

Appendix A

**Bathymetric Survey Data [“Bathymetric Survey and
Sediment Probing....”, dated December 27, 2006,
by HYDROTERRAEnvironmental Services, LLC.]**



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December 27, 2006

Mr. Rick Stewart, PE
The Louis Berger Group, Inc.
1001 Elm Street, Suite 300
Manchester, NH 03101

RE: Bathymetric Survey and Sediment Probing for the Taylor River Dam/Bridge Project - Hampton, NH (Job No. 899423-1)

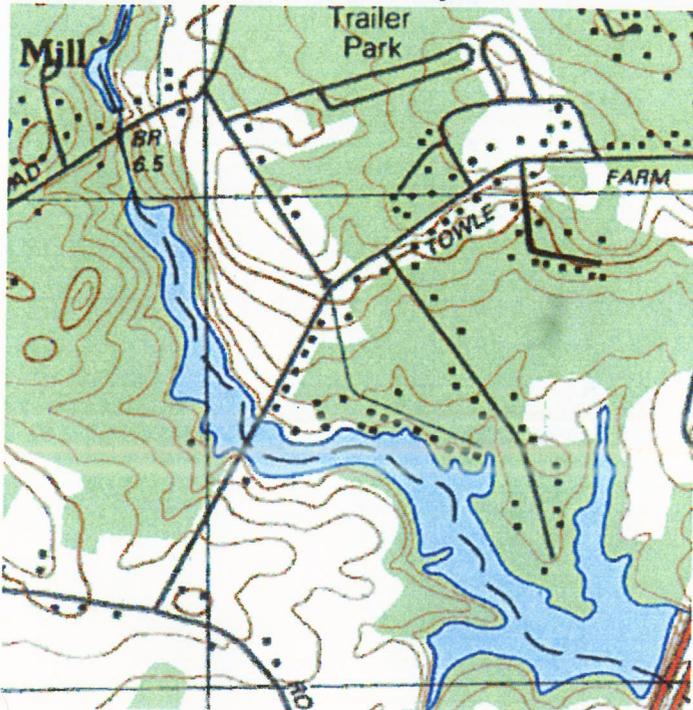
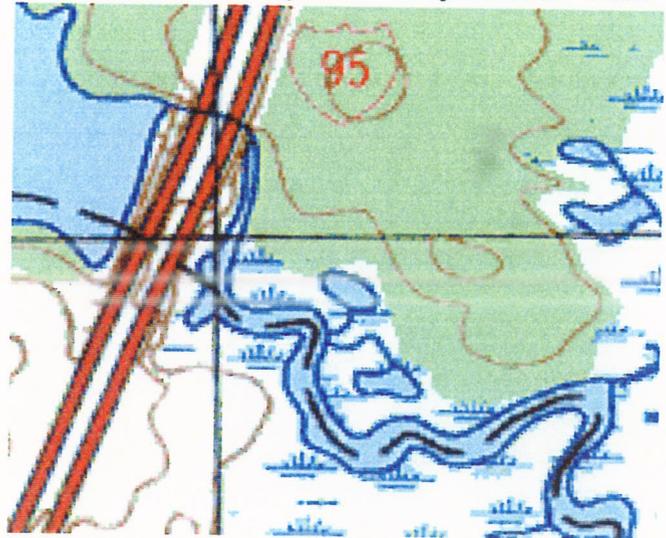
Dear Mr. Stewart;

HYDROTERRA Environmental Services (HYDROTERRA) is pleased to provide you with this summary report for the Bathymetric Survey completed in the Taylor River, Hampton, New Hampshire to support engineering plans for the Taylor River Dam Project.

PROJECT UNDERSTANDING

The purpose of this hydrographic survey was to obtain river bottom elevation and physical characteristics of the Taylor River adjacent to Interstate 95 (I-95) and the Rice Dam sites. The approximate survey area location is shown on Figures 1 and 1A (the Study Areas).

HYDROTERRA conducted this river survey using a 10-foot survey boat equipped with a recording fathometer, hand sounding probes, a Differential Global Positioning System (DGPS), and an onboard computer hydrographic surveying system. The survey was conducted within Taylor River from approximately 400 feet downstream (west) of I-95 to the base of Rice Dam (approximately 6,500 feet) and approximately 1, 200 upstream east of I-95.

FIGURE 1 Study Area - Taylor River - West**FIGURE 1A Study Area - Taylor River - East**

WORK COMPLETED

River Bathymetric Survey

The bathymetric survey was completed using HYDROTERRA's survey boat equipped with recording fathometers, hand sounding probes, a Differential Global Positioning System (DGPS), an onboard computer and a hydrographic surveying software. The fathometers were calibrated using a metal striker plate and hand soundings. The onboard hydrographic surveying computer software collected and logged real time depth, water temperature, boat speed, bearing and positioning data on a 1 second interval. Field observations and operator notes, as well as hand sounding readings were also logged real time by the software.

Staff gages were installed to record surface water level changes during the survey. The location of these stations are shown on the bathymetric contour maps (see map folders - Attachment1). All sounding data was adjusted to the vertical elevation datum established by the New Hampshire Department of Transportation (NH DOT) (NGVD 29). Positioning data was reduced to New Hampshire State Plane System (ft) (1983) and Geodetic Latitudes and Longitudes (WGS 1984).

Data Presentation and Summary of Findings

HYDROTERRA reduced all sounding data and prepared hydrographic sounding contour maps for the Study Area. The Study Area was broken into two sub areas for presentation. The East Taylor River area was the survey area completed east of I-95, and the West Taylor River area was the area west of I-95. The sounding contour maps are included in the map folders attached to the back of this letter report (Attachment 1). The West Taylor River area contour map was plotted at 1 inch equals 100 feet and was broken into three "D" size sheets. The East Taylor River area contour map was plotted at one inch equals 50 feet and includes only one "D" sheet. The Excel X,Y,Z sounding files for the survey are included on the CD (Attachment 2). Table 1 summarizes the electronic survey files included on the attached HYDROTERRA survey CD (Attachment 2).

TABLE 1		Summary of Electronic Files	
File Name	File Type	File Content	
Taylor East	Excel (spreadsheet)	X,Y,Z Bottom Elev. file for Taylor River, east of I-95	
Taylor West	.Excel (spreadsheet)	X,Y,Z Bottom Elev. file for Taylor River, west of I-95	
Taylor-River-Probing	Excel (spreadsheet)	Bottom Probe Locations and Depths	
Taylor-River-Bathy.dwg	DWG (AutoCad)	Bottom Elev. Contour Map for Taylor River, east of I-95 and Bottom Elev. Contour Map for Taylor River, west of I-95	

Figures 2, 3, 4, and 5 presented 3D surface plots for the bathymetric river elevations for the east and west areas respectively. For the West Taylor River area, river bottom elevations were generally shallow with a confined river channel. Elevation ranges were between approximately 6 to 9 feet above sea level (ASL)(near shore) to 0 to -1 feet ASL (deepest channel locations). For the East Taylor River area, river bottom elevations were generally deeper with elevation ranges between approximately 0 to 2 feet ASL (near shore) to -6 to -7.5 feet ASL(deeper channel locations).

Please feel free to call me at (603) 743-5728 if you have any questions. HYDROTERRA appreciates this opportunity to provide you with these marine services.

