

LONDON Avenue Aquifer Pumping Test (Table of Contents)

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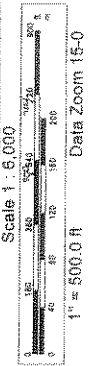
Permeability Computations – South Transect Observation Wells

Permeability Computations – East Transect Observation Wells

Permeability Computations – West Transect Observation Wells

Ordering of Computed Permeability

Overall Locations Pumping Well and Observation Wells



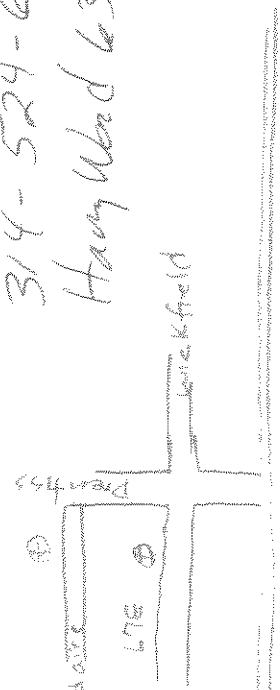
PROJECT	Page ___ of ___	COMPUTED BY	DATE
SUBJECT		CHECKED BY	DATE

Joe Schenk

314-524-6663
 Harry Ward 636 300-3107

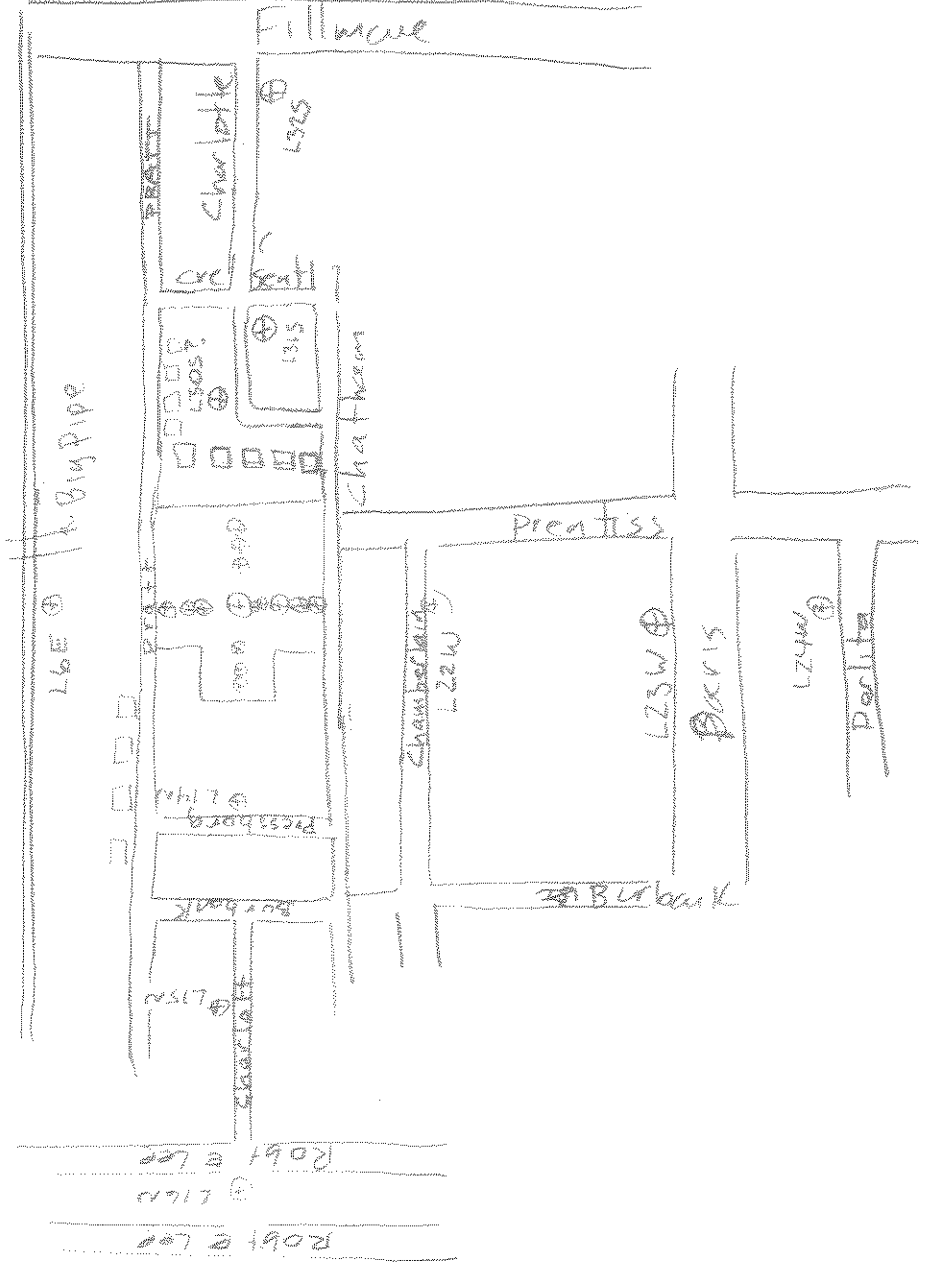
2393

710
 510 1.5
 24
 210



London Canal

Flooded



London

from Center

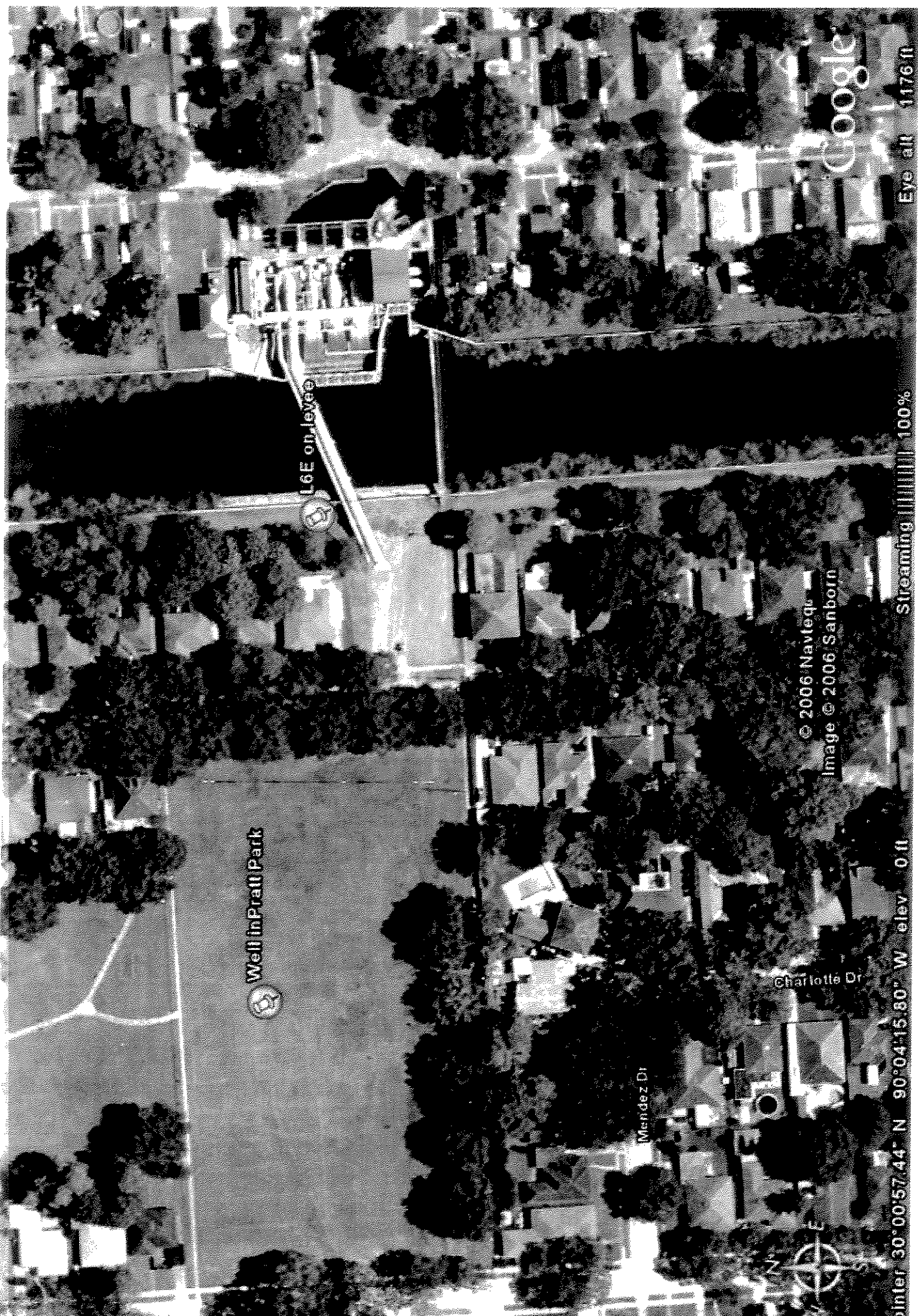
L6E	397	516
L7E	317	1121
L8E	387	1627
L14N	427	427
L15N	517	955
