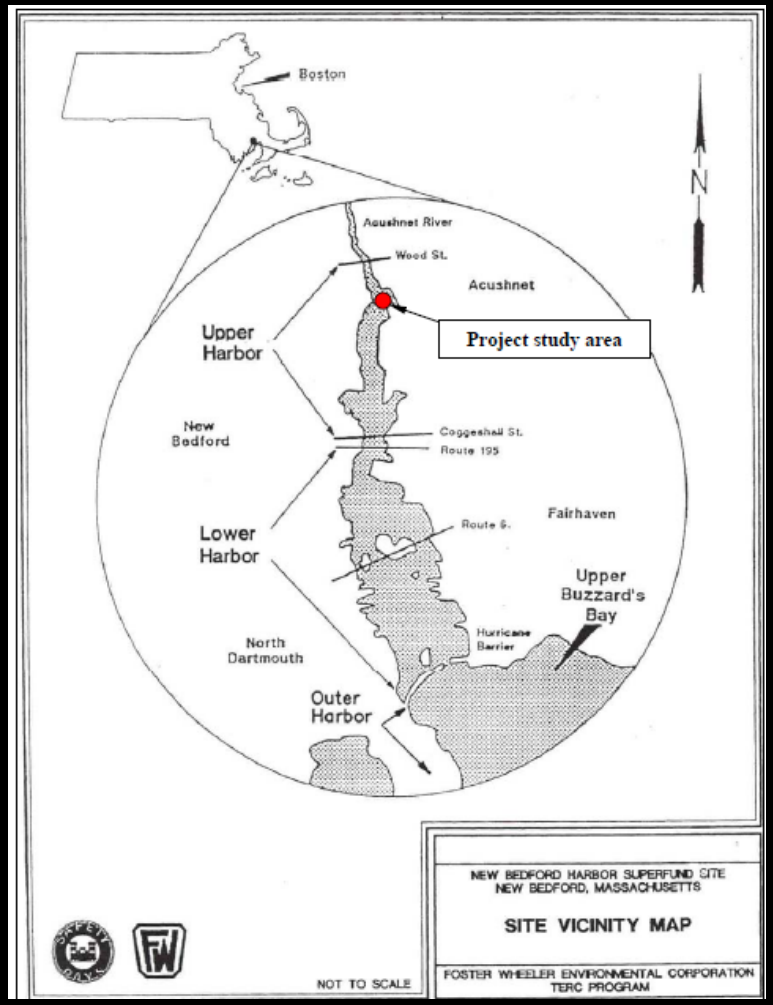
New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

