OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER FUNCTION TRANSMISS STORTIVTY
   1 .388E-03 .7854E+05 .1417E-03
   3 .358E-03 .8076E+05 .1041E-03
   5 .355E-03 .8023E+05 .1030E-03

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS
ITER FUNCTION TRANSMISS STORTIVTY
   5 .355E-03 .8040E+05 .1028E-03
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   .8040E+05   0.8028E+05   0.8052E+05
STORTIVTY   .1028E-03   0.0000   0.3976E-02

TO CONTINUE ENTER "RETURN"

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER FUNCTION TRANSMISS STORTIVTY SPEC_LEAK
   1 .171E-04 .7023E+05 .3988E-03 .3784E-04
   2 .171E-04 .7023E+05 .3988E-03 .3789E-04

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS
ITER FUNCTION TRANSMISS STORTIVTY SPEC_LEAK
   2 .171E-04 .7023E+05 .3988E-03 .3789E-04
FRACTIONAL COMPONENTS OF FUNCTION VALUE
WELL #   1   2   3
      .0000   1.000   .0000

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

Indian Well 2

$$T = 538,784 \ gpd/ft$$
$$S = 3.988 \times 10^{-4}$$
$$K'/b' = 3.789 \times 10^{-4} \ day^{-1}$$

                    SENSITIVITY ANALYSIS

        TWO STANDARD DEVIATION CONFIDENCE INTERVALS

        PARAMETER   VALUE   LOWER LIMIT   UPPER LIMIT

        TRANSMISS   .7023E+05   0.6981E+05   0.7065E+05
        STORTIVTY   .3988E-03   0.0000   0.1587E-01
        SPEC_LEAK   .3791E-04   0.0000   0.1105

TO CONTINUE ENTER "RETURN"

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM


```
ITER  FUNCTION  TRANSMISS STORTIVTY
   1  .123E-03  .7186E+05 .4200E-03
   3  .273E-04  .7750E+05 .3848E-03
   5  .180E-04  .7590E+05 .3894E-03
```

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS
```
ITER  FUNCTION  TRANSMISS STORTIVTY
   5  .180E-04  .7640E+05 .3873E-03
```
FRACTIONAL COMPONENTS OF FUNCTION VALUE
```
WELL #    1        2        3
        .0000    .0000    1.000
```

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

Indians Well 3

$T = 571,472 \ gpd/ft$

$S = 3.873 \times 10^{-4}$

$K/b = ?$

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	.7640E+05	0.7597E+05	0.7684E+05
STORTIVTY	.3873E-03	0.0000	0.1418E-01

TO CONTINUE ENTER "RETURN"

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM


```
ITER  FUNCTION  TRANSMISS STORTIVTY SPEC_LEAK
  1  .136E-02  .6707E+05 .4200E-03 .1900E-02
  2  .103E-02  .6945E+05 .3998E-03 .2388E-03
  4  .100E-02  .6908E+05 .3975E-03 .4845E-03
  6  .100E-02  .6905E+05 .3985E-03 .5210E-03
  7  .100E-02  .6903E+05 .3988E-03 .5247E-03
```

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS
```
ITER  FUNCTION  TRANSMISS STORTIVTY SPEC_LEAK
  7  .100E-02  .6903E+05 .3989E-03 .5247E-03
```
FRACTIONAL COMPONENTS OF FUNCTION VALUE
```
WELL #   1       2       3
       .7471   .3799E-01 .2149
```

