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Data and Results from an Aquifer Test Performed at the Medina Water Supply Corporation Well Field, Medina, Texas

Texas Water Development Board

By

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And
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August 1997

Introduction

On August 5 and 6, 1997, Robert Bradley, Doug Coker, and Steve Moore of the TWDB Water Supplies Section conducted an aquifer test in Medina, Texas (Figure 1). The test was conducted to determine if additional water could be produced from the existing Medina WSC wells used for public supply for the community of Medina in Bandera County.

The three wells used in the test are completed in the middle and lower Trinity aquifer. Well No. 1 is completed in the Cow Creek Limestone and Hosston Sand. Well No. 2 is completed in the Hensell Sand and Cow Creek Limestone. Well No. 3 is completed in the lower Glen Rose Limestone, Hensell Sand, and Cow Creek Limestone. Medina WSC uses wells No. 1 and 3 for production and well No. 2 is not in use. The physical characteristics of the geologic units at the test site are:

| Geologic Unit | | Hydrologic Unit | Approximate Maximum Thickness (feet) | Character of Rocks | Water-Bearing Proprieties |
|---------------------|--------------|-----------------|--------------------------------------|---|--|
| Glen Rose Limestone | Lower member | Middle Trinity | 300 | Massive Limestone | Yields small to moderate quantities of fresh to slightly saline water. |
| Hensell Sand | | | 140 | Red to gray clay, silt, sand and conglomerate | |
| Cow Creek Limestone | | | 90 | Massive limestone | |
| Hammett Shale | | | 50 | Dark gray to blue shale | Yields no water |
| Hosston Sand | | Lower Trinity | 370 | Red and white conglomerate, sandstone, shale, and limestone | Yields small to large quantities of fresh to slightly saline water. |

The following table describes the characteristics of the three wells at the test site.

| Medina WSC Well No. | State Well No. | Test Use | Depth | Screened Interval |
|---------------------|----------------|-------------|-------|----------------------|
| Number 1 | 69-14-601 | Observation | ±500 | 400 - ±500 |
| Number 2 | 69-14-604 | Observation | 406 | 235 - 406 |
| Number 3 | 69-14-606 | Pump | 420 | 150 - 170, 312 - 400 |

Aquifer Test Description

An aquifer test establishes the hydraulic characteristics of an aquifer, which are typically described using transmissivity and storage coefficient. Transmissivity is the amount of water that will move in a unit time through a vertical strip of the aquifer one unit wide, under a hydraulic gradient of one. Storage in confined aquifers is described as storage coefficient. This is the volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer per unit change in head.

Well No. 3 was used as the pumped well and wells No. 1 and 2 were used as observation wells. Measurements were made in all of the wells prior to pumping to determine a recovery trend and static water level. Water-level measurements were made using E-lines throughout the test. Discharge of pumping well No. 3 was measured using an electronic flowmeter placed on the discharge pipe. Pumping lasted 12 hours and recovery was measured for 12 hours (Tables 1 and 2). Well discharge ranged from approximately 171 gpm at the beginning of pumping to 104 gpm during later portions of the test (Table 3; Figure 2). For most of the test the well pumped approximately 105 gpm. Discharge could not be regulated because there was no valve installed in the discharge line. The pumped well could not be used for measurements after the test started due to technical difficulties. The test data and results are attached (Tables 1-3; Figures 1 through 16). The following results are an average from all three wells:

| <i>Hydraulic Characteristic</i> | <i>Average</i> | <i>Maximum</i> | <i>Minimum</i> |
|---------------------------------------|----------------|----------------|----------------|
| Transmissivity (ft ² /day) | 129 | 157.7 | 91.9 |
| Storage Coefficient | .00015 | .0001966 | .0001162 |

Conclusions and Recommendations

The aquifer at the Medina WSC well field is under artesian conditions as indicated by the storage coefficient determined from the aquifer test. The aquifer has a low transmissivity. Together, wells 1 and 3 are capable of pumping approximately 160 gpm over an extended time. The pumped well during the test averaged 105 gpm over 12 hours. Records of the WSC show a maximum daily usage for 1997 is approximately 110,000 gallons. If well No. 3 was the only well in operation, it would have to pump a total of 17½ hours in one day to meet the peak demand. Additionally, if this well pumped continuously for 24 hours it would produce roughly 150,000 gallons, which is a 36 percent increase over the present peak demand. If one of the wells were to be inoperable during a peak time, it is likely that the system would not keep up with the demand for water.

After ten hours of pumping, the cone of depression produced by well No. 3 will influence an area up to 1000 feet away. This would be seen in water-level declines within this 1000 feet radius. For example, after ten hours of pumping from well No. 3, any well 300 feet away will experience a water-level decline of 20 to 30 feet. Wells less than 300 feet away would experience greater water-level declines. Pumping of multiple wells at this site will concentrate the water-level declines. Options suggested by the Medina WSC for additional water include rehabilitation of well No. 2 or a new well on the same site. If three wells are pumped simultaneously on this site, the wells will compete with each other and individual well yields will be reduced.

The aquifer test results indicate that this site is not suitable for additional development. Test transmissivity values are lower than the suggested 1000 ft²/day for public supply wells. For future growth, it is recommended that another well or well field should be established at another location. Data and results of the test are attached.

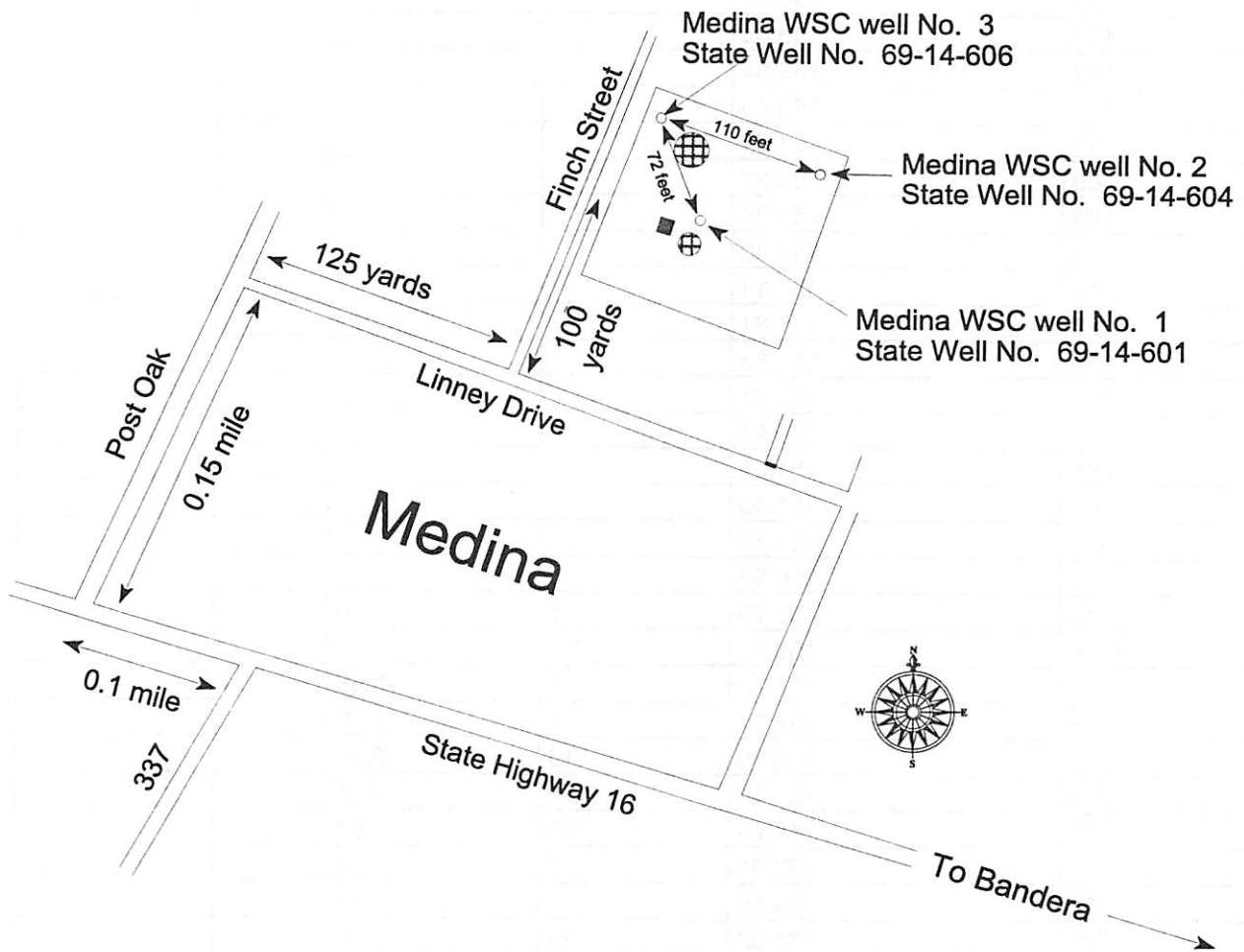


Figure 1. Map showing the location of the Medina WSC well field.

Table 1. Aquifer test data, Medina WSC well No. 1, August 5 – 6, 1997

| Elapsed Time (minutes) | Water Level Feet Below M.P. | Time Pump on (minutes) | Drawdown (feet) | Time Pump off (minutes) | Remarks |
|------------------------|-----------------------------|------------------------|-----------------|-------------------------|-------------|
| 0 | 161.45 | | | | |
| 18 | 160.10 | | | | |
| 36 | 159.30 | | | | |
| 48 | 158.51 | | | | |
| 63 | 157.82 | | | | |
| 78 | 157.18 | | | | |
| 93 | 156.58 | | | | |
| 108 | 156.05 | | | | |
| 123 | 155.54 | | | | |
| 138 | 155.05 | | | | |
| 153 | 154.64 | | | | |
| 168 | 154.22 | | | | |
| 183 | 153.84 | | | | |
| 198 | 153.48 | | | | |
| 213 | 153.14 | | | | |
| 228 | 152.81 | | | | |
| 243 | 152.53 | | | | |
| 258 | 152.21 | | | | |
| 273 | 151.94 | | | | |
| 288 | 151.65 | | | | |
| 303 | 151.43 | | | | |
| 318 | 151.15 | | | | |
| 333 | 150.92 | | | | |
| 349 | 150.76 | 1 | 0.16 | | Pump on 348 |
| 351.5 | 150.91 | 3.5 | 0.01 | | |
| 354 | 151.77 | 6 | -0.85 | | |
| 356 | 152.71 | 8 | -1.79 | | |
| 358 | 153.79 | 10 | -2.87 | | |
| 361.5 | 155.14 | 13.5 | -4.22 | | |
| 363 | 156.6 | 15 | -5.68 | | |
| 365 | 157.91 | 17 | -6.99 | | |
| 367 | 159.16 | 19 | -8.24 | | |
| 371 | 161.52 | 23 | -10.60 | | |
| 375 | 163.75 | 27 | -12.83 | | |
| 381 | 166.85 | 33 | -15.93 | | |
| 386 | 169.06 | 38 | -18.14 | | |
| 391 | 171.05 | 43 | -20.13 | | |
| 395 | 172.43 | 47 | -21.51 | | |
| 401 | 174.3 | 53 | -23.38 | | |
| 406 | 175.71 | 58 | -24.79 | | |

