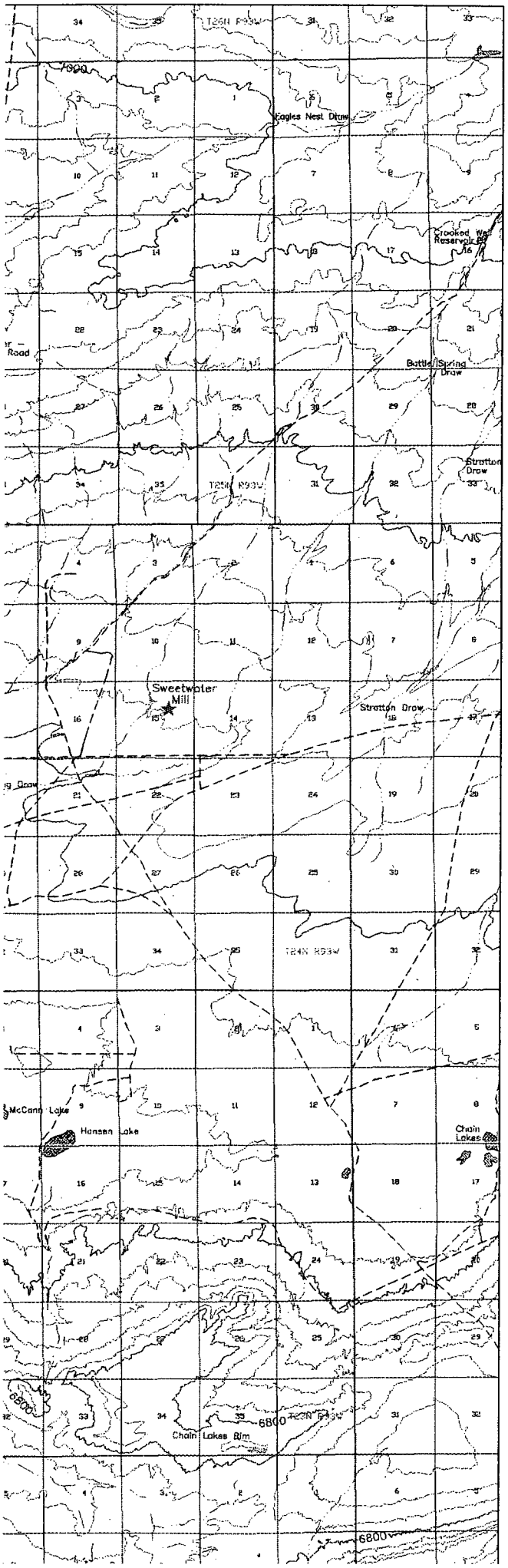

EVALUATION OF AQUIFER TEST DATA

For the SWEETWATER URANIUM PROJECT Sweetwater County, Wyoming

Source Material License SUA-1350

Prepared For:
Kennecott Uranium Company
P.O. Box 1500
Rawlins, Wyoming 82301

Prepared By:
Shepherd Miller, Inc.
3801 Automation Way
Fort Collins, Colorado 80525

February 1997

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SWEETWATER URANIUM PROJECT

SWEETWATER COUNTY, WYOMING

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Prepared by:

Shepherd Miller, Inc.
3801 Automation Way, Suite 100
Fort Collins, Colorado 80525

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EVALUATION OF SWEETWATER URANIUM PROJECT
TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 SITE GEOLOGY & GROUND WATER HYDROLOGY 2
- 2.1 Site Geology 2
  - 2.1.1 Physiography and Topography 2
  - 2.1.2 Stratigraphy and Tectonic History 3
  - 2.1.3 Detailed Site Geology 4
- 2.2 Ground Water Hydrology 5
  - 2.2.1 Regional Hydrology 5
  - 2.2.2 Site Hydrology 11

3.0 AQUIFER TESTING 16
- 3.1 Aquifer Test Analysis and Methodology 17
- 3.2 Results 21

4.0 CONCLUSIONS 23

5.0 REFERENCES 24

LIST OF TABLES

Table 2.1 Aquifer Tests and Studies Relating to the Battle Spring Aquifer in the Vicinity of the Sweetwater Uranium Project 8

Table 2.2 Comparison of Aquifer Test Results 9

Table 2.3 Monitor Well Completion and Elevation Data 14

Table 3.1 History of Aquifer Test 16

Table 3.2 Pumping Test Results for TMW-16 and TMW-29 Corrections 20

Table E-1 Sweetwater Pumping Test Results (contained in Appendix E)

LIST OF FIGURES

Figure 1 Location of Sweetwater Project Site

Figure 2 Location of Boreholes and Geologic Cross Sections

Figure 3 Geologic Cross Section in Vicinity of 1996 Aquifer Test

Figure 4 Tailings Cell Monitor Well Map

Figure 5 Wells Used in 1996 Aquifer Test

LIST OF APPENDICES

Appendix A	Geophysical Logs
Appendix B	Original Hermit Data
Appendix C	Original Hand Water Level Data
Appendix D	Original Barometric Pressure Data
Appendix E	Data Plots and Type Curves
Appendix F	TMW-45 Corrected Data
Appendix G	TMW-16 and TMW-29 Corrected Data
Appendix H	Barometric Pressure Corrected Data

Diskette Attached - Aquifer Test Data

1.0 INTRODUCTION

A pumping test was conducted in December 1996 at the Kennecott Sweetwater Uranium Facility located northwest of Rawlins, Wyoming (Figure 1). The 1996 aquifer test was one element of the field data collection program conducted in support of final design efforts for an evaporation pond, reclamation of the existing tailings impoundment, and a new tailings impoundment at the site. Data from this program will be used directly in final design or will be available for future analyses or modeling efforts, such as geochemical and ground water modeling. Additionally, the aquifer test results are descriptive of the current conditions in the upper portion of the Battle Spring Aquifer, where ongoing pumping is occurring as part of the site's Corrective Action Program, and are included in the 1996 Corrective Action Program Review.

2.0 SITE GEOLOGY & GROUND WATER HYDROLOGY

2.1 Site Geology

The geology of the area surrounding the Sweetwater Uranium Facility has been defined in previous submittals to the Nuclear Regulatory Commission, originally in the Environmental Report (Woodward-Clyde, 1976), and in subsequent design reports (Dames & Moore, 1977, 1981). The site geology was summarized in the Revised Environmental Report (Shepherd Miller, Inc., 1994) based on review of these documents and is summarized below.

2.1.1 Physiography and Topography

Regional

The site is located in south-central Wyoming in the Red Desert area of the Great Divide Basin. This basin is part of the Wyoming Basin physiographic province as defined by Fenneman (1931). The floor of the Wyoming Basin is a plateau marked by elongated ridges and isolated mountains. The altitude of the plateau surface ranges from 6500 to 7500 feet above sea level.

The Great Divide Basin is an internally drained basin bounded on most sides by major structural uplifts - the Sweetwater Uplift to the north and northeast, the Rawlins Uplift to the east and southeast, the Rock Springs Uplift to the west and the Wind River Uplift to the northwest. To the south the Great Divide Basin is separated from the Washakie Basin by Laney Rim and Cathedral Bluffs (Bradley, 1945).

Local

The site is located in the east-central portion of the Great Divide Basin in an area generally north of the playa and alkali lakes that occupy the topographically lowest part of the basin. The relatively flat surface is broken by a few low ridges. Elevations in the immediate project area

range from approximately 6500 to 6700 feet above sea level. The surface slopes to the southwest about 40 feet per mile (less than one degree).

2.1.2 Stratigraphy and Tectonic History

Approximately 23,000 feet of Paleozoic, Mesozoic, and Cenozoic sediments underlie the site. These sediments comprise one of the thickest rock sequences of the Great Divide Basin.

In addition to the Laramide orogeny of Late Cretaceous age, several gentle epeirogenic movements have occurred throughout geologic time. Deposition of the Cambrian sandstones occurred during Early Paleozoic downwarping. This deposition was followed by a period of nondeposition and/or erosion, which continued until the Mississippian carbonates and the sandstones and carbonates of Pennsylvanian and Permian time were deposited during another period of downwarping. Periods of transgression and regression were common during the Late Paleozoic and Mesozoic, when an abundance of fine clastics interspersed with thin carbonates and sandstones were deposited.

The present configuration of the Great Divide Basin was initiated as a result of tectonic activity associated with the Laramide orogeny in Late Cretaceous time. In Early Cenozoic time, erosion of the Sweetwater, Rawlins, Rock Springs, and Wind River Uplifts supplied sediments to the basin. The coarser clastics were supplied to the basin from the north and east as movement of the uplifts continued into Middle Cenozoic time. In late Middle Cenozoic time, volcanic debris consisting of tufts and tuffaceous material was introduced into the basin. Subsequent regional uplift caused erosion and exhumation of the basin, which defined its present form.

The Tertiary sequence of rocks that were deposited following the Laramide orogeny consist of conglomerates, sandstones, siltstones, mudstones, and lignitic and subbituminous coals. All of these rocks are of continental origin and were deposited under fluvial, lacustrine, and paludal conditions. The Tertiary rocks in the Great Divide Basin have been divided into six formations by Pipiringos (1955). The oldest formation, the Fort Union Formation of Paleocene age, does not crop out and is known only from deep drilling records. This formation is unconformably

overlain by interfingering sediments of Eocene age that Pipiringos assigned to Green River, Wasatch, and Battle Spring Formations. These beds are conformably overlain by the Eocene Bridger Formation, which in turn is unconformably overlain by the Brown's Park Formation of Oligocene to Miocene age. Holocene alluvium, consisting of sands, silts, and gravels, covers much of the present surface.

In the project area, only a portion of the Battle Spring Formation is exposed or immediately underlies the alluvium. This formation was deposited as a typical deltaic fanglomerate and consists of intercalated and interfingered beds of arkosic sandstone, siltstone, and mudstone. The sandstones are generally fine- to coarse-grained, poorly sorted, and slightly clayey. These sandstones are lenticular, often grading laterally into interchannel deposits of siltstone and mudstone. Although the siltstones and mudstones are also somewhat lenticular, their lateral extent is greater and they are more continuous than the sandstones. The sandstones of the Battle Spring Formation are host rocks for uranium mineralization in the area.

2.1.3 Detailed Site Geology

The surface at the site is covered by thin Holocene alluvium derived from the immediately underlying Battle Spring Formation. At this locality, the Battle Spring Formation consists of interbedded and interfingered mudstones, siltstones, and sandstones. The beds are nearly horizontal, and dip northwestward at an angle of less than one degree (approximately 40 feet to the mile).

The sandstones generally form lenses or channels that are enclosed by finer clastics. Fairly continuous beds of impermeable, finer clastics are present throughout the stratigraphic interval underlying the mill and tailings impoundment sites.

Geologic Cross Section

Figure 2 shows the location of boreholes near the existing site tailings impoundment and differentiates between exploration borings, geotechnical borings, original tailings monitor wells,

water source wells, deep aquifer wells, shallow aquifer wells, and perched aquifer wells. Geophysical data consisting of gamma, spontaneous potential (SP), and resistivity were collected from several of these boreholes to distinguish stratigraphic layering in the vicinity of the tailings impoundment.

Four cross section lines were selected to comprise as many of the borings with geophysical data as possible (Shepherd Miller, Inc., 1995). Geologic cross sections were then created based on interpretation of the geophysical data, cross-referenced to lithologic logs. Lithologic logs were generated based on cuttings and are not considered to be as accurate as the geophysical logs. Figure 2 provides a plan view showing the locations of the cross sections relative to the tailings impoundment and boring locations. The portion of cross Section B-B' that extends through the area affected by the 1996 aquifer test is depicted in Figure 3. Geophysical logs from the boreholes in this portion of Cross Section B-B' are included in Appendix A.

Correlations between borings were also based on an understanding of the general site geology and a review of the geologic record available in observation of the pit wall. The observation that the fine layers are discontinuous was used in interpolating between boreholes. The cross sections verify previous observations that the Battle Spring Formation in the site vicinity is composed of interfingered layers of sandstone and silt- or claystone.

2.2 Ground Water Hydrology

2.2.1 Regional Hydrology

The Great Divide Basin is an internally drained basin defined by a bifurcation of the Continental Divide. The site lies in the east-central portion of this basin in the ephemeral Battle Spring Draw watershed. Aquifers beneath the site, from the surface downward, are located in the alluvial, Battle Spring, Fort Union and Lance Formations.

There is very little surface water in the Great Divide Basin. Some shallow perennial lakes are located a few miles south of the site in Chain Lakes Flat, which is near the center of the basin.

Heavy precipitation can cause some surface water flow in draws; however, these flows are infrequent, since average annual precipitation is only about 5 to 6 inches (site precipitation data, 1978 to 1990). There are a few intermittent springs in the lower portions of the basin that discharge into draws, but this water seeps into the ground a short distance downstream.

Descriptions of the geologic formations of the Great Divide Basin and their hydrologic properties have been discussed in numerous publications (Welder and McGreevy, 1966; Berry, 1960; Wyant, and others, 1956; Masursky, 1962; Root and others, 1973). Hydrogeologic units that occur beneath the site and vicinity include the following: recent alluvial, windblown, and lake deposits; the Eocene Battle Spring Formation; and the Paleocene Fort Union Formation. These units are classified as aquifers and, depending on their hydrologic characteristics, yield ground water to wells and springs.

Alluvium. The alluvial aquifer in the area of the site consists of thin, unconsolidated, poorly stratified clays, silts, sands, and gravels. Precipitation infiltrates the aquifer during the year, and any intermittent streams flowing across the alluvium also provide recharge. However, most of the recharge flows through the alluvium to lower aquifers, where the water table, in the vicinity of the site, is located at depths of approximately 100 feet below the surface. Consequently, there is no potential for the development of alluvial ground water supplies.

Windblown Sand and Lake Deposits. Many scattered and relatively thin windblown sand and lake deposits consisting of sands, silts, and clays overlie the Battle Spring Formation in the vicinity of the site. The dune sands primarily cover the upland slopes adjacent to Battle Spring and Chain Lakes flats, which lie to the southwest and south of the site, respectively. Lake deposits border or underlie the large playa lakes within these flats. Although the potential for producing ground water yields of more than 10 gallons per minute (gpm) from these deposits is poor, they do serve as recharge areas to the underlying aquifers.

Battle Spring Formation. The Battle Spring Formation consists of a fine- to coarse-grained arkosic sandstone, with lenticular interbeds of silts and shales. This formation underlies the site and extensive areas to the north and east to depths as great as approximately 5000 feet.

Approximately 5 to 10 miles southwest of the site, the formation interfingers with the Wasatch Formation of equivalent age. The Battle Spring and Wasatch Formations are the two most important aquifers in the Great Divide Basin.

Large reserves of water are believed to be present in the Battle Spring Aquifer, but knowledge of its hydrologic characteristics is not adequate to assess the amount of available ground water (Welder and McGreevy, 1966).

Ground Water Occurrence and Movement

Based on local well data, the Battle Spring Formation does not appear to be a single, continuous, and homogeneous aquifer. Water in the aquifer is generally under artesian pressure, but it may be locally unconfined.

The site is located within a closed ground water system. The low point of this ground water basin lies within the 6500-foot contour located south and southwest of the site. Ground water moves toward the center of the basin and discharge occurs principally in the playa lakes to the south (Chain Lakes) and southwest (Battle Spring Flat) of the site. Since the basin is also closed topographically, the discharged water is ponded, and most of this water is lost to evaporation. In addition, there is some discharge from springs near Battle Spring and Chain Lakes flats. This water is also subject to evaporation.

The Battle Spring Aquifer is recharged mainly by infiltration of precipitation in its outcrop area near the perimeter of the Great Divide Basin. Precipitation may also seep into the aquifer in smaller amounts throughout the basin, especially in areas where sand dunes directly overlie the surface.

Hydrologic Testing

Minerals Exploration Company collected detailed pumping test data in the project area from a number of different tests (Shepherd Miller, Inc., 1994). Table 2.1 lists the pumping tests and other studies of the Battle Spring Aquifer conducted by Minerals Exploration Company and their consultants from 1976 through 1987. More detail is provided in the Revised Environmental Report (Shepherd Miller, Inc., 1994). The results of the 1996 aquifer test are compared in Table 2.2 to results from these previous tests.

Test #1 was conducted in May and June of 1976 in preparation of the 1976 Environmental Report using wells approximately three to four miles southwest of the mill. The well depths varied from 100 to 424 feet and the distances of the observation wells from the pumping wells were 50 to 100 feet. Aquifer transmissivity calculated for the Test #1 wells pumping at different rates were in relatively close agreement at an approximate range of 400 to 2,000 gpd/ft.

Table 2.1 Aquifer Tests and Studies Relating to the Battle Spring Aquifer in the Vicinity of the Sweetwater Uranium Project

Test #	Date	Area Tested	Type of Test	Tester
1	May/June 1976	Sec 20 T24N R93W	Pumping Test	Woodward-Clyde
2	August 1976	Sec 10 T24N R93W	Pumping Test	R.W. Davis
3	March 1977	Sec 9 T24N R93W	Pumping Test	WDC*
4	May 1981	Sec 9 & 10 T24N R93W	Falling Head	Golder Associates
5	December 1981	Sec 3 T23N R94W	Pumping Test	MEC*
6	November 1987	Sec 9 & 10 T23N R94W	Rebound	WWL*
7a - 7e	September/October 1979 and August 1980	Sec 1 T24n R94W	Pumping Test	MEC
8	December 1996	Sec 14 T24N R93W	Pumping Test	SMI*

* WDC is Water Development Corporation; MEC is Minerals Exploration Company; WWL is Water Waste and Land; SMI is Shepherd Miller, Inc.

Table 2.2 Comparison of Aquifer Test Results

Test #	Reported Transmissivities, gpd/ft	Comment
1	400 - 2,000	Regional observation wells
2	23,000 - 330,000	Pit vicinity, 200 - 250 feet
3	16,000 - 35,000	Same wells as #2
4	not available	Horizontal conductivity = 15 ft/day
5	27,000 - 46,000	Battle Spring Flat
6	16,000	Pit vicinity
7	1,000	Northwest of mill
8	3,200 - 13,800	Just north of tailings impoundment, horizontal conductivity = 12 - 53 ft/day

Test #2, conducted in August 1976 (R. W. Davis, 1976), was performed to estimate the magnitude of dewatering problems to be encountered during operation of the Sweetwater pit. Six wells (one pumping well and five observation wells) were installed for this test. The pumping well, RDW-1, was drilled to 340 feet and operated at flows of 288 to 380 gallons per minute. The observation wells were completed over a depth interval of 200 to 250 feet. Transmissivities and storage coefficients were computed using the Theis curve method. The results of the test show transmissivities ranging from about 23,000 to 106,000 gpd/ft in the drawdown portion of the test, but mostly in the 30,000 to 70,000 gpd/ft range.

Test #3 was conducted in March 1977 (Water Development Corporation, 1977) to determine aquifer properties around the proposed pit area. The results of the test were reinterpreted by Golder Associates (1982). Well RDW-8 was pumped at a rate of 609 gallons per minute for 174 hours with wells RDW-1, RDW-6 and RDW-7 used as observation wells. Test #3 resulted in estimated transmissivities of 16,000 to 35,000 gpd/ft.

A fourth test of the Battle Spring Aquifer was conducted by Minerals Exploration Company and the data interpreted by Golder Associates. Golder Associates stated that the results of this falling head test indicated that the sandstone aquifers of the Battle Spring Formation behave as a multiple leaky confined aquifer system with the drawdown in each aquifer in response to pumping being more or less independent of the head in overlying or underlying aquifers. Golder Associates concluded that the average horizontal conductivity of the sandstone aquifers is probably on the order of 1×10^{-2} ft/min and vertical conductivity is probably on the order of 1×10^{-6} ft/min. They also stated that the aquifers respond to pumping as a confined system (with the exception of the uppermost saturated sand with a specific storage of about 1.5×10^{-6}/ft [Golder Associates, 1982]).

The fifth pumping test was conducted by Minerals Exploration Company in December 1981 around a pumping well. The test involved pumping REB-1081W, approximately 10 miles southwest of the mill, at an average rate of 399 gallons per minute for 477 hours. Drawdown was observed in eleven surrounding wells. Drawdown data for four of the eleven observation wells exhibited too much variation to be analyzed by either the Theis or delayed yield from storage curve matching methods (Dames & Moore, 1982). The results of the test indicate transmissivities ranging from 27,000 to 46,000 gpd/ft.

The sixth study of the properties of the Battle Spring Aquifer was conducted in November 1987 by Water, Waste and Land. They studied the Sweetwater pit water levels in response to the cessation of pit dewatering on April 25, 1983. Water, Waste and Land concluded that the rate of recovery of the water level in the pit most closely matched the recovery one would get if the Battle Spring Aquifer had a transmissivity of 15,700 gpd/ft (Water Waste and Land, 1987).

Pumping test numbers 7a through 7e were conducted to the northwest of the facility to evaluate the Battle Spring Aquifer around Well WW-2. Test #7a was conducted by pumping WW-2 at an average rate of 51.4 gpm for 11 hours; Test #7b at an average rate of 48.6 gpm for 269 minutes; Test #7c at an average rate of 37.9 gpm for 90 minutes; Test #7d at an average rate of 59.1 gpm for over 72 hours; and Test #7e was conducted by pumping WW-1 at an average

rate of 39.7 gpm for over 5 hours (unpublished data from Minerals Exploration Company). The results of these five pumping tests show transmissivities ranging from 700 to 1,200 gpd/ft.

Summary and Comparison of Aquifer Test Results

The transmissivity estimated from the December 1996 aquifer test, 400 to 1,900 ft^2/day (3,200 to 13,800 gpd/ft) and discussed in Section 3.2 below, is within the range of transmissivities reported from other pumping tests, which typically varied from 1,000 to 100,000 gpd/ft. Tests in the vicinity of the Sweetwater pit typically show transmissivities on the order of 15,000 to 70,000. These wells are completed in a deeper portion of the Battle Spring Aquifer than are the tailings monitor wells evaluated in the 1996 aquifer test. Regional wells show aquifer transmissivities to be as low as 1,000 gpd/ft and as high as 45,000 gpd/ft. Iron and calcite were observed during the 1996 drilling program and it may be that shallower portions of the aquifer have lower transmissivities due to precipitates in the oxygenated zone at the top of the aquifer.

2.2.2 Site Hydrology

The Battle Spring Aquifer is located immediately beneath the Sweetwater tailings impoundment, at a depth of approximately 100 feet. As described above, the Battle Spring Formation is composed of discontinuous layers of alluvial sandstones and finer clastics (siltstone and claystone). The sandstone units of the Battle Spring Formation may behave as a multiple leaky confined aquifer system, with the drawdown in each aquifer in response to pumping being more or less independent of the head in the overlying or underlying aquifers (Golder Associates, 1982). This behavior results from the layers of clay materials, which inhibit vertical movement of water.

On a localized basis, a number of separated water-storing units exist within the Battle Spring Aquifer. Additionally, the presence of claystone layers above the Battle Spring Aquifer allows seepage to be perched in certain locations.

As documented in the Revised Environmental Report (Shepherd Miller, Inc., 1994), an incursion from the tailings impoundment occurred in 1984, allowing tailings fluid to seep into the ground adjacent to the impoundment. In the vicinity of the tailings impoundment, two claystone layers create three localized water-storing units. Each of the three units is identified where appropriate on the cross section in Figure 3. The first, located to the north and west of the impoundment, is a perched aquifer. This perched layer is situated above a fairly continuous claystone layer located approximately 50 to 70 feet below the ground surface. The approximate areal extent of the perched aquifer is estimated as shown in Figure 2. As of September 1989 available fluid present in the perched aquifer had been pumped out and returned to the tailings impoundment. Therefore, the perched aquifer is no longer saturated.

The other two localized aquifer units are within saturated sands of the Battle Spring Aquifer, separated by another fairly continuous claystone layer approximately 150 to 200 feet below the ground surface (see Figure 3). The upper saturated sand of the Battle Spring Aquifer is approximately 50 feet thick. The lower saturated sand of the aquifer exists below 150 feet from the ground surface. Water quality sampling of three wells completed within the lower saturated sand, TMW's 8, 24 and 47, shows it to be unaffected by seepage from the cell, indicating that flow from the upper to lower saturated sands is retarded by the claystone layer. These three wells have been completed at depths of approximately 200 to 240 feet.

The December 1996 piezometric surface, with the pumpback system shut off, for the Battle Spring Aquifer is shown in blue on the cross section in Figure 3. Additionally, the perimeter of the tailings impoundment, the approximate tailings surface, and the current tailings fluid level (6,620 feet above mean sea level) are depicted in Figures 2 and 3.

The average horizontal conductivity of the Battle Spring Aquifer, as stated above, is probably on the order of 1×10^{-2} ft/min and vertical conductivity probably on the order of 1×10^{-6} ft/min. Potable water wells, Drake-1, PWW-1 and PWW-2, have been drilled in the Battle Spring Aquifer to provide water to the site. Water quality in these wells is good, with water quality data provided in the Revised Environmental Report (Shepherd Miller, Inc., 1994). Pumpback

wells, as part of the ground water Corrective Action Program, have historically pumped at annualized average rates of up to 11 gpm.

Monitor Well Completion and Elevation Data

Monitor wells around the tailings impoundment have been completed in each of the three localized aquifer units discussed above (perched aquifer and upper and lower saturated sands of the Battle Spring Aquifer). Table 2.3 summarizes for each well the zone in which it was completed and the depth of the screened interval. Additionally, Figure 4 displays the locations of each of these monitor wells and denotes the zone of completion by symbol color. The completion zones for TMWs -17, -75 and are also shown on the cross section in Figure 3. TMW-17 (the pumping well in the 1996 aquifier test) was drilled and completed by Drilling Enterprises located in Casper, Wyoming. A Gardner Denver 1000 utilizing rotary drilling techniques was used to drill the 9-inch borehole. TMW-17 was completed with nominal 5-inch Schedule-80 PVC. The screened interval is 50 feet long with a slot size of 0.03 inches wide by 2 inches long and with approximately 1800 slots. A 3/8-inch pea gravel pack was installed over the length of the screened interval. Approximately 44 feet of bentonite pellets were installed above the filter pack (assuming that the one pail noted in the completion log is equal to 5 gallons). Cement was installed from the top of the bentonite to ground surface.

In November 1996 a survey was conducted to determine the accurate casing and ground surface elevations for each of the tailings monitor wells using the recently corrected elevation of the southwest corner of Section 14, R93W, T24N as the starting point. The 1996 survey corrects errors made in previous surveys that were based on incorrect base elevations. The casings were also cut level and notched in November 1996 to provide a consistent point from which to measure water surface elevations. Table 2.3 lists the casing and ground surface elevations from the 1996 survey for each of the tailings monitor wells.

Table 2.3 Monitor Well Completion and Elevation Data

Well Number (TMW-)	Completion Zone	Screen Interval (Feet from ground surface)	Casing Elevation (1)	Ground Surface Elevation (1)
1	Aquifer	160 - 260, 280 - 300	6648.22	6648.22
2	Aquifer	135 - 295, 295 - 300	6627.09	6626.32
3	Aquifer	100 - 267	6626.27	6624.74
4	Aquifer	100 - 267	6626.89	6625.74
5	Aquifer	100 - 267	6658.59	6656.49
6	Aquifer	100 - 267	6641.66	6640.26
8	Deep Aquifer	220 - 240	6646.47	6645.64
15	Aquifer	78 - 128	6643.26	6642.09
16	Aquifer	120 - 145	6655.62	6654.35
17	Aquifer	100 - 150	6660.87	6660.19
18	Aquifer	96 - 146	6655.98	6654.91
19	Perched	20 - 38	6661.54	6660.36
20	Perched	39 - 59	6661.29	6659.62
21	Perched	33 - 53	6659.40	6658.05
22	Perched	28 - 48	6659.68	6658.27
23	Perched	15 - 44.5	6659.28	6658.32
24	Deep Aquifer	215 - 235	6661.21	6659.20
29	Aquifer	100 - 150	6656.64	6655.98
30	Perched	18.5 - 38.5	6659.22	6658.41
31	Aquifer	99.5 - 149.5	6661.09	6660.04
34	Perched	24.7 - 35.7	6657.92	6656.35
35	Aquifer	97 - 147	6657.75	6656.54
36	Aquifer	96 - 146	6657.75	6656.48
37	Aquifer	88.5 - 138.5	6650.73	6649.39
44	Aquifer	85 - 135	6637.52	6636.84
45	Aquifer	85 - 135	6641.00	6640.37
47	Deep Aquifer	197 - 217	6640.35	6638.73
48	Aquifer	100 - 150	6639.72	6638.50
49	Aquifer	100 - 150	6640.19	6639.23
50	Aquifer	100 - 150	6647.80	6646.76
51	Aquifer	110 - 160	6650.00	6648.40
52	Aquifer	100 - 150	6644.70	6643.25
53	Aquifer	100 - 150	6641.47	6640.03

Table 2.3 Monitor Well Completion and Elevation Data (Cont'd)

Well Number (TMW-)	Completion Zone	Screen Interval (Feet from ground surface)	Casing Elevation (1)	Ground Surface Elevation (1)
54	Perched	49 - 75	6652.06	6650.73
55	Perched	43.5 - 58.5	6649.48	6648.10
56	Aquifer	87 - 137	6647.72	6646.15
57	Aquifer	87 - 137	6649.86	6647.74
58	Aquifer	87 - 137	6646.96	6645.75
59	Aquifer	90 - 138	6648.15	6647.46
61	Aquifer	100 - 150	6649.36	6648.30
62	Aquifer	100 - 150	6646.13	6645.12
63	Aquifer	110 - 130	6654.77	6653.83
64	Aquifer	97 -147	6652.25	6651.55
65	Perched	54.7 - 77.7	6654.88	6653.48
66	Perched	58 - 68	6658.05	6656.76
67	Perched	54 - 72	6656.63	6655.02
68	Perched	76 - 91	6655.04	6653.60
69	Aquifer	100 - 150	6654.47	6653.46
70	Aquifer	100 - 150	6651.06	6649.83
71	Aquifer	100 - 150	6654.52	6652.59
74	Perched	42.5 - 62.5	6660.18	6659.23
75	Aquifer	97 - 147	6660.18	6658.93
76	Perched	46 - 76	6658.48	6657.24
77	Perched	15.5 - 30.5	6658.28	6656.93
78	Aquifer	99 - 149	6658.50	6657.66
79	Perched	48 - 60	6661.52	6659.70
80	Perched	57 - 82	6661.52	6660.04
81	Perched	37.5 - 47.5	6659.96	6658.50
82	Aquifer	100 - 150	6660.64	6659.56
83	Perched	40 - 65	6658.87	6657.86
84	Aquifer	97 - 147	6661.86	6660.36
85	Perched	50 - 90	6659.12	6657.31
86	Perched	71.5 - 89.5	6660.08	6658.16
87	Perched	64 - 88	6660.60	6658.49
88	Perched	62.5 - 85.5	6660.49	6658.71
89	Aquifer	100 - 150	6660.75	6659.33

(1) Elevations are based on the November 1996 survey, with an elevation of 6626.64 feet at SE15, T24N, R93W.

3.0 AQUIFER TESTING

The December 1996 pumping test was conducted in the vicinity of the existing tailings impoundment. Figure 5 shows the wells used in the test. The pumping well was TMW-17, which lies just north of the tailings impoundment in section 14 (T24N, R93W), Sweetwater County, Wyoming. A total of 14 wells were monitored during the pumping and recovery portions of the aquifer test. A history of the aquifer test including flow rates and the starting and ending times is presented in Table 3.1.

Table 3.1 History of Aquifer Test

Activity	Date	Time	Time Since Start of Test (min)	Flow Rate (gpm)	Flow Meter reading (gallons)
Start Pumping Portion of Test	12/7/96	11:05	0	7.9	737.63
	12/7/96	13:50	165	7.5	
	12/7/96	15:05	240	7.5	
	12/8/96	09:52	1367	7.5	
	12/8/96	12:15	1510	7.5	
	12/8/96	16:04	1739	7.7	
	12/9/96	08:35	2730	7.5	
	12/9/96	11:52	2927	7.7	
	12/9/96	16:20	3195	7.1	
	12/10/96	11:50	4365	7.5	
End Pumping Portion of Test	12/10/96	13:21	4456		34121.23
Start Recovery Portion of Test	12/10/96	13:21	0		
End Recovery Portion of Test	12/12/96	09:05	2624		

The wells were monitored using a Solinst water level probe or an In-Situ Inc. Hermit 2000 eight-channel data logger with pressure transducers, or a combination of both methods. Monitoring wells TMW-17, 75, 82, 24, 29, 35, 78, and 16 were monitored using the data logger; monitoring wells TMW-82, 24, 29, 35, 36, 37, 45, 59, 18, 16, 64, and 78 were monitored using the water level probe. Hand water levels were not taken on TMW-17 and TMW-75 because of the possibility of hanging up the water level probe on wiring downhole. The original Hermit data is presented in Appendix B. The original hand water level data is presented in Appendix C. Barometric pressure readings were taken during the aquifer test using a recording barometer located at the site office and are presented in Appendix D. The original Hermit, hand water level, and barometric data is included in electronic format on the 3.5-inch computer disk at the back of the report (Microsoft Excel spreadsheet).

The pumping portion of the aquifer test was run for 4,456 minutes using a submersible pump that pumped at an average rate of 7.5 gallons/minute (gpm). Flow rates were monitored using a flow meter with a totalizer, and periodically checking the flow meter rate with a calibrated five-gallon bucket and a stop watch. The recovery portion of the aquifer test was run for 2,624 minutes which allowed enough time for over 99% recovery.

During the aquifer test several storm fronts passed through the area causing significant fluctuations in the barometric pressure and, correspondingly, in aquifer levels. Corrections for the changes in water levels due to changes in barometric pressure are discussed in Section 3.1.

3.1 Aquifer Test Analysis and Methodology

Of the 13 observation wells that were monitored only TMW-75 and TMW-78 showed a response to pumping. TMW-35 and TMW-24 initially appeared to show a response, but review of the data indicates that the pressure transducer in TMW-35 malfunctioned and the water level changes in TMW-24 were solely in response to barometric pressure changes.

Pumping well TMW-17 is screened in the upper saturated sand aquifer, as are all the monitor wells that were monitored, except for TMW-24, which is screened in the lower saturated sand

aquifer. Because TMW-24 did not show a response to pumping, the aquifer evaluation conducted by this pumping test is limited to the upper saturated sand aquifer. For the pumping well evaluated, the pumping rate, and the length of pumping for this aquifer test, no conclusion can be made regarding hydrologic connection of the upper and lower saturated sands. TMW-17, -75 and -78, are all screened from approximately 100-150 feet below ground surface. Therefore, the pumping well and the monitor wells were treated as fully penetrating wells for the purpose of aquifer parameter estimation.

The pumping test data were analyzed using the University of Waterloo aquifer test program, Aquifer Test for Windows (Waterloo Hydrogeologic). Data were compiled from the data logger and hand water level measurements into a spreadsheet before analysis was performed. The data were analyzed by type-curve matching on a computer screen for all data sets. Because the geology of the upper saturated sand aquifer consists of sand with extensive interbedded claystone layers, the type curves for a leaky-confined aquifer (Hantush curves) and for an unconfined aquifer (Neuman curves) were used in the type-curve matching. The actual data plots with type curves used in matching are given in Appendix E.

Several different methods for correcting the data were used to determine which would best adjust for the changes in barometric pressure. Corrections to the data were made as follows:

1. Correction for barometric pressure changes using a single correction for an entire day of pumping. Corrections came from water levels at TMW-45, which were measured by hand and were not affected by aquifer drawdown ("TMW-45 corrected" entries in Table E-1). Appendix F contains a graph of the hand water level data, original pressure transducer data, and corrected pressure transducer data. Signs were changed on the data for graphing purposes.

2. No correction for barometric pressure ("uncorrected" entries in Table E-1).

3. Correction for barometric pressure changes using data from the pressure transducer in TMW-16 for barometric pressure changes and a correction for initial (before the pumping

test began) transducer drift ("TMW-16 corrected" entries in Table 3.2 and Table E-1). Appendix G contains graphs of the hand water level data, original pressure transducer data (corrected for initial drift), and corrected pressure transducer data. Signs were changed on the data for graphing purposes.

4. Correction for barometric pressure changes using data from the pressure transducer in TMW-29 for barometric pressure changes and a correction for initial (before the pumping test began) transducer drift ("TMW-29 corrected" entries in Table 3.2 and Table E-1). Appendix G contains graphs of the hand water level data, original pressure transducer data (corrected for initial drift), and corrected pressure transducer data. Signs were changed on the data for graphing purposes.

5. Correction for barometric pressure changes using the site barometer ("kencot bar. corr" entries in Table E-1). The site's barometer is altitude-corrected. Depending on the type of aquifer, water levels will respond at some percentage of barometric changes (aquifer efficiency). The aquifer efficiency was determined by applying various factors to the original data until the data plot curve was smoothed out. For analysis of data from the pumping well and the two monitoring wells that showed drawdown, 50% aquifer efficiency seemed to be the optimal correction factor. This correction factor did not completely smooth out the end of the data plots, but the aquifer analysis is based on an earlier part of the curve and is not affected by the late-time data. Appendix D contains graphs of the barometric changes and corrected pressure transducer data. The corrected transducer data are shown in Appendix H using 0%, 50%, and 100% aquifer efficiency factors. Signs were changed on the data for graphing purposes.

The recovery data were not analyzed. A check valve in the discharge pipe of the pumping well did not work properly and allowed the volume of water in the discharge pipe (approximately 4.8 gallons) to drain down into the well. Review of the recovery data indicates that the "slug" of water drained back over some period of time, which does not allow analysis of the recovery. Drawdown in TMW-75 and TMW-78 was deemed insufficient to allow analysis of recovery.

Table 3.2 Pumping Test Results for TMW-16 and TMW-29 Corrections

WELL NAME	RADIAL DISTANCE (feet)	HANTUSH METHOD			NEUMAN METHOD		
		TRANSMISSIVITY (feet*2/day)	K (35 FT) (feet/day)	STORATIVITY	TRANSMISSIVITY (feet*2/day)	K (35 FT) (feet/day)	STORATIVITY
PUMPING WELL							
TMW-17 (TMW-16 corrected) (2)	.3(1)	32.98	0.94		33.70	0.96	
TMW-17 (TMW-29 corrected) (3)	.3(1)	32.98	0.94		30.82	0.88	
OBSERVATION WELLS							
TMW-78 (TMW-16 corrected) (2)	450	2779.20	79.50	1.81E-04	1872.00	53.71	1.65E-04
TMW-78 (TMW-29 corrected) (3)	450	2836.80	81.05	1.42E-04	1828.80	52.30	1.46E-04
TMW-75 (TMW-16 corrected) (2)	200	763.20	21.74	1.37E-04	439.20	12.50	1.09E-04
TMW-75 (TMW-29 corrected) (3)	200	721.44	20.60	1.08E-04	424.80	12.15	9.90E-05

note (1) radius is radius of well. Required for software to complete calculations. No storativity calc.

note (2) (TMW-16 correction) means corrected for initial transducer drift; and for barometric pressure changes using the pressure transducer data from TMW-16.

note (3) (TMW-29 correction) means corrected for initial transducer drift; and for barometric pressure changes using the pressure transducer data from TMW-29.

3.2 Results

The results of the type-curve matching are summarized in Table 1 and Table E-1. The data that were corrected using the barometric pressure changes from TMW-16 and TMW-29 and an initial drift correction produced the most uniform curves and were deemed to be the most reliable; therefore, only this data set (TMW-16 and TMW-29 corrected) is addressed in the results and conclusions and is presented in Table 3.2. A comparison of all the correction factors is contained in Table E-1. Figure 5 shows the cone of depression in plan view and Figure 3 shows the water level before the start of pumping and the cone of depression in cross-sectional view.

Overall, the data appear to match the Neuman (unconfined aquifer) curves somewhat better than the Hantush (leaky-confined aquifer) curves, but the data do not allow for a definitive distinction as to which aquifer response is representative. The high barometric response and the presence of abundant claystone layers suggests that the leaky-confined aquifer response might be the more appropriate response; however, there is no aquifer above the upper saturated sand aquifer (as is assumed in the Hantush method) and thus the aquifer itself would have to be divided into subaquifers by the claystone layers for the leaky-confined response to be the correct response. Thus, the upper saturated sand aquifer may behave as an unconfined aquifer despite the claystone layers. For this reason, the Neuman method results for transmissivity and hydraulic conductivity are preferred; but both the Neuman and Hantush methods resulted in similar transmissivities and hydraulic conductivities.

The pumping well TMW-17 had a low transmissivity, ranging from approximately 31 to 33 feet squared per day (ft^2/day). Using an effective transmissive thickness of 35 feet for the 50 feet of screened interval in each well (because of the claystone layers), a hydraulic conductivity range of approximately 0.9 to 1.0 feet/day is obtained. This is quite tight for a sand and lower than the conductivity found at the other monitor wells that showed a response during the aquifer test.

The two monitor wells that exhibited useable responses to pumping, TMW-78 and TMW-75, had considerably higher transmissivities than the pumping well. For example, TMW-75 is 200 feet from the pumping well to the north and had transmissivities in the range of approximately

425 to 440 ft^2/day (3,180 to 3,290 gpd/ft), giving a hydraulic conductivity for a 35-foot saturated thickness of approximately 12 to 13 feet/day. Storativity values for this well ranged from 1.1E-4 to 9.9E-5 for the barometric corrections used.

Well TMW-78 is 450 feet from the pumping well and showed transmissivities in the range of 1829 to 1872 ft^2/day (13,700 to 14,000 gpd/ft) and hydraulic conductivities of 52 to 54 feet per day for TMW-29 and TMW-16 barometric corrections. Storativity values for this well ranged from 1.7E-4 to 1.5E-4.

4.0 CONCLUSIONS

The following conclusions were reached based on the aquifer test data from the pumping test conducted on well TMW-17 during December 1996:

1. The upper saturated sand aquifer responds to pumping like an unconfined aquifer, although the leaky-confined response may also be appropriate.

2. Based on the plotted curves, the best correction factors are those derived from TMW-16 and TMW-29 data.

3. The transmissivity of the upper saturated sand aquifer is approximately 430 ft^2/day (3,200 gpd/ft) for distances in the range of 200 feet from the tailings (TMW-75). The resulting hydraulic conductivity is approximately 12 feet/day.

4 The transmissivity of the upper saturated sand aquifer is approximately 1850 ft^2/day (13,800 gpd/ft) for distances in the range of 450 feet from the tailings (TMW-78). The resulting hydraulic conductivity is approximately 53 feet/day.

5. The pumping well, TMW-17, had a transmissivity of approximately 30 ft^2/day (220 gpd/ft), and a hydraulic conductivity of approximately 1.0 feet/day, considerably lower than that of TMW-16 or TMW-29.

6. The transmissivity of the upper saturated sand aquifer may increase with distance away from the tailings.

7. The storativity of the upper saturated sand aquifer is in the range of 1.7E-4 to 9.9E-5.

8. For the pumping well evaluated, the pumping rate, and the length of pumping in this aquifer test, no conclusion can be made regarding the hydrologic connection of the upper and lower saturated sands.

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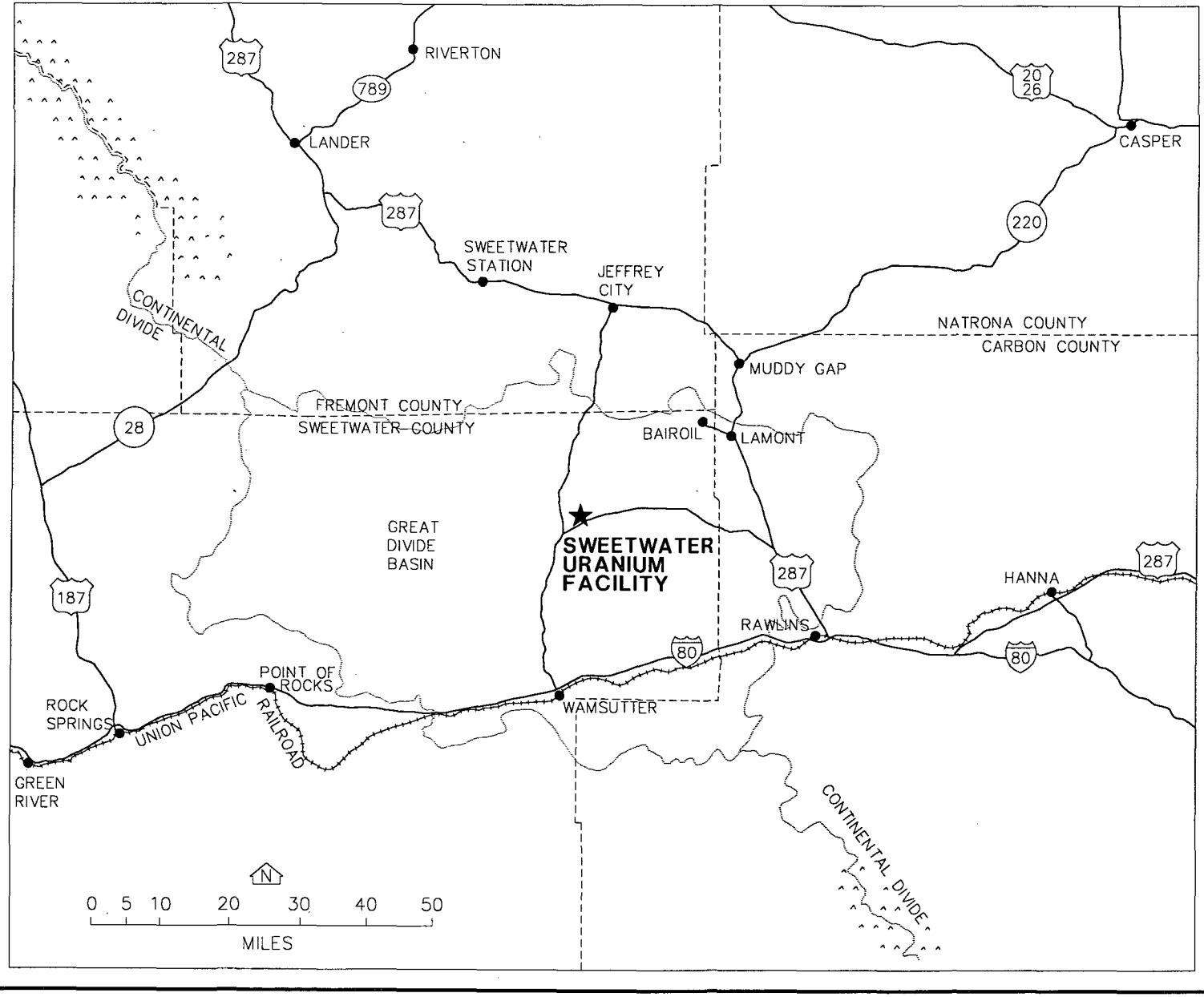
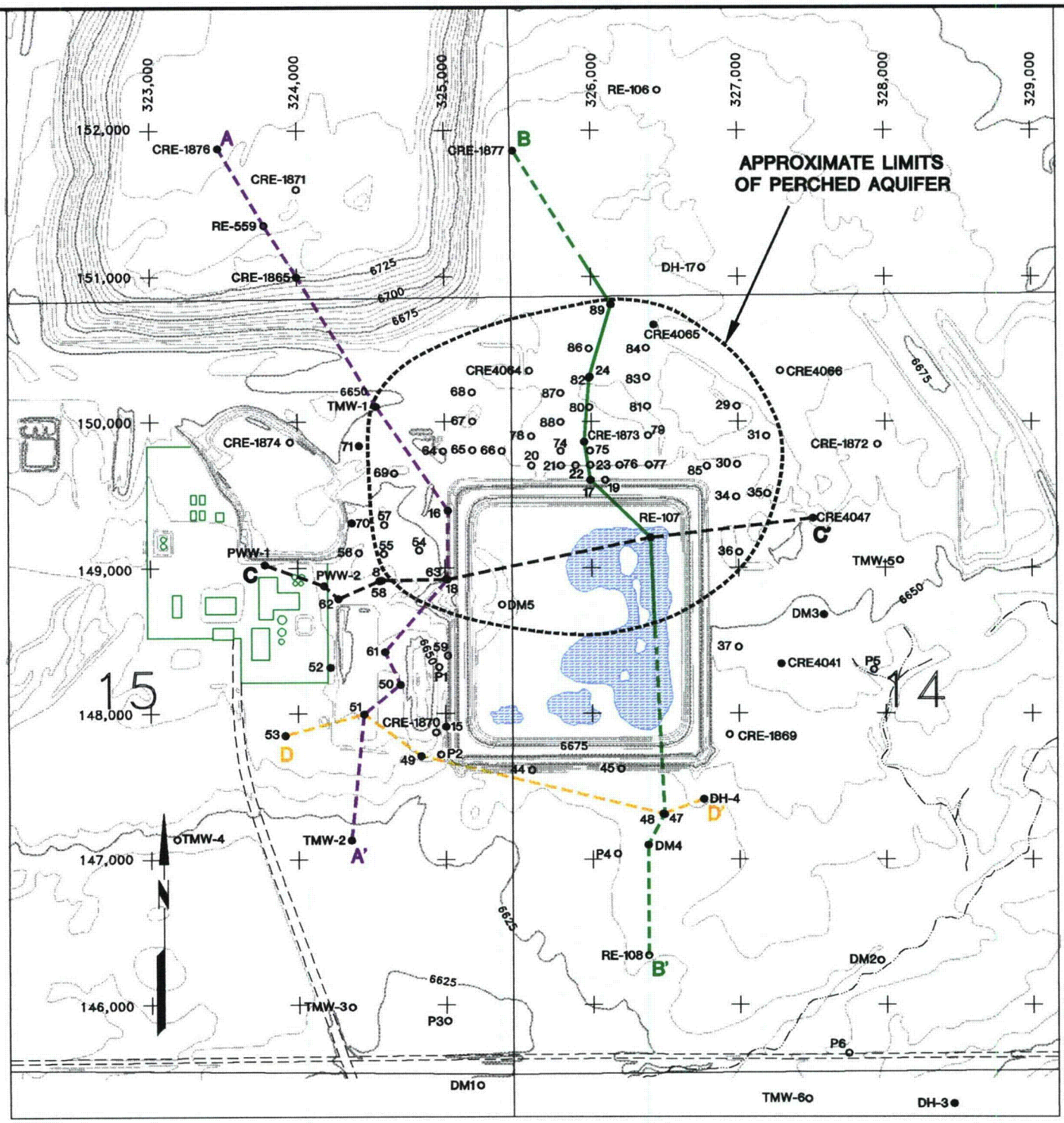


SHEPHERD MILLER
INCORPORATED

FIGURE 1
LOCATION OF
SWEETWATER PROJECT SITE

Date:	NOV. 1996
Project:	06-442
File:	PROSITE



NOTES:

ALL WELLS HAVE A TMW PREFIX (UNLESS OTHERWISE NOTED)

TMW-1 TO 89:	TAILINGS MONITOR WELLS
P1 – P6:	BORINGS FROM 1976 DAMES & MOORE STUDY
DM1 – DM5:	PRELIMINARY BORINGS FROM 1976 DAMES & MOORE STUDY
RE:	EXPLORATION HOLES
CRE:	EXPLORATION HOLES
PWW-1 & 2	WATER WELLS
DH:	EXPLORATION HOLES

SOLID LINE INDICATES PORTION OF CROSS SECTION INCLUDED IN FIGURE 3.

DASHED LINES INDICATES CROSS SECTIONS INCLUDED IN SHEPHERD MILLER, INC. (1995).

