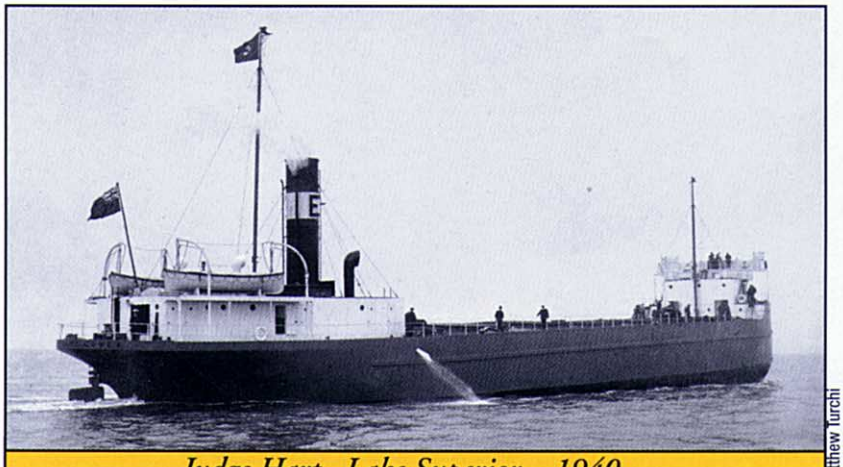
The Hart of Lake Superior

by Matthew M. Turchi and Darryl Ertel

The war years of the 1940s brought a long awaited increase in Great Lakes shipping, for the previous years of economic depression had idled many vessels. It was in this economic climate that the 250-foot steel steamer *Judge Hart* was pushing the limits of operation in late November of 1942. With a cargo of wheat the crew encountered an ice storm in northern Lake Superior. Ice began accumulating on the fathometer as well as freezing the anchors into their chocks. The crew was unable to determine the depth they were operating in and with the loss of visibility, they were forced to open the windows. The conditions made navigation impossible. With the crew suffering from frostbite the captain ordered the vessel to seek the shelter of a nearby bay. The *Hart* struck a rocky shoal but did not immediately sink and the crew radioed a passing ship. After the crew abandoned ship the pumps eventually failed and the ship sank into 240-feet of cold fresh water.

The *Hart* was located in the early 1990s and quickly became an interest to the preservationist within the Canadian Government. The marine archaeologists in the Ministry of Citizenship Culture and Recreation recognized the historical importance of the ship. The steamer was one of a small number of ëcanalersí that were built in Great Britain to operate through the Welland canal system. This series of canals and locks allowed shipping from the upper Great Lakes to the St. Lawrence Seaway. It was for this reason that we contacted the Ministry for permission to document this perfectly preserved wreck. We completed an archaeology application which came with some important stipulations.

The rules of engagement as outlined in the permit were very explicit. There was to be no penetration of the ship and only benign mooring to the site to ensure that no damage was to come to the ship. The desilting of any objects and of course the handling of artifacts was strictly prohibited. We all felt that these conditions, which did not jeopardize the safety of the team, where acceptable. The permit issued also required that we give the Ministry a report on our findings. This was to include a written account (including field notes),



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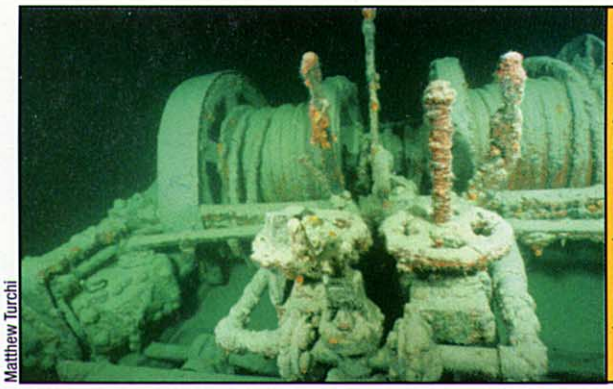
Judge Hart Lake Superior 1940