Table 1. Aquifer test data, Medina WSC well No. 1, August 5 – 6, 1997

| Elapsed Time (minutes) | Water Level Feet Below M.P. | Time Pump on (minutes) | Drawdown (feet) | Time Pump off (minutes) | Remarks |
|------------------------|-----------------------------|------------------------|-----------------|-------------------------|------------------|
| 411 | 176.97 | 63 | -26.05 | | |
| 413 | 177.44 | 65 | -26.52 | | |
| 423 | 179.54 | 75 | -28.62 | | |
| 433 | 181.3 | 85 | -30.38 | | |
| 443 | 182.85 | 95 | -31.93 | | |
| 453 | 184.13 | 105 | -33.21 | | |
| 468 | 185.78 | 120 | -34.86 | | |
| 483 | 187.13 | 135 | -36.21 | | |
| 498 | 188.31 | 150 | -37.39 | | |
| 513 | 189.47 | 165 | -38.55 | | |
| 528 | 190.51 | 180 | -39.59 | | |
| 543 | 191.31 | 195 | -40.39 | | |
| 558 | 192.09 | 210 | -41.17 | | |
| 573 | 192.81 | 225 | -41.89 | | |
| 588 | 193.44 | 240 | -42.52 | | |
| 608 | 194.22 | 260 | -43.30 | | |
| 628 | 194.92 | 280 | -44.00 | | |
| 648 | 195.56 | 300 | -44.64 | | |
| 678 | 196.4 | 330 | -45.48 | | |
| 708 | 197.11 | 360 | -46.19 | | |
| 768 | 198.32 | 420 | -47.40 | | |
| 828 | 199.32 | 480 | -48.40 | | |
| 888 | 200.13 | 540 | -49.21 | | |
| 949 | 200.82 | 601 | -49.90 | | |
| 1008 | 201.41 | 660 | -50.49 | | |
| 1068 | 201.86 | 720 | -50.94 | | |
| 1070 | 201.85 | 722 | -50.93 | 1 | Pump off at 1069 |
| 1071 | 201.84 | 723 | -50.92 | 2 | |
| 1072 | 201.84 | 724 | -50.92 | 3 | |
| 1073 | 201.61 | 725 | -50.69 | 4 | |
| 1074 | 201.37 | 726 | -50.45 | 5 | |
| 1075 | 201.04 | 727 | -50.12 | 6 | |
| 1076 | 200.55 | 728 | -49.63 | 7 | |
| 1077 | 200.02 | 729 | -49.10 | 8 | |
| 1078 | 199.43 | 730 | -48.51 | 9 | |
| 1080 | 198.12 | 732 | -47.20 | 11 | |
| 1082 | 196.73 | 734 | -45.81 | 13 | |
| 1084 | 195.28 | 736 | -44.36 | 15 | |
| 1086 | 193.86 | 738 | -42.94 | 17 | |
| 1088 | 192.47 | 740 | -41.55 | 19 | |

Table 1. Aquifer test data, Medina WSC well No. 1, August 5 – 6, 1997

| Elapsed Time (minutes) | Water Level Feet Below M.P. | Time Pump on (minutes) | Drawdown (feet) | Time Pump off (minutes) | Remarks |
|------------------------|-----------------------------|------------------------|-----------------|-------------------------|---------|
| 1093 | 189.21 | 745 | -38.29 | 24 | |
| 1098 | 186.35 | 750 | -35.43 | 29 | |
| 1103 | 183.9 | 755 | -32.98 | 34 | |
| 1108 | 181.72 | 760 | -30.80 | 39 | |
| 1113 | 179.85 | 765 | -28.93 | 44 | |
| 1118 | 178.16 | 770 | -27.24 | 49 | |
| 1123 | 176.66 | 775 | -25.74 | 54 | |
| 1128 | 175.31 | 780 | -24.39 | 59 | |
| 1138 | 172.97 | 790 | -22.05 | 69 | |
| 1151 | 170.53 | 803 | -19.61 | 82 | |
| 1158 | 169.36 | 810 | -18.44 | 89 | |
| 1168 | 167.93 | 820 | -17.01 | 99 | |
| 1178 | 166.67 | 830 | -15.75 | 109 | |
| 1188 | 165.53 | 840 | -14.61 | 119 | |
| 1203 | 164.06 | 855 | -13.14 | 134 | |
| 1218 | 162.59 | 870 | -11.67 | 149 | |
| 1233 | 161.64 | 885 | -10.72 | 164 | |
| 1248 | 160.65 | 900 | -9.73 | 179 | |
| 1263 | 159.75 | 915 | -8.83 | 194 | |
| 1278 | 158.94 | 930 | -8.02 | 209 | |
| 1293 | 158.21 | 945 | -7.29 | 224 | |
| 1308 | 157.52 | 960 | -6.60 | 239 | |
| 1328 | 156.72 | 980 | -5.80 | 259 | |
| 1348 | 155.99 | 1000 | -5.07 | 279 | |
| 1368 | 155.32 | 1020 | -4.40 | 299 | |
| 1398 | 154.42 | 1050 | -3.50 | 329 | |
| 1428 | 153.64 | 1080 | -2.72 | 359 | |
| 1488 | 152.29 | 1140 | -1.37 | 419 | |
| 1548 | 151.2 | 1200 | -0.28 | 479 | |
| 1608 | 150.28 | 1260 | 0.64 | 539 | |
| 1668 | 149.49 | 1320 | 1.43 | 599 | |
| 1728 | 148.79 | 1380 | 2.13 | 659 | |
| 1788 | 148.14 | 1440 | 2.78 | 719 | |

Table 2. Aquifer test data, Medina WSC well No. 2, August 5 – 6, 1997.

| Elapsed Time (minutes) | Water Level Feet Below M.P. | Time Pump on (minutes) | Drawdown (feet) | Time Pump off (minutes) | Remarks |
|------------------------|-----------------------------|------------------------|-----------------|-------------------------|------------------------|
| 0 | 113.1 | | | | swl to establish trend |
| 15 | 112.1 | | | | |
| 30 | 111.13 | | | | |
| 45 | 110.4 | | | | |
| 60 | 109.63 | | | | |
| 75 | 108.96 | | | | |
| 90 | 108.36 | | | | |
| 105 | 107.77 | | | | |
| 120 | 107.24 | | | | |
| 135 | 106.75 | | | | |
| 150 | 106.3 | | | | |
| 165 | 105.86 | | | | |
| 180 | 105.46 | | | | |
| 195 | 105.07 | | | | |
| 210 | 104.7 | | | | |
| 225 | 104.34 | | | | |
| 240 | 104.01 | | | | |
| 255 | 103.71 | | | | |
| 270 | 103.4 | | | | |
| 285 | 103.13 | | | | |
| 300 | 102.85 | | | | |
| 315 | 102.6 | | | | |
| 332 | 102.23 | 2 | 0.37 | | Pump on @330 |
| 334.5 | 102.51 | 4.5 | 0.09 | | |
| 337 | 102.99 | 7 | -0.39 | | |
| 339 | 103.61 | 9 | -1.01 | | |
| 341 | 104.41 | 11 | -1.81 | | |
| 344 | 105.59 | 14 | -2.99 | | |
| 346 | 106.78 | 16 | -4.18 | | |
| 348 | 107.87 | 18 | -5.27 | | |
| 350 | 108.3 | 20 | -5.7 | | |
| 355 | 111.55 | 25 | -8.95 | | |
| 360 | 114.2 | 30 | -11.6 | | |
| 365 | 116.49 | 35 | -13.89 | | |
| 370 | 118.77 | 40 | -16.17 | | |
| 375 | 120.86 | 45 | -18.26 | | |
| 380 | 122.56 | 50 | -19.96 | | |
| 385 | 124.38 | 55 | -21.78 | | |
| 390 | 125.91 | 60 | -23.31 | | |

Table 2. Aquifer test data, Medina WSC well No. 2, August 5 – 6, 1997.

| Elapsed Time (minutes) | Water Level Feet Below M.P. | Time Pump on (minutes) | Drawdown (feet) | Time Pump off (minutes) | Remarks |
|------------------------|-----------------------------|------------------------|-----------------|-------------------------|-----------------|
| 400 | 128.51 | 70 | -25.91 | | |
| 410 | 130.83 | 80 | -28.23 | | |
| 420 | 132.78 | 90 | -30.18 | | |
| 430 | 134.54 | 100 | -31.94 | | |
| 440 | 136.08 | 110 | -33.48 | | |
| 450 | 137.35 | 120 | -34.75 | | |
| 465 | 139.05 | 135 | -36.45 | | |
| 480 | 140.6 | 150 | -38 | | |
| 495 | 142.4 | 165 | -39.8 | | |
| 510 | 143.3 | 180 | -40.7 | | |
| 525 | 144.66 | 195 | -42.06 | | |
| 540 | 145.85 | 210 | -43.25 | | |
| 557 | 146.54 | 227 | -43.94 | | |
| 574 | 147.49 | 244 | -44.89 | | |
| 592 | 148.39 | 262 | -45.79 | | |
| 612 | 149.34 | 282 | -46.74 | | |
| 632 | 150.5 | 302 | -47.9 | | |
| 662 | 151.11 | 332 | -48.51 | | |
| 692 | 152.1 | 362 | -49.5 | | |
| 752 | 153.81 | 422 | -51.21 | | |
| 812 | 155.41 | 482 | -52.81 | | |
| 872 | 156.55 | 542 | -53.95 | | |
| 932 | 157.52 | 602 | -54.92 | | |
| 992 | 158.39 | 662 | -55.79 | | |
| 1050 | 159.25 | 720 | -56.65 | | |
| 1052 | 159.15 | 722 | -56.55 | 1 | Pump off @ 1051 |
| 1053 | 159 | 723 | -56.4 | 2 | |
| 1054 | 158.9 | 724 | -56.3 | 3 | |
| 1055 | 158.8 | 725 | -56.2 | 4 | |
| 1056 | 158.6 | 726 | -56 | 5 | |
| 1059 | 157.9 | 729 | -55.3 | 8 | |
| 1060 | 157.6 | 730 | -55 | 9 | |
| 1061 | 157.4 | 731 | -54.8 | 10 | |
| 1063 | 156.25 | 733 | -53.65 | 12 | |
| 1065 | 155.4 | 735 | -52.8 | 14 | |
| 1067 | 154.8 | 737 | -52.2 | 16 | |
| 1069 | 152.6 | 739 | -50 | 18 | |
| 1071 | 151.35 | 741 | -48.75 | 20 | |
| 1076 | 148.05 | 746 | -45.45 | 25 | |
| 1081 | 145.6 | 751 | -43 | 30 | |

