

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER	FUNCTION	TRANSMISS	STORTIVTY	SPEC_LEAK
1	.398	3789.	.1824E-02	.5546E-03
2	.398	3789.	.1824E-02	.5524E-03

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS

ITER	FUNCTION	TRANSMISS	STORTIVTY	SPEC_LEAK
2	.398	3789.	.1824E-02	.5524E-03

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3	4	5
	1.000	.0000	.0000	.0000	.0000

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

Rowland Walker Well 1

T = 28,342 gpd/ft

S = 1.824 x 10⁻³

K₁/b = 5.524 x 10⁻⁴ day⁻¹

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	3789.	3743.	3834.
STORTIVTY	.1824E-02	0.8761E-04	0.3561E-02
SPEC_LEAK	.5524E-03	0.0000	0.2671E-02

TO CONTINUE ENTER "RETURN"

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER	FUNCTION	TRANSMISS	STORTIVITY
1	9.02	3723.	.1800E-02
3	.387	4057.	.2474E-03
5	.302	3698.	.3135E-03
7	.294	3765.	.3095E-03

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS

ITER	FUNCTION	TRANSMISS	STORTIVITY
7	.294	3752.	.3100E-03

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3	4	5
	.0000	1.000	.0000	.0000	.0000

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

Howland Walker Well 3.

T = 28,065 gpd/ft

S = 3.1 x 10⁻⁴

K'/b = 3.166 x 10⁻⁵ day

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	3752.	3745.	3760.
STORTIVITY	.3100E-03	0.6794E-04	0.5521E-03

TO CONTINUE ENTER "RETURN"

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER	FUNCTION	TRANSMISS	STORTIVTY
1	4.99	5039.	.9293E-04
3	1.10	3240.	.6656E-04
5	.285	3775.	.6516E-04
7	.276	3696.	.6601E-04

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS

ITER	FUNCTION	TRANSMISS	STORTIVTY
7	.276	3712.	.6586E-04

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3	4	5
	.0000	.0000	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	3712.	3710.	3713.
STORTIVTY	.6586E-04	0.1406E-04	0.1177E-03

TO CONTINUE ENTER "RETURN"

Rowland Walker Well 4

T = 27,766 gpd/ft

S = 6.586 x 10⁻⁵

K'/b' = ?

27	.191E-02	5548.	.1509E-03	.4557E-04
28	.180E-02	5556.	.1515E-03	.4491E-04
29	.171E-02	5562.	.1520E-03	.4435E-04
30	.164E-02	5568.	.1524E-03	.4386E-04
31	.158E-02	5572.	.1529E-03	.4345E-04
32	.153E-02	5575.	.1532E-03	.4311E-04
33	.150E-02	5578.	.1536E-03	.4282E-04
34	.147E-02	5579.	.1539E-03	.4258E-04
35	.144E-02	5580.	.1542E-03	.4238E-04
36	.142E-02	5581.	.1544E-03	.4223E-04
37	.141E-02	5581.	.1547E-03	.4210E-04
38	.139E-02	5581.	.1549E-03	.4201E-04
39	.138E-02	5580.	.1551E-03	.4194E-04
40	.137E-02	5579.	.1553E-03	.4189E-04

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS

ITER	FUNCTION	TRANSMISS	STORTIVTY	SPEC_LEAK
40	.137E-02	5578.	.1554E-03	.4189E-04

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3	4	5
	.0000	.0000	.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	5578.	5571.	5584.
STORTIVTY	.1554E-03	0.0000	0.5250E-03
SPEC_LEAK	.4187E-04	0.0000	0.3286E-03

TO CONTINUE ENTER "RETURN"

Rowland Walker Well 21

T = 41,791 gpd/ft

S = 1.554 x 10⁻⁴

K'/b' = 4.189 x 10⁻⁵ day⁻¹

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER	FUNCTION	TRANSMISS	STORTIVITY
1	.253E+05	947.2	.8732E-04
3	.247E+05	90.99	.1251E-03
6	.246E+05	317.8	.9315E-04
8	.234E+05	107.0	.5007E-04
10	.233E+05	137.0	.3361E-04
11	.233E+05	105.9	.3854E-04
12	.233E+05	118.7	.3533E-04

TERMINATION DUE TO FUNCTION CONVERGENCE

FINAL RESULTS

ITER	FUNCTION	TRANSMISS	STORTIVITY
15	.233E+05	116.7	.3565E-04

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3	4	5
	.0000	.0000	.0000	.0000	1.000

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

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	116.7	116.7	116.8
STORTIVITY	.3565E-04	0.3418E-04	0.3712E-04

TO CONTINUE ENTER "RETURN"

Rowland Walker Well 23

T = 873 gpd/ft

S = 3.565 x 10⁻⁵

K/b = ?

