

**Appendix L**  
**Slug Test Technical Memorandum**

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**SUBJECT:** Stepan and Sears and Adjacent Properties RI; Aquifer Recovery  
Slug Testing

**PROJECT:** NJO22948.ST.WL

## **1.0 Introduction**

Aquifer recovery (slug) tests were performed on the Stepan and Sears and Adjacent Properties during the period from August 12 to 27, 1992. Tests were performed on the wells installed during the remedial investigation to characterize the hydraulic properties of the overburden and bedrock zones beneath the study area. Results of the slug tests provide order-of-magnitude estimates of in situ hydraulic conductivity for a small aquifer volume in the area immediately surrounding the test well. Sets of tests were performed in well couplets screened in intervals within the overburden and fractured bedrock units. From these tests, the hydraulic conductivities and transmissivities of the test units were determined.

This technical memorandum (TM) presents the results of the aquifer testing, including a description of the hydrogeologic units tested and the procedures used. Calculated hydraulic conductivities and transmissivity of the overburden aquifer are also presented.

## **Geologic Units**

The overburden stratigraphy at the site consists of fill, recent deposits, Pleistocene stratified and unstratified glacial deposits, and soil residual. This unit ranges in thickness from 2 to 18 feet. It consists predominantly of brown, very fine sand and silts, but also contains layers of clay and coarser-grained sediments. Groundwater occurred at 2.6 to 16.2 feet below grade in the overburden aquifer at the time the tests were performed.

The overburden unit overlies the fractured bedrock of the Passaic Group. Generally, bedrock occurs from 4 to 11 feet below grade. Beneath the site, the unit is comprised primarily of fine sandstone, with some shale units. Based on the results of the

injection-packer testing conducted in September, the unit exhibits zones of variable hydraulic conductivity and transmissivity. More highly fractured zones within the bedrock were identified through injection-packer testing. The zone with the highest conductivity was screened in the bedrock wells. This zone occurred from as shallow as 14 feet to 48 feet below grade, the maximum depth tested. Groundwater occurred at 2.9 to 22 feet below grade in the bedrock aquifer at the time the tests were performed.

## **Well Descriptions**

Fourteen wells screened in the overburden and seventeen wells screened in bedrock were tested. Aquifer tests were performed on wells located on the Stepan, Sears, Federal Express, SWS Realty, Sunoco, and Gulf properties (Figure 1-1). Table 1-1 presents the pertinent well construction information. Well construction details are important since well and sandpack diameter, screen length, and the height of the water column in the well determine the test method chosen and are used during the data analysis.

The wells are screened over a very small area of the unit. Hydraulic conductivities determined within these wells may not be representative of conditions occurring in other portions of this zone. The wells are screened in sandy layers within the overburden unit, which may not be continuous or hydraulically connected to other portions of the unit.

## **Hydraulic Conductivity Testing Methodologies**

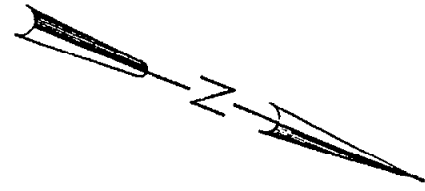
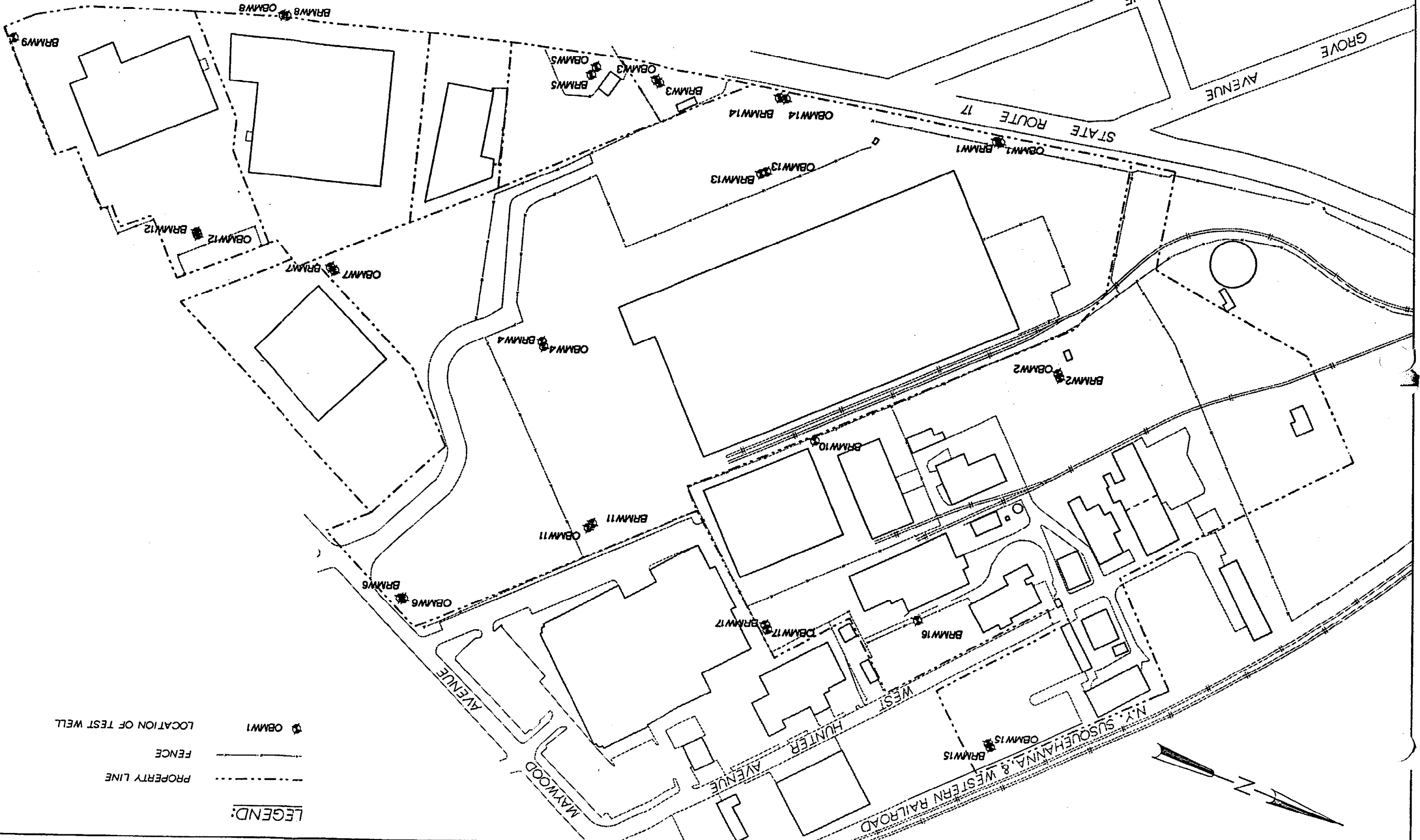
### **Field Testing Methods**

Slug tests were performed on all wells installed during the remedial investigation (Figure 1-1). Rising head recovery tests were performed using one of two methods: a pneumatic displacement method, or a displacement cylinder method. The pneumatic displacement device was used in wells where the screened interval was fully submerged with water. In wells where the water table occurred within the screened interval, the displacement cylinder was used to conduct the test. All wells screened within the unconsolidated aquifer were tested with the displacement cylinder method. Only one well, OBMW10, could not be tested since the well never recovered from the displacement caused by the insertion of the cylinder. Of the 17 wells screened in the bedrock aquifer, 15 were tested with the pneumatic displacement device and two were tested using the displacement cylinder method (BRMW9 and BRMW14). In the majority of the bedrock wells, the screen was located well below the water table, so the pneumatic displacement device could be used. In BRMW9, the water table was only 3.5 feet above the top of the screen, so the displacement cylinder was used to test the well. The displacement cylinder was used to test BRMW14, since the water level could not be suppressed with air pressure. Table 1-1 indicates which test was used on each well.

FIGURE 1-1  
AQUIFER TEST LOCATIONS

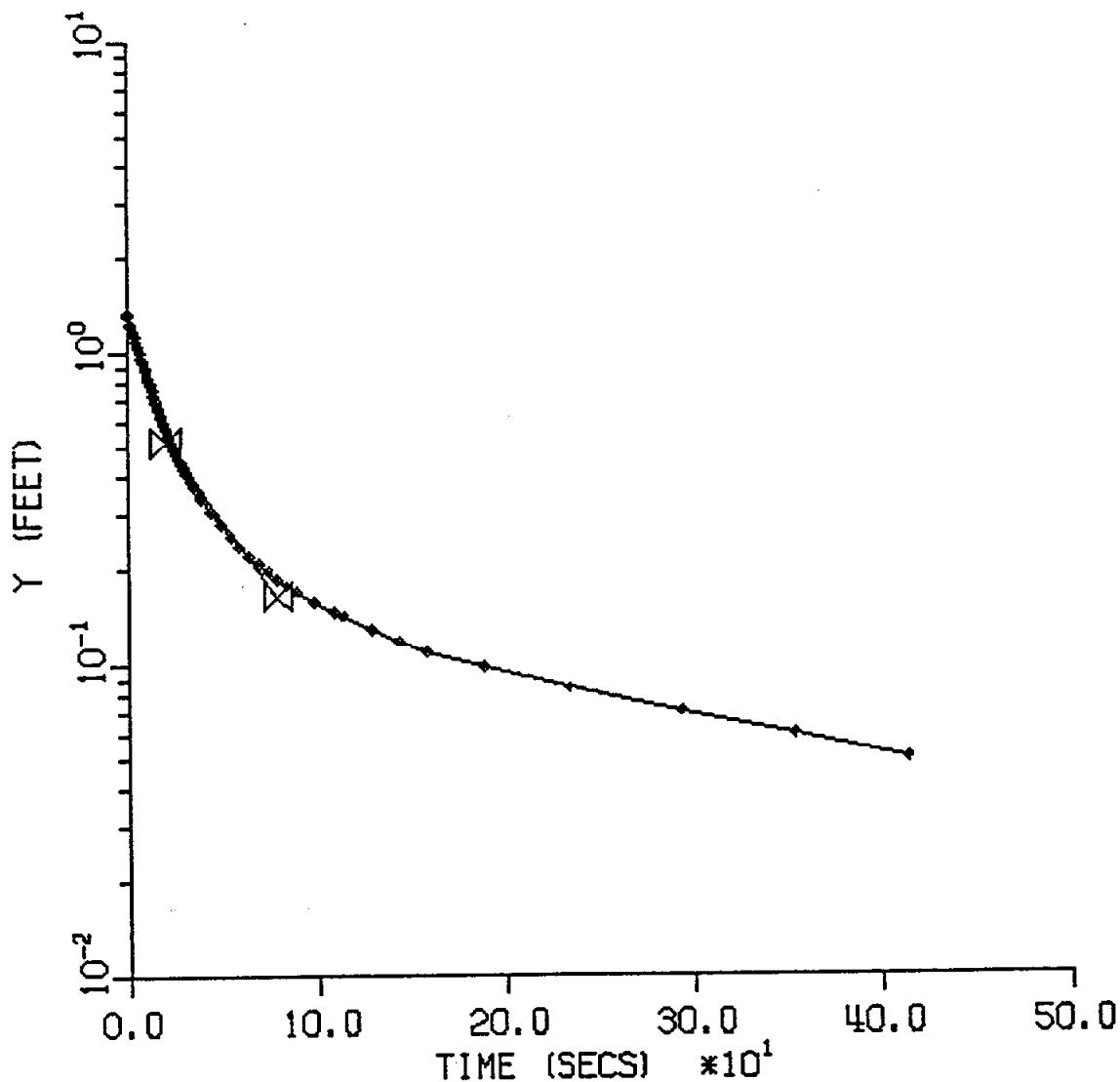
STEPAN COMPANY AND SEARS AND  
PROPERTIES RI  
MAYWOOD, NEW JERSEY

SCALE 1"=200'



# SEARS LOGISTICAL SERVICES

## OBMW1-TEST 1



K (CM/S) = 0.006635

WELL SPECS. (FEET)

SCREEN LENGTH = 3.8

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 5.0

H (FEET) = 3.84

COEFFICIENTS

A = 0.00

B = 0.00

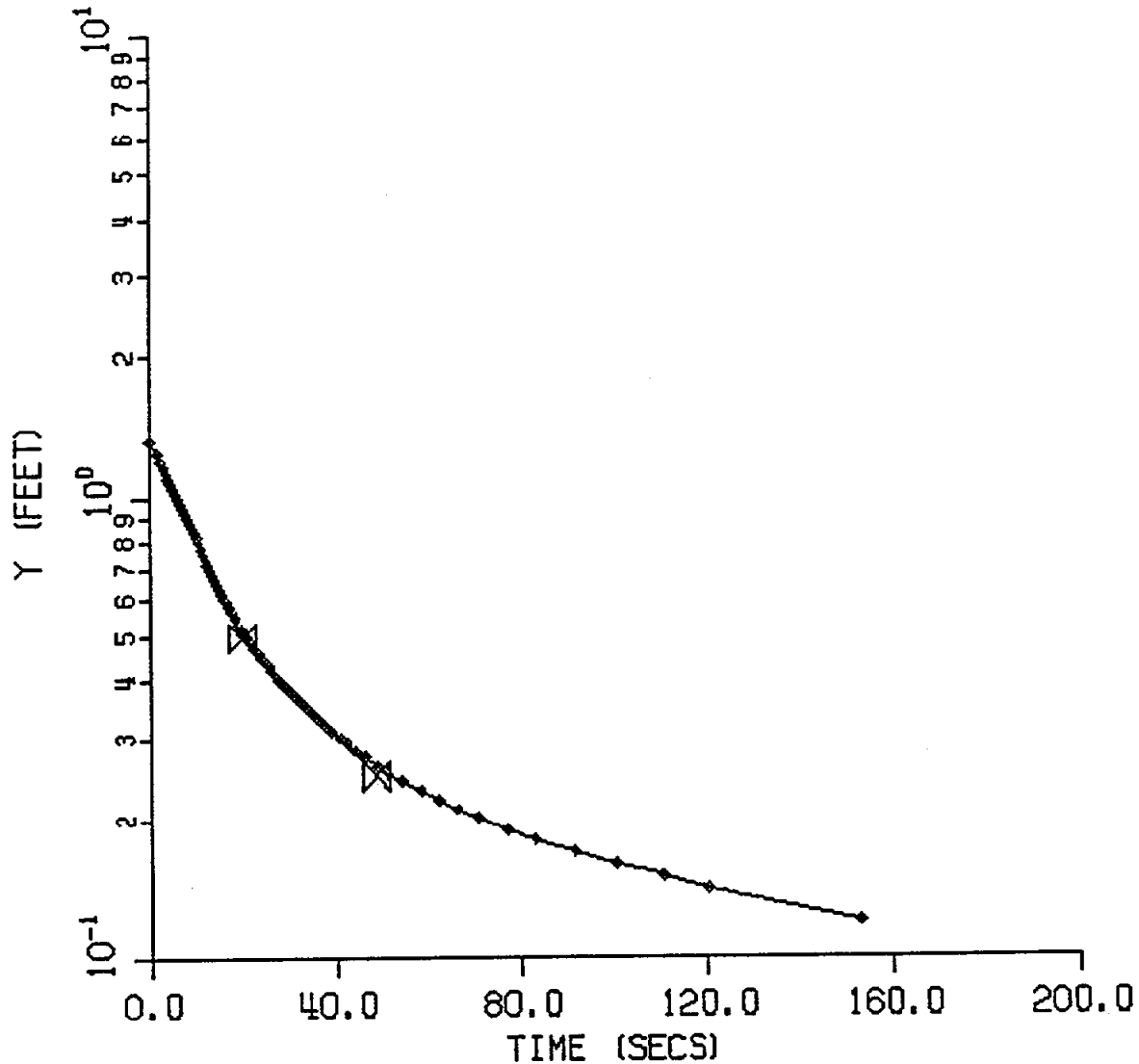
C = 1.27

Y-INTERCEPT = 0.76

SLOPE = -0.0084

# SEARS LOGISTICAL SERVICES

## OBMW1-TEST 2



K (CM/S) = 0.008194

WELL SPECS. (FEET)

SCREEN LENGTH = 3.8

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 5.0

H (FEET) = 3.84

COEFFICIENTS

A = 0.00

B = 0.00

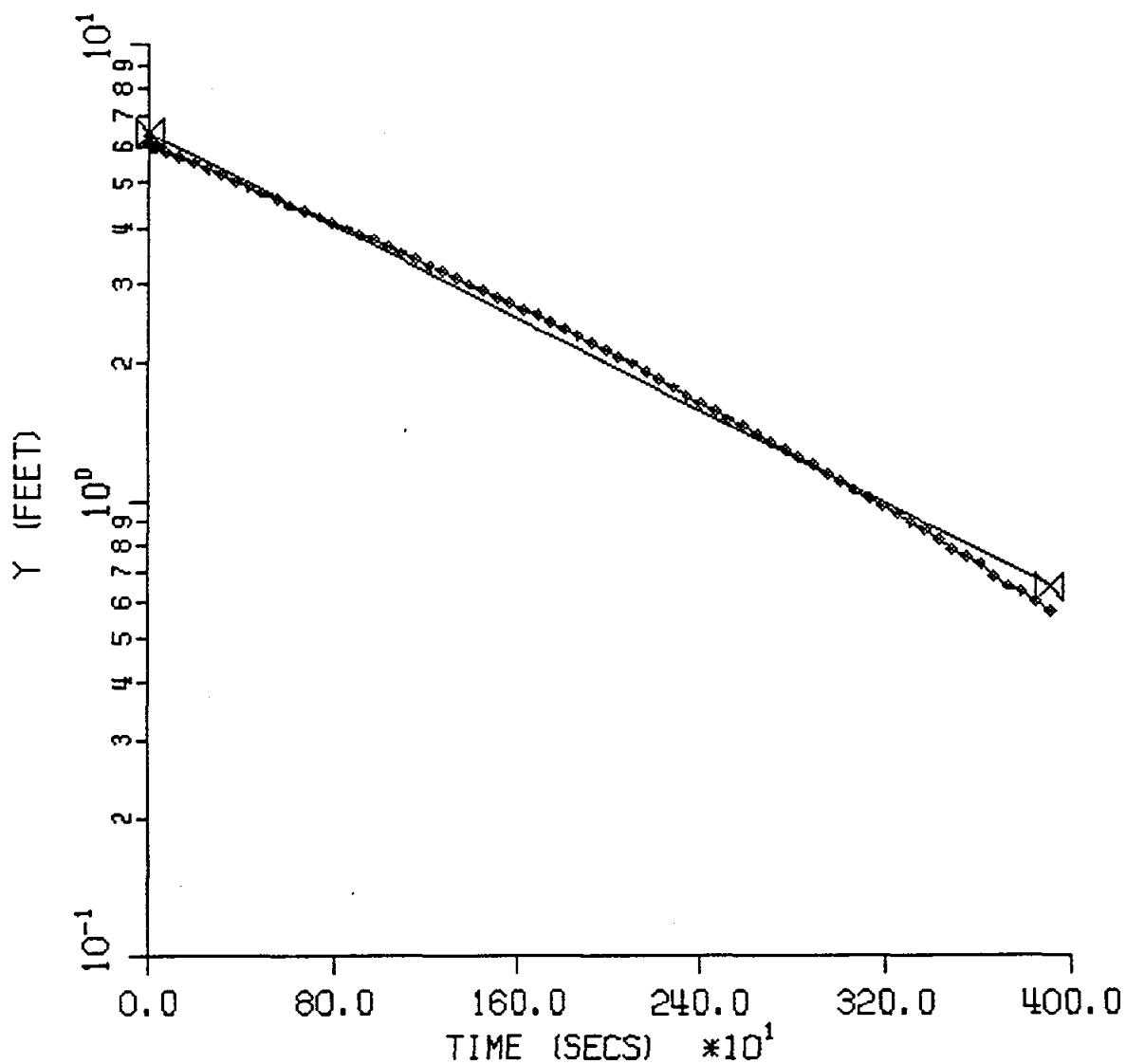
C = 1.27

Y-INTERCEPT = 0.79

SLOPE = -0.0103

# SEARS LOGISTICAL SERVICES

## BRMW1-TEST 1



K (CM/S) = 0.000020

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 42.0

H (FEET) = 41.50

COEFFICIENTS

A = 2.41

B = 0.38

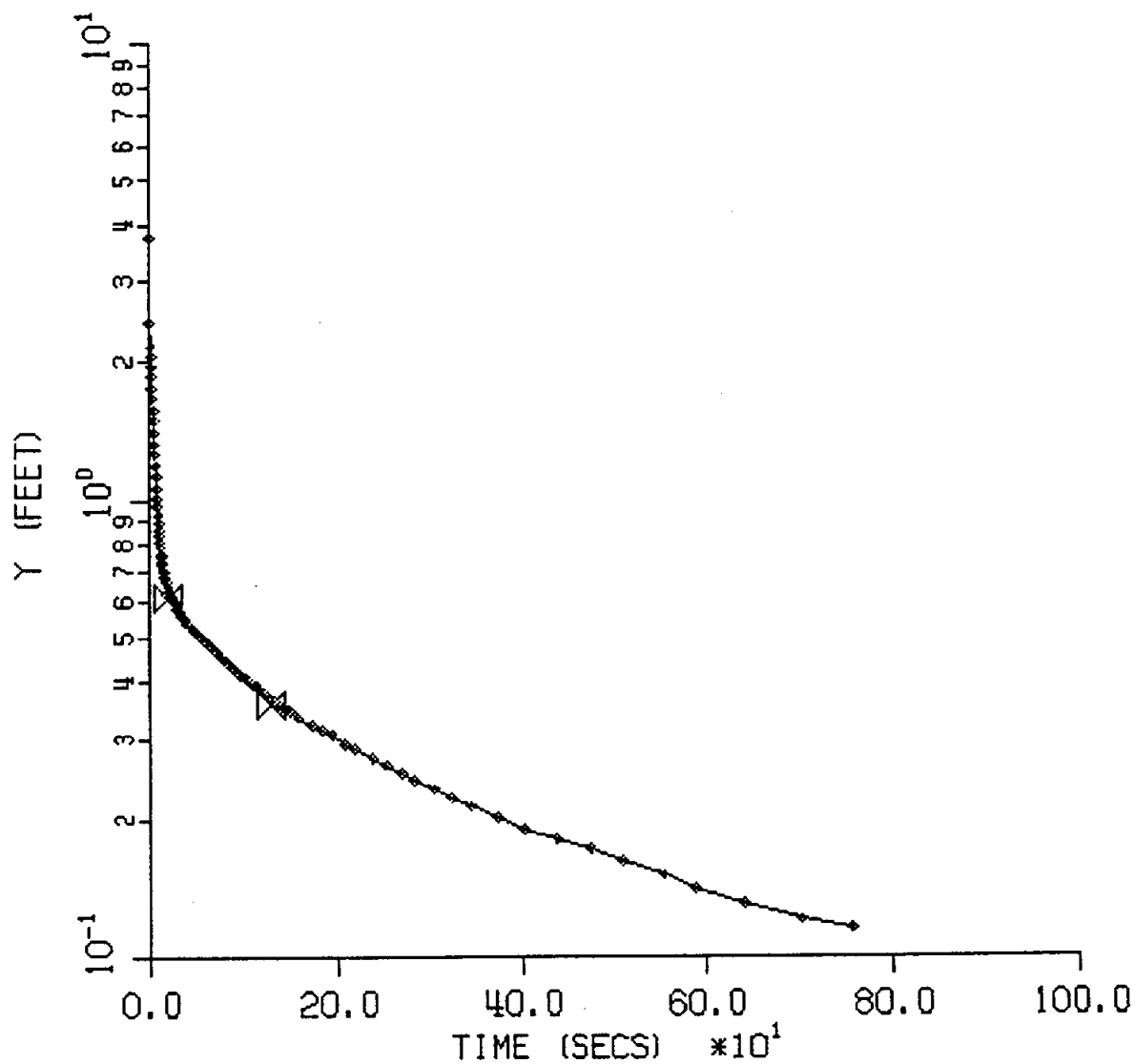
C = 0.00

Y-INTERCEPT = 6.43

SLOPE = -0.0003

# STEPAN COMPANY

## OBMW2-TEST 1



K (CM/S) = 0.001163

WELL SPECS. (FEET)

SCREEN LENGTH = 7.1

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 7.0

H (FEET) = 7.14

COEFFICIENTS

A = 0.00

B = 0.00

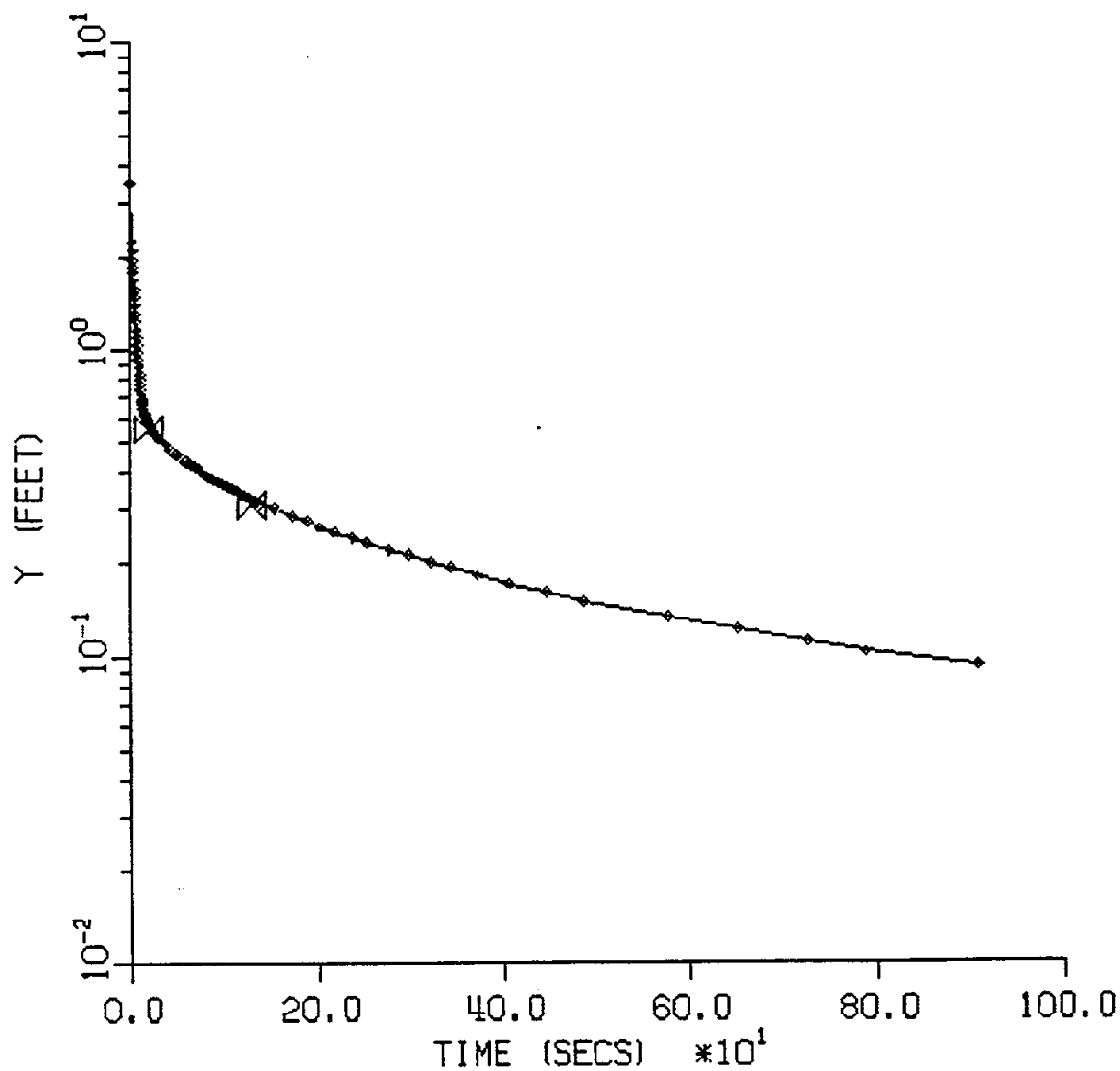
C = 1.76

Y-INTERCEPT = 0.67

SLOPE = -0.0021

# STEPAN COMPANY

## OBMW2-TEST 2



K (CM/S) = 0.001233

WELL SPECS. (FEET)

SCREEN LENGTH = 7.1

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 7.0

H (FEET) = 7.14

COEFFICIENTS

A = 0.00

B = 0.00

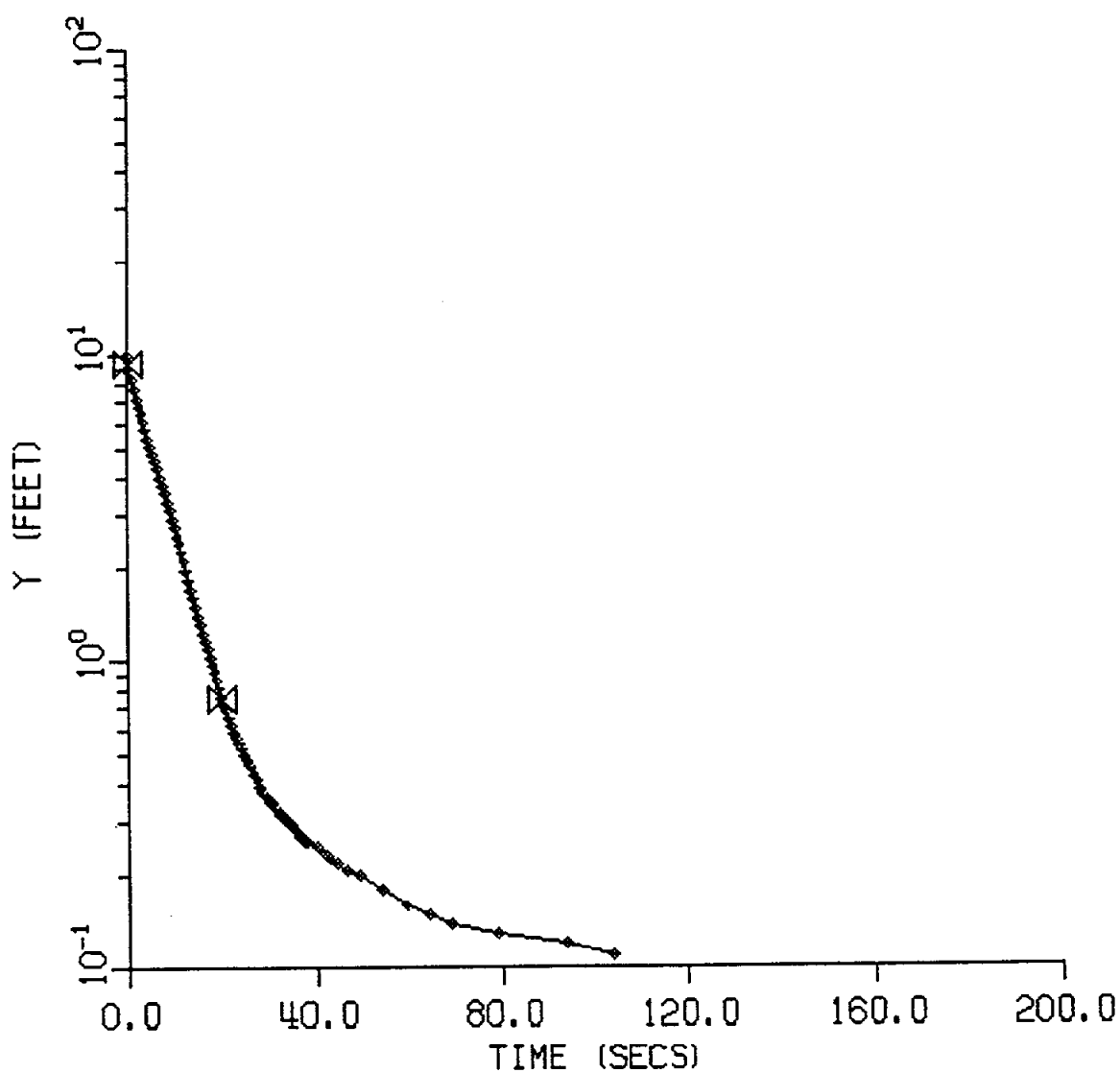
C = 1.76

Y-INTERCEPT = 0.61

SLOPE = -0.0023

# STEPAN COMPANY

## BRMW2-TEST 1



K (CM/S) = 0.004041

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 34.0

H (FEET) = 33.00

COEFFICIENTS

A = 2.41

B = 0.38

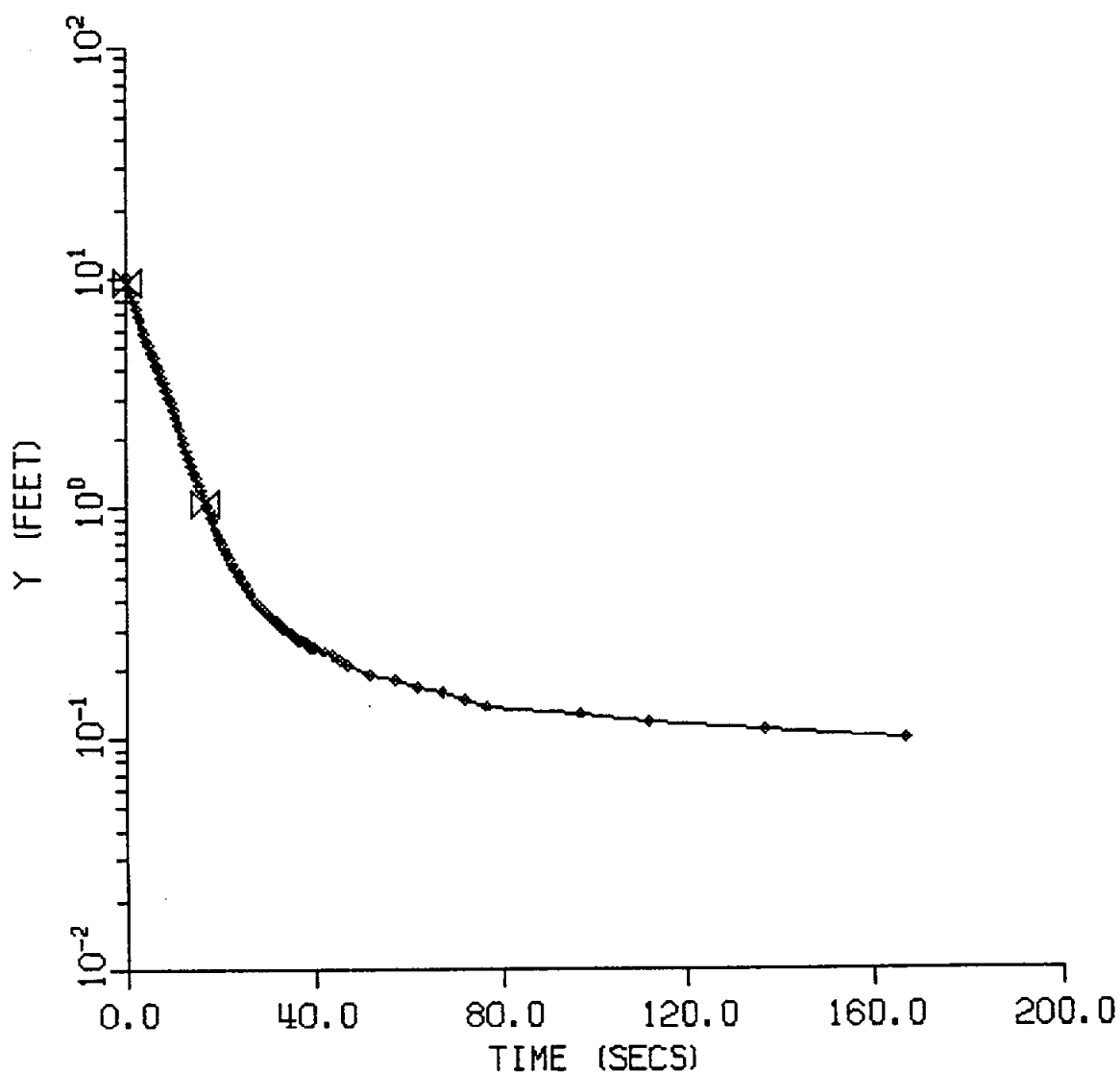
C = 0.00

Y-INTERCEPT = 9.38

SLOPE = -0.0553

# STEPAN COMPANY

## BRMW2-TEST 2



K (CM/S) = 0.004189

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 34.0

H (FEET) = 33.00

COEFFICIENTS

A = 2.41

B = 0.38

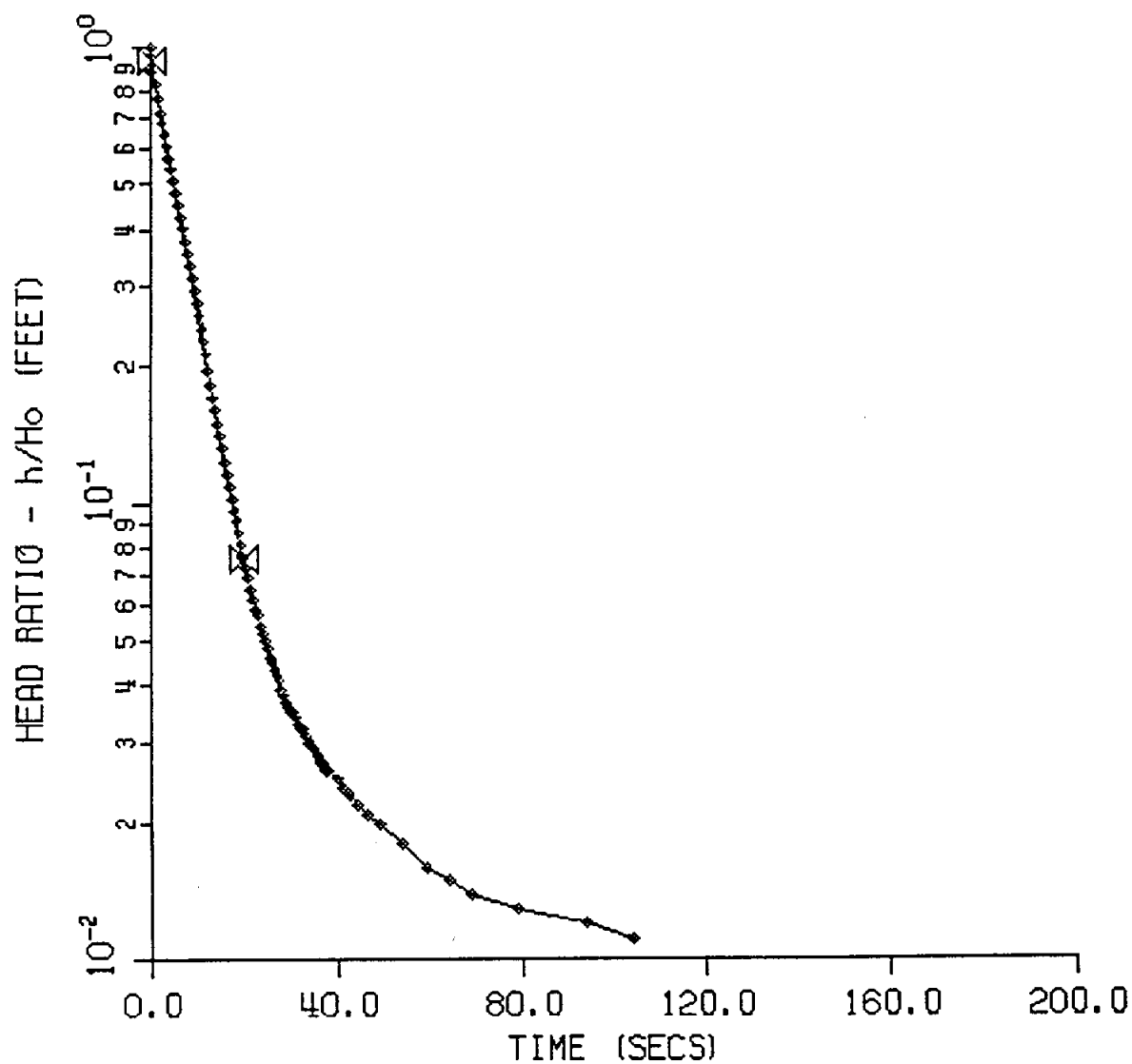
C = 0.00

Y-INTERCEPT = 9.65

SLOPE = -0.0573

# STEPAN COMPANY

## BRMW2-TEST 1



$K$  (CM/S) = 0.007143

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

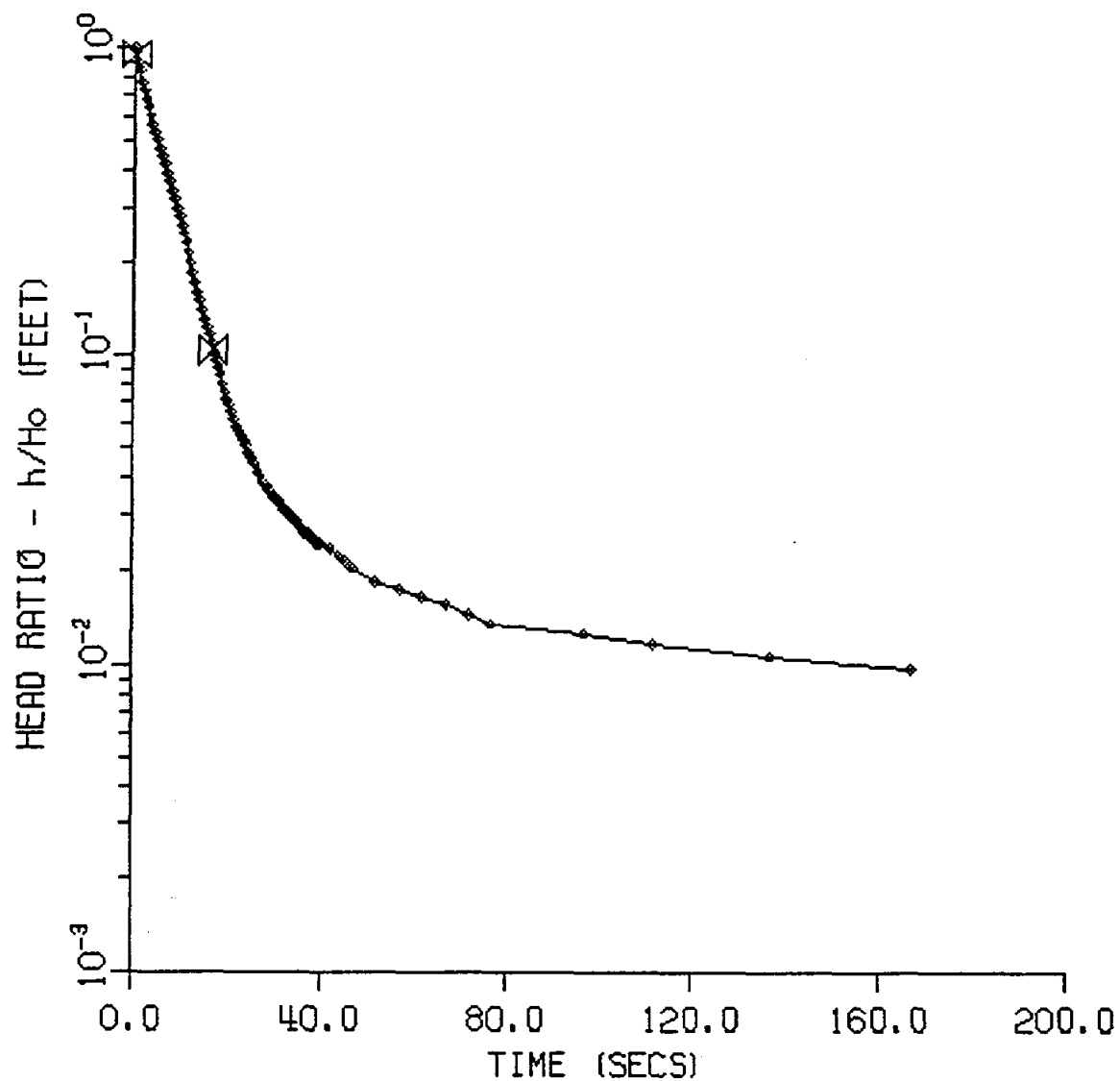
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0553