Table 2. Aquifer test data, Medina WSC well No. 2, August 5 – 6, 1997.

| Elapsed Time (minutes) | Water Level Feet Below M.P. | Time Pump on (minutes) | Drawdown (feet) | Time Pump off (minutes) | Remarks |
|------------------------|-----------------------------|------------------------|-----------------|-------------------------|---------|
| 1086 | 143 | 756 | -40.4 | 35 | |
| 1091 | 140.6 | 761 | -38 | 40 | |
| 1096 | 138.3 | 766 | -35.7 | 45 | |
| 1101 | 136.8 | 771 | -34.2 | 50 | |
| 1106 | 135.15 | 776 | -32.55 | 55 | |
| 1111 | 133.5 | 781 | -30.9 | 60 | |
| 1120 | 131.45 | 790 | -28.85 | 69 | |
| 1130 | 129 | 800 | -26.4 | 79 | |
| 1140 | 127.35 | 810 | -24.75 | 89 | |
| 1150 | 125.25 | 820 | -22.65 | 99 | |
| 1160 | 123.7 | 830 | -21.1 | 109 | |
| 1170 | 122.4 | 840 | -19.8 | 119 | |
| 1185 | 120.53 | 855 | -17.93 | 134 | |
| 1200 | 118.9 | 870 | -16.3 | 149 | |
| 1215 | 117.55 | 885 | -14.95 | 164 | |
| 1230 | 116.25 | 900 | -13.65 | 179 | |
| 1245 | 115.15 | 915 | -12.55 | 194 | |
| 1260 | 114.08 | 930 | -11.48 | 209 | |
| 1275 | 113.25 | 945 | -10.65 | 224 | |
| 1290 | 112.32 | 960 | -9.72 | 239 | |
| 1310 | 111.38 | 980 | -8.78 | 259 | |
| 1330 | 110.5 | 1000 | -7.9 | 279 | |
| 1350 | 109.5 | 1020 | -6.9 | 299 | |
| 1380 | 108.42 | 1050 | -5.82 | 329 | |
| 1410 | 107.47 | 1080 | -4.87 | 359 | |
| 1470 | 105.72 | 1140 | -3.12 | 419 | |
| 1530 | 104.35 | 1200 | -1.75 | 479 | |
| 1590 | 103.12 | 1260 | -0.52 | 539 | |
| 1650 | 102.18 | 1320 | 0.42 | 599 | |
| 1710 | 101.25 | 1380 | 1.35 | 659 | |
| 1770 | 100.5 | 1440 | 2.1 | 719 | |

Table 3. Pumping Rates

| Elapsed Pumping Time (minutes) | Flowmeter Discharge (gpm) |
|--------------------------------|---------------------------|
| 1 | 171 |
| 4 | 150 |
| 7 | 138 |
| 8 | 138 |
| 9 | 137 |
| 10 | 136 |
| 12 | 132 |
| 14 | 128 |
| 17 | 126 |
| 23 | 123 |
| 30 | 122 |
| 35 | 116 |
| 40 | 117 |
| 52 | 113 |
| 60 | 115 |
| 78 | 111 |
| 90 | 110 |
| 127 | 111 |
| 185 | 110 |
| 214 | 107 |
| 228 | 108 |
| 247 | 105 |
| 264 | 107 |
| 285 | 106 |
| 304 | 106 |
| 335 | 105 |
| 365 | 104 |
| 427 | 102 |
| 487 | 104 |
| 545 | 105 |
| 604 | 105 |
| 663 | 104 |
| 719 | 105 |

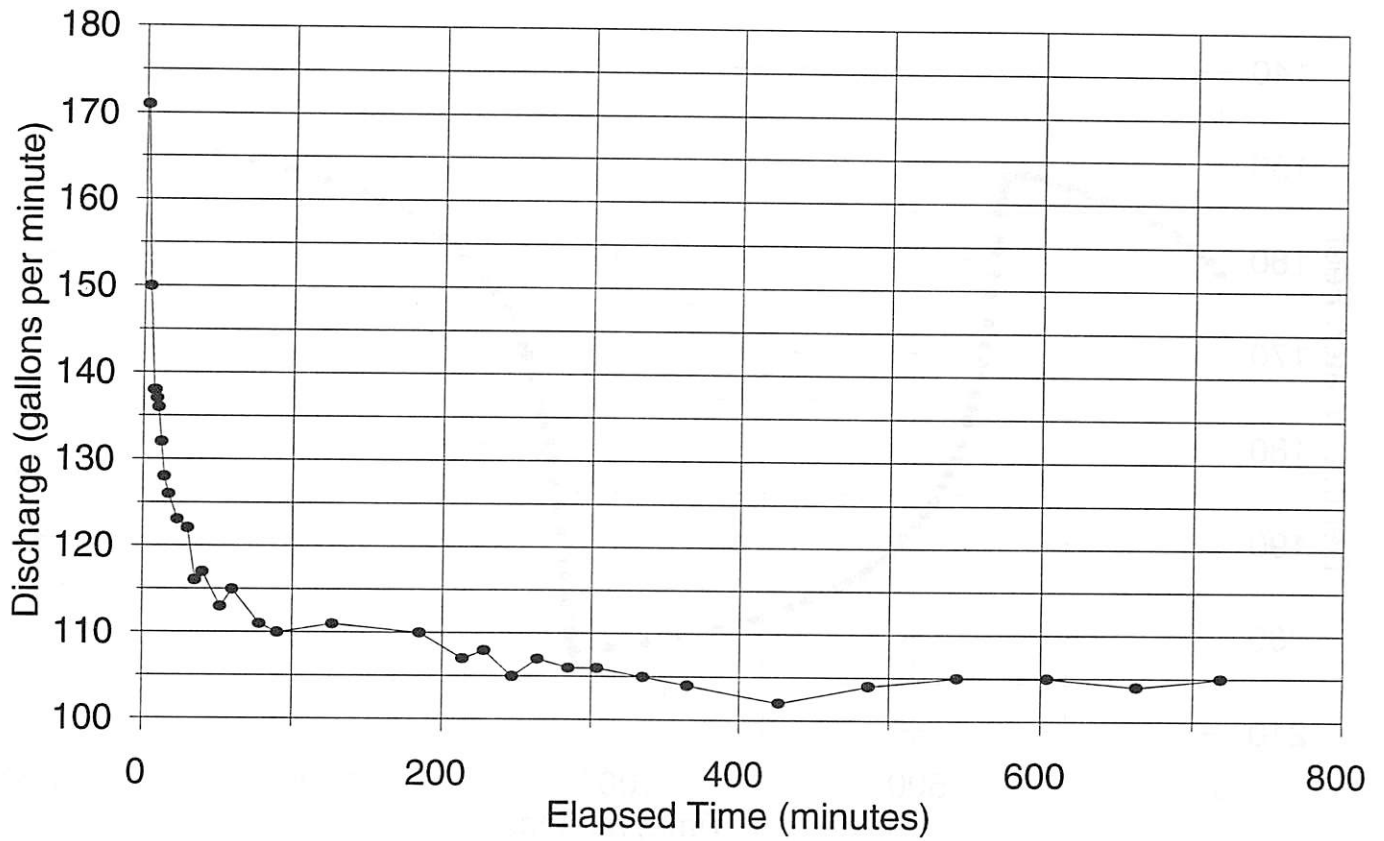


Figure 2. Pumped well discharge of Medina WSC well No. 3.

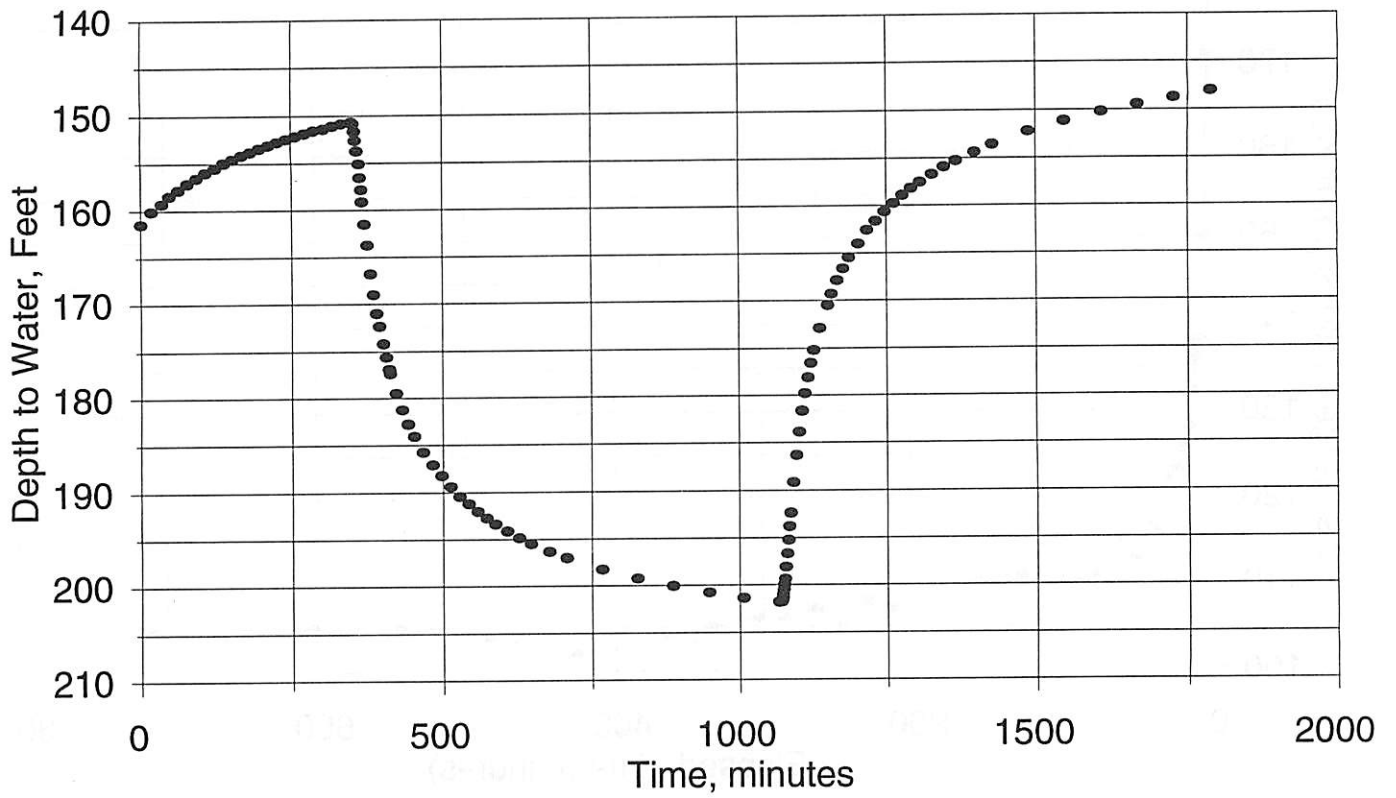


Figure 3. Water level measurements, Medina WSC well No. 1.

