Coastline Consulting & Development, LLC
Waterfront Planning, Permitting, and Development

TOWN OF OLD LYME, CONNECTICUT
BLACK HALL RIVER
NAVIGABLE WATERWAYS STUDY

PHASE 1

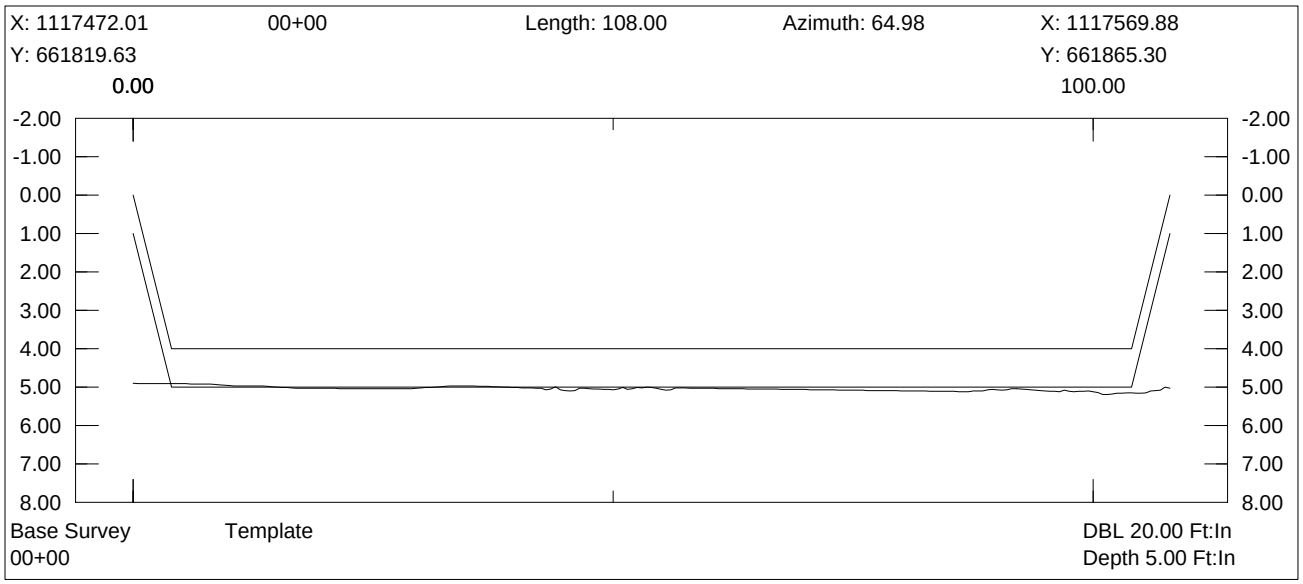
TASK 1.5 REPORT (1 OF 2)
CONCEPTUAL CHANNEL PLANS AND DREDGED VOLUME COMPUTATIONS

July 2, 2013

Prepared For:
Office of the First Selectwoman
Attention: First Selectwoman Bonnie A. Reemsnyder
Memorial Town Hall
52 Lyme Street
Old Lyme, CT 06371

Prepared By:
Coastline Consulting & Development, LLC
5-B Old Post Road
Madison, CT 06443

