NPS Form 10-900
United States Department of the Interior
National Park Service
OMB No. 1024-0018

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.

1. Name of Property

Historic name: JOSEPH S FAY Shipwreck Site
Other names/site number: 20UH088
Name of related multiple property listing:
N/A
(Enter "N/A" if property is not part of a multiple property listing

2. Location

Street & number: N/A
City or town: Rogers City State: MI County: Presque Isle
Not For Publication: [ ] Vicinity: [X]

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:

___national **_X_statewide** **___local**

Applicable National Register Criteria:

_X_A **___B** **_X_C** **_X_D**

Brian Mulloy 12/27/17

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

SHPO

State or Federal agency/bureau or Tribal Government

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

Signature of commenting official: **Date**

FPO 1/16/2017

Title : **State or Federal agency/bureau or Tribal Government**

4. National Park Service Certification

I hereby certify that this property is:

X 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:) _____

For Signature of the Keeper — Date of Action: 2/8/18

5. Classification

Ownership of Property

(Check as many boxes as apply.)

Private:	☐
Public – Local	X
Public – State	X
Public – Federal	☐

Category of Property

(Check only **one** box.)

Building(s)	☐
District	☐
Site	X
Structure	☐
Object	☐

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

Contributing	Noncontributing	
0		buildings
1		sites
0		structures
0		objects
1		Total

Number of contributing resources previously listed in the National Register _____

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6. Function or Use
Historic Functions
(Enter categories from instructions.)
TRANSPORTATION/water-related

Current Functions
(Enter categories from instructions.)
LANDSCAPE/UNDERWATER/UNDERWATER SITE

---

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

The JOSEPH S. FAY Shipwreck Site contains the remains of the three-masted, wooden-hulled bulk freighter JOSEPH S. FAY as it came to rest following a wrecking event just offshore of Forty Mile Point Lighthouse in Rogers City, Michigan, in Lake Huron after a storm on 19 October 1905. Most of JOSEPH S. FAY's wreckage remains submerged in seventeen feet of water, excluding its starboard side, which ran ashore several hundred yards northwest of the lighthouse. For the submerged portion, most of the hull beneath the turn of the bilge remains intact, as does much of its steam propulsion machinery. Here, hull sections, rudder, copper hull sheathing, keelsons, portside engine mount, propeller shaft assembly, and iron ore cargo are the most prominent features. Ashore, a 134-foot-long starboard section features scarfed ceiling planking, paired frame sets, and hundreds of wood and iron fasteners. Together, along with other artifacts scattered around the site, these sections illustrate construction details of early wooden bulk freighters, iconic vernacular ships that emerged in the Great Lakes in the 1870s and later evolved into the modern Great Lakes bulk carrier.

Narrative Description

SETTING

JOSEPH S. FAY (United States Registration Number 75315) was built in 1871 by Quayle and Martin in Cleveland, Ohio, for the price of $80,000 (Thunder Bay Sanctuary Research Collection: Joseph S. Fay). Alva Bradley commissioned the vessel to expand his growing fleet of vessels engaged in the Lake Superior iron ore trade. Throughout its thirty-four-year career, JOSEPH S. FAY executed routine round trips carrying coal north from Cleveland and other Lower Lake ports to Lake Superior iron ore ports including Escanaba, Marquette, and Duluth, in turn carrying iron ore on the reciprocal transit back into the lower lakes.

At the time of launch, JOSEPH S. FAY was the largest steamer that had ever been built in Cleveland, and one of the biggest yet to ply Great Lakes waters (*Buffalo Commercial Advertiser* 1871; Detroit *Free Press* 1872) (FIGURE 1). Its hull was 215.6' long, 33.6' in beam, with a 14.8' depth of hold, and grossed 882.31 tons (United States Department of Commerce Bureau of Navigation 1871). The single screw propeller was powered by a towering 28.5" by 36" direct acting high-pressure steam engine manufactured by Cleveland's Cuyahoga Iron Works (Thunder Bay Sanctuary Research Collection: Joseph S. Fay). Twin tubular boilers, measuring 6'10" by 17'3", supplied up to eighty-four pounds of steam per square inch. In 1887, this power plant was upgraded to a steeple compound steam engine and single scotch boiler that could generate more steam pressure (Thunder Bay Sanctuary Research Collection: Joseph S. Fay).

JOSEPH S. FAY had a two-level aft cabin situated above the engine room, just aft of the mizzen mast where engineers, stokers, and other non-officer crew members berthed. A single smokestack extended upward through the forward end of this cabin. Aside from the foremast, mainmast, some deck machinery, two lifeboats, and a small midships cabin, the majority of JOSEPH S. FAY's main deck was kept clear to accommodate cargo loading. Coal and iron ore were hoisted in and out of the main hold through four cargo hatches. The centered "bird-cage" style pilothouse rested atop the foc'sle, or forecastle (the upper deck forward of the foremast) and gave helmsmen, pilots, and captains near 360-degree visibility. Perched atop the pilothouse was an eagle figurehead, symbolizing the vessel's American nationality (FIGURE 2).

As was common during this period of sail-to-steam transition, JOSEPH S. FAY was fitted with three masts used as an auxiliary propulsion system and provided the rigging necessary for loading and unloading cargo. JOSEPH S. FAY was an exemplary model of the first wooden bulk carrier types designed to utilize new steam propulsion technologies to meet the burgeoning economic demand for large cargoes of bulk iron ore.

WRECKING EVENT

On Thursday, 19 October 1905, JOSEPH S. FAY was steaming south towards Ashtabula, Ohio, with its consort schooner barge, D.P. RHODES, in tow. Two days earlier, both vessels departed Escanaba, Michigan, on the northern shore of Lake Michigan, fully laden with iron ore (*Alpena Evening News* 10/23/1905). Weather was calm up until the morning of Thursday, 19 October as the vessel was nearing Forty Mile Point. Furious east winds built quickly, elevating to gale force conditions by one thousand hours (United States Department of Agriculture 1905:3). Snow compounded the situation by reducing visibility as JOSEPH S. FAY fought against the east winds, which pushed the vessel towards shore. Wheelsman George Rinley recalled the event to

the *Alpena Evening News*:

> 'The old boat pounded in the sea, which at every moment was growing worse and by midnight the waves were going completely over the boat. I was at the wheel and the captain urged me to turn the vessel around. To his cries of 'hard over' I vainly tried to turn the wheel but would be thrown from one side of the cabin to the other, and could gain no control of the vessel. Another man was sent to aid me but the terrific sea proved too strong for us and we were forced to let the ship go her course before the wind. She drifted for some miles at the mercy of the sea at every turn the creaking of the timbers foretold the end. It was when were about to let go the wheel that mate George Syze, who was shouting orders from the deck, called out to hold steady. I looked from the cabin door and saw a huge wave strike him just as he uttered the words, and he was knocked from the deck to his death. In danger of my own life I went to the rail but could see nothing of his body. The wind was blowing from the northeast and nearly sixty miles an hour when we were ordered to man the yawl boat. The mate was gone and only nine were left to fill the boat, one of whom was the woman cook. It was about 2:30 o'clock when we left the side of the Fay which was then leaking like a sieve. The wind was so strong that we found it impossible to row against it and were so near the steamer when she sank that the suction nearly overturned the yawl' (*Alpena Evening News*, 10/23/1905).

The ten crew eventually made land in the lifeboat and sought local shelter near Presque Isle. Meanwhile, schooner barge D. P. RHODES had broken free in the storm and drifted all the way to Cheboygan Point before also running aground. The barge, however, was later refloated with minimal damage (*Alpena News*, 10/21/1905). JOSEPH S. FAY was driven hard aground and sank on the sand bars directly offshore of the Forty Mile Point Lighthouse. Overnight the vessel took an amazing pounding from wind and waves, sufficient to break off and send its starboard side ashore, a distance of nearly eight-hundred feet. The remaining wreckage broke apart and settled in fifteen feet of water, perpendicular to the shore.

SHIPWRECK DESCRIPTION

The shipwreck site of JOSEPH S. FAY remains in two extant sections, the majority of which is underwater, while its starboard side is on land, embedded in the beach at Forty Mile Point Lighthouse.

Submerged Section

Most of the wreckage of JOSEPH S. FAY lies submerged offshore of the Forty Mile Point Lighthouse (FIGURE 3). Consistent with archaeological site formation processes expected for this water depth, wrecking event, ship construction type, and passage of time, all of JOSEPH S. FAY's upper works are disarticulated and scattered nearby on the lake bottom. Beneath the turn of the bilge, however, hull sections are mostly intact from stem post to the propeller shaft. The resulting site loci, therefore, is a mix of articulated and disarticulated remains, overall comprising the majority of the vessel's historic structure.

The bow section features angled cant frames, hull and ceiling planking, and iron fasteners that secured the adjacent side sections together (FIGURE 4). Sections of copper or iron sheathing rest on the lakebed, visible just beneath the vessel's lower extents. Along these sheathing plates, rivet holes follow a pattern consistent with the curvature of the bow, suggesting that the sheathing simply peeled off the wooden hull over time.

Beginning at the base of the stem post, the keelson, along with several sister and rider keelsons (which together compose the keelson assembly), are exposed and run the length of the wreckage to a point just forward of where the steam engine was formerly located. The primary keelson was bolted through frame sets into the keel, forming the rigid 'backbone' of the vessel and securing the base of the transverse framing sets (FIGURE 5). At intervals, sacrificial keelson planking is spaced fore and aft, corresponding to the vertical position of the deck hatches. This wood plating protected the keelson from impact damage when coal and iron ore were poured through the hatches into the hold (FIGURE 5).

On the starboard side, two types of ceiling planking are visible. Forward of the pump well, a typical type of fore-and-aft running planking is visible. In most vessels, this planking delineated the bottom-most portion of the vessel's usable interior space, the lowest point at which cargo (whether bulk or package freight) would be stored. On JOSEPH S. FAY, however, an additional level of ceiling planking was installed from the area of the pump well, aft, to the end of the keelson assembly. Quayle and Martin equipped JOSEPH S. FAY with this additional layer of wood as added protection against damages produced by physical impact while loading and unloading large cargoes of coal and iron ore.

Compound frame sets comprise the remaining visible hull wreckage on the starboard side aft of the pump well. Most of the port side is covered by a dense pile of JOSEPH S. FAY's loose iron ore cargo. The irregular-shaped pieces range from apple to cantaloupe in overall size.

The stern section aft of the keelson assembly terminus is composed of strengthened horizontal timbers, deadwood, and angled cant frames that provided the structural support for propulsion machinery and gave the vessel's fantail stern its curved shape (FIGURE 6). Three massive floor timber assemblies formed the mount for the steeple compound steam engine. Since its two steam cylinders were arranged vertically, thus raising its center of gravity, this type of engine required substantial structural support. The portside engine mount remains bolted to the forward two floors. These v-shaped assemblies provided structural support by way of distributing the weight

and vibration of the engine while maintaining a level plane with respect to the propeller shaft.

The propeller shaft is likewise intact, as are the flywheel, mounting brackets, and two-piece stuffing box. The propeller itself was cut and removed from the site at an unknown time, leaving forty-eight inches of the propeller shaft protruding from the stern post, terminating in a blunt, cut end.

Beyond the primary hull wreckage detailed above, an assortment of ferrous machinery components, the port sidewall, and the rudder are scattered around the hull. An iron bow windlass rests isolated in eight feet of water between the submerged portion of the site and shore (FIGURE 7). Just outboard of the portside engine mount is part of the engine. The single low-pressure cylinder is split in half longitudinally; its bore reflects the circular shape of the port engine mount. A slide valve rod remains attached to the slide valve chest on outer side of the cylinder. Direct measurement suggests this cylinder was likely the forty-four-inch diameter low pressure cylinder and is the only remnant of the 24” x 44” x 30” steeple compound engine installed on JOSEPH S. FAY in 1887 by Globe Iron Works (Thunder Bay Sanctuary Research Collection).

Numerous pieces of rectangular iron sheathing rest in the sand just off the port stern. This plating likely encapsulated JOSEPH S. FAY’s aft boiler house where the steam engine and scotch boiler were located. Because of the pressure, heat, and open flames ever present in this part of the vessel, Quayle and Martin installed iron plating over the wooden superstructure of the boiler house to reduce the risk of fire (FIGURE 8).

Off JOSEPH S. FAY’s port side is a larger section of its port sidewall whose starboard counterpart lies beached ashore. Based on the curvature of the compound frames that protrude from the ceiling planking on the inboard end and the existence of wooden knees on the outboard end, this section of hull was fitted above the turn of the bilge up to the main deck which was added in 1876 (United States Department of Commerce Bureau of Navigation 1876). On the right of Figure 9 are the wooden knees, supporting the deck beams that supported the floor of the main deck. The slightly curved frames in the left of the photograph represent the upper section of the turn of the bilge (FIGURE 9). In between these features are ceiling planks that cover almost the entire section. At the top of this section are several ferrous bands, running fore and aft, that were built into the bulwarks just beneath the shelf depicted in Figure 9. These overlapping metal bands were riveted to the ceiling planking and represent a Quayle and Martin innovation aimed at strengthening JOSEPH S. FAY by way of stiffening the longitudinal axis of the vessel’s upper works: an unconventional method not traditionally employed in wooden hull construction.

JOSEPH S. FAY’s rudder lies flat off the starboard stern. Including the attached rudder head, the overall length of this assembly is twenty-four feet and three inches (FIGURE 10). The composite rudder was built chiefly of oak but has iron plating encasing a square section of the rudder at the approximate height of the water line. This plating may have been a protective measure against ice damage. Part of the iron rudder post remains attached to the rudder, along with sections of the tiller arm that are accompanied by two support arms. Two blocks and come-alongs are attached to the end of this tiller arm that would be directed outboard by steering cable (FIGURE 11). In

combination, this assembly forms the main components of the JOSEPH S. FAY's steering gear.

Beached Section

A 134-foot by 15-foot section of JOSEPH S. FAY's starboard side washed ashore several hundred yards up the beach from the Forty Mile Point Lighthouse (FIGURE 12). Situated in an emergent zone that fluctuates relative to lake elevation, this portion of the vessel is subject to a range of conditions that effects substrate coverage and periodic submergence. When sand coverage is minimal, frame sets, scarfed ceiling timbers, deck beam shelf, and hull planking are exposed.

Hundreds of wooden and iron fasteners are present that vary in length and fastener head type. Even when emergent, substrate coverage can vary greatly from year to year. Most recently in 2016, this section was sloping down towards the water's edge.

SITE INVESTIGATIONS

JOSEPH S. FAY's dynamic, two-part shipwreck site has developed into an excellent heritage resource and educational tool for sanctuary researchers, partners, and the public. The Thunder Bay National Marine Sanctuary and volunteers maintain a seasonal mooring buoy that safely allows kayakers, sailors, and dive boats to visit the submerged portion of site without having to anchor and potentially damage its archaeological remains. The mooring buoy also assists with finding the site when navigating from shore. Due in large part to this mooring buoy and its proximity to shore, the submerged section is frequently visited while swimmers and non-swimmers alike can access the shore-side portion, resulting in one of the most publicly accessible shipwreck sites in the entire sanctuary. Furthermore, its proximity to the National Register-listed, the Forty Mile Point Lighthouse (NR# 19840719), illustrates the relationship between land and lake as a core component of historical maritime activity of the Great Lakes, accentuating the need for JOSEPH S. FAY to be listed on the National Register of Historic Places.

The beached section is a popular component of the Forty Mile Point Lighthouse experience. Thousands of visitors learn about the shipwreck through interpretive exhibits and panels located in the on-site Lighthouse Keepers Museum and are directed by signage that leads to the beached section. While most visitors are conscious of heritage preservation efforts, there is evidence of less-conscious visitors who have damaged timbers by walking and playing on them and even removing iron fasteners.

For sanctuary educators, the beached section offers an incredible background to teach ship documentation methods and Great Lakes wooden ship construction, a stepping-stone for curriculums dealing with maritime history and heritage topics. Some of the groups that regularly interface with the beached section of JOSEPH S. FAY in partnership with the Thunder Bay National Marine Sanctuary include regional school groups, local community college courses, regional and national undergraduate and postgraduate anthropology and archaeology programs, professional tourism groups, historical societies, and citizen-science programs interested in

heritage-related activities.

Through these partnerships, the Thunder Bay National Marine Sanctuary has built an inventory of archaeological information, plans, descriptions, photographs, and observations related spanning, continuously, almost fifteen years. The completed site plan and underwater images are just several of these archaeological data products that have come as a result of JOSEPH S. FAY's historical significance and accessible location so close to shore.

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.
- [X] 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.)
_COMMERCE_____
_ENGINEERING_____
ARCHAEOLOGY: HISTORIC – Non-Aboriginal
_____
_____
_____
_____

Period of Significance
_1871-1905_____
_____
_____

Significant Dates
_1871 (Launch)_____
October 19, 1905 (Sinking)
_____

Significant Person
(Complete only if Criterion B is marked above.)
_N/A_____
_____
_____

Cultural Affiliation
_N/A_____
_____
_____

Architect/Builder
Quayle and Martin, Cleveland, OH
_____
_____

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.)

