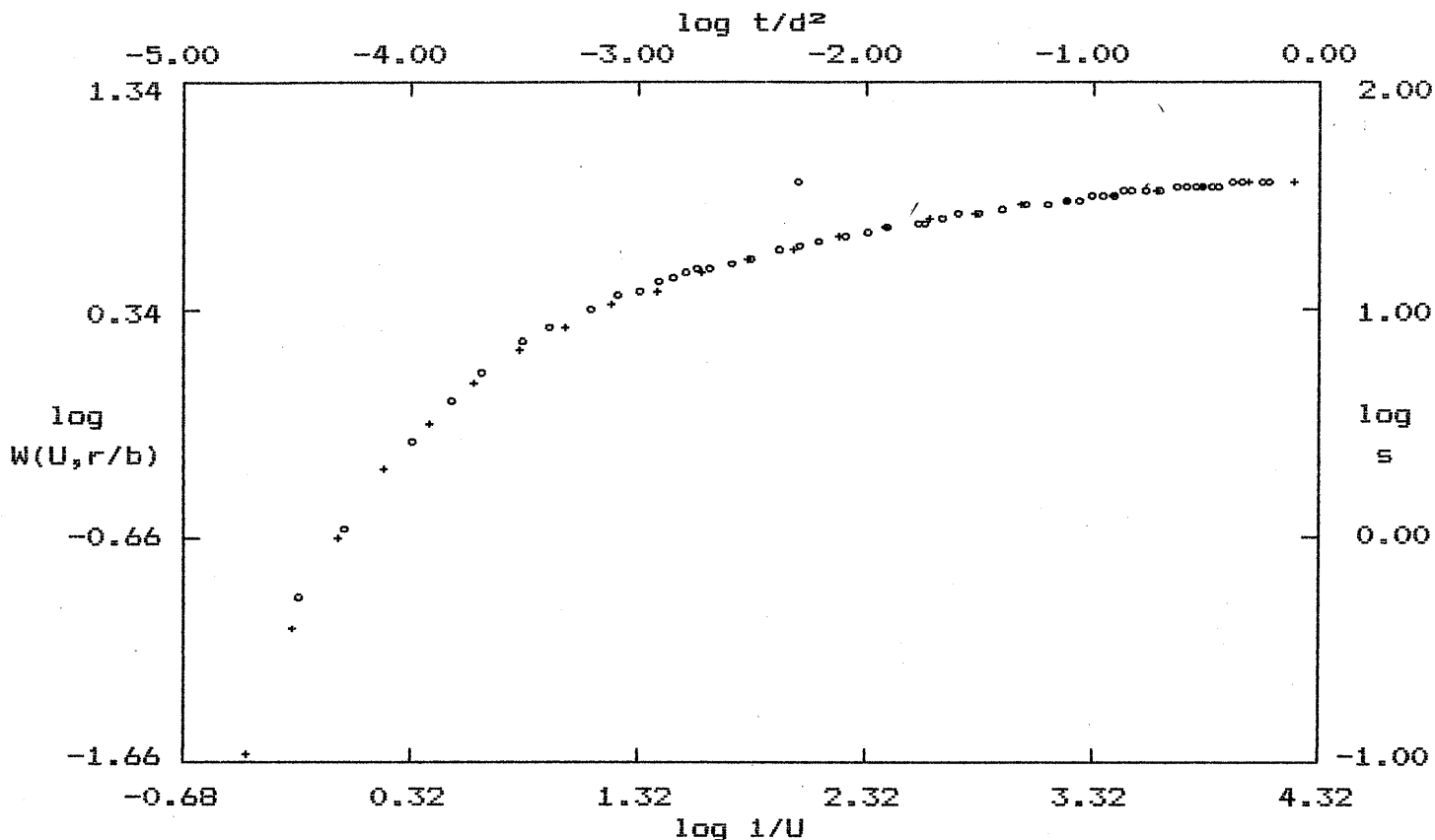


PUMP TEST DATA



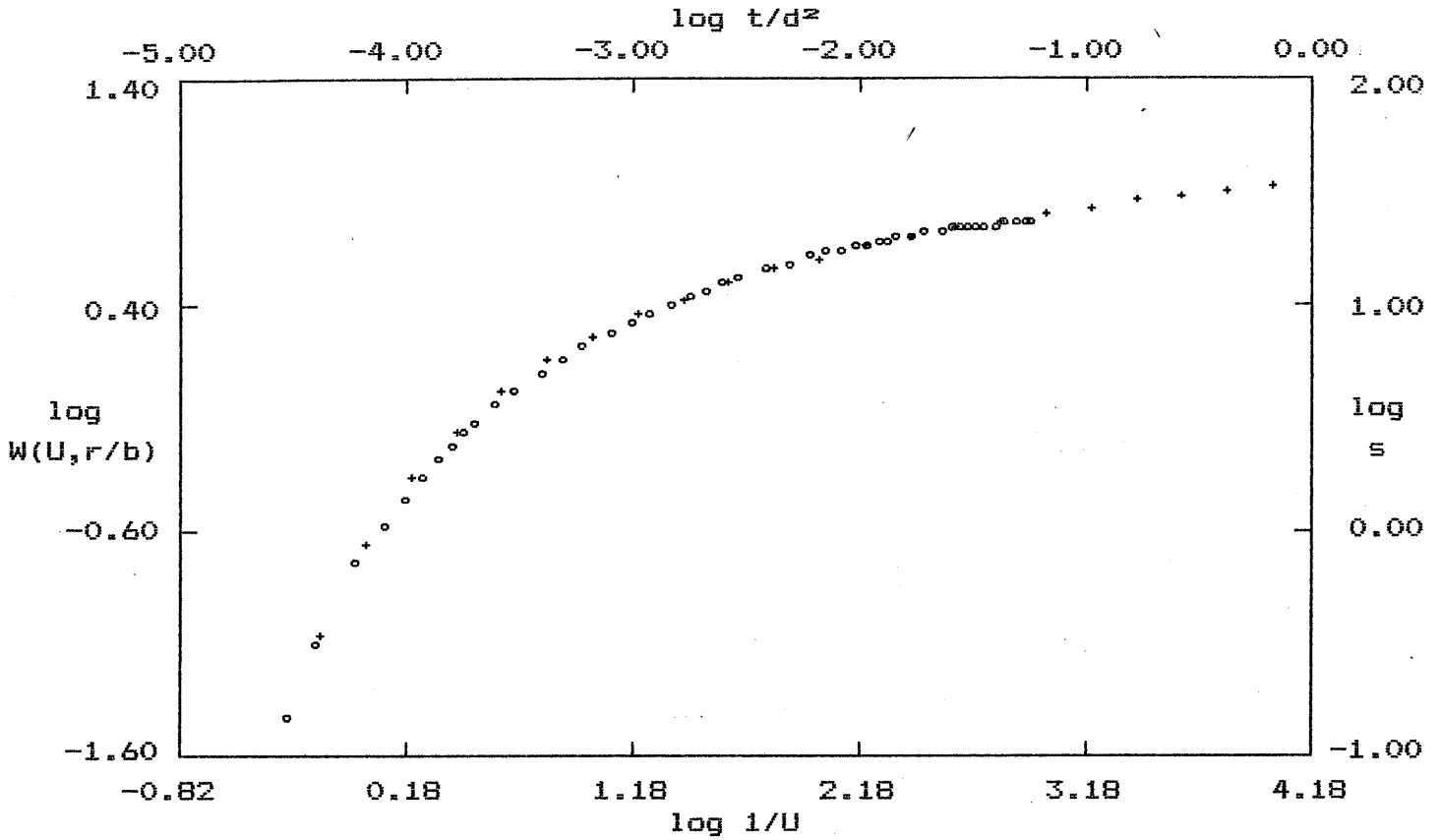
o - Data
 + - Type Curve
 Confined Leaky: $r/B = 0.02$

SOLUTION

Transmissivity = $1.210E+00$ ft.²/min. = *13,033 gpd/ft*
 Storativity = $2.317E-04$