DREDGE CHANNEL CROSS-SECTIONS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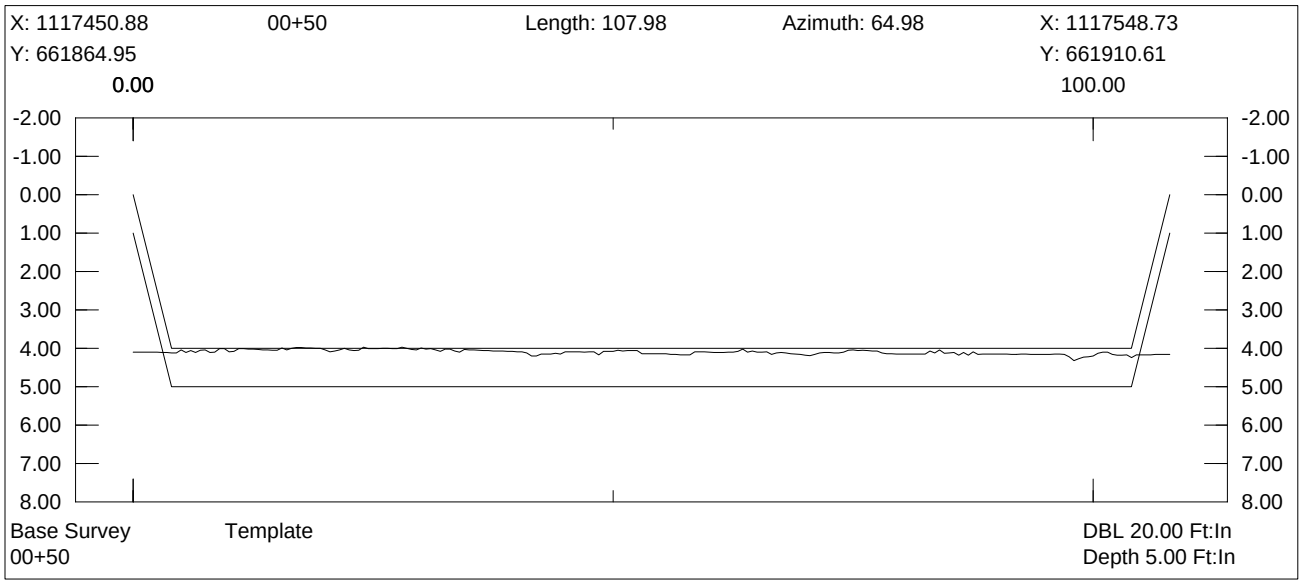
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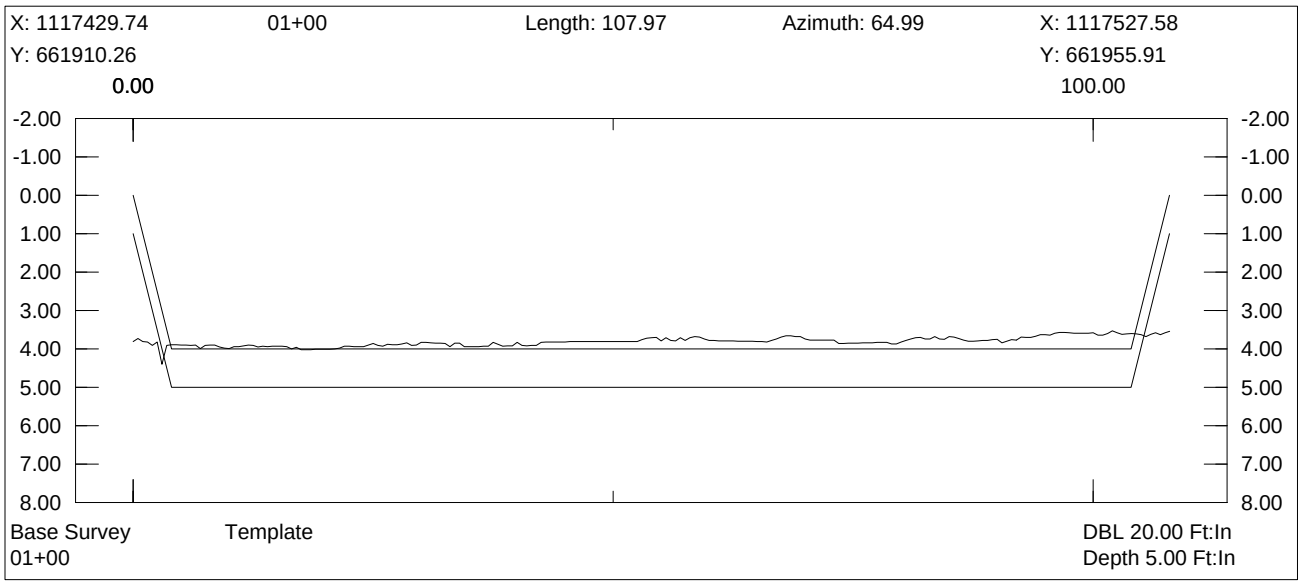
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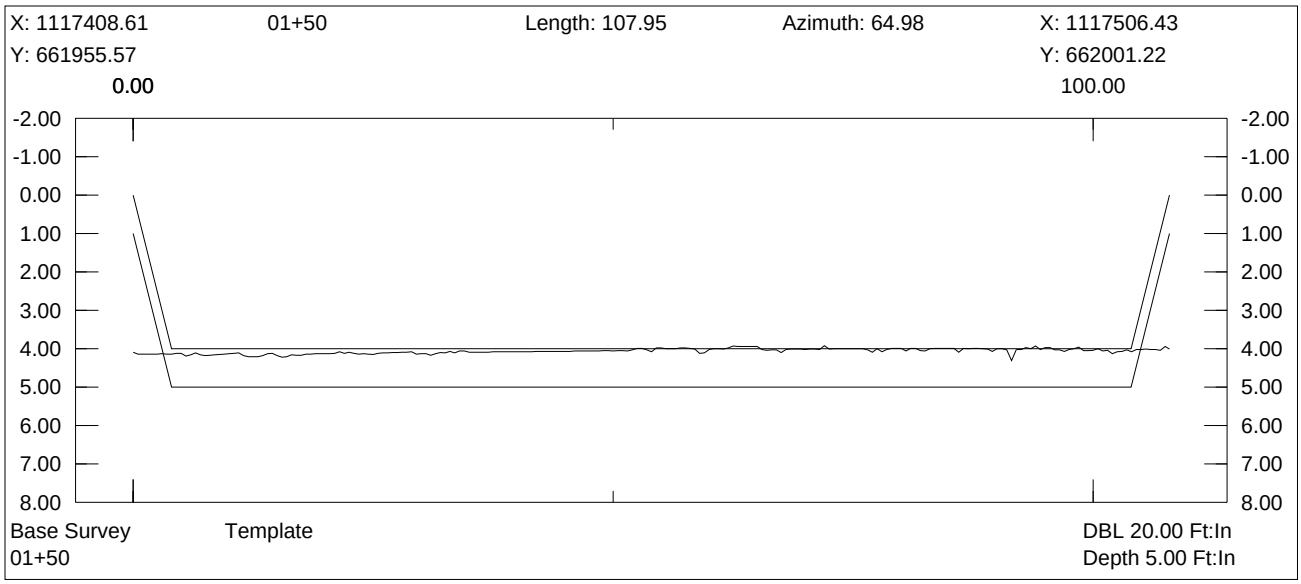
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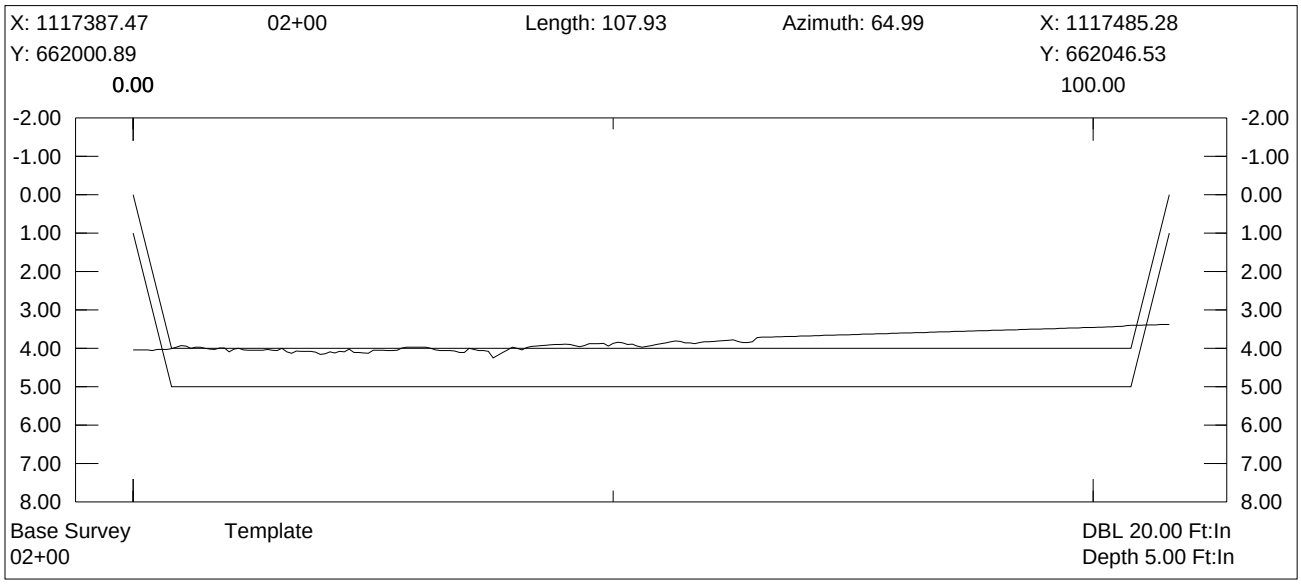
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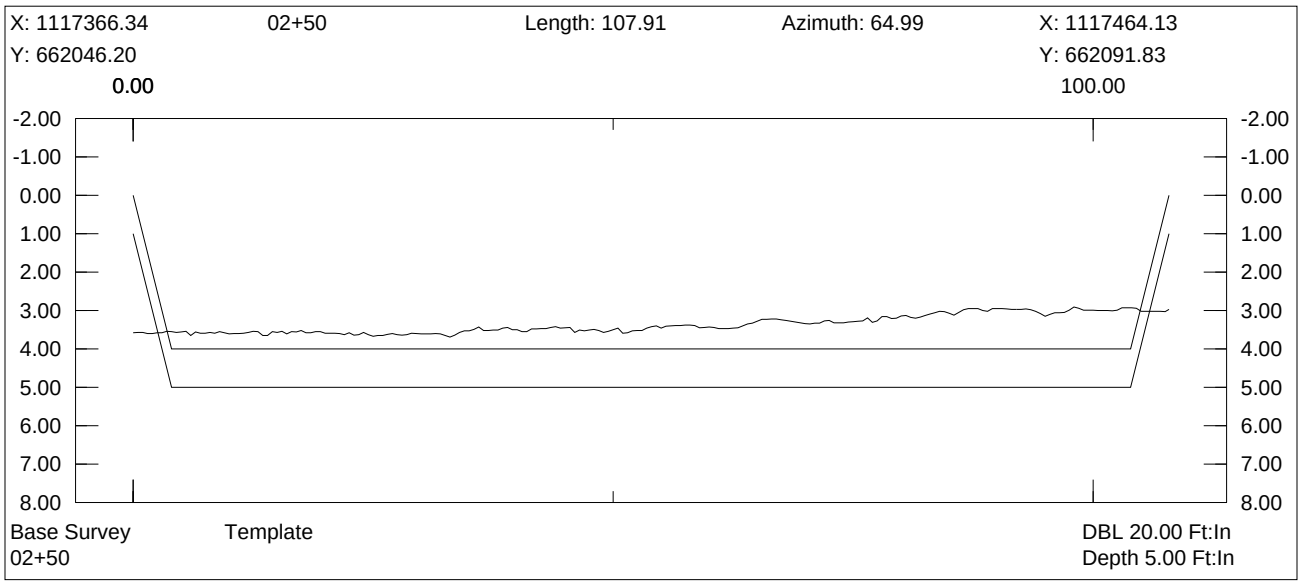
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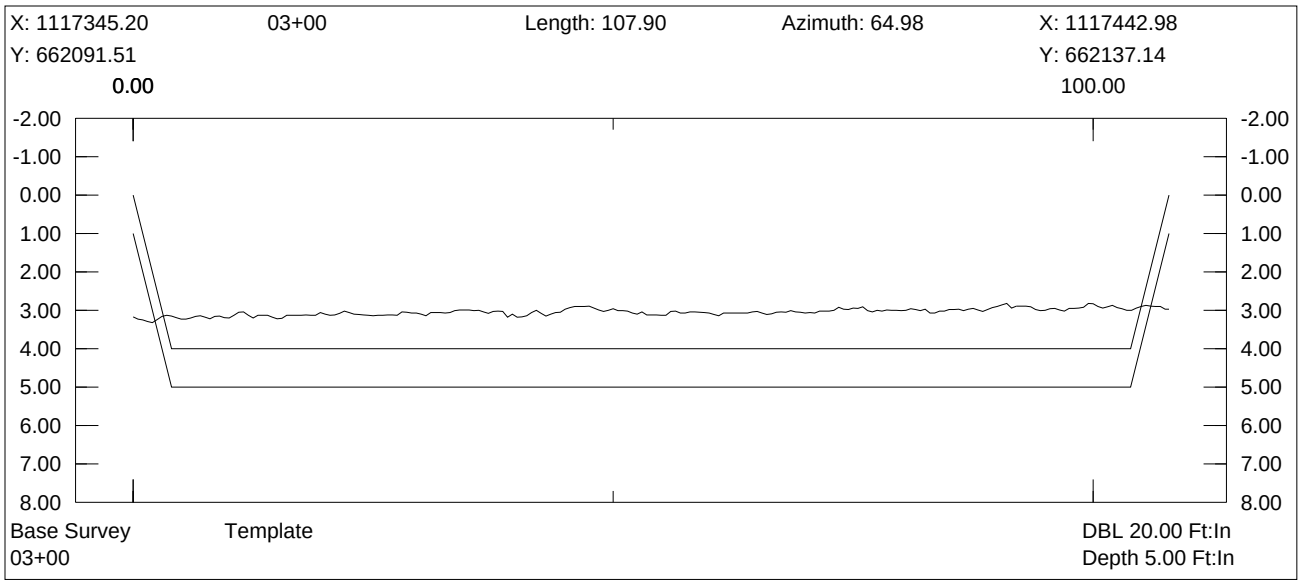
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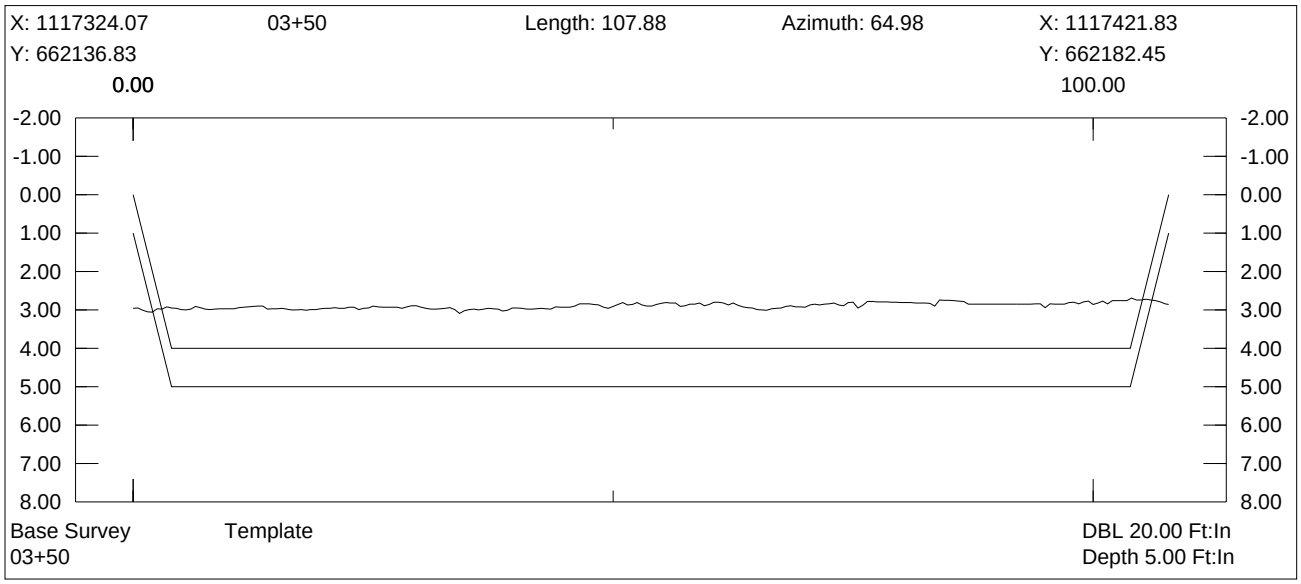
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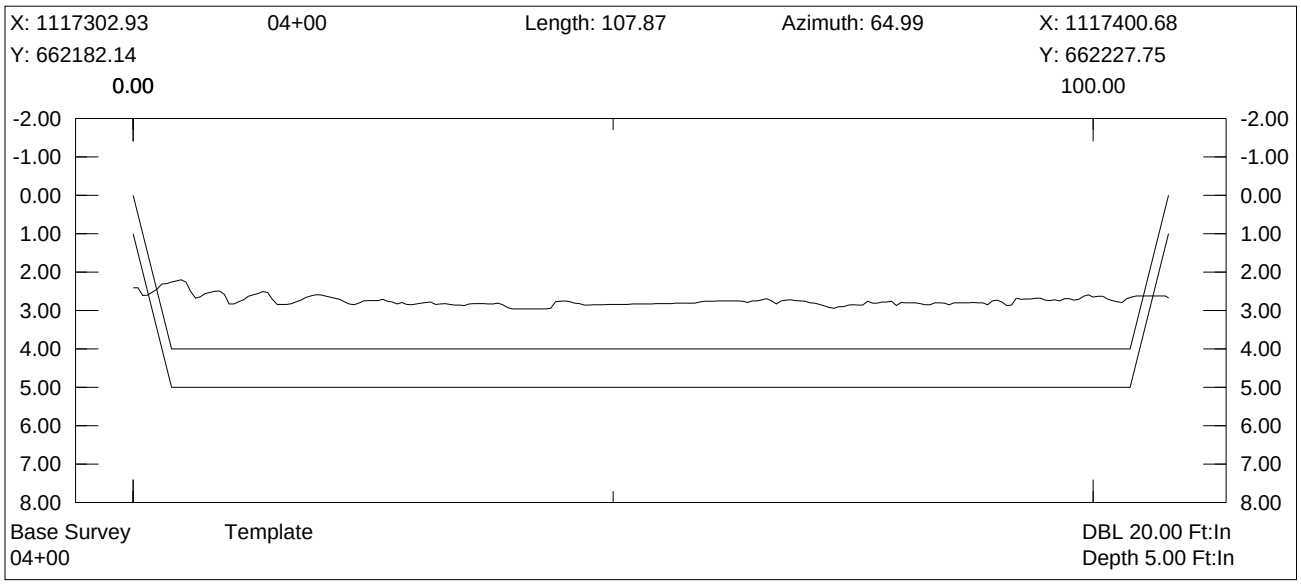
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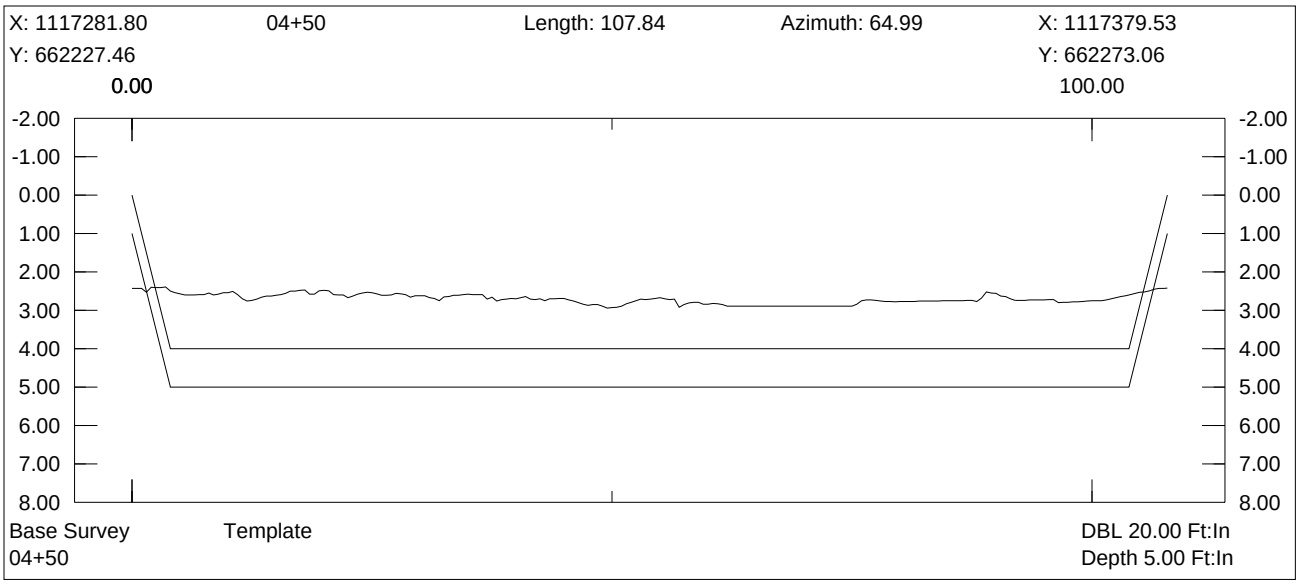
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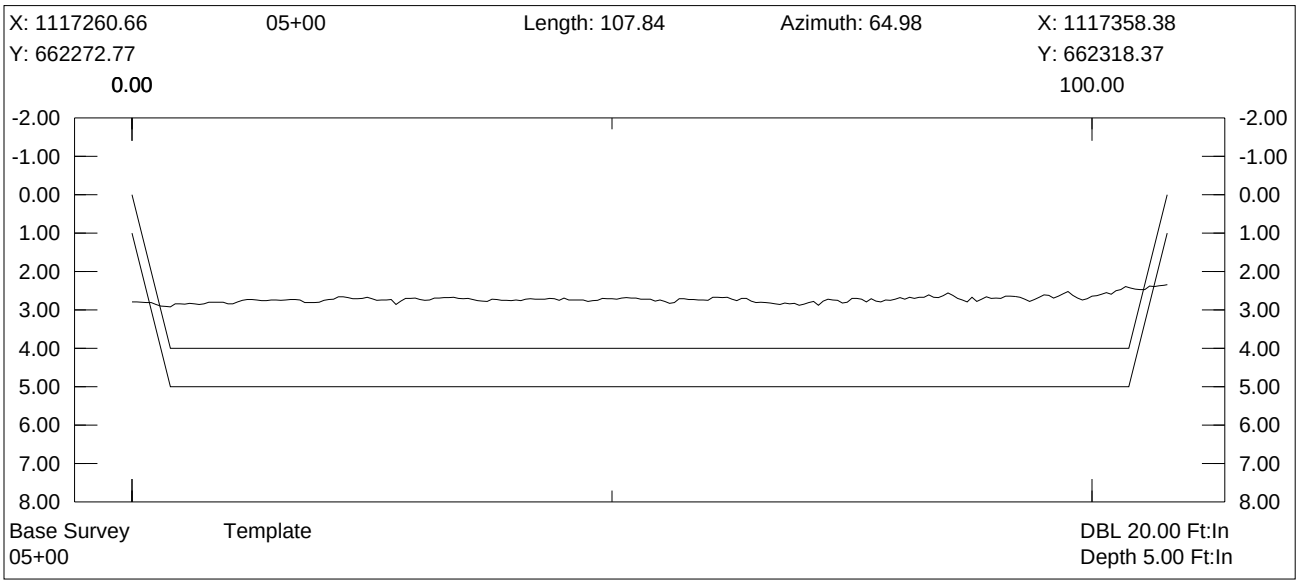
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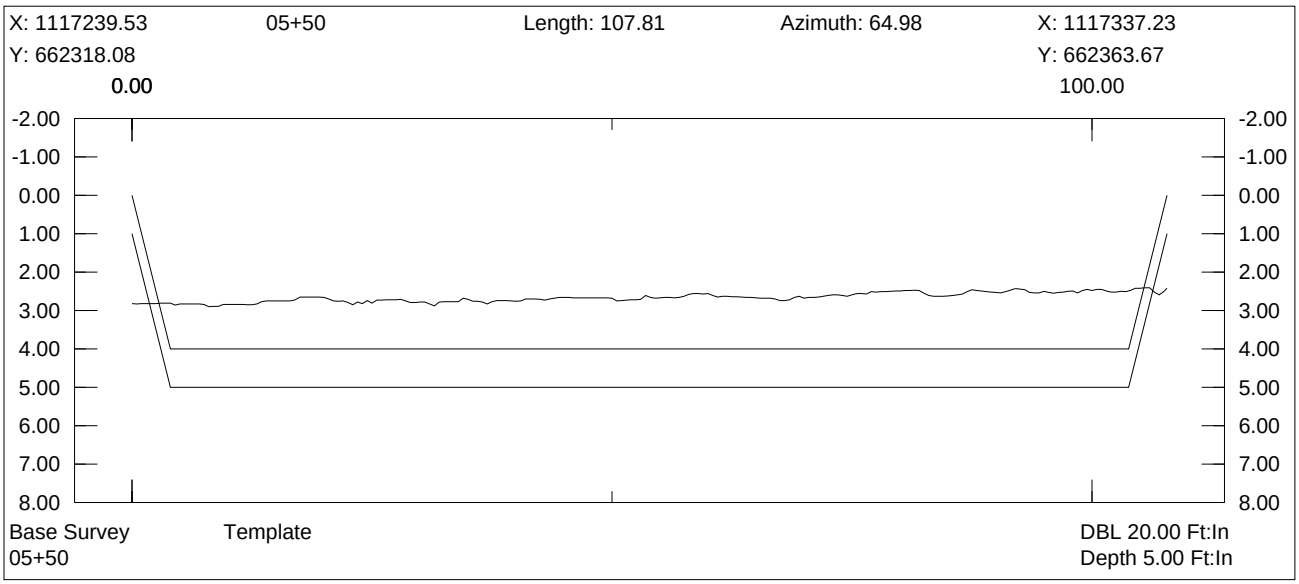
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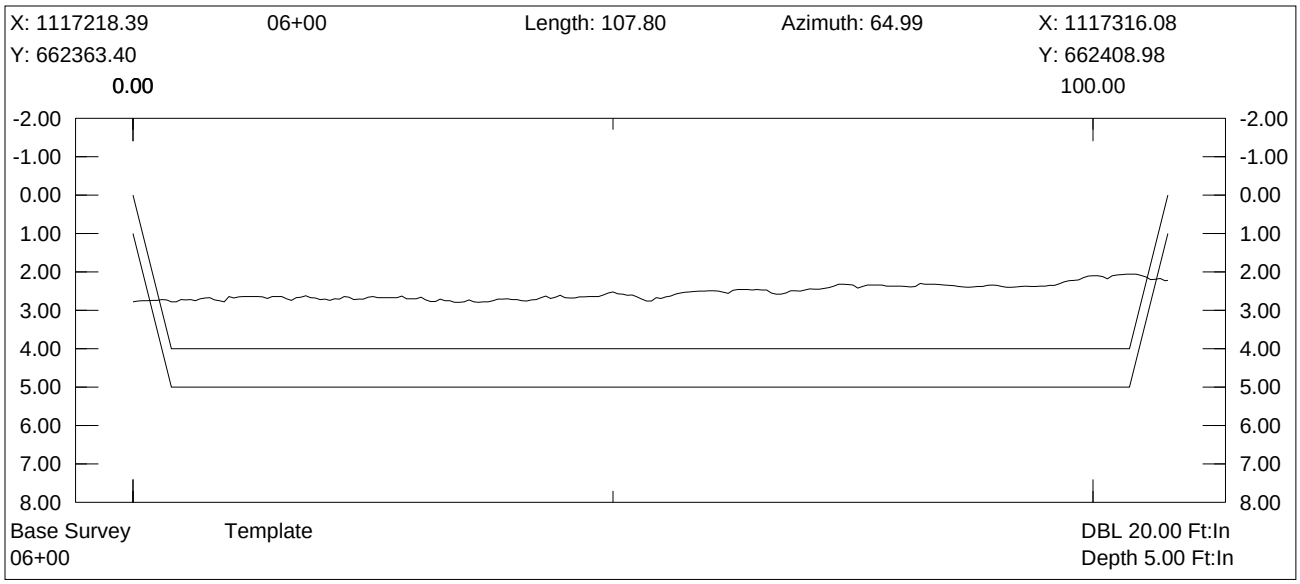
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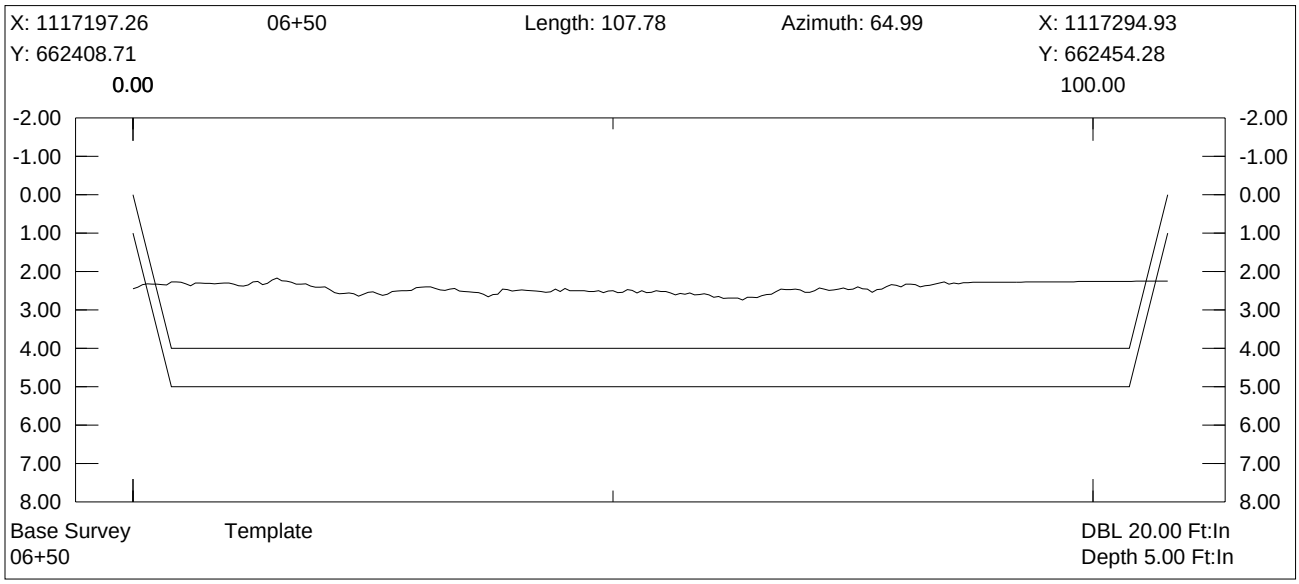
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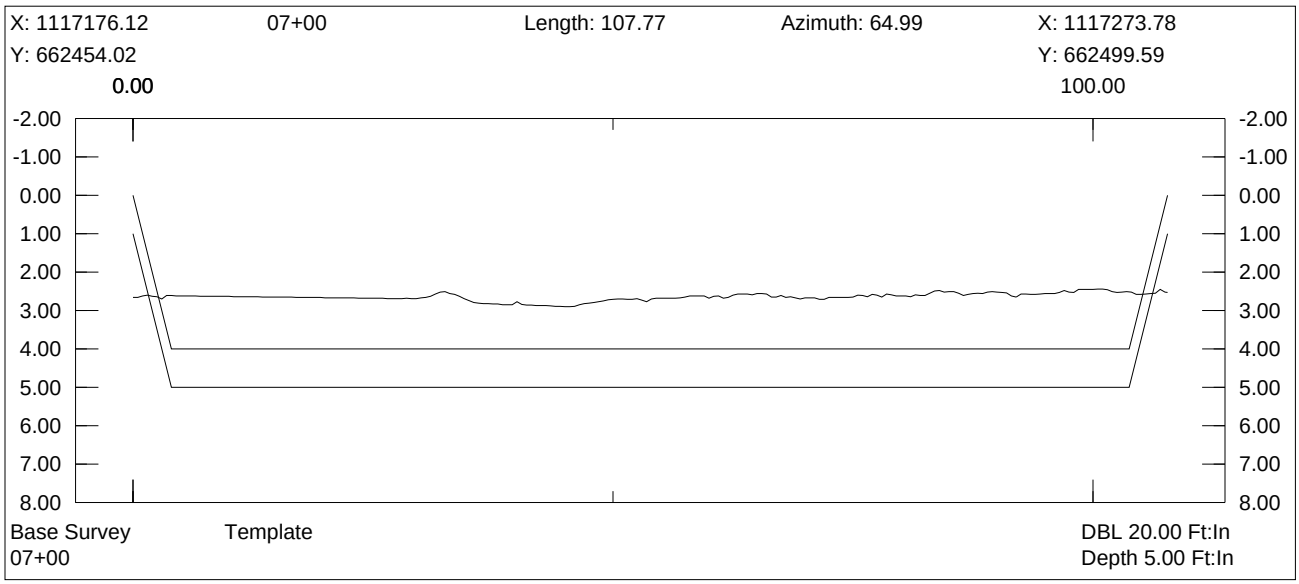
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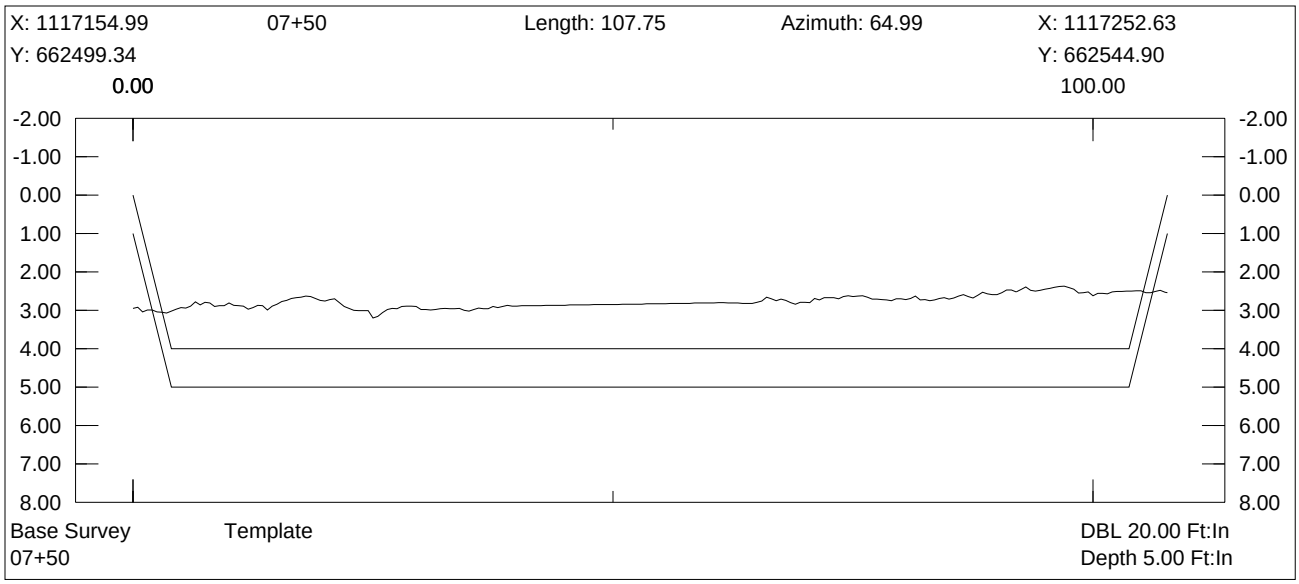
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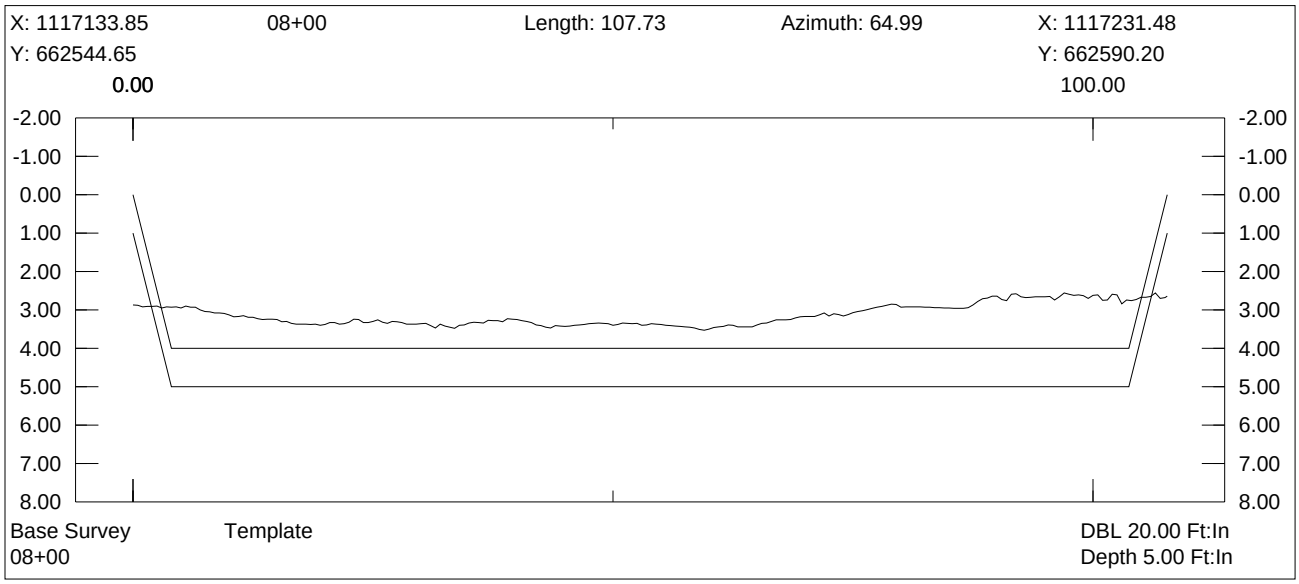
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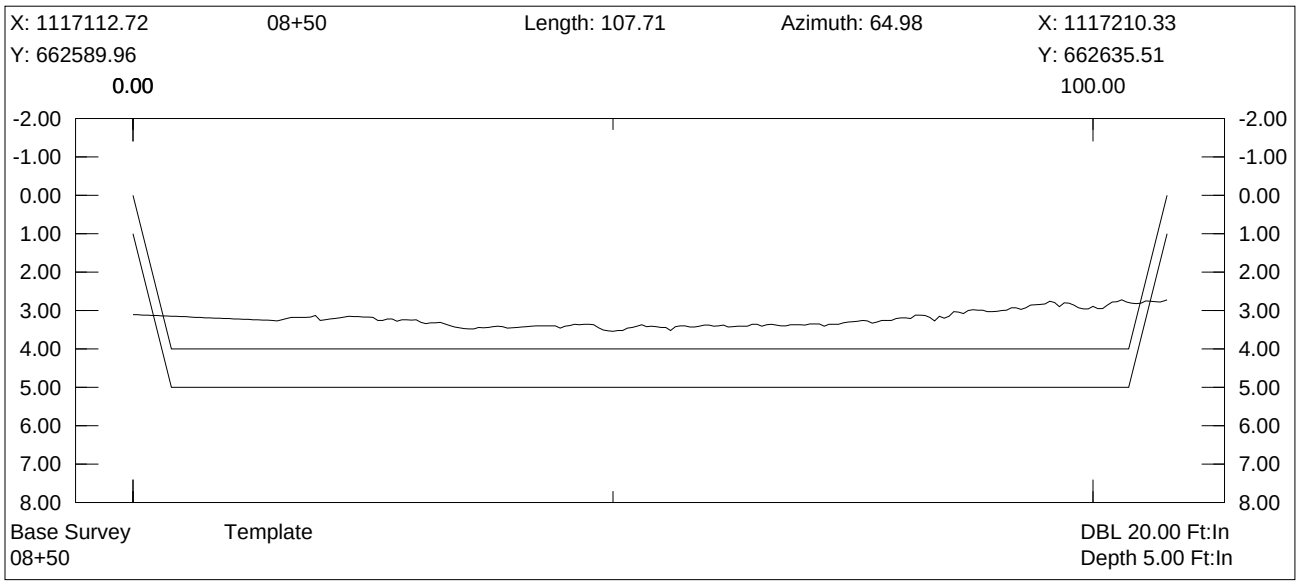
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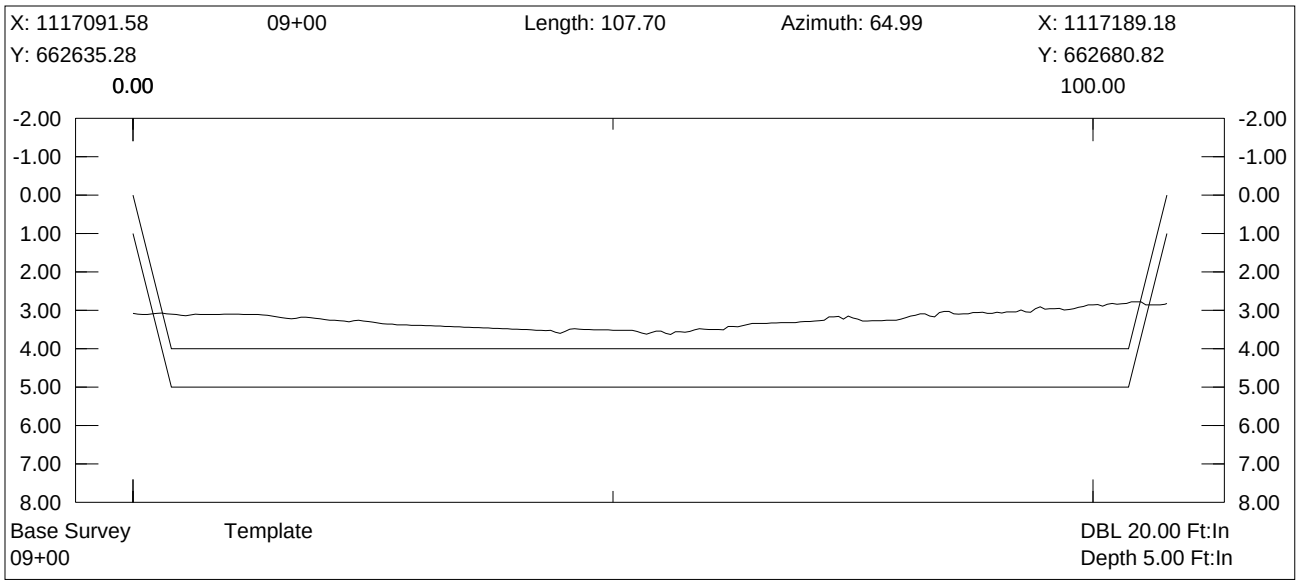
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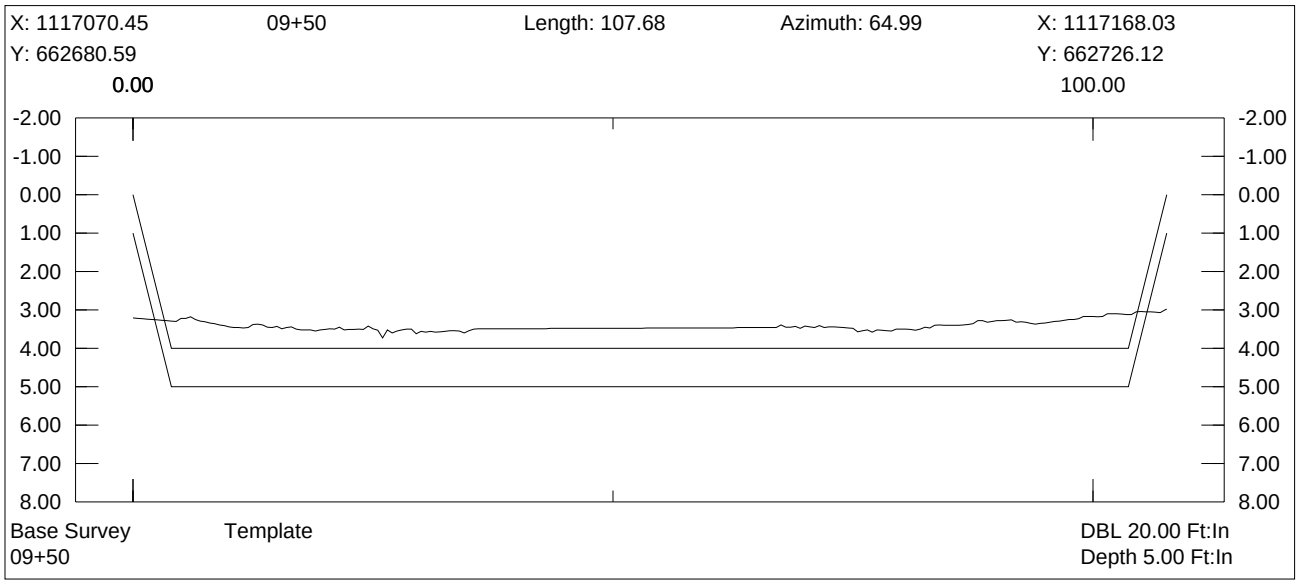
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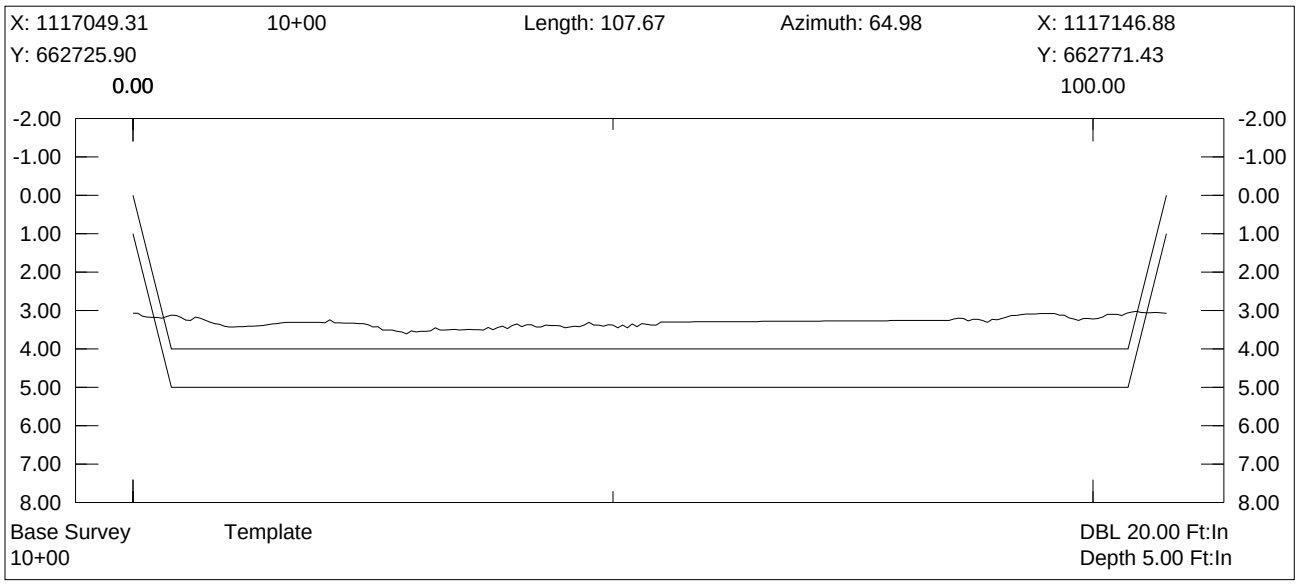
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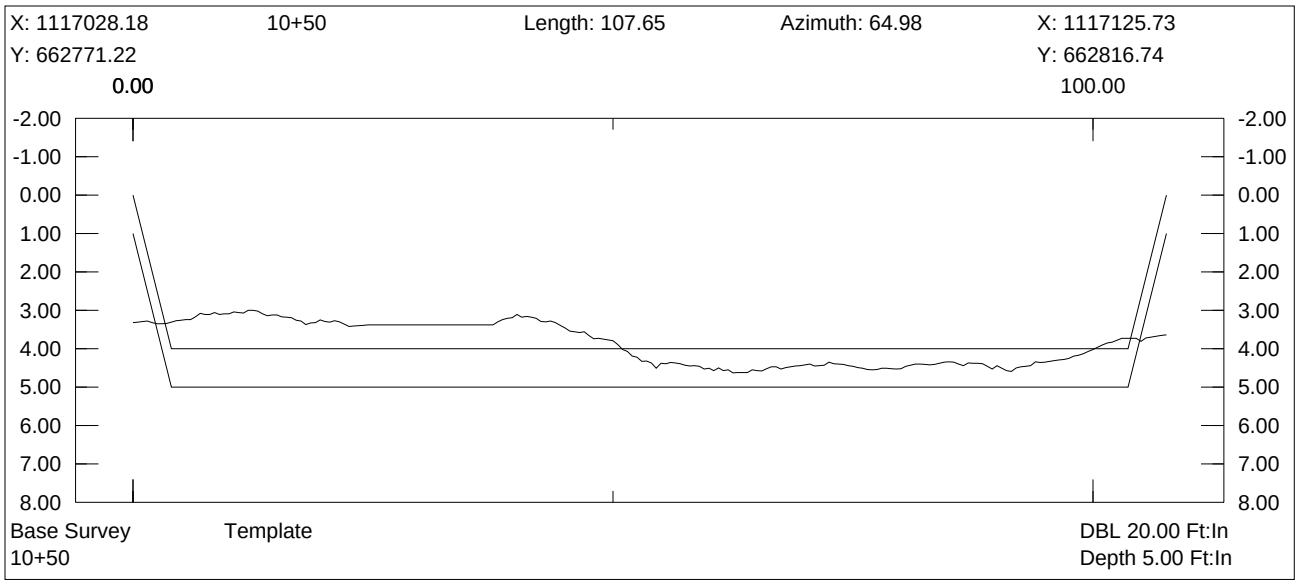
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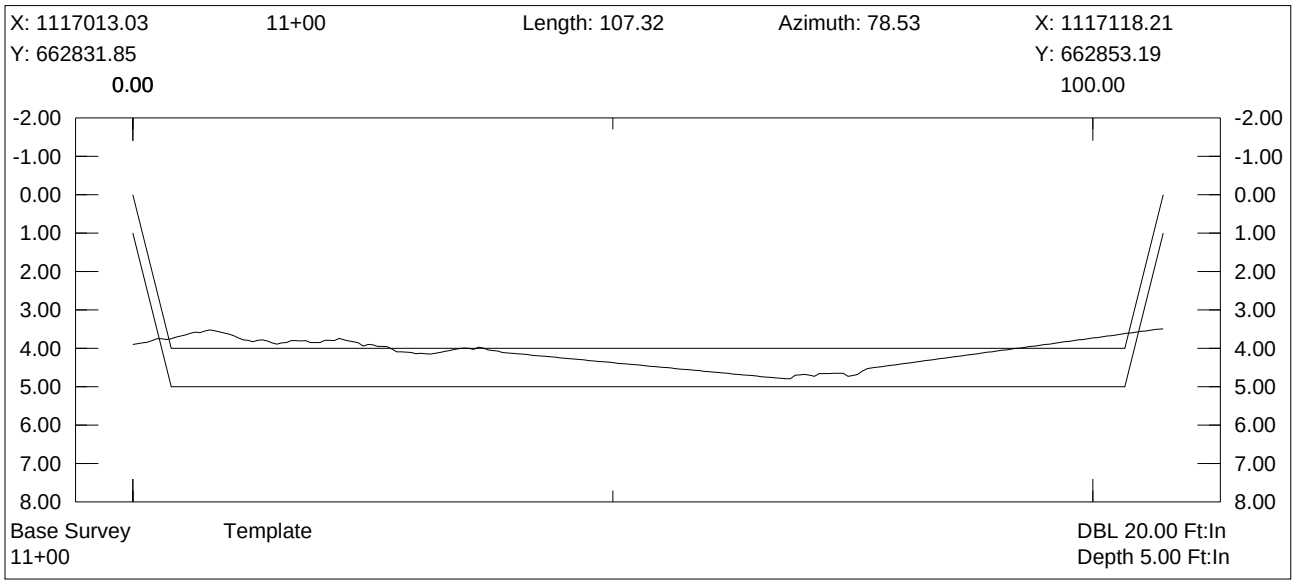
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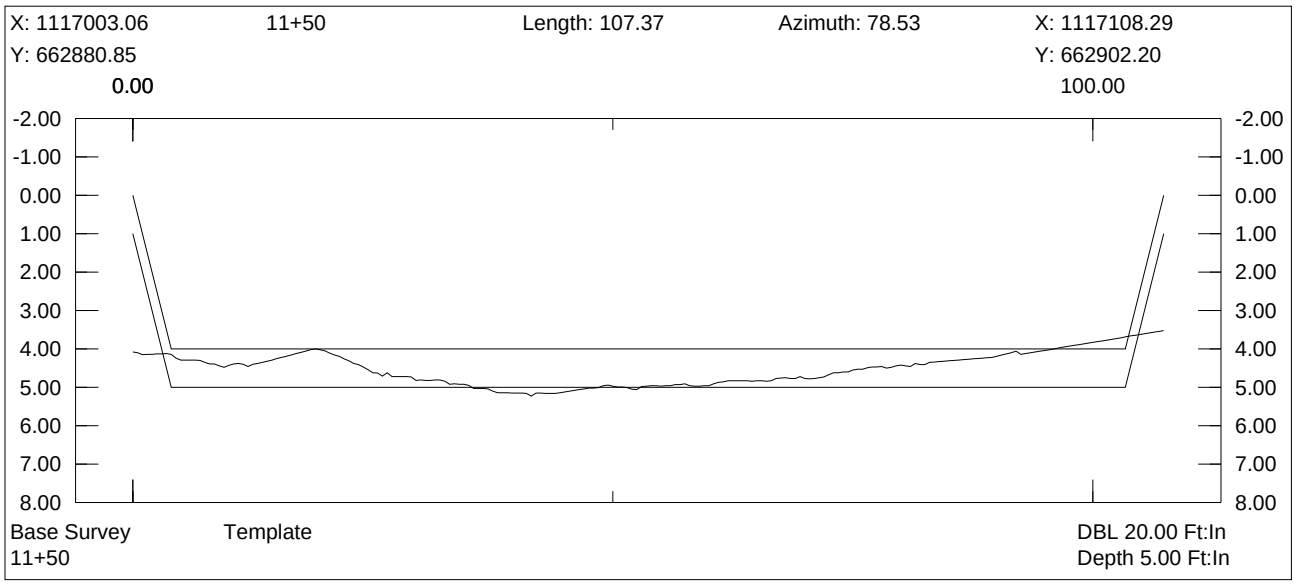
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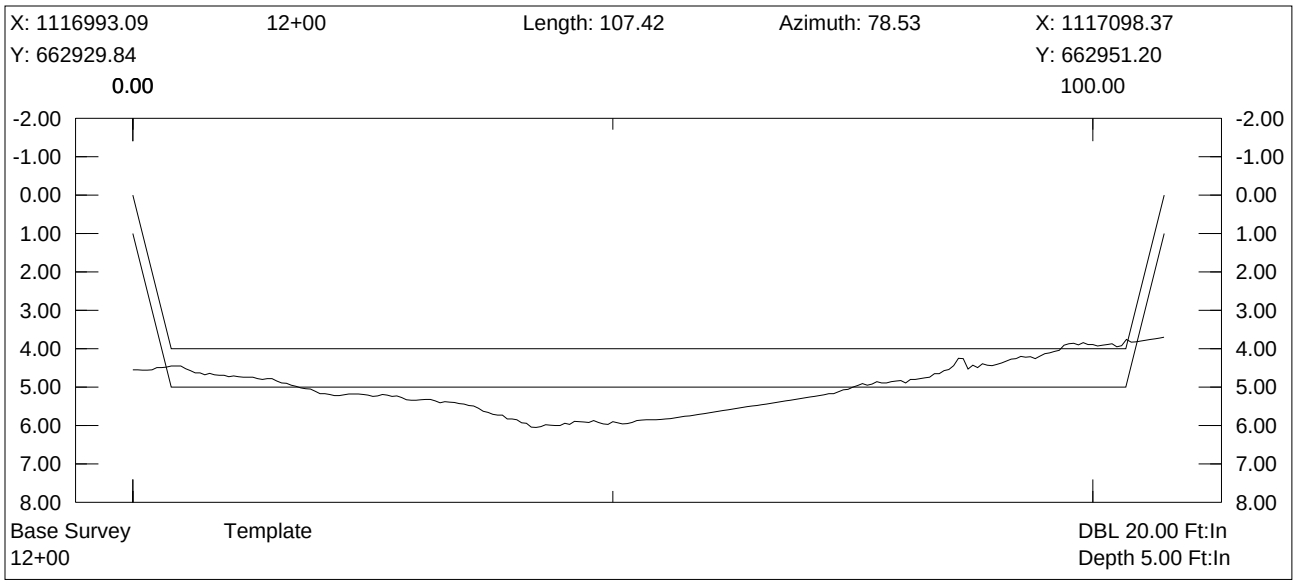
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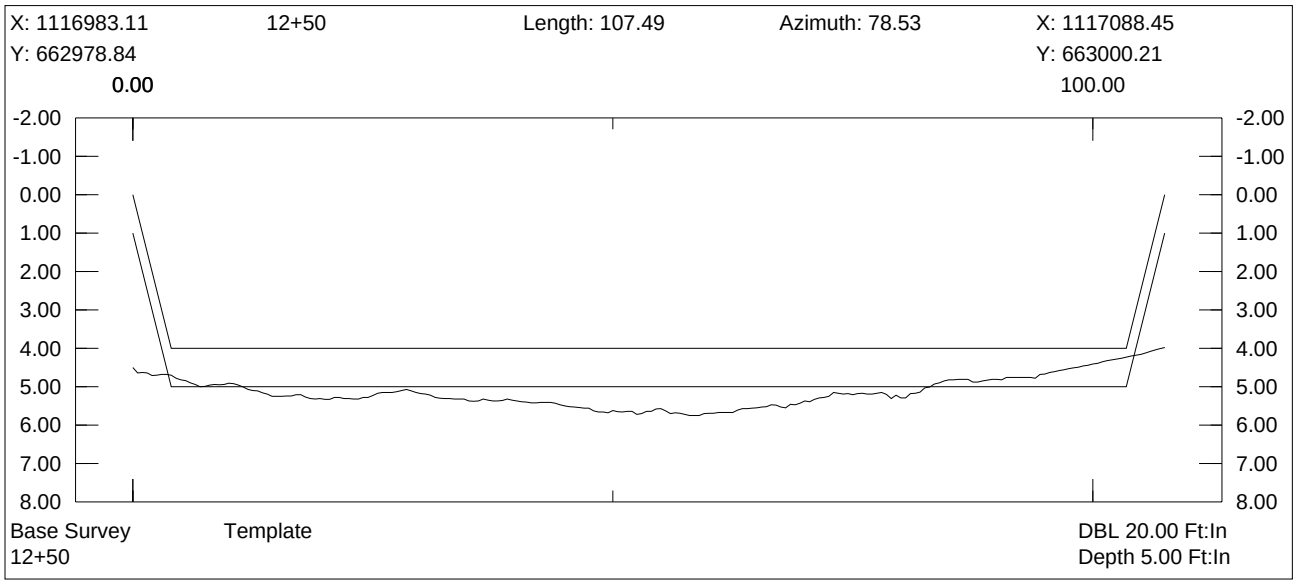
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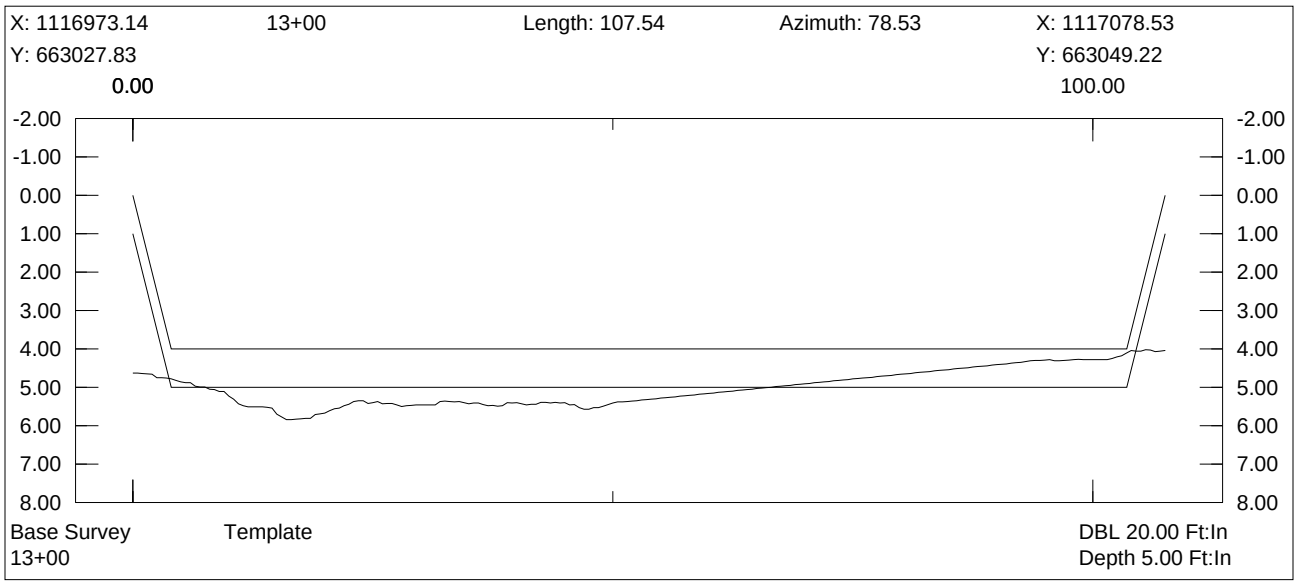
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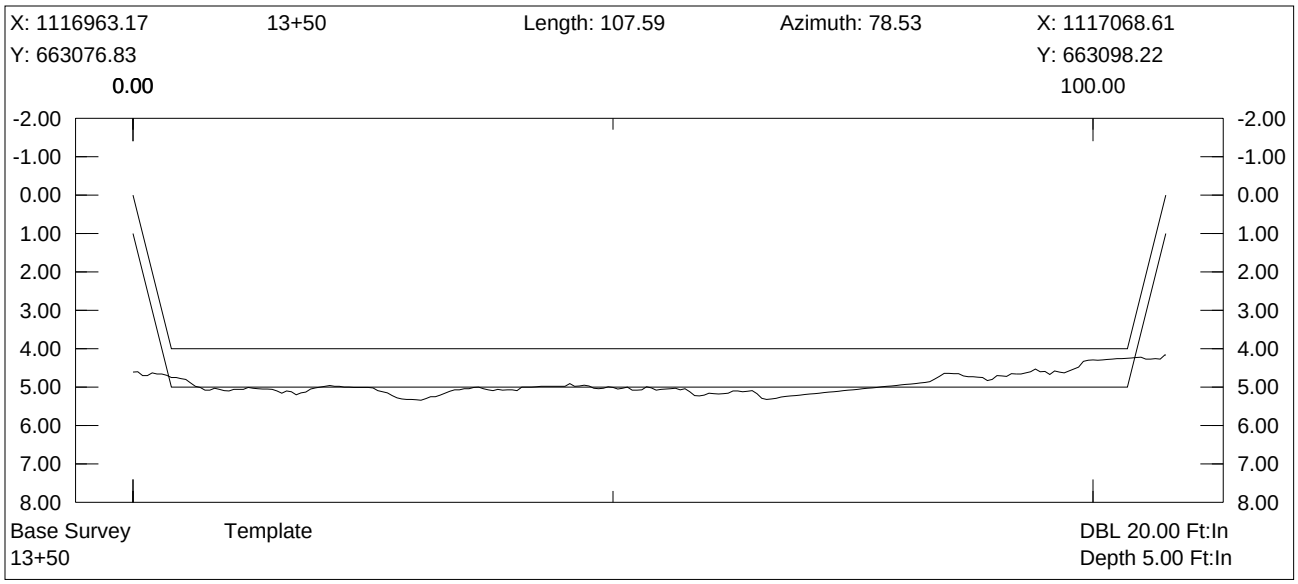
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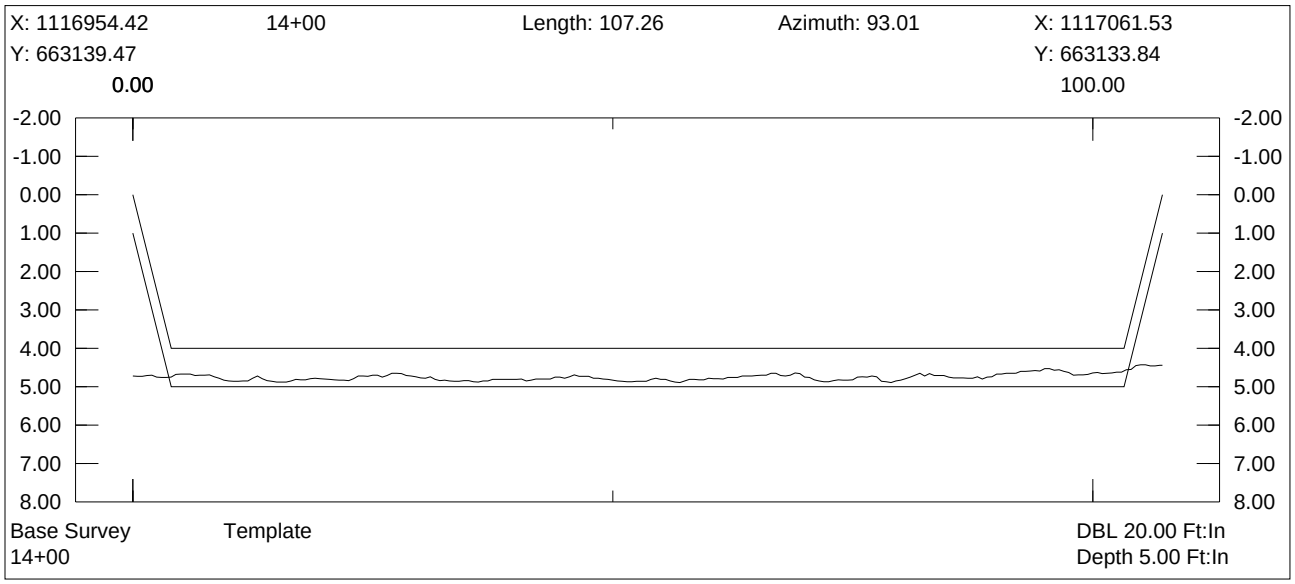
X: 1116954.42
14+00
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X: 1117061.53
Y: 663139.47
Y: 663133.84
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100.00
-2.00
-1.00
0.00
1.00
2.00
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6.00
7.00
8.00
Base Survey
Template
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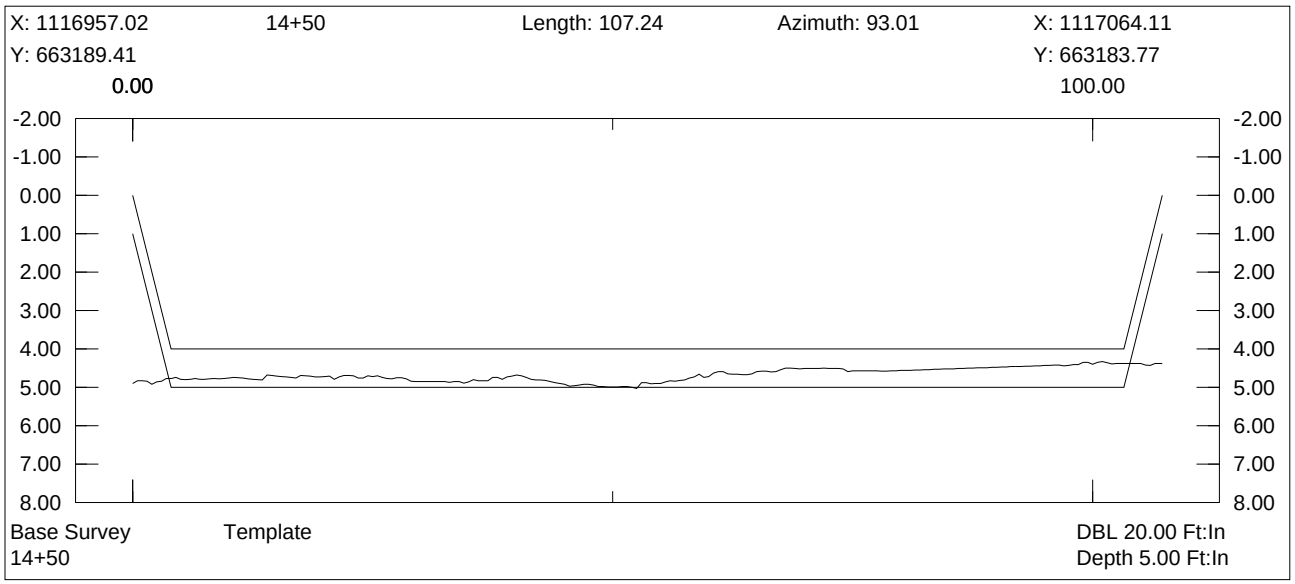
14+00
Depth 5.00 Ft:In


