

# The Clure Terminal Rises from the Sand

When Duluth-based Zenith Dredge Company bid on the job to build the Arthur M. Clure Public Marine Terminal in 1958, the harbor site was essentially a barren spit of sand that served as a shooting range for the Duluth Gun Club. Over the next 15 months, a fleet of hand-fired steam tugs and barges chartered by Zenith Dredge would sometimes work 24 hours a day to transform the 120-acre site into a world-class port facility.<sup>1</sup>



*The Arthur M. Clure Public Marine Terminal begins to take shape in August 1958 on a 120-acre site that Zenith Dredge Co. filled with 1.5 million cubic yards of material---mostly sand dredged from the harbor. In the foreground is the north dock wall, where the terminal's main transit shed was constructed later that fall and winter. (Duluth Seaway Port Authority Collection, Basgen Photo)*

Zenith Dredge Company had come into existence shortly after the turn of the century to assist the U.S. Army Corps of Engineers in the harbor deepening program that was to be an ongoing project for much of the first half of the 20<sup>th</sup> century.<sup>2</sup> From its headquarters at the foot of 13<sup>th</sup> Avenue West and the waterfront, the company dispatched a fleet of hydraulic dredges, scows, tugboats and dipper dredges around the harbor, dredging and filling slips for grain terminal elevators, stone docks, steam electric generating stations and wood products plants. Through most of the mid-years of the century, Zenith Dredge's tugs *Essayons* and *William A. Whitney* were among the most familiar sights in the Duluth-Superior harbor.

Zenith Dredge diversified during World War II to become one of the numerous companies in the Twin Ports building ships for the Allied war effort.<sup>3</sup> The company also became a major supplier of road paving materials through its Arrowhead Blacktop Co. subsidiary.

Zenith Dredge returned to its dredging roots following World War II, winning the contract from the Corps of Engineers to build the mammoth stone breakwater at Two Harbors. That was followed by the successful bid for the

Clure Public Marine Terminal. Howard T. Hagen recalled that the Two Harbors breakwater and the Clure Public Marine Terminal were large projects that helped the company ease its way out of the shipbuilding business, which had essentially evaporated with the end of the war.

"Probably one of the largest contracts we had was the Two Harbors breakwater," explained Hagen, a Minneapolis native and University of Minnesota graduate who had come to Duluth just before the war and joined Zenith Dredge in the fall of 1942. "Well, the port terminal, of course, was another good-sized project."<sup>4</sup>

The two postwar projects resulted in further diversification for Zenith Dredge. To fill the demand for stone for the Two Harbors breakwater, the Duluth company in 1949 purchased an old stone quarry out on Becks Road in Midway Township.<sup>5</sup> "As the breakwater project was completed," Hagen recalled, "there was a large quantity of small rock that had accumulated in the quarry, and it served to make good material for blacktop raw material. From that point, Arrowhead Blacktop Company was started as a wholly-owned subsidiary of Zenith Dredge Company"<sup>6</sup>

Keith Yetter was working for Arrowhead Blacktop in 1957 when Donald C. McDonald, the president of the Zenith Dredge holding company, asked him to transfer to Zenith Dredge. Yetter, a South Dakota native, had arrived in Duluth with the U.S. Air Force in 1954 following his graduation from South Dakota State University in Brookings with a degree in civil engineering. Yetter did his two-year Air Force stint as an installation engineer with the 343<sup>rd</sup> Fighter Group, helping to build what would become the Duluth Air Force Base.<sup>7</sup>

The contract to build the Clure Public Marine Terminal was both simple and immense. Yetter and his Zenith Dredge crews had to reclaim and reshape a 120-acre peninsula of sand into a site capable of holding warehouses, tank farms, railroad tracks and asphalt roads able to withstand constant heavy rail and truck traffic. Then they had to dredge perimeter channels and aging dock slips to the depths of 27-30 feet required to float the ocean vessels expected with the spring 1959 opening of the St. Lawrence Seaway. Most of the old timber crib docks in the harbor dated to the harbor deepening project from 50 or more years before and were dredged to a maximum of 20 or 22 feet.<sup>8</sup> All of the work had to be accomplished in a time span of little more than 15 months.

