

### The Theories:

The documentary record leaves a few theories that need exploration if the reason for *Commodore*'s loss is to be determined. There are allegations of treason, deliberate scuttling, overloading, seams bursting, blocked pumps, and misunderstood valves. The only two informants following the tugboat's loss who refused to speculate were Crane and Captain Murphy. Archaeologists, historians, and divers at *Commodore*'s wreck site have sought answers to the alternate hypotheses for over two decades. At this time, there is no way to prove or disprove any of the newspapers' theories without excavating the site, an option considered unsuitable at this time within the current research design. Although it is impossible to determine from the documentary record what caused *Commodore* to sink on January 2, 1897, it is possible to partially recreate the ship's final moments from the wreckage strewn on the seafloor. First, however, the site had to be found. The unlikely teaming of an English professor from Jacksonville University and a diver from Daytona Beach led to the discovery of the site believed to be the sunken *Commodore*.

**CHAPTER V:**  
**“SAVE FOR THE TOPS, WHICH WERE OF FOAMING WHITE:”**  
**THE SITE:**

Discovering *Commodore*:

Newspaper accounts at the time of *Commodore*'s loss claim the ship sank “twenty fathoms below the surface, about eighteen miles north of Mosquito Inlet” (*Florida Times-Union*, January 3, 1897). The ship's loss in 120 feet of water more than eighteen miles from shore made locating the lost *Commodore* difficult at best. How then was the vessel found? If *Commodore* suffered the same fate as other “rediscovered wrecks” what salvage work has occurred at the site? This chapter addresses the discovery, state of the site, and salvage attempts made at the site believed to be the lost *Commodore*.

Anecdotal evidence, suggests that the wreck site known to archaeologists and PILHA as the alleged SS *Commodore* has been dived since the 1950s. Local fishing charter captains and divers well into their eighties maintain that they dived the wreck known as the “steamship” for three decades before Don Serbousek “discovered” the site (Don Hampton, Jan Neal, John Lane, Denise Morrisette, personal communications May 2002-June 2004). Fortunately, few artifacts were removed from the wreck site during these early years. Apparently, divers believed the site to be of little interest beyond spear fishing.

Don Serbousek's interest in the *Commodore* wreck site began in the early 1980s when Jacksonville University English professor Peggy Friedman contacted him about searching for the ship Stephen Crane wrote about in “The Open Boat.” In a 1987

interview, Serbousek mentioned that when Friedman approached him about *Commodore*, they both believed the ship could easily be located using Crane's short story ("Found: Crane's 'Open Boat,' A short story leads to an underwater treasure." *Newsweek*, Begley & Belleville 1987:52). Friedman's interest in the vessel came from her love of diving and her career in literature. She felt Crane's short story could be used in conjunction with the historical record to locate the vessel. At the time Friedman approached Serbousek he was already diving a wreck that had yielded numerous bullets, rifles, and a pulley with the date 1885 stamped into it (Begley & Belleville 1987:52). Both believed Serbousek had located the lost *Commodore* (Begley & Belleville 1987:52). Serbousek's dives on the site began in the early 1980s. Unfortunately, Serbousek's dive logs for the *Commodore* site do not begin until 1985. By then, he had begun mapping the site and recovering artifacts (See Figure 8). When asked about the extent of the site in the 1980s, he said there was more machinery extant as well as an anchor to the northwest (Serbousek personal communication May 2003). Serbousek told reporters that the most dangerous aspects of the work were sharks and the great depth of the wreck (Begley & Belleville 1987:52)<sup>8</sup>. Of particular interest to later archaeologists is the article's description of Serbousek's methods: "divers searched 10-foot squares laid out in a grid, using small rakes and the heels of their hands to find artifacts by 'fanning' the sand" (Begley & Belleville 1987:52).

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<sup>8</sup> The site lies in 70-80 feet of water dependent on tide, time of year, and wave action.