L16N	917	1738
L22W	610	610
L23W	934	934
L24W	1525	1525
L30S	531	531
L31S	1042	1042
L32S	1542	1542



Anthony Gallodoro
+
Bob Woody



Glenn
x
Tom



Well in Pratt Park

L6E on Levee

© 2006 Navteq
Image © 2006 Sanborn

Google

Eye alt 1176 ft

Streaming 100%

Pointer 30° 00' 57.44" N 90° 04' 15.80" W elev 0 ft

Chris Wheeler
Scott Clement



Well In Pratt Park

Pressburg Dr

Chamberlain Dr

L22W 5726 Chamberlain

Pranita Ave

Mandez Dr

Charlotte Dr

Pressburg St

Athis St

L23W on median by 5711 Paris

L24W 5705 Perlitte

Perlitte St

© 2006 Navteq
Image © 2006 Sanborn

Google



Pointer 30°00'57.26" N 90°04'28.58" W elev 0 ft

Streaming 100%

Eye alt 1981 ft

Greg Debose +
Stacey Gauthier

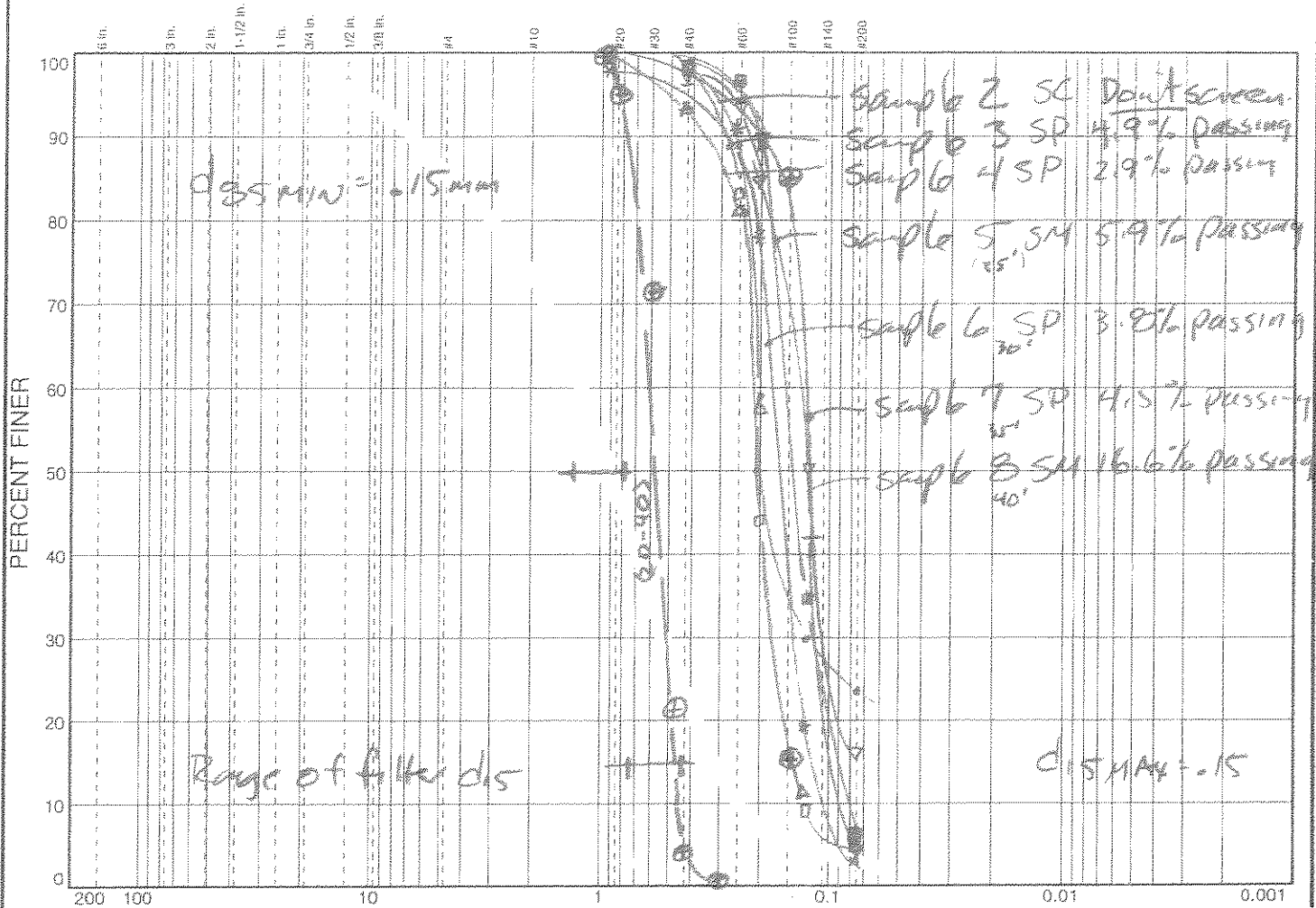
Results of Sampling and Soils Testing Pilot Hole Drilling at Pumping Well

