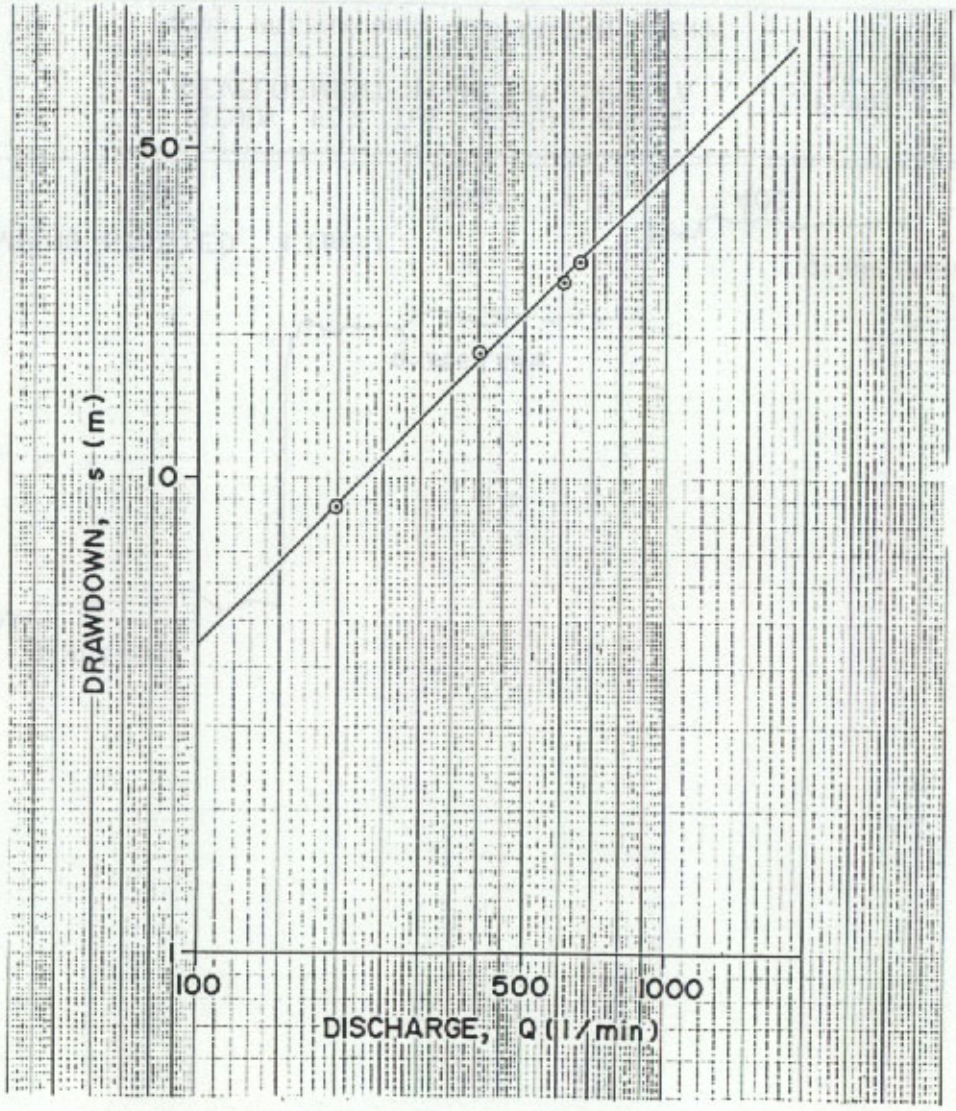
# ANALYSIS OF PUMPING TEST DATA




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure STEP DRAWDOWN TEST AT WELL No.1 (300m), SITE No.1, LAS PIÑAS




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure DISCHARGE - DRAWDOWN GRAPH WELL No. I (300m), SITE No. I, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

$\frac{S}{Q} = BQ + C$

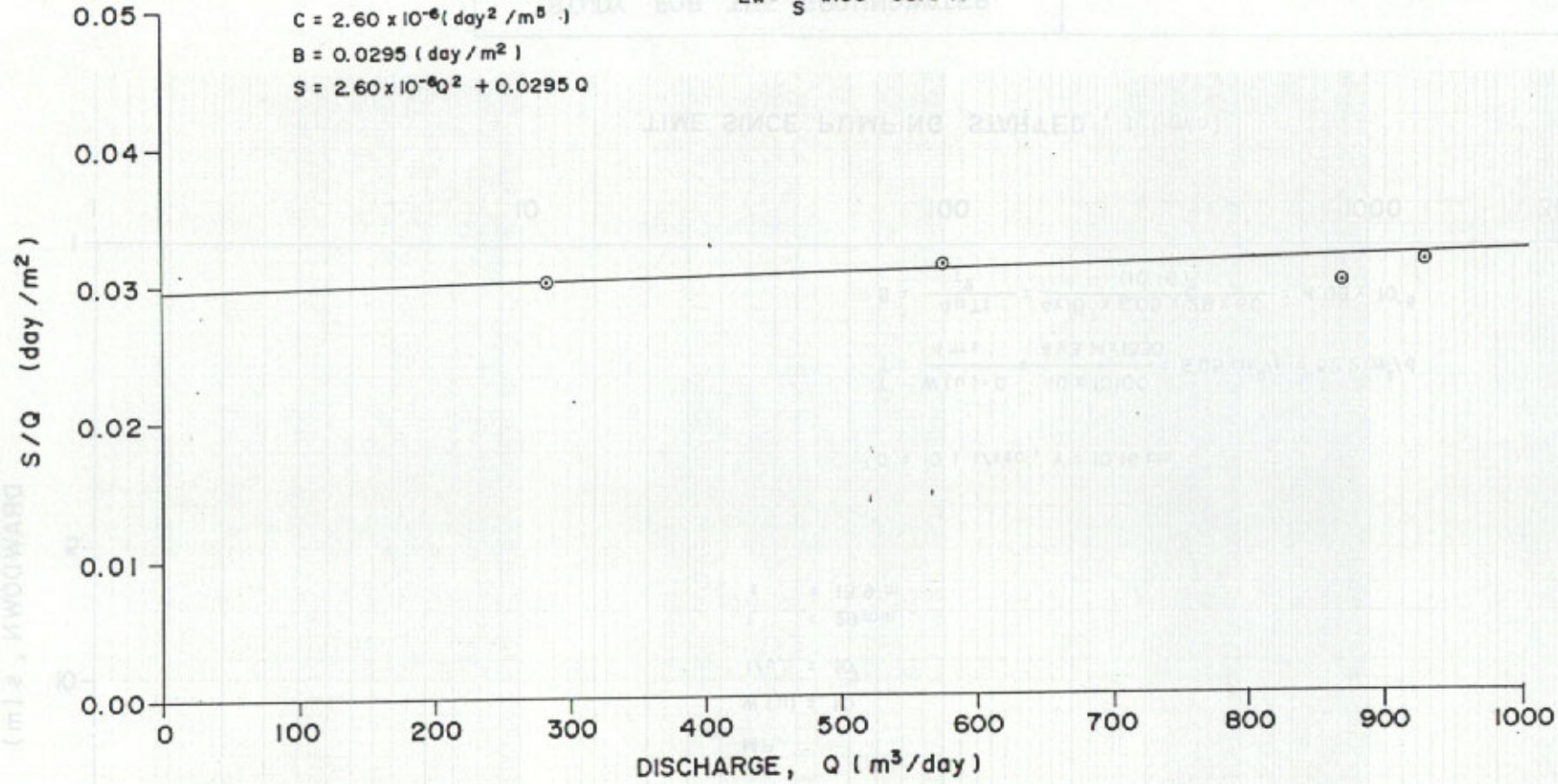
WHEN $Q = 872.6\ m^3/d$

$Ew = \frac{BQ}{S} \times 100 = 98.6\ \%$

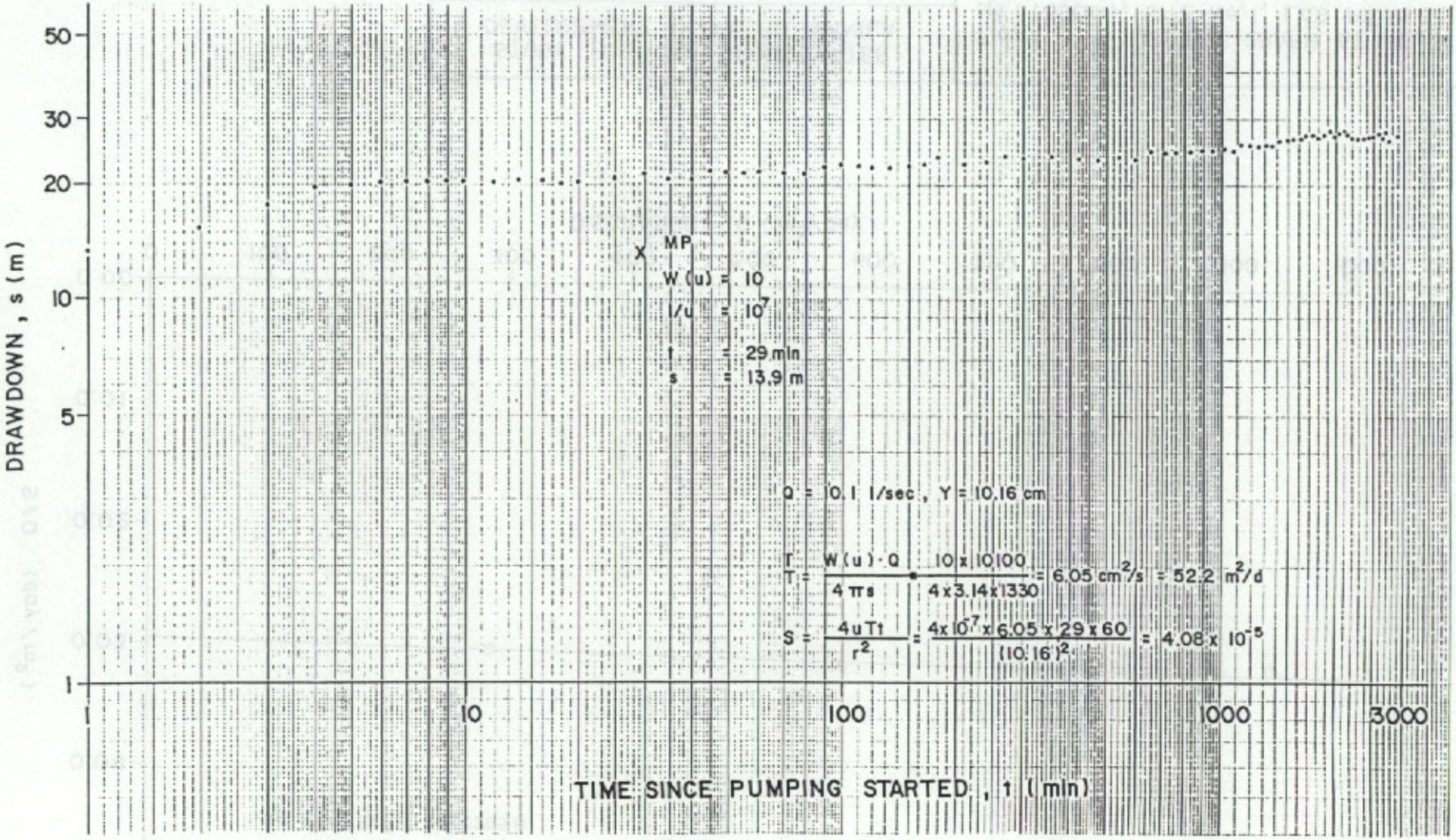
$C = 2.60 \times 10^{-6}\ (day^2/m^5)$

$B = 0.0295\ (day/m^2)$

$S = 2.60 \times 10^{-6} Q^2 + 0.0295\ Q$



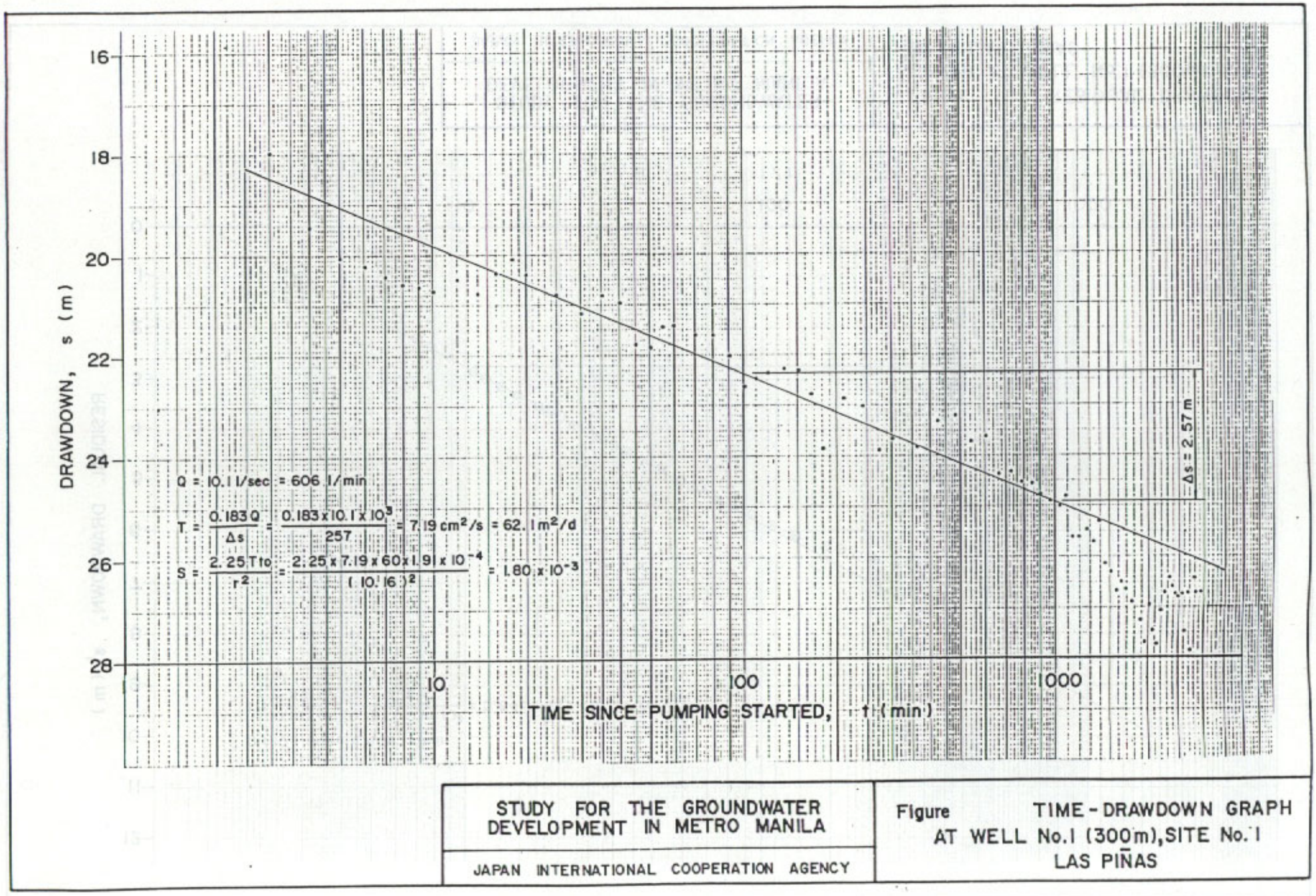

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure Q-S/Q GRAPH AT WELL No.1 (300m), SITE No. 1, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

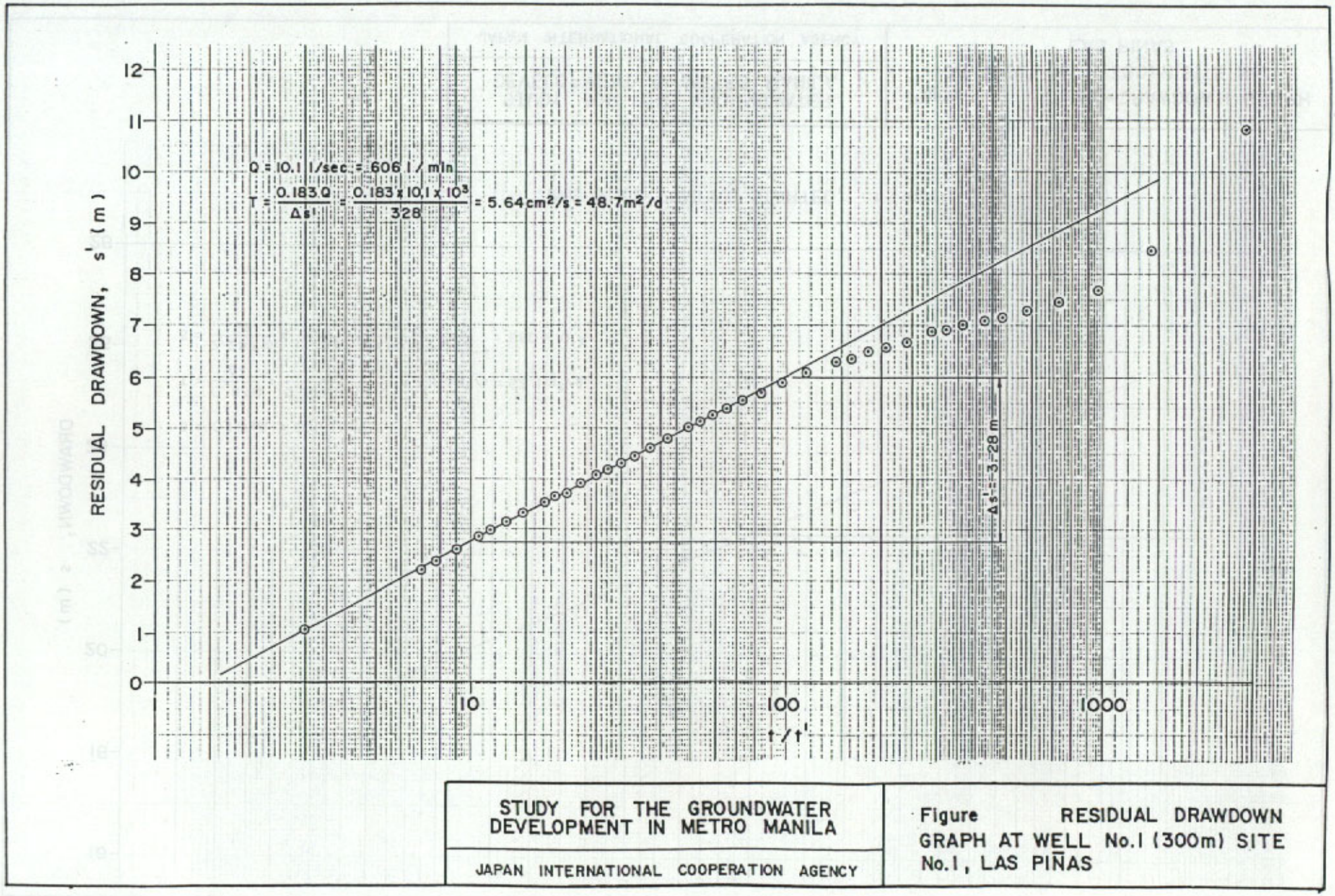
Figure TIME-DRAWDOWN GRAPH AT WELL No. 1 (300m), SITE No. 1 LAS PIÑAS



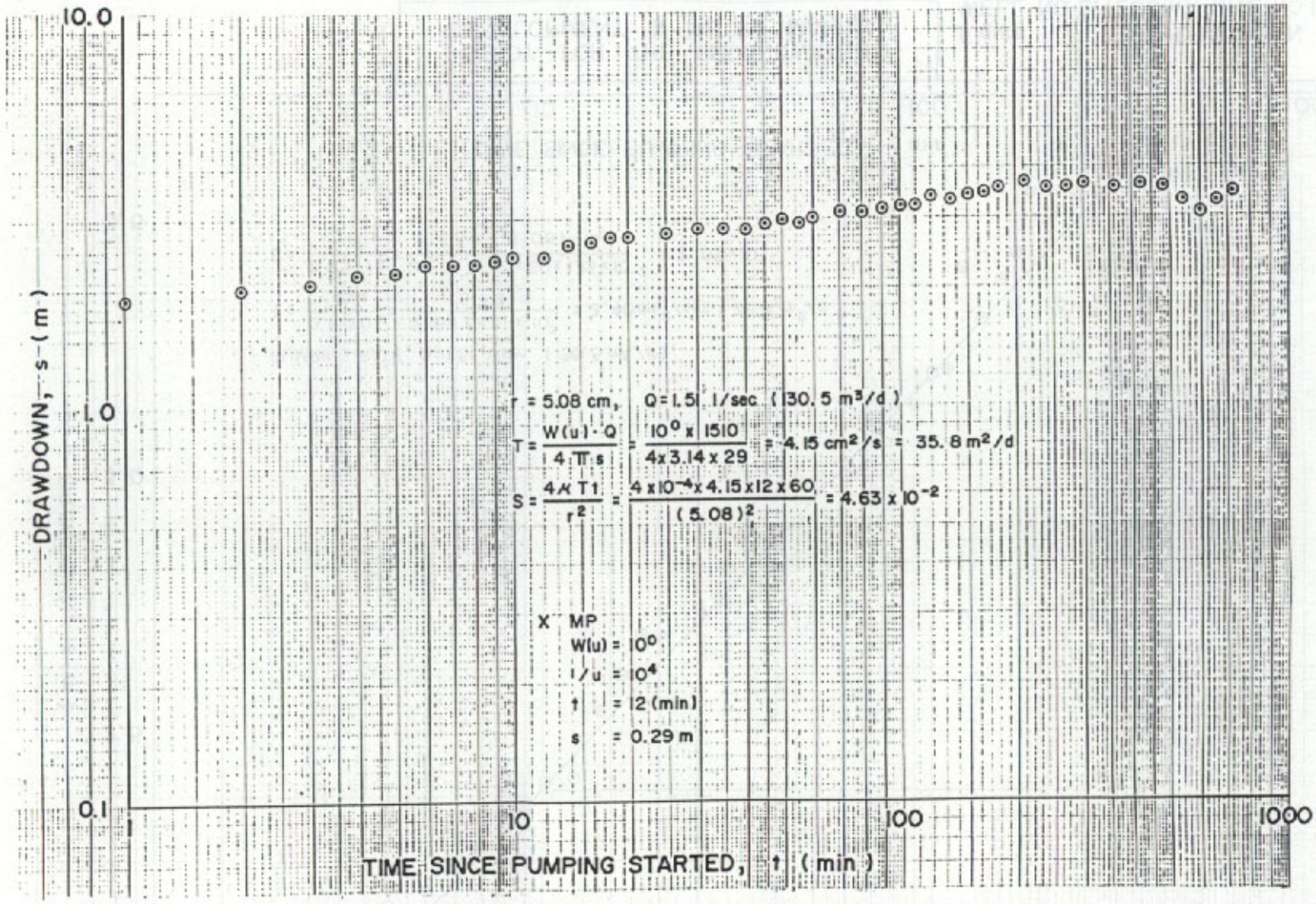

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

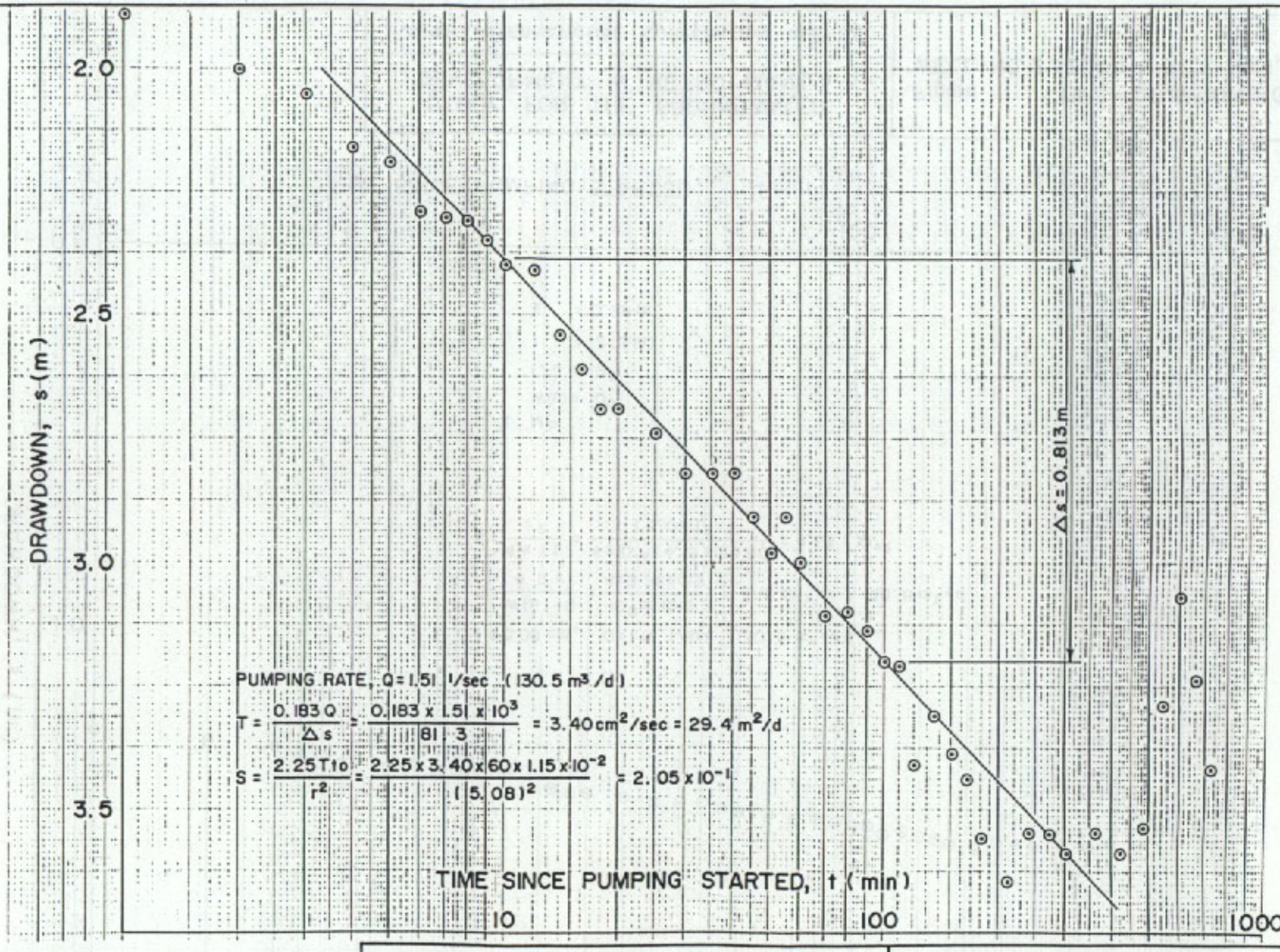
Figure TIME-DRAWDOWN GRAPH AT WELL No.1 (300m), SITE No.1 LAS PIÑAS




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure RESIDUAL DRAWDOWN GRAPH AT WELL No.1 (300m) SITE No.1, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



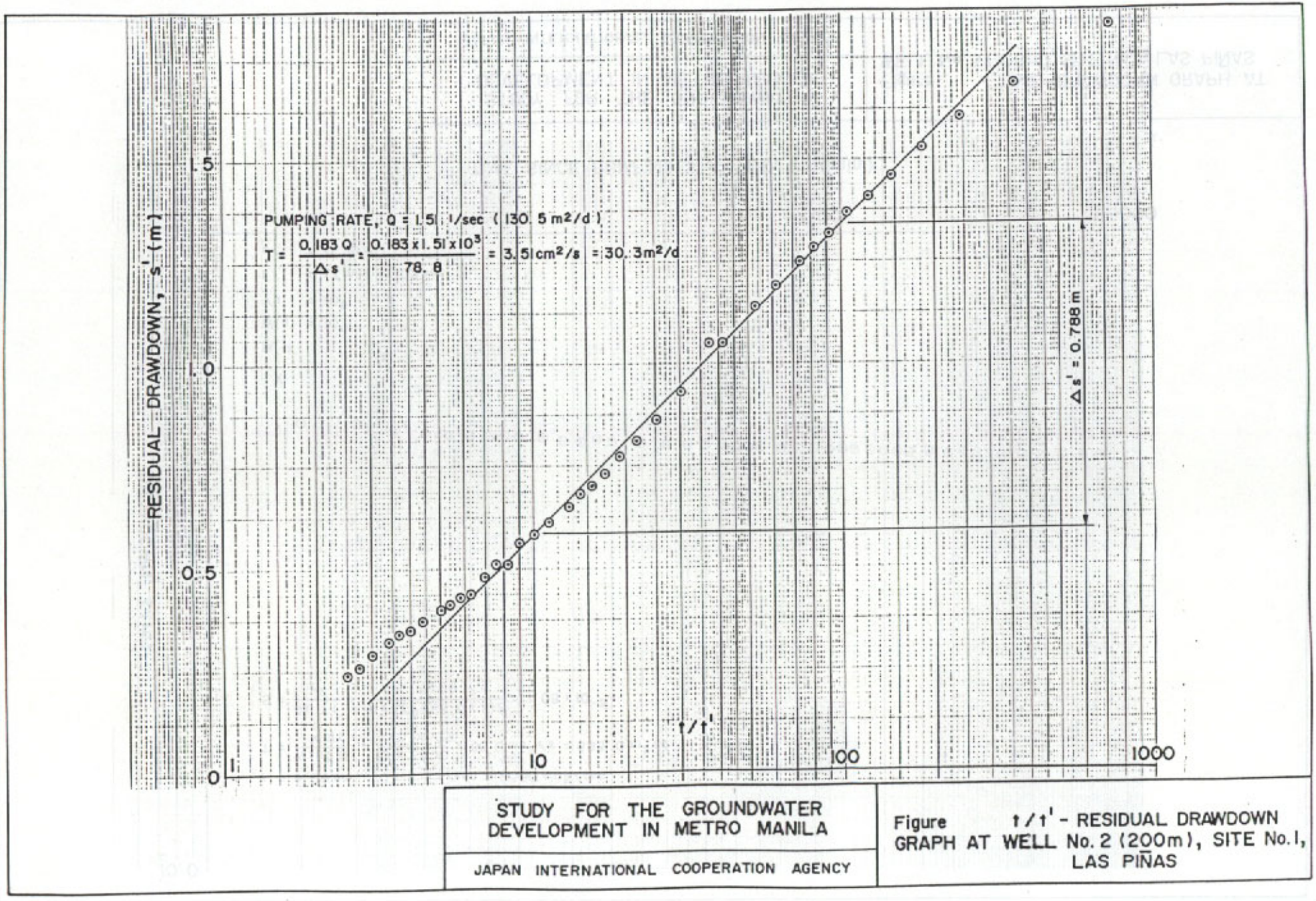

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME - DRAWDOWN GRAPH AT WELL NO. 2 (200m), SITE NO. 1, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

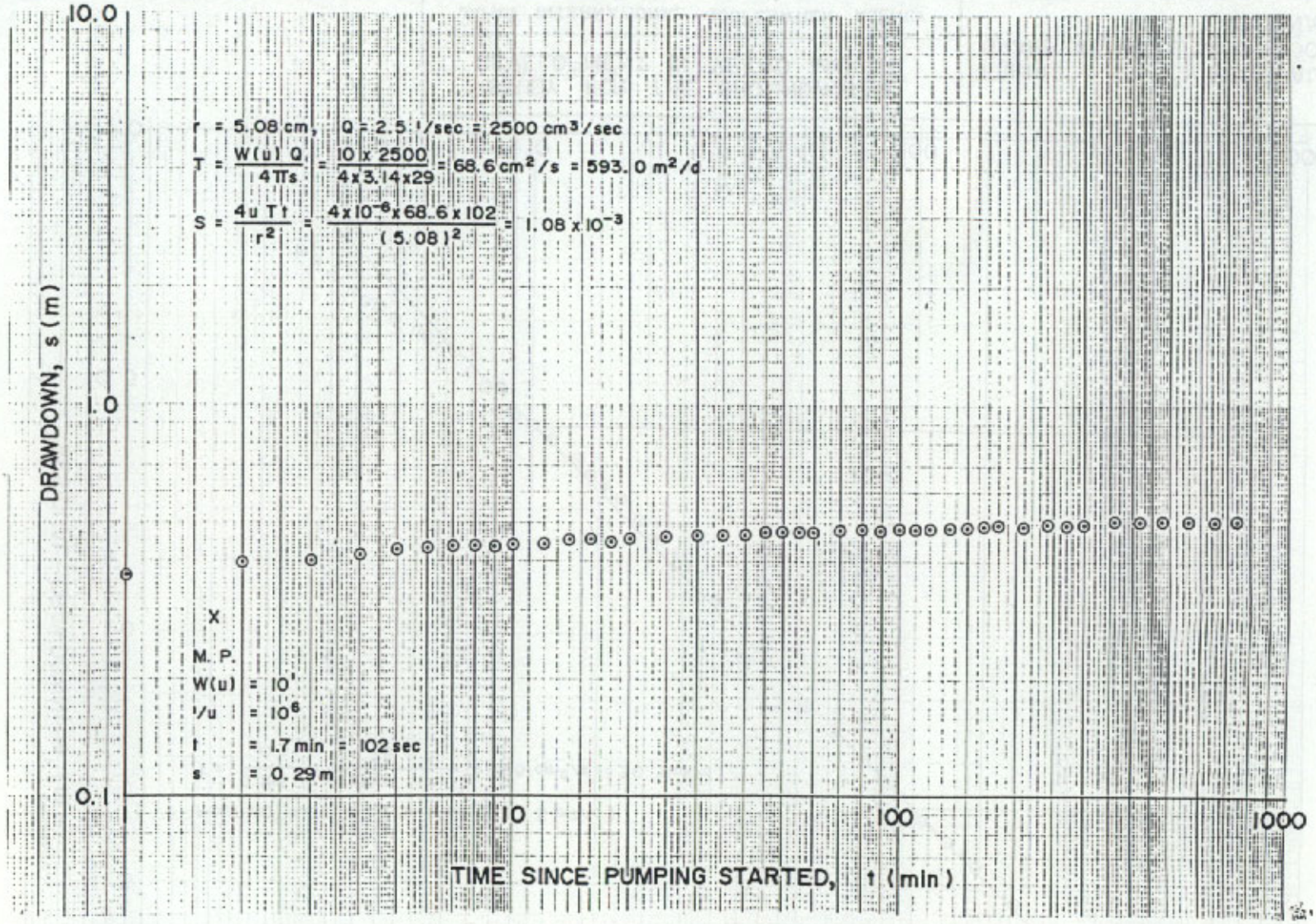
Figure TIME-DRAWDOWN GRAPH AT WELL NO. 2, (200m), SITE NO. 1, LAS PIÑAS



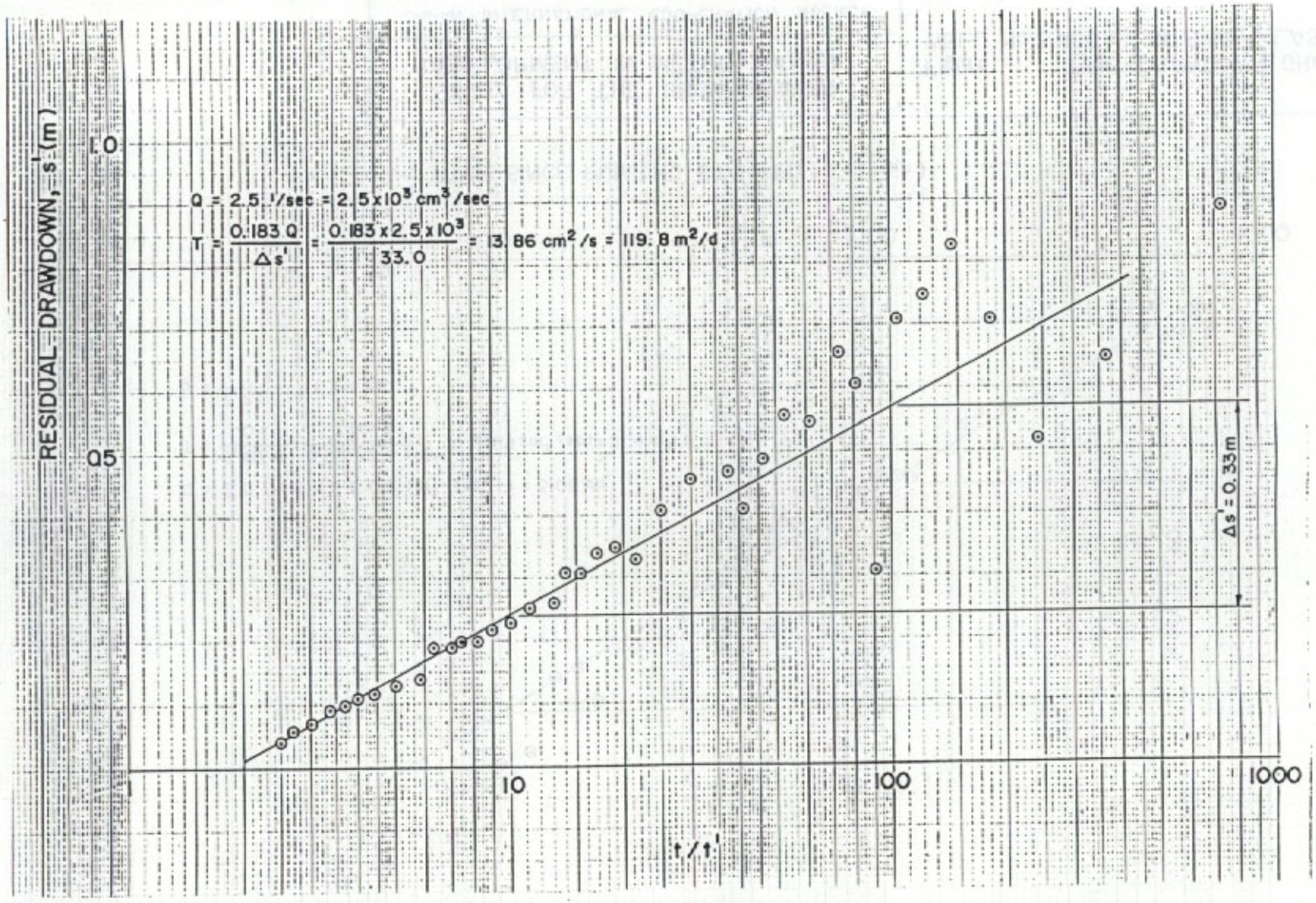

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

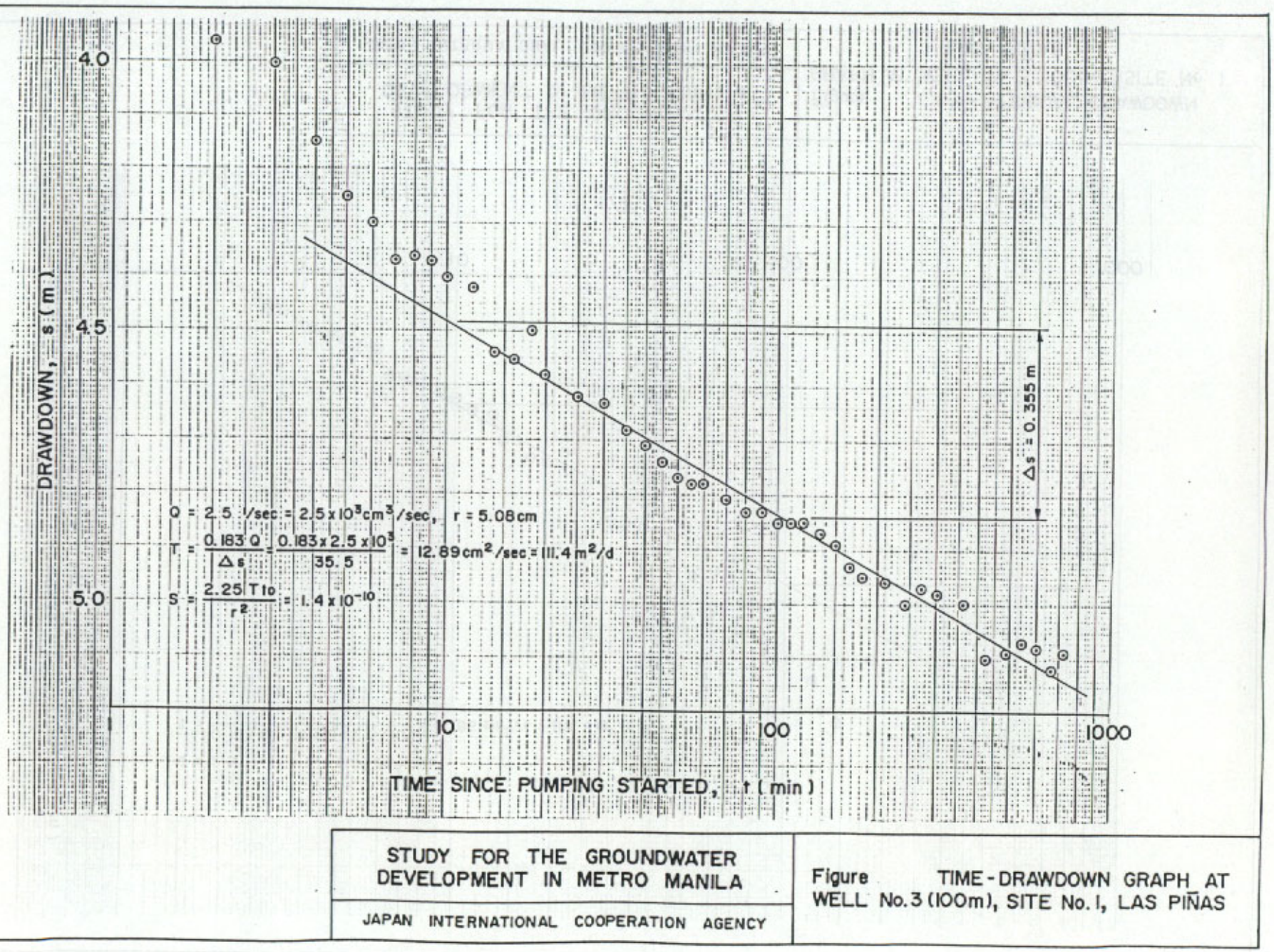
Figure t/t' - RESIDUAL DRAWDOWN GRAPH AT WELL No. 2 (200m), SITE No. 1, LAS PIÑAS




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME-DRAWDOWN GRAPH AT WELL No. 3 (100m), SITE No. 1, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



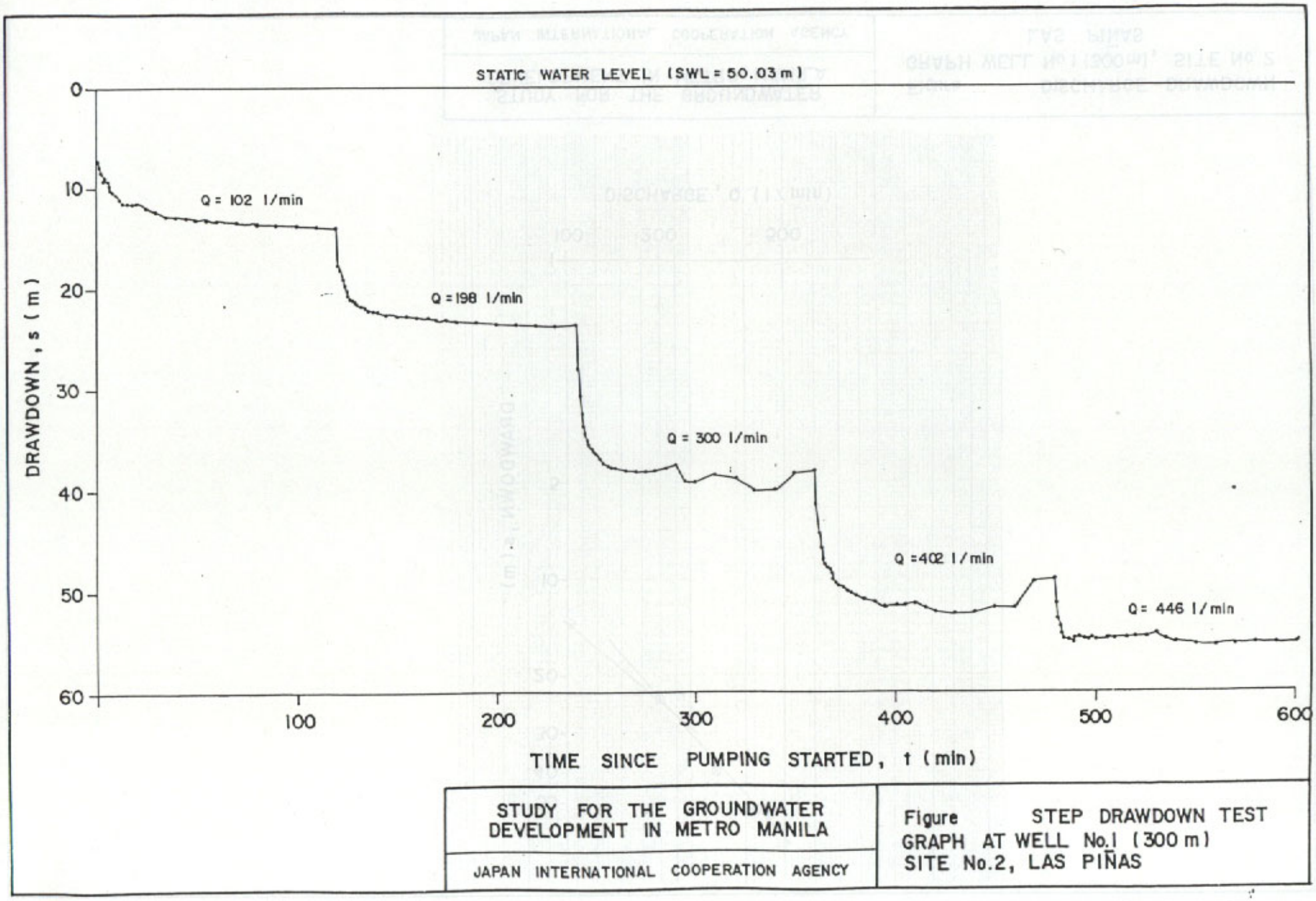

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure t/t' - RESIDUAL DRAWDOWN GRAPH AT WELL No. 3 (100m), SITE No. 1 LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

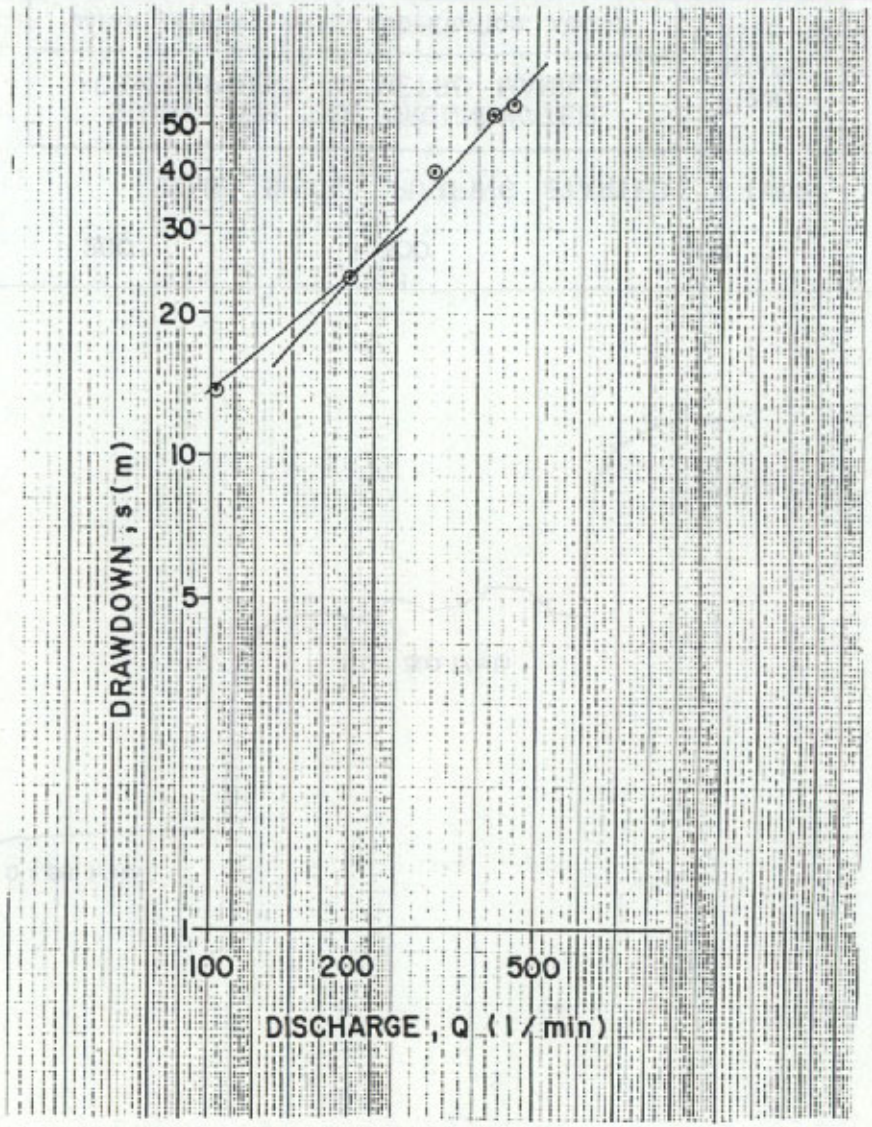
Figure TIME-DRAWDOWN GRAPH AT WELL No.3 (100m), SITE No.1, LAS PIÑAS



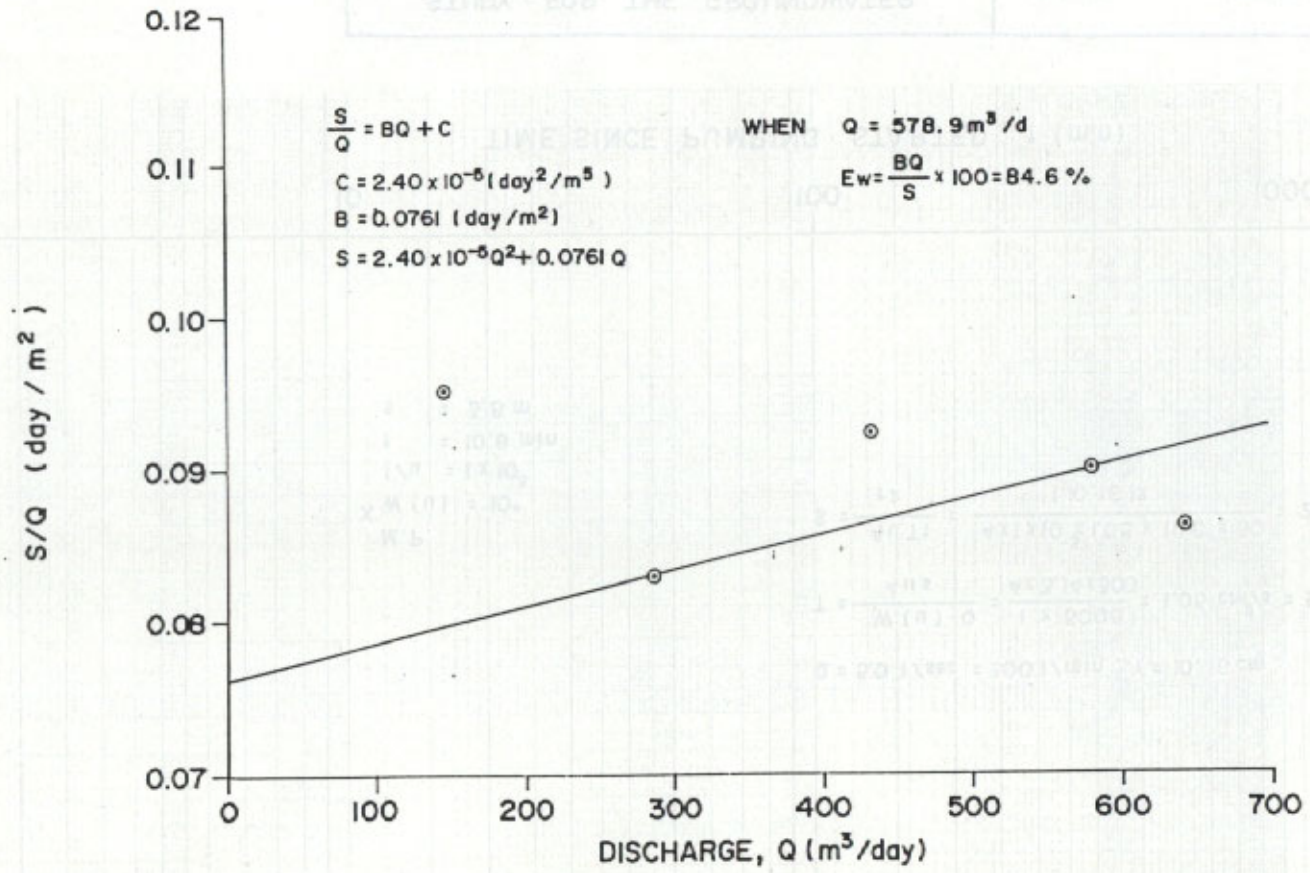

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

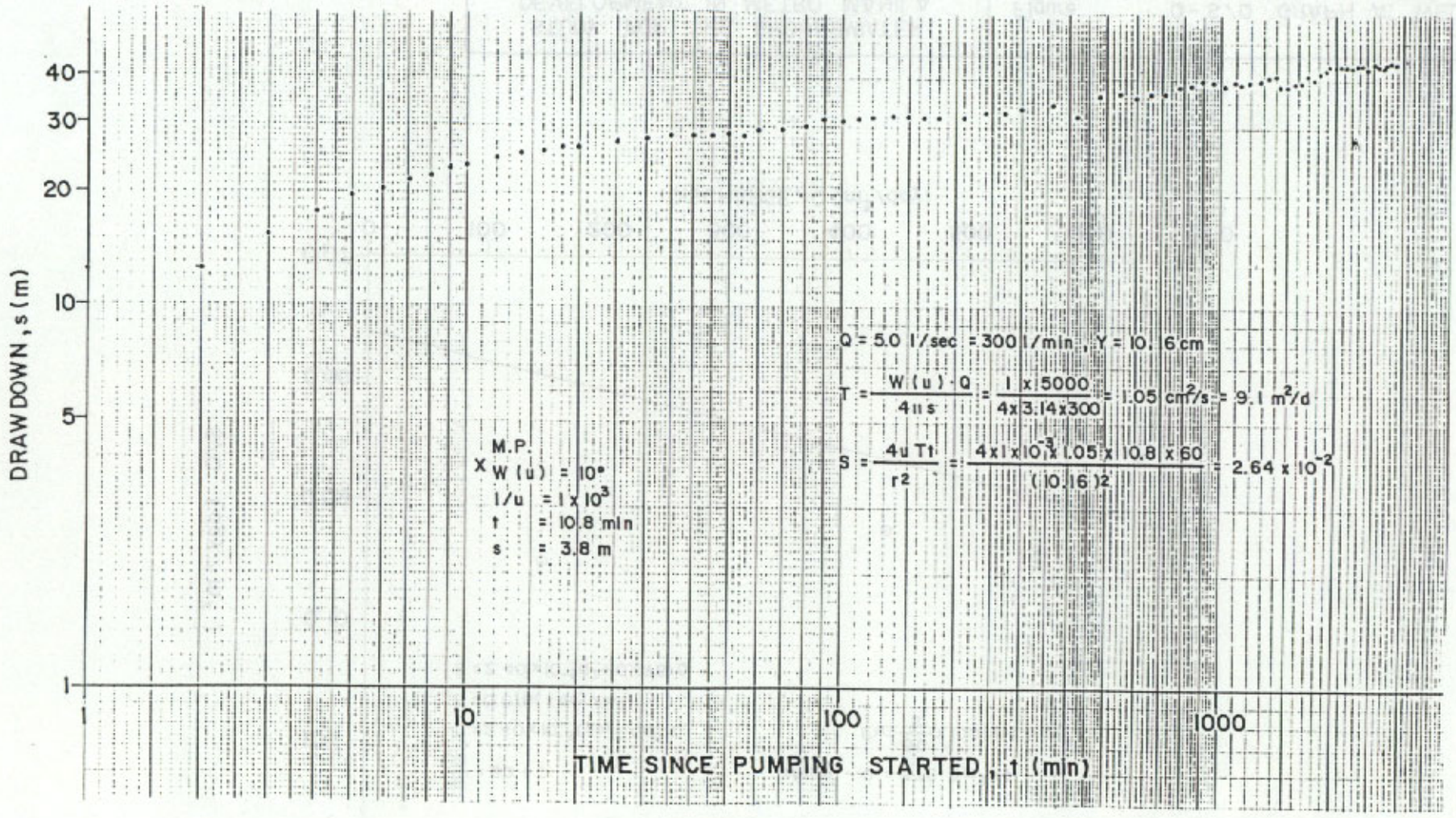
Figure STEP DRAWDOWN TEST GRAPH AT WELL No.1 (300 m) SITE No.2, LAS PIÑAS



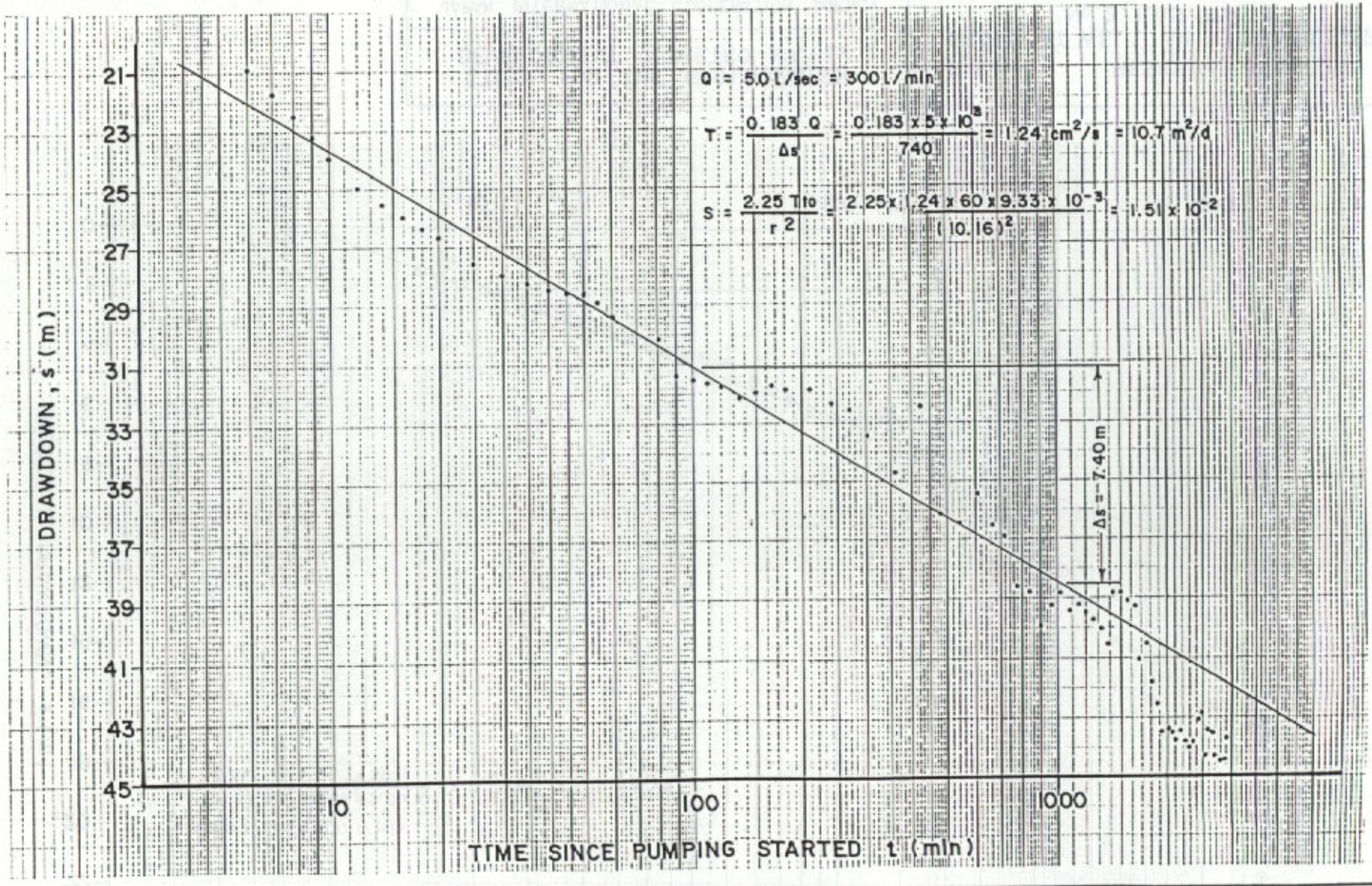

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure DISCHARGE - DRAWDOWN GRAPH WELL No.1 (300m), SITE No. 2 LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure Q - S/Q GRAPH AT WELL No. 1 (300m), SITE No. 2, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



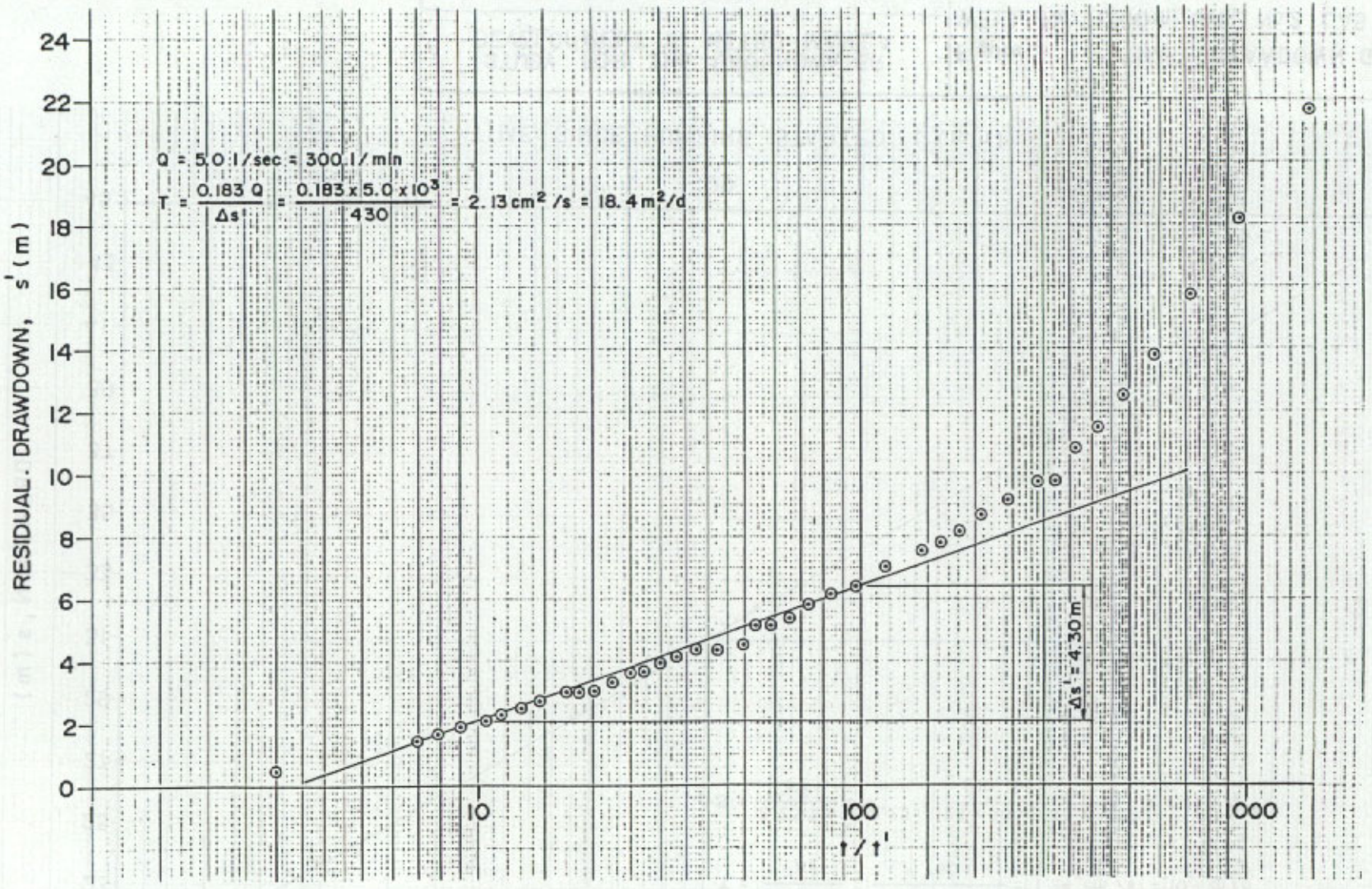

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME-DRAWDOWN GRAPH AT WELL No.1 (300m), SITE No.2 LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



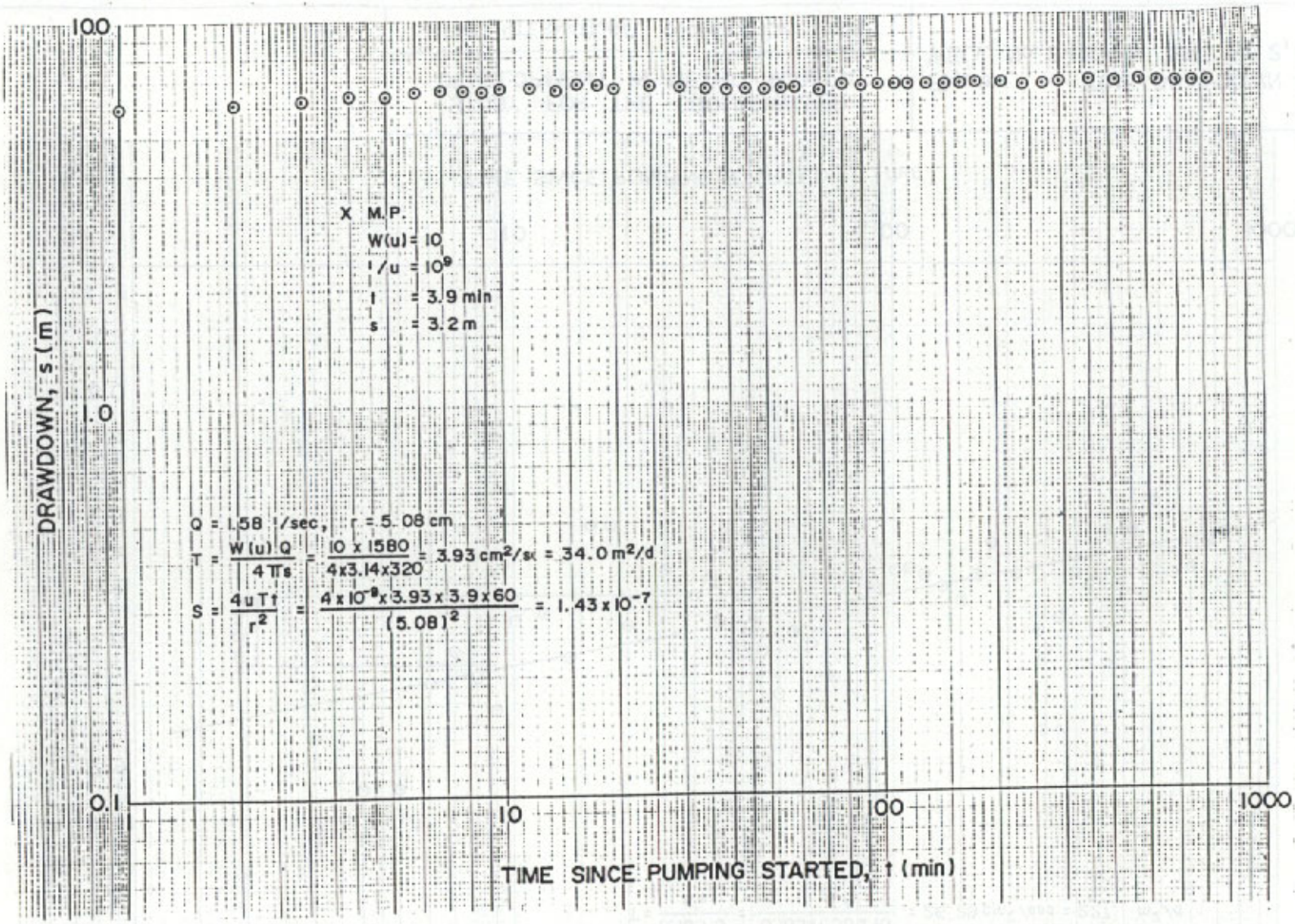

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure TIME - DRAWDOWN GRAPH AT WELL No.1 (300m), SITE No.2 LAS PIÑAS



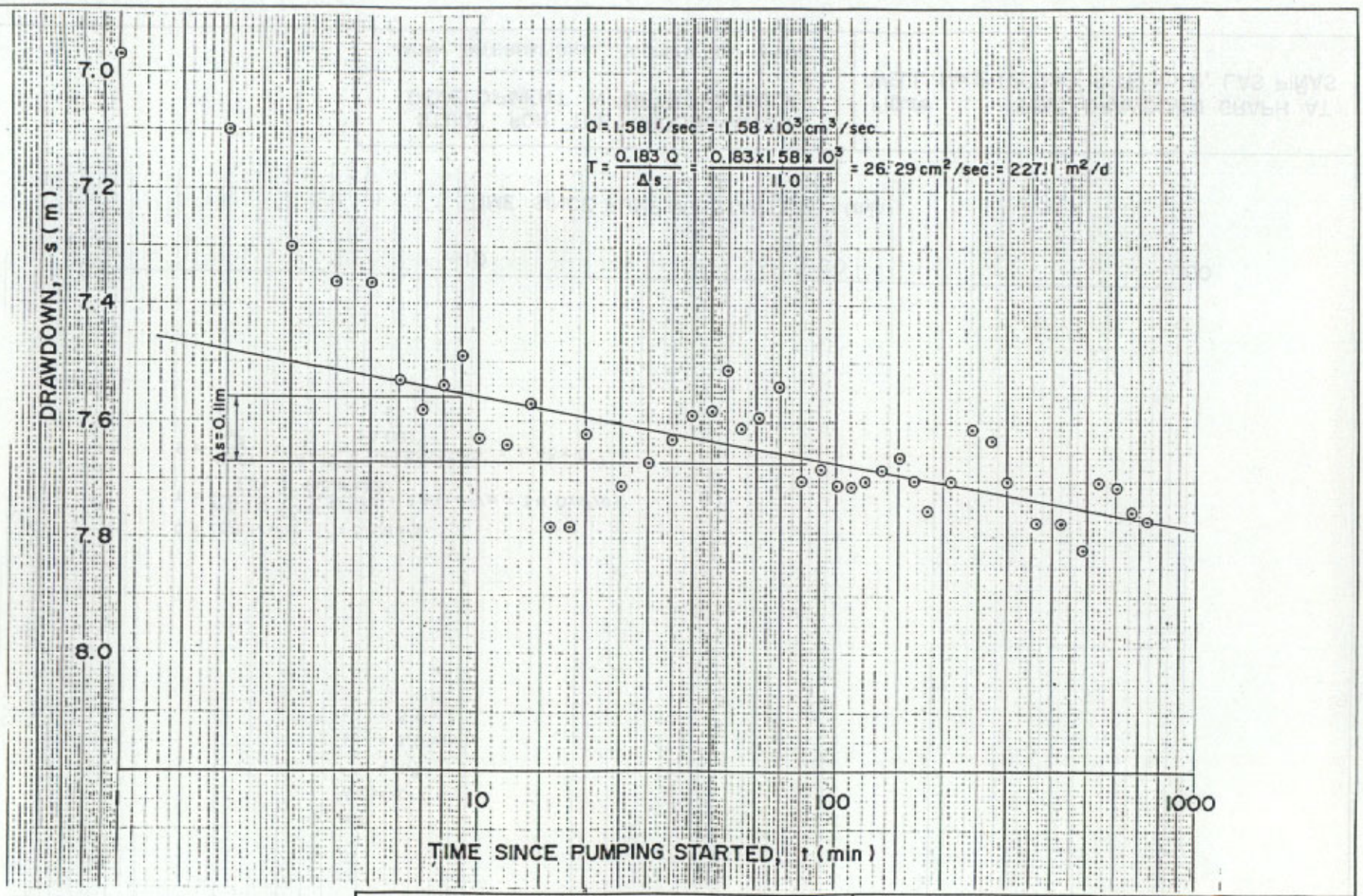

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure RESIDUAL DRAWDOWN GRAPH AT WELL No.1 (300m), SITE No.2, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

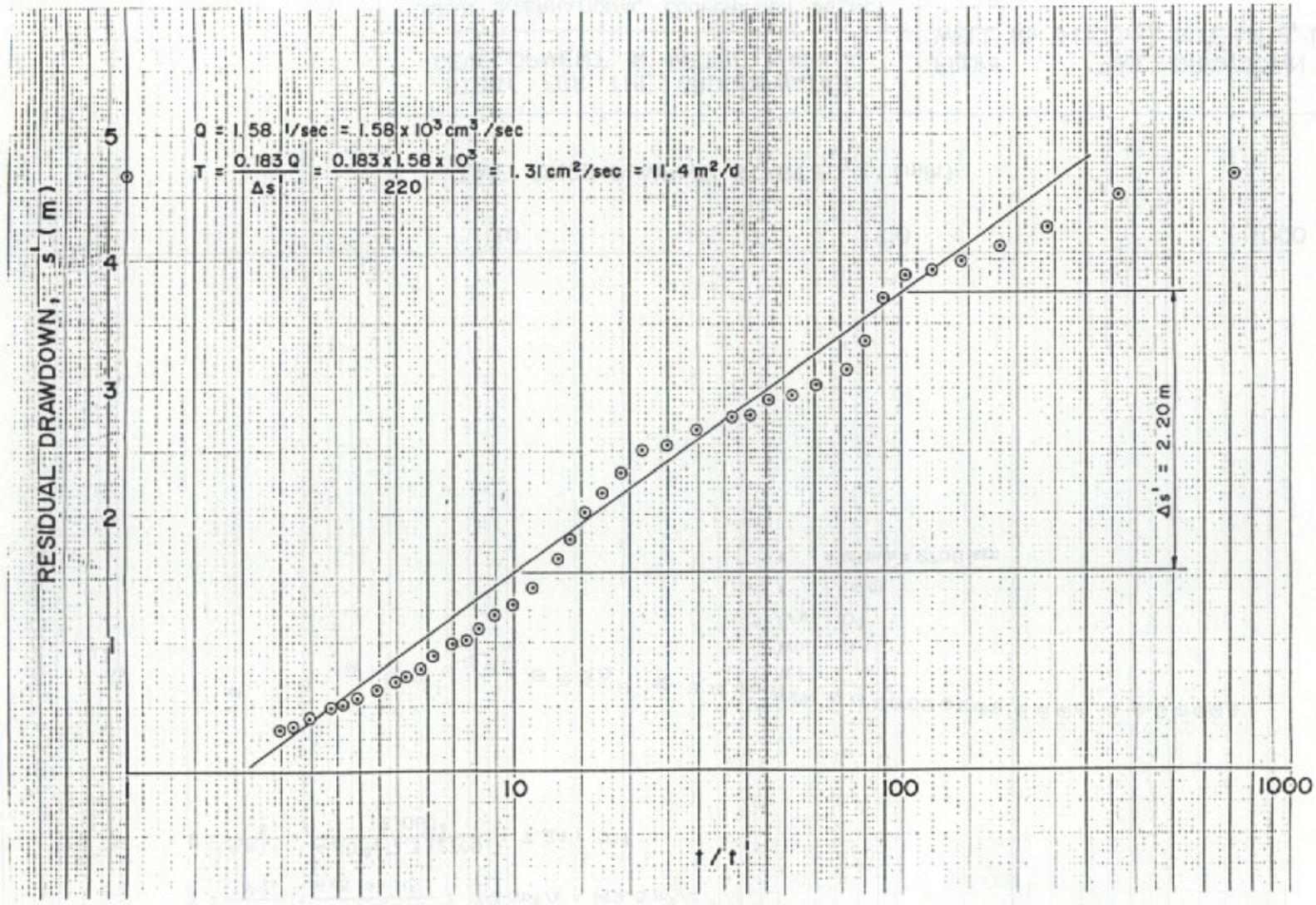
Figure TIME - DRAWDOWN GRAPH AT WELL No. 2 (200m), SITE No. 2, LAS PIÑAS



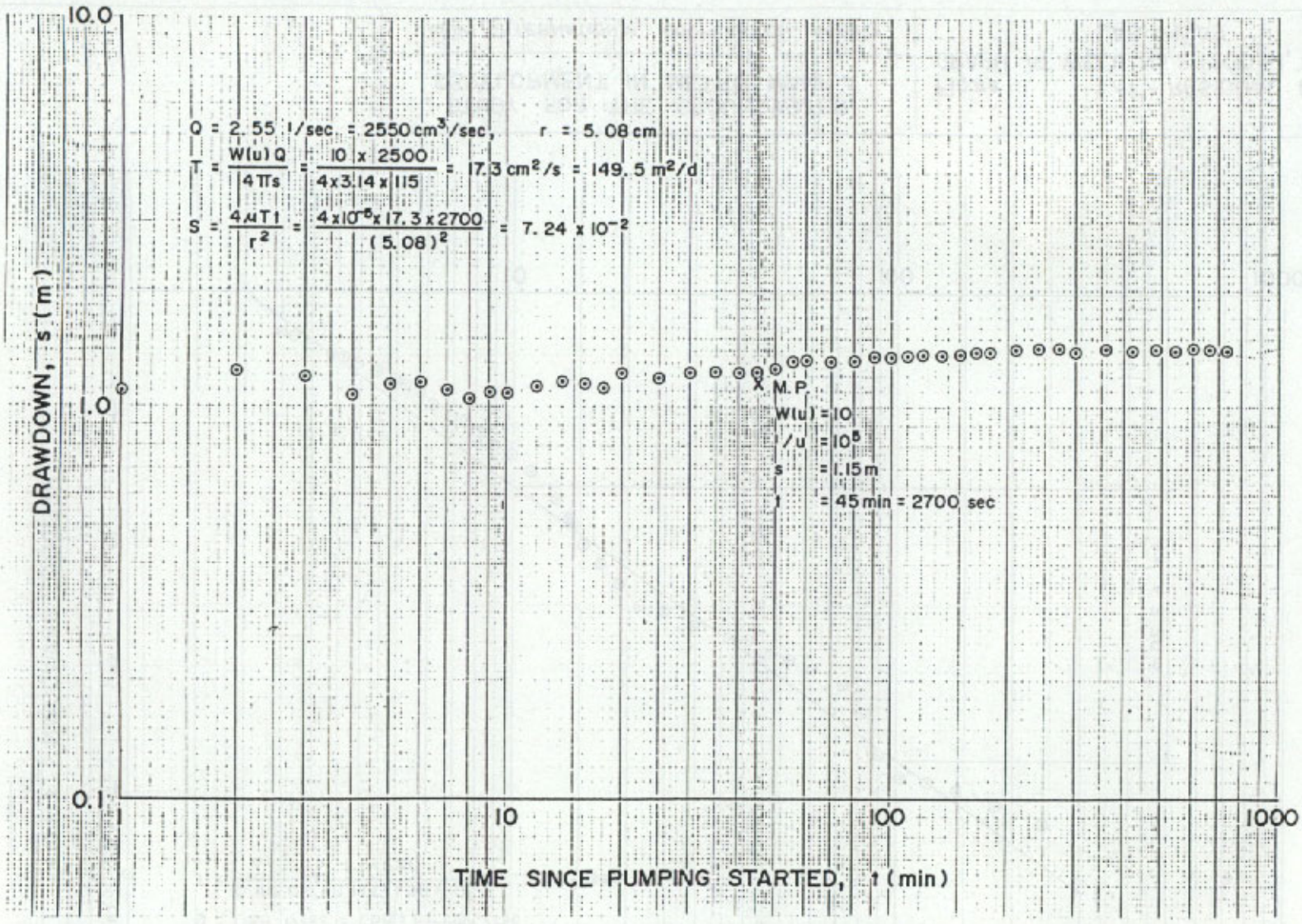

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

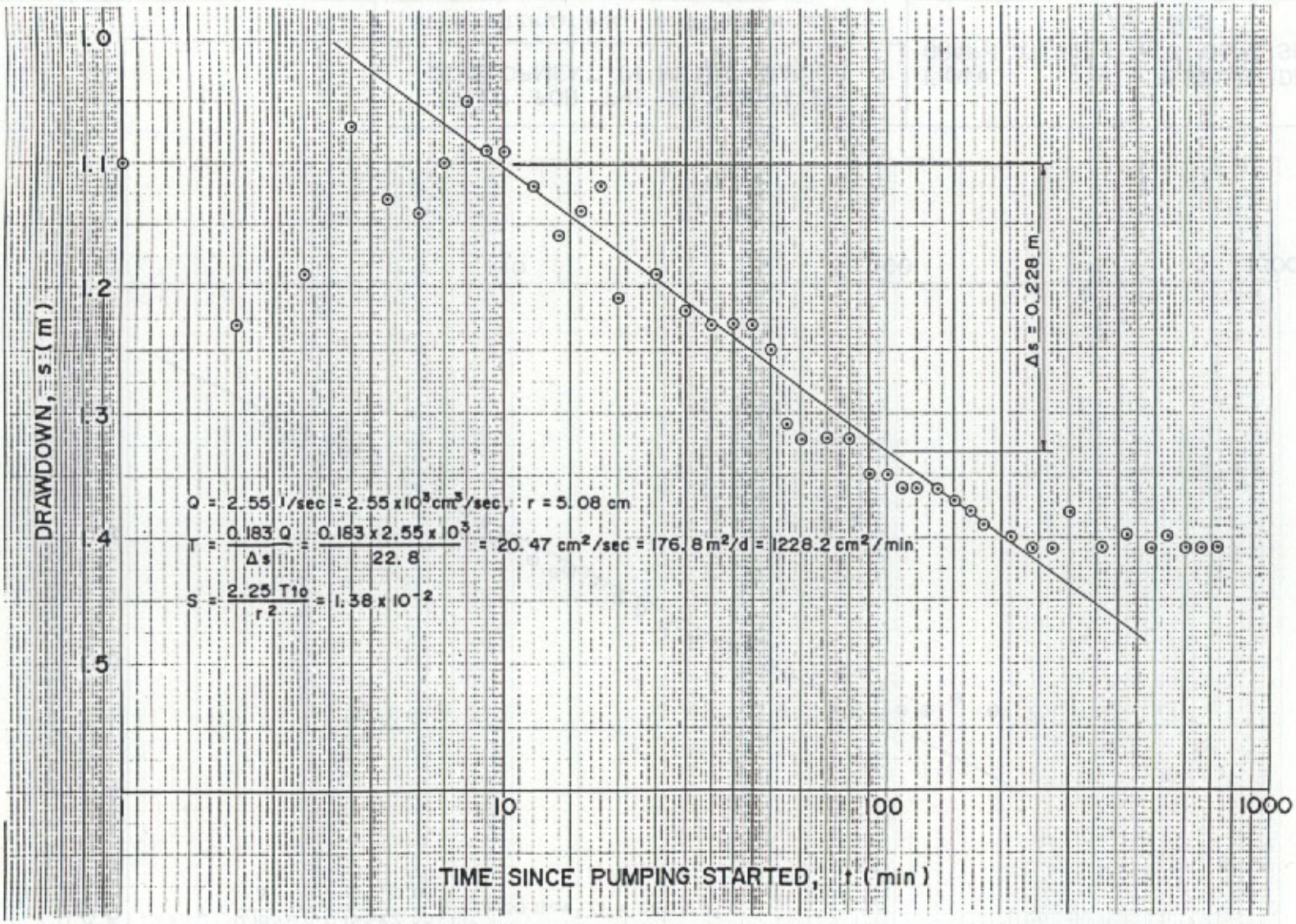
Figure TIME-DRAWDOWN GRAPH AT WELL No. 2 (200m), SITE No. 2, LAS PIÑAS




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure t/t'- RESIDUAL DRAWDOWN GRAPH AT WELL No.2 (200m), SITE No. 2, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



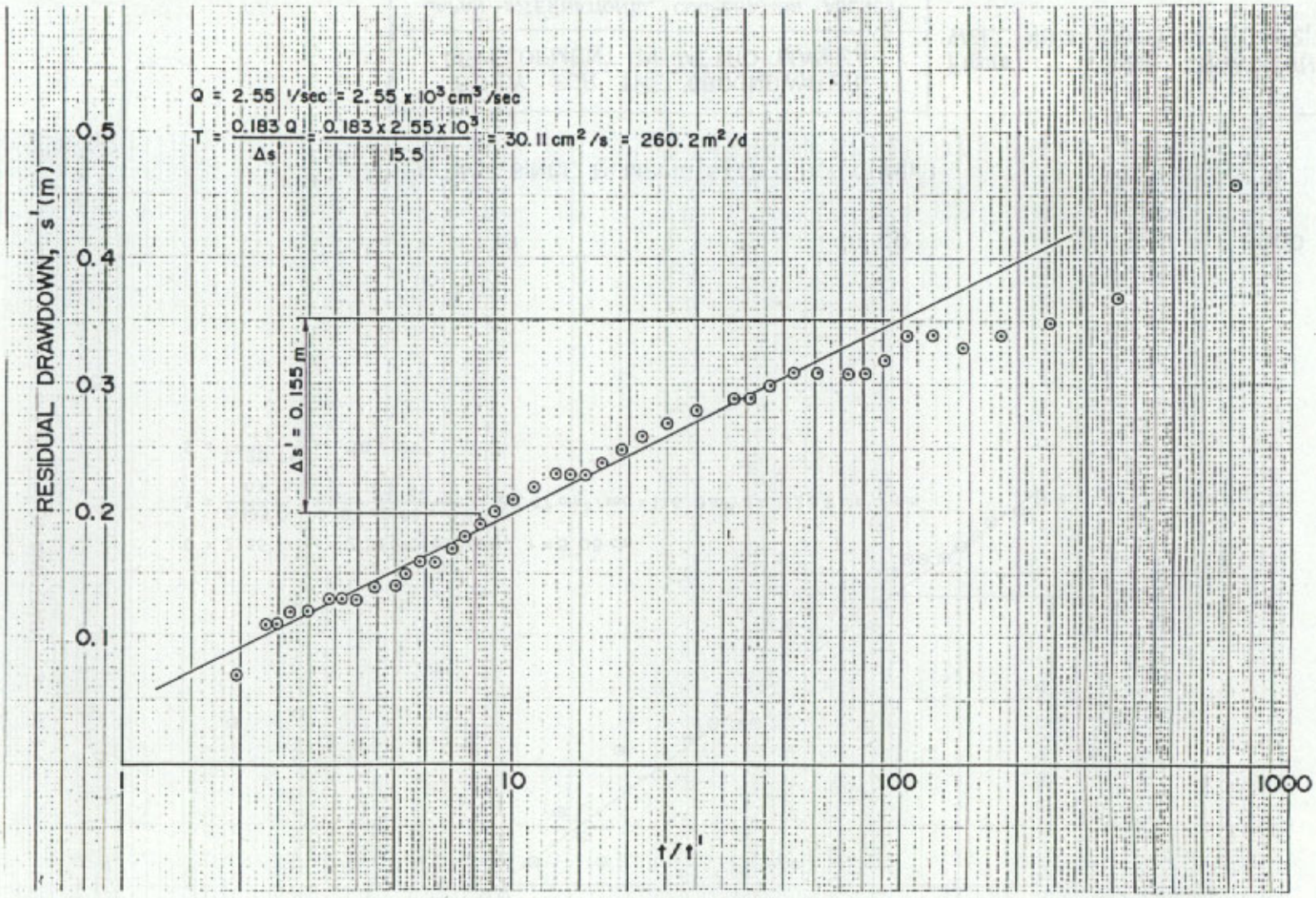

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME - DRAWDOWN GRAPH AT WELL No. 3 (100m), SITE No. 2, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



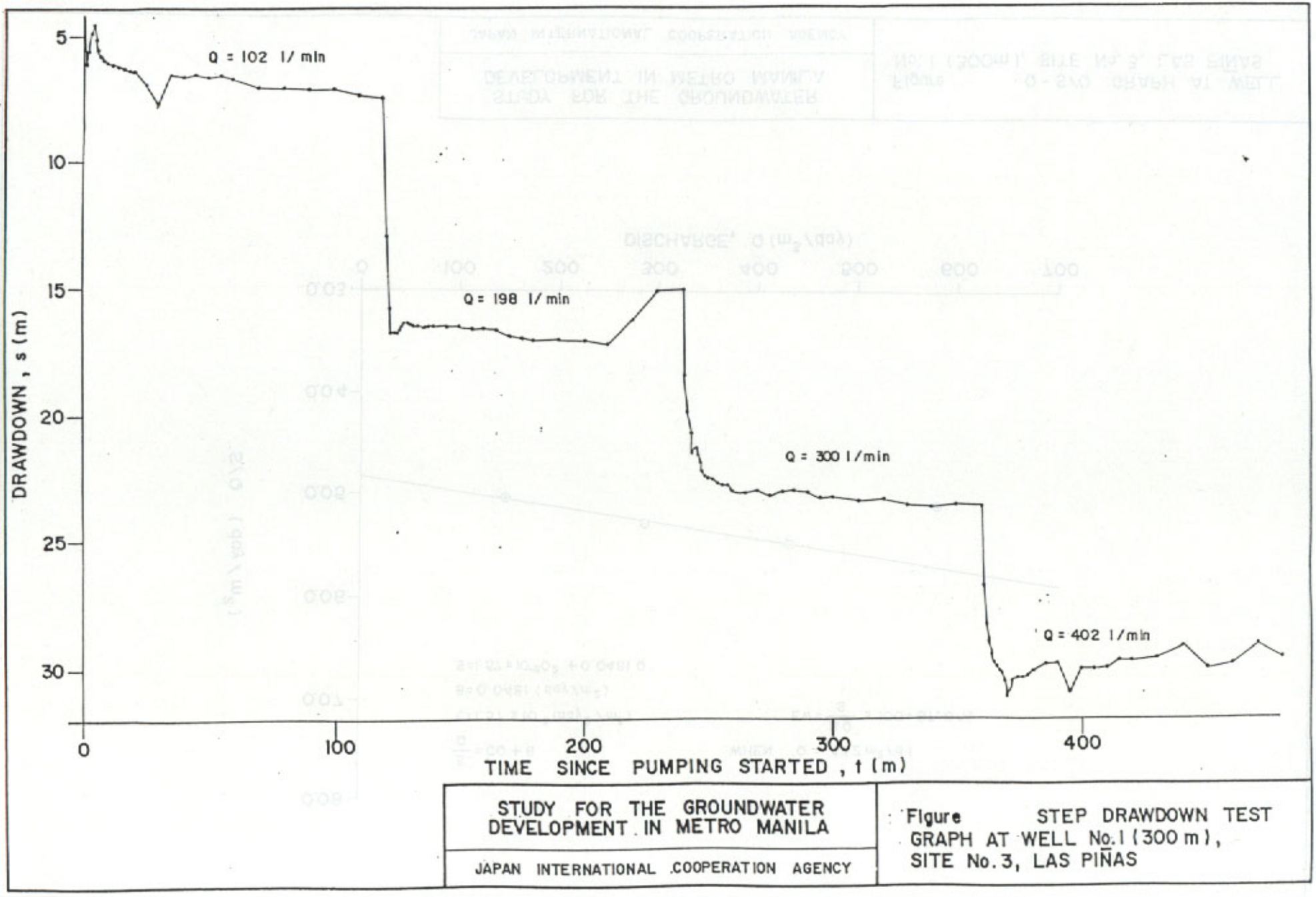

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure TIME - DRAWDOWN GRAPH AT WELL No. 3 (100m), SITE No. 2, LAS PIÑAS



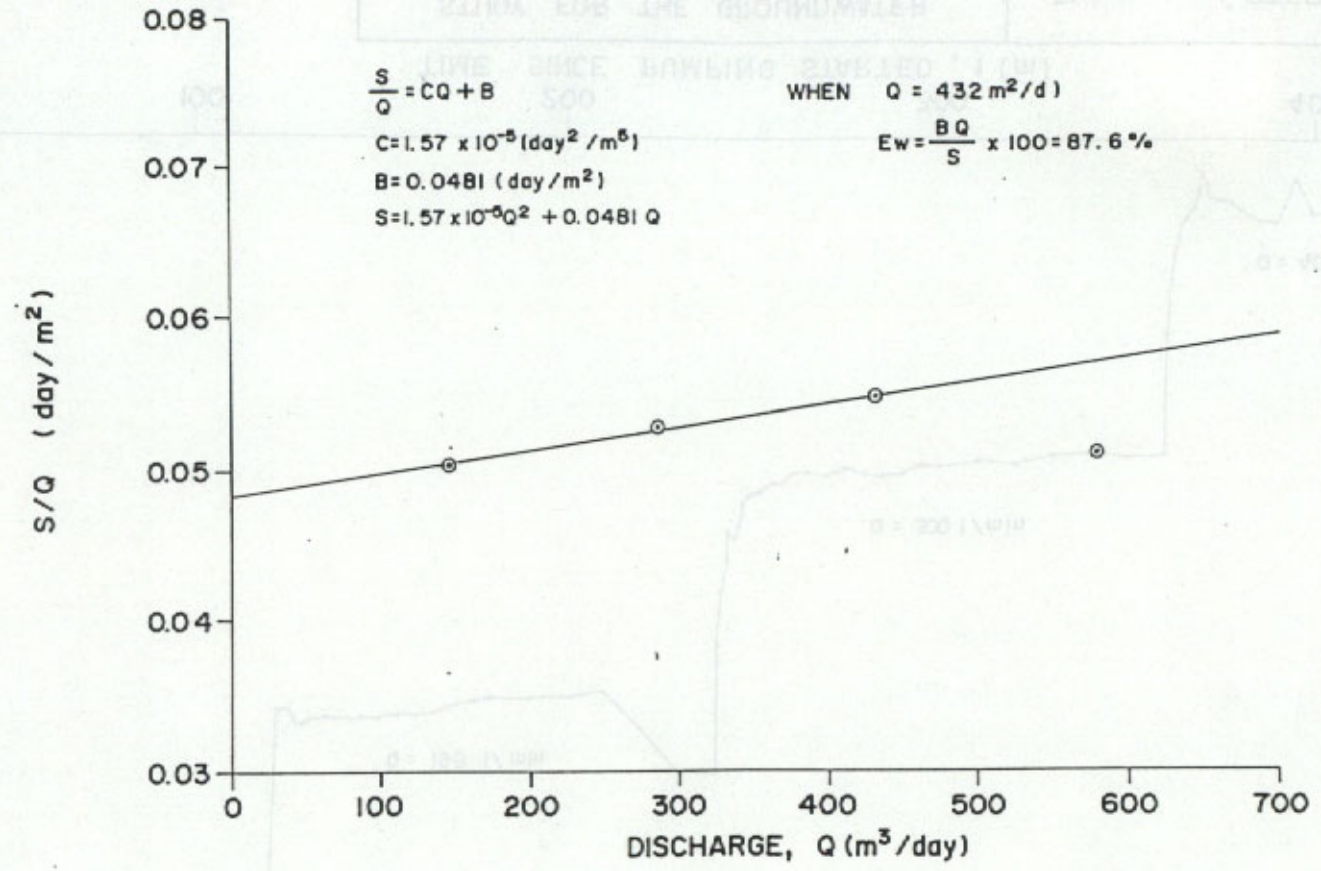

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure t/t' - RESIDUAL DRAWDOWN GRAPH AT WELL No. 3 (100m), SITE No. 2 LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



