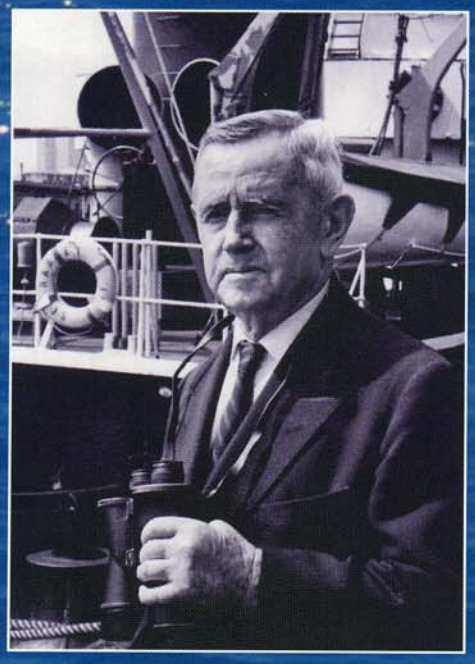
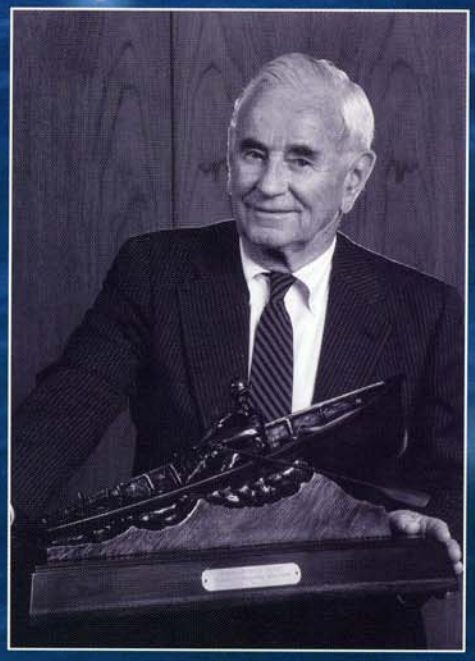


TWO MEN AT THE HELM

The First 100 Years of Crowley Maritime Corporation
1892-1992



TWO MEN AT THE HELM

The First 100 Years of Crowley Maritime Corporation
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TWO MEN AT THE HELM

The First 100 Years of Crowley Maritime Corporation · 1892-1992

This company history is based on the recollections of Thomas Bannon Crowley Sr., Chairman of the Board and Chief Executive Officer, and other long-time employees of Crowley Maritime Corporation. All quotations cited in the text are from interviews with, or other recorded statements made by, Mr. Crowley in the 1970s, 1980s, and 1990s.

by Jean Gilbertson

ACKNOWLEDGEMENTS

The text for *Two Men at the Helm* was developed primarily from interviews conducted by the writer with Thomas B. Crowley Sr., James B. Rettig, Lester C. Bedient, and, over many years, hundreds of Crowley Maritime Corporation employees at numerous company locations. The participation of Messrs. Crowley, Rettig, and Bedient is gratefully acknowledged, as are the efforts of Richard A. Simpson, who initiated and guided the entire project.

Key published sources included interviews conducted by the Regional Oral History Office, Bancroft Library, University of California, Berkeley. These sources included: *Thomas Crowley, Recollections of the San Francisco Waterfront*, an interview conducted by Karl Kortum and Willa Klug Baum, 1967; *Thomas B. Crowley, Crowley Maritime Corporation: San Francisco Bay Tugboats to International Transportation Fleet*, an interview conducted by Miriam Feingold Stein, 1973-1975; *William J. McGillivray, Tugboats and Boatmen of California 1906-1970*, an interview conducted by Ruth Teiser; and *William Figari, San Francisco Bay and Waterfront, 1900-1965*, an interview conducted by Ruth Teiser, 1969.

Other written sources were in-house and external publications produced by Crowley Maritime Corporation. Helpful information was also provided by Austen Hemion, a founder of the Puget Sound Maritime Historical Society.

Photographs were made available from the personal collections of Virginia Escher and Constance Bowles, sisters of Thomas B. Crowley Sr., as well as from the Rettig family collection, the Bedient family collection, Joanna DeMaris, and Crowley Maritime Corporation's files of historical and contemporary images. Special assistance with photographs was given by Byron Lemmon and Brian Moran. Photographer credits are cited wherever the identity of the photographer was known or could be determined.

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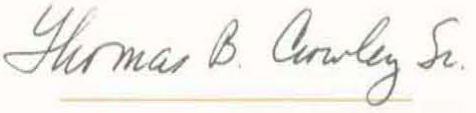
DEDICATION

More than 5,000 men and women are currently employed by Crowley Maritime Corporation and its operating subsidiaries. These individuals contribute to the success of the organization on a day-to-day basis aboard vessels, in office settings, in terminals and warehouses, in the sales field, and in stevedoring and trucking capacities. These 5,000 were preceded by thousands more, without whom the company could not have become what it is today.

This history of Crowley Maritime Corporation emphasizes the story of the company's evolution rather than the many personalities involved, because even though specific individuals deserve recognition for specific achievements, it really took all of us, working together, to accomplish this remarkable history.

My father and I are not alone in having given our lifework to this company. A great many employees have made lifetime careers of serving Crowley Maritime and its customers, and we have been fortunate in our ability to attract as employees the best the industry has to offer.

This book is dedicated to the employees of Crowley Maritime Corporation— from "Dutch" Albert, the company's first employee, to our present personnel—in acknowledgement of and with sincere appreciation for their loyalty, initiative, perseverance, dedication, and spirit.



Thomas B. Crowley Sr.

T A B L E O F

C O N T E N T S

FOREWORD

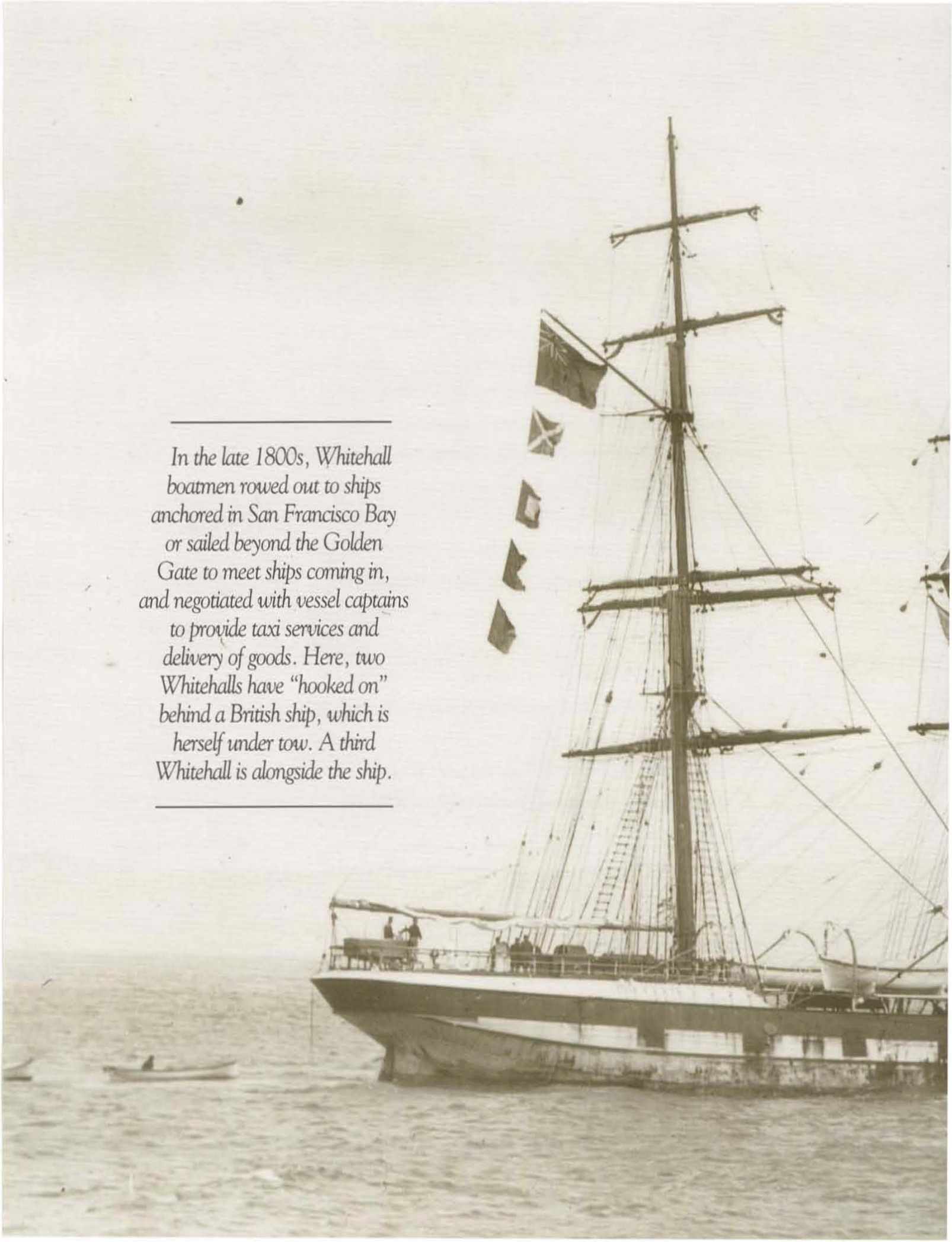
Crowley Maritime Corporation is the third largest U.S.-flag marine transportation company, the leading container carrier to Latin America and the Caribbean Basin, and the world's largest tug and barge operator.

Founded in 1892 with a single $80 Whitehall rowboat, the company currently operates a fleet numbering over 400 vessels, and annual revenues run in excess of $1 billion. Crowley provides scheduled liner services to offshore domestic and international markets, contract transportation anywhere in the world, tug and harbor services, petroleum transportation and distribution, passenger services, environmental protection, and emergency response. It is one of the most diversified maritime companies in the world.

Today Crowley Maritime Corporation, headquartered in Oakland, California, is the holding company and sole shareholder of two major operating units: Crowley American Transport, Inc., providing

international liner services throughout the Americas with management offices in Jacksonville, Florida, and Crowley Marine Services, Inc., which provides worldwide contract and specialized marine transportation services, with management offices in Seattle, Washington.

In its 100 years of growth and evolution, Crowley Maritime Corporation has been headed by only two Chief Executive Officers: Thomas Crowley, the founder, and Thomas Bannon Crowley Sr., the founder's son. Both generations of leadership have been marked by an entrepreneurial zeal for seeking out opportunities and by an extraordinary ability to recognize and pursue them, once found. *Two Men at the Helm* recounts the development of the business under their direction, the evolution of what must, by any measure, be considered a great American success story.



In the late 1800s, Whitehall boatmen rowed out to ships anchored in San Francisco Bay or sailed beyond the Golden Gate to meet ships coming in, and negotiated with vessel captains to provide taxi services and delivery of goods. Here, two Whitehalls have "hooked on" behind a British ship, which is herself under tow. A third Whitehall is alongside the ship.

Chapter One 1892-1902

First boat in the water

Thomas Crowley's approach to business was already set when he launched his first company in 1892. He was seventeen years old and had saved $80, with which he bought a second-hand Whitehall boat and entered the competitive boatman business on San Francisco Bay.

"All his life, every dollar my father ever made he plowed back into the business. That's the story of my life, too. Some people call that being a miser, some people call it reinvesting in the business—it all depends on how you look at it."

Whitehalls were 18-ft. rowboats named for the street in New York City on which they were first made. At four feet, eight inches wide, Whitehalls could be rowed by two boatmen but were often rowed by just one. Sometimes one man rowed while the other bailed water. Most of the Whitehalls had sails that came in handy when there was a tail-wind. The boatmen who rowed them transported not only groceries and miscellaneous supplies, but also vessel captains and crews, and anyone else who required transportation on the Bay.

Near the end of the 1800s, Whitehalls abounded on San Francisco waters. They were sent out to the ships on behalf of sailors' boarding houses, stevedoring companies, ship chandlers, butchers and produce markets, customs officials, police, doctors, and others who had business to conduct with the captains. Businesses either had their own Whitehalls and employed boatboys to run them, or they hired an independent boatman who owned his own Whitehall.

San Francisco Maritime Museum

Anchored in the Bay, the ships included foreign and American square-riggers, whaling ships, tall ships, clippers, two-masted schooners, and the new steamers. The Whitehall boatman who was first to reach the anchored ship and open negotiations typically won the right to provide service for the vessel and its captain for as long as the ship remained in port.

Tom Crowley learned what it took to be the first boatman to reach the incoming ships and how to bargain with the captains.

Down among the wooden huts on the bulkhead of the Vallejo Street Wharf, across the dock from the offices of the Red Stack tugs, Tom found a shack where he could set up his headquarters. He ate and slept at the shack, so that no time was wasted when word came that a ship was due to arrive.

Even at that, sleep time was down time. He began to think about hiring an assistant so that his business would be ready whenever a boatman was needed. "Dutch" Albert came aboard as Tom's first employee. Dutch's job entailed living at the Vallejo Street quarters, always on-call, and waking up at any time of the night to row a captain from shore back to his ship. With Dutch

Above, the company's founder at the beginning of his long career. San Francisco Maritime Museum

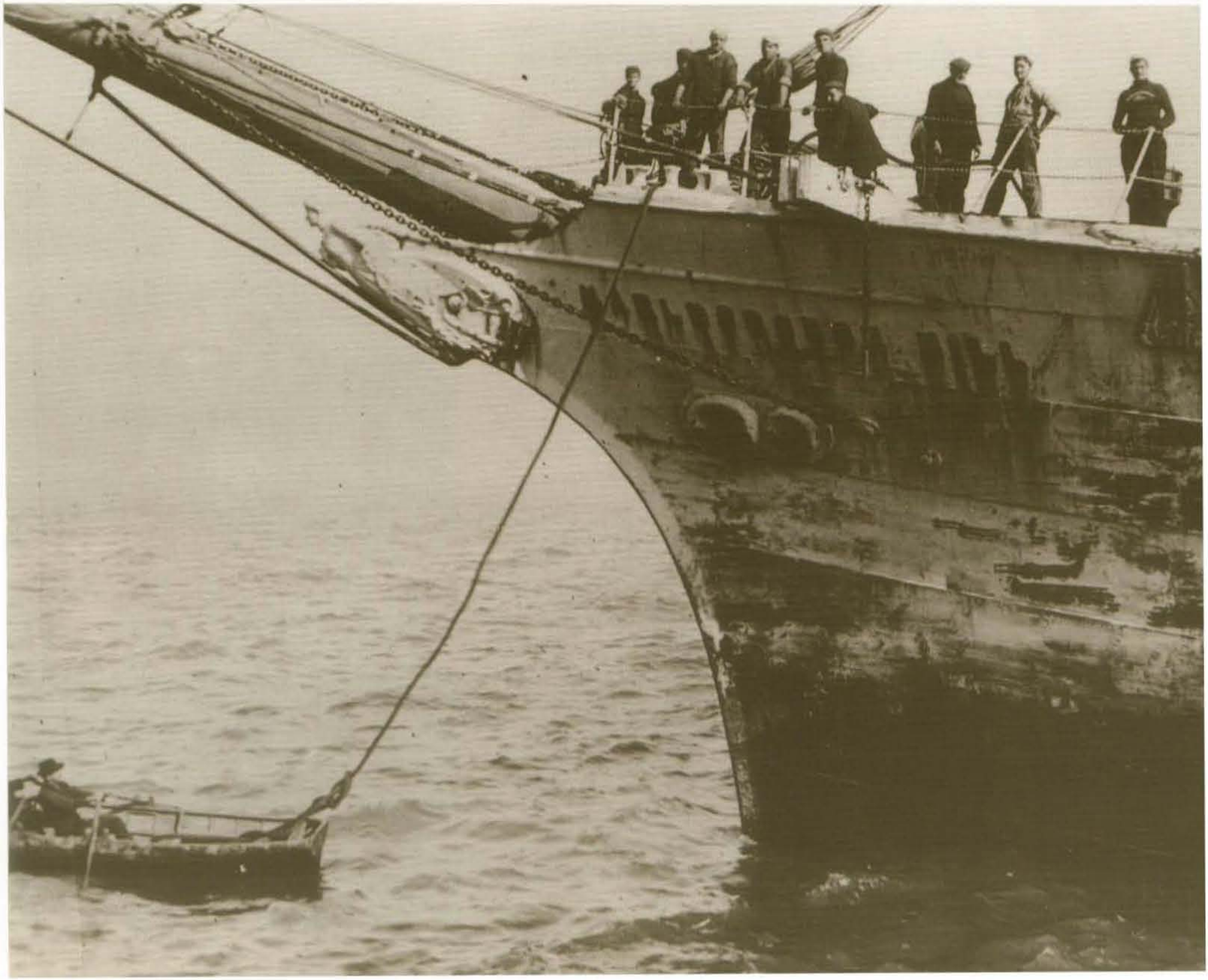
Above right, Whitehall boats under sail during annual Fourth of July races on the Bay.

Preceding page: Oliver collection, San Francisco Maritime National Historical Park

full-time on the waterfront, Tom acquired a second boat, which he often hooked on behind a departing vessel and rode out to the Heads, at the entrance of the Bay, to meet incoming ships and solicit their business before other boatmen had even left the dock.

Hooking on to departing ships was one of the few ways a boatman could spare his arms and back. Tom carried in his boat an iron hook some twelve feet long with an eye on the end where he would attach a rope some twenty-five fathoms (150 feet) in length. After hooking on to a ship as far aft as possible, he would play out the rope until his boat rode comfortably in the wake. When the ship reached the Golden Gate, a flip of the line would release the hook.

The iron hook was not always necessary to the ride. Tom's quarters on the Vallejo Street Wharf had put him in close proximity to crews of the Red Stack tugs. Sometimes these crewmen would let the Whitehall boatman throw a line, which they would tie around a bitt in order to tow the boat as far as Tom wished to go. Sometimes he hitched along as far as the Farallon Islands, twenty-five miles offshore. The tugs themselves were seeking business with incoming ships that would require tug assistance in the harbor.



Two oarsmen in a Whitehall boat run a line to the dock for a ship calling at San Francisco.

Crowley Maritime collection

Once positioned out near the entrance to the Bay, Tom would discuss business with as many ship captains and stewards as possible before heading back to San Francisco to begin filling orders. Some days as many as twenty ships arrived in port, and every one of them required the first day's supply of groceries. A typical order was fifty pounds of meat, two sacks of potatoes, and a few bags of vegetables.

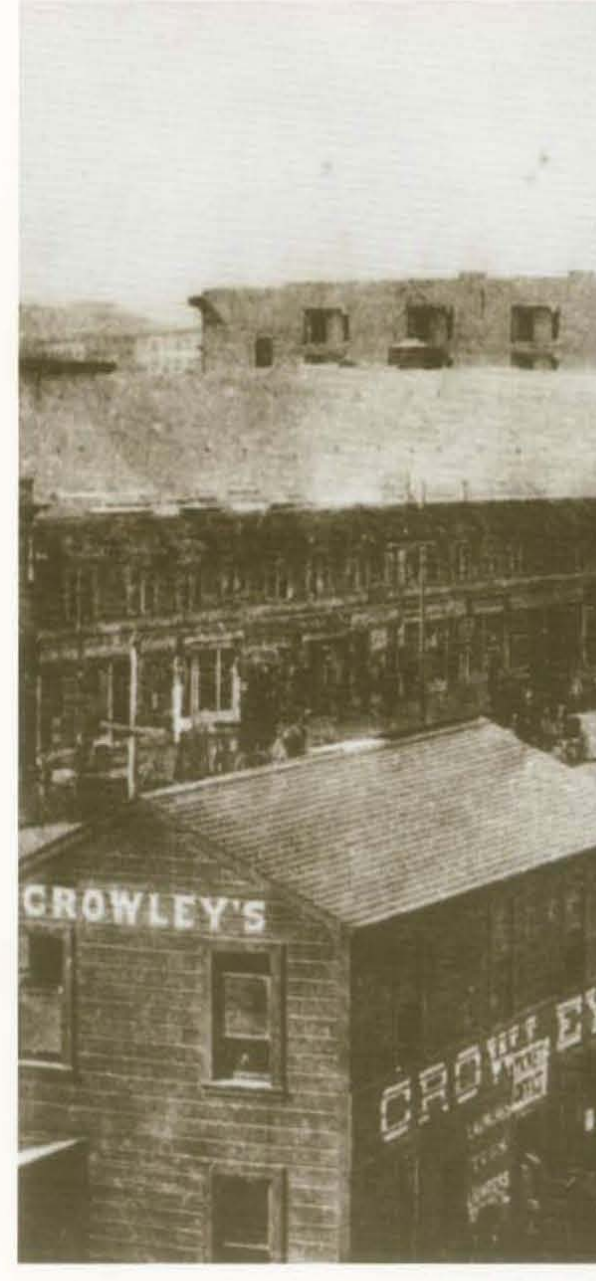
By continuously putting his earnings back into the business, Tom soon had three Whitehalls, serving the San Francisco ship traffic twenty-four hours a day. He employed his two younger half-brothers to help run the boats and, in the mid-1890s, incorporated his business under the name Thomas Crowley and Brothers.

"My father had been into Whitehall boats since he was old enough to get in a boat, I guess about 1887 or so, up until 1898 when he built his first gasoline-powered boat, Jenny C."

Tom found additional quarters at Meiggs Wharf, where the Marine Exchange was located, so he could be one of the first to hear of incoming ships. Many years later, Fisherman's Wharf would be built in this vicinity. Not much more than a shack, Tom's Meiggs Wharf facility also had bunks so that he or his men could sleep there and be ready to jump into a boat immediately when word was telegraphed to the Marine Exchange that a ship was arriving. Of course, Tom was not the only Whitehall boatman who had the idea of keeping close to Meiggs Wharf. Competition was lively and not always friendly. Whoever was not quick to reach his boat sometimes found that his oars had been thrown overboard.

Tom avoided this problem by rowing out with the tide, sometimes before five in the morning, hooking onto steamers or schooners to get his boat around Fort Point, then waiting near the Golden Gate for incoming ships.

He continued to keep Whitehall boats at the Vallejo Street Wharf. With the permission of the Harbor Commission, Tom built a two-story building on the Wharf, and put in bunks on the upper floor so that his growing staff could be available around the clock. His boats and his men were busy, but Tom had his mind on the next step: how to acquire a gasoline-powered launch. The Klondike Gold Rush was to provide the answer.

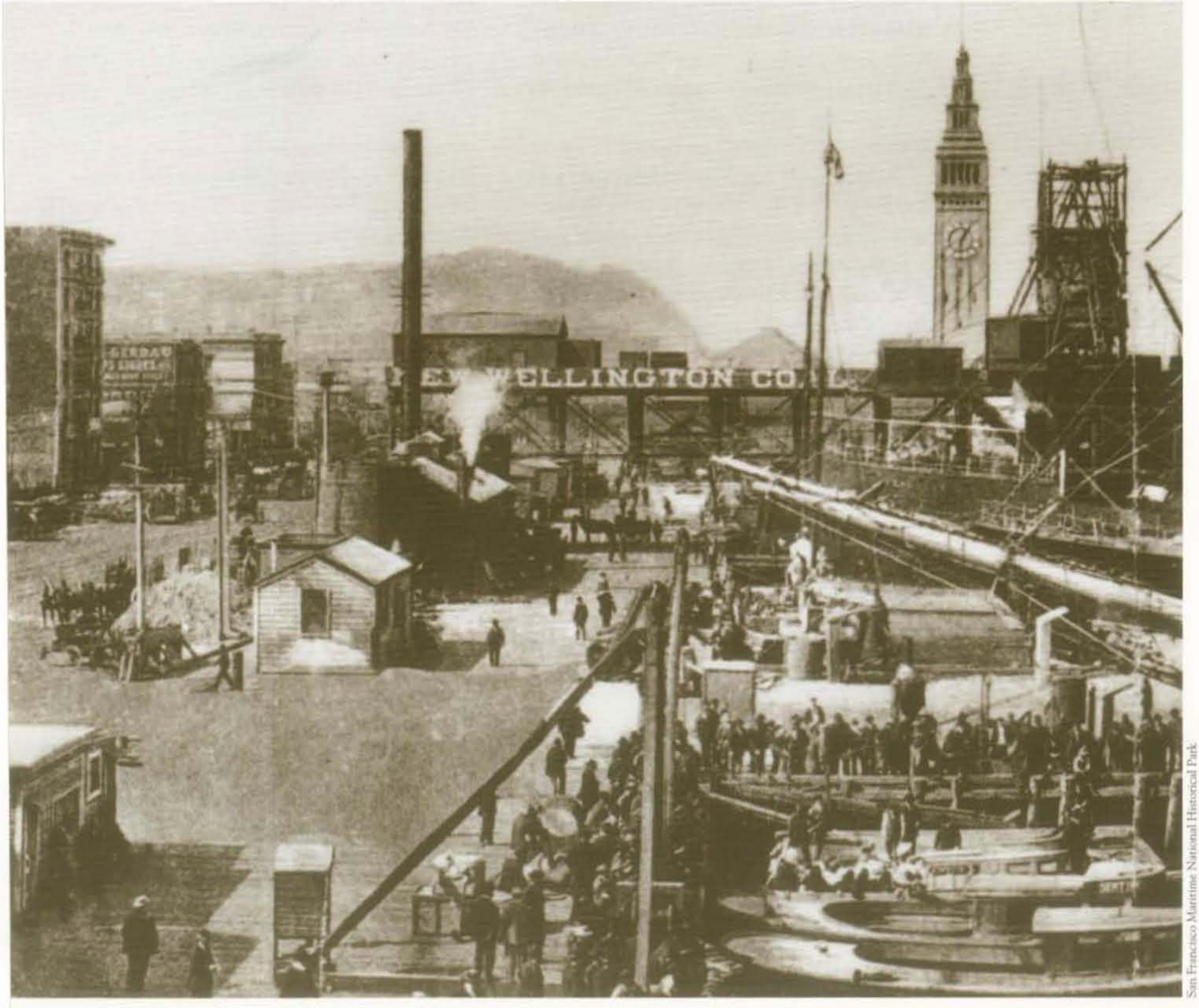


There's gold in them thar furs

When gold was discovered in the west-central Yukon in 1896, prospectors rushed from the eastern states to San Francisco to catch a vessel northbound to Alaska. Tom Crowley had observed that crews on whaling ships returning from Alaska had little wish to keep their heavy Arctic clothing and were happy to collect money for it as soon as they reached the warm California climate.

The heavy garments included boots, coats, hoods, and leggings, all made of hides and furs—just what the gold prospectors needed to protect them against the bitter-cold Alaskan winters. Tom began buying as much of them as he could. His competition for the fur garments were two retailers, who sold off the clothing to gold miners as quickly as they bought it, but Tom was in the business of marine transportation, not retailing, so he warehoused his growing inventory, continually buying more and looking for a buyer who would purchase all he

Tom Crowley built a two-story boathouse on the Vallejo Street Wharf near the end of the 1890s. The building was moved by barge to East Street in late 1906. Docked nearby are several Crowley launches.



San Francisco Maritime National Historical Park

had amassed in one transaction.

When the buyer was found and the deal was made, Tom collected a profit of some $900, which he used for a down payment toward a 36-ft. motor launch to be built by John Twigg & Sons. He called his first gasoline-powered launch *Jenny C.* Total cost of the vessel was approximately $1,800.

The *Jenny C.*'s engine was built by the Hercules Engine Company on Bay Street in San Francisco. Gasoline engines were the new technology, so new that the power of them took getting used to, and the servicing of them was an industry not yet created. Whenever problems arose, Hercules would send a mechanic at the exorbitant rate of sixty cents per hour. As automobiles began to gain acceptance in the early 1900s, the technology of gasoline-powered engines would improve for maritime uses as well.

Dutch Albert was often called on to take the *Jenny C.* to the Oakland Long Wharf with ship stores for the colliers (coal ships) coming in from British Columbia. One day a thirteen-year-old boy named Willie Figari asked if he could go along for the ride. Soon Figari was making the trip on a regular basis, and learning how to operate the boat.

The young Crowley company, like the nation overall, found the turn of the century to be a time abounding with a sense that there were opportunities to be seized if one worked hard and had the dedication to be the fastest and the best. In 1900 the population of the state of California had not yet reached 1,500,000. Fewer than two percent of the households in the United States had a telephone. The paved highways of the nation amounted to fewer than 150 miles, but then there were only 8,000 registered cars and no trucks or buses. For Tom Crowley, now in his mid-twenties, the new century represented a lot of progress to be made. He added a second gasoline-powered launch, a 45-ft. vessel called the *Crowley*, then a third, the *Spy*, a 28-ft. boat with a nine-h.p. engine. Tom Crowley offered the job of running the *Spy* to Willie Figari, who not only accepted the job but continued to work for the Crowley organization for sixty-three years.

In his first decade of business, Thomas Crowley had established the philosophy and day-to-day business practices that would enable his young company to grow into a leader in the maritime industry. The hallmarks of that philosophy included putting earnings back into the business; constantly seeking improvements in equipment and methodology; and attracting loyal, capable, hard-working employees.

Meiggs Wharf, pictured in 1865. Tom Crowley found additional quarters for his Whitehall business here in the mid-1890s.

Virginia Eicher collection

Virginia Escher collection

Tom Crowley aboard the 45-ft., gasoline-powered launch Crowley, which carried passengers and cargoes on the Bay.

△ Historical Park

Tom Crowley, standing left, clarifies instructions to an employee at the Vallejo Street Wharf.

LAUNCHES
"Crowley" and "Jennie C"
For Boating, Towing and Excursions.

Lighter "Shamrock"
25 TONS CAPACITY
For Freighting, Etc.

Telephone Main 214.

Thos. Crowley & Bros.

LAUNCH BOATMEN.

Boathouse, Vallejo-Street Wharf

OPEN ALL NIGHT

21

San Francisco, May 25 1900.

Dr Kinyon Quarantine Officer

Dear Sir,

We begto inform you we cannot continue to furnish Launches Crowley and Jennie C. for patrol duty at present rates any longer, owing to extra help employed, gasoline consumed and continous running

Launch Crowley has forty-five horse-power engine and consumes five gallons per hour at twenty cent per gallon, twenty-four hours running, also two crews employed

Will agree to furnish Launch Crowley for ~~day~~ twenty-four hours @ fifty-dollars per day Jennie C for twelve hours @ twenty dollars

Yours very Respectfully
Thos Crowley & Bro

In this letter, dated May 25, 1900, Tom Crowley informs a customer, the Kinyon Quarantine Officer, that his company cannot continue to furnish launches Crowley and Jennie C for patrol duty at the present rates any longer. Thomas B. Crowley Sr. observed that his father's letter "communicates the basic philosophy that successfully built the foundation of

HISTORICAL PERSPECTIVE

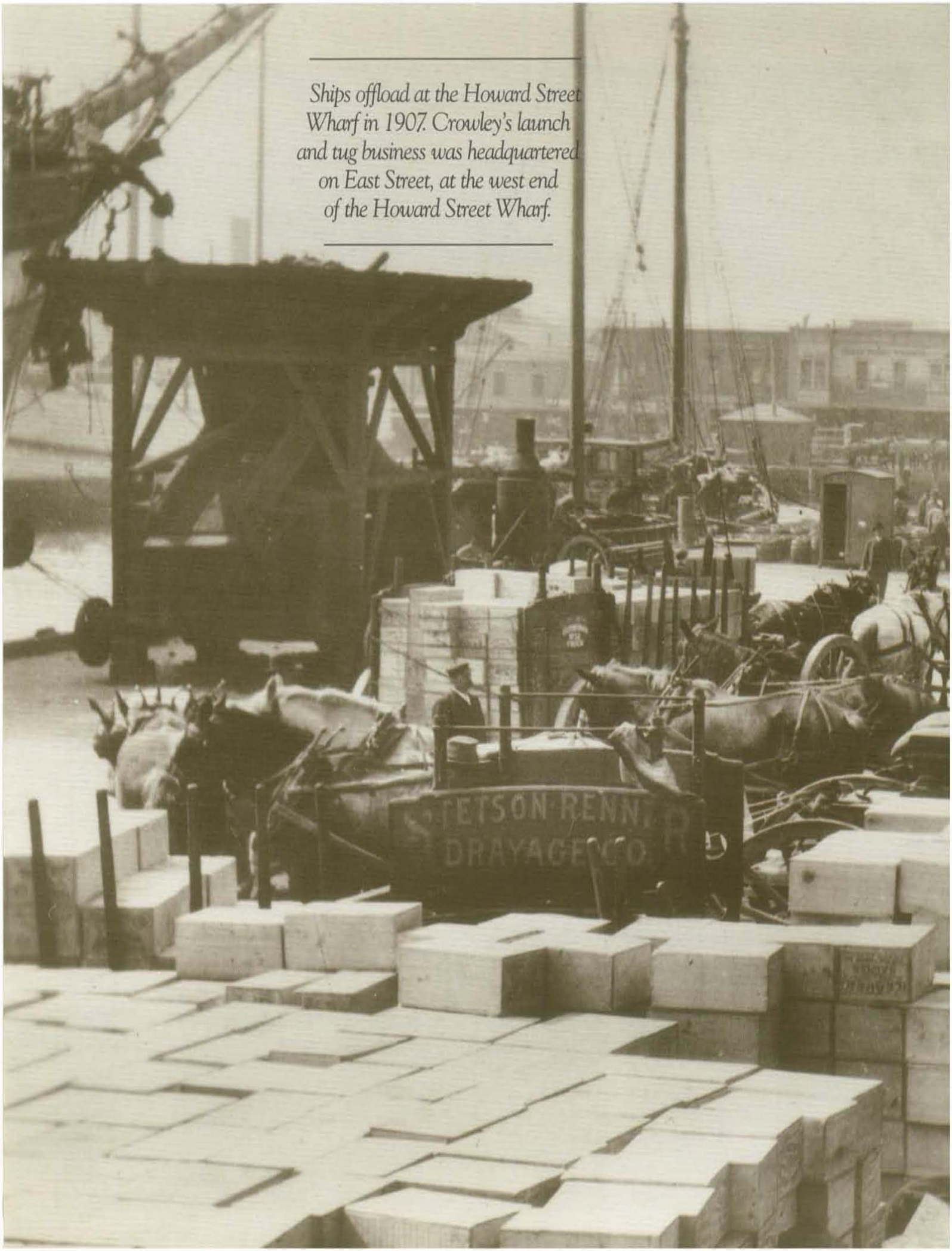
1892	A German engineer named Rudolf Diesel patented an oil-burning internal-combustion engine which would eventually become prominent in maritime applications.
1896	The discovery of gold in Alaska's Yukon region sparked the Klondike Gold Rush.
1898	Theodore Roosevelt led a cavalry regiment, The Rough Riders, in the four-month-long Spanish-American War in Cuba.
1900	The total mileage of rails in the U.S. had increased to nearly 200,000.
1901	U.S. President William McKinley was assassinated six months after his inauguration; Theodore Roosevelt became President.