The JOSEPH S. FAY Shipwreck Site qualifies for listing on the National Register of Historic Places under Criterion A in the area of Commerce based on the vessel's role in the Lake Superior iron ore trade. After the rediscovery of iron ore in Michigan's Upper Peninsula in the 1840s, motions were greatly accelerated to capitalize on the region's resources and industrialize their extraction. The locks at Sault Ste. Marie, coastal marine infrastructure, and new, larger vessels were designed specifically to carry this important bulk freight material. Despite the land and marine hurdles that complicated early iron mining in Michigan's Upper Peninsula, the region quickly rose to be one of America's chief suppliers of iron ore. With concurrent advances in steel production and the vertical growth of cities, iron demand had a profound effect on Great Lakes commerce. JOSEPH S. FAY was an early contributor in the Lake Superior iron ore boom of the mid-late nineteenth century.

The JOSEPH S. FAY Shipwreck Site also qualifies for listing on the National Register of Historic Places under Criterion C in the area of Engineering, based on its innovative hull design. JOSEPH S. FAY is one of the earliest examples of the wooden bulk freighter, a vernacular vessel type that revolutionized bulk freight transportation on the Great Lakes. Created in response to demand by the iron ore industry, JOSEPH S. FAY featured a long, unobstructed deck with wide cargo hatches that facilitated and accelerated loading and unloading of bulk iron ore and coal. Its hull design was an antecedent to the steel bulk freighters that superseded wooden bulk freighters in commercial iron ore transportation on the Great Lakes.

The remains of JOSEPH S. FAY are archaeologically significant to the study of Great Lakes wooden bulk freighters. Despite its shallow water deposition, most of the hull is intact beneath the turn of the bilge and retains a high level of integrity. Many questions remain of the transitional period of wood to steel hull bulk freighters on the Great Lakes. How did shipbuilders reconcile newer steam engine technology that exhausted unprecedented vibration, friction, and force on traditional wooden hulls? What techniques did Quayle and Martin use to harness and secure JOSEPH S. FAY's advanced power plant? What can be inferred of the wide-ranging fastener patterns and types present on the beached starboard section? How does JOSEPH S. FAY's construction compare to later wooden bulk freighters? As a rare, early example of its vessel class, the JOSEPH S. FAY Shipwreck Site has potential to yield pertinent information on early wooden bulk freighter construction making it eligible under Criterion D with a period of significance between its launching in 1872 to its sinking on 19 October 1905.

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

CRITERION A

Commerce

JOSEPH S. FAY is eligible for listing under Criterion A for its participation in maritime commerce on the Great Lakes. During the nineteenth century, the Great Lakes transitioned from a remote maritime frontier to a busy industrial waterway following discoveries of raw material deposits, developments in regional maritime infrastructure (towns, docks, facilities, and canals), and the emergence of vessel designs suited for exploiting the region's natural resources within a unique and demanding maritime transportation landscape. As a result, the iron ore caches in Michigan's Upper Peninsula quickly became one of the Great Lakes most profitable and long-lived bulk freight commodities. George Miller highlighted the region's geological importance to the American Geographic Society:

> No single resource, unless it be coal or soil, is so vital to the economic growth of the modern nation as iron. Iron ore deposits situated like those of the Lake Superior district, of such high grade, in such a limited area, and so easily mined on a large scale, could not fail to affect the whole nation. Their production, utilization, and conservation concern the whole people (1914:882).

In 1841, State of Michigan Geologist Douglas Houghton reported large deposits of iron ore present among the commercially-exploitable caches of native copper that occupied the southern shore of Lake Superior and especially the Keweenaw Peninsula (Reynolds 2011:11). Five years later, several groups from Cleveland, Ohio, marked iron outcroppings along what came to be the Marquette Iron Range. Land claims followed, and companies began erecting infrastructure to extract the ore, and, of equal importance, transport it to lower lake markets. Coupled with the pit-mining machinery and an abundant labor force, a solid transportation network was equally vital to keep coal flowing north to fuel the ore camps while furnaces processed ore and prepared it for shipment in the form of pig iron.

The Marquette Iron Range is located between ten and fifteen miles south of the Keweenaw Peninsula and runs southwest to northeast toward the city of Marquette on the southern shore of Lake Superior. Marquette was the natural first choice for mining companies as their shipping port. It was relatively close to the remote mining camps that began extracting ore in 1848, but did pose one significant disadvantage: the rapids of the Saint Mary's River required all cargoes and vessels to portage three-quarters-of-a-mile around the white water to reach the open water of northern Lake Michigan and Lake Huron. Despite the roughly seventy-five-mile distance

between Negaunee, at the heart of the Marquette Iron Range, and Escanaba (closest deep-water port on Lake Michigan) companies chose Escanaba as a primary ore port and began work to construct a railroad network to connect the iron with the lake, thus circumventing the maritime navigation barrier between Lake Superior, and Lakes Huron, and Michigan.

In 1851 iron ore was discovered ninety miles northwest of Escanaba in Iron River by United States land surveyor Harvey Millen and prospectors immediately set up camps (Sawyer 1911:518). Notable mines in this new mining locale, now referred to as the Menominee Range, include the Baker, Brule, and Crystal Falls Iron Ore Companies. As lakeshore facilities in Marquette grew in scale and the Chicago and Northwestern Railroad Company connected Negaunee with Escanaba, Escanaba became the principal port for the Menominee Range and an alternative port for the Marquette Range.

Even after the locks were built in 1855 at Sault Ste. Marie, Escanaba offered one important advantage over Marquette. The locks at Sault Ste. Marie inevitably introduced a bottleneck for shipping during peak months. Consequently, distance and time (most importantly) was reduced by loading ore boats at Escanaba situated at the northern tip of Lake Michigan. Since the first shipment left Escanaba in 1866, it has remained an important iron ore hub. In shipping distances to Cleveland, Ohio, Escanaba is sixty miles closer than Marquette, two hundred and fifty-one miles closer than Ashland, and three hundred miles closer than Duluth (Newett 1897:103).

Excluding rail cost to transport ore to dock, iron ore freight rates per ton averaged twenty to twenty-five percent less leaving Escanaba than material leaving Marquette (United States House of Representatives 1892:27).

Escanaba's rise as a dominant late-nineteenth-century Upper Lake iron ore port happened swiftly. Its first dock was constructed in 1863, and its first registered shipment departed its shores in 1866 (Thompson 1991:38). By 1889, Escanaba was shipping forty-four percent of Lake Superior iron ore and was considered the industry's most important port (Day 1892:26). As cities across the nation sought steel-constructed bridges, buildings, and manufacturing centers, insatiable demand placed the Lake Superior iron ore industry on an unparalleled growth track.

Lake Superior iron ore's higher purity compared to ore from the rest of the nation was an important reason for the industrial development of the region (Van Hise 1901:315). The Bessemer process, invented in 1875 by Edgar Thomson, heightened demand for high grades of iron ore. Many nationally significant industries relied on Superior ore. This new process of manufacturing led to increased demand for domestic steel for use as railroad ties, in commercial construction, shipbuilding, automobiles, and numerous military and civilian industries.

In 1885, Chicago's Home Insurance Company headquarters was the first building constructed with a steel-reinforced skeleton and considered the first skyscraper (Koram Jr:2008:93). Like ship hulls, steel frames allowed architects to experiment with new building designs that "culminated in the introduction of the skyscraper that today dominates the urban skyline of cities around the world" (Bowlus 2010:153). Masonry construction had a known height limit of fourteen stories, while steel-framed buildings had no such restriction (Domosh 1996:73).

Consequently, urban landscapes were not only growing laterally, but vertically, and at a staggering rate. Buildings like the Manhattan Life Insurance building (1894), the New York World Building (1890), and others competed for the title of world's tallest building. All of these structures relied upon the vast supply and effective transportation network of the Lake Superior iron ore industry. Vessels like JOSEPH S. FAY were instrumental in providing the necessary construction materials for the largest buildings in North America.

Lake Superior iron ore was perhaps most essential in the construction and expansion of a national railroad network (Bogue 2007:55). America's vast rail network was the principle force behind the rapid national industrialization that occurred in the late 19th and early 20th centuries (Rostow 1960). Its "giant web broke down the barriers of regionalism and gave all but the most remote villages access to markets previously unavailable" (Bowlus 2010:9). Railroading was a key factor in the success of every American industry as it brought raw materials to manufacturing centers, and finished products to market. The tracks, ties, engines, and rail cars of American's transportation system were all built with Bessemer steel beginning in the 1880s through the 1920s. Bessemer steel, of course, was best produced with the pure, low-phosphorus iron ore found in Michigan's Upper Peninsula.

Dependable, efficient, and large capacity ships were a critical link in the supply chain that allowed Escanaba and other Lake Superior iron ore ports to witness such incredible growth. As regional and national transport networks expanded at the impetus of the iron industry, Great Lakes shipbuilding likewise capitalized upon the opportunity and developed purpose-built craft for the iron ore trade, thus the development of the wooden bulk carrier. Built just five years after the first shipment left Escanaba, the 1,100-net-ton JOSEPH S. FAY was one of the earliest wooden bulk carriers and played a lead role in the rise of the Lake Superior iron ore industry.

JOSEPH S. FAY averaged between ten and twelve round trip voyages between Escanaba (and sometimes other Lake Superior Ports) and Ashtabula, Ohio, per year (Thunder Bay Sanctuary Research Collection). Including the 891 net tons offered by JOSEPH S. FAY's consort schooner-barge, D. P. RHODES, the pair carried roughly two thousand net tons of cargo in each direction. D. P. RHODES is pictured at dock abreast to JOSEPH S. FAY in Figure 13 (FIGURE 13). D.P. RHODES broke free during the storm and ran ashore near Cheboygan, Michigan.

At the time, JOSEPH S. FAY's carrying capacity was among the largest of cargo carriers. Because of its early role in what would become Michigan's most profitable bulk freight commodity, JOSEPH S. FAY is eligible under Criterion A in the area of commerce. JOSEPH S. FAY is also eligible under Criterion C in the area engineering as its second area of significance.

CRITERION C

Engineering

JOSEPH S. FAY is eligible for listing under Criterion C under the engineering area of significance because it embodies the distinctive characteristics of a specific vessel type (wooden

bulk freighter), and represents the work of the influential Great Lakes shipbuilding firm Quayle and Martin. JOSEPH S. FAY is an excellent example of the 1870s wooden bulk freighters that influenced Great Lakes shipbuilding trends into the twentieth century.

The Quayle family, including young Thomas, landed in the Cleveland from Isle of Man in 1827, and purchased a farm. Thomas had acquired some carpentry skills while living on the Isle of Man, and began working for a small shipbuilding firm upon arrival. Within two years, Thomas had started his own business and launched brigs CAROLINE and SHAKESPEARE. Quayle's subsequent partnership with Luther Moses generated enough business that the pair had "six to seven vessels on the stocks at once, and turning two sets a year" (Williams 1885:460). The partnership dissolved after two years, and Quayle found a stronger partner in John Martin. In their first year, the Quayle and Martin built thirteen ships, including the JOSEPH S. FAY (Orth 1910:720). They developed a reputation for large wooden ships, and helped pioneer the development of large wooden propellers like DEAN RICHMOND, ARIZONA, and JOSEPH S. FAY. Regional historian John Mansfield refers to Thomas Quayle as "…. the father of Cleveland shipbuilders" (1899:427). Quayle remained a household name in Great Lakes shipbuilding until he retired in 1882 and left his business to his sons. The wooden bulk freighter JOSEPH S. FAY appropriately echoes his innovation and expertise.

Great Lakes bulk freighters can trace their origins to R. J. HACKETT, built in 1869 by Peck and Masters in Cleveland, Ohio (Thompson 1991:22; FIGURE 14). With its innovative forward pilothouse, and aft engine and crew cabin, R. J. HACKETT's main deck was left uninterrupted with eight-foot cargo hatches spaced at twenty-four-foot centers that matched up with the spacing of loading nozzles at Lake Superior pocket docks (Wright 1969:5). Not only did this "fore-and-aft" cabin arrangement allow for more gross tonnage due to the consolidation of unprofitable ship spaces (large engine rooms located amidships, expansive cabins on deck) but also cargo loading was accelerated. Time at dock was reduced greatly as the R. J. HACKETT's cargo hatches were spaced according to dockside loading equipment. With the launch of the R. J. HACKETT marking the beginning of the wooden bulk freighter era, thirty-nine wooden bulk freighters were constructed, with the majority built before 1875 (Devendorf 1995:8). Maritime historian Mark Thompson argues that the advent of the R. J. HACKETT "led ultimately to the demise of sailing vessels and allowed bulk cargoes, particularly iron ore, to displace the passenger trade as the most important commerce on the lakes" (1994:29).

JOSEPH S. FAY was launched just two years after R. J. HACKETT and shares most of its pioneering design features. At time of launch, JOSEPH S. FAY was powered by a 28.5" x 36" single cylinder direct acting steam engine fed by twin 6'10" x 17'3" tubular boilers that generated eighty-four pounds of steam per square inch (Thunder Bay Sanctuary Research Collection). As was typical of early wooden bulk freighters initially launched with high-revving, single cylinder engines, its original engine was replaced in 1887 with a 24" x 44" x 30" steeple compound engine (Devendorf 1995:8). The new power plant was fed by a single, more-efficient Scotch boiler that measured 14' x 12'6". As was typical for the bulk freighter design, these engines were positioned aft to maximize cargo capacity. While an aft engine placement would seem common and sensible to a modern eye, the propellers and sidewheel steamers popular of the day had their engines mounted much closer to amidships for better weight balancing as they

weren't carrying large, heavy, bulk cargos. Most of their cargoes was package freight, and could be organized and stowed around central engine rooms and boiler houses.

At the time of JOSEPH S. FAY's launch, available hull construction technology was the limiting factor in the size of early wooden bulk freighters. Wooden hulls generally were not built longer than three hundred feet to prevent hogging and sagging at the vessels' stern and bow (Thompson 1994:29). Dense, loose cargos of coal and iron ore especially stressed wooden hulls so shipping owners like Alva Bradley were left to maximize profits by having the wooden bulk freighter tow a consort schooner-barge. Unlike hull technology, engine technology had progressed to be able to power both the fully-laden host vessel, and tow a barge of similar size (Devendorf 1995:8).

The size limitations of the 1870s wooden bulk freighters were quickly addressed with the launching of ONOKO in 1882 – the first iron-hulled bulk freighter on the lakes. While the iron, and, shortly later, steel hulls unlocked great potential for vessel size and carrying capacity, the basic hull shape and deck arrangement of these metal-hulled bulk freighters mirrored JOSEPH S. FAY and the wooden bulk freighters of the 1870s. Thomas Quayle and his partners were among the first to experiment with this new vessel design that greatly accelerated the iron ore industry's growth, and became the staple design that was built through the middle twentieth century.

Because of these technological developments in hull design and propulsion systems, JOSEPH S. FAY is eligible under Criterion C with Engineering as its second area of significance.

CRITERION D

The JOSEPH S. FAY Shipwreck Site is eligible under Criterion D; the shipwreck site has yielded, and is likely to yield more information pertinent to maritime history of the Great Lakes. JOSEPH S. FAY embodies the leading maritime technology prevalent during the 1870s transition from wooden to steel hulls as discussed above under the shipwreck's significance under Criterion C: Engineering. Additional archaeological documentation of the site will enhance understanding of the wooden bulk freighter by addressing inquiries such as: what can the fastener patterns of the beached section of JOSEPH S. FAY tell us about how builders Quayle and Martin used iron to reinforce the 215-foot-long wooden hull? Wooden trenails are also present to the naked eye on the beached section; what is the quantitative and spatial correlation between wooden and iron fasteners on JOSEPH S. FAY? Both iron and wood fasteners present on JOSEPH S. FAY are far from homogenous in design, size, and method of attachment; do these irregular fastener attachments suggest hull- reinforcement after the vessel was launched in 1872? Are there ship refittings noted in the historical record that correlate to the variations in JOSEPH S. FAY's fastener patterns?

Additional archaeological inquiry into JOSEPH S. FAY's propulsion system will further understanding of how large wooden hulls were reinforced to host heavy, high-vibration compound steam engines. The availability and relatively inexpensive cost of wood as a hull construction material coupled with the witnessed longevity of wooden hulls in fresh water kept them around longer in North American shipbuilding chronology compared to saltwater traditions. As steam engines were concurrently getting faster, larger, more efficient, and heavier,

wooden hulls required innovative solutions to support these new propulsion systems. Hull design strategies to mitigate heavy vibration and friction characteristic of middle nineteenth century marine steam engines were often unique to individual shipbuilders. Additional archaeological survey of JOSEPH S. FAY's stern section will provide valuable insight into how Quayle and Martin addressed this challenge.

