社会開発調査部報告書

REPUBLIC OF KENYA

MINISTRY OF WATER DEVELOPMENT

THE STUDY

ON

THE NATIONAL WATER MASTER PLAN

DATA BOOK
(DB.3)

GROUNDWATER DATA
(Study Supporting Data)

JULY 1992

JAPAN INTERNATIONAL COOPERATION AGENCY

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PREFACE

Administrative Division of Districts

In this Study, the original 41 districts were considered and various statistical data, particularly socio-economic information, were collected for these districts. During the progress of the Study, six districts were were detached from the original ones and established as new districts. In the report, the data on these new districts are grouped together with the corresponding original districts as shown below.

	Original Districts	New Districts	Data included in:
1.	Machakos	Makueni	Machakos/Makueni
2.	Kisii	Nyamira	Kisii/Nyamira
3.	Kakamega	Vihiga	Kakamega/Vihiga
4.	Meru	Tharaka-Nithi	Meru/Tharaka-Nithi
5.	Kericho	Bomet	Kericho/Bomet
6.	South Nyanza	Migori	South Nyanza/Migori

(Note: The last three Districts were established very recently.
The report refers only to the names of the original 41 districts.)

The administrative boundary map used in this Study is the latest complete map set covering the whole country (41 Districts, 233 Divisions and 976 Locations), prepared in 1986 by the Survey of Kenya, Ministry of Land and Housing.

Data and Information

The data and information contained in the report represent those collected in the 1990-1991 period from various documents and reports made available mostly from central government offices in Nairobi and/or those analyzed in this Study based on the collected data. Some of them may be different from those kept in files at some agencies and regional offices. Such discrepancies if any should be collated and adjusted as required in further detailed studies of the relevant development projects.

THE STUDY ON THE NATIONAL WATER MASTER PLAN

DATABOOK : DB.3
HYDROLOGICAL DATA (SUPPORTING DATA)

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PART I ; GROUNDWATER DATA

Table 1.1 (1/2) Aquifer characteristics by rock type

No.	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	Water level Struck (m)	Water level Rest (m)	Diameter (cm)	Pumping test Number	Pumping test Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m2/min)	Storage coefficient
Rock type = 1 (Total number of boreholes = 3882)														
Number of data	3416	3416	3279	3854	3529	3442	3539	2396	3448	1832	3287	823	426	403
Data percentage	88.00	88.00	84.47	99.28	90.91	88.67	91.16	61.72	88.82	47.19	84.67	21.20	10.97	10.38
Minimum	34.02	-3.92	6.00	3.00	1.00	0.00	3.00	1.00	1.00	0.00	0.30	0.50	0.00	0.00
Maximum	40.60	4.83	3120.00	939.00	369.00	287.00	90.00	8.00	945.00	211.80	99.00	80.00	1.85	0.61
Average	36.46	-0.56	1762.74	124.70	93.96	48.68	16.84	1.52	124.19	37.05	16.97	6.31	0.02	0.03
standard deviation	0.75	1.08	456.99	63.46	58.37	41.20	4.24	0.91	107.81	34.31	13.06	8.77	0.12	0.07
Rock type = 2 (Total number of boreholes =1592)														
Number of data	1406	1406	1418	1577	1202	1221	1353	860	1163	743	1095	287	106	103
Data percentage	88.32	88.32	89.07	99.06	75.50	76.70	84.99	54.02	73.05	46.67	68.78	18.03	6.66	6.47
Minimum	34.02	-4.30	14.00	2.00	1.00	1.00	2.00	1.00	1.00	0.10	0.30	1.00	0.00	0.00
Maximum	41.45	5.33	2385.00	341.00	244.00	190.00	51.00	78.00	760.00	171.00	99.00	58.00	0.98	0.72
Average	36.53	-0.42	1266.59	79.59	55.30	26.40	15.54	1.46	75.62	31.08	15.74	7.60	0.02	0.03
standard deviation	1.66	1.68	441.41	42.88	37.50	25.94	4.17	2.73	86.55	29.46	14.72	11.58	0.10	0.08
Rock type = 3 (Total number of boreholes =878)														
Number of data	666	667	586	876	786	777	790	611	709	430	681	239	131	127
Data percentage	75.85	75.97	66.74	99.77	89.52	88.50	89.98	69.59	80.75	48.97	77.56	27.22	14.92	14.46
Minimum	34.07	-4.57	3.00	4.00	1.00	1.00	6.00	1.00	1.00	0.20	1.00	1.00	0.00	0.00
Maximum	41.87	5.03	2640.00	310.00	258.00	247.00	53.00	4.00	947.00	312.00	99.00	59.00	0.45	0.57
Average	38.72	-1.78	439.48	81.22	54.25	34.80	17.07	1.20	92.48	17.39	17.32	5.80	0.01	0.02
standard deviation	1.98	2.53	585.84	62.98	47.98	37.45	4.71	0.58	106.45	29.87	16.01	8.31	0.04	0.06
Rock type = 4 (Total number of boreholes =162)														
Number of data	129	129	128	160	150	146	142	133	143	110	133	66	28	28
Data percentage	79.63	79.63	79.01	98.77	92.59	90.12	87.65	82.10	88.27	67.90	82.10	40.74	17.28	17.28
Minimum	34.10	-4.58	8.00	10.30	1.90	1.00	11.00	1.00	2.50	1.00	1.00	0.25	0.00	0.00
Maximum	39.70	5.03	2715.00	307.00	219.00	156.00	31.00	5.00	800.00	124.10	99.00	36.00	0.02	0.10
Average	36.79	-1.10	1079.47	82.53	54.39	28.53	16.42	1.26	123.14	25.87	16.00	4.57	0.00	0.02
standard deviation	1.86	2.20	631.99	60.17	43.21	30.44	5.05	0.61	160.30	24.88	15.74	5.82	0.01	0.03
Rock type = 5 (Total number of boreholes =67)														
Number of data	52	52	46	67	58	52	62	49	50	46	48	30	10	9
Data percentage	77.61	77.61	68.66	100.00	86.57	77.61	92.54	73.13	74.63	68.66	71.64	44.78	14.93	13.43
Minimum	34.47	-3.73	168.00	23.00	6.00	1.00	11.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Maximum	40.10	3.30	1850.00	220.00	203.00	102.00	30.00	4.00	619.00	120.00	24.00	46.00	0.28	0.03
Average	36.87	0.44	1073.65	91.28	51.16	25.97	17.69	1.29	94.52	32.28	13.13	9.63	0.03	0.01
standard deviation	1.86	1.98	432.74	46.83	40.50	22.55	3.99	0.68	116.59	31.16	9.50	11.76	0.09	0.01

Table 1.1 (2/2) Aquifer characteristics by rock type

No.	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	Water level Struck (m)	Water level Rest (m)	Diameter (cm)	Pumping test Number	Pumping test Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m2/min)	Storage coefficient
Rock type = 6 (Total number of boreholes = 72)														
Number of data	48	53	48	72	67	63	70	52	56	45	54	39	23	22
Data percentage	71.64	73.61	66.67	100.00	93.06	87.50	97.22	72.22	77.78	62.50	75.00	54.17	31.94	30.56
Minimum	34.13	-2.37	250.00	15.00	6.00	3.00	11.00	1.00	11.00	0.10	3.00	1.00	0.00	0.00
Maximum	40.02	4.58	2700.00	473.00	420.00	213.00	34.00	4.00	455.00	90.00	38.00	50.00	0.37	0.82
Average	35.66	0.62	1265.85	90.44	63.22	28.98	16.79	1.25	126.16	24.14	17.46	5.54	0.02	0.05
standard deviation	1.51	1.89	594.53	67.07	61.97	33.94	4.33	0.59	98.90	20.35	9.37	8.46	0.06	0.17
Rock type = 7 (Total number of boreholes =52)														
Number of data	61	50	48	52	46	42	46	44	45	35	45	24	19	18
Data percentage	91.04	96.15	92.31	100.00	88.46	80.77	88.46	84.62	86.54	67.31	86.54	46.15	36.54	34.62
Minimum	1.51	-4.22	21.00	17.00	4.00	1.00	10.00	1.00	6.00	2.80	1.00	1.00	0.00	0.00
Maximum	71.64	2.48	2179.00	270.00	244.00	115.00	25.00	4.00	758.00	140.80	25.00	8.00	0.50	0.13
Average	36.15	-0.41	1332.83	106.71	79.37	26.60	15.22	1.36	179.40	41.22	13.13	3.38	0.03	0.02
standard deviation	6.77	1.06	498.58	58.38	57.11	27.93	3.67	0.72	167.97	30.37	8.51	2.37	0.11	0.03
Rock type = 8 (Total number of boreholes =20)														
Number of data	57	16	13	20	15	16	16	15	15	12	14	11	5	5
Data percentage	85.07	80.00	65.00	100.00	75.00	80.00	80.00	75.00	75.00	60.00	70.00	55.00	25.00	25.00
Minimum	1.51	-3.70	167.00	22.00	16.00	9.00	13.00	1.00	5.00	1.00	1.00	2.00	0.00	0.00
Maximum	91.04	3.83	1996.00	261.00	225.00	107.00	20.00	2.00	225.00	76.00	24.00	24.00	0.03	0.17
Average	37.13	-0.19	1054.23	103.95	63.00	38.88	15.81	1.40	76.25	19.39	18.57	5.91	0.01	0.04
standard deviation	11.24	1.99	586.58	64.47	55.16	33.41	2.14	0.51	58.93	20.41	8.62	6.28	0.01	0.07
Rock type = 9 (Total number of boreholes =781)														
Number of data	571	568	384	723	410	340	536	333	332	311	312	130	192	182
Data percentage	73.11	72.73	49.17	92.57	52.50	43.53	68.63	42.64	42.51	39.82	39.95	16.65	24.58	23.30
Minimum	34.00	-4.67	18.00	6.00	1.00	1.00	6.00	1.00	1.00	0.50	1.00	1.00	0.00	0.00
Maximum	40.65	4.93	2730.00	300.00	223.00	163.00	200.00	649.00	444.00	142.00	79.00	44.00	0.21	0.47
Average	35.07	0.39	1391.61	78.66	55.76	25.68	17.60	3.08	81.47	24.44	12.59	3.50	0.01	0.02
standard deviation	1.13	1.58	379.40	47.39	39.12	27.21	13.42	35.51	82.94	24.58	9.78	4.39	0.02	0.05

Table 1.2 (1/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Water level Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
1A (Total number of boreholes = 192)											
Count	167	192	172	104	109	178	112	107	113	31	28
Data percentage	87.0	100.0	89.6	54.2	56.8	92.7	58.3	55.7	58.9	16.1	14.6
Min	130.0	29.0	1.0	2.0	1.0	8.0	1.0	0.0	1.0	1.12E-04	7.38E-04
Max	2060.0	145.0	9.0	79.0	56.0	25.0	300.0	96.0	72.0	4.36E-02	5.91E-02
Average	1296.2	55.2	2.9	37.3	11.7	13.2	48.4	15.4	7.8	6.36E-03	1.67E-02
S. D.	269.3	16.3	2.4	15.1	10.1	3.5	56.5	14.3	10.4	1.06E-02	1.76E-02
1B (Total number of boreholes = 100)											
Count	98	100	100	90	88	87	87	45	81	9	9
Data percentage	98.0	100.0	100.0	90.0	88.0	87.0	87.0	45.0	81.0	9.0	9.0
Min	506.0	9.0	1.0	3.0	0.0	10.0	1.0	1.0	1.0	1.97E-05	1.33E-04
Max	2300.0	195.0	4.0	176.0	55.0	22.0	504.0	113.6	72.0	1.56E-02	1.03E-01
Average	1173.9	67.7	1.7	44.3	18.5	14.4	56.2	27.1	11.2	3.40E-03	2.53E-02
S. D.	642.0	39.9	0.6	30.1	13.0	2.4	84.1	25.9	11.2	5.15E-03	3.40E-02
1C (Total number of boreholes = 91)											
Count	88	89	85	80	76	72	79	39	74	3	3
Data percentage	96.7	97.8	93.4	87.9	83.5	79.1	86.8	42.9	81.3	3.3	3.3
Min	549.0	12.0	1.0	5.0	1.0	10.0	2.0	0.2	1.0	1.74E-05	1.55E-04
Max	2591.0	250.0	9.0	235.0	101.0	20.0	227.0	175.6	72.0	4.88E-03	2.11E-02
Average	1333.0	72.6	1.4	48.8	14.4	15.3	55.0	45.6	9.6	1.68E-03	7.39E-03
S. D.	820.7	47.9	1.1	39.9	16.5	1.4	57.9	41.9	10.2	2.77E-03	1.19E-02
1D (Total number of boreholes = 127)											
Count	105	127	111	101	91	120	61	57	65	21	20
Data percentage	82.7	100.0	87.4	79.5	71.7	94.5	48.0	44.9	51.2	16.5	15.7
Min	430.0	23.0	1.0	3.0	1.0	8.0	5.0	1.0	0.3	3.66E-05	2.86E-04
Max	2090.0	150.0	9.0	102.0	34.0	25.0	227.0	114.3	65.0	6.86E-02	1.36E-01
Average	1362.9	50.6	2.2	33.7	9.4	15.2	63.0	22.2	8.5	9.20E-03	2.07E-02
S. D.	271.5	19.8	1.6	16.9	5.3	4.4	57.8	21.3	12.4	1.84E-02	3.12E-02
1E (Total number of boreholes = 351)											
Count	241	350	263	229	201	315	204	196	201	64	58
Data percentage	68.7	99.7	74.9	65.2	57.3	89.7	58.1	55.8	57.3	18.2	16.5
Min	1158.0	22.0	1.0	4.0	1.0	7.0	3.0	1.0	0.3	3.21E-05	2.33E-04
Max	1690.0	200.0	9.0	120.0	59.0	25.0	279.0	120.2	36.0	7.12E-02	2.23E-01
Average	1361.1	52.1	2.9	35.3	13.7	14.8	66.2	15.8	5.8	8.49E-03	2.65E-02
S. D.	129.9	18.9	2.4	15.4	8.6	4.0	61.0	15.5	6.0	1.31E-02	4.43E-02

Table I.2 (2/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Water level Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
1F (Total number of boreholes = 19)											
Count	18	19	17	12	14	14	15	11	16	2	2
Data percentage	94.7	100.0	89.5	63.2	73.7	73.7	78.9	57.9	84.2	10.5	10.5
Min	695.0	37.0	1.0	9.0	2.0	10.0	2.0	6.0	1.0	4.39E-04	2.17E-03
Max	2591.0	259.0	7.0	259.0	83.0	29.0	300.0	211.8	28.0	1.41E-02	5.58E-02
Average	1874.2	122.7	1.6	95.6	23.9	18.1	70.3	74.9	14.8	7.28E-03	2.90E-02
S. D.	591.4	70.2	1.5	89.6	24.3	5.5	76.8	70.6	9.2	9.67E-03	3.79E-02
1G (Total number of boreholes = 129)											
Count	125	128	114	111	105	109	106	79	98	26	25
Data percentage	96.9	99.2	88.4	86.0	81.4	84.5	82.2	61.2	76.0	20.2	19.4
Min	15.0	30.0	1.0	5.0	2.0	12.0	1.0	0.6	1.0	2.44E-05	1.43E-04
Max	2682.0	327.0	9.0	251.0	187.0	34.0	760.0	160.3	65.0	1.05E-01	1.12E-01
Average	1620.5	111.0	2.7	84.9	32.3	17.0	132.1	47.9	14.8	8.77E-03	1.17E-02
S. D.	507.1	56.2	3.0	53.1	33.1	3.4	133.2	38.1	12.1	2.44E-02	2.24E-02
1H (Total number of boreholes = 210)											
Count	192	203	160	155	151	161	155	136	153	56	55
Data percentage	91.4	96.7	76.2	73.8	71.9	76.7	73.8	64.8	72.9	26.7	26.2
Min	354.0	6.0	1.0	1.0	1.0	10.0	4.8	1.1	1.0	2.64E-05	2.36E-04
Max	1738.0	279.0	9.0	201.0	100.0	38.0	662.0	143.0	81.0	1.96E-01	4.66E-01
Average	1284.6	77.9	4.3	53.9	20.2	17.5	130.3	29.7	13.0	6.98E-03	2.17E-02
S. D.	171.5	38.5	3.3	34.4	16.1	6.1	146.1	27.0	14.9	2.67E-02	6.67E-02
1J (Total number of boreholes = 94)											
Count	33	34	34	24	27	29	25	7	23	3	2
Data percentage	35.1	36.2	36.2	25.5	28.7	30.9	26.6	7.4	24.5	3.2	2.1
Min	1128.0	46.0	1.0	21.0	4.0	15.0	5.0	1.0	1.0	1.26E-04	9.84E-04
Max	2800.0	244.0	9.0	223.0	163.0	20.0	500.0	45.7	86.0	2.20E-01	2.62E-02
Average	2039.9	152.9	2.4	115.7	71.8	15.9	141.2	19.6	20.8	7.60E-02	1.36E-02
S. D.	513.3	51.2	2.9	56.3	53.9	1.9	162.3	18.8	17.9	1.24E-01	1.78E-02
1K (Total number of boreholes = 69)											
Count	59	68	60	58	59	60	64	59	63	16	16
Data percentage	85.5	98.6	87.0	84.1	85.5	87.0	92.8	85.5	91.3	23.2	23.2
Min	1158.0	25.0	1.0	7.0	1.0	11.0	1.0	2.0	1.0	6.41E-05	5.04E-04
Max	1980.0	204.0	9.0	174.0	74.0	40.0	252.0	137.8	36.0	4.39E-03	2.17E-02
Average	1468.7	81.6	4.2	54.9	17.8	16.6	71.2	35.8	10.7	1.11E-03	5.29E-03
S. D.	208.0	36.3	3.5	33.3	16.7	4.3	68.5	29.4	8.5	1.46E-03	6.59E-03

Table I.2 (3/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
1L (Total number of boreholes = 26)											
Count	25	25	24	21	21	23	21	9	18	2	2
Data percentage	96.2	96.2	92.3	80.8	80.8	88.5	80.8	34.6	69.2	7.7	7.7
Min	1500.0	52.0	1.0	9.0	4.0	15.0	3.0	4.0	3.0	4.88E-04	3.51E-03
Max	2819.0	289.0	9.0	280.0	233.0	34.0	212.0	114.0	38.0	9.77E-03	3.74E-02
Average	2289.8	153.2	1.6	126.9	70.5	16.3	95.0	38.9	14.8	5.13E-03	2.04E-02
S. D.	390.7	67.0	1.7	67.4	61.4	4.1	58.9	33.8	10.0	6.57E-03	2.40E-02
2A (Total number of boreholes = 50)											
Count	23	49	40	29	25	28	26	21	22	13	13
Data percentage	46.0	98.0	80.0	58.0	50.0	56.0	52.0	42.0	44.0	26.0	26.0
Min	360.0	8.0	1.0	6.0	2.0	11.0	3.0	2.0	3.0	1.31E-05	9.70E-05
Max	1000.0	145.0	4.0	118.0	56.0	27.0	200.0	42.0	26.0	5.55E-03	3.65E-02
Average	628.6	58.8	1.8	36.3	16.4	16.8	49.8	14.9	21.7	1.15E-03	6.90E-03
S. D.	181.9	29.1	1.1	25.5	13.8	4.3	48.7	11.1	5.8	1.46E-03	9.56E-03
2B (Total number of boreholes = 177)											
Count	85	174	130	139	118	144	80	78	79	65	62
Data percentage	48.0	98.3	73.4	78.5	66.7	81.4	45.2	44.1	44.6	36.7	35.0
Min	300.0	2.0	1.0	3.0	2.0	8.0	1.0	0.0	1.0	6.62E-05	2.00E-04
Max	2280.0	201.0	9.0	206.0	59.0	35.0	289.0	182.0	30.0	4.88E-01	5.48E-01
Average	1122.5	54.4	2.2	35.0	14.5	15.7	62.7	15.6	18.2	1.54E-02	2.15E-02
S. D.	470.8	27.7	1.6	24.7	11.1	5.3	70.3	23.6	6.3	6.56E-02	7.09E-02
2C (Total number of boreholes = 50)											
Count	32	50	43	42	40	41	33	24	28	18	16
Data percentage	64.0	100.0	86.0	84.0	80.0	82.0	66.0	48.0	56.0	36.0	32.0
Min	90.0	12.0	1.0	3.0	1.5	11.0	3.0	1.0	2.0	3.43E-04	1.95E-03
Max	2490.0	195.0	7.0	132.0	65.0	80.0	286.0	48.0	54.0	3.53E-01	8.09E-02
Average	840.1	65.6	2.6	38.2	21.7	20.0	79.4	13.7	21.1	3.62E-02	2.17E-02
S. D.	561.9	46.1	1.8	31.0	23.2	10.4	72.6	12.5	10.9	9.08E-02	2.10E-02
2D (Total number of boreholes = 25)											
Count	23	24	25	24	24	23	23	16	21	9	9
Data percentage	92.0	96.0	100.0	96.0	96.0	92.0	92.0	64.0	84.0	36.0	36.0
Min	570.0	20.0	1.0	17.0	6.0	10.0	11.0	1.0	2.0	5.16E-05	3.71E-04
Max	1981.0	183.0	8.0	174.0	110.0	20.0	500.0	129.2	99.0	1.37E-03	6.87E-03
Average	1218.4	106.6	2.0	72.7	40.1	16.0	96.7	36.7	27.4	6.95E-04	3.31E-03
S. D.	450.8	48.1	1.9	43.0	30.9	2.5	104.7	39.1	19.8	4.39E-04	2.17E-03

Table I.2 (4/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Water level Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
2E (Total number of boreholes = 271)											
Count	258	270	267	239	230	232	238	100	235	11	11
Data percentage	95.2	99.6	98.5	88.2	84.9	85.6	87.8	36.9	86.7	4.1	4.1
Min	266.0	19.0	1.0	3.0	2.0	10.0	1.0	0.5	1.0	2.78E-04	1.40E-03
Max	3120.0	412.0	9.0	251.0	220.0	25.0	455.0	197.0	99.0	4.88E-02	3.30E-01
Average	2027.7	141.1	1.2	112.8	65.6	16.3	127.2	33.6	17.0	8.01E-03	5.90E-02
S. D.	352.6	56.6	0.8	53.7	50.6	2.6	85.0	31.5	13.5	1.51E-02	1.09E-01
2F (Total number of boreholes = 200)											
Count	184	200	198	177	179	189	180	71	175	13	11
Data percentage	92.0	100.0	99.0	88.5	89.5	94.5	90.0	35.5	87.5	6.5	5.5
Min	914.0	40.0	1.0	14.0	2.0	13.0	6.0	0.2	1.0	2.03E-04	1.40E-03
Max	2865.0	312.0	9.0	259.0	235.0	40.0	450.0	101.8	99.0	3.66E-01	8.24E-01
Average	2029.3	148.2	1.5	125.4	79.4	16.2	140.4	31.9	18.2	7.09E-02	9.95E-02
S. D.	220.3	51.4	1.7	50.3	45.1	3.3	82.9	25.1	15.6	1.26E-01	2.43E-01
2G (Total number of boreholes = 274)											
Count	267	270	270	238	232	233	230	101	211	13	13
Data percentage	97.4	98.5	98.5	86.9	84.7	85.0	83.9	36.9	77.0	4.7	4.7
Min	250.0	13.0	1.0	2.0	1.0	10.0	2.0	0.1	1.0	3.15E-05	1.85E-04
Max	2793.0	939.0	9.0	290.0	287.0	33.0	690.0	88.4	90.0	1.92E-01	6.11E-01
Average	2173.7	115.6	1.3	87.6	62.5	17.4	148.0	19.3	13.5	2.80E-02	8.42E-02
S. D.	309.9	86.9	1.1	69.0	62.4	4.2	140.5	20.0	9.8	5.93E-02	1.75E-01
2H (Total number of boreholes = 72)											
Count	66	70	72	50	48	56	46	28	48	4	4
Data percentage	91.7	97.2	100.0	69.4	66.7	77.8	63.9	38.9	66.7	5.6	5.6
Min	860.0	49.0	1.0	14.0	9.0	8.0	1.0	1.0	1.0	1.94E-04	1.66E-03
Max	2636.0	325.0	9.0	274.0	264.0	25.0	620.0	107.0	56.0	2.26E-02	1.36E-01
Average	1812.6	171.1	1.5	122.9	90.6	16.6	118.4	35.4	19.2	6.30E-03	3.81E-02
S. D.	373.3	62.7	1.2	69.1	71.1	3.4	139.4	27.7	13.1	1.09E-02	6.56E-02
2J (Total number of boreholes = 113)											
Count	36	107	72	61	52	66	52	46	51	30	26
Data percentage	31.9	94.7	63.7	54.0	46.0	58.4	46.0	40.7	45.1	26.5	23.0
Min	366.0	6.0	1.0	2.0	2.0	11.0	4.0	1.0	3.0	1.61E-05	1.12E-04
Max	1000.0	254.0	9.0	130.0	61.0	40.0	300.0	59.0	30.0	3.95E-01	8.49E-02
Average	696.9	70.8	2.2	39.4	20.6	19.3	73.4	15.7	21.8	1.83E-02	1.53E-02
S. D.	142.4	39.1	2.1	25.5	15.5	5.2	68.9	12.0	6.4	7.19E-02	2.18E-02

Table 1.2 (5/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
2K (Total number of boreholes = 22)											
Count	22	22	22	15	16	18	15	12	14	3	3
Data percentage	100.0	100.0	100.0	68.2	72.7	81.8	68.2	54.5	63.6	13.6	13.6
Min	1650.0	76.0	1.0	49.0	8.0	15.0	6.0	0.1	2.0	6.86E-04	3.86E-03
Max	2987.0	305.0	9.0	244.0	214.0	20.0	150.0	65.0	24.0	6.69E-03	3.41E-02
Average	2473.8	162.0	1.9	125.3	81.6	16.1	91.6	28.3	14.2	3.38E-03	1.71E-02
S. D.	486.9	53.4	2.4	47.9	61.1	2.1	48.0	23.6	8.1	3.05E-03	1.55E-02
3A (Total number of boreholes = 448)											
Count	420	444	441	415	416	414	416	202	394	48	46
Data percentage	93.8	99.1	98.4	92.6	92.9	92.4	92.9	45.1	87.9	10.7	10.3
Min	12.0	17.0	1.0	6.0	1.0	7.0	1.0	1.0	1.0	4.58E-05	3.68E-04
Max	2301.0	372.0	9.0	338.0	204.0	200.0	766.0	176.2	99.0	5.03E-01	3.61E-01
Average	1699.8	131.6	1.5	100.2	51.1	17.0	105.0	37.7	18.4	2.54E-02	2.58E-02
S. D.	202.2	59.6	1.1	57.9	32.6	9.9	106.0	32.9	14.5	1.01E-01	6.15E-02
3B (Total number of boreholes = 1158)											
Count	1097	1148	1151	1110	1110	1098	1125	516	1072	95	92
Data percentage	94.7	99.1	99.4	95.9	95.9	94.8	97.2	44.6	92.6	8.2	7.9
Min	152.0	12.0	1.0	2.0	1.0	3.0	1.0	0.6	1.0	1.89E-05	1.88E-04
Max	2715.0	473.0	9.0	420.0	265.0	152.0	826.0	141.5	99.0	6.10E-01	4.20E-01
Average	1784.1	135.0	1.1	101.2	47.7	16.8	136.7	40.1	17.2	1.43E-02	3.01E-02
S. D.	240.1	57.7	0.8	54.7	31.5	5.4	109.2	32.9	12.8	6.39E-02	6.13E-02
3C (Total number of boreholes = 52)											
Count	46	51	51	51	48	50	46	24	46	5	5
Data percentage	88.5	98.1	98.1	98.1	92.3	96.2	88.5	46.2	88.5	9.6	9.6
Min	1447.0	63.0	1.0	22.0	8.0	10.0	5.0	3.0	1.0	1.83E-04	9.06E-04
Max	1950.0	245.0	1.0	229.0	126.0	25.0	471.0	190.0	30.0	4.18E-03	1.60E-02
Average	1564.5	143.2	1.0	105.8	46.9	17.1	136.6	44.9	15.5	1.33E-03	5.96E-03
S. D.	108.3	48.2	0.0	50.9	24.6	3.2	125.6	44.8	7.7	1.64E-03	5.88E-03
3D (Total number of boreholes = 26)											
Count	25	24	26	25	24	26	26	18	26	0	0
Data percentage	96.2	92.3	100.0	96.2	92.3	100.0	100.0	69.2	100.0	0.0	0.0
Min	1219.0	35.0	1.0	3.0	2.0	15.0	1.0	3.0	1.0		
Max	2024.0	153.0	6.0	128.0	76.0	25.0	606.0	90.0	61.0		
Average	1396.4	103.0	1.9	73.8	29.3	16.7	113.2	42.1	19.9		
S. D.	164.7	31.9	1.2	32.9	20.7	2.8	134.4	27.6	13.4		

Table 1.2 (6/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
3E (Total number of boreholes = 117)											
Count	111	117	117	103	101	105	104	54	101	4	4
Data percentage	94.9	100.0	100.0	88.0	86.3	89.7	88.9	46.2	86.3	3.4	3.4
Min	440.0	9.0	1.0	1.0	1.0	15.0	1.0	1.0	1.0	7.37E-05	5.01E-04
Max	1981.0	213.0	5.0	210.0	92.0	25.0	345.0	145.9	99.0	2.42E-04	1.20E-03
Average	1503.1	103.4	2.0	73.2	24.3	16.0	96.0	55.9	19.2	1.31E-04	8.56E-04
S. D.	276.5	40.8	0.6	37.9	19.6	2.3	83.1	35.2	13.9	7.55E-05	2.86E-04
3F (Total number of boreholes = 252)											
Count	248	252	252	207	209	207	208	102	195	15	15
Data percentage	98.4	100.0	100.0	82.1	82.9	82.1	82.5	40.5	77.4	6.0	6.0
Min	305.0	9.0	1.0	4.0	1.0	10.0	1.0	0.3	1.0	2.35E-05	1.68E-04
Max	2286.0	244.0	9.0	189.0	165.0	51.0	680.0	144.2	99.0	1.28E-02	2.71E-02
Average	1368.8	102.3	2.2	66.0	35.4	16.3	94.0	45.4	24.3	2.08E-03	8.17E-03
S. D.	312.9	42.4	1.2	36.5	24.6	3.6	85.0	36.5	20.3	3.45E-03	9.30E-03
3G (Total number of boreholes = 31)											
Count	30	31	30	29	30	27	13	9	14	0	0
Data percentage	96.8	100.0	96.8	93.5	96.8	87.1	41.9	29.0	45.2	0.0	0.0
Min	610.0	10.0	1.0	6.0	3.0	10.0	5.0	0.1	3.0		
Max	1768.0	292.0	2.0	255.0	242.0	16.0	218.0	132.5	26.0		
Average	1309.9	71.2	1.4	47.5	33.0	14.6	91.5	30.1	12.8		
S. D.	318.6	64.5	0.5	51.8	47.4	2.1	66.0	42.7	8.8		
3H (Total number of boreholes = 39)											
Count	34	39	39	33	33	29	33	20	30	4	4
Data percentage	87.2	100.0	100.0	84.6	84.6	74.4	84.6	51.3	76.9	10.3	10.3
Min	15.0	6.0	2.0	1.0	1.0	15.0	1.0	0.2	1.0	1.02E-03	5.73E-03
Max	1585.0	199.0	9.0	157.0	118.0	53.0	636.0	64.0	72.0	1.02E-02	4.95E-02
Average	242.1	75.8	3.1	52.0	34.1	18.9	113.4	12.4	17.9	3.98E-03	1.94E-02
S. D.	409.8	51.2	1.0	44.3	32.8	7.7	114.6	16.2	13.4	4.21E-03	2.03E-02
3J (Total number of boreholes = 5)											
Count	5	5	5	5	5	5	5	1	5	1	0
Data percentage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	20.0	100.0	20.0	0.0
Min	716.0	37.0	1.0	30.0	13.0	15.0	166.0	0.1	4.0	9.81E-01	
Max	762.0	67.0	2.0	61.0	35.0	20.0	397.0	0.1	56.0	9.81E-01	
Average	744.8	54.6	1.2	43.4	27.8	16.0	283.8	0.1	24.4	9.81E-01	
S. D.	23.6	11.8	0.4	11.7	8.5	2.2	89.4		20.7		

Table 1.2 (7/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Water level Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
3K (Total number of boreholes = 148)											
Count	92	148	143	144	137	144	132	109	124	1	1
Data percentage	62.2	100.0	96.6	97.3	92.6	97.3	89.2	73.6	83.8	0.7	0.7
Min	8.0	15.0	2.0	5.0	2.0	6.0	2.0	0.2	1.0	5.16E-04	2.91E-03
Max	1615.0	307.0	4.0	149.0	89.0	26.0	531.0	130.1	99.0	5.16E-04	2.91E-03
Average	159.2	49.3	3.1	31.9	18.0	15.7	51.5	11.5	9.5	5.16E-04	2.91E-03
S. D.	307.1	34.2	0.5	20.3	10.4	4.5	63.0	15.6	13.2		
3L (Total number of boreholes = 122)											
Count	118	122	122	115	115	111	109	25	104	2	1
Data percentage	96.7	100.0	100.0	94.3	94.3	91.0	89.3	20.5	85.2	1.6	0.8
Min	3.0	4.0	1.0	3.0	2.0	10.0	1.0	0.5	1.0	4.25E-04	2.10E-03
Max	2220.0	310.0	3.0	207.0	141.0	50.0	500.0	107.0	81.0	4.46E-01	2.10E-03
Average	163.9	51.8	2.9	33.1	18.5	16.4	68.8	22.9	15.0	2.23E-01	2.10E-03
S. D.	337.4	59.1	0.4	38.2	20.0	4.4	87.5	30.2	13.1	3.15E-01	
3M (Total number of boreholes = 159)											
Count	155	159	159	139	136	129	129	51	117	7	7
Data percentage	97.5	100.0	100.0	87.4	85.5	81.1	81.1	32.1	73.6	4.4	4.4
Min	11.0	5.0	1.0	2.0	2.0	2.0	2.0	0.6	1.0	4.71E-04	2.18E-03
Max	2100.0	298.0	9.0	235.0	150.0	36.0	800.0	91.7	99.0	4.36E-02	8.50E-02
Average	332.3	93.6	2.8	58.0	25.2	16.9	155.7	19.4	29.2	8.39E-03	2.45E-02
S. D.	366.3	51.0	1.0	43.5	22.3	3.9	143.1	24.0	21.6	1.58E-02	3.22E-02
3N (Total number of boreholes = 26)											
Count	23	26	26	24	24	24	24	17	23	5	5
Data percentage	88.5	100.0	100.0	92.3	92.3	92.3	92.3	65.4	88.5	19.2	19.2
Min	1189.0	24.0	1.0	13.0	9.0	15.0	3.0	0.1	1.0	4.81E-05	3.25E-04
Max	1830.0	191.0	9.0	180.0	111.0	20.0	499.0	104.0	70.0	6.10E-02	1.97E-01
Average	1321.0	109.7	2.1	74.7	42.0	15.8	142.4	28.2	23.4	1.23E-02	4.03E-02
S. D.	169.5	47.2	1.8	45.5	26.3	1.9	114.0	34.6	15.2	2.72E-02	8.75E-02
4A (Total number of boreholes = 72)											
Count	67	72	72	66	66	69	67	43	65	15	15
Data percentage	93.1	100.0	100.0	91.7	91.7	95.8	93.1	59.7	90.3	20.8	20.8
Min	23.0	24.0	1.0	9.0	2.0	1.9	3.0	0.1	1.0	4.81E-05	3.25E-04
Max	2438.0	244.0	100.0	180.0	121.0	92.3	499.0	108.5	88.5	1.92E+01	1.92E+01
Average	1621.1	115.1	3.4	80.4	49.1	17.0	121.1	33.7	21.6	1.63E+00	1.65E+00
S. D.	475.9	51.5	12.0	44.3	31.9	9.6	99.3	32.8	16.2	5.04E+00	5.03E+00

Table I.2 (8/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
4B (Total number of boreholes = 76)											
Count	75	76	76	74	67	66	72	40	69	4	4
Data percentage	97.4	98.7	98.7	96.1	87.0	85.7	93.5	51.9	89.6	5.2	5.2
Min	1052.0	15.0	1.0	3.0	1.0	15.0	2.0	5.6	1.0	8.32E-05	6.05E-04
Max	2790.0	250.0	9.0	213.0	85.0	25.0	455.0	183.0	48.0	5.63E-04	3.04E-03
Average	1426.3	99.2	1.8	61.4	16.0	17.1	86.4	55.3	16.6	2.29E-04	1.46E-03
S. D.	233.6	53.8	1.5	46.8	16.9	3.1	95.5	44.2	11.0	2.25E-04	1.14E-03
4C (Total number of boreholes = 122)											
Count	120	122	122	116	115	117	116	46	115	4	4
Data percentage	98.4	100.0	100.0	95.1	94.3	95.9	95.1	37.7	94.3	3.3	3.3
Min	1058.0	27.0	1.0	18.0	2.0	15.0	1.0	5.0	1.0	3.56E-04	2.92E-03
Max	2652.0	277.0	9.0	264.0	189.0	25.0	945.0	120.0	78.0	8.54E-02	3.01E-01
Average	1641.8	122.8	1.3	97.4	43.0	16.4	124.3	53.0	16.0	2.30E-02	8.05E-02
S. D.	405.1	50.4	1.2	49.2	31.5	2.7	116.8	34.8	12.1	4.17E-02	1.47E-01
4D (Total number of boreholes = 15)											
Count	14	14	14	12	13	13	12	8	12	0	0
Data percentage	93.3	93.3	93.3	80.0	86.7	86.7	80.0	53.3	80.0	0.0	0.0
Min	450.0	34.0	1.0	29.0	9.0	10.0	4.0	9.1	6.0		
Max	1765.0	200.0	2.0	111.0	80.0	20.0	270.0	139.1	55.0		
Average	1241.9	112.9	1.9	69.8	29.1	15.4	71.8	78.9	24.3		
S. D.	305.4	52.2	0.4	28.9	19.1	2.5	86.0	42.9	14.7		
4E (Total number of boreholes = 30)											
Count	29	29	29	25	27	27	27	17	25	4	4
Data percentage	96.7	96.7	96.7	83.3	90.0	90.0	90.0	56.7	83.3	13.3	13.3
Min	396.0	22.0	1.0	18.0	1.0	15.0	2.0	2.0	1.0	1.23E-04	8.13E-04
Max	2060.0	201.0	4.0	186.0	108.0	20.0	275.0	94.0	51.0	2.93E-03	1.58E-02
Average	1208.3	110.0	1.6	88.4	42.3	15.9	64.6	48.5	19.1	1.53E-03	6.50E-03
S. D.	294.9	42.9	0.7	41.5	28.7	2.0	64.4	31.6	11.3	1.43E-03	6.71E-03
4F (Total number of boreholes = 58)											
Count	49	49	56	50	46	53	41	21	41	8	8
Data percentage	84.5	84.5	96.6	86.2	79.3	91.4	70.7	36.2	70.7	13.8	13.8
Min	230.0	11.0	1.0	7.0	3.0	10.0	2.0	1.0	2.0	4.18E-05	3.58E-04
Max	1900.0	180.0	9.0	156.0	118.0	35.0	252.0	84.0	24.0	2.17E-03	1.19E-02
Average	1003.4	63.3	1.8	50.4	34.4	15.8	105.5	17.0	16.2	7.56E-04	4.46E-03
S. D.	638.9	39.0	1.7	35.0	23.9	6.6	52.9	18.7	9.0	7.26E-04	3.98E-03

Table 1.2 (9/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Water level Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
4G (Total number of boreholes = 43)											
Count	42	43	41	33	38	36	33	17	32	6	6
Data percentage	97.7	100.0	95.3	76.7	88.4	83.7	76.7	39.5	74.4	14.0	14.0
Min	23.0	18.0	1.0	3.0	3.0	10.0	6.0	0.1	1.0	1.63E-04	9.68E-04
Max	1920.0	174.0	8.0	148.0	130.0	35.0	619.0	76.0	68.0	3.49E-02	1.46E-01
Average	670.5	91.7	2.6	56.9	39.0	18.8	104.8	23.9	17.7	7.07E-03	2.94E-02
S. D.	519.6	45.4	1.6	46.6	33.7	7.0	118.7	24.3	14.0	1.37E-02	5.73E-02
4H (Total number of boreholes = 41)											
Count	40	40	41	33	31	34	34	15	29	0	0
Data percentage	97.6	97.6	100.0	80.5	75.6	82.9	82.9	36.6	70.7	0.0	0.0
Min	180.0	15.0	1.0	3.0	1.0	5.0	1.0	6.0	1.0		
Max	1737.0	172.0	5.0	150.0	140.0	25.0	342.0	132.1	72.0		
Average	1013.5	92.4	2.2	54.7	33.5	15.8	60.5	46.9	24.8		
S. D.	312.7	36.5	0.7	35.2	32.0	3.4	72.1	38.3	17.4		
4J (Total number of boreholes = 18)											
Count	18	18	18	12	14	14	10	3	11	0	0
Data percentage	100.0	100.0	100.0	66.7	77.8	77.8	55.6	16.7	61.1	0.0	0.0
Min	30.0	57.0	2.0	35.0	17.0	12.0	12.0	2.1	2.0		
Max	2640.0	232.0	3.0	185.0	219.0	23.0	68.0	25.0	48.0		
Average	259.2	134.5	2.9	117.3	104.1	15.4	47.4	10.6	20.9		
S. D.	597.2	54.1	0.3	48.6	52.2	3.4	17.5	12.6	13.8		
4K (Total number of boreholes = 26)											
Count	24	26	24	16	18	18	17	7	14	4	4
Data percentage	92.3	100.0	92.3	61.5	69.2	69.2	65.4	26.9	53.8	15.4	15.4
Min	11.0	9.0	2.0	4.0	4.0	10.0	27.0	1.4	4.0	6.38E-04	3.65E-03
Max	610.0	232.0	3.0	172.0	168.0	20.0	600.0	20.9	24.0	4.59E-02	9.33E-02
Average	117.5	86.9	2.7	61.6	57.5	14.7	115.2	9.3	16.2	1.33E-02	3.08E-02
S. D.	129.4	58.1	0.5	58.2	53.2	2.6	147.3	8.0	7.5	2.18E-02	4.21E-02
5A (Total number of boreholes = 106)											
Count	102	104	100	82	82	81	92	44	82	6	6
Data percentage	96.2	98.1	94.3	77.4	77.4	76.4	86.8	41.5	77.4	5.7	5.7
Min	570.0	6.0	1.0	1.0	1.0	15.0	1.0	2.2	1.0	5.46E-05	3.74E-04
Max	2941.0	308.0	9.0	307.0	201.0	90.0	455.0	149.3	63.0	7.12E-03	3.33E-02
Average	2172.9	122.0	1.1	106.1	49.3	16.5	85.1	53.2	14.4	1.73E-03	8.64E-03
S. D.	365.6	65.0	0.8	62.8	36.3	8.4	73.3	37.2	9.9	2.69E-03	1.24E-02

