NPS Form 10-900 OMB No. 1024-0018

United States Department of the Interior
National Park Service

804

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

RECEIVED 2280
OCT - 2 2015
Nat. Register of Historic Places
National Park Service

1. Name of Property

Historic name: U-352, shipwreck and remains
Other names/site number: _____
Name of related multiple property listing:
World War II Shipwrecks along the East Coast and Gulf of Mexico
(Enter "N/A" if property is not part of a multiple property listing

2. Location

Street & number: Offshore
City or town: Offshore-Beaufort State: Offshore-NC County: Offshore-Carteret
Not For Publication: ☐ Vicinity: ☐

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this _x_ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property _X_ meets___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

_X_ national **___statewide** **___local**

Applicable National Register Criteria:

_X_ A **___B** **___C** **_X_ D**

10/1/2015

Signature of certifying official/Title: **Date**

National Oceanic & Atmospheric Administration

State or Federal agency/bureau or Tribal Government

In my opinion, the property _X_ meets ___ does not meet the National Register criteria.

Signature of commenting official: **Date**

9/22/2015

Title : ~~SHPO~~ Deputy Secretary/SHPO **State or Federal agency/bureau or Tribal Government**

4. National Park Service Certification

I hereby certify that this property is:

✓ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper 11-12-2015 Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

Private: ☐

Public – Local ☐

Public – State ☐

Public – Federal ☒

Category of Property

(Check only **one** box.)

Building(s) ☐

District ☐

Site ☒

Structure ☐

Object ☐

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
_____	_____	buildings
_____1_____	_____	sites
_____	_____	structures
_____	_____	objects
_____1_____	_____	Total

Number of contributing resources previously listed in the National Register ___0_____

6. Function or Use
Historic Functions
(Enter categories from instructions.)
TRANSPORTATION – WATER RELATED
_____
_____
_____
_____

Current Functions
(Enter categories from instructions.)
VACANT/NOT IN USE
_____
_____
_____
_____
_____

7. Description

Architectural Classification
(Enter categories from instructions.)
_N/A_____
_____
_____
_____
_____
_____
_____

Materials: (enter categories from instructions.)
Principal exterior materials of the property: ____N/A_____

Narrative Description
(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

See Continuation Sheets

Narrative Description

See Continuation Sheets

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

[x] A. Property is associated with events that have made a significant contribution to the broad patterns of our history.

[ ] B. Property is associated with the lives of persons significant in our past.

[ ] C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

[x] D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark “x” in all the boxes that apply.)

[ ] A. Owned by a religious institution or used for religious purposes

[ ] B. Removed from its original location

[ ] C. A birthplace or grave

[ ] D. A cemetery

[ ] E. A reconstructed building, object, or structure

[ ] F. A commemorative property

[ ] G. Less than 50 years old or achieving significance within the past 50 years

Areas of Significance
(Enter categories from instructions.)
MARITIME HISTORY
MILITARY
ARCHAEOLOGY - HISTORIC

Period of Significance
1942

Significant Dates
5 May 1942 (arrived in U.S. waters off North Carolina)
9 May 1942 (sank)

Significant Person
(Complete only if Criterion B is marked above.)

Cultural Affiliation
N/A

Architect/Builder
Flensburger Schiffsbau-Ges, Flensburg, Germany

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

See Continuation Sheets

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

See Continuation Sheets

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

See Continuation Sheets

Previous documentation on file (NPS):

____ preliminary determination of individual listing (36 CFR 67) has been requested
____ previously listed in the National Register
__x_ previously determined eligible by the National Register
____ designated a National Historic Landmark
____ recorded by Historic American Buildings Survey #_____
____ recorded by Historic American Engineering Record # _____
____ recorded by Historic American Landscape Survey # _____

Primary location of additional data:

____ State Historic Preservation Office
____ Other State agency
__x_ Federal agency
____ Local government
__x_ University
___ Other
Name of repository: _National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries (Silver Spring, MD), East Carolina University's Program in Maritime Studies (Greenville, NC), and University of North Carolina's Coastal Studies Institute

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property _61.77635_____

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates

Datum if other than WGS84:_____

(enter coordinates to 6 decimal places)

1. Latitude: Longitude:

2. Latitude: Longitude:

3. Latitude: Longitude:

4. Latitude: Longitude:

Or
UTM References
Datum (indicated on USGS map):

[ ] NAD 1927 or [X] NAD 1983

1. Zone: 18N	Easting:	355,615	Northing:	3,788,748
2. Zone: 18N	Easting:	356,115	Northing:	3,788,798
3. Zone: 18N	Easting:	356,115	Northing:	3,788,298
4. Zone: 18N	Easting :	355,615	Northing:	3,788,298

Verbal Boundary Description (Describe the boundaries of the property.)

U-352 rests 21.8 nautical miles south of Cape Lookout, North Carolina at a depth of 110 feet. The submarine's remains lie outside North Carolina state waters but still in United States' federal waters within the contiguous zone. North American Datum UTM coordinates for U-352 (shipwreck and remains) are 355,865 East 3,788,548 North. This location marks the center of the property. The 61.77635 acre site (a square 500 meters per side with boundary coordinates: northwest 355,615 E x 3,788,798 N, northeast 356,115 E x 3,788,798 N, southwest 355,615 E x 3,788,298 N, southeast 356,115 E x 3,788,298 N) includes the main structure and debris field surrounding the U-boat. See Map 1 and 2 for locational details.

Boundary Justification (Explain why the boundaries were selected.)

The National Register boundaries of U-352 (shipwreck and remains) encompass the footprint of its articulated remains within a square (500 meters per side) to capture disarticulated remains and artifacts that are separated from the main structure. Surveys conducted by the National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries revealed the extents of the centralized structure surrounded by scattered debris set apart from the main structure.

11. Form Prepared By

name/title: Deborah Marx and Joseph Hoyt, Maritime Archaeologists
organization: NOAA/Office of National Marine Sanctuaries
street & number: 1305 East West Hwy Building: SSMC4
city or town: Silver Spring state: MD zip code: 20910
e-mail Deborah.Marx@noaa.gov
telephone: 781-545-8026 ex 214
date: 9/28/15

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location. See page 46 Map 1 and Map 2.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

Photo Log/Index of Photos

Note: Photos 001 through 005 are embedded within the nomination text and labeled within the text as Figure 001, Figure 002, etc.

Name of Property: U-352 (shipwreck and remains)
City or Vicinity: Offshore – Beaufort
County: Offshore - Carteret State: Offshore - NC
Photographer: NOAA Monitor National Marine Sanctuary
Date Photographed: 2008
Description of Photograph(s) and number: Archaeological site map of U-352's wreck site. Photo 001. 1 of 5.

Name of Property: U-352 (shipwreck and remains)
City or Vicinity: Offshore – Beaufort
County: Offshore - Carteret State: Offshore - NC
Photographer: Joseph Hoyt, NOAA Monitor National Marine Sanctuary
Date Photographed: 2008
Description of Photograph(s) and number: Photomosaic of U-352 wreck site in 2008. Photo 002. 2 of 5.

Name of Property: U-352 (shipwreck and remains)
City or Vicinity: Offshore – Beaufort
County: Offshore - Carteret State: Offshore - NC
Photographer: Joseph Hoyt, NOAA Monitor National Marine Sanctuary
Date Photographed: July 2008
Description of Photograph(s) and number: U-352's hull and conning tower. Photo 003. 3 of 5.

Name of Property: U-352 (shipwreck and remains)
City or Vicinity: Offshore – Beaufort Head
County: Offshore - Carteret State: Offshore - NC
Photographer: Advanced Underwater Surveys
Date Photographed: 2011
Description of Photograph(s) and number: Reason 8125 scaled multibeam survey of U-352 wreck site. Photo 004. 4 of 5.

Name of Property: U-352 (shipwreck and remains)
City or Vicinity: Offshore – Beaufort
County: Offshore - Carteret State: Offshore - NC
Photographer: Advanced Underwater Surveys
Date Photographed: circa 2011
Description of Photograph(s) and number: Isometric sonar visualization of U-352 wreck site. Photo 005. 5 of 5

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).
Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Section 7 - Description

SUMMARY

U-352 is the shipwreck and remains of a Type VIIC German U-boat that was sunk by the United States Coast Guard Cutter USCG *Icarus* on 9 May 1942 during World War II. U-352 is significant to American military, maritime history, and historic archaeology as it was the first U-boat sunk by the United States Coast Guard off the American East Coast during the Battle of the Atlantic. U-352 had an overall length of 220.2 feet with a width of 20.4 feet and a depth of 15.7 feet. Launched on 7 April 1942, U-352 completed one full war patrol off Iceland before departing for the United States on 7 April 1942. During its second war patrol off North Carolina U-352 was sunk with 16 of the 48 crewmembers lost during the incident. The remaining 32 men became war prisoners until the end of World War II. U-352's wreck site rests in 110 feet of water 21.8 nautical miles south of Cape Lookout, North Carolina. U-352's extant remains consist of portions of its outer hull, its pressure hull, saddle tanks, bow and stern torpedo tubes and propulsion components. The vessel's longitudinal orientation runs nearly northeast to southwest with the bow located at the northeast end, distinguished by the presence of the bow torpedo tubes and bow dive planes.

SETTING

U-352 sits partially buried on a sandy bottom in 110 feet of water 21.8 nautical miles south of Cape Lookout, North Carolina in an expanse of ocean often referred to as the Graveyard of the Atlantic due to the number of ships that have been lost in these waters. The strength of ocean currents on the site varies widely from nearly imperceptible to very swift. Depending on the current, visibility also varies, but commonly ranges around 40 feet. Summer water temperatures range between 70-80° F, and winter temperatures are typically in the low to mid-60°s F, making the site accessible to recreational SCUBA divers year round. The shipwreck's vertical relief is in stark contrast to the surrounding featureless sandy seafloor. Its structure serves as hard substrate for encrusting marine organisms and provides shelter for many species of marine life.

