LKS2695 File

**CORRESPONDENCE/MEMORANDUM** — State of Wisconsin

DATE: November 15, 1996 FILE REF:

TO: Dave Pericak LAX

FROM: Paul La Liberte Paul

SUBJECT: Sediment samples from Cataract Pond

In a memo dated 5-15-96, I reviewed particle size data collected from Cataract Pond at four core sample stations. At that time I recommended that chemical characterization be done in the vicinity of site #1, near the dam, since the sample from this site contained 78% silt and clay. The sample was reportedly collected from the top three feet of sediment.

I have reviewed the analytical results from a second set of sediment samples collected from Cataract Pond. A single core was taken near the dam for chemical characterization on 7-2-96 and the analytical results forwarded to me on 9-24-96. The top 2.5' of the 3.7' core had a black, organic appearance. Below 2.5', the material was primarily sand. The core was split into two sections at the 2.5' level for separate analysis.

The top section of the core contained 19.2 % silt and clay, while the bottom contained 9%. The chemistry results of the samples were normal with the exception of cadmium in the top layer (1.28 ppm). At this level of enrichment , I would expect the finer-grained sediments in the pond to be about 2 ppm cadmium. As mentioned above, previous sampling has found deposits up to 78% fines in the lake. These cadmium levels are at the high end of what is normally found in aquatic sediments in that part of Wisconsin. In most published aquatic sediment classification systems, these concentrations (1-2 ppm) are described as having the potential for "low level effects" on aquatic organisms.

The cadmium content of terrestrial soil is usually less than 0.5 ppm. The soil concentration at which adverse effects of cadmium begin to show up in terrestrial plants and animals is around 9 ppm, according to recent EPA estimates. The lake's watershed is rural with a mix of agriculture and forest. I know of no sources of cadmium in the watershed attributable to human activities.

The removal of this material should pose no threat to the aquatic environment since cadmium seems to be the only pollutant that is at all elevated and the concentration of

it is less in the deeper layers. Dredging will therefore leave the pond in better shape, chemically, than it was before. The safety of land application of this material should be addressed by whoever will have regulatory authority at the disposal site.

catara2.mem
enc. test results
cc. J. Eslien

# DAVY LABORATORIES

115 South 6th Street
P.O. Box 2076
La Crosse WI 54602-2076
(608) 782-3130
FAX: (608) 784-6611

Division of Davy Engineering Co.


## CHEMICAL ANALYSIS REPORT FORM

Cataract Sportsmen's Club
Route 2, Box 67
Sparta, WI 54656
Attn: Dick Eddy

September 16, 1996

Client No. 26325

Sampling Location: Top Sample Core
Collected By: Paul A. Harris & Karl Green
Delivered By: Paul A. Harris
Date Collected: 7-2-96
Date Received: 7-5-96

TOC = 4.6%

| Sample No. | | | | #56940 | |
|---|---|---|---|---|---|
| Sample Site | | | | Top Sample Core | |
| PARAMETER: | METHOD: | MDL: | LOQ: | **RESULT:** | UNITS: |
| Nitrogen Ammonia as $NH_3$-N | EPA 350.2 | 7 | 24 | **216** * | mg/kg |
| Nitrogen Kjeldahl as $NH_3$-N | EPA 351.2 | 140 | 500 | **2,720** * | mg/kg |
| Total Phosphorus as P | EPA 365.4 | 30 | 100 | **1,310** * | mg/kg |
| Arsenic-Total | EPA 7060A | 0.128 | 0.478 | **8.30** ok | mg/kg |
| Cadmium-Total | EPA 7130 | 0.03 | 0.11 | **1.28** High | mg/kg |
| Chromium-Total | EPA 7190 | 0.06 | 0.19 | **10.3** ok | mg/kg |
| Copper-Total | EPA 7210 | 0.06 | 0.21 | **13.8** OK | mg/kg |
| Lead-Total | EPA 7420 | 0.3 | 1.0 | **21.1** ok | mg/kg |
| Mercury-Total | EPA 7471A | 0.008 | 0.0254 | **0.02** OK | mg/kg |
| Nickel-Total | EPA 7520 | 0.19 | 0.70 | **20.0** ok | mg/kg |
| Zinc-Total | EPA 7950 | 0.6 | 2.6 | **104** | mg/kg |
| Particle Size Analysis | WI Soil | --- | --- | **See Attached** 19.2% fine | |
| Organics | --- | --- | --- | **See Attached** | |

MDL = Minimum Detection Level LOQ = Limit of Quantitation

6.3% clay
12.9% silt

* Samples air-dried prior to analyses - 100% solid assumed.

| PARAMETER: | METHOD: | MDL: | LOQ: | **RESULT:** | UNITS: |
|---|---|---|---|---|---|
| PCB | EPA 8080 | 0.065 | 0.207 | **<0.065** | mg/Kg |
| Dieldrin | EPA 8080 | 0.008 | 0.024 | **<0.008** | mg/Kg |
| Methoxychlor | EPA 8080 | 0.176 | 0.560 | **<0.176** | mg/Kg |
| Lindane | EPA 8080 | 0.003 | 0.011 | **<0.003** | mg/Kg |
| DDT | EPA 8080 | 0.006 | 0.018 | **<0.006** | mg/Kg |
| DDE | EPA 8080 | 0.005 | 0.017 | **<0.005** | mg/Kg |
| DDD | EPA 8080 | 0.011 | 0.035 | **<0.011** | mg/Kg |

MDL = Minimum Detection Level LOQ = Limit of Quantitation

X


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## CHEMICAL ANALYSIS REPORT FORM

Cataract Sportsmen's Club
Route 2, Box 67
Sparta, WI 54656
Attn: Dick Eddy

September 16, 1996

Client No. 26325

Sampling Location: Bottom Sample Core
Collected By: Paul A. Harris & Karl Green
Delivered By: Paul A. Harris
Date Collected: 7-2-96
Date Received: 7-5-96