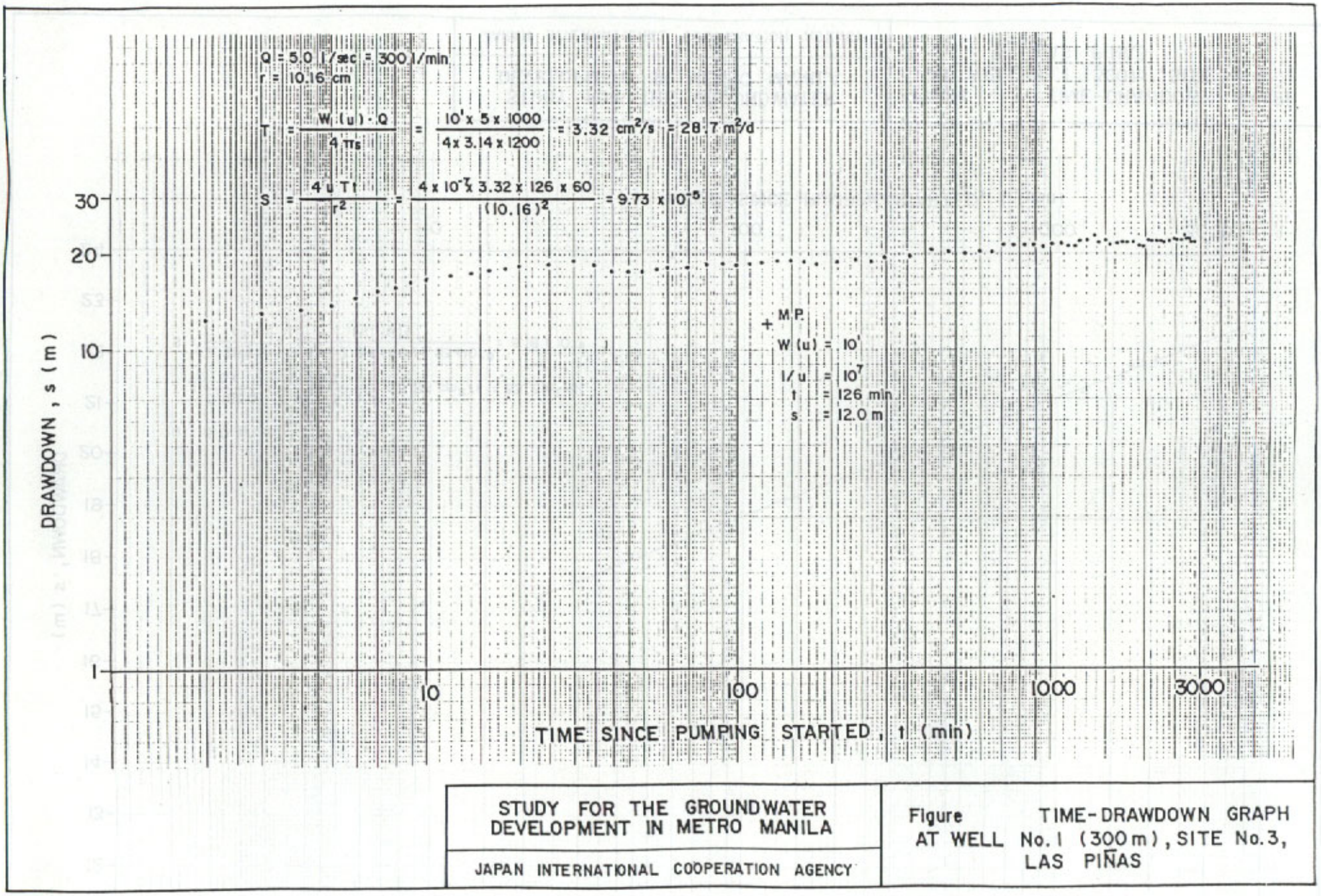

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

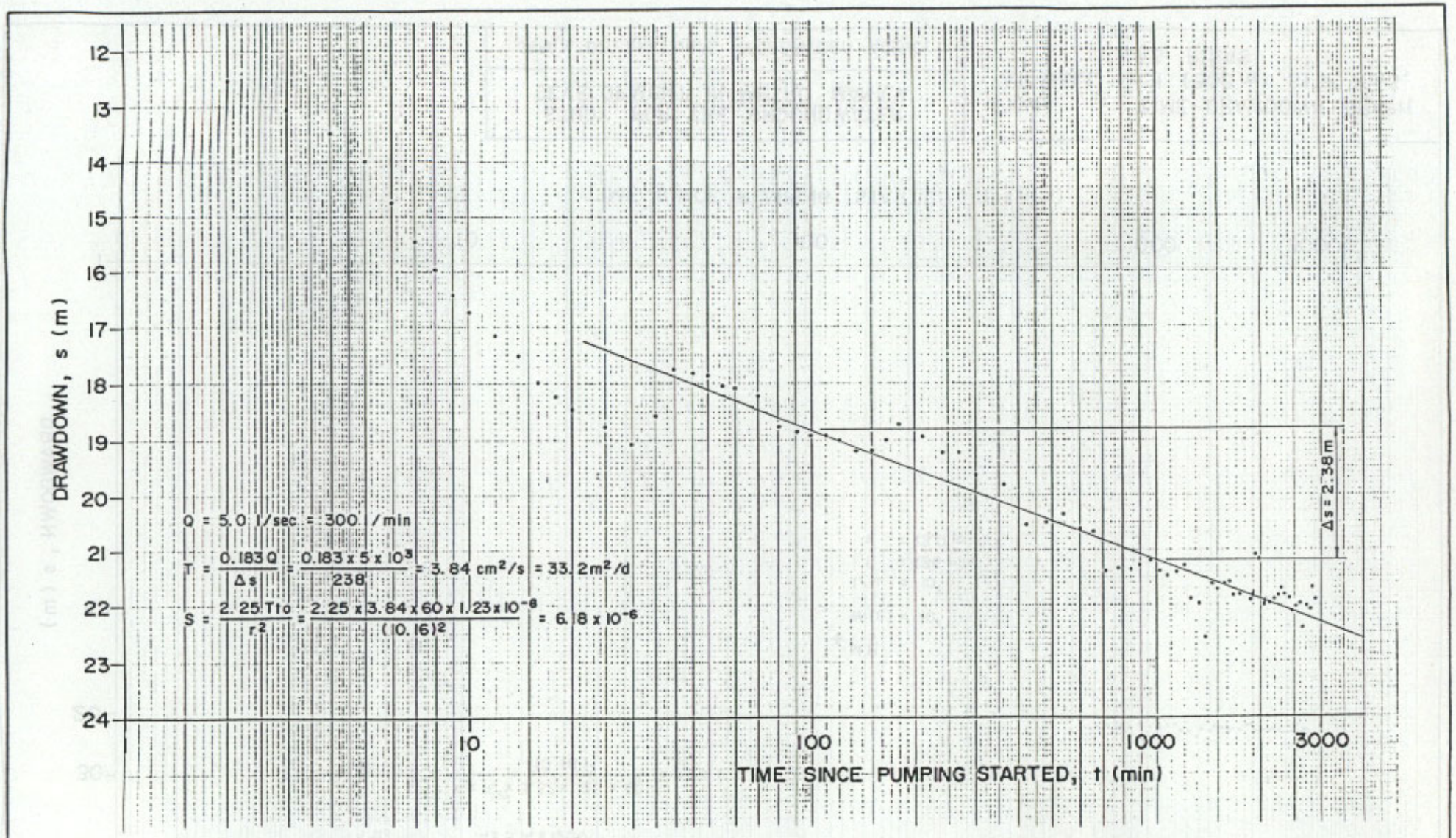
Figure STEP DRAWDOWN TEST GRAPH AT WELL No.1 (300 m), SITE No.3, LAS PIÑAS



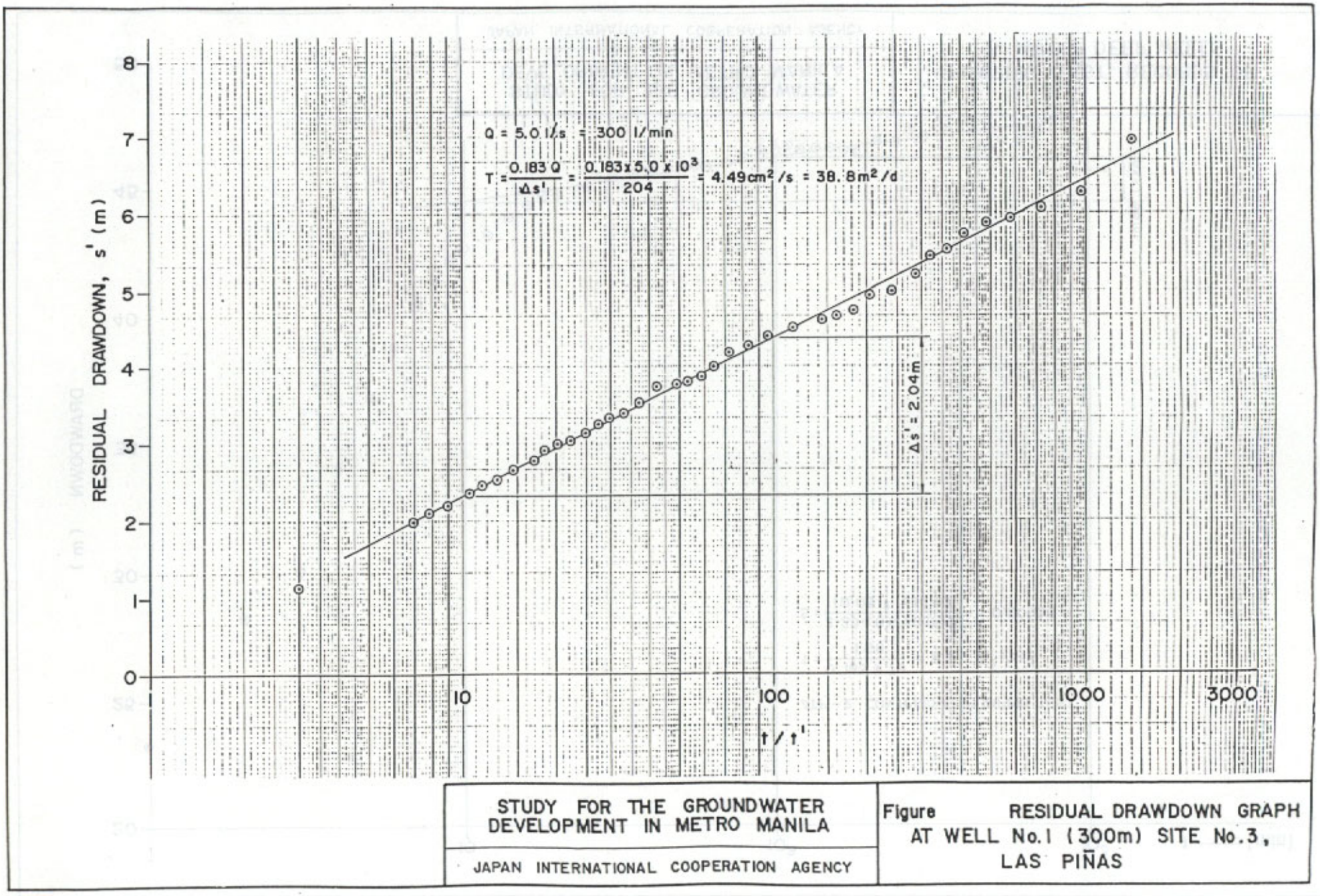

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure Q-S/Q GRAPH AT WELL No. 1 (300m), SITE No. 3, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME-DRAWDOWN GRAPH AT WELL No. 1 (300 m), SITE No. 3, LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



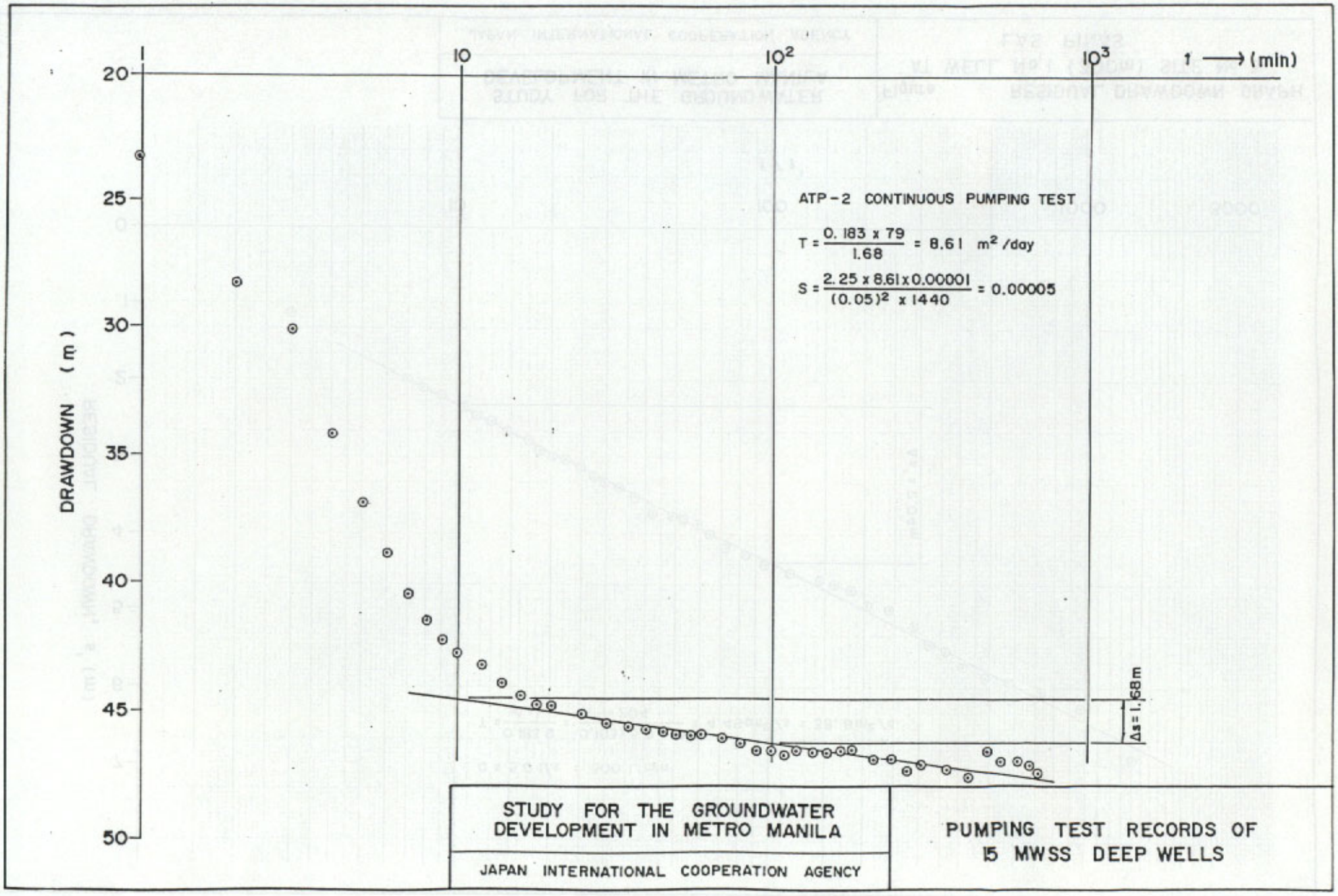

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME-DRAWDOWN GRAPH AT WELL No. 1 (300m), SITE No. 3 LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

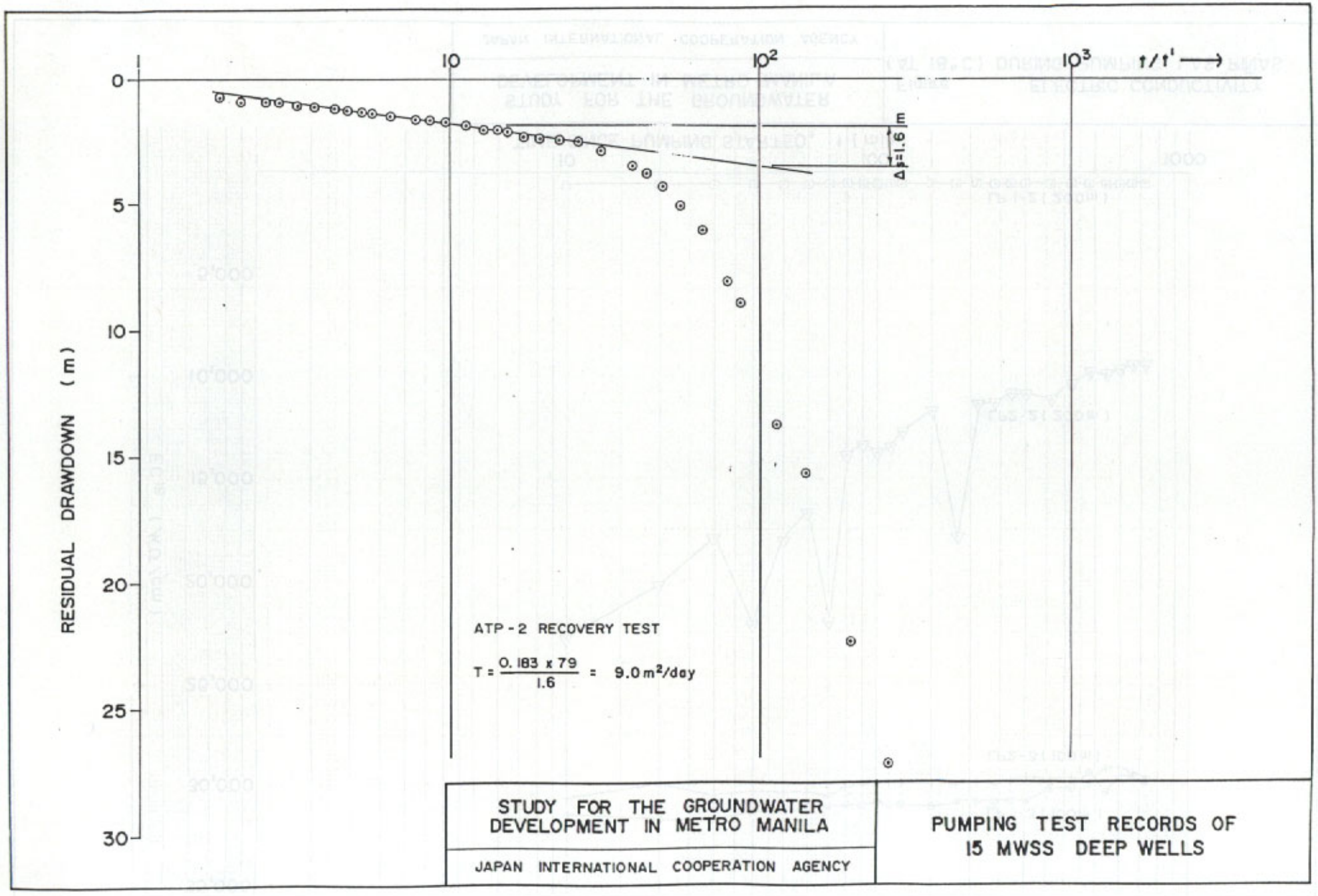


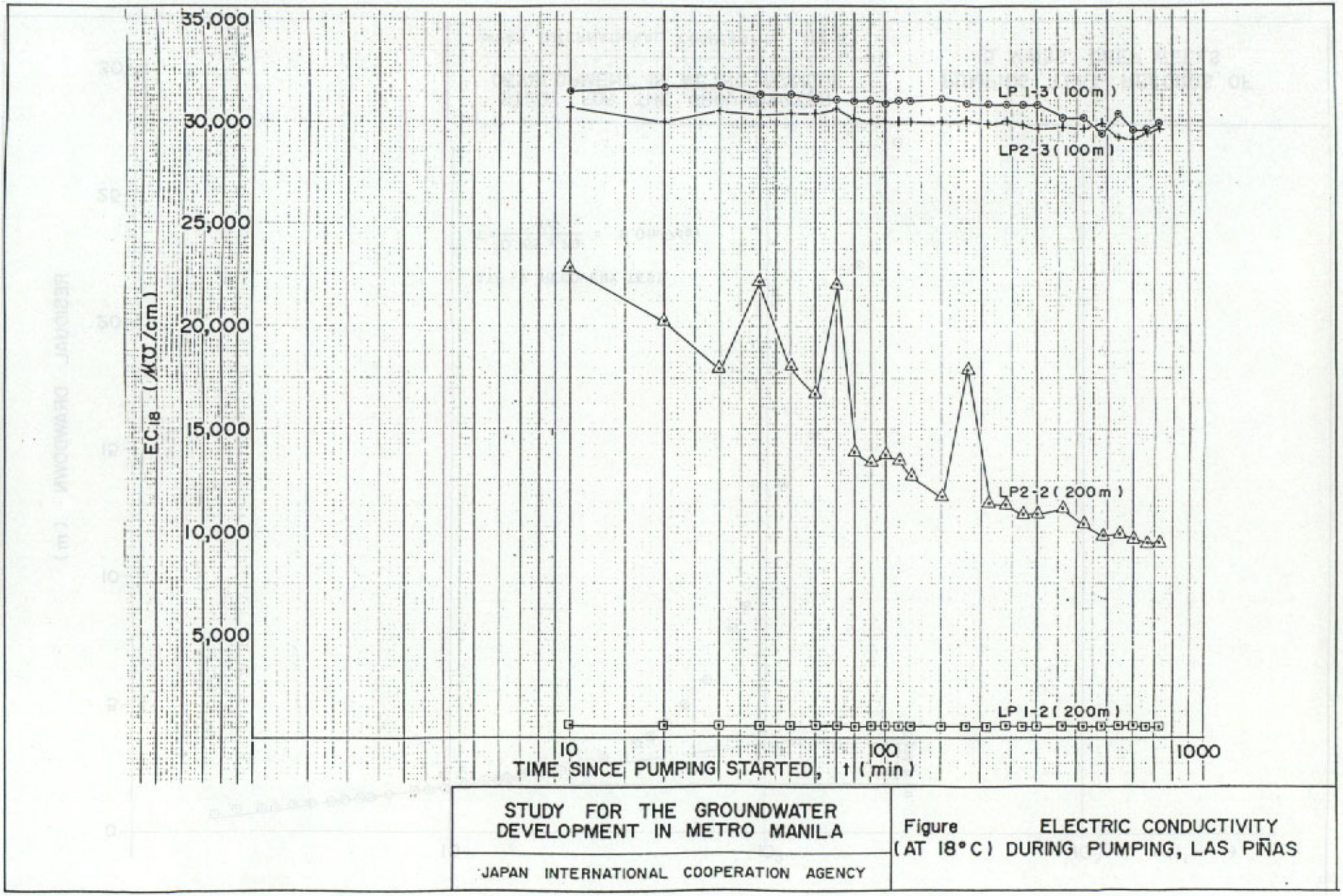

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure RESIDUAL DRAWDOWN GRAPH AT WELL No.1 (300m) SITE No.3, LAS PIÑAS


1
10
10²
10³
t ⟶ (min)
20
25
30
35
40
45
50
DRAWDOWN (m)
ATP-2 CONTINUOUS PUMPING TEST
T = 0.183 x 79 / 1.68 = 8.61 m²/day
S = 2.25 x 8.61 x 0.00001 / (0.05)² x 1440 = 0.00005
Δs = 1.68 m
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS

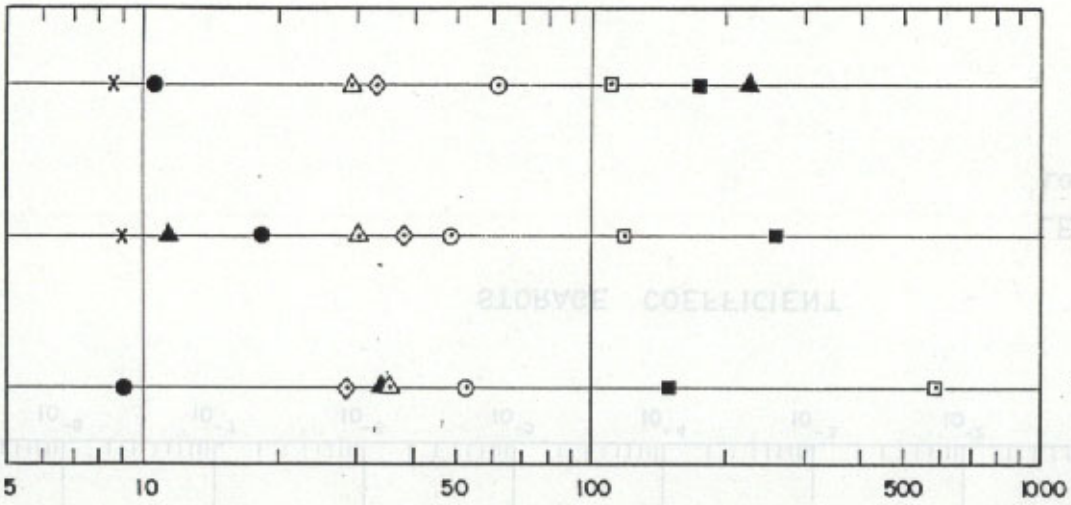

1
10
10²
10³
t/t'
0
5
10
15
20
25
30
RESIDUAL DRAWDOWN (m)
Δs=1.6 m
ATP-2 RECOVERY TEST
T = 0.183 x 79 / 1.6 = 9.0 m²/day
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

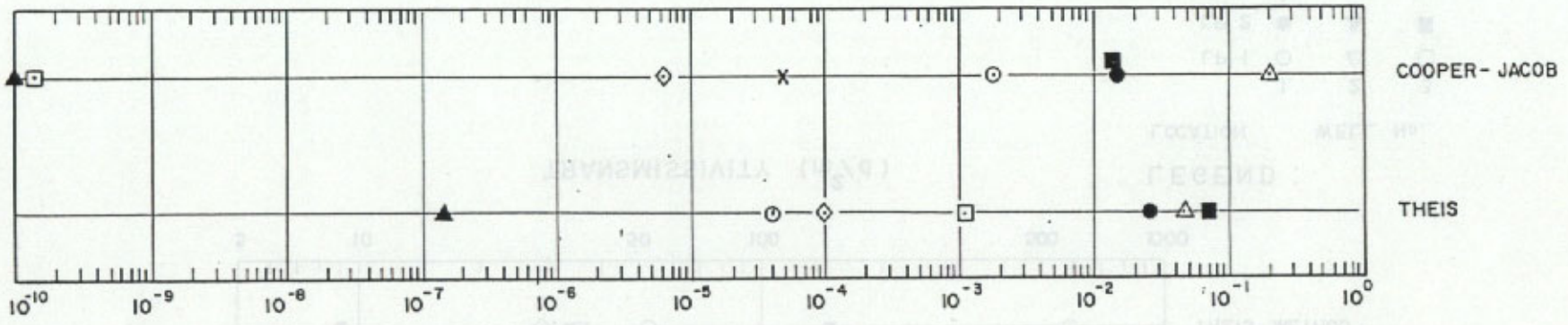
Figure ELECTRIC CONDUCTIVITY (AT 18°C) DURING PUMPING, LAS PIÑAS




LEGEND :

| LOCATION | WELL No. 1 | 2 | 3 |
|---|---|---|---|
| LP 1 | ○ | △ | □ |
| LP 2 | ● | ▲ | ■ |
| LP 3 | ◇ | | |
| ANT | | X | |

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | DISTRIBUTION OF TRANSMISSIVITY IN TEST WELL |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STORAGE COEFFICIENT

LEGEND :

| LOCATION | WELL No. 1 | 2 | 3 |
|---|---|---|---|
| LP 1 | ○ | △ | □ |
| LP 2 | ● | ▲ | ■ |
| LP 3 | ◇ | | |
| ANT | | X | |

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

DISTRIBUTION OF STORAGE COEFFICIENT IN TEST WELLS

# 2.2

# PUMPING TEST RECORDS

2.2.1

# ANALYSIS OF PUMPING TEST DATA

# PUMPING TEST
(Step Drawdown Test)

## TEST NO.: 1

WELL LOCATION: Sucat Elem. School, Muntinlupa (MTL-147)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 20.00 M PWL: 30.64 M
DATE CONDUCTED: Feb. 15, 1991
TIME: 9:00 PM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY: 16.95 l/sec, Flowmeter method
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 15, 1991
TIME: 11:00 PM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | REMARKS | |
|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | | |
| 9:00 | | 0 | | 0 | 20.00 | | | | Time | SWL |
| PM | | 1 | | 1 | 24.76 | 4.76 | 8.9 | 3.3 | 6:40 pm | 20.05 m |
| | | 2 | | 1 | 26.06 | 6.06 | 9.6 | 4.0 | 7:55 pm | 20.03 m |
| | | 3 | | 1 | 26.76 | 6.76 | 8.8 | 3.2 | 8:30 pm | 20.01 m |
| | | 4 | | 1 | 27.00 | 7.00 | 8.7 | 3.1 | | |
| | | 5 | | 1 | 27.43 | 7.43 | 8.9 | 3.2 | | |
| | | 6 | | 1 | 27.88 | 7.88 | 9.2 | 3.6 | | |
| | | 7 | | 1 | 28.06 | 8.06 | 8.9 | 3.3 | | |
| | | 8 | | 1 | 28.21 | 8.21 | 8.8 | 3.2 | | |
| | | 9 | | 1 | 28.36 | 8.36 | 8.8 | 3.2 | | |
| | | 10 | | 1 | 28.47 | 8.47 | 8.8 | 3.2 | | |
| | | 12 | | 2 | 28.63 | 8.63 | 8.8 | 3.2 | | |
| | | 14 | | 2 | 28.76 | 8.76 | 8.8 | 3.2 | | |
| | | 16 | | 2 | 28.87 | 8.87 | 8.8 | 3.2 | | |
| | | 18 | | 2 | 28.95 | 8.95 | 8.8 | 3.2 | | |
| | | 20 | | 2 | 29.02 | 9.02 | 9.0 | 3.4 | | |
| | | 25 | | 5 | 29.04 | 9.04 | 8.7 | 3.1 | | |
| | | 30 | | 5 | 29.14 | 9.14 | 8.8 | 3.2 | | |
| | | 35 | | 5 | 29.20 | 9.20 | 8.8 | 3.2 | | |
| | | 40 | | 5 | 29.25 | 9.25 | 8.8 | 3.2 | | |
| | | 45 | | 5 | 28.93 | 8.93 | 8.4 | 2.9 | | |
| | | 50 | | 5 | 29.38 | 9.38 | 8.8 | 3.2 | | |
| | | 55 | | 5 | 29.83 | 9.83 | 8.7 | 3.1 | | |
| 10:00 | 1 | 00 | | 5 | 30.22 | 10.22 | 8.8 | 3.2 | | |
| PM | 1 | 10 | | 10 | 30.52 | 10.52 | 8.8 | 3.2 | | |
| | 1 | 20 | | 10 | 30.59 | 10.59 | 8.8 | 3.2 | | |
| | 1 | 30 | | 10 | 30.61 | 10.61 | 8.8 | 3.2 | | |
| | 1 | 40 | | 10 | 30.64 | 10.64 | 8.8 | 3.2 | | |
| | 1 | 50 | | 10 | 30.63 | 10.63 | 8.8 | 3.2 | | |
| 11:00 | 2 | 00 | | 10 | 30.64 | 10.64 | 8.8 | 3.2 | | |
| PM | 2 | 15 | | 15 | | | | | | |
| | 2 | 30 | | 15 | | | | | | |
| | 2 | 45 | | 15 | | | | | | |
| | 3 | 00 | | 15 | | | | | | |
| | 3 | 30 | | 30 | | | | | | |
| | 4 | 00 | | 30 | | | | | | |
| | 4 | 30 | | 30 | | | | | | |
| | 5 | 00 | | 30 | | | | | | |

# PUMPING TEST
## (Step Drawdown Test)

TEST NO.: 2

WELL LOCATION: Sucat Elem. School, Muntinlupa (MTL-147)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 20.00 M PWL: 37.60 M
DATE CONDUCTED: Feb. 15, 1991
TIME: 11:00 PM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY: 16.95 l/sec, Flowmeter method
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 15, 1991
TIME: 1:00 AM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | REMARKS |
| 11:00 | | 0 | | 0 | 30.64 | | | | |
| PM | | 1 | | 1 | 31.95 | 11.95 | 10.9 | 5.5 | |
| | | 2 | | 1 | 33.62 | 13.62 | 11.9 | 6.8 | |
| | | 3 | | 1 | 34.31 | 14.31 | 11.9 | 6.8 | |
| | | 4 | | 1 | 34.92 | 14.92 | 11.9 | 6.8 | |
| | | 5 | | 1 | 35.41 | 15.41 | 11.9 | 6.8 | |
| | | 6 | | 1 | 35.64 | 15.64 | 11.8 | 6.7 | |
| | | 7 | | 1 | 35.95 | 15.95 | 11.9 | 6.8 | |
| | | 8 | | 1 | 36.14 | 16.14 | 11.9 | 6.8 | |
| | | 9 | | 1 | 36.31 | 16.31 | 11.9 | 6.8 | |
| | | 10 | | 1 | 36.46 | 16.46 | 11.8 | 6.7 | |
| | | 12 | | 2 | 36.67 | 16.67 | 11.8 | 6.7 | |
| | | 14 | | 2 | 36.91 | 16.91 | 11.8 | 6.7 | |
| | | 16 | | 2 | 37.00 | 17.00 | 11.8 | 6.7 | |
| | | 18 | | 2 | 37.15 | 17.15 | 11.8 | 6.7 | |
| | | 20 | | 2 | 37.26 | 17.26 | 11.8 | 6.7 | |
| | | 25 | | 5 | 37.34 | 17.34 | 11.8 | 6.7 | |
| | | 30 | | 5 | 37.38 | 17.38 | 11.8 | 6.7 | |
| | | 35 | | 5 | 37.46 | 17.46 | 11.8 | 6.7 | |
| | | 40 | | 5 | 37.49 | 17.49 | 11.8 | 6.7 | |
| | | 45 | | 5 | 37.45 | 17.45 | 11.8 | 6.7 | |
| | | 50 | | 5 | 37.43 | 17.43 | 11.8 | 6.7 | |
| | | 55 | | 5 | 37.48 | 17.48 | 11.8 | 6.7 | |
| 12:00 | 1 | 00 | | 5 | 37.51 | 17.51 | 11.8 | 6.7 | |
| MN | 1 | 10 | | 10 | 37.55 | 17.55 | 11.8 | 6.7 | |
| | 1 | 20 | | 10 | 37.56 | 17.56 | 11.9 | 6.8 | |
| | 1 | 30 | | 10 | 37.59 | 17.59 | 11.8 | 6.7 | |
| | 1 | 40 | | 10 | 37.57 | 17.57 | 11.8 | 6.7 | |
| | 1 | 50 | | 10 | 37.61 | 17.61 | 11.8 | 6.7 | |
| 1:00 | 2 | 00 | | 10 | 37.60 | 17.60 | 11.7 | 6.6 | |
| AM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

# PUMPING TEST
(Step Drawdown Test)

## TEST NO.: 3

WELL LOCATION: Sucat Elem. School, Muntinlupa (MTL-147)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 20.00 M PWL: 44.26 M
DATE CONDUCTED: Feb. 16, 1991
TIME: 1:00 AM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY: 16.95 l/sec, Flowmeter method
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 16, 1991
TIME: 3:00 AM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | |
| 1:00 | | 0 | | 0 | 37.60 | 17.60 | | | |
| AM | | 1 | | 1 | 39.81 | 19.81 | 13.9 | 10.1 | |
| | | 2 | | 1 | 40.84 | 20.84 | 13.8 | 9.9 | |
| | | 3 | | 1 | 41.69 | 21.69 | 13.9 | 10.1 | |
| | | 4 | | 1 | 42.49 | 22.49 | 13.9 | 10.1 | |
| | | 5 | | 1 | 42.86 | 22.86 | 13.9 | 10.1 | |
| | | 6 | | 1 | 43.11 | 23.11 | 13.9 | 10.1 | |
| | | 7 | | 1 | 43.27 | 23.27 | 13.9 | 10.1 | |
| | | 8 | | 1 | 43.41 | 23.41 | 13.9 | 10.1 | |
| | | 9 | | 1 | 43.49 | 23.49 | 13.9 | 10.1 | |
| | | 10 | | 1 | 43.54 | 23.54 | 13.9 | 10.1 | |
| | | 12 | | 2 | 43.59 | 23.59 | 13.9 | 10.1 | |
| | | 14 | | 2 | 43.58 | 23.58 | 13.9 | 10.1 | |
| | | 16 | | 2 | 43.70 | 23.70 | 13.9 | 10.1 | |
| | | 18 | | 2 | 43.76 | 23.76 | 13.8 | 9.9 | |
| | | 20 | | 2 | 43.75 | 23.75 | 13.8 | 9.9 | |
| | | 25 | | 5 | 43.80 | 23.80 | 13.8 | 9.9 | |
| | | 30 | | 5 | 43.88 | 23.88 | 13.8 | 9.9 | |
| | | 35 | | 5 | 43.92 | 23.92 | 13.8 | 9.9 | |
| | | 40 | | 5 | 43.96 | 23.96 | 13.8 | 9.9 | |
| | | 45 | | 5 | 43.96 | 23.96 | 13.7 | 9.7 | |
| | | 50 | | 5 | 43.98 | 23.98 | 13.8 | 9.9 | |
| | | 55 | | 5 | 44.03 | 24.03 | 13.8 | 9.9 | |
| 2:00 | 1 | 00 | | 5 | 44.04 | 24.04 | 13.8 | 9.9 | |
| AM | 1 | 10 | | 10 | 44.11 | 24.11 | 13.8 | 9.9 | |
| | 1 | 20 | | 10 | 44.17 | 24.17 | 13.8 | 9.9 | |
| | 1 | 30 | | 10 | 44.22 | 24.22 | 13.8 | 9.9 | |
| | 1 | 40 | | 10 | 44.25 | 24.25 | 13.8 | 9.9 | |
| | 1 | 50 | | 10 | 44.23 | 24.23 | 13.8 | 9.9 | |
| 3:00 | 2 | 00 | | 10 | 44.26 | 24.26 | 13.8 | 9.9 | |
| AM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

# PUMPING TEST
## (Step Drawdown Test)

TEST NO.: 4

WELL LOCATION: Sucat Elem. School, Muntinlupa (MTL-147)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 20.00 M PWL: 48.14 M
DATE CONDUCTED: Feb. 16, 1991
TIME: 3:00 AM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY: 16.95 l/sec, Flowmeter method
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 16, 1991
TIME: 5:00 AM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | REMARKS |
| 3:00 | | 0 | | 0 | 44.26 | 24.26 | | | |
| AM | | 1 | | 1 | 45.73 | 25.73 | 15.2 | 12.6 | |
| | | 2 | | 1 | 47.01 | 27.01 | 15.5 | 13.2 | |
| | | 3 | | 1 | 47.76 | 27.76 | 15.3 | 12.8 | Slightly turbid |
| | | 4 | | 1 | 48.30 | 28.30 | 15.5 | 13.2 | |
| | | 5 | | 1 | 48.80 | 28.80 | 15.5 | 13.2 | |
| | | 6 | | 1 | 48.63 | 28.63 | 15.4 | 13.0 | |
| | | 7 | | 1 | 48.39 | 28.39 | 15.4 | 13.0 | |
| | | 8 | | 1 | 47.89 | 27.89 | 15.4 | 13.0 | |
| | | 9 | | 1 | 47.69 | 27.69 | 15.4 | 13.0 | |
| | | 10 | | 1 | 47.89 | 27.89 | 15.4 | 13.0 | |
| | | 12 | | 2 | 47.78 | 27.78 | 15.4 | 13.0 | |
| | | 14 | | 2 | 47.67 | 27.67 | 15.4 | 13.0 | Becomes clear |
| | | 16 | | 2 | 48.01 | 28.01 | 15.4 | 13.0 | |
| | | 18 | | 2 | 48.09 | 28.09 | 15.4 | 13.0 | |
| | | 20 | | 2 | 48.07 | 28.07 | 15.4 | 13.0 | |
| | | 25 | | 5 | 48.03 | 28.03 | 15.4 | 13.0 | |
| | | 30 | | 5 | 47.97 | 27.97 | 15.4 | 13.0 | |
| | | 35 | | 5 | 48.08 | 28.08 | 15.4 | 13.0 | |
| | | 40 | | 5 | 48.10 | 28.10 | 15.4 | 13.0 | |
| | | 45 | | 5 | 48.12 | 28.12 | 15.4 | 13.0 | |
| | | 50 | | 5 | 48.00 | 28.00 | 15.4 | 13.0 | |
| | | 55 | | 5 | 48.10 | 28.10 | 15.4 | 13.0 | |
| 4:00 | 1 | 00 | | 5 | 48.16 | 28.16 | 15.4 | 13.0 | |
| AM | 1 | 10 | | 10 | 47.95 | 27.95 | 15.4 | 13.0 | |
| | 1 | 20 | | 10 | 47.89 | 27.89 | 15.3 | 12.8 | |
| | 1 | 30 | | 10 | 47.93 | 27.93 | 15.4 | 13.0 | |
| | 1 | 40 | | 10 | 47.90 | 27.90 | 15.4 | 13.0 | |
| | 1 | 50 | | 10 | 48.08 | 28.08 | 15.4 | 13.0 | |
| 5:00 | 2 | 00 | | 10 | 48.14 | 28.14 | 15.4 | 13.0 | |
| AM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

# PUMPING TEST
## (Step Drawdown Test)

TEST NO.: 5

WELL LOCATION: Sucat Elem. School, Muntinlupa (MTL-147)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 20.00 M PWL: 49.97 M
DATE CONDUCTED: Feb. 16, 1991
TIME: 5:00 AM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY: 16.95 l/sec, Flowmeter method
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 16, 1991
TIME: 7:00 AM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | REMARKS |
| 5:00 | | 0 | | 0 | 48.14 | 28.14 | | | |
| AM | | 1 | | 1 | 48.61 | 28.61 | 15.7 | 13.7 | |
| | | 2 | | 1 | 48.78 | 28.78 | 15.7 | 13.7 | Water has many |
| | | 3 | | 1 | 48.96 | 28.96 | 15.7 | 13.7 | air bubbles |
| | | 4 | | 1 | 49.55 | 29.55 | 15.7 | 13.7 | |
| | | 5 | | 1 | 49.62 | 29.62 | 15.8 | 13.9 | |
| | | 6 | | 1 | 49.71 | 29.71 | 15.7 | 13.7 | |
| | | 7 | | 1 | 49.94 | 29.94 | 15.7 | 13.7 | |
| | | 8 | | 1 | 49.96 | 29.96 | 15.8 | 13.9 | |
| | | 9 | | 1 | 50.03 | 30.03 | 15.8 | 13.9 | |
| | | 10 | | 1 | 50.06 | 30.06 | 15.7 | 13.7 | |
| | | 12 | | 2 | 50.05 | 30.05 | 15.7 | 13.7 | |
| | | 14 | | 2 | 50.06 | 30.06 | 15.7 | 13.7 | |
| | | 16 | | 2 | 50.03 | 30.03 | 15.7 | 13.7 | |
| | | 18 | | 2 | 50.05 | 30.05 | 15.7 | 13.7 | |
| | | 20 | | 2 | 50.01 | 30.01 | 15.8 | 13.9 | |
| | | 25 | | 5 | 50.08 | 30.08 | 15.7 | 13.7 | |
| | | 30 | | 5 | 49.99 | 29.99 | 15.7 | 13.7 | |
| | | 35 | | 5 | 50.01 | 30.01 | 15.7 | 13.7 | |
| | | 40 | | 5 | 50.08 | 30.08 | 15.7 | 13.7 | |
| | | 45 | | 5 | 50.01 | 30.01 | 15.7 | 13.7 | |
| | | 50 | | 5 | 50.03 | 30.03 | 15.7 | 13.7 | |
| | | 55 | | 5 | 50.15 | 30.15 | 15.7 | 13.7 | |
| 6:00 | 1 | 00 | | 5 | 50.15 | 30.15 | 15.7 | 13.7 | |
| AM | 1 | 10 | | 10 | 50.64 | 30.64 | 15.7 | 13.7 | |
| | 1 | 20 | | 10 | 49.16 | 29.16 | 15.7 | 13.7 | |
| | 1 | 30 | | 10 | 50.01 | 30.01 | 15.7 | 13.7 | |
| | 1 | 40 | | 10 | 50.28 | 30.28 | 15.7 | 13.7 | |
| | 1 | 50 | | 10 | 50.64 | 30.64 | 15.7 | 13.7 | |
| 7:00 | 2 | 00 | | 10 | 49.97 | 29.97 | 15.7 | 13.7 | |
| AM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: Sto. Domingo, Cainta (CTA-18)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: 350 mm (14") RISER PIPE: DIA.75mm (3") L: 96 m

SWL: 64.31 mbmp PWL:

DATE CONDUCTED: 0830 hrs, 15 Feb. 1991 DATE COMPLETED: 0430 hrs 16 February 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| | 0 | | 0 | 64.31 | 0 | | | |
| | 1 | | 1 | 76.14 | 11.83 | | | |
| | 2 | | 1 | 82.55 | 18.24 | | | |
| | 3 | | 1 | 87.48 | 23.17 | | | |
| | 4 | | 1 | 90.84 | 26.53 | 12.4 cm | 7.6 | |
| | 5 | | 1 | 92.81 | 28.50 | 12.4 | 7.6 | |
| | 6 | | 1 | 94.11 | 29.80 | 11.9 | 6.8 | |
| | 7 | | 1 | 94.92 | 30.61 | 11.4 | 6.1 | |
| | 8 | | 1 | 95.60 | 31.29 | 11.0 | 5.6 | |
| | 9 | | 1 | 95.61 | 31.30 | 10.9 | 5.5 | |
| | 10 | | 1 | 95.51 | 31.20 | 10.8 | 5.4 | |
| | 12 | | 2 | 95.51 | 31.20 | 10.5 | 5.0 | |
| | 14 | | 2 | 95.58 | 31.27 | 10.7 | 5.2 | |
| | 16 | | 2 | 95.64 | 31.33 | 11.1 | 5.7 | |
| | 18 | | 2 | 95.73 | 31.42 | 11.5 | 6.3 | |
| | 20 | | 2 | 95.76 | 31.45 | 11.0 | 5.6 | |
| | 25 | | 5 | 95.73 | 31.42 | 10.9 | 5.5 | |
| | 30 | | 5 | 95.75 | 31.44 | 10.8 | 5.4 | |
| | 35 | | 5 | 95.77 | 31.46 | 10.8 | 5.4 | |
| | 40 | | 5 | 95.73 | 31.42 | 10.8 | 5.4 | |
| | 45 | | 5 | 95.80 | 31.49 | 10.4 | 4.9 | |
| | 50 | | 5 | 95.74 | 31.43 | 10.4 | 4.9 | |
| | 55 | | 5 | 95.76 | 31.45 | 10.3 | 4.8 | |
| 1 | 00 | | 5 | 95.76 | 31.45 | 10.2 | 4.7 | |
| 1 | 10 | | 10 | 95.75 | 31.44 | 10.4 | 4.9 | |
| 1 | 20 | | 10 | 95.80 | 31.49 | 10.6 | 5.1 | |
| 1 | 30 | | 10 | 95.78 | 31.47 | 10.6 | 5.1 | |
| 1 | 40 | | 10 | 95.74 | 31.43 | 10.4 | 4.9 | |
| 1 | 50 | | 10 | 95.74 | 31.43 | 10.5 | 5.0 | |
| 2 | 00 | | 10 | 95.71 | 31.40 | 10.6 | 5.1 | |
| 2 | 15 | | 15 | 95.75 | 31.44 | 10.3 | 4.8 | |
| 2 | 30 | | 15 | 95.69 | 31.38 | 10.3 | 4.8 | |
| 2 | 45 | | 15 | 95.72 | 31.41 | 10.3 | 4.8 | |
| 3 | 00 | | 15 | 95.74 | 31.43 | 10.3 | 4.8 | |
| 3 | 30 | | 30 | 95.77 | 31.46 | 10.3 | 4.8 | |
| 4 | 00 | | 30 | 95.78 | 31.47 | 10.7 | 5.2 | |
| 4 | 30 | | 30 | 95.78 | 31.47 | 10.5 | 5.0 | |
| 5 | 00 | | 30 | 95.76 | 31.45 | 10.5 | 5.0 | |

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 6 | 00 | 1 | 00 | 95.71 | 31.40 | 10.4 | 4.9 | |
| 7 | 00 | 1 | 00 | 95.70 | 31.39 | 10.4 | 4.9 | |
| 8 | 00 | 1 | 00 | 95.66 | 31.35 | 10.4 | 4.9 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 16 February 1991 (CTA-18)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 95.66 | 31.35 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 85.63 | 21.32 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 79.65 | 15.34 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 75.18 | 10.87 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 71.91 | 7.60 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 70.24 | 5.93 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 68.71 | 4.40 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 67.42 | 3.11 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 66.60 | 2.29 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 66.04 | 1.73 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 65.69 | 1.38 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 65.17 | 0.86 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 64.91 | 0.60 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 64.77 | 0.46 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 64.65 | 0.34 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 64.56 | 0.25 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 64.49 | 0.18 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 64.45 | 0.14 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 64.39 | 0.08 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 64.36 | 0.05 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 64.35 | 0.04 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 64.35 | 0.04 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 64.34 | 0.03 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 64.34 | 0.03 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 64.33 | 0.02 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 64.33 | 0.02 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 64.33 | 0.02 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 34.62 | 0.01 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 34.62 | 0.01 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 34.62 | 0.01 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 34.62 | 0.01 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 34.62 | 0.01 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 34.62 | 0.01 | | | | | | |
| 3 | 00 | | 15 | 34.62 | 0.01 | | | | | | |
| 3 | 30 | | 30 | 34.62 | 0.01 | | | | | | |
| 4 | 00 | | 30 | 34.62 | 0.01 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: ANTIPOLO NO. 2

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: 200 m EQUIPMENT CAPACITY:

CASING DIAMETER: 4" dia. RISER PIPE: DIA. L:

SWL: 34.00 m PWL:

DATE CONDUCTED: March 12, 1991 DATE COMPLETED:

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbql) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 34.00 | | | | |
| | 1 | | 1 | 57.26 | 23.26 | | | |
| | 2 | | 1 | 62.28 | 28.28 | 5.80 | 1.13 | |
| | 3 | | 1 | 64.70 | 30.70 | 5.70 | 1.09 | |
| | 4 | | 1 | 68.16 | 34.56 | 5.70 | 1.09 | |
| | 5 | | 1 | 70.86 | 36.86 | 5.70 | 1.09 | |
| | 6 | | 1 | 72.82 | 38.82 | 5.60 | 1.04 | |
| | 7 | | 1 | 74.39 | 40.39 | 5.50 | 0.99 | |
| | 8 | | 1 | 75.45 | 41.45 | 5.40 | 0.95 | |
| | 9 | | 1 | 76.20 | 42.20 | 5.38 | 0.95 | |
| | 10 | | 1 | 76.68 | 42.68 | 5.40 | 0.95 | |
| | 12 | | 2 | 77.14 | 43.14 | 5.40 | 0.95 | |
| | 14 | | 2 | 77.86 | 43.86 | 5.40 | 0.95 | |
| | 16 | | 2 | 78.31 | 44.31 | 5.30 | 0.91 | |
| | 18 | | 2 | 78.68 | 44.68 | 5.30 | 0.91 | |
| | 20 | | 2 | 78.74 | 44.74 | 5.20 | 0.91 | |
| | 25 | | 5 | 79.04 | 45.04 | 5.30 | 0.91 | |
| | 30 | | 5 | 79.42 | 45.42 | 5.20 | 0.86 | |
| | 35 | | 5 | 79.55 | 45.55 | 5.20 | 0.86 | |
| | 40 | | 5 | 79.71 | 45.71 | 5.20 | 0.86 | |
| | 45 | | 5 | 79.76 | 45.76 | 5.20 | 0.86 | |
| | 50 | | 5 | 79.85 | 45.85 | 5.20 | 0.86 | |
| | 55 | | 5 | 79.97 | 45.97 | 5.20 | 0.86 | |
| 1 | 00 | | 5 | 79.90 | 45.90 | 5.30 | 0.91 | |
| 1 | 10 | | 10 | 80.10 | 46.10 | 5.30 | 0.91 | |
| 1 | 20 | | 10 | 80.21 | 46.21 | 5.30 | 0.91 | |
| 1 | 30 | | 10 | 80.50 | 46.50 | 5.30 | 0.91 | |
| 1 | 40 | | 10 | 80.53 | 46.53 | 5.30 | 0.91 | |
| 1 | 50 | | 10 | 80.67 | 46.67 | 5.30 | 0.91 | |
| 2 | 00 | | 10 | 80.54 | 46.54 | 5.30 | 0.91 | |
| 2 | 15 | | 15 | 80.56 | 46.56 | 5.20 | 0.86 | |
| 2 | 30 | | 15 | 80.56 | 46.56 | 5.30 | 0.91 | |
| 2 | 45 | | 15 | 80.48 | 46.48 | 5.30 | 0.91 | |
| 3 | 00 | | 15 | 80.42 | 46.42 | 5.20 | 0.86 | |
| 3 | 30 | | 30 | 80.82 | 46.82 | 5.30 | 0.91 | |
| 4 | 00 | | 30 | 80.83 | 46.83 | 5.20 | 0.91 | |
| 4 | 30 | | 30 | 81.26 | 47.26 | 5.30 | 0.91 | |
| 5 | 00 | | 30 | 81.07 | 47.07 | 5.30 | 0.91 | |

ANTIPOLO # 2

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| 6 | 00 | 1 | 00 | 81.20 | 47.20 | 5.20 | | |
| 7 | 00 | 1 | 00 | 81.48 | 47.48 | 5.30 | | |
| 8 | 00 | 1 | 00 | 80.58 | 46.58 | 5.20 | | |
| 9 | 00 | 1 | 00 | 80.99 | 46.99 | 5.20 | | |
| 10 | 00 | 1 | 00 | 80.92 | 46.92 | 5.20 | | |
| 12 | 00 | 1 | 00 | 81.05 | 47.05 | 5.10 | | |
| 13 | 00 | 1 | 00 | 81.38 | 47.38 | 5.10 | | |
| 14 | 00 | 1 | 00 | 81.57 | 47.57 | 5.20 | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: NHA-1 Dagat-Dagatan, Navotas (NAV-5)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: 250 mm (10") RISER PIPE: DIA. L:

SWL: 45.54 mbgl PWL:

DATE CONDUCTED: 1300 hrs. 25 Feb. 1991 DATE COMPLETED: 2100 hrs. 25 Feb. 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 45.54 | 0 | 9.2 | 3.6 | |
| | 1 | | 1 | 52.06 | 6.52 | 8.7 | 3.1 | |
| | 2 | | 1 | 55.51 | 9.97 | 8.6 | 3.0 | |
| | 3 | | 1 | 56.10 | 10.56 | 8.4 | 2.9 | |
| | 4 | | 1 | 58.17 | 12.63 | 8.5 | 2.9 | |
| | 5 | | 1 | 59.82 | 14.28 | 8.4 | 2.9 | |
| | 6 | | 1 | 61.32 | 15.78 | 8.4 | 2.9 | |
| | 7 | | 1 | 62.53 | 16.99 | 8.2 | 2.7 | |
| | 8 | | 1 | 63.87 | 18.33 | 8.4 | 2.9 | |
| | 9 | | 1 | 65.01 | 19.47 | 8.5 | 2.9 | |
| | 10 | | 1 | 65.83 | 20.29 | 8.4 | 2.9 | |
| | 12 | | 2 | 66.74 | 21.20 | 8.0 | 2.5 | |
| | 14 | | 2 | 68.06 | 22.52 | 8.4 | 2.9 | |
| | 16 | | 2 | 69.38 | 23.84 | 8.3 | 2.8 | |
| | 18 | | 2 | 70.31 | 24.77 | 8.3 | 2.8 | |
| | 20 | | 2 | 70.91 | 25.37 | 8.3 | 2.8 | |
| | 25 | | 5 | 72.18 | 26.64 | 8.3 | 2.8 | |
| | 30 | | 5 | 73.14 | 27.60 | 8.3 | 2.8 | |
| | 35 | | 5 | 73.72 | 28.18 | 8.2 | 2.7 | |
| | 40 | | 5 | 74.07 | 28.53 | 8.2 | 2.7 | |
| | 45 | | 5 | 74.69 | 29.15 | 8.3 | 2.8 | |
| | 50 | | 5 | 75.09 | 29.55 | 8.3 | 2.8 | |
| | 55 | | 5 | 75.38 | 29.84 | 8.3 | 2.8 | |
| 1 | 00 | | 5 | 75.59 | 30.05 | 8.3 | 2.8 | |
| 1 | 10 | | 10 | 75.98 | 30.44 | 8.3 | 2.8 | |
| 1 | 20 | | 10 | 76.22 | 30.68 | 8.3 | 2.8 | |
| 1 | 30 | | 10 | 76.46 | 30.92 | 8.2 | 2.7 | |
| 1 | 40 | | 10 | 76.63 | 31.09 | 8.3 | 2.8 | |
| 1 | 50 | | 10 | 76.85 | 31.31 | 8.3 | 2.8 | |
| 2 | 00 | | 10 | 77.02 | 31.48 | 8.2 | 2.7 | |
| 2 | 15 | | 15 | 77.42 | 31.88 | 8.2 | 2.7 | |
| 2 | 30 | | 15 | 77.73 | 32.19 | 8.2 | 2.7 | |
| 2 | 45 | | 15 | 78.00 | 32.46 | 8.3 | 2.8 | |
| 3 | 00 | | 15 | 78.24 | 32.70 | 8.3 | 2.8 | |
| 3 | 30 | | 30 | 78.72 | 33.18 | 8.2 | 2.7 | |
| 4 | 00 | | 30 | 79.16 | 33.62 | 8.2 | 2.7 | |
| 4 | 30 | | 30 | 79.46 | 33.92 | 8.2 | 2.7 | |
| 5 | 00 | | 30 | 79.68 | 34.14 | 8.2 | 2.7 | |

NAV-5

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| 6 | 00 | 1 | 00 | 79.97 | 34.43 | 8.2 | 2.7 | |
| 7 | 00 | 1 | 00 | 80.15 | 34.61 | 8.2 | 2.7 | |
| 8 | 00 | 1 | 00 | 80.30 | 34.76 | 8.2 | 2.7 | |
| 9 | 00 | 1 | 00 | 80.46 | 34.92 | 8.2 | 2.7 | |
| 10 | 00 | 1 | 00 | 80.63 | 35.09 | 8.2 | 2.7 | |
| 12 | 00 | 1 | 00 | 80.74 | 35.20 | 8.2 | 2.7 | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 25 FEB. 1991 (NAV-5)

| TIME | | INTERVAL | | WATER LEVEL | RESIDUAL DRAWDOWN | TIME | | INTERVAL | | WATER LEVEL | RESIDUAL DRAWDOWN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | (m) | (m) | HOUR | M. | HOUR | M. | (m) | (m) |
| | 0 | | 0 | 80.74 | 35.2 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 77.25 | 31.71 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 74.42 | 28.88 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 71.87 | 26.33 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 69.98 | 24.44 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 68.11 | 22.57 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 66.43 | 20.89 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 65.10 | 19.56 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 63.99 | 18.45 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 62.90 | 17.36 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 61.99 | 16.45 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 60.53 | 14.99 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 59.48 | 13.94 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 58.59 | 13.05 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 58.03 | 12.49 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 57.51 | 11.97 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 56.61 | 11.07 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 56.01 | 10.47 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 55.54 | 10.00 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 55.17 | 9.63 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 54.87 | 9.33 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 54.59 | 9.05 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 54.36 | 8.82 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 54.15 | 8.61 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 53.78 | 8.24 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 53.46 | 7.92 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 53.20 | 7.66 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 52.97 | 7.43 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 52.73 | 7.19 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 52.55 | 7.01 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 52.28 | 6.74 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 52.03 | 6.49 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 51.81 | 6.27 | | | | | | |
| 3 | 00 | | 15 | 51.61 | 6.07 | | | | | | |
| 3 | 30 | | 30 | 51.24 | 5.70 | | | | | | |
| 4 | 00 | | 30 | 50.90 | 5.39 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: Malabon (Catmon) MLB-21

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 106.47 m PWL:

DATE CONDUCTED: March 2, 1991 DATE COMPLETED: March 3, 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 106.47 | | | | |
| | 1 | | 1 | 120.45 | 13.98 | 0 | 0 | |
| | 2 | | 1 | 121.24 | 14.77 | 5.5 | 0.99 | |
| | 3 | | 1 | 121.93 | 15.46 | 8.5 | 2.90 | |
| | 4 | | 1 | 122.54 | 16.07 | 8.5 | 2.90 | |
| | 5 | | 1 | 122.91 | 16.44 | 8.5 | 2.90 | |
| | 6 | | 1 | 123.28 | 16.81 | 8.5 | 2.90 | |
| | 7 | | 1 | 123.59 | 17.12 | 8.5 | 2.90 | |
| | 8 | | 1 | 124.00 | 17.53 | 8.4 | 2.90 | |
| | 9 | | 1 | 124.17 | 17.70 | 8.3 | 2.80 | |
| | 10 | | 1 | 124.29 | 17.82 | 8.3 | 2.80 | |
| | 12 | | 2 | 124.61 | 18.14 | 8.2 | 2.70 | |
| | 14 | | 2 | 124.92 | 18.45 | 8.2 | 2.70 | |
| | 16 | | 2 | 125.25 | 18.78 | 8.2 | 2.70 | |
| | 18 | | 2 | 125.40 | 18.93 | 8.1 | 2.60 | |
| | 20 | | 2 | 125.62 | 19.15 | 8.1 | 2.60 | |
| | 25 | | 5 | 125.89 | 19.42 | 8.1 | 2.60 | |
| | 30 | | 5 | 126.16 | 19.69 | 8.1 | 2.60 | |
| | 35 | | 5 | 126.29 | 19.82 | 8.1 | 2.60 | |
| | 40 | | 5 | 126.45 | 19.98 | 8.1 | 2.60 | |
| | 45 | | 5 | 126.50 | 20.03 | 8.1 | 2.60 | |
| | 50 | | 5 | 126.58 | 20.11 | 8.1 | 2.60 | |
| | 55 | | 5 | 126.54 | 20.07 | 8.1 | 2.60 | |
| 1 | 00 | | 5 | 126.51 | 20.04 | 8.1 | 2.60 | |
| 1 | 10 | | 10 | 126.49 | 20.02 | 8.2 | 2.70 | |
| 1 | 20 | | 10 | 126.46 | 19.99 | 8.2 | 2.70 | |
| 1 | 30 | | 10 | 126.60 | 20.13 | 8.2 | 2.70 | |
| 1 | 40 | | 10 | 126.65 | 20.18 | 8.2 | 2.70 | |
| 1 | 50 | | 10 | 126.68 | 20.21 | 8.2 | 2.70 | |
| 2 | 00 | | 10 | 126.72 | 20.25 | 8.1 | 2.60 | |
| 2 | 15 | | 15 | 127.00 | 20.53 | 8.1 | 2.60 | |
| 2 | 30 | | 15 | 127.20 | 20.73 | 8.1 | 2.60 | |
| 2 | 45 | | 15 | 127.25 | 20.78 | 8.1 | 2.60 | |
| 3 | 00 | | 15 | 127.35 | 20.88 | 8.1 | 2.60 | |
| 3 | 30 | | 30 | 127.45 | 20.98 | 8.1 | 2.60 | |
| 4 | 00 | | 30 | 127.68 | 21.21 | 8.1 | 2.60 | |
| 4 | 30 | | 30 | 127.78 | 21.31 | 8.1 | 2.60 | |
| 5 | 00 | | 30 | 127.87 | 21.40 | 8.1 | 2.60 | |

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 6 | 00 | 1 | 00 | 128.19 | 21.72 | 8.1 | 2.60 | |
| 7 | 00 | 1 | 00 | 128.29 | 21.82 | 8.1 | 2.60 | |
| 8 | 00 | 1 | 00 | 128.45 | 21.98 | 8.1 | 2.60 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: March 3, 1991 (MLB-21)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 128.45 | 21.98 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 124.74 | 18.27 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 121.64 | 15.17 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 119.48 | 13.01 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 118.05 | 11.58 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 117.17 | 10.70 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 116.36 | 9.89 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 115.88 | 9.41 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 115.25 | 8.78 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 114.85 | 8.38 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 114.46 | 7.99 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 113.76 | 7.29 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 113.34 | 6.87 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 112.91 | 6.44 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 112.57 | 6.10 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 112.24 | 5.77 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 111.66 | 5.19 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 111.25 | 4.78 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 110.86 | 4.39 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 110.52 | 4.05 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 110.41 | 3.94 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 110.19 | 3.72 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 110.10 | 3.63 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 109.80 | 3.33 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 109.73 | 3.26 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 109.57 | 3.10 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 109.29 | 2.82 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 109.22 | 2.75 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 109.08 | 2.61 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 109.00 | 2.53 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 108.74 | 2.27 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 108.60 | 2.13 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 108.43 | 1.96 | | | | 00 | | |
| 3 | 00 | | 15 | 108.26 | 1.79 | | | | 00 | | |
| 3 | 30 | | 30 | 108.07 | 1.60 | | | | 00 | | |
| 4 | 00 | | 30 | 107.91 | 1.44 | | | | 00 | | |
| 4 | 30 | | 30 | | | | | | 00 | | |
| 5 | 00 | | 30 | | | | | | 00 | | |
| 6 | 00 | 1 | 00 | | | | | | 00 | | |
| 7 | 00 | 1 | 00 | | | | | | 00 | | |
| 8 | 00 | 1 | 00 | | | | | | 00 | | |
| 9 | 00 | 1 | 00 | | | | | | 00 | | |
| 10 | 00 | 1 | 00 | | | | | | 00 | | |
| 11 | 00 | 1 | 00 | | | | | | 00 | | |
| 12 | 00 | 1 | 00 | | | | | | 00 | | |
| 13 | 00 | 1 | 00 | | | | | | 00 | | |
| 14 | 00 | 1 | 00 | | | | | | 00 | | |
| 15 | 00 | 1 | 00 | | | | | | 00 | | |
| 16 | 00 | 1 | 00 | | | | | | 00 | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: SMT-1 Public Market, San Mateo

SITE ELEVATION:

PUMPING EQUIPMENT:

WELL DEPTH: 137.2 m (450')

EQUIPMENT CAPACITY:

CASING DIAMETER: 300 mm (12")

RISER PIPE: DIA.75mm(3") L: 73.17m (240')

SWL: 11.59 mbgl PWL:

DATE CONDUCTED: February 17, 1991

DATE COMPLETED: February 17, 1991

| TIME HOUR | TIME M. | INTERVAL HOUR | INTERVAL M. | WATER LEVEL m(mbgl) | DRAWDOWN (m) | V-NOTCH 90 deg. | DISCHARGE (l/sec) | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | 0 | | 0 | 11.59 | 0 | | | |
| | 1 | | 1 | 17.52 | 5.93 | | | |
| | 2 | | 1 | 18.27 | 6.68 | 17.8 | 18.7 | |
| | 3 | | 1 | 18.37 | 6.78 | 16.6 | 15.7 | |
| | 4 | | 1 | 18.43 | 6.84 | 16.5 | 15.5 | |
| | 5 | | 1 | 18.47 | 6.88 | 16.5 | 15.5 | |
| | 6 | | 1 | 18.54 | 6.95 | 16.4 | 15.2 | |
| | 7 | | 1 | 18.60 | 7.01 | 16.3 | 15.0 | |
| | 8 | | 1 | 18.64 | 7.05 | 16.2 | 14.8 | |
| | 9 | | 1 | 18.69 | 7.10 | 16.3 | 15.0 | |
| | 10 | | 1 | 18.73 | 7.14 | 16.3 | 15.0 | |
| | 12 | | 2 | 18.79 | 7.20 | 16.3 | 15.0 | |
| | 14 | | 2 | 18.72 | 7.13 | 16.5 | 15.5 | |
| | 16 | | 2 | 18.76 | 7.17 | 16.3 | 15.0 | |
| | 18 | | 2 | 18.81 | 7.22 | 16.5 | 15.5 | |
| | 20 | | 2 | 18.83 | 7.24 | 16.4 | 15.2 | |
| | 25 | | 5 | 18.87 | 7.28 | 16.3 | 15.0 | |
| | 30 | | 5 | 18.89 | 7.30 | 16.3 | 15.0 | |
| | 35 | | 5 | 18.94 | 7.35 | 16.4 | 15.2 | |
| | 40 | | 5 | 19.01 | 7.42 | 16.5 | 15.5 | |
| | 45 | | 5 | 19.03 | 7.44 | 16.4 | 15.2 | |
| | 50 | | 5 | 19.06 | 7.47 | 16.4 | 15.2 | |
| | 55 | | 5 | 19.05 | 7.46 | 16.4 | 15.2 | |
| 1 | 00 | | 5 | 19.09 | 7.50 | 16.3 | 15.0 | |
| 1 | 10 | | 10 | 19.16 | 7.54 | 16.4 | 15.2 | |
| 1 | 20 | | 10 | 19.18 | 7.59 | 16.5 | 15.5 | |
| 1 | 30 | | 10 | 19.21 | 7.62 | 16.4 | 15.2 | |
| 1 | 40 | | 10 | 19.24 | 7.65 | 16.3 | 15.0 | |
| 1 | 50 | | 10 | 19.26 | 7.67 | 16.1 | 14.6 | |
| 2 | 00 | | 10 | 19.33 | 7.74 | 16.3 | 15.0 | |
| 2 | 15 | | 15 | 19.31 | 7.72 | 16.6 | 15.7 | |
| 2 | 30 | | 15 | 19.36 | 7.77 | 16.2 | 14.8 | |
| 2 | 45 | | 15 | 19.34 | 7.75 | 16.1 | 14.6 | |
| 3 | 00 | | 15 | 19.36 | 7.77 | 16.2 | 14.8 | |
| 3 | 30 | | 30 | 19.39 | 7.80 | 15.8 | 13.9 | |
| 4 | 00 | | 30 | 19.38 | 7.79 | 15.8 | 13.9 | |
| 4 | 30 | | 30 | 19.44 | 7.85 | 15.6 | 13.5 | |
| 5 | 00 | | 30 | 19.45 | 7.86 | 15.8 | 13.9 | |

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| 6 | 00 | 1 | 00 | 19.47 | 7.88 | 15.8 | 13.9 | |
| 7 | 00 | 1 | 00 | 19.49 | 7.90 | 15.8 | 13.9 | |
| 8 | 00 | 1 | 00 | 19.52 | 7.93 | 15.8 | 13.9 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 17 February 1991 (SMT-1)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 19.52 | 7.93 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 13.01 | 1.42 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 12.79 | 1.20 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 12.70 | 1.11 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 12.65 | 1.06 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 12.60 | 1.01 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 12.56 | 0.97 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 12.52 | 0.93 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 12.49 | 0.90 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 12.46 | 0.87 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 12.44 | 0.85 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 12.40 | 0.81 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 12.36 | 0.77 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 12.32 | 0.73 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 12.29 | 0.70 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 12.26 | 0.67 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 12.20 | 0.61 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 12.15 | 0.56 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 12.10 | 0.51 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 12.06 | 0.47 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 12.03 | 0.44 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 12.00 | 0.41 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 11.97 | 0.38 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 11.94 | 0.35 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 11.90 | 0.31 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 11.86 | 0.27 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 11.82 | 0.23 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 11.80 | 0.21 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 11.77 | 0.18 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 11.74 | 0.16 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 11.72 | 0.13 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 11.70 | 0.11 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 11.67 | 0.08 | | | | | | |
| 3 | 00 | | 15 | 11.65 | 0.06 | | | | | | |
| 3 | 30 | | 30 | 11.62 | 0.03 | | | | | | |
| 4 | 00 | | 30 | 11.60 | 0.01 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Step Drawdown Test)

TEST NO. 1

WELL LOCATION: LAGRO NO. 1 G.C. (GCT-202)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 90.59 m FWL: 92.88 m

DATE CONDUCTED: Feb. 24, 1991 DATE COMPLETED: Feb. 24, 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 90.59 | | | | |
| | 1 | | 1 | 92.51 | 1.92 | 9.80 | 4.20 | |
| | 2 | | 1 | 92.50 | 1.91 | 9.10 | 3.50 | |
| | 3 | | 1 | 92.38 | 1.79 | 8.30 | 2.70 | |
| | 4 | | 1 | 92.32 | 1.73 | 8.10 | 2.60 | |
| | 5 | | 1 | 92.34 | 1.75 | 8.10 | 2.60 | |
| | 6 | | 1 | 92.38 | 1.79 | 8.00 | 2.50 | |
| | 7 | | 1 | 92.39 | 1.80 | 8.00 | 2.50 | |
| | 8 | | 1 | 92.45 | 1.86 | 8.00 | 2.50 | |
| | 9 | | 1 | 92.54 | 1.95 | 8.50 | 2.90 | |
| | 10 | | 1 | 92.64 | 2.05 | 8.70 | 3.10 | |
| | 12 | | 2 | 92.56 | 1.97 | 8.50 | 2.90 | |
| | 14 | | 2 | 92.49 | 1.90 | 8.00 | 2.50 | |
| | 16 | | 2 | 92.51 | 1.92 | 8.20 | 2.70 | |
| | 18 | | 2 | 92.53 | 1.94 | 8.10 | 2.60 | |
| | 20 | | 2 | 92.56 | 1.97 | 8.20 | 2.70 | |
| | 25 | | 5 | 92.59 | 2.00 | 8.10 | 2.60 | |
| | 30 | | 5 | 92.65 | 2.06 | 8.20 | 2.70 | |
| | 35 | | 5 | 92.68 | 2.09 | 8.10 | 2.60 | |
| | 40 | | 5 | 92.70 | 2.11 | 8.10 | 2.60 | |
| | 45 | | 5 | 92.74 | 2.15 | 8.10 | 2.60 | |
| | 50 | | 5 | 92.77 | 2.18 | 8.10 | 2.60 | |
| | 55 | | 5 | 92.78 | 2.19 | 8.10 | 2.60 | |
| 1 | 00 | | 5 | 92.79 | 2.20 | 8.10 | 2.60 | |
| 1 | 10 | | 10 | 92.82 | 2.23 | 8.10 | 2.60 | |
| 1 | 20 | | 10 | 92.84 | 2.25 | 8.10 | 2.60 | |
| 1 | 30 | | 10 | 92.85 | 2.26 | 8.10 | 2.60 | |
| 1 | 40 | | 10 | 92.87 | 2.28 | 8.10 | 2.60 | |
| 1 | 50 | | 10 | 92.87 | 2.28 | 8.10 | 2.60 | |
| 2 | 00 | | 10 | 92.88 | 2.29 | 8.10 | 2.60 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

TEST NO. 2

WELL LOCATION: LAGRO NO. 1 Q.C. (QCT-202)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 90.59 m PWL: 93.89 m

DATE CONDUCTED: Feb. 24, 1991 DATE COMPLETED: Feb. 25, 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 92.88 | | | | |
| | 1 | | 1 | 93.19 | 2.60 | 9.1 | 3.5 | |
| | 2 | | 1 | 93.28 | 2.69 | 9.1 | 3.5 | |
| | 3 | | 1 | 93.31 | 2.72 | 9.1 | 3.5 | |
| | 4 | | 1 | 93.33 | 2.74 | 9.1 | 3.5 | |
| | 5 | | 1 | 93.36 | 2.77 | 9.1 | 3.5 | |
| | 6 | | 1 | 93.37 | 2.78 | 9.1 | 3.5 | |
| | 7 | | 1 | 93.38 | 2.79 | 9.1 | 3.5 | |
| | 8 | | 1 | 93.40 | 2.81 | 9.1 | 3.5 | |
| | 9 | | 1 | 93.41 | 2.82 | 9.1 | 3.5 | |
| | 10 | | 1 | 93.41 | 2.82 | 9.1 | 3.5 | |
| | 12 | | 2 | 93.43 | 2.84 | 9.1 | 3.5 | |
| | 14 | | 2 | 93.46 | 2.87 | 9.1 | 3.5 | |
| | 16 | | 2 | 93.45 | 2.86 | 9.1 | 3.5 | |
| | 18 | | 2 | 93.47 | 2.88 | 9.1 | 3.5 | |
| | 20 | | 2 | 93.47 | 2.88 | 9.1 | 3.5 | |
| | 25 | | 5 | 93.50 | 2.91 | 9.1 | 3.5 | |
| | 30 | | 5 | 93.51 | 2.92 | 9.1 | 3.5 | |
| | 35 | | 5 | 93.53 | 2.94 | 9.1 | 3.5 | |
| | 40 | | 5 | 93.54 | 2.95 | 9.1 | 3.5 | |
| | 45 | | 5 | 93.56 | 2.97 | 9.1 | 3.5 | |
| | 50 | | 5 | 93.56 | 2.97 | 9.1 | 3.5 | |
| | 55 | | 5 | 93.57 | 2.98 | 9.1 | 3.5 | |
| 1 | 00 | | 5 | 93.59 | 3.00 | 9.1 | 3.5 | |
| 1 | 10 | | 10 | 93.58 | 2.99 | 9.1 | 3.5 | |
| 1 | 20 | | 10 | 93.60 | 3.01 | 9.1 | 3.5 | |
| 1 | 30 | | 10 | 93.61 | 3.02 | 9.1 | 3.5 | |
| 1 | 40 | | 10 | 93.62 | 3.03 | 8.8 | 3.2 | |
| 1 | 50 | | 10 | 93.64 | 3.05 | 8.8 | 3.2 | |
| 2 | 00 | | 10 | 93.89 | 3.30 | 9.1 | 3.5 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

TEST NO. 3

WELL LOCATION: LAGRO NO. 1 G.C. (GCT-202)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 90.59 m PWL: 95.15 m

DATE CONDUCTED: Feb. 25, 1991 DATE COMPLETED: Feb. 25, 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | | | | | |
| | 1 | | 1 | 94.41 | 3.82 | 10.00 | 4.4 | |
| | 2 | | 1 | 94.50 | 3.91 | 10.00 | 4.4 | |
| | 3 | | 1 | 94.60 | 4.01 | 10.10 | 4.5 | |
| | 4 | | 1 | 94.71 | 4.12 | 10.30 | 4.8 | |
| | 5 | | 1 | 94.77 | 4.18 | 10.30 | 4.8 | |
| | 6 | | 1 | 94.73 | 4.14 | 10.10 | 4.5 | |
| | 7 | | 1 | 94.72 | 4.13 | 10.10 | 4.5 | |
| | 8 | | 1 | 94.74 | 4.15 | 10.10 | 4.5 | |
| | 9 | | 1 | 94.76 | 4.17 | 10.10 | 4.5 | |
| | 10 | | 1 | 94.76 | 4.17 | 10.10 | 4.5 | |
| | 12 | | 2 | 94.79 | 4.20 | 10.00 | 4.4 | |
| | 14 | | 2 | 94.81 | 4.22 | 10.00 | 4.4 | |
| | 16 | | 2 | 94.86 | 4.27 | 10.10 | 4.5 | |
| | 18 | | 2 | 94.94 | 4.35 | 10.10 | 4.5 | |
| | 20 | | 2 | 94.98 | 4.39 | 10.20 | 4.7 | |
| | 25 | | 5 | 95.01 | 4.42 | 10.20 | 4.7 | |
| | 30 | | 5 | 94.95 | 4.36 | 10.10 | 4.5 | |
| | 35 | | 5 | 94.96 | 4.37 | 10.00 | 4.4 | |
| | 40 | | 5 | 94.98 | 4.39 | 10.00 | 4.4 | |
| | 45 | | 5 | 94.99 | 4.40 | 10.10 | 4.5 | |
| | 50 | | 5 | 95.00 | 4.41 | 10.00 | 4.0 | |
| | 55 | | 5 | 95.02 | 4.43 | 10.00 | 4.0 | |
| 1 | 00 | | 5 | 95.04 | 4.45 | 10.00 | 4.0 | |
| 1 | 10 | | 10 | 95.05 | 4.46 | 10.00 | 4.0 | |
| 1 | 20 | | 10 | 95.08 | 4.49 | 10.00 | 4.0 | |
| 1 | 30 | | 10 | 95.12 | 4.53 | 10.00 | 4.0 | |
| 1 | 40 | | 10 | 95.14 | 4.55 | 10.00 | 4.0 | |
| 1 | 50 | | 10 | 95.15 | 4.56 | 10.00 | 4.0 | |
| 2 | 00 | | 10 | 95.15 | 4.56 | 10.00 | 4.0 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

TEST NO.: 4

WELL LOCATION: LAGRO NO. 1 Q.C. (QCT-202)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 90.59 m PWL: 96.41 m

DATE CONDUCTED: Feb. 25, 1991 DATE COMPLETED: Feb. 25, 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | | | | | |
| | 1 | | 1 | 95.75 | 5.16 | 10.90 | 5.5 | |
| | 2 | | 1 | 95.83 | 5.24 | 10.90 | 5.5 | |
| | 3 | | 1 | 95.89 | 5.30 | 11.00 | 5.6 | |
| | 4 | | 1 | 95.92 | 5.33 | 10.90 | 5.5 | |
| | 5 | | 1 | 95.93 | 5.34 | 10.90 | 5.5 | |
| | 6 | | 1 | 95.96 | 5.37 | 10.90 | 5.5 | |
| | 7 | | 1 | 95.98 | 5.39 | 10.90 | 5.5 | |
| | 8 | | 1 | 96.00 | 5.41 | 10.90 | 5.5 | |
| | 9 | | 1 | 96.01 | 5.42 | 10.90 | 5.5 | |
| | 10 | | 1 | 96.02 | 5.43 | 10.90 | 5.5 | |
| | 12 | | 2 | 96.06 | 5.47 | 10.90 | 5.5 | |
| | 14 | | 2 | 96.08 | 5.49 | 10.90 | 5.5 | |
| | 16 | | 2 | 96.12 | 5.53 | 10.90 | 5.5 | |
| | 18 | | 2 | 96.12 | 5.53 | 10.90 | 5.5 | |
| | 20 | | 2 | 96.15 | 5.56 | 10.90 | 5.5 | |
| | 25 | | 5 | 96.19 | 5.60 | 10.90 | 5.5 | |
| | 30 | | 5 | 96.20 | 5.61 | 10.90 | 5.5 | |
| | 35 | | 5 | 96.21 | 5.62 | 10.80 | 5.4 | |
| | 40 | | 5 | 96.22 | 5.63 | 10.80 | 5.4 | |
| | 45 | | 5 | 96.25 | 5.66 | 10.70 | 5.2 | |
| | 50 | | 5 | 96.25 | 5.66 | 10.70 | 5.2 | |
| | 55 | | 5 | 96.27 | 5.68 | 10.70 | 5.2 | |
| 1 | 00 | | 5 | 96.28 | 5.69 | 10.70 | 5.2 | |
| 1 | 10 | | 10 | 96.33 | 5.74 | 10.80 | 5.4 | |
| 1 | 20 | | 10 | 96.33 | 5.74 | 10.80 | 5.4 | |
| 1 | 30 | | 10 | 96.37 | 5.78 | 10.80 | 5.4 | |
| 1 | 40 | | 10 | 96.37 | 5.78 | 10.80 | 5.4 | |
| 1 | 50 | | 10 | 96.39 | 5.80 | 10.80 | 5.4 | |
| 2 | 00 | | 10 | 96.41 | 5.82 | 10.80 | 5.4 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

TEST NO.: 5

WELL LOCATION: LAGRO NO. 1 O.C. (OCT-202)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 90.59 m PWL 98.07 m

DATE CONDUCTED: Feb. 25, 1991 DATE COMPLETED: Feb. 25, 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | | | | | |
| | 1 | | 1 | 97.33 | 6.74 | 11.90 | 6.8 | |
| | 2 | | 1 | 97.46 | 6.87 | 11.90 | 6.8 | |
| | 3 | | 1 | 97.55 | 6.96 | 12.00 | 7.0 | |
| | 4 | | 1 | 97.49 | 6.90 | 11.80 | 6.7 | |
| | 5 | | 1 | 97.49 | 6.90 | 11.70 | 6.6 | |
| | 6 | | 1 | 97.50 | 6.91 | 11.70 | 6.6 | |
| | 7 | | 1 | 97.50 | 6.91 | 11.70 | 6.6 | |
| | 8 | | 1 | 97.51 | 6.92 | 11.70 | 6.6 | |
| | 9 | | 1 | 97.53 | 6.94 | 11.60 | 6.4 | |
| | 10 | | 1 | 97.54 | 6.95 | 11.70 | 6.6 | |
| | 12 | | 2 | 97.55 | 6.96 | 11.70 | 6.6 | |
| | 14 | | 2 | 97.60 | 7.01 | 11.80 | 6.7 | |
| | 16 | | 2 | 97.62 | 7.03 | 11.70 | 6.6 | |
| | 18 | | 2 | 97.65 | 7.06 | 11.70 | 6.6 | |
| | 20 | | 2 | 97.66 | 7.07 | 11.70 | 6.6 | |
| | 25 | | 5 | 97.71 | 7.12 | 11.70 | 6.6 | |
| | 30 | | 5 | 97.73 | 7.14 | 11.70 | 6.6 | |
| | 35 | | 5 | 97.77 | 7.18 | 11.70 | 6.6 | |
| | 40 | | 5 | 97.79 | 7.20 | 11.70 | 6.6 | |
| | 45 | | 5 | 97.84 | 7.25 | 11.70 | 6.6 | |
| | 50 | | 5 | 97.86 | 7.27 | 11.70 | 6.6 | |
| | 55 | | 5 | 97.88 | 7.29 | 11.70 | 6.6 | |
| 1 | 00 | | 5 | 97.89 | 7.30 | 11.80 | 6.7 | |
| 1 | 10 | | 10 | 97.90 | 7.31 | 11.70 | 6.6 | |
| 1 | 20 | | 10 | 97.95 | 7.36 | 11.70 | 6.6 | |
| 1 | 30 | | 10 | 97.99 | 7.40 | 11.70 | 6.6 | |
| 1 | 40 | | 10 | 98.01 | 7.42 | 11.70 | 6.6 | |
| 1 | 50 | | 10 | 98.04 | 7.45 | 11.70 | 6.6 | |
| 2 | 00 | | 10 | 98.07 | 7.48 | 11.70 | 6.6 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: LAGRO NO. 1 Q.C. (QCT-202)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 90.04 m PWL: 96.76 m

DATE CONDUCTED: Feb. 25, 1991 DATE COMPLETED: Feb. 26, 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 90.04 | | | | |
| | 1 | | 1 | 93.20 | 3.16 | 11.50 | 6.3 | |
| | 2 | | 1 | 93.53 | 3.49 | 10.90 | 5.5 | |
| | 3 | | 1 | 93.88 | 3.84 | 11.00 | 5.5 | |
| | 4 | | 1 | 94.06 | 4.02 | 10.90 | 5.5 | |
| | 5 | | 1 | 94.21 | 4.17 | 11.00 | 5.5 | |
| | 6 | | 1 | 94.33 | 4.29 | 10.90 | 5.5 | |
| | 7 | | 1 | 94.43 | 4.39 | 10.90 | 5.5 | |
| | 8 | | 1 | 94.50 | 4.46 | 10.90 | 5.5 | |
| | 9 | | 1 | 94.58 | 4.54 | 10.90 | 5.5 | |
| | 10 | | 1 | 94.64 | 4.60 | 10.90 | 5.5 | |
| | 12 | | 2 | 94.74 | 4.70 | 10.80 | 5.4 | |
| | 14 | | 2 | 94.87 | 4.83 | 10.90 | 5.5 | |
| | 16 | | 2 | 94.95 | 4.91 | 10.90 | 5.5 | |
| | 18 | | 2 | 95.02 | 4.98 | 10.90 | 5.5 | |
| | 20 | | 2 | 95.11 | 5.07 | 10.90 | 5.5 | |
| | 25 | | 5 | 95.27 | 5.23 | 10.80 | 5.4 | |
| | 30 | | 5 | 95.40 | 5.36 | 10.90 | 5.5 | |
| | 35 | | 5 | 95.50 | 5.46 | 10.80 | 5.4 | |
| | 40 | | 5 | 95.57 | 5.53 | 10.80 | 5.4 | |
| | 45 | | 5 | 95.75 | 5.71 | 10.90 | 5.5 | |
| | 50 | | 5 | 95.83 | 5.79 | 10.90 | 5.5 | |
| | 55 | | 5 | 95.82 | 5.78 | 10.90 | 5.5 | |
| 1 | 00 | | 5 | 95.81 | 5.77 | 10.90 | 5.5 | |
| 1 | 10 | | 10 | 95.85 | 5.81 | 10.90 | 5.5 | |
| 1 | 20 | | 10 | 95.80 | 5.76 | 10.80 | 5.4 | |
| 1 | 30 | | 10 | 95.82 | 5.78 | 10.90 | 5.5 | |
| 1 | 40 | | 10 | 95.87 | 5.83 | 10.90 | 5.5 | |
| 1 | 50 | | 10 | 95.82 | 5.88 | 10.90 | 5.5 | |
| 2 | 00 | | 10 | 95.94 | 5.90 | 10.90 | 5.5 | |
| 2 | 15 | | 15 | 96.01 | 5.97 | 10.90 | 5.5 | |
| 2 | 30 | | 15 | 96.08 | 6.04 | 10.90 | 5.5 | |
| 2 | 45 | | 15 | 96.14 | 6.10 | 10.90 | 5.5 | |
| 3 | 00 | | 15 | 96.19 | 6.15 | 10.90 | 5.5 | |
| 3 | 30 | | 30 | 96.29 | 6.25 | 10.90 | 5.5 | |
| 4 | 00 | | 30 | 96.37 | 6.33 | 10.90 | 5.5 | |
| 4 | 30 | | 30 | 96.45 | 6.41 | 10.90 | 5.5 | |
| 5 | 00 | | 30 | 96.52 | 6.48 | 10.90 | 5.5 | |

OCT-202

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 6 | 00 | 1 | 00 | 96.61 | 6.57 | 10.90 | 5.5 | |
| 7 | 00 | 1 | 00 | 96.70 | 6.66 | 10.90 | 5.5 | |
| 8 | 00 | 1 | 00 | 96.76 | 6.72 | 10.90 | 5.5 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: Feb. 26, 1991 (QCT-202)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | | | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 94.02 | 3.98 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 93.54 | 3.50 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 93.16 | 3.12 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 93.10 | 3.06 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 92.95 | 2.91 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 92.85 | 2.81 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 92.75 | 2.71 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 92.67 | 2.63 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 92.59 | 2.55 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 92.52 | 2.48 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 92.42 | 2.38 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 92.32 | 2.28 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 92.21 | 2.17 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 92.14 | 2.10 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 92.17 | 2.13 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 91.90 | 1.86 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 91.77 | 1.73 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 91.68 | 1.64 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 91.58 | 1.54 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 91.49 | 1.45 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 91.42 | 1.38 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 91.37 | 1.33 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 91.31 | 1.27 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 91.22 | 1.18 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 91.14 | 1.10 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 91.07 | 1.03 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 91.00 | 0.96 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 90.95 | 0.91 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 90.91 | 0.87 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 90.83 | 0.79 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 90.75 | 0.71 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 90.71 | 0.67 | | | | | | |
| 3 | 00 | | 15 | 90.65 | 0.61 | | | | | | |
| 3 | 30 | | 30 | 90.55 | 0.51 | | | | | | |
| 4 | 00 | | 30 | 90.47 | 0.43 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Step Drawdown Test)

WELL LOCATION: San Jose, Montalban, Rizal MTB-1 Step #1

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. 100mm

SWL: 12.76 mbgl PWL:

DATE CONDUCTED: 20 FEB 1991 DATE COMPLETED: 20 FEB 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 12.76 | 0.00 | | | |
| | 1 | | 1 | 13.98 | 1.22 | | | |
| | 2 | | 1 | 14.48 | 1.72 | | | |
| | 3 | | 1 | 14.64 | 1.88 | | | |
| | 4 | | 1 | 14.74 | 1.98 | 8.50 | 2.90 | |
| | 5 | | 1 | 14.80 | 2.04 | 8.50 | 2.90 | |
| | 6 | | 1 | 14.85 | 2.09 | 8.60 | 3.00 | |
| | 7 | | 1 | 14.88 | 2.12 | 8.60 | 3.00 | |
| | 8 | | 1 | 14.91 | 2.15 | 8.50 | 2.90 | |
| | 9 | | 1 | 14.95 | 2.19 | 8.30 | 2.80 | |
| | 10 | | 1 | 14.98 | 2.22 | 8.30 | 2.80 | |
| | 12 | | 2 | 14.99 | 2.23 | 8.50 | 2.90 | |
| | 14 | | 2 | 15.03 | 2.27 | 8.50 | 2.90 | |
| | 16 | | 2 | 15.01 | 2.25 | 8.50 | 2.90 | |
| | 18 | | 2 | 15.02 | 2.26 | 8.50 | 2.90 | |
| | 20 | | 2 | 15.07 | 2.31 | 8.50 | 2.90 | |
| | 25 | | 5 | 15.12 | 2.36 | 8.50 | 2.90 | |
| | 30 | | 5 | 15.15 | 2.39 | 8.50 | 2.90 | |
| | 35 | | 5 | 15.18 | 2.42 | 8.50 | 2.90 | |
| | 40 | | 5 | 15.20 | 2.44 | 8.50 | 2.90 | |
| | 45 | | 5 | 15.26 | 2.50 | 8.50 | 2.90 | |
| | 50 | | 5 | 15.28 | 2.52 | 8.50 | 2.90 | |
| | 55 | | 5 | 15.28 | 2.52 | 8.50 | 2.90 | |
| 1 | 00 | | 5 | 15.31 | 2.55 | 8.50 | 2.90 | |
| 1 | 10 | | 10 | 15.33 | 2.57 | 8.60 | 3.00 | |
| 1 | 20 | | 10 | 15.36 | 2.60 | 8.60 | 3.00 | |
| 1 | 30 | | 10 | 15.37 | 2.61 | 8.60 | 3.00 | |
| 1 | 40 | | 10 | 15.38 | 2.62 | 8.60 | 3.00 | |
| 1 | 50 | | 10 | 15.40 | 2.64 | 8.60 | 3.00 | |
| 2 | 00 | | 10 | 15.41 | 2.65 | 8.60 | 3.00 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

WELL LOCATION: San Jose, Montalban, Rizal (MTB-1) Step #2

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: PWL:

DATE CONDUCTED: 20 FEB 1991 DATE COMPLETED: 21 FEB 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 15.41 | 2.65 | 11.30 | 6.00 | |
| | 1 | | 1 | 16.74 | 3.98 | 11.40 | 6.10 | |
| | 2 | | 1 | 17.34 | 4.58 | 11.30 | 6.00 | |
| | 3 | | 1 | 17.49 | 4.73 | 11.30 | 6.00 | |
| | 4 | | 1 | 17.55 | 4.79 | 11.30 | 6.00 | |
| | 5 | | 1 | 16.74 | 4.87 | 11.30 | 6.00 | |
| | 6 | | 1 | 17.68 | 4.92 | 11.20 | 5.90 | |
| | 7 | | 1 | 17.71 | 4.95 | 11.20 | 5.90 | |
| | 8 | | 1 | 17.75 | 4.99 | 11.20 | 5.90 | |
| | 9 | | 1 | 17.77 | 5.01 | 11.30 | 6.00 | |
| | 10 | | 1 | 17.80 | 5.04 | 11.30 | 6.00 | |
| | 12 | | 2 | 17.84 | 5.08 | 11.30 | 6.00 | |
| | 14 | | 2 | 17.87 | 5.11 | 11.30 | 6.00 | |
| | 16 | | 2 | 17.90 | 5.14 | 11.30 | 6.00 | |
| | 18 | | 2 | 17.92 | 5.16 | 11.30 | 6.00 | |
| | 20 | | 2 | 17.94 | 5.18 | 11.30 | 6.00 | |
| | 25 | | 5 | 18.00 | 5.24 | 11.30 | 6.00 | |
| | 30 | | 5 | 18.05 | 5.29 | 11.40 | 6.10 | |
| | 35 | | 5 | 18.08 | 5.32 | 11.40 | 6.10 | |
| | 40 | | 5 | 18.09 | 5.33 | 11.40 | 6.10 | |
| | 45 | | 5 | 18.12 | 5.36 | 11.30 | 6.00 | |
| | 50 | | 5 | 18.13 | 5.37 | 11.30 | 6.00 | |
| | 55 | | 5 | 18.15 | 5.39 | 11.30 | 6.00 | |
| 1 | 00 | | 5 | 18.18 | 5.42 | 11.40 | 6.10 | |
| 1 | 10 | | 10 | 18.22 | 5.46 | 11.40 | 6.10 | |
| 1 | 20 | | 10 | 18.26 | 5.50 | 11.40 | 6.10 | |
| 1 | 30 | | 10 | 18.27 | 5.51 | 11.40 | 6.10 | |
| 1 | 40 | | 10 | 18.28 | 5.52 | 11.40 | 6.10 | |
| 1 | 50 | | 10 | 18.30 | 5.54 | 11.40 | 6.10 | |
| 2 | 00 | | 10 | 18.32 | 5.56 | 11.30 | 6.00 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