DESCRIPTION: ARCHAEOLOGICAL REMAINS

U-352's remains rest in one contiguous section on the seafloor. The submarine lies upright on the bottom with a 45° list to starboard. The shipwreck's structure retains the overall shape of the U-boat as constructed. U-352's archaeological remains are 203 feet long and the width varies with an average of 15 feet depending on if the saddle tanks are exposed or not (see Figure 001 and 002). At the bow, most of the outer-hull plating, or fairing, is gone exposing the inner pressure hull and the forward torpedo tubes as well as the port forward diving plan and anchor

windlass. Along the rest of the shipwreck, the outer-hull fairing has mostly deteriorated leaving the intact interior pressure hull exposed. Moving aft there is evidence of the capstan mount, brackets for the forward external torpedo container and high pressure air flask. The forward torpedo loading hatch and battery loading hatch are also present and open (Richards and Hoyt 2014).

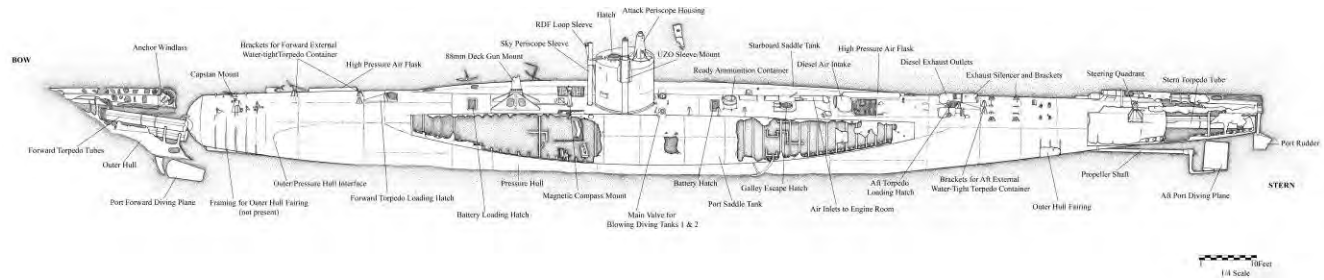


Figure 001. U-352 plan view archaeological site map. Bow is on the left and stern is on the right (courtesy of NOAA Monitor National Marine Sanctuary).

Figure 002. Profile view photomosaic of U-352's wreck site. Bow is on the right and stern is on the left (courtesy of Joseph Hoyt, NOAA Monitor National Marine Sanctuary).

Just forward of the conning tower is the 88mm deck gun mount but the gun is missing, possibly blown off during the attack and sinking events. U-352's conning tower rises ten feet above the hull making it the highest point of relief on the site. Associated navigational and firing equipment still present on and near the conning tower includes the sky periscope sleeve, radio direction finder loop sleeve, magnetic compass mount, attack periscope housing and binocular sleeve/mount. Most of the metal plating surrounding the conning tower is missing with the main hatch open (see Figure 003) (Richards and Hoyt 2014).

Aft of the conning tower the pressure hull is exposed and the port and starboard saddle tanks are visible. The battery hatch, gallery escape hatch and aft torpedo loading hatch are all present but open. The position of the submarine's diesel engine can be determined from the location of the engine room air intakes, diesel air intake, diesel exhaust outlets and exhaust silencer near the high pressure air flask. On the top of the hull are the brackets for the aft external torpedo container but the container is gone. At U-352's stern the stern torpedo tube, steering quadrant, port propeller shaft, port rudder and aft port diving plane are visible. The starboard diving plane, propeller shaft and rudder are buried in the sand (Richards and Hoyt 2014).

Figure 003. U-352's conning tower (courtesy of Joseph Hoyt, NOAA Monitor National Marine Sanctuary).

Although U-352's structural remains are still predominantly intact, divers have illegally collected a large amount of artifacts associated with the site and natural processes have deteriorated other sections of the wreckage. Site reports and photographic documentation confirms the following impacts to the site (Richards and Hoyt 2014):

- In 1978, divers removed the 20-mm anti-aircraft gun.
- In 1979, divers recovered the port propeller.
- All hatch covers have been opened and removed. These include the fore and aft torpedo loading hatches, the fore and aft battery hatches, the galley escape hatch and the main conning tower hatch.

- The radio direction finder loop is missing.
- The sky periscope appears to have been removed but most of the housing remains.
- The 88-mm deck gun was dislodged from its mount during the sinking event and may likely be in close proximity to the wreck, but it is likely buried in sediment.
- The magnetic compass housing has been removed.
- The anchor capstan is missing.
- The forward ready ammunition container is missing.
- The aft ready ammunition container's lid and contents are gone. This may have been the result of the U.S. Navy's unexploded ordnance removal efforts.
- There is deterioration of the outer-hull fairing due to natural processes.
- Sections of the saddle tanks have also deteriorated due to natural processes.
- Some of the stern framing structure has been removed.
- Divers recovered smaller artifacts from the wreck's interior.
- Human remains are still believed to be present on the site. There is evidence divers have disturbed and collected human remains.

Despite the natural and anthropogenic impacts to U-352, the property still retains enough integrity to meet the National Register Criteria A and D and be significant to the nation. Ample archaeological information can still be obtained from the shipwreck and research questions can be answered about its construction, weaponry, sinking and crew. U-352 is a rare example of a Type VII-C German U-boat and its location off North Carolina makes it only one of a handful of its kind off the United States available for study.

SITE INVESTIGATIONS

Almost immediately after U-352 sank that the U.S. Navy salvage vessel *Umpqua* relocated the U-boat and began conducting salvage operations in hopes of entering the submarine to recover secret materials. On 23 May 1942, U-352 was located and visited by Navy diver C.E. Meyer. He reported that the U-352 was sitting on its starboard side at a 60° angel and its bow had a deep gash in it. During subsequent days Navy divers made several additional, but unsuccessful, attempts to relocate the shipwreck (Gentile 1992:199). Strangely, despite the relatively shallow depth, the salvage attempts conducted by U.S. Navy divers were fruitless in regards to gathering intelligence materials. The divers did not recover anything of military importance and salvage operations were discontinued.

After the Navy salvage vessels' departure, a depth charge attack was carried out on the site three months later by HMS *Stella Polaris* after detecting a metallic target near the seafloor. Unknowing if it was U-352 or another German U-boat, several depth charges were also deployed by the Coast Guard cutters *474* and *480*. No evidence of any additional U-boats were found in

the area. The depth charge detonations caused air bubbles and oil to rise to the surface. A diver was then sent to the bottom to assess the situation but he found no submarine although grappling attempts did eventually locate and hook into U-352. Another diver visited the submarine and recovered a 20 foot section of deck grating (Gentile 1992:200-201). Operations were halted due to concerns about unexploded depth charges. Later during World War II, the Navy launched a survey mission to the site and obtained photographs with drop cameras. After this mission U-352 was left undisturbed for decades with the remains of 15 German sailors interred inside.

In 1975, a group of scuba divers from Morehead City, North Carolina relocated U-352's wreck by using the Navy's coordinates. The submarine ended up being a mile and a quarter from the original numbers. Since that discovery, U-352 has been consistently visited by divers. U-352's unexploded ordnance were determined to be an issue during the 1980s and many feared that in order to ensure that these munitions were rendered safe, there was a possibility the site would be demolished and the munitions thus detonated. These concerns were alleviated, however, when the U.S. Navy removed the externally accessible torpedoes and munitions and then welded the access points to the wreck's interior spaces shut. Although these measures were intended to ensure that nobody could interfere with the hazardous materials or human remains located inside the hull, a diver soon pried the welded hatches open leaving the inside of the wreck accessible to divers (Farb 1985:193; Gentile 1992:203; Keatts and Farr 1994:97). As divers regained entry to the wreck, numerous artifacts were looted and human remains were uncovered and disturbed on multiple occasions. Despite the removal of artifacts and features from the site, U-352 still has integrity and is an important historical and archaeological resource as well as a key economic attraction for the North Carolina's diving community.

In 2008, maritime archaeologists and researchers from NOAA's Office of National Marine Sanctuaries' Monitor National Marine Sanctuary, the National Park Service, Minerals Management Service, East Carolina University and the University of North Carolina's Coastal Studies Institute conducted an archaeological investigation of U-352 using scuba diving equipment and standard underwater archaeology recording techniques. The project was conducted after being contacted by the Consul General at the German Embassy in Washington, D.C. who requested NOAA take the lead in carrying out a baseline archaeological investigation of the three U-boats located off North Carolina, U-*85*, U-352, and U-*701*, due to reports that additional illegal salvage might occur in the near future. The research design identified several goals and questions to be addressed during the investigation and assessment of U-352. The project's goals included (Richards and Hoyt 2014):

1) Assess U-352's historical significance and archaeological integrity;
2) Determining if U-352 is eligible for nomination to the National Register of Historic Places;

3) Identify to what degree is site preservation is influenced by environmental formation processes and anthropogenic impacts;
4) Determine whether or not U-352 warrants further investigation;
5) Complete a thorough exterior survey and artifact inventory;
6) Produce a site map for interpretation and as a representation of baseline data for use in follow-up inquiry and future monitoring;
7) Complete a detailed video and photographic survey.

During July 2008, NOAA led the survey to investigate U-352. Project team members generated an accurate archaeological site plan, collected photographs and video footage of the wreckage and compared the levels of preservation between the three U-boat sites within recreational scuba diving depths off the coast of North Carolina. The data products as well as the photographs and video footage will enable archaeologists to monitor the site for continued degradation and illegal artifact recovery.