X: 1116957.02
14+50
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Azimuth: 93.01
X: 1117064.11
Y: 663189.41
Y: 663183.77
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-2.00
-1.00
0.00
1.00
2.00
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7.00
8.00
Base Survey
Template
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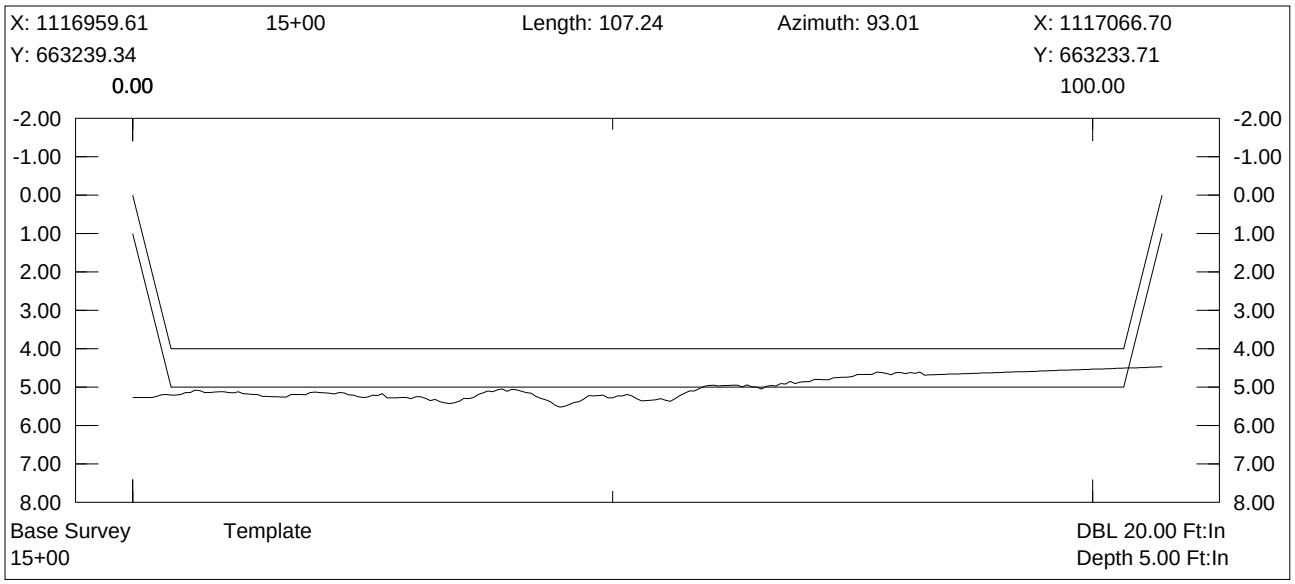
14+50
Depth 5.00 Ft:In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X: 1117066.70
Y: 663239.34
Y: 663233.71
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-2.00
-1.00
0.00
1.00
2.00
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7.00
8.00
Base Survey
Template
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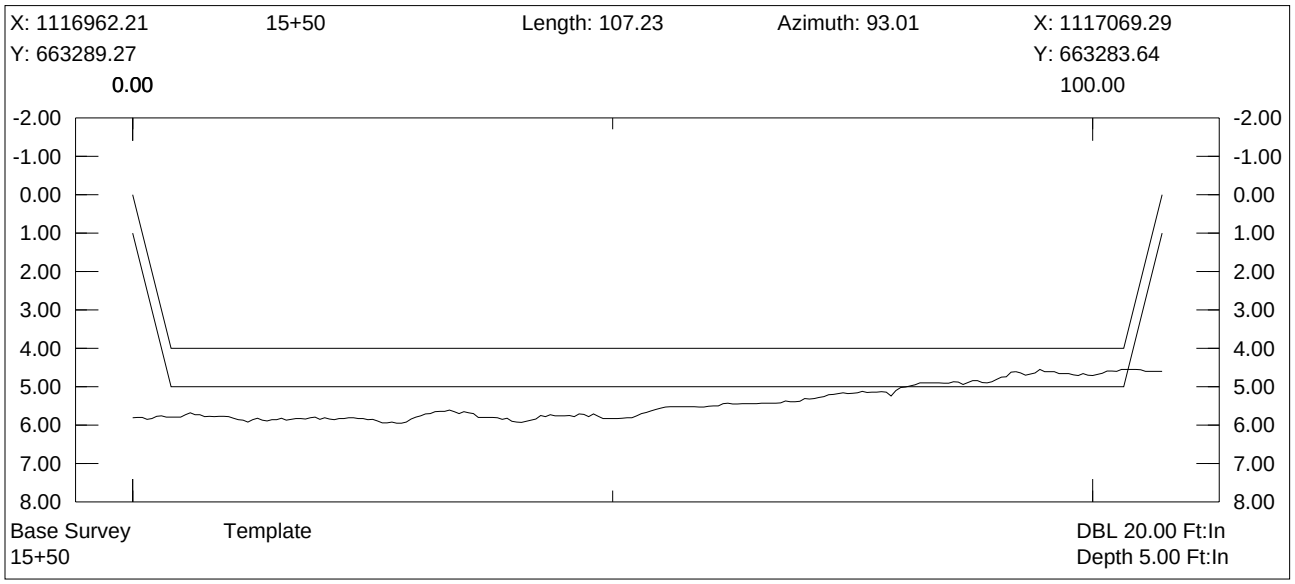
15+00
Depth 5.00 Ft:In


X: 1116962.21
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Length: 107.23
Azimuth: 93.01
X: 1117069.29
Y: 663289.27
Y: 663283.64
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100.00
-2.00
-1.00
0.00
1.00
2.00
3.00
4.00
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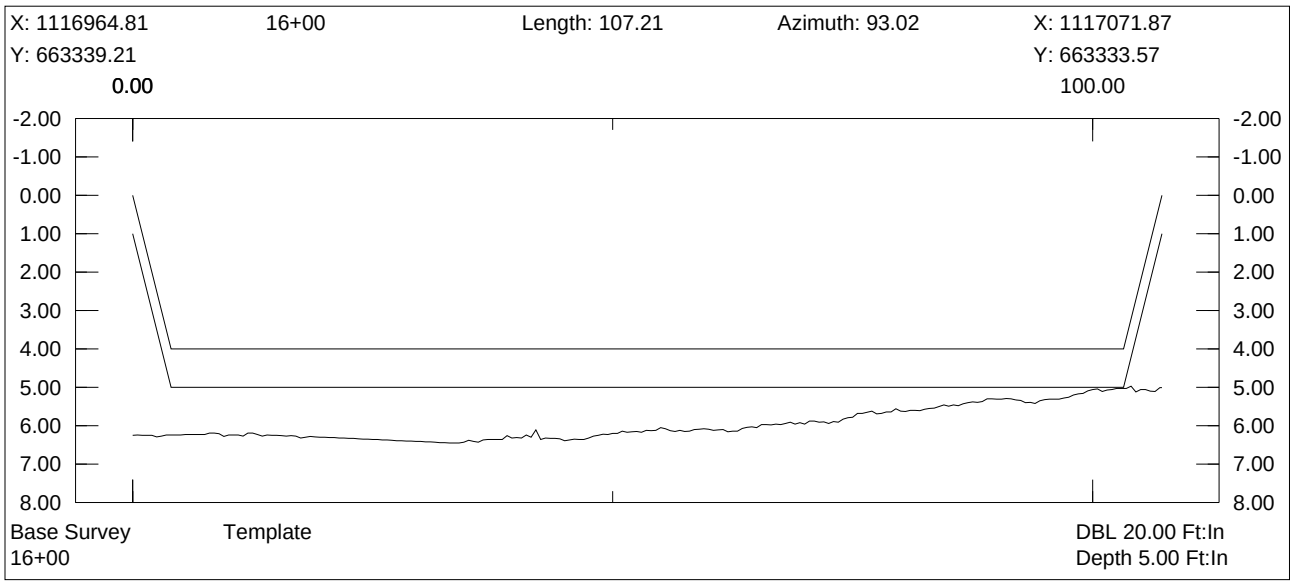
6.00
7.00
8.00
Base Survey
Template
DBL 20.00 Ft:In
15+50
Depth 5.00 Ft:In


X: 1116964.81
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X: 1117071.87
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Y: 663333.57
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-2.00
-1.00
0.00
1.00
2.00
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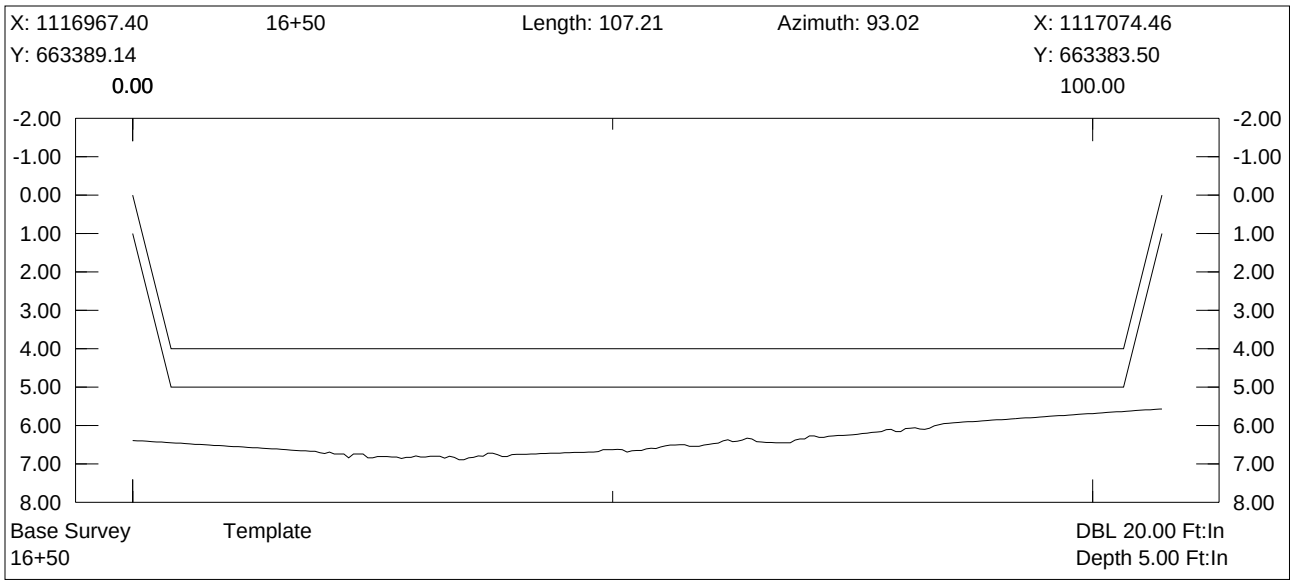
6.00
7.00
8.00
Base Survey
Template
DBL 20.00 Ft:In
16+00
Depth 5.00 Ft:In


X: 1116967.40
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X: 1117074.46
Y: 663389.14
Y: 663383.50
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-2.00
-1.00
0.00
1.00
2.00
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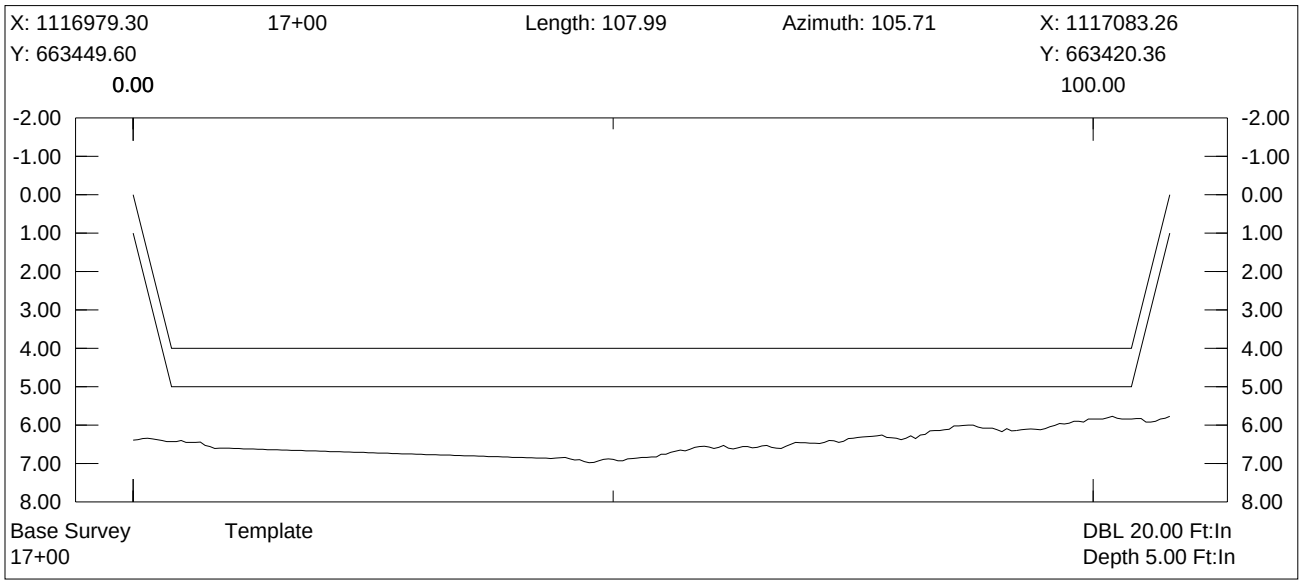
6.00
7.00
8.00
Base Survey
Template
DBL 20.00 Ft:In
16+50
Depth 5.00 Ft:In


X: 1116979.30
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Length: 107.99
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X: 1117083.26
Y: 663449.60
Y: 663420.36
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-2.00
-1.00
0.00
1.00
2.00
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6.00
7.00
8.00
Base Survey
Template
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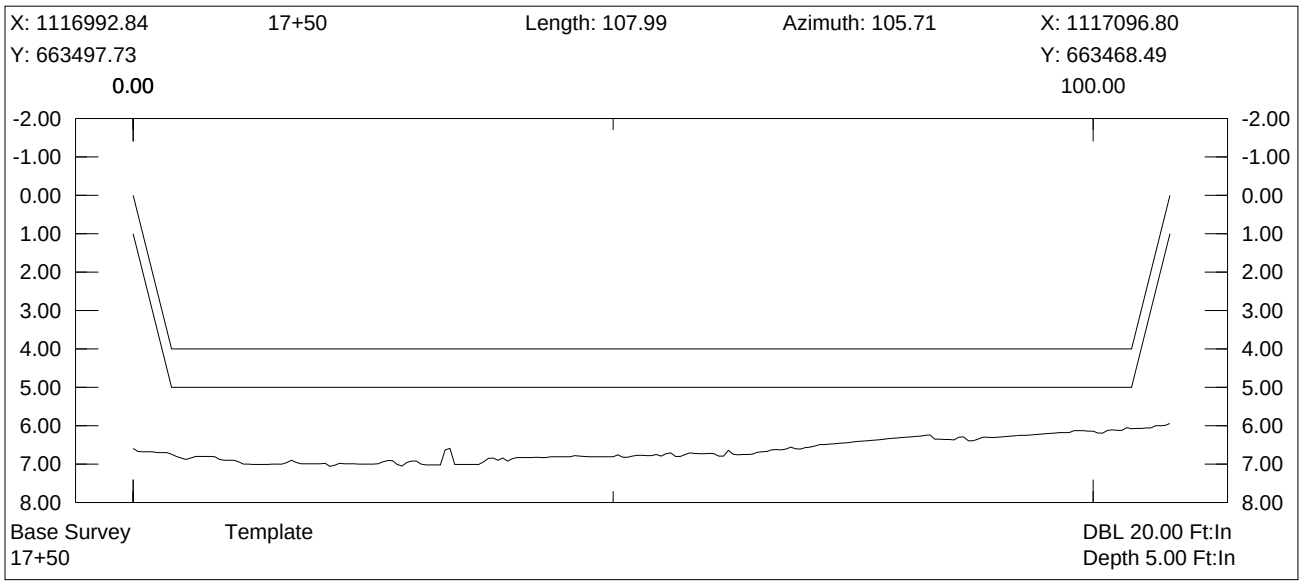
17+00
Depth 5.00 Ft:In


X: 1116992.84
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X: 1117096.80
Y: 663497.73
Y: 663468.49
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-2.00
-1.00
0.00
1.00
2.00
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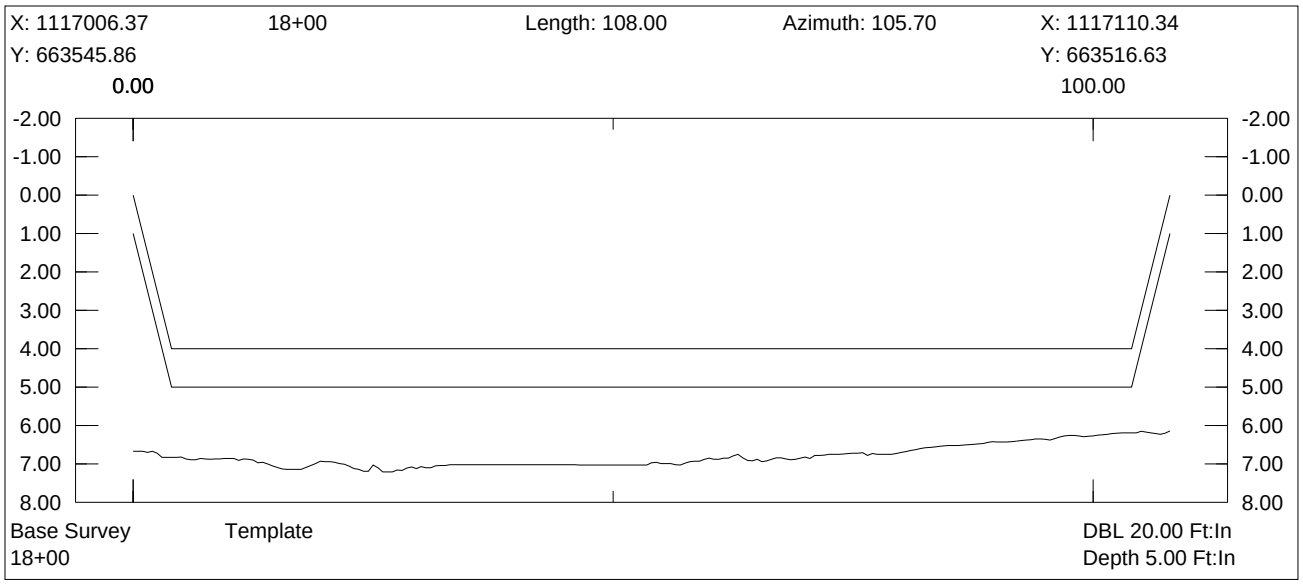
6.00
7.00
8.00
Base Survey
Template
DBL 20.00 Ft:In
17+50
Depth 5.00 Ft:In


X: 1117006.37
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X: 1117110.34
Y: 663545.86
Y: 663516.63
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-2.00
-1.00
0.00
1.00
2.00
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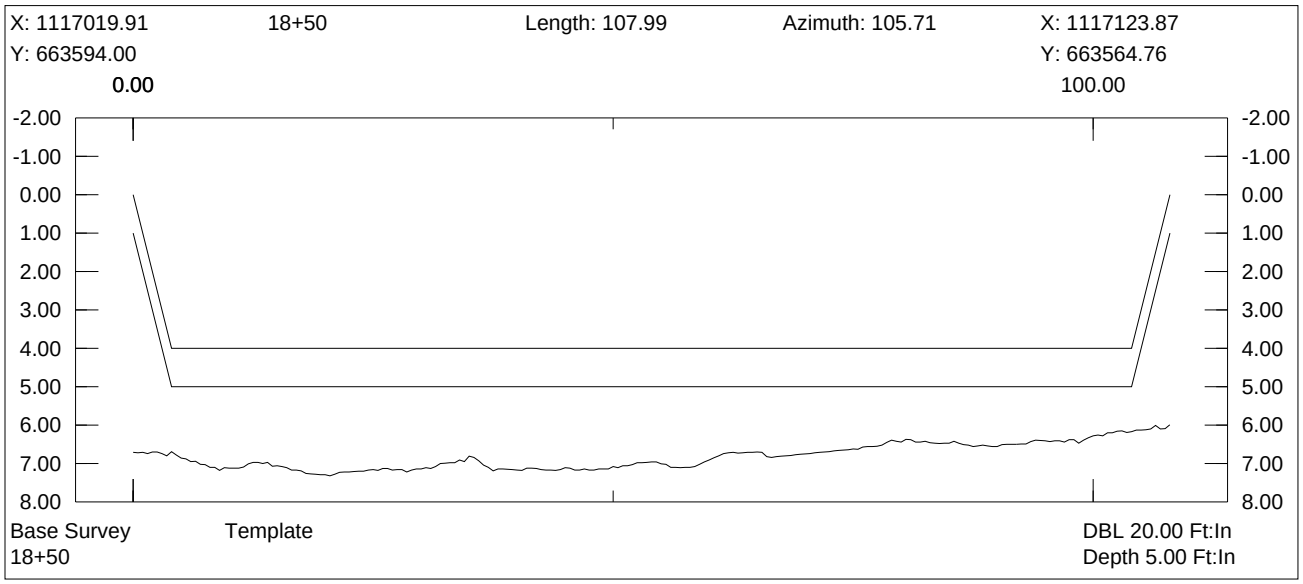
7.00
8.00
Base Survey
18+00
Template
DBL 20.00 Ft:In
Depth 5.00 Ft:In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X: 1117123.87
Y: 663594.00
Y: 663564.76
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0.00
1.00
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7.00
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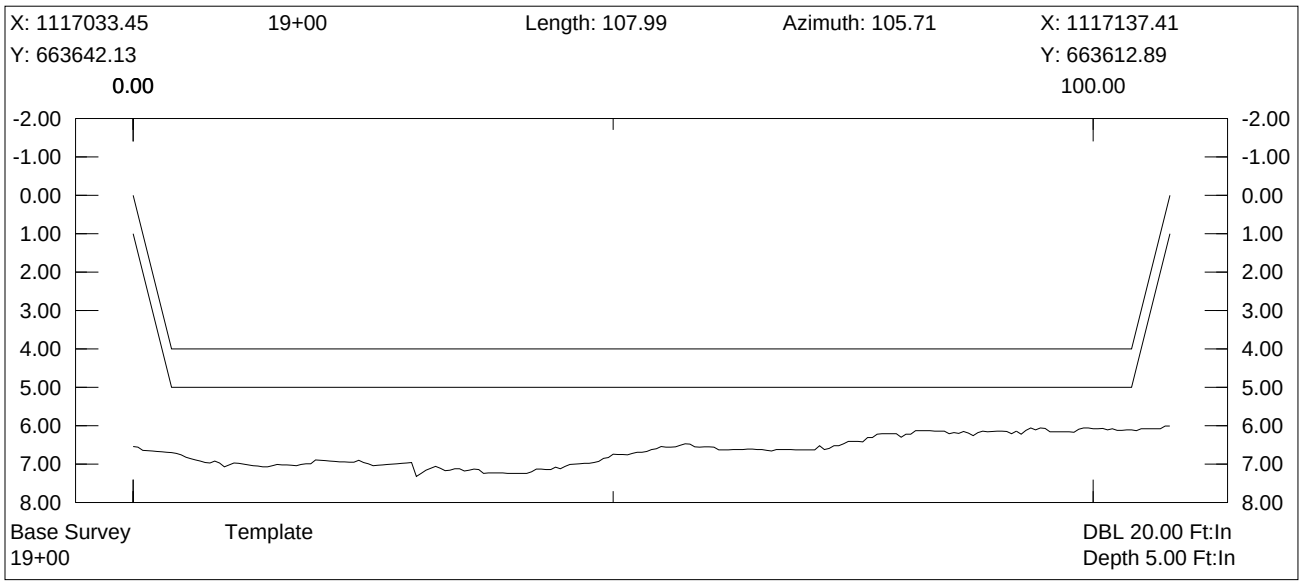
Base Survey
18+50
Template
DBL 20.00 Ft:In
Depth 5.00 Ft:In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X: 1117137.41
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Y: 663612.89
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-2.00
-1.00
0.00
1.00
2.00
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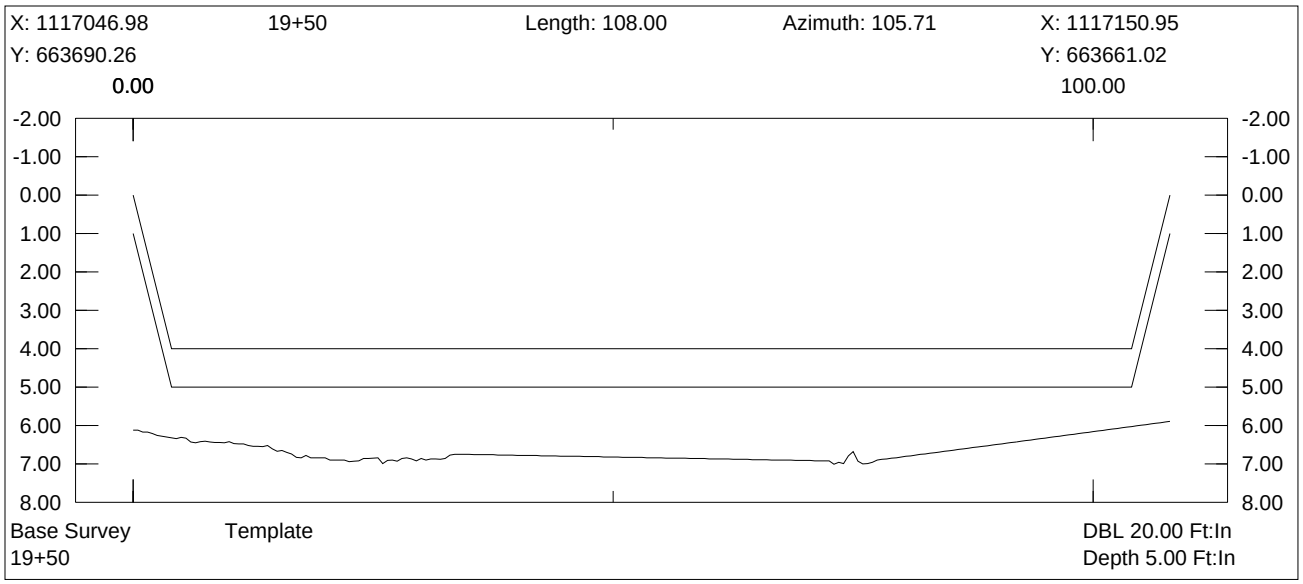
7.00
8.00
Base Survey
19+00
Template
DBL 20.00 Ft:In
Depth 5.00 Ft:In