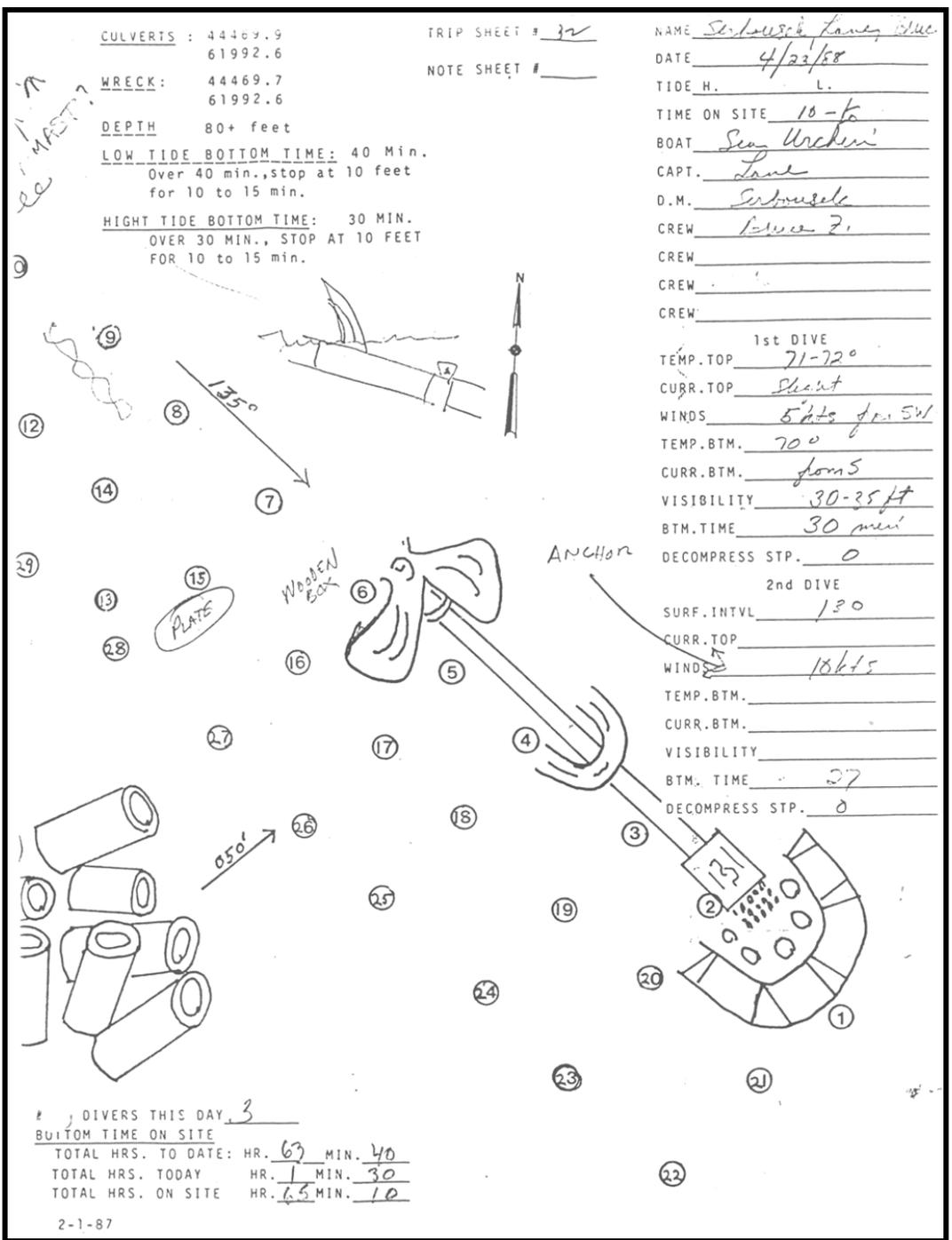


Figure 7: The map above is Serbousek’s site plan for *Commodore*. The numbered circles indicate steel rebar stakes Serbousek placed on the site to provenience artifacts. The change from this map to the archaeological site plan has dramatically altered PILHA’s understanding of the site and its remains. (Image courtesy PILHA)

An avocational archaeologist and diver, Serbousek wanted to map the artifact remains as carefully as possible. To accomplish his goal Serbousek and his divers placed upwards of 30–eight-foot long pieces of steel rebar on the site. The stakes were driven into the soft shell hash bottom and then labeled with a number (see Figure 8). Every artifact recovered from the wreck site was then tagged with the stake number it was near. The map Serbousek generated was then marked with the day’s finds near the appropriate rebar number. Serbousek's method left him with copious pages of dive logs and marked rebar positions showing where artifacts were located. His desire to accurately record artifact provenience may also have had the unwitting effect of helping galvanically protect the wreck site for another ten years. The rebar’s continued corrosion may have acted as a passive electrolytic couple for the engine machinery at the site. Serbousek worked to showcase the wreck site and protect it from the local sport divers. In addition to the artifacts Serbousek acquired from the *Commodore* site (which he loaned to PILHA in 1996 for conservation and curation), he had very clearly defined reasons for wanting to dive the *Commodore*:

Why we work the *Commodore*...My interest is

- 1<sup>st</sup> I feel it should be of very great interest to all Volusia and the outside world.
- 2<sup>nd</sup> We should find some very interesting artifacts around it.
- 3<sup>rd</sup> Possibly we can prove if its steam bilge pumps were sabotaged or not.
- 4<sup>th</sup> We can help [illegible] write the end to the *Commodore* sinking and to Stephen Crane’s “Open Boat.”
- 5<sup>th</sup> It’s a real challenge to dive and salvage the remains of the *Commodore* at that depth and will be a[n] ongoing project for years.  
(Norman Serbousek, Abstract “Discoveries of the Ship I call the *Commodore*,” undated, circa 1987)

PILHA staff and several archaeologists agree with Serbousek's assertion that the site believed to be *Commodore* is of significance and interest to Volusia County, the state of Florida, and the nation. The vessel played an important role during a critical time in Florida, American, Spanish, and Cuban history. The responsibility of the keepers at the Mosquito/Ponce Inlet Lighthouse to rescue *Commodore*'s crew is linked with PILHA's present day responsibility for the wrecked *Commodore* in the form of the site's title held by PILHA.

The wreck site's artifact assemblage and the material previously recovered are of value for material cultural study. Artifacts recovered by Serbousek's team range from a toilet base to hundreds of lead bullets, several concreted rifles, framing components, rubber gasketing material, and what may be the remains of an electrical relay. The total number of artifacts recovered is impossible to know as Serbousek gave away artifacts to interested parties as late as 1997. All of the known extant artifacts date to the appropriate time range for the wreck site. Those artifacts in the possession of PILHA are in archival or wet storage, or on display in an exhibit at PILHA that presents the *Commodore*'s importance and her conservation and preservation by PILHA.

Serbousek's third point, about the bilge pumps, is intriguing. Unfortunately, the vessel remains have been battered heavily by passing hurricanes, storms, and present day looters. At this time, the pumps have not been found in the wreckage, and the resources do not exist to support site excavation.

Serbousek's desire to finish telling the untold story of *Commodore*'s wrecking is one that PILHA and archaeologists also find important. PILHA is finding ways to help

disseminate the information from archaeological work at the *Commodore*. The importance of the site has already led to two exhibits at PILHA, several conference papers by the author, a high school outreach program with the Cambrian Foundation, assistance from Lighthouse Archaeological Maritime Program (LAMP), and numerous public presentations on the archaeology and history of the wreck site and SS *Commodore*.

The fifth reason Serbousek worked the *Commodore* wreck site parallels the interest of the Cambrian Foundation and the Volusia County Reef Team. The site to both organizations is a logistical challenge and a place to test their abilities and equipment. The Cambrian Foundation used the site as a training exercise for deeper and more technical projects. Several of the divers used the site to test new rebreathers and their ability to multitask at depth (See Figure 8). PILHA and archaeologists see the site as a valuable *in situ* resource that needs to undergo no further recovery efforts until proper conservation and curation facilities can be obtained.