Documentation of the level of degradation to U-352 was a high priority for the 2008 NOAA survey. Data collected during the expedition was used to compare to earlier representations of the site. It was important to note what degradation was caused by natural sources, due to the site formation processes and what was caused by interference with the site by sport divers and looters. The assessment of impacts will help make educated recommendations for future mitigation efforts. Overall the project identified the following features of U-352 that are believed to be threatened due to anthropogenic processes (Richards and Hoyt 2014):

- Outer hull features including hull plates, fittings and constructional elements
- The remainder of the aft ready ammunition locker
- The anchor windlass
- Various mounts including the 88-mm deck gun mount, the magnetic compass mount and the capstan mount
- U-352's interior compartment has been disturbed, however there may still be a great deal of threatened cultural material inside including personal effects, human remains, dials, gauges, placards and hull fittings

During the Monitor National Marine Sanctuary's 2011 Battle of the Atlantic expedition, U-352 was revisited and surveyed using high resolution multibeam sonar (see Figure 004 and 005). This survey provided NOAA with a detailed geographically accurate site image as well as a 3D point cloud model of the shipwreck that can be used for advanced three dimensional visualization (Richards and Hoyt 2014).

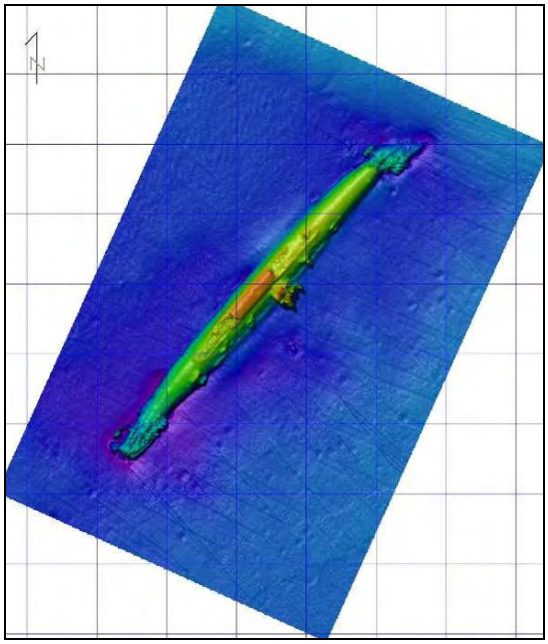


Figure 004. Multibeam sonar image of U-352 from NOAA's 2011 survey (courtesy of Advanced Underwater Surveys).

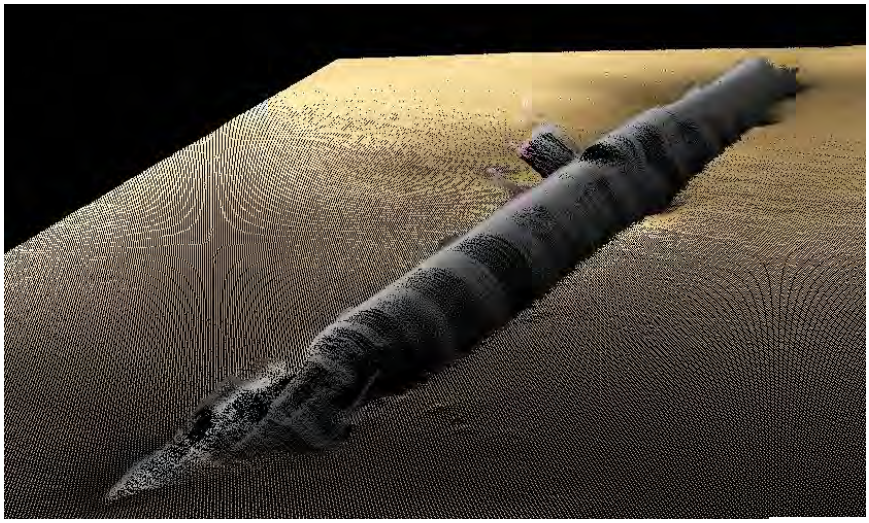


Figure 005. Isometric sonar visualization of U-352 wreck site (courtesy of Advanced Underwater Surveys).

NOAA's expeditions to U-352, in 2008 and 2011, were part of a larger multi-year project to research and document a number of historically significant shipwrecks lost in the Battle of the

Atlantic off North Carolina during World War II. The project's overall goal is to raise awareness of a war that was fought so close to the American coastline and to preserve our nation's maritime history. This effort was also undertaken to determine baseline preservation values, initiate and support ongoing historical and archaeological research in North Carolina and to evaluate the significance of this collection in consideration of expanding the Monitor National Marine Sanctuary off North Carolina. Work has included diver surveys and mapping to generate site-plans and photomosaics, as well as remote sensing surveys using multibeam and ROV/AUV technology. Project collaborators include the Bureau of Ocean Energy Management, National Park Service, East Carolina University, the University of North Carolina Coastal Studies Institute and the State of North Carolina (Richards and Hoyt 2014).

During World War II there were twelve German U-boats lost off the United States' East Coast and Gulf of Mexico (see Table 1). To date, eight of them have been located and of those five have been archaeologically documented. U-352 was the second U-boat lost and one of three Type VIIC U-boats lost from the group. NOAA's archaeological work on the U-boats off North Carolina, U-*85*, U-352, U-*576*, and U-*701*, is increasing our knowledge about U-boat design, construction and use as well as allowing a better interpretation of the Battle of the Atlantic and its role in military and maritime history.

Name	Date Lost	Wreck Located	Archaeological Assessment	Type	Cause of Sinking	Survivors	Casualties	Wreck Location (State)
U-*85*	4/14/1942	Yes	Yes	VIIB	Gunfire From Ship	0	46	North Carolina
U-*352*	5/9/1942	Yes	Yes	VIIC	Depth Charge From Ship	32	16	North Carolina
U-*701*	7/7/1942	Yes	Yes	VIIC	Depth Charge From Plane	7	39	North Carolina
U-*576*	7/15/1942	Yes	Yes	VIIC	Depth Charge from Plane and Gunfire/Ramming From Ship	0	45	North Carolina (in deep water)
U-*166*	7/30/1942	Yes	Yes	IXC	Depth Charge From Ship	0	52	Louisiana (in deep water)
U-*521*	6/2/1943	No	No	IXC	Depth Charge From Ship	1	51	Virginia/Maryland
U-*550*	4/16/1944	Yes	No	IXC/40	Depth Charge and Gunfire From Ship	12	44	Massachusetts
U-*869*	2/11/1945	Yes	No	IXC/40	Depth Charge From Ship	0	56	New Jersey
U-*548*	4/19/1945	No	No	IXC/40	Depth Charge From Ship	0	58	Massachusetts
U-*879*	4/30/1945	No	No	IXC/40	Depth Charge From Ship	0	52	North Carolina/Virginia
U-*857*	4/x/1945	No	No	IXC/40	Unknown	0	59	
U-*853*	5/6/1945	Yes	No	IXC/40	Depth Charge From Ship	0	55	Rhode Island

Table 1. U-boats lost during World War II off the United States East Coast and Gulf of Mexico.

Section 8 – Statement of Significance

SUMMARY

The Type VIIC German submarine U-352 is significant to American maritime history, military, and historic archaeology as was the first U-boat sunk during World War II by the United States Coast Guard off the American East Coast. U-352 is one of a number of shipwrecks associated with the Battle of the Atlantic off the United States East Coast and Gulf of Mexico that together become an assemblage of historic properties that collectively tells a more complete story of this significant period in American history. In order to make these broader connections to our maritime landscape individual properties like U-352 are examined, characterized and weaved into the larger story. Once the United States entered World War II Germany extended its *handelskrieg* ("trade war") to American shores by dispatching U-boats across the Atlantic Ocean to sink Allied merchant shipping. For a brief period in 1942 German U-boats attacks went unchallenged but by the spring of 1942 U.S. and Allied forces started to gain the upper hand and deter and even sink a number of U-boats including U-352. Overall, U-352 was the second U-boat sunk during World War II off the United States East Coast and Gulf of Mexico. On 9 May 1942 the Coast Guard Cutter USCG *Icarus* depth charged and sank U-352 off North Carolina while the submarine was on its second war patrol. Lieutenant Maurice D. Jester, commander of the *Icarus*, was awarded the Navy Cross for his actions in sinking U-352. There were only six Coast Guard recipients of the Navy Cross during World War II. Sixteen of U-352's 48 crewmembers perished while the remaining 32 men became war prisoners until the end of World War II. U-352's archaeological remains are significant at the national level under National Register of Historic Places Criteria A and D with the period of significance being the year 1942.

For a more comprehensive synopsis of the Battle of the Atlantic's significance reference the World War II Shipwrecks along the East Coast and Gulf of Mexico Multiple Property Submission (MPS) (NPS reference number 64501184). U-352 is included as one of the Axis military losses associated with the Battle of the Atlantic in the document.

U-352 qualifies for listing under National Register of Historic Places Criteria A and is significant in the area of Maritime History based upon U-352's association with the Battle of the Atlantic off the United States' East Coast during 1942. The presence and success of submarines during World War II, exemplified by the German U-boat, changed the face of naval combat and history. The battlefield now extended not only from the air and water's surface but also to the underwater and seafloor landscape. Instead of the Axis powers targeting enemy military assets, they focused on non-military components, the merchant vessel from Allied and neutral countries. Until the escorted convoy system and adequate offensive and defensive forces were put into place the merchant mariners were vulnerable while transiting along the United States' coast. The sea-

lanes, especially around North Carolina's Outer Banks, were the lifeline of maritime commerce during World War II and the area subsequently became the epicenter of conflict as German U-boats, like U-352, prowled the coast in search of targets.

U-352 qualifies for listing under National Register of Historic Places Criteria A and is significant in the area of Military based on U-352's association with Allied and Axis military operations off the Outer Banks during World War II in 1942. The U-boat played a significant role as an enemy combatant of the United States and as a symbol of the German war machine that, for six months in 1942, nearly crippled America's ability to supply its allies in Europe with crucial war materials to defeat the Axis powers. U-352's shipwreck, just miles outside of Beaufort Inlet, North Carolina, serves as a poignant reminder of a time when victory during World War II was not certain and as a reminder of the sacrifices paid by the mariners of multiple nations and by friend and foe alike off the shores of the American mainland. It is also significant to American maritime history as it was the first U-boat sunk by U.S. Coast Guard forces off the U.S. East Coast during World War II.