When Yetter first arrived on the site in late 1957, it was "nothing but a big spit of sand. The gun club sat right in there with a concrete block building that we used as our office during the construction of the terminal."<sup>9</sup> The few docks serving the site had been built at the turn of the century and had been primarily used for stockpiling lumber during the heyday of the sawmills. The immensity of the job was illustrated by the inventory of the marshalling yard that Zenith Dredge built on the old gun club site in the early winter of 1958. It included 3,000 H-beams used as batters for the anchor system; 1,000 tie

rods, 3-3/4 inches thick and 70-foot long; 500 steel sheet pilings 58 feet long; and a Manitowoc Crane.<sup>10</sup>

Zenith Dredge purchased a hydraulic dredge from a Milwaukee firm and began dredging a depth of 15 feet around the perimeter of the site as soon as the ice went out in the spring of 1958. Then they pumped in material enough for a roadway of sand around the entire perimeter of the terminal. Once the roadway was in place, the hydraulic dredge stationed itself adjacent to the roadway and dredged down to 30 feet, pumping the dredged material over the roadway to fill in the rest of the terminal site.<sup>11</sup> Even after dredging the whole perimeter to 30 feet, there wasn't enough sand to fill in the entire terminal site, so the crews dredged a deep hole off nearby Hearing Island to provide the additional sand. When they were finished leveling off the site, they stockpiled more than a million cubic yards of sand on one of the old lumber docks. Later in 1959 and 1960, that sand was used to provide fill for the approach to the Blatnik High Bridge.<sup>12</sup>

By the summer of 1958, more than 100 people were working on the Clure Public Marine Terminal project for Zenith Dredge Company. As many as 22 workers slept on the dipper dredge used for the project. "We had a full-time chef when we were out working," Yetter said. "The food was as good as you would get on the lakers. Our steam derricks also had quarters, and we had cooks on board."<sup>13</sup>

The Zenith Dredge crews worked around the clock during the summer and fall of 1958. "You used to say you worked 24 hours a day, seven days a week," Yetter said. "And if you didn't get your work done, then you worked nights."<sup>14</sup>

Dredging and piledriving for the foundations of the terminal's warehouse and transit sheds was hard, routine work, sometimes broken by the odd discovery. Piledrivers would be working down 20 feet or so below the surface and hit a hard object. They'd continue driving, and all of a sudden, the pile would drop another seven feet with no resistance. "These were old sunken barges," Yetter explained, "wooden barges, and he would drive piling right through the deck and then go through the bottom."<sup>15</sup>

Then there were the two cars picked up by the dredging crews. "Never found any bodies," Yetter said, "but in both cases, the air was still in the tires. One of them had been sat on by an ore boat, so it was flattened down. It was like one of those you see in the scrap yard."<sup>16</sup>

In the end, the Zenith Dredge crews moved more than 1.5 million cubic yards of material and sank thousands of sheet piles and timbers to build the Clure Public Marine Terminal.<sup>17</sup> The project was finished in time for Duluth-Superior to attain the status of a world port with the opening of the St. Lawrence Seaway in the spring of 1959.

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<sup>1</sup> Paul Adams, "A Maritime Marvel," *Duluth News-Tribune*, December 12, 1999

<sup>2</sup> Glenn N. Sandvik and William Beck, Duluth: An Illustrated History of the Zenith City Woodland Hills, California: Windsor Publications, 1983, p.106

<sup>3</sup> Ibid., p.106

<sup>4</sup> Tape-Recorded Interview with Howard T. Hagen, Duluth, Minnesota, February 24, 2000, pp. 1-5

<sup>5</sup> Ibid., p.2

<sup>6</sup> Ibid., p.3. Zenith Dredge also diversified into the wood products industry in the postwar years. In May 1945, a week after the surrender of Germany, Donald C. MacDonald of Zenith Dredge incorporated the Superior Wood Products Company. The firm, which became known as Superwood, built a hardboard manufacturing plant on the site of the old Zenith Dredge Company World War II-era shipyard. See Sandvik, Duluth: An Illustrated History of the Zenith City, p.107

<sup>7</sup> Tape-Recorded Interview with L. Keith Yetter, Duluth, Minnesota, May 24, 2000, p.1

<sup>8</sup> Ibid., p.5

<sup>9</sup> Ibid., p.10

<sup>10</sup> Ibid., p.11

<sup>11</sup> Ibid., p.11

<sup>12</sup> Ibid., p.12

<sup>13</sup> Ibid., p.6

<sup>14</sup> Ibid., p.6

<sup>15</sup> Ibid., p.15

<sup>16</sup> Ibid., p.15. On a bright, sunny August 30, 1983, the USS Great Lakes Fleet's *Philip R. Clarke* did snag a car, at least partially resolving a local mystery. The *Clarke* was loaded and bound for the Reiss Coal Company dock when, as she approached the East Gate Basin near the Clure Public Marine Terminal, a tremendous wind reared up out of nowhere. Capt. William Wilson dropped a bow anchor, brought the vessel under control and docked at the terminal's Berth No. 5. When the anchor was raised after the storm, there, cradled in its flukes, was a sedan – containing the bodies of a retired longshoreman and a female companion who had vanished one night exactly five years earlier, on August 30, 1978. Police theorized the couple missed a turn on the gravel roadway and drove off the dock.

<sup>17</sup> Paul Adams, "A Maritime Marvel," *Duluth News-Tribune*, December 12, 1999