The “salvage” of the *Commodore* site is precisely what should be avoided at all costs. Previous salvage at the site by Serbousek and his team has left it unstable and damaged many artifacts that could have helped archaeologists better understand the wreck site. The salvage mentality generated during the early years of Serbousek’s work at the site recently resurfaced when an “endangered” artifact was recovered by a local Reef Team member without any archaeological provenience. The intact brass and glass porthole in question was lying exposed on the seabed. A member believed he was recovering a “one of a kind” artifact. PILHA already had a porthole from the site, and in January 2005, a third example of a porthole was given to PILHA after sitting for

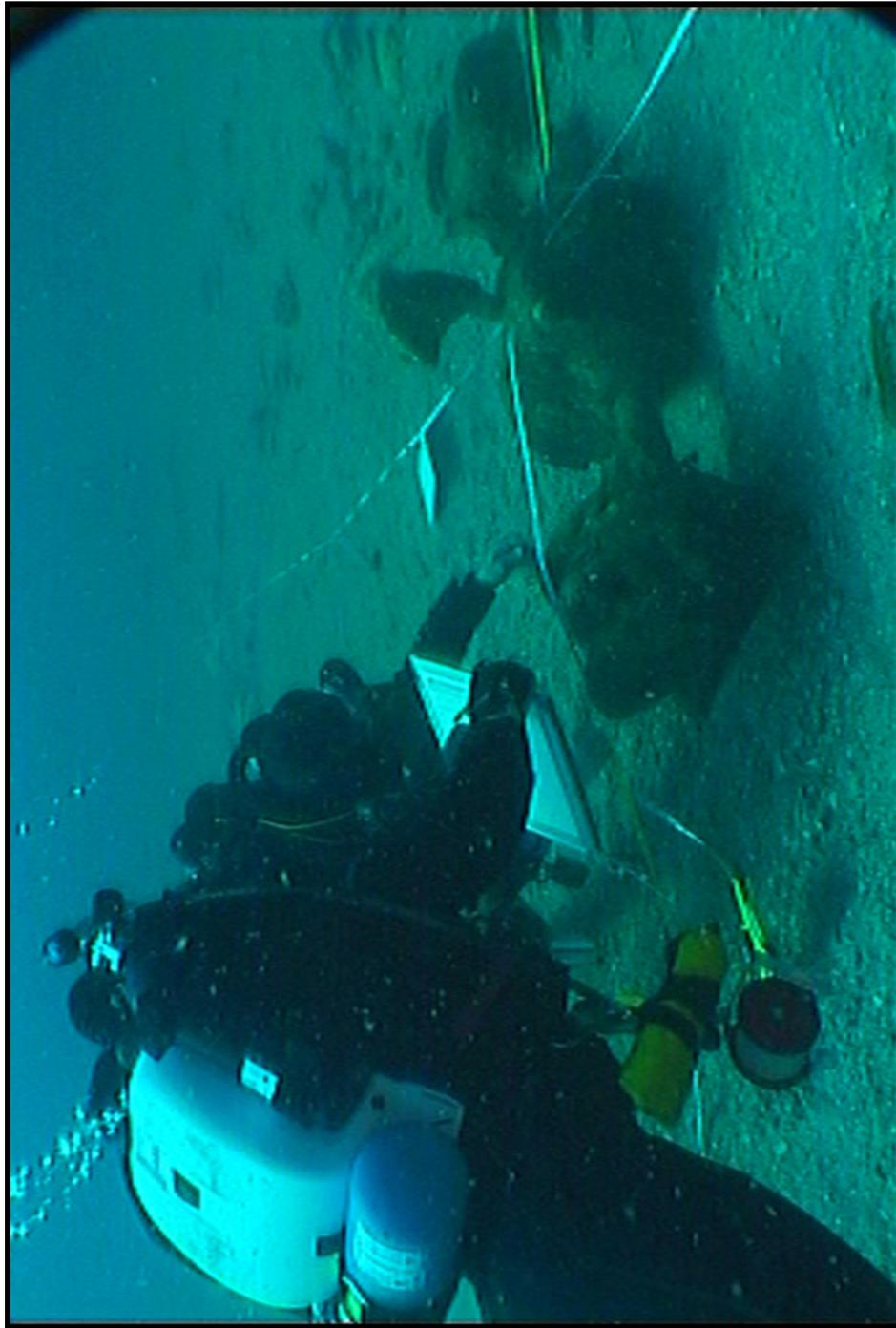


Figure 8: Two research divers from the Cambrian Foundation test out new equipment while mapping the windlass during the 2002 field season. The windlass is probably associated with the donkey boiler located near the engine. (Image courtesy Rick Allen, Nautilus Productions 2002)

twenty-five years under a diver's bedroom dresser. The Volusia County Reef Team is under loose PILHA and archaeological supervision, and is tasked with measuring the angle of the engine remains above the sand and monitoring damage to the site.

Unfortunately, past procedures have left their mark, and members periodically recover artifacts that they feel may disappear if left behind. The regrettable lack of provenience and damage to artifacts from both recovery methods and lack of conservation has caused a rift between the joint titleholders of the site: PILHA and Serbousek.

Serbousek's discovery of the wreck site is a contentious issue in Ponce Inlet, Florida. Many local divers feel they deserve credit for the discovery. Serbousek is the person who identified and began actively "protecting" the wreck site. Serbousek and Friedman's partnership resulted in the information later used by archaeologists and PILHA staff to identify the site, and by the Middle District Court to award ownership in 1998. Originally interested in pursuing an admiralty claim for the wreck site, Serbousek hired lawyers to have the necessary paperwork completed during the early 1990s. Unknown to Serbousek until years later, the paperwork was never completed or submitted. The wreck site remained accessible to any diver interested in diving and salvaging artifacts, which is how several of the artifacts in PILHA's care were recovered. Serbousek and PILHA jointly filed for custody of the wreck site in 1997. PILHA and Serbousek believed that joint ownership would speed the court proceedings if Serbousek did indeed hold a previous admiralty arrest. The 1998 award of joint title by the Middle District Federal Court in Orlando to PILHA and Serbousek resolved Serbousek's fears of unwanted salvage.

The site's salvage largely ceased during the late nineties when Serbousek stopped diving because of medical complications and age. The Volusia County Reef Team continued to dive the site for photographic and fish monitoring purposes. Despite the Reef Team's desire to pursue archaeological work at the site, PILHA was not prepared to undertake a field season until the summer of 2002.