TOC = 2.1 %

| Sample No. | | | | #56941 | | |
|---|---|---|---|---|---|---|
| Sample Site | | | | Bottom Sample Core | | |
| PARAMETER: | METHOD: | MDL: | LOQ: | **RESULT:** | | UNITS: |
| Nitrogen Ammonia as $NH_3$-N | EPA 350.2 | 7 | 24 | **64** | * | mg/kg |
| Nitrogen Kjeldahl as $NH_3$-N | EPA 351.2 | 140 | 500 | **1,860** | * | mg/kg |
| Total Phosphorus as P | EPA 365.4 | 30 | 100 | **600** | * | mg/kg |
| Arsenic-Total | EPA 7060A | 0.064 | 0.239 | **1.81** | | mg/kg |
| Cadmium-Total | EPA 7130 | 0.03 | 0.11 | **0.11** | | mg/kg |
| Chromium-Total | EPA 7190 | 0.06 | 0.19 | **2.41** | | mg/kg |
| Copper-Total | EPA 7210 | 0.6 | 0.21 | **3.31** | | mg/kg |
| Lead-Total | EPA 7420 | 0.3 | 1.0 | **4.84** | | mg/kg |
| Mercury-Total | EPA 7471A | 0.008 | 0.0254 | **<0.008** | | mg/kg |
| Nickel-Total | EPA 7520 | 0.19 | 0.70 | **3.77** | | mg/kg |
| Zinc-Total | EPA 7950 | 0.15 | 0.65 | **21.8** | | mg/kg |
| Particle Size Analysis | WI Soil | --- | --- | **See Attached** | % | p 200 |
| Organics | --- | --- | --- | **See Attached** | | |

MDL = Minimum Detection Level LOQ = Limit of Quantitation

* Samples air-dried prior to analyses - 100% solid assumed.

| PARAMETER: | METHOD: | MDL: | LOQ: | **RESULT:** | UNITS: |
|---|---|---|---|---|---|
| PCB | EPA 8080 | 0.065 | 0.207 | **<0.065** | mg/Kg |
| Dieldrin | EPA 8080 | 0.008 | 0.024 | **<0.008** | mg/Kg |
| Methoxychlor | EPA 8080 | 0.176 | 0.560 | **<0.176** | mg/Kg |
| Lindane | EPA 8080 | 0.003 | 0.011 | **<0.003** | mg/Kg |
| DDT | EPA 8080 | 0.006 | 0.018 | **<0.006** | mg/Kg |
| DDE | EPA 8080 | 0.005 | 0.017 | **<0.005** | mg/Kg |
| DDD | EPA 8080 | 0.011 | 0.035 | **<0.011** | mg/Kg |

MDL = Minimum Detection Level LOQ = Limit of Quantitation

CORRESPONDENCE MEMORANDUM

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

FILE CODE: 3530-3
Monroe County

DATE: May 7, 1996

TO: Paul La Liberte - WD 785-9010

FROM: David M. Pericak - La Crosse
DMP

SUBJECT: Cataract Pond Rehabilitation Project, Monroe County

Attached is a hydrographic map for Cataract Pond that was recently prepared by Stony Creek Engineering for the sportsmen's club. This map, also, highlights the areas and depths they would like to dredge.

Dairyland Laboratories, Inc., completed some "basic" physical analysis on four samples. You may already have these results. The map I received indicates the sample locations, but doesn't identify the sample numbers.

Please provide me with any additional requirements for sediment sampling and testing for this project so that I can forward them to the village.

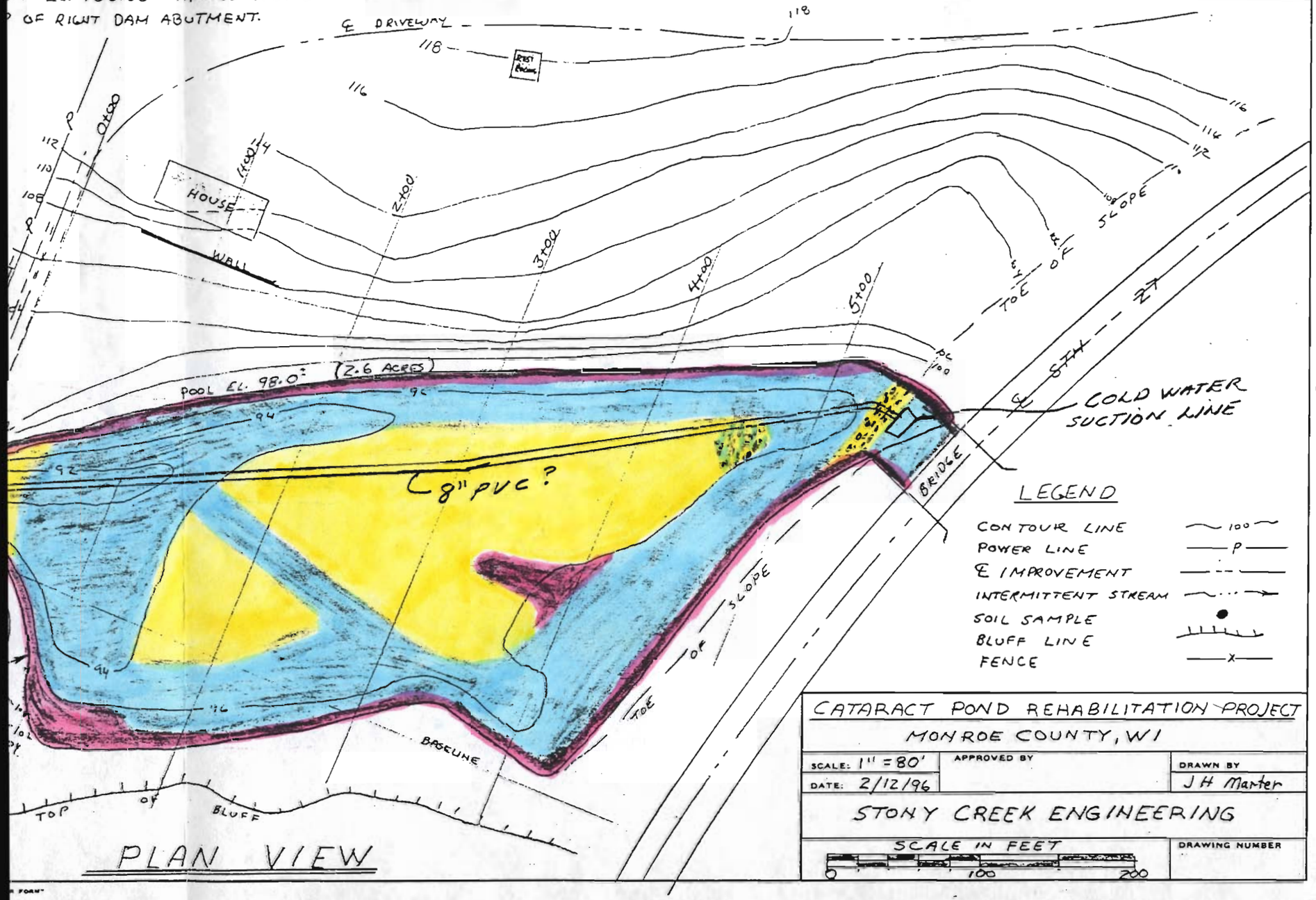
DMP:cs

Enc.

cc: Buzz Sorge - WD

CHMARK DESCRIPTION

Y-1 EL. 103.38 - PAINTED SPOT ON
OF RIGHT DAM ABUTMENT.