Marine Archaeological Documentation and Assessment

New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

Project Location & 1999 Cultural Resources Survey



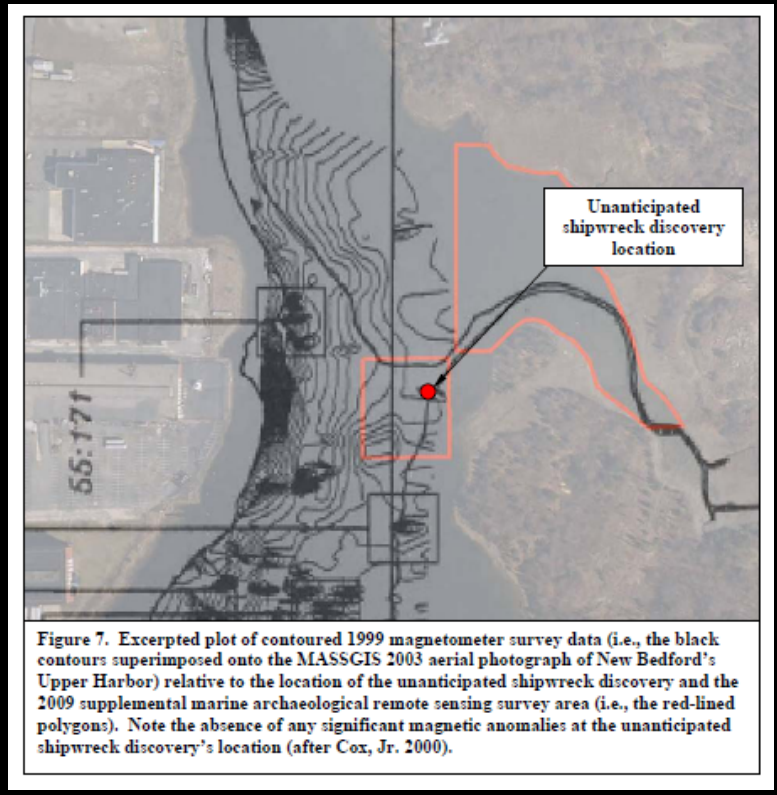


Figure 7. Excerpted plot of contoured 1999 magnetometer survey data (i.e., the black contours superimposed onto the MASSGIS 2003 aerial photograph of New Bedford's Upper Harbor) relative to the location of the unanticipated shipwreck discovery and the 2009 supplemental marine archaeological remote sensing survey area (i.e., the red-lined polygons). Note the absence of any significant magnetic anomalies at the unanticipated shipwreck discovery's location (after Cox, Jr. 2000).

New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

Dredging and Debris Removal

New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

- Timbers encountered and recovered July 2009
- Examined by USACE-NAE, MBUAR, and Fathom Research archaeologists

New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

- Timbers recovered in July 2009 included:
  - **Keel**
  - **Frames (“ribs”)**
  - **Exterior hull planking fragments**
- Timbers appeared to be from a sailing vessel dating from the late 1700s to early 1800s
- Timbers were charred – clue that ship had burned – possibly linked with 1778 British attack on New Bedford and Acushnet when 30 to 70 ships were reportedly burned
- Fathom Research of New Bedford hired to document and assess shipwreck remains and site

New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

- Step 1: ship find area surveyed with magnetometer, side scan sonar and sub-bottom profiler
- Additional wreckage found; required removal and documentation

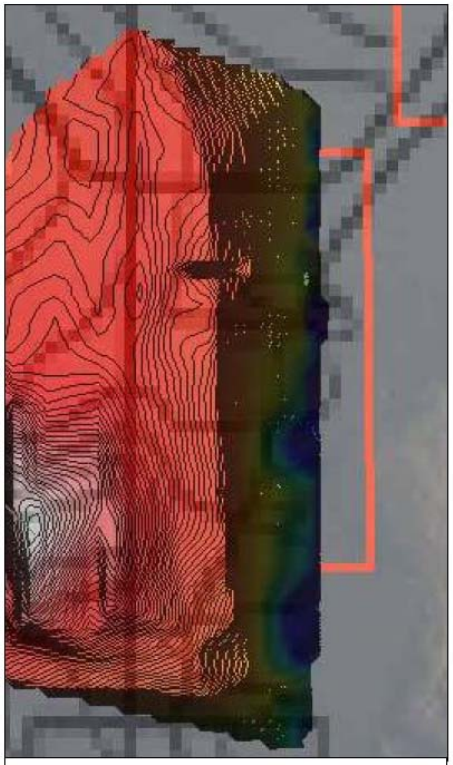


Figure 3-2. Color-coded contour plot of magnetic data recorded during the 2009 geophysical survey of the NBHSS shipwreck study area (image courtesy of CRE).

