

OPTIMIZATION BY LEVENBERG-MARQUARDT MINIMIZATION ALGORITHM

ITER FUNCTION TRANSMISS STORTIVTY SPEC\_LEAK  
1 .129 2350. .5910E-04 .2196E-03

TERMINATION DUE TO PARAMETER CONVERGENCE

FINAL RESULTS

ITER FUNCTION TRANSMISS STORTIVTY SPEC\_LEAK  
1 .129 2350. .5907E-04 .2196E-03

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL # 1 2  
1.000 .0000

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

Nobles Well 1

$$T = 17,578 \text{ gpd/ft}$$

$$S = 5.907 \times 10^{-5}$$

$$K/b = 2.196 \times 10^{-4} \text{ day}^{-1}$$

SENSITIVITY ANALYSIS

TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	2350.	2349.	2351.
STORTIVTY	.5907E-04	0.3385E-04	0.8429E-04
SPEC_LEAK	.2194E-03	0.6484E-04	0.3740E-03

TO CONTINUE ENTER "RETURN"

1	10.8	2350.	.5907E-04	.2194E-03
3	.741	1839.	.5324E-04	.1689E-03
5	.776E-01	1820.	.5303E-04	.2317E-03
7	.580E-01	1802.	.5303E-04	.2513E-03
8	.566E-01	1794.	.5318E-04	.2570E-03
9	.560E-01	1790.	.5334E-04	.2596E-03
10	.557E-01	1787.	.5347E-04	.2614E-03
11	.552E-01	1785.	.5358E-04	.2627E-03
12	.551E-01	1784.	.5367E-04	.2636E-03
13	.550E-01	1782.	.5373E-04	.2644E-03
14	.549E-01	1781.	.5378E-04	.2650E-03
15	.549E-01	1780.	.5382E-04	.2654E-03
16	.548E-01	1780.	.5385E-04	.2658E-03
17	.548E-01	1779.	.5388E-04	.2661E-03

TERMINATION DUE TO PARAMETER CONVERGENCE

#### FINAL RESULTS

ITER FUNCTION TRANSMISS STORTIVTY SPEC\_LEAK

17 .548E-01 1779. .5389E-04 .2661E-03

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2
	.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	1779.	1778.	1780.
STORTIVTY	.5389E-04	0.3304E-04	0.7475E-04
SPEC_LEAK	.2663E-03	0.1274E-03	0.4052E-03

TO CONTINUE ENTER "RETURN"

*Noble Well 2*

*T = 13,307 gpd/ft*

*S = 5.389 x 10<sup>-5</sup>*

*K/b' = 2.661 x 10<sup>-4</sup> day<sup>-1</sup>*

54	5.22	2607.	.3461E-04	.6263E-04
55	5.22	2608.	.3458E-04	.6252E-04
56	5.22	2608.	.3454E-04	.6242E-04
57	5.22	2609.	.3451E-04	.6233E-04
58	5.22	2609.	.3448E-04	.6224E-04
59	5.22	2610.	.3445E-04	.6215E-04
60	5.22	2611.	.3442E-04	.6207E-04
61	5.22	2611.	.3439E-04	.6199E-04
62	5.22	2612.	.3437E-04	.6191E-04
63	5.22	2612.	.3434E-04	.6184E-04
64	5.22	2612.	.3432E-04	.6177E-04
65	5.22	2613.	.3430E-04	.6170E-04
66	5.22	2613.	.3427E-04	.6163E-04
67	5.22	2614.	.3425E-04	.6157E-04

TERMINATION DUE TO PARAMETER CONVERGENCE

#### FINAL RESULTS

ITER FUNCTION TRANSMISS STORTIVTY SPEC\_LEAK

67 5.22 2614. .3423E-04 .6157E-04

FRACTIONAL COMPONENTS OF FUNCTION VALUE

WELL #	1	2
	.3239	.6761

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

#### SENSITIVITY ANALYSIS

#### TWO STANDARD DEVIATION CONFIDENCE INTERVALS

PARAMETER	VALUE	LOWER LIMIT	UPPER LIMIT
TRANSMISS	2614.	2614.	2614.
STORTIVTY	.3423E-04	0.2327E-04	0.4519E-04
SPEC_LEAK	.6151E-04	0.2252E-04	0.1005E-03