PLAN VIEW

LEGEND

| | |
|---|---|
| CONTOUR LINE | ~100~ |
| POWER LINE | —P— |
| ℄ IMPROVEMENT | — — — |
| INTERMITTENT STREAM | ~···→ |
| SOIL SAMPLE | ● |
| BLUFF LINE | |
| FENCE | —X— |

CATARACT POND REHABILITATION PROJECT

MONROE COUNTY, WI

| | | |
|---|---|---|
| SCALE: 1" = 80' | APPROVED BY | DRAWN BY |
| DATE: 2/12/96 | | J H Manter |

STONY CREEK ENGINEERING

SCALE IN FEET 0 100 200

DRAWING NUMBER

Corporate Offices:
217 E. Main
ARCADIA, WI 54612
PHONE: (608) 323-2123
FAX: (608) 323-2184

Dairyland Laboratories, Inc.

Branch Laboratories:
1001 Frontage Road
Stratford, WI 54484
PHONE: (715) 687-4165
FAX: (715) 687-5895

P.O. Box 580
Saint Cloud, MN 56302-9900
PHONE: (612) 240-1737
FAX: (612) 240-1838

# PHYSICAL ANALYSIS

SUBMITTED BY: CATARACT SPORTSMEN
C/O DICK EDDY
RT 2 BOX 67
SPARTA, WI 54656

GROWER:

DATE: 2-26-96

ACCOUNT NO. 320-189

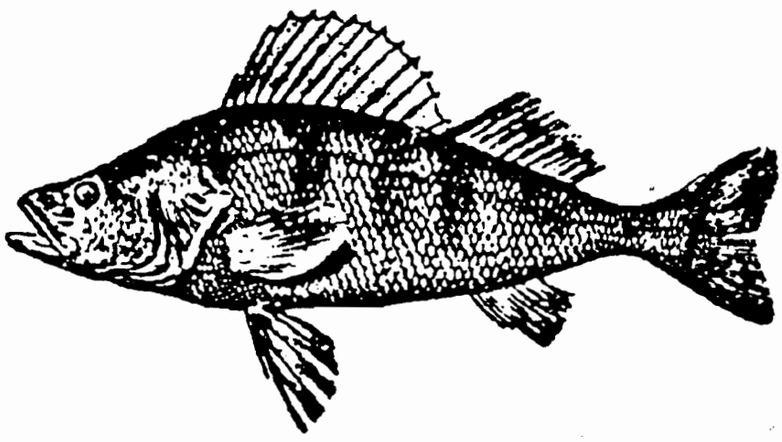
LAB NO. 885132

| FIELD ID (depth) | SAMPLE ID | % SAND | % SILT | % CLAY | TEXTURAL CLASS |
|---|---|---|---|---|---|
| 1 (3') | 1 | 22 | 58 | 20 | SILT LOAM |
| 2 (3.5') | 2 | 84 | 8 | 8 | LOAMY SAND |
| 3 (2.5') | 3 | 90 | 8 | 2 | SAND |
| 4 (2') | 4 | 88 | 8 | 4 | SAND |