Table 1.2 (10/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Water level Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
5B (Total number of boreholes = 108)											
Count	106	108	107	92	91	93	98	33	94	4	4
Data percentage	98.1	100.0	99.1	85.2	84.3	86.1	90.7	30.6	87.0	3.7	3.7
Min	914.0	19.0	1.0	7.0	2.0	13.0	2.0	2.0	2.0	1.54E-04	1.19E-03
Max	2255.0	283.0	6.0	277.0	90.0	25.0	272.0	204.2	52.0	2.09E-03	8.45E-03
Average	1888.6	107.2	1.3	89.7	40.2	15.6	91.5	57.3	12.7	7.84E-04	4.05E-03
S. D.	187.1	53.3	0.7	50.2	21.0	2.0	73.3	49.9	9.0	9.05E-04	3.44E-03
5C (Total number of boreholes = 46)											
Count	44	46	45	44	43	43	39	24	31	6	6
Data percentage	95.7	100.0	97.8	95.7	93.5	93.5	84.8	52.2	67.4	13.0	13.0
Min	229.0	40.0	1.0	16.0	5.0	13.0	2.0	2.0	1.0	6.18E-05	4.76E-04
Max	2134.0	285.0	5.0	263.0	146.0	63.0	236.0	146.0	99.0	6.73E-02	5.46E-02
Average	1714.8	138.3	1.4	100.8	45.8	16.7	88.7	63.0	19.3	1.19E-02	1.19E-02
S. D.	447.9	60.9	0.8	61.8	30.7	7.6	70.0	44.6	18.2	2.71E-02	2.12E-02
5D (Total number of boreholes = 107)											
Count	100	105	104	86	84	86	84	37	78	5	5
Data percentage	93.5	98.1	97.2	80.4	78.5	80.4	78.5	34.6	72.9	4.7	4.7
Min	19.0	19.0	1.0	1.0	3.0	10.0	2.0	1.0	1.0	2.72E-05	2.37E-04
Max	2804.0	318.0	9.0	207.0	151.0	25.0	677.0	121.9	99.0	1.80E-02	3.10E-02
Average	1708.4	104.9	1.8	75.0	37.6	15.8	83.6	52.0	17.0	7.08E-03	1.18E-02
S. D.	473.5	48.0	1.1	40.4	25.7	2.4	102.2	35.3	15.8	9.24E-03	1.36E-02
5E (Total number of boreholes = 144)											
Count	140	141	141	103	103	116	109	68	91	15	15
Data percentage	97.2	97.9	97.9	71.5	71.5	80.6	75.7	47.2	63.2	10.4	10.4
Min	30.0	9.0	1.0	2.0	1.0	14.0	1.0	0.3	1.0	4.71E-05	3.42E-04
Max	1960.0	292.0	9.0	263.0	247.0	30.0	455.0	211.8	99.0	4.71E-02	2.11E-01
Average	681.4	97.0	2.8	74.0	53.3	17.4	66.9	27.8	23.1	7.84E-03	2.51E-02
S. D.	402.5	67.1	1.7	62.0	54.3	3.6	80.6	39.1	20.5	1.48E-02	5.65E-02
5F (Total number of boreholes = 75)											
Count	71	73	74	56	59	62	60	42	56	13	13
Data percentage	94.7	97.3	98.7	74.7	78.7	82.7	80.0	56.0	74.7	17.3	17.3
Min	99.0	11.0	1.0	3.0	2.0	11.0	1.0	0.8	1.0	1.46E-04	1.18E-03
Max	2000.0	220.0	8.0	192.0	163.0	25.0	800.0	312.0	48.0	5.85E-03	5.28E-02
Average	402.7	113.0	2.9	104.3	88.4	16.0	126.2	18.3	23.8	2.27E-03	1.13E-02
S. D.	464.0	55.6	1.1	47.4	46.3	2.8	145.3	47.7	11.5	1.93E-03	1.39E-02

Table 1.2 (11/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m2/min)	Storage coefficient
5G (Total number of boreholes = 26)											
Count	14	16	16	15	15	12	14	5	8	3	3
Data percentage	53.8	61.5	61.5	57.7	57.7	46.2	53.8	19.2	30.8	11.5	11.5
Min	122.0	46.0	2.0	35.0	16.0	10.0	1.0	1.0	1.0	1.26E-04	8.56E-04
Max	792.0	244.0	5.0	183.0	144.0	20.0	160.0	119.0	48.0	7.53E-02	1.94E-01
Average	529.1	116.5	2.8	69.1	56.2	16.1	47.6	40.6	20.9	2.52E-02	6.52E-02
S. D.	165.6	51.7	0.8	38.4	31.9	3.2	43.3	47.3	14.7	4.34E-02	1.11E-01
5H (Total number of boreholes = 1)											
Count	1	1	1	1	1	1	1	0	0	1	1
Data percentage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0
Min	610.0	89.0	3.0	53.0	43.0	15.0	48.0			5.65E-04	3.16E-03
Max	610.0	89.0	3.0	53.0	43.0	15.0	48.0			5.65E-04	3.16E-03
Average	610.0	89.0	3.0	53.0	43.0	15.0	48.0			5.65E-04	3.16E-03
S. D.											
5J (Total number of boreholes = 34)											
Count	29	32	34	24	24	28	16	14	11	5	5
Data percentage	85.3	94.1	100.0	70.6	70.6	82.4	47.1	41.2	32.4	14.7	14.7
Min	385.0	13.0	1.0	2.0	0.3	15.0	1.0	1.3	6.0	1.25E-04	1.01E-03
Max	1820.0	260.0	9.0	155.0	114.0	25.0	240.0	69.0	32.0	1.04E-01	5.72E-01
Average	660.9	90.5	2.4	47.6	31.0	17.9	88.3	31.1	21.5	3.64E-02	1.46E-01
S. D.	321.8	69.2	1.9	40.5	34.0	3.6	74.4	21.4	8.0	4.94E-02	2.45E-01
Unkown (Total number of boreholes = 363)											
Count	123	337	292	250	238	293	217	191	209	40	32
Data percentage	33.9	92.8	80.4	68.9	65.6	80.7	59.8	52.6	57.6	11.0	8.8
Min	6.0	3.0	1.0	3.0	1.0	10.0	1.0	0.6	1.0	4.88E-05	4.03E-04
Max	2485.0	302.0	9.0	270.0	179.0	200.0	471.0	155.0	48.0	1.85E+00	4.20E-01
Average	1173.0	86.5	2.6	61.2	31.1	18.9	94.1	26.1	13.2	1.10E-01	4.15E-02
S. D.	541.9	62.0	2.4	54.5	33.5	12.0	90.7	26.5	9.5	3.28E-01	8.36E-02

Table 1.3 (1/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	rest (m)	Diameter (cm)	Pumping Number	tests Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m2/min)	Storage coefficient
District code = 11 (Nairobi)																
Total number of boreholes = [illegible]																
Number of data	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	427	420	378	626	302	597	156	90	88
Data percentage	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	94.37	57.06	95.28	45.97	90.87	23.74	13.70	13.39
Minimum	[illegible]	[illegible]	[illegible]	[illegible]	1	1	5	1	7	1	1	1	1	1	5.37E-05	3.96E-04
Maximum	[illegible]	1.00	[illegible]	[illegible]	7	[illegible]	450	210	200	5	826	176.2	99	40	1.10E-01	4.20E-01
Average	[illegible]	[illegible]	[illegible]	[illegible]	1.44	1.10	112.83	86.73	17.47	1.86	126.41	39.50	16.62	7.56	0.01	0.03
Standard deviation	[illegible]	[illegible]	[illegible]	[illegible]	0.90	0.81	80.78	32.47	10.05	0.91	106.81	33.18	13.03	9.72	0.02	0.06
District code = 21 (Kiambu)																
Total number of boreholes = [illegible]																
Number of data	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1020	[illegible]	[illegible]	992	704	992	500	853	244	112	109
Data percentage	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	94.30	68.48	96.50	48.64	82.70	23.74	10.89	10.60
Minimum	[illegible]	[illegible]	[illegible]	[illegible]	1	1	2	1	3	1	1	0.6	1	1	1.89E-05	1.88E-04
Maximum	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	290	[illegible]	53	7	750	190	99	58	6.10E-01	4.20E-01
Average	[illegible]	[illegible]	[illegible]	[illegible]	2.13	1.14	100.73	[illegible]	16.63	1.63	141.48	41.51	17.02	7.01	0.02	0.03
Standard deviation	[illegible]	[illegible]	[illegible]	[illegible]	1.12	0.87	[illegible]	[illegible]	3.87	0.96	114.22	33.52	11.84	9.31	0.06	0.07
District code = 22 (Kirinyaga)																
Total number of boreholes = [illegible]																
Number of data	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12	[illegible]	14	15	14	14	11	14	10	2	2
Data percentage	[illegible]	[illegible]	[illegible]	100.00	100.00	80.00	100.00	93.33	100.00	93.33	93.33	73.33	93.33	66.67	13.33	13.33
Minimum	[illegible]	[illegible]	[illegible]	[illegible]	1	1	24	2	15	1	11	1	9	1.00	4.39E-04	2.37E-03
Maximum	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	110	80	20	3	270	93	24	24.00	2.69E-03	1.48E-02
Average	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.73	[illegible]	[illegible]	17.33	1.29	102.14	36.15	21.21	5.80	0.00	0.01
Standard deviation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.34	[illegible]	20.06	2.30	0.61	79.62	36.17	5.56	6.92	0.00	0.01
District code = 23 (Muranga)																
Total number of boreholes = [illegible]																
Number of data	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	104	100	93	93	63	98	33	95	20	6	6
Data percentage	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100.00	[illegible]	89.42	89.42	60.58	94.23	30.96	91.35	19.23	5.77	5.77
Minimum	[illegible]	[illegible]	[illegible]	[illegible]	1	1	3	1	15	1	1	3	1	1	8.32E-05	6.05E-04
Maximum	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	183	113	25	3	945	183	73	27	8.37E-04	7.26E-03
Average	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14.94	1.78	100.29	57.63	17.04	5.60	0.00	0.00
Standard deviation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.03	1.02	123.87	41.80	12.39	7.11	0.00	0.00
District code = 24 (Nyandarua)																
Total number of boreholes = [illegible]																
Number of data	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	112	114	63	122	57	110	24	8	8
Data percentage	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40.38	78.21	36.54	70.51	15.38	5.13	5.13
Minimum	[illegible]	[illegible]	[illegible]	[illegible]	1	1	[illegible]	3	12	1	1	2	1	1	1.94E-04	1.66E-03
Maximum	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	90	4	433	98.1	63	26	1.72E-02	3.49E-02
Average	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.42	85.32	33.21	14.21	5.92	0.00	0.01
Standard deviation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.78	70.87	23.60	9.06	6.70	0.01	0.03

Table 1.3 (2/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	rest (m)	Diameter (cm)	Pumping Number	tests Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmis-sivity (m2/min)	Storage coefficient
District code = 25 (Nyeri)																
Total number of boreholes = 60																
Number of data	56	56	54	60	57	59	56	56	57	30	57	28	54	12	6	5
Data percentage	93.33	93.33	90.00	100.00	95.00	98.33	93.33	93.33	95.00	50.00	95.00	46.67	90.00	20.00	8.33	8.33
Minimum	36.67	-0.57	914	33	1	1	9	2	14	1	2	2	2	1	7.32E-05	5.30E-04
Maximum	37.33	-0.02	2438	244	5	8	170	116	25	4	324	108.5	49	5	6.97E-04	5.11E-03
Average	36.94	-0.29	1925.41	121.98	1.89	1.34	84.93	49.80	15.86	1.60	99.00	40.34	15.17	2.33	0.00	0.00
Standard deviation	0.11	0.12	206.35	47.90	0.99	1.23	41.12	28.66	2.35	0.72	70.90	31.21	10.17	1.61	0.00	0.00
District code = 31 (Kilifi)																
Total number of boreholes = 212																
Number of data	181	181	169	212	201	211	199	195	190	136	177	76	170	43	12	12
Data percentage	85.38	85.38	79.72	100.00	94.81	99.53	93.87	91.98	89.62	64.15	83.49	35.85	80.19	20.28	5.66	5.66
Minimum	39.13	-4.30	3	4	1	1	1	1	10	1	1	0.5	1	1	9.76E-05	7.17E-04
Maximum	40.17	-2.63	2220	310	4	9	226	150	53	4	636	97.2	61	36	1.02E-02	6.07E-02
Average	39.84	-3.46	122.62	70.83	1.38	3.03	47.17	28.24	18.01	1.34	98.33	14.29	17.72	6.81	0.00	0.01
Standard deviation	0.18	0.27	309.86	67.33	0.61	0.68	47.21	27.93	5.41	0.71	109.37	20.09	15.13	8.51	0.00	0.02
District code = 32 (Kwale)																
Total number of boreholes = 310																
Number of data	227	230	178	310	283	304	290	283	286	218	259	176	246	71	22	21
Data percentage	73.23	74.19	57.42	100.00	91.29	98.06	93.55	91.29	92.26	70.32	83.55	56.77	79.03	22.90	7.10	6.77
Minimum	38.67	-4.67	6	7	1	2	5	2	2	1	2	0.2	1	0.25	3.47E-04	9.68E-04
Maximum	39.60	-3.52	1830	307	7	9	236	118	31	3	947	130.1	99	26	4.46E-01	9.88E-02
Average	39.36	-4.23	217.20	62.75	1.47	3.05	38.39	19.97	16.31	1.07	86.19	11.85	12.73	3.02	0.02	0.01
Standard deviation	0.20	0.22	303.62	47.46	0.78	0.71	31.99	15.93	4.82	0.29	116.77	17.68	16.32	4.42	0.09	0.03
District code = 33 (Lamu)																
Total number of boreholes = 14																
Number of data	14	14	14	14	8	12	6	6	11	8	9	1	7	2	2	2
Data percentage	100.00	100.00	100.00	100.00	57.14	85.71	42.86	42.86	78.57	57.14	64.29	7.14	50.00	14.29	14.29	14.29
Minimum	40.36	-2.40	11	9	1	2	8	7	12	1	28	2	8	1	3.95E-03	1.28E-02
Maximum	41.08	-1.87	200	112	1	3	24	22	18	2	600	2	12	3	4.59E-02	9.33E-02
Average	40.77	-2.18	56.50	52.71	1.00	2.83	13.75	12.00	14.36	1.13	153.67	2.00	10.00	2.00	0.02	0.05
Standard deviation	0.24	0.22	64.01	26.01	0.00	0.39	6.21	11.74	2.58	0.35	197.91		2.00	1.41	0.03	0.06
District code = 34 (Mombasa)																
Total number of boreholes = 25																
Number of data	24	24	25	25	22	25	22	20	19	11	24	8	22	4	0	0
Data percentage	96.00	96.00	100.00	100.00	88.00	100.00	88.00	80.00	76.00	44.00	96.00	32.00	88.00	16.00		
Minimum	39.53	-4.08	11	17	1	3	13	2	10	1	8	1	2	1		
Maximum	39.78	-3.90	183	154	5	3	90	45	25	1	590	23	95	6		
Average	39.66	-4.01	42.12	63.04	1.41	3.00	28.95	20.05	16.42	1.00	128.96	6.94	36.00	3.00		
Standard deviation	0.06	0.07	48.85	42.89	0.91	0.00	16.18	10.50	3.88	0.00	155.48	8.63	29.09	2.45		

Table 1.3 (3/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	Water level rest (m)	Diameter (cm)	Pumping tests Number	Pumping tests Yield (l/min)	Pumping tests Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m2/min)	Storage coefficient
District code = 35 (Taita Taveta)																
Total number of boreholes = 74																
Number of data	64	64	63	74	63	74	60	58	61	30	54	26	52	15	14	12
Data percentage	86.49	86.49	85.14	100.00	85.14	100.00	81.08	78.38	82.43	40.54	72.97	35.14	70.27	20.27	18.92	16.22
Minimum	37.60	-3.83	6	5	1	1	2	2	12	1	2	0.1	3	1	4.71E-04	2.18E-03
Maximum	39.08	-2.76	2100	276	5	6	145	123	36	4	453	107	56	35	9.81E-01	1.28E-01
Average	38.34	-3.45	752.08	74.78	1.94	2.00	49.57	22.76	17.00	1.63	125.59	26.57	18.50	9.67	0.08	0.03
Standard deviation	0.34	0.17	274.30	49.85	1.03	0.95	37.09	21.75	3.83	1.02	106.26	27.61	11.75	9.76	0.26	0.04
District code = 36 (Tana River)																
Total number of boreholes = 15																
Number of data	9	9	9	15	4	13	4	6	9	5	6	2	5	2	0	0
Data percentage	60.00	60.00	60.00	100.00	26.67	86.67	26.67	40.00	60.00	33.33	53.33	13.33	33.33	13.33		
Minimum	38.73	-2.42	76	67	1	1	60	52	15	1	30	23.4	5	7		
Maximum	40.25	-1.67	379	181	2	7	150	140	31	1	54	25.1	24	7		
Average	39.71	-1.95	177.11	123.73	1.50	3.38	95.00	87.83	20.33	1.00	38.75	24.25	17.80	7.00		
Standard deviation	0.68	0.35	123.13	39.47	0.58	1.50	38.51	28.56	5.02	0.00	8.60	1.20	8.84	0.00		
District code = 41 (Embu)																
Total number of boreholes = 129																
Number of data	13	13	12	127	106	117	98	84	115	87	90	88	89	65	2	2
Data percentage	10.08	10.08	9.30	98.45	82.17	90.70	75.97	65.12	89.15	67.44	69.77	68.22	68.99	50.39	1.55	1.55
Minimum	35.85	-0.72	998	22	1	1	7	1	10	1	2.5	2	1	1	4.89E-04	2.52E-03
Maximum	37.78	0.17	1680	158	3	9	186	91	20	4	720	94	24	41	2.93E-03	1.58E-02
Average	37.52	-0.50	1217.75	59.45	1.80	2.05	44.20	17.16	14.62	1.07	70.44	31.66	8.68	4.54	0.00	0.01
Standard deviation	0.51	0.24	199.74	21.55	0.47	1.75	25.64	15.95	2.46	0.37	112.49	18.49	6.27	6.11	0.00	0.01
District code = 42 (Isiolo)																
Total number of boreholes = 62																
Number of data	41	41	37	60	52	60	51	52	52	35	46	24	40	19	11	11
Data percentage	66.13	66.13	59.68	96.77	83.87	96.77	82.26	83.87	83.87	56.45	74.19	38.71	64.52	30.65	17.74	17.74
Minimum	36.75	-0.57	30	11	1	1	7	1	15	1	4	1	1	1	2.72E-05	2.37E-04
Maximum	39.48	1.98	1524	214	4	9	207	140	30	4	500	96	76	25	3.72E-02	2.11E-01
Average	37.87	0.65	835.00	98.37	1.77	2.37	66.59	43.12	17.50	1.43	119.39	24.11	25.68	7.05	0.01	0.03
Standard deviation	0.77	0.47	453.67	54.57	0.76	1.30	44.83	37.64	3.90	0.81	101.02	29.97	16.32	7.06	0.01	0.06
District code = 43 (Kitui)																
Total number of boreholes = 73																
Number of data	58	58	58	72	58	69	59	58	63	38	57	30	51	20	7	7
Data percentage	79.45	79.45	79.45	98.63	79.45	94.52	80.82	79.45	86.30	52.05	78.08	41.10	69.86	27.40	9.59	9.59
Minimum	37.60	-2.25	396	22	1	1	3	1	13	1	1	1	1	1	1.63E-04	9.68E-04
Maximum	38.43	-0.65	1737	198	4	9	143	108	25	5	619	132.1	72	43	3.49E-02	1.46E-01
Average	38.06	-1.41	1022.67	91.07	1.66	2.48	45.12	25.79	17.35	1.61	71.30	44.68	23.27	11.40	0.01	0.03
Standard deviation	0.17	0.40	221.49	37.40	0.81	1.50	34.23	23.31	3.61	0.95	99.23	36.44	16.38	12.68	0.02	0.05

Table 1.3 (4/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	Water level rest (m)	Diameter (cm)	Pumping tests Number	Pumping tests Yield (l/min)	Pumping tests Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m2/min)	Storage coefficient
District code = 44 (Machakos)																
Total number of boreholes = 507																
Number of data	463	463	454	505	445	501	439	437	440	269	436	223	411	89	35	35
Data percentage	91.32	91.32	89.55	99.61	87.77	98.82	86.59	86.19	86.79	53.06	86.00	43.98	81.07	17.55	6.90	6.90
Minimum	36.92	-2.98	12	9	1	1	1	1	5	1	1	0.5	1	1	7.37E-05	5.01E-04
Maximum	38.37	-0.88	2118	245	8	9	214	165	51	7	766	150	99	58	4.62E-02	3.61E-01
Average	37.34	-1.70	1442.08	99.64	1.74	2.05	70.18	33.45	16.45	1.66	88.12	40.39	20.32	7.40	0.00	0.02
Standard deviation	0.31	0.38	303.08	44.60	0.99	1.19	39.37	25.16	3.24	0.99	97.68	33.81	17.83	11.39	0.01	0.06
District code = 45 (Marsabit)																
Total number of boreholes = 497																
Number of data	90	90	88	97	71	99	73	70	83	56	61	46	52	26	13	13
Data percentage	18.11	18.11	17.71	19.52	14.29	19.92	14.69	14.08	16.70	11.27	12.27	9.26	10.46	5.23	2.62	2.62
Minimum	37.00	1.25	385	13	1	1	2	0.3	15	1	1	0.3	1	1	8.36E-05	6.02E-04
Maximum	39.45	3.62	1820	358	5	9	314	247	30	4	545	88	72	58	1.04E-01	5.72E-01
Average	38.08	2.61	737.56	102.38	1.65	2.64	72.40	54.88	17.90	1.36	84.62	22.95	22.00	11.19	0.02	0.07
Standard deviation	0.63	0.74	294.80	73.28	0.79	1.84	73.88	63.17	3.35	0.62	106.00	21.82	12.20	15.99	0.03	0.16
District code = 46 (Meru)																
Total number of boreholes = 116																
Number of data	100	101	95	108	97	108	96	91	96	65	85	49	82	19	14	14
Data percentage	86.21	87.07	81.90	93.10	83.62	93.10	82.76	78.45	82.76	73.28	73.28	42.24	70.69	16.38	12.07	12.07
Minimum	37.28	-0.33	19	17	1	1	10	3	10	1	2	0.1	1	1	4.18E-05	3.58E-04
Maximum	38.25	0.52	2682	318	4	9	170	156	35	3	600	312	24	33	1.80E-02	3.10E-02
Average	37.90	0.23	1179.00	87.46	2.00	1.82	66.10	40.93	17.84	1.22	120.07	26.76	15.23	5.42	0.00	0.01
Standard deviation	0.23	0.19	705.16	52.15	0.76	1.73	40.05	30.38	7.20	0.47	90.99	47.17	9.26	8.65	0.00	0.01
District code = 51 (Garissa)																
Total number of boreholes = 77																
Number of data	72	72	70	75	67	76	61	65	63	53	59	33	53	19	12	12
Data percentage	93.51	93.51	90.91	97.40	87.01	98.70	79.22	84.42	81.82	68.83	76.62	42.86	68.83	24.68	15.58	15.58
Minimum	39.17	-1.92	14	11	1	2	3	2	10	1	1	0.5	1	1	1.46E-04	1.18E-03
Maximum	41.30	0.87	1219	252	70	8	185	219	25	4	800	58	48	59	5.85E-03	5.28E-02
Average	40.18	-0.17	248.80	117.73	2.25	2.97	101.39	92.45	16.02	1.25	111.10	11.20	20.57	13.58	0.00	0.01
Standard deviation	0.55	0.76	262.18	56.45	8.42	0.80	48.85	48.29	3.27	0.65	149.72	11.83	12.29	18.04	0.00	0.01
District code = 52 (Mandera)																
Total number of boreholes = 43																
Number of data	27	27	26	43	35	42	35	35	30	26	28	13	19	7	6	6
Data percentage	62.79	62.79	60.47	100.00	81.40	97.67	81.40	81.40	69.77	60.47	65.12	30.23	44.19	16.28	13.95	13.95
Minimum	40.10	2.55	305	41	1	2	6	12	10	1	1	1	1	1	1.46E-04	1.18E-03
Maximum	41.87	3.93	925	300	2	6	253	179	25	4	160	119	48	8	7.53E-02	1.94E-01
Average	40.98	3.38	597.31	142.05	1.29	2.83	94.54	62.03	17.03	1.27	65.25	24.08	21.37	3.43	0.02	0.06
Standard deviation	0.55	0.30	110.44	74.90	0.46	1.01	73.05	38.30	3.15	0.67	35.79	34.70	9.92	2.51	0.03	0.07

Table 1.3 (5/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)		rest (m)	Diameter (cm)	Pumping tests Number	Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m2/min)	Storage coefficient
District code = 53 (Wajir)																	
Total number of boreholes = 112																	
Number of data	97	97	96	112	77	110	73		75	82	64	71	46	61	28	15	15
Data percentage	86.61	86.61	85.71	100.00	68.75	98.21	65.18		66.96	73.21	57.14	63.39	42.86	54.46	25.00	13.39	13.39
Minimum	38.83	0.05	122	9	1	1	7		5	14	1	1	0.9	1	1	4.71E-05	3.42E-04
Maximum	40.97	3.77	1830	300	4	8	216		190	25	4	210	211.8	89	46	4.28E-03	1.54E-02
Average	39.76	1.79	410.99	119.07	1.35	2.96	98.27		75.72	16.39	1.34	61.20	25.42	21.66	8.46	0.00	0.00
Standard deviation	0.45	0.94	303.65	69.10	0.58	1.35	55.59		49.65	2.66	0.74	49.06	42.55	15.75	12.62	0.00	0.00
District code = 61 (Kisii)																	
Total number of boreholes = 28																	
Number of data	18	18	21	27	21	21	22		19	22	21	21	21	20	17	5	5
Data percentage	64.29	64.29	75.00	96.43	75.00	75.00	78.57		67.86	78.57	75.00	75.00	75.00	71.43	60.71	17.86	17.86
Minimum	34.58	-0.83	1265	40	1	1	2		2.2	12	1	5	5	5	1	2.22E-05	1.80E-04
Maximum	34.92	0.67	2181	184	2	9	114		48	40	3	225	144	24	24	2.75E-03	1.77E-02
Average	34.75	-0.63	1801.62	83.30	1.76	3.19	44.05		15.73	16.55	1.29	79.86	42.89	13.55	6.12	0.00	0.01
Standard deviation	0.10	0.34	223.58	32.56	0.44	3.37	23.43		11.94	6.41	0.64	74.57	37.14	6.22	7.03	0.00	0.01
District code = 62 (Kisumu)																	
Total number of boreholes = 133																	
Number of data	130	130	128	133	117	115	120		112	121	107	119	98	116	43	40	39
Data percentage	97.74	97.74	96.24	100.00	87.97	86.47	90.23		84.21	90.98	80.45	89.47	73.68	87.22	32.33	30.08	29.32
Minimum	34.00	-0.83	351	6	1	1	1		1	11	1	1	0.6	1	1	2.64E-05	1.43E-04
Maximum	35.26	0.20	1829	327	6	9	192		105	36	5	760	130	71	15	1.05E-01	1.12E-01
Average	34.97	-0.13	1268.86	95.61	2.09	3.28	67.33		21.24	19.44	1.47	184.93	34.55	16.29	3.12	0.01	0.01
Standard deviation	0.18	0.11	162.93	52.66	1.00	3.24	41.99		17.31	5.50	0.94	168.13	29.19	15.14	3.16	0.02	0.02
District code = 63 (Siaya)																	
Total number of boreholes = 161																	
Number of data	129	129	111	160	89	112	91		81	142	85	87	93	87	13	34	31
Data percentage	80.12	80.12	68.94	99.38	55.28	69.57	56.52		50.31	88.20	52.80	54.04	57.76	54.04	8.07	21.12	19.25
Minimum	34.08	-0.50	354	25	1	1	7		1	7	1	4	1	0.3	1	2.71E-05	2.36E-04
Maximum	34.73	0.30	1795	200	3	9	104		46	29	78	346	120.2	24	16	2.56E-02	1.44E-01
Average	34.27	0.14	1232.95	59.08	1.73	3.63	40.67		17.95	13.08	1.95	69.81	17.08	7.54	3.46	0.01	0.02
Standard deviation	0.10	0.16	159.58	27.91	0.47	2.85	16.04		9.31	4.05	8.35	73.37	24.08	5.46	4.37	0.01	0.03
District code = 64 (South Nyanza)																	
Total number of boreholes = 262																	
Number of data	199	199	221	259	184	202	184		177	192	169	175	157	172	76	71	69
Data percentage	75.95	75.95	84.35	98.85	70.23	77.10	70.23		67.56	73.28	64.50	66.79	59.92	65.65	29.01	27.10	26.34
Minimum	34.02	-1.33	1000	21	1	1	7		1	10	1	1	1	2	1	2.44E-05	2.31E-04
Maximum	35.50	-0.25	1888	214	6	9	201		100	34	4	320	143	81	44	1.96E-01	7.23E-01
Average	34.44	-0.64	1346.30	75.63	1.90	5.58	54.41		19.07	16.45	1.15	74.79	29.98	10.42	4.29	0.01	0.03
Standard deviation	0.20	0.23	119.12	34.17	0.72	3.32	34.42		16.53	3.83	0.50	72.83	25.76	11.25	6.98	0.03	0.10

Table 1.3 (6/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	rest (m)	Diameter (cm)	Pumping tests Number	Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m2/min)	Storage coefficient
District code = 71 (Baringo)																
Total number of boreholes = 43																
Number of data	34	34	33	43	37	40	38	35	39	25	33	17	32	14	7	7
Data percentage	79.07	79.07	76.74	100.00	86.05	93.02	88.37	81.40	90.70	58.14	76.74	39.53	74.42	32.56	16.28	16.28
Minimum	35.63	-0.03	914	23	1	1	5	4	10	1	12	1	3	1	2.78E-04	1.40E-03
Maximum	36.70	1.57	2134	288	4	9	264	204	80	3	500	137	50	57	5.71E-02	1.14E-01
Average	35.95	0.56	1531.52	139.02	1.59	1.53	108.11	69.31	18.79	1.40	134.18	26.18	22.41	12.86	0.01	0.02
Standard deviation	0.21	0.43	415.69	48.08	0.64	1.54	49.66	54.17	10.82	0.58	97.48	33.04	8.91	18.31	0.02	0.04
District code = 72 (Elgeyo Marakwet)																
Total number of boreholes = 14																
Number of data	10	10	10	14	14	13	14	14	13	9	13	8	13	7	2	2
Data percentage	71.43	71.43	71.43	100.00	100.00	92.86	100.00	100.00	92.86	64.29	92.86	57.14	92.86	50.00	14.29	14.29
Minimum	35.47	0.65	689	47	1	1	33	3	15	1	6	3	12	3	1.01E-03	6.79E-03
Maximum	35.58	0.77	2300	188	3	2	176	85	20	4	165	113.6	72	13	6.34E-03	5.43E-02
Average	35.51	0.70	1320.30	111.86	1.50	1.45	67.07	38.36	15.77	2.33	61.16	32.03	31.69	7.29	0.00	0.03
Standard deviation	0.04	0.04	701.85	41.75	0.65	0.52	36.81	26.12	1.88	1.22	56.04	34.99	16.33	4.15	0.00	0.03
District code = 73 (Kajiado)																
Total number of boreholes = 323																
Number of data	266	266	249	320	294	318	289	289	295	217	273	192	264	129	56	54
Data percentage	82.35	82.35	77.09	99.07	91.02	98.45	89.47	89.47	91.33	67.18	84.52	59.44	81.73	39.94	17.34	16.72
Minimum	35.85	-2.98	10	20	1	1	5	2	8	1	1	0.1	1	0.5	2.35E-05	1.68E-04
Maximum	37.65	-0.95	2286	292	6	9	273	254	31	6	600	144.2	97	58	5.03E-01	2.02E-01
Average	36.92	-1.90	1548.08	125.88	1.75	1.91	80.20	39.71	16.60	1.44	125.97	40.59	22.07	8.72	0.02	0.02
Standard deviation	0.32	0.51	278.93	53.79	0.82	1.58	52.32	36.47	3.36	0.82	104.35	37.05	12.70	11.24	0.09	0.05
District code = 74 (Kericho)																
Total number of boreholes = 54																
Number of data	51	51	51	54	45	53	45	45	47	35	46	27	42	6	2	2
Data percentage	94.44	94.44	94.44	100.00	83.33	98.15	83.33	83.33	87.04	64.81	85.19	50.00	77.78	11.11	3.70	3.70
Minimum	35.05	-0.73	15	30	1	1	9	3	12	1	1	3	5	1	1.26E-04	9.84E-04
Maximum	35.65	-0.03	3120	244	5	9	223	116	34	4	606	160.3	86	9	4.88E-04	3.51E-03
Average	35.36	-0.30	2036.90	146.41	1.89	1.85	105.87	40.33	16.66	1.83	119.85	55.41	18.86	4.67	0.00	0.00
Standard deviation	0.18	0.19	465.49	49.40	1.03	2.35	55.80	30.67	3.68	1.15	120.56	46.92	15.67	3.72	0.00	0.00
District code = 75 (Laikipia)																
Total number of boreholes = 239																
Number of data	229	229	230	239	210	239	209	204	208	131	218	102	207	19	10	10
Data percentage	95.82	95.82	96.23	100.00	87.87	100.00	87.45	85.36	87.03	54.81	91.21	42.68	86.61	7.95	4.18	4.18
Minimum	36.13	-0.18	570	19	1	1	7	2	13	1	1	2	1	1	5.46E-05	3.74E-04
Maximum	37.38	0.85	2804	306	6	7	307	141	63	8	677	204.2	52	42	5.23E-03	2.08E-02
Average	36.84	0.26	1909.10	126.10	1.90	1.30	105.18	43.63	15.86	1.82	85.64	65.41	13.59	5.74	0.00	0.01
Standard deviation	0.29	0.24	219.20	63.97	0.95	0.65	60.89	25.18	3.79	1.12	79.65	43.78	9.15	9.15	0.00	0.01

Table 1.3 (7/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	Water level rest (m)	Diameter (cm)	Pumping tests Number	Pumping tests Yield (l/min)	Pumping tests Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m2/min)	Storage coefficient
District code = 76 (Nakuru)																
Total number of boreholes = 767																
Number of data	718	718	705	765	678	755	675	673	686	446	676	291	643	137	48	44
Data percentage	93.61	93.61	91.92	99.74	88.40	98.44	88.01	87.74	89.44	58.15	88.14	37.94	83.83	17.86	6.26	5.74
Minimum	35.27	-1.00	250	10	1	1	1	1	10	1	1	0.1	1	1	3.15E-05	1.85E-04
Maximum	39.88	0.28	2987	939	9	9	290	287	40	7	690	115.8	99	80	1.85E+00	8.24E-01
Average	36.12	-0.40	2067.91	135.29	1.75	1.28	106.58	69.55	16.87	1.43	142.73	27.20	16.25	4.77	0.08	0.08
Standard deviation	0.30	0.27	313.25	70.48	0.93	1.21	62.27	56.45	3.64	0.85	112.13	25.91	13.18	7.93	0.27	0.17
District code = 78 (Narok)																
Total number of boreholes = 38																
Number of data	23	23	25	38	26	33	25	23	31	24	23	24	22	12	6	6
Data percentage	60.53	60.53	65.79	100.00	68.42	86.84	65.79	60.53	81.58	63.16	60.53	63.16	57.89	31.58	15.79	15.79
Minimum	34.87	-1.80	1500	48	1	1	6	2	15	1	3	0.1	1	1	1.53E-04	1.24E-03
Maximum	36.33	-0.58	2758	305	3	9	267	213	25	3	188	80.6	48	13	9.77E-03	3.74E-02
Average	35.79	-1.16	2037.92	147.39	1.73	2.15	82.36	56.43	16.48	1.33	74.04	38.22	17.73	6.75	0.00	0.02
Standard deviation	0.43	0.34	306.27	67.73	0.53	2.06	62.03	55.39	2.63	0.64	56.02	23.69	11.28	3.70	0.00	0.02
District code = 79 (Samburu)																
Total number of boreholes = 69																
Number of data	62	62	60	69	50	68	50	49	56	28	41	20	35	16	7	7
Data percentage	89.86	89.86	86.96	100.00	72.46	98.55	72.46	71.01	81.16	40.58	59.42	28.99	52.17	23.19	10.14	10.14
Minimum	36.55	0.57	229	13	1	1	1	3	10	1	4	1.2	1	1	5.16E-05	3.71E-04
Maximum	37.72	1.98	2134	206	4	8	169	146	30	4	364	145	99	49	6.73E-02	5.45E-02
Average	37.19	1.10	1261.37	96.83	1.58	2.35	64.10	30.68	16.29	1.79	70.17	57.16	29.03	12.06	0.01	0.01
Standard deviation	0.37	0.35	456.66	46.84	0.78	1.56	39.21	26.13	2.98	0.96	71.68	43.10	30.23	16.32	0.03	0.02
District code = 81 (Trans Nzoia)																
Total number of boreholes = 53																
Number of data	50	50	50	53	43	53	44	44	39	33	43	21	40	7	1	1
Data percentage	94.34	94.34	94.34	100.00	81.13	100.00	83.02	83.02	73.58	62.26	81.13	39.62	75.47	13.21	1.89	1.89
Minimum	34.78	0.82	506	15	1	1	3	0	10	1	1	1.5	1	1	5.09E-03	2.16E-02
Maximum	35.45	1.25	2180	201	3	9	189	55	20	4	189	182	24	6	5.09E-03	2.16E-02
Average	34.96	1.06	1367.00	66.40	1.44	1.83	39.23	18.30	13.97	1.33	39.63	34.69	8.25	2.57	0.01	0.02
Standard deviation	0.13	0.13	653.21	45.80	0.67	1.10	23.29	11.27	2.35	0.74	41.36	45.20	6.18	2.37		
District code = 82 (Turkana)																
Total number of boreholes = 412																
Number of data	315	315	148	400	275	315	277	248	288	233	232	204	212	119	122	106
Data percentage	76.46	76.46	35.92	97.09	66.75	76.46	67.23	60.19	69.90	56.55	56.31	49.51	51.46	28.88	29.61	25.73
Minimum	34.17	1.33	90	2	1	1	1.9	1.5	11	1	1.33	0	1	1	1.31E-05	9.70E-05
Maximum	36.73	5.33	1829	254	3	9	206	107	40	2	444	96	76	29	9.41E-01	5.48E-01
Average	35.33	3.36	671.76	63.64	1.58	2.08	37.06	18.29	19.50	1.06	84.99	15.86	22.30	5.10	0.04	0.02
Standard deviation	0.51	0.88	218.56	36.98	0.50	1.67	26.75	15.49	5.48	0.23	88.51	15.17	9.13	3.67	0.12	0.06

Table 1.3 (8/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	rest (m)	Diameter (cm)	Pumping Number	tests Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmis-sivity (m2/min)	Storage coefficient
District code = 83 (Uasin Gishu)																
Total number of boreholes = 132																
Number of data	127	127	125	130	119	124	120	117	111	66	120	60	110	11	3	3
Data percentage	96.21	96.21	94.70	98.48	90.15	93.94	90.91	88.64	84.09	51.52	90.91	45.45	83.33	8.33	2.27	2.27
Minimum	35.02	0.00	266	9	1	1	3	1	13	1	2	0.2	1	1	1.74E-05	1.65E-04
Maximum	36.27	0.92	2621	259	4	4	259	101	20	4	804	211.8	72	6	4.66E-03	2.11E-02
Average	35.54	0.54	1294.27	78.46	1.29	1.29	54.61	15.97	15.37	1.65	62.28	48.58	10.49	3.16	0.00	0.01
Standard deviation	0.16	0.21	816.17	51.66	0.67	0.60	48.60	16.94	1.41	1.05	78.46	45.27	9.96	1.72	0.00	0.01
District code = 84 (West Pokot)																
Total number of boreholes = 42																
Number of data	36	36	25	42	40	39	37	32	39	36	31	30	32	23	18	18
Data percentage	85.71	85.71	59.52	100.00	95.24	92.86	88.10	76.19	92.86	85.71	73.81	71.43	76.19	54.76	42.86	42.86
Minimum	34.93	0.30	1200	32	1	1	9	4	11	1	1	1	1	1	1.97E-05	1.33E-04
Maximum	35.63	2.27	2645	202	2	9	96	69	25	2	273	185	24	9	1.56E-02	1.03E-01
Average	35.12	1.46	1510.80	77.79	1.53	2.15	45.57	22.38	14.23	1.06	42.71	21.46	18.69	3.13	0.00	0.01
Standard deviation	0.15	0.47	320.78	34.36	0.51	1.16	22.33	11.57	4.92	0.23	56.04	32.59	6.64	2.26	0.00	0.03
District code = 91 (Bungoma)																
Total number of boreholes = 176																
Number of data	148	148	133	174	110	150	104	101	153	70	68	63	67	10	18	18
Data percentage	84.09	84.09	75.57	98.86	62.50	85.23	59.09	57.39	86.93	39.77	38.64	35.80	38.07	5.68	10.23	10.23
Minimum	34.23	0.45	347	25	1	1	2	1	8	1	1	0	1	1	4.88E-05	2.00E-04
Maximum	35.15	1.10	2280	150	3	9	91	56	29	4	260	114.3	72	5	2.79E-02	1.30E-02
Average	34.83	0.68	1399.83	60.19	1.58	2.81	36.71	11.93	13.47	1.17	53.88	27.41	11.22	1.70	0.00	0.00
Standard deviation	0.13	0.11	403.92	18.83	0.53	2.13	18.82	10.77	4.06	0.56	67.21	20.01	14.69	1.34	0.01	0.00
District code = 92 (Busia)																
Total number of boreholes = 288																
Number of data	207	209	217	286	200	226	191	168	267	154	140	134	146	66	50	47
Data percentage	71.88	72.57	75.35	99.31	69.44	78.47	66.32	58.33	92.71	53.47	48.61	46.53	50.69	22.92	17.36	16.32
Minimum	34.02	0.03	130	22	1	1	4	1	8	1	2	1	1	1	9.38E-06	7.26E-05
Maximum	35.27	0.77	1800	145	2	9	84	59	30	3	300	85	45	25	4.36E-02	1.56E-01
Average	34.22	0.36	1231.97	53.97	1.59	2.58	36.70	12.64	14.15	1.02	55.16	13.66	6.47	2.23	0.01	0.02
Standard deviation	0.16	0.14	122.61	16.75	0.49	2.16	14.32	9.74	4.60	0.18	57.45	11.58	6.72	3.93	0.01	0.03
District code = 93 (Kakamega)																
Total number of boreholes = 323																
Number of data	292	292	245	323	246	272	235	218	295	206	199	184	200	12	48	44
Data percentage	90.40	90.40	75.85	100.00	76.16	84.21	72.76	67.49	91.33	63.78	61.61	56.97	61.92	3.72	14.86	13.62
Minimum	34.22	0.00	1210.00	22.00	1.00	1.00	3.00	1.00	10.00	1.00	3.00	1.00	0.30	1.00	3.21E-06	2.33E-04
Maximum	35.53	0.75	1590.00	116.00	4.00	9.00	102.00	49.00	29.00	4.00	279.00	102.70	36.00	18.00	7.12E-02	2.23E-01
Average	34.63	0.34	1424.01	48.37	1.63	2.46	32.08	10.71	15.76	1.02	67.57	17.23	5.77	2.75	1.04E-02	2.77E-02
Standard deviation	0.15	0.10	115.61	13.36	0.62	1.88	13.23	5.28	4.30	0.22	56.21	12.83	6.51	4.68	1.82E-02	4.85E-02
District code = Unknown																
Total number of boreholes = 48																
Number of data	20	13	6	14	11	12	11	18	11	20	21	19	17	15	2	2
Data percentage	41.67	27.08	12.50	29.17	22.92	25.00	22.92	37.50	22.92	41.67	43.75	39.58	35.42	31.25	4.17	4.17
Minimum	34.18	-1.53	1250	16	1	1	9	4.9	10	1	1	2	1	1	2.14E-04	2.15E-03
Maximum	39.65	0.82	1900	200	3	9	180	146	200	649	247	88	24	5	7.32E-04	3.46E-03
Average	36.27	-0.31	1561.00	65.64	1.82	4.08	57.00	22.85	33.36	34.25	82.07	20.37	8.12	3.16	0.00	0.00
Standard deviation	1.68	0.60	265.72	49.23	0.60	3.15	50.75	33.14	56.53	144.73	70.53	20.32	6.58	0.84	0.00	0.00

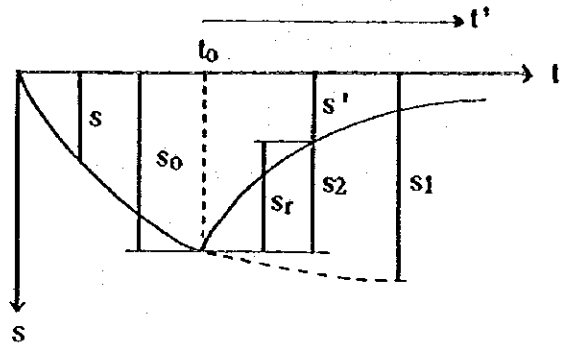
I.4 Analyses of Recovery Test Data

A step-drawdown pumping test and a recovery test have been generally conducted after drilling a borehole, but constant-discharge pumping test has hardly been carried out in Kenya. Recovery test data can be analyzed, only when the pre-pumping is done at a constant rate, to estimate hydraulics of aquifers and drawdown of wells.