TO CONTINUE ENTER "RETURN"

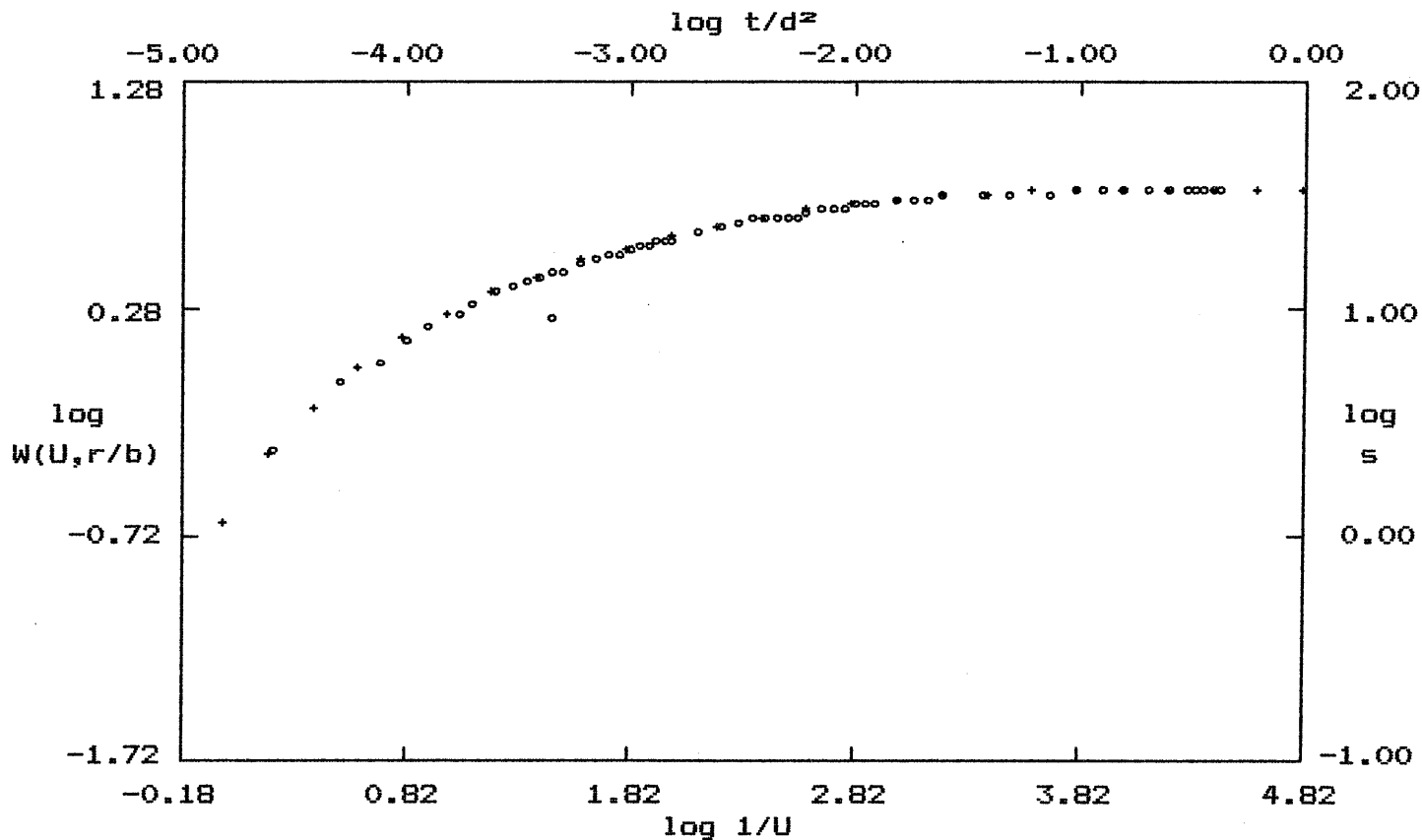
Nobles Boon Wells

$$T = 19,553 \text{ gpd/ft}$$

$$S = 3.423 \times 10^{-5}$$

$$K'/b = 6.157 \times 10^{-5} \text{ day}^{-1}$$

# PUMP TEST DATA



o - Data

+ - Type Curve

Confined Leaky:  $r/B = 0.05$

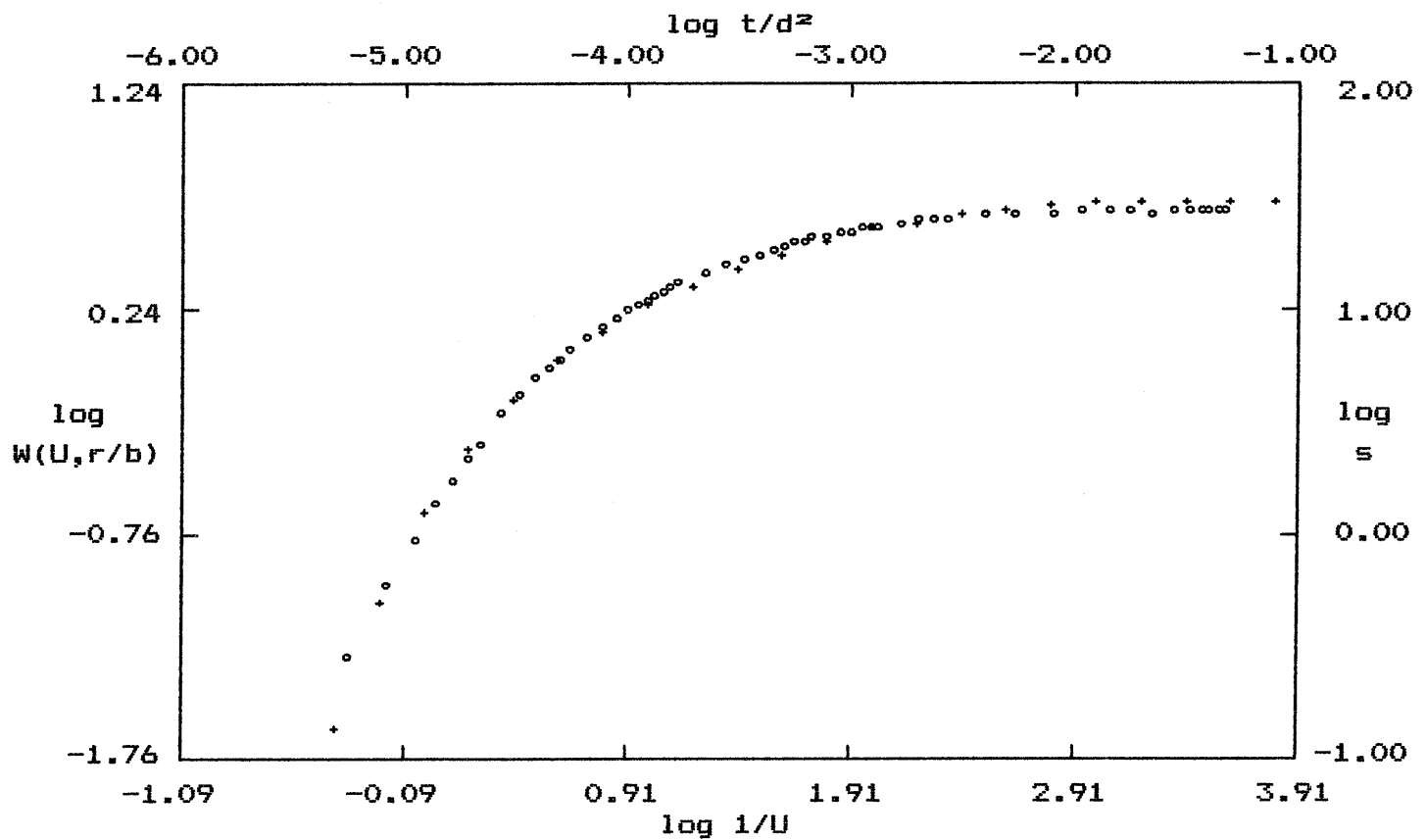
## SOLUTION

Transmissivity =  $1.419E+00$  ft.<sup>2</sup>/min. = 15,284 gpd/ft

Storativity =  $8.590E-05$

*Nobles long well 1*

# PUMP TEST DATA



o - Data

+ - Type Curve

Confined Leaky:  $r/B = 0.08$

## SOLUTION

Transmissivity =  $1.294E+00$  ft.<sup>2</sup>/min. = 13,938 gpd/ft

Storativity =  $6.368E-05$

Nobles long well 2