U-352 qualifies for listing under the National Register of Historic Places Criteria D and is significant in the areas of Archaeology – Historic based upon the site's likelihood to yield information import to history. Archaeological investigations of the submarine's hull, machinery, armament and cultural artifacts may provide information that will confirm or contradict historical records. It is significant in that U-352 is a Type VIIC German U-boat, of which 660 were built but only a few have been located and archaeologically assessed. While a large number of Type VIIC U-boats were built, U-352 is important because it is only one of three Type VIIC U-boats off the United States' East Coast and Gulf of Mexico and only one of two within recreational scuba diving depths making long term site investigations feasible. Archaeological data will also provide details about the sinking at the hands of the USCG *Icarus*' crew off North Carolina. Thirty-three of U-352's 48 man crew survived its wrecking and became the first German prisoners of war taken by the United States after the declaration of war with Germany. U-352's remains are an important physical reminder of World War II off North Carolina and future study of the site will continue to record the site's overall characteristics, its extents, anthropogenic impacts and material culture.

HISTORICAL SIGNIFICANCE

The U-boat was one of the most effective tools used by the Germany military during World War II. It inflicted severe damage on Allied shipping until convoy systems and anti-submarine patrols could gain the upper hand. German commanders believed that if they interrupted or even stopped merchant vessel traffic, especially in the North Atlantic and along the United States' East Coast and Gulf of Mexico, then it could remove the United Kingdom and United States

participation in the war or at minimum reduce their war efforts. In turn, Germany invested vast amounts of money and manpower to support their U-boat campaigns that targeted the Allied flow of food, goods and military supplies during the Battle of the Atlantic. It had been proven during World War I that U-boats were a valid weapon and their success during World War II laid the foundation for modern submarine warfare (Westwood 1984:7).

The German Navy, under Admiral Karl Dönitz, built many different U-boat types with varying degree of numbers produced per type but the Type VII U-boats accounted for 61% of all German submarines built under Hitler's reign. They were designed as submersible torpedo boats that relied on their ability to stay underwater for long periods of time as their greatest strength. It was the largest class of U-boat with 704 launched and sinking the majority of Allied and neutral shipping during World War II. Type VII U-boats trace their roots back to the UB III model built during World War I. U-352 was a Type VIIC, a subgroup of the larger Type VII class. The VII subtypes included VII (also called a Type VIIA), VIIB, VIIC and C-41, VIID and VIIF. There were 660 Type VIIC U-boats built, the largest number of all the Type VII submarines constructed. The 660 included 572 Type VIIC and 88 VIIC/41 which were identical to the Type VIIC but a higher grade of steel was used making them capable of great operational depths and stronger hulls with greater resistance to depth charges.

> . . . the Type VII was a specific compromise between tactical requirements, financial constraints and the terms of the 1935 London Naval Treaty. . . . the Type VII was in all an outstanding design, meeting and in many cases exceeding the requirements of the U-boat command, thanks to careful planning, well-specified requirement, the basing of the design on a tried and tested predecessor from the previous war, at not the least the skills of its designers Schürer and Bröking (Krzysztalowicz 2011:39).

In general all Type VII U-boats were constructed with a cylindrical pressure hull with a bow and stern section welded on as well as an outer hull casing to increase seaworthiness. A conning tower, also known as an attack center, sat amidships and served as the main entry and exit point and place for instruments and periscopes. Internally, the U-boats had the following seven compartments: forward torpedo and crews quarters, officers and chief rates quarters, control room, senior rates quarters, diesel engine room, electric motor room and aft torpedo compartment.

Two four-stroke six cylinder diesel engines, either manufactured by MAN or Germaniawerft F 46, propelled the U-boats at the surface while electric motors, designed by AEG, BBC, or SSW,

were used while underwater. Primary weaponry typically included 14 G7a or G7b torpedoes (four tubes in the bow and one in the stern) with auxiliary armament consisting of an 88mm SK C35 naval deck gun and 20mm FlaK 30 anti-aircraft gun. Lastly, the Type VII could carry 36 TMA or 39 TMB mines laid through its torpedo tubes (Westwood 1984:8-10).

> Hence the specific mix of imagination (Dönitz), necessity (something was needed to win the war and to realize Dönitz's plans) and logic (using an old but tested model) resulted in what was arguably the most perfect and effective of all instruments of war used in the Second World War - the Type VII U-boat with all its variants (Krzysztalowicz 2011:12).

U-352 was a Type VIIC U-boat, a refinement of the Type VIIA and Type VIIB design. The Type VIIC represented the majority of the U-boats built and used during World War II. "For the first time the changes introduced in the new version were aimed not at eliminating any observed shortcomings in the boat but to create space for mounting new electronics equipment" (Krzysztalowicz 2011:20). The Type VIIC was the workhorse of the German submarine fleet and an effective fighting machine. It served in almost all the areas where U-boats operated around the world and proved to be a successful model with the first type to use active sonar to detect mines and targets. The Type VIIB could not accommodate the active sonar equipment so that was one of the main reasons for the development of a new variant, the Type VIIC.

Between 1938 and 1944, 660 Type VIIC U-boats were built with the first one, U-*69*, launched on 19 September 1939 and the last one, U-*1210*, launched on 9 February 1944. The Type VIIC were commissioned toward the end of the "First Happy Time" near the beginning of World War II and were still in service when Allied anti-submarine efforts ultimately defeated the U-boat campaign in late 1943 and 1944. Fifteen shipyards built the Type VIIC U-boats in the German cities of Vegesack, Lubeck, Emden, Kiel, Danzig, Hamburg, Wilhelmshaven, Stettin and Rostock. The model became the standard U-boat of the German Navy and the main player in the Battle of the Atlantic.

Overall, the Type VIIC were two feet larger at 220 feet in length overall with the same width as Type VIIB at 20 feet 4 inches. They displayed 769 tons at the surface and 871 tons submerged. Their surface range was 8,500 nautical miles at 10 knots with a maximum surface speed of as 17.7 knots and their maximum submerged speed of 7.6 knots. This was slightly less than the Type VIIB because of the Type VIIC's increased length and tonnage making it heavier. The saddle tanks were also slightly longer and fitted with quick dive tanks inside to facilitate emergency maneuvers. The slight enlargement of the submarine allowed a larger conning tower

that sat above the control room. A more efficient ventilation system was also installed on the Type VIIC that used less lubricating oil and a new Junkers air compressor ran off the diesel engine instead of electric motors, as in earlier types (Krzysztalowicz 2011:20).

Due to the large number of Type VIIC U-boats it is thought that they were "mass produced" with little variation between individual submarines. In actuality they were not identical because of the number of shipyards who built them. Each shipyard had its own variation based on individual styles.

> Differences between individual submarines, often unnoticeable by an unskilled observed, were obvious to an expert. Series built submarines were by no means clones of each other. This was because, although they were based on a set of blueprints, they were constructed in different shipyards, each of varying capabilities and experience, which immediately adapted those plans to their capabilities (Krzysztalowicz 2011:34).

To familiarize U-boat crews with an individual submarine's finer details, Dönitz created the Baubelehrung program. This program required U-boat crewmembers to be involved in the submarine's construction for those who would soon serve aboard them. The men would learn about the U-boat even before it was in the water and be intimately acquainted with its operation well before heading to battle at sea.

U-352'S CAREER (1941 to 1942)

U-352 was built at the Flensburger Schiffsbau-Ges shipyard of Flensburg, Germany and carried the city of Flensburg's crest on its conning tower. The shipyard built (and were later commissioned into the Kriegsmarine) 20 Type VIIC (U-*351* through U-*370*) and eight Type VIIC/41 U-boats (U-*1301* through U-*1308*). The company, started in 1872, is still in business today. U-352's keel was laid down on 11 March 1940, but the vessel was not launched until 7 May 1941. U-352 had an overall length of 220.2 feet with a width of 20.4 feet and a depth of 15.7 feet. With so many Type VIIC U-boats manufactured, one company could not supply all the diesel engines needed, so there were options for the engine model available for U-352. The builders equipped it with Germaniawerft F46 supercharged diesel engines which generated 1,400 horsepower at 470 to 490 rpm. Its two AEG GU electric motors were only used while submerged. The electric motor's power was stored in two battery banks made up of sixty-two AFA 33 MAL 800 E cells. Battery life was 20 hours before needing to be recharged from the diesel engines. The submarine was commissioned on 28 August 1941 with the Feldpost Number

45 428 and designed to carry 60 men (4 officers and 56 enlisted men) (Krzysztalowicz 2011:21; Wynn 1997:232).

Command of U-352 was given to Kapitänleutnant Hellmut Rathke who was born in Czychen, East Prussia on 3 December 1910. Rathke was a member of the Naval Officers Class of 1930 and eventually took a position as the Course Leader of Torpedo School at Murwik from May 1939 through June 1940. After this short tenure at the Torpedo School at Murwik, he took a new station as a Staff Officer at the Naval Command Station in Calais until October 1940, whereupon he returned to his former role at the torpedo school until April 1941. From April 1941 through July 1941, Rathke attended U-boat training school. Unlike many other U-boat Kapitänleutnants, Rathke did not participate in a training cruise as a pupil, but was instead awarded command of U-352 almost immediately upon graduation from U-boat school.

In July 1941, Rathke and U-352's crew began Baubelehrung. Upon completion of Baubelehrung a month later, Rathke took full command of U-352 on 28 August (USONI 1942:5; Busch and Röll 1999:207). By January 1942, Rathke and his crew had completed training in the Baltic and were ready to begin patrol duty. On 15 January 1942, U-352 moved from Kiel, Germany to Bergen, Norway, where the crew set out for their first patrol on 20 January. U-352 and 12 other U-boats formed a fleet called Group Schlei, which was ordered to converge on an area West of Rockall and begin seeking out convoys. This patrol was recalled shortly after its deployment, however, due to the newly launched offensive against shipping off the East Coast of the United States. Dönitz was eager to put heavy pressure on this newly opened theatre since he was already receiving favorable reports on shipping along the U.S. Eastern Seaboard. After five days, five U-boats in Group Schlei quickly returned to St. Nazaire, France and began preparing for deployment to American waters (USONI 1942:5; Wynn 1997:232).