WELL LOCATION: San Jose, Montalban, Rizal (MTB-1) Step #3

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: PWL:

DATE CONDUCTED: 21 FEB 1991 DATE COMPLETED: 21 FEB 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 18.32 | 5.56 | 13.30 | 9.00 | |
| | 1 | | 1 | 19.31 | 6.55 | 13.00 | 8.50 | |
| | 2 | | 1 | 19.52 | 6.76 | 13.00 | 8.50 | |
| | 3 | | 1 | 19.63 | 6.87 | 13.30 | 9.00 | |
| | 4 | | 1 | 19.69 | 6.93 | 13.10 | 8.90 | |
| | 5 | | 1 | 19.76 | 7.00 | 13.30 | 9.00 | |
| | 6 | | 1 | 19.78 | 7.02 | 13.20 | 8.90 | |
| | 7 | | 1 | 19.80 | 7.04 | 13.10 | 8.90 | |
| | 8 | | 1 | 19.85 | 7.09 | 13.10 | 8.90 | |
| | 9 | | 1 | 19.88 | 7.12 | 13.10 | 8.90 | |
| | 10 | | 1 | 19.89 | 7.13 | 13.10 | 8.90 | |
| | 12 | | 2 | 19.93 | 7.17 | 13.10 | 8.90 | |
| | 14 | | 2 | 19.95 | 7.19 | 13.10 | 8.90 | |
| | 16 | | 2 | 19.95 | 7.19 | 13.10 | 8.90 | |
| | 18 | | 2 | 19.98 | 7.22 | 13.40 | 9.20 | |
| | 20 | | 2 | 20.00 | 7.24 | 13.10 | 8.90 | |
| | 25 | | 5 | 20.04 | 7.28 | 13.50 | 9.40 | |
| | 30 | | 5 | 20.08 | 7.32 | 13.40 | 9.20 | |
| | 35 | | 5 | 20.11 | 7.35 | 13.40 | 9.20 | |
| | 40 | | 5 | 20.11 | 7.35 | 13.40 | 9.20 | |
| | 45 | | 5 | 20.12 | 7.36 | 13.40 | 9.20 | |
| | 50 | | 5 | 20.16 | 7.40 | 13.40 | 9.20 | |
| | 55 | | 5 | 20.15 | 7.39 | 13.40 | 9.20 | |
| 1 | 00 | | 5 | 20.18 | 7.42 | 13.40 | 9.20 | |
| 1 | 10 | | 10 | 20.19 | 7.43 | 13.40 | 9.20 | |
| 1 | 20 | | 10 | 20.22 | 7.46 | 13.40 | 9.20 | |
| 1 | 30 | | 10 | 20.24 | 7.48 | 13.40 | 9.20 | |
| 1 | 40 | | 10 | 20.26 | 7.50 | 13.40 | 9.20 | |
| 1 | 50 | | 10 | 20.28 | 7.52 | 13.40 | 9.20 | |
| 2 | 00 | | 10 | 20.30 | 7.54 | 13.40 | 9.20 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

WELL LOCATION: San Jose, Montalban, Rizal (MTB-1) Step #4

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: PWL:

DATE CONDUCTED: 21 FEB 1991 DATE COMPLETED: 21 FEB 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 20.30 | 7.54 | 14.70 | 11.60 | |
| | 1 | | 1 | 21.82 | 9.06 | 14.70 | 11.60 | |
| | 2 | | 1 | 22.39 | 9.63 | 14.60 | 11.40 | |
| | 3 | | 1 | 22.53 | 9.77 | 14.70 | 11.60 | |
| | 4 | | 1 | 22.58 | 9.82 | 14.60 | 11.40 | |
| | 5 | | 1 | 22.67 | 9.91 | 14.60 | 11.40 | |
| | 6 | | 1 | 22.69 | 9.93 | 14.60 | 11.40 | |
| | 7 | | 1 | 22.73 | 9.97 | 14.60 | 11.40 | |
| | 8 | | 1 | 22.74 | 9.98 | 14.70 | 11.60 | |
| | 9 | | 1 | 22.76 | 10.00 | 14.60 | 11.40 | |
| | 10 | | 1 | 22.77 | 10.01 | 14.60 | 11.40 | |
| | 12 | | 2 | 22.80 | 10.04 | 14.70 | 11.60 | |
| | 14 | | 2 | 22.82 | 10.06 | 14.80 | 11.80 | |
| | 16 | | 2 | 22.85 | 10.09 | 14.60 | 11.40 | |
| | 18 | | 2 | 22.88 | 10.12 | 14.70 | 11.60 | |
| | 20 | | 2 | 22.90 | 10.14 | 14.70 | 11.60 | |
| | 25 | | 5 | 22.94 | 10.18 | 14.70 | 11.60 | |
| | 30 | | 5 | 23.01 | 10.25 | 14.70 | 11.60 | |
| | 35 | | 5 | 22.97 | 10.21 | 14.60 | 11.40 | |
| | 40 | | 5 | 23.00 | 10.24 | 14.50 | 11.20 | |
| | 45 | | 5 | 23.01 | 10.25 | 14.50 | 11.20 | |
| | 50 | | 5 | 23.03 | 10.27 | 14.50 | 11.20 | |
| | 55 | | 5 | 23.05 | 10.29 | 14.60 | 11.40 | |
| 1 | 00 | | 5 | 23.06 | 10.30 | 14.50 | 11.20 | |
| 1 | 10 | | 10 | 23.08 | 10.32 | 14.50 | 11.20 | |
| 1 | 20 | | 10 | 23.13 | 10.37 | 14.60 | 11.40 | |
| 1 | 30 | | 10 | 23.14 | 10.38 | 14.50 | 11.20 | |
| 1 | 40 | | 10 | 23.15 | 10.39 | 14.50 | 11.20 | |
| 1 | 50 | | 10 | 23.16 | 10.40 | 14.50 | 11.20 | |
| 2 | 00 | | 10 | 23.17 | 10.41 | 14.50 | 11.20 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: San Jose, Montalban, Rizal (MTB-1)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. 100mm

SWL: 12.57 m PWL: 23.46 m

DATE CONDUCTED: 21 FEB 1991 DATE COMPLETED:

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 12.57 | | | | |
| | 1 | | 1 | 18.37 | 5.80 | 14.00 | 10.30 | |
| | 2 | | 1 | 18.75 | 6.18 | 14.20 | 10.60 | |
| | 3 | | 1 | 19.50 | 6.93 | 14.30 | 10.80 | |
| | 4 | | 1 | 20.08 | 7.51 | 14.40 | 11.00 | |
| | 5 | | 1 | 20.54 | 7.97 | 14.40 | 11.00 | |
| | 6 | | 1 | 20.72 | 8.15 | 14.30 | 10.80 | |
| | 7 | | 1 | 20.87 | 8.30 | 14.40 | 11.00 | |
| | 8 | | 1 | 20.91 | 8.34 | 14.40 | 11.00 | |
| | 9 | | 1 | 21.11 | 8.54 | 14.40 | 11.00 | |
| | 10 | | 1 | 21.19 | 8.62 | 14.40 | 11.00 | |
| | 12 | | 2 | 21.29 | 8.72 | 14.40 | 11.00 | |
| | 14 | | 2 | 21.38 | 8.81 | 14.40 | 11.00 | |
| | 16 | | 2 | 21.46 | 8.89 | 14.30 | 10.80 | |
| | 18 | | 2 | 21.57 | 9.00 | 14.40 | 11.00 | |
| | 20 | | 2 | 21.65 | 9.08 | 14.40 | 11.00 | |
| | 25 | | 5 | 21.77 | 9.20 | 14.30 | 10.80 | |
| | 30 | | 5 | 21.92 | 9.35 | 14.30 | 10.80 | |
| | 35 | | 5 | 22.00 | 9.43 | 14.40 | 11.00 | |
| | 40 | | 5 | 22.25 | 9.68 | 14.40 | 11.00 | |
| | 45 | | 5 | 22.38 | 9.81 | 14.30 | 10.80 | |
| | 50 | | 5 | 22.43 | 9.86 | 14.30 | 10.80 | |
| | 55 | | 5 | 22.49 | 9.92 | 14.30 | 10.80 | |
| 1 | 00 | | 5 | 22.53 | 9.96 | 14.30 | 10.80 | |
| 1 | 10 | | 10 | 22.57 | 10.00 | 14.40 | 11.00 | |
| 1 | 20 | | 10 | 22.65 | 10.08 | 14.30 | 10.80 | |
| 1 | 30 | | 10 | 22.71 | 10.14 | 14.30 | 10.80 | |
| 1 | 40 | | 10 | 22.82 | 10.25 | 14.40 | 11.00 | |
| 1 | 50 | | 10 | 22.88 | 10.31 | 14.30 | 10.80 | |
| 2 | 00 | | 10 | 22.92 | 10.35 | 14.40 | 11.00 | |
| 2 | 15 | | 15 | 22.94 | 10.37 | 14.40 | 11.00 | |
| 2 | 30 | | 15 | 22.96 | 10.39 | 14.30 | 10.80 | |
| 2 | 45 | | 15 | 23.01 | 10.44 | 14.30 | 10.80 | |
| 3 | 00 | | 15 | 23.08 | 10.51 | 14.40 | 11.00 | |
| 3 | 30 | | 30 | 23.11 | 10.54 | 14.40 | 11.00 | |
| 4 | 00 | | 30 | 23.18 | 10.61 | 14.30 | 10.80 | |
| 4 | 30 | | 30 | 23.25 | 10.68 | 14.30 | 10.80 | |
| 5 | 00 | | 30 | 23.25 | 10.68 | 14.30 | 10.80 | |

MTB-1

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| 6 | 00 | 1 | 00 | 23.38 | 10.81 | 14.40 | 11.00 | |
| 7 | 00 | 1 | 00 | 23.43 | 10.86 | 14.40 | 11.00 | |
| 8 | 00 | 1 | 00 | 23.46 | 10.89 | 14.40 | 11.00 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 21 FEB 1991 (MTB-1)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | | | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 17.74 | 5.17 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 16.56 | 3.99 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 15.99 | 3.42 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 15.68 | 3.11 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 15.43 | 2.86 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 15.33 | 2.76 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 15.18 | 2.61 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 15.07 | 2.50 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 14.99 | 2.42 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 14.79 | 2.22 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 14.73 | 2.16 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 14.62 | 2.05 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 14.54 | 1.97 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 14.46 | 1.89 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 14.41 | 1.84 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 14.23 | 1.66 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 14.09 | 1.52 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 13.99 | 1.42 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 13.88 | 1.31 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 13.78 | 1.21 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 13.74 | 1.17 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 13.65 | 1.08 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 13.62 | 1.05 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 13.52 | 0.95 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 13.43 | 0.86 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 13.34 | 0.77 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 13.29 | 0.72 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 13.26 | 0.69 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 13.2 | 0.63 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 13.12 | 0.55 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 13.07 | 0.50 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 13.04 | 0.47 | | | | | | |
| 3 | 00 | | 15 | 12.99 | 0.42 | | | | | | |
| 3 | 30 | | 30 | 12.95 | 0.38 | | | | | | |
| 4 | 00 | | 30 | 12.91 | 0.34 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: EJERCITO, CAVITE CITY (CVC-15)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 33.05 m PWL: 76.1 m

DATE CONDUCTED: Feb. 21, 1991 DATE COMPLETED: Feb. 22, 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 33.05 | | | | |
| | 1 | | 1 | 45.73 | 12.68 | 10.20 | 4.70 | |
| | 2 | | 1 | 55.01 | 21.96 | 11.00 | 5.60 | |
| | 3 | | 1 | 60.63 | 24.42 | 10.20 | 4.70 | |
| | 4 | | 1 | 66.67 | 26.81 | 10.70 | 4.10 | |
| | 5 | | 1 | 66.54 | 28.00 | 7.70 | 2.30 | |
| | 6 | | 1 | 62.42 | 29.37 | 6.50 | 1.51 | |
| | 7 | | 1 | 62.61 | 29.56 | 8.40 | 2.90 | |
| | 8 | | 1 | 63.60 | 30.55 | 8.30 | 2.80 | |
| | 9 | | 1 | 64.25 | 31.20 | 8.20 | 2.70 | |
| | 10 | | 1 | 65.74 | 32.69 | 8.40 | 2.90 | |
| | 12 | | 2 | 67.19 | 34.14 | 8.40 | 2.90 | |
| | 14 | | 2 | 68.00 | 34.95 | 8.30 | 2.80 | |
| | 16 | | 2 | 68.55 | 35.50 | 8.30 | 2.80 | |
| | 18 | | 2 | 69.63 | 36.58 | 8.40 | 2.90 | |
| | 20 | | 2 | 70.90 | 37.40 | 8.40 | 2.90 | |
| | 25 | | 5 | 72.01 | 38.96 | 8.40 | 2.90 | |
| | 30 | | 5 | 72.26 | 39.21 | 8.40 | 2.90 | |
| | 35 | | 5 | 72.65 | 39.60 | 8.40 | 2.90 | |
| | 40 | | 5 | 72.05 | 39.00 | 8.20 | 2.70 | |
| | 45 | | 5 | 73.55 | 40.50 | 8.30 | 2.80 | |
| | 50 | | 5 | 74.12 | 41.07 | 8.30 | 2.80 | |
| | 55 | | 5 | 74.51 | 41.46 | 8.40 | 2.90 | |
| 1 | 00 | | 5 | 74.54 | 41.49 | 8.40 | 2.90 | |
| 1 | 10 | | 10 | 74.94 | 41.89 | 8.40 | 2.90 | |
| 1 | 20 | | 10 | 74.93 | 41.88 | 8.30 | 2.80 | |
| 1 | 30 | | 10 | 75.06 | 42.01 | 8.30 | 2.80 | |
| 1 | 40 | | 10 | 75.23 | 42.18 | 8.30 | 2.80 | |
| 1 | 50 | | 10 | 75.16 | 42.11 | 8.40 | 2.90 | |
| 2 | 00 | | 10 | 75.23 | 42.18 | 8.30 | 2.80 | |
| 2 | 15 | | 15 | 75.15 | 42.10 | 8.30 | 2.80 | |
| 2 | 30 | | 15 | 75.18 | 42.13 | 8.30 | 2.80 | |
| 2 | 45 | | 15 | 74.99 | 41.94 | 8.30 | 2.80 | |
| 3 | 00 | | 15 | 75.17 | 42.12 | 8.30 | 2.80 | |
| 3 | 30 | | 30 | 75.21 | 42.16 | 8.30 | 2.80 | |
| 4 | 00 | | 30 | 75.63 | 42.58 | 8.40 | 2.90 | |
| 4 | 30 | | 30 | 75.81 | 42.76 | 8.40 | 2.90 | |
| 5 | 00 | | 30 | 75.91 | 42.86 | 8.30 | 2.80 | |

CVC-15

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| 6 | 00 | 1 | 00 | 76.02 | 42.97 | 8.20 | 2.70 | |
| 7 | 00 | 1 | 00 | 76.10 | 43.05 | 8.40 | 2.90 | |
| 8 | 00 | 1 | 00 | 76.10 | 43.05 | 8.40 | 2.90 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: Feb. 21, 1991 (CVC-15)

| TIME | | INTERVAL | | WATER LEVEL | RESIDUAL DRAWDOWN | TIME | | INTERVAL | | WATER LEVEL | RESIDUAL DRAWDOWN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | (m) | (m) | HOUR | M. | HOUR | M. | (m) | (m) |
| | 0 | | 0 | | | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 68.10 | 35.05 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 60.01 | 26.96 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 57.13 | 24.08 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 53.94 | 20.89 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 51.76 | 18.71 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 49.30 | 16.25 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 47.95 | 14.90 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 46.43 | 13.38 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 45.25 | 12.20 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 44.28 | 11.23 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 42.76 | 9.71 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 41.61 | 8.56 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 50.67 | 7.62 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 40.07 | 7.02 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 39.54 | 6.49 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 38.43 | 5.38 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 37.79 | 4.74 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 37.10 | 4.05 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 36.56 | 3.51 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 36.26 | 3.21 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 36.12 | 3.07 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 35.82 | 2.77 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 35.61 | 2.56 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 35.28 | 2.23 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 35.06 | 2.01 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 34.77 | 1.72 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 34.50 | 1.45 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 34.36 | 1.31 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 34.24 | 1.19 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 34.12 | 1.07 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 34.00 | 0.95 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 33.84 | 0.79 | | | | | | |
| 3 | 00 | | 15 | 33.71 | 0.66 | | | | | | |
| 3 | 30 | | 30 | 33.45 | 0.40 | | | | | | |
| 4 | 00 | | 30 | 33.24 | 0.19 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: Antipolo, Rizal (ATP-4)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 26.15 m PWL: 44.48 m

DATE CONDUCTED: DATE COMPLETED:

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| | 0 | | 0 | 26.15 | | | | |
| | 1 | | 1 | 37.23 | 11.08 | 9.20 | 3.60 | |
| | 2 | | 1 | 40.39 | 14.24 | 13.40 | 9.20 | |
| | 3 | | 1 | 41.59 | 15.44 | 13.20 | 8.90 | |
| | 4 | | 1 | 42.06 | 15.91 | 13.20 | 8.90 | |
| | 5 | | 1 | 42.49 | 16.34 | 13.10 | 8.90 | |
| | 6 | | 1 | 42.69 | 16.54 | 13.10 | 8.90 | |
| | 7 | | 1 | 42.87 | 16.72 | 13.00 | 8.50 | |
| | 8 | | 1 | 42.98 | 16.83 | 13.00 | 8.50 | |
| | 9 | | 1 | 43.06 | 16.91 | 13.10 | 8.90 | |
| | 10 | | 1 | 43.14 | 16.99 | 13.10 | 8.90 | |
| | 12 | | 2 | 43.22 | 17.07 | 13.00 | 8.50 | |
| | 14 | | 2 | 43.31 | 17.16 | 13.10 | 8.90 | |
| | 16 | | 2 | 43.39 | 17.24 | 13.00 | 8.50 | |
| | 18 | | 2 | 43.45 | 17.30 | 13.00 | 8.50 | |
| | 20 | | 2 | 43.51 | 17.36 | 13.00 | 8.50 | |
| | 25 | | 5 | 43.56 | 17.41 | 13.10 | 8.90 | |
| | 30 | | 5 | 43.65 | 17.50 | 13.10 | 8.90 | |
| | 35 | | 5 | 43.67 | 17.52 | 13.10 | 8.90 | |
| | 40 | | 5 | 43.70 | 17.55 | 13.10 | 8.90 | |
| | 45 | | 5 | 43.73 | 17.58 | 13.20 | 8.90 | |
| | 50 | | 5 | 43.76 | 17.61 | 13.20 | 8.90 | |
| | 55 | | 5 | 43.79 | 17.64 | 13.20 | 8.90 | |
| 1 | 00 | | 5 | 43.83 | 17.68 | 13.20 | 8.90 | |
| 1 | 10 | | 10 | 43.89 | 17.74 | 13.20 | 8.90 | |
| 1 | 20 | | 10 | 43.92 | 17.77 | 13.20 | 8.90 | |
| 1 | 30 | | 10 | 44.05 | 17.90 | 13.10 | 8.90 | |
| 1 | 40 | | 10 | 43.95 | 17.80 | 13.10 | | |
| 1 | 50 | | 10 | 44.02 | 17.87 | 13.10 | | |
| 2 | 00 | | 10 | 44.10 | 17.95 | 13.10 | | |
| 2 | 15 | | 15 | 44.02 | 17.87 | 13.10 | | |
| 2 | 30 | | 15 | 44.15 | 18.00 | 13.10 | | |
| 2 | 45 | | 15 | 44.20 | 18.05 | 13.10 | | |
| 3 | 00 | | 15 | 44.16 | 18.01 | 13.10 | | |
| 3 | 30 | | 30 | 44.29 | 18.14 | 13.10 | | |
| 4 | 00 | | 30 | 44.15 | 18.00 | 13.10 | | |
| 4 | 30 | | 30 | 44.15 | 18.00 | 13.10 | | |
| 5 | 00 | | 30 | 44.29 | 18.14 | 13.10 | | |

ATP-4

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 6 | 00 | 1 | 00 | 44.38 | 18.23 | 13.10 | 8.90 | |
| 7 | 00 | 1 | 00 | 44.44 | 18.29 | 13.10 | 8.90 | |
| 8 | 00 | 1 | 00 | 44.48 | 18.33 | 13.10 | 8.90 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 27 FEB 1991 (ATP-4)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 44.48 | 18.33 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 30.21 | 4.06 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 27.26 | 1.11 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 26.93 | 0.78 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 26.84 | 0.69 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 26.78 | 0.63 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 26.75 | 0.60 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 26.73 | 0.58 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 26.70 | 0.55 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 26.68 | 0.53 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 26.66 | 0.51 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 26.64 | 0.49 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 26.62 | 0.47 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 26.60 | 0.45 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 26.58 | 0.43 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 26.56 | 0.41 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 26.53 | 0.38 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 26.51 | 0.36 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 26.48 | 0.33 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 26.46 | 0.31 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 26.44 | 0.29 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 26.43 | 0.28 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 26.42 | 0.27 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 26.41 | 0.26 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 26.41 | 0.26 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 26.40 | 0.25 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 26.40 | 0.25 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 26.39 | 0.24 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 26.37 | 0.22 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 26.34 | 0.19 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 26.31 | 0.16 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 26.29 | 0.14 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 26.26 | 0.11 | | | | | | |
| 3 | 00 | | 15 | 26.25 | 0.10 | | | | | | |
| 3 | 30 | | 30 | 26.21 | 0.06 | | | | | | |
| 4 | 00 | | 30 | 26.19 | 0.04 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: TUNASAN, MUNTINLUPA ( MTL-149 )

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 9-75m

DATE CONDUCTED: 18 Feb. 1991 DATE COMPLETED: 19 Feb. 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 9.75 | | | | |
| | 1 | | 1 | 11.83 | 2.08 | 10.1 | 4.5 | |
| | 2 | | 1 | 12.59 | 2.84 | 10.1 | 4.5 | |
| | 3 | | 1 | 13.02 | 3.27 | 10.1 | 4.5 | |
| | 4 | | 1 | 13.54 | 3.79 | 10.1 | 4.5 | |
| | 5 | | 1 | 13.92 | 4.07 | 10.1 | 4.5 | |
| | 6 | | 1 | 14.13 | 4.38 | 10.1 | 4.5 | |
| | 7 | | 1 | 14.33 | 4.58 | 10.1 | 4.5 | |
| | 8 | | 1 | 14.59 | 4.04 | 10.1 | 4.5 | |
| | 9 | | 1 | 15.46 | 5.71 | 10.1 | 4.5 | |
| | 10 | | 1 | 15.56 | 5.81 | 10.0 | 4.4 | |
| | 12 | | 2 | 15.62 | 5.87 | 9.8 | 4.2 | |
| | 14 | | 2 | 15.66 | 5.91 | 9.5 | 3.9 | |
| | 16 | | 2 | 15.67 | 5.92 | 9.5 | 3.9 | |
| | 18 | | 2 | 15.67 | 5.92 | 9.5 | 3.9 | |
| | 20 | | 2 | 15.67 | 5.92 | 9.5 | 3.9 | |
| | 25 | | 5 | 15.68 | 5.93 | 9.5 | 3.9 | |
| | 30 | | 5 | 15.72 | 5.97 | 9.4 | 3.8 | |
| | 35 | | 5 | 15.73 | 5.98 | 9.4 | 3.8 | |
| | 40 | | 5 | 15.75 | 6.00 | 9.8 | 4.2 | |
| | 45 | | 5 | 15.75 | 6.00 | 9.8 | 4.2 | |
| | 50 | | 5 | 15.75 | 6.00 | 9.8 | 4.2 | |
| | 55 | | 5 | 15.75 | 6.00 | 9.8 | 4.2 | |
| 1 | 00 | | 5 | 15.75 | 6.00 | 9.8 | 4.2 | |
| 1 | 10 | | 10 | 15.76 | 6.01 | 9.8 | 4.2 | |
| 1 | 20 | | 10 | 15.77 | 6.02 | 9.8 | 4.2 | |
| 1 | 30 | | 10 | 15.76 | 6.01 | 9.8 | 4.2 | |
| 1 | 40 | | 10 | 15.76 | 6.01 | 9.8 | 4.2 | |
| 1 | 50 | | 10 | 15.76 | 6.01 | 9.8 | 4.2 | |
| 2 | 00 | | 10 | 15.76 | 6.01 | 9.8 | 4.2 | |
| 2 | 15 | | 15 | 15.73 | 5.98 | 9.8 | 4.2 | |
| 2 | 30 | | 15 | 15.7 | 5.95 | 9.8 | 4.2 | |
| 2 | 45 | | 15 | 15.74 | 5.99 | 9.8 | 4.2 | |
| 3 | 00 | | 15 | 15.73 | 5.98 | 9.5 | 3.9 | |
| 3 | 30 | | 30 | 15.74 | 5.99 | 9.5 | 3.9 | |
| 4 | 00 | | 30 | 15.74 | 5.99 | 9.5 | 3.9 | |
| 4 | 30 | | 30 | 15.75 | 6.00 | 9.5 | 3.9 | |
| 5 | 00 | | 30 | 15.81 | 6.06 | 9.5 | 3.9 | |

TUNASAN, MUNTINLUPA

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 6 | 00 | 1 | 00 | 15.74 | 5.99 | 9.5 | 3.9 | |
| 7 | 00 | 1 | 00 | 15.74 | 5.99 | 9.5 | 3.9 | |
| 8 | 00 | 1 | 00 | 15.74 | 5.99 | 9.5 | 3.9 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 19 Feb. 1991 (TUNASAN, MUNTINLUPA)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 5.74 | | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 13.86 | 4.09 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 12.62 | 2.87 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 12.31 | 2.56 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 11.98 | 2.23 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 11.69 | 1.94 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 11.47 | 1.72 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 11.27 | 1.52 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 11.12 | 1.37 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 10.99 | 1.24 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 10.87 | 1.12 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 10.70 | 0.95 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 10.55 | 0.80 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 10.47 | 0.72 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 10.44 | 0.69 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 10.36 | 0.61 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 10.30 | 0.55 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 10.26 | 0.51 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 10.24 | 0.49 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 10.23 | 0.48 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 10.22 | 0.47 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 10.21 | 0.46 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 10.18 | 0.43 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 10.15 | 0.40 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 10.15 | 0.40 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 10.15 | 0.40 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 10.15 | 0.40 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 10.14 | 0.39 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 10.14 | 0.39 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 10.14 | 0.39 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 10.14 | 0.39 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 10.13 | 0.38 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 10.13 | 0.38 | | | | | | |
| 3 | 00 | | 15 | 10.13 | 0.38 | | | | | | |
| 3 | 30 | | 30 | 10.11 | 0.36 | | | | | | |
| 4 | 00 | | 30 | 10.10 | 0.35 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: ATP-10 Sanquinsin, Antipolo

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: 141.76m (465') EQUIPMENT CAPACITY:

CASING DIAMETER: 250mm (10") RISER PIPE: DIA. L:

SWL: 12.17 mbgl PWL:

DATE CONDUCTED: 19 Feb. 1991 DATE COMPLETED: 20 Feb. 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 12.17 | | | | |
| | 1 | | 1 | 32.04 | 19.87 | 18.9 | 21.7 | |
| | 2 | | 1 | 37.45 | 25.28 | 18.6 | 20.9 | |
| | 3 | | 1 | 39.42 | 27.25 | 18.3 | 20.1 | |
| | 4 | | 1 | 40.25 | 28.08 | 18.2 | 19.8 | |
| | 5 | | 1 | 40.68 | 28.51 | 18.2 | 19.8 | |
| | 6 | | 1 | 41.03 | 28.86 | 18.2 | 19.8 | |
| | 7 | | 1 | 41.30 | 29.13 | 18.3 | 20.1 | |
| | 8 | | 1 | 41.43 | 29.26 | 18.5 | 20.6 | |
| | 9 | | 1 | 41.51 | 29.34 | 18.4 | 20.3 | |
| | 10 | | 1 | 41.71 | 29.00 | 18.5 | 20.6 | |
| | 12 | | 2 | 41.95 | 29.78 | 18.4 | 20.3 | |
| | 14 | | 2 | 42.14 | 29.97 | 18.4 | 20.3 | |
| | 16 | | 2 | 42.32 | 30.15 | 18.4 | 20.3 | |
| | 18 | | 2 | 42.46 | 30.29 | 18.4 | 20.3 | |
| | 20 | | 2 | 42.65 | 30.48 | 18.3 | 20.1 | |
| | 25 | | 5 | 42.81 | 30.64 | 18.4 | 20.3 | |
| | 30 | | 5 | 42.80 | 30.63 | 18.4 | 20.3 | |
| | 35 | | 5 | 42.88 | 30.71 | 18.4 | 20.3 | |
| | 40 | | 5 | 43.07 | 30.90 | 18.3 | 20.1 | |
| | 45 | | 5 | 43.20 | 31.03 | 18.3 | 20.1 | |
| | 50 | | 5 | 43.08 | 30.91 | 18.3 | 20.1 | |
| | 55 | | 5 | 43.20 | 31.03 | 18.3 | 20.1 | |
| 1 | 00 | | 5 | 43.20 | 31.03 | 18.3 | 20.1 | |
| 1 | 10 | | 10 | 43.44 | 31.27 | 18.3 | 20.1 | |
| 1 | 20 | | 10 | 43.47 | 31.30 | 18.3 | 20.1 | |
| 1 | 30 | | 10 | 43.54 | 31.37 | 18.3 | 20.1 | |
| 1 | 40 | | 10 | 43.51 | 31.34 | 18.3 | 20.1 | |
| 1 | 50 | | 10 | 43.55 | 31.38 | 18.2 | 19.8 | |
| 2 | 00 | | 10 | 43.66 | 31.49 | 18.2 | 19.8 | |
| 2 | 15 | | 15 | 43.76 | 31.59 | 18.2 | 19.8 | |
| 2 | 30 | | 15 | 43.73 | 31.56 | 18.1 | 19.5 | |
| 2 | 45 | | 15 | 43.80 | 31.63 | 18.2 | 19.8 | |
| 3 | 00 | | 15 | 44.04 | 31.87 | 18.2 | 19.8 | |
| 3 | 30 | | 30 | 43.98 | 31.81 | 18.2 | 19.8 | |
| 4 | 00 | | 30 | 44.03 | 31.26 | 18.2 | 19.8 | |
| 4 | 30 | | 30 | 44.05 | 31.88 | 18.2 | 19.8 | |
| 5 | 00 | | 30 | 44.09 | 31.92 | 18.2 | 19.8 | |

ATP-10

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 6 | 00 | 1 | 00 | 44.01 | 31.84 | 18.2 | 19.8 | |
| 7 | 00 | 1 | 00 | 44.14 | 31.97 | 18.2 | 19.8 | |
| 8 | 00 | 1 | 00 | 44.14 | 31.94 | 18.2 | 19.8 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

ATP-10

DATE: 20 Feb. 1991

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 44.11 | 31.94 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 26.24 | 14.07 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 19.20 | 7.03 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 17.54 | 5.37 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 16.45 | 4.28 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 15.80 | 3.63 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 15.33 | 3.16 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 15.00 | 2.83 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 14.76 | 2.59 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 14.60 | 2.43 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 14.46 | 2.29 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 14.22 | 2.05 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 14.02 | 1.85 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 13.85 | 1.68 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 13.71 | 1.54 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 13.61 | 1.44 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 13.39 | 1.22 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 13.24 | 1.07 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 13.12 | 0.85 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 13.03 | 0.86 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 12.95 | 0.78 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 12.88 | 0.71 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 12.84 | 0.67 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 12.78 | 0.61 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 12.69 | 0.52 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 12.62 | 0.45 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 12.57 | 0.40 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 12.52 | 0.35 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 12.48 | 0.31 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 12.44 | 0.27 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 12.39 | 0.22 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 12.35 | 0.18 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 12.31 | 0.14 | | | | | | |
| 3 | 00 | | 15 | 12.29 | 0.12 | | | | | | |
| 3 | 30 | | 30 | 12.24 | 0.07 | | | | | | |
| 4 | 00 | | 30 | 12.19 | 0.02 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Step Drawdown Test)

WELL LOCATION: Escopa, Proj.4. Q.C. QCT-269 Step No. 1

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 105.27m PWL:

DATE CONDUCTED: 22 FEB 1991 DATE COMPLETED: 22 FEB 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 105.27 | | | | |
| | 1 | | 1 | 108.45 | 3.18 | | | |
| | 2 | | 1 | 107.61 | 2.34 | 7.80 | 2.40 | |
| | 3 | | 1 | 107.27 | 2.00 | 8.20 | 2.70 | |
| | 4 | | 1 | 107.19 | 1.92 | 8.20 | 2.70 | |
| | 5 | | 1 | 107.17 | 1.90 | 8.20 | 2.70 | |
| | 6 | | 1 | 107.13 | 1.86 | 8.10 | 2.60 | |
| | 7 | | 1 | 107.10 | 1.83 | 8.10 | 2.60 | |
| | 8 | | 1 | 107.05 | 1.78 | 8.10 | 2.60 | |
| | 9 | | 1 | 106.96 | 1.69 | 8.20 | 2.70 | |
| | 10 | | 1 | 106.96 | 1.69 | 8.20 | 2.70 | |
| | 12 | | 2 | 106.96 | 1.69 | 8.20 | 2.70 | |
| | 14 | | 2 | 106.96 | 1.69 | 8.20 | 2.70 | |
| | 16 | | 2 | 106.96 | 1.69 | 8.10 | 2.60 | |
| | 18 | | 2 | 106.96 | 1.69 | 8.10 | 2.60 | |
| | 20 | | 2 | 106.81 | 1.54 | 8.10 | 2.60 | |
| | 25 | | 5 | 106.66 | 1.39 | 8.00 | 2.50 | |
| | 30 | | 5 | 107.00 | 1.73 | 8.00 | 2.50 | |
| | 35 | | 5 | 107.05 | 1.78 | 8.00 | 2.50 | |
| | 40 | | 5 | 107.08 | 1.81 | 8.10 | 2.60 | |
| | 45 | | 5 | 107.08 | 1.81 | 8.10 | 2.60 | |
| | 50 | | 5 | 107.08 | 1.81 | 8.10 | 2.60 | |
| | 55 | | 5 | 107.06 | 1.79 | 8.10 | 2.60 | |
| 1 | 00 | | 5 | 107.07 | 1.80 | 8.10 | 2.60 | |
| 1 | 10 | | 10 | 107.06 | 1.79 | 8.10 | 2.60 | |
| 1 | 20 | | 10 | 107.06 | 1.79 | 8.10 | 2.60 | |
| 1 | 30 | | 10 | 107.06 | 1.79 | 8.10 | 2.60 | |
| 1 | 40 | | 10 | 107.06 | 1.79 | 8.10 | 2.60 | |
| 1 | 50 | | 10 | 107.07 | 1.80 | 8.10 | 2.60 | |
| 2 | 00 | | 10 | 107.07 | | 8.10 | | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

WELL LOCATION: Escopa Proj.4 Q.C. QCT-269 Step No. 2

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 105.27m PWL:

DATE CONDUCTED: 22 FEB 1991 DATE COMPLETED: 22 FEB 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 107.07 | 1.80 | 8.10 | 2.60 | |
| | 1 | | 1 | 107.99 | 2.72 | 10.60 | 5.10 | |
| | 2 | | 1 | 108.07 | 2.80 | 10.60 | 5.10 | |
| | 3 | | 1 | 108.25 | 2.98 | 10.60 | 5.10 | |
| | 4 | | 1 | 108.28 | 3.01 | 10.60 | 5.10 | |
| | 5 | | 1 | 108.32 | 3.05 | 10.60 | 5.10 | |
| | 6 | | 1 | 108.34 | 3.07 | 10.60 | 5.10 | |
| | 7 | | 1 | 108.36 | 3.09 | 10.60 | 5.10 | |
| | 8 | | 1 | 108.37 | 3.10 | 10.50 | 5.00 | |
| | 9 | | 1 | 108.38 | 3.11 | 10.50 | 5.00 | |
| | 10 | | 1 | 108.39 | 3.12 | 10.60 | 5.10 | |
| | 12 | | 2 | 108.40 | 3.13 | 10.60 | 5.10 | |
| | 14 | | 2 | 108.41 | 3.14 | 10.80 | 5.40 | |
| | 16 | | 2 | 108.41 | 3.14 | 10.80 | 5.40 | |
| | 18 | | 2 | 108.41 | 3.14 | 10.80 | 5.40 | |
| | 20 | | 2 | 108.43 | 3.16 | 10.80 | 5.40 | |
| | 25 | | 5 | 108.44 | 3.17 | 10.70 | 5.20 | |
| | 30 | | 5 | 108.47 | 3.20 | 10.80 | 5.40 | |
| | 35 | | 5 | 108.48 | 3.21 | 10.80 | 5.40 | |
| | 40 | | 5 | 108.49 | 3.22 | 10.80 | 5.40 | |
| | 45 | | 5 | 108.50 | 3.23 | 10.80 | 5.40 | |
| | 50 | | 5 | 108.50 | 3.23 | 10.80 | 5.40 | |
| | 55 | | 5 | 108.50 | 3.23 | 10.80 | 5.40 | |
| 1 | 00 | | 5 | 108.51 | 3.24 | 10.80 | 5.40 | |
| 1 | 10 | | 10 | 108.52 | 3.25 | 10.80 | 5.40 | |
| 1 | 20 | | 10 | 108.54 | 3.27 | 10.70 | 5.20 | |
| 1 | 30 | | 10 | 108.54 | 3.27 | 10.70 | 5.20 | |
| 1 | 40 | | 10 | 108.54 | 3.27 | 10.70 | 5.20 | |
| 1 | 50 | | 10 | 108.55 | 3.28 | 10.70 | 5.20 | |
| 2 | 00 | | 10 | 108.55 | 3.28 | 10.70 | 5.20 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Step Drawdown Test)

WELL LOCATION: Escopa Proj.4, Q.C. QCT-269 Step No. 3

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: 105.27m PWL:

DATE CONDUCTED: 22 FEB 1991 DATE COMPLETED: 22 FEB 1991

| TIME HOUR | TIME M. | INTERVAL HOUR | INTERVAL M. | WATER LEVEL m(mbgl) | DRAWDOWN (m) | V-NOTCH 90 deg. | DISCHARGE (l/sec) | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | 0 | | 0 | 108.55 | 3.28 | 10.70 | 5.20 | |
| | 1 | | 1 | 108.87 | 3.60 | 11.80 | 6.70 | |
| | 2 | | 1 | 108.98 | 3.71 | 11.80 | 6.70 | |
| | 3 | | 1 | 109.00 | 3.73 | 11.80 | 6.70 | |
| | 4 | | 1 | 109.01 | 3.74 | 11.80 | 6.70 | |
| | 5 | | 1 | 109.03 | 3.76 | 12.00 | 7.00 | |
| | 6 | | 1 | 109.04 | 3.77 | 11.90 | 6.80 | |
| | 7 | | 1 | 109.05 | 3.78 | 11.90 | 6.80 | |
| | 8 | | 1 | 109.06 | 3.79 | 11.90 | 6.80 | |
| | 9 | | 1 | 109.07 | 3.80 | 11.80 | 6.70 | |
| | 10 | | 1 | 109.07 | 3.80 | 11.90 | 6.80 | |
| | 12 | | 2 | 109.07 | 3.80 | 12.00 | 7.00 | |
| | 14 | | 2 | 109.07 | 3.80 | 12.20 | 7.30 | |
| | 16 | | 2 | 109.07 | 3.80 | 12.20 | 7.30 | |
| | 18 | | 2 | 109.07 | 3.80 | 12.20 | 7.30 | |
| | 20 | | 2 | 109.07 | 3.80 | 12.20 | 7.30 | |
| | 25 | | 5 | 109.10 | 3.83 | 12.00 | 7.00 | |
| | 30 | | 5 | 109.10 | 3.83 | 12.00 | 7.00 | |
| | 35 | | 5 | 109.11 | 3.84 | 11.90 | 6.80 | |
| | 40 | | 5 | 109.11 | 3.84 | 11.80 | 6.70 | |
| | 45 | | 5 | 109.14 | 3.87 | 11.80 | 6.70 | |
| | 50 | | 5 | 109.15 | 3.88 | 11.80 | 6.70 | |
| | 55 | | 5 | 109.15 | 3.88 | 11.80 | 6.70 | |
| 1 | 00 | | 5 | 109.15 | 3.88 | 11.80 | 6.70 | |
| 1 | 10 | | 10 | 109.16 | 3.89 | 11.80 | 6.70 | |
| 1 | 20 | | 10 | 109.16 | 3.89 | 11.80 | 6.70 | |
| 1 | 30 | | 10 | 109.16 | 3.89 | 11.80 | 6.70 | |
| 1 | 40 | | 10 | 109.18 | 3.91 | 11.80 | 6.70 | |
| 1 | 50 | | 10 | 109.20 | 3.93 | 11.80 | 6.70 | |
| 2 | 00 | | 10 | 109.20 | 3.93 | 11.80 | 6.70 | |
| 2 | 15 | | 15 | | | | | |
| 2 | 30 | | 15 | | | | | |
| 2 | 45 | | 15 | | | | | |
| 3 | 00 | | 15 | | | | | |
| 3 | 30 | | 30 | | | | | |
| 4 | 00 | | 30 | | | | | |
| 4 | 30 | | 30 | | | | | |
| 5 | 00 | | 30 | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: Escopa Proj.4, Q.C. QCT-269

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. L:

SWL: PWL:

DATE CONDUCTED: 23 FEB 1991 DATE COMPLETED: 23 FEB 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 105.37 | | | | |
| | 1 | | 1 | 108.51 | 3.14 | | | |
| | 2 | | 1 | 108.41 | 3.04 | | | |
| | 3 | | 1 | 108.55 | 3.18 | | | |
| | 4 | | 1 | 108.57 | 3.20 | | | |
| | 5 | | 1 | 108.51 | 3.14 | | | |
| | 6 | | 1 | 107.94 | 2.57 | 11.00 | 5.60 | |
| | 7 | | 1 | 107.85 | 2.48 | 10.90 | 5.50 | |
| | 8 | | 1 | 107.83 | 2.46 | 10.80 | 5.40 | |
| | 9 | | 1 | 107.81 | 2.44 | 10.80 | 5.40 | |
| | 10 | | 1 | 107.80 | 2.43 | 10.80 | 5.40 | |
| | 12 | | 2 | 107.83 | 2.46 | 10.80 | 5.40 | |
| | 14 | | 2 | 107.88 | 2.51 | 10.80 | 5.40 | |
| | 16 | | 2 | 108.25 | 2.88 | 10.90 | 5.50 | |
| | 18 | | 2 | 108.30 | 2.93 | 10.90 | 5.50 | |
| | 20 | | 2 | 108.31 | 2.94 | 10.90 | 5.50 | |
| | 25 | | 5 | 108.36 | 2.99 | 11.00 | 5.60 | |
| | 30 | | 5 | 108.38 | 3.01 | 10.90 | 5.50 | |
| | 35 | | 5 | 108.39 | 3.02 | 10.90 | 5.50 | |
| | 40 | | 5 | 108.42 | 3.05 | 10.90 | 5.50 | |
| | 45 | | 5 | 108.44 | 3.07 | 10.90 | 5.50 | |
| | 50 | | 5 | 108.44 | 3.07 | 10.90 | 5.50 | |
| | 55 | | 5 | 108.44 | 3.07 | 10.90 | 5.50 | |
| 1 | 00 | | 5 | 108.44 | 3.07 | 10.90 | 5.50 | |
| 1 | 10 | | 10 | 108.45 | 3.08 | 10.90 | 5.50 | |
| 1 | 20 | | 10 | 108.50 | 3.13 | 10.90 | 5.50 | |
| 1 | 30 | | 10 | 108.53 | 3.16 | 11.00 | 5.60 | |
| 1 | 40 | | 10 | 108.54 | 3.17 | 11.00 | 5.60 | |
| 1 | 50 | | 10 | 108.57 | 3.20 | 11.00 | 5.60 | |
| 2 | 00 | | 10 | 108.57 | 3.20 | 11.00 | 5.60 | |
| 2 | 15 | | 15 | 108.58 | 3.21 | 11.00 | 5.60 | |
| 2 | 30 | | 15 | 108.59 | 3.22 | 11.00 | 5.60 | |
| 2 | 45 | | 15 | 108.60 | 3.23 | 11.00 | 5.60 | |
| 3 | 00 | | 15 | 108.62 | 3.25 | 11.00 | 5.60 | |
| 3 | 30 | | 30 | 108.63 | 3.26 | 11.00 | 5.60 | |
| 4 | 00 | | 30 | 108.67 | 3.30 | 11.00 | 5.60 | |
| 4 | 30 | | 30 | 108.67 | 3.30 | 11.00 | 5.60 | |
| 5 | 00 | | 30 | 108.67 | 3.30 | 11.00 | 5.60 | |

QCT-269

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 6 | 00 | 1 | 00 | 108.72 | 3.35 | 11.00 | 5.60 | |
| 7 | 00 | 1 | 00 | 108.74 | 3.37 | 11.00 | 5.60 | |
| 8 | 00 | 1 | 00 | 108.77 | | 11.00 | 5.60 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 23 FEB 1991 (QCT-269)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 108.77 | 3.40 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 105.01 | -0.36 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 104.95 | -0.42 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 105.09 | -0.28 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 105.32 | -0.05 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 105.66 | 0.29 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 105.88 | 0.51 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 105.93 | 0.56 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 105.95 | 0.58 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 105.96 | 0.59 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 105.94 | 0.57 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 105.91 | 0.54 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 105.90 | 0.53 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 105.89 | 0.50 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 105.88 | 0.51 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 105.85 | 0.48 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 105.82 | 0.45 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 105.80 | 0.43 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 105.79 | 0.42 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 105.78 | 0.41 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 105.74 | 0.37 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 105.73 | 0.36 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 105.72 | 0.35 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 105.71 | 0.34 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 105.69 | 0.32 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 105.68 | 0.31 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 105.66 | 0.29 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 105.65 | 0.28 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 105.65 | 0.28 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 105.64 | 0.27 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 105.62 | 0.25 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 105.61 | 0.24 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 105.61 | 0.24 | | | | | | |
| 3 | 00 | | 15 | 105.60 | 0.23 | | | | | | |
| 3 | 30 | | 30 | 105.60 | 0.23 | | | | | | |
| 4 | 00 | | 30 | 105.59 | 0.24 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Continuous Drawdown Test)

WELL LOCATION: IBP #2, QUEZON CITY QCT - 195

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: EQUIPMENT CAPACITY:

CASING DIAMETER: RISER PIPE: DIA. 75mm L:

SWL: 87.67mbgl PWL:

DATE CONDUCTED: 3 March 1991 DATE COMPLETED: 3 March 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 87.67 | 0.00 | | | |
| | 1 | | 1 | 93.79 | 6.12 | 12.40 | 7.60 | |
| | 2 | | 1 | 95.70 | 8.03 | 12.00 | 7.00 | |
| | 3 | | 1 | 96.69 | 9.02 | 11.90 | 6.80 | |
| | 4 | | 1 | 97.31 | 9.64 | 11.80 | 6.70 | |
| | 5 | | 1 | 97.81 | 10.14 | 11.80 | 6.70 | |
| | 6 | | 1 | 98.17 | 10.50 | 11.80 | 6.70 | |
| | 7 | | 1 | 98.46 | 10.79 | 11.80 | 6.70 | |
| | 8 | | 1 | 98.74 | 11.07 | 11.70 | 6.60 | |
| | 9 | | 1 | 98.89 | 11.22 | 11.70 | 6.60 | |
| | 10 | | 1 | 99.11 | 11.44 | 11.70 | 6.60 | |
| | 12 | | 2 | 99.45 | 11.78 | 11.70 | 6.60 | |
| | 14 | | 2 | 99.73 | 12.06 | 11.60 | 6.40 | |
| | 16 | | 2 | 99.99 | 12.32 | 11.60 | 6.40 | |
| | 18 | | 2 | 100.19 | 12.52 | 11.60 | 6.40 | |
| | 20 | | 2 | 100.38 | 12.71 | 11.50 | 6.30 | |
| | 25 | | 5 | 100.86 | 13.19 | 11.40 | 6.10 | |
| | 30 | | 5 | 101.13 | 13.46 | 11.40 | 6.10 | |
| | 35 | | 5 | 101.36 | 13.69 | 11.40 | 6.10 | |
| | 40 | | 5 | 101.78 | 14.11 | 11.40 | 6.10 | |
| | 45 | | 5 | 102.01 | 14.34 | 11.40 | 6.10 | |
| | 50 | | 5 | 102.15 | 14.48 | 11.30 | 6.00 | |
| | 55 | | 5 | 102.31 | 14.64 | 11.40 | 6.10 | |
| 1 | 00 | | 5 | 102.58 | 14.91 | 11.70 | 6.60 | |
| 1 | 10 | | 10 | 102.73 | 15.06 | 11.70 | 6.60 | |
| 1 | 20 | | 10 | 102.87 | 15.20 | 11.60 | 6.40 | |
| 1 | 30 | | 10 | 103.05 | 15.38 | 11.70 | 6.60 | |
| 1 | 40 | | 10 | 103.39 | 15.72 | 11.70 | 6.60 | |
| 1 | 50 | | 10 | 103.40 | 15.73 | 11.70 | 6.60 | |
| 2 | 00 | | 10 | 103.42 | 15.75 | 11.60 | 6.40 | |
| 2 | 15 | | 15 | 103.64 | 15.97 | 11.40 | 6.10 | |
| 2 | 30 | | 15 | 103.67 | 16.00 | 11.70 | 6.60 | |
| 2 | 45 | | 15 | 103.83 | 16.16 | 11.50 | 6.30 | |
| 3 | 00 | | 15 | 103.93 | 16.26 | 11.40 | 6.10 | |
| 3 | 30 | | 30 | 104.18 | 16.51 | 11.50 | 6.30 | |
| 4 | 00 | | 30 | 104.29 | 16.62 | 11.50 | 6.30 | |
| 4 | 30 | | 30 | 104.38 | 16.71 | 11.40 | 6.10 | |
| 5 | 00 | | 30 | 104.20 | 16.53 | 11.40 | 6.10 | |

QCT-195

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 5 | 30 | 1 | 00 | 104.38 | 16.71 | 11.40 | 6.10 | |
| 6 | 00 | 1 | 00 | 104.49 | 16.82 | 11.30 | 6.00 | |
| 6 | 30 | 1 | 00 | 104.62 | 16.95 | 11.30 | 6.00 | |
| 7 | 00 | 1 | 00 | 104.59 | 16.92 | 11.30 | 6.00 | |
| 7 | 30 | 1 | 00 | 104.80 | 17.13 | 11.30 | 6.00 | |
| 8 | 00 | 1 | 00 | 104.81 | 17.14 | 11.40 | 6.10 | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 3 March 1991 (QCT-195)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 104.81 | 17.14 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 99.48 | 11.81 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 97.64 | 9.97 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 96.59 | 8.92 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 96.07 | 8.40 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 95.62 | 7.95 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 95.26 | 7.59 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 94.95 | 7.28 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 94.66 | 6.99 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 94.47 | 6.80 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 94.25 | 6.58 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 93.88 | 6.21 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 93.54 | 5.87 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 93.30 | 5.63 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 93.01 | 5.34 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 92.79 | 5.12 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 92.31 | 4.64 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 91.91 | 4.24 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 91.59 | 3.92 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 91.30 | 3.63 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 91.06 | 3.39 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 90.84 | 3.17 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 90.64 | 2.97 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 90.47 | 2.80 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 90.18 | 2.51 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 89.90 | 2.23 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 89.70 | 2.03 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 89.52 | 1.85 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 89.34 | 1.67 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 89.21 | 1.54 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 89.03 | 1.36 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 88.88 | 1.21 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 88.74 | 1.07 | | | | | | |
| 3 | 00 | | 15 | 88.62 | 0.95 | | | | | | |
| 3 | 30 | | 30 | 88.41 | 0.74 | | | | | | |
| 4 | 00 | | 30 | 88.27 | 0.60 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

PUMPING TEST
(Constant Discharge Test)

WELL LOCATION: Banaba-Ampid, San Mateo (SMT-II)

SITE ELEVATION: PUMPING EQUIPMENT:

WELL DEPTH: 500 ft (152.4 m) EQUIPMENT CAPACITY:

CASING DIAMETER: 10" (250 mm) RISER PIPE: DIA.4"(100mm) L: 160 f (48.8 m

SWL: 9.48m PWL:

DATE CONDUCTED: 16 February 1991 DATE COMPLETED: 16 February 1991

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | REMARKS |
| | 0 | | 0 | 9.48 | | | | |
| | 1 | | 1 | 14.56 | 5.08 | | | |
| | 2 | | 1 | 15.43 | 5.95 | | | |
| | 3 | | 1 | 16.08 | 6.60 | 15.5 | 13.2 | |
| | 4 | | 1 | 16.46 | 6.98 | 15.6 | 13.5 | |
| | 5 | | 1 | 16.75 | 7.27 | 15.5 | 13.2 | |
| | 6 | | 1 | 16.92 | 7.44 | 15.5 | 13.2 | |
| | 7 | | 1 | 17.08 | 7.60 | 15.5 | 13.2 | |
| | 8 | | 1 | 17.24 | 7.76 | 15.6 | 13.5 | |
| | 9 | | 1 | 17.47 | 7.99 | 15.5 | 13.2 | |
| | 10 | | 1 | 17.44 | 7.96 | 15.5 | 13.2 | |
| | 12 | | 2 | 17.90 | 8.42 | 15.5 | 13.2 | |
| | 14 | | 2 | 18.00 | 8.52 | 15.6 | 13.5 | |
| | 16 | | 2 | 18.14 | 8.66 | 15.3 | 12.8 | |
| | 18 | | 2 | 18.22 | 8.74 | 15.3 | 12.8 | |
| | 20 | | 2 | 18.29 | 8.81 | 15.3 | 12.8 | |
| | 25 | | 5 | 18.47 | 8.99 | 15.0 | 12.2 | |
| | 30 | | 5 | 18.51 | 9.03 | 15.0 | 12.2 | |
| | 35 | | 5 | 18.61 | 9.13 | 14.8 | 11.8 | |
| | 40 | | 5 | 18.70 | 9.22 | 14.9 | 12.0 | |
| | 45 | | 5 | 18.76 | 9.28 | 14.9 | 12.0 | |
| | 50 | | 5 | 18.84 | 9.36 | 14.8 | 11.8 | |
| | 55 | | 5 | 18.89 | 9.41 | 14.7 | 11.6 | |
| 1 | 00 | | 5 | 18.82 | 9.34 | 15.0 | 12.2 | |
| 1 | 10 | | 10 | 18.87 | 9.39 | 14.7 | 11.6 | |
| 1 | 20 | | 10 | 18.91 | 9.43 | 14.8 | 11.8 | |
| 1 | 30 | | 10 | 18.96 | 9.48 | 14.8 | 11.8 | |
| 1 | 40 | | 10 | 18.99 | 9.51 | 14.6 | 11.4 | |
| 1 | 50 | | 10 | 19.00 | 9.52 | 14.8 | 11.8 | |
| 2 | 00 | | 10 | 19.05 | 9.57 | 14.8 | 11.8 | |
| 2 | 15 | | 15 | 19.12 | 9.64 | 14.7 | 11.6 | |
| 2 | 30 | | 15 | 19.16 | 9.68 | 15.0 | 12.2 | |
| 2 | 45 | | 15 | 19.16 | 9.68 | 15.0 | 12.2 | |
| 3 | 00 | | 15 | 19.17 | 9.69 | 15.0 | 12.2 | |
| 3 | 30 | | 30 | 19.18 | 9.70 | 14.9 | 12.0 | |
| 4 | 00 | | 30 | 19.25 | 9.77 | 15.0 | 12.2 | |
| 4 | 30 | | 30 | 19.28 | 9.80 | 14.9 | 12.0 | |
| 5 | 00 | | 30 | 19.29 | 9.81 | 15.0 | 12.2 | |

SMT-II

| TIME | | INTERVAL | | WATER LEVEL | DRAWDOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | m(mbgl) | (m) | 90 deg. | (l/sec) | |
| 6 | 00 | 1 | 00 | 19.30 | 9.82 | 14.9 | 12.0 | |
| 7 | 00 | 1 | 00 | 19.35 | 9.87 | 14.9 | 12.0 | |
| 8 | 00 | 1 | 00 | 19.37 | 9.89 | 14.9 | 12.0 | |
| 9 | 00 | 1 | 00 | | | | | |
| 10 | 00 | 1 | 00 | | | | | |
| 12 | 00 | 1 | 00 | | | | | |
| 13 | 00 | 1 | 00 | | | | | |
| 14 | 00 | 1 | 00 | | | | | |
| 15 | 00 | 1 | 00 | | | | | |
| 16 | 00 | 1 | 00 | | | | | |
| 17 | 00 | 1 | 00 | | | | | |
| 18 | 00 | 1 | 00 | | | | | |
| 19 | 00 | 1 | 00 | | | | | |
| 20 | 00 | 1 | 00 | | | | | |
| 21 | 00 | 1 | 00 | | | | | |
| 22 | 00 | 1 | 00 | | | | | |
| 23 | 00 | 1 | 00 | | | | | |
| 24 | 00 | 1 | 00 | | | | | |
| 25 | 00 | 1 | 00 | | | | | |
| 26 | 00 | 1 | 00 | | | | | |
| 27 | 00 | 1 | 00 | | | | | |
| 28 | 00 | 1 | 00 | | | | | |
| 29 | 00 | 1 | 00 | | | | | |
| 30 | 00 | 1 | 00 | | | | | |
| 31 | 00 | 1 | 00 | | | | | |
| 32 | 00 | 1 | 00 | | | | | |
| 33 | 00 | 1 | 00 | | | | | |
| 34 | 00 | 1 | 00 | | | | | |
| 35 | 00 | 1 | 00 | | | | | |
| 36 | 00 | 1 | 00 | | | | | |
| 37 | 00 | 1 | 00 | | | | | |
| 38 | 00 | 1 | 00 | | | | | |
| 39 | 00 | 1 | 00 | | | | | |
| 40 | 00 | 1 | 00 | | | | | |
| 41 | 00 | 1 | 00 | | | | | |
| 42 | 00 | 1 | 00 | | | | | |
| 43 | 00 | 1 | 00 | | | | | |
| 44 | 00 | 1 | 00 | | | | | |
| 45 | 00 | 1 | 00 | | | | | |
| 46 | 00 | 1 | 00 | | | | | |
| 47 | 00 | 1 | 00 | | | | | |
| 48 | 00 | 1 | 00 | | | | | |

RECOVERY TEST DATA

DATE: 17 February 1991 (SMT-II)

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | 19.37 | 9.89 | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 14.15 | 4.67 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 12.90 | 3.42 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 12.41 | 2.93 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 12.02 | 2.54 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 11.79 | 2.31 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 11.49 | 2.01 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 11.20 | 1.72 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 11.12 | 1.64 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 10.97 | 1.49 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 10.90 | 1.42 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 10.85 | 1.37 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 10.75 | 1.27 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 10.64 | 1.16 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 10.52 | 1.04 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 10.44 | 0.96 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 10.37 | 0.89 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 10.34 | 0.86 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 10.27 | 0.79 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 10.22 | 0.74 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 10.19 | 0.71 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 10.14 | 0.66 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 10.11 | 0.63 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 10.08 | 0.60 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 10.04 | 0.56 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 9.97 | 0.49 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 9.92 | 0.44 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 9.87 | 0.39 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 9.82 | 0.34 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 9.81 | 0.33 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 9.77 | 0.29 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 9.72 | 0.24 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 9.69 | 0.21 | | | | | | |
| 3 | 00 | | 15 | 9.64 | 0.16 | | | | | | |
| 3 | 30 | | 30 | 9.62 | 0.14 | | | | | | |
| 4 | 00 | | 30 | 9.58 | 0.10 | | | | | | |
| 4 | 30 | | 30 | 9.53 | 0.05 | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

# PUMPING TEST
## (Step Drawdown Test)

TEST NO.: 1

WELL LOCATION: Signal Vill, TGG-138 (Taguig, M.M)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 35.64.00 M PWL: 39.08 M
DATE CONDUCTED: Feb. 17, 1991
TIME: 4:00 PM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY:
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 17, 1991
TIME: 6:00 PM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. (mm) | (l/sec) | REMARKS |
| 4:00 | | 0 | | 0 | 35.64 | | | | |
| PM | | 1 | | 1 | 38.99 | 3.35 | 87 | 3.1 | |
| | | 2 | | 1 | 38.41 | 2.77 | 91 | 3.5 | |
| | | 3 | | 1 | 38.45 | 2.81 | 89 | 3.3 | |
| | | 4 | | 1 | 38.27 | 2.63 | 90 | 3.4 | |
| | | 5 | | 1 | 38.22 | 2.58 | 85 | 2.9 | |
| | | 6 | | 1 | 39.27 | 2.63 | 85 | 2.9 | |
| | | 7 | | 1 | 38.33 | 2.69 | 87 | 3.1 | |
| | | 8 | | 1 | 38.43 | 2.79 | 87 | 3.1 | |
| | | 9 | | 1 | 38.44 | 2.80 | 87 | 3.1 | |
| | | 10 | | 1 | 38.45 | 2.81 | 87 | 3.1 | |
| | | 12 | | 2 | 38.52 | 2.88 | 87 | 3.1 | |
| | | 14 | | 2 | 38.54 | 2.90 | 87 | 3.1 | |
| | | 16 | | 2 | 38.57 | 2.93 | 87 | 3.1 | |
| | | 18 | | 2 | 38.60 | 2.96 | 87 | 3.1 | |
| | | 20 | | 2 | 38.62 | 2.98 | 87 | 3.1 | |
| | | 25 | | 5 | 38.68 | 3.04 | 87 | 3.1 | |
| | | 30 | | 5 | 38.73 | 3.09 | 87 | 3.1 | |
| | | 35 | | 5 | 38.80 | 3.16 | 87 | 3.1 | |
| | | 40 | | 5 | 38.83 | 3.19 | 87 | 3.1 | |
| | | 45 | | 5 | 38.86 | 3.22 | 87 | 3.1 | |
| | | 50 | | 5 | 38.91 | 3.27 | 87 | 3.1 | |
| | | 55 | | 5 | 38.89 | 3.25 | 87 | 3.1 | |
| 5:00 | 1 | 00 | | 5 | 38.92 | 3.28 | 88 | 3.2 | |
| PM | 1 | 10 | | 10 | 38.98 | 3.34 | 88 | 3.2 | |
| | 1 | 20 | | 10 | 38.98 | 3.34 | 88 | 3.2 | |
| | 1 | 30 | | 10 | 39.02 | 3.38 | 88 | 3.2 | |
| | 1 | 40 | | 10 | 39.02 | 3.38 | 88 | 3.2 | |
| | 1 | 50 | | 10 | 39.08 | 3.44 | 88 | 3.2 | |
| 6:00 | 2 | 00 | | 10 | 39.08 | 3.44 | 88 | 3.2 | |
| PM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

# PUMPING TEST
## (Step Drawdown Test)

TEST NO.: 2

WELL LOCATION: Signal Vill, TGG-138 (Taguig, M.M)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 35.64.00 M PWL: 43.31 M
DATE CONDUCTED: Feb. 17, 1991
TIME: 6:00 PM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY:
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 17, 1991
TIME: 8:00 PM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | REMARKS |
| 6:00 | | 0 | | 0 | 39.08 | 3.44 | (mm) | | |
| PM | | 1 | | 1 | 41.01 | 5.37 | 114 | 6.1 | |
| | | 2 | | 1 | 41.54 | 5.90 | 114 | 6.1 | |
| | | 3 | | 1 | 41.76 | 6.12 | 114 | 6.1 | |
| | | 4 | | 1 | 41.93 | 6.29 | 114 | 6.1 | |
| | | 5 | | 1 | 42.04 | 6.40 | 115 | 6.3 | |
| | | 6 | | 1 | 42.12 | 6.48 | 115 | 6.3 | |
| | | 7 | | 1 | 42.18 | 6.54 | 114 | 6.1 | |
| | | 8 | | 1 | 42.23 | 6.59 | 114 | 6.1 | |
| | | 9 | | 1 | 42.27 | 6.63 | 115 | 6.3 | |
| | | 10 | | 1 | 42.31 | 6.67 | 115 | 6.3 | |
| | | 12 | | 2 | 42.39 | 6.75 | 114 | 6.1 | |
| | | 14 | | 2 | 42.45 | 6.81 | 114 | 6.1 | |
| | | 16 | | 2 | 42.49 | 6.85 | 115 | 6.3 | |
| | | 18 | | 2 | 42.53 | 6.89 | 115 | 6.3 | |
| | | 20 | | 2 | 42.58 | 6.94 | 115 | 6.3 | |
| | | 25 | | 5 | 42.62 | 6.98 | 115 | 6.3 | |
| | | 30 | | 5 | 42.71 | 7.07 | 115 | 6.3 | |
| | | 35 | | 5 | 42.76 | 7.12 | 115 | 6.3 | |
| | | 40 | | 5 | 42.82 | 7.18 | 115 | 6.3 | |
| | | 45 | | 5 | 42.86 | 7.22 | 115 | 6.3 | |
| | | 50 | | 5 | 42.89 | 7.25 | 115 | 6.3 | |
| | | 55 | | 5 | 42.95 | 7.31 | 115 | 6.3 | |
| 7:00 | 1 | 00 | | 5 | 43.00 | 7.36 | 115 | 6.3 | |
| PM | 1 | 10 | | 10 | 43.05 | 7.41 | 115 | 6.3 | |
| | 1 | 20 | | 10 | 43.10 | 7.46 | 115 | 6.3 | |
| | 1 | 30 | | 10 | 43.16 | 7.52 | 115 | 6.3 | |
| | 1 | 40 | | 10 | 43.21 | 7.57 | 115 | 6.3 | |
| | 1 | 50 | | 10 | 43.23 | 7.59 | 115 | 6.3 | |
| 8:00 | 2 | 00 | | 10 | 43.31 | 7.67 | 115 | 6.3 | |
| PM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

# PUMPING TEST
## (Step Drawdown Test)

TEST NO.: 3

WELL LOCATION: Signal Vill, TGG-138 (Taguig, M.M)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 35.64.00 M PWL: 47.15 M
DATE CONDUCTED: Feb. 17, 1991
TIME: 8:00 PM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY:
RISER PIPE: Dia. 100 mm L: 134 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 17, 1991
TIME: 10:00 PM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | REMARKS |
| 8:00 | | 0 | | 0 | 43.31 | 7.67 | (mm) | | |
| PM | | 1 | | 1 | 44.65 | 9.01 | 135 | 9.4 | |
| | | 2 | | 1 | 44.95 | 9.31 | 130 | 8.5 | |
| | | 3 | | 1 | 45.72 | 10.08 | 134 | 9.2 | |
| | | 4 | | 1 | 45.99 | 10.35 | 135 | 9.4 | |
| | | 5 | | 1 | 46.10 | 10.46 | 134 | 9.2 | |
| | | 6 | | 1 | 46.19 | 10.55 | 134 | 9.2 | |
| | | 7 | | 1 | 46.26 | 10.62 | 134 | 9.2 | |
| | | 8 | | 1 | 46.31 | 10.67 | 134 | 9.2 | |
| | | 9 | | 1 | 46.35 | 10.71 | 134 | 9.2 | |
| | | 10 | | 1 | 46.42 | 10.78 | 134 | 9.2 | |
| | | 12 | | 2 | 46.49 | 10.85 | 136 | 9.5 | |
| | | 14 | | 2 | 46.50 | 10.86 | 136 | 9.5 | |
| | | 16 | | 2 | 46.42 | 10.78 | 135 | 9.4 | |
| | | 18 | | 2 | 46.41 | 10.77 | 134 | 9.2 | |
| | | 20 | | 2 | 46.42 | 10.78 | 135 | 9.4 | |
| | | 25 | | 5 | 46.51 | 10.87 | 135 | 9.4 | |
| | | 30 | | 5 | 46.56 | 10.92 | 134 | 9.2 | |
| | | 35 | | 5 | 46.59 | 10.95 | 134 | 9.2 | |
| | | 40 | | 5 | 46.57 | 10.93 | 134 | 9.2 | |
| | | 45 | | 5 | 46.71 | 11.07 | 135 | 9.4 | |
| | | 50 | | 5 | 46.72 | 11.08 | 135 | 9.4 | |
| | | 55 | | 5 | 46.75 | 11.11 | 135 | 9.4 | |
| 9:00 | 1 | 00 | | 5 | 46.82 | 11.18 | 135 | 9.4 | |
| PM | 1 | 10 | | 10 | 46.88 | 11.24 | 135 | 9.4 | |
| | 1 | 20 | | 10 | 46.93 | 11.29 | 135 | 9.4 | |
| | 1 | 30 | | 10 | 46.98 | 11.34 | 135 | 9.4 | |
| | 1 | 40 | | 10 | 47.02 | 11.38 | 135 | 9.4 | |
| | 1 | 50 | | 10 | 47.07 | 11.43 | 135 | 9.4 | |
| 10:00 | 2 | 00 | | 10 | 47.15 | 11.51 | 135 | 9.4 | |
| PM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

# PUMPING TEST
## (Step Drawdown Test)

TEST NO.: 4

WELL LOCATION: Signal Vill, TGG-138 (Taguig, M.M)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 35.64.00 M PWL: 50.83 M
DATE CONDUCTED: Feb. 17, 1991
TIME: 10:00 PM

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY:
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 17, 1991
TIME: 12:00 PM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | REMARKS |
| 10:00 | | 0 | | 0 | 47.15 | 11.51 | (PVC) | | |
| PM | | 1 | | 1 | 48.60 | 12.96 | 140 | 10.3 | |
| | | 2 | | 1 | 49.31 | 13.67 | 155 | 13.2 | |
| | | 3 | | 1 | 49.47 | 13.83 | 149 | 12.0 | |
| | | 4 | | 1 | 49.55 | 13.91 | 151 | 12.4 | |
| | | 5 | | 1 | 49.74 | 14.10 | 150 | 12.2 | |
| | | 6 | | 1 | 49.78 | 14.14 | 150 | 12.2 | |
| | | 7 | | 1 | 49.83 | 14.19 | 150 | 12.2 | |
| | | 8 | | 1 | 49.89 | 14.25 | 150 | 12.2 | |
| | | 9 | | 1 | 49.94 | 14.30 | 150 | 12.2 | |
| | | 10 | | 1 | 49.94 | 14.30 | 150 | 12.2 | |
| | | 12 | | 2 | 50.00 | 14.36 | 150 | 12.2 | |
| | | 14 | | 2 | 50.03 | 14.39 | 150 | 12.2 | |
| | | 16 | | 2 | 50.06 | 14.42 | 150 | 12.2 | |
| | | 18 | | 2 | 50.10 | 14.46 | 150 | 12.2 | |
| | | 20 | | 2 | 50.13 | 14.49 | 150 | 12.2 | |
| | | 25 | | 5 | 50.30 | 14.66 | 150 | 12.2 | |
| | | 30 | | 5 | 50.36 | 14.72 | 150 | 12.2 | |
| | | 35 | | 5 | 50.35 | 14.71 | 150 | 12.2 | |
| | | 40 | | 5 | 50.38 | 14.74 | 150 | 12.2 | |
| | | 45 | | 5 | 50.42 | 14.78 | 150 | 12.2 | |
| | | 50 | | 5 | 50.41 | 14.77 | 150 | 12.2 | |
| | | 55 | | 5 | 50.53 | 14.89 | 150 | 12.2 | |
| 11:00 | 1 | 00 | | 5 | 50.54 | 14.90 | 150 | 12.2 | |
| PM | 1 | 10 | | 10 | 50.69 | 15.05 | 150 | 12.2 | |
| | 1 | 20 | | 10 | 50.74 | 15.10 | 150 | 12.2 | |
| | 1 | 30 | | 10 | 50.65 | 15.10 | 150 | 12.2 | |
| | 1 | 40 | | 10 | 50.66 | 15.02 | 150 | 12.2 | |
| | 1 | 50 | | 10 | 50.69 | 15.05 | 150 | 12.2 | |
| 12:00 | 2 | 00 | | 10 | 50.83 | 15.19 | 150 | 12.2 | |
| PM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

# PUMPING TEST
## (Step Drawdown Test)

TEST NO.: 5

WELL LOCATION: Signal Vill, TGG-138 (Taguig, M.M)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 35.64.00 M PWL: 54.56 M
DATE CONDUCTED: Feb. 17, 1991
TIME: 12:00 MN

PUMPING EQUIPMENT: 30 Hp submersible pump
EQUIPMENT CAPACITY:
RISER PIPE: Dia. 100 mm L: 67 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 18, 1991
TIME: 2:00 AM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | REMARKS |
| 12:00 | | 0 | | 0 | 50.83 | | (cm) | | |
| MN | | 1 | | 1 | 51.57 | 15.93 | 15.8 | 13.9 | |
| | | 2 | | 1 | 52.01 | 16.37 | 16.0 | 14.3 | |
| | | 3 | | 1 | 52.43 | 16.79 | 16.2 | 14.8 | |
| | | 4 | | 1 | 52.91 | 17.27 | 16.4 | 15.2 | |
| | | 5 | | 1 | 53.22 | 17.58 | 16.5 | 15.5 | |
| | | 6 | | 1 | 53.30 | 17.66 | 16.4 | 15.2 | |
| | | 7 | | 1 | 53.42 | 17.78 | 16.4 | 15.2 | |
| | | 8 | | 1 | 53.51 | 17.87 | 16.5 | 15.5 | |
| | | 9 | | 1 | 53.53 | 17.89 | 16.5 | 15.5 | |
| | | 10 | | 1 | 53.56 | 17.92 | 16.5 | 15.5 | |
| | | 12 | | 2 | 53.59 | 17.95 | 16.5 | 15.5 | |
| | | 14 | | 2 | 53.65 | 18.01 | 16.5 | 15.5 | |
| | | 16 | | 2 | 53.69 | 18.05 | 16.4 | 15.2 | |
| | | 18 | | 2 | 53.71 | 18.07 | 16.4 | 15.2 | |
| | | 20 | | 2 | 53.73 | 18.09 | 16.4 | 15.2 | |
| | | 25 | | 5 | 53.84 | 18.20 | 16.4 | 15.2 | |
| | | 30 | | 5 | 53.91 | 18.27 | 16.4 | 15.2 | |
| | | 35 | | 5 | 53.97 | 18.33 | 16.4 | 15.2 | |
| | | 40 | | 5 | 54.03 | 18.39 | 16.5 | 15.5 | |
| | | 45 | | 5 | 53.98 | 18.34 | 16.5 | 15.5 | |
| | | 50 | | 5 | 54.04 | 18.40 | 16.4 | 15.2 | |
| | | 55 | | 5 | 54.22 | 18.58 | 16.4 | 15.2 | |
| 1:00 | 1 | 00 | | 5 | 54.26 | 18.62 | 16.5 | 15.5 | |
| AM | 1 | 10 | | 10 | 54.29 | 18.65 | 16.5 | 15.5 | |
| | 1 | 20 | | 10 | 54.33 | 18.69 | 16.5 | 15.5 | |
| | 1 | 30 | | 10 | 54.40 | 18.76 | 16.4 | 15.2 | |
| | 1 | 40 | | 10 | 54.47 | 18.83 | 16.5 | 15.5 | |
| | 1 | 50 | | 10 | 54.52 | 18.88 | 16.5 | 15.5 | |
| 2:00 | 2 | 00 | | 10 | 54.56 | 18.92 | 16.5 | 15.5 | |
| AM | 2 | 15 | | 15 | | | | | |
| | 2 | 30 | | 15 | | | | | |
| | 2 | 45 | | 15 | | | | | |
| | 3 | 00 | | 15 | | | | | |
| | 3 | 30 | | 30 | | | | | |
| | 4 | 00 | | 30 | | | | | |
| | 4 | 30 | | 30 | | | | | |
| | 5 | 00 | | 30 | | | | | |

# PUMPING TEST
## (Continuous Drawdown Test)

WELL LOCATION: Signal Village (TGG-138)
SITE ELEVATION:
WELL DEPTH:
CASING DIAMETER: 250 mm
SWL: 36.32 M PWL: 55.58 M
DATE CONDUCTED: Feb. 18, 1991
TIME: 10:00 AM

PUMPING EQUIPMENT: 30 Hp
EQUIPMENT CAPACITY:
RISER PIPE: Dia. 100 mm L: 134 M
TEST PERFORMED BY: TECHNOTEST, INC.
DATE COMPLETED: Feb. 18, 1991
TIME: 6:00 PM

| TIME | | | INTERVAL | | WATER LEVEL | DRAW-DOWN | V-NOTCH | DISCHARGE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| HOUR | | M | HOUR | M | m(mbgl) | (m) | 90-deg. | (l/sec) | |
| 10:00 | | 0 | | 0 | 36.32 | | | | |
| AM | | 1 | | 1 | 47.49 | 11.17 | 17.3 | 17.4 | |
| | | 2 | | 1 | 48.82 | 12.50 | 17.3 | 17.4 | |
| | | 3 | | 1 | 48.69 | 12.37 | 16.1 | 14.6 | |
| | | 4 | | 1 | 49.20 | 12.88 | 16.4 | 15.2 | |
| | | 5 | | 1 | 49.61 | 13.29 | 16.5 | 15.5 | |
| | | 6 | | 1 | 49.82 | 13.50 | 16.4 | 15.2 | |
| | | 7 | | 1 | 50.04 | 13.72 | 16.4 | 15.2 | |
| | | 8 | | 1 | 50.16 | 13.84 | 16.4 | 15.2 | |
| | | 9 | | 1 | 50.39 | 14.07 | 16.4 | 15.2 | |
| | | 10 | | 1 | 50.49 | 14.17 | 16.4 | 15.2 | |
| | | 12 | | 2 | 50.80 | 14.48 | 16.1 | 14.6 | |
| | | 14 | | 2 | 50.88 | 14.56 | 16.1 | 14.6 | |
| | | 16 | | 2 | 51.04 | 14.72 | 16.1 | 14.6 | |
| | | 18 | | 2 | 51.18 | 14.86 | 16.1 | 14.6 | |
| | | 20 | | 2 | 51.28 | 14.96 | 16.1 | 14.6 | |
| | | 25 | | 5 | 52.31 | 15.99 | 16.1 | 14.6 | |
| | | 30 | | 5 | 52.55 | 16.23 | 16.5 | 15.5 | |
| | | 35 | | 5 | 52.87 | 16.55 | 16.5 | 15.5 | |
| | | 40 | | 5 | 52.98 | 16.66 | 16.5 | 15.5 | |
| | | 45 | | 5 | 53.11 | 16.79 | 16.5 | 15.5 | |
| | | 50 | | 5 | 53.21 | 16.89 | 16.7 | 16.0 | |
| | | 55 | | 5 | 53.38 | 17.06 | 16.7 | 16.0 | |
| 11:00 | 1 | 00 | | 5 | 53.38 | 17.06 | 16.7 | 16.0 | |
| AM | 1 | 10 | | 10 | 53.52 | 17.20 | 16.8 | 16.2 | |
| | 1 | 20 | | 10 | 53.69 | 17.37 | 16.8 | 16.2 | |
| | 1 | 30 | | 10 | 53.87 | 17.55 | 16.7 | 16.0 | |
| | 1 | 40 | | 10 | 54.05 | 17.73 | 17.0 | 16.7 | |
| | 1 | 50 | | 10 | 54.01 | 17.69 | 16.7 | 16.0 | |
| 12:00 | 2 | 00 | | 10 | 54.27 | 17.95 | 16.6 | 15.7 | |
| NN | 2 | 15 | | 15 | 54.31 | 17.99 | 16.6 | 15.7 | |
| | 2 | 30 | | 15 | 54.29 | 17.97 | 16.6 | 15.7 | |
| | 2 | 45 | | 15 | 54.44 | 18.12 | 16.7 | 16.0 | |
| 1:00 | 3 | 00 | | 15 | 54.38 | 18.06 | 16.4 | 15.2 | |
| PM | 3 | 30 | | 30 | 54.49 | 18.17 | 16.5 | 15.5 | |
| 2:00 | 4 | 00 | | 30 | 54.73 | 18.41 | 16.6 | 15.7 | |
| PM | 4 | 30 | | 30 | 54.79 | 18.47 | 16.5 | 15.5 | |
| 3:00 | 5 | 00 | | 30 | 54.92 | 18.60 | 16.7 | 16.0 | |
| 4:00 | 6 | 00 | 1 | 00 | 55.19 | 18.87 | 16.6 | 15.7 | |
| 5:00 | 7 | 00 | 1 | 00 | 55.40 | 19.08 | 16.4 | 15.2 | |
| 6:00 | 8 | 00 | 1 | 00 | 55.58 | 19.26 | 16.4 | 15.2 | |

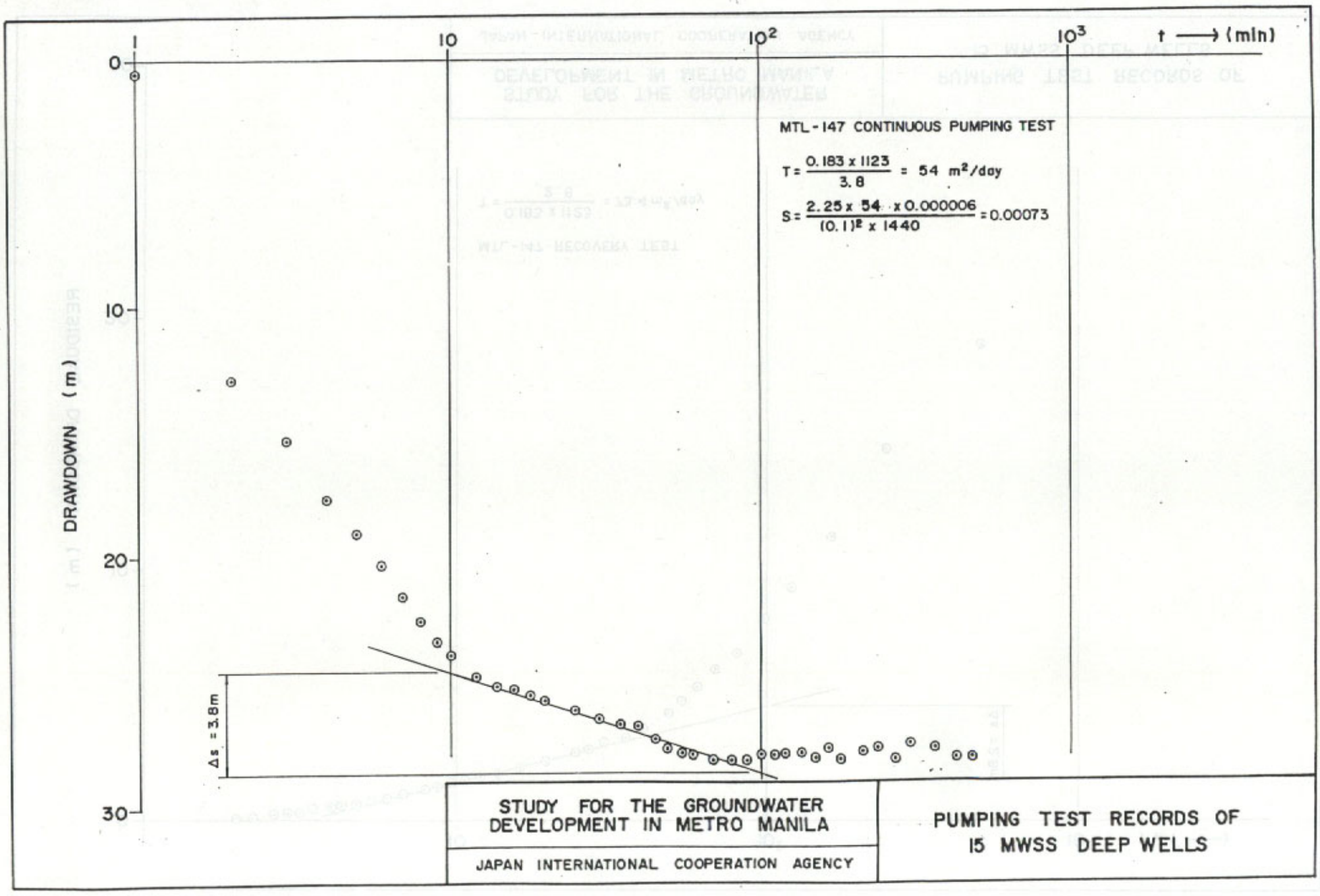
RECOVERY TEST DATA

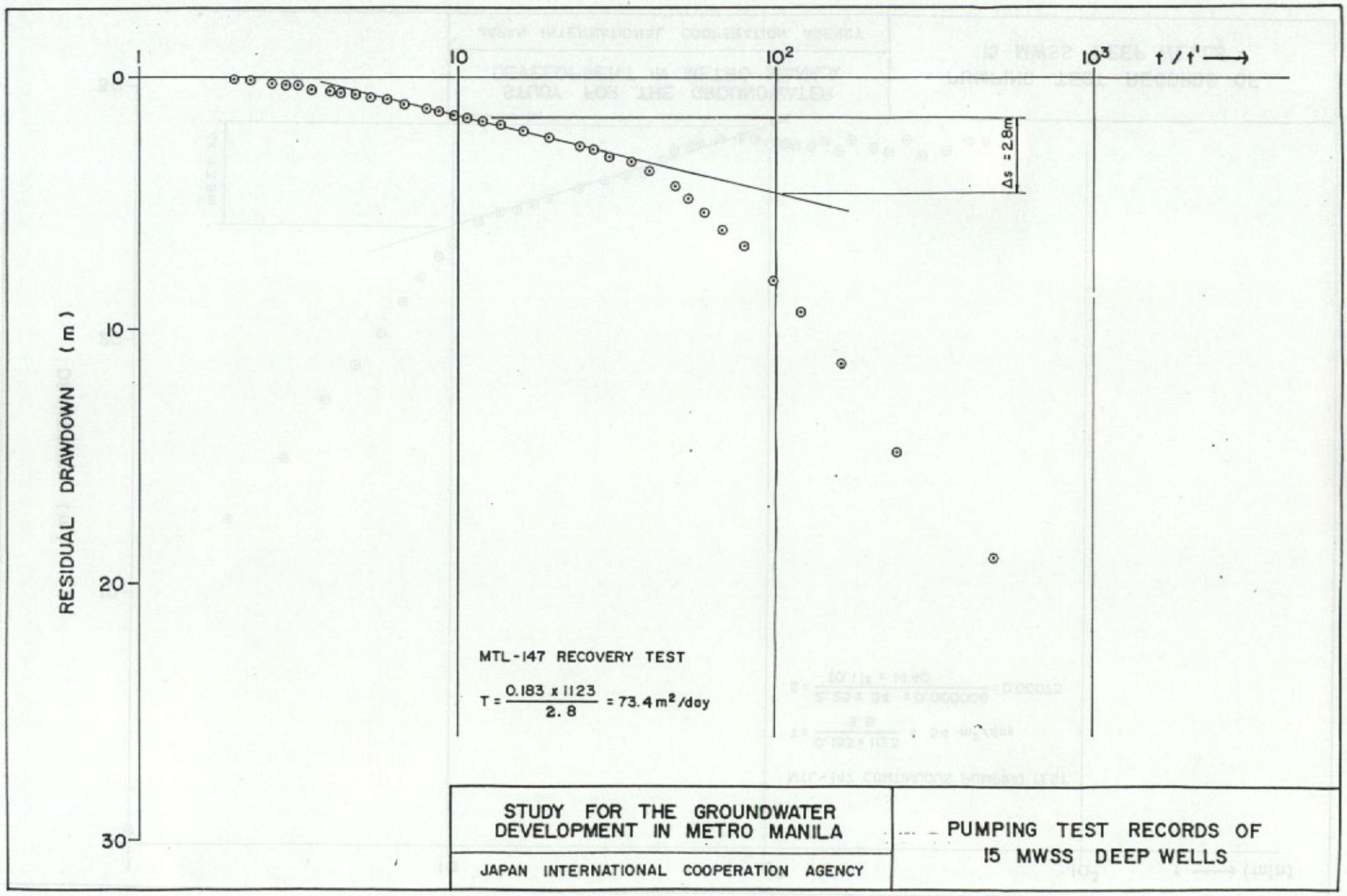
DATE: Feb. 18, 1991 ( TGG-138 )

| TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) | TIME | | INTERVAL | | WATER LEVEL (m) | RESIDUAL DRAWDOWN (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOUR | M. | HOUR | M. | | | HOUR | M. | HOUR | M. | | |
| | 0 | | 0 | | | 17 | 00 | 1 | 00 | | |
| | 1 | | 1 | 43.93 | 7.61 | 18 | 00 | 1 | 00 | | |
| | 2 | | 1 | 42.95 | 6.63 | 19 | 00 | 1 | 00 | | |
| | 3 | | 1 | 42.43 | 6.11 | 20 | 00 | 1 | 00 | | |
| | 4 | | 1 | 41.93 | 5.61 | 21 | 00 | 1 | 00 | | |
| | 5 | | 1 | 41.60 | 5.28 | 22 | 00 | 1 | 00 | | |
| | 6 | | 1 | 41.34 | 5.02 | 23 | 00 | 1 | 00 | | |
| | 7 | | 1 | 41.13 | 4.81 | 24 | 00 | 1 | 00 | | |
| | 8 | | 1 | 40.94 | 4.62 | 25 | 00 | 1 | 00 | | |
| | 9 | | 1 | 40.81 | 4.49 | 26 | 00 | 1 | 00 | | |
| | 10 | | 1 | 40.67 | 4.35 | 27 | 00 | 1 | 00 | | |
| | 12 | | 2 | 40.42 | 4.10 | 28 | 00 | 1 | 00 | | |
| | 14 | | 2 | 40.26 | 3.94 | 29 | 00 | 1 | 00 | | |
| | 16 | | 2 | 40.08 | 3.76 | 30 | 00 | 1 | 00 | | |
| | 18 | | 2 | 39.95 | 3.63 | 31 | 00 | 1 | 00 | | |
| | 20 | | 2 | 39.83 | 3.51 | 32 | 00 | 1 | 00 | | |
| | 25 | | 5 | 39.59 | 3.27 | 33 | 00 | 1 | 00 | | |
| | 30 | | 5 | 39.37 | 3.05 | 34 | 00 | 1 | 00 | | |
| | 35 | | 5 | 39.20 | 2.88 | 35 | 00 | 1 | 00 | | |
| | 40 | | 5 | 39.20 | 2.73 | 36 | 00 | 1 | 00 | | |
| | 45 | | 5 | 38.93 | 2.61 | 37 | 00 | 1 | 00 | | |
| | 50 | | 5 | 38.83 | 2.51 | 38 | 00 | 1 | 00 | | |
| | 55 | | 5 | 38.73 | 2.41 | 39 | 00 | 1 | 00 | | |
| 1 | 00 | | 5 | 38.65 | 2.33 | 40 | 00 | 1 | 00 | | |
| 1 | 10 | | 10 | 38.49 | 2.17 | 41 | 00 | 1 | 00 | | |
| 1 | 20 | | 10 | 38.39 | 2.07 | 42 | 00 | 1 | 00 | | |
| 1 | 30 | | 10 | 38.27 | 1.95 | 43 | 00 | 1 | 00 | | |
| 1 | 40 | | 10 | 38.17 | 1.85 | 44 | 00 | 1 | 00 | | |
| 1 | 50 | | 10 | 38.07 | 1.75 | 45 | 00 | 1 | 00 | | |
| 2 | 00 | | 10 | 37.99 | 1.67 | 46 | 00 | 1 | 00 | | |
| 2 | 15 | | 15 | 37.88 | 1.56 | 47 | 00 | 1 | 00 | | |
| 2 | 30 | | 15 | 37.78 | 1.46 | 48 | 00 | 1 | 00 | | |
| 2 | 45 | | 15 | 37.70 | 1.38 | | | | | | |
| 3 | 00 | | 15 | 36.61 | 1.29 | | | | | | |
| 3 | 30 | | 30 | 37.47 | 1.15 | | | | | | |
| 4 | 00 | | 30 | 37.73 | 1.41 | | | | | | |
| 4 | 30 | | 30 | | | | | | | | |
| 5 | 00 | | 30 | | | | | | | | |
| 6 | 00 | 1 | 00 | | | | | | | | |
| 7 | 00 | 1 | 00 | | | | | | | | |
| 8 | 00 | 1 | 00 | | | | | | | | |
| 9 | 00 | 1 | 00 | | | | | | | | |
| 10 | 00 | 1 | 00 | | | | | | | | |
| 11 | 00 | 1 | 00 | | | | | | | | |
| 12 | 00 | 1 | 00 | | | | | | | | |
| 13 | 00 | 1 | 00 | | | | | | | | |
| 14 | 00 | 1 | 00 | | | | | | | | |
| 15 | 00 | 1 | 00 | | | | | | | | |
| 16 | 00 | 1 | 00 | | | | | | | | |

2.2.2

# ANALYSIS OF PUMPING TEST DATA

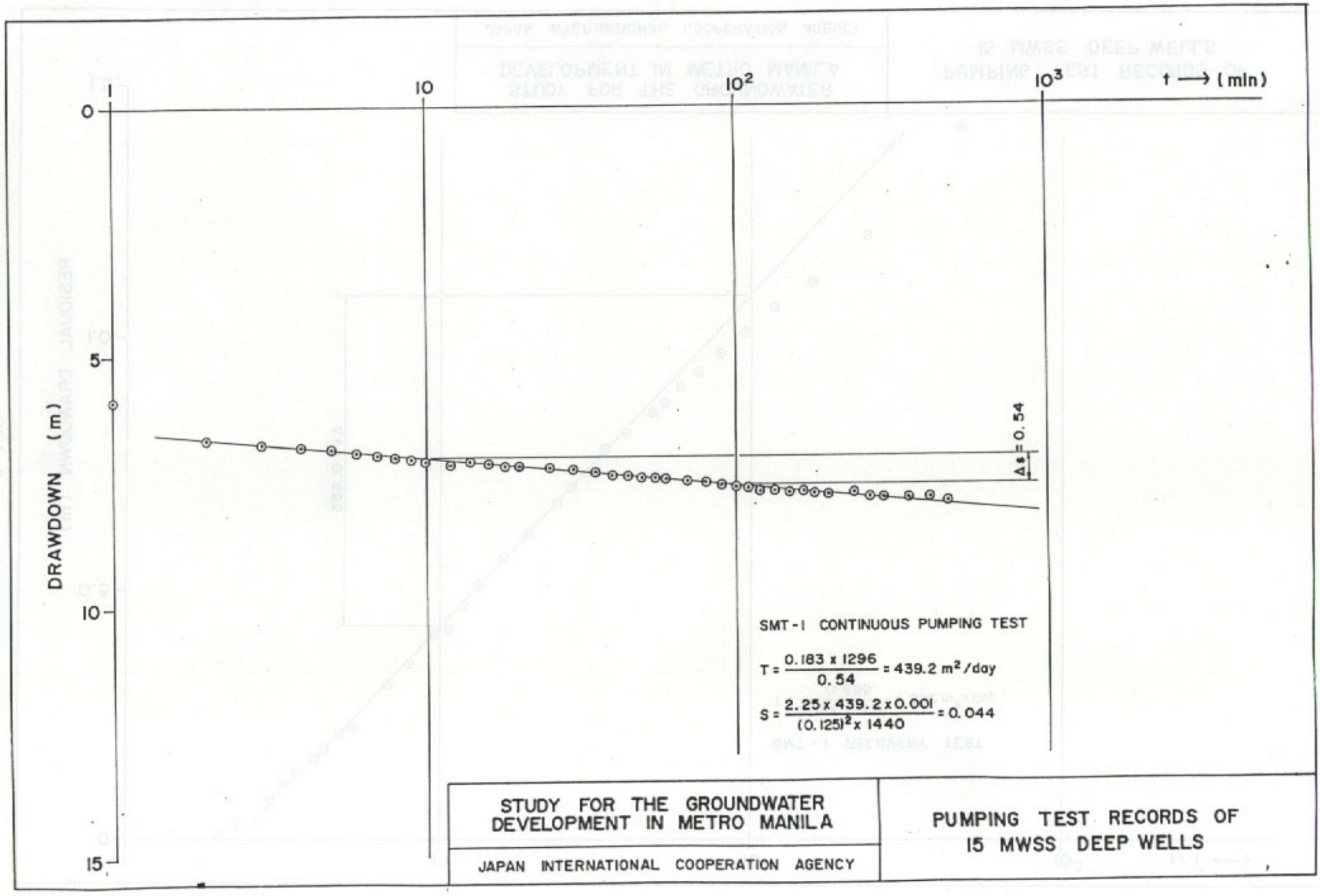

1
10
10²
10³
t ⟶ (min)
0
10
20
30
DRAWDOWN (m)
MTL-147 CONTINUOUS PUMPING TEST
T = 0.183 x 1123 / 3.8 = 54 m²/day
S = 2.25 x 54 x 0.000006 / (0.1)² x 1440 = 0.00073
Δs = 3.8m
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS

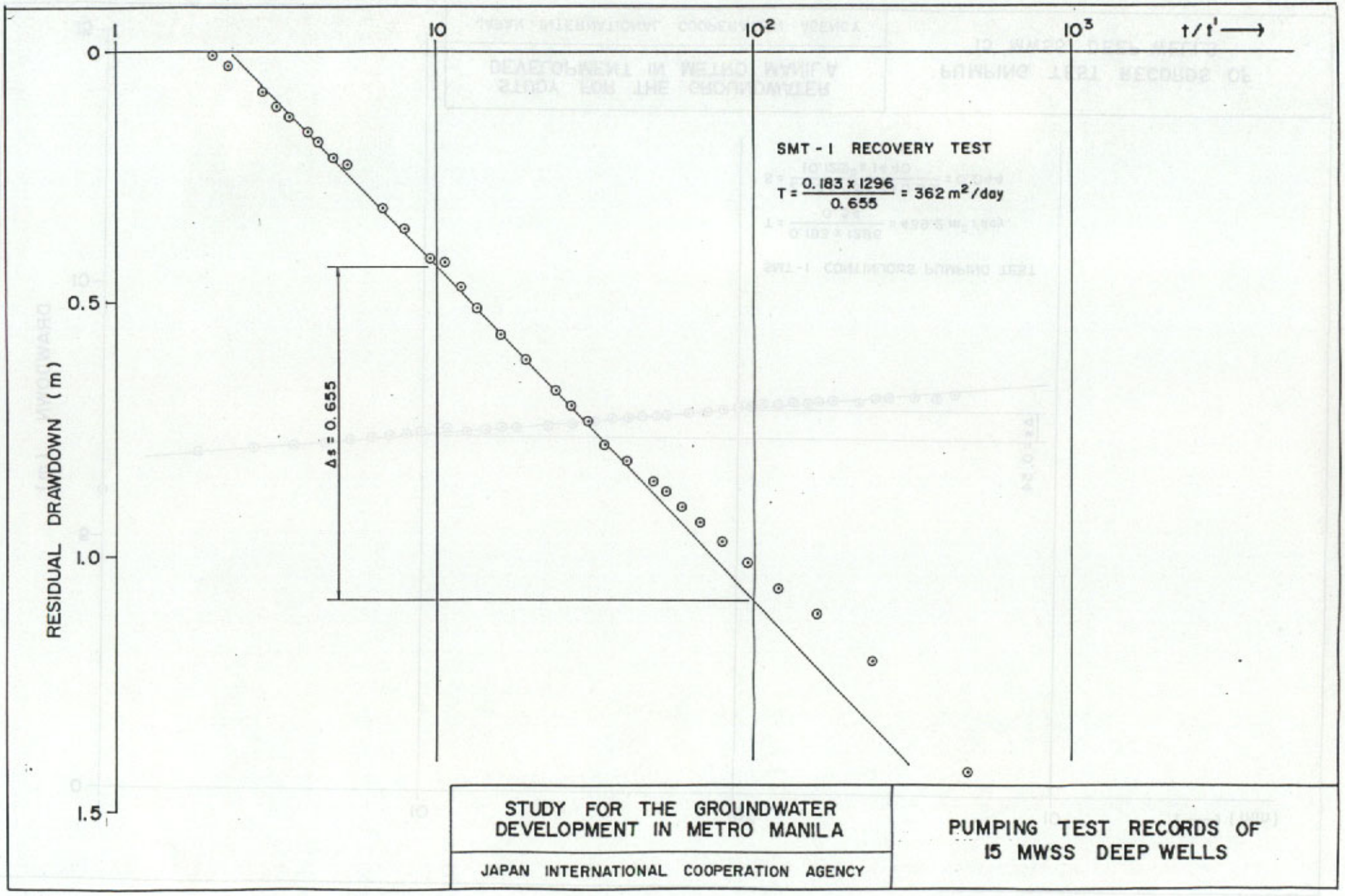


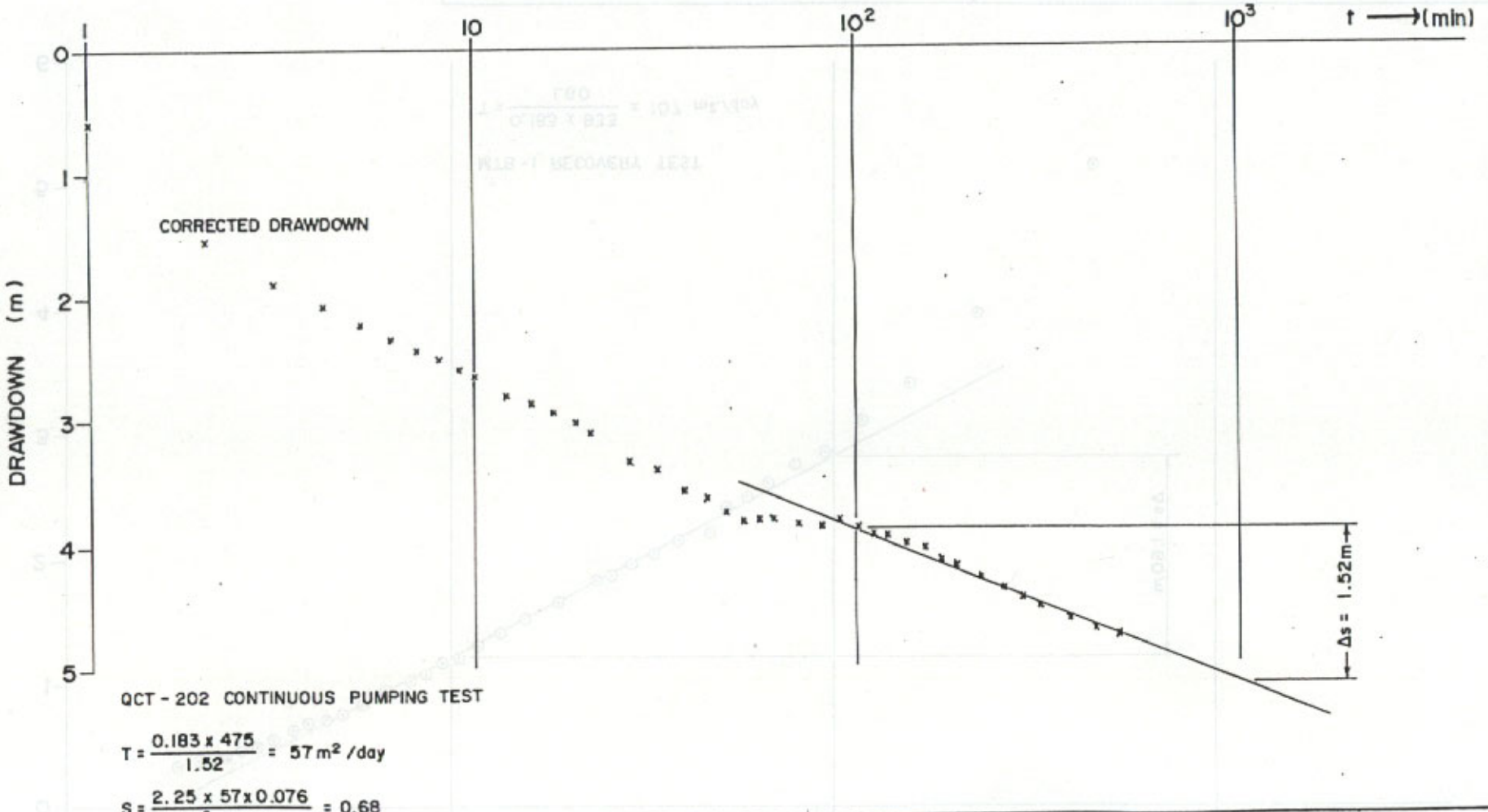

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS


1
10
10²
10³
t ⟶ (min)
0
5
10
15
DRAWDOWN (m)
Δs = 0.54
SMT-1 CONTINUOUS PUMPING TEST
T = 0.183 x 1296 / 0.54 = 439.2 m²/day
S = 2.25 x 439.2 x 0.001 / (0.125)² x 1440 = 0.044
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS


1
10
10²
10³
t/t'
0
0.5
1.0
1.5
RESIDUAL DRAWDOWN (m)
Δs = 0.655
SMT - 1 RECOVERY TEST
T = 0.183 x 1296 / 0.655 = 362 m²/day
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS




QCT - 202 CONTINUOUS PUMPING TEST

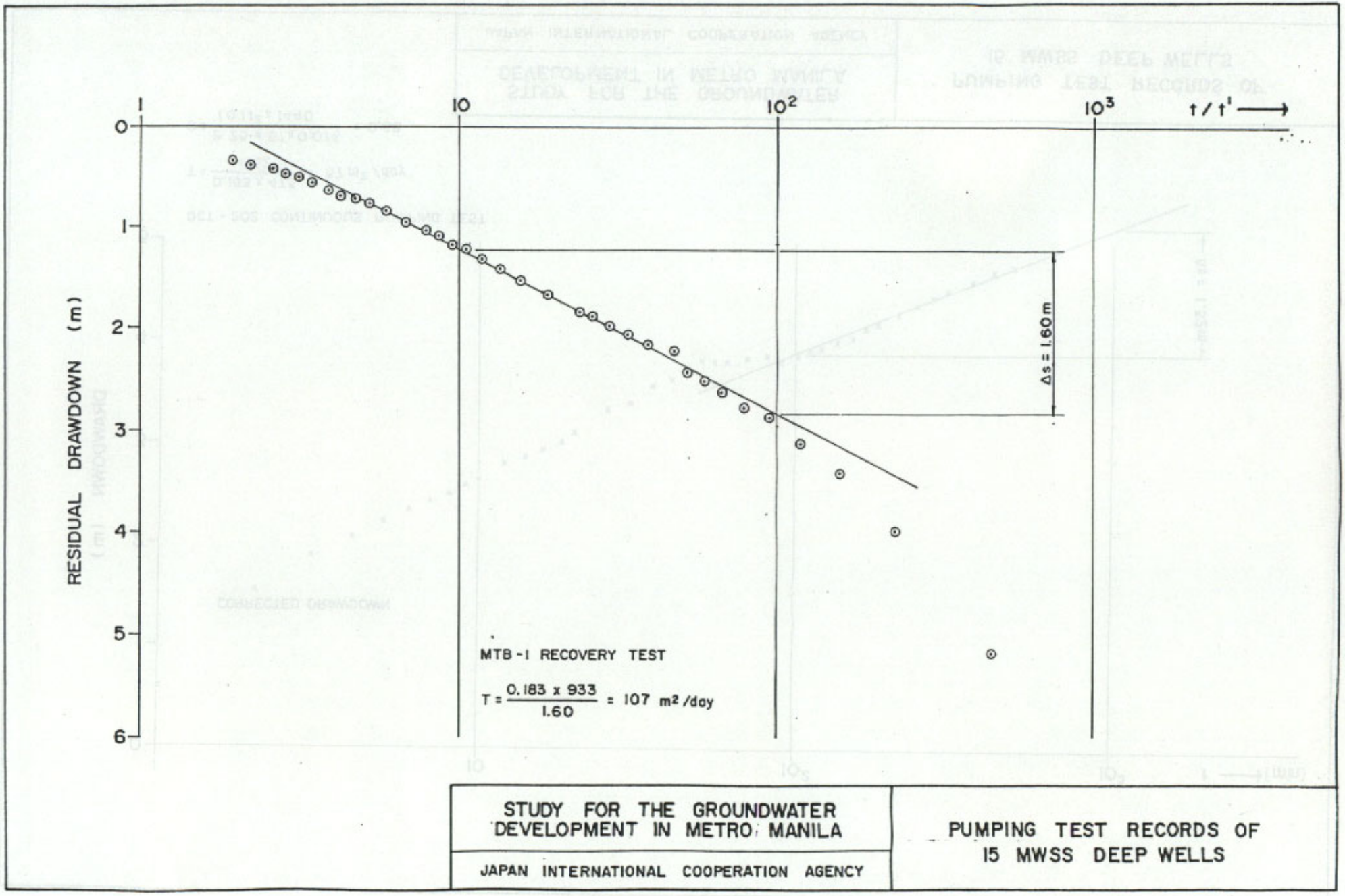
$$T = \frac{0.183 \times 475}{1.52} = 57\ m^2/day$$

$$S = \frac{2.25 \times 57 \times 0.076}{(0.1)^2 \times 1440} = 0.68$$

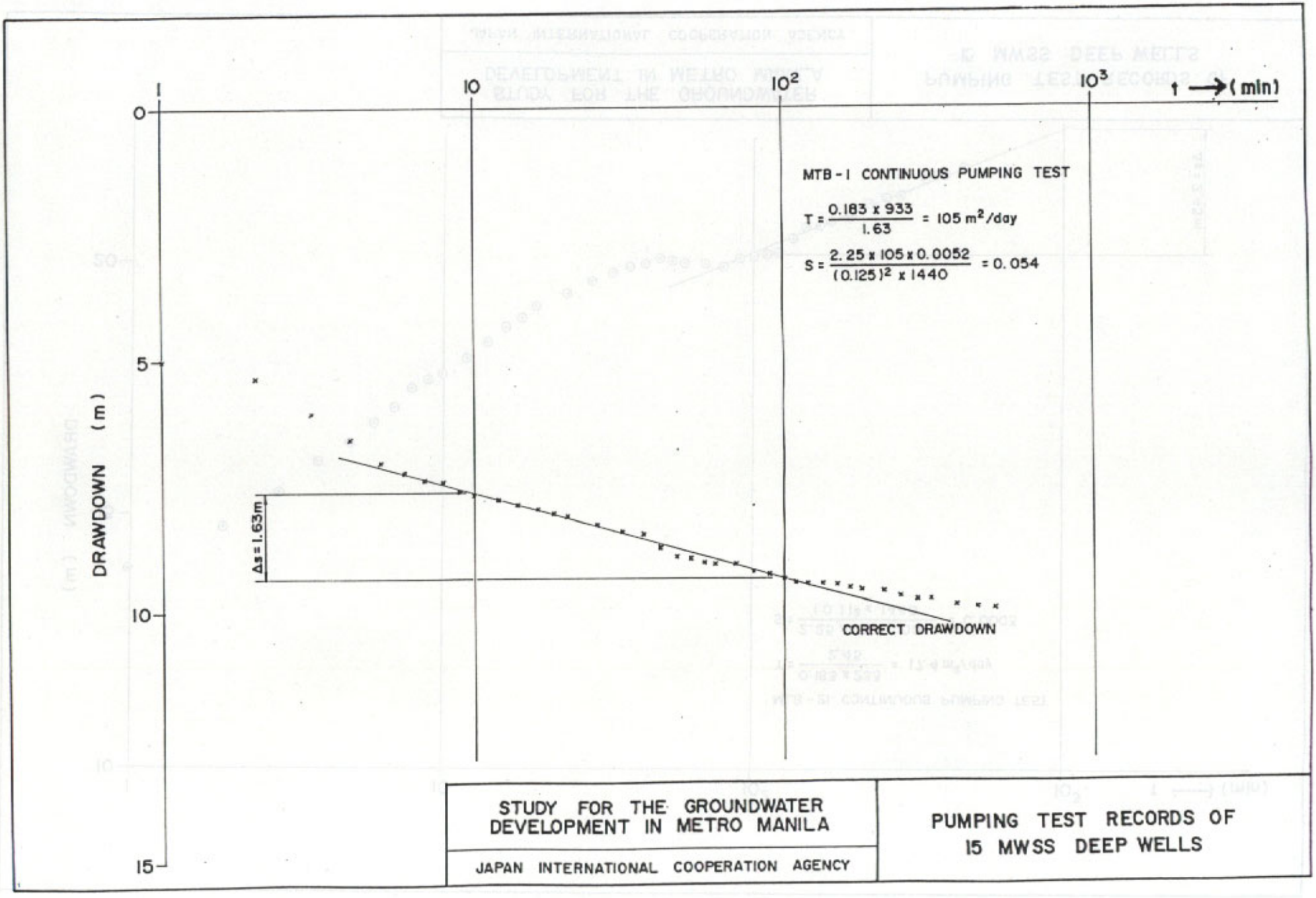
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS



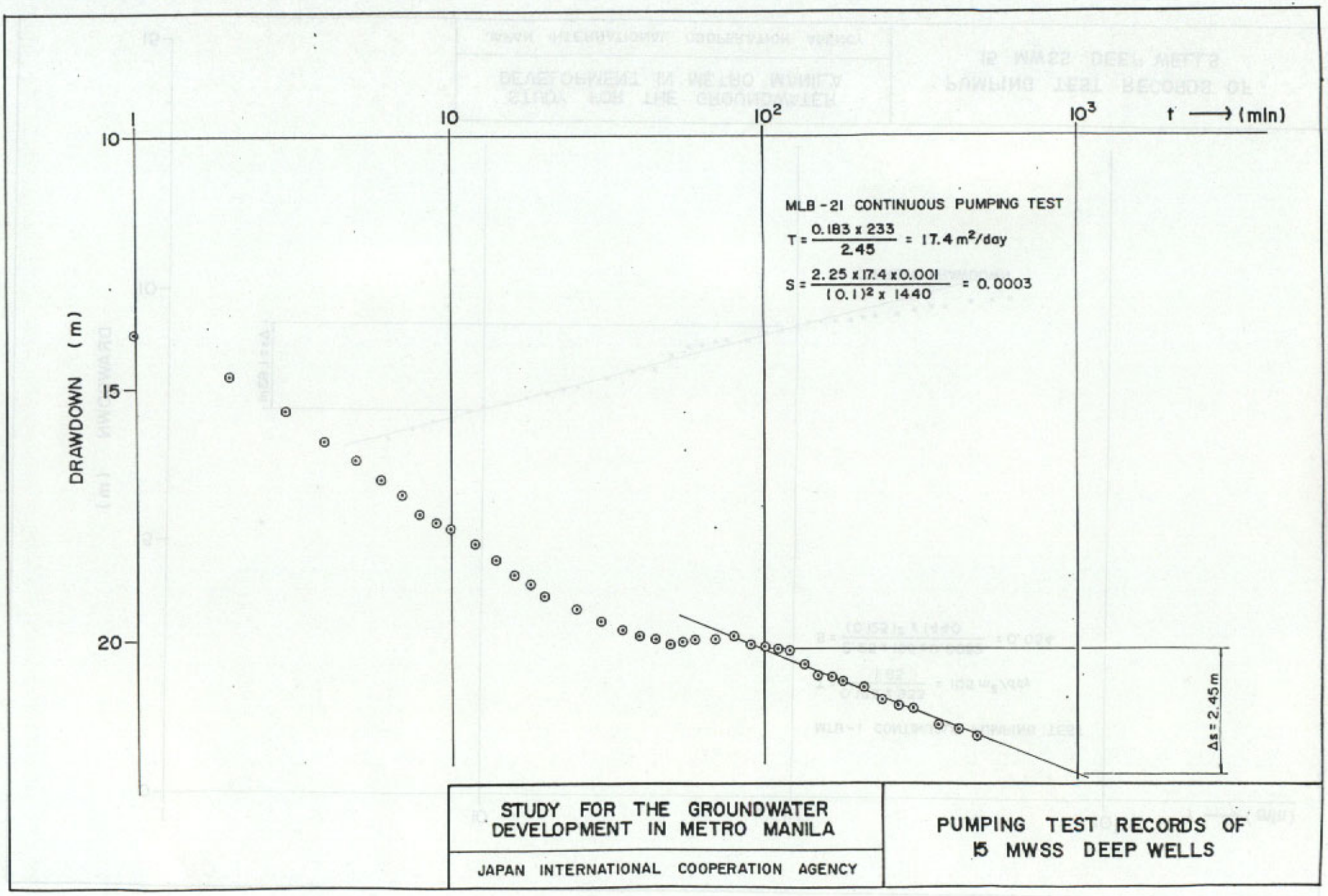

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

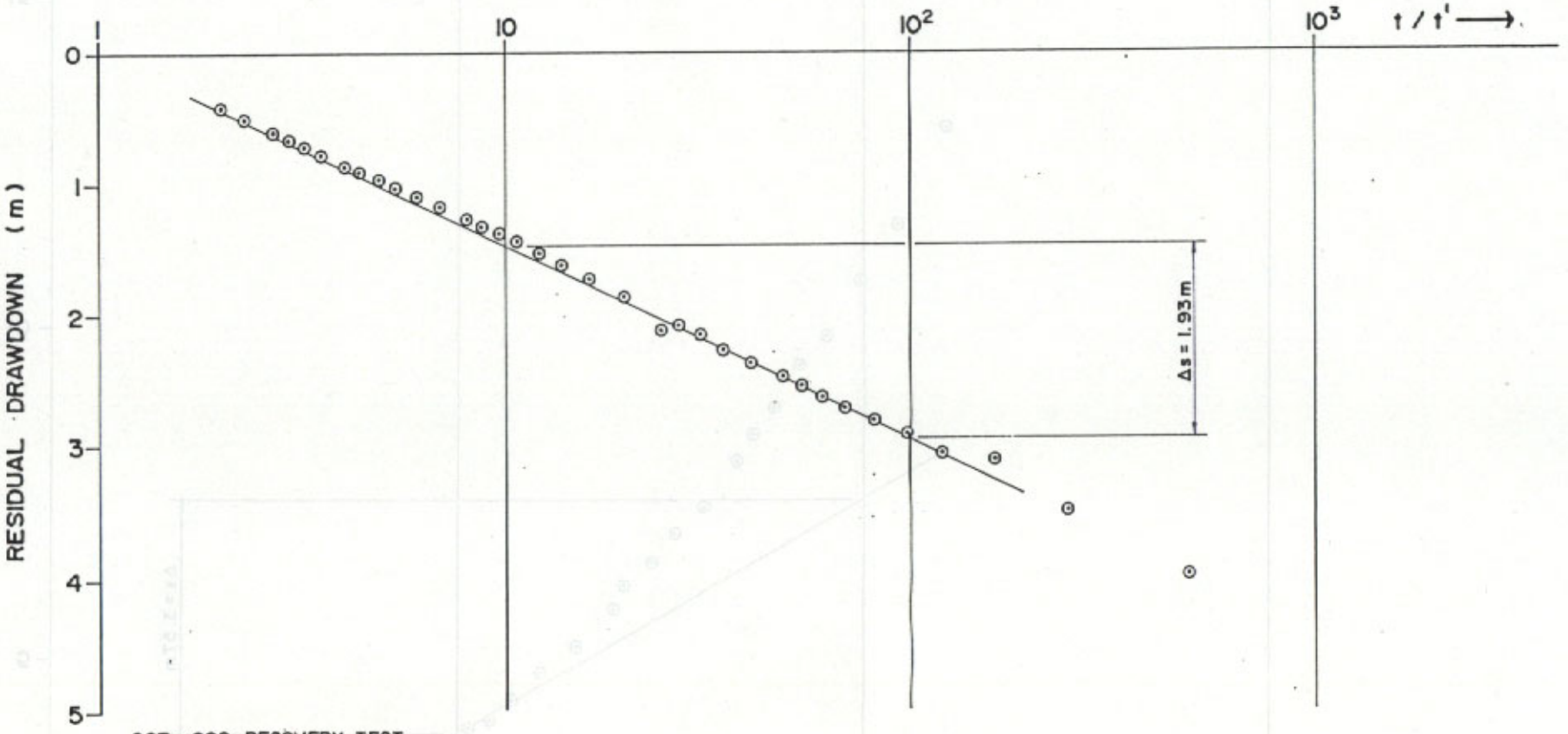



STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS

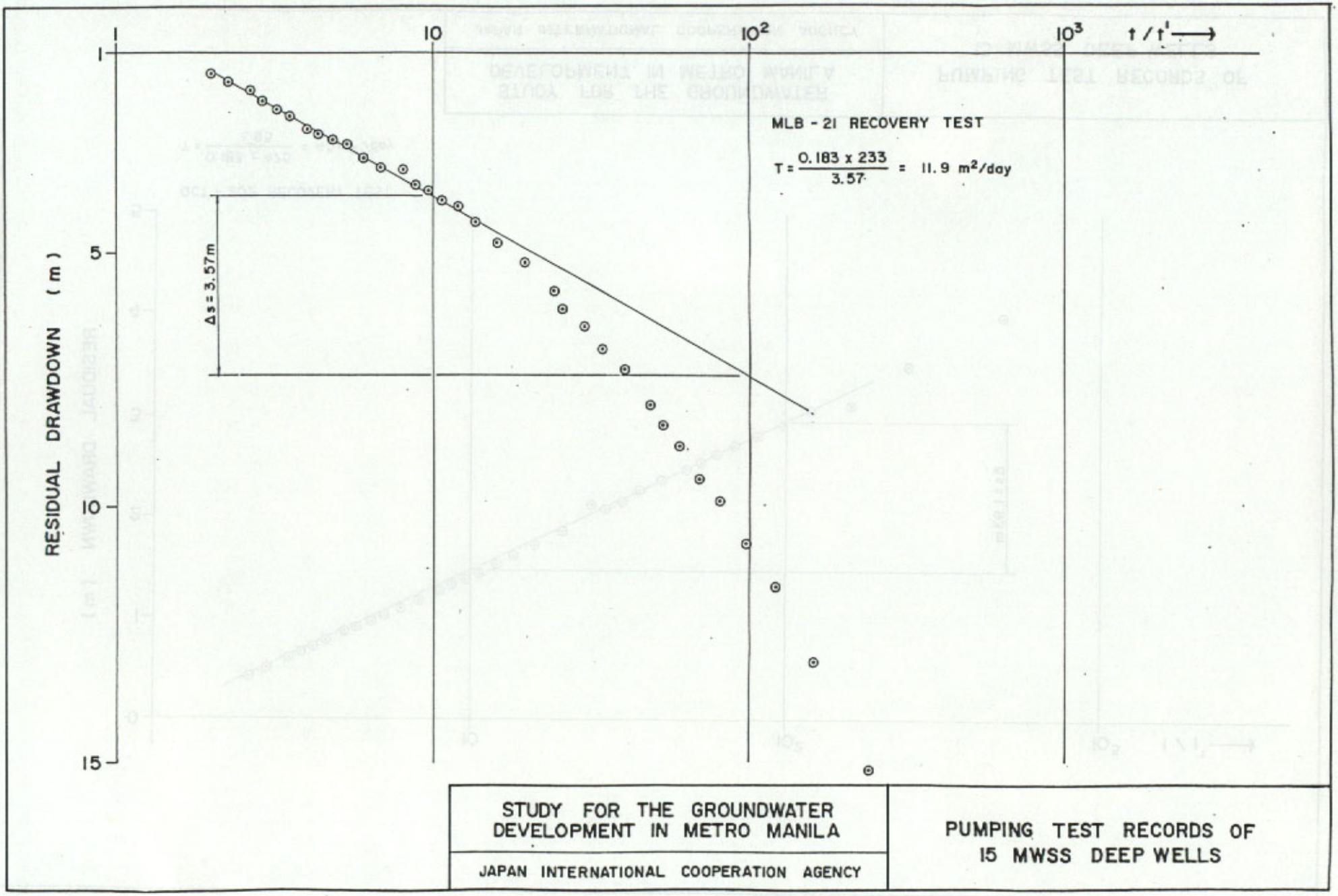

1
10
10²
10³
t ⟶ (min)
10
15
20
DRAWDOWN (m)
MLB-21 CONTINUOUS PUMPING TEST
T = 0.183 x 233 / 2.45 = 17.4 m²/day
S = 2.25 x 17.4 x 0.001 / (10.1)² x 1440 = 0.0003
Δs = 2.45 m
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS



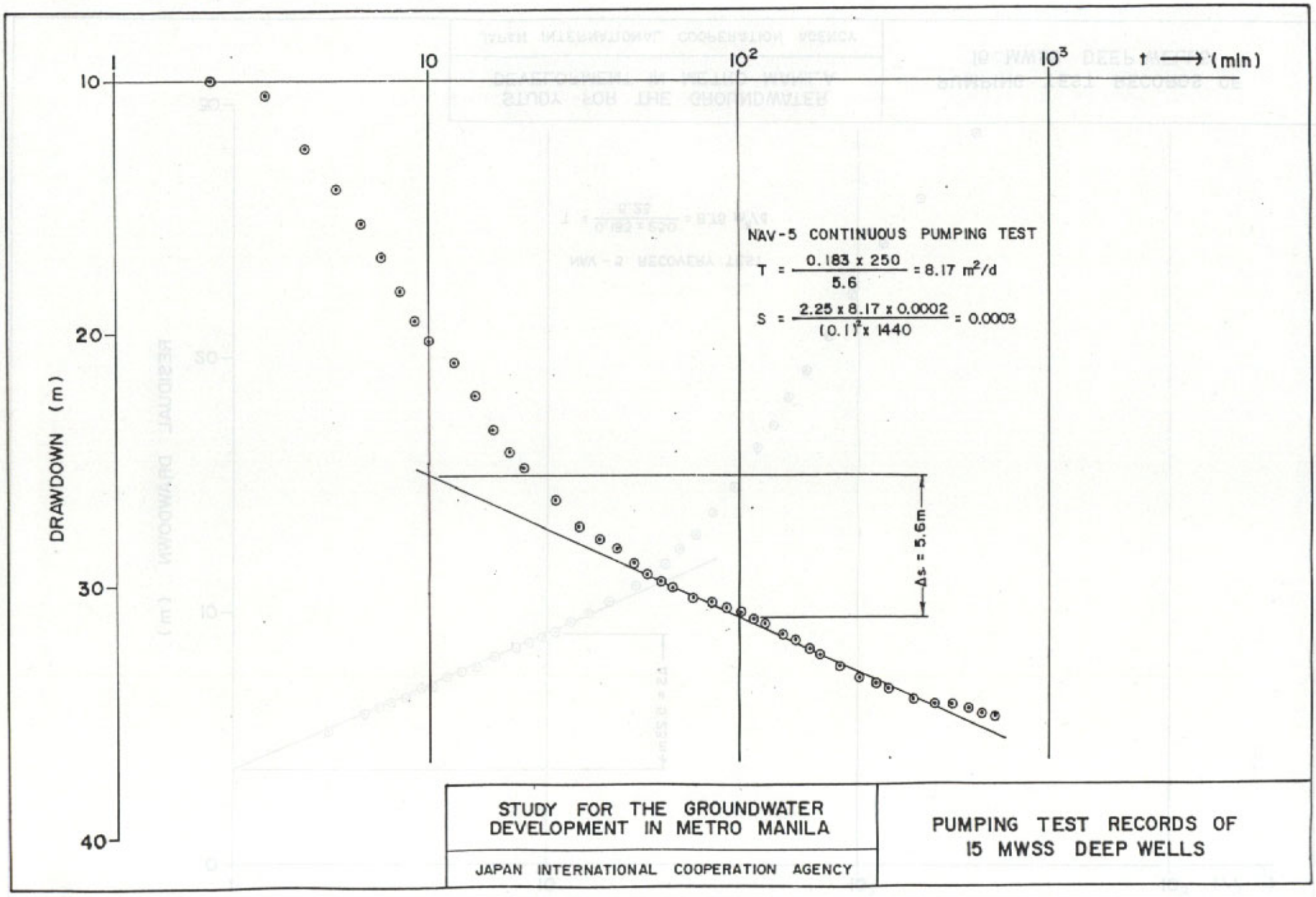

QCT - 202 RECOVERY TEST

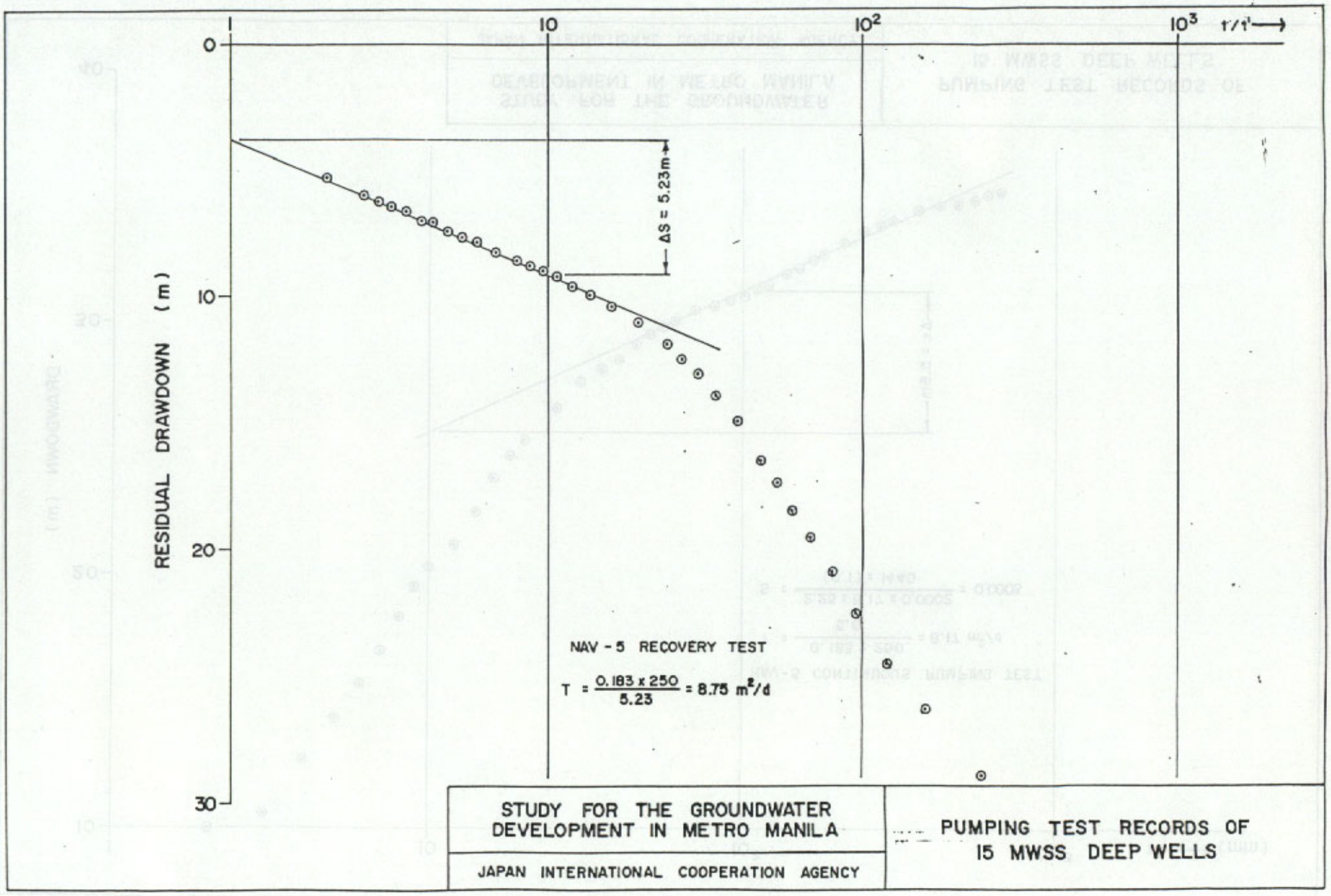
$$T = \frac{0.183 \times 475}{1.93} = 45 m^2/day$$

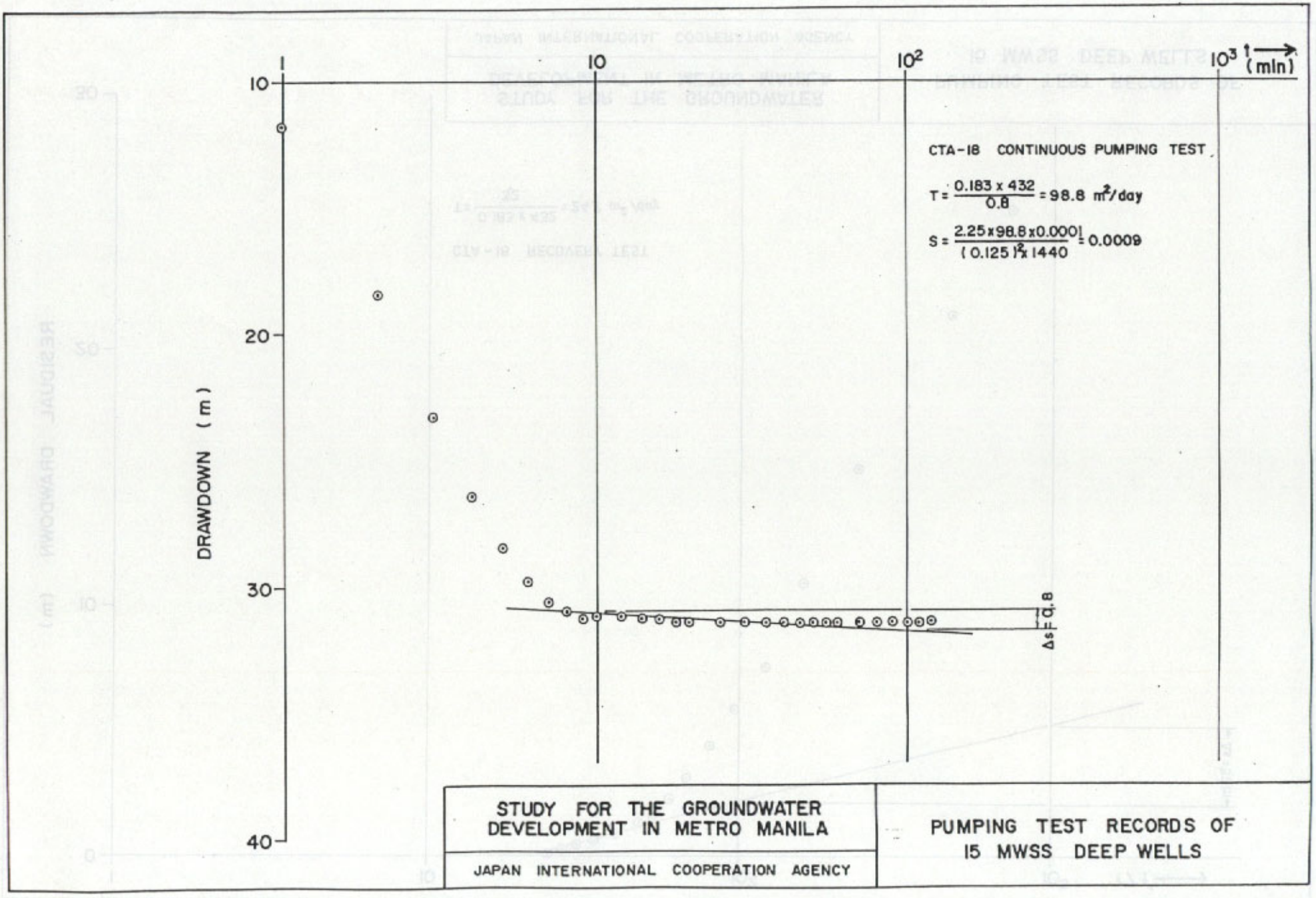
| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |

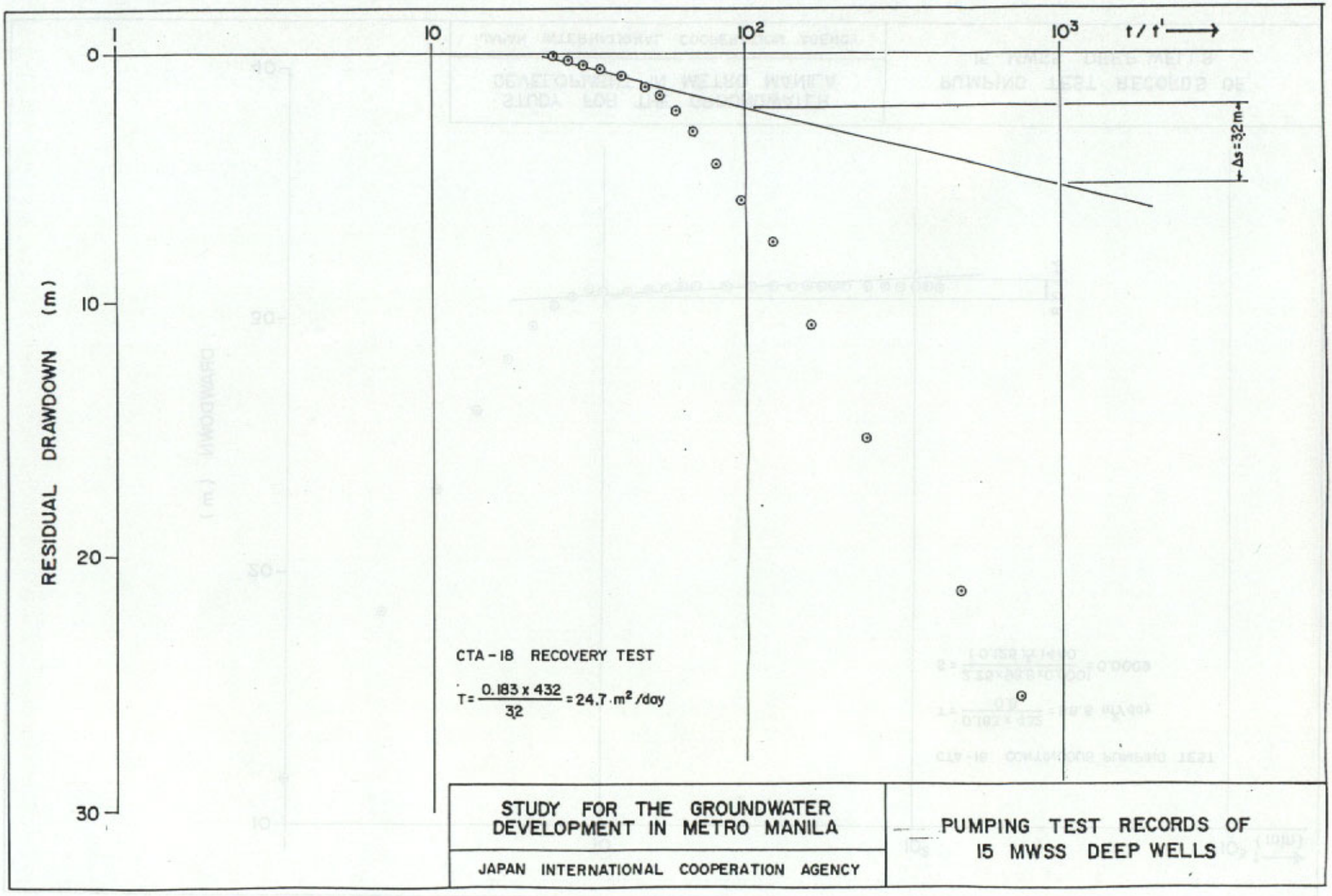


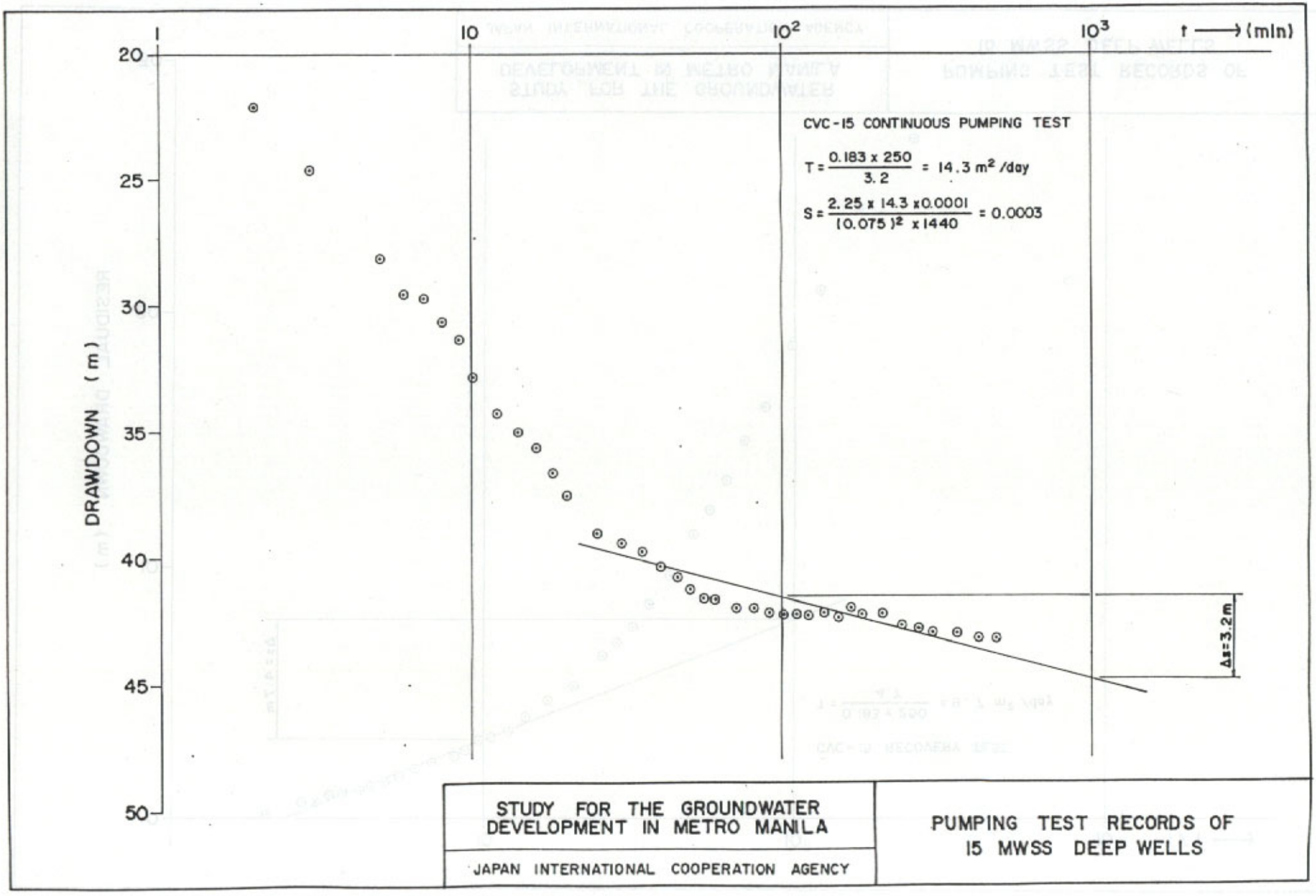

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

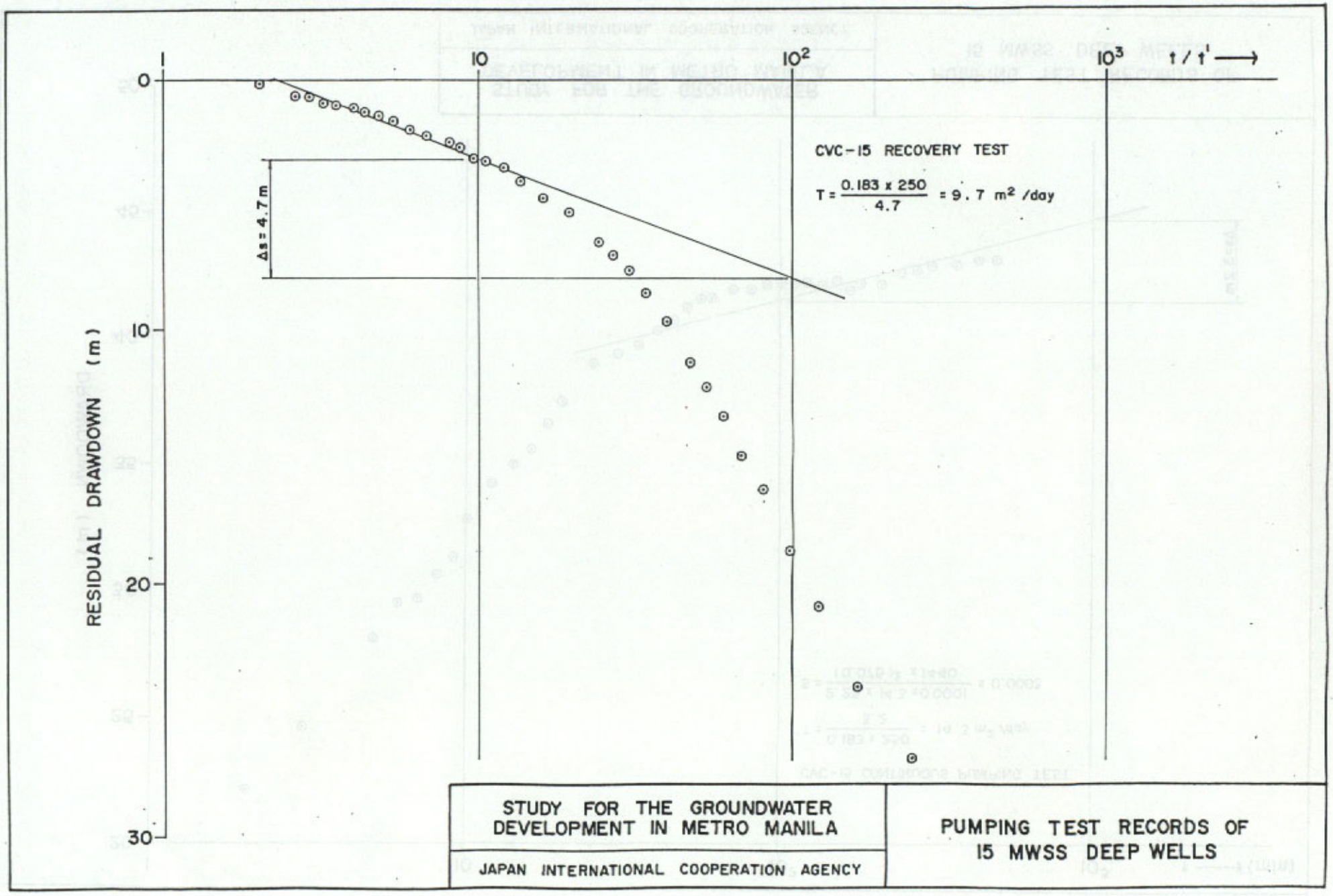

1
10
10²
10³
t ⟶ (min)
10
20
30
40
DRAWDOWN (m)
NAV-5 CONTINUOUS PUMPING TEST
T = 0.183 x 250 / 5.6 = 8.17 m²/d
S = 2.25 x 8.17 x 0.0002 / (0.1)² x 1440 = 0.0003
Δs = 5.6m
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS

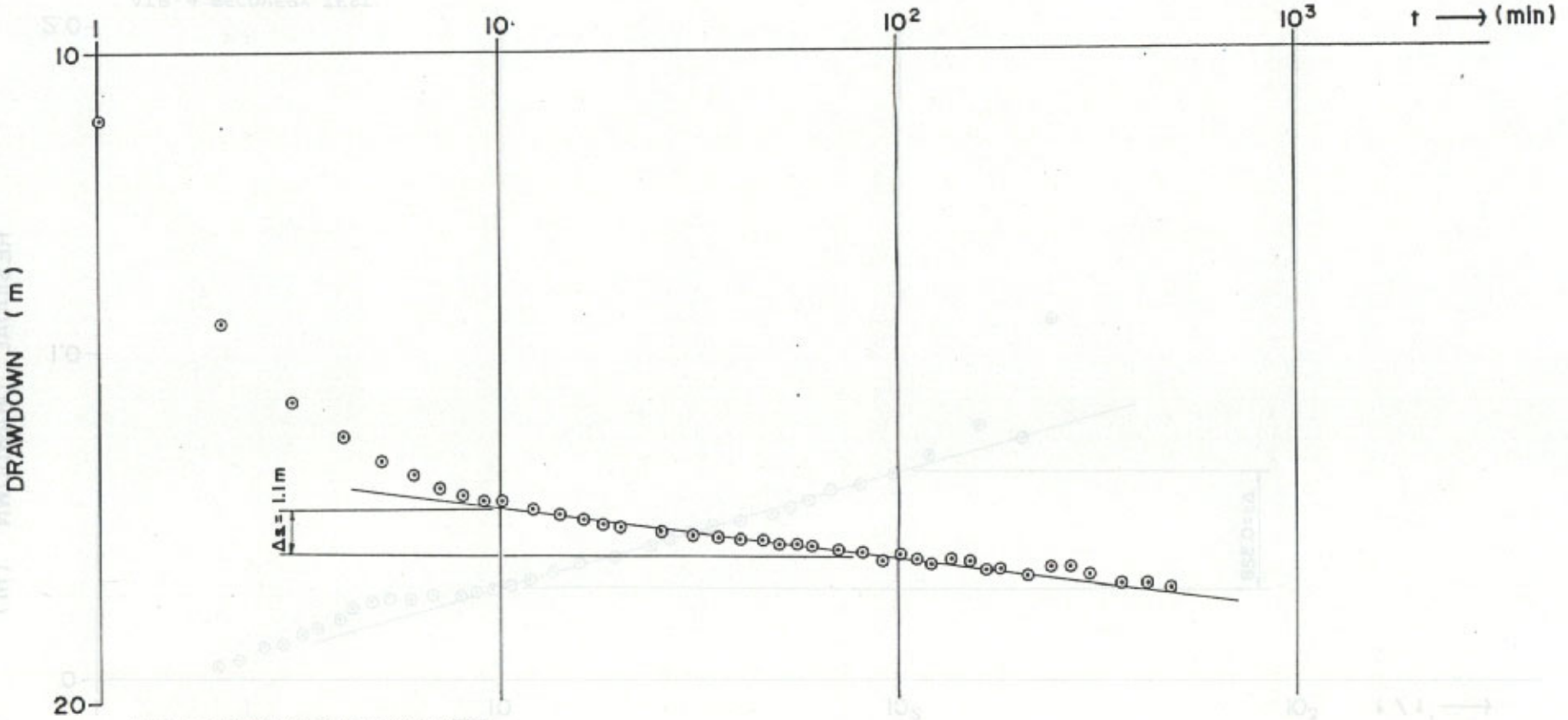

1
10
10²
10³
t/t'
0
10
20
30
RESIDUAL DRAWDOWN (m)
ΔS = 5.23m
NAV - 5 RECOVERY TEST
T = 0.183 x 250 / 5.23 = 8.75 m²/d
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS


1
10
10²
10³ t (min)
10
20
30
40
DRAWDOWN (m)
CTA-18 CONTINUOUS PUMPING TEST
T = 0.183 x 432 / 0.8 = 98.8 m²/day
S = 2.25x98.8x0.0001 / (0.125)²x1440 = 0.0009
Δs=0.8
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS


1
10
10²
10³
t / t'
0
10
20
30
RESIDUAL DRAWDOWN (m)
Δs=3.2m
CTA-18 RECOVERY TEST
T = 0.183 x 432 / 3.2 = 24.7 m²/day
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS


1
10
10²
10³
t ⟶ (min)
20
25
30
35
40
45
50
DRAWDOWN (m)
CVC-15 CONTINUOUS PUMPING TEST
T = 0.183 x 250 / 3.2 = 14.3 m²/day
S = 2.25 x 14.3 x 0.0001 / (0.075)² x 1440 = 0.0003
Δs=3.2m
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS


1
10
10²
10³
t / t'
0
10
20
30
RESIDUAL DRAWDOWN (m)
Δs = 4.7 m
CVC-15 RECOVERY TEST
T = 0.183 x 250 / 4.7 = 9.7 m²/day
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS




ATP-4 CONTINUOUS PUMPING TEST

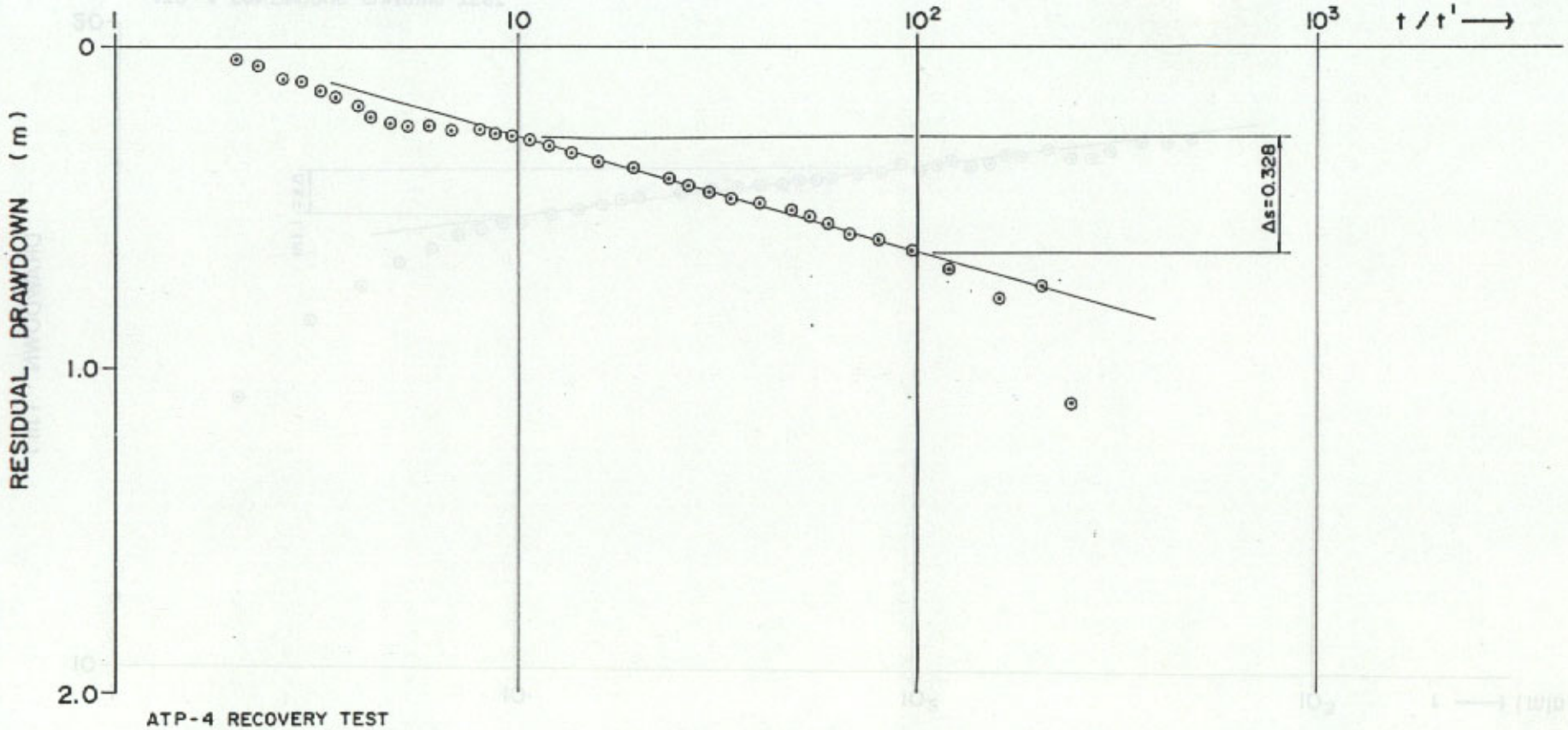
$$T = \frac{0.183 \times 769}{1.1} = 127\ m^2/day$$

$$S = \frac{2.25 \times 127 \times 0.001}{(0.075)^2 \times 1440} = 0.035$$

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

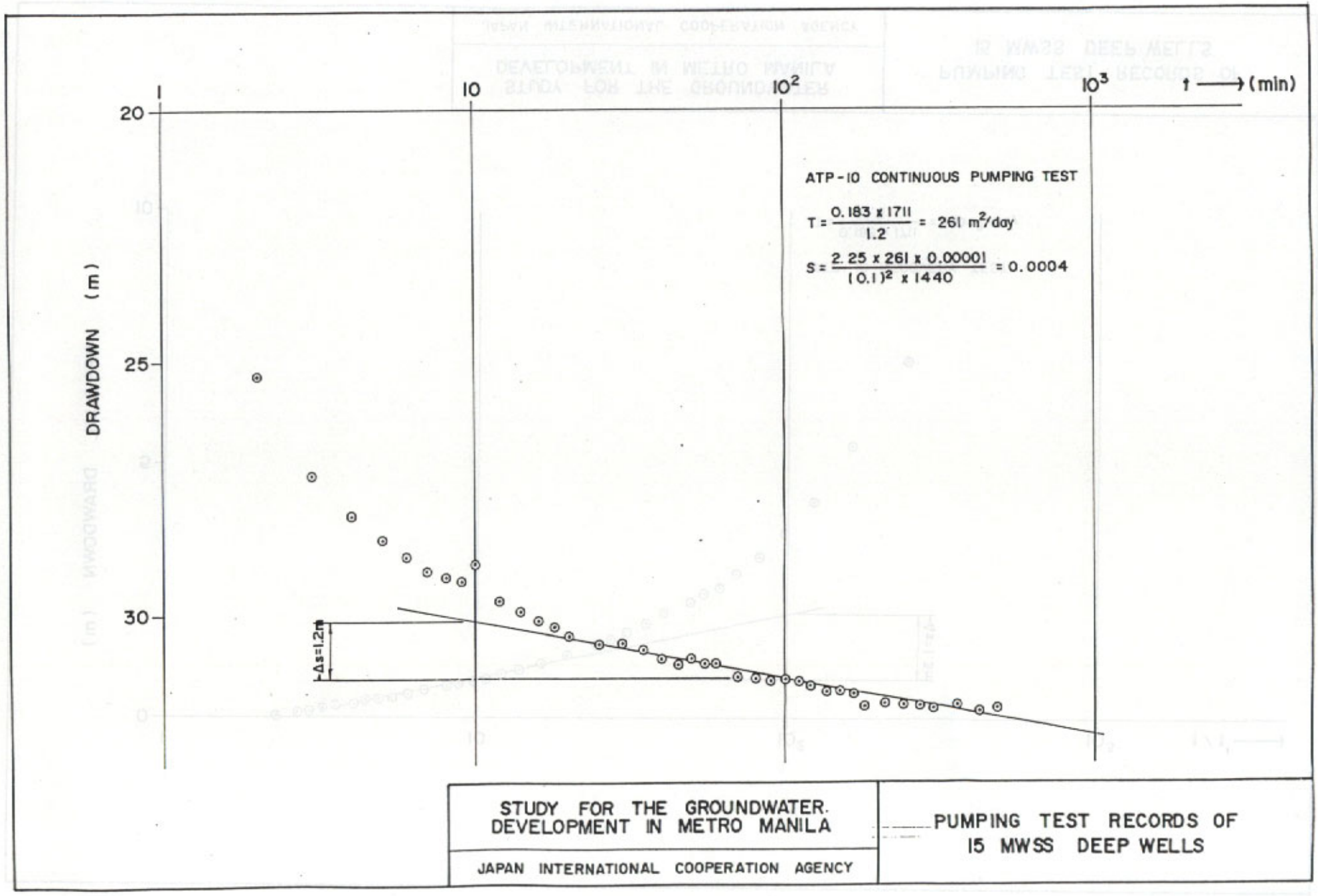
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS

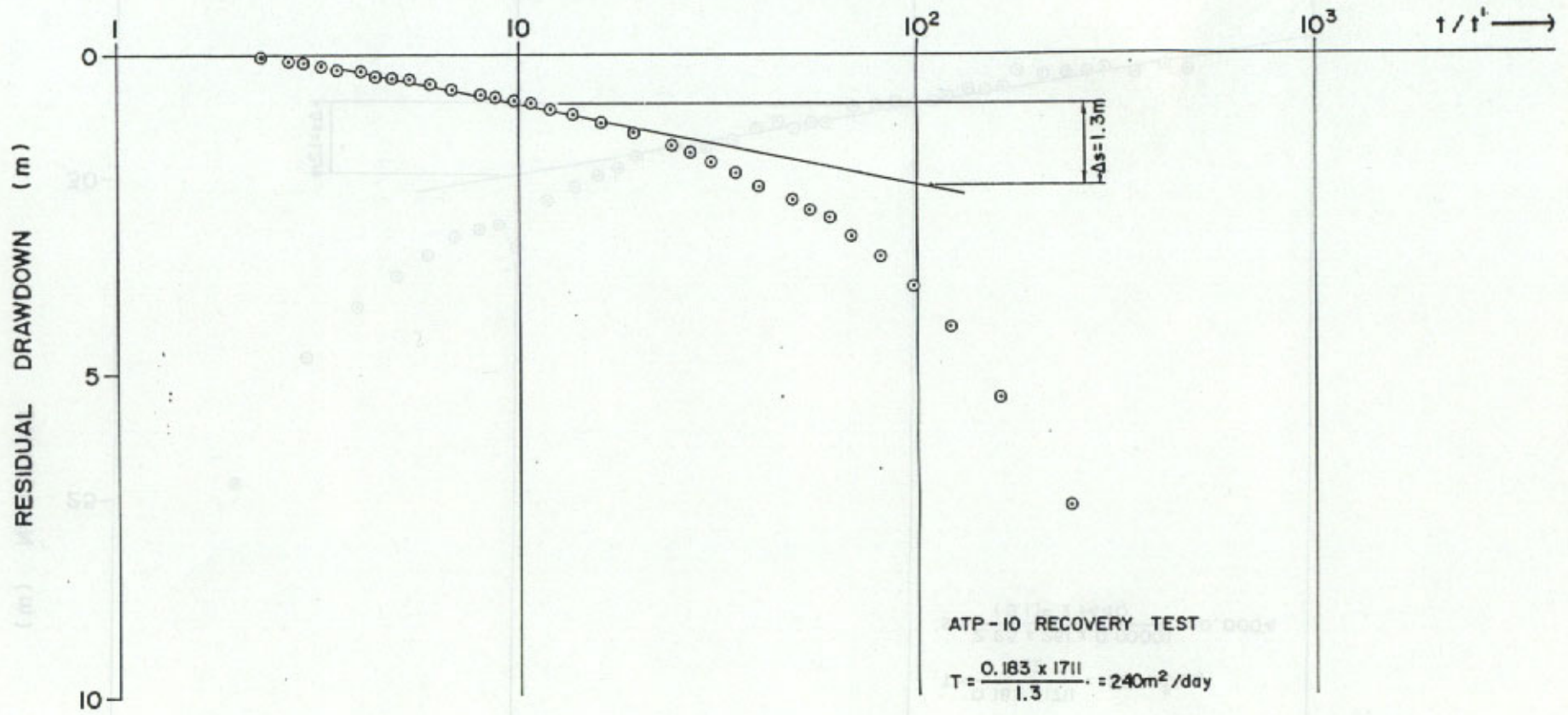



ATP-4 RECOVERY TEST

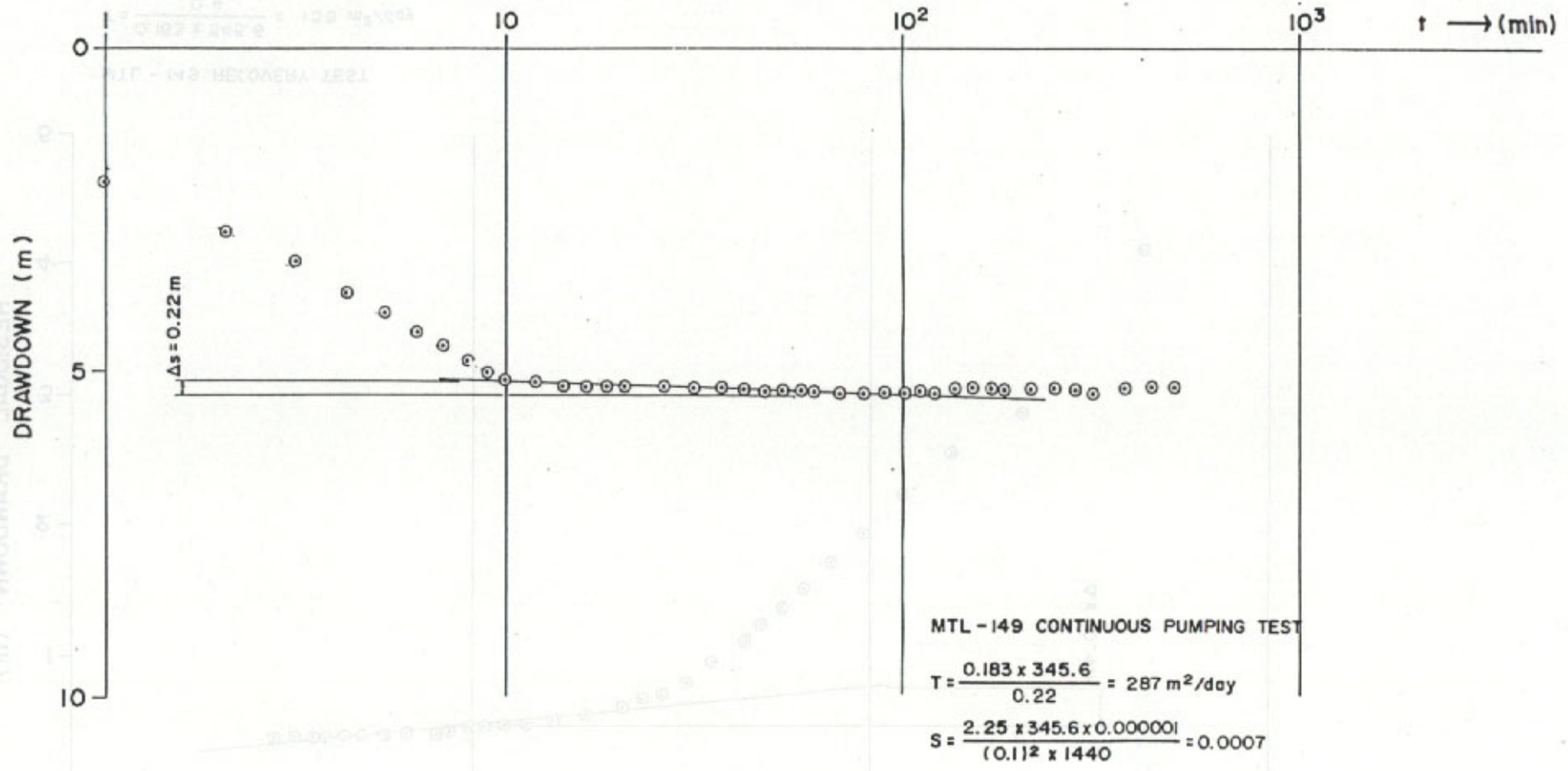
$$T = \frac{0.183 \times 769}{0.328} = 429 m^2/day$$

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

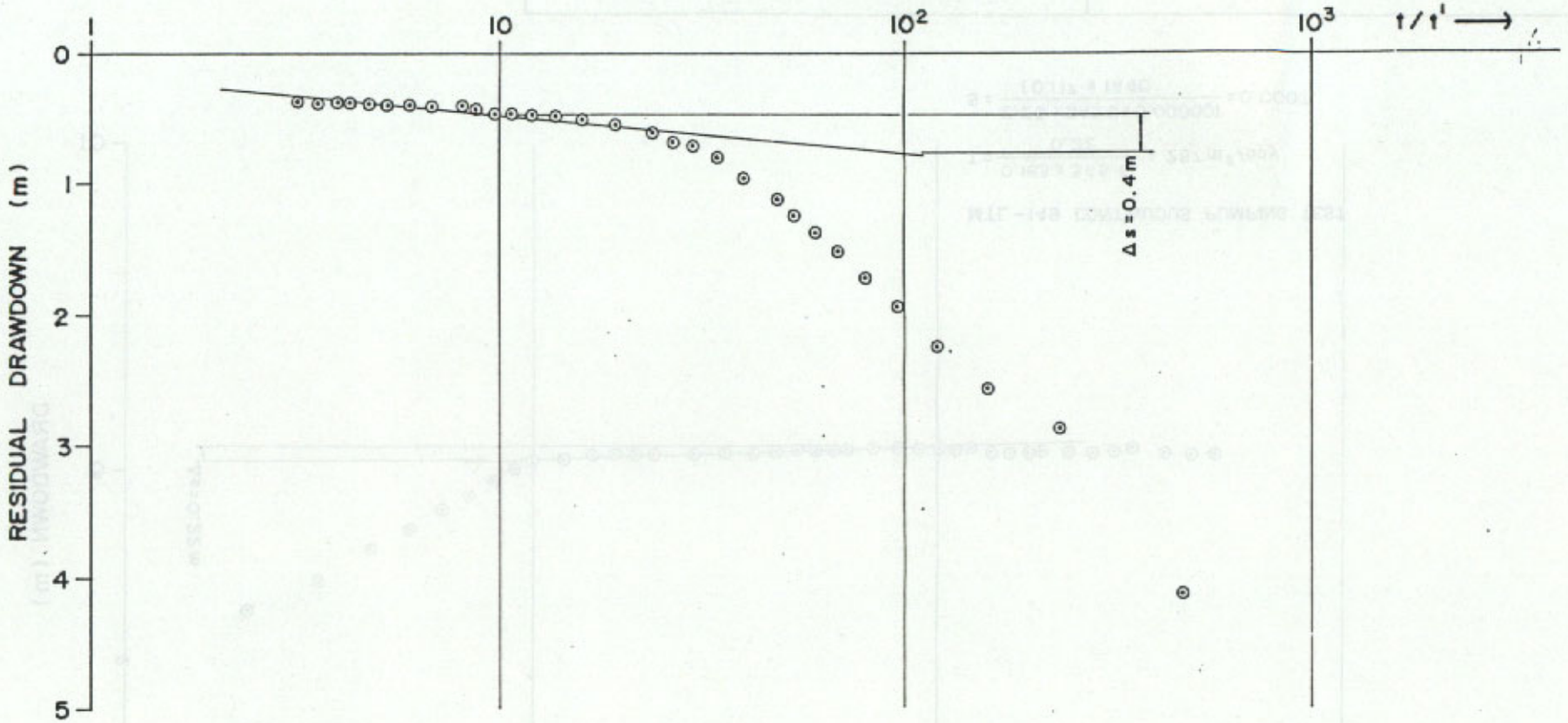

1
10
10²
10³
t ⟶ (min)
20
25
30
DRAWDOWN (m)
ATP-10 CONTINUOUS PUMPING TEST
T = 0.183 x 1711 / 1.2 = 261 m²/day
S = 2.25 x 261 x 0.00001 / (10.1)² x 1440 = 0.0004
Δs=1.2m
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



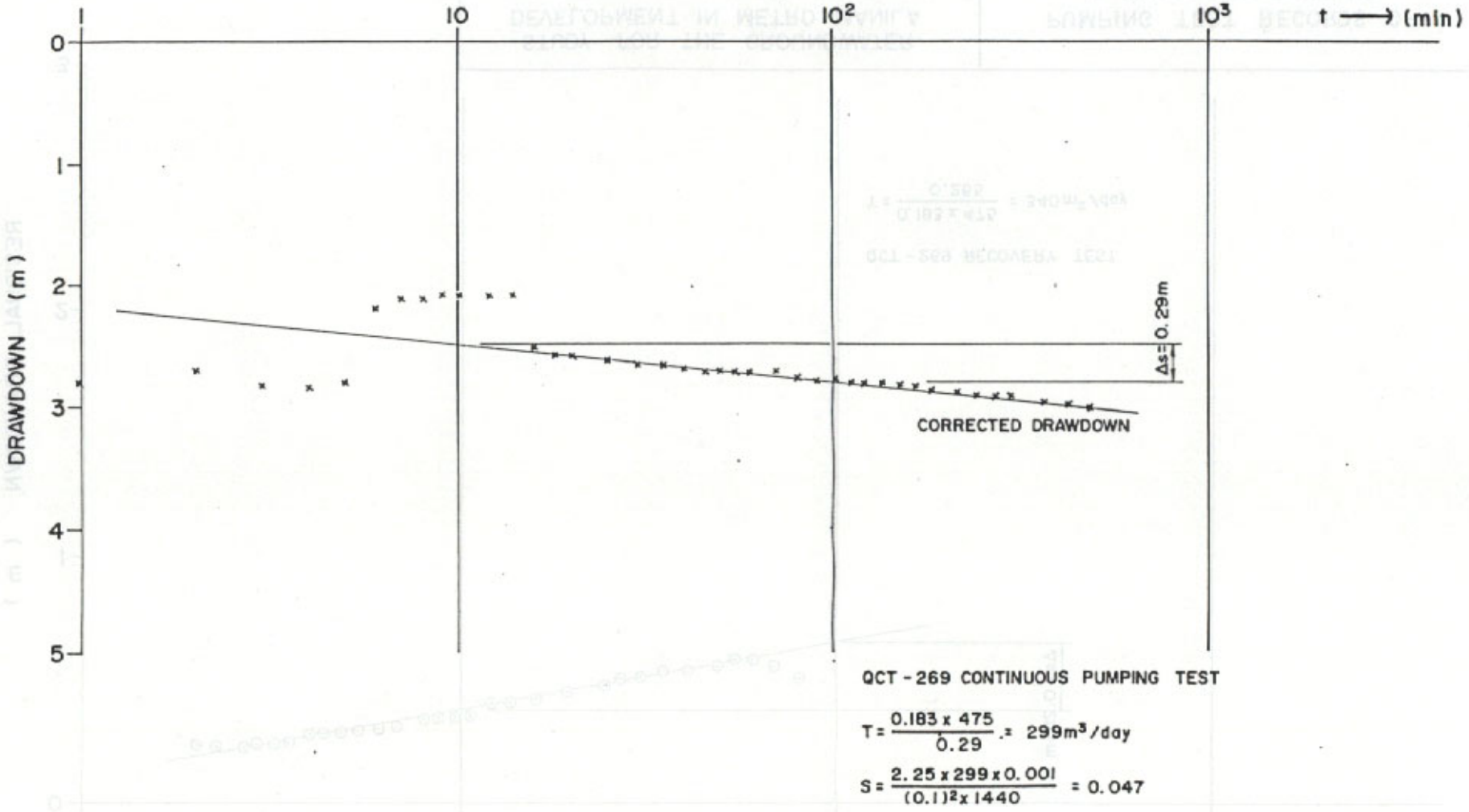

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



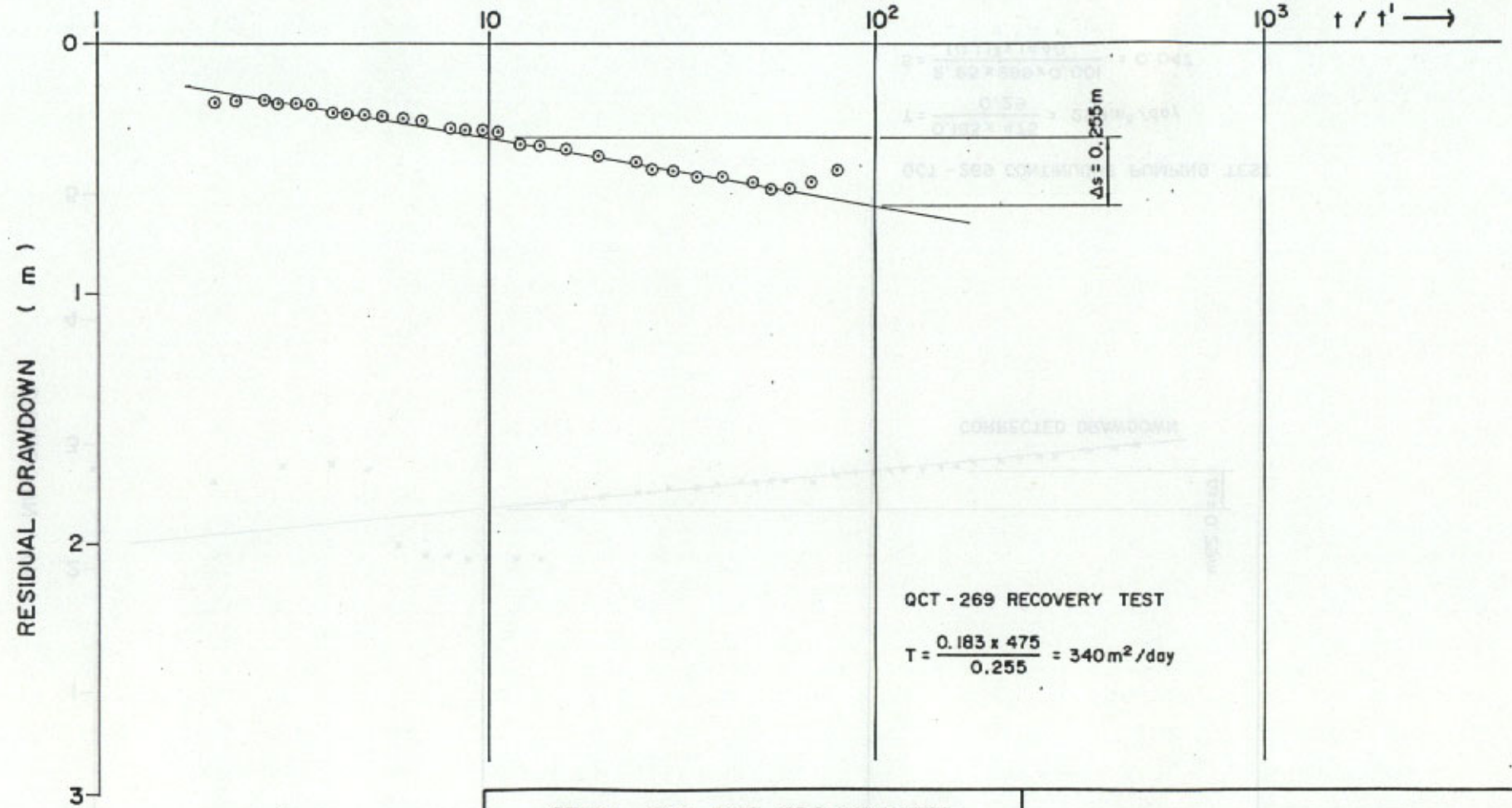

MTL - 149 RECOVERY TEST

$$T = \frac{0.183 \times 345.6}{0.4} = 158 \text{ m}^2/\text{day}$$

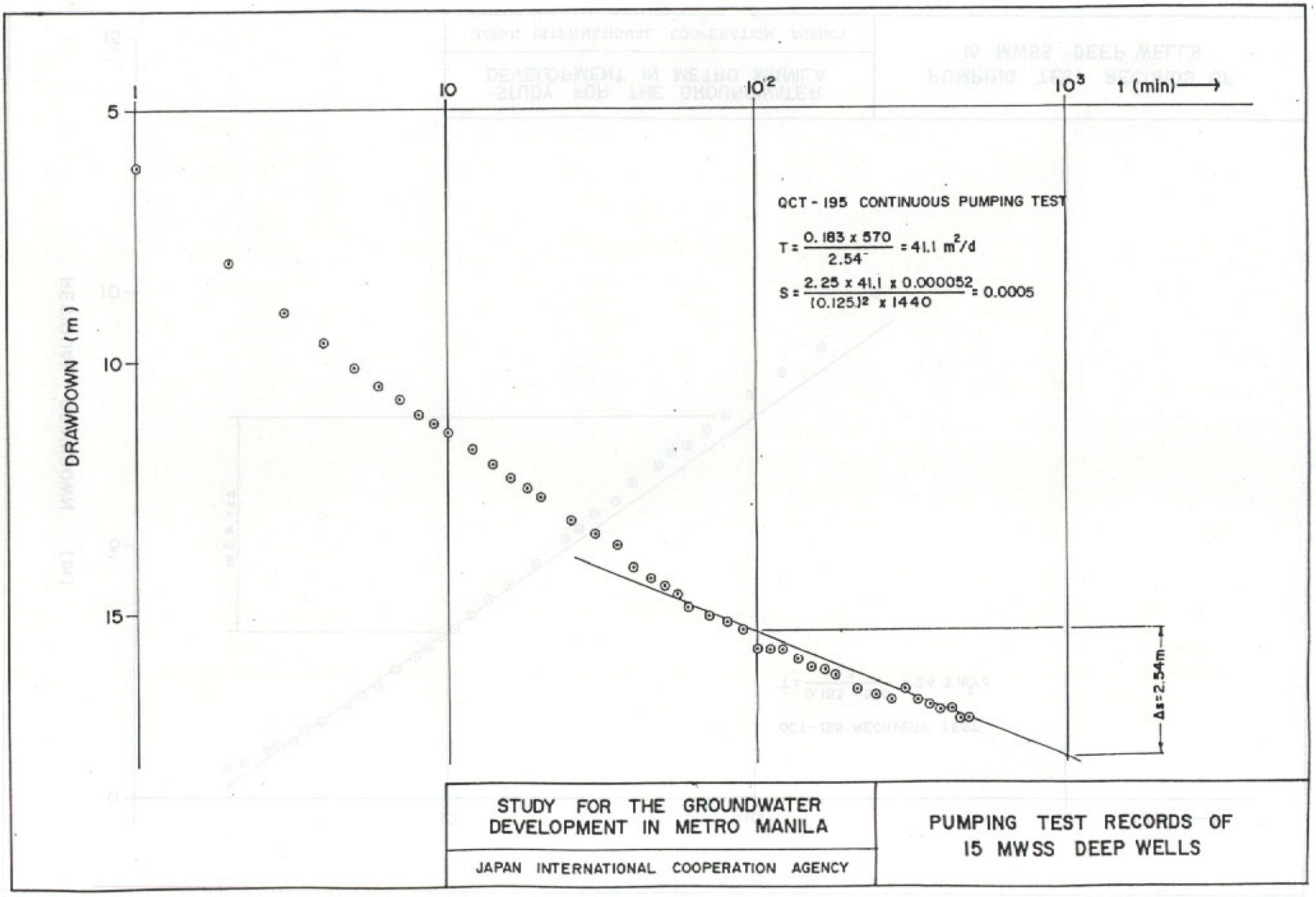
| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

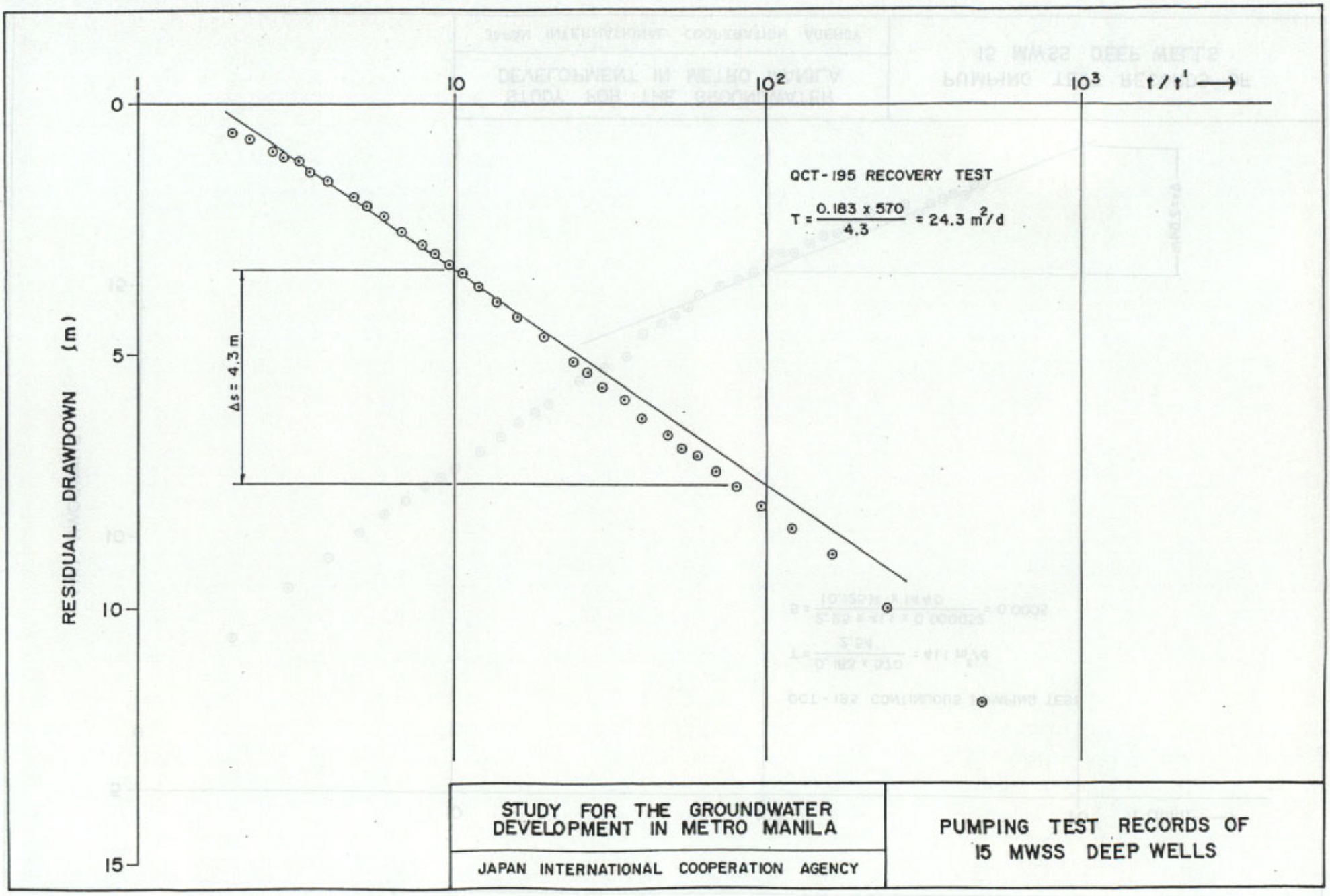



| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

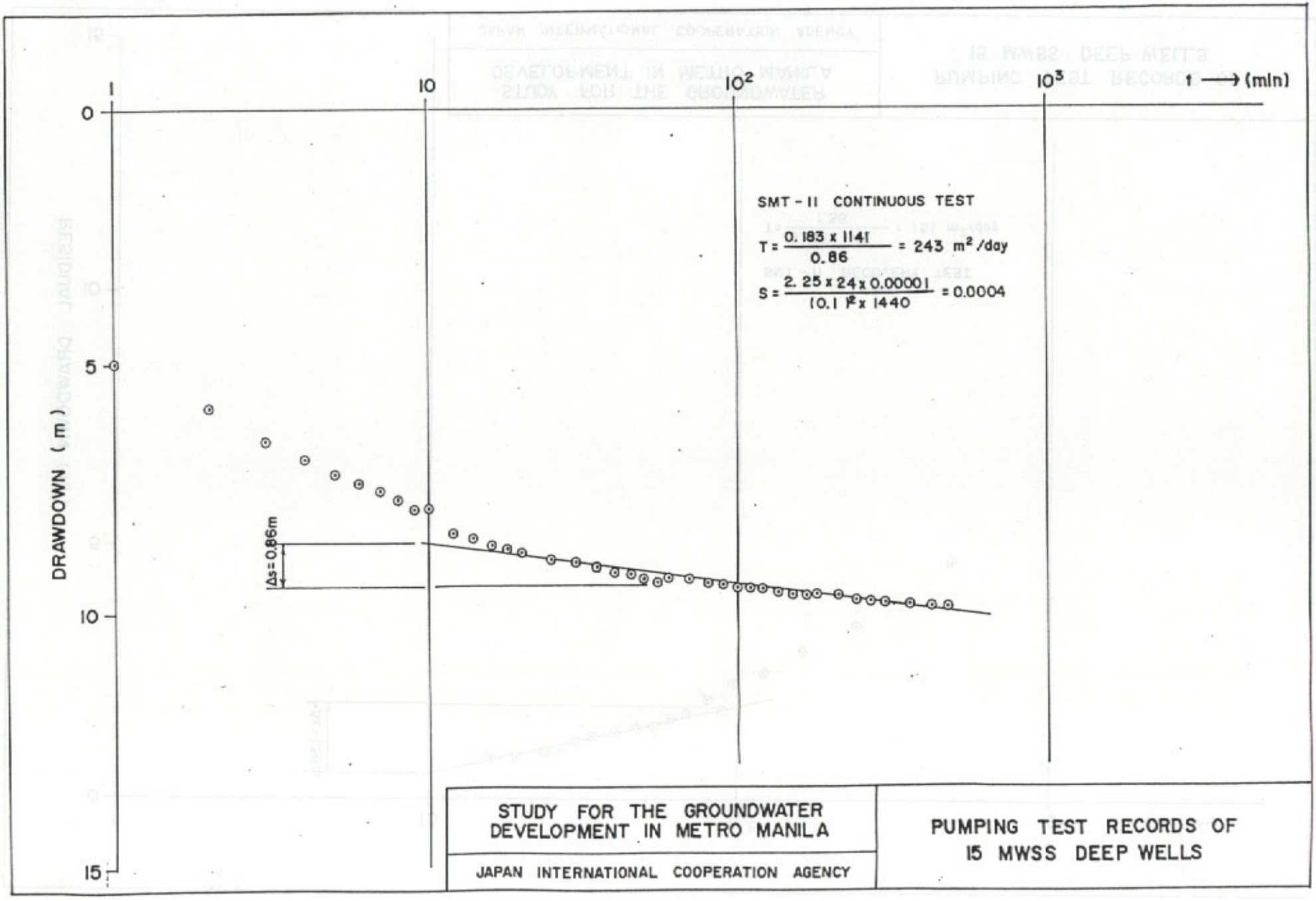

1
10
10²
10³
t (min)
5
10
15
DRAWDOWN (m)
QCT - 195 CONTINUOUS PUMPING TEST
T = 0.183 x 570 / 2.54 = 41.1 m²/d
S = 2.25 x 41.1 x 0.000052 / (0.125)² x 1440 = 0.0005
Δs=2.54m
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS

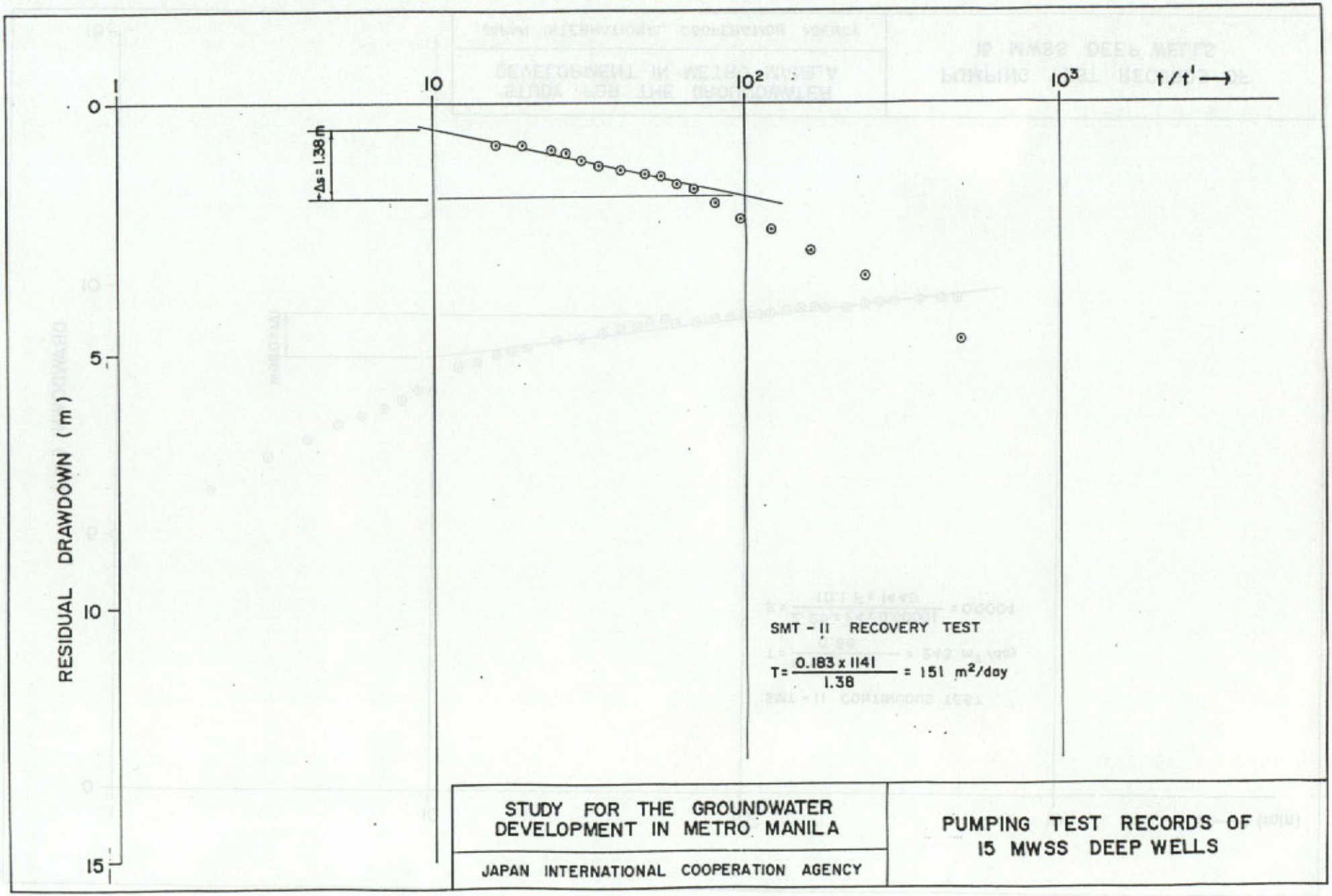


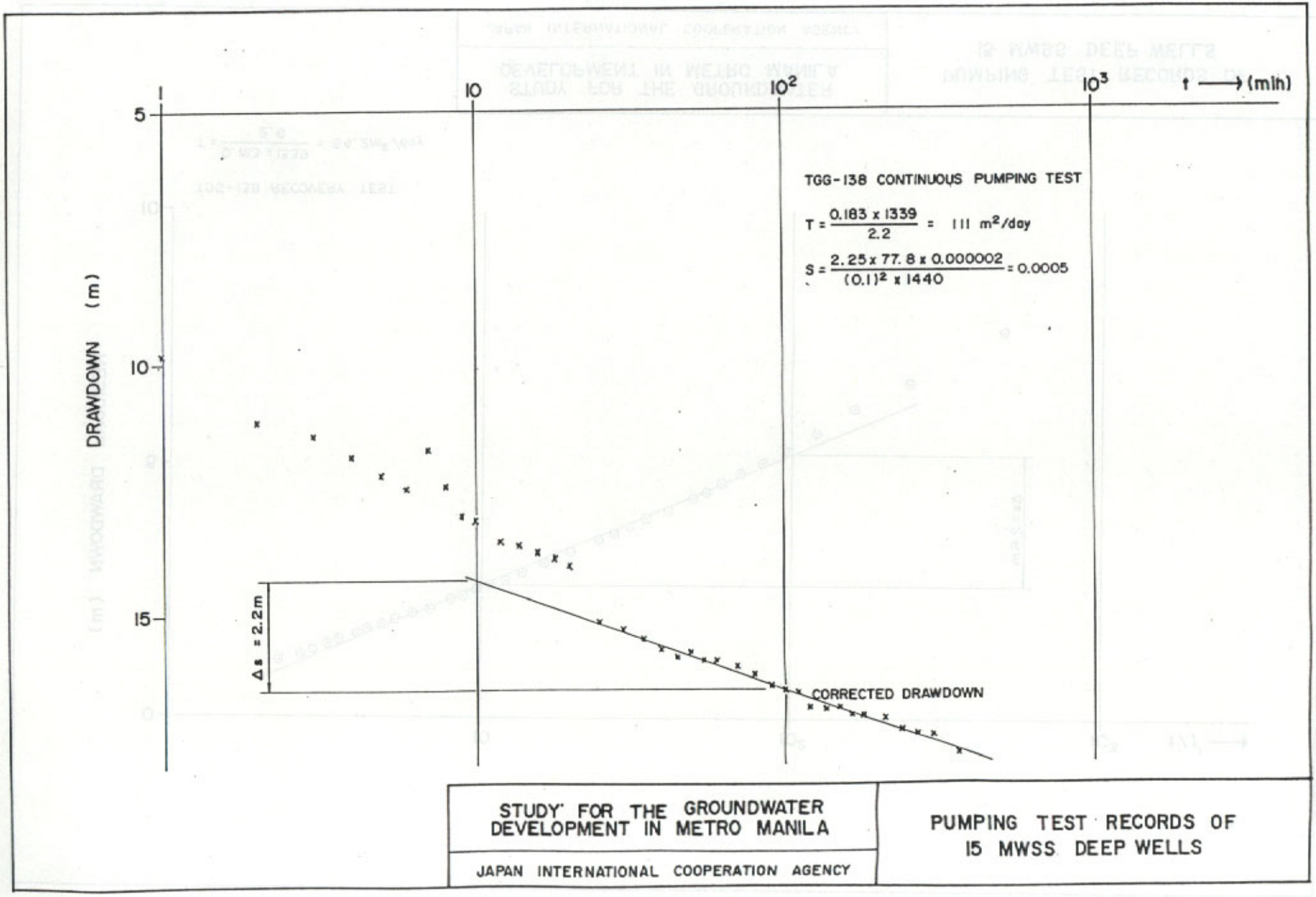

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

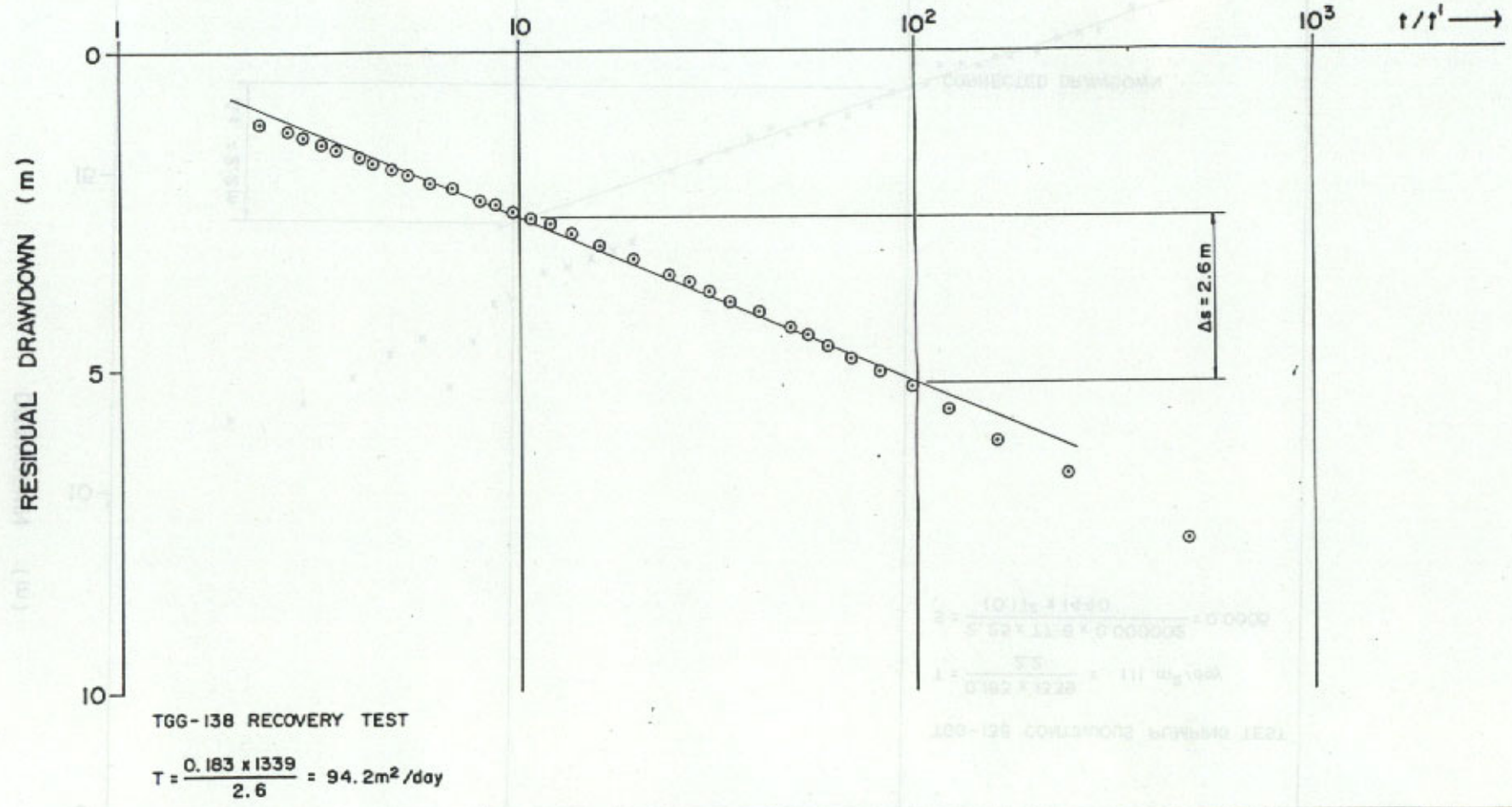
JAPAN INTERNATIONAL COOPERATION AGENCY

PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS


1
10
$10^2$
$10^3$
t ⟶ (min)
0
5
10
15
DRAWDOWN ( m )
Δs=0.86m
SMT - II CONTINUOUS TEST
$T = \frac{0.183 \times 1141}{0.86} = 243\ m^2/day$
$S = \frac{2.25 \times 24 \times 0.00001}{10.1^2 \times 1440} = 0.0004$
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS


1
10
10²
10³
t/t'
0
5
10
15
RESIDUAL DRAWDOWN (m)
Δs = 1.38 m
SMT - II RECOVERY TEST
T = 0.183 x 1141 / 1.38 = 151 m²/day
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS

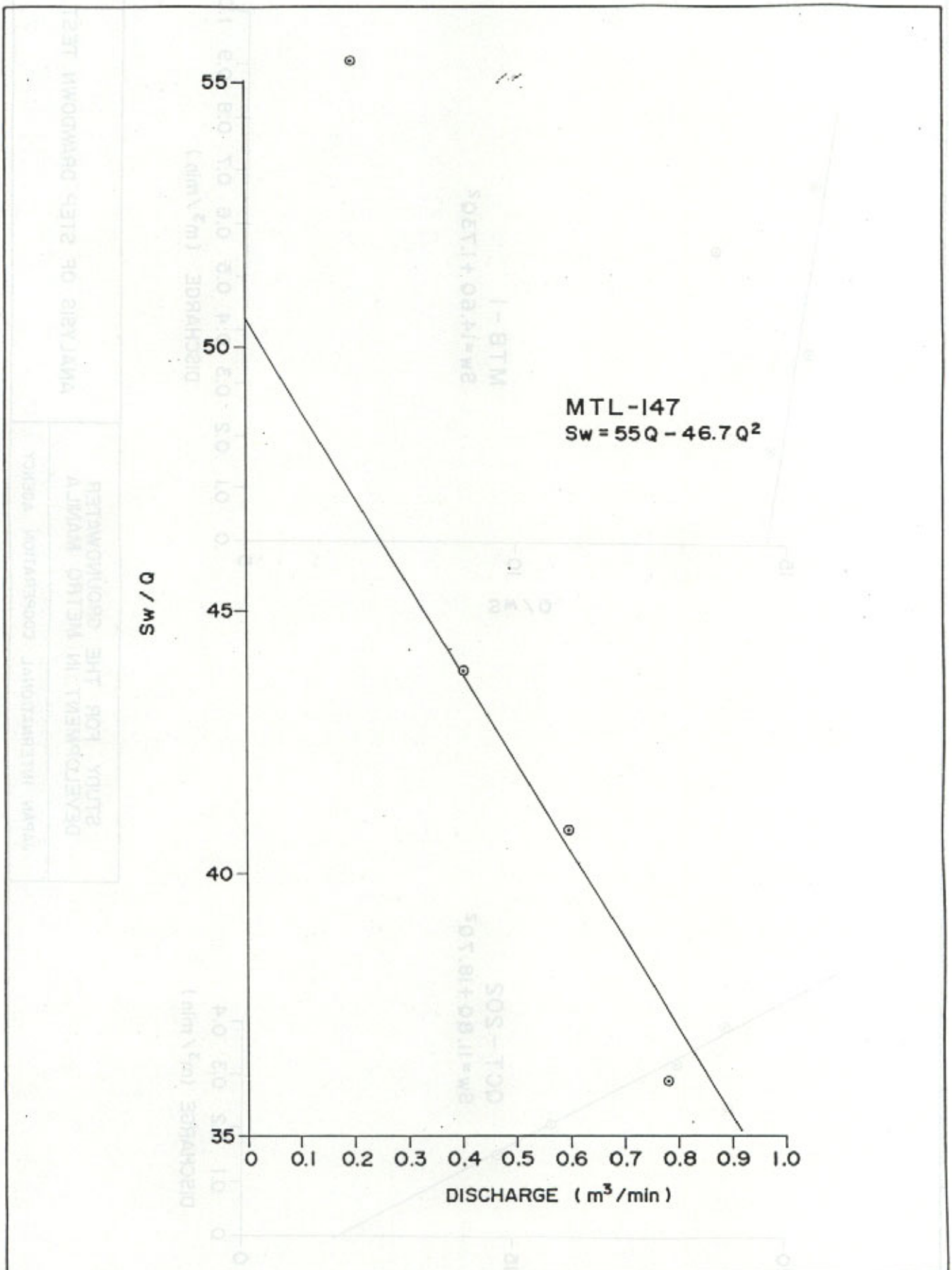

1
10
10²
10³
t ⟶ (min)
5
10
15
DRAWDOWN (m)
TGG-138 CONTINUOUS PUMPING TEST
T = 0.183 x 1339 / 2.2 = 111 m²/day
S = 2.25 x 77.8 x 0.000002 / (0.1)² x 1440 = 0.0005
Δs = 2.2m
CORRECTED DRAWDOWN
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS



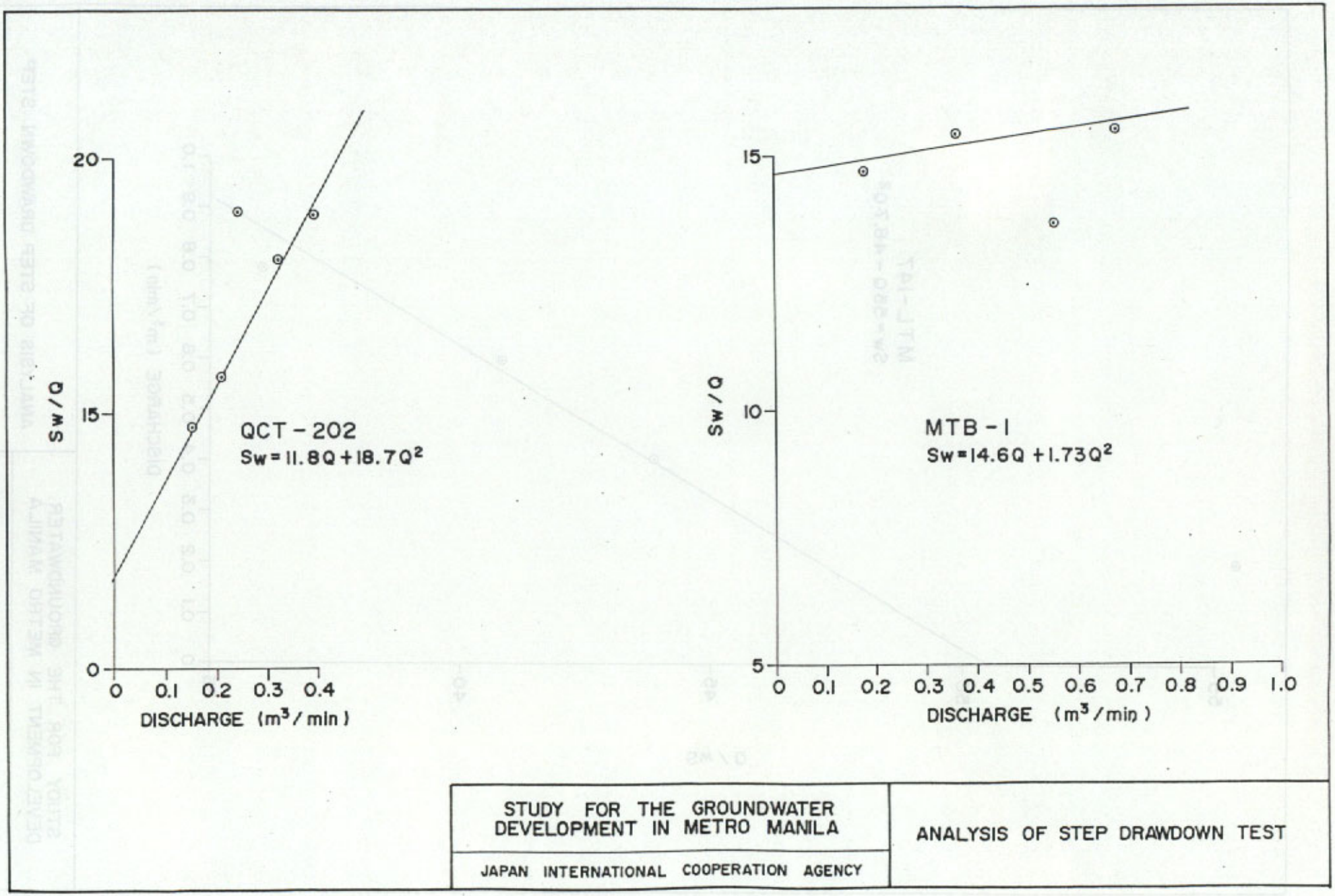

TGG-138 RECOVERY TEST

$$T = \frac{0.183 \times 1339}{2.6} = 94.2 m^2/day$$

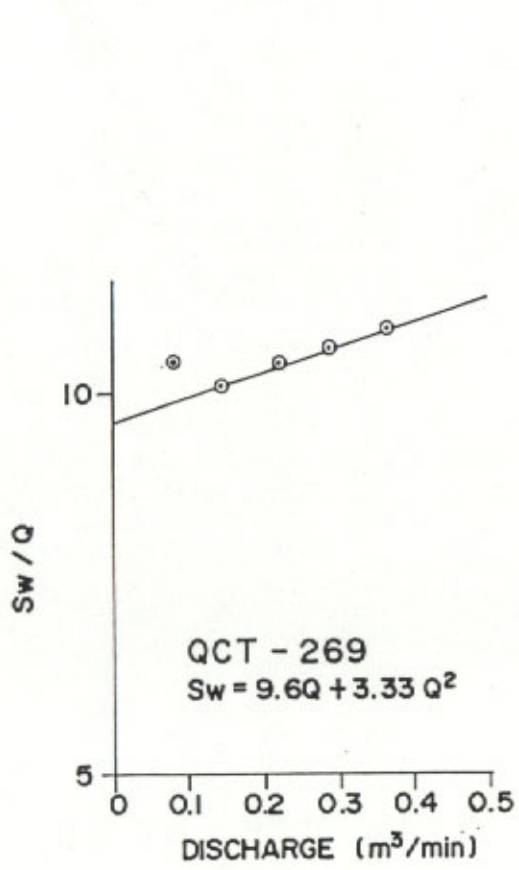
| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | PUMPING TEST RECORDS OF 15 MWSS DEEP WELLS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

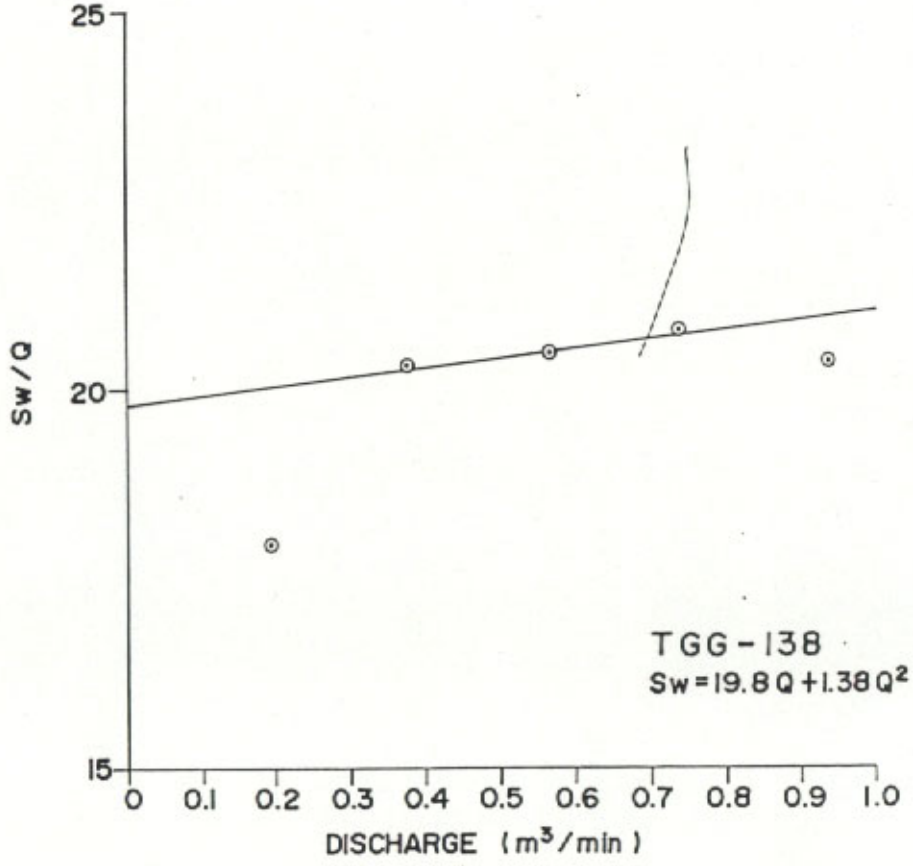



| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | ANALYSIS OF STEP DRAWDOWN STEP |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | ANALYSIS OF STEP DRAWDOWN TEST |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | ANALYSIS OF STEP DRAWDOWN STEP |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

# CHAPTER 3

# WELL REHABILITATION

# 3.1

# PREPARATION OF REHABILITATION WORKS AND SHORT PUMPING TESTS

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (1)

Existing Pump: 7.5 HP
Pump Setting : 78 m

WELL NAME: Cogeo ATP #1

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 10:17/Feb.21 | 0 | | 6.00 | 0 | Dirty Brown |
| | 10 | | | | |
| | 20 | 4.76 | 67.06 | 61.06 | Dirty Brown |
| | 30 | | | | |
| | 40 | 3.12 | - | - | Almost clean |
| | 50 | | | | |
| 11:17 | 60 | 3.08 | - | - | Stopped pump operation |
| | 70 | | | | |
| | 80 | | | | |
| | 90 | | | | |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | | | | |
| 13:27 | | | 7.20 | | |

EC: 557 uS/cm, pH: 6.75 ,Temp: 27.4 °C

Test Pump: 15 HP
Pump Setting: 78 m

WELL NAME: Cogeo ATP #1

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 15:04/Feb.21 | 0 | | | | Brown |
| | 10 | | | | |
| | 20 | 3.57 | - | - | Almost clean |
| | 30 | | | | |
| | 40 | 3.33 | - | - | |
| | 50 | | | | |
| 16:04 | 60 | 3.22 | - | - | |
| | 70 | | | | |
| | 80 | | | | |
| | 90 | | | | |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | | | | |

EC: 486 uS/cm, pH: 6.69 ,Temp: 27.6 °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (2)

TD: 109.12 m
PS: 102.11 m 25 HP WELL NAME: Cogeo ATP #6

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 10:15/Feb.22 | 0 | 2.33 | 37.80 | - | Clean water |
| | 10 | 2.42 | 37.80 | | |
| | 20 | 2.45 | 37.80 | | |
| | 30 | 2.45 | 37.80 | | |
| | 40 | 2.45 | 38.00 | | 55A 220V |
| | 50 | 2.50 | 38.00 | | |
| | 60 | 2.45 | 38.00 | | |
| | 70 | 2.45 | 38.00 | | |
| | 80 | 2.45 | 38.00 | | |
| | 90 | 2.45 | 38.00 | | |
| | 100 | 2.45 | 38.00 | | |
| | 110 | 2.45 | 38.00 | | |
| | 120 | 2.45 | 38.00 | | |
| 12:15 | | | | | |

EC: 488 uS/cm, pH: 678 , Temp: 27.6 °C

WELL NAME:

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| | 0 | | | | |
| | 10 | | | | |
| | 20 | | | | |
| | 30 | | | | |
| | 40 | | | | |
| | 50 | | | | |
| | 60 | | | | |
| | 70 | | | | |
| | 80 | | | | |
| | 90 | | | | |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | | | | |

EC: uS/cm, pH: , Temp: °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (3)

WELL NAME: Lagro #5

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 11:30/Feb.25 | 0 | 3.75 | 50.60 | 6.20 | Stop operation |
| | 10 | 0 | | | 218V 55A |
| | 20 | | | | Adding 3 pcs. |
| | 30 | | | | of 4" riser |
| | 40 | | | | pipes |
| | 50 | | | | |
| | 60 | | | | |
| | 70 | | | | |
| | 80 | | | | |
| | 90 | | | | |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | 0 | 44.40 | 0 | |
| 13:30 | | | | | |

EC: 414 uS/cm, pH: 7.55, Temp: 27.9 °C

WELL NAME: Lagro #5

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 14:03/Feb.25 | 0 | | 44.40 | 0 | Start operation |
| | 10 | 7.97 | 44.70 | 0.30 | Dark gray |
| | 20 | 7.47 | 44.70 | 0.30 | Ligh brown |
| | 30 | 6.92 | 46.00 | 1.60 | 218V 65A |
| | 40 | 6.92 | 48.00 | 3.60 | |
| | 50 | 6.92 | 50.00 | 5.60 | Almost clean |
| | 60 | 6.87 | 54.80 | 10.40 | 221V 65A |
| | 70 | 6.50 | 54.80 | 10.40 | |
| 15:19 | 80 | | | | Stoppage of |
| | 90 | | | | electric supply |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | | | | |

EC: uS/cm, pH: , Temp: °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (4)

WELL NAME: IBP #3, Quezon City

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 9:04/Feb.26 | 0 | 0 | 39.00 | 0 | No operation |
| | 10 | | | | |
| | 20 | | | | |
| | 30 | | | | |
| | 40 | | | | |
| | 50 | | | | |
| | 60 | | | | |
| | 70 | | | | |
| | 80 | | | | |
| | 90 | | | | |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | | | | |

EC: uS/cm, pH: , Temp: °C

WELL NAME: Alabang Junction, Muntin

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 10:30/Feb.26 | 0 | - | 74.00 | | Clean Water |
| | 10 | Flow rate | 74.00 | | |
| | 20 | meter was | 74.00 | | |
| | 30 | broken | 74.00 | | |
| | 40 | | 74.00 | | |
| | 50 | | 74.00 | | |
| 11:30 | 60 | | 74.45 | | |
| | 70 | | 74.45 | | |
| | 80 | | 74.45 | | |
| | 90 | | 74.45 | | |
| | 100 | | 74.45 | | |
| | 110 | | 74.45 | | |
| | 120 | | 74.45 | | |
| 12:30 | | | | | Clean water |

EC: 709 uS/cm, pH: 7.74 ,Temp: 28.9 °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (5)

WELL NAME: Malanday, San Mateo

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 9:20/Feb.27 | 0 | 6.67 | 30.00 | | Iron bacteria |
| | 10 | 6.67 | 30.00 | | |
| | 20 | 6.67 | 30.00 | | 55A, 210V |
| | 30 | 6.67 | 30.00 | | 25 kg/sq.cm. |
| | 40 | 6.50 | 30.50 | | |
| | 50 | 6.50 | 31.20 | | |
| | 60 | 6.17 | 31.00 | | |
| | 70 | 6.50 | 31.70 | | |
| | 80 | 6.67 | 30.50 | | |
| | 90 | 6.67 | 30.50 | | |
| | 100 | 6.67 | 30.50 | | |
| | 110 | 6.67 | 30.50 | | |
| 11:20 | 120 | 6.67 | 30.50 | | Iron bacteria |

EC: 386 uS/cm, pH: 7.18, Temp: 28.1 °C

WELL NAME: Dulong Bayan, San Mateo

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 12:14/Feb.27 | 0 | 10.0 | 19.00 | | Clean water |
| | 10 | 10.0 | 19.00 | | |
| | 20 | 10.0 | 19.00 | | 50A, 210V |
| | 30 | 10.0 | 19.00 | | |
| | 40 | 10.0 | 19.00 | | |
| | 50 | 10.0 | 19.00 | | |
| | 60 | 10.0 | 19.00 | | |
| | 70 | 10.0 | 19.00 | | |
| | 80 | 10.0 | 19.00 | | |
| | 90 | 10.0 | 19.00 | | |
| | 100 | 10.0 | 19.00 | | |
| | 110 | 10.0 | 19.00 | | |
| | 120 | 10.0 | 19.00 | | Clean water |

EC: 377 uS/cm, pH: 7.55, Temp: 27.6 °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (6)

WELL NAME: Sumulong, Taytay

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 10:30/Feb.28 | 0 | 0 | 58.00 | 0 | Defective pump insulation resistivity was 0 M |
| | 10 | | | | |
| | 20 | | | | |
| | 30 | | | | |
| | 40 | | | | |
| | 50 | | | | |
| | 60 | | | | |
| | 70 | | | | |
| | 80 | | | | |
| | 90 | | | | |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | | | | |

EC: uS/cm, pH: , Temp: °C

WELL NAME: Bangiad, Taytay

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 11:00/Feb.28 | 0 | 23.67 | 74.80 | | Clean |
| | 10 | 23.67 | 74.80 | | |
| | 20 | 23.67 | 74.80 | | 220V, 58A |
| | 30 | 23.67 | 74.80 | | |
| | 40 | 23.67 | 74.80 | | |
| | 50 | 23.67 | 74.80 | | |
| | 60 | 22.17 | 75.00 | | |
| | 70 | 22.17 | 75.00 | | |
| | 80 | 22.17 | 75.00 | | |
| | 90 | 22.17 | 75.00 | | |
| | 100 | 22.17 | 75.00 | | |
| | 110 | 22.17 | 75.00 | | |
| | 120 | 22.17 | 75.00 | | |
| 13:00 | | | | | |

EC: 445 uS/cm, pH: 8.65 ,Temp: 29.0 °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (7)

WELL NAME: Zapote, Las Piñas

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 10:00/Mar. 1 | 0 | 10.50 | | | Clean |
| | 10 | 10.50 | | | 58A Voltmeter |
| | 20 | 10.50 | | | Broken |
| | 30 | 10.50 | | | |
| | 40 | 10.50 | | | Water Level |
| | 50 | 10.50 | | | Sounding |
| | 60 | 10.67 | | | Sensor was |
| | 70 | 10.67 | | | touched to |
| | 80 | 10.67 | | | the smaller |
| | 90 | 10.67 | | | casing pipe |
| | 100 | 10.67 | | | |
| | 110 | 10.67 | | | |
| | 120 | 10.67 | | | Clean |

EC: 2.230 uS/cm, pH: 7.95, Temp: 30.9 °C

WELL NAME: Naga #2, Las Piñas

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 13:00/Mar. 1 | 0 | 7.67 | 74.0 | | Clean |
| | 10 | 7.67 | 74.0 | | 55A, 240V |
| | 20 | 7.67 | 74.0 | | |
| | 30 | 7.50 | 74.0 | | |
| | 40 | 7.50 | 74.0 | | |
| | 50 | 7.83 | 74.0 | | |
| | 60 | 7.83 | 74.0 | | |
| | 70 | 7.83 | 74.0 | | |
| | 80 | 7.83 | 74.0 | | |
| | 90 | 7.83 | 74.0 | | |
| | 100 | 7.83 | 74.0 | | |
| | 110 | 7.83 | 74.0 | | |
| 15:00 | 120 | 7.83 | 74.0 | | Clean |

EC: 983 uS/cm, pH: 8.12, Temp: 31.1 °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (8)

WELL NAME: Topacio Elem.. Imus

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 10:40/Mar. 4 | 0 | 14.5 | 81.70 | | Clean |
| | 10 | 14.5 | 81.70 | | |
| | 20 | 14.5 | 81.70 | | 240V, 77A |
| | 30 | 14.5 | 81.70 | | |
| | 40 | 14.5 | 81.70 | | |
| | 50 | 14.5 | 81.70 | | |
| | 60 | 14.5 | 81.00 | | |
| | 70 | 14.5 | 81.00 | | |
| | 80 | 14.5 | 81.00 | | |
| | 90 | 14.5 | 81.00 | | |
| | 100 | 14.5 | 81.00 | | |
| | 110 | 14.5 | 81.00 | | |
| 12:40 | 120 | 14.5 | 81.00 | | |

EC: 585 uS/cm, pH: 8.56, Temp: 32.5 °C

WELL NAME: #17, Dalahican, Cavite

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 14:10/Mar. 4 | 0 | 6.67 | 51.90 | | Clean |
| | 10 | 6.67 | 51.90 | | |
| | 20 | 6.67 | 52.00 | | 220V, 50A |
| | 30 | 6.67 | 52.00 | | |
| | 40 | 6.67 | 52.00 | | |
| | 50 | 6.67 | 52.00 | | |
| | 60 | 6.67 | 52.00 | | |
| | 70 | 6.67 | 52.00 | | |
| | 80 | 6.67 | 52.00 | | |
| | 90 | 6.67 | 52.00 | | |
| | 100 | 6.67 | 52.00 | | |
| | 110 | 6.67 | 52.00 | | |
| 16:10 | 120 | 6.67 | 52.45 | | |

EC: 739 uS/cm, pH: 8.07, Temp: 31.6 °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (9)

WELL NAME: Forbes Park #12, Makati

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 10:30/Mar. 5 | 0 | 0 | 48.50 | 0 | Static water level |
| | 10 | | | | |
| | 20 | | | | |
| | 30 | | | | |
| | 40 | | | | |
| | 50 | | | | |
| | 60 | | | | |
| | 70 | | | | |
| | 80 | | | | |
| | 90 | | | | |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | | | | |

EC: uS/cm, pH: , Temp: °C

WELL NAME: Forbes Park #11, Makati

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 10:50/Mar. 5 | 0 | - | 139.50 | | Clean |
| | 10 | No flow | 139.50 | | |
| | 20 | rate | 139.50 | | 240V, 75A |
| | 30 | meter | 139.50 | | 1.2 kg/sq.cm. |
| | 40 | | 139.50 | | |
| | 50 | | 139.50 | | |
| | 60 | | 139.50 | | |
| | 70 | | 139.50 | | |
| | 80 | | 139.50 | | |
| | 90 | | 139.50 | | |
| | 100 | | 139.50 | | |
| | 110 | | 139.50 | | |
| 12:50 | 120 | | 139.50 | | Clean |

EC: 568 uS/cm, pH: 7.67, Temp: 30.7 °C

PREPARATION FOR REHABILITATION WORK
SHORT PUMPING TEST (10)

WELL NAME: Marricaban III, Pasay City

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| 13:30/Mar. 5 | 0 | 11.33 | 110.40 | | Clean |
| | 10 | 11.33 | 110.40 | | |
| | 20 | 11.33 | 110.40 | | 218V, 80A |
| | 30 | 11.33 | 110.40 | | |
| | 40 | 11.33 | 110.40 | | |
| | 50 | 11.33 | 110.40 | | |
| | 60 | 11.33 | 110.40 | | |
| | 70 | 11.33 | 110.40 | | |
| | 80 | 11.33 | 110.40 | | |
| | 90 | 11.33 | 110.40 | | |
| | 100 | 11.33 | 110.40 | | |
| | 110 | 11.33 | 110.40 | | |
| 15:30 | 120 | 11.33 | 110.40 | | |

EC: 1.421 uS/cm, pH: 8.29, Temp: 31.6 °C

WELL NAME:

| Time/Date | Lapse Time from Beginning: min | Discharge Rate: lps | Pumping Water Level: m | Drawdown m | Remarks |
|---|---|---|---|---|---|
| | 0 | | | | |
| | 10 | | | | |
| | 20 | | | | |
| | 30 | | | | |
| | 40 | | | | |
| | 50 | | | | |
| | 60 | | | | |
| | 70 | | | | |
| | 80 | | | | |
| | 90 | | | | |
| | 100 | | | | |
| | 110 | | | | |
| | 120 | | | | |

EC: uS/cm, pH: , Temp: °C

# 3.2

# RECORDS OF

# EXPERIMENTAL REHABILITATION

3.2.1

# PUMPING TEST RECORDS

STEP DRAWDOWN TEST DATA SHEET 1

WELL LOCATION: Taytay
SITE NO.: SUMULONG
WELL NO.: 1
WELL DEPTH 202.68 M
CASING DIA 15 c m
SWL: 58 m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 58 | 0 | 0 | | |
| 1 | 1 | 63.10 | -5.10 | 60 | 1.2 | |
| 2 | 2 | 65.10 | -7.10 | 60 | 1.2 | |
| 3 | 3 | 67.10 | -9.10 | 60 | 1.2 | |
| 4 | 4 | 68.10 | -10.10 | 60 | 1.2 | |
| 5 | 5 | 68.10 | -10.10 | 60 | 1.2 | |
| 6 | 6 | 69.10 | -11.10 | 60 | 1.2 | |
| 7 | 7 | 69.10 | -11.10 | 55 | 1.0 | |
| 8 | 8 | 69.10 | -11.10 | 60 | 1.2 | Q=72 l/m |
| 9 | 9 | 70.10 | -12.10 | 60 | 1.2 | |
| 10 | 10 | 71.10 | -13.10 | 60 | 1.2 | |
| 12 | 12 | 70.60 | -12.60 | 55 | 1.0 | |
| 14 | 14 | 70.10 | -12.10 | 60 | 1.2 | |
| 16 | 16 | 69.20 | -11.20 | 57.5 | 1.1 | |
| 18 | 18 | 68.90 | -10.90 | 60 | 1.2 | |
| 20 | 20 | 68.30 | -10.30 | 63 | 1.4 | |
| 25 | 25 | 68.00 | -10.00 | 63 | 1.4 | |
| 30 | 30 | 67.70 | -9.70 | 68 | 1.7 | |
| 35 | 35 | 67.70 | -9.70 | 67 | 1.6 | |
| 40 | 40 | 67.60 | -9.60 | 64 | 1.5 | |
| 45 | 45 | 67.10 | -9.10 | 67 | 1.6 | |
| 50 | 50 | 67.10 | -9.10 | 65 | 1.5 | |
| 55 | 55 | 65.10 | -7.10 | 47 | .7 | |
| 60 | 60 | 65.10 | -7.10 | 45 | .6 | |
| 70 | 70 | 64.60 | -6.60 | 54 | .9 | |
| 80 | 80 | 64.00 | -6.00 | 50 | .8 | |
| 90 | 90 | 63.50 | -5.50 | 48 | .7 | |
| 100 | 100 | 63.10 | -5.10 | 52 | .9 | |
| 110 | 110 | 63.90 | -5.90 | 56 | 1.0 | |
| 120 | 120 | 63.90 | -5.90 | 55 | 1.0 | Q=60 l/m |
| 121 | 1 | 70.10 | -12.10 | 70 | 1.8 | |
| 122 | 2 | 67.10 | -9.10 | 70 | 1.8 | |
| 123 | 3 | 70.50 | -12.50 | 70 | 1.8 | |
| 124 | 4 | 71.40 | -13.40 | 70 | 1.8 | |
| 125 | 5 | 70.20 | -12.20 | 70 | 1.8 | |
| 126 | 6 | 69.50 | -11.50 | 70 | 1.8 | |
| 127 | 7 | 70.40 | -12.40 | 70 | 1.8 | |
| 128 | 8 | 70.20 | -12.20 | 70 | 1.8 | |
| 129 | 9 | 69.30 | -11.30 | 70 | 1.8 | |
| 130 | 10 | 70.20 | -12.20 | 70 | 1.8 | |
| 132 | 12 | 70.10 | -12.10 | 70 | 1.8 | |
| 134 | 14 | 70.20 | -12.20 | 70 | 1.8 | |
| 136 | 16 | 70.30 | -12.30 | 70 | 1.8 | |
| 138 | 18 | 70.50 | -12.50 | 70 | 1.8 | |
| 140 | 20 | 70.50 | -12.50 | 70 | 1.8 | |
| 145 | 25 | 70.80 | -12.80 | 75 | 2.2 | |
| 150 | 30 | 70.80 | -12.80 | 75 | 2.2 | |
| 155 | 35 | 70.80 | -12.80 | 75 | 2.2 | |
| 160 | 40 | 69.00 | -11.00 | 70 | 1.8 | |
| 165 | 45 | 69.10 | -11.10 | 70 | 1.8 | |
| 170 | 50 | 70.00 | -12.00 | 70 | 1.8 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 175 | 55 | 70.00 | -12.00 | 70 | 1.8 | |
| 180 | 60 | 69.30 | -11.30 | 70 | 1.8 | |
| 190 | 70 | 69.30 | -11.30 | 70 | 1.8 | |
| 200 | 80 | 69.30 | -11.30 | 70 | 1.8 | |
| 210 | 90 | 69.40 | -11.40 | 70 | 1.8 | |
| 220 | 100 | 69.50 | -11.50 | 70 | 1.8 | |
| 230 | 110 | 69.50 | -11.50 | 70 | 1.8 | |
| 240 | 120 | 69.40 | -11.40 | 70 | 1.8 | Q=108 l/m |
| 241 | 1 | 70.00 | -12.00 | 77 | 2.3 | |
| 242 | 2 | 70.10 | -12.10 | 77 | 2.3 | |
| 243 | 3 | 70.30 | -12.30 | 77 | 2.3 | |
| 244 | 4 | 70.40 | -12.40 | 77 | 2.3 | |
| 245 | 5 | 70.60 | -12.60 | 77 | 2.3 | |
| 246 | 6 | 70.60 | -12.60 | 76 | 2.2 | |
| 247 | 7 | 70.80 | -12.80 | 77 | 2.3 | |
| 248 | 8 | 71.00 | -13.00 | 77 | 2.3 | |
| 249 | 9 | 71.30 | -13.30 | 77 | 2.3 | |
| 250 | 10 | 73.20 | -15.20 | 77 | 2.3 | |
| 252 | 12 | 73.90 | -15.90 | 77 | 2.3 | |
| 254 | 14 | 75.00 | -17.00 | 77 | 2.3 | |
| 256 | 16 | 75.40 | -17.40 | 76 | 2.2 | |
| 258 | 18 | 75.50 | -17.50 | 77 | 2.3 | |
| 260 | 20 | 75.50 | -17.50 | 77 | 2.3 | |
| 265 | 25 | 75.70 | -17.70 | 78 | 2.4 | |
| 270 | 30 | 76.00 | -18.00 | 78 | 2.4 | |
| 275 | 35 | 76.10 | -18.10 | 77 | 2.3 | |
| 280 | 40 | 76.30 | -18.30 | 77 | 2.3 | |
| 285 | 45 | 77.40 | -19.40 | 77 | 2.3 | |
| 290 | 50 | 78.30 | -20.30 | 77 | 2.3 | |
| 295 | 55 | 78.60 | -20.60 | 78 | 2.4 | |
| 300 | 60 | 78.60 | -20.60 | 77 | 2.3 | |
| 310 | 70 | 78.60 | -20.60 | 77 | 2.3 | |
| 320 | 80 | 78.60 | -20.60 | 77 | 2.3 | |
| 330 | 90 | 77.60 | -19.60 | 78 | 2.4 | |
| 340 | 100 | 77.50 | -19.50 | 78 | 2.4 | |
| 350 | 110 | 77.50 | -19.50 | 78 | 2.4 | |
| 360 | 120 | 77.50 | -19.50 | 78 | 2.4 | Q=144 l/m |
| 361 | 1 | 80.10 | -22.10 | 83 | 2.8 | |
| 362 | 2 | 80.30 | -22.30 | 83 | 2.8 | |
| 363 | 3 | 81.10 | -23.10 | 84 | 2.9 | |
| 364 | 4 | 79.20 | -21.20 | 83 | 2.8 | |
| 365 | 5 | 80.50 | -22.50 | 82 | 2.7 | |
| 366 | 6 | 81.40 | -23.40 | 83 | 2.8 | |
| 367 | 7 | 83.10 | -25.10 | 83 | 2.8 | |
| 368 | 8 | 82.30 | -24.30 | 84 | 2.9 | |
| 369 | 9 | 81.60 | -23.60 | 83 | 2.8 | |
| 370 | 10 | 82.10 | -24.10 | 84 | 2.9 | |
| 372 | 12 | 80.90 | -22.90 | 83 | 2.8 | |
| 374 | 14 | 79.10 | -21.10 | 82 | 2.7 | |
| 376 | 16 | 79.60 | -21.60 | 81 | 2.6 | |
| 378 | 18 | 79.30 | -21.30 | 82 | 2.7 | |
| 380 | 20 | 78.20 | -20.20 | 83 | 2.8 | |
| 385 | 25 | 78.90 | -20.90 | 83 | 2.8 | |
| 390 | 30 | 78.70 | -20.70 | 83 | 2.8 | |
| 395 | 35 | 79.10 | -21.10 | 84 | 2.9 | |
| 400 | 40 | 80.10 | -22.10 | 84 | 2.9 | |
| 405 | 45 | 80.40 | -22.40 | 85 | 2.9 | |
| 410 | 50 | 81.10 | -23.10 | 83 | 2.8 | |
| 415 | 55 | 80.90 | -22.90 | 83 | 2.8 | |
| 420 | 60 | 81.30 | -23.30 | 82 | 2.7 | |
| 430 | 70 | 82.10 | -24.10 | 83 | 2.8 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 440 | 80 | 81.90 | -23.90 | 83 | 2.8 | |
| 450 | 90 | 81.80 | -23.80 | 83 | 2.8 | |
| 460 | 100 | 81.20 | -23.20 | 83 | 2.8 | |
| 470 | 110 | 82.10 | -24.10 | 84 | 2.9 | |
| 480 | 120 | 81.40 | -23.40 | 83 | 2.8 | Q=168 l/m |
| 481 | 1 | 83.5 | -25.50 | 89 | 3.3 | |
| 482 | 2 | 83.7 | -25.70 | 90 | 3.4 | |
| 483 | 3 | 82.1 | -24.10 | 89 | 3.3 | |
| 484 | 4 | 81.1 | -23.10 | 88 | 3.2 | |
| 485 | 5 | 82.6 | -24.60 | 89 | 3.3 | |
| 486 | 6 | 83.2 | -25.20 | 89 | 3.3 | |
| 487 | 7 | 84.1 | -26.10 | 90 | 3.4 | |
| 488 | 8 | 83.4 | -25.40 | 89 | 3.3 | |
| 489 | 9 | 83.3 | -25.30 | 89 | 3.3 | |
| 490 | 10 | 83.7 | -25.70 | 89 | 3.3 | |
| 492 | 12 | 83.1 | -25.10 | 89 | 3.3 | |
| 494 | 14 | 87.2 | -29.20 | 89 | 3.3 | |
| 496 | 16 | 87.6 | -29.60 | 89 | 3.3 | |
| 498 | 18 | 87.8 | -29.80 | 89 | 3.3 | |
| 500 | 20 | 88.2 | -30.20 | 89 | 3.3 | |
| 505 | 25 | 87.9 | -29.90 | 89 | 3.3 | |
| 510 | 30 | 88 | -30.00 | 89 | 3.3 | |
| 515 | 35 | 87.1 | -29.10 | 89 | 3.3 | |
| 520 | 40 | 88.1 | -30.10 | 89 | 3.3 | |
| 525 | 45 | 88.1 | -30.10 | 89 | 3.3 | |
| 530 | 50 | 88.1 | -30.10 | 89 | 3.3 | |
| 535 | 55 | 88 | -30.00 | 89 | 3.3 | |
| 540 | 60 | 88 | -30.00 | 89 | 3.3 | |
| 550 | 70 | 88 | -30.00 | 89 | 3.3 | |
| 560 | 80 | 88 | -30.00 | 89 | 3.3 | |
| 570 | 90 | 88 | -30.00 | 89 | 3.3 | |
| 580 | 100 | 88 | -30.00 | 89 | 3.3 | |
| 590 | 110 | 88 | -30.00 | 89 | 3.3 | |
| 600 | 120 | 88 | -30.00 | 89 | 3.3 | Q=198 l/m |

CONTINUOUS PUMPING TEST DATA SHEET1

WELL LOCATION: TAYTAY

SITE NO.: SUMULONG

WELL NO.: 1

WELL DEPTH: 202.68 M

CASING DIAMETER: 15 c m

SWL: 58 m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 58 | 0 | | |
| 1 | 62.80 | -4.80 | 80 | 2.5 |
| 2 | 65.30 | -7.30 | 80 | 2.5 |
| 3 | 67.60 | -9.60 | 81 | 2.6 |
| 4 | 67.60 | -9.60 | 80 | 2.5 |
| 5 | 68.60 | -10.60 | 82 | 2.7 |
| 6 | 69.10 | -11.10 | 80 | 2.5 |
| 7 | 70.90 | -12.90 | 80 | 2.5 |
| 8 | 71.40 | -13.40 | 80 | 2.5 |
| 9 | 72.40 | -14.40 | 80 | 2.5 |
| 10 | 72.40 | -14.40 | 80 | 2.5 |
| 12 | 73.00 | -15.00 | 79 | 2.5 |
| 14 | 73.00 | -15.00 | 80 | 2.5 |
| 16 | 73.00 | -15.00 | 80 | 2.5 |
| 18 | 73.00 | -15.00 | 81 | 2.6 |
| 20 | 73.40 | -15.40 | 80 | 2.5 |
| 25 | 73.40 | -15.40 | 79 | 2.5 |
| 30 | 73.60 | -15.60 | 80 | 2.5 |
| 35 | 73.80 | -15.80 | 80 | 2.5 |
| 40 | 73.90 | -15.90 | 82 | 2.7 |
| 45 | 74.10 | -16.10 | 80 | 2.5 |
| 50 | 74.10 | -16.10 | 80 | 2.5 |
| 55 | 74.30 | -16.30 | 79 | 2.5 |
| 60 | 74.30 | -16.30 | 80 | 2.5 |
| 70 | 74.30 | -16.30 | 80 | 2.5 |
| 80 | 74.40 | -16.40 | 81 | 2.6 |
| 90 | 74.50 | -16.50 | 82 | 2.7 |
| 100 | 75.10 | -17.10 | 81 | 2.6 |
| 110 | 76.10 | -18.10 | 79 | 2.5 |
| 120 | 76.10 | -18.10 | 80 | 2.5 |
| 135 | 76.20 | -18.20 | 81 | 2.6 |
| 150 | 77.00 | -19.00 | 80 | 2.5 |
| 165 | 76.30 | -18.30 | 80 | 2.5 |
| 180 | 77.10 | -19.10 | 81 | 2.6 |
| 210 | 76.90 | -18.90 | 81 | 2.6 |
| 240 | 76.90 | -18.90 | 80 | 2.5 |
| 270 | 77.10 | -19.10 | 82 | 2.7 |
| 300 | 77.90 | -19.90 | 82 | 2.7 |
| 360 | 77.20 | -19.20 | 80 | 2.5 |
| 420 | 77.20 | -19.20 | 80 | 2.5 |
| 480 | 77.60 | -19.60 | 83 | 2.8 |
| 540 | 77.20 | -19.20 | 84 | 2.9 |
| 600 | 77.20 | -19.20 | 81 | 2.6 |
| 660 | 77.20 | -19.20 | 81 | 2.6 |
| 720 | 77.20 | -19.20 | 81 | 2.6 |
| 780 | 77.20 | -19.20 | 81 | 2.6 |
| 840 | 77.20 | -19.20 | 81 | 2.6 |
| 900 | 77.20 | -19.20 | 81 | 2.6 |
| 960 | 76.90 | -18.90 | 80 | 2.5 |
| 1020 | 77.20 | -19.20 | 81 | 2.6 |
| 1080 | 77.90 | -19.90 | 81 | 2.6 |

| | | | | |
|---|---|---|---|---|
| 1140 | 77.20 | -19.20 | 81 | 2.6 |
| 1200 | 77.20 | -19.20 | 82 | 2.7 |
| 1260 | 78.20 | -20.20 | 80 | 2.5 |
| 1320 | 78.20 | -20.20 | 81 | 2.6 |
| 1380 | 78.20 | -20.20 | 81 | 2.6 |
| 1440 | 77.20 | -19.20 | 80 | 2.5 |
| 1500 | 78.10 | -20.10 | 80 | 2.5 |
| 1560 | 78.00 | -20.00 | 81 | 2.6 |
| 1620 | 77.80 | -19.80 | 80 | 2.5 |
| 1680 | 77.50 | -19.50 | 81 | 2.6 |
| 1740 | 76.90 | -18.90 | 81 | 2.6 |
| 1800 | 76.90 | -18.90 | 82 | 2.7 |
| 1860 | 77.10 | -19.10 | 81 | 2.6 |
| 1920 | 77.70 | -19.70 | 81 | 2.6 |
| 1980 | 77.90 | -19.90 | 82 | 2.7 |
| 2040 | 77.90 | -19.90 | 82 | 2.7 |
| 2100 | 77.90 | -19.90 | 80 | 2.5 |
| 2160 | 77.90 | -19.90 | 81 | 2.6 |
| 2220 | 78.50 | -20.50 | 80 | 2.5 |
| 2280 | 78.50 | -20.50 | 80 | 2.5 |
| 2340 | 78.50 | -20.50 | 80 | 2.5 |
| 2400 | 78.50 | -20.50 | 81 | 2.6 |
| 2460 | 78.50 | -21.40 | 80 | 2.5 |
| 2520 | 77.90 | -20.80 | 82 | 2.7 |
| 2580 | 78.50 | -20.50 | 80 | 2.5 |
| 2640 | 78.50 | -20.50 | 80 | 2.5 |
| 2700 | 78.50 | -20.50 | 80 | 2.5 |
| 2760 | 78.40 | -20.40 | 81 | 2.6 |
| 2820 | 78.50 | -20.50 | 81 | 2.6 |
| 2880 | 78.50 | -20.50 | 81 | 2.6 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 78.50 | 20.50 | 2880 | |
| 1 | 73.50 | 15.50 | 2881 | 2881 |
| 2 | 71.10 | 13.10 | 2882 | 1441 |
| 3 | 70.10 | 12.10 | 2883 | 961 |
| 4 | 69.10 | 11.10 | 2884 | 721 |
| 5 | 63.80 | 5.80 | 2885 | 577 |
| 6 | 63.40 | 5.40 | 2886 | 481 |
| 7 | 63.30 | 5.30 | 2887 | 412.42857 |
| 8 | 63.20 | 5.20 | 2888 | 361 |
| 9 | 63.00 | 5.00 | 2889 | 321 |
| 10 | 62.90 | 4.90 | 2890 | 289 |
| 12 | 62.90 | 4.90 | 2892 | 241 |
| 14 | 62.60 | 4.60 | 2894 | 206.71429 |
| 16 | 62.50 | 4.50 | 2896 | 181 |
| 18 | 62.30 | 4.30 | 2898 | 161 |
| 20 | 62.20 | 4.20 | 2900 | 145 |
| 25 | 61.80 | 3.80 | 2905 | 116.2 |
| 30 | 61.00 | 3.00 | 2910 | 97 |
| 35 | 60.60 | 2.60 | 2915 | 83.285714 |
| 40 | 60.50 | 2.50 | 2920 | 73 |
| 45 | 60.40 | 2.40 | 2925 | 65 |
| 50 | 60.20 | 2.20 | 2930 | 58.6 |
| 55 | 60.30 | 2.30 | 2935 | 53.363636 |
| 60 | 60.50 | 2.50 | 2940 | 49 |
| 70 | 60.90 | 2.90 | 2950 | 42.142857 |
| 80 | 61.00 | 3.00 | 2960 | 37 |

| | | | | |
|---|---|---|---|---|
| 90 | 61.00 | 3.00 | 2970 | 33 |
| 100 | 61.00 | 3.00 | 2980 | 29.8 |
| 110 | 59.10 | 1.10 | 2990 | 27.181818 |
| 120 | 59.10 | 1.10 | 3000 | 25 |
| 135 | 59.10 | 1.10 | 3015 | 22.333333 |
| 150 | 59.00 | 1.00 | 3030 | 20.2 |
| 165 | 59.00 | 1.00 | 3045 | 18.454545 |
| 180 | 59.00 | 1.00 | 3060 | 17 |
| 210 | 59.00 | 1.00 | 3090 | 14.714286 |
| 240 | 59.00 | 1.00 | 3120 | 13 |
| 270 | 59.00 | 1.00 | 3150 | 11.666667 |
| 300 | 59.00 | 1.00 | 3180 | 10.6 |
| 360 | 58.90 | .90 | 3240 | 9 |
| 420 | 58.90 | .90 | 3300 | 7.8571429 |
| 480 | 58.80 | .80 | 3360 | 7 |

STEP DRAWDOWN TEST DATA SHEET 2

WELL LOCATION: Taytay

SITE NO.: Sumulong

WELL NO.: 1

WELL DEPTH 202.68 M

CASING DIA 15 c m

SWL: 58.5 m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 58.5 | 0 | 0 | | |
| 1 | 1 | 60.80 | -2.30 | 61 | 1.3 | Q=78 l/m |
| 2 | 2 | 61.00 | -2.50 | 61 | 1.3 | |
| 3 | 3 | 61.70 | -3.20 | 61 | 1.3 | |
| 4 | 4 | 62.00 | -3.50 | 61 | 1.3 | |
| 5 | 5 | 62.50 | -4.00 | 61 | 1.3 | |
| 6 | 6 | 62.90 | -4.40 | 61 | 1.3 | |
| 7 | 7 | 63.10 | -4.60 | 61 | 1.3 | |
| 8 | 8 | 63.30 | -4.80 | 61 | 1.3 | |
| 9 | 9 | 63.50 | -5.00 | 61 | 1.3 | |
| 10 | 10 | 63.50 | -5.00 | 61 | 1.3 | |
| 12 | 12 | 63.80 | -5.30 | 61 | 1.3 | |
| 14 | 14 | 63.90 | -5.40 | 61 | 1.3 | |
| 16 | 16 | 64.00 | -5.50 | 61 | 1.3 | |
| 18 | 18 | 64.10 | -5.60 | 61 | 1.3 | |
| 20 | 20 | 64.20 | -5.70 | 61 | 1.3 | |
| 25 | 25 | 64.30 | -5.80 | 61 | 1.3 | |
| 30 | 30 | 64.40 | -5.90 | 61 | 1.3 | |
| 35 | 35 | 64.40 | -5.90 | 61 | 1.3 | |
| 40 | 40 | 64.50 | -6.00 | 61 | 1.3 | |
| 45 | 45 | 64.50 | -6.00 | 61 | 1.3 | |
| 50 | 50 | 64.50 | -6.00 | 61 | 1.3 | |
| 55 | 55 | 64.50 | -6.00 | 61 | 1.3 | |
| 60 | 60 | 64.50 | -6.00 | 61 | 1.3 | |
| 70 | 70 | 64.50 | -6.00 | 61 | 1.3 | |
| 80 | 80 | 64.50 | -6.00 | 61 | 1.3 | |
| 90 | 90 | 64.50 | -6.00 | 61 | 1.3 | |
| 100 | 100 | 64.50 | -6.00 | 61 | 1.3 | |
| 110 | 110 | 64.50 | -6.00 | 61 | 1.3 | |
| 120 | 120 | 64.50 | -6.00 | 61 | 1.3 | Q=78 l/m |
| 121 | 1 | 66.40 | -7.90 | 73 | 2.0 | Q=120 l/m |
| 122 | 2 | 66.70 | -8.20 | 73 | 2.0 | |
| 123 | 3 | 66.70 | -8.20 | 73 | 2.0 | |
| 124 | 4 | 66.70 | -8.20 | 73 | 2.0 | |
| 125 | 5 | 66.80 | -8.30 | 73 | 2.0 | |
| 126 | 6 | 66.90 | -8.40 | 73 | 2.0 | |
| 127 | 7 | 66.90 | -8.40 | 73 | 2.0 | |
| 128 | 8 | 67.00 | -8.50 | 73 | 2.0 | |
| 129 | 9 | 67.10 | -8.60 | 73 | 2.0 | |
| 130 | 10 | 67.20 | -8.70 | 73 | 2.0 | |
| 132 | 12 | 67.10 | -8.60 | 73 | 2.0 | |
| 134 | 14 | 67.20 | -8.70 | 73 | 2.0 | |
| 136 | 16 | 67.30 | -8.80 | 73 | 2.0 | |
| 138 | 18 | 67.30 | -8.80 | 73 | 2.0 | |
| 140 | 20 | 67.30 | -8.80 | 73 | 2.0 | |
| 145 | 25 | 67.40 | -8.90 | 73 | 2.0 | |
| 150 | 30 | 67.50 | -9.00 | 73 | 2.0 | |
| 155 | 35 | 67.50 | -9.00 | 73 | 2.0 | |
| 160 | 40 | 67.60 | -9.10 | 73 | 2.0 | |
| 165 | 45 | 67.60 | -9.10 | 73 | 2.0 | |
| 170 | 50 | 67.60 | -9.10 | 73 | 2.0 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 175 | 55 | 67.60 | -9.10 | 73 | 2.0 | |
| 180 | 60 | 67.60 | -9.10 | 73 | 2.0 | |
| 190 | 70 | 67.70 | -9.20 | 73 | 2.0 | |
| 200 | 80 | 67.70 | -9.20 | 73 | 2.0 | |
| 210 | 90 | 67.70 | -9.20 | 73 | 2.0 | |
| 220 | 100 | 67.70 | -9.20 | 73 | 2.0 | |
| 230 | 110 | 67.70 | -9.20 | 73 | 2.0 | |
| 240 | 120 | 67.70 | -9.20 | 73 | 2.0 | Q=120 l/m |
| 241 | 1 | 68.80 | -10.30 | 82 | 2.7 | Q=162 l/m |
| 242 | 2 | 69.40 | -10.90 | 82 | 2.7 | |
| 243 | 3 | 69.60 | -11.10 | 82 | 2.7 | |
| 244 | 4 | 69.60 | -11.10 | 82 | 2.7 | |
| 245 | 5 | 69.70 | -11.20 | 82 | 2.7 | |
| 246 | 6 | 69.70 | -11.20 | 82 | 2.7 | |
| 247 | 7 | 69.80 | -11.30 | 82 | 2.7 | |
| 248 | 8 | 69.90 | -11.40 | 82 | 2.7 | |
| 249 | 9 | 69.90 | -11.40 | 82 | 2.7 | |
| 250 | 10 | 70.00 | -11.50 | 82 | 2.7 | |
| 252 | 12 | 70.00 | -11.50 | 82 | 2.7 | |
| 254 | 14 | 70.20 | -11.70 | 82 | 2.7 | |
| 256 | 16 | 70.40 | -11.90 | 82 | 2.7 | |
| 258 | 18 | 70.40 | -11.90 | 82 | 2.7 | |
| 260 | 20 | 70.50 | -12.00 | 82 | 2.7 | |
| 265 | 25 | 70.50 | -12.00 | 82 | 2.7 | |
| 270 | 30 | 71.00 | -12.50 | 82 | 2.7 | |
| 275 | 35 | 71.10 | -12.60 | 82 | 2.7 | |
| 280 | 40 | 71.30 | -12.80 | 82 | 2.7 | |
| 285 | 45 | 71.30 | -12.80 | 82 | 2.7 | |
| 290 | 50 | 71.40 | -12.90 | 82 | 2.7 | |
| 295 | 55 | 71.40 | -12.90 | 82 | 2.7 | |
| 300 | 60 | 71.60 | -13.10 | 82 | 2.7 | |
| 310 | 70 | 71.80 | -13.30 | 82 | 2.7 | |
| 320 | 80 | 71.80 | -13.30 | 82 | 2.7 | |
| 330 | 90 | 71.80 | -13.30 | 82 | 2.7 | |
| 340 | 100 | 71.80 | -13.30 | 82 | 2.7 | |
| 350 | 110 | 71.80 | -13.30 | 82 | 2.7 | |
| 360 | 120 | 71.80 | -13.30 | 82 | 2.7 | Q=162 l/m |
| 361 | 1 | 72.60 | -14.10 | 89 | 3.3 | Q=198 l/m |
| 362 | 2 | 73.10 | -14.60 | 89 | 3.3 | |
| 363 | 3 | 73.80 | -15.30 | 89 | 3.3 | |
| 364 | 4 | 74.00 | -15.50 | 89 | 3.3 | |
| 365 | 5 | 74.20 | -15.70 | 89 | 3.3 | |
| 366 | 6 | 74.80 | -16.30 | 89 | 3.3 | |
| 367 | 7 | 74.80 | -16.30 | 89 | 3.3 | |
| 368 | 8 | 74.80 | -16.30 | 89 | 3.3 | |
| 369 | 9 | 74.80 | -16.30 | 89 | 3.3 | |
| 370 | 10 | 74.90 | -16.40 | 89 | 3.3 | |
| 372 | 12 | 75.00 | -16.50 | 89 | 3.3 | |
| 374 | 14 | 75.40 | -16.90 | 89 | 3.3 | |
| 376 | 16 | 75.50 | -17.00 | 89 | 3.3 | |
| 378 | 18 | 75.80 | -17.30 | 89 | 3.3 | |
| 380 | 20 | 76.30 | -17.80 | 89 | 3.3 | |
| 385 | 25 | 76.90 | -18.40 | 89 | 3.3 | |
| 390 | 30 | 77.30 | -18.80 | 89 | 3.3 | |
| 395 | 35 | 77.40 | -18.90 | 89 | 3.3 | |
| 400 | 40 | 77.40 | -18.90 | 89 | 3.3 | |
| 405 | 45 | 77.50 | -19.00 | 89 | 3.3 | |
| 410 | 50 | 77.80 | -19.30 | 89 | 3.3 | |
| 415 | 55 | 77.90 | -19.40 | 89 | 3.3 | |
| 420 | 60 | 77.90 | -19.40 | 89 | 3.3 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 430 | 70 | 78.00 | -19.50 | 89 | 3.3 | |
| 440 | 80 | 78.00 | -19.50 | 89 | 3.3 | |
| 450 | 90 | 78.10 | -19.60 | 89 | 3.3 | |
| 460 | 100 | 78.10 | -19.60 | 89 | 3.3 | |
| 470 | 110 | 78.20 | -19.70 | 89 | 3.3 | |
| 480 | 120 | 78.20 | -19.70 | 89 | 3.3 | Q=198 l/m |
| 481 | 1 | 78.8 | -20.30 | 96 | 4.0 | Q=240 l/m |
| 482 | 2 | 78.9 | -20.40 | 96 | 4.0 | |
| 483 | 3 | 79.6 | -21.10 | 96 | 4.0 | |
| 484 | 4 | 80.3 | -21.80 | 96 | 4.0 | |
| 485 | 5 | 80.8 | -22.30 | 96 | 4.0 | |
| 486 | 6 | 80.9 | -22.40 | 96 | 4.0 | |
| 487 | 7 | 81 | -22.50 | 96 | 4.0 | |
| 488 | 8 | 81.3 | -22.80 | 96 | 4.0 | |
| 489 | 9 | 81.6 | -23.10 | 96 | 4.0 | |
| 490 | 10 | 81.7 | -23.20 | 96 | 4.0 | |
| 492 | 12 | 82 | -23.50 | 96 | 4.0 | |
| 494 | 14 | 82 | -23.50 | 96 | 4.0 | |
| 496 | 16 | 82.3 | -23.80 | 96 | 4.0 | |
| 498 | 18 | 82.3 | -23.80 | 96 | 4.0 | |
| 500 | 20 | 82.4 | -23.90 | 96 | 4.0 | |
| 505 | 25 | 82.7 | -24.20 | 96 | 4.0 | |
| 510 | 30 | 83 | -24.50 | 96 | 4.0 | |
| 515 | 35 | 83.1 | -24.60 | 96 | 4.0 | |
| 520 | 40 | 83.1 | -24.60 | 96 | 4.0 | |
| 525 | 45 | 83.1 | -24.60 | 96 | 4.0 | |
| 530 | 50 | 83.2 | -24.70 | 96 | 4.0 | |
| 535 | 55 | 83.2 | -24.70 | 96 | 4.0 | |
| 540 | 60 | 83.3 | -24.80 | 96 | 4.0 | |
| 550 | 70 | 83.4 | -24.90 | 96 | 4.0 | |
| 560 | 80 | 83.5 | -25.00 | 96 | 4.0 | |
| 570 | 90 | 83.5 | -25.00 | 96 | 4.0 | |
| 580 | 100 | 83.6 | -25.10 | 96 | 4.0 | |
| 590 | 110 | 83.6 | -25.10 | 96 | 4.0 | |
| 600 | 120 | 83.6 | -25.10 | 96 | 4.0 | |

CONTINUOUS PUMPING TEST DATA SHEET2

WELL LOCATION: TAYTAY
SITE NO.: SUMULONG
WELL NO.: 1
WELL DEPTH: 202.68 M
CASING DIAMETER: 15 c m
SWL: 58.5 m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 58.5 | 0 | | |
| 1 | 59.90 | -1.40 | 82 | 2.7 |
| 2 | 61.10 | -2.60 | 82 | 2.7 |
| 3 | 64.40 | -5.90 | 82 | 2.7 |
| 4 | 66.00 | -7.50 | 82 | 2.7 |
| 5 | 66.40 | -7.90 | 82 | 2.7 |
| 6 | 66.70 | -8.20 | 82 | 2.7 |
| 7 | 67.00 | -8.50 | 82 | 2.7 |
| 8 | 67.20 | -8.70 | 82 | 2.7 |
| 9 | 69.20 | -10.70 | 93 | 3.7 |
| 10 | 70.10 | -11.60 | 93 | 3.7 |
| 12 | 71.60 | -13.10 | 93 | 3.7 |
| 14 | 72.40 | -13.90 | 93 | 3.7 |
| 16 | 73.10 | -14.60 | 93 | 3.7 |
| 18 | 73.60 | -15.10 | 93 | 3.7 |
| 20 | 74.20 | -15.70 | 93 | 3.7 |
| 25 | 75.80 | -17.30 | 93 | 3.7 |
| 30 | 76.30 | -17.80 | 93 | 3.7 |
| 35 | 77.70 | -19.20 | 93 | 3.7 |
| 40 | 78.30 | -19.80 | 93 | 3.7 |
| 45 | 78.90 | -20.40 | 90 | 3.4 |
| 50 | 80.60 | -22.10 | 90 | 3.4 |
| 55 | 81.00 | -22.50 | 90 | 3.4 |
| 60 | 81.30 | -22.80 | 90 | 3.4 |
| 70 | 81.70 | -23.20 | 93 | 3.7 |
| 80 | 82.30 | -23.80 | 95 | 3.9 |
| 90 | 82.40 | -23.90 | 90 | 3.4 |
| 100 | 82.50 | -24.00 | 90 | 3.4 |
| 110 | 82.70 | -24.20 | 90 | 3.4 |
| 120 | 82.70 | -24.20 | 90 | 3.4 |
| 135 | 83.00 | -24.50 | 90 | 3.4 |
| 150 | 83.00 | -24.50 | 90 | 3.4 |
| 165 | 83.00 | -24.50 | 90 | 3.4 |
| 180 | 83.20 | -24.70 | 90 | 3.4 |
| 210 | 83.50 | -25.00 | 90 | 3.4 |
| 240 | 83.60 | -25.10 | 90 | 3.4 |
| 270 | 83.60 | -25.10 | 90 | 3.4 |
| 300 | 83.80 | -25.30 | 90 | 3.4 |
| 360 | 84.40 | -25.90 | 90 | 3.4 |
| 420 | 84.40 | -25.90 | 90 | 3.4 |
| 480 | 84.40 | -25.90 | 90 | 3.4 |
| 540 | 84.40 | -25.90 | 90 | 3.4 |
| 600 | 84.40 | -25.90 | 90 | 3.4 |
| 660 | 84.40 | -25.90 | 90 | 3.4 |
| 720 | 84.40 | -25.90 | 90 | 3.4 |
| 780 | 84.50 | -26.00 | 90 | 3.4 |
| 840 | 84.50 | -26.00 | 90 | 3.4 |
| 900 | 84.50 | -26.00 | 90 | 3.4 |
| 960 | 84.50 | -26.00 | 90 | 3.4 |
| 1020 | 84.50 | -26.00 | 90 | 3.4 |
| 1080 | 84.50 | -26.00 | 90 | 3.4 |

| | | | | |
|---|---|---|---|---|
| 1140 | 84.50 | -26.00 | 90 | 3.4 |
| 1200 | 84.50 | -26.00 | 90 | 3.4 |
| 1260 | 84.50 | -26.00 | 90 | 3.4 |
| 1320 | 84.50 | -26.00 | 90 | 3.4 |
| 1380 | 84.50 | -26.00 | 90 | 3.4 |
| 1440 | 84.50 | -26.00 | 90 | 3.4 |
| 1500 | 84.50 | -26.00 | 90 | 3.4 |
| 1560 | 84.50 | -26.00 | 90 | 3.4 |
| 1620 | 84.50 | -26.00 | 90 | 3.4 |
| 1680 | 84.50 | -26.00 | 90 | 3.4 |
| 1740 | 84.50 | -26.00 | 90 | 3.4 |
| 1800 | 84.50 | -26.00 | 90 | 3.4 |
| 1860 | 84.50 | -26.00 | 90 | 3.4 |
| 1920 | 84.90 | -26.40 | 90 | 3.4 |
| 1980 | 84.90 | -26.40 | 90 | 3.4 |
| 2040 | 84.50 | -26.00 | 90 | 3.4 |
| 2100 | 84.50 | -26.00 | 90 | 3.4 |
| 2160 | 84.50 | -26.00 | 90 | 3.4 |
| 2220 | 84.50 | -26.00 | 90 | 3.4 |
| 2280 | 84.50 | -26.00 | 90 | 3.4 |
| 2340 | 84.50 | -26.00 | 90 | 3.4 |
| 2400 | 84.50 | -26.00 | 90 | 3.4 |
| 2460 | 84.50 | -26.00 | 90 | 3.4 |
| 2520 | 84.50 | -26.00 | 90 | 3.4 |
| 2580 | 84.50 | -26.00 | 90 | 3.4 |
| 2640 | 84.50 | -26.00 | 90 | 3.4 |
| 2700 | 84.50 | -26.00 | 90 | 3.4 |
| 2760 | 84.50 | -26.00 | 90 | 3.4 |
| 2820 | 84.50 | -26.00 | 90 | 3.4 |
| 2880 | 84.50 | -26.00 | 90 | 3.4 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 84.50 | 26.00 | 2880 | |
| 1 | 82.00 | 23.50 | 2881 | 2881 |
| 2 | 81.00 | 22.50 | 2882 | 1441 |
| 3 | 79.00 | 20.50 | 2883 | 961 |
| 4 | 77.90 | 19.40 | 2884 | 721 |
| 5 | 76.30 | 17.80 | 2885 | 577 |
| 6 | 75.30 | 16.80 | 2886 | 481 |
| 7 | 74.00 | 15.50 | 2887 | 412.42857 |
| 8 | 72.90 | 14.40 | 2888 | 361 |
| 9 | 71.30 | 12.80 | 2889 | 321 |
| 10 | 70.70 | 12.20 | 2890 | 289 |
| 12 | 69.70 | 11.20 | 2892 | 241 |
| 14 | 68.50 | 10.00 | 2894 | 206.71429 |
| 16 | 67.20 | 8.70 | 2896 | 181 |
| 18 | 66.10 | 7.60 | 2898 | 161 |
| 20 | 65.10 | 6.60 | 2900 | 145 |
| 25 | 64.60 | 6.10 | 2905 | 116.2 |
| 30 | 62.50 | 4.00 | 2910 | 97 |
| 35 | 61.80 | 3.30 | 2915 | 83.285714 |
| 40 | 61.40 | 2.90 | 2920 | 73 |
| 45 | 61.00 | 2.50 | 2925 | 65 |
| 50 | 60.80 | 2.30 | 2930 | 58.6 |
| 55 | 60.60 | 2.10 | 2935 | 53.363636 |
| 60 | 60.50 | 2.00 | 2940 | 49 |
| 70 | 60.30 | 1.80 | 2950 | 42.142857 |
| 80 | 60.20 | 1.70 | 2960 | 37 |
| 90 | 60.00 | 1.50 | 2970 | 33 |

| | | | | |
|---|---|---|---|---|
| 100 | 59.90 | 1.40 | 2980 | 29.8 |
| 110 | 59.90 | 1.40 | 2990 | 27.181818 |
| 120 | 59.80 | 1.30 | 3000 | 25 |
| 135 | 59.80 | 1.30 | 3015 | 22.333333 |
| 150 | 59.70 | 1.20 | 3030 | 20.2 |
| 165 | 59.70 | 1.20 | 3045 | 18.454545 |
| 180 | 59.70 | 1.20 | 3060 | 17 |
| 210 | 59.60 | 1.10 | 3090 | 14.714286 |
| 240 | 59.50 | 1.00 | 3120 | 13 |
| 270 | 59.50 | 1.00 | 3150 | 11.666667 |
| 300 | 59.40 | .90 | 3180 | 10.6 |
| 360 | 59.40 | .90 | 3240 | 9 |
| 420 | 59.30 | .80 | 3300 | 7.8571429 |
| 480 | 59.20 | .70 | 3360 | 7 |

STEP DRAWDOWN TEST DATA SHEET1

WELL LOCATION: ANTIPOLO

SITE NO.: COGEO

WELL NO.: 1

WELL DEPTH 91.44 M

CASING DIA 15 c m

SWL: 7.3 m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 7.3 | 0 | 0 | | |
| 1 | 1 | 8.14 | -.84 | 47 | .7 | |
| 2 | 2 | 8.81 | -1.51 | 47 | .7 | |
| 3 | 3 | 8.90 | -1.60 | 47 | .7 | |
| 4 | 4 | 8.84 | -1.54 | 47 | .7 | |
| 5 | 5 | 8.82 | -1.52 | 47 | .7 | |
| 6 | 6 | 8.82 | -1.52 | 47 | .7 | |
| 7 | 7 | 8.83 | -1.53 | 47 | .7 | |
| 8 | 8 | 8.83 | -1.53 | 47 | .7 | |
| 9 | 9 | 8.84 | -1.54 | 47 | .7 | |
| 10 | 10 | 8.85 | -1.55 | 47 | .7 | |
| 12 | 12 | 8.87 | -1.57 | 47 | .7 | |
| 14 | 14 | 8.94 | -1.64 | 47 | .7 | |
| 16 | 16 | 8.84 | -1.54 | 47 | .7 | |
| 18 | 18 | 8.87 | -1.57 | 47 | .7 | |
| 20 | 20 | 8.36 | -1.06 | 47 | .7 | |
| 25 | 25 | 8.40 | -1.10 | 47 | .7 | |
| 30 | 30 | 8.69 | -1.39 | 47 | .7 | |
| 35 | 35 | 8.69 | -1.39 | 47 | .7 | |
| 40 | 40 | 8.69 | -1.39 | 47 | .7 | |
| 45 | 45 | 8.69 | -1.39 | 47 | .7 | |
| 50 | 50 | 8.69 | -1.39 | 47 | .7 | |
| 55 | 55 | 8.69 | -1.39 | 47 | .7 | |
| 60 | 60 | 8.69 | -1.39 | 47 | .7 | |
| 70 | 70 | 8.69 | -1.39 | 47 | .7 | |
| 80 | 80 | 8.69 | -1.39 | 47 | .7 | |
| 90 | 90 | 8.69 | -1.39 | 47 | .7 | |
| 100 | 100 | 8.69 | -1.39 | 47 | .7 | |
| 110 | 110 | 8.69 | -1.39 | 47 | .7 | |
| 120 | 120 | 8.69 | -1.39 | 47 | .7 | Q=42 l/m |
| 121 | 1 | 10.50 | -3.20 | 61 | 1.3 | |
| 122 | 2 | 10.58 | -3.28 | 61 | 1.3 | |
| 123 | 3 | 10.69 | -3.39 | 61 | 1.3 | |
| 124 | 4 | 10.80 | -3.50 | 61 | 1.3 | |
| 125 | 5 | 10.88 | -3.58 | 61 | 1.3 | |
| 126 | 6 | 10.94 | -3.64 | 61 | 1.3 | |
| 127 | 7 | 11.00 | -3.70 | 61 | 1.3 | |
| 128 | 8 | 11.10 | -3.80 | 61 | 1.3 | |
| 129 | 9 | 11.20 | -3.90 | 61 | 1.3 | |
| 130 | 10 | 11.20 | -3.90 | 61 | 1.3 | |
| 132 | 12 | 11.30 | -4.00 | 61 | 1.3 | |
| 134 | 14 | 11.35 | -4.05 | 61 | 1.3 | |
| 136 | 16 | 11.39 | -4.09 | 61 | 1.3 | |
| 138 | 18 | 11.44 | -4.14 | 61 | 1.3 | |
| 140 | 20 | 11.76 | -4.46 | 61 | 1.3 | |
| 145 | 25 | 11.76 | -4.46 | 61 | 1.3 | |
| 150 | 30 | 11.90 | -4.60 | 61 | 1.3 | |
| 155 | 35 | 11.90 | -4.60 | 61 | 1.3 | |
| 160 | 40 | 11.90 | -4.60 | 61 | 1.3 | |
| 165 | 45 | 11.90 | -4.60 | 61 | 1.3 | |
| 170 | 50 | 11.90 | -4.60 | 61 | 1.3 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 175 | 55 | 11.90 | -4.60 | 61 | 1.3 | |
| 180 | 60 | 11.90 | -4.60 | 61 | 1.3 | |
| 190 | 70 | 11.90 | -4.60 | 61 | 1.3 | |
| 200 | 80 | 12.00 | -4.70 | 61 | 1.3 | |
| 210 | 90 | 12.00 | -4.70 | 61 | 1.3 | |
| 220 | 100 | 12.10 | -4.80 | 61 | 1.3 | |
| 230 | 110 | 12.10 | -4.80 | 61 | 1.3 | |
| 240 | 120 | 12.10 | -4.80 | 61 | 1.3 | Q=78 l/m |
| 241 | 1 | 13.60 | -6.30 | 73 | 2.0 | |
| 242 | 2 | 14.00 | -6.70 | 73 | 2.0 | |
| 243 | 3 | 14.20 | -6.90 | 73 | 2.0 | |
| 244 | 4 | 14.20 | -6.90 | 73 | 2.0 | |
| 245 | 5 | 14.30 | -7.00 | 73 | 2.0 | |
| 246 | 6 | 14.30 | -7.00 | 73 | 2.0 | |
| 247 | 7 | 14.40 | -7.10 | 73 | 2.0 | |
| 248 | 8 | 14.40 | -7.10 | 73 | 2.0 | |
| 249 | 9 | 14.50 | -7.20 | 73 | 2.0 | |
| 250 | 10 | 14.50 | -7.20 | 73 | 2.0 | |
| 252 | 12 | 14.60 | -7.30 | 73 | 2.0 | |
| 254 | 14 | 14.70 | -7.40 | 73 | 2.0 | |
| 256 | 16 | 14.80 | -7.50 | 73 | 2.0 | |
| 258 | 18 | 15.00 | -7.70 | 73 | 2.0 | |
| 260 | 20 | 15.10 | -7.80 | 73 | 2.0 | |
| 265 | 25 | 15.10 | -7.80 | 73 | 2.0 | |
| 270 | 30 | 15.20 | -7.90 | 73 | 2.0 | |
| 275 | 35 | 15.20 | -7.90 | 73 | 2.0 | |
| 280 | 40 | 15.20 | -7.90 | 73 | 2.0 | |
| 285 | 45 | 15.20 | -7.90 | 73 | 2.0 | |
| 290 | 50 | 15.20 | -7.90 | 73 | 2.0 | |
| 295 | 55 | 15.20 | -7.90 | 73 | 2.0 | |
| 300 | 60 | 15.30 | -8.00 | 73 | 2.0 | |
| 310 | 70 | 15.30 | -8.00 | 73 | 2.0 | |
| 320 | 80 | 15.30 | -8.00 | 73 | 2.0 | |
| 330 | 90 | 15.40 | -8.10 | 73 | 2.0 | |
| 340 | 100 | 15.40 | -8.10 | 73 | 2.0 | |
| 350 | 110 | 15.40 | -8.10 | 73 | 2.0 | |
| 360 | 120 | 15.40 | -8.10 | 73 | 2.0 | Q=120 l/m |
| 361 | 1 | 16.90 | -9.60 | 81 | 2.6 | |
| 362 | 2 | 17.60 | -10.30 | 81 | 2.6 | |
| 363 | 3 | 17.70 | -10.40 | 81 | 2.6 | |
| 364 | 4 | 17.90 | -10.60 | 81 | 2.6 | |
| 365 | 5 | 18.10 | -10.80 | 81 | 2.6 | |
| 366 | 6 | 18.30 | -11.00 | 81 | 2.6 | |
| 367 | 7 | 18.40 | -11.10 | 81 | 2.6 | |
| 368 | 8 | 18.40 | -11.10 | 81 | 2.6 | |
| 369 | 9 | 18.50 | -11.20 | 81 | 2.6 | |
| 370 | 10 | 18.50 | -11.20 | 81 | 2.6 | |
| 372 | 12 | 18.60 | -11.30 | 81 | 2.6 | |
| 374 | 14 | 18.70 | -11.40 | 81 | 2.6 | |
| 376 | 16 | 18.70 | -11.40 | 81 | 2.6 | |
| 378 | 18 | 18.70 | -11.40 | 81 | 2.6 | |
| 380 | 20 | 18.80 | -11.50 | 81 | 2.6 | |
| 385 | 25 | 18.80 | -11.50 | 81 | 2.6 | |
| 390 | 30 | 18.80 | -11.50 | 81 | 2.6 | |
| 395 | 35 | 18.90 | -11.60 | 81 | 2.6 | |
| 400 | 40 | 18.90 | -11.60 | 81 | 2.6 | |
| 405 | 45 | 19.10 | -11.80 | 81 | 2.6 | |
| 410 | 50 | 19.10 | -11.80 | 81 | 2.6 | |
| 415 | 55 | 19.20 | -11.90 | 81 | 2.6 | |
| 420 | 60 | 19.20 | -11.90 | 81 | 2.6 | |
| 430 | 70 | 19.50 | -12.20 | 81 | 2.6 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 440 | 80 | 19.80 | -12.50 | 81 | 2.6 | |
| 450 | 90 | 20.10 | -12.80 | 81 | 2.6 | |
| 460 | 100 | 20.10 | -12.80 | 81 | 2.6 | |
| 470 | 110 | 20.40 | -13.10 | 81 | 2.6 | |
| 480 | 120 | 20.50 | -13.20 | 81 | 2.6 | Q=156 l/m |
| 481 | 1 | 21.4 | -14.10 | 89 | 3.3 | |
| 482 | 2 | 23.4 | -16.10 | 90 | 3.4 | |
| 483 | 3 | 24.8 | -17.50 | 89 | 3.3 | |
| 484 | 4 | 26.5 | -19.20 | 88 | 3.2 | |
| 485 | 5 | 26.7 | -19.40 | 89 | 3.3 | |
| 486 | 6 | 27.9 | -20.60 | 89 | 3.3 | |
| 487 | 7 | 29.7 | -22.40 | 90 | 3.4 | |
| 488 | 8 | 30.8 | -23.50 | 89 | 3.3 | |
| 489 | 9 | 31 | -23.70 | 89 | 3.3 | |
| 490 | 10 | 32.7 | -25.40 | 89 | 3.3 | |
| 492 | 12 | 33.8 | -26.50 | 89 | 3.3 | |
| 494 | 14 | 34.5 | -27.20 | 89 | 3.3 | |
| 496 | 16 | 34.9 | -27.60 | 89 | 3.3 | |
| 498 | 18 | 35.4 | -28.10 | 89 | 3.3 | |
| 500 | 20 | 36.8 | -29.50 | 89 | 3.3 | |
| 505 | 25 | 37.9 | -30.60 | 89 | 3.3 | |
| 510 | 30 | 39.7 | -32.40 | 89 | 3.3 | |
| 515 | 35 | 42.4 | -35.10 | 89 | 3.3 | |
| 520 | 40 | 45.8 | -38.50 | 89 | 3.3 | |
| 525 | 45 | 46.9 | -39.60 | 89 | 3.3 | |
| 530 | 50 | 48.5 | -41.20 | 89 | 3.3 | |
| 535 | 55 | 48.5 | -41.20 | 89 | 3.3 | |
| 540 | 60 | 49.6 | -42.30 | 89 | 3.3 | |
| 550 | 70 | 51 | -43.70 | 89 | 3.3 | |
| 560 | 80 | 52.4 | -45.10 | 89 | 3.3 | |
| 570 | 90 | 54.4 | -47.10 | 89 | 3.3 | |
| 580 | 100 | 55.3 | -48.00 | 89 | 3.3 | |
| 590 | 110 | 55.8 | -48.50 | 89 | 3.3 | |
| 600 | 120 | 56.1 | -48.80 | 89 | 3.3 | Q=198 l/m |

CONTINUOUS PUMPING TEST DATA SHEET1

WELL LOCATION: ANTIPOLO

SITE NO.: COGEO

WELL NO.: 1

WELL DEPTH: 91.44 M

CASING DIAMETER: 15 c m

SWL: 8.1 m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 8.1 | 0 | | |
| 1 | 10.00 | -1.90 | 89 | 3.3 |
| 2 | 13.70 | -5.60 | 89 | 3.3 |
| 3 | 17.40 | -9.30 | 89 | 3.3 |
| 4 | 18.80 | -10.70 | 89 | 3.3 |
| 5 | 19.40 | -11.30 | 89 | 3.3 |
| 6 | 19.80 | -11.70 | 89 | 3.3 |
| 7 | 20.20 | -12.10 | 89 | 3.3 |
| 8 | 20.50 | -12.40 | 89 | 3.3 |
| 9 | 20.80 | -12.70 | 89 | 3.3 |
| 10 | 21.30 | -13.20 | 89 | 3.3 |
| 12 | 21.90 | -13.80 | 89 | 3.3 |
| 14 | 22.50 | -14.40 | 89 | 3.3 |
| 16 | 23.40 | -15.30 | 89 | 3.3 |
| 18 | 24.50 | -16.40 | 89 | 3.3 |
| 20 | 25.00 | -16.90 | 89 | 3.3 |
| 25 | 25.50 | -17.40 | 89 | 3.3 |
| 30 | 25.90 | -17.80 | 89 | 3.3 |
| 35 | 26.30 | -18.20 | 89 | 3.3 |
| 40 | 26.90 | -18.80 | 89 | 3.3 |
| 45 | 27.50 | -19.40 | 89 | 3.3 |
| 50 | 29.90 | -21.80 | 89 | 3.3 |
| 55 | 31.30 | -23.20 | 89 | 3.3 |
| 60 | 32.70 | -24.60 | 89 | 3.3 |
| 70 | 34.60 | -26.50 | 89 | 3.3 |
| 80 | 36.30 | -28.20 | 89 | 3.3 |
| 90 | 37.60 | -29.50 | 89 | 3.3 |
| 100 | 38.40 | -30.30 | 89 | 3.3 |
| 110 | 39.10 | -31.00 | 89 | 3.3 |
| 120 | 40.10 | -32.00 | 89 | 3.3 |
| 135 | 41.00 | -32.90 | 89 | 3.3 |
| 150 | 42.60 | -34.50 | 89 | 3.3 |
| 165 | 43.60 | -35.50 | 89 | 3.3 |
| 180 | 44.40 | -36.30 | 89 | 3.3 |
| 210 | 46.60 | -38.50 | 89 | 3.3 |
| 240 | 49.80 | -41.70 | 89 | 3.3 |
| 270 | 50.00 | -41.90 | 89 | 3.3 |
| 300 | 50.10 | -42.00 | 89 | 3.3 |
| 360 | 53.50 | -45.40 | 89 | 3.3 |
| 420 | 56.80 | -48.70 | 89 | 3.3 |
| 480 | 60.90 | -52.80 | 89 | 3.3 |
| 540 | 65.70 | -57.60 | 89 | 3.3 |
| 600 | 68.70 | -60.60 | 89 | 3.3 |
| 660 | | | | |
| 720 | | | | |
| 780 | | | | |
| 840 | | | | |
| 900 | | | | |
| 960 | | | | |
| 1020 | | | | |
| 1080 | | | | |

1140
1200
1260
1320
1380
1440
1500
1560
1620
1680
1740
1800
1860
1920
1980
2040
2100
2160
2220
2280
2340
2400
2460
2520
2580
2640
2700
2760
2820
2880

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 68.70 | 60.60 | 600 | |
| 1 | 58.60 | 50.50 | 601 | 601 |
| 2 | 51.80 | 43.70 | 602 | 301 |
| 3 | 42.10 | 34.00 | 603 | 201 |
| 4 | 38.30 | 30.20 | 604 | 151 |
| 5 | 35.80 | 27.70 | 605 | 121 |
| 6 | 35.60 | 27.50 | 606 | 101 |
| 7 | 32.90 | 24.80 | 607 | 86.714286 |
| 8 | 29.80 | 21.70 | 608 | 76 |
| 9 | 27.60 | 19.50 | 609 | 67.666667 |
| 10 | 21.60 | 13.50 | 610 | 61 |
| 12 | 17.50 | 9.40 | 612 | 51 |
| 14 | 16.30 | 8.20 | 614 | 43.857143 |
| 16 | 15.00 | 6.90 | 616 | 38.5 |
| 18 | 13.40 | 5.30 | 618 | 34.333333 |
| 20 | 11.20 | 3.10 | 620 | 31 |
| 25 | 10.90 | 2.80 | 625 | 25 |
| 30 | 10.80 | 2.70 | 630 | 21 |
| 35 | 10.70 | 2.60 | 635 | 18.142857 |
| 40 | 10.70 | 2.60 | 640 | 16 |
| 45 | 10.60 | 2.50 | 645 | 14.333333 |
| 50 | 10.60 | 2.50 | 650 | 13 |
| 55 | 10.60 | 2.50 | 655 | 11.909091 |
| 60 | 10.60 | 2.50 | 660 | 11 |
| 70 | 10.50 | 2.40 | 670 | 9.5714286 |
| 80 | 10.40 | 2.30 | 680 | 8.5 |
| 90 | 10.40 | 2.30 | 690 | 7.6666667 |

| | | | | |
|---|---|---|---|---|
| 100 | 10.30 | 2.20 | 700 | 7 |
| 110 | 10.20 | 2.10 | 710 | 6.4545455 |
| 120 | 10.20 | 2.10 | 720 | 6 |
| 135 | 10.10 | 2.00 | 735 | 5.4444444 |
| 150 | 10.00 | 1.90 | 750 | 5 |
| 165 | 10.00 | 1.90 | 765 | 4.6363636 |
| 180 | 10.00 | 1.90 | 780 | 4.3333333 |
| 210 | 9.80 | 1.70 | 810 | 3.8571429 |
| 240 | 9.70 | 1.60 | 840 | 3.5 |
| 270 | 9.60 | 1.50 | 870 | 3.2222222 |
| 300 | 9.60 | 1.50 | 900 | 3 |
| 360 | 9.40 | 1.30 | 960 | 2.6666667 |
| 420 | 9.30 | 1.20 | 1020 | 2.4285714 |
| 480 | 9.00 | .90 | 1080 | 2.25 |