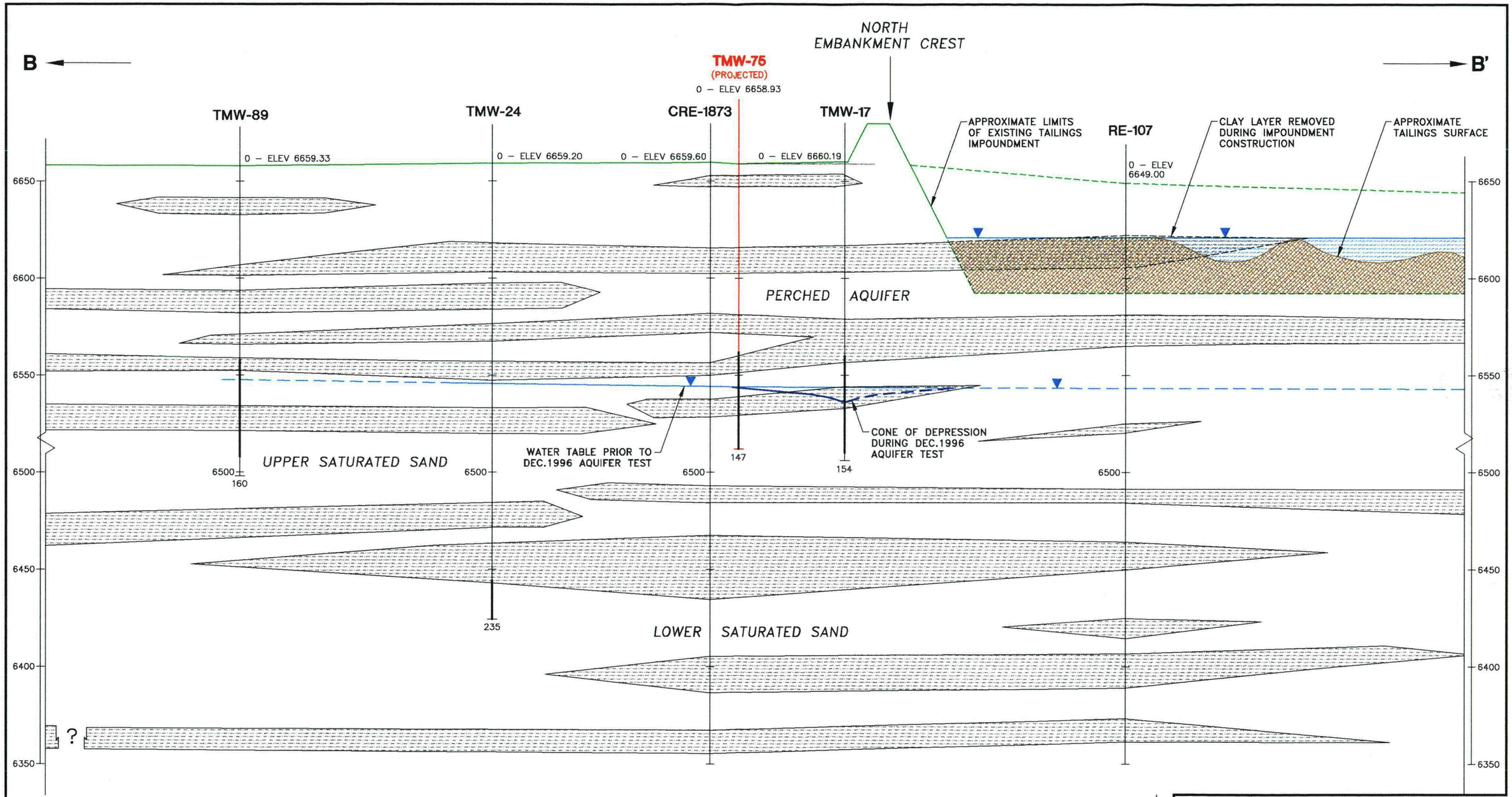
SCALE IN FEET

1000 0 2000

SHEPHERD MILLER INCORPORATED

FIGURE 2
LOCATION OF BOREHOLES AND GEOLOGIC CROSS SECTIONS

Date:	JAN. 1997
Project:	06-302
File:	XSEC-LOC



LEGEND:

CLAY OR CLAYSTONE

SAND OR SANDSTONE

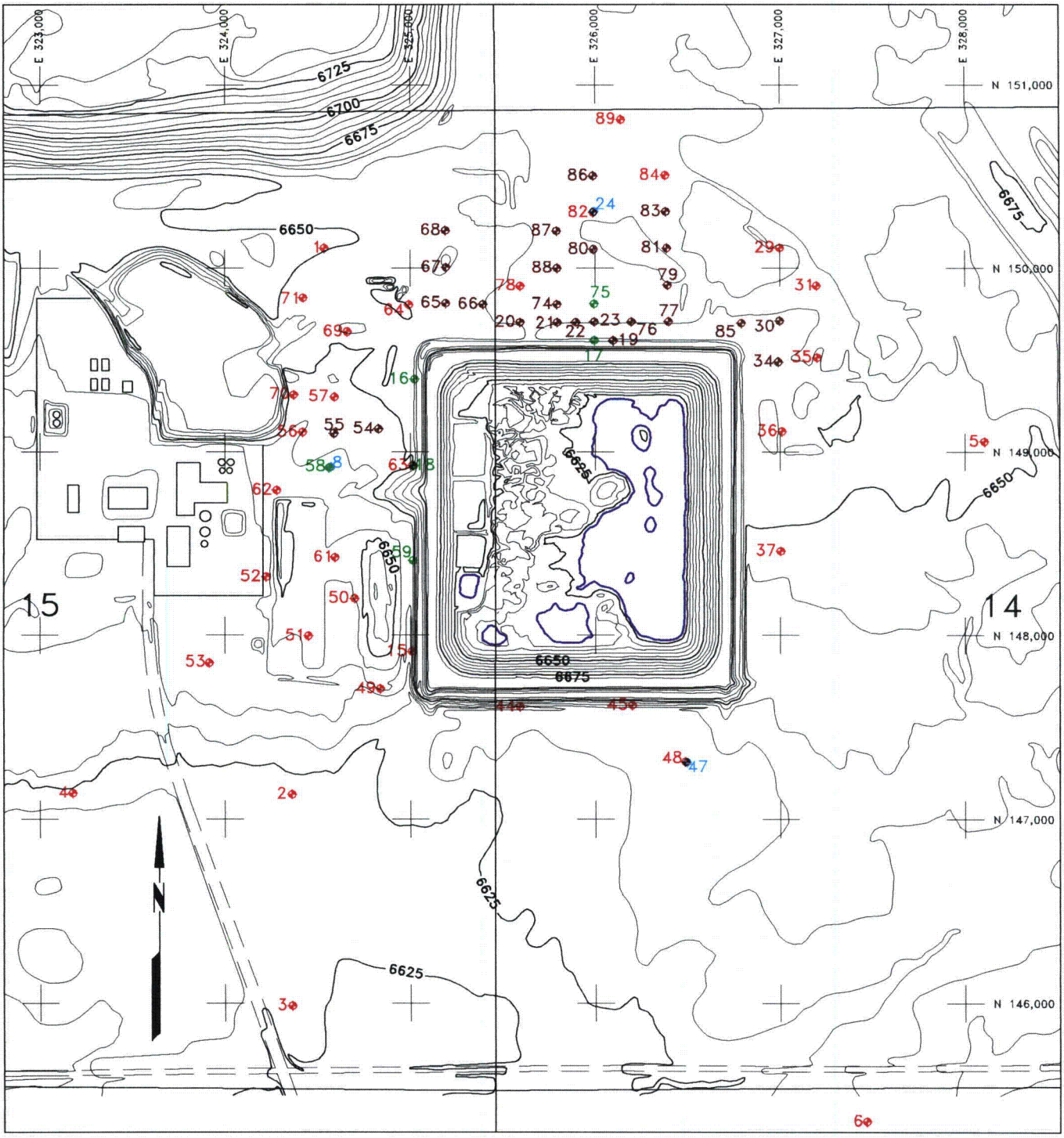
SCALE: HORIZONTAL: 1"=200'
VERTICAL: 1"=50'

N

FIGURE 3
GEOLOGIC CROSS SECTION IN VICINITY OF 1996 AQUIFER TEST

SHEPHERD MILLER INCORPORATED

Date:	JAN. 1997
Project:	06-302
File:	XSEC-BB



SCALE IN FEET

800 0 1600

TOPOGRAPHY FROM 7-4-83 AERIAL PHOTOGRAPHY,
TAILINGS CONTOURS FROM 11-3-96 AERIAL PHOTOGRAPHY

LEGEND

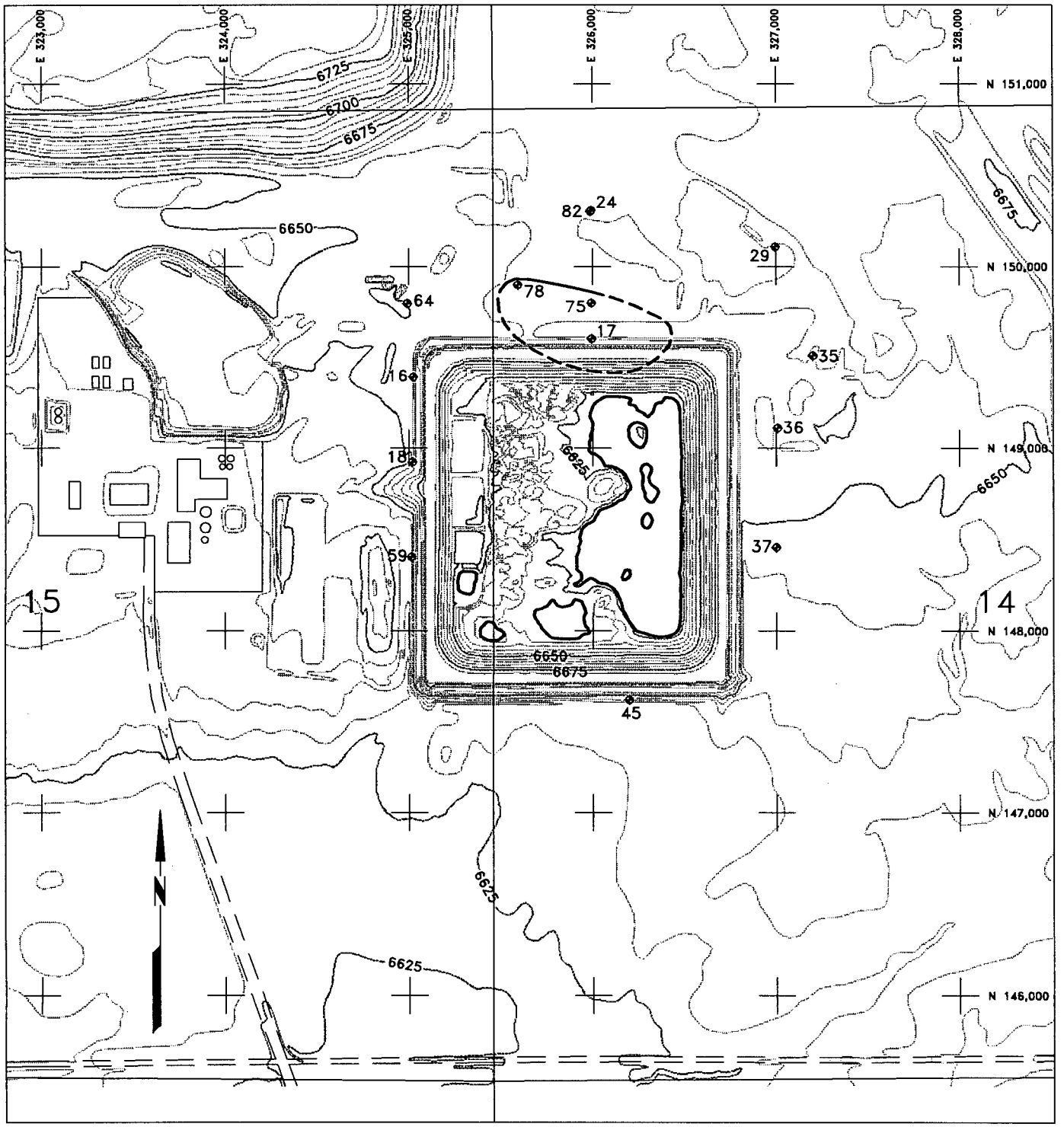
- SHALLOW WELLS (PERCHED)
- DEEP AQUIFER WELLS
- AQUIFER WELLS
- PUMPBACK WELLS, AQUIFER

NOTE: ALL WELLS HAVE A TMW PREFIX (TYP.)

SHEPHERD MILLER INCORPORATED

FIGURE 4
TAILINGS CELL MONITOR WELL MAP

Date:	JAN. 1997
Project:	06-442
File:	CELLMAP



SCALE IN FEET

800 0 1600

EXTENT OF DRAWDOWN

POSSIBLE EXTENT OF DRAWDOWN

TOPOGRAPHY FROM 7-4-83 AERIAL PHOTOGRAPHY,
TAILINGS CONTOURS FROM 11-3-96 AERIAL PHOTOGRAPHY

NOTE: ALL WELLS HAVE A TMW PREFIX (TYP.)

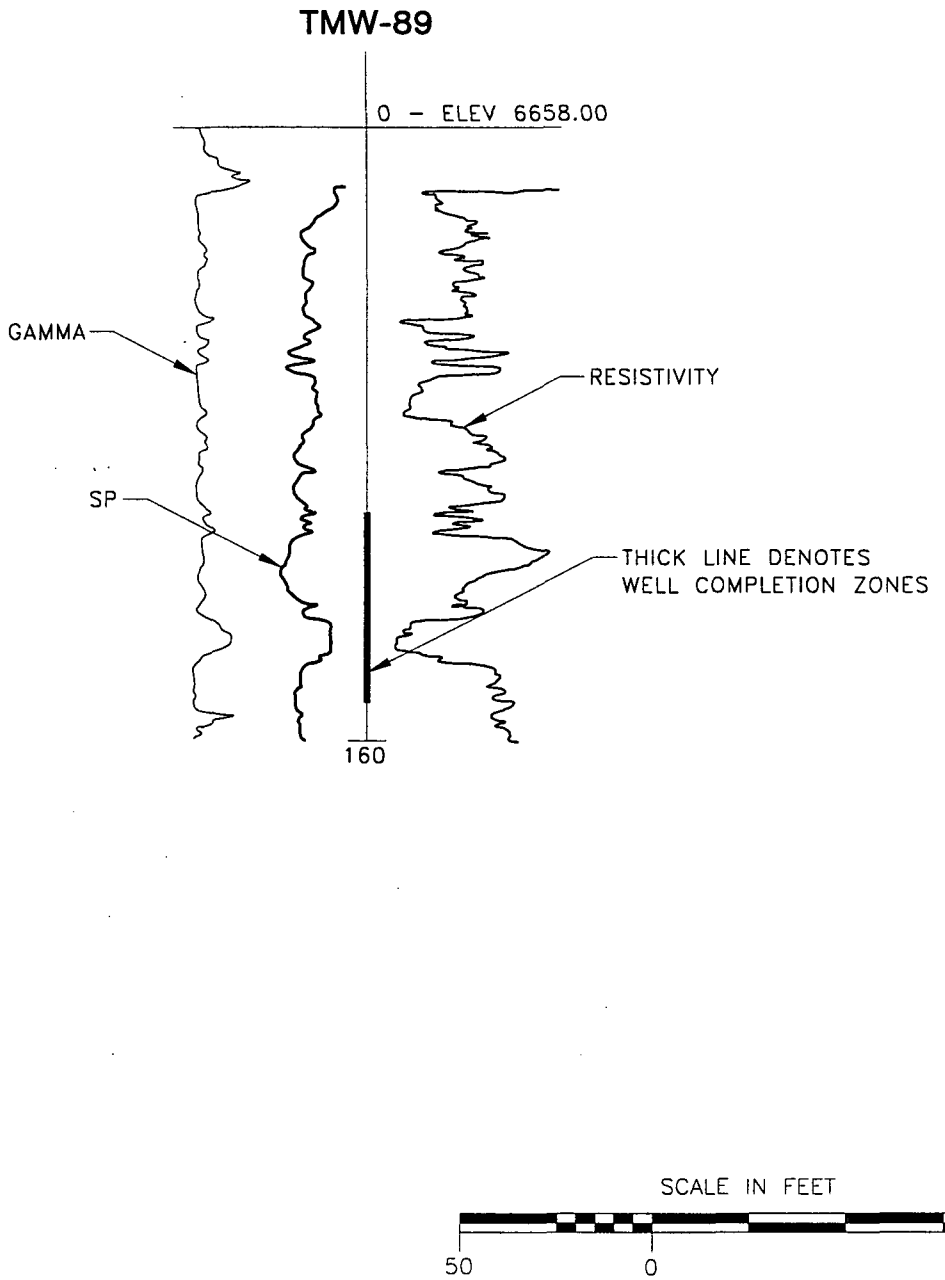
SHEPHERD MILLER INCORPORATED

FIGURE 5
WELLS USED IN 1996 AQUIFER TEST

Date:	JAN. 1997
Project:	06-302
File:	AQ-TST

APPENDIX A

DATA PLOTS AND TYPE-CURVES



SHEPHERD MILLER
INCORPORATED

TMW-89
GEOPHYSICAL LOG

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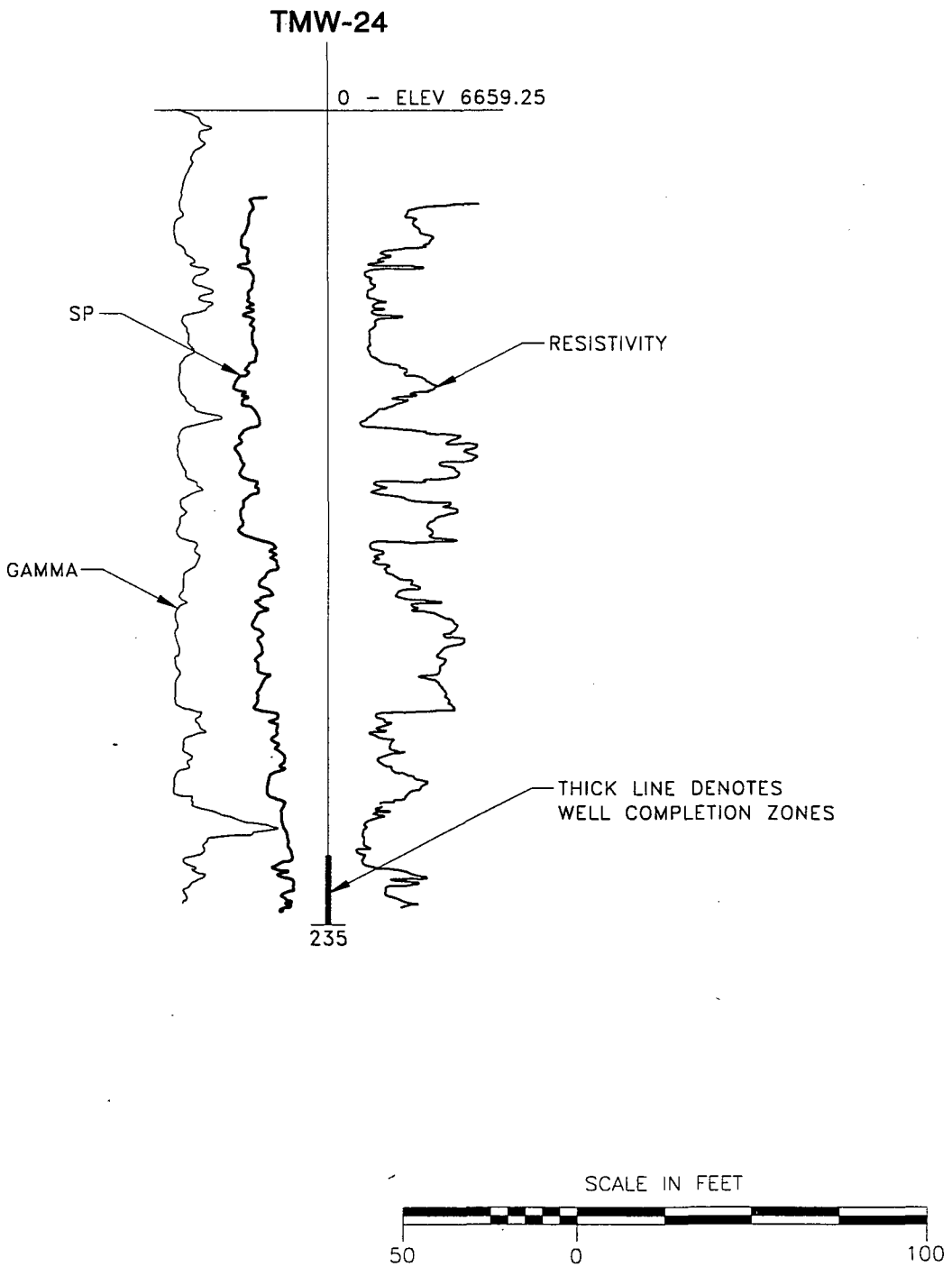
Project:	06-442
File:	TMW89C



SHEPHERD MILLER
INCORPORATED

TMW-24
GEOPHYSICAL LOG

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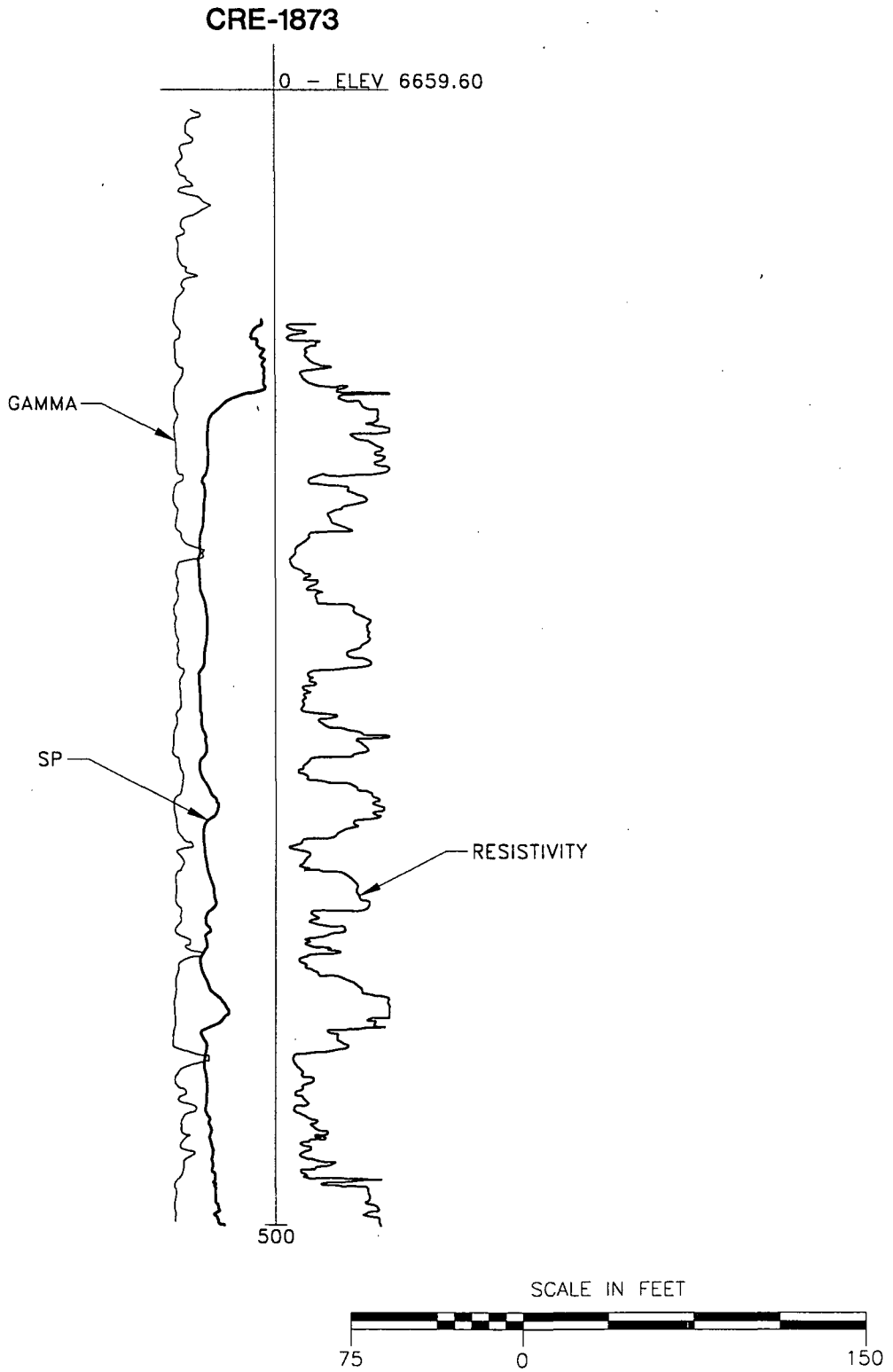
Project:	06-442
File:	TMW24C_5



SHEPHERD MILLER INCORPORATED

CRE-1873
GEOPHYSICAL LOG

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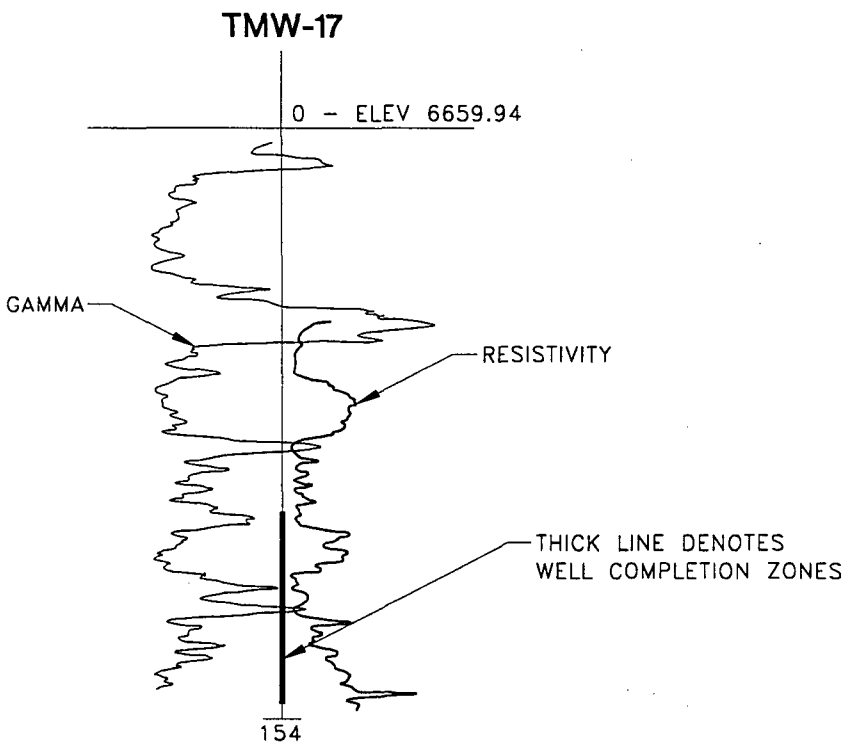
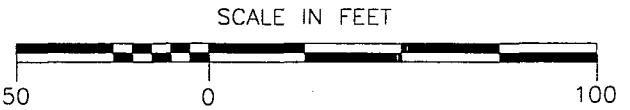
Project:	06-442
File:	CRE1873C





SHEPHERD MILLER
INCORPORATED

TMW-17
GEOPHYSICAL LOG

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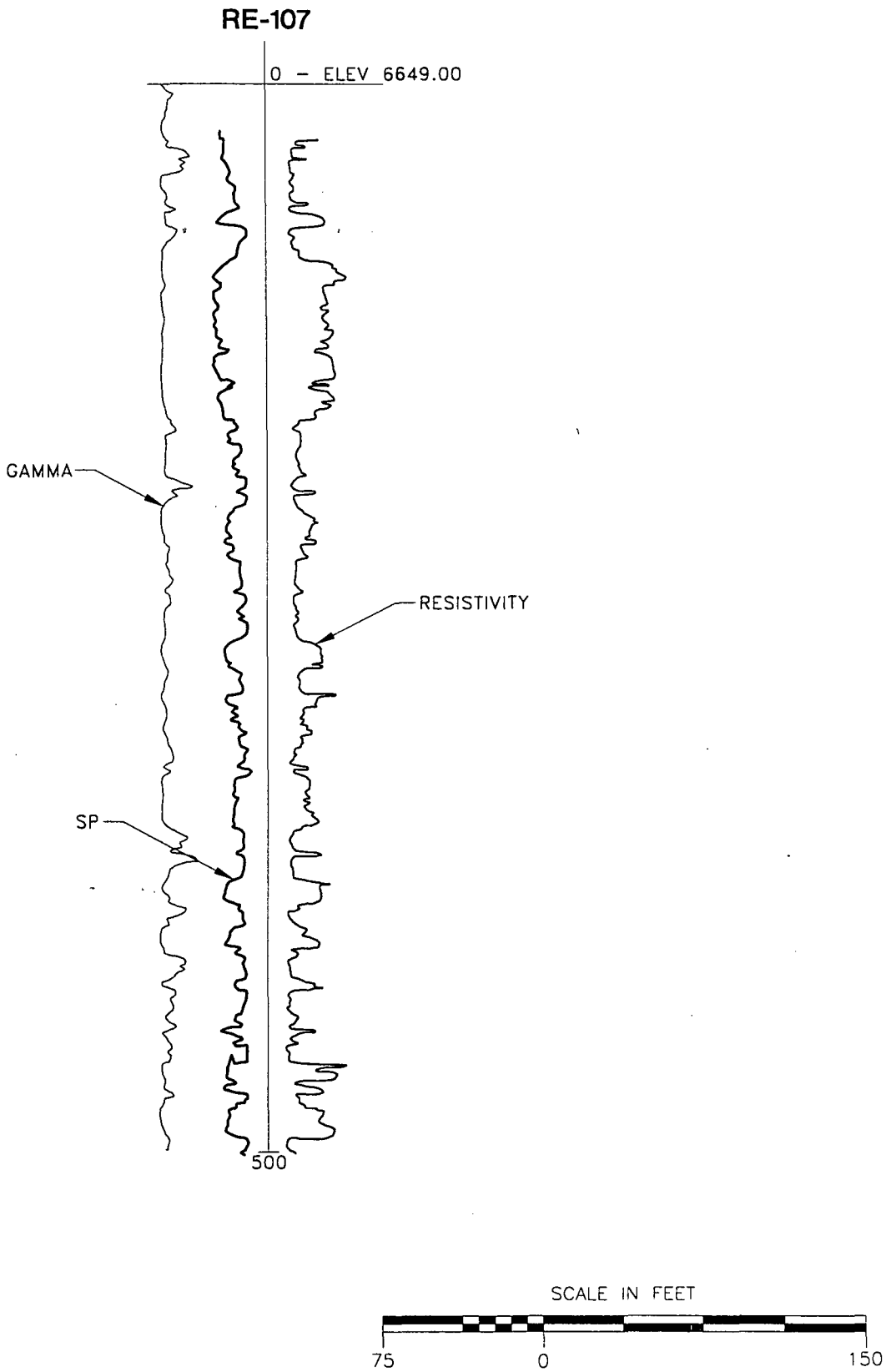
File:	TMW17C_5



SHEPHERD MILLER INCORPORATED

RE-107
GEOPHYSICAL LOG

Date:	AUG. 1995
Project:	06-442
File:	RE107C

APPENDIX B

TMW-45 CORRECTED DATA

RECOVERY PORTION OF THE AQUIFER TEST

SE2000
Environmental Logger
12/12/96 11:07

Unit# 6 12 Test 0

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7	INPUT 8
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	TOC	TOC	TOC	TOC	TOC	TOC	TOC	TOC
I.D.	TMW16	TMW78	TMW24	TMW82	TMW75	TMW17	TMW29	TMW35
Reference	0	0	0	0	0	0	0	0
PSI at Ref.	4.283	4.29	4.596	4.595	5.034	6.281	5.319	4.669
SG	1	1	1	1	1	1	1	1
Linearity	0.039	0.086	0.002	0.014	0.142	-0.028	0.008	0.012
Scale factor	19.94	19.857	29.84	19.977	19.799	19.985	19.978	19.961
Offset	0.036	-0.019	-0.072	0.001	0.026	0.013	-0.017	-0.046
Delay mSEC	50	50	50	50	50	50	50	50

Step 1 12/10/96 1:21 PM 9:39 PM

Elapsed Time	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7	INPUT 8
0	-0.483	-0.262	-0.206	-0.465	-0.1	7.66	-0.46	-0.031
0.0083	-0.489	-0.269	-0.206	-0.465	-0.106	7.565	-0.46	-0.037
0.0166	-0.495	-0.269	-0.206	-0.465	-0.106	7.445	-0.46	-0.037
0.025	-0.495	-0.269	-0.206	-0.465	-0.112	7.47	-0.46	-0.037
0.0333	-0.495	-0.269	-0.206	-0.465	-0.106	7.458	-0.46	-0.037
0.0416	-0.502	-0.269	-0.206	-0.465	-0.112	7.433	-0.46	-0.037
0.05	-0.502	-0.262	-0.206	-0.465	-0.112	7.401	-0.46	-0.044
0.0583	-0.495	-0.269	-0.206	-0.465	-0.106	7.37	-0.46	-0.037
0.0666	-0.495	-0.269	-0.206	-0.471	-0.106	7.332	-0.46	-0.037
0.075	-0.495	-0.269	-0.206	-0.465	-0.106	7.288	-0.46	-0.037
0.0833	-0.495	-0.269	-0.206	-0.471	-0.112	7.237	-0.46	-0.044
0.0916	-0.495	-0.269	-0.206	-0.465	-0.112	7.193	-0.46	-0.044
0.1	-0.495	-0.269	-0.206	-0.465	-0.112	7.149	-0.46	-0.037
0.1083	-0.502	-0.269	-0.206	-0.465	-0.112	7.105	-0.46	-0.037
0.1166	-0.495	-0.275	-0.206	-0.465	-0.106	7.067	-0.46	-0.037
0.125	-0.495	-0.269	-0.206	-0.471	-0.106	7.029	-0.46	-0.044
0.1333	-0.495	-0.262	-0.206	-0.465	-0.106	6.998	-0.46	-0.044
0.1416	-0.495	-0.269	-0.206	-0.471	-0.112	6.96	-0.46	-0.044
0.15	-0.495	-0.275	-0.206	-0.465	-0.112	6.928	-0.46	-0.044
0.1583	-0.495	-0.275	-0.206	-0.465	-0.106	6.884	-0.466	-0.044
0.1666	-0.495	-0.275	-0.206	-0.471	-0.112	6.84	-0.46	-0.044
0.175	-0.495	-0.275	-0.206	-0.471	-0.106	6.796	-0.46	-0.044
0.1833	-0.502	-0.275	-0.206	-0.465	-0.106	6.752	-0.46	-0.044
0.1916	-0.502	-0.275	-0.206	-0.471	-0.112	6.707	-0.466	-0.037

Elapsed Time	INPUT_1	INPUT_2	INPUT_3	INPUT_4	INPUT_5	INPUT_6	INPUT_7	INPUT_8
0.2	-0.502	-0.275	-0.206	-0.471	-0.112	6.663	-0.46	-0.037
0.2083	-0.495	-0.275	-0.206	-0.465	-0.112	6.625	-0.46	-0.037
0.2166	-0.495	-0.275	-0.197	-0.465	-0.112	6.588	-0.46	-0.037
0.225	-0.495	-0.275	-0.206	-0.465	-0.106	6.55	-0.46	-0.044
0.2333	-0.502	-0.275	-0.206	-0.471	-0.112	6.512	-0.466	-0.044
0.2416	-0.502	-0.275	-0.206	-0.465	-0.112	6.474	-0.46	-0.037
0.25	-0.502	-0.275	-0.206	-0.465	-0.112	6.436	-0.46	-0.044
0.2583	-0.502	-0.269	-0.206	-0.465	-0.106	6.392	-0.46	-0.044
0.2666	-0.502	-0.275	-0.206	-0.465	-0.112	6.354	-0.46	-0.037
0.275	-0.502	-0.275	-0.206	-0.471	-0.112	6.31	-0.46	-0.037
0.2833	-0.502	-0.269	-0.206	-0.471	-0.112	6.272	-0.46	-0.037
0.2916	-0.502	-0.275	-0.206	-0.471	-0.106	6.235	-0.46	-0.044
0.3	-0.502	-0.275	-0.206	-0.465	-0.106	6.19	-0.46	-0.044
0.3083	-0.502	-0.275	-0.206	-0.465	-0.106	6.146	-0.46	-0.044
0.3166	-0.502	-0.275	-0.206	-0.471	-0.112	6.108	-0.46	-0.044
0.325	-0.502	-0.275	-0.206	-0.471	-0.106	6.064	-0.46	-0.044
0.3333	-0.502	-0.275	-0.206	-0.465	-0.112	6.026	-0.46	-0.044
0.35	-0.502	-0.275	-0.206	-0.465	-0.112	5.944	-0.46	-0.044
0.3666	-0.502	-0.275	-0.206	-0.471	-0.112	5.875	-0.46	-0.044
0.3833	-0.502	-0.275	-0.206	-0.471	-0.112	5.806	-0.46	-0.044
0.4	-0.502	-0.275	-0.206	-0.465	-0.112	5.743	-0.46	-0.044
0.4166	-0.502	-0.275	-0.206	-0.465	-0.112	5.686	-0.46	-0.044
0.4333	-0.502	-0.275	-0.206	-0.465	-0.106	5.629	-0.46	-0.044
0.45	-0.502	-0.275	-0.206	-0.465	-0.106	5.579	-0.46	-0.05
0.4666	-0.502	-0.275	-0.206	-0.465	-0.106	5.528	-0.46	-0.044
0.4833	-0.502	-0.275	-0.206	-0.465	-0.112	5.484	-0.46	-0.044
0.5	-0.502	-0.269	-0.215	-0.471	-0.112	5.434	-0.46	-0.037
0.5166	-0.502	-0.275	-0.206	-0.471	-0.112	5.396	-0.46	-0.044
0.5333	-0.502	-0.269	-0.206	-0.465	-0.112	5.358	-0.466	-0.044
0.55	-0.502	-0.275	-0.206	-0.471	-0.112	5.333	-0.46	-0.05
0.5666	-0.502	-0.269	-0.206	-0.471	-0.106	5.301	-0.46	-0.044
0.5833	-0.502	-0.275	-0.206	-0.471	-0.112	5.264	-0.46	-0.037
0.6	-0.502	-0.275	-0.206	-0.465	-0.112	5.219	-0.466	-0.037
0.6166	-0.502	-0.269	-0.206	-0.471	-0.112	5.175	-0.466	-0.037
0.6333	-0.502	-0.269	-0.206	-0.471	-0.112	5.125	-0.46	-0.044
0.65	-0.502	-0.269	-0.206	-0.465	-0.106	5.081	-0.46	-0.044
0.6666	-0.502	-0.269	-0.206	-0.465	-0.106	5.037	-0.46	-0.044
0.6833	-0.502	-0.275	-0.206	-0.465	-0.112	4.992	-0.46	-0.044
0.7	-0.502	-0.275	-0.206	-0.471	-0.106	4.942	-0.46	-0.044
0.7166	-0.502	-0.275	-0.206	-0.465	-0.106	4.898	-0.466	-0.044
0.7333	-0.502	-0.275	-0.206	-0.465	-0.106	4.847	-0.466	-0.044
0.75	-0.502	-0.269	-0.206	-0.465	-0.106	4.803	-0.466	-0.05
0.7666	-0.502	-0.275	-0.206	-0.465	-0.112	4.753	-0.46	-0.044
0.7833	-0.502	-0.275	-0.206	-0.465	-0.106	4.709	-0.46	-0.05
0.8	-0.502	-0.275	-0.206	-0.471	-0.106	4.658	-0.46	-0.044
0.8166	-0.502	-0.275	-0.206	-0.471	-0.112	4.608	-0.466	-0.044
0.8333	-0.502	-0.275	-0.197	-0.465	-0.106	4.557	-0.466	-0.044
0.85	-0.502	-0.275	-0.206	-0.471	-0.106	4.513	-0.46	-0.044

Elapsed Time	INPUT_1	INPUT_2	INPUT_3	INPUT_4	INPUT_5	INPUT_6	INPUT_7	INPUT_8
0.8666	-0.502	-0.281	-0.206	-0.465	-0.106	4.463	-0.466	-0.05
0.8833	-0.502	-0.275	-0.206	-0.465	-0.112	4.419	-0.46	-0.044
0.9	-0.502	-0.275	-0.206	-0.471	-0.112	4.374	-0.46	-0.044
0.9166	-0.502	-0.281	-0.206	-0.471	-0.112	4.33	-0.46	-0.044
0.9333	-0.502	-0.281	-0.206	-0.471	-0.112	4.286	-0.46	-0.044
0.95	-0.502	-0.281	-0.206	-0.465	-0.112	4.242	-0.46	-0.044
0.9666	-0.502	-0.281	-0.206	-0.471	-0.112	4.198	-0.46	-0.044
0.9833	-0.502	-0.281	-0.206	-0.465	-0.112	4.148	-0.466	-0.044
1	-0.502	-0.281	-0.206	-0.465	-0.112	4.11	-0.46	-0.044
1.2	-0.495	-0.287	-0.206	-0.471	-0.106	3.605	-0.46	-0.044
1.4	-0.495	-0.287	-0.215	-0.471	-0.106	3.17	-0.46	-0.044
1.6	-0.495	-0.281	-0.215	-0.471	-0.112	2.798	-0.46	-0.05
1.8	-0.495	-0.275	-0.215	-0.465	-0.112	2.471	-0.46	-0.05
2	-0.495	-0.269	-0.206	-0.465	-0.119	2.187	-0.46	-0.05
2.2	-0.495	-0.262	-0.206	-0.465	-0.125	1.935	-0.46	-0.05
2.4	-0.495	-0.262	-0.206	-0.458	-0.125	1.708	-0.46	-0.044
2.6	-0.495	-0.262	-0.206	-0.465	-0.131	1.5	-0.46	-0.044
2.8	-0.495	-0.262	-0.206	-0.465	-0.131	1.317	-0.46	-0.044
3	-0.495	-0.262	-0.206	-0.465	-0.144	1.153	-0.46	-0.044
3.2	-0.495	-0.269	-0.206	-0.465	-0.144	1.008	-0.46	-0.044
3.4	-0.495	-0.275	-0.206	-0.465	-0.15	0.876	-0.46	-0.05
3.6	-0.495	-0.275	-0.206	-0.471	-0.156	0.762	-0.46	-0.044
3.8	-0.495	-0.269	-0.206	-0.471	-0.156	0.661	-0.46	-0.044
4	-0.495	-0.275	-0.206	-0.471	-0.169	0.567	-0.46	-0.05
4.2	-0.502	-0.281	-0.206	-0.465	-0.175	0.485	-0.46	-0.044
4.4	-0.495	-0.281	-0.206	-0.465	-0.181	0.416	-0.46	-0.044
4.6	-0.495	-0.275	-0.206	-0.458	-0.181	0.352	-0.46	-0.05
4.8	-0.495	-0.281	-0.206	-0.465	-0.188	0.296	-0.46	-0.044
5	-0.495	-0.287	-0.206	-0.465	-0.194	0.245	-0.46	-0.05
5.2	-0.495	-0.281	-0.206	-0.465	-0.2	0.201	-0.46	-0.044
5.4	-0.495	-0.294	-0.206	-0.465	-0.2	0.163	-0.46	-0.05
5.6	-0.502	-0.3	-0.206	-0.465	-0.207	0.126	-0.46	-0.05
5.8	-0.502	-0.3	-0.206	-0.465	-0.207	0.094	-0.46	-0.05
6	-0.495	-0.306	-0.215	-0.465	-0.213	0.069	-0.46	-0.05
6.2	-0.502	-0.306	-0.215	-0.465	-0.219	0.044	-0.466	-0.05
6.4	-0.495	-0.306	-0.215	-0.471	-0.225	0.018	-0.46	-0.05
6.6	-0.502	-0.3	-0.206	-0.471	-0.225	0	-0.46	-0.05
6.8	-0.495	-0.287	-0.215	-0.471	-0.225	-0.018	-0.466	-0.05
7	-0.495	-0.287	-0.206	-0.465	-0.232	-0.037	-0.46	-0.05
7.2	-0.495	-0.287	-0.206	-0.471	-0.232	-0.05	-0.46	-0.044
7.4	-0.502	-0.294	-0.206	-0.471	-0.238	-0.063	-0.46	-0.05
7.6	-0.495	-0.3	-0.215	-0.471	-0.244	-0.075	-0.46	-0.05
7.8	-0.495	-0.306	-0.215	-0.465	-0.244	-0.088	-0.46	-0.05
8	-0.495	-0.306	-0.215	-0.465	-0.244	-0.094	-0.46	-0.05
8.2	-0.495	-0.306	-0.215	-0.471	-0.25	-0.107	-0.466	-0.05
8.4	-0.502	-0.3	-0.215	-0.471	-0.25	-0.113	-0.46	-0.05
8.6	-0.495	-0.287	-0.215	-0.471	-0.257	-0.119	-0.46	-0.05
8.8	-0.502	-0.287	-0.206	-0.471	-0.257	-0.126	-0.46	-0.05

Elapsed Time	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7	INPUT 8
9	-0.502	-0.294	-0.206	-0.471	-0.257	-0.132	-0.46	-0.05
9.2	-0.502	-0.294	-0.206	-0.471	-0.257	-0.132	-0.46	-0.05
9.4	-0.502	-0.294	-0.206	-0.471	-0.263	-0.138	-0.466	-0.044
9.6	-0.495	-0.3	-0.206	-0.471	-0.263	-0.144	-0.466	-0.05
9.8	-0.502	-0.306	-0.206	-0.471	-0.269	-0.151	-0.466	-0.044
10	-0.502	-0.312	-0.206	-0.471	-0.269	-0.151	-0.46	-0.056
12	-0.489	-0.3	-0.206	-0.465	-0.276	-0.176	-0.46	-0.044
14	-0.489	-0.312	-0.206	-0.471	-0.288	-0.195	-0.46	-0.044
16	-0.489	-0.337	-0.206	-0.471	-0.301	-0.208	-0.46	-0.05
18	-0.495	-0.331	-0.206	-0.471	-0.313	-0.22	-0.466	-0.05
20	-0.495	-0.344	-0.206	-0.484	-0.319	-0.226	-0.466	-0.05
22	-0.502	-0.356	-0.215	-0.484	-0.332	-0.239	-0.466	-0.05
24	-0.495	-0.369	-0.206	-0.477	-0.332	-0.239	-0.466	-0.05
26	-0.502	-0.362	-0.206	-0.484	-0.338	-0.252	-0.473	-0.05
28	-0.502	-0.369	-0.206	-0.484	-0.345	-0.258	-0.473	-0.05
30	-0.502	-0.375	-0.206	-0.49	-0.351	-0.264	-0.473	-0.056
32	-0.502	-0.381	-0.215	-0.484	-0.357	-0.271	-0.473	-0.05
34	-0.502	-0.381	-0.206	-0.477	-0.363	-0.271	-0.473	-0.056
36	-0.502	-0.387	-0.206	-0.484	-0.363	-0.277	-0.473	-0.056
38	-0.502	-0.387	-0.206	-0.484	-0.363	-0.277	-0.473	-0.05
40	-0.502	-0.394	-0.206	-0.484	-0.37	-0.283	-0.473	-0.05
42	-0.508	-0.394	-0.206	-0.484	-0.37	-0.283	-0.479	-0.05
44	-0.508	-0.4	-0.206	-0.484	-0.376	-0.289	-0.473	-0.05
46	-0.508	-0.419	-0.215	-0.477	-0.376	-0.289	-0.479	-0.044
48	-0.508	-0.413	-0.215	-0.477	-0.382	-0.296	-0.473	-0.05
50	-0.508	-0.413	-0.215	-0.477	-0.382	-0.296	-0.479	-0.044
52	-0.508	-0.406	-0.206	-0.477	-0.382	-0.296	-0.473	-0.05
54	-0.502	-0.406	-0.206	-0.477	-0.382	-0.296	-0.479	-0.037
56	-0.508	-0.419	-0.206	-0.484	-0.382	-0.302	-0.473	-0.037
58	-0.508	-0.419	-0.206	-0.484	-0.388	-0.302	-0.479	-0.037
60	-0.508	-0.425	-0.206	-0.477	-0.388	-0.308	-0.479	-0.037
62	-0.508	-0.413	-0.206	-0.484	-0.395	-0.308	-0.479	-0.037
64	-0.508	-0.413	-0.206	-0.477	-0.395	-0.308	-0.479	-0.037
66	-0.508	-0.425	-0.206	-0.477	-0.395	-0.315	-0.479	-0.037
68	-0.502	-0.425	-0.206	-0.477	-0.395	-0.315	-0.479	-0.037
70	-0.508	-0.431	-0.215	-0.484	-0.401	-0.315	-0.479	-0.037
72	-0.502	-0.431	-0.206	-0.477	-0.401	-0.321	-0.479	-0.037
74	-0.508	-0.431	-0.206	-0.484	-0.401	-0.321	-0.479	-0.031
76	-0.508	-0.438	-0.215	-0.484	-0.401	-0.321	-0.479	-0.031
78	-0.502	-0.45	-0.215	-0.484	-0.401	-0.321	-0.479	-0.037
80	-0.508	-0.425	-0.206	-0.484	-0.407	-0.327	-0.479	-0.031
82	-0.508	-0.438	-0.206	-0.484	-0.401	-0.327	-0.479	-0.037
84	-0.508	-0.444	-0.215	-0.477	-0.401	-0.327	-0.479	-0.037
86	-0.508	-0.438	-0.206	-0.477	-0.407	-0.327	-0.479	-0.031
88	-0.508	-0.438	-0.206	-0.484	-0.407	-0.327	-0.479	-0.031
90	-0.508	-0.444	-0.215	-0.484	-0.407	-0.334	-0.479	-0.037
92	-0.508	-0.444	-0.215	-0.484	-0.414	-0.334	-0.479	-0.037
94	-0.508	-0.45	-0.215	-0.484	-0.414	-0.34	-0.479	-0.044

Elapsed Time	INPUT_1	INPUT_2	INPUT_3	INPUT_4	INPUT_5	INPUT_6	INPUT_7	INPUT_8
96	-0.508	-0.45	-0.215	-0.484	-0.414	-0.34	-0.479	-0.037
98	-0.508	-0.45	-0.215	-0.484	-0.414	-0.34	-0.479	-0.037
100	-0.508	-0.45	-0.215	-0.484	-0.42	-0.34	-0.485	-0.037
120	-0.508	-0.456	-0.215	-0.484	-0.407	-0.352	-0.479	-0.025
140	-0.508	-0.463	-0.215	-0.484	-0.414	-0.359	-0.479	-0.018
160	-0.502	-0.469	-0.225	-0.484	-0.407	-0.365	-0.479	0
180	-0.502	-0.475	-0.225	-0.477	-0.407	-0.378	-0.479	0
200	-0.495	-0.475	-0.225	-0.471	-0.407	-0.378	-0.479	0
220	-0.489	-0.475	-0.215	-0.477	-0.407	-0.384	-0.473	0.006
240	-0.489	-0.475	-0.225	-0.471	-0.407	-0.39	-0.473	0.012
260	-0.483	-0.475	-0.225	-0.465	-0.401	-0.39	-0.473	0.012
280	-0.483	-0.475	-0.215	-0.465	-0.401	-0.384	-0.466	0.018
300	-0.47	-0.469	-0.215	-0.458	-0.395	-0.378	-0.46	0.031
320	-0.464	-0.463	-0.215	-0.446	-0.388	-0.378	-0.454	0.037
340	-0.458	-0.456	-0.206	-0.446	-0.382	-0.371	-0.454	0.044
360	-0.458	-0.456	-0.206	-0.446	-0.382	-0.378	-0.454	0.05
380	-0.458	-0.456	-0.206	-0.446	-0.388	-0.378	-0.447	0.044
400	-0.464	-0.456	-0.206	-0.452	-0.388	-0.384	-0.454	0.044
420	-0.47	-0.463	-0.206	-0.465	-0.395	-0.39	-0.46	0.031
440	-0.47	-0.463	-0.206	-0.465	-0.401	-0.397	-0.46	0.031
460	-0.47	-0.463	-0.206	-0.465	-0.401	-0.397	-0.46	0.025
480	-0.477	-0.469	-0.197	-0.471	-0.407	-0.409	-0.466	0.025
500	-0.477	-0.475	-0.197	-0.465	-0.407	-0.409	-0.466	0.031
520	-0.47	-0.469	-0.197	-0.465	-0.407	-0.403	-0.466	0.031
540	-0.477	-0.469	-0.187	-0.471	-0.407	-0.409	-0.466	0.031
560	-0.477	-0.475	-0.187	-0.471	-0.414	-0.409	-0.466	0.025
580	-0.477	-0.475	-0.187	-0.471	-0.414	-0.416	-0.473	0.031
600	-0.47	-0.475	-0.187	-0.465	-0.414	-0.416	-0.466	0.031
620	-0.477	-0.475	-0.187	-0.465	-0.414	-0.416	-0.466	0.031
640	-0.483	-0.481	-0.187	-0.477	-0.42	-0.422	-0.473	0.018
660	-0.489	-0.488	-0.187	-0.49	-0.426	-0.434	-0.485	0.012
680	-0.495	-0.494	-0.187	-0.484	-0.432	-0.434	-0.485	0.018
700	-0.495	-0.488	-0.187	-0.484	-0.432	-0.441	-0.485	0.018
720	-0.495	-0.5	-0.187	-0.49	-0.432	-0.441	-0.492	0.012
740	-0.502	-0.506	-0.197	-0.49	-0.439	-0.441	-0.492	0.012
760	-0.495	-0.506	-0.197	-0.49	-0.432	-0.441	-0.492	0.025
780	-0.495	-0.506	-0.206	-0.49	-0.439	-0.441	-0.498	0.018
800	-0.514	-0.506	-0.206	-0.49	-0.439	-0.441	-0.498	0.018
820	-0.508	-0.506	-0.206	-0.484	-0.439	-0.441	-0.498	0.025
840	-0.514	-0.513	-0.215	-0.496	-0.445	-0.453	-0.504	0.012
860	-0.514	-0.513	-0.215	-0.496	-0.445	-0.447	-0.504	0.012
880	-0.514	-0.519	-0.225	-0.496	-0.451	-0.453	-0.51	0.012
900	-0.521	-0.525	-0.225	-0.509	-0.457	-0.46	-0.51	0.006
920	-0.521	-0.525	-0.234	-0.509	-0.457	-0.46	-0.517	0.006
940	-0.527	-0.531	-0.234	-0.509	-0.457	-0.466	-0.517	0
960	-0.514	-0.525	-0.234	-0.496	-0.457	-0.453	-0.517	0.018
980	-0.508	-0.519	-0.244	-0.49	-0.451	-0.453	-0.51	0.025
1000	-0.495	-0.519	-0.234	-0.471	-0.439	-0.434	-0.498	0.037

Elapsed Time	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7	INPUT 8
1200	-0.401	-0.431	-0.225	-0.389	-0.357	-0.352	-0.416	0.144
1400	-0.395	-0.413	-0.206	-0.396	-0.351	-0.346	-0.403	0.132
1600	-0.32	-0.369	-0.178	-0.308	-0.288	-0.277	-0.328	0.233
1800	-0.301	-0.331	-0.168	-0.289	-0.257	-0.252	-0.296	0.252
2000	-0.32	-0.331	-0.14	-0.308	-0.269	-0.264	-0.302	0.22
2200	-0.376	-0.381	-0.14	-0.358	-0.319	-0.315	-0.353	0.17
2400	-0.376	-0.394	-0.159	-0.352	-0.326	-0.321	-0.365	0.176
2600	-0.313	-0.331	-0.159	-0.276	-0.257	-0.252	-0.302	0.252

PUMPING PORTION OF THE AQUIFER TEST

SE2000
Environmental Logger
12/12/96 10:55

Unit# 6 12 Test 0

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7	INPUT 8
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	TOC	TOC	TOC	TOC	TOC	TOC	TOC	TOC
I.D.	TMW16	TMW78	TMW24	TMW82	TMW75	TMW17	TMW29	TMW35
Reference	0	0	0	0	0	0	0	0
PSI at Ref.	4.283	4.29	4.596	4.595	5.034	6.281	5.319	4.669
SG	1	1	1	1	1	1	1	1
Linearity	0.039	0.086	0.002	0.014	0.142	-0.028	0.008	0.012
Scale factor	19.94	19.857	29.84	19.977	19.799	19.985	19.978	19.961
Offset	0.036	-0.019	-0.072	0.001	0.026	0.013	-0.017	-0.046
Delay mSEC	50	50	50	50	50	50	50	50

Step 0 12/7/96 11:05 AM 4:59 AM

Elapsed Time	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7	INPUT 8
0	0.006	-0.012	0	0	0	0	0	0.012
0.0083	0	-0.012	0	0	-0.006	0	0	0.012
0.0166	-0.006	-0.012	0	0	-0.006	0	0	0.012
0.025	-0.006	-0.012	0	0	-0.006	0	0	0.012
0.0333	-0.006	-0.012	0	0	-0.006	0.264	0	0.012
0.0416	-0.012	-0.012	0	0	-0.012	-0.182	0	0.006
0.05	-0.012	-0.012	0	0	-0.012	0.239	0	0.012
0.0583	-0.012	-0.012	0	0	-0.012	0.308	0	0.006
0.0666	-0.012	-0.012	0	0	-0.012	0.334	0	0.012
0.075	-0.012	-0.012	0	0	-0.012	0.403	0	0.012
0.0833	-0.012	-0.012	0	0	-0.012	0.491	0	0.012
0.0916	-0.012	-0.012	0	0	-0.012	0.579	0	0.012
0.1	-0.012	-0.012	0	0	-0.012	0.617	0	0.012
0.1083	-0.012	-0.012	0	0	-0.012	0.661	0	0.012
0.1166	-0.012	-0.012	0	0	-0.012	0.712	0	0.018
0.125	-0.012	-0.012	0	0	-0.012	0.813	0	0.012
0.1333	-0.012	-0.012	0	0	-0.012	0.901	0	0.012
0.1416	-0.012	-0.012	0	0	-0.018	0.932	0	0.012
0.15	-0.012	-0.012	0	0	-0.012	0.977	0	0.012
0.1583	-0.012	-0.012	0	0	-0.018	1.014	0	0.018
0.1666	-0.012	-0.012	0	0	-0.018	1.096	0	0.018
0.175	-0.012	-0.012	0	0	-0.018	1.159	0	0.018
0.1833	-0.012	-0.012	0	0	-0.018	1.26	0	0.018
0.1916	-0.012	-0.012	0	0	-0.018	1.311	-0.006	0.018