X: 1117046.98
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X: 1117150.95
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Y: 663661.02
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-2.00
-1.00
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Base Survey
Template
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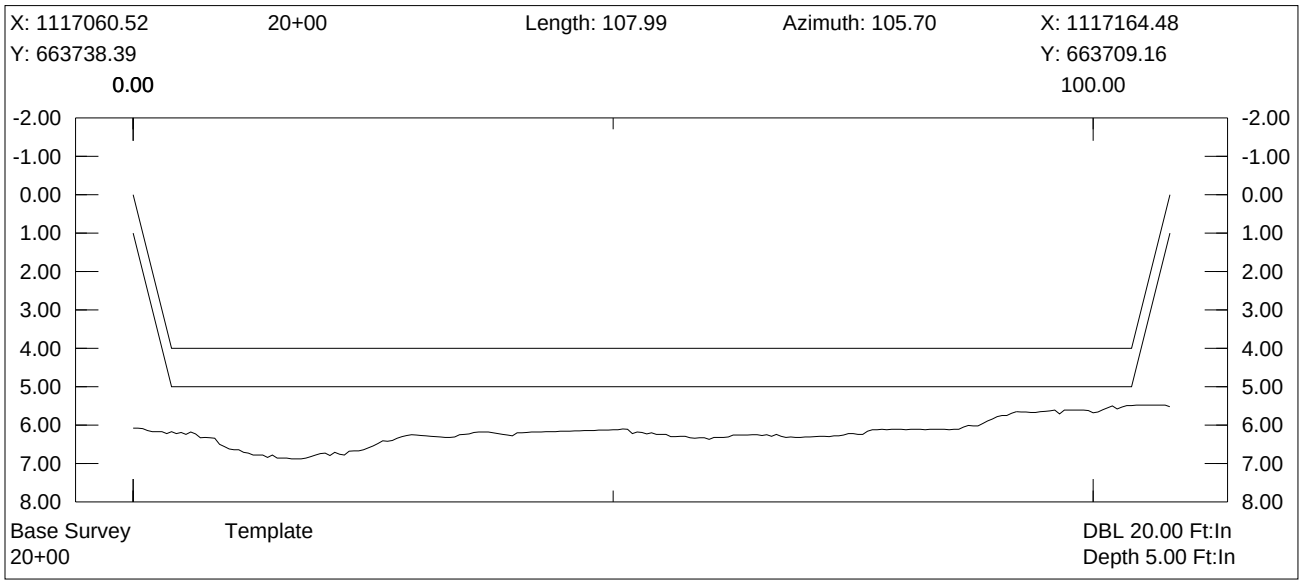
19+50
Depth 5.00 Ft:In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X: 1117164.48
Y: 663738.39
Y: 663709.16
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100.00
-2.00
-1.00
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Base Survey
Template
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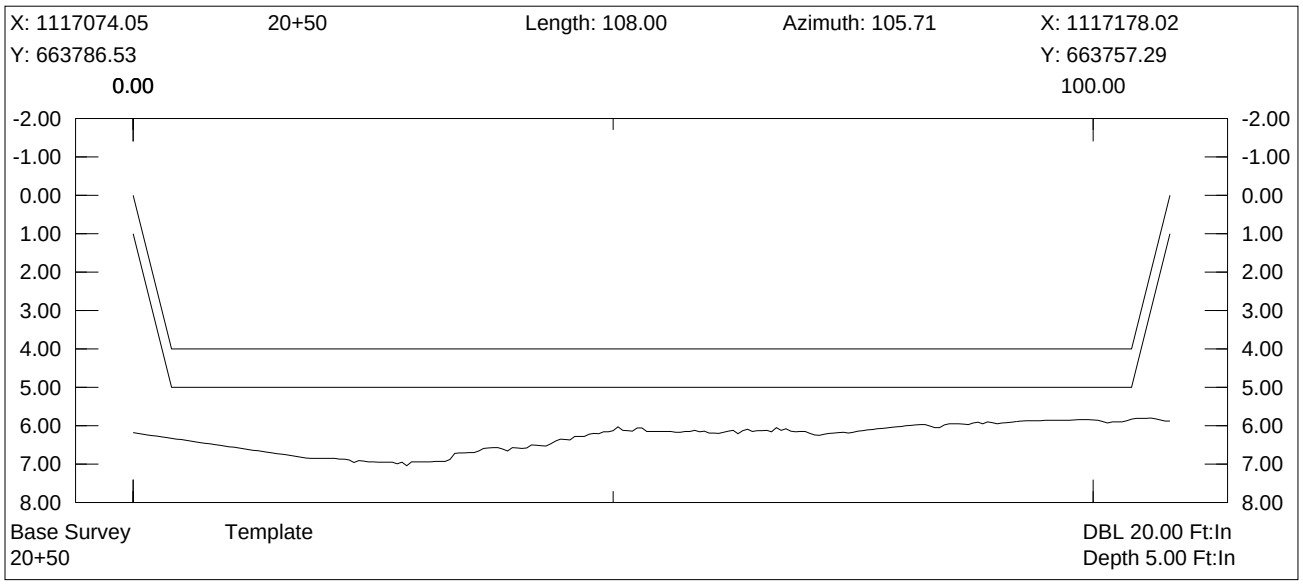
20+00
Depth 5.00 Ft:In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X: 1117178.02
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Y: 663757.29
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-1.00
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8.00
Base Survey
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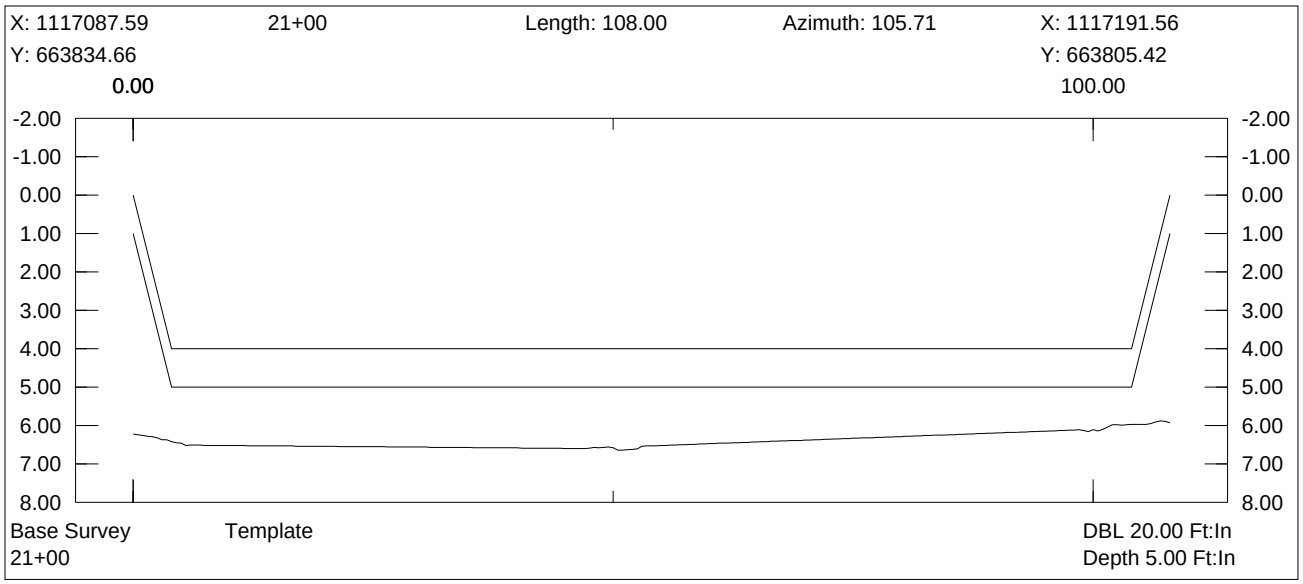
20+50
Depth 5.00 Ft:In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X: 1117191.56
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Y: 663805.42
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8.00
Base Survey
Template
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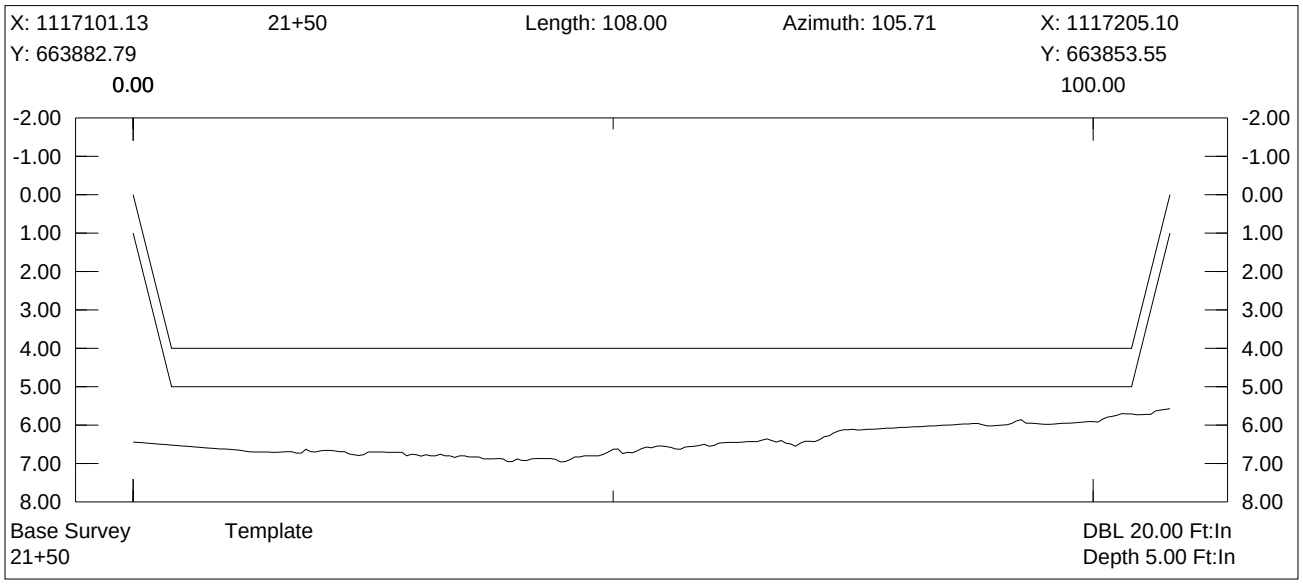
21+00
Depth 5.00 Ft:In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Azimuth: 105.71
X: 1117205.10
Y: 663882.79
Y: 663853.55
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100.00
-2.00
-1.00
0.00
1.00
2.00
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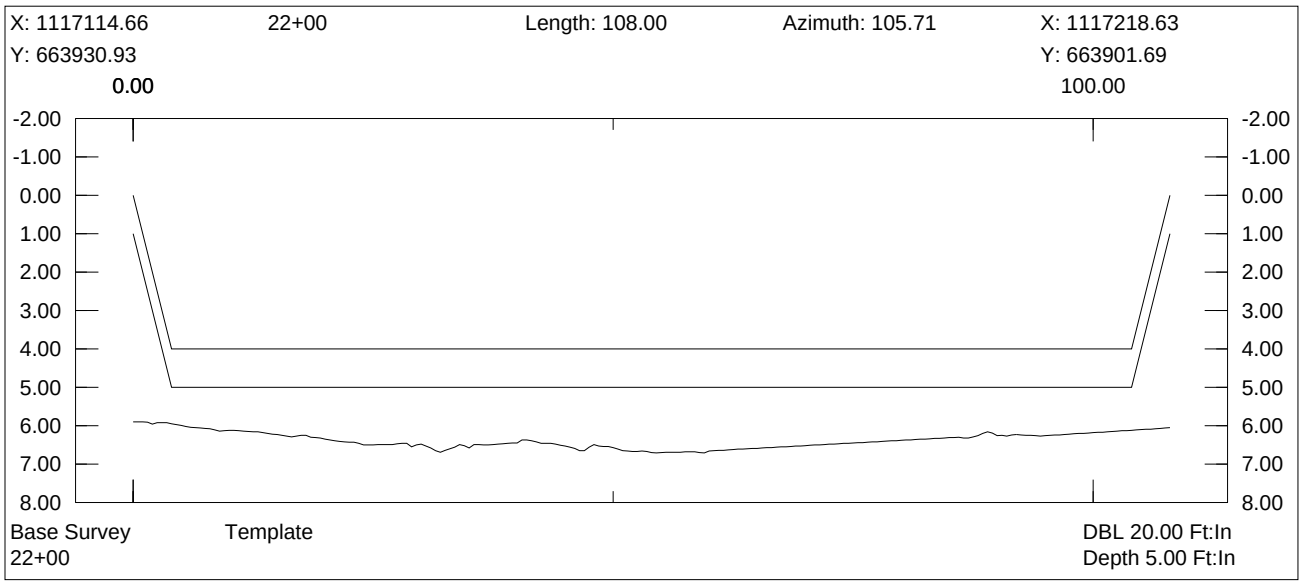
7.00
8.00
Base Survey
Template
DBL 20.00 Ft:In
21+50
Depth 5.00 Ft:In


X: 1117114.66
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Length: 108.00
Azimuth: 105.71
X: 1117218.63
Y: 663930.93
Y: 663901.69
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-2.00
-1.00
0.00
1.00
2.00
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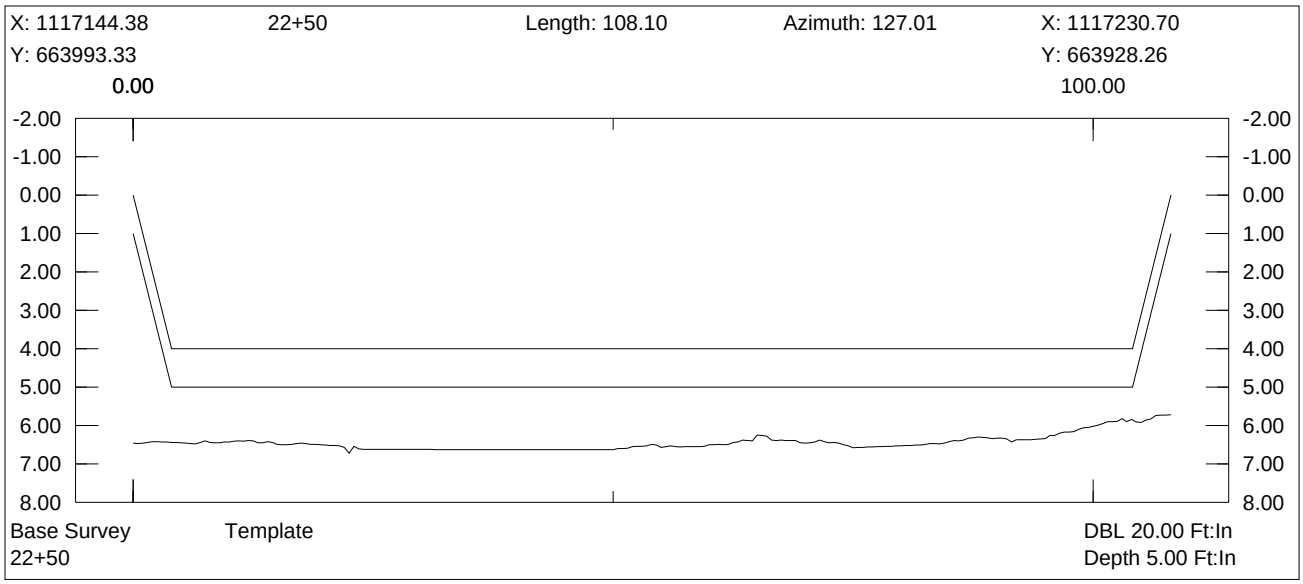
6.00
7.00
8.00
Base Survey
Template
DBL 20.00 Ft:In
22+00
Depth 5.00 Ft:In


X: 1117144.38
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Azimuth: 127.01
X: 1117230.70
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Y: 663928.26
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-2.00
-1.00
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2.00
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7.00
8.00
Base Survey
Template
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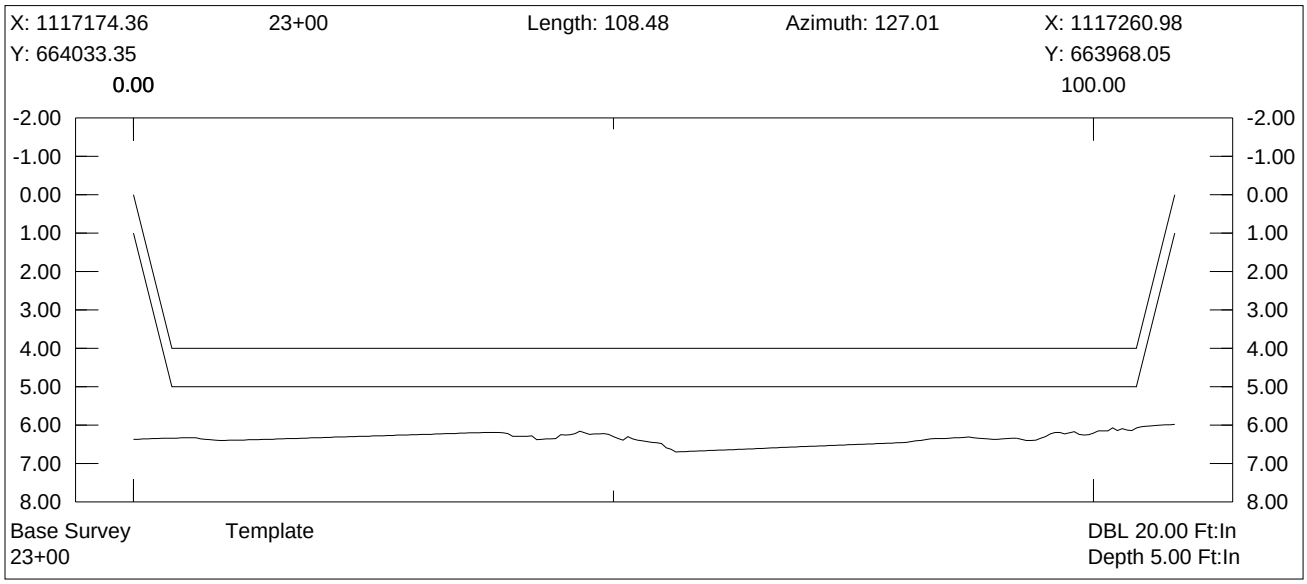
22+50
Depth 5.00 Ft:In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Base Survey
Template
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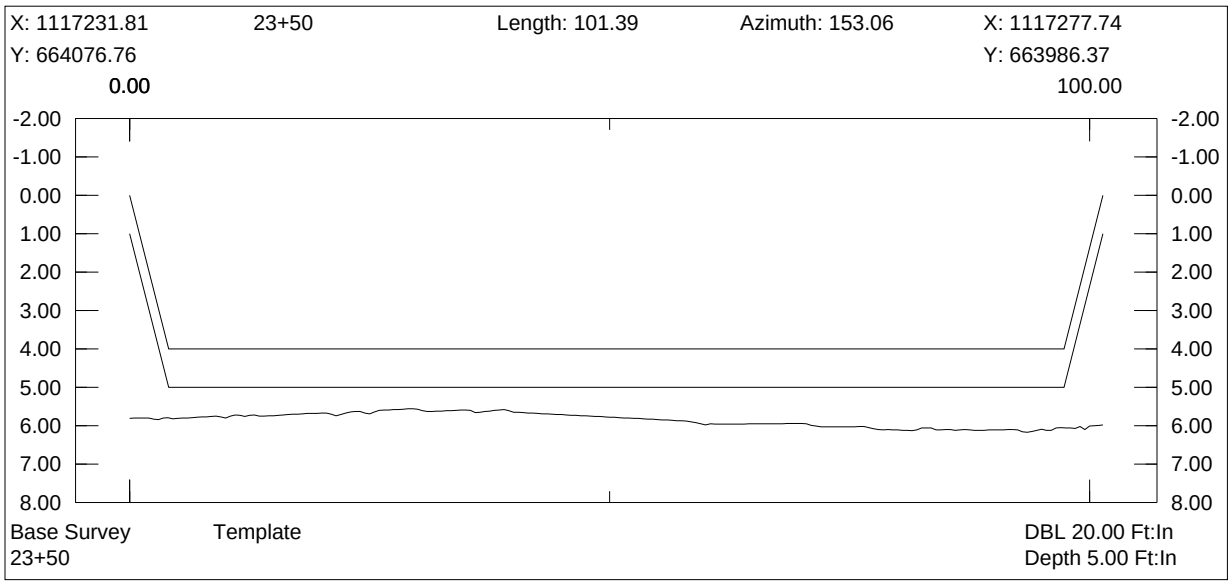
23+00
Depth 5.00 Ft:In


X: 1117231.81
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Y: 663986.37
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Base Survey
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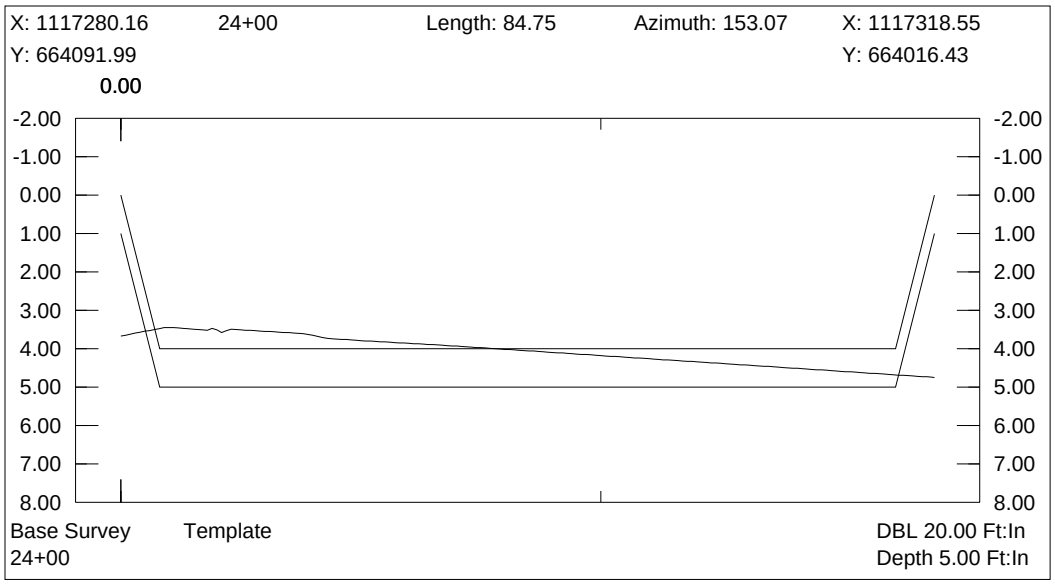
23+50
Depth 5.00 Ft:In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Y: 664016.43
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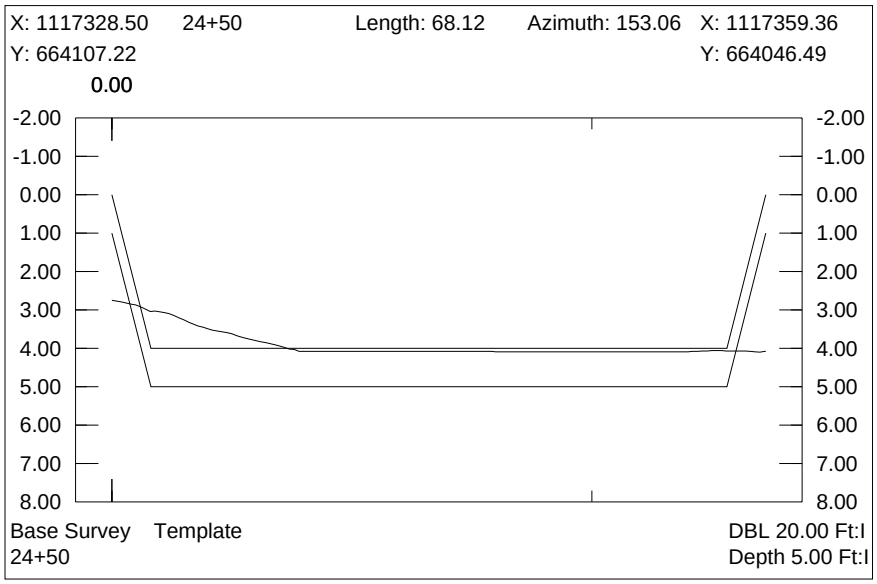
7.00
8.00
Base Survey
Template
24+00
DBL 20.00 Ft:In
Depth 5.00 Ft:In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X: 1117359.36
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Y: 664046.49
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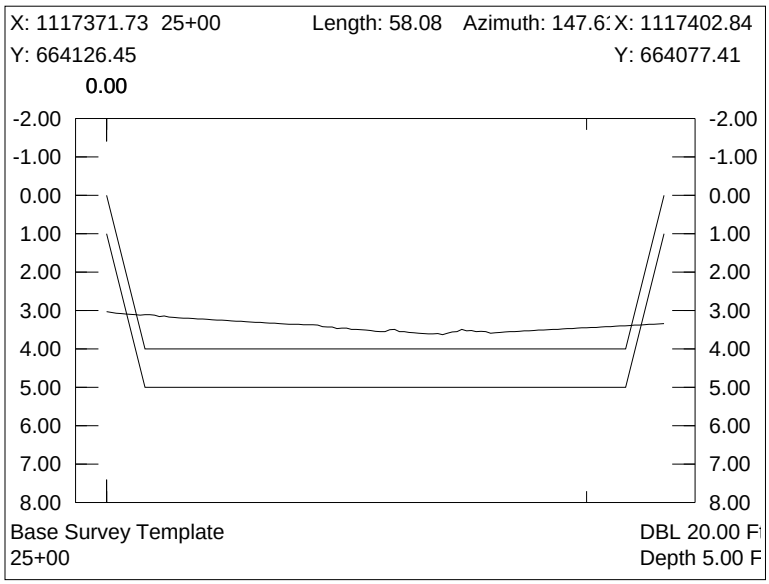
DBL 20.00 Ft:I
Depth 5.00 Ft:I


X: 1117371.73
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Y: 664077.41
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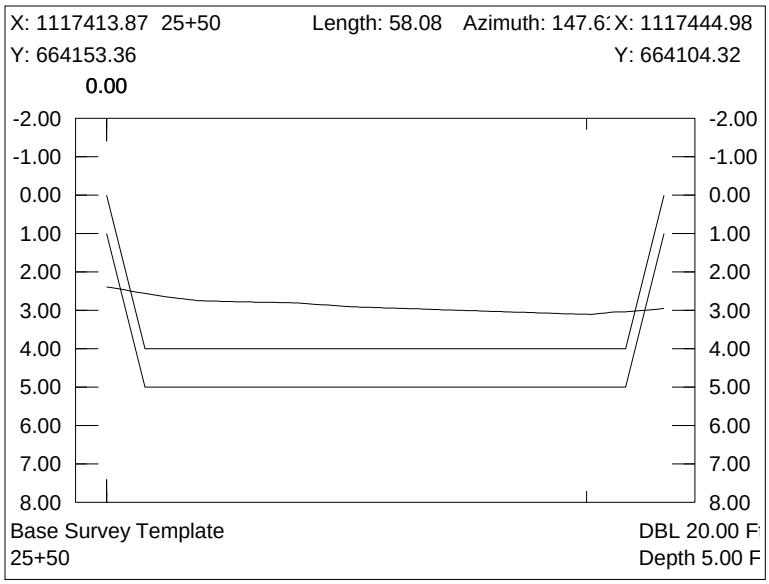
Template
25+00
DBL 20.00 F
Depth 5.00 F


X: 1117413.87 25+50
Length: 58.08 Azimuth: 147.6
X: 1117444.98
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Y: 664104.32
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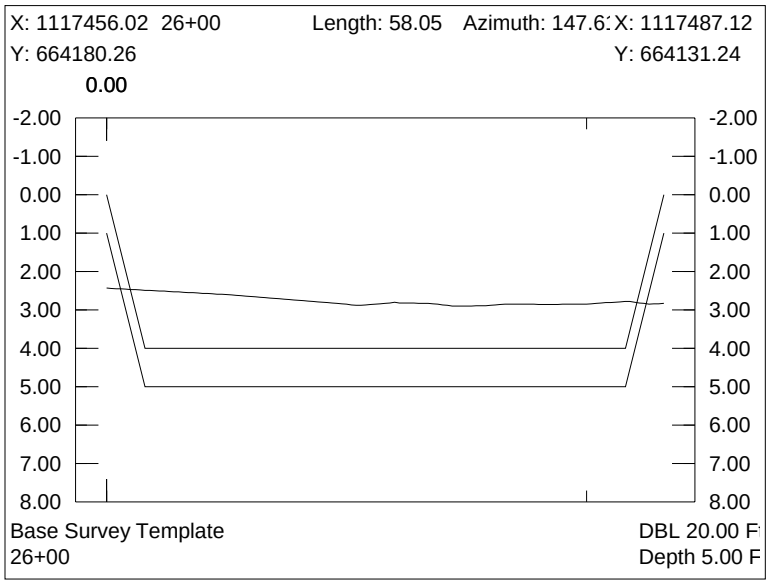
Base Survey Template
DBL 20.00 F
25+50
Depth 5.00 F


X: 1117456.02 26+00
Length: 58.05 Azimuth: 147.6
X: 1117487.12
Y: 664180.26
Y: 664131.24
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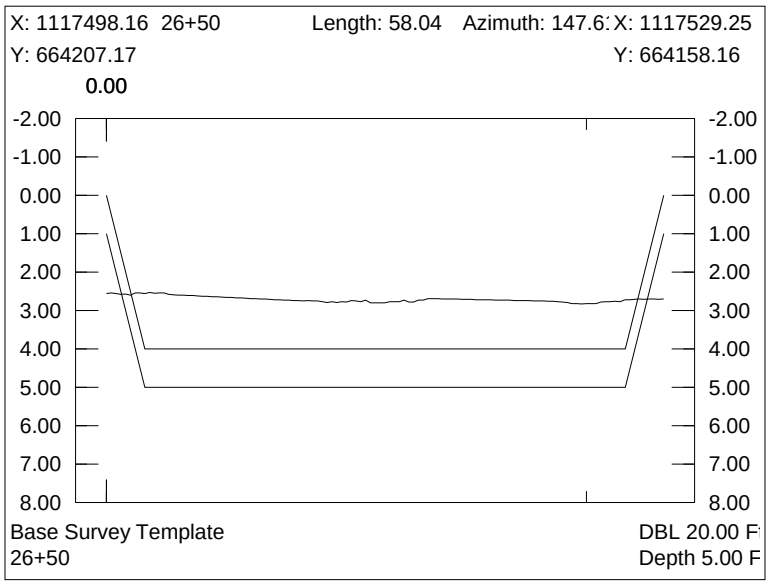
Base Survey Template
DBL 20.00 F
26+00
Depth 5.00 F


X: 1117498.16 26+50
Length: 58.04 Azimuth: 147.6
X: 1117529.25
Y: 664207.17
Y: 664158.16
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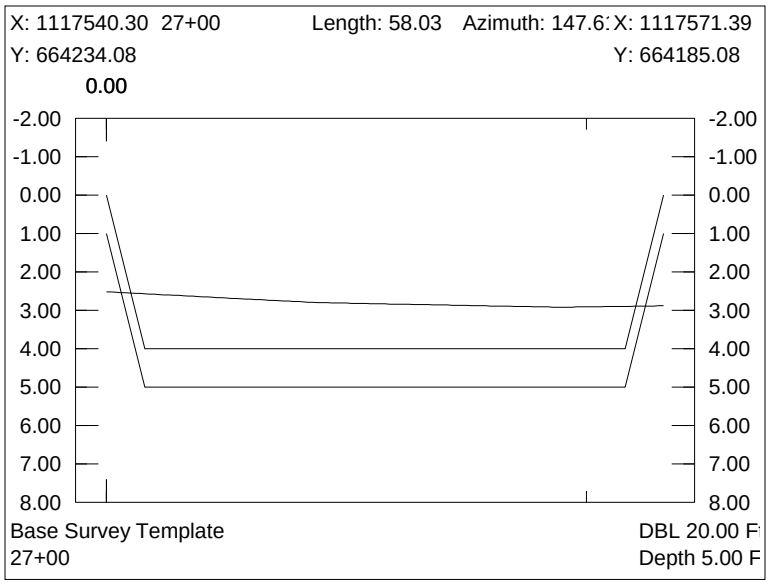
Base Survey Template
DBL 20.00 F
26+50
Depth 5.00 F