STEPAN COMPANY  
BRMW2-TEST 2



$K$  (CM/S) = 0.007403

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

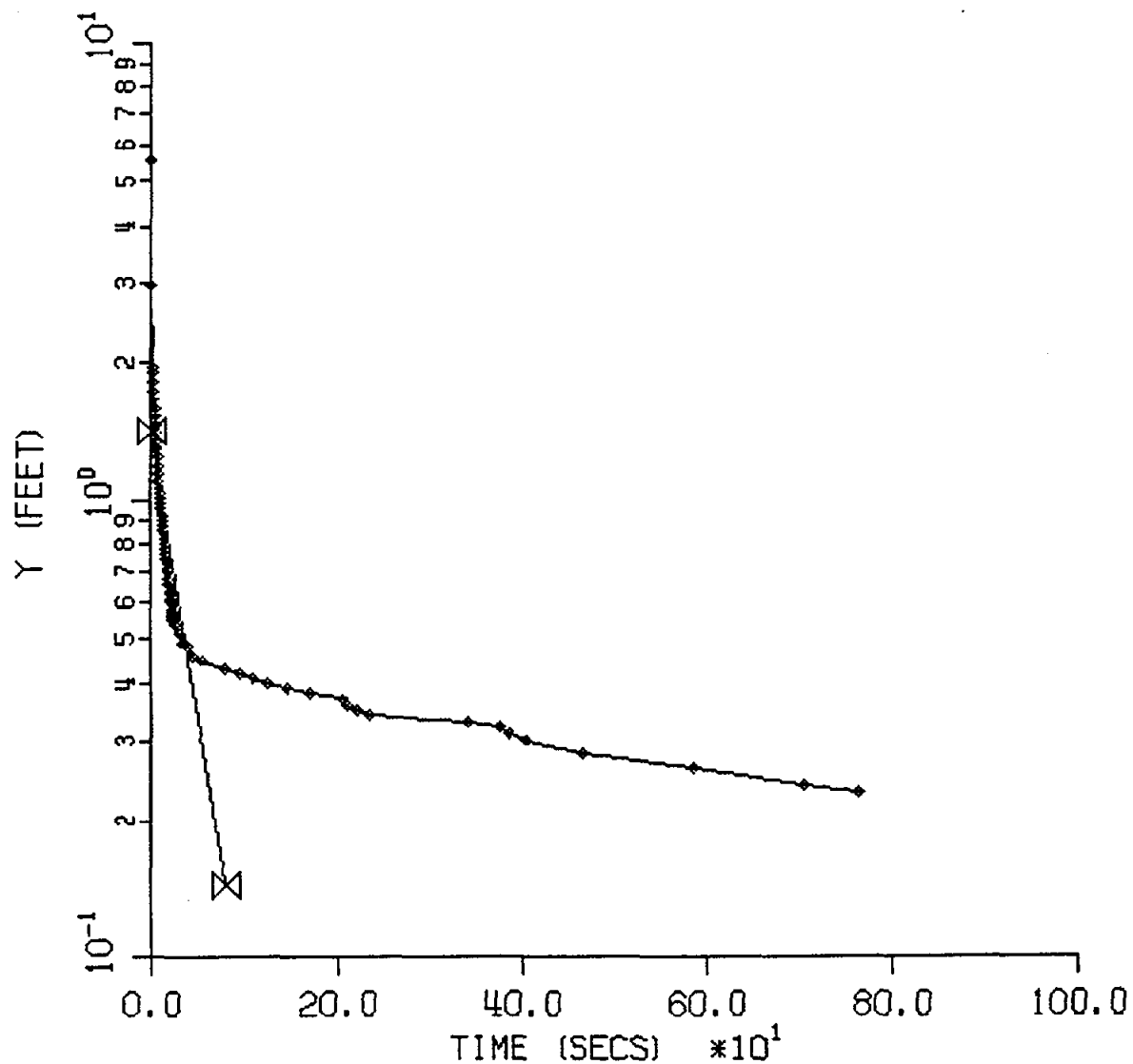
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0573

# GULF PROPERTY OBMW3-TEST 1



K (CM/S) = 0.000980

WELL SPECS. (FEET)

SCREEN LENGTH = 7.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 7.0

H (FEET) = 7.17

COEFFICIENTS

A = 0.00

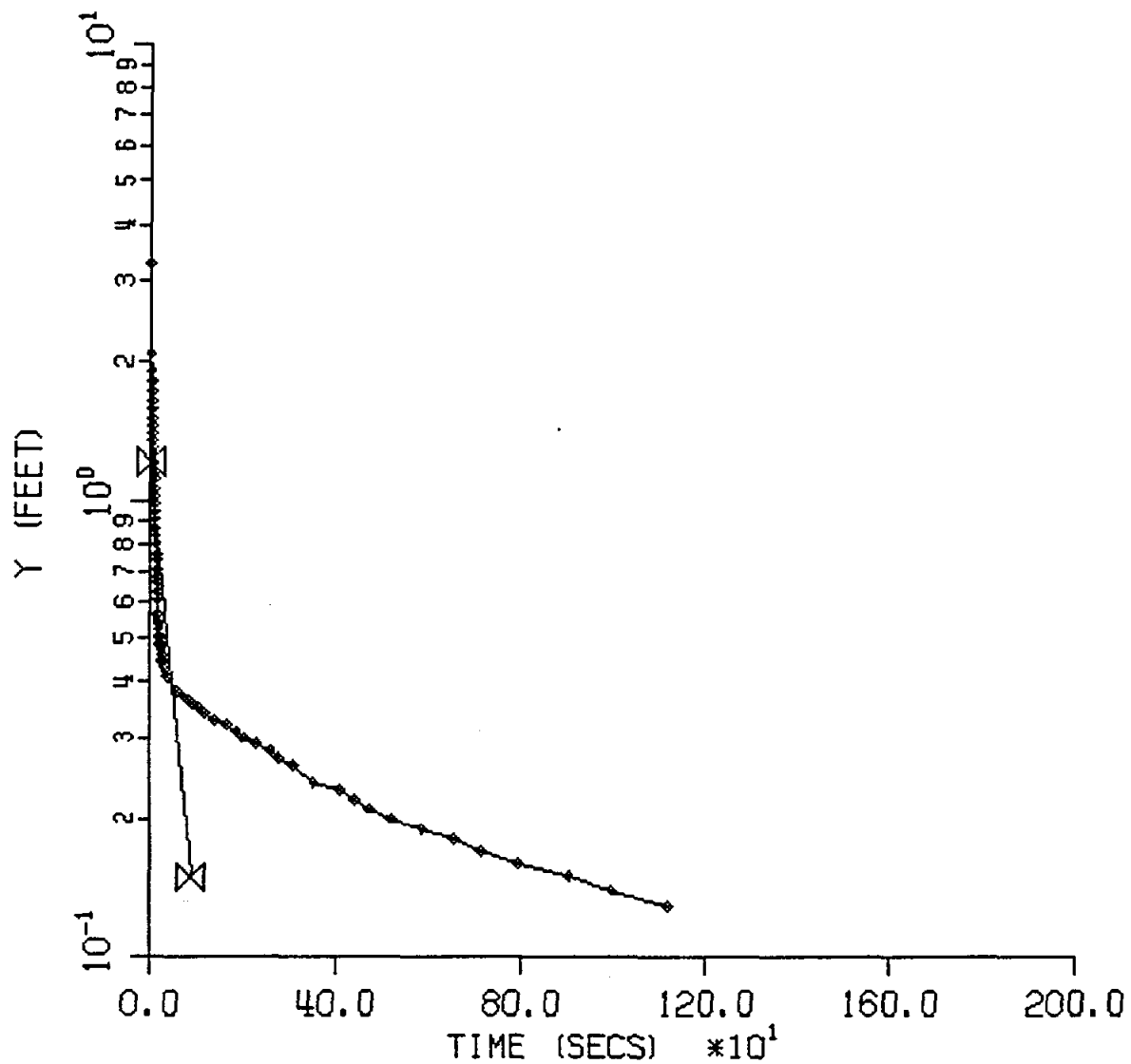
B = 0.00

C = 1.74

Y-INTERCEPT = 1.41

SLOPE = -0.0124

# GULF PROPERTY OBMW3-TEST 2



K (CM/S) = 0.000817

WELL SPECS. (FEET)

SCREEN LENGTH = 7.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 7.0

H (FEET) = 7.17

COEFFICIENTS

A = 0.00

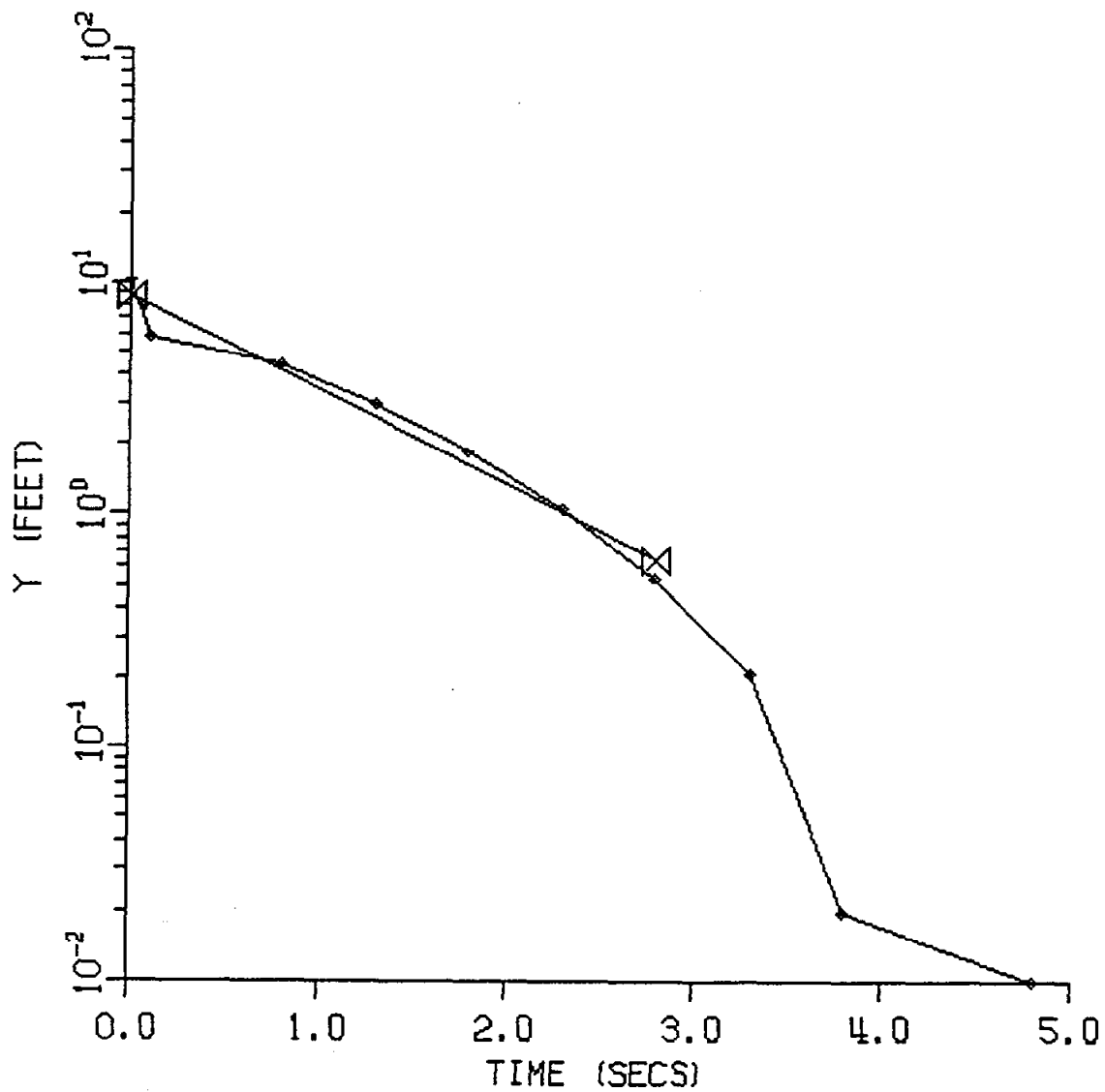
B = 0.00

C = 1.74

Y-INTERCEPT = 1.21

SLOPE = -0.0104

# GULF PROPERTY BRMW3-TEST 1



K (CM/S) = 0.028559

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 26.5

H (FEET) = 25.70

COEFFICIENTS

A = 2.41

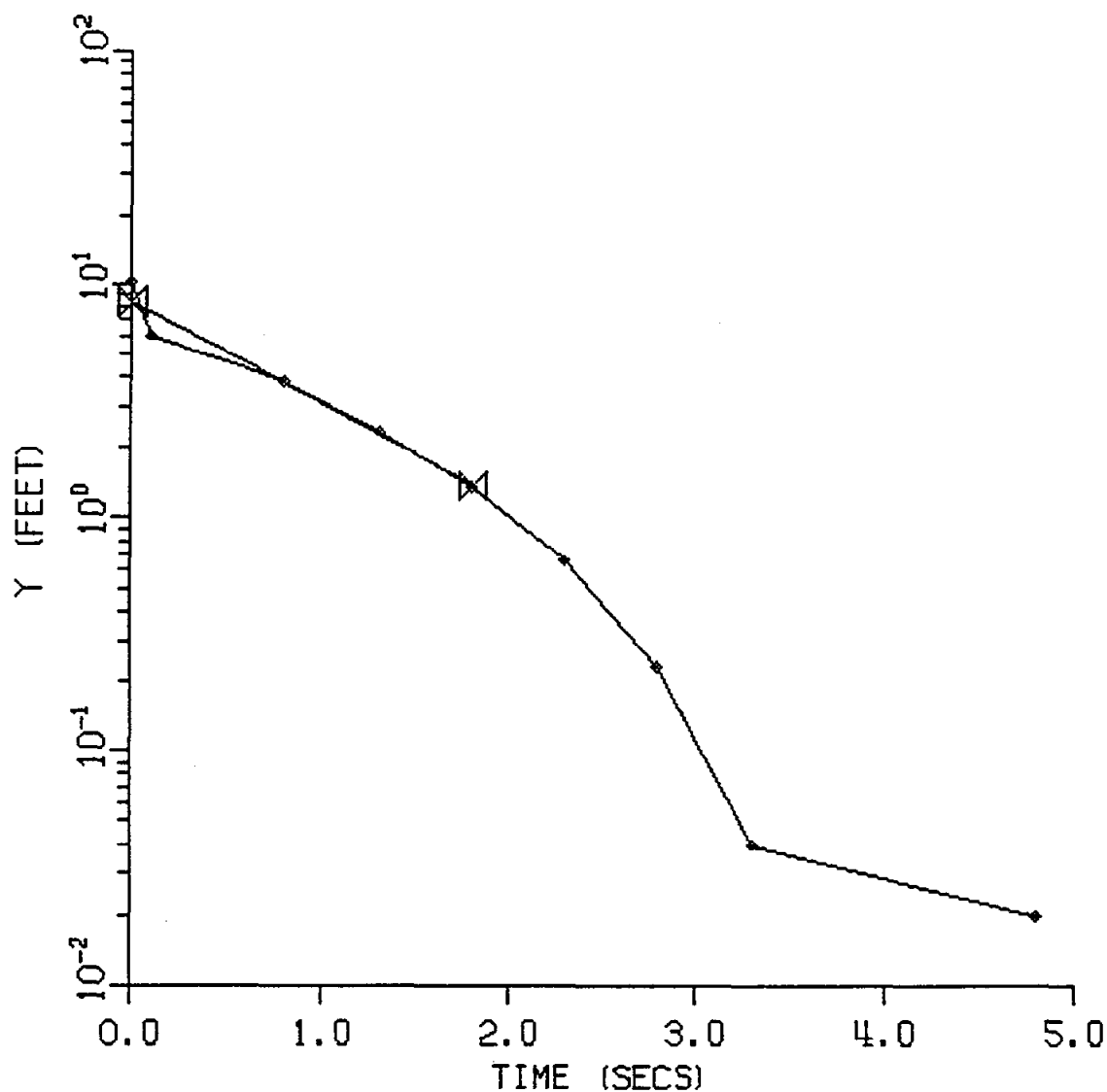
B = 0.38

C = 0.00

Y-INTERCEPT = 8.73

SLOPE = -0.4038

# GULF PROPERTY BRMW3-TEST 2



K (CM/S) = 0.030665

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 26.5

H (FEET) = 25.70

COEFFICIENTS

A = 2.41

B = 0.38

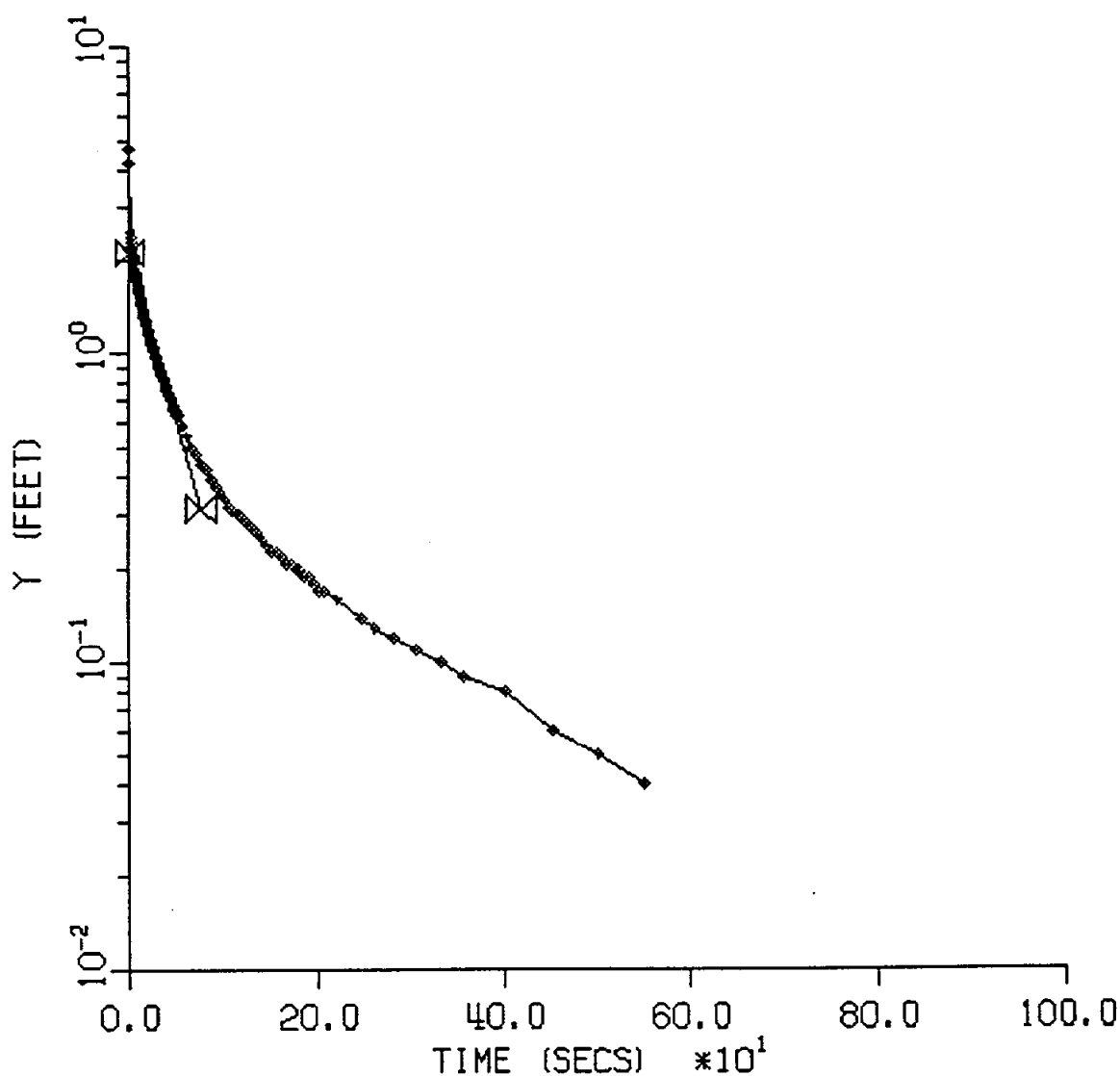
C = 0.00

Y-INTERCEPT = 8.36

SLOPE = -0.4336

# SEARS LOGISTICAL SERVICES

## OBMW4-TEST 1



K (CM/S) = 0.000699

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 11.6

H (FEET) = 11.60

COEFFICIENTS

A = 0.00

B = 0.00

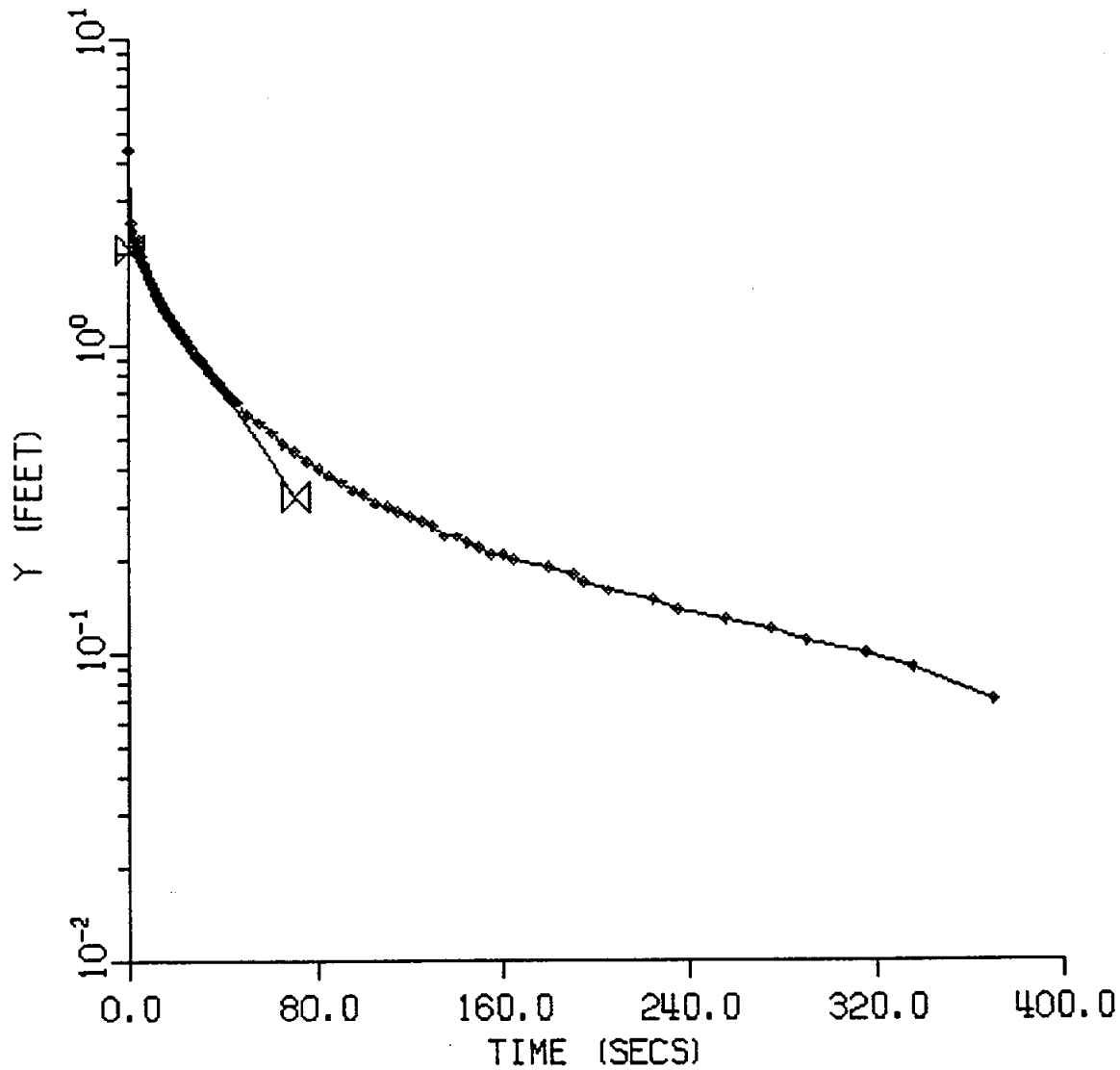
C = 2.05

Y-INTERCEPT = 2.15

SLOPE = -0.0109

# SEARS LOGISTICAL SERVICES

## OBMW4-TEST 2



K (CM/S) = 0.000741

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 11.6

H (FEET) = 11.60

COEFFICIENTS

A = 0.00

B = 0.00

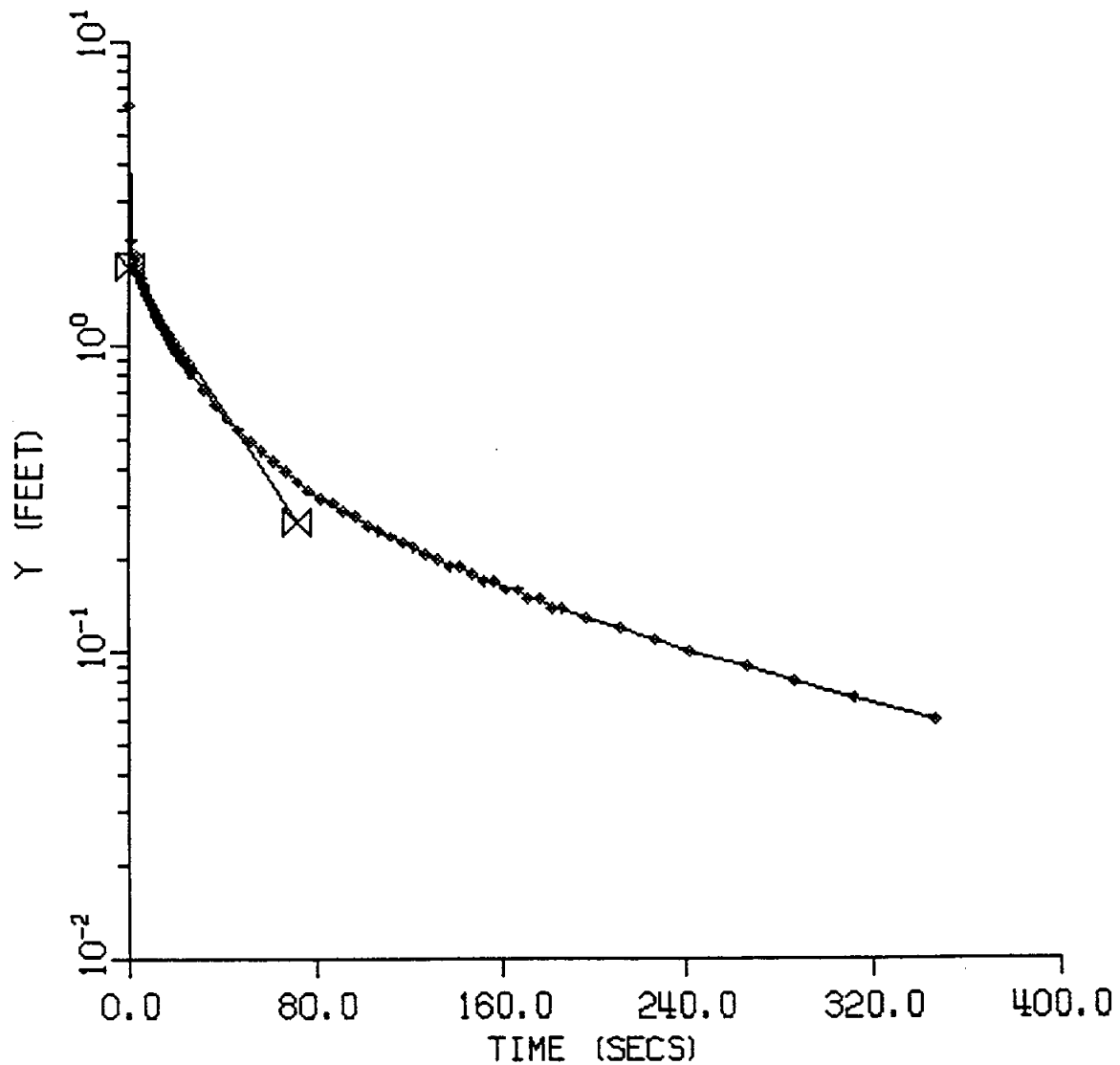
C = 2.05

Y-INTERCEPT = 2.09

SLOPE = -0.0115

# SEARS LOGISTICAL SERVICES

## OBMW4-TEST 3



K (CM/S) = 0.000745

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 11.6

H (FEET) = 11.60

COEFFICIENTS

A = 0.00

B = 0.00

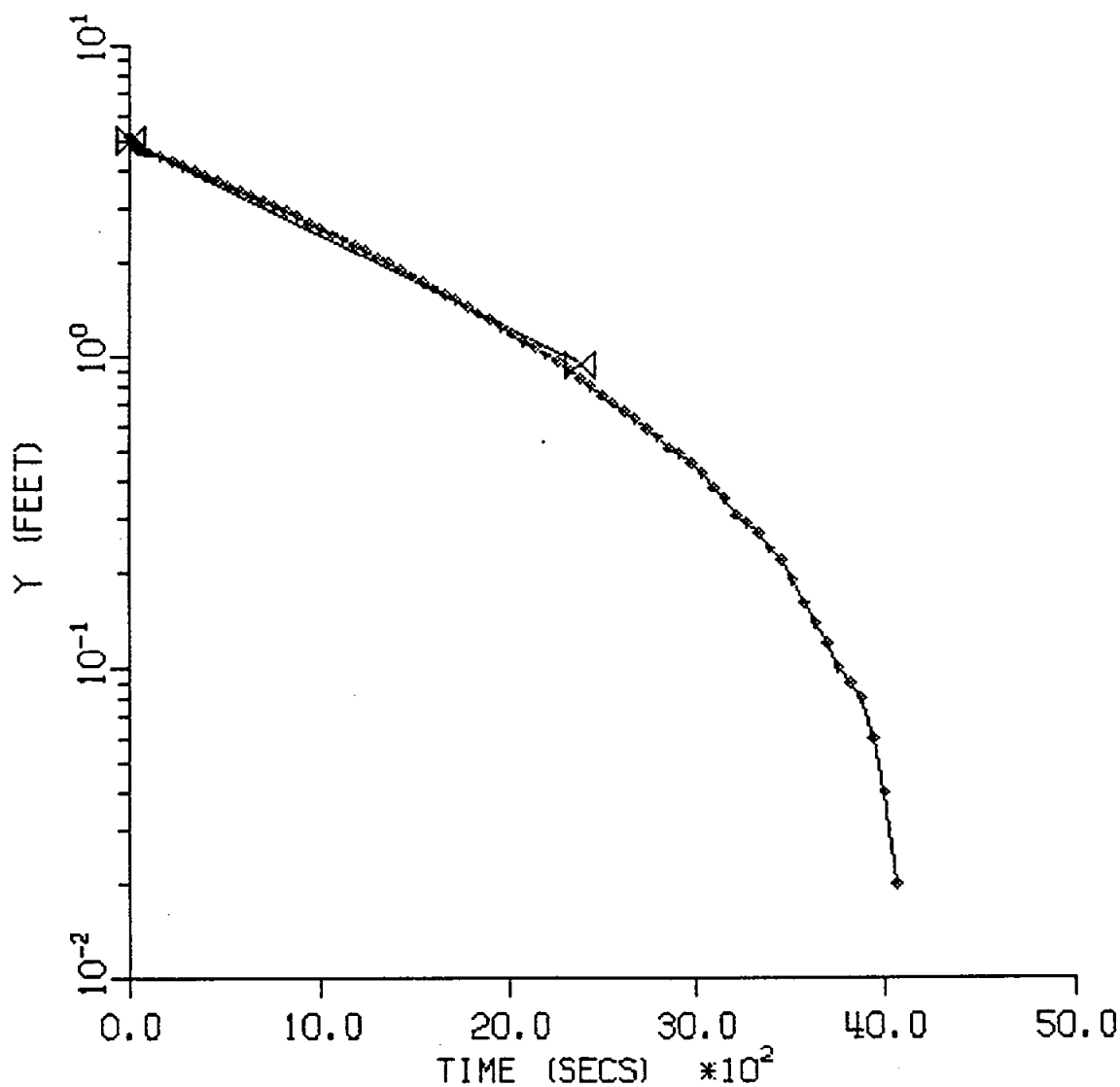
C = 2.05

Y-INTERCEPT = 1.81

SLOPE = -0.0116

# SEARS LOGISTICAL SERVICES

## BRMW4-TEST 1



K (CM/S) = 0.000022

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 31.5

H (FEET) = 30.80

COEFFICIENTS

A = 2.41

B = 0.38

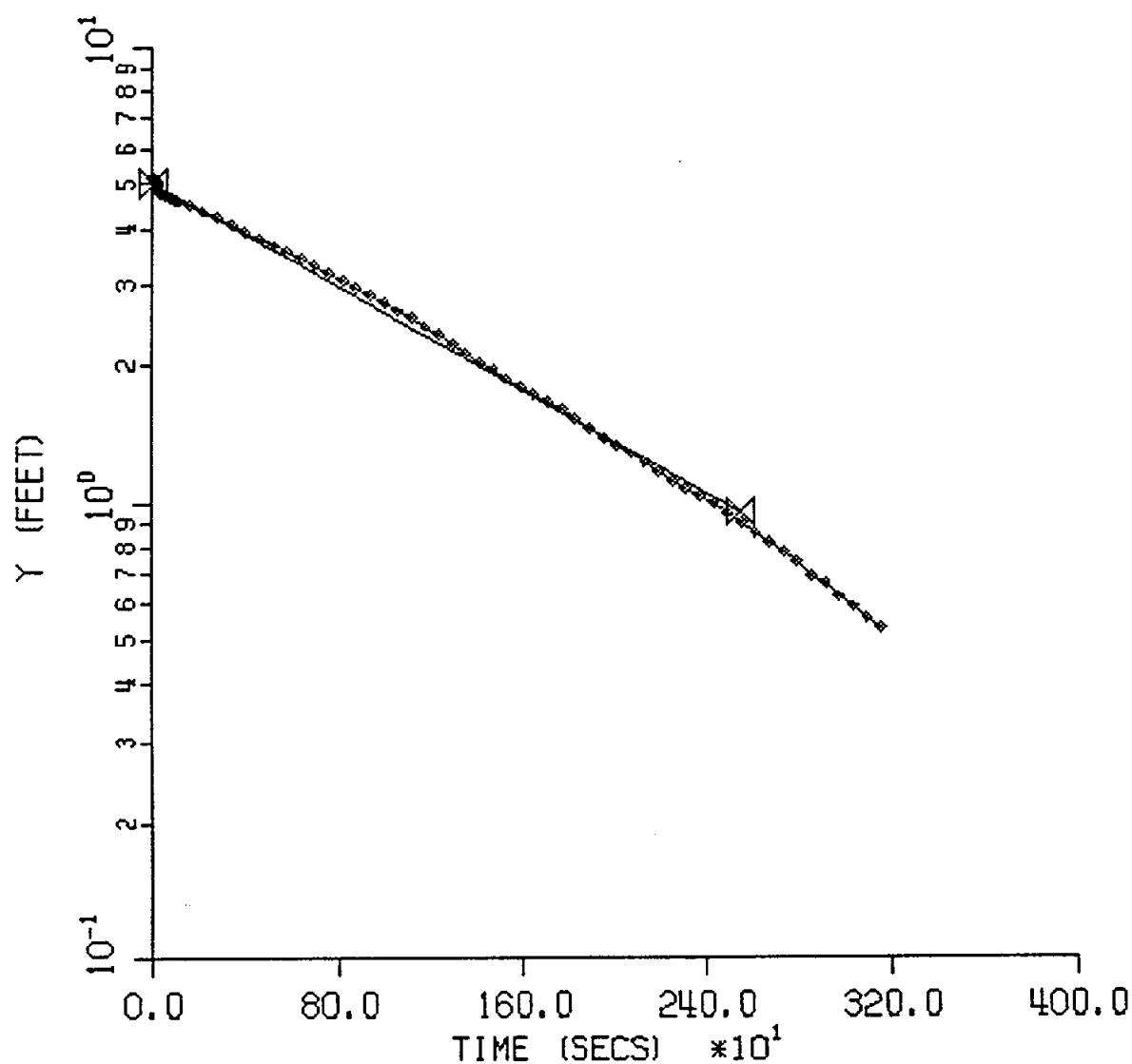
C = 0.00

Y-INTERCEPT = 4.99

SLOPE = -0.0003

# SEARS LOGISTICAL SERVICES

## BRMW4-TEST 2



K (CM/S) = 0.000021

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 31.5

H (FEET) = 30.80

COEFFICIENTS

A = 2.41

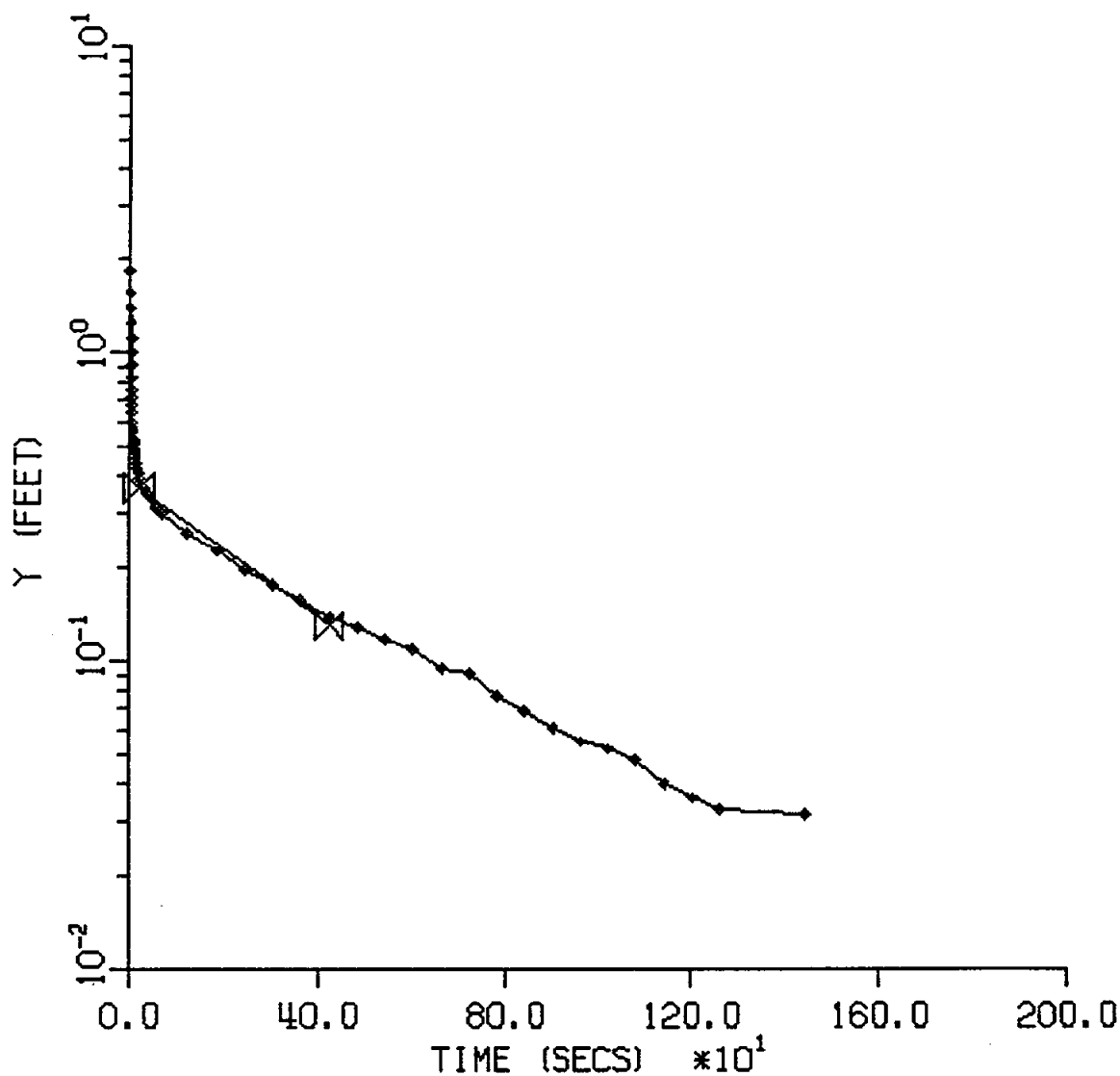
B = 0.38

C = 0.00

Y-INTERCEPT = 5.03

SLOPE = -0.0003

SUNOCO PROPERTY  
OBMW5-TEST 1



K (CM/S) = 0.000687

WELL SPECS. (FEET)

SCREEN LENGTH = 5.7

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 5.7

H (FEET) = 5.70

COEFFICIENTS

A = 0.00

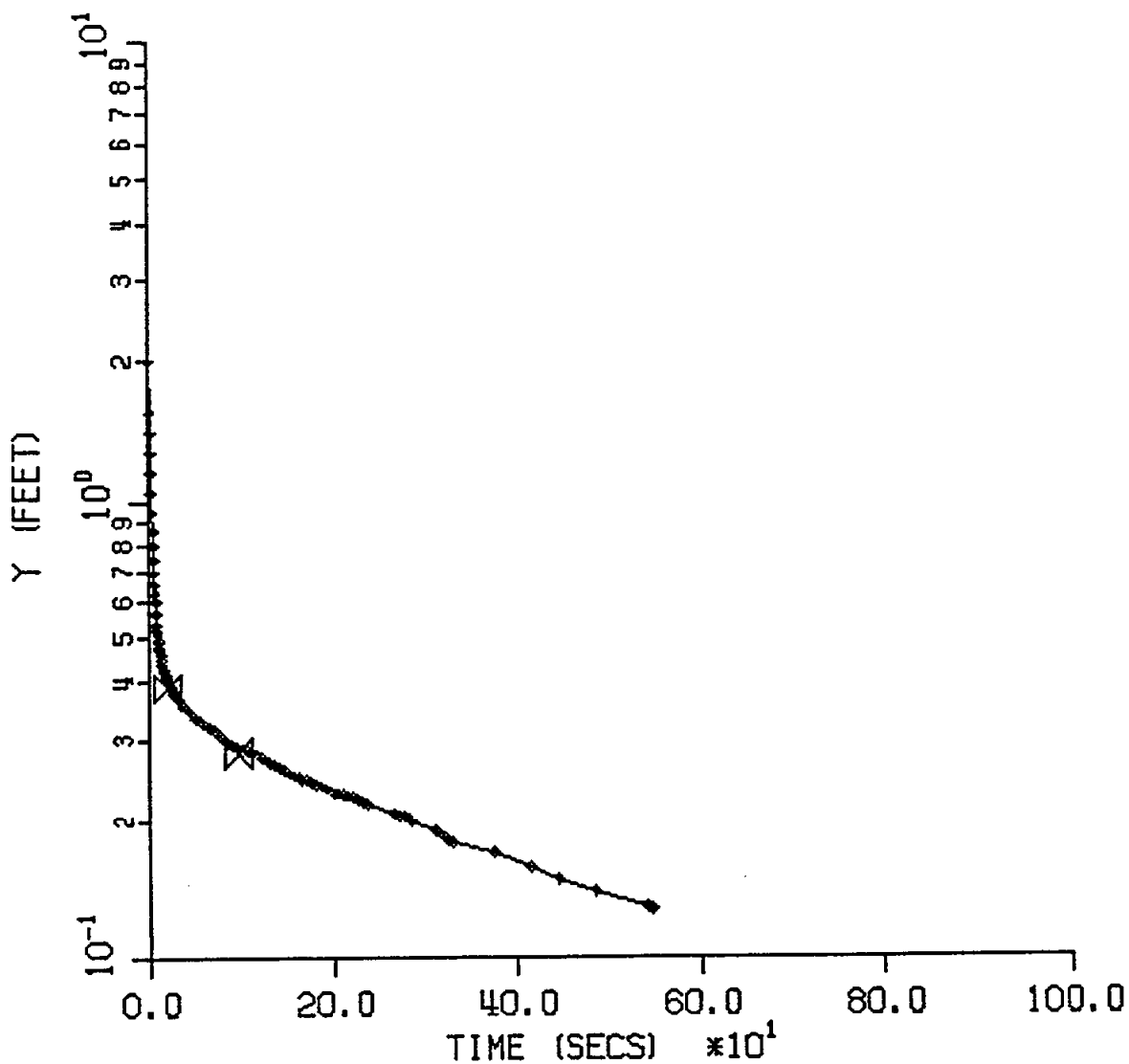
B = 0.00

C = 1.57

Y-INTERCEPT = 0.38

SLOPE = -0.0011

SUNOCO PROPERTY  
OBMW5-TEST 2



K (CM/S) = 0.001175

WELL SPECS. (FEET)

SCREEN LENGTH = 5.7

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 5.7

H (FEET) = 5.70

COEFFICIENTS

A = 0.00

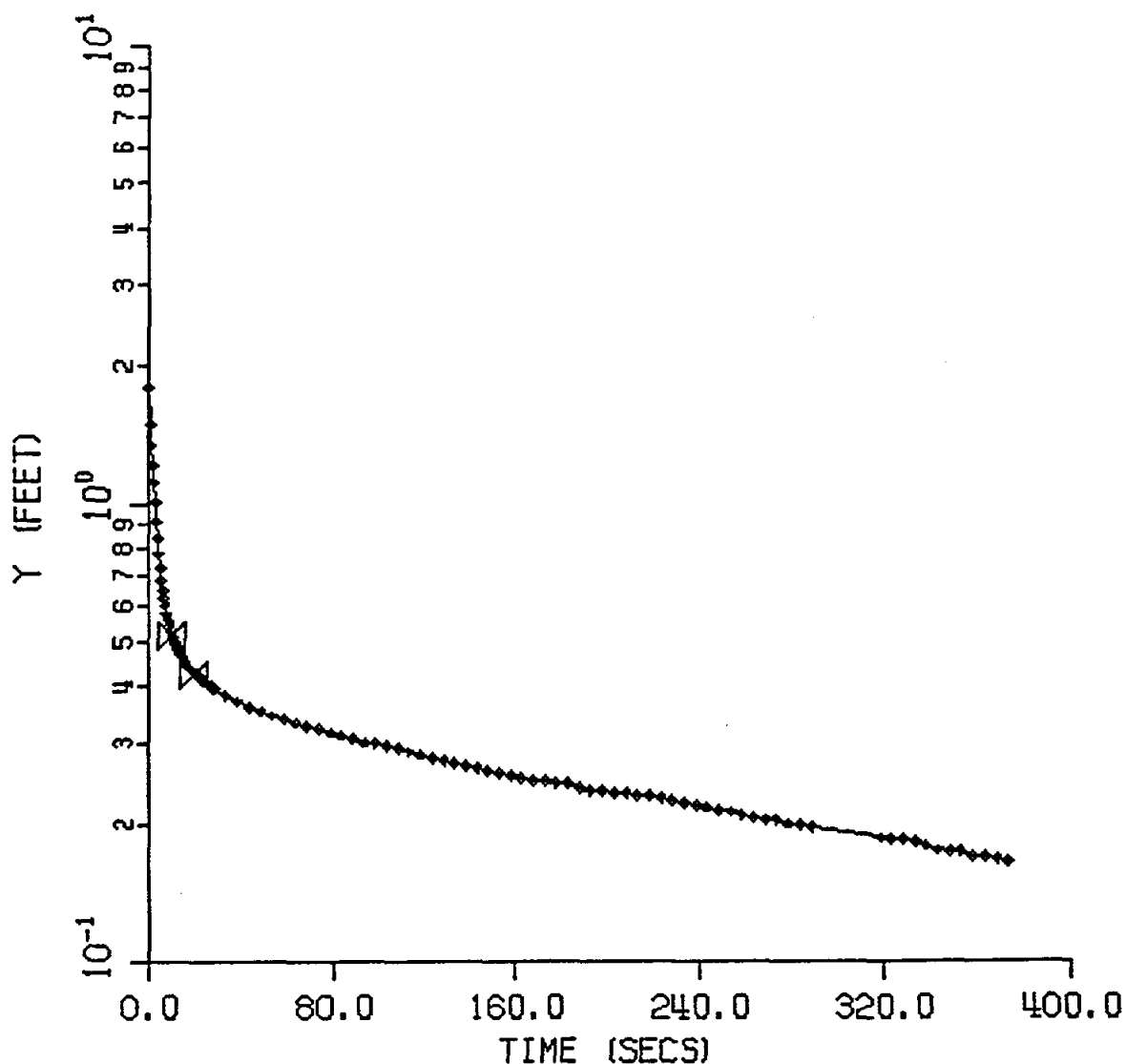
B = 0.00

C = 1.57

Y-INTERCEPT = 0.42

SLOPE = -0.0019

SUNOCO PROPERTY  
OBMW5-TEST 3



K (CM/S) = 0.005293

WELL SPECS. (FEET)

SCREEN LENGTH = 5.7

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 5.7

H (FEET) = 5.70

COEFFICIENTS

A = 0.00

B = 0.00

C = 1.57

Y-INTERCEPT = 0.62

SLOPE = -0.0085

**Table 1-1**  
**Well Construction Details**  
**Stepan, Sears, and Vicinity Properties**

Well	Location	Well Riser I.D.	Estimated Aquifer Thickness	Screen Length	Depth of Top of Screen	Water Depth*	Test Method
OB MW1	Sears	2 in.	5 ft.	7 ft.	3 ft.	5.31 ft.	DC
BR MW1	Sears	2 in.	42 ft.	10 ft.	37 ft.	5.51 ft.	PDD
OB MW2	Stepan	2 in.	7 ft.	10 ft.	3 ft.	5.86 ft.	DC
BR MW2	Stepan	2 in.	34 ft.	10 ft.	32 ft.	9.24 ft.	PDD
OB MW3	Gulf	2 in.	7 ft.	7 ft.	5 ft.	4.83 ft.	DC
BR MW3	Gulf	2 in.	26.5 ft.	10 ft.	20 ft.	4.32 ft.	PDD
OB MW4	Sears	2 in.	12 ft.	10 ft.	4 ft.	2.60 ft.	DC
BR MW4	Sears	2 in.	31.5 ft.	10 ft.	26 ft.	5.20 ft.	PDD
OB MW5	Sunoco	2 in.	22.7 ft.	7 ft.	3 ft.	4.34 ft.	DC
BR MW5	Sunoco	2 in.	26 ft.	10 ft.	19 ft.	4.33 ft.	PDD
OB MW6	Sears	2 in.	16.8 ft.	5 ft.	3 ft.	4.25 ft.	DC
BR MW6	Sears	2 in.	23.5 ft.	10 ft.	17 ft.	4.57 ft.	PDD
OB MW7	Sears	2 in.	26.8 ft.	10 ft.	5 ft.	3.23 ft.	DC
BR MW7	Sears	2 in.	25.5 ft.	10 ft.	28 ft.	13.34 ft.	PDD
OB MW8	SWS Realty	2 in.	6.9 ft.	7 ft.	5.5 ft.	5.31 ft.	DC
BR MW8	SWS Realty	2 in.	40 ft.	10 ft.	32 ft.	5.31 ft.	PDD
BR MW9	Federal Express	2 in.	7.2 ft.	10 ft.	13.5 ft.	16.35 ft.	DC
BR MW10	Stepan	2 in.	32 ft.	10 ft.	30 ft.	8.95 ft.	PDD
OB MW11	Sears	2 in.	9.5 ft.	5 ft.	5 ft.	3.40 ft.	DC

More detailed description of the two test methods are provided in the following sections. In both cases, the test data were collected in digital form using a Campbell Scientific Inc. 21X datalogger connected to Druck pressure transducers.