Elapsed Time	INPUT_1	INPUT_2	INPUT_3	INPUT_4	INPUT_5	INPUT_6	INPUT_7	INPUT_8
0.2	-0.012	-0.012	0	0	-0.018	1.361	-0.006	0.018
0.2083	-0.012	-0.012	0	0	-0.018	1.43	0	0.018
0.2166	-0.012	-0.012	0	0	-0.012	1.43	-0.006	0.018
0.225	-0.012	-0.012	0	0	-0.012	1.512	0	0.018
0.2333	-0.012	-0.012	0	0	-0.012	1.525	-0.006	0.018
0.2416	-0.012	-0.012	0	0	-0.012	1.582	-0.006	0.018
0.25	-0.012	-0.012	0	0	-0.018	1.594	-0.006	0.018
0.2583	-0.012	-0.012	0	0	-0.018	1.72	-0.006	0.018
0.2666	-0.012	-0.012	0	0	-0.018	1.752	-0.006	0.025
0.275	-0.012	-0.012	0	0	-0.018	1.809	-0.006	0.018
0.2833	-0.012	-0.012	0	0	-0.018	1.853	-0.006	0.025
0.2916	-0.012	-0.012	0	0	-0.018	1.941	-0.006	0.025
0.3	-0.012	-0.012	0	0	-0.018	1.973	-0.006	0.025
0.3083	-0.012	-0.012	0	0	-0.018	2.042	-0.006	0.025
0.3166	-0.012	-0.012	0	0	-0.018	2.061	0	0.025
0.325	-0.012	-0.012	0	0	-0.018	2.118	0	0.025
0.3333	-0.012	-0.012	0	0	-0.018	2.174	-0.006	0.025
0.35	-0.012	-0.012	0	0	-0.018	2.275	-0.006	0.025
0.3666	-0.012	-0.012	0	0	-0.018	2.382	0	0.025
0.3833	-0.012	-0.012	0	0	-0.012	2.477	-0.006	0.025
0.4	-0.012	-0.012	0	0	-0.012	2.521	-0.006	0.025
0.4166	-0.012	-0.012	0	0	-0.012	2.609	-0.006	0.025
0.4333	-0.012	-0.012	0	0	-0.012	2.647	-0.006	0.025
0.45	-0.012	-0.012	0	0	-0.018	2.735	-0.006	0.025
0.4666	-0.012	-0.012	0	0	-0.012	2.811	-0.006	0.025
0.4833	-0.012	-0.012	0	0	-0.012	2.88	-0.006	0.025
0.5	-0.012	-0.012	0	-0.006	-0.012	2.943	-0.006	0.031
0.5166	-0.012	-0.012	0	0	-0.012	2.987	0	0.025
0.5333	-0.012	-0.012	0	-0.006	-0.012	3.051	0	0.025
0.55	-0.012	-0.012	0	0	-0.012	3.126	-0.006	0.025
0.5666	-0.012	-0.012	0	-0.006	-0.012	3.202	0	0.025
0.5833	-0.012	-0.012	0	0	-0.018	3.29	0	0.031
0.6	-0.012	-0.012	0	0	-0.018	3.347	0	0.031
0.6166	-0.012	-0.012	0	-0.006	-0.012	3.391	-0.006	0.031
0.6333	-0.012	-0.012	0	-0.006	-0.012	3.435	0	0.031
0.65	-0.012	-0.012	0	0	-0.012	3.511	-0.006	0.031
0.6666	-0.012	-0.012	0	0	-0.012	3.561	-0.006	0.031
0.6833	-0.012	-0.012	0	-0.006	-0.012	3.605	0	0.031
0.7	-0.012	-0.012	0	-0.006	-0.012	3.656	0	0.031
0.7166	-0.012	-0.012	0	-0.006	-0.012	3.725	-0.006	0.031
0.7333	-0.012	-0.012	0	0	-0.012	3.82	0	0.031
0.75	-0.012	-0.012	0	0	-0.012	3.845	-0.006	0.031
0.7666	-0.012	-0.012	0	-0.006	-0.012	3.864	0	0.031
0.7833	-0.012	-0.012	0	0	-0.012	3.914	0	0.031
0.8	-0.012	-0.012	0	0	-0.012	4.072	0	0.031
0.8166	-0.012	-0.012	0	0	-0.012	3.946	0	0.031
0.8333	-0.012	-0.012	0	0	-0.012	3.952	0	0.031
0.85	-0.012	-0.012	0	-0.006	-0.012	3.984	0	0.031

Elapsed Time	INPUT_1	INPUT_2	INPUT_3	INPUT_4	INPUT_5	INPUT_6	INPUT_7	INPUT_8
0.8666	-0.012	-0.012	0	0	-0.012	3.971	0	0.031
0.8833	-0.012	-0.012	0	-0.006	-0.012	4.034	0	0.031
0.9	-0.012	-0.012	0	0	-0.012	3.99	0	0.037
0.9166	-0.012	-0.012	0	-0.006	-0.012	4.028	-0.006	0.037
0.9333	-0.012	-0.012	0	-0.006	-0.012	4.04	0	0.037
0.95	-0.012	-0.012	0	0	-0.012	4.103	0	0.037
0.9666	-0.012	-0.012	0	0	-0.012	4.097	0	0.037
0.9833	-0.012	-0.012	0	-0.006	-0.006	4.141	0	0.037
1	-0.012	-0.012	0	-0.006	-0.006	4.166	0	0.037
1.2	-0.006	-0.012	-0.009	0	-0.006	4.532	0	0.018
1.4	-0.006	-0.012	0	-0.006	0	4.847	0	0.018
1.6	-0.012	-0.012	0	0	0	5.074	-0.006	0.018
1.8	-0.012	-0.012	0	0	0	5.339	-0.006	0.025
2	-0.012	-0.012	0	0	0.006	5.478	-0.006	0.025
2.2	-0.012	-0.012	0	-0.006	0.012	5.642	-0.006	0.031
2.4	-0.012	-0.012	0	0	0.012	5.762	-0.006	0.025
2.6	-0.006	-0.018	0	0	0.018	5.869	0	0.031
2.8	-0.006	-0.012	0	-0.006	0.025	5.957	-0.006	0.031
3	-0.006	-0.012	0	-0.006	0.031	6.064	-0.006	0.031
3.2	-0.006	-0.012	0	-0.006	0.037	6.146	-0.006	0.025
3.4	-0.012	-0.012	0	-0.006	0.043	6.241	-0.006	0.031
3.6	-0.012	-0.012	0	-0.006	0.05	6.298	-0.006	0.031
3.8	-0.006	-0.012	0	-0.006	0.056	6.386	-0.006	0.031
4	-0.006	-0.012	0	-0.006	0.062	6.436	-0.006	0.031
4.2	-0.006	-0.012	-0.009	-0.006	0.062	6.493	-0.006	0.031
4.4	-0.006	-0.012	-0.009	-0.006	0.068	6.537	-0.006	0.031
4.6	-0.012	-0.012	0	-0.006	0.068	6.562	-0.006	0.025
4.8	-0.012	-0.012	0	-0.006	0.068	6.625	-0.006	0.031
5	-0.018	-0.012	0	-0.006	0.075	6.638	-0.006	0.031
5.2	-0.018	-0.012	0	-0.006	0.075	6.663	-0.012	0.031
5.4	-0.018	-0.012	-0.009	-0.006	0.081	6.682	-0.006	0.037
5.6	-0.012	-0.012	-0.009	-0.006	0.087	6.695	-0.006	0.031
5.8	-0.012	-0.006	0	-0.012	0.094	6.726	-0.006	0.031
6	-0.018	-0.012	-0.009	-0.012	0.094	6.752	-0.006	0.031
6.2	-0.018	-0.006	-0.009	-0.006	0.094	6.764	-0.006	0.037
6.4	-0.018	-0.006	-0.009	-0.006	0.1	6.745	-0.006	0.037
6.6	-0.012	-0.006	0	-0.006	0.106	6.783	-0.006	0.037
6.8	-0.018	-0.006	0	-0.006	0.106	6.802	-0.006	0.037
7	-0.012	-0.006	-0.009	-0.006	0.106	6.796	-0.006	0.037
7.2	-0.018	0	-0.009	-0.012	0.112	6.802	-0.006	0.031
7.4	-0.012	0	-0.009	-0.006	0.112	6.821	-0.006	0.031
7.6	-0.012	0	-0.009	-0.006	0.119	6.821	-0.006	0.037
7.8	-0.012	0	-0.009	-0.006	0.112	6.808	-0.006	0.037
8	-0.018	0.006	-0.009	-0.006	0.119	6.84	-0.006	0.037
8.2	-0.018	0	-0.009	-0.006	0.119	6.852	-0.006	0.037
8.4	-0.025	0	-0.009	-0.006	0.112	6.846	-0.006	0.044
8.6	-0.025	0.006	-0.009	-0.006	0.119	6.827	-0.012	0.037
8.8	-0.018	0.006	-0.009	-0.006	0.125	6.871	-0.006	0.044

Elapsed Time	INPUT_1	INPUT_2	INPUT_3	INPUT_4	INPUT_5	INPUT_6	INPUT_7	INPUT_8
9	-0.018	0.006	-0.009	-0.006	0.125	6.865	-0.006	0.044
9.2	-0.018	0.006	-0.009	-0.006	0.125	6.852	-0.006	0.044
9.4	-0.012	0.006	-0.009	-0.006	0.131	6.84	-0.006	0.037
9.6	-0.018	0.006	-0.009	-0.006	0.131	6.846	-0.006	0.037
9.8	-0.012	0.006	-0.009	-0.012	0.137	6.865	-0.006	0.037
10	-0.012	0.012	-0.009	-0.006	0.137	6.846	-0.006	0.044
12	-0.012	0.018	0	0.006	0.156	6.897	0	0.05
14	-0.012	0.025	-0.009	0	0.163	6.897	0	0.037
16	-0.018	0.031	-0.018	0	0.163	6.928	-0.006	0.037
18	0	0.037	-0.009	0.006	0.181	6.941	0	0.063
20	-0.006	0.031	-0.018	0.006	0.188	6.953	0	0.056
22	0	0.037	-0.009	0.006	0.194	6.966	0	0.063
24	0.006	0.043	0	0.012	0.206	6.991	0.006	0.063
26	0	0.05	0	0.012	0.213	7.004	0.012	0.063
28	0	0.05	0	0.018	0.213	7.01	0.012	0.075
30	0	0.062	0	0.018	0.219	7.029	0.012	0.075
32	0.006	0.062	0	0.018	0.232	6.985	0.012	0.069
34	0.012	0.062	0	0.018	0.232	7.023	0.018	0.069
36	0.006	0.068	0.009	0.025	0.232	7.048	0.018	0.075
38	0.012	0.068	0.009	0.025	0.238	7.048	0.018	0.075
40	0.006	0.075	0.009	0.018	0.238	7.067	0.018	0.056
42	0.006	0.075	0.018	0.018	0.244	7.048	0.018	0.063
44	0.012	0.075	0.018	0.018	0.25	7.061	0.018	0.056
46	0.012	0.081	0.018	0.025	0.25	7.054	0.018	0.069
48	0.012	0.075	0.009	0.018	0.25	7.067	0.025	0.056
50	0.018	0.087	0	0.025	0.25	7.086	0.018	0.056
52	0.012	0.087	0.009	0.025	0.257	7.067	0.025	0.063
54	0.006	0.087	0.009	0.018	0.257	7.08	0.025	0.05
56	0.018	0.087	0	0.018	0.257	7.111	0.018	0.063
58	0.012	0.087	0.009	0.012	0.263	7.111	0.018	0.05
60	0.012	0.093	0.009	0.012	0.263	7.136	0.018	0.044
62	0.006	0.087	0.009	0.012	0.257	7.092	0.018	0.037
64	0.006	0.093	0.009	0.012	0.257	7.105	0.025	0.037
66	0.012	0.1	0.009	0.006	0.263	7.117	0.018	0.037
68	0.006	0.093	0	0.012	0.257	7.117	0.018	0.044
70	0	0.093	0	0.012	0.257	7.149	0.018	0.025
72	0.006	0.093	0.009	0.006	0.263	7.13	0.012	0.037
74	0.006	0.093	0	0	0.263	7.124	0.018	0.018
76	0.006	0.093	0	0.006	0.263	7.136	0.012	0.031
78	0.006	0.093	0	0	0.263	7.098	0.012	0.031
80	0.006	0.1	0	0.006	0.263	7.117	0.012	0.031
82	0	0.1	-0.009	0.006	0.263	7.124	0.012	0.031
84	0	0.093	-0.009	0	0.269	7.124	0.012	0.018
86	0	0.093	-0.018	0.006	0.263	7.124	0.012	0.031
88	0	0.1	-0.018	0.006	0.269	7.143	0.018	0.025
90	0	0.1	-0.018	0.012	0.263	7.124	0.012	0.031
92	0.006	0.1	-0.018	0.006	0.275	7.117	0.012	0.031
94	0	0.1	-0.009	0.012	0.269	7.136	0.018	0.031

Elapsed Time	INPUT_1	INPUT_2	INPUT_3	INPUT_4	INPUT_5	INPUT_6	INPUT_7	INPUT_8
96	0	0.106	-0.009	0.018	0.269	7.13	0.018	0.037
98	0	0.1	0	0.018	0.269	7.136	0.018	0.025
100	0	0.1	-0.009	0.012	0.275	7.136	0.018	0.031
120	0.012	0.112	0	0.025	0.301	7.149	0.031	0.069
140	0.025	0.118	-0.009	0.031	0.319	7.161	0.037	0.094
160	0.025	0.131	0.009	0.037	0.326	7.161	0.044	0.088
180	0.031	0.137	0	0.044	0.344	7.193	0.05	0.094
200	0.031	0.137	0	0.044	0.363	7.225	0.056	0.094
220	0.037	0.156	0.009	0.05	0.37	7.218	0.063	0.138
240	0.025	0.156	0	0.037	0.363	7.225	0.05	0.157
260	0.037	0.156	0	0.037	0.37	7.237	0.05	0.163
280	0.043	0.156	0.018	0.037	0.382	7.25	0.056	0.182
300	0.037	0.162	0.018	0.031	0.382	7.243	0.05	0.39
320	0.037	0.168	0.018	0.044	0.388	7.237	0.056	0.409
340	0.025	0.168	0.018	0.031	0.376	7.256	0.05	0.403
360	0.025	0.168	0.018	0.025	0.376	7.25	0.05	0.409
380	0.018	0.168	0.018	0.012	0.376	7.256	0.037	0.409
400	0.012	0.168	0.028	0.018	0.37	7.25	0.044	0.453
420	0.012	0.168	0.028	0.018	0.37	7.25	0.044	0.441
440	0.018	0.193	0.037	0.012	0.376	7.243	0.044	0.434
460	0.012	0.187	0.037	0.012	0.37	7.281	0.037	0.441
480	0.012	0.181	0.046	0.006	0.37	7.237	0.037	0.416
500	0.006	0.175	0.046	0	0.37	7.237	0.031	0.397
520	0	0.175	0.046	-0.006	0.363	7.256	0.031	0.397
540	-0.006	0.181	0.056	0	0.357	7.231	0.025	0.434
560	0	0.187	0.056	0	0.37	7.262	0.031	0.434
580	0	0.175	0.065	0	0.37	7.269	0.031	0.384
600	-0.006	0.168	0.065	0.006	0.357	7.275	0.031	0.352
620	-0.006	0.168	0.075	0	0.363	7.262	0.031	0.371
640	-0.006	0.168	0.075	0.006	0.37	7.269	0.037	0.352
660	0.006	0.168	0.075	0	0.37	7.269	0.031	0.365
680	0.006	0.168	0.075	0	0.37	7.275	0.031	0.378
700	0	0.168	0.084	0	0.37	7.3	0.031	0.359
720	0	0.168	0.075	0.006	0.37	7.319	0.031	0.359
740	0.006	0.168	0.084	0.006	0.37	7.281	0.031	0.327
760	-0.006	0.168	0.084	0.012	0.363	7.256	0.037	0.327
780	0	0.175	0.084	0.012	0.37	7.256	0.037	0.321
800	0	0.175	0.075	0.018	0.363	7.269	0.037	0.346
820	0	0.168	0.075	0	0.363	7.256	0.031	0.334
840	-0.006	0.175	0.075	0.006	0.363	7.313	0.031	0.34
860	-0.006	0.168	0.075	0.006	0.363	7.288	0.031	0.327
880	-0.006	0.175	0.075	0.012	0.376	7.313	0.031	0.371
900	0.012	0.181	0.065	0.012	0.376	7.288	0.037	0.371
920	0.012	0.181	0.075	0.025	0.382	7.313	0.037	0.39
940	0.006	0.187	0.065	0.018	0.382	7.294	0.044	0.371
960	0	0.181	0.065	0.018	0.376	7.319	0.037	0.378
980	0.006	0.187	0.065	0.012	0.376	7.294	0.037	0.352
1000	-0.006	0.181	0.056	0.012	0.363	7.275	0.031	0.346

Elapsed Time	INPUT_1	INPUT_2	INPUT_3	INPUT_4	INPUT_5	INPUT_6	INPUT_7	INPUT_8
1200	-0.018	0.187	0.056	-0.006	0.363	7.288	0.025	0.346
1400	-0.05	0.156	0.065	-0.037	0.332	7.25	-0.006	0.056
1600	-0.062	0.143	0.065	-0.05	0.313	7.212	-0.031	0.037
1800	-0.094	0.125	0.056	-0.075	0.288	7.206	-0.05	0.063
2000	-0.119	0.1	0.065	-0.1	0.269	7.206	-0.069	0.063
2200	-0.175	0.056	0.056	-0.163	0.213	7.174	-0.126	0.031
2400	-0.238	-0.025	0	-0.226	0.15	7.098	-0.189	0
2600	-0.295	-0.068	-0.046	-0.276	0.1	7.061	-0.239	-0.031
2800	-0.313	-0.093	-0.056	-0.301	0.081	7.023	-0.271	-0.069
3000	-0.376	-0.15	-0.075	-0.358	0.018	6.966	-0.315	-0.132
3200	-0.401	-0.181	-0.103	-0.377	-0.012	6.941	-0.346	-0.081
3400	-0.426	-0.206	-0.112	-0.414	-0.031	6.859	-0.378	-0.069
3600	-0.464	-0.244	-0.103	-0.446	-0.068	6.89	-0.41	-0.088
3800	-0.539	-0.319	-0.159	-0.515	-0.15	6.808	-0.492	-0.132
4000	-0.539	-0.344	-0.215	-0.515	-0.156	6.752	-0.504	-0.107
4200	-0.489	-0.294	-0.215	-0.471	-0.106	6.821	-0.46	-0.044
4400	-0.483	-0.275	-0.206	-0.458	-0.094	6.859	-0.46	-0.031

APPENDIX C

TMW-16 AND TMW-29 CORRECTED DATA

Water levels taken by hand - Original Data											
TMW-18			TMW-16			TMW-64			TMW-78		
DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO
		H20 - TOC			H20 - TOC			H20 - TOC			H20 - TOC
			6-Dec	1100	113.52				6-Dec	1045	114.62
7-Dec	904	114.55	7-Dec	1014	114.01	7-Dec	909	109.59	7-Dec	914	115.03
begin aquifer test - pumping portion											
	1240	114.57		1247	113.99		1252	109.70		1301	115.23
	1520	114.59		1525	114.01		1529	109.71		1536	115.28
8-Dec	808	114.52	8-Dec	815	113.92	8-Dec	820	109.68	8-Dec	824	115.27
	1217	114.48		1227	113.89		1222	109.66		1230	115.24
	1607	114.46		1614	113.86		1617	109.63		1623	115.22
9-Dec	900	114.22	9-Dec	906	113.64	9-Dec	911	109.45	9-Dec	928	115.00
	1157	114.19		1200	113.61		1203	109.41		1208	114.97
	1633	114.11		1636	113.55		1639	109.37		1639	114.90
10-Dec	1200	114.08	10-Dec	1204	113.51	10-Dec	1208	109.32	10-Dec	1211	114.85
begin aquifer test - recovery portion											
	1656	114.06		1601	113.48		1605	109.28		1608	114.66
11-Dec	903	114.17	11-Dec	906	113.58	11-Dec	910	109.34	11-Dec	914	114.70
	1655	114.27		1659	113.67		1710	109.42		1733	114.81
12-Dec	759	114.25	12-Dec	802	113.66	12-Dec	805	109.43	12-Dec	809	114.80

TMW-82			TMW-24			TMW-29			TMW-35		
DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO
		H20 - TOC			H20 - TOC			H20 - TOC			H20 - TOC
6-Dec	1120	115.95	6-Dec	1122	115.48	6-Dec	1205	111.30	6-Dec	1210	112.69
7-Dec	920	116.39	7-Dec	922	115.68	7-Dec	929	111.71	7-Dec	935	113.13
begin aquifer test - pumping portion											
	1305	116.46		1307	115.71		1310	111.78		1314	113.14
	1540	116.47		1542	115.73		1555	111.81		1602	113.14
8-Dec	834	116.41	8-Dec	840	115.78	8-Dec	843	111.77	8-Dec	845	113.05
	1236	116.40		1238	115.78		1247	111.75		1246	113.03
	1646	116.39		1647	115.78		1655	111.73		1659	113.02
9-Dec	934	116.16	9-Dec	937	115.68	9-Dec	940	111.52	9-Dec	943	112.79
	1225	116.12		1227	115.66		1235	111.47		1240	112.74
	1655	116.07		1657	115.61		1725	111.42		1731	112.71
10-Dec	1215	116.01	10-Dec	1216	115.55	10-Dec	1223	111.35	10-Dec	1226	112.67
begin aquifer test - recovery portion											
	1646	116.00		1647	115.52		1654	111.33		1657	112.69
11-Dec	922	116.09	11-Dec	923	115.53	11-Dec	926	111.41	11-Dec	929	112.81
	1737	116.20		1739	115.59		1742	111.51		1747	112.91
12-Dec	813	116.21	12-Dec	814	115.61	12-Dec	817	111.53	12-Dec	820	112.92

TMW-36			TMW-37			TMW-45			TMW-59		
DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO
		H20 - TOC			H20 - TOC			H20 - TOC			H20 - TOC
7-Dec	950	113.74				7-Dec	955	98.54	7-Dec	959	107.33
begin aquifer test - pumping portion											
	1320	113.75		1324	106.85		1330	98.54		1332	107.32
	1624	113.73		1620	106.78		16	98.57		1632	107.31
8-Dec	850	113.64	8-Dec	856	106.75	8-Dec	900	98.47	8-Dec	910	107.15
	1250	113.63		1252	106.74		1258	98.45		1301	107.15
	1902	113.59		1708	106.70		1734	98.41		1740	107.10
9-Dec	947	113.37	9-Dec	951	106.47	9-Dec	954	98.17	9-Dec	959	106.87
	1248	113.33		1252	106.41		1255	98.11		1258	106.79
	1734	113.28		1737	106.35		1743	98.06		1746	106.74
10-Dec	1230	113.24	10-Dec	1233	106.30	10-Dec	1236	98.00	10-Dec	1240	106.71
begin aquifer test - recovery portion											
	1702	113.26		1707	106.34		1712	98.03		1718	106.75
11-Dec	932	113.41	11-Dec	934	106.48	11-Dec	938	98.18	11-Dec	943	106.89
	1748	113.49		1750	106.57		1754	98.29		1757	106.97
12-Dec	824	113.51	12-Dec	827	106.62	12-Dec	830	98.32	12-Dec	834	106.97

TMW-17			TMW-75		
DATE	TIME	DEPTH TO	DATE	TIME	DEPTH TO
		H20 - TOC			H20 - TOC
2-Dec	1505	117.33	2-Dec	1510	116.62
3-Dec	840	117.45	3-Dec	836	116.62
	1512	117.31		1515	116.51
4-Dec	851	117.40	4-Dec	849	116.49
	1513	117.31		1510	116.51
5-Dec	816	117.00	5-Dec	813	116.12
	1538	117.00		1535	116.10
6-Dec	1150	117.21	6-Dec	1140	116.30
begin aquifer test - pumping portion					
begin aquifer test - recovery portion					

APPENDIX D

BAROMETRIC PRESSURE CORRECTED DATA

ORIGINAL BAROMETRIC DATA - PUMPING PORTION OF TEST

KENNECOTT URANIUM COMPANY
SWEETWATER URANIUM PROJECT
BAROMETRIC DATA
01-Dec-96 12-Dec-96

TIME INDEX 0 MIN: 07-Dec-96 11:05:00 AM
DATEVALUE: 35406
TIMEVALUE: 0.461805556
SUM: 35406.4618055556

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	TIME INDEX (MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
07-Dec-96	11:00:00 AM	15	-0.003472222	-5.0000001	1014.499	760.939	29.96
07-Dec-96	11:15:00 AM	15	0.006944444	9.9999999	1014.313	760.799	29.96
07-Dec-96	11:30:00 AM	15	0.017361111	25	1014.329	760.812	29.96
07-Dec-96	11:45:00 AM	15	0.027777778	40	1014.635	761.041	29.97
07-Dec-96	12:00:00 PM	15	0.038194444	55	1014.616	761.027	29.97
07-Dec-96	12:15:00 PM	15	0.048611111	70	1014.248	760.751	29.95
07-Dec-96	12:30:00 PM	15	0.059027778	85	1013.926	760.509	29.94
07-Dec-96	12:45:00 PM	15	0.069444444	100	1014.115	760.651	29.95
07-Dec-96	01:00:00 PM	15	0.079861111	115	1014.316	760.802	29.96
07-Dec-96	01:15:00 PM	15	0.090277778	130	1014.873	761.219	29.97
07-Dec-96	01:30:00 PM	15	0.100694444	145	1015.133	761.415	29.98
07-Dec-96	01:45:00 PM	15	0.111111111	160	1015.358	761.583	29.99
07-Dec-96	02:00:00 PM	15	0.121527778	175	1015.407	761.62	29.99
07-Dec-96	02:15:00 PM	15	0.131944444	190	1015.508	761.696	29.99
07-Dec-96	02:30:00 PM	15	0.142361111	205	1015.758	761.884	30.00
07-Dec-96	02:45:00 PM	15	0.152777778	220	1015.859	761.959	30.00
07-Dec-96	03:00:00 PM	15	0.163194444	235	1015.612	761.774	29.99
07-Dec-96	03:15:00 PM	15	0.173611111	250	1015.41	761.622	29.99
07-Dec-96	03:30:00 PM	15	0.184027778	265	1015.404	761.617	29.99
07-Dec-96	03:45:00 PM	15	0.194444444	280	1015.508	761.696	29.99
07-Dec-96	04:00:00 PM	15	0.204861111	295	1015.452	761.654	29.99
07-Dec-96	04:15:00 PM	15	0.215277778	310	1015.306	761.544	29.99
07-Dec-96	04:30:00 PM	15	0.225694444	325	1015.443	761.647	29.99
07-Dec-96	04:45:00 PM	15	0.236111111	340	1015.159	761.434	29.98
07-Dec-96	05:00:00 PM	15	0.246527778	355	1014.977	761.298	29.98
07-Dec-96	05:15:00 PM	15	0.256944444	370	1014.658	761.058	29.97
07-Dec-96	05:30:00 PM	15	0.267361111	385	1014.274	760.77	29.95
07-Dec-96	05:45:00 PM	15	0.277777778	400	1014.323	760.807	29.96
07-Dec-96	06:00:00 PM	15	0.288194444	415	1014.251	760.753	29.95
07-Dec-96	06:15:00 PM	15	0.298611111	430	1014.115	760.65	29.95
07-Dec-96	06:30:00 PM	15	0.309027778	445	1014.004	760.568	29.95
07-Dec-96	06:45:00 PM	15	0.319444444	460	1013.757	760.382	29.94
07-Dec-96	07:00:00 PM	15	0.329861111	475	1013.665	760.314	29.94
07-Dec-96	07:15:00 PM	15	0.340277778	490	1013.451	760.153	29.93
07-Dec-96	07:30:00 PM	15	0.350694444	505	1013.314	760.05	29.93
07-Dec-96	07:45:00 PM	15	0.361111111	520	1013.115	759.901	29.92
07-Dec-96	08:00:00 PM	15	0.371527778	535	1012.878	759.723	29.91
07-Dec-96	08:15:00 PM	15	0.381944444	550	1012.76	759.635	29.91
07-Dec-96	08:30:00 PM	15	0.392361111	565	1012.855	759.706	29.91
07-Dec-96	08:45:00 PM	15	0.402777778	580	1012.923	759.757	29.92
07-Dec-96	09:00:00 PM	15	0.413194444	595	1012.822	759.681	29.91
07-Dec-96	09:15:00 PM	15	0.423611111	610	1012.777	759.647	29.91
07-Dec-96	09:30:00 PM	15	0.434027778	625	1012.695	759.586	29.91
07-Dec-96	09:45:00 PM	15	0.444444444	640	1012.907	759.745	29.91
07-Dec-96	10:00:00 PM	15	0.454861111	655	1012.79	759.657	29.91
07-Dec-96	10:15:00 PM	15	0.465277778	670	1012.747	759.625	29.91

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
07-Dec-96	10:30:00 PM	15	0.475694444	685	1012.695	759.586	29.91
07-Dec-96	10:45:00 PM	15	0.486111111	700	1012.611	759.523	29.91
07-Dec-96	11:00:00 PM	15	0.496527778	715	1012.575	759.496	29.90
07-Dec-96	11:15:00 PM	15	0.506944444	730	1012.614	759.525	29.91
07-Dec-96	11:30:00 PM	15	0.517361111	745	1012.611	759.523	29.91
07-Dec-96	11:45:00 PM	15	0.527777778	760	1012.559	759.484	29.90
08-Dec-96	12:00:00 AM	15	0.538194444	775	1012.725	759.608	29.91
08-Dec-96	12:15:00 AM	15	0.548611111	790	1012.848	759.701	29.91
08-Dec-96	12:30:00 AM	15	0.559027778	805	1012.643	759.547	29.91
08-Dec-96	12:45:00 AM	15	0.569444444	820	1012.497	759.437	29.90
08-Dec-96	01:00:00 AM	15	0.579861111	835	1012.562	759.486	29.90
08-Dec-96	01:15:00 AM	15	0.590277778	850	1012.565	759.488	29.90
08-Dec-96	01:30:00 AM	15	0.600694444	865	1012.555	759.481	29.90
08-Dec-96	01:45:00 AM	15	0.611111111	880	1012.715	759.601	29.91
08-Dec-96	02:00:00 AM	15	0.621527778	895	1012.865	759.713	29.91
08-Dec-96	02:15:00 AM	15	0.631944444	910	1012.939	759.769	29.92
08-Dec-96	02:30:00 AM	15	0.642361111	925	1013.073	759.869	29.92
08-Dec-96	02:45:00 AM	15	0.652777778	940	1013.073	759.869	29.92
08-Dec-96	03:00:00 AM	15	0.663194444	955	1012.897	759.737	29.91
08-Dec-96	03:15:00 AM	15	0.673611111	970	1012.809	759.672	29.91
08-Dec-96	03:30:00 AM	15	0.684027778	985	1012.712	759.598	29.91
08-Dec-96	03:45:00 AM	15	0.694444444	1000	1012.611	759.523	29.91
08-Dec-96	04:00:00 AM	15	0.704861111	1015	1012.441	759.396	29.90
08-Dec-96	04:15:00 AM	15	0.715277778	1030	1012.249	759.252	29.90
08-Dec-96	04:30:00 AM	15	0.725694444	1045	1012.181	759.2	29.89
08-Dec-96	04:45:00 AM	15	0.736111111	1060	1012.093	759.134	29.89
08-Dec-96	05:00:00 AM	15	0.746527778	1075	1012.227	759.234	29.89
08-Dec-96	05:15:00 AM	15	0.756944444	1090	1012.383	759.352	29.90
08-Dec-96	05:30:00 AM	15	0.767361111	1105	1012.36	759.335	29.90
08-Dec-96	05:45:00 AM	15	0.777777778	1120	1012.487	759.43	29.90
08-Dec-96	06:00:00 AM	15	0.788194444	1135	1012.575	759.496	29.90
08-Dec-96	06:15:00 AM	15	0.798611111	1150	1012.435	759.391	29.90
08-Dec-96	06:30:00 AM	15	0.809027778	1165	1012.415	759.376	29.90
08-Dec-96	06:45:00 AM	15	0.819444444	1180	1012.337	759.318	29.90
08-Dec-96	07:00:00 AM	15	0.829861111	1195	1012.23	759.237	29.89
08-Dec-96	07:15:00 AM	15	0.840277778	1210	1012.21	759.222	29.89
08-Dec-96	07:30:00 AM	15	0.850694444	1225	1012.096	759.137	29.89
08-Dec-96	07:45:00 AM	15	0.861111111	1240	1011.904	758.993	29.88
08-Dec-96	08:00:00 AM	15	0.871527778	1255	1011.768	758.89	29.88
08-Dec-96	08:15:00 AM	15	0.881944444	1270	1011.696	758.837	29.88
08-Dec-96	08:30:00 AM	15	0.892361111	1285	1011.452	758.653	29.87
08-Dec-96	08:45:00 AM	15	0.902777778	1300	1011.439	758.644	29.87
08-Dec-96	09:00:00 AM	15	0.913194444	1315	1011.419	758.629	29.87
08-Dec-96	09:15:00 AM	15	0.923611111	1330	1011.611	758.773	29.88
08-Dec-96	09:30:00 AM	15	0.934027778	1345	1011.764	758.888	29.88
08-Dec-96	09:45:00 AM	15	0.944444444	1360	1011.657	758.807	29.88
08-Dec-96	10:00:00 AM	15	0.954861111	1375	1011.54	758.719	29.87
08-Dec-96	10:15:00 AM	15	0.965277778	1390	1011.81	758.922	29.88
08-Dec-96	10:30:00 AM	15	0.975694444	1405	1011.829	758.937	29.88
08-Dec-96	10:45:00 AM	15	0.986111111	1420	1011.888	758.981	29.88
08-Dec-96	11:00:00 AM	15	0.996527778	1435	1011.885	758.978	29.88
08-Dec-96	11:15:00 AM	15	1.006944444	1450	1011.732	758.863	29.88
08-Dec-96	11:30:00 AM	15	1.017361111	1465	1011.641	758.795	29.88

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
08-Dec-96	11:45:00 AM	15	1.027777778	1480	1011.813	758.924	29.88
08-Dec-96	12:00:00 PM	15	1.038194444	1495	1012.126	759.159	29.89
08-Dec-96	12:15:00 PM	15	1.048611111	1510	1012.184	759.203	29.89
08-Dec-96	12:30:00 PM	15	1.059027778	1525	1012.178	759.198	29.89
08-Dec-96	12:45:00 PM	15	1.069444444	1540	1012.272	759.269	29.90
08-Dec-96	01:00:00 PM	15	1.079861111	1555	1012.148	759.176	29.89
08-Dec-96	01:15:00 PM	15	1.090277778	1570	1012.067	759.115	29.89
08-Dec-96	01:30:00 PM	15	1.100694444	1585	1012.103	759.142	29.89
08-Dec-96	01:45:00 PM	15	1.111111111	1600	1012.174	759.195	29.89
08-Dec-96	02:00:00 PM	15	1.121527778	1615	1012.044	759.098	29.89
08-Dec-96	02:15:00 PM	15	1.131944444	1630	1012.015	759.076	29.89
08-Dec-96	02:30:00 PM	15	1.142361111	1645	1011.888	758.981	29.88
08-Dec-96	02:45:00 PM	15	1.152777778	1660	1011.82	758.929	29.88
08-Dec-96	03:00:00 PM	15	1.163194444	1675	1011.891	758.983	29.88
08-Dec-96	03:15:00 PM	15	1.173611111	1690	1011.904	758.993	29.88
08-Dec-96	03:30:00 PM	15	1.184027778	1705	1012.008	759.071	29.89
08-Dec-96	03:45:00 PM	15	1.194444444	1720	1011.839	758.944	29.88
08-Dec-96	04:00:00 PM	15	1.204861111	1735	1011.826	758.934	29.88
08-Dec-96	04:15:00 PM	15	1.215277778	1750	1011.758	758.883	29.88
08-Dec-96	04:30:00 PM	15	1.225694444	1765	1011.689	758.832	29.88
08-Dec-96	04:45:00 PM	15	1.236111111	1780	1011.628	758.785	29.88
08-Dec-96	05:00:00 PM	15	1.246527778	1795	1011.468	758.666	29.87
08-Dec-96	05:15:00 PM	15	1.256944444	1810	1011.208	758.47	29.86
08-Dec-96	05:30:00 PM	15	1.267361111	1825	1011.058	758.358	29.86
08-Dec-96	05:45:00 PM	15	1.277777778	1840	1011.074	758.37	29.86
08-Dec-96	06:00:00 PM	15	1.288194444	1855	1010.905	758.243	29.86
08-Dec-96	06:15:00 PM	15	1.298611111	1870	1010.771	758.143	29.85
08-Dec-96	06:30:00 PM	15	1.309027778	1885	1010.801	758.165	29.85
08-Dec-96	06:45:00 PM	15	1.319444444	1900	1010.817	758.177	29.85
08-Dec-96	07:00:00 PM	15	1.329861111	1915	1010.671	758.067	29.85
08-Dec-96	07:15:00 PM	15	1.340277778	1930	1010.505	757.943	29.84
08-Dec-96	07:30:00 PM	15	1.350694444	1945	1010.469	757.916	29.84
08-Dec-96	07:45:00 PM	15	1.361111111	1960	1010.322	757.806	29.84
08-Dec-96	08:00:00 PM	15	1.371527778	1975	1009.87	757.467	29.82
08-Dec-96	08:15:00 PM	15	1.381944444	1990	1009.958	757.533	29.83
08-Dec-96	08:30:00 PM	15	1.392361111	2005	1010.088	757.63	29.83
08-Dec-96	08:45:00 PM	15	1.402777778	2020	1010.023	757.581	29.83
08-Dec-96	09:00:00 PM	15	1.413194444	2035	1010.189	757.706	29.83
08-Dec-96	09:15:00 PM	15	1.423611111	2050	1010.075	757.62	29.83
08-Dec-96	09:30:00 PM	15	1.434027778	2065	1009.873	757.469	29.82
08-Dec-96	09:45:00 PM	15	1.444444444	2080	1009.827	757.435	29.82
08-Dec-96	10:00:00 PM	15	1.454861111	2095	1009.743	757.371	29.82
08-Dec-96	10:15:00 PM	15	1.465277778	2110	1009.632	757.288	29.82
08-Dec-96	10:30:00 PM	15	1.475694444	2125	1009.473	757.169	29.81
08-Dec-96	10:45:00 PM	15	1.486111111	2140	1009.29	757.032	29.81
08-Dec-96	11:00:00 PM	15	1.496527778	2155	1009.18	756.949	29.80
08-Dec-96	11:15:00 PM	15	1.506944444	2170	1008.958	756.783	29.80
08-Dec-96	11:30:00 PM	15	1.517361111	2185	1008.571	756.492	29.79
08-Dec-96	11:45:00 PM	15	1.527777778	2200	1008.33	756.312	29.78
09-Dec-96	12:00:00 AM	15	1.538194444	2215	1008.206	756.219	29.78
09-Dec-96	12:15:00 AM	15	1.548611111	2230	1008.135	756.165	29.77
09-Dec-96	12:30:00 AM	15	1.559027778	2245	1007.848	755.951	29.77
09-Dec-96	12:45:00 AM	15	1.569444444	2260	1007.712	755.848	29.76

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
09-Dec-96	01:00:00 AM	15	1.579861111	2275	1007.484	755.677	29.75
09-Dec-96	01:15:00 AM	15	1.590277778	2290	1007.191	755.457	29.75
09-Dec-96	01:30:00 AM	15	1.600694444	2305	1007.122	755.406	29.74
09-Dec-96	01:45:00 AM	15	1.611111111	2320	1006.914	755.25	29.74
09-Dec-96	02:00:00 AM	15	1.621527778	2335	1006.797	755.162	29.73
09-Dec-96	02:15:00 AM	15	1.631944444	2350	1006.797	755.162	29.73
09-Dec-96	02:30:00 AM	15	1.642361111	2365	1006.742	755.12	29.73
09-Dec-96	02:45:00 AM	15	1.652777778	2380	1006.647	755.049	29.73
09-Dec-96	03:00:00 AM	15	1.663194444	2395	1006.484	754.927	29.72
09-Dec-96	03:15:00 AM	15	1.673611111	2410	1006.396	754.862	29.72
09-Dec-96	03:30:00 AM	15	1.684027778	2425	1006.335	754.815	29.72
09-Dec-96	03:45:00 AM	15	1.694444444	2440	1005.99	754.556	29.71
09-Dec-96	04:00:00 AM	15	1.704861111	2455	1005.729	754.361	29.70
09-Dec-96	04:15:00 AM	15	1.715277778	2470	1005.716	754.351	29.70
09-Dec-96	04:30:00 AM	15	1.725694444	2485	1005.54	754.219	29.70
09-Dec-96	04:45:00 AM	15	1.736111111	2500	1005.521	754.205	29.70
09-Dec-96	05:00:00 AM	15	1.746527778	2515	1005.41	754.122	29.69
09-Dec-96	05:15:00 AM	15	1.756944444	2530	1005.277	754.022	29.69
09-Dec-96	05:30:00 AM	15	1.767361111	2545	1005.208	753.97	29.69
09-Dec-96	05:45:00 AM	15	1.777777778	2560	1005.218	753.978	29.69
09-Dec-96	06:00:00 AM	15	1.788194444	2575	1005.094	753.885	29.68
09-Dec-96	06:15:00 AM	15	1.798611111	2590	1005.088	753.88	29.68
09-Dec-96	06:30:00 AM	15	1.809027778	2605	1005.14	753.919	29.69
09-Dec-96	06:45:00 AM	15	1.819444444	2620	1005.244	753.997	29.69
09-Dec-96	07:00:00 AM	15	1.829861111	2635	1005.381	754.1	29.69
09-Dec-96	07:15:00 AM	15	1.840277778	2650	1005.449	754.151	29.69
09-Dec-96	07:30:00 AM	15	1.850694444	2665	1005.277	754.022	29.69
09-Dec-96	07:45:00 AM	15	1.861111111	2680	1005.068	753.865	29.68
09-Dec-96	08:00:00 AM	15	1.871527778	2695	1005.085	753.878	29.68
09-Dec-96	08:15:00 AM	15	1.881944444	2710	1005.234	753.99	29.69
09-Dec-96	08:30:00 AM	15	1.892361111	2725	1005.452	754.153	29.69
09-Dec-96	08:45:00 AM	15	1.902777778	2740	1005.612	754.273	29.70
09-Dec-96	09:00:00 AM	15	1.913194444	2755	1005.71	754.346	29.70
09-Dec-96	09:15:00 AM	15	1.923611111	2770	1005.905	754.493	29.71
09-Dec-96	09:30:00 AM	15	1.934027778	2785	1006.055	754.605	29.71
09-Dec-96	09:45:00 AM	15	1.944444444	2800	1006.094	754.634	29.71
09-Dec-96	10:00:00 AM	15	1.954861111	2815	1006.172	754.693	29.72
09-Dec-96	10:15:00 AM	15	1.965277778	2830	1006.175	754.695	29.72
09-Dec-96	10:30:00 AM	15	1.975694444	2845	1006.146	754.673	29.71
09-Dec-96	10:45:00 AM	15	1.986111111	2860	1006.038	754.593	29.71
09-Dec-96	11:00:00 AM	15	1.996527778	2875	1005.915	754.5	29.71
09-Dec-96	11:15:00 AM	15	2.006944444	2890	1005.68	754.324	29.70
09-Dec-96	11:30:00 AM	15	2.017361111	2905	1005.313	754.049	29.69
09-Dec-96	11:45:00 AM	15	2.027777778	2920	1005.016	753.826	29.68
09-Dec-96	12:00:00 PM	15	2.038194444	2935	1004.857	753.707	29.68
09-Dec-96	12:15:00 PM	15	2.048611111	2950	1004.635	753.541	29.67
09-Dec-96	12:30:00 PM	15	2.059027778	2965	1004.71	753.597	29.67
09-Dec-96	12:45:00 PM	15	2.069444444	2980	1004.603	753.516	29.67
09-Dec-96	01:00:00 PM	15	2.079861111	2995	1004.303	753.292	29.66
09-Dec-96	01:15:00 PM	15	2.090277778	3010	1004.189	753.206	29.66
09-Dec-96	01:30:00 PM	15	2.100694444	3025	1004.082	753.126	29.65
09-Dec-96	01:45:00 PM	15	2.111111111	3040	1004.01	753.072	29.65
09-Dec-96	02:00:00 PM	15	2.121527778	3055	1004.066	753.113	29.65

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
09-Dec-96	02:15:00 PM	15	2.131944444	3070	1003.903	752.991	29.65
09-Dec-96	02:30:00 PM	15	2.142361111	3085	1003.896	752.986	29.65
09-Dec-96	02:45:00 PM	15	2.152777778	3100	1003.812	752.923	29.65
09-Dec-96	03:00:00 PM	15	2.163194444	3115	1003.815	752.925	29.65
09-Dec-96	03:15:00 PM	15	2.173611111	3130	1003.688	752.83	29.64
09-Dec-96	03:30:00 PM	15	2.184027778	3145	1003.796	752.911	29.65
09-Dec-96	03:45:00 PM	15	2.194444444	3160	1003.591	752.757	29.64
09-Dec-96	04:00:00 PM	15	2.204861111	3175	1003.327	752.559	29.63
09-Dec-96	04:15:00 PM	15	2.215277778	3190	1003.206	752.469	29.63
09-Dec-96	04:30:00 PM	15	2.225694444	3205	1003.086	752.378	29.62
09-Dec-96	04:45:00 PM	15	2.236111111	3220	1003.021	752.33	29.62
09-Dec-96	05:00:00 PM	15	2.246527778	3235	1002.894	752.234	29.62
09-Dec-96	05:15:00 PM	15	2.256944444	3250	1002.682	752.076	29.61
09-Dec-96	05:30:00 PM	15	2.267361111	3265	1002.536	751.966	29.61
09-Dec-96	05:45:00 PM	15	2.277777778	3280	1002.308	751.795	29.60
09-Dec-96	06:00:00 PM	15	2.288194444	3295	1002.246	751.748	29.60
09-Dec-96	06:15:00 PM	15	2.298611111	3310	1002.279	751.773	29.60
09-Dec-96	06:30:00 PM	15	2.309027778	3325	1002.012	751.573	29.59
09-Dec-96	06:45:00 PM	15	2.319444444	3340	1001.982	751.551	29.59
09-Dec-96	07:00:00 PM	15	2.329861111	3355	1001.777	751.397	29.59
09-Dec-96	07:15:00 PM	15	2.340277778	3370	1001.859	751.458	29.59
09-Dec-96	07:30:00 PM	15	2.350694444	3385	1001.852	751.453	29.59
09-Dec-96	07:45:00 PM	15	2.361111111	3400	1001.514	751.199	29.58
09-Dec-96	08:00:00 PM	15	2.371527778	3415	1001.436	751.141	29.58
09-Dec-96	08:15:00 PM	15	2.381944444	3430	1001.247	750.999	29.57
09-Dec-96	08:30:00 PM	15	2.392361111	3445	1001.006	750.818	29.56
09-Dec-96	08:45:00 PM	15	2.402777778	3460	1000.882	750.725	29.56
09-Dec-96	09:00:00 PM	15	2.413194444	3475	1000.703	750.591	29.55
09-Dec-96	09:15:00 PM	15	2.423611111	3490	1000.641	750.545	29.55
09-Dec-96	09:30:00 PM	15	2.434027778	3505	1000.632	750.537	29.55
09-Dec-96	09:45:00 PM	15	2.444444444	3520	1000.645	750.547	29.55
09-Dec-96	10:00:00 PM	15	2.454861111	3535	1000.654	750.555	29.55
09-Dec-96	10:15:00 PM	15	2.465277778	3550	1000.726	750.608	29.55
09-Dec-96	10:30:00 PM	15	2.475694444	3565	1000.518	750.452	29.55
09-Dec-96	10:45:00 PM	15	2.486111111	3580	1000.332	750.313	29.54
09-Dec-96	11:00:00 PM	15	2.496527778	3595	1000.352	750.327	29.54
09-Dec-96	11:15:00 PM	15	2.506944444	3610	1000.433	750.388	29.55
09-Dec-96	11:30:00 PM	15	2.517361111	3625	1000.28	750.274	29.54
09-Dec-96	11:45:00 PM	15	2.527777778	3640	1000.049	750.1	29.53
10-Dec-96	12:00:00 AM	15	2.538194444	3655	999.932	750.012	29.53
10-Dec-96	12:15:00 AM	15	2.548611111	3670	999.753	749.878	29.53
10-Dec-96	12:30:00 AM	15	2.559027778	3685	999.574	749.744	29.52
10-Dec-96	12:45:00 AM	15	2.569444444	3700	999.274	749.519	29.51
10-Dec-96	01:00:00 AM	15	2.579861111	3715	998.997	749.312	29.50
10-Dec-96	01:15:00 AM	15	2.590277778	3730	998.695	749.085	29.49
10-Dec-96	01:30:00 AM	15	2.600694444	3745	998.512	748.948	29.49
10-Dec-96	01:45:00 AM	15	2.611111111	3760	998.19	748.706	29.48
10-Dec-96	02:00:00 AM	15	2.621527778	3775	998.037	748.591	29.48
10-Dec-96	02:15:00 AM	15	2.631944444	3790	998.008	748.569	29.47
10-Dec-96	02:30:00 AM	15	2.642361111	3805	998.076	748.621	29.48
10-Dec-96	02:45:00 AM	15	2.652777778	3820	997.887	748.479	29.47
10-Dec-96	03:00:00 AM	15	2.663194444	3835	997.754	748.379	29.47
10-Dec-96	03:15:00 AM	15	2.673611111	3850	997.699	748.338	29.47

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
10-Dec-96	03:30:00 AM	15	2.684027778	3865	997.913	748.499	29.47
10-Dec-96	03:45:00 AM	15	2.694444444	3880	998.076	748.621	29.48
10-Dec-96	04:00:00 AM	15	2.704861111	3895	998.18	748.699	29.48
10-Dec-96	04:15:00 AM	15	2.715277778	3910	998.161	748.684	29.48
10-Dec-96	04:30:00 AM	15	2.725694444	3925	998.118	748.652	29.48
10-Dec-96	04:45:00 AM	15	2.736111111	3940	998.431	748.887	29.49
10-Dec-96	05:00:00 AM	15	2.746527778	3955	998.77	749.141	29.50
10-Dec-96	05:15:00 AM	15	2.756944444	3970	999.076	749.37	29.51
10-Dec-96	05:30:00 AM	15	2.767361111	3985	999.186	749.453	29.51
10-Dec-96	05:45:00 AM	15	2.777777778	4000	999.342	749.57	29.51
10-Dec-96	06:00:00 AM	15	2.788194444	4015	999.557	749.732	29.52
10-Dec-96	06:15:00 AM	15	2.798611111	4030	999.655	749.805	29.52
10-Dec-96	06:30:00 AM	15	2.809027778	4045	999.827	749.934	29.53
10-Dec-96	06:45:00 AM	15	2.819444444	4060	999.948	750.025	29.53
10-Dec-96	07:00:00 AM	15	2.829861111	4075	1000.14	750.169	29.54
10-Dec-96	07:15:00 AM	15	2.840277778	4090	1000.339	750.318	29.54
10-Dec-96	07:30:00 AM	15	2.850694444	4105	1000.505	750.442	29.55
10-Dec-96	07:45:00 AM	15	2.861111111	4120	1000.391	750.357	29.54
10-Dec-96	08:00:00 AM	15	2.871527778	4135	1000.397	750.362	29.55
10-Dec-96	08:15:00 AM	15	2.881944444	4150	1000.501	750.44	29.55
10-Dec-96	08:30:00 AM	15	2.892361111	4165	1000.762	750.635	29.56
10-Dec-96	08:45:00 AM	15	2.902777778	4180	1001.081	750.874	29.57
10-Dec-96	09:00:00 AM	15	2.913194444	4195	1001.068	750.865	29.56
10-Dec-96	09:15:00 AM	15	2.923611111	4210	1001.224	750.982	29.57
10-Dec-96	09:30:00 AM	15	2.934027778	4225	1001.436	751.141	29.58
10-Dec-96	09:45:00 AM	15	2.944444444	4240	1001.53	751.211	29.58
10-Dec-96	10:00:00 AM	15	2.954861111	4255	1001.523	751.206	29.58
10-Dec-96	10:15:00 AM	15	2.965277778	4270	1001.546	751.224	29.58
10-Dec-96	10:30:00 AM	15	2.975694444	4285	1001.689	751.331	29.58
10-Dec-96	10:45:00 AM	15	2.986111111	4300	1001.631	751.287	29.58
10-Dec-96	11:00:00 AM	15	2.996527778	4315	1001.494	751.184	29.58
10-Dec-96	11:15:00 AM	15	3.006944444	4330	1001.689	751.331	29.58
10-Dec-96	11:30:00 AM	15	3.017361111	4345	1001.553	751.228	29.58
10-Dec-96	11:45:00 AM	15	3.027777778	4360	1001.514	751.199	29.58
10-Dec-96	12:00:00 PM	15	3.038194444	4375	1001.403	751.116	29.57
10-Dec-96	12:15:00 PM	15	3.048611111	4390	1001.383	751.102	29.57
10-Dec-96	12:30:00 PM	15	3.059027778	4405	1001.478	751.172	29.58
10-Dec-96	12:45:00 PM	15	3.069444444	4420	1001.458	751.158	29.58
10-Dec-96	01:00:00 PM	15	3.079861111	4435	1001.592	751.258	29.58
10-Dec-96	01:15:00 PM	15	3.090277778	4450	1001.641	751.294	29.58
10-Dec-96	01:30:00 PM	15	3.100694444	4465	1001.602	751.265	29.58