METHOD OF ANALYSIS: HYDROMETER METHOD

# CATARACT POND
# PRELIMINARY SEDIMENT STUDY

Cataract, WI
February 12, 1996

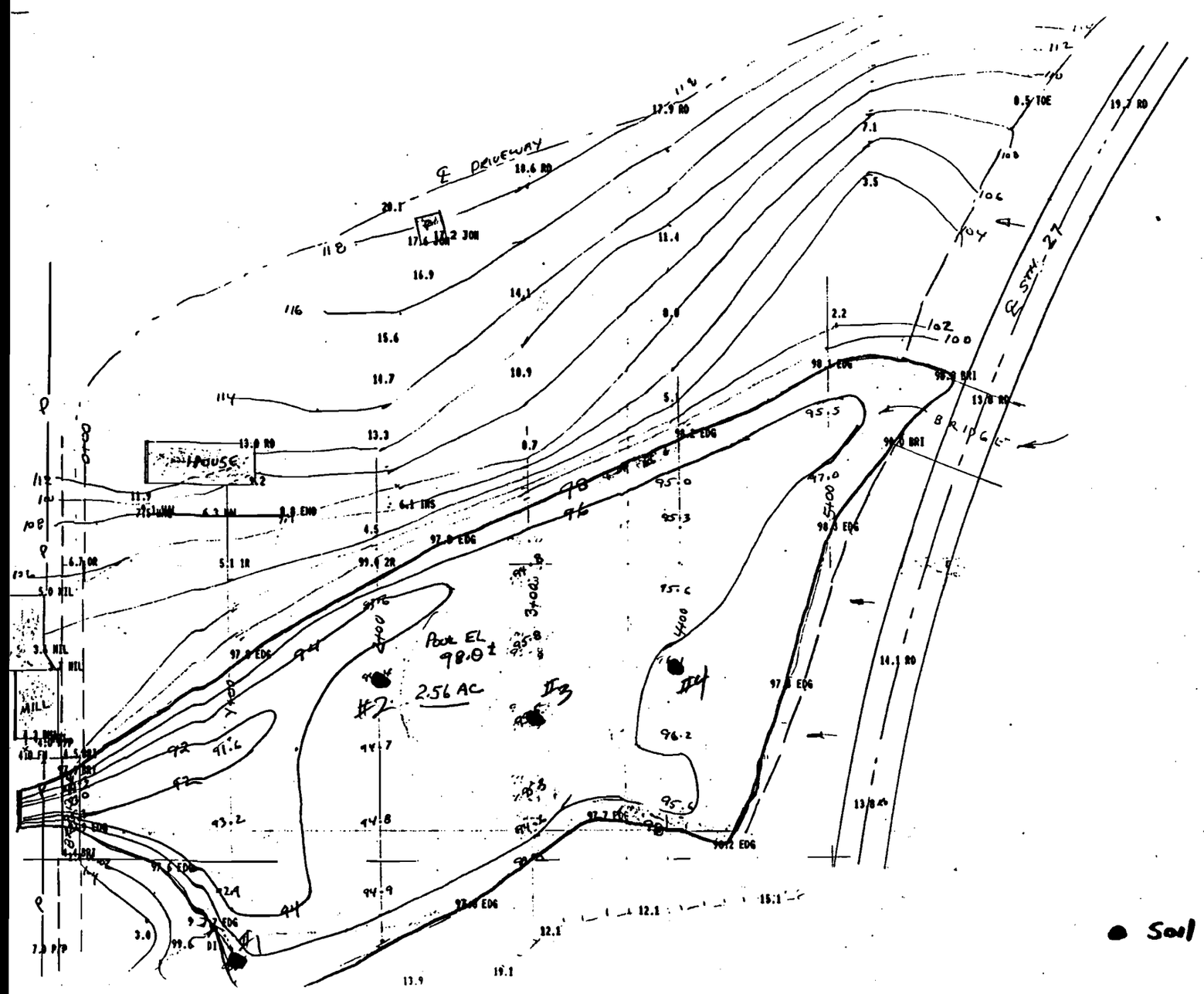


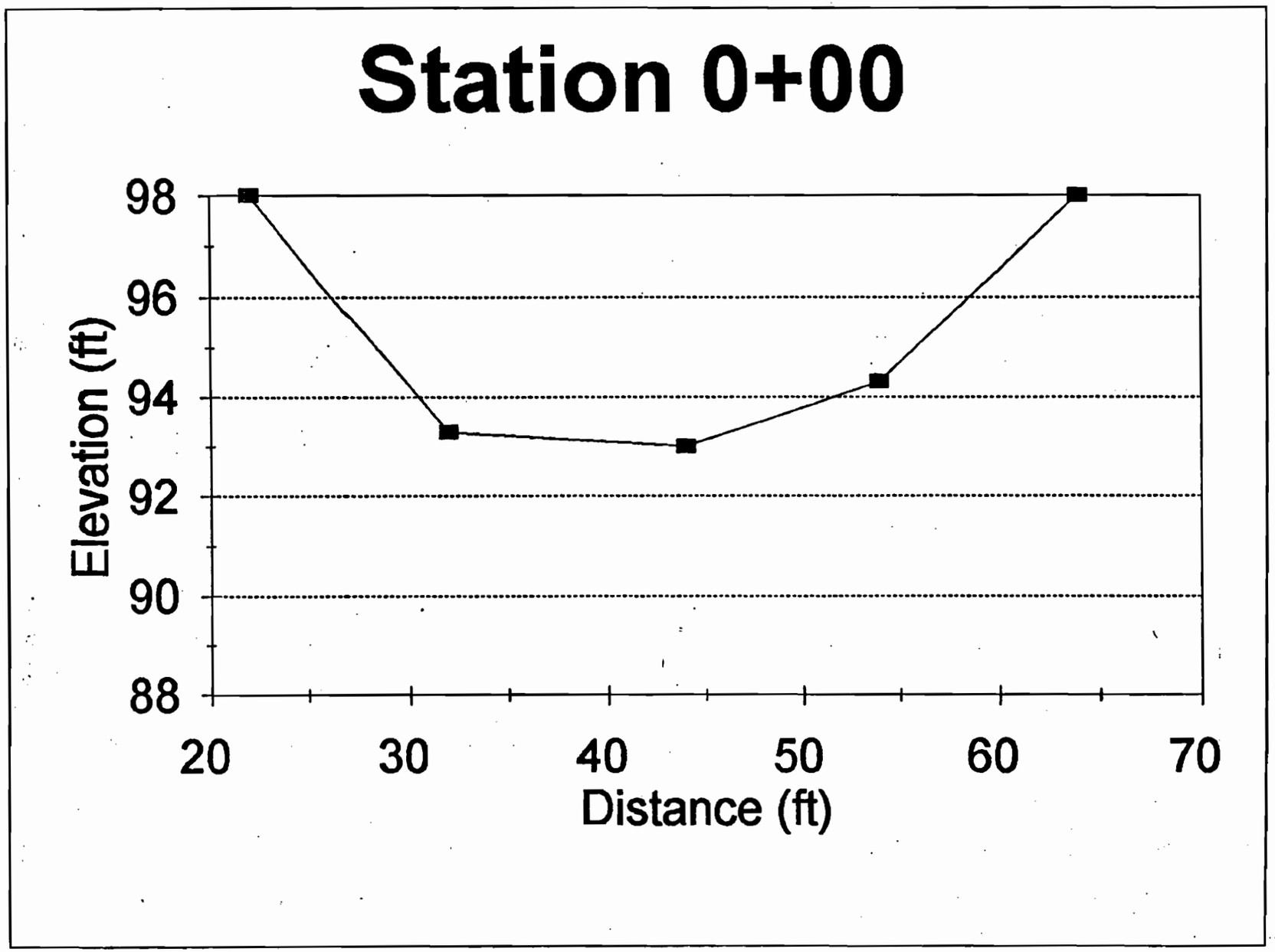
Prepared by :