X: 1117540.30 27+00
Length: 58.03 Azimuth: 147.6
X: 1117571.39
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Y: 664185.08
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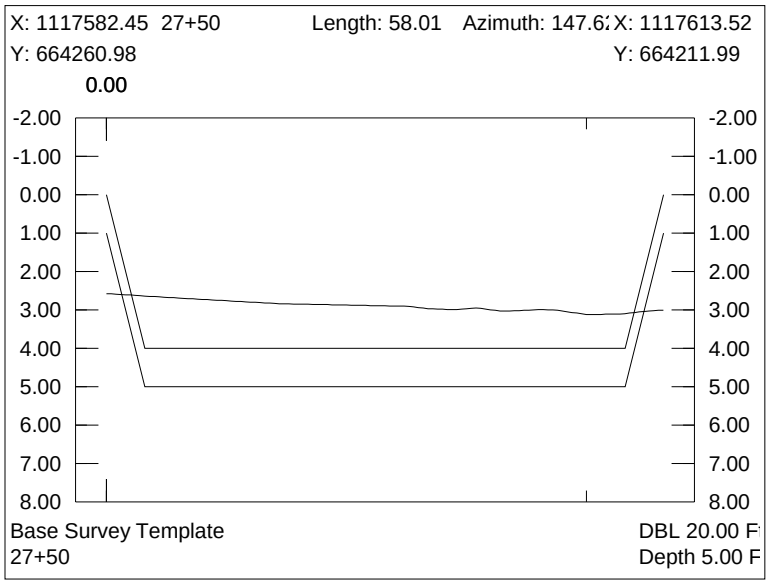
Base Survey Template
DBL 20.00 F
27+00
Depth 5.00 F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X: 1117613.52
Y: 664260.98
Y: 664211.99
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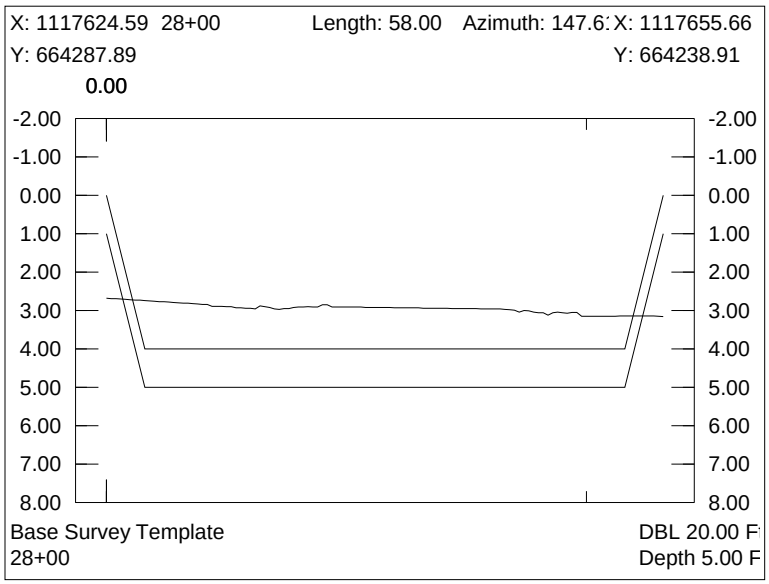
Base Survey Template
DBL 20.00 F
27+50
Depth 5.00 F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Length: 58.00 Azimuth: 147.6
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Y: 664238.91
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7.00
8.00
Base Survey Template
DBL 20.00 F
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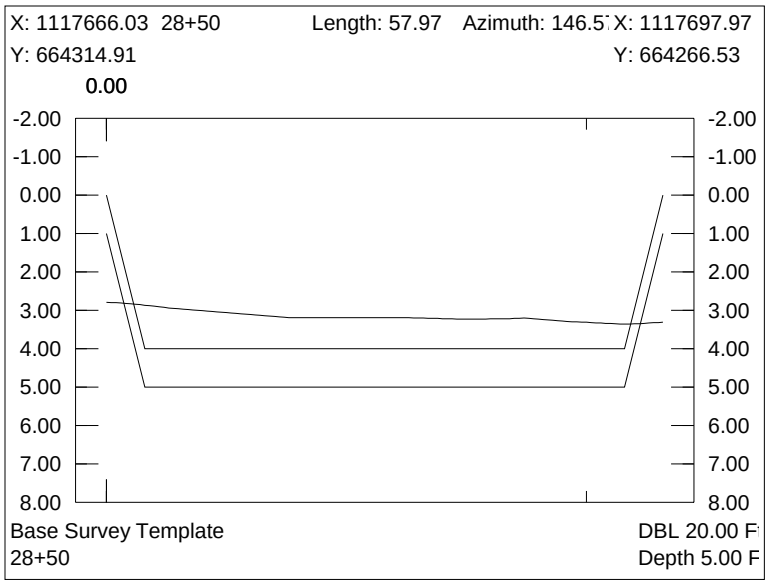
Depth 5.00 F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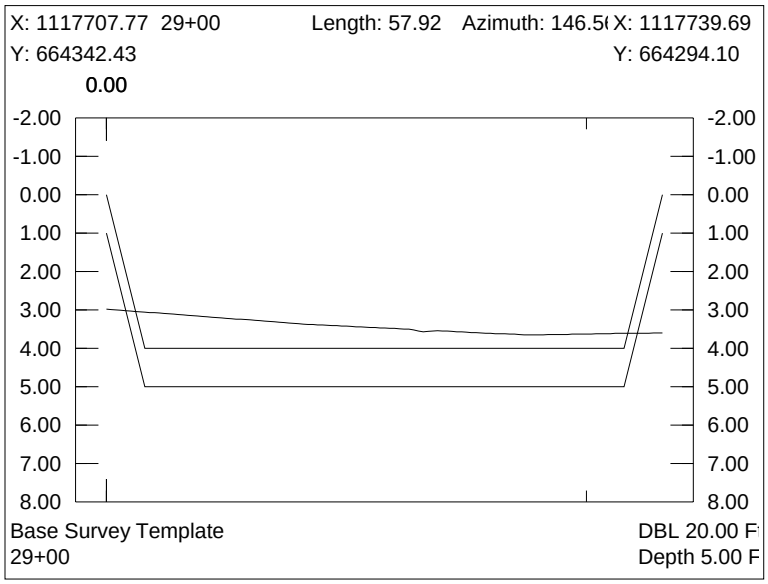
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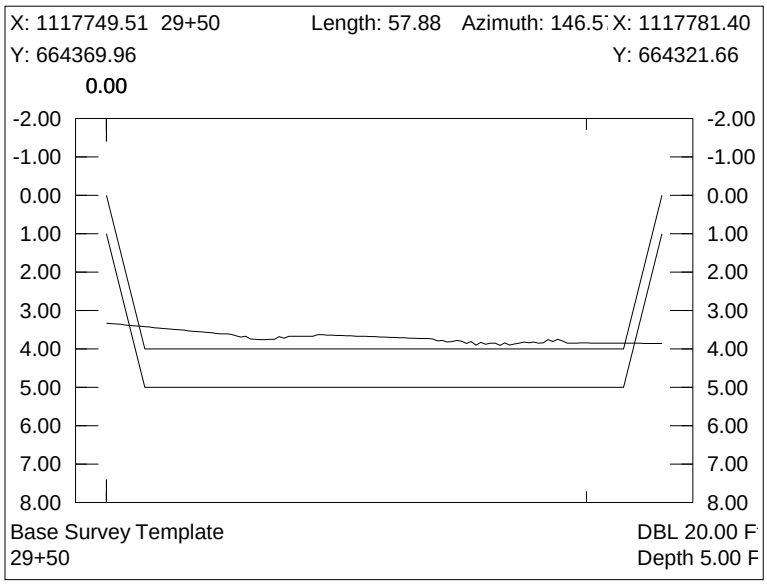
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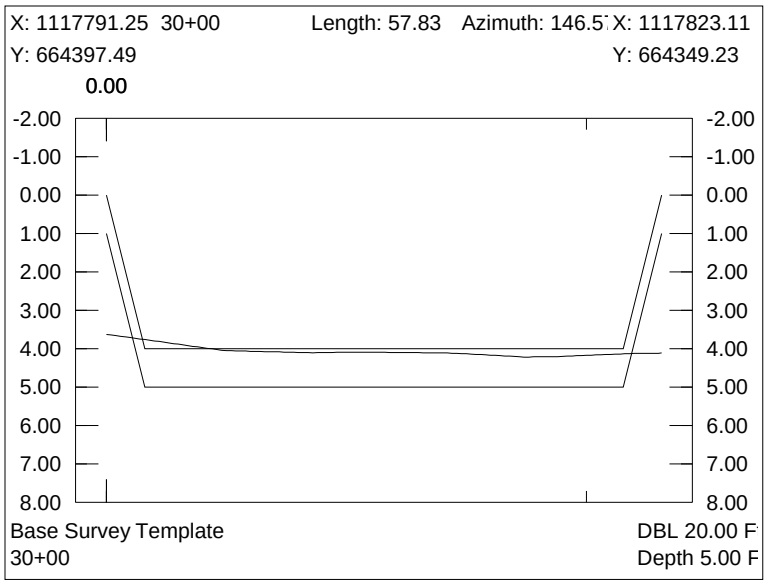
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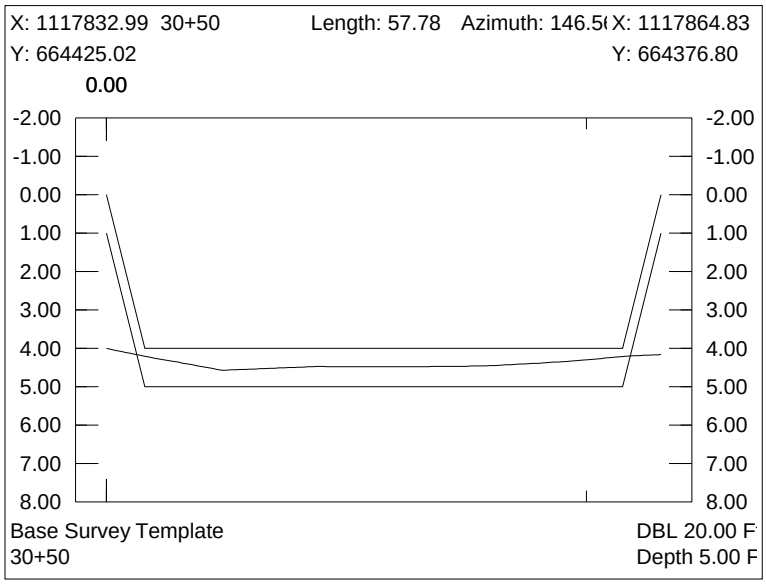
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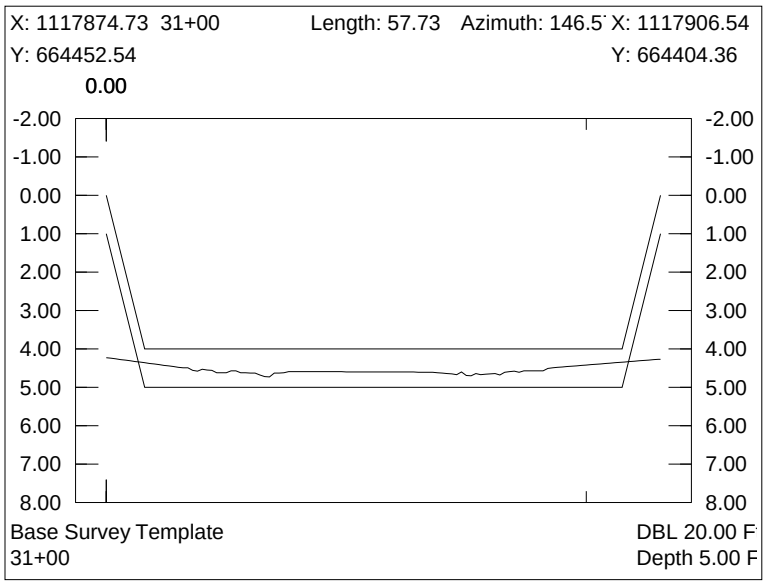
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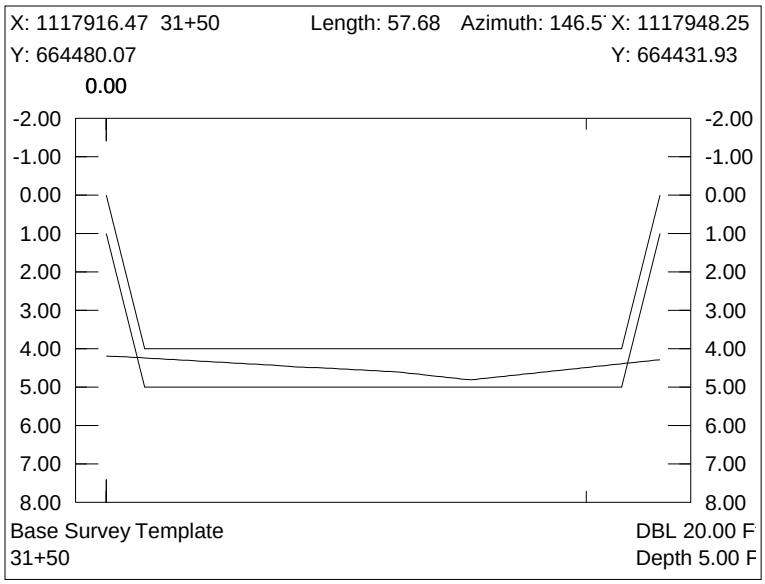
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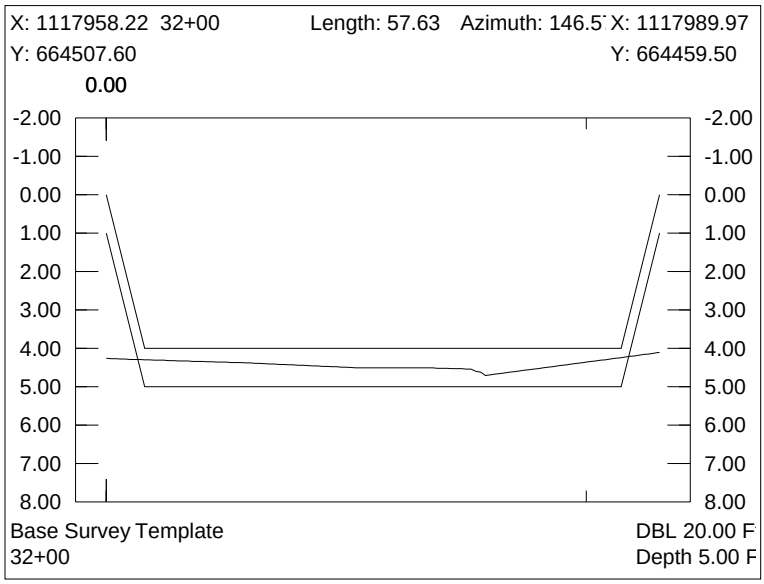
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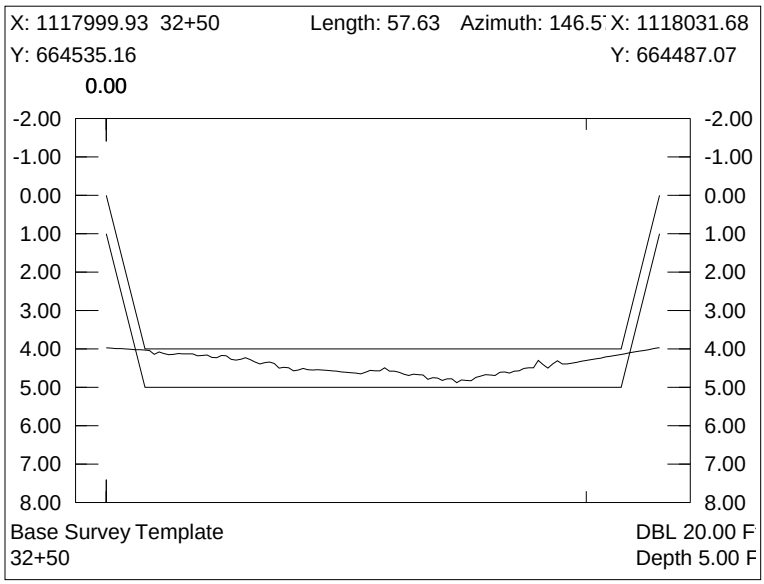
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Base Survey Template
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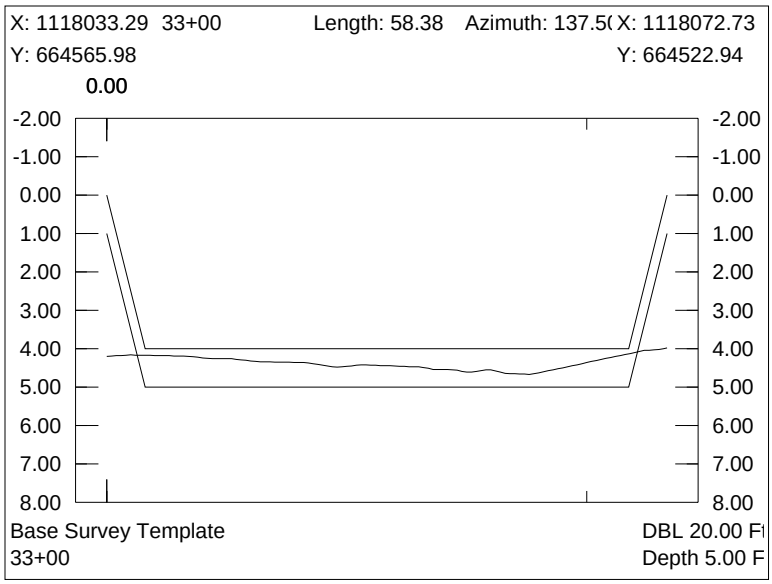
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Base Survey Template
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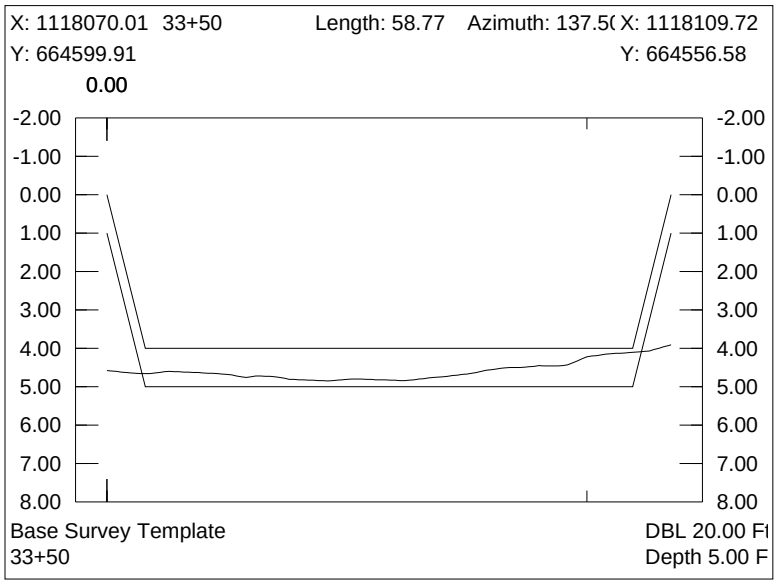
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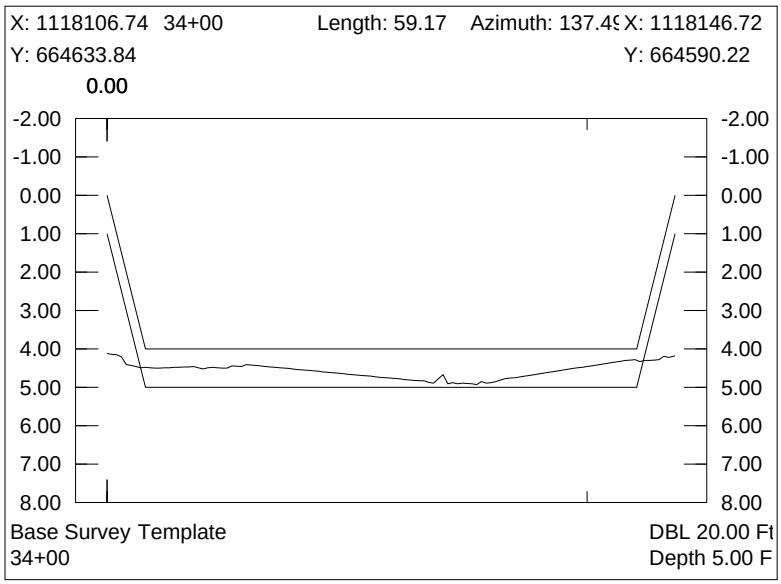
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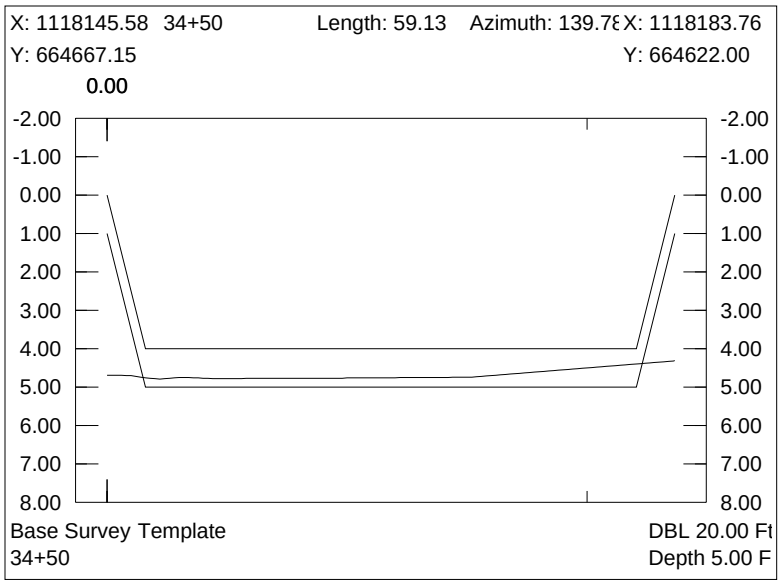
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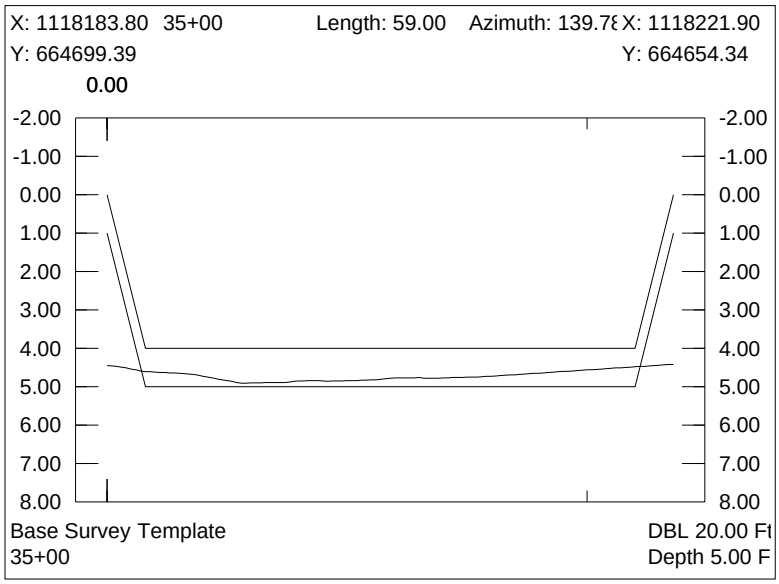
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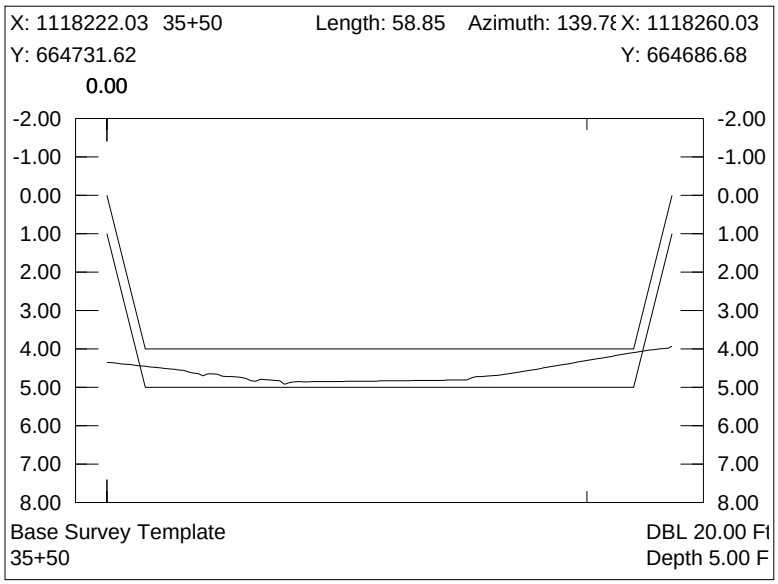
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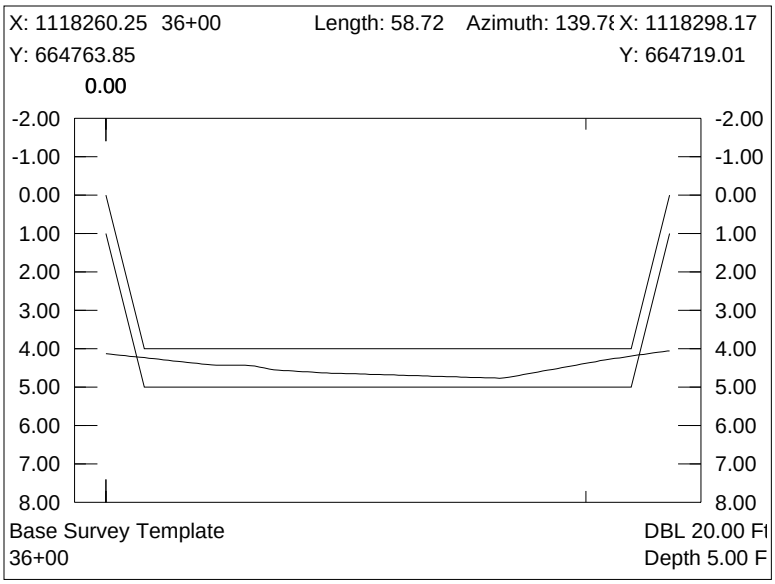
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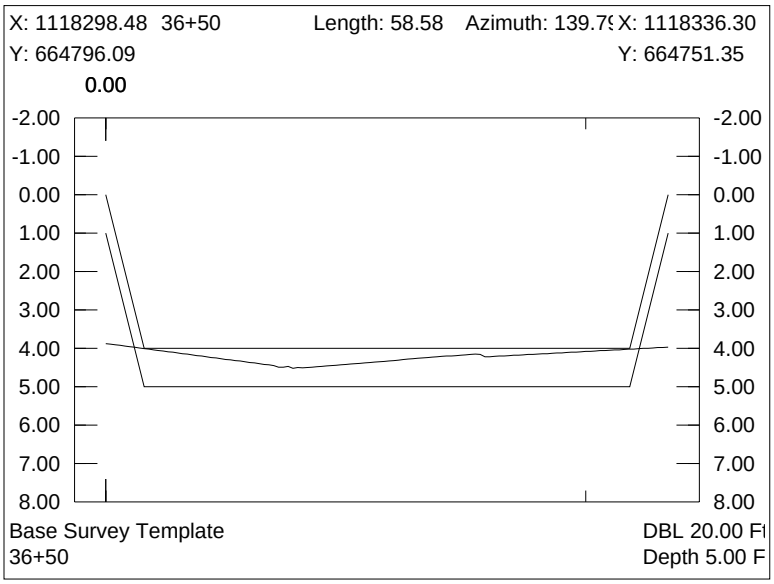
36+00
Depth 5.00 F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36+50
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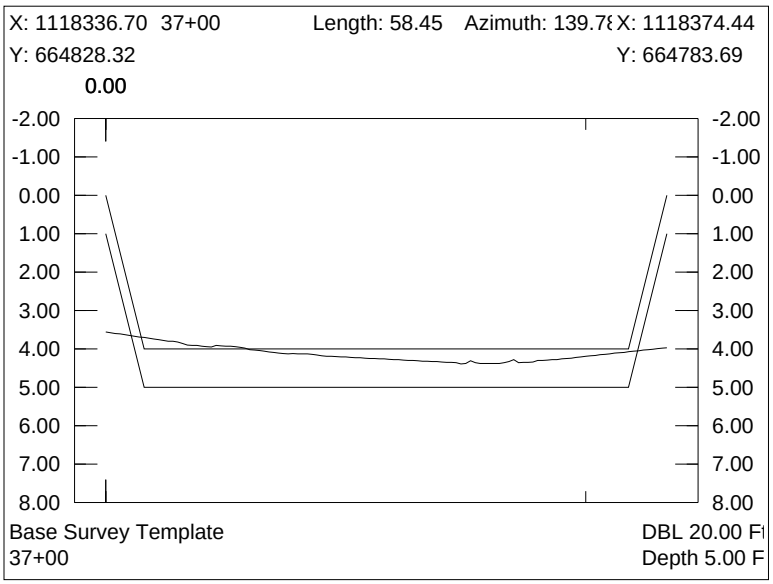
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37+00
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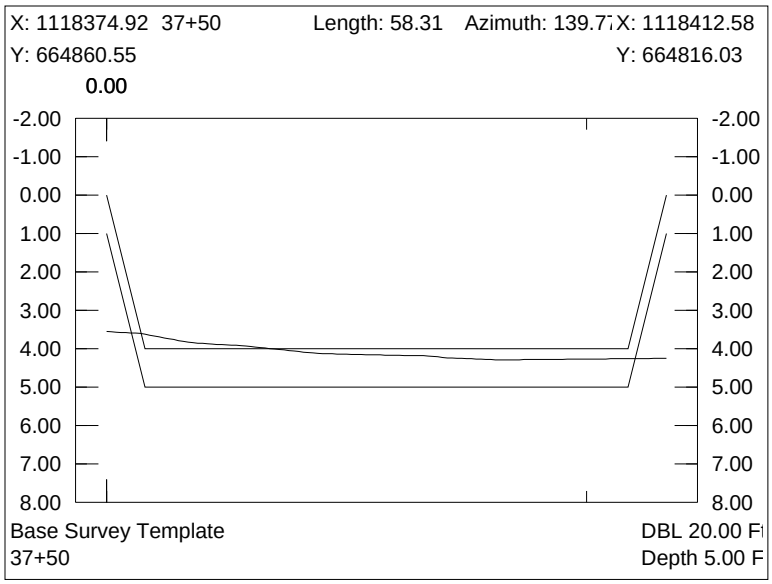
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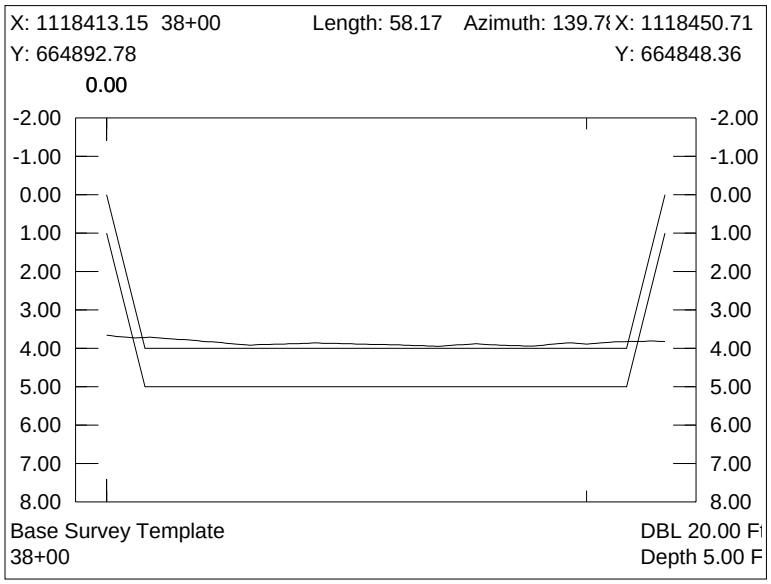
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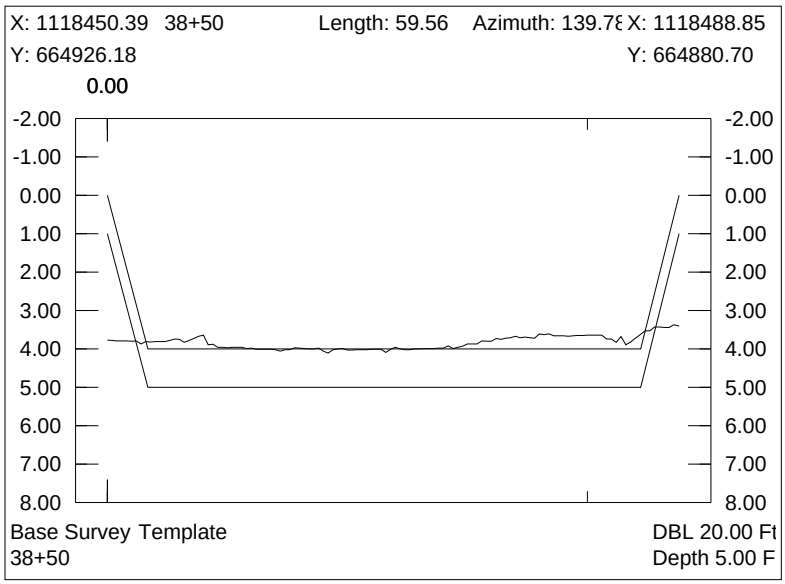
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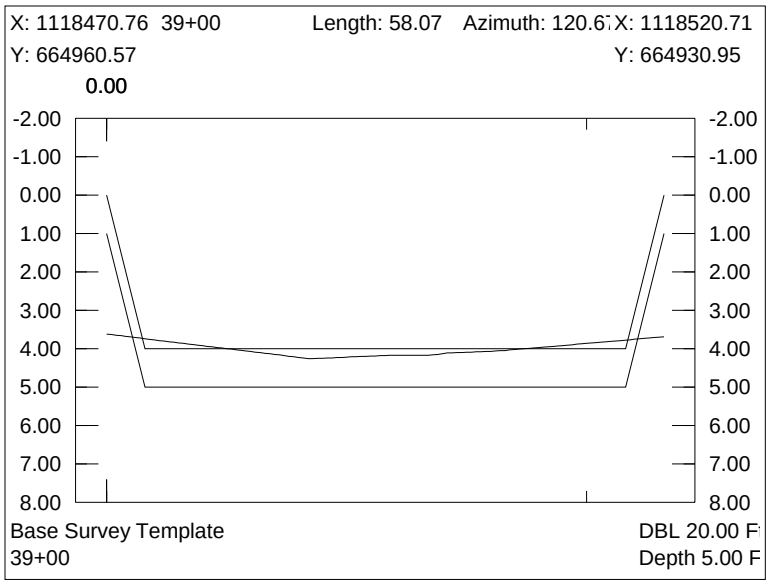
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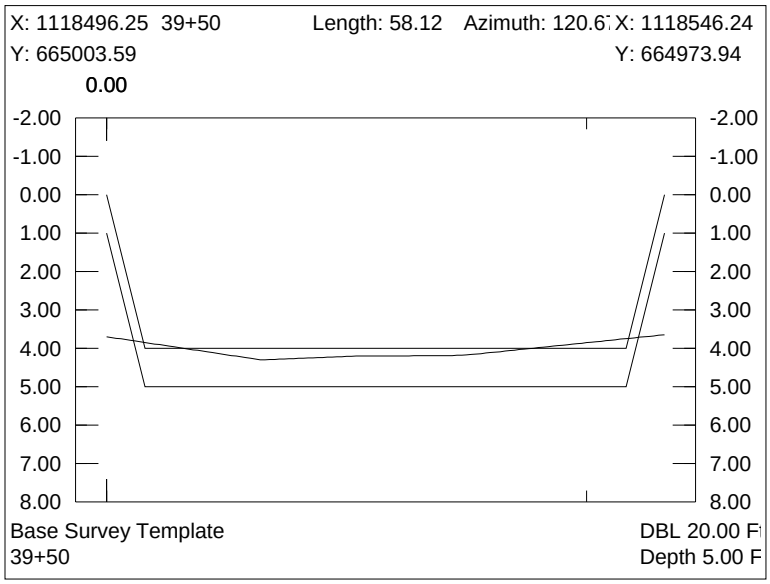
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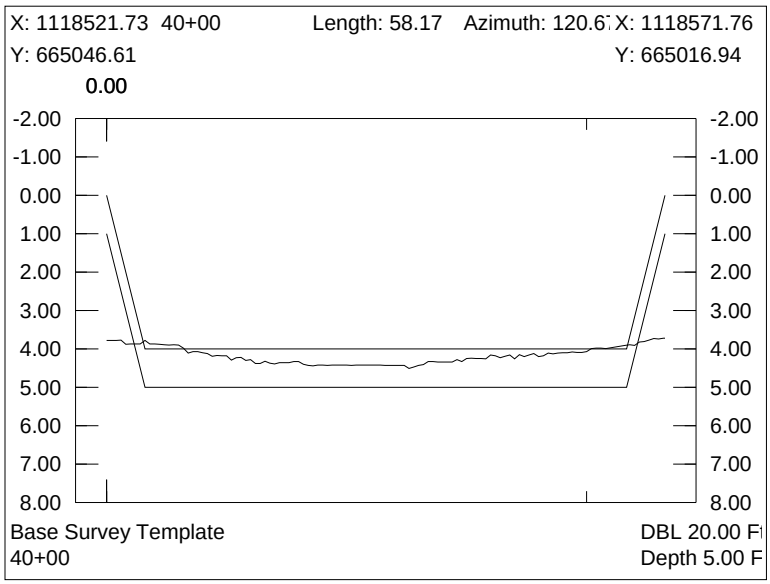
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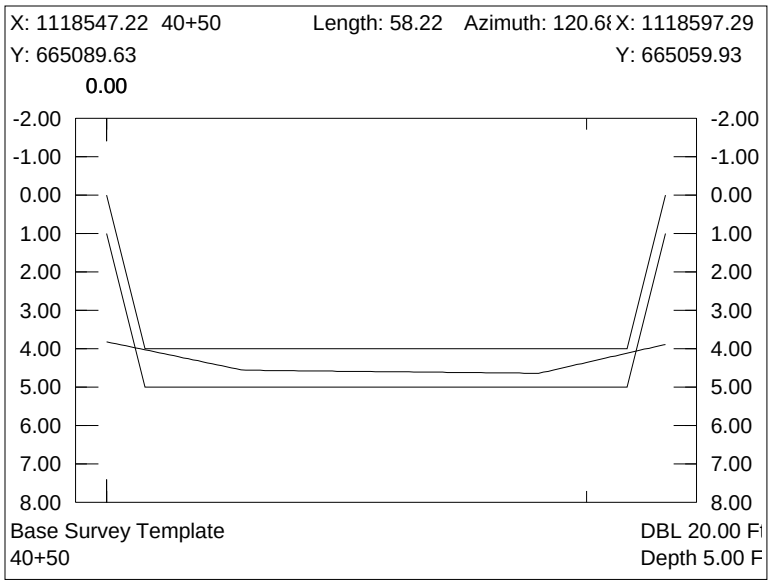
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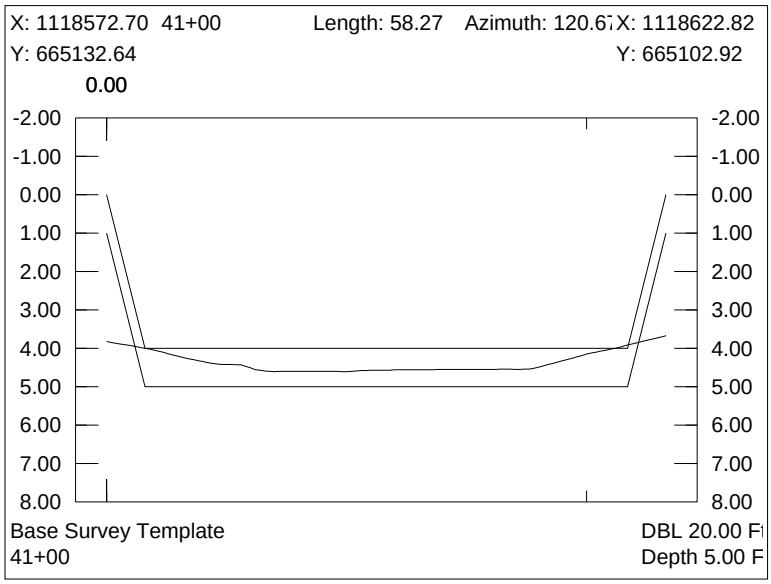
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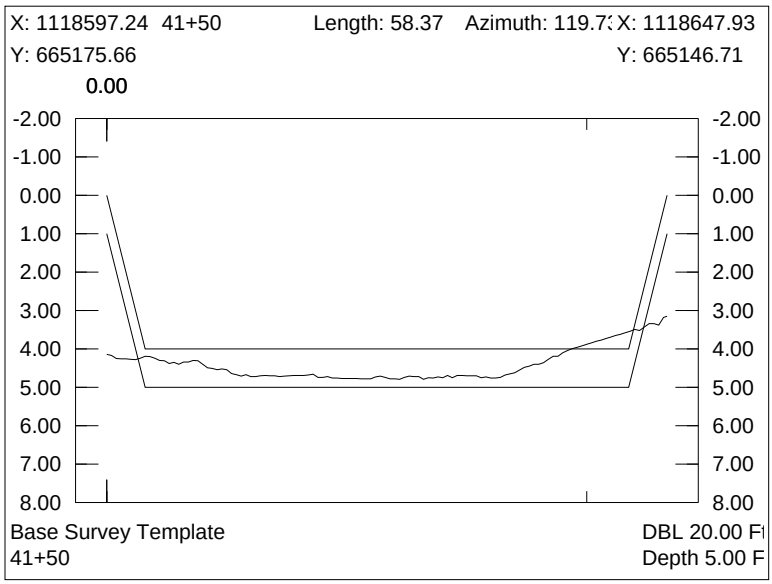
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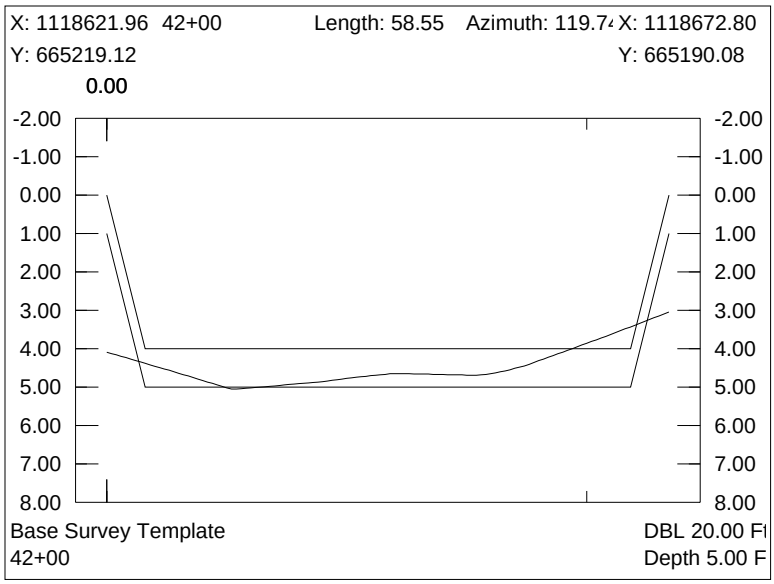
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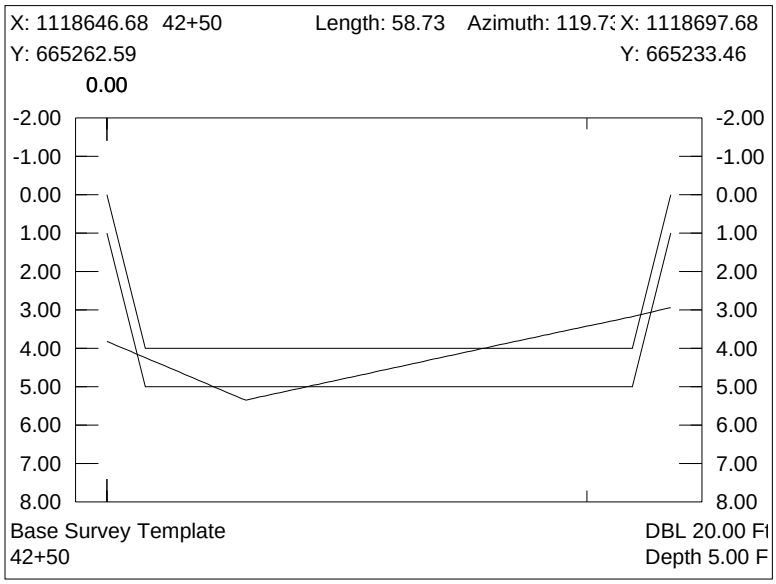
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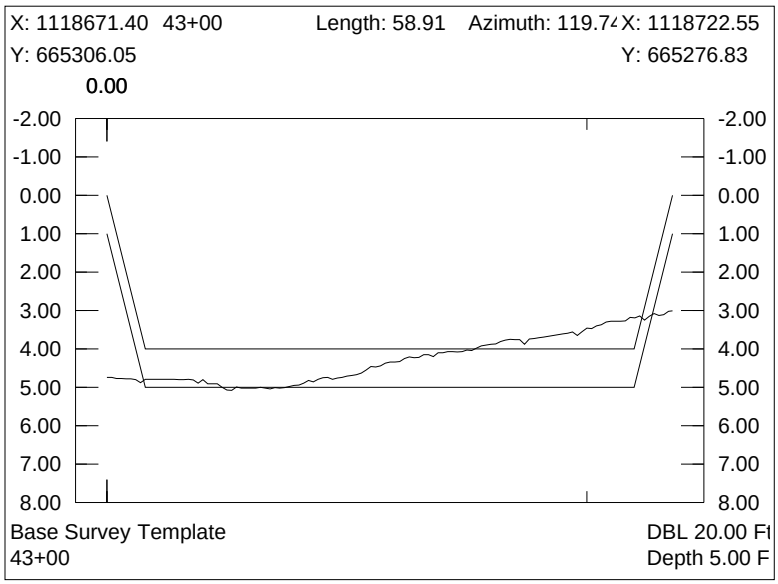
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Base Survey Template
DBL 20.00 Ft
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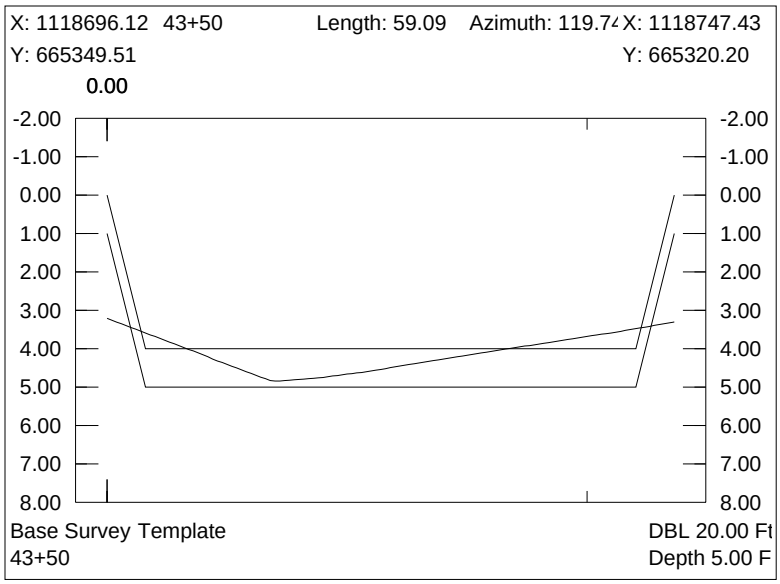
Depth 5.00 F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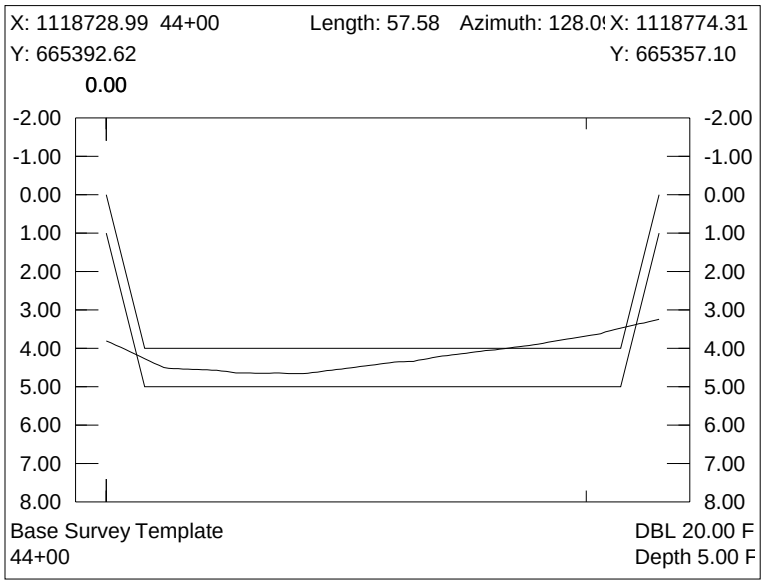
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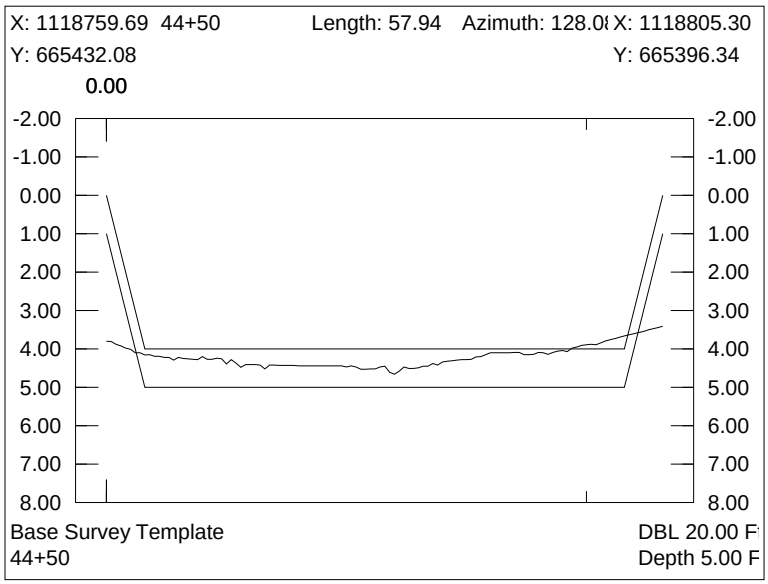
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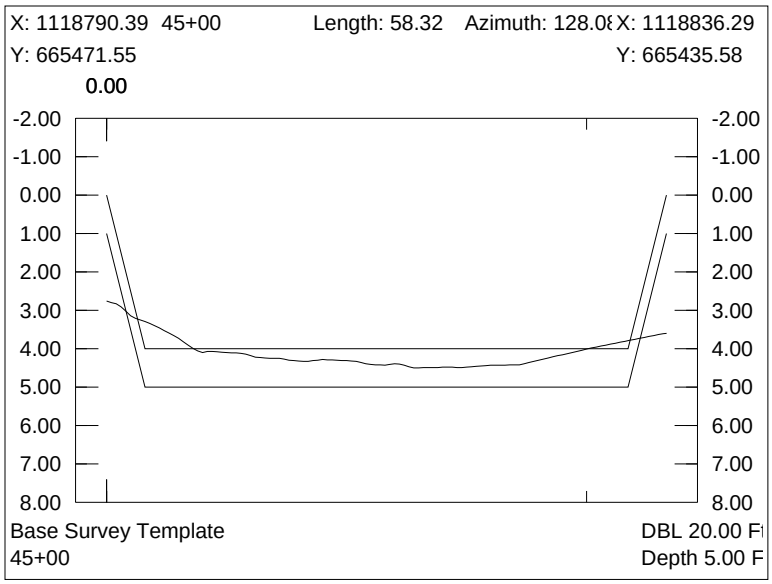
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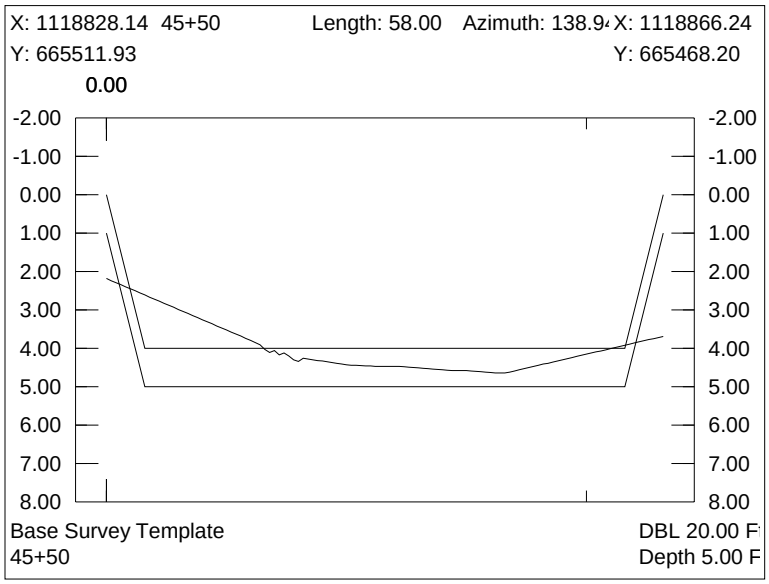
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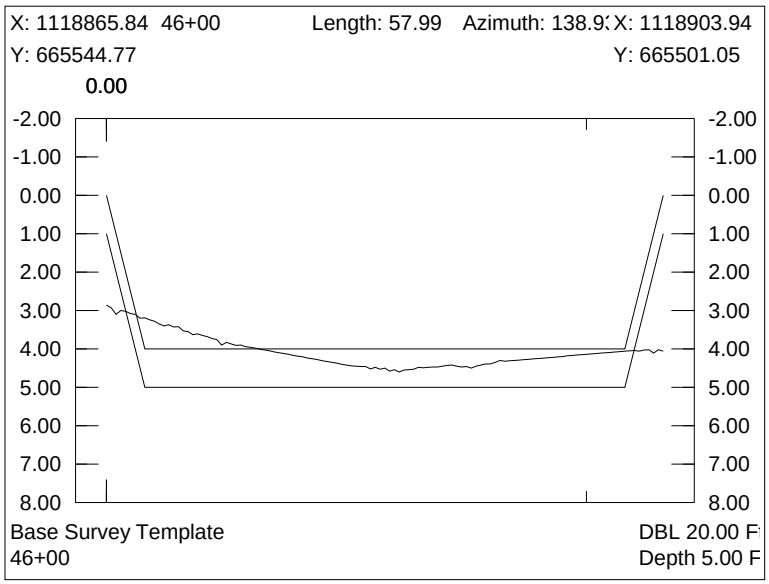
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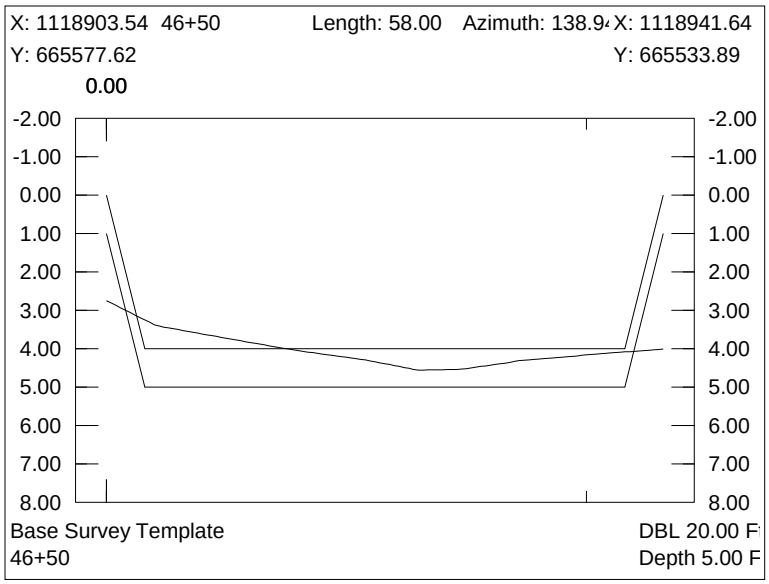
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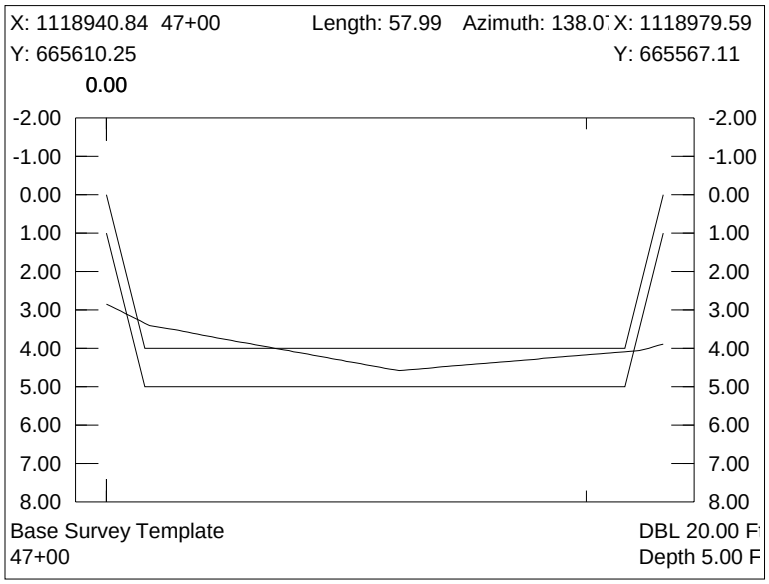
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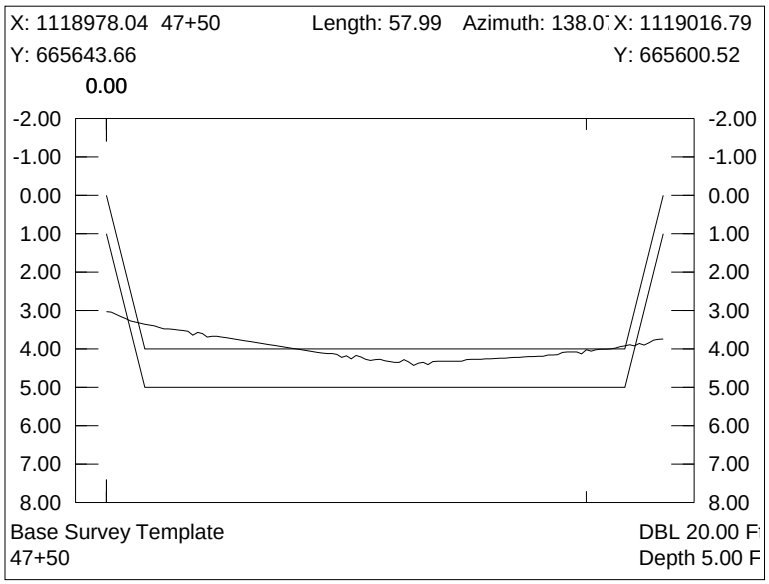
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Base Survey Template
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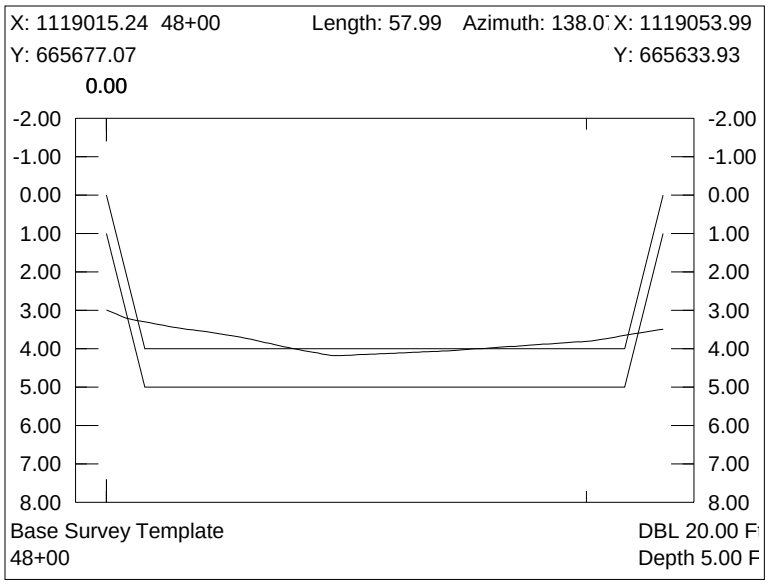
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Base Survey Template
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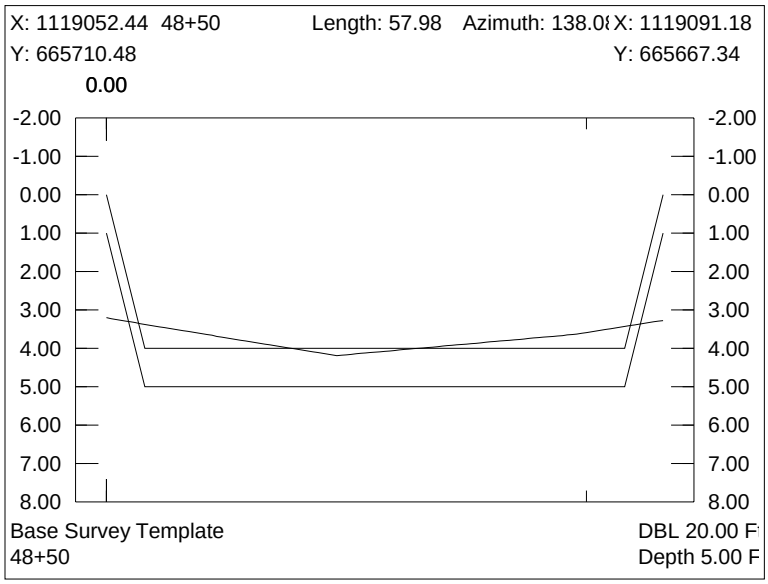
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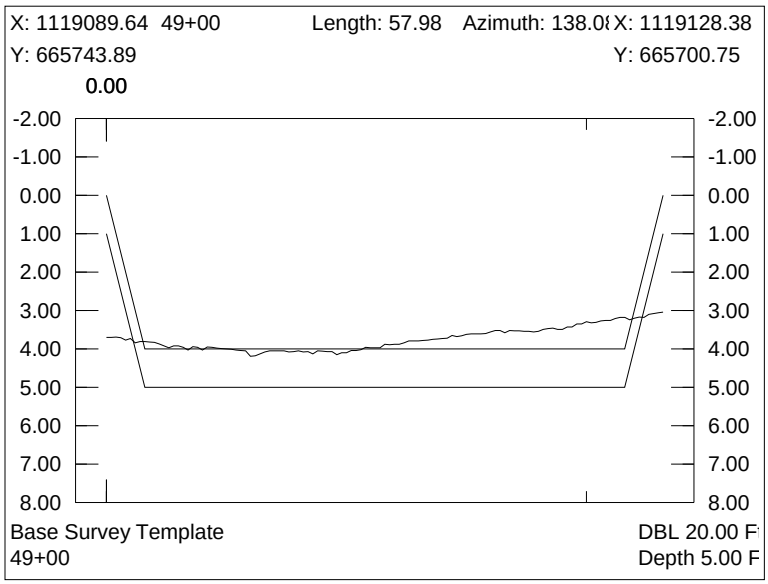
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Base Survey Template
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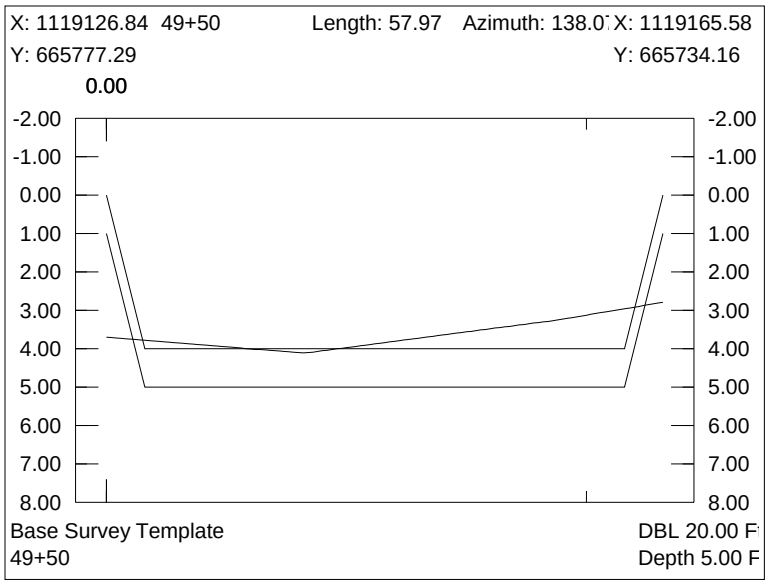
Depth 5.00 F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Base Survey Template
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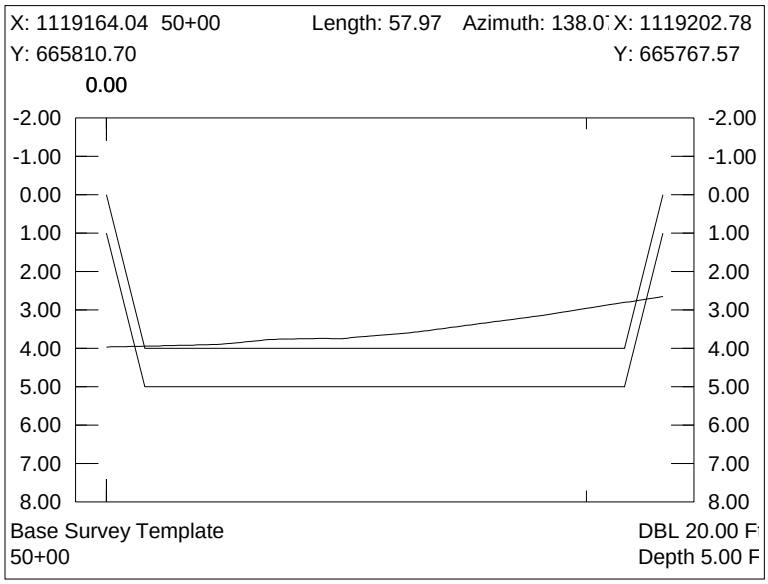
Depth 5.00 F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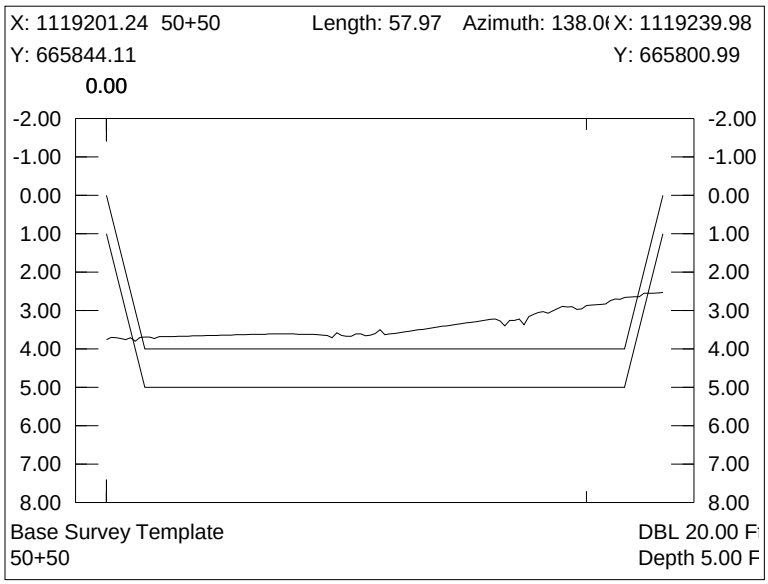
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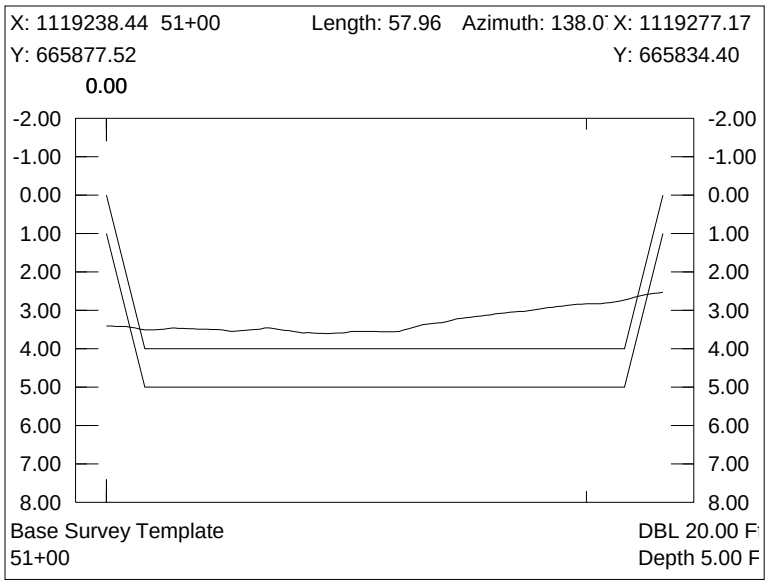
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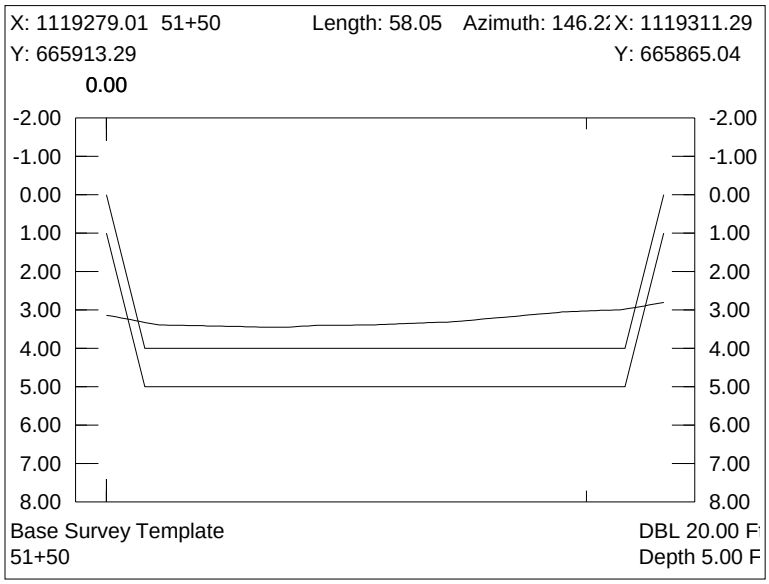
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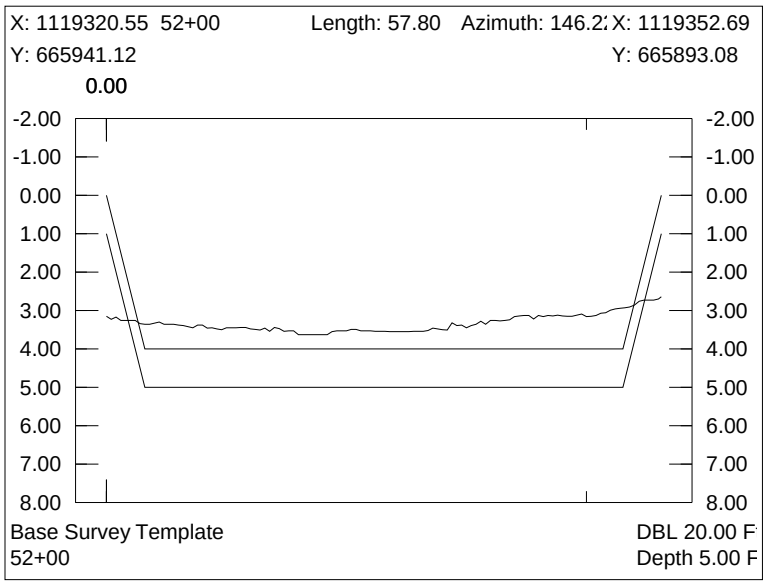
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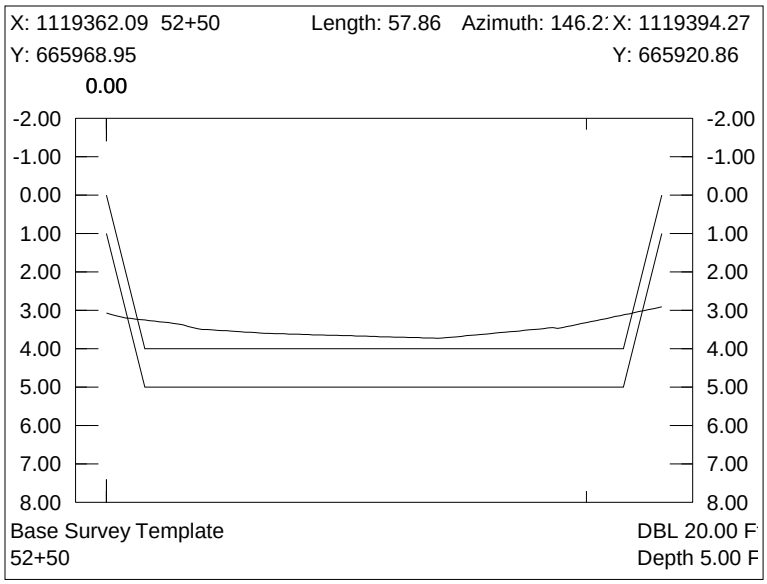
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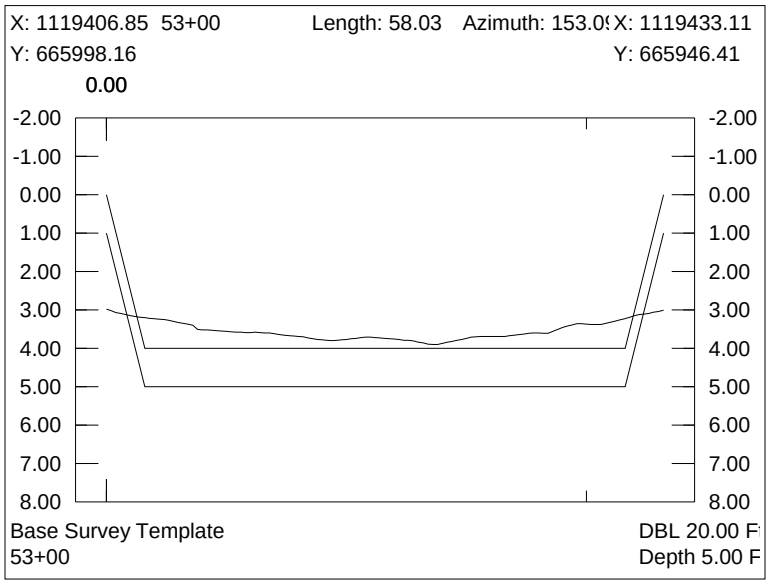
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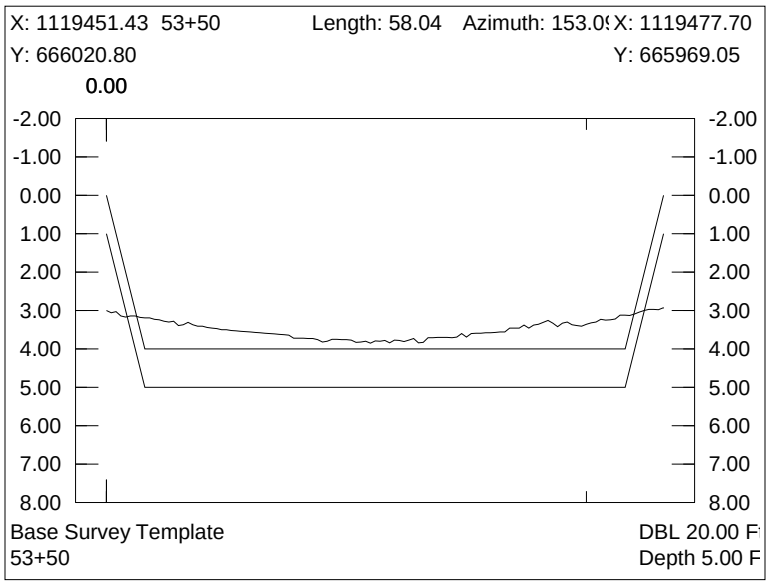
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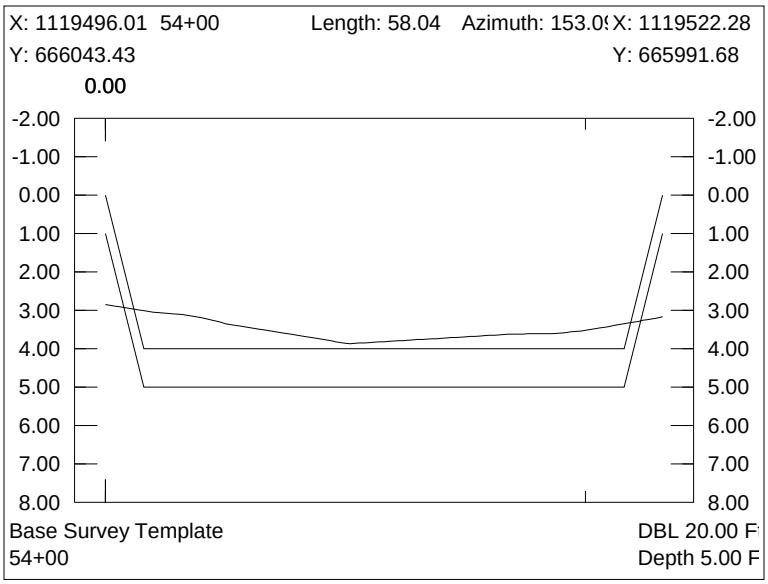
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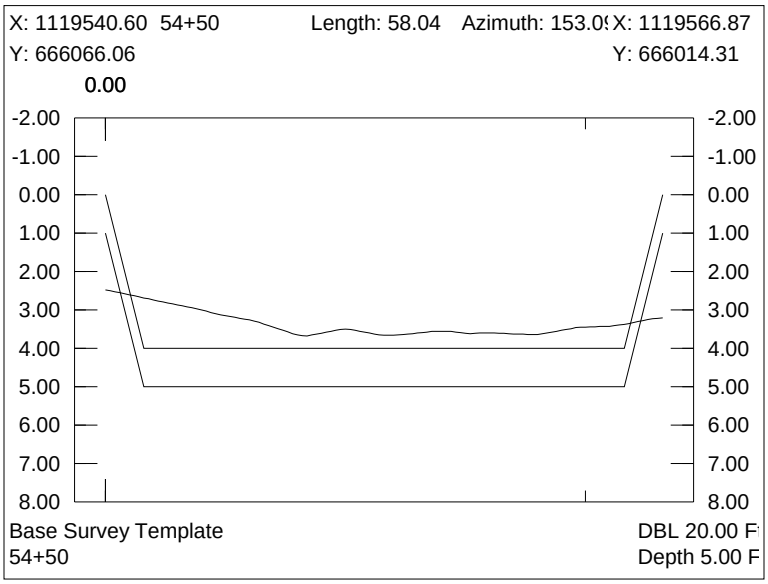
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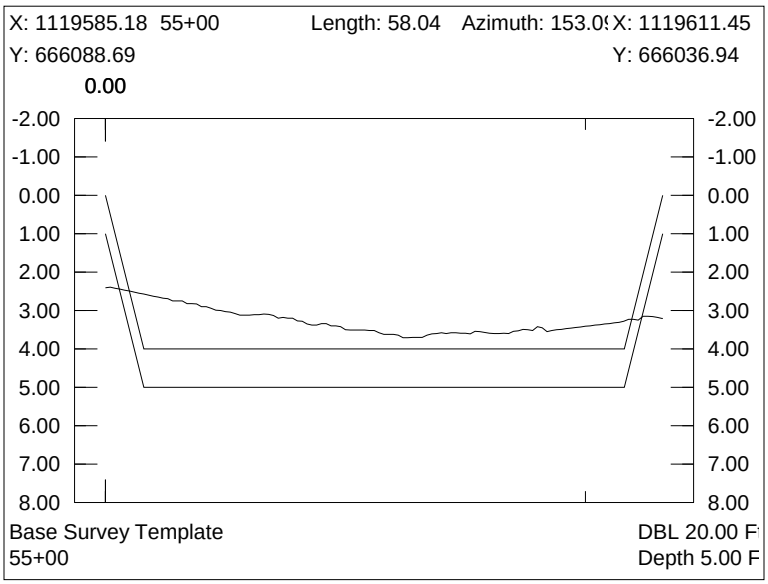
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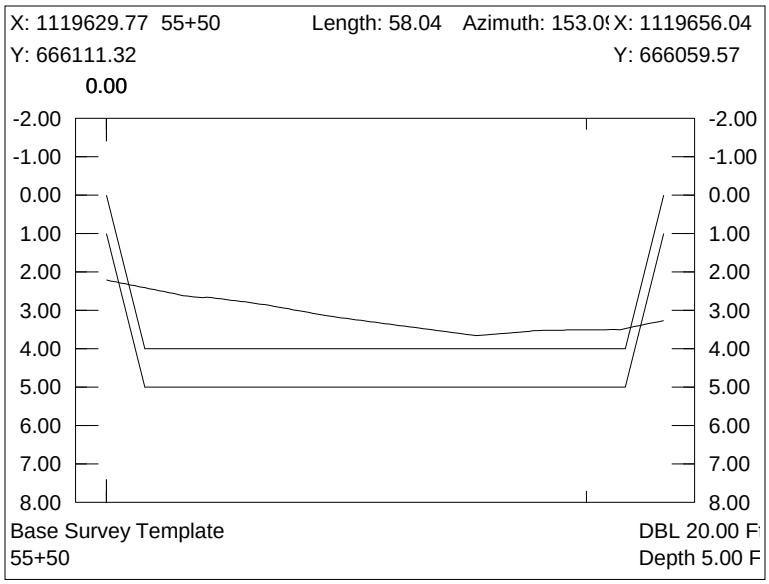
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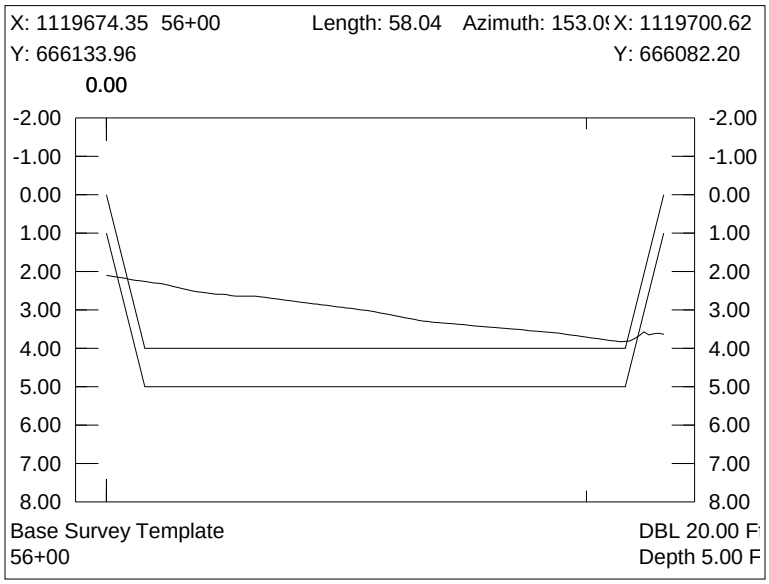
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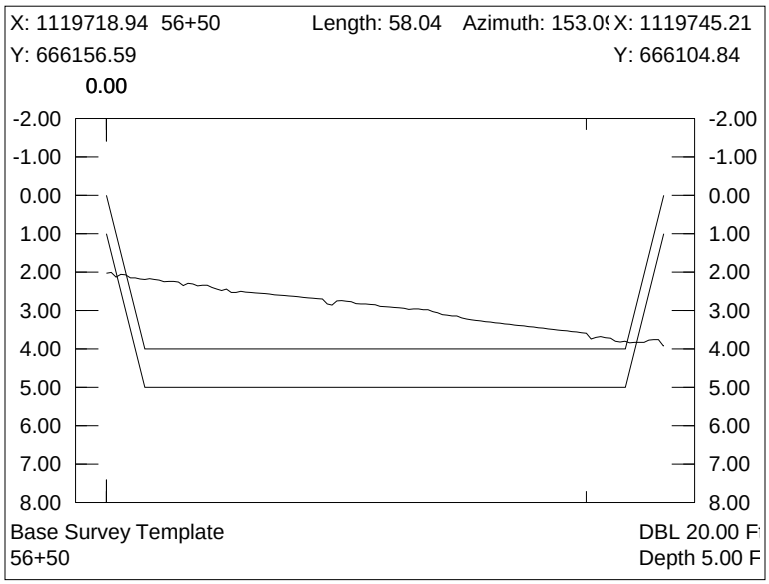
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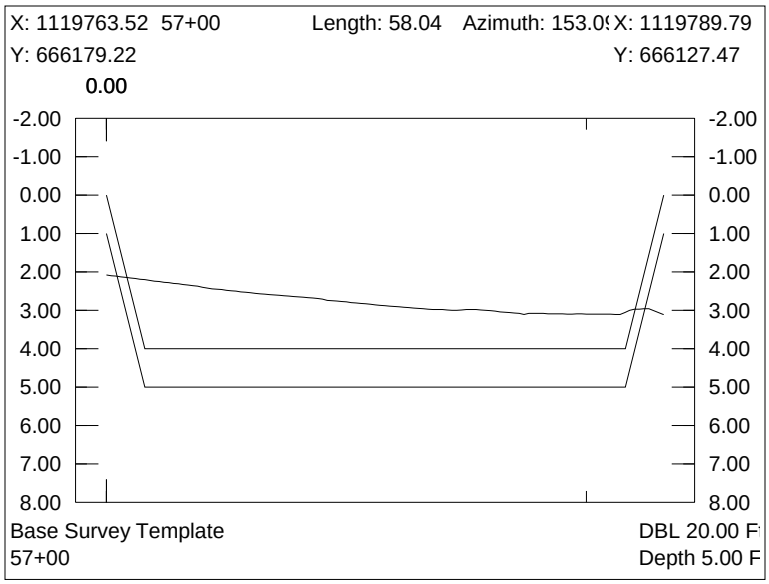
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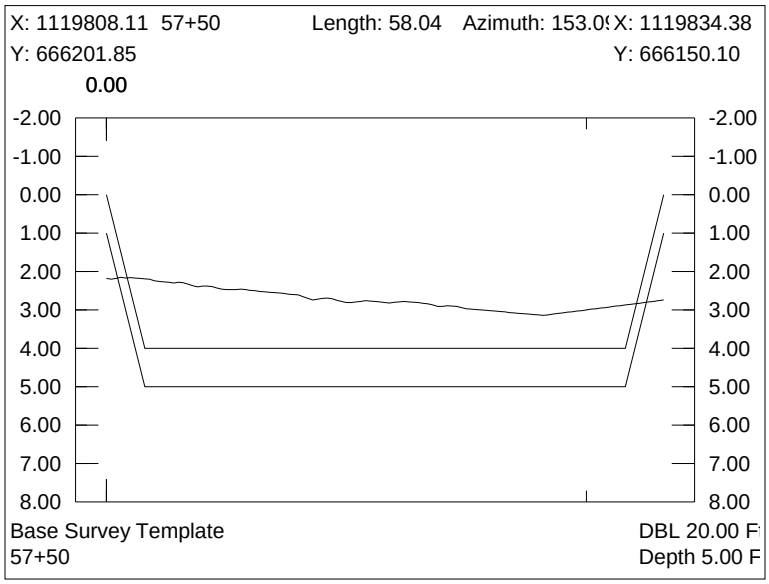
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Base Survey Template
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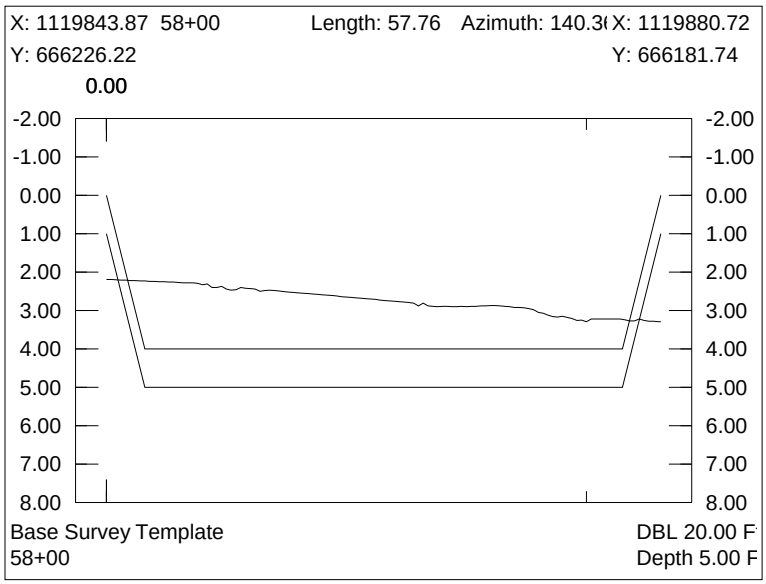
Depth 5.00 F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Base Survey Template
DBL 20.00 F
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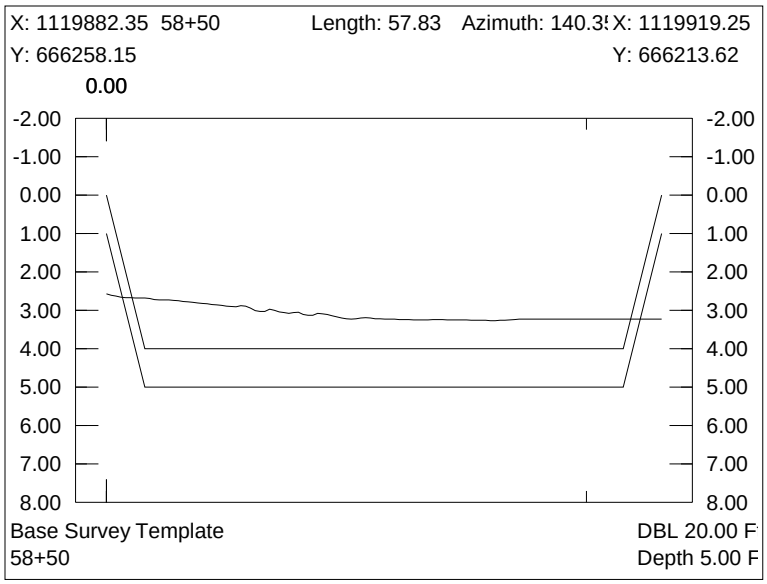
Depth 5.00 F