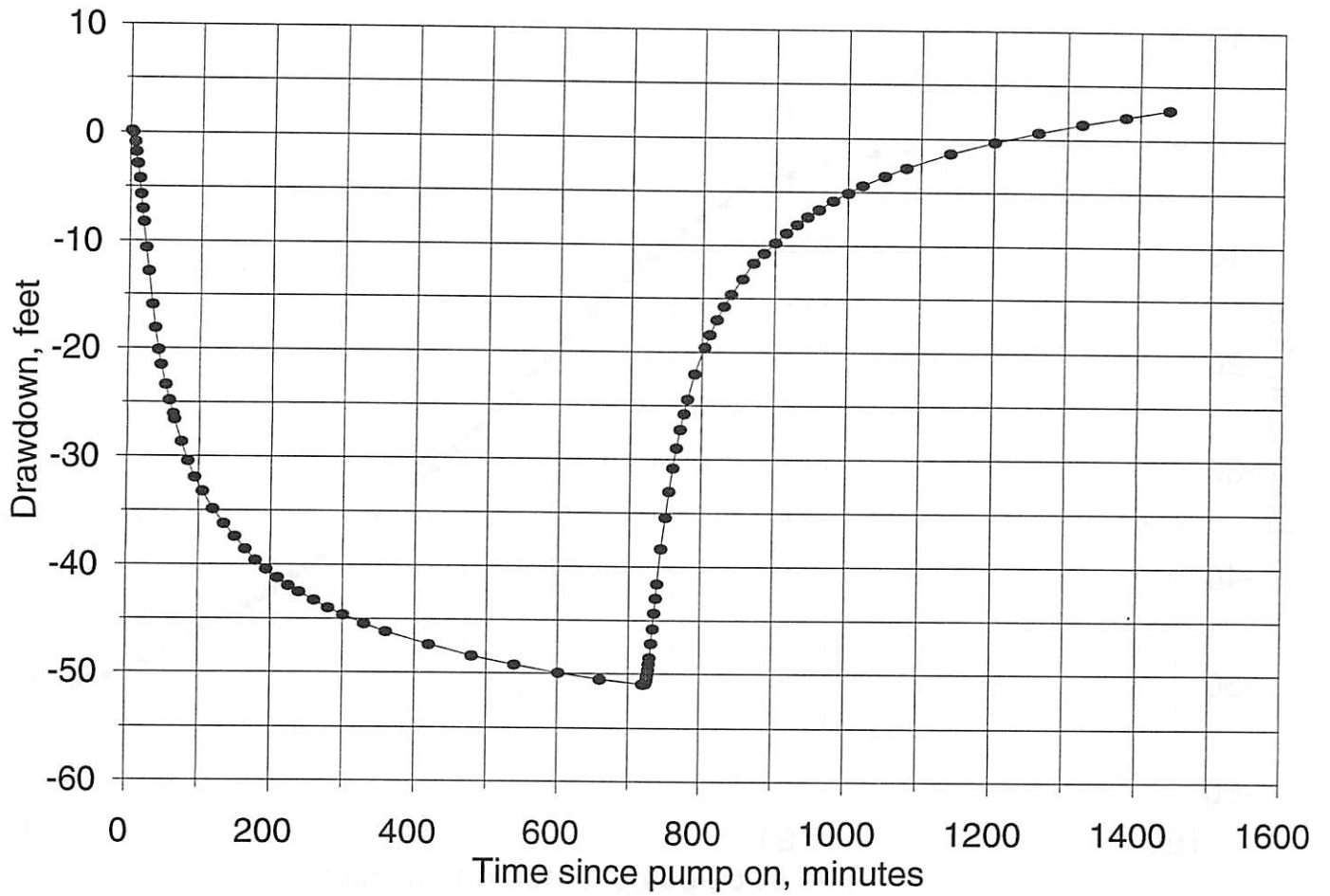


Figure 4. Drawdown measurements, Medina WSC well No. 1.

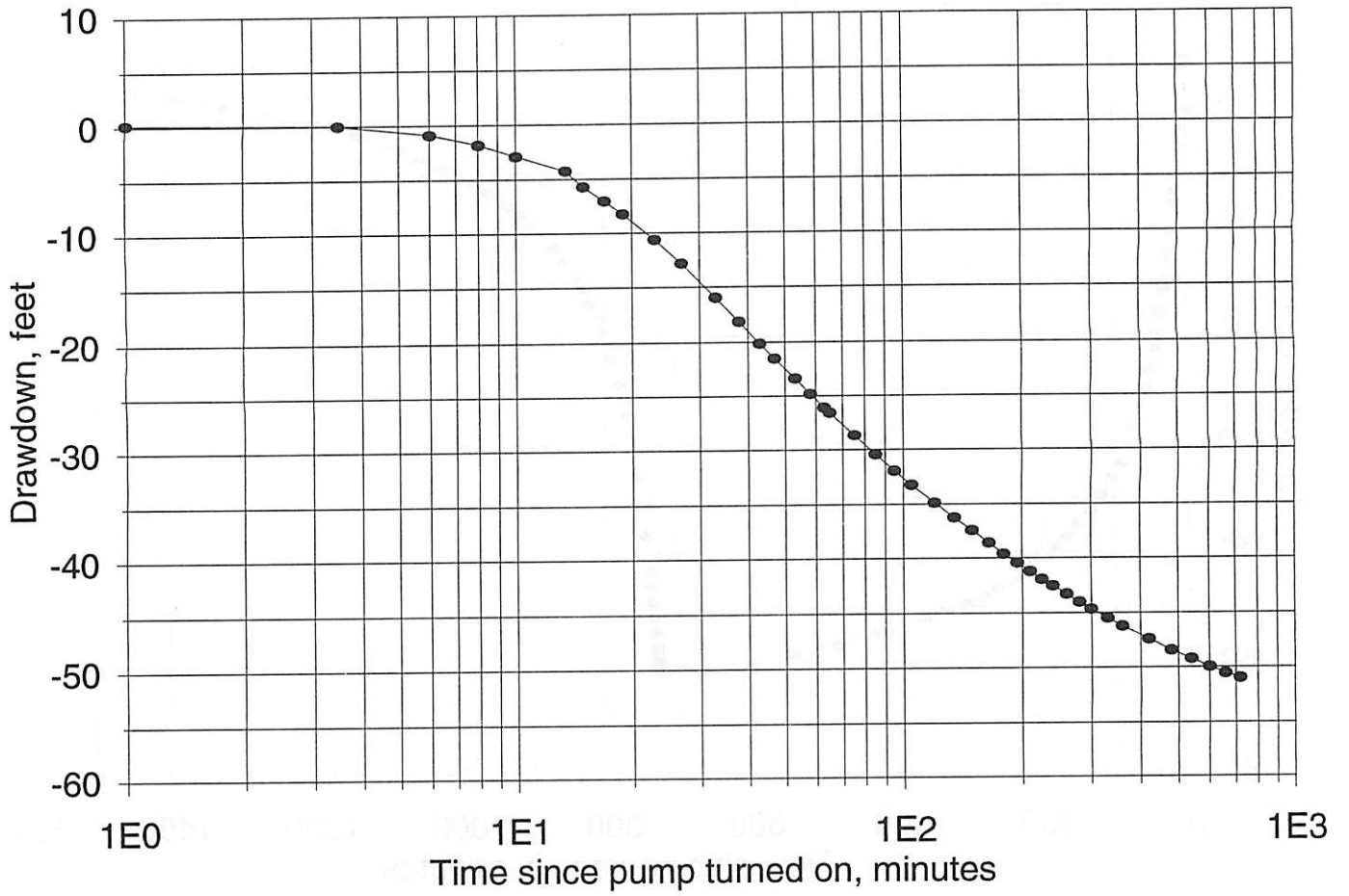


Figure 5. Drawdown measurements for Medina WSC well No. 1, minutes since pump turned on.