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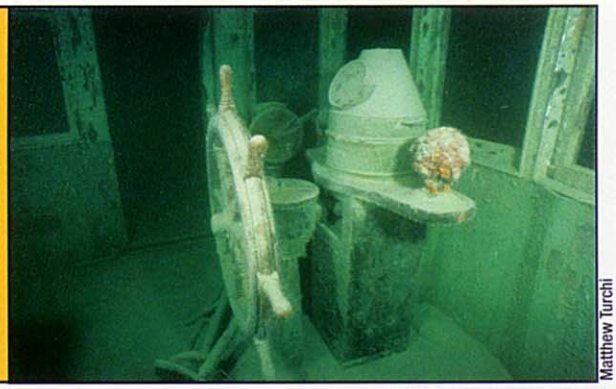
Left: Windlass, located on the bow deck

Right: View of the inside of the Pilot House.



Matthew Turchi

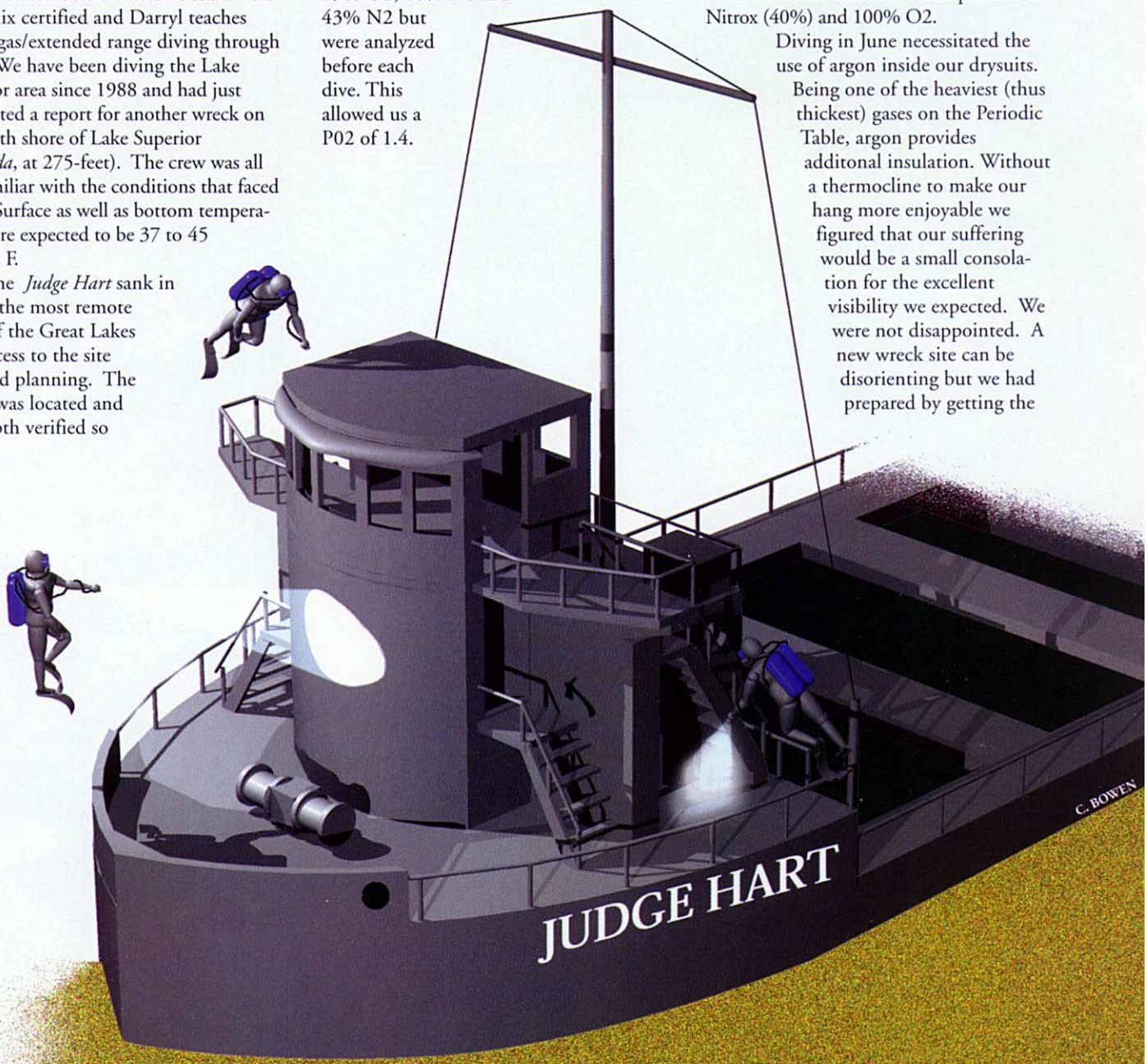
as well as photographs and videotape footage. We also gave them drawings and historical photographs that we knew were not in the Canadian Archives.