ORIGINAL BAROMETRIC PRESSURE DATA - RECOVERY PORTION OF TEST

KENNECOTT URANIUM COMPANY
SWEETWATER URANIUM PROJECT
BAROMETRIC DATA
01-Dec-96 12-Dec-96

TIME INDEX 0 MIN: 07-Dec-96 11:05:00 AM
DATEVALUE: 35406
TIMEVALUE: 0.461805556
SUM: 35406.4618055556

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
10-Dec-96	01:30:00 PM	15	3.10069444	4465	1001.602	751.265	29.58
10-Dec-96	01:45:00 PM	15	3.11111111	4480	1001.296	751.035	29.57
10-Dec-96	02:00:00 PM	15	3.12152778	4495	1001.136	750.916	29.57
10-Dec-96	02:15:00 PM	15	3.13194444	4510	1001.351	751.077	29.57
10-Dec-96	02:30:00 PM	15	3.14236111	4525	1001.416	751.126	29.58
10-Dec-96	02:45:00 PM	15	3.15277778	4540	1001.452	751.153	29.58
10-Dec-96	03:00:00 PM	15	3.16319444	4555	1001.403	751.116	29.57
10-Dec-96	03:15:00 PM	15	3.17361111	4570	1001.458	751.158	29.58
10-Dec-96	03:30:00 PM	15	3.18402778	4585	1001.436	751.141	29.58
10-Dec-96	03:45:00 PM	15	3.19444444	4600	1001.478	751.172	29.58
10-Dec-96	04:00:00 PM	15	3.20486111	4615	1001.497	751.187	29.58
10-Dec-96	04:15:00 PM	15	3.21527778	4630	1001.602	751.265	29.58
10-Dec-96	04:30:00 PM	15	3.22569444	4645	1001.673	751.319	29.58
10-Dec-96	04:45:00 PM	15	3.23611111	4660	1001.706	751.343	29.58
10-Dec-96	05:00:00 PM	15	3.24652778	4675	1001.738	751.367	29.58
10-Dec-96	05:15:00 PM	15	3.25694444	4690	1001.722	751.355	29.58
10-Dec-96	05:30:00 PM	15	3.26736111	4705	1001.696	751.336	29.58
10-Dec-96	05:45:00 PM	15	3.27777778	4720	1001.751	751.377	29.59
10-Dec-96	06:00:00 PM	15	3.28819444	4735	1001.859	751.458	29.59
10-Dec-96	06:15:00 PM	15	3.29861111	4750	1001.908	751.495	29.59
10-Dec-96	06:30:00 PM	15	3.30902778	4765	1002.184	751.702	29.60
10-Dec-96	06:45:00 PM	15	3.31944444	4780	1002.305	751.792	29.60
10-Dec-96	07:00:00 PM	15	3.32986111	4795	1002.376	751.846	29.60
10-Dec-96	07:15:00 PM	15	3.34027778	4810	1002.396	751.861	29.60
10-Dec-96	07:30:00 PM	15	3.35069444	4825	1002.36	751.834	29.60
10-Dec-96	07:45:00 PM	15	3.36111111	4840	1002.201	751.714	29.60
10-Dec-96	08:00:00 PM	15	3.37152778	4855	1002.165	751.687	29.60
10-Dec-96	08:15:00 PM	15	3.38194444	4870	1001.973	751.543	29.59
10-Dec-96	08:30:00 PM	15	3.39236111	4885	1001.745	751.372	29.58
10-Dec-96	08:45:00 PM	15	3.40277778	4900	1001.738	751.367	29.58
10-Dec-96	09:00:00 PM	15	3.41319444	4915	1001.761	751.385	29.59
10-Dec-96	09:15:00 PM	15	3.42361111	4930	1001.481	751.175	29.58
10-Dec-96	09:30:00 PM	15	3.43402778	4945	1001.315	751.05	29.57
10-Dec-96	09:45:00 PM	15	3.44444444	4960	1001.322	751.055	29.57
10-Dec-96	10:00:00 PM	15	3.45486111	4975	1001.602	751.265	29.58
10-Dec-96	10:15:00 PM	15	3.46527778	4990	1001.53	751.211	29.58
10-Dec-96	10:30:00 PM	15	3.47569444	5005	1001.396	751.111	29.57
10-Dec-96	10:45:00 PM	15	3.48611111	5020	1001.374	751.094	29.57
10-Dec-96	11:00:00 PM	15	3.49652778	5035	1001.299	751.038	29.57
10-Dec-96	11:15:00 PM	15	3.50694444	5050	1001.488	751.18	29.58
10-Dec-96	11:30:00 PM	15	3.51736111	5065	1001.569	751.241	29.58
10-Dec-96	11:45:00 PM	15	3.52777778	5080	1001.419	751.128	29.58
11-Dec-96	12:00:00 AM	15	3.53819444	5095	1001.257	751.006	29.57
11-Dec-96	12:15:00 AM	15	3.54861111	5110	1000.996	750.811	29.56
11-Dec-96	12:30:00 AM	15	3.55902778	5125	1000.807	750.669	29.56
11-Dec-96	12:45:00 AM	15	3.56944444	5140	1000.739	750.618	29.56

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
11-Dec-96	01:00:00 AM	15	3.57986111	5155	1000.768	750.64	29.56
11-Dec-96	01:15:00 AM	15	3.59027778	5170	1000.794	750.659	29.56
11-Dec-96	01:30:00 AM	15	3.60069444	5185	1000.794	750.659	29.56
11-Dec-96	01:45:00 AM	15	3.61111111	5200	1000.69	750.581	29.55
11-Dec-96	02:00:00 AM	15	3.62152778	5215	1000.853	750.703	29.56
11-Dec-96	02:15:00 AM	15	3.63194444	5230	1000.758	750.633	29.56
11-Dec-96	02:30:00 AM	15	3.64236111	5245	1000.765	750.638	29.56
11-Dec-96	02:45:00 AM	15	3.65277778	5260	1000.771	750.642	29.56
11-Dec-96	03:00:00 AM	15	3.66319444	5275	1000.859	750.708	29.56
11-Dec-96	03:15:00 AM	15	3.67361111	5290	1000.745	750.623	29.56
11-Dec-96	03:30:00 AM	15	3.68402778	5305	1000.755	750.63	29.56
11-Dec-96	03:45:00 AM	15	3.69444444	5320	1001.006	750.818	29.56
11-Dec-96	04:00:00 AM	15	3.70486111	5335	1001.064	750.862	29.56
11-Dec-96	04:15:00 AM	15	3.71527778	5350	1001.12	750.904	29.57
11-Dec-96	04:30:00 AM	15	3.72569444	5365	1001.143	750.921	29.57
11-Dec-96	04:45:00 AM	15	3.73611111	5380	1001.175	750.945	29.57
11-Dec-96	05:00:00 AM	15	3.74652778	5395	1001.195	750.96	29.57
11-Dec-96	05:15:00 AM	15	3.75694444	5410	1001.409	751.121	29.57
11-Dec-96	05:30:00 AM	15	3.76736111	5425	1001.716	751.35	29.58
11-Dec-96	05:45:00 AM	15	3.77777778	5440	1002.044	751.597	29.59
11-Dec-96	06:00:00 AM	15	3.78819444	5455	1002.409	751.87	29.60
11-Dec-96	06:15:00 AM	15	3.79861111	5470	1002.865	752.212	29.62
11-Dec-96	06:30:00 AM	15	3.80902778	5485	1002.962	752.286	29.62
11-Dec-96	06:45:00 AM	15	3.81944444	5500	1003.278	752.522	29.63
11-Dec-96	07:00:00 AM	15	3.82986111	5515	1003.411	752.622	29.63
11-Dec-96	07:15:00 AM	15	3.84027778	5530	1003.613	752.774	29.64
11-Dec-96	07:30:00 AM	15	3.85069444	5545	1003.835	752.94	29.65
11-Dec-96	07:45:00 AM	15	3.86111111	5560	1004.02	753.079	29.65
11-Dec-96	08:00:00 AM	15	3.87152778	5575	1004.476	753.421	29.67
11-Dec-96	08:15:00 AM	15	3.88194444	5590	1005.098	753.887	29.68
11-Dec-96	08:30:00 AM	15	3.89236111	5605	1005.186	753.953	29.69
11-Dec-96	08:45:00 AM	15	3.90277778	5620	1005.374	754.095	29.69
11-Dec-96	09:00:00 AM	15	3.91319444	5635	1005.146	753.924	29.69
11-Dec-96	09:15:00 AM	15	3.92361111	5650	1005.332	754.063	29.69
11-Dec-96	09:30:00 AM	15	3.93402778	5665	1005.703	754.341	29.70
11-Dec-96	09:45:00 AM	15	3.94444444	5680	1006.097	754.637	29.71
11-Dec-96	10:00:00 AM	15	3.95486111	5695	1005.791	754.407	29.70
11-Dec-96	10:15:00 AM	15	3.96527778	5710	1005.524	754.207	29.70
11-Dec-96	10:30:00 AM	15	3.97569444	5725	1005.547	754.224	29.70
11-Dec-96	10:45:00 AM	15	3.98611111	5740	1005.986	754.554	29.71
11-Dec-96	11:00:00 AM	15	3.99652778	5755	1005.918	754.503	29.71
11-Dec-96	11:15:00 AM	15	4.00694444	5770	1005.625	754.283	29.70
11-Dec-96	11:30:00 AM	15	4.01736111	5785	1005.658	754.307	29.70
11-Dec-96	11:45:00 AM	15	4.02777778	5800	1005.791	754.407	29.70
11-Dec-96	12:00:00 PM	15	4.03819444	5815	1005.879	754.473	29.71
11-Dec-96	12:15:00 PM	15	4.04861111	5830	1005.947	754.525	29.71
11-Dec-96	12:30:00 PM	15	4.05902778	5845	1005.814	754.424	29.71
11-Dec-96	12:45:00 PM	15	4.06944444	5860	1005.732	754.363	29.70
11-Dec-96	01:00:00 PM	15	4.07986111	5875	1005.654	754.305	29.70
11-Dec-96	01:15:00 PM	15	4.09027778	5890	1005.719	754.354	29.70
11-Dec-96	01:30:00 PM	15	4.10069444	5905	1006.051	754.603	29.71
11-Dec-96	01:45:00 PM	15	4.11111111	5920	1006.224	754.732	29.72
11-Dec-96	02:00:00 PM	15	4.12152778	5935	1006.367	754.84	29.72

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
11-Dec-96	02:15:00 PM	15	4.13194444	5950	1006.595	755.01	29.73
11-Dec-96	02:30:00 PM	15	4.14236111	5965	1006.702	755.091	29.73
11-Dec-96	02:45:00 PM	15	4.15277778	5980	1006.712	755.098	29.73
11-Dec-96	03:00:00 PM	15	4.16319444	5995	1006.611	755.023	29.73
11-Dec-96	03:15:00 PM	15	4.17361111	6010	1006.65	755.052	29.73
11-Dec-96	03:30:00 PM	15	4.18402778	6025	1006.784	755.152	29.73
11-Dec-96	03:45:00 PM	15	4.19444444	6040	1007.347	755.574	29.75
11-Dec-96	04:00:00 PM	15	4.20486111	6055	1008.001	756.065	29.77
11-Dec-96	04:15:00 PM	15	4.21527778	6070	1008.206	756.219	29.78
11-Dec-96	04:30:00 PM	15	4.22569444	6085	1008.197	756.212	29.78
11-Dec-96	04:45:00 PM	15	4.23611111	6100	1007.975	756.046	29.77
11-Dec-96	05:00:00 PM	15	4.24652778	6115	1007.692	755.833	29.76
11-Dec-96	05:15:00 PM	15	4.25694444	6130	1007.966	756.038	29.77
11-Dec-96	05:30:00 PM	15	4.26736111	6145	1008.226	756.234	29.78
11-Dec-96	05:45:00 PM	15	4.27777778	6160	1008.031	756.087	29.77
11-Dec-96	06:00:00 PM	15	4.28819444	6175	1008.047	756.099	29.77
11-Dec-96	06:15:00 PM	15	4.29861111	6190	1008.184	756.202	29.78
11-Dec-96	06:30:00 PM	15	4.30902778	6205	1008.135	756.165	29.77
11-Dec-96	06:45:00 PM	15	4.31944444	6220	1007.832	755.938	29.76
11-Dec-96	07:00:00 PM	15	4.32986111	6235	1007.523	755.706	29.76
11-Dec-96	07:15:00 PM	15	4.34027778	6250	1007.757	755.882	29.76
11-Dec-96	07:30:00 PM	15	4.35069444	6265	1008.115	756.151	29.77
11-Dec-96	07:45:00 PM	15	4.36111111	6280	1008.109	756.146	29.77
11-Dec-96	08:00:00 PM	15	4.37152778	6295	1007.972	756.043	29.77
11-Dec-96	08:15:00 PM	15	4.38194444	6310	1007.907	755.995	29.77
11-Dec-96	08:30:00 PM	15	4.39236111	6325	1007.868	755.965	29.77
11-Dec-96	08:45:00 PM	15	4.40277778	6340	1007.682	755.826	29.76
11-Dec-96	09:00:00 PM	15	4.41319444	6355	1007.331	755.562	29.75
11-Dec-96	09:15:00 PM	15	4.42361111	6370	1007.282	755.526	29.75
11-Dec-96	09:30:00 PM	15	4.43402778	6385	1007.467	755.665	29.75
11-Dec-96	09:45:00 PM	15	4.44444444	6400	1007.376	755.597	29.75
11-Dec-96	10:00:00 PM	15	4.45486111	6415	1007.389	755.606	29.75
11-Dec-96	10:15:00 PM	15	4.46527778	6430	1007.347	755.574	29.75
11-Dec-96	10:30:00 PM	15	4.47569444	6445	1007.191	755.457	29.75
11-Dec-96	10:45:00 PM	15	4.48611111	6460	1007.09	755.382	29.74
11-Dec-96	11:00:00 PM	15	4.49652778	6475	1006.751	755.128	29.73
11-Dec-96	11:15:00 PM	15	4.50694444	6490	1006.54	754.969	29.73
11-Dec-96	11:30:00 PM	15	4.51736111	6505	1006.335	754.815	29.72
11-Dec-96	11:45:00 PM	15	4.52777778	6520	1006.25	754.752	29.72
12-Dec-96	12:00:00 AM	15	4.53819444	6535	1005.817	754.427	29.71
12-Dec-96	12:15:00 AM	15	4.54861111	6550	1005.791	754.407	29.70
12-Dec-96	12:30:00 AM	15	4.55902778	6565	1005.661	754.31	29.70
12-Dec-96	12:45:00 AM	15	4:56944444	6580	1005.745	754.373	29.70
12-Dec-96	01:00:00 AM	15	4.57986111	6595	1005.57	754.241	29.70
12-Dec-96	01:15:00 AM	15	4.59027778	6610	1005.687	754.329	29.70
12-Dec-96	01:30:00 AM	15	4.60069444	6625	1005.286	754.029	29.69
12-Dec-96	01:45:00 AM	15	4.61111111	6640	1005.267	754.014	29.69
12-Dec-96	02:00:00 AM	15	4.62152778	6655	1005.316	754.051	29.69
12-Dec-96	02:15:00 AM	15	4.63194444	6670	1005.479	754.173	29.70
12-Dec-96	02:30:00 AM	15	4.64236111	6685	1005.501	754.19	29.70
12-Dec-96	02:45:00 AM	15	4.65277778	6700	1005.479	754.173	29.70
12-Dec-96	03:00:00 AM	15	4.66319444	6715	1005.417	754.127	29.69
12-Dec-96	03:15:00 AM	15	4.67361111	6730	1005.4	754.114	29.69

DATE	TIME	AVG. DUR.	TIME INDEX (DAYS)	(MINUTES)	PRESSURE (MILLIBARS)	PRESSURE (MM of HG)	PRESSURE (INCHES)
12-Dec-96	03:30:00 AM	15	4.68402778	6745	1005.527	754.21	29.70
12-Dec-96	03:45:00 AM	15	4.69444444	6760	1005.615	754.276	29.70
12-Dec-96	04:00:00 AM	15	4.70486111	6775	1005.843	754.446	29.71
12-Dec-96	04:15:00 AM	15	4.71527778	6790	1006.12	754.654	29.71
12-Dec-96	04:30:00 AM	15	4.72569444	6805	1006.335	754.815	29.72
12-Dec-96	04:45:00 AM	15	4.73611111	6820	1006.426	754.884	29.72
12-Dec-96	05:00:00 AM	15	4.74652778	6835	1006.566	754.988	29.73
12-Dec-96	05:15:00 AM	15	4.75694444	6850	1006.787	755.155	29.73
12-Dec-96	05:30:00 AM	15	4.76736111	6865	1006.901	755.24	29.74
12-Dec-96	05:45:00 AM	15	4.77777778	6880	1006.986	755.304	29.74
12-Dec-96	06:00:00 AM	15	4.78819444	6895	1007.207	755.469	29.75
12-Dec-96	06:15:00 AM	15	4.79861111	6910	1007.367	755.589	29.75
12-Dec-96	06:30:00 AM	15	4.80902778	6925	1007.445	755.648	29.75
12-Dec-96	06:45:00 AM	15	4.81944444	6940	1007.536	755.716	29.76
12-Dec-96	07:00:00 AM	15	4.82986111	6955	1007.777	755.897	29.76
12-Dec-96	07:15:00 AM	15	4.84027778	6970	1008.112	756.148	29.77
12-Dec-96	07:30:00 AM	15	4.85069444	6985	1008.372	756.344	29.78
12-Dec-96	07:45:00 AM	15	4.86111111	7000	1008.6	756.515	29.79
12-Dec-96	08:00:00 AM	15	4.87152778	7015	1008.695	756.585	29.79
12-Dec-96	08:15:00 AM	15	4.88194444	7030	1008.978	756.798	29.80
12-Dec-96	08:30:00 AM	15	4.89236111	7045	1009.199	756.964	29.81
12-Dec-96	08:45:00 AM	15	4.90277778	7060	1009.382	757.101	29.81
12-Dec-96	09:00:00 AM	15	4.91319444	7075	1009.561	757.235	29.82
12-Dec-96	09:15:00 AM	15	4.92361111	7090	1009.691	757.332	29.82

APPENDIX E

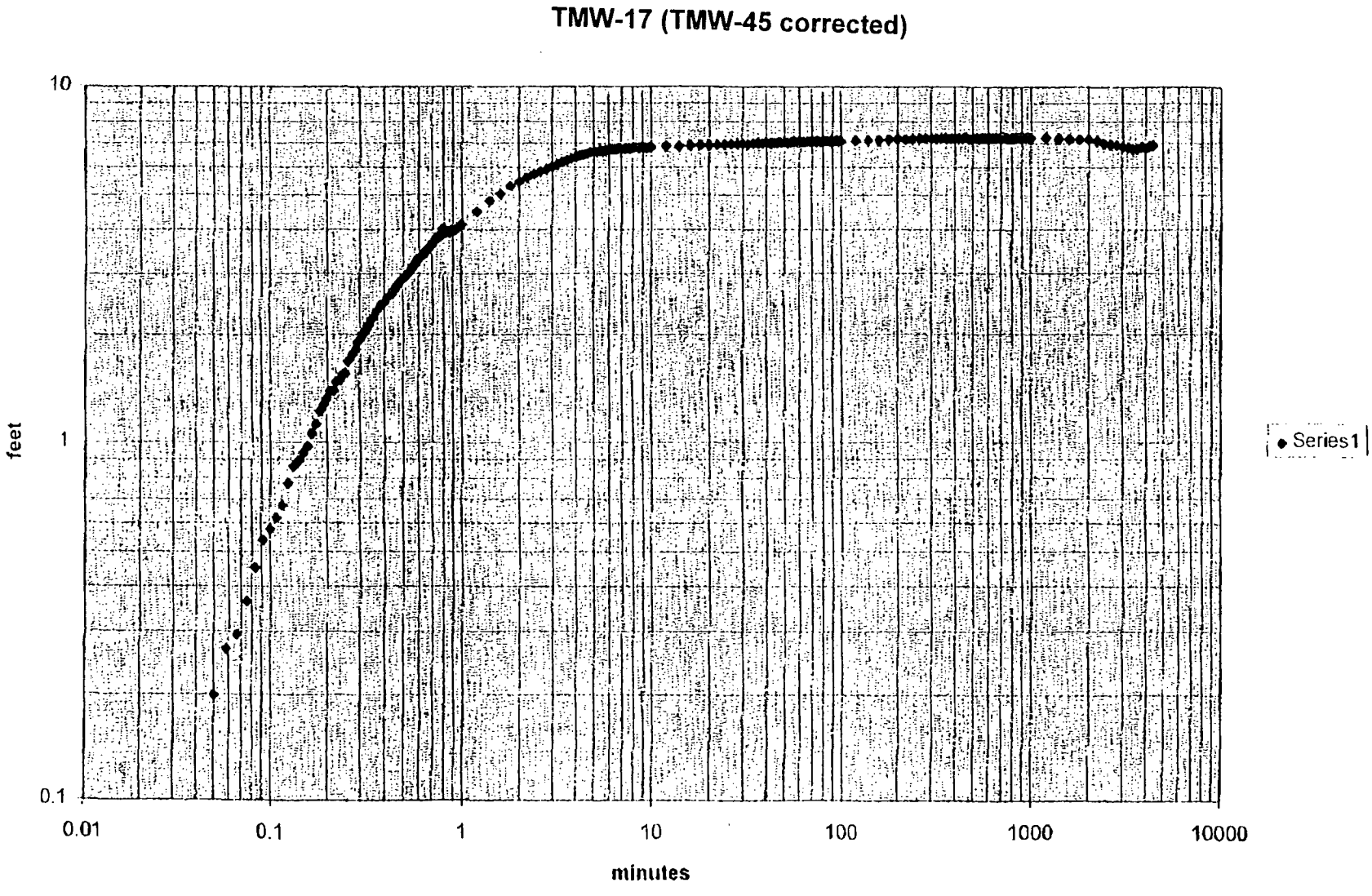
ORIGINAL HERMIT DATA

Table E-1 Pumping Test Results for All Correction

WELL NAME	RADIAL DISTANCE (feet)	HANTUSH METHOD			NEUMAN METHOD		
		TRANSMISSIVITY (feet*2/day)	K (35 FT) (feet/day)	STORATIVITY	TRANSMISSIVITY (feet*2/day)	K (35 FT) (feet/day)	STORATIVITY
PUMPING WELL							
TMW-17 (TMW-45 corrected) (2)	.3(1)	38.90	0.94		31.25	0.90	
TMW-17 (uncorrected) (3)	.3(1)	32.70	0.94		53.14	1.50	
TMW-17 (TMW-16 corrected) (4)	.3(1)	32.98	0.94		33.70	0.96	
TMW-17 (TMW-29 corrected) (5)	.3(1)	32.98	0.94		30.82	0.88	
TMW-17 (kencot bar cor) (6)	.3(1)	31.40	0.90		52.30	1.44	
OBSERVATION WELLS							
TMW-78 (TMW-45 corrected) (2)	450	1454.40	41.60	5.26E-04	918.70	26.21	4.18E-04
TMW-78 (uncorrected) (3)	450	668.20	19.00	1.53E-04	420.50	12.04	1.24E-04
TMW-78 (TMW-16 corrected) (4)	450	2779.20	79.50	1.81E-04	1872.00	53.71	1.65E-04
TMW-78 (TMW-29 corrected) (5)	450	2836.80	81.05	1.42E-04	1828.80	52.30	1.46E-04
TMW-78 (kencot bar cor) (6)	450	1454.40	41.60	1.58E-04	1268.60	36.10	1.44E-04
TMW-75 (TMW-45 corrected) (2)	200	781.90	22.30	2.22E-04	1104.50	31.50	1.98E-04
TMW-75 (uncorrected) (3)	200	384.00	11.00	1.07E-04	401.80	11.50	1.12E-04
TMW-75 (TMW-16 corrected) (4)	200	763.20	21.74	1.37E-04	439.20	12.50	1.09E-04
TMW-75 (TMW-29 corrected) (5)	200	721.44	20.60	1.08E-04	424.80	12.15	9.90E-05
TMW-75 (kencot bar cor) (6)	200	1670.40	47.81	7.66E-04	2001.60	57.46	8.02E-04

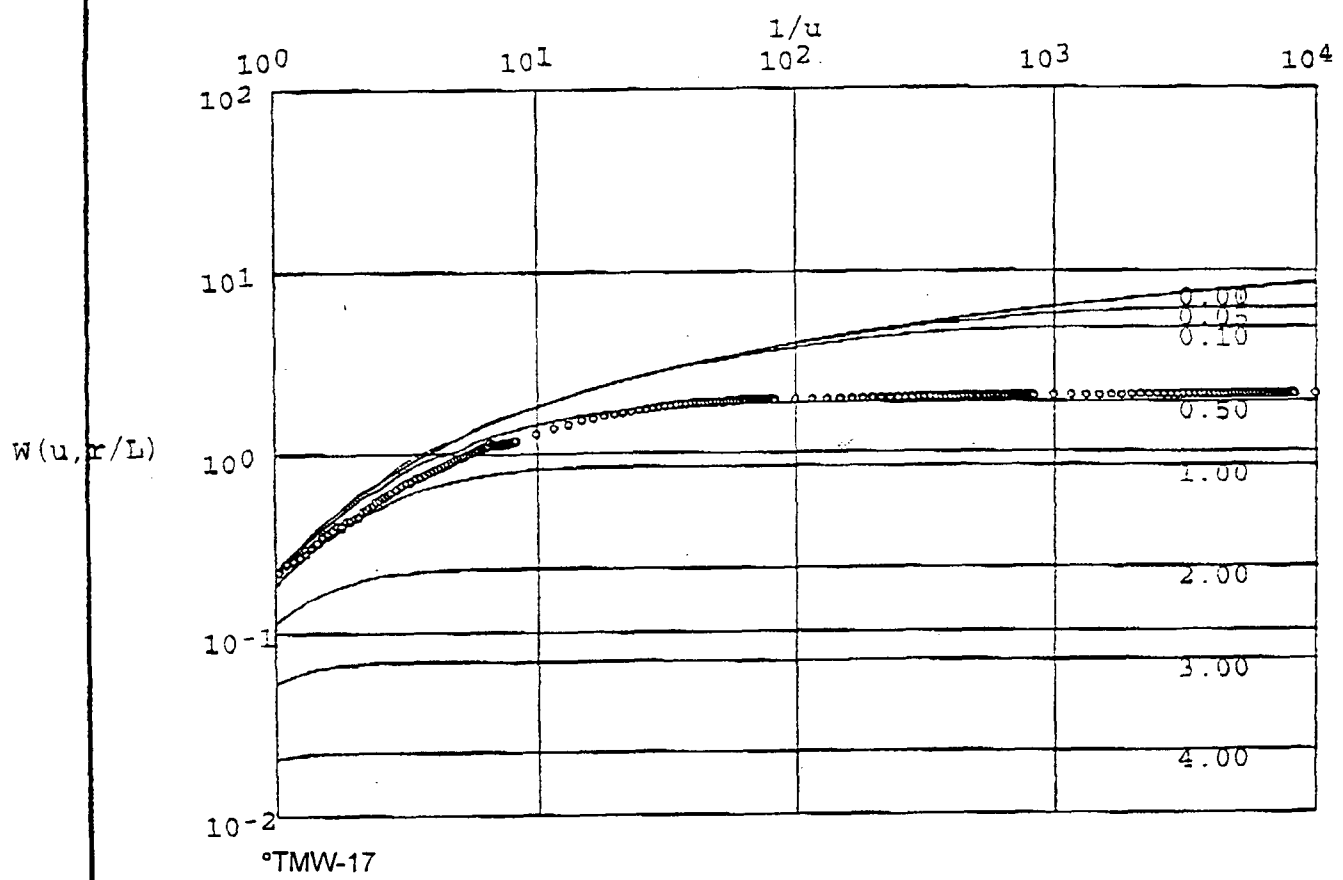
note (1) radius is radius of well. Required for software to complete calculations. No storativity calc.
note (2) (TMW-45 corrected) means one barometric correction for entire day, from TMW-45 hand water level data.
note (3) (uncorrected) means no barometric or transducer corrections.
note (4) (TMW-16 correction) means corrected for initial transducer drift; and for barometric pressure changes using the pressure transducer data from TMW-16.
note (5) (TMW-29 correction) means corrected for initial transducer drift; and for barometric pressure changes using the pressure transducer data from TMW-29.
note (6) (kencot bar. cor) means corrected for barometric pressure measured by kennecott.

E1


TMW-17 (TMW-45 corrected)
10
1
0.1
feet
0.01
0.1
1
10
100
1000
10000
minutes
Series1

Shepherd Miller, Inc 2460 West 26th Ave, # 43 Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Evaluated by Date: 20.01

Pumping Test No.	Test conducted on: TMW-17
TMW-17 (TMW-45 corrected)	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 2.27×10^{-2} = 38.9 ft²/day

Hydraulic conductivity [ft/min]: 6.50×10^{-4} = 0.94 ft/day

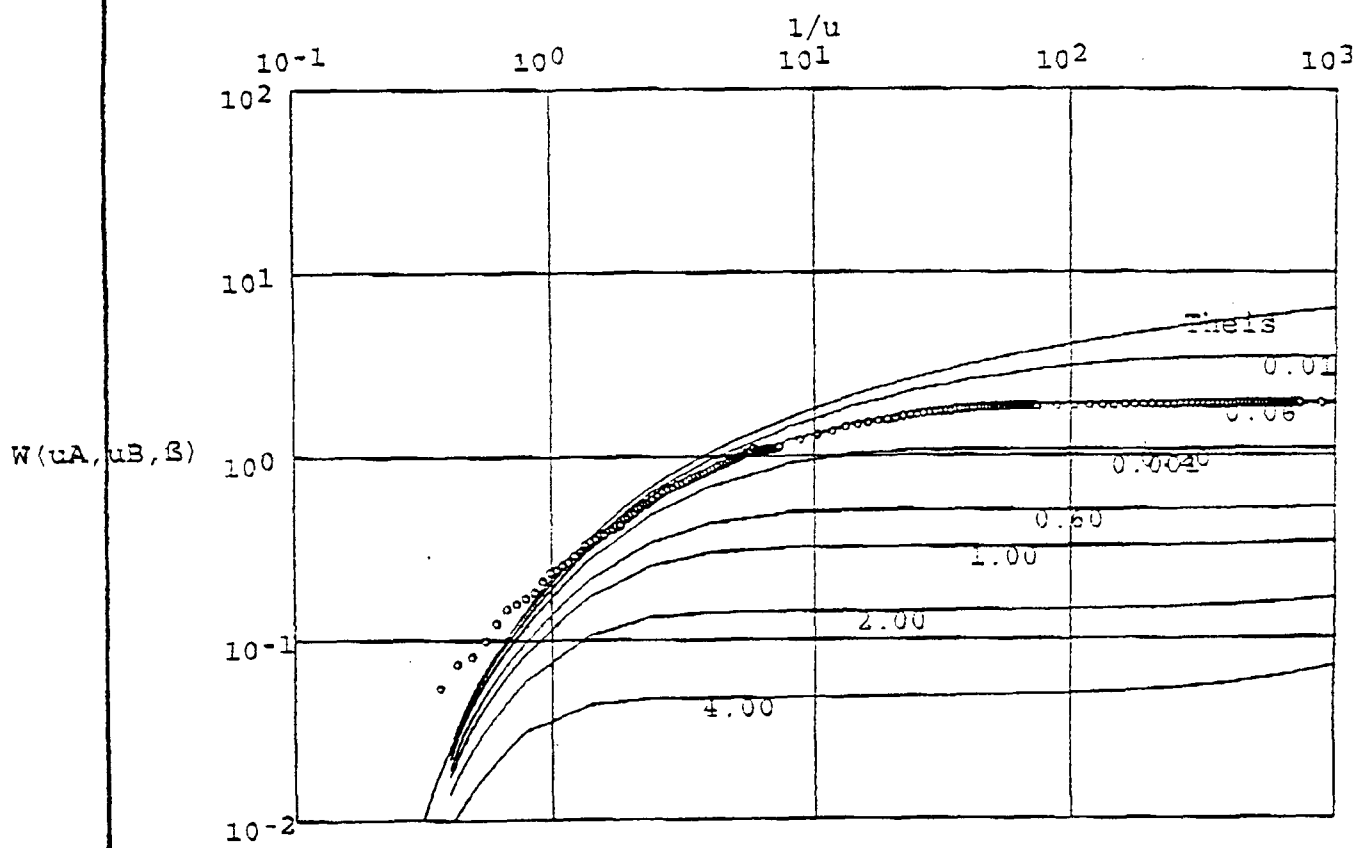
Aquifer thickness [ft]: 35.00

Shepherd Miller, Inc 2460 West 26th Ave, # 43 Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Evaluated by Date: 20.01

Pumping Test No. Test conducted on: TMW-17

TMW-17 (TMW-45 corrected)

Discharge 7.50 U.S.gal/min



°TMW-17

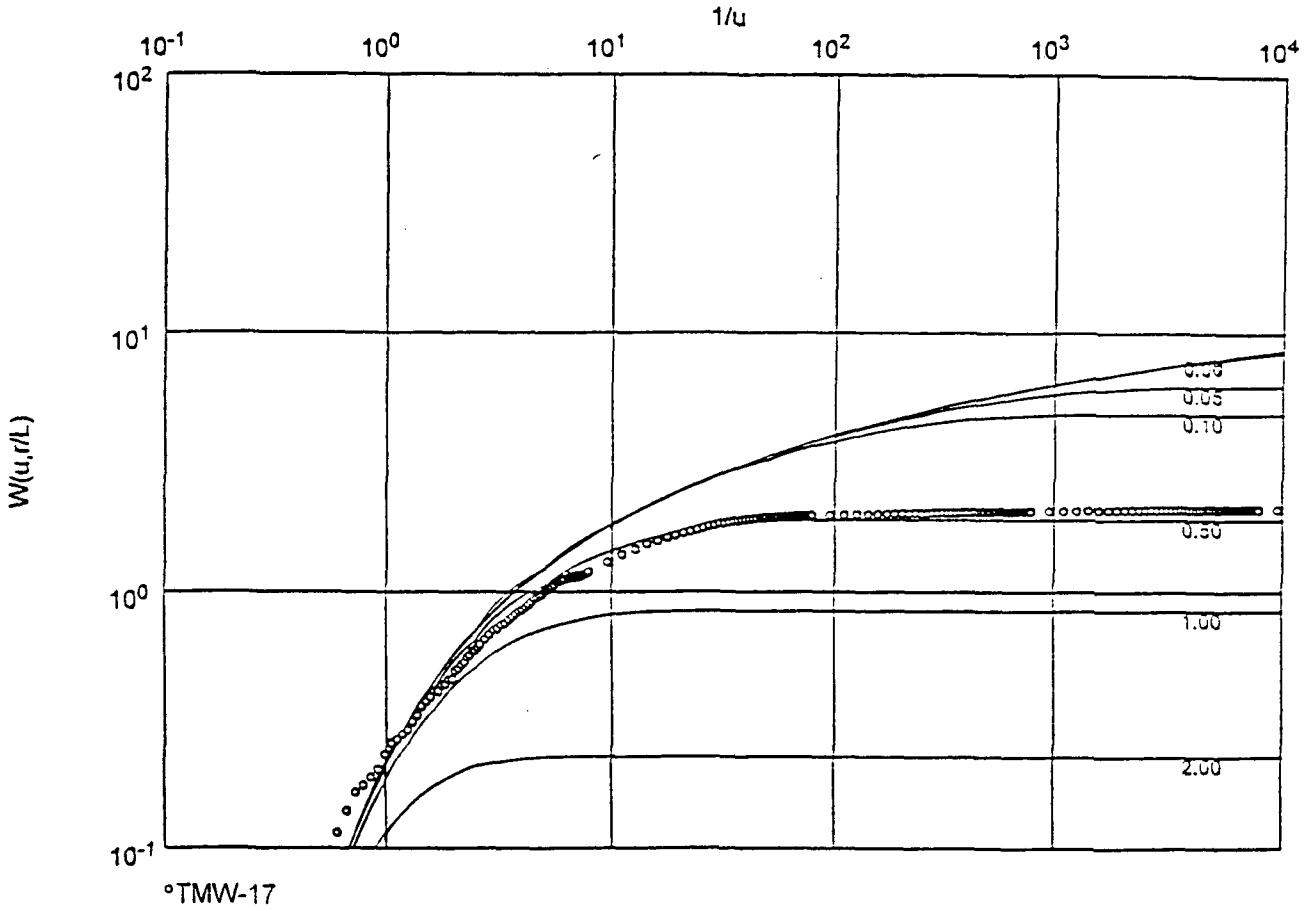
Transmissivity [ft²/min]: 2.17×10^{-2} = 31.25 ft²/day

Hydraulic conductivity [ft/min]: 6.21×10^{-4} = 0.90 ft/day

Aquifer thickness [ft]: 35.00

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Evaluated by:	Date: 08.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-17 (uncorrected)	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 2.27×10^{-2} = 32.7 ft^2/day

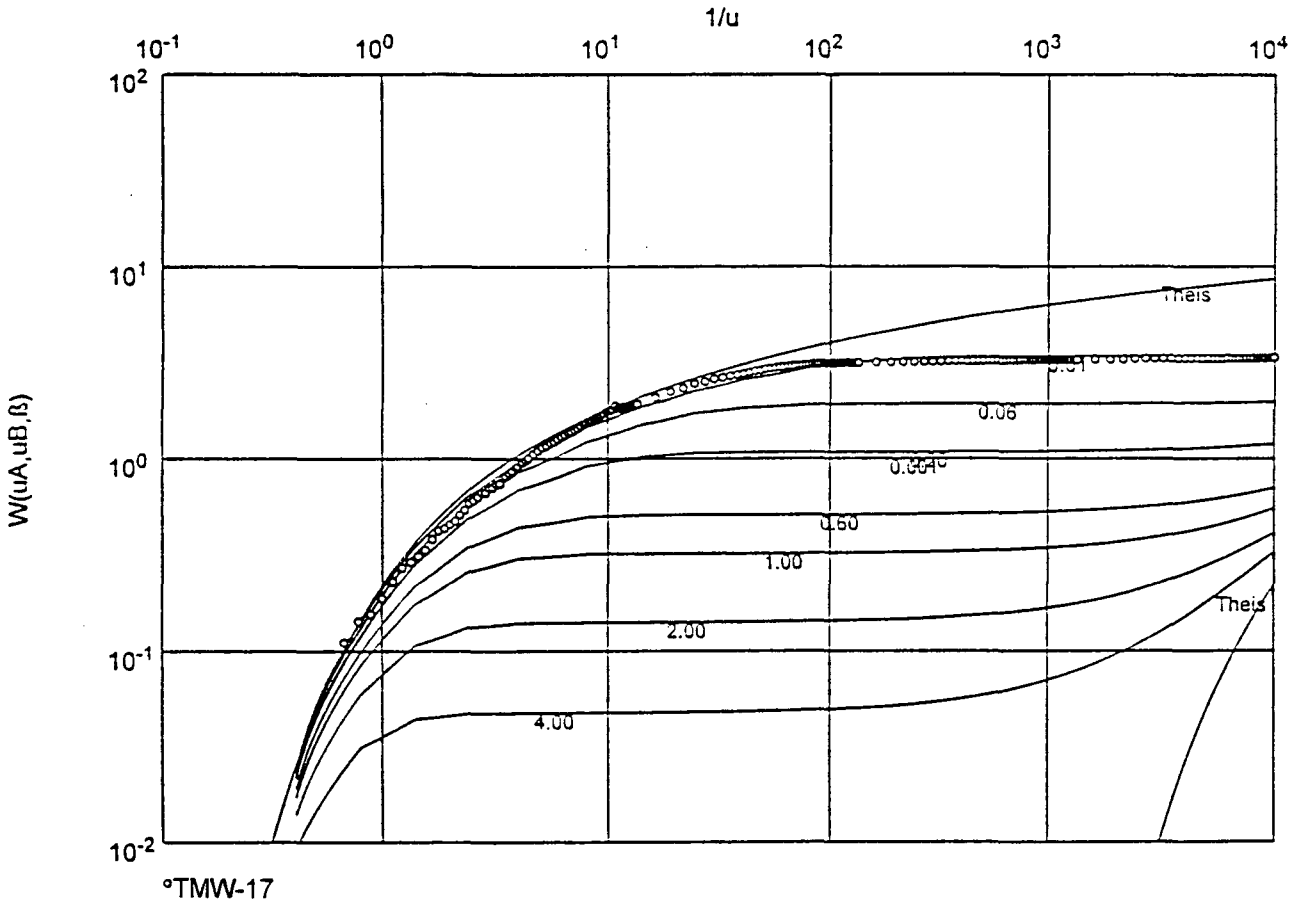
Hydraulic conductivity [ft/min]: 6.51×10^{-4} = 0.94 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 1.15×10^{-2}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Evaluated by:	Date: 08.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-17 (uncorrected)	
Discharge 7.50 U.S.gal/min	



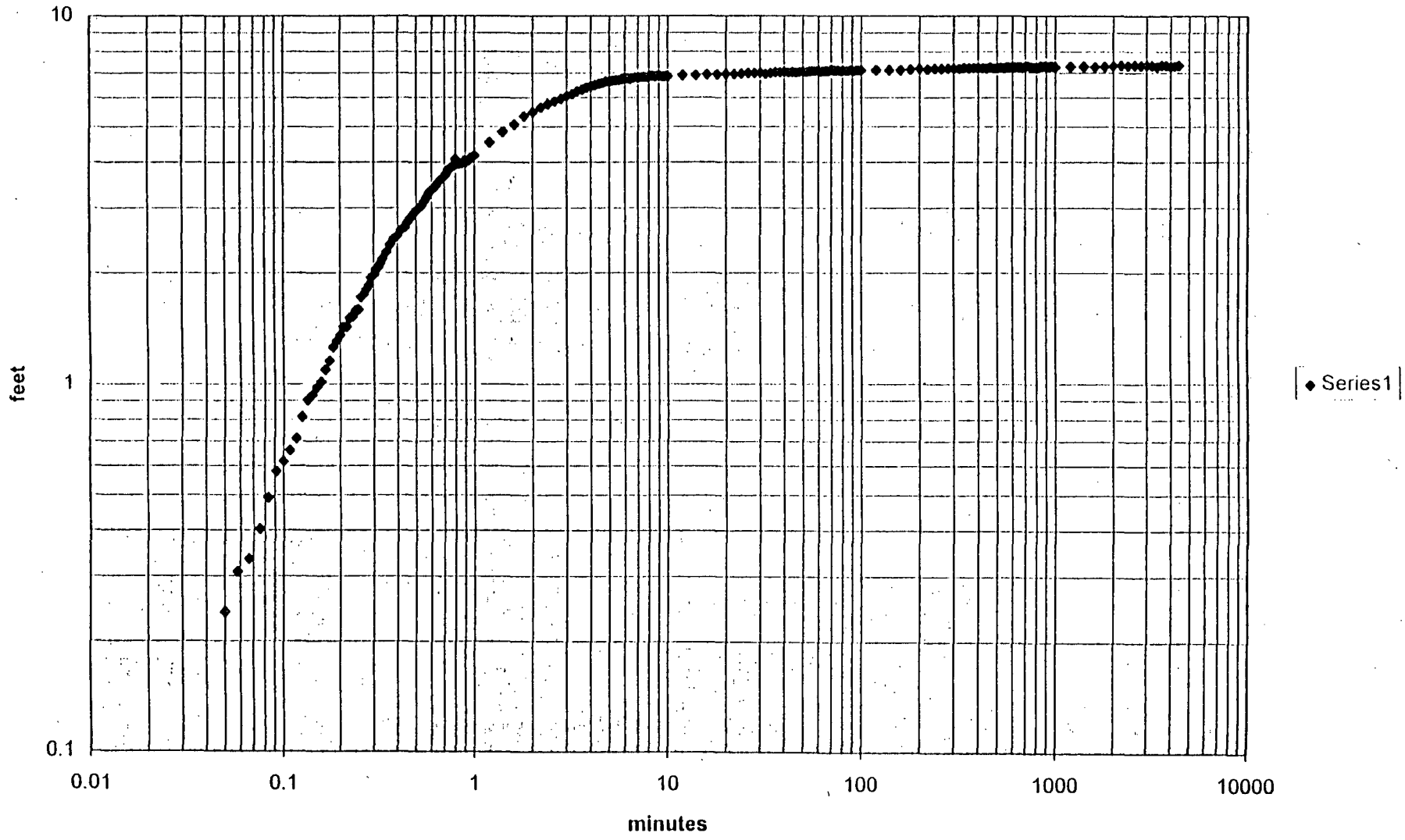
Transmissivity [ft²/min]: 3.69×10^{-2} = 53.14 ft^2/day

Hydraulic conductivity [ft/min]: 1.05×10^{-3} = 1.5 ft/day

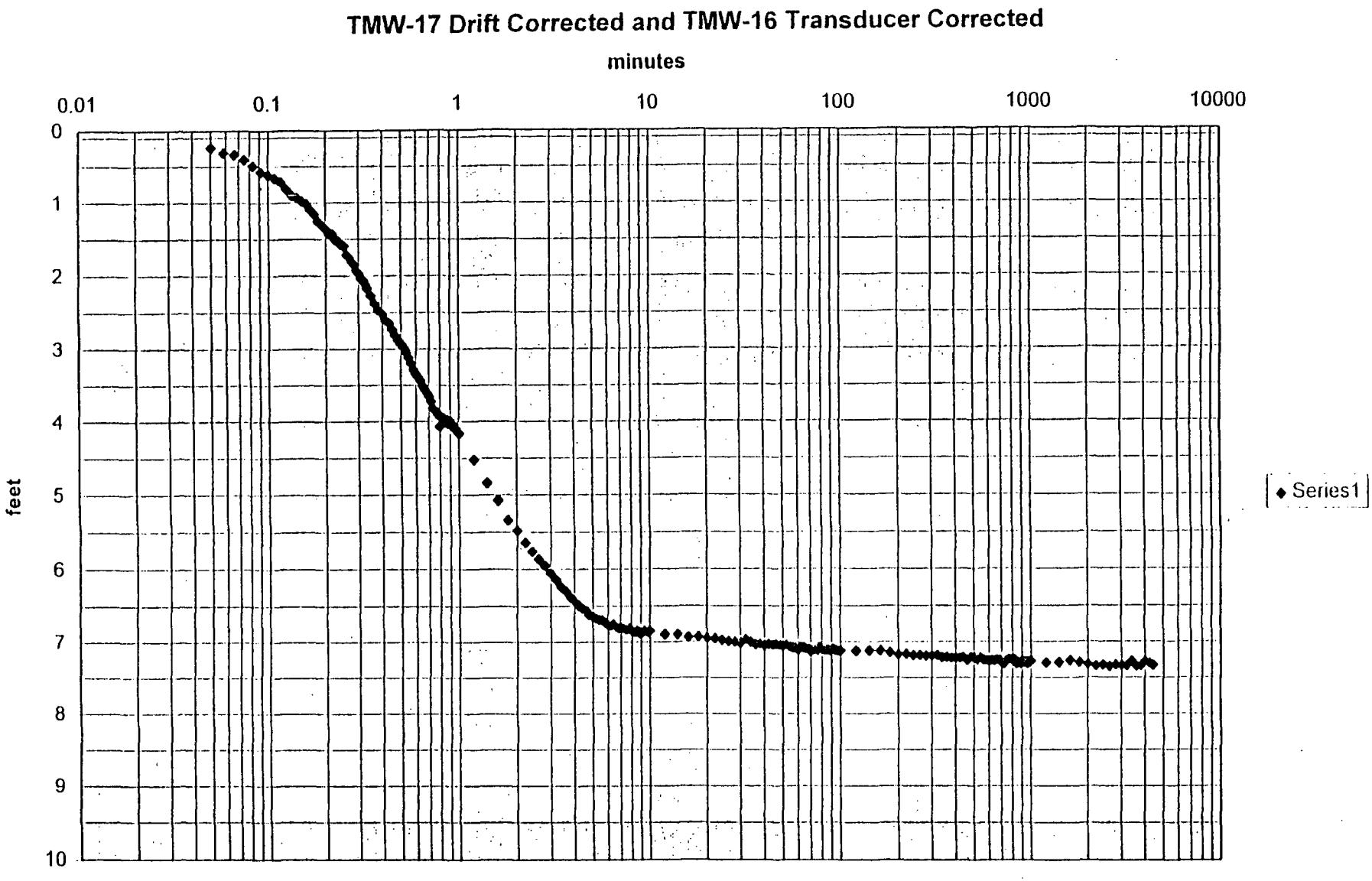
Aquifer thickness [ft]: 35.00

Storativity: 1.10×10^{-2}

TMW-17 Drift Corrected and TMW-16 Transducer Corrected

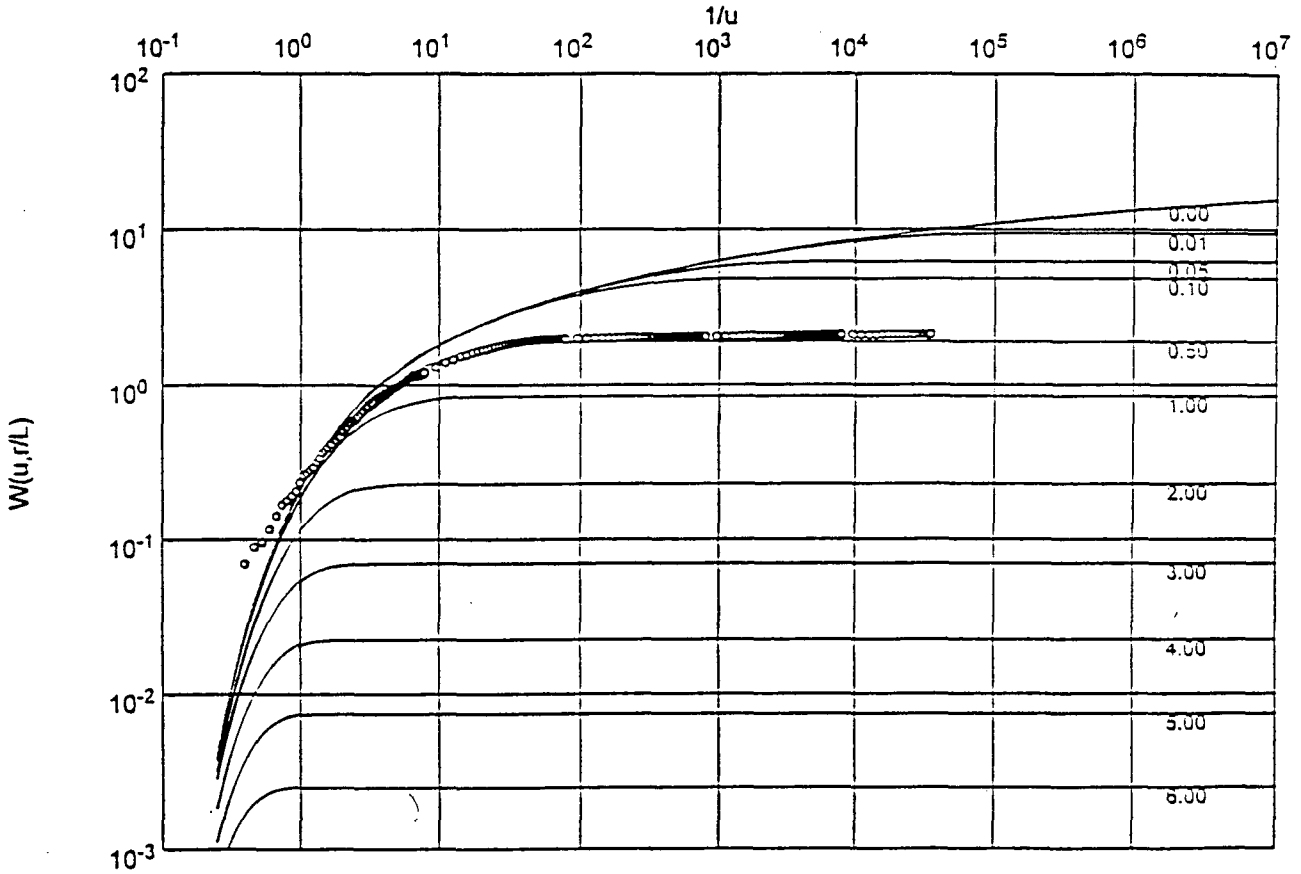


E6


TMW-17 Drift Corrected and TMW-16 Transducer Corrected
minutes
0.01
0.1
1
10
100
1000
10000
feet
0
1
2
3
4
5
6
7
8
9
10
Series1

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-17 Drift Corrected and TMW-16 Transducer Corrected	
Discharge 7.50 U.S.gal/min	



°TMW-17

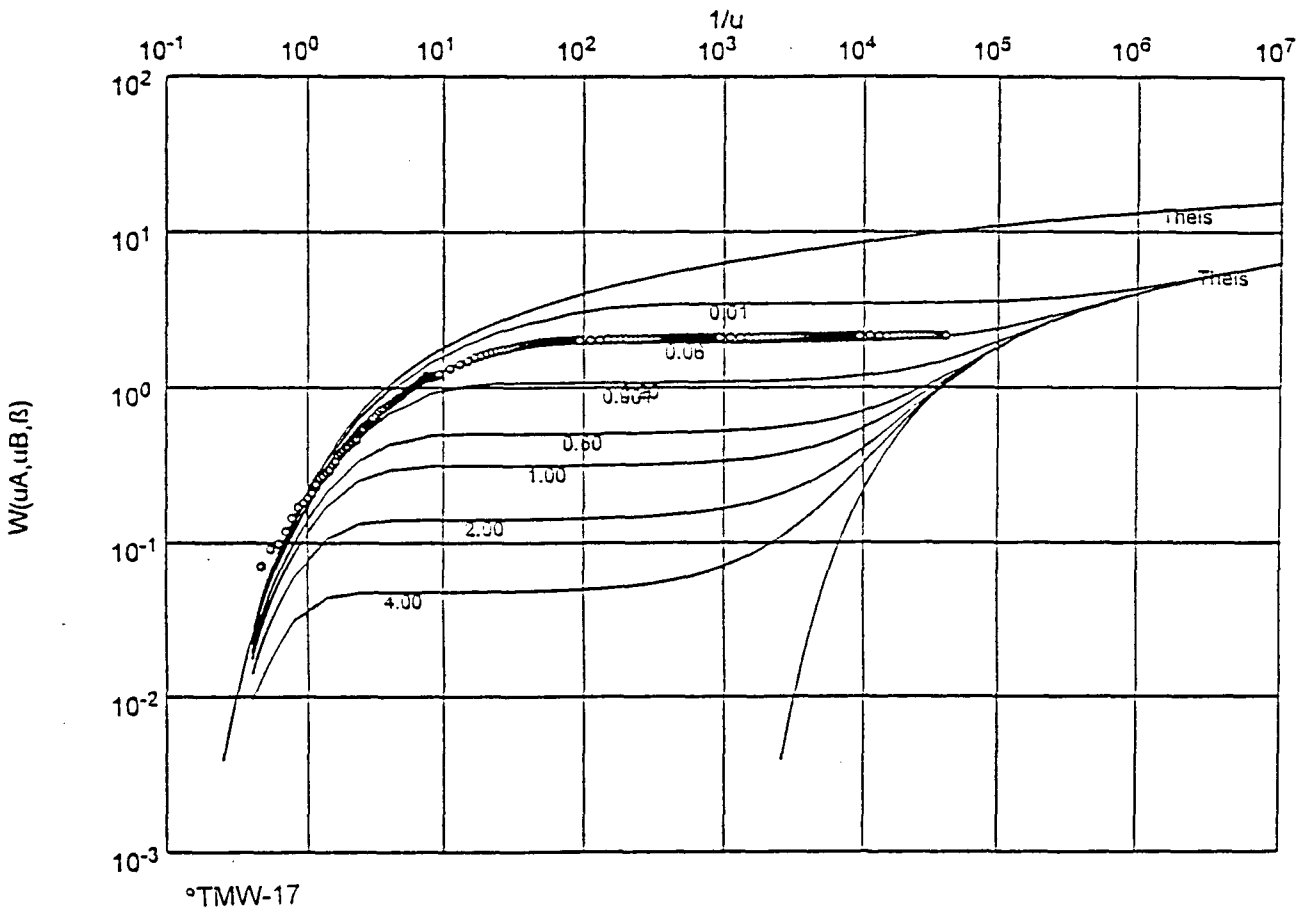
Transmissivity [ft²/min]: 2.29×10^{-2} = 32.98 ft^2/day

Hydraulic conductivity [ft/min]: 6.54×10^{-4} = 0.94 ft/day

Aquifer thickness [ft]: 35.00

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-17 Drift Corrected and TMW-16 Transducer Corrected	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 2.34×10^{-2} = 33.7 ft^2 /day