San Francisco Maritime Museum

Young Tom Crowley rows a Whitehall boat after business in the Bay.

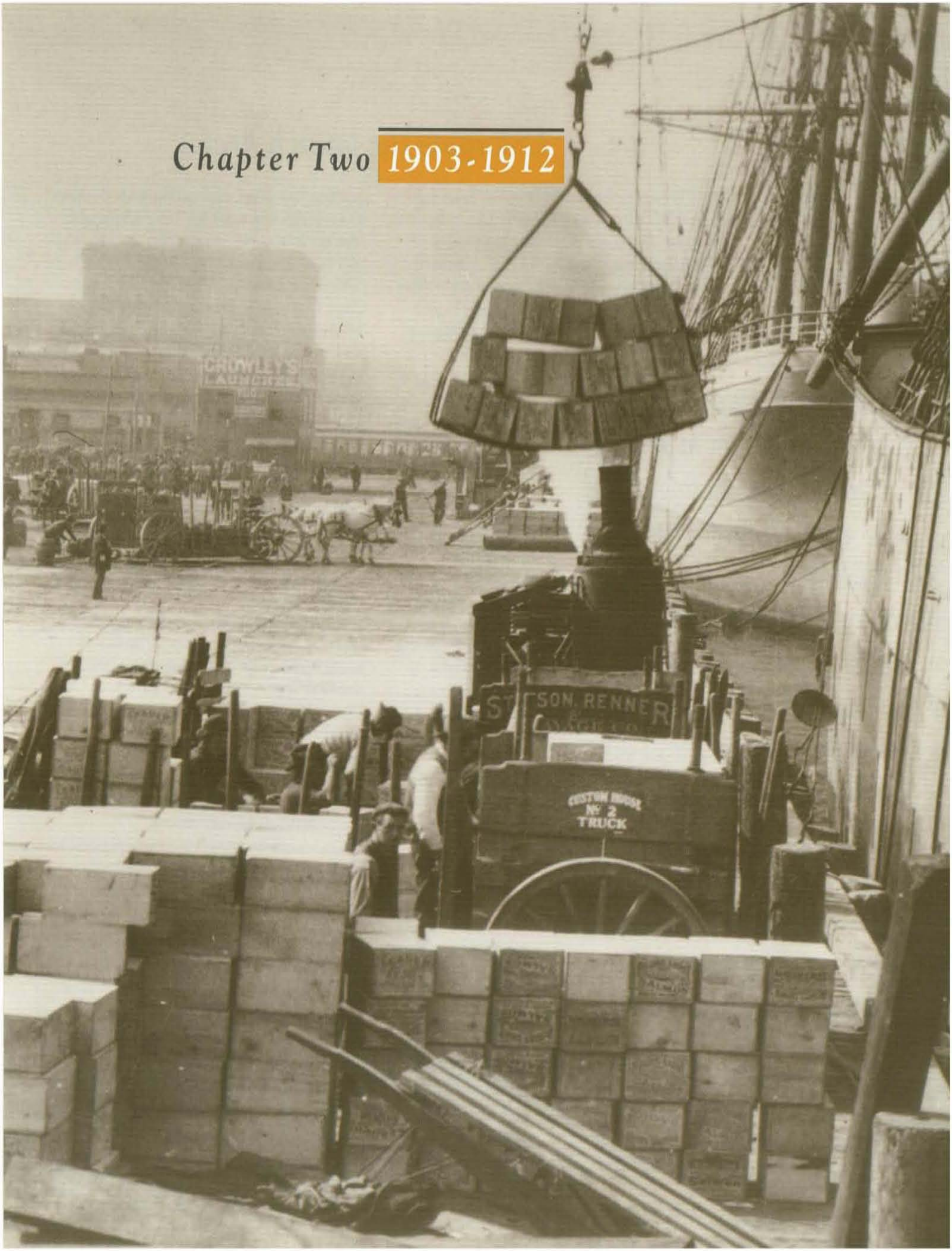
Thomas Bannon was born in San Francisco to Irish immigrant parents on December 5, 1875. His father, a Whitehall boatman, died of tuberculosis when Tom was sixteen months old. When David Crowley, a fellow member of the Irish immigrant community who made his living with Whitehall boats, married the young widow and adopted her two children, Tom was renamed Thomas Crowley.

In 1890, when he was fifteen, Tom Crowley quit school and went to work as a boatboy rowing a Whitehall for Wilson's Sailors' Boarding House. He was paid five dollars per week to transport sailors and the boarding house runner to and from ships in San Francisco Bay.



Ships offload at the Howard Street Wharf in 1907. Crowley's launch and tug business was headquartered on East Street, at the west end of the Howard Street Wharf.

Chapter Two 1903-1912



Enlarging the launch fleet

The improvement in business brought about by the gasoline-powered launches was a great deal more than simply a matter of saving the arms and backs of the oarsmen. The launches were faster, not so dependent on the winds and tides, and much bigger. While the Whitehall business had meant transporting a single ship's captain at a time, the launches could pick up a dozen captains and bring them all ashore at once.

"There is a great distinction in my opinion in service industries as distinguished from manufacturing industries. Some people are natural putterers and makers of things and other people are natural doers of things. My father was a natural doer of things...[He] had always been in the business of giving services to people –furnishing a launch service, a tugboat service, or something of that nature."

A gas-launch operator was called a "gas skinner." The crew aboard a launch was typically one or two men, the same as for the operation of a Whitehall boat, so the increased efficiency of the launch did not come at the expense of increased manpower aboard the boat.

Tom Crowley continued to build new, or buy used, gasoline launches, expanding both the fleet and the types of work his company could perform in the Bay. In the first decade of the new century, the company's gas launches included the *Jenny C.*, *Crowley*, *Spy*, *Scout*, *Chief*, *Comet*, and *Meteor*. When a former Whitehall competitor built a wooden-hull gas launch named the *William C.*, Tom kept an eye on the vessel until the owner was ready to sell, and it, too, became part of the growing Crowley fleet. By this time, the company also owned and operated small barges, no larger than what the gas launches could handle, for use in transporting steel to Oakland and barrels of oil, ice, and other supplies in large loads of stores to ships anchored in the Bay. Barges owned by the company in the early years could carry 300 to 400 tons.

One of the first jobs found for the 45-ft. launch *Crowley* was transporting bundles of newspapers—the early morning edition of the *Examiner*—from San Francisco to Oakland. The job called for picking up the newly printed papers at three o'clock in the morning, taking them across the Bay, and delivering the bundles to the appropriate docks, where one-horse wagons waited to pick up the papers for delivery ashore.

On March 8, 1906, Tom incorporated his operations under the name Crowley Launch and Tugboat Company. Stockholders were Thomas Crowley and his two half-brothers.

San Francisco Maritime Museum

Cannery workers are transported aboard the gasoline-powered launch Crowley No. 5 from shore to a ship bound for Alaska.

Preceding page: San Francisco Maritime National Historical Park

San Francisco earthquake of 1906

Vallejo Street Wharf, early 1906. A Crowley Launch and Tugboat Company barge is tied up in front of Crowley's two-story boathouse. Down the wharf is the office of Shipowners and Merchants Tugboat Company (S. O. & M.), operators of the Red Stack fleet.

San Francisco Maritime Museum

It was about five o'clock on Good Friday morning, April 18, 1906, when the great earthquake struck San Francisco. After the Richter scale was devised in 1935, scientists calculated that the magnitude of the quake must have reached 8.0 or higher. Fires erupted almost immediately, many of them caused by the lighting of cooking fires in households where the chimneys had been damaged or destroyed. The fires lasted three days and claimed the lives of five hundred people.

Ferry boat services were halted; passenger steamers remained at anchor in the Bay. Tom Crowley's launches undertook continuous runs back and forth across the Bay, transporting people and belongings out of San Francisco. Most were taken to Oakland, though some passengers were carried to the anchored steamers and put aboard until it was safe to return to shore. On one occasion, the company accommodated a boatload of people bound for Sausalito, but every effort was made to confine the shuttle to Oakland in order to make the most efficient use of the equipment. When the passenger volume became more than the launches could handle, Tom Crowley brought in 300-ft. grain barges, put them alongside the dock, and allowed people to load their salvaged belongings for transport to Oakland.

It wasn't only quake refugees who turned to the Crowley company in the emergency; bankers, too, were looking for a safe place to store assets until order was restored to the city. One Crowley vessel stood out in the Bay for the duration of the crisis with its hold full of the cash and securities of the banks of San Francisco.

Expanding into scows and tugboats

The Crowley company's gasoline-powered launches were frequently called to tow scow schooners. Scows are flat-bottomed boats with square bows and sterns that, during the early 1900s, were used primarily to transport dry-bulk materials such as hay, grain, lumber, sand, nitrates, and coal. Scows equipped with masts to support sails and rigging are known as scow schooners. In those days, barges were not yet prevalent, but scow schooners were as numerous on the Bay as Whitehalls were before the advent of gasoline launches.

Though scow schooners could set sail and often maneuvered by means of their sails on the Sacramento and San Joaquin rivers, their activities on San Francisco Bay usually necessitated towing, due to their heavy loads and the prevailing currents.

The largest scow schooners on the Bay were owned by the Piper-Aden-Goodall Company (subsequently the Piper-Aden Company), and all were equipped with steam "donkey" engines on the aft deck to aid in loading and discharging the heavy cargoes.

When Tom Crowley was approached about buying Piper-Aden, he recognized the opportunity as the next logical step in his company's evolution. With the acquisition, he renamed the scow schooner operation California Lighterage Company and continued to provide the same services previously offered by Piper-Aden. A routine project was the transportation of nitrate, discharged from ships in-bound from South America, to the Hercules Powder Company in Pinole. Crowley assigned several scows to each shipload in order to ensure a quick turn-

The Crowley No. 7 tows a California Lighterage Company scow schooner.
San Francisco Maritime Museum

Onlookers find an afternoon's entertainment in the raising of the Black Stack tug Defiance *by Smith-Rice Company in 1907. Tom Crowley later came to own the tug and enter into a joint venture with Smith-Rice.*

Virginia Escher collection

around for the ship. California Lighterage Company also handled the coal for the government stations and many Bay Area industries, who used it as fuel for various steam-power requirements.

Among the twelve scows acquired by Tom Crowley in the purchase of Piper-Aden was the *Mono*, the biggest scow ever operated on San Francisco Bay. Other scows in the fleet were the *Annie Aden*, *Carrier Dove*, *Georgia Woods*, and *Pinole*.

By now, Tom Crowley was recognized as an expert in the most efficient ways to handle and transport marine cargoes. W.R. Grace and Company, with whom the Crowley company had already done a lot of business, asked Tom to travel to South America, observe the methods used to lighter nitrate and guano from the numerous island and shoreside sites in Chile and Peru to ships anchored offshore, and recommend a faster system. Tom accepted the assignment and on his return to the U.S. West Coast, he ordered construction of 28-ft., gasoline-powered boats with 12- to 14-h.p. engines. Once delivered, these vessels succeeded in hastening the fertilizer-lighterage operations, and led to many subsequent requests from W.R. Grace concerning additions to the Grace fleet.

Several years of working day-in and day-out across the Vallejo Street Wharf from the Red Stack tugs had given Tom Crowley ample opportunity to observe tug operations. He had also ridden the tugs, eaten meals with crews in the tug galleys, and learned the names and uses of tug fixtures and equipment. Many times he and the Red

Stacks had jointly sought out ship captains, with Tom offering transportation of personnel and stores, and the Red Stacks negotiating to provide tug services in the port of San Francisco. There was little surprise, then, in Tom's decision to acquire tugs of his own and enter into competition with Shipowners and Merchants Tugboat Company, operators of the Red Stack tugs.

The first tug owned by Tom Crowley was the steam-powered *H.H. Buhne*, purchased from the Buhne Company in Eureka, California. Eventually a second steam tug, the *Priscilla*, was also acquired.

The impetus behind the purchase of the *H.H. Buhne* was a contract Tom had won to tow barges loaded with rock for the building of a breakwater for the Key Route Pier, near the site of the present-day Bay Bridge. The tug was eventually renamed *Sea Wolf*.

Crowley Launch and Tugboat Company now had a diverse fleet of gasoline-powered launches, barges, scow schooners, and gasoline- and steam-powered tugboats. With this commercial armada at his command, Tom Crowley adopted a proud motto for his company: "Anything, Anywhere, Anytime, On Water."

"The first large steam tug that the Crowley Launch and Tugboat Company had was the H.H. Buhne, *which was built in 1863 by one of the early settlers of Eureka in Humboldt Bay. She was used up there for years towing sailing ships. My father bought her in about 1908. The second steam tug was the* Priscilla. *These were wooden tugs with Scotch boilers and a compound reciprocating, condensing steam engine."*

The launch Crowley No. 2 delivers drums of oil for a dredger working to reclaim the marshlands of the Delta district, ca. 1912.

Crowley Maritime collection

By 1910, the Oakland estuary was lined with laid-up ships, including whaling vessels and wooden salmon packets.

San Francisco Maritime Museum

Maintaining the fleet

By the end of Tom Crowley's second decade of operations on San Francisco Bay, his fleet had grown to such an extent that maintenance and repair could more prudently be managed within the company rather than by contracting the work to outside shipyards. Accordingly, Crowley Launch and Tugboat obtained a long-term lease on property belonging to the City of Oakland, and built a marine railway, a dock, and a woodworking mill for the maintenance of wooden hulls.

The new facility was named Crowley Shipyard and was intended to provide services exclusively on company vessels, a situation which soon changed as the country became embroiled in World War I.

"In 1912, the Crowley Launch and Tugboat Company leased a piece of property over in Brooklyn Basin in Oakland and built a small shipyard for dry-docking, cleaning, painting, and repairing the tugs and barges of Crowley Launch and Tugboat Company."

The tugboat Crowley No. 16 towed barges, scows, and schooners on San Francisco Bay.

Crowley Maritime collection

HISTORICAL PERSPECTIVE

1903	The Wright brothers flew the first powered, controlled airplane at Kitty Hawk, North Carolina.
1904	Construction began on the 51-mile-long canal across the isthmus of Panama, connecting the Atlantic and Pacific oceans.
1906	The San Francisco earthquake and fire lasted three days and devastated the young city.
1909	American explorers Robert E. Peary and Matthew Henson reached the North Pole. William Howard Taft was inaugurated as President of the U.S.
1911-12	The motion picture business took over the quiet country town of Hollywood, California.

Virginia Escher collection

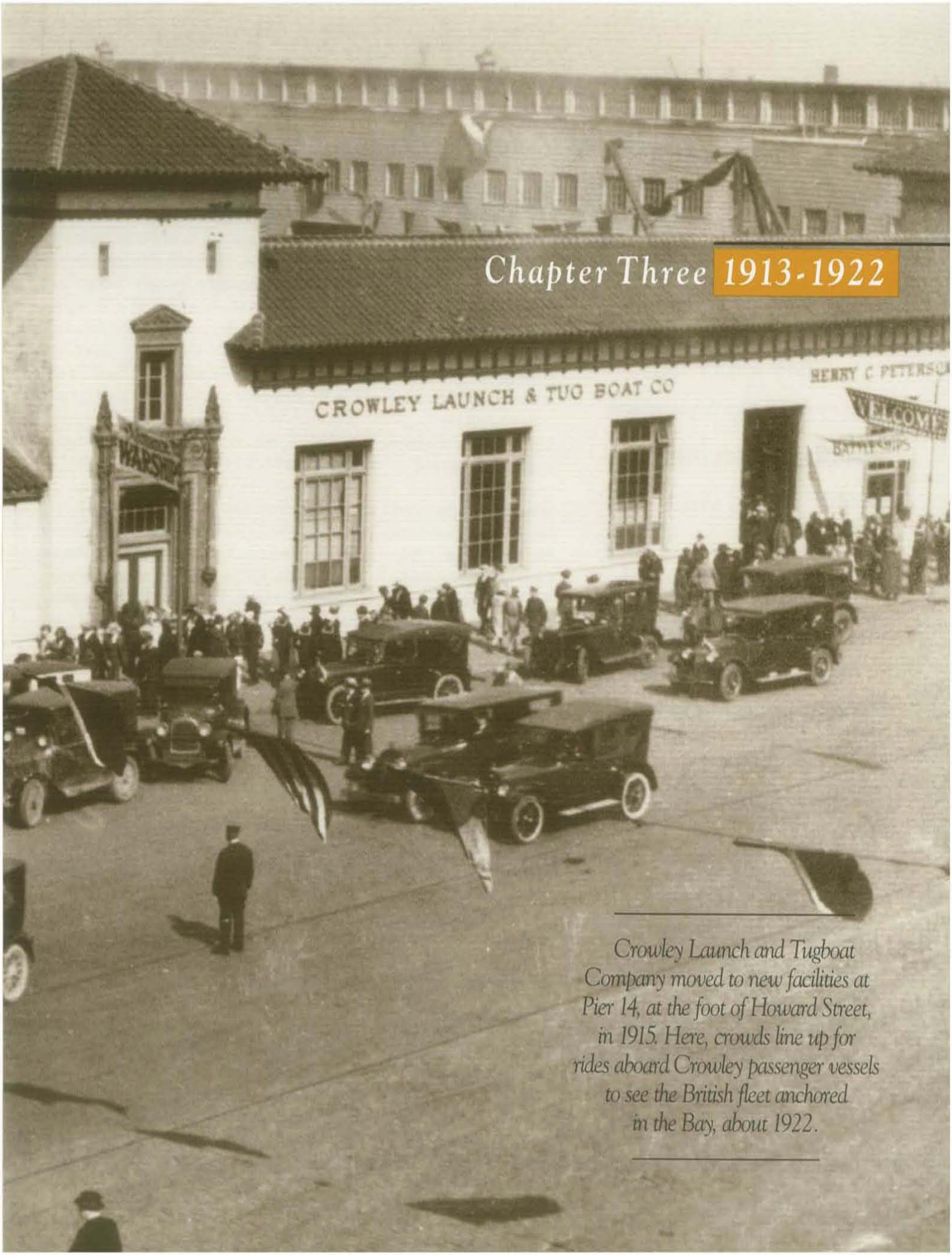
Thomas Crowley, about age thirty.

Though his interest in boats was in earning a living, not sport, Tom Crowley sailed a Whitehall in the annual Fourth of July Whitehall races, winning the event for the first time in 1904.

As the 1906 fires spread toward Thomas Crowley's own home, he transported his family to Oakland and returned alone to save what furniture he could. As he was loading the furniture onto a launch, a fifteen-year-old boy named William McGillivray happened by the waterfront. Tom Crowley asked the boy for a hand. Within a few days, McGillivray had a regular job with the company, which continued until his retirement at the end of 1970.

Thomas Crowley married Louise Gade in 1910. Four children were born to the couple: three daughters (Virginia Escher, Constance Bowles, and Jane Koven), and one son, Thomas Bannon Crowley.

Chapter Three 1913-1922



Crowley Launch and Tugboat Company moved to new facilities at Pier 14, at the foot of Howard Street, in 1915. Here, crowds line up for rides aboard Crowley passenger vessels to see the British fleet anchored in the Bay, about 1922.

World Exposition brings new opportunities

In 1913, San Francisco city officials began making plans for the Panama Pacific International Exposition, a World's Fair to celebrate the construction and opening of the Panama Canal. The proposed site was a 635-acre area called Harbor View that would require extensive filling and development. The resulting fairgrounds would become known as the Marina.

"My father was always in the passenger transportation business, hauling people out to ships in the stream. In 1915 he built a couple of double-deck passenger boats, which he called the double-deckers, for taking bay excursionists out from the Panama Pacific International Exposition down on the Marina. He operated those passenger boats through the '30s."

First a bulkhead was built to define the boundaries of the site and protect the construction, then dredges were brought in to pump and fill. Throughout 1914, Crowley Launch and Tugboat Company dedicated equipment and personnel to the project, transporting sand, gravel, lumber, and other building materials, equipment, and supplies.The red rock used to build the fairground roads was transported by Crowley barges across the Bay from Fort Baker and nearby sites.

To help complete this project as well as others in the Bay, Crowley Launch and Tugboat acquired several small derrick barges, outfitted with A-frames and booms for lifting cargo onto and off lighters. During the First World War, the company built and added to its fleet a large heavy-lift derrick barge, the *Crowley No. 3*, which could perform 100-ton lifts.

By the time the Exposition opened in 1915, Tom Crowley had acquired a concession that gave him an exclusive right to transport passengers between the yacht harbor and the U.S. battleship *Oregon*, which was anchored out in the Bay and was available for tours at designated hours. The battleship had taken part in the defeat of the Spanish fleet in Cuba during the Spanish-American War. In addition, tours of the Bay were available for tourists visiting San Francisco for the Exposition. Two double-deck boats, *Crowley No. 17* and *Crowley No. 18*, were built specifically for the Exposition. Each of the 38-ton passenger launches carried 250 passengers. They were later converted in 1942 and 1943 to diesel-powered tugboats with 400-h.p. Enterprise engines.

In all, approximately 19 million people attended the Exposition, which cost $50 million to mount and featured 80,000 exhibitors.

When the Panama Pacific International Exposition closed, Tom Crowley began using his double-deck excursion boats to carry passengers to Paradise Park, formerly known as El Campo Amusement Park and as California City, at Paradise Cove in Marin County. Tom Crowley purchased the 128-acre park, and for many years Crowley vessels were the only means of access except for those people who owned their own yachts. The park offered a dance pavilion, restaurant, and bar operated under the direction of Ernest Tanner. The Paradise Cove enterprise continued successfully until automobiles became the common means of transportation, supported by a network of roadways, and the water link was no longer a viable operation for the company.

In 1917, Tom Crowley took his passenger-services expertise to Nevada, where the government was about to open a reservation to mining prospectors. The short-term venture involved relocating a launch from San Francisco by railcar for use in transporting prospectors back and forth across the eight-mile Walker Lake. When the rush of prospecting activity settled down, Tom Crowley sold the launch at Walker Lake and turned all of his attention back to the Coast, where maritime activity was at record levels due to wartime shipping needs.

Preceding page: Crowley Maritime collection

Crowley Maritime collection

The Crowley No. 18 *was one of two double-deck, 250-passenger excursion vessels built for service during the Panama Pacific International Exposition in 1915.* (Photograph taken during the Golden Gate International Exposition in 1939.)

Shown loaded with passengers, the tug Crowley No. 23 *was typically used to tow scow schooners and barges on the Bay.*

Crowley Maritime collection

World War I

In the span of four years, from 1914 to 1918, the First World War exploded from a single shot in Austria-Hungary to an embroilment involving twenty-eight nations and encompassing nine-tenths of the entire world population. From the beginning, the war sharply increased ship traffic and the need for vessels to transport goods. Vessel owners sought more and more hulls to meet the demand, searching out laid-up or abandoned vessels and even looking underwater for hulls that might be returned to service.

The laid-up coal barge *City of Panama*, which had formerly been a steamer owned by Pacific Mail, had sunk in the Oakland estuary some years before the war. When ships were needed to carry coal oil to Australia, Tom Crowley raised the vessel, repaired her, and made a five-masted schooner of her. Renamed *Crowley*, the vessel completed numerous voyages to Australia, carrying some 54,000 cases of coal oil per voyage southbound. Each wooden case contained two five-gallon cans of kerosene or gasoline. On the northbound trip, the vessel transported coal or other commodities to South America before returning to San Francisco. Some four years after her resurrection, the *Crowley* attracted the attention of a maritime operation in Argentina; negotiations were entered into and the schooner was sold.

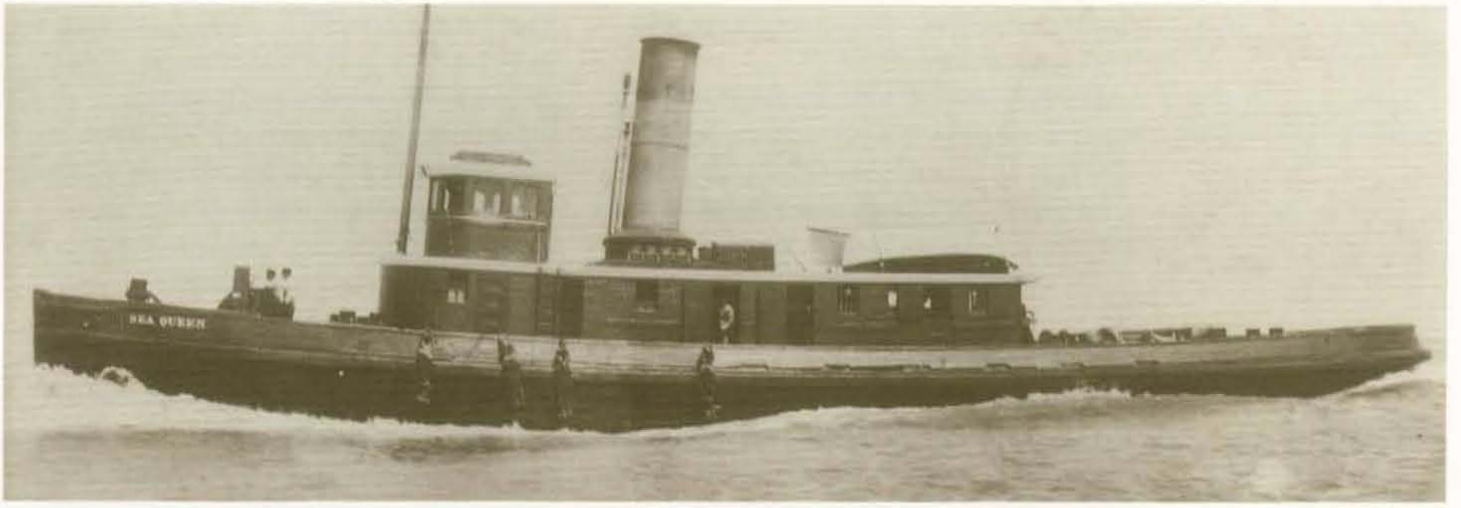
Thomas Crowley, left, and Andrew Mahoney.
Virginia Escher collection

The second ship acquired specifically for Australia-bound cargoes was the *Olympic*, which was the only rig of its kind ever made. A four-masted barkentine built on the Atlantic Coast, the vessel had two masts forward and two masts aft. Tom Crowley purchased the ship and used her for many years not only to and from Australia, but also to carry lumber on the West Coast. The *Olympic* was eventually sold for use as a fishing vessel off Southern California.

Once more in Oakland, Tom Crowley found a beached whaler with a hold full of water. The *John N. Winthrop* was in water over her decks, but the hull was in good shape. The vessel was raised and made into a three-masted schooner for transporting freight to Australia and the South Sea Islands.

In the Bay Area, Crowley Launch and Tugboat kept pace with the increase in traffic caused by war-related cargoes, supplying coal, groceries, and other goods to battleships and cargo vessels coming in to port, while at the same time vying for towing and ship assist work.

At this point, Tom Crowley entered into a partnership with a fellow vessel owner, Andrew Mahoney, to operate ships between the U.S. West Coast and Australia and South America, as well as in U.S. coastwise movements. Both continued separate businesses

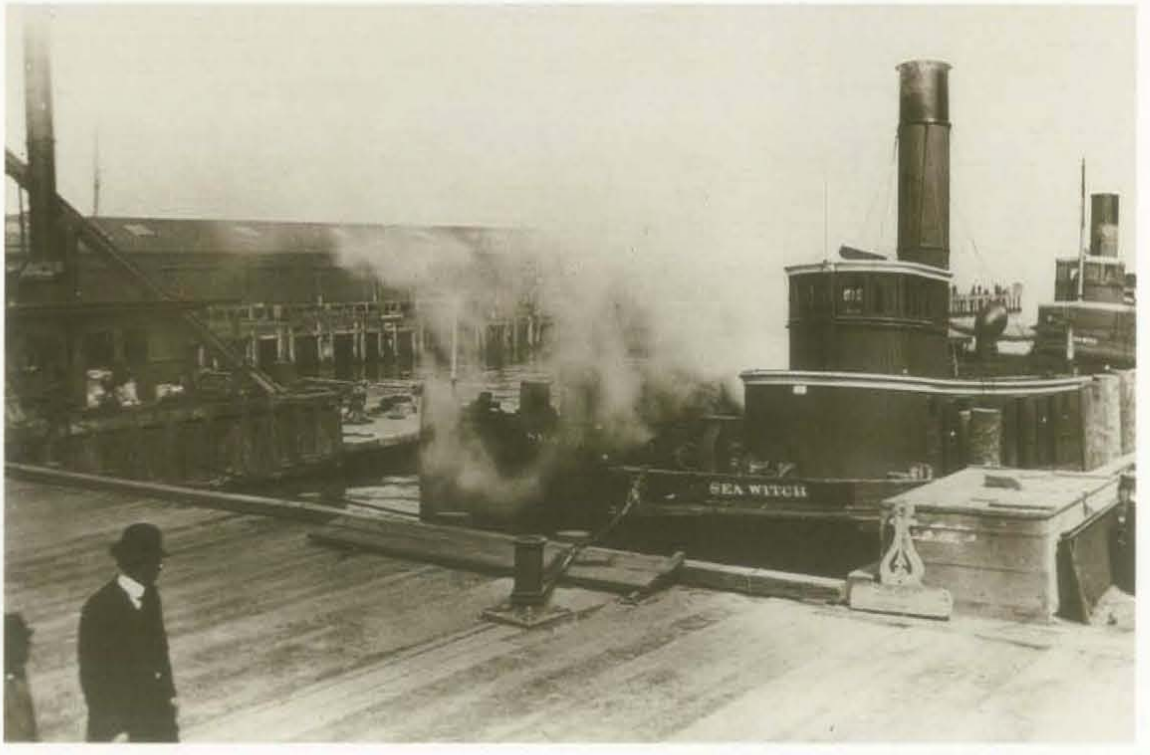


Virginia Escher collection

Sea Queen *was an early Shipowners and Merchants Tugboat Company tug.*

Crowley Maritime collection

Barge Crowley No. 56 *loaded with Scotch boilers bearing the Crowley slogan: Anything, Anytime, Anywhere, On Water.*



San Francisco Maritime Museum

The first of the Red Stack tugs, the steam-powered Sea Witch *was built for Shipowners and Merchants Tugboat Company in 1883. Beside her is the steam tug* Sea Fox.

with fleets of their own in addition to the joint steamer operations.

The first vessels bought by the partnership were two steam schooners originally built in Oakland and operated in France. The *Sophie Christenson* and *Hanify* were purchased from their French owners and delivered to New York, where Tom Crowley received them. For the first leg of the voyage home, he chartered the vessels to carry cargo from New York to a southern U.S. port. On arriving on the West Coast, the vessels were renamed *Jane Nettleton* and *Thomas Crowley* for use in coastwise operations.

The partnership between Tom Crowley and Andrew Mahoney continued for several years. Among the vessels purchased and operated jointly by the partners were three steel ships bought from W.R. Grace and Company in New Orleans. The *Columbia*, *Santa Inez*, and *Santa Rita* were placed in service transporting lumber on the West Coast.

A competitor for steam schooner business on the West Coast was North Pacific Steamship Company, owned by Charles P. Doe. The company transported coal and passengers, calling at San Francisco, Eureka, Portland, and Seattle. Crowley and Mahoney purchased the company and continued to operate its passenger vessels, *F.A. Kilburne* and *Breakwater*, on the same routes. The larger vessel, *George W. Elder*, was chartered by the new owners to W.R. Grace and Company for operations between New Orleans and Panama.

The Relief *and* Alert, *two Black Stack tugs, assist the Matson ship* Sonoma, *ca. 1902.*
San Francisco Maritime Museum

Acquiring the Red Stack tugs

From his earliest days as a Whitehall boatman, Tom Crowley had worked across the Vallejo Street Wharf from the Red Stack tugs. He had visited aboard them, learned all there was to know about operating them, and even entered into competition with them with tugs of his own. In his third decade of business, he became the General Manager of the Red Stacks.

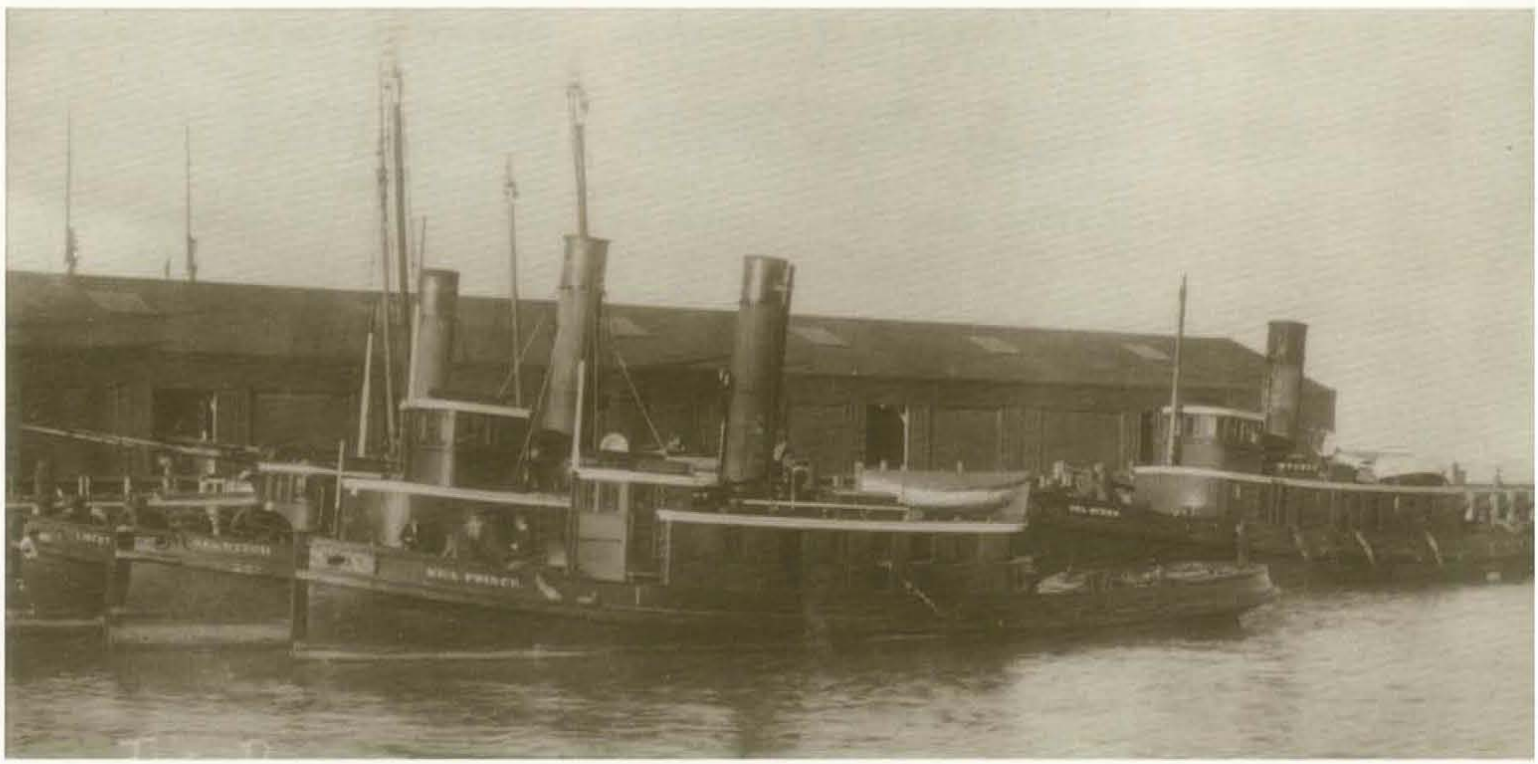
Named for the color of their smokestacks, the Red Stack tugs were operated by Shipowners and Merchants Tugboat Company, a corporation established in 1882 by a group of vessel owners and others dependent on tug service in San Francisco Bay. The group was led by William Babcock, who was named President of the new corporation.