(1) Recovery test as an important part of aquifer test

When pumping is stopped, water level of well and aquifer rise towards their initial or rest levels. The time - drawdown measurements taken during the constant - rate pumping period and the time - recovery measurements taken during the recovery period provide two different sets of information from a single aquifer test.

During the recovery period, water level measurements can be made without being affected by pump vibrations and momentary variations in pumping rate. The time - recovery data for the pumped well are more accurate than its time - drawdown data of the constant - rate pumping test.



so	:	Final drawdown [m]
sr	:	Recovery [m]
s'	:	Residual drawdown (= so - sr) [m]
to	:	Time when pumping stopped [sec]
t'	:	Time since pumping stopped [sec]
t	:	Time since pumping started (= to + t') [sec]

Recovery data can be analyzed only when the pumping is done at a constant rate. The residual drawdown at any time during recovery period is the difference between s1 and s2.

$$s' = s1 - s2 = \frac{Q}{4\pi T} W(u) - \frac{Q}{4\pi T} W(u') \quad \text{----------} \quad (1)$$

$$u = \frac{S}{4T}\left(\frac{r^2}{t}\right), \qquad u' = \frac{S}{4T}\left(\frac{r^2}{t'}\right) \quad \text{----------} \quad (2)$$

Q	:	Pumping rate [m3/sec]
W	:	Well function
T	:	Transmissivity [m2/sec]
S	:	Storage coefficient

When the value of u in equation of the well function is less than 0.01, that is, when r2/t becomes very small, an approximation method developed by Cooper and Jacob permits a solution. Therefore, equation (1) is approximated by

$$s' = \frac{Q}{4\pi T}\{(-0.5772 - \log_e u) - (-0.5772 - \log_e u')\}$$

$$= \frac{Q}{4\pi T}\left\{\log_e \frac{4T}{S}\left(\frac{t}{r2}\right) - \log_e \frac{4T}{S}\left(\frac{t'}{r2}\right)\right\}$$

$$= \frac{2.303Q}{4\pi T}\log \frac{t}{t'} \qquad \text{----------} \qquad (3)$$

Similarly, the residual drawdown at any time during recovery period is difference between so and sr .

$$sr = so - s'$$

$$= \frac{Q}{4\pi T}W(uo) - \frac{Q}{4\pi T}W(u')$$

$$= \frac{2.303Q}{4\pi T}\left(\log \frac{2.25Tto}{Sr2} - \log \frac{t}{t'}\right)$$

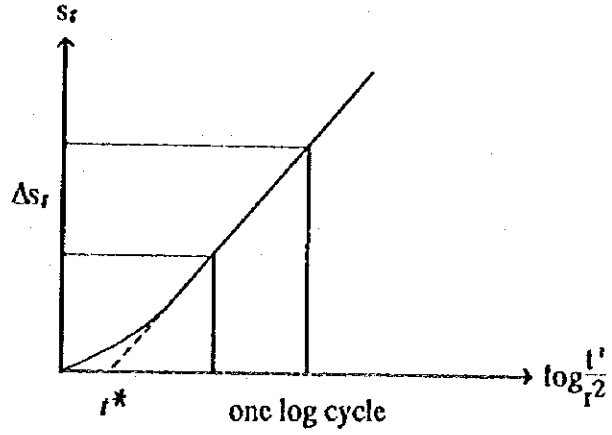
$$= \frac{2.303Q}{4\pi T}\left(\log \frac{t'}{r2} - \log \frac{S}{2.25T} - \log \frac{to}{t' + to}\right)$$

---------- (4)

The value of log to/(t' + to) should be zero when pumping period would be large. Therefore, equation (4) is

$$sr = \frac{2.303Q}{4\pi T}\left(\log \frac{t'}{r2} - \log \frac{S}{2.25T}\right) \qquad \text{----------} \qquad (5)$$

When t' becomes large, the plot of the observed data would fall on a straight line as shown in the following Figure.



The value of t'/r2 is usually chosen over one log cycle so that equation (5) becomes:

$$T = \frac{2.303Q}{4\pi \Delta sr} \qquad \text{----------} \qquad (6)$$

Storage coefficient is determined by projecting the straight line to the zero residual drawdown intercept which defines log t'/r2.

$$S = 2.25\,T \log \frac{t'}{r2} \qquad \text{----------} \qquad (7)$$

Table I.4.1 (1/15) Analysis of exising recovery test data

B/H No	X1	Y1	Gradient	Q (l/min)	delta s r	Transmisivity (m2/min)	Intercept	t*	Storage Coefficient
3656	3.8	12.1	3.67	6.8	3.67	3.39E-04	-1.83	0.50	3.82E-04
3657	4.0	45.0	58.33	15	58.33	4.71E-05	-188.33	3.23	3.42E-04
3658	3.6	33.0	55.00	23	55.00	7.65E-05	-165.00	3.00	5.17E-04
3673	4.9	32.0	40.00	76	40.00	3.48E-04	-164.00	4.10	3.21E-03
3683	3.4	20.0	18.89	130	18.89	1.26E-03	-44.22	2.34	6.64E-03
3685				121					
3686	4.4	22.0	16.00	11	16.00	1.26E-04	-48.40	3.03	8.56E-04
3687	3.5	18.0	13.33	36	13.33	4.94E-04	-28.67	2.15	2.39E-03
3694	3.7	55.0	40.91	78	40.91	3.49E-04	-96.36	2.36	1.85E-03
3695	3.2	12.3	3.00	152	3.00	9.27E-03	2.70	-0.90	
3696	4.3	11.0	15.00	12	15.00	1.46E-04	-53.50	3.57	1.18E-03
3706	4.0	47.0	39.17	88	39.17	4.11E-04	-109.67	2.80	2.59E-03
3715	3.0	32.0	25.00	88	25.00	6.44E-04	-43.00	1.72	2.49E-03
3728	4.5	110.0	175.00	26	175.00	2.72E-05	-677.50	3.87	2.37E-04
3731	3.5	14.0	18.33	121	18.33	1.21E-03	-50.17	2.74	7.44E-03
3747	4.4	14.0	10.00	126	10.00	2.31E-03	-30.00	3.00	1.56E-02
3752	3.4	58.0	45.50	121	45.50	4.87E-04	-96.70	2.13	2.33E-03
3753	3.0	11.0	8.75	180	8.75	3.77E-03	-15.25	1.74	1.48E-02
3755	3.9	50.0	57.14	23	57.14	7.37E-05	-172.86	3.03	5.01E-04
3757	3.6	58.0	46.67	76	46.67	2.98E-04	-110.00	2.36	1.58E-03
3761	3.4	30.0	83.75	25	83.75	5.46E-05	-254.75	3.04	3.74E-04
3781	2.9	19.0	16.67	101	16.67	1.11E-03	-29.33	1.76	4.39E-03
3782	3.0	11.0	12.50	72	12.50	1.05E-03	-26.50	2.12	5.03E-03
3783	3.8	9.0	6.25	160	6.25	4.69E-03	-14.75	2.36	2.49E-02
3785	2.8	13.0	13.33	152	13.33	2.09E-03	-24.33	1.83	8.57E-03
3787	3.4	16.0	17.50	98	17.50	1.02E-03	-43.50	2.49	5.73E-03
3788	3.2	13.0	8.33	97	8.33	2.13E-03	-13.67	1.64	7.86E-03
3797	3.2	20.0	17.00	167	17.00	1.80E-03	-34.40	2.02	8.19E-03
3811	3.0	29.0	25.71	136	25.71	9.68E-04	-48.14	1.87	4.08E-03
3815	3.6	19.0	18.75	106	18.75	1.03E-03	-48.50	2.59	6.02E-03
3819	4.0	21.0	11.43	152	11.43	2.43E-03	-24.71	2.16	1.18E-02
3824	4.0	90.0	80.00	76	80.00	1.74E-04	-226.00	2.83	1.11E-03
3830	3.0	15.2	10.67	152	10.67	2.61E-03	-16.80	1.57	9.24E-03
3832	3.8	60.0	55.00	68	55.00	2.26E-04	-149.00	2.71	1.38E-03
3833	4.4	110.0	112.50	38	112.50	6.18E-05	-385.00	3.42	4.76E-04
3834	2.8	50.0	62.50	91	62.50	2.66E-04	-125.00	2.00	1.20E-03
3835	3.4	75.0	93.75	114	93.75	2.23E-04	-243.75	2.60	1.30E-03
3839	3.1	5.8	4.80	167	4.80	6.37E-03	-9.08	1.89	2.71E-02
3852	2.9	24.0	23.33	114	23.33	8.94E-04	-43.67	1.87	3.77E-03
3855	4.2	110.0	110.00	31	110.00	5.16E-05	-352.00	3.20	3.71E-04
3856	3.8	70.0	87.50	23	87.50	4.81E-05	-262.50	3.00	3.25E-04
3857	2.4	8.0	13.30	152	13.33	2.09E-03	-24.00	1.80	8.45E-03
3860	3.0	28.0	33.33	285	33.33	1.56E-03	-72.00	2.16	7.61E-03
3861	4.4	22.0	22.50	46	22.50	3.74E-04	-77.00	3.42	2.88E-03
3882	4.0	6.5	3.75	137	3.75	6.69E-03	-8.50	2.27	3.41E-02
3909	3.2	10.0	7.78	99	7.78	2.33E-03	-14.89	1.91	1.00E-02
4101	3.8	28.0	17.78	325.75	17.78	3.35E-03	-39.56	2.23	1.68E-02
4103	3.6	42.0	26.67	113.63	26.67	7.80E-04	-54.00	2.03	3.55E-03
4104	3.6	70.0	77.78	530.3	77.78	1.25E-03	-210.00	2.70	7.58E-03
4108	3.7	26.0	19.09	303.03	19.09	2.91E-03	-44.64	2.34	1.53E-02
4110	5.0	50.0	33.33	15.15	33.33	8.32E-05	-116.67	3.50	6.55E-04
4113	4.8	40.0	33.33	22.73	33.33	1.25E-04	-120.00	3.60	1.01E-03
4116	4.2	18.0	8.57	128.78	8.57	2.75E-03	-18.00	2.10	1.30E-02
4121	5.0	70.0	63.64	125.75	63.64	3.62E-04	-248.18	3.90	3.17E-03
4133	4.3	12.0	16.00	150	16.00	1.72E-03	-56.80	3.55	1.37E-02
4134	4.3	36.0	32.00	41.63	32.00	2.38E-04	-101.60	3.18	1.70E-03
4140	5.1	10.0	2.31	144.9	2.31	1.15E-02	-1.77	0.77	1.98E-02
4144	3.4	50.0	36.36	500	36.36	2.52E-03	-73.64	2.03	1.15E-02
4146	4.8	5.2	5.25	181.81	5.25	6.34E-03	-20.00	3.81	5.43E-02
4148	3.8	35.0	58.33	400	58.33	1.26E-03	-186.67	3.20	9.04E-03
4178	4.0	2.7	0.90	600	0.90	1.22E-01	-0.90	1.00	2.75E-01
4179	3.1	6.0	6.00	58.33	6.00	1.78E-03	-12.60	2.10	8.41E-03
4180	3.2	10.0	7.00	200	7.00	5.23E-03	-12.40	1.77	2.08E-02

Table I.4.1 (2/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
4182	3.1	4.8	10.25	101.0	10.25	1.80E-03	-27.03	2.64	1.07E-02
4189	4.1	2.3	1.42	330.0	1.42	4.26E-02	-3.51	2.48	2.38E-01
4190	4.2	32.0	32.50	50.0	32.50	2.82E-04	-104.50	3.22	2.04E-03
4198	4.2	80.0	77.78	10.0	77.78	2.35E-05	-246.67	3.17	1.68E-04
4199	3.2	24.0	15.00	356.8	15.00	4.35E-03	-24.00	1.60	1.57E-02
4201	4.6	0.5	0.20	545.5	0.20	4.99E-01	-0.44	2.20	
4206	3.6	32.0	22.50	183.3	22.50	1.49E-03	-49.00	2.18	7.31E-03
4207	5.0	30.0	22.00	24.6	22.00	2.04E-04	-80.00	3.64	1.67E-03
4214	4.1	42.0	41.11	45.6	41.11	2.03E-04	-126.56	3.08	1.40E-03
4219	3.8	4.8	1.64	389.5	1.64	4.36E-02	-1.42	0.87	8.50E-02
4220	4.8	8.0	4.00	148.2	4.00	6.78E-03	-11.20	2.80	4.27E-02
4231	3.0	40.0	43.75	160.0	43.75	6.69E-04	-91.25	2.09	3.14E-03
4233	4.7	22.0	6.25	88.0	6.25	2.58E-03	-7.38	1.18	6.84E-03
4235	4.0	1.3	0.55	14.3	0.55	4.80E-03	-0.91	1.67	1.80E-02
4236	4.8	3.0	2.25	568.2	2.25	4.62E-02	-7.80	3.47	3.61E-01
4251	3.6	50.0	75.00	50.5	75.00	1.23E-04	-220.00	2.93	8.13E-04
4259	5.0	140.0	90.00	30.0	90.00	6.10E-05	-310.00	3.44	4.73E-04
4264	3.6	55.0	30.00	90.0	30.00	5.49E-04	-53.00	1.77	2.18E-03
4266	4.2	4.9	1.00	116.7	1.00	2.14E-02	0.70	-0.70	
4268	4.2	35.0	19.44	90.0	19.44	8.47E-04	-46.67	2.40	4.57E-03
4274	3.1	35.0	38.89	100.0	38.89	4.71E-04	-85.56	2.20	2.33E-03
4275	4.2	5.0	20.83	76.0	20.83	6.68E-04	-82.50	3.96	5.95E-03
4277	4.8	28.0	9.00	180.0	9.00	3.66E-03	-15.20	1.69	1.39E-02
4278	4.2	2.8	1.20	80.0	1.20	1.22E-02	-2.24	1.87	5.12E-02
4290	4.2	160.0	112.50	158.0	112.50	2.57E-04	-312.50	2.78	1.61E-03
4293	4.2	40.0	20.00	170.0	20.00	1.56E-03	-44.00	2.20	7.70E-03
4294	2.6	6.5	6.67	150.0	6.67	4.12E-03	-10.83	1.63	1.51E-02
4388	4.4	2.1	0.80	83.0	0.80	1.90E-02	-1.42	1.78	7.58E-02
4397	3.3	0.5	0.18	1818.2	0.18	1.85E+00	-0.09	0.52	
4403	4.6	12.5	3.46	90.0	3.46	4.76E-03	-3.42	0.99	1.06E-02
4404	3.3	0.5	0.18	95.0	0.18	9.66E-02	-0.09	0.52	1.14E-01
4408	4.6	32.0	12.50	88.0	12.50	1.29E-03	-25.50	2.04	5.91E-03
4415	3.3	0.4	0.33	876.1	0.33	4.81E-01	-0.69	2.07	
4416	3.7	18.0	32.50	428.5	32.50	2.41E-03	-102.25	3.15	1.71E-02
4417	3.7	50.0	28.57	43.9	28.57	2.81E-04	-55.71	1.95	1.23E-03
4419	2.9	3.3	1.50	292.4	1.50	3.57E-02	-1.05	0.70	5.62E-02
4420	2.4	1.6	3.50	1894.0	3.50	9.90E-02	-6.80	1.94	4.33E-01
4438	3.2	60.0	50.00	270.0	50.00	9.88E-04	-100.00	2.00	4.45E-03
4442	3.4	10.0	9.00	15.3	9.00	3.12E-04	-20.60	2.29	1.60E-03
4445	4.4	2.6	4.33	9.1	4.33	3.84E-04	-16.47	3.80	3.28E-03
4446	4.4	7.0	5.83	110.0	5.83	3.58E-03	-17.75	3.16	2.54E-02
4450	4.6	36.0	28.33	136.4	28.33	8.81E-04	-94.33	3.33	6.60E-03
4453	4.8	2.5	3.17	101.2	3.17	5.85E-03	-12.70	4.01	5.28E-02
4456	3.6	23.0	11.25	330.0	11.25	5.37E-03	-17.50	1.56	1.88E-02
4459	3.0	7.8	2.75	460.0	2.75	3.06E-02	-0.45	0.16	1.13E-02
4466	4.8	9.4	5.29	110.0	5.29	3.81E-03	-15.97	3.02	2.59E-02
4470	2.9	3.0	0.36	877.4	0.36	4.46E-01	1.92	-5.32	
4472	4.8	78.0	78.00	60.0	78.00	1.41E-04	-296.40	3.80	1.20E-03
4473	3.8	13.0	13.00	88.0	13.00	1.24E-03	-36.40	2.80	7.81E-03
4474	3.0	5.2	10.40	130.0	10.40	2.29E-03	-26.00	2.50	1.29E-02
4477	3.0	16.0	35.00	122.0	35.00	6.38E-04	-89.00	2.54	3.65E-03
4480	3.2	64.0	49.00	305.0	49.00	1.14E-03	-92.80	1.89	4.85E-03
4482	3.0	2.8	2.38	80.0	2.38	6.17E-03	-4.33	1.82	2.53E-02
4484	3.7	1.4	1.50	112.8	1.50	1.38E-02	-4.15	2.77	8.57E-02
4485	3.2	15.0	11.00	166.7	11.00	2.77E-03	-20.20	1.84	1.15E-02
4493	4.6	12.0	11.00	272.0	11.00	4.53E-03	-38.60	3.51	3.57E-02
4498	3.4	27.0	15.83	82.0	15.83	9.48E-04	-26.83	1.69	3.61E-03
4507	4.2	70.0	50.00	70.0	50.00	2.56E-04	-140.00	2.80	1.61E-03
4511	3.2	0.2	0.10	200.0	0.10	3.66E-01	-0.10	1.00	8.24E-01
4513	3.7	50.0	33.33	25.0	33.33	1.37E-04	-73.33	2.20	6.79E-04
4517	4.8	7.0	15.00	284.1	15.00	3.47E-03	-65.00	4.33	3.38E-02
4518	3.0	16.0	23.33	113.6	23.33	8.91E-04	-54.00	2.31	4.64E-03
4520	4.8	80.0	88.89	88.0	88.89	1.81E-04	-346.67	3.90	1.59E-03

Table I.4.1 (3/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
4521	4.2	80.0	48.75	114.8	48.75	4.31E-04	-124.75	2.56	2.48E-03
4523	3.0	0.9	1.15	100.0	1.15	1.59E-02	-2.55	2.22	7.94E-02
4525	4.0	29.0	16.00	20.0	16.00	2.29E-04	-35.00	2.19	1.13E-03
4530	3.0	1.1	0.42	153.2	0.42	6.73E-02	-0.15	0.36	5.45E-02
4532	3.6	17.0	17.50	177.6	17.50	1.86E-03	-46.00	2.63	1.10E-02
4537	2.4	0.3	0.15	500.0	0.15	6.10E-01	-0.03	0.20	2.75E-01
4538	4.4	26.0	12.86	120.0	12.86	1.71E-03	-30.57	2.38	9.14E-03
4540	3.7	26.0	40.00	48.2	40.00	2.20E-04	-122.00	3.05	1.51E-03
4556	4.6	34.0	72.50	42.0	72.50	1.06E-04	-299.50	4.13	9.86E-04
4559	3.2	5.0	6.25	100.0	6.25	2.93E-03	-15.00	2.40	1.58E-02
4560	4.2	40.0	40.00	129.7	40.00	5.93E-04	-128.00	3.20	4.27E-03
4561	3.2	7.0	8.75	70.0	8.75	1.46E-03	-21.00	2.40	7.91E-03
4563	2.6	1.0	12.86	200.0	12.86	2.85E-03	-32.43	2.52	1.62E-02
4572	4.8	85.0	68.75	947.0	68.75	2.52E-03	-245.00	3.56	2.02E-02
4579	4.0	40.0	75.00	347.0	75.00	8.47E-04	-260.00	3.47	6.61E-03
4580	4.8	2.3	4.25	73.0	4.25	3.14E-03	-18.10	4.26	3.01E-02
4583	2.9	0.6	0.24	136.1	0.24	1.04E-01	-0.15	0.61	1.42E-01
4586	5.0	12.0	11.00	50.0	11.00	8.32E-04	-43.00	3.91	7.32E-03
4597	4.0	45.0	32.14	100.0	32.14	5.69E-04	-83.57	2.60	3.33E-03
4599	4.8	5.0	15.00	289.0	15.00	3.53E-03	-67.00	4.47	3.54E-02
4600	3.6	80.0	80.00	13.8	80.00	3.15E-05	-208.00	2.60	1.85E-04
4602	3.0	3.8	4.00	118.0	4.00	5.40E-03	-8.20	2.05	2.49E-02
4604	3.4	4.5	3.75	22.3	3.75	1.09E-03	-8.25	2.20	5.39E-03
4605	3.2	4.6	3.50	75.0	3.50	3.92E-03	-6.60	1.89	1.66E-02
4611	4.2	50.0	46.00	34.0	46.00	1.35E-04	-143.20	3.11	9.48E-04
4614	4.4	4.5	4.00	178.0	4.00	8.14E-03	-13.10	3.28	6.00E-02
4617	4.4	45.2	35.20	90.9	35.20	4.73E-04	-109.68	3.12	3.31E-03
4619	4.4	19.0	16.67	50.0	16.67	5.49E-04	-54.33	3.26	4.03E-03
4621	3.2	60.0	62.50	287.0	62.50	8.40E-04	-140.00	2.24	4.24E-03
4622	3.2	19.0	25.00	206.0	25.00	1.51E-03	-61.00	2.44	8.28E-03
4623	4.8	50.0	100.00	412.0	100.00	7.54E-04	-430.00	4.30	7.30E-03
4628	4.0	53.0	165.00	113.7	165.00	1.26E-04	-607.00	3.68	1.04E-03
4635	5.0	40.0	13.08	183.3	13.08	2.57E-03	-25.38	1.94	1.12E-02
4636	3.2	60.0	107.50	530.0	107.50	9.02E-04	-284.00	2.64	5.36E-03
4638	3.2	0.8	0.39	160.0	0.39	7.53E-02	-0.44	1.14	1.94E-01
4646	3.2	22.0	25.00	119.4	25.00	8.74E-04	-58.00	2.32	4.56E-03
4658	4.6	5.0	2.43	88.1	2.43	6.65E-03	-6.16	2.54	3.80E-02
4662	3.6	18.0	26.67	19.0	26.67	1.30E-04	-78.00	2.93	8.58E-04
4664	4.8	26.0	15.00	206.0	15.00	2.51E-03	-46.00	3.07	1.73E-02
4665	4.8	17.0	30.00	412.0	30.00	2.51E-03	-127.00	4.23	2.39E-02
4666	3.2	50.0	100.00	113.6	100.00	2.08E-04	-270.00	2.70	1.26E-03
4669	3.0	4.2	1.00	214.0	1.00	3.92E-02	1.20	-1.20	
4685	3.2	8.0	6.25	227.0	6.25	6.65E-03	-12.00	1.92	2.87E-02
4686	4.6	40.0	23.13	440.0	23.13	3.48E-03	-66.38	2.87	2.25E-02
4687	5.0	60.0	27.27	112.5	27.27	7.55E-04	-76.36	2.80	4.76E-03
4689	3.6	70.0	83.33	274.0	83.33	6.02E-04	-230.00	2.76	3.74E-03
4690	4.8	70.0	300.00	31.0	300.00	1.89E-05	-1370.00	4.57	1.94E-04
4693	3.0	40.0	123.33	55.0	123.33	8.16E-05	-330.00	2.68	4.91E-04
4697	4.8	4.4	2.29	90.9	2.29	7.28E-03	-6.57	2.88	4.71E-02
4699	4.8	3.2	4.50	50.0	4.50	2.03E-03	-18.40	4.09	1.87E-02
4702	3.6	30.0	28.00	106.0	28.00	6.93E-04	-70.80	2.53	3.94E-03
4714	3.5	5.0	3.18	79.0	3.18	4.54E-03	-6.14	1.93	1.97E-02
4717	3.8	70.0	87.50	100.0	87.50	2.09E-04	-262.50	3.00	1.41E-03
4719	3.6	1.1	1.83	90.6	1.83	9.04E-03	-5.50	3.00	6.11E-02
4722	3.0	10.0	9.50	307.2	9.50	5.92E-03	-18.50	1.95	2.59E-02
4728	3.7	50.0	112.50	189.4	112.50	3.08E-04	-366.25	3.26	2.26E-03
4729	4.2	7.0	2.92	189.4	2.92	1.19E-02	-5.25	1.80	4.81E-02
4730	3.4	17.0	15.45	70.0	15.45	8.29E-04	-35.55	2.30	4.29E-03
4732	3.3	11.3	28.25	375.0	28.25	2.43E-03	-61.93	2.90	1.59E-02
4734	3.0	9.0	10.00	150.0	10.00	2.75E-03	-21.00	2.10	1.30E-02
4735	4.8	7.0	2.50	150.0	2.50	1.10E-02	-5.00	2.00	4.94E-02
4737	3.8	60.0	50.00	60.6	50.00	2.22E-04	-130.00	2.60	1.30E-03
4739	4.3	26.0	20.00	151.5	20.00	1.39E-03	-60.00	3.00	9.36E-03

Table I.4.1 (4/15) Analysis of exising recovery test data

B/H No	X1	Y1	Gradient	Q (l/min)	delta s r	Transmisivity (m2/min)	intercept	t *	Storage Coefficient
4742	5.2	9.0	2.14	165	2.14	1.41E-02	-2.14	1.00	3.17E-02
4747	3.2	0.3	0.27	170.45	0.27	1.17E-01	-0.59	2.23	5.86E-01
4751	4.0	36.0	26.00	112	26.00	7.88E-04	-68.00	2.62	4.64E-03
4755	5.0	100.0	42.86	112	42.86	4.78E-04	-114.29	2.67	2.87E-03
4756	4.8	50.0	18.75	90	18.75	8.79E-04	-40.00	2.13	4.22E-03
4758	4.2	50.0	30.00	160.37	30.00	9.78E-04	-76.00	2.53	5.58E-03
4760	4.2	80.0	125.00	121.74	125.00	1.78E-04	-445.00	3.56	1.43E-03
4762	4.2	70.0	150.00	151.51	150.00	1.85E-04	-560.00	3.73	1.55E-03
4763	4.2	80.0	60.00	219.92	60.00	6.71E-04	-172.00	2.87	4.33E-03
4767	3.2	3.0	1.50	170	1.50	2.07E-02	-1.80	1.20	5.60E-02
4768	3.8	25.0	13.75	220	13.75	2.93E-03	-27.25	1.98	1.31E-02
4770	4.0	15.0	11.67	209.77	11.67	3.29E-03	-31.67	2.71	2.01E-02
4773	4.6	2.5	2.50	166.66	2.50	1.22E-02	-9.00	3.60	9.88E-02
4775	4.3	60.0	41.67	175.97	41.67	7.73E-04	-119.17	2.86	4.97E-03
4780	3.8	17.0	16.00	227	16.00	2.60E-03	-43.80	2.74	1.60E-02
4789	4.4	26.0	16.67	55	16.67	6.04E-04	-47.33	2.84	3.86E-03
4791	5.0	4.5	2.25	100	2.25	8.13E-03	-6.75	3.00	5.49E-02
4792	3.5	70.0	71.43	151.51	71.43	3.88E-04	-180.00	2.52	2.20E-03
4801	4.4	35.0	16.67	70	16.67	7.69E-04	-38.33	2.30	3.98E-03
4804	3.5	8.0	4.17	113	4.17	4.96E-03	-6.58	1.58	1.76E-02
4805	3.4	18.0	13.75	60	13.75	7.99E-04	-28.75	2.09	3.76E-03
4806	3.6	10.5	1.75	120	1.75	1.26E-02	4.20	-2.40	
4809	3.4	2.3	4.00	291.66	4.00	1.33E-02	-11.30	2.83	8.48E-02
4810	4.9	13.0	15.00	113.63	15.00	1.39E-03	-60.50	4.03	1.26E-02
4811	3.6	34.0	30.00	151.51	30.00	9.24E-04	-74.00	2.47	5.13E-03
4812	4.0	13.0	6.25	80	6.25	2.34E-03	-12.00	1.92	1.01E-02
4813	2.8	17.0	8.00	260.86	8.00	5.97E-03	-5.40	0.68	9.06E-03
4823	2.8	15.0	17.50	227	17.50	2.37E-03	-34.00	1.94	1.04E-02
4830	4.0	0.8	0.29	112.5	0.29	7.21E-02	-0.34	1.20	1.95E-01
4831	4.0	40.0	37.50	91.66	37.50	4.47E-04	-110.00	2.93	2.95E-03
4835	3.4	24.0	36.67	151.53	36.67	7.56E-04	-100.67	2.75	4.67E-03
4836	2.9	5.0	3.33	151.51	3.33	8.32E-03	-4.67	1.40	2.62E-02
4840	3.5	44.0	26.00	75	26.00	5.28E-04	-47.00	1.81	2.15E-03
4841	4.8	3.2	1.27	164.84	1.27	2.37E-02	-2.91	2.29	1.22E-01
4843	4.6	11.0	18.33	164.24	18.33	1.64E-03	-73.33	4.00	1.48E-02
4846	4.8	0.7	0.20	120	0.20	1.10E-01	-0.24	1.20	2.97E-01
4847	5.0	8.0	3.00	133	3.00	8.11E-03	-7.00	2.33	4.26E-02
4848	5.0	9.5	1.94	300	1.94	2.82E-02	-0.22	0.11	7.26E-03
4849	4.8	6.0	1.75	155	1.75	1.62E-02	-2.40	1.37	5.00E-02
4860	2.6	19.0	26.67	355	26.67	2.44E-03	-50.33	1.89	1.03E-02
4861	4.6	2.3	1.19	191	1.19	2.94E-02	-3.16	2.66	1.76E-01
4862	4.6	18.0	16.00	100	16.00	1.14E-03	-55.60	3.48	8.94E-03
4863	3.2	8.0	15.00	87	15.00	1.06E-03	-40.00	2.67	6.37E-03
4865	4.2	4.0	0.50	225	0.50	8.24E-02	1.90	-3.80	
4866	4.4	110.0	83.33	90.91	83.33	2.00E-04	-256.67	3.08	1.38E-03
4867	3.9	23.0	17.27	181.8	17.27	1.93E-03	-44.36	2.57	1.11E-02
4870	3.6	2.0	2.25	284.09	2.25	2.31E-02	-6.10	2.71	1.41E-01
4871	3.2	4.8	2.60	341.2	2.60	2.40E-02	-3.52	1.35	7.32E-02
4878	3.8	17.0	12.00	69.7	12.00	1.06E-03	-28.60	2.38	5.70E-03
4879	4.4	30.0	42.86	60	42.86	2.56E-04	-158.57	3.70	2.13E-03
4882	3.4	28.0	24.44	16.8	24.44	1.26E-04	-55.11	2.25	6.38E-04
4887	3.4	17.0	40.00	127	40.00	5.81E-04	-119.00	2.98	3.89E-03
4888	4.0	13.0	11.43	265.15	11.43	4.25E-03	-32.71	2.86	2.73E-02
4891	4.4	45.0	45.00	101.53	45.00	4.13E-04	-153.00	3.40	3.16E-03
4895	4.4	34.0	35.00	27.33	35.00	1.43E-04	-120.00	3.43	1.10E-03
4898	3.0	23.0	18.33	308	18.33	3.07E-03	-32.00	1.75	1.21E-02
4901	3.6	70.0	62.50	43	62.50	1.26E-04	-155.00	2.48	7.03E-04
4902	5.0	12.0	6.25	30	6.25	8.79E-04	-19.25	3.08	6.09E-03
4903	4.2	11.0	6.25	60	6.25	1.76E-03	-15.25	2.44	9.65E-03
4905	4.4	40.0	50.00	41.8	50.00	1.53E-04	-180.00	3.60	1.24E-03
4910	3.4	34.0	32.50	112.5	32.50	6.34E-04	-76.50	2.35	3.36E-03
4913	3.6	23.0	17.50	82.79	17.50	8.66E-04	-40.00	2.29	4.45E-03
4919	4.8	1.0	0.56	148.22	0.56	4.88E-02	-1.67	3.00	3.30E-01

Table I.4.1 (5/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s'	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
4922	4.0	34.0	20.00	86.0	20.00	7.87E-04	-46.00	2.30	4.07E-03
4923	3.1	29.0	22.86	250.0	22.86	2.00E-03	-41.86	1.83	8.25E-03
4924	3.3	3.0	2.29	117.0	2.29	9.37E-03	-4.54	1.99	4.19E-02
4925	3.0	22.0	25.71	287.0	25.71	2.04E-03	-55.14	2.14	9.86E-03
4926	4.8	40.0	16.67	68.0	16.67	7.47E-04	-40.00	2.40	4.03E-03
4938	4.8	100.0	44.44	56.8	44.44	2.34E-04	-113.33	2.55	1.34E-03
4939	3.7	4.6	5.20	227.3	5.20	8.00E-03	-14.64	2.82	5.07E-02
4941	3.2	24.0	26.25	170.5	26.25	1.19E-03	-60.00	2.29	6.11E-03
4942	3.4	6.1	2.57	10.0	2.57	7.12E-04	-2.64	1.03	1.65E-03
4947	4.2	15.0	7.50	17.4	7.50	4.25E-04	-16.50	2.20	2.10E-03
4949	4.4	6.0	17.50	42.6	17.50	4.45E-04	-71.00	4.06	4.07E-03
4962	3.5	12.0	10.00	75.0	10.00	1.37E-03	-23.00	2.30	7.10E-03
4963	3.6	35.0	37.50	227.3	37.50	1.11E-03	-100.00	2.67	6.66E-03
4965	3.1	6.0	8.57	229.6	8.57	4.77E-03	-20.57	2.40	2.58E-02
4978	3.0	12.0	8.75	40.0	8.75	8.37E-04	-14.25	1.63	3.07E-03
4979	2.5	0.7	0.33	450.0	0.33	2.50E-01	-0.08	0.24	1.34E-01
4980	4.2	60.0	50.00	90.0	50.00	3.29E-04	-150.00	3.00	2.22E-03
4981	3.8	7.0	3.13	112.5	3.13	6.59E-03	-4.88	1.56	2.31E-02
4985	3.4	32.0	35.00	40.0	35.00	2.09E-04	-87.00	2.49	1.17E-03
4989	2.0	0.4	0.65	681.8	0.65	1.92E-01	-0.92	1.42	6.11E-01
4992	4.8	1.2	2.00	98.2	2.00	8.98E-03	-8.40	4.20	8.49E-02
4997	4.5	15.0	9.33	250.0	9.33	4.90E-03	-27.00	2.89	3.19E-02
4998	2.9	9.0	5.71	114.8	5.71	3.68E-03	-7.57	1.33	1.10E-02
4999	4.1	90.0	72.73	108.3	72.73	2.72E-04	-208.18	2.86	1.75E-03
5002	3.1	4.8	9.00	152.0	9.00	3.09E-03	-23.10	2.57	1.79E-02
5006	3.4	90.0	75.00	220.0	75.00	5.37E-04	-165.00	2.20	2.66E-03
5009	3.8	15.0	12.50	112.5	12.50	1.65E-03	-32.50	2.60	9.64E-03
5013	4.7	18.0	13.85	113.7	13.85	1.50E-03	-47.08	3.40	1.15E-02
5014	40.0	50.0	35.00	40.0	35.00	2.09E-04	-1350.00	38.57	1.82E-02
5015	3.0	17.5	16.88	400.0	16.88	4.34E-03	-33.13	1.96	1.92E-02
5017	3.6	40.0	43.75	84.0	43.75	3.51E-04	-117.50	2.69	2.12E-03
5019	4.8	70.0	50.00	71.0	50.00	2.60E-04	-170.00	3.40	1.99E-03
5026	3.0	40.0	58.33	325.0	58.33	1.02E-03	-135.00	2.31	5.31E-03
5027	3.0	17.0	8.00	217.4	8.00	4.97E-03	-7.00	0.88	9.79E-03
5028	3.1	18.0	20.00	59.1	20.00	5.40E-04	-44.00	2.20	2.67E-03
5029	3.9	40.0	20.59	50.0	20.59	4.44E-04	-40.29	1.96	1.96E-03
5031	3.5	22.0	17.78	129.0	17.78	1.33E-03	-40.22	2.26	6.76E-03
5041	3.2	28.0	27.50	200.0	27.50	1.33E-03	-60.00	2.18	6.53E-03
5042	3.9	17.0	12.14	13.8	12.14	2.08E-04	-30.36	2.50	1.17E-03
5043	4.2	50.0	32.14	23.3	32.14	1.33E-04	-85.00	2.64	7.89E-04
5047	4.4	18.0	45.00	101.5	45.00	4.13E-04	-180.00	4.00	3.72E-03
5050	3.2	14.0	11.25	150.0	11.25	2.44E-03	-22.00	1.96	1.07E-02
5100	4.2	28.0	23.33	23.3	23.33	1.83E-04	-70.00	3.00	1.24E-03
5101	3.8	32.0	22.86	36.7	22.86	2.94E-04	-54.86	2.40	1.59E-03
5104	4.4	45.0	38.14	18.3	38.14	8.80E-05	-122.03	3.20	6.33E-04
5114	3.4	17.0	20.00	111.1	20.00	1.02E-03	-51.00	2.55	5.83E-03
5118	3.1	3.2	3.37	188.4	3.37	1.02E-02	-7.26	2.15	4.95E-02
5142	4.2	29.0	29.23	33.0	29.23	2.07E-04	-92.31	3.16	1.47E-03
5143	2.2	2.5	5.65	300.0	5.65	9.72E-03	-9.93	1.76	3.84E-02
5144	3.6	22.0	20.00	84.0	20.00	7.69E-04	-50.00	2.50	4.32E-03
5161	4.0	50.0	50.00	150.0	50.00	5.49E-04	-150.00	3.00	3.71E-03
5166	3.6	18.0	10.45	100.0	10.45	1.75E-03	-19.61	1.88	7.40E-03
5167	3.4	24.0	17.50	75.0	17.50	7.84E-04	-35.50	2.03	3.58E-03
5168	3.8	11.0	6.43	45.0	6.43	1.28E-03	-13.43	2.09	6.02E-03
5171	4.0	60.0	40.00	150.0	40.00	6.86E-04	-100.00	2.50	3.86E-03
5174	4.0	2.6	1.11	111.0	1.11	1.83E-02	-1.84	1.66	6.83E-02
5203	3.8	23.0	20.00	36.4	20.00	3.33E-04	-53.00	2.65	1.98E-03
5204	4.2	22.0	27.50	60.0	27.50	3.99E-04	-93.50	3.40	3.05E-03
5205	3.8	1.6	1.03	150.0	1.03	2.67E-02	-2.28	2.22	1.33E-01
5206	4.2	0.3	0.21	277.8	0.21	2.42E-01	-0.55	2.63	
5209	3.0	20.0	11.82	272.0	11.82	4.21E-03	-15.45	1.31	1.24E-02
5217	4.6	7.0	5.83	60.6	5.83	1.90E-03	-19.83	3.40	1.45E-02
5221	4.0	1.4	1.17	42.0	1.17	6.60E-03	-3.27	2.80	4.16E-02