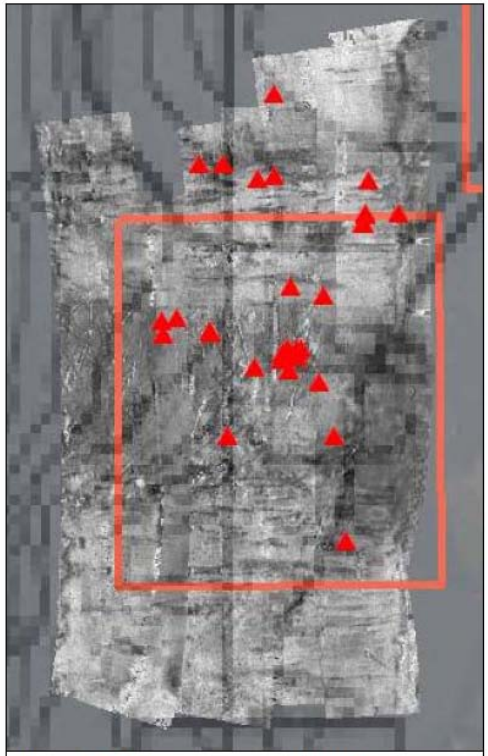


Figure 3-1. Sidescan sonar image of plotted acoustic anomalies at the NBHSS shipwreck survey area (image courtesy of CRE).

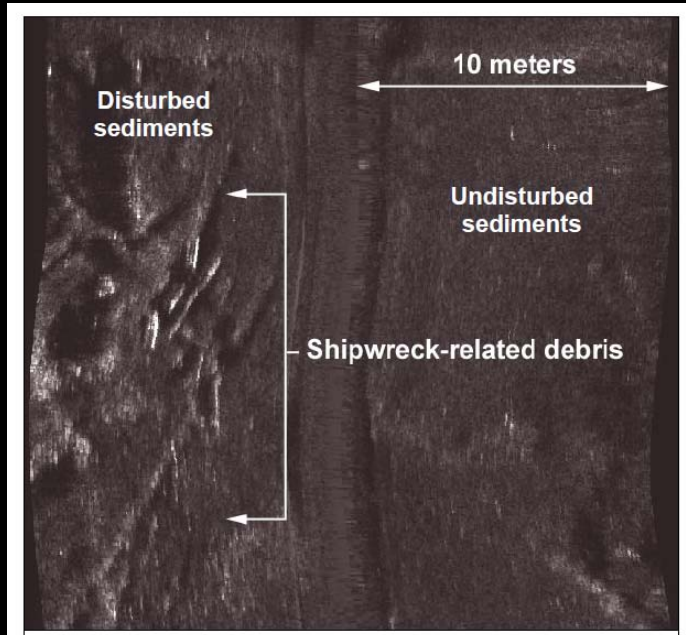


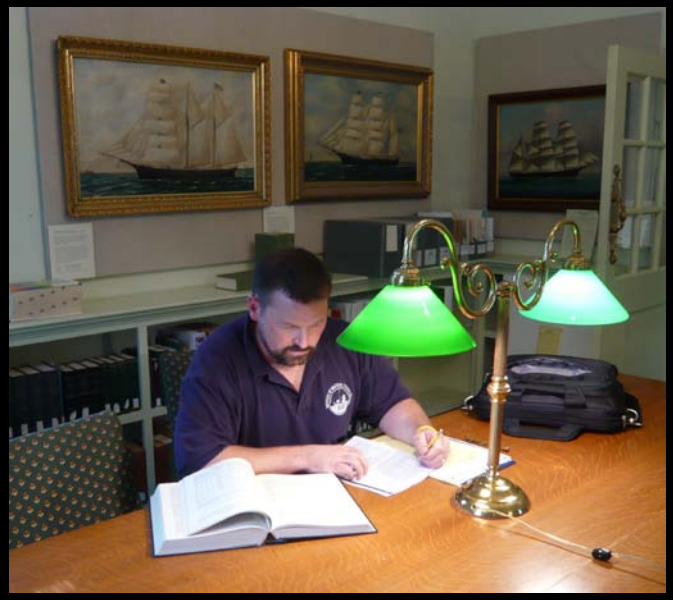
Figure 3-3. Sidescan sonar image clearly showing disarticulated hull timbers and the scarred and disturbed nature of the sediments on the harbor floor at the NBHSS sshipwreck find spot (image after CRE).