X: 1119882.35 58+50
Length: 57.83 Azimuth: 140.3
X: 1119919.25
Y: 666258.15
Y: 666213.62
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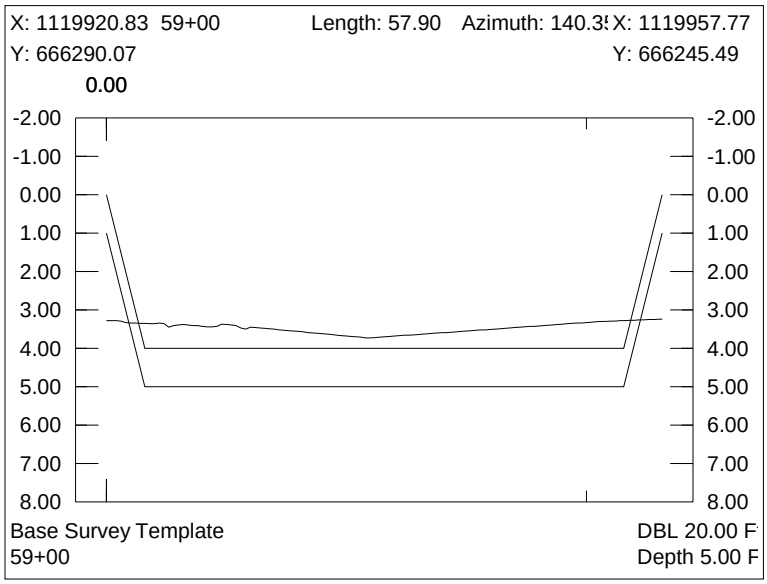
-2.00
-1.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
Base Survey Template
DBL 20.00 F
58+50
Depth 5.00 F