Table I.4.1 (6/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
5222	4.5	30.0	27.27	26.5	27.27	1.78E-04	-92.73	3.40	1.36E-03
5224	3.6	3.5	7.00	34.1	7.00	8.91E-04	-21.35	3.05	6.12E-03
5225	40.0	5.0	7.14	11.4	7.14	2.91E-04	-280.71	39.30	2.57E-02
5226	3.8	45.0	56.25	6.1	56.25	1.97E-05	-168.75	3.00	1.33E-04
5227	4.0	20.0	10.67	11.0	10.67	1.88E-04	-22.67	2.13	9.01E-04
5230	4.3	24.0	26.67	12.1	26.67	8.32E-05	-90.67	3.40	6.36E-04
5232	3.6	20.0	5.82	169.0	5.82	5.32E-03	-0.95	0.16	1.94E-03
5234	3.0	1.0	0.88	166.7	0.88	3.49E-02	-1.63	1.86	1.46E-01
5235	3.7	10.0	6.90	22.7	6.90	6.03E-04	-15.52	2.25	3.05E-03
5237	3.3	4.0	5.00	37.9	5.00	1.39E-03	-12.50	2.50	7.80E-03
5241	5.0	18.0	6.25	48.3	6.25	1.42E-03	-13.25	2.12	6.75E-03
5243	3.8	70.0	70.00	62.5	70.00	1.63E-04	-196.00	2.80	1.03E-03
5255	4.2	80.0	80.00	50.0	80.00	1.14E-04	-256.00	3.20	8.24E-04
5257	3.4	12.0	9.52	143.3	9.52	2.75E-03	-20.38	2.14	1.33E-02
5263	4.4	14.0	5.71	535.7	5.71	1.72E-02	-11.14	1.95	7.53E-02
5264	4.4	8.0	4.00	416.7	4.00	1.91E-02	-9.60	2.40	1.03E-01
5265	4.5	4.5	1.94	125.0	1.94	1.18E-02	-4.25	2.19	5.79E-02
5272	4.6	120.0	50.00	66.0	50.00	2.42E-04	-110.00	2.20	1.20E-03
5276	4.8	9.0	4.38	125.7	4.38	5.26E-03	-12.00	2.74	3.25E-02
5324	4.4	7.0	6.00	262.2	6.00	8.00E-03	-19.40	3.23	5.82E-02
5325	3.6	16.0	12.50	232.0	12.50	3.40E-03	-29.00	2.32	1.77E-02
5326	5.0	40.0	35.00	160.0	35.00	8.37E-04	-135.00	3.86	7.26E-03
5342	3.6	30.0	31.25	77.7	31.25	4.55E-04	-82.50	2.64	2.70E-03
5343	4.0	2.8	1.50	155.3	1.50	1.89E-02	-3.20	2.13	9.10E-02
5344	4.6	40.0	29.17	80.0	29.17	5.02E-04	-94.17	3.23	3.65E-03
5348	4.0	2.6	1.67	114.8	1.67	1.26E-02	-4.07	2.44	6.92E-02
5349	4.6	1.3	0.35	109.1	0.35	5.71E-02	-0.31	0.89	1.14E-01
5351	4.8	55.0	21.43	63.0	21.43	5.38E-04	-47.86	2.23	2.70E-03
5352	3.6	30.0	31.25	126.7	31.25	7.42E-04	-82.50	2.64	4.41E-03
5353	3.2	15.0	15.71	52.0	15.71	6.06E-04	-35.29	2.25	3.06E-03
5355	4.2	2.6	24.00	13.0	24.00	9.91E-05	-98.20	4.09	9.13E-04
5357	3.1	7.0	7.50	41.2	7.50	1.01E-03	-16.25	2.17	4.90E-03
5365	4.2	12.0	5.00	120.0	5.00	4.39E-03	-9.00	1.80	1.78E-02
5366	3.3	0.1	0.29	48.0	0.29	3.06E-02	-0.84	2.93	2.02E-01
5367	4.0	2.9	1.50	125.0	1.50	1.53E-02	-3.10	2.07	7.09E-02
5368	5.0	56.0	36.00	41.0	36.00	2.08E-04	-124.00	3.44	1.62E-03
5369	5.0	3.9	0.94	174.0	0.94	3.37E-02	-0.82	0.87	6.61E-02
5373	3.9	1.9	1.43	55.0	1.43	7.05E-03	-3.67	2.57	4.07E-02
5375	4.6	6.0	4.17	115.4	4.17	5.07E-03	-13.17	3.16	3.60E-02
5396	3.8	16.0	16.67	113.0	16.67	1.24E-03	-47.33	2.84	7.93E-03
5397	4.0	90.0	66.67	146.0	66.67	4.01E-04	-176.67	2.65	2.39E-03
5398	4.8	2.2	1.11	122.3	1.11	2.01E-02	-3.13	2.82	1.26E-01
5399	3.2	10.0	7.50	218.2	7.50	5.32E-03	-14.00	1.87	2.24E-02
5403	4.2	2.6	2.89	47.7	2.89	3.02E-03	-9.53	3.30	2.24E-02
5406	4.8	54.0	90.00	80.0	90.00	1.63E-04	-378.00	4.20	1.54E-03
5408	3.2	20.0	17.00	153.3	17.00	1.65E-03	-34.40	2.02	7.52E-03
5410	4.6	15.0	18.75	14.0	18.75	1.37E-04	-71.25	3.80	1.17E-03
5411	3.4	54.0	30.00	107.2	30.00	6.54E-04	-48.00	1.60	2.35E-03
5463	3.4	3.4	3.33	21.8	3.33	1.20E-03	-7.93	2.38	6.42E-03
5465	4.4	16.0	12.50	28.6	12.50	4.18E-04	-39.00	3.12	2.94E-03
5466	3.6	14.0	9.17	300.0	9.17	5.99E-03	-19.00	2.07	2.79E-02
5467	4.0	11.0	7.00	171.4	7.00	4.48E-03	-17.00	2.43	2.45E-02
5468	4.3	10.0	14.49	493.8	14.49	6.24E-03	-52.17	3.60	5.05E-02
5469	5.1	2.8	1.14	35.3	1.14	5.65E-03	-3.03	2.65	3.37E-02
5470	4.6	1.9	0.63	32.4	0.63	9.50E-03	-0.98	1.56	3.33E-02
5471	4.4	2.4	0.89	34.8	0.89	7.17E-03	-1.51	1.70	2.74E-02
5472	4.0	16.0	13.33	16.3	13.33	2.24E-04	-37.33	2.80	1.41E-03
5473	4.4	11.6	5.79	9.5	5.79	2.99E-04	-13.86	2.40	1.61E-03
5474	4.0	16.0	10.77	100.0	10.77	1.70E-03	-27.08	2.51	9.61E-03
5475	3.8	16.0	13.64	8.3	13.64	1.11E-04	-35.82	2.63	6.57E-04
5476	4.6	0.4	0.09	35.3	0.09	6.86E-02	-0.08	0.88	1.36E-01
5479	4.6	9.0	6.87	12.4	6.87	3.30E-04	-22.60	3.29	2.44E-03
5480	4.4	22.0	18.64	3.3	18.64	3.21E-05	-60.03	3.22	2.33E-04

Table 1.4.1 (7/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s1	Transmissivity (m2/min)	Intercept	I*	Storage Coefficient
5482	3.8	3.2	1.60	31.6	1.60	3.61E-03	-2.88	1.80	1.46E-02
5483	3.8	20.0	17.00	21.1	17.00	2.27E-04	-44.60	2.62	1.34E-03
5484	4.6	17.0	9.44	17.9	9.44	3.47E-04	-26.44	2.80	2.19E-03
5485	4.0	21.0	19.00	20.3	19.00	1.96E-04	-55.00	2.89	1.28E-03
5492	4.8	80.0	57.14	69.5	57.14	2.23E-04	-194.29	3.40	1.70E-03
5496	3.4	17.5	8.75	150.0	8.75	3.14E-03	-12.25	1.40	9.88E-03
5499	4.1	60.0	75.00	42.0	75.00	1.02E-04	-247.50	3.30	7.61E-04
5501	4.2	1.6	0.80	75.0	0.80	1.72E-02	-1.76	2.20	8.49E-02
5507	3.7	0.4	0.75	27.5	0.75	6.71E-03	-2.38	3.17	4.78E-02
5509	3.3	2.2	3.40	20.0	3.40	1.08E-03	-9.02	2.65	6.43E-03
5510	3.3	7.5	9.00	55.0	9.00	1.12E-03	-22.20	2.47	6.21E-03
5511	3.7	6.0	8.96	20.0	8.96	4.09E-04	-26.87	3.00	2.76E-03
5512	3.5	3.6	5.00	55.0	5.00	2.01E-03	-13.90	2.78	1.26E-02
5517	4.0	3.6	13.33	136.0	13.33	1.87E-03	-49.73	3.73	1.57E-02
5518	2.6	7.0	7.50	134.0	7.50	3.27E-03	-12.50	1.67	1.23E-02
5519	3.0	14.0	25.00	100.0	25.00	7.32E-04	-61.00	2.44	4.02E-03
5543	3.6	8.3	10.50	61.5	10.50	1.07E-03	-29.50	2.81	6.78E-03
5545	3.8	22.0	36.67	88.9	36.67	4.44E-04	-117.33	3.20	3.19E-03
5546	3.6	2.0	5.33	80.0	5.33	2.75E-03	-17.20	3.23	1.99E-02
5552	3.0	3.4	1.60	220.0	1.80	2.24E-02	-2.00	1.11	5.59E-02
5557	2.9	2.9	4.27	32.0	4.27	1.37E-03	-9.47	2.22	6.86E-03
5560	3.0	6.0	8.33	131.6	8.33	2.89E-03	-19.00	2.28	1.48E-02
5561	4.0	5.0	10.00	440.0	10.00	8.05E-03	-35.00	3.50	6.34E-02
5562	3.7	8.0	3.53	250.0	3.53	1.30E-02	-5.06	1.43	4.18E-02
5567	4.6	140.0	140.00	17.0	140.00	2.22E-05	-504.00	3.60	1.80E-04
5644	3.6	36.0	68.00	6.0	68.00	1.61E-05	-208.80	3.07	1.12E-04
5655	3.4	19.0	31.20	20.0	31.20	1.17E-04	-87.08	2.79	7.37E-04
5657	3.8	5.0	4.44	198.0	4.44	8.15E-03	-11.89	2.68	4.91E-02
5660	4.1	12.0	15.00	13.3	15.00	1.63E-04	-49.50	3.30	1.21E-03
5661	3.4	15.0	23.33	44.0	23.33	3.45E-04	-64.33	2.76	2.14E-03
5662	4.8	30.0	26.00	3.3	26.00	2.34E-05	-94.80	3.65	1.92E-04
5665	4.0	36.0	51.43	3.7	51.43	1.31E-05	-169.71	3.30	9.70E-05
5666	4.8	15.0	10.71	21.7	10.71	3.70E-04	-36.43	3.40	2.83E-03
5667	3.3	25.0	41.67	73.3	41.67	3.22E-04	-112.50	2.70	1.96E-03
5669	3.0	7.0	8.33	290.0	8.33	6.37E-03	-18.00	2.16	3.10E-02
5670	4.6	90.0	70.00	75.0	70.00	1.96E-04	-232.00	3.31	1.46E-03
5676	4.0	2.6	1.25	338.0	1.25	4.95E-02	-2.40	1.92	2.14E-01
5680	3.8	14.0	10.83	67.0	10.83	1.13E-03	-27.17	2.51	6.39E-03
5681	3.6	3.4	2.50	32.4	2.50	2.37E-03	-5.60	2.24	1.20E-02
5684	4.6	0.3	0.08	32.4	0.08	7.12E-02	-0.07	0.88	1.41E-01
5685	3.8	2.7	1.75	30.0	1.75	3.14E-03	-3.95	2.26	1.59E-02
5686	4.0	5.2	1.60	32.4	1.60	3.71E-03	-1.20	0.75	6.26E-03
5687	3.6	5.8	3.75	32.4	3.75	1.58E-03	-7.70	2.05	7.31E-03
5689	4.2	12.6	10.60	7.7	10.60	1.34E-04	-31.92	3.01	9.06E-04
5690	4.5	2.0	0.45	26.7	0.45	1.07E-02	-0.05	0.10	2.42E-03
5691	3.6	3.6	1.88	46.2	1.88	4.50E-03	-3.15	1.68	1.70E-02
5692	5.0	0.9	0.10	32.4	0.10	5.94E-02	0.40	-4.00	
5694	4.0	1.9	0.23	27.2	0.23	2.21E-02	0.98	-4.36	
5696	3.9	6.2	2.33	27.9	2.33	2.19E-03	-2.90	1.24	6.12E-03
5697	4.6	1.7	0.19	31.6	0.19	3.09E-02	0.84	-4.47	
5698	3.5	4.8	3.50	30.3	3.50	1.59E-03	-7.45	2.13	7.59E-03
5699	4.0	15.0	9.42	25.9	9.42	5.03E-04	-22.67	2.41	2.73E-03
5700	4.6	2.0	0.89	32.8	0.89	6.72E-03	-2.17	2.42	3.66E-02
5703	3.7	1.4	0.60	34.5	0.60	1.05E-02	-0.82	1.37	3.24E-02
5704	4.6	0.3	0.12	26.8	0.12	3.98E-02	-0.23	1.84	1.65E-01
5705	3.8	0.4	0.30	26.6	0.30	1.62E-02	-0.70	2.33	8.52E-02
5706	4.7	8.0	4.86	27.5	4.86	1.04E-03	-14.83	3.05	7.13E-03
5707	3.8	8.0	7.10	21.0	7.10	5.42E-04	-18.98	2.67	3.26E-03
5708	4.2	2.6	1.23	27.9	1.23	4.15E-03	-2.57	2.09	1.95E-02
5710	3.7	7.0	6.00	28.1	6.00	6.56E-04	-15.20	2.53	4.88E-03
5711	3.5	7.5	2.86	23.8	2.86	1.52E-03	-2.50	0.88	3.00E-03
5712	4.8	1.6	0.46	31.5	0.46	1.25E-02	-0.59	1.28	3.61E-02
5713	3.9	9.0	6.36	24.7	6.36	7.11E-04	-15.82	2.49	3.97E-03

Table I.4.1 (8/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
5714	4.0	3.4	1.58	28.5	1.58	3.30E-03	-2.93	1.85	1.37E-02
5715	4.3	1.1	0.46	130.5	0.46	5.18E-02	-0.88	1.92	2.23E-01
5716	3.7	9.3	10.33	18.5	10.33	3.27E-04	-28.93	2.80	2.06E-03
5717	4.6	1.7	0.44	33.7	0.44	1.39E-02	-0.34	0.78	2.42E-02
5718	4.2	1.7	0.63	28.1	0.63	8.22E-03	-0.93	1.48	2.74E-02
5719	5.6	1.4	0.58	30.0	0.58	9.41E-03	-1.87	3.20	6.78E-02
5720	3.2	1.1	0.67	14.3	0.67	3.92E-03	-1.03	1.55	1.37E-02
5721	3.4	7.0	5.83	25.0	5.83	7.84E-04	-12.83	2.20	3.88E-03
5722	3.8	1.4	0.38	30.0	0.38	1.46E-02	-0.08	0.20	6.59E-03
5724	3.4	9.0	8.33	26.5	8.33	5.82E-04	-19.33	2.32	3.04E-03
5725	4.4	0.8	0.27	25.2	0.27	1.73E-02	-0.41	1.55	6.04E-02
5726	3.6	7.3	5.63	21.6	5.63	7.04E-04	-13.00	2.31	3.66E-03
5731	3.7	1.8	1.00	18.7	1.00	3.42E-03	-1.90	1.90	1.46E-02
5732	4.5	0.6	0.20	28.7	0.20	2.63E-02	-0.28	1.40	8.28E-02
5733	3.8	0.9	0.30	31.5	0.30	1.92E-02	-0.29	0.97	4.18E-02
5735	3.8	12.0	7.00	12.8	7.00	3.35E-04	-14.60	2.09	1.57E-03
5736	3.5	2.6	0.63	15.0	0.63	4.39E-03	0.41	-0.66	
5737				27.7					
5738	4.0	6.0	4.44	13.0	4.44	5.35E-04	-11.78	2.65	3.19E-03
5739	4.2	3.3	1.29	27.6	1.29	3.93E-03	-2.10	1.63	1.44E-02
5740	4.8	1.1	0.33	30.9	0.33	1.69E-02	-0.50	1.50	5.72E-02
5741	4.4	1.0	0.70	12.6	0.70	3.30E-03	-2.08	2.97	2.21E-02
5742	3.7	3.8	0.31	30.7	0.31	1.80E-02	2.59	-8.30	
5743	4.6	1.8	0.20	28.3	0.20	2.54E-02	0.81	-3.96	
5744	4.1	1.7	0.57	30.5	0.57	9.78E-03	-0.64	1.13	2.48E-02
5745	3.8	0.7	0.32	11.8	0.32	6.73E-03	-0.50	1.55	2.35E-02
5746	4.0	0.2	0.10	14.0	0.10	2.56E-02	-0.25	2.50	1.44E-01
5747	3.6	6.0	5.56	29.7	5.56	9.78E-04	-14.00	2.52	5.55E-03
5750	4.6	2.3	0.40	30.5	0.40	1.40E-02	0.46	-1.15	
5801	3.8	17.0	20.00	300.0	20.00	2.75E-03	-59.00	2.95	1.82E-02
5802	3.8	12.0	10.30	171.4	10.30	3.05E-03	-27.14	2.63	1.81E-02
5819	3.1	7.0	7.50	150.0	7.50	3.66E-03	-16.25	2.17	1.78E-02
5821	3.8	24.0	25.00	300.0	25.00	2.20E-03	-71.00	2.84	1.40E-02
5822	3.2	16.0	16.00	67.0	16.00	7.66E-04	-35.20	2.20	3.79E-03
5826	3.2	15.0	26.00	41.7	26.00	2.93E-04	-68.20	2.62	1.73E-03
5827	4.0	10.0	9.00	22.5	9.00	4.58E-04	-26.00	2.89	2.97E-03
5834	3.4	4.0	4.38	113.3	4.38	4.74E-03	-10.88	2.49	2.65E-02
5837	3.3	8.0	8.89	46.0	8.89	9.47E-04	-21.33	2.40	5.11E-03
5840	4.2	7.0	4.00	75.0	4.00	3.43E-03	-9.80	2.45	1.89E-02
5842	3.0	7.0	21.21	200.0	21.21	1.73E-03	-55.79	2.63	1.02E-02
5845	3.1	1.0	3.50	30.0	3.50	1.57E-03	-9.85	2.81	9.93E-03
5848	3.4	8.0	11.67	40.0	11.67	6.28E-04	-31.67	2.71	3.83E-03
5849	3.0	4.0	3.67	92.3	3.67	4.61E-03	-7.00	1.91	1.98E-02
5850	3.8	4.0	3.75	100.0	3.75	4.88E-03	-10.25	2.73	3.00E-02
5851	4.1	9.0	12.00	26.7	12.00	4.07E-04	-40.20	3.35	3.07E-03
5853	4.4	11.0	8.33	13.3	8.33	2.93E-04	-25.67	3.08	2.03E-03
5855	3.7	24.0	18.00	20.0	18.00	2.03E-04	-42.60	2.37	1.08E-03
5857	4.2	9.0	10.68	25.0	10.68	4.21E-04	-36.68	3.37	3.19E-03
5859	2.7	4.0	6.50	100.0	6.50	2.82E-03	-13.55	2.08	1.32E-02
5861	4.5	13.0	6.43	13.3	6.43	3.80E-04	-15.93	2.48	2.12E-03
5863	4.2	8.0	6.67	20.3	6.67	5.58E-04	-20.00	3.00	3.77E-03
5864	2.6	3.1	4.67	40.0	4.67	1.57E-03	-9.03	1.94	6.83E-03
5865	2.7	1.3	0.30	40.0	0.30	2.41E-02	0.51	-1.68	
5866	4.2	7.0	3.57	69.0	3.57	3.54E-03	-8.00	2.24	1.78E-02
5867	2.9	14.0	25.00	60.0	25.00	4.39E-04	-58.50	2.34	2.31E-03
5868	2.9	2.5	4.50	34.3	4.50	1.39E-03	-10.55	2.34	7.35E-03
5869	4.8	2.1	0.33	30.0	0.33	1.65E-02	0.50	-1.50	
5871	3.0	3.4	3.05	120.0	3.05	7.20E-03	-5.75	1.89	3.05E-02
5872	3.0	0.5	0.18	200.0	0.18	2.09E-01	-0.04	0.20	9.41E-02
5873	3.7	1.8	0.57	40.0	0.57	1.28E-02	-0.36	0.64	1.84E-02
5902	3.8	6.4	2.14	6.2	2.14	5.29E-04	-1.74	0.81	9.68E-04
5914	3.8	13.0	7.86	40.0	7.86	9.32E-04	-15.29	1.95	4.08E-03
5915	3.4	1.1	11.43	24.0	11.43	3.84E-04	-37.76	3.30	2.86E-03

Table I.4.1 (9/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
5918	3.4	6.2	3.83	26.7	3.83	1.27E-03	-6.83	1.78	5.11E-03
5921	3.6	2.4	1.88	25.0	1.88	2.43E-03	-4.38	2.33	1.27E-02
5922	3.9	19.0	12.22	18.5	12.22	2.76E-04	-28.67	2.35	1.46E-03
5923	3.8	13.0	10.48	12.6	10.48	2.21E-04	-26.81	2.56	1.27E-03
5924	3.5	5.0	5.63	142.8	5.63	4.65E-03	-14.69	2.61	2.73E-02
5925	3.3	0.5	0.12	28.6	0.12	4.36E-02	0.09	-0.78	
5926	2.9	3.5	6.75	22.2	6.75	6.03E-04	-16.08	2.38	3.23E-03
5927	4.3	10.0	5.83	22.2	5.83	6.97E-04	-15.08	2.59	4.06E-03
5928	3.3	0.5	0.34	26.7	0.34	1.44E-02	-0.62	1.83	5.91E-02
5929	4.0	0.8	0.44	25.0	0.44	1.03E-02	-0.98	2.20	5.10E-02
5931	3.9	0.9	0.33	24.0	0.33	1.32E-02	-0.40	1.20	3.56E-02
5932	3.9	15.0	13.68	20.0	13.68	2.68E-04	-38.37	2.80	1.69E-03
5933	3.6	10.0	7.06	16.9	7.06	4.38E-04	-15.41	2.18	2.15E-03
5934	5.0	3.0	4.31	3.8	4.31	1.59E-04	-18.54	4.30	1.54E-03
5935	4.6	2.9	0.94	20.0	0.94	3.88E-03	-1.44	1.53	1.33E-02
5936	3.1	3.4	0.75	22.6	0.75	5.53E-03	1.07	-1.43	
5940	3.7	3.1	1.40	30.0	1.40	3.92E-03	-2.08	1.49	1.31E-02
5942	3.5	12.0	18.00	10.4	18.00	1.06E-04	-51.00	2.83	6.76E-04
5943	4.3	3.3	1.15	25.0	1.15	3.97E-03	-1.66	1.44	1.28E-02
5944	3.8	1.4	0.38	17.9	0.38	8.74E-03	-0.03	0.07	1.31E-03
5945	3.1	5.0	5.86	14.1	5.86	4.41E-04	-13.16	2.25	2.23E-03
5946	4.4	20.0	20.89	1.1	20.89	9.38E-06	-71.91	3.44	7.26E-05
5947	4.1	1.2	1.16	142.9	1.16	2.25E-02	-3.56	3.07	1.55E-01
5949	3.4	9.0	10.42	14.5	10.42	2.54E-04	-26.42	2.54	1.45E-03
5950	4.5	6.1	4.64	14.8	4.64	5.85E-04	-14.76	3.18	4.19E-03
5951	4.3	16.0	10.31	5.9	10.31	1.04E-04	-28.32	2.75	6.42E-04
5953	4.0	13.0	9.00	12.4	9.00	2.52E-04	-23.00	2.56	1.45E-03
5954	4.4	9.0	6.67	14.1	6.67	3.88E-04	-20.33	3.05	2.66E-03
5962	3.4	1.2	1.22	17.1	1.22	2.58E-03	-2.94	2.41	1.40E-02
5963	4.4	9.0	6.67	142.9	6.67	3.92E-03	-20.33	3.05	2.69E-02
5964	3.7	6.0	4.29	27.3	4.29	1.16E-03	-9.86	2.30	6.03E-03
5965	4.5	0.9	0.11	26.7	0.11	4.27E-02	0.37	-3.20	
5966	4.5	1.9	0.65	25.0	0.65	7.07E-03	-1.01	1.56	2.49E-02
5968	3.2	4.6	7.32	15.4	7.32	3.85E-04	-18.86	2.58	2.23E-03
5973	4.6	0.5	0.23	11.7	0.23	9.48E-03	-0.52	2.29	4.88E-02
5974	4.3	1.1	0.69	14.6	0.69	3.88E-03	-1.86	2.70	2.35E-02
5977	4.0	5.0	3.75	14.6	3.75	7.14E-04	-10.00	2.67	4.28E-03
5981	4.4	6.5	2.50	17.9	2.50	1.31E-03	-4.50	1.80	5.31E-03
5982	4.5	9.0	4.53	13.3	4.53	5.39E-04	-11.38	2.51	3.05E-03
5983	3.9	2.8	1.31	18.5	1.31	2.58E-03	-2.31	1.76	1.02E-02
5984	3.3	3.9	2.40	142.9	2.40	1.09E-02	-4.02	1.68	4.11E-02
5985	4.4	13.0	8.00	8.6	8.00	1.96E-04	-22.20	2.78	1.22E-03
5986	3.5	3.7	1.20	18.5	1.20	2.82E-03	-0.50	0.42	2.64E-03
5987	4.4	0.5	0.12	18.8	0.12	2.79E-02	-0.02	0.18	1.10E-02
5988	4.6	4.2	1.71	17.9	1.71	1.91E-03	-3.69	2.15	9.24E-03
5989	4.4	5.6	1.94	17.1	1.94	1.62E-03	-2.93	1.51	5.50E-03
5990	3.9	13.0	8.57	14.1	8.57	3.02E-04	-20.43	2.38	1.62E-03
5991	3.7	5.8	3.56	20.0	3.56	1.03E-03	-7.36	2.07	4.79E-03
6000	3.4	13.0	30.00	52.2	30.00	3.18E-04	-89.00	2.97	2.12E-03
6002	4.1	59.0	59.00	66.0	59.00	2.05E-04	-182.90	3.10	1.43E-03
6004	3.3	0.6	0.22	92.0	0.22	7.82E-02	-0.07	0.33	5.78E-02
6005	2.7	2.4	4.33	200.0	4.33	8.45E-03	-9.30	2.15	4.08E-02
6006	2.6	3.0	6.67	109.0	6.67	2.99E-03	-14.33	2.15	1.45E-02
6024	3.9	46.0	65.00	45.0	65.00	1.27E-04	-207.50	3.19	9.10E-04
6036	3.8	17.0	30.00	25.0	30.00	1.53E-04	-97.00	3.23	1.11E-03
6049	4.2	48.0	48.00	58.0	48.00	2.21E-04	-153.60	3.20	1.59E-03
6051	3.4	57.0	61.67	150.0	61.67	4.45E-04	-152.67	2.48	2.48E-03
6052	4.4	32.0	32.00	43.0	32.00	2.46E-04	-108.80	3.40	1.86E-03
6056	3.0	24.0	40.00	123.0	40.00	5.63E-04	-96.00	2.40	3.04E-03
6057	3.9	0.6	0.36	165.0	0.36	8.30E-02	-0.82	2.25	4.20E-01
6068	4.8	50.0	62.50	66.7	62.50	1.95E-04	-250.00	4.00	1.76E-03
6069	3.8	4.8	2.18	82.5	2.18	6.92E-03	-3.49	1.60	2.49E-02
6081	4.6	19.0	40.00	82.5	40.00	3.77E-04	-165.00	4.13	3.50E-03

Table I.4.1 (10/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
6086	3.6	28.0	26.00	157.0	26.00	1.11E-03	-65.60	2.52	6.27E-03
6093	3.8	2.0	2.00	216.7	2.00	1.98E-02	-5.60	2.80	1.25E-01
6095	4.4	70.0	42.86	103.1	42.86	4.40E-04	-118.57	2.77	2.74E-03
6098	4.0	50.0	27.78	66.7	27.78	4.39E-04	-61.11	2.20	2.17E-03
6099	4.8	6.0	6.67	240.0	6.67	6.59E-03	-26.00	3.90	5.78E-02
6100	5.0	28.0	36.67	19.0	36.67	9.48E-05	-155.33	4.24	9.04E-04
6101	4.1	2.3	0.78	20.0	0.78	4.67E-03	-0.92	1.17	1.23E-02
6103	3.4	2.1	0.97	21.1	0.97	3.99E-03	-1.19	1.23	1.10E-02
6105	3.1	0.8	1.50	18.5	1.50	2.25E-03	-3.85	2.57	1.30E-02
6106	4.6	11.0	7.27	9.0	7.27	2.27E-04	-22.45	3.09	1.58E-03
6108	4.1	3.5	2.50	15.6	2.50	1.14E-03	-6.75	2.70	6.93E-03
6114	4.4	36.0	26.67	40.0	26.67	2.75E-04	-81.33	3.05	1.88E-03
6120	4.5	16.0	11.67	8.0	11.67	1.26E-04	-36.50	3.13	8.83E-04
6127	3.4	8.4	3.75	93.3	3.75	4.55E-03	-4.35	1.16	1.19E-02
6129	4.3	18.0	16.67	3.0	16.67	3.33E-05	-53.67	3.22	2.41E-04
6130	4.3	13.0	11.25	6.5	11.25	1.06E-04	-35.38	3.14	7.47E-04
6131	4.6	4.3	4.50	4.7	4.50	1.93E-04	-16.45	3.66	1.59E-03
6132	4.1	7.0	5.56	2.8	5.56	9.06E-05	-15.78	2.84	5.79E-04
6134	4.6	14.0	15.00	4.0	15.00	4.88E-05	-55.00	3.67	4.03E-04
6136	4.6	16.0	15.00	6.1	15.00	7.43E-05	-53.00	3.53	5.91E-04
6138	4.4	20.0	13.64	8.3	13.64	1.12E-04	-40.00	2.93	7.38E-04
6141	3.7	3.6	3.14	12.8	3.14	7.43E-04	-8.03	2.55	4.27E-03
6143	4.5	1.1	0.64	18.7	0.64	5.39E-03	-1.76	2.77	3.36E-02
6145	3.8	4.6	2.33	19.4	2.33	1.52E-03	-4.27	1.83	6.25E-03
6146	4.2	0.8	0.38	10.2	0.38	4.96E-03	-0.78	2.07	2.31E-02
6151	2.6	16.0	12.73	4.6	12.73	6.62E-05	-17.09	1.34	2.00E-04
6154	4.2	14.0	4.44	206.9	4.44	8.52E-03	-4.67	1.05	2.01E-02
6156	4.0	7.0	5.83	46.8	5.83	1.47E-03	-16.33	2.80	9.25E-03
6157	4.2	0.4	0.38	5.1	0.38	2.50E-03	-1.14	3.03	1.71E-02
6184	4.2	11.0	15.00	3.0	15.00	3.66E-05	-52.00	3.47	2.86E-04
6206	3.2	20.0	26.67	201.5	26.67	1.38E-03	-65.33	2.45	7.62E-03
6208	3.4	8.0	23.33	200.0	23.33	1.57E-03	-71.33	3.06	1.08E-02
6209	4.8	2.4	1.38	125.0	1.38	1.66E-02	-4.20	3.05	1.14E-01
6211	4.4	3.5	6.25	50.0	6.25	1.46E-03	-24.00	3.84	1.27E-02
6212	3.7	40.0	100.00	150.0	100.00	2.75E-04	-330.00	3.30	2.04E-03
6213	4.4	15.0	14.00	150.0	14.00	1.96E-03	-46.60	3.33	1.47E-02
6214	4.4	36.0	26.67	4.0	26.67	2.75E-05	-81.33	3.05	1.88E-04
6216	3.8	100.0	112.50	45.0	112.50	7.32E-05	-327.50	2.91	4.60E-04
6217	4.6	100.0	125.00	25.0	125.00	3.66E-05	-475.00	3.80	3.13E-04
6219	4.0	60.0	56.00	55.4	56.00	1.81E-04	-164.00	2.93	1.19E-03
6220	4.2	60.0	83.33	30.0	83.33	6.59E-05	-290.00	3.48	5.16E-04
6221	4.2	1.8	1.20	42.1	1.20	6.41E-03	-3.44	2.87	4.14E-02
6223	4.4	90.0	80.00	23.5	80.00	5.37E-05	-262.00	3.28	3.96E-04
6224	4.4	80.0	75.00	47.8	75.00	1.17E-04	-250.00	3.33	8.75E-04
6225	3.5	22.0	21.11	62.2	21.11	5.39E-04	-51.89	2.46	2.98E-03
6228	3.2	8.0	6.25	151.5	6.25	4.44E-03	-12.00	1.92	1.92E-02
6239	4.6	7.5	4.69	45.5	4.69	1.77E-03	-14.06	3.00	1.20E-02
6240	4.4	0.7	0.48	40.9	0.48	1.56E-02	-1.41	2.94	1.03E-01
6242	3.4	9.0	6.25	15.2	6.25	4.44E-04	-12.25	1.96	1.96E-03
6244	3.8	10.0	7.33	26.4	7.33	6.59E-04	-17.87	2.44	3.61E-03
6245	4.4	10.0	6.25	9.1	6.25	2.66E-04	-17.50	2.80	1.68E-03
6248	4.0	6.0	7.50	45.5	7.50	1.11E-03	-24.00	3.20	7.99E-03
6250	4.8	17.0	37.50	22.7	37.50	1.11E-04	-163.00	4.35	1.08E-03
6251	4.2	30.0	32.50	37.9	32.50	2.13E-04	-106.50	3.28	1.57E-03
6252	4.2	28.0	46.67	136.4	46.67	5.35E-04	-168.00	3.60	4.33E-03
6258	4.8	110.0	225.00	136.4	225.00	1.11E-04	-970.00	4.31	1.08E-03
6260	3.4	50.0	41.67	41.7	41.67	1.83E-04	-91.67	2.20	9.06E-04
6264	3.5	70.0	71.43	41.7	71.43	1.07E-04	-180.00	2.52	6.05E-04
6276	3.8	0.9	0.80	99.0	0.80	2.26E-02	-2.14	2.68	1.36E-01
6277	4.8	3.0	2.50	187.0	2.50	1.37E-02	-8.50	3.40	1.05E-01
6279	3.8	7.0	11.67	22.1	11.67	3.47E-04	-37.33	3.20	2.50E-03
6289	3.9	60.0	66.67	88.0	66.67	2.42E-04	-200.00	3.00	1.63E-03
6292	4.4	3.4	1.45	80.0	1.45	1.01E-02	-3.00	2.06	4.67E-02

Table 1.4.1 (11/15) Analysis of exising recovery test data

B/H No	X1	Y1	Gradient	Q (l/min)	delta s r	Transmisivity (m2/min)	Intercept	t*	Storage Coefficient
6293	4.1	4.0	2.73	189	2.73	1.27E-02	-7.18	2.63	7.52E-02
6295	4.6	120.0	125.00	243.09	125.00	3.56E-04	-455.00	3.64	2.92E-03
6300	3.7	28.0	46.67	75	46.67	2.94E-04	-144.67	3.10	2.05E-03
6301	4.0	7.0	4.00	88	4.00	4.03E-03	-9.00	2.25	2.04E-02
6302	3.6	12.0	20.00	27	20.00	2.47E-04	-60.00	3.00	1.67E-03
6309	3.4	50.0	62.50	303.03	62.50	8.87E-04	-162.50	2.60	5.19E-03
6320	4.0	30.0	22.92	33.3	22.92	2.66E-04	-61.67	2.69	1.61E-03
6321	3.4	50.0	50.00	99.5	50.00	3.64E-04	-120.00	2.40	1.97E-03
6322	3.8	90.0	75.00	69.67	75.00	1.70E-04	-195.00	2.60	9.95E-04
6323	3.6	18.0	30.00	165	30.00	1.01E-03	-90.00	3.00	6.79E-03
6325	4.6	46.0	16.67	91.03	16.67	1.00E-03	-30.67	1.84	4.14E-03
6326	4.0	17.0	15.00	225	15.00	2.75E-03	-43.00	2.87	1.77E-02
6327	4.1	2.1	0.30	150	0.30	9.15E-02	0.87	-2.90	
6330	4.3	11.0	5.00	85.72	5.00	3.14E-03	-10.50	2.10	1.48E-02
6331	4.2	70.0	60.00	45.27	60.00	1.38E-04	-182.00	3.03	9.42E-04
6332	4.0	100.0	150.00	109.08	150.00	1.33E-04	-500.00	3.33	9.98E-04
6347	3.8	34.0	40.00	71.4	40.00	3.27E-04	-118.00	2.95	2.17E-03
6352	3.7	20.0	16.00	171.42	16.00	1.96E-03	-39.20	2.45	1.08E-02
6354	4.4	60.0	48.00	133.33	48.00	5.08E-04	-151.20	3.15	3.60E-03
6360	2.9	10.0	14.00	160.97	14.00	2.10E-03	-30.60	2.19	1.03E-02
6361	4.8	70.0	23.08	20	23.08	1.59E-04	-40.77	1.77	6.31E-04
6362	3.8	13.0	8.33	12.65	8.33	2.78E-04	-18.67	2.24	1.40E-03
6364	2.8	14.3	8.25	41.67	8.25	9.24E-04	-8.80	1.07	2.22E-03
6365	3.8	5.0	4.00	25	4.00	1.14E-03	-10.20	2.55	6.56E-03
6367	4.8	150.0	175.00	16.67	175.00	1.74E-05	-690.00	3.94	1.55E-04
6368	2.9	1.8	1.67	150	1.67	1.65E-02	-3.03	1.82	6.75E-02
6377	3.5	30.0	75.00	35	75.00	8.54E-05	-232.50	3.10	5.96E-04
6378	3.2	2.6	3.33	43	3.33	2.36E-03	-8.07	2.42	1.29E-02
6484	4.0	3.0	6.25	200	6.25	5.86E-03	-22.00	3.52	4.64E-02
6493	3.0	11.0	15.00	125	15.00	1.53E-03	-34.00	2.27	7.78E-03
6519	3.4	21.0	38.00	94.26	38.00	4.54E-04	-108.20	2.85	2.91E-03
6524	3.2	0.1	0.08	220	0.08	5.03E-01	-0.15	1.83	
6538	5.2	0.9	0.41	174	0.41	7.84E-02	-1.26	3.11	5.48E-01
6541	4.0	5.5	2.92	125	2.92	7.84E-03	-6.17	2.11	3.73E-02
6542	4.2	2.8	1.38	56	1.38	7.45E-03	-2.98	2.16	3.63E-02
6543	3.8	8.4	2.33	26.6	2.33	2.09E-03	-0.47	0.20	9.39E-04
6544	4.4	9.0	5.83	5	5.83	1.57E-04	-16.67	2.86	1.01E-03
6546	4.4	14.0	10.00	80	10.00	1.46E-03	-30.00	3.00	9.88E-03
6548	3.2	6.0	25.00	30	25.00	2.20E-04	-74.00	2.96	1.46E-03
6549	3.8	4.5	2.86	21.42	2.86	1.37E-03	-6.36	2.23	6.87E-03
6550	3.0	5.0	5.83	33.3	5.83	1.04E-03	-12.50	2.14	5.04E-03
6551	3.4	5.0	5.63	60	5.63	1.95E-03	-14.13	2.51	1.10E-02
6552	3.4	12.0	12.50	133.33	12.50	1.95E-03	-30.50	2.44	1.07E-02
6553	3.7	7.6	4.29	17.13	4.29	7.32E-04	-8.26	1.93	3.17E-03
6554	3.6	19.0	0.02	42.85	0.02	3.53E-01	18.92	-851.40	
6555	4.2	12.0	15.00	6.67	15.00	8.14E-05	-51.00	3.40	6.23E-04
6556	4.0	9.0	7.50	20	7.50	4.88E-04	-21.00	2.80	3.07E-03
6557	4.8	8.0	6.67	3.33	6.67	9.14E-05	-24.00	3.60	7.41E-04
6558	4.1	1.0	0.06	63.15	0.06	1.93E-01	0.78	-13.07	
6561	3.4	5.0	8.89	16.67	8.89	3.43E-04	-25.22	2.84	2.19E-03
6562	4.0	0.7	0.60	13.33	0.60	4.07E-03	-1.70	2.83	2.59E-02
6563	3.5	2.6	0.90	200	0.90	4.07E-02	-0.55	0.61	5.59E-02
6564	4.1	26.0	16.00	240	16.00	2.75E-03	-39.60	2.48	1.53E-02
6566	3.8	1.5	0.56	66.67	0.56	2.20E-02	-0.61	1.10	5.44E-02
6567	3.8	1.1	0.86	80	0.86	1.71E-02	-2.16	2.52	9.67E-02
6568	3.9	3.4	3.00	5.72	3.00	3.49E-04	-8.30	2.77	2.17E-03
6569	4.1	3.8	0.07	109.08	0.07	2.75E-01	3.53	-48.70	
6570	3.9	14.5	10.50	50	10.50	8.72E-04	-26.45	2.52	4.94E-03
6571	3.8	4.0	4.29	50	4.29	2.14E-03	-12.29	2.87	1.98E-02
6572	3.4	4.7	0.94	121.4	0.94	2.35E-02	1.49	-1.58	
6573	3.7	21.0	18.89	18.75	18.89	1.82E-04	-48.89	2.59	1.06E-03
6574	3.2	11.0	16.00	66.67	16.00	7.63E-04	-40.20	2.51	4.31E-03
6575	3.7	7.0	8.57	43.33	8.57	9.25E-04	-24.71	2.88	6.00E-03

Table I.4.1 (12/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
6579	3.9	29.0	5.00	105.9	5.00	3.88E-03	9.50	-1.90	
6585	2.9	4.4	4.50	35.0	4.50	1.42E-03	-8.65	1.92	6.16E-03
6588	3.4	9.0	83.33	77.6	83.33	1.70E-04	-274.33	3.29	1.26E-03
6609	3.0	24.0	28.33	181.8	28.33	1.17E-03	-61.00	2.15	5.69E-03
6612	3.3	1.5	3.50	101.5	3.50	5.31E-03	-10.05	2.87	3.43E-02
6613	4.0	17.0	17.50	75.0	17.50	7.84E-04	-53.00	3.03	5.35E-03
6614	4.0	30.0	17.50	36.7	17.50	3.84E-04	-40.00	2.29	1.97E-03
6616	5.0	1.4	0.93	20.0	0.93	3.95E-03	-3.23	3.49	3.10E-02
6617	4.0	23.0	19.17	13.3	19.17	1.27E-04	-53.67	2.80	8.02E-04
6619	4.4	26.0	16.25	25.0	16.25	2.82E-04	-45.50	2.80	1.77E-03
6620	4.6	5.0	2.08	50.0	2.08	4.39E-03	-4.58	2.20	2.17E-02
6622	4.6	20.0	50.00	6.7	50.00	2.44E-05	-210.00	4.20	2.31E-04
6623	4.0	11.0	8.46	100.0	8.46	2.16E-03	-22.83	2.70	1.31E-02
6624	63.4	9.0	3.46	100.0	3.46	5.29E-03	-210.46	60.80	7.23E-01
6627	3.6	10.0	15.00	75.0	15.00	9.15E-04	-44.00	2.93	6.04E-03
6630	3.6	12.0	2.40	220.0	2.40	1.68E-02	3.36	-1.40	
6631	4.0	3.7	1.17	220.0	1.17	3.45E-02	-0.97	0.83	6.43E-02
6633	3.2	34.0	28.00	88.0	28.00	5.75E-04	-55.60	1.99	2.57E-03
6634	3.0	4.5	6.25	757.6	6.25	2.22E-02	-14.25	2.28	1.14E-01
6635	3.5	70.0	67.00	105.6	67.00	2.88E-04	-164.50	2.46	1.59E-03
6643	3.6	30.0	26.00	52.8	26.00	3.72E-04	-63.60	2.45	2.05E-03
6658	3.3	8.0	5.00	114.3	5.00	4.18E-03	-8.50	1.70	1.60E-02
6679	5.0	4.0	8.57	10.0	8.57	2.14E-04	-38.43	4.48	2.15E-03
6682	2.8	2.0	0.12	120.0	0.12	1.86E-01	1.66	-14.26	
6686	3.7	21.2	10.29	100.0	10.29	1.78E-03	-16.86	1.64	6.56E-03
6704	3.1	0.2	0.15	70.0	0.15	8.54E-02	-0.24	1.57	3.01E-01
6746	4.2	20.0	18.75	60.0	18.75	5.86E-04	-58.75	3.13	4.13E-03
6750	3.8	11.0	6.00	48.0	6.00	1.46E-03	-11.80	1.97	6.48E-03
6751	4.4	34.0	26.00	60.0	26.00	4.22E-04	-80.40	3.09	2.94E-03
6752	3.2	32.0	36.67	120.0	36.67	5.99E-04	-85.33	2.33	3.14E-03
6753	3.0	7.0	7.50	200.0	7.50	4.88E-03	-15.50	2.07	2.27E-02
6754	3.6	8.0	5.71	24.0	5.71	7.69E-04	-12.57	2.20	3.81E-03
6755	3.6	32.0	35.00	80.0	35.00	4.18E-04	-94.00	2.69	2.53E-03
6756	4.2	4.0	3.50	20.0	3.50	1.05E-03	-10.70	3.06	7.19E-03
6757	3.7	0.7	0.28	300.0	0.28	1.96E-01	-0.30	1.06	4.66E-01
6759	4.0	40.0	35.00	133.3	35.00	6.97E-04	-100.00	2.86	4.48E-03
6760	4.4	15.0	21.67	15.0	21.67	1.27E-04	-80.33	3.71	1.06E-03
6795	3.8	32.0	28.00	272.7	28.00	1.78E-03	-74.40	2.66	1.07E-02
6860	4.2	35.0	35.00	20.0	35.00	1.05E-04	-112.00	3.20	7.53E-04
6867	4.0	14.0	6.88	80.0	6.88	2.13E-03	-13.50	1.96	9.41E-03
6870	4.4	7.0	6.25	40.0	6.25	1.17E-03	-20.50	3.28	8.64E-03
6872	2.6	1.4	0.48	60.0	0.48	2.29E-02	0.19	-0.40	
6873	2.9	11.0	10.71	80.0	10.71	1.37E-03	-20.07	1.87	5.76E-03
6874	3.4	6.0	3.08	160.0	3.08	9.52E-03	-4.46	1.45	3.11E-02
6875	3.2	7.5	3.00	266.6	3.00	1.63E-02	-2.10	0.70	2.56E-02
6878	3.6	55.0	45.83	110.0	45.83	4.39E-04	-110.00	2.40	2.37E-03
6910	3.4	16.0	10.50	240.0	10.50	4.18E-03	-19.70	1.88	1.77E-02
6912	3.7	13.0	12.22	20.0	12.22	3.00E-04	-32.22	2.64	1.78E-03
6916	3.8	30.0	30.00	26.7	30.00	1.63E-04	-84.00	2.80	1.02E-03
6917	4.1	28.0	17.33	40.0	17.33	4.22E-04	-43.07	2.48	2.36E-03
6919	3.4	11.0	10.00	10.0	10.00	1.83E-04	-23.00	2.30	9.47E-04
6924	3.2	23.0	30.00	129.4	30.00	7.89E-04	-73.00	2.43	4.32E-03
6931	3.1	6.5	5.00	90.0	5.00	3.29E-03	-9.00	1.80	1.33E-02
6951	4.8	14.0	20.00	40.0	20.00	3.66E-04	-82.00	4.10	3.38E-03
6974	4.4	40.0	66.67	70.6	66.67	1.94E-04	-253.33	3.80	1.66E-03
6975	4.0	8.0	6.67	120.0	6.67	3.29E-03	-18.67	2.80	2.08E-02
7086	3.9	110.0	128.57	73.3	128.57	1.04E-04	-391.43	3.04	7.15E-04
7109	6.0	4.5	1.50	127.6	1.50	1.56E-02	-4.50	3.00	1.05E-01
7155	4.4	35.0	43.75	20.0	43.75	8.37E-05	-157.50	3.60	6.78E-04
7205	4.2	70.0	125.00	85.2	125.00	1.25E-04	-455.00	3.64	1.02E-03
7218	3.8	12.0	25.00	13.8	25.00	1.01E-04	-83.00	3.32	7.55E-04
7219	3.4	7.0	14.00	10.0	14.00	1.31E-04	-40.60	2.90	8.53E-04
7303	3.4	5.0	4.00	60.0	4.00	2.75E-03	-8.60	2.15	1.33E-02