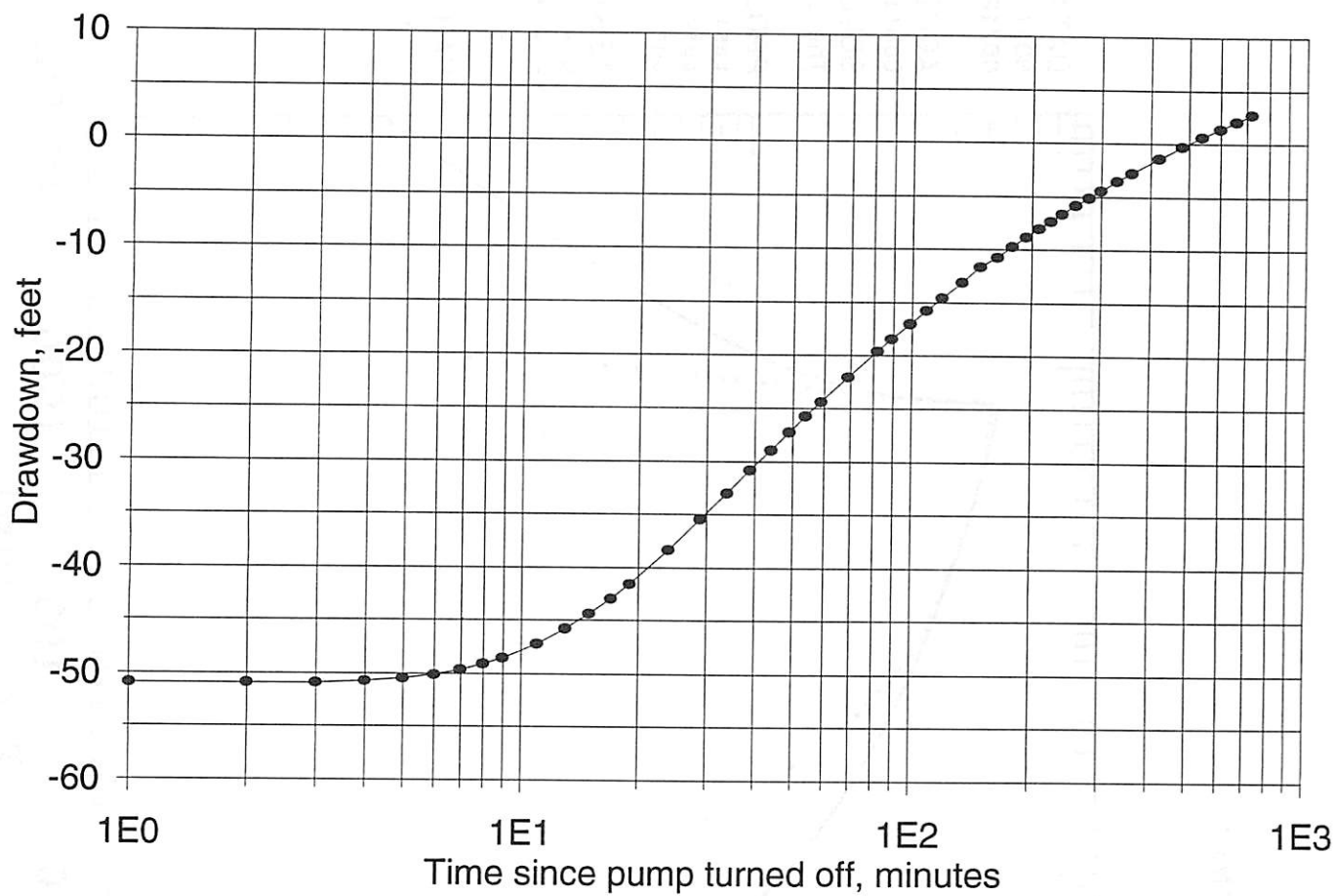
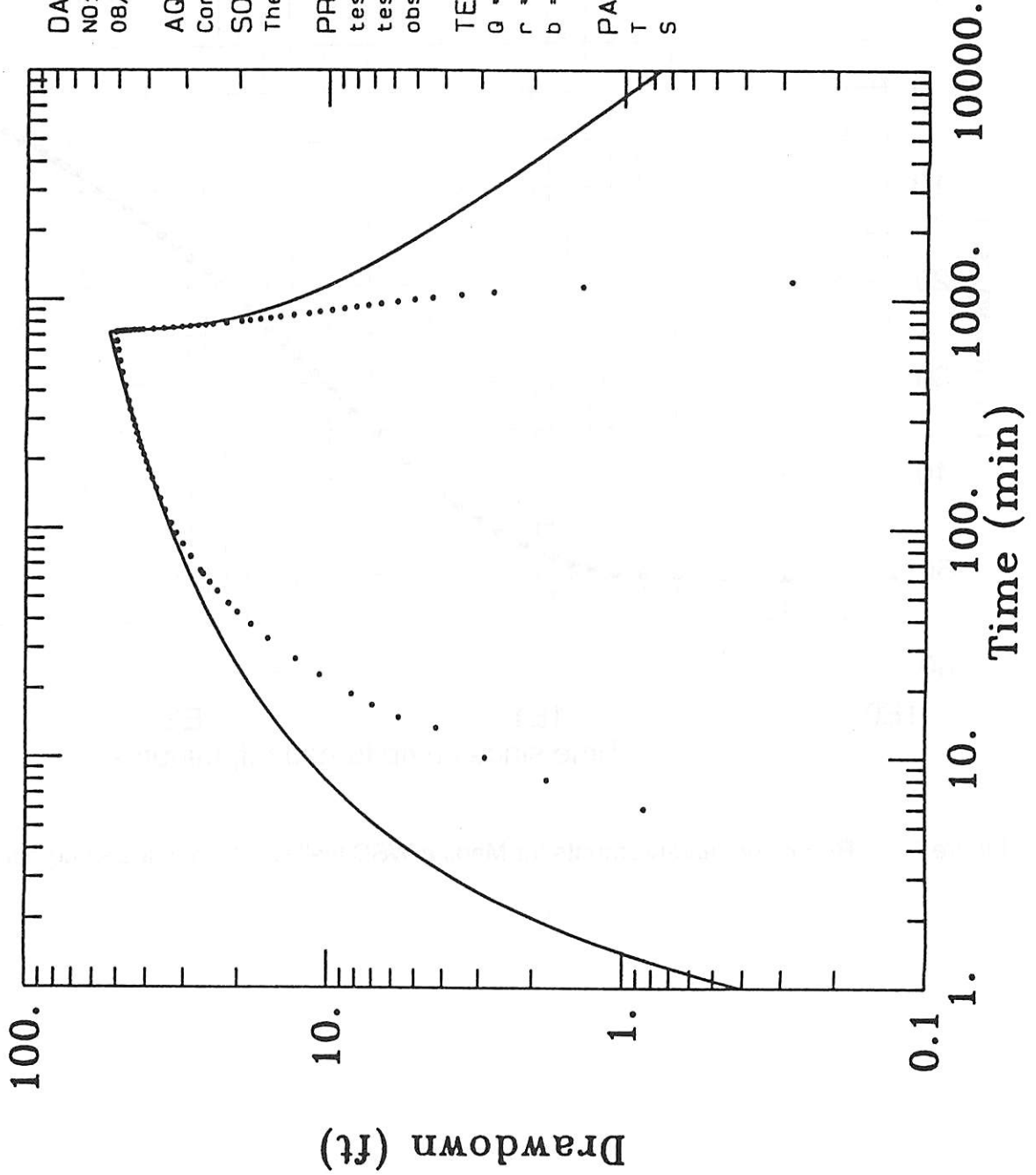


Figure 6. Recovery measurements for Medina WSC well No. 1, minutes since pump turned off.

Figure 7. Theis plot for Medina WSC well No. 1.



DATA SET:
N01THEIS.DAT
08/12/97

AQUIFER MODEL:
Confined

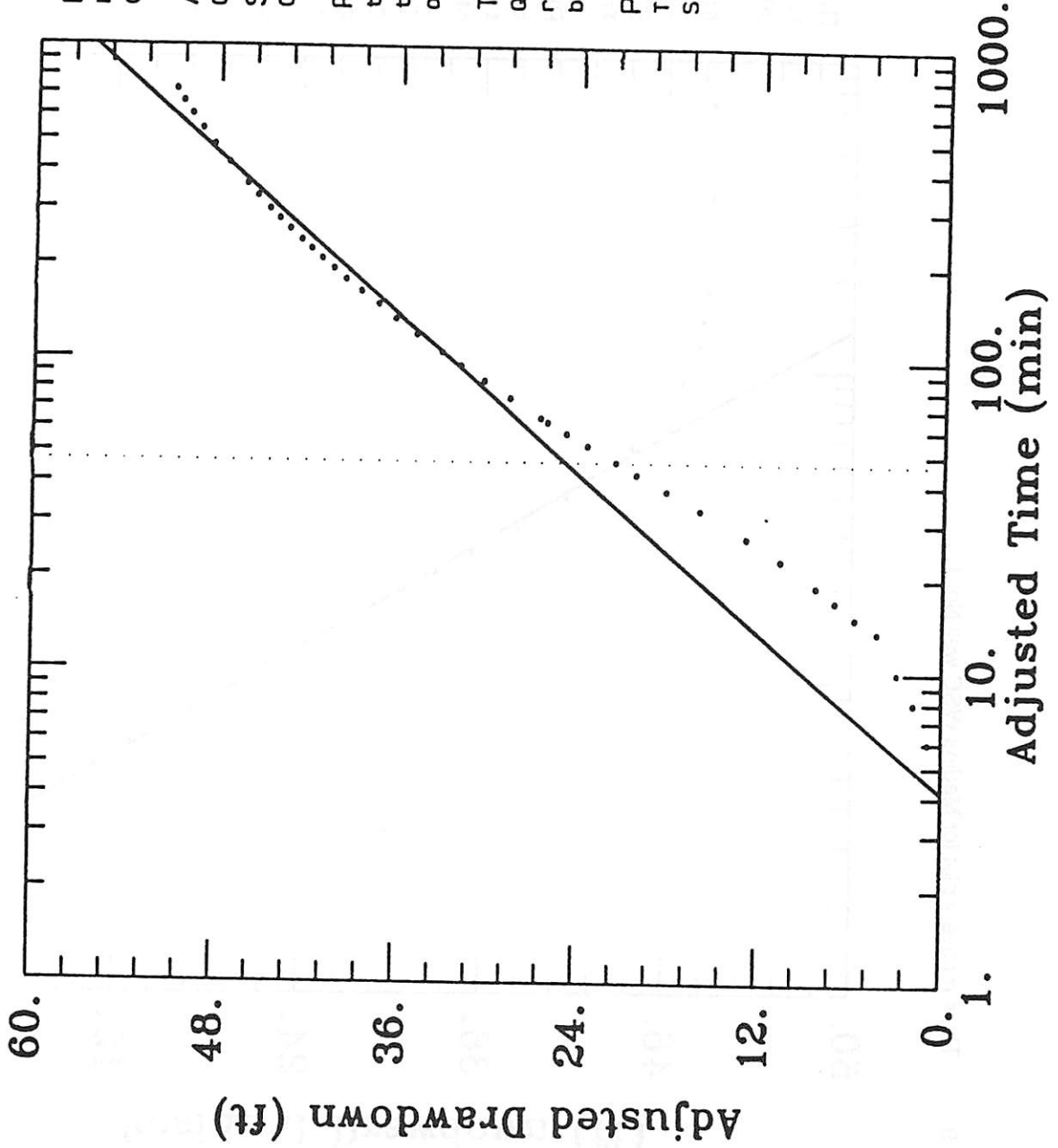
SOLUTION METHOD:
Theis

PROJECT DATA:
test date: August 5-6, 1997
test well: Medina WSC No.3
obs. well: Medina WSC No. 1

TEST DATA:
g = 105. gal/min
r = 72. ft
b = 1. ft

PARAMETER ESTIMATES:
T = 157.7 ft²/day
S = 0.0001818

Figure 8. Cooper-Jacob plot for Medina WSC well No. 1.