New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

• Step 2: recover additional ship timbers from find area under supervision of archaeologist; keep timbers wet until documentation

New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

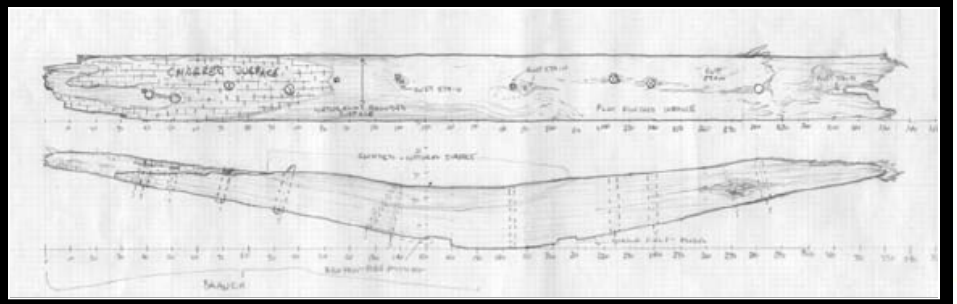
• Step 3: document ship's timbers and conduct archival research to attempt to identify vessel's name and assess its historical significance



New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

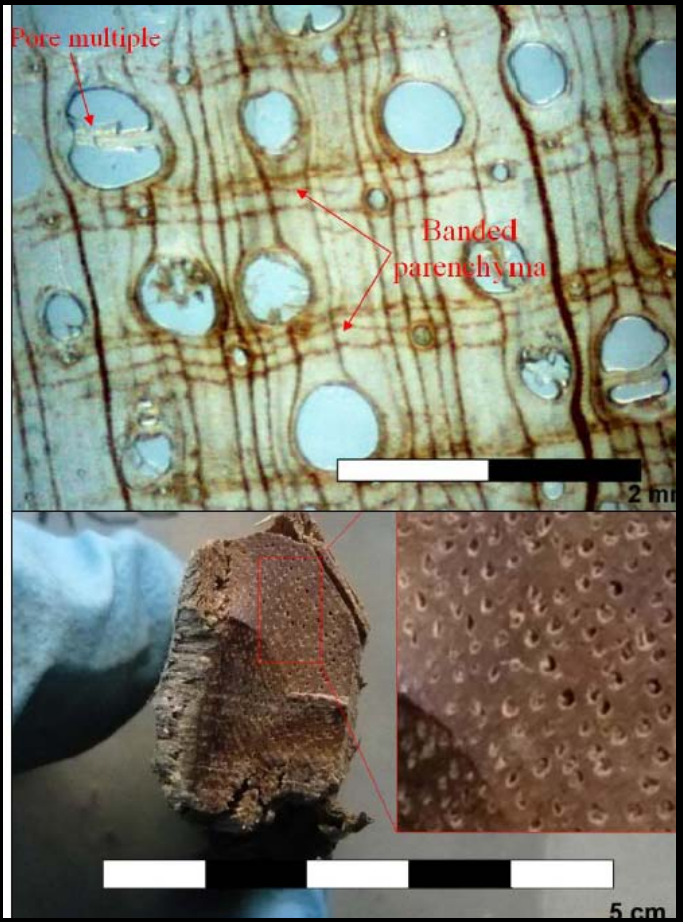
• **Hull timbers:** 45 timbers (i.e., 5 keel fragments, 1 sternpost, 1 stem, 15 floors, 10 large planking fragments, 3 cant frames, 9 futtocks, and 1 miscellaneous timber)

• **Artifacts:** 1 intact hearth brick; 25 brick fragments (two of which were intrusive, the remainder of which were hearth bricks), two vegetable-fiber rope fragments, broken base of a glass case-bottle, iron barrel hoop, a wooden bucket base fragment, two wooden barrel base fragments, a wooden box panel fragment, a square-in-section piece of wood stock, and leather shoe sole (possibly intrusive)