While PILHA was gathering resources for fieldwork on *Commodore*, the Cambrian Foundation offered its services. The Cambrian Foundation is a 501(c)3 non-profit whose mission is to further understanding of the aquatic realm. The Foundation's role in the dive community has helped to foster stronger relationships between technical divers, archaeologists, and scientists on state, federal, and international levels. The donation of the Foundation's talents, time, and logistical support have helped NOAA at the USS *Monitor* National Marine Sanctuary and assisted environmental conservationists, hydrologists, and explorers in Mexico's Yucatan Peninsula. Cambrian's offer of assistance to PILHA and the Volusia County Reef Team came with years of diving experience, and most importantly, no price tag. The Foundation's offer to PILHA eventually resulted in the 2002 field season. When Cambrian and PILHA first began putting together a 2002 field season, neither organization had ever placed a diver on the wreck site. Preliminary planning relied heavily on anecdotal information, Serbousek's initial field maps, and guesswork. Both nonprofits also knew that they needed the services of an archaeologist to develop a research design and oversee the project.

Location:

The remains of the vessel believed to be SS *Commodore* lie in 70-82 feet seawater, approximately twelve miles from Ponce Inlet, Florida. The site, just as Stephen Crane wrote in the "Open Boat," affords a view of the lighthouse that makes it "look precisely like the point of a pin." The wreck lies on a mixture of sand and shell hash with the shell predominant. In some places shell hash depth exceeds 4-6 inches with sand beneath. The site is located near an artificial culvert reef that was mistakenly dropped in the early 1990's, but shows minimal marine life colonization. The site is home to a large game fish population, however, which brings in tourist fishing boats almost daily. Visibility ranges from less than two feet to over one hundred feet depending upon time of year. A deep-water upwelling event from September 2003 through November 2004 from the Gulf Stream dropped visibility on the site to less than 5 feet with a red algal bloom and temperatures below 60 degrees Fahrenheit .

The site stretches more than 110 feet in length and approximately 50 feet at its widest point. The wreck lies in a southeast to northwest orientation with the bow to the southeast as determined from GPS coordinates taken from bow and stern. The site's orientation implies the vessel was running to the southeast towards Cuba when it sank.

Although minimal current is typically observed on site, the wreck's shallow depth paired with a strong storm usually results in storm surge on the bottom. Current and wave actions clearly have an effect as wave ripples are routinely noted in the shell hash. It is unknown at this time what effect the active 2004 hurricane season had on the site.

Most wreckage lies to starboard (the southwest) with a debris field stretching aft of the stern (northwest). Few remains have been noted on the port side (northeast) of the engine and propeller shaft. On the starboard side a small boiler, fire tubes, ammunition boxes, and an anchor have been located (See Figure 9). To port are several small bullets and steam fittings. The minimal coverage afforded the site by the shell hash yields easily to hand fanning and has revealed much wreckage 2-3 inches beneath the overburden. The debris field suggests the vessel sank stern first, rolled to her starboard side, and at some point, the bow broke and swept to the northwest (toward shore).

The site's dominant feature is the engine. Rising 10.4 feet from the bottom, the engine is a key reference for other features on the site. The propeller shaft stretches aft of the engine assembly to the four-bladed propeller; both are iron. The shaft is rapidly corroding based on three years of field data and the propeller is partially buried, but is still upright. The wooden hull associated with SS *Commodore* is rarely visible at the site, but the metal plate and machinery remain. The warm, terredo-rich waters have destroyed a large percentage of the wooden hull remains. The iron remains are in good shape at this time.

Florida's northeast coast is an active hurricane area. Long shore currents, the Gulf Stream, and a soft, sandy and shell hash seafloor typify Ponce Inlet's coastline. The shallow bathymetry and constant estuarine mixing from Ponce Inlet, result in poor visibility and current damage on the *Commodore* site. Scouring, and wave marks on the site indicate that passing waves and storms routinely make their mark on the wreckage.