Grain Size Analyses of Aquifer

Design of Filter Pack

Landon

PARTICLE SIZE DISTRIBUTION TEST REPORT



$$\frac{D_{15 \text{ MAX FILTER}}}{d_{85 \text{ MIN FOUND}}} = 5 \quad \parallel \quad d_{85 \text{ MIN}} = .15 \quad D_{15 \text{ MAX FILTER}} = .75$$

$$\frac{D_{15 \text{ MIN FILTER}}}{d_{15 \text{ MAX FOUND}}} > 3 \text{ to } 5 \quad \parallel \quad d_{15 \text{ MAX}} = .15 \quad D_{15 \text{ MIN FILTER}} = .45 \text{ to } .75$$

$$\frac{D_{50 \text{ MIN FILTER}}}{d_{15 \text{ MAX FOUND}}} = 4 \text{ to } 6 \quad \parallel \quad d_{15 \text{ MAX}} = .15 \quad D_{50 \text{ MIN FILTER}} = .8 \text{ to } 1.2$$

Boring No. LS PH-1-06
 Project Londra Canal Pipe No. 2
 Observer Bell

Location Surface Elevation
 Station
 Date 2-3-03

STRATUM	MATERIAL	COLOR	CONSISTENCY	SAMPLE DEPTH	TYPE OF SAMPLER AND CONTAINER	REMARKS
0	clay	cc	Blows			split span 6'8.7
1			1.25			
2						
3						
4	cc					
5.0	clay	cc	0	5.0	RT 1	
6			0	5.5		
7			0	6.0		
8						
9						
10.0	clay and sandy silt	cc	0	10.5	RT 2	
11			0	11.0		
12			0	11.5		
13						Change 3' 7.0
14	SM					
15.0	F-shad	cc	0	15.0	RT 3	
16			0	15.5		
17			0	16.0		
18				16.5		
19						
20						

Boring No. L.C.P.H. - 1 - 06

Location -

Station

Observer - Bell

Surface Elevation

Date 2-3-06

STRATUM	MATERIAL	COLOR	CONSISTENCY <i>Blows</i>	SAMPLE DEPTH	TYPE OF SAMPLER AND CONTAINER	REMARKS
20.0	F-sand	Gr	3	$\frac{20.0}{20.5}$	PT 4	spl. spars
1			5	$\frac{20.5}{21.0}$		
2			17	$\frac{21.0}{21.5}$		
3						
4						
25.0	F-sand	Gr	6	$\frac{25.0}{25.5}$	PT 5	
6			20	$\frac{25.5}{26.0}$		
7			46	$\frac{26.0}{26.5}$		
8						
9						
30.0	F-sand	Gr	12	$\frac{30.0}{30.5}$	PT 6	
1			31	$\frac{30.5}{31.0}$		
2			50+	$\frac{31.0}{31.5}$		
3				$\frac{31.5}{31.4}$		
4						
35.0	F-sand w/ clay layer	Gr	3	$\frac{35.0}{35.5}$	PT 7	
6			12	$\frac{35.5}{36.0}$		
7			17	$\frac{36.0}{36.5}$		
8						
9						
0						

Boring No. LC PH-1-06

Location

Station

Observer Bel

Surface Elevation

Date 2-3-06

Project

STRATUM	MATERIAL	COLOR	CONSISTENCY	SAMPLE DEPTH	TYPE OF SAMPLER AND CONTAINER	REMARKS
40.0	^{ML} Sand-silt/clay	LC	Blows 5	40.0 40.5	PT	8 Change @ 40.0
1			2	40.8 41.0		
2			0	41.0 41.5		
3						
4						
45.0	Testing Clay	LC	0	45.0 45.5	PT	9
6			0	45.5 46.0		
7			0	46.0 46.5		
8						
9						
50.0	Testing Clay	LC	0	50.0 50.5	PT	10
1			0	50.5 51.0		
2			1	51.0 51.5		
3	Compacted @ 51.5					
4	2-3-06					
5						
6						
7						
8						
9						
0						

SIEVE ANALYSIS WORK SHEET

Project: T.F.G. - PUMP PILOT HOLE
LONDON AVENUE CANAL
(06-15)

Date: 7 FEB 06

Sheet No:
1 of 3

Boring No: LCPH.1.D.6

U.S. STD Sieve No.	Opening mm.	Sample No. 2 ✓			Sample No. 3 ✓			Sample No. 4 ✓		
		Ret. gms	Ret. %	Pass	Ret. gms	Ret. %	Pass	Ret. gms	Ret. %	Pass
		Sample Elev. 114.7			Sample Elev. 125.8			Sample Elev. 125.1		
		Sample Wt. 88.0 gms			Sample Wt. 119.9 gms			Sample Wt. 122.3 gms		
		Sieve Wt. 88.0 gms			Sieve Wt. 119.9 gms			Sieve Wt. 122.3 gms		
1"	25.4	P-	444		P-	333		P-	203	
3/4"	19.1	C-	3		C-	AD		C-	AG	
1/2"	12.7									
3/8"	9.52									
4	4.76									
6	3.36									
10	2.00									
12	1.68									
16	1.19									
(18)	1.00	0.2	SI SIF		0.0	SIF		3.4	SI SIF	
20	0.84									
30	0.59									
35	0.50									
(40)	0.42	1.4	FEW SIF		1.2	FEW SIF		7.7	FEW SIF	
50	0.297									
(60)	0.250	13.8			20.3			23.0		
70	0.210									
(80)	0.177	46.9			70.1			53.8		
100	0.149									
(120)	0.125	79.9			114.4			169.4		
140	0.105									
(200)	0.076	86.7			119.6			121.5		
230	0.062									
(Pan)		88.0			119.8			122.2		
Total										

Technician: VW

SAMPLE 2 IS AN SC
WITH 75.6% SAND

Computed: VW

SP-F-M
95.1% SAND

Checked:

SP-F-M
97.1% SAND

SIEVE ANALYSIS WORK SHEET

Project: T.F.G. - PUMP PILOT HOLE
 LONDON AVENUE CANAL
 (06-15)

Date: 7 FEB 06
 Sheet No: 2 of 3

Boring No: LCPH.1.2.6							
U.S. STD Sieve No.	Opening mm.	Sample No. 5 ✓	Sample No. 16	Sample No. 17			
		Sample Elev. 112.2	Sample Elev. 109.5	Sample Elev. 103.8			
		Sample Wt. 107.2 gms	Sample Wt. 106.5 gms	Sample Wt. 99.8 gms			
		Sieve Wt. 107.2 gms	Sieve Wt. 106.5 gms	Sieve Wt. 99.8 gms			
		Ret. gms	Ret. gms	Ret. gms	Ret. gms	Ret. gms	Ret. gms
1"	25.4	P- 548	P- 529	P- 639			
3/4"	19.1	✓ -21 ✓	✓ -47 ✓	✓ -13			
1/2"	12.7						
3/8"	9.52						
4	4.76						
6	3.36						
10	2.00						
12	1.68						
16	1.19						
(18)	1.00	0.8 SIF	2.8 SIF	1.5 SIF			
20	0.84						
30	0.59						
35	0.50						
(40)	0.42	1.3 FEW SIF	5.8 FEW SIF	3.0 FEW SIF			
50	0.297						
(60)	0.250	2.4	9.1	4.4			
70	0.210						
(80)	0.177	11.4	25.2	10.1			
100	0.149						
(120)	0.125	74.1	87.9	59.6			
140	0.105						
(200)	0.075	105.6	105.3	99.1			
230	0.062						
(Pan)		107.1	106.5	99.8			
Total							