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

Indians all wells

$T = 516,344 \text{ gpd/ft}$

$S = 3.989 \times 10^{-4}$

$K'/_{b'} = 5.247 \times 10^{-4} \, \text{day}^{-1}$

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS
```
------------------------------------------------------
PARAMETER   VALUE     LOWER LIMIT   UPPER LIMIT

TRANSMISS   .6903E+05  0.6876E+05   0.6930E+05
STORTIVTY   .3989E-03  0.0000       0.9993E-02
SPEC_LEAK   .5251E-03  0.0000       0.6513E-01
```
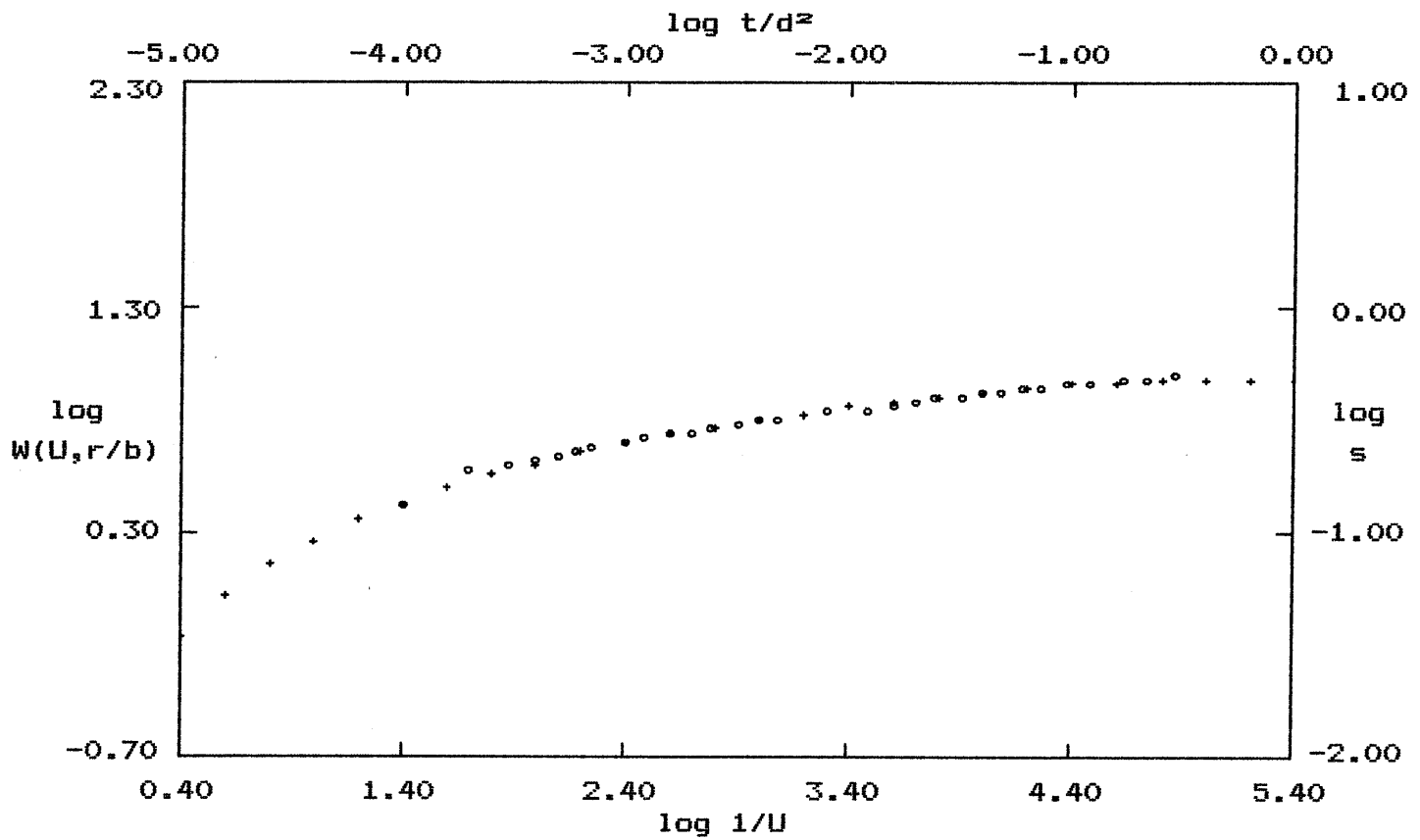

TO CONTINUE ENTER "RETURN"