U-352 was not one of the five called back to St. Nazaire. U-352 along with the remaining seven U-boats from Group Schlei were redirected to Iceland, the Faroes and Scotland. U-352's crew then spent several uneventful weeks at sea. Although Rathke attempted to carry out at least one attack against merchant shipping, he was thwarted by the depth charges of Allied escort vessels. Eventually U-352 was forced to return to port to resupply after not successfully attacking any merchant vessels on its first war patrol. After 38 days at sea, U-352 pulled into port at St. Nazaire on 26 February to begin the process of taking on provisions and making preparations for the vessel's next assignment (USONI 1942:5; Wynn 1997:232).

Shortly after the bombing of Pearl Harbor, Germany joined Japan in declaring war on the United States and America was immediately drawn into World War II and forced to fight a war on two fronts. Since most large U.S. naval vessels were quickly allocated to fight the war in the Pacific Theater or escorting convoys on the high seas off the coast of Europe, the American Eastern

Seaboard and Gulf Coast were left virtually unprotected. This lack of security was quickly recognized and capitalized upon by the German Navy and U-boats began making the voyage across the Atlantic to prey upon merchant freighters and tankers off the American coast as early as January 1942.

U-352 ARRIVES OFF THE U.S. (1942)

As the battle along the American East Coast progressed, the waters off North Carolina, particularly near Cape Hatteras, were recognized by the Germans as the best geographical location in which to intercept unprotected merchant vessels. These waters were also recognized by America and America's allies as some of the deadliest waters for merchant mariners to traverse in every theater of war. In seven short months, from January 1942 to July 1942, the waters off the Outer Banks would become some of the most contested waters in the world and German submarines would sink dozens of merchant freighters and tankers in this location while losing very few of their U-boats in return. U-352 was among the second wave of Type VII U-boats to be deployed to American waters. Due to the large expanse of area the U-boats had to patrol, the German wolf-pack tactics were not as practical and many vessels, though still in loose groups, were operating individually.

In St. Nazaire, U-352 underwent minor repairs and was made ready for a second cruise. This time, Rathke and U-352 were heading to the U.S. East Coast. U-352 departed St. Nazaire on 7 April 1942 to begin its first patrol in American waters. On the crossing Rathke was resupplied by the U-tanker U-*459*, which was one of the first U-boats designed for the purpose of serving as a resupply vessel. The transfer of fuel to U-352 successfully took place approximately 500 miles Northeast of Bermuda, after which a fully provisioned U-352 set course for its operational area off the North Carolina coast (USONI 1942:5; Hickam 1989:182; Blair 1996:575; Wynn 1997:232).

> By the time the U-352 started to work her way toward Cape Hatteras, Rathke was satisfied with the training, spirit and morale of his crew. He decided to stay on the surface and look for targets as he moved south. If what he had been told was true, they should be fat and easy (Hickam 1989:183).

Beginning on 5 May 1942, far out to sea east of Cape Hatteras, North Carolina, U-352 began a game of cat-and-mouse with the Swedish merchant vessel *Freden*. The merchant vessel was moving slowing and not zig-zagging so all the U-boat crew had to do was wait it out until their paths crossed. Rathke moved into a firing position twice, firing a torpedo from the bow both times, but each torpedo missed. Despite the torpedoes missing the merchant vessel, the *Freden*'s

crew believed they would eventually be hit and decided to abandon their ship. When they stopped to launch the lifeboats, the U-352's crew passed them without noticing and somehow lost contact of the merchant ship. Meanwhile, since *Freden* was not sinking, its captain gained confidence in their survival and ordered his crew back aboard their vessel to resume their voyage (Wynn 1997:232).

The following day, Rathke again came across *Freden* after conducting a search to regain contact. Over the next several hours, Rathke fired two more torpedoes, both of which missed. *Freden*'s crew again panicked and took to their lifeboats once more. In the process of launching the lifeboats the *Freden*'s stern was turned towards U-352 to present a smaller target. Rathke mistook this for *Freden* running off at full speed and gave up his pursuit. *Freden*'s crew drifted in their lifeboats all night, but on the morning of the 7 May, they happened to pass by the completely undamaged *Freden* and once more boarded their vessel and continued on their journey. This incredible event has been described as an "amazing story of ineptitude on both sides" (Wynn 1997:23).

As the *Freden*'s crew was re-boarding their ship U-352 surfaced and its lookouts spotted a twin-engine plane a few miles away headed directly for the submarine. Rathke pushed the lookouts aside, jumped down the conning tower hatch and ordered a crash dive. After an hour he surfaced U-352 and did not see any threats in the area anymore. Over the next several days U-352 moved closer to the Outer Banks, attacking three more freighters with still no success. On 7 May, Rathke encountered another airplane. This time the plane spotted the U-boat and dropped bombs on them but to no avail. U-352 changed its operating zone and moved to the 20 meter line off Cape Lookout where previous U-boat crews had encountered greater success (Hickam 1989:185-186).

U-352 DEMISE (9 May 1942)

On 9 May 1942, Rathke initiated the engagement that would ultimately end in U-352's demise. Rathke spotted, what at first he believed to be a small freighter, but later realized it was the 165-foot U.S. Coast Guard Cutter USCG *Icarus*, which was on antisubmarine patrol off Cape Lookout, and decided to attempt to sink the cutter. As U-352 closed in for an attack, the *Icarus*' crew got a sonar contact shortly before they saw and heard a torpedo exploding off their vessel's port quarter. Rathke fired at *Icarus* but the torpedo either malfunctioned and detonated at the end of its run or hit the sea bottom as they were in only 110-120 feet of water. In hopes of avoiding detection by *Icarus*' anti-submarine devices, Rathke took the U-boat to the location of the torpedo explosion and grounded his submarine (USONI 1942:7; Hoyt 1978 123; Hickam 1989:188; Blair 1996:575; Wynn 1997:232).

Icarus' commander, Lieutenant Commander Maurice Jester, reacted immediately and sent out a spread of eight depth charges, which damaged U-352 so severely that its crew decided to try and play dead and lie still on the bottom in the hopes of going unnoticed. Inside the U-boat, the first few depth charges destroyed the periscope and killed one of the officers (Lieutenant Ernst) in the conning tower as well as smashing in the control room gauges. U-352's interior spaces were now littered with broken gear, the lockers had burst open and all lights, except the emergency ones, were damaged. There is evidence that the electric motors were also taken out of service, making the U-352 a sitting duck and un-maneuverable. Jester observed air bubbles on the surface so he continued dropping depth charges as the U-532 was drifting underwater with its bow up and stern scrapping the bottom until finally coming to rest. On U-352's exterior, its deck gun and a good portion of the conning tower's metal plating had been blown off and one of its buoyancy tanks was also ruptured.

Ultimately, Rathke was forced to surface his U-boat. As U-352's crew made preparations to scuttle their submarine, several crewmembers began emerging from the conning tower ready to jump overboard. Fearing that the German submariners may attempt to use their deck guns, the U.S. Coast Guard sailors aboard *Icarus* opened fire with their deck and machine-guns, which resulted in the deaths of several of U-352's crewmembers. The guns also damage the submarine's hull and conning tower (USONI 1942:7; Hoyt 1978, 123; Hickam 1989:188-190; Blair 1996:575; Wynn 1997:232).

As U-352 sank, the majority of the crew were able to escape the stricken submarine but 16 were ultimately lost. The *Icarus* quickly departed the scene for approximately one hour to await instructions on how they should proceed. They then returned to the site and collected 33 survivors. U-352's machinist mate, Gerd Russel, died aboard *Icarus* shortly thereafter. The *Icarus* steamed to the U.S. Navy Yard in Charleston, South Carolina and arrived on 10 May. Gerd Russel was buried with military honors in Post Section, grave No. 18 at the National Cemetery in Beaufort, South Carolina. The U-352's survivors were the first German submariners captured by American forces in World War II. Once on shore they were interrogated by U.S. military forces before being sent to various prisoner of war camps for the war's duration. Unfortunately, The U.S. Office of Naval Intelligence obtained very little useful information from the U-352's crew (USONI 1942:7; Hoyt 1978, 123; Hickam 1989:188; Blair 1996:575; Wynn 1997:232; Gentile 1992:198-199).

CONCLUSIONS

Although U-352 was not one of the more successful German U-boats during World War II, as it did not even sink or damage any vessels, it nevertheless played an important part in the Battle of the Atlantic. U-352, as a Type VIIC U-boat, represented the workhorse submarines of the

German Navy that nearly crippled Allied shipping throughout the world. U-532 is significant also because it was the first U-boat sunk in American Waters by a U.S. Coast Guard vessel and the U-boat's crew comprised the first prisoners of war captured from a U-boat that was sunk in American waters. USCG Cutter *Icarus*'s successful attack was a great victory for the U.S. coastal patrol forces and demonstrated that servicemen from all branches of the U.S. military were beginning to learn how to defeat the German U-boats.

Although the successful removal of U-boats from American Waters would take several more months, U-352's sinking reinvigorated the coastal patrols and helped signal the end of the German U-boat's ability to attack merchant vessels in American waters with impunity. U-352's wreckage stands as a testament of this historic engagement and as a sign of the dedication of U.S. military forces in eliminating a foreign threat during World War II. Today, the wreck site is likely the most frequently visited U-boat shipwreck off the coast of North Carolina and, as such, it a important economic driver for cultural resource tourism of the Outer Banks and helps support the local recreational diving community.

There are 22 submarines listed on the National Register of Historic Places or listed as a National Historic Landmark (see Table 2). The H.L. *Hunley*, I-*169*, and U-*1105* are the only three shipwrecks included in that list. The majority of the submarines are from the United States (17) with additional properties from Japan (3) and Germany (2). The two German U-boats, U-*1105* and U-*505*, date from World War II and are a Type VIIC and IXC respectively.