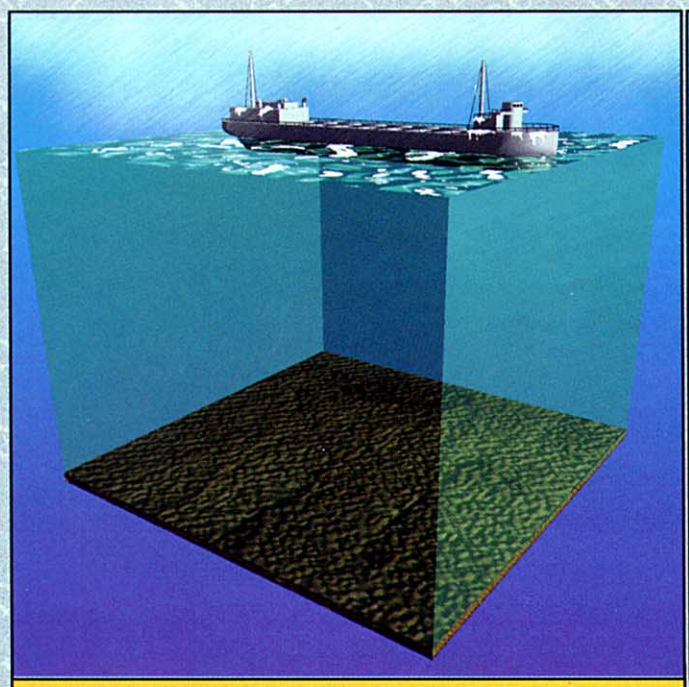
The members of the dive team were all trimix certified and Darryl teaches mixed gas/extended range diving through TDI. We have been diving the Lake Superior area since 1988 and had just completed a report for another wreck on the north shore of Lake Superior (*Gunilda*, at 275-feet). The crew was all too familiar with the conditions that faced them. Surface as well as bottom temperature were expected to be 37 to 45 degrees F.

The *Judge Hart* sank in one of the most remote areas of the Great Lakes and access to the site required planning. The wreck was located and the depth verified so that we could choose the appropriate dive tables. We wanted to make all our dives using mixed gases and do two dives per day. The gases were premixed with a 17% O2, 40% He and 43% N2 but were analyzed before each dive. This allowed us a P02 of 1.4.

Two decompression hang systems were used but all team members carried their decompression gases with them as backups. Our pre-dive plan called for a 20-25 minute bottom time and decompression on Nitrox (40%) and 100% O2.