The syndicate formed the company for their economic protection, with a goal of providing fairer ship assist rates than were being charged by Captain Millen Griffith, who maintained a monopoly on tugboat operations in the Bay by manipulating rates to discourage competition. It wasn't until 1890 that the U.S. Congress voted in the Sherman Antitrust Act, making monopolistic business practices illegal.

In July 1882, the new company sent out specifications to several boatbuilders for a wooden steam tug, and in August of the same year, a contract was awarded to Hinckley, Spires and Hayes for the building of the first Red Stack tug, *Sea Witch*. At about the same time, construction of the second tug, *Sea King*, was begun.

Soon after Shipowners and Merchants began operations in 1883, tug rates lowered to a more reasonable level, and Captain Griffith sold out and left the business. However, new competition had already developed for the Red Stacks: the Black Stacks, owned by John D. Spreckels and Brothers, had taken up headquarters on Pacific Street, a couple of blocks away, and begun providing services on San Francisco Bay.

Each of the two fleets, the Red Stacks and the Black Stacks, was composed of eight to ten tugboats, and the two companies vied constantly for business, running out to the bar to meet ships and trying to win the tow-



Crowley Maritime collection

Four Red Stack tugs: Liberty, Sea Prince, Sea Witch, *and* Sea Queen, *ca. 1912.*

ing and harbor assist work for any ship calling at the port.

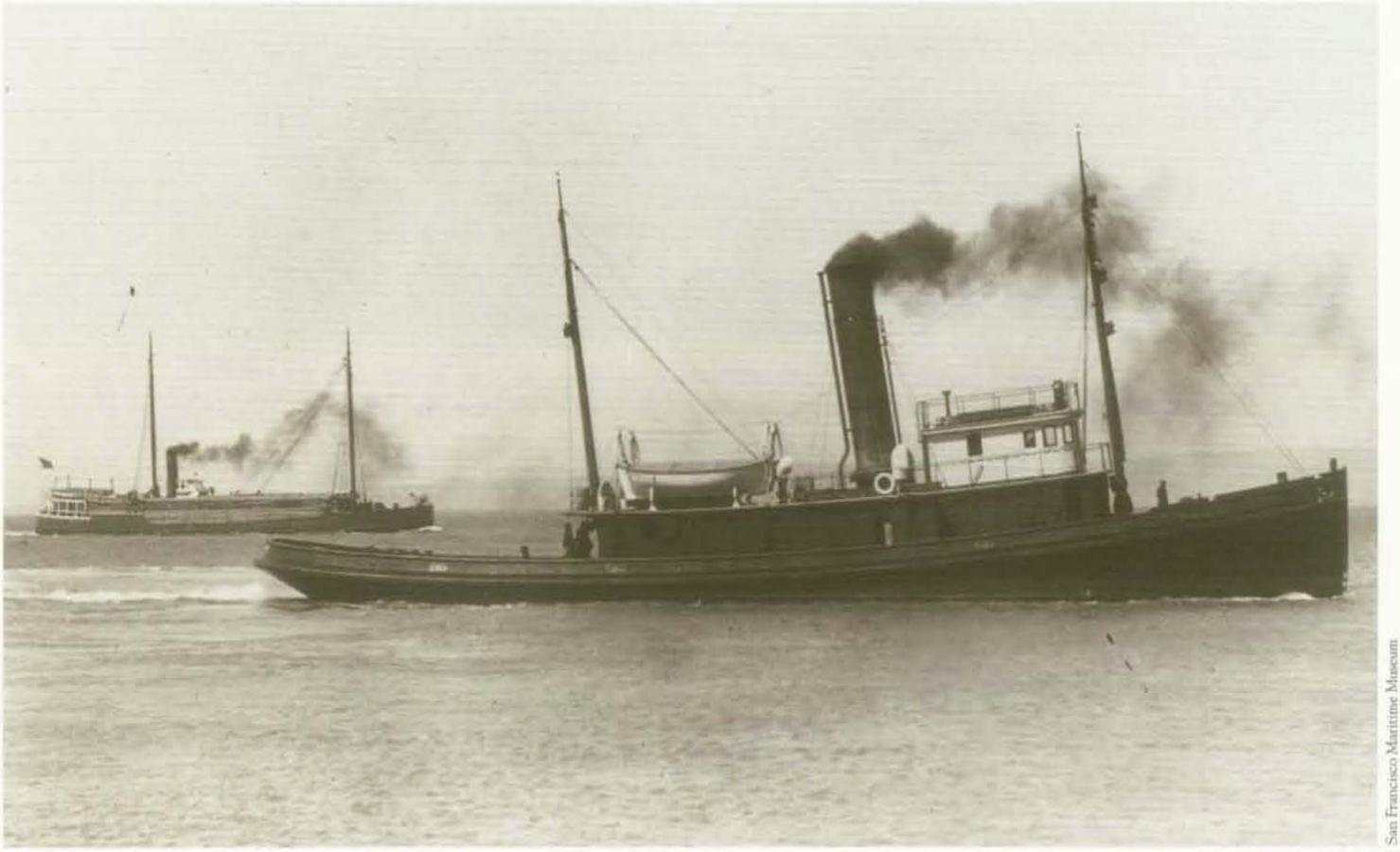
Competition continued for several years, keeping the rates at low levels, until Spreckels had had enough. In 1907, he agreed to sell the Black Stack tugs to Shipowners and Merchants Tugboat Company in exchange for stock, and the Red Stack fleet doubled in size.

What brought the Red Stacks under Crowley ownership had less to do with the politics and challenges of the tugboat business than it did with the new federal income tax instituted as a result of the Sixteenth Amendment to the U.S. Constitution, approved by Congress in 1913. The only two ways to soften the blow of the income tax levied on boat-owning corporations were ongoing capital investment and depreciation of the fleet. One problem for Shipowners and Merchants Tugboat Company was that over the previous thirty years, it had depreciated its vessels to zero. Another was that its President, William Babcock, had passed away and there was pressure to settle his estate. Company officials determined that the only way to proceed was to sell.

Many shipowners, businessmen, bankers, and other investors were interested when word was out that the Red Stack business was to be sold. The price tag was one million dollars, which would have to be shared among several buyers. Tom Crowley stepped forward with a quarter of the total amount. With the backing of two other major investors, each of whom invested $70,000, Tom Crowley took control of the Red Stack tugs.

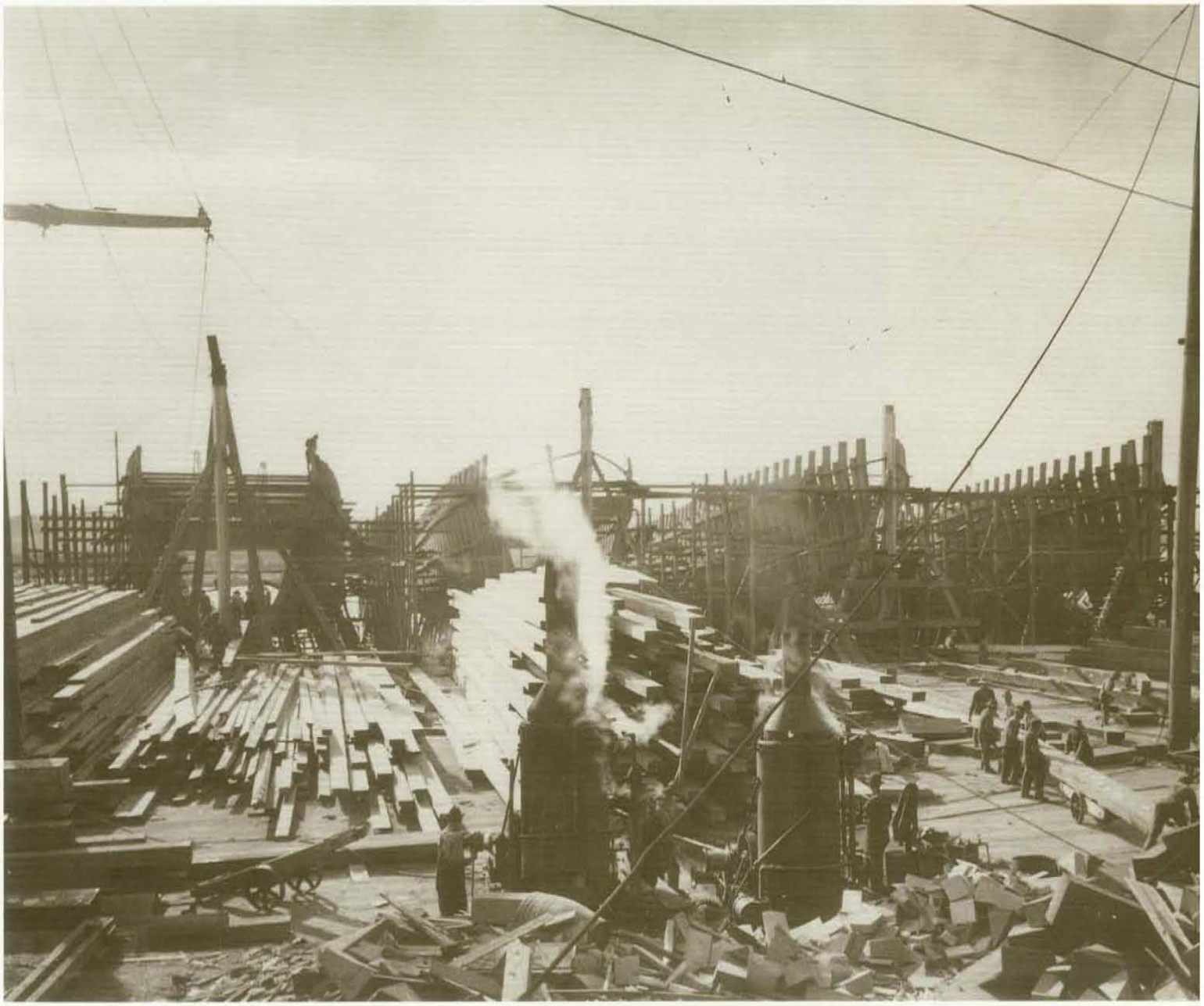
Captain William J. Gray, who had been in charge of the Red Stacks for many years, retired and Tom Crowley personally took up the reins of the tug business. His title was Vice President and General Manager; President of the reorganized Shipowners and Merchants Tugboat Company was Ed Ford of W.R. Grace and Company. From among the Red Stack tug skippers William J. Darragh was selected to come ashore as dispatcher, and he continued as a Crowley employee for more than sixty years.

The tug Dauntless *was first owned by Spreckels and Brothers, then acquired by Shipowners and Merchants Tugboat Company.*



San Francisco Maritime Museum

Four large wooden tugs



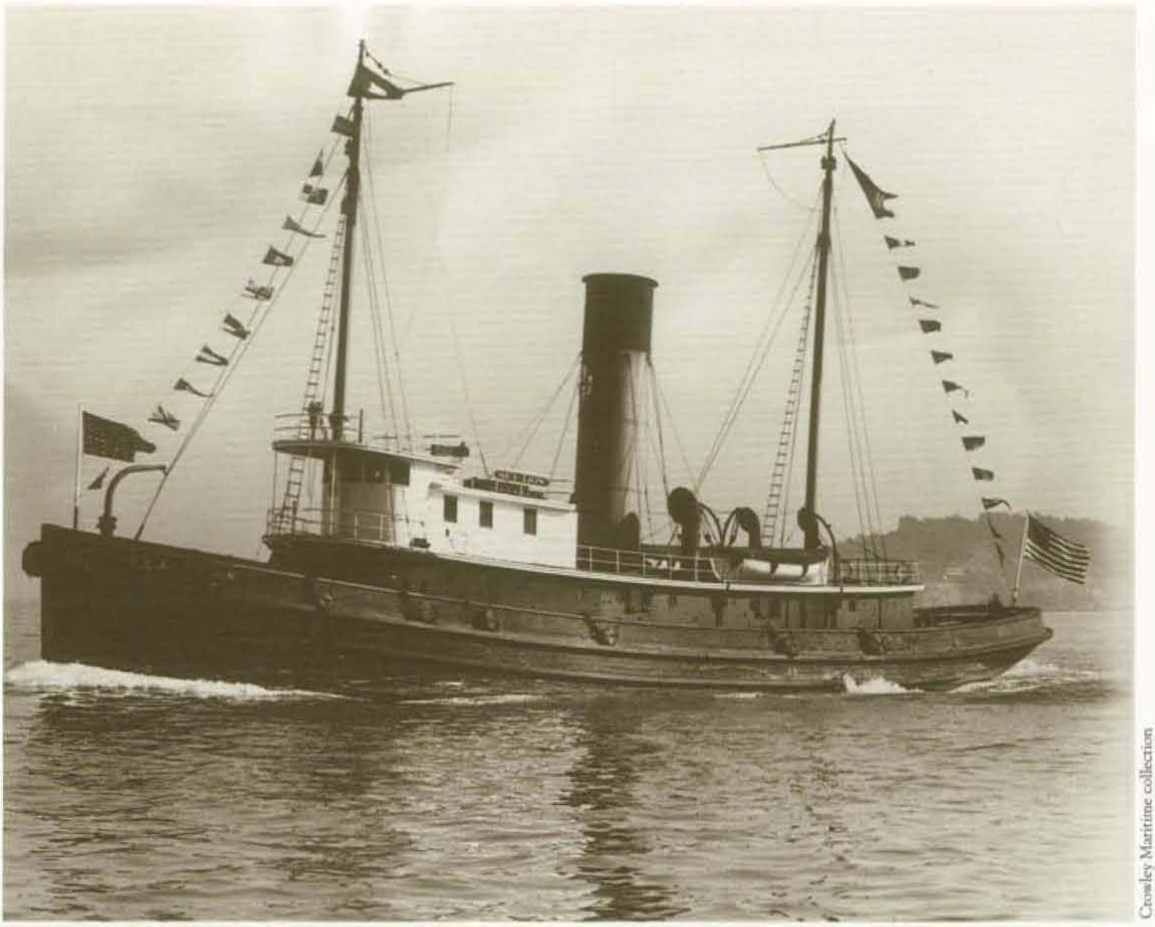
San Francisco Maritime National Historical Park

At the end of World War I, four large wooden tugs were under construction at the Lester Stone Shipyard in Oakland, having been ordered by the U.S. Shipping Board. Each of the oceangoing 150-ft. tugs was to have a 1,000-h.p. steam engine, but completion of construction was uncertain since the war was over. By this time, steel tugs were available and Tom Crowley would have preferred steel hulls, but the new Shipowners and Merchants Tugboat Company decided to buy the wooden tugs and complete their construction.

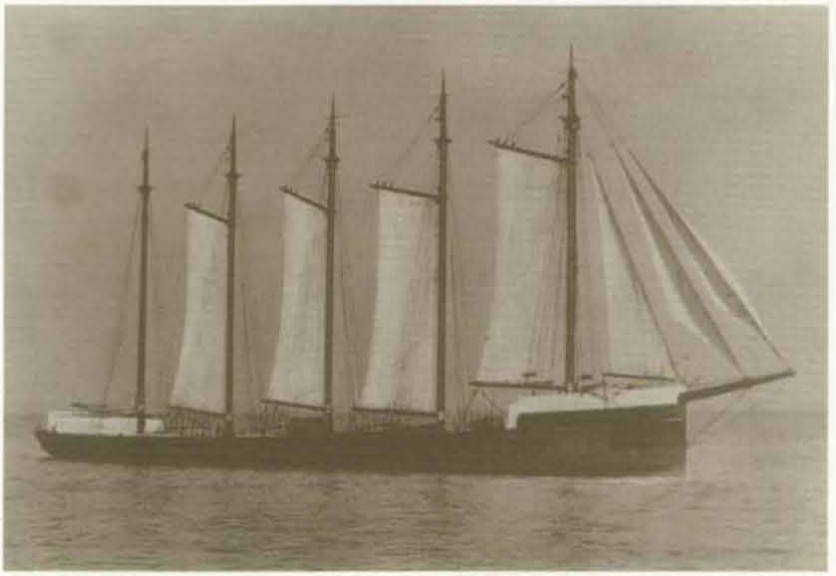
Named *Sea Monarch*, *Sea Lion*, *Sea Ranger*, and *Sea Scout*, the four tugs performed excellent work for the company for some years but apparently were not destined for ordinary merchant marine careers. One was sunk in a collision on Puget Sound and the other three operated for the government through World War II.

Four large wooden tugs under construction at the Stone Shipyard at the end of World War I were purchased by Shipowners and Merchants Tugboat Company. The tugs were the Sea Scout, Sea Ranger, Sea Monarch, *and* Sea Lion.

The Sea Lion *was one of four steam tugs originally designed by the U. S. Shipping Board, then completed to Tom Crowley's specifications.*



Crowley Maritime collection



Crowley Maritime collection

Crowley Maritime collection

Left, the five-masted schooner Crowley *was built from a raised coal barge, the ex-*City of Panama, *and used to carry cargo to Australia during World War I. Right, the one-of-a-kind barkentine* Olympic *was used in ocean and coastal transports.* (These images were processed from original daguerreotypes.)

HISTORICAL PERSPECTIVE

1913	The Sixteenth Amendment to the Constitution, providing for a federal income tax, was ratified.
1914	The Panama Canal was completed. World War I began with the assassination of Austrian Archduke Francis Ferdinand in Sarajevo.
1916	The U.S. bought the Virgin Islands from Denmark for $25 million.
1917-18	The United States fought in the World War on the side of the Allies (Britain, France, Russia, Italy, Japan, et al) against the Central Powers (Austria-Hungary, Germany, Bulgaria, and Turkey).
1921	The U.S. Congress voted formally to end the War, having rejected the Versailles Treaty in 1919.

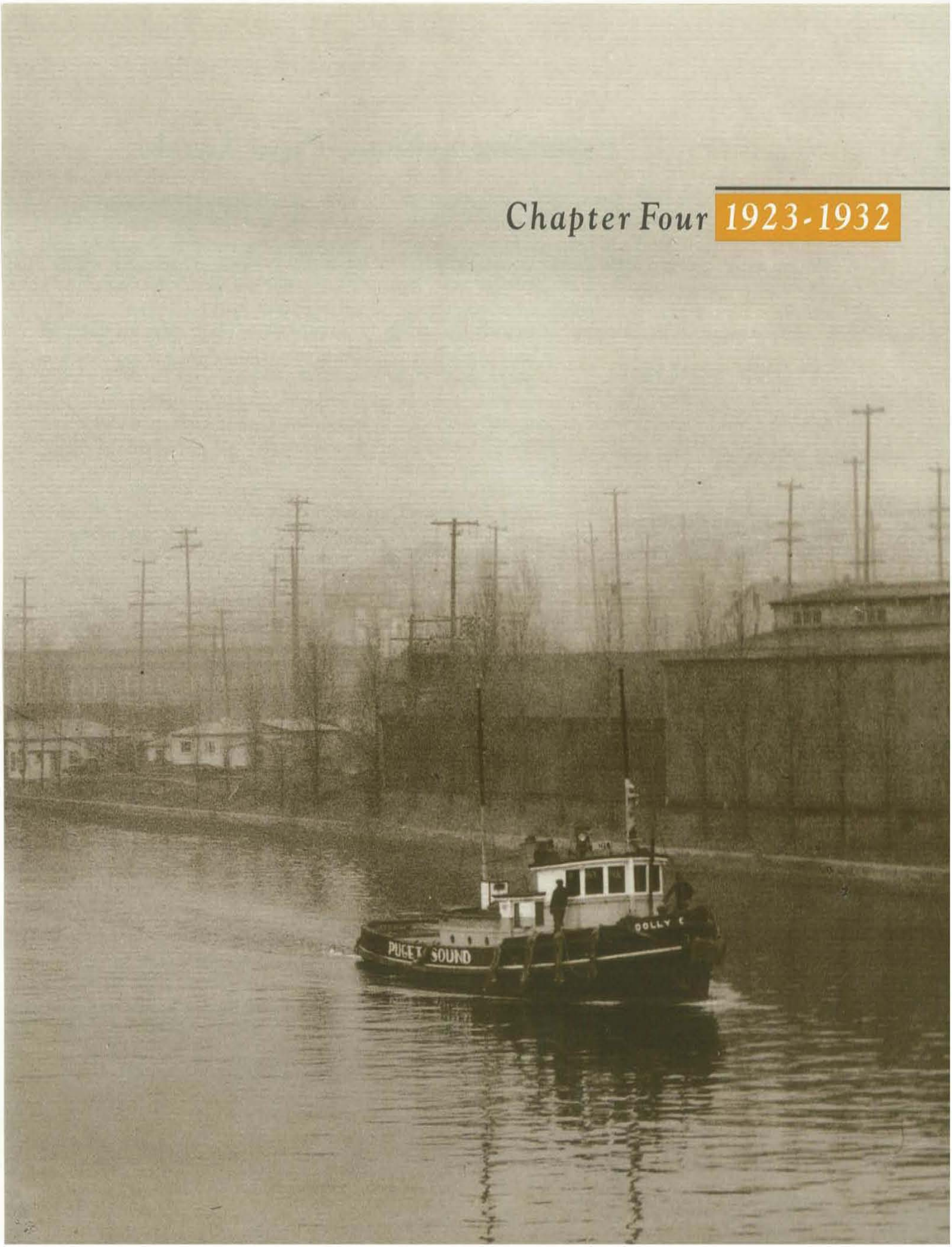
Constance Bowles collection

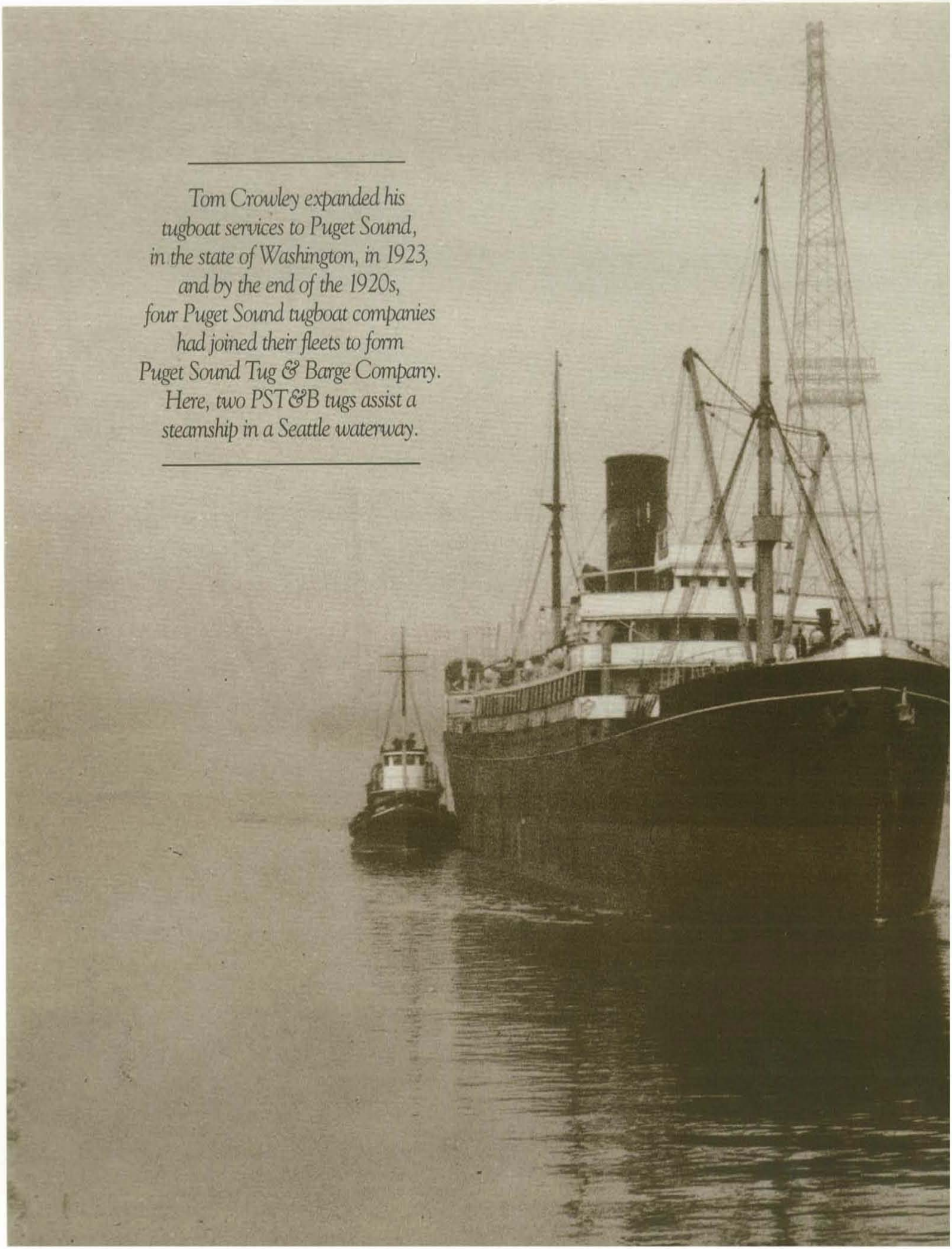
Thomas B. Crowley Sr. with his father, Thomas Crowley, in 1922.

Thomas Bannon Crowley was born on September 3, 1914, in San Francisco. As a boy, he went with his father to the docks on weekends when battleships were in the harbor to help collect quarters at the gangways from passengers going aboard Crowley vessels for tours of the Bay.

Captains William McGillivray and Ernest Mohr were skippers of the passenger vessels Crowley No. 17 *and* Crowley No. 18 *during the Panama Pacific International Exposition. Good friends yet rivals, too, Mohr and McGillivray were natural-born boathandlers and star operators of Crowley vessels in San Francisco in the early 1900s.*

Chapter Four 1923-1932





Tom Crowley expanded his tugboat services to Puget Sound, in the state of Washington, in 1923, and by the end of the 1920s, four Puget Sound tugboat companies had joined their fleets to form Puget Sound Tug & Barge Company. Here, two PST&B tugs assist a steamship in a Seattle waterway.

Expanding north into Puget Sound...

In 1923, Tom Crowley purchased an interest in Drummond Lighterage Company, an established Seattle business founded at the turn of the century to perform lighter services on Puget Sound. Lightering is required wherever shallow or congested harbors prevent deep-draft or large vessels from coming to dock. These oceangoing vessels are anchored offshore and lighter craft, usually barges or scows, come alongside to take cargo from the larger vessel for towing to shore.

"My father watched very closely all the details of the business...In my opinion, he was an excellent businessman. He wanted to, one, give a service to the customer; two, take in more than he paid out; and three, thereby make jobs for people and perform a service for the community."

Drummond owned a fleet of lighters and had built a business chartering them for movement of various materials around Puget Sound. Since Drummond had no tugs of its own, it worked closely with the Cary-Davis Tug and Barge Company, founded in 1913 by George Cary and Lindley Davis.

Tom Crowley also acquired stock in Cary-Davis, but his expansion into Puget Sound was not limited to stock transactions; he also sent the 150-ft. wooden tug *Sea Monarch* from San Francisco to Puget Sound to find what work she could. The steam tug had previously been used primarily for coastwise towing of log rafts from Astoria, Oregon, to a sawmill in San Diego, California, on behalf of Benson Lumber Company. The *Sea Monarch* did well in competition with other Northwest tugs, but in 1924 she was struck by a French cargo ship outside Port Angeles, Washington, in the Strait of Juan de Fuca, and sank.

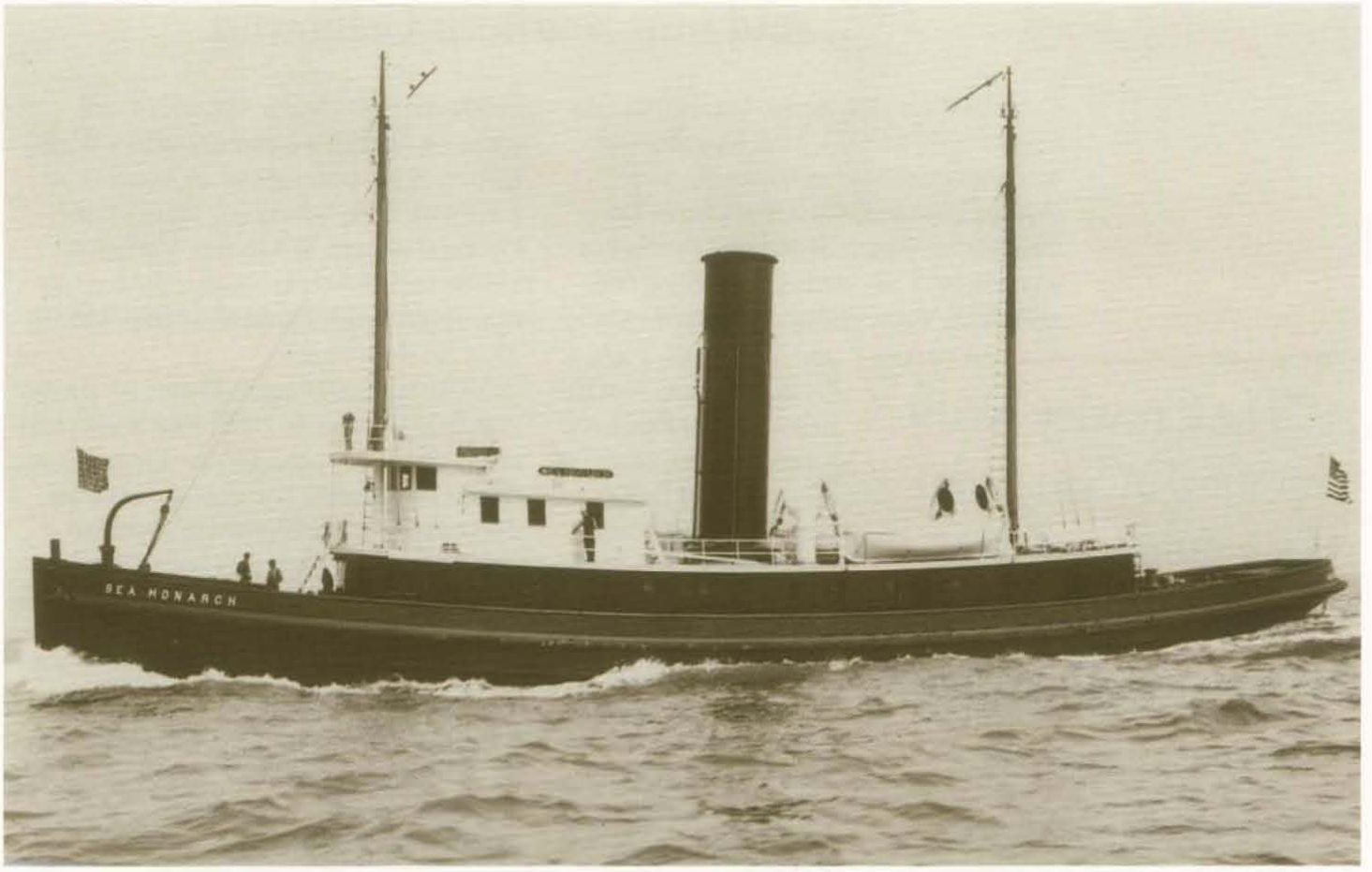
Over the next few years, Tom Crowley bought more shares and built a substantial interest in Drummond Lighterage, which was managed throughout the 1920s, on into the 1940s, by Harrison Hart.

In 1929, Drummond Lighterage and Cary-Davis, along with two other Puget Sound maritime companies, The Pacific Towboat Company in Everett and Gilkey Brothers in Anacortes, joined their fleets to form Puget Sound Tug & Barge Company (PST&B). The new company went to work with twenty-seven tugs and forty-eight barges. All four companies held stock in PST&B.

Even as the new company was getting its feet wet, a momentum was under way on New York's Wall Street that would have a resounding impact not only in America, but throughout the world. Prices on the New York Stock Exchange had begun a steady decline, and on October 24, known thereafter as "Black Thursday," surging panic brought nearly 13 million shares flooding the market. Five days later, more than 16 million shares were up for sale and rapidly becoming worthless. With the crash of the stock market, U.S. securities lost $26 billion in value, and the Great Depression began, with vast consequences on economies worldwide.

For Puget Sound Tug & Barge Company, the Depression was a time of attrition, as key quantities of stocks began to change hands. Additional shares of Cary-Davis were sold to Drummond Lighterage; Gilkey Brothers ceased to be one of the PST&B participating companies; and The Pacific Towboat Company sold its interest in PST&B to a competitor. Before the close of the 1930s, Drummond had acquired control of Cary-Davis stock, and with it majority ownership of PST&B, and Tom Crowley owned more than 50 percent of Drummond. Eventually, PST&B became a wholly owned subsidiary of Crowley Maritime Corporation.

Preceding page: Ray Krantz/Commodore Marine Prints



Crowley Maritime collection

Shipowners and Merchants Tugboat Company's steam tug Sea Monarch *was sent from San Francisco to work in Puget Sound waters in the early 1920s.*

Crowley Maritime collection

PST&B's office in Everett, Washington, in the early 1930s.

Joe D. Williamson collection, P.S.M.H.S.

Joe D. Williamson collection, Puget Sound Maritime Historical Society (P.S.M.H.S.)