Table I.4.1 (13/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
7313	3.4	50.0	100.00	97.0	100.00	1.78E-04	-290.00	2.90	1.16E-03
7344	3.0	0.1	0.18	36.6	0.18	3.72E-02	-0.45	2.52	2.11E-01
7346	1.5	2.2	3.72	933.3	3.72	4.59E-02	-3.36	0.90	9.33E-02
7352	3.2	18.0	26.00	73.3	26.00	5.16E-04	-65.20	2.51	2.91E-03
7372	3.3	19.0	14.17	176.0	14.17	2.27E-03	-27.75	1.96	1.00E-02
7381	3.2	0.2	0.40	480.0	0.40	2.20E-01	-1.11	2.78	
7398	3.1	10.0	35.00	114.8	35.00	6.00E-04	-98.50	2.81	3.80E-03
7404	4.4	50.0	33.33	120.0	33.33	6.59E-04	-96.67	2.90	4.30E-03
7406	4.0	1.2	0.35	31.3	0.35	1.63E-02	-0.20	0.57	2.10E-02
7412	3.7	11.0	16.67	44.0	16.67	4.83E-04	-50.67	3.04	3.31E-03
7416	3.5	9.0	8.57	101.5	8.57	2.17E-03	-21.00	2.45	1.19E-02
7417	3.5	17.0	22.86	44.0	22.86	3.52E-04	-63.00	2.76	2.18E-03
7418	4.2	18.0	22.86	60.6	22.86	4.85E-04	-78.00	3.41	3.73E-03
7426	3.8	19.0	35.00	133.3	35.00	6.97E-04	-114.00	3.26	5.11E-03
7427	4.2	8.0	6.25	31.4	6.25	9.20E-04	-18.25	2.92	6.05E-03
7428	3.4	30.0	30.00	220.0	30.00	1.34E-03	-72.00	2.40	7.25E-03
7429	4.4	90.0	100.00	30.0	100.00	5.49E-05	-350.00	3.50	4.32E-04
7433	4.0	26.0	27.50	146.7	27.50	9.76E-04	-84.00	3.05	6.71E-03
7436	2.6	1.6	0.63	280.0	0.63	8.20E-02	-0.08	0.12	2.21E-02
7437	4.0	1.1	0.16	300.0	0.16	3.53E-01	0.50	-3.20	
7438	4.0	1.2	0.14	300.0	0.14	3.95E-01	0.64	-4.64	
7439	4.4	1.1	0.06	300.0	0.06	9.41E-01	0.86	-14.80	
7440	4.2	1.5	0.16	300.0	0.16	3.45E-01	0.83	-5.23	
7441	4.2	1.8	0.18	300.0	0.18	3.02E-01	0.99	-5.43	
7442	3.2	1.8	0.42	300.0	0.42	1.32E-01	0.42	-1.00	
7443	3.8	1.6	0.19	300.0	0.19	2.82E-01	0.81	-4.17	
7447	3.5	15.0	32.50	27.1	32.50	1.52E-04	-98.75	3.04	1.04E-03
7454	4.1	21.0	40.00	10.0	40.00	4.58E-05	-143.00	3.58	3.68E-04
7560	4.4	11.5	10.50	10.0	10.50	1.74E-04	-34.70	3.30	1.30E-03
7563	4.6	20.0	33.33	4.8	33.33	2.64E-05	-133.33	4.00	2.37E-04
7565	3.7	16.0	10.91	30.0	10.91	5.03E-04	-24.36	2.23	2.53E-03
7566	3.6	8.0	6.25	26.7	6.25	7.81E-04	-14.50	2.32	4.08E-03
7568	4.2	16.0	13.33	75.0	13.33	1.03E-03	-40.00	3.00	6.95E-03
7571	3.2	35.0	35.71	233.3	35.71	1.20E-03	-79.29	2.22	5.97E-03
7574	3.6	24.0	22.00	30.0	22.00	2.50E-04	-55.20	2.51	1.41E-03
7575	4.1	30.0	33.33	133.3	33.33	7.32E-04	-106.67	3.20	5.27E-03
7576	3.2	12.0	6.00	24.0	6.00	7.32E-04	-7.20	1.20	1.98E-03
7577	3.6	35.0	26.92	160.0	26.92	1.09E-03	-61.92	2.30	5.63E-03
7578	4.2	30.0	40.00	10.0	40.00	4.58E-05	-138.00	3.45	3.55E-04
7579	4.2	12.0	6.00	30.0	6.00	9.15E-04	-13.20	2.20	4.53E-03
7581	2.5	2.0	1.00	300.0	1.00	5.49E-02	-0.50	0.50	6.18E-02
7582	4.6	45.0	41.67	14.2	41.67	6.22E-05	-146.67	3.52	4.93E-04
7584	4.0	18.0	22.50	66.7	22.50	5.42E-04	-72.00	3.20	3.90E-03
7585	3.5	14.0	25.00	136.4	25.00	9.98E-04	-73.50	2.94	6.60E-03
7610	4.6	2.8	20.00	34.0	20.00	3.11E-04	-89.20	4.46	3.12E-03
7612	4.2	11.0	30.00	20.0	30.00	1.22E-04	-115.00	3.83	1.05E-03
7627	4.4	21.0	26.67	90.0	26.67	6.18E-04	-96.33	3.61	5.02E-03
7630	3.0	15.0	14.29	63.0	14.29	8.07E-04	-27.86	1.95	3.54E-03
7632	2.8	0.7	1.00	38.9	1.00	7.12E-03	-2.08	2.08	3.33E-02
7634	3.7	11.0	22.00	125.0	22.00	1.04E-03	-70.40	3.20	7.49E-03
7635	4.8	6.5	2.22	50.0	2.22	4.12E-03	-4.17	1.88	1.74E-02
7636	3.8	7.5	4.55	40.0	4.55	1.61E-03	-9.77	2.15	7.79E-03
7637	3.7	25.0	11.00	50.0	11.00	8.32E-04	-15.70	1.43	2.67E-03
7640	3.8	23.0	19.00	20.0	19.00	1.93E-04	-49.20	2.59	1.12E-03
7641	4.0	8.0	10.00	66.7	10.00	1.22E-03	-32.00	3.20	8.79E-03
7647	3.7	13.0	17.14	120.0	17.14	1.28E-03	-50.43	2.94	8.48E-03
7648	3.3	7.0	3.67	200.0	3.67	9.98E-03	-5.10	1.39	3.12E-02
7650	4.4	2.1	0.55	150.0	0.55	5.03E-02	-0.30	0.55	6.23E-02
7652	3.8	15.0	6.25	80.0	6.25	2.34E-03	-8.75	1.40	7.38E-03
7656	4.2	2.8	2.20	66.7	2.20	5.55E-03	-6.44	2.93	3.65E-02
7659	3.8	19.0	13.00	33.3	13.00	4.69E-04	-30.40	2.34	2.47E-03
7660	3.0	3.5	7.50	70.6	7.50	1.72E-03	-19.00	2.53	9.82E-03
7667	5.0	3.2	1.78	109.1	1.78	1.12E-02	-5.69	3.20	8.09E-02

Table I.4.1 (14/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s r	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
7668	3.2	6.6	4.00	120.0	4.00	5.49E-03	-4.20	1.05	1.30E-02
7671	4.4	14.0	10.83	20.0	10.83	3.38E-04	-33.67	3.11	2.36E-03
7672	4.2	24.0	16.00	4.0	16.00	4.58E-05	-43.20	2.70	2.78E-04
7673	5.4	9.7	5.44	171.4	5.44	5.71E-03	-19.66	3.62	4.69E-02
7674	4.4	5.8	0.55	150.0	0.55	5.03E-02	3.41	-6.24	
7678	3.3	22.0	35.00	133.3	35.00	6.97E-04	-93.50	2.67	4.19E-03
7679	4.4	13.0	8.00	70.7	8.00	1.62E-03	-22.20	2.78	1.01E-02
7680	4.0	17.0	8.46	23.3	8.46	5.05E-04	-16.85	1.99	2.26E-03
7734	3.2	4.0	1.36	170.5	1.36	2.29E-02	-0.36	0.27	1.37E-02
7737	4.0	1.1	0.16	300.0	0.16	3.53E-01	0.50	-3.20	
7738	4.2	1.3	0.19	300.0	0.19	2.93E-01	0.46	-2.47	
7756	3.5	13.0	13.33	50.0	13.33	6.86E-04	-33.67	2.53	3.90E-03
7757	3.4	5.0	6.00	51.0	6.00	1.56E-03	-15.40	2.57	8.98E-03
7765	3.9	40.0	27.27	166.7	27.27	1.12E-03	-66.36	2.43	6.12E-03
7766	4.0	41.0	130.00	60.0	130.00	8.45E-05	-479.00	3.68	7.00E-04
7770	4.6	11.0	4.50	26.7	4.50	1.08E-03	-9.70	2.16	5.26E-03
7773	3.1	1.8	1.22	240.0	1.22	3.59E-02	-1.99	1.63	1.32E-01
7774	4.6	34.0	22.86	26.7	22.86	2.14E-04	-71.14	3.11	1.50E-03
7776	3.1	20.0	15.71	100.0	15.71	1.16E-03	-28.71	1.83	4.79E-03
7778	3.6	50.0	38.89	80.0	38.89	3.77E-04	-90.00	2.31	1.96E-03
7779	3.8	30.0	37.50	20.0	37.50	9.76E-05	-112.50	3.00	6.59E-04
7782	4.2	45.0	40.00	15.0	40.00	6.86E-05	-123.00	3.08	4.75E-04
7784	3.0	20.0	18.75	133.3	18.75	1.30E-03	-36.25	1.93	5.66E-03
7785	3.2	32.0	25.00	100.0	25.00	7.32E-04	-48.00	1.92	3.16E-03
7786	4.4	24.0	45.00	6.7	45.00	2.71E-05	-174.00	3.87	2.36E-04
7787	3.3	6.0	3.89	300.0	3.89	1.41E-02	-6.83	1.76	5.58E-02
7793	5.2	1.1	1.00	126.0	1.00	2.31E-02	-4.10	4.10	2.13E-01
7805	3.6	30.0	70.00	80.0	70.00	2.09E-04	-222.00	3.17	1.49E-03
7828	4.2	60.0	42.86	15.7	42.86	6.70E-05	-120.00	2.80	4.22E-04
7845	3.2	10.0	10.71	60.0	10.71	1.02E-03	-24.29	2.27	5.23E-03
7846	3.6	13.0	10.83	100.0	10.83	1.69E-03	-26.00	2.40	9.12E-03
8045	3.8	35.0	21.88	160.0	21.88	1.34E-03	-48.13	2.20	6.63E-03
8047	3.2	12.0	10.00	66.7	10.00	1.22E-03	-20.00	2.00	5.49E-03
8048	3.1	12.0	9.00	133.3	9.00	2.71E-03	-15.90	1.77	1.08E-02
8049	3.7	17.0	16.25	40.0	16.25	4.51E-04	-43.13	2.65	2.69E-03
8050	3.3	24.0	25.00	75.0	25.00	5.49E-04	-58.50	2.34	2.89E-03
8051	4.4	38.0	18.89	100.0	18.89	9.69E-04	-45.11	2.39	5.21E-03
8052	3.6	30.0	16.67	200.0	16.67	2.20E-03	-30.00	1.80	8.90E-03
8053	4.1	35.0	15.92	266.7	16.92	2.88E-03	-33.38	1.97	1.28E-02
8054	4.4	55.0	34.48	120.0	34.48	6.37E-04	-96.72	2.81	4.02E-03
8055	3.1	50.0	50.00	200.0	50.00	7.32E-04	-105.00	2.10	3.46E-03
8056	3.2	36.0	35.56	200.0	35.56	1.03E-03	-77.78	2.19	5.07E-03
8057	3.0	24.0	22.22	200.0	22.22	1.65E-03	-42.67	1.92	7.12E-03
8058	4.2	45.0	37.50	70.6	37.50	3.44E-04	-112.50	3.00	2.33E-03
8059	2.2	0.9	0.52	300.0	0.52	1.05E-01	-0.25	0.47	1.12E-01
8060	2.8	4.4	2.00	200.0	2.00	1.83E-02	-1.23	0.62	2.53E-02
8061	4.0	2.0	7.33	300.0	7.33	7.49E-03	-27.33	3.73	6.28E-02
8062	2.6	7.5	80.00	200.0	80.00	4.58E-04	-200.50	2.51	2.58E-03
8063	24.0	2.9	30.00	133.3	30.00	8.13E-04	-717.10	23.90	4.37E-02
8064	2.9	19.0	21.43	240.0	21.43	2.05E-03	-43.14	2.01	9.29E-03
8065	3.1	32.0	37.14	150.0	37.14	7.39E-04	-83.14	2.24	3.72E-03
8066	2.9	40.0	75.00	133.3	75.00	3.25E-04	-177.50	2.37	1.73E-03
8068	3.5	6.5	3.33	300.0	3.33	1.65E-02	-5.17	1.55	5.74E-02
8071	4.0	20.0	51.43	78.0	51.43	2.77E-04	-185.71	3.61	2.25E-03
8114	3.0	26.0	28.33	200.0	28.33	1.29E-03	-59.00	2.08	6.05E-03
8115	3.0	13.0	12.00	300.0	12.00	4.58E-03	-23.00	1.92	1.97E-02
8116	3.1	21.0	16.00	80.0	16.00	9.15E-04	-28.60	1.79	3.68E-03
8117	3.2	3.6	0.50	200.0	0.50	7.32E-02	1.95	-3.90	
8118	3.1	22.0	17.50	240.0	17.50	2.51E-03	-32.25	1.84	1.04E-02
8119	2.4	4.3	2.30	300.0	2.30	2.39E-02	-1.24	0.54	2.90E-02
8120	3.1	24.0	18.00	200.0	18.00	2.03E-03	-31.80	1.77	8.08E-03
8121	2.3	10.0	20.50	200.0	20.50	1.79E-03	-37.15	1.81	7.28E-03
8122	3.4	13.0	6.67	150.0	6.67	4.12E-03	-9.67	1.45	1.34E-02

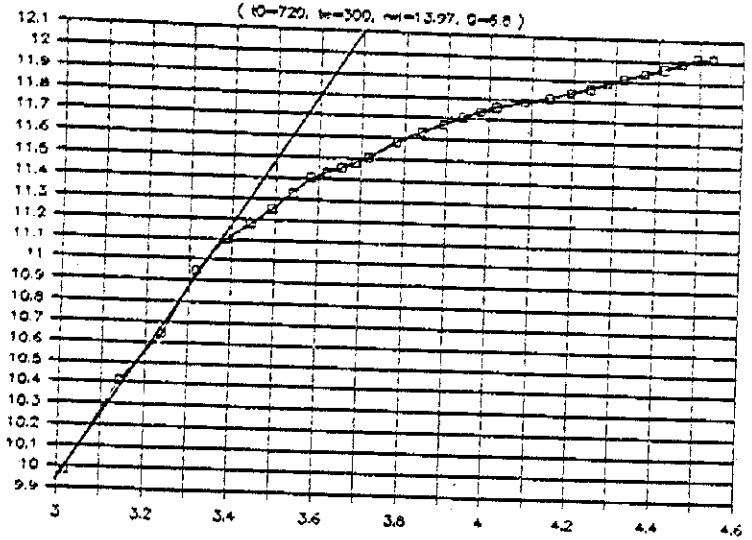
Table I.4.1 (15/15) Analysis of existing recovery test data

B/H no	X1	Y1	Gradient	Q (l/min)	delta s'	Transmissivity (m2/min)	Intercept	t*	Storage Coefficient
8126	3.0	0.0	46.42	20.0	46.42	7.89E-05	-139.25	3.00	5.32E-04
8134	2.5	12.9	17.50	200.0	17.50	2.09E-03	-30.85	1.76	8.30E-03
8135	4.4	40.0	28.57	60.0	28.57	3.84E-04	-85.71	3.00	2.59E-03
8138	2.8	15.0	11.67	240.0	11.67	3.77E-03	-17.67	1.51	1.28E-02
8243	4.6	22.0	17.50	20.0	17.50	2.09E-04	-58.50	3.34	1.57E-03
8245	3.0	1.9	17.50	150.0	17.50	1.57E-03	-50.60	2.89	1.02E-02
8247	4.2	30.0	42.86	15.0	42.86	6.41E-05	-150.00	3.50	5.04E-04
8248	3.5	24.0	11.11	100.0	11.11	1.65E-03	-14.89	1.34	4.97E-03
8256	3.7	30.0	23.08	3.3	23.08	2.64E-05	-55.38	2.40	1.43E-04
8258	4.4	40.0	43.75	30.0	43.75	1.26E-04	-152.50	3.49	9.84E-04
8261	4.2	50.0	50.00	133.3	50.00	4.88E-04	-160.00	3.20	3.51E-03
8262	3.2	2.4	1.40	150.0	1.40	1.96E-02	-2.08	1.49	6.56E-02
8296	3.5	7.0	5.45	100.0	5.45	3.36E-03	-12.09	2.22	1.67E-02
8430	5.0	12.0	5.83	60.0	5.83	1.68E-03	-17.17	2.94	1.25E-02
8433	3.4	2.2	2.38	80.0	2.38	6.17E-03	-5.88	2.47	3.43E-02
8435	3.6	13.0	21.67	75.0	21.67	6.34E-04	-65.00	3.00	4.28E-03
8436	4.2	15.0	17.50	189.0	17.50	1.98E-03	-58.50	3.34	1.49E-02
8437	3.4	15.0	13.75	75.0	13.75	9.98E-04	-31.75	2.31	5.19E-03
8440	3.6	26.0	34.29	13.3	34.29	7.12E-05	-97.43	2.84	4.55E-04
8443	4.0	5.9	0.54	60.0	0.54	2.04E-02	3.75	-6.98	
8445				50.0					
8446	3.8	10.0	9.00	17.1	9.00	3.48E-04	-24.20	2.69	2.11E-03
8449	3.6	1.3	0.60	200.0	0.60	6.10E-02	-0.86	1.43	1.97E-01
8453	3.9	40.0	25.00	40.0	25.00	2.93E-04	-57.50	2.30	1.52E-03
8454	3.2	10.0	4.29	300.0	4.29	1.28E-02	-3.71	0.87	2.50E-02
8456	4.2	35.0	62.50	26.7	62.50	7.81E-05	-227.50	3.64	6.40E-04
8460	4.4	35.0	29.17	13.3	29.17	8.36E-05	-93.33	3.20	6.02E-04
8461	4.6	30.0	23.33	8.0	23.33	6.28E-05	-77.33	3.31	4.68E-04
8462	3.9	20.0	13.33	20.0	13.33	2.75E-04	-32.00	2.40	1.48E-03
8465	4.8	7.0	8.75	5.0	8.75	1.05E-04	-35.00	4.00	9.41E-04
8474	4.4	80.0	83.33	70.0	83.33	1.54E-04	-286.67	3.44	1.19E-03
8499	3.5	13.0	1.50	203.3	1.50	2.48E-02	7.75	-5.17	
8503	3.4	8.0	10.00	110.0	10.00	2.01E-03	-26.00	2.60	1.18E-02
8697	3.8	20.0	15.56	130.0	15.56	1.53E-03	-39.11	2.51	8.65E-03
8745	3.8	15.0	11.25	103.4	11.25	1.68E-03	-27.75	2.47	9.34E-03
8883	4.2	1.2	0.83	155.3	0.83	3.41E-02	-2.30	2.76	2.12E-01
8887	4.2	103.0	103.00	55.0	103.00	9.77E-05	-329.60	3.20	7.04E-04
8892	4.7	7.4	4.47	14.2	4.47	5.81E-04	-13.59	3.04	3.98E-03
8895	4.4	5.0	1.94	30.0	1.94	2.82E-03	-3.56	1.83	1.16E-02
8898	4.4	18.0	12.00	13.3	12.00	2.03E-04	-34.80	2.90	1.33E-03
8899	3.2	0.5	0.08	200.0	0.08	4.68E-01	0.27	-3.60	
8900	3.8	18.0	12.73	20.0	12.73	2.88E-04	-30.36	2.39	1.54E-03
8902	3.2	7.0	3.75	13.3	3.75	6.51E-04	-5.00	1.33	1.95E-03
8904	4.6	3.2	1.38	40.0	1.38	5.32E-03	-3.13	2.27	2.72E-02
8907	4.6	19.0	11.67	30.0	11.67	4.71E-04	-34.67	2.97	3.15E-03
8909	5.0	26.0	18.57	20.0	18.57	1.97E-04	-66.86	3.60	1.60E-03
8918	2.7	1.0	0.18	176.0	0.18	1.79E-01	0.51	-2.86	
8920	4.6	28.0	35.00	8.0	35.00	4.18E-05	-133.00	3.80	3.58E-04
8923	4.0	34.0	34.00	18.3	34.00	9.83E-05	-102.00	3.00	6.64E-04
8929	3.3	9.5	10.00	150.0	10.00	2.75E-03	-23.50	2.35	1.45E-02
8964	3.8	1.8	0.40	73.6	0.40	3.37E-02	0.28	-0.70	
8966	4.3	19.0	10.83	166.7	10.83	2.82E-03	-27.58	2.55	1.61E-02
8988	3.2	11.0	9.70	120.0	9.70	2.26E-03	-20.04	2.07	1.05E-02
8990	2.1	6.2	2.08	33.3	2.08	2.93E-03	1.83	-0.88	
8993	4.0	9.0	12.50	13.3	12.50	1.95E-04	-41.00	3.28	1.44E-03
8994	2.4	16.0	14.00	1041.6	14.00	1.36E-02	-17.60	1.26	3.85E-02
8995	2.0	9.0	12.00	133.3	12.00	2.03E-03	-15.00	1.25	5.72E-03
8996	2.8	11.0	11.11	676.7	11.11	1.11E-02	-20.11	1.81	4.54E-02
8997	4.6	13.0	4.79	133.3	4.79	5.09E-03	-9.04	1.89	2.16E-02
8999	2.6	4.0	3.75	83.3	3.75	4.07E-03	-5.75	1.53	1.40E-02

Table I.4.2 Analysis of recovery test data obtained in the NWMP Study

B/H No	X1	Y1	Gradient	Q (l/min)	delta s r	Transmisivity (m2/min)	Intercept	t*	Storage Coefficient
3360	2.6	12	25	91	25.00	6.66E-04	-53.00	2.12	3.18E-03
3463	2.4	1.2	1.25	27	1.25	3.95E-03	-1.80	1.44	1.28E-02
3541	2.4	5	6.66667	87	6.67	2.39E-03	-11.00	1.65	8.87E-03
3625	2	2.6	1.5	152	1.50	1.85E-02	-0.40	0.27	1.11E-02
3660	3.6	7	4.16667	111	4.17	4.88E-03	-8.00	1.92	2.11E-02
3682	2	1.3	1.16667	300	1.17	4.71E-02	-1.03	0.89	9.38E-02
3695	2.2	1	2.5	71	2.50	5.20E-03	-4.50	1.80	2.11E-02
3813	4.8	1.2	23.8889	36	23.89	2.76E-04	-113.47	4.75	2.95E-03
3861	3	6	11.6667	36	11.67	5.65E-04	-29.00	2.49	3.16E-03
3899	3.2	15	9.375	219	9.38	4.28E-03	-15.00	1.60	1.54E-02
3959	3	2	16.6667	30	16.67	3.29E-04	-48.00	2.88	2.13E-03
4130	3.6	0.02	0.075	402	0.08	9.81E-01	-0.25	3.33	
4270	2.2	5.6	6	134	6.00	4.09E-03	-7.60	1.27	1.16E-02
4303	4	8	15	58	15.00	7.08E-04	-52.00	3.47	5.52E-03
4415	2.8	0.25	1.33333	210	1.33	2.88E-02	-3.48	2.61	1.69E-01
4422	3.4	10	75	40	75.00	9.76E-05	-245.00	3.27	7.17E-04
4442	2.6	3	3.33333	178	3.33	9.77E-03	-5.67	1.70	3.74E-02
4573	4.2	0.28	0.35	143	0.35	7.48E-02	-1.19	3.40	5.72E-01
4729	3	3	1.08333	177	1.08	2.99E-02	-0.25	0.23	1.55E-02
5278	3.8	0	30	40	30.00	2.44E-04	-114.00	3.80	2.09E-03
5627	3.8	2.9	0.54167	163	0.54	5.51E-02	0.84	-1.55	
5795	2	7	15	148	15.00	1.81E-03	-23.00	1.53	6.23E-03
5894	2	5	13.3333	337	13.33	4.63E-03	-21.67	1.63	1.69E-02
6072	2.3	2.38	0.18571	279	0.19	2.75E-01	1.95	-10.52	
6084	2	0.94	0.19	234	0.19	2.25E-01	0.56	-2.95	
6498	4.2	6	36.6667	13	36.67	6.49E-05	-148.00	4.04	5.89E-04
6507	3	3.1	0.75	272	0.75	6.64E-02	0.85	-1.13	
6975	3.6	3	7	152	7.00	3.97E-03	-22.20	3.17	2.84E-02
7064	2.4	14	12.5	108	12.50	1.58E-03	-16.00	1.28	4.55E-03
7451	3	1.64	0.2	41	0.20	3.75E-02	1.04	-5.20	
7581	4.4	2.9	2.25	233	2.25	1.90E-02	-7.00	3.11	1.33E-01
7804	3.8	0	56.25	8	56.25	2.60E-05	-213.75	3.80	2.23E-04
7878	2.8	5	6.25	45	6.25	1.32E-03	-12.50	2.00	5.93E-03
8062	3.6	2.01	0.5	91	0.50	3.33E-02	0.21	-0.42	
8298	2.3	14	30	65	30.00	3.97E-04	-55.00	1.83	1.64E-03
8810	3.2	2.5	1.75	102	1.75	1.07E-02	-3.10	1.77	4.25E-02
8923	3.4	24	17.5	26	17.50	2.72E-04	-35.50	2.03	1.24E-03
8981	2.4	10	87.5	234	87.50	4.89E-04	-200.00	2.29	2.52E-03
9002	2.2	6	5.41667	250	5.42	8.45E-03	-5.92	1.09	2.08E-02
9170	3.4	10	55	22	55.00	7.32E-05	-177.00	3.22	5.30E-04
9180	4	2	3	108	3.00	6.59E-03	-10.00	3.33	4.94E-02
9400	2.2	2	4.55	59	4.55	2.37E-03	-8.01	1.76	9.40E-03

C3656



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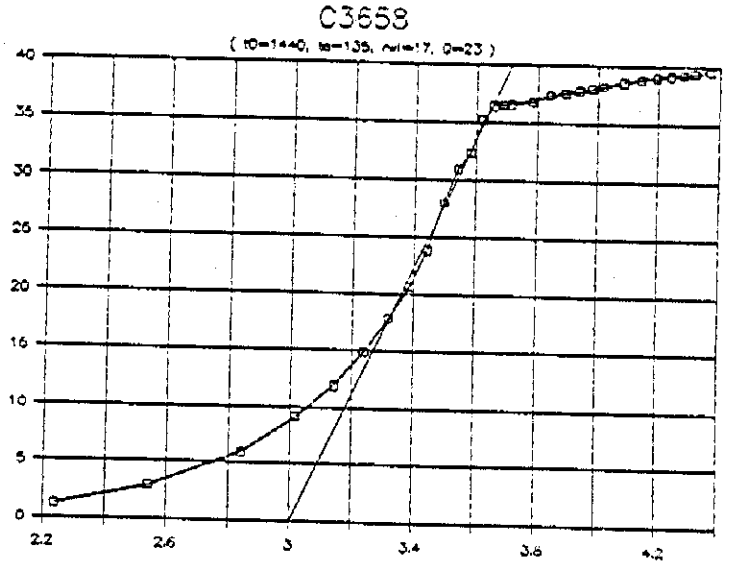

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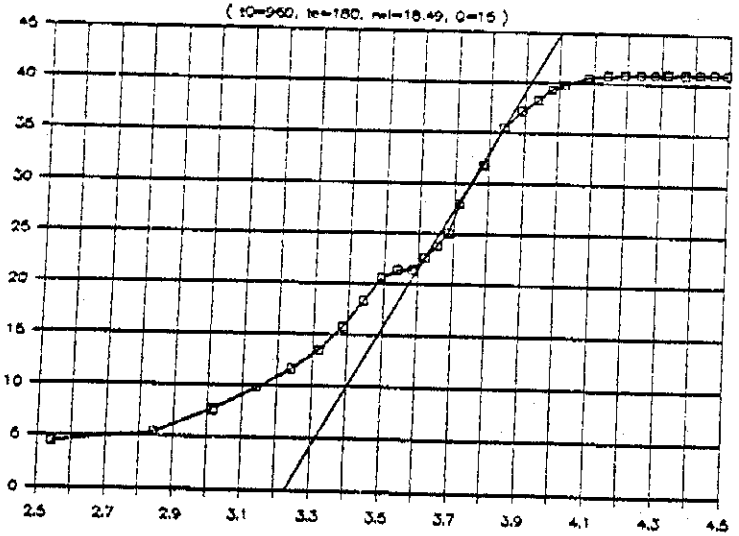

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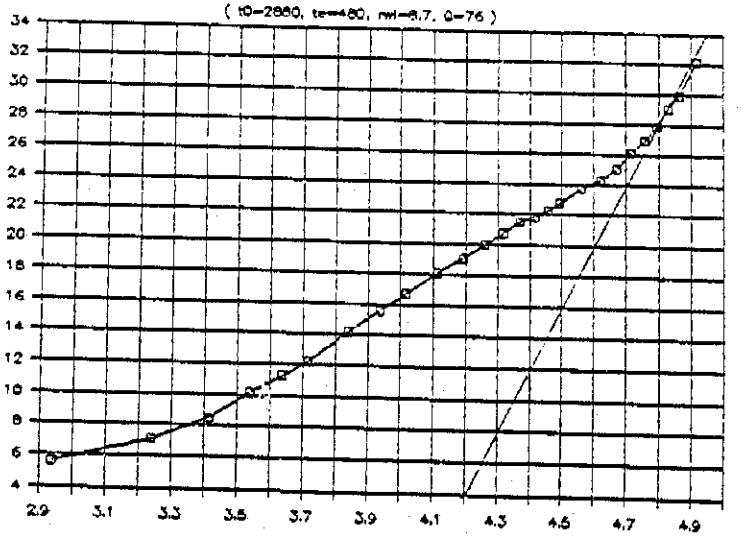

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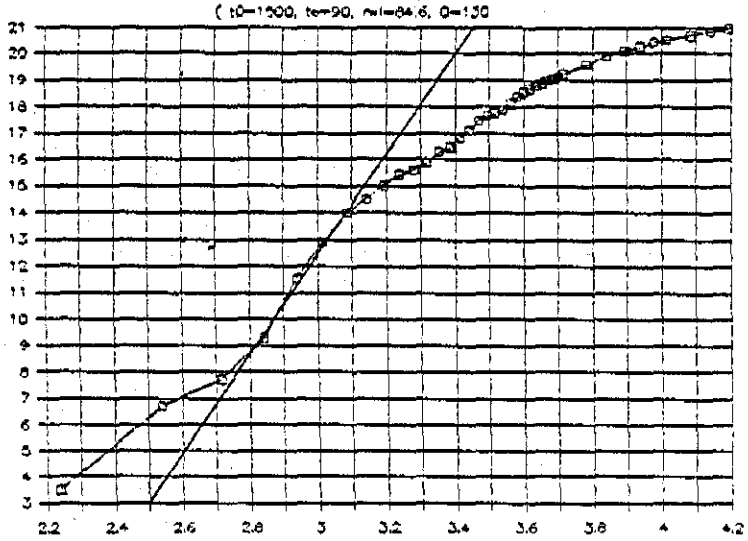

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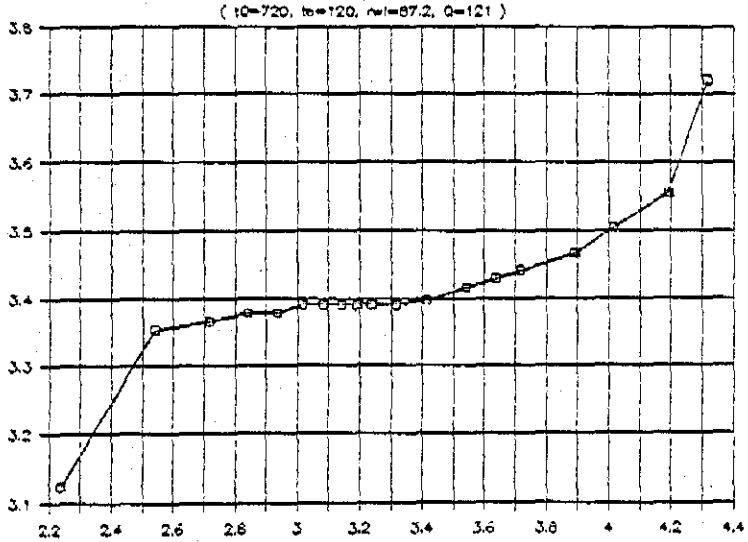

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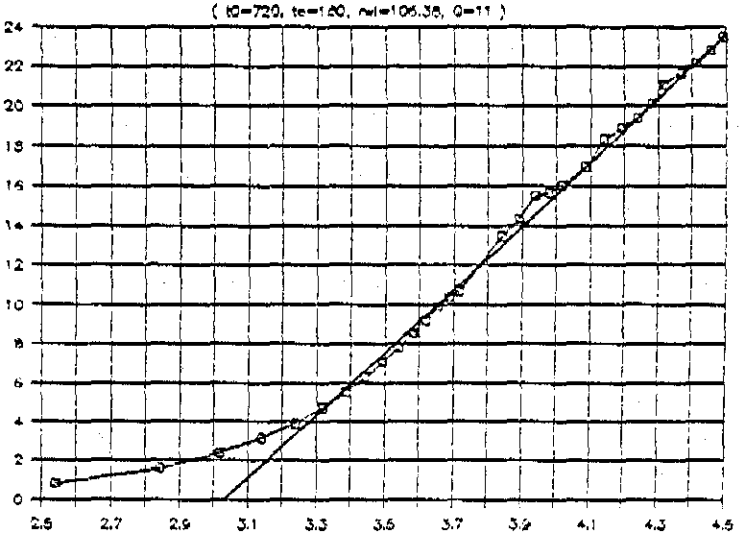

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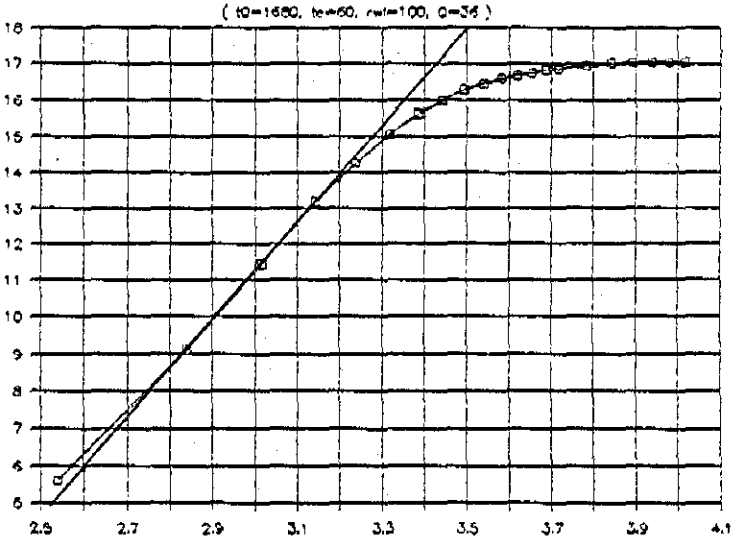

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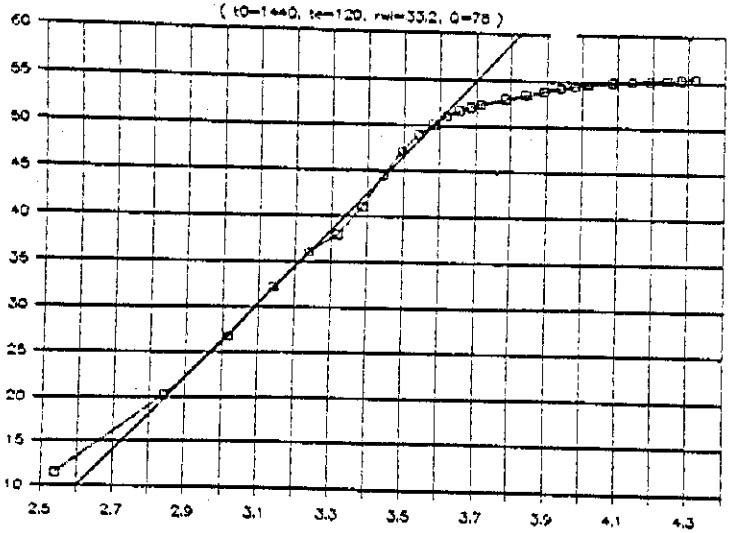

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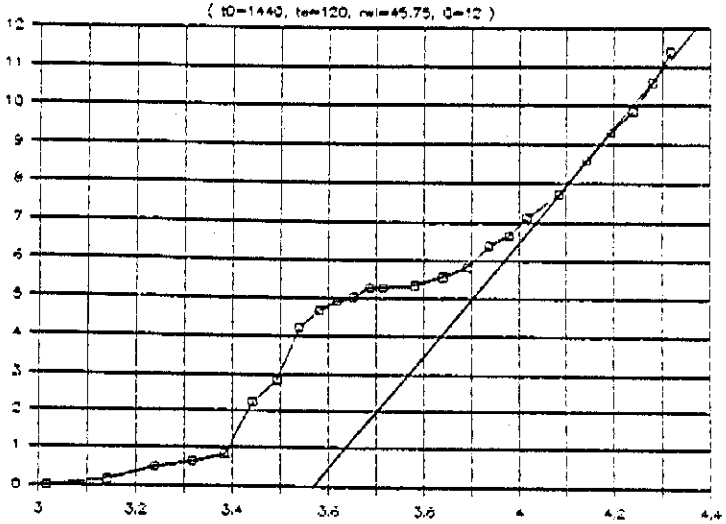

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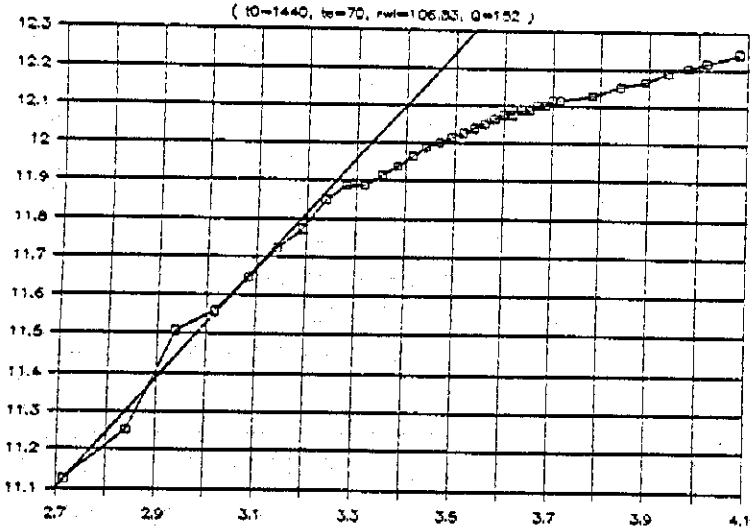

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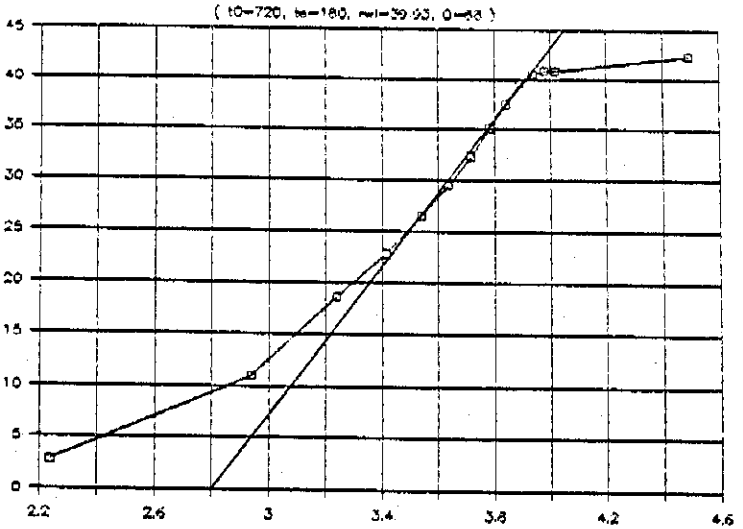