PUMP TEST DATA

o — Data

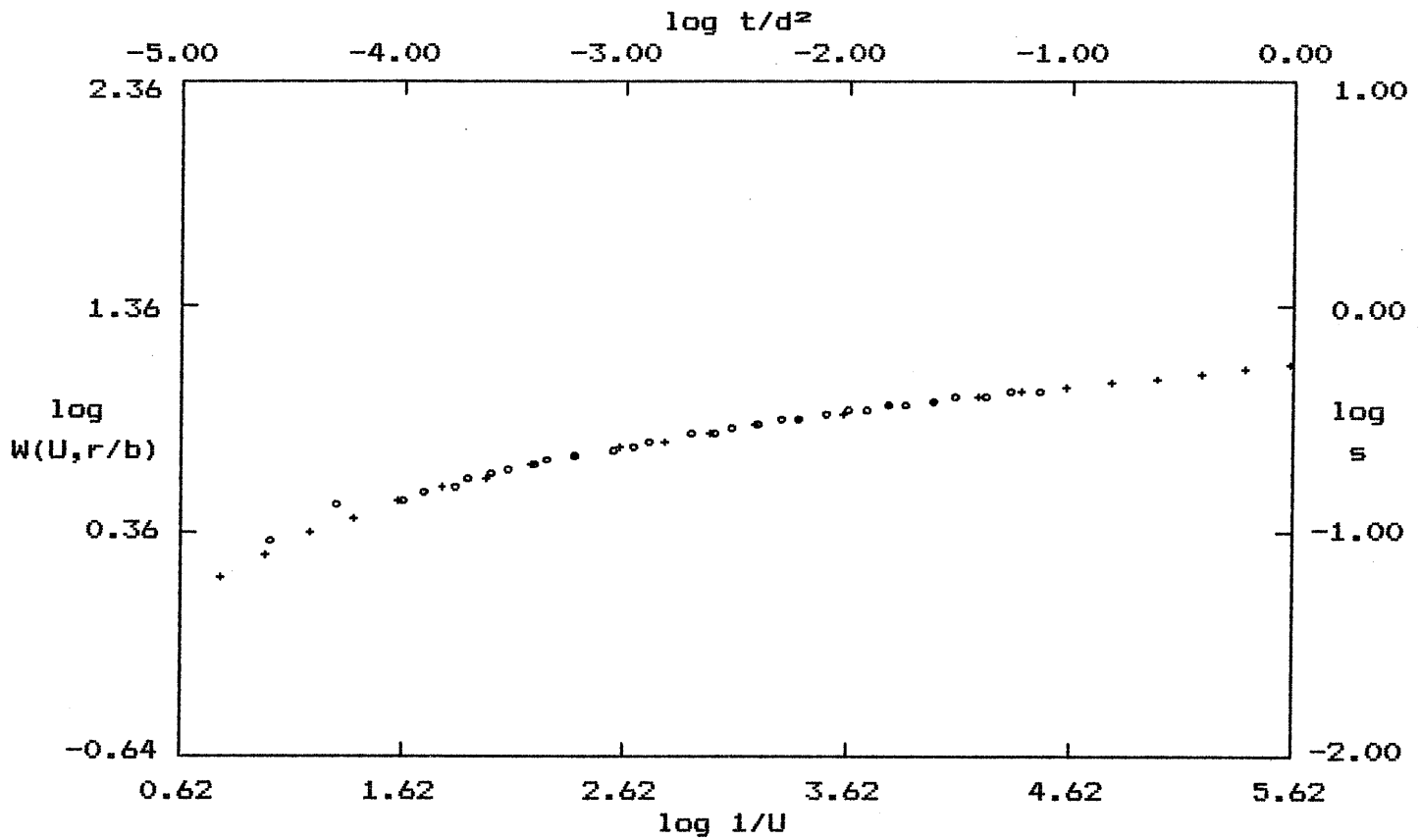+ — Type Curve
    Confined Leaky: r/B = 0.01