Left, the PST&B tug Goliah *towing log rafts on Puget Sound.*

Right, the 45-h.p. tug Christie R. *was used to tow barges on Puget Sound.*

...and into Southern California

At the same time he was expanding into Puget Sound in 1923, Tom Crowley was also setting up tugboat services in San Pedro, California, where the City of Los Angeles had begun developing the harbor and wanted a tug service for docking and undocking ships. As head of Shipowners and Merchants Tugboat Company, Tom sent the steam tug *Sea Prince* and several smaller steam tugs south, and asked Captain Ernest Mohr to relocate to San Pedro to organize a new operation called San Pedro Tugboat Company. Within a short time, Captain Mohr was forced by ill health to return to San Francisco, and was replaced in San Pedro by Captain William McGillivray.

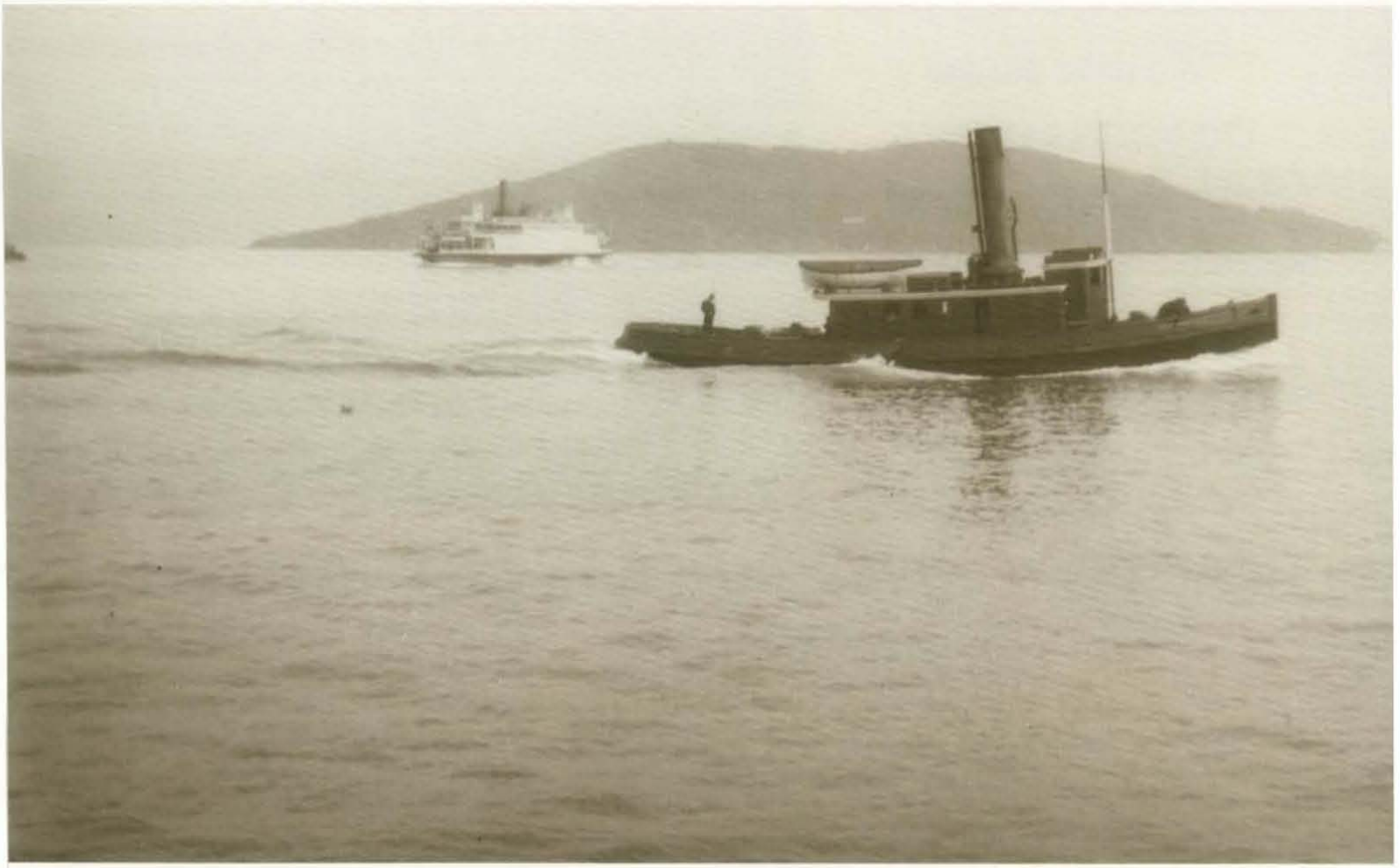
"The Crowley No. 9 operated in San Pedro for a number of years. The Fairbanks-Morse engine was a two-cycle engine and had a tremendous exhaust impact. All the dishes in the restaurants uptown would rattle when the Crowley No. 9 went by."

Keen competition for the new company was provided from the outset by Wilmington Transportation Company, which was owned by the Wrigley gum interests. To help make the San Pedro service more cost-effective, some of Crowley Launch and Tugboat's smaller diesel tugs were sent down in 1925 to be operated by San Pedro Tugboat.

Among the tugs in San Pedro was the *Crowley No. 9*, formerly a steam fishing tug called *Paladini Brothers* built in 1915. Crowley Launch and Tugboat Company purchased the vessel in the 1920s and converted her to a diesel tug with a Werkspoor engine, patented by a German company with a manufacturing plant on the Oakland estuary. When the Werkspoor engine required replacement, the tug was repowered with a Fairbanks-Morse Model 35, a 350-h.p. engine.

Along with opening markets for Crowley vessels in the Pacific Northwest and Southern California, Tom Crowley spent a great deal of time during the 1920s overseeing the operations of Shipowners and Merchants Tugboat Company and of the steam schooners, which he conducted from offices at 244 California Street in San Francisco. The management of Crowley Launch and Tugboat, based at Pier 14, was largely entrusted to employees. With the crash of the stock market in 1929 and the resulting plunge in the nation's economy, Tom recognized the need for tighter control of his businesses and returned to the waterfront to resume command of Crowley Launch and Tugboat Company, as well.

On the advice of admiralty attorneys, Tom Crowley formed a new corporation in 1929 to limit liability in the event of a catastrophic maritime accident. The advice stemmed from a maritime accident a few years earlier in which a ship, while being assisted by the 150-ft. wooden steam tug *Sea Lion*, collided with the bridge between Oakland and Alameda in a confusion of communication with the bridge tender. The new company, Shipowners and Merchants Towboat Company, Ltd., was formed to bareboat-charter and operate tugs belonging to Shipowners and Merchants Tugboat Company.



The steam tug Sea Prince *was sent to Los Angeles Harbor in 1923 when San Pedro Tugboat Company was inaugurated.*

San Francisco Maritime Museum

The diesel-powered tug Crowley No. 9 *at work for San Pedro Tugboat Company.*

Virginia Escher collection

"We were always engaged in salvage. Anybody in the tugboat business engages in salvage automatically because when a ship goes ashore, you try to pull her off."

P.40 and P.42 were house barges operated by Harbor Tug & Barge Company in San Francisco.
Swadley Photographers

Harbor Tug & Barge quietly joins the fold

The Depression hit hard a great many businesses, including Harbor Tug & Barge Company (HT&B), formed in 1926 as a consolidation of Oakland Launch and Tugboat Company, which was owned by American Dredging Company, and the Henry C. Peterson Company. The latter was, coincidentally, a next-door neighbor to Crowley Launch and Tugboat as well as a competitor for tug and passenger operations. The Peterson company was based at Pier 16, which became the home also of Harbor Tug & Barge Company.

As a new company, Harbor Tug & Barge had attempted to expand rapidly, so it was caught by the Depression in serious financial difficulties. Crocker Bank was a large creditor of American Dredging, which had borrowed heavily to build a large hydraulic dredge, and had no desire to see the loans go into default. Bank officials paid a call to Tom Crowley and worked out an arrangement whereby Crowley purchased a 55 percent interest in HT&B. The deal—unannounced to the industry—not only kept HT&B afloat, it also made Tom Crowley the major stockholder of his tugboat company's principal competition.

Derrick barge and salvage services

Along with providing tug, launch, and barge services, Crowley Launch and Tugboat engaged in heavy-lift and derrick barge services on San Francisco Bay throughout the 1920s in competition with the Haviside Company and the Smith-Rice Company. Crowley owned the 100-ton rig *Derrick Barge No. 3* as well as smaller derrick barges. After the crash of 1929, however, there was not enough business to support all three companies, so Tom Crowley and Charlie Rice combined their derrick barges in a fifty-fifty joint venture. The name of the company continued as Smith-Rice Company.

In conjunction with the Haviside Company, Shipowners and Merchants Tugboat Company put together a joint venture in the early 1930s. The company performed marine salvage services under the name of West Coast Salvage Company.

Freight and passenger services

Another new service established in the early 1930s was Pioneer Line, which was formed as a division of Crowley Launch and Tugboat Company to perform freight transportation under a tariff structure in the Bay Area. Directed by Walter Westman, Pioneer Line used tugs and barges to haul freight from San Francisco to the Union Oil dock at Oleum, the American Smelting and Refining smelter at Selby's, the Sperry Flour Company mill at South Vallejo, and the Mare Island Navy Yard.

"In the early '30s, passenger transportation to the battleships started going to water taxis, which were small, high-speed boats, as distinguished from the old launches."

Freight hauled for American Smelting and Refining moved both north- and southbound, as Pioneer Line transported sacked ore to the smelter and loaded lead for the return trip.

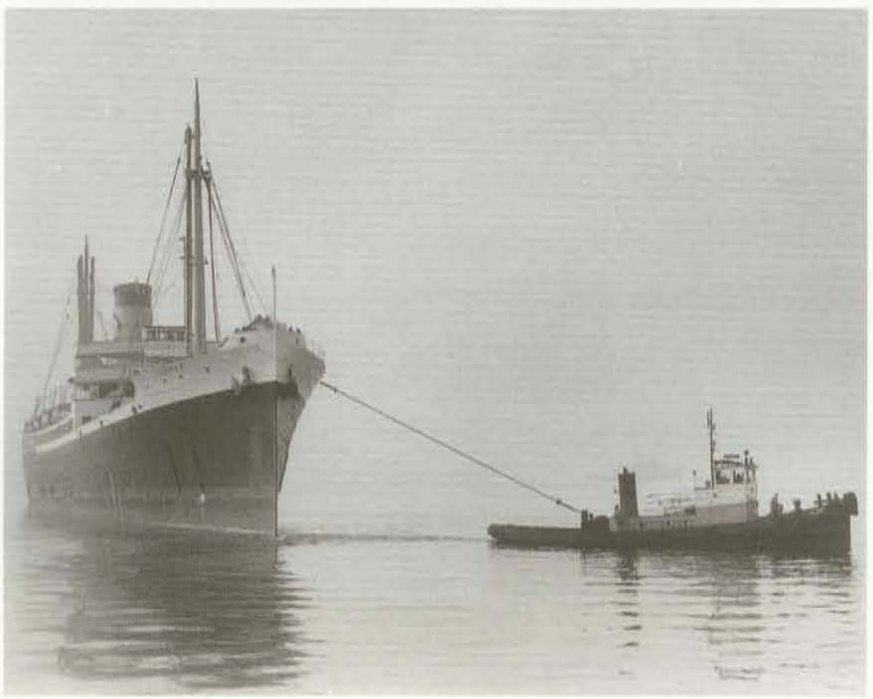
Crowley's passenger services continued to draw tourists who wanted to see the visiting battleships anchored in the Bay and take part in other excursions aboard Crowley launches and the double-deck, 250-passenger vessels. The most popular of the battleships was the *H.M.S. Hood*, the pride of the British fleet.

However, the need for smaller, quicker passenger boats was becoming apparent. The company ordered construction of three water taxis from Nunes Yard in Sausalito. Delivered between 1930 and 1932, the three taxis were the 43-ft. *Star* and the *Crowley No. 4* and *Crowley No. 5*, both 45-ft. vessels. Later, the company added a 48-ft. water taxi to the fleet.

Top, Harbor Tug & Barge Company and Crowley Launch and Tugboat operated side-by-side at piers 16 and 14, San Francisco.

Bottom, the Bay Cities Transportation tug Alert *undocks a ship in San Francisco.*

Crowley Maritime collection



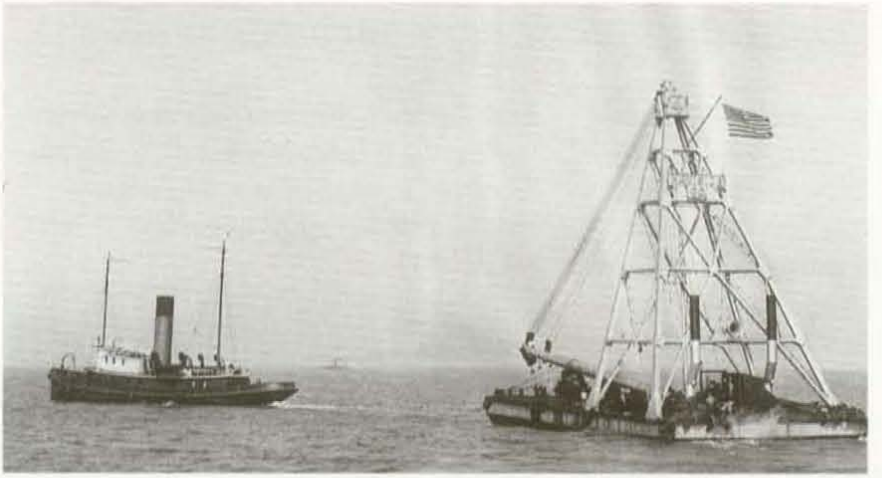
Joe D. Williamson collection, P.S.M.H.S.

Left, Haviside Derrick Barge No. 4, *shown under tow, was operated by West Coast Salvage Company, a joint venture between Haviside Company and Shipowners and Merchants Tugboat Company.*

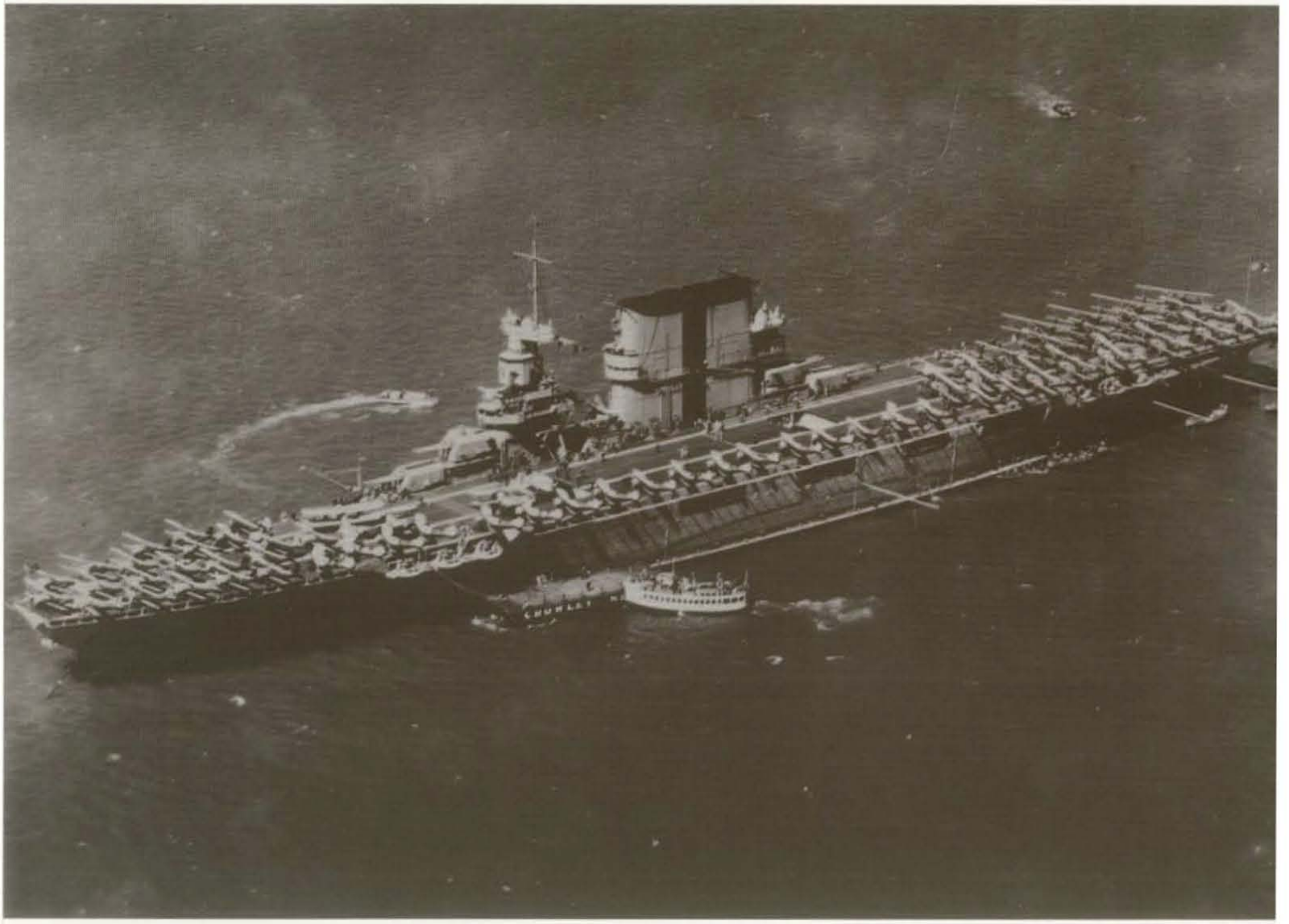
Crowley Maritime collection

Right, rigging for the lift of a boat by the Smith-Rice Company's Derrick Barge No. 3.

Crowley Maritime collection



U.S. Naval Historical Center Photo



A Crowley double-deck passenger vessel delivers visitors to the U.S.S. Saratoga in San Francisco Bay, 1930.

HISTORICAL PERSPECTIVE

1923	U.S. President Warren G. Harding died in San Francisco of a stroke and was succeeded by Calvin Coolidge.
1926	Henry Ford's mass-assembly methods, which he introduced in 1913, were producing nearly four million Model T's per year.
1927	Charles A. Lindbergh flew the first nonstop solo transatlantic flight in 33-1/2 hours.
1929	On a single day, October 29, the stock market lost $14 billion in paper values, ushering in the Great Depression.

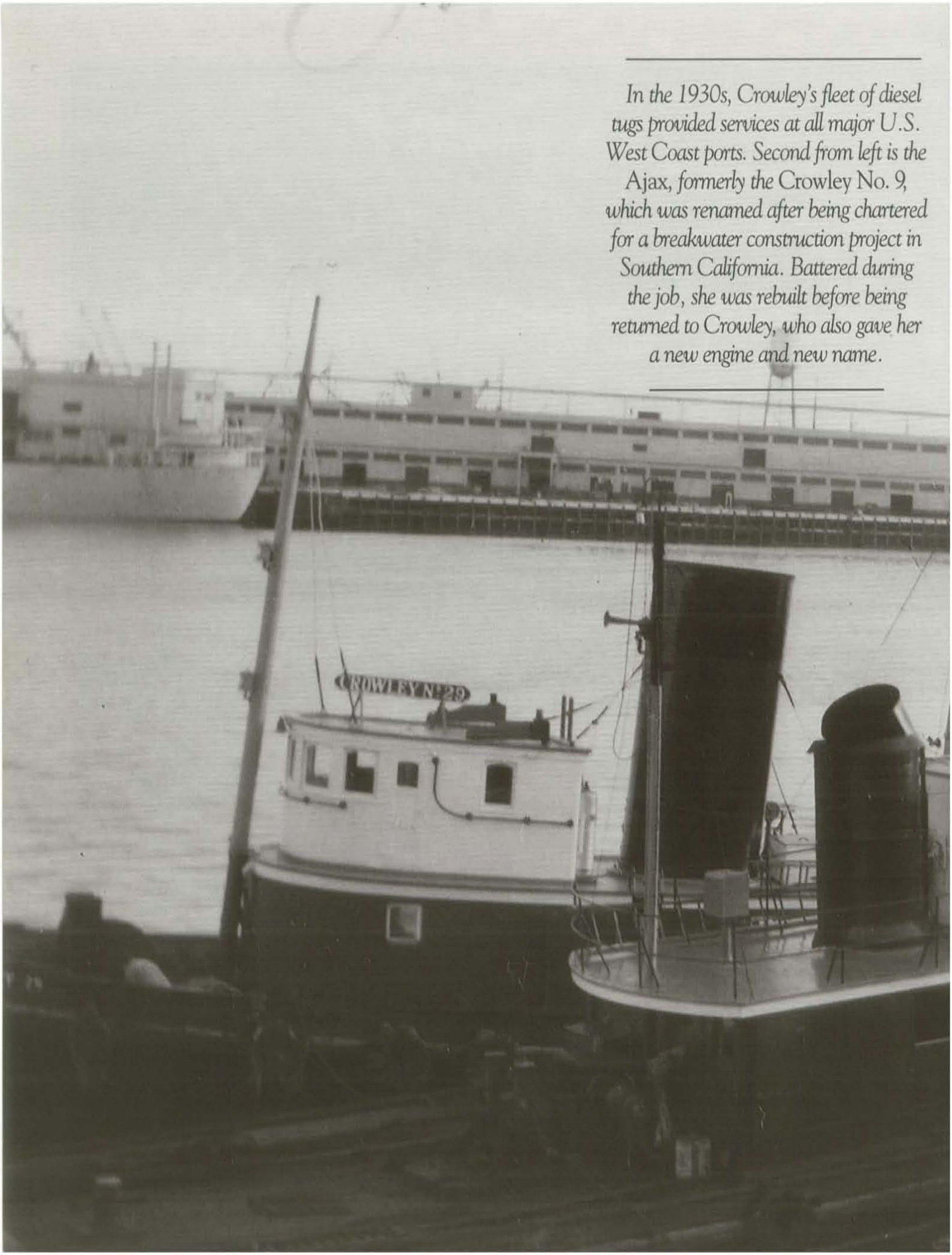
Mrs. Lillian Bunkers, commonly known as "Tillie," went to work for San Pedro Tugboat Company in 1923 as a dispatcher and bookkeeper, and retired fifty years later. Her instructions, relayed to tug skippers by means of a hand-held megaphone, could be heard throughout the narrow harbor. Author Norman Reilly Raine visited the San Pedro operation occasionally while he was developing the character of Tugboat Annie. Beginning in 1931, seventy-five stories featuring Tugboat Annie were published by Raine in The Saturday Evening Post.

In 1930, Thomas B. Crowley Sr., age fifteen, made the newspapers several times, first for his ventures and successes as the youngest Bird-class skipper in boat races on the Bay, then for using his boat, Linnet, *to rescue two boys whose skiff had capsized.*

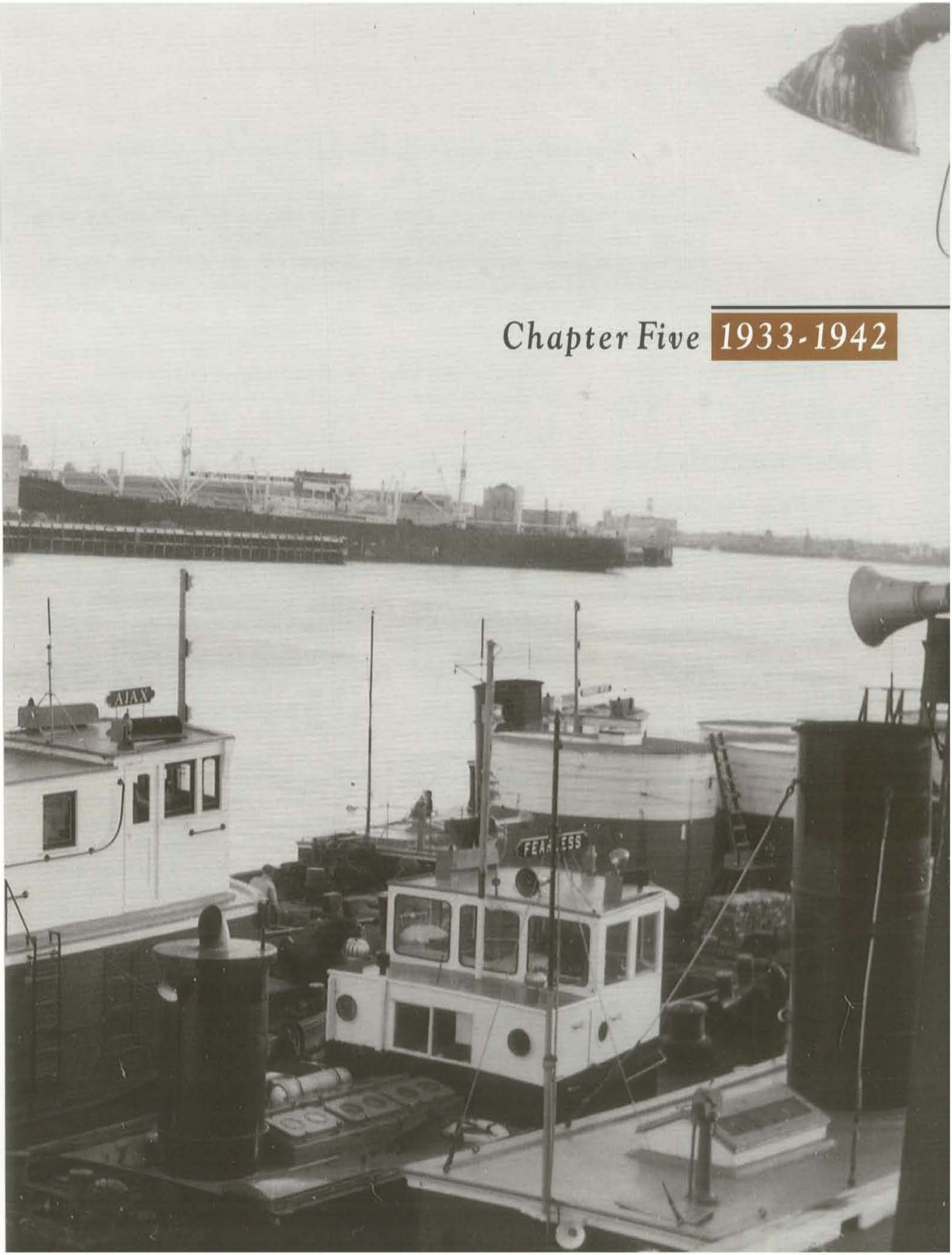
Photo by Walter A. Scott

Thomas B. Crowley Sr.'s Bird-class boat, Linnet, *in racing form, 1930.*

Thomas B. Crowley Sr.'s first regular job for the company, undertaken when he was seventeen years old, was on the dry dock at Crowley Shipyard, in the summer of 1931, scraping barnacles off hulls and applying paint. In the summer of 1932, he worked at Pier 17, San Francisco, checking freight and preparing documentation for Pioneer Line.



In the 1930s, Crowley's fleet of diesel tugs provided services at all major U.S. West Coast ports. Second from left is the Ajax, *formerly the* Crowley No. 9, *which was renamed after being chartered for a breakwater construction project in Southern California. Battered during the job, she was rebuilt before being returned to Crowley, who also gave her a new engine and new name.*



Chapter Five 1933-1942

Operating during the Great Depression

The Depression continued throughout most of the 1930s. In 1933, the nation's industrial output was less than half what it had been in 1929; wages and salaries were sharply reduced for those fortunate enough to have jobs; and "Hoovervilles," named for outgoing President Herbert Hoover, sprang up as makeshift housing for the newly homeless in cities all over the United States.

"Times were pretty tough in the '30s. My father cancelled all the insurance, because we couldn't afford to pay the premiums, so we didn't have any insurance on any of our floating equipment."

Business volume was so low for derrick barges that Crowley's *Derrick Barge No. 3*, operated by the joint venture Smith-Rice Company, could handle all the work available on the Bay, and the company's other derrick barges were laid up. When Charlie Rice, Tom Crowley's partner in Smith-Rice, got a job scrapping a ship near Antioch, he took his rig *Smith-Rice No. 2* out of laid-up status. En route up river, the wooden rig caught fire and burned to the water.

Though Tom had cancelled all the insurance on his own fleet, Charlie Rice had continued coverage on the *No. 2*, paying the premiums himself rather than as joint venture expense, and he received $60,000 for the loss of the rig. Rice offered the cash to Tom Crowley in 1937 in exchange for his half interest in Smith-Rice Company, an offer very difficult to refuse in hard times, and Tom accepted.

Down in Southern California, the competitive environment in harbor services had become even more severe with the depressed economy. It became apparent to Tom Crowley that San Pedro Tugboat Company would require diesel tugs, rather than steam-powered tugs, if it was to remain in business. The problem was that San Pedro Tugboat was a subsidiary of Shipowners and Merchants Tugboat Company, which knew a lot about operating large steam tugs but had little experience with diesel-powered boats. Tom determined that the risky venture of converting the San Pedro Tugboat fleet to diesel would be effected more efficiently by Crowley Launch and Tugboat Company, which was a smaller operation with personnel who understood diesel equipment. So, in 1934, Crowley Launch and Tugboat Company purchased San Pedro Tugboat Company from Shipowners and Merchants, and undertook the conversion program.

Over the next few years, San Pedro's steam tugs were repowered with Union direct reversible diesel engines and renamed. The steam tug *Sea Lark* became the *Crowley No. 24*; the *Restless* became *Crowley No. 25*; the *Harbor* became *Crowley No. 27*; the harbor tug *A.E. Williams* became *Crowley No. 28*; and *Sea Prince* became *Crowley No. 29*. The *Sea Witch*, Shipowners and Merchants Tugboat's first steam tug, was not repowered because of her age.

San Pedro Tugboat Company continued in competition with Wilmington Transportation Company with its new fleet of diesel tugs throughout the '30s and '40s until government war-surplus vessels became available and brought the next stage of fleet upgrading.

One of the factors that enabled a business to remain afloat during the Depression era was pinpointing and eliminating unnecessary costs. For twenty years Crowley Shipyard had operated as an adjunct of the tugboat company, Crowley Launch and Tugboat, which meant that vessels were sent to the yard and shipyard supplies were used without a billing structure that kept these costs visible and controlled. In the mid-1930s, Tom Crowley decided that Crowley Launch and Tugboat should become accountable for all maintenance of its equipment, and that the

Preceding page: Crowley Maritime collection

Photo by Thomas M. Livingstone

Pacific Dry Dock and Repair Company was incorporated as a separate business line in 1935. This photograph, taken in the early 1960s, shows a mix of company-owned and government vessels in for dry docking and repair.

shipyard should be operated as a completely separate organization.

In 1935, Pacific Dry Dock and Repair Company was inaugurated as a new corporation by Tom Crowley and Thomas B. Crowley Sr. PDD purchased the lease and facilities operated formerly as Crowley Shipyard, and became a separate company, responsible for providing vessel repair and maintenance services, charging fair rates for supplies and work performed, and maintaining cost control.

One of the key people helping to make the major financial decisions during this period was John H. "Jack" Jenkins, who, as Chief Financial Officer of the Crowley companies, not only watched over the establishment of Pacific Dry Dock and Repair, but the financial dealings of the other Crowley businesses as well. He was based at Pier 14, San Francisco, where he was assisted by bookkeeper Marie Carey. Both Jenkins and Carey retired in the 1970s after five decades of service to the company.

Crowley Maritime collection

The newly repowered 450-h.p. diesel tug Crowley No. 27 *and the steam-powered* Sea Witch *at San Pedro.*

"That was one of the benefits of the Depression—it did make businesses run a lot more efficiently."

New Deal legislation

Franklin D. Roosevelt accepted the Democratic nomination for President of the United States in 1932, promising "a new deal for the American people." With his inauguration, he commenced a broad program of legislation in which, during the first "Hundred Days," fifteen major New Deal bills were introduced in Congress and pushed through to enactment.

An element of early New Deal legislation bearing a particular impact on the water transportation industry was the National Industrial Recovery Act, under which the National Recovery Administration (NRA) attempted to negotiate codes of "fair competition." In theory, company managers could avoid cutting prices and therefore could raise wages and shorten workers' hours.

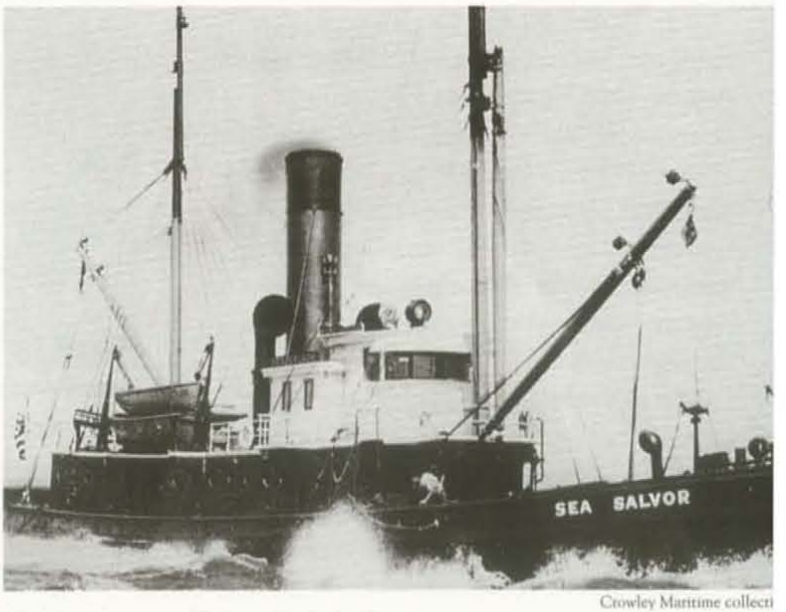
At this time, Pioneer Line, the freight transportation division of Crowley Launch and Tugboat Company, was performing freight services from San Francisco to Oleum, Selby's, South Vallejo, and Mare Island. Another freight service, Bay Cities Transportation Company, formed by Lawrence Warehouse Company in the 1920s, transported freight between San Francisco and Oakland. Using barges outfitted with deck houses, Bay Cities operated a regular service under the slogan "Twice a Day We Bridge the Bay."

Though they were competitors, managers of Bay Cities and Pioneer Line were forced by New Deal legislation to spend a great deal of time together. As they worked out the details of the NRA codes, they determined that the two operations could be managed more economically if they were unified. Thomas B. Crowley Sr. undertook the negotiations and purchased a 50 percent interest in Bay Cities Transportation Company.