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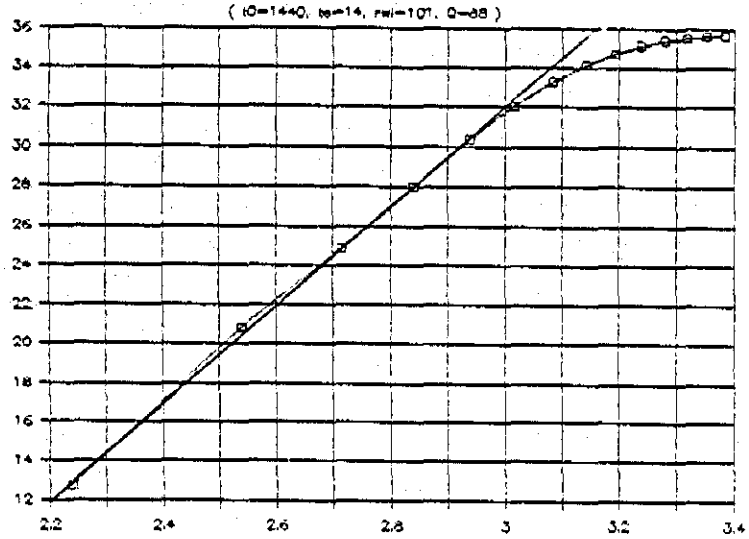

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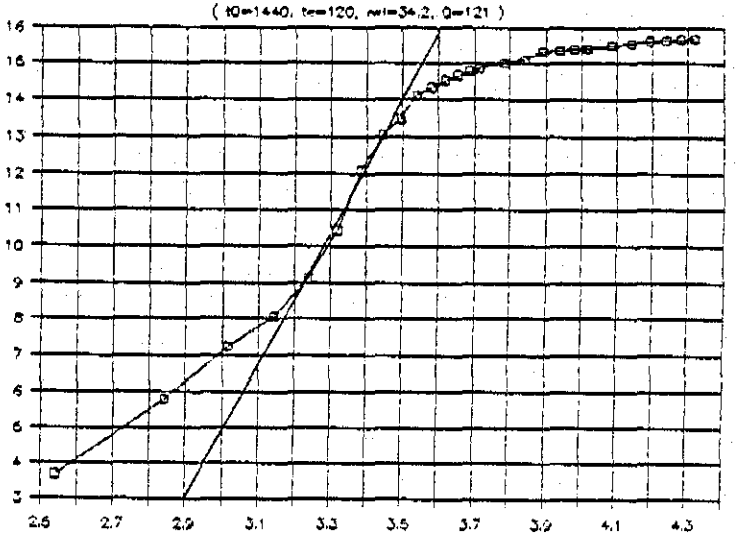

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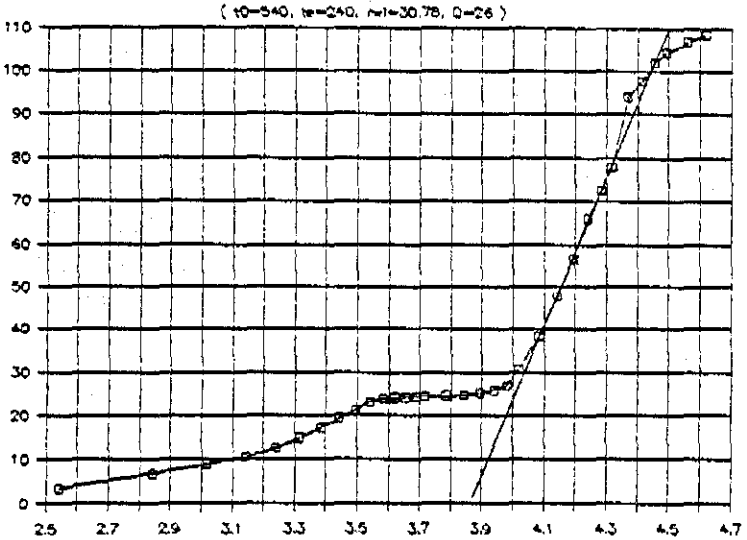

C3747

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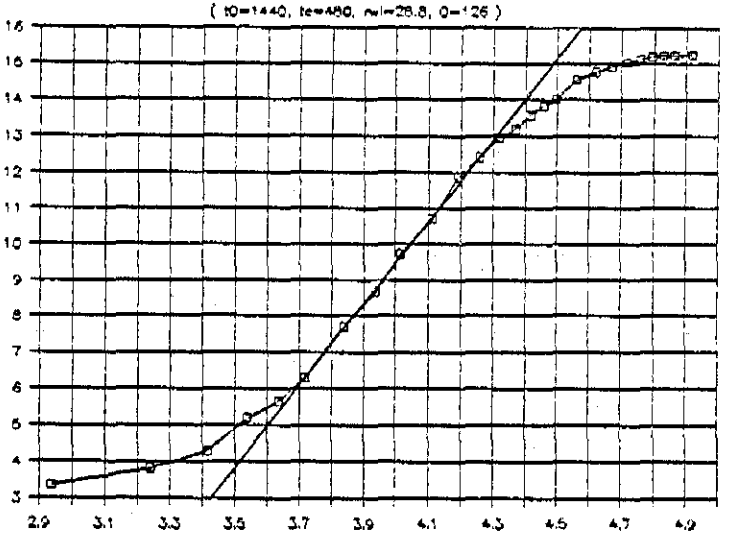

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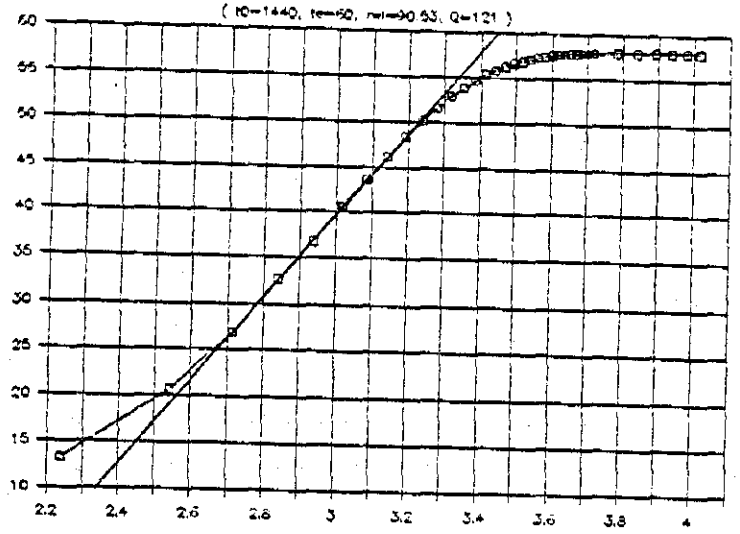

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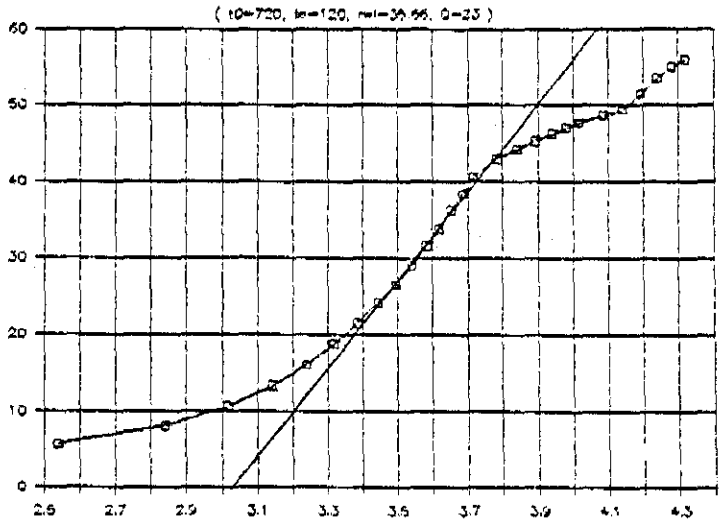

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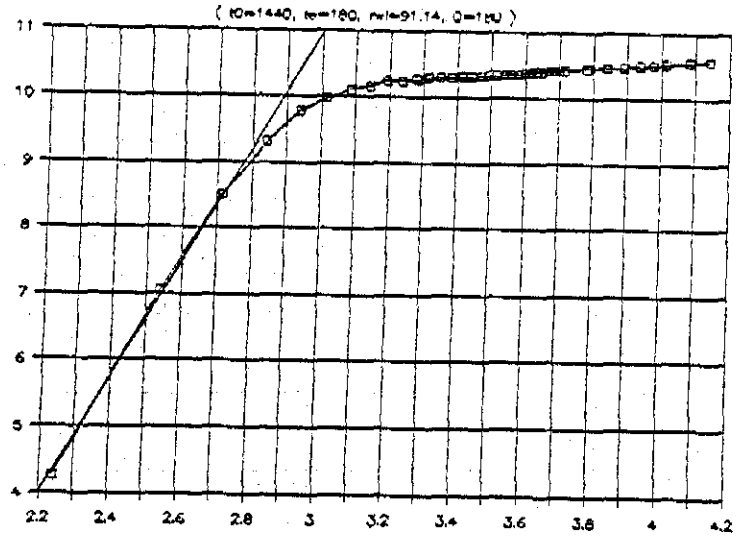

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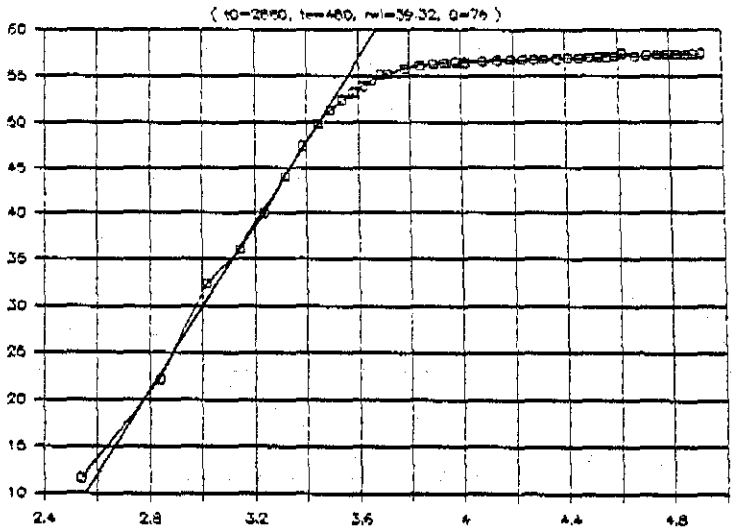
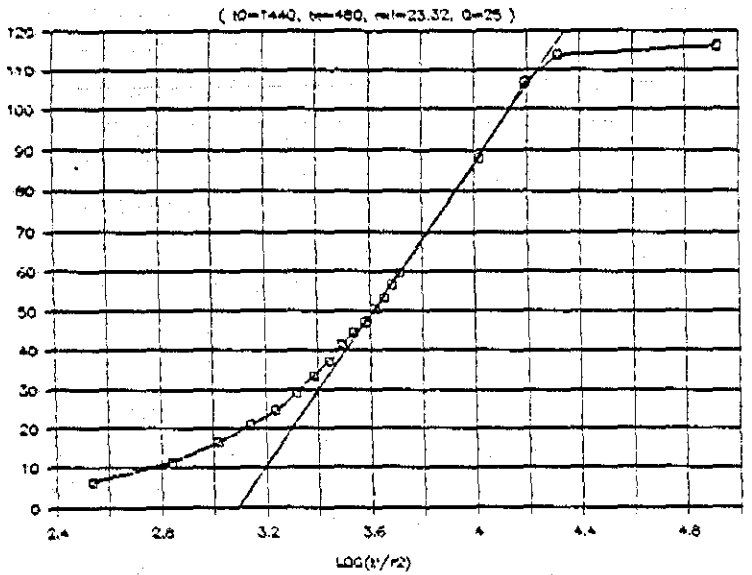


C3761



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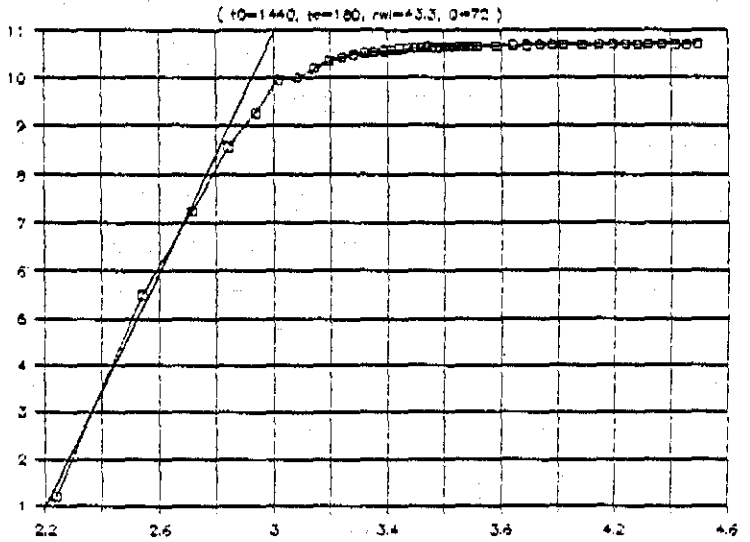

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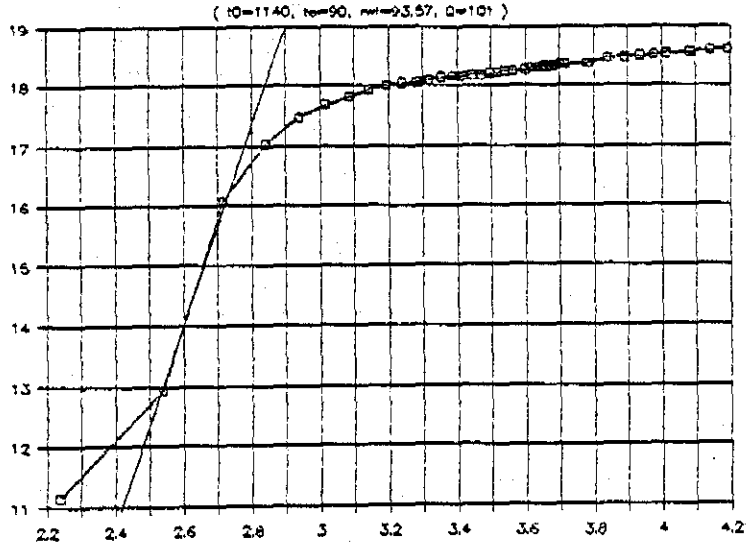

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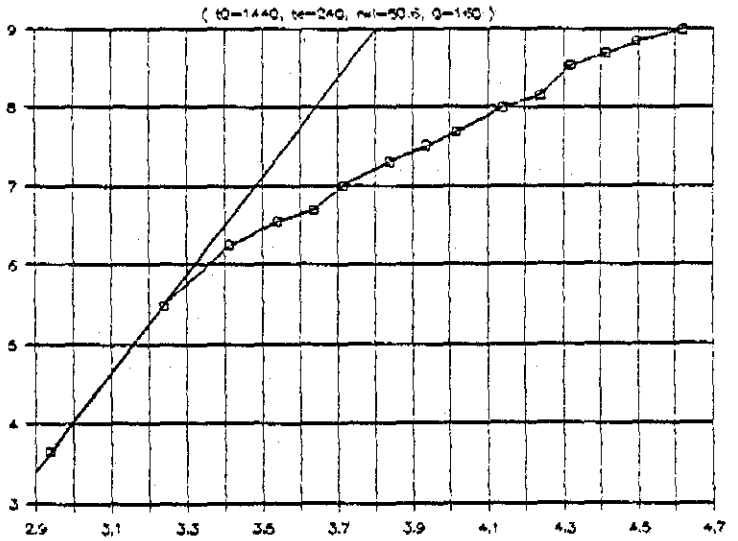

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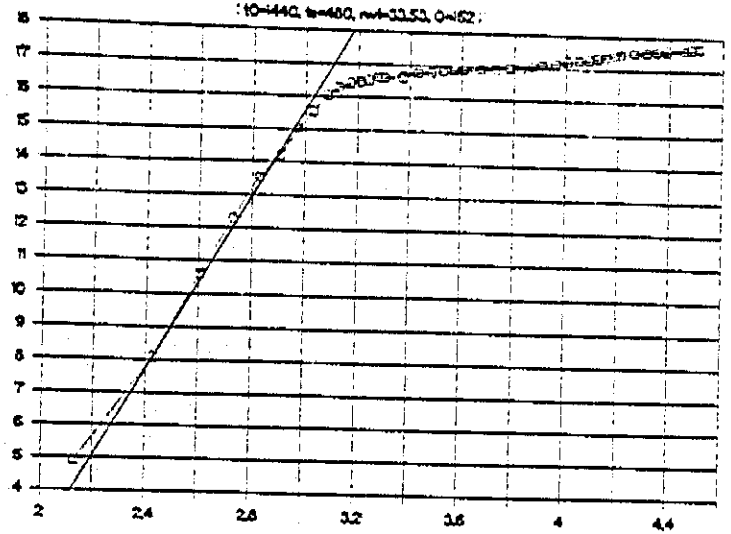

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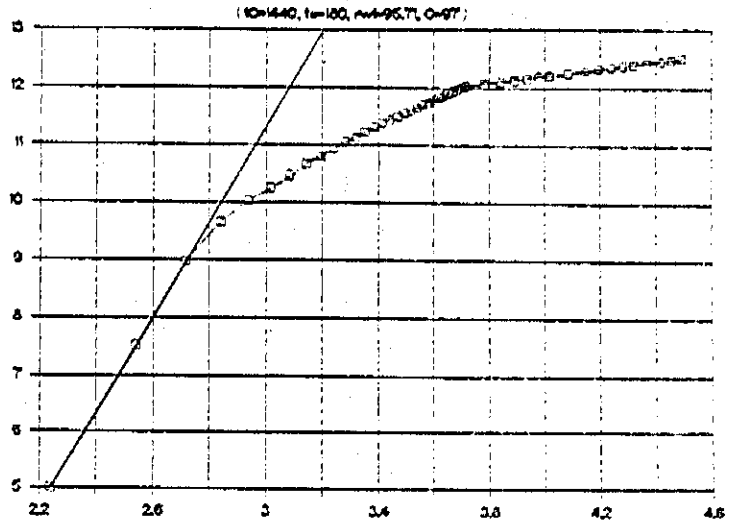

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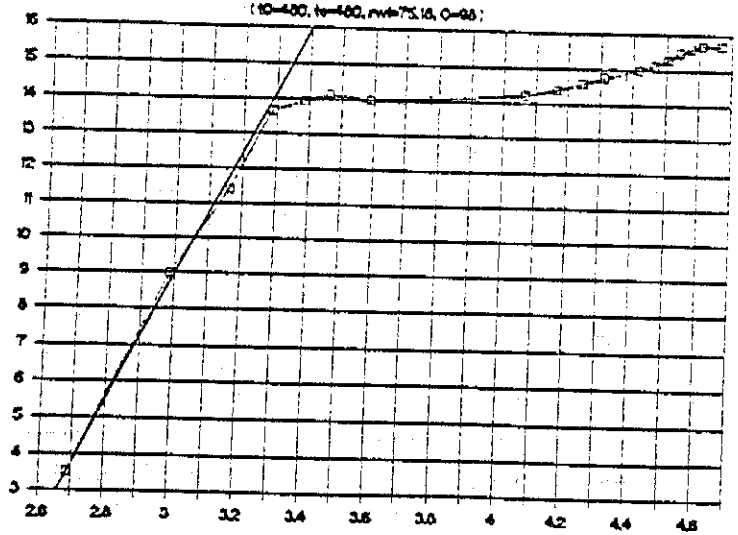

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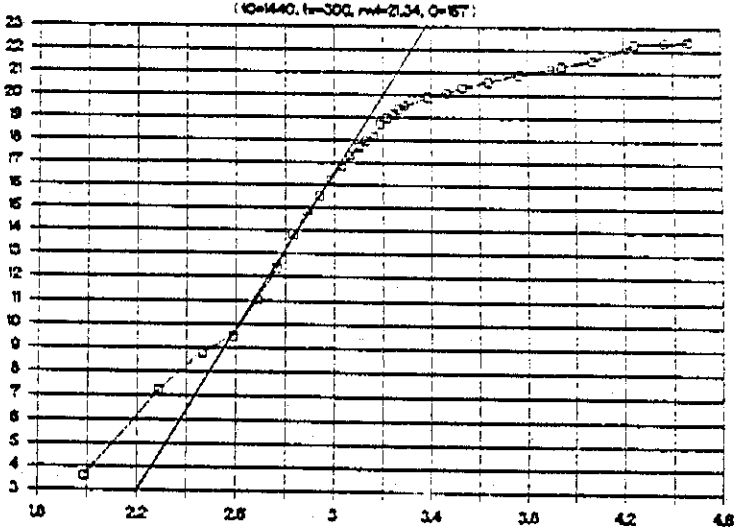

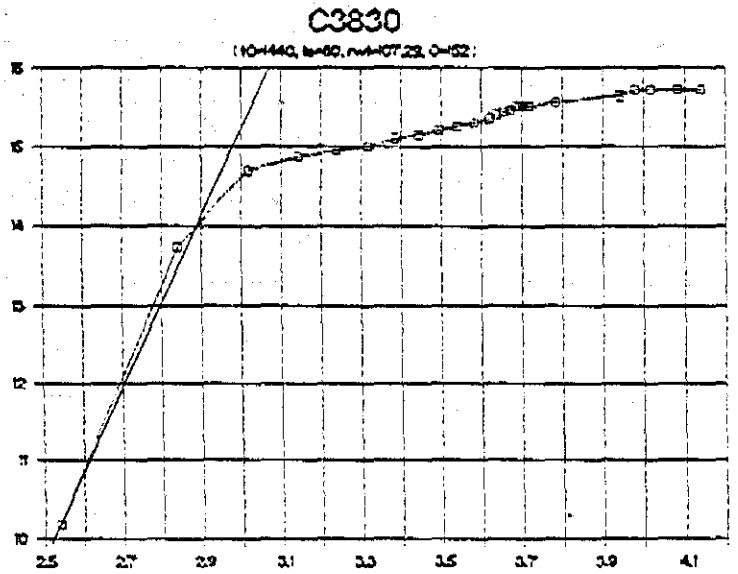
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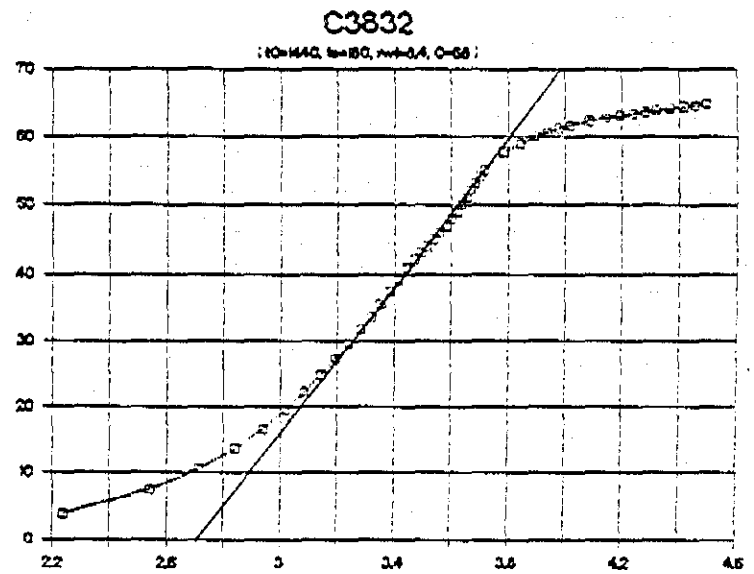
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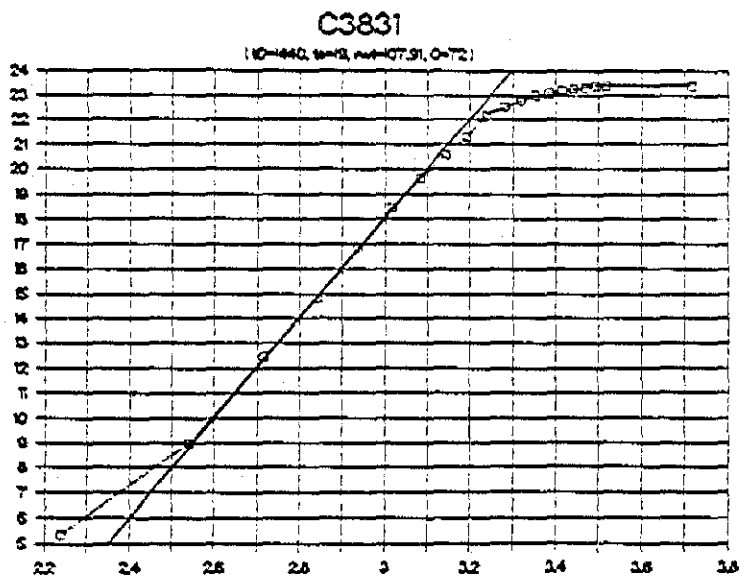
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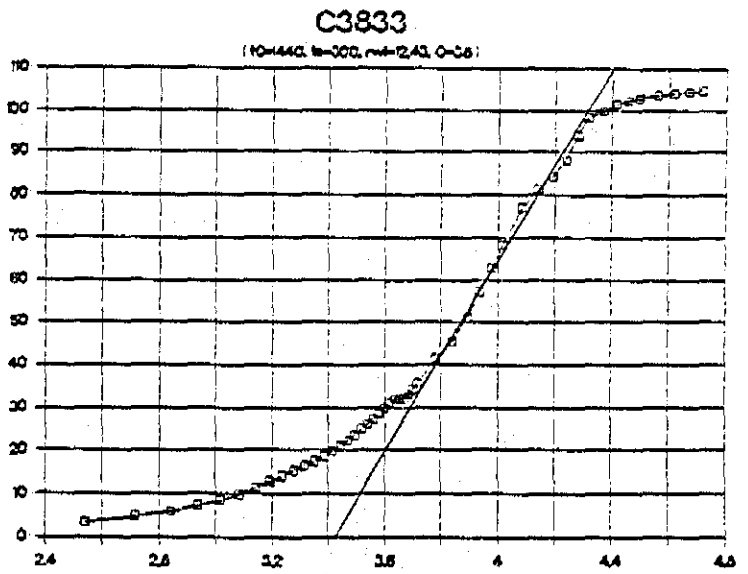
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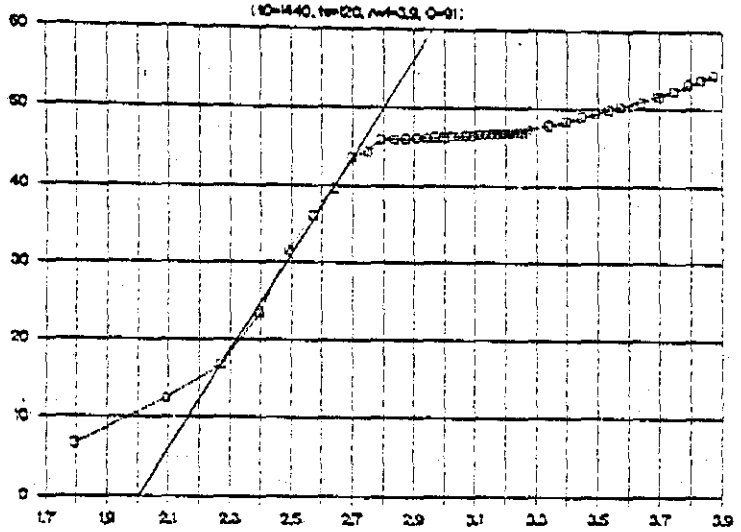

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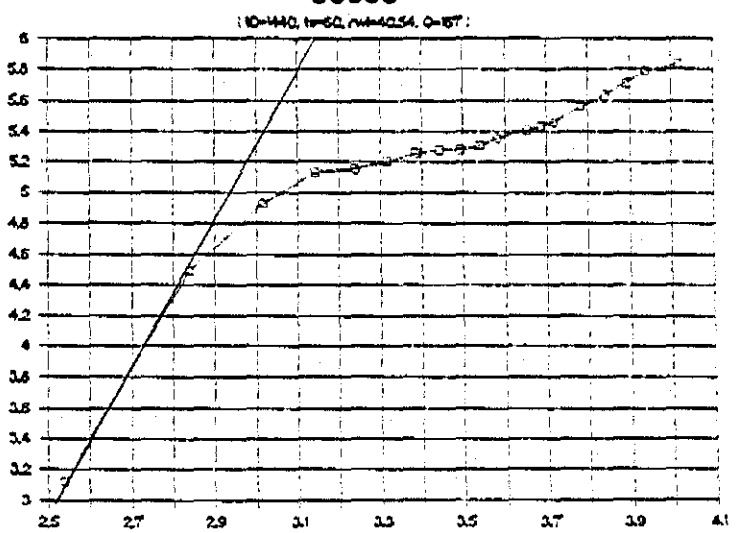

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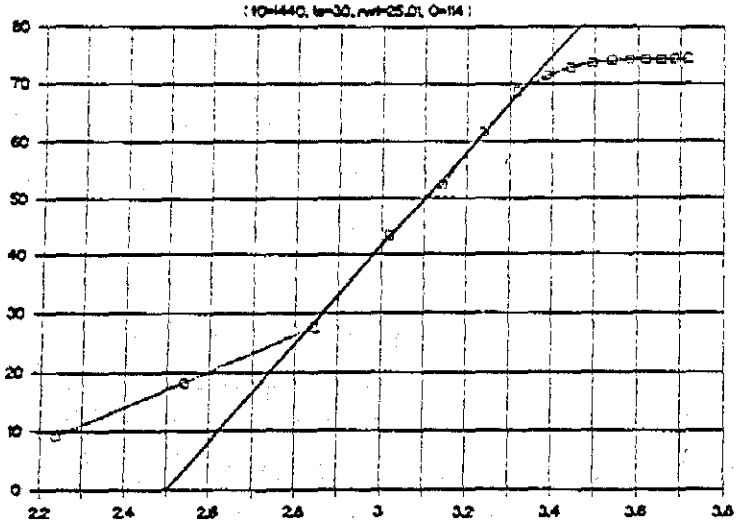

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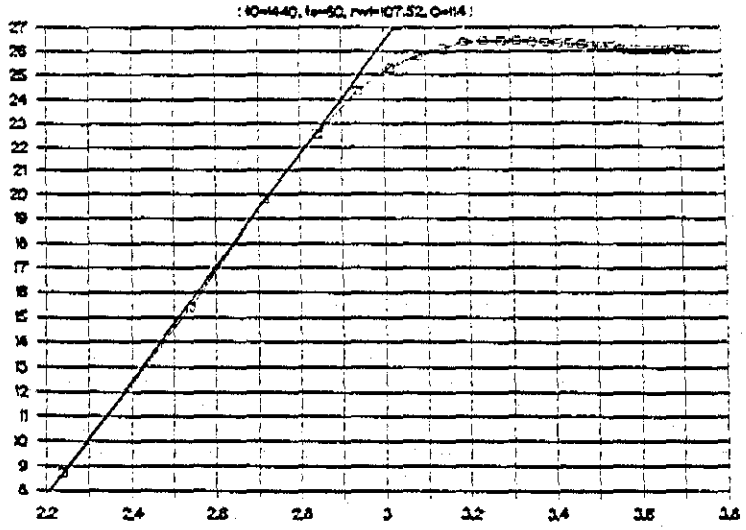

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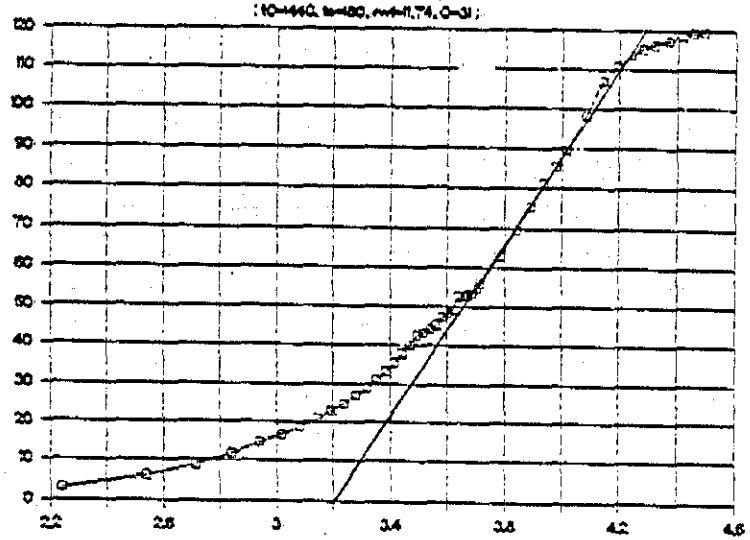

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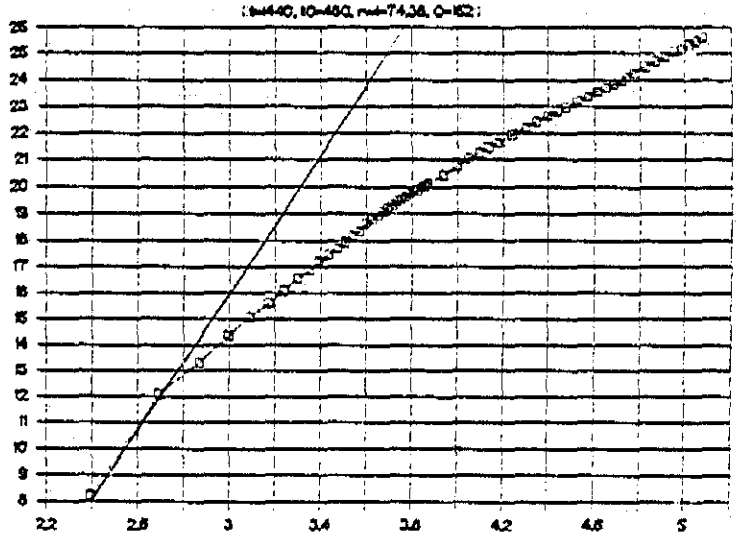

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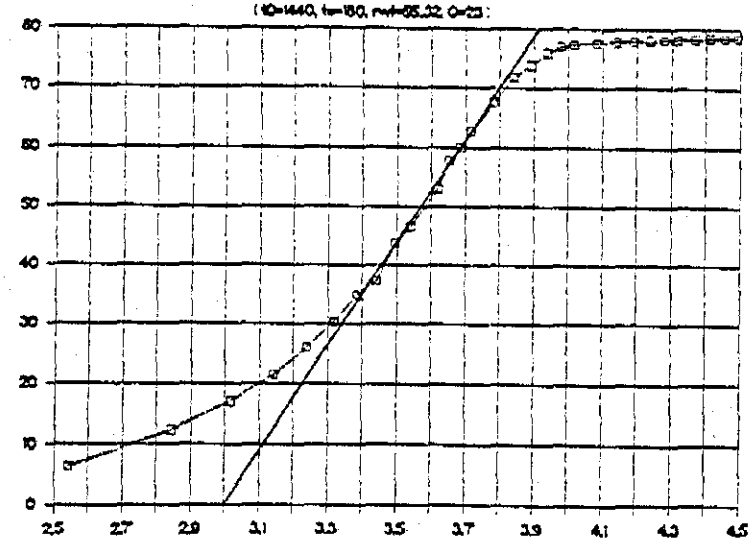

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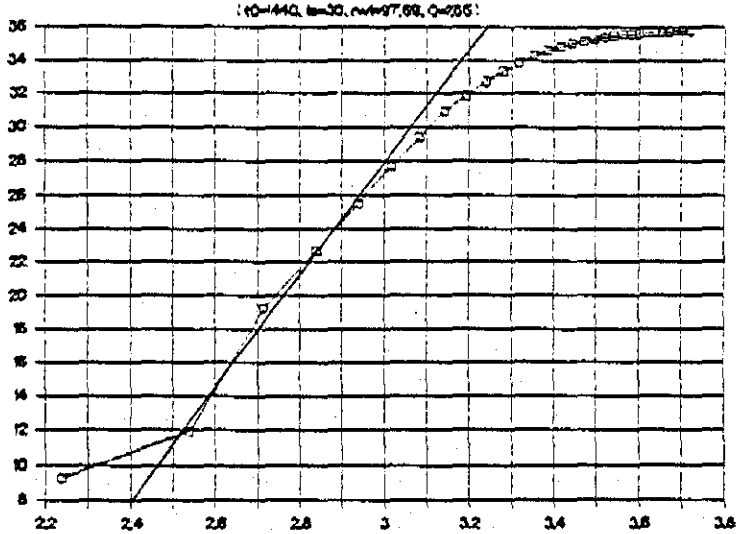

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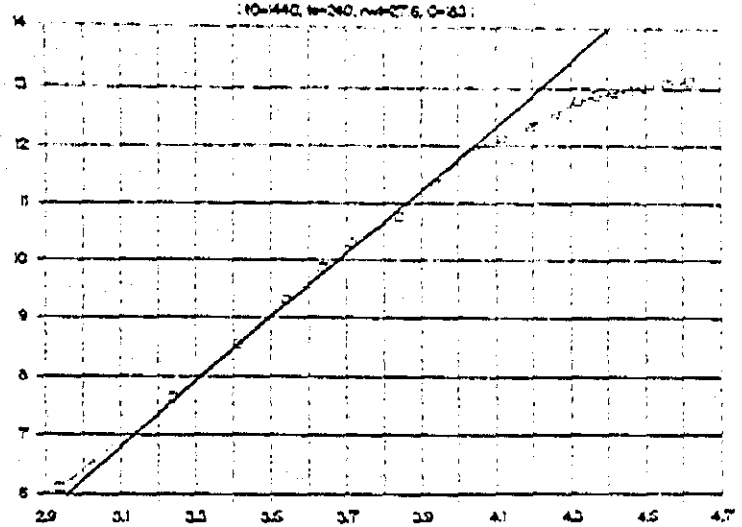

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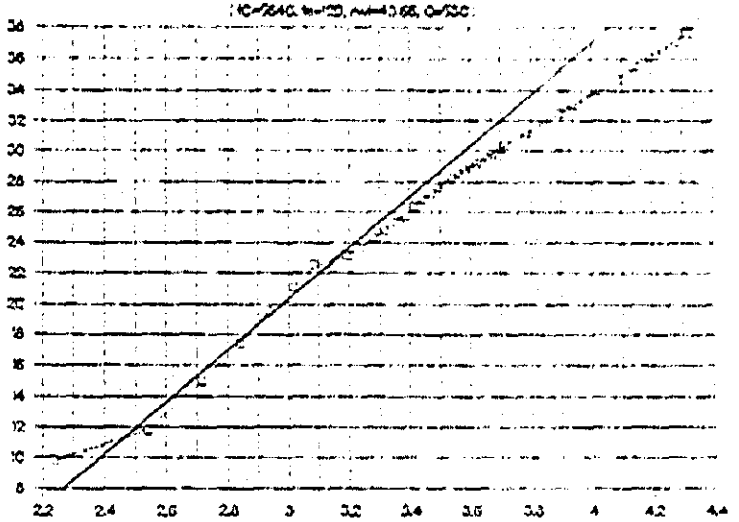

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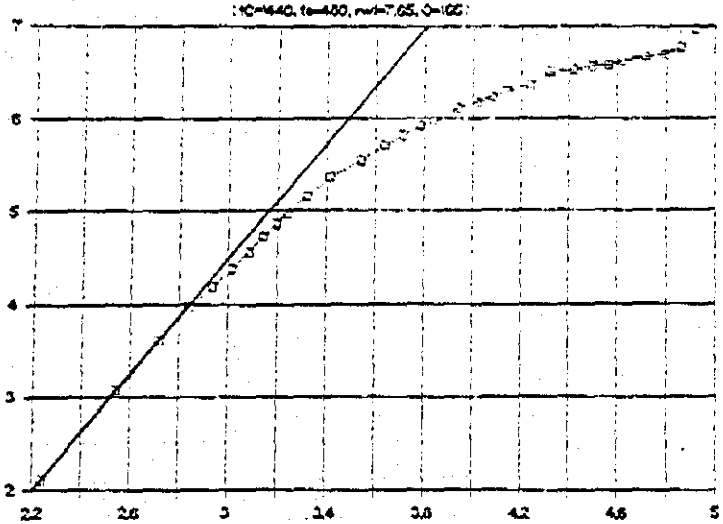

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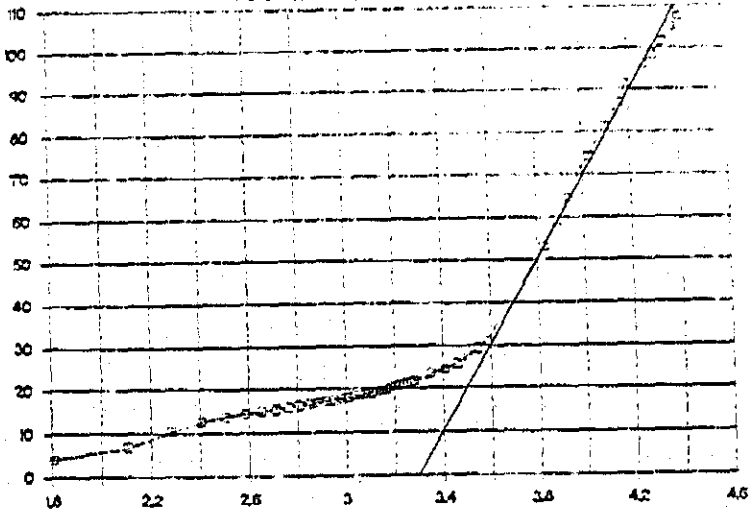

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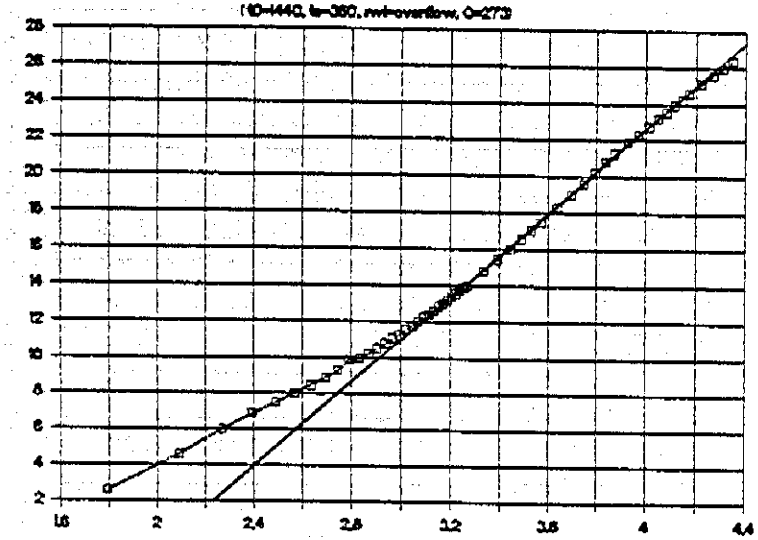