STEP DRAWDOWN TEST DATA SHEET2

WELL LOCATION: ANTIPOLO

SITE NO.: COGEO

WELL NO.: 1

WELL DEPTH 91.44 M

CASING DIA 15 c m

SWL: 6.55 m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 6.55 | 0 | 0 | | |
| 1 | 1 | 6.95 | -.40 | 47 | .7 | |
| 2 | 2 | 7.05 | -.50 | 47 | .7 | |
| 3 | 3 | 7.15 | -.60 | 47 | .7 | |
| 4 | 4 | 7.35 | -.80 | 47 | .7 | |
| 5 | 5 | 7.45 | -.90 | 47 | .7 | |
| 6 | 6 | 7.55 | -1.00 | 47 | .7 | |
| 7 | 7 | 7.65 | -1.10 | 47 | .7 | |
| 8 | 8 | 7.65 | -1.10 | 47 | .7 | |
| 9 | 9 | 7.65 | -1.10 | 47 | .7 | |
| 10 | 10 | 7.65 | -1.10 | 47 | .7 | |
| 12 | 12 | 7.65 | -1.10 | 47 | .7 | |
| 14 | 14 | 7.65 | -1.10 | 47 | .7 | |
| 16 | 16 | 7.65 | -1.10 | 47 | .7 | |
| 18 | 18 | 7.65 | -1.10 | 47 | .7 | |
| 20 | 20 | 7.65 | -1.10 | 47 | .7 | |
| 25 | 25 | 7.65 | -1.10 | 47 | .7 | |
| 30 | 30 | 7.65 | -1.10 | 47 | .7 | |
| 35 | 35 | 7.65 | -1.10 | 47 | .7 | |
| 40 | 40 | 7.65 | -1.10 | 47 | .7 | |
| 45 | 45 | 7.65 | -1.10 | 47 | .7 | |
| 50 | 50 | 7.65 | -1.10 | 47 | .7 | |
| 55 | 55 | 7.65 | -1.10 | 47 | .7 | |
| 60 | 60 | 7.65 | -1.10 | 47 | .7 | |
| 70 | 70 | 7.65 | -1.10 | 47 | .7 | |
| 80 | 80 | 7.65 | -1.10 | 47 | .7 | |
| 90 | 90 | 7.65 | -1.10 | 47 | .7 | |
| 100 | 100 | 7.65 | -1.10 | 47 | .7 | |
| 110 | 110 | 7.65 | -1.10 | 47 | .7 | |
| 120 | 120 | 7.65 | -1.10 | 47 | .7 | Q=42 l/m |
| 121 | 1 | 9.05 | -2.50 | 61 | 1.3 | |
| 122 | 2 | 9.15 | -2.60 | 61 | 1.3 | |
| 123 | 3 | 9.25 | -2.70 | 61 | 1.3 | |
| 124 | 4 | 9.25 | -2.70 | 61 | 1.3 | |
| 125 | 5 | 9.25 | -2.70 | 61 | 1.3 | |
| 126 | 6 | 9.25 | -2.70 | 61 | 1.3 | |
| 127 | 7 | 9.25 | -2.70 | 61 | 1.3 | |
| 128 | 8 | 9.25 | -2.70 | 61 | 1.3 | |
| 129 | 9 | 9.35 | -2.80 | 61 | 1.3 | |
| 130 | 10 | 9.35 | -2.80 | 61 | 1.3 | |
| 132 | 12 | 9.35 | -2.80 | 61 | 1.3 | |
| 134 | 14 | 9.35 | -2.80 | 61 | 1.3 | |
| 136 | 16 | 9.35 | -2.80 | 61 | 1.3 | |
| 138 | 18 | 9.35 | -2.80 | 61 | 1.3 | |
| 140 | 20 | 9.35 | -2.80 | 61 | 1.3 | |
| 145 | 25 | 9.35 | -2.80 | 61 | 1.3 | |
| 150 | 30 | 9.45 | -2.90 | 61 | 1.3 | |
| 155 | 35 | 9.45 | -2.90 | 61 | 1.3 | |
| 160 | 40 | 9.45 | -2.90 | 61 | 1.3 | |
| 165 | 45 | 9.45 | -2.90 | 61 | 1.3 | |
| 170 | 50 | 9.45 | -2.90 | 61 | 1.3 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 175 | 55 | 9.45 | -2.90 | 61 | 1.3 | |
| 180 | 60 | 9.45 | -2.90 | 61 | 1.3 | |
| 190 | 70 | 9.55 | -3.00 | 61 | 1.3 | |
| 200 | 80 | 9.55 | -3.00 | 61 | 1.3 | |
| 210 | 90 | 9.55 | -3.00 | 61 | 1.3 | |
| 220 | 100 | 9.55 | -3.00 | 61 | 1.3 | |
| 230 | 110 | 9.65 | -3.10 | 61 | 1.3 | |
| 240 | 120 | 9.65 | -3.10 | 61 | 1.3 | Q=78 l/m |
| 241 | 1 | 10.15 | -3.60 | 73 | 2.0 | |
| 242 | 2 | 10.45 | -3.90 | 73 | 2.0 | |
| 243 | 3 | 10.95 | -4.40 | 73 | 2.0 | |
| 244 | 4 | 11.25 | -4.70 | 73 | 2.0 | |
| 245 | 5 | 11.35 | -4.80 | 73 | 2.0 | |
| 246 | 6 | 11.45 | -4.90 | 73 | 2.0 | |
| 247 | 7 | 11.45 | -4.90 | 73 | 2.0 | |
| 248 | 8 | 11.45 | -4.90 | 73 | 2.0 | |
| 249 | 9 | 11.45 | -4.90 | 73 | 2.0 | |
| 250 | 10 | 11.45 | -4.90 | 73 | 2.0 | |
| 252 | 12 | 11.45 | -4.90 | 73 | 2.0 | |
| 254 | 14 | 11.45 | -4.90 | 73 | 2.0 | |
| 256 | 16 | 11.45 | -4.90 | 73 | 2.0 | |
| 258 | 18 | 11.45 | -4.90 | 73 | 2.0 | |
| 260 | 20 | 11.45 | -4.90 | 73 | 2.0 | |
| 265 | 25 | 11.45 | -4.90 | 73 | 2.0 | |
| 270 | 30 | 11.45 | -4.90 | 73 | 2.0 | |
| 275 | 35 | 11.45 | -4.90 | 73 | 2.0 | |
| 280 | 40 | 11.45 | -4.90 | 73 | 2.0 | |
| 285 | 45 | 11.45 | -4.90 | 73 | 2.0 | |
| 290 | 50 | 11.45 | -4.90 | 73 | 2.0 | |
| 295 | 55 | 11.45 | -4.90 | 73 | 2.0 | |
| 300 | 60 | 11.45 | -4.90 | 73 | 2.0 | |
| 310 | 70 | 11.45 | -4.90 | 73 | 2.0 | |
| 320 | 80 | 11.45 | -4.90 | 73 | 2.0 | |
| 330 | 90 | 11.55 | -5.00 | 73 | 2.0 | |
| 340 | 100 | 11.55 | -5.00 | 73 | 2.0 | |
| 350 | 110 | 11.55 | -5.00 | 73 | 2.0 | |
| 360 | 120 | 11.55 | -5.00 | 73 | 2.0 | Q=120 l/m |
| 361 | 1 | 12.45 | -5.90 | 81 | 2.6 | |
| 362 | 2 | 13.15 | -6.60 | 81 | 2.6 | |
| 363 | 3 | 13.75 | -7.20 | 81 | 2.6 | |
| 364 | 4 | 14.15 | -7.60 | 81 | 2.6 | |
| 365 | 5 | 14.95 | -8.40 | 81 | 2.6 | |
| 366 | 6 | 15.25 | -8.70 | 81 | 2.6 | |
| 367 | 7 | 15.35 | -8.80 | 81 | 2.6 | |
| 368 | 8 | 15.35 | -8.80 | 81 | 2.6 | |
| 369 | 9 | 15.35 | -8.80 | 81 | 2.6 | |
| 370 | 10 | 15.35 | -8.80 | 81 | 2.6 | |
| 372 | 12 | 15.45 | -8.90 | 81 | 2.6 | |
| 374 | 14 | 15.45 | -8.90 | 81 | 2.6 | |
| 376 | 16 | 15.45 | -8.90 | 81 | 2.6 | |
| 378 | 18 | 15.45 | -8.90 | 81 | 2.6 | |
| 380 | 20 | 15.45 | -8.90 | 81 | 2.6 | |
| 385 | 25 | 15.45 | -8.90 | 81 | 2.6 | |
| 390 | 30 | 15.55 | -9.00 | 81 | 2.6 | |
| 395 | 35 | 15.65 | -9.10 | 81 | 2.6 | |
| 400 | 40 | 15.65 | -9.10 | 81 | 2.6 | |
| 405 | 45 | 15.65 | -9.10 | 81 | 2.6 | |
| 410 | 50 | 15.75 | -9.20 | 81 | 2.6 | |
| 415 | 55 | 15.75 | -9.20 | 81 | 2.6 | |
| 420 | 60 | 15.75 | -9.20 | 81 | 2.6 | |
| 430 | 70 | 15.85 | -9.30 | 81 | 2.6 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 440 | 80 | 15.85 | -9.30 | 81 | 2.6 | |
| 450 | 90 | 16.05 | -9.50 | 81 | 2.6 | |
| 460 | 100 | 16.05 | -9.50 | 81 | 2.6 | |
| 470 | 110 | 16.15 | -9.60 | 81 | 2.6 | |
| 480 | 120 | 16.15 | -9.60 | 81 | 2.6 | Q=156 l/m |
| 481 | 1 | 16.85 | -10.30 | 89 | 3.3 | |
| 482 | 2 | 17.25 | -10.70 | 90 | 3.4 | |
| 483 | 3 | 17.95 | -11.40 | 89 | 3.3 | |
| 484 | 4 | 18.35 | -11.80 | 88 | 3.2 | |
| 485 | 5 | 18.65 | -12.10 | 89 | 3.3 | |
| 486 | 6 | 19.05 | -12.50 | 89 | 3.3 | |
| 487 | 7 | 19.25 | -12.70 | 90 | 3.4 | |
| 488 | 8 | 19.35 | -12.80 | 89 | 3.3 | |
| 489 | 9 | 19.45 | -12.90 | 89 | 3.3 | |
| 490 | 10 | 19.65 | -13.10 | 89 | 3.3 | |
| 492 | 12 | 19.85 | -13.30 | 89 | 3.3 | |
| 494 | 14 | 20.15 | -13.60 | 89 | 3.3 | |
| 496 | 16 | 20.65 | -14.10 | 89 | 3.3 | |
| 498 | 18 | 20.85 | -14.30 | 89 | 3.3 | |
| 500 | 20 | 21.15 | -14.60 | 89 | 3.3 | |
| 505 | 25 | 21.55 | -15.00 | 89 | 3.3 | |
| 510 | 30 | 22.25 | -15.70 | 89 | 3.3 | |
| 515 | 35 | 22.65 | -16.10 | 89 | 3.3 | |
| 520 | 40 | 22.95 | -16.40 | 89 | 3.3 | |
| 525 | 45 | 23.05 | -16.50 | 89 | 3.3 | |
| 530 | 50 | 23.25 | -16.70 | 89 | 3.3 | |
| 535 | 55 | 23.35 | -16.80 | 89 | 3.3 | |
| 540 | 60 | 23.45 | -16.90 | 89 | 3.3 | |
| 550 | 70 | 23.55 | -17.00 | 89 | 3.3 | |
| 560 | 80 | 23.75 | -17.20 | 89 | 3.3 | |
| 570 | 90 | 24.45 | -17.90 | 89 | 3.3 | |
| 580 | 100 | 25.35 | -18.80 | 89 | 3.3 | |
| 590 | 110 | 25.65 | -19.10 | 89 | 3.3 | |
| 600 | 120 | 26.05 | -19.50 | 89 | 3.3 | Q=198 l/m |

CONTINUOUS PUMPING TEST DATA SHEET2

WELL LOCATION: ANTIPOLO

SITE NO.: COGEO

WELL NO.: 1

WELL DEPTH: 91.44 M

CASING DIAMETER: 15 c m

SWL: 6.55 m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 6.55 | 0 | | |
| 1 | 11.05 | -4.50 | 89 | 3.3 |
| 2 | 12.25 | -5.70 | 89 | 3.3 |
| 3 | 13.25 | -6.70 | 89 | 3.3 |
| 4 | 14.35 | -7.80 | 89 | 3.3 |
| 5 | 15.55 | -9.00 | 89 | 3.3 |
| 6 | 16.25 | -9.70 | 89 | 3.3 |
| 7 | 16.95 | -10.40 | 89 | 3.3 |
| 8 | 17.15 | -10.60 | 89 | 3.3 |
| 9 | 17.25 | -10.70 | 89 | 3.3 |
| 10 | 17.35 | -10.80 | 89 | 3.3 |
| 12 | 17.45 | -10.90 | 89 | 3.3 |
| 14 | 17.55 | -11.00 | 89 | 3.3 |
| 16 | 18.35 | -11.80 | 89 | 3.3 |
| 18 | 18.65 | -12.10 | 89 | 3.3 |
| 20 | 19.05 | -12.50 | 89 | 3.3 |
| 25 | 19.25 | -12.70 | 89 | 3.3 |
| 30 | 19.45 | -12.90 | 89 | 3.3 |
| 35 | 19.75 | -13.20 | 89 | 3.3 |
| 40 | 20.05 | -13.50 | 89 | 3.3 |
| 45 | 20.35 | -13.80 | 89 | 3.3 |
| 50 | 20.85 | -14.30 | 89 | 3.3 |
| 55 | 21.45 | -14.90 | 89 | 3.3 |
| 60 | 21.85 | -15.30 | 89 | 3.3 |
| 70 | 22.95 | -16.40 | 89 | 3.3 |
| 80 | 23.45 | -16.90 | 89 | 3.3 |
| 90 | 23.95 | -17.40 | 89 | 3.3 |
| 100 | 24.55 | -18.00 | 89 | 3.3 |
| 110 | 24.95 | -18.40 | 89 | 3.3 |
| 120 | 26.35 | -19.80 | 89 | 3.3 |
| 135 | 27.35 | -20.80 | 89 | 3.3 |
| 150 | 28.45 | -21.90 | 89 | 3.3 |
| 165 | 28.85 | -22.30 | 89 | 3.3 |
| 180 | 29.45 | -22.90 | 89 | 3.3 |
| 210 | 30.65 | -24.10 | 89 | 3.3 |
| 240 | 31.95 | -25.40 | 89 | 3.3 |
| 270 | 33.25 | -26.70 | 89 | 3.3 |
| 300 | 34.35 | -27.80 | 89 | 3.3 |
| 360 | 35.85 | -29.30 | 89 | 3.3 |
| 420 | 37.45 | -30.90 | 89 | 3.3 |
| 480 | 37.65 | -31.10 | 89 | 3.3 |
| 540 | 38.85 | -32.30 | 89 | 3.3 |
| 600 | 39.95 | -33.40 | 89 | 3.3 |
| 660 | 40.85 | -34.30 | 89 | 3.3 |
| 720 | 41.55 | -35.00 | 89 | 3.3 |
| 780 | 42.25 | -35.70 | 89 | 3.3 |
| 840 | 43.05 | -36.50 | 89 | 3.3 |
| 900 | 43.75 | -37.20 | 89 | 3.3 |
| 960 | 44.45 | -37.90 | 89 | 3.3 |
| 1020 | 45.15 | -38.60 | 89 | 3.3 |
| 1080 | 45.85 | -39.30 | 89 | 3.3 |

| | | | | |
|---|---|---|---|---|
| 1140 | 46.55 | -40.00 | 89 | 3.3 |
| 1200 | 47.05 | -40.50 | 89 | 3.3 |
| 1260 | 47.75 | -41.20 | 89 | 3.3 |
| 1320 | 48.35 | -41.80 | 89 | 3.3 |
| 1380 | 48.95 | -42.40 | 89 | 3.3 |
| 1440 | 49.55 | -43.00 | 89 | 3.3 |
| 1500 | 50.05 | -43.50 | 89 | 3.3 |
| 1560 | 50.55 | -44.00 | 89 | 3.3 |
| 1620 | 51.15 | -44.60 | 89 | 3.3 |
| 1680 | 52.25 | -45.70 | 89 | 3.3 |
| 1740 | 53.14 | -46.59 | 89 | 3.3 |
| 1800 | 54.86 | -48.31 | 89 | 3.3 |
| 1860 | 55.55 | -49.00 | 89 | 3.3 |
| 1920 | 55.75 | -49.20 | 89 | 3.3 |
| 1980 | 55.95 | -49.40 | 89 | 3.3 |
| 2040 | 56.15 | -49.60 | 89 | 3.3 |
| 2100 | 56.45 | -49.90 | 89 | 3.3 |
| 2160 | 56.85 | -50.30 | 89 | 3.3 |
| 2220 | 57.25 | -50.70 | 89 | 3.3 |
| 2280 | 57.35 | -50.80 | 89 | 3.3 |
| 2340 | 57.65 | -51.10 | 89 | 3.3 |
| 2400 | 57.75 | -51.20 | 89 | 3.3 |
| 2460 | 58.55 | -21.40 | 89 | 3.3 |
| 2520 | 59.05 | -20.80 | 89 | 3.3 |
| 2580 | 59.75 | -53.20 | 89 | 3.3 |
| 2640 | 60.55 | -54.00 | 89 | 3.3 |
| 2700 | 61.25 | -54.70 | 89 | 3.3 |
| 2760 | 61.35 | -54.80 | 89 | 3.3 |
| 2820 | 61.35 | -54.80 | 89 | 3.3 |
| 2880 | 61.35 | -54.80 | 89 | 3.3 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 61.35 | 54.80 | 2880 | |
| 1 | 58.65 | 52.10 | 2881 | 2881 |
| 2 | 58.15 | 51.60 | 2882 | 1441 |
| 3 | 53.55 | 47.00 | 2883 | 961 |
| 4 | 46.95 | 40.40 | 2884 | 721 |
| 5 | 38.05 | 31.50 | 2885 | 577 |
| 6 | 33.15 | 26.60 | 2886 | 481 |
| 7 | 28.05 | 21.50 | 2887 | 412.42857 |
| 8 | 22.15 | 15.60 | 2888 | 361 |
| 9 | 17.55 | 11.00 | 2889 | 321 |
| 10 | 14.95 | 8.40 | 2890 | 289 |
| 12 | 14.25 | 7.70 | 2892 | 241 |
| 14 | 13.05 | 6.50 | 2894 | 206.71429 |
| 16 | 11.55 | 5.00 | 2896 | 181 |
| 18 | 9.95 | 3.40 | 2898 | 161 |
| 20 | 9.75 | 3.20 | 2900 | 145 |
| 25 | 9.65 | 3.10 | 2905 | 116.2 |
| 30 | 9.55 | 3.00 | 2910 | 97 |
| 35 | 9.45 | 2.90 | 2915 | 83.285714 |
| 40 | 9.45 | 2.90 | 2920 | 73 |
| 45 | 9.35 | 2.80 | 2925 | 65 |
| 50 | 9.35 | 2.80 | 2930 | 58.6 |
| 55 | 9.25 | 2.70 | 2935 | 53.363636 |
| 60 | 9.25 | 2.70 | 2940 | 49 |
| 70 | 9.05 | 2.50 | 2950 | 42.142857 |
| 80 | 8.95 | 2.40 | 2960 | 37 |
| 90 | 8.85 | 2.30 | 2970 | 33 |

| | | | | |
|---|---|---|---|---|
| 100 | 8.75 | 2.20 | 2980 | 29.8 |
| 110 | 8.65 | 2.10 | 2990 | 27.181818 |
| 120 | 8.65 | 2.10 | 3000 | 25 |
| 135 | 8.55 | 2.00 | 3015 | 22.333333 |
| 150 | 8.45 | 1.90 | 3030 | 20.2 |
| 165 | 8.35 | 1.80 | 3045 | 18.454545 |
| 180 | 8.15 | 1.60 | 3060 | 17 |
| 210 | 8.05 | 1.50 | 3090 | 14.714286 |
| 240 | 7.85 | 1.30 | 3120 | 13 |
| 270 | 7.65 | 1.10 | 3150 | 11.666667 |
| 300 | 7.45 | .90 | 3180 | 10.6 |
| 360 | 7.25 | .70 | 3240 | 9 |
| 420 | 7.05 | .50 | 3300 | 7.8571429 |
| 480 | 6.95 | .40 | 3360 | 7 |

STEP DRAWDOWN TEST DATA SHEET1

WELL LOCATION: ANTIPOLO
SITE NO.: COGEO
WELL NO.: 6
WELL DEPTH 117.35 M
CASING DIA 20 c m
SWL: 10.85 m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 10.85 | 0 | 0 | | |
| 1 | 1 | 11.61 | -.76 | 49 | .7 | |
| 2 | 2 | 11.67 | -.82 | 49 | .7 | |
| 3 | 3 | 11.72 | -.87 | 49 | .7 | |
| 4 | 4 | 11.78 | -.93 | 49 | .7 | |
| 5 | 5 | 11.85 | -1.00 | 51 | .8 | |
| 6 | 6 | 11.95 | -1.10 | 51 | .8 | |
| 7 | 7 | 11.96 | -1.11 | 51 | .8 | |
| 8 | 8 | 12.00 | -1.15 | 51 | .8 | |
| 9 | 9 | 12.03 | -1.18 | 51 | .8 | |
| 10 | 10 | 12.06 | -1.21 | 51 | .8 | |
| 12 | 12 | 12.13 | -1.28 | 51 | .8 | |
| 14 | 14 | 12.19 | -1.34 | 51 | .8 | |
| 16 | 16 | 12.28 | -1.43 | 51 | .8 | |
| 18 | 18 | 12.37 | -1.52 | 50 | .8 | |
| 20 | 20 | 12.48 | -1.63 | 49 | .7 | |
| 25 | 25 | 12.71 | -1.86 | 49 | .7 | |
| 30 | 30 | 12.94 | -2.09 | 51 | .8 | |
| 35 | 35 | 13.21 | -2.36 | 51 | .8 | |
| 40 | 40 | 13.42 | -2.57 | 51 | .8 | |
| 45 | 45 | 13.64 | -2.79 | 51 | .8 | |
| 50 | 50 | 13.79 | -2.94 | 51 | .8 | |
| 55 | 55 | 13.93 | -3.08 | 51 | .8 | |
| 60 | 60 | 14.04 | -3.19 | 51 | .8 | |
| 70 | 70 | 14.25 | -3.40 | 51 | .8 | |
| 80 | 80 | 14.41 | -3.56 | 51 | .8 | |
| 90 | 90 | 14.59 | -3.74 | 51 | .8 | |
| 100 | 100 | 14.76 | -3.91 | 51 | .8 | |
| 110 | 110 | 14.73 | -3.88 | 49 | .7 | |
| 120 | 120 | 14.78 | -3.93 | 51 | .8 | Q=49.2 l/m |
| 121 | 1 | 14.95 | -4.10 | 68 | 1.7 | |
| 122 | 2 | 15.19 | -4.34 | 68 | 1.7 | |
| 123 | 3 | 15.48 | -4.63 | 68 | 1.7 | |
| 124 | 4 | 15.84 | -4.99 | 68 | 1.7 | |
| 125 | 5 | 16.21 | -5.36 | 68 | 1.7 | |
| 126 | 6 | 16.52 | -5.67 | 68 | 1.7 | |
| 127 | 7 | 16.75 | -5.90 | 68 | 1.7 | |
| 128 | 8 | 17.13 | -6.28 | 68 | 1.7 | |
| 129 | 9 | 17.62 | -6.77 | 68 | 1.7 | |
| 130 | 10 | 17.87 | -7.02 | 68 | 1.7 | |
| 132 | 12 | 18.66 | -7.81 | 68 | 1.7 | |
| 134 | 14 | 19.36 | -8.51 | 68 | 1.7 | |
| 136 | 16 | 20.02 | -9.17 | 68 | 1.7 | |
| 138 | 18 | 20.53 | -9.68 | 68 | 1.7 | |
| 140 | 20 | 20.82 | -9.97 | 68 | 1.7 | |
| 145 | 25 | 21.80 | -10.95 | 68 | 1.7 | |
| 150 | 30 | 22.77 | -11.92 | 68 | 1.7 | |
| 155 | 35 | 23.56 | -12.71 | 68 | 1.7 | |
| 160 | 40 | 24.29 | -13.44 | 68 | 1.7 | |
| 165 | 45 | 24.79 | -13.94 | 68 | 1.7 | |
| 170 | 50 | 25.24 | -14.39 | 68 | 1.7 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 175 | 55 | 25.69 | -14.84 | 68 | 1.7 | |
| 180 | 60 | 26.14 | -15.29 | 68 | 1.7 | |
| 190 | 70 | 26.88 | -16.03 | 68 | 1.7 | |
| 200 | 80 | 27.30 | -16.45 | 68 | 1.7 | |
| 210 | 90 | 27.74 | -16.89 | 68 | 1.7 | |
| 220 | 100 | 28.44 | -17.59 | 68 | 1.7 | |
| 230 | 110 | 28.62 | -17.77 | 68 | 1.7 | |
| 240 | 120 | 28.97 | -18.12 | 68 | 1.7 | Q=102 l/m |
| 241 | 1 | 29.25 | -18.40 | 82 | 2.7 | |
| 242 | 2 | 30.21 | -19.36 | 78 | 2.4 | |
| 243 | 3 | 30.44 | -19.59 | 75 | 2.2 | |
| 244 | 4 | 31.01 | -20.16 | 81 | 2.6 | |
| 245 | 5 | 31.74 | -20.89 | 82 | 2.7 | |
| 246 | 6 | 32.28 | -21.43 | 80 | 2.5 | |
| 247 | 7 | 32.64 | -21.79 | 79 | 2.5 | |
| 248 | 8 | 33.10 | -22.25 | 80 | 2.5 | |
| 249 | 9 | 33.56 | -22.71 | 80 | 2.5 | |
| 250 | 10 | 33.94 | -23.09 | 80 | 2.5 | |
| 252 | 12 | 34.78 | -23.93 | 80 | 2.5 | |
| 254 | 14 | 35.62 | -24.77 | 80 | 2.5 | |
| 256 | 16 | 36.54 | -25.69 | 80 | 2.5 | |
| 258 | 18 | 37.28 | -26.43 | 80 | 2.5 | |
| 260 | 20 | 37.95 | -27.10 | 80 | 2.5 | |
| 265 | 25 | 39.45 | -28.60 | 80 | 2.5 | |
| 270 | 30 | 40.78 | -29.93 | 80 | 2.5 | |
| 275 | 35 | 41.87 | -31.02 | 80 | 2.5 | |
| 280 | 40 | 43.03 | -32.18 | 80 | 2.5 | |
| 285 | 45 | 44.02 | -33.17 | 80 | 2.5 | |
| 290 | 50 | 44.89 | -34.04 | 80 | 2.5 | |
| 295 | 55 | 45.71 | -34.86 | 80 | 2.5 | |
| 300 | 60 | 46.39 | -35.54 | 80 | 2.5 | |
| 310 | 70 | 47.29 | -36.44 | 80 | 2.5 | |
| 320 | 80 | 48.28 | -37.43 | 82 | 2.7 | |
| 330 | 90 | 49.14 | -38.29 | 80 | 2.5 | |
| 340 | 100 | 49.68 | -38.83 | 80 | 2.5 | |
| 350 | 110 | 49.93 | -39.08 | 80 | 2.5 | |
| 360 | 120 | 50.58 | -39.73 | 80 | 2.5 | Q=150 l/m |
| 361 | 1 | 51.18 | -40.33 | 91 | 3.5 | |
| 362 | 2 | 51.87 | -41.02 | 90 | 3.4 | |
| 363 | 3 | 52.52 | -41.67 | 89 | 3.3 | |
| 364 | 4 | 53.11 | -42.26 | 89 | 3.3 | |
| 365 | 5 | 53.86 | -43.01 | 89 | 3.3 | |
| 366 | 6 | 54.21 | -43.36 | 89 | 3.3 | |
| 367 | 7 | 55.24 | -44.39 | 90 | 3.4 | |
| 368 | 8 | 56.08 | -45.23 | 90 | 3.4 | |
| 369 | 9 | 56.79 | -45.94 | 90 | 3.4 | |
| 370 | 10 | 57.58 | -46.73 | 90 | 3.4 | |
| 372 | 12 | 58.87 | -48.02 | 90 | 3.4 | |
| 374 | 14 | 59.99 | -49.14 | 90 | 3.4 | |
| 376 | 16 | 60.98 | -50.13 | 90 | 3.4 | |
| 378 | 18 | 61.84 | -50.99 | 90 | 3.4 | |
| 380 | 20 | 62.77 | -51.92 | 90 | 3.4 | |
| 385 | 25 | 64.84 | -53.99 | 90 | 3.4 | |
| 390 | 30 | 66.26 | -55.41 | 90 | 3.4 | |
| 395 | 35 | 67.31 | -56.46 | 89 | 3.3 | |
| 400 | 40 | 68.88 | -58.03 | 90 | 3.4 | |
| 405 | 45 | 70.00 | -59.15 | 90 | 3.4 | |
| 410 | 50 | 70.89 | -60.04 | 90 | 3.4 | |
| 415 | 55 | 71.59 | -60.74 | 89 | 3.3 | |
| 420 | 60 | 72.68 | -61.83 | 90 | 3.4 | |
| 430 | 70 | 74.23 | -63.38 | 90 | 3.4 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 440 | 80 | 75.56 | -64.71 | 90 | 3.4 | |
| 450 | 90 | 77.55 | -66.70 | 90 | 3.4 | |
| 460 | 100 | 78.55 | -67.70 | 90 | 3.4 | |
| 470 | 110 | 79.00 | -68.15 | 90 | 3.4 | |
| 480 | 120 | 79.25 | -68.40 | 90 | 3.4 | Q=204 l/m |
| 481 | 1 | 80.05 | -69.20 | 98 | 4.2 | |
| 482 | 2 | 80.5 | -69.65 | 98 | 4.2 | |
| 483 | 3 | 81.36 | -70.51 | 98 | 4.2 | |
| 484 | 4 | 82.05 | -71.20 | 98 | 4.2 | |
| 485 | 5 | 82.6 | -71.75 | 98 | 4.2 | |
| 486 | 6 | 83.26 | -72.41 | 98 | 4.2 | |
| 487 | 7 | 83.56 | -72.71 | 98 | 4.2 | |
| 488 | 8 | 83.91 | -73.06 | 98 | 4.2 | |
| 489 | 9 | 84.24 | -73.39 | 98 | 4.2 | |
| 490 | 10 | 84.69 | -73.84 | 98 | 4.2 | |
| 492 | 12 | 85.38 | -74.53 | 98 | 4.2 | |
| 494 | 14 | 86.32 | -75.47 | 98 | 4.2 | |
| 496 | 16 | 87.12 | -76.27 | 98 | 4.2 | |
| 498 | 18 | 88.01 | -77.16 | 98 | 4.2 | |
| 500 | 20 | 88.9 | -78.05 | 98 | 4.2 | Q=252 l/m |

CONTINUOUS PUMPING TEST DATA SHEET1

WELL LOCATION: ANTIPOLO

SITE NO.: COGEO

WELL NO.: 6

WELL DEPTH: 117.35 M

CASING DIAMETER: 20 c m

SWL: 11.5 m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 11.5 | 0 | | |
| 1 | 11.90 | -.40 | 76 | 2.2 |
| 2 | 11.91 | -.41 | 77 | 2.3 |
| 3 | 12.21 | -.71 | 78 | 2.4 |
| 4 | 12.45 | -.95 | 80 | 2.5 |
| 5 | 12.74 | -1.24 | 80 | 2.5 |
| 6 | 13.10 | -1.60 | 80 | 2.5 |
| 7 | 13.53 | -2.03 | 80 | 2.5 |
| 8 | 13.89 | -2.39 | 80 | 2.5 |
| 9 | 14.28 | -2.78 | 80 | 2.5 |
| 10 | 14.69 | -3.19 | 80 | 2.5 |
| 12 | 16.09 | -4.59 | 80 | 2.5 |
| 14 | 16.37 | -4.87 | 80 | 2.5 |
| 16 | 18.10 | -6.60 | 80 | 2.5 |
| 18 | 19.63 | -8.13 | 79 | 2.5 |
| 20 | 20.88 | -9.38 | 80 | 2.5 |
| 25 | 24.18 | -12.68 | 80 | 2.5 |
| 30 | 27.92 | -16.42 | 79 | 2.5 |
| 35 | 31.76 | -20.26 | 80 | 2.5 |
| 40 | 33.44 | -21.94 | 80 | 2.5 |
| 45 | 35.37 | -23.87 | 80 | 2.5 |
| 50 | 37.23 | -25.73 | 80 | 2.5 |
| 55 | 38.93 | -27.43 | 80 | 2.5 |
| 60 | 40.45 | -28.95 | 80 | 2.5 |
| 70 | 43.05 | -31.55 | 80 | 2.5 |
| 80 | 45.27 | -33.77 | 80 | 2.5 |
| 90 | 47.40 | -35.90 | 80 | 2.5 |
| 100 | 48.98 | -37.48 | 80 | 2.5 |
| 110 | 50.72 | -39.22 | 80 | 2.5 |
| 120 | 51.45 | -39.95 | 80 | 2.5 |
| 135 | 51.76 | -40.26 | 80 | 2.5 |
| 150 | 52.37 | -40.87 | 80 | 2.5 |
| 165 | 52.88 | -41.38 | 80 | 2.5 |
| 180 | 53.16 | -41.66 | 80 | 2.5 |
| 210 | 53.61 | -42.11 | 80 | 2.5 |
| 240 | 53.86 | -42.36 | 80 | 2.5 |
| 270 | 54.10 | -42.60 | 80 | 2.5 |
| 300 | 55.07 | -43.57 | 80 | 2.5 |
| 360 | 57.20 | -45.70 | 80 | 2.5 |
| 420 | 57.91 | -46.41 | 80 | 2.5 |
| 480 | 59.82 | -48.32 | 80 | 2.5 |
| 540 | 62.16 | -50.66 | 80 | 2.5 |
| 600 | 63.07 | -51.57 | 80 | 2.5 |
| 660 | 63.30 | -51.80 | 80 | 2.5 |
| 720 | 63.47 | -51.97 | 80 | 2.5 |
| 780 | 63.59 | -52.09 | 80 | 2.5 |
| 840 | 63.67 | -52.17 | 80 | 2.5 |
| 900 | 63.74 | -52.24 | 80 | 2.5 |
| 960 | 64.43 | -52.93 | 80 | 2.5 |
| 1020 | 64.28 | -52.78 | 80 | 2.5 |
| 1080 | 65.41 | -53.91 | 80 | 2.5 |
| 1140 | 65.00 | -53.50 | 80 | 2.5 |

| | | | | |
|---|---|---|---|---|
| 1200 | 65.07 | -53.57 | 80 | 2.5 |
| 1260 | 64.08 | -52.58 | 80 | 2.5 |
| 1320 | 64.85 | -53.35 | 80 | 2.5 |
| 1380 | Electric Power Supply stopped | | | |
| 1440 | | | | |
| 1500 | | | | |
| 1560 | | | | |
| 1620 | | | | |
| 1680 | | | | |
| 1740 | | | | |
| 1800 | | | | |
| 1860 | | | | |
| 1920 | | | | |
| 1980 | | | | |
| 2040 | | | | |
| 2100 | | | | |
| 2160 | | | | |
| 2220 | | | | |
| 2280 | | | | |
| 2340 | | | | |
| 2400 | | | | |
| 2460 | | | | |
| 2520 | | | | |
| 2580 | | | | |
| 2640 | | | | |
| 2700 | | | | |
| 2760 | | | | |
| 2820 | | | | |
| 2880 | | | | |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 64.85 | 53.35 | 1320 | |
| 1 | 62.02 | 50.52 | 1321 | 1321 |
| 2 | 58.54 | 47.04 | 1322 | 661 |
| 3 | 55.32 | 43.82 | 1323 | 441 |
| 4 | 54.19 | 42.69 | 1324 | 331 |
| 5 | 52.33 | 40.83 | 1325 | 265 |
| 6 | 50.77 | 39.27 | 1326 | 221 |
| 7 | 48.57 | 37.07 | 1327 | 189.57143 |
| 8 | 46.53 | 35.03 | 1328 | 166 |
| 9 | 44.41 | 32.91 | 1329 | 147.66667 |
| 10 | 41.97 | 30.47 | 1330 | 133 |
| 12 | 40.09 | 28.59 | 1332 | 111 |
| 14 | 36.54 | 25.04 | 1334 | 95.285714 |
| 16 | 34.17 | 22.67 | 1336 | 83.5 |
| 18 | 31.41 | 19.91 | 1338 | 74.333333 |
| 20 | 28.65 | 17.15 | 1340 | 67 |
| 25 | 22.96 | 11.46 | 1345 | 53.8 |
| 30 | 19.43 | 7.93 | 1350 | 45 |
| 35 | 16.53 | 5.03 | 1355 | 38.714286 |
| 40 | 15.34 | 3.84 | 1360 | 34 |
| 45 | 14.66 | 3.16 | 1365 | 30.333333 |
| 50 | 14.24 | 2.74 | 1370 | 27.4 |
| 55 | 13.76 | 2.26 | 1375 | 25 |
| 60 | 13.42 | 1.92 | 1380 | 23 |
| 70 | 12.95 | 1.45 | 1390 | 19.857143 |
| 80 | 12.69 | 1.19 | 1400 | 17.5 |
| 90 | 12.58 | 1.08 | 1410 | 15.666667 |
| 100 | 12.39 | .89 | 1420 | 14.2 |

| | | | | |
|---|---|---|---|---|
| 110 | 12.30 | .80 | 1430 | 13 |
| 120 | 12.19 | .69 | 1440 | 12 |
| 135 | 12.09 | .59 | 1455 | 10.777778 |
| 150 | 12.00 | .50 | 1470 | 9.8 |
| 165 | 11.94 | .44 | 1485 | 9 |
| 180 | 11.87 | .37 | 1500 | 8.3333333 |
| 210 | 11.74 | .24 | 1530 | 7.2857143 |
| 240 | 11.67 | .17 | 1560 | 6.5 |
| 270 | 11.59 | .09 | 1590 | 5.8888889 |
| 300 | 11.51 | .01 | 1620 | 5.4 |
| 360 | 11.44 | -.06 | 1680 | 4.6666667 |
| 420 | 11.34 | -.16 | 1740 | 4.1428571 |
| 480 | 11.30 | -.20 | 1800 | 3.75 |

STEP DRAWDOWN TEST DATA SHEET2

WELL LOCATION: ANTIPOLO
SITE NO.: COGEO
WELL NO.: 6
WELL DEPTH 117.35 M
CASING DIA 20 c m
SWL: 10.27 m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 10.27 | 0 | 0 | | |
| 1 | 1 | 11.76 | -1.49 | 84 | 2.9 | |
| 2 | 2 | 12.04 | -1.77 | 84 | 2.9 | |
| 3 | 3 | 12.37 | -2.10 | 74 | 2.1 | |
| 4 | 4 | 12.41 | -2.14 | 74 | 2.1 | |
| 5 | 5 | 12.35 | -2.08 | 73 | 2.0 | |
| 6 | 6 | 12.41 | -2.14 | 65 | 1.5 | |
| 7 | 7 | 12.75 | -2.48 | 51 | .8 | |
| 8 | 8 | 12.74 | -2.47 | 51 | .8 | |
| 9 | 9 | 12.80 | -2.53 | 51 | .8 | |
| 10 | 10 | 12.82 | -2.55 | 47 | .7 | |
| 12 | 12 | 12.78 | -2.51 | 47 | .7 | |
| 14 | 14 | 12.78 | -2.51 | 52 | .9 | |
| 16 | 16 | 12.78 | -2.51 | 51 | .8 | |
| 18 | 18 | 12.62 | -2.35 | 51 | .8 | |
| 20 | 20 | 12.70 | -2.43 | 51 | .8 | |
| 25 | 25 | 12.79 | -2.52 | 51 | .8 | |
| 30 | 30 | 12.93 | -2.66 | 51 | .8 | |
| 35 | 35 | 12.99 | -2.72 | 51 | .8 | |
| 40 | 40 | 13.10 | -2.83 | 51 | .8 | |
| 45 | 45 | 13.19 | -2.92 | 51 | .8 | |
| 50 | 50 | 13.27 | -3.00 | 51 | .8 | |
| 55 | 55 | 13.39 | -3.12 | 51 | .8 | |
| 60 | 60 | 13.43 | -3.16 | 51 | .8 | |
| 70 | 70 | 13.57 | -3.30 | 51 | .8 | |
| 80 | 80 | 13.69 | -3.42 | 51 | .8 | |
| 90 | 90 | 13.76 | -3.49 | 51 | .8 | |
| 100 | 100 | 13.90 | -3.63 | 51 | .8 | |
| 110 | 110 | 13.91 | -3.64 | 51 | .8 | |
| 120 | 120 | 13.98 | -3.71 | 51 | .8 | Q=49.2 l/m |
| 121 | 1 | 14.14 | -3.87 | 68 | 1.7 | |
| 122 | 2 | 14.34 | -4.07 | 68 | 1.7 | |
| 123 | 3 | 14.51 | -4.24 | 68 | 1.7 | |
| 124 | 4 | 14.69 | -4.42 | 68 | 1.7 | |
| 125 | 5 | 14.86 | -4.59 | 68 | 1.7 | |
| 126 | 6 | 15.06 | -4.79 | 68 | 1.7 | |
| 127 | 7 | 15.26 | -4.99 | 68 | 1.7 | |
| 128 | 8 | 15.52 | -5.25 | 68 | 1.7 | |
| 129 | 9 | 15.82 | -5.55 | 68 | 1.7 | |
| 130 | 10 | 16.13 | -5.86 | 68 | 1.7 | |
| 132 | 12 | 16.66 | -6.39 | 68 | 1.7 | |
| 134 | 14 | 17.21 | -6.94 | 68 | 1.7 | |
| 136 | 16 | 17.82 | -7.55 | 68 | 1.7 | |
| 138 | 18 | 18.39 | -8.12 | 68 | 1.7 | |
| 140 | 20 | 18.89 | -8.62 | 68 | 1.7 | |
| 145 | 25 | 19.93 | -9.66 | 68 | 1.7 | |
| 150 | 30 | 20.71 | -10.44 | 68 | 1.7 | |
| 155 | 35 | 21.26 | -10.99 | 68 | 1.7 | |
| 160 | 40 | 21.91 | -11.64 | 68 | 1.7 | |
| 165 | 45 | 22.53 | -12.26 | 68 | 1.7 | |
| 170 | 50 | 23.07 | -12.80 | 68 | 1.7 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 175 | 55 | 23.51 | -13.24 | 68 | 1.7 | |
| 180 | 60 | 23.86 | -13.59 | 68 | 1.7 | |
| 190 | 70 | 24.69 | -14.42 | 68 | 1.7 | |
| 200 | 80 | 24.88 | -14.61 | 68 | 1.7 | |
| 210 | 90 | 25.20 | -14.93 | 68 | 1.7 | |
| 220 | 100 | 25.46 | -15.19 | 68 | 1.7 | |
| 230 | 110 | 25.72 | -15.45 | 68 | 1.7 | |
| 240 | 120 | 25.91 | -15.64 | 68 | 1.7 | Q=102 l/m |
| 241 | 1 | 26.67 | -16.40 | 78 | 2.4 | |
| 242 | 2 | 27.07 | -16.80 | 78 | 2.4 | |
| 243 | 3 | 27.56 | -17.29 | 80 | 2.5 | |
| 244 | 4 | 28.18 | -17.91 | 80 | 2.5 | |
| 245 | 5 | 28.89 | -18.62 | 80 | 2.5 | |
| 246 | 6 | 29.49 | -19.22 | 80 | 2.5 | |
| 247 | 7 | 30.08 | -19.81 | 80 | 2.5 | |
| 248 | 8 | 30.58 | -20.31 | 80 | 2.5 | |
| 249 | 9 | 31.11 | -20.84 | 80 | 2.5 | |
| 250 | 10 | 31.59 | -21.32 | 80 | 2.5 | |
| 252 | 12 | 32.44 | -22.17 | 80 | 2.5 | |
| 254 | 14 | 33.21 | -22.94 | 80 | 2.5 | |
| 256 | 16 | 34.02 | -23.75 | 80 | 2.5 | |
| 258 | 18 | 34.78 | -24.51 | 80 | 2.5 | |
| 260 | 20 | 35.45 | -25.18 | 80 | 2.5 | |
| 265 | 25 | 36.99 | -26.72 | 80 | 2.5 | |
| 270 | 30 | 38.21 | -27.94 | 80 | 2.5 | |
| 275 | 35 | 39.46 | -29.19 | 80 | 2.5 | |
| 280 | 40 | 40.32 | -30.05 | 80 | 2.5 | |
| 285 | 45 | 41.19 | -30.92 | 80 | 2.5 | |
| 290 | 50 | 42.09 | -31.82 | 80 | 2.5 | |
| 295 | 55 | 42.60 | -32.33 | 80 | 2.5 | |
| 300 | 60 | 43.18 | -32.91 | 80 | 2.5 | |
| 310 | 70 | 44.22 | -33.95 | 80 | 2.5 | |
| 320 | 80 | 45.02 | -34.75 | 82 | 2.7 | |
| 330 | 90 | 45.57 | -35.30 | 80 | 2.5 | |
| 340 | 100 | 45.96 | -35.69 | 80 | 2.5 | |
| 350 | 110 | 46.25 | -35.98 | 80 | 2.5 | |
| 360 | 120 | 46.45 | -36.18 | 80 | 2.5 | Q=150 l/m |
| 361 | 1 | 47.09 | -36.82 | 90 | 3.4 | |
| 362 | 2 | 47.82 | -37.55 | 90 | 3.4 | |
| 363 | 3 | 48.51 | -38.24 | 90 | 3.4 | |
| 364 | 4 | 49.27 | -39.00 | 90 | 3.4 | |
| 365 | 5 | 49.97 | -39.70 | 90 | 3.4 | |
| 366 | 6 | 50.62 | -40.35 | 90 | 3.4 | |
| 367 | 7 | 51.23 | -40.96 | 90 | 3.4 | |
| 368 | 8 | 51.94 | -41.67 | 90 | 3.4 | |
| 369 | 9 | 52.65 | -42.38 | 90 | 3.4 | |
| 370 | 10 | 53.26 | -42.99 | 90 | 3.4 | |
| 372 | 12 | 54.55 | -44.28 | 90 | 3.4 | |
| 374 | 14 | 55.85 | -45.58 | 90 | 3.4 | |
| 376 | 16 | 56.95 | -46.68 | 90 | 3.4 | |
| 378 | 18 | 58.03 | -47.76 | 90 | 3.4 | |
| 380 | 20 | 58.91 | -48.64 | 90 | 3.4 | |
| 385 | 25 | 60.74 | -50.47 | 90 | 3.4 | |
| 390 | 30 | 62.55 | -52.28 | 90 | 3.4 | |
| 395 | 35 | 63.84 | -53.57 | 90 | 3.4 | |
| 400 | 40 | 65.21 | -54.94 | 90 | 3.4 | |
| 405 | 45 | 67.19 | -56.92 | 90 | 3.4 | |
| 410 | 50 | 68.57 | -58.30 | 90 | 3.4 | |
| 415 | 55 | 69.76 | -59.49 | 90 | 3.4 | |
| 420 | 60 | 70.51 | -60.24 | 90 | 3.4 | |
| 430 | 70 | 71.78 | -61.51 | 90 | 3.4 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 440 | 80 | 72.79 | -62.52 | 90 | 3.4 | |
| 450 | 90 | 73.35 | -63.08 | 90 | 3.4 | |
| 460 | 100 | 73.92 | -63.65 | 90 | 3.4 | |
| 470 | 110 | 74.17 | -63.90 | 90 | 3.4 | |
| 480 | 120 | 74.47 | -64.20 | 90 | 3.4 | Q=204 l/m |
| 481 | 1 | 75.89 | -65.62 | 95 | 3.9 | |
| 482 | 2 | 77.05 | -66.78 | 95 | 3.9 | |
| 483 | 3 | 77.87 | -67.60 | 95 | 3.9 | |
| 484 | 4 | 78.19 | -67.92 | 98 | 4.2 | |
| 485 | 5 | 78.88 | -68.61 | 98 | 4.2 | |
| 486 | 6 | 79.4 | -69.13 | 98 | 4.2 | |
| 487 | 7 | 80.07 | -69.80 | 98 | 4.2 | |
| 488 | 8 | 80.79 | -70.52 | 98 | 4.2 | |
| 489 | 9 | 81.52 | -71.25 | 98 | 4.2 | |
| 490 | 10 | 82.23 | -71.96 | 98 | 4.2 | |
| 492 | 12 | 83.09 | -72.82 | 98 | 4.2 | |
| 494 | 14 | 83.99 | -73.72 | 99 | 4.3 | |
| 496 | 16 | 85.09 | -74.82 | 99 | 4.3 | |
| 498 | 18 | 86.66 | -76.39 | 96 | 4.0 | |
| 500 | 20 | 88.13 | -77.86 | 96 | 4.0 | Q=252 l/m |

CONTINUOUS PUMPING TEST DATA SHEET2

WELL LOCATION: ANTIPOLO

SITE NO.: COGEO

WELL NO.: 6

WELL DEPTH: 117.35 M

CASING DIAMETER: 20 c m

SWL: 10.49 m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 10.49 | 0 | | |
| 1 | 11.15 | -.66 | 74 | 2.1 |
| 2 | 11.57 | -1.08 | 74 | 2.1 |
| 3 | 11.75 | -1.26 | 74 | 2.1 |
| 4 | 11.89 | -1.40 | 78 | 2.4 |
| 5 | 12.35 | -1.86 | 79 | 2.5 |
| 6 | 12.17 | -1.68 | 78 | 2.4 |
| 7 | 12.36 | -1.87 | 78 | 2.4 |
| 8 | 12.56 | -2.07 | 80 | 2.5 |
| 9 | 12.85 | -2.36 | 80 | 2.5 |
| 10 | 13.17 | -2.68 | 80 | 2.5 |
| 12 | 13.85 | -3.36 | 80 | 2.5 |
| 14 | 14.49 | -4.00 | 80 | 2.5 |
| 16 | 15.02 | -4.53 | 80 | 2.5 |
| 18 | 15.94 | -5.45 | 80 | 2.5 |
| 20 | 16.98 | -6.49 | 80 | 2.5 |
| 25 | 20.04 | -9.55 | 80 | 2.5 |
| 30 | 22.16 | -11.67 | 80 | 2.5 |
| 35 | 24.82 | -14.33 | 80 | 2.5 |
| 40 | 27.14 | -16.65 | 80 | 2.5 |
| 45 | 29.68 | -19.19 | 80 | 2.5 |
| 50 | 31.68 | -21.19 | 80 | 2.5 |
| 55 | 33.37 | -22.88 | 80 | 2.5 |
| 60 | 34.90 | -24.41 | 80 | 2.5 |
| 70 | 37.08 | -26.59 | 80 | 2.5 |
| 80 | 38.94 | -28.45 | 80 | 2.5 |
| 90 | 40.70 | -30.21 | 80 | 2.5 |
| 100 | 41.50 | -31.01 | 80 | 2.5 |
| 110 | 42.78 | -32.29 | 80 | 2.5 |
| 120 | 45.11 | -34.62 | 80 | 2.5 |
| 135 | 47.58 | -37.09 | 80 | 2.5 |
| 150 | 49.88 | -39.39 | 80 | 2.5 |
| 165 | 51.24 | -40.75 | 80 | 2.5 |
| 180 | 52.09 | -41.60 | 80 | 2.5 |
| 210 | 52.13 | -41.64 | 80 | 2.5 |
| 240 | 53.67 | -43.18 | 80 | 2.5 |
| 270 | 54.14 | -43.65 | 80 | 2.5 |
| 300 | 54.52 | -44.03 | 80 | 2.5 |
| 360 | 54.63 | -44.14 | 80 | 2.5 |
| 420 | 53.39 | -42.90 | 80 | 2.5 |
| 480 | 44.82 | -34.33 | 80 | 2.5 |
| 540 | 43.90 | -33.41 | 80 | 2.5 |
| 600 | 43.93 | -33.44 | 80 | 2.5 |
| 660 | 44.55 | -34.06 | 80 | 2.5 |
| 720 | 48.17 | -37.68 | 80 | 2.5 |
| 780 | 51.80 | -41.31 | 80 | 2.5 |
| 840 | 49.42 | -38.93 | 80 | 2.5 |
| 900 | 48.31 | -37.82 | 80 | 2.5 |
| 960 | 48.13 | -37.64 | 80 | 2.5 |
| 1020 | 48.02 | -37.53 | 80 | 2.5 |
| 1080 | 48.01 | -37.52 | 80 | 2.5 |
| 1140 | 47.98 | -37.49 | 80 | 2.5 |

| | | | | |
|---|---|---|---|---|
| 1200 | 47.89 | -37.40 | 80 | 2.5 |
| 1260 | 47.76 | -37.27 | 80 | 2.5 |
| 1320 | 47.66 | -37.17 | 80 | 2.5 |
| 1380 | 47.64 | -37.15 | 80 | 2.5 |
| 1440 | 47.50 | -37.01 | 80 | 2.5 |
| 1500 | 47.35 | -36.86 | 80 | 2.5 |
| 1560 | 50.61 | -40.12 | 80 | 2.5 |
| 1620 | 51.23 | -40.74 | 80 | 2.5 |
| 1680 | 51.38 | -40.89 | 80 | 2.5 |
| 1740 | 47.80 | -37.31 | 80 | 2.5 |
| 1800 | 48.96 | -38.47 | 80 | 2.5 |
| 1860 | 48.77 | -38.28 | 80 | 2.5 |
| 1920 | 49.48 | -38.99 | 80 | 2.5 |
| 1980 | 49.86 | -39.37 | 80 | 2.5 |
| 2040 | 50.38 | -39.89 | 80 | 2.5 |
| 2100 | 50.98 | -40.49 | 80 | 2.5 |
| 2160 | 51.40 | -40.91 | 80 | 2.5 |
| 2220 | 52.20 | -41.71 | 80 | 2.5 |
| 2280 | 52.40 | -41.91 | 80 | 2.5 |
| 2340 | 52.11 | -41.62 | 80 | 2.5 |
| 2400 | 52.35 | -41.86 | 80 | 2.5 |
| 2460 | 52.28 | -21.40 | 80 | 2.5 |
| 2520 | 52.17 | -20.80 | 80 | 2.5 |
| 2580 | 52.00 | -41.51 | 80 | 2.5 |
| 2640 | 51.91 | -41.42 | 80 | 2.5 |
| 2700 | 51.81 | -41.32 | 80 | 2.5 |
| 2760 | 51.71 | -41.22 | 80 | 2.5 |
| 2820 | 51.01 | -40.52 | 80 | 2.5 |
| 2880 | 48.59 | -38.10 | 80 | 2.5 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 48.59 | 38.10 | 2880 | |
| 1 | 44.70 | 34.21 | 2881 | 2881 |
| 2 | 42.91 | 32.42 | 2882 | 1441 |
| 3 | 41.29 | 30.80 | 2883 | 961 |
| 4 | 39.73 | 29.24 | 2884 | 721 |
| 5 | 38.05 | 27.56 | 2885 | 577 |
| 6 | 36.64 | 26.15 | 2886 | 481 |
| 7 | 35.05 | 24.56 | 2887 | 412.42857 |
| 8 | 33.58 | 23.09 | 2888 | 361 |
| 9 | 32.26 | 21.77 | 2889 | 321 |
| 10 | 30.61 | 20.12 | 2890 | 289 |
| 12 | 27.61 | 17.12 | 2892 | 241 |
| 14 | 25.10 | 14.61 | 2894 | 206.71429 |
| 16 | 22.90 | 12.41 | 2896 | 181 |
| 18 | 21.06 | 10.57 | 2898 | 161 |
| 20 | 19.80 | 9.31 | 2900 | 145 |
| 25 | 16.69 | 6.20 | 2905 | 116.2 |
| 30 | 15.09 | 4.60 | 2910 | 97 |
| 35 | 14.35 | 3.86 | 2915 | 83.285714 |
| 40 | 13.75 | 3.26 | 2920 | 73 |
| 45 | 13.26 | 2.77 | 2925 | 65 |
| 50 | 12.89 | 2.40 | 2930 | 58.6 |
| 55 | 12.64 | 2.15 | 2935 | 53.363636 |
| 60 | 12.44 | 1.95 | 2940 | 49 |
| 70 | 12.18 | 1.69 | 2950 | 42.142857 |
| 80 | 12.00 | 1.51 | 2960 | 37 |
| 90 | 11.84 | 1.35 | 2970 | 33 |
| 100 | 11.74 | 1.25 | 2980 | 29.8 |

| | | | | |
|---|---|---|---|---|
| 110 | 11.58 | 1.09 | 2990 | 27.181818 |
| 120 | 11.44 | .95 | 3000 | 25 |
| 135 | 11.30 | .81 | 3015 | 22.333333 |
| 150 | 11.23 | .74 | 3030 | 20.2 |
| 165 | 11.16 | .67 | 3045 | 18.454545 |
| 180 | 11.11 | .62 | 3060 | 17 |
| 210 | 11.03 | .54 | 3090 | 14.714286 |
| 240 | 10.95 | .46 | 3120 | 13 |
| 270 | 10.90 | .41 | 3150 | 11.666667 |
| 300 | 10.86 | .37 | 3180 | 10.6 |
| 360 | 10.79 | .30 | 3240 | 9 |
| 420 | 10.76 | .27 | 3300 | 7.8571429 |
| 480 | 10.74 | .25 | 3360 | 7 |

STEP DRAWDOWN TEST DATA SHEET 1

WELL LOCATION: LAS PINAS

SITE NO.: NAGA ROAD

WELL NO.: 2

WELL DEPTH 243.84 M

CASING DIA 25 c m

SWL: 55.4 m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 55.4 | 0 | 0 | | |
| 1 | 1 | 56.87 | -1.47 | 52 | .9 | |
| 2 | 2 | 57.34 | -1.94 | 69 | 1.8 | |
| 3 | 3 | 58.35 | -2.95 | 68 | 1.7 | |
| 4 | 4 | 59.34 | -3.94 | 68 | 1.7 | |
| 5 | 5 | 59.74 | -4.34 | 68 | 1.7 | |
| 6 | 6 | 59.86 | -4.46 | 68 | 1.7 | |
| 7 | 7 | 60.03 | -4.63 | 71 | 1.9 | |
| 8 | 8 | 60.17 | -4.77 | 68 | 1.7 | |
| 9 | 9 | 60.25 | -4.85 | 68 | 1.7 | |
| 10 | 10 | 60.33 | -4.93 | 68 | 1.7 | |
| 12 | 12 | 60.33 | -4.93 | 68 | 1.7 | |
| 14 | 14 | 60.33 | -4.93 | 68 | 1.7 | |
| 16 | 16 | 60.33 | -4.93 | 68 | 1.7 | |
| 18 | 18 | 60.32 | -4.92 | 68 | 1.7 | |
| 20 | 20 | 60.33 | -4.93 | 68 | 1.7 | |
| 25 | 25 | 60.33 | -4.93 | 68 | 1.7 | |
| 30 | 30 | 60.34 | -4.94 | 68 | 1.7 | |
| 35 | 35 | 60.33 | -4.93 | 68 | 1.7 | |
| 40 | 40 | 60.34 | -4.94 | 68 | 1.7 | |
| 45 | 45 | 60.34 | -4.94 | 68 | 1.7 | |
| 50 | 50 | 60.33 | -4.93 | 68 | 1.7 | |
| 55 | 55 | 60.33 | -4.93 | 68 | 1.7 | |
| 60 | 60 | 60.33 | -4.93 | 68 | 1.7 | |
| 70 | 70 | 60.33 | -4.93 | 68 | 1.7 | |
| 80 | 80 | 60.34 | -4.94 | 68 | 1.7 | |
| 90 | 90 | 60.34 | -4.94 | 68 | 1.7 | |
| 100 | 100 | 60.32 | -4.92 | 68 | 1.7 | |
| 110 | 110 | 60.31 | -4.91 | 68 | 1.7 | |
| 120 | 120 | 60.30 | -4.90 | 68 | 1.7 | Q=102 l/m |
| 121 | 1 | 61.80 | -6.40 | 86 | 3.0 | |
| 122 | 2 | 62.79 | -7.39 | 89 | 3.3 | |
| 123 | 3 | 63.20 | -7.80 | 90 | 3.4 | |
| 124 | 4 | 63.79 | -8.39 | 90 | 3.4 | |
| 125 | 5 | 64.10 | -8.70 | 90 | 3.4 | |
| 126 | 6 | 64.20 | -8.80 | 90 | 3.4 | |
| 127 | 7 | 64.30 | -8.90 | 90 | 3.4 | |
| 128 | 8 | 64.35 | -8.95 | 90 | 3.4 | |
| 129 | 9 | 64.35 | -8.95 | 90 | 3.4 | |
| 130 | 10 | 64.40 | -9.00 | 90 | 3.4 | |
| 132 | 12 | 64.50 | -9.10 | 90 | 3.4 | |
| 134 | 14 | 64.50 | -9.10 | 90 | 3.4 | |
| 136 | 16 | 64.55 | -9.15 | 90 | 3.4 | |
| 138 | 18 | 64.61 | -9.21 | 90 | 3.4 | |
| 140 | 20 | 64.61 | -9.21 | 90 | 3.4 | |
| 145 | 25 | 64.81 | -9.41 | 90 | 3.4 | |
| 150 | 30 | 64.91 | -9.51 | 90 | 3.4 | |
| 155 | 35 | 65.01 | -9.61 | 90 | 3.4 | |
| 160 | 40 | 65.12 | -9.72 | 90 | 3.4 | |
| 165 | 45 | 65.22 | -9.82 | 90 | 3.4 | |
| 170 | 50 | 65.22 | -9.82 | 90 | 3.4 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 175 | 55 | 65.32 | -9.92 | 90 | 3.4 | |
| 180 | 60 | 65.32 | -9.92 | 90 | 3.4 | |
| 190 | 70 | 65.32 | -9.92 | 90 | 3.4 | |
| 200 | 80 | 65.32 | -9.92 | 90 | 3.4 | |
| 210 | 90 | 65.32 | -9.92 | 90 | 3.4 | |
| 220 | 100 | 65.32 | -9.92 | 90 | 3.4 | |
| 230 | 110 | 65.32 | -9.92 | 90 | 3.4 | |
| 240 | 120 | 65.33 | -9.93 | 90 | 3.4 | Q=204 l/m |
| 241 | 1 | 66.85 | -11.45 | 105 | 5.0 | |
| 242 | 2 | 66.96 | -11.56 | 105 | 5.0 | |
| 243 | 3 | 67.19 | -11.79 | 105 | 5.0 | |
| 244 | 4 | 67.23 | -11.83 | 105 | 5.0 | |
| 245 | 5 | 67.30 | -11.90 | 105 | 5.0 | |
| 246 | 6 | 67.44 | -12.04 | 105 | 5.0 | |
| 247 | 7 | 67.46 | -12.06 | 105 | 5.0 | |
| 248 | 8 | 67.63 | -12.23 | 105 | 5.0 | |
| 249 | 9 | 67.66 | -12.26 | 105 | 5.0 | |
| 250 | 10 | 67.74 | -12.34 | 105 | 5.0 | |
| 252 | 12 | 67.86 | -12.46 | 105 | 5.0 | |
| 254 | 14 | 67.90 | -12.50 | 105 | 5.0 | |
| 256 | 16 | 67.96 | -12.56 | 105 | 5.0 | |
| 258 | 18 | 67.99 | -12.59 | 105 | 5.0 | |
| 260 | 20 | 68.07 | -12.67 | 105 | 5.0 | |
| 265 | 25 | 68.18 | -12.78 | 105 | 5.0 | |
| 270 | 30 | 68.34 | -12.94 | 105 | 5.0 | |
| 275 | 35 | 68.56 | -13.16 | 105 | 5.0 | |
| 280 | 40 | 68.67 | -13.27 | 105 | 5.0 | |
| 285 | 45 | 68.90 | -13.50 | 105 | 5.0 | |
| 290 | 50 | 68.93 | -13.53 | 105 | 5.0 | |
| 295 | 55 | 69.21 | -13.81 | 105 | 5.0 | |
| 300 | 60 | 69.27 | -13.87 | 105 | 5.0 | |
| 310 | 70 | 69.73 | -14.33 | 105 | 5.0 | |
| 320 | 80 | 69.84 | -14.44 | 105 | 5.0 | |
| 330 | 90 | 69.99 | -14.59 | 105 | 5.0 | |
| 340 | 100 | 69.65 | -14.25 | 105 | 5.0 | |
| 350 | 110 | 70.18 | -14.78 | 105 | 5.0 | |
| 360 | 120 | 70.37 | -14.97 | 105 | 5.0 | Q=300 l/m |
| 361 | 1 | 71.00 | -15.60 | 114 | 6.1 | |
| 362 | 2 | 71.68 | -16.28 | 115 | 6.3 | |
| 363 | 3 | 72.06 | -16.66 | 116 | 6.4 | |
| 364 | 4 | 72.29 | -16.89 | 116 | 6.4 | |
| 365 | 5 | 72.44 | -17.04 | 116 | 6.4 | |
| 366 | 6 | 72.45 | -17.05 | 115 | 6.3 | |
| 367 | 7 | 72.46 | -17.06 | 115 | 6.3 | |
| 368 | 8 | 72.54 | -17.14 | 115 | 6.3 | |
| 369 | 9 | 72.54 | -17.14 | 116 | 6.4 | |
| 370 | 10 | 72.57 | -17.17 | 116 | 6.4 | |
| 372 | 12 | 72.60 | -17.20 | 116 | 6.4 | |
| 374 | 14 | 72.60 | -17.20 | 116 | 6.4 | |
| 376 | 16 | 72.60 | -17.20 | 116 | 6.4 | |
| 378 | 18 | 72.51 | -17.11 | 116 | 6.4 | |
| 380 | 20 | 72.42 | -17.02 | 116 | 6.4 | |
| 385 | 25 | 72.37 | -16.97 | 116 | 6.4 | |
| 390 | 30 | 72.81 | -17.41 | 115 | 6.3 | |
| 395 | 35 | 73.00 | -17.60 | 115 | 6.3 | |
| 400 | 40 | 72.98 | -17.58 | 115 | 6.3 | |
| 405 | 45 | 72.95 | -17.55 | 115 | 6.3 | |
| 410 | 50 | 72.81 | -17.41 | 115 | 6.3 | |
| 415 | 55 | 72.85 | -17.45 | 115 | 6.3 | |
| 420 | 60 | 72.98 | -17.58 | 115 | 6.3 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 430 | 70 | 73.05 | -17.65 | 115 | 6.3 | |
| 440 | 80 | 72.97 | -17.57 | 115 | 6.3 | |
| 450 | 90 | 72.97 | -17.57 | 114 | 6.1 | |
| 460 | 100 | 73.17 | -17.77 | 115 | 6.3 | |
| 470 | 110 | 73.21 | -17.81 | 115 | 6.3 | |
| 480 | 120 | 73.10 | -17.70 | 115 | 6.3 | Q=378 l/m |

CONTINUOUS PUMPING TEST DATA SHEET1

WELL LOCATION: LAS PINAS
SITE NO.: NAGA ROAD
WELL NO.: 2
WELL DEPTH: 243.84 M
CASING DIAMETER: 25 c m
SWL: 55.84 m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 55.84 | 0 | | |
| 1 | 57.96 | -2.12 | 113 | 6.0 |
| 2 | 61.80 | -5.96 | 111 | 5.7 |
| 3 | 65.07 | -9.23 | 112 | 5.9 |
| 4 | 67.29 | -11.45 | 112 | 5.9 |
| 5 | 67.35 | -11.51 | 112 | 5.9 |
| 6 | 67.70 | -11.86 | 112 | 5.9 |
| 7 | 67.72 | -11.88 | 112 | 5.9 |
| 8 | 67.74 | -11.90 | 112 | 5.9 |
| 9 | 67.66 | -11.82 | 112 | 5.9 |
| 10 | 67.69 | -11.85 | 112 | 5.9 |
| 12 | 66.75 | -10.91 | 112 | 5.9 |
| 14 | 66.98 | -11.14 | 112 | 5.9 |
| 16 | 67.81 | -11.97 | 112 | 5.9 |
| 18 | 69.11 | -13.27 | 112 | 5.9 |
| 20 | 68.93 | -13.09 | 112 | 5.9 |
| 25 | 70.51 | -14.67 | 112 | 5.9 |
| 30 | 69.09 | -13.25 | 112 | 5.9 |
| 35 | 70.02 | -14.18 | 112 | 5.9 |
| 40 | 69.37 | -13.53 | 112 | 5.9 |
| 45 | 69.66 | -13.82 | 112 | 5.9 |
| 50 | 69.93 | -14.09 | 112 | 5.9 |
| 55 | 69.85 | -14.01 | 112 | 5.9 |
| 60 | 69.93 | -14.09 | 112 | 5.9 |
| 70 | 70.23 | -14.39 | 112 | 5.9 |
| 80 | 70.52 | -14.68 | 112 | 5.9 |
| 90 | 70.71 | -14.87 | 112 | 5.9 |
| 100 | 70.90 | -15.06 | 112 | 5.9 |
| 110 | 71.00 | -15.16 | 112 | 5.9 |
| 120 | 71.15 | -15.31 | 112 | 5.9 |
| 135 | 71.31 | -15.47 | 112 | 5.9 |
| 150 | 71.50 | -15.66 | 112 | 5.9 |
| 165 | 71.46 | -15.62 | 112 | 5.9 |
| 180 | 71.69 | -15.85 | 112 | 5.9 |
| 210 | 71.81 | -15.97 | 112 | 5.9 |
| 240 | 71.82 | -15.98 | 112 | 5.9 |
| 270 | 72.02 | -16.18 | 112 | 5.9 |
| 300 | 72.22 | -16.38 | 112 | 5.9 |
| 360 | 72.71 | -16.87 | 112 | 5.9 |
| 420 | 72.75 | -16.91 | 112 | 5.9 |
| 480 | 72.95 | -17.11 | 112 | 5.9 |
| 540 | 73.00 | -17.16 | 112 | 5.9 |
| 600 | 73.05 | -17.21 | 112 | 5.9 |
| 660 | 73.10 | -17.26 | 112 | 5.9 |
| 720 | 73.38 | -17.54 | 112 | 5.9 |
| 780 | 73.45 | -17.61 | 112 | 5.9 |
| 840 | 73.86 | -18.02 | 112 | 5.9 |
| 900 | 73.44 | -17.60 | 112 | 5.9 |
| 960 | 73.49 | -17.65 | 112 | 5.9 |
| 1020 | 73.60 | -17.76 | 112 | 5.9 |
| 1080 | 73.74 | -17.90 | 112 | 5.9 |

| | | | | |
|---|---|---|---|---|
| 1140 | 73.35 | -17.51 | 112 | 5.9 |
| 1200 | 73.06 | -17.22 | 112 | 5.9 |
| 1260 | 72.98 | -17.14 | 112 | 5.9 |
| 1320 | 72.87 | -17.03 | 112 | 5.9 |
| 1380 | 73.11 | -17.27 | 112 | 5.9 |
| 1440 | 72.94 | -17.10 | 112 | 5.9 |
| 1500 | 73.45 | -17.61 | 112 | 5.9 |
| 1560 | 73.64 | -17.80 | 112 | 5.9 |
| 1620 | 73.75 | -17.91 | 112 | 5.9 |
| 1680 | 73.98 | -18.14 | 112 | 5.9 |
| 1740 | 74.06 | -18.22 | 112 | 5.9 |
| 1800 | 74.12 | -18.28 | 112 | 5.9 |
| 1860 | 74.16 | -18.32 | 112 | 5.9 |
| 1920 | 74.07 | -18.23 | 112 | 5.9 |
| 1980 | 74.01 | -18.17 | 112 | 5.9 |
| 2040 | 74.17 | -18.33 | 112 | 5.9 |
| 2100 | 74.23 | -18.39 | 112 | 5.9 |
| 2160 | 74.39 | -18.55 | 112 | 5.9 |
| 2220 | 74.30 | -18.46 | 112 | 5.9 |
| 2280 | 74.29 | -18.45 | 112 | 5.9 |
| 2340 | 74.41 | -18.57 | 112 | 5.9 |
| 2400 | 74.28 | -18.44 | 112 | 5.9 |
| 2460 | 74.46 | -26.00 | 112 | 5.9 |
| 2520 | 74.60 | -26.00 | 112 | 5.9 |
| 2580 | 74.44 | -18.60 | 112 | 5.9 |
| 2640 | 74.26 | -18.42 | 112 | 5.9 |
| 2700 | 74.30 | -18.46 | 112 | 5.9 |
| 2760 | 74.16 | -18.32 | 112 | 5.9 |
| 2820 | 74.15 | -18.31 | 112 | 5.9 |
| 2880 | 73.39 | -17.55 | 112 | 5.9 |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 73.39 | 17.55 | 2880 | |
| 1 | 63.79 | 7.95 | 2881 | 2881 |
| 2 | 63.54 | 7.70 | 2882 | 1441 |
| 3 | 63.89 | 8.05 | 2883 | 961 |
| 4 | 62.09 | 6.25 | 2884 | 721 |
| 5 | 62.18 | 6.34 | 2885 | 577 |
| 6 | 62.16 | 6.32 | 2886 | 481 |
| 7 | 62.11 | 6.27 | 2887 | 412.42857 |
| 8 | 62.03 | 6.19 | 2888 | 361 |
| 9 | 61.95 | 6.11 | 2889 | 321 |
| 10 | 61.80 | 5.96 | 2890 | 289 |
| 12 | 61.69 | 5.85 | 2892 | 241 |
| 14 | 61.54 | 5.70 | 2894 | 206.71429 |
| 16 | 61.40 | 5.56 | 2896 | 181 |
| 18 | 61.26 | 5.42 | 2898 | 161 |
| 20 | 61.14 | 5.30 | 2900 | 145 |
| 25 | 60.89 | 5.05 | 2905 | 116.2 |
| 30 | 60.67 | 4.83 | 2910 | 97 |
| 35 | 60.47 | 4.63 | 2915 | 83.285714 |
| 40 | 60.31 | 4.47 | 2920 | 73 |
| 45 | 60.16 | 4.32 | 2925 | 65 |
| 50 | 60.03 | 4.19 | 2930 | 58.6 |
| 55 | 59.91 | 4.07 | 2935 | 53.363636 |
| 60 | 59.81 | 3.97 | 2940 | 49 |
| 70 | 59.61 | 3.77 | 2950 | 42.142857 |
| 80 | 59.41 | 3.57 | 2960 | 37 |

| | | | | |
|---|---|---|---|---|
| 90 | 59.24 | 3.40 | 2970 | 33 |
| 100 | 59.10 | 3.26 | 2980 | 29.8 |
| 110 | 58.99 | 3.15 | 2990 | 27.181818 |
| 120 | 58.89 | 3.05 | 3000 | 25 |
| 135 | 58.71 | 2.87 | 3015 | 22.333333 |
| 150 | 58.57 | 2.73 | 3030 | 20.2 |
| 165 | 58.40 | 2.56 | 3045 | 18.454545 |
| 180 | 58.31 | 2.47 | 3060 | 17 |
| 210 | 58.14 | 2.30 | 3090 | 14.714286 |
| 240 | 57.97 | 2.13 | 3120 | 13 |
| 270 | 57.80 | 1.96 | 3150 | 11.666667 |
| 300 | 57.67 | 1.83 | 3180 | 10.6 |
| 360 | 57.43 | 1.59 | 3240 | 9 |
| 420 | 57.25 | 1.41 | 3300 | 7.8571429 |
| 480 | 57.09 | 1.25 | 3360 | 7 |

STEP DRAWDOWN TEST DATA SHEET 2

WELL LOCATION: LAS PINAS

SITE NO.: NAGA ROAD

WELL NO.: 2

WELL DEPTH 243.84 M

CASING DIA 25 c m

SWL: 55.19 m

| TIME (min) | TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) | DATA NAME |
|---|---|---|---|---|---|---|
| 0 | 0 | 55.19 | 0 | 0 | | |
| 1 | 1 | 57.94 | -2.75 | 65 | 1.5 | |
| 2 | 2 | 60.53 | -5.34 | 71 | 1.9 | |
| 3 | 3 | 59.73 | -4.54 | 68 | 1.7 | |
| 4 | 4 | 59.23 | -4.04 | 70 | 1.8 | |
| 5 | 5 | 59.13 | -3.94 | 67 | 1.6 | |
| 6 | 6 | 58.95 | -3.76 | 70 | 1.8 | |
| 7 | 7 | 58.90 | -3.71 | 69 | 1.8 | |
| 8 | 8 | 58.90 | -3.71 | 68 | 1.7 | |
| 9 | 9 | 58.88 | -3.69 | 68 | 1.7 | |
| 10 | 10 | 58.94 | -3.75 | 68 | 1.7 | |
| 12 | 12 | 58.94 | -3.75 | 68 | 1.7 | |
| 14 | 14 | 58.91 | -3.72 | 68 | 1.7 | |
| 16 | 16 | 58.94 | -3.75 | 68 | 1.7 | |
| 18 | 18 | 58.92 | -3.73 | 68 | 1.7 | |
| 20 | 20 | 58.93 | -3.74 | 67 | 1.6 | |
| 25 | 25 | 59.16 | -3.97 | 68 | 1.7 | |
| 30 | 30 | 59.17 | -3.98 | 69 | 1.8 | |
| 35 | 35 | 59.20 | -4.01 | 68 | 1.7 | |
| 40 | 40 | 59.30 | -4.11 | 68 | 1.7 | |
| 45 | 45 | 59.34 | -4.15 | 68 | 1.7 | |
| 50 | 50 | 59.37 | -4.18 | 68 | 1.7 | |
| 55 | 55 | 59.39 | -4.20 | 68 | 1.7 | |
| 60 | 60 | 59.43 | -4.24 | 68 | 1.7 | |
| 70 | 70 | 59.47 | -4.28 | 68 | 1.7 | |
| 80 | 80 | 59.56 | -4.37 | 68 | 1.7 | |
| 90 | 90 | 59.60 | -4.41 | 68 | 1.7 | |
| 100 | 100 | 59.63 | -4.44 | 68 | 1.7 | |
| 110 | 110 | 59.67 | -4.48 | 68 | 1.7 | |
| 120 | 120 | 59.69 | -4.50 | 68 | 1.7 | Q=102 l/m |
| 121 | 1 | 60.95 | -5.76 | 88 | 3.2 | |
| 122 | 2 | 61.75 | -6.56 | 90 | 3.4 | |
| 123 | 3 | 62.18 | -6.99 | 90 | 3.4 | |
| 124 | 4 | 62.51 | -7.32 | 90 | 3.4 | |
| 125 | 5 | 62.65 | -7.46 | 89 | 3.3 | |
| 126 | 6 | 62.80 | -7.61 | 90 | 3.4 | |
| 127 | 7 | 62.95 | -7.76 | 90 | 3.4 | |
| 128 | 8 | 63.02 | -7.83 | 90 | 3.4 | |
| 129 | 9 | 63.06 | -7.87 | 90 | 3.4 | |
| 130 | 10 | 63.13 | -7.94 | 90 | 3.4 | |
| 132 | 12 | 63.15 | -7.96 | 90 | 3.4 | |
| 134 | 14 | 63.24 | -8.05 | 90 | 3.4 | |
| 136 | 16 | 63.30 | -8.11 | 90 | 3.4 | |
| 138 | 18 | 63.36 | -8.17 | 90 | 3.4 | |
| 140 | 20 | 63.36 | -8.17 | 89 | 3.3 | |
| 145 | 25 | 63.58 | -8.39 | 90 | 3.4 | |
| 150 | 30 | 63.71 | -8.52 | 90 | 3.4 | |
| 155 | 35 | 63.73 | -8.54 | 90 | 3.4 | |
| 160 | 40 | 63.75 | -8.56 | 90 | 3.4 | |
| 165 | 45 | 63.74 | -8.55 | 89 | 3.3 | |
| 170 | 50 | 63.81 | -8.62 | 90 | 3.4 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 175 | 55 | 63.92 | -8.73 | 90 | 3.4 | |
| 180 | 60 | 64.00 | -8.81 | 90 | 3.4 | |
| 190 | 70 | 64.06 | -8.87 | 90 | 3.4 | |
| 200 | 80 | 64.11 | -8.92 | 90 | 3.4 | |
| 210 | 90 | 64.09 | -8.90 | 90 | 3.4 | |
| 220 | 100 | 64.15 | -8.96 | 90 | 3.4 | |
| 230 | 110 | 64.22 | -9.03 | 90 | 3.4 | |
| 240 | 120 | 64.34 | -9.15 | 90 | 3.4 | Q=204 l/m |
| 241 | 1 | 65.73 | -10.54 | 106 | 5.1 | |
| 242 | 2 | 66.76 | -11.57 | 107 | 5.2 | |
| 243 | 3 | 66.78 | -11.59 | 104 | 4.9 | |
| 244 | 4 | 66.93 | -11.74 | 104 | 4.9 | |
| 245 | 5 | 67.08 | -11.89 | 105 | 5.0 | |
| 246 | 6 | 67.17 | -11.98 | 105 | 5.0 | |
| 247 | 7 | 67.18 | -11.99 | 105 | 5.0 | |
| 248 | 8 | 67.33 | -12.14 | 105 | 5.0 | |
| 249 | 9 | 67.40 | -12.21 | 105 | 5.0 | |
| 250 | 10 | 67.44 | -12.25 | 105 | 5.0 | |
| 252 | 12 | 67.50 | -12.31 | 105 | 5.0 | |
| 254 | 14 | 67.54 | -12.35 | 105 | 5.0 | |
| 256 | 16 | 67.67 | -12.48 | 105 | 5.0 | |
| 258 | 18 | 67.48 | -12.29 | 105 | 5.0 | |
| 260 | 20 | 67.11 | -11.92 | 105 | 5.0 | |
| 265 | 25 | 67.73 | -12.54 | 105 | 5.0 | |
| 270 | 30 | 67.83 | -12.64 | 105 | 5.0 | |
| 275 | 35 | 67.89 | -12.70 | 105 | 5.0 | |
| 280 | 40 | 67.91 | -12.72 | 105 | 5.0 | |
| 285 | 45 | 67.97 | -12.78 | 105 | 5.0 | |
| 290 | 50 | 68.20 | -13.01 | 105 | 5.0 | |
| 295 | 55 | 68.26 | -13.07 | 105 | 5.0 | |
| 300 | 60 | 68.30 | -13.11 | 105 | 5.0 | |
| 310 | 70 | 68.38 | -13.19 | 105 | 5.0 | |
| 320 | 80 | 68.45 | -13.26 | 105 | 5.0 | |
| 330 | 90 | 68.62 | -13.43 | 105 | 5.0 | |
| 340 | 100 | 69.11 | -13.92 | 105 | 5.0 | |
| 350 | 110 | 69.35 | -14.16 | 105 | 5.0 | |
| 360 | 120 | 69.32 | -14.13 | 105 | 5.0 | Q=300 l/m |
| 361 | 1 | 69.52 | -14.33 | 113 | 6.0 | |
| 362 | 2 | 70.52 | -15.33 | 116 | 6.4 | |
| 363 | 3 | 71.05 | -15.86 | 115 | 6.3 | |
| 364 | 4 | 72.65 | -17.46 | 116 | 6.4 | |
| 365 | 5 | 72.71 | -17.52 | 116 | 6.4 | |
| 366 | 6 | 72.76 | -17.57 | 116 | 6.4 | |
| 367 | 7 | 72.53 | -17.34 | 116 | 6.4 | |
| 368 | 8 | 72.61 | -17.42 | 115 | 6.3 | |
| 369 | 9 | 72.71 | -17.52 | 115 | 6.3 | |
| 370 | 10 | 72.77 | -17.58 | 115 | 6.3 | |
| 372 | 12 | 71.65 | -16.46 | 114 | 6.1 | |
| 374 | 14 | 71.47 | -16.28 | 113 | 6.0 | |
| 376 | 16 | 71.48 | -16.29 | 113 | 6.0 | |
| 378 | 18 | 71.20 | -16.01 | 112 | 5.9 | |
| 380 | 20 | 71.70 | -16.51 | 114 | 6.1 | |
| 385 | 25 | 71.71 | -16.52 | 113 | 6.0 | |
| 390 | 30 | 71.63 | -16.44 | 113 | 6.0 | |
| 395 | 35 | 71.45 | -16.26 | 111 | 5.7 | |
| 400 | 40 | 71.56 | -16.37 | 112 | 5.9 | |
| 405 | 45 | 71.92 | -16.73 | 114 | 6.1 | |
| 410 | 50 | 71.83 | -16.64 | 113 | 6.0 | |
| 415 | 55 | 71.88 | -16.69 | 114 | 6.1 | |
| 420 | 60 | 72.04 | -16.85 | 114 | 6.1 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 430 | 70 | 72.07 | -16.88 | 113 | 6.0 | |
| 440 | 80 | 72.15 | -16.96 | 114 | 6.1 | |
| 450 | 90 | 72.33 | -17.14 | 114 | 6.1 | |
| 460 | 100 | 72.22 | -17.03 | 114 | 6.1 | |
| 470 | 110 | 72.23 | -17.04 | 113 | 6.0 | |
| 480 | 120 | 72.26 | -17.07 | 113 | 6.0 | Q=360 l/m |

CONTINUOUS PUMPING TEST DATA SHEET2

WELL LOCATION: LAS PINAS
SITE NO.: NAGA ROAD
WELL NO.: 2
WELL DEPTH: 243.84 M
CASING DIAMETER: 25 c m
SWL: 55.42 m

| TIME (min) | WATER LEVEL(m) | DRAWDOWN (m) | V-NOTCH (mm) | DISCHARGE (l/sec) |
|---|---|---|---|---|
| 0 | 55.42 | 0 | 0 | |
| 1 | 65.43 | -10.01 | 110 | 5.6 |
| 2 | 66.00 | -10.58 | 110 | 5.6 |
| 3 | 66.50 | -11.08 | 112 | 5.9 |
| 4 | 66.85 | -11.43 | 112 | 5.9 |
| 5 | 67.00 | -11.58 | 112 | 5.9 |
| 6 | 67.16 | -11.74 | 112 | 5.9 |
| 7 | 67.21 | -11.79 | 112 | 5.9 |
| 8 | 67.59 | -12.17 | 112 | 5.9 |
| 9 | 67.69 | -12.27 | 112 | 5.9 |
| 10 | 67.85 | -12.43 | 112 | 5.9 |
| 12 | 67.98 | -12.56 | 112 | 5.9 |
| 14 | 68.40 | -12.98 | 112 | 5.9 |
| 16 | 68.38 | -12.96 | 112 | 5.9 |
| 18 | 68.49 | -13.07 | 112 | 5.9 |
| 20 | 68.52 | -13.10 | 112 | 5.9 |
| 25 | 68.78 | -13.36 | 112 | 5.9 |
| 30 | 69.04 | -13.62 | 112 | 5.9 |
| 35 | 69.18 | -13.76 | 112 | 5.9 |
| 40 | 69.29 | -13.87 | 112 | 5.9 |
| 45 | 69.48 | -14.06 | 112 | 5.9 |
| 50 | 69.78 | -14.36 | 112 | 5.9 |
| 55 | 70.07 | -14.65 | 112 | 5.9 |
| 60 | 70.83 | -15.41 | 112 | 5.9 |
| 70 | 71.20 | -15.78 | 112 | 5.9 |
| 80 | 70.72 | -15.30 | 112 | 5.9 |
| 90 | 70.68 | -15.26 | 112 | 5.9 |
| 100 | 70.61 | -15.19 | 112 | 5.9 |
| 110 | 70.49 | -15.07 | 112 | 5.9 |
| 120 | 70.95 | -15.53 | 112 | 5.9 |
| 135 | 71.10 | -15.68 | 112 | 5.9 |
| 150 | 71.42 | -16.00 | 112 | 5.9 |
| 165 | 71.60 | -16.18 | 112 | 5.9 |
| 180 | 71.76 | -16.34 | 112 | 5.9 |
| 210 | 71.87 | -16.45 | 112 | 5.9 |
| 240 | 71.82 | -16.40 | 112 | 5.9 |
| 270 | 72.23 | -16.81 | 112 | 5.9 |
| 300 | 72.29 | -16.87 | 112 | 5.9 |
| 360 | 72.40 | -16.98 | 112 | 5.9 |
| 420 | 72.47 | -17.05 | 112 | 5.9 |
| 480 | 72.59 | -17.17 | 112 | 5.9 |
| 540 | 72.61 | -17.19 | 112 | 5.9 |
| 600 | 72.81 | -17.39 | 112 | 5.9 |
| 660 | 72.95 | -17.53 | 112 | 5.9 |
| 720 | 73.09 | -17.67 | 112 | 5.9 |
| 780 | 73.20 | -17.78 | 112 | 5.9 |
| 840 | 73.39 | -17.97 | 112 | 5.9 |
| 900 | 73.43 | -18.01 | 112 | 5.9 |
| 960 | 73.24 | -17.82 | 112 | 5.9 |
| 1020 | 73.36 | -17.94 | 112 | 5.9 |

| | | | | |
|---|---|---|---|---|
| 1080 | 73.39 | -17.97 | 112 | 5.9 |
| 1140 | 73.32 | -17.90 | 112 | 5.9 |
| 1200 | 73.31 | -17.89 | 112 | 5.9 |
| 1260 | 73.50 | -18.08 | 112 | 5.9 |
| 1320 | 73.46 | -18.04 | 112 | 5.9 |
| 1380 | 73.33 | -17.91 | 112 | 5.9 |
| 1440 | 73.29 | -17.87 | 112 | 5.9 |
| 1500 | 73.31 | -17.89 | 112 | 5.9 |
| 1560 | 73.19 | -17.77 | 112 | 5.9 |
| 1620 | 73.50 | -18.08 | 112 | 5.9 |
| 1680 | 73.52 | -18.10 | 112 | 5.9 |
| 1740 | 73.51 | -18.09 | 112 | 5.9 |
| 1800 | 73.53 | -18.11 | 112 | 5.9 |
| 1860 | 73.60 | -18.18 | 112 | 5.9 |
| 1920 | 73.44 | -18.02 | 112 | 5.9 |
| 1980 | 73.39 | -17.97 | 112 | 5.9 |
| 2040 | 73.59 | -18.17 | 112 | 5.9 |
| 2100 | 73.48 | -18.06 | 112 | 5.9 |
| 2160 | 73.57 | -18.15 | 112 | 5.9 |
| 2220 | 73.61 | -18.19 | 112 | 5.9 |
| 2280 | 73.79 | -18.37 | 112 | 5.9 |
| 2340 | 73.65 | -18.23 | 112 | 5.9 |
| 2400 | 73.73 | -18.31 | 112 | 5.9 |
| 2460 | 73.63 | -18.21 | 112 | 5.9 |
| 2520 | 73.73 | -18.31 | 112 | 5.9 |
| 2580 | 73.65 | -18.23 | 112 | 5.9 |
| 2640 | 73.50 | -18.08 | 112 | 5.9 |
| 2700 | Electric power supply stopped(brown-out) | | | |
| 2760 | | | | |
| 2820 | | | | |
| 2880 | | | | |

RECOVERY TEST

| t2 | WATER LEVEL(m) | DRAWDOWN (m) | t1+t2 | t/t' |
|---|---|---|---|---|
| 0 | 73.50 | 18.08 | 2640 | |
| 1 | 63.98 | 8.56 | 2641 | 2641 |
| 2 | 63.61 | 8.19 | 2642 | 1321 |
| 3 | 63.07 | 7.65 | 2643 | 881 |
| 4 | 62.83 | 7.41 | 2644 | 661 |
| 5 | 62.67 | 7.25 | 2645 | 529 |
| 6 | 62.42 | 7.00 | 2646 | 441 |
| 7 | 62.37 | 6.95 | 2647 | 378.14286 |
| 8 | 62.29 | 6.87 | 2648 | 331 |
| 9 | 62.19 | 6.77 | 2649 | 294.33333 |
| 10 | 61.90 | 6.48 | 2650 | 265 |
| 12 | 60.96 | 5.54 | 2652 | 221 |
| 14 | 60.85 | 5.43 | 2654 | 189.57143 |
| 16 | 60.75 | 5.33 | 2656 | 166 |
| 18 | 60.65 | 5.23 | 2658 | 147.66667 |
| 20 | 60.53 | 5.11 | 2660 | 133 |
| 25 | 60.33 | 4.91 | 2665 | 106.6 |
| 30 | 60.15 | 4.73 | 2670 | 89 |
| 35 | 59.98 | 4.56 | 2675 | 76.428571 |
| 40 | 59.85 | 4.43 | 2680 | 67 |
| 45 | 59.70 | 4.28 | 2685 | 59.666667 |
| 50 | 59.58 | 4.16 | 2690 | 53.8 |
| 55 | 59.44 | 4.02 | 2695 | 49 |
| 60 | 59.35 | 3.93 | 2700 | 45 |
| 70 | 59.16 | 3.74 | 2710 | 38.714286 |
| 80 | 59.00 | 3.58 | 2720 | 34 |

| | | | | |
|---|---|---|---|---|
| 90 | 58.87 | 3.45 | 2730 | 30.333333 |
| 100 | 58.73 | 3.31 | 2740 | 27.4 |
| 110 | 58.60 | 3.18 | 2750 | 25 |
| 120 | 58.50 | 3.08 | 2760 | 23 |
| 135 | 58.37 | 2.95 | 2775 | 20.555556 |
| 150 | 58.24 | 2.82 | 2790 | 18.6 |
| 165 | 58.12 | 2.70 | 2805 | 17 |
| 180 | 58.02 | 2.60 | 2820 | 15.666667 |
| 210 | 57.79 | 2.37 | 2850 | 13.571429 |
| 240 | 57.63 | 2.21 | 2880 | 12 |
| 270 | 57.49 | 2.07 | 2910 | 10.777778 |
| 300 | 57.36 | 1.94 | 2940 | 9.8 |
| 360 | 57.16 | 1.74 | 3000 | 8.3333333 |
| 420 | 57.00 | 1.58 | 3060 | 7.2857143 |
| 480 | 56.86 | 1.44 | 3120 | 6.5 |