Within a year, the NRA codes had proved unworkable in real-world applications, and in 1935, the NRA was ruled unconstitutional by the Supreme Court. In an effort to retain elements of the National Industrial Recovery Act having to do with labor practices, Congress passed the National Labor

Crowley Maritime collection

The steam tug Reliance *was purchased by Tom Crowley in the 1930s for use in ship docking in San Francisco.*



Crowley Maritime collecti

The Sea Salvor *was sold, along with the* Sea Giant, *to a British company at the beginning of World War II.*

Joe D. Williamson collection, P.S.M.H.S.

Puget Sound Tug & Barge Company tugs Active *and* Goliah *tow a barge laden with a bridge caisson, about 1939.*

Relations Act, also known as the Wagner Act, in 1935 to guarantee the right of workers to organize and bargain as a group with employers. In that year, Shipowners and Merchants Tugboat Company signed a labor agreement with the Marine Engineers Beneficial Association (MEBA); the Masters, Mates, and Pilots (MM&P); and the Ferry Boatmen's Union, which later became the Inland Boatmen's Union (IBU). The Crowley companies have continued to be unionized to the present day.

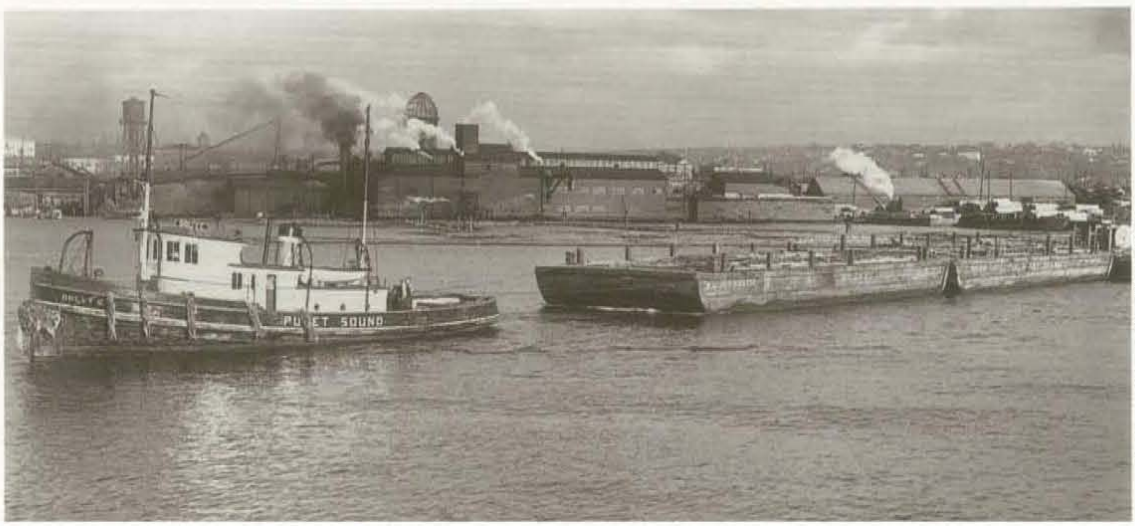
In 1939 and 1940, the Crowley organization bought the remaining shares in Bay Cities and gradually shifted all of its common carrier freight transportation to Bay Cities, phasing Pioneer Line out of existence. Freight barging on the Bay slowly died out in the years following the Second World War, as trucking services made use of the Golden Gate Bridge and the San Francisco- Oakland Bay Bridge to provide freight deliveries.

Meanwhile, Harbor Tug & Barge Company had continued its operations on San Francisco Bay without Crowley's majority ownership becoming common knowledge. In 1935, the Crowley organization purchased the remaining 45 percent interest in the company. Operating in competition with each other, HT&B and Crowley Launch and Tugboat had gradually developed a duplication of services, but were perceived by the industry as differing widely in management philosophy.

Crowley Launch and Tugboat ceased operations on the Bay in 1939, though it continued to own marine equipment which it bareboat-chartered to Bay Cities Transportation Company, San Pedro Tugboat Company, and other Crowley subsidiaries.

The salvage tug Commissioner *and tug* Dolly C., *both operated by Puget Sound Tug & Barge Company, assist the ship* Coldbrook.

Joe D. Williamson collection, P.S.M.H.S.



The Dolly C. *tows two Drummond Lighterage barges.*

Ray Krantz/Commodore Marine Prints

The Golden Gate International Exposition

By the late 1930s, the Bay Area boasted the two longest suspension bridges in the world. Completed in 1936, the San Francisco-Oakland Bay Bridge had two joined spans of 2,310 feet each, and the Golden Gate Bridge, finished in 1937, was designed with a single span of 4,200 feet. To celebrate the opening of the bridges, the Golden Gate International Exposition was organized, and in 1939, more than 17 million people attended the fair, held on a 400-acre site on Treasure Island.

The Crowley organization negotiated for, and won, a concession to operate two passenger services out of Treasure Island, one a speedboat ride and the other, a cruise to the Golden Gate Bridge and back. In preparation, the company refurbished its two double-deck passenger boats, *Crowley No. 17* and *Crowley No. 18*; bought four Chris-Craft speedboats; and built two glass-enclosed water taxis, named *Crowley No. 1* and *Crowley No. 2*.

The Sea Giant, *formerly a U.S. Navy tug, was the most powerful tug on the Pacific Coast. Shown with flags to celebrate the Golden Gate International Exposition in 1939, she was sold to a British company in 1940.*

Morton & Co. Commercial Photography

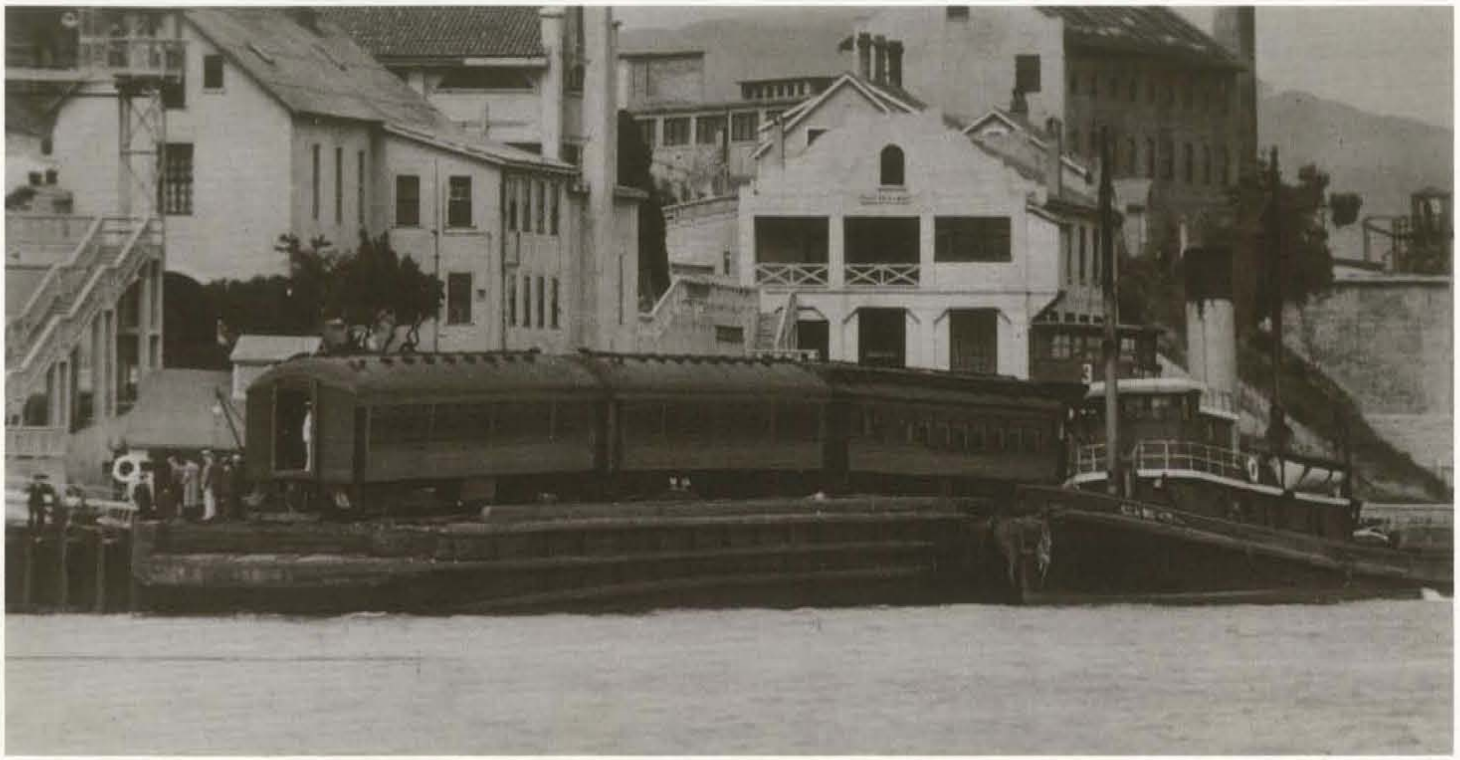
The water taxi Crowley No. 1 *was built at Pacific Dry Dock and Repair Company to carry passengers for the 1939 Exposition. The vessel is shown near the federal prison on Alcatraz Island.*

Crowley Maritime collection

A PST&B tug tows a Chicago Milwaukee & St. Paul Railroad car float on Puget Sound.

Joe D. Williamson collection, P.S.M.H.S.

The two water taxis were powered by the newest technology in diesel engines: a "super-charged" diesel engine just developed by Cummins to increase horsepower output by about 40 percent. The taxis continued to operate on the Bay for several years after the Exposition and were eventually sold to the Panama Canal Company.



San Francisco Maritime Museum

A Crowley tug assists in the delivery of the first transport of prisoners to the newly converted federal penitentiary on Alcatraz Island in 1934. Al Capone was among the convicts.

Bay and river moves of bulk petroleum

During the 1930s, the oil companies built barge terminals at San Francisco, Redwood City, Oakland, Stockton, and Sacramento to enable them to barge large quantities of petroleum to these facilities for storage and subsequent inland hauling by trucks. Thomas B. Crowley Sr. and his father were interested in becoming involved in the marine transports of refined bulk petroleum, so in 1938, they worked with Dravo Corporation to design a 148-ft., 7,000-bbl. gasoline barge.

The entire San Francisco Bay oil industry watched with skepticism, believing that it would be impossible to build a barge capable of moving that great a bulk volume.

Barge parts were manufactured and shipped to Pacific Dry Dock and Repair Company for assembly into the company's first oil barge, *Barge No. 8*. With this vessel, Crowley began hauling gasoline from the refineries to the oil company terminals. Next on the company's drawing boards was a 9,000-bbl. barge, followed by an 11,000-bbl. barge.

Convinced of Crowley's commitment to oil transportation, Shell Oil decided in 1939 to sell its oil barging equipment to Crowley, which formed a company called United Towing to operate bulk petroleum transportation equipment in the Bay Area and subsequently in Southern California, as well. The barges purchased from Shell included wooden vessels with tanks both below and on deck, ship-shape hulls for hauling black oil, and a flatdeck barge. In all, some eight barges were acquired for operations both on San Francisco Bay and in Los Angeles Harbor.

From that beginning, United Towing continued to add to its fleet of oil barges, many of which were built by Pacific Coast Engineering in Alameda.

World War II

With Adolph Hitler's coming to power in 1933, Germany rearmed and began to annex neighboring countries, beginning with Austria in 1938. Hitler's invasion of Poland in 1939 resulted in declarations of war from Britain and France, and the Second World War had begun.

The first member of the Crowley organization to take active part in World War II was a tugboat, the *Sea Giant*, which had just been sold, along with the *Sea Salvor*, to the London company Ocean Towing and Salvage. Built by the U.S. Navy just after World War I, the *Sea Giant* was a powerful steam tug bought by Shipowners and Merchants Tugboat Company in the 1930s. She was rebuilt at Pacific Dry Dock with a new oil-burning system, operated in San Francisco Bay, then sold and sent to England, where she was taken over by the British government for use in the war.

The diesel tug *Crowley No. 21*, powered by an Atlas Imperial engine, was taken over by the U.S. Navy for use in laying submarine nets across the Golden Gate, the entrance to San Francisco Bay. She had formerly been used on a regular run towing Crowley barges between San Francisco and Vallejo. When the company saw that the tug was not being utilized for military purposes, it requested and was granted the return of the *No. 21* to help fill the heavy demand for commercial services.

As the principal supporting base for the naval war in the Pacific, San Francisco experienced a significant increase in vessel traffic. The Navy yard at Mare Island had been building and repairing naval vessels since well before the First World War, and now several new naval facilities were established in the Bay Area to support World War II efforts. The heavy vessel traffic resulted in greatly increased ship-assist and passenger services work for the Crowley companies.

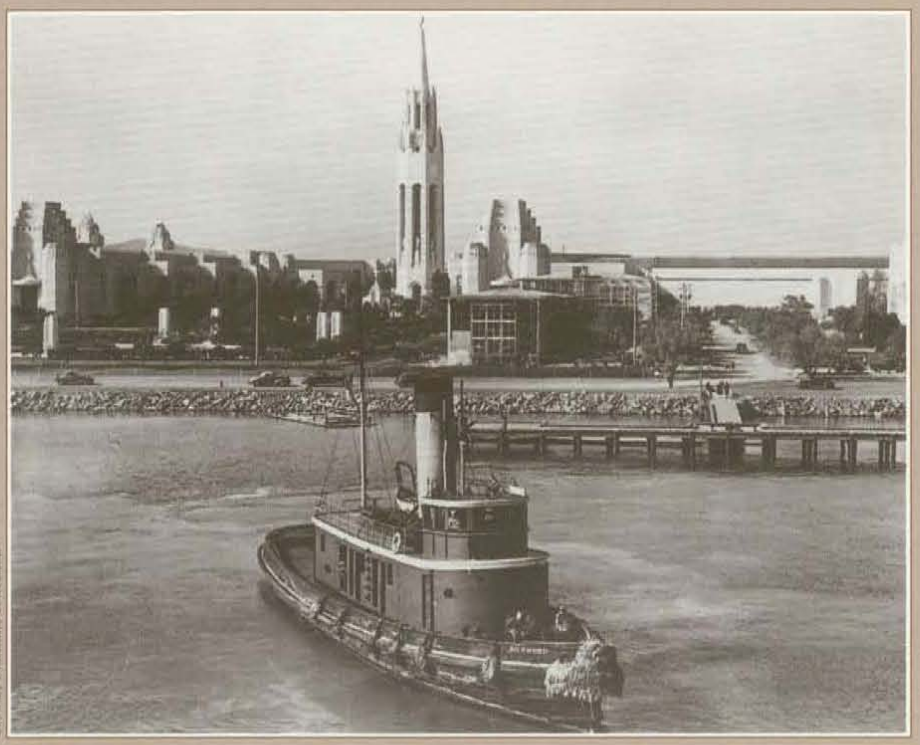
For Pacific Dry Dock and Repair Company, the war meant a stint of shipbuilding for the government. The yard built barges for the U.S. Navy in 1940, as well as self-propelled lighters in 1941 and 1942. PDD designed the prototype for the lighters, won the approval of the Navy, and built three of the vessels. Though the Navy wanted to see the PDD yard expand to build several more lighters and other vessels for military use, Thomas B. Crowley Sr. and his father decided not to pursue shipbuilding, but to concentrate their energies and expertise in the arena they knew best: providing maritime services in cargo and passenger transportation, vessel assist, towing, and vessel repair.

Crowley No. 21 *was requisitioned by the U.S. Navy for use in World War II.*

Crowley Maritime collection

HISTORICAL PERSPECTIVE

1933	Adolph Hitler, leader of the National Socialist (Nazi) party, seized power in Germany.
1933	Franklin D. Roosevelt assumed the Presidency of the U.S. and initiated the New Deal.
1937	San Francisco's Golden Gate Bridge was completed.
1939	World War II began.
1941	With Japan's attack on Pearl Harbor, the United States was drawn into the World War.



Crowley Maritime collection

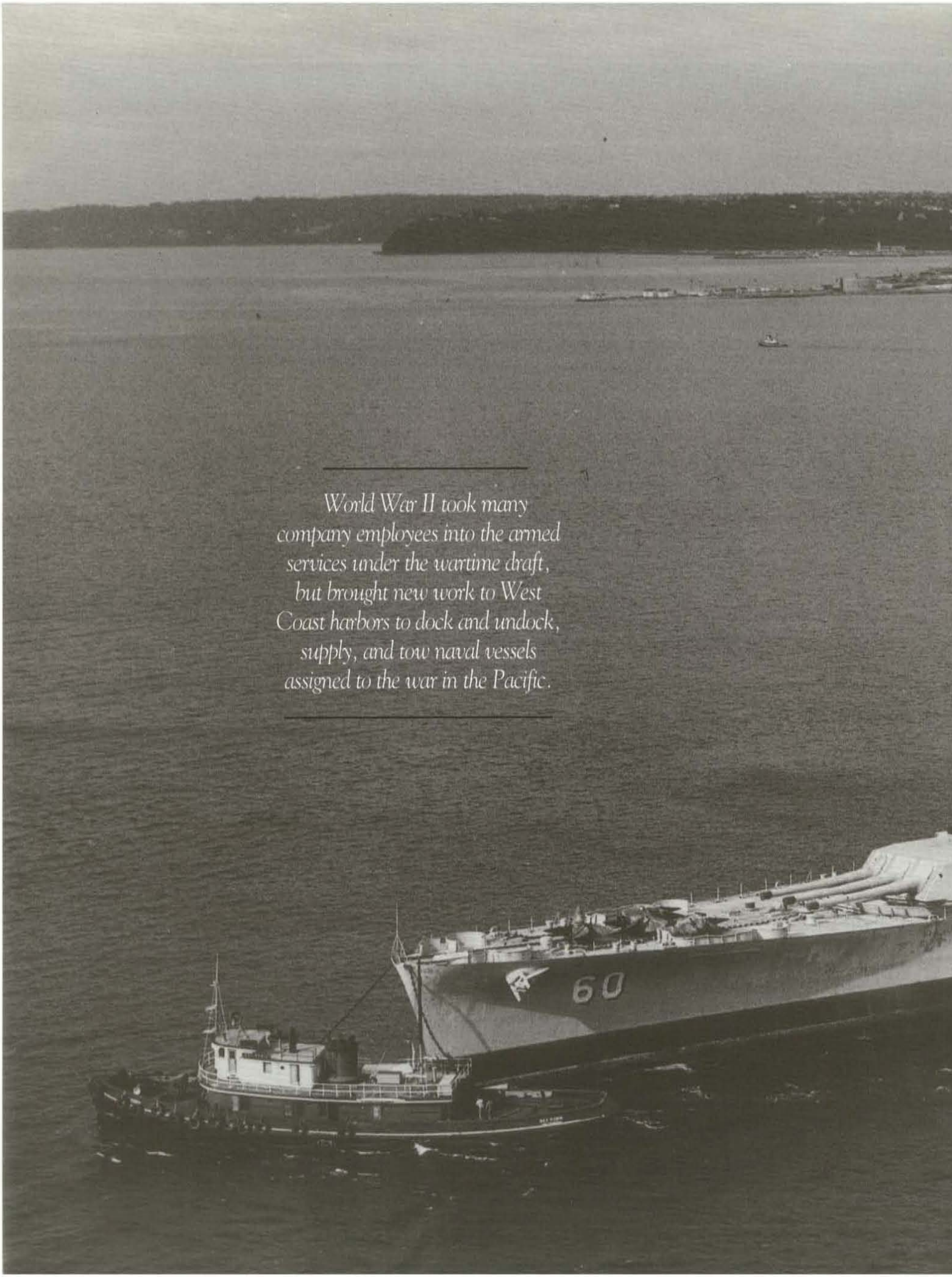
The tug Richmond, *shown at the site of the 1939 Exposition on Treasure Island.*

On January 22, 1933, after two academic years at Stanford University, Thomas B. Crowley Sr. left school to go to work as a deckhand on the Red Stack tug Sea Scout, *then was transferred to the tug* Richmond, *skippered by Captain Ernest Mohr. After a year of working as a tugboat deckhand and mate, he worked in the bookkeeping and accounting department at Pioneer Line, then began calling on shipowners to solicit work for the tugs and the shipyard.*

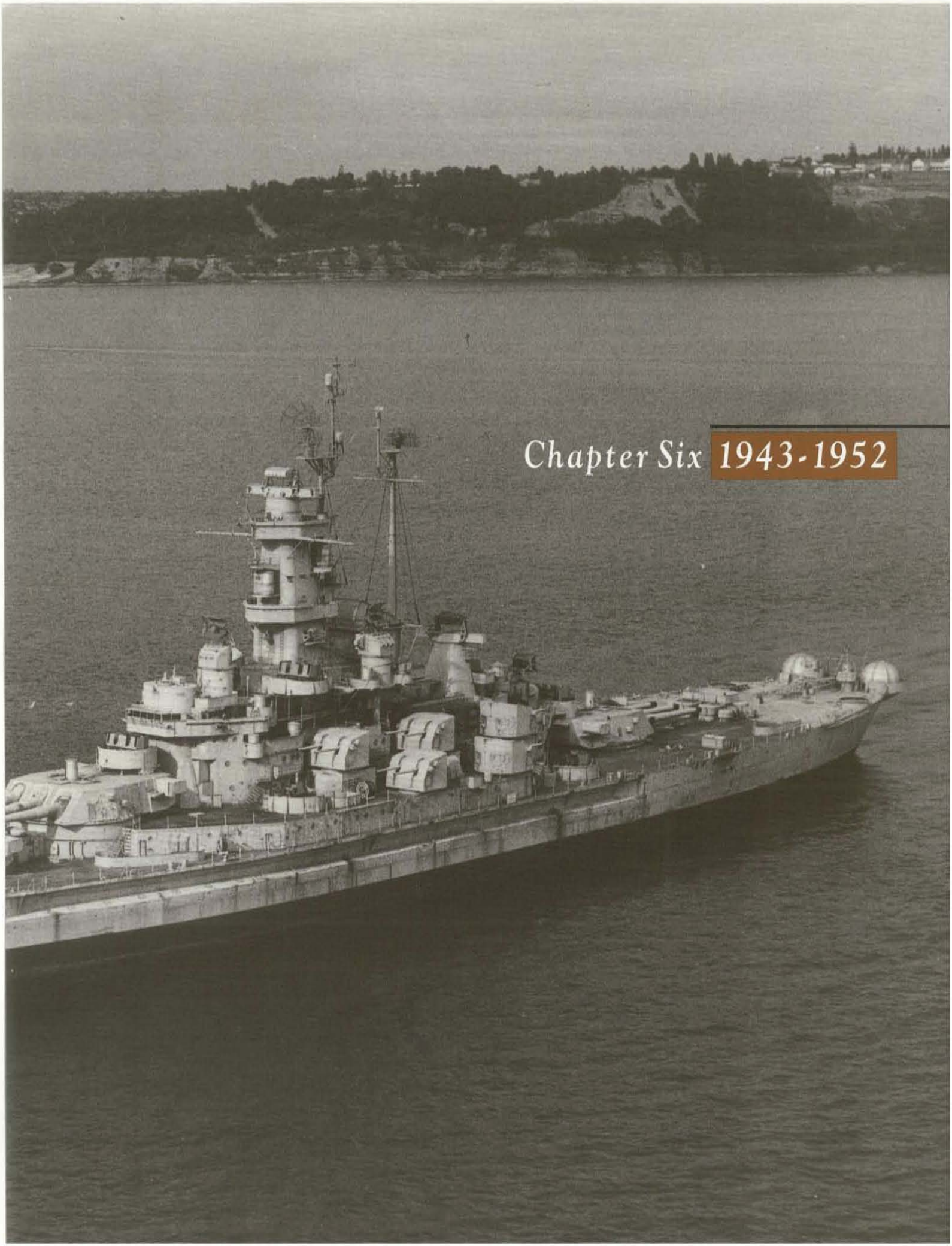
Jim Rettig aboard the tug Alert.

Rettig family collection

On September 15, 1939, at the age of nineteen, James B. Rettig joined the company working for United Towing in the dispatch office at Pier 14, San Francisco, under the supervision of Willie Figari.



World War II took many company employees into the armed services under the wartime draft, but brought new work to West Coast harbors to dock and undock, supply, and tow naval vessels assigned to the war in the Pacific.



Chapter Six 1943-1952

Building terminals to support oil transportation

Throughout the war years, United Towing continued to transport refined bulk petroleum to the various terminals that the oil companies had built in the Bay Area. It became apparent to the Crowley organization that additional terminals at various sites would improve the efficiency of the petroleum-distribution network. Accordingly, after the Second World War, Crowley Launch and Tugboat Company established a subsidiary named Oil Terminals Company to build and operate terminals.

"There was no specific time when my father relinquished the presidency and I assumed it. As time went on, I did more and more, and my father did less and less."

Alviso was selected as the site for the first Crowley-owned terminal, built in 1945. Located at the extreme southern end of San Francisco Bay, Alviso was strategically positioned to facilitate the flow of petroleum products by truck into the Santa Clara Valley and farther south, but no depot had been built there by the oil companies because of the very shallow access.

The shallow channel was no problem for United Towing barges. The new facility included storage tanks to receive bulk petroleum and a truck-loading rack to enable tank trucks to take on loads for inland distribution. Eventually company terminals were also built at Meridian in the Sacramento Valley and at Petaluma, northwest of the Bay. Both United Towing and Oil Terminals Company operated under the direction of Bob Dyer.

After some years of experience hauling bulk petroleum to terminals in San Francisco Bay and Los Angeles Harbor, Crowley undertook the first coastal transport of bulk petroleum by barge. The initial voyage transported refined products from San Francisco to the Shell Oil terminal at Coos Bay, Oregon.

Following this successful pioneering move, Crowley built storage terminals at Crescent City and Eureka, both on the Northern California coast, and ordered construction of the company's first seagoing oil barge, *Barge 11*, completed in 1947. The vessel measured 195 x 40 x 13 feet and could carry just over 14,000 barrels of oil.

United Transportation Company was

The Eureka, California, depot built by Oil Terminals Company.
Photo by Merle Shuster

Preceding page: Brant Photography

established to perform Crowley's coastwise bulk petroleum transportation, which was conducted as a line of business separate from the operations of United Towing. Beginning in the late 1940s, the fleet of oceangoing oil barges grew steadily. *Barge 12*, with a capacity of 24,000 barrels, was launched in 1949; *Barge 14*, at over 59,000 barrels, was added in the early 1950s; *Barge 15*, a 30,300-bbl. barge, joined the fleet in 1951; the 43,500-bbl. *Barge 16* was built in 1953; etc. Coastal bulk petroleum transportation rapidly became a major business line for the company, and continues so today.

Crowley's depot facilities in and near the Bay Area served the oil industry for as long as twenty years before an extensive oil pipeline network eliminated the need for local barge terminals. The company's oil terminals at Eureka and Crescent City, and an additional facility at Coos Bay, Oregon, continued to operate until the mid-1980s and early 1990s, when expanded oil pipelines in California and the Pacific Northwest took over the delivery of oil for subsequent inland movement by trucks.

"We pioneered the transportation of bulk petroleum products on the coast in large barges."

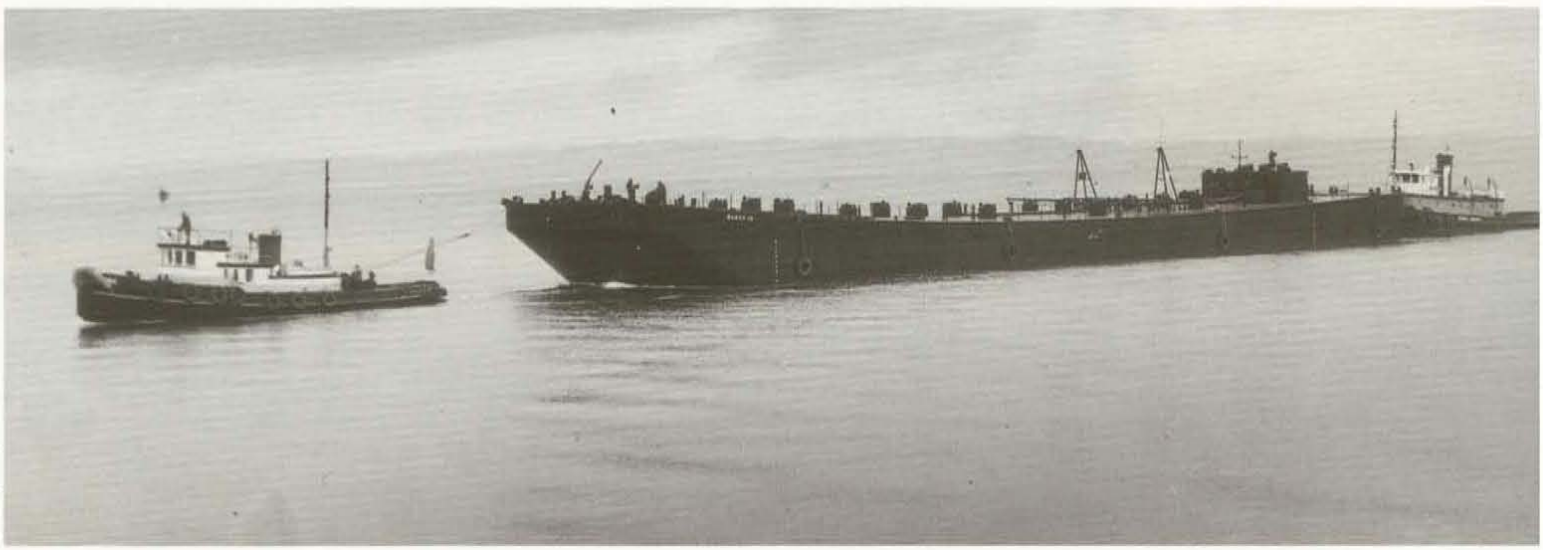


Photo by Harry A. Kirwin

Brown's Studio

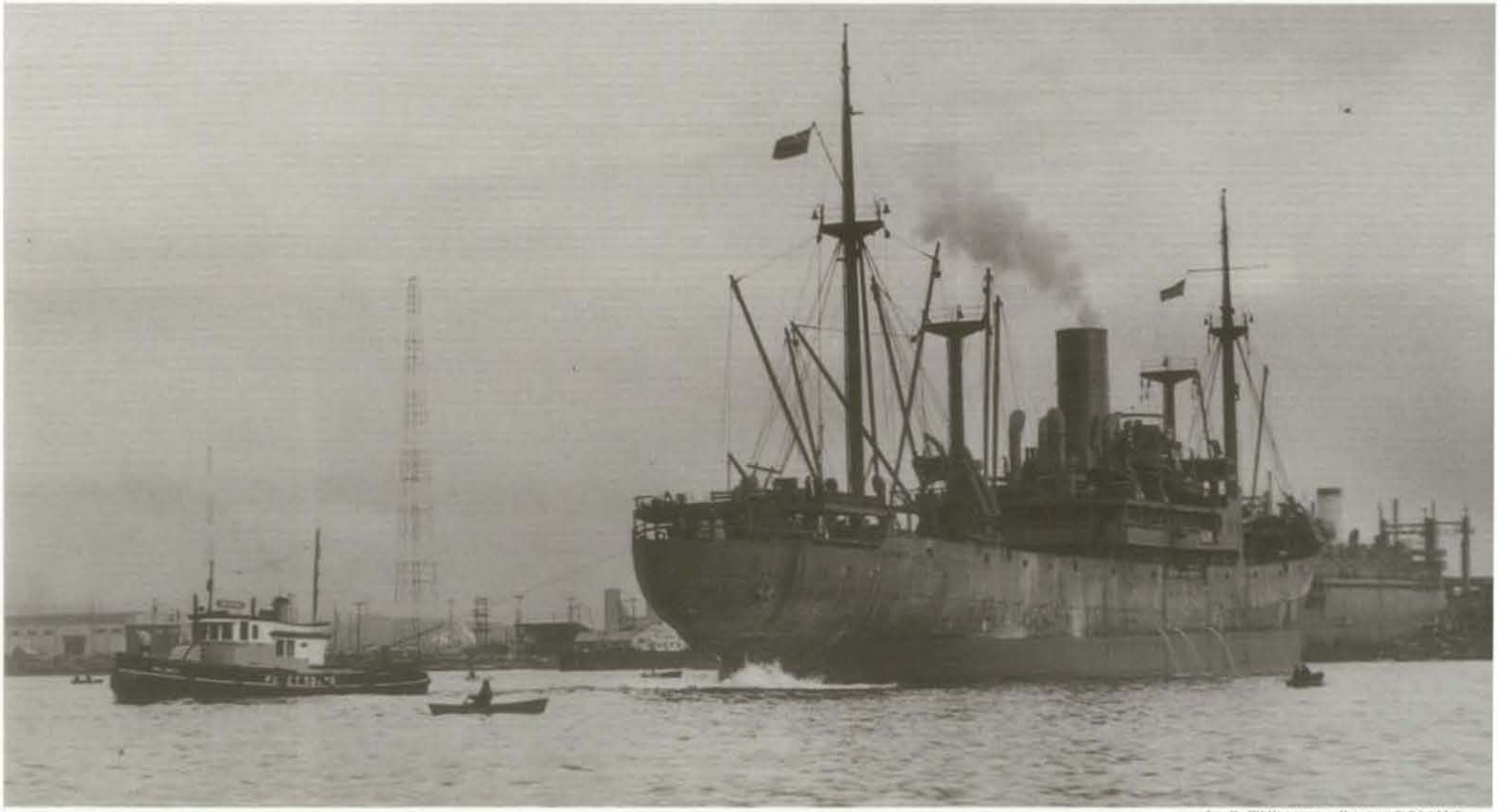
Top, the 275 x 50 x 20-ft., 43,500-bbl. Barge 16 *was built in the early 1950s.*

Bottom, Barge 14 *with the tug* Sea Ranger *at the Shell Oil dock in Coos Bay, Oregon.*

A newly launched tank barge ready for United Transportation bulk petroleum service.

Crowley Maritime collection

In Puget Sound, the PST&B tug Delwood *undocks a ship during the wartime years.*



Joe D. Williamson collection, P.S.M.H.S.

San Francisco passenger and cargo services

Harbor Tug & Barge Company had been performing passenger services from its earliest years, inherited from its original parent, Henry C. Peterson Company, at Pier 16. Beginning with the *Chief* and *Lark*, two water taxis purchased from Johnson Brothers before the war, HT&B competed with Crowley Launch and Tugboat to provide water taxi services on the Bay. When Crowley Launch and Tugboat ceased its passenger operations in 1939, HT&B became even more active.

Passenger volumes increased significantly during the war, but at the war's end, the company found itself with a large fleet of small water taxis and an insufficient amount of work to keep them busy. HT&B decided to try finding work for the boats by running sightseeing cruises on the Bay.