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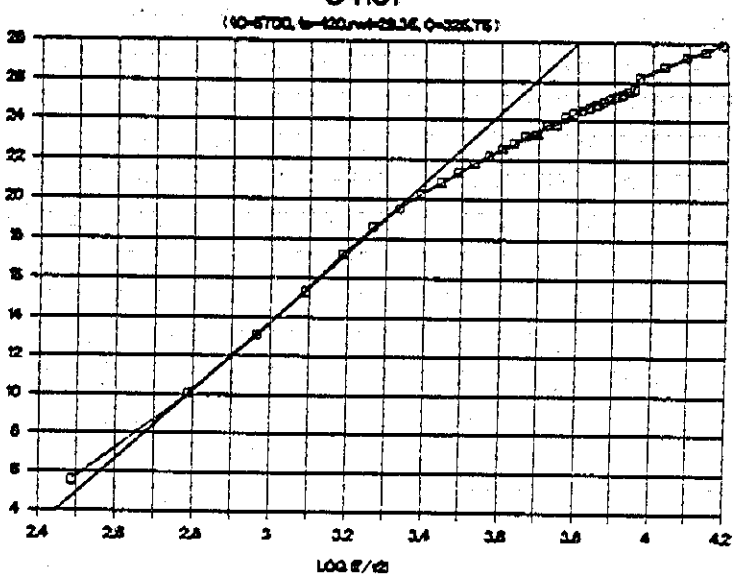

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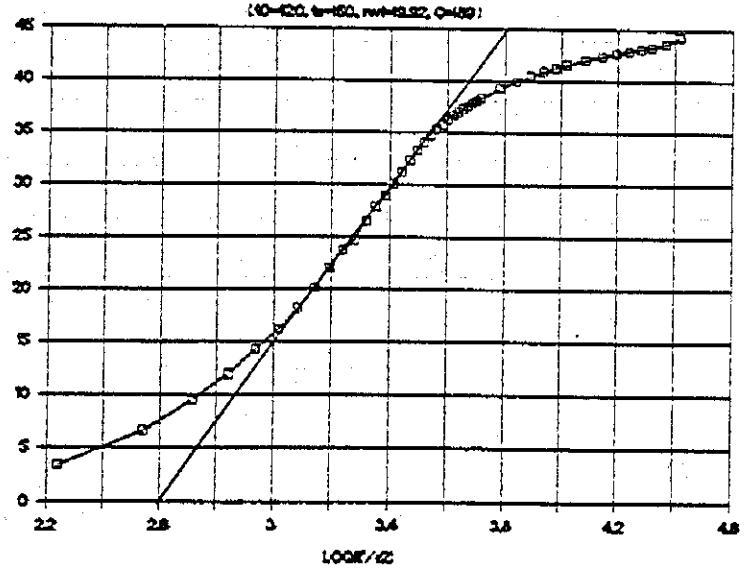

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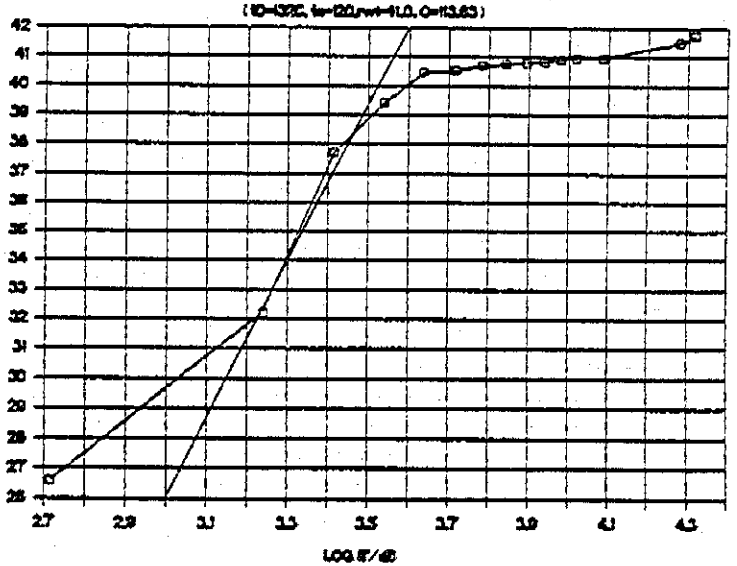

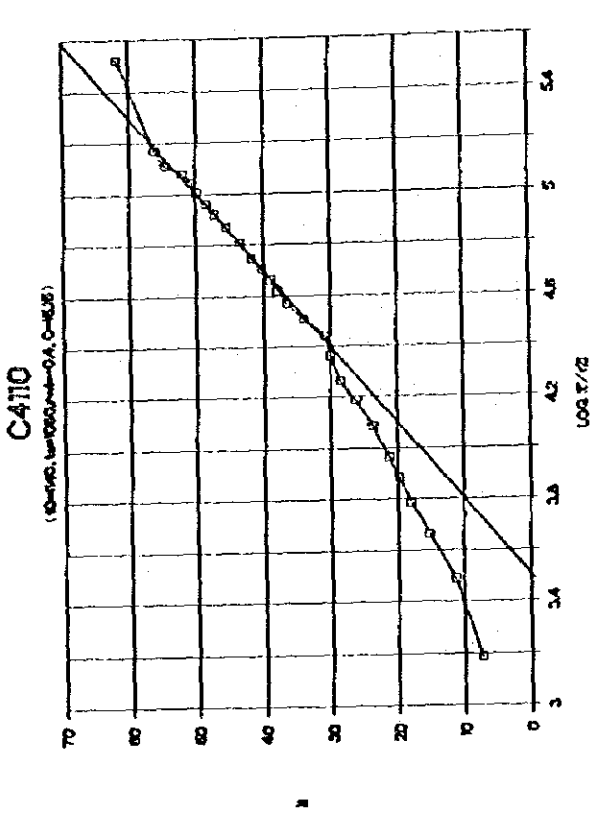
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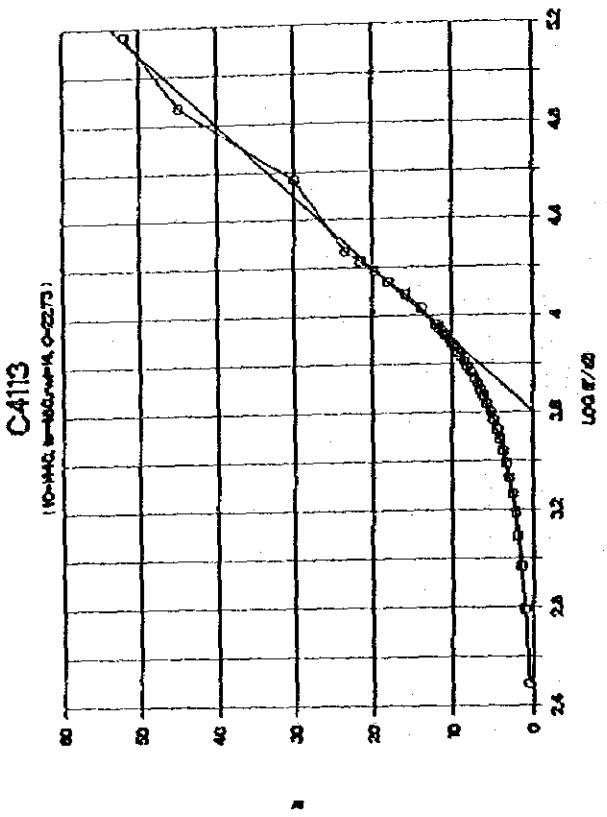
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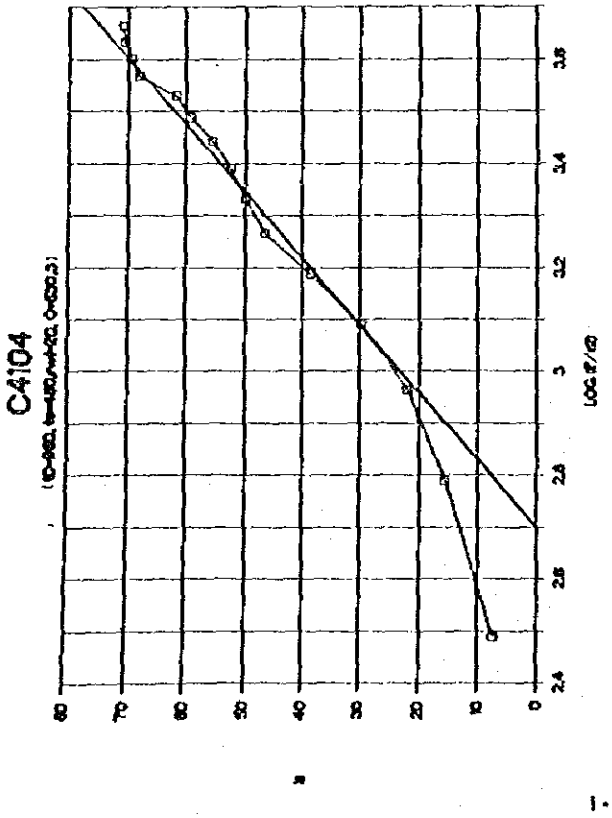
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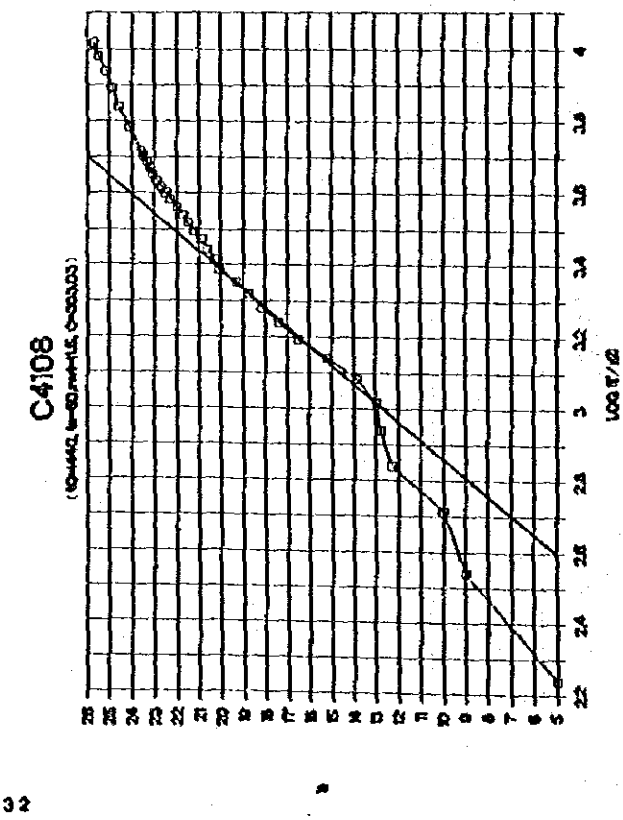
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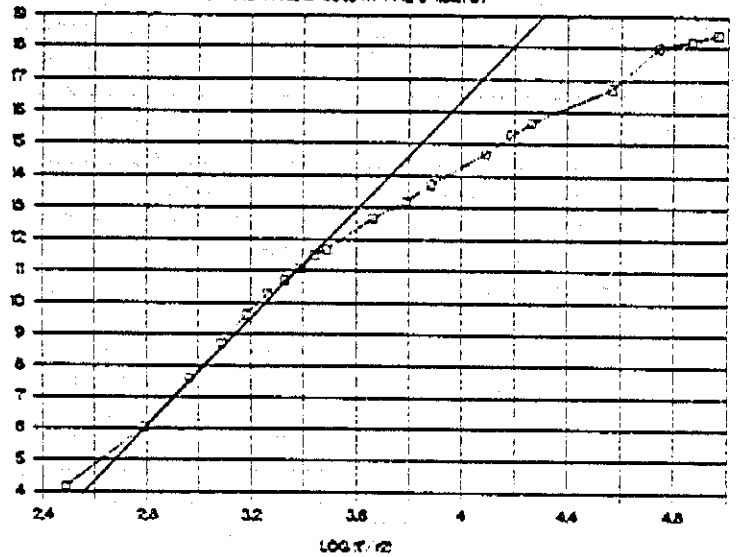

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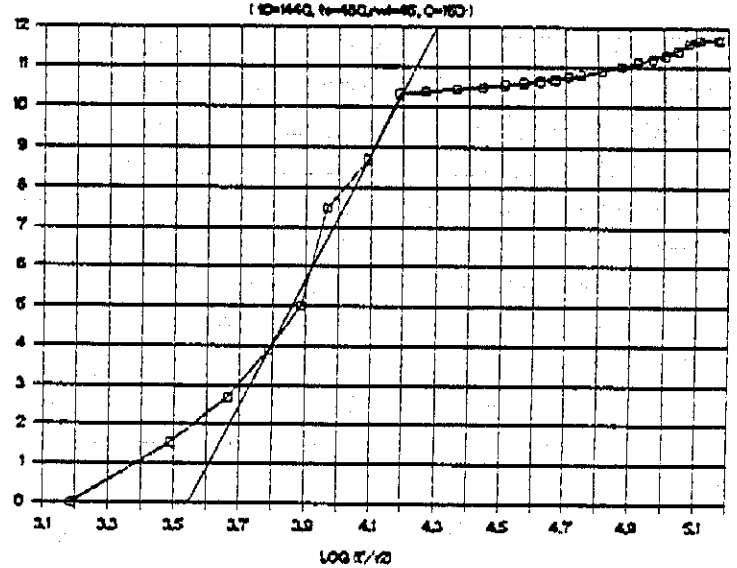

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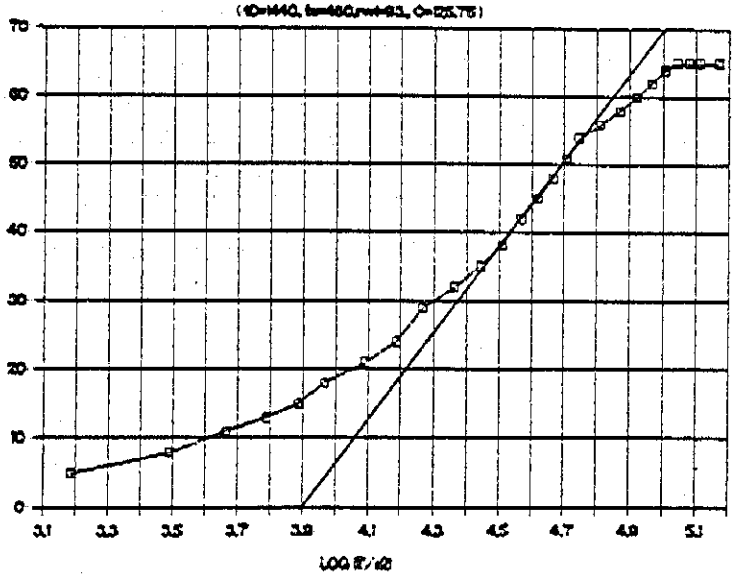

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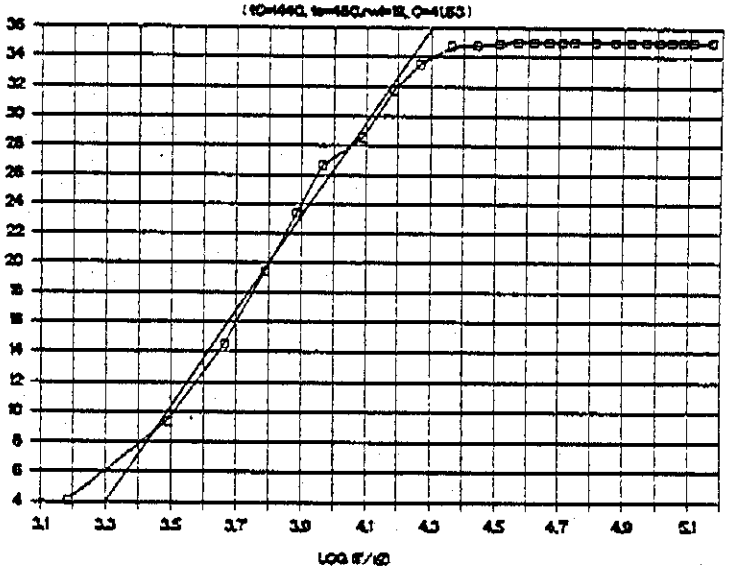

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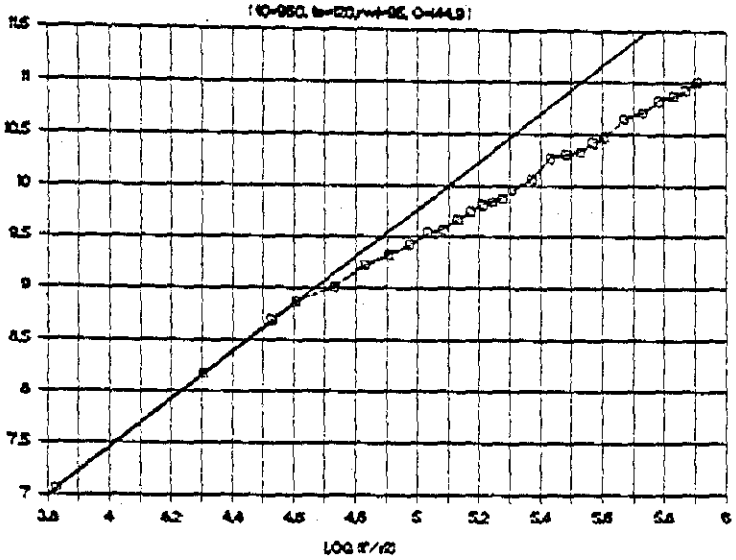

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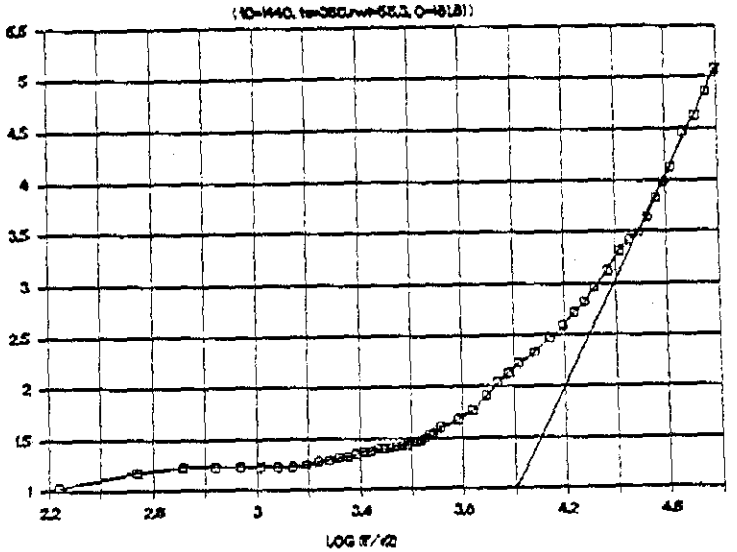

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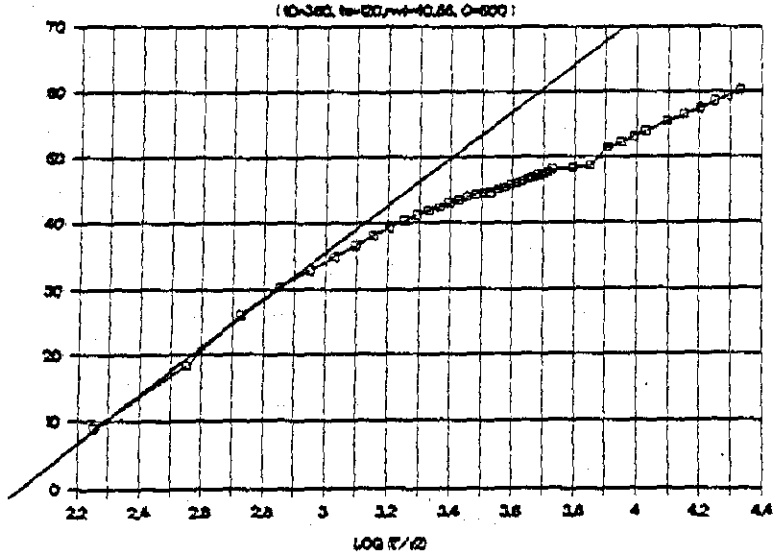

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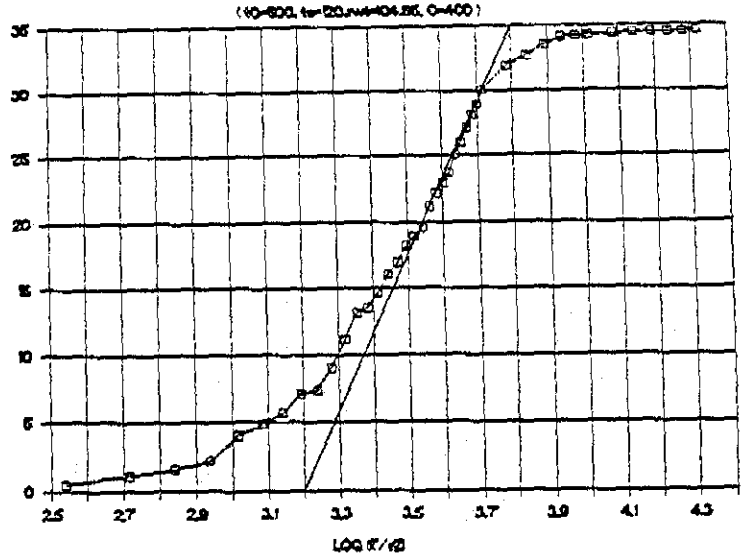

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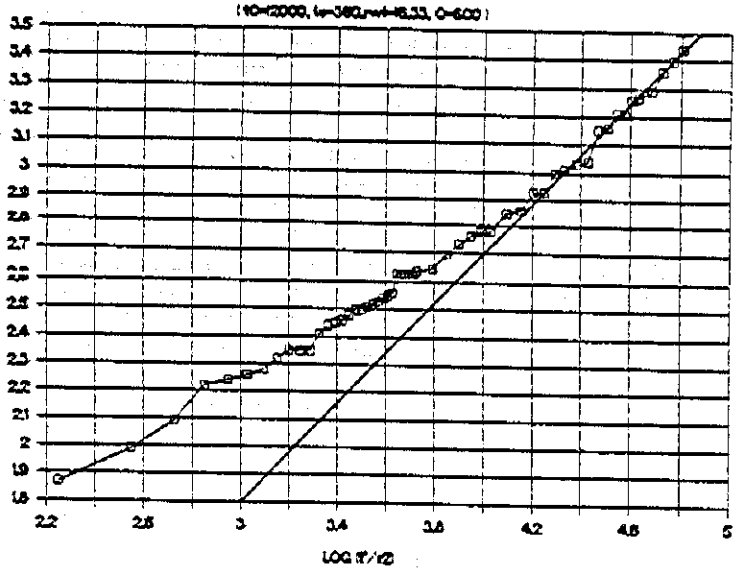

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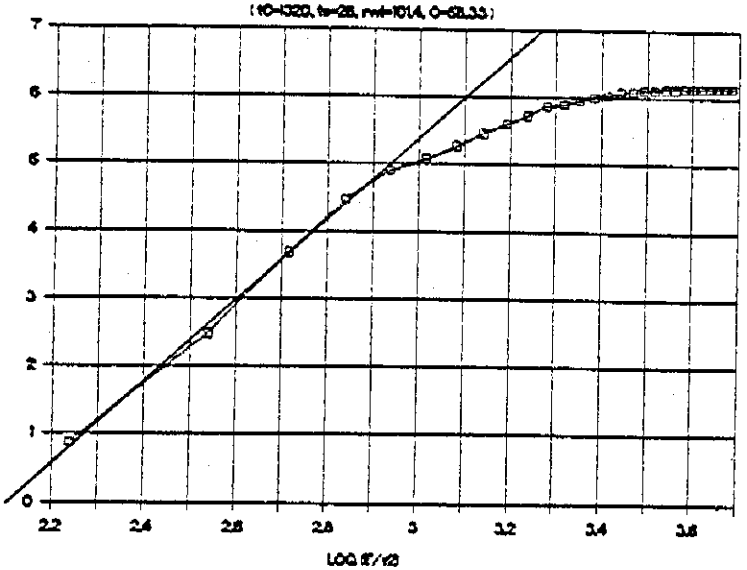

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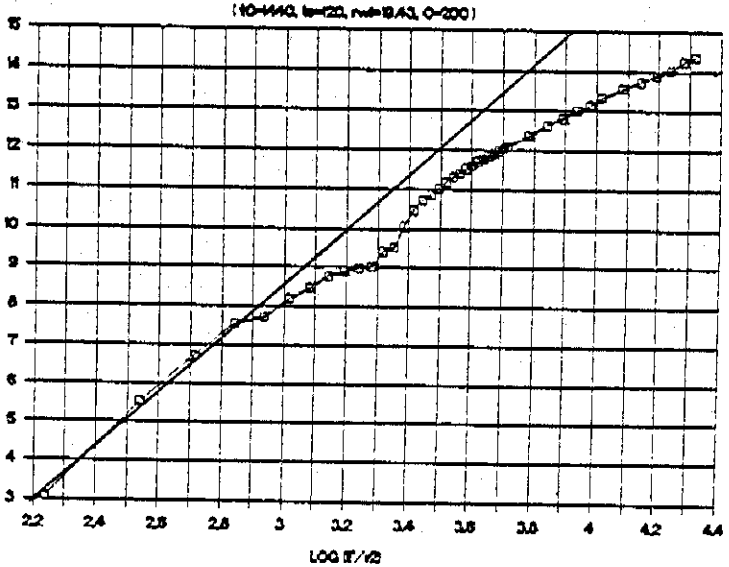

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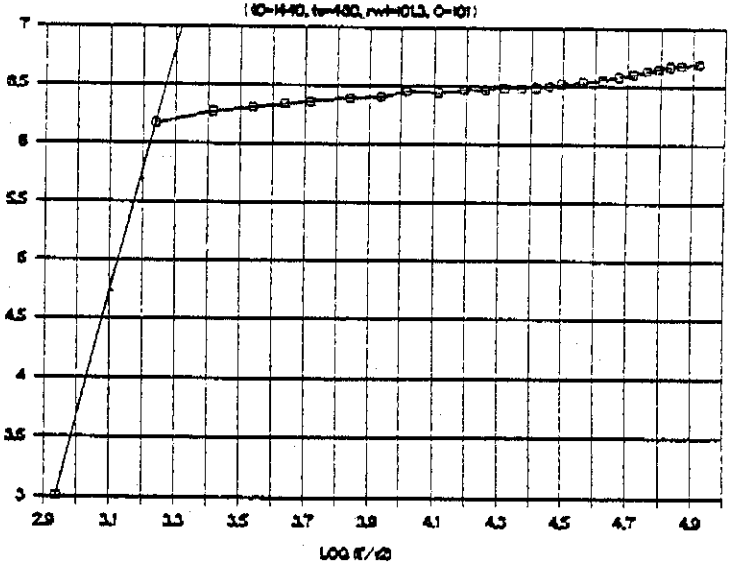

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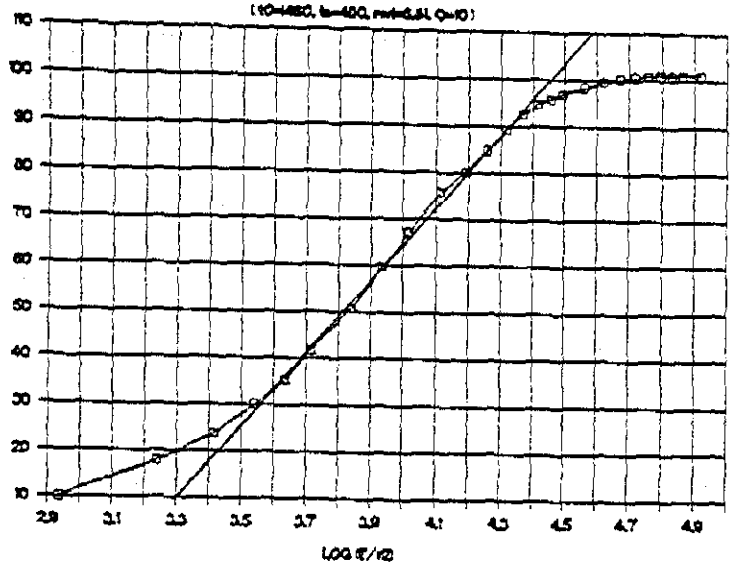

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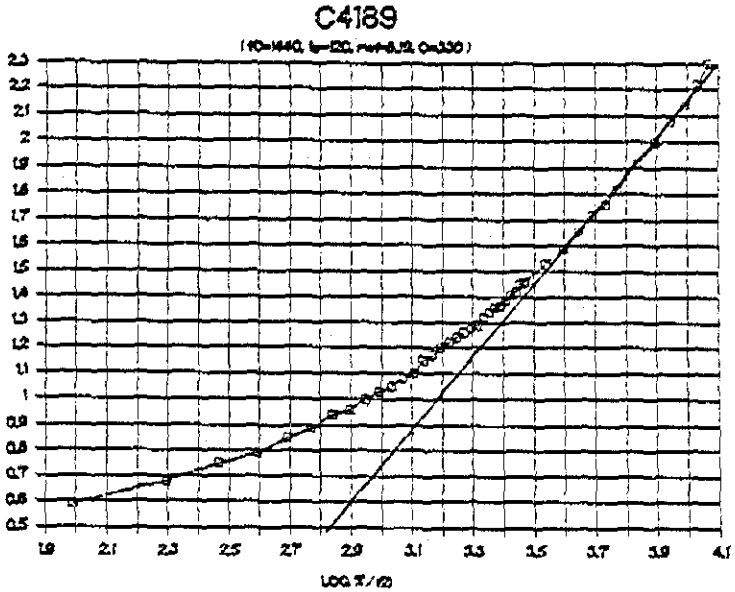

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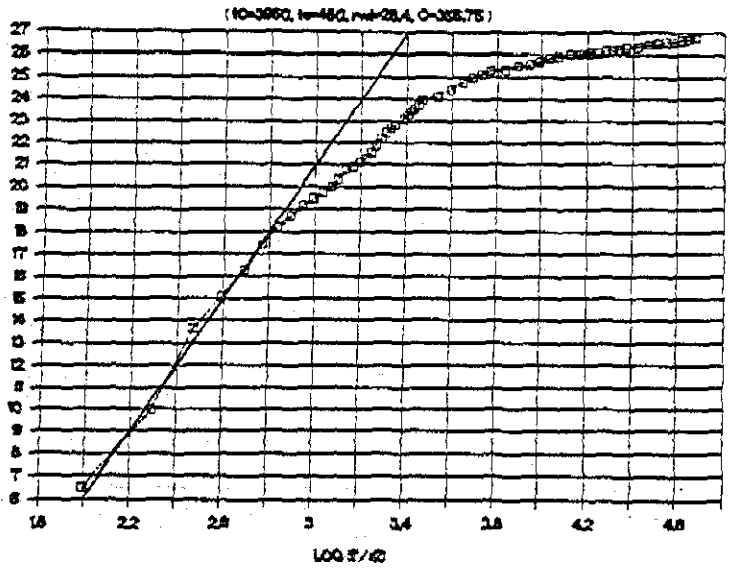

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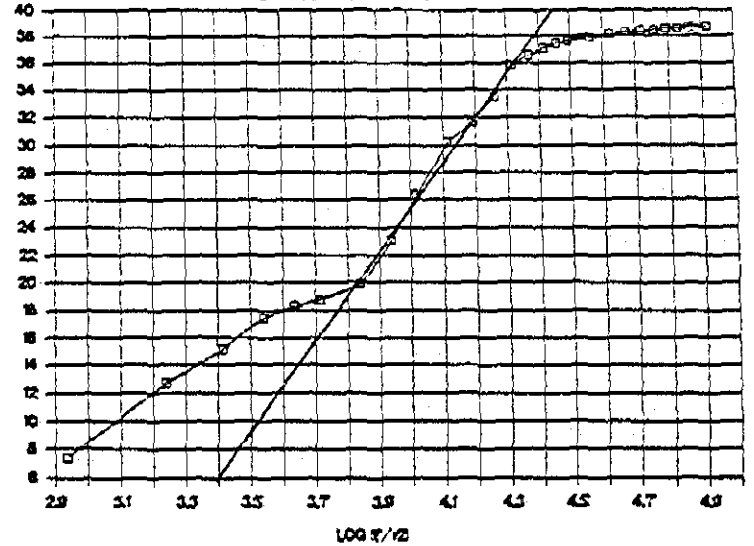

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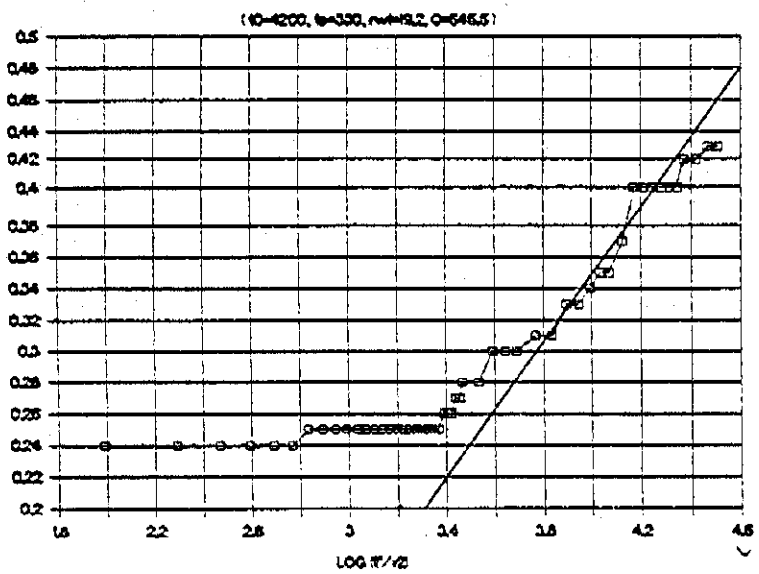

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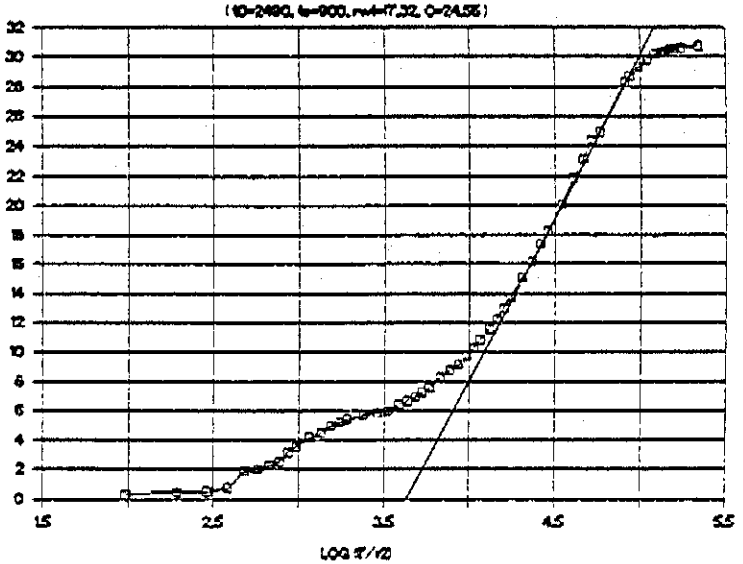

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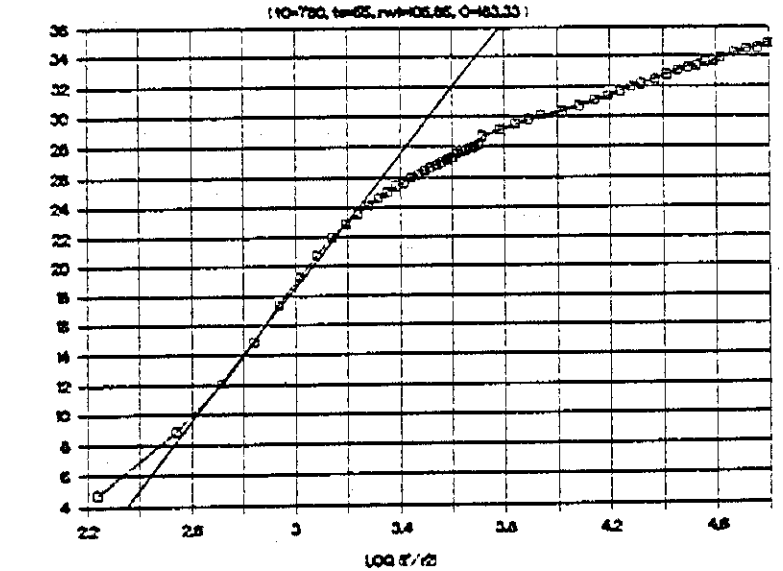

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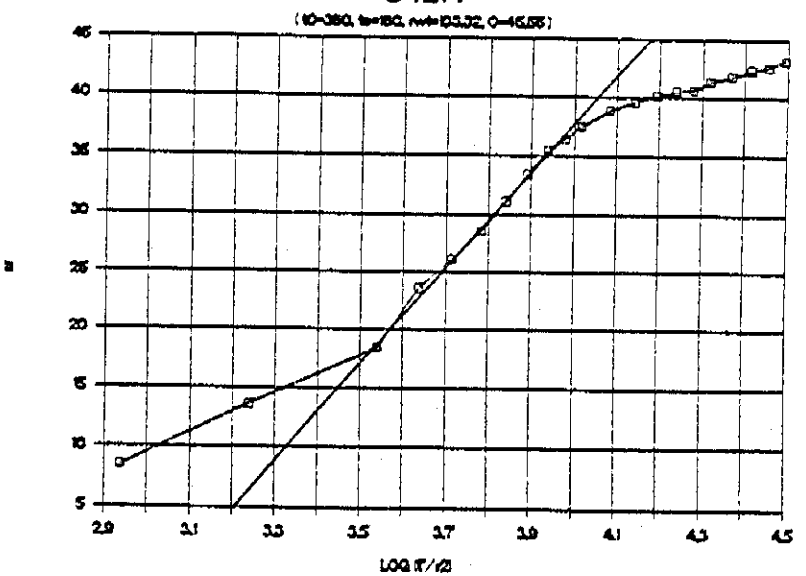

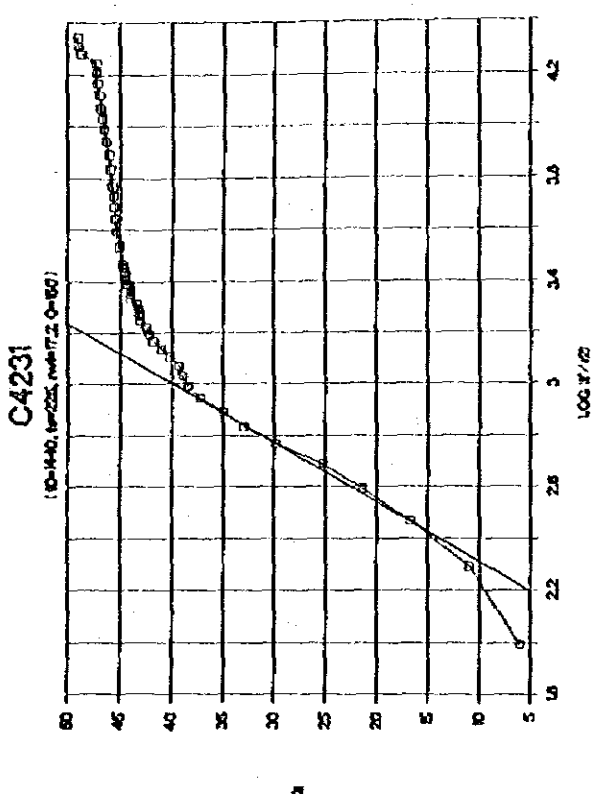
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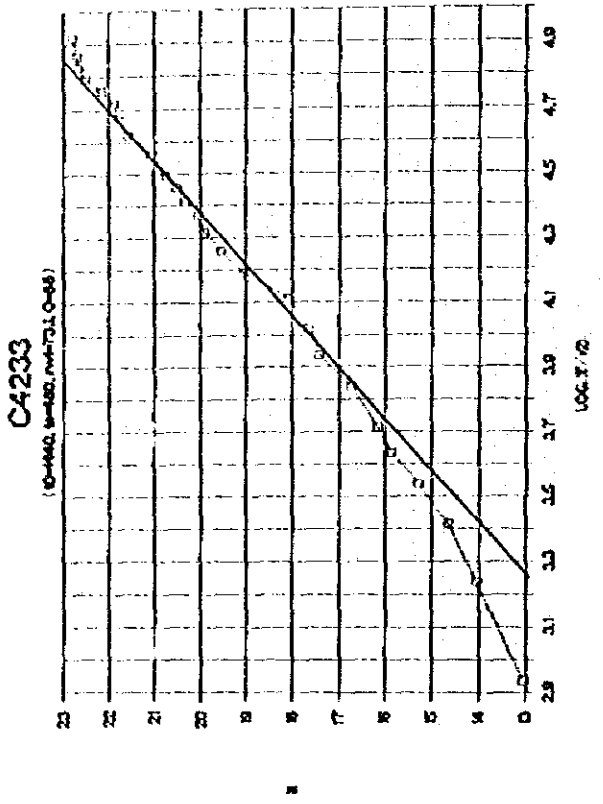
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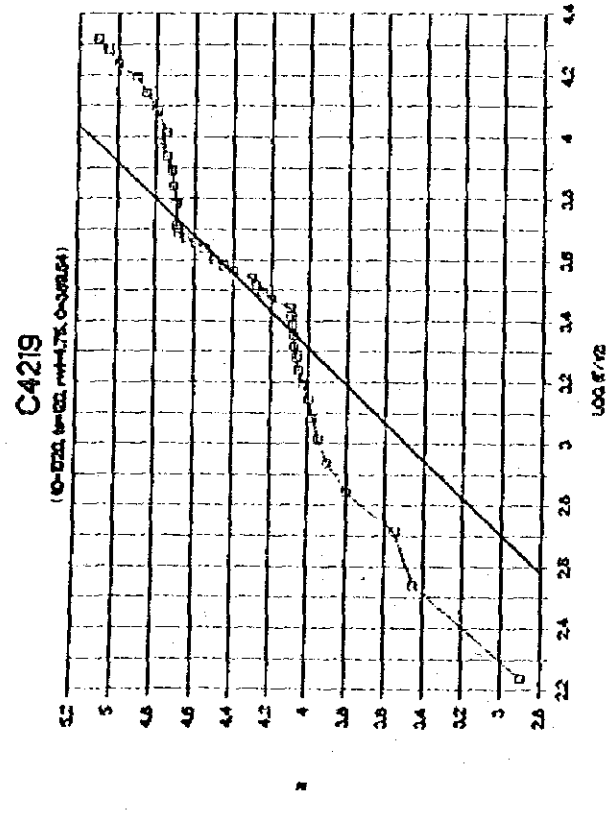
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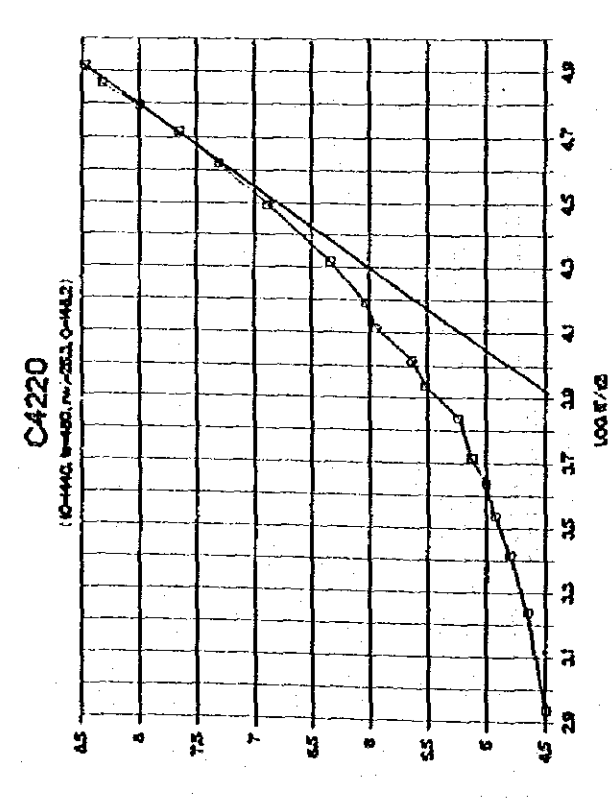
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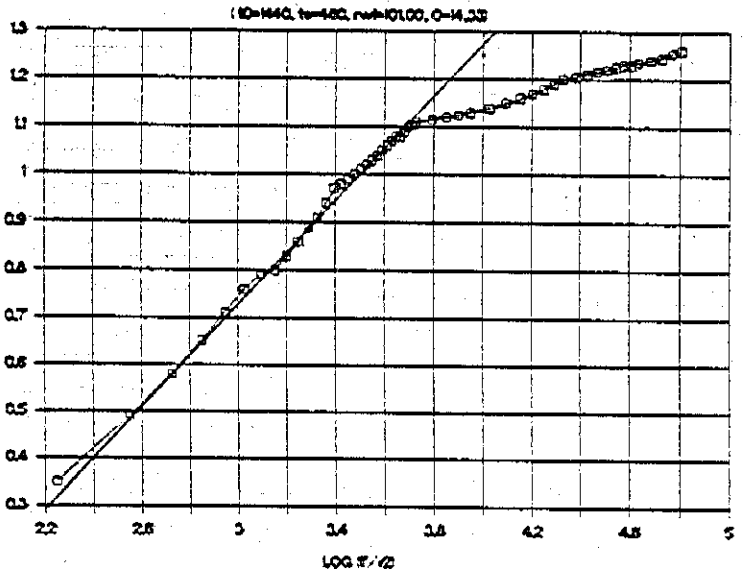