Additional archaeological survey will be used in comparison against other documented wooden bulk freighters. *AUSTRALASIA* rests in similar water depths and eight hundred feet from shore southeast of the Whitefish Dunes State Park beach in Door County, Wisconsin. *AUSTRALASIA* was built by James Davidson: another prolific Great Lakes shipbuilder best known for large wooden hulls. Davidson launched *AUSTRALASIA* on 17 September 1884 in his Bay City shipyard. The vessel was 285 feet long with a forty-foot beam; one of the largest wooden vessels built at the time. Its shipwreck site was documented in 2012 by the Wisconsin Historical Society and listed in the National Register of Historic Places under Criterion D in 2013 (Thomsen and Meverden 2012). *AUSTRALASIA* was launched at the end of the wooden bulk freighter era while JOSEPH S. FAY was built at the beginning twelve years prior. Did James Davidson employ any hull strengthening innovations utilized by Quayle and Martin on JOSEPH S. FAY? How was the fore-and-aft compound engine mounted on *AUSTRALASIA*? As both sites rest in similar lakebed environments, what observations can be made of their respective site formation processes? A comparison of archaeological data from both *AUSTRALASIA* and JOSEPH S. FAY has strong potential to yield important information about construction methods utilized at both the beginning, and end of the wooden bulk freighter construction in the Great Lakes from the early 1870s to middle 1880s. Because of this potential to greatly supplement present understanding of early wooden bulk freighters, the JOSEPH S. FAY Shipwreck Site meets requirements for National Register Criterion D with a period of significance of 1872 (launch) to 19 October 1905 (sinking).

INTEGRITY CONCLUSION

The JOSEPH S. FAY Shipwreck Site has retained a high level of site integrity that support its eligibility for listing to the National Register of Historic Places under Criteria A, C, and D.

Materials

Since its wrecking event on 19 October 1905, JOSEPH S. FAY has retained key material components including its oak hull and ferrous engine and fastener components. Most of its lower works remain intact in the submerged section as does its starboard side located on the beach. The site is a clear historic resource and remains intact with the materials used during its 1872 construction.

Workmanship

JOSEPH S. FAY is the direct product of innovative Great Lakes shipbuilders Quayle and Martin. It was constructed during a time of vessel transition as wooden hulls were built to their maximum usable lengths permitted by larger, faster, and more efficient steam engine technology.

The JOSEPH S. FAY reflects Quayle and Martin's creative workmanship down to the last fastener as presented in Section 7 and earlier in Section 8. Despite its location in shallow water and on shore, the JOSEPH S. FAY Shipwreck Site has survived without serious damage caused by natural and cultural transforms.

Design

JOSEPH S. FAY was an example of a specific ship type vernacular to the Great Lakes: the wooden bulk freighter. It has retained design characteristics like hull shape, fastener patterns, cargo, and a propulsion system that together relate the ship's historical functions, commercial association and participation, and pioneering technological advancements of the time.

Association

The JOSEPH S. FAY Shipwreck Site is clearly associated with its wrecking event. Both the submerged and beached portions convey the 1905 disaster that deposited the JOSEPH S. FAY at 40 Mile Point Lighthouse.

Feeling

In most cases, shipwrecks exist under water. Of the 100 known shipwreck sites in the 4,300-square-mile Thunder Bay National Marine Sanctuary less than five exist on land. Coupled with locations that are publicly accessible, these terrestrial sites relate the feeling of shipwreck sites to broader audiences. The JOSEPH S. FAY Shipwreck Site's location at the 40 Mile Point Lighthouse stirs the feelings of danger at sea, nineteenth century ship construction, and maritime commerce on the Great Lakes to the thousands of visitors that inspect its wreckage every year.

Setting

Through the course of the storm, the crew of JOSEPH S. FAY elected to run the vessel aground within sight of the 40 Mile Point Lighthouse. With a constant lookout perched in the light tower during storms, the lighthouse offered their best odds at surviving the storm and getting the crew safely on shore. The shipwreck's setting is a clear example of the relationship between vessels in danger and lighthouses.

Location

The JOSEPH S. FAY Shipwreck Site remains in its original location after its shipwrecking event in 1905. The beached portion can be affected by sand depositions and can often change in level of sand coverage, but its geophysical location has not changed.

9. Major Bibliographical References

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Previous documentation on file (NPS):

____ preliminary determination of individual listing (36 CFR 67) has been requested
____ previously listed in the National Register
____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:

_X___ State Historic Preservation Office
____ Other State agency
_X___ Federal agency
____ Local government
____ University
_X___ Other
Name of repository: _Thunder Bay Sanctuary Research Collection at the Alpena Public Library, Alpena, MI_

Historic Resources Survey Number (if assigned): _20UH088_____

10. Geographical Data

Acreage of Property _61.264 acres__

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates (decimal degrees)
Datum if other than WGS84:_____
(enter coordinates to 6 decimal places)

1. Latitude: 45.488040 (Submerged Bow) Longitude: -83.909870
2. Latitude: 45.488610 (Submerged Stern) Longitude: -83.910000
3. Latitude: 45.487870 (Starboard Bow) Longitude: -83.914830
4. Latitude: 45.486860 (Starboard Bow) Longitude: -83.914320

Boundary Box Coordinates:
1. Latitude: 45.486000 (Northwest Corner) Longitude: -83.916000
2. Latitude: 45.486000 (Southwest Corner) Longitude: -83.908000
3. Latitude: 45.490000 (Southeast Corner) Longitude: -83.908000
4. Latitude: 45.490000 (Northeast Corner) Longitude: -83.916000

Or
UTM References
Datum (indicated on USGS map):

☐ NAD 1927 or ☐ NAD 1983

1. Zone: Easting: Northing:
2. Zone: Easting: Northing:
3. Zone: Easting: Northing:
4. Zone: Easting : Northing:

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

JOSEPH S. FAY rests partly one-quarter-mile from shore and northeast of the Forty Mile Point Lighthouse and partly on shore, one-sixteenth-mile up the beach from Forty Mile Point Lighthouse. The submerged portion rests in 13-17 feet of water, while the beached section rests embedded in the sand. For the submerged section, the bow is located at latitude 45.488040 longitude -83.909870 and the stern is located at latitude 45.488610 longitude -83.910000. For the one-hundred-thirty-four-long side section of the beach, the bow is located at latitude 45.487870 longitude -83.914830 and the stern is located at latitude 45.486860 longitude -83.914320. The boundaries of the shipwreck site are defined by a rectangle extending out from the primary submerged section towards the lake, and back towards shore, encompassing the scattered artifacts that lay between the primary submerged section and shore. The rectangle also includes the beached section in the southwest corner of the box.

The area of this box is 61.264 acres, or 247,930 square meters. The northwest corner of the box is at latitude 45.486000 longitude -83.916000. The southwest corner is at latitude 45.486000 longitude -83.908000. The southeast corner is at latitude 45.490000 longitude -83.908000. The northeast corner is at 45.490000 longitude -83.916000.

Boundary Justification (Explain why the boundaries were selected.)

The National Register boundaries of the JOSEPH S. FAY Shipwreck Site encompass the primary footprints of the submerged and beached sections, and everything in between. Archaeological surveys conducted by the Thunder Bay National Marine Sanctuary revealed artifacts of varying size and material scattered around the site. The combination of the surf zone, the wrecking event, and an unstable sand/cobble lake bottom have deposited these important artifacts around the site, and is the primary justification for encompassing these features in one boundary box. A closer examination and GIS-based artifact tagging of this debris field may yield important information to history and provide important site formation process data and advise resource managers at the federal, state, and local levels. It is likely that many artifacts remain hidden beneath the sands that one day will surface, offering further justification for the boundary box suggested.

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11. Form Prepared By

name/title: _Philip A. Hartmeyer, Maritime Archaeologist_____
organization: _Thunder Bay National Marine Sanctuary_____
street & number: _500 West Fletcher Street_____
city or town: Alpena_____ state: MI_____ zip code: _49707_____
e-mail_phil.hartmeyer@noaa.gov_____
telephone: _(925) 286-9648_____
date: _January 11, 2017_____

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.
- **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.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Description of Photograph(s) and number, include description of view indicating direction of camera:

Photograph/Figure 1 of 17	JOSEPH S. FAY, Historic Photograph Name of Photographer: *Thunder Bay Sanctuary Research Collection*, Alpena, MI Date of Image: 2008 Location of Digital Image: Thunder Bay Sanctuary Research Collection, Alpena Public Library, Alpena, MI MI_Presque Isle_Joseph S. Fay Shipwreck Site_0001
Photograph/Figure 2 of 17	JOSEPH S. FAY, Historic Photograph Name of Photographer: *Thunder Bay Sanctuary Research Collection*, Alpena, MI Date of Image: 2008 Location of Digital Image: Thunder Bay Sanctuary Research Collection, Alpena Public Library, Alpena, MI MI_Presque Isle_Joseph S. Fay Shipwreck Site_0002
Photograph/Figure 3 of 17	JOSEPH S. FAY, Site Plan

Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 2008
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0003

Photograph/Figure 4 of 17 — JOSEPH S. FAY, Underwater Bow Photograph
Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 5/172015
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0004

Photograph/Figure 5 of 17 — JOSEPH S. FAY, Underwater photograph of keelsons
Name of Author: Wayne Lusardi
Date of Image: 6/22/2005
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0005

Photograph/Figure 6 of 17 — JOSEPH S. FAY, Underwater photograph of stern
Name of Author: Shawn Parkin
Date of Image: 5/2014
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0006

Photograph/Figure 7 of 17 — JOSEPH S. FAY, Underwater photograph of windlass
Name of Author: Wayne Lusardi
Date of Image: 6/22/2006
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0007

Photograph/Figure 8 of 17 — JOSEPH S. FAY, Underwater photograph of stern plating
Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 5/17/2015
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0008

Photograph/Figure 9 of 17 — JOSEPH S. FAY, Underwater photograph of port side
Name of Author: Wayne Lusardi
Date of Image: 6/12/2007
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI

MI_Presque Isle_Joseph S. Fay Shipwreck Site_0009

Photograph/Figure 10 of 17
JOSEPH S. FAY, Rudder drawing
Name of Author: Wayne Lusardi, State of Michigan
Date of Image: 2/20/2009
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0010

Photograph/Figure 11 of 17
JOSEPH S. FAY, Underwater photograph of tiller arm
Name of Author: Wayne Lusardi
Date of Image: 6/13/2007
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0011

Photograph/Figure 12 of 17
JOSEPH S. FAY, Photograph of beached section
Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 11/21/2004
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0012

Photograph/Figure 13 of 17
D. P. RHODES, Historic photograph
Name of Author: *Thunder Bay Sanctuary Research Collection*, Alpena, MI
Date of Image: 2008
Location of Digital Image: Thunder Bay Sanctuary Research Collection, Alpena Public Library, Alpena, MI MI_Presque Isle_Joseph S. Fay Shipwreck Site_0013

Photograph/Figure 14 of 17
R. J. HACKETT, Historic photograph
Name of Author: *Thunder Bay Sanctuary Research Collection*, Alpena, MI
Date of Image: 2008
Location of Digital Image: Thunder Bay Sanctuary Research Collection, Alpena Public Library, Alpena, MI MI_Presque Isle_Joseph S. Fay Shipwreck Site_0014

Photograph/Figure 15 of 17
JOSEPH S. FAY, Boundary box
Name of Author: Philip Hartmeyer Date of Image: 2017
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0015

Photograph/Figure 16 of 17
JOSEPH S. FAY, Geographic Context
Name of Author: Philip Hartmeyer
Date of Image: 2017

Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0016

Photograph/Figure 17 of 17

JOSEPH S. FAY, Historical Photo
Joseph S. Fay waiting its turn to lock upbound in the State Lock at the Sault. Behind is its consort, the schooner *D. P. Rhodes*.
Name of Author:
Date of Image: c. 1874
Location of Digital Image: Judge Joseph H. Steere Room, Bayliss Public Library, Sault Sainte Marie, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0017

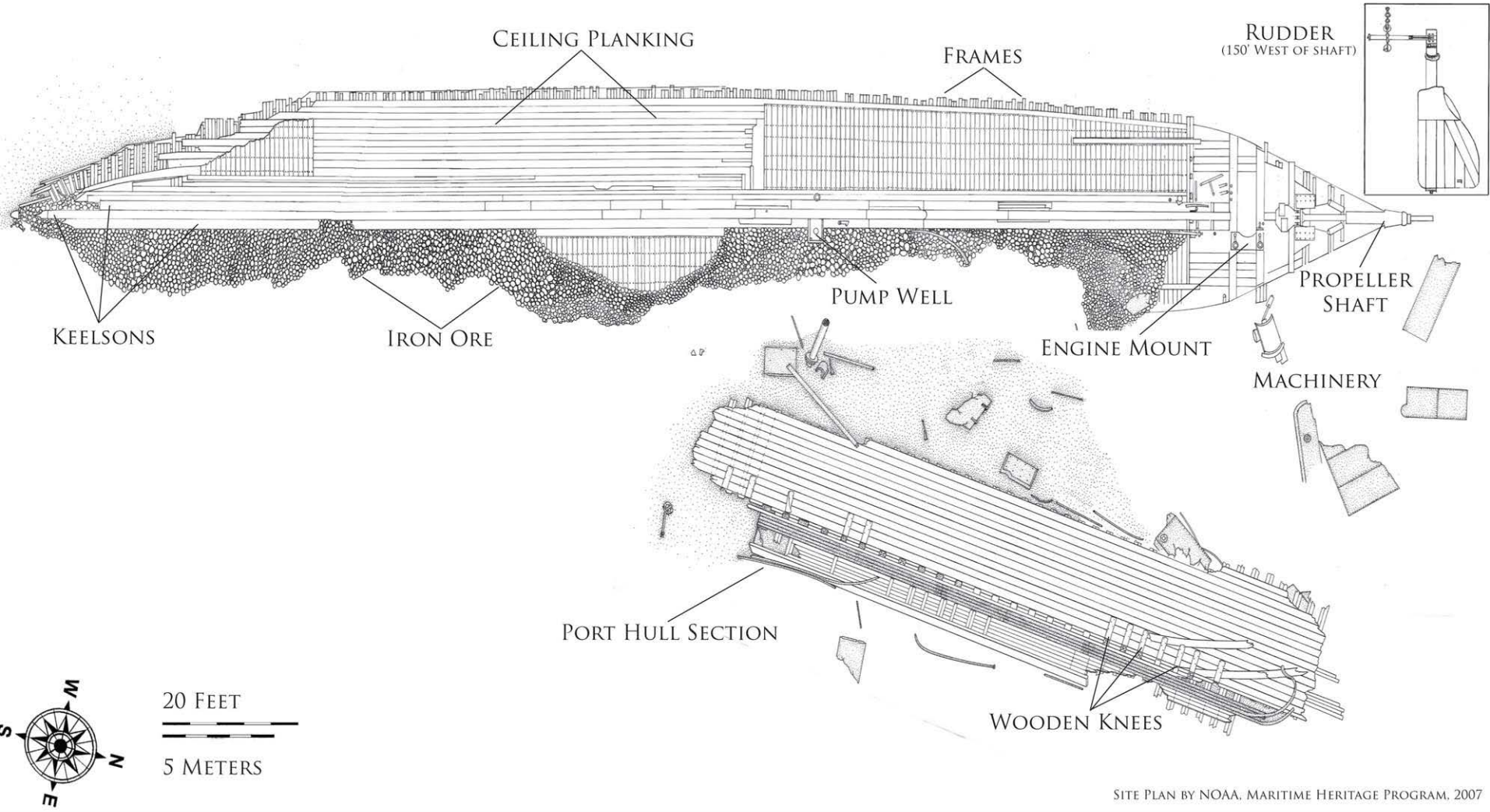

U.S.F.C.