Two water taxis, the *Teal* and *Tern*, were chosen to be refurbished with glass enclosures. The vessels' plywood covers were cut and framed for glass windows, and the company began advertising sightseeing cruises on the Bay. Tickets were sold out of the back window of the offices on Pier 16. By 1948, the sightseeing business was going so well that two new 65 x 18-ft. wooden sightseeing boats, *Harbor Sightseer* and *Harbor Tourist*, were built. Designed with single decks, the new vessels were later remodeled to double-deck and carried up to 225 passengers.

A separate corporation called Harbor Tours was established to operate the passenger vessels in scheduled cruises on the Bay and excursions to Paradise Park. Space was acquired at Fisherman's Wharf where passengers could come to buy tickets and board vessels. In addition, the company operated commuter services in the Oakland estuary after World War II, under contract to the Navy, to transport workers to and from the Alameda Naval Air Station.

The President of Harbor Tug & Barge for some thirty years beginning in the early 1940s was Albert D. Elledge, an attorney who succeeded C.C. Kreimler in the position. Lester C. Bedient was Operating Manager all during the war and was responsible for HT&B's evolution in sightseeing cruises as well as for instituting passenger services out of Fisherman's Wharf.

Besides its passenger activities, Harbor Tug & Barge performed a variety of towing and cargo-transportation services within

Crowley Maritime collection

HT&B tug Sacramento *performed general towing on San Francisco Bay.*

Crowley Maritime collection

The Harbor Sightseer *after conversion to a double-deck passenger vessel.*

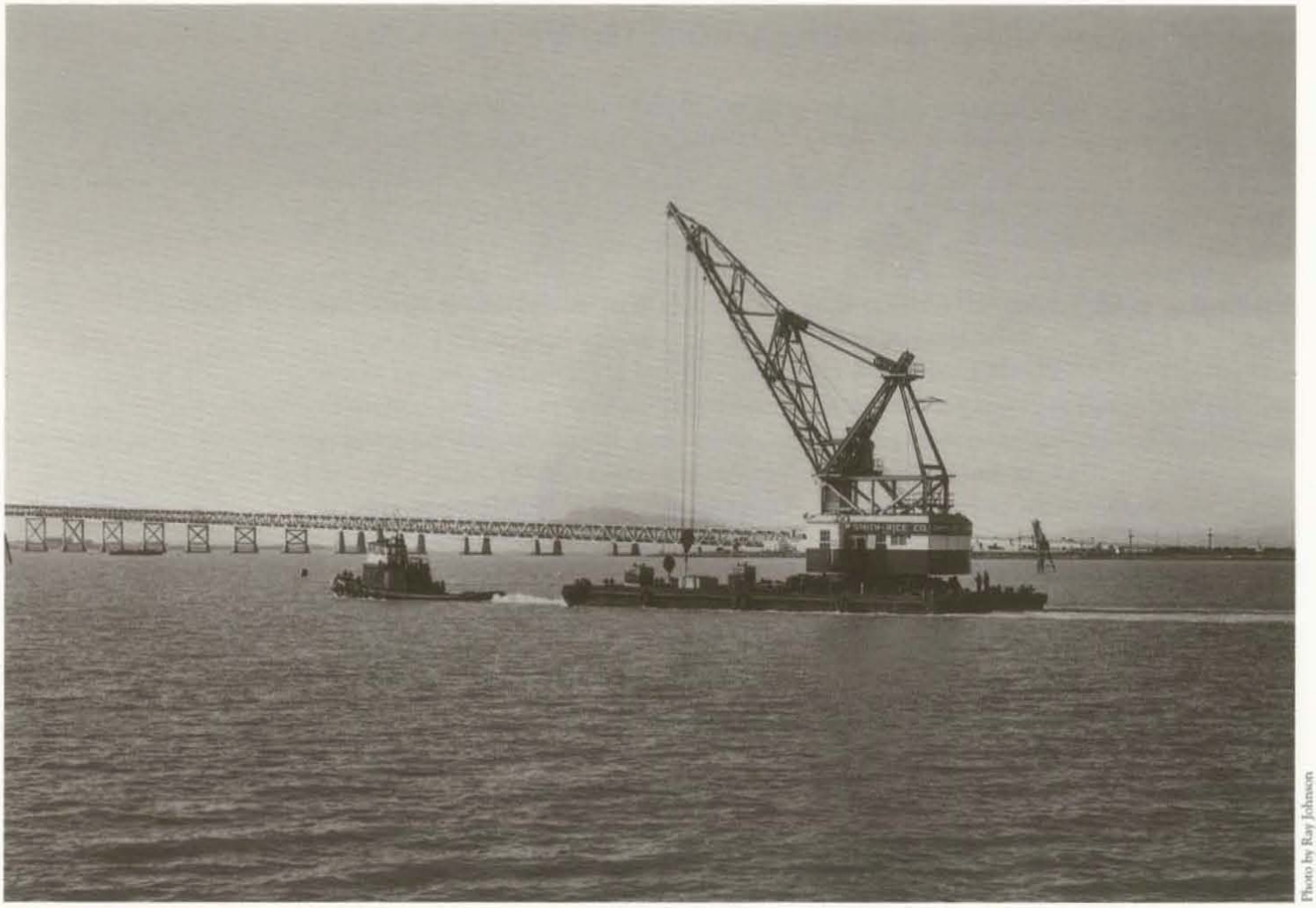


Photo by Ray Johnson

The 900-h.p. tug Redwood City *towing a Smith-Rice Company derrick barge.*

the Bay Area. Ship docking and "outside towing," referring to tows that involved oceangoing vessels on the coast or in ocean transit, were generally performed by the Red Stack fleet.

During each harvest season in the Delta, HT&B moved thousands of tons of sugar beets from local loading hoppers to the sugar factories at Clarksburg and Tracy, using 100- to 150-ft. barges. The company's tugs at this time ranged from 75 to 250 horsepower and were painted red and white. In 1950, the 59-ft., 500-h.p. steel tugs *Sacramento* and *Stockton* were added to the harbor fleet, and in 1952, the 65-ft., 900-h.p. steel tug *Redwood City* was built for towing and general Bay work.

As roadways and bridges were built and improved in the Delta, trucks began to move more and more of the sugar beets until barging of the crop ceased altogether in the late 1960s.

The company also hauled crushed rock, sand, and gravel, as well as great quantities of rock for levee protection on the Sacramento and San Joaquin rivers and around the islands in the Delta. HT&B was called upon to tow oil barges operated by United Towing, dump barges owned by Olympian Dredging, and derrick barges for Smith-Rice Company.

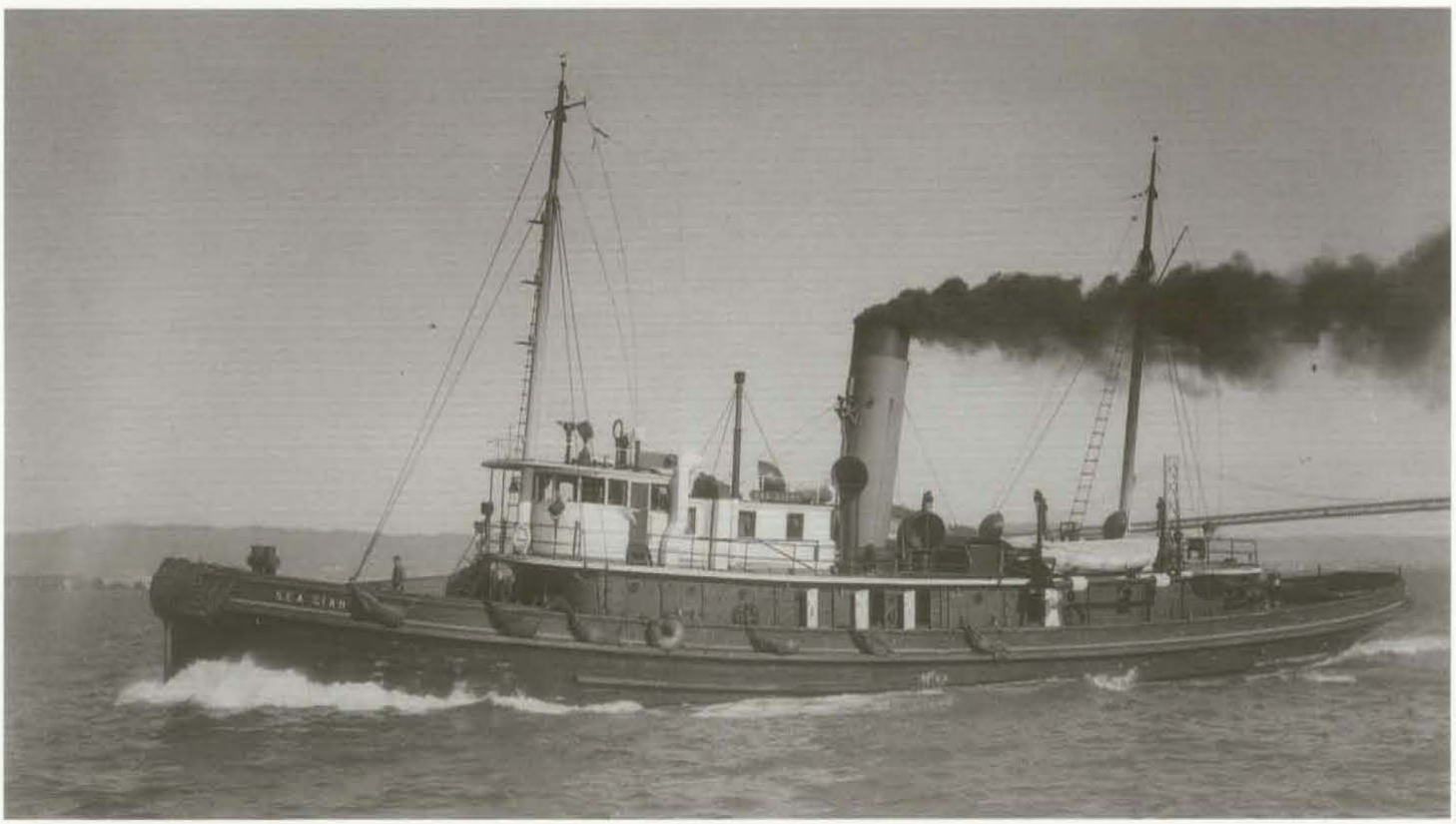
In about 1947 the Crowley companies began hauling bulk molasses, first in Northern California, then in Southern California. The molasses was offloaded from Matson ships on behalf of the Pacific Molasses Company, which marketed Hawaiian molasses for C&H Sugar. In the early 1950s, the company performed round-trip transits, hauling gasoline from Southern California to Topolobampo, Mexico, and molasses on the return trip.

The bonanza of war-surplus vessels

Shipowners and Merchants Tugboat Company, headquartered at Pier 25, owned by this time a large fleet of Red Stack tugs which were used in general ocean towing services and were available for use by the other Crowley companies. Shipowners and Merchants was among the many U.S. tugboat companies that took advantage of the availability of Navy- and Army-built tugs after World War II. All of the surviving steam tugs in the fleet were replaced with war-surplus diesel equipment.

Two types of Army-built, wooden-hull tugs sold by the War Shipping Administration were the miki class and the miki-miki class. The former were single-screw, single-engine tugs, and the latter were twin-screw, twin-engine tugs. Crowley officials determined that the miki-class tugs, which were powered with 1200-h.p. Enterprise direct

"The revival in the tugboat fleet of the United States, by purchasing war-surplus equipment in the late '40s, carried practically all the tugboat companies through the '60s with new modern floating equipment."



The 1,000-h.p. tug Sea Giant, *built on the U.S. Shipping Board design from World War I, was operated for military use in World War II, and sold to Crowley in the late 1940s.*

Moulin Studios

reversible engines, were superior and immediately purchased four for use in San Francisco and two for Puget Sound.

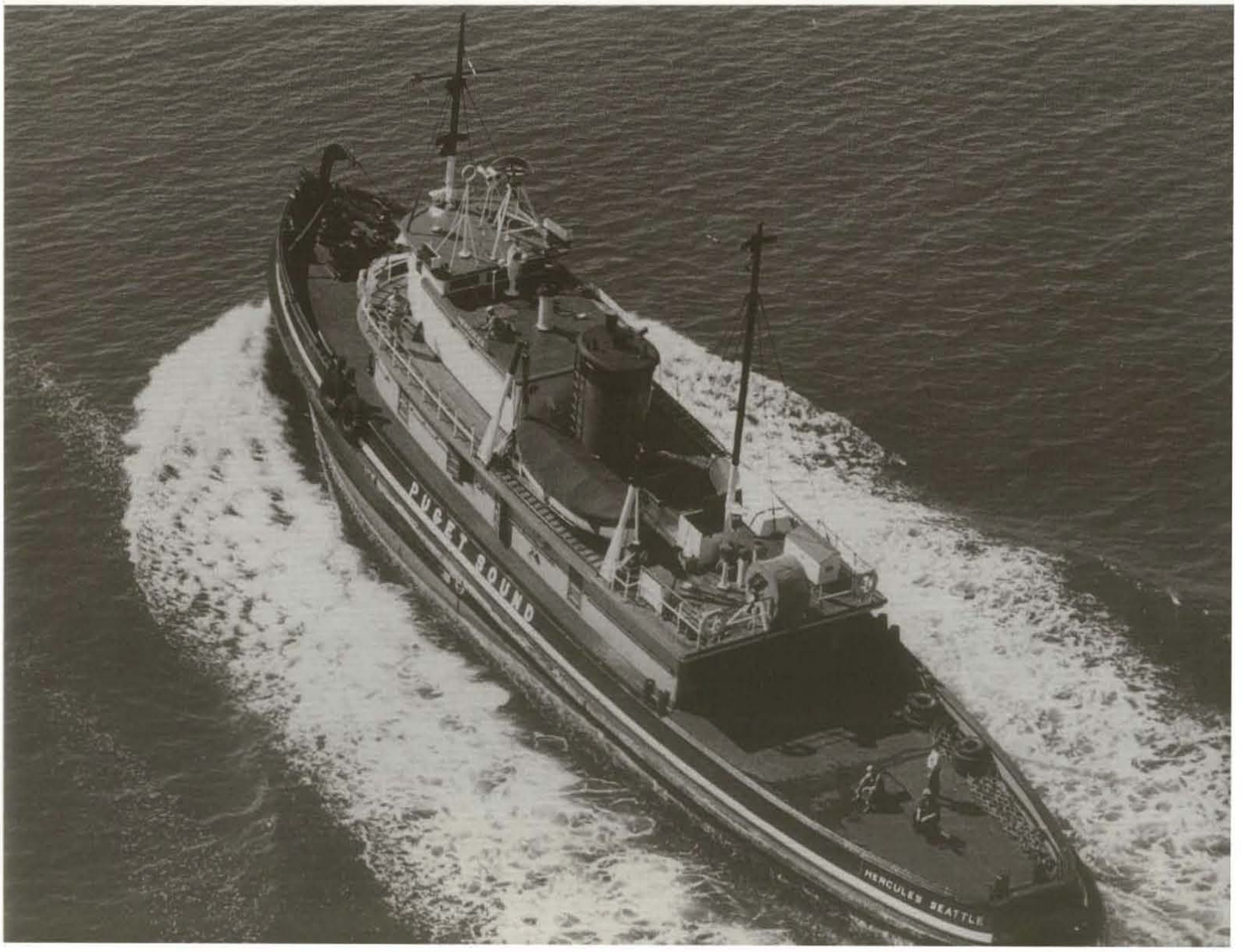
Additional miki-class tugs were acquired later by the company. The diesel-powered miki tug *Relief* was the flagship of the San Pedro Tugboat Company fleet in the late 1940s and early 1950s.

Numerous flatdeck and other barges were also bought for use by the various Crowley operating companies and locations.

With so many commercial maritime companies purchasing government war-surplus vessels, there was an increased requirement for ocean towing services. Using two of its newly purchased miki-class tugs, Shipowners and Merchants towed fourteen war-surplus LSTs (landing ship tanks) from San Francisco to Orange, Texas, for Humble Oil and Refining Company. The 310-ft. LSTs were towed in tandem in seven tows to the Gulf, where they were converted for use in supporting offshore drilling.

The Crowley company also undertook the towing of the badly damaged U.S. battleship *Oklahoma* from Hawaii, where she had been bombed at Pearl Harbor, to Oakland. She was to be scrapped at Moore Drydock. Despite temporary repairs intended to enable the *Oklahoma* to withstand the tow, she took on more and more water, and finally sank completely, nearly pulling with her one of the two miki tugs.

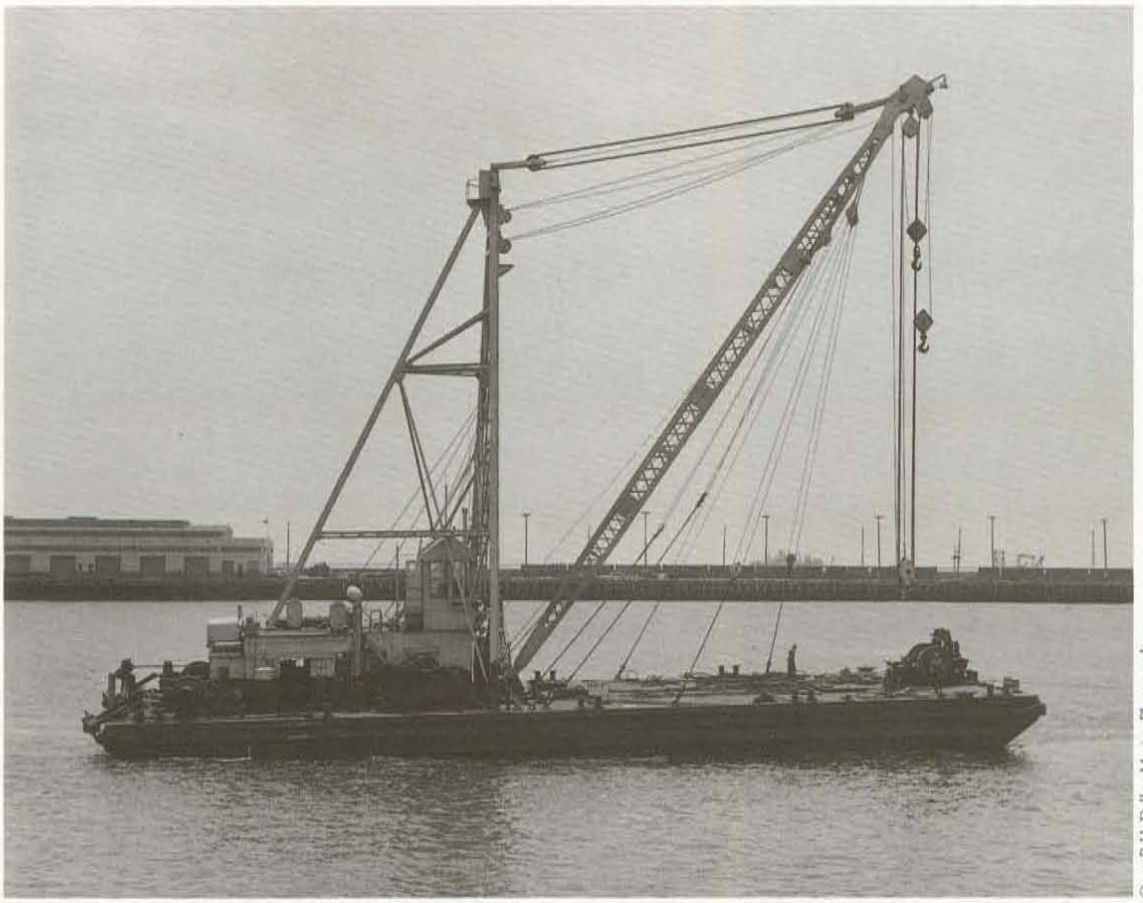
Hercules was a miki-class tug bought from the government after the war and operated in Puget Sound.
Jack's Photo Services



Return to derrick barge services

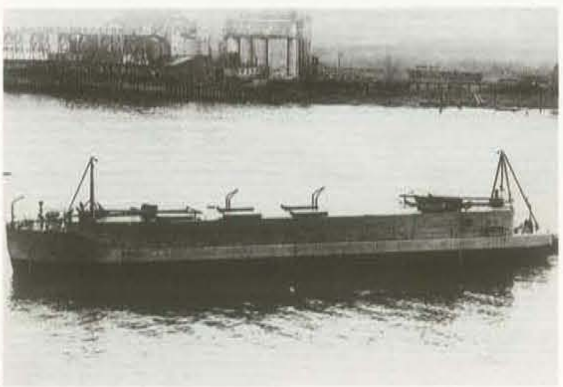
The war years were a time of prosperity for coastal derrick barge services, what with the tanks and other large military cargoes that had to be lifted aboard ship. As the war came to an end, the sole large derrick barge operator in Los Angeles Harbor decided to relocate his company to the East Coast. Charlie Rice, who had bought out Tom Crowley's interest in Smith-Rice Company in 1937, visited Thomas B. Crowley Sr. to ask whether a new joint venture might be arranged to perform services in Southern California.

Rice's proposal called for a new company, to be owned fifty-fifty by Rice and by



A 60-ton war-surplus derrick barge purchased for operation in Southern California by Smith-Rice Derrick Barges, Inc.

Capt. R.H. Dallas, Marine Photographer



Joe D. Williamson collection, P.S.M.H.S.

The PS 90 was a war-surplus YF (yard freighter) used to transport bulk molasses and other cargoes.

Jack's Photo Services

The miki-class tug Relief was purchased for use in Los Angeles Harbor.

Crowley. Thomas B. Crowley Sr. agreed, and Smith-Rice Derrick Barges, Inc. was established to perform dredging, marine construction, heavy-lifting, and other derrick barge services in the Los Angeles, Long Beach, and San Diego harbors. War-surplus derrick barges and a couple of bottom dump barges were purchased for the Southern California operation.

In Northern California, Smith-Rice Company continued its operations wholly owned by Charlie Rice, though Crowley's Bay Cities Transportation Company purchased the war-surplus steel rig *Derrick Barge 7*, which was outfitted with a Washington Iron Works 50-ton crane.

Joe D. Williamson collection, P.S.M.H.S.

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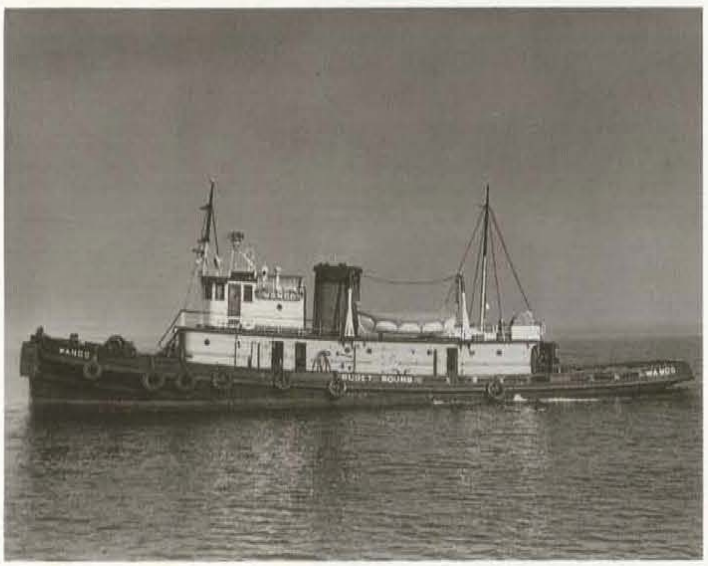


Crowley Maritime collection

Upper left, the miki tug Monarch *tows a dry dock in Puget Sound.*

Upper right, the PST&B tug Douglas *assists the* Ernie Pyle, *named for the U.S. war correspondent who accompanied U.S. troops to major fronts and was killed in 1945.*

Lower left, the Wando *performed Puget Sound towing and ship docking as well as coastwise towing before, during, and after World War II.*

Lower right, the miki-class tug Sea Prince *operated out of San Francisco.*

HISTORICAL PERSPECTIVE

1944	The Allies landed at Normandy on June 6, D-Day, in the largest amphibious invasion ever.
1945	Roosevelt, Churchill, and Stalin held the Yalta Conference in the USSR. Benito Mussolini was killed; Hitler reportedly committed suicide. Japan surrendered shortly after atomic bombs were dropped on Hiroshima and Nagasaki.
1945	Franklin Roosevelt died of cerebral hemorrhage and Harry S. Truman became the U.S. President.
1946	The General Assembly of the United Nations met for the first time.
1949	The North Atlantic Treaty Organization (NATO) was signed by twelve nations agreeing to protect each other from Communist aggression.
1950	South Korea was invaded by North Korea. President Truman sent U.S. troops to assist South Korea.

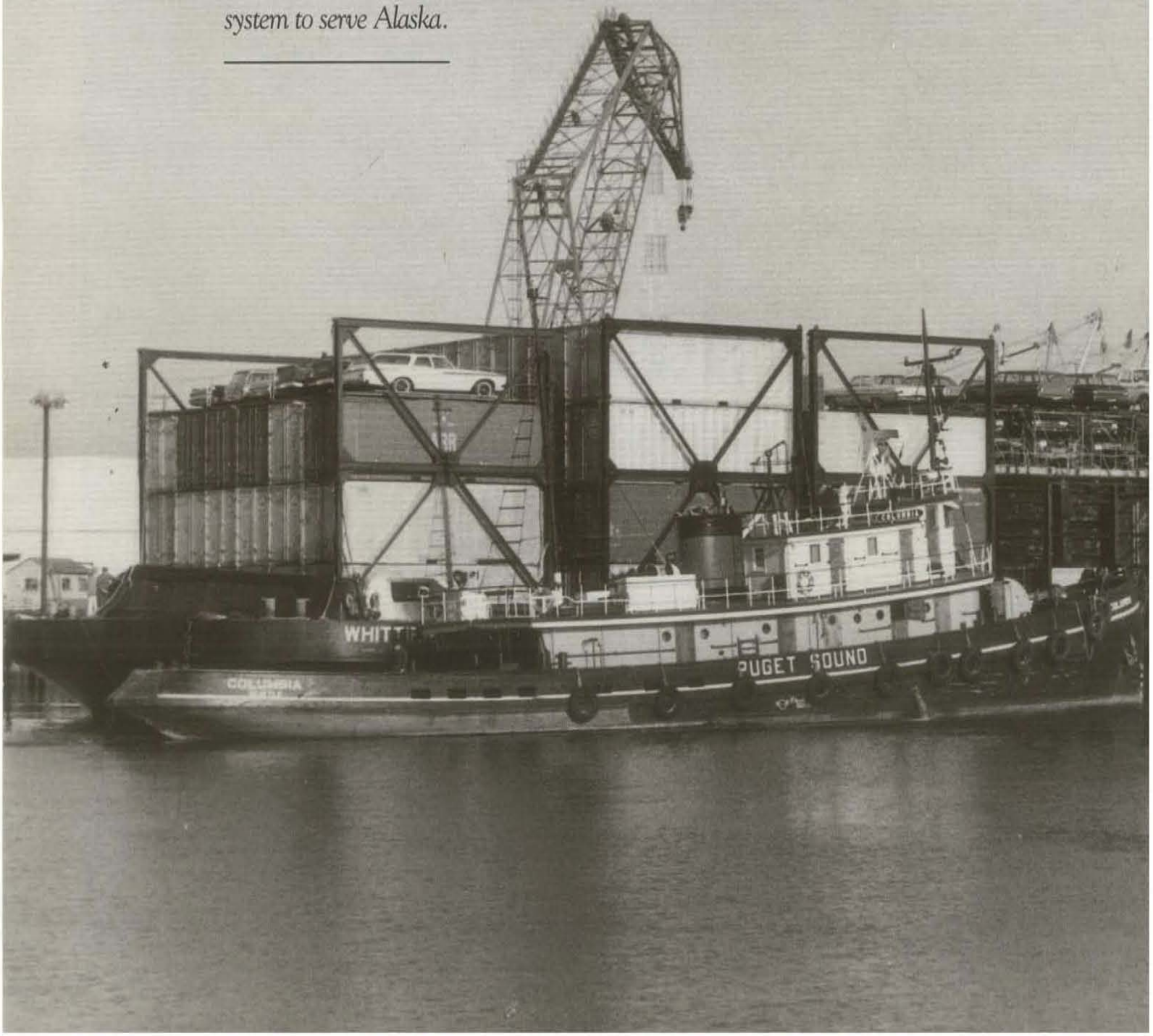
Jim Rettig was stationed in the Philippines during World War II.
Rettig family collection

Leo L. Collar
Herrington-Olson Photography

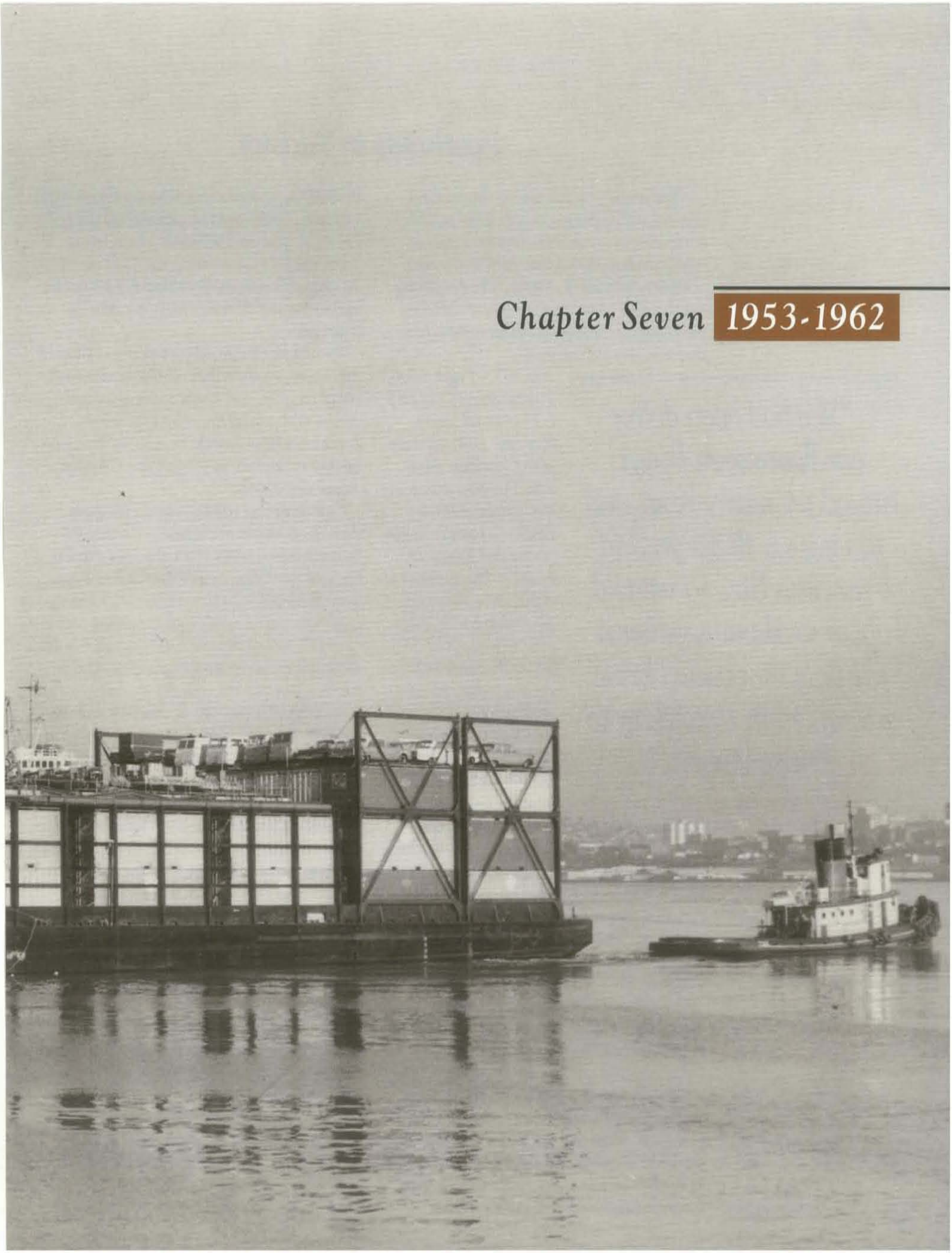
Jim Rettig served with the Army Transportation Corps for three years beginning in 1944, then returned to Crowley Maritime Corporation, where he became deeply involved in the maintenance, repair, and new equipment construction of all Crowley equipment.

Leo Collar joined Shipowners and Merchants Towboat Company in San Francisco in 1948 at the age of eighteen, working as a bookkeeper.

Puget Sound Alaska Van Lines, a Crowley company established in 1958, operated between Seattle and Seward, Alaska, and was the first fully containerized common carrier transportation system to serve Alaska.



Chapter Seven 1953-1962



Footholds in Alaska

After many years of performing coastal and oceanic towing services, the Crowley company, in its seventh decade, initiated regular transportation services to the vast northern frontier of Alaska. These services involved all coastal perimeters of the state including the untamed Arctic, where history was about to be made.

"We had been doing car-floating on Puget Sound for many years and towing car floats on San Francisco Bay, so we told them we'd put together a car float that would bring railcars from Ketchikan to Prince Rupert."

In 1953, Puget Sound Tug & Barge Co. (PST &B) entered into a fifty-fifty joint venture with Canadian interests. The new company was named Alaska-British Columbia Transportation Company (ABC). The purpose of ABC was to haul railcars loaded with bales of dissolving pulp on a 125-mile water link between railroad tracks at Ward Cove, in Ketchikan, Alaska, and Prince Rupert, British Columbia, a western terminus of the Canadian transcontinental railroad. The ABC link enabled pulp made by the Ketchikan Pulp Company to travel by rail all the way from Ketchikan to the U.S. Atlantic Coast, where it was used by the American Viscose Company in the manufacture of rayon yarn, a vital ingredient in tire tread.

The first roll-on/roll-off barge used by ABC carried eighteen railcars per load. The second, built a few years later, had a twenty-four-railcar capacity and was christened *ABC 24*.

Having seen the success of railcar barge service at its Prince Rupert terminus, the Canadian National Railway looked farther west and envisioned a similar rail/water link between Canada's west coast and South-Central Alaska. CNR officials visited PST&B representatives, who confirmed that such a rail link could be established between Prince Rupert and Whittier. Soon after, ABC barges were crossing the Gulf of Alaska with railcars from British Columbia, connecting at Whittier with the Alaska Railroad.

The Alaska Railroad had its own vision of the future, a vision that emphasized containerized cargoes, and it was seeking a water carrier who would move large numbers of containers from Seattle to Alaska. The ship operators weren't interested; the Crowley organization was.