X: 1119920.83 59+00
Length: 57.90 Azimuth: 140.3
X: 1119957.77
Y: 666290.07
Y: 666245.49
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-1.00
0.00
1.00
2.00
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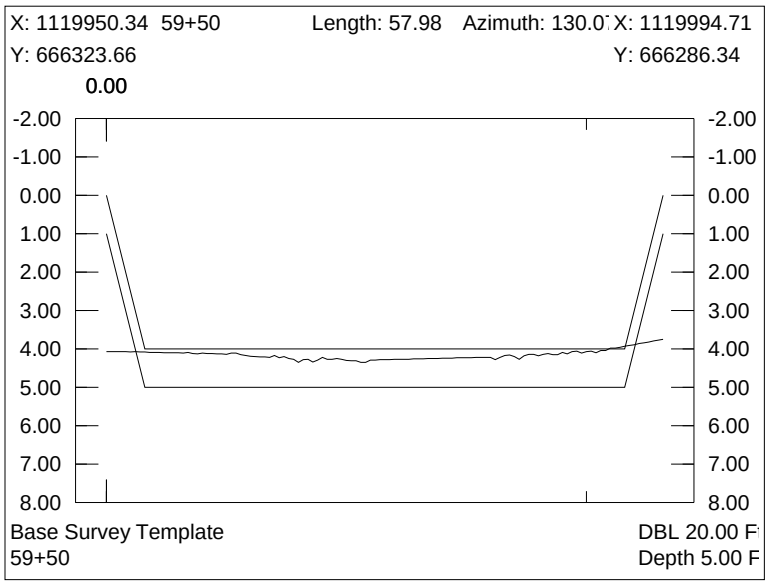
4.00
5.00
6.00
7.00
8.00
Base Survey Template
DBL 20.00 F
59+00
Depth 5.00 F


X: 1119950.34 59+50
Length: 57.98 Azimuth: 130.0
X: 1119994.71
Y: 666323.66
Y: 666286.34
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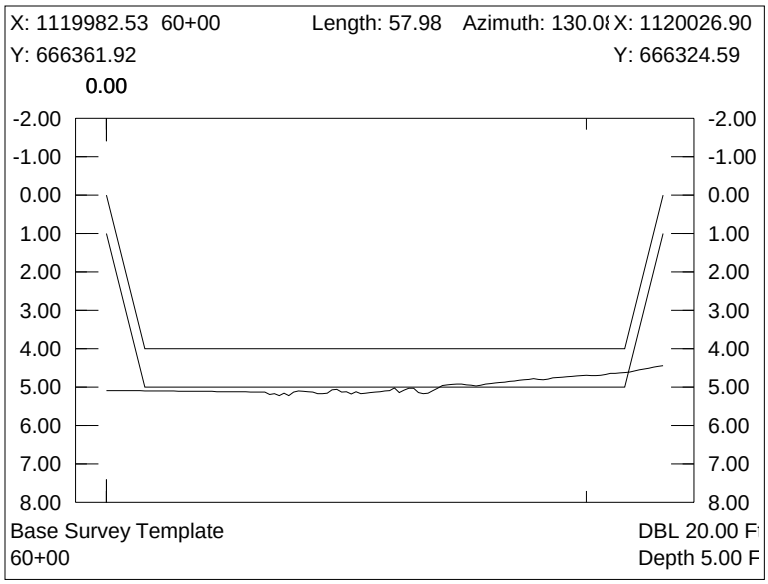
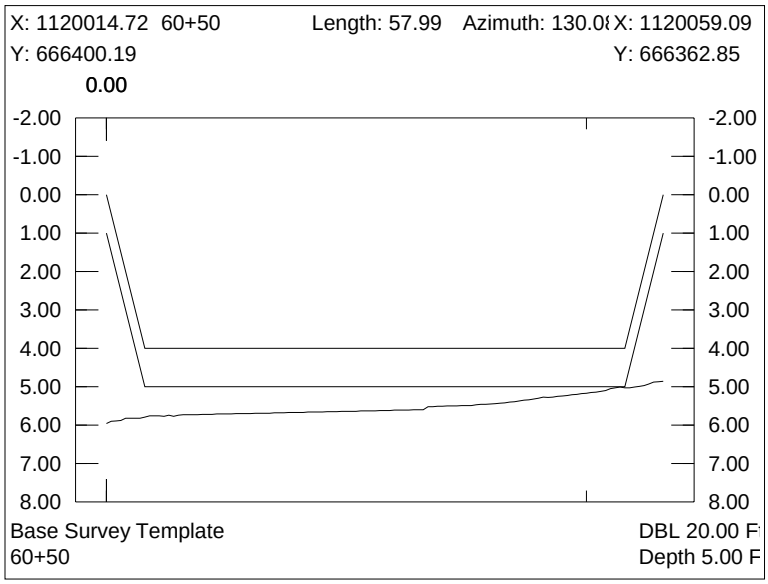
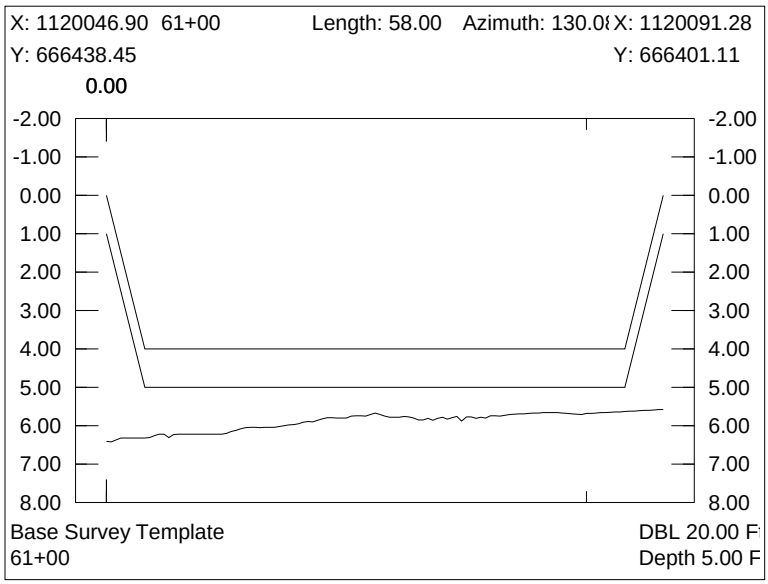
-2.00
-1.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
Base Survey Template
DBL 20.00 F
59+50
Depth 5.00 F


X: 1119982.53 60+00
Length: 57.98 Azimuth: 130.0
X: 1120026.90
Y: 666361.92
Y: 666324.59
0.00
-2.00
-1.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
Base Survey Template
DBL 20.00 F
60+00
Depth 5.00 F


X: 1120014.72 60+50
Length: 57.99 Azimuth: 130.0
X: 1120059.09
Y: 666400.19
Y: 666362.85
0.00
-2.00
-1.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
Base Survey Template
DBL 20.00 F
60+50
Depth 5.00 F


X: 1120046.90 61+00
Length: 58.00 Azimuth: 130.0
X: 1120091.28
Y: 666438.45
Y: 666401.11
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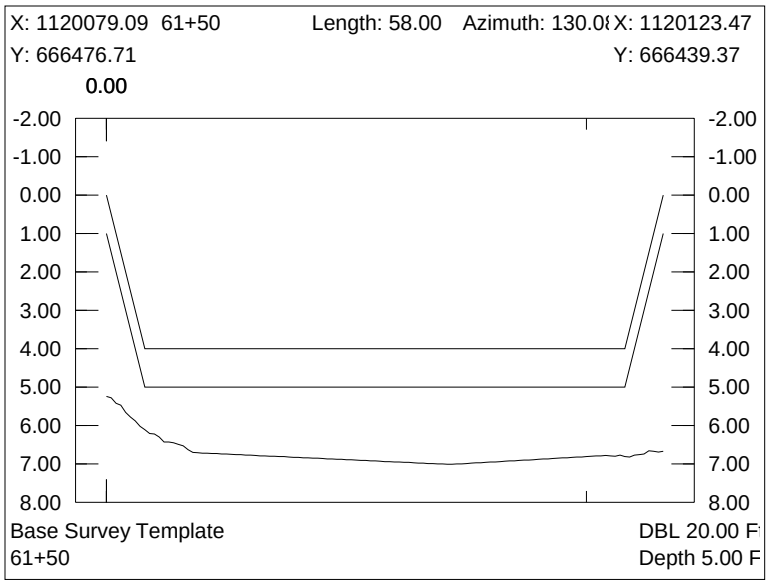
-2.00
-1.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
Base Survey Template
DBL 20.00 F
61+00
Depth 5.00 F


X: 1120079.09 61+50
Length: 58.00
Azimuth: 130.0
X: 1120123.47
Y: 666476.71
Y: 666439.37
0.00
-2.00
-1.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
Base Survey Template
61+50
DBL 20.00 F
Depth 5.00 F

DREDGE CHANNEL VOLUME COMPUTATIONS

Office Engineeering Section, Survey Branch
Run: 7/1/2013 8:26:18 AM

Black Hall River

Station To Station		Project Depth	Over Depth	Left Slope	Right Slope
00+00	61+50	4.00	5.00	1.00\1	1.00\1

Dredging Quantities Summary

Total Material To Project Depth	5808.92 CY
Total Allowable Overdepth	7366.90
Total Volume	13175.81

Dredging Quantities Computation

	-------- Reference Depth =			4.00 ft ------		---------- Overdepth =			1.00 ft --------	
Station	Left Slope	Left Channel	Right Channel	Right Slope	Volume (CY)	Left Slope	Left Channel	Right Channel	Right Slope	Volume (CY)
00+00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
Offset	-54.00	-50.00	50.00	54.00						
00+50	0.00	0.05	0.00	0.00	0.05	0.00	5.39	0.00	0.00	4.99
Offset	-54.00	-50.00	49.98	53.98						
01+00	0.01	5.33	13.29	0.08	17.37	0.11	46.32	49.97	0.39	94.60
Offset	-53.99	-49.99	49.97	53.97						
01+50	0.00	0.01	0.40	0.00	17.69	0.00	0.75	22.36	0.00	111.02
Offset	-53.98	-49.98	49.97	53.97						
02+00	0.00	1.36	18.52	0.18	18.95	0.00	20.98	49.96	0.60	87.65
Offset	-53.97	-49.97	49.96	53.96						
02+50	0.10	22.06	40.88	0.55	77.45	0.46	49.96	49.95	1.00	160.08
Offset	-53.96	-49.96	49.95	53.95						
03+00	0.37	45.63	49.96	0.55	148.26	0.85	49.95	49.95	1.10	188.16
Offset	-53.95	-49.95	49.95	53.95						
03+50	0.56	52.62	57.65	0.81	192.75	1.02	49.95	49.93	1.27	188.92
Offset	-53.95	-49.95	49.93	53.93						
04+00	1.40	61.98	61.14	0.94	219.51	1.55	49.94	49.92	1.38	189.76
Offset	-53.94	-49.94	49.92	53.92						
04+50	1.25	67.29	60.78	1.04	236.88	1.59	49.93	49.92	1.48	190.49
Offset	-53.93	-49.93	49.92	53.92						
05+00	0.60	62.72	64.39	1.19	240.07	1.11	49.92	49.91	1.53	190.18
Offset	-53.92	-49.92	49.91	53.91						
05+50	0.71	62.32	71.26	1.22	244.80	1.19	49.91	49.90	1.59	189.84
Offset	-53.91	-49.91	49.90	53.90						
06+00	0.80	65.38	80.38	1.83	262.89	1.27	49.90	49.90	1.85	190.30
Offset	-53.90	-49.90	49.90	53.90						
06+50	1.39	77.30	78.90	1.53	284.69	1.67	49.89	49.89	1.75	190.83
Offset	-53.89	-49.89	49.89	53.89						
07+00	0.92	64.44	70.31	1.04	273.92	1.34	49.89	49.87	1.42	190.49
Offset	-53.89	-49.89	49.87	53.87						
07+50	0.45	55.62	66.67	1.13	241.28	0.95	49.88	49.87	1.49	189.56
Offset	-53.88	-49.88	49.87	53.87						
08+00	0.57	35.13	49.12	0.81	193.97	1.06	49.87	49.86	1.33	189.15
Offset	-53.87	-49.87	49.86	53.86						
08+50	0.37	34.45	40.95	0.71	150.10	0.86	49.86	49.85	1.19	188.77
Offset	-53.86	-49.86	49.85	53.85						
09+00	0.42	32.68	40.14	0.74	139.32	0.93	49.85	49.85	1.22	188.54
Offset	-53.85	-49.85	49.85	53.85						
09+50	0.26	26.16	30.15	0.41	121.23	0.72	49.84	49.84	0.95	188.13
Offset	-53.84	-49.84	49.84	53.84						
10+00	0.36	30.18	37.92	0.46	116.58	0.81	49.83	49.83	0.97	187.79
Offset	-53.83	-49.83	49.83	53.83						
10+50	0.23	31.85	0.58	0.04	94.10	0.66	46.92	3.48	0.27	141.47
Offset	-53.83	-49.83	49.82	53.82						
11+00	0.03	5.26	2.13	0.08	40.43	0.24	24.43	11.33	0.39	86.25
Offset	-53.67	-49.67	49.66	53.66						
11+50	0.00	0.00	1.16	0.05	8.06	0.00	0.00	7.38	0.33	40.84

Offset	-53.70	-49.70	49.68	53.68						
12+00	0.00	0.00	0.72	0.03	1.82	0.00	0.00	6.78	0.22	13.61
Offset	-53.73	-49.73	49.70	53.70						
12+50	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00	6.48
Offset	-53.76	-49.76	49.72	53.72						
13+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-53.79	-49.79	49.74	53.74						
13+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-53.82	-49.82	49.77	53.77						
14+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-53.44	-49.44	49.81	53.81						
14+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-53.47	-49.47	49.77	53.77						
15+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-53.50	-49.50	49.73	53.73						
15+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-53.53	-49.53	49.69	53.69						
16+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-53.57	-49.57	49.64	53.64						
16+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-53.60	-49.60	49.61	53.61						
17+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	49.99	53.99						
17+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
18+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
18+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
19+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
19+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
20+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
20+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
21+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
21+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
22+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.00	-50.00	50.00	54.00						
22+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.07	-50.07	50.03	54.03						
23+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-54.22	-50.22	50.26	54.26						
23+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-48.70	-44.64	48.64	52.69						
24+00	0.13	10.37	0.00	0.00	9.73	0.51	34.94	0.00	0.00	32.83
Offset	-40.38	-36.32	40.32	44.38						
24+50	0.52	6.75	0.00	0.00	16.46	1.10	14.19	0.00	0.00	46.98
Offset	-32.05	-27.99	32.01	36.07						
25+00	0.39	16.47	12.47	0.18	33.73	0.89	24.08	26.00	0.61	61.50
Offset	-28.08	-24.08	26.00	30.00						
25+50	1.08	29.38	25.17	0.47	79.27	1.50	24.22	25.85	0.98	96.42
Offset	-28.22	-24.22	25.85	29.85						
26+00	1.16	32.14	29.57	0.73	110.85	1.53	24.37	25.69	1.19	97.54
Offset	-28.37	-24.37	25.69	29.69						
26+50	1.05	32.16	31.90	0.83	119.95	1.41	24.51	25.53	1.30	97.71
Offset	-28.51	-24.51	25.53	29.53						