EC AND TEMPERATURE OF WATER

DATE: 6-18-1991
LOCATION: SUMULONG, TAYTAY
INTERVAL: 1M

| Depth(m) | Temp. | E.C. | E.C. | E.C.18 | |
|---|---|---|---|---|---|
| 0 | 28.1 | 0 | 0 | 0 | .0 |
| 1 | 28.4 | 0 | 0 | 0 | .0 |
| 2 | 28.4 | 0 | 0 | 0 | .0 |
| 3 | 28.4 | 0 | 0 | 0 | .0 |
| 4 | 28.4 | 0 | 0 | 0 | .0 |
| 5 | 28.3 | 0 | 0 | 0 | .0 |
| 6 | 28.3 | 0 | 0 | 0 | .0 |
| 7 | 28.2 | 0 | 0 | 0 | .0 |
| 8 | 28.2 | 0 | 0 | 0 | .0 |
| 9 | 28.2 | 0 | 0 | 0 | .0 |
| 10 | 28.2 | 0 | 0 | 0 | .0 |
| 11 | 28.3 | 0 | 0 | 0 | .0 |
| 12 | 28.3 | 0 | 0 | 0 | .0 |
| 13 | 28.4 | 0 | 0 | 0 | .0 |
| 14 | 28.3 | 0 | 0 | 0 | .0 |
| 15 | 28.4 | 0 | 0 | 0 | .0 |
| 16 | 28.4 | 0 | 0 | 0 | .0 |
| 17 | 28.3 | 0 | 0 | 0 | .0 |
| 18 | 28.3 | 0 | 0 | 0 | .0 |
| 19 | 28.3 | 0 | 0 | 0 | .0 |
| 20 | 28.3 | 0 | 0 | 0 | .0 |
| 21 | 28.3 | 0 | 0 | 0 | .0 |
| 22 | 28.3 | 0 | 0 | 0 | .0 |
| 23 | 28.3 | 0 | 0 | 0 | .0 |
| 24 | 28.3 | 0 | 0 | 0 | .0 |
| 25 | 28.3 | 0 | 0 | 0 | .0 |
| 26 | 28.3 | 0 | 0 | 0 | .0 |
| 27 | 28.3 | 0 | 0 | 0 | .0 |
| 28 | 28.25 | 0 | 0 | 0 | .0 |
| 29 | 28.3 | 0 | 0 | 0 | .0 |
| 30 | 28.3 | 0 | 0 | 0 | .0 |
| 31 | 28.3 | 0 | 0 | 0 | .0 |
| 32 | 28.3 | 0 | 0 | 0 | .0 |
| 33 | 28.3 | 0 | 0 | 0 | .0 |
| 34 | 28.3 | 0 | 0 | 0 | .0 |
| 35 | 28.3 | 0 | 0 | 0 | .0 |
| 36 | 28.3 | 0 | 0 | 0 | .0 |
| 37 | 28.2 | 0 | 0 | 0 | .0 |
| 38 | 28.3 | 0 | 0 | 0 | .0 |
| 39 | 28.3 | 0 | 0 | 0 | .0 |
| 40 | 28.3 | 0 | 0 | 0 | .0 |
| 41 | 28.3 | 0 | 0 | 0 | .0 |
| 42 | 28.3 | 0 | 0 | 0 | .0 |
| 43 | 28.3 | 0 | 0 | 0 | .0 |
| 44 | 28.3 | 0 | 0 | 0 | .0 |
| 45 | 28.3 | 0 | 0 | 0 | .0 |
| 46 | 28.3 | 0 | 0 | 0 | .0 |
| 47 | 28.3 | 0 | 0 | 0 | .0 |
| 48 | 28.3 | 0 | 0 | 0 | .0 |
| 49 | 28.3 | 0 | 0 | 0 | .0 |

| | | | | | |
|---|---|---|---|---|---|
| 50 | 28.4 | 0 | 0 | 0 | .0 |
| 51 | 28.4 | 0 | 0 | 0 | .0 |
| 52 | 28.4 | 0 | 0 | 0 | .0 |
| 53 | 28.4 | 0 | 0 | 0 | .0 |
| 54 | 28.4 | 0 | 0 | 0 | .0 |
| 55 | 28.4 | 0 | 0 | 0 | .0 |
| 56 | 28.4 | 0 | 0 | 0 | .0 |
| 57 | 28.4 | 0 | 0 | 0 | .0 |
| 58 | 28.5 | 0 | 0 | 0 | .0 |
| 59 | 30.2 | 890 | .89 | 702 | .7 |
| 60 | 30.2 | 885 | .885 | 698 | .7 |
| 61 | 30.3 | 885 | .885 | 697 | .7 |
| 62 | 30.3 | 885 | .885 | 697 | .7 |
| 63 | 30.3 | 885 | .885 | 697 | .7 |
| 64 | 30.4 | 880 | .88 | 691 | .7 |
| 65 | 30.4 | 880 | .88 | 691 | .7 |
| 66 | 30.4 | 875 | .875 | 687 | .7 |
| 67 | 30.4 | 875 | .875 | 687 | .7 |
| 68 | 30.4 | 875 | .875 | 687 | .7 |
| 69 | 30.4 | 875 | .875 | 687 | .7 |
| 70 | 30.4 | 870 | .87 | 684 | .7 |
| 71 | 30.4 | 870 | .87 | 684 | .7 |
| 72 | 30.4 | 870 | .87 | 684 | .7 |
| 73 | 30.4 | 880 | .88 | 691 | .7 |
| 74 | 30.4 | 885 | .885 | 695 | .7 |
| 75 | 30.4 | 895 | .895 | 703 | .7 |
| 76 | 30.4 | 900 | .9 | 707 | .7 |
| 77 | 30.4 | 915 | .915 | 719 | .7 |
| 78 | 30.4 | 930 | .93 | 731 | .7 |
| 79 | 30.4 | 940 | .94 | 739 | .7 |
| 80 | 30.4 | 960 | .96 | 754 | .8 |
| 81 | 30.4 | 960 | .96 | 754 | .8 |
| 82 | 30.4 | 960 | .96 | 754 | .8 |
| 83 | 30.4 | 965 | .965 | 758 | .8 |
| 84 | 30.4 | 965 | .965 | 758 | .8 |
| 85 | 30.4 | 965 | .965 | 758 | .8 |
| 86 | 30.4 | 965 | .965 | 758 | .8 |
| 87 | 30.4 | 970 | .97 | 762 | .8 |
| 88 | 30.4 | 970 | .97 | 762 | .8 |
| 89 | 30.4 | 970 | .97 | 762 | .8 |
| 90 | 30.4 | 970 | .97 | 762 | .8 |
| 91 | 30.4 | 970 | .97 | 762 | .8 |
| 92 | 30.4 | 970 | .97 | 762 | .8 |
| 93 | 30.4 | 970 | .97 | 762 | .8 |
| 94 | 30.4 | 970 | .97 | 762 | .8 |
| 95 | 30.4 | 965 | .965 | 758 | .8 |
| 96 | 30.4 | 965 | .965 | 758 | .8 |
| 97 | 30.4 | 965 | .965 | 758 | .8 |
| 98 | 30.4 | 965 | .965 | 758 | .8 |
| 99 | 30.4 | 965 | .965 | 758 | .8 |
| 100 | 30.4 | 965 | .965 | 758 | .8 |
| 101 | 30.4 | 965 | .965 | 758 | .8 |
| 102 | 30.4 | 965 | .965 | 758 | .8 |
| 103 | 30.4 | 965 | .965 | 758 | .8 |
| 104 | 30.4 | 965 | .965 | 758 | .8 |
| 105 | 30.4 | 965 | .965 | 758 | .8 |
| 106 | 30.4 | 965 | .965 | 758 | .8 |
| 107 | 30.4 | 965 | .965 | 758 | .8 |
| 108 | 30.4 | 965 | .965 | 758 | .8 |
| 109 | 30.4 | 965 | .965 | 758 | .8 |
| 110 | 30.4 | 965 | .965 | 758 | .8 |

| | | | | | |
|---|---|---|---|---|---|
| 111 | 30.4 | 965 | .965 | 758 | .8 |
| 112 | 30.4 | 965 | .965 | 758 | .8 |
| 113 | 30.4 | 960 | .96 | 754 | .8 |
| 114 | 30.4 | 955 | .955 | 750 | .8 |
| 115 | 30.4 | 965 | .965 | 758 | .8 |
| 116 | 30.4 | 975 | .975 | 766 | .8 |
| 117 | 30.4 | 975 | .975 | 766 | .8 |
| 118 | 30.4 | 975 | .975 | 766 | .8 |
| 119 | 30.4 | 975 | .975 | 766 | .8 |
| 120 | 30.4 | 975 | .975 | 766 | .8 |
| 121 | 30.4 | 975 | .975 | 766 | .8 |
| 122 | 30.4 | 975 | .975 | 766 | .8 |
| 123 | 30.3 | 975 | .975 | 767 | .8 |
| 124 | 30.3 | 980 | .98 | 771 | .8 |
| 125 | 30.3 | 975 | .975 | 767 | .8 |
| 126 | 30.4 | 980 | .98 | 770 | .8 |
| 127 | 30.4 | 980 | .98 | 770 | .8 |
| 128 | 30.4 | 980 | .98 | 770 | .8 |
| 129 | 30.4 | 980 | .98 | 770 | .8 |
| 130 | 30.4 | 980 | .98 | 770 | .8 |
| 131 | 30.4 | 980 | .98 | 770 | .8 |
| 132 | 30.4 | 980 | .98 | 770 | .8 |
| 133 | 30.4 | 980 | .98 | 770 | .8 |
| 134 | 30.4 | 980 | .98 | 770 | .8 |
| 135 | 30.3 | 980 | .98 | 771 | .8 |
| 136 | 30.3 | 980 | .98 | 771 | .8 |
| 137 | 30.3 | 980 | .98 | 771 | .8 |
| 138 | 30.3 | 980 | .98 | 771 | .8 |
| 139 | 30.4 | 980 | .98 | 770 | .8 |
| 140 | 30.4 | 980 | .98 | 770 | .8 |
| 141 | 30.4 | 980 | .98 | 770 | .8 |
| 142 | 30.4 | 980 | .98 | 770 | .8 |
| 143 | 30.4 | 980 | .98 | 770 | .8 |
| 144 | 30.4 | 985 | .985 | 774 | .8 |
| 145 | 30.4 | 985 | .985 | 774 | .8 |
| 146 | 30.4 | 985 | .985 | 774 | .8 |
| 147 | 30.4 | 985 | .985 | 774 | .8 |
| 148 | 30.4 | 985 | .985 | 774 | .8 |
| 149 | 30.4 | 980 | .98 | 770 | .8 |
| 150 | 30.4 | 980 | .98 | 770 | .8 |
| 151 | 30.4 | 980 | .98 | 770 | .8 |
| 152 | 30.4 | 980 | .98 | 770 | .8 |
| 153 | 30.4 | 980 | .98 | 770 | .8 |
| 154 | 30.4 | 985 | .985 | 774 | .8 |
| 155 | 30.4 | 985 | .985 | 774 | .8 |
| 156 | 30.4 | 985 | .985 | 774 | .8 |
| 157 | 30.4 | 985 | .985 | 774 | .8 |
| 158 | 30.4 | 985 | .985 | 774 | .8 |
| 159 | 30.4 | 985 | .985 | 774 | .8 |
| 160 | 30.4 | 985 | .985 | 774 | .8 |
| 161 | 30.4 | 985 | .985 | 774 | .8 |
| 162 | 30.5 | 990 | .99 | 776 | .8 |
| 163 | 30.3 | 985 | .985 | 775 | .8 |
| 164 | 30.3 | 990 | .99 | 779 | .8 |
| 165 | 30.3 | 990 | .99 | 779 | .8 |
| 166 | 30.4 | 995 | .995 | 782 | .8 |
| 167 | 30.4 | 995 | .995 | 782 | .8 |
| 168 | 30.4 | 1000 | 1 | 786 | .8 |
| 169 | 30.4 | 1000 | 1 | 786 | .8 |
| 170 | 30.4 | 1000 | 1 | 786 | .8 |
| 171 | 30.4 | 995 | .995 | 782 | .8 |

| | | | | | |
|---|---|---|---|---|---|
| 172 | 30.4 | 1000 | 1 | 786 | .8 |
| 173 | 30.4 | 1010 | 1.01 | 794 | .8 |
| 174 | 30.4 | 1010 | 1.01 | 794 | .8 |
| 175 | 30.4 | 1010 | 1.01 | 794 | .8 |
| 176 | 30.4 | 1010 | 1.01 | 794 | .8 |
| 177 | 30.5 | 1040 | 1.04 | 816 | .8 |
| 178 | 30.6 | 1070 | 1.07 | 838 | .8 |
| 179 | 30.6 | 1130 | 1.13 | 885 | .9 |
| 180 | 30.6 | 1160 | 1.16 | 908 | .9 |
| 181 | 30.6 | 1170 | 1.17 | 916 | .9 |
| 182 | 30.7 | 1170 | 1.17 | 914 | .9 |
| 183 | 30.7 | 1190 | 1.19 | 930 | .9 |
| 184 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 185 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 186 | 30.7 | 1230 | 1.23 | 961 | 1.0 |
| 187 | 30.7 | 1230 | 1.23 | 961 | 1.0 |
| 188 | 30.7 | 1230 | 1.23 | 961 | 1.0 |
| 189 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 190 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 191 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 192 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 193 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 194 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 195 | 30.7 | 1220 | 1.22 | 954 | 1.0 |
| 196 | 30.7 | 1220 | 1.22 | 954 | 1.0 |

EC AND TEMPERATURE OF WATER

DATE: 7-12-1991
LOCATION: COGEO,ANTIPOLO No.1
INTERVAL: 1M

| Depth(m) | Temp. | E.C. | E.C. | E.C.18 | |
|---|---|---|---|---|---|
| 0 | 29.8 | 0 | 0 | 0 | .0 |
| 1 | 29.6 | 0 | 0 | 0 | .0 |
| 2 | 29.6 | 0 | 0 | 0 | .0 |
| 3 | 29.6 | 0 | 0 | 0 | .0 |
| 4 | 29.6 | 0 | 0 | 0 | .0 |
| 5 | 29.5 | 0 | 0 | 0 | .0 |
| 6 | 29.4 | 0 | 0 | 0 | .0 |
| 7 | 29.4 | 0 | 0 | 0 | .0 |
| 8 | 27.1 | 444 | .444 | 370 | .4 |
| 9 | 27 | 430 | .43 | 359 | .4 |
| 10 | 26.8 | 422 | .422 | 354 | .4 |
| 11 | 26.7 | 419 | .419 | 352 | .4 |
| 12 | 26.7 | 413 | .413 | 347 | .3 |
| 13 | 26.6 | 411 | .411 | 346 | .3 |
| 14 | 26.6 | 405 | .405 | 341 | .3 |
| 15 | 26.6 | 402 | .402 | 338 | .3 |
| 16 | 26.6 | 400 | .4 | 336 | .3 |
| 17 | 26.6 | 398 | .398 | 335 | .3 |
| 18 | 26.5 | 398 | .398 | 335 | .3 |
| 19 | 26.5 | 399 | .399 | 336 | .3 |
| 20 | 26.6 | 398 | .398 | 335 | .3 |
| 21 | 26.5 | 400 | .4 | 337 | .3 |
| 22 | 26.4 | 401 | .401 | 338 | .3 |
| 23 | 26.4 | 403 | .403 | 340 | .3 |
| 24 | 26.4 | 408 | .408 | 344 | .3 |
| 25 | 26.4 | 408 | .408 | 344 | .3 |
| 26 | 26.4 | 408 | .408 | 344 | .3 |
| 27 | 26.4 | 412 | .412 | 348 | .3 |
| 28 | 26.4 | 412 | .412 | 348 | .3 |
| 29 | 26.3 | 417 | .417 | 353 | .4 |
| 30 | 26.4 | 418 | .418 | 353 | .4 |
| 31 | 26.3 | 422 | .422 | 357 | .4 |
| 32 | 26.3 | 424 | .424 | 359 | .4 |
| 33 | 26.3 | 429 | .429 | 363 | .4 |
| 34 | 26.2 | 432 | .432 | 366 | .4 |
| 35 | 26.3 | 433 | .433 | 366 | .4 |
| 36 | 26.3 | 435 | .435 | 368 | .4 |
| 37 | 26.3 | 439 | .439 | 371 | .4 |
| 38 | 26.3 | 440 | .44 | 372 | .4 |
| 39 | 26.3 | 441 | .441 | 373 | .4 |
| 40 | 26.2 | 443 | .443 | 375 | .4 |
| 41 | 26.2 | 444 | .444 | 376 | .4 |
| 42 | 26.2 | 449 | .449 | 380 | .4 |
| 43 | 26.2 | 450 | .45 | 381 | .4 |
| 44 | 26.2 | 451 | .451 | 382 | .4 |
| 45 | 26.2 | 452 | .452 | 383 | .4 |
| 46 | 26.2 | 453 | .453 | 384 | .4 |
| 47 | 26.1 | 455 | .455 | 386 | .4 |
| 48 | 26.1 | 455 | .455 | 386 | .4 |
| 49 | 26.1 | 458 | .458 | 389 | .4 |

| | | | | | |
|---|---|---|---|---|---|
| 50 | 26.1 | 459 | .459 | 390 | .4 |
| 51 | 26.1 | 459 | .459 | 390 | .4 |
| 52 | 26.1 | 458 | .458 | 389 | .4 |
| 53 | 26.1 | 458 | .458 | 389 | .4 |
| 54 | 26.1 | 458 | .458 | 389 | .4 |
| 55 | 26.1 | 458 | .458 | 389 | .4 |
| 56 | 26.1 | 457 | .457 | 388 | .4 |
| 57 | 26.1 | 457 | .457 | 388 | .4 |
| 58 | 26 | 455 | .455 | 387 | .4 |
| 59 | 26 | 453 | .453 | 385 | .4 |
| 60 | 26 | 452 | .452 | 384 | .4 |
| 61 | 26 | 448 | .448 | 381 | .4 |
| 62 | 26 | 445 | .445 | 378 | .4 |
| 63 | 26 | 441 | .441 | 375 | .4 |
| 64 | 25.9 | 441 | .441 | 376 | .4 |
| 65 | 25.9 | 437 | .437 | 372 | .4 |
| 66 | 25.9 | 433 | .433 | 369 | .4 |
| 67 | 25.9 | 432 | .432 | 368 | .4 |
| 68 | 25.9 | 432 | .432 | 368 | .4 |
| 69 | 25.9 | 433 | .433 | 369 | .4 |
| 70 | 25.9 | 432 | .432 | 368 | .4 |
| 71 | 25.9 | 433 | .433 | 369 | .4 |
| 72 | 25.9 | 435 | .435 | 371 | .4 |
| 73 | 25.9 | 434 | .434 | 370 | .4 |
| 74 | 25.8 | 436 | .436 | 372 | .4 |
| 75 | 25.8 | 438 | .438 | 374 | .4 |
| 76 | 25.8 | 438 | .438 | 374 | .4 |
| 77 | 25.8 | 439 | .439 | 375 | .4 |
| 78 | 25.8 | 439 | .439 | 375 | .4 |
| 79 | 25.8 | 440 | .44 | 376 | .4 |
| 80 | 25.8 | 441 | .441 | 376 | .4 |
| 81 | 25.8 | 441 | .441 | 376 | .4 |
| 82 | 25.8 | 442 | .442 | 377 | .4 |
| 83 | 25.8 | 442 | .442 | 377 | .4 |
| 84 | 25.8 | 442 | .442 | 377 | .4 |
| 85 | 25.8 | 441 | .441 | 376 | .4 |
| 86 | 25.8 | 442 | .442 | 377 | .4 |
| 87 | 25.8 | 442 | .442 | 377 | .4 |

EC AND TEMPERATURE OF WATER

DATE: 7-22-1991
LOCATION: COGEO,ANTIPOLO No.6
INTERVAL: 1M

| Depth(m) | Temp. | E.C. | E.C. | E.C.18 | |
|---|---|---|---|---|---|
| 0 | 25.4 | 0 | 0 | 0 | .0 |
| 1 | 25.7 | 0 | 0 | 0 | .0 |
| 2 | 25.9 | 0 | 0 | 0 | .0 |
| 3 | 26 | 0 | 0 | 0 | .0 |
| 4 | 26.2 | 0 | 0 | 0 | .0 |
| 5 | 26.5 | 0 | 0 | 0 | .0 |
| 6 | 26.5 | 0 | 0 | 0 | .0 |
| 7 | 26.6 | 0 | 0 | 0 | .0 |
| 8 | 26.4 | 0 | 0 | 0 | .0 |
| 9 | 26.2 | 0 | 0 | 0 | .0 |
| 10 | 26.2 | 0 | 0 | 0 | .0 |
| 11 | 26.4 | 0 | 0 | 0 | .0 |
| 12 | 26.4 | 0 | 0 | 0 | .0 |
| 13 | 26.4 | 385 | 3.85 | 325 | 3.2 |
| 14 | 27.2 | 380 | 3.8 | 316 | 3.2 |
| 15 | 27.2 | 390 | 3.9 | 324 | 3.2 |
| 16 | 27 | 388 | 3.88 | 324 | 3.2 |
| 17 | 27.2 | 390 | 3.9 | 324 | 3.2 |
| 18 | 27 | 400 | 4 | 334 | 3.3 |
| 19 | 27 | 400 | 4 | 334 | 3.3 |
| 20 | 26.9 | 404 | 4.04 | 338 | 3.4 |
| 21 | 26.9 | 400 | 4 | 335 | 3.3 |
| 22 | 26.9 | 405 | 4.05 | 339 | 3.4 |
| 23 | 26.9 | 400 | 4 | 335 | 3.3 |
| 24 | 26.9 | 400 | 4 | 335 | 3.3 |
| 25 | 26.9 | 400 | 4 | 335 | 3.3 |
| 26 | 26.9 | 405 | 4.05 | 339 | 3.4 |
| 27 | 26.9 | 402 | 4.02 | 336 | 3.4 |
| 28 | 26.9 | 402 | 4.02 | 336 | 3.4 |
| 29 | 26.9 | 402 | 4.02 | 336 | 3.4 |
| 30 | 27 | 405 | 4.05 | 338 | 3.4 |
| 31 | 27 | 410 | 4.1 | 342 | 3.4 |
| 32 | 27 | 405 | 4.05 | 338 | 3.4 |
| 33 | 27 | 405 | 4.05 | 338 | 3.4 |
| 34 | 27 | 408 | 4.08 | 341 | 3.4 |
| 35 | 27 | 410 | 4.1 | 342 | 3.4 |
| 36 | 27 | 408 | 4.08 | 341 | 3.4 |
| 37 | 27 | 410 | 4.1 | 342 | 3.4 |
| 38 | 27 | 410 | 4.1 | 342 | 3.4 |
| 39 | 27 | 410 | 4.1 | 342 | 3.4 |
| 40 | 27 | 410 | 4.1 | 342 | 3.4 |
| 41 | 27 | 405 | 4.05 | 338 | 3.4 |
| 42 | 27 | 408 | 4.08 | 341 | 3.4 |
| 43 | 27 | 402 | 4.02 | 336 | 3.4 |
| 44 | 27 | 405 | 4.05 | 338 | 3.4 |
| 45 | 27 | 400 | 4 | 334 | 3.3 |
| 46 | 27 | 402 | 4.02 | 336 | 3.4 |
| 47 | 27 | 405 | 4.05 | 338 | 3.4 |
| 48 | 27 | 400 | 4 | 334 | 3.3 |
| 49 | 27 | 399 | 3.99 | 333 | 3.3 |

| | | | | | |
|---|---|---|---|---|---|
| 50 | 27 | 392 | 3.92 | 327 | 3.3 |
| 51 | 27 | 398 | 3.98 | 332 | 3.3 |
| 52 | 27 | 400 | 4 | 334 | 3.3 |
| 53 | 27 | 400 | 4 | 334 | 3.3 |
| 54 | 27 | 400 | 4 | 334 | 3.3 |
| 55 | 27 | 400 | 4 | 334 | 3.3 |
| 56 | 27 | 402 | 4.02 | 336 | 3.4 |
| 57 | 27 | 402 | 4.02 | 336 | 3.4 |
| 58 | 27 | 400 | 4 | 334 | 3.3 |
| 59 | 27.1 | 402 | 4.02 | 335 | 3.3 |
| 60 | 27.1 | 400 | 4 | 333 | 3.3 |
| 61 | 27.1 | 400 | 4 | 333 | 3.3 |
| 62 | 27.1 | 400 | 4 | 333 | 3.3 |
| 63 | 27.1 | 400 | 4 | 333 | 3.3 |
| 64 | 27.1 | 400 | 4 | 333 | 3.3 |
| 65 | 27.1 | 400 | 4 | 333 | 3.3 |
| 66 | 27.2 | 402 | 4.02 | 334 | 3.3 |
| 67 | 27.2 | 401 | 4.01 | 333 | 3.3 |
| 68 | 27.2 | 390 | 3.9 | 324 | 3.2 |
| 69 | 27.2 | 400 | 4 | 333 | 3.3 |
| 70 | 27.2 | 400 | 4 | 333 | 3.3 |
| 71 | 27.2 | 402 | 4.02 | 334 | 3.3 |
| 72 | 27.2 | 400 | 4 | 333 | 3.3 |
| 73 | 27.2 | 404 | 4.04 | 336 | 3.4 |
| 74 | 27.2 | 403 | 4.03 | 335 | 3.4 |
| 75 | 27.2 | 404 | 4.04 | 336 | 3.4 |
| 76 | 27.2 | 404 | 4.04 | 336 | 3.4 |
| 77 | 27.2 | 405 | 4.05 | 337 | 3.4 |
| 78 | 27.2 | 404 | 4.04 | 336 | 3.4 |
| 79 | 27.2 | 403 | 4.03 | 335 | 3.4 |
| 80 | 27.2 | 400 | 4 | 333 | 3.3 |
| 81 | 27.2 | 403 | 4.03 | 335 | 3.4 |
| 82 | 27.2 | 400 | 4 | 333 | 3.3 |
| 83 | 27.2 | 398 | 3.98 | 331 | 3.3 |
| 84 | 27.2 | 395 | 3.95 | 329 | 3.3 |
| 85 | 27.3 | 395 | 3.95 | 328 | 3.3 |
| 86 | 27.3 | 398 | 3.98 | 330 | 3.3 |
| 87 | 27.3 | 398 | 3.98 | 330 | 3.3 |
| 88 | 27.4 | 399 | 3.99 | 331 | 3.3 |
| 89 | 27.4 | 402 | 4.02 | 333 | 3.3 |
| 90 | 27.5 | 400 | 4 | 331 | 3.3 |
| 91 | 27.5 | 398 | 3.98 | 329 | 3.3 |
| 92 | 27.5 | 402 | 4.02 | 333 | 3.3 |
| 93 | 27.5 | 405 | 4.05 | 335 | 3.3 |
| 94 | 27.5 | 405 | 4.05 | 335 | 3.3 |
| 95 | 27.5 | 405 | 4.05 | 335 | 3.3 |
| 96 | 27.5 | 405 | 4.05 | 335 | 3.3 |
| 97 | 27.5 | 408 | 4.08 | 337 | 3.4 |
| 98 | 27.5 | 408 | 4.08 | 337 | 3.4 |
| 99 | 27.5 | 408 | 4.08 | 337 | 3.4 |
| 100 | 27.5 | 404 | 4.04 | 334 | 3.3 |
| 101 | 27.5 | 404 | 4.04 | 334 | 3.3 |
| 102 | 27.5 | 410 | 4.1 | 339 | 3.4 |
| 103 | 27.5 | 404 | 4.04 | 334 | 3.3 |
| 104 | 27.5 | 405 | 4.05 | 335 | 3.3 |
| 105 | 27.5 | 409 | 4.09 | 338 | 3.4 |
| 106 | 27.5 | 410 | 4.1 | 339 | 3.4 |
| 107 | 27.4 | 410 | 4.1 | 340 | 3.4 |

EC AND TEMPERATURE OF WATER

DATE: 7-1-1991
LOCATION: IBP,QUEZON CITY
INTERVAL: 1M

| Depth(m) | Temp. | E.C. | E.C. | E.C.18 | |
|---|---|---|---|---|---|
| 0 | 38.9 | 0 | 0 | 0 | .0 |
| 1 | 39.2 | 0 | 0 | 0 | .0 |
| 2 | 39.1 | 0 | 0 | 0 | .0 |
| 3 | 39.1 | 0 | 0 | 0 | .0 |
| 4 | 39.1 | 0 | 0 | 0 | .0 |
| 5 | 39 | 0 | 0 | 0 | .0 |
| 6 | 38.6 | 0 | 0 | 0 | .0 |
| 7 | 38.6 | 0 | 0 | 0 | .0 |
| 8 | 38.6 | 0 | 0 | 0 | .0 |
| 9 | 38.6 | 0 | 0 | 0 | .0 |
| 10 | 38.4 | 0 | 0 | 0 | .0 |
| 11 | 38.2 | 0 | 0 | 0 | .0 |
| 12 | 38.2 | 0 | 0 | 0 | .0 |
| 13 | 37.9 | 0 | 0 | 0 | .0 |
| 14 | 37.6 | 0 | 0 | 0 | .0 |
| 15 | 37.6 | 0 | 0 | 0 | .0 |
| 16 | 37.6 | 0 | 0 | 0 | .0 |
| 17 | 37.4 | 0 | 0 | 0 | .0 |
| 18 | 37.4 | 0 | 0 | 0 | .0 |
| 19 | 36.8 | 0 | 0 | 0 | .0 |
| 20 | 36.7 | 0 | 0 | 0 | .0 |
| 21 | 36.6 | 0 | 0 | 0 | .0 |
| 22 | 36.4 | 0 | 0 | 0 | .0 |
| 23 | 31.4 | 0 | 0 | 0 | .0 |
| 24 | 31.2 | 0 | 0 | 0 | .0 |
| 25 | 31.1 | 0 | 0 | 0 | .0 |
| 26 | 30.5 | 0 | 0 | 0 | .0 |
| 27 | 30.3 | 0 | 0 | 0 | .0 |
| 28 | 30.2 | 0 | 0 | 0 | .0 |
| 29 | 30.1 | 0 | 0 | 0 | .0 |
| 30 | 29.6 | 0 | 0 | 0 | .0 |
| 31 | 28.9 | 0 | 0 | 0 | .0 |
| 32 | 28.7 | 0 | 0 | 0 | .0 |
| 33 | 28.6 | 0 | 0 | 0 | .0 |
| 34 | 28.4 | 0 | 0 | 0 | .0 |
| 35 | 28.2 | 0 | 0 | 0 | .0 |
| 36 | 28.2 | 0 | 0 | 0 | .0 |
| 37 | 28.2 | 0 | 0 | 0 | .0 |
| 38 | 28.1 | 0 | 0 | 0 | .0 |
| 39 | 27.7 | 112 | .112 | 92 | .1 |
| 40 | 27.9 | 113 | .113 | 93 | .1 |
| 41 | 27.9 | 118 | .118 | 97 | .1 |
| 42 | 27.9 | 118 | .118 | 97 | .1 |
| 43 | 27.9 | 118 | .118 | 97 | .1 |
| 44 | 27.9 | 121 | .121 | 99 | .1 |
| 45 | 27.9 | 125 | .125 | 103 | .1 |
| 46 | 27.9 | 128 | .128 | 105 | .1 |
| 47 | 27.9 | 129 | .129 | 106 | .1 |
| 48 | 27.9 | 129 | .129 | 106 | .1 |
| 49 | 27.9 | 129 | .129 | 106 | .1 |

| | | | | | |
|---|---|---|---|---|---|
| 50 | 27.9 | 127 | .127 | 104 | .1 |
| 51 | 27.9 | 127 | .127 | 104 | .1 |
| 52 | 27.9 | 155 | .155 | 127 | .1 |
| 53 | 27.9 | 169 | .169 | 139 | .1 |
| 54 | 27.9 | 171 | .171 | 140 | .1 |
| 55 | 27.9 | 171 | .171 | 140 | .1 |
| 56 | 27.9 | 171 | .171 | 140 | .1 |
| 57 | 27.9 | 171 | .171 | 140 | .1 |
| 58 | 27.9 | 171 | .171 | 140 | .1 |
| 59 | 27.9 | 172 | .172 | 141 | .1 |
| 60 | 27.9 | 172 | .172 | 141 | .1 |
| 61 | 27.9 | 172 | .172 | 141 | .1 |
| 62 | 27.9 | 172 | .172 | 141 | .1 |
| 63 | 27.9 | 172 | .172 | 141 | .1 |
| 64 | 27.9 | 172 | .172 | 141 | .1 |
| 65 | 27.9 | 172 | .172 | 141 | .1 |
| 66 | 27.9 | 173 | .173 | 142 | .1 |
| 67 | 27.9 | 173 | .173 | 142 | .1 |
| 68 | 27.9 | 174 | .174 | 143 | .1 |
| 69 | 27.9 | 174 | .174 | 143 | .1 |
| 70 | 27.8 | 174 | .174 | 143 | .1 |
| 71 | 27.8 | 174 | .174 | 143 | .1 |
| 72 | 27.8 | 172 | .172 | 141 | .1 |
| 73 | 27.8 | 175 | .175 | 144 | .1 |
| 74 | 27.8 | 173 | .173 | 142 | .1 |
| 75 | 27.8 | 173 | .173 | 142 | .1 |
| 76 | 27.8 | 171 | .171 | 141 | .1 |
| 77 | 27.9 | 169 | .169 | 139 | .1 |
| 78 | 27.8 | 169 | .169 | 139 | .1 |
| 79 | 27.9 | 165 | .165 | 135 | .1 |
| 80 | 27.9 | 163 | .163 | 134 | .1 |
| 81 | 27.8 | 163 | .163 | 134 | .1 |
| 82 | 27.8 | 163 | .163 | 134 | .1 |
| 83 | 27.8 | 163 | .163 | 134 | .1 |
| 84 | 27.8 | 163 | .163 | 134 | .1 |
| 85 | 27.8 | 165 | .165 | 136 | .1 |
| 86 | 27.8 | 165 | .165 | 136 | .1 |
| 87 | 27.8 | 164 | .164 | 135 | .1 |
| 88 | 27.8 | 163 | .163 | 134 | .1 |
| 89 | 27.9 | 164 | .164 | 135 | .1 |
| 90 | 27.9 | 164 | .164 | 135 | .1 |
| 91 | 27.8 | 165 | .165 | 136 | .1 |
| 92 | 27.9 | 165 | .165 | 135 | .1 |
| 93 | 27.9 | 165 | .165 | 135 | .1 |
| 94 | 27.9 | 165 | .165 | 135 | .1 |
| 95 | 27.9 | 165 | .165 | 135 | .1 |
| 96 | 27.9 | 165 | .165 | 135 | .1 |
| 97 | 27.8 | 165 | .165 | 136 | .1 |
| 98 | 27.8 | 165 | .165 | 136 | .1 |
| 99 | 27.9 | 165 | .165 | 135 | .1 |
| 100 | 27.8 | 166 | .166 | 137 | .1 |
| 101 | 27.8 | 166 | .166 | 137 | .1 |
| 102 | 27.9 | 166 | .166 | 136 | .1 |
| 103 | 27.8 | 166 | .166 | 137 | .1 |
| 104 | 27.9 | 167 | .167 | 137 | .1 |
| 105 | 27.8 | 167 | .167 | 137 | .1 |
| 106 | 27.9 | 167 | .167 | 137 | .1 |
| 107 | 27.8 | 167 | .167 | 137 | .1 |
| 108 | 27.9 | 167 | .167 | 137 | .1 |
| 109 | 27.8 | 167 | .167 | 137 | .1 |
| 110 | 27.9 | 167 | .167 | 137 | .1 |

| | | | | | |
|---|---|---|---|---|---|
| 111 | 27.9 | 167 | .167 | 137 | .1 |
| 112 | 27.9 | 168 | .168 | 138 | .1 |
| 113 | 27.9 | 168 | .168 | 138 | .1 |
| 114 | 27.9 | 168 | .168 | 138 | .1 |
| 115 | 27.9 | 168 | .168 | 138 | .1 |
| 116 | 27.9 | 168 | .168 | 138 | .1 |
| 117 | 27.9 | 168 | .168 | 138 | .1 |
| 118 | 27.9 | 168 | .168 | 138 | .1 |
| 119 | 27.9 | 168 | .168 | 138 | .1 |
| 120 | 27.9 | 168 | .168 | 138 | .1 |
| 121 | 27.9 | 169 | .169 | 139 | .1 |
| 122 | 27.9 | 169 | .169 | 139 | .1 |
| 123 | 27.9 | 169 | .169 | 139 | .1 |
| 124 | 27.9 | 169 | .169 | 139 | .1 |
| 125 | 27.9 | 170 | .17 | 140 | .1 |
| 126 | 27.9 | 169 | .169 | 139 | .1 |
| 127 | 27.9 | 169 | .169 | 139 | .1 |
| 128 | 27.9 | 169 | .169 | 139 | .1 |
| 129 | 27.9 | 170 | .17 | 140 | .1 |
| 130 | 27.9 | 171 | .171 | 140 | .1 |
| 131 | 27.9 | 171 | .171 | 140 | .1 |
| 132 | 27.9 | 171 | .171 | 140 | .1 |
| 133 | 27.9 | 171 | .171 | 140 | .1 |
| 134 | 27.9 | 171 | .171 | 140 | .1 |
| 135 | 27.9 | 171 | .171 | 140 | .1 |
| 136 | 27.9 | 171 | .171 | 140 | .1 |
| 137 | 27.9 | 171 | .171 | 140 | .1 |
| 138 | 27.9 | 171 | .171 | 140 | .1 |
| 139 | 27.9 | 171 | .171 | 140 | .1 |
| 140 | 27.9 | 171 | .171 | 140 | .1 |
| 141 | 27.9 | 171 | .171 | 140 | .1 |
| 142 | 27.9 | 171 | .171 | 140 | .1 |
| 143 | 27.9 | 172 | .172 | 141 | .1 |
| 144 | 28 | 172 | .172 | 141 | .1 |
| 145 | 28 | 172 | .172 | 141 | .1 |
| 146 | 28 | 172 | .172 | 141 | .1 |
| 147 | 28 | 172 | .172 | 141 | .1 |
| 148 | 28.1 | 172 | .172 | 141 | .1 |
| 149 | 28.1 | 172 | .172 | 141 | .1 |
| 150 | 28.1 | 172 | .172 | 141 | .1 |
| 151 | 28.1 | 172 | .172 | 141 | .1 |
| 152 | 28.1 | 172 | .172 | 141 | .1 |
| 153 | 28.1 | 172 | .172 | 141 | .1 |
| 154 | 28.1 | 172 | .172 | 141 | .1 |
| 155 | 28.1 | 172 | .172 | 141 | .1 |
| 156 | 28.1 | 172 | .172 | 141 | .1 |
| 157 | 28.1 | 172 | .172 | 141 | .1 |
| 158 | 28.1 | 172 | .172 | 141 | .1 |
| 159 | 28.1 | 171 | .171 | 140 | .1 |
| 160 | 28.1 | 171 | .171 | 140 | .1 |
| 161 | 28.1 | 172 | .172 | 141 | .1 |
| 162 | 28.1 | 173 | .173 | 142 | .1 |
| 163 | 28.1 | 172 | .172 | 141 | .1 |
| 164 | 28.1 | 174 | .174 | 142 | .1 |
| 165 | 28.1 | 173 | .173 | 142 | .1 |
| 166 | 28.1 | 174 | .174 | 142 | .1 |
| 167 | 28.1 | 174 | .174 | 142 | .1 |
| 168 | 28.1 | 174 | .174 | 142 | .1 |
| 169 | 28.1 | 174 | .174 | 142 | .1 |
| 170 | 28.1 | 174 | .174 | 142 | .1 |
| 171 | 28.1 | 174 | .174 | 142 | .1 |

EC AND TEMPERATURE OF WATER

DATE: 8-5-1991
LOCATION: NAGA ROAD No.2,LAS PINAS
INTERVAL: 1M

| Depth(m) | Temp. | E.C. | E.C. | E.C.18 |
|---|---|---|---|---|
| 0 | 28.7 | 0 | 0 | 0 |
| 1 | 29.4 | 0 | 0 | 0 |
| 2 | 29.9 | 0 | 0 | 0 |
| 3 | 30 | 0 | 0 | 0 |
| 4 | 29.9 | 0 | 0 | 0 |
| 5 | 30.2 | 0 | 0 | 0 |
| 6 | 30.2 | 0 | 0 | 0 |
| 7 | 30.4 | 0 | 0 | 0 |
| 8 | 30.4 | 0 | 0 | 0 |
| 9 | 30.5 | 0 | 0 | 0 |
| 10 | 30.6 | 0 | 0 | 0 |
| 11 | 30.5 | 0 | 0 | 0 |
| 12 | 30.5 | 0 | 0 | 0 |
| 13 | 30.5 | 0 | 0 | 0 |
| 14 | 30.5 | 0 | 0 | 0 |
| 15 | 30.5 | 0 | 0 | 0 |
| 16 | 30.6 | 0 | 0 | 0 |
| 17 | 30.6 | 0 | 0 | 0 |
| 18 | 30.6 | 0 | 0 | 0 |
| 19 | 30.6 | 0 | 0 | 0 |
| 20 | 30.7 | 0 | 0 | 0 |
| 21 | 30.7 | 0 | 0 | 0 |
| 22 | 30.7 | 0 | 0 | 0 |
| 23 | 30.8 | 0 | 0 | 0 |
| 24 | 30.8 | 0 | 0 | 0 |
| 25 | 30.8 | 0 | 0 | 0 |
| 26 | 30.8 | 0 | 0 | 0 |
| 27 | 30.8 | 0 | 0 | 0 |
| 28 | 30.8 | 0 | 0 | 0 |
| 29 | 30.8 | 0 | 0 | 0 |
| 30 | 30.8 | 0 | 0 | 0 |
| 31 | 31 | 0 | 0 | 0 |
| 32 | 31.1 | 0 | 0 | 0 |
| 33 | 31.1 | 0 | 0 | 0 |
| 34 | 31.1 | 0 | 0 | 0 |
| 35 | 31.1 | 0 | 0 | 0 |
| 36 | 31.1 | 0 | 0 | 0 |
| 37 | 31.1 | 0 | 0 | 0 |
| 38 | 31.2 | 0 | 0 | 0 |
| 39 | 31.1 | 0 | 0 | 0 |
| 40 | 31.2 | 0 | 0 | 0 |
| 41 | 31.2 | 0 | 0 | 0 |
| 42 | 31.2 | 0 | 0 | 0 |
| 43 | 31.2 | 0 | 0 | 0 |
| 44 | 31.2 | 0 | 0 | 0 |
| 45 | 31.2 | 0 | 0 | 0 |
| 46 | 31.2 | 0 | 0 | 0 |
| 47 | 31.2 | 0 | 0 | 0 |
| 48 | 31.2 | 0 | 0 | 0 |

| | | | | |
|---|---|---|---|---|
| 49 | 31.2 | 0 | 0 | 0 |
| 50 | 31.2 | 0 | 0 | 0 |
| 51 | 31.2 | 0 | 0 | 0 |
| 52 | 31.2 | 0 | 0 | 0 |
| 53 | 31.2 | 0 | 0 | 0 |
| 54 | 31.2 | 0 | 0 | 0 |
| 55 | 31.2 | 0 | 0 | 0 |
| 56 | 31.2 | 0 | 0 | 0 |
| 57 | 31.2 | 0 | 0 | 0 |
| 58 | 31.2 | 0 | 0 | 0 |
| 59 | 31.2 | 6400 | 6.4 | 4960 |
| 60 | 31.1 | 6480 | 6.48 | 5030 |
| 61 | 30.9 | 7300 | 7.3 | 5686 |
| 62 | 30.8 | 7800 | 7.8 | 6086 |
| 63 | 30.7 | 9300 | 9.3 | 7269 |
| 64 | 30.5 | 12000 | 12 | 9412 |
| 65 | 30.4 | 12200 | 12.2 | 9585 |
| 66 | 30.6 | 11000 | 11 | 8613 |
| 67 | 30.6 | 10500 | 10.5 | 8221 |
| 68 | 30.7 | 9400 | 9.4 | 7347 |
| 69 | 30.7 | 8800 | 8.8 | 6878 |
| 70 | 30.8 | 7900 | 7.9 | 6164 |
| 71 | 30.8 | 7600 | 7.6 | 5930 |
| 72 | 30.9 | 6700 | 6.7 | 5219 |
| 73 | 30.9 | 6050 | 6.05 | 4713 |
| 74 | 31 | 5200 | 5.2 | 4044 |
| 75 | 31.1 | 4900 | 4.9 | 3804 |
| 76 | 31.2 | 4250 | 4.25 | 3294 |
| 77 | 31.2 | 3800 | 3.8 | 2945 |
| 78 | 31.2 | 3250 | 3.25 | 2519 |
| 79 | 31.3 | 3000 | 3 | 2321 |
| 80 | 31.3 | 2450 | 2.45 | 1895 |
| 81 | 31.3 | 2150 | 2.15 | 1663 |
| 82 | 31.3 | 1990 | 1.99 | 1540 |
| 83 | 31.3 | 1810 | 1.81 | 1400 |
| 84 | 31.3 | 1630 | 1.63 | 1261 |
| 85 | 31.3 | 1420 | 1.42 | 1099 |
| 86 | 31.3 | 1320 | 1.32 | 1021 |
| 87 | 31.2 | 1280 | 1.28 | 992 |
| 88 | 31.2 | 1210 | 1.21 | 938 |
| 89 | 31.2 | 1190 | 1.19 | 922 |
| 90 | 31.2 | 1120 | 1.12 | 868 |
| 91 | 31.1 | 1060 | 1.06 | 823 |
| 92 | 31.1 | 1020 | 1.02 | 792 |
| 93 | 31.1 | 1020 | 1.02 | 792 |
| 94 | 31 | 1000 | 1 | 778 |
| 95 | 31 | 990 | .99 | 770 |
| 96 | 30.8 | 990 | .99 | 772 |
| 97 | 30.7 | 990 | .99 | 774 |
| 98 | 30 | 1080 | 1.08 | 854 |
| 99 | 30 | 1060 | 1.06 | 839 |
| 100 | 30 | 1110 | 1.11 | 878 |
| 101 | 30.1 | 1120 | 1.12 | 885 |
| 102 | 30.1 | 1150 | 1.15 | 908 |
| 103 | 30.1 | 1170 | 1.17 | 924 |
| 104 | 30.2 | 1210 | 1.21 | 954 |
| 105 | 30.2 | 1260 | 1.26 | 993 |
| 106 | 30.2 | 1250 | 1.25 | 985 |
| 107 | 30.2 | 1250 | 1.25 | 985 |
| 108 | 30.2 | 1250 | 1.25 | 985 |

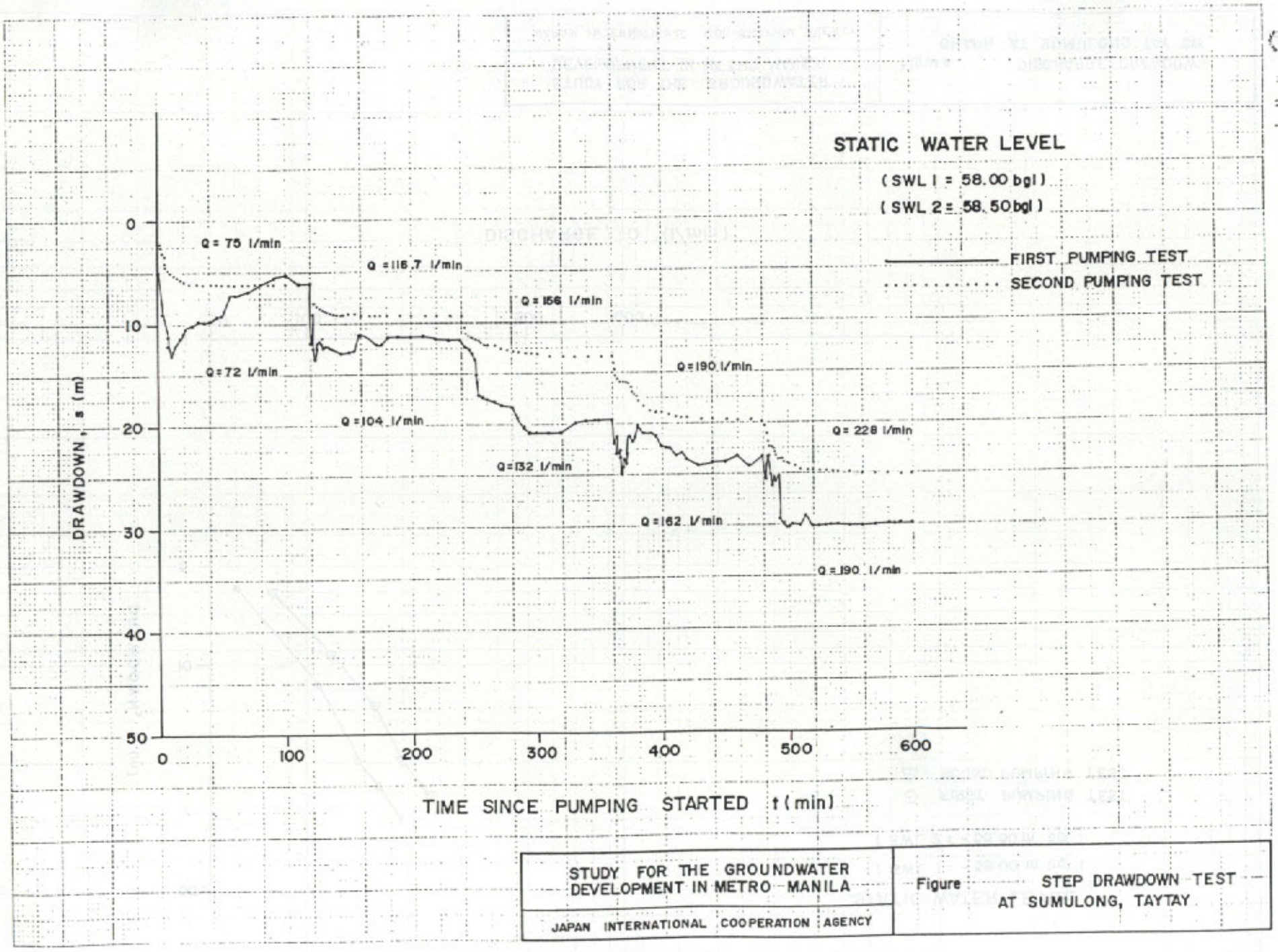
| | | | | |
|---|---|---|---|---|
| 109 | 30.2 | 1250 | 1.25 | 985 |
| 110 | 30.2 | 1250 | 1.25 | 985 |
| 111 | 30.2 | 1250 | 1.25 | 985 |
| 112 | 30.2 | 1250 | 1.25 | 985 |
| 113 | 30.2 | 1240 | 1.24 | 978 |
| 114 | 30.2 | 1240 | 1.24 | 978 |
| 115 | 30.3 | 1240 | 1.24 | 976 |
| 116 | 30.3 | 1240 | 1.24 | 976 |
| 117 | 30.3 | 1230 | 1.23 | 968 |
| 118 | 30.3 | 1220 | 1.22 | 960 |
| 119 | 30.3 | 1190 | 1.19 | 937 |
| 120 | 30.3 | 1180 | 1.18 | 929 |
| 121 | 30.4 | 1190 | 1.19 | 935 |
| 122 | 30.4 | 1190 | 1.19 | 935 |
| 123 | 30.4 | 1190 | 1.19 | 935 |
| 124 | 30.4 | 1190 | 1.19 | 935 |
| 125 | 30.4 | 1180 | 1.18 | 927 |
| 126 | 30.4 | 1180 | 1.18 | 927 |
| 127 | 30.4 | 1170 | 1.17 | 919 |
| 128 | 30.4 | 1160 | 1.16 | 911 |
| 129 | 30.4 | 1170 | 1.17 | 919 |
| 130 | 30.5 | 1170 | 1.17 | 918 |
| 131 | 30.5 | 1160 | 1.16 | 910 |
| 132 | 30.5 | 1160 | 1.16 | 910 |
| 133 | 30.6 | 1160 | 1.16 | 908 |
| 134 | 30.6 | 1150 | 1.15 | 900 |
| 135 | 30.7 | 1140 | 1.14 | 891 |
| 136 | 30.7 | 1110 | 1.11 | 868 |
| 137 | 30.7 | 1110 | 1.11 | 868 |
| 138 | 30.7 | 1110 | 1.11 | 868 |
| 139 | 30.7 | 1110 | 1.11 | 868 |
| 140 | 30.8 | 1100 | 1.1 | 858 |
| 141 | 30.8 | 1110 | 1.11 | 866 |
| 142 | 30.8 | 1110 | 1.11 | 866 |
| 143 | 30.8 | 1110 | 1.11 | 866 |
| 144 | 30.9 | 1110 | 1.11 | 865 |
| 145 | 30.9 | 1110 | 1.11 | 865 |
| 146 | 30.9 | 1110 | 1.11 | 865 |
| 147 | 31 | 1110 | 1.11 | 863 |
| 148 | 31 | 1110 | 1.11 | 863 |
| 149 | 31 | 1110 | 1.11 | 863 |
| 150 | 31 | 1120 | 1.12 | 871 |
| 151 | 31.1 | 1110 | 1.11 | 862 |
| 152 | 31.2 | 1110 | 1.11 | 860 |
| 153 | 31.2 | 1110 | 1.11 | 860 |
| 154 | 31.2 | 1110 | 1.11 | 860 |
| 155 | 31.2 | 1110 | 1.11 | 860 |
| 156 | 31.2 | 1110 | 1.11 | 860 |
| 157 | 31.2 | 1110 | 1.11 | 860 |
| 158 | 31.3 | 1120 | 1.12 | 866 |
| 159 | 31.3 | 1120 | 1.12 | 866 |
| 160 | 31.3 | 1120 | 1.12 | 866 |
| 161 | 31.4 | 1120 | 1.12 | 865 |
| 162 | 31.4 | 1120 | 1.12 | 865 |
| 163 | 31.5 | 1120 | 1.12 | 864 |
| 164 | 31.5 | 1110 | 1.11 | 856 |
| 165 | 31.5 | 1110 | 1.11 | 856 |
| 166 | 31.6 | 1110 | 1.11 | 854 |
| 167 | 31.6 | 1090 | 1.09 | 839 |
| 168 | 31.8 | 1020 | 1.02 | 782 |

| | | | | |
|---|---|---|---|---|
| 169 | 31.9 | 990 | .99 | 758 |
| 170 | 32.2 | 930 | .93 | 709 |
| 171 | 32.2 | 925 | .925 | 705 |
| 172 | 32.3 | 880 | .88 | 669 |
| 173 | 32.4 | 840 | .84 | 638 |
| 174 | 32.5 | 820 | .82 | 622 |
| 175 | 32.6 | 795 | .795 | 602 |
| 176 | 32.7 | 780 | .78 | 589 |
| 177 | 32.7 | 760 | .76 | 574 |
| 178 | 32.7 | 750 | .75 | 567 |
| 179 | 32.7 | 740 | .74 | 559 |
| 180 | 32.7 | 730 | .73 | 552 |
| 181 | 32.8 | 730 | .73 | 551 |
| 182 | 32.8 | 720 | .72 | 543 |
| 183 | 32.8 | 720 | .72 | 543 |
| 184 | 32.8 | 710 | .71 | 536 |
| 185 | 32.8 | 705 | .705 | 532 |
| 186 | 32.8 | 700 | .7 | 528 |
| 187 | 32.8 | 690 | .69 | 521 |
| 188 | 32.8 | 690 | .69 | 521 |
| 189 | 32.7 | 685 | .685 | 518 |
| 190 | 32.7 | 685 | .685 | 518 |
| 191 | 32.8 | 685 | .685 | 517 |
| 192 | 32.8 | 685 | .685 | 517 |
| 193 | 32.8 | 690 | .69 | 521 |
| 194 | 32.9 | 690 | .69 | 520 |
| 195 | 32.9 | 690 | .69 | 520 |
| 196 | 32.9 | 695 | .695 | 523 |
| 197 | 33 | 695 | .695 | 523 |
| 198 | 33 | 700 | .7 | 526 |
| 199 | 33.1 | 700 | .7 | 525 |
| 200 | 33.1 | 710 | .71 | 533 |
| 201 | 33.2 | 710 | .71 | 532 |
| 202 | 33.2 | 715 | .715 | 536 |
| 203 | 33.2 | 720 | .72 | 540 |
| 204 | 33.3 | 725 | .725 | 542 |
| 205 | 33.3 | 730 | .73 | 546 |
| 206 | 33.4 | 735 | .735 | 549 |
| 207 | 33.4 | 740 | .74 | 553 |
| 208 | 33.4 | 745 | .745 | 556 |
| 209 | 33.5 | 755 | .755 | 563 |
| 210 | 33.5 | 760 | .76 | 567 |
| 211 | 33.5 | 770 | .77 | 574 |
| 212 | 33.6 | 770 | .77 | 573 |
| 213 | 33.6 | 785 | .785 | 584 |
| 214 | 33.6 | 785 | .785 | 584 |
| 215 | 33.6 | 790 | .79 | 588 |
| 216 | 33.6 | 800 | .8 | 596 |
| 217 | 33.7 | 815 | .815 | 606 |
| 218 | 33.7 | 830 | .83 | 617 |
| 219 | 33.7 | 830 | .83 | 617 |
| 220 | 33.7 | 840 | .84 | 624 |
| 221 | 33.8 | 850 | .85 | 631 |
| 222 | 33.8 | 860 | .86 | 638 |
| 223 | 33.9 | 865 | .865 | 641 |
| 224 | 33.9 | 880 | .88 | 652 |
| 225 | 33.9 | 885 | .885 | 656 |
| 226 | 33.9 | 890 | .89 | 659 |
| 227 | 33.9 | 905 | .905 | 670 |
| 228 | 33.9 | 920 | .92 | 682 |

| | | | | |
|---|---|---|---|---|
| 229 | 34 | 930 | .93 | 688 |
| 230 | 34 | 940 | .94 | 695 |
| 231 | 34 | 960 | .96 | 710 |
| 232 | 34.1 | 970 | .97 | 716 |
| 233 | 34.1 | 985 | .985 | 727 |
| 234 | 34.1 | 995 | .995 | 735 |
| 235 | 34.1 | 1005 | 1.005 | 742 |
| 236 | 34.1 | 1010 | 1.01 | 746 |
| 237 | 34.2 | 1020 | 1.02 | 752 |
| 238 | 34.2 | 1030 | 1.03 | 759 |
| 239 | 34.2 | 1030 | 1.03 | 759 |
| 240 | 34.2 | 1030 | 1.03 | 759 |
| 241 | 34.2 | 1040 | 1.04 | 767 |
| 242 | 34.2 | 1030 | 1.03 | 759 |
| 243 | 34.2 | 1030 | 1.03 | 759 |
| 244 | 34.2 | 1030 | 1.03 | 759 |

3.2.2

# ANALYSIS OF PUMPING TEST DATA

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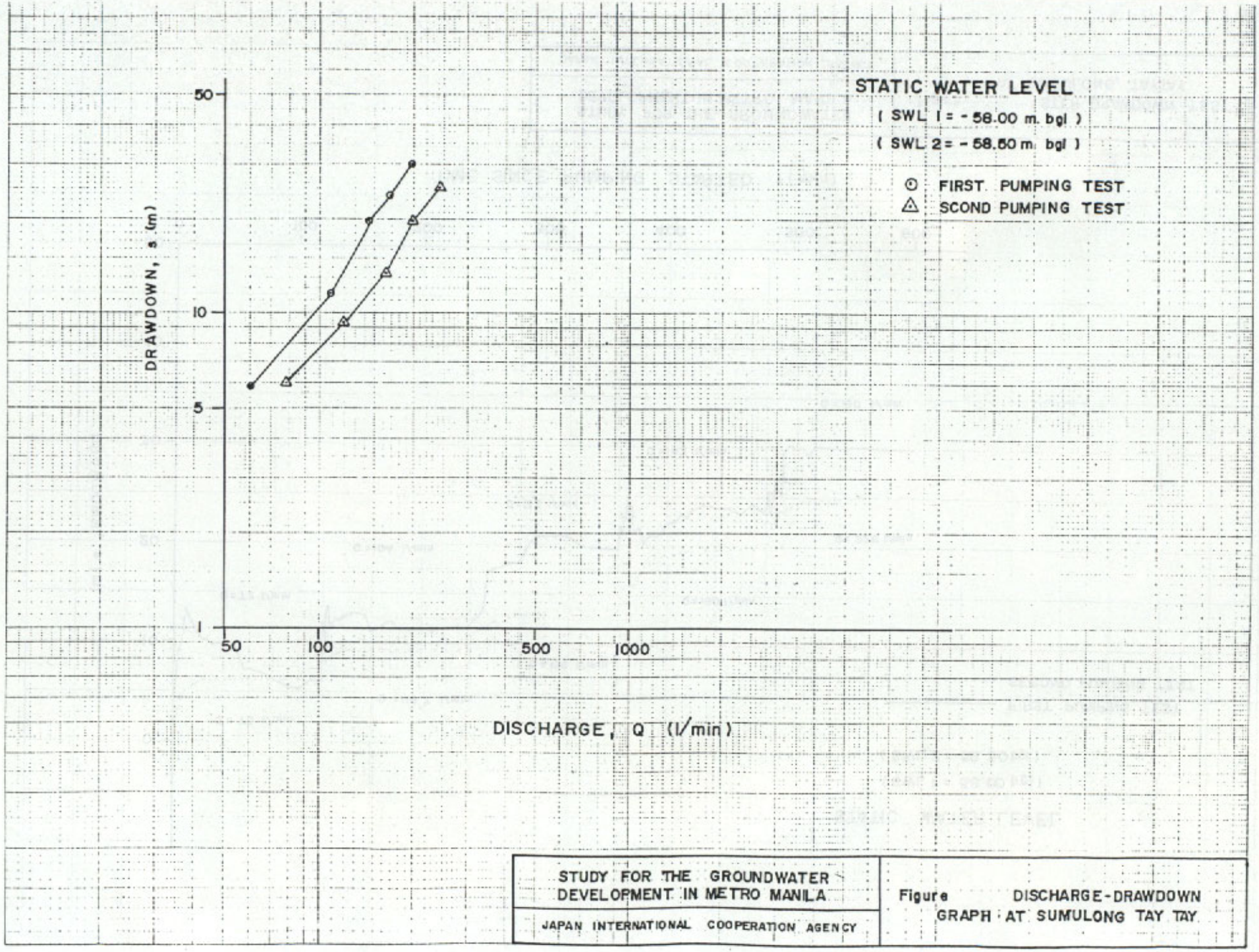
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure STEP DRAWDOWN TEST AT SUMULONG, TAYTAY |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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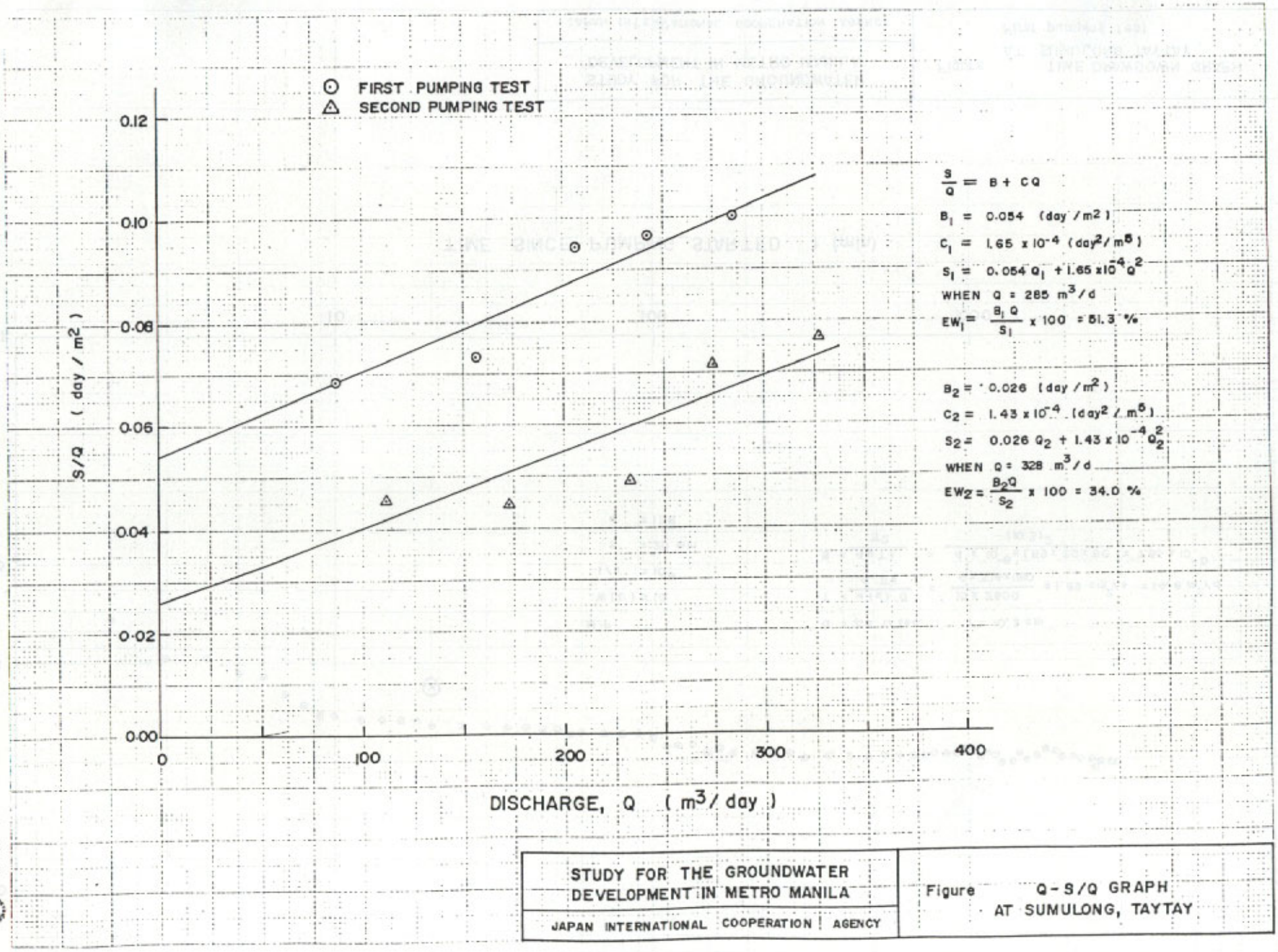
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | Figure DISCHARGE-DRAWDOWN GRAPH AT SUMULONG TAY TAY |

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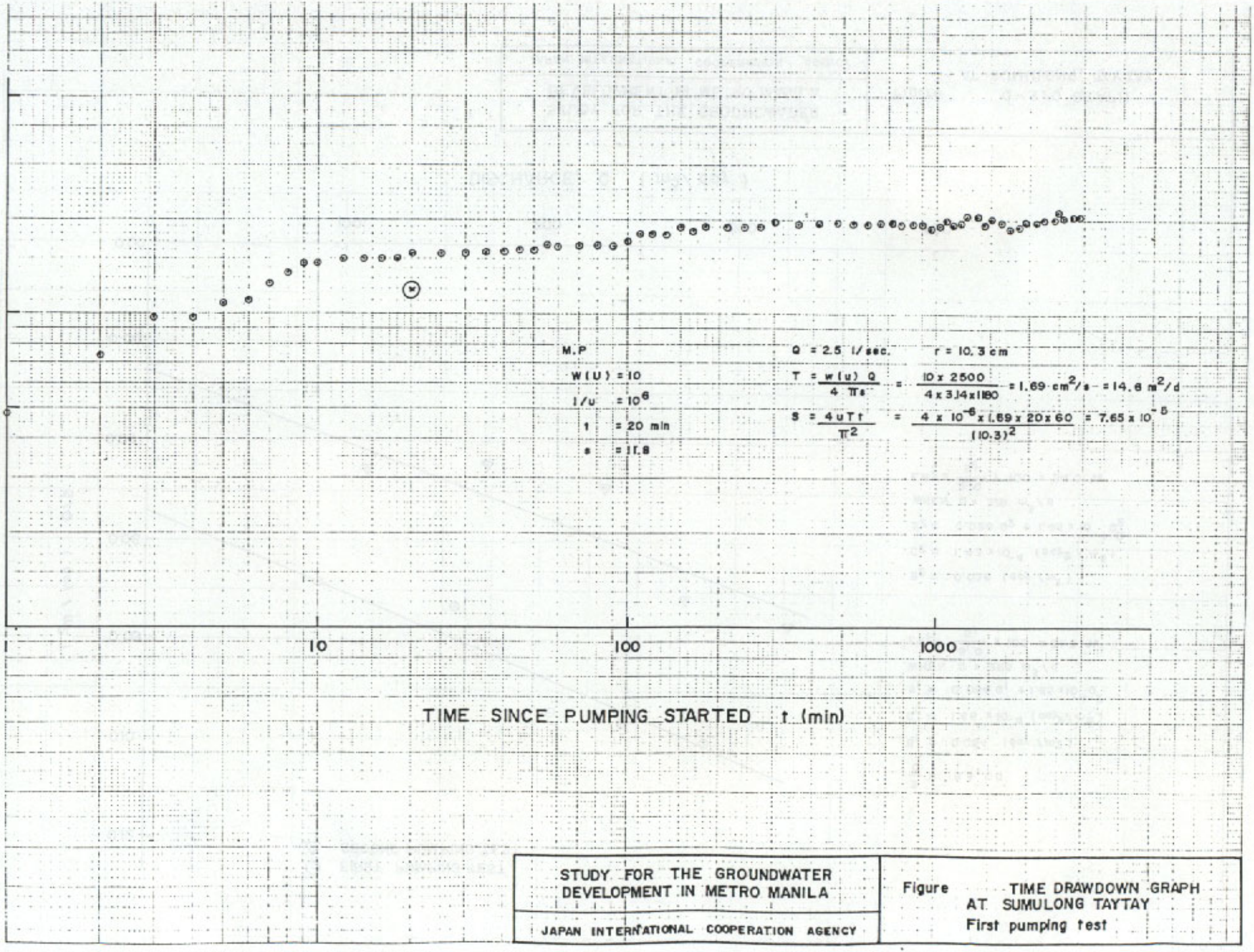
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | Figure Q - S/Q GRAPH AT SUMULONG, TAYTAY |

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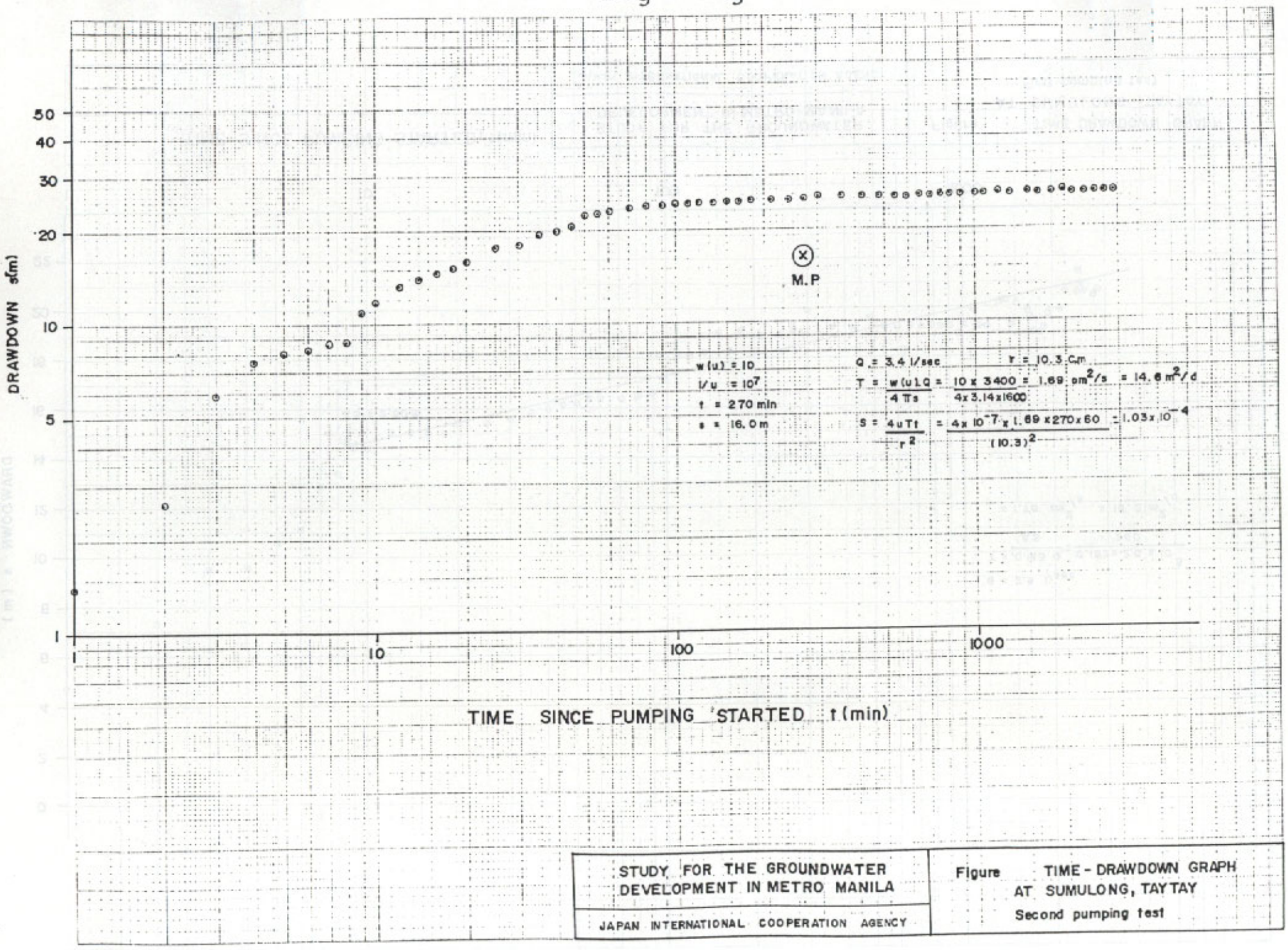
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | Figure TIME DRAWDOWN GRAPH AT SUMULONG TAYTAY<br>First pumping test |

Log Log

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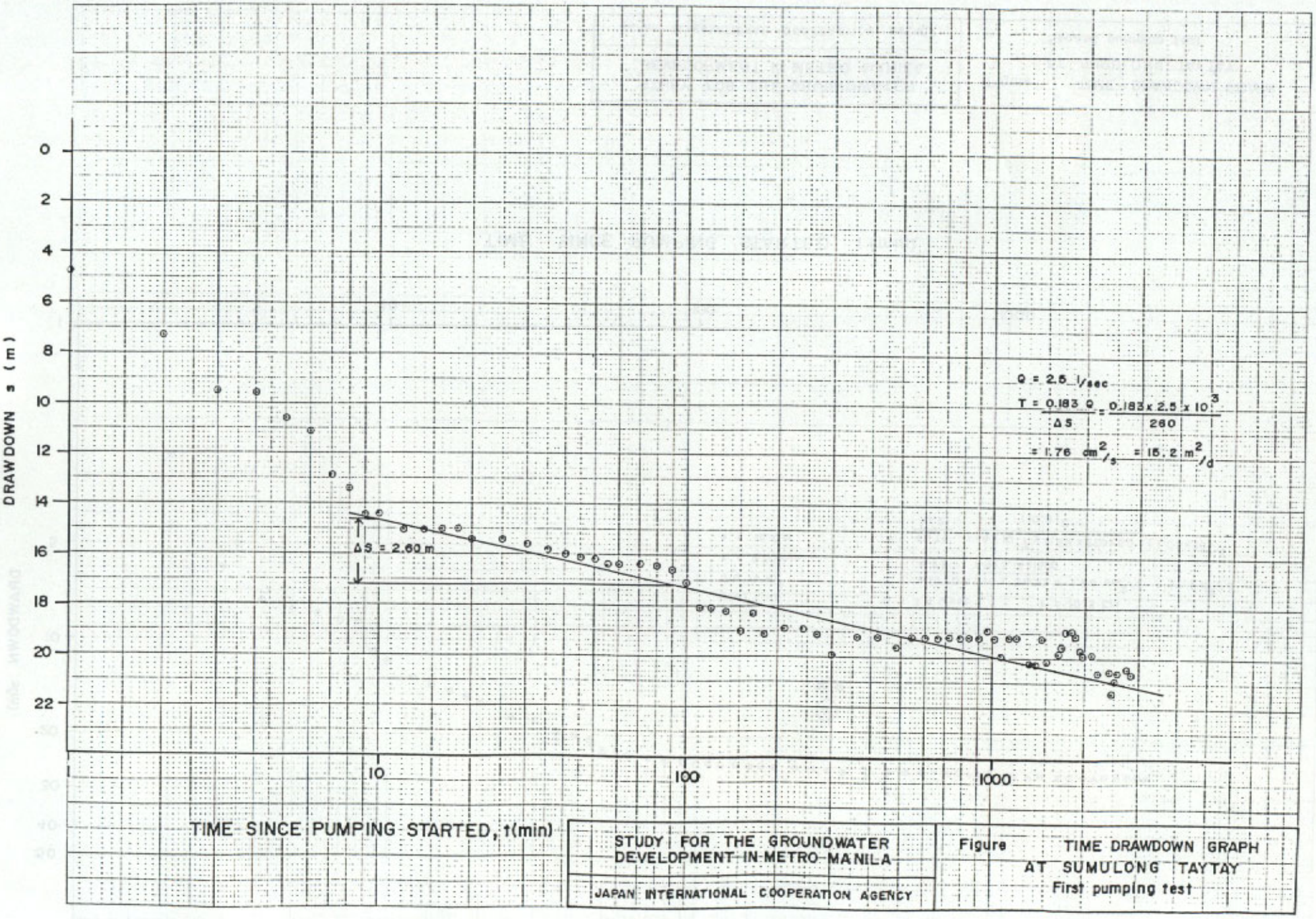
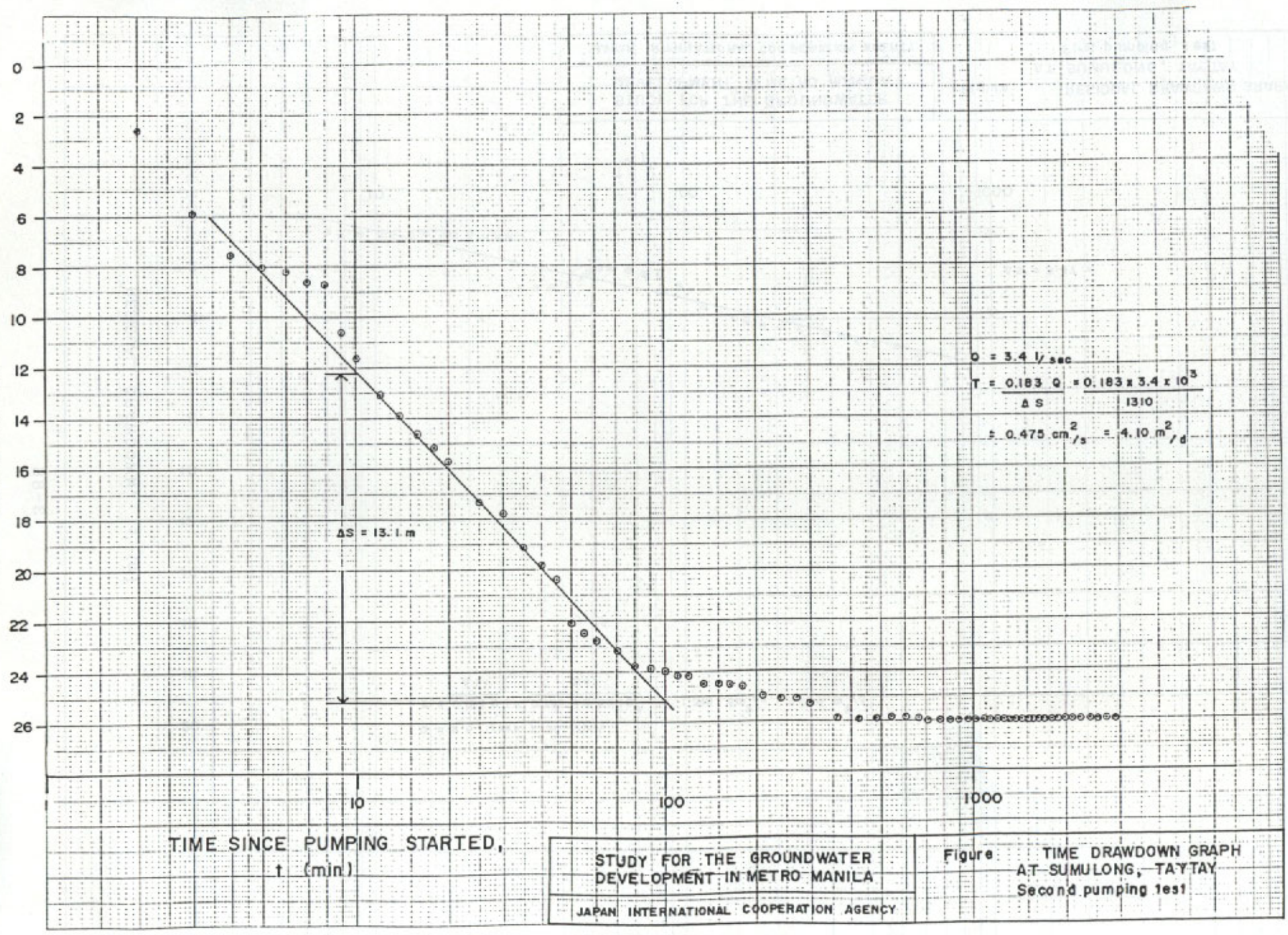
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME - DRAWDOWN GRAPH AT SUMULONG, TAYTAY Second pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO-MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

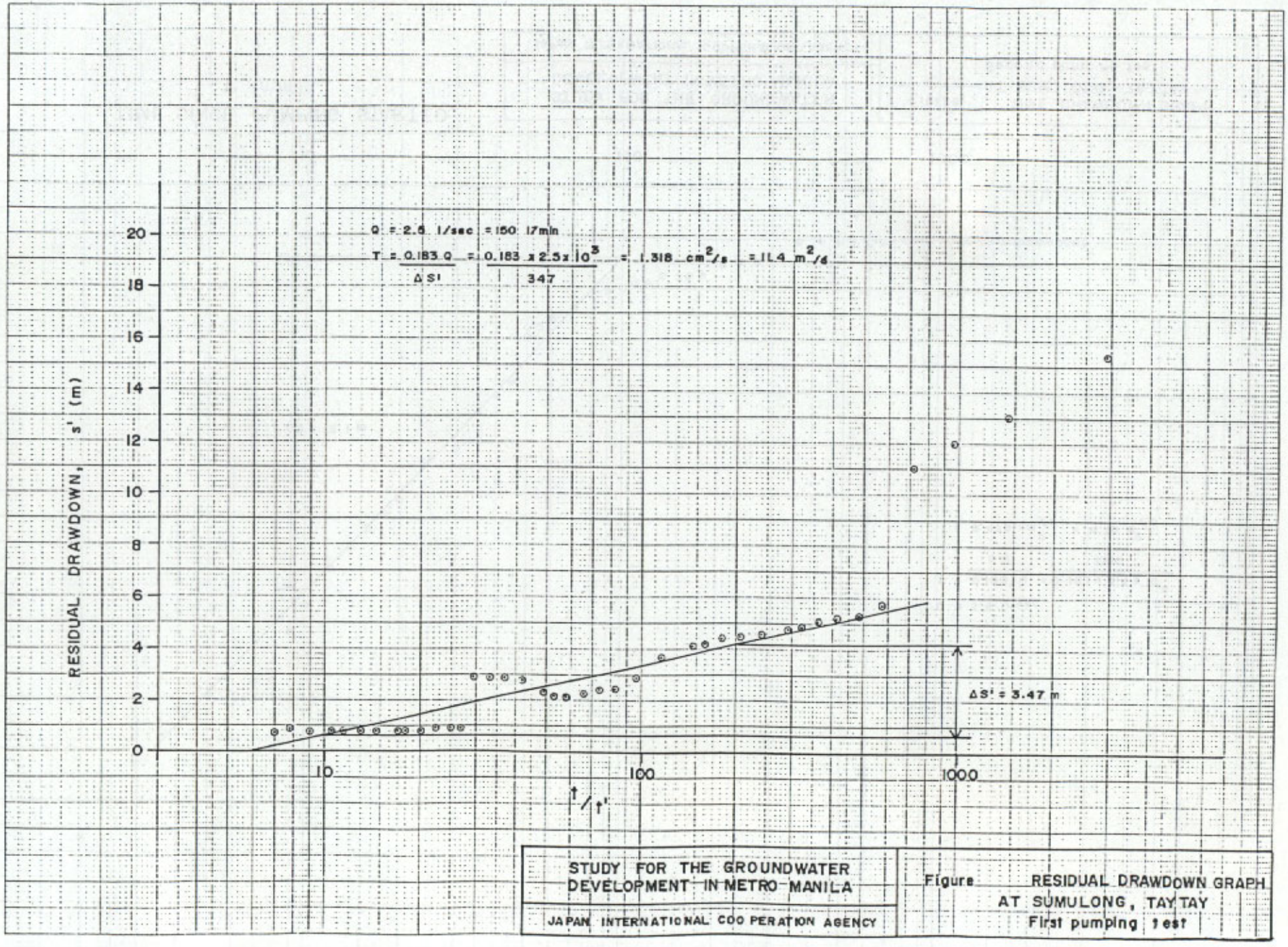
Figure TIME DRAWDOWN GRAPH AT SUMULONG TAYTAY
First pumping test

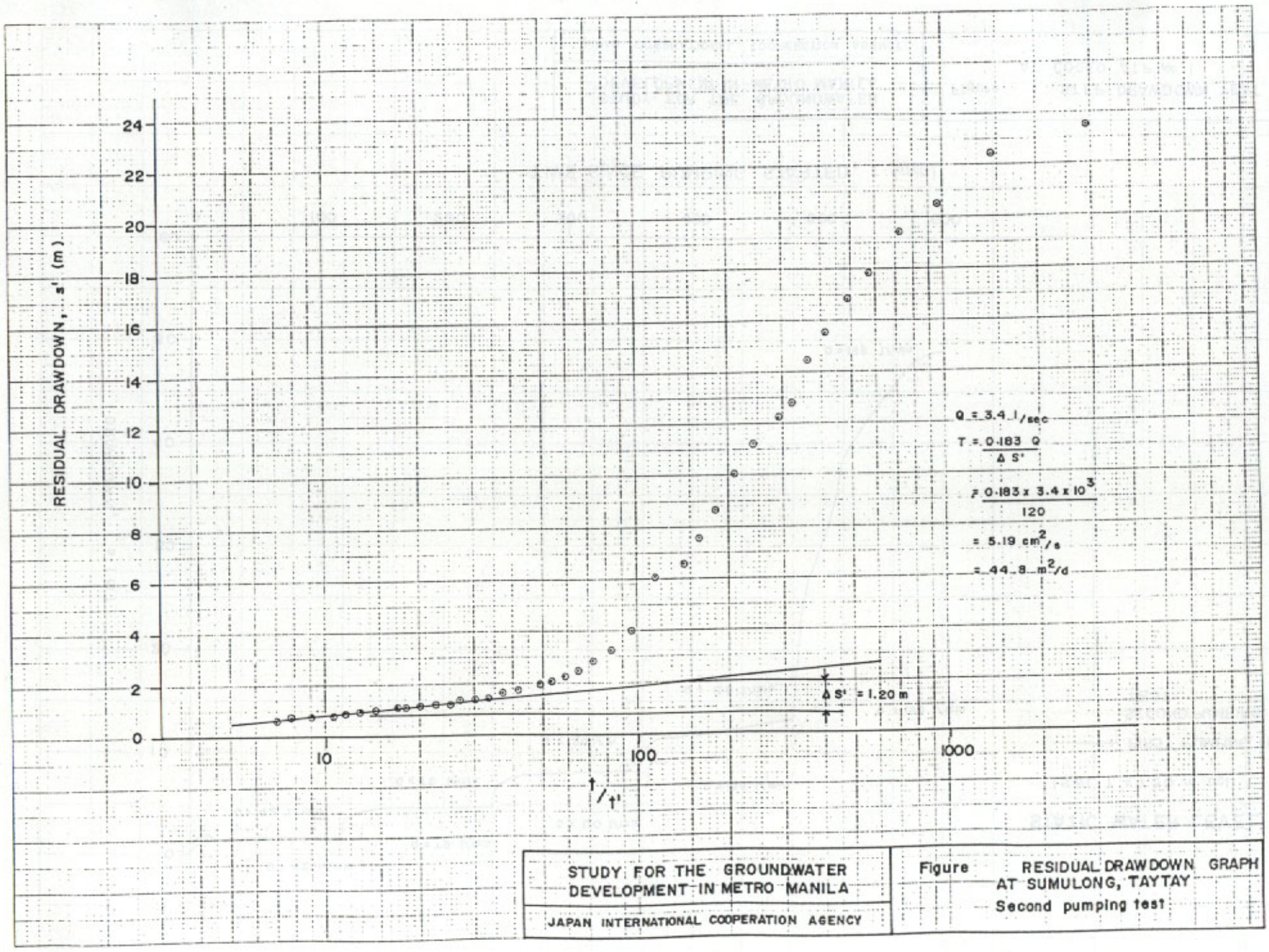



STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure TIME DRAWDOWN GRAPH AT SUMULONG, TAYTAY Second pumping test

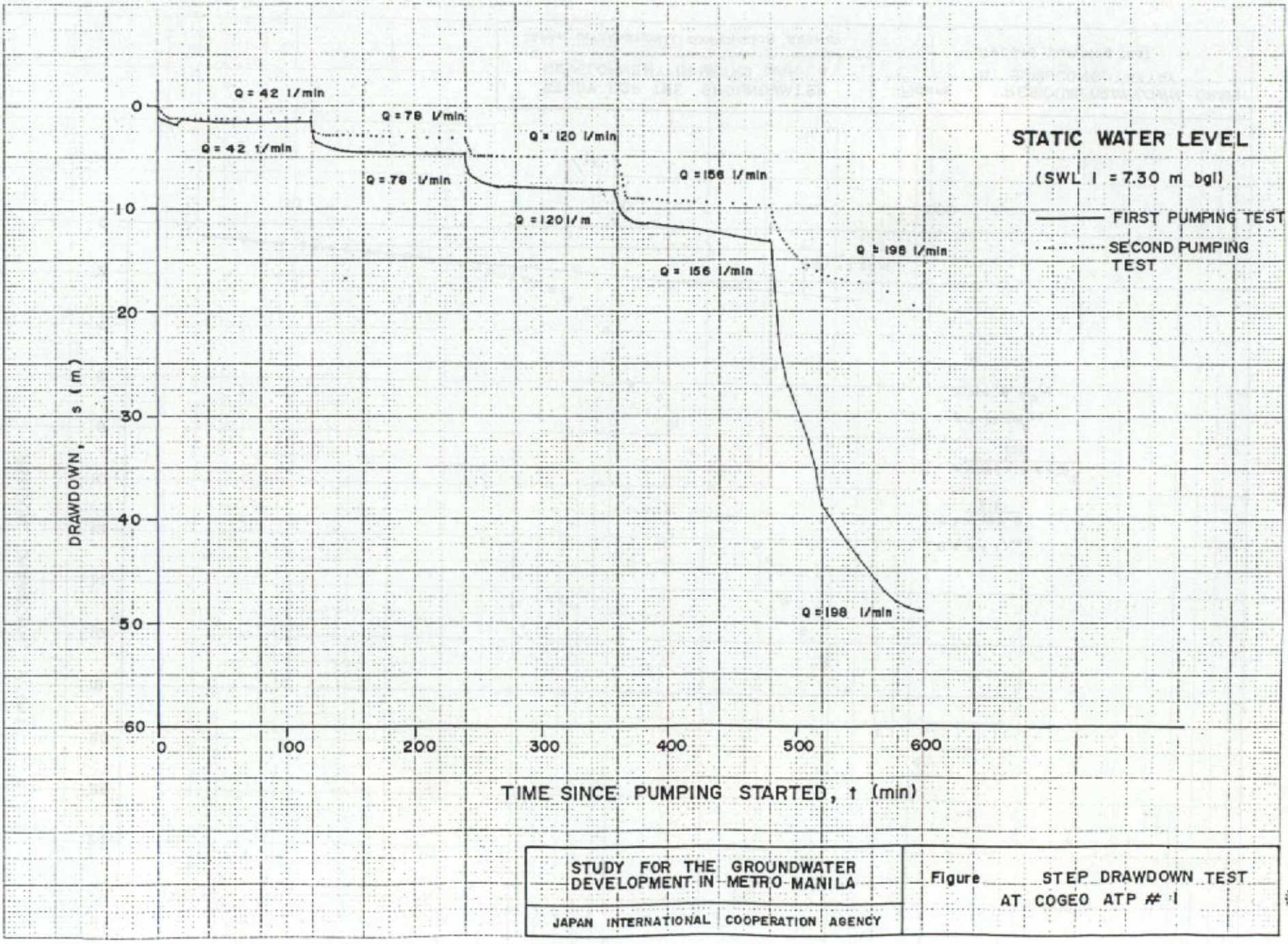

Q = 2.5 l/sec = 150 l/min
T = 0.183 Q / ΔS' = 0.183 x 2.5 x 10^3 / 3.47 = 1.318 cm^2/s = 11.4 m^2/d
RESIDUAL DRAWDOWN, s' (m)
20
18
16
14
12
10
8
6
4
2
0
ΔS' = 3.47 m
10
100
1000
t/t'
STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO-MANILA
JAPAN INTERNATIONAL COOPERATION AGENCY
Figure RESIDUAL DRAWDOWN GRAPH AT SUMULONG, TAYTAY First pumping test




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure RESIDUAL DRAWDOWN GRAPH AT SUMULONG, TAYTAY
Second pumping test

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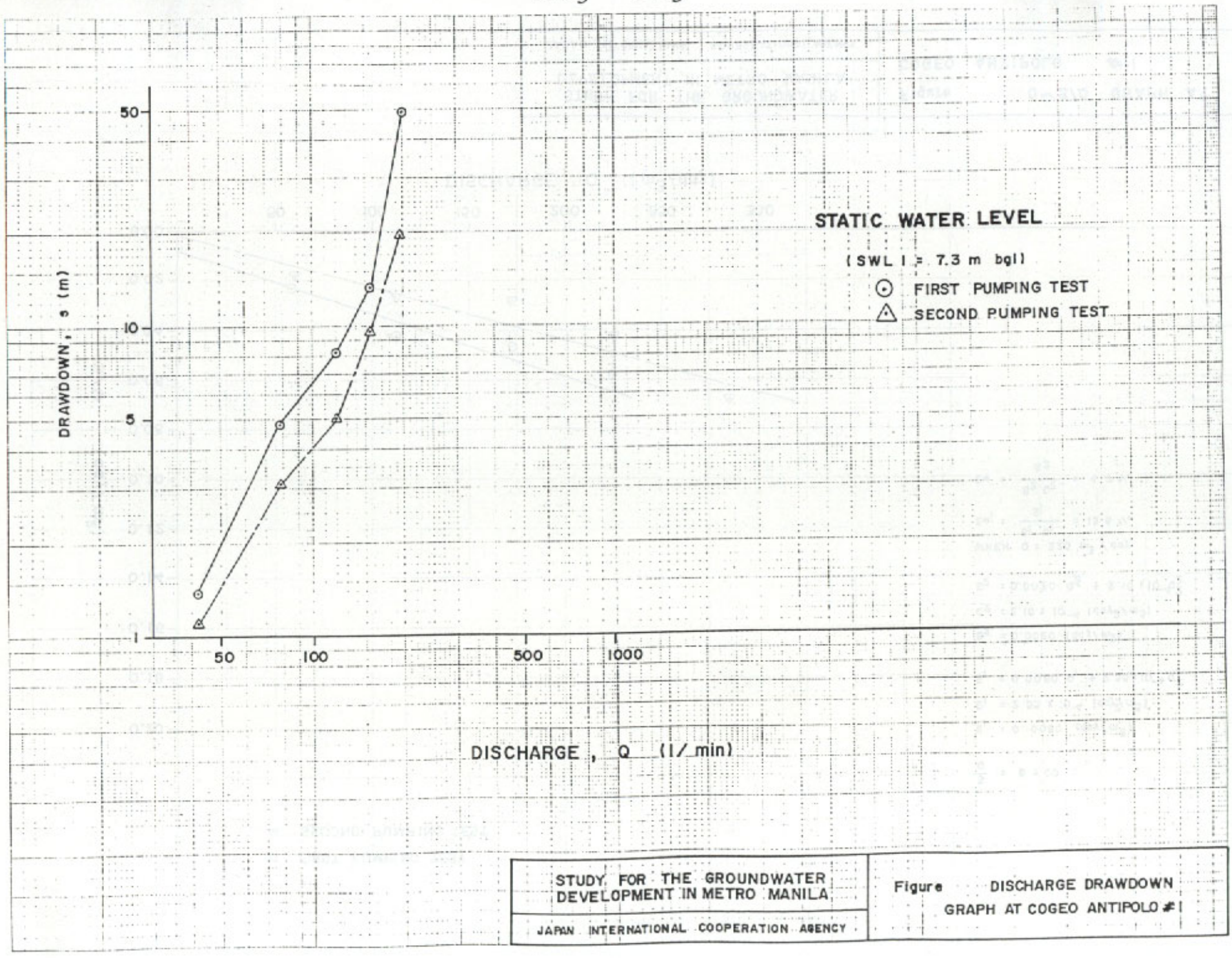
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure STEP DRAWDOWN TEST AT COGEO ATP # 1 |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