Technician: VW Computed: VW Checked:

SAMPLE 5 IS AN SM WITH 94.1% SAND SP-F-M 96.2% SAND SP-F-M 95.5% SAND

SIEVE ANALYSIS WORK SHEET

Project: T. F.G. - PUMP PILOT HOLE
LONDON AVENUE CANAL
(06-15)

Date:
Sheet No:
3 of 3

Boring No:

U.S. STD Sieve No.	Opening mm.	Sample No. 8			Sample No.			Sample No.		
		Sample Elev.	Sample Elev.	Sample Elev.	Sample Elev.	Sample Elev.	Sample Elev.	Sample Elev.	Sample Elev.	
		Sample Wt. gms	Sample Wt. gms	Sample Wt. gms	Sample Wt. gms	Sample Wt. gms	Sample Wt. gms	Sample Wt. gms	Sample Wt. gms	
		Sieve Wt. gms	Sieve Wt. gms	Sieve Wt. gms	Sieve Wt. gms	Sieve Wt. gms	Sieve Wt. gms	Sieve Wt. gms	Sieve Wt. gms	
		Ret. gms	Ret. gms	Page	Ret. gms	Ret. gms	Page	Ret. gms	Ret. gms	Page
1"	25.4	P-	392							
3/4"	19.1	C-	1							
1/2"	12.7									
3/8"	9.52									
4	4.76									
6	3.36									
10	2.00									
12	1.68									
16	1.19									
(18)	1.00	1.2	SI SIF							
20	0.84									
30	0.59									
35	0.50									
(40)	0.42	3.6	FEW SIF							
50	0.297									
(60)	0.250	7.6								
70	0.210									
(80)	0.177	18.4								
100	0.149									
(120)	0.125	64.8								
140	0.105									
(200)	0.076	108.2								
270	0.062									
(Pan)		110.0								
Total										

Technician: VW
SAMPLE 8 IS AN SC
WITH 83.4% SAND

Computed: VW

Checked:

SIIV.EXE

INPUT SIEVE NUMBER
120
INPUT CUMMALATIVE GRAMS RETAINED
79.9

INPUT SIEVE NUMBER
200
INPUT CUMMALATIVE GRAMS RETAINED
86.7

PROJECT: LONDON AVENUE CANAL PUMP TEST PILOT HOLE DATE: 08FEB06
BORING NUMBER: LCPH.1.0.6 TECHNICIAN: VW
SAMPLE: 2
SAMPLE WEIGHT: 114.7

SIEVE #	RETAINED GRAMS	PASS %
18	.2	99.8
40	1.4	98.8
60	13.8	88.0
80	46.9	59.1
120	79.9	30.3
200	86.7	24.4

SC

SAMPLE 2 IS AN SM WITH:
75.6 PERCENT SAND

ARE THERE ANY MORE SAMPLES FOR THIS BORING

SIV EXE		
INPUT SIEVE NUMBER		
200		
INPUT CUMMALATIVE GRAMS RETAINED		
119.6		
PROJECT: LONDON AVENUE CANAL PUMP TEST PILOT HOLE		DATE: 08FEB06
BORING NUMBER: LCPH.1.0.6		TECHNICIAN: VW
SAMPLE: 3		
SAMPLE WEIGHT: 125.8		
SIEVE #	RETAINED GRAMS	PASS %
18	.0	100.0
40	1.2	99.0
60	20.3	83.9
80	70.1	44.3
120	114.4	9.1
200	119.6	4.9
SAMPLE 3 IS AN SP WITH:		
.0 PERCENT GRAVEL		
.0 PERCENT COARSE SAND		
1.0 PERCENT MEDIUM SAND		
94.1 PERCENT FINE SAND		
AND		
95.1 PERCENT SAND		
ARE THERE ANY MORE SAMPLES FOR THIS BORING		

SIV EXE

INPUT SIEVE NUMBER
200

INPUT CUMMALATIVE GRAMS RETAINED
121.5

PROJECT: LONDON AVENUE CANAL PUMP TEST PILOT HOLE DATE: 08FEB06
BORING NUMBER: LCPH.1.0.6 TECHNICIAN: VW
SAMPLE: 4
SAMPLE WEIGHT: 125.1

SIEVE #	RETAINED GRAMS	PASS %
18	3.4	97.3
40	7.7	93.8
60	23.0	81.6
80	53.8	57.0
120	109.4	12.5
200	121.5	2.9

SAMPLE 4 IS AN SP WITH:
 .0 PERCENT GRAVEL
 .0 PERCENT COARSE SAND
 6.2 PERCENT MEDIUM SAND
 91.0 PERCENT FINE SAND
 AND
 97.1 PERCENT SAND

ARE THERE ANY MORE SAMPLES FOR THIS BORING

INPUT SIEVE NUMBER
 120
 INPUT CUMMALATIVE GRAMS RETAINED
 74.1

 INPUT SIEVE NUMBER
 200
 INPUT CUMMALATIVE GRAMS RETAINED
 105.6

 PROJECT: LONDON AVENUE CANAL PUMP TEST PILOT HOLE DATE: 08FEB06
 BORING NUMBER: LCPH.1.0.6 TECHNICIAN: VW
 SAMPLE: 5
 SAMPLE WEIGHT: 112.2

SIEVE #	RETAINED GRAMS	PASS %
18	.8	99.3
40	1.3	98.8
60	2.4	97.9
80	11.4	89.8
120	74.1	34.0
200	105.6	5.9

 SAMPLE 5 IS AN SM WITH:
 94.1 PERCENT SAND
 ARE THERE ANY MORE SAMPLES FOR THIS BORING

SIV EXT

INPUT SIEVE NUMBER
200

INPUT CUMMALATIVE GRAMS RETAINED
105.3

PROJECT: LONDON AVENUE CANAL PUMP TEST PILOT HOLE DATE: 08FEB06
BORING NUMBER: LCPH.1.0.6 TECHNICIAN: VW
SAMPLE: 6
SAMPLE WEIGHT: 109.5

SIEVE #	RETAINED GRAMS	PASS %
18	2.8	97.4
40	5.8	94.7
60	9.1	91.7
80	25.2	77.0
120	87.9	19.7
200	105.3	3.8

SAMPLE 6 IS AN SP WITH:
 .0 PERCENT GRAVEL
 .0 PERCENT COARSE SAND
 5.3 PERCENT MEDIUM SAND
 90.9 PERCENT FINE SAND
 AND
 96.2 PERCENT SAND