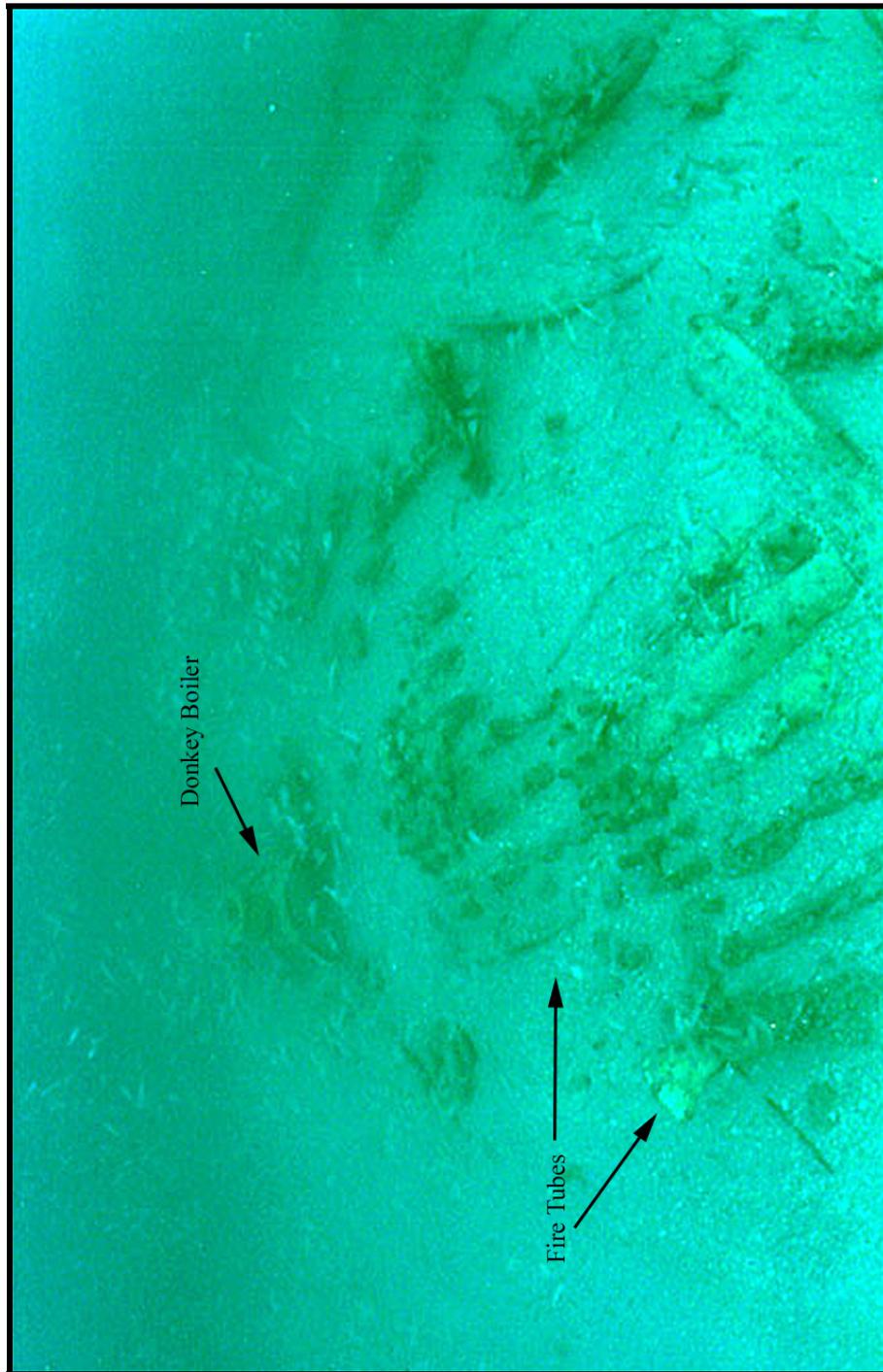


Figure 9: Disarticulated wreckage *in situ*. Note the small donkey boiler that is probably associated with the windlass in Figure 8, and the disarticulated boiler fire tubes. Boiler debris from an explosion litters the site near the engine. (Image courtesy Cindy Burnham, Nautilus Productions 2002)

### Salvage Work Prior to 2002:

Prior to Serbousek's work at the wreck site in the 1980s and 1990s, no one had methodically investigated the wreck site. It is the understanding of PILHA and others now involved in the project that few artifacts were removed from the site prior to Serbousek. This hypothesis has been tested several times by PILHA and staff with the use of newspaper articles, interviews, and requests to Volusia County residents to report for identification any artifact they may have recovered from the site. The call for information came with a request for PILHA to be allowed to photograph and examine the artifact and then return it to its owner. The responses to these calls for information have been minimal, and discussions with dive shop owners seem to indicate the wreck site has not been looted by many local divers. Serbousek's work in the 1980s and 1990s resulted in the recovery of several hundred artifacts. The use of rebar grids on the site paired with Serbousek's memories form the bulk of the information known about artifact provenience from this time.

**CHAPTER VI:**  
**“AND ALL OF THE MEN KNEW THE COLORS OF THE SEA:”**  
**THE ARCHAEOLOGY:**

The discovery of the site alleged to be the remains of *Commodore* in the mid 1980s and the subsequent salvage of the site left a single question remaining: Are these the remains of *Commodore*? Local divers, museum staff, and even the Middle District Court believe the site to be *Commodore*. To answer the question PILHA and Serbousek needed a professional archaeological survey of the site and an assessment of the artifacts. Three years of fieldwork and artifact analysis have resulted in a tested and verified site identity, and given PILHA an opportunity to educate its visitors about maritime archaeology. This chapter follows the *Commodore* Project from 2002-2004. The methodology for fieldwork is presented first, followed by the work conducted in 2002, 2003, and 2004. Finally, archaeological findings, vessel findings, and the smaller artifactual remains are discussed. The findings presented here prove the site believed to be the *Commodore* is indeed the lost SS *Commodore*.

Archaeological work at the site believed to be the Steamship *Commodore*'s remains has been underway since February 2002. A videographer and photographer assisted the archaeologist obtain a general site orientation and documentation which assisted in field planning. A preliminary site survey was made of the wreckage and one roll of photographs was shot. Work began with a field season in May 2002 resulting in a site plan, an engine mosaic, a preliminary artifact analysis, and site recommendations for both future work and conservation. In May 2003, a two-weeks were spent assessing

artifacts for a baseline for conservation needs, drawings of all artifacts in PILHA's possession, and making two reconnaissance dives at the site with archaeological personnel. Work during the summer of 2003 completed the artifact database of PILHA's *Commodore* collection. An April 2004 field expedition involved assistance from the Lighthouse Archaeological Maritime Program (LAMP) at St. Augustine Lighthouse and Museum, Inc. This one-day expedition documented the engine, propeller, and shaft in detailed field drawings and finalized archaeological site identification.

#### Methodology:

The *Commodore* Project's methodology delineated three years of research on the site and with the artifact collection. The project methodology created was a non-disturbance survey, allowing for minimal hand fanning and no artifact recovery. The methodology also accounted for minimal information about the site's sediment layers, a team with little or no archaeological training, and the artifacts already in PILHA's care.

A February 2002 reconnaissance dive at the site guided decisions about mapping methods and baseline type. The February dive resulted in preliminary photos of the site's *in situ* remains and sediment identification. The dive raised questions about running a straight baseline over the site because of the vertical relief of the engine and propeller. With the height of the engine and propeller shaft off the bottom, it made more sense to run the baseline to the starboard side of the wreckage, but parallel to the engine assembly. The offset baseline was anchored with eight-foot long rebar and two turnbuckles to remove slack in the cable. The baseline 0'0" point began twenty feet forward of the

engine remains to encompass remains visible above the sand. The baseline's 170'0" endpoint stretched aft of the propeller and through the site's debris field. The ¼ inch steel baseline was used with a 200-foot long fiberglass construction tape graduated in feet and tenths. Cross lines were laid in and attached to the baseline in ten-foot increments with the exception of the engine grid. The cross lines were anchored beyond the visible wreckage with four-foot sections of steel rebar. Despite efforts to make all cross line lengths uniform, the disarticulated wreckage resulted in several cross lines in excess of thirty-feet in length. The engine grid was a twenty-foot grid on the baseline, and a 15.25-foot grid at the edge of the debris.

The methodology required teams of two to map each grid in plan view to scale, trilaterate major features, and then draw an elevation plan of the grid square. Once a grid was completed, the team moved to the next assigned grid taking care to not excavate the wreck or harm artifacts. Teams were supposed to draw elevation maps of major features within their grids, but the complexity of the assignment for non-archaeologists resulted in few elevation drawings. The only exception to the buddy team protocol involved the videographer who teamed with the site archaeologist.