Silver Strand Leases CO753

PUMP TEST DATA



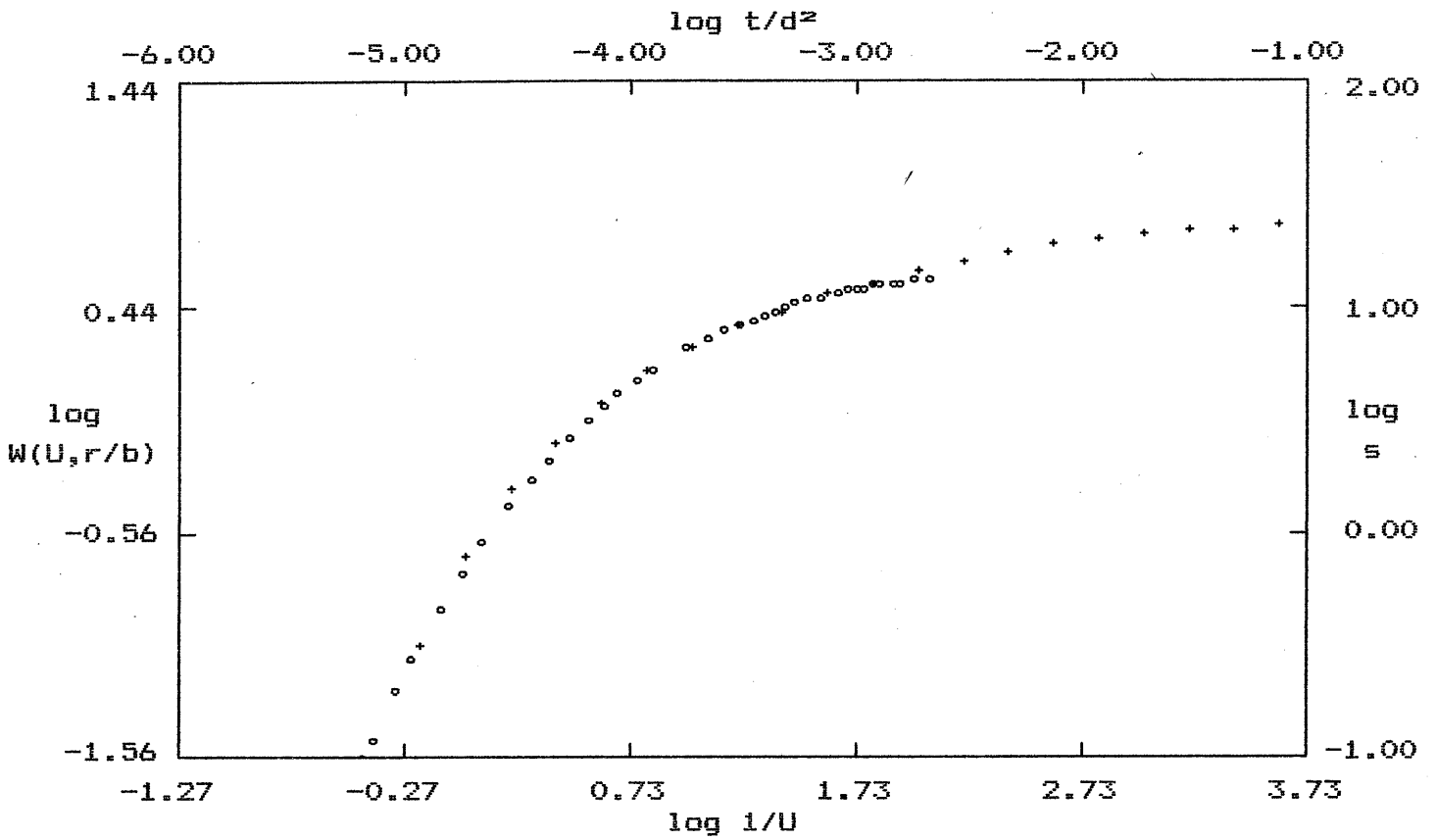
o - Data
 + - Type Curve
 Confined Leaky: $r/B = 0.01$