ARE THERE ANY MORE SAMPLES FOR THIS BORING

SIV EXE

INPUT SIEVE NUMBER
200

INPUT CUMMALATIVE GRAMS RETAINED
99.1

PROJECT: LONDON AVENUE CANAL PUMP TEST PILOT HOLE DATE: 08FEB06
BORING NUMBER: LCPH.1.0.6 TECHNICIAN: VW
SAMPLE: 7
SAMPLE WEIGHT: 103.8

SIEVE #	RETAINED GRAMS	PASS %
18	1.5	98.6
40	3.0	97.1
60	4.4	95.8
80	10.1	90.3
120	59.6	42.6
200	99.1	4.5

SAMPLE 7 IS AN SP WITH:
 .0 PERCENT GRAVEL
 .0 PERCENT COARSE SAND
 2.9 PERCENT MEDIUM SAND
 92.6 PERCENT FINE SAND
 AND
 95.5 PERCENT SAND

ARE THERE ANY MORE SAMPLES FOR THIS BORING

SIV.DXE

INPUT SIEVE NUMBER
120
INPUT CUMMALATIVE GRAMS RETAINED
64.8

INPUT SIEVE NUMBER
200
INPUT CUMMALATIVE GRAMS RETAINED
108.2

PROJECT: LONDON AVENUE CANAL PUMP TEST PILOT HOLE DATE: 08FEB06
BORING NUMBER: LC PH.1.0.6 TECHNICIAN: VW
SAMPLE: 8
SAMPLE WEIGHT: 129.7

SIEVE #	RETAINED GRAMS	PASS %
18	1.2	99.1
40	3.6	97.2
60	7.6	94.1
80	18.4	85.8
120	64.8	50.0
200	108.2	16.6

SC

SAMPLE 8 IS AN SN WITH:
83.4 PERCENT SAND
ARE THERE ANY MORE SAMPLES FOR THIS BORING

Schematic of Pumping Well, Stratigraphy, and Pump Intake Elevation

PROJECT

London Ave

Page ___ of ___

COMPUTED BY DATE

SUBJECT

CHECKED BY DATE

L255 +2.5'

London Test Well +1.5'

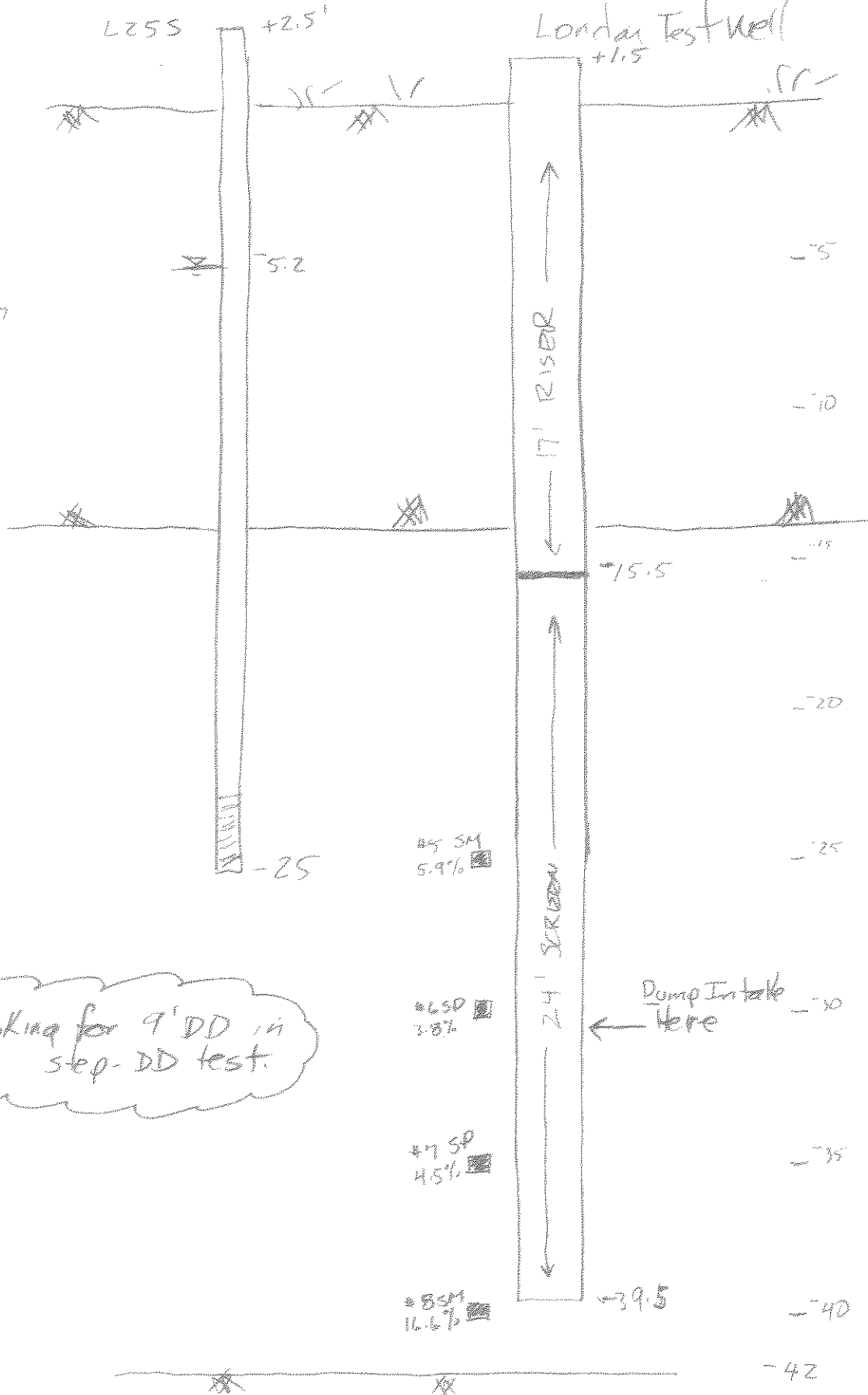
17' riser
24' screen

7.7
-2.5

5.2

-15.8
-2.1

-37.9



- Looking for 9' DD in sep-DD test.