The mapping methodology was modified to document the engine assembly's large size and intricacy. With only ten divers in the water and a single archaeologist, there was not enough time to map the engine and the site accurately. To address the problem the project videographer, Rick Allen, swam preplanned lanes over the engine assembly from all angles, while the archaeologist focused on mapping machinery such as the propeller and taking basic engine measurements (See Figure 10). This video was

edited and stills removed to create a mosaic of the engine. The remainder of the site while being archaeologically mapped was also video mosaiced over the course of the second week. The video provided a running documentary record of site activities and provided information about the site unseen in field drawings and the February photographs. The method worked well and resulted in 100 percent coverage of the site remains.

The crew's arrival on April 29, 2002 marked the start of ten days on site. Divers were divided into teams of two based on their experience level and their preferred buddies. Over the course of ten days, ten divers logged 3,375 hours mapping. At the end of the project a full site plan was complete and the site cleaned up. Divers used either semi-closed rebreathers or twin tanks with an Enriched Air Nitrox 40 (EAN40) fill.<sup>9</sup> Bottom times averaged 66 minutes and were completed with team decompression. Boat operations took place from the forty-two feet long *Sea Dog Diver*.

The final step in the field methodology required the *Commodore*'s remains be mapped in relation to the shoreline. To accommodate the site's distance from shore GPS coordinates were recorded at baseline endpoints marked with lift bags and used to orient the site to shore.

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<sup>9</sup>EAN40 or Enriched Air Nitrox 40 is a special blend of dive gas that reduces the amount of nitrogen in the diver's back gas (his/her breathing supply) from 78% to 59% and increases the oxygen content from 21% in air to 40%. The decrease in nitrogen and increase in oxygen allows a diver to stay at depth longer and decreases the risk of decompression sickness. For example, a dive on the *Commodore* using air would allow divers only 33 minutes work time. A diver using EAN40 could remain on the bottom working for over an hour provided the gas supply lasted.

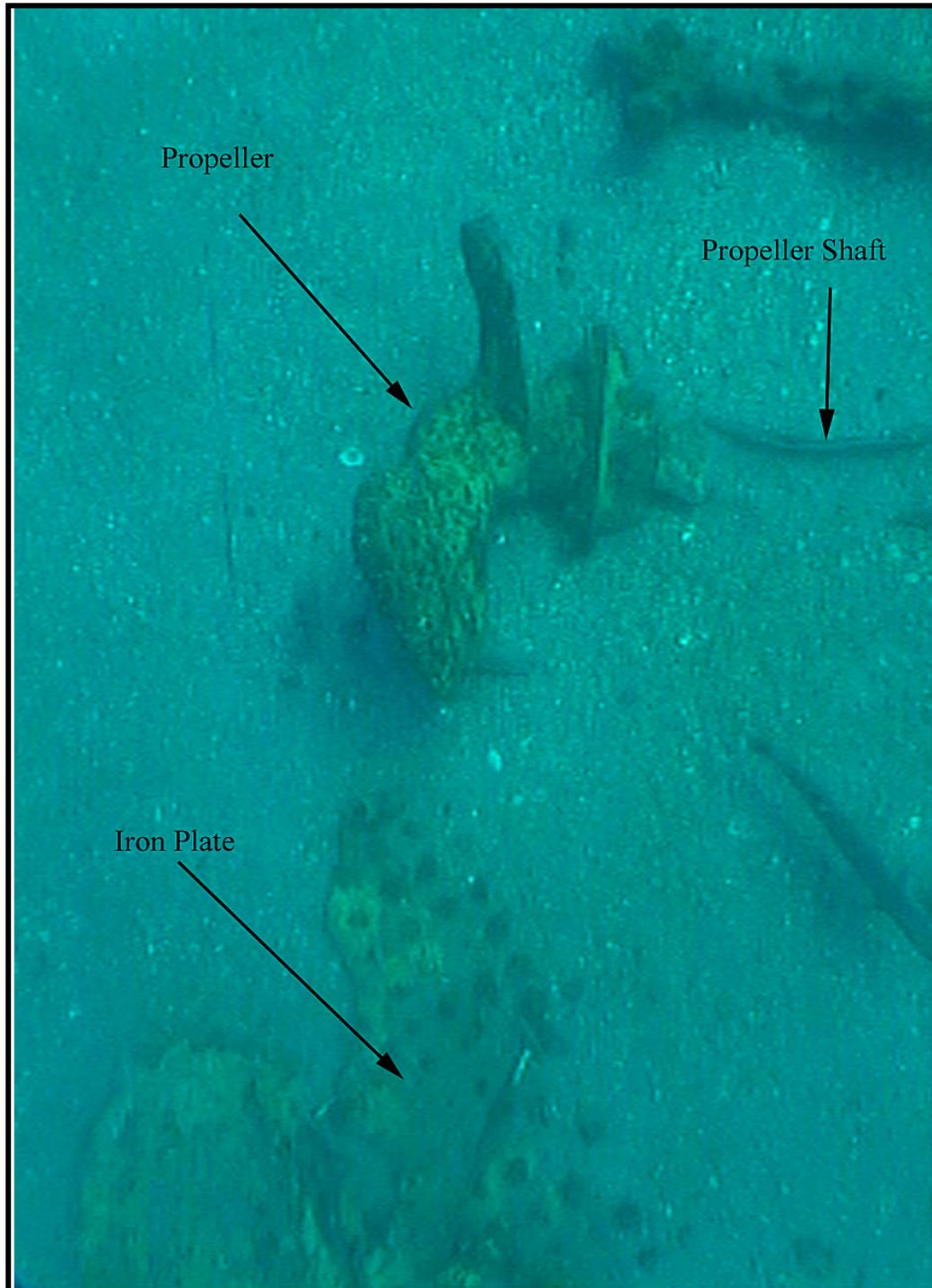


Figure 10: Plan view of the propeller, shaft, and iron plate. Note the iron plate to the bottom left and the collapsed propeller shaft to the right of the propeller. (Image courtesy Rick Allen, Nautilus Productions 2002)

#### Artifact Recording Methodology:

The methodology incorporated the need for artifact study and mediation. PILHA maintains a large collection of artifacts from the wreck site that required conservation and documentation. Proper artifact assessment, documentation, and mediation were an integral part of the project methodology. All artifacts either in dry storage at PILHA's archives or in wet storage would be identified where possible, drawn in feet and tenths, photographed, radiographed, tagged, and inventoried. Artifact information was incorporated into PILHA's digital collections database and recommendations for conservation were given to PILHA for curation.