Sincerely,

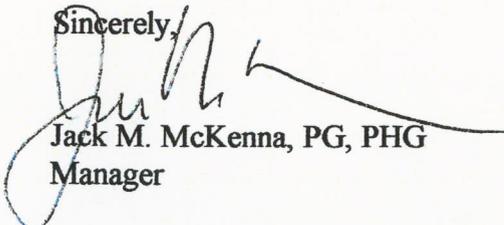

 Jack M. McKenna, PG, PHG
 Manager

FIGURE 2
3D Bottom Elevation Plot
West Taylor River
North Looking View

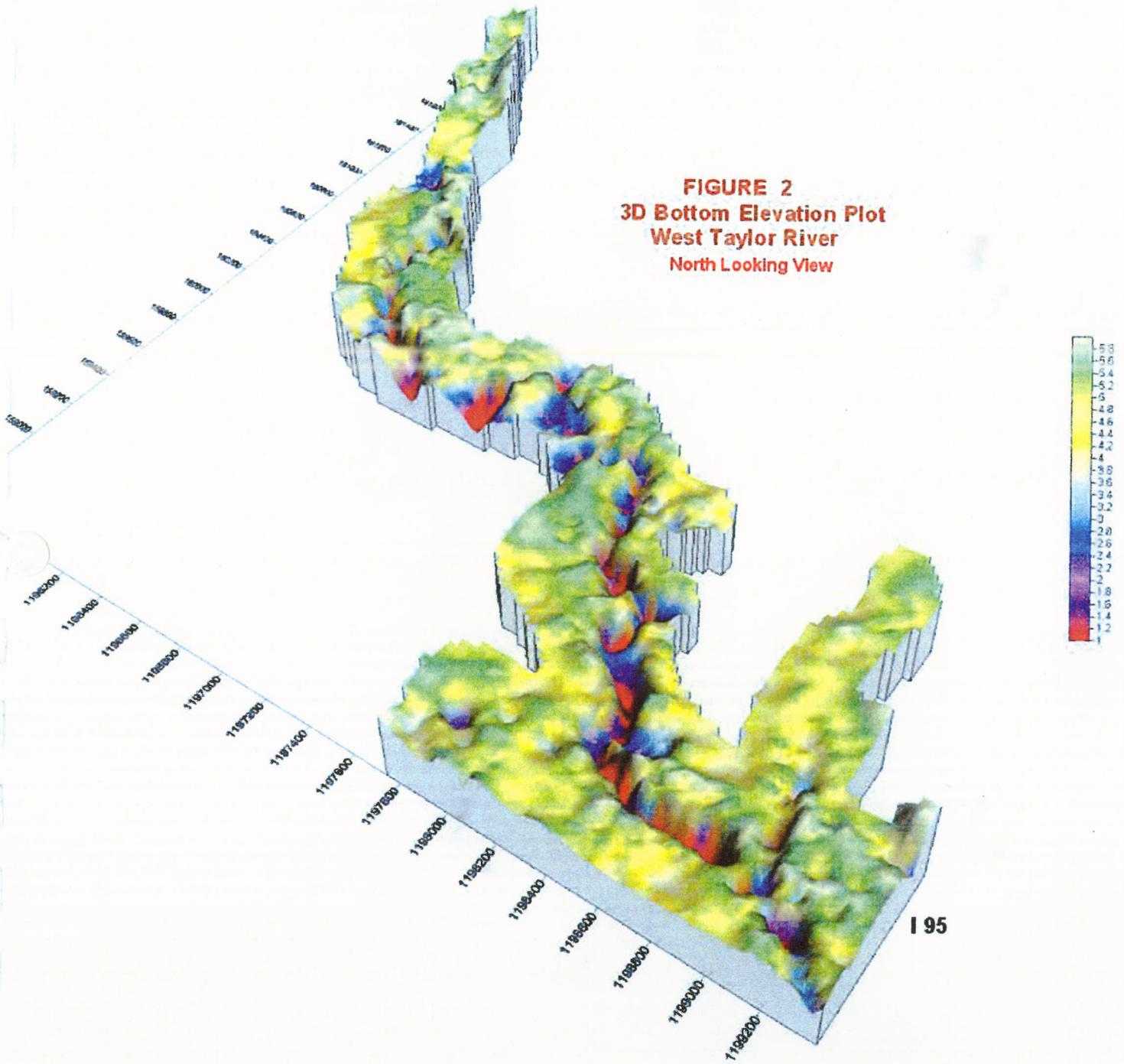


FIGURE 3
3D Bottom Elevation Plot
West Taylor River
South Looking View

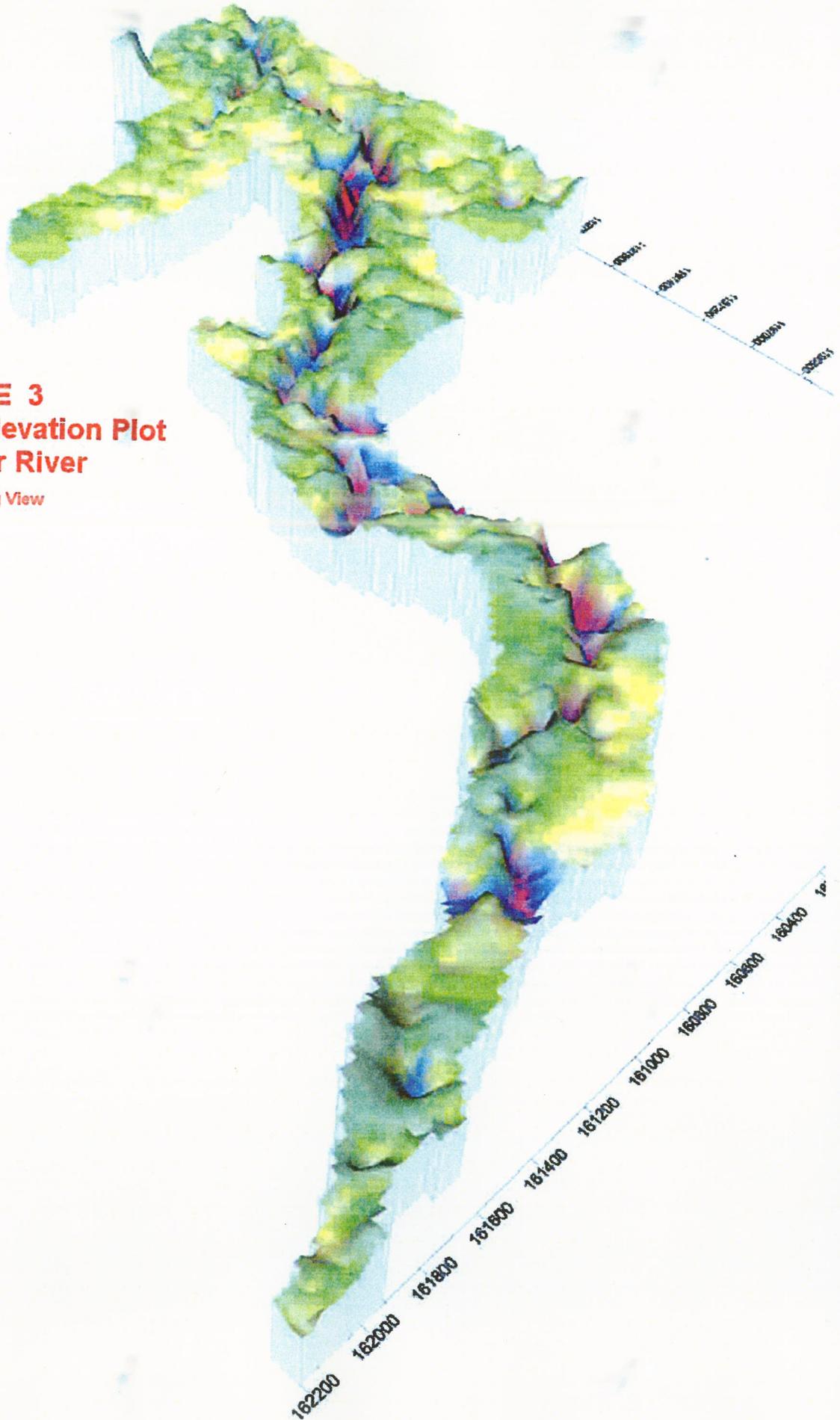