Hydraulic conductivity [ft/min]: 6.70×10^{-4} = 0.96 ft/day

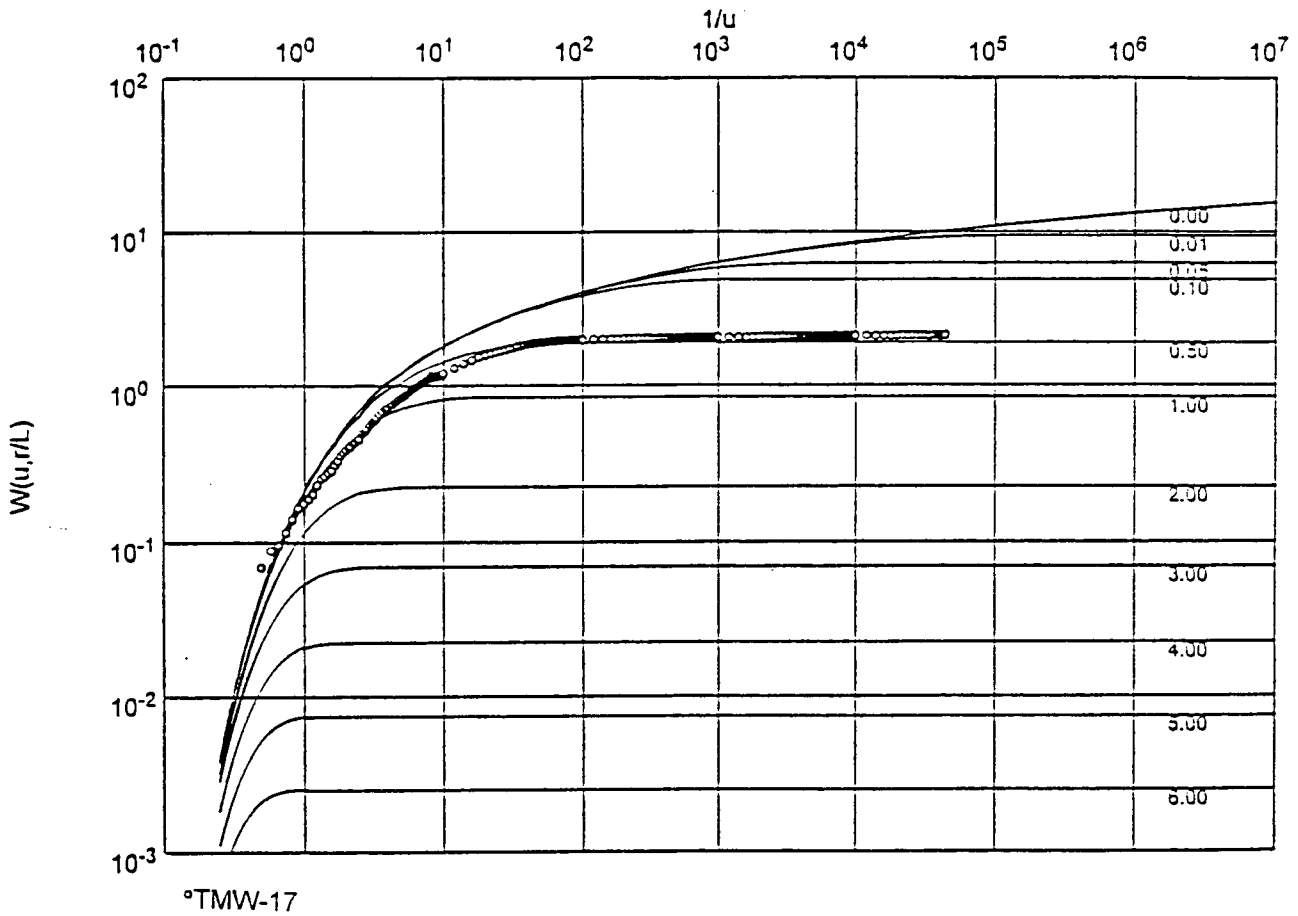
Aquifer thickness [ft]: 35.00

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No. | Test conducted on: TMW-17

TMW-17 Drift Corrected and TMW-29 Transducer Corrected

Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: 2.29×10^{-2} = 32.98 ft^2/day

Hydraulic conductivity [ft/min]: 6.55×10^{-4} = 0.94 ft/day

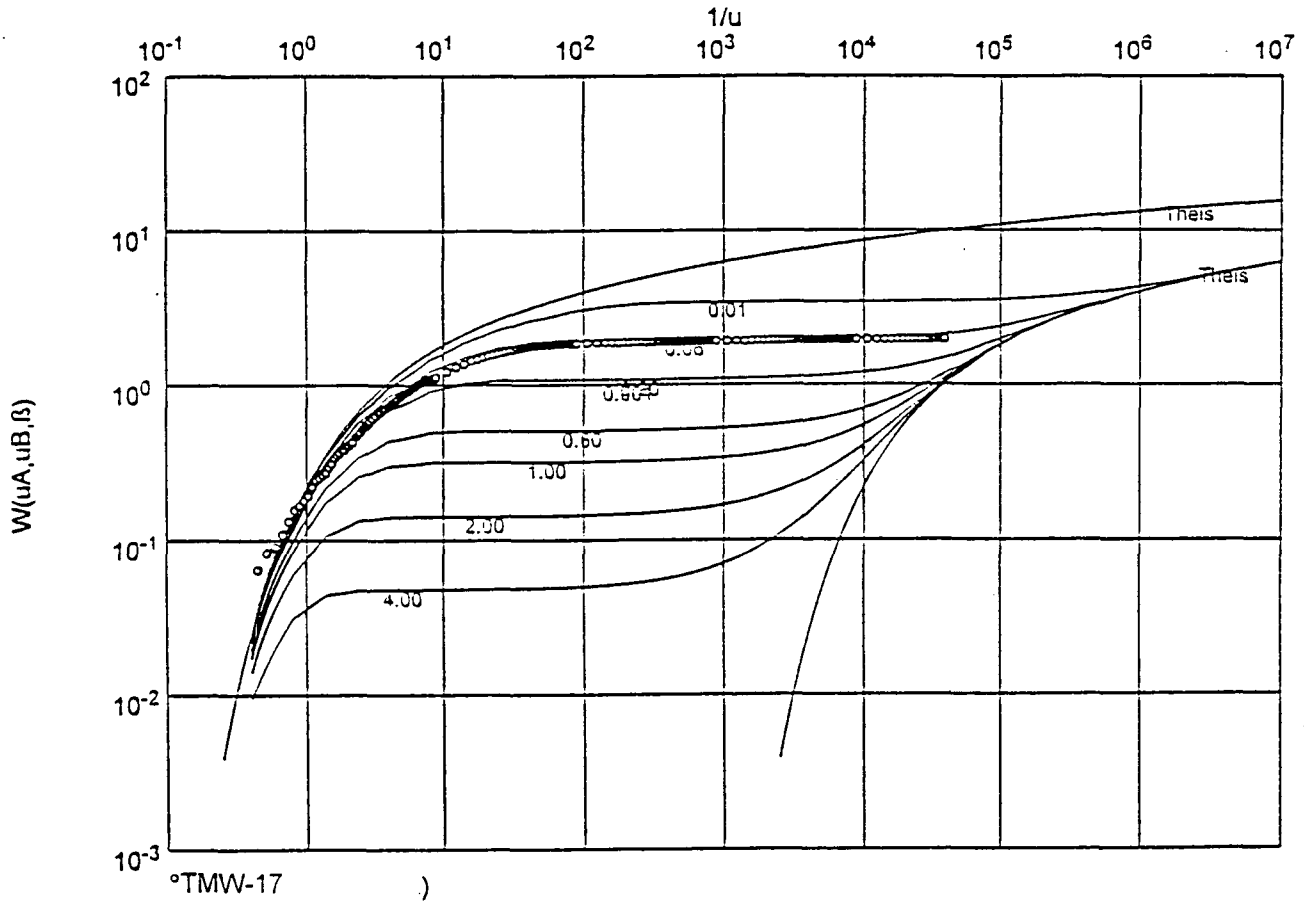
Aquifer thickness [ft]: 35.00

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No. | Test conducted on: TMW-17

TMW-17 Drift Corrected and TMW-29 Transducer Corrected

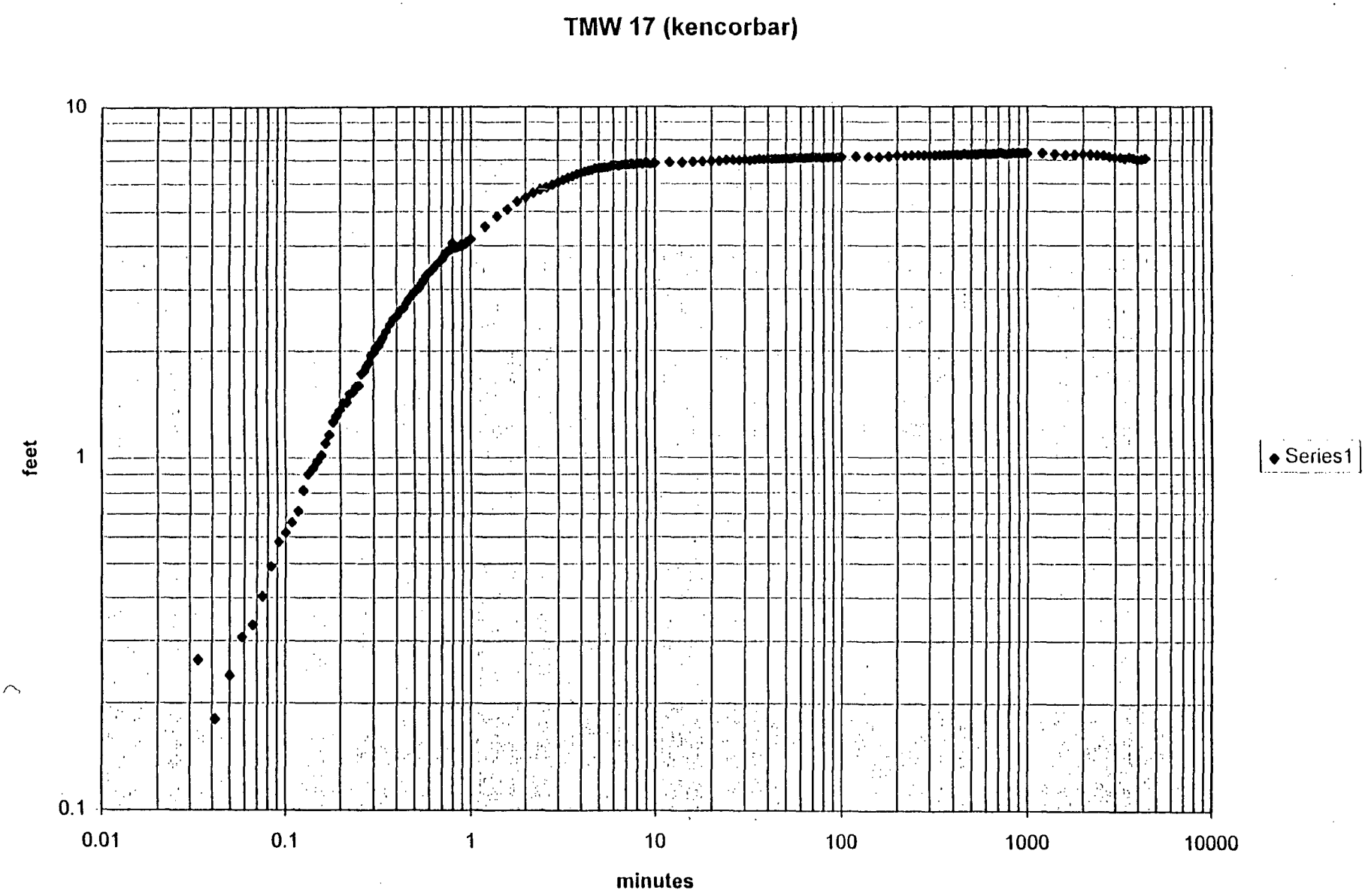
Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: 2.14×10^{-2} = 30.82 ft^2/day

Hydraulic conductivity [ft/min]: 6.11×10^{-4} = 0.94 ft/day

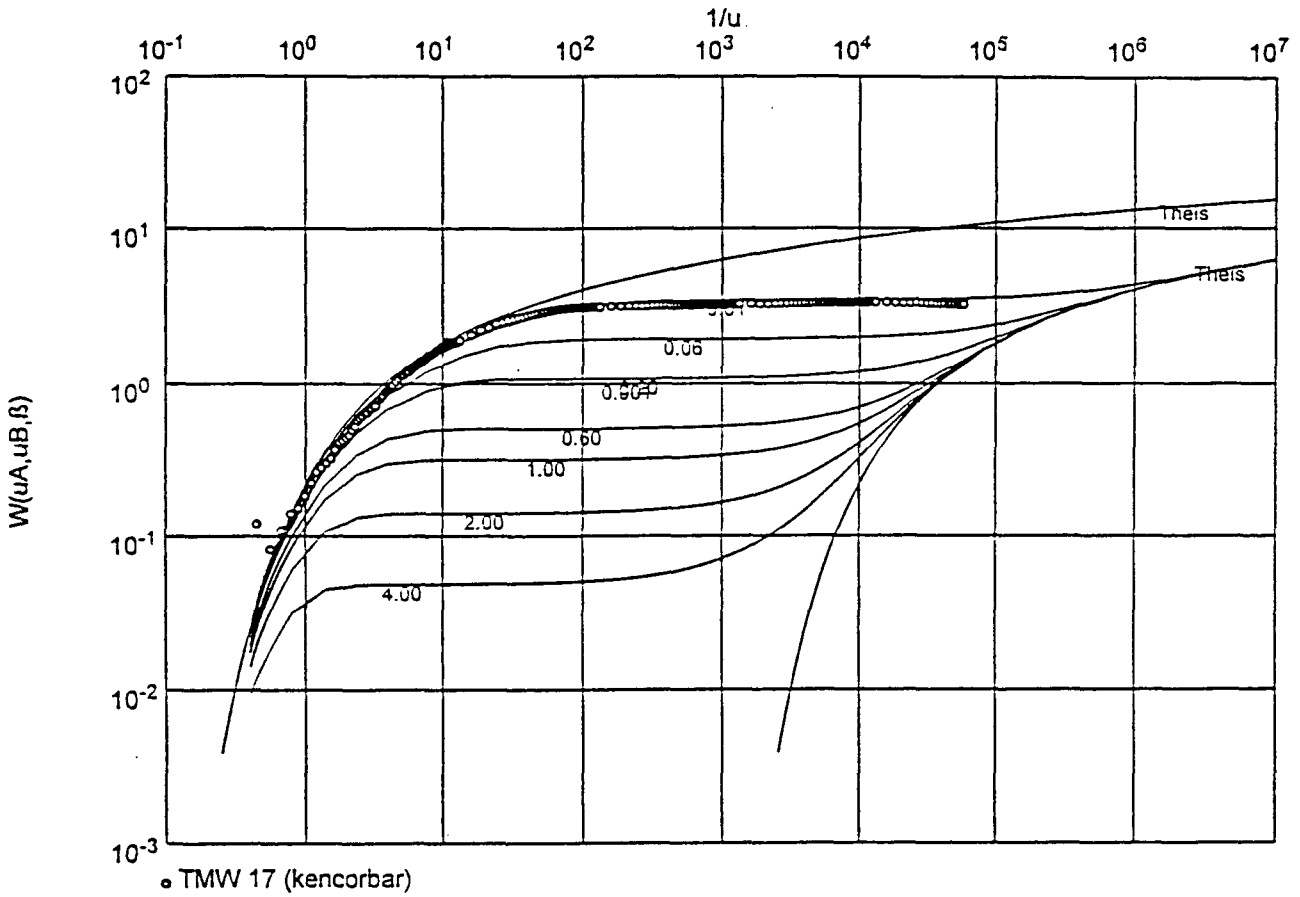
Aquifer thickness [ft]: 35.00


TMW 17 (kencorbar)
10
1
0.1
feet
0.01
0.1
1
10
100
1000
10000
minutes
Series1

E12

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Sweetwater Evaluated by: RCB Date: 15.01.1997

Pumping Test No.	Test conducted on: TMW 17
TMW 17 (kencorbar)	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 3.63×10^{-2} = 52.3 ft^2/day

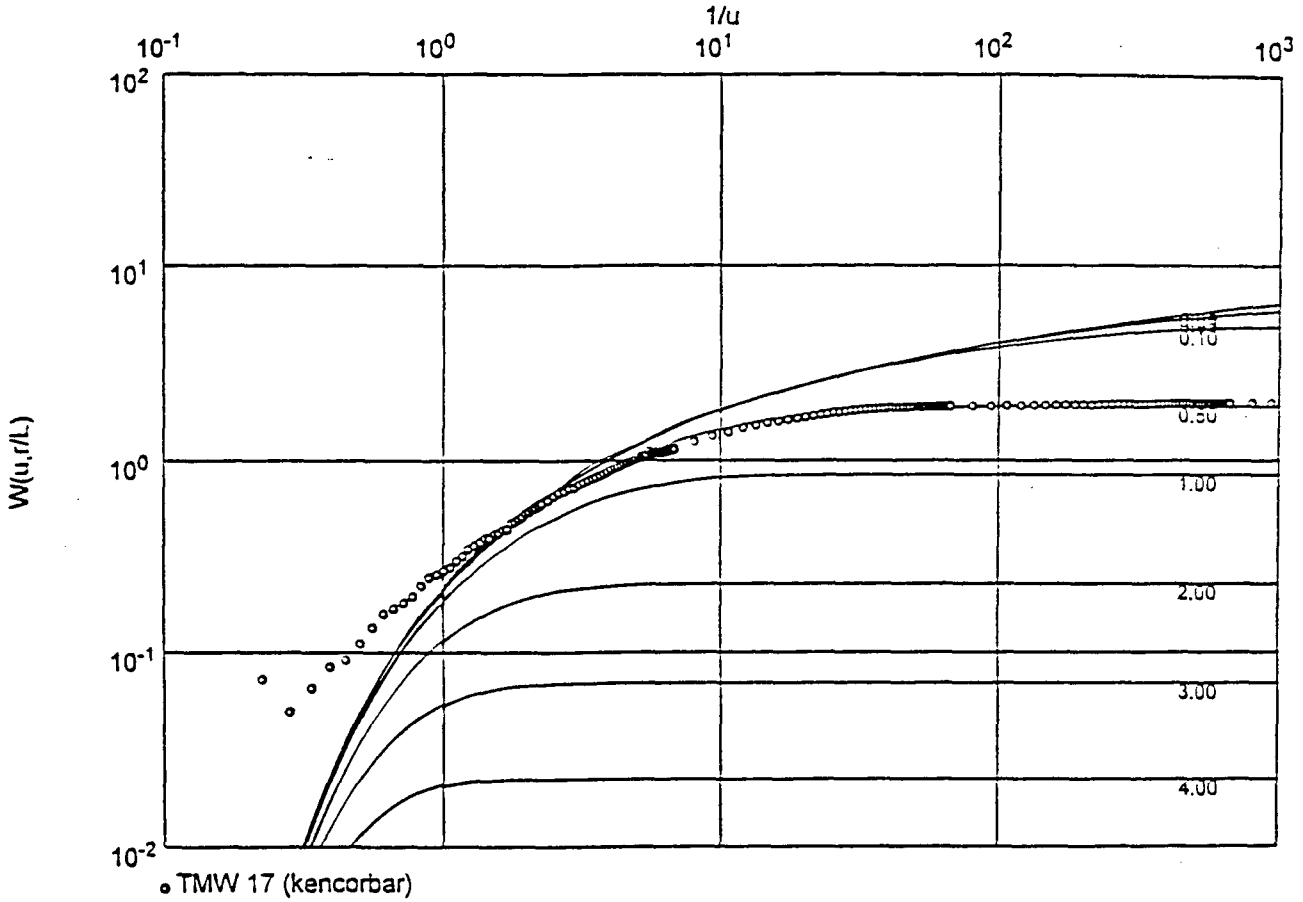
Hydraulic conductivity [ft/min]: 1.03×10^{-3} = 1.44 ft/day

Aquifer thickness [ft]: 35.00

r = .3 ft

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Sweetwater Evaluated by: RCB | Date: 15.01.1997

Pumping Test No.	Test conducted on: TMW 17
TMW 17 (kencorbar)	
Discharge 7.50 U.S.gal/min	



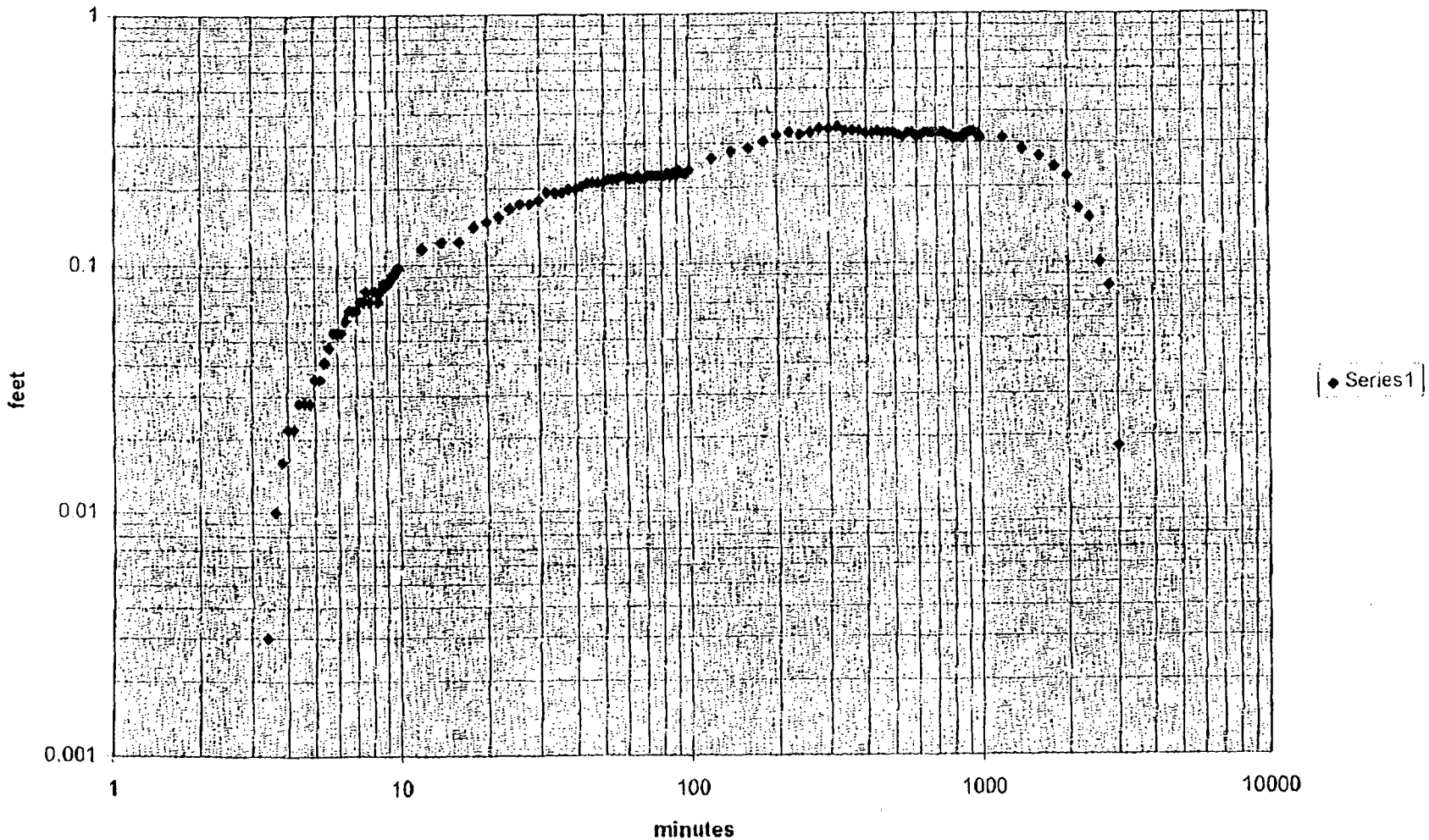
Transmissivity [ft²/min]: 2.18×10^{-2} = 31.4 ft^2/day

Hydraulic conductivity [ft/min]: 6.25×10^{-4} = 0.9 ft/day

Aquifer thickness [ft]: 35.00

r = .3 ft

TMW-75 (TMW-45 Corrected)

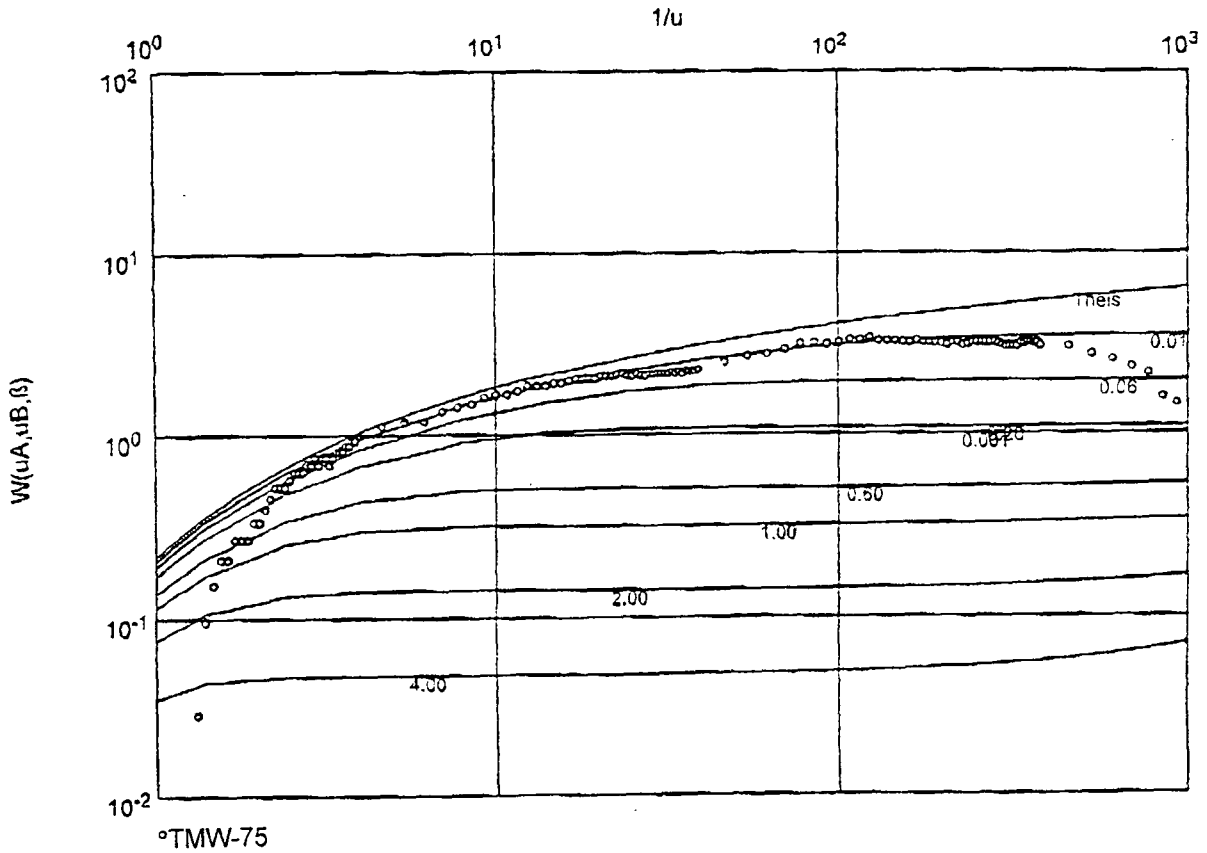


Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Evaluated by:	Date: 20.01.1997

Pumping Test No. Test conducted on: TMW-17

TMW-75 (TMW-45 Corrected)

Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: 7.67×10^{-1} = 1104.5 ft²/day

Hydraulic conductivity [ft/min]: 2.19×10^{-2} = 31.5 ft/day

Aquifer thickness [ft]: 35.00

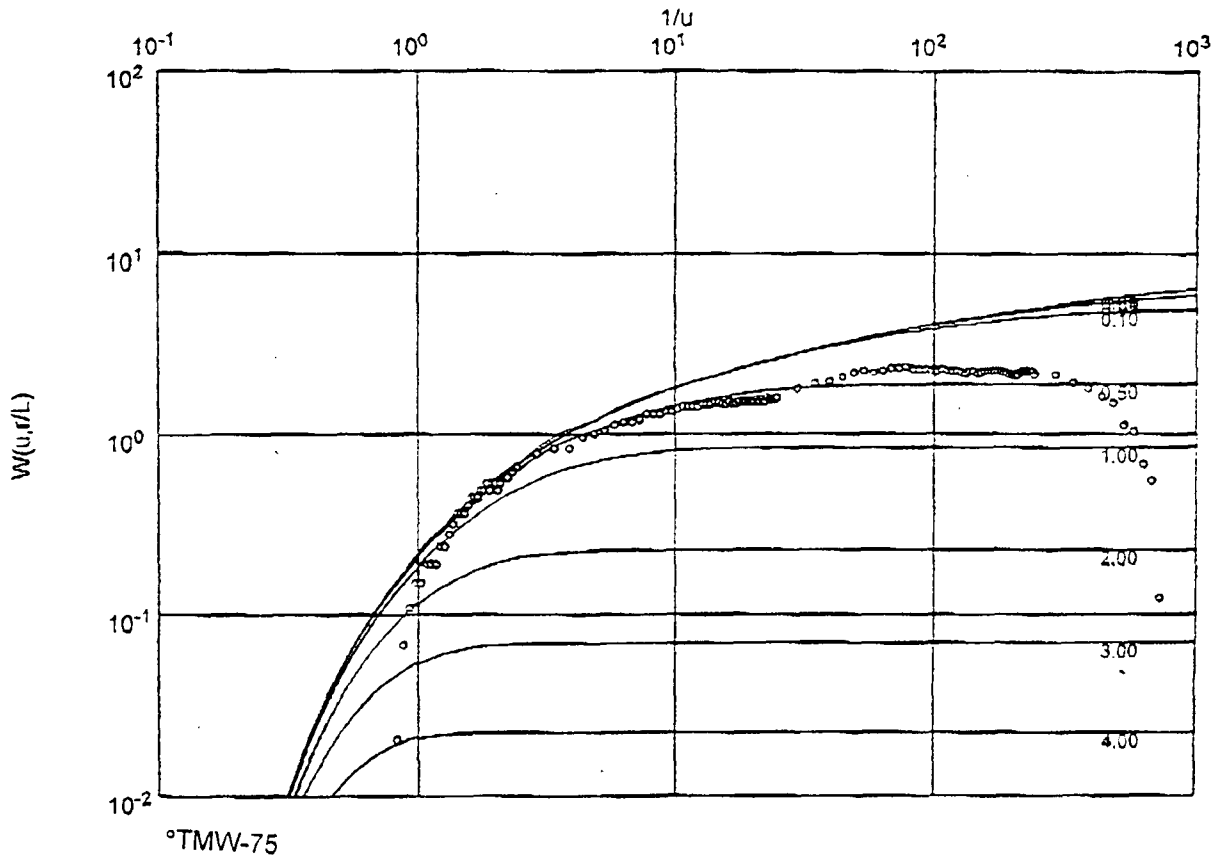
Storativity: 1.98×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Evaluated by:	Date: 20.01.1997

Pumping Test No. Test conducted on: TMW-17

TMW-75 (TMW-45 Corrected)

Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: 5.43×10^{-1} = 781.9 ft^2/day

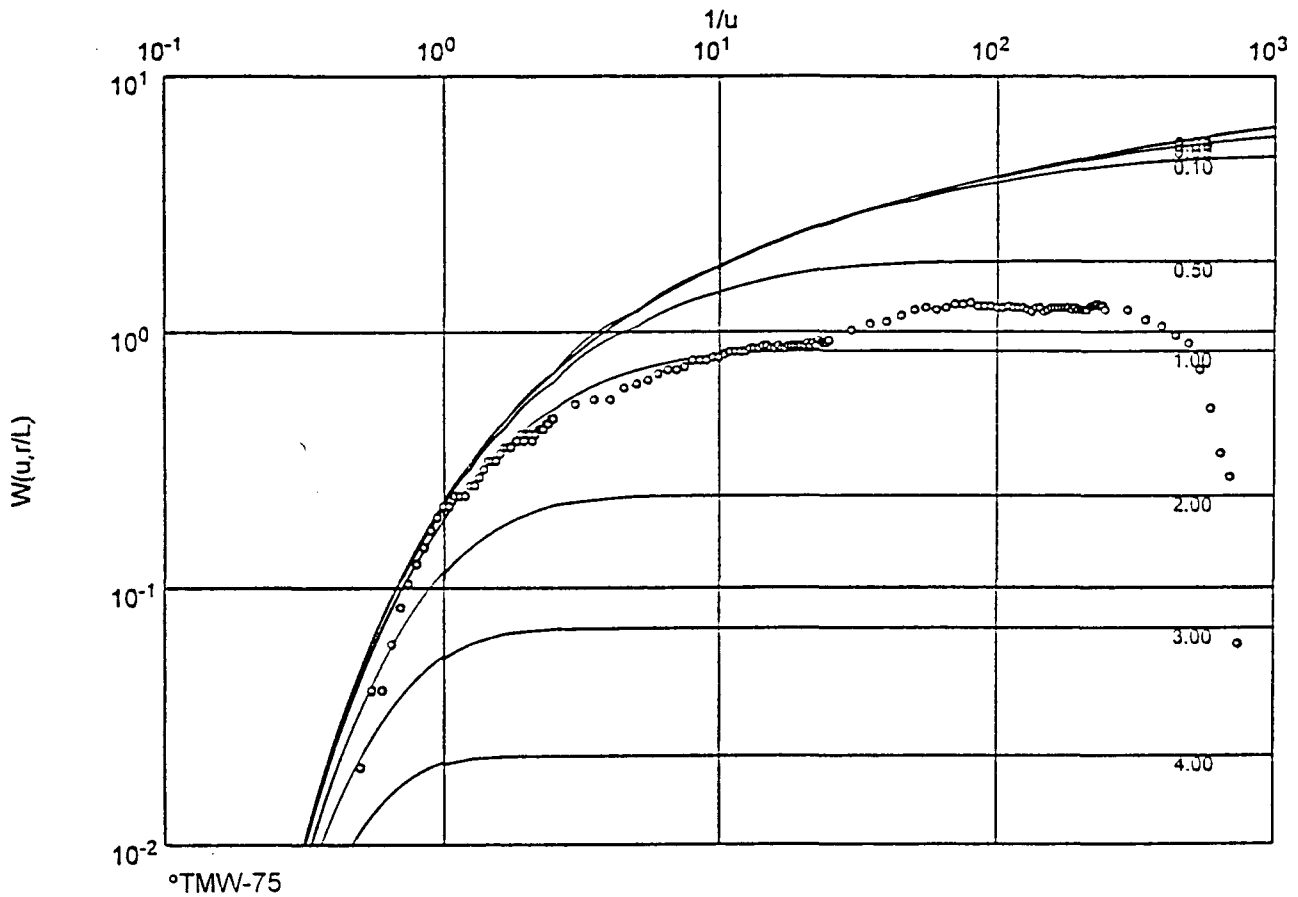
Hydraulic conductivity [ft/min]: 1.55×10^{-2} = 22.3 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 2.22×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Evaluated by:	Date: 08.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-75 (Uncorrected)	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 2.67×10^{-1} = 384 ft^2/day

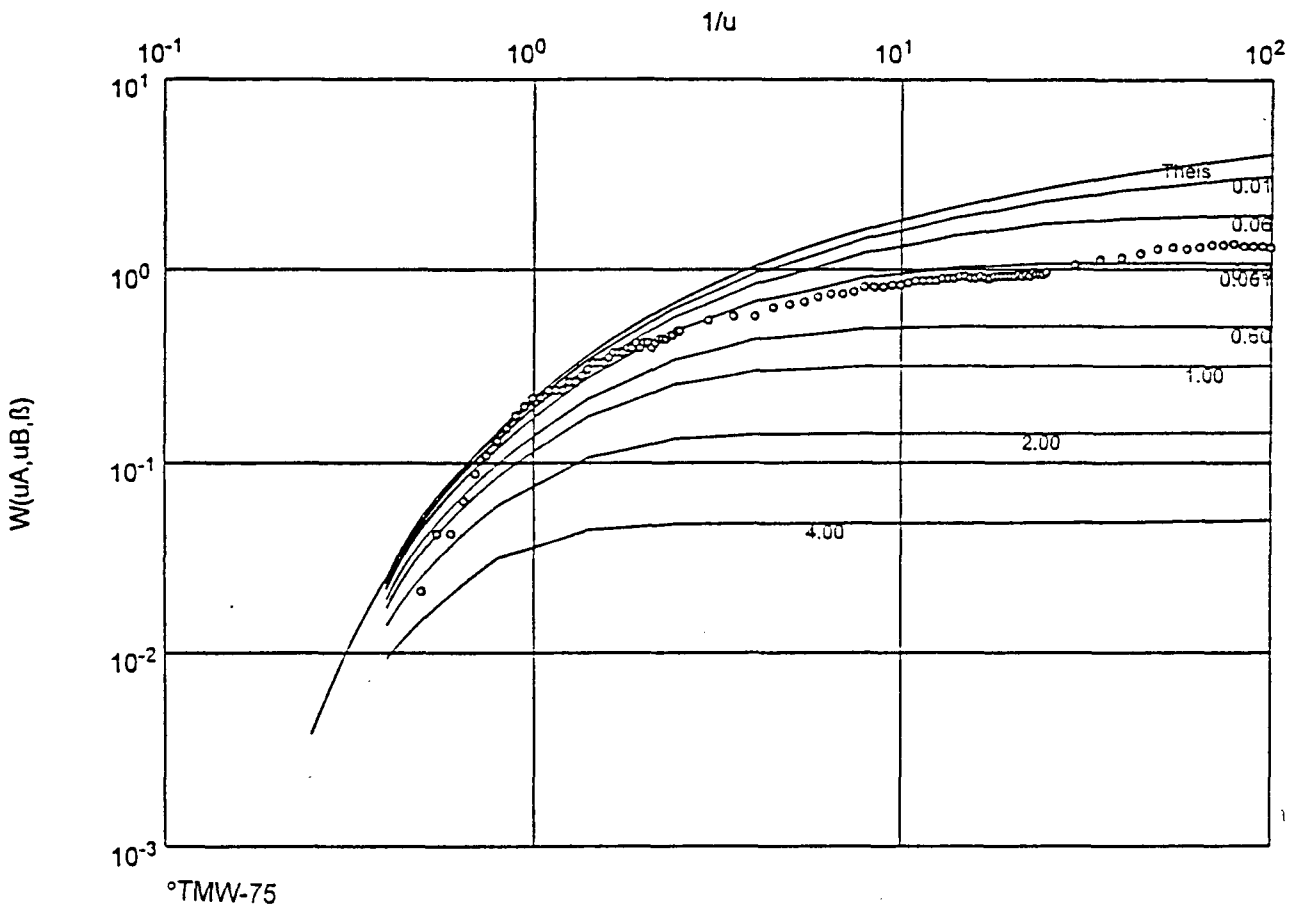
Hydraulic conductivity [ft/min]: 7.63×10^{-3} = 11.0 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 1.07×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Evaluated by:	Date: 08.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-75 (Uncorrected)	
Discharge 7.50 U.S.gal/min	



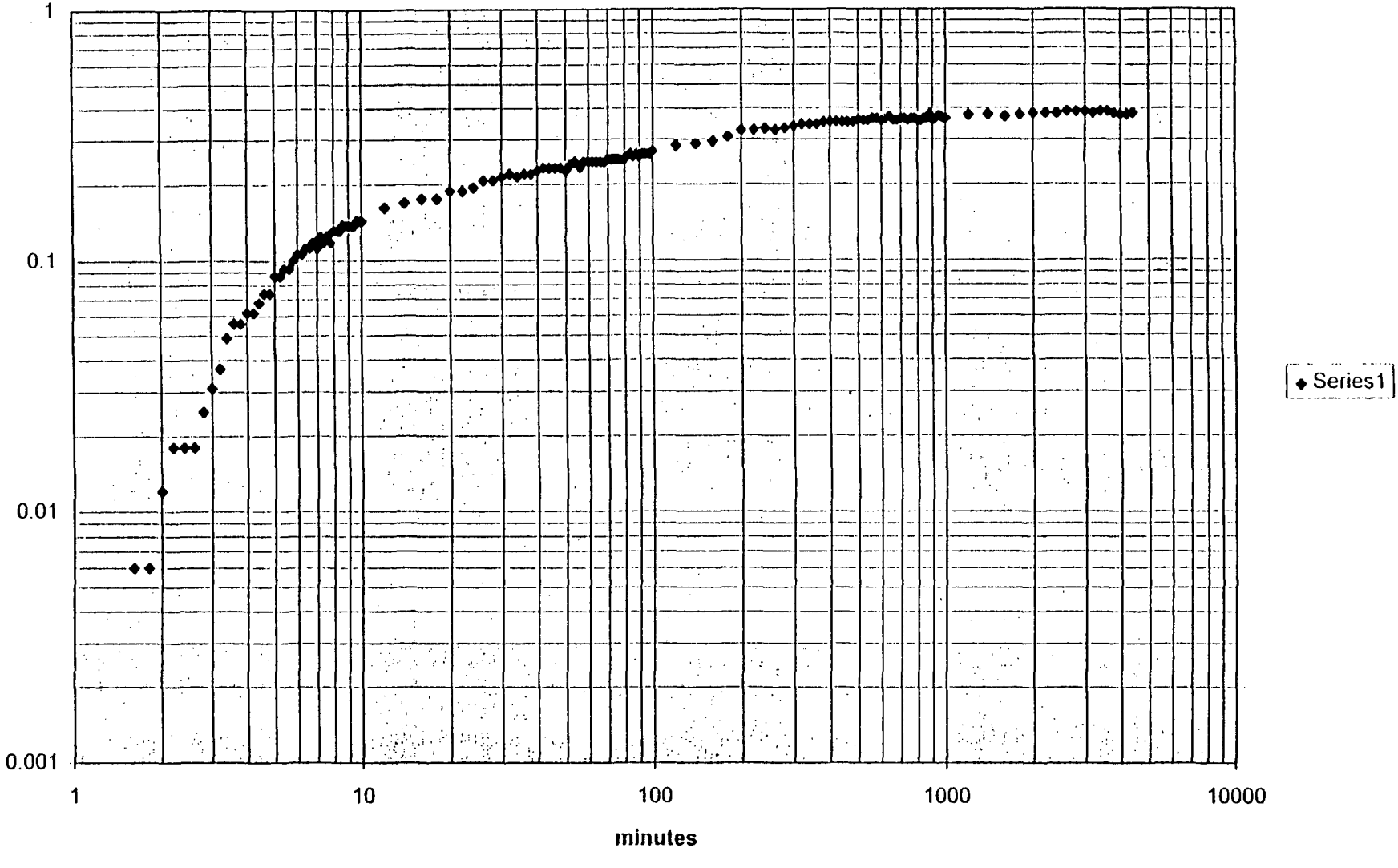
Transmissivity [ft²/min]: 2.79×10^{-1} = 401.8 ft^2/day

Hydraulic conductivity [ft/min]: 7.99×10^{-3} = 11.5 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 1.12×10^{-4}

TMW-75 Drift Corrected and TMW-16 Transducer Corrected

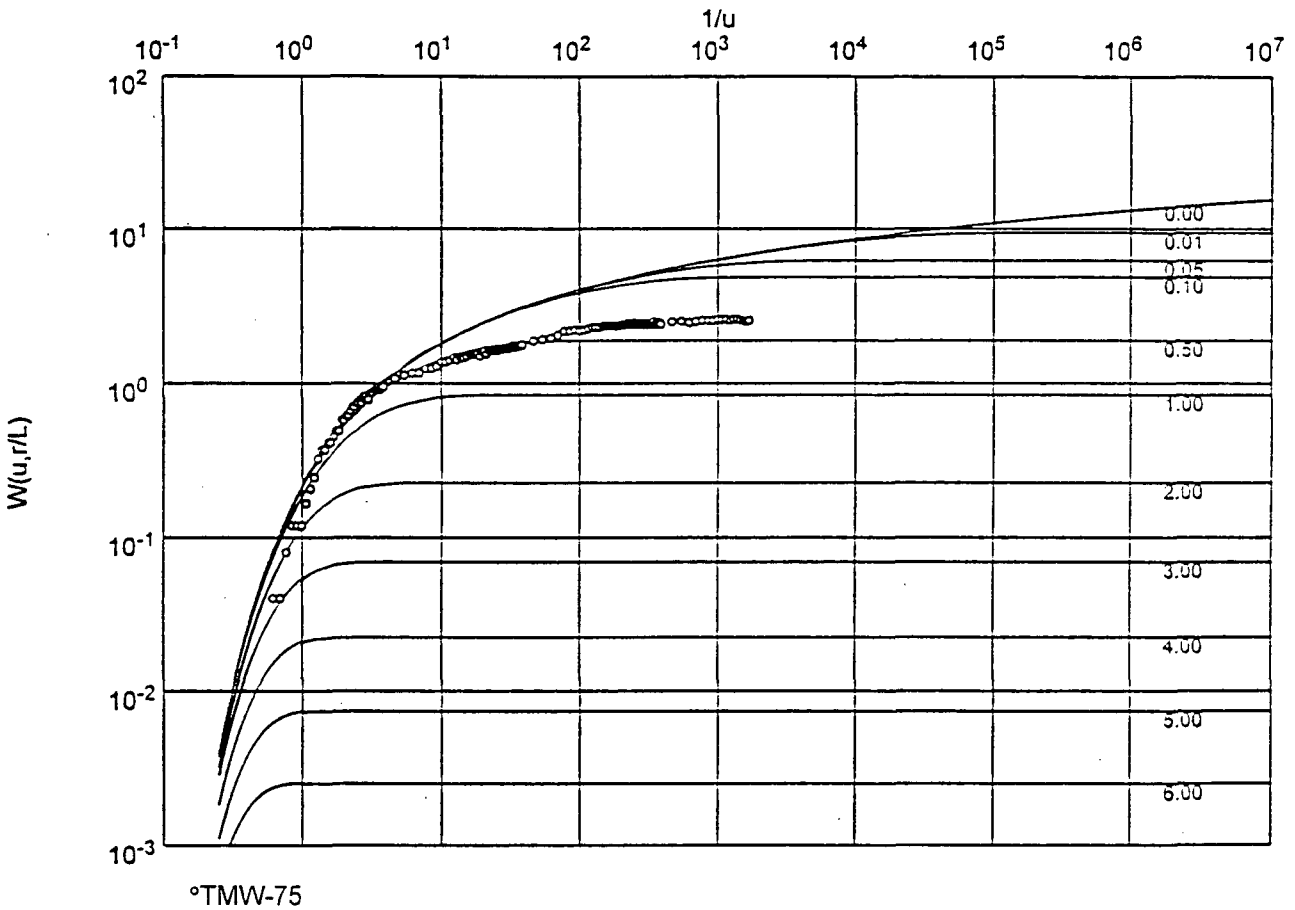


Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No. | Test conducted on: TMW-17

TMW-75 Drift Corrected and TMW-16 Transducer Corrected

Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: = 763.2 ft^2/day

Hydraulic conductivity [ft/min]: 1.51×10^{-2} = 21.74 ft/day

Aquifer thickness [ft]: 35.00

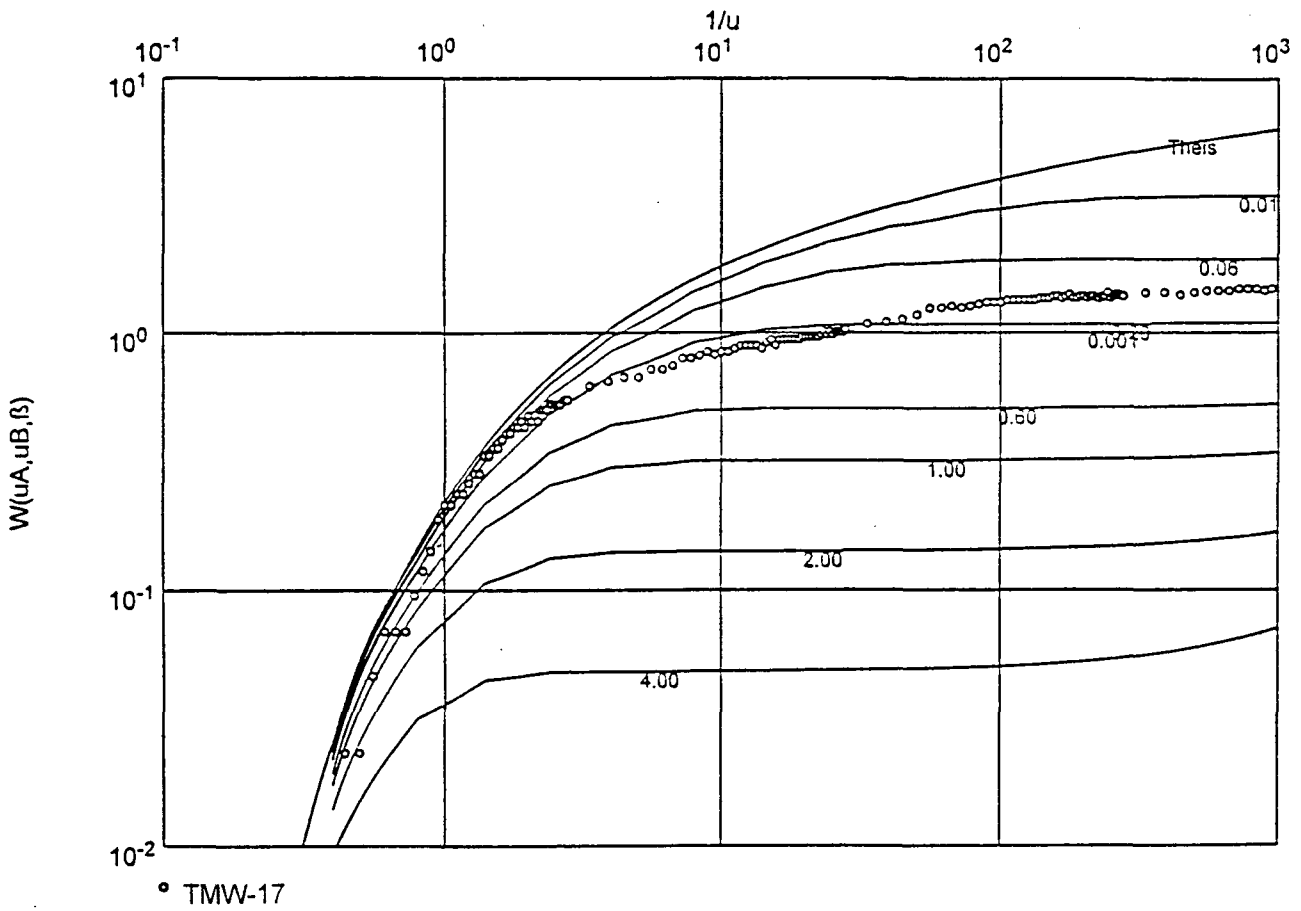
Storativity: 1.37×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No. | Test conducted on: TMW-17

TMW-75 Drift Corrected and TMW-16 Transducer Corrected

Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: 3.05×10^{-1} = 439.2 ft^2/day

Hydraulic conductivity [ft/min]: 8.71×10^{-3} = 12.5 ft/day

Aquifer thickness [ft]: 35.00

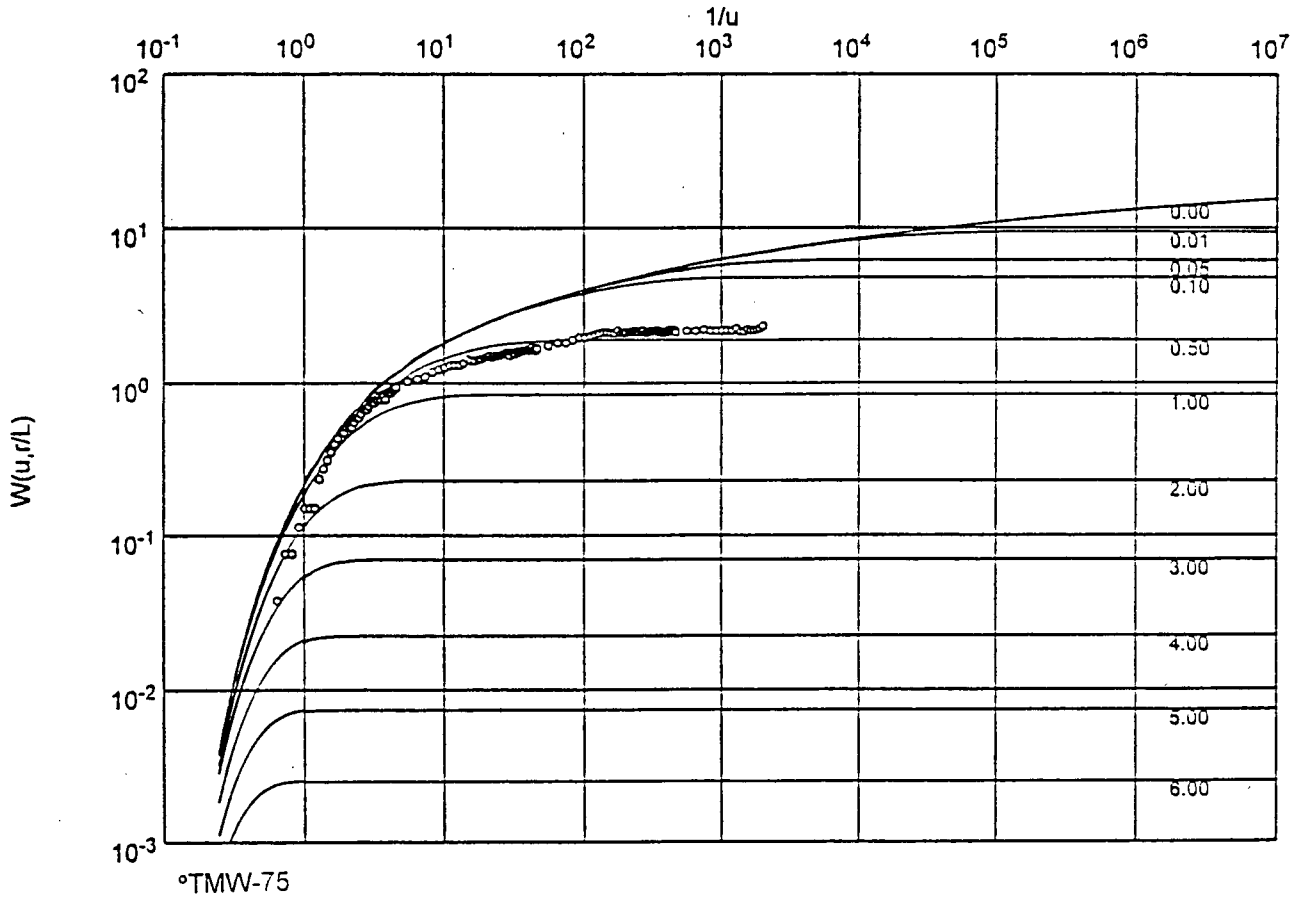
Storativity: 1.09×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Sweetwater Evaluated by: RCB | Date: 09.01.1997