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER	FUNCTION	TRANSMISS	STORTIVTY
1	.265E+05	8961.	.1524E-02
3	.265E+05	.5143E+05	.1956E-08
6	.260E+05	9427.	.1031E-06
7	.260E+05	4345.	.1082E-05
9	.259E+05	5392.	.9054E-06
11	.259E+05	5279.	.8569E-06

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS

ITER	FUNCTION	TRANSMISS	STORTIVTY
11	.259E+05	5305.	.8545E-06

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2	3	4	5
	.2866E-02	.1539E-02	.7634E-03	.1663E-02	.9932

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

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	5305.	5305.	5305.
STORTIVTY	.8545E-06	0.4634E-06	0.1246E-05

TO CONTINUE ENTER "RETURN"

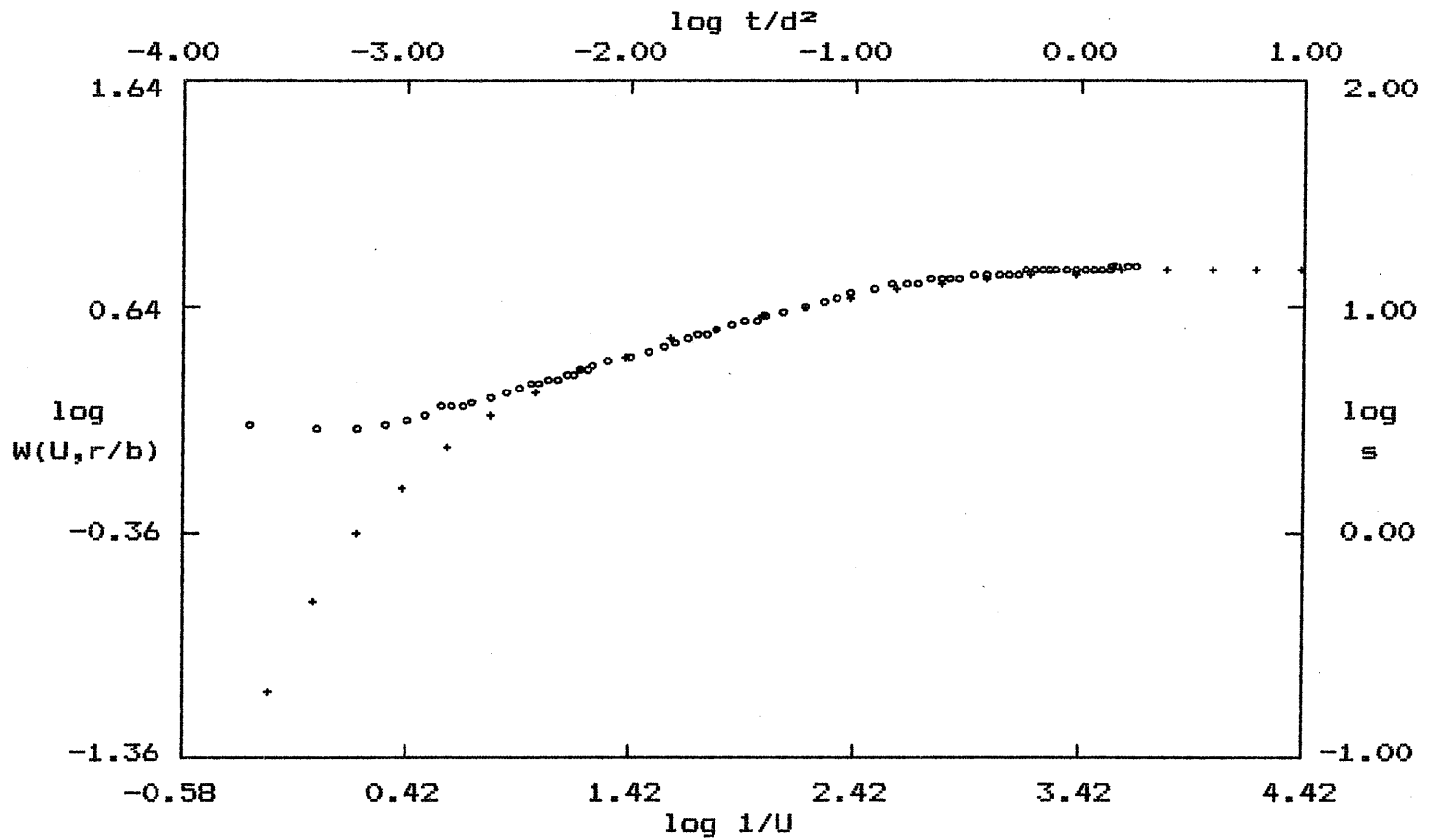
Rowland Walker all Wells

$T = 39,681 \text{ gpd/ft}$

$S = 8.545 \times 10^{-7}$

$K'/b = ?$

PUMP TEST DATA



o - Data

+ - Type Curve

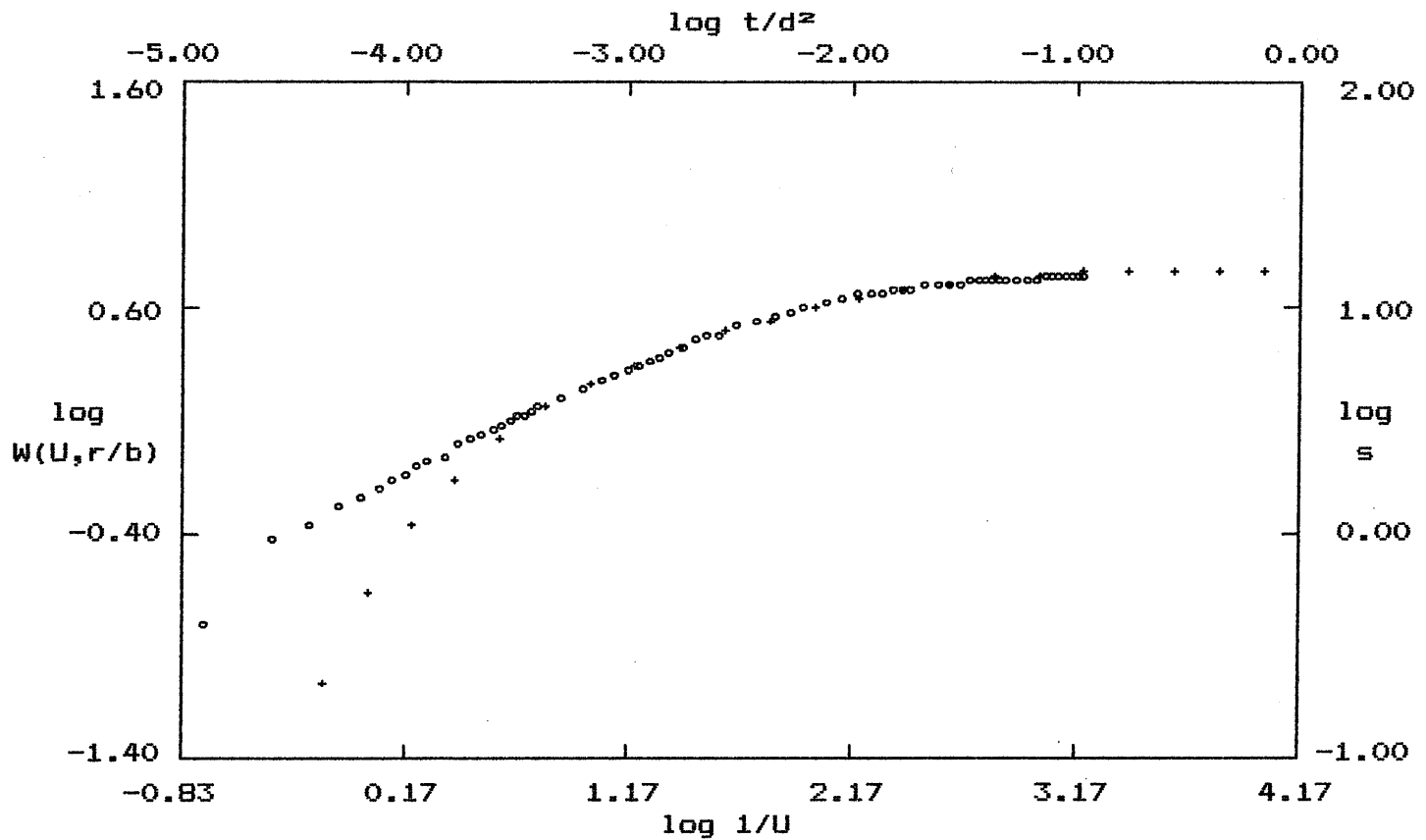
Confined Leaky: $r/B = 0.05$

SOLUTION

Transmissivity = $2.220E+00$ ft.²/min. = 23,912 gpd/ft
 Storativity = $3.376E-03$