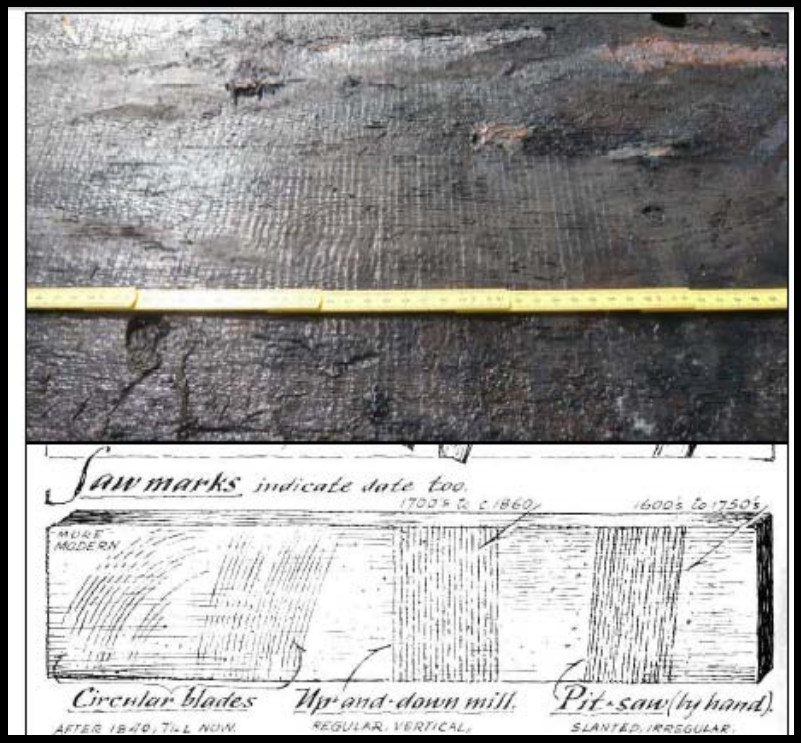


New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

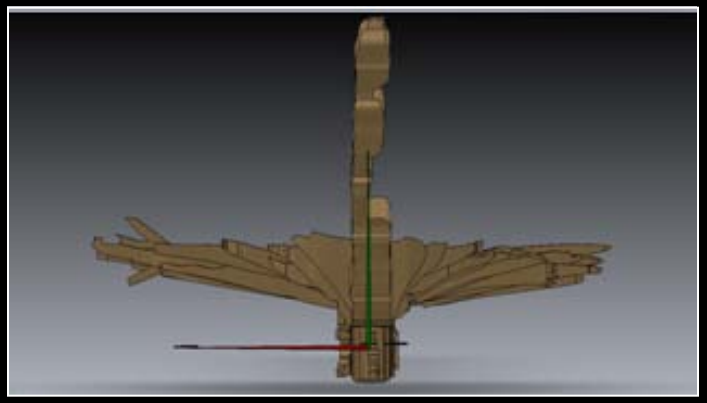
- **Macro/microscopic Analyses of Hull Timbers:**
  - **All "Old Growth" compass timbers consisting of oak and hickory**
  - **Indicated earlier (1700s) date and southern New England to Middle Atlantic origin**