SOLUTION

Transmissivity = $1.390E+00$ ft.²/min. = *14,972 gpd/ft*
 Storativity = $3.672E-04$

Silver Strand Groves C0754

PUMP TEST DATA



o - Data

+ - Type Curve

Confined Leaky: $r/B = 0.05$

SOLUTION

Transmissivity = $1.524E+00$ ft.²/min. = *16,372 gpd/ft*
 Storativity = $1.135E-04$

Silver Strand Geosols CO 756

PROJECTED CONE-OF-DEPRESSION
SILVER STRAND GROVES

TRANSMISSIVITY = 14,000 GPD/FT
LEAKANCE = 0.002 GPD/FT³
PUMPAGE = 17 MGD (MAX DAY)

STEADY-STATE LEAKY
ARTESIAN AQUIFER MODEL

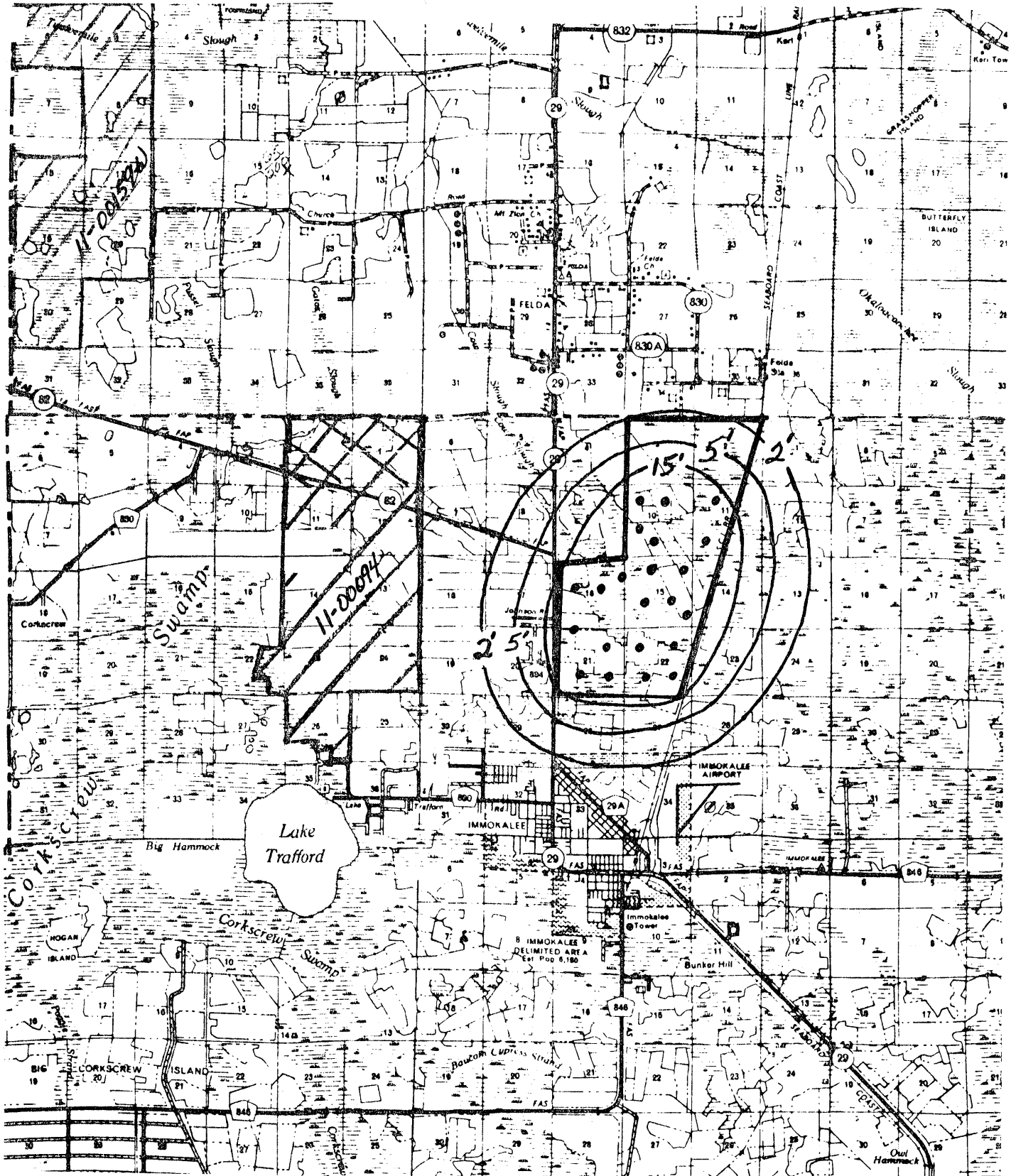


TABLE 4-1. AQUIFER COEFFICIENTS CALCULATED FOR THE HAWTHORN ZONE I AQUIFER

<u>Analysis Method</u>	<u>T(gpd/ft)</u>	<u>S</u>	<u>k'/b'(gpd/ft³)</u>
Well CO-753			
1. Hantush-Jacob	12,955	2.2×10^{-4}	2.3×10^{-3}
2. Jacob	14,450	1.7×10^{-4}	
Well CO-754			
1. Hantush-Jacob	14,188	3.7×10^{-4}	1.0×10^{-3}
2. Jacob	14,450	3.8×10^{-4}	
Well CO-756			
1. Hantush-Jacob	14,898	1.3×10^{-4}	4.2×10^{-4}
2. Jacob	19,056	8.3×10^{-5}	
Distance Drawdown			
1. Jacob - 10 min.	12,200	2.3×10^{-4}	
2. Jacob - 100 min.	12,042	2.3×10^{-4}	
3. Jacob - 1000 min.	11,990	4.3×10^{-4}	

$$S = \frac{0.3 T t_0}{r^2}$$

where,

T = transmissivity, gpd/ft

Q = discharge, gpm

Δs = drawdown between log cycles, in feet

t_0 = time, in days

r = distance from pumped well, in feet

S = storage coefficient

The calculated results obtained using this method are almost identical for the drawdowns plotted at 10 minutes, 100 minutes and 1,000 minutes.

The following hydraulic coefficients will be used for predictive modeling of aquifer response to pumping:

Transmissivity = 14,000 gpd/ft

Storage Coefficient = 2×10^{-4}

Leakance = 2×10^{-3} gpd/ft³

31	9.83	1921.	.1082E-03	.8229E-04
32	9.83	1922.	.1080E-03	.8185E-04
33	9.83	1923.	.1078E-03	.8145E-04
34	9.83	1924.	.1076E-03	.8107E-04
35	9.83	1925.	.1074E-03	.8072E-04
36	9.83	1926.	.1072E-03	.8040E-04
37	9.83	1926.	.1070E-03	.8010E-04
38	9.83	1927.	.1069E-03	.7982E-04
39	9.83	1927.	.1067E-03	.7956E-04
40	9.83	1928.	.1066E-03	.7932E-04
42	9.83	1929.	.1064E-03	.7887E-04
44	9.82	1930.	.1061E-03	.7847E-04
46	9.82	1931.	.1059E-03	.7813E-04
48	9.82	1932.	.1058E-03	.7784E-04

Silver Strand Groves C0753

T = 14,451 gpd/ft

S = 1.057 x 10⁻⁴

K'/b = 7.784 x 10⁻⁵ day⁻¹

TERMINATION DUE TO FUNCTION CONVERGENCE

FINAL RESULTS

ITER	FUNCTION	TRANSMISS	STORTIVTY	SPEC_LEAK
49	9.82	1932.	.1057E-03	.7784E-04

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3
	1.000	.0000	.0000

DO YOU WANT A SENSITIVITY ANALYSIS ? (Y/N)

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	1932.	1930.	1933.
STORTIVTY	.1057E-03	0.5599E-04	0.1554E-03
SPEC_LEAK	.7771E-04	0.0000	0.1788E-03

TO CONTINUE ENTER "RETURN"

6	.237	2007.	.3137E-03	.6486E-04
7	.158	1942.	.3374E-03	.9515E-04
8	.106	1886.	.3593E-03	.1256E-03
9	.762E-01	1842.	.3775E-03	.1534E-03
10	.607E-01	1809.	.3915E-03	.1763E-03
11	.539E-01	1787.	.4014E-03	.1932E-03
12	.514E-01	1773.	.4079E-03	.2043E-03
13	.501E-01	1765.	.4119E-03	.2109E-03
14	.496E-01	1759.	.4144E-03	.2152E-03
15	.493E-01	1756.	.4159E-03	.2178E-03
16	.492E-01	1754.	.4167E-03	.2193E-03
17	.491E-01	1753.	.4172E-03	.2202E-03
18	.490E-01	1753.	.4175E-03	.2209E-03
19	.490E-01	1752.	.4177E-03	.2213E-03

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS

ITER FUNCTION TRANSMISS STORTIVTY SPEC_LEAK
 19 .490E-01 1752. .4178E-03 .2213E-03

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3
	.0000	1.000	.0000

DO YOU WANT A SENSITIVITY ANALYSIS ? (Y/N)

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	1752.	1746.	1758.
STORTIVTY	.4178E-03	0.1976E-03	0.6380E-03
SPEC_LEAK	.2214E-03	0.0000	0.5493E-03

TO CONTINUE ENTER "RETURN"

Silver Stained Grooves CO 754

T = 13,090 gpd/ft
S = 4.178 x 10⁻⁴

K/b = 2.213 x 10⁻⁴ day⁻¹

9	.178E-01	1863.	.1204E-03	.6539E-04
10	.153E-01	1854.	.1198E-03	.6732E-04
11	.136E-01	1846.	.1194E-03	.6899E-04
12	.123E-01	1839.	.1190E-03	.7043E-04
13	.113E-01	1832.	.1187E-03	.7169E-04
14	.106E-01	1827.	.1185E-03	.7278E-04
15	.101E-01	1822.	.1183E-03	.7375E-04
16	.966E-02	1818.	.1181E-03	.7460E-04
17	.935E-02	1814.	.1180E-03	.7535E-04
18	.909E-02	1810.	.1179E-03	.7603E-04
19	.889E-02	1807.	.1179E-03	.7663E-04
20	.871E-02	1804.	.1179E-03	.7718E-04
21	.857E-02	1801.	.1178E-03	.7768E-04
22	.846E-02	1798.	.1178E-03	.7798E-04

Silver Strand Groundwater CO756

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS

ITER FUNCTION TRANSMISS STORTIVITY SPEC_LEAK
 25 .846E-02 1798. .1178E-03 .7798E-04

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3
	.0000	.0000	1.000

DO YOU WANT A SENSITIVITY ANALYSIS ? (Y/N)

T = 13,449 gpd/ft
S = 1.178 x 10⁻⁴
K/p = 7.798 x 10⁻⁵ day⁻¹

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	1798.	1796.	1800.
STORTIVITY	.1178E-03	0.2991E-04	0.2057E-03
SPEC_LEAK	.7803E-04	0.0000	0.1868E-03

TO CONTINUE ENTER "RETURN"

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER	FUNCTION	TRANSMISS	STORTIVITY
1	62.0	1466.	.1006E-02
3	29.7	2153.	.2280E-03
5	21.6	1964.	.1821E-03
7	21.4	2011.	.1803E-03

Silver Strand Groves all wells

TERMINATION DUE TO PARAMETER CONVERGENCE

T = 14,975 gpd/ft

FINAL RESULTS

ITER	FUNCTION	TRANSMISS	STORTIVITY
7	21.4	2002.	.1810E-03

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3
	.6716	.2896	.3882E-01

S = 1.81 x 10⁻⁴

K_{1/2} = ?

DO YOU WANT A SENSITIVITY ANALYSIS ? (Y/N)

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	2002.	2000.	2003.
STORTIVITY	.1810E-03	0.1379E-03	0.2241E-03

TO CONTINUE ENTER "RETURN"