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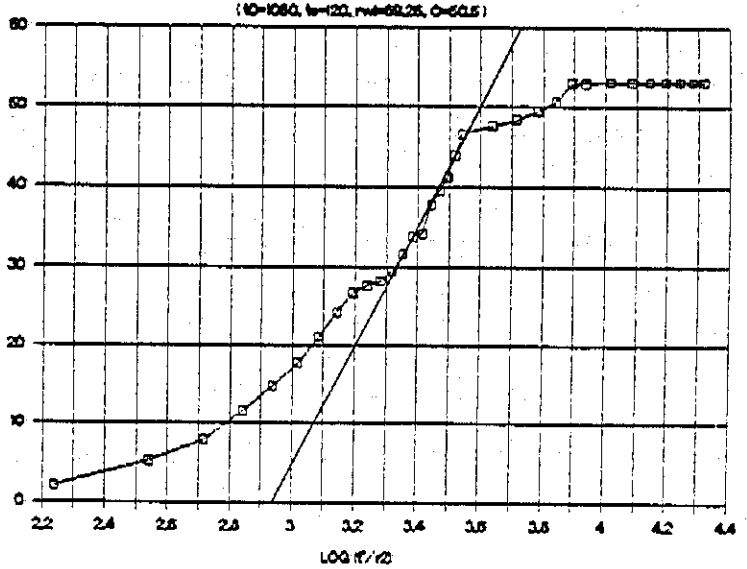

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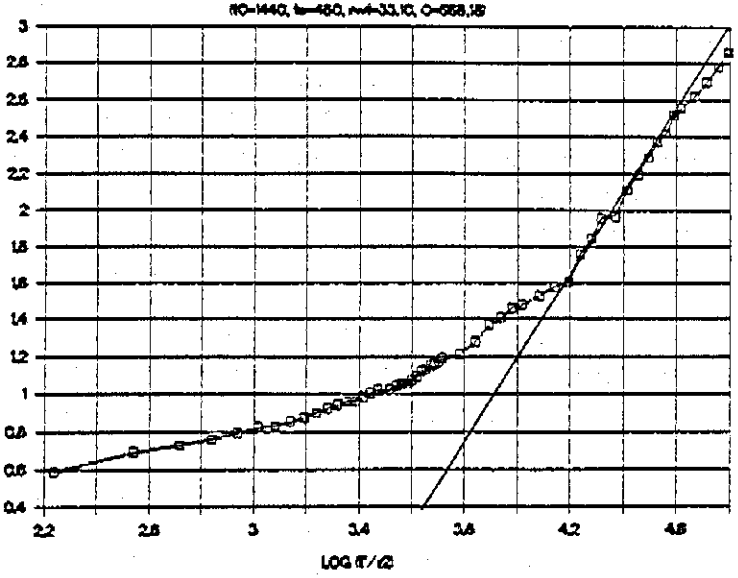

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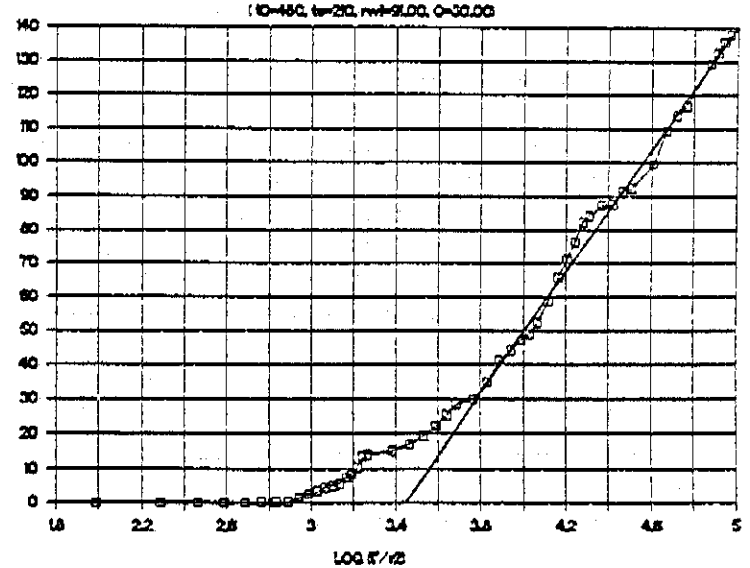

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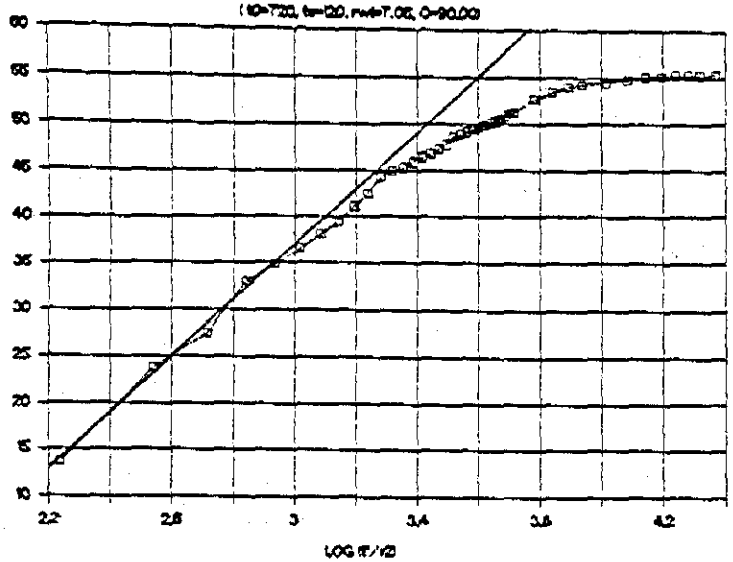
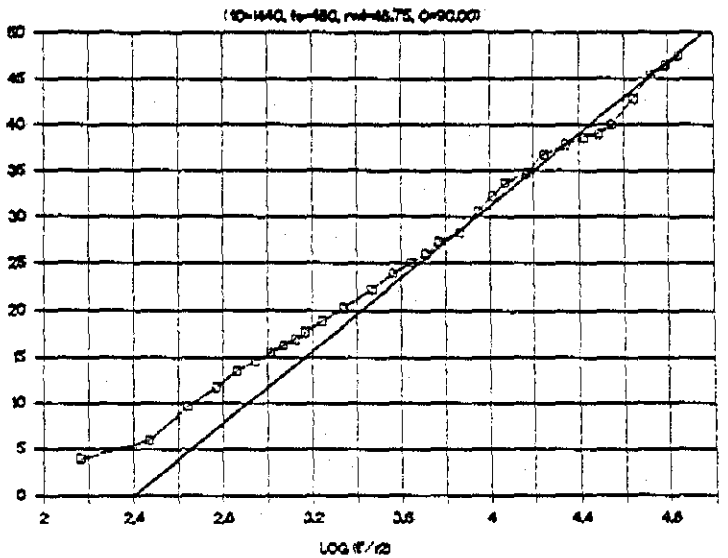


C4268



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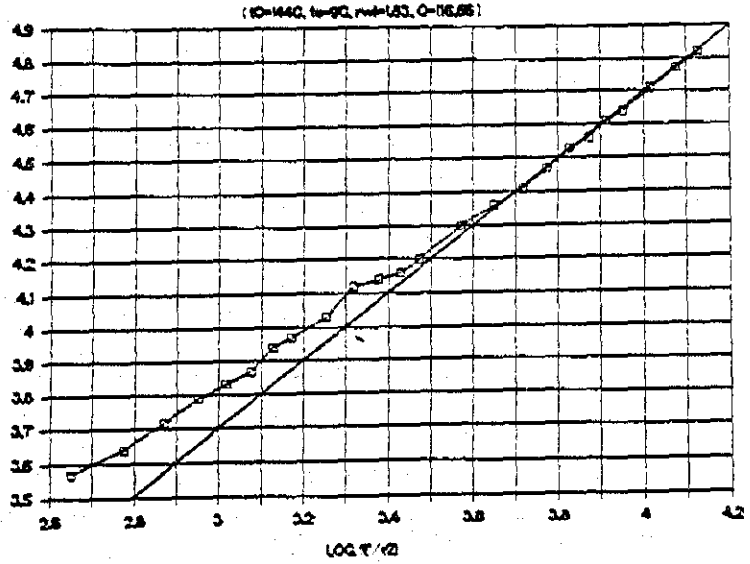

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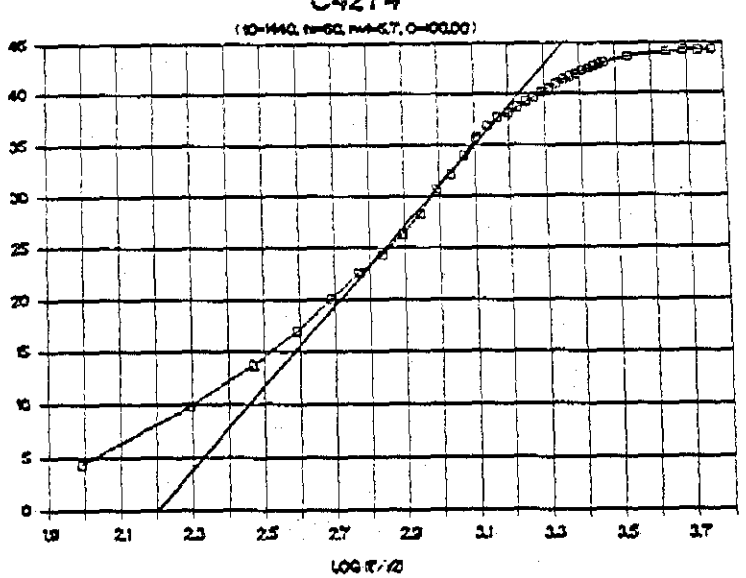

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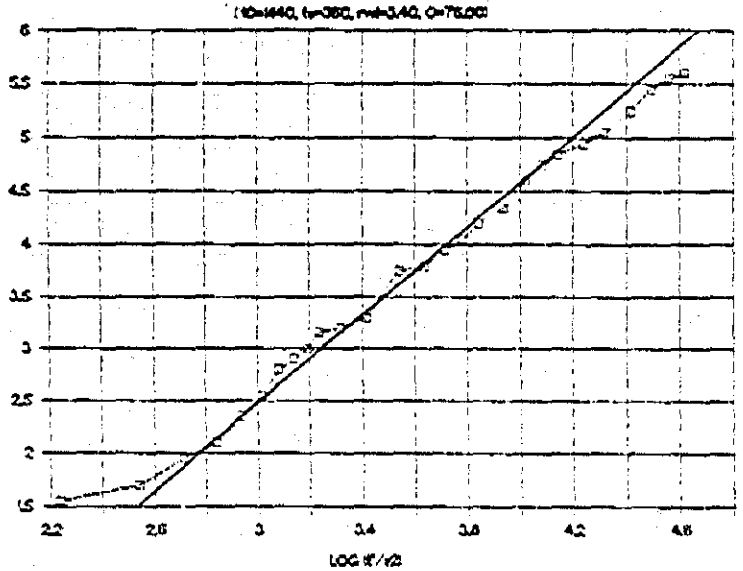

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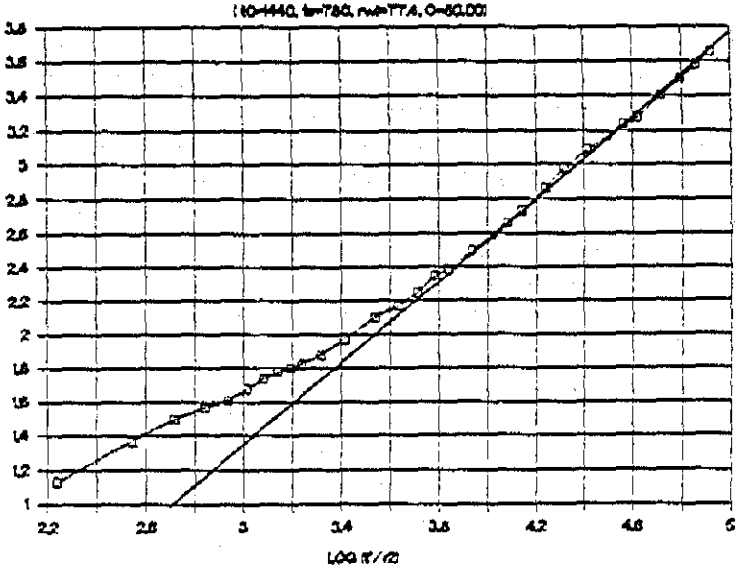

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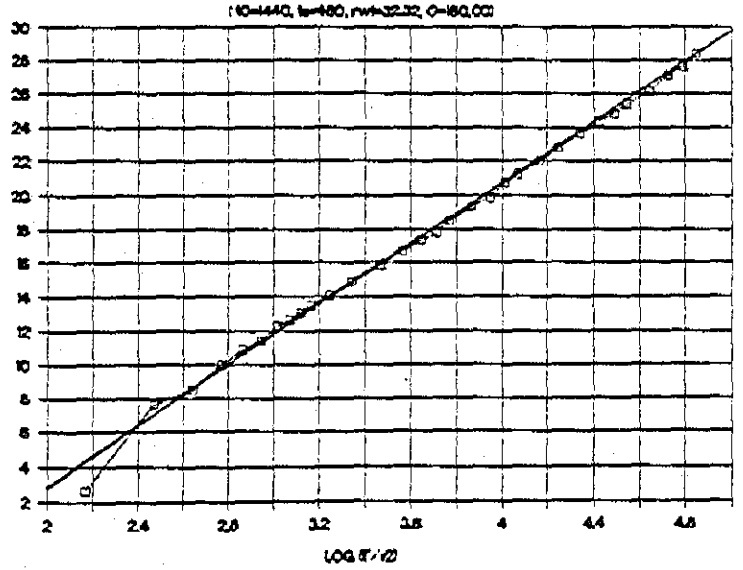

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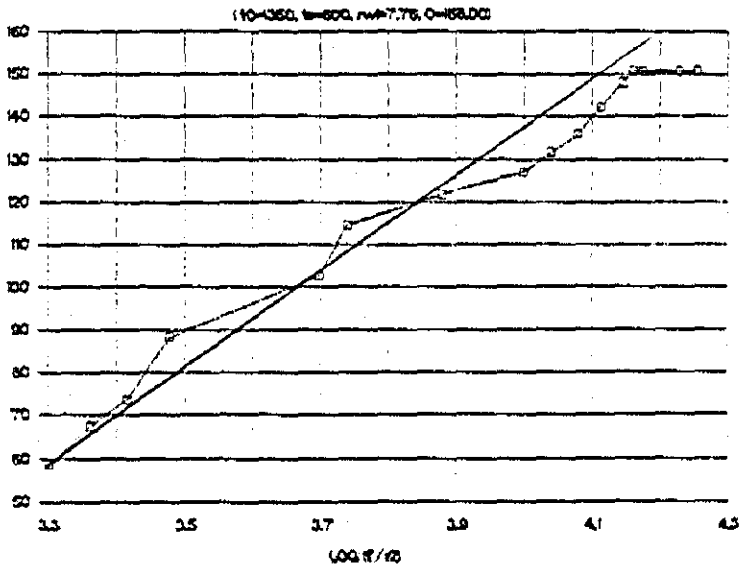

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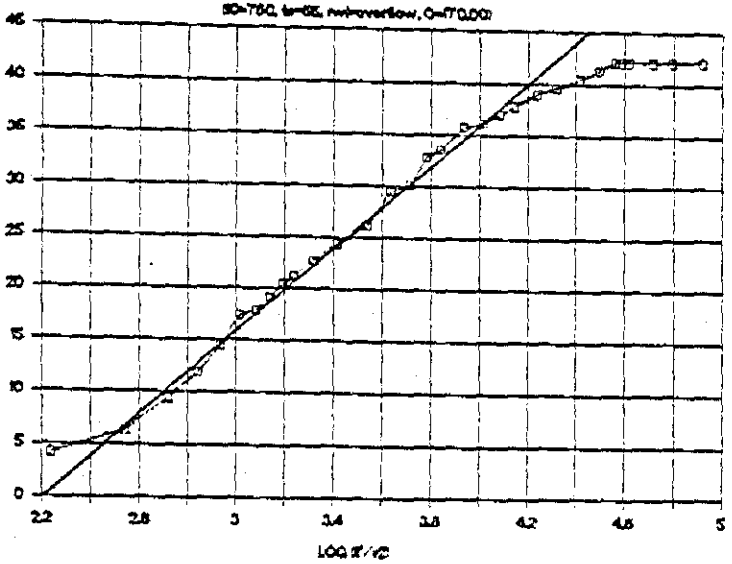

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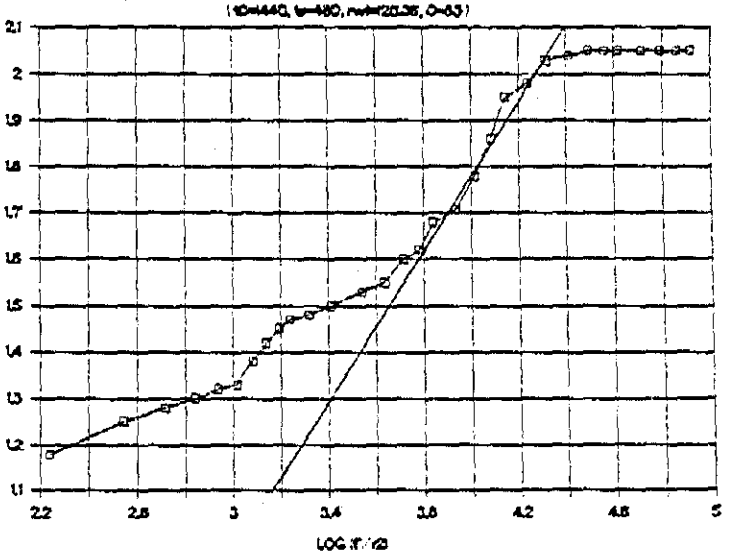

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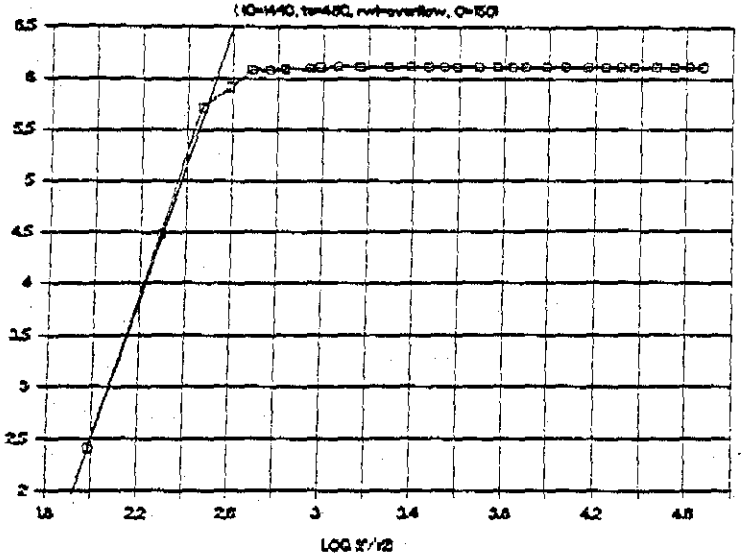

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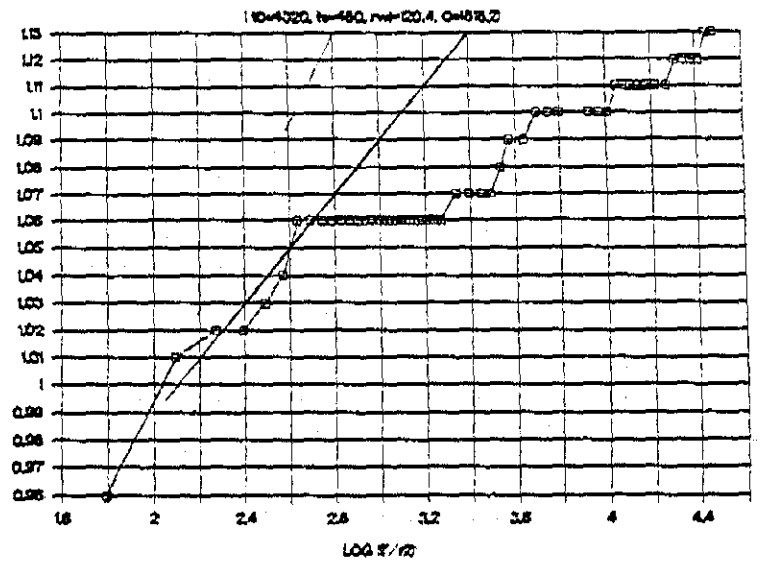

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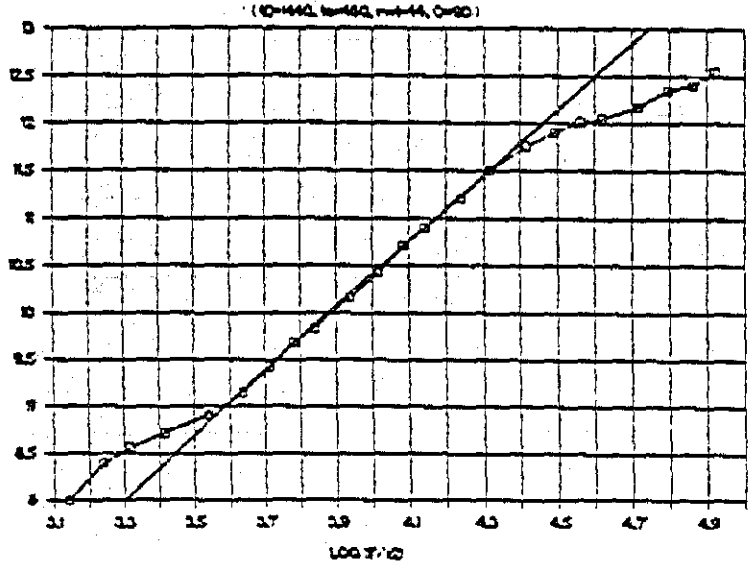

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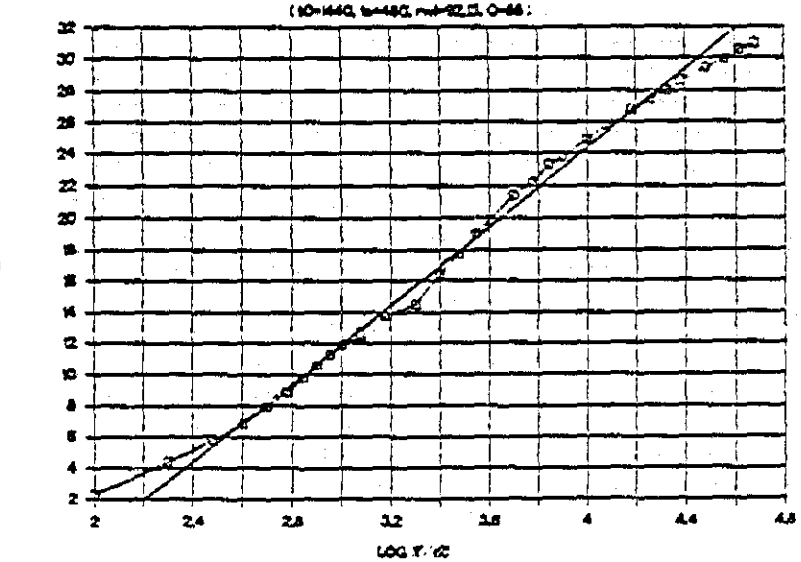

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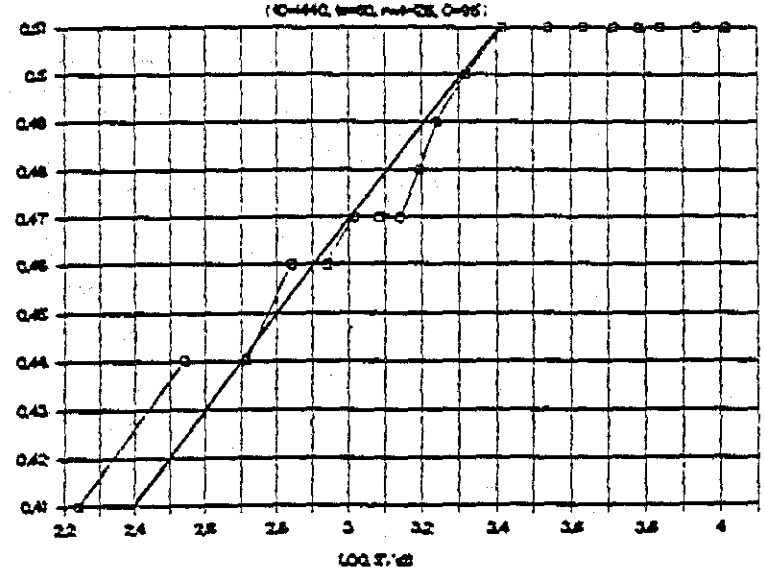

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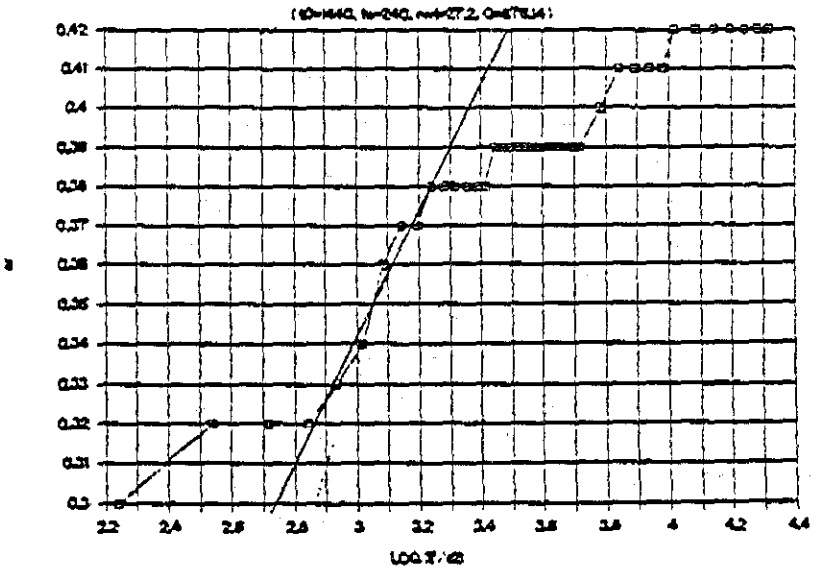

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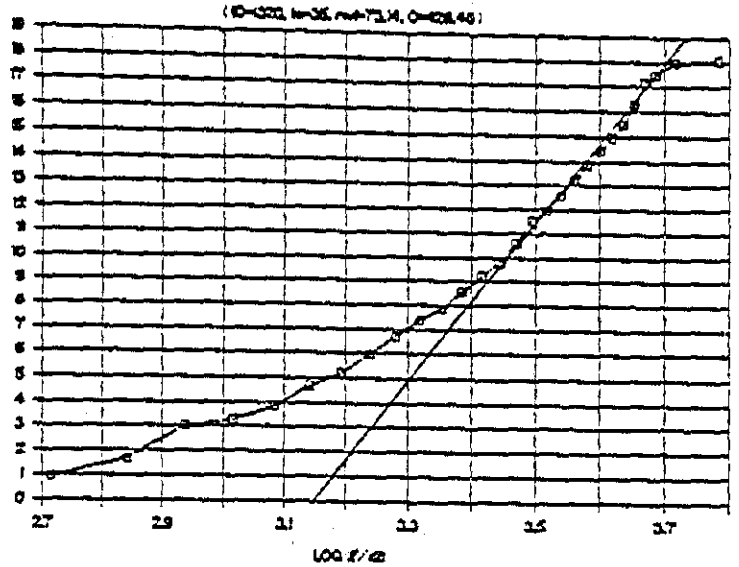

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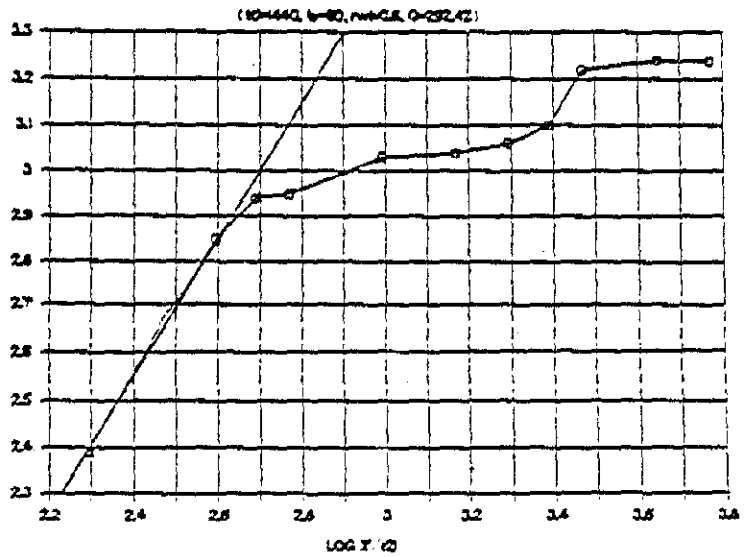

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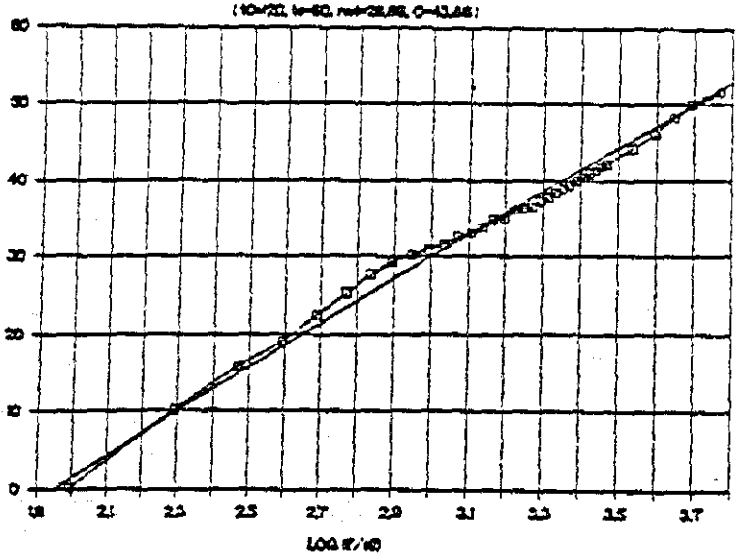

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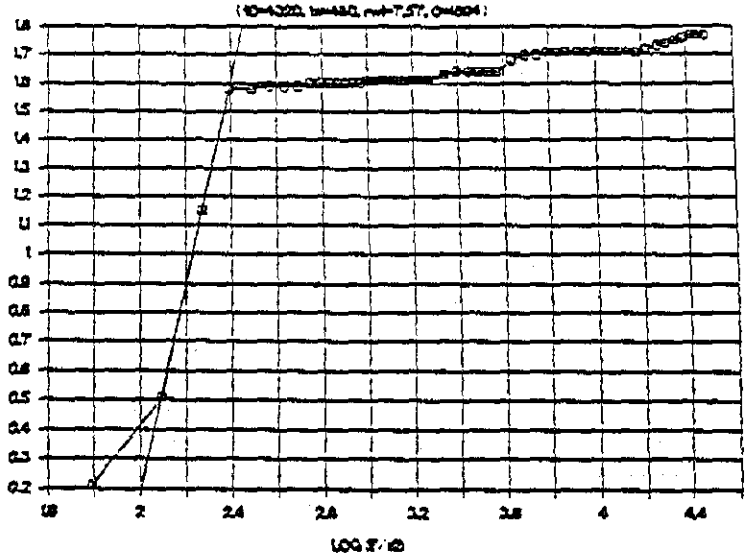

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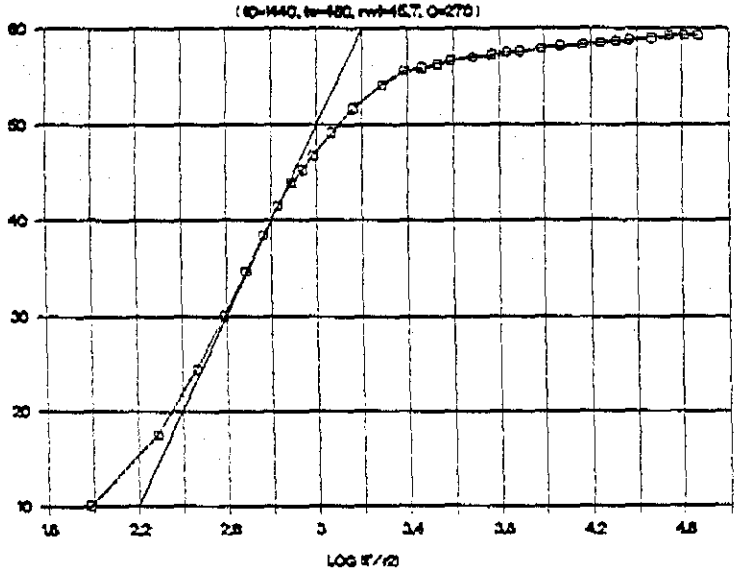

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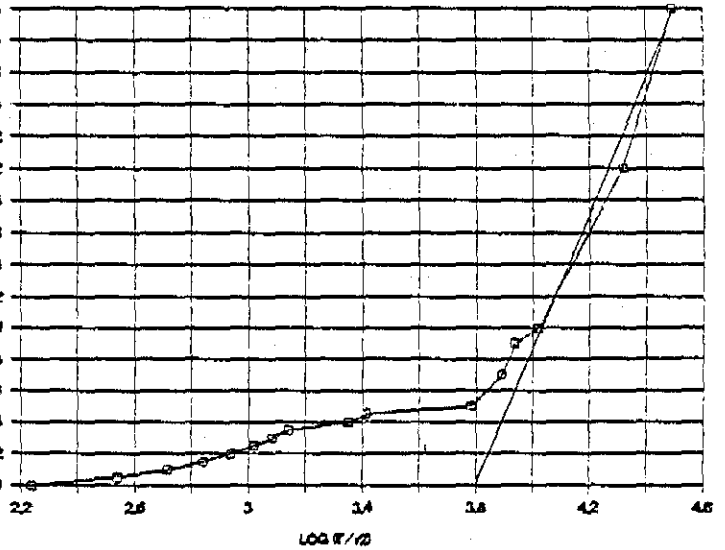

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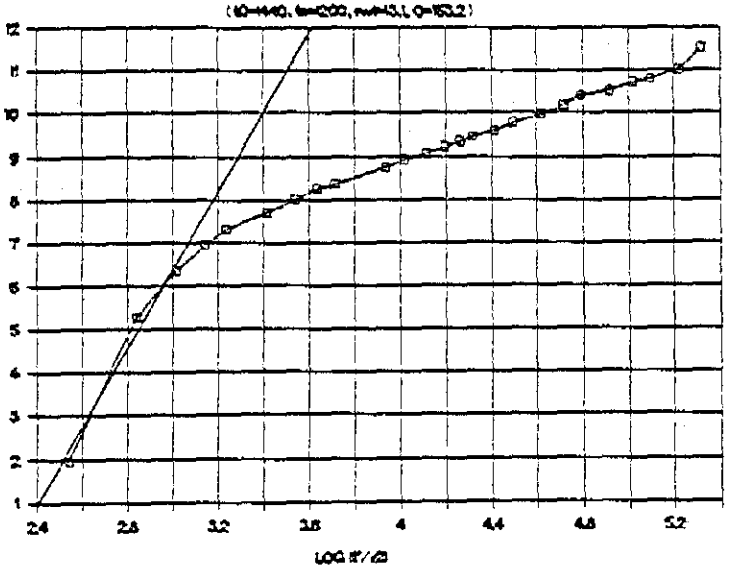

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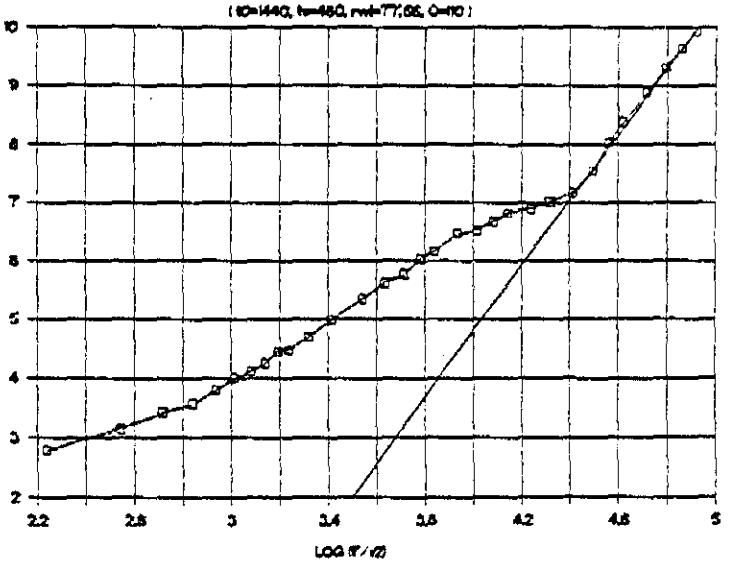

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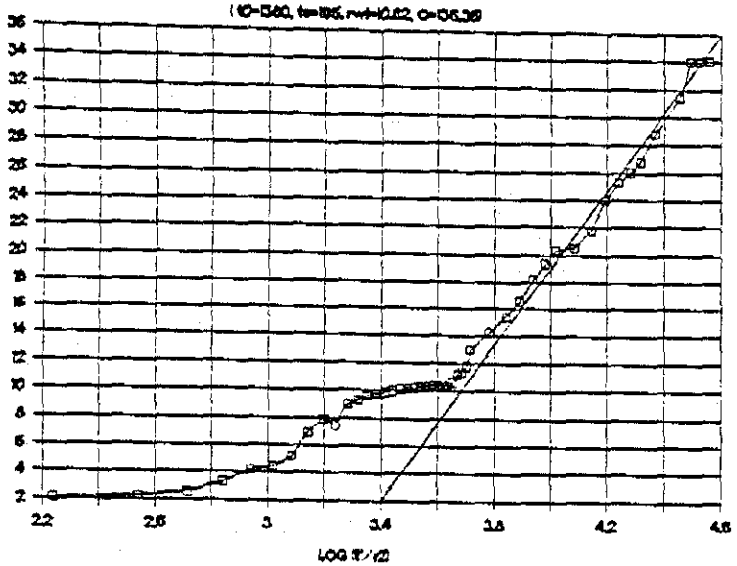

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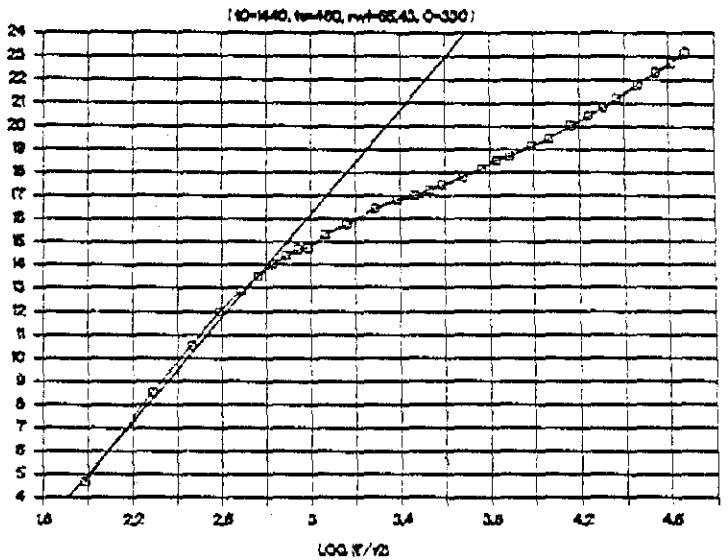

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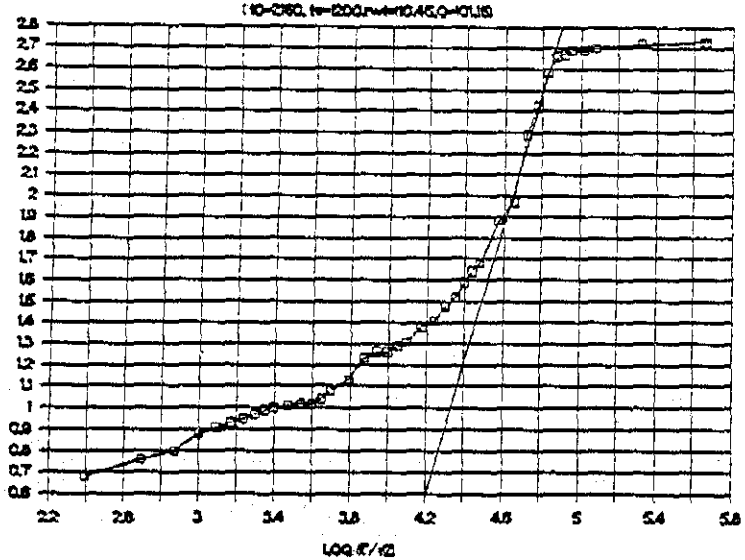

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