Diving in June necessitated the use of argon inside our drysuits. Being one of the heaviest (thus thickest) gases on the Periodic Table, argon provides additonal insulation. Without a thermocline to make our hang more enjoyable we figured that our suffering would be a small consolation for the excellent visibility we expected. We were not disappointed. A new wreck site can be disorienting but we had prepared by getting the





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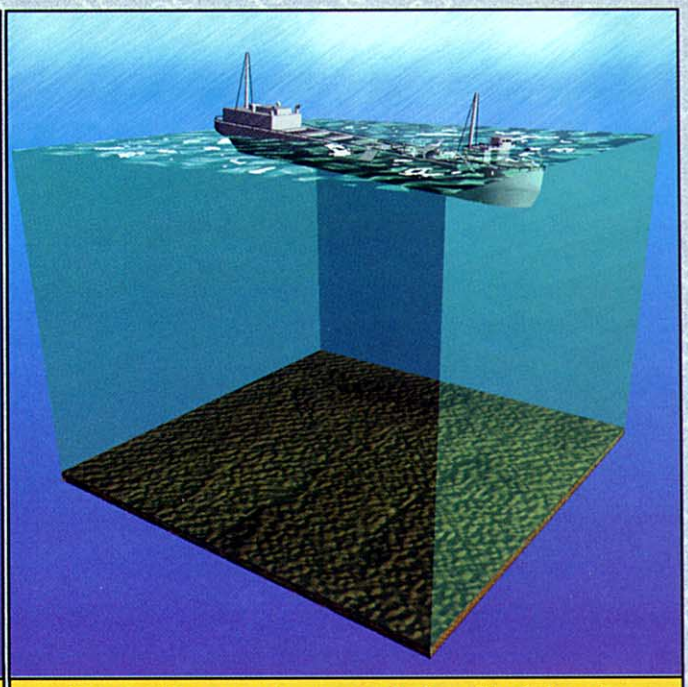
Frozen in the water, The *Judge Hart* is over weighted due to the ice and snow forming on her decks.



Swamped by oncoming waves, the bow dips below the surface of Lake Superior.

plans and photographs from the National Maritime Museum in Great Britain.

The *Judge Hart* lies in an approximate north by south orientation with the bow pointing towards the north. It is completely upright and intact. The depth of the vessel varies slightly from bow to stern but the ship is almost level with respect to the bottom. Depth at the bow is 235 feet and 230 feet at the rudder. The forward deck is covered with a heavily packed clay which would confirm a bow first sinking. The steal hull of the *Hart* has much of its paint in various stages of peeling. This gives the vessel a mottled appearance. Atop the foredeck stands the fathometer which was unworkable at the time of her loss.

Our first dive to the *Hart* had us staring at a light as if someone was shining back at us. As we got closer we could see the illusion was from a searchlight on the bridge wing that had an impresive mirror that reflected our lights back at us. There were also intact running lights with their painted sheilds looking like the day they left the surface.

The pilothouse is the most exciting part of this wreck. It is rare to find an intact wooden pilothouse on a shipwreck because most of them are blown off upon sinking. We believe that the ice may have prevented it from disintegrated when the ship sank. Two of the forward windows are opened which was described by the crew as their only option to see during the storm. Inside, the ship's wheel and binnacle are the most striking features. They are in excellent condition and there is no evidence of damage or significant deterioration. The pilot's stool is broken on the floor but may have been damaged before the *Hart* sank. The telegraph indicator is in the slow position, just as the captain had ordered. A desk is in the back corner and has a directional rangefinder on it. This was an early LORAN and was used for navigation. Another interesting find were the framed schedules that still hang above the windows. They appear to have Morse Code signals of various ports and were used to navigate. The glass that is covering these schedules is still intact and the words are legible after 55 years! Aft of the wheelhouse on the rear companionway is a second binnacle with an enclosed compass. This binnacle being behind the wheehouse, is in a rather curious location for a compass. Many steamers have their auxiliary compasses forward of the pilothouse. Just aft of the binnacle is the forward mast with its attached brass bell.

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Left:
Ship's extra anchors, located on the forward wall of the stern cabins.

Right:
Running light, located on both the port and starboard upper deck.