Rowland Walker Well 1

PUMP TEST DATA



o - Data

+ - Type Curve

Confined Leaky: $r/B = 0.06$

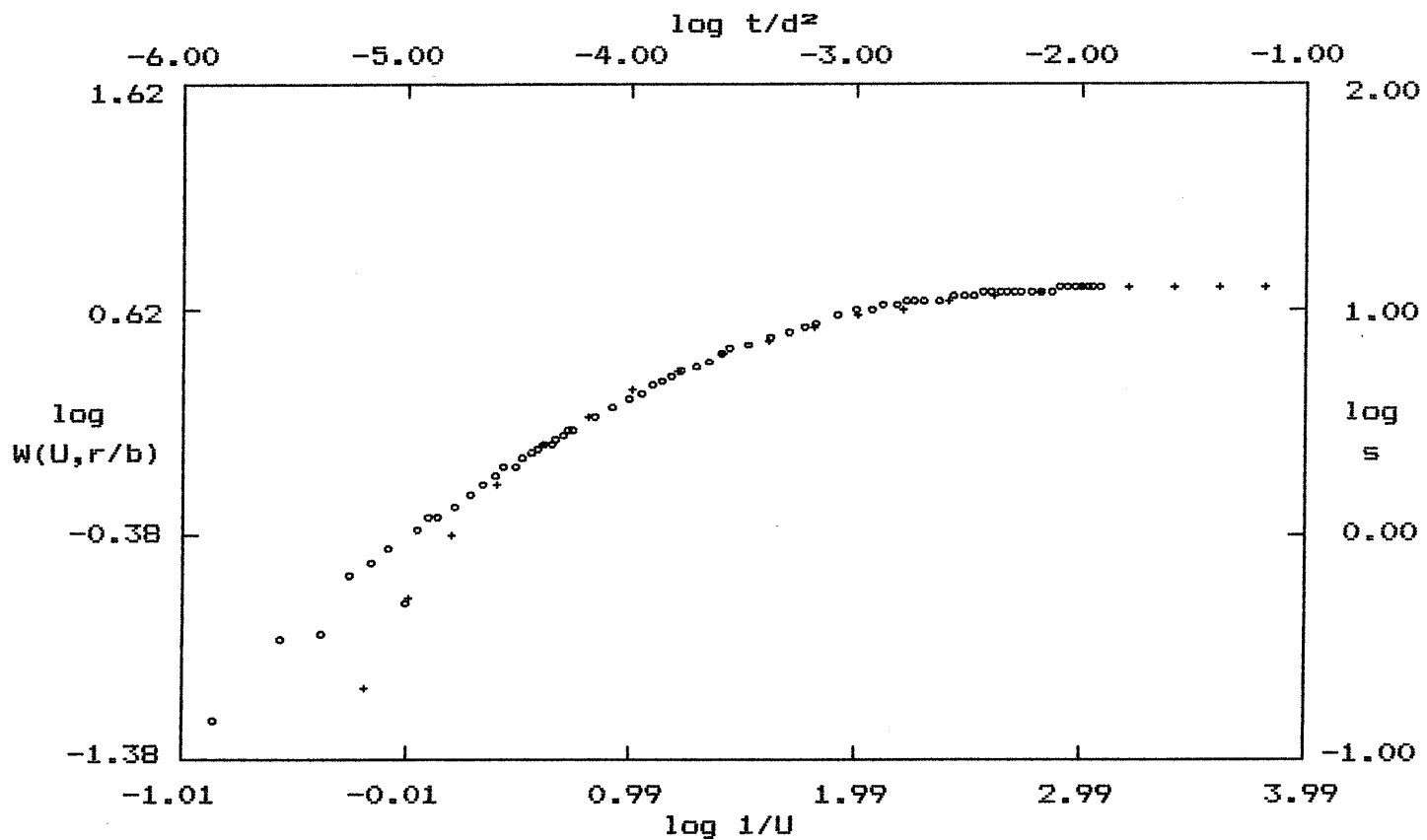
SOLUTION

Transmissivity = $2.024E+00$ ft.²/min. = 21,801 gpd/ft

Storativity = $5.475E-04$

Rowland Walker Well 3

PUMP TEST DATA



o - Data

+ - Type Curve

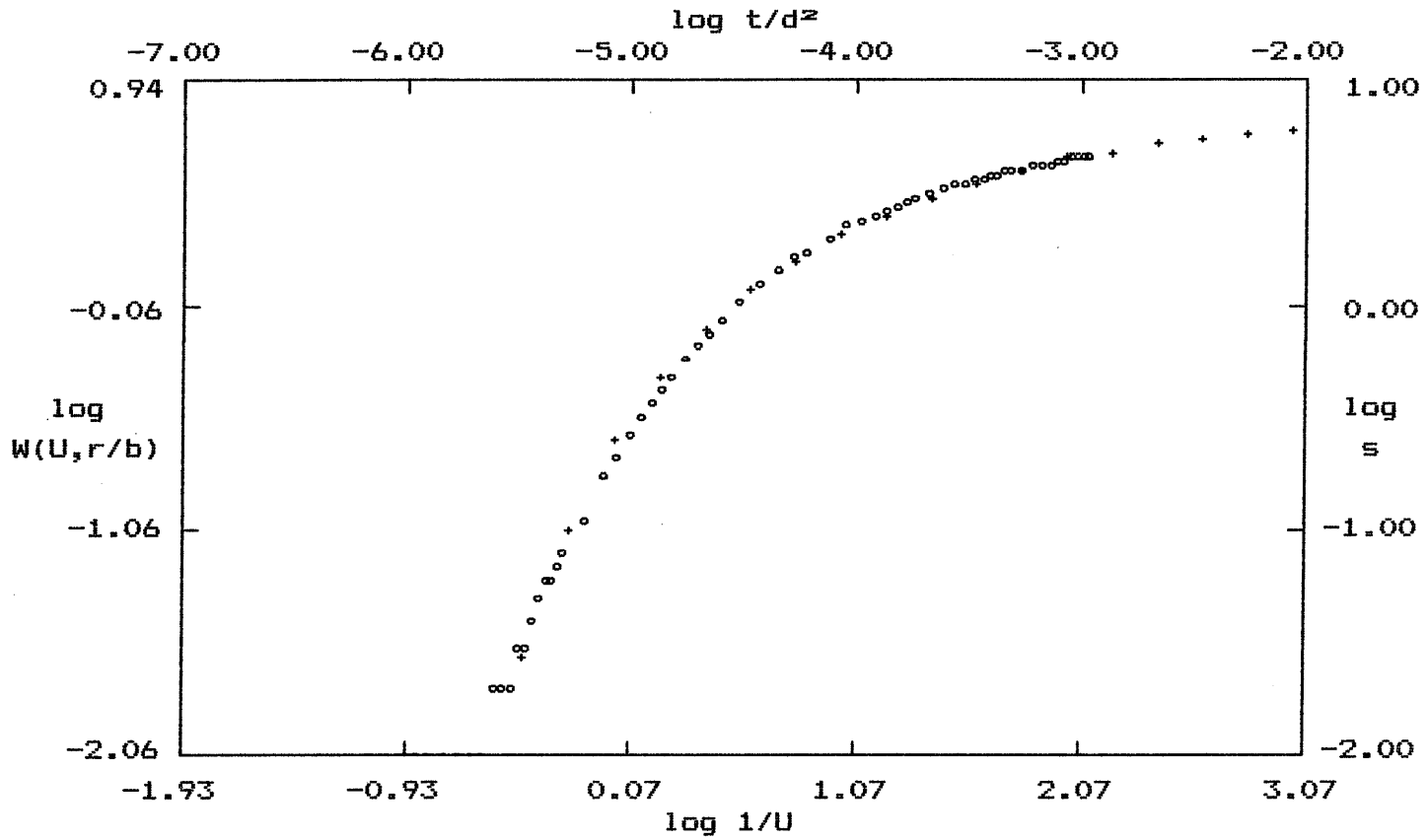
Confined Leaky: $r/B = 0.08$

SOLUTION

Transmissivity = $3.317E+00$ ft.²/min. = 35,728 gpd/ft
 Storativity = $1.358E-04$