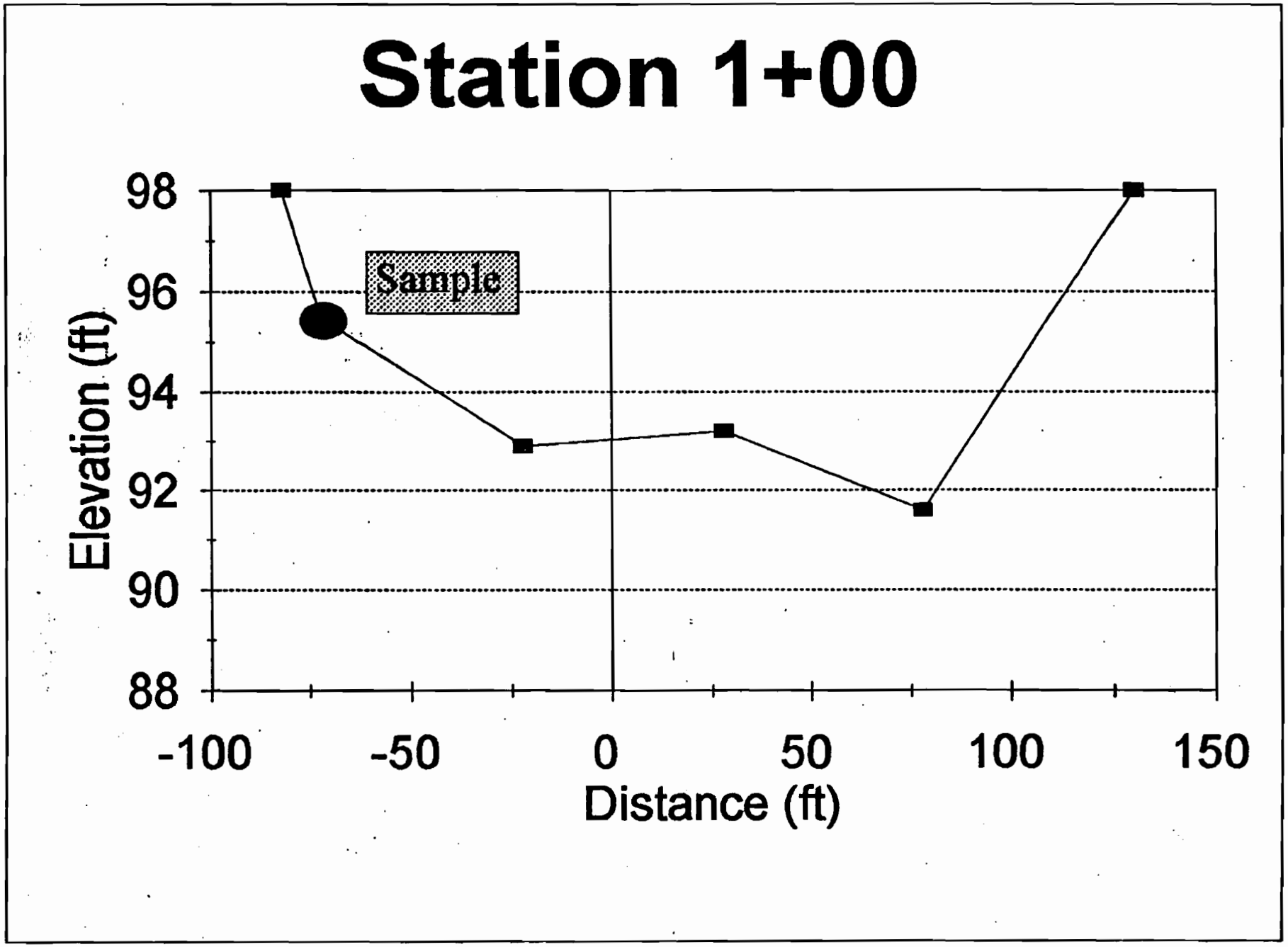

Joseph H. Marter
RR #1 Box 136A
Hixton, WI 54635
(715) 963-2709

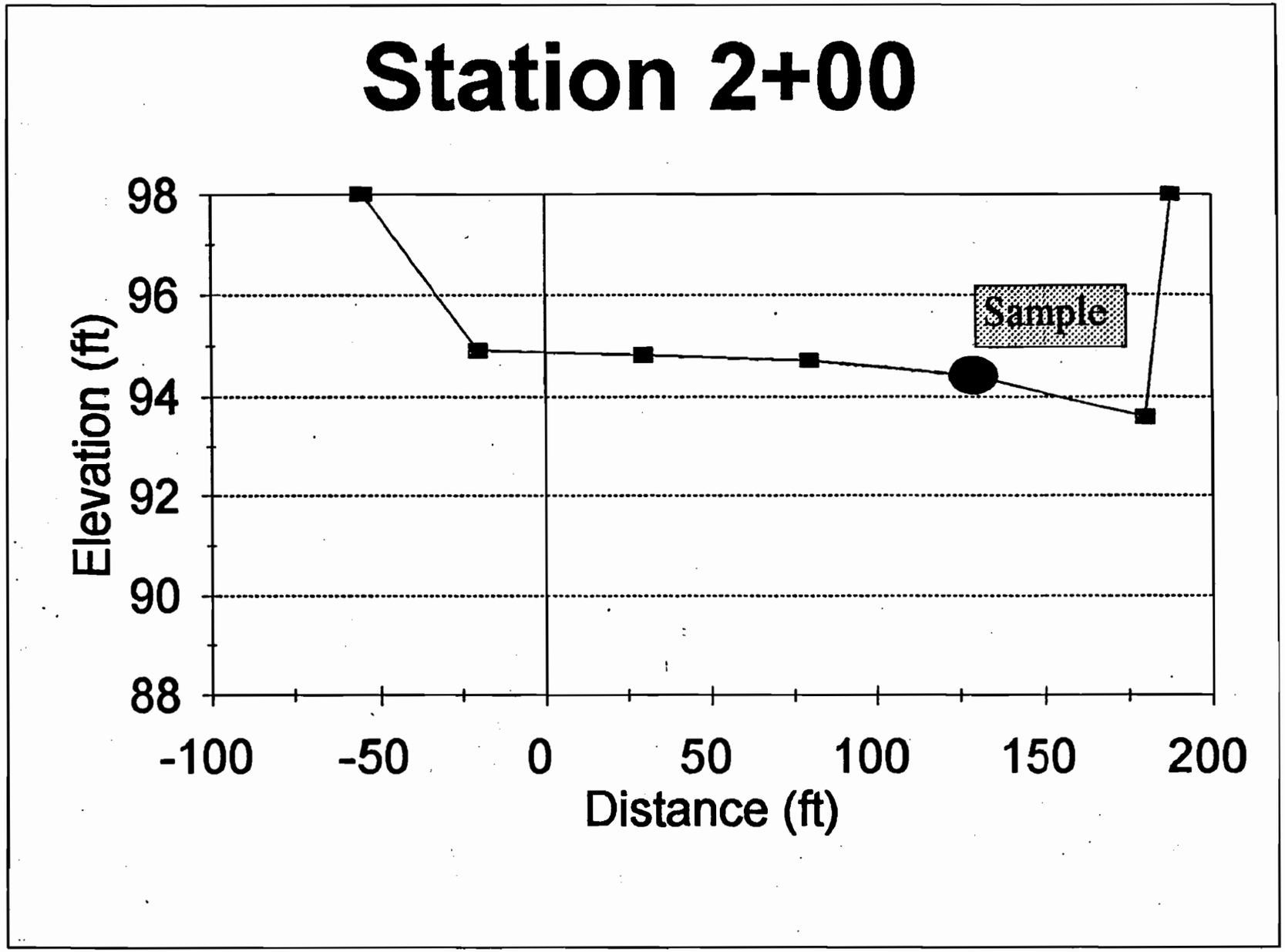

**STONY CREEK ENGINEERING**

WISCONSIN
JOSEPH H. MARTER
E-09708

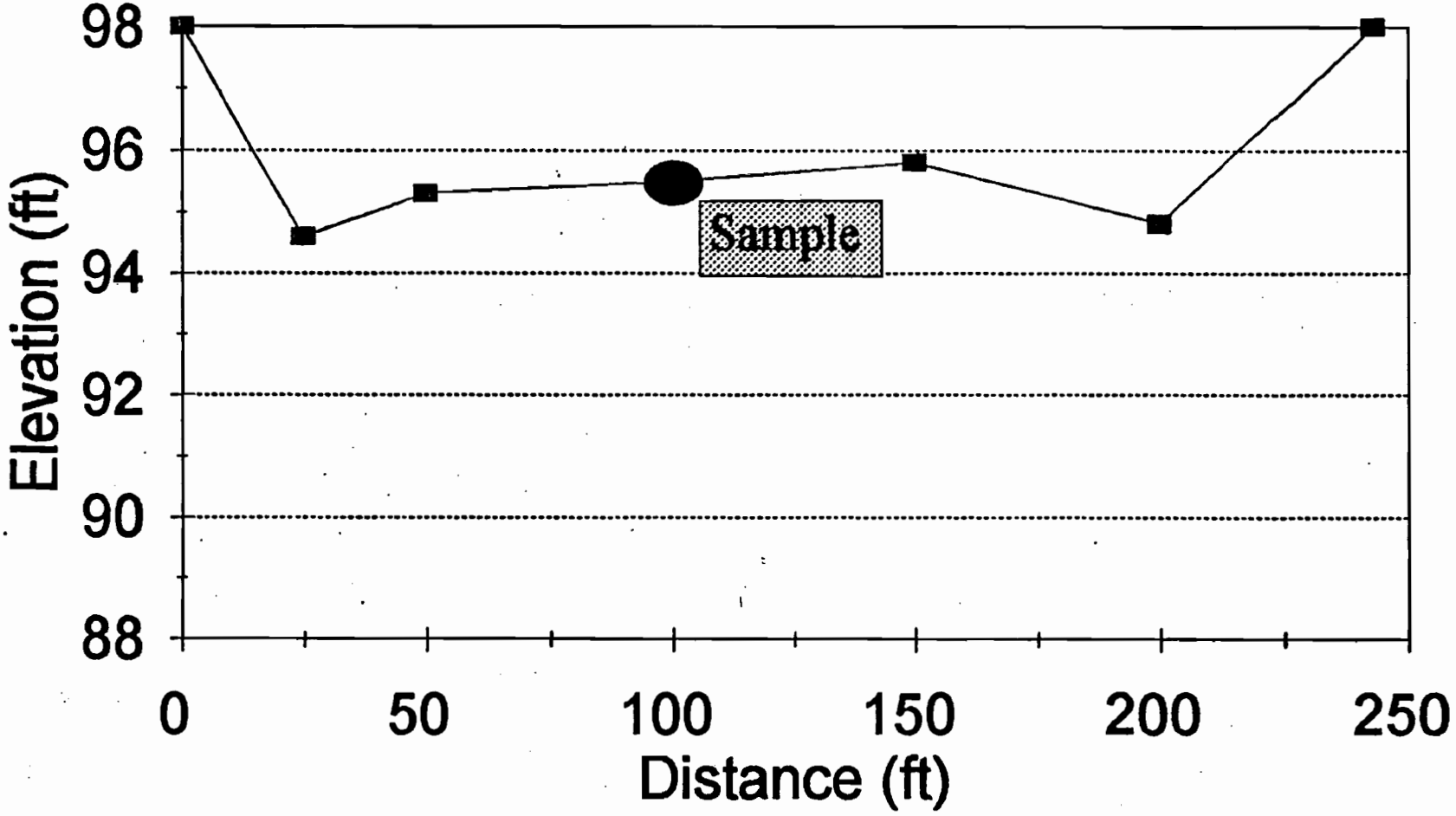

℄ DRIVEWAY
HOUSE
CL STH 27
BRIDGE