#### 2002 Season:

Archaeological work began April 29, 2002 when the team arrived in Ponce Inlet. The crew also needed some archaeological mapping training. A mapping class took place on April 29 off the seawall at PILHA Executive Director, Anne Caneer's house. The location was chosen for two reasons: the crew stayed at Caneer's and because of the abundance of cultural material adjacent to the seawall. The abundance of nineteenth and twentieth century bottles, coquina, and chain gave the crew an opportunity to distinguish man-made objects from natural ones in a safe, but partially submerged environment (See Figure 11). The crew was divided into teams of two. Each team had a slate, a tape, and



Figure 11: The *Commodore* Project team practiced archaeological recording off the nineteenth century Pacetti family seawall. The site shows an eighteenth century seawall, with nineteenth and twentieth century seawalls built side by side. Here team members Bob Ogoreuc and Tim Killinger work to map in a coquina block dating to the nineteenth century wall. (Photo courtesy Ponce Inlet Lighthouse Association 2002)

an assigned grid. Over the course of two hours, the teams learned to map quickly, and look for things that “didn’t belong.” The preliminary land training proved invaluable when the teams hit the water on April 30.

The first day at the site, April 30, 2002 resulted in site orientation dives, and the laying of the baseline. The 170-foot baseline was anchored at either end with rebar and tightened with a turnbuckle. Lift bags were used to denote either end of the baseline for surface personnel to mark with GPS. The forward endpoint and zero mark is at the engine. The aft endpoint anchoring the baseline is in the sand 170 feet away. The rebar, and cross line endpoints remain *in situ* as reference points for another field season, and galvanically protect the wreck.

The project remained a pre-disturbance survey with minimal hand fanning. No artifact recovery or excavation occurred, and only minimal disturbance of the seafloor was permitted. No dredging or airlift equipment was on site, and the project was mentioned to as few locals as possible to prevent looting on a site kept out of the public eye for decades. Another aspect of the work was a cleaning of all PILHA’s concreted artifacts and tagging of those in need of radiographic analysis.

Cross lines were installed and distances, angles, and measurements recorded for all cross line endpoints. Archaeological mapping began with the forward-most grids. Following a pre-dive briefing each day the crew divided into buddy teams either returning to previously assigned grids, or moving onto new ones. The entire site was numbered within the grids beginning at the 0’0” point on the baseline with odd numbers

to starboard and even to port. These numbers served to identify work zones for each team on every dive.

The friend teams quickly learned to map their areas to scale. Divers noted unusual features like webbing, rifle casings, or packed cartons on their slates and transferred the information to the main site plan each afternoon. At the close of the first five days of mapping, 30 percent of the site had been mapped, excluding the engine section.

During the second week, the project videographer and another diver arrived as several teammates left. The project videographer spent his time “mowing the lawn” as he moved over the site creating a video mosaic. The video mosaic provided critical detail of the engine allowing the completion of recording by May 10, the project’s end date (See Figure 12). The video mosaics also provided information about the site missed by divers or overlooked because of time constraints.

By the second week, the teams worked faster and more accurately at mapping. Hand fanning in the port side grids between the propeller shaft and baseline uncovered boilerplate and other large features continuing beneath the shell hash. Fanning revealed a fair amount of wreckage such as bullets and iron plate within 3 inches of the sediment’s surface.

The most troubling incident of the field season occurred during the second week. During the night while the field crew was ashore, recreational divers curious about the