DATA SET:
N01JACOB.DAT
08/12/97

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Cooper-Jacob

PROJECT DATA:

test date: August 5-6, 1997
test well: Medina WSC No.3
obs. well: Medina WSC No. 1

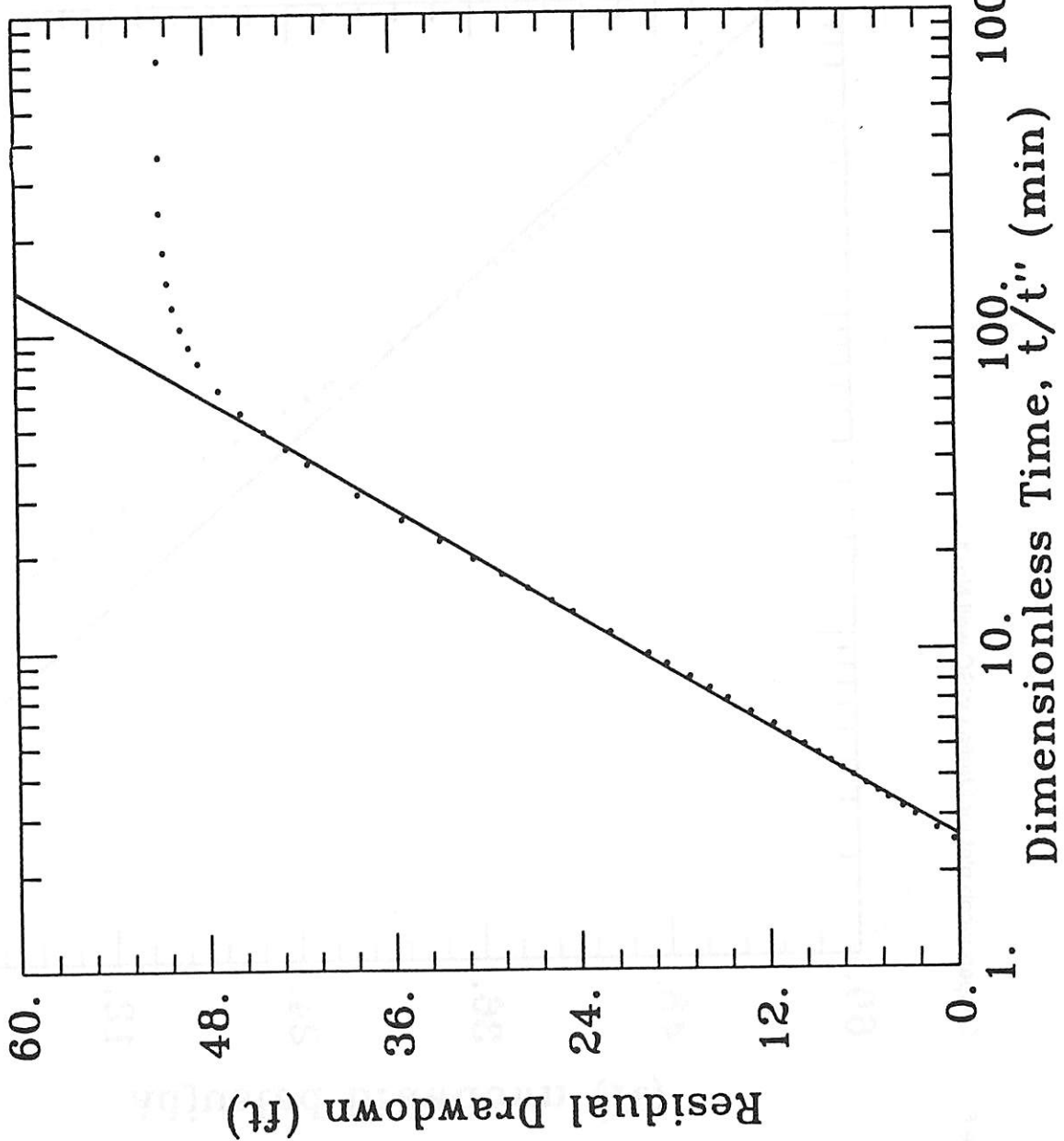
TEST DATA:

Q = 105. gal/min
r = 72. ft
b = 1. ft

PARAMETER ESTIMATES:

T = 156.8 ft²/day
S = 0.0001966

Figure 9. This recovery plot for Medina WSC well No. 1.



DATA SET:
 NC1RECOV.DAT
 08/12/97

AQUIFER MODEL:
 Confined

SOLUTION METHOD:
 Theis Recovery

PROJECT DATA:

test date: August 5-6, 1997
 test well: Medina WSC No.3
 obs. well: Medina WSC No. 1

TEST DATA:

Q = 105. gal/min
 r = 72. ft
 b = 1. ft

PARAMETER ESTIMATES:

T = 106.4 ft²/day
 S = 2.596

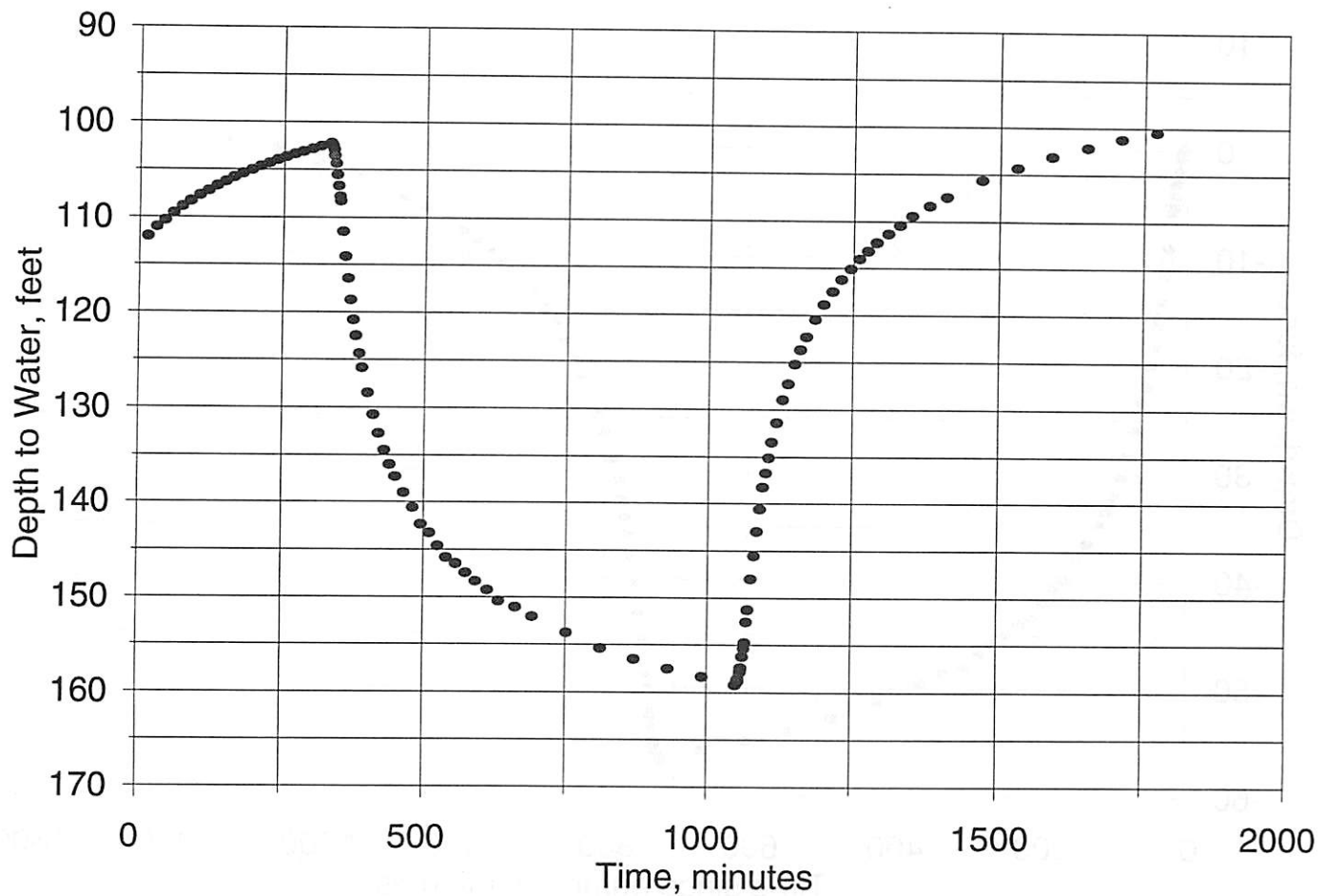


Figure 10. Water level measurements, Medina WSC well No. 2.

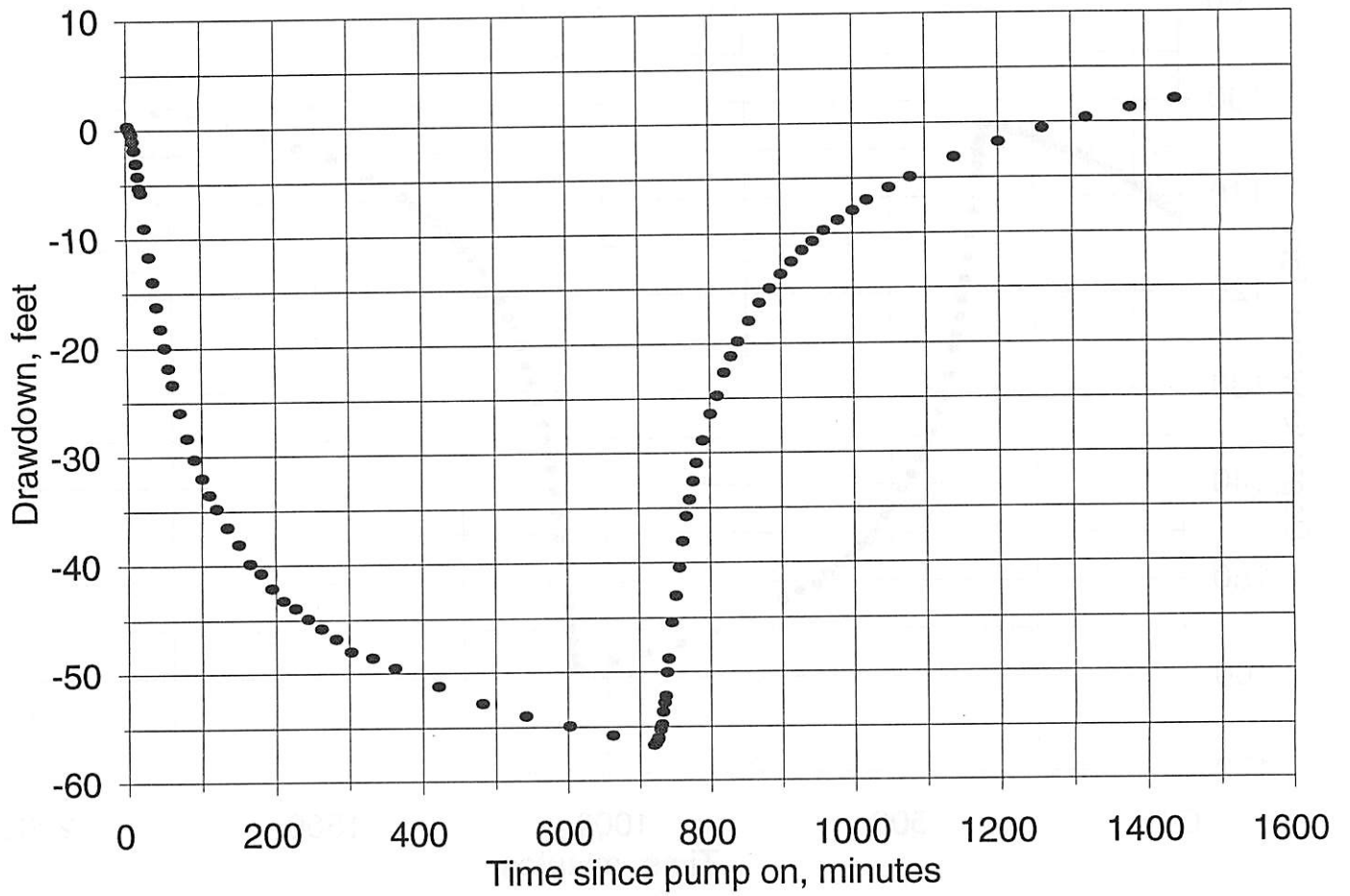


Figure 11. Drawdown measurements, Medina WSC well No. 2.