The U-*1105*, also known as the *Black Panther*, was surrendered at the end of World War II on 10 May 1945. It was turned over to the United States and eventually made its way to New Hampshire where it was the focus of salvage and towing tests where it was intentionally sunk and raised several times. Eventually, during a test on 19 September 1949, a depth charge cracked its pressure hull and sank the submarine. It now lies near Piney Point, Maryland in the U-*1105* Black Panther Historic Shipwreck Preserve and is a popular dive site. The U-*505* was captured by American forces on 4 June 1944 off West Africa and taken to Bermuda after gathering valuable intelligence materials. It too made its way to New Hampshire where it was abandoned for several years before being donated in 1954 to the Museum of Science and Industry in Chicago, Illinois. In order to gain intelligence about U-boats U-*1105* and U-*505* were stripped of a lot of their components. Unlike the previous two U-boats, U-352 was sunk during active duty during World War II. Its shipwreck and remains are significant and represent a Type VIIC U-boat in in an operational state with a majority of its original features intact and available for study.

National Register Number	Name	National Register (NR) or National Historic Landmark (NHL)	State	Nationality	Type	Service Period	Property
78003412	H. L. HUNLEY	NR	SOUTH CAROLINA	USA		1863-1864	Shipwreck
89001428	HA. *19* (Midget Submarine)	NHL	FLORIDA	Japan	A Kō-hyōteki-class	1938-1941	Vessel
99001706	HA. *62-76* (Midget Attack Submarine)	NR	GUAM	Japan	C Kō-hyōteki-class	1944	Vessel
76002267	I-*169* (part of Truk Lagoon Underwater Fleet, Truk Atoll)	NHL	FED. STATES	Japan	KD6a / I-168 class	1935-1944	Shipwreck
00001602	U-*1105* (aka Black Panther)	NR	MARYLAND	Germany	VIIC / 41	1944-1949	Shipwreck
89001231	U-*505*	NHL	ILLINOIS	Germany	IXC	1940-1944	Vessel
89001077	USS ALBACORE (AGSS-*569*)	NHL	NEW HAMPSHIRE	USA		1953-1980	Vessel
78002458	USS BECUNA (SS-*319*)	NHL	PENNSYLVANIA	USA	Blao class	1944-1969	Vessel
08000947	USS BLUEBACK (SS-*581*)	NR	OREGON	USA	Barbel class	1957-1990	Vessel
82000149	USS BOWFIN (SS-*287*)	NHL	HAWAII	USA	Blao class	1942-1971	Vessel
08000477	USS CAVALLA (SS-*244*)	NR	TEXAS	USA	Gato class	1943-1969	Vessel
89001229	USS CLAMAGORE (SS-*343*)	NHL	SOUTH CAROLINA	USA	Blao class	1945-1975	Vessel
86000087	USS COBIA (SS-*245*)	NHL	WISCONSIN	USA	Gato class	1943-1970	Vessel
86000088	USS COD (SS-*224*)	NHL	OHIO	USA	Gato class	1942-1971	Vessel
08000863	USS CROAKER (SS-*246*)	NR	NEW YORK	USA	Gato class	1943-1968	Vessel
86000086	USS DRUM (SS-*228*)	NHL	ALABAMA	USA	Gato class	1940-1968	Vessel
76002270	USS LIONFISH (SS-*298*)	NHL	MASSACHUSETTS	USA	Balao class	1943-1971	Vessel
79002653	USS NAUTILUS (SSN-*571*)	NHL	CONNECTICUT	USA		1954-1980	Vessel
86000089	USS PAMPANITO (SS-383)	NHL	CALIFORNIA	USA	Blao class	1943-1971	Vessel
04001502	USS RAZORBACK (SS-*394*)	NR	ARKANSAS	USA	Balao class	1944-2001	Vessel
72001566	USS SILVERSIDES (SS-*236*)	NHL	ILLINOIS	USA	Gato class	1941-1969	Vessel
86000090	USS TORSK (SS-*423*)	NHL	MARYLAND	USA	Tench class	1944-1968	Vessel

Table 2. Submarines listed on the National Register of Historic Places or listed as a National Historic Landmark (http://www.nps.gov/nr/research/index.htm).

WRECKSITE MANAGEMENT

As a sunken foreign military vessel, not otherwise abandoned, disposed of or had its title transferred, U-352 is still owned by the Federal Republic of Germany. In legal succession to the former German Reich, the Federal Republic of Germany, as a rule, sees itself as the owner of formerly Reich-owned military assets, such as ship or aircraft wreckages. Furthermore, 16 crewmembers perished during its loss and human remains have been located on the shipwreck site, therefore the wreck is considered a military war grave. Those who would engage in unauthorized activities directed at sunken State craft, like U-352, are advised that disturbance or recovery of such craft should not occur without the express permission of the sovereign government retaining ownership. On 2 February 2004 the U.S. State Department published a

notice in the Federal Register (Public Notice 4614) stating that, "The U.S. will use its authority to protect and preserve sunken State craft of the United States and other nations, whether located in the waters of the United States, a foreign nation, or in international waters." For more information about the U.S. Policy on Sunken Warships see Federal Register Volume 69, Number 24 from 5 February 2004 pages 5647-5648 (http://www.gpo.gov/fdsys/pkg/FR-2004-02-05/html/04-2488.htm).

NOAA's Office of National Marine Sanctuaries (ONMS) and the Federal Republic of Germany, through the German Embassy in Washington D.C., are in consultation on how to manage U-352. Discussion have taken place to better coordinate efforts to document the wreck's physical remains, develop a long term management plan, assist with nominating the site to the National Register of Historic Places and partner with the local community for education and outreach initiatives to share U-352's story. The German Navy and ONMS have common interests in the protection and preservation of significant underwater cultural heritage such as the U-352. The agencies recognize the historical and archaeological significance of the submarine its associated artifacts. Coordination and collaboration between the agencies will improve the ability to protect, preserve, and manage U-352 for the enjoyment of present and future generations. As the Monitor National Marine Sanctuary is 74 nautical miles southwest from the U-352 shipwreck, ONMS staff and resources, also provided by its Maritime Heritage Program, have an increased capacity for responsible research and stewardship activities.

Section 9 – Bibliography

Blair, Clay
1996 *Hitler's U-boat War: The Hunters 1939-1942*. Random House, New York, NY.

Blair, Clay
1998 *Hitler's U-boat War: The Hunted 1942-1945*. Random House, New York, NY.

Busch, R., and H. Röll
1999 *German U-boat Commanders of World War II: a Biographical Dictionary.* Naval Institute Press: Annapolis, MD.

Farb, Roderick M.
1985 *Shipwrecks: Diving the Graveyard of the Atlantic*. Menasha Ridge, Hillsborough, NC.

Gentile, Gary
1992 *Shipwrecks of North Carolina from Hatteras Inlet South.* Gary Gentile Productions, Philadelphia, PA.

Hickam, Homer H.
1989 *Torpedo Junction: U-boat War off America's East Coast, 1942*. Naval Institute Press, Annapolis, MD.

Hoyt, E.P.
1978 *U-boats Offshore: When Hitler Struck America*. Stein and Day, New York, NY

Hoyt, Joseph, James P. Delgado, Bradley Barr, Bruce Terrell, and Valeria Grussing
2014 Graveyard of the Atlantic: An Overview of North Carolina's Maritime Cultural Landscape. NOAA's Office of National Marine Sanctuaries. Maritime Heritage Program Series: Number 4. Silver Spring, MD.

Keatts, H., and G. Farr
1994 *U-boats*. Pisces Books, Houston, TX.

Krzysztalowicz, Marek
2001 *Type VII: Germany's Most Successful U-Boats*. Naval Institute Press, Annapolis, MD.

Richards, Nathan and Joseph Hoyt (editors)
2014 Battle of the Atlantic Archaeological Fieldwork 2008-2013: Preliminary Findings and Data Products. Interim report prepared by NOAA's Office of National Marine Sanctuaries on file at the NOAA's Monitor National Marine Sanctuary, Newport News, VA.

Stern, Robert C.
1991 *Type VII U-boats.* Arms and Armour Press, London.