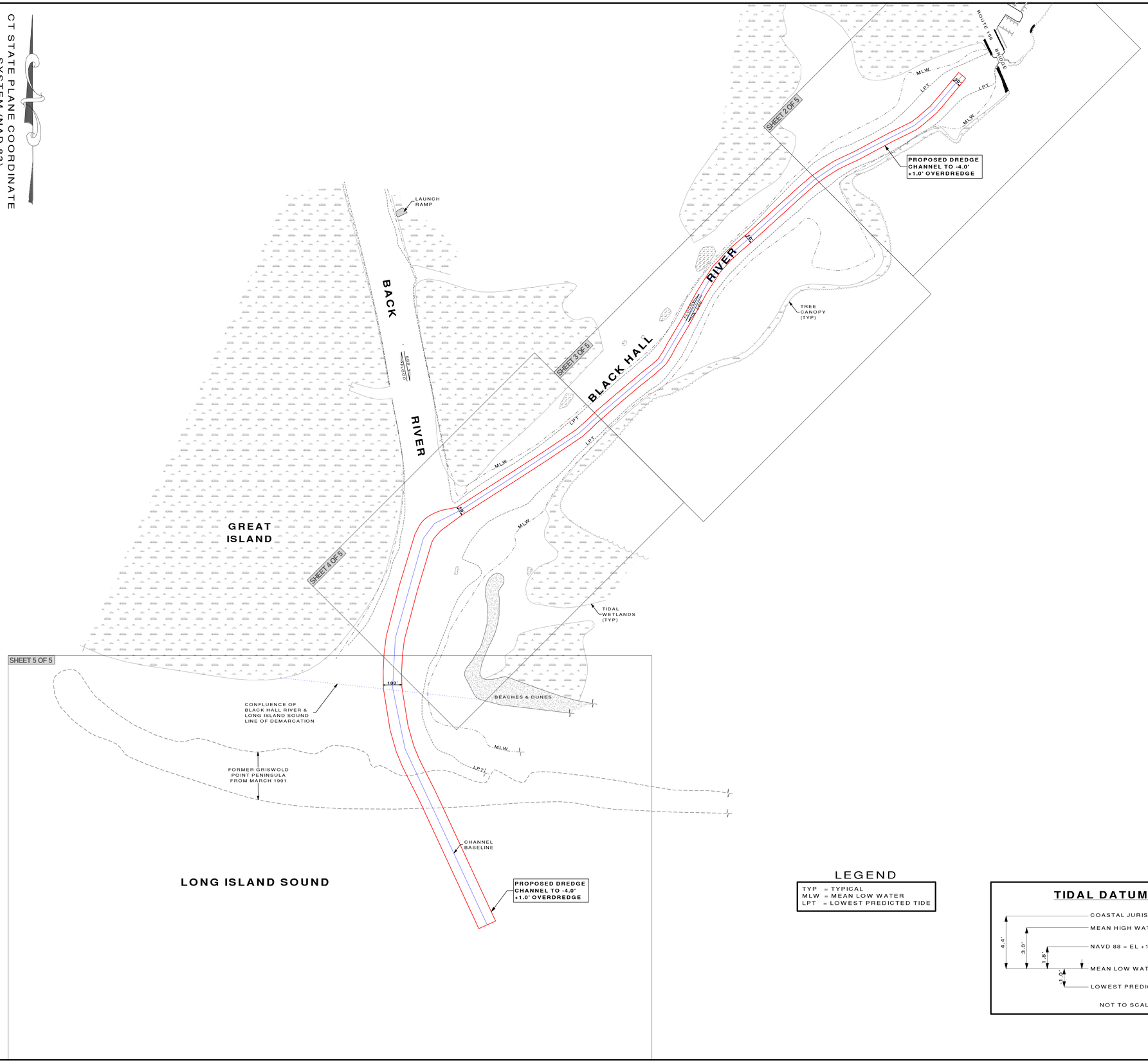
27+00	1.04	31.54	28.31	0.61	118.01	1.45	24.65	25.38	1.11	97.54
Offset	-28.65	-24.65	25.38	29.38						
27+50	0.94	29.89	25.05	0.42	109.07	1.39	24.80	25.22	0.93	97.15
Offset	-28.80	-24.80	25.22	29.22						
28+00	0.80	27.88	24.76	0.37	101.96	1.28	24.94	25.06	0.86	96.74
Offset	-28.94	-24.94	25.06	29.06						
28+50	0.66	22.52	18.85	0.20	88.89	1.16	24.98	24.99	0.64	96.20
Offset	-28.98	-24.98	24.99	28.99						
29+00	0.45	17.91	10.13	0.08	65.56	0.96	24.96	24.96	0.39	95.41
Offset	-28.96	-24.96	24.96	28.96						
29+50	0.17	9.34	4.73	0.01	39.64	0.59	24.93	24.94	0.15	94.33
Offset	-28.93	-24.93	24.94	28.94						
30+00	0.03	0.81	0.00	0.00	13.97	0.24	7.00	0.00	0.00	53.57
Offset	-28.91	-24.91	24.92	28.92						
30+50	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00	6.71
Offset	-28.88	-24.88	24.90	28.90						
31+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-28.86	-24.86	24.87	28.87						
31+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-28.84	-24.84	24.84	28.84						
32+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-28.81	-24.81	24.82	28.82						
32+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-28.83	-24.79	24.80	28.80						
33+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.18	-25.18	25.19	29.19						
33+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.38	-25.38	25.39	29.39						
34+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.58	-25.58	25.59	29.59						
34+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.57	-25.57	25.56	29.56						
35+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.50	-25.50	25.50	29.50						
35+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.43	-25.43	25.43	29.43						
36+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.36	-25.36	25.36	29.36						
36+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.29	-25.29	25.29	29.29						
37+00	0.05	1.38	0.00	0.00	1.32	0.31	10.75	0.00	0.00	10.24
Offset	-29.22	-25.22	25.23	29.23						
37+50	0.08	2.01	0.00	0.00	3.25	0.40	13.00	0.00	0.00	22.64
Offset	-29.15	-25.15	25.16	29.16						
38+00	0.04	3.74	2.47	0.02	7.73	0.28	25.08	25.09	0.18	59.28
Offset	-29.08	-25.08	25.09	29.09						
38+50	0.02	1.72	5.33	0.09	12.42	0.20	15.55	23.56	0.47	83.72
Offset	-30.53	-26.30	25.03	29.03						
39+00	0.04	1.10	1.17	0.03	8.82	0.27	8.50	10.57	0.23	54.19
Offset	-29.03	-25.03	25.04	29.04						
39+50	0.01	0.31	1.23	0.03	3.63	0.16	4.00	9.62	0.26	31.11
Offset	-29.06	-25.06	25.06	29.06						
40+00	0.02	0.46	0.14	0.00	2.05	0.19	4.08	3.73	0.10	20.49
Offset	-29.08	-25.08	25.09	29.09						
40+50	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00	7.50
Offset	-29.11	-25.11	25.11	29.11						
41+00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	1.27	0.09	1.26
Offset	-29.13	-25.13	25.14	29.14						
41+50	0.00	0.00	1.34	0.11	1.41	0.00	0.00	5.98	0.50	7.29
Offset	-29.19	-25.19	25.19	29.19						
42+00	0.00	0.00	1.72	0.18	3.10	0.00	0.00	6.06	0.63	12.19
Offset	-29.28	-25.28	25.28	29.28						

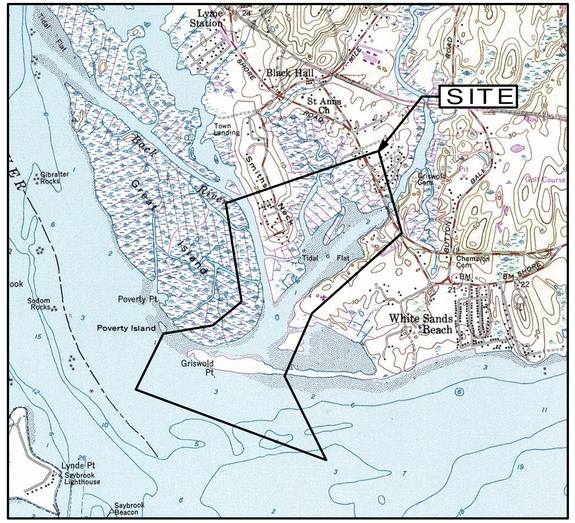
42+50	0.00	0.00	6.42	0.36	8.04	0.00	0.00	15.48	0.88	21.34
Offset	-29.37	-25.37	25.36	29.36						
43+00	0.00	0.00	6.45	0.35	12.58	0.00	0.00	16.58	0.81	31.24
Offset	-29.46	-25.46	25.45	29.45						
43+50	0.09	0.89	3.43	0.14	10.51	0.46	4.30	13.34	0.55	33.36
Offset	-29.55	-25.55	25.54	29.54						
44+00	0.00	0.00	2.75	0.15	6.67	0.00	0.00	11.83	0.56	27.82
Offset	-28.81	-24.81	24.77	28.77						
44+50	0.00	0.00	0.91	0.06	3.58	0.00	0.00	5.56	0.36	16.95
Offset	-28.99	-24.99	24.96	28.96						
45+00	0.27	1.96	0.43	0.02	3.39	0.77	5.07	4.14	0.22	14.93
Offset	-29.16	-25.16	25.15	29.15						
45+50	1.08	8.95	0.05	0.00	12.30	1.56	12.37	1.33	0.09	24.17
Offset	-29.00	-25.00	25.00	29.00						
46+00	0.33	4.24	0.00	0.00	13.57	0.88	11.83	0.00	0.00	25.98
Offset	-29.00	-25.00	25.00	29.00						
46+50	0.32	4.83	0.00	0.00	9.01	0.85	14.75	0.00	0.00	26.21
Offset	-29.00	-25.00	25.00	29.00						
47+00	0.25	4.21	0.00	0.00	8.86	0.75	13.50	0.00	0.00	27.53
Offset	-28.99	-24.99	25.00	29.00						
47+50	0.22	4.90	0.06	0.00	8.92	0.68	15.75	1.49	0.08	29.87
Offset	-28.99	-24.99	25.00	29.00						
48+00	0.26	5.75	2.13	0.06	12.38	0.73	15.50	15.48	0.36	46.37
Offset	-28.99	-24.99	24.99	28.99						
48+50	0.20	4.72	5.37	0.17	17.27	0.65	15.25	21.48	0.59	64.85
Offset	-28.99	-24.99	24.99	28.99						
49+00	0.02	0.62	11.02	0.31	20.77	0.19	10.04	24.99	0.78	68.49
Offset	-28.99	-24.99	24.99	28.99						
49+50	0.02	1.59	14.41	0.56	26.44	0.22	15.49	24.98	1.08	72.01
Offset	-28.99	-24.99	24.98	28.98						
50+00	0.00	4.68	18.47	0.74	37.48	0.06	24.98	24.99	1.24	86.15
Offset	-28.98	-24.98	24.99	28.99						
50+50	0.05	9.00	20.04	0.91	49.91	0.30	24.98	24.99	1.36	95.29
Offset	-28.98	-24.98	24.99	28.99						
51+00	0.13	11.80	22.40	0.86	60.35	0.51	24.98	24.98	1.36	95.79
Offset	-28.98	-24.98	24.98	28.98						
51+50	0.24	14.61	20.44	0.55	64.81	0.71	24.87	25.14	1.07	95.36
Offset	-28.87	-24.87	25.14	29.18						
52+00	0.22	12.84	17.90	0.59	62.40	0.69	24.90	24.90	1.13	95.76
Offset	-28.90	-24.90	24.90	28.90						
52+50	0.29	11.23	11.60	0.41	51.00	0.77	24.92	24.94	0.93	95.54
Offset	-28.92	-24.92	24.94	28.94						
53+00	0.33	10.43	9.35	0.32	40.57	0.82	25.01	25.02	0.84	95.23
Offset	-29.01	-25.01	25.02	29.02						
53+50	0.34	10.57	12.13	0.39	40.62	0.85	25.01	25.02	0.90	95.82
Offset	-29.01	-25.01	25.02	29.02						
54+00	0.51	12.87	9.15	0.22	42.76	1.03	25.01	25.02	0.68	95.84
Offset	-29.01	-25.01	25.02	29.02						
54+50	0.91	17.67	10.91	0.20	48.56	1.39	25.01	25.03	0.65	96.13
Offset	-29.01	-25.01	25.03	29.03						
55+00	1.08	21.83	11.70	0.29	59.78	1.51	25.01	25.03	0.77	96.65
Offset	-29.01	-25.01	25.03	29.03						
55+50	1.33	27.86	11.77	0.15	70.36	1.67	25.02	25.02	0.56	96.85
Offset	-29.02	-25.02	25.02	29.02						
56+00	1.57	32.66	12.85	0.02	81.66	1.81	25.02	25.02	0.18	96.57
Offset	-29.02	-25.02	25.02	29.02						
56+50	1.70	36.25	16.72	0.02	94.25	1.92	25.02	25.02	0.18	96.47
Offset	-29.02	-25.02	25.02	29.02						
57+00	1.67	35.96	24.26	0.50	108.38	1.85	25.02	25.02	1.03	97.27
Offset	-29.02	-25.02	25.02	29.02						
57+50	1.67	36.57	25.78	0.66	117.66	1.83	25.02	25.02	1.16	98.12

Offset	-29.02	-25.02	25.02	29.02						
58+00	1.58	38.06	25.23	0.28	117.26	1.79	24.88	24.88	0.73	96.11
Offset	-28.88	-24.88	24.88	28.88						
58+50	0.87	25.43	18.92	0.30	102.47	1.33	24.92	24.91	0.77	96.49
Offset	-28.92	-24.92	24.91	28.91						
59+00	0.21	12.06	12.94	0.26	65.72	0.65	24.95	24.94	0.73	95.55
Offset	-28.95	-24.95	24.94	28.94						
59+50	0.00	0.00	0.05	0.00	23.49	0.00	0.00	1.65	0.07	48.76
Offset	-28.99	-24.99	24.99	28.99						
60+00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	1.59
Offset	-28.99	-24.99	24.99	28.99						
60+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.00	-25.00	24.99	28.99						
61+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.00	-25.00	25.00	29.00						
61+50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offset	-29.00	-25.00	25.00	29.00						
Totals	----	----	----	----	----	----	----	----	----	----
	37.18	1542.73	1527.84	29.64	5808.92	63.40	1935.09	1922.22	57.04	7366.90

DREDGE CHANNEL CONCEPTUAL PLANS

CT STATE PLANE COORDINATE SYSTEM (NAD 83)



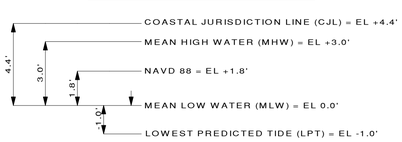


SITE LOCATION
SCALE 1 = 12,000

LEGEND

TYP = TYPICAL
MLW = MEAN LOW WATER
LPT = LOWEST PREDICTED TIDE

TIDAL DATUM PLANE



NOT TO SCALE

GRAPHIC SCALE
100 0 250 500

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BLACK HALL RIVER
SHEET INDEX MAP
PROPOSED DREDGE CHANNEL &
HYDROGRAPHIC CONDITIONS

PREPARED FOR THE TOWN OF OLD LYME
NAVIGABLE WATERWAYS STUDY
OLD LYME, CONNECTICUT

JULY 1, 2013	SHEET 1 OF 5	SCALE: 1" = 250'

TIDAL DATUM PLANE

- COASTAL JURISDICTION LINE (CJL) = EL +4.4'
- MEAN HIGH WATER (MHW) = EL +3.0'
- NAVD 88 = EL +1.8'
- MEAN LOW WATER (MLW) = EL 0.0'
- LOWEST PREDICTED TIDE (LPT) = EL -1.0'

(4.4', 3.0', 1.8', 1.0')

NOT TO SCALE

LEGEND

-1.2 = SOUNDINGS IN FEET
+7.3 = UPLAND ELEVATION
N/F = NOW/FORMERLY
TYP = TYPICAL
MLW = MEAN LOW WATER
LPT = LOWEST PREDICTED TIDE
= NAVIGATION AID PVC PIPE
52+50 = CROSS SECTION LINE

-2.1
NOTE: MEASURING POINT FOR INDIVIDUAL SOUNDINGS IS LOCATED AT THE DECIMAL POINT

GRAPHIC SCALE
20 10 0 50 100

COASTAL RESOURCES LEGEND

GENERAL COASTAL RESOURCES	OVER ENTIRE AREA
BEACHES & DUNES	NONE
COASTAL BLUFFS & ESCARPMENTS	NONE
COASTAL HAZARD AREAS	OVER ENTIRE AREA
ESTUARINE EMBAYMENTS	ENTIRE EXTENT OF RIVER SHOWN
DEVELOPED SHOREFRONTS	NONE
FRESHWATER WETLANDS & WATERCOURSES	NONE
INTERTIDAL FLATS	AS NOTED
ISLANDS	NONE
ROCKY SHOREFRONTS	NONE
NEARSHORE WATERS	ENTIRE EXTENT OF RIVER SHOWN
OFFSHORE WATERS	NONE
SHELLFISH CONCENTRATION AREAS	AS NOTED
SHORELANDS	NONE
TIDAL WETLANDS	AS NOTED

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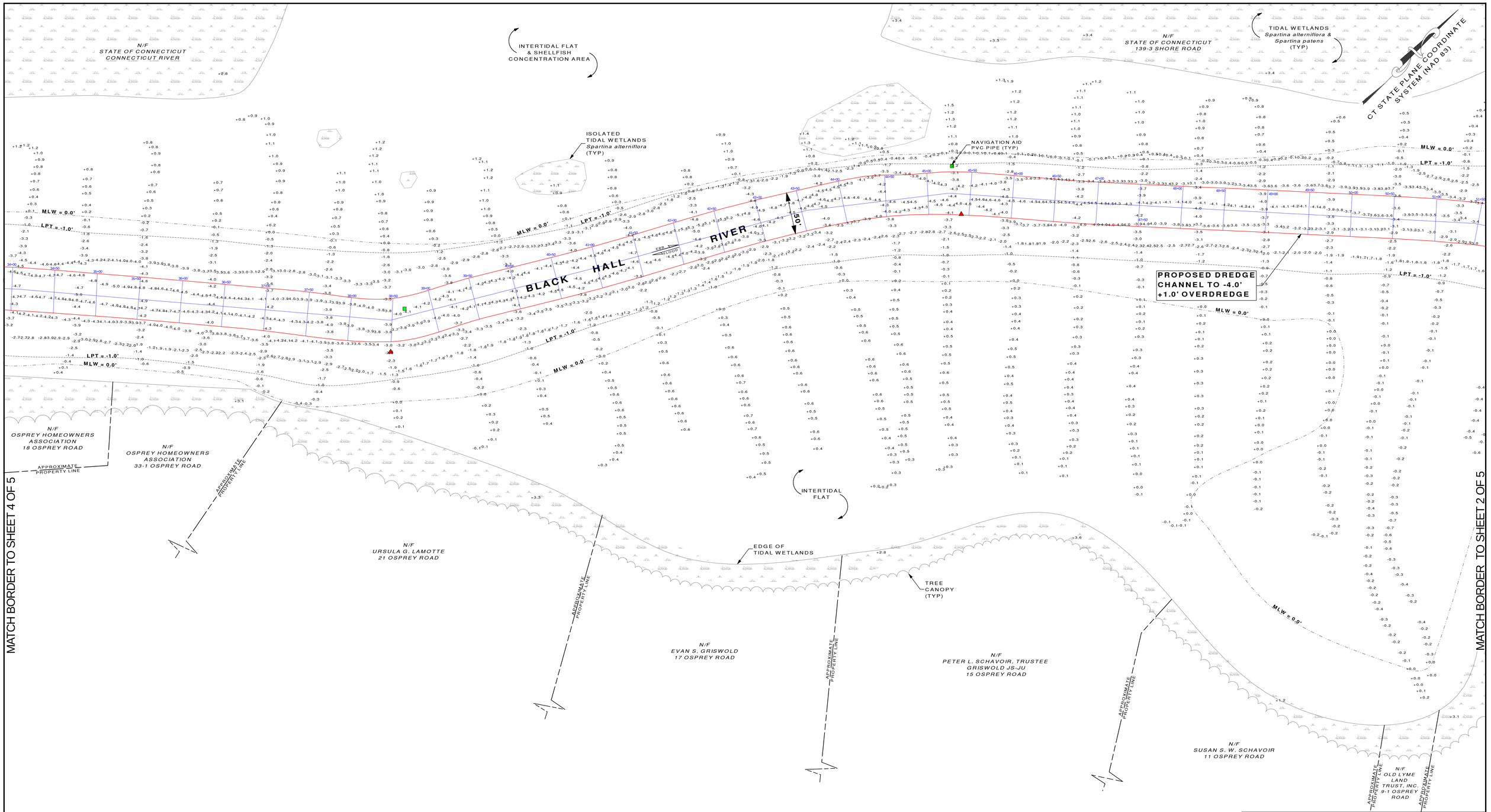
BLACK HALL RIVER
PROPOSED DREDGE CHANNEL & HYDROGRAPHIC CONDITIONS

PREPARED FOR THE TOWN OF OLD LYME
NAVIGABLE WATERWAYS STUDY
OLD LYME, CONNECTICUT

JULY 1, 2013	SHEET 2 OF 5	SCALE: 1" = 50'



GRAPHIC SCALE

20 10 0 50 100

-2.1

NOTE: MEASURING POINT FOR INDIVIDUAL SOUNDINGS IS LOCATED AT THE DECIMAL POINT

LEGEND

-1.2 = SOUNDINGS IN FEET
+7.3 = UPLAND ELEVATION
N/F = NOW/FORMERLY
TYP = TYPICAL
MLW = MEAN LOW WATER
LPT = LOWEST PREDICTED TIDE

= NAVIGATION AID PVC PIPE

52+50 = CROSS SECTION LINE

TIDAL DATUM PLANE

4.4' — COASTAL JURISDICTION LINE (CJL) = EL +4.4'
3.0' — MEAN HIGH WATER (MHW) = EL +3.0'
1.8' — NAVD 88 = EL +1.8'
MEAN LOW WATER (MLW) = EL 0.0'
1.0' — LOWEST PREDICTED TIDE (LPT) = EL -1.0'

NOT TO SCALE

COASTAL RESOURCES LEGEND

GENERAL COASTAL RESOURCES	OVER ENTIRE AREA
BEACHES & DUNES	NONE
COASTAL BLUFFS & ESCARPMENTS	NONE
COASTAL HAZARD AREAS	OVER ENTIRE AREA
ESTUARINE EMBAYMENTS	ENTIRE EXTENT OF RIVER SHOWN
DEVELOPED SHOREFRONTS	NONE
FRESHWATER WETLANDS & WATERCOURSES	NONE
INTERTIDAL FLATS	AS NOTED
ISLANDS	NONE
ROCKY SHOREFRONTS	NONE
NEARSHORE WATERS	ENTIRE EXTENT OF RIVER SHOWN
OFFSHORE WATERS	NONE
SHELLFISH CONCENTRATION AREAS	AS NOTED
SHORELANDS	NONE
TIDAL WETLANDS	AS NOTED

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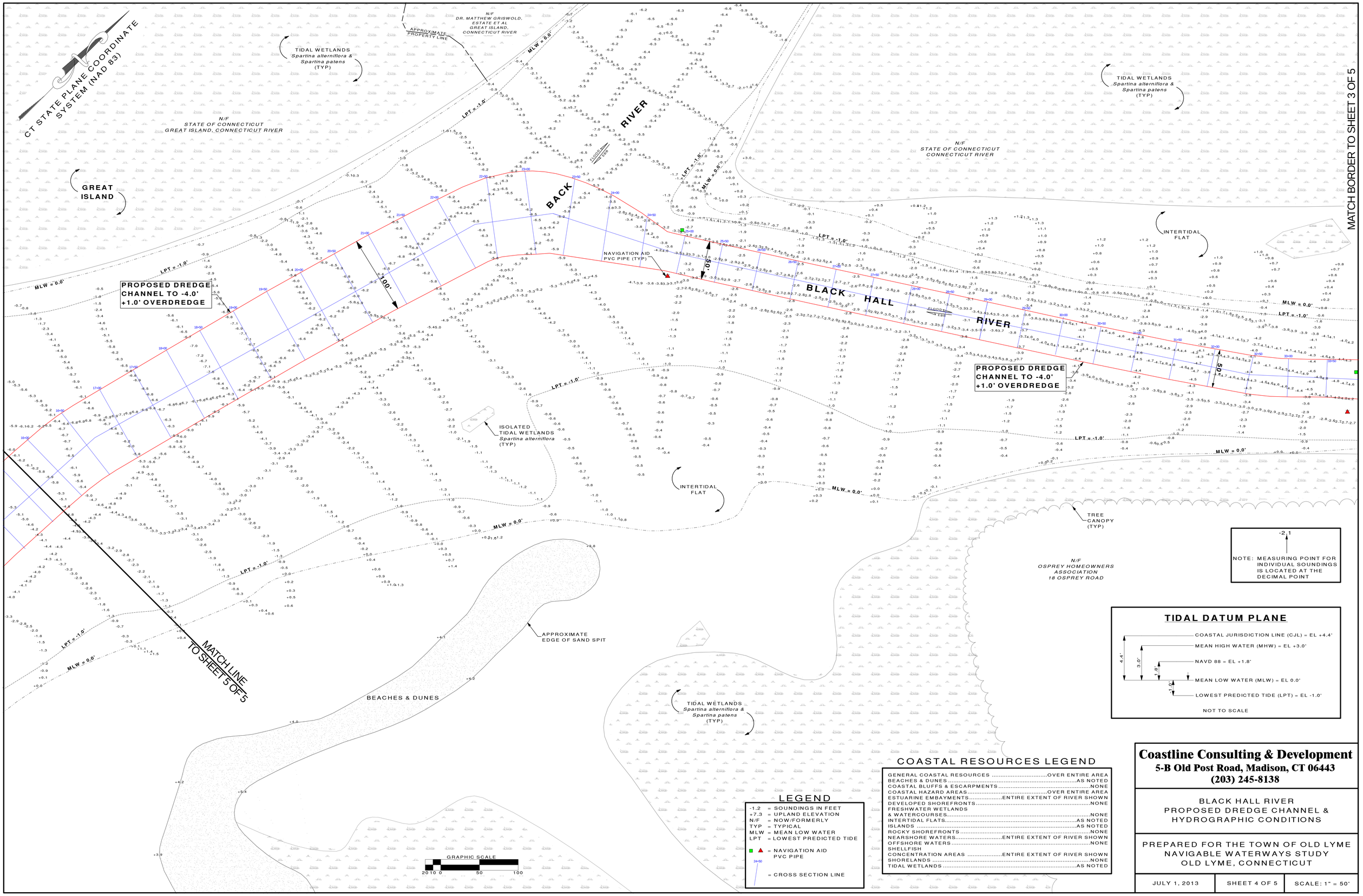
BLACK HALL RIVER
PROPOSED DREDGE CHANNEL &
HYDROGRAPHIC CONDITIONS

PREPARED FOR THE TOWN OF OLD LYME
NAVIGABLE WATERWAYS STUDY
OLD LYME, CONNECTICUT

JULY 1, 2013	SHEET 3 OF 5	SCALE: 1" = 50'



NOTE: MEASURING POINT FOR INDIVIDUAL SOUNDINGS IS LOCATED AT THE DECIMAL POINT

TIDAL DATUM PLANE

- COASTAL JURISDICTION LINE (CJL) = EL +4.4'
- MEAN HIGH WATER (MHW) = EL +3.0'
- NAVD 88 = EL +1.8'
- MEAN LOW WATER (MLW) = EL 0.0'
- LOWEST PREDICTED TIDE (LPT) = EL -1.0'

4.4' 3.0' 1.8' 1.0'

NOT TO SCALE

LEGEND

-1.2	= SOUNDINGS IN FEET
+7.3	= UPLAND ELEVATION
N/F	= NOW/FORMERLY
TYP	= TYPICAL
MLW	= MEAN LOW WATER
LPT	= LOWEST PREDICTED TIDE
■ ▲	= NAVIGATION AID PVC PIPE
24+50	= CROSS SECTION LINE

COASTAL RESOURCES LEGEND

GENERAL COASTAL RESOURCES	OVER ENTIRE AREA
BEACHES & DUNES	AS NOTED
COASTAL BLUFFS & ESCARPMENTS	NONE
COASTAL HAZARD AREAS	OVER ENTIRE AREA
ESTUARINE EMBAYMENTS	ENTIRE EXTENT OF RIVER SHOWN
DEVELOPED SHOREFRONTS	NONE
FRESHWATER WETLANDS & WATERCOURSES	NONE
INTERTIDAL FLATS	AS NOTED
ISLANDS	AS NOTED
ROCKY SHOREFRONTS	NONE
NEARSHORE WATERS	ENTIRE EXTENT OF RIVER SHOWN
OFFSHORE WATERS	NONE
SHELLFISH CONCENTRATION AREAS	ENTIRE EXTENT OF RIVER SHOWN
SHORELANDS	NONE
TIDAL WETLANDS	AS NOTED

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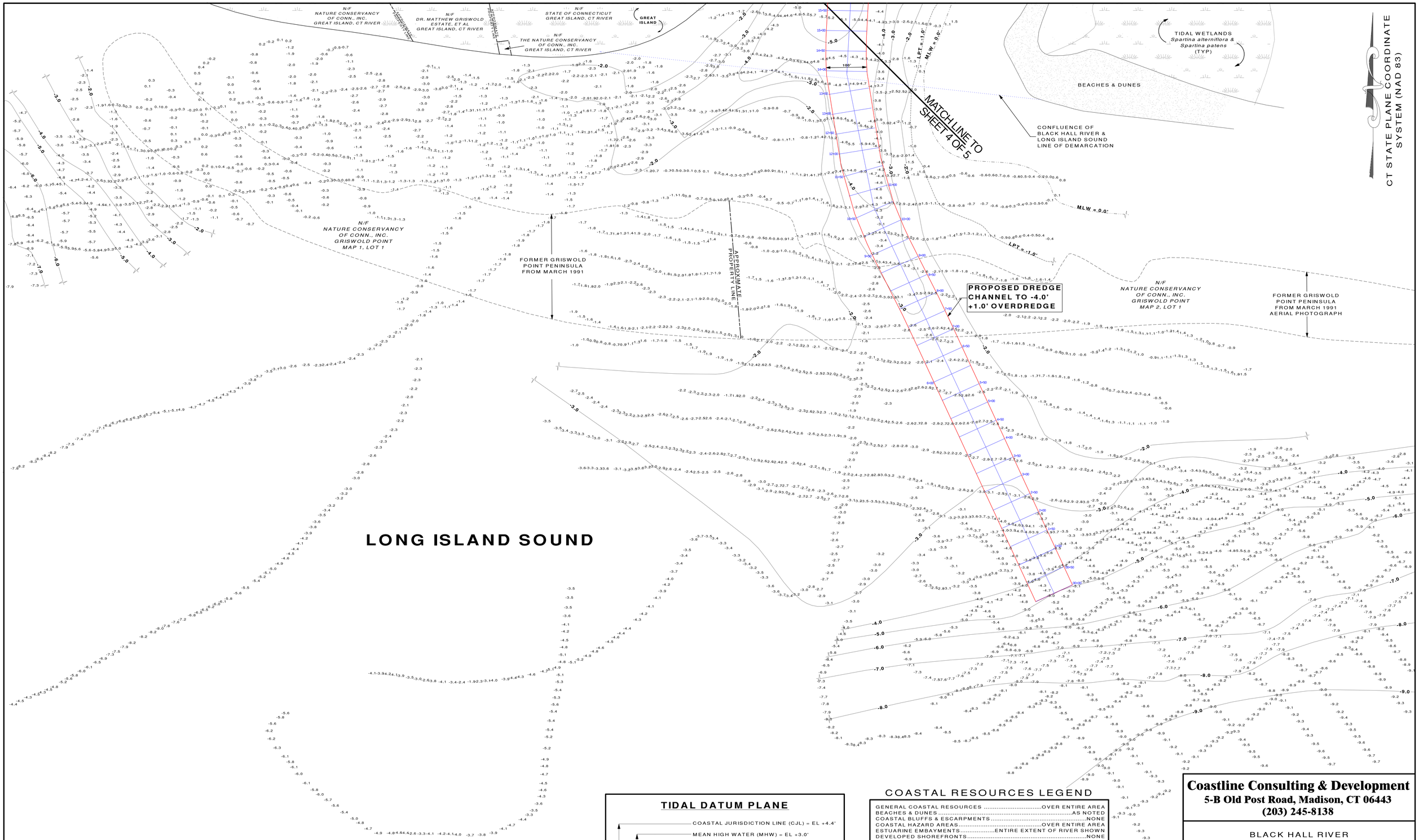
BLACK HALL RIVER
PROPOSED DREDGE CHANNEL & HYDROGRAPHIC CONDITIONS

PREPARED FOR THE TOWN OF OLD LYME
NAVIGABLE WATERWAYS STUDY
OLD LYME, CONNECTICUT

JULY 1, 2013	SHEET 4 OF 5	SCALE: 1" = 50'



LEGEND

-1.2 = SOUNDINGS IN FEET
+7.3 = UPLAND ELEVATION
N/F = NOW/FORMERLY
TYP = TYPICAL
MLW = MEAN LOW WATER
LPT = LOWEST PREDICTED TIDE
3+00 = CROSS SECTION LINE

-2.1
NOTE: MEASURING POINT FOR INDIVIDUAL SOUNDINGS IS LOCATED AT THE DECIMAL POINT

GRAPHIC SCALE
20 0 100 200

TIDAL DATUM PLANE

4.4'	COASTAL JURISDICTION LINE (CJL) = EL +4.4'
3.0'	MEAN HIGH WATER (MHW) = EL +3.0'
1.8'	NAVD 88 = EL +1.8'
	MEAN LOW WATER (MLW) = EL 0.0'
1.0'	LOWEST PREDICTED TIDE (LPT) = EL -1.0'

NOT TO SCALE

COASTAL RESOURCES LEGEND

GENERAL COASTAL RESOURCES	OVER ENTIRE AREA
BEACHES & DUNES	AS NOTED
COASTAL BLUFFS & ESCARPMENTS	NONE
COASTAL HAZARD AREAS	OVER ENTIRE AREA
ESTUARINE EMBAYMENTS	ENTIRE EXTENT OF RIVER SHOWN
DEVELOPED SHOREFRONTS	NONE
FRESHWATER WETLANDS & WATERCOURSES	NONE
INTERTIDAL FLATS	AS NOTED
ISLANDS	AS NOTED
ROCKY SHOREFRONTS	NONE
NEARSHORE WATERS	ENTIRE EXTENT OF RIVER SHOWN
OFFSHORE WATERS	NONE
SHELLFISH CONCENTRATION AREAS	ENTIRE EXTENT OF AREA SHOWN
SHORELANDS	NONE
TIDAL WETLANDS	AS NOTED

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BLACK HALL RIVER
PROPOSED DREDGE CHANNEL &
HYDROGRAPHIC CONDITIONS

PREPARED FOR THE TOWN OF OLD LYME
NAVIGABLE WATERWAYS STUDY
OLD LYME, CONNECTICUT

JULY 1, 2013	SHEET 5 OF 5	SCALE: 1" = 100'