Thunder Bay National Marine Sanctuary

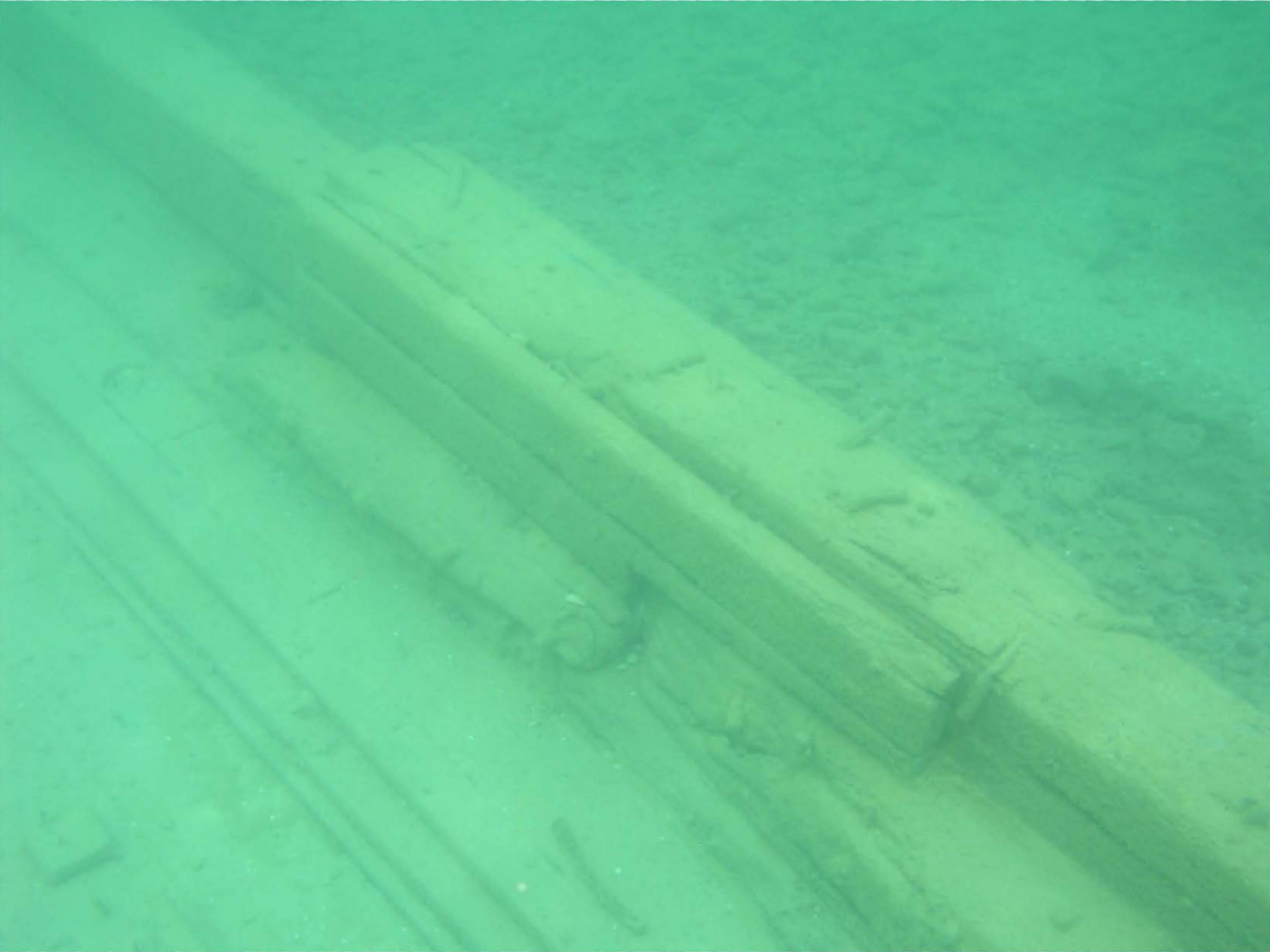
Joseph S. Fay

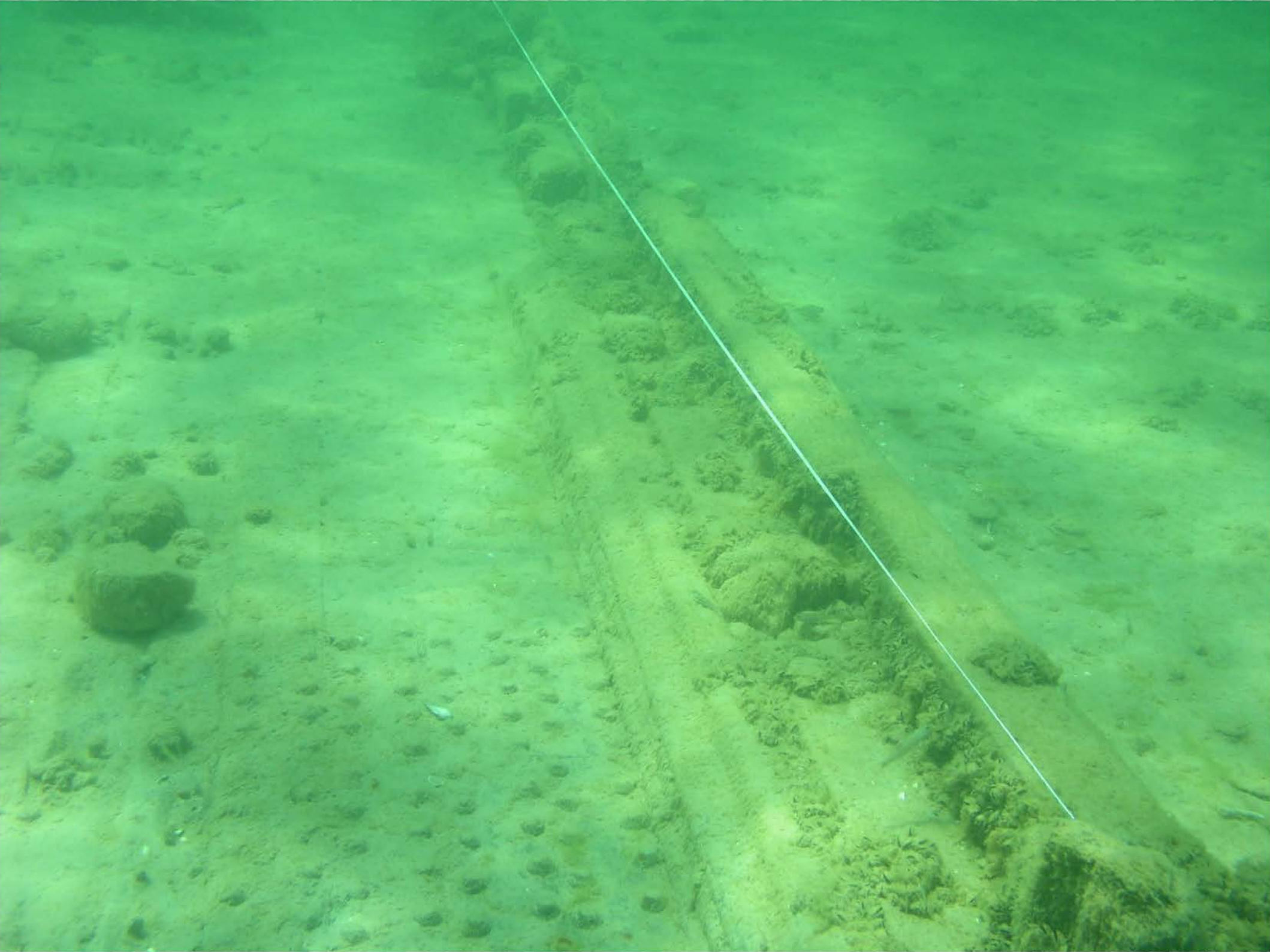
Wooden Bulk Freighter
1871-1905

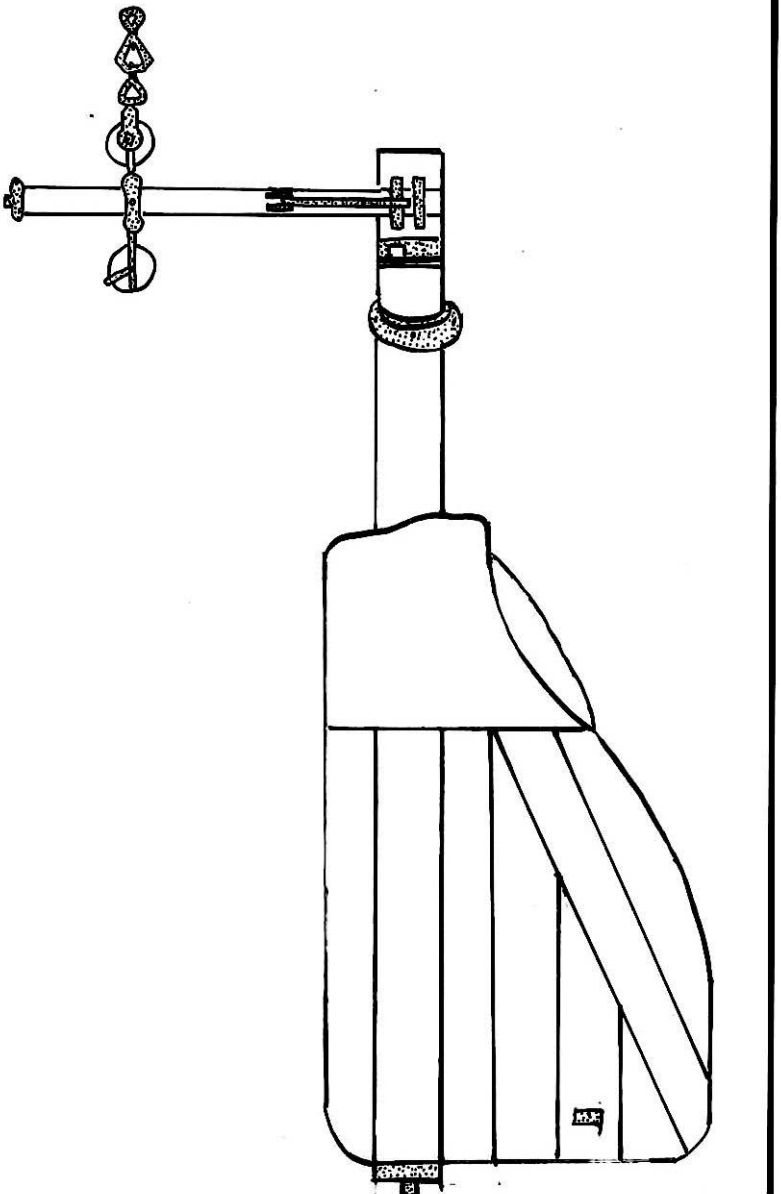
GPS Location: N45° 29.317' W 83° 54.600'
Depth: 11-15 Feet
Wreck Length: 220 Feet Beam: 30 Feet

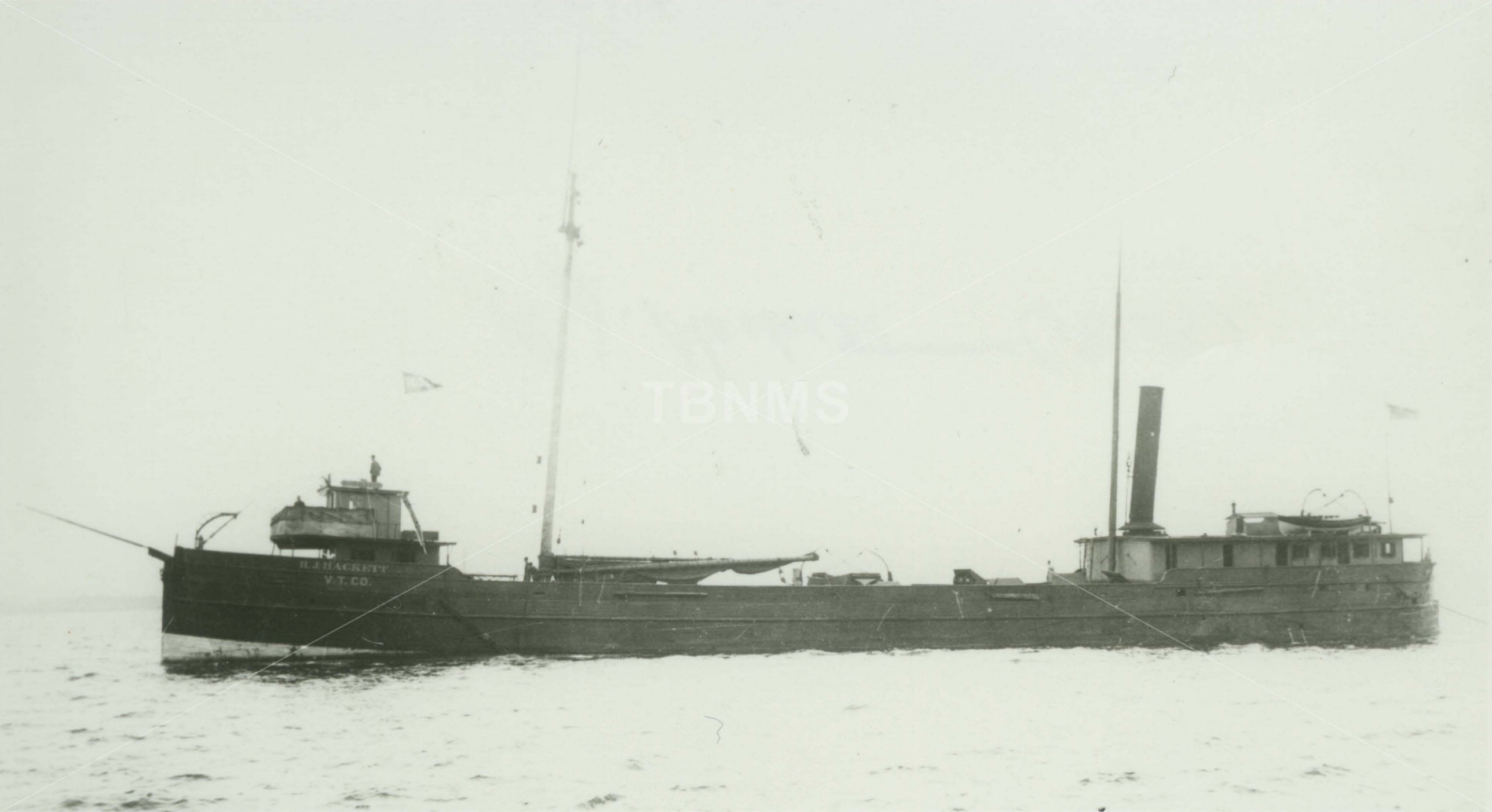


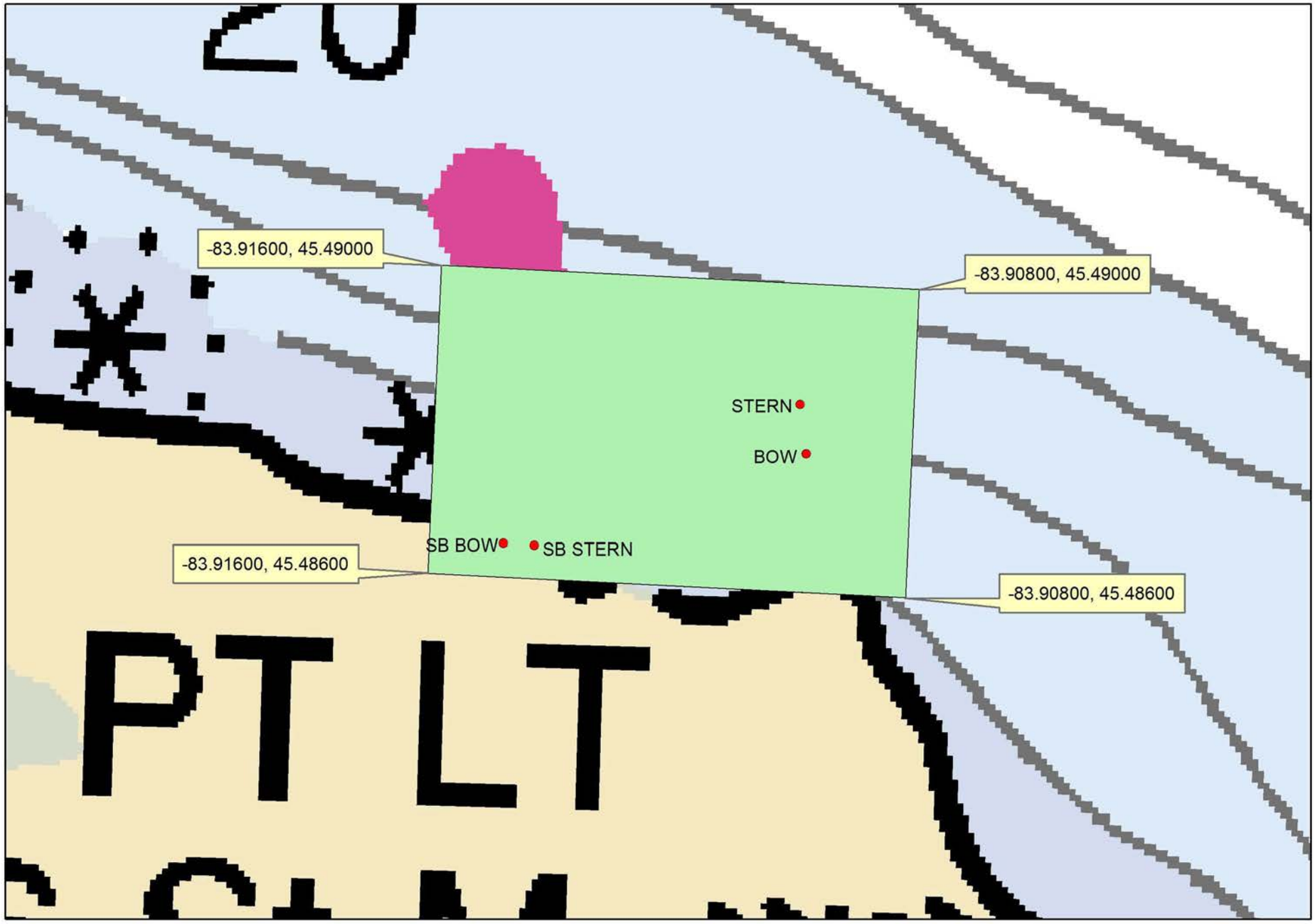
Site Plan by NOAA, Maritime Heritage Program, 2007








R.J.HACKETT
V.T.CO.