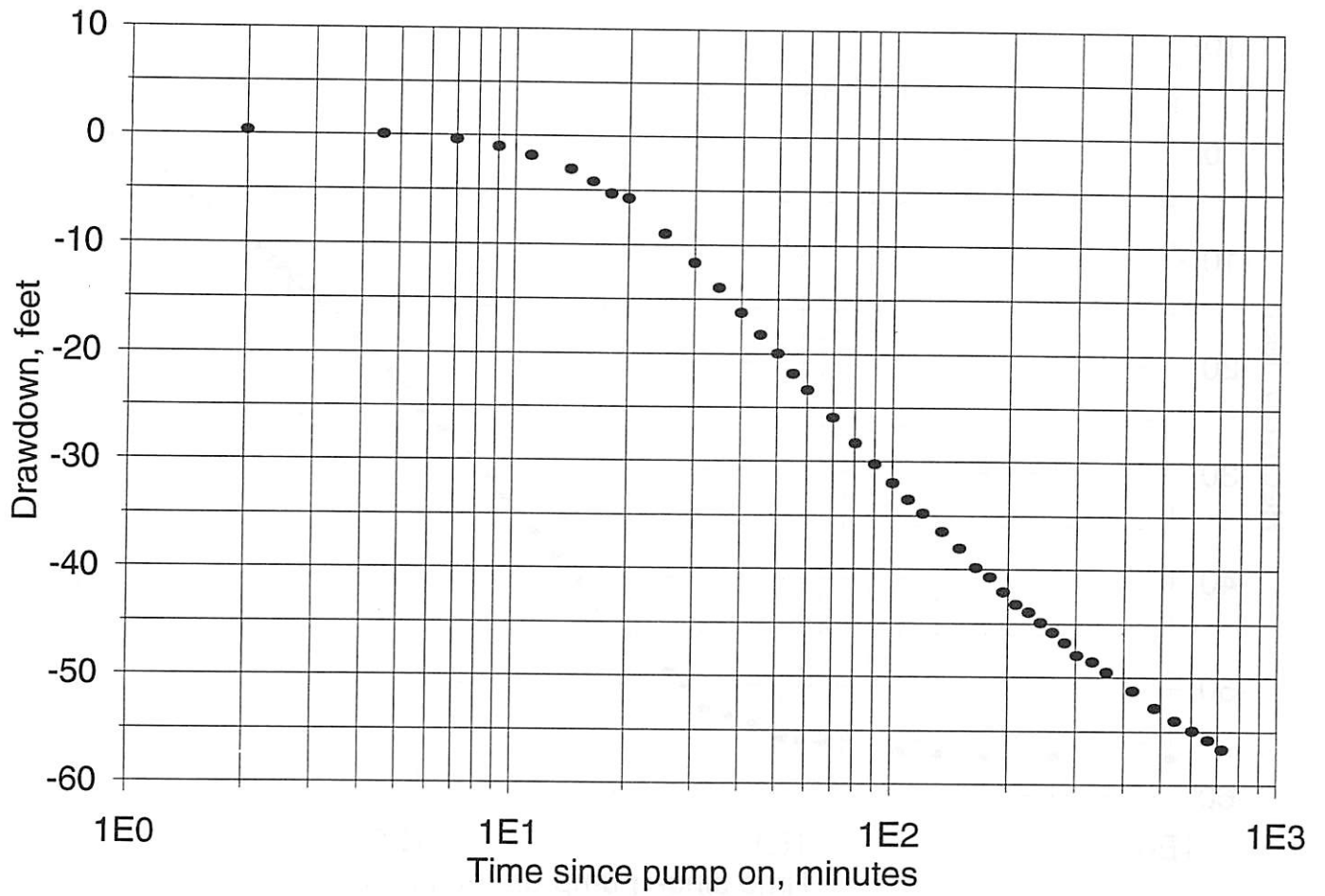


Figure 12. Drawdown measurements for Medina WSC well No. 2, minutes since pump turned on.

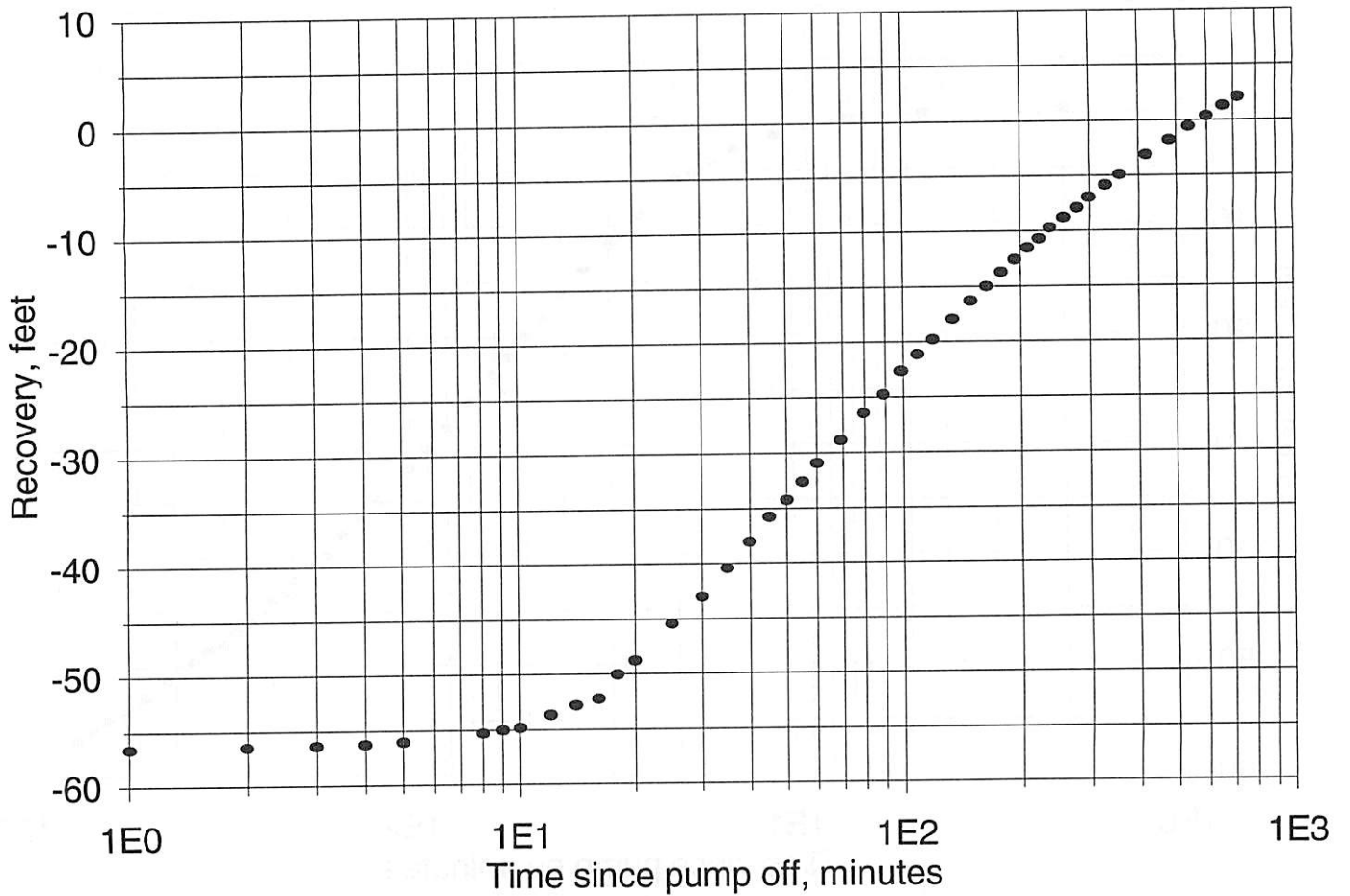
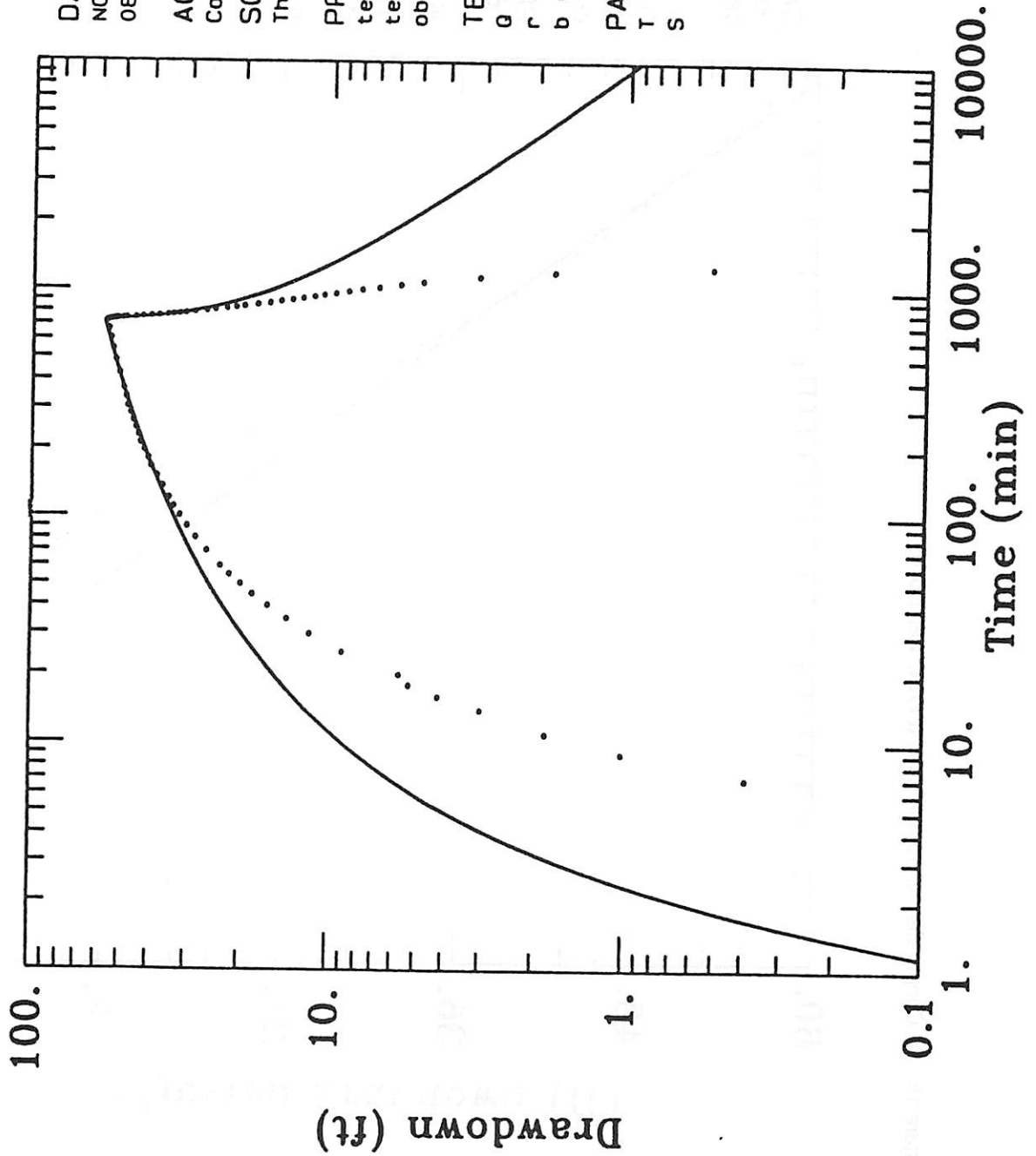