45 SM
5.9%

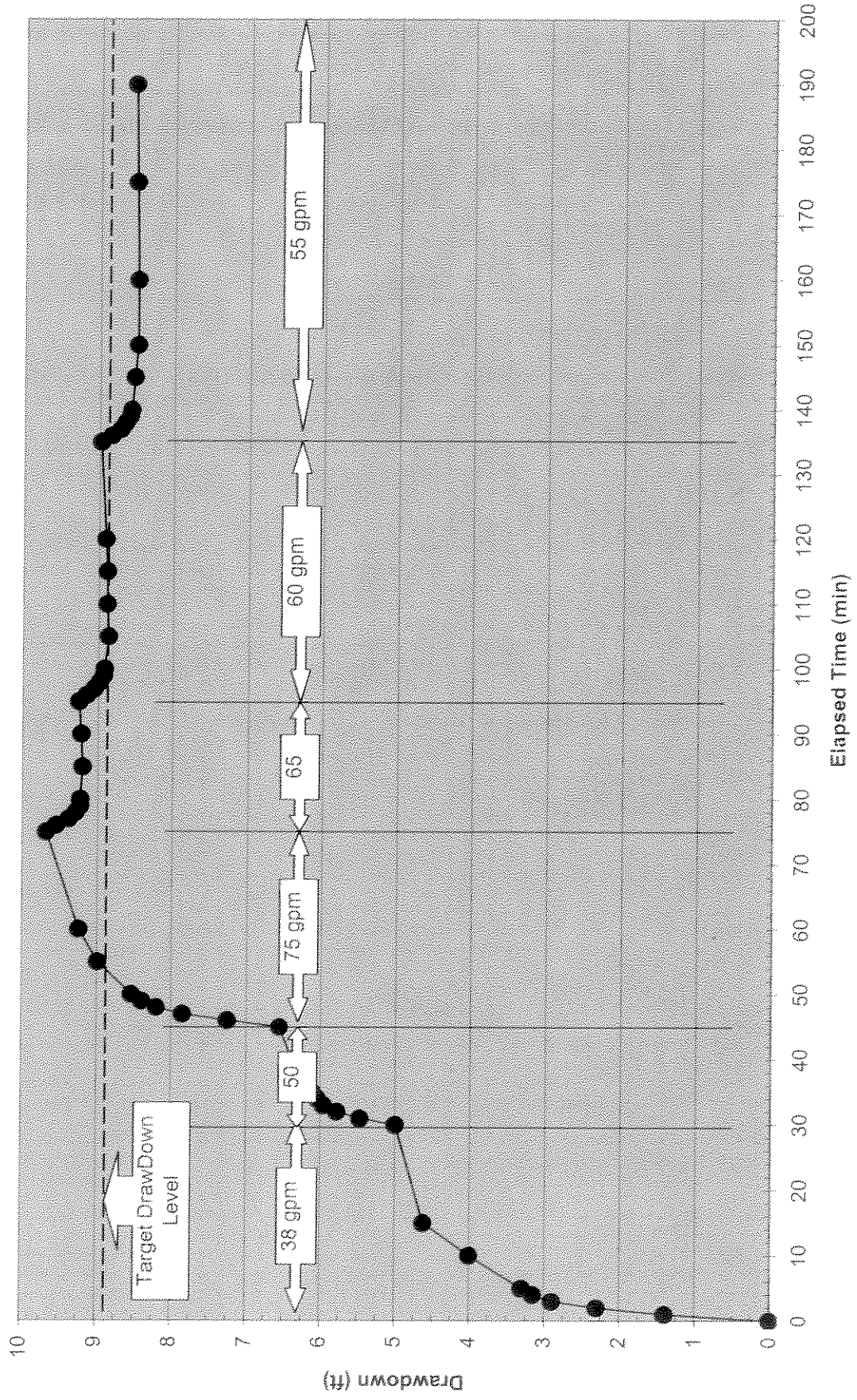
65 SD
3.8%

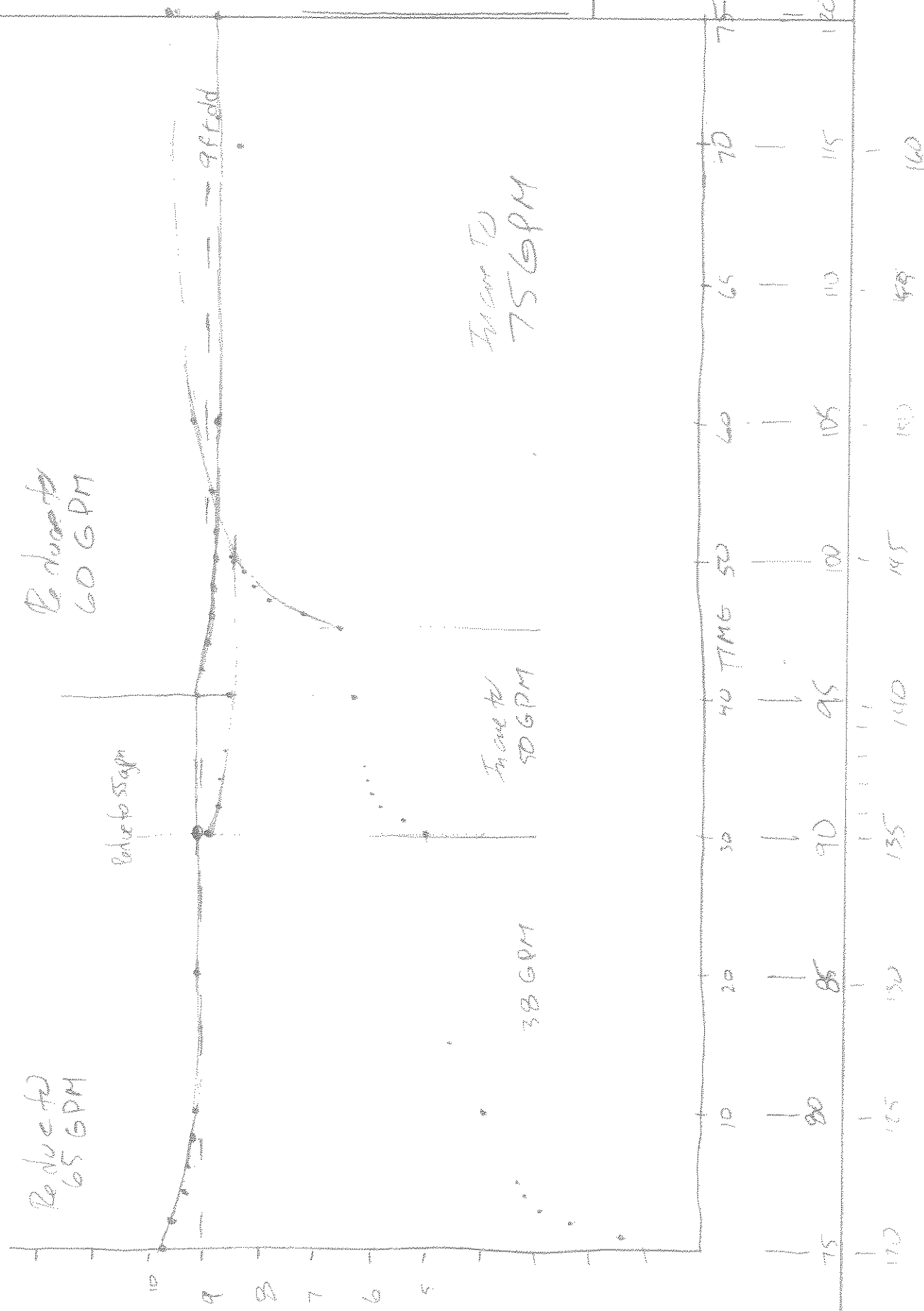
47 SD
4.5%

85M
16.6%

Results of Miniature Step-Drawdown Test

London Ave Step Drawdown Test - Target Drawdown is 8.8-feet





PROJECT		Page ___ of ___		COMPUTED BY	DATE
SUBJECT		Step DD Test		CHECKED BY	DATE
Target 9-ft dd.					
Clock Time	E.T.	Depth to H ₂ O		DD	
3/14 13:04	0	7.7		0	
3/14 13:04	15s				
3/14 13:04	30s				
3:08 PM	60s	9.1		8.14	
	2m	10.0		2.3	
	3m	10.6		2.9	
	4m	10.85		3.15	
	5m	11.0		3.3	
	10m	11.7		4	
	15m	12.32		4.6	
	30m	12.17		5	
31		13.17		5.47	
32		13.48		5.78	
33		13.66		5.96	
34		13.74		6.04	
35		13.8		6.1	Time
40		14.08		6.38	
45		14.25		6.55	
46		14.95		7.25	
47		15.55		7.85	
48		15.9		8.2	
49		16.1		8.4	
50		16.24		8.54	
55		16.69		8.99	
60		16.94		9.24	

PROJECT		Page <u> </u> of <u> </u>	COMPUTED BY	DATE
SUBJECT			CHECKED BY	DATE
75	17-38	9.68	Reduce to 65 GPM	
76	17-25	9.55		
77	17-08	9.38		
78	16-99	9.29		
79	16-93	9.23		
80	16-93	9.23		
85	16-90	9.20		
90	16-92	9.22		
95	16-95	9.25	Reduce to 60	
96	16-85	7.15		
97	16-75	9.05		
98	16-68	8.98		
99	16-67	8.93		
100	16-62	8.92		
105	16-57	8.87	60 GPM	
110	16-59	8.89		
115	16-59	8.89		
120	16-61	8.91		
135	16-68	8.92	Reduce to 55	
136	16-54	8.89		
137	16-42	8.72		
138	16-36	8.66		
139	16-30	8.60		
140	16-28	8.58		
145	16-24	8.54		
150	16-20	8.50		