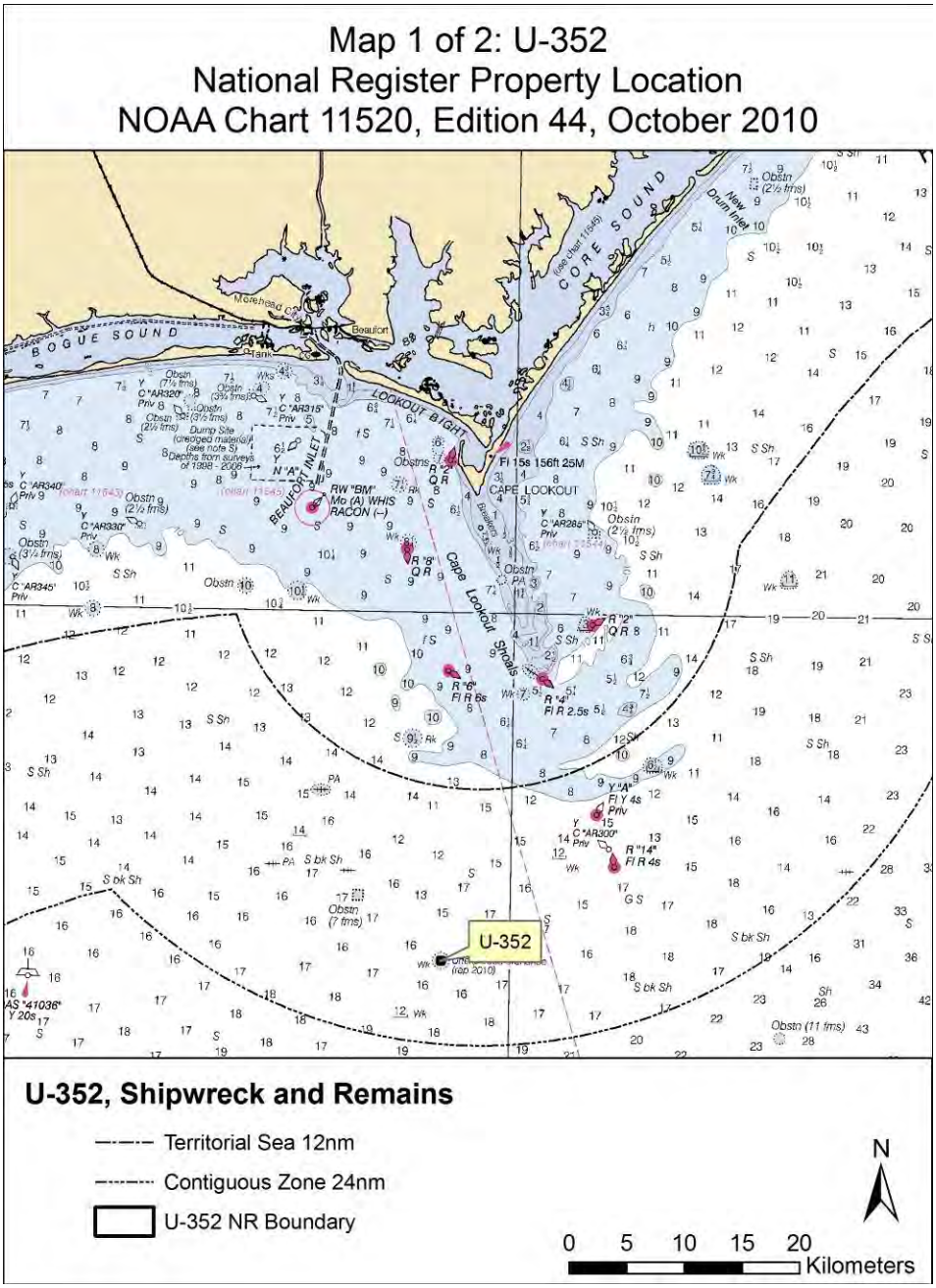
Stick, David
1952 *Graveyard of the Atlantic: Shipwrecks of the North Carolina Coast*. University of North Carolina Press, Chapel Hill, NC.

United States Navy Office of the Chief of Naval Operations. 20 May 1942. Report on U-*85* from Op-16-F-9 to the Director <http://www.uboatarchive.net/U-85A/U-85Op-16Report.htm>. Accessed 10 March 2015.

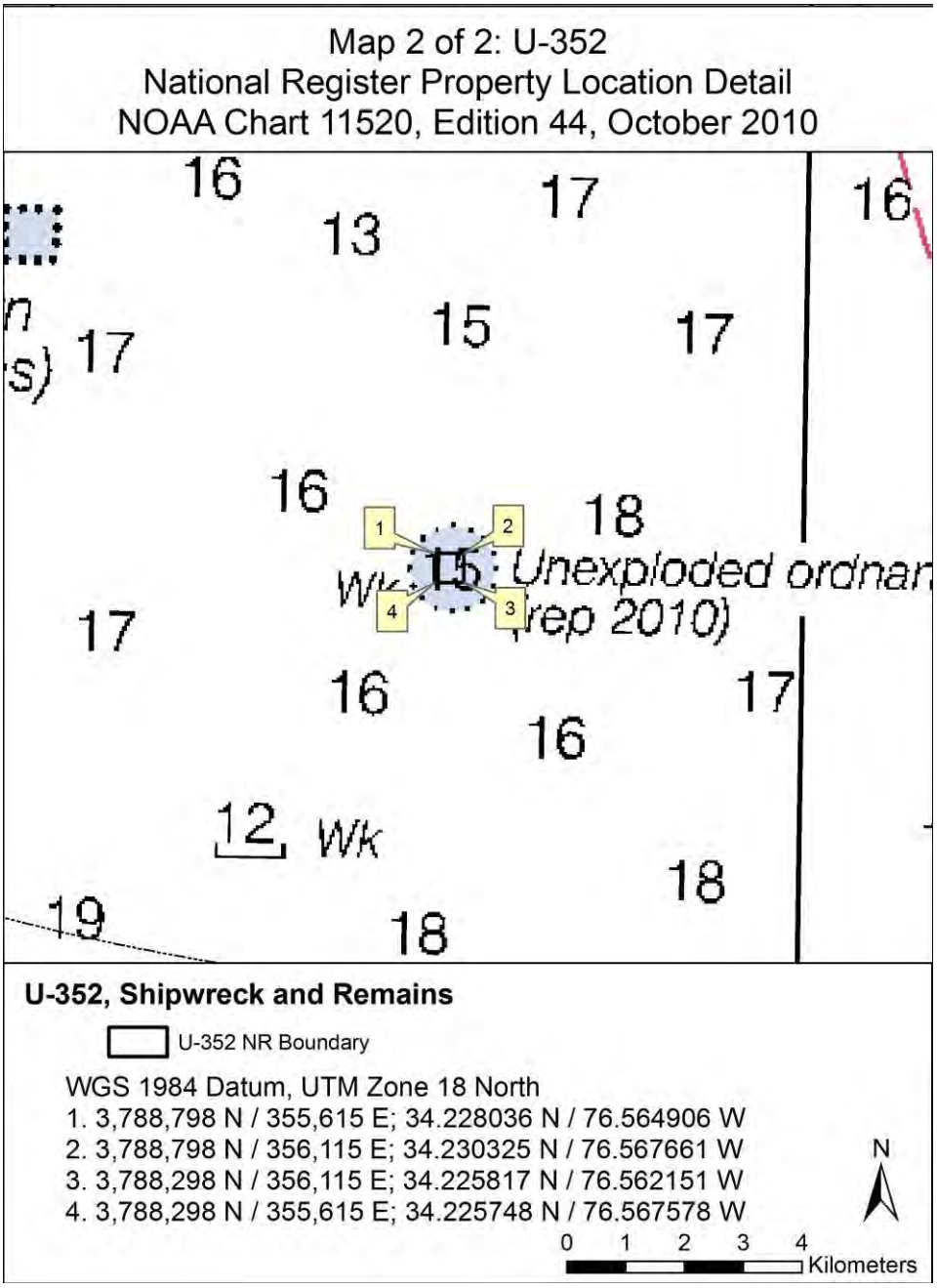
United States Office of Naval Intelligence (USONI)
1942 Report of Interrogation of Survivors of U-352 Sunk by USCG Icarus on May 9, 1942. US GPO, Washington DC. National Archives, Washington DC.

Westwood, David
1984 *The Type VII U-Boat*. Conway Maritime Press, London, Great Britain.

Wynn, K.G.
1997 *U-boat Operations of the Second World War*. Naval Institute Press, Annapolis, MD.


Map 1 of 2: U-352
National Register Property Location
NOAA Chart 11520, Edition 44, October 2010
BOGUE SOUND
CORE SOUND
LOOKOUT BIGHT
BEAUFORT INLET
Cape Lookout Shoals
CAPE LOOKOUT
Beaufort
Morehead City
U-352
U-352, Shipwreck and Remains
Territorial Sea 12nm
Contiguous Zone 24nm
U-352 NR Boundary
N
0 5 10 15 20
Kilometers

Map 01.


Map 2 of 2: U-352
National Register Property Location Detail
NOAA Chart 11520, Edition 44, October 2010
16
17
16
13
15
17
17
16
18
1
2
3
4
15
Unexploded ordnan
rep 2010)
17
16
17
16
12
Wk
18
19
18
U-352, Shipwreck and Remains
U-352 NR Boundary
WGS 1984 Datum, UTM Zone 18 North
1. 3,788,798 N / 355,615 E; 34.228036 N / 76.564906 W
2. 3,788,798 N / 356,115 E; 34.230325 N / 76.567661 W
3. 3,788,298 N / 356,115 E; 34.225817 N / 76.562151 W
4. 3,788,298 N / 355,615 E; 34.225748 N / 76.567578 W
N
0 1 2 3 4
Kilometers

Map 02.

Information on the correspondence PDFs included on the CDs

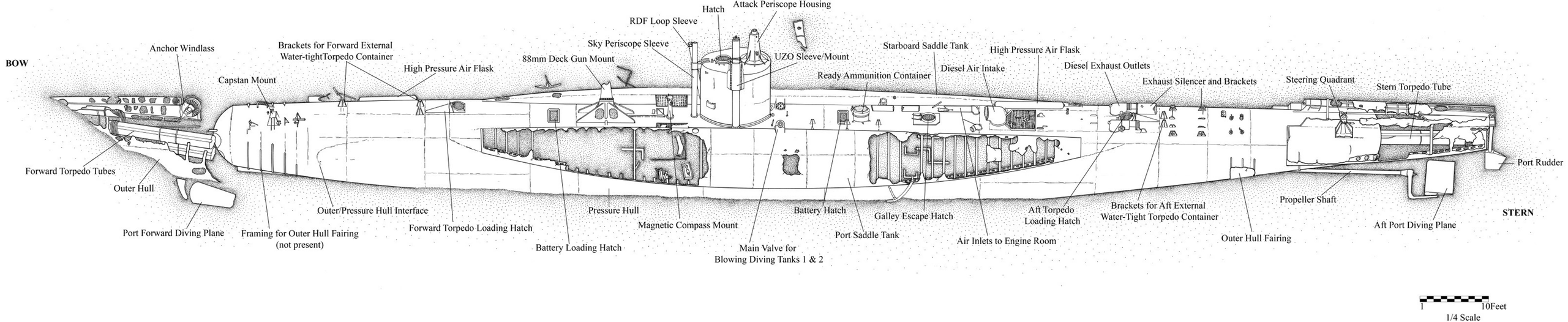
Correspondence 001. Documents related to the request for determination of eligibility for U-352 back in 1980. U-352 was found eligible for the National Register on 21 July 1980 as documented on page 12.

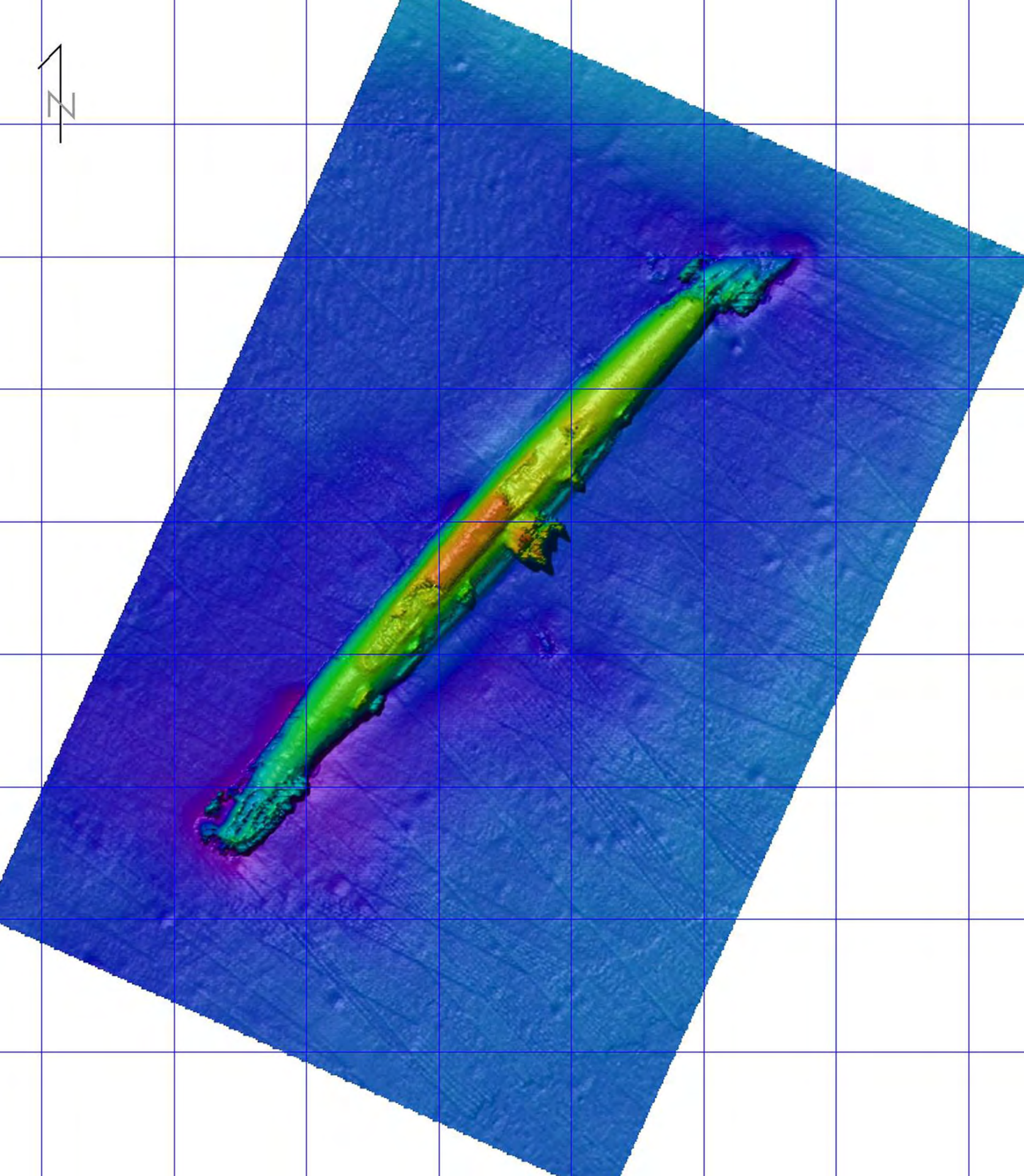
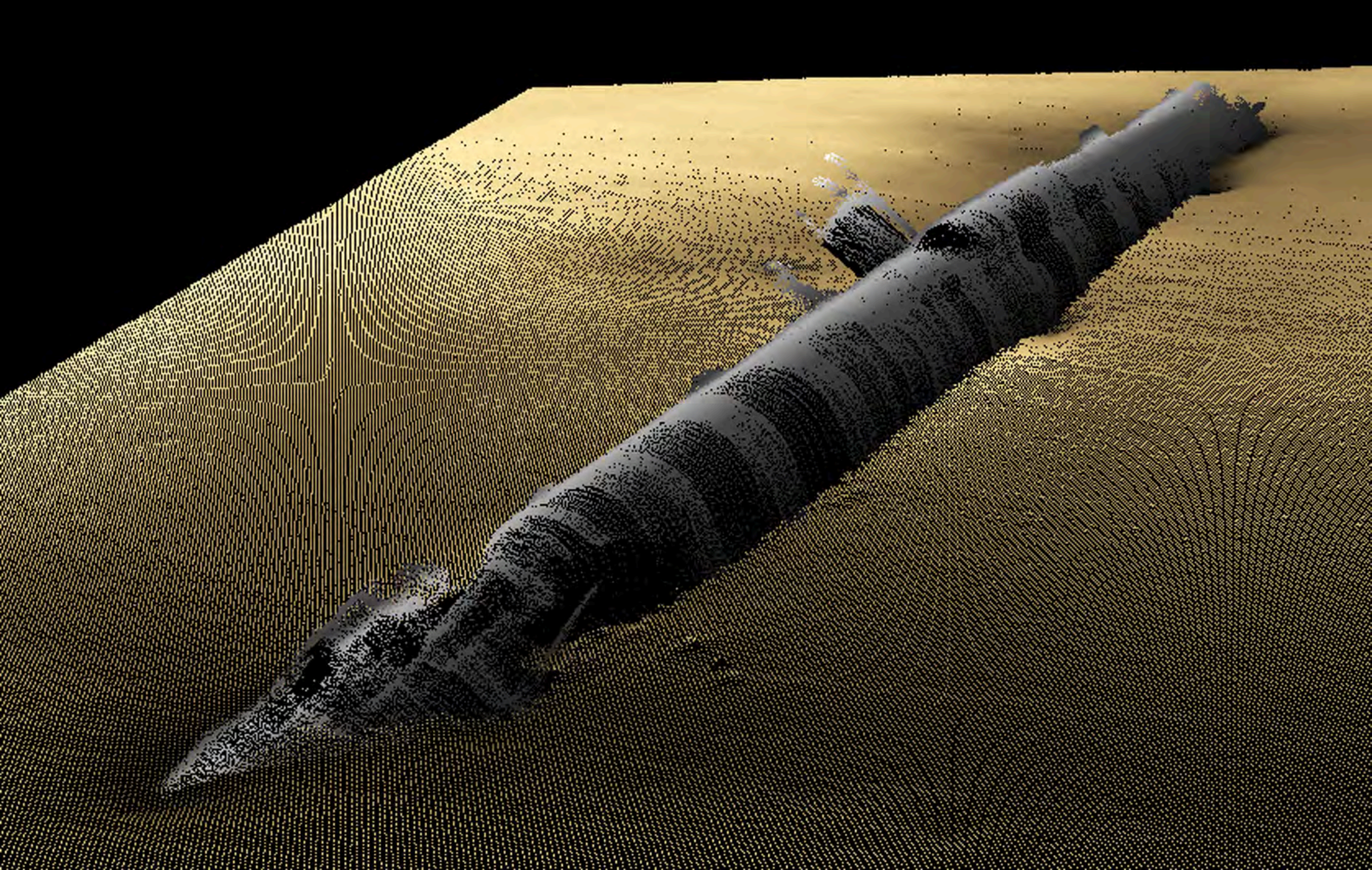
Correspondence 002. Letter on behalf of the German government that states they have no objections to the National Register nominations (page 1) as well as a copy of the email that was sent to notify them of the nominations for U-85, U-352, U-701 and U-576 as well as requesting a letter of support (page 2-5). NOAA was in the process of sending a hard copy letter signed by James Delgado (page 6) when they sent us their reply (page 1).

Correspondence 003. Correspondence between the German Embassy in Washington D.C. and the U.S. State Department from 2006-2009. The German Embassy was concerned about illegal disturbance of U-boats and requested on page 1 that the, ". . .State Department to look into how the sunken German submarines lying off the coast of Cape Hatteras and possibly other sites, which are undoubtedly war graves according to international law, could be protected from further disturbances and pillaging."

Correspondence 004. Cover letter addressed to the NC SHPO dated 15 June 2015 that accompanied the U-352 nomination's submission to the NC SHPO for review and comment.

Correspondence 005. Letter from North Carolina SHPO, dated 22 September 2015, stating the U-352, in their opinion, meets the NRHP criteria and the nomination has been approved and signed.


BOW
STERN
Anchor Windlass
Capstan Mount
Brackets for Forward External
Water-tightTorpedo Container
High Pressure Air Flask
88mm Deck Gun Mount
Sky Periscope Sleeve
RDF Loop Sleeve
Hatch
Attack Periscope Housing
UZO Sleeve/Mount
Ready Ammunition Container
Starboard Saddle Tank
Diesel Air Intake
High Pressure Air Flask
Diesel Exhaust Outlets
Exhaust Silencer and Brackets
Steering Quadrant
Stern Torpedo Tube
Port Rudder
Forward Torpedo Tubes
Outer Hull
Port Forward Diving Plane
Framing for Outer Hull Fairing
(not present)
Outer/Pressure Hull Interface
Forward Torpedo Loading Hatch
Battery Loading Hatch
Pressure Hull
Magnetic Compass Mount
Main Valve for
Blowing Diving Tanks 1 & 2
Battery Hatch
Port Saddle Tank
Galley Escape Hatch
Air Inlets to Engine Room
Aft Torpedo
Loading Hatch
Brackets for Aft External
Water-Tight Torpedo Container
Outer Hull Fairing
Propeller Shaft
Aft Port Diving Plane
1
10Feet
1/4 Scale


N