Figure 13. Recovery measurements for Medina WSC well No. 2, minutes since pump turned off.

Figure 14. Theis plot for Medina WSC well No. 2.



DATA SET:
N02THEIS.DAT
08/12/97

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Theis

PROJECT DATA:

test date: August 5-6, 1997
test well: Medina WSC No. 3
obs. well: Medina WSC No. 2

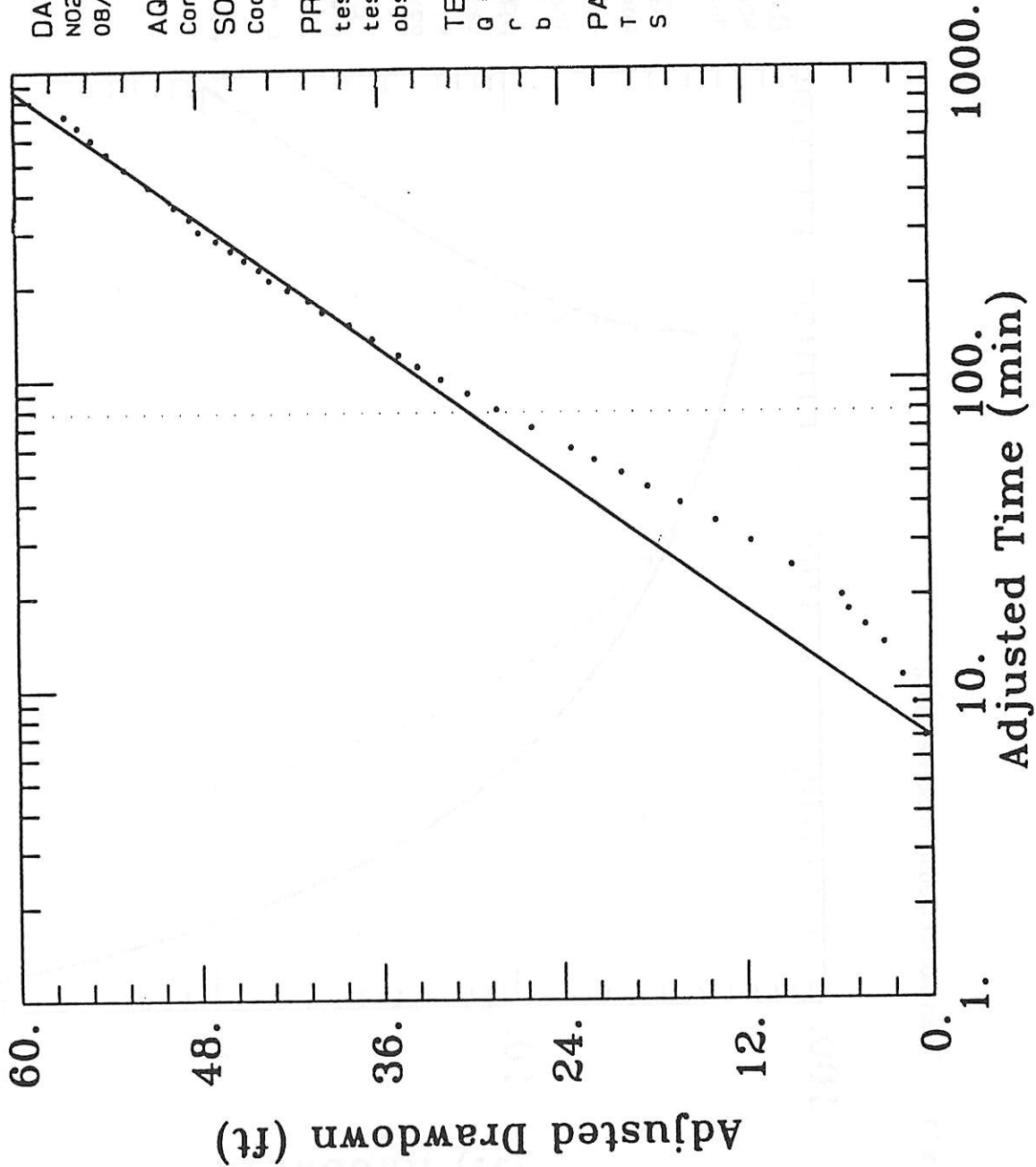
TEST DATA:

Q = 105. gal/min
r = 110. ft
b = 1. ft

PARAMETER ESTIMATES:

T = 129.2 ft²/day
S = 0.0001162

Figure 15. Cooper-Jacob plot for Medina WSC well No. 2.



DATA SET:
N02JACOB.DAT
08/13/97

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Cooper-Jacob

PROJECT DATA:

test date: August 5-6, 1997
test well: Medina WSC No. 3
obs. well: Medina WSC No. 2

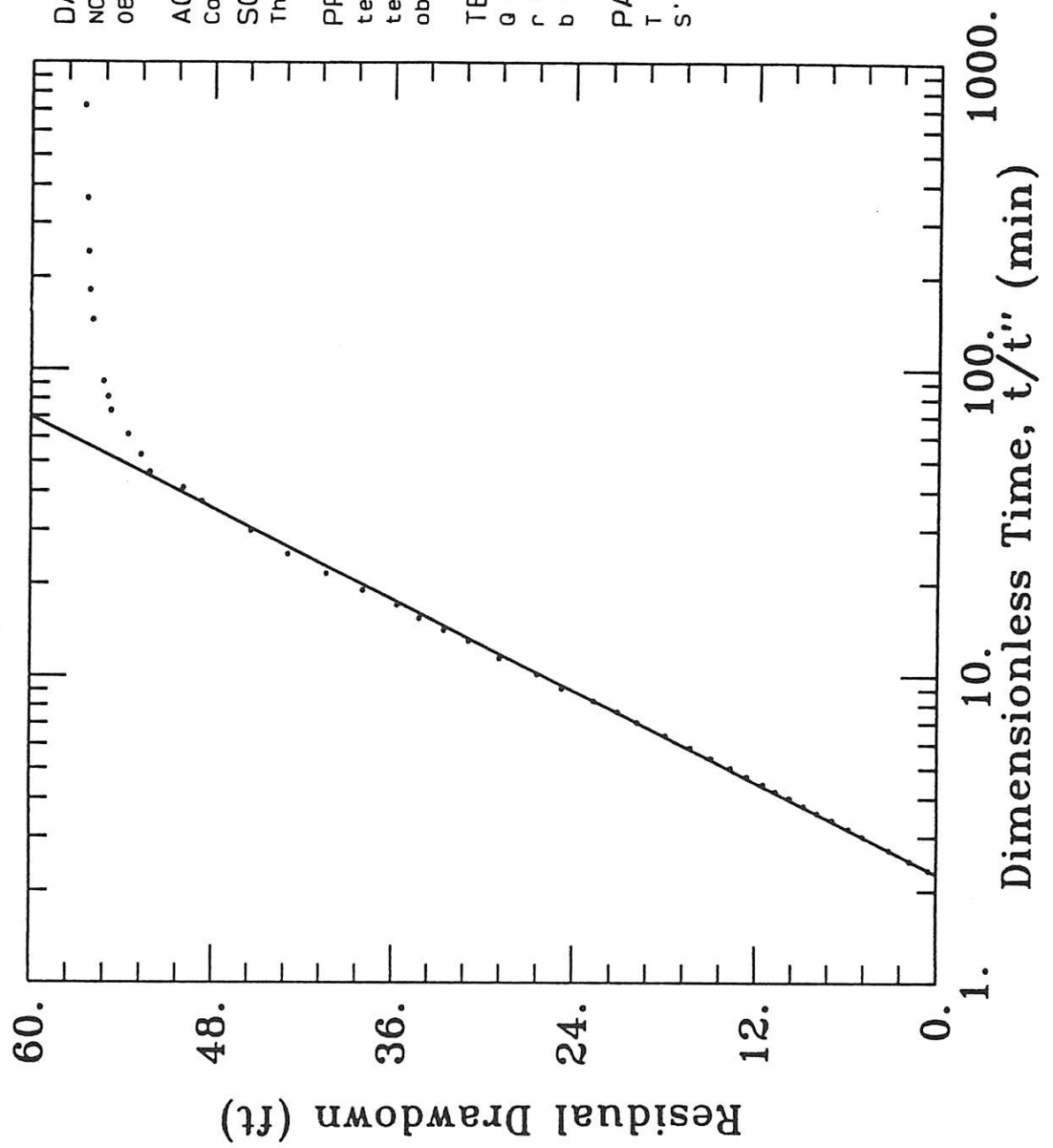
TEST DATA:

Q = 105. gal/min
r = 110. ft
b = 1. ft

PARAMETER ESTIMATES:

T = 129.2 ft²/day
S = 0.0001162

Figure 16. This recovery plot for Medina WSC well No. 2.



DATA SET:
N02RECOV.DAT
08/13/97

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Theis Recovery

PROJECT DATA:
test date: August 5-6, 1997
test well: Medina WSC No. 3
obs. well: Medina WSC No. 2

TEST DATA:
 $Q = 105$ gal/min
 $r = 110$ ft
 $b = 1$ ft

PARAMETER ESTIMATES:
 $T = 91.9$ ft²/day
 $S' = 2.27$