40 160 16 20

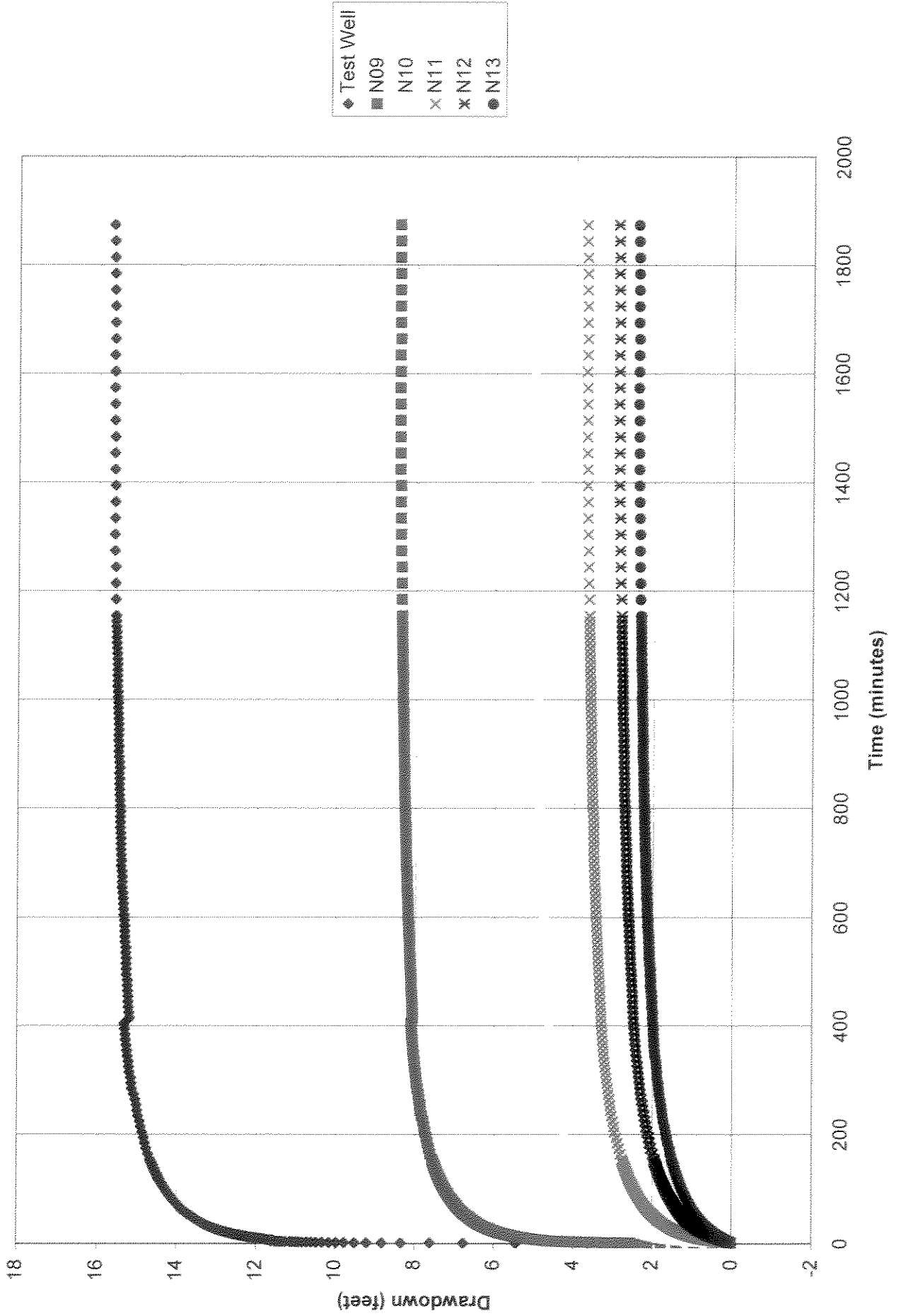
8.50

PROJECT	Page <u> </u> of <u> </u>	COMPUTED BY	DATE
SUBJECT		CHECKED BY	DATE

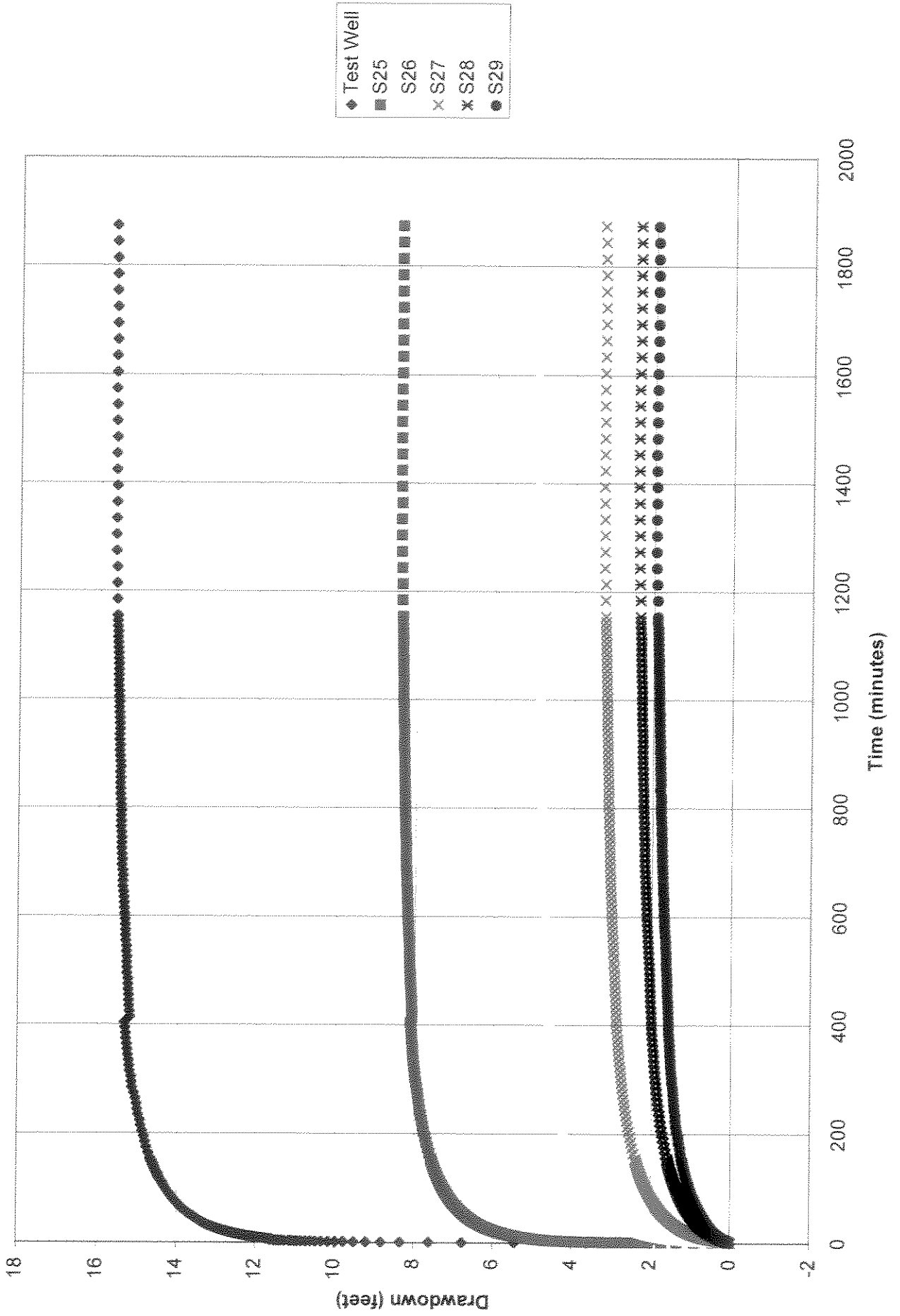
<u>ET</u>	<u>Depth to H₂O</u>	<u>DD</u>
175	16.22	8.52