JOSEPH S. FAY SHIPWRECK SITE

Presque Isle County, Michigan

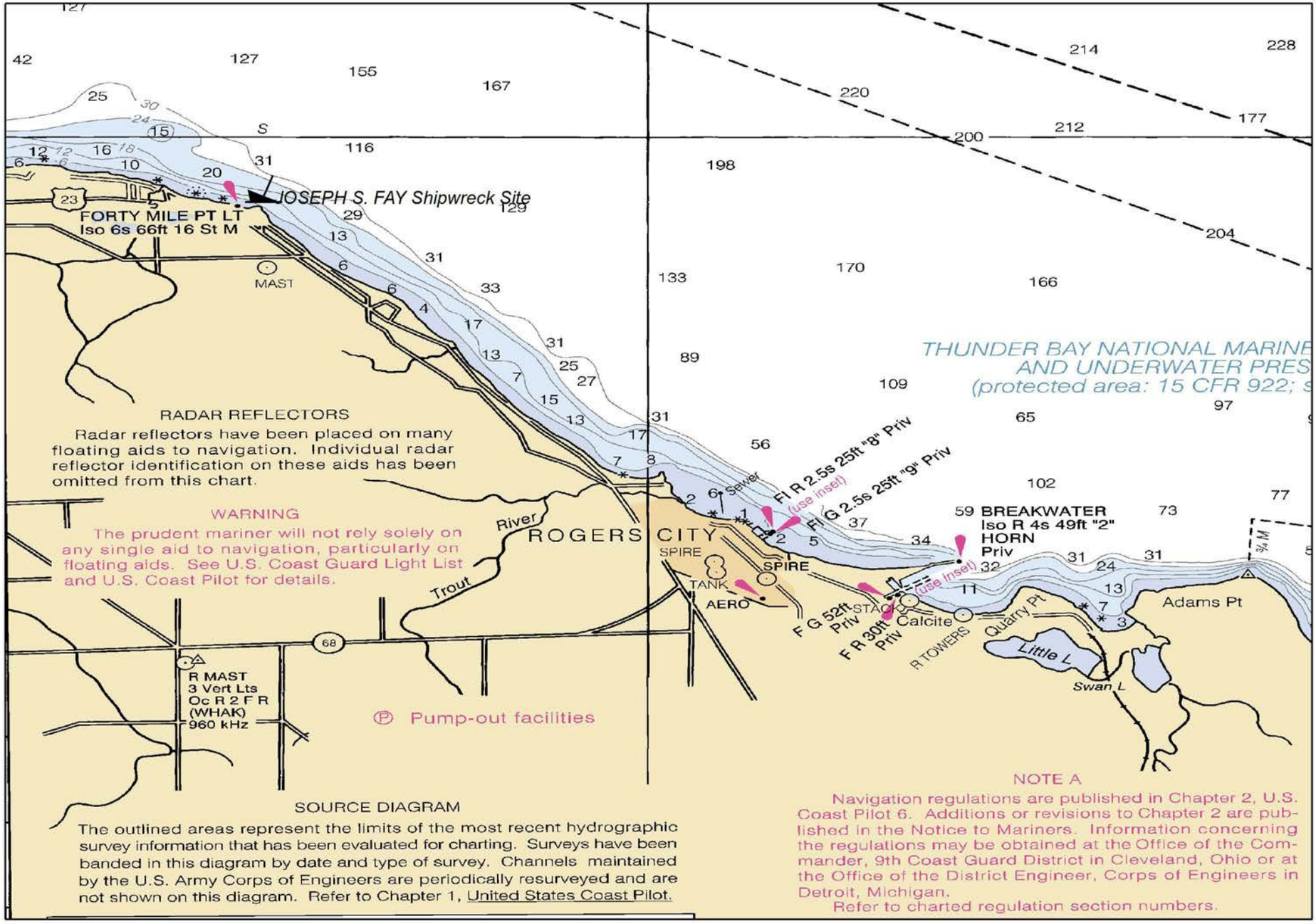
0 0.05 0.1 0.2 Miles

N W E S

BOW:	45.48804	-83.90987
STERN:	45.48861	-83.91000
SB BOW:	45.48787	-83.91483
SB STERN:	45.48686	-83.91432

NW Corner:	45.48600	-83.91600
NE Corner:	45.49000	-83.91600
SE Corner:	45.49000	-83.90800
SW Corner:	45.48600	-83.90800

NOAA Chart 14684



JOSEPH S. FAY SHIPWRECK SITE

Presque Isle County, Michigan

N W E S

BOW:	45.48804	-83.90987
STERN:	45.48861	-83.91000
SB BOW:	45.48787	-83.91483
SB STERN:	45.48686	-83.91432

NW Corner:	45.48600	-83.91600
NE Corner:	45.49000	-83.91600
SE Corner:	45.49000	-83.90800
SW Corner:	45.48600	-83.90800

0 0.75 1.5 3 Miles

NOAA Chart 14684

National Register of Historic Places
Memo to File

Correspondence

The Correspondence consists of communications from (and possibly to) the nominating authority, notes from the staff of the National Register of Historic Places, and/or other material the National Register of Historic Places received associated with the property.
Correspondence may also include information from other sources, drafts of the nomination, letters of support or objection, memorandums, and ephemera which document the efforts to recognize the property.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

Requested Action:	Resubmission
Property Name:	JOSEPH S. FAY Shipwreck Site
Multiple Name:	
State & County:	MICHIGAN, Presque Isle

Date Received:	Date of Pending List:	Date of 16th Day:	Date of 45th Day:	Date of Weekly List:
1/24/2018			3/12/2018	

Reference number:	RS100001838
Nominator:	State

Reason For Review:

__X__ Accept _____ Return _____ Reject **2/8/2018** Date

Abstract/Summary Comments:

Recommendation/ Criteria

Reviewer Julie Ernstein Discipline Archeologist

Telephone (202)354-2217 Date 2/8/18

DOCUMENTATION: see attached comments : No see attached SLR : No

If a nomination is returned to the nomination authority, the nomination is no longer under consideration by the National Park Service.

40 Mile Point Lighthouse Society
PO Box 205, Rogers City, Michigan 49779

Non-profit Organization

February 7, 2017

Michigan State Historic Preservation Office
PO Box 30740
Lansing, Michigan 49909

To Whom It May Concern:

The 40 Mile Point Lighthouse Society would like to add their support to the nomination of the Joseph S. Fay shipwreck to the National Register of Historic Places.

Approximately 150' of the Joseph S. Fay hull is located 200' west of the Lighthouse on the beach. An additional section is located northeast of the lighthouse approximately 100 yards from the beach in Lake Huron.

The 40 Mile Point Lighthouse Society recognizes the importance of distinguishing historic sites in Presque Isle County.

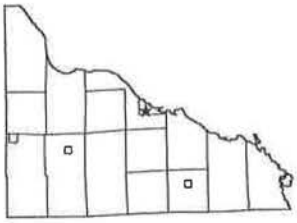
Sincerely,

Patrick J. Williams, Vice-President
40 Mile Point Lighthouse Society

PJW:sdw

RECEIVED
FEB 10 2017

Presque Isle County Board of Commissioners



Michigan State Historic Preservation Office
702 West Kalamazoo Street
P.O. Box 30740
Lansing, MI 49909

January 27, 2017

To: Michigan State Historic Preservation Office

The Presque Isle County Board of Commissioners at their regularly scheduled meeting held Friday, January 27, 2017 unanimously approved a motion in support of the nomination of the JOSEPH S. FAY shipwreck to the National Register of Historic Places. The shipwreck is located on the beach of the 40 Mile Point Lighthouse property owned by Presque Isle County. The board recognizes the importance of distinguishing important historic sites in Presque Isle County and values this process.

Ann Marie Main
County Clerk /
Secretary of the Board of Commissioners

151 E. Huron Ave.
P.O. Box 110
Rogers City, MI 49779

Phone: (989) 734-3288
Fax: (989) 734-7635

Email: piclerk@plcounty.org

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
STATE HISTORIC PRESERVATION OFFICE

EARL J. POLESKI
EXECUTIVE DIRECTOR

September 27, 2017

Mr. J. Paul Loether, Keeper
National Register of Historic Places
Mail Stop 7228
1849 C St, NW
Washington, D.C. 20240

Dear Mr. Loether:

The enclosed discs contain the true and correct copy of the nomination for the **JOSEPH S. FAY Shipwreck Site, Rogers City, Presque Isle County, Michigan**. Disc 1 contains correspondence and the National Register of Historic Places Registration Form, which includes site maps. Disc 2 contains photographs of this site. This property is being submitted for listing in the National Register of Historic Places. Written comments concerning this nomination received by us are included with correspondence on Disc 1.

Questions concerning this nomination should be addressed to Todd A. Walsh, Interim National Register coordinator, at (517) 373-1979 or WalshT@michigan.gov.

Sincerely yours,

Brian D. Conway
State Historic Preservation Officer

NPS Form 10-900 OMB No. 1024-0018

United States Department of the Interior
National Park Service

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.

1. Name of Property

Historic name: JOSEPH S FAY Shipwreck Site
Other names/site number: 20UH088
Name of related multiple property listing:
N/A
(Enter "N/A" if property is not part of a multiple property listing

2. Location

Street & number:
City or town: Rogers City State: Michigan County: Presque Isle
Not For Publication: ☐ Vicinity: Forty Mile Point Lighthouse

3. State/Federal Agency Certification

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

I hereby certify that this ___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 ___meets ___does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___national ___X___statewide ___local

Applicable National Register Criteria:

___X___A ___B ___C ___X___D

Brian Mckay, SHPO 11/28/17

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

MI SHPO

In my opinion, the property ___meets ___does not meet the National Register criteria.

Signature of commenting official: **Date**

Title : **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 Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

Private:	☐
Public – Local	X
Public – State	X
Public – Federal	☐

Category of Property

(Check only **one** box.)

Building(s)	☐
District	☐
Site	X
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 _____

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

Current Functions
(Enter categories from instructions.)
LANDSCAPE / UNDERWATER / UNDERWATER SITE

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

Summary Paragraph

The JOSEPH S. FAY Shipwreck Site contains the remains of the three-masted, wooden-hulled bulk freighter JOSEPH S. FAY as it came to rest following a wrecking event just offshore of Forty Mile Point Lighthouse in Rogers City, Michigan, in Lake Huron after a storm on 19 October 1905. Most of JOSEPH S. FAY's wreckage remains submerged in seventeen feet of water, excluding its starboard side, which ran ashore several hundred yards northwest of the lighthouse. For the submerged portion, most of the hull beneath the turn of the bilge remains intact, as does much of its steam propulsion machinery. Here, hull sections, rudder, copper hull sheathing, keelsons, portside engine mount, propeller shaft assembly, and iron ore cargo are the most prominent features. Ashore, a 134-foot-long starboard section features scarfed ceiling planking, paired frame sets, and hundreds of wood and iron fasteners. Together, along with other artifacts scattered around the site, these sections illustrate construction details of early wooden bulk freighters, iconic vernacular ships that emerged in the Great Lakes in the 1870s and later evolved into the modern Great Lakes bulk carrier.

Narrative Description

SETTING

JOSEPH S. FAY (United States Registration Number 75315) was built in 1871 by Quayle and Martin in Cleveland, Ohio, for the price of $80,000 (Thunder Bay Sanctuary Research Collection:Joseph S. Fay). Alva Bradley commissioned the vessel to expand his growing fleet of vessels engaged in the Lake Superior iron ore trade. Throughout its thirty-four-year career, JOSEPH S. FAY executed routine round trips carrying coal north from Cleveland and other Lower Lake ports to Lake Superior iron ore ports including Escanaba, Marquette, and Duluth, in turn carrying iron ore on the reciprocal transit back into the lower lakes.

At the time of launch, JOSEPH S. FAY was the largest steamer that had ever been built in Cleveland, and one of the biggest yet to ply Great Lakes waters (*Buffalo Commercial Advertiser* 1871; Detroit *Free Press* 1872) (FIGURE 1). Its hull was 215.6' long, 33.6' in beam, with a 14.8' depth of hold, and grossed 882.31 tons (United States Department of Commerce Bureau of Navigation 1871). The single screw propeller was powered by a towering 28.5' by 36" direct acting high-pressure steam engine manufactured by Cleveland's Cuyahoga Iron Works (Thunder Bay Sanctuary Research Collection: Joseph S. Fay). Twin tubular boilers, measuring 6'10" by 10'3", supplied up to eighty-four pounds of steam per square inch. In 1887, this power plant was upgraded to a steeple compound steam engine and single scotch boiler that could generate more steam pressure (Thunder Bay Sanctuary Research Collection: Joseph S. Fay).

JOSEPH S. FAY had a two-level aft cabin situated above the engine room, just aft of the mizzen mast where engineers, stokers, and other non-officer crew members berthed. A single smokestack extended upward through the forward end of this cabin. Aside from the foremast, mainmast, some deck machinery, two lifeboats, and a small midships cabin, the majority of JOSEPH S. FAY's main deck was kept clear to accommodate cargo loading. Coal and iron ore were hoisted in and out of the main hold through four cargo hatches. The centered "bird-cage" style pilothouse rested atop the forecastle, or forecastle (the upper deck forward of the foremast) and gave helmsmen, pilots, and captains near 360-degree visibility. Perched atop the pilothouse was an eagle figurehead, symbolizing the vessel's American nationality (FIGURE 2).

As was common during this period of sail-to-steam transition, JOSEPH S. FAY was fitted with three masts used as an auxiliary propulsion system and provided the rigging necessary for loading and unloading cargo. JOSEPH S. FAY was an exemplary model of the first wooden bulk carrier types designed to utilize new steam propulsion technologies to meet the burgeoning economic demand for large cargoes of bulk iron ore.

WRECKING EVENT

On Thursday, 19 October 1905, JOSEPH S. FAY was steaming south towards Ashtabula, Ohio, with its consort schooner barge, D.P. RHODES, in tow. Two days earlier, both vessels departed Escanaba, Michigan, on the northern shore of Lake Michigan, fully laden with iron ore (*Alpena Evening News* 10/23/1905). Weather was calm up until the morning of Thursday, 19 October as the vessel was nearing Forty Mile Point. Furious east winds built quickly, elevating to gale force conditions by one thousand

hours (United States Department of Agriculture 1905:3). Snow compounded the situation by reducing visibility as JOSEPH S. FAY fought against the east winds, which pushed the vessel towards shore. Wheelsman George Rinley recalled the event to the *Alpena Evening News*:

> 'The old boat pounded in the sea, which at every moment was growing worse and by midnight the waves were going completely over the boat. I was at the wheel and the captain urged me to turn the vessel around. To his cries of 'hard over' I vainly tried to turn the wheel but would be thrown from one side of the cabin to the other, and could gain no control of the vessel. Another man was sent to aid me but the terrific sea proved too strong for us and we were forced to let the ship go her course before the wind. She drifted for some miles at the mercy of the sea at every turn the creaking of the timbers foretold the end. It was when were about to let go the wheel that mate George Syze, who was shouting orders from the deck, called out to hold steady. I looked from the cabin door and saw a huge wave strike him just as he uttered the words, and he was knocked from the deck to his death. In danger of my own life I went to the rail but could see nothing of his body. The wind was blowing from the northeast and nearly sixty miles an hour when we were ordered to man the yawl boat. The mate was gone and only nine were left to fill the boat, one of whom was the woman cook. It was about 2:30 o'clock when we left the side of the Fay which was then leaking like a sieve. The wind was so strong that we found it impossible to row against it and were so near the steamer when she sank that the suction nearly overturned the yawl' (*Alpena Evening News*, 10/23/1905).

The ten crew eventually made land in the lifeboat and sought local shelter near Presque Isle. Meanwhile, schooner barge D. P. RHODES had broken free in the storm and drifted all the way to Cheboygan Point before also running aground. The barge, however, was later refloated with minimal damage (*Alpena News*, 10/21/1905). JOSEPH S. FAY was driven hard aground and sank on the sand bars directly offshore of the Forty Mile Point Lighthouse. Overnight the vessel took an amazing pounding from wind and waves, sufficient to break off and send its starboard side ashore, a distance of nearly eight-hundred feet. The remaining wreckage broke apart and settled in fifteen feet of water, perpendicular to the shore.

SHIPWRECK DESCRIPTION

The shipwreck site of JOSEPH S. FAY remains in two extant sections, the majority of which is underwater, while its starboard side is on land, embedded in the beach at Forty Mile Point Lighthouse.