Log Log

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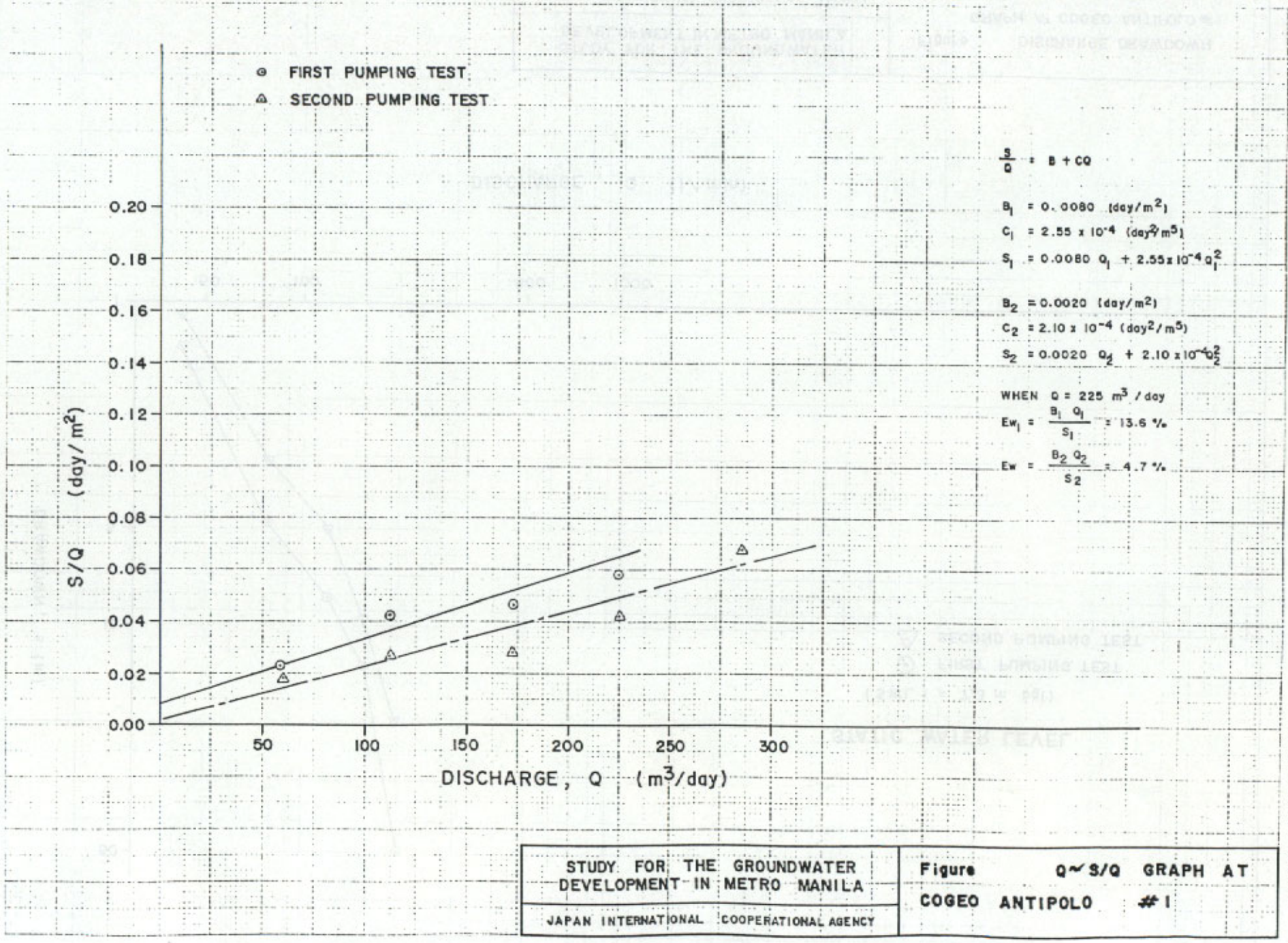
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | Figure DISCHARGE DRAWDOWN GRAPH AT COGEO ANTIPOLO #1 |

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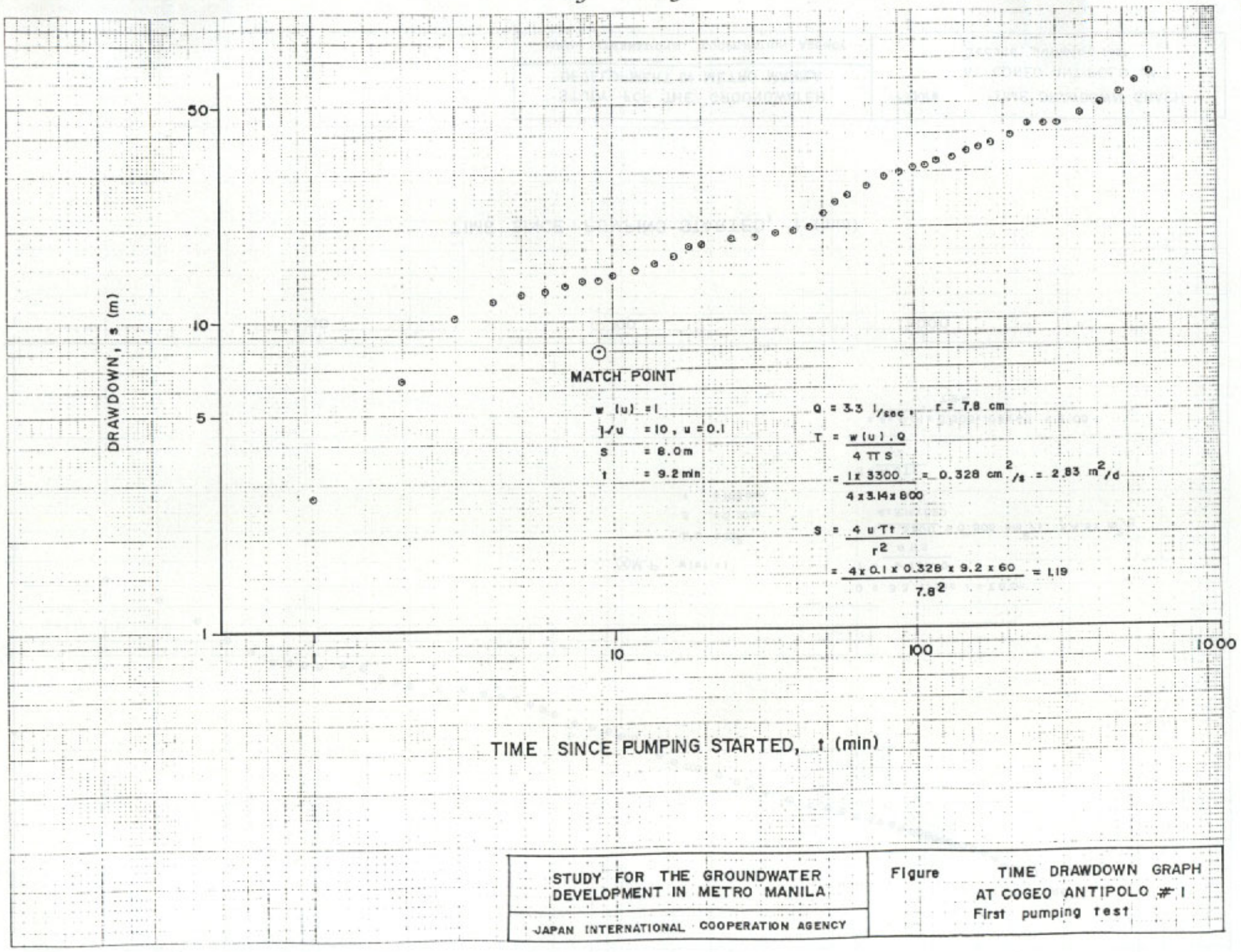
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure Q~S/Q GRAPH AT COGEO ANTIPOLO #1 |
| JAPAN INTERNATIONAL COOPERATIONAL AGENCY | |

Log Log

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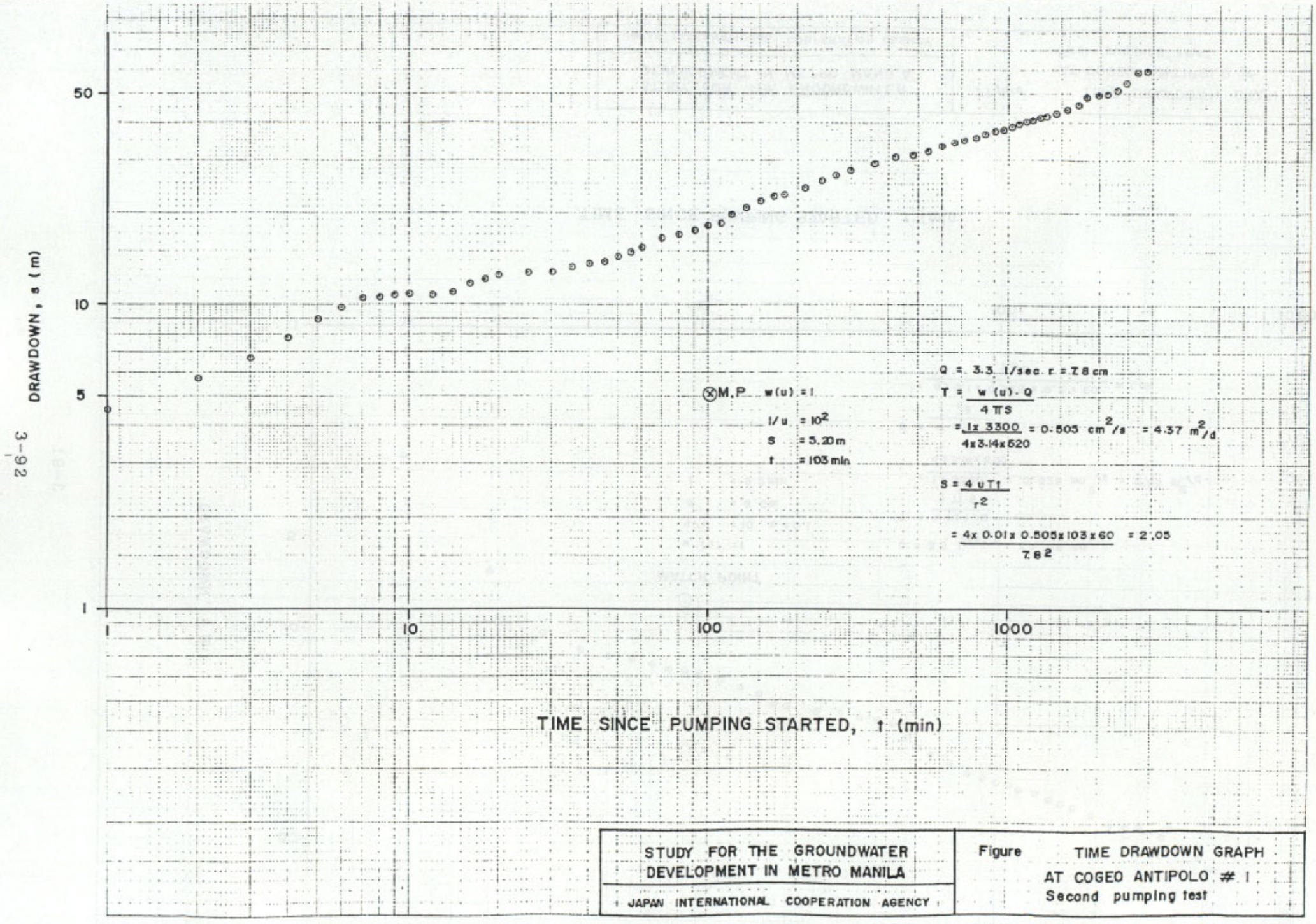
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME DRAWDOWN GRAPH AT COGEO ANTIPOLO #1 First pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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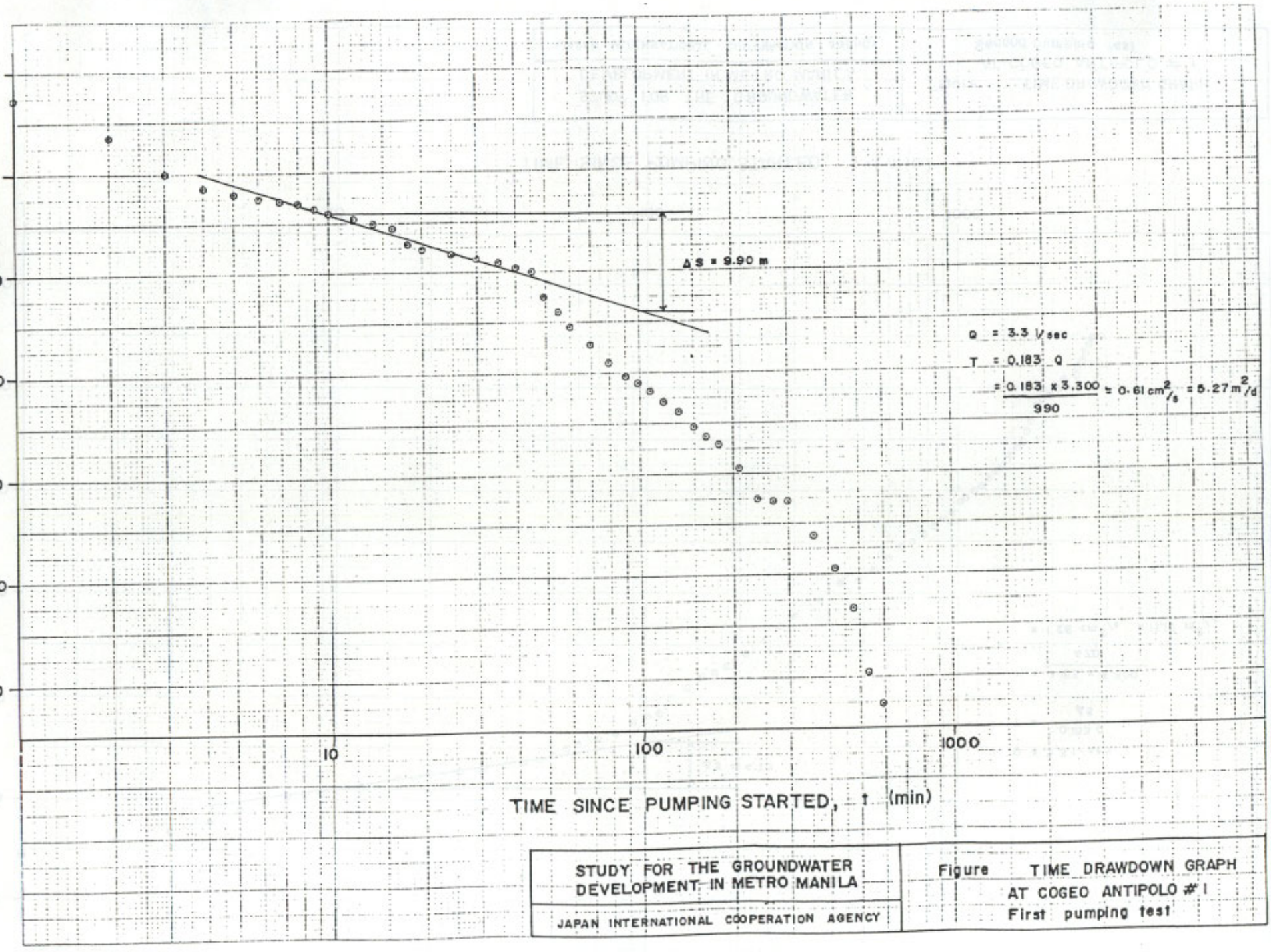
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | Figure TIME DRAWDOWN GRAPH AT COGEO ANTIPOLO # 1 Second pumping test |

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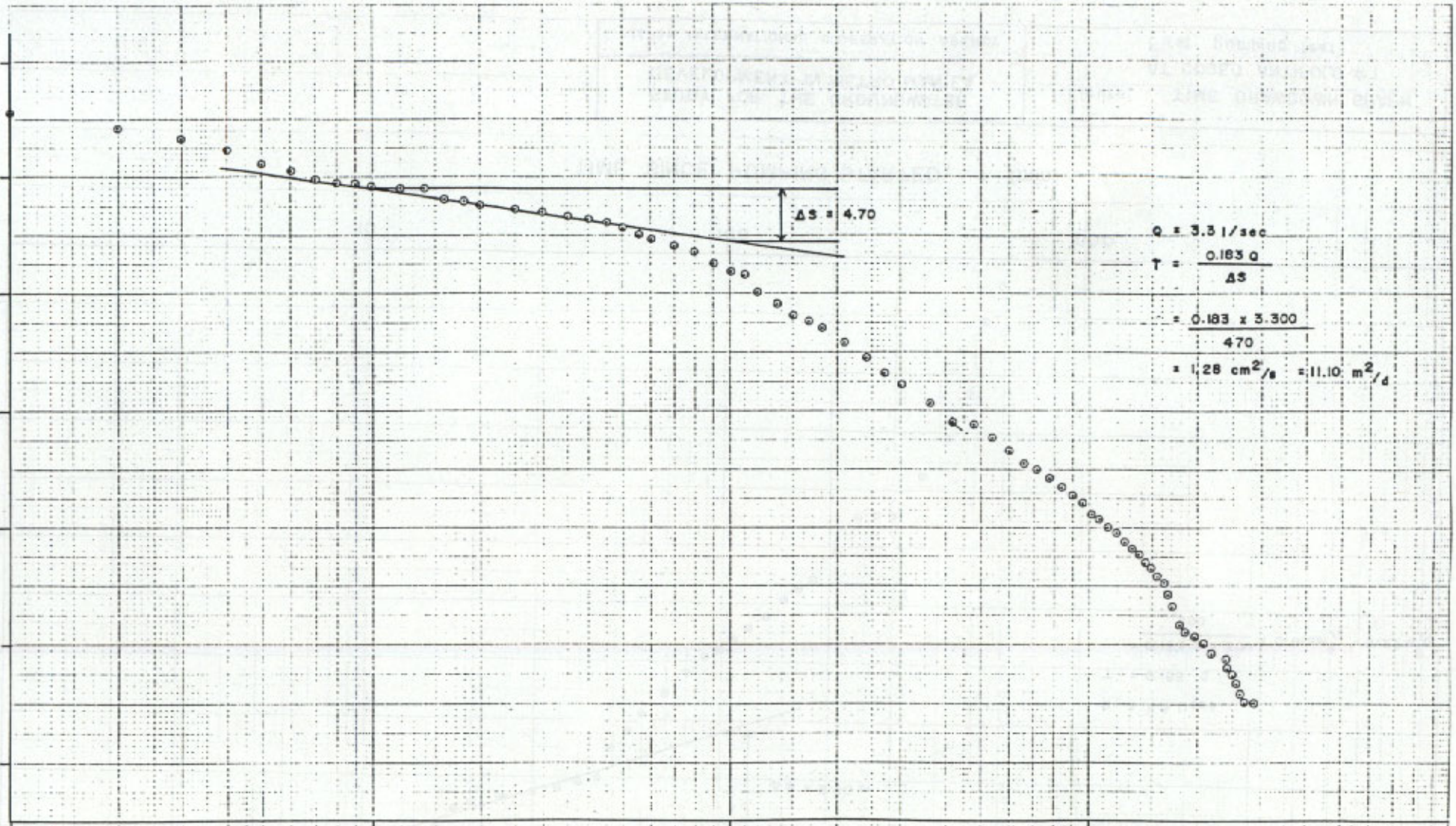
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME DRAWDOWN GRAPH AT COGEO ANTIPOLO #1 First pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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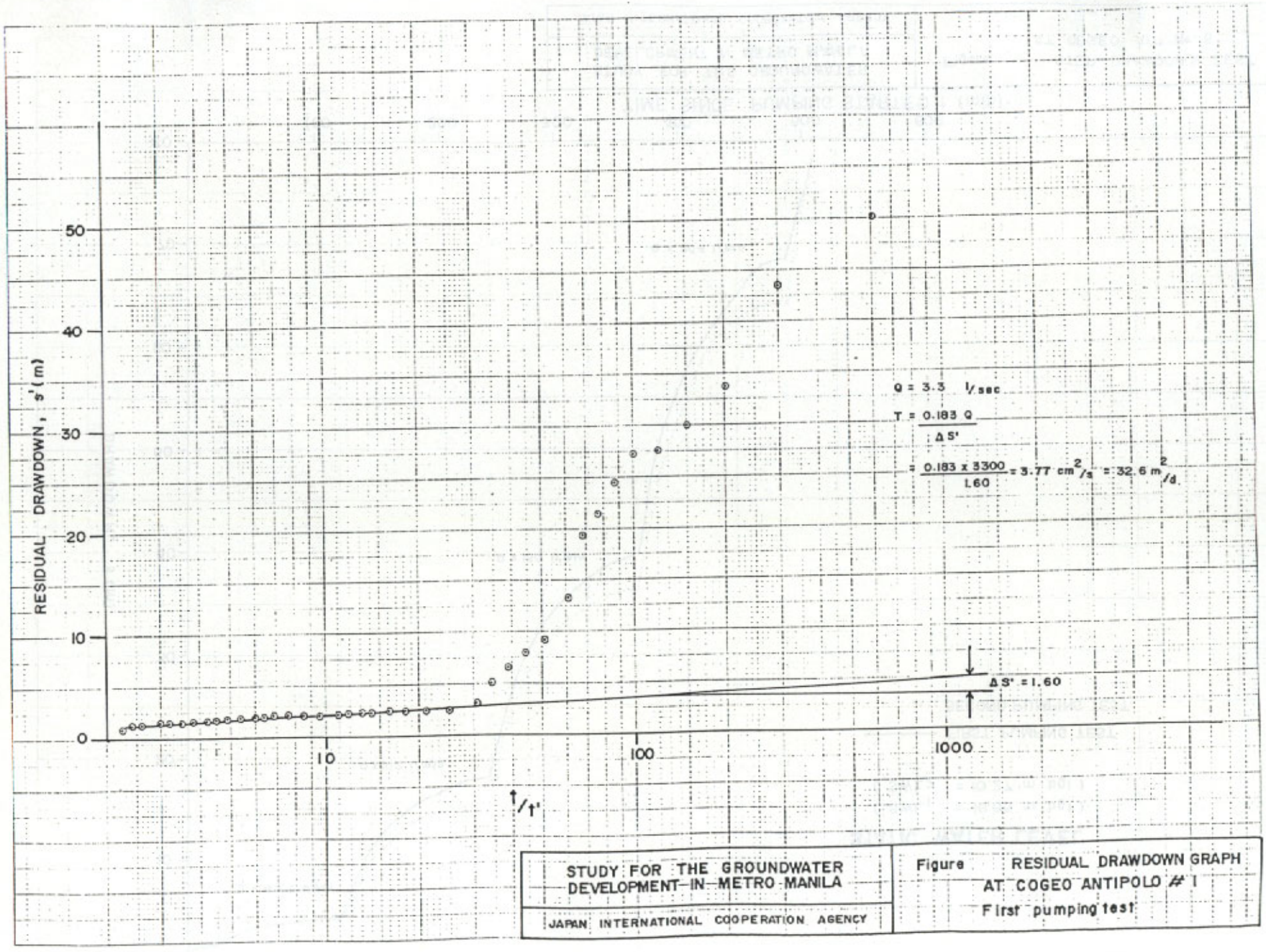
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | Figure TIME DRAWDOWN GRAPH AT COGEO ANTIPOLO # 1<br>Second pumping test |

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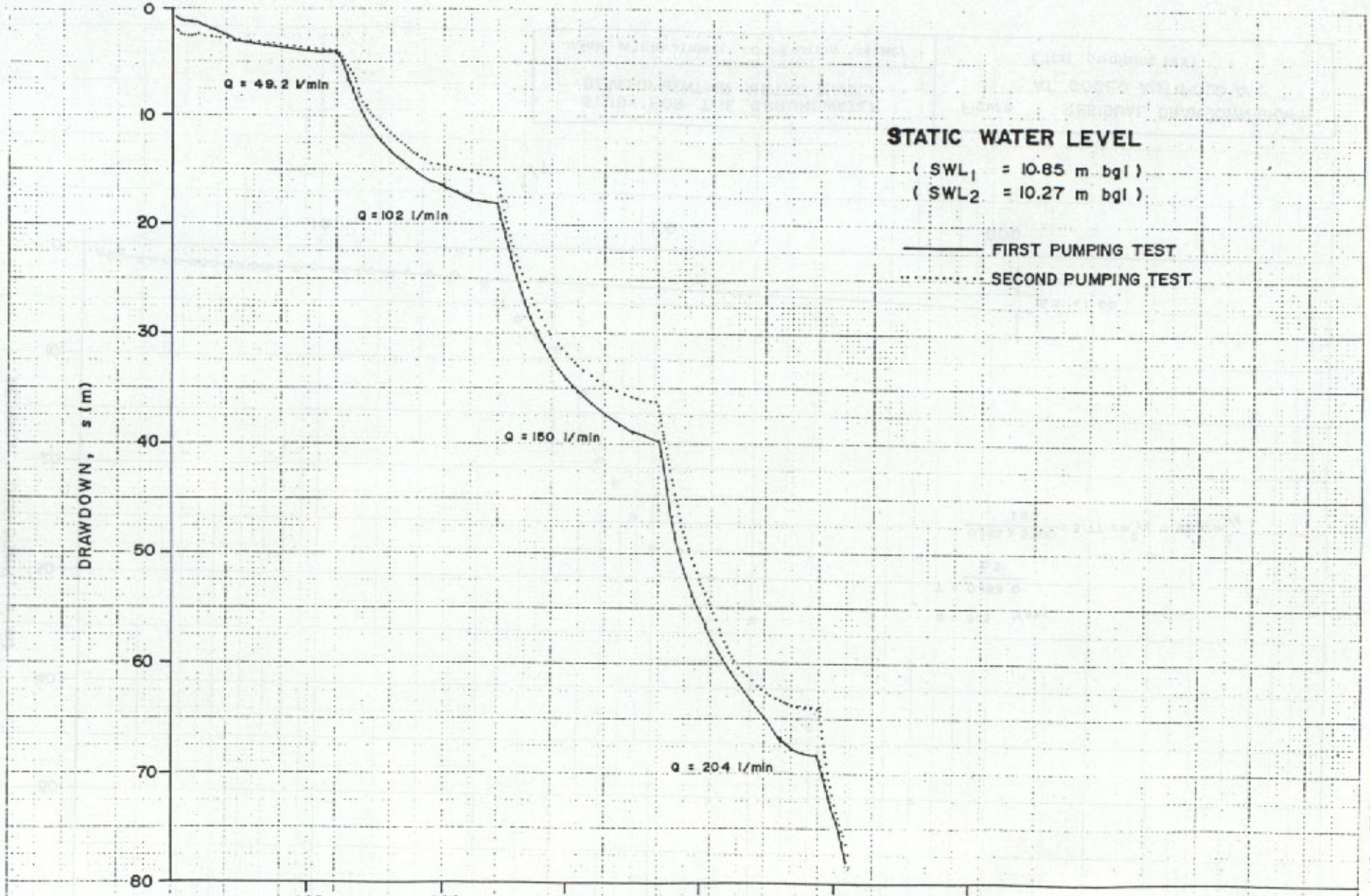
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure RESIDUAL DRAWDOWN GRAPH AT COGEO ANTIPOLO # 1 First pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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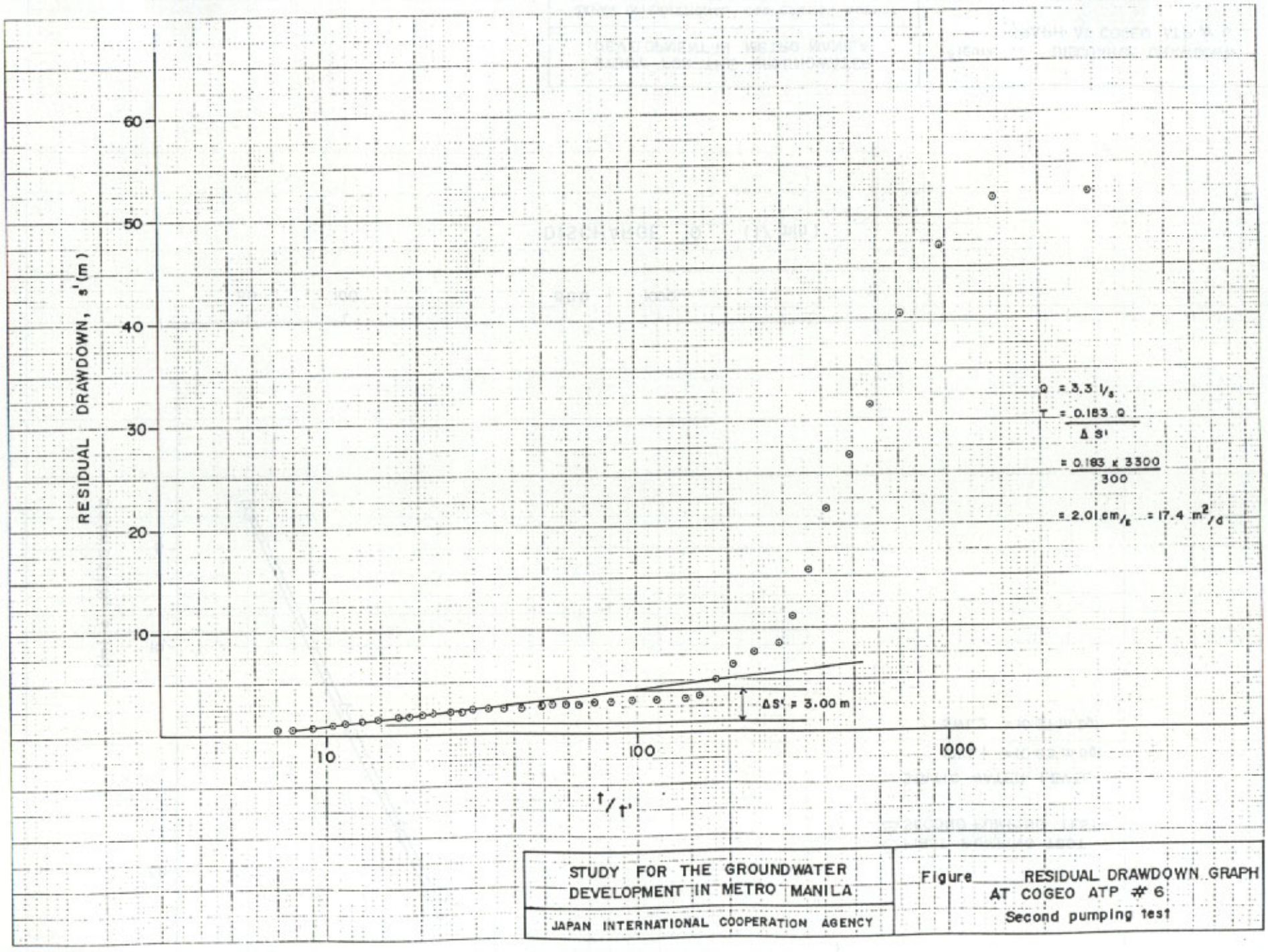
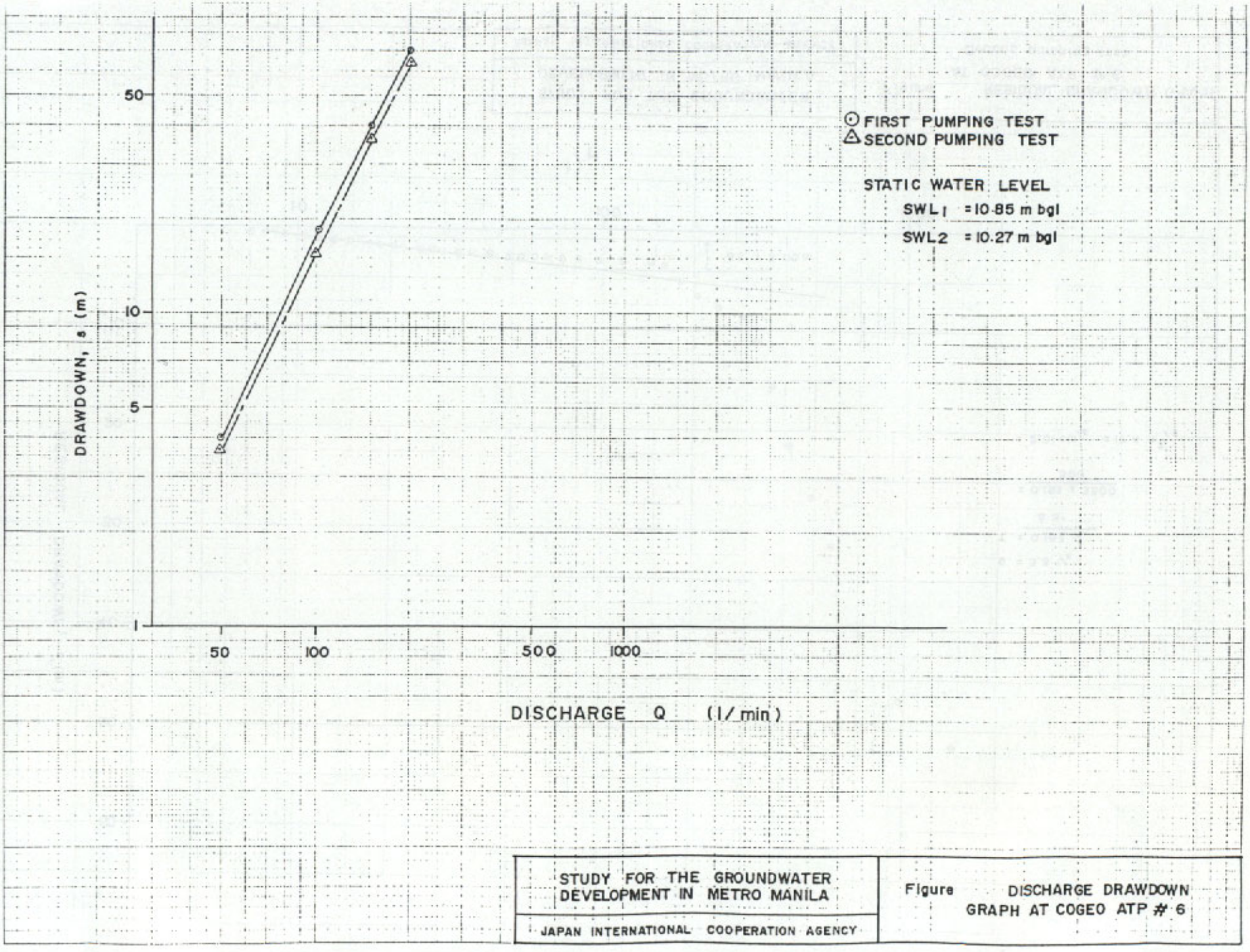
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure STEP DRAWDOWN TEST AT COGEO ATP # 6 |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure RESIDUAL DRAWDOWN GRAPH AT COGEO ATP # 6
Second pumping test

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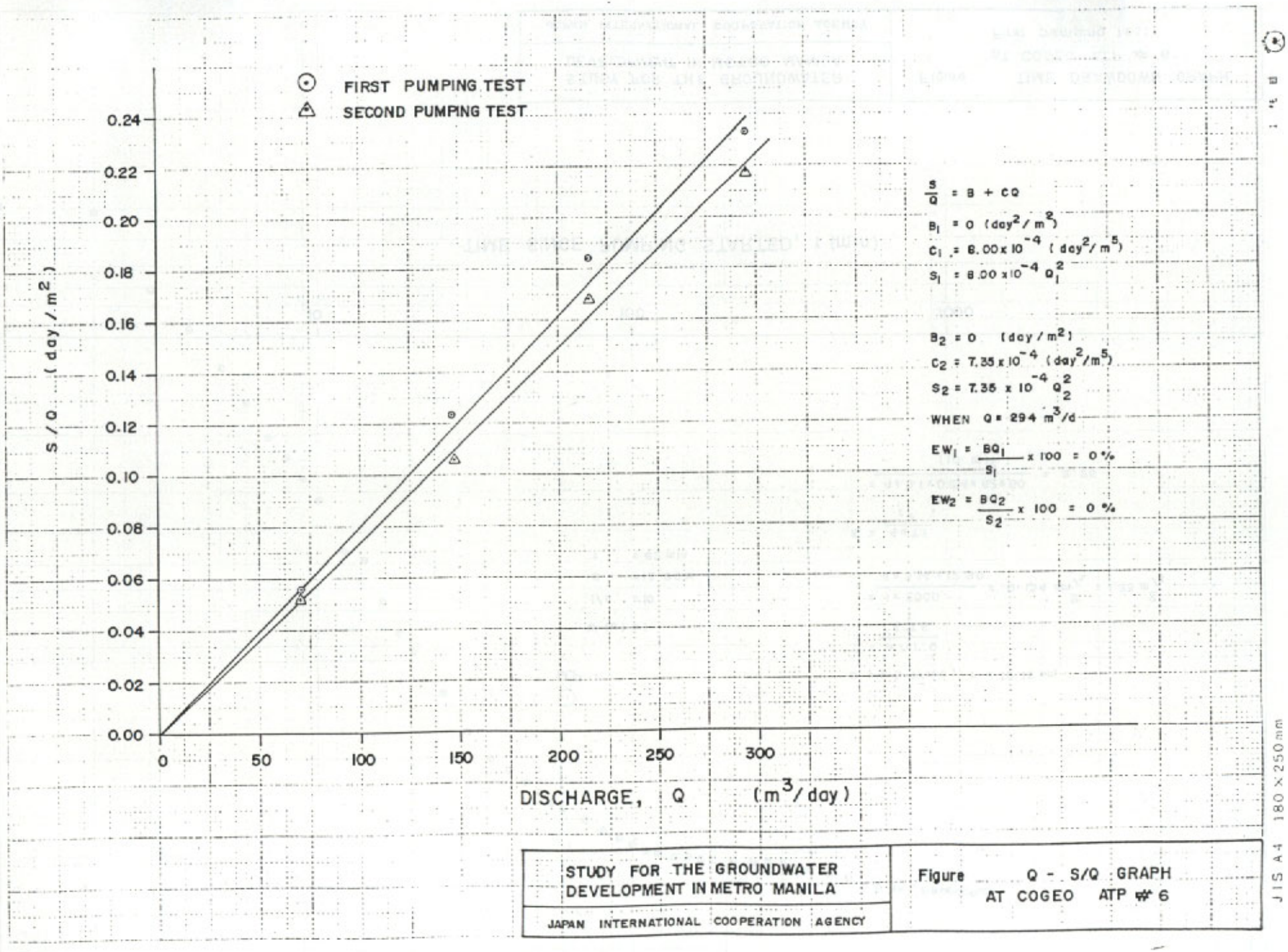
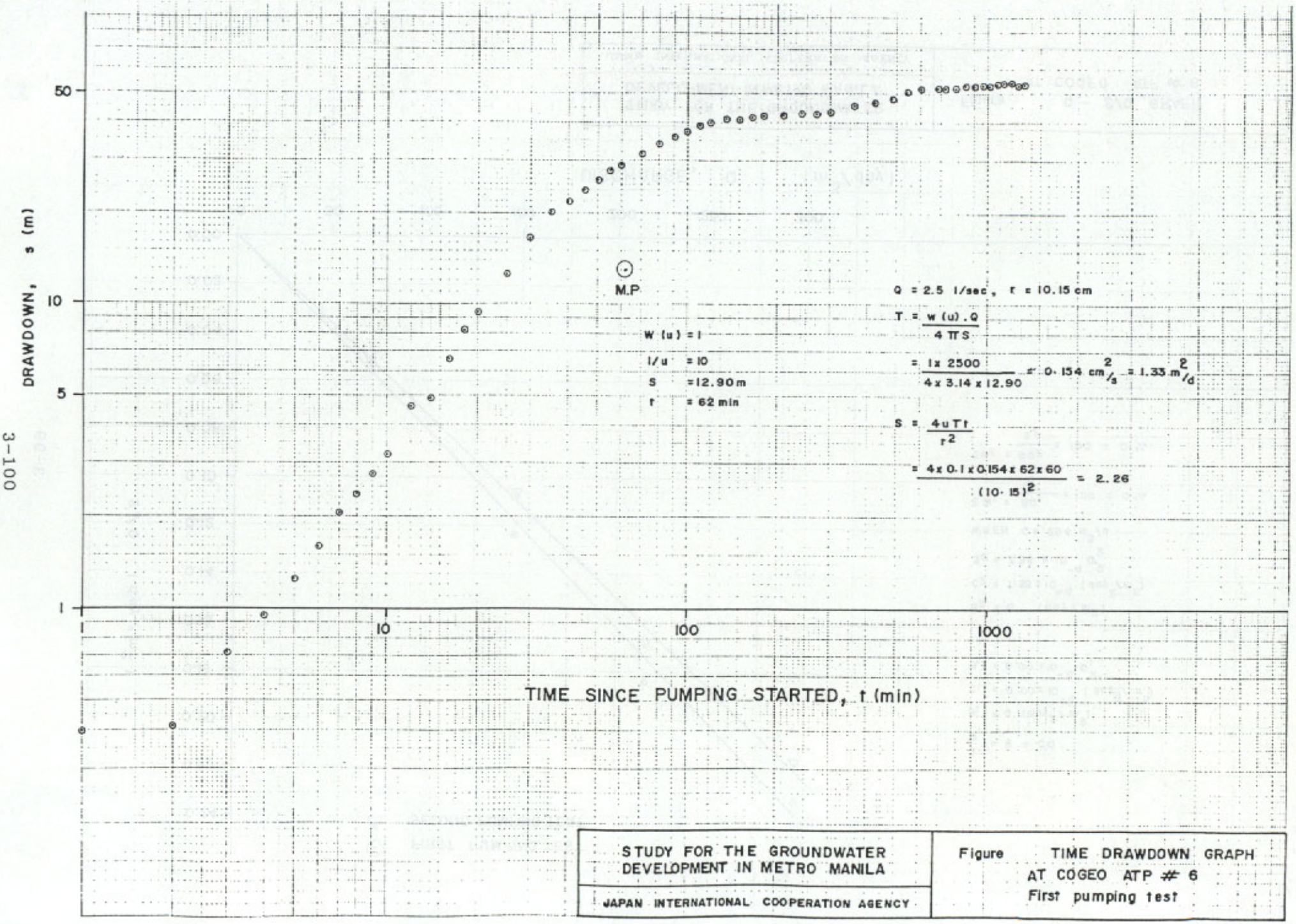
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure DISCHARGE DRAWDOWN GRAPH AT COGEO ATP # 6 |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure Q - S/Q GRAPH AT COGEO ATP # 6

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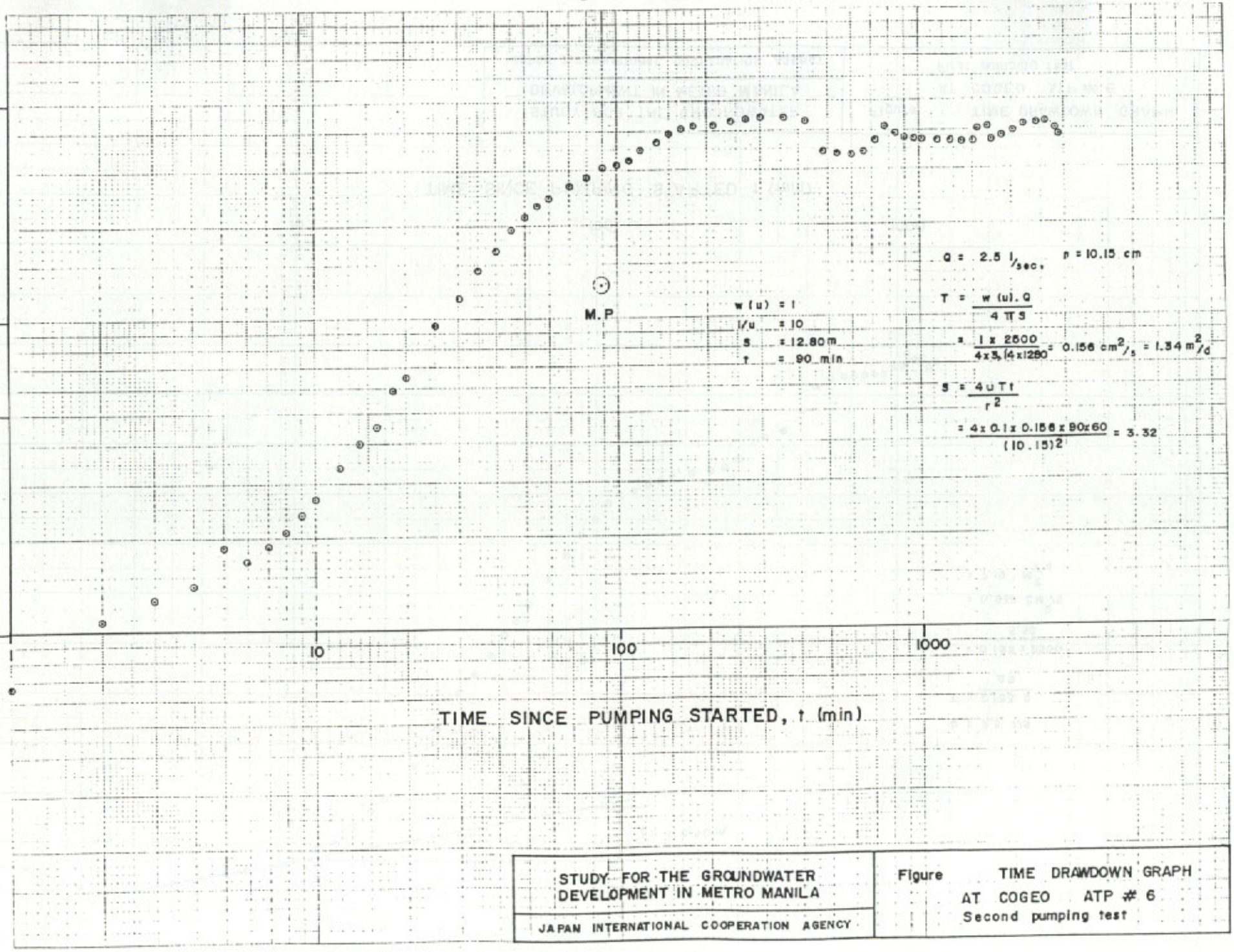
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME DRAWDOWN GRAPH AT COGEO ATP # 6 First pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

Log Log

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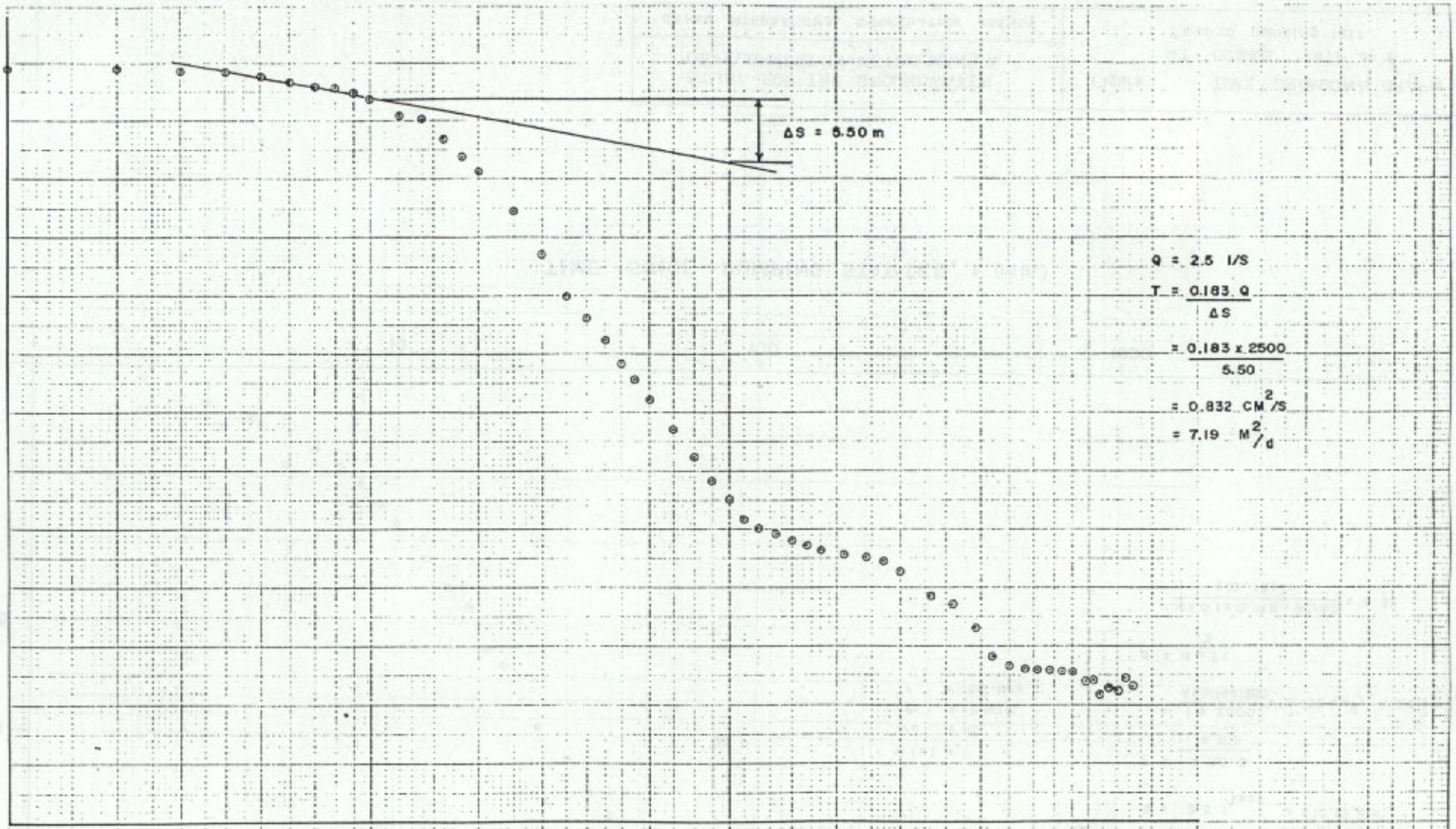
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME DRAWDOWN GRAPH AT COGEO ATP # 6 Second pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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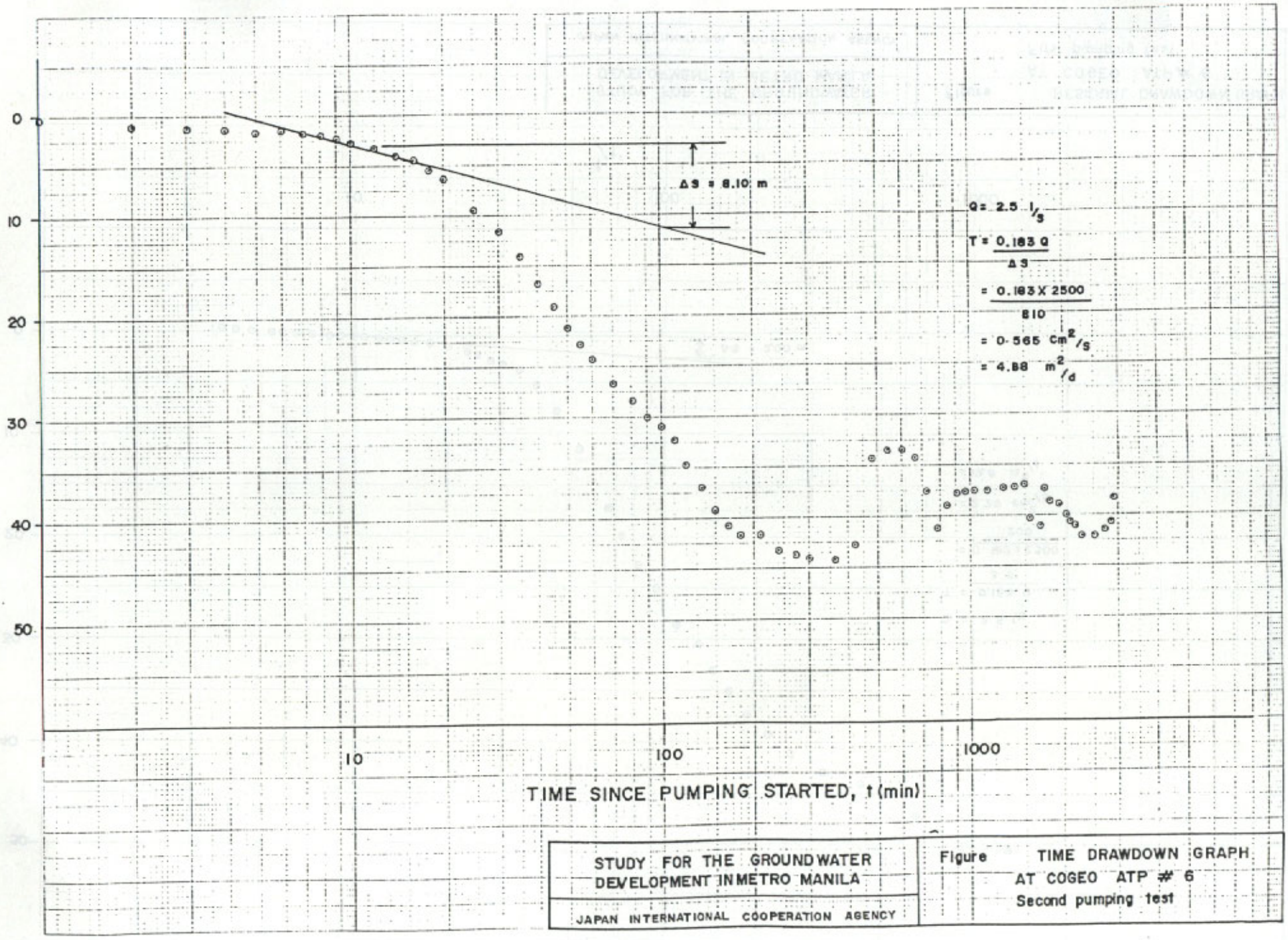
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | Figure TIME DRAWDOWN GRAPH AT COGEO ATP # 6 First pumping test |

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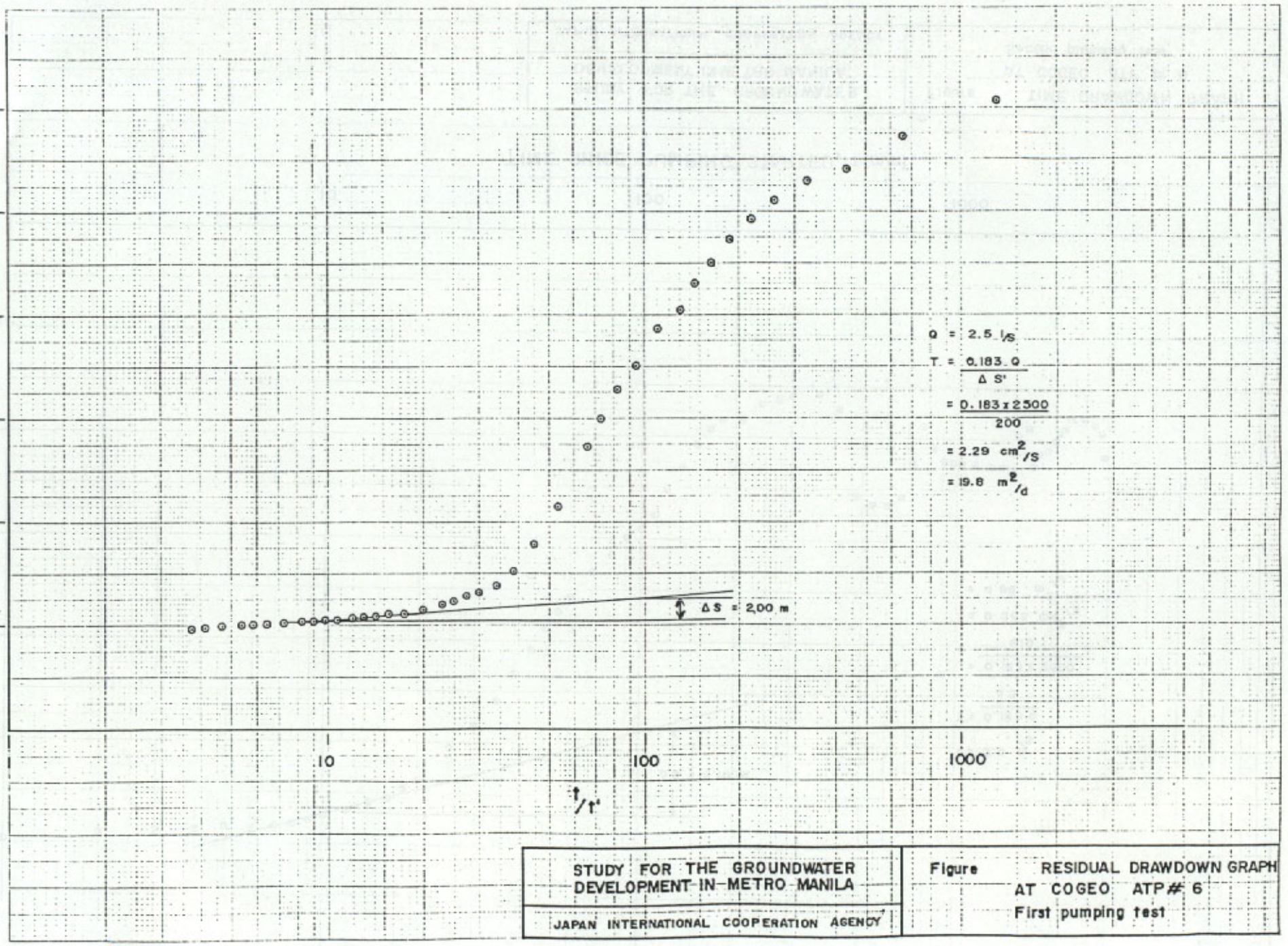
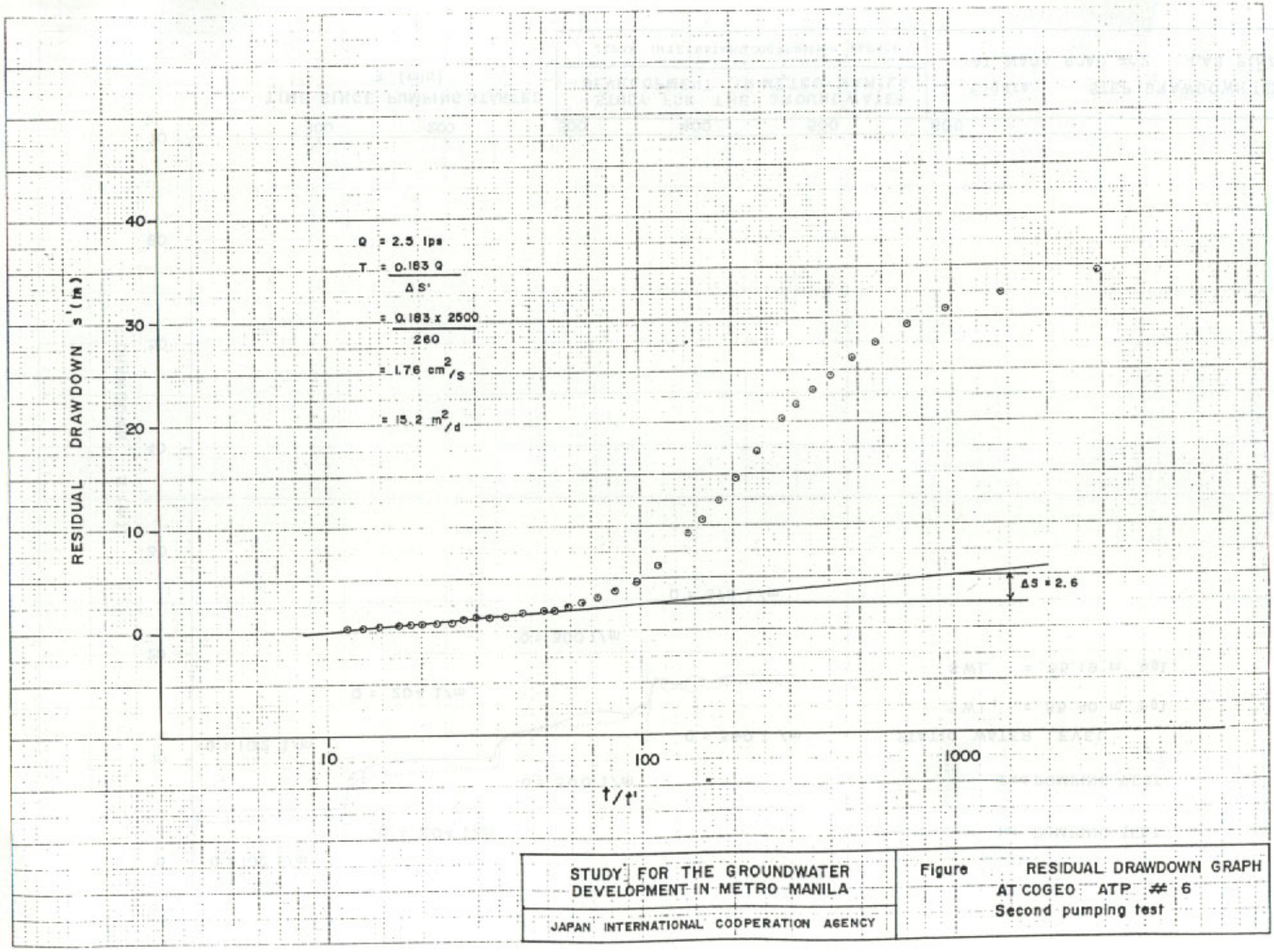
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME DRAWDOWN GRAPH AT COGEO ATP # 6 Second pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure RESIDUAL DRAWDOWN GRAPH AT COGEO ATP# 6 First pumping test

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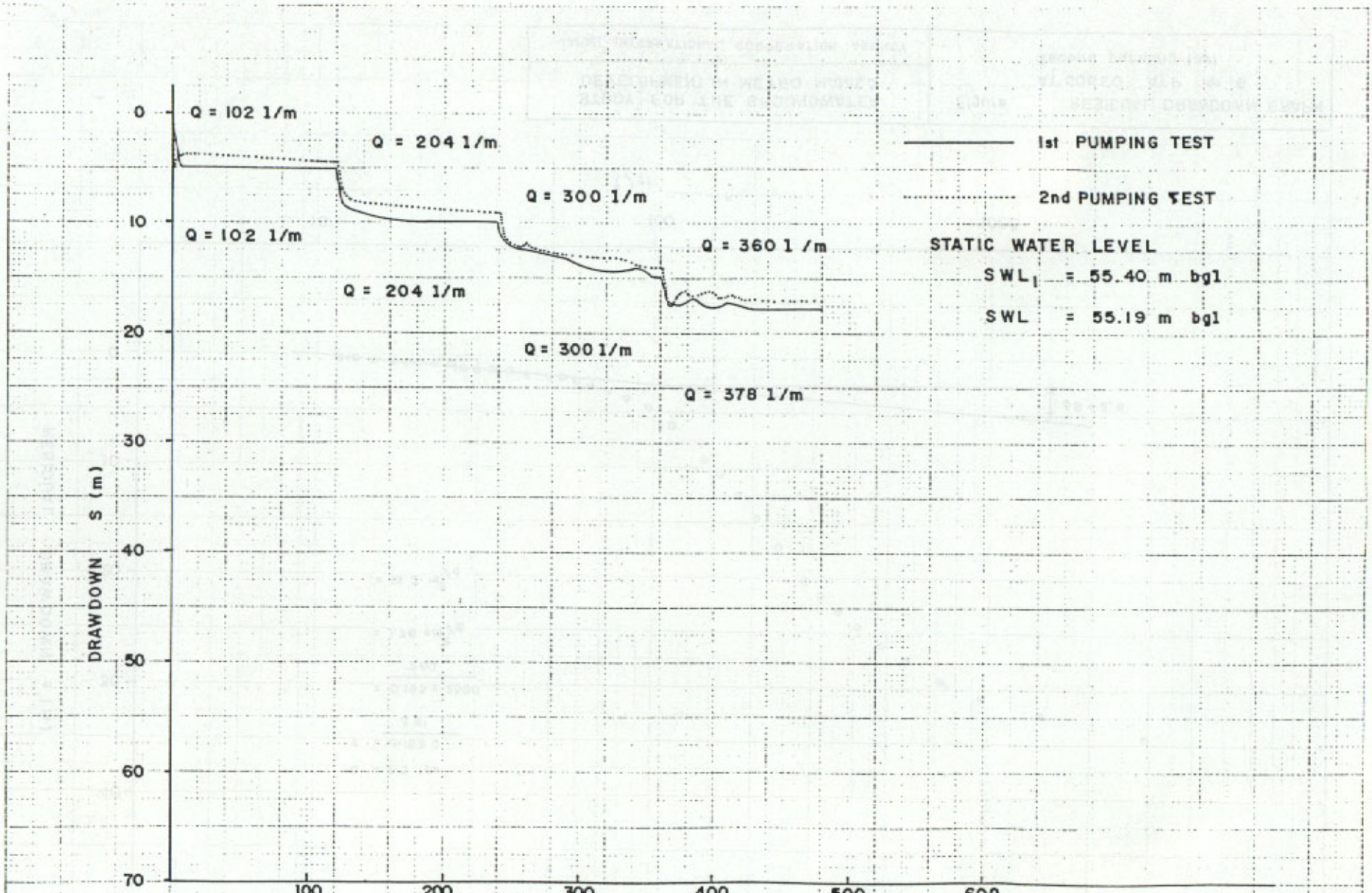
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure RESIDUAL DRAWDOWN GRAPH AT COGEO ATP # 6 Second pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



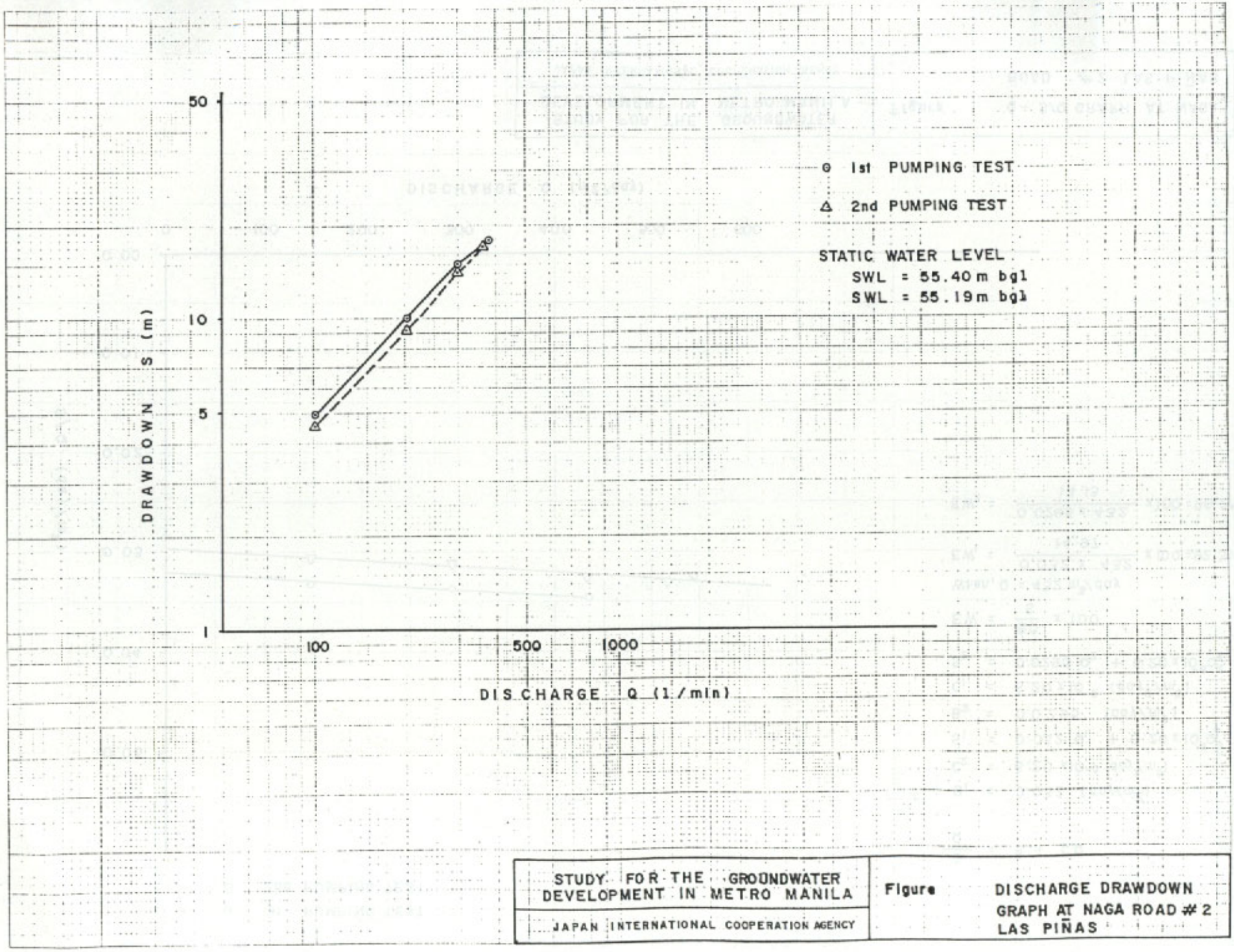

STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO-MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure STEP DRAWDOWN TEST AT NAGA ROAD #2 LAS PIÑAS

JIS A1 180×250mm

Log Log

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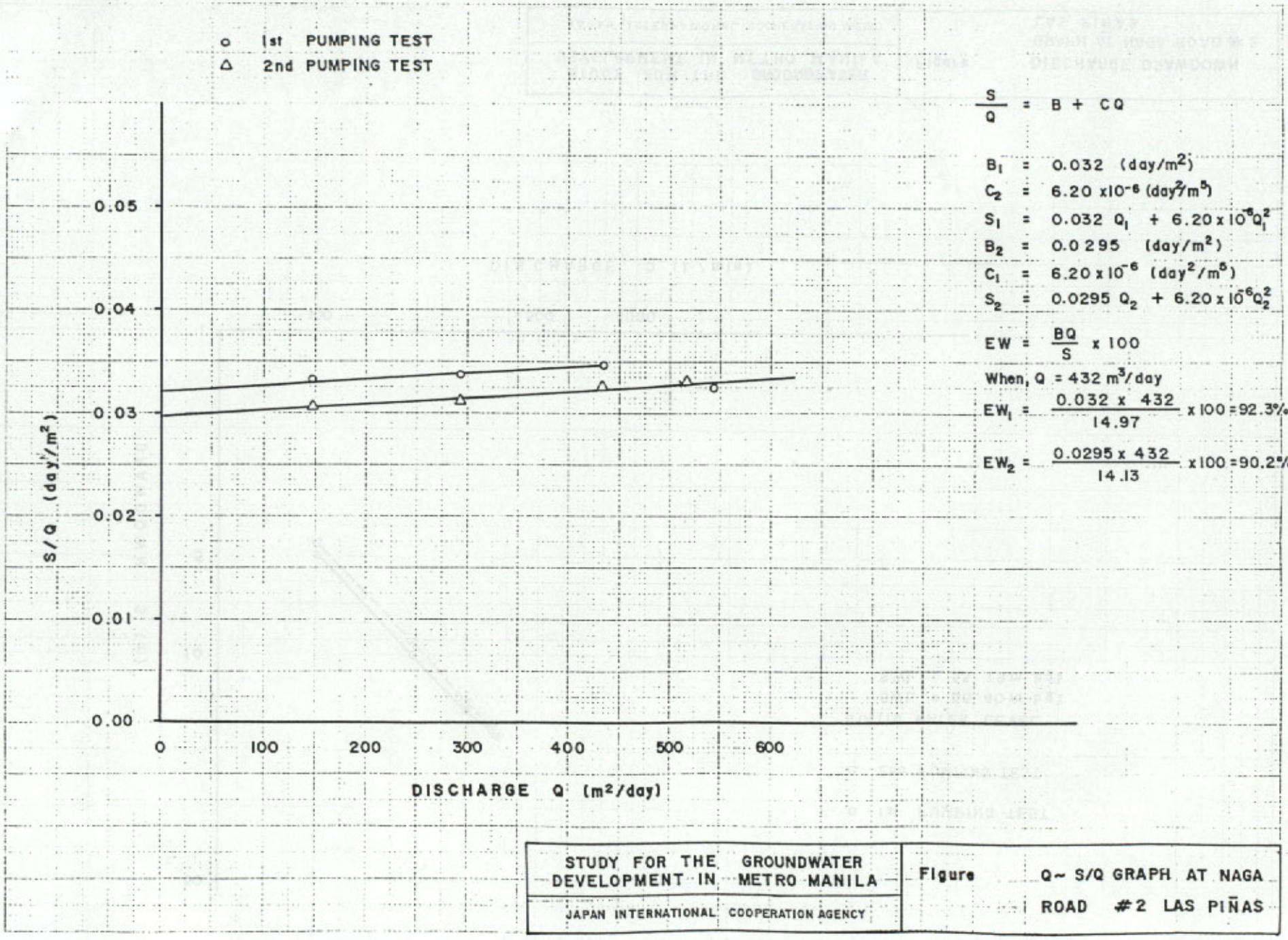
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure DISCHARGE DRAWDOWN GRAPH AT NAGA ROAD #2 LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

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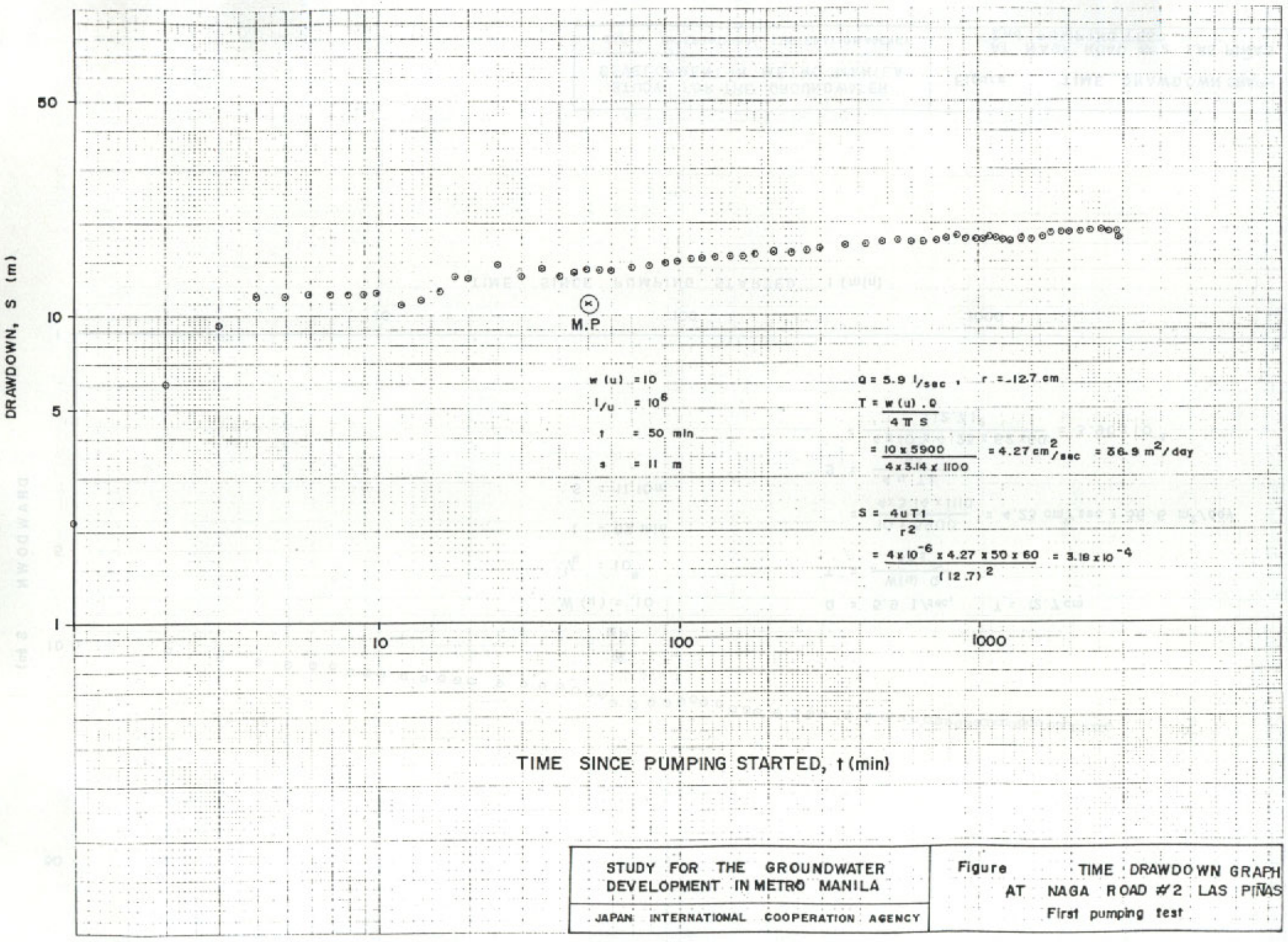
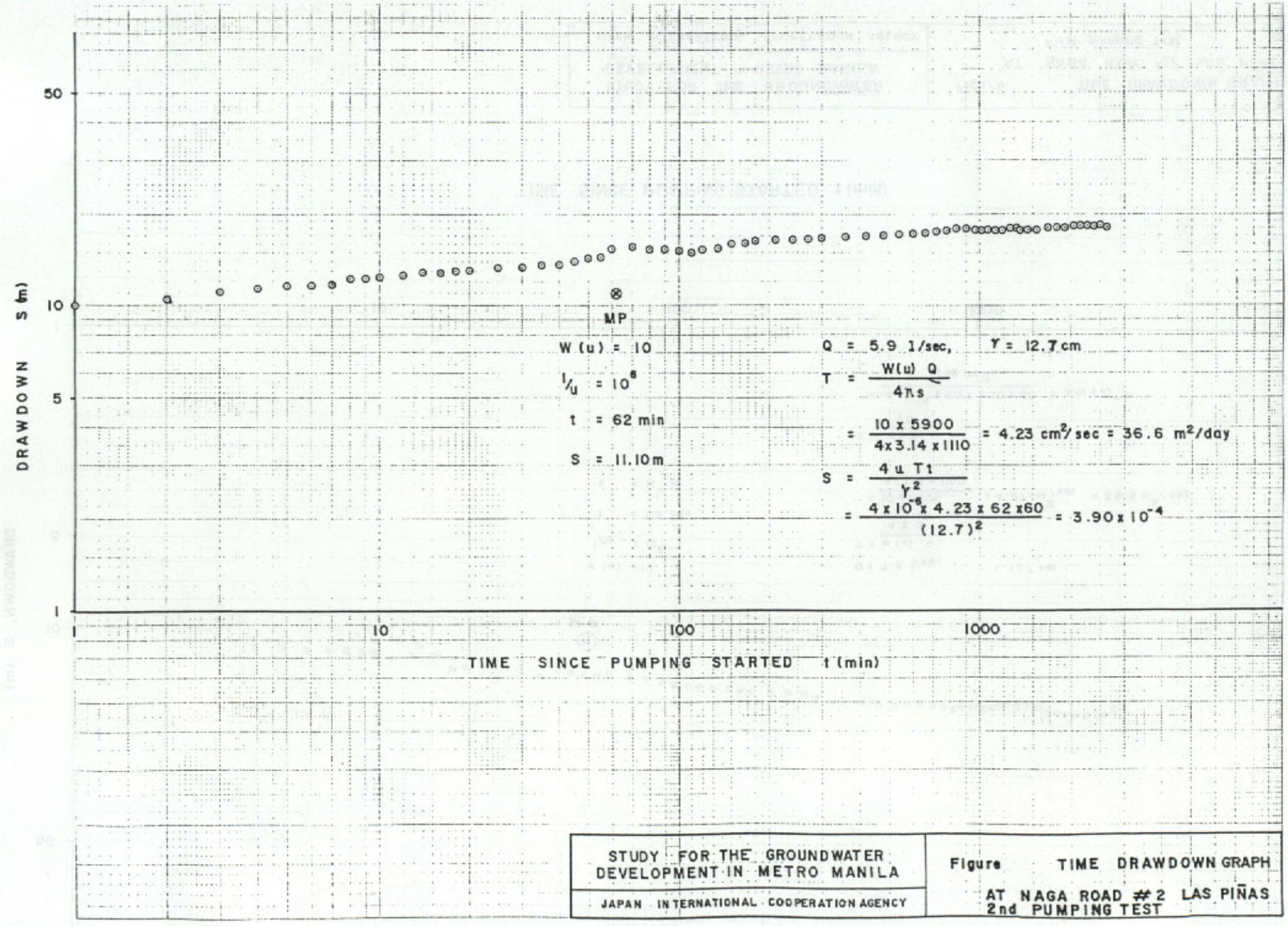
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure Q~ S/Q GRAPH AT NAGA ROAD #2 LAS PIÑAS |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |

JIS A4 180 x 250mm

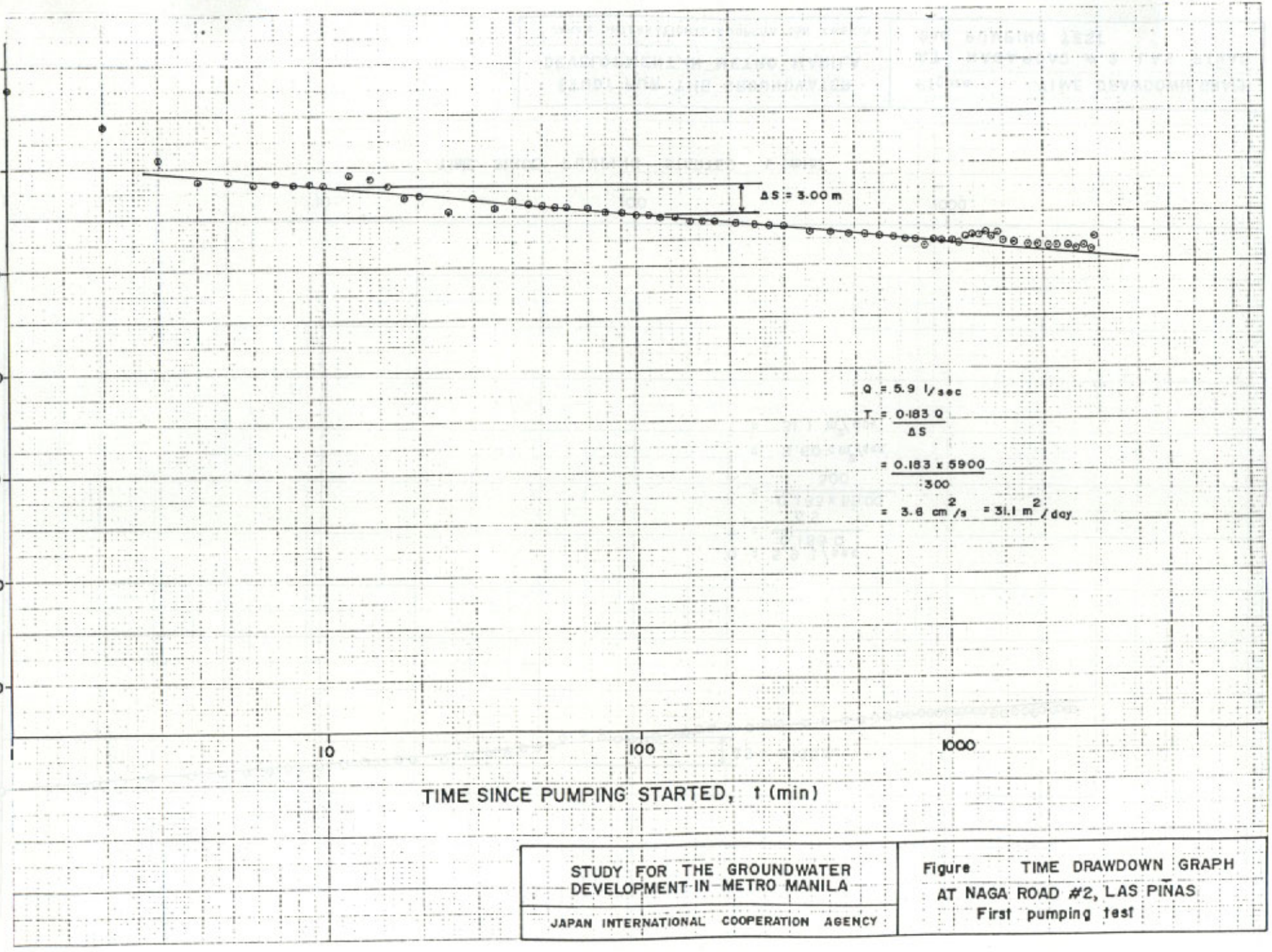
Log Log




| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME DRAWDOWN GRAPH AT NAGA ROAD #2 LAS PIÑAS First pumping test |
| JAPAN INTERNATIONAL COOPERATION AGENCY | |



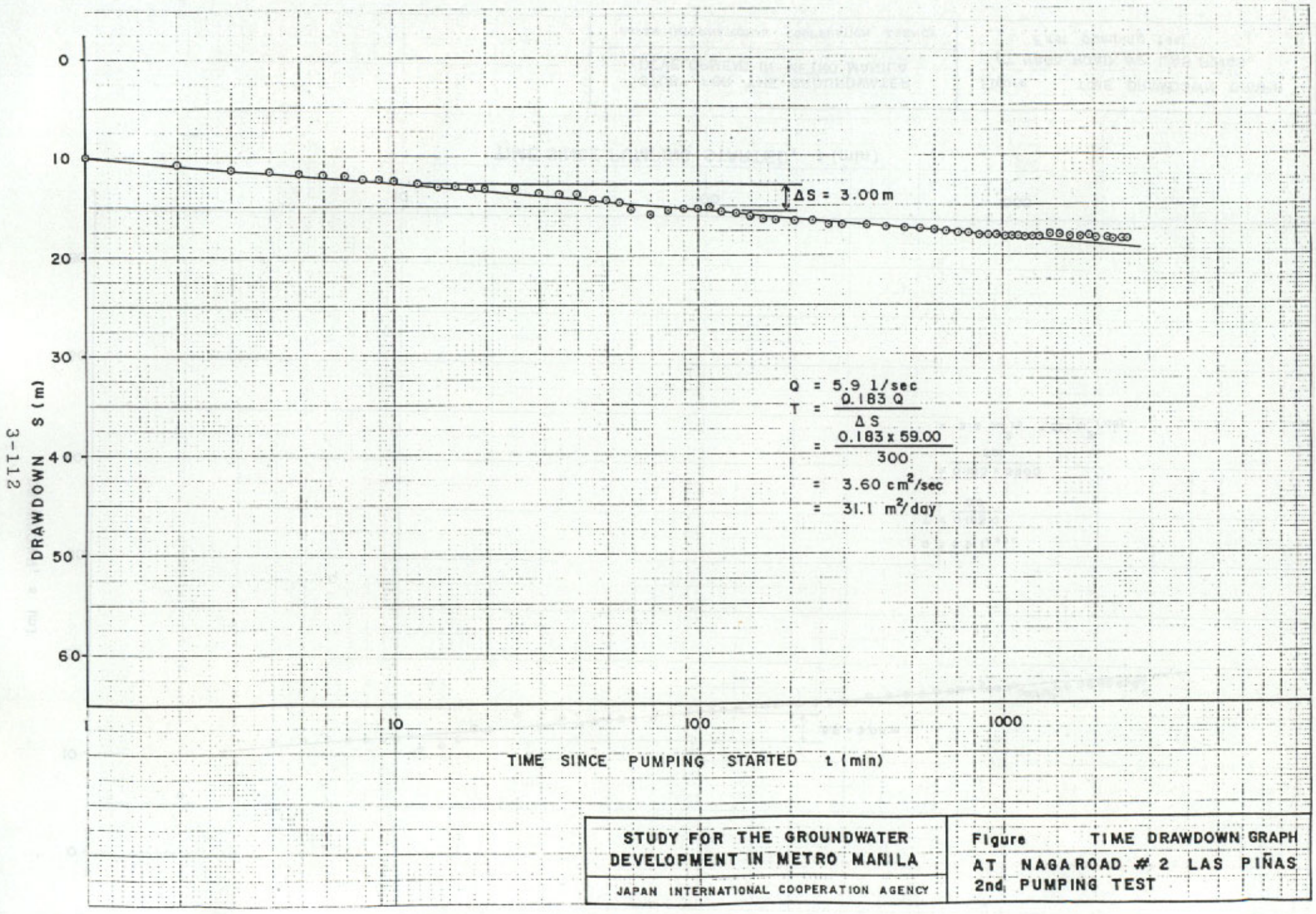

| | |
|---|---|
| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA<br>JAPAN INTERNATIONAL COOPERATION AGENCY | Figure TIME DRAWDOWN GRAPH AT NAGA ROAD #2 LAS PIÑAS 2nd PUMPING TEST |




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure TIME DRAWDOWN GRAPH AT NAGA ROAD #2, LAS PIÑAS First pumping test

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| STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA | Figure TIME DRAWDOWN GRAPH AT NAGA ROAD # 2 LAS PIÑAS 2nd PUMPING TEST |
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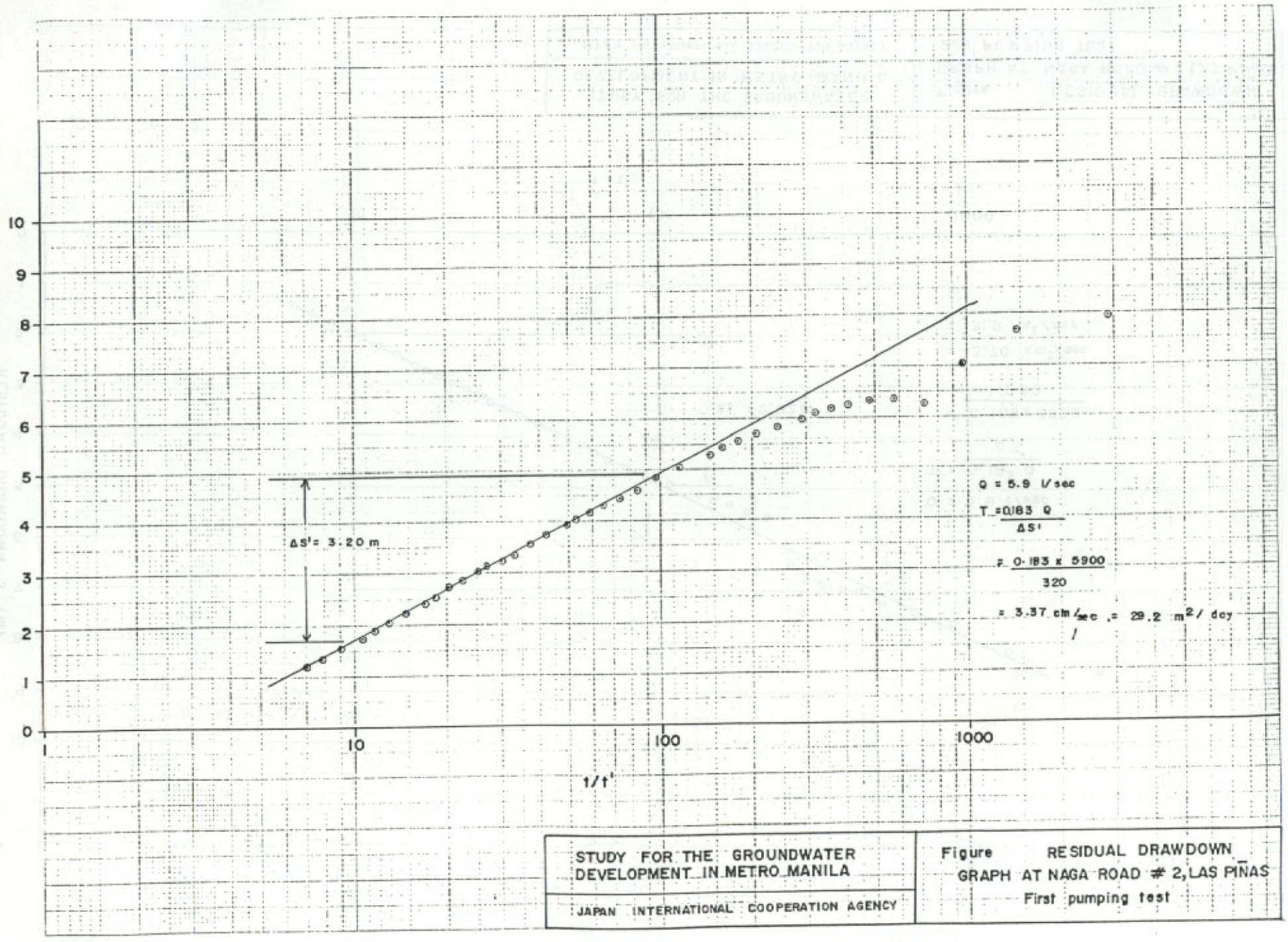


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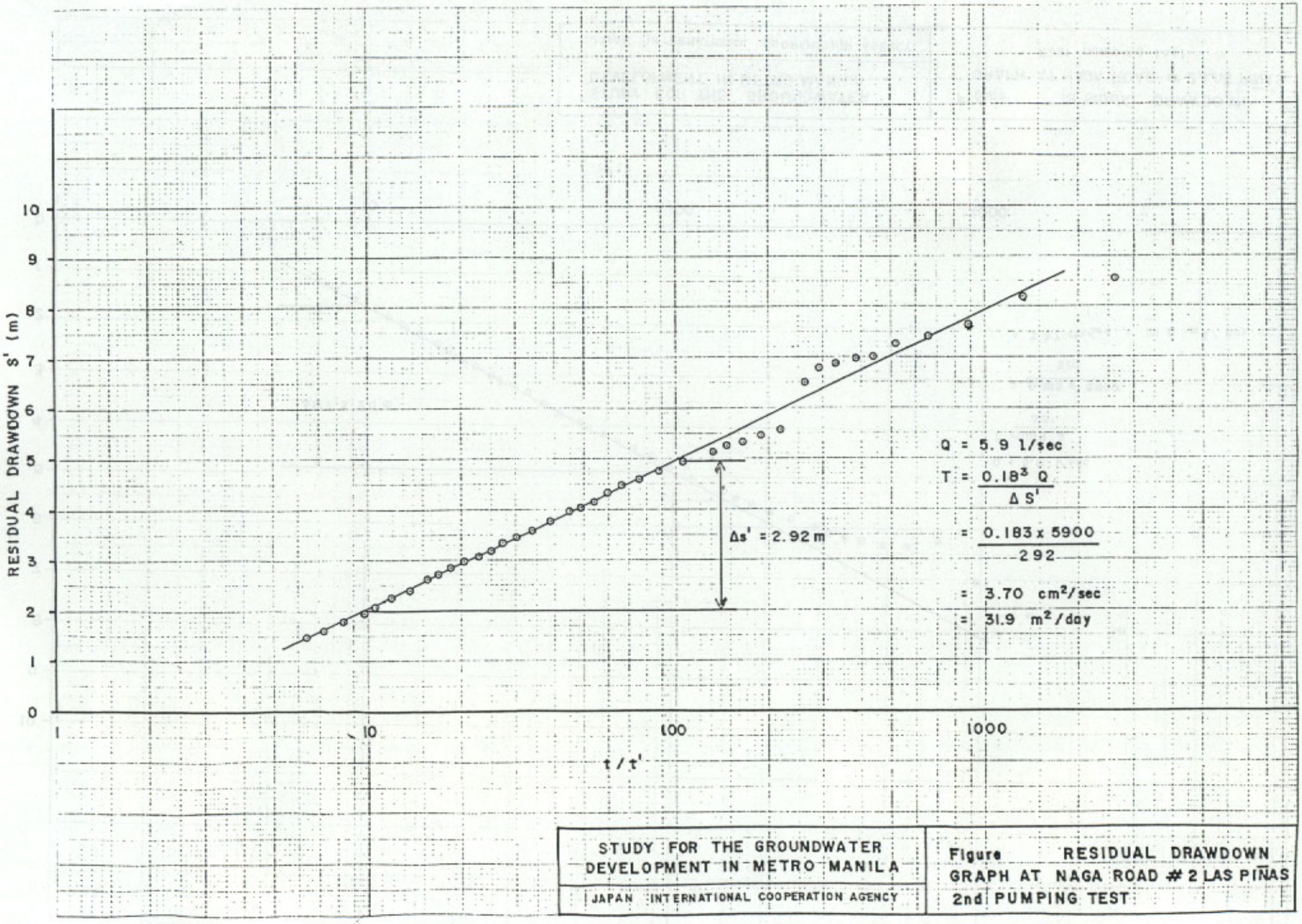
Figure RESIDUAL DRAWDOWN GRAPH AT NAGA ROAD # 2, LAS PIÑAS
First pumping test




STUDY FOR THE GROUNDWATER DEVELOPMENT IN METRO MANILA

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Figure RESIDUAL DRAWDOWN GRAPH AT NAGA ROAD # 2 LAS PIÑAS 2nd PUMPING TEST