Crowley's first regular service between Alaska and what are now the "Lower 48" states was formed in 1958, the year Alaska became the 49th state of the Union. Puget Sound Alaska Van Lines (PSAVL) was a common carrier service, transporting containers between Seattle and Seward, Alaska, where cargo was transferred to the Alaska Railroad for movement inland.

At PSAVL's inception, much of its cargo came by way of Crowley's industry ties to a company called Coastwise Line, which was in business primarily to move Crown Zellerbach newsprint from the state of Washington southbound to California. In order to increase profitability, Coastwise had built up a customer base for cargoes northbound from San Francisco and Seattle to Alaska. When its newsprint cargoes began to move by railroad instead of water, Coastwise turned to PST&B to handle the Seattle/Alaska leg of its northbound freight. PST&B utilized Puget Sound Alaska Van Lines to provide this service on a regular basis, and it became the first common carrier transportation system to Alaska to fully utilize containers.

Four new steel barges were built for the service, each capable of carrying 300 containers, stacked four high on deck. The original plans had called for the Alaska Railroad to provide containers for the operation.

Preceding page: Joe D. Williamson collection, P.S.M.H.S.

Joe D. Williamson collection, P.S.M.H.S.

PSAVL's barge Seward *carried containers, highway trailers, mobile units, and vehicles.*

Wrathall's Photo Finishing

Barge ABC 20, *operated by Alaska-British Columbia Transportation Company, was equipped with rails to transport railcars between Ketchikan, Alaska, and Prince Rupert, British Columbia, Canada.*

Joe D. Williamson collection, P.S.M.H.S.

A crane positions a car on top of a three-high load of containers aboard the barge Whittier. *Crowley developed a framework to secure containers for the ocean haul without the need for lashing.*

Joe D. Williamson collection, P.S.M.H.S.

Containers were loaded by forklift and crane onto PSAVL barges.

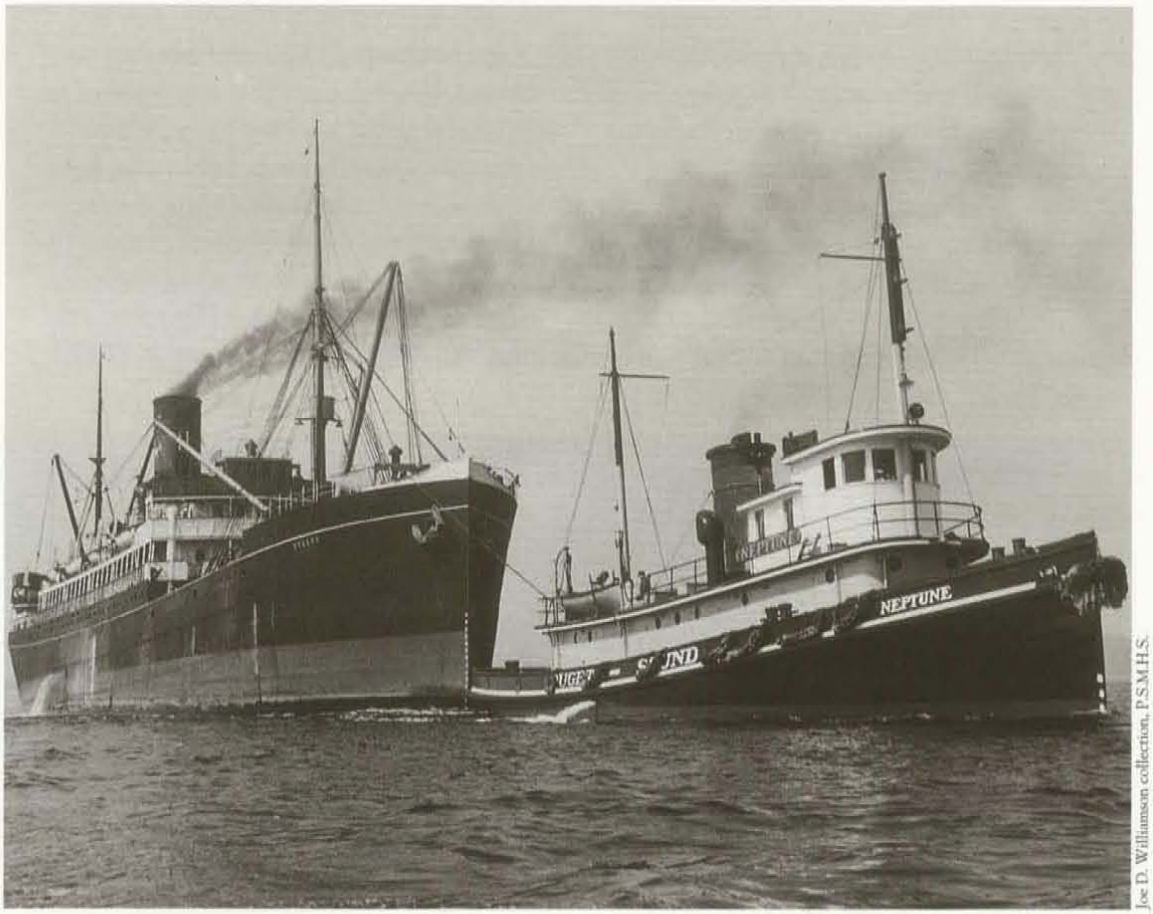
When those plans changed, the Crowley company had to purchase some 600 containers and install cranes at both Seattle and Seward. It also built a terminal at the Drummond Lighterage yard, on Harbor Island in Seattle.

With this equipment and terminal facility, PSAVL operated successfully through 1962, when it became apparent that a significant investment in containers, container cranes, and terminal upgrading was around the corner if PSAVL was to continue its operations and develop its market. Instead, the company decided to convert a new container barge, which was under construction at the time, into a railcar roll-on/roll-off barge and introduce a rail/water connection between the railroads in the Lower 48 states and the Alaska Railroad. *(Chapter Eight details the initiation of Alaska Hydro-Train in 1963.)*

Pier 6, on Seattle's Harbor Island, was home for Puget Sound Tug & Barge Company and Puget Sound Alaska Van Lines in the early 1960s. The PSAVL barge is loaded with containers stacked four-high.

Brant Photography

The PST&B tug Neptune *assists the ship* Otsego.



Joe D. Williamson collection, P.S.M.H.S.

Making history in the Arctic

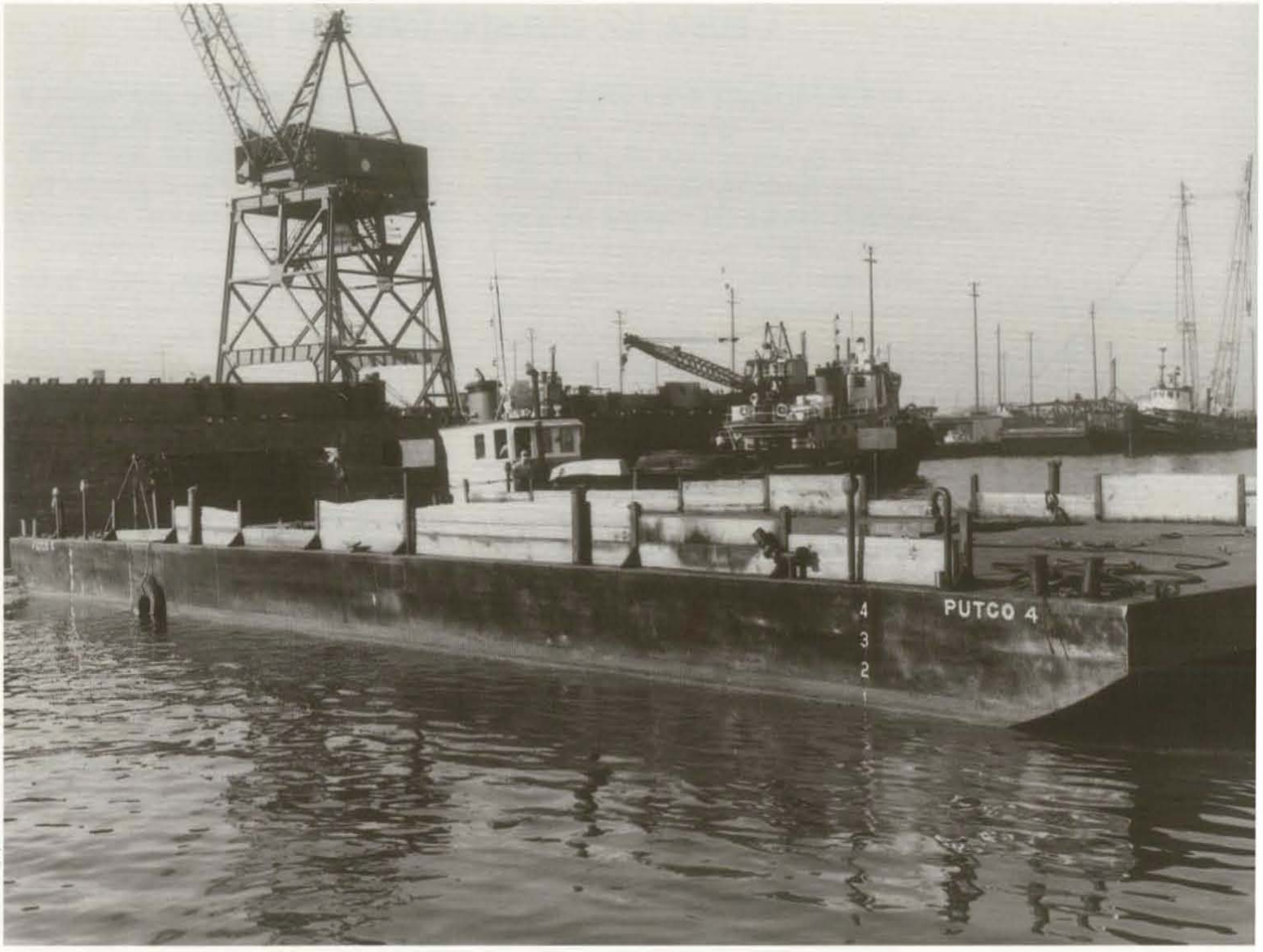
The Distant Early Warning (DEW) Line radar installations were built in 1955 by the U.S. government at various sites on the perimeter of Alaska, including the Aleutian Chain and across the northern coast into Canada. Resupply of the sites was completed by governmental agencies during the summer months by means of cargo ships, landing ship tanks (LSTs), icebreakers, and other Navy vessels. There was no history of commercial tug and barge operation in Arctic waters, but government officials responsible for deliveries of fuel and other supplies to the DEW Line sites were interested in a change.

In the summer of 1957 a portion of the DEW Line resupply, composed of the Bering Sea sites and the Aleutian Chain, was contracted to a tug and barge service based in Kotzebue, Alaska. By the following summer, with Crowley's agreement to take part in a joint venture arrangement for performance of the resupply, the government expanded the contract scope, adding the Arctic coastline. The Crowley organization acquired additional barges, tugs, lighters, and shoreside equipment in order to perform the deliveries to the Arctic outposts.

Timing was critical because of the ice pack that remains close to shore near Pt. Barrow throughout the year except for a narrow window of time, usually about six weeks in duration, when the prevailing winds push the ice back, making way for vessel traffic.

The 1958 season was a success not only in meeting all requirements of Project "Cool Barge," but also in completing the first penetration of the Arctic by commercial tug and barge services.

The joint venture came to be known as APUTCO, an acronym for Alaska Puget United Transportation Company, and



Aerolist Photographers, Inc.

The small refined products barge Putco 4, shown in Seattle, lightered DEW Line cargoes ashore in the Bering Sea for Puget United Transportation Company (later renamed APUTCO, Alaska Puget United Transportation Company).

continued as a joint venture operation into the mid-1970s, when Crowley Maritime acquired full ownership.

Outposts and native villages served by APUTCO, which is still in operation today, rely on the service for fuel and other bulk products, construction materials, groceries, vehicles, and heavy-lift cargoes. Virtually all of the remote sites, which today number some 130, are without dock facilities, and require the company to perform shallow-water and over-the-beach operations. Inland cargo transports, which often entail vehicular treks up remote mountain roads, are performed by specially tailored APUTCO trucks.

Coastwise transportation of lumber

In addition to activities in Alaska, there was plenty going on in Crowley's West Coast operations between 1953 and 1962.

During this decade the Crowley organization took a look at the coastwise transportation of lumber by steam schooners and determined that it could do a better job with barges. The company was in the process of designing barges that would carry lumber on deck and oil in tanks below deck when word got out to the industry, and one day Whitney Olson, of the Oliver J. Olson Company, which transported lumber by steam schooner, came to visit Thomas B. Crowley Sr. to discuss whether lumber barging might be done jointly by the two companies.

"A barge is a raft, and a raft that fits flat on the water and follows the contours of the water can't easily roll over. So long as the hull itself is full of air and it's so wide compared to its depth, stability is not a problem."

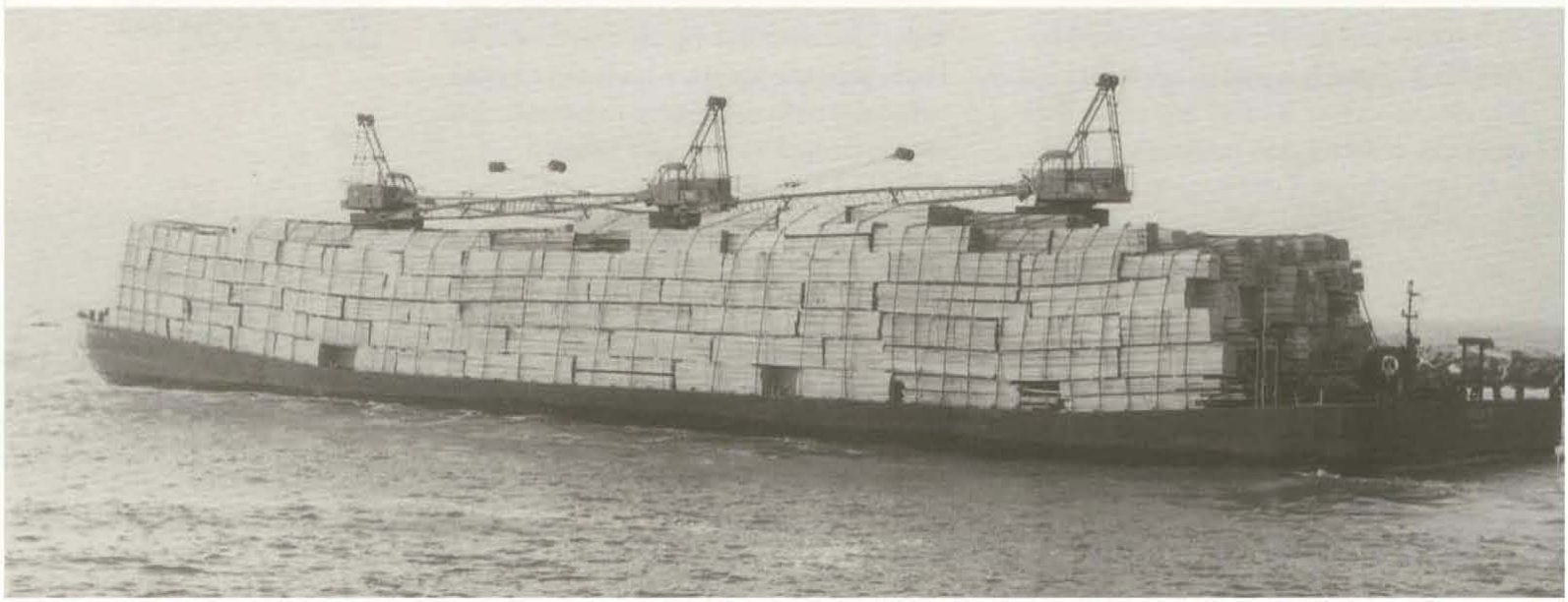
An agreement was reached for a fifty-fifty joint venture to be called Pacific Barging Company. It was Olson's intention to continue transporting lumber by steam schooner on the Pacific Coast in addition to the traffic handled by the new joint venture, a prospect that did not disturb Thomas B. Crowley Sr., to whom it was clear that 50 percent of the profit of hauling lumber by barges would be better than 100 percent of the profit of hauling lumber by ships.

Crowley planned to carry lumber in 4 x 4-ft. parcels stacked seven high. Some industry observers voiced the opinion that the Crowley barges would capsize if they were towed while bearing the anticipated 28-ft.-high loads.

Two Crowley-designed barges, *Pacific No. 1* and *Pacific No. 2,* were built for the new service. Each carried four million board feet of lumber, compared to the 1.7 million board feet carried by a large steam schooner.

After two years of joint venture operation, the Olson company decided to build barges of its own to replace some of its lumber ships. This was in conflict with the terms of the agreement with Crowley, and the joint venture was dissolved, with each company taking one of the two Pacific Barging Company vessels.

A new Crowley company called Oregon Coast Towing was formed when Crowley's lumber-barging activities began. Its purpose initially was to tow the lumber barges. As this business declined, the new company towed primarily Crowley oil barges.



Pacific No. 1 *was designed and built by the Crowley company to carry lumber on deck and petroleum products in tanks below deck.*

Jack's Photo Services

Ferry and excursion services on the Bay

The company's San Francisco Bay passenger services were also expanded during this period, under the direction of Les Bedient. Built and added to the passenger fleet between 1954 and 1958 were the *Harbor King*, *Harbor Queen*, and *Harbor Princess*, all 400-passenger vessels. In 1960 the company began ferrying commuters between San Francisco and Tiburon, in addition to its established operations running sightseeing excursions out of Fisherman's Wharf and chartering vessels for cruises on the Bay. Unlike its other services, Crowley's Tiburon ferry service was regulated by the Public Utilities Commission of the State of California, so Crowley created a company called Harbor Carriers, as a subsidiary of Harbor Tug & Barge, to control all of the company's ferry service operating rights.

Orte Damewood Photography

Crowley's passenger services facility at Fisherman's Wharf in the 1950s.

The 400-passenger Harbor King, *built in the 1950s, carries sightseers on San Francisco Bay.*

Crowley Maritime collection

At the same time, Harbor Tug & Barge purchased Golden Gate Scenic Steamship Company, a San Francisco passenger services company that transported passengers from Fisherman's Wharf to Angel Island and performed other excursion services on the Bay.

Innovations for bulk cargoes

In the mid-1950s, United Transportation converted barges to undertake the hauling of penetration (paving-grade) asphalt, which had never been transported by this method before. The primary vessel was *Barge 12*, a 230 x 46 x 16-ft. vessel outfitted with coils and capable of carrying 3,000 tons of cargo. *Barge 14*, a 272 x 68 x 20-ft. vessel, was also converted to this service.

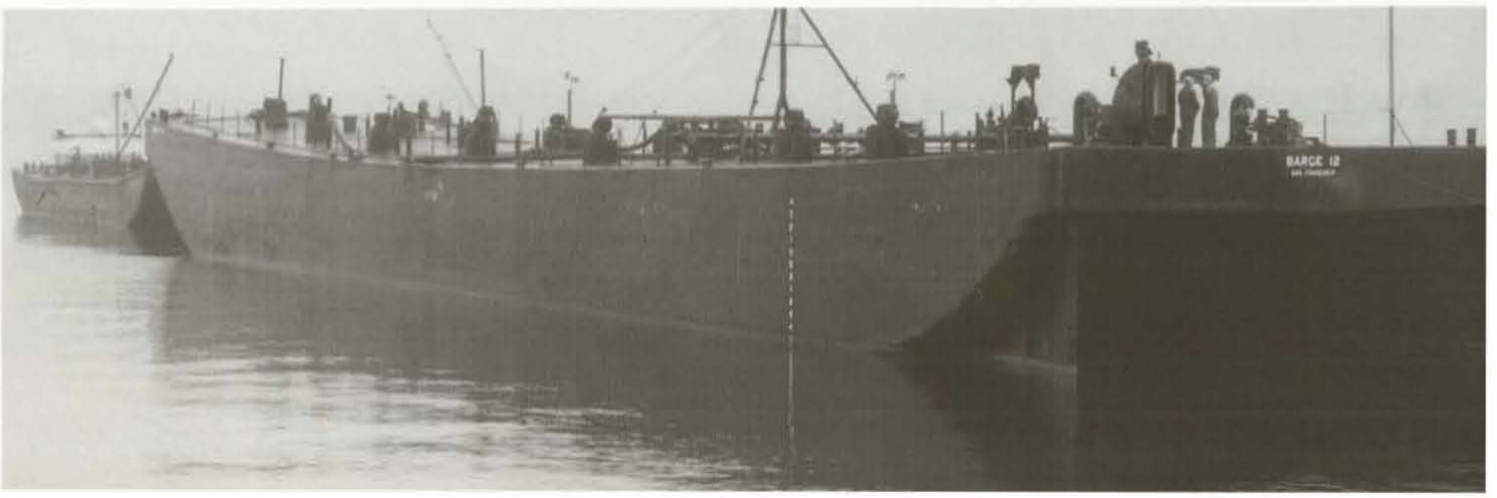
The first haul of hot asphalt by a Crowley barge was out of Portland to Anchorage. Loading involved heating the asphalt to 350 degrees so that it could be pumped in liquid state into the barge. Head of engineering Jim Rettig watched closely as the barge steel above the water line expanded three inches with the super-hot cargo. Rettig and workers aboard the barge wore wooden shoes to keep from being burned by the hot steel deck. The submerged portion of the hull remained somewhat cooler but was still hot enough to cause the water alongside to bubble. Because this was the first time such a move had ever been attempted with a single-hull barge, it was unknown whether the barge might break in two because of the differing degrees of heat expansion above and below the water line.

As it became apparent that the barge would withstand the stress, the tow got under way to Anchorage, where the Rogers and Babler Company had built a receiving terminal equipped with retort units, which were used to reheat the asphalt cargo. It took three days to return the cargo to a pumpable consistency. Before Crowley took on the challenge of transporting hot asphalt, the oil companies handled the difficult cargo by mixing in hot diesel oil, which enabled the asphalt to be pumped but had to be separated out subsequently by distillation.

Using *Barge 14*, Crowley later performed transportation of paving-grade asphalt from Pt. San Luis in Southern California to a Portland fiberboard plant, which used the product in making asphalt roofing shingles.

Another bulk cargo which the company endeavored to accommodate was copra, the dried coconut meat from which coconut oil is extracted. In 1954, Bulk Handlers Inc. was established as a fifty-fifty joint venture between Thomas B. Crowley Sr. and Marine Terminals Company to develop a more efficient way of removing bulk copra from ships arriving in San Francisco Bay from the South Pacific. The new company converted a 205 x 34-ft. LSM (landing ship medium) for the job, equipping it with a diesel engine and bulk moving equipment.

This line of business became obsolete when coconut oil companies started processing the copra into oil before transporting it to the United States. The LSM was dismantled and sold. Eventually Crowley bought full ownership of Bulk Handlers, and it continued as a stevedoring service in the Pacific Northwest and Alaska.



Barge 12 *was converted to transport and deliver paving-grade asphalt.*

The Seattle Times

A second shipyard in Oakland

By 1953, the Martinolich Ship Repair Company, which owned a marine railway and shipyard at the entrance to Lake Merritt in Oakland, California, had fallen into financial straits. Its creditors came to Thomas B. Crowley Sr. to ask whether the Crowley organization would buy the shipyard.

Not only did the Martinolich shipyard offer a larger yard capacity than Crowley's Pacific Dry Dock and Repair Company, it also had a 2,800-ton concrete floating dry dock built by the Navy for the performance of Navy contracts. The Pacific Dry Dock facility, also located on the Oakland estuary, was limited to

"Our plant at Pacific Dry Dock and Repair Company was a little small for our ever-increasing size of tugs and barges."

Martinolich Ship Repair Company, Oakland, which featured a 2,800-ton concrete floating dry dock, was acquired by Crowley in 1953.

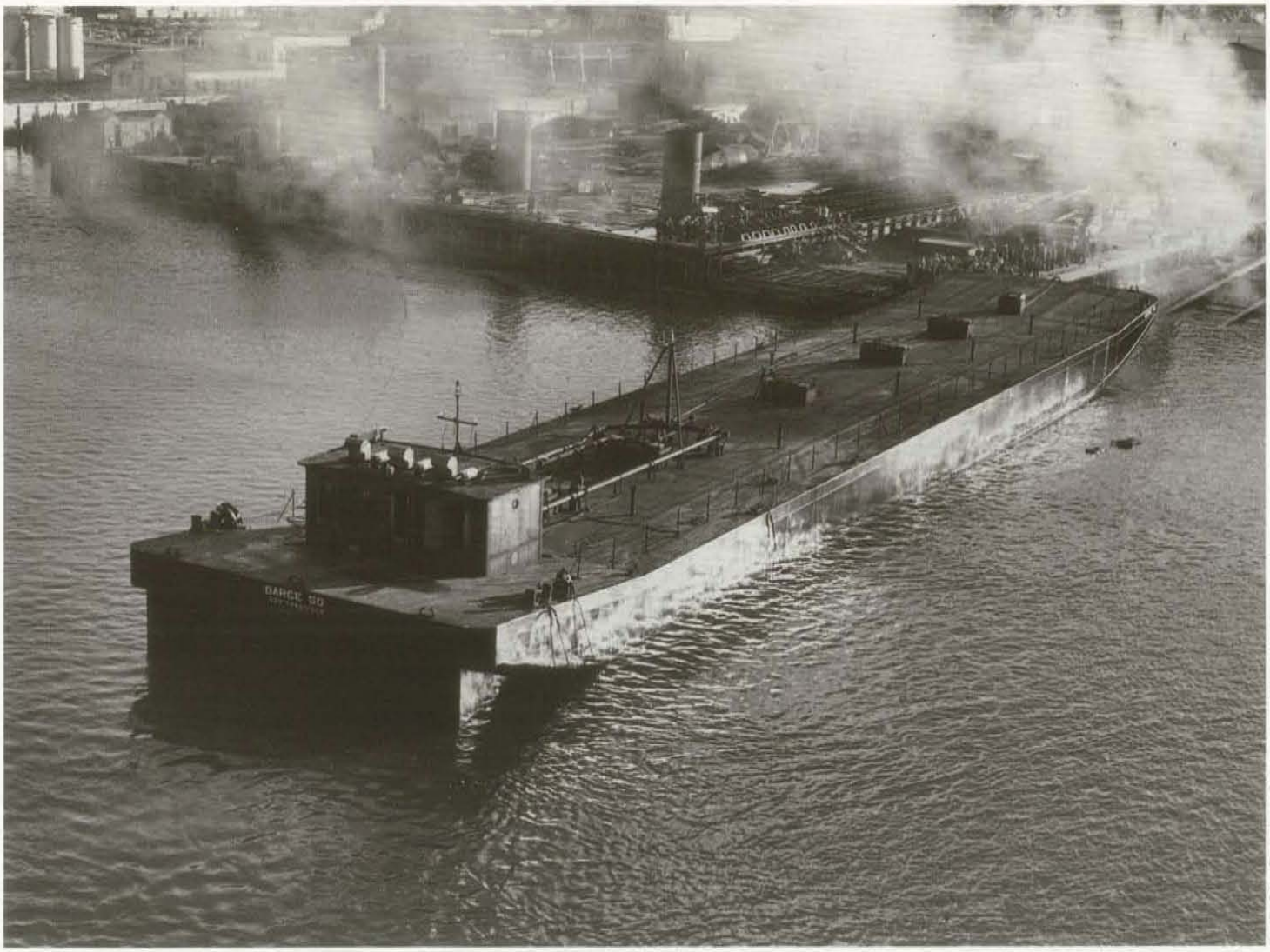
Crowley Maritime collection

1,000 tons for vessels entering its dry dock.

As for ledger considerations, the Martinolich shipyard was broke and owed a lot of money, but it offered a substantial tax loss carry-forward that the Crowley company could use so long as it operated the yard in the same businesses as had been provided there before, and it had a lease with the Port of Oakland for the plant.

Recognizing an opportunity which continued to provide benefits for nearly four decades, Crowley acquired the Martinolich shipyard, paid off the creditors, and undertook the business of dry docking Coast Guard cutters and other government vessels. The company also used the new yard to dry dock the largest vessels in its own growing fleet.

In the late 1960s, the name of the Martinolich yard was changed to Merritt Ship Repair.



Pacific Coast Engineering Co.

Numerous bulk petroleum barges were added to the Crowley fleet in the 1950s to keep pace with the company's growing involvement in petroleum transportation. Barge 50 came off the ways in 1953 at Pacific Coast Engineering Company. The 260 x 48 x 12- ft. barge had a capacity of 24,224 barrels.

HISTORICAL PERSPECTIVE

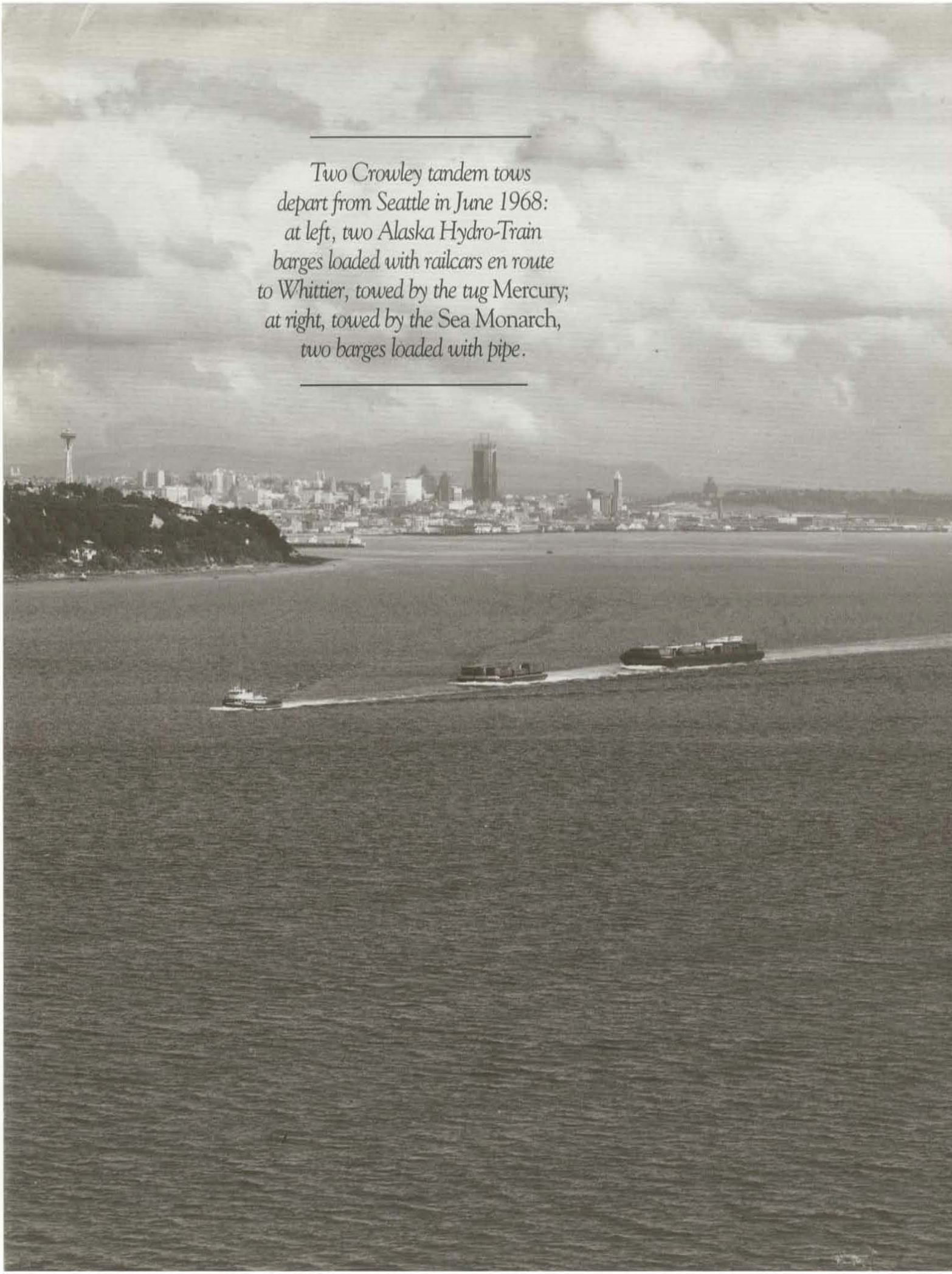
1953	The U.S. "liked Ike"— General Dwight D. Eisenhower was inaugurated President. An armistice was signed, ending the three-year Korean War.
1954	The U.S. launched the first atomic-powered submarine, Nautilus.
1957	Russia launched the first artificial earth satellite, Sputnik I.
1958-59	Alaska and Hawaii became, respectively, the 49th and 50th states of the Union.
1960	John F. Kennedy, age 43, was elected President of the United States.
1961	U.S. astronauts Alan Shepard and Virgil Grissom rocketed into space. The Berlin Wall was erected.

Thomas B. Crowley Sr. and John Lee, President of Puget Sound Tug & Barge Company, shared a memorable flight in 1958 from Barrow, Alaska, to Fairbanks in an aged Cessna 180 Tail-dragger. On site in the Arctic to oversee DEW Line cargo deliveries, the two company officials chartered the small plane because it was the only means of departure that evening from the native village on the northernmost point of Alaska.