Pond EL 98.0±
2.56 AC
#2
#1
● Soil Samples

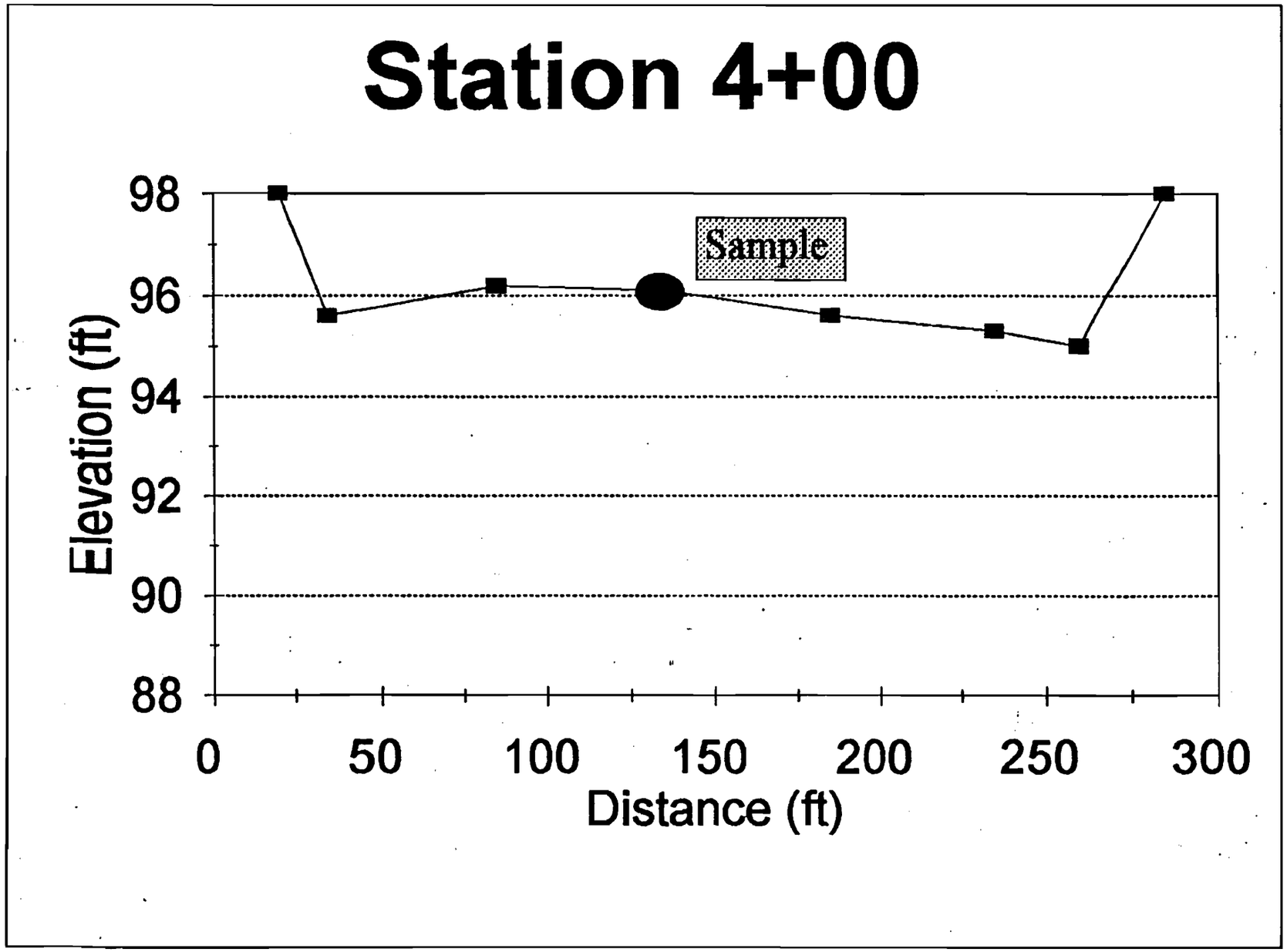

Station 0+00
Elevation (ft)
98
96
94
92
90
88
20
30
40
50
60
70
Distance (ft)


Station 1+00
Sample
Elevation (ft)
98
96
94
92
90
88
-100
-50
0
50
100
150
Distance (ft)

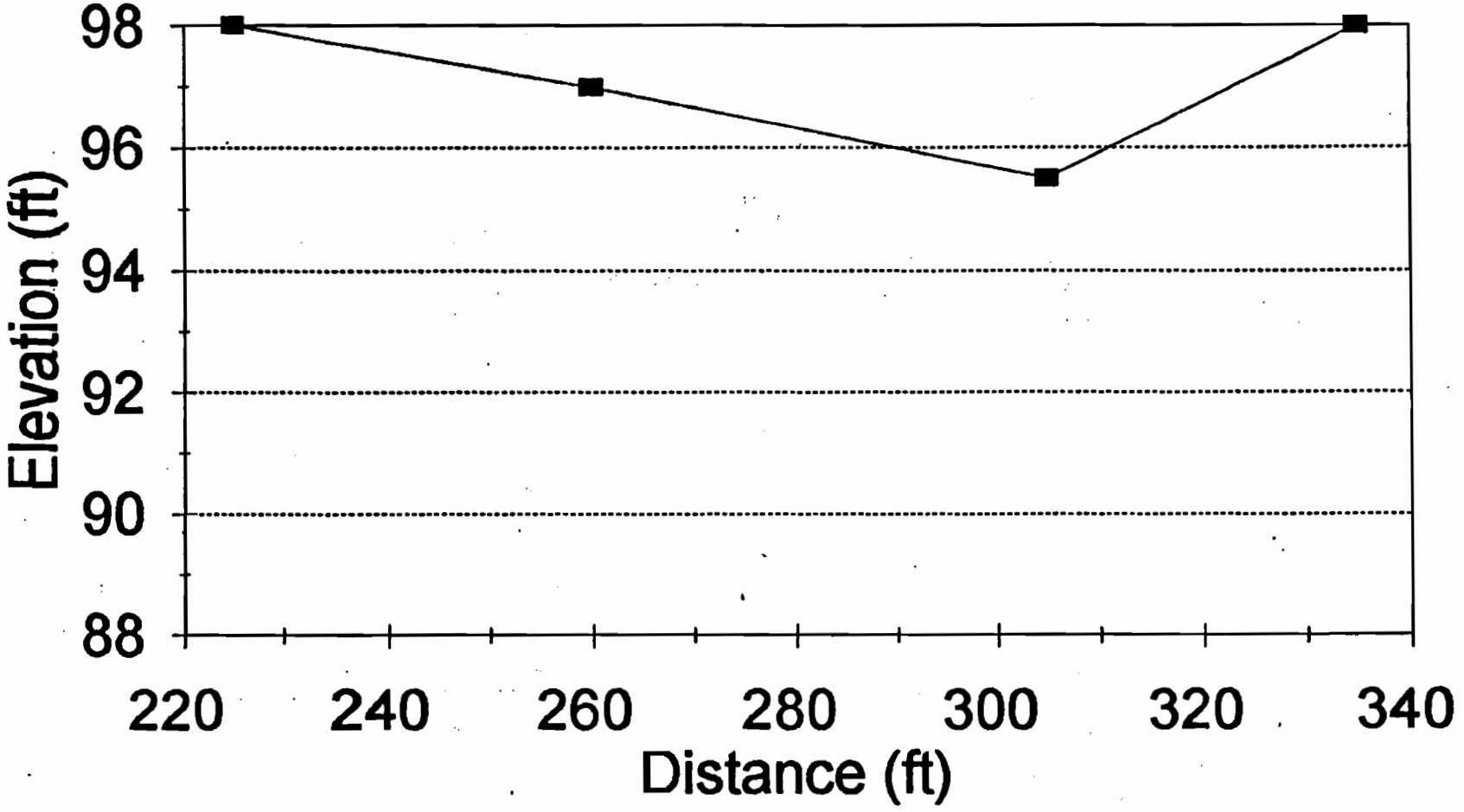

Station 2+00
Elevation (ft)
98
96
94
92
90
88
-100
-50
0
50
100
150
200
Distance (ft)
Sample

# Station 3+00


98
96
94
92
90
88
Elevation (ft)
Sample
0
50
100
150
200
250
Distance (ft)


Station 4+00
Sample
Elevation (ft)
98
96
94
92
90
88
0
50
100
150
200
250
300
Distance (ft)

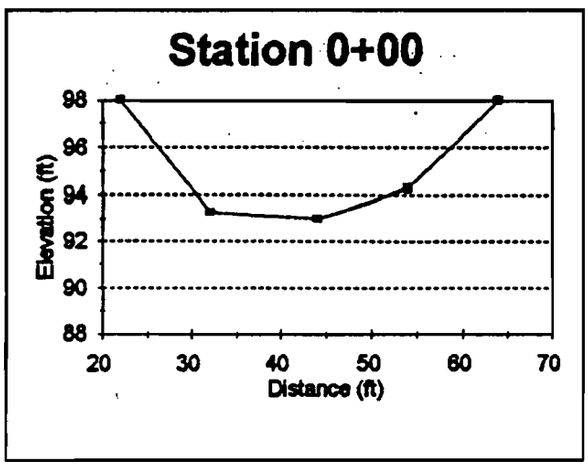
# Station 5+00


98
96
94
92
90
88
Elevation (ft)
220
240
260
280
300
320
340
Distance (ft)

# CATARACT POND CROSS SECTIONS

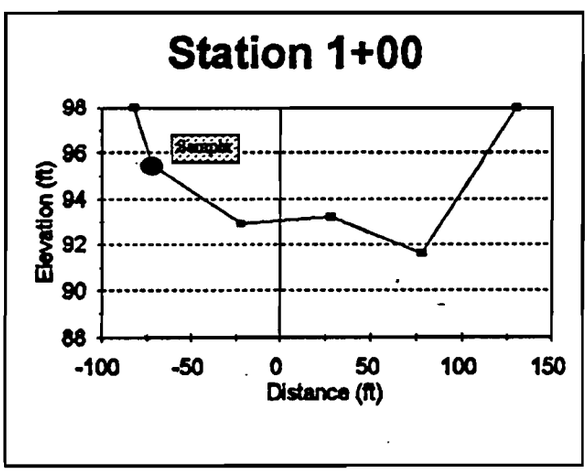
Station 0+00

| station | elevation |
|---|---|
| 22 | 98 |
| 32 | 93.3 |
| 44 | 93 |
| 54 | 94.3 |
| 64 | 98 |



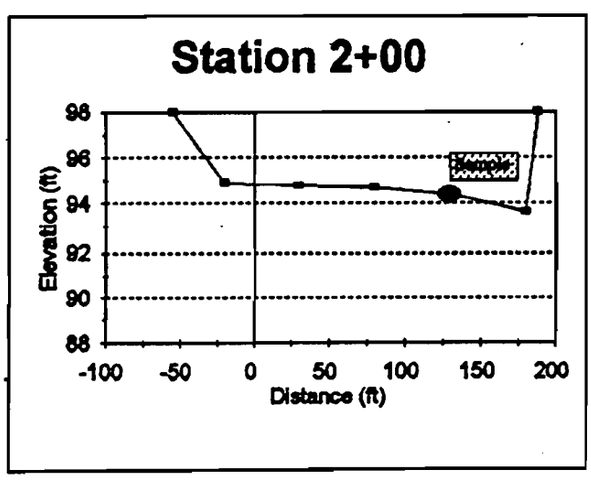

Station 1+00

| station | elevation |
|---|---|
| -82 | 98 |
| -72 | 95.5 |
| -22 | 92.9 |
| 28 | 93.2 |
| 78 | 91.6 |
| 130 | 98 |



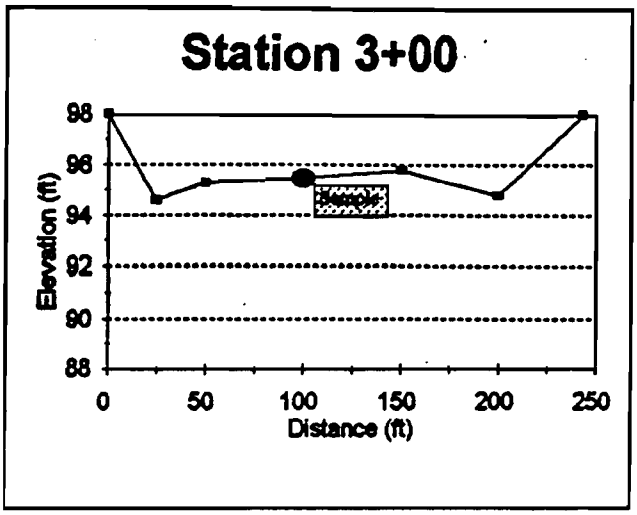

Station 2+00

| station | elevation |
|---|---|
| -55 | 98 |
| -20 | 94.9 |
| 30 | 94.8 |
| 80 | 94.7 |
| 130 | 94.4 |
| 180 | 93.6 |
| 188 | 98 |



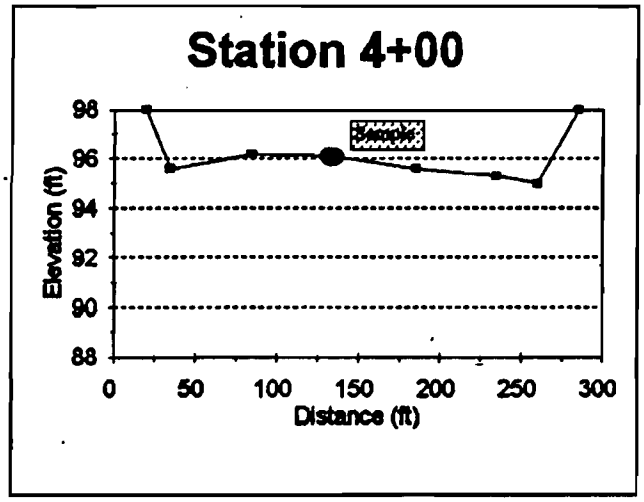
Station 3+00

| station | elevation |
|---|---|
| 0 | 98 |
| 25 | 94.6 |
| 50 | 95.3 |
| 100 | 95.5 |
| 150 | 95.8 |
| 200 | 94.8 |
| 243 | 98 |




Station 4+00

| station | elevation |
|---|---|
| 20 | 98 |
| 35 | 95.6 |
| 85 | 96.2 |
| 135 | 96.1 |
| 185 | 95.6 |
| 235 | 95.3 |
| 260 | 95 |
| 285 | 98 |




Station 5+00

| station | elevation |
|---|---|
| 225 | 98 |
| 260 | 97 |
| 305 | 95.5 |
| 335 | 98 |