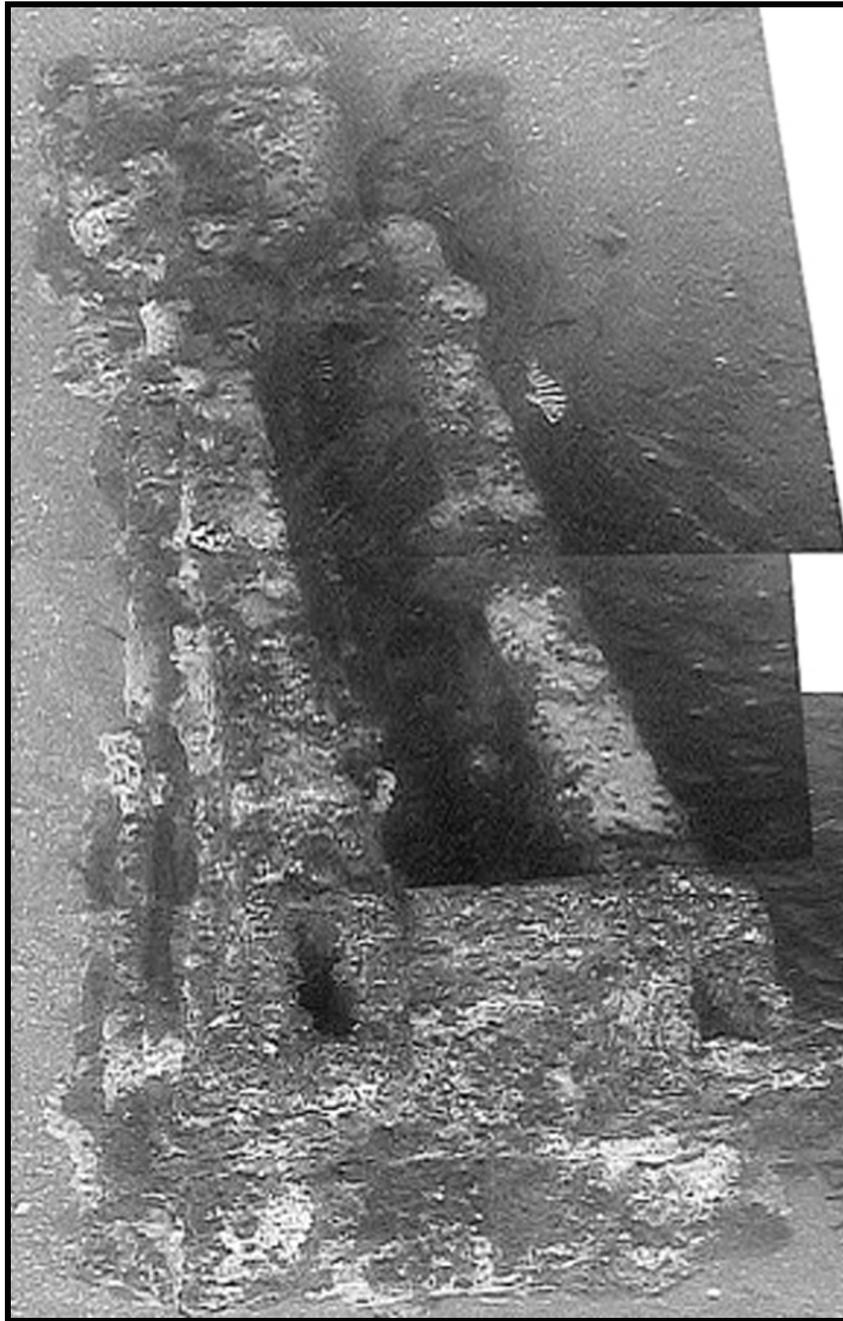


Figure 12: Plan view engine mosaic. Stills pulled from the video mosaic swum by videographer Rick Allen were combined to create this image. Note the condenser and piston mounts at the top of engine. This image was scaled and used to complete the site plan in conjunction with diagnostic measurements. The engine is lying to starboard, and the metal is rubbed smooth where the engine is rotating on the seafloor. (Image courtesy Rick Allen, Nautilus Productions and author 2002)

activity dived the site. The damage caused by recreational divers pounding concretion away, and blowing holes in the sand with scooters is irreparable.

While no excavation or artifact recovery occurred in the 2002 field season, a great deal was learned. The final day at the wreck site the crew recovered all cross lines, the baseline, tapes, and other modern site debris. The rebar was *in situ* as late as May 2004 when last observed and remains a valuable tool for relocating cross-line and baseline endpoints for site analysis and mapping.

The 2002 fieldwork resulted in a detailed site plan for the wreckage believed to be that of SS *Commodore* (See Figure 13). The detailed archaeological survey found no evidence that the site is other than a late nineteenth century site, and trained a series of technical divers in underwater archaeological methods.

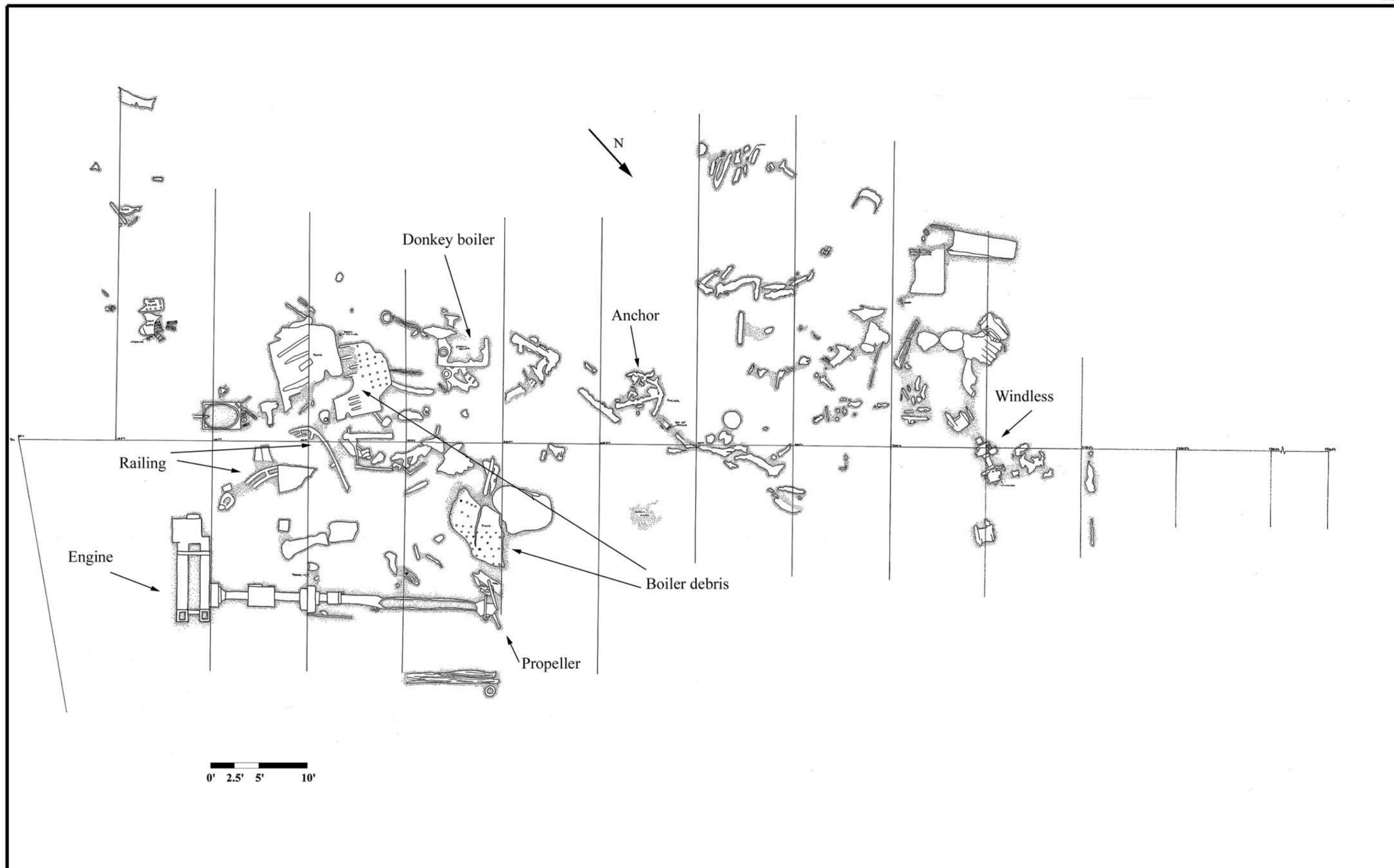


Figure 13: 2002 *Commodore* Project Site Plan. Grids to starboard side, or upper section were oddly numbered, those to port, or the bottom of the page were evenly numbered for the team. Note the southeast to northwest debris trail, and the lack of wreckage forward of the engine. (K.L. Eslinger 2002)