Rowland Walker Well 4

PUMP TEST DATA



o - Data

+ - Type Curve

Confined Leaky: $r/B = 0.08$

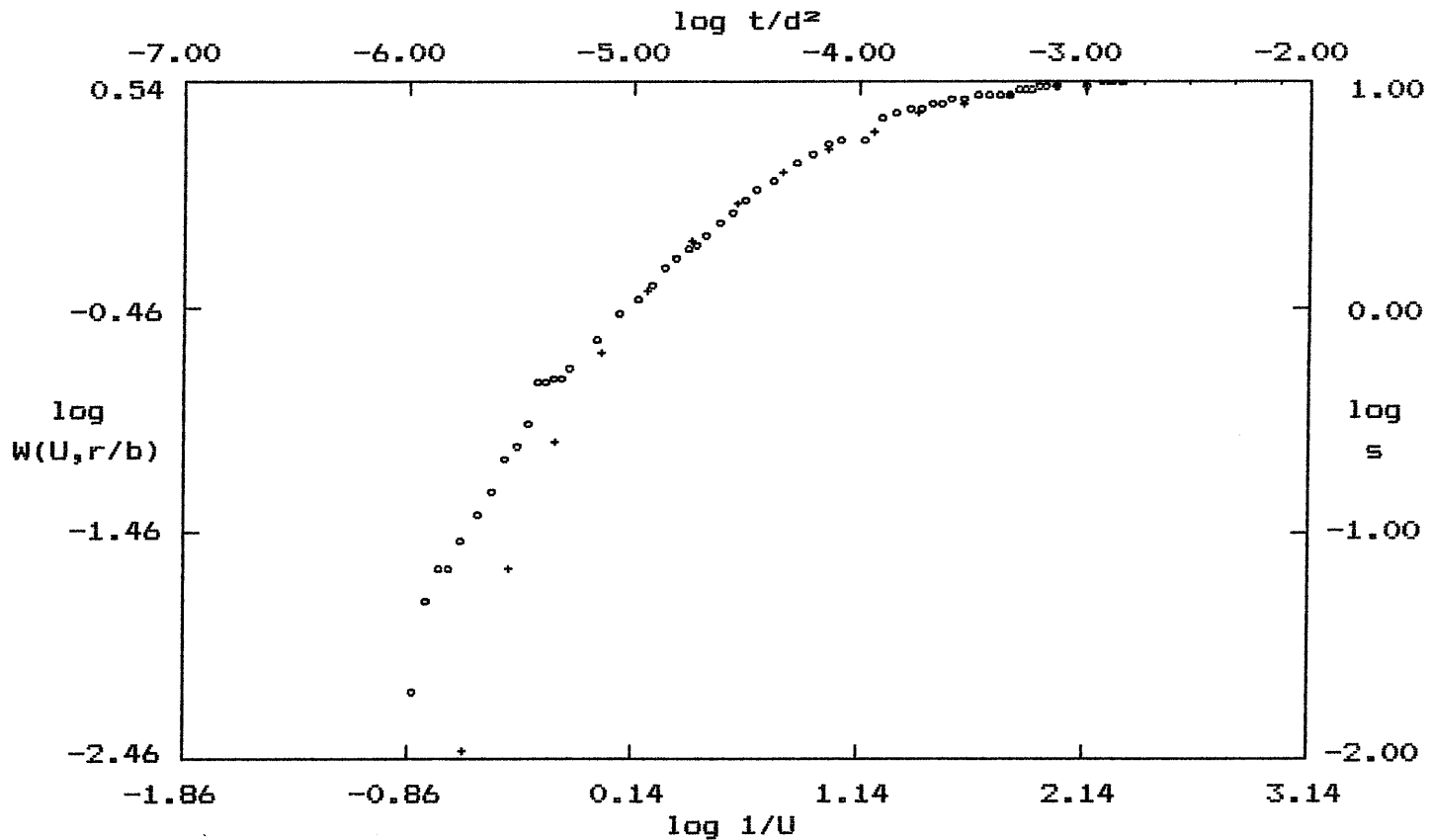
SOLUTION

Transmissivity = $6.930E+00$ ft.²/min. = 74,644

Storativity = $2.359E-04$

Rowland Walker Well 21

PUMP TEST DATA



o - Data

+ - Type Curve

Confined Leaky: $r/B = 0.20$

SOLUTION

Transmissivity = $2.759E+00$ ft.²/min. = 29,718 gpd/ft
 Storativity = $7.995E-05$

Rowland Walker Well 23