SOLUTION

Transmissivity = 4.181E+01 ft.²/min. = 450,344 gpd/ft
Storativity = 6.659E-04

Indians well 1

PUMP TEST DATA

log t/d²

o — Data

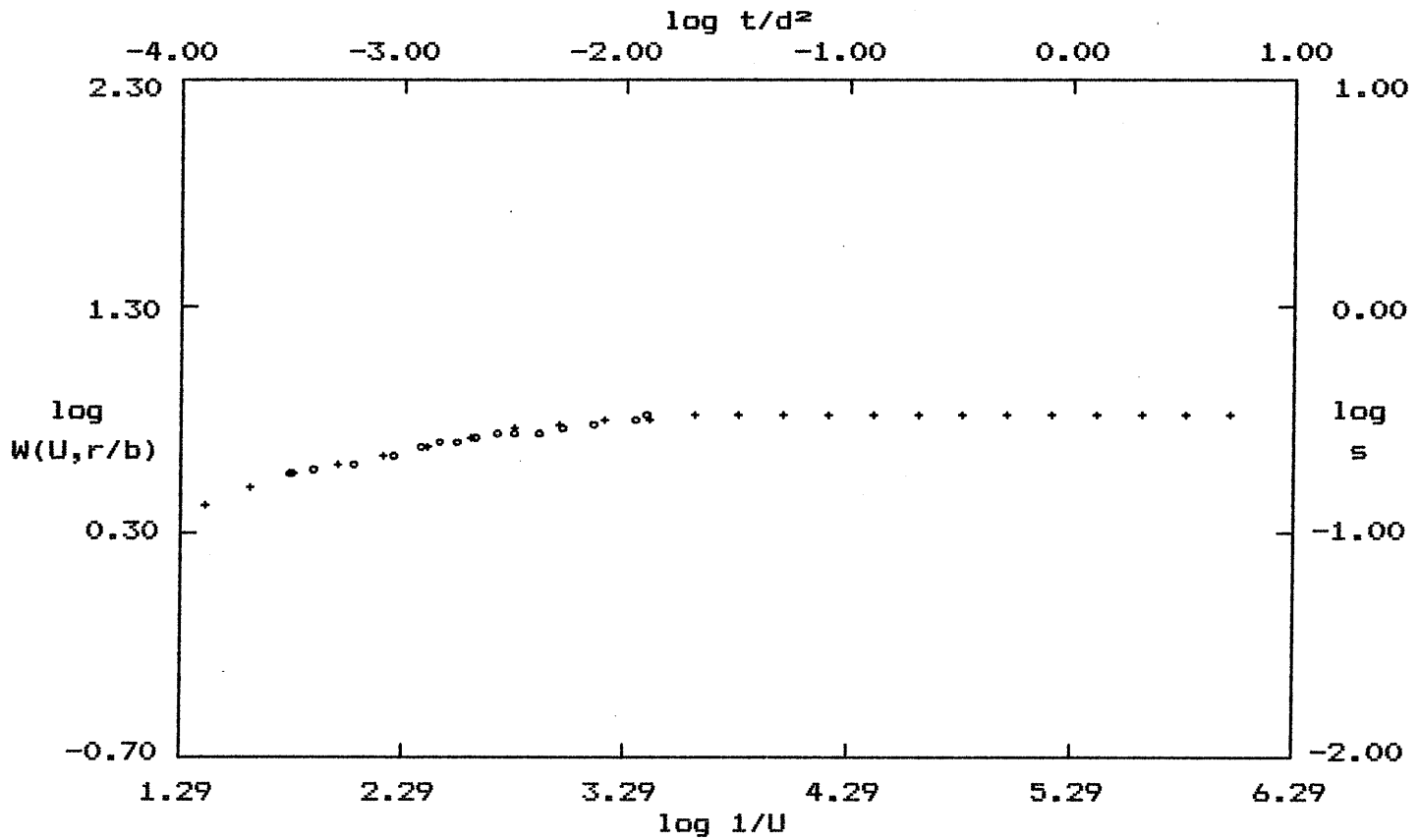+ — Type Curve
   Confined Leaky: r/B = Theis

SOLUTION

Transmissivity = 4.801E+01 ft.²/min. = 517, 125 gpd/ft
Storativity   = 4.607E-04

Indian well 2

PUMP TEST DATA

log t/d²

o – Data

+ – Type Curve
   Confined Leaky: r/B = 0.04

SOLUTION

Transmissivity = 4.181E+01 ft.²/min. = 450, 344 gpd/ft
Storativity = 8.578E-04

Indian Well 3