### *Pneumatic Displacement Method*

The pneumatic displacement method consists of an apparatus inserted into the well which contains a packer that allows the well to be sealed off and pressurized with a bottled air supply. The pneumatic displacement apparatus was developed to suppress the water column in a well and consisted of a packer assembly, fittings for the transducers and a pressure regulating valve, and a pressure-release valve. When the packer was lowered into the upper portion of the monitoring well, clamped in place and inflated, it provided a seal between the apparatus and the inside of the well. Two fittings were provided for inserting transducers. One transducer was lowered down through the packer and placed approximately 20 feet below the water surface in the well, and remained at that depth throughout the test. The other transducer was inserted into the side of the packer to measure the induced gas pressure (above the water surface during the test). A third compression fitting allowed gas to be introduced to pressurize the well. Bottled nitrogen was delivered through a regulator into the apparatus. The pressure was released quickly through a ball valve to start each test.

Fifteen bedrock wells were tested using the pneumatic displacement method. The test was generally repeated a second time in each well to evaluate the repeatability of the data. Each test was performed as follows:

- After the test apparatus was installed in the well, the packer was inflated and the well pressurized.
- The datalogger was programmed to display the pressure measured by the submerged transducer (T1) (ft of water), the gas pressure measured by the transducer (T2), and the difference between the two (T1-T2). The difference equalled the height of the water column (ft) above the submerged transducer. The gas pressure was regulated at a constant value.
- The water levels were routinely suppressed approximately 10 ft for both tests. Wells with a slow response were suppressed as far as possible (typically 3 to 5 ft). Only one test was performed on extremely slow wells (BRMW 1). As the gas pressure was applied, the water level in the well declined to the desired level, displacing a slug of water from the well.
- Tests were begun after allowing for equilibration between the well and the geologic formation. The length of time allowed for equilibrium was variable, but the test was ready to start when the absolute change in

assembly. The rapid change in water level triggered the datalogger, which recorded elapsed time and corresponding water levels. Tests continued until the water level recovered to within 80 to 90 percent of the initial static water level measurements.

### Data Analysis Methods

Each set of test data was analyzed using methods developed by Bouwer and Rice (1976) for partially penetrating and partially screened wells in unconfined aquifers. The method can also be used in confined aquifers if the well screen is some distance below the confining unit.

Test data from wells that may have been semi-confined based on packer-testing results were analyzed using methods developed by Hvorslev (1951) for confined or semi-confined aquifers. This was done to compare hydraulic conductivities obtained by this method to Bouwer and Rice.

### Bouwer and Rice Method

Water level recordings and elapsed time were transferred from raw data sets into files adjusted for use with a computer program. A utility computer program especially adapted for unconfined aquifers using the Bouwer and Rice equation and appropriate shape factors was used for the analysis of all the wells. The method is applicable to any diameter and depth of borehole, provided that the dimensions of the system were covered by the range for which the geometry factor  $R_e$  has been derived. Bouwer and Rice used analog analyses to evaluate  $R_e$  for various geometries. The results were expressed in terms of a dimensionless ratio  $\ln(R_e/r_w)$

Where:  $R_e$  is the effective radial distance over which the vertical distance,  $y$ , between water level inside the well and static water table outside the well is dissipated.

$r_w$  is the radial distance of the undisturbed portion of aquifer from the centerline

Bouwer and Rice developed a governing equation for the rise of water levels in a well after a slug of water was suddenly removed. They integrated the equations and obtained the following expression for  $K$  (hydraulic conductivity):

$$K = r_c^2 / 2L_e \ln(R_e/r_w) 1/t \ln(y_o/y_c)$$

Where:  $y$  = the vertical distance between water level inside the well and static water table outside the well

$h$  = the head of water at time  $t$  (ft)

A linear regression, best-fit analysis was performed on each data set, and the resulting best-fit line was also plotted. The hydraulic conductivity was then calculated using the equation:

$$K = \pi r^2 C1 / T_o F$$

where:

$K$  = hydraulic conductivity (cm/sec)

$r$  = well radius (in)

$C1$  = conversion factor (2.54cm/in x 1/12 ft/in)

$T_o$  = basic lag time (sec)

$F$  = shape factor (ft)

The shape factor ( $F$ ) for tested wells where screen penetration was 20 to 85% of aquifer thickness was calculated by:

$$F = 2\pi L / \ln (L/R)$$

where:

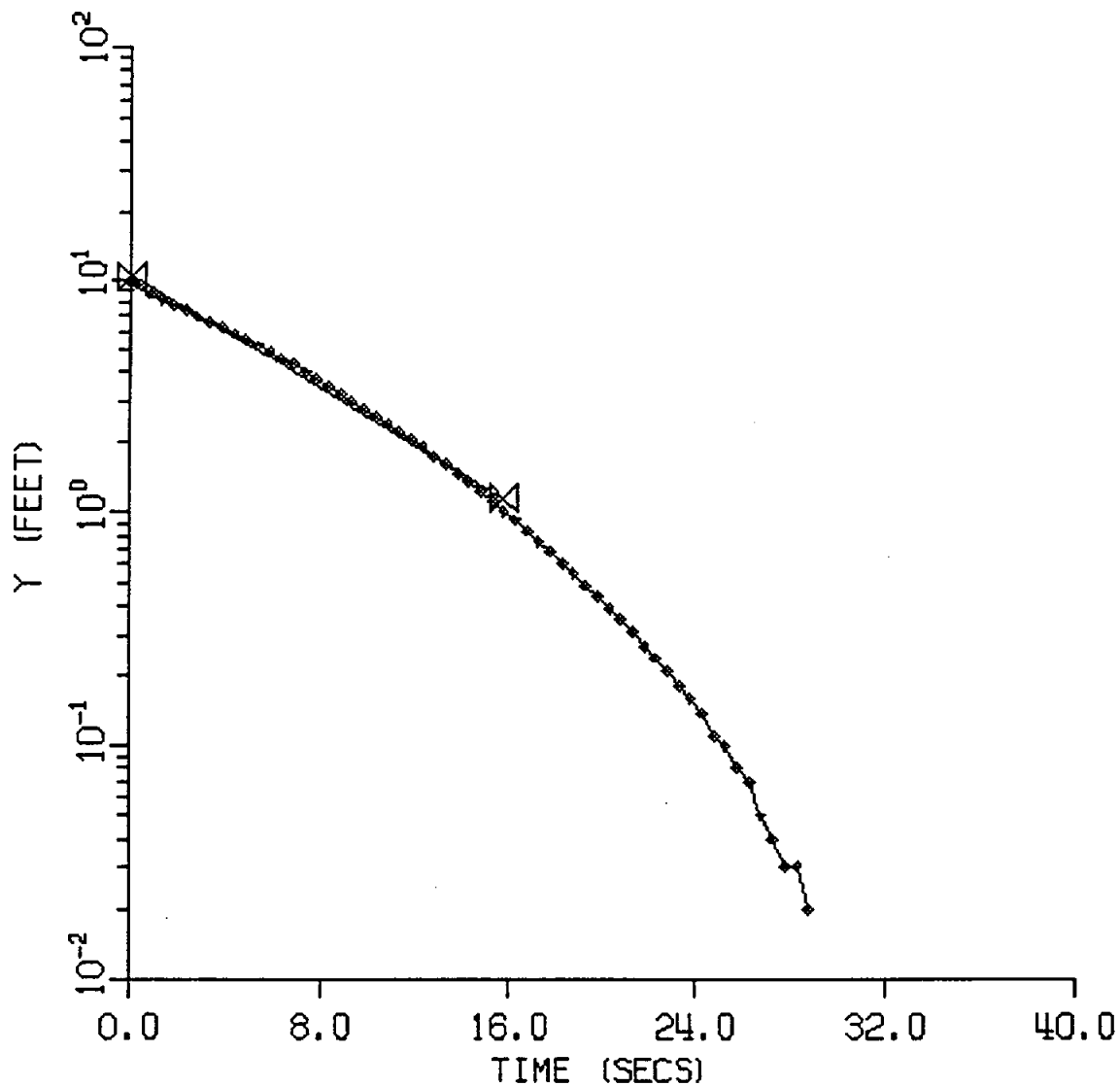
$L$  = screen length (ft)

$R$  = screen radius (ft)

Initially, calculation of hydraulic conductivity was based on the linear regression best-fit line for the entire data set. If the best-fit line did not appear to represent a substantial range of the data set, a subset was created and evaluated over a shorter duration of the test. For wells exhibiting high  $K$  values, most of the data points fell on or near the best-fit line (Attachment A). In general, the subset of data evaluated occurred between 0 and 90 percent of static water level recovery. This range eliminated the noise in the data set due to the tailing off of the data as the water level asymptotically approaches static water level. The selected subset is indicated by notches at each end of the best-fit line. The value of hydraulic conductivity and the slope of the best-fit line are at the bottom of each graph. Slopes of the graphs may appear different based on the length of the test, the recovery response of the aquifer, and the degree to which the well recovered.



SUNOCO PROPERTY  
BRMW5-TEST 1



K (CM/S) = 0.004177

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 26.0

H (FEET) = 24.70

COEFFICIENTS

A = 2.41

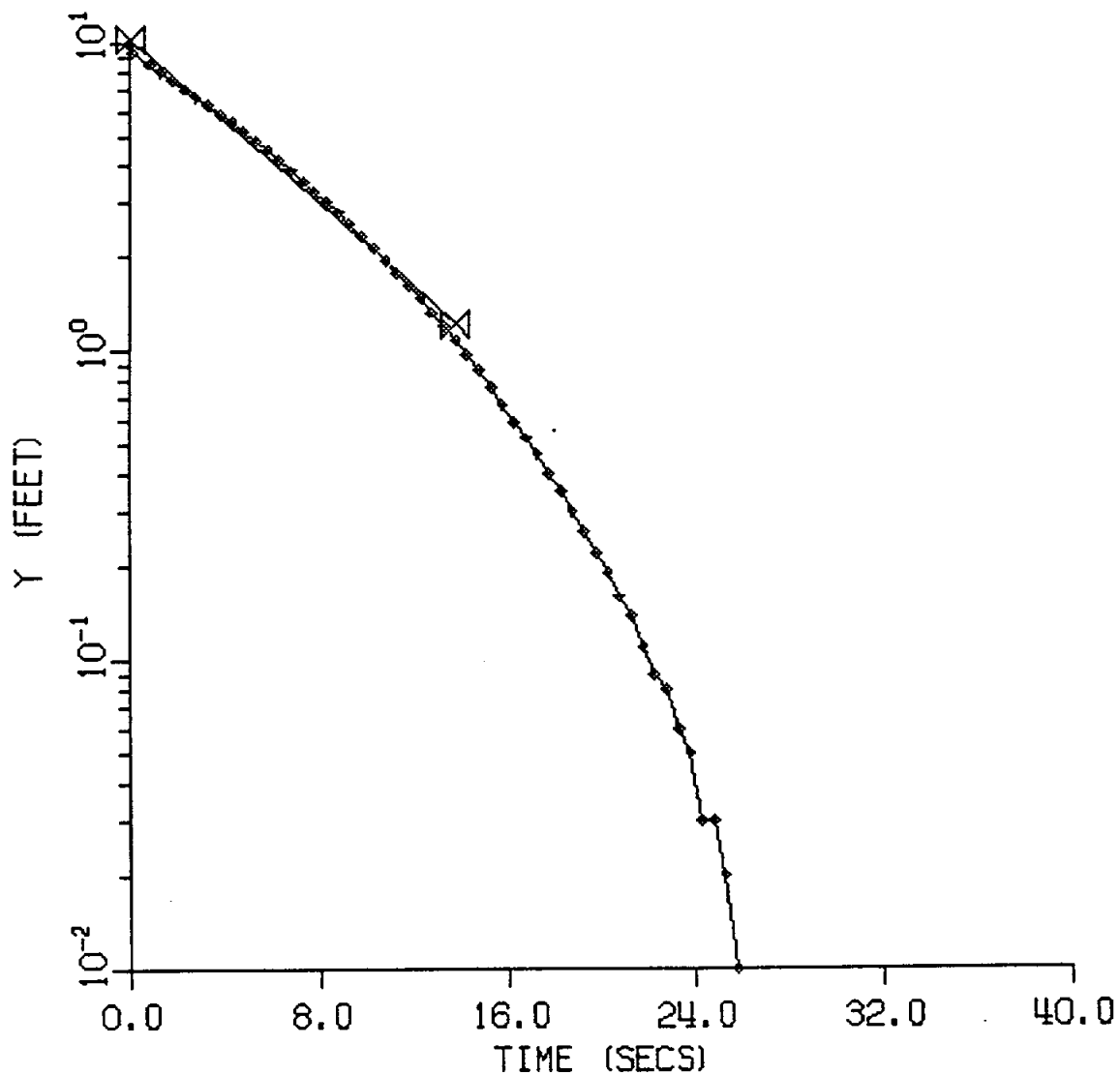
B = 0.38

C = 0.00

Y-INTERCEPT = 10.40

SLOPE = -0.0605

SUNOCO PROPERTY  
BRMW5-TEST 2



K (CM/S) = 0.004652

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 26.0

H (FEET) = 24.70

COEFFICIENTS

A = 2.41

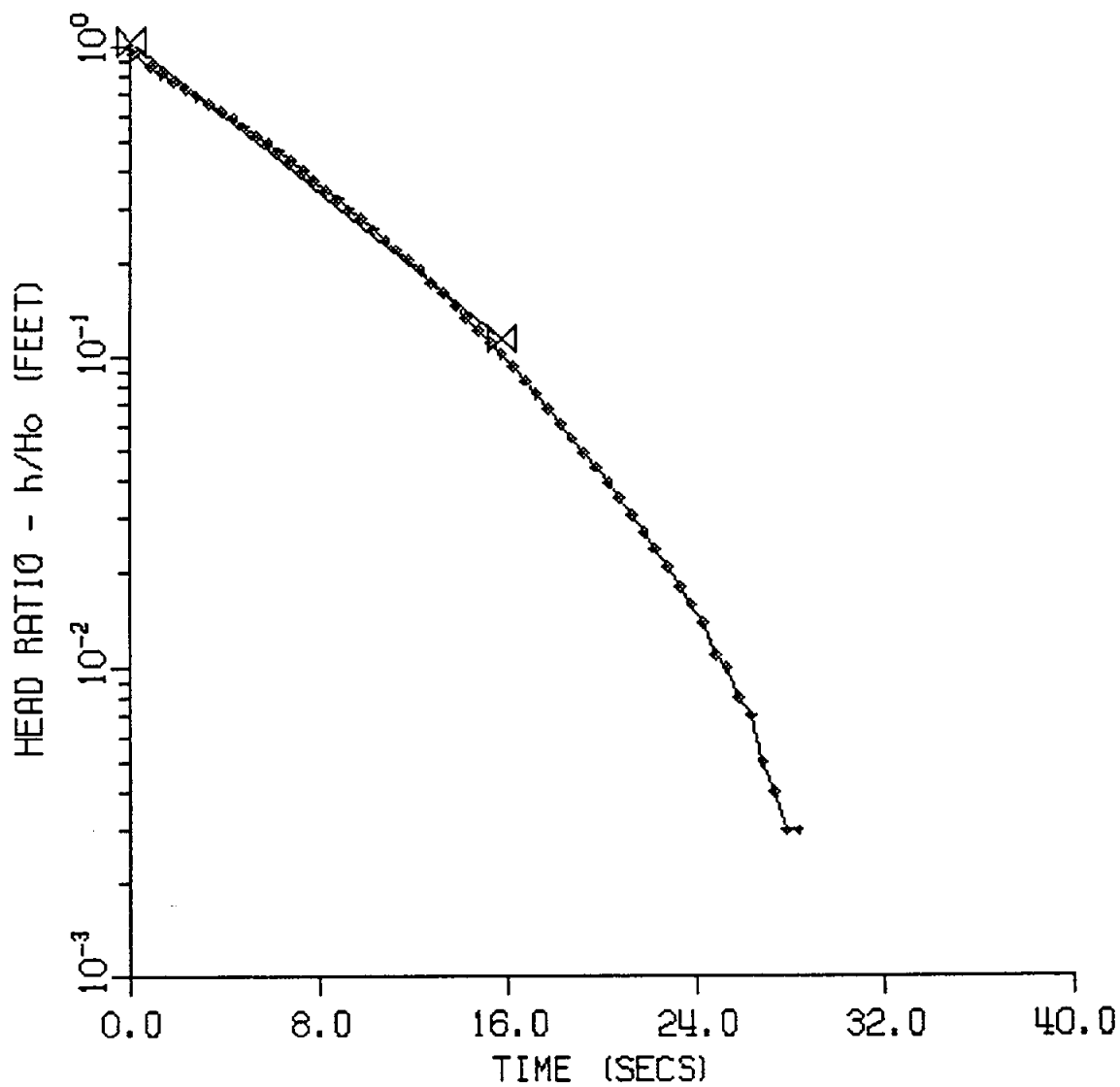
B = 0.38

C = 0.00

Y-INTERCEPT = 10.34

SLOPE = -0.0674

SUNOCO PROPERTY  
BRMW5-TEST 1



$K$  (CM/S) = 0.007812

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

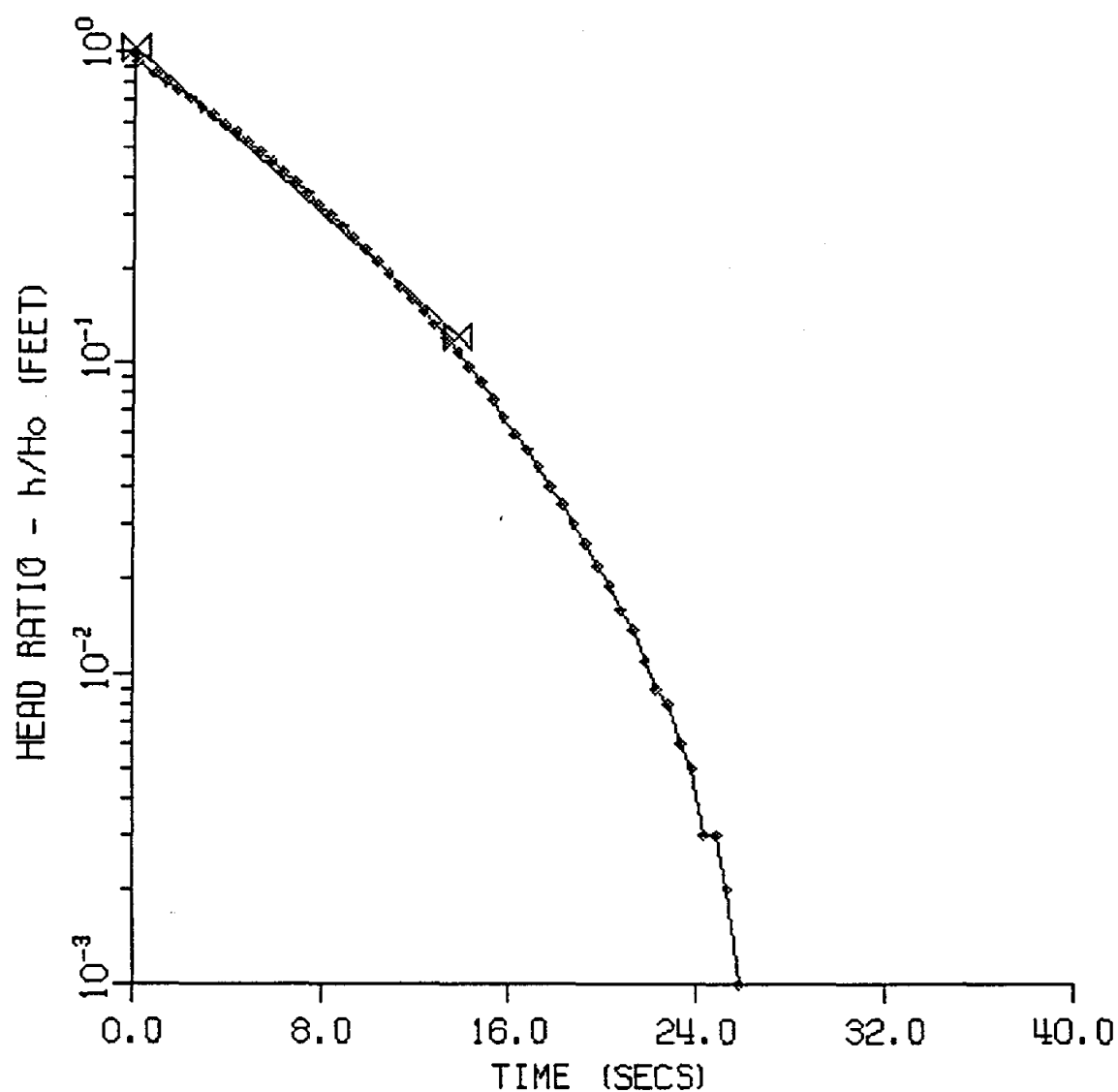
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0605

SUNOCO PROPERTY  
BRMW5-TEST 2



K (CM/S) = 0.008700

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

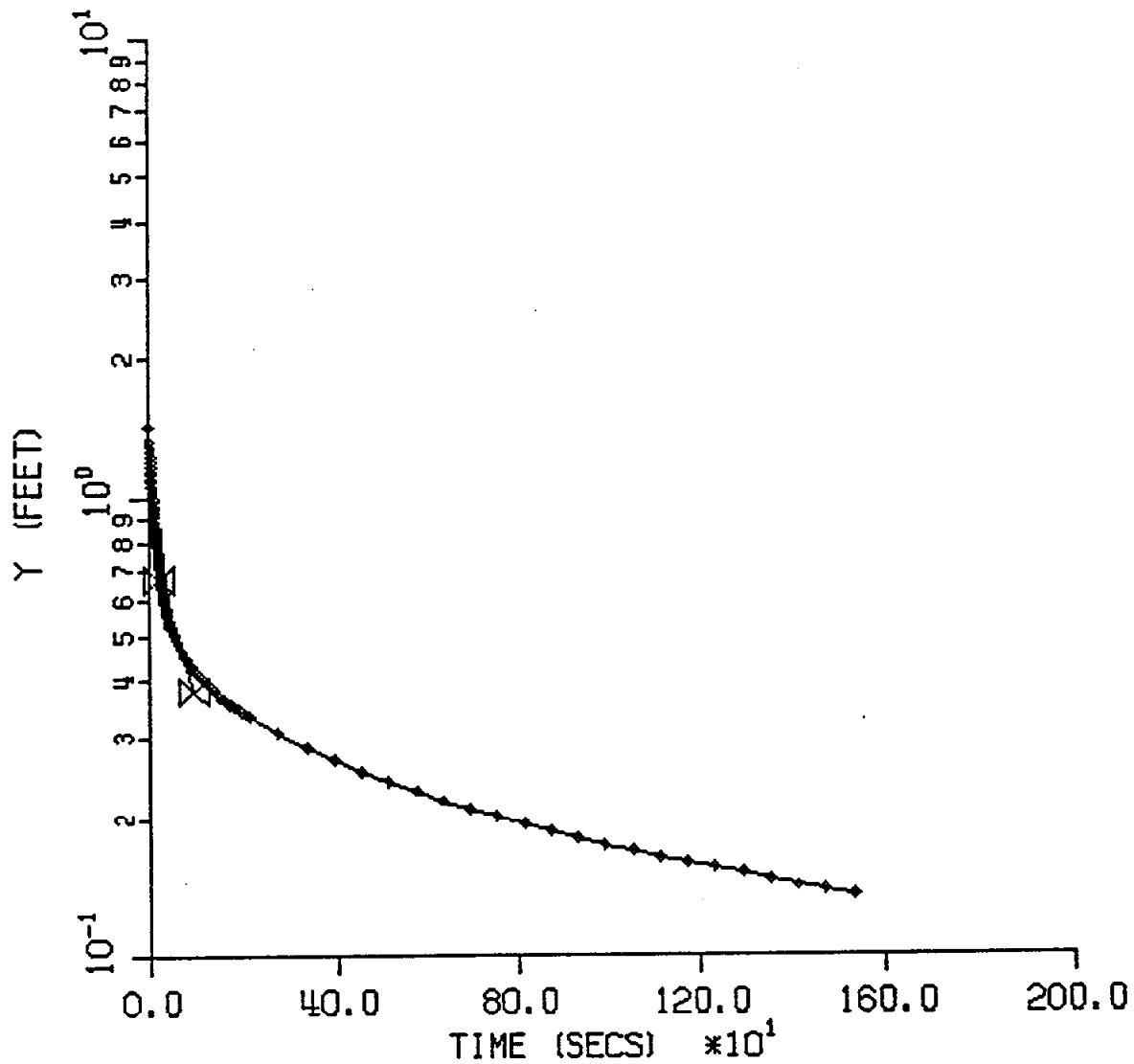
WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0674

# SEARS LOGISTICAL SERVICES

## OBMW6-TEST 1



K (CM/S) = 0.002587

WELL SPECS. (FEET)

SCREEN LENGTH = 3.8

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 3.8

H (FEET) = 3.80

COEFFICIENTS

A = 0.00

B = 0.00

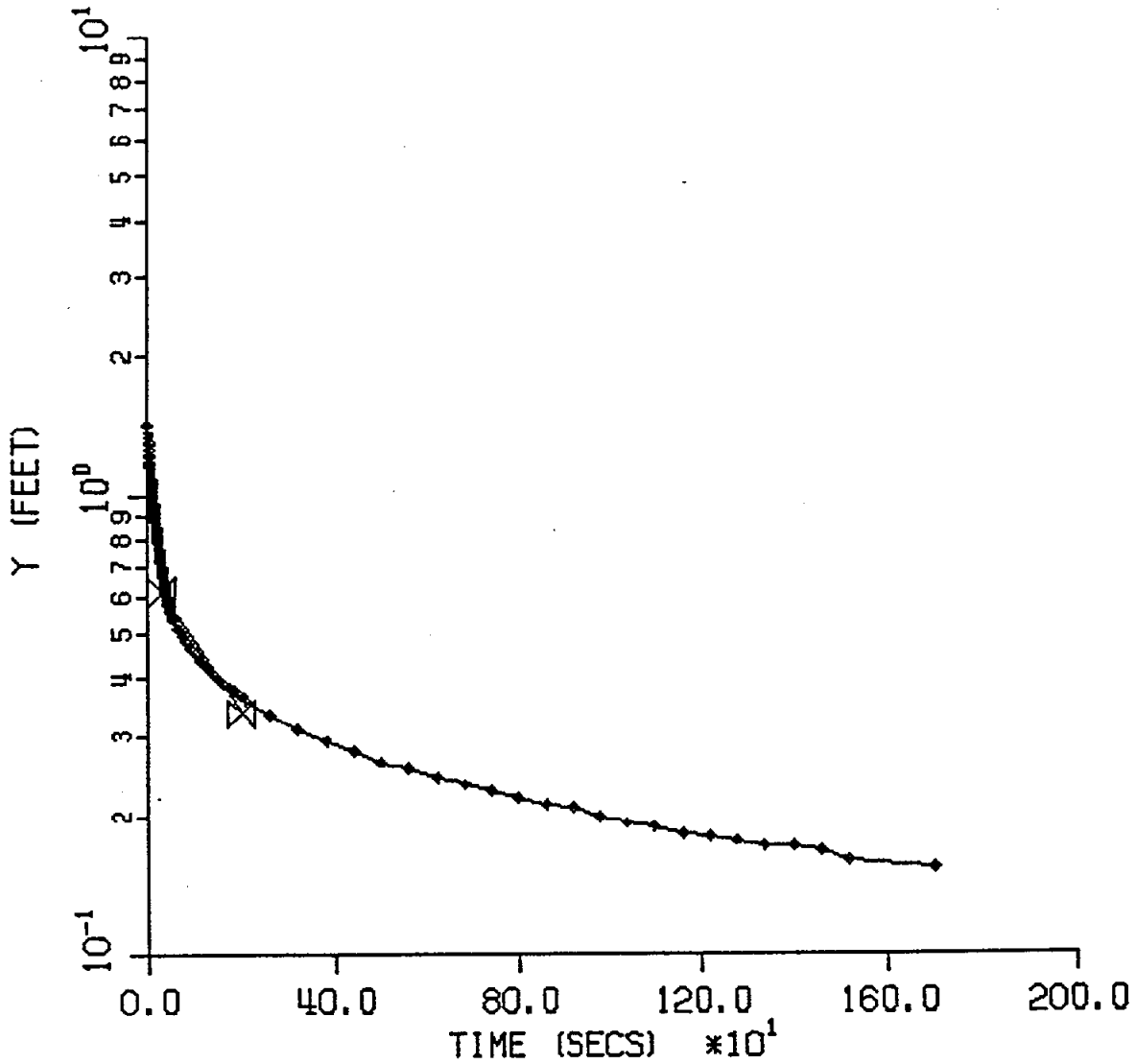
C = 1.26

Y-INTERCEPT = 0.77

SLOPE = -0.0032

# SEARS LOGISTICAL SERVICES

## OBMW6-TEST 2



K (CM/S) = 0.001242

WELL SPECS. (FEET)

SCREEN LENGTH = 3.8

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 3.8

H (FEET) = 3.80

COEFFICIENTS

A = 0.00

B = 0.00

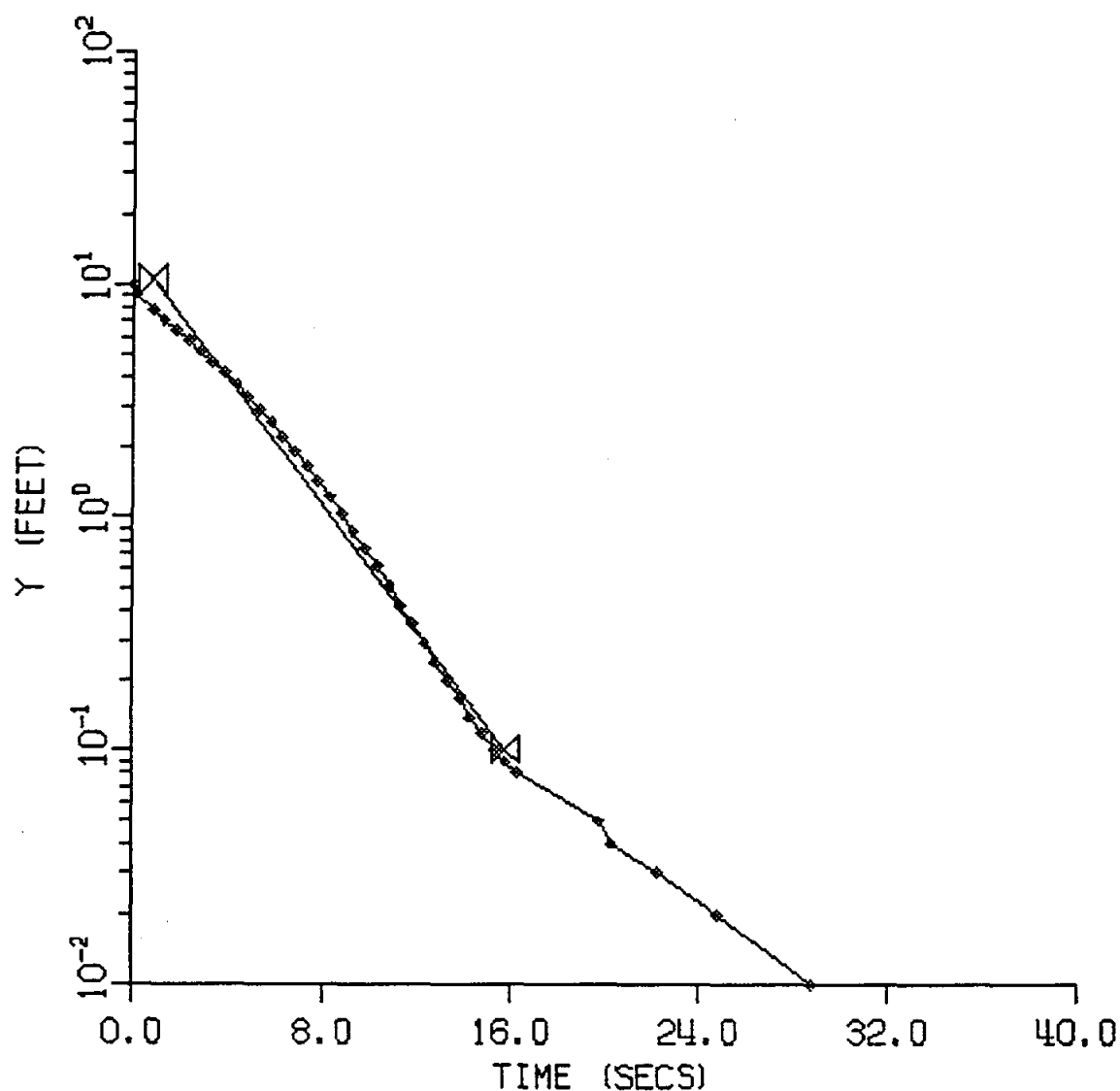
C = 1.26

Y-INTERCEPT = 0.69

SLOPE = -0.0016

# SEARS LOGISTICAL SERVICES

## BRMW6-TEST 1



K (CM/S) = 0.009154

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 23.5

H (FEET) = 22.40

COEFFICIENTS

A = 2.41

B = 0.38

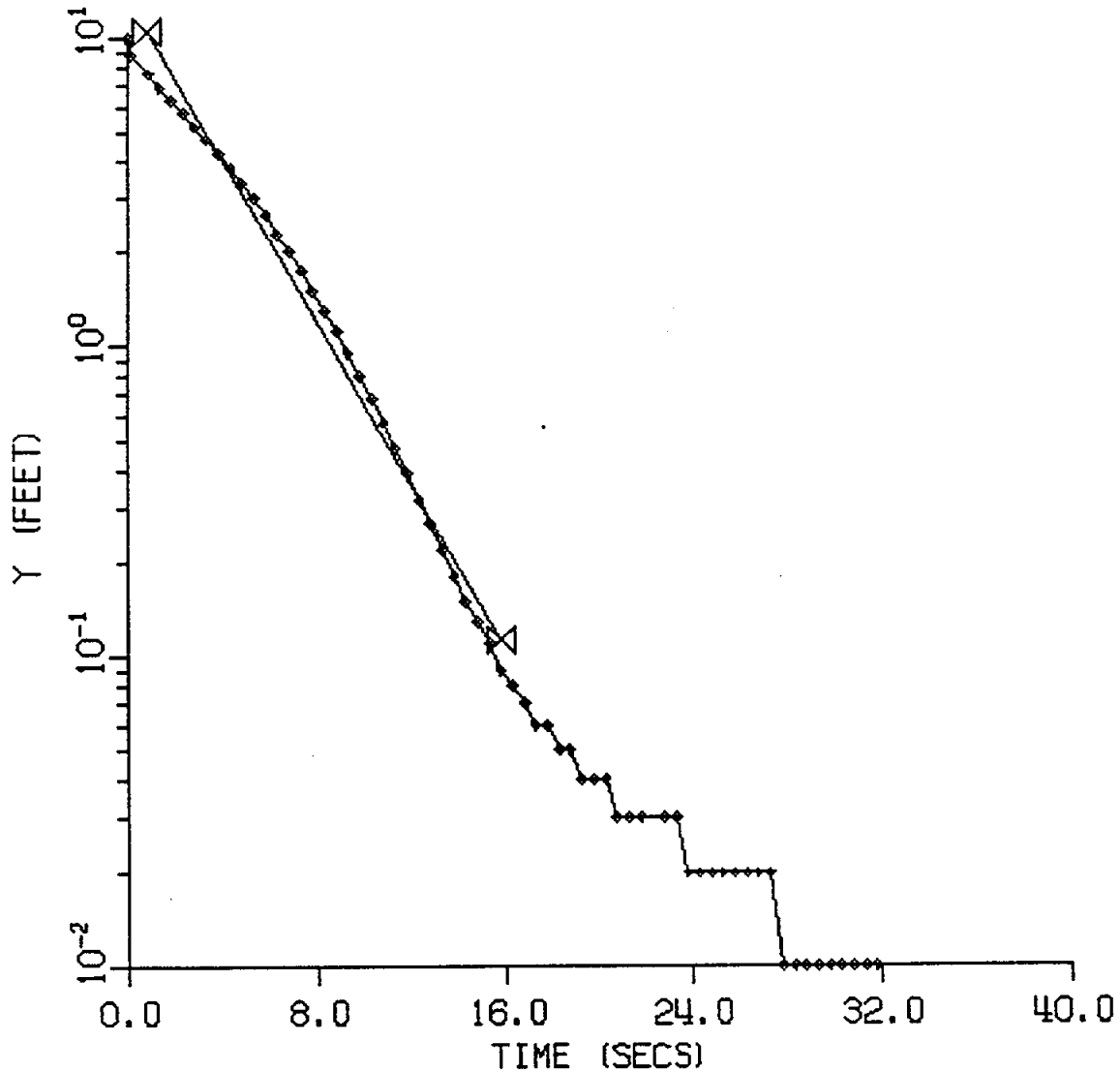
C = 0.00

Y-INTERCEPT = 13.36

SLOPE = -0.1340

# SEARS LOGISTICAL SERVICES

## BRMW6-TEST 2



K (CM/S) = 0.008947

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 23.5

H (FEET) = 22.40

COEFFICIENTS

A = 2.41

B = 0.38

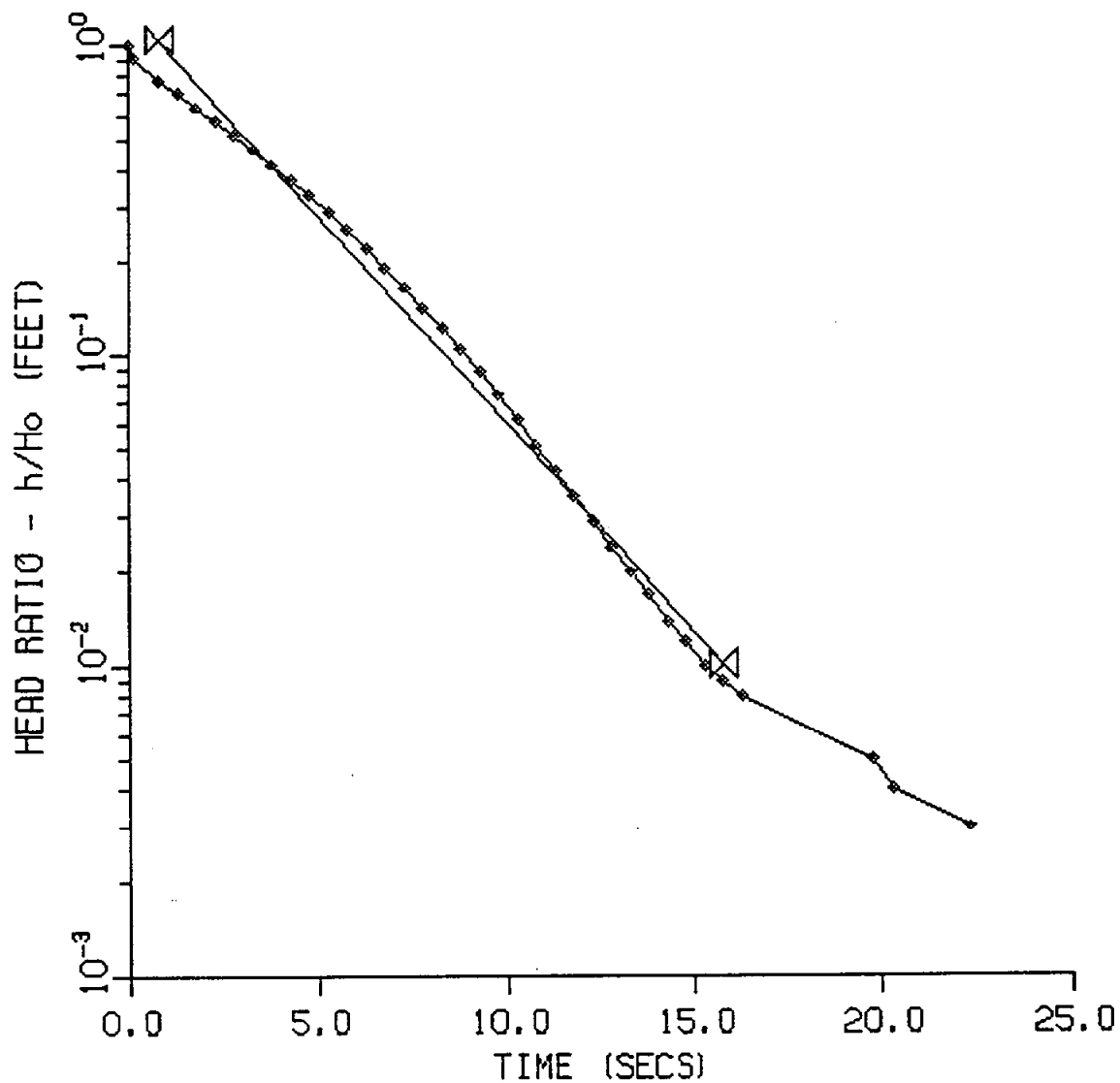
C = 0.00

Y-INTERCEPT = 13.27

SLOPE = -0.1310

# SEARS LOGISTICAL SERVICES

## BRMW6-TEST 1



$K$  (CM/S) = 0.017307

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

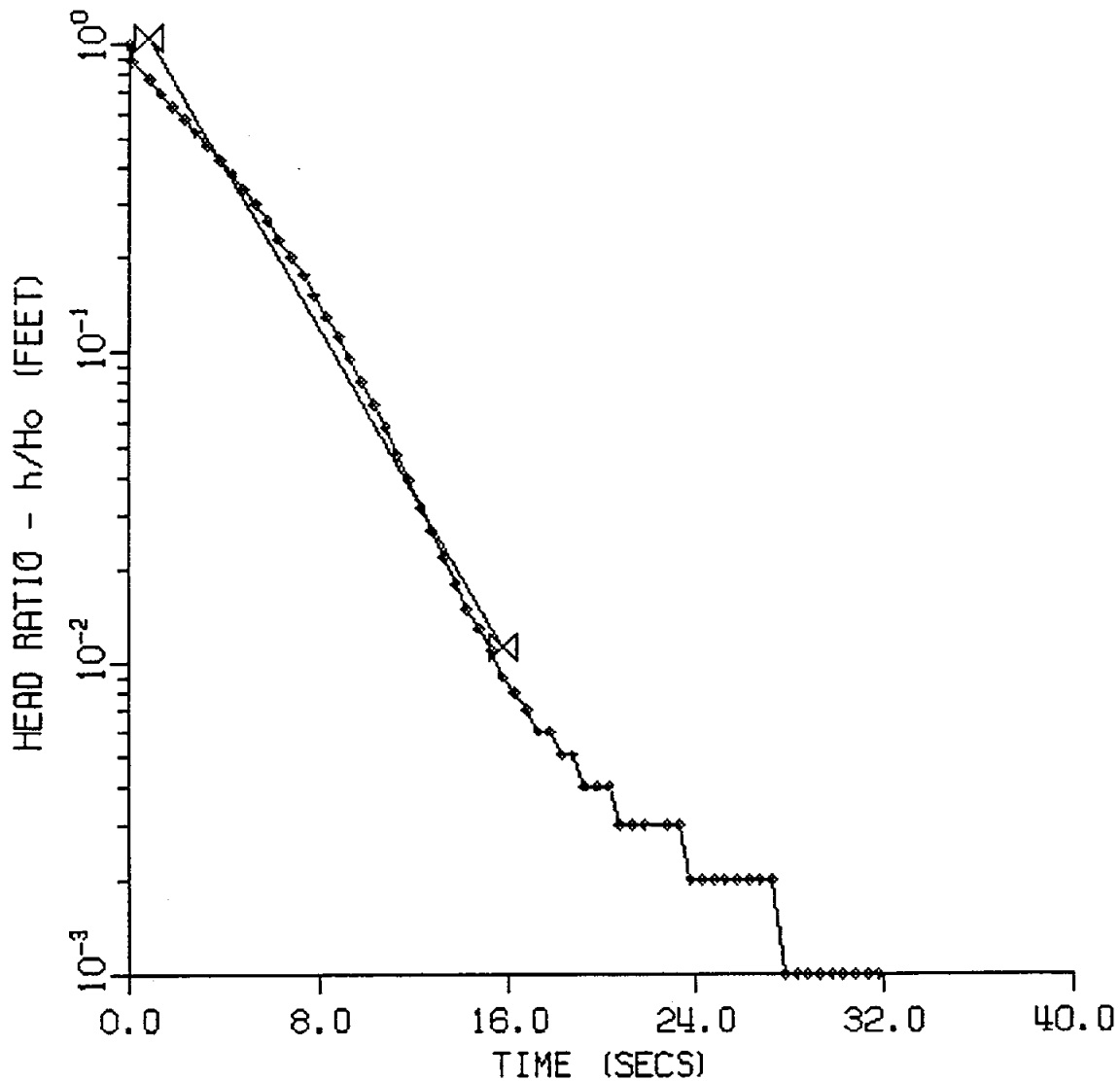
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.1340

SEARS LOGISTICAL SERVICES  
BRMW6-TEST 2



$K$  (CM/S) = 0.016915

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

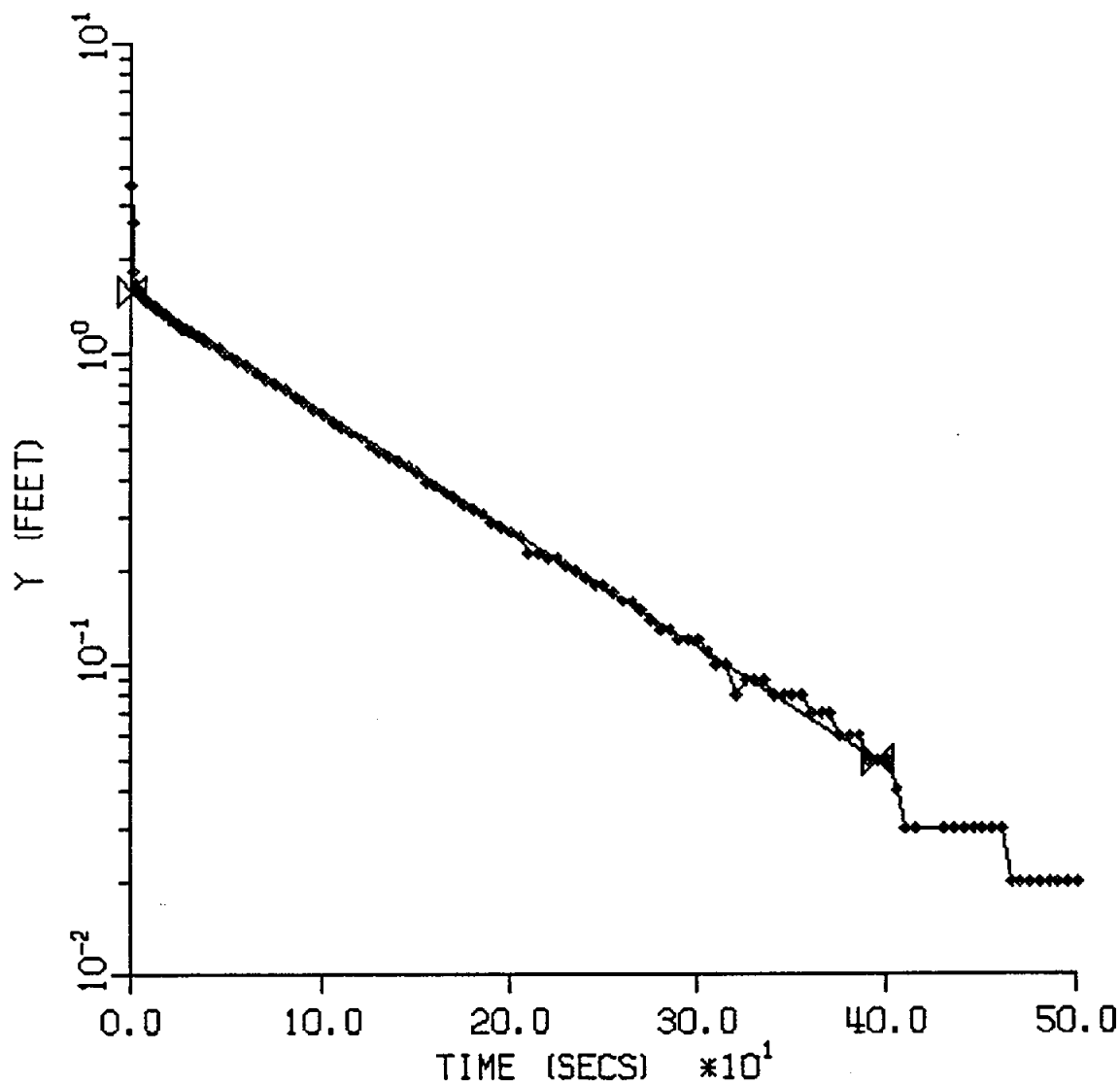
WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.1310

# SEARS LOGISTICAL SERVICES

## OBMW7-TEST 1



K (CM/S) = 0.000246

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 11.8

H (FEET) = 11.80

COEFFICIENTS

A = 0.00

B = 0.00

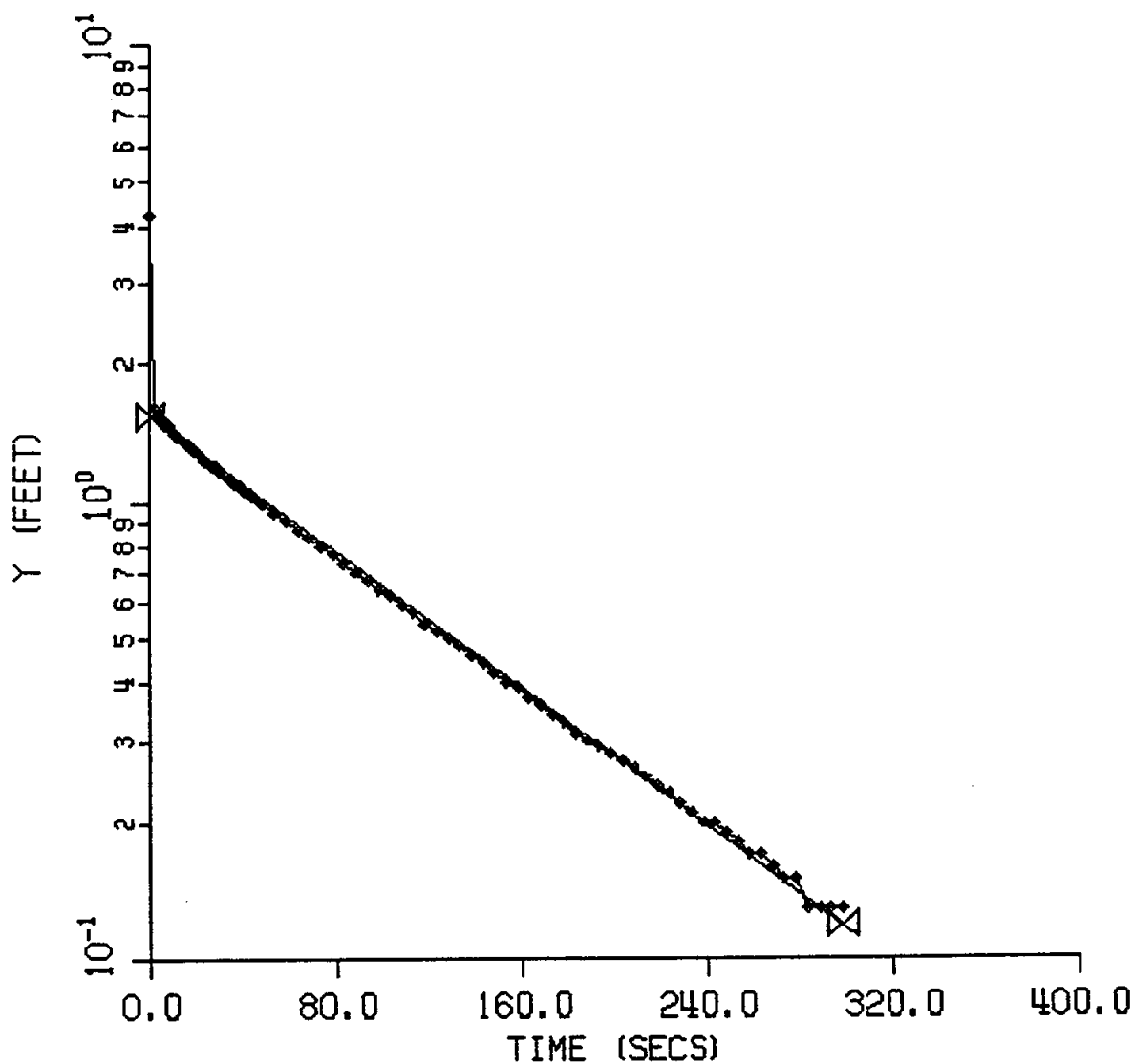
C = 2.05

Y-INTERCEPT = 1.59

SLOPE = -0.0038

# SEARS LOGISTICAL SERVICES

## OBMW7-TEST 2



K (CM/S) = 0.000241

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 11.8

H (FEET) = 11.80

COEFFICIENTS

A = 0.00

B = 0.00

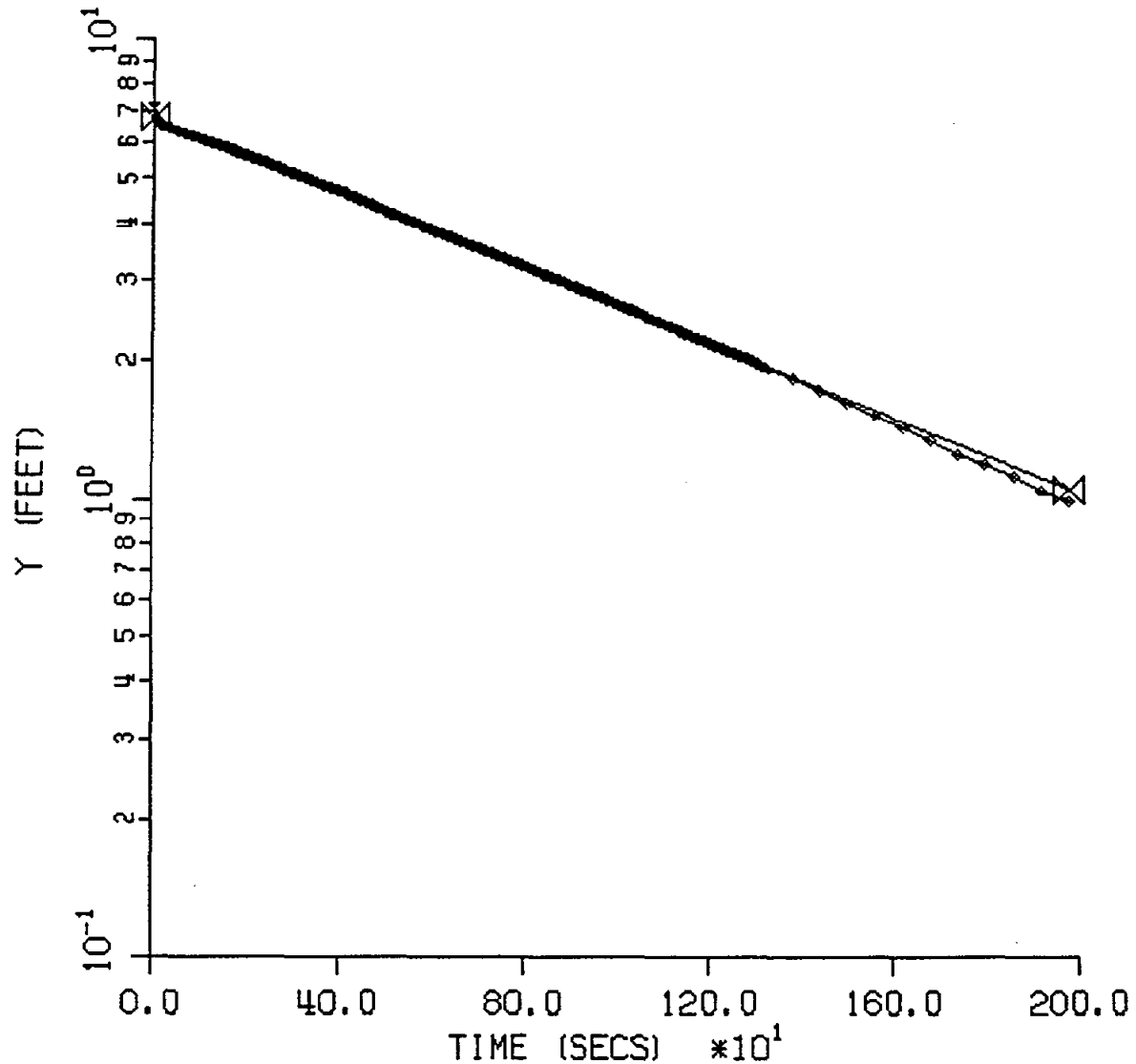
C = 2.05

Y-INTERCEPT = 1.54

SLOPE = -0.0037

# SEARS LOGISTICAL SERVICES

## BRMW7-TEST 1



K (CM/S) = 0.000029

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 25.5

H (FEET) = 24.70

COEFFICIENTS

A = 2.41

B = 0.38

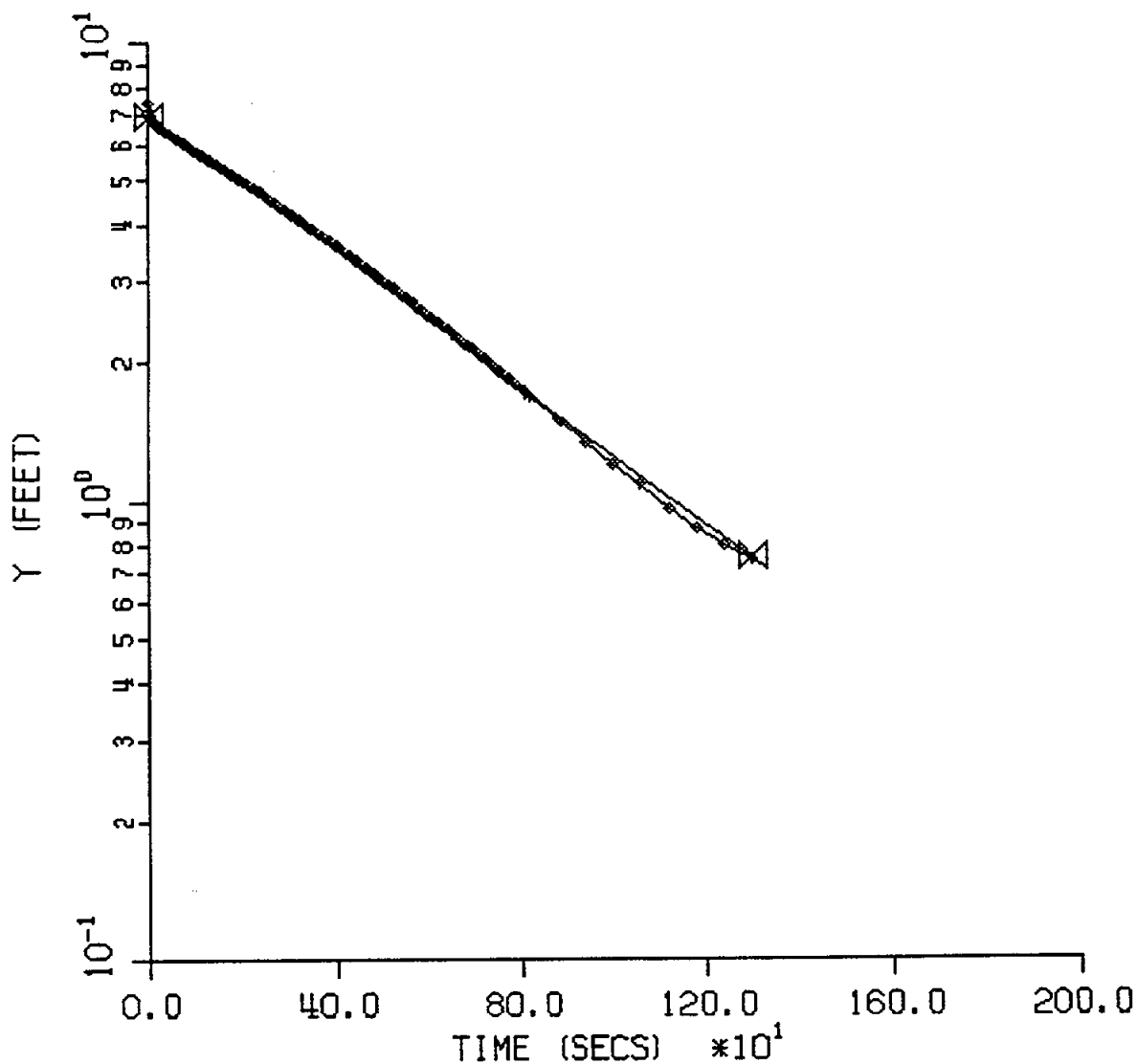
C = 0.00

Y-INTERCEPT = 6.77

SLOPE = -0.0004

# SEARS LOGISTICAL SERVICES

## BRMW7-TEST 2



K (CM/S) = 0.000052

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 25.5

H (FEET) = 24.70

COEFFICIENTS

A = 2.41

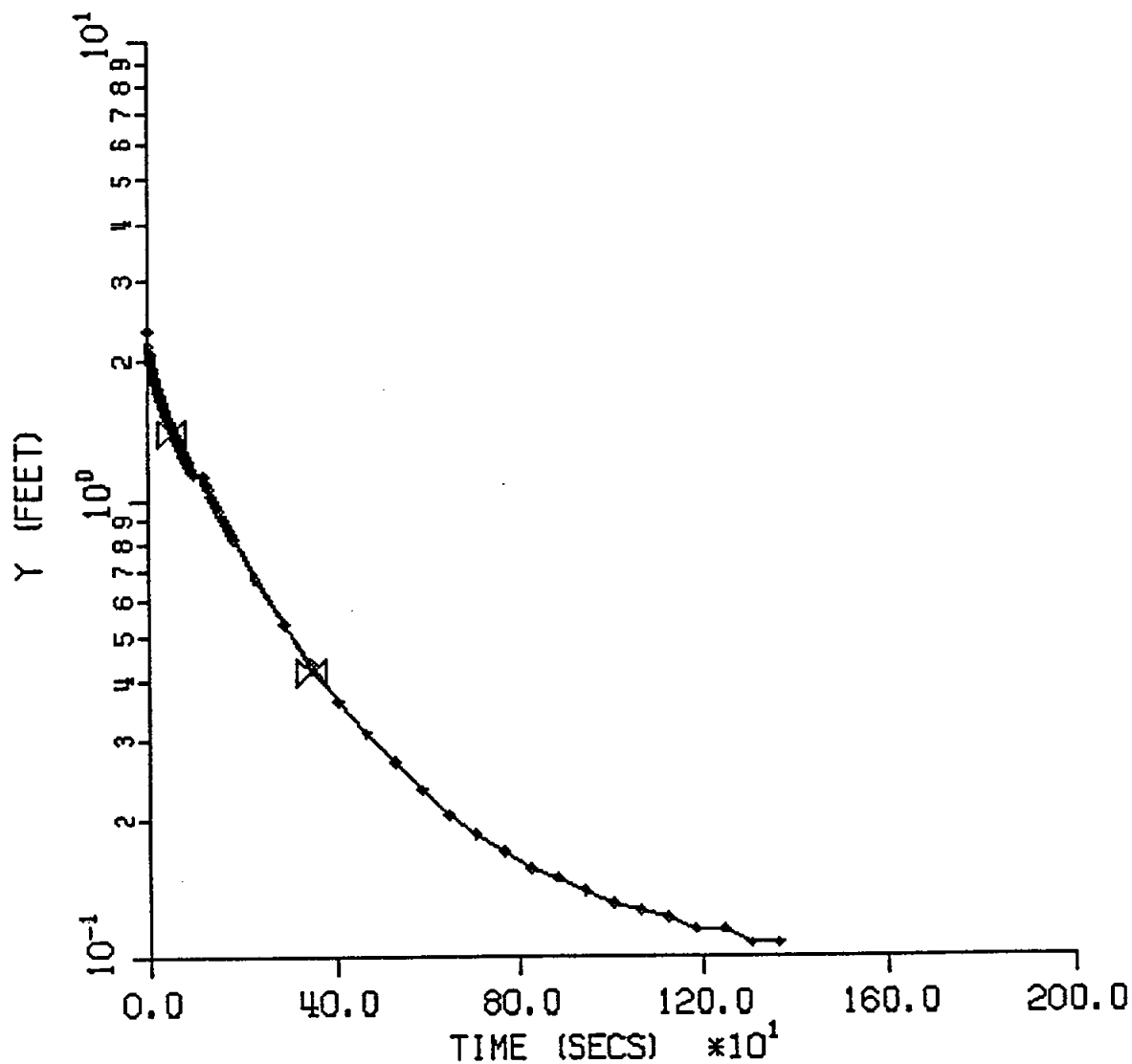
B = 0.38

C = 0.00

Y-INTERCEPT = 6.96

SLOPE = -0.0007

# SWS REALTY OBMW8-TEST 1



K (CM/S) = 0.000979

WELL SPECS. (FEET)

SCREEN LENGTH = 6.9

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 6.9

H (FEET) = 6.90

COEFFICIENTS

A = 0.00

B = 0.00

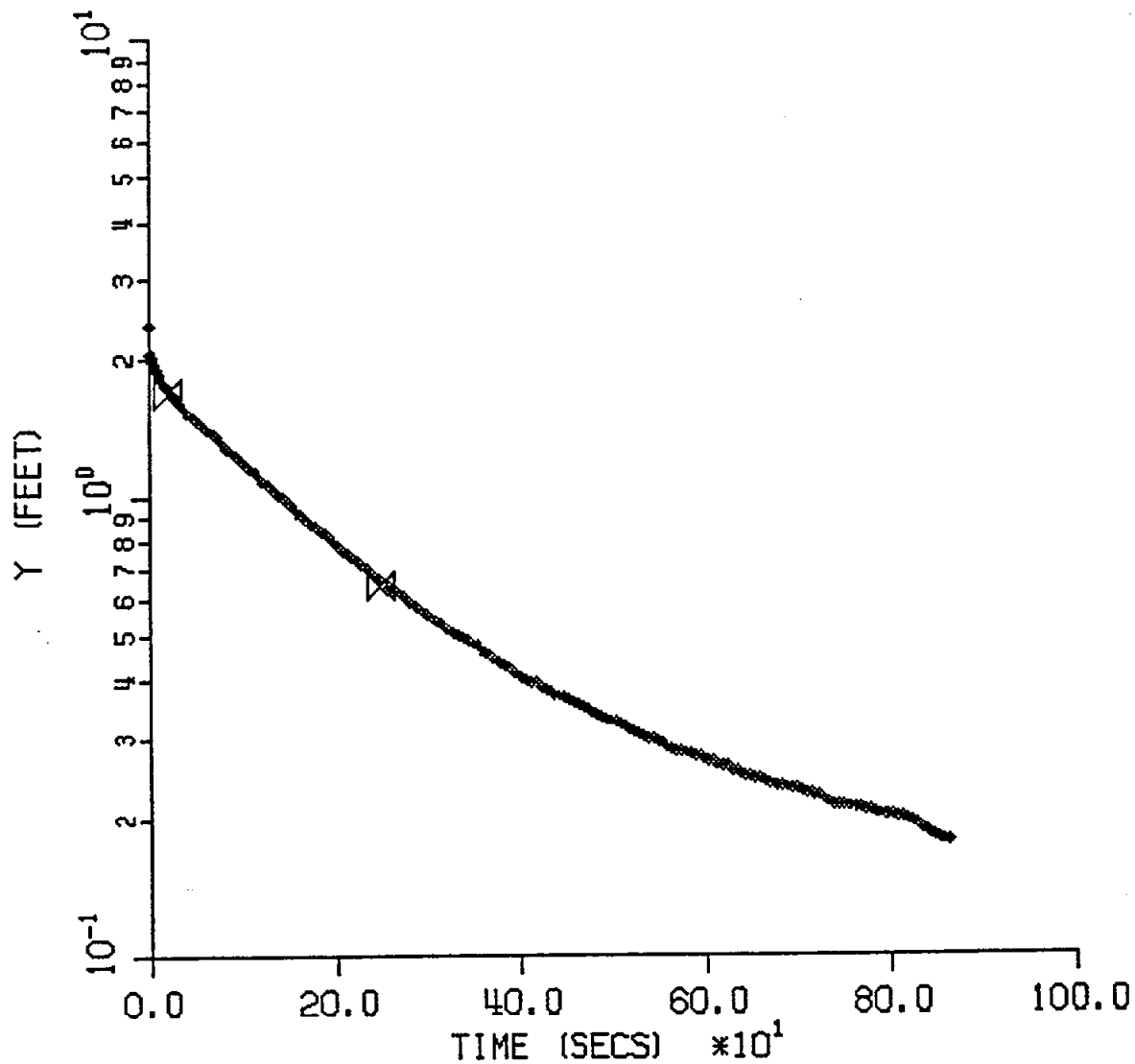
C = 1.73

Y-INTERCEPT = 1.71

SLOPE = -0.0018

# SWS REALTY

## OBMW8-TEST 2



K (CM/S) = 0.001016

WELL SPECS. (FEET)

SCREEN LENGTH = 6.9

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 6.9

H (FEET) = 6.90

COEFFICIENTS

A = 0.00

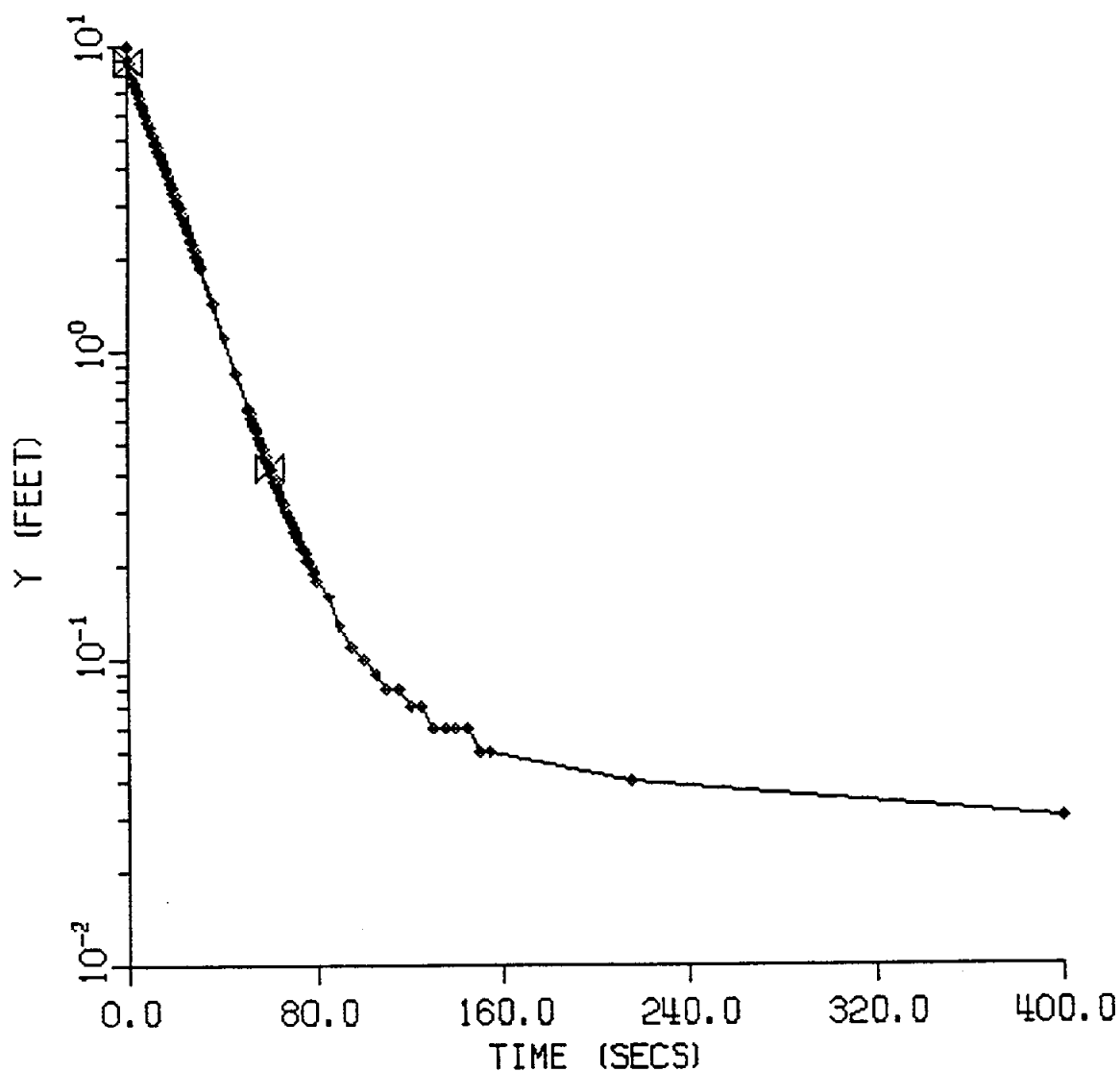
B = 0.00

C = 1.73

Y-INTERCEPT = 1.83

SLOPE = -0.0018

SWS REALTY  
BRMW8-TEST 1



K (CM/S) = 0.001576

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 40.0

H (FEET) = 36.70

COEFFICIENTS

A = 2.41

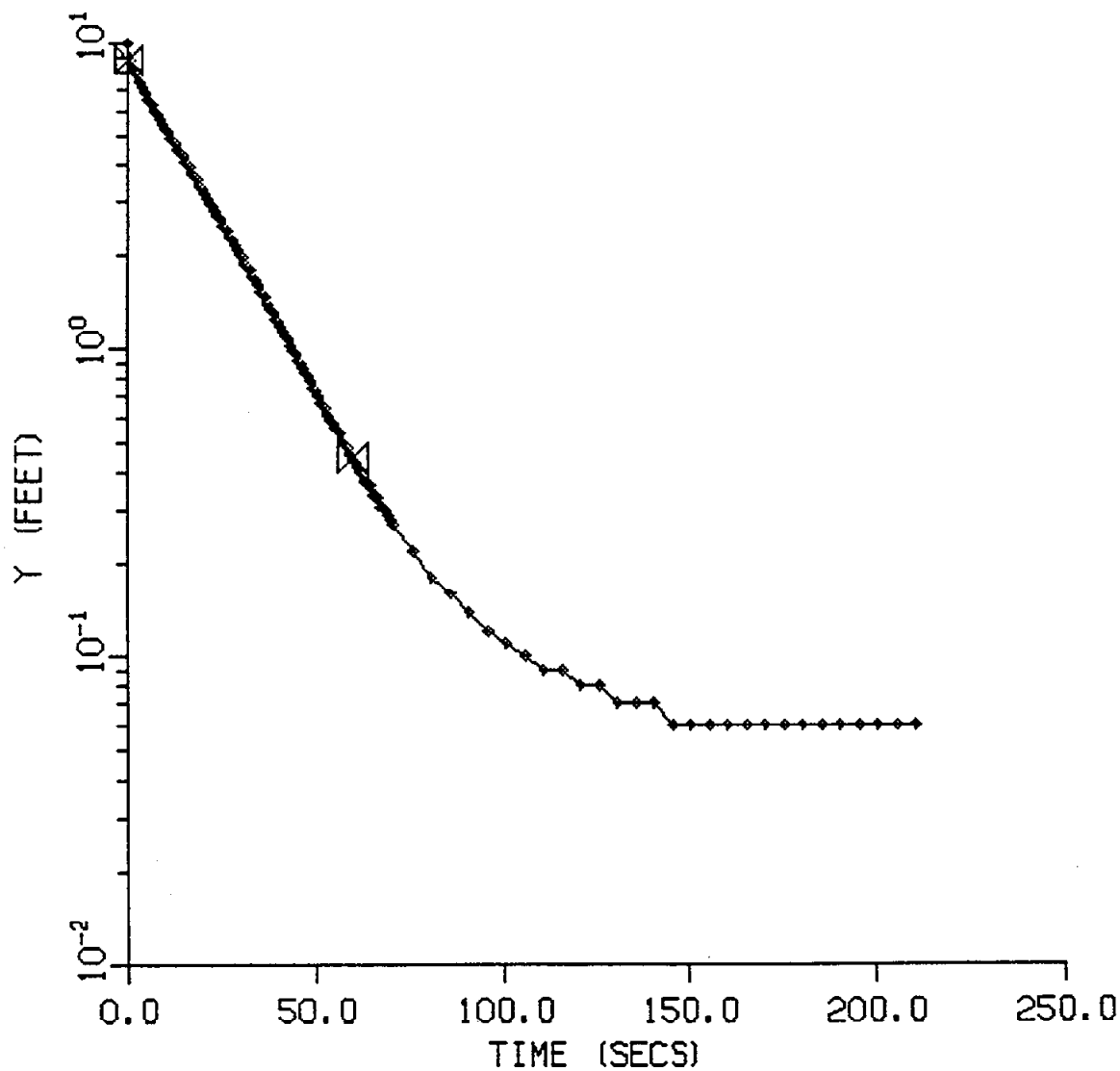
B = 0.38

C = 0.00

Y-INTERCEPT = 8.89

SLOPE = -0.0222

# SWS REALTY BRMW8-TEST 2



K (CM/S) = 0.001541

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 40.0

H (FEET) = 36.70

COEFFICIENTS

A = 2.41

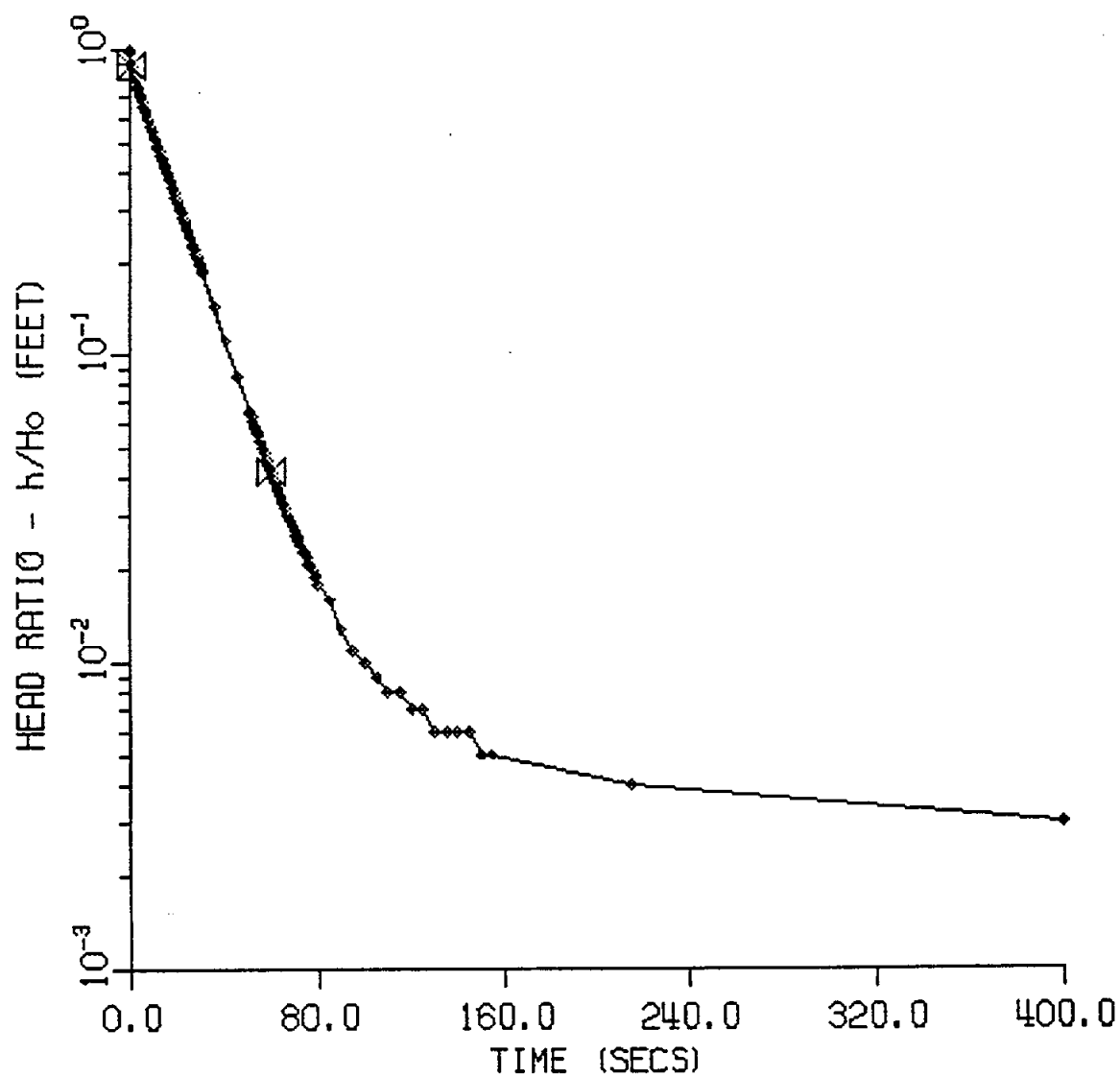
B = 0.38

C = 0.00

Y-INTERCEPT = 8.84

SLOPE = -0.0217

SWS REALTY PROPERTY  
BRMW8-TEST 1



K (CM/S) = 0.002866

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

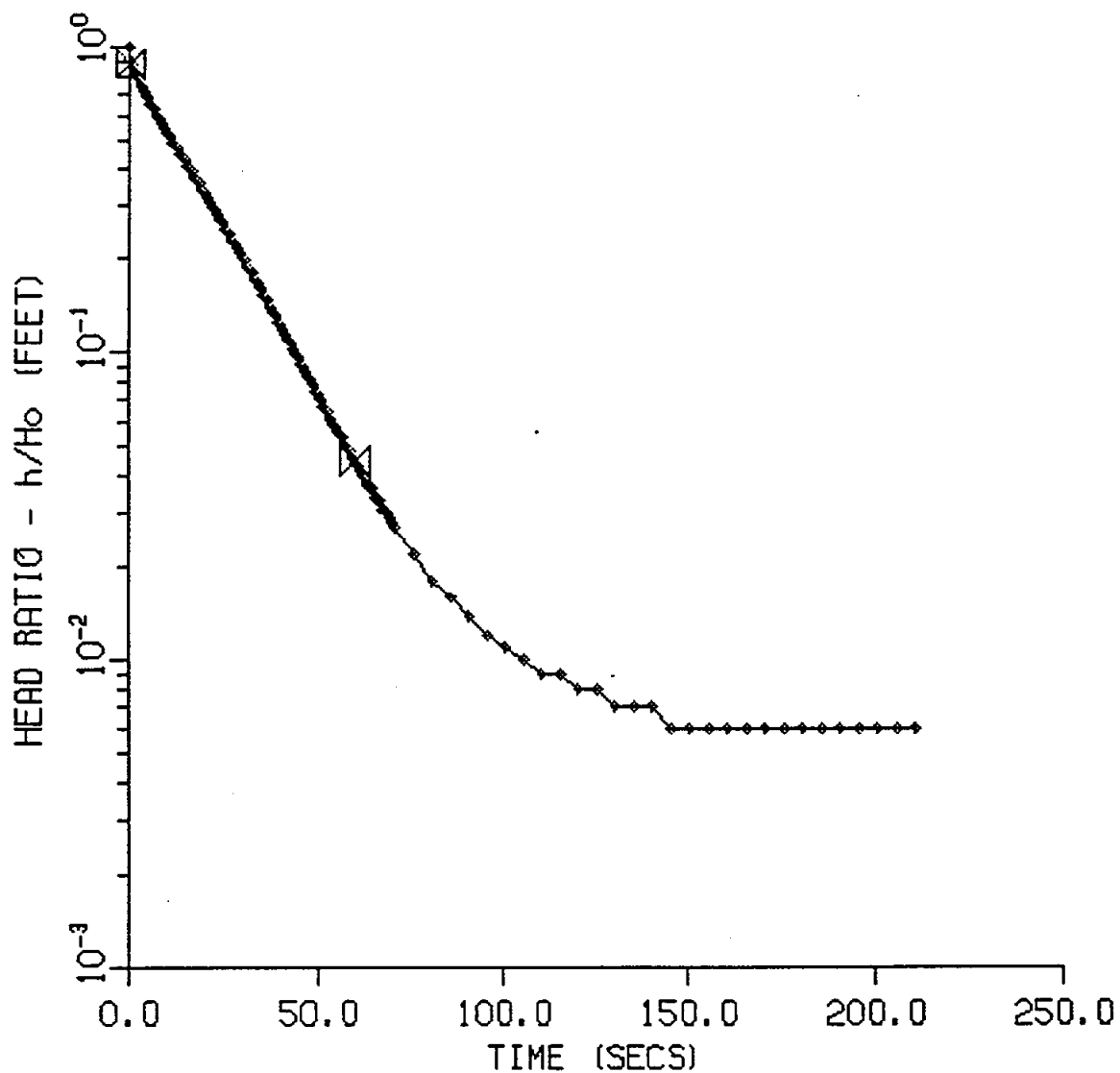
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0222