FIGURE 4
3D Bottom Elevation Plot
East Taylor River

North Looking View

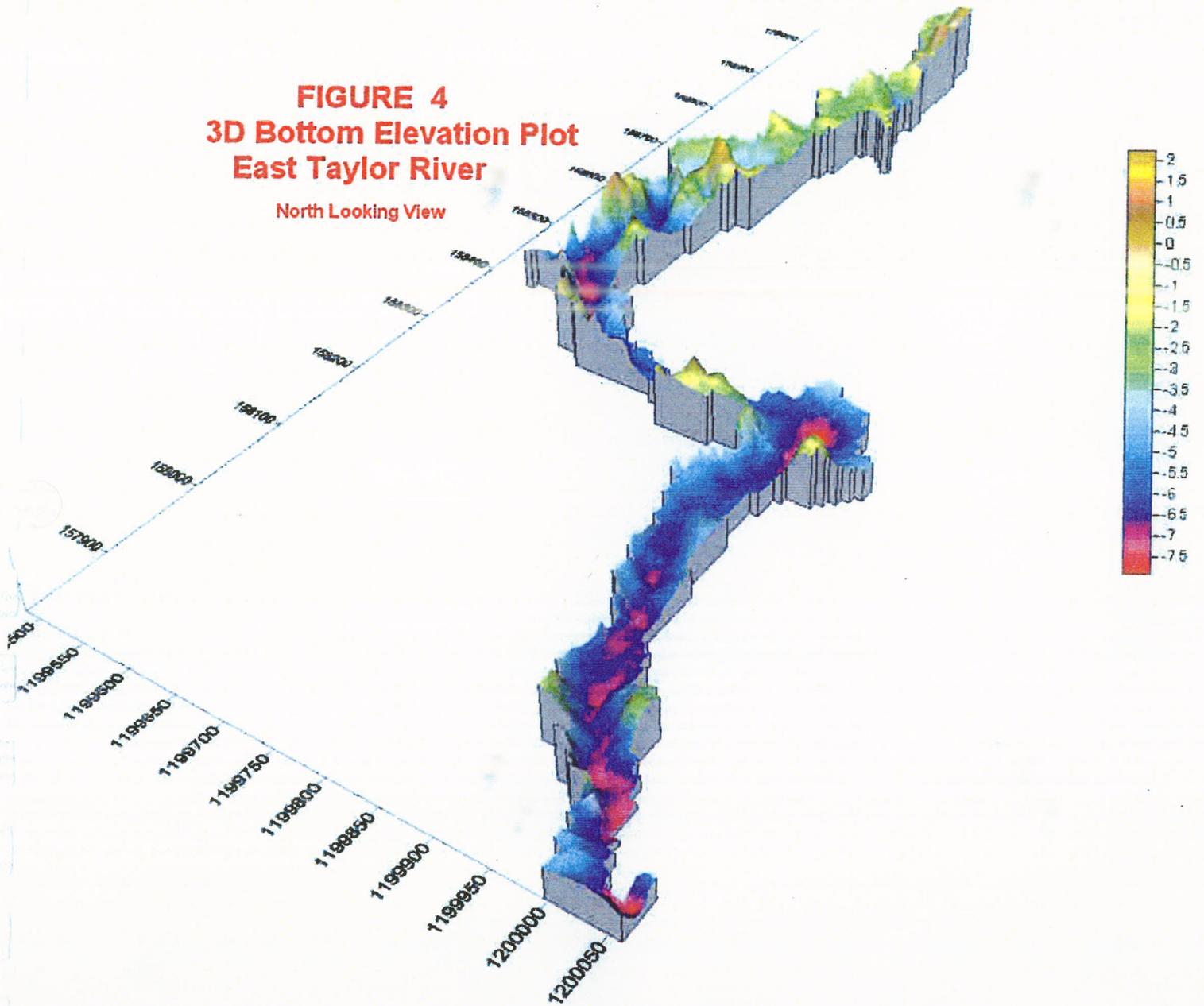
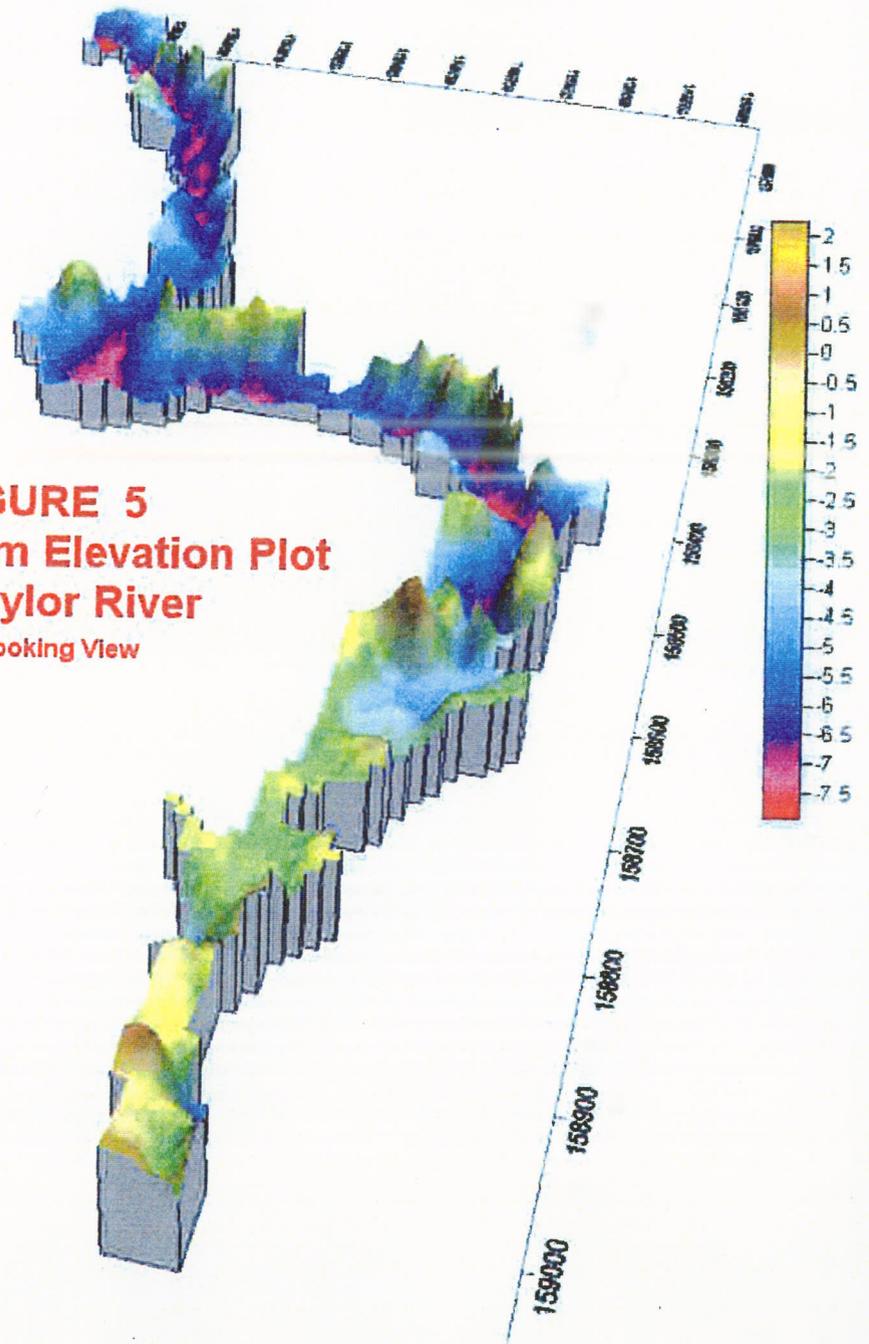


FIGURE 5
3D Bottom Elevation Plot
East Taylor River
South Looking View



**ATTACHMENT 1
BATHYMETRIC CONTOUR
MAP FOLDERS**

ATTACHMENT 2
BATHYMETRIC SURVEY
DATA CD