Submerged Section

Most of the wreckage of JOSEPH S. FAY lies submerged offshore of the Forty Mile Point Lighthouse (FIGURE 3). Consistent with archaeological site formation processes expected for this water depth, wrecking event, ship construction type, and passage of time, all of JOSEPH S. FAY's upper works are

disarticulated and scattered nearby on the lake bottom. Beneath the turn of the bilge, however, hull sections are mostly intact from stem post to the propeller shaft. The resulting site loci, therefore, is a mix of articulated and disarticulated remains, overall comprising the majority of the vessel's historic structure.

The bow section features angled cant frames, hull and ceiling planking, and iron fasteners that secured the adjacent side sections together (FIGURE 4). Sections of copper or iron sheathing rest on the lakebed, visible just beneath the vessel's lower extents. Along these sheathing plates, rivet holes follow a pattern consistent with the curvature of the bow, suggesting that the sheathing simply peeled off the wooden hull over time.

Beginning at the base of the stem post, the keelson, along with several sister and rider keelsons (which together compose the keelson assembly), are exposed and run the length of the wreckage to a point just forward of where the steam engine was formerly located. The primary keelson was bolted through frame sets into the keel, forming the rigid 'backbone' of the vessel and securing the base of the transverse framing sets (FIGURE). At intervals, sacrificial keelson planking is spaced fore and aft, corresponding to the vertical position of the deck hatches. This wood plating protected the keelson from impact damage when coal and iron ore were poured through the hatches into the hold (FIGURE 5).

On the starboard side, two types of ceiling planking are visible. Forward of the pump well, a typical type of fore-and-aft running planking is visible. In most vessels, this planking delineated the bottom-most portion of the vessel's usable interior space, the lowest point at which cargo (whether bulk or package freight) would be stored. On JOSEPH S. FAY, however, an additional level of ceiling planking was installed from the area of the pump well, aft, over the sides of the keelson assembly. Quayle and Martin equipped JOSEPH S. FAY with this additional layer of wood as added protection against damages produced by physical impact while loading and unloading large cargoes of coal and iron ore.

Compound frame sets comprise the remaining visible hull wreckage on the starboard side aft of the pump well. Most of the port side is covered by a dense pile of JOSEPH S. FAY's loose iron ore cargo. The irregular-shaped pieces range from apple to cantaloupe in overall size.

The stern section aft of the keelson assembly terminus is composed of strengthened horizontal timbers, deadwood, and angled cant frames that provided the structural support for propulsion machinery and gave the vessel's fantail stern its curved shape (FIGURE 6). Three massive floor timber assemblies formed the mount for the steeple compound steam engine. Since its two steam cylinders were arranged vertically, thus raising its center of gravity, this type of engine required substantial structural support. The portside engine mount remains bolted to the forward two floors. These v-shaped assemblies provided structural support by way of distributing the weight and vibration of the engine while maintaining a level plane with respect to the propeller shaft.

The propeller shaft is likewise intact, as are the flywheel, mounting brackets, and two-piece stuffing box. The propeller itself was cut and removed from the site at an unknown time, leaving forty-eight inches of the propeller shaft protruding from the stern post, terminating in a blunt, cut end.

Beyond the primary hull wreckage detailed above, an assortment of ferrous machinery components, the port sidewall, and the rudder are scattered around the hull. An iron bow windlass rests isolated in eight feet of water between the submerged portion of the site and shore (FIGURE 7). Just outboard of the

portside engine mount is part of the engine. The single low- pressure cylinder is split in half longitudinally; its bore reflects the circular shape of the port engine mount. A slide valve rod remains attached to the slide valve chest on outer side of the cylinder. Direct measurement suggests this cylinder was likely the forty-four-inch diameter low pressure cylinder and is the only remnant of the 24" x 44" x 30" steeple compound engine installed on JOSEPH S. FAY in 1887 by Globe Iron Works (Thunder Bay Sanctuary Research Collection).

Numerous pieces of rectangular iron sheathing rest in the sand just off the port stern. This plating likely encapsulated JOSEPH S. FAY's aft boiler house where the steam engine and scotch boiler were located. Because of the pressure, heat, and open flames ever present in this part of the vessel, Quayle and Martin installed iron plating over the wooden superstructure of the boiler house to reduce the risk of fire (FIGURE 8).

Off JOSEPH S. FAY's port side is a larger section of its port sidewall whose starboard counterpart lies beached ashore. Based on the curvature of the compound frames that protrude from the ceiling planking on the inboard end and the existence of wooden knees on the outboard end, this section of hull was fitted above the turn of the bilge up to the main deck which was added in 1876 (United States Department of Commerce Bureau of Navigation 1876). On the right of Figure 9 are the wooden knees, supporting the deck beams that supported the floor of the main deck. The slightly curved frames in the left of the photograph represent the upper section of the turn of the bilge (FIGURE 9). In between these features are ceiling planks that cover almost the entire section. At the top of this section are several ferrous bands, running fore and aft, that were built into the bulwarks just beneath the shelf depicted in Figure 9. These overlapping metal bands were riveted to the ceiling planking and represent a Quayle and Martin innovation aimed at strengthening JOSEPH S. FAY by way of stiffening the longitudinal axis of the vessel's upper works: an unconventional method not traditionally employed in wooden hull construction.

JOSEPH S. FAY's rudder lies flat off the starboard stern. Including the attached rudder head, the overall length of this assembly is twenty-four feet and three inches (FIGURE 10). The composite rudder was built chiefly of oak but has iron plating encasing a square section of the rudder at the approximate height of the water line. This plating may have been a protective measure against ice damage. Part of the iron rudder post remains attached to the rudder, along with sections of the tiller arm that are accompanied by two support arms. Two blocks and come-alongs are attached to the end of this tiller arm that would be directed outboard by steering cable (FIGURE 11). In combination, this assembly forms the main components of the JOSEPH S. FAY's steering gear.

Beached Section

A 134-foot by 15-foot section of JOSEPH S. FAY's starboard side washed ashore several hundred yards up the beach from the Forty Mile Point Lighthouse (FIGURE 12). Situated in an emergent zone that fluctuates relative to lake elevation, this portion of the vessel is subject to a range of conditions that effects substrate coverage and periodic submergence. When sand coverage is minimal, frame sets, scarfed ceiling timbers, deck beam shelf, and hull planking are exposed.

Hundreds of wooden and iron fasteners are present that vary in length and fastener head type. Even when emergent, substrate coverage can vary greatly from year to year. Most recently in 2016, this section was sloping down towards the water's edge.

SITE INVESTIGATIONS

JOSEPH S. FAY's dynamic, two-part shipwreck site has developed into an excellent heritage resource and educational tool for sanctuary researchers, partners, and the public. The Thunder Bay National Marine Sanctuary and volunteers maintain a seasonal mooring buoy that safely allows kayakers, sailors, and dive boats to visit the submerged portion of site without having to anchor and potentially damage its archaeological remains. The mooring buoy also assists with finding the site when navigating from shore. Due in large part to this mooring buoy and its proximity to shore, the submerged section is frequently visited while swimmers and non- swimmers alike can access the shore-side portion, resulting in one of the most publicly accessible shipwreck sites in the entire sanctuary. Furthermore, its proximity to the National Register-listed, the Forty Mile Point Lighthouse (NR# 19840719), illustrates the relationship between land and lake as a core component of historical maritime activity of the Great Lakes, accentuating the need for JOSEPH S. FAY to be listed on the National Register of Historic Places.

The beached section is a popular component of the Forty Mile Point Lighthouse experience. Thousands of visitors learn about the shipwreck through interpretive exhibits and panels located in the on-site Lighthouse Keepers Museum and are directed by signage that leads to the beached section. While most visitors are conscious of heritage preservation efforts, there is evidence of less-conscious visitors who have damaged timbers by walking and playing on them and even removing iron fasteners.

For sanctuary educators, the beached section offers an incredible background to teach ship documentation methods and Great Lakes wooden ship construction. A stepping-stone for curriculums dealing with maritime history and heritage topics. Some of the groups that regularly interface with the beached section of JOSEPH S. FAY in partnership with the Thunder Bay National Marine Sanctuary include regional school groups, local community college courses, regional and national undergraduate and postgraduate anthropology and archaeology programs, professional tourist groups, historical societies, and citizen-science programs interested in heritage-related activities.

Through these partnerships, the Thunder Bay National Marine Sanctuary has built an inventory of archaeological information, plans, descriptions, photographs, and observations related spanning, continuously, almost fifteen years. The completed site plan and underwater images are just several of these archaeological data products that have come as a result of JOSEPH S. FAY's historical significance and accessible location so close to shore.

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.)

COMMERCE
ENGINEERING

Period of Significance
1871-1905

Significant Dates
1871 (Launch)
10/19/1905 (Sinking)

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

Cultural Affiliation
N/A

Architect/Builder
Quayle and Martin, Cleveland

Statement of Significance Summary Paragraph

The JOSEPH S. FAY Shipwreck Site qualifies for listing on the National Register of Historic Places under Criterion A in the area of Commerce based on the vessel's role in the Lake Superior iron ore trade. After the rediscovery of iron ore in Michigan's Upper Peninsula in the 1840s, motions were greatly accelerated to capitalize on the region's resources and industrialize their extraction. The locks at Sault Ste. Marie, coastal marine infrastructure, and new, larger vessels were designed specifically to carry this important bulk freight material. Despite the land and marine hurdles that complicated early iron mining in Michigan's Upper Peninsula, the region quickly rose to be one of America's chief suppliers of iron ore. With concurrent advances in steel production and the vertical growth of cities, iron demand had a profound effect on Great Lakes commerce. JOSEPH S. FAY was an early contributor in the Lake Superior iron ore boom of the mid-late nineteenth century.

The JOSEPH S. FAY Shipwreck Site also qualifies for listing on the National Register of Historic Places under Criterion A in the area of Engineering, based on its innovative hull design. JOSEPH S. FAY is one of the earliest examples of the wooden bulk freighter, a vernacular vessel type that revolutionized bulk freight transportation on the Great Lakes. Created in response to demand by the iron ore industry, JOSEPH S. FAY featured a long, unobstructed deck with wide cargo hatches that facilitated and accelerated loading and unloading of bulk iron ore and coal. Its hull design was an antecedent to the steel

bulk freighters that superseded wooden bulk freighters in commercial iron ore transportation on the Great Lakes.

The remains of JOSEPH S. FAY are archaeologically significant to the study of Great Lakes wooden bulk freighters. Despite its shallow water deposition, most of the hull is intact beneath the turn of the bilge and retains a high level of integrity. Many questions remain of the transitional period of wood to steel hull bulk freighters on the Great Lakes. How did shipbuilders reconcile newer steam engine technology that exhausted unprecedented vibration, friction, and force on traditional wooden hulls? What techniques did Quayle and Martin use to harness and secure JOSEPH S. FAY's advanced power plant? What can be inferred of the wide-ranging fastener patterns and types present on the beached starboard section? How does JOSEPH S. FAY's construction compare to later wooden bulk freighters? As a rare, early example of its vessel class, the JOSEPH S. FAY Shipwreck Site has potential to yield pertinent information on early wooden bulk freighter construction making it eligible under Criterion D with a period of significance between its launching in 1892 to its sinking on 19 October 1905.

Narrative Statement of Significance

CRITERION A

Commerce

JOSEPH S. FAY is eligible for listing under Criterion A for its participation in maritime commerce on the Great Lakes. During the nineteenth century, the Great Lakes transitioned from a remote maritime frontier to a busy industrial waterway following discoveries of raw material deposits, developments in regional maritime infrastructure (towns, docks, facilities, and canals), and the emergence of vessel designs suited for exploiting the region's natural resources within a unique and demanding maritime transportation landscape. As a result, the iron ore caches in Michigan's Upper Peninsula quickly became one of the Great Lakes most profitable and long-lived bulk freight commodities. George Miller highlighted the region's geological importance to the American Geographic Society:

> No single resource, unless it be coal or soil, is so vital to the economic growth of the modern nation as iron. Iron ore deposits situated like those of the Lake Superior district, of such high grade, in such a limited area, and so easily mined on a large scale, could not fail to affect the whole nation. Their production, utilization, and conservation concern the whole people (1914:882).

In 1841, State of Michigan Geologist Douglas Houghton reported large deposits of iron ore present among the commercially-exploitable caches of native copper that occupied the southern shore of Lake Superior and especially the Keweenaw Peninsula (Reynolds 2011:11). Five years later, several groups from Cleveland, Ohio, marked iron outcroppings along what came to be the Marquette Iron Range. Land claims followed, and companies began erecting infrastructure to extract the ore, and, of equal importance, transport it to lower lake markets. Coupled with the pit- mining machinery and an abundant labor force, a solid transportation network was equally vital to keep coal flowing north to fuel the ore camps while furnaces processed ore and prepared it for shipment in the form of pig iron.

The Marquette Iron Range is located between ten and fifteen miles south of the Keweenaw Peninsula and runs southwest to northeast toward the city of Marquette on the southern shore of Lake Superior. Marquette was the natural first choice for mining companies as their shipping port. It was relatively close to the remote mining camps that began extracting ore in 1848, but did pose one significant disadvantage: the rapids of the Saint Mary's River required all cargoes and vessels to portage three-quarters-of-a-mile around the white water to reach the open water of northern Lake Michigan and Lake Huron. Despite the roughly seventy-five-mile distance between Negaunee, at the heart of the Marquette Iron Range, and Escanaba (closest deep-water port on Lake Michigan) companies chose Escanaba as a primary ore port and began work to construct a railroad network to connect the iron with the lake, thus circumventing the maritime navigation barrier between Lake Superior, and Lakes Huron, and Michigan.

In 1851 iron ore was discovered ninety miles northwest of Escanaba in Iron River by United States land surveyor Harvey Millen and prospectors immediately set up camps (Sawyer 1911:518). Notable mines in this new mining locale, now referred to as the Menominee Range, include the Baker, Brule, and Crystal

Falls Iron Ore Companies. As lakeshore facilities in Marquette grew in scale and the Chicago and Northwestern Railroad Company connected Negaunee with Escanaba, Escanaba became the principal port for the Menominee Range and an alternative port for the Marquette Range.

Even after the locks were built in 1855 at Sault Ste. Marie, Escanaba offered one important advantage over Marquette. The locks at Sault Ste. Marie inevitably introduced a bottleneck for shipping during peak months. Consequently, distance and time (most importantly) was reduced by loading ore boats at Escanaba situated at the northern tip of Lake Michigan. Since the first shipment left Escanaba in 1866, it has remained an important iron ore hub. In shipping distances to Cleveland, Ohio, Escanaba is sixty miles closer than Marquette, two hundred and fifty-one miles closer than Ashland, and three hundred miles closer than Duluth (Newett 1897:103).

Excluding rail cost to transport ore to dock, iron ore freight rates per ton averaged twenty to twenty-five percent less leaving Escanaba than material leaving Marquette (United States House of Representatives 1892:27).

Escanaba's rise as a dominant late nineteenth-century Upper Lake iron ore port happened swiftly. Its first dock was constructed in 1863, and its first registered shipment departed its shores in 1866 (Thompson 1991:38). By 1889, Escanaba was shipping forty-four percent of Lake Superior iron ore and was considered the industry's most important port (Day 1892:26). As cities across the nation sought steel-constructed bridges, buildings, and manufacturing centers, insatiable demand placed the Lake Superior iron ore industry on an unparalleled growth track.

Lake Superior iron ore's higher purity compared to ore from the rest of the nation was an important reason for the industrial development of the region (Van Hise 1901:715). The Bessemer process, invented in 1875 by Edgar Thomson, heightened demand for high grades of iron ore. Many nationally significant industries relied on Superior ore. This new process of manufacturing led to increased demand for domestic steel for use as railroad ties, in commercial construction, shipbuilding, automobiles, and numerous military and civilian industries.

In 1885, Chicago's Home Insurance Company headquarters was the first building constructed with a steel-reinforced skeleton and considered the first skyscraper (Koram 2008:93). Like ship hulls, steel frames allowed architects to experiment with new building designs that "culminated in the introduction of the skyscraper that today dominates the urban skyline of cities around the world" (Bowlus 2010:153). Masonry construction had a known height limit of fourteen stories, while steel-framed buildings had no such restriction (Domosh 1996:73).

Consequently, urban landscapes were not only growing laterally, but vertically, and at a staggering rate. Buildings like the Manhattan Life Insurance building (1894), the New York World Building (1890), and others competed for the title of world's tallest building. All of these structures relied upon the vast supply and effective transportation network of the Lake Superior iron ore industry. Vessels like JOSEPH S. FAY were instrumental in providing the necessary construction materials for the largest buildings in North America.

Lake Superior iron ore was perhaps most essential in the construction and expansion of a national railroad network (Bogue 2007:55). America's vast rail network was the principle force behind the rapid national

industrialization that occurred in the late 19th and early 20th centuries (Rostow 1960). Its "giant web broke down the barriers of regionalism and gave all but the most remote villages access to markets previously unavailable" (Bowlus 2010:9). Railroading was a key factor in the success of every American industry as it brought raw materials to manufacturing centers, and finished products to market. The tracks, ties, engines, and rail cars of American's transportation system were all built with Bessemer steel beginning in the 1880s through the 1920s. Bessemer steel, of course, was best produced with the pure, low-phosphorus iron ore found in Michigan's Upper Peninsula.