SWS REALTY PROPERTY  
BRMW8-TEST 2



K (CM/S) = 0.002802

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

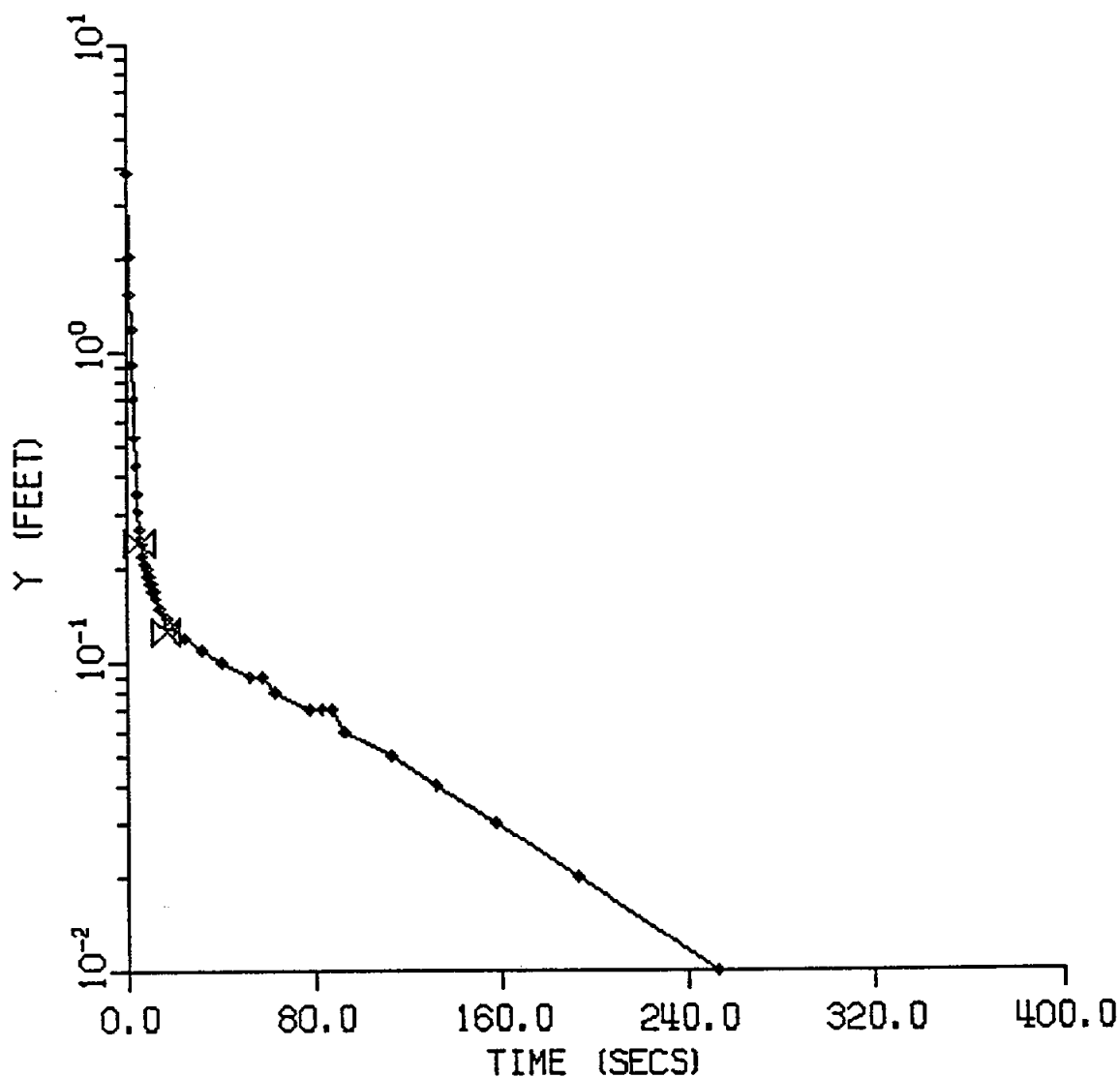
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0217

FEDERAL EXPRESS PROPERTY  
BRMW9-TEST 1



K (CM/S) = 0.013371

WELL SPECS. (FEET)

SCREEN LENGTH = 7.2

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 7.2

H (FEET) = 7.15

COEFFICIENTS

A = 0.00

B = 0.00

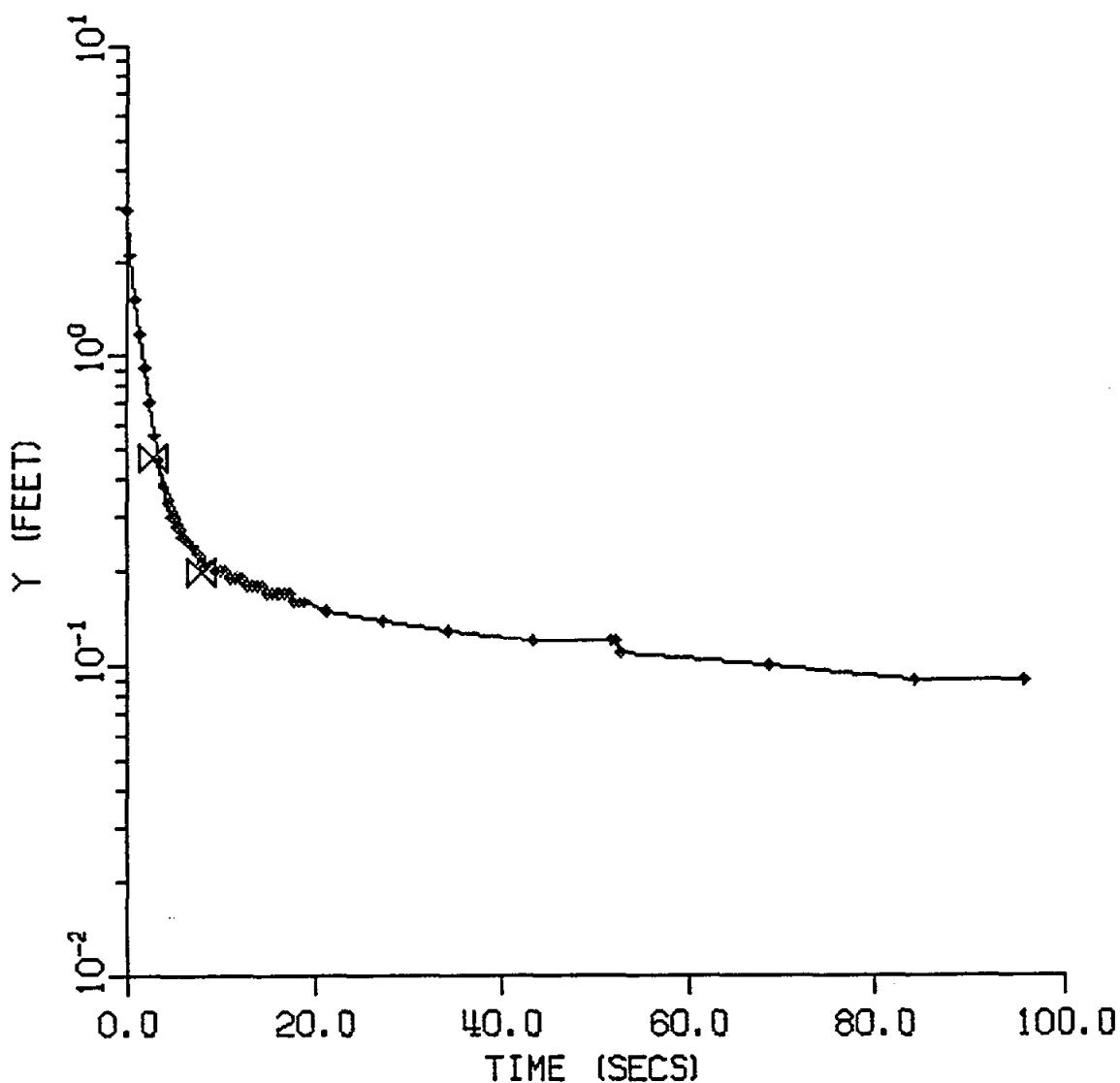
C = 1.76

Y-INTERCEPT = 0.32

SLOPE = -0.0247

# FEDERAL EXPRESS PROPERTY

## BRMW9-TEST 2



K (CM/S) = 0.039926

WELL SPECS. (FEET)

SCREEN LENGTH = 7.2

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 7.2

H (FEET) = 7.15

COEFFICIENTS

A = 0.00

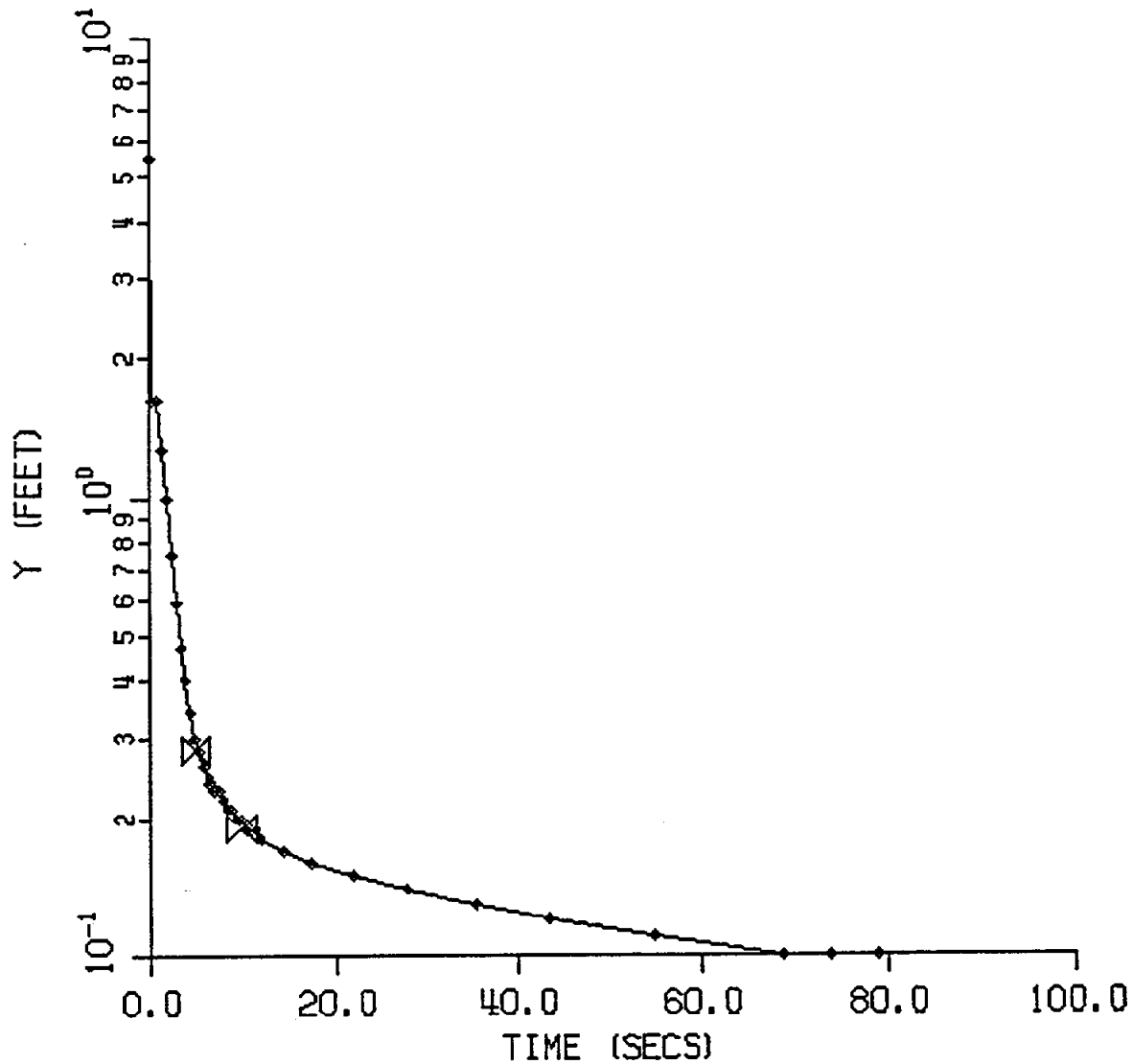
B = 0.00

C = 1.76

Y-INTERCEPT = 0.75

SLOPE = -0.0738

FEDERAL EXPRESS PROPERTY  
BRMW9-TEST 3



K (CM/S) = 0.018484

WELL SPECS. (FEET)

SCREEN LENGTH = 7.2

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 7.2

H (FEET) = 7.15

COEFFICIENTS

A = 0.00

B = 0.00

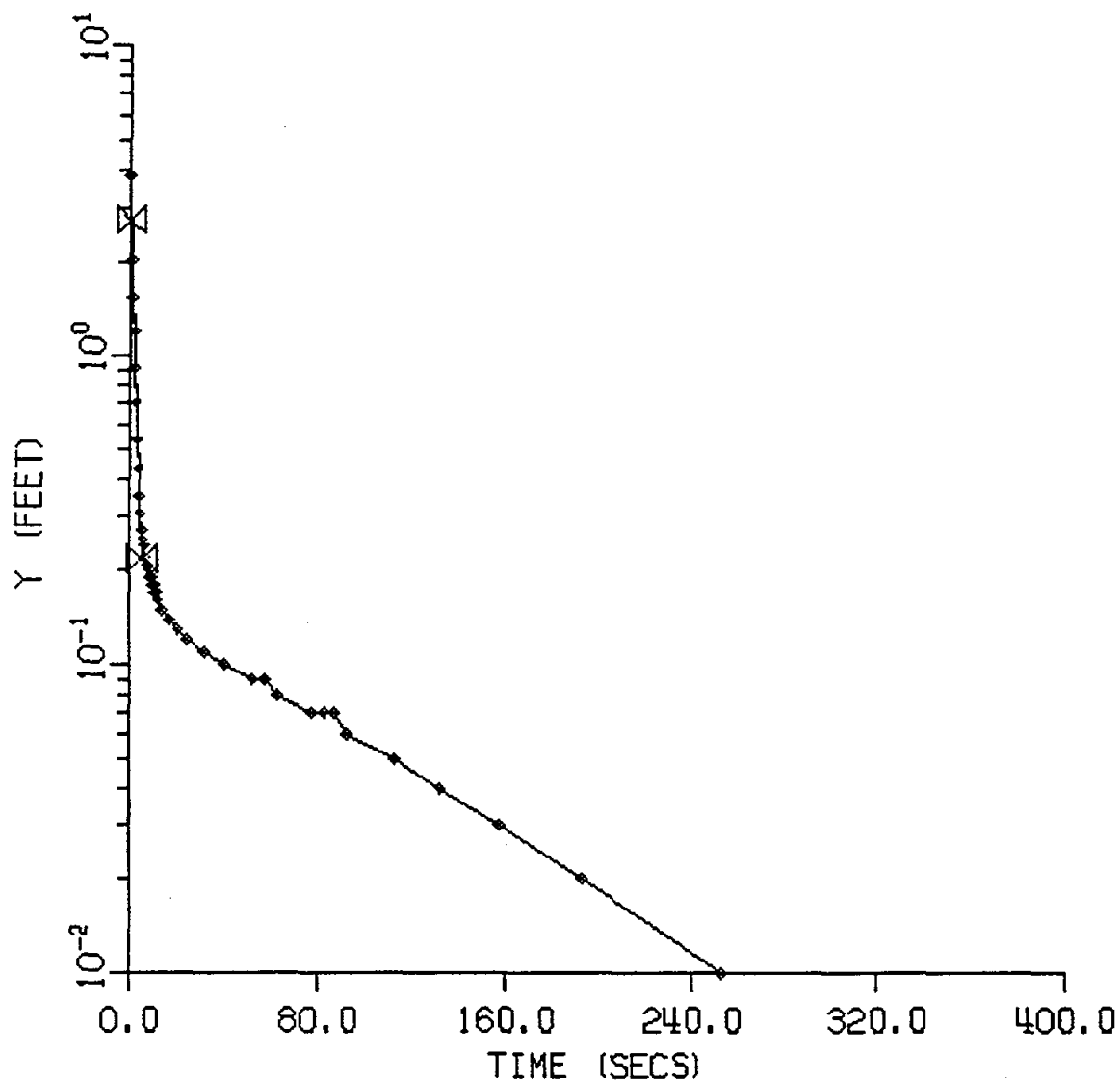
C = 1.76

Y-INTERCEPT = 0.41

SLOPE = -0.0342

# FEDERAL EXPRESS PROPERTY

## BRMW9-TEST 1



K (CM/S) = 0.015024

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 25.0

H (FEET) = 23.50

COEFFICIENTS

A = 2.41

B = 0.38

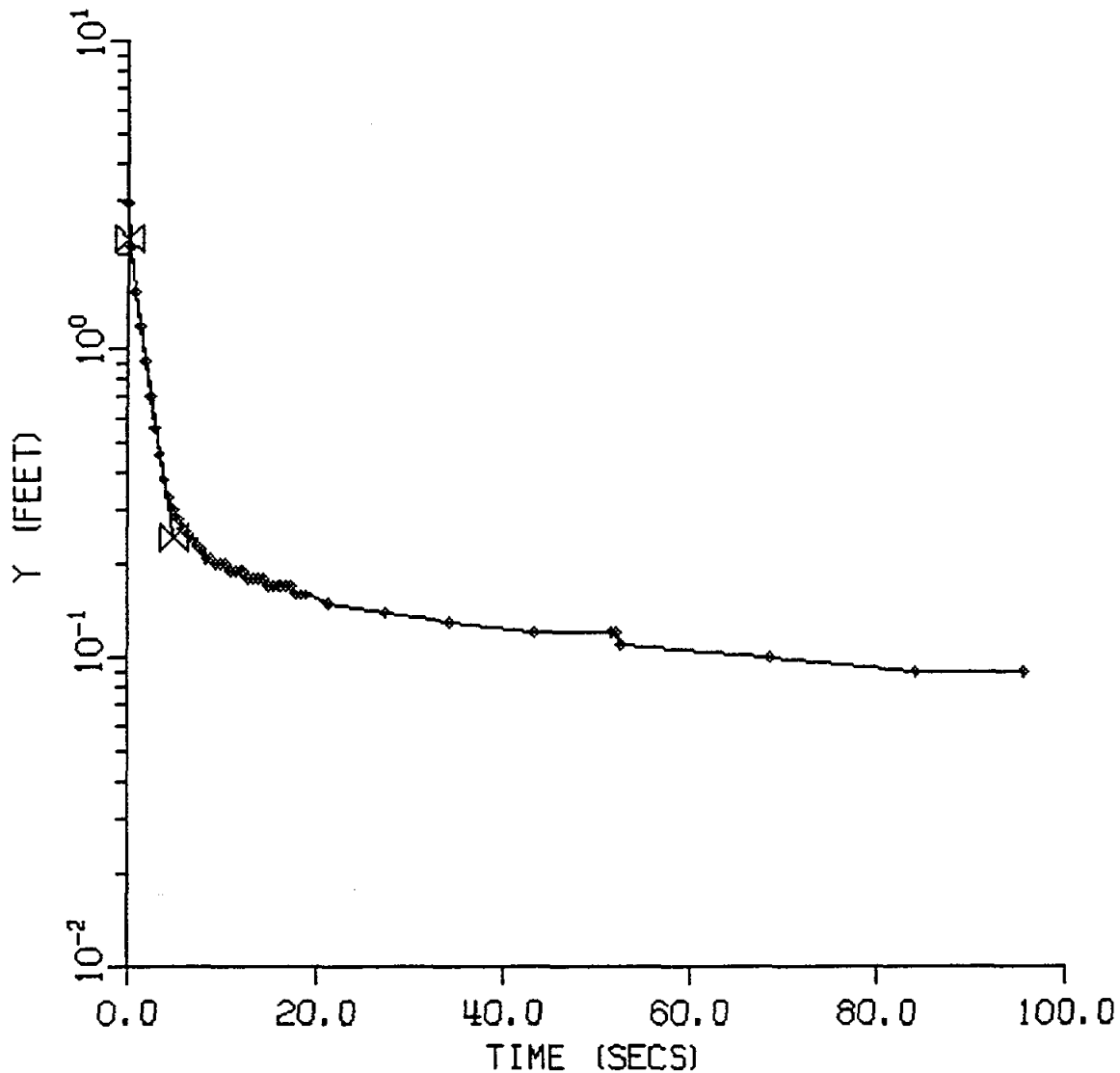
C = 0.00

Y-INTERCEPT = 2.77

SLOPE = -0.2206

# FEDERAL EXPRESS PROPERTY

## BRMW9-TEST 2



K (CM/S) = 0.013683

COEFFICIENTS

WELL SPECS. (FEET)

A = 2.41

SCREEN LENGTH = 10.0

B = 0.38

WELL SCREEN/BORE RADIUS = 0.33

C = 0.00

WELL CASING RADIUS = 0.08

Y-INTERCEPT = 2.27

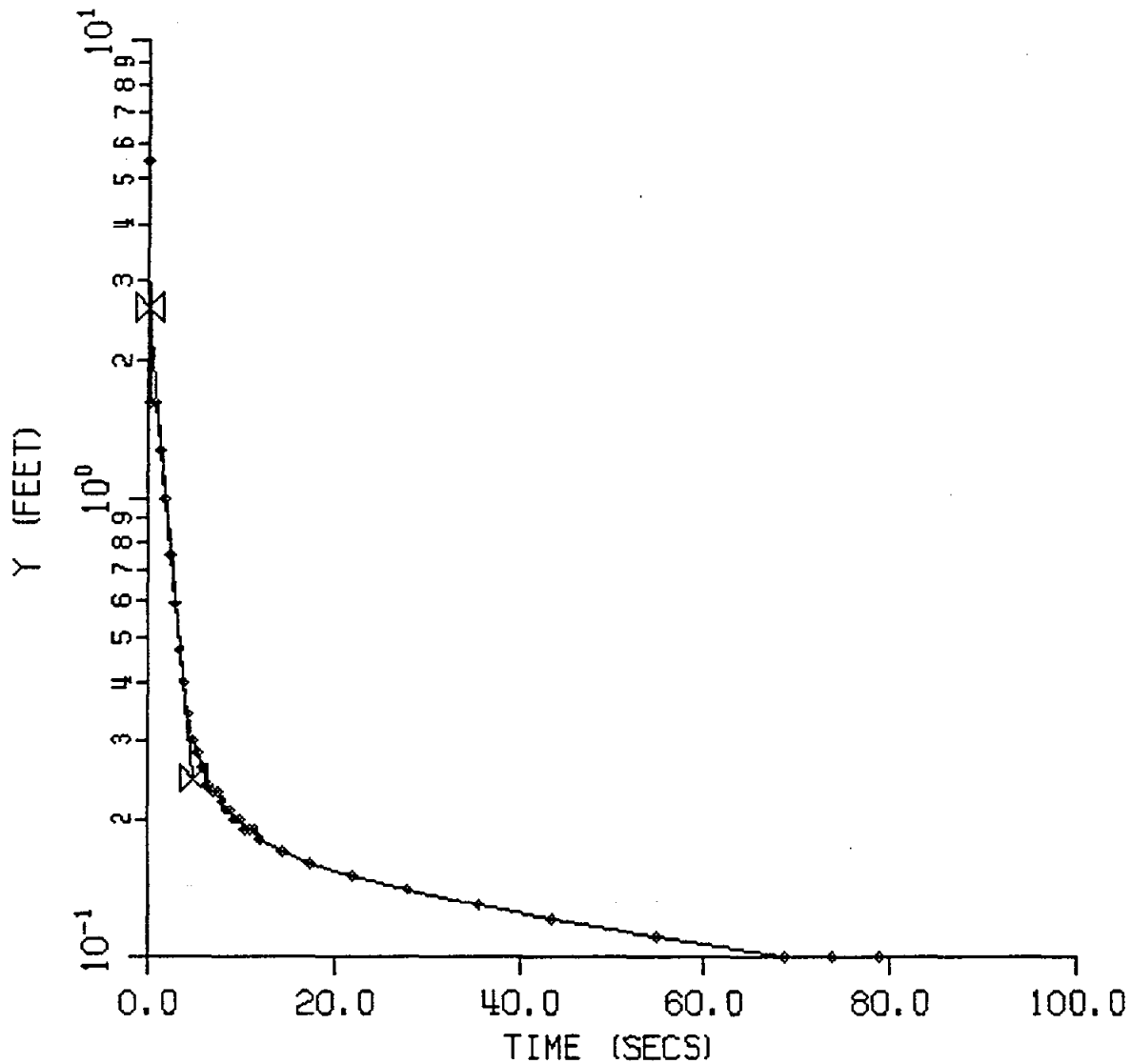
AQUIFER THICKNESS = 25.0

SLOPE = -0.2009

H (FEET) = 23.50

# FEDERAL EXPRESS PROPERTY

## BRMW9-TEST 3



K (CM/S) = 0.014585

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 25.0

H (FEET) = 23.50

COEFFICIENTS

A = 2.41

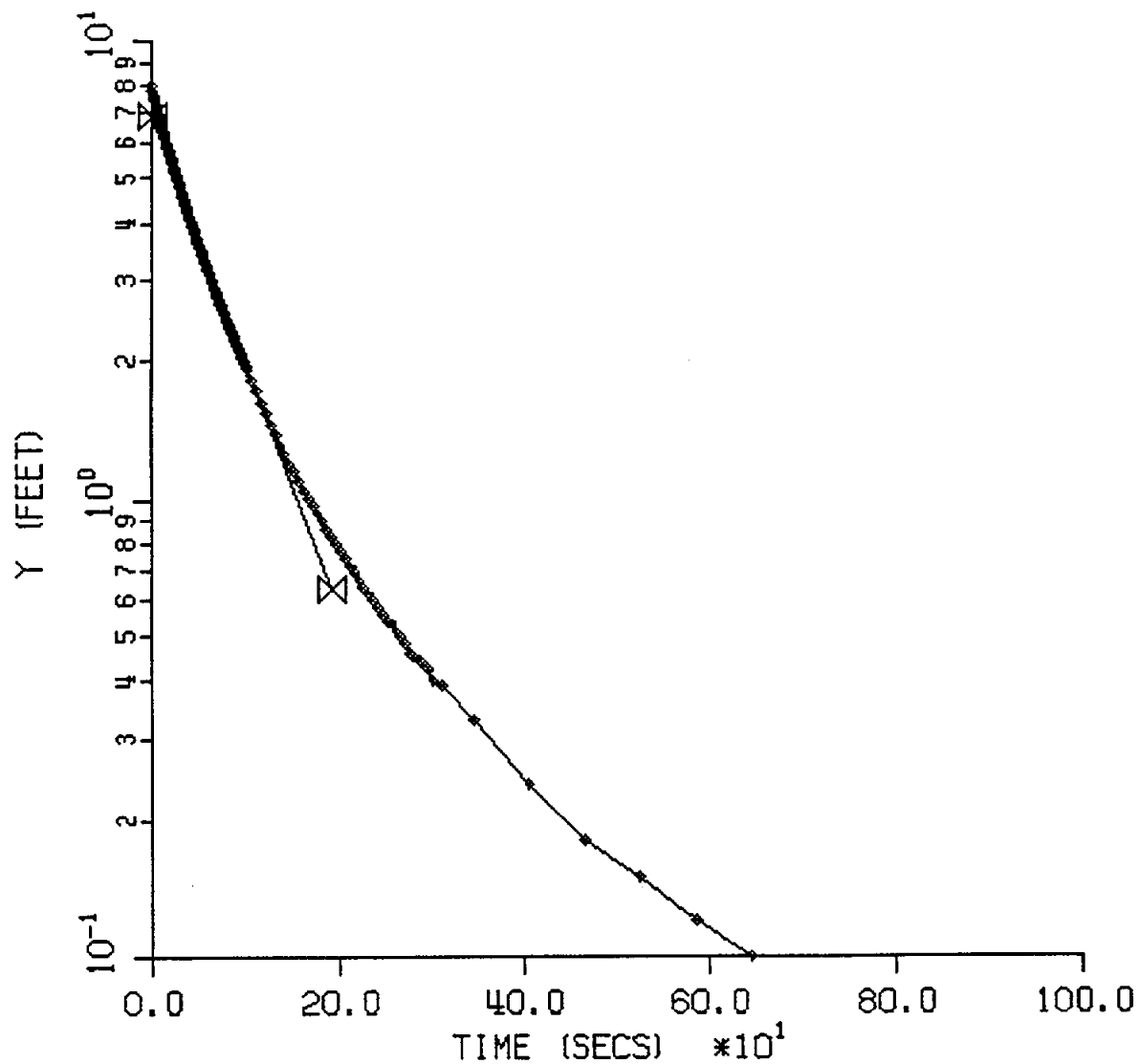
B = 0.38

C = 0.00

Y-INTERCEPT = 2.62

SLOPE = -0.2141

# STEPAN PROPERTY BRMW10-TEST 1



K (CM/S) = 0.000391

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 32.0

H (FEET) = 31.05

COEFFICIENTS

A = 2.41

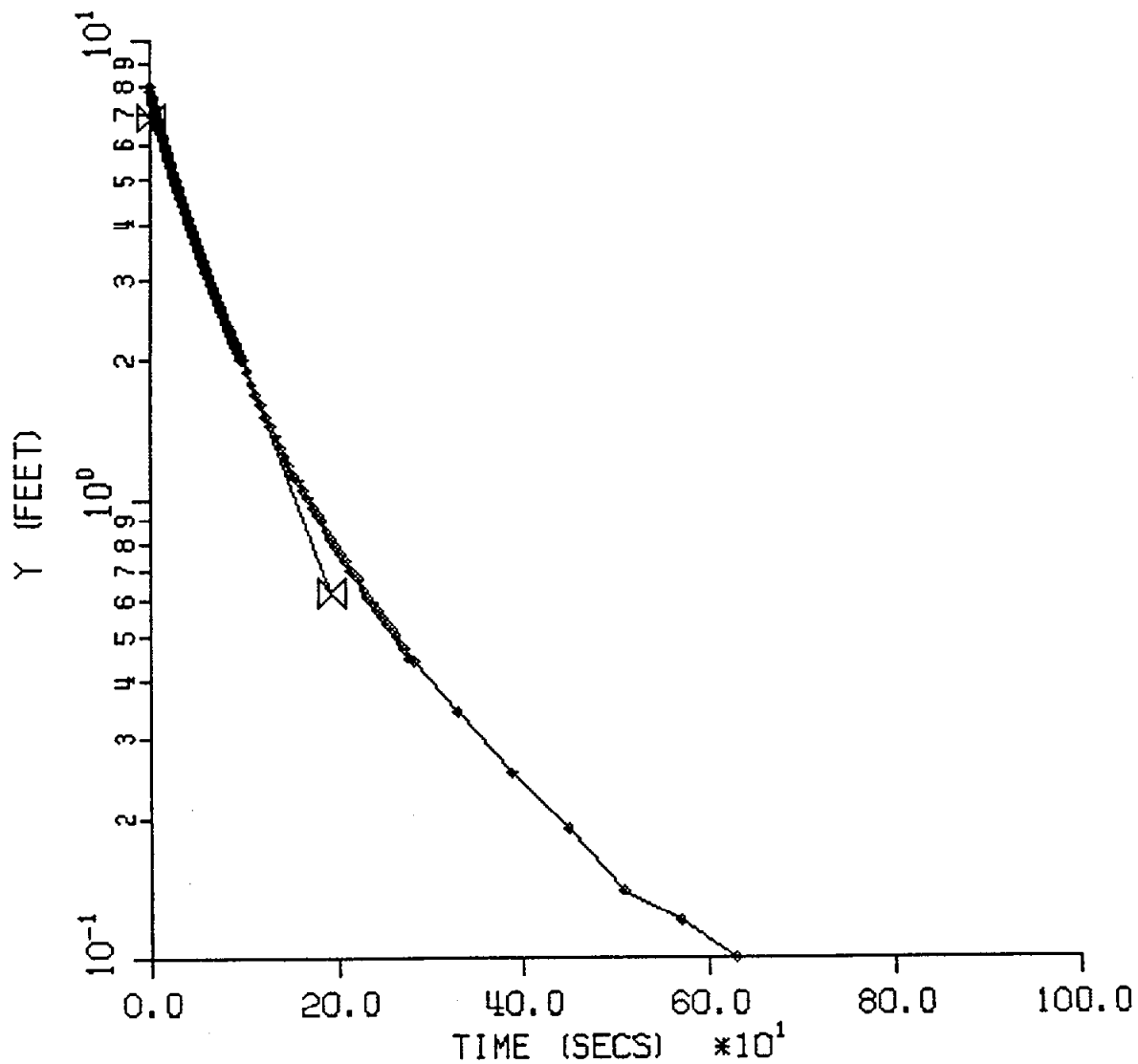
B = 0.38

C = 0.00

Y-INTERCEPT = 6.88

SLOPE = -0.0054

# STEPAN PROPERTY BRMW10-TEST 2



K (CM/S) = 0.000392

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 32.0

H (FEET) = 31.05

COEFFICIENTS

A = 2.41

B = 0.38

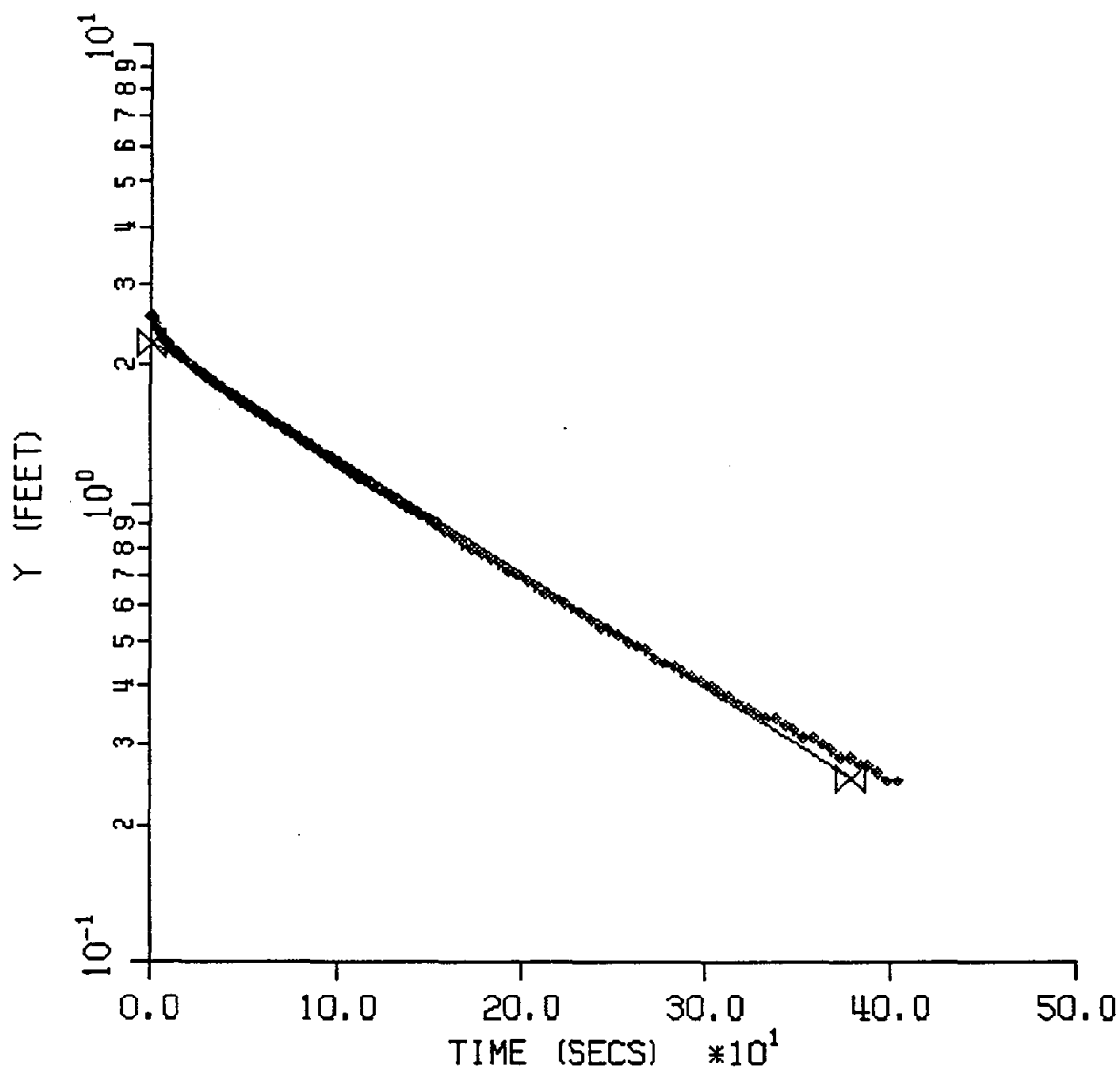
C = 0.00

Y-INTERCEPT = 6.84

SLOPE = -0.0054

# SEARS LOGISTICAL SERVICES

## OBMW11-TEST 1



K (CM/S) = 0.000285

WELL SPECS. (FEET)

SCREEN LENGTH = 5.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 9.5

H (FEET) = 9.50

COEFFICIENTS

A = 0.00

B = 0.00

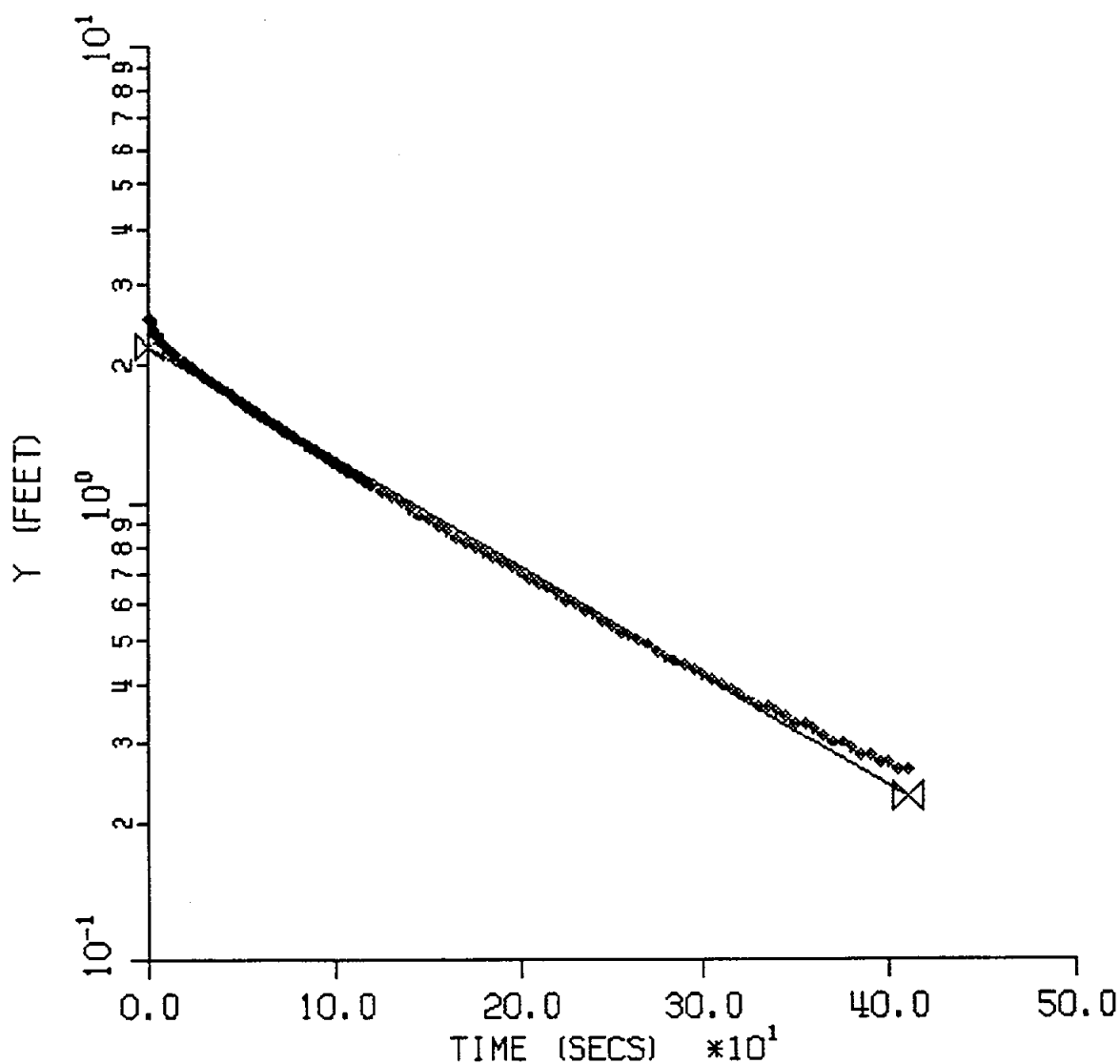
C = 1.47

Y-INTERCEPT = 2.22

SLOPE = -0.0025

# SEARS LOGISTICAL SERVICES

## OBMW11-TEST 2



K (CM/S) = 0.000274

WELL SPECS. (FEET)