Pumping Test No. | Test conducted on: TMW-17

TMW-75 Drift Corrected and TMW-29 Transducer Corrected

Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: 5.01×10^{-1} = 721.44 ft^2/day

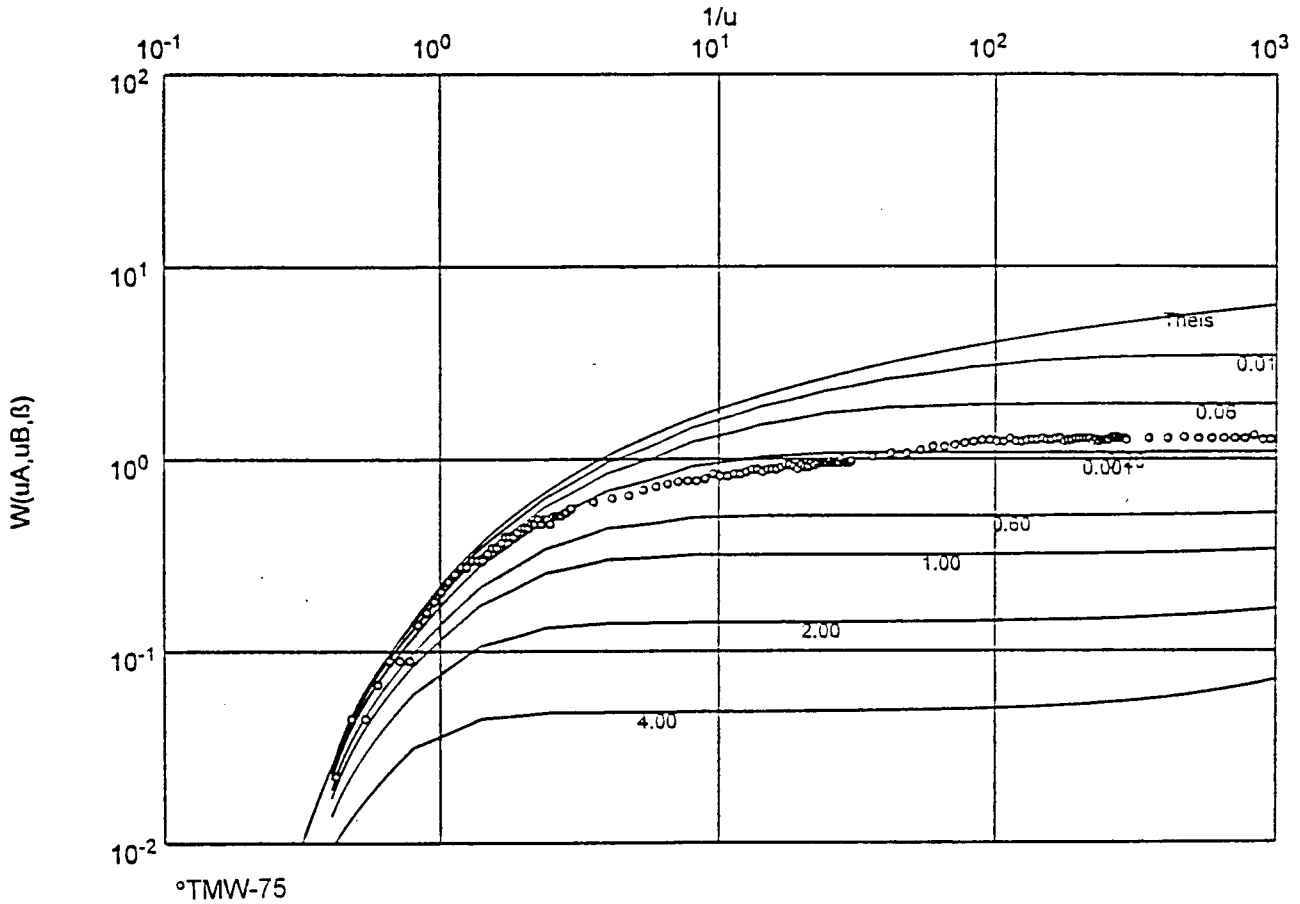
Hydraulic conductivity [ft/min]: 1.43×10^{-2} = 20.6 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 1.08×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-75 Drift Corrected and TMW-29 Transducer Corrected	
Discharge 7.50 U.S.gal/min	

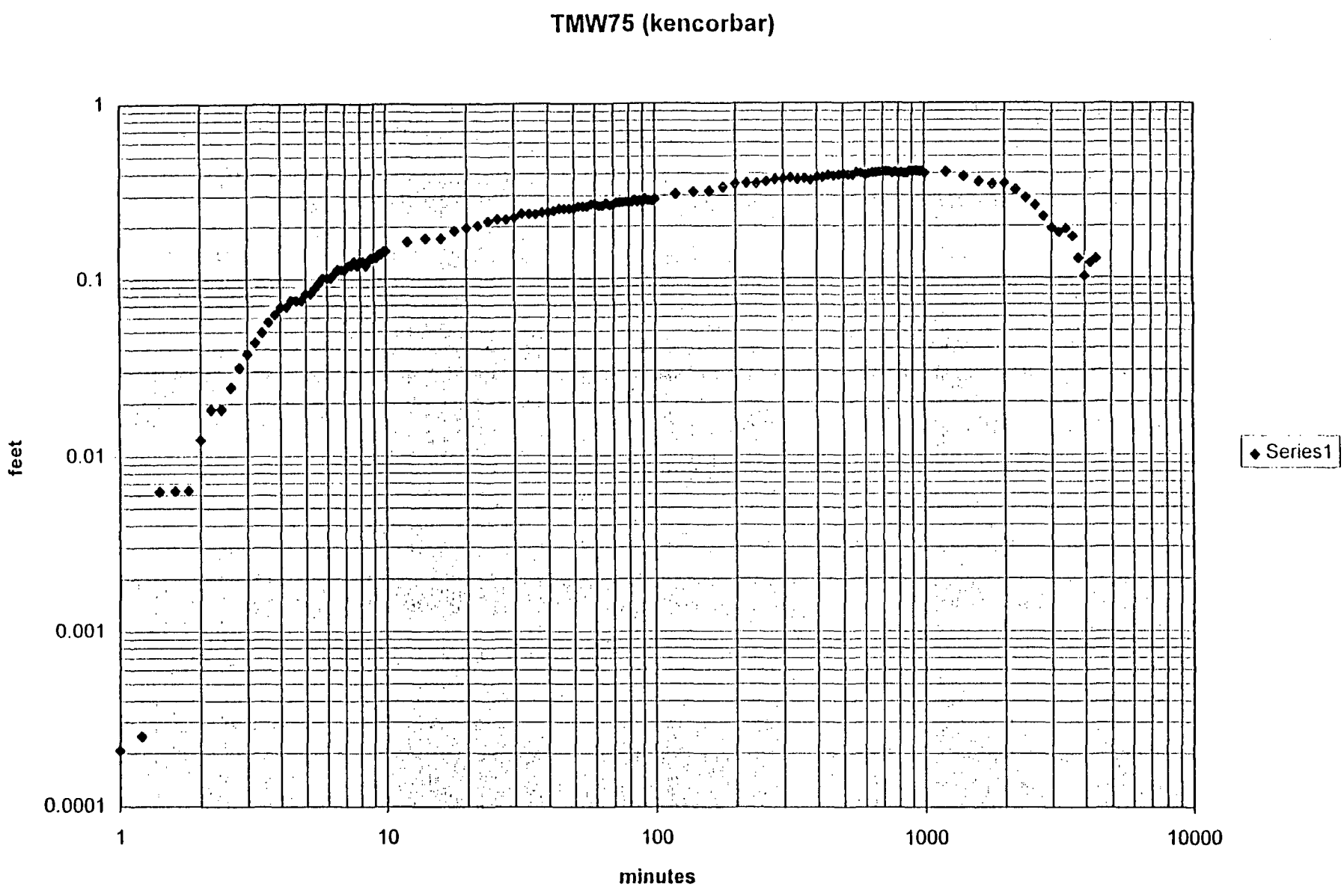


Transmissivity [ft²/min]: 2.95×10^{-1} = 424.8 ft^2/day

Hydraulic conductivity [ft/min]: 8.44×10^{-3} = 12.15 ft/day

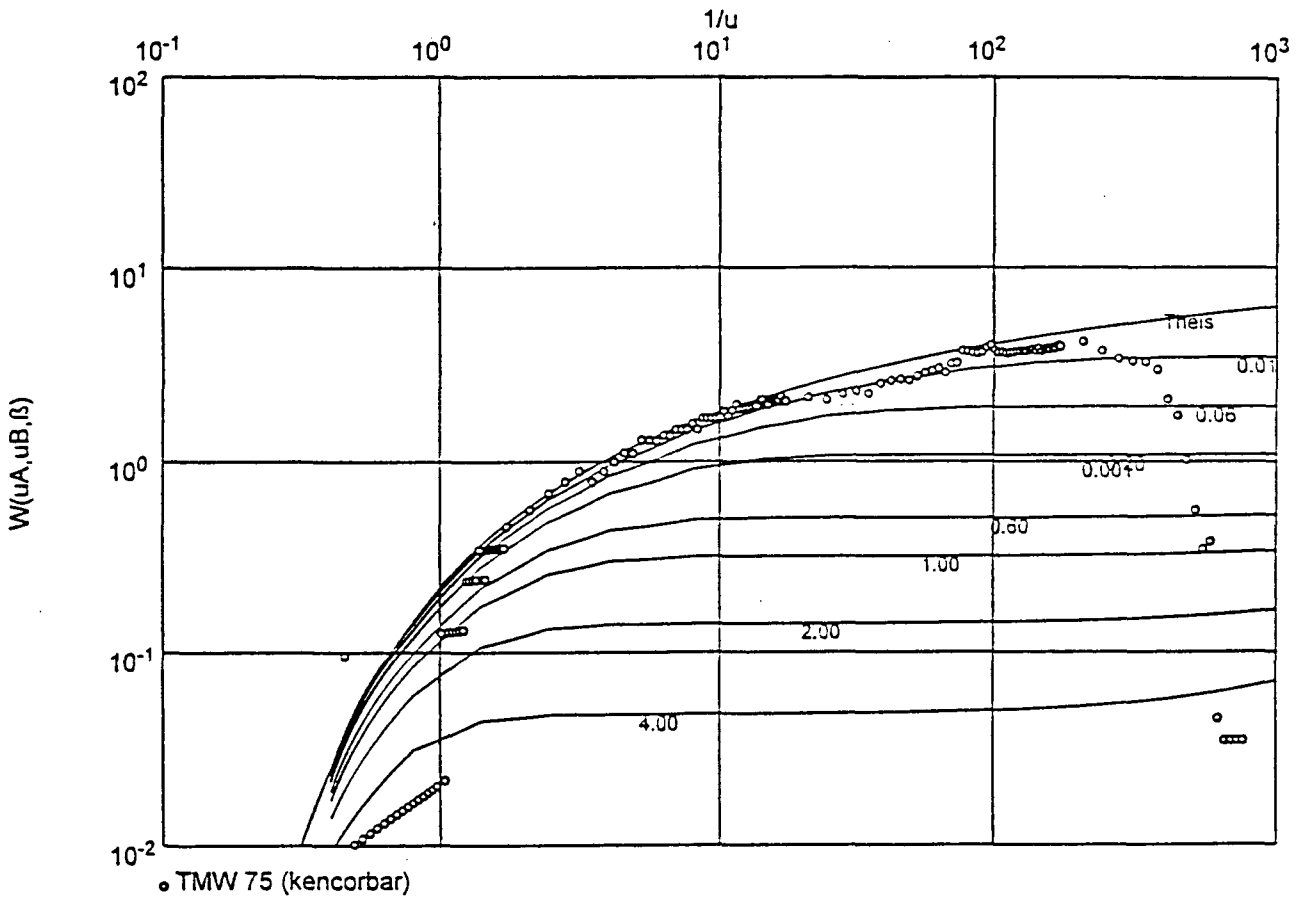
Aquifer thickness [ft]: 35.00

Storativity: 9.90×10^{-5}


TMW75 (kencorbar)
1
0.1
0.01
0.001
0.0001
feet
1
10
100
1000
10000
minutes
Series1

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Sweetwater Evaluated by: RCB Date: 15.01.1997

Pumping Test No. TMW-17	Test conducted on: TMW-17
TMW 75 (kencorbar)	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 1.39×10^{0} = 2001.6 ft^2/day

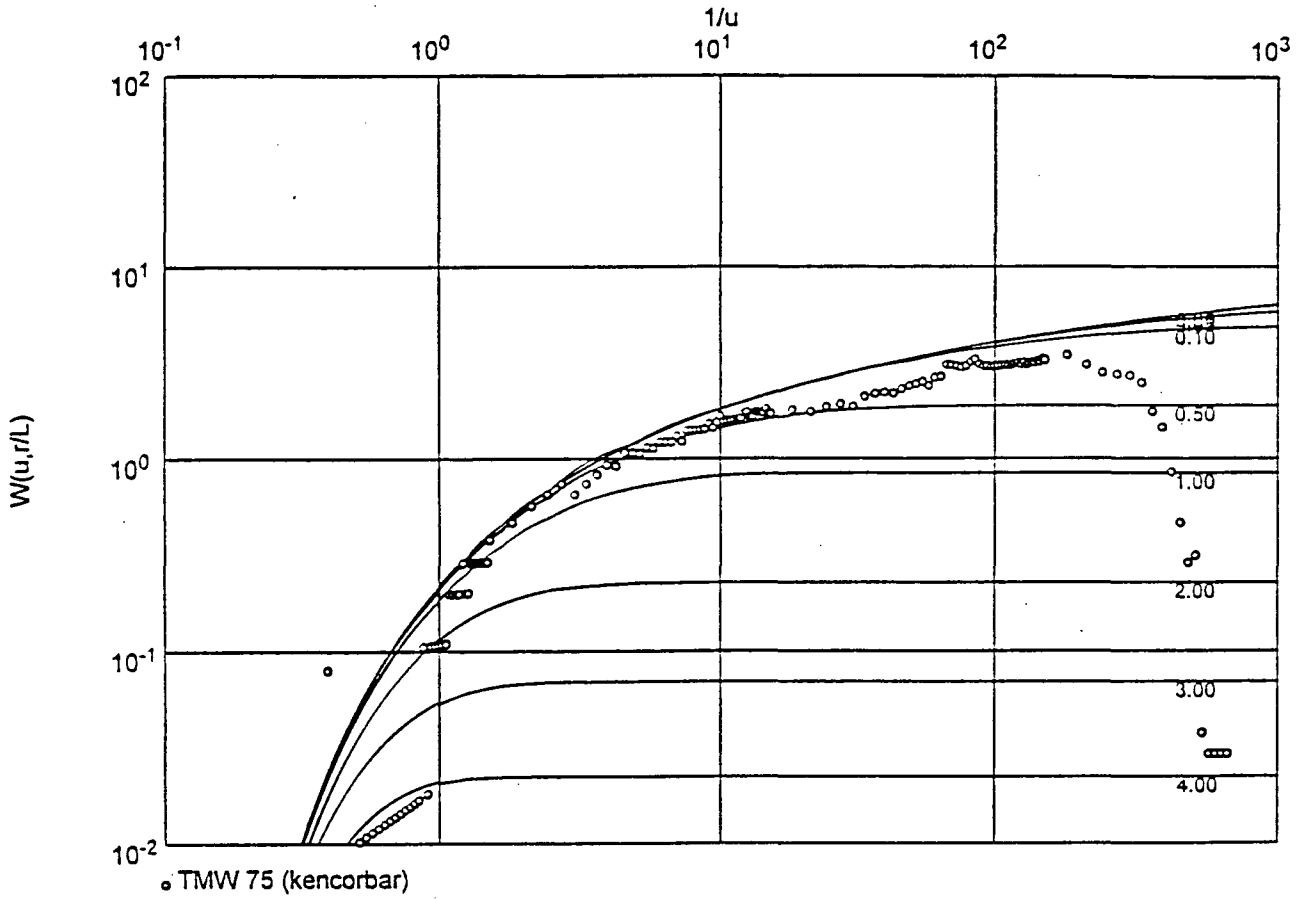
Hydraulic conductivity [ft/min]: 3.99×10^{-2} = 57.46 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 8.02×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Sweetwater Evaluated by: RCB | Date: 15.01.1997

Pumping Test No. TMW-17	Test conducted on: TMW-17
TMW 75 (kencorbar)	
Discharge 7.50 U.S.gal/min	



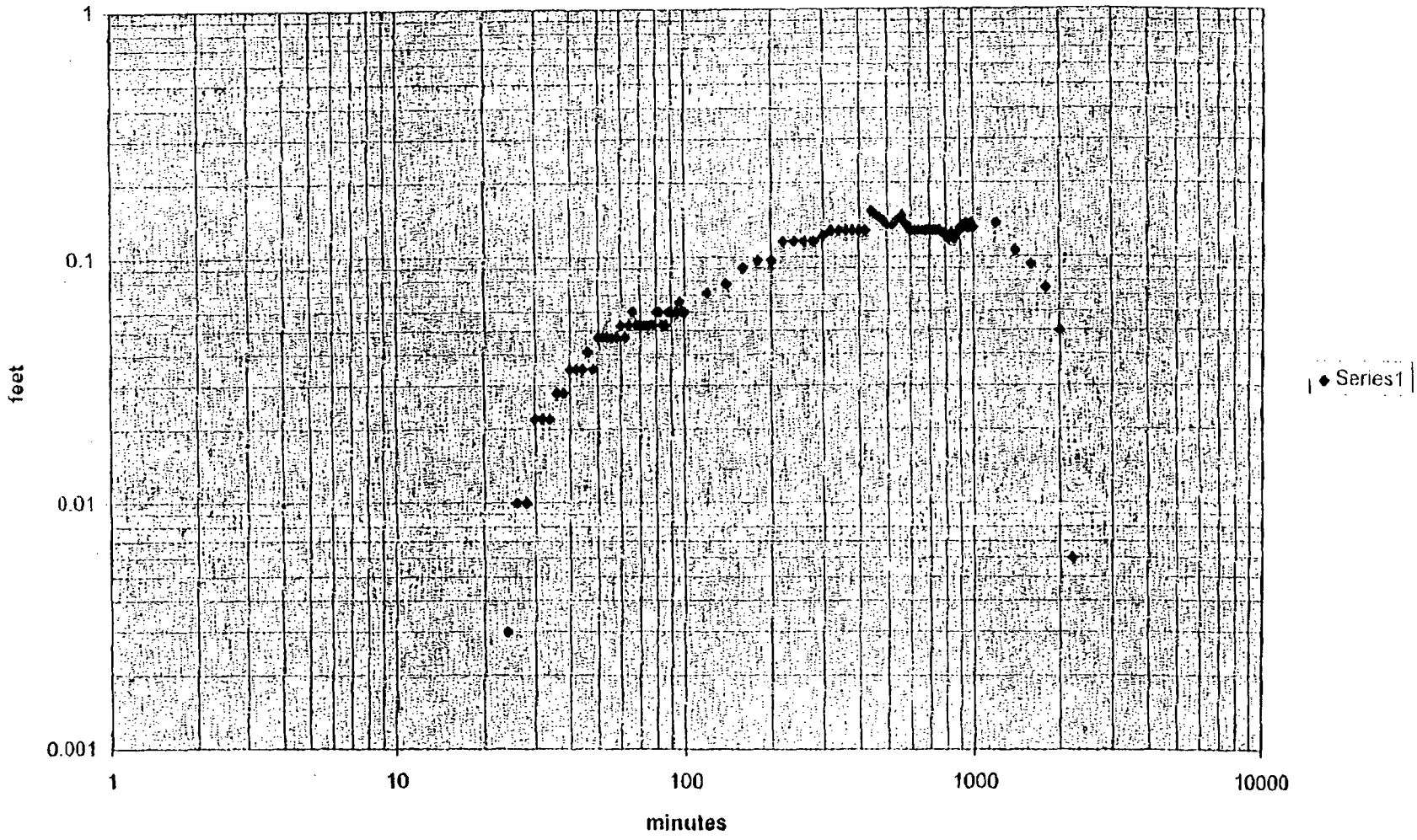
Transmissivity [ft²/min]: 1.16×10^{0} = 1670.4 ft^2/day

Hydraulic conductivity [ft/min]: 3.32×10^{-2} = 47.81ft/day

Aquifer thickness [ft]: 35.00

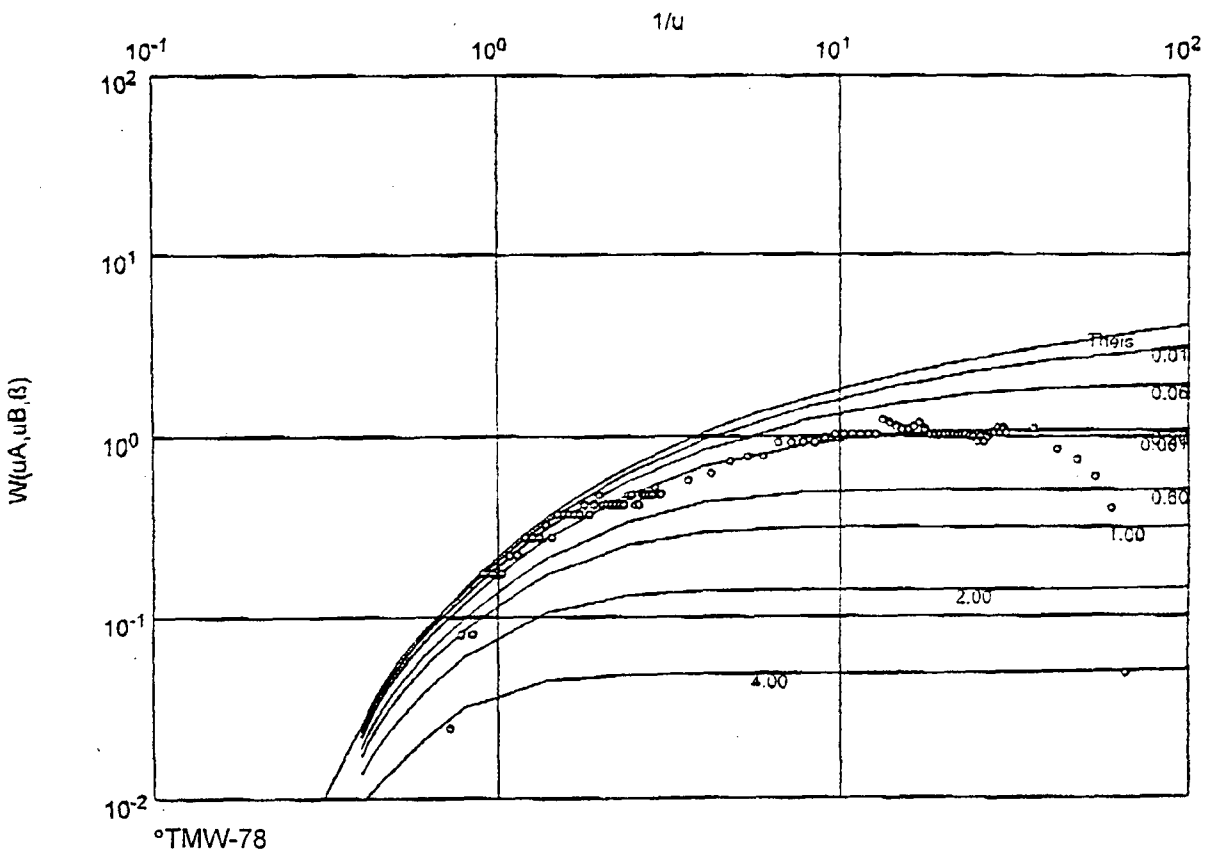
Storativity: 7.66×10^{-4}

TMW-78 (TMW-45 Corrected)



Shepherd Miller, Inc 2460 West 26th Ave. # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Evaluated by:	Date: 20.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-78 (TMW-45 Corrected)	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 6.38×10^{-1} = 918.7 ft^2/day

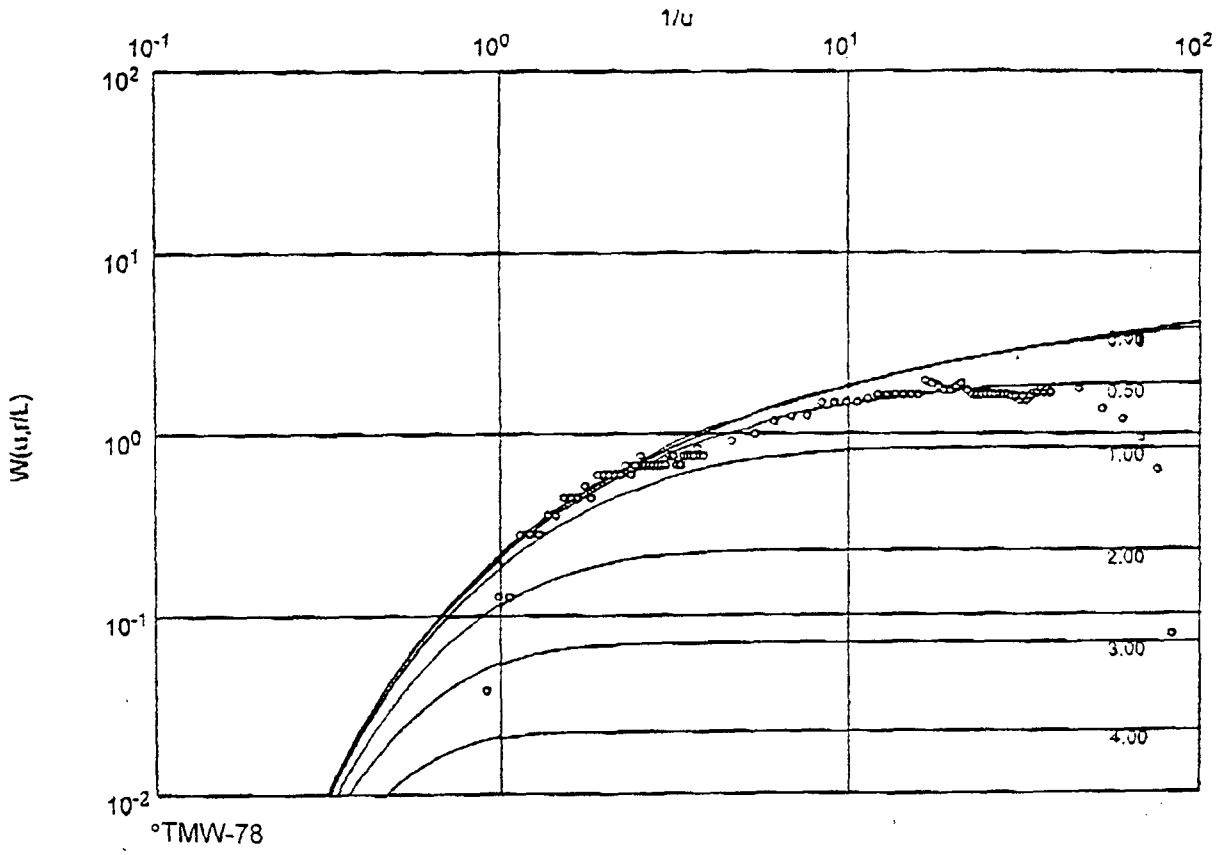
Hydraulic conductivity [ft/min]: 1.82×10^{-2} = 26.21 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 4.18×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave. # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Evaluated by:	Date: 20.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-17 (TMW-45 corrected)	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 1.01×10^{0} = 1454.4 ft^2/day

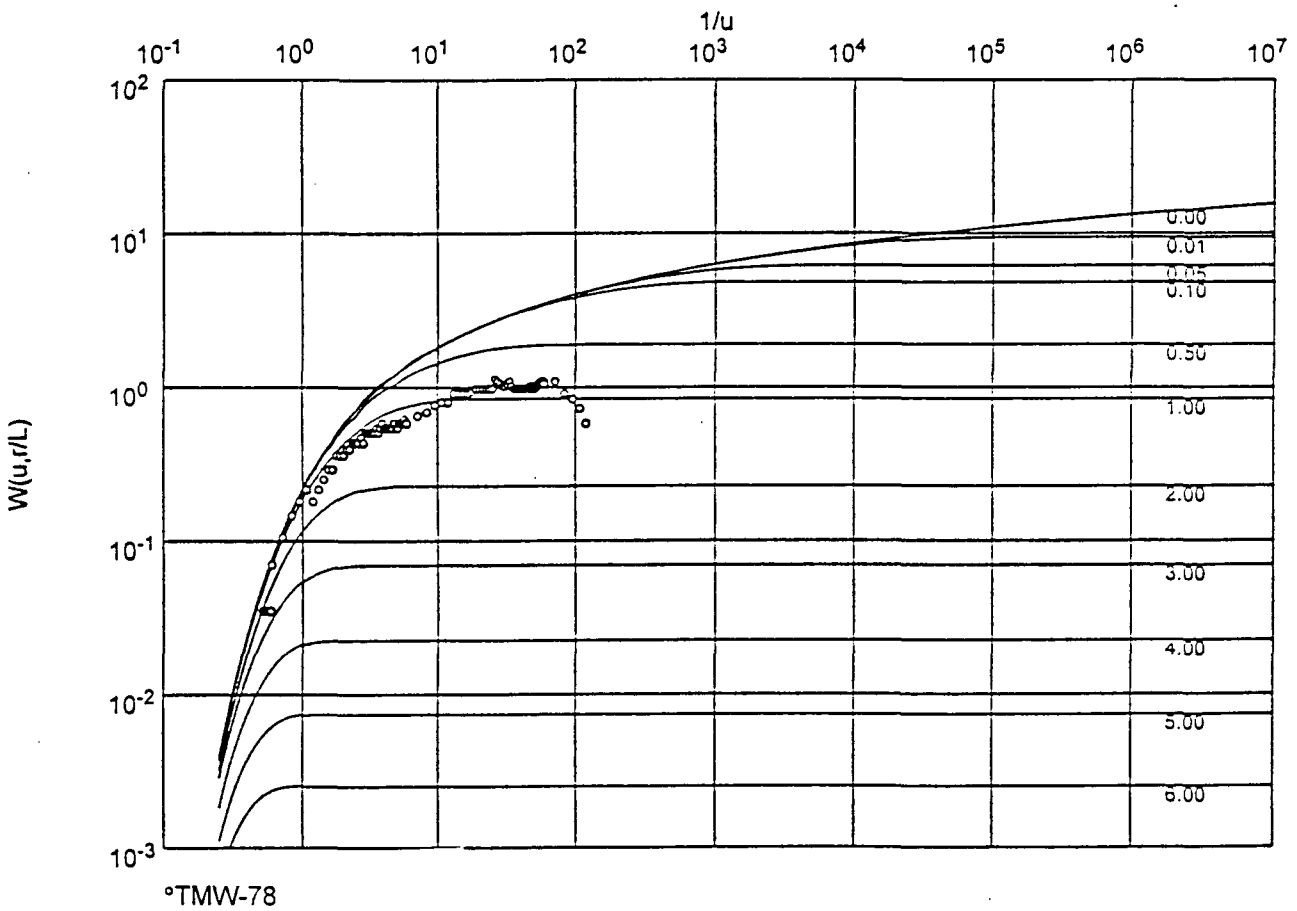
Hydraulic conductivity [ft/min]: 2.89×10^{-2} = 41.62 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 5.26×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Evaluated by:	Date: 08.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-78 (Uncorrected)	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 4.64×10^{-1} = 668.2 ft^2/day

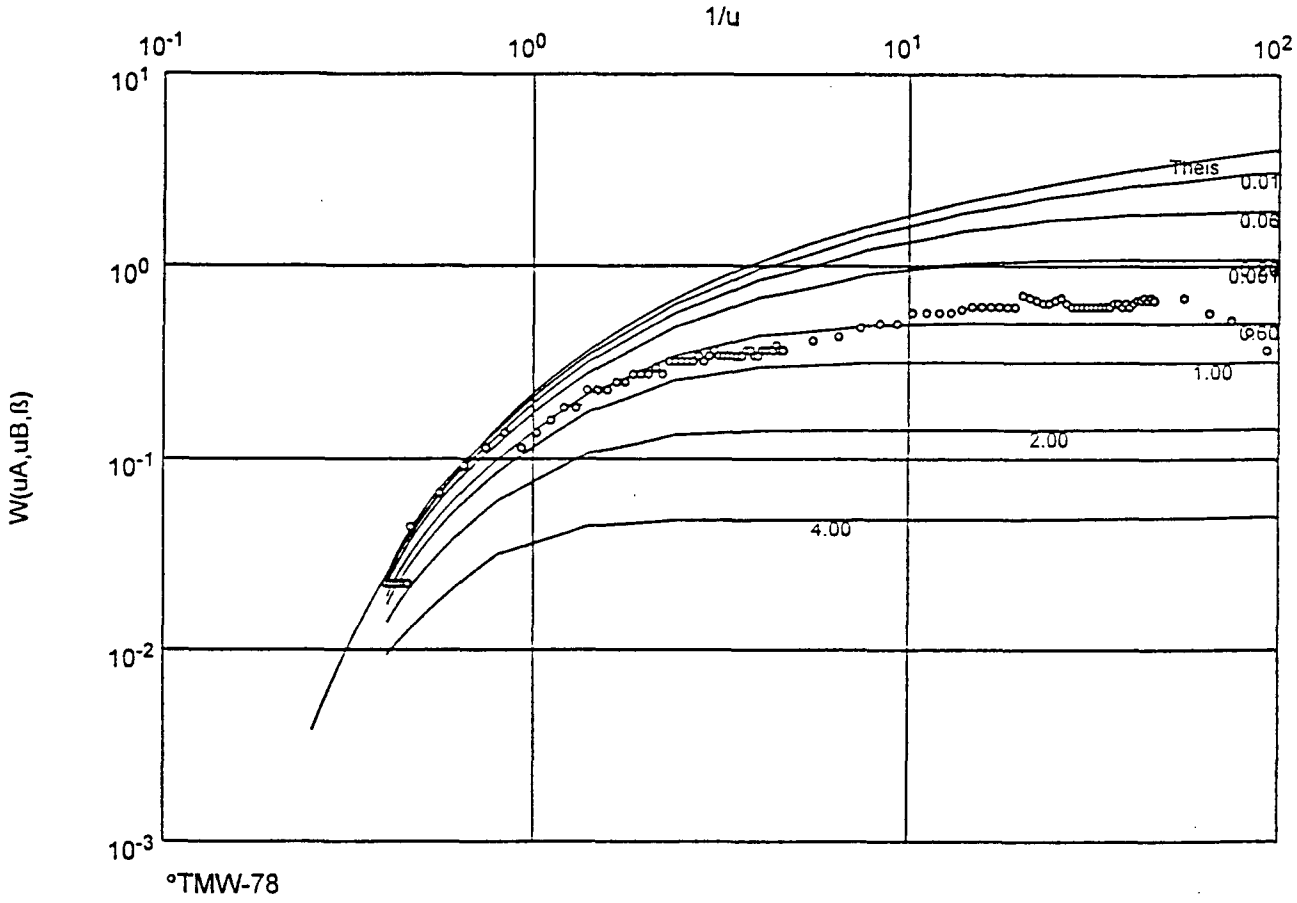
Hydraulic conductivity [ft/min]: 1.32×10^{-2} = 19 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 1.53×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Evaluated by:	Date: 08.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-78 (Uncorrected)	
Discharge 7.50 U.S.gal/min	



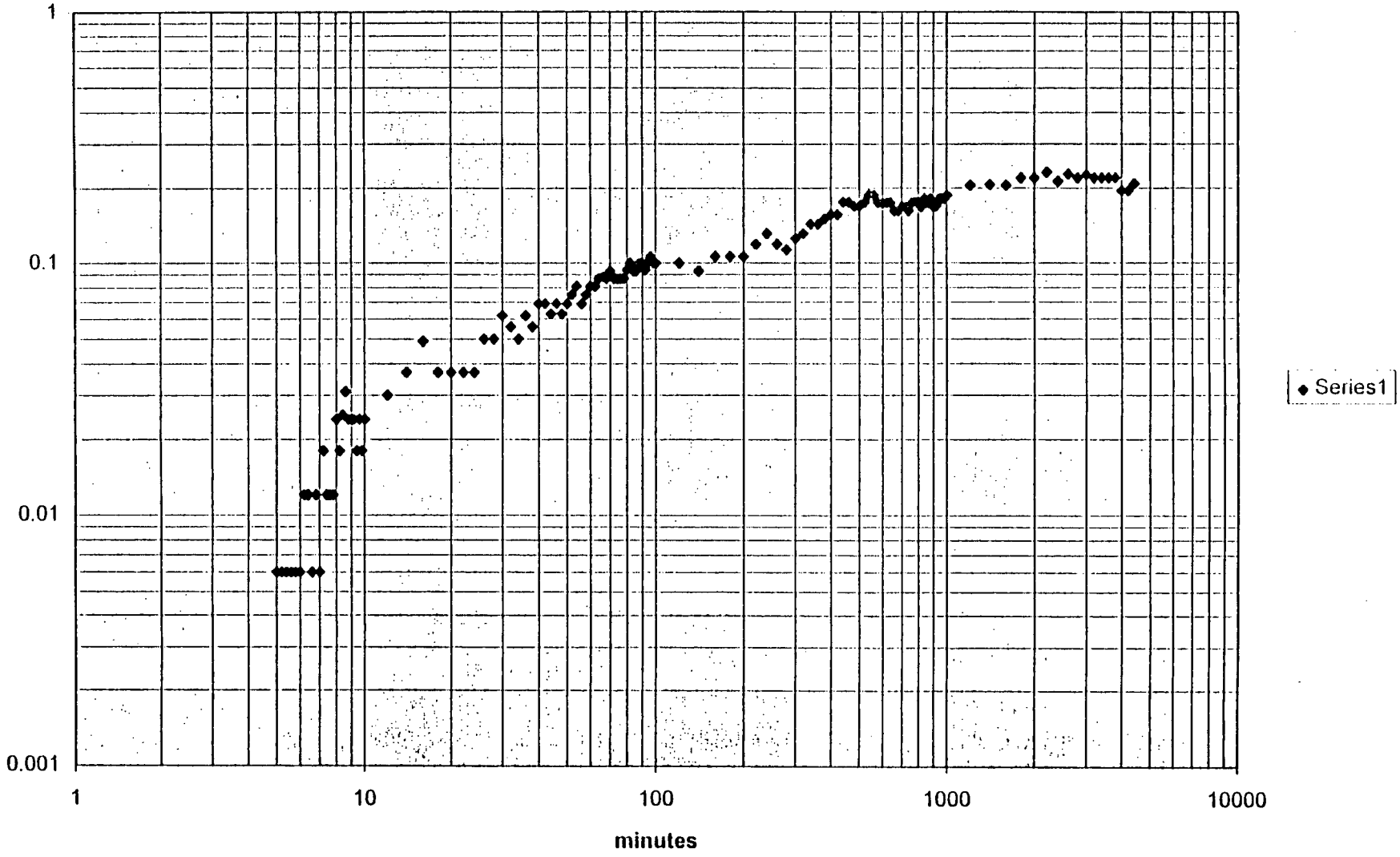
Transmissivity [ft²/min]: 2.92×10^{-1} = 420.5 ft^2/day

Hydraulic conductivity [ft/min]: 8.36×10^{-3} = 12.04 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 1.24×10^{-4}

TMW-78 Drift Corrected and TMW-16 Transducer Corrected

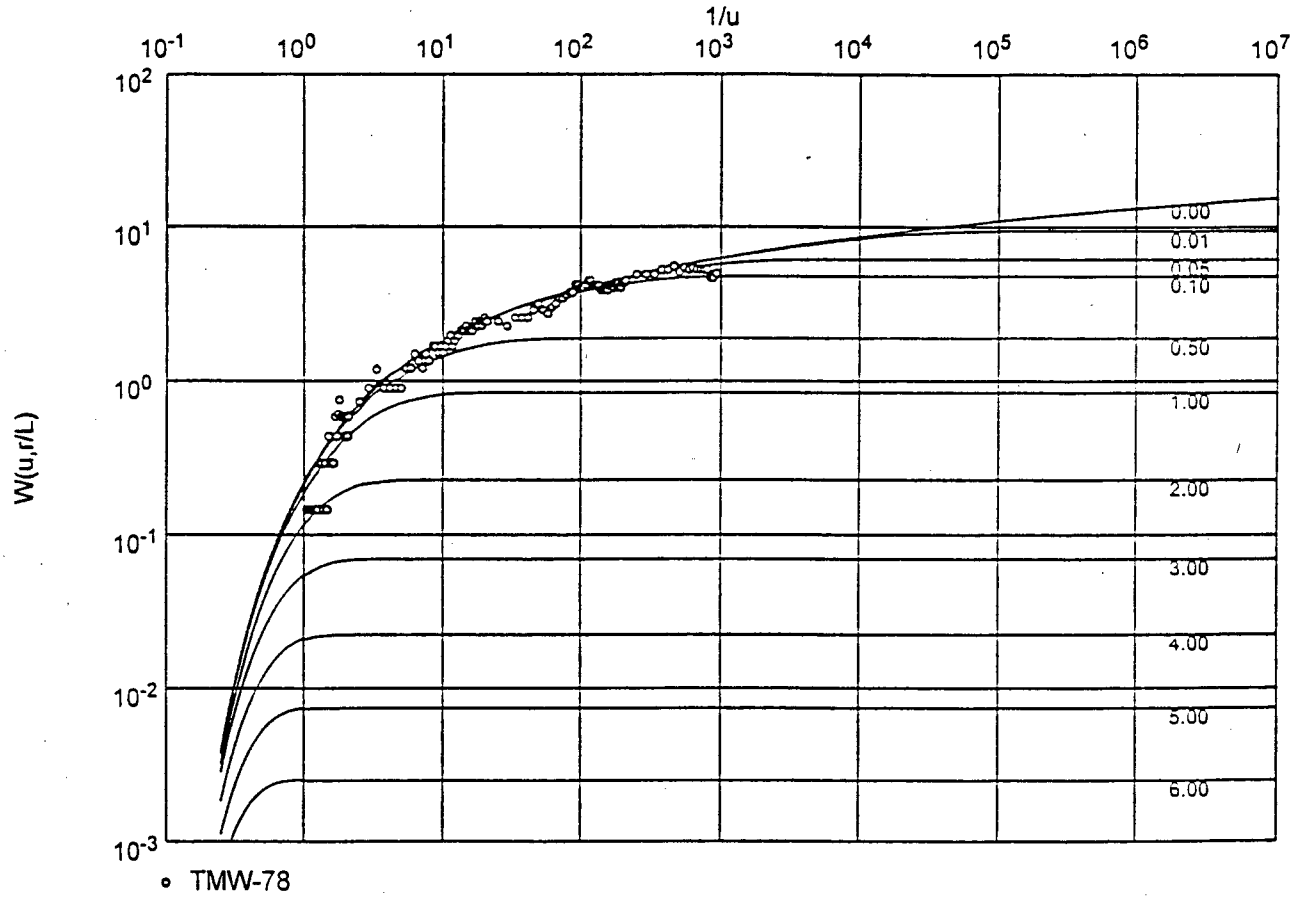


Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No. | Test conducted on: TMW- 17

TMW-17 Drift Corrected and TMW-16 Transducer Corrected

Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: 1.93×10^{0} = 2779.2 ft^2/day

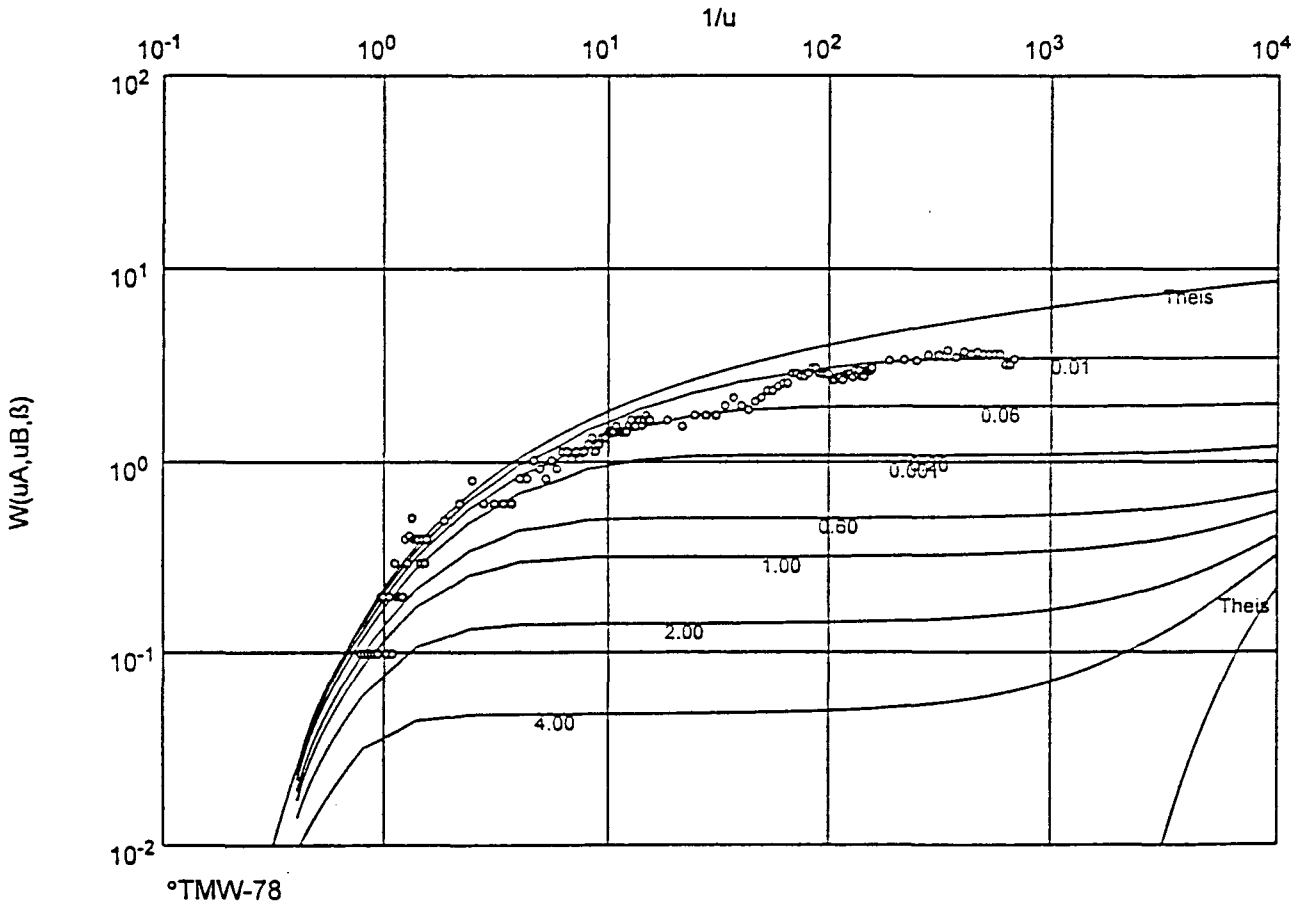
Hydraulic conductivity [ft/min]: 5.52×10^{-2} = 79.5 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 1.81×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Sweetwater Evaluated by: RCB | Date: 09.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-17 Drift Corrected and TMW-16 Transducer Corrected	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 1.30×10^{0} = 1872 ft^2/day

Hydraulic conductivity [ft/min]: 3.73×10^{-2} = 53.71 ft/day

Aquifer thickness [ft]: 35.00

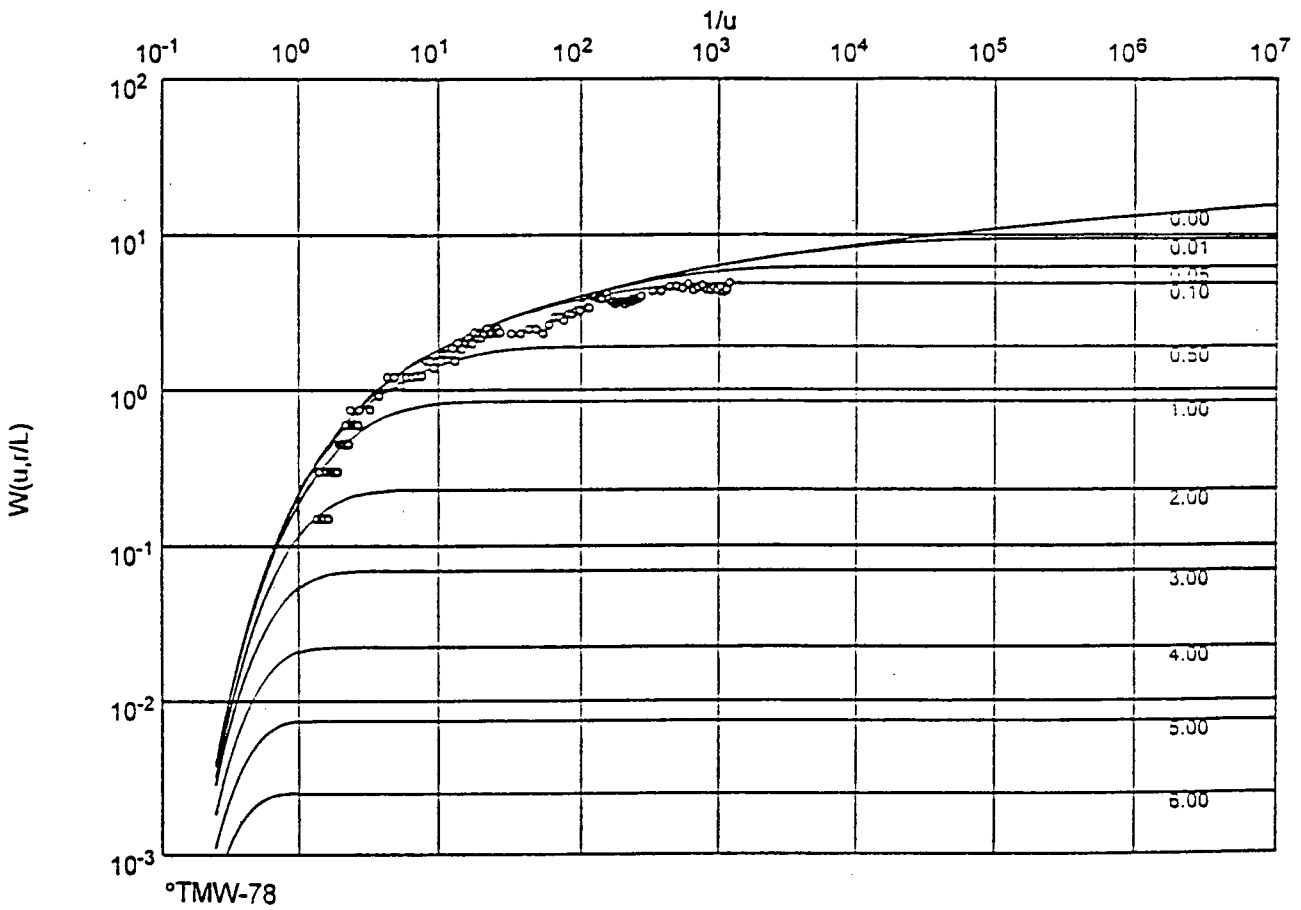
Storativity: 1.65×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	Page 1 Project: Sweetwater Evaluated by: RCB Date: 09.01.1997

Pumping Test No. | Test conducted on: TMW-17

TMW-78 Drift Corrected and TMW-29 Transducer Corrected

Discharge 7.50 U.S.gal/min



Transmissivity [ft²/min]: 1.97×10^{0} = 2836.8 ft^2/day

Storativity: 1.42×10^{-4}

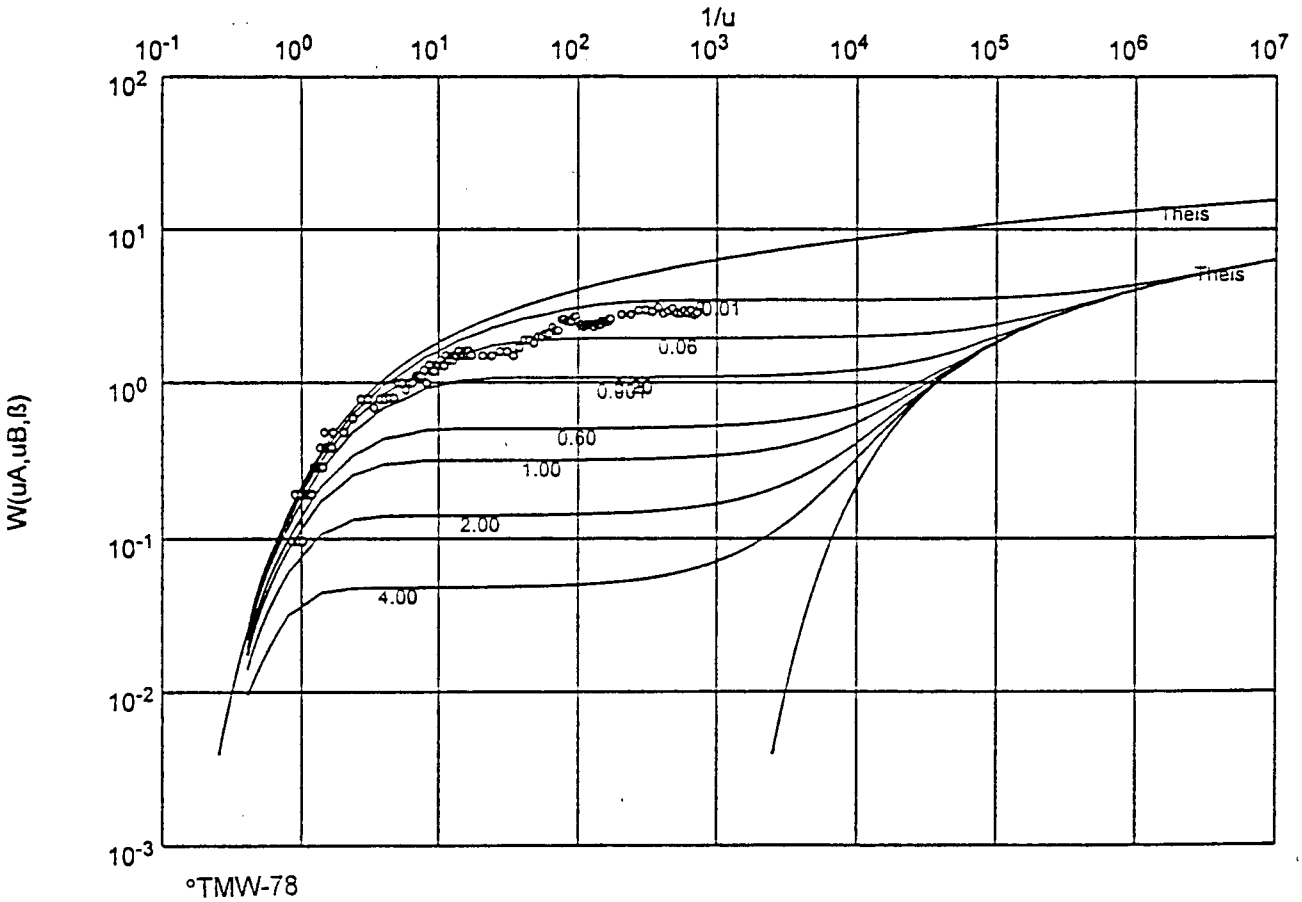
Conductivity = 81.05 ft/day

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Page 1 Project: Sweetwater Evaluated by: RCB | Date: 09.01.1997