190	16.24	8.54

Automated Time-Drawdown Curves
North, South, East, West Transects
(Within 200-feet of Pumping Well)

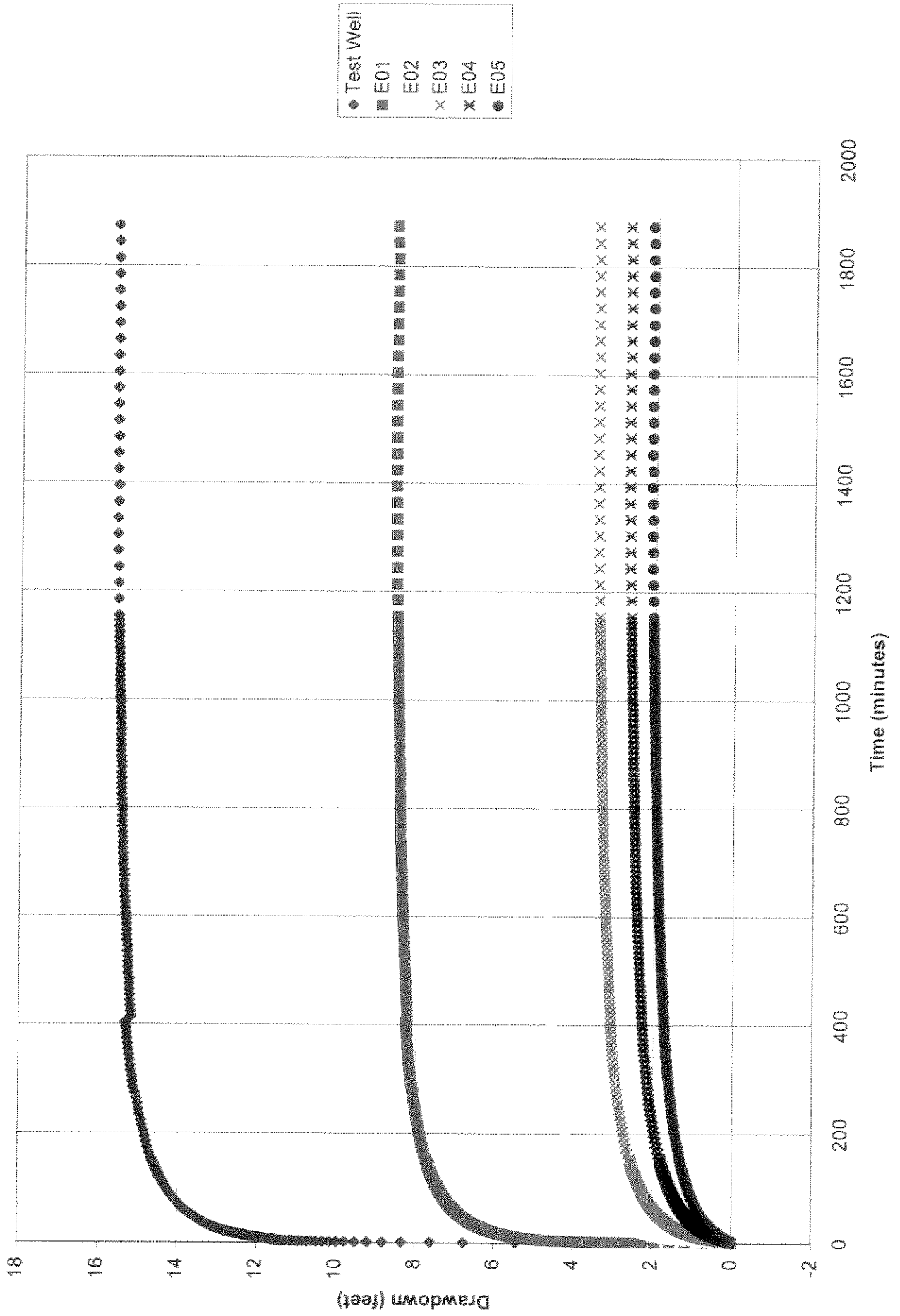
London Ave Canal



London Ave Canal



London Ave Canal



London Ave Canal