SCREEN LENGTH = 5.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 9.5

H (FEET) = 9.50

COEFFICIENTS

A = 0.00

B = 0.00

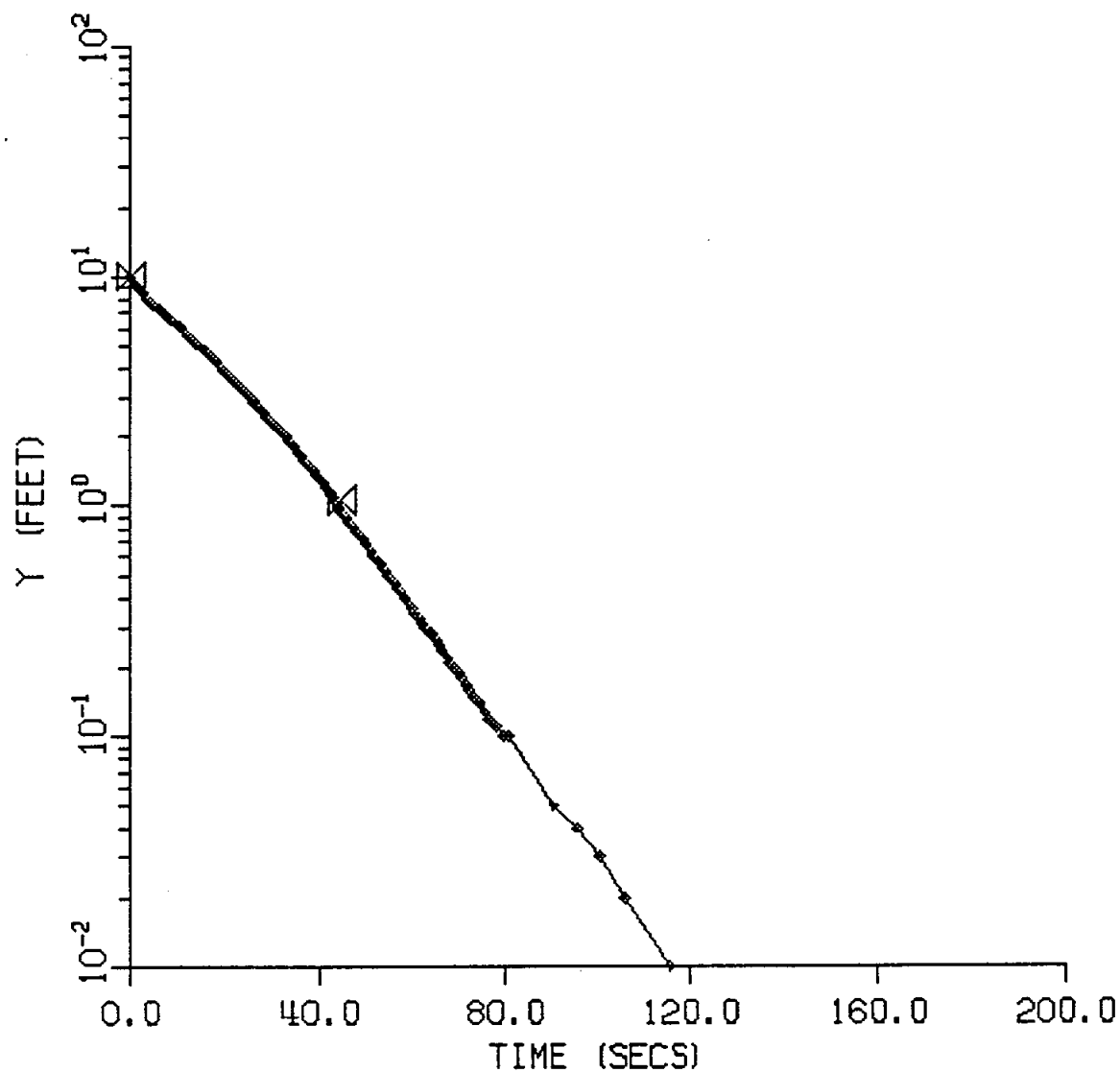
C = 1.47

Y-INTERCEPT = 2.19

SLOPE = -0.0024

# SEARS LOGISTICAL SERVICES

## BRMW11-TEST 1



K (CM/S) = 0.001580

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 31.0

H (FEET) = 30.10

COEFFICIENTS

A = 2.41

B = 0.38

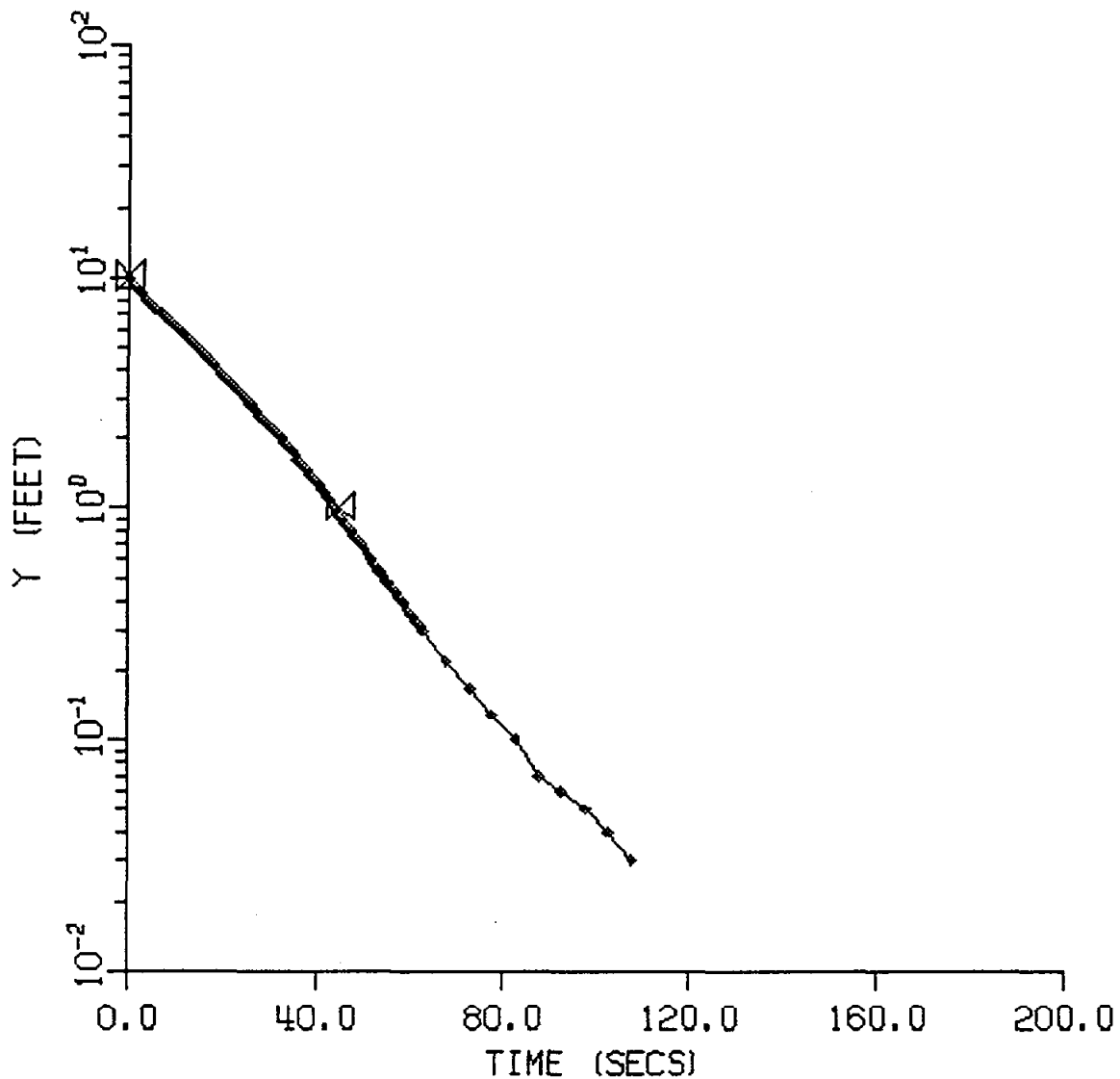
C = 0.00

Y-INTERCEPT = 10.15

SLOPE = -0.0219

# SEARS LOGISTICAL SERVICES

## BRMW11-TEST 2



K (CM/S) = 0.001611

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 31.0

H (FEET) = 30.10

COEFFICIENTS

A = 2.41

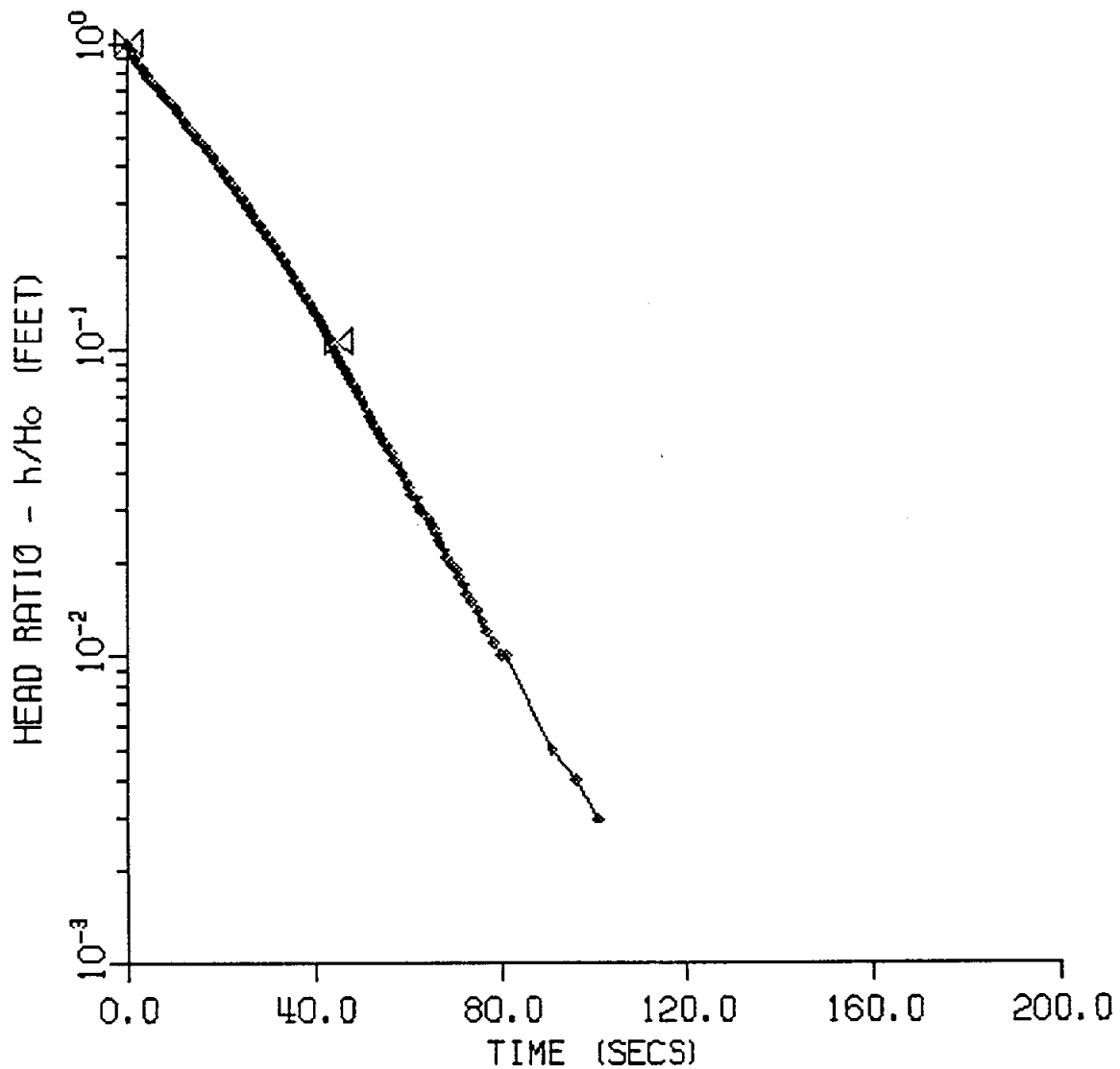
B = 0.38

C = 0.00

Y-INTERCEPT = 10.18

SLOPE = -0.0223

SEARS LOGISTICAL SERVICES  
BRMW11-TEST 1



$K$  (CM/S) = 0.002822

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

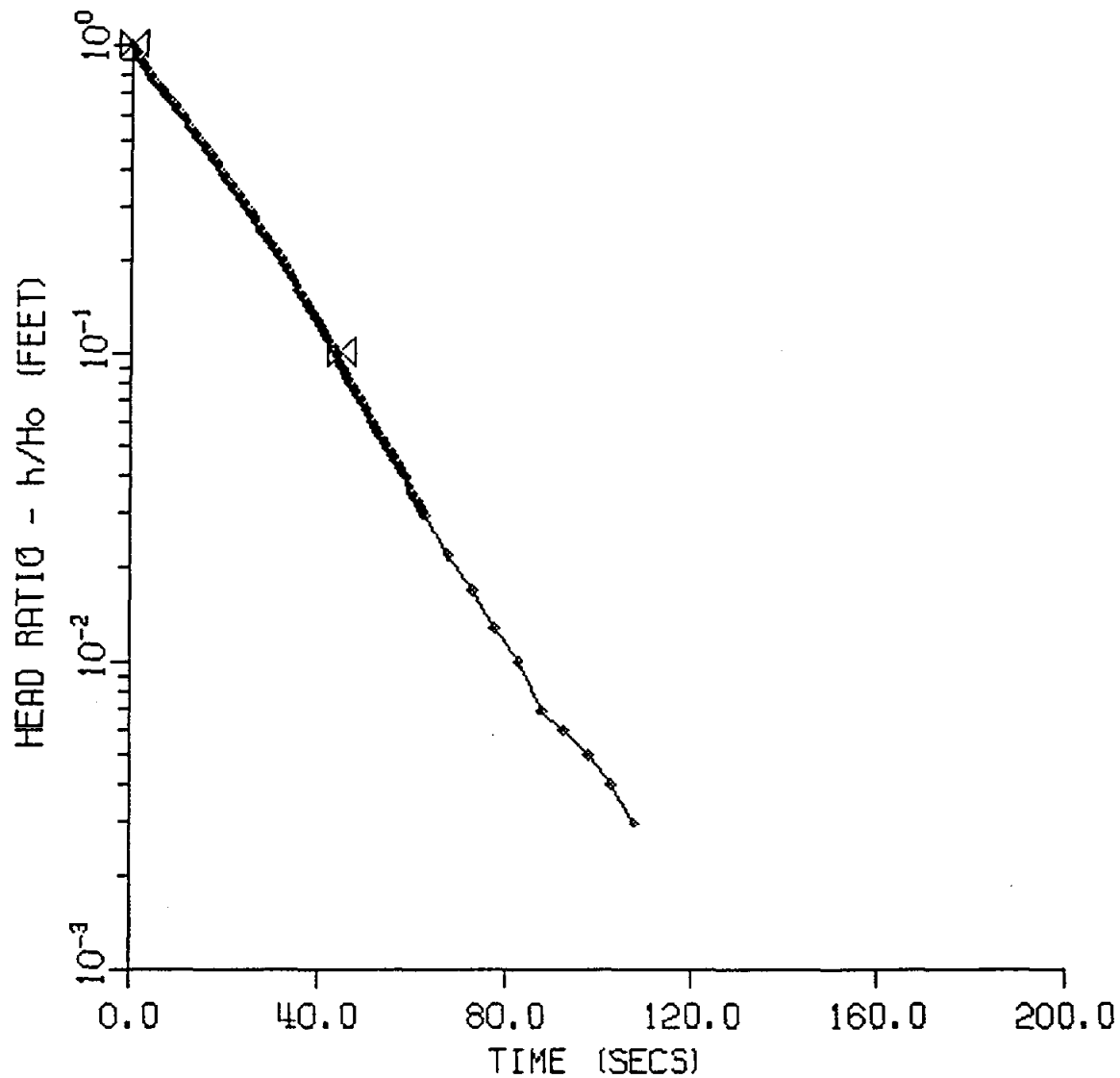
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0219

SEARS LOGISTICAL SERVICES  
BRMW11-TEST 2



$K$  (CM/S) = 0.002878

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

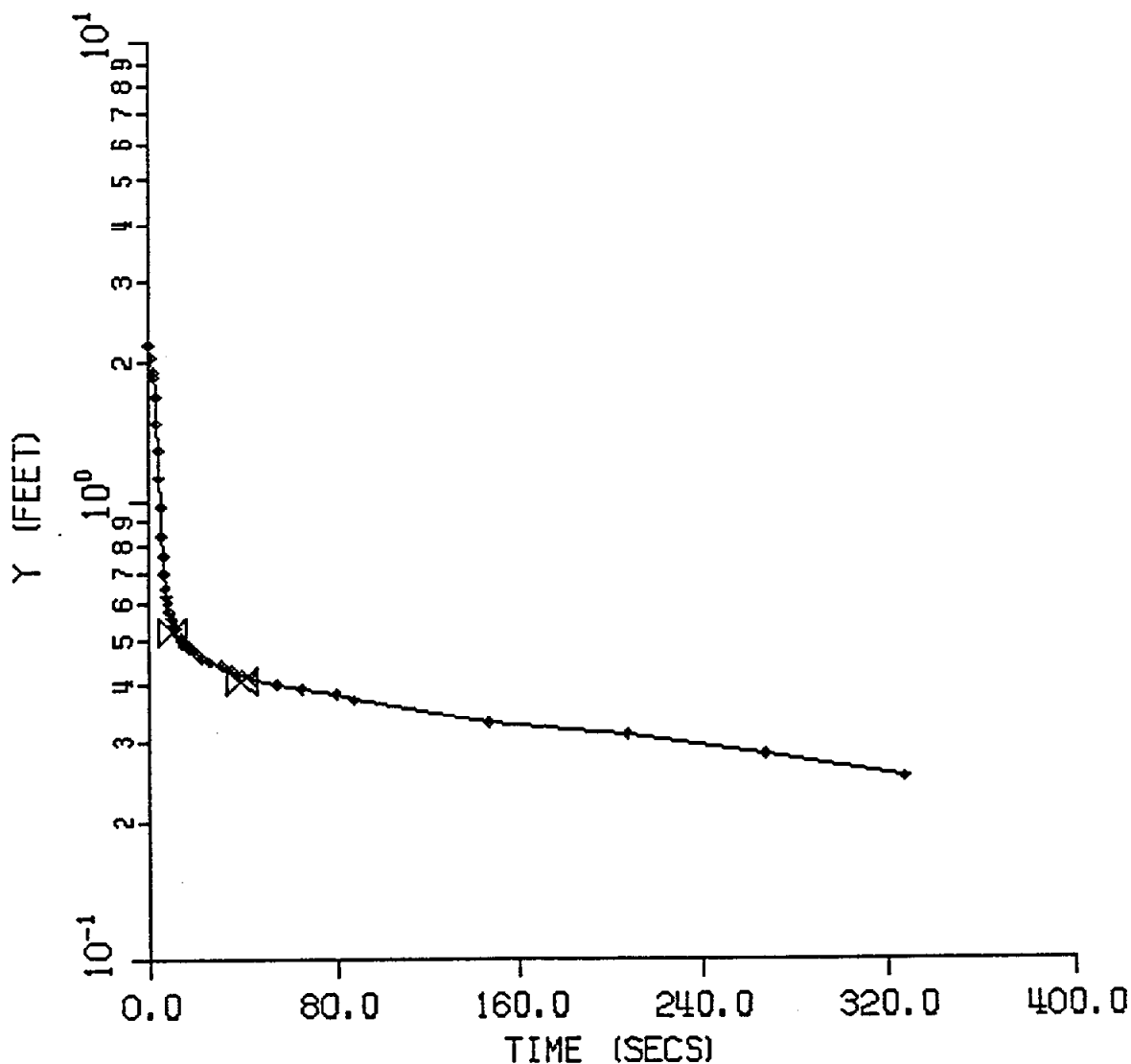
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0223

FEDERAL EXPRESS PROPERTY  
OBMW12-TEST 1



K (CM/S) = 0.001869

WELL SPECS. (FEET)

SCREEN LENGTH = 7.9

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 7.9

H (FEET) = 7.90

COEFFICIENTS

A = 0.00

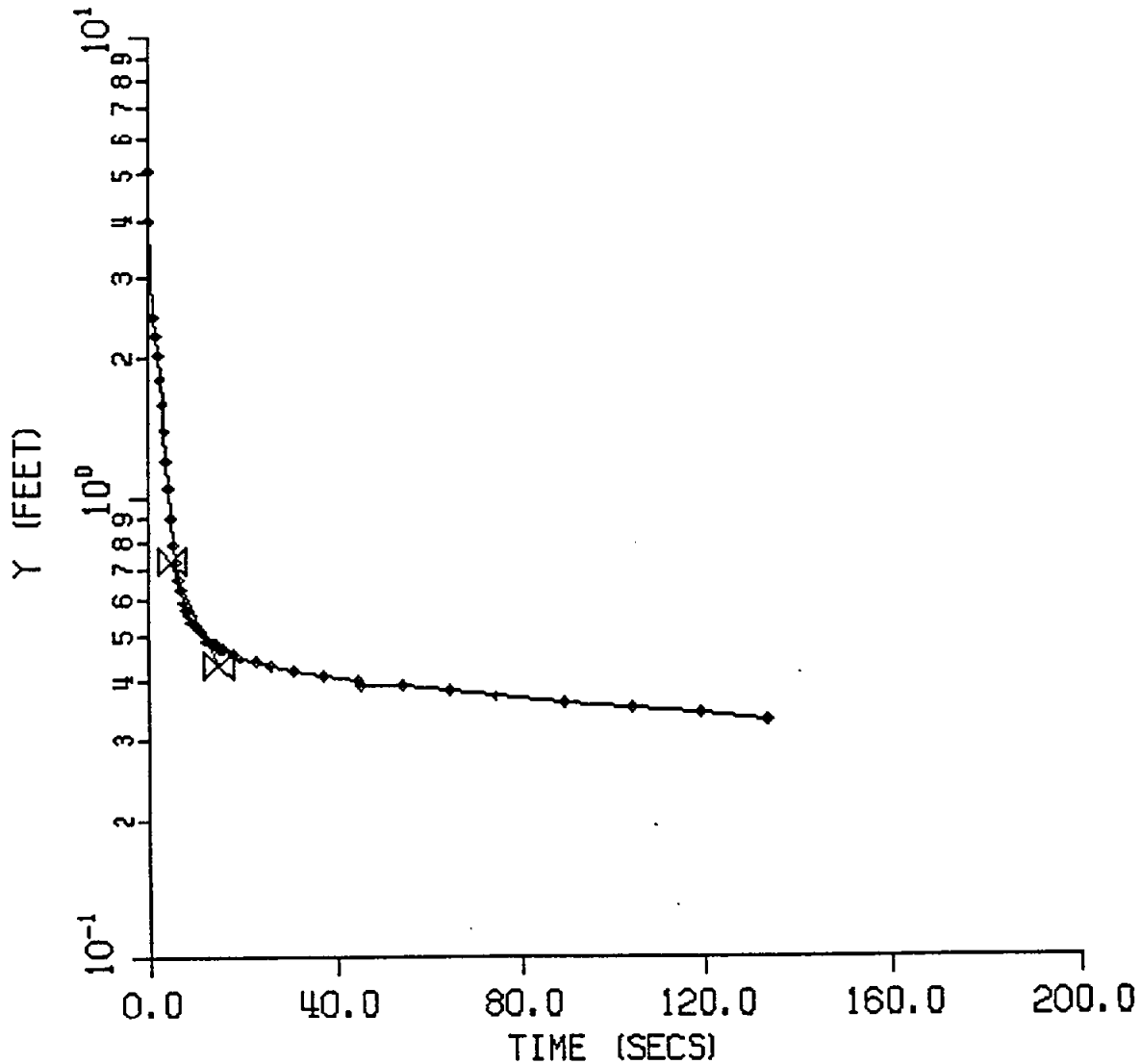
B = 0.00

C = 1.84

Y-INTERCEPT = 0.57

SLOPE = -0.0037

FEDERAL EXPRESS PROPERTY  
OBMW12-TEST 2



K (CM/S) = 0.011356

WELL SPECS. (FEET)

SCREEN LENGTH = 7.9

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 7.9

H (FEET) = 7.90

COEFFICIENTS

A = 0.00

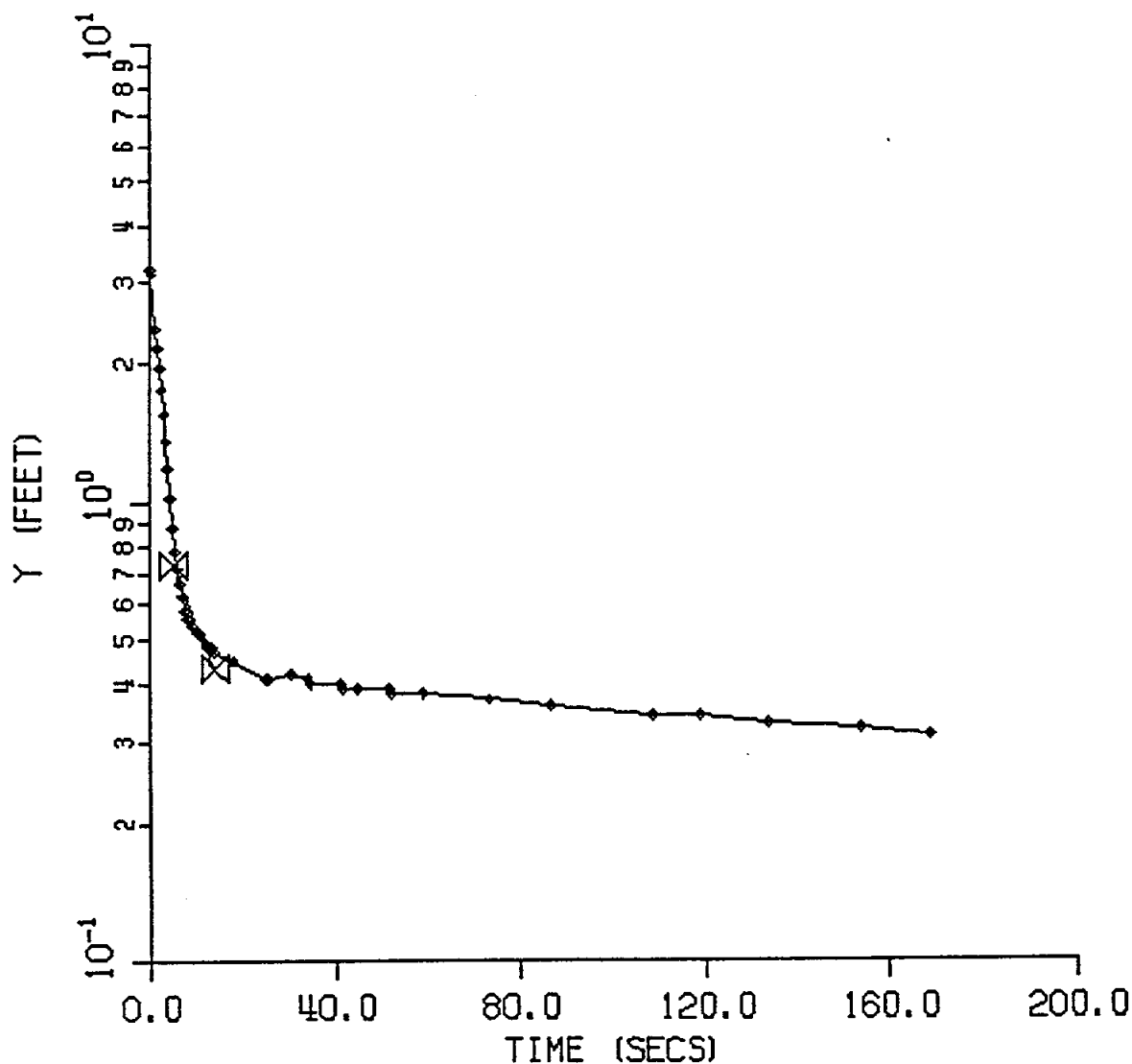
B = 0.00

C = 1.84

Y-INTERCEPT = 0.93

SLOPE = -0.0224

FEDERAL EXPRESS PROPERTY  
OBMW12-TEST 3



K (CM/S) = 0.012703

WELL SPECS. (FEET)

SCREEN LENGTH = 7.9

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 7.9

H (FEET) = 7.90

COEFFICIENTS

A = 0.00

B = 0.00

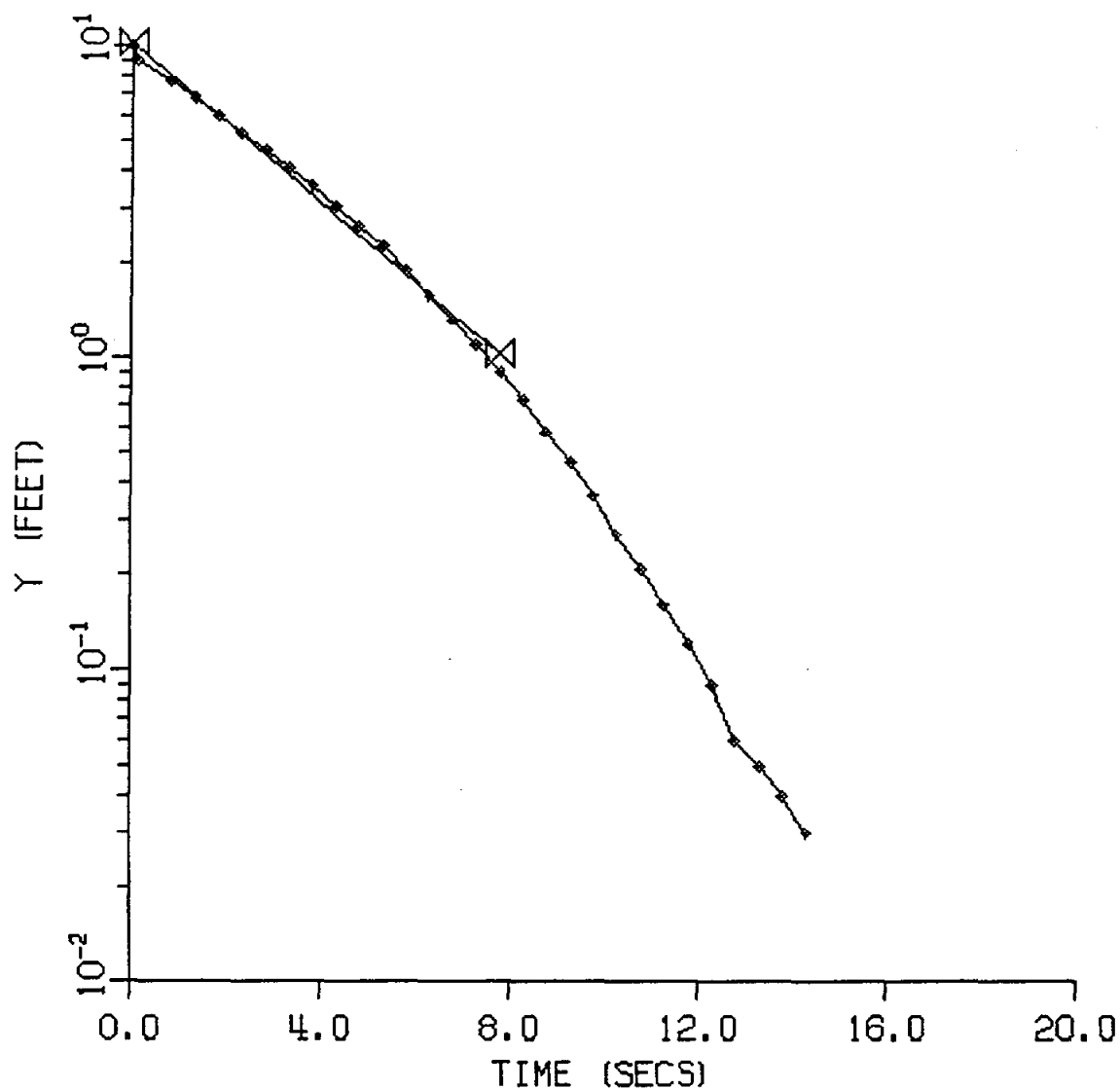
C = 1.84

Y-INTERCEPT = 0.96

SLOPE = -0.0250

# FEDERAL EXPRESS PROPERTY

## BRMW12- TEST 1



K (CM/S) = 0.009966

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 42.0

H (FEET) = 41.50

COEFFICIENTS

A = 2.41

B = 0.38

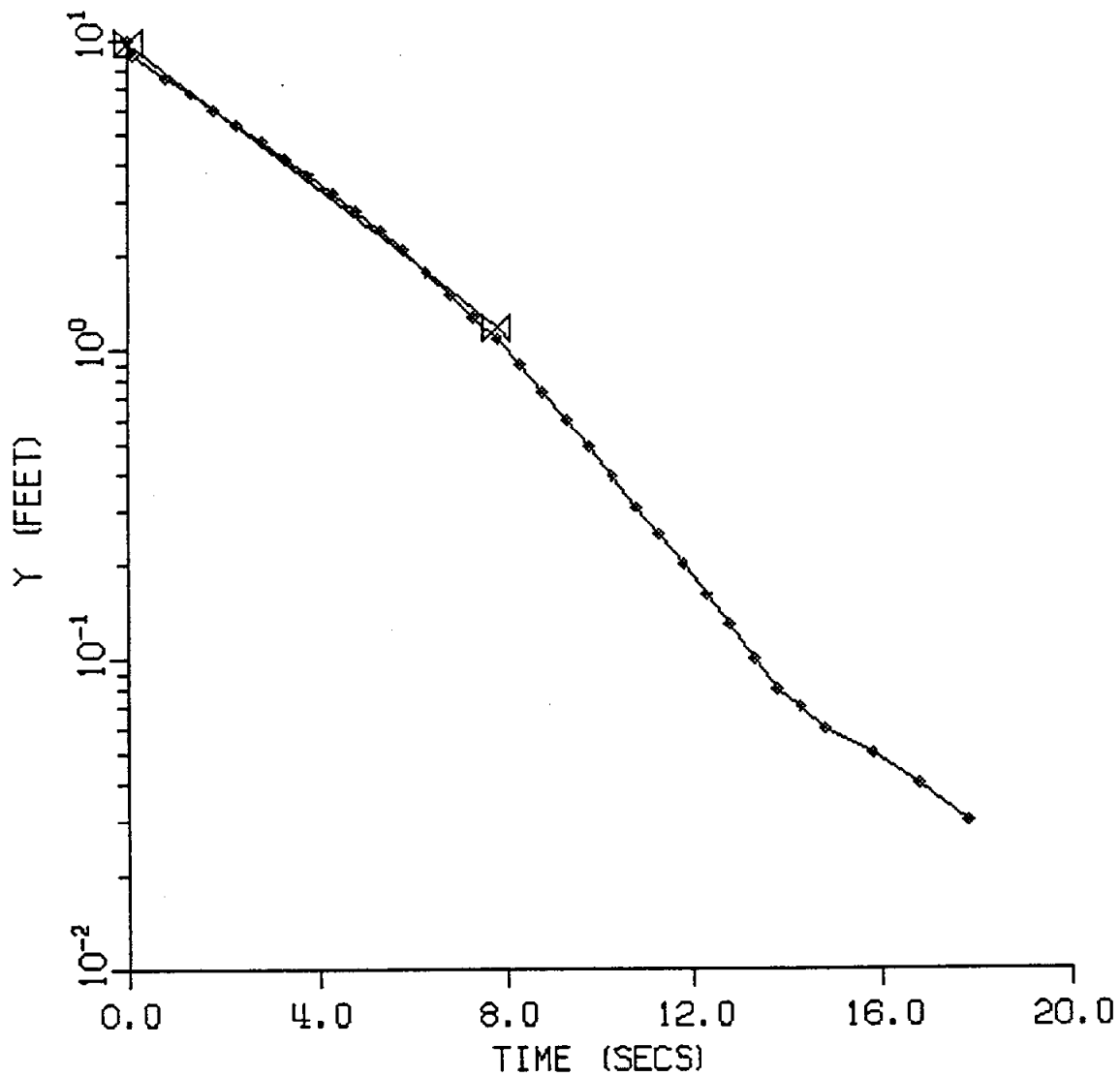
C = 0.00

Y-INTERCEPT = 10.21

SLOPE = -0.1282

# FEDERAL EXPRESS PROPERTY

## BRMW12-TEST 2



K (CM/S) = 0.009227

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 42.0

H (FEET) = 41.50

COEFFICIENTS

A = 2.41

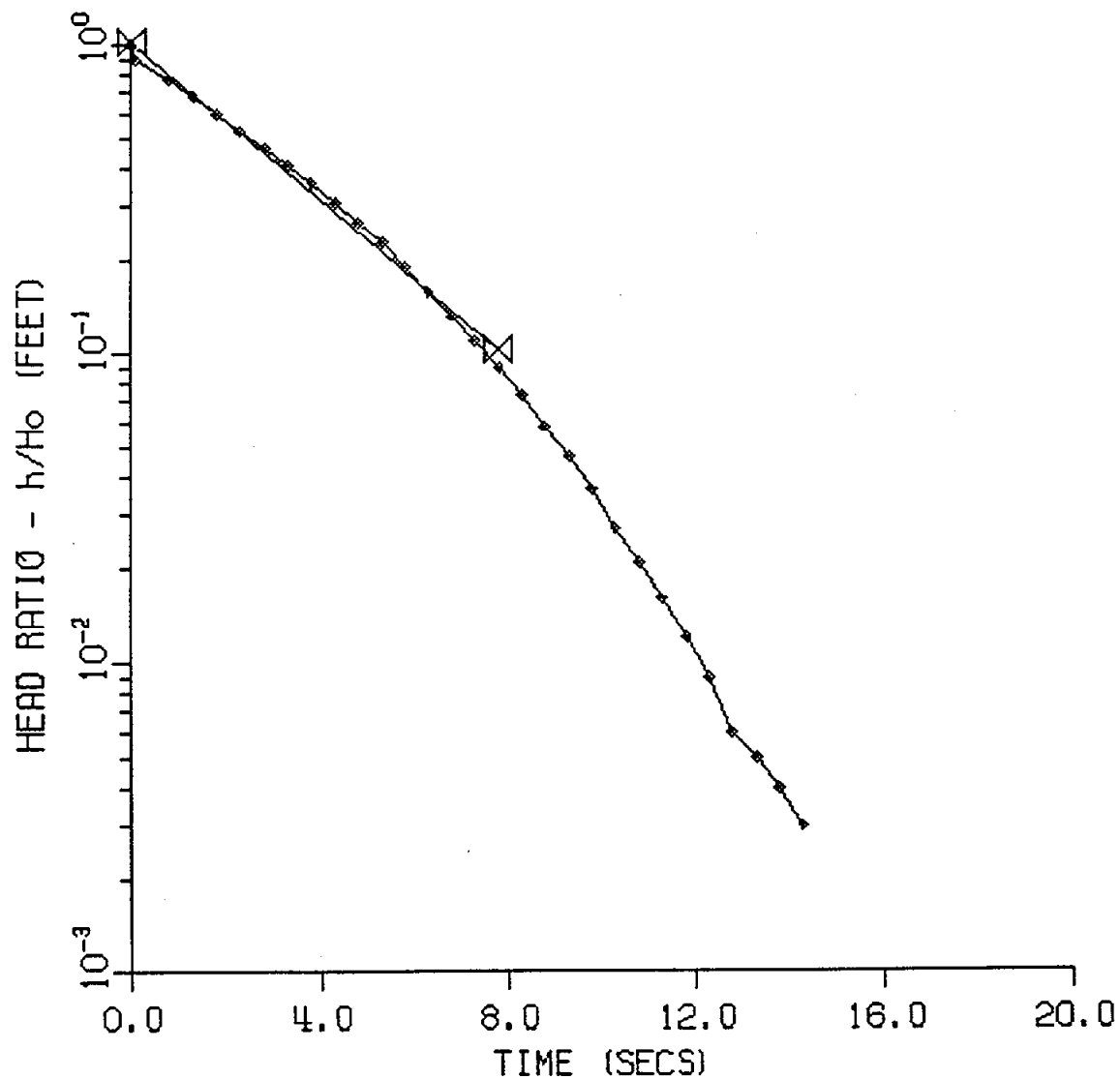
B = 0.38

C = 0.00

Y-INTERCEPT = 9.89

SLOPE = -0.1187

FEDERAL EXPRESS PROPERTY  
BRMW12-TEST 1



$K$  (CM/S) = 0.016554

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

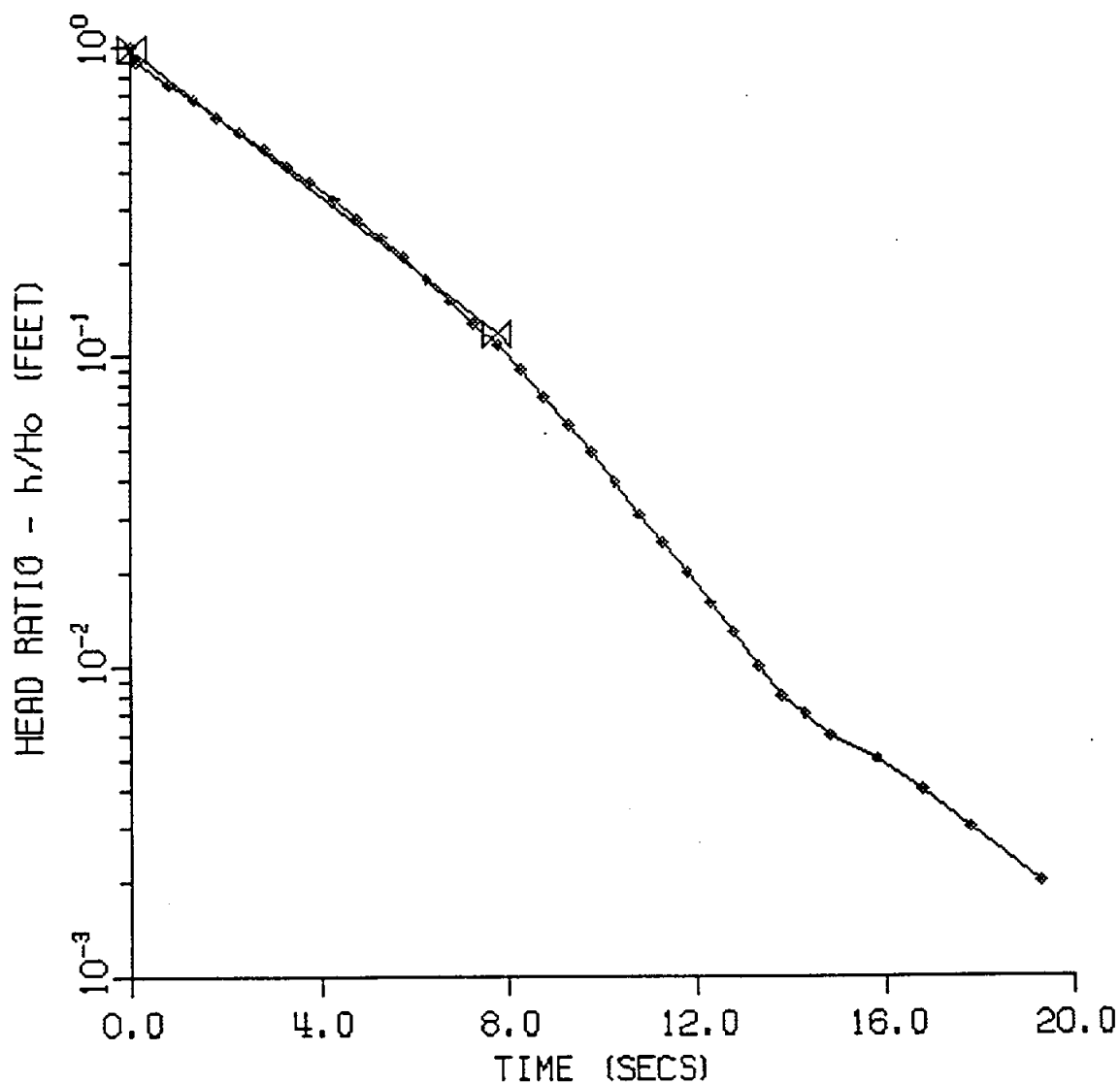
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.1282

FEDERAL EXPRESS PROPERTY  
BRMW12-TEST 2



$K$  (CM/S) = 0.015327

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

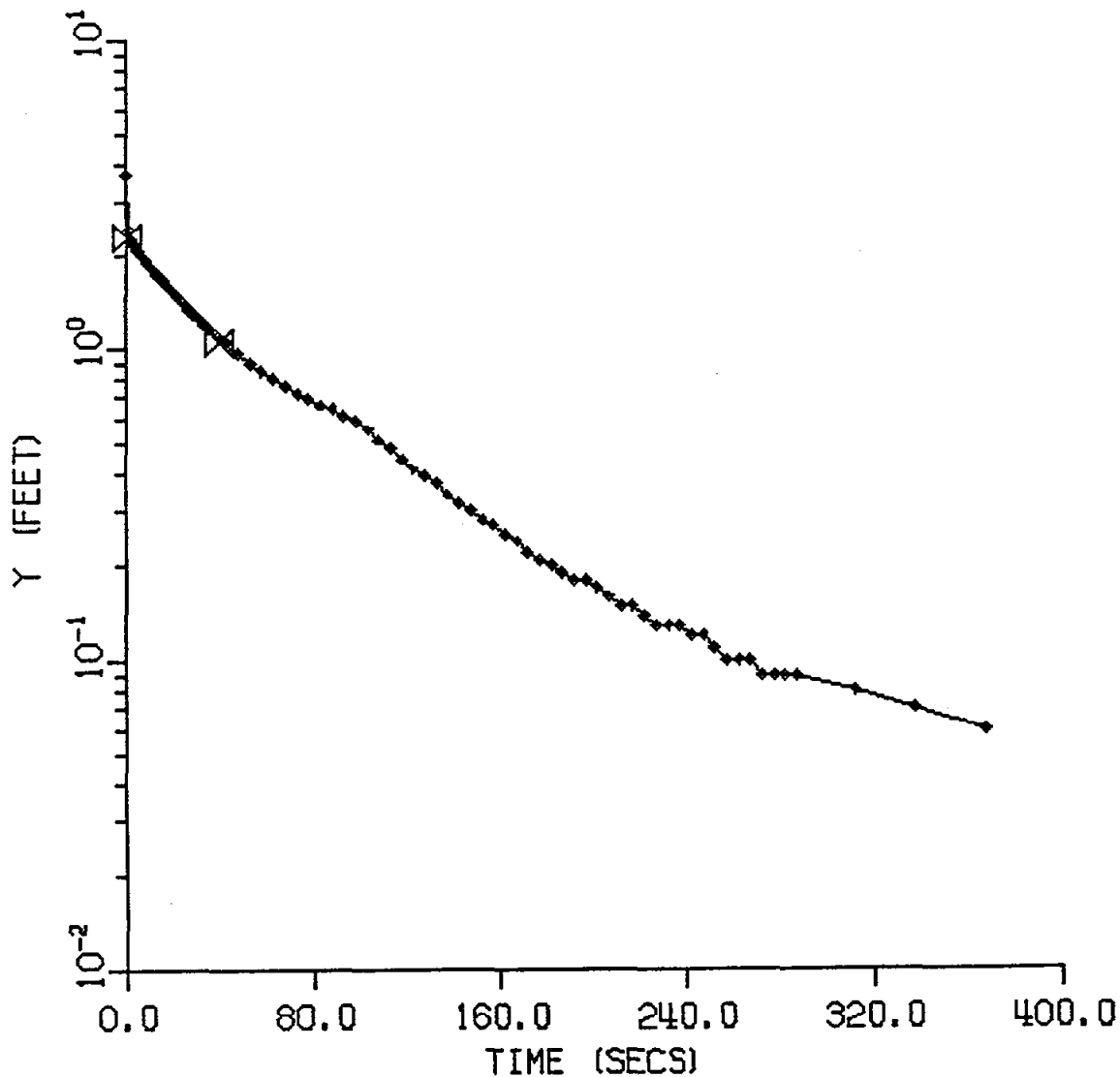
WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.1187

# SEARS LOGISTICAL SERVICES

## OBMW13-TEST 1



K (CM/S) = 0.003847

WELL SPECS. (FEET)

SCREEN LENGTH = 9.8

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 9.8

H (FEET) = 9.80

COEFFICIENTS

A = 0.00

B = 0.00

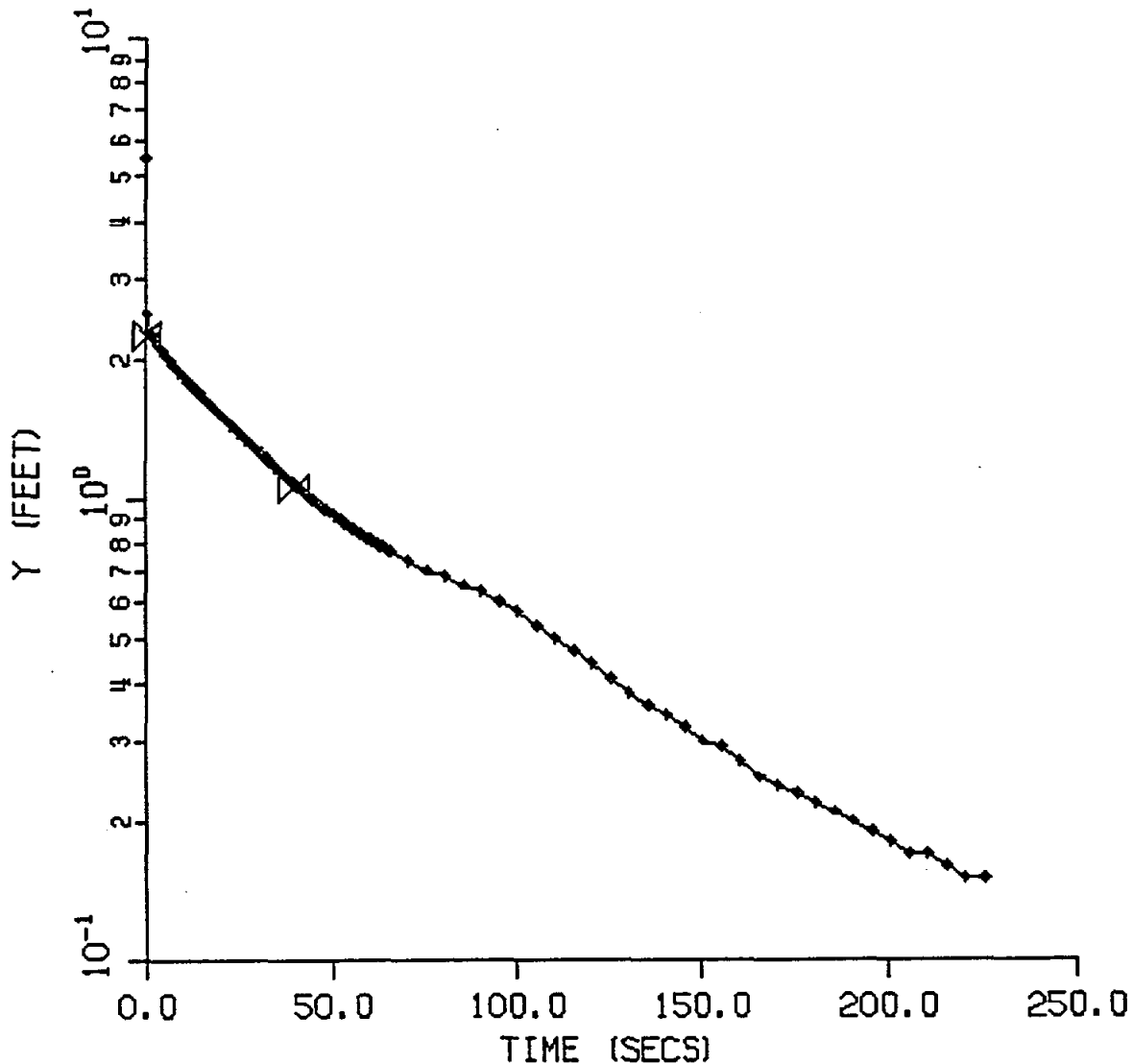
C = 2.03

Y-INTERCEPT = 2.33

SLOPE = -0.0087

# SEARS LOGISTICAL SERVICES

## OBMW13-TEST 2



K (CM/S) = 0.003697

WELL SPECS. (FEET)