Dependable, efficient, and large capacity ships were a critical link in the supply chain that allowed Escanaba and other Lake Superior iron ore ports to witness such incredible growth. As regional and national transport networks expanded at the impetus of the iron industry, Great Lakes shipbuilding likewise capitalized upon the opportunity and developed purpose-built craft for the iron ore trade, thus the development of the wooden bulk carrier. Built just five years after the first shipment left Escanaba, the 1,100-net-ton JOSEPH S. FAY was one of the earliest wooden bulk carriers and played a lead role in the rise of the Lake Superior iron ore industry.

JOSEPH S. FAY averaged between ten and twelve round trip voyages between Escanaba (and sometimes other Lake Superior Ports) and Cleveland, Ohio, per year (Thunder Bay Sanctuary Research Collection). Including the 891 net tons offered by JOSEPH S. FAY's consort schooner- barge, D. P. RHODES, the pair carried roughly two thousand net tons of cargo in each direction. D. P. RHODES is pictured at dock abreast to JOSEPH S. FAY in Figure 13 (FIGURE 13). D.P. RHODES broke free during the storm and ran ashore near Cheboygan, Michigan.

At the time, JOSEPH S. FAY's carrying capacity was among the largest of cargo carriers. Because of its early role in what would become Michigan's most profitable bulk freight commodity, JOSEPH S. FAY is eligible under Criterion A in the area of commerce. JOSEPH S. FAY is also eligible under Criterion A in the area engineering as its second area of significance.

Engineering

JOSEPH S. FAY is eligible for listing under Criterion A under the engineering area of significance because it embodies the distinctive characteristics of a specific vessel type (wooden bulk freighter), and represents the work of the influential Great Lakes shipbuilding firm Quayle and Martin. JOSEPH S. FAY is an excellent example of the 1870s wooden bulk freighters that influenced Great Lakes shipbuilding trends into the twentieth century.

The Quayle family, including young Thomas, landed in the Cleveland from Isle of Man in 1827, and purchased a farm. Thomas had acquired some carpentry skills while living on the Isle of Man, and began working for a small shipbuilding firm upon arrival. Within two years, Thomas had started his own business and launched brigs CAROLINE and SHAKESPEARE. Quayle's subsequent partnership with Luther Moses generated enough business that the pair had "six to seven vessels on the stocks at once, and turning two sets a year" (Williams 1885:460). The partnership dissolved after two years, and Quayle found a stronger partner in John Martin. In their first year, the Quayle and Martin built thirteen ships, including the JOSEPH S. FAY (Orth 1910:720). They developed a reputation for large wooden ships, and helped pioneer the development of large wooden propellers like DEAN RICHMOND, ARIZONA, and JOSEPH S. FAY. Regional historian John Mansfield refers to Thomas Quayle as "…. the father of

Cleveland shipbuilders" (1899:427). Quayle remained a household name in Great Lakes shipbuilding until he retired in 1882 and left his business to his sons. The wooden bulk freighter JOSEPH S. FAY appropriately echoes his innovation and expertise.

Great Lakes bulk freighters can trace their origins to R. J. HACKETT, built in 1869 by Peck and Masters in Cleveland, Ohio (Thompson 1991:22; FIGURE 14). With its innovative forward pilothouse, and aft engine and crew cabin, R. J. HACKETT's main deck was left uninterrupted with eight-foot cargo hatches spaced at twenty-four-foot centers that matched up with the spacing of loading nozzles at Lake Superior pocket docks (Wright 1969:5). Not only did this "fore-and-aft" cabin arrangement allow for more gross tonnage due to the consolidation of unprofitable ship spaces (large engine rooms located amidships, expansive cabins on deck) but also cargo loading was accelerated. Time at dock was reduced greatly as the R. J. HACKETT's cargo hatches were spaced according to dockside loading equipment. With the launch of the R. J. HACKETT marking the beginning of the wooden bulk freighter era, thirty-nine wooden bulk freighters were constructed, with the majority built before 1875 (Devendorf 1995:8). Maritime historian Mark Thompson argues that the advent of the R. J. HACKETT "led ultimately to the demise of sailing vessels and allowed bulk cargoes, particularly iron ore, to displace the passenger trade as the most important commerce on the Lakes" (1994:29).

JOSEPH S. FAY was launched just two years after R. J. HACKETT and shares most of its pioneering design features. At time of launch, JOSEPH S. FAY was powered by a 28.5" x 36" single cylinder direct acting steam engine fed by twin 6'10" x 17'6" tubular boilers that generated eighty-four pounds of steam per square inch (Thunder Bay Sanctuary Research Collection). As was typical of early wooden bulk freighters initially launched with high-revving single cylinder engines, its original engine was replaced in 1887 with a 24" x 44" x 30" steeple compound engine (Devendorf 1995:8). The new power plant was fed by a single, more-efficient Scotch boiler that measured 14' x 12'6". As was typical for the bulk freighter design, these engines were positioned aft to maximize cargo capacity. While an aft engine placement would seem common and sensible to a modern eye, the propellers and sidewheel steamers popular of the day had their engines mounted much closer to amidships for better weight balancing as they weren't carrying large, heavy, bulk cargos. Most of their cargoes was packaged freight and could be organized and stowed around central engine rooms and boiler houses.

At the time of JOSEPH S. FAY's launch, available hull construction technology was the limiting factor in the size of early wooden bulk freighters. Wooden hulls generally were not built longer than three hundred feet to prevent hogging and sagging at the vessels' stern and bow (Thompson 1994:29). Dense, loose cargos of coal and iron ore especially stressed wooden hulls so shipping owners like Alva Bradley were left to maximize profits by having the wooden bulk freighter tow a consort schooner-barge. Unlike hull technology, engine technology had progressed to be able to power both the fully-laden host vessel, and tow a barge of similar size (Devendorf 1995:8).

The size limitations of the 1870s wooden bulk freighters were quickly addressed with the launching of ONOKO in 1882 – the first iron-hulled bulk freighter on the lakes. While the iron, and, shortly later, steel hulls unlocked great potential for vessel size and carrying capacity, the basic hull shape and deck arrangement of these metal-hulled bulk freighters mirrored JOSEPH S. FAY and the wooden bulk freighters of the 1870s. Thomas Quayle and his partners were among the first to experiment with this new vessel design that greatly accelerated the iron ore industry's growth, and became the staple design that was built through the middle twentieth century.

Because of these technological developments in hull design and propulsion systems, JOSEPH S. FAY is eligible under Criterion A with Engineering as its second area of significance.

CRITERIA D

The JOSEPH S. FAY Shipwreck Site is eligible under Criterion D; the shipwreck site has yielded, and is likely to yield more information pertinent to maritime history of the Great Lakes. JOSEPH S. FAY embodies the leading maritime technology prevalent during the 1870s transition from wooden to steel hulls as discussed above under the shipwreck's significance under Criterion A: Engineering. Additional archaeological documentation of the site will enhance understanding of the wooden bulk freighter by addressing inquiries such as: what can the fastener patterns of the beached section of JOSEPH S. FAY tell us about how builders Quayle and Martin used iron to reinforce the 215-foot-long wooden hull? Wooden trenails are also present to the naked eye on the beached section; what is the quantitative and spatial correlation between wooden and iron fasteners on JOSEPH S. FAY? Both iron and wood fasteners present on JOSEPH S. FAY are far from homogenous in design, size, and method of attachment; do these irregular fastener attachments suggest hull- reinforcement after the vessel was launched in 1872? Are there ship refittings noted in the historical record that correlate to the variations in JOSEPH S. FAY's fastener patterns?

Additional archaeological inquiry into JOSEPH S. FAY's propulsion system will further understanding of how large wooden hulls were reinforced to host heavy, high-vibration compound steam engines. The availability and relatively inexpensive cost of wood as a hull construction material coupled with the witnessed longevity of wooden hulls in fresh water kept them around longer in North American shipbuilding chronology compared to saltwater traditions. As steam engines were concurrently getting faster, larger, more efficient, and heavier, wooden hulls required innovative solutions to support these new propulsion systems. Hull design strategies to mitigate heavy vibration and friction characteristic of middle nineteenth century marine steam engines were often unique to individual shipbuilders. Additional archaeological survey of JOSEPH S. FAY's stern section will provide valuable insight into how Quayle and Martin addressed this challenge.

Additional archaeological survey will be used in comparison against other documented wooden bulk freighters. *AUSTRALASIA* rests in similar water depths and eight hundred feet from shore southeast of the Whitefish Dunes State Park beach in Door County, Wisconsin. *AUSTRALASIA* was built by James Davidson: another prolific Great Lakes shipbuilder best known for large wooden hulls. Davidson launched *AUSTRALASIA* on 17 September 1884 in his Bay City shipyard. The vessel was 285 feet long with a forty-foot beam; one of the largest wooden vessels built at the time. Its shipwreck site was documented in 2012 by the Wisconsin Historical Society and listed in the National Register of Historic Places under Criterion D in 2013 (Thomsen and Meverden 2012). *Australasia* was launched at the end of the wooden bulk freighter era while JOSEPH S. FAY was built at the beginning twelve years prior. Did James Davidson employ any hull strengthening innovations utilized by Quayle and Martin on JOSEPH S. FAY? How was the fore-and-aft compound engine mounted on *Australasia*? As both sites rest in similar lakebed environments, what observations can be made of their respective site formation processes? A comparison of archaeological data from both *Australasia* and JOSEPH S. FAY has strong potential to yield important information about construction methods utilized at both the beginning, and end of the wooden bulk freighter construction in the Great Lakes from the early 1870s to middle 1880s. Because of

this potential to greatly supplement present understanding of early wooden bulk freighters, the JOSEPH S. FAY Shipwreck Site meets requirements for National Register Criterion D with a period of significance of 1872 (launch) to 19 October 1905 (sinking).

INTEGRITY CONCLUSION

The JOSEPH S. FAY Shipwreck Site has retained a high level of site integrity that support its eligibility for listing to the National Register of Historic Places under Criteria A and D.

Materials

Since its wrecking event on 19 October 1905, JOSEPH S. FAY has retained key material components including its oak hull and ferrous engine and fastener components. Most of its lower works remain intact in the submerged section as does its starboard side located on the beach. The site is a clear historic resource and remains intact with the materials used during its 1872 construction.

Workmanship

JOSEPH S. FAY is the direct product of innovative Great Lakes shipbuilders Quayle and Martin. It was constructed during a time of vessel transition as wooden hulls were built to their maximum usable lengths permitted by larger, faster, and more efficient steam engine technology. The JOSEPH S. FAY reflects Quayle and Martin's creative workmanship down to the last fastener as presented in Section 7 and earlier in Section 8. Despite its location in shallow water and on shore, the JOSEPH S. FAY Shipwreck Site has survived without serious damage caused by natural and cultural transforms.

Design

JOSEPH S. FAY was an example of a specific ship type vernacular to the Great Lakes: the wooden bulk freighter. It has retained design characteristics like hull shape, fastener patterns, cargo, and a propulsion system that together relate the ship's historical functions, commercial association and participation, and pioneering technological advancements of the time.

Association

The JOSEPH S. FAY Shipwreck Site is clearly associated with its wrecking event. Both the submerged and beached portions convey the 1905 disaster that deposited the JOSEPH S. FAY at 40 Mile Point Lighthouse.

Feeling

In most cases, shipwrecks exist under water. Of the 100 known shipwreck sites in the 4,300- square-mile Thunder Bay National Marine Sanctuary less than five exist on land. Coupled with locations that are publicly accessible, these terrestrial sites relate the feeling of shipwreck sites to broader audiences. The JOSEPH S. FAY Shipwreck Site's location at the 40 Mile Point Lighthouse stirs the feelings of danger at sea, nineteenth century ship construction, and maritime commerce on the Great Lakes to the thousands of visitors that inspect its wreckage every year.

Setting

Through the course of the storm, the crew of JOSEPH S. FAY elected to run the vessel aground within sight of the 40 Mile Point Lighthouse. With a constant lookout perched in the light tower during storms, the lighthouse offered their best odds at surviving the storm and getting the crew safely on shore. The shipwreck's setting is a clear example of the relationship between vessels in danger and lighthouses.

Location

The JOSEPH S. FAY Shipwreck Site remains in its original location after its shipwrecking event in 1905. The beached portion can be affected by sand depositions and can often change in level of sand coverage, but its geophysical location has not changed.

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Previous documentation on file (NPS):

_____preliminary determination of individual listing (36 CFR 67) has been requested
_____previously listed in the National Register
_____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:

_X_State Historic Preservation Office
_____Other State agency
_X_Federal agency
_____Local government
_____University
_X_Other
Name of repository: Thunder Bay Sanctuary Research Collection at the Alpena Public Library, Alpena, MI

Historic Resources Survey Number (if assigned): 20UH088

10. Geographical Data

Acreage of Property: 61.264 acres

Latitude/Longitude Coordinates
Datum if other than WGS84:_____
(enter coordinates to 6 decimal places)

1. Latitude: 45.488040 (Submerged Bow) Longitude: -83.909870
2. Latitude: 45.488610 (Submerged Stern) Longitude: -83.910000
3. Latitude: 45.487870 (Starboard Bow) Longitude: -83.914830
4. Latitude: 45.486860 (Starboard Bow) Longitude: -83.914320

Boundary Box Coordinates:
1. Latitude: 45.486000 (Northwest Corner) Longitude: -83.916000
2. Latitude: 45.486000 (Southwest Corner) Longitude: -83.908000
3. Latitude: 45.490000 (Southeast Corner) Longitude: -83.908000
4. Latitude: 45.490000 (Northeast Corner) Longitude: -83.916000

Verbal Boundary Description

JOSEPH S. FAY rests partly one-quarter-mile from shore and northeast of the Forty Mile Point Lighthouse and partly on shore, one-sixteenth-mile up the beach from Forty Mile Point Lighthouse. The submerged portion rests in 13-17 feet of water, while the beached section rests embedded in the sand. For the submerged section, the bow is located at latitude 45.488040 longitude -83.909870 and the stern is located at latitude 45.488610 longitude - 83.910000. For the one-hundred-thirty-four-long side section of the beach, the bow is located at latitude 45.487870 longitude -83.914830 and the stern is located at latitude 45.486860 longitude -83.914320. The boundaries of the shipwreck site are defined by a rectangle extending out from the primary submerged section towards the lake, and back towards shore, encompassing the scattered artifacts that lay between the primary submerged section and shore. The rectangle also includes the beached section in the southwest corner of the box.

The area of this box is 61.264 acres, or 247,930 square meters. The northwest corner of the box is at latitude 45.486000 longitude -83.916000. The southwest corner is at latitude 45.486000 longitude -83.908000. The southeast corner is at latitude 45.490000 longitude - 83.908000. The northeast corner is at 45.490000 longitude -83.916000.

Boundary Justification (Explain why the boundaries were selected.)

The National Register boundaries of the JOSEPH S. FAY Shipwreck Site encompass the primary footprints of the submerged and beached sections, and everything in between. Archaeological surveys conducted by the Thunder Bay National Marine Sanctuary revealed artifacts of varying size and material scattered around the site. The combination of the surf zone, the wrecking event, and an unstable sand/cobble lake bottom have deposited these important artifacts around the site, and is the primary justification for encompassing these features in one boundary box. A closer examination and GIS-based artifact tagging of this debris field may yield important information to history and provide important site formation process data and advise resource managers at the federal, state, and local levels. It is likely that many artifacts remain hidden beneath the sand that one day will surface, offering further justification for the boundary box suggested.