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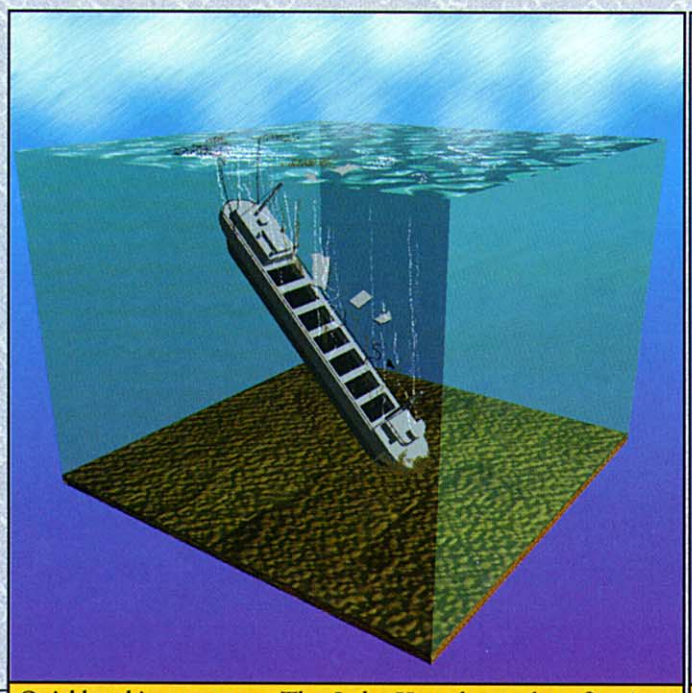

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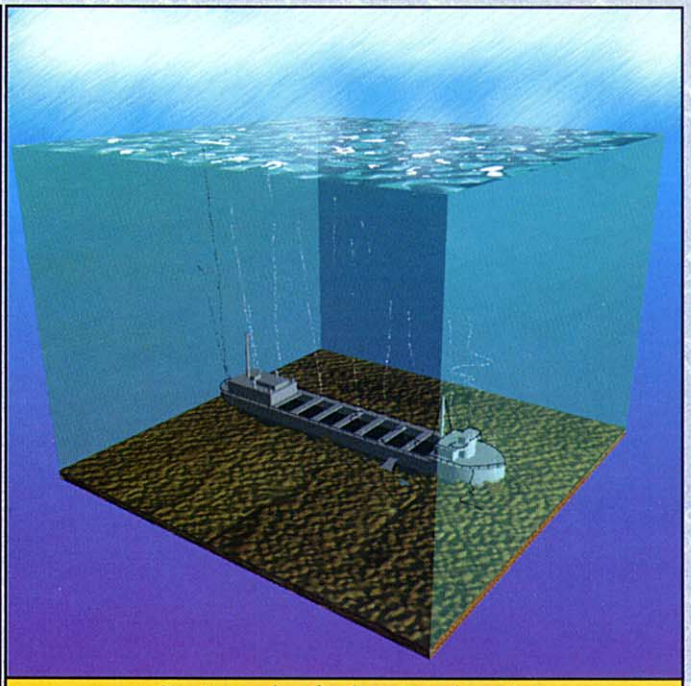
Quickly taking on water, The *Judge Hart* plunges bow first into Lake Superior's mud bottom.



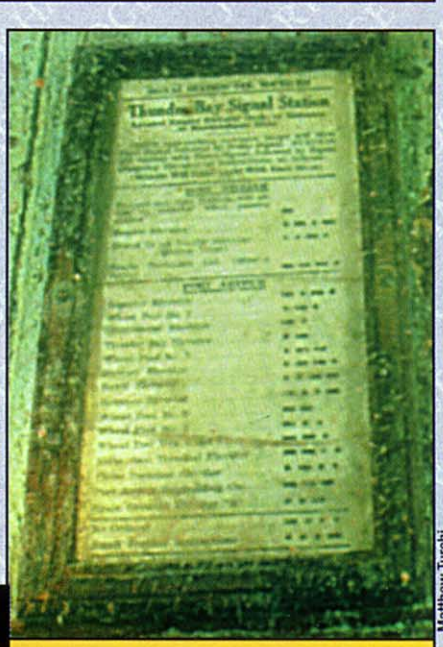
Coming to her final resting place the *Judge Hart* lies in 230 feet of water.

The clapper appears to be present and a very light layer of silt is on it. The name *Judge Hart* is engraved in the metal. Small silt-cicles are frozen to the bottom of the bell.

The main deck is littered with wooden planks that are probably pieces of the cargo hatches. The open hatches show silt covering the grain cargo. As we move towards the stern a large deck winch is tucked amid the silt. At the gunnels, adjacent to this winch are shackles that held the cables in place during operation of the winch. These were used to operate through the canals and locks. The stern cabins are entirely metal with the exception of the coal bunker doors.

There are two anchors attached to the forward wall of the stern cabins. The starboard one is a more modern-day type and the portside one has a stock and flukes. On the deck forward of this older anchor is a partially crushed metal drum. An oval, brass builders plate is attached to the forward facing wall of this stern cabin. All that can be read is Cowes where the ship was built in 1923. The top of the stern cabin is somewhat undamaged. The smokestack with its attached whistle and foghorn is bent back along the top of the cabins. Apparently the ice did not save this from damage during the sinking. The rear mast is still standing and the cross trees still have intact running lights with air sealed inside. The galley or kitchen has pots and pans scattered about. We did not enter the ship but observed and photographed from a safe distance. The fantail has the name: JUDGE HART ST. CATHARINES still in white paint. The ship was registered in St. Catharines, Ontario.

The dives on the *Hart* brought us more discoveries and renewed faith in the value of preservation. We hope that this unique underwater resource will be well managed so as to preserve the marine heritage of our two countries. The Great Lakes have some of the most intact and well-preserved wrecks in the world. It is for this reason that the philosophy of conserving these underwater resources is so important.



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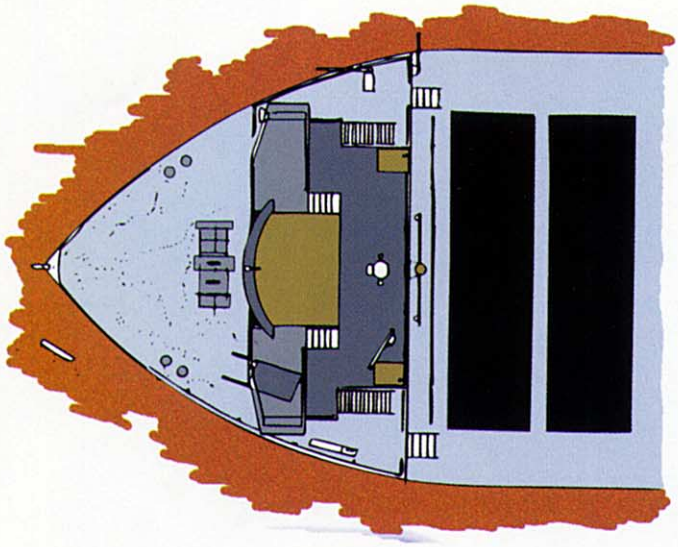
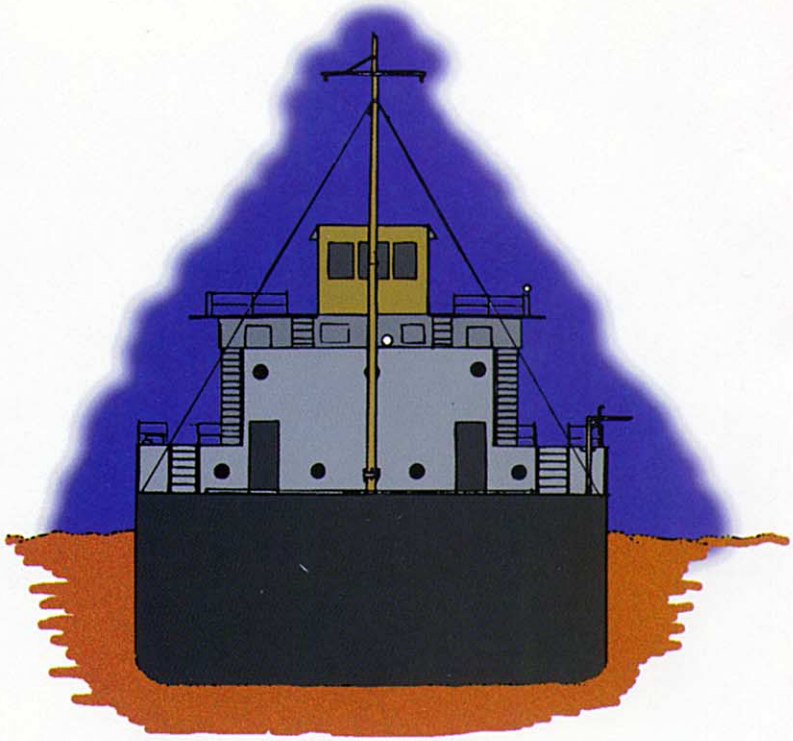
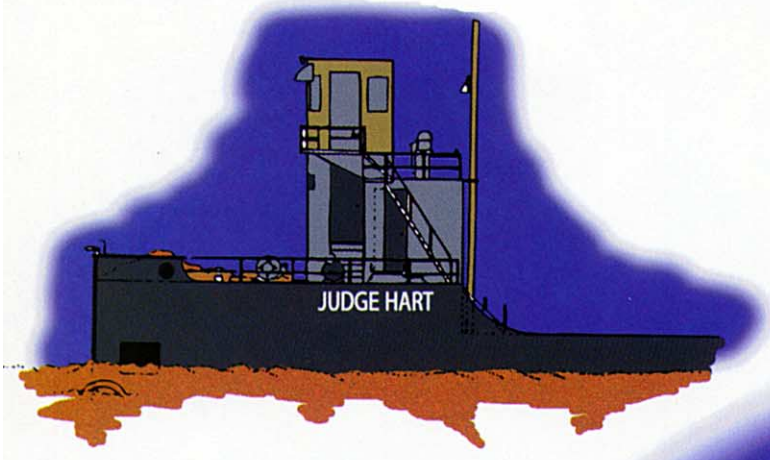
Above:
Picture framed Morse code signals for various ports, used to help navigate the ship.

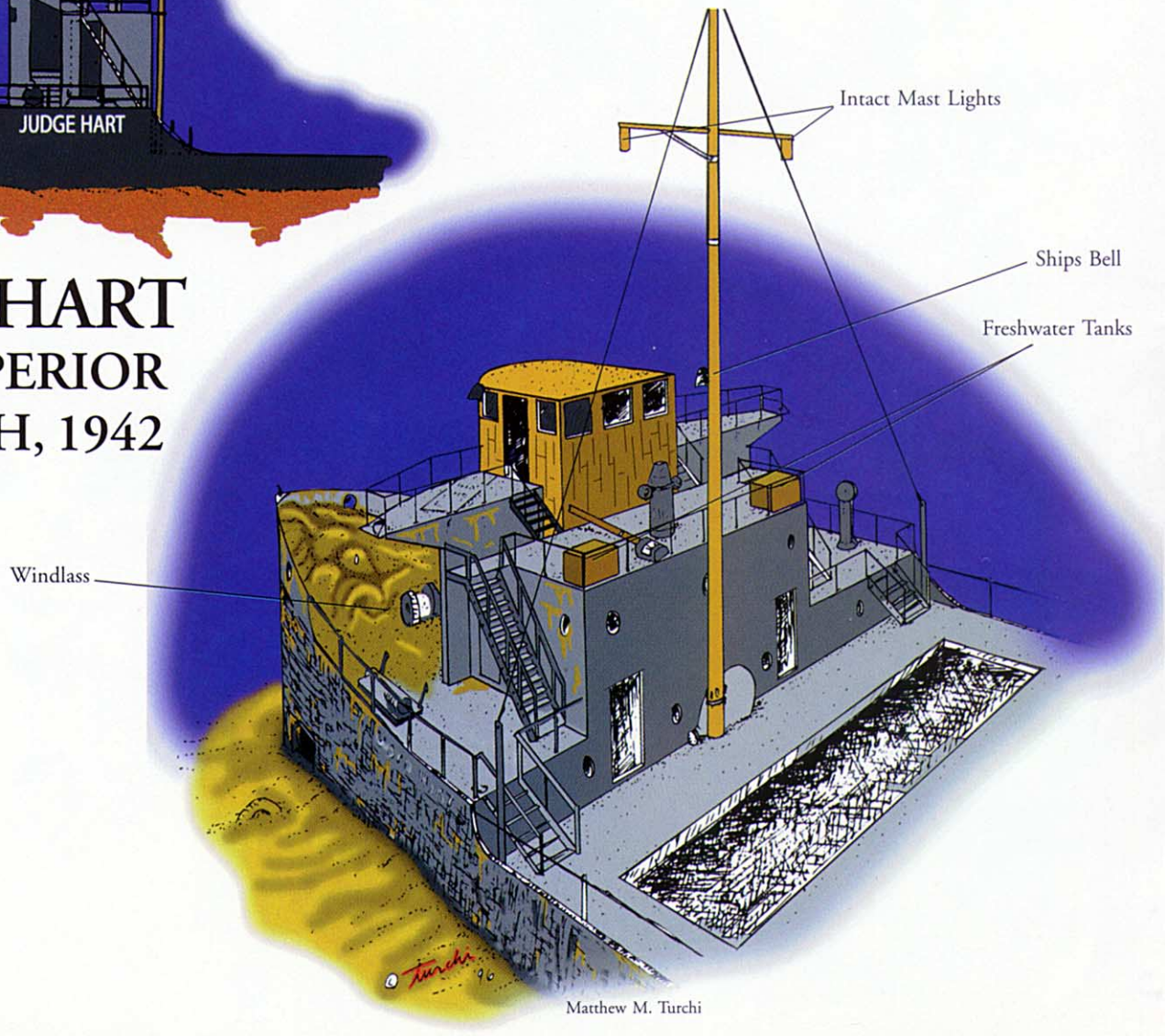
Left:
Spot light located on the upper deck on the starboard side.







JUDGE HART
LAKE SUPERIOR
NOV 28TH, 1942



Matthew M. Turchi

Inside the Judge Hart's Pilot House

Matthew Turchi

Matthew Turchi and Darryl Ertel prepare for a dive on the Hart.

SPECIFICATIONS

Name:	JUDGE HART
Owners:	Upper Lakes & Transportation Company Ltd (at time of sinking) Eastern Steamship Company Ltd.
City of Registration:	St. Catharines, Ontario; Canada
Hull No.:	1599
Fleet No.:	228
Dimensions:	253' x 43'1"x 20'
Overall length:	261'
Tonnage:	1729 (gross); 1112 (Net)
Builder:	J. Samuel White and Co. Ltd.; East Cowes, England
Launch date:	21 April 1923 (Sat.)
Type:	Steam Propeller, Bulk
Machinery:	Triple Expansion (16", 27", 44").
Working psi:	180 Scotch Boilers (12' x 11').
Engine builder:	J. Samuel White and Co. Ltd. East Cowes, England
Hull:	Steel, double bottom
Fittings:	Seven hatches (12' x 29')
Speed:	Ten knots
Cost:	$330,000 (1923 dollars)
Cargo:	Grain (at time of sinking)
Date of sinking:	28 November 1942
Final location:	Ashburton Bay, Ontario Canada
Depth:	230 ft.
Captain at time of loss:	Captain Frederick M. Burmeister
Bulkheads:	Three watertight
Year discovered:	1990