SCREEN LENGTH = 9.8

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 9.8

H (FEET) = 9.80

COEFFICIENTS

A = 0.00

B = 0.00

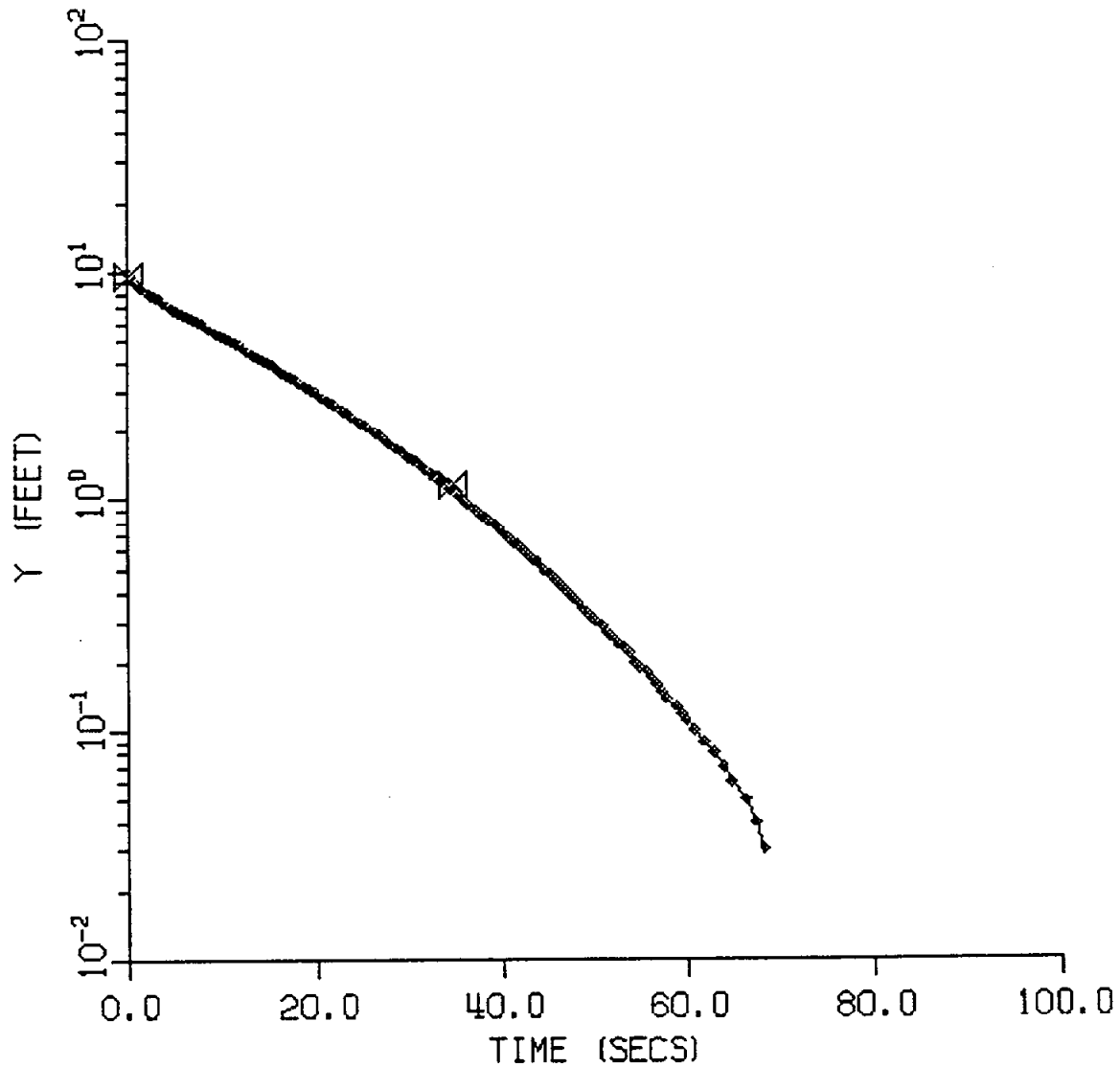
C = 2.03

Y-INTERCEPT = 2.27

SLOPE = -0.0084

# SEARS LOGISTICAL SERVICES

## BRMW13-TEST 1



K (CM/S) = 0.001928

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 29.0

H (FEET) = 28.50

COEFFICIENTS

A = 2.41

B = 0.38

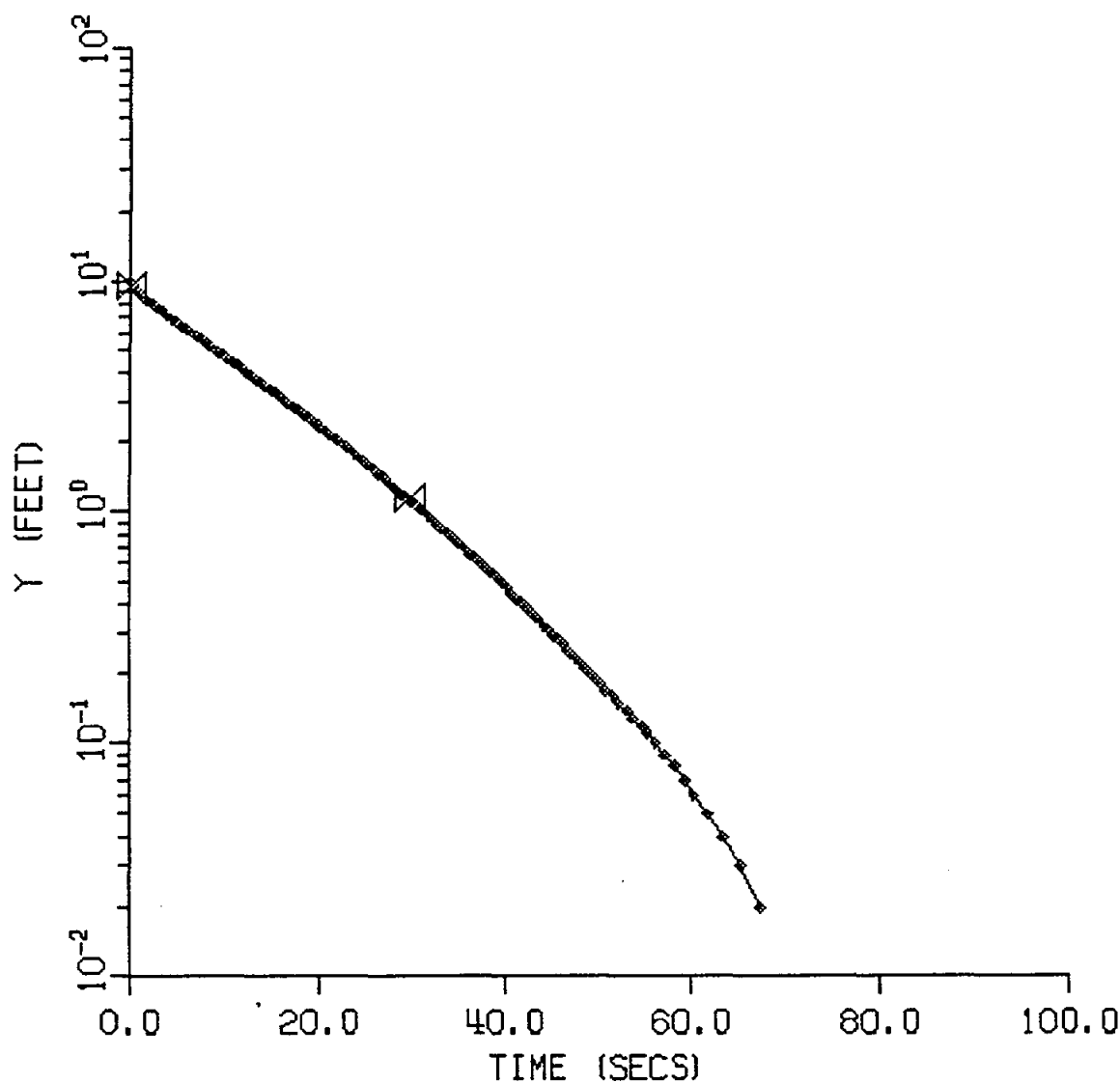
C = 0.00

Y-INTERCEPT = 9.56

SLOPE = -0.0263

# SEARS LOGISTICAL SERVICES

## BRMW13-TEST 2



K (CM/S) = 0.002246

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 29.0

H (FEET) = 28.50

COEFFICIENTS

A = 2.41

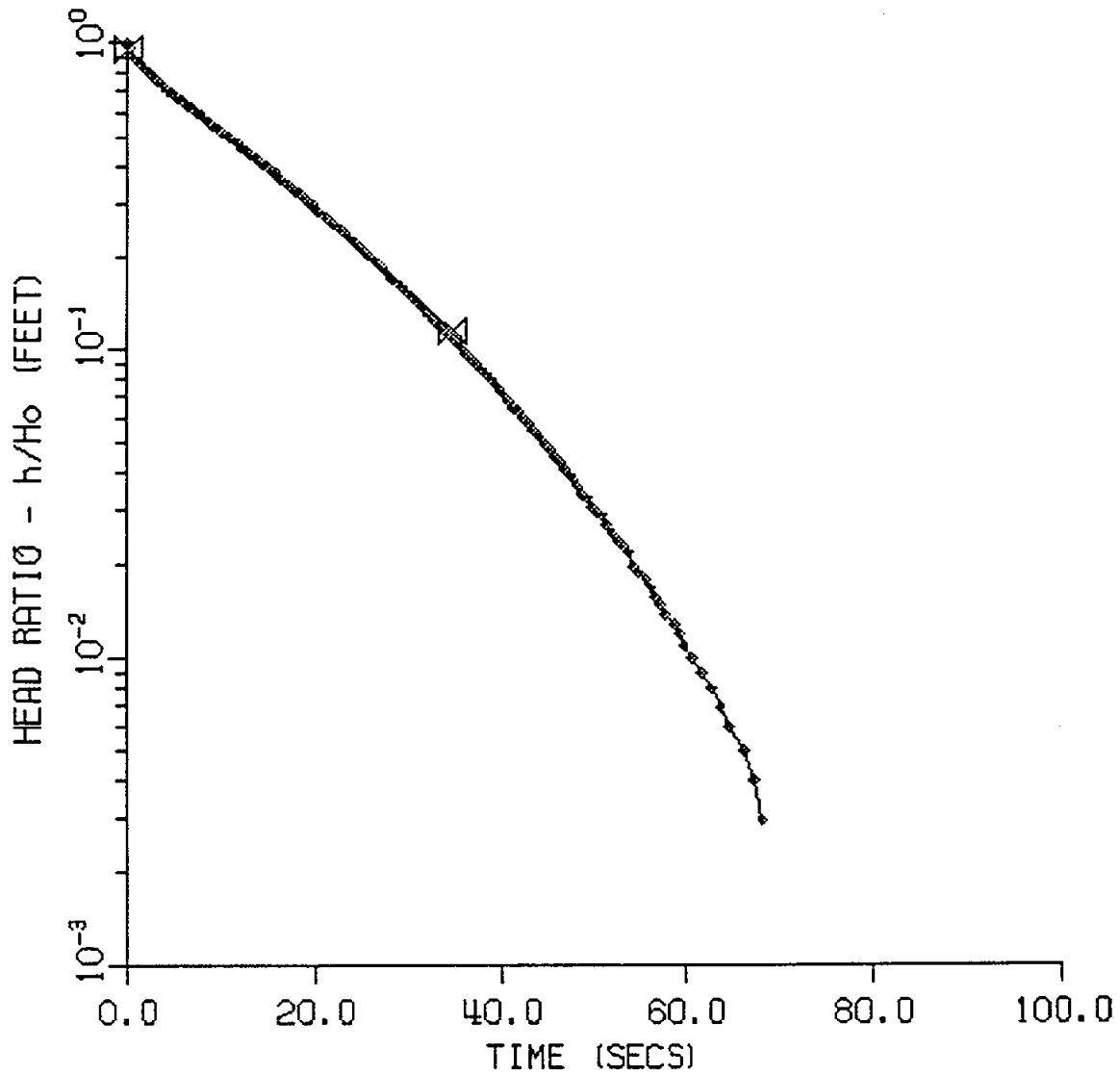
B = 0.38

C = 0.00

Y-INTERCEPT = 9.50

SLOPE = -0.0307

SEARS LOGISTICAL SERVICES  
BRMW13-TEST 1



$K$  (CM/S) = 0.003400

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

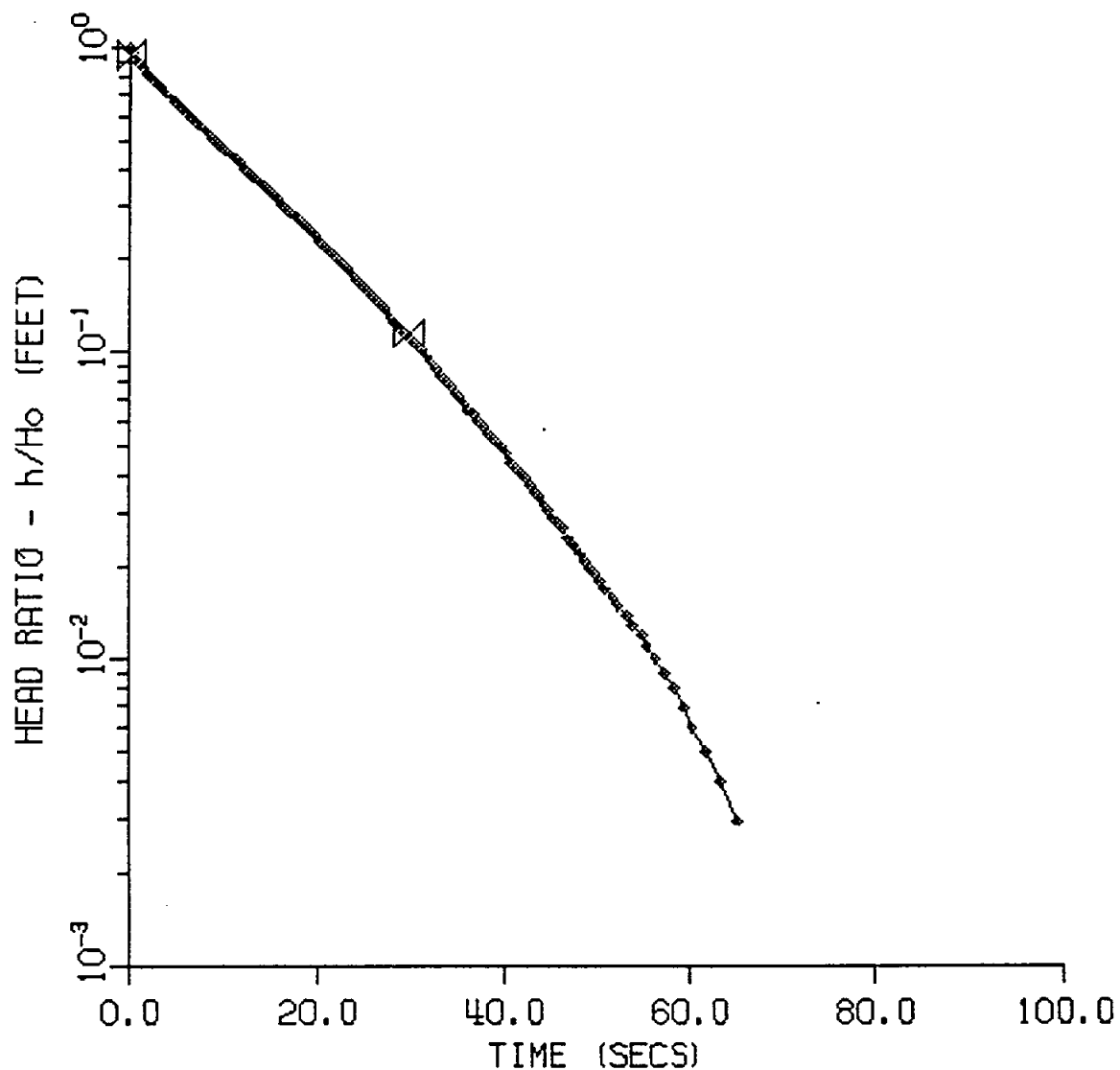
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0263

SEARS LOGISTICAL SERVICES  
BRMW13-TEST 2



$K$  (CM/S) = 0.003959

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

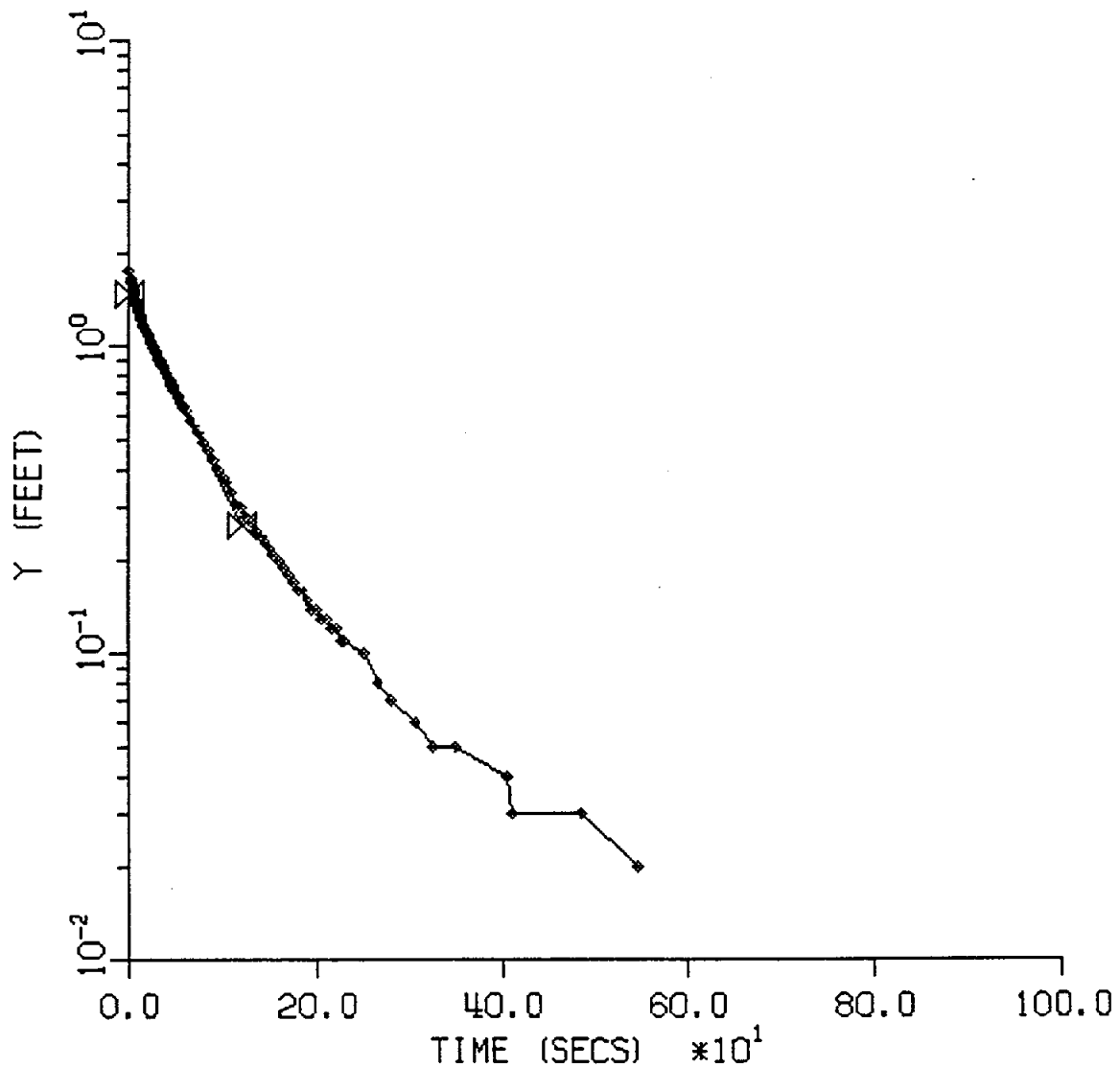
WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0307

# SEARS LOGISTICAL SERVICES

## OBMW14-TEST 1



K (CM/S) = 0.000400

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 11.1

H (FEET) = 11.10

COEFFICIENTS

A = 0.00

B = 0.00

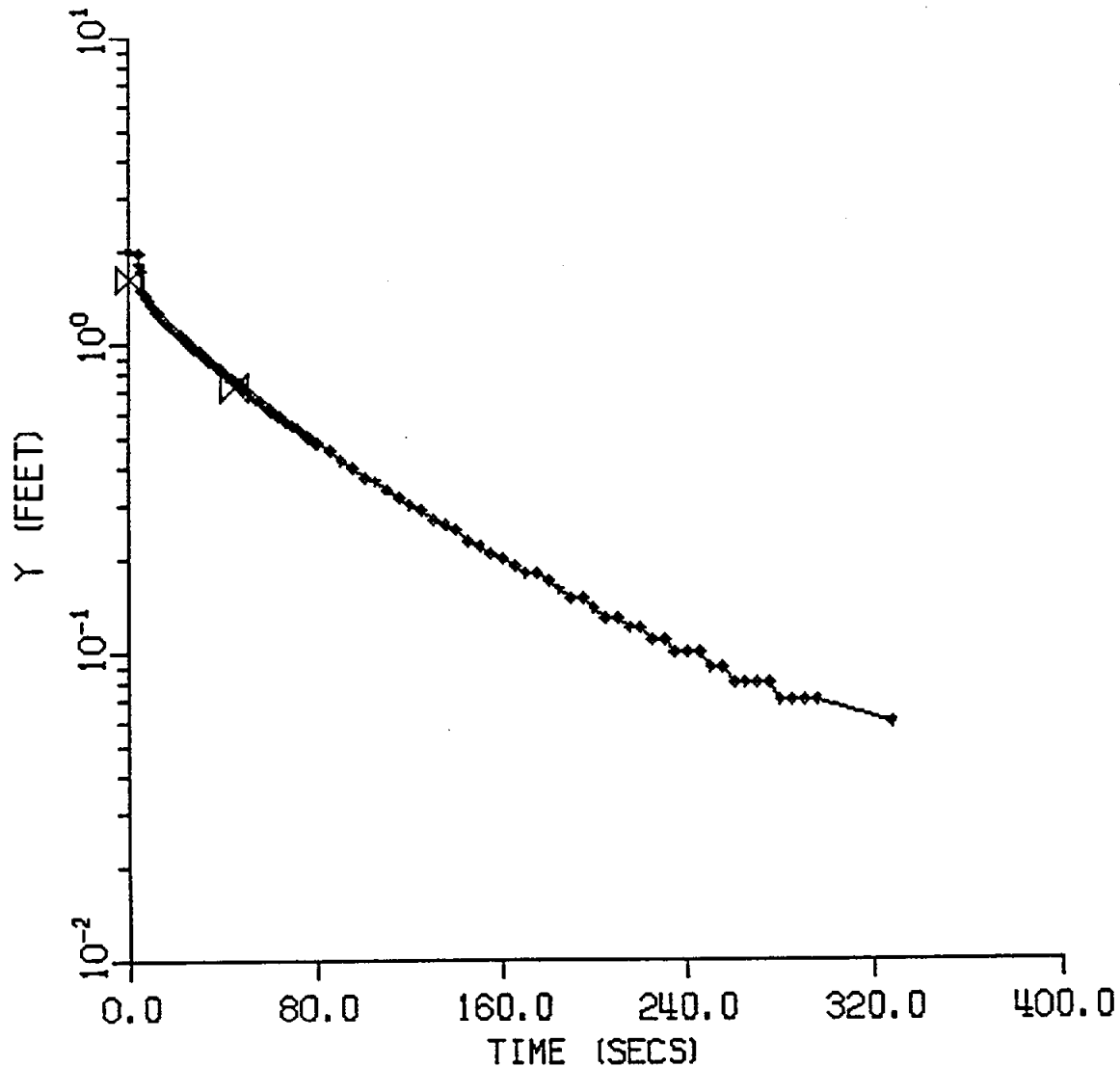
C = 2.05

Y-INTERCEPT = 1.49

SLOPE = -0.0063

# SEARS LOGISTICAL SERVICES

## OBMW14-TEST 2



K (CM/S) = 0.000499

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 11.1

H (FEET) = 11.10

COEFFICIENTS

A = 0.00

B = 0.00

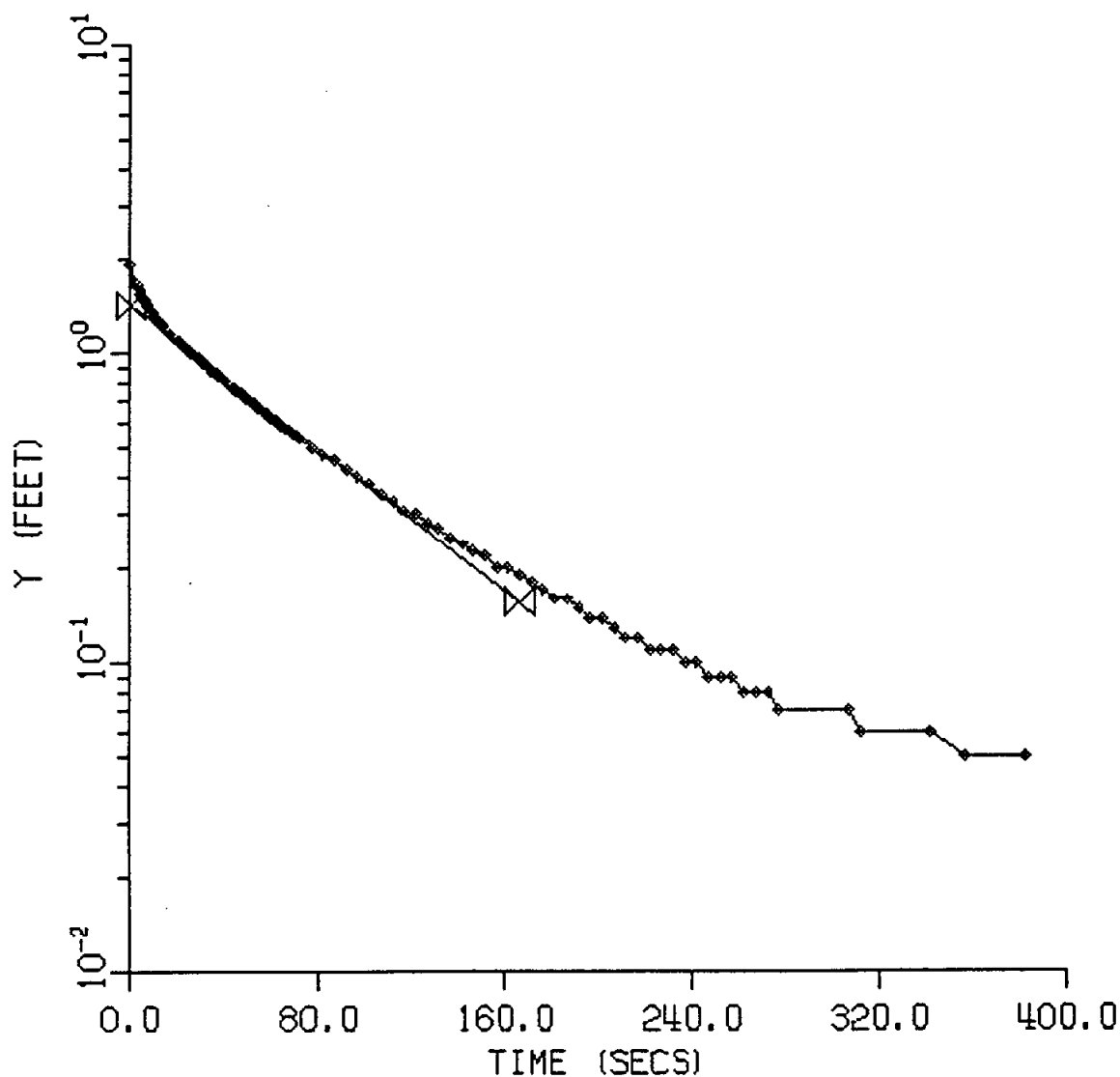
C = 2.05

Y-INTERCEPT = 1.63

SLOPE = -0.0078

# SEARS LOGISTICAL SERVICES

## OBMW14-TEST 3



K (CM/S) = 0.000367

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 11.1

H (FEET) = 11.10

COEFFICIENTS

A = 0.00

B = 0.00

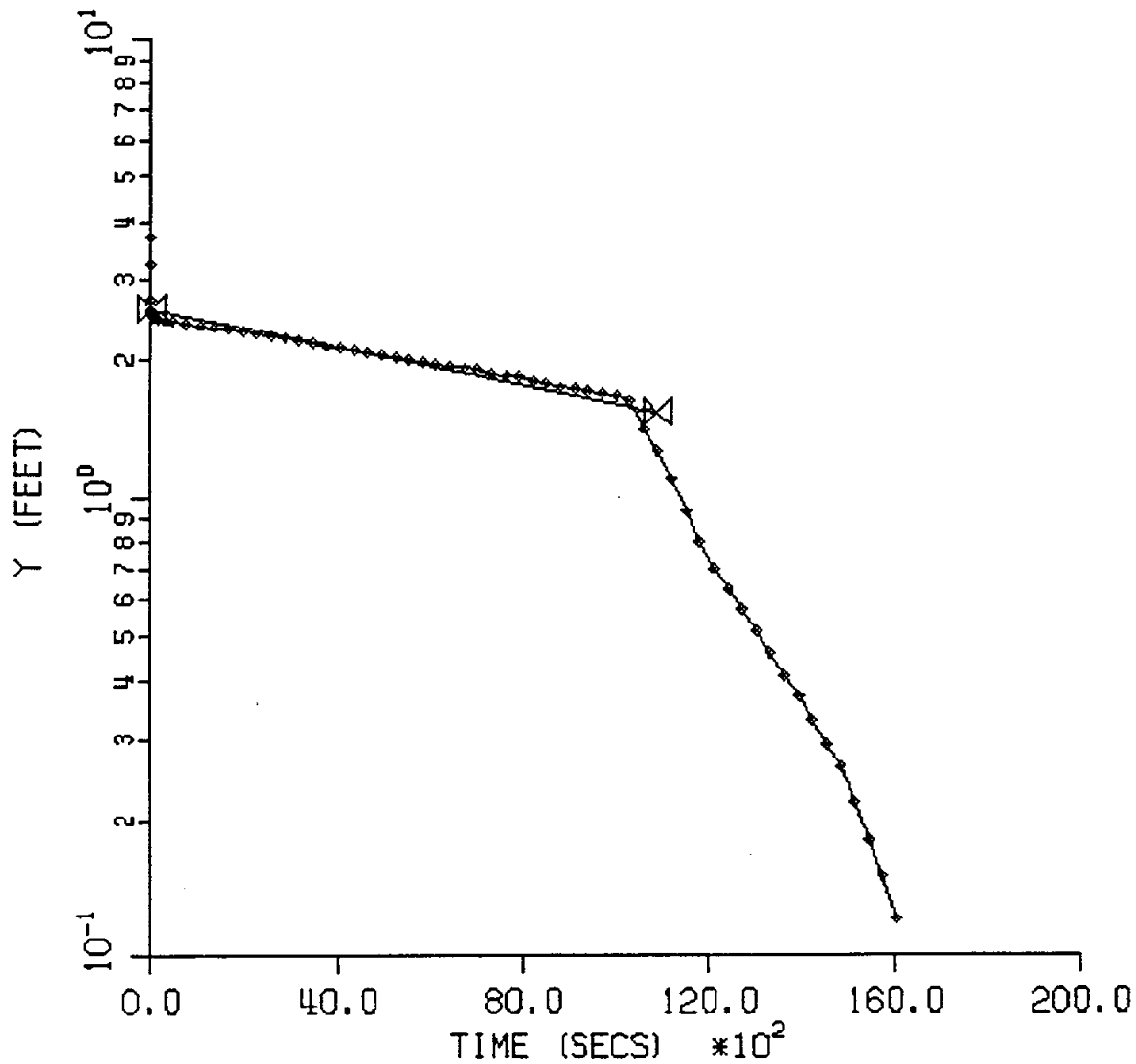
C = 2.05

Y-INTERCEPT = 1.44

SLOPE = -0.0058

# SEARS LOGISTICAL SERVICES

## BRMW14-TEST 1



K (CM/S) = 0.000001

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 26.0

H (FEET) = 25.00

COEFFICIENTS

A = 2.41

B = 0.38

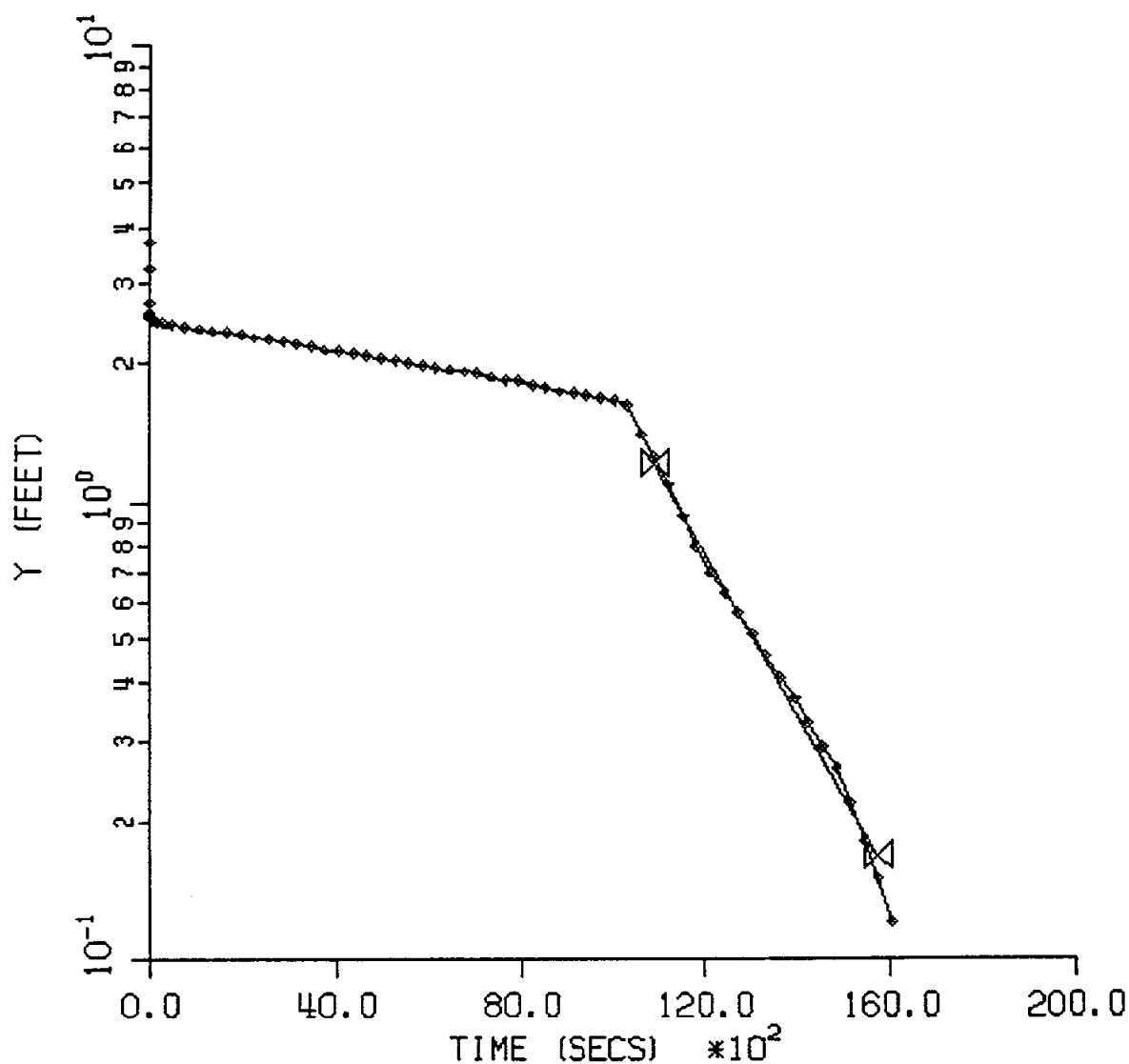
C = 0.00

Y-INTERCEPT = 2.60

SLOPE = -0.0000

# SEARS LOGISTICAL SERVICES

## BRMW14-TEST 1



K (CM/S) = 0.000012

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 26.0

H (FEET) = 25.00

COEFFICIENTS

A = 2.41

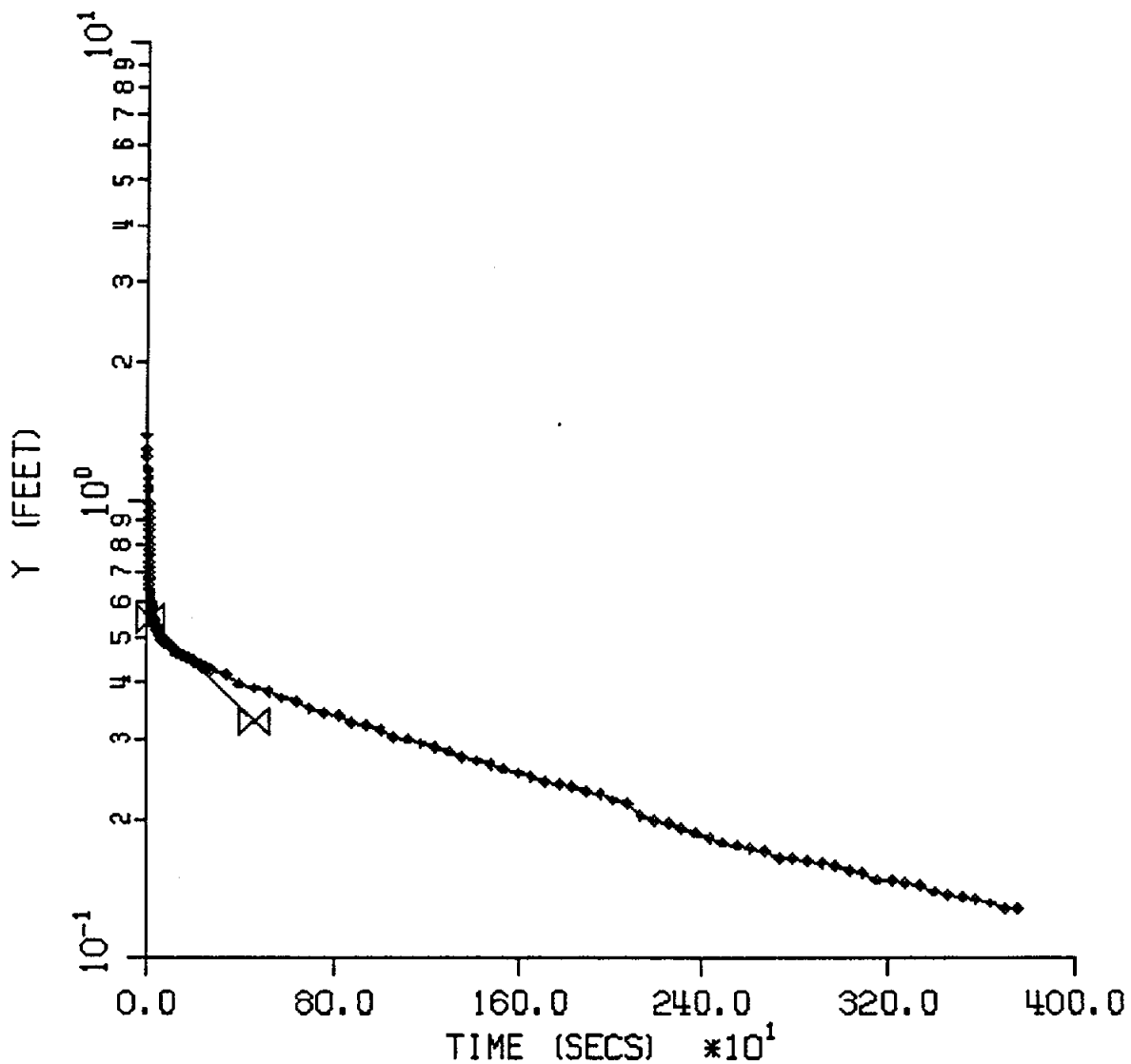
B = 0.38

C = 0.00

Y-INTERCEPT = 109.63

SLOPE = -0.0002

STEPAN COMPANY  
OBMW15-TEST 1



K (CM/S) = 0.000392

WELL SPECS. (FEET)