11. Form Prepared By

name/title: Philip A. Hartmeyer/Maritime Archaeologist
organization: Thunder Bay National Marine Sanctuary street &
number: 500 West Fletcher
city or town: Alpena state: Michigan zip code: 49707 e-
mail: phil.hartmeyer@noaa.gov
telephone: (925) 286-9648
date: January 11, 2017

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.
- **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.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photograph/Figure 1
JOSEPH S. FAY, Historical Photograph
Name of Photographer: *Thunder Bay Sanctuary Research Collection*, Alpena, MI
Date of Image: 2008
Location of Digital Image: Thunder Bay Sanctuary Research Collection, Alpena Public Library, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0001

Photograph/Figure 2
JOSEPH S. FAY, Historical Photograph
Name of Photographer: *Thunder Bay Sanctuary Research Collection*, Alpena, MI
Date of Image: 2008
Location of Digital Image: Thunder Bay Sanctuary Research Collection, Alpena Public Library, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0002

Photograph/Figure 3
JOSEPH S. FAY, Site Plan
Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 2008
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0003

Photograph/Figure 4
JOSEPH S. FAY, Underwater Bow Photograph
Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 5/172015
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0004

Photograph/Figure 5
JOSEPH S. FAY, Underwater photograph of keelsons
Name of Author: Wayne Lusardi

Date of Image: 6/22/2005
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0005

Photograph/Figure 6
JOSEPH S. FAY, Underwater photograph of stern
Name of Author: Shawn Parkin
Date of Image: 5/2014
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0006

Photograph/Figure 7
JOSEPH S. FAY, Underwater photograph of windlass
Name of Author: Wayne Lusardi
Date of Image: 6/22/2006
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0007

Photograph/Figure 8
JOSEPH S. FAY, Underwater photograph of stern plating
Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 5/17/2015
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0008

Photograph/Figure 9
JOSEPH S. FAY, Underwater photograph of port side
Name of Author: Wayne Lusardi
Date of Image: 6/12/2007
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0009

Photograph/Figure 10
JOSEPH S. FAY, Rudder drawing
Name of Author: Wayne Lusardi, State of Michigan
Date of Image: 2/20/2009
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0010

Photograph/Figure 11
JOSEPH S. FAY, Underwater photograph of tiller arm
Name of Author: Wayne Lusardi
Date of Image: 6/13/2007

Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0011

Photograph/Figure 12
JOSEPH S. FAY, Photograph of beached section
Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 11/21/2004
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0012

Photograph/Figure 13
D. P. RHODES, Historic photograph
Name of Author: *Thunder Bay Sanctuary Research Collection*, Alpena, MI
Date of Image: 2008
Location of Digital Image: Thunder Bay Sanctuary Research Collection, Alpena Public Library, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0013

Photograph/Figure 14
R. J. HACKETT, Historic photograph
Name of Author: *Thunder Bay Sanctuary Research Collection*, Alpena, MI
Date of Image: 2008
Location of Digital Image: Thunder Bay Sanctuary Research Collection, Alpena Public Library, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0014

Photograph/Figure 15
JOSEPH S. FAY, Boundary box
Name of Author: Philip Hartmeyer
Date of Image: 2017
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0015

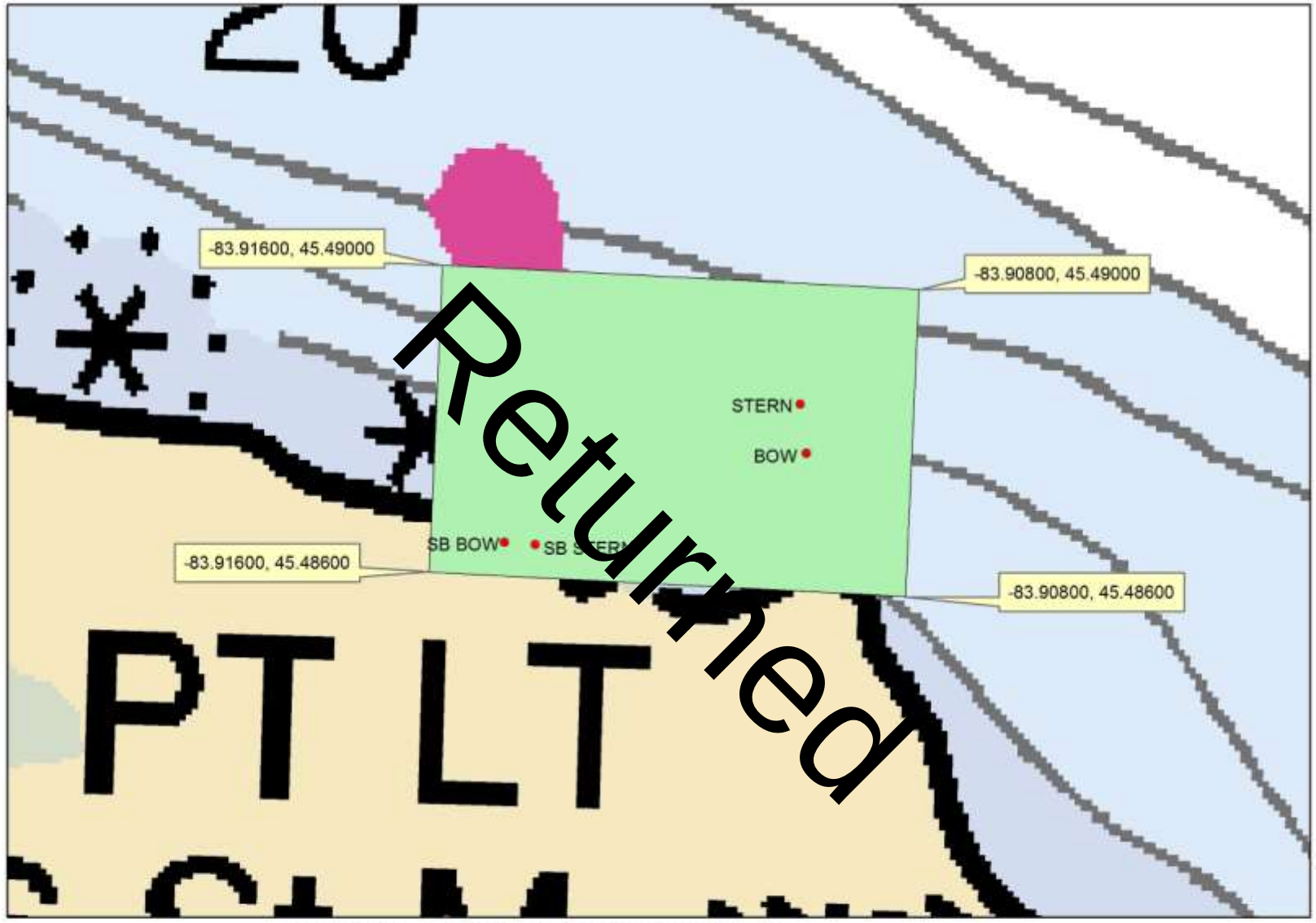
Photograph/Figure 16
JOSEPH S. FAY, Geographic Context
Name of Author: Philip Hartmeyer
Date of Image: 2017
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0016

Photograph/Figure 17
JOSEPH S. FAY, Historical Photo
Joseph S. Fay waiting its turn to lock upbound in the State Lock at the Sault. Behind is its consort, the schooner *D. P. Rhodes*.
Name of Author:

JOSEPH S FAY Shipwreck Site
Name of Property

Presque Isle, Michigan
County and State

Date of Image: c. 1874
Location of Digital Image: Judge Joseph H. Steere Room, Bayliss Public Library, Sault Sainte Marie, MI
MI_Presque Isle_Joseph S. Fay Shipwreck Site_0017



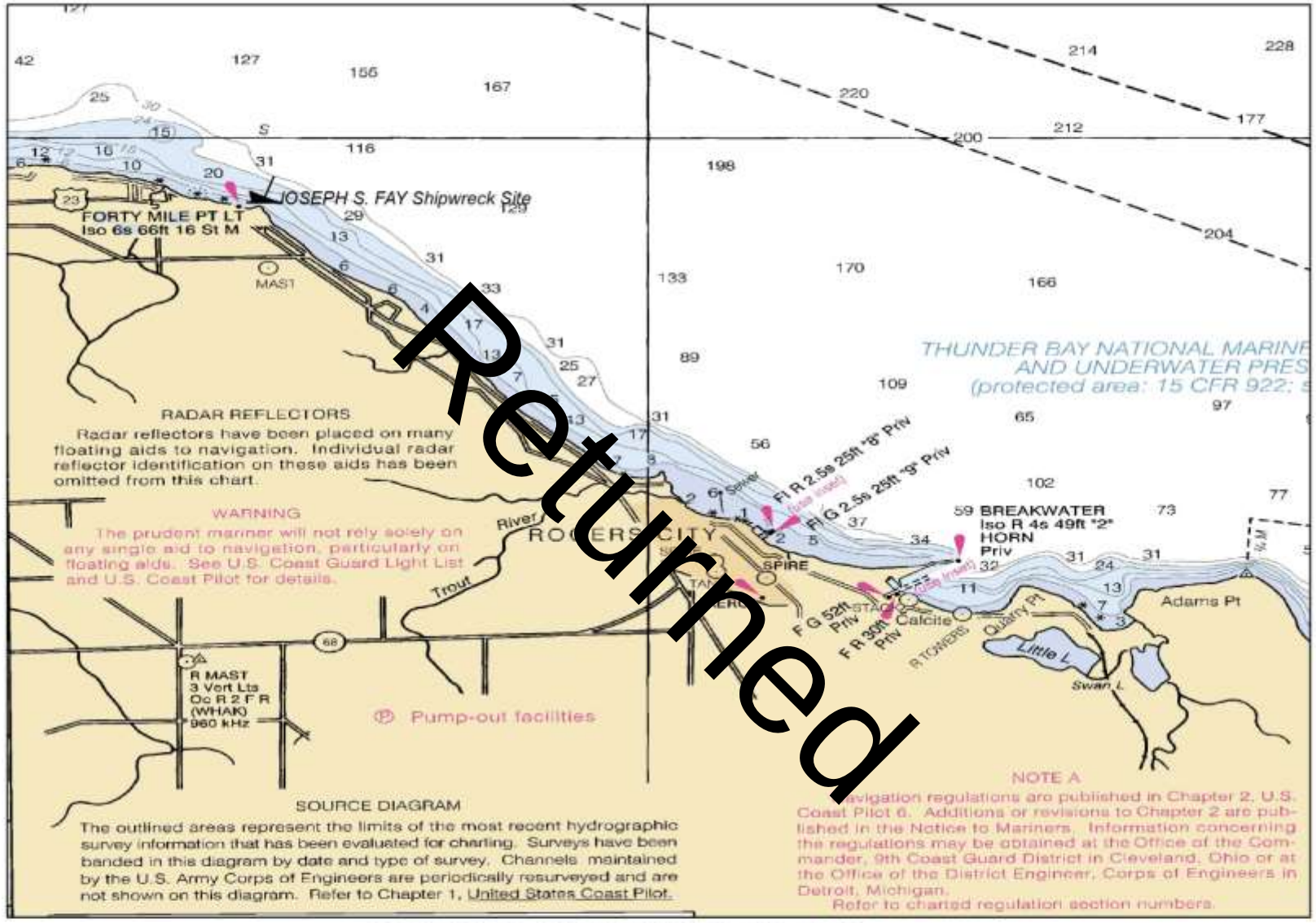
JOSEPH S. FAY SHIPWRECK SITE
Presque Isle County, Michigan

0 0.05 0.1 0.2 Miles

BOW:	45.48804	-83.90987
STERN:	45.48861	-83.91000
SB BOW:	45.48787	-83.91483
SB STERN:	45.48686	-83.91432

NW Corner:	45.48600	-83.91600
NE Corner:	45.49000	-83.91600
SE Corner:	45.49000	-83.90800
SW Corner:	45.48600	-83.90800

NOAA Chart 14684



JOSEPH S. FAY SHIPWRECK SITE

Presque Isle County, Michigan

N W E S

BOW:	45.48804	-83.90987	NW Corner:	45.48600	-83.91600
STERN:	45.48861	-83.91000	NE Corner:	45.49000	-83.91600
SB BOW:	45.48787	-83.91483	SE Corner:	45.49000	-83.90800
SB STERN:	45.48686	-83.91432	SW Corner:	45.48600	-83.90800

0 0.75 1.5 3 Miles

NOAA Chart 14684

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

Requested Action:	Nomination
Property Name:	JOSEPH S. FAY Shipwreck Site
Multiple Name:	
State & County:	MICHIGAN, Presque Isle

Date Received:	Date of Pending List:	Date of 16th Day:	Date of 45th Day:	Date of Weekly List:
10/13/2017	11/14/2017	11/29/2017	11/27/2017	

Reference number:	SG100001838
Nominator:	State

Reason For Review:

__ Appeal	__ PDIL	X Text/Data Issue
__ SHPO Request	__ Landscape	__ Photo
__ Waiver	__ National	__ Map/Boundary
__ Resubmission	__ Mobile Resource	__ Period
__ Other	__ TCP	__ Less than 50 years
	__ CLG	

_____ Accept ___X___ Return _____ Reject **11/27/2017** Date

Abstract/Summary Comments:

Recommendation/ Criteria

Reviewer Julie Ernstein Discipline Archeologist

Telephone (202)354-2217 Date 11/27/17

DOCUMENTATION: see attached comments : Yes/NA see attached SLR : ~~NA~~ NO

If a nomination is returned to the nomination authority, the nomination is no longer under consideration by the National Park Service.

United States Department of the Interior
National Park Service
National Register of Historic Places

Evaluation/Return Sheet

Property Name: JOSEPH S. FAY Shipwreck Site
Property Location: Rogers City, Presque Isle Co., Michigan
Reference Number: SG 100001838
Date of Comments: 12/1/2017

Summary and Overview
As detailed in the National Register of Historic Places Registration Form received in this office on October 13, 2017, the JOSEPH S. FAY Shipwreck Site is a dynamic, multi-part shipwreck site consisting of a 134-foot section of the vessel's starboard side embedded in the beach at Forty Mile Point Lighthouse, the majority of the submerged remainder of the wreck offshore, and the land containing the scattered artifacts between the shore-based and submerged sections of the vessel. This three-masted, wooden-hulled, bulk freighter sank on October 19, 1905 and the submerged parts of the site lie within the bounds of Thunder Bay National Marine Sanctuary. The wreck is nominated under significance criteria A and D, and the areas of significance identified are commerce and engineering. The associated period of significance is 1871-1905.

This National Register documentation is being returned for a procedural error and two technical errors, each of which is outlined below.

Procedural Error: Absence of Signature by Proper Certifying Authority
The property proposed for listing in the National Register is located within the bounds of Thunder Bay National Marine Sanctuary. As such, it represents a concurrent state-federal nomination, and is to be processed in the manner outlined in Federal regulation at 36 CFR §60.10. This point was noted in the course of e-mail and telephone conversations with both SHPO and Federal agency staff, and a strategy for remedying the situation and ultimately proceeding to listing this property in the National Register were discussed. These comments document the process for achieving this shared goal.

The above-named nomination was submitted to our office directly from the Michigan State Historic Preservation Office without affording NOAA's Federal Preservation Officer the opportunity to comment on the merits of the nomination on behalf of that agency. Here is that individual's contact information:

Mr. Randolph Ghertler
Federal Preservation Officer
National Oceanic & Atmospheric Administration
Project Planning & Management Division
Office of the Chief Administrative Officer
1305 East-West Highway
Silver Spring, MD 20910

tel.: 301.628.0979
email: randolph.ghertler@noaa.gov

Two Technical Items

Two additional technical items warrant consideration:

- Archeology: Historic—Non-aboriginal should be added to the Areas of Significance identified in Section 8, p. 14; and
- when identifying Engineering as an Area of Significance, it is associated with significance criterion C and not A. We would recommend making this addition to the current nomination, which will involve checking that criterion in Boxes 3 and 8 and editing the narrative throughout the nomination to reflect this change. This would result in a revised nomination that invokes significance criteria A, C, and D.

Finally, I have checked the nominations that are currently in my queue for review and do not see any that appear to likewise be concurrent state/federal nominations on which NOAA's FPO has not yet had the opportunity to comment. Thank you for your patience while I took a couple of days to do that reconnaissance work.

Please be sure to forward revised versions of the nomination to NOAA's FPO for signature and forwarding to the Keeper of the Register at the National Register Program, 1849 C St., NW (mail stop 7228), Washington, DC 20240.

Thank you for the opportunity to read the nomination of this important resource. Once the resubmission is prepared and submitted, I will be prepared to ensure a timely review and listing. Please feel free to call me at 202.354.2217 or e-mail me at: julie_ernstein@nps.gov if you have any questions regarding these comments.

Julie H. Ernstein, Ph.D., RPA
Supervisory Archeologist, National Register of Historic Places

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
STATE HISTORIC PRESERVATION OFFICE

EARL J. POLESKI
EXECUTIVE DIRECTOR

Friday, January 19, 2018

Mr. J. Paul Loether, Keeper
National Register of Historic Places
Mail Stop 7228
1849 C St, NW
Washington, D.C. 20240

Dear Mr. Loether:

The enclosed discs contain the true and correct copy of the nomination for the **JOSEPH S. FAY Shipwreck Site, Rogers City, Presque Isle County, Michigan**. Disc 1 contains correspondence and the National Register of Historic Places Registration Form, which includes site maps. Disc 2 contains photographs of this site. This property is being submitted for listing in the National Register of Historic Places.

This nomination was returned to us on December 1, 2017, for a procedural error and two technical items. The previous version omitted the signature of the Federal Preservation Officer for the National Oceanic and Atmospheric Administration. Additionally, the previous version did not identify "Archeology: Historic—Non-aboriginal" as an Area of Significance, and Criterion C was not selected even though Engineering was identified as an Area of Significance.

All of these errors have been addressed and corrected.

Written comments concerning this nomination received by us are included with correspondence on Disc 1.

Questions concerning this nomination should be addressed to Todd A. Walsh, Interim National Register coordinator, at (517) 373-1979 or WalshT@michigan.gov.

Sincerely yours,

Brian D. Conway
State Historic Preservation Officer