Pumping Test No. | Test conducted on: TMW-17

TMW-78 Drift Corrected and TMW-29 Transducer Corrected

Discharge 7.50 U.S.gal/min

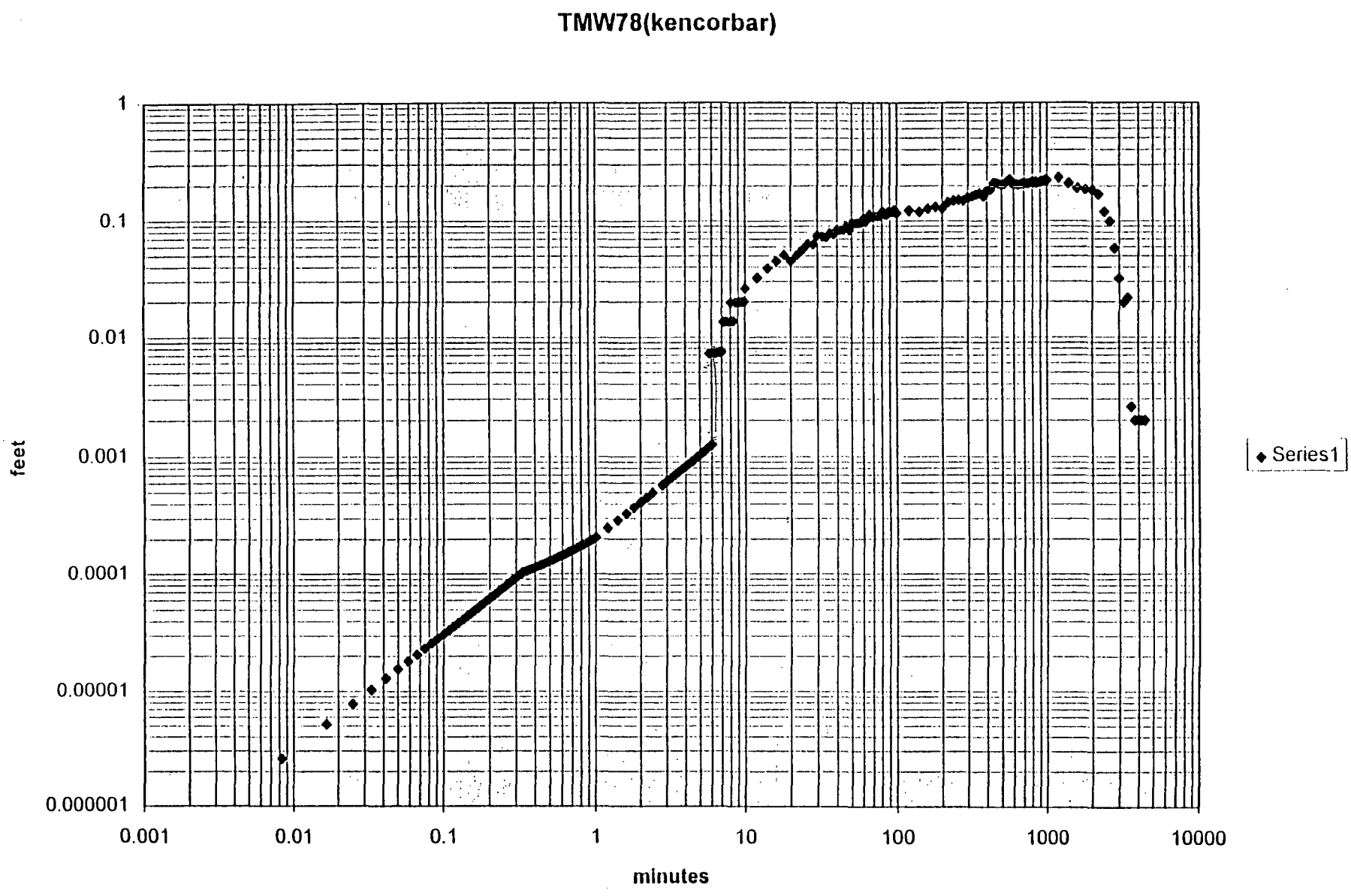


Transmissivity [ft²/min]: 1.27×10^{0} = 1828.8 ft^2/day

Hydraulic conductivity [ft/min]: 3.63×10^{-2} = 52.3 ft/day

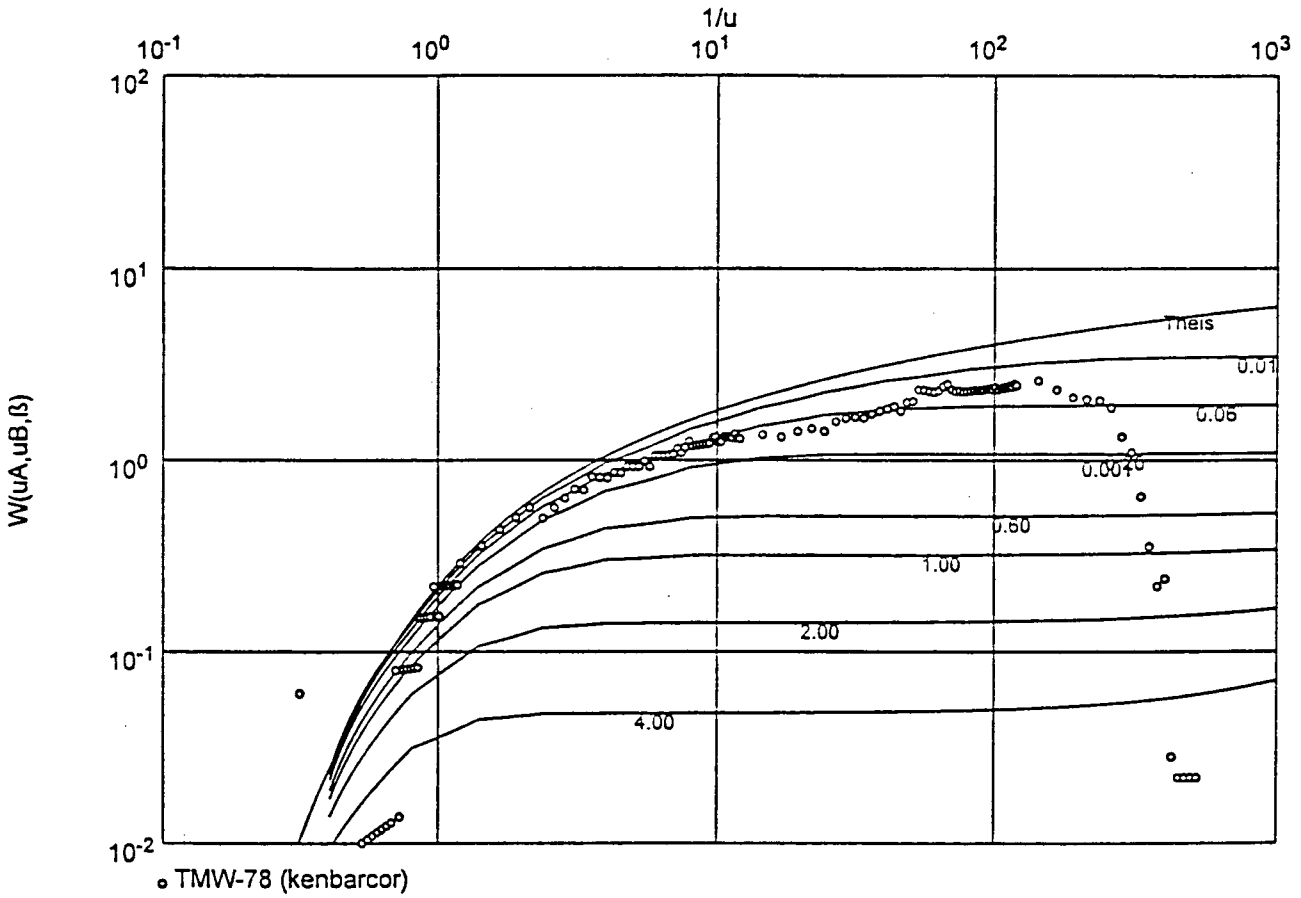
Aquifer thickness [ft]: 35.00

Storativity: 1.46×10^{-4}


TMW78(kencorbar)
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
feet
0.001
0.01
0.1
1
10
100
1000
10000
minutes
Series1

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	kencot bar. correction, Page 1 Project: Sweetwater Evaluated by: RCB | Date: 15.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-78	
Discharge 7.50 U.S.gal/min	



Transmissivity [ft²/min]: 8.81×10^{-1} = 1268.6 ft^2/day

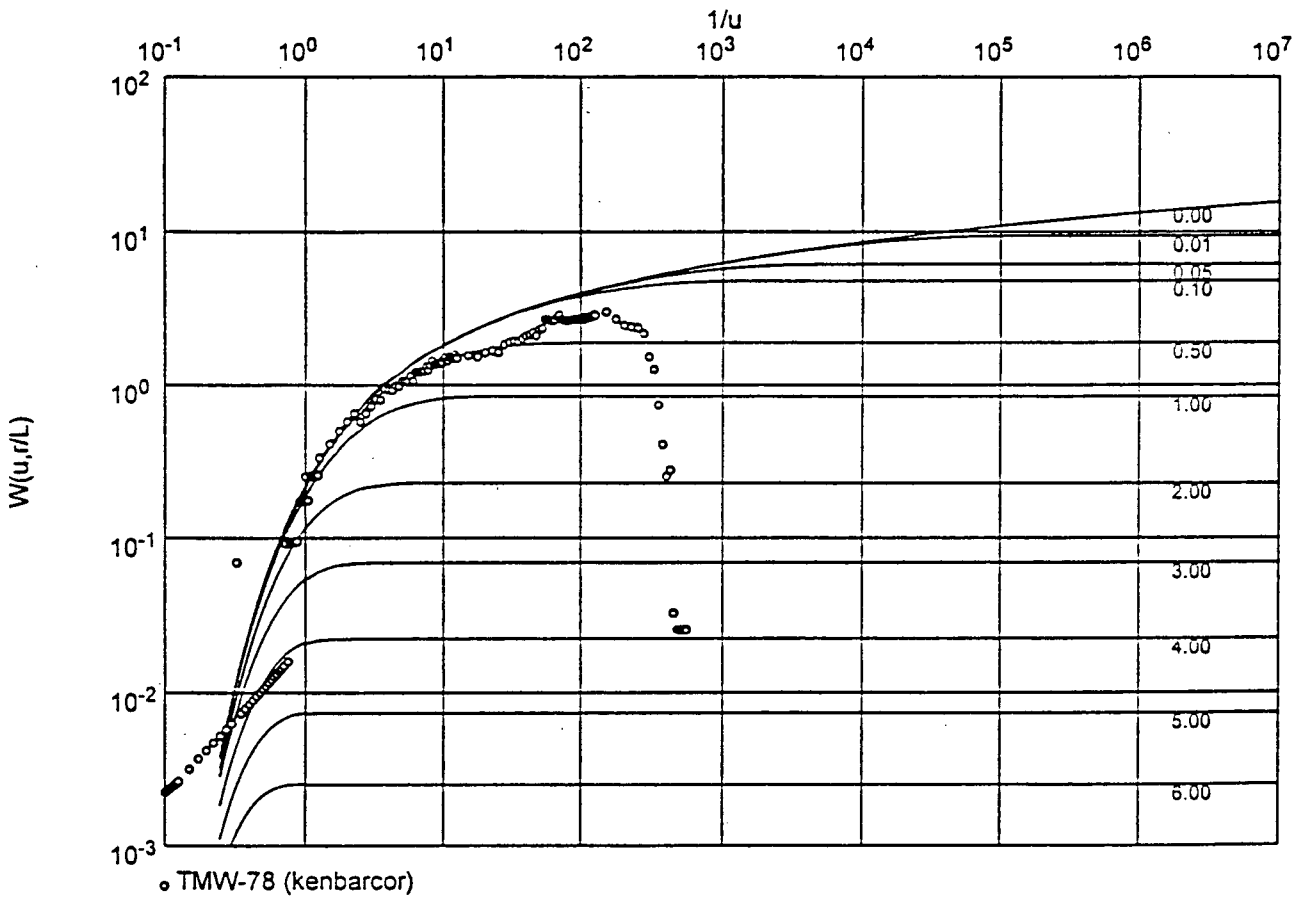
Hydraulic conductivity [ft/min]: 2.51×10^{-2} = 36.1 ft/day

Aquifer thickness [ft]: 35.00

Storativity: 1.44×10^{-4}

Shepherd Miller, Inc 2460 West 26th Ave, # 430C Denver, CO 80211 303-477-5338	Pumping test analysis HANTUSH's method Leaky aquifer, no aquitard storage	kencot bar. correction, Page 1 Project: Sweetwater Evaluated by: RCB | Date: 15.01.1997

Pumping Test No.	Test conducted on: TMW-17
TMW-78	
Discharge 7.50 U.S.gal/min	

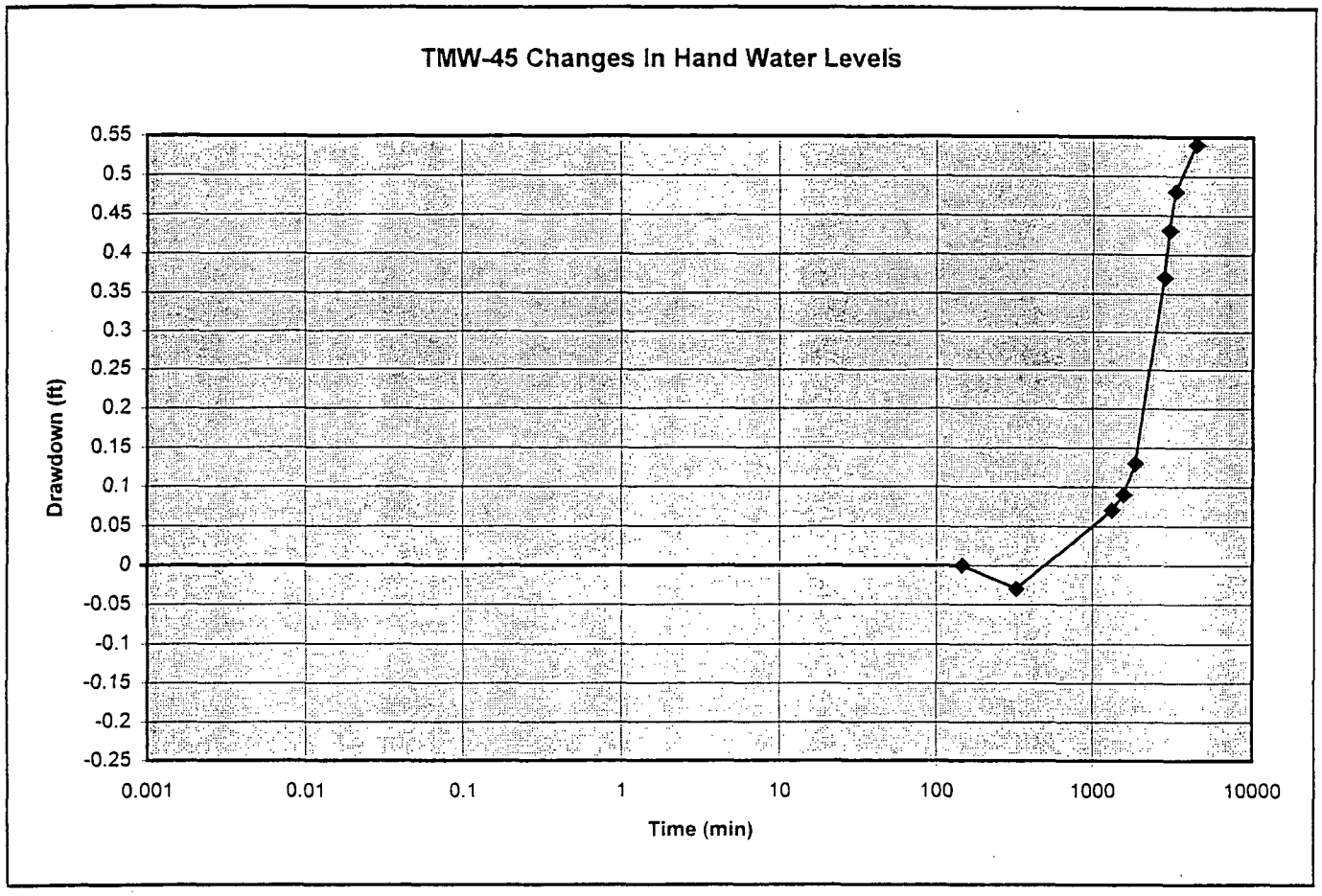


Transmissivity [ft²/min]: 1.01×10^{0} = 1454.4 ft^2/day

Hydraulic conductivity [ft/min]: 2.89×10^{-2} = 41.6 ft/day

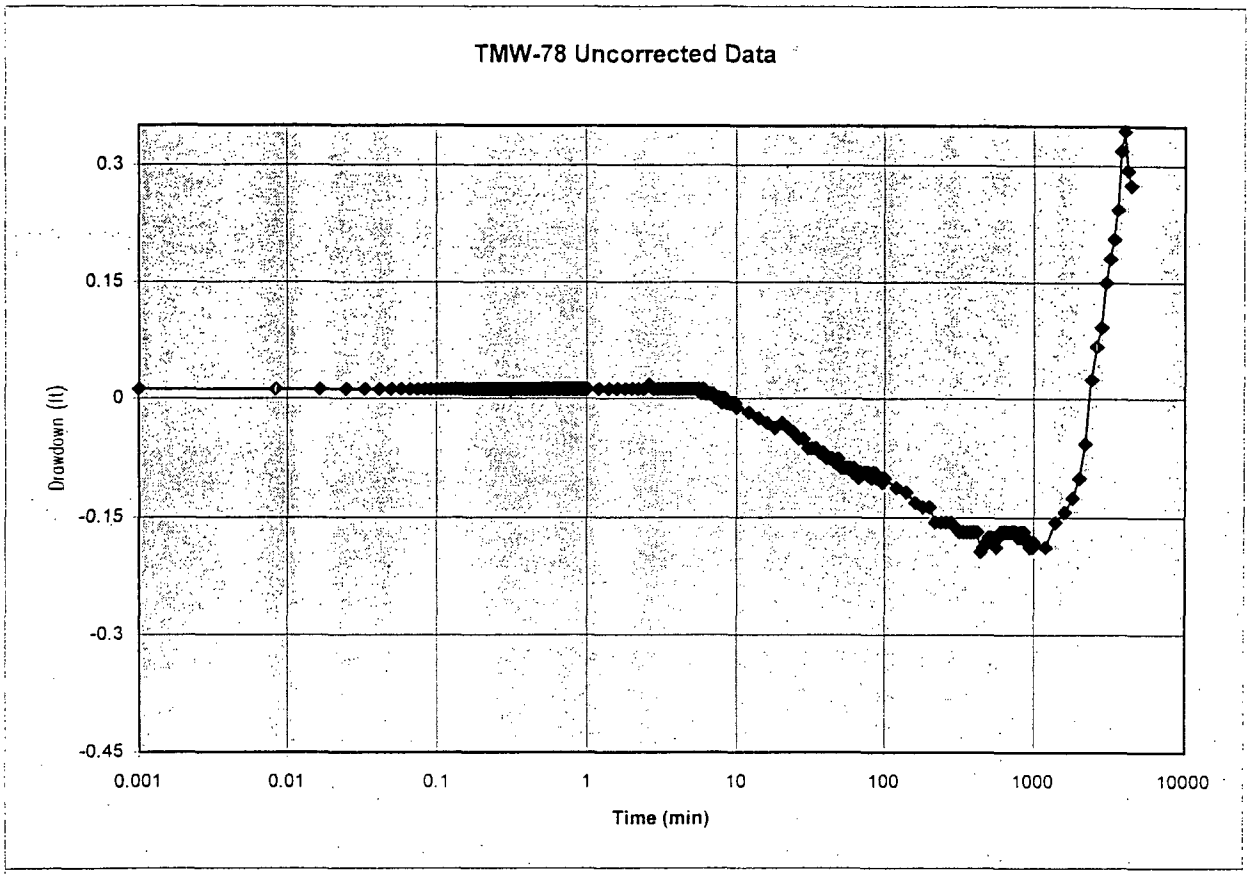
Aquifer thickness [ft]: 35.00

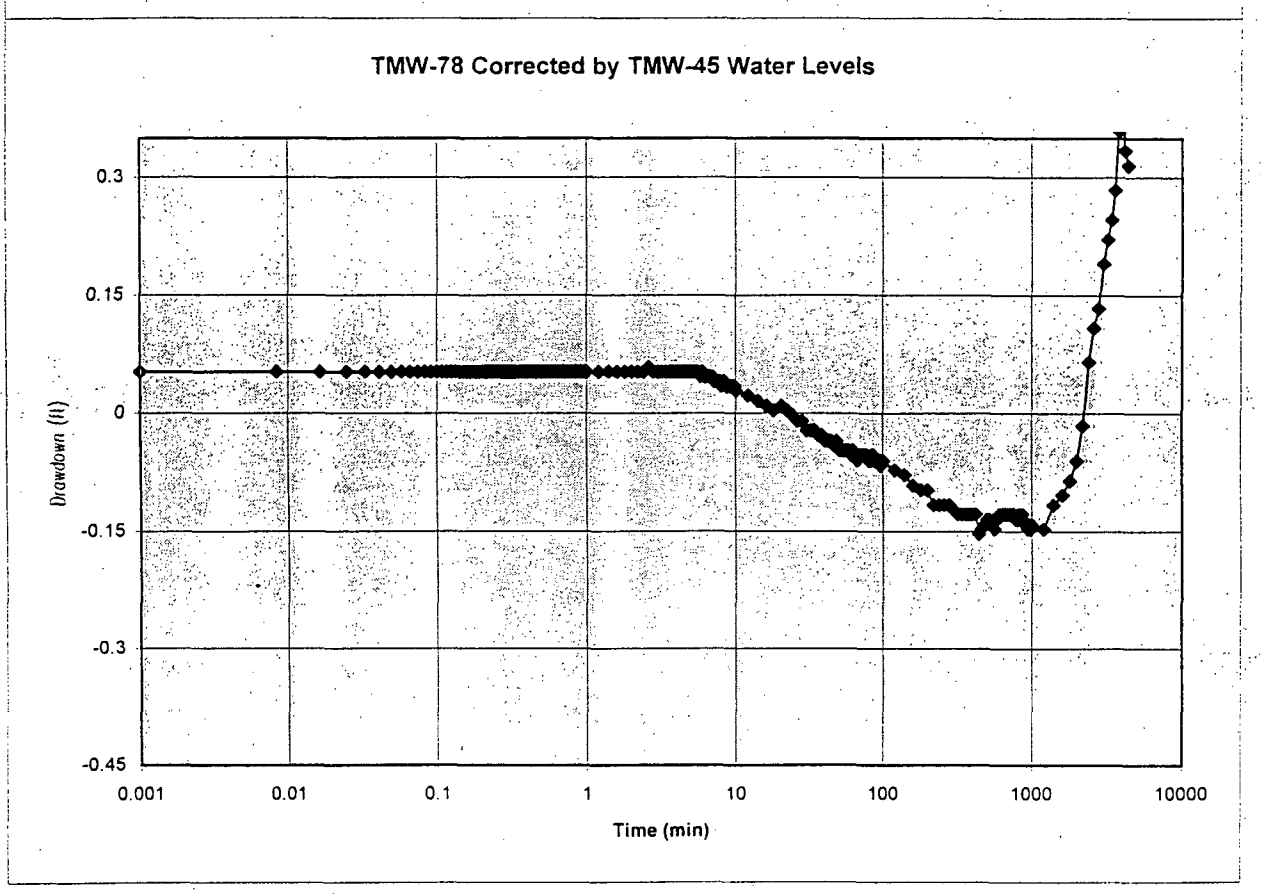
Storativity: 1.58×10^{-4}

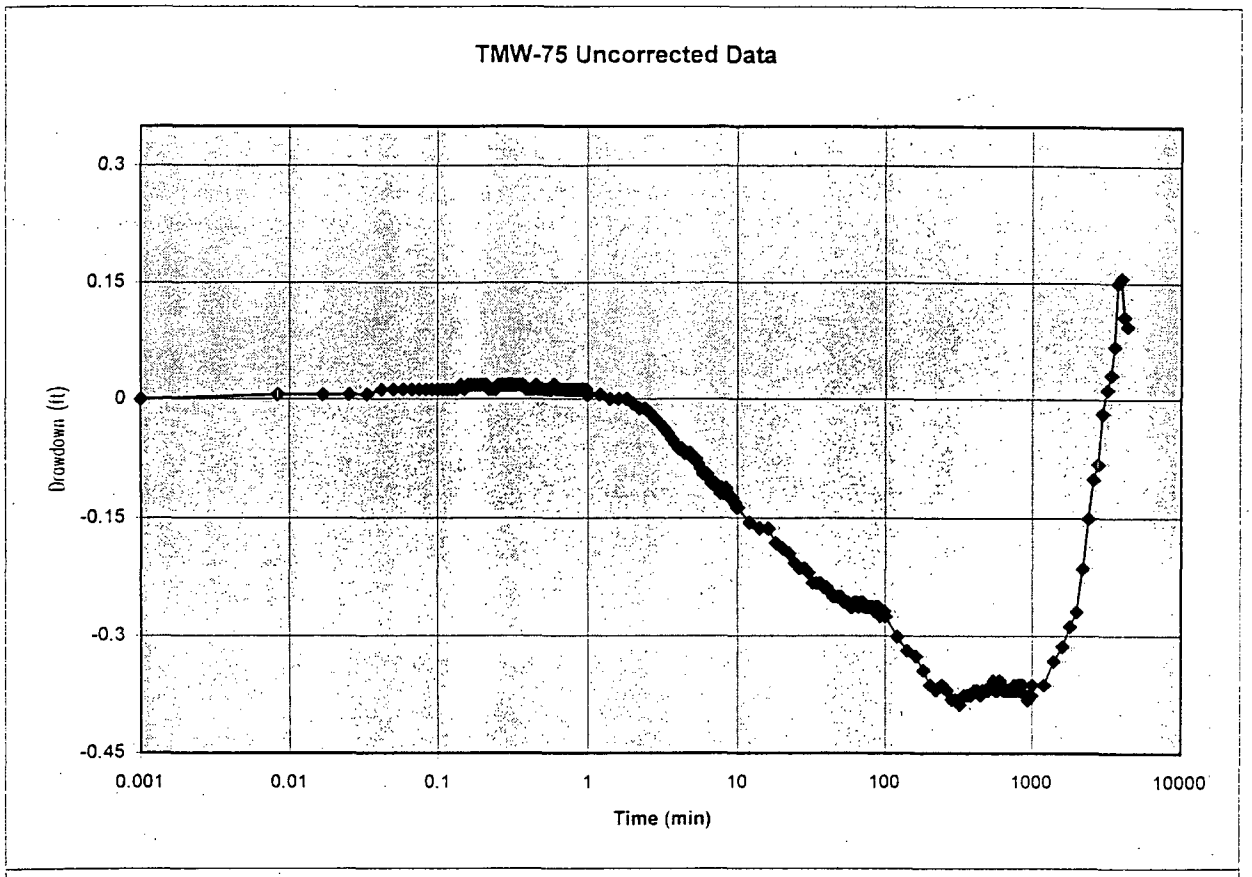

TMW-45 Changes In Hand Water Levels
Drawdown (ft)
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
-0.25
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

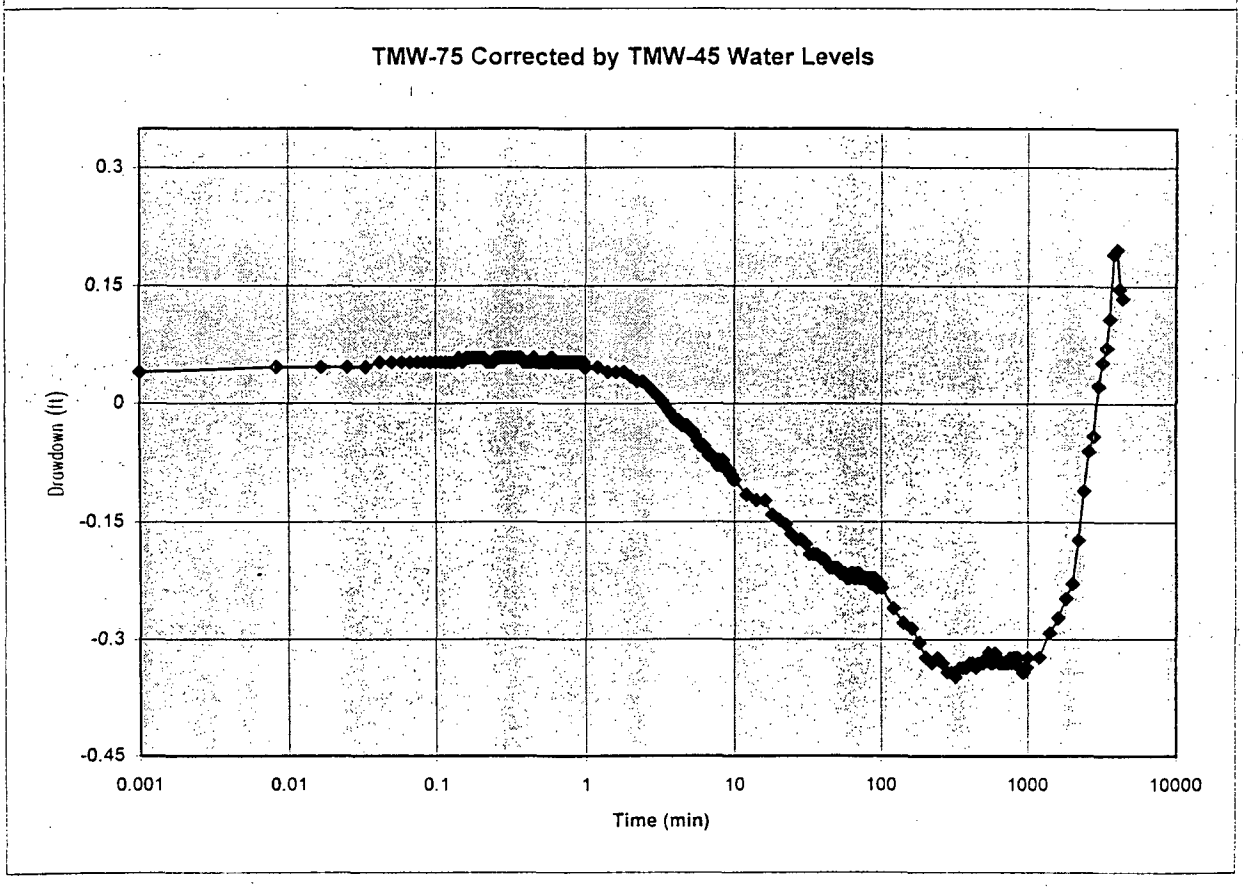
APPENDIX F

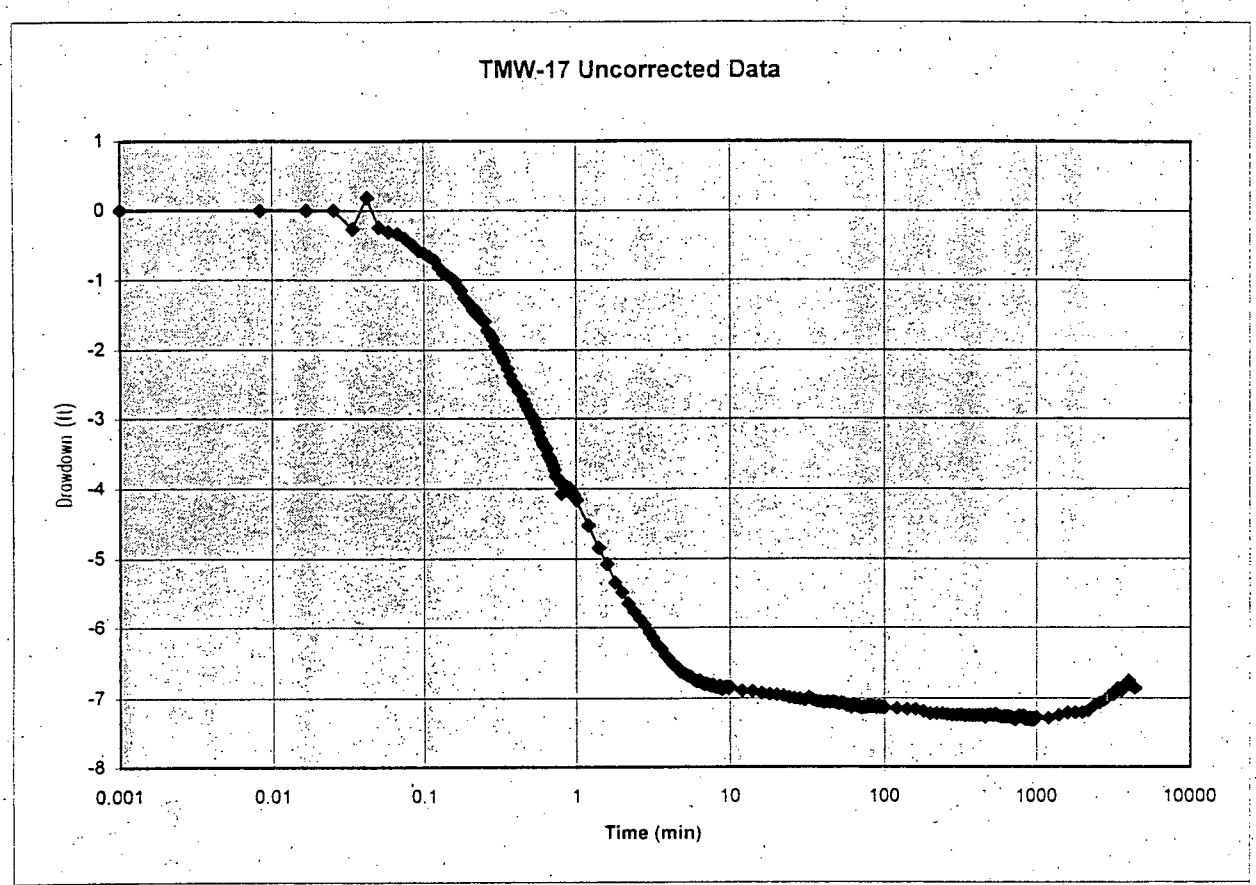
ORIGINAL HAND WATER LEVEL DATA

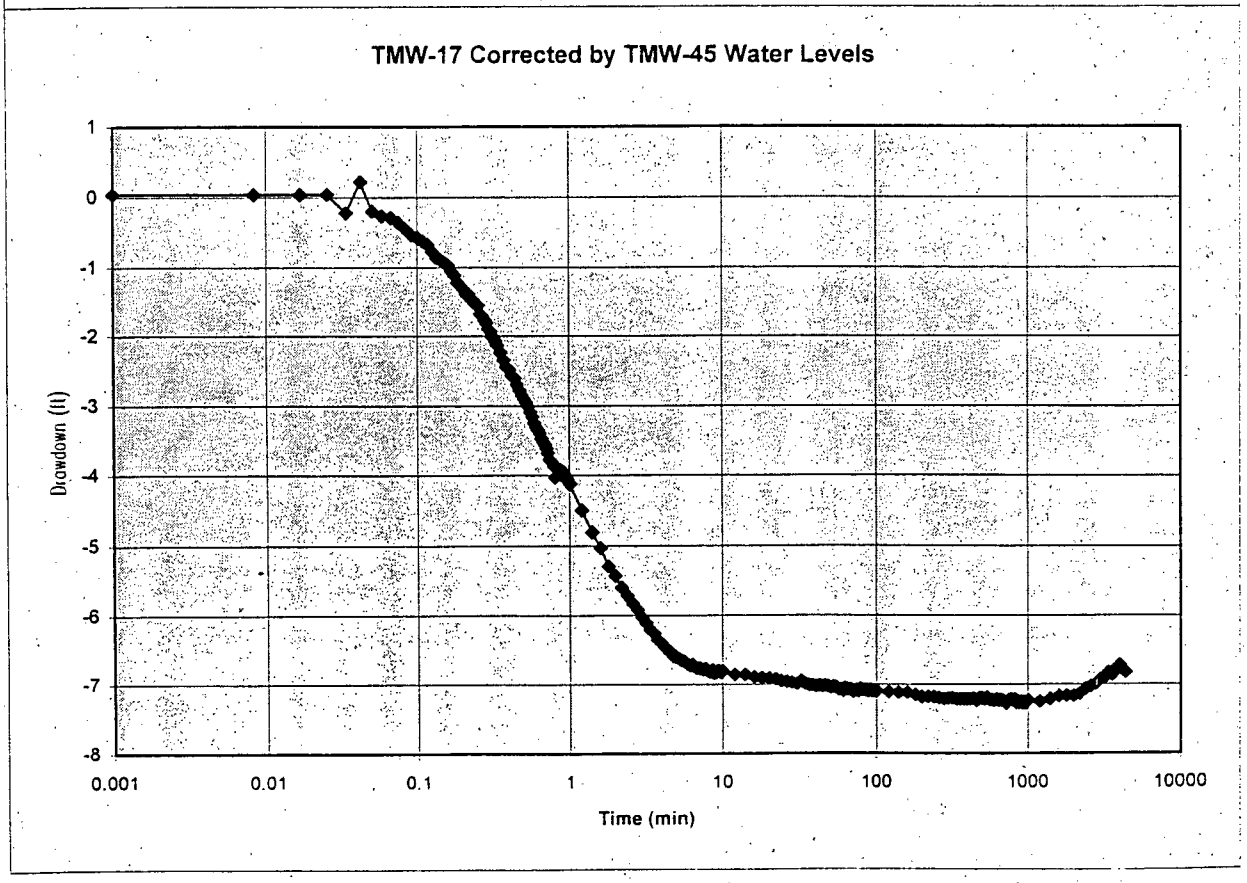

TMW-78 Uncorrected Data
0.3
0.15
0
-0.15
-0.3
-0.45
Drawdown (ft)
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-78 Corrected by TMW-45 Water Levels
0.3
0.15
0
-0.15
-0.3
-0.45
Drawdown (ft)
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-75 Uncorrected Data
0.3
0.15
0
-0.15
-0.3
-0.45
Drawdown (ft)
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

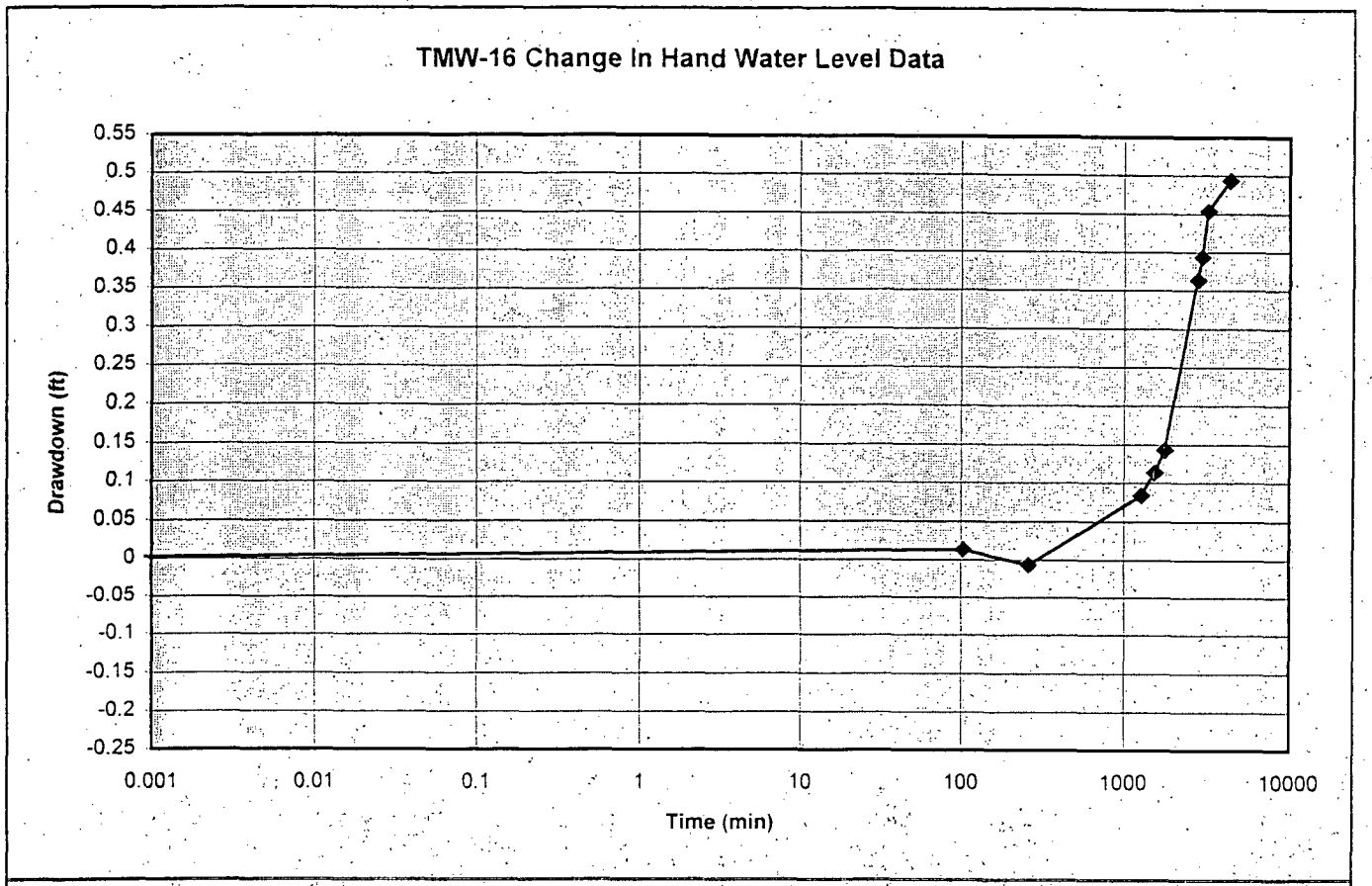

TMW-75 Corrected by TMW-45 Water Levels
0.3
0.15
0
-0.15
-0.3
-0.45
Drawdown (ft)
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

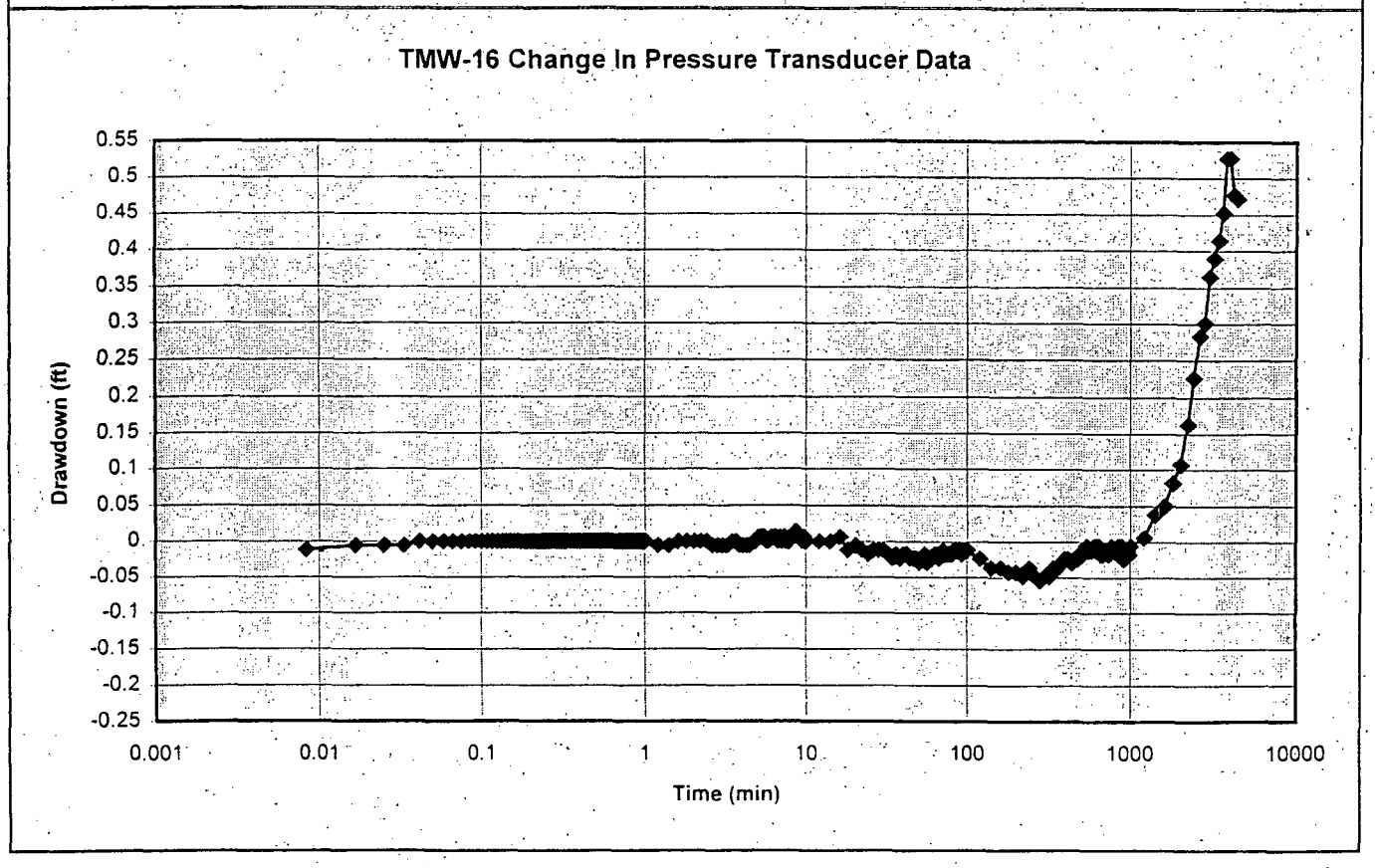

TMW-17 Uncorrected Data
Drawdown (ft)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

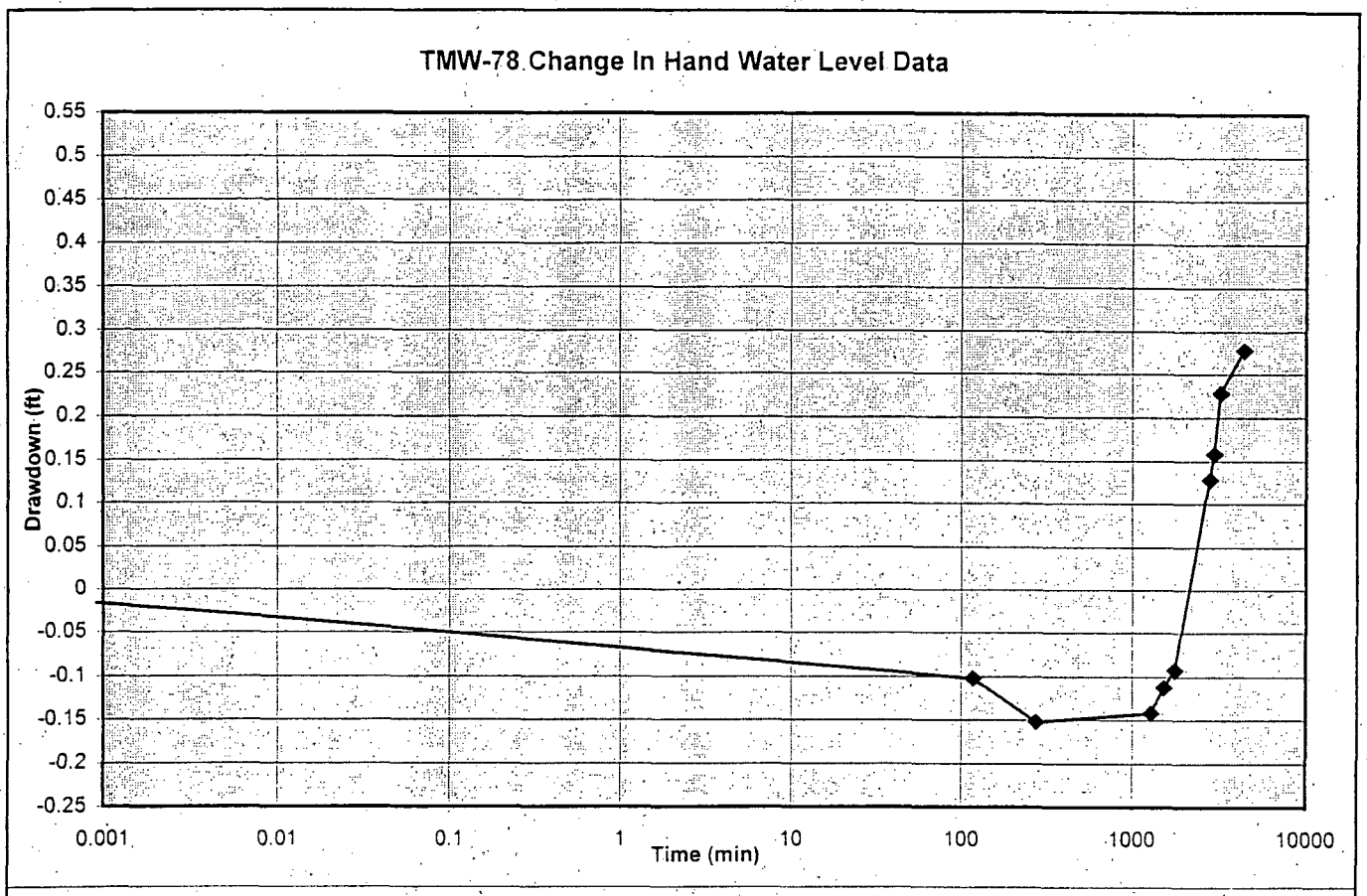

TMW-17 Corrected by TMW-45 Water Levels
Drawdown (ft)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

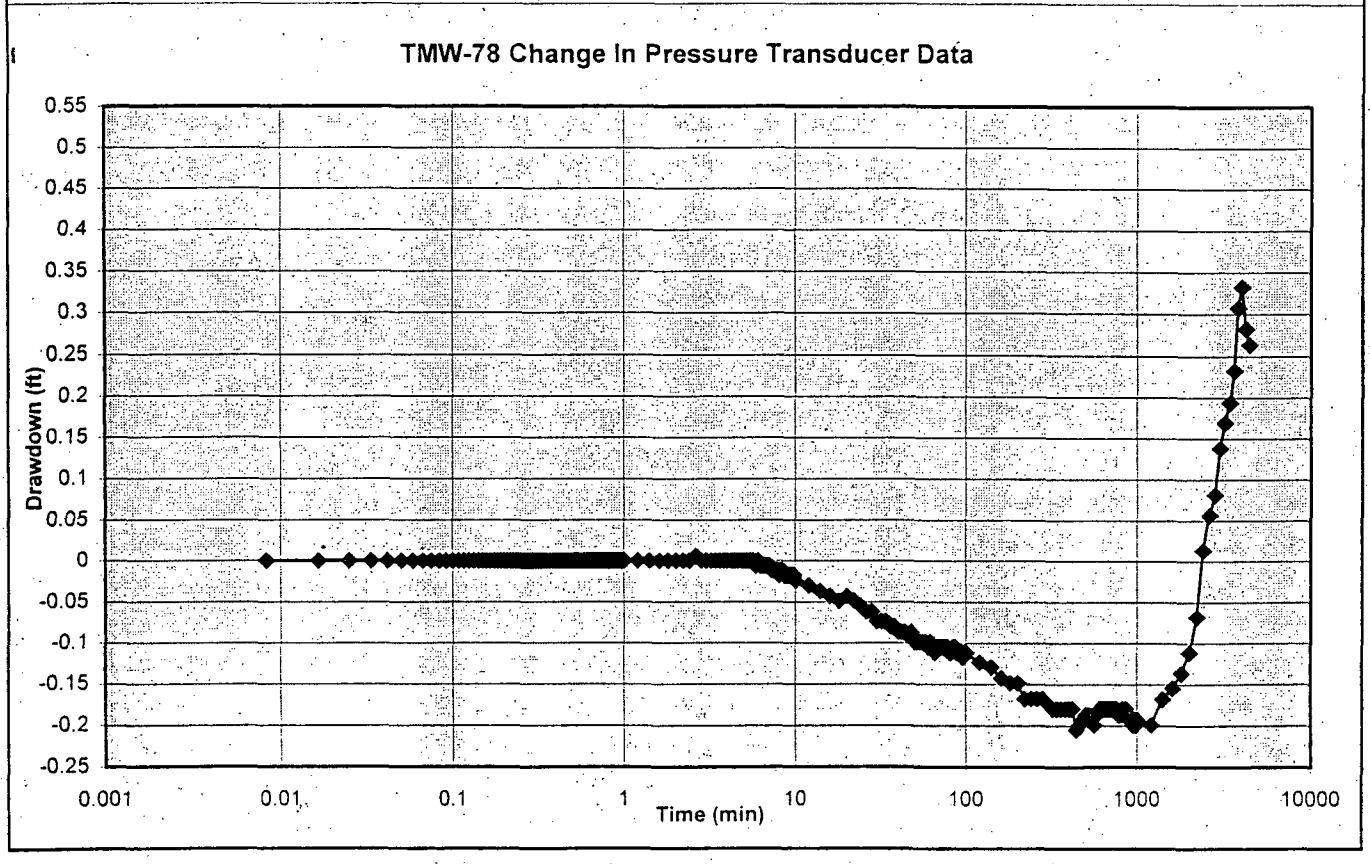
APPENDIX G

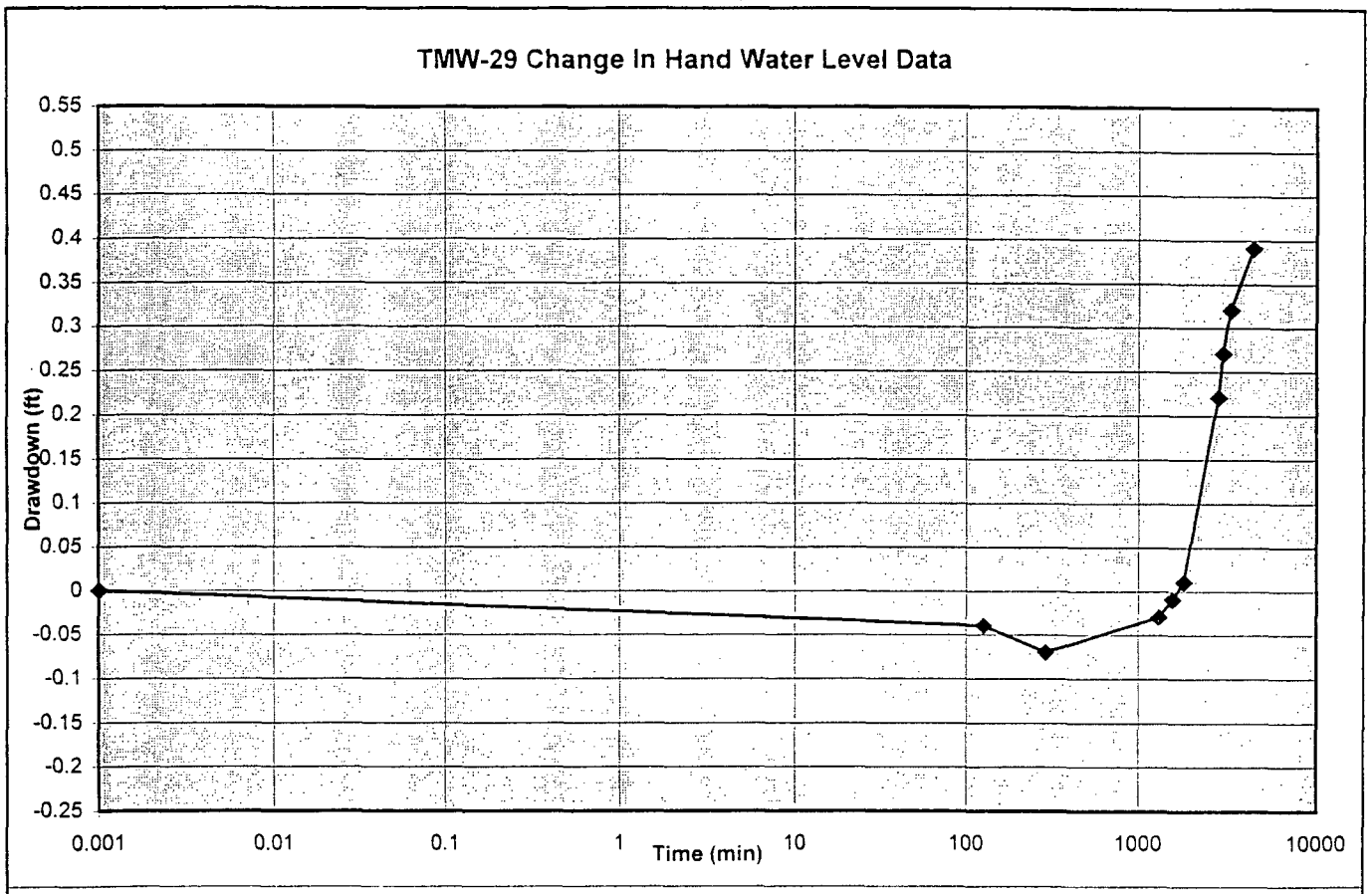
GEOPHYSICAL WELL LOGS

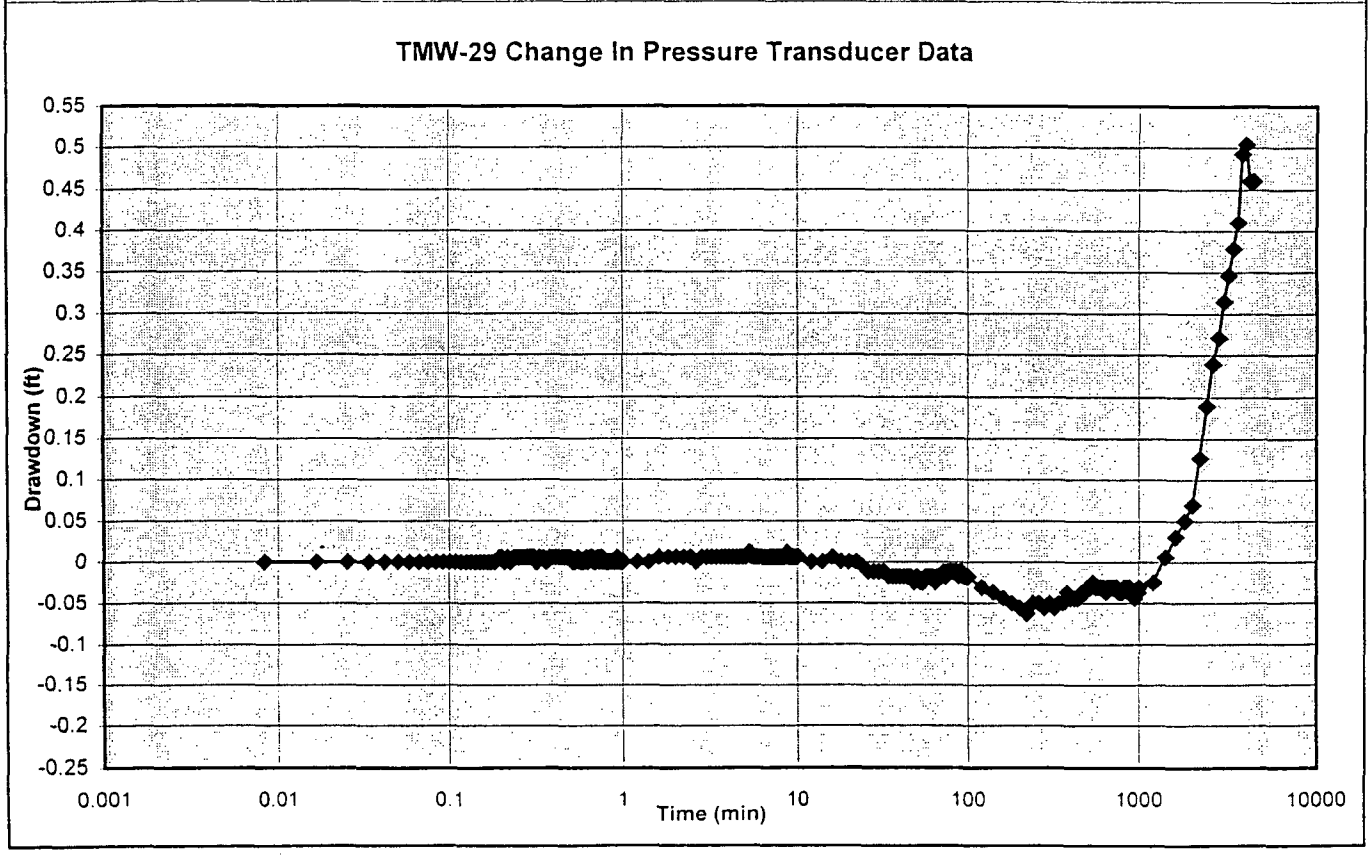

TMW-16 Change In Hand Water Level Data
Drawdown (ft)
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
-0.25
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

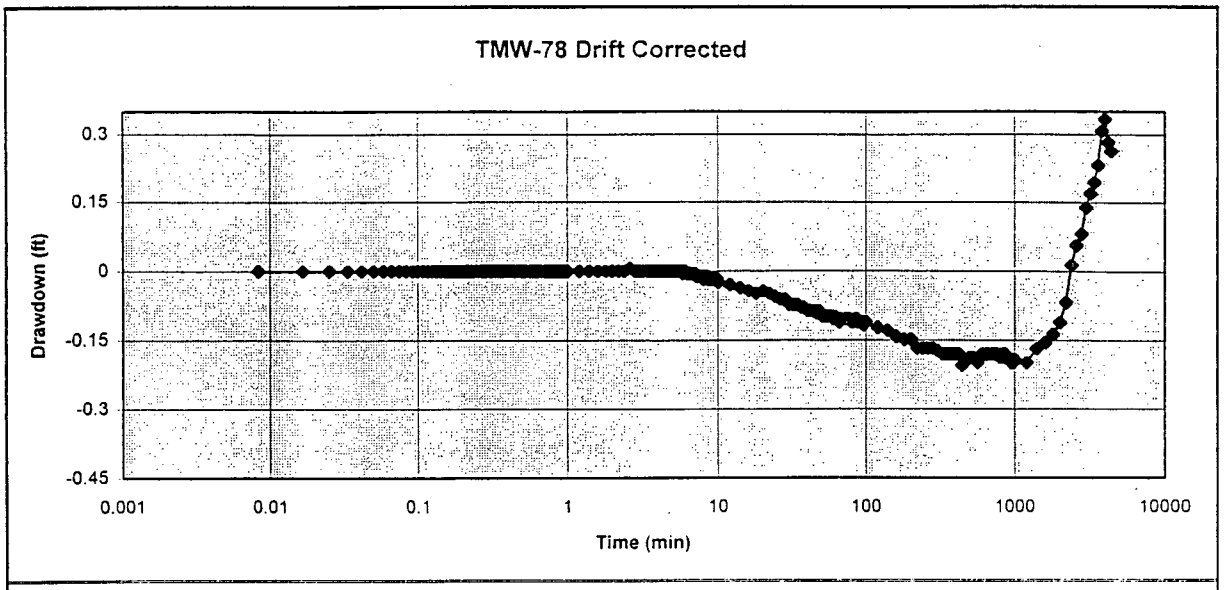

TMW-16 Change In Pressure Transducer Data
Drawdown (ft)
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
-0.25
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

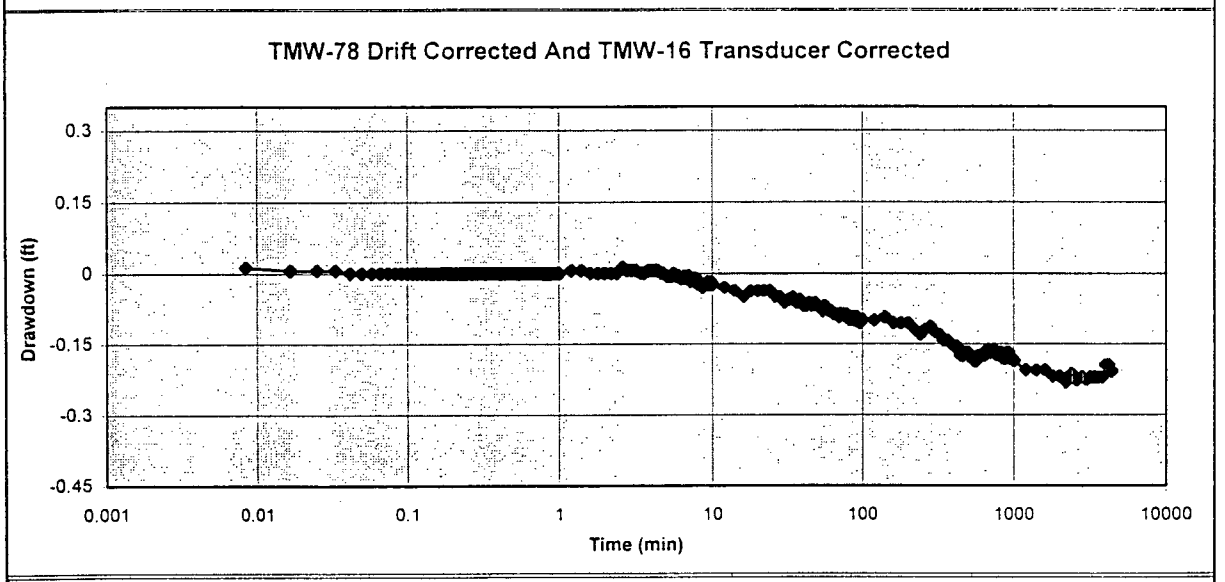

TMW-78 Change In Hand Water Level Data
Drawdown (ft)
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
-0.25
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

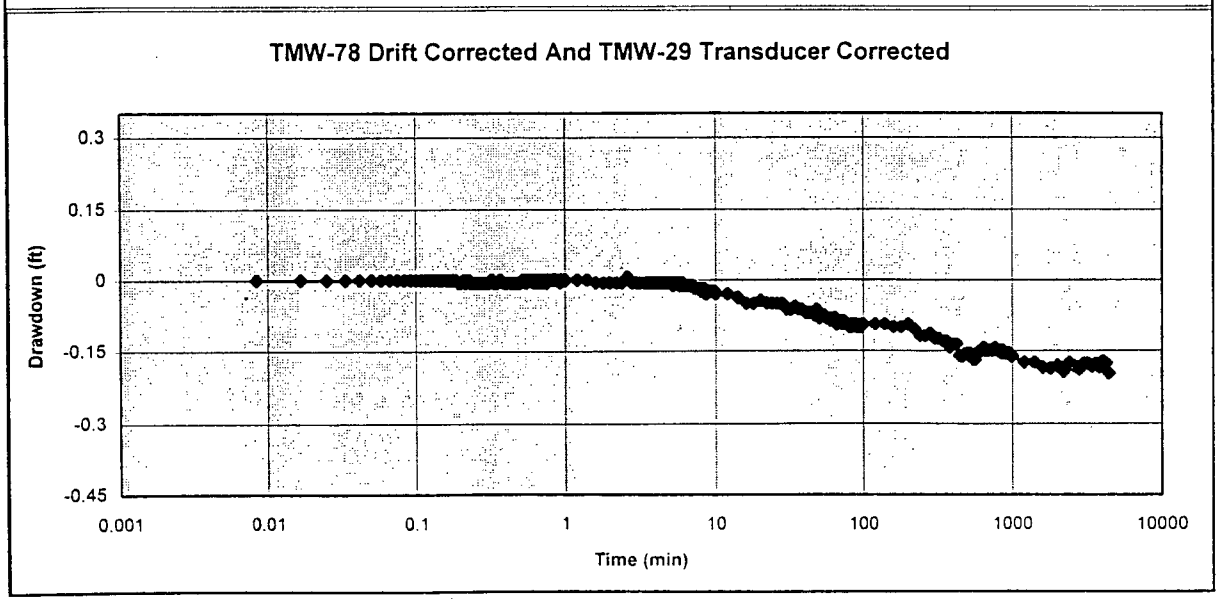

TMW-78 Change In Pressure Transducer Data
Drawdown (ft)
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
-0.25
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

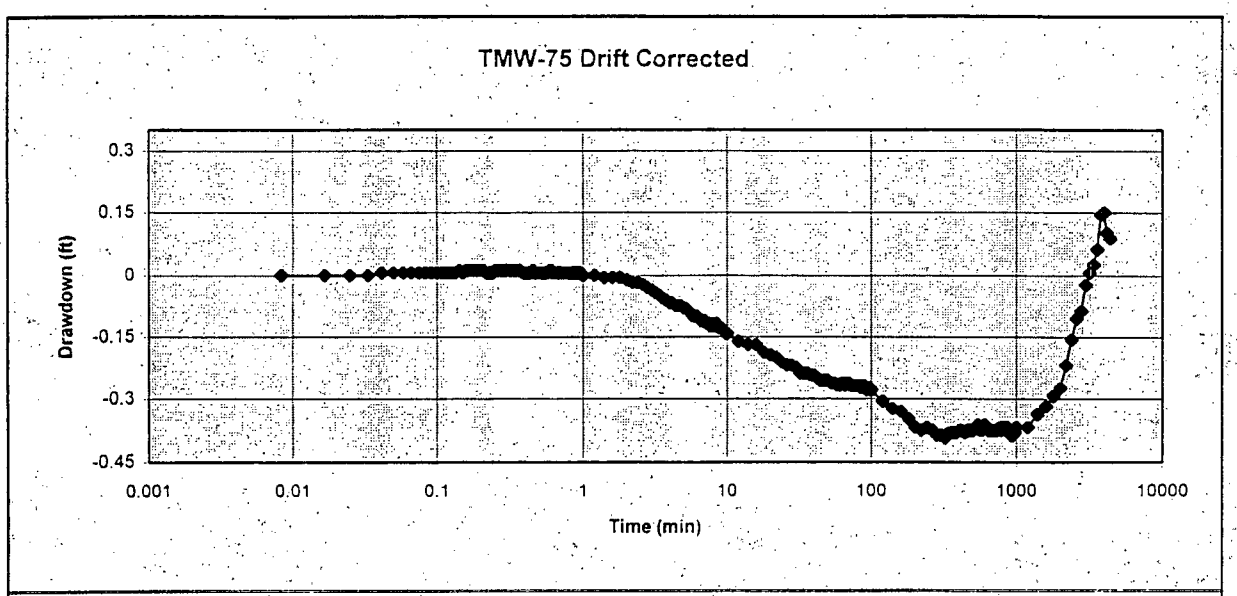

TMW-29 Change In Hand Water Level Data
Drawdown (ft)
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
-0.25
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

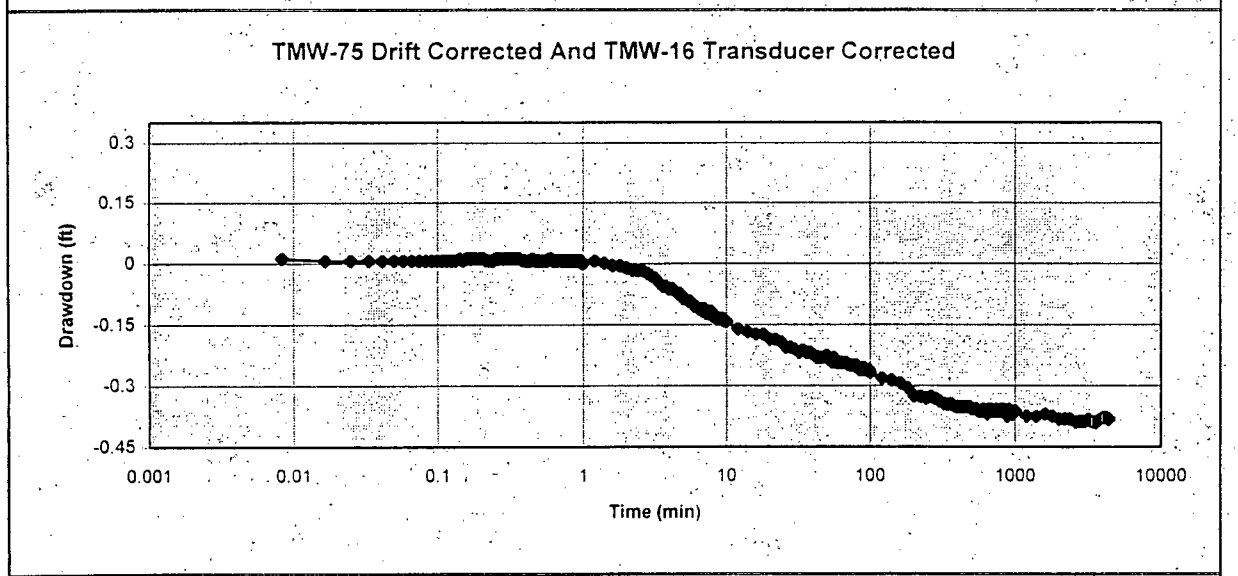

TMW-29 Change In Pressure Transducer Data
Drawdown (ft)
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
-0.25
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

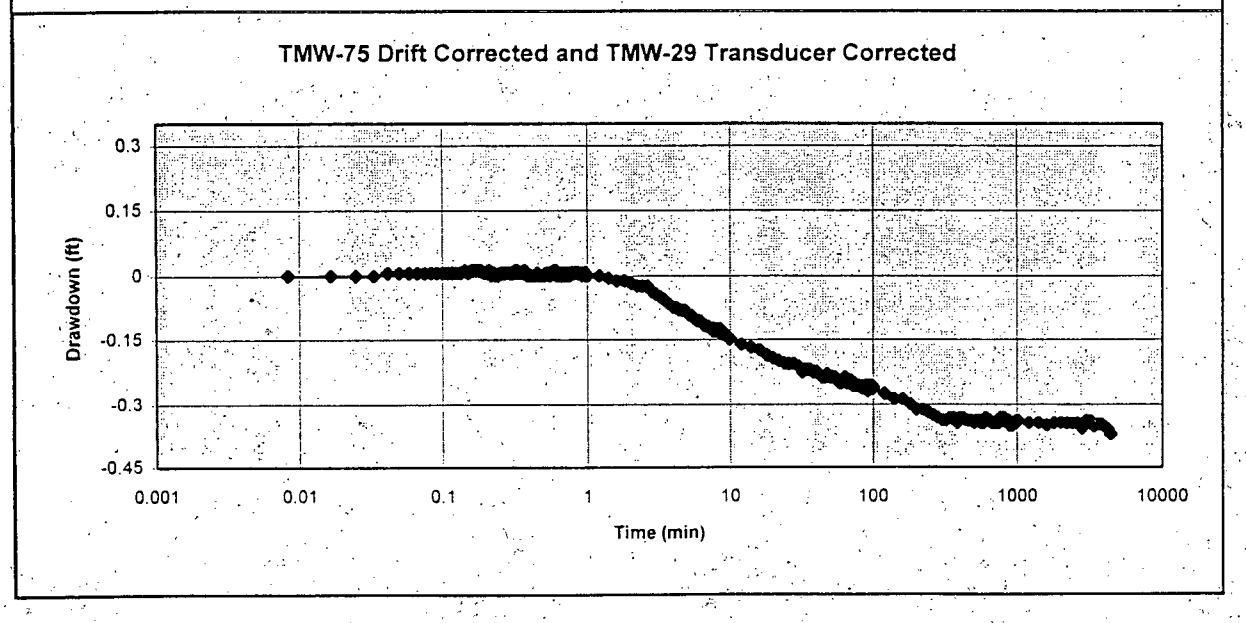

TMW-78 Drift Corrected
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

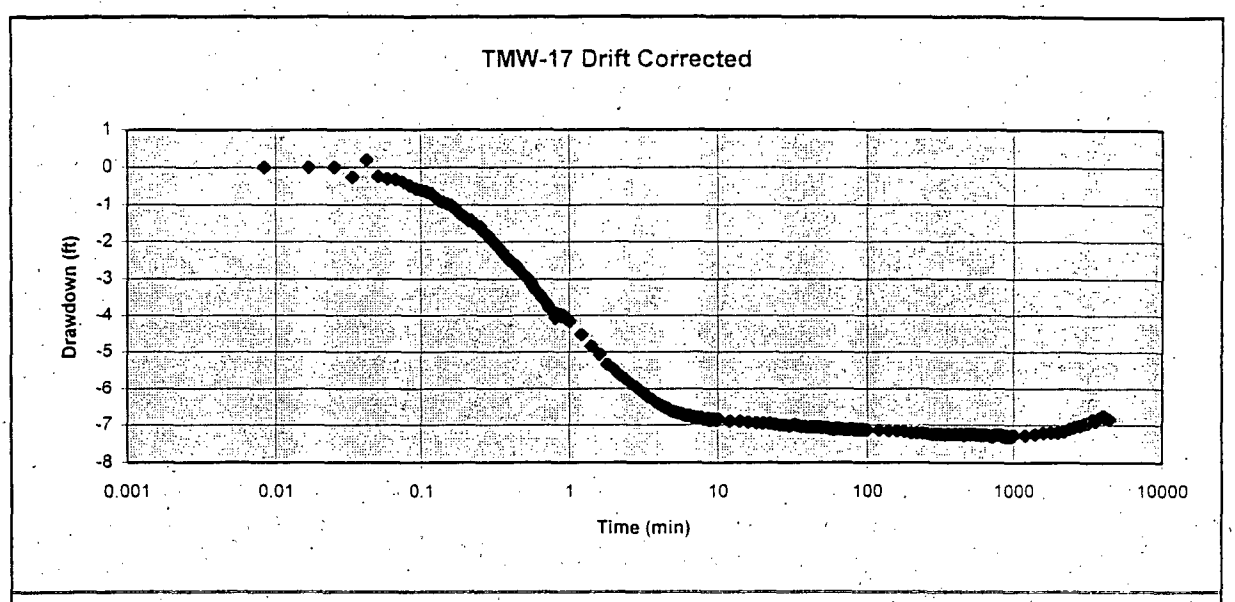

TMW-78 Drift Corrected And TMW-16 Transducer Corrected
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

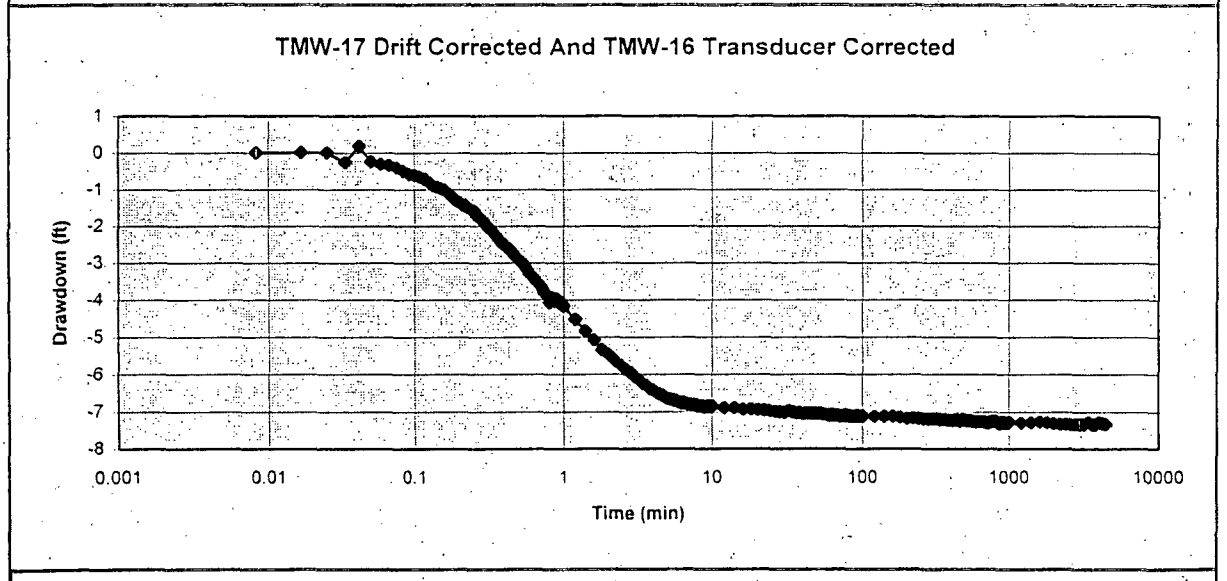

TMW-78 Drift Corrected And TMW-29 Transducer Corrected
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

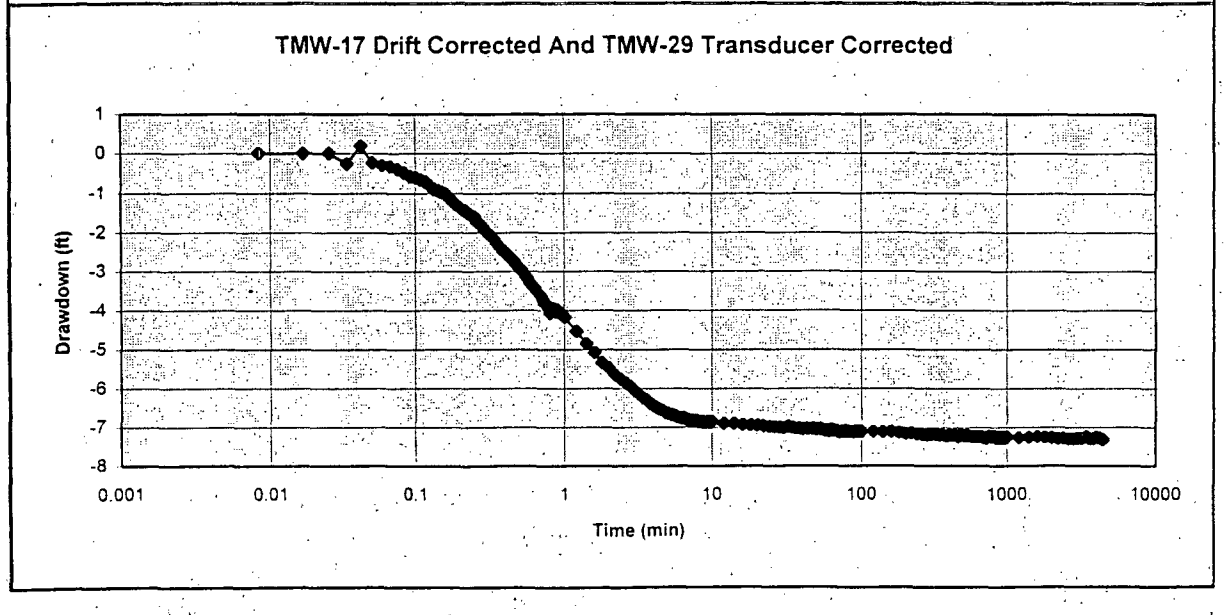

TMW-75 Drift Corrected
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-75 Drift Corrected And TMW-16 Transducer Corrected
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-75 Drift Corrected and TMW-29 Transducer Corrected
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

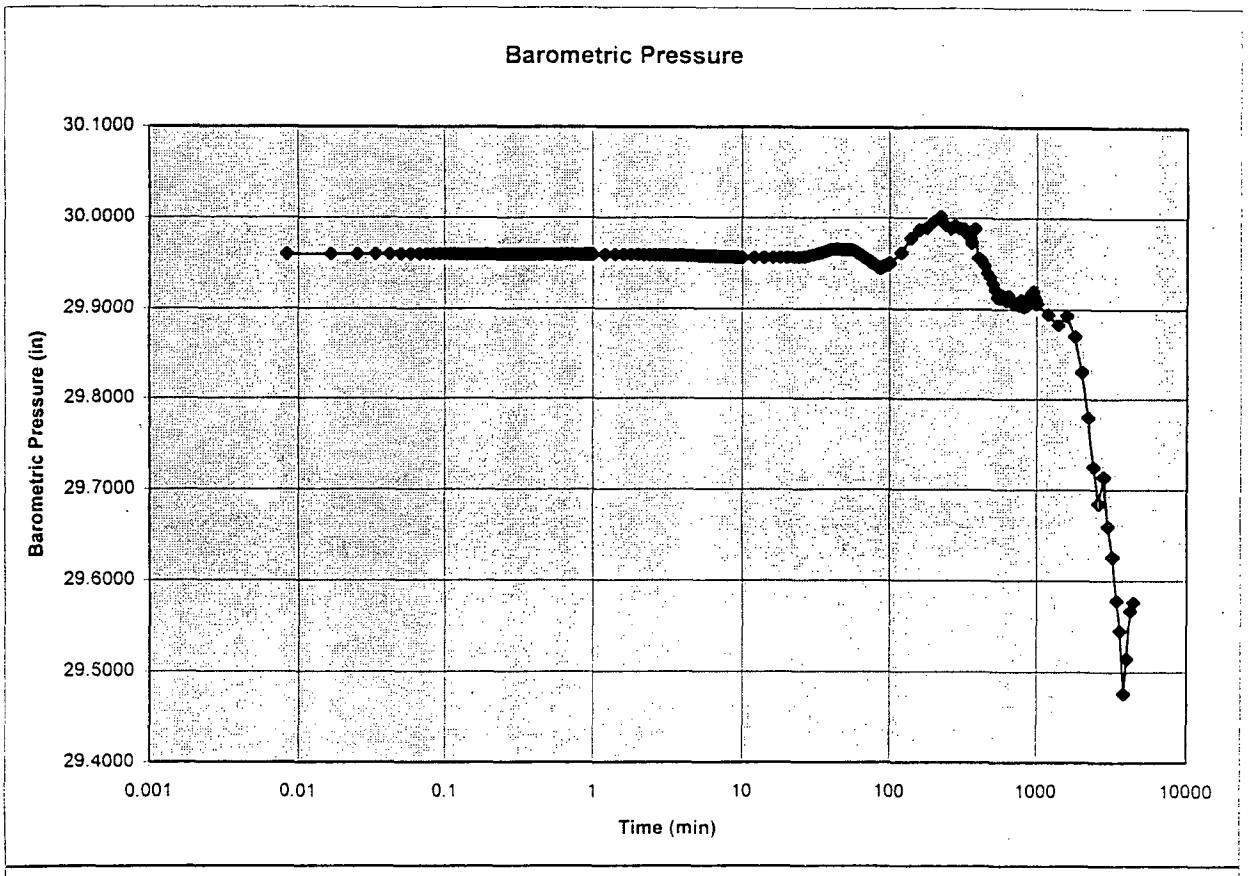

TMW-17 Drift Corrected
Drawdown (ft)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

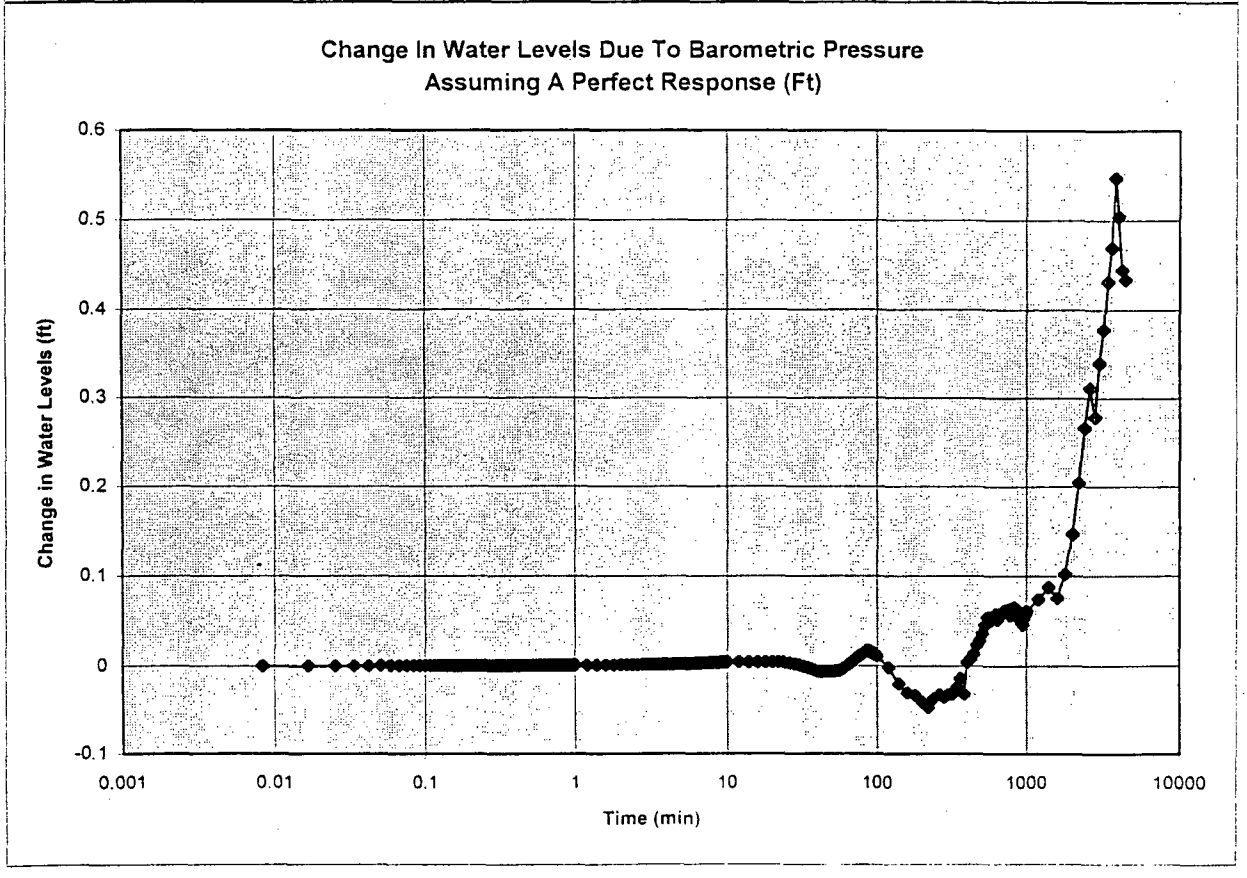

TMW-17 Drift Corrected And TMW-16 Transducer Corrected
Drawdown (ft)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

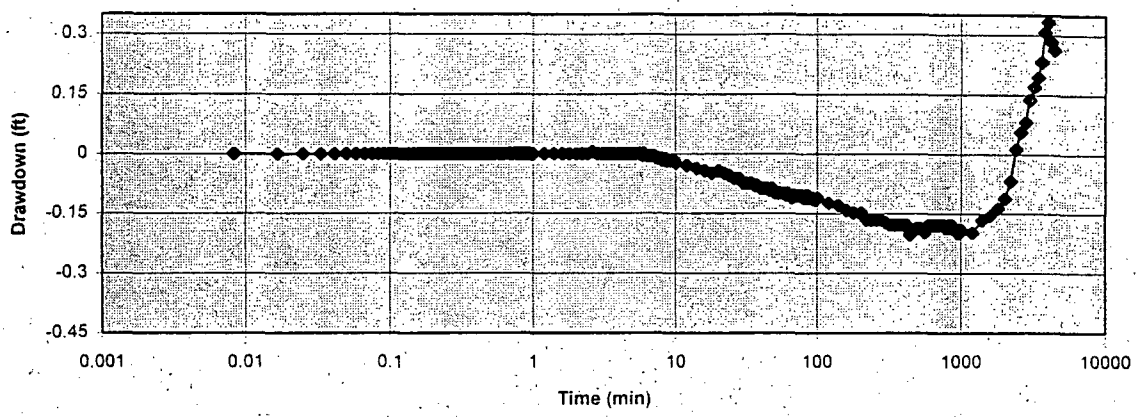

TMW-17 Drift Corrected And TMW-29 Transducer Corrected
Drawdown (ft)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

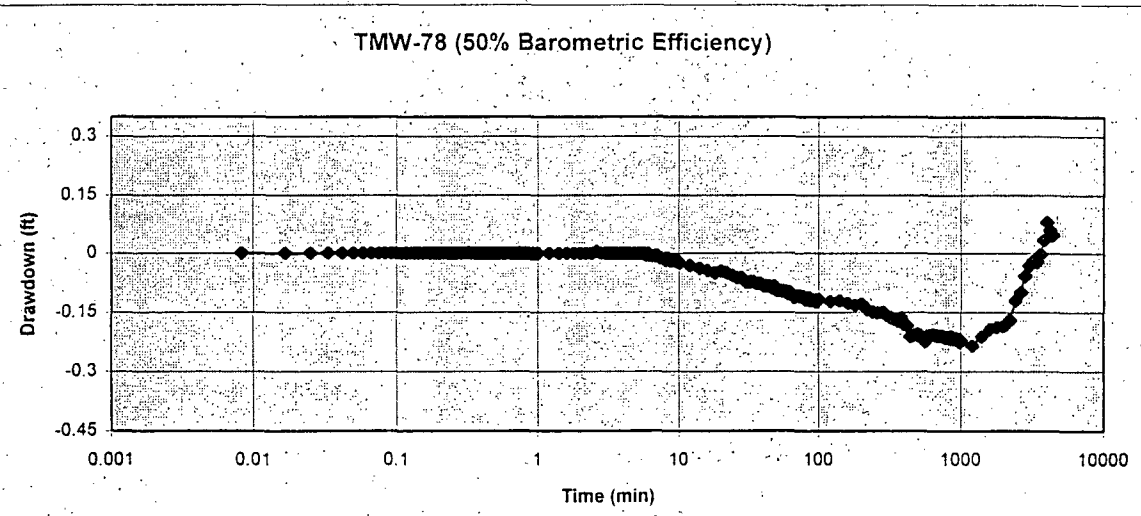
APPENDIX H

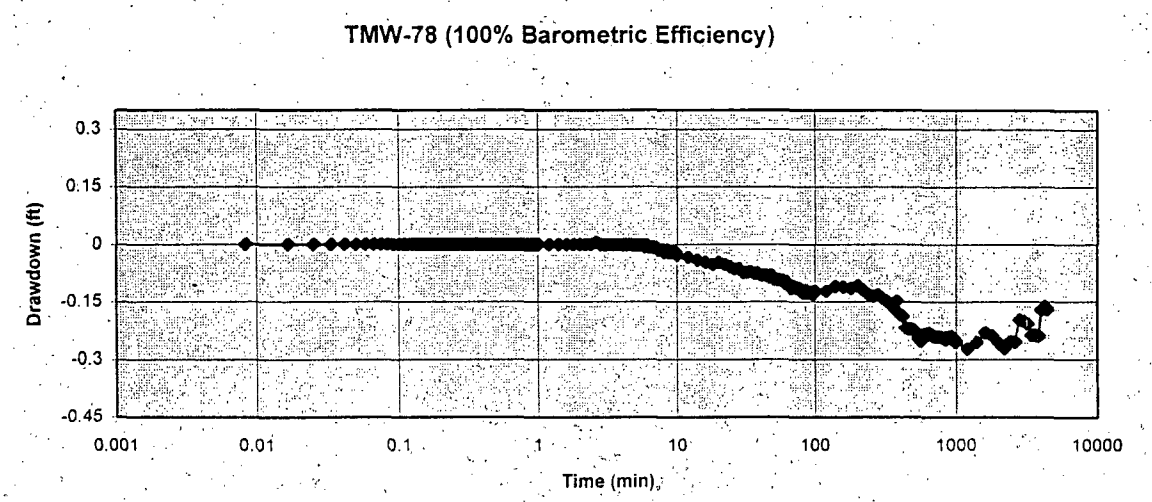
BAROMETRIC PRESSURE CORRECTED DATA

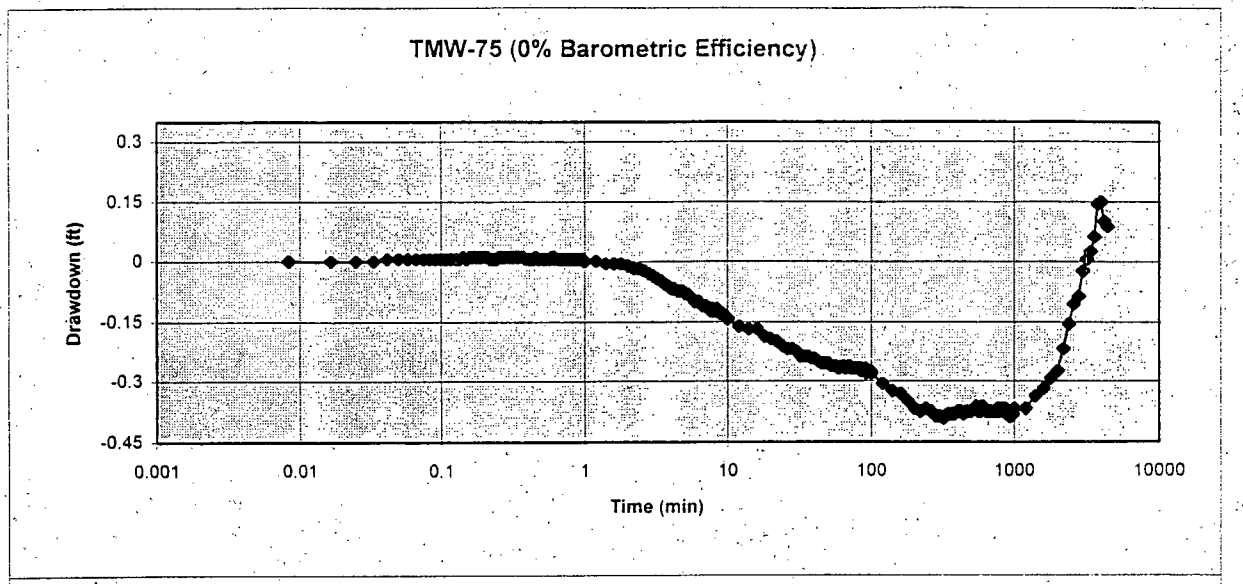

Barometric Pressure
30.1000
30.0000
29.9000
29.8000
29.7000
29.6000
29.5000
29.4000
Barometric Pressure (in)
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

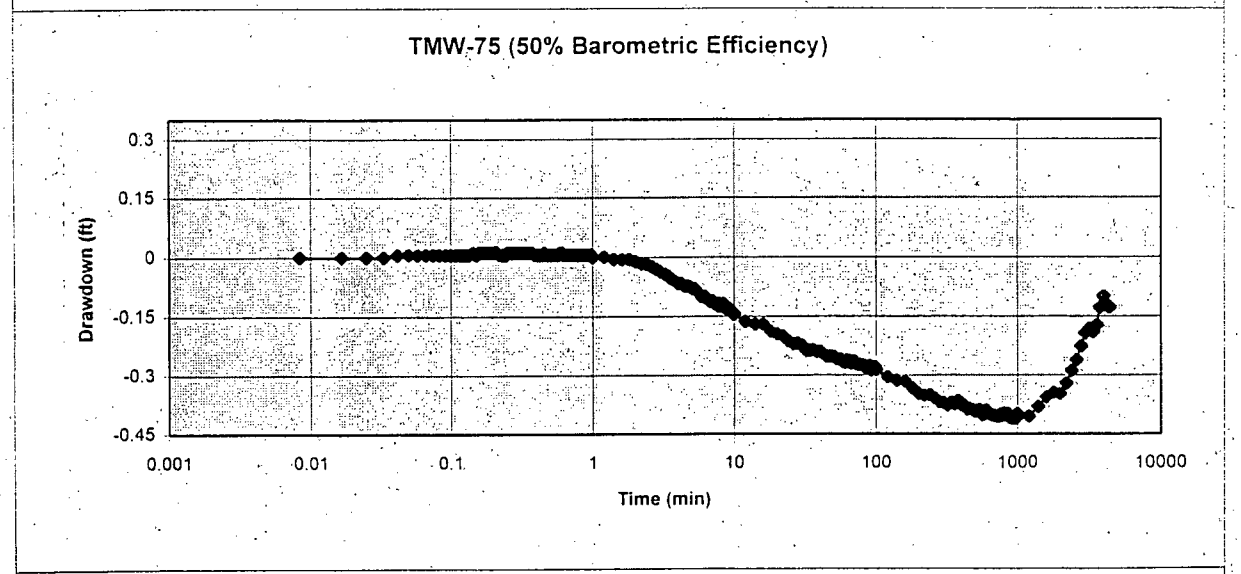

Change In Water Levels Due To Barometric Pressure
Assuming A Perfect Response (Ft)
0.6
0.5
0.4
0.3
0.2
0.1
0
-0.1
Change in Water Levels (ft)
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

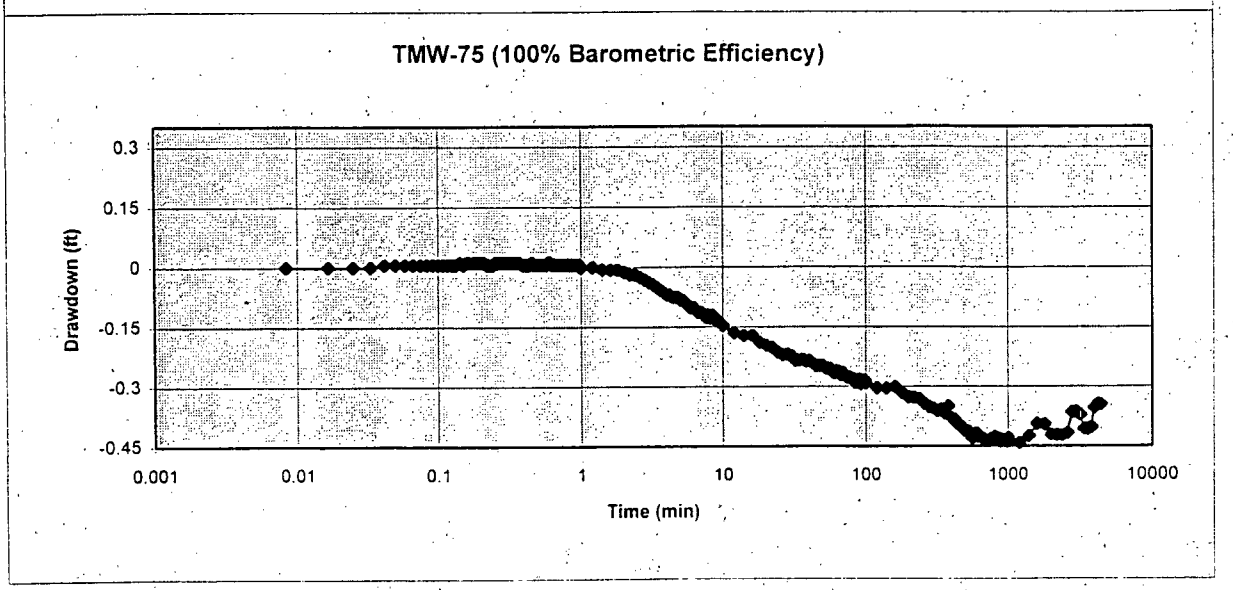

TMW-78 (0% Barometric Efficiency)
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

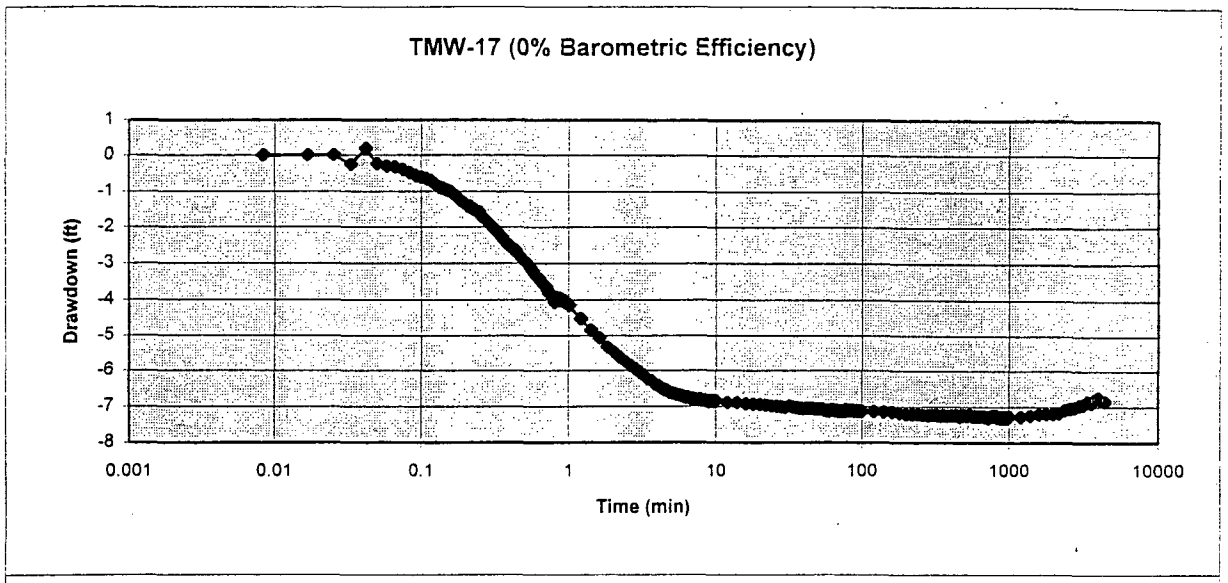

TMW-78 (50% Barometric Efficiency)
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

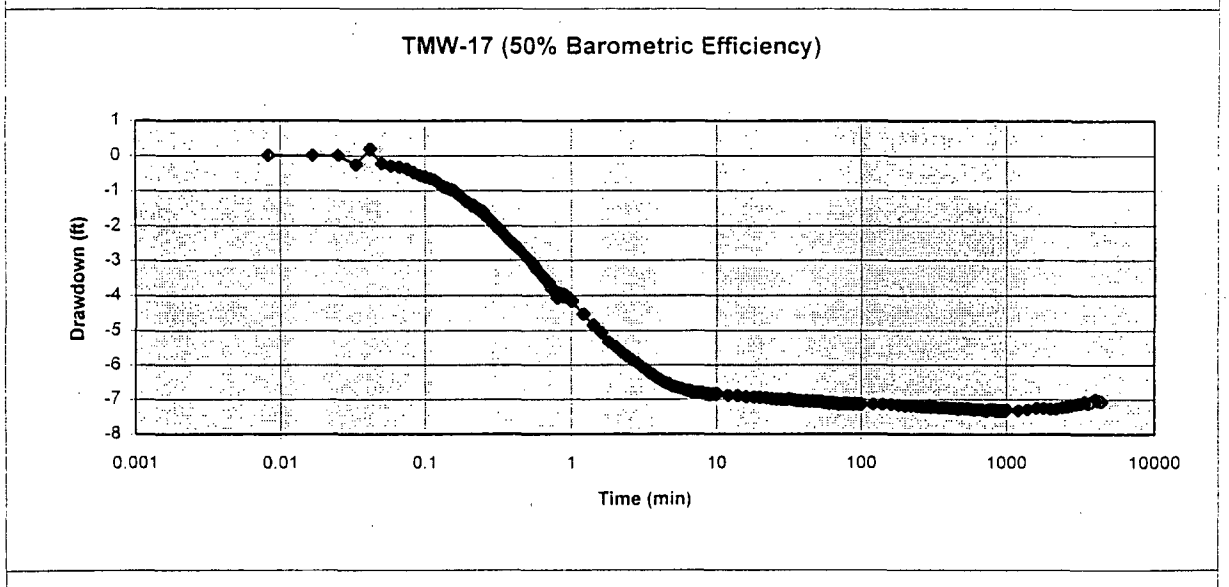

TMW-78 (100% Barometric Efficiency)
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)

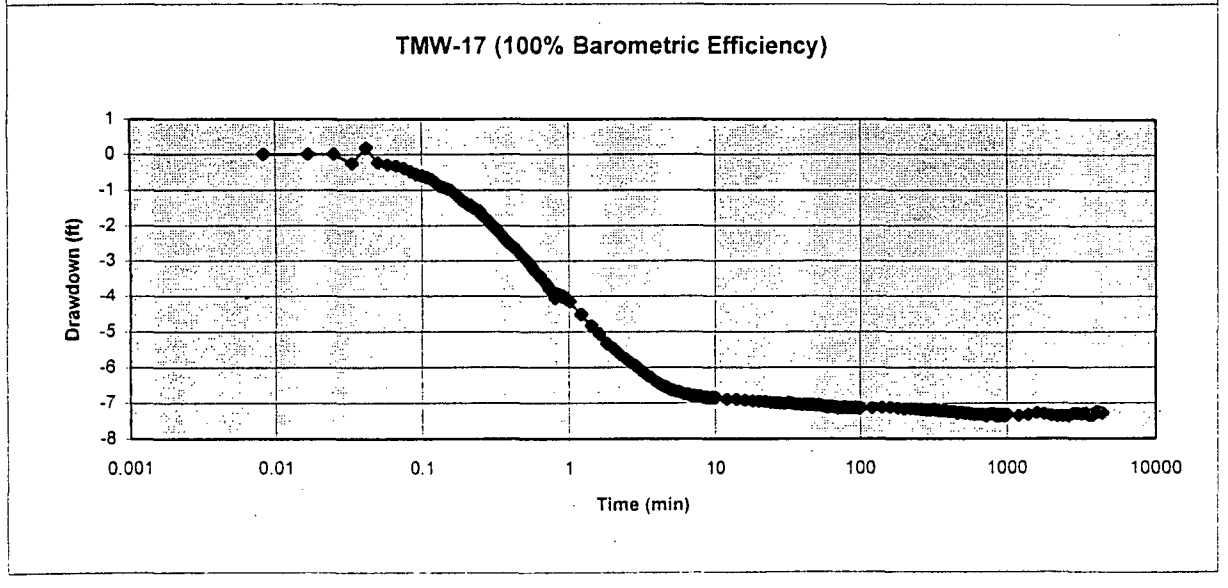

TMW-75 (0% Barometric Efficiency)
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-75 (50% Barometric Efficiency)
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-75 (100% Barometric Efficiency)
Drawdown (ft)
0.3
0.15
0
-0.15
-0.3
-0.45
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-17 (0% Barometric Efficiency)
Drawdown (ft)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-17 (50% Barometric Efficiency)
Drawdown (ft)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)


TMW-17 (100% Barometric Efficiency)
Drawdown (ft)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
0.001
0.01
0.1
1
10
100
1000
10000
Time (min)