SCREEN LENGTH = 4.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 4.0

H (FEET) = 4.00

COEFFICIENTS

A = 0.00

B = 0.00

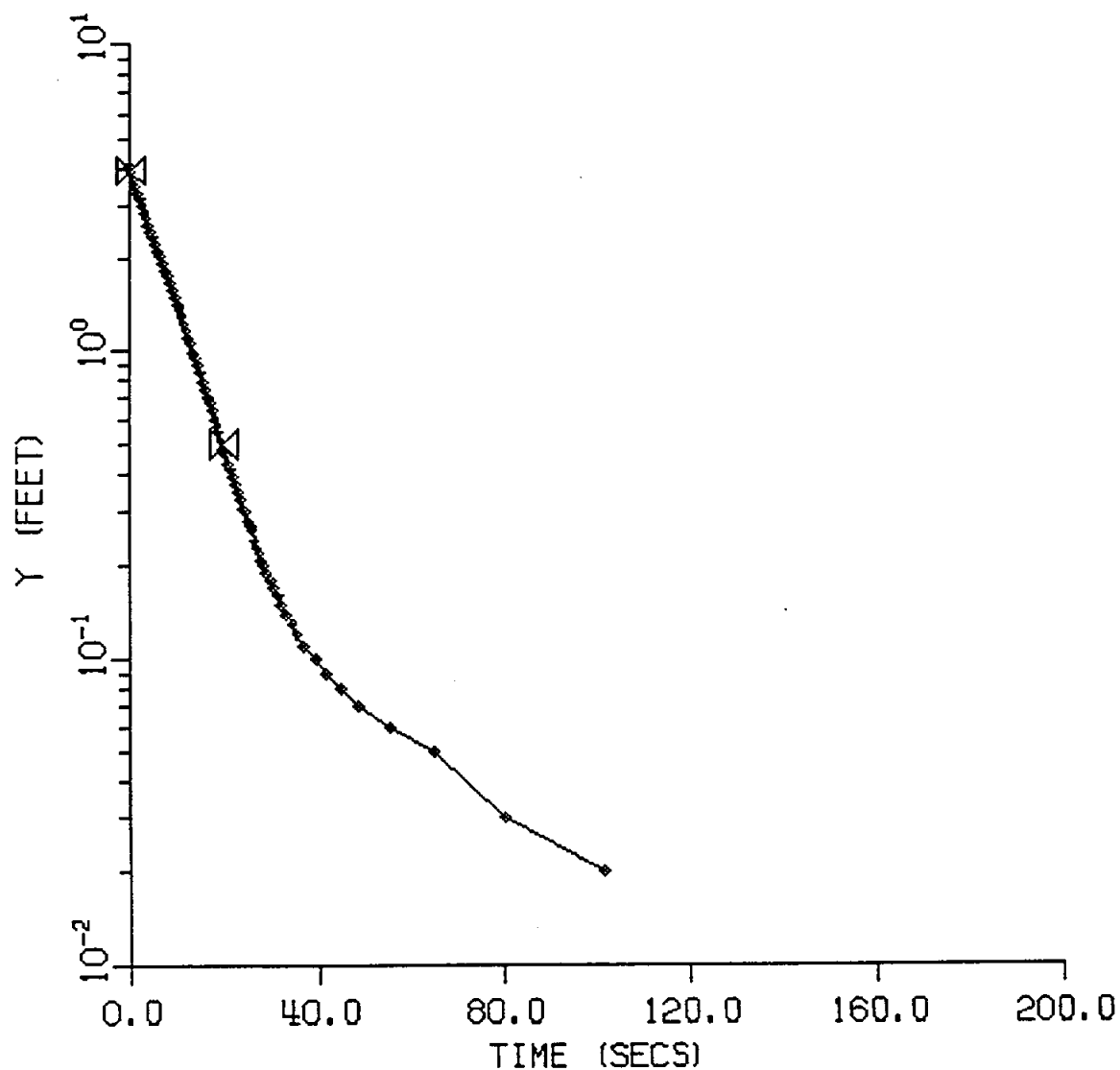
C = 1.30

Y-INTERCEPT = 0.56

SLOPE = -0.0005

# STEPAN COMPANY

## BRMW15-TEST 1



K (CM/S) = 0.002903

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 17.0

H (FEET) = 15.85

COEFFICIENTS

A = 2.41

B = 0.38

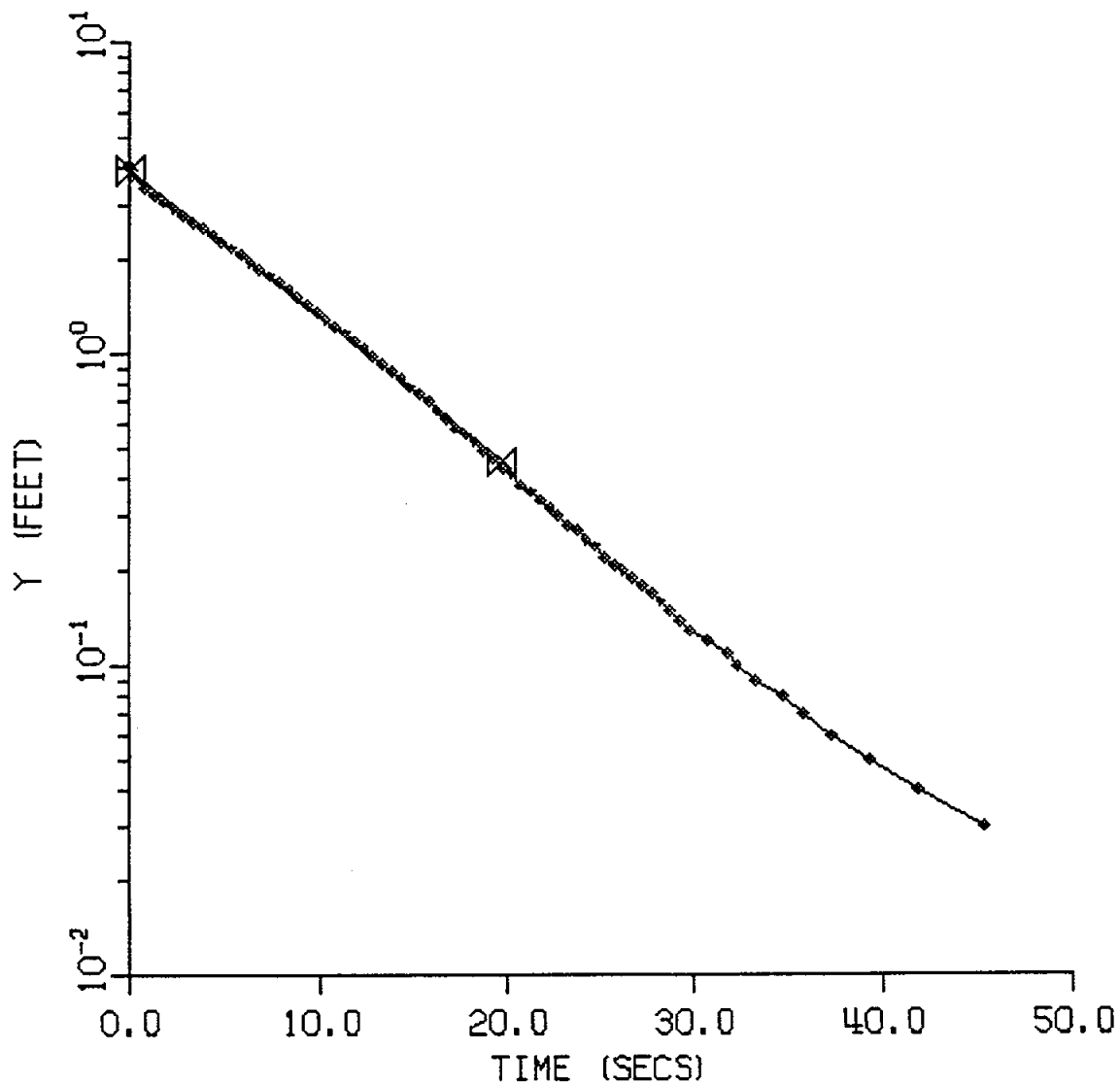
C = 0.00

Y-INTERCEPT = 3.92

SLOPE = -0.0454

# STEPAN COMPANY

## BRMW15-TEST 2



K (CM/S) = 0.003030

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 17.0

H (FEET) = 15.85

COEFFICIENTS

A = 2.41

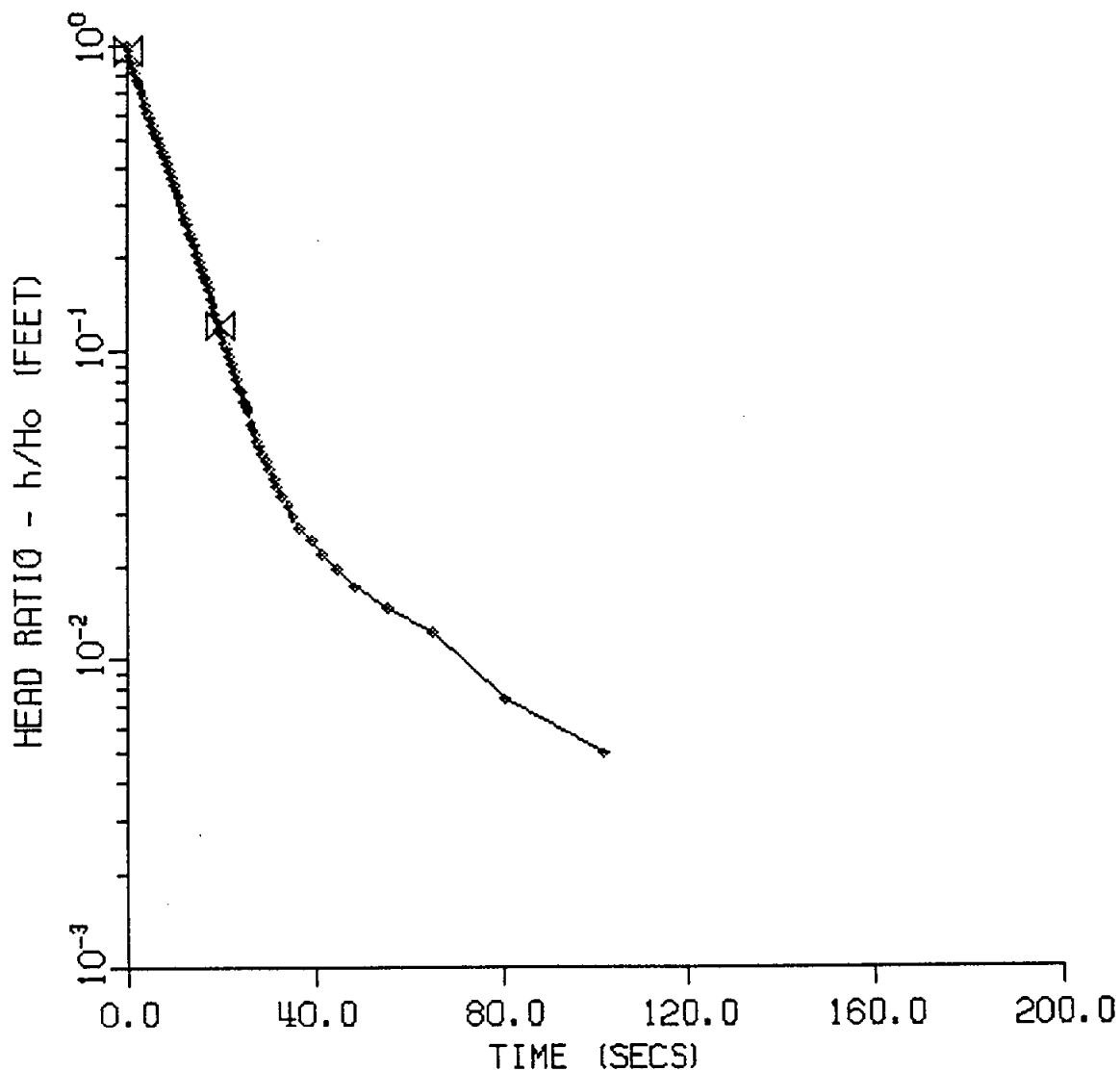
B = 0.38

C = 0.00

Y-INTERCEPT = 3.90

SLOPE = -0.0473

STEPAN COMPANY  
BRMW15-TEST 1



$K$  (CM/S) = 0.005858

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

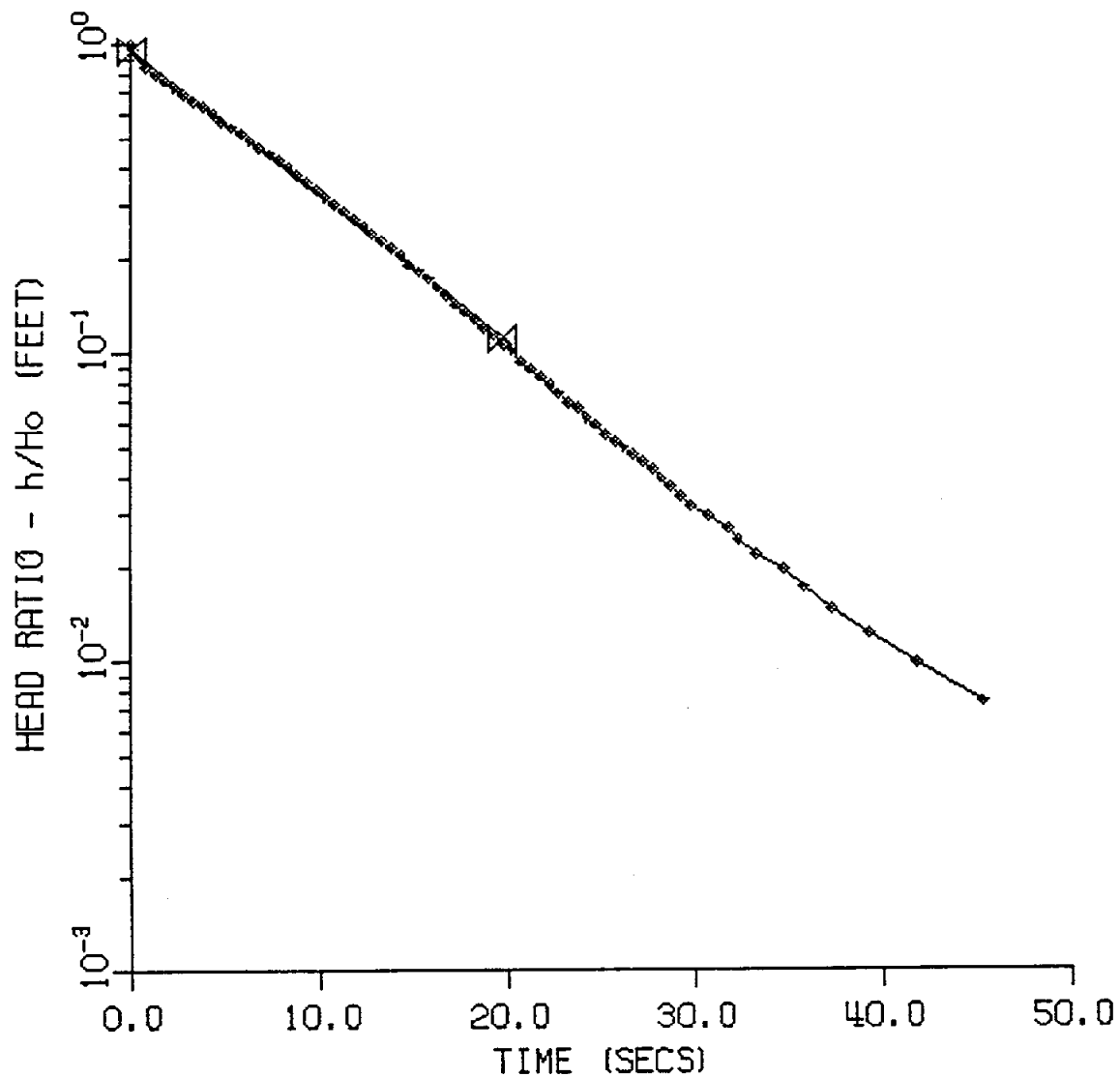
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0454

STEPAN COMPANY  
BRMW15-TEST 2



$K$  (CM/S) = 0.006113

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

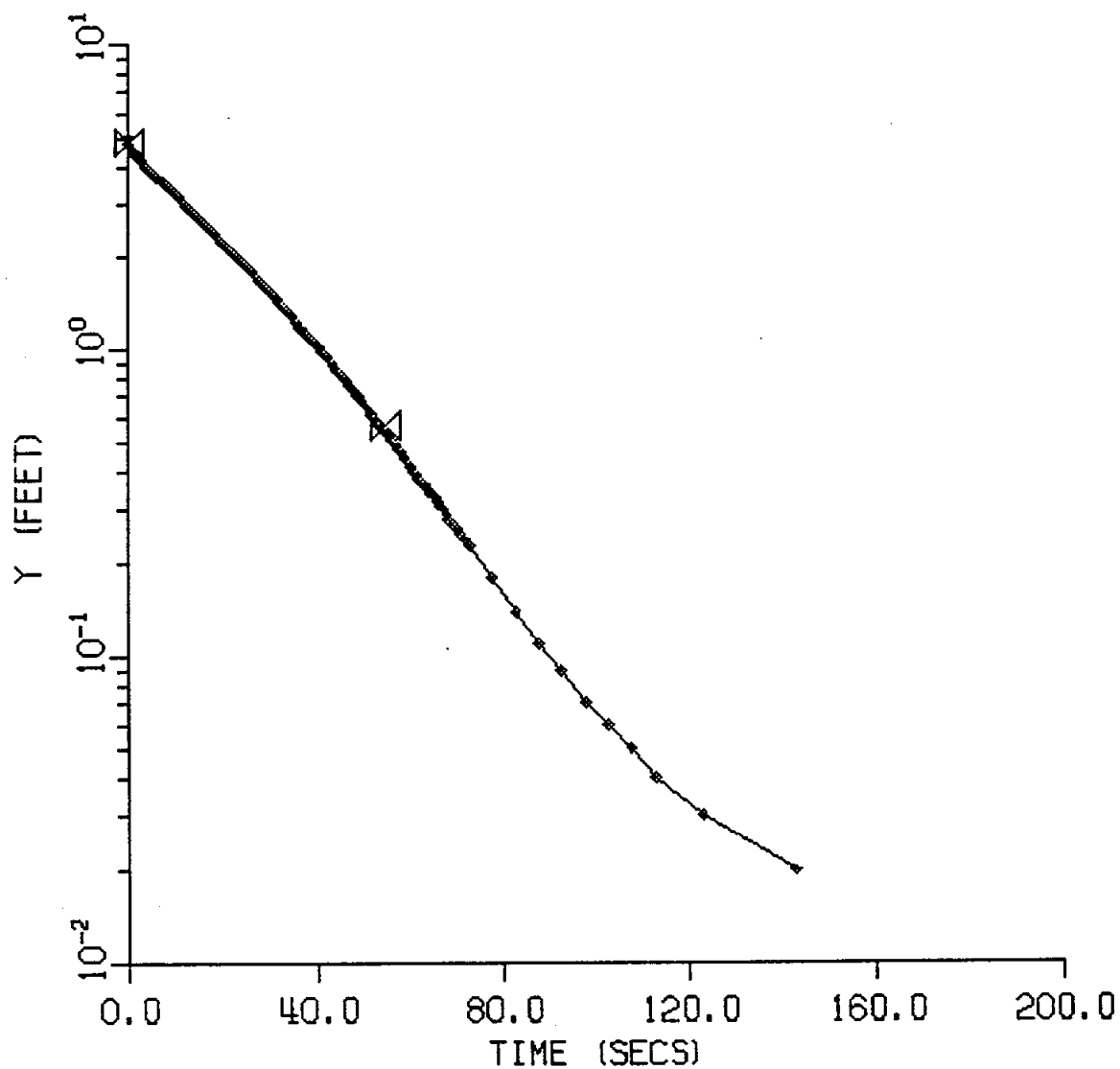
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0473

STEPAN COMPANY  
BRMW16-TEST 1



K (CM/S) = 0.001118

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 18.0

H (FEET) = 17.20

COEFFICIENTS

A = 2.41

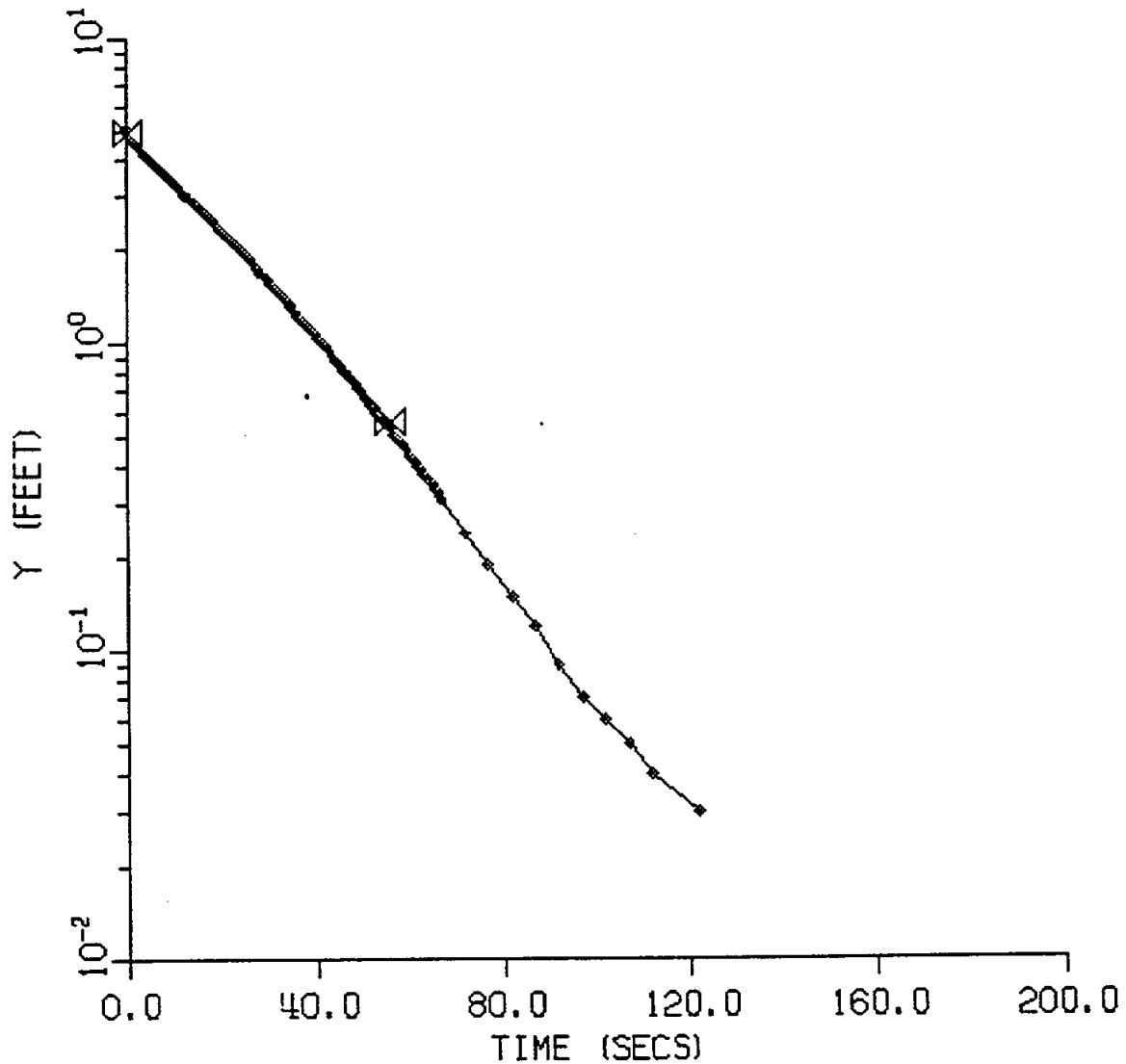
B = 0.38

C = 0.00

Y-INTERCEPT = 4.82

SLOPE = -0.0170

STEPAN COMPANY  
BRMW16-TEST 2



K (CM/S) = 0.001114

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 18.0

H (FEET) = 17.20

COEFFICIENTS

A = 2.41

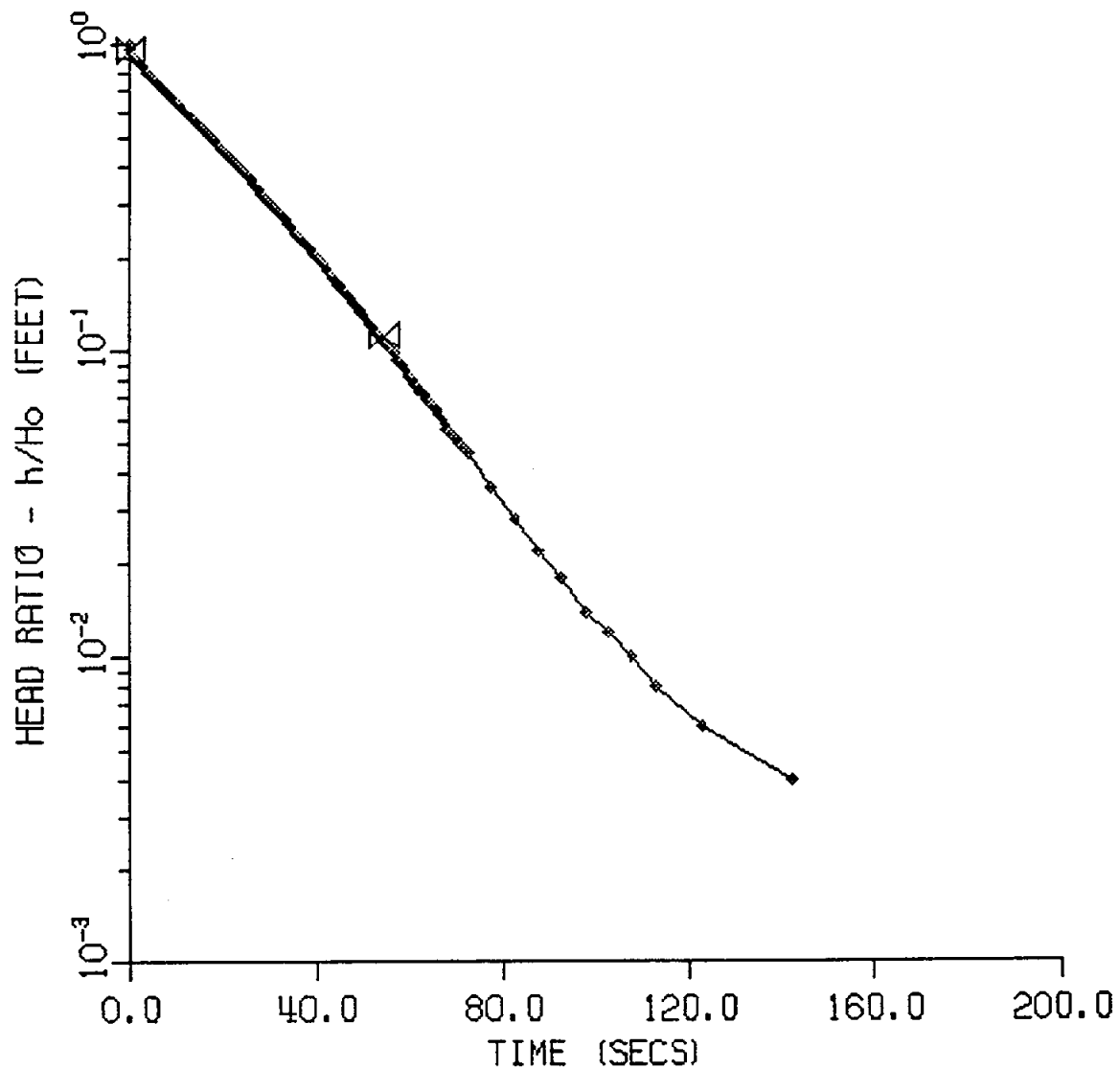
B = 0.38

C = 0.00

Y-INTERCEPT = 4.94

SLOPE = -0.0169

STEPAN COMPANY  
BRMW16-TEST 1



$K$  (CM/S) = 0.002194

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

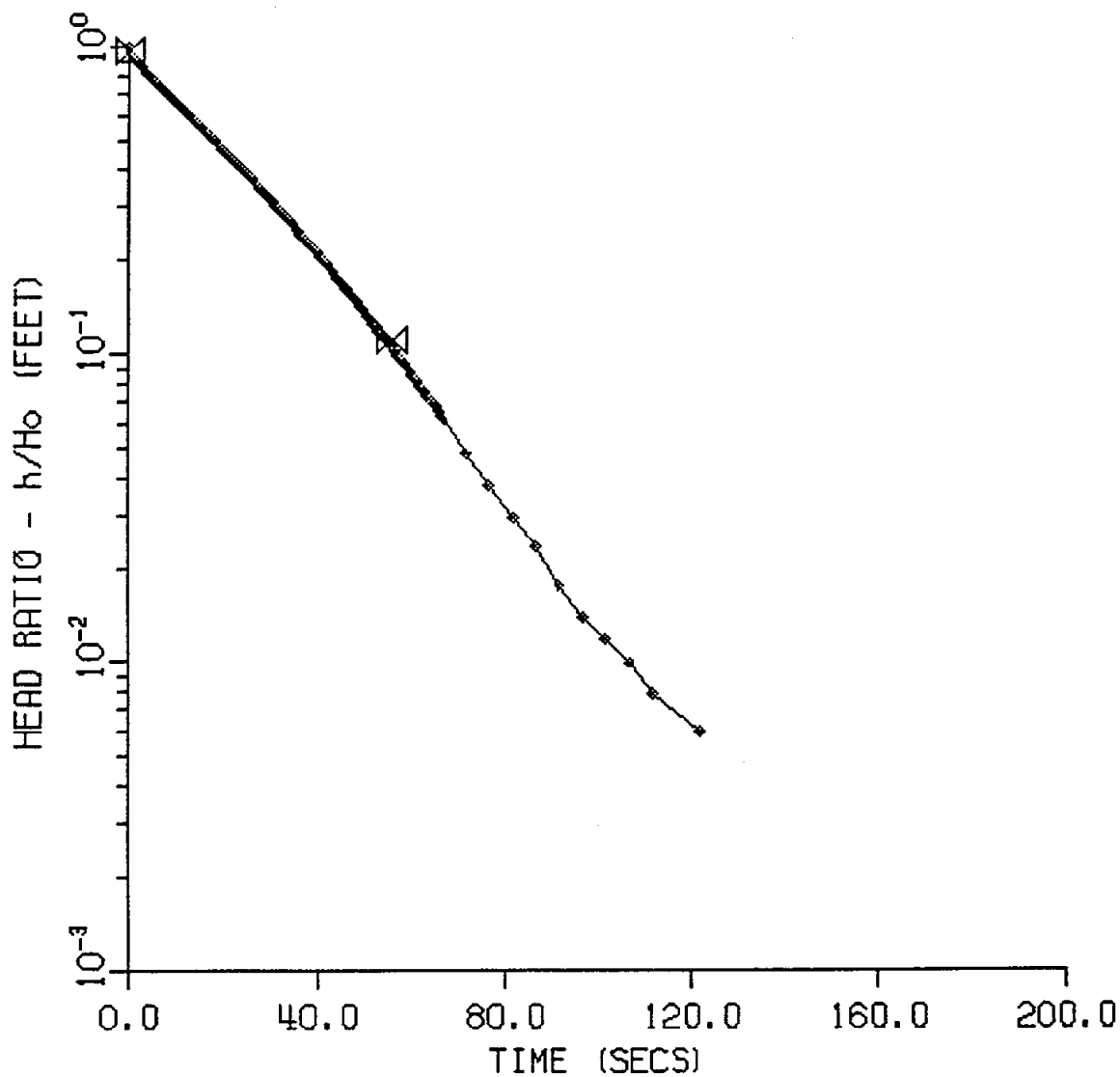
WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0170

STEPAN COMPANY  
BRMW16-TEST 2



$K$  (CM/S) = 0.002186

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

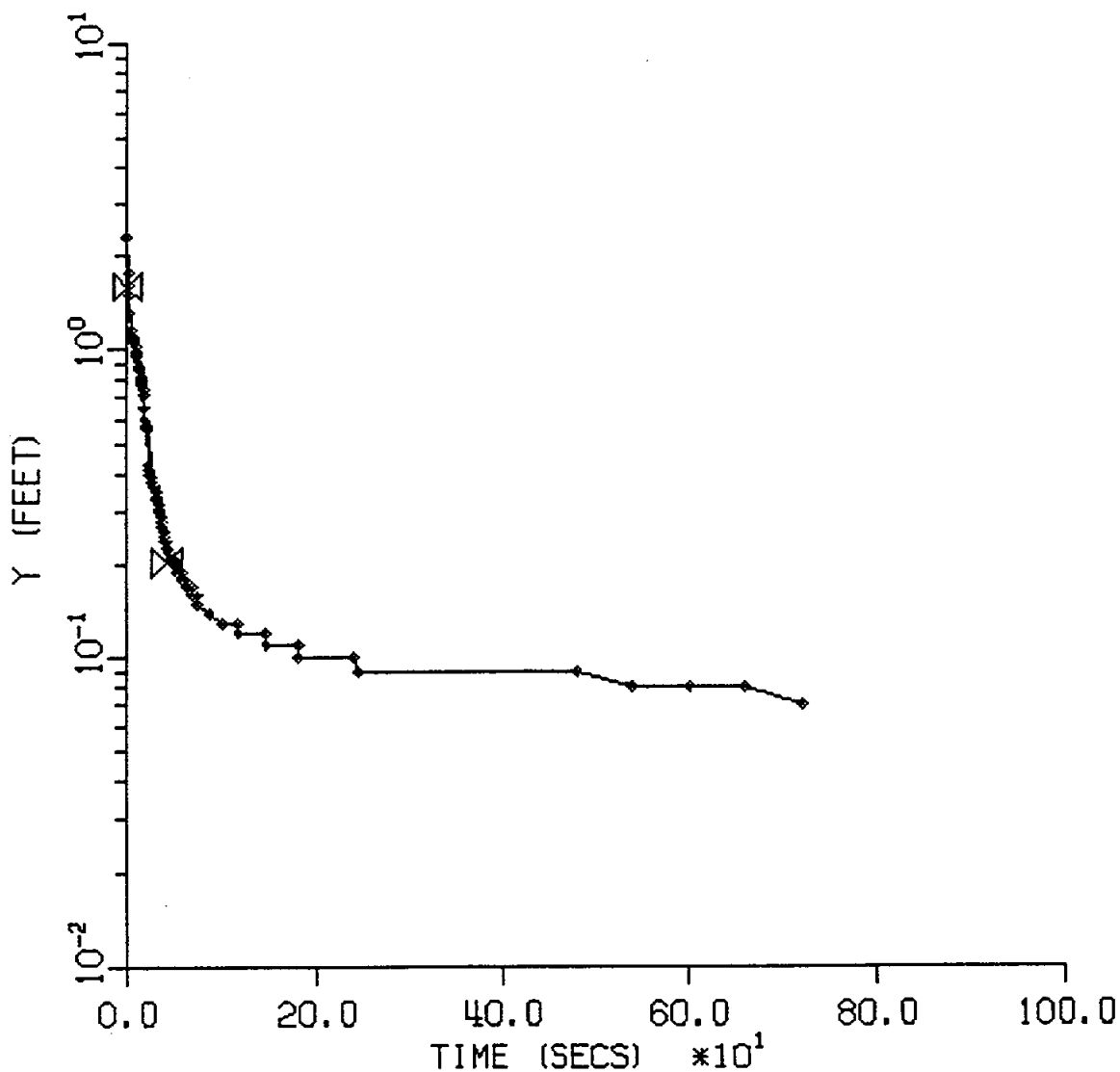
WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 10.0

SLOPE = -0.0169

# STEPAN PROPERTY

## OBMW17-TEST 1



K (CM/S) = 0.010387

WELL SPECS. (FEET)

SCREEN LENGTH = 8.4

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 8.4

H (FEET) = 8.40

COEFFICIENTS

A = 0.00

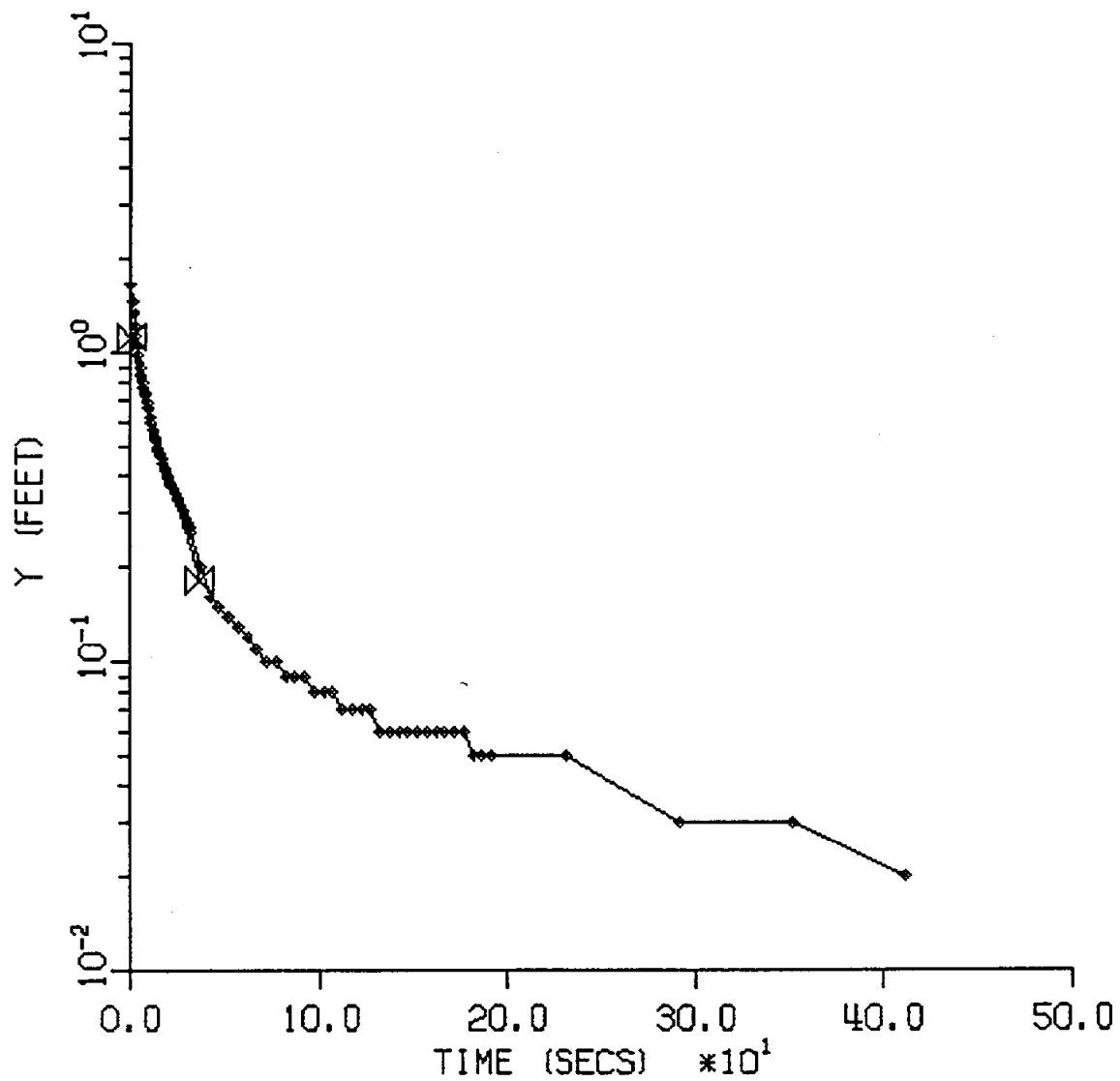
B = 0.00

C = 1.90

Y-INTERCEPT = 1.59

SLOPE = -0.0213

STEPAN COMPANY  
OBMW17-TEST 2



K (CM/S) = 0.010499

WELL SPECS. (FEET)

SCREEN LENGTH = 8.4

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.22

AQUIFER THICKNESS = 8.4

H (FEET) = 8.40

COEFFICIENTS

A = 0.00

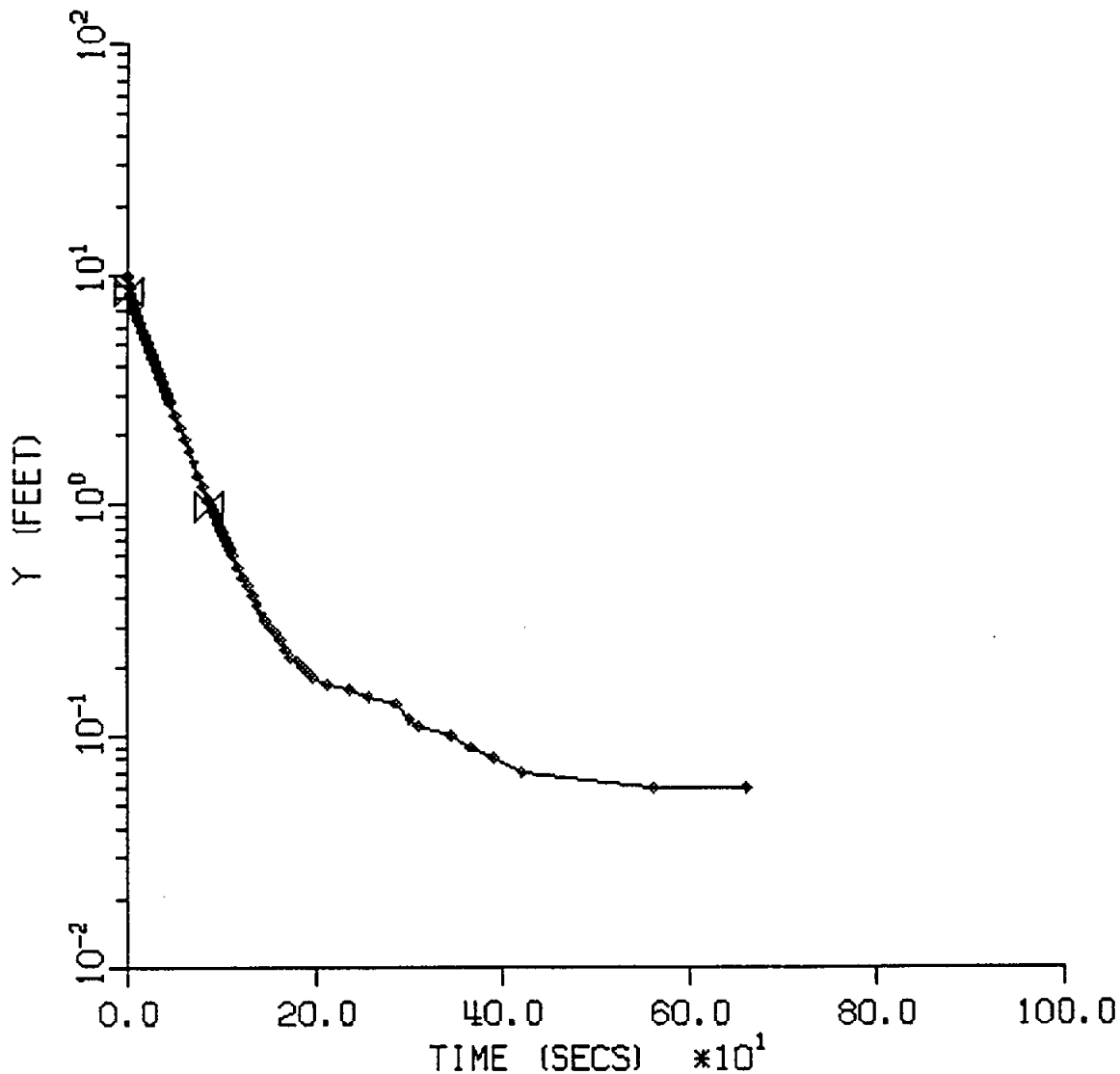
B = 0.00

C = 1.90

Y-INTERCEPT = 1.13

SLOPE = -0.0215

STEPAN COMPANY  
BRMW17-TEST 1



K (CM/S) = 0.000779

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 31.0

H (FEET) = 30.05

COEFFICIENTS

A = 2.41

B = 0.38

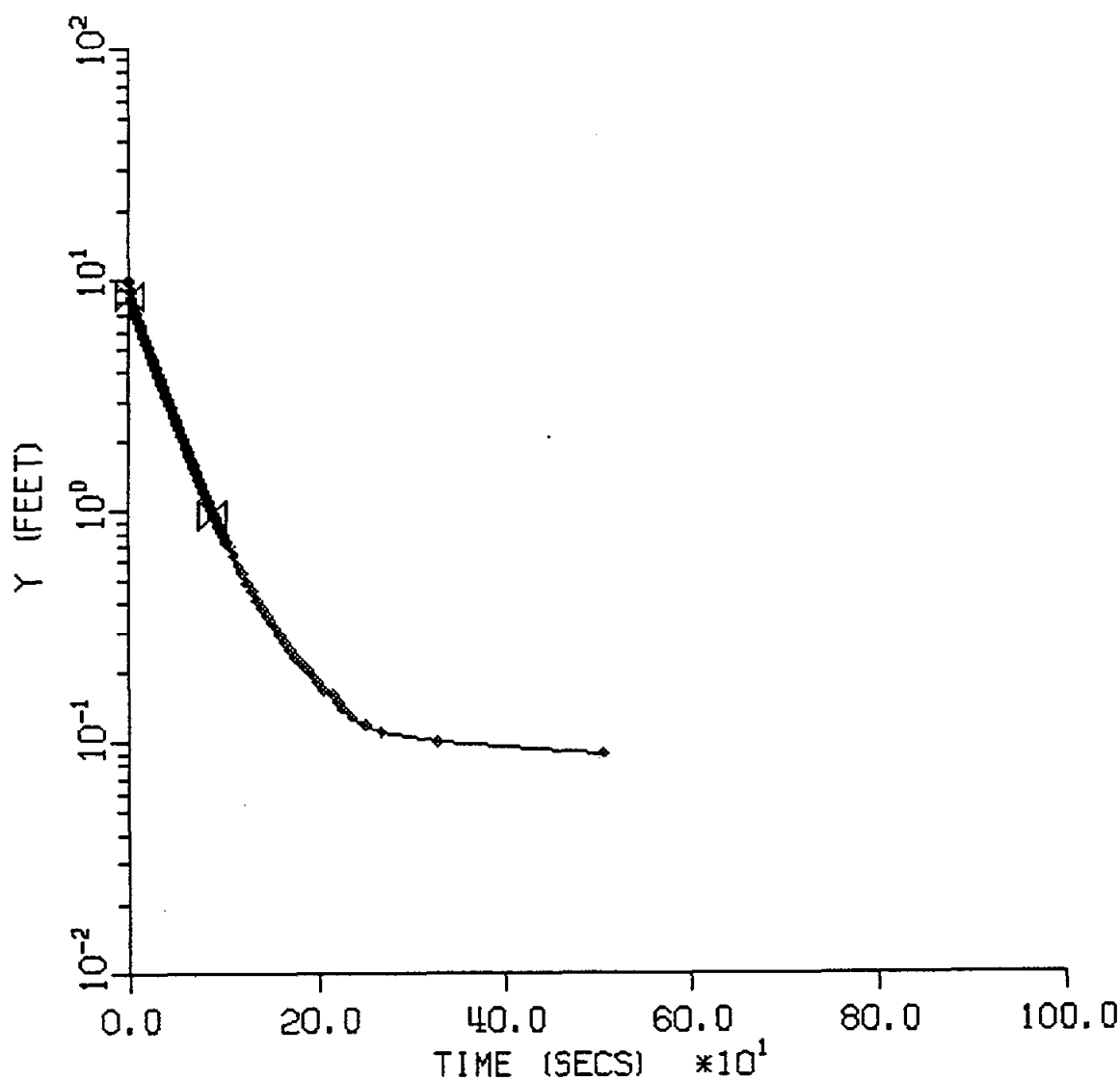
C = 0.00

Y-INTERCEPT = 8.53

SLOPE = -0.0108

# STEPAN COMPANY

## BRMW17-TEST 2



K (CM/S) = 0.000767

WELL SPECS. (FEET)

SCREEN LENGTH = 10.0

WELL SCREEN/BORE RADIUS = 0.33

WELL CASING RADIUS = 0.08

AQUIFER THICKNESS = 31.0

H (FEET) = 30.05

COEFFICIENTS

A = 2.41

B = 0.38

C = 0.00

Y-INTERCEPT = 8.47

SLOPE = -0.0106