New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

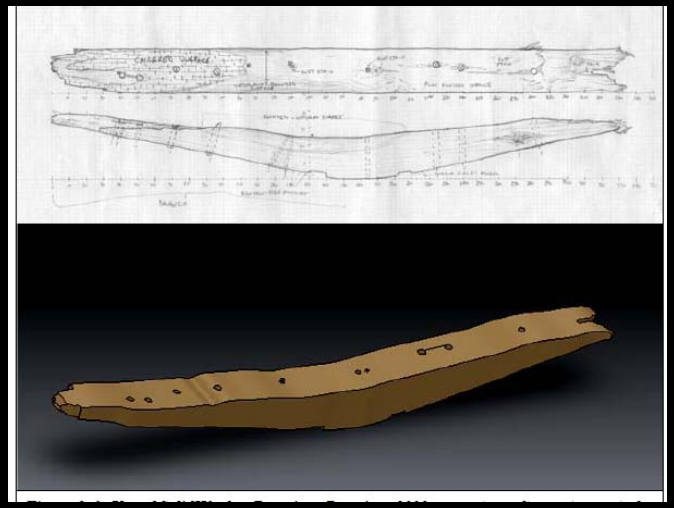


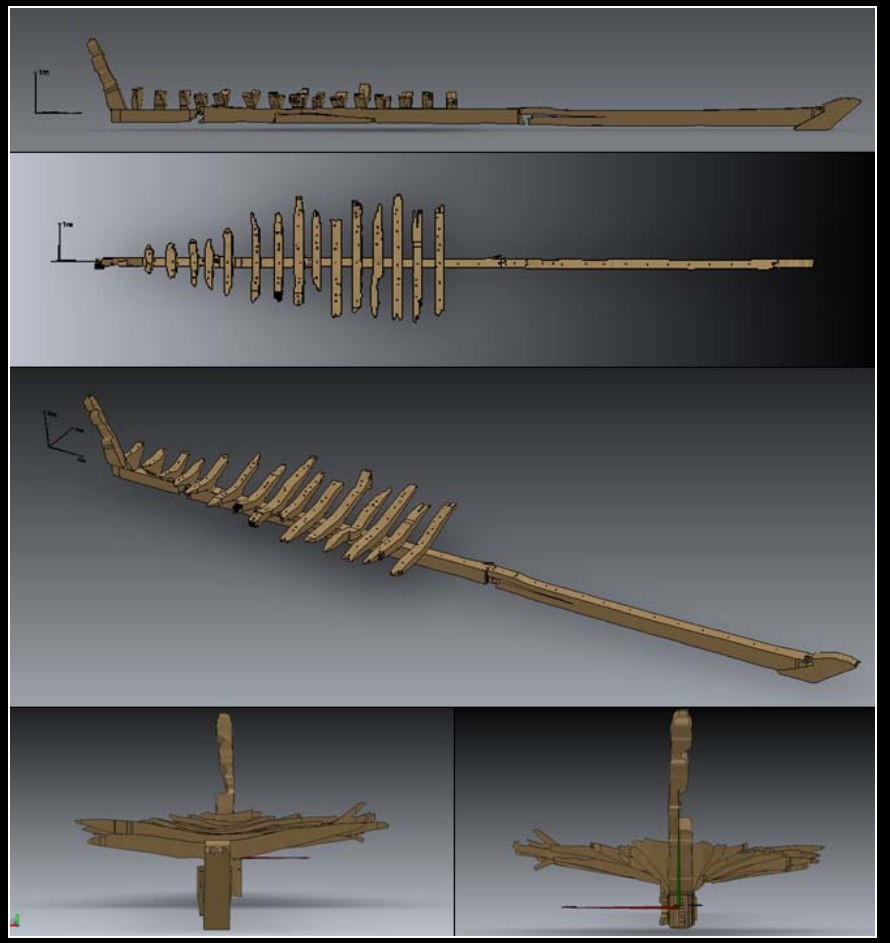
- Saw marks, hull shape and size, use of “old growth” wood, compass timbers, and faceted, hand-cut tree-nails all pointed to a late 18th century date for the shipwreck
- Use of White Oak and Hickory indicates vessel was built somewhere between southern New England and the Middle Atlantic region
- Vessel’s hull shape (full vs. fine or narrow) is suggestive of a merchant ship designed to have increased cargo capacity



New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

- **3-D digital modeling from 2-D drawings:**
  - **Enabled virtual reconstruction of vessel's disarticulated remains**





New Bedford Harbor Superfund Site – Unanticipated Shipwreck Discovery

So, what ship was it?

Archival research to date has not been able to identify the name of the ship; however, archaeological research indicates that the NBHSS shipwreck appears to be that of an abandoned 70 ft long, 100-ton merchantman sloop or schooner used in the inter-colonial/West Indies trades (evidence of wooden hull sheathing indicates usage in southern/tropical waters)