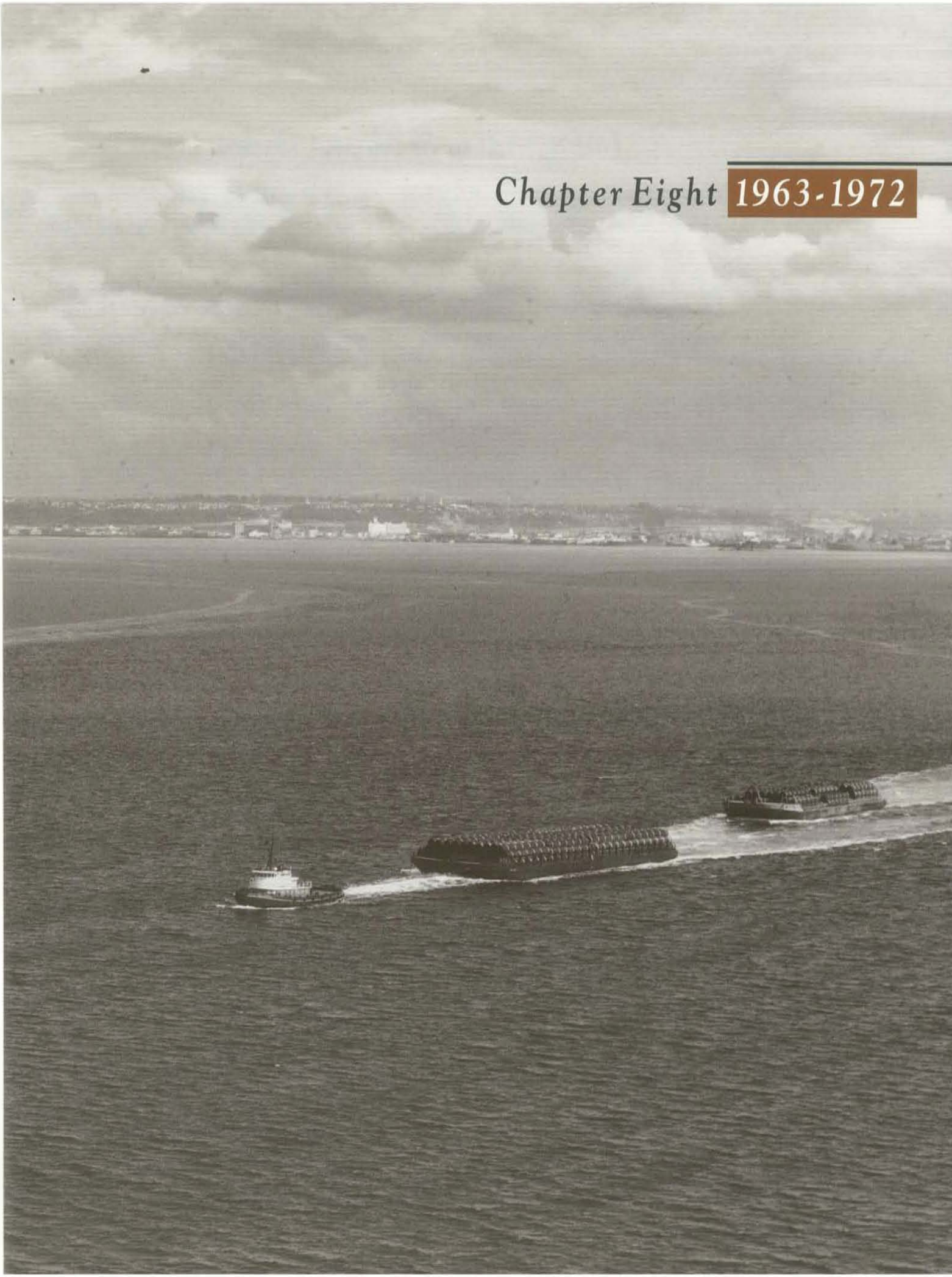
First, the prevailing winds forced the pilot to fly low to the ground in order to make headway. Next, the gyro compass failed, then the generator. Fuel taken on during a brief stop at Umiat was brought to the plane in open buckets and filtered through a chamois pulled from the pilot's back pocket.

As nightfall approached, the plane headed toward the Anaktuvuk Pass in the Brooks Range, emerging in growing darkness with no lights and no radio. In pitch blackness, the pilot found the tiny airfield at Bettles, in the wild between the Brooks Range and the Yukon River. The travelers spent the cold night with a family near the airfield and flew on to Fairbanks the next morning.

Photo courtesy Gordon S. Williams collection, Museum of Flight



Two Crowley tandem tows depart from Seattle in June 1968: at left, two Alaska Hydro-Train barges loaded with railcars en route to Whittier, towed by the tug Mercury; *at right, towed by the* Sea Monarch, *two barges loaded with pipe.*



Chapter Eight 1963-1972

Inauguration of Alaska Hydro-Train

Alaska Hydro-Train (AHT) already had a history before its first voyage in 1963.

In the late 1950s, the four major U.S. railroads serving Seattle had observed Crowley's successful railcar barge services between British Columbia and Alaska, and had requested suggestions from Crowley and two other water carriers as to how the U.S. railroad tracks might be linked with the Alaska Railroad.

"The American railroads decided they wanted a roll-on/roll-off railcar service from Seattle to Alaska and we commenced to convert our activity to this type of service when Alaska was struck by a serious earthquake in 1964."

Thomas B. Crowley Sr. recommended large railcar barges, but the railroad companies leaned in favor of a Japanese-built trainship called *City of New Orleans*, which had a capacity of forty-eight railcars. As a foreign-registry vessel, however, the trainship could not be operated in U.S. waters without violating the Merchant Marine Act of 1920 (also known as the Jones Act). Backers of the trainship service developed a Congressional bill to bring the trainship under American registry. Though introduced twice in consecutive sessions of Congress, the bill was ultimately tabled through the persistent efforts of Senator Clair Engle.

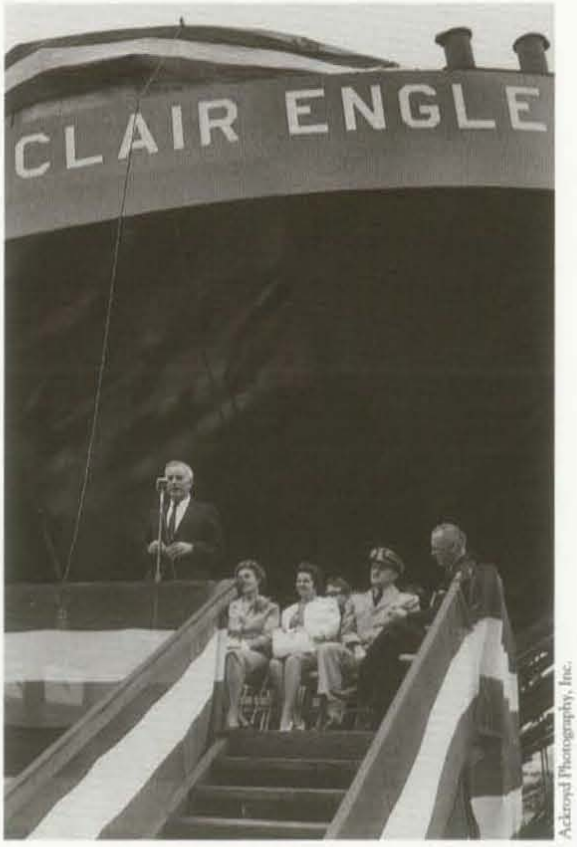
Meanwhile, the Crowley company had decided to convert a container barge, then under construction in an American shipyard, to rail service, and eventually agreements were reached with the American railroads for a barge link between Seattle and Whittier, Alaska. AHT's first barge was christened *Clair Engle* in honor of the California Democrat who was loyal to the principles of the U.S. merchant marine and had been so instrumental in the company's inception.

Railroad transfer bridges were built to provide for roll-on/roll-off loading and discharge of railcars, which connected with the Alaska Railroad for delivery along the Alaskan railbelt. North Star Forwarding Company was initiated to provide LCL (less-than-carload) freight consolidation services in Seattle.

For a year Crowley operated both AHT into Whittier and Puget Sound Alaska Van Lines into Seward, then came the earthquake in March 1964, when the dock at Seward was totally destroyed. Only the company's big crawler crane was saved. By happenstance the terminal manager had walked it off the dock the night before the quake, and it was used to help restore order.

PSAVL suffered substantial losses in the earthquake and rather than rebuild, Crowley decided to concentrate on its railcar service. PSAVL's 272- ft. steel container barges were sold or chartered, providing the capital to build four 350-ft. railcar barges. Soon even

Preceding page: Aerolist Photographers, Inc.



Ackroyd Photography, Inc.

Thomas B. Crowley Sr. speaks at the dedication of the first Alaska Hydro-Train barge, Clair Engle.

Crowley Maritime collection

The trainship Alaska *was used in AHT service briefly in the mid-1970s, operated between British Columbia and Whittier.*

Two AHT barges depart from Seattle on the 1,378-mile route to Whittier.

Photo by Wally Foxal

larger equipment was engineered. By the close of 1970, fifteen 400-ft. barges, with beams of 76 and 100 feet, had been built, some to carry railcars and some to carry pipe and other cargoes. The 350-ft. vessels had been converted to floating drill rigs and pipe-laying barges.

As for the trainship *City of New Orleans*, she was renamed *Alaska* and operated in competition with AHT for many years, running between British Columbia and Alaska. Then in the mid-1970s when several of Hydro-Train's 400-ft. barges were needed to carry oil industry cargoes to the North Slope, Crowley purchased the *Alaska* and operated her on the same Canada/Alaska route for two years before she was removed from service as economically unsound. Later sold for use on the Alaskan North Slope as a floating machine shop, the trainship was shipwrecked on the Siberian coast during a storm.

A new Crowley barge is equipped with rails at Pacific Coast Engineering in Oakland.

Herrington-Olson Photography

Railcar transfer bridges in Whittier (shown) and Seattle allow for easy roll-on/roll-off loading and offloading of railcars.

Crowley Maritime collection

Designing new classes of tugboats

By 1964, the company had begun to look for ways to reduce the cost of operating a tugboat so as to improve its overall efficiency, and had realized that the modern diesel engines could eliminate the need for the large engine-room crews that had been required by the earlier reciprocating steam tugs. Jim Rettig, working with Phil Spaulding, a naval architect in Seattle, developed a simplified engine room.

> *"We made the engine room very simple, with a minimum of valves and auxiliary equipment, and operated the engine from the pilothouse."*

With all the gauges, alarms, and controls located in the pilothouse, each tug required only a single machinery superintendent. Though this modernization of equipment and its resulting improvements in working conditions met with little or no opposition from unions, it created a stir among competitors, who objected to having to operate their twelve-person boats in competition with Crowley's eight-person tugs. It wasn't long before the tugboat industry followed Crowley's lead.

The first Crowley tugboat built with the simplified engine room was the 121-ft., 2,800-h.p. *Daring*, built in 1965.

By 1968, the Crowley company had designed and built the twin-screw *Sea Swift* class of tugboat, the most powerful tugs of their time. The new tugboats featured the pilothouse-controlled engine room and were powered by two sixteen-cylinder, General Motors Electro-Motive Division turbo-charged engines generating 7,000 horsepower. Five *Sea Swift*-class tugs were added to the Crowley fleet between 1968 and 1970.

The Daring*-class tug* Vigilant, *featuring the simplified engine room, was launched in 1966.*

Herrington-Olson Photography

The 7,000-h.p. Sea Swift *was built in 1968.*

Crowley Maritime collection

Crowley's Nikiski Dock, near Kenai, Alaska, was established to provide shoreside support for oil industry operations in Cook Inlet.

Ward M. Wells, Photography

The Falcon *was one of the crew boats redeployed from Cook Inlet to Singapore in 1971.*

Crowley Maritime collection

Crowley Maritime collection

The 165 x 36 x 15-ft. supply boat Rig Pusher *was added to the fleet in 1967 for use in supporting offshore drilling and construction activities.*

Support for the oil patches: Cook Inlet, Indonesia

In the 1960s, Crowley was called on by oil industry officials to help tame the waters of Cook Inlet, Alaska, where oil had been discovered beneath the inlet floor. Huge tidal variations and twelve-knot currents made a difficult chore of setting platforms without the high-horsepower tugs in use today, and no marine support structure was then available.

Crowley responded to both problems, rafting tugs together to achieve the necessary horsepower, and establishing a company called Rig Tenders to furnish supply boat and crew boat services.

In 1967 the company built Nikiski Dock, also known as Rig Tenders Dock, near Kenai. The facility continues in operation today, providing stevedoring services, cargo-handling equipment including cranes and forklifts, and warehouse storage.

When Cook Inlet activities declined in 1971, much of the oil industry support equipment amassed there was sent to Singapore, where Crowley operated under the name General Marine International Services. Some twenty-six tugs, barges, supply boats, and crew boats crossed the ocean to work in the Indonesian oil patch, transporting personnel and supplies to and from floating drill rigs.

A Crowley supply boat attends a drill rig platform in Cook Inlet, Alaska.

Crowley Maritime collection

First years of the sealift

When oil was discovered at Prudhoe Bay and neither air transit nor overland service was suitable for the kinds of cargoes needed at Alaska's North Slope, the oil industry turned to Crowley. The operational techniques required had already been pioneered by Crowley in 1958 when the company took the DEW Line resupply equipment into the Arctic and brought it back out again within the narrow and unpredictable window permitted by the region's formidable climatic and oceanic conditions.

"We were in a good position when oil was discovered on the North Slope."

The first sealift, in 1968, entailed two bargeloads with a total of 6,000 tons, including a drilling rig, casing, and drilling mud, transported from Anchorage to the beach at Foggy Island, about ten miles east of Prudhoe Bay. In 1969, thirty-two barges composed the sealift fleet, departing from Seattle with 73,000 tons of dry cargo and 125,000 barrels of petroleum. This time the company augmented its tug navigation capability with air-borne ice reconnaissance. Flying as low as fifty feet above the surface, the Crowley ice-recon guide maintained communication with the lead tug, giving headings for the safest route through waters mined with ice floes and recognized as one of the most hazardous areas of the world.

Because of the risks involved in marine operations in the far north, Crowley formed a joint venture with Pacific Inland Navigation called Arctic Marine Freighters to perform the transports to Prudhoe Bay. Many of the first eight sealift seasons were conducted with Pacific Inland Navigation's participation before Crowley acquired that company's oceangoing equipment in late 1975.

Soon the oil industry was ready to increase the value and sophistication of the cargoes entrusted to the service. Rather than continue to transport construction materials to the Arctic and try to build complex installations in such a forbidding environment, oil companies began constructing modules in the Lower-48 states, complete to the last detail, and committing them to Crowley barges for the long haul north.

In 1970, the Crowley sealift delivered 187,000 tons of cargo, transported aboard thirty-six barges. It was the largest nonmilitary sealift in maritime history to that date. A national magazine writer, on hand to observe the massive project, wrote: "The North Slope challenge had all the timing, the logistics, the excitement, and the risks of a 'D-day' landing—without the gunfire."

Then, as suddenly as it had sprung up, the activity at the North Slope quieted as

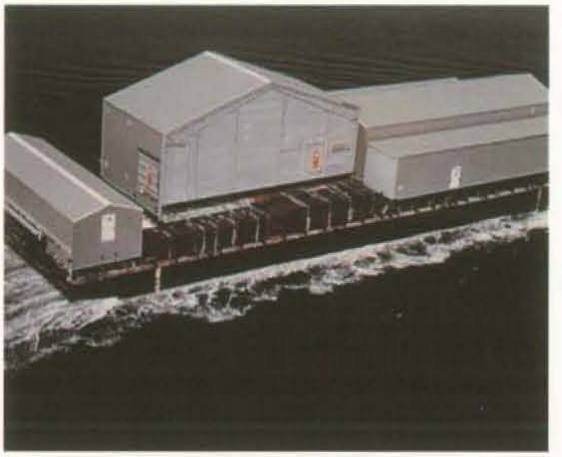
Thirty-six bargeloads of pipe, casing, and other oil field materials were included in the 1970 sealift.

Crowley Maritime collection

the question of environmental safety took precedence. The 1971 sealift carried just over 16,000 tons on six barges. Among the modules was a 437-ton unit that was the first big module taken to the Slope. Thomas B. Crowley Sr. later recalled: "I was at Prudhoe Bay the night they discharged the 437-ton module and rolled it off the barge. Everybody was anxious to see what would happen, whether the barge would break in half or what, because the first time you take 437 tons at a crack off a barge, you don't know what will happen. Anyway, it came off very nicely during the night."

In 1972, only two barges traveled north, carrying 6,192 tons. It would be three years before another sealift flotilla of significant size gathered on the West Coast for the journey to the North Slope.

Crowley Maritime collection



Left, a crawler transporter moves a 1971 sealift module to shore.

Right, Barge 255 *carried oil well casing, drilling chemicals, and modules weighing up to 437 tons in the 1971 sealift.*

Crowley Maritime collection

The first dock at Prudhoe Bay was composed in part of barges sunk to rest on the bottom. Shallow-draft barges lightered pipe and other cargoes to this dock from larger barges anchored offshore.

Port of Seattle Photo

Entering the Caribbean trade

Having amassed a large fleet of tugs and barges to serve oil field development in Alaska, then having that fleet idled by Congressional debate about the future of the trans-Alaska pipeline, Crowley officials sought other utilization for this marine equipment. Plans were developed for a weekly roll-on/roll-off freight service between Miami, Florida, and San Juan, Puerto Rico. The service, to be called Caribe Hydro-Trailer, would use Crowley's 400 x 100-ft., single-deck barges to carry ninety trailers per load. The primary competition in the trade was a company called TMT Trailer Ferry, which operated roll-on/roll-off service with war-surplus LSTs (landing ship tanks) and had been struggling with bankruptcy for many years.

"In 1971, the pipeline was stopped by the ecologists, so we had tugs and barges that we sent down to Florida and instituted a roll-on/roll-off service with trucks to Puerto Rico."

Before the Puerto Rico Ports Authority would grant harbor space to Crowley in San Juan, the company had to agree to initiate a second freight service to Puerto Rico out of the U.S. Gulf. Despite its belief that a Gulf service would not be economically sound, Crowley officials elected to enter the Caribbean trade, running Caribe Hydro-Trailer out of Miami to San Juan and another new company called Puerto Rico Marine Lines (PRML) out of the Gulf.

Initiated in 1971, PRML provided common carrier freight service from the mainland ports of Galveston, Port Arthur, and Lake Charles to San Juan, Ponce, and Mayaguez in Puerto Rico. The service operated three large warehouse barges, each with some 380,000 cubic feet of covered cargo area. Palletized cargoes were loaded and unloaded by means of forklifts. Two of the barges had formerly been used by the company in a seasonal service, called Salmon Carriers, carrying canned salmon on pallets from Bristol Bay, Alaska, to Seattle.

After several months of Caribe Hydro-Trailer operation, it was clear that there was insufficient traffic on the Miami/San Juan route to support both TMT and the Crowley trailer service, so Crowley time-chartered its Miami barges to TMT and discontinued its own service.

In two years, Crowley would be back to acquire TMT Trailer Ferry and begin a steady growth to become the largest roll-on/roll-off carrier in the mainland/Puerto Rico trade.

A warehouse barge used by the Crowley company Puerto Rico Marine Lines to carry cargoes between the U.S. Gulf and Puerto Rico.

Crowley Maritime collection

Photo by David Acevedo

Caribe Hydro-Trailer vessels pass by Old San Juan, Puerto Rico.

Creating a passenger service in Southern California

Santa Catalina Island, located just twenty-six miles across San Pedro Channel from Long Beach, California, was a place Southern Californians had heard about, but not many had actually been there. The reason was the limited availability of transportation service to and from the island.

What service there was, was provided by the steamer *Catalina*, a 2500- passenger ship originally built to service the island by William Wrigley Jr., who had made a fortune manufacturing chewing gum. Wrigley bought the island, built a famous dance pavilion at Avalon, and, through the 1920s, ran three steamers to transport large numbers of patrons to and from the island. Wrigley died during the Depression, and the Catalina Island service began a steady decline. It was eventually sold and two of the steamers were laid up. By the 1960s, the *Catalina* was running only during the summer months with smaller boats providing transportation for island residents during the winters.

In the late 1960s, the Crowley company—which had by that time nearly eighty years of experience in passenger transportation on San Francisco Bay— was approached about buying the steamer, but it decided instead to create a new Catalina service. It took almost two years to obtain a California Public Utilities Commission certificate to operate. Finally in May 1970, Crowley's Catalina Cruises initiated services with two crew boats, the *Eagle* and *Mallard*, formerly used to carry

The crew boat Eagle *was used to initiate passenger services in Southern California.*

Crowley Maritime collection

The Harbor Queen *and* Harbor Princess *were lengthened from sixty-five to eighty-five feet in the early 1970s to increase passenger vessel capacity on San Francisco Bay.*

Wion, May Day Pictorial News

oil industry personnel in Cook Inlet, Alaska.

Company officials could see the potential of the service, and construction was ordered at the Colberg Shipyard in Stockton of five 700-passenger vessels. The first, the *Long Beach Prince*, was delivered in 1971, and all five were in service by 1977.

Operating year-round, with reliable daily sailings, Catalina Cruises revitalized the island and its tourism. The company was soon breaking records for passenger volumes to and from the island. Les Bedient, who had long overseen passenger services in San Francisco, was responsible for the startup and successful development of Catalina Cruises.

Crowley Maritime collection

Five 700-passenger vessels were built for service between Southern California and Santa Catalina Island.

Orne Damewood Photography

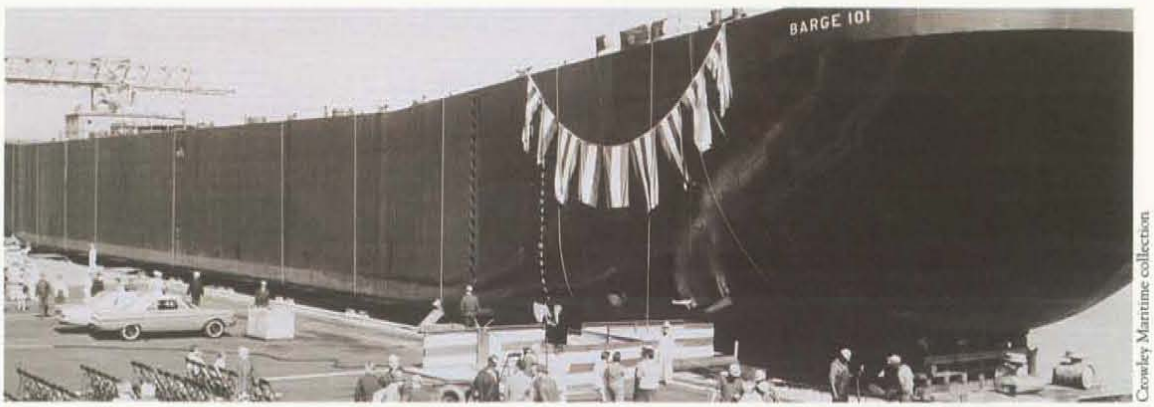
In San Francisco, the 450-passenger Harbor Emperor *was added to the fleet in the late 1960s.*

Oil spill response

Marine Oil Pickup Services (MOPS) was organized in 1970 as a logical extension of the company's involvement in bulk petroleum transportation. Based in Seattle, MOPS provided oil spill prevention and cleanup services throughout the Puget Sound area and Alaska, as well as consultation for oil companies preparing emergency plans. It also served as operating contractor for Clean Sound Cooperative.

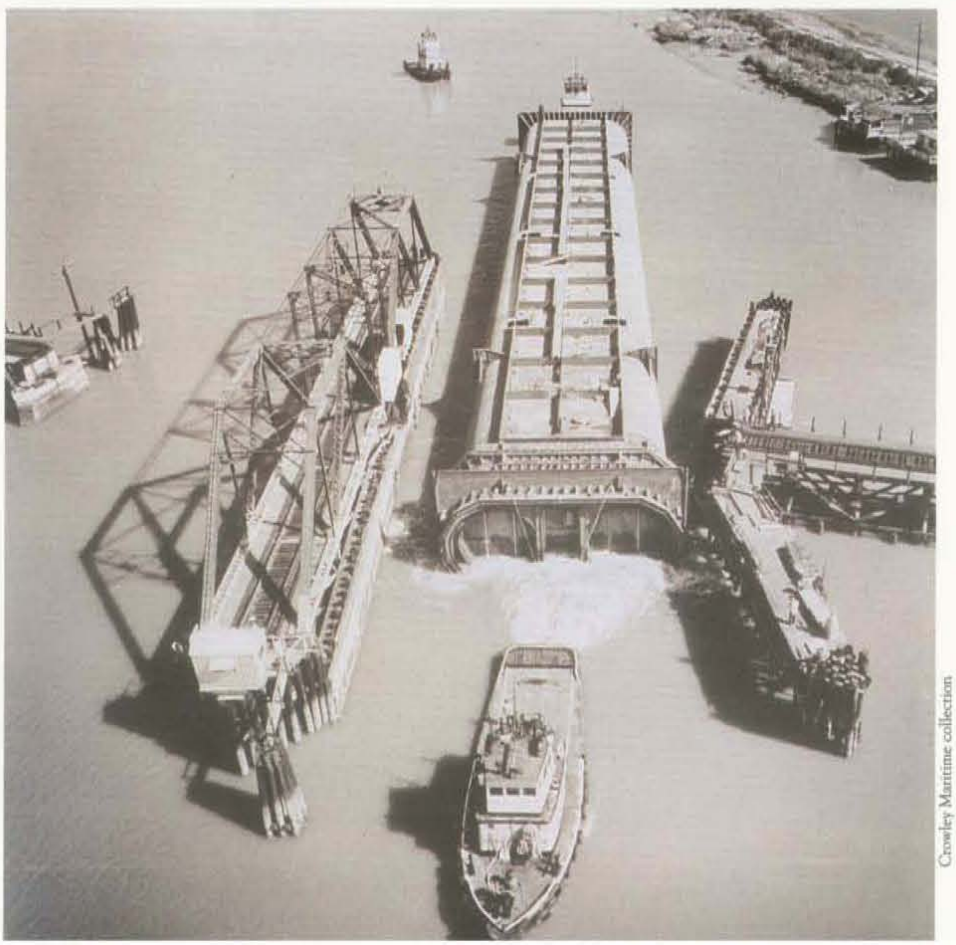
In Northern California, Harbor Tug & Barge Company provided oil spill response services for industrial customers and operated equipment for Clean Bay. Both Clean Bay and Clean Sound Cooperative are cleanup service groups composed of oil producers, storers, and transporters.

MOPS laid the foundation for the company's more extensive involvement in environmental services, beginning in 1975, under the name Crowley Environmental Services.



Crowley Maritime collection

The 13,000-dwt Barge 101 was built in 1968 for bulk petroleum service. Salvaged after a marine accident in 1972, she was returned to service with a center section removed and a new displacement of 11,400 deadweight tons.



Crowley Maritime collection

A Harbor Tug & Barge Company tug tows a 324-ft. section of the Bay Area Rapid Transit (BART) District's twin-bore tube down the Napa River in 1968. The tube had been fitted with a flexible seismic protection joint at Kaiser Steel.

HISTORICAL PERSPECTIVE

1963	President John F. Kennedy was assassinated in Dallas, Texas. Lyndon B. Johnson succeeded him as President.
1965	U.S. planes began flying combat missions over South Vietnam; the number of U.S. troops in the area rose to 184,000.
1969	Apollo II astronaut Neil Armstrong made "one small step for man" on the surface of the moon.
1969	U.S. President Richard Nixon began withdrawing troops from Vietnam, but sent troops to Cambodia the following year.
1972	Richard Nixon was reelected in a landslide victory, but there had been a break-in at the Democratic National Committee headquarters in the Watergate complex.

Thomas B. Crowley Sr. receives the NDTA Award in 1970.

Orie Danewood Photography

Crowley Maritime collection

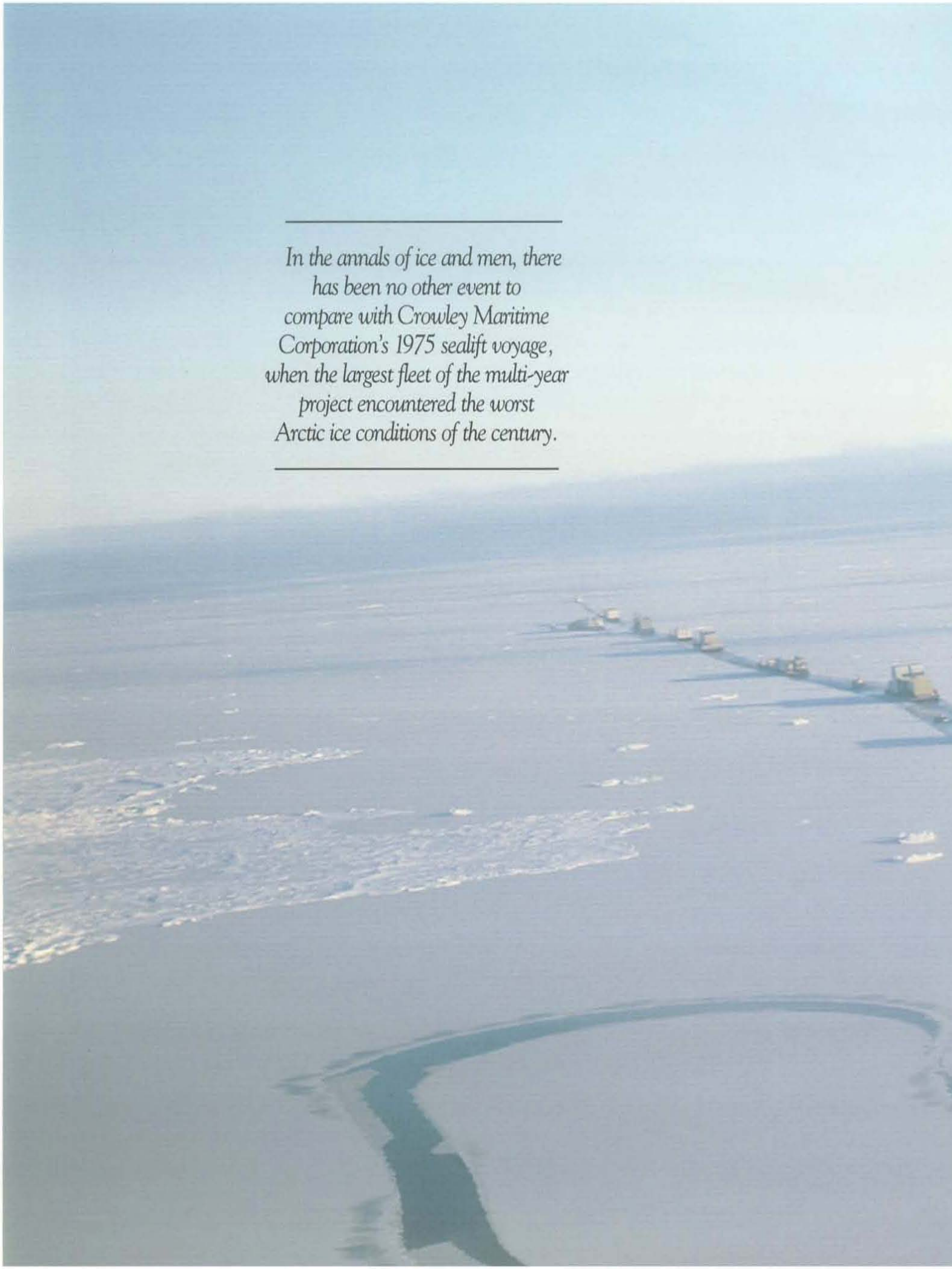
Thomas B. Crowley Sr. and his father, Thomas Crowley, at a luncheon in the late 1960s.

The company's founder, Thomas Crowley, died at his home in San Francisco on August 4, 1970, a few months before his ninety-fifth birthday. Newspaper coverage honored him as "King of Tugs," and the San Francisco Chronicle *noted: "He began life as a Whitehaller...and he ended it controlling most of the tugs between San Diego and Alaska."*

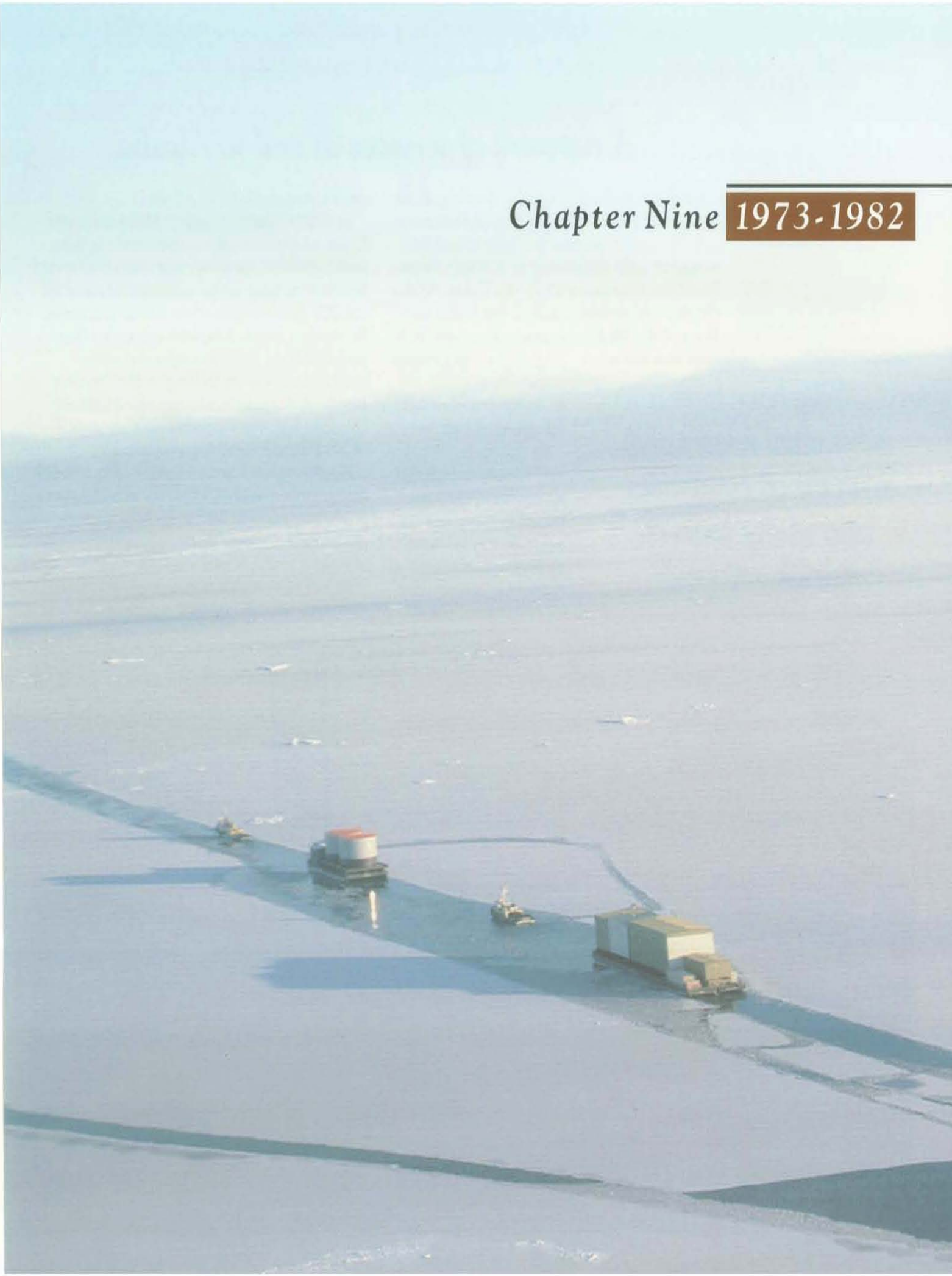
Thomas B. Crowley Sr. was selected by the Secretary of Defense, