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H.H. Thompson at work on the government pier in Grand Marais, Michigan, in 1910.

All photos courtesy of Marie and Jerry Norick

Hard Hat Divers

This family's underwater work began in 1898

EDITOR'S NOTE:

Patrick Lapinski, a Superior native with a passion for maritime history, prepared this article on a longtime family-owned diving business and most graciously provided the article to the readers of the Nor'Easter. We are pleased and proud to publish the article and its accompanying photos in this and our next two editions.

By Patrick Lapinski

Marie and Jerry Norick sit beside each other at a long wooden table in the kitchen of the old Thompson homestead east of Duluth. Nestled in a grove of pine trees, their white clapboard house is weathered and aging on the outside, but warm and inviting within.

John Manton Upton Thompson, patriarch of the Thompson family, settled on this spot overlooking Lake Superior in 1885. Marie's

grandfather Horace Thompson built the house, which has, at one time or another, been home to five generations of the Thompson family. Marie flips through the pages of an old scrapbook, pausing to read paragraphs from the yellowed newspaper clippings. The articles chronicle over one hundred years of her family's history as hard hat divers, an independent business that few, in their day, ventured to try.

Their scrapbooks follow the diving career of Capt. Horace H. Thompson, Marie's grandfather, and succeeding members of this family of divers.

Capt. H. H. Thompson, born in 1873 in Duluth, began his diving career in 1898 in the Duluth ship canal. He laid the city's gas and water mains under the canal in 1905.

In 1906 he worked for the Pittsburgh Steamship Co., salvaging steamers wrecked in the damaging storm on the lakes in 1905. He worked on the wreckages of the *Cumberland, Crescent City, Edenborn, Hadley, Hesper* and many others. Immediately after the America sank, he and his son, John, examined it preparatory to submitting a salvage bid.

Capt. Thompson had worked in many parts of the country, such as Memphis, Tennessee; New Mexico; and Chicago; but most of his work came in Minnesota, Wisconsin and Michigan.

Capt. Thompson started sailing at16 on his father's tug, operated here in the early 90s. He also worked on lake steamers and held a pilot's license between Duluth, Chicago and Buffalo. He was very enthusiastic over his diving work and dived until he was 70 years old. In 1953 he passed away, leaving his sons, John and James, to continue on in the business.

It all began with John Manton Upton Thompson, said Jerry: "He had a vision."

Thompson, a banker by trade, arrived in the Lake Superior area in the 1860s, settling in Mahtowa, a village south of Duluth. During the course of his daily business, Thompson made numerous trips to nearby Duluth.

"He wasn't a marine man himself," continued Jerry, "but he could see the potential."

With an eye to the future, Upton Thompson started a small tugboat operation in the Duluth harbor. He supplied the capital, purchased the vessels and employed his sons in the daily operations as deckhands, engineers, managers and captains: William Freer Thompson was master of the steamer *M. C. Neff*; John P. owned and operated the tug *Fred Hall*; R. M. Thompson was owner and operator of the tug *Spirit*. Horace H. and Charles E. Thompson were both licensed pilots.

As Jerry provided the details of the Thompson chronology, Marie opened the first volume of the family scrapbooks to the fourth page.

"This is the story I'd heard all my life," she said, pointing to a faded headline glued onto the page. Marie repeats, almost verbatim,

H.H. tending for son John. Futher detail unavailable.

the contents of a hand-written note she had placed in the scrapbook 90 years after the date of the article. The article recounts the deaths of several workers at the site of the Duluth Ship Canal in 1898. "Killed By Dynamite," Terrible Explosion," "Sudden Death." There was no ambiguity about the outcome.

Among the fatalities was a hard hat diver, along with several other workers, when the dynamite used beneath the water to clear debris from the canal unexpectedly exploded above the water as a careless worker exposed the powder to an open flame. Horace H. Thompson, the 26-year-old son of John Manton Thompson, was a laborer on the project in the employ of the Butler-Ryan Company, of St. Paul. He escaped injury by being off work that day. In fact, undeterred by the tragedy, he purchased the dive gear from the family of the deceased diver, including the battered helmet and suit, which he sent off to the manufacturer in Boston for refurbishment.

"They redid everything. Redid the breast plate, pounded the dents out," explain Jerry. "It looked like a brand new helmet," he marveled.

Later that summer, Horace, or "Holly," as he was commonly called, with little experience or knowledge other than what he picked up from other divers around him, began hiring himself out as a diver.

It is difficult to comprehend why, especially after the death of the man whose suit he was now using, he would want to take up such a line of work. The dangers of the job, the uncertainty of working in the darkness on wreckage that could entangle legs and air lines, made the job one of the least desirable professions, even riskier than logging and rail construction. To compensate for the danger, contractors were paying top dollar for divers – up to $50 a day for experienced men.

Thompson persisted in his new endeavor, finding work as an independent diver or in the employ of John Wanless, a contractor from Wisconsin. In 1906, Wanless was awarded the contract to lay new gas and water mains from the city of Duluth across the ship canal to residents of Minnesota Point. It was on this project that Thompson, in the employ of Wanless, nearly lost his life.

Capt. Horace H. Thompson tends the air line for his son John Thompson, below, while Howard Geisert and Frank Smith man the pumps. They are laying a water line in Lake Superior for the Fitger company off Duluth's Sixth Avenue East in 1935.

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After descending 30 feet to the bottom of the canal, on the south side near the aerial tram car that connected residents of Minnesota Point to the city, Thompson found the current in the canal too strong to continue diving. In contact with his dive tender via a voice line, Holly told him to stand by to gather up the air and safety lines as he ascended from the bottom. Knowing that closing the air valve on the side of the helmet would inflate his suit and bring him to the surface, Holly closed the valve, but did so too quickly. He shot toward the surface faster than his tender on the scow above could take in the slack from his lines. Unable to control his rate of ascent, Holly rocketed toward the surface with the strong current pushing him downstream, beneath the work scow. Thompson collided forcefully with the bottom of the scow, rupturing the glass face piece on his helmet.

As his suit began filling with water, Holly urgently pulled his safety line three times in rapid succession, the warning signal to get him out of the water quickly.

"I attempted to stem the tide of water through the face plate by covering it with my hand, but this

Horace H. Thompson looking for a body in the Minnesota River, June 1905.

was impossible," Thompson told reporters afterward. His personal account of the incident follows:

"I then caught the last breath of air as the suit filled, and [I] held my breath until I was almost bursting. I was compelled to give out and swallowed about a half gallon of water. The sensation was horrible at first, and it seemed as though an hour of suffering had passed. Then I felt my senses going and seemed to pass into a pleasant dream. The next thing I knew they had me on the deck of the scow and were rolling me around, jerking me upside down to bring out the water and let the air into my lungs. Soon I recovered sufficiently to get home and knocked off work for the rest of the day."

Thompson was quick to take the blame for the accident, conceding that he closed his air valve too soon. Undeterred, he returned to the job site the following day and worked on the project through its completion.

At the turn of the century, the repair, salvage and removal of damaged vessels was big business. In an era before sophisticated navigational equipment and long-range weather forecasting, captains and mariners all sailed unaware of the big lakes' conditions miles away. As a result, damage and disaster were common. Insurance companies, not always eager to suffer losses, often hired divers to salvage what they could or to assess the extent and location of the damage to aid in their investigations.

In November 1905, Thompson worked with the highly regarded wreck salvager Tom Reid to perform the underwater repairs on the steamer *Crescent City*, pushed aground almost directly below the Thompson homestead, in Lakewood Township just north of Duluth, in the now infamous blow that stranded and sank ships throughout the Great Lakes that fall. In fact, a number of vessels were blown onto the rocks along the Minnesota's north shore, their hulls holed and broken, deck cabins caved in. The following summer, in the direct employ of the Pittsburgh Steamship Company, Holly was back on the shore to aid in the salvage of several other Pittsburgh ships, including the *Lafayette*, near Encampment Island, and the *William Edenborn*, at the mouth of the Split Rock River.

Wreck salvage and removal became a major source of work for Thompson over the course of his career. Damaged vessels ranged in size from small tugs and barges to medium sized packet freighters and on up to large lake steamers. Depending upon the severity of the damage, the vessel was sometimes patched and refloated, or, if the ship was non-seaworthy, machinery and equipment were removed before declaring the vessel a total loss. In other instances, debris from vessels simply clogging shipping channels or harbors needed to be cleared from

Horace H. Thompson, undated.

the area to prevent these wrecks from fouling other ships. Whatever the situation, Thompson was amply busy with this type of work.

In the spring of 1909 Thompson helped raise the tug *Hall* after it sank at its dock while its crew was ashore eating lunch. During this dive, Thompson placed chains around the hull so that the tug could be hoisted to the surface with a derrick crane positioned above. That same year, Thompson removed the wreck debris of the steamer *Sevona*, near Sand Island in the Apostle Islands chain. Farther down the south shore, an expansion of the harbor at Ontonagon, Michigan, required the removal of an old hulk lying beneath the surface on the west side of the pier. The *Quail*, a wooden-hulled tug, had burned at its anchorage in the late 1880s. The hull was heavily drifted in with sand, making it impossible to remove without the help of a diver. Thompson, under the supervision of the United States Army Corps of Engineers, was hired to remove the heavily laden hull from the channel so that dredging could be completed.

From 1910 to 1920, Thompson worked on several interesting wrecks. In 1910 he dynamited the wooden hull of the steamer *Alex Nimick*, clearing its wreckage from the navigation channel. The 298-foot *Nimick* had been stranded three years earlier about 13 miles from Vermilion Point, along Lake Superior's "shipwreck coast." The following January, Thompson lowered himself through the ice in the Duluth harbor to repair the rudder on the steamer *Crescent*, which had lost its rudder in a late-December storm off the mouth of the Brule River, on the Wisconsin south shore of Lake Superior. Rather than wait until spring for dry dock space, the ship's owner hired Thompson to perform the repairs at an empty dock in the nearby port of Duluth. Within a few days the *Crescent* was back out on the lake.

For divers like Horace Thompson, storms could be a good thing financially — but the wreckage

Hard hat divers never work alone

For Thompson and other divers, the slender air hose and lifeline connecting them to the world above was the difference between life and death on every dive. Hard hat divers rarely worked without a lifeline, and they never worked alone. From the surface they were supported by a team responsible for their well-being. At the turn of the 20th century, a typical dive team consisted of the diver and his assistant, known as a "tender," and as many as six men to operate a manual pump to provide compressed air for the diver. The deeper the dive, the harder the men had to work to pump the air. It was a physically demanding job. On deeper dives more men were used because of the frequent need to spell the men working the pump.

The first responsibility of the tender, once the team reached the dive location, was to assist in dressing the diver. This could be a rather lengthy process, depending on the experience of the dive tender. A typical dive suit was made of half-inch thick rubberized canvas, open at the top, with a series of round holes surrounding the top portion of the suit, along the edge of the opening, that connected to a brass shoulder plate.

Horace H. Thompson repairing the steamboat Capt. Bill McLean (undated).

Getting the diver's arms through the sleeves was often the most difficult aspect of the dressing. The opening of the sleeves consisted of an iron circle leading to rubber cuffs. A diver with big arms and wrists would often need to use soap so his hands could slip through the openings.

Once the suit was on, a metal shoulder piece with bolts protruding along its lower edge was placed over the diver's head. The bolts were slipped through the matching holes surrounding the edge of the diving suit and secured to it with wing bolts. The collar of the shoulder piece was threaded to match, and when the time came, the diver's helmet was fitted in a similar fashion onto the suit.

Before proceeding to the helmet, the next task for the tender was putting the shoes on the diver. In the 1890s, the soles of the shoes were made of either copper or brass. In addition to its value as added weight, the metal also provided protection for the feet and heels. For additional ballast, a belt encircled with lead weights was strapped around the diver's waist. It was only after this was attached that the diver would stand to have the helmet threaded into place.

The diving helmet, or "hard hat," that Thompson used was manufactured by the firm of Andrew J. Morse and Sons, of Boston. The A. J. Morse Company was well known for being one of the premier suppliers to the commercial diving industry in the country. The heavy demand for divers on the Great Lakes alone commanded a large amount of business for the Boston firm. Helmets were made of copper and brass. A dive suit could weigh in the neighborhood of 175 pounds.

Early in his diving career Thompson worked with and personally hired many different tenders. Around 1923, John Francis, the second of four children born from the 1899 marriage of Horace Thompson and Nellie Eckert, began assisting his father on his dives. John's older brother James soon followed, also working as a tender for his father. From that point onward the business took on the structure of a family operation. The other two Thompson siblings, Charlotte and Herbert, were never directly involved in the diving business.

Sons John and Jim tend for Horace on this cable job in Duluth.

was terribly dangerous. Working under water in low visibility called for caution. A broken ship presented any number of dangers, from fallen masts and cables, splintered decks and jagged metal to spewed cargo concealing twisted debris. Working for hours at a time amidst the silent chaos, Thompson would carefully weave his tethered way among the broken ships, winding chains and attaching tackle around winches, boilers and capstans — items to be lifted away before strategically placing his dynamite to break the non-salvageable parts into removable pieces.

The repair and maintenance of sewage and water lines was a steady source of income for the Thompson business. In 1910, the appearance of *Bacillus coli* in the well at the Lakewood pumping station in Duluth indicated a possible leak in the pipe. The Lakewood station was one of the main intake points for the city's drinking water. In bidding on the project, Horace competed directly against his former employer, John Wanless. Thompson won the bid and began work in the late fall. Over the next 15 days Horace replaced rusted bolts, tightened and caulked all of the joints along the 1,500 foot pipe and placed a copper and wood strainer over the mouth of the intake to prevent large objects from entering. The pre-project assessments of the pipeline also revealed that a large amount of the supporting rip rap and cribbing used to hold the pipe stable had been either eroded or displaced, perhaps by a ship's anchor, so an additional 1,200 to 1,500 tons of rock were replaced along the pipe to secure it.

Nearly every underwater project presents some level of risk. In 1905, Horace Thompson nearly lost his life while laying the gas line across the Duluth ship canal. The 1910 Lakewood station project also brought another close call for Thompson when the electrical power to the pumping station went out, just minutes after he had exited the pipeline. Had he still been inside the pipe at the time, the force of the in-rushing water would have made it impossible for him to be pulled out of the 42-inch ceramic pipe.

The 1920s closed with a flurry of interesting projects, many of them revolving around the theme of disaster, death and destruction. In the fall of 1928 Horace and John descended 120 feet to confirm the wreck of the steamer *Kamloops*

A train wreck near Michigammi, Michigan, in 1939 put the Thompsons to work.

off of Isle Royale. The wreck was spotted through the crystal clear water by the crew of the tug *James Whalen*, from nearby Port Arthur, Ontario. The *Kamloops* had disappeared in December 1927, with the loss of all hands during a winter gale. It is not known whether there was any attempt to recover any bodies from the wreck site.

The subject of human remains on and around shipwrecks is always a prickly one. Removing machinery, fixing gas and water mains or breaking up hulls was hard work, but they didn't carry the emotionally charged weight that came with the loss of human life. Hard hat divers were called upon by local and state officials to search for and retrieve human remains on many occasions, and Horace Thompson was no exception.

One time Holly worked the wreck of the side-wheeler *Cumberland*. "The wreck is still strewn with human bones," Thompson said. "It was the most gruesome find I ever made."

In early June 1909, Thompson was summoned to Jamestown, North Dakota, to assist in the search for two missing residents who were presumed downed after their overturned boat was found on Spiritwood Lake, north of Jamestown. The couple, "prominent residents of Jamestown," had planned to be married that summer.

A week-long search of the lake had failed to produce their bodies, despite the use of more than 100 pounds of dynamite and the efforts of a large number of volunteers recruited to drag the lake. Holly, assisted by his brother Freer, was able to recover the bodies after about three hours of searching.

Whether involving prominent citizens or not, all efforts were extended to retrieve people trapped beneath the water. In July 1930, Horace undertook one of the most dangerous dives of his career, descending 125 feet to claim the bodies of nine people killed in a power boat accident on Lake Okoboji, in Iowa. Thompson had been solicited by attorneys representing the families of the victims after three other divers had failed in their attempts to recover the bodies. The tragedy had occurred the previous July when the speed boat *Miss Thriller* was rammed by a second speed boat, the *Zipper*.

Horace H. Thompson helped the city of Gilbert, Minnesota, with a water line in 1931.

The average dive depth for Thompson was generally in the range of 25 to 30 feet. Dives exceeding 70 feet were considered dangerous because the diver ran a higher risk of developing the bends as the body adjusted to the pressures incurred when resurfacing. During the Lake Okoboji dive, Thompson remained below the water for nearly four hours, considered an extreme feat at the time. Following the recovery of the bodies, Thompson assisted in the salvage of both boats.

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Perhaps the most dramatic recovery operation that the Thompsons were involved in was the 1939 train wreck of the Duluth, South Shore & Atlantic passenger train near Michigamme, Michigan. The train, eastbound from Calumet to Marquette, was derailed after a landslide of rocks and dirt dislodged the tracks along the Beaufort River. The train's engineer and its fireman were killed in the accident. Thompson was able to find the engineer's body in a relatively short amount of time, but the recovery of the fireman took over a week. Because visibility beneath the water was poor, Thompson relied on his sense of touch to help locate the bodies. He would often literally crawl along the bottom, using an eight-foot steel rod to reach ahead of him during the search process.

The story of this family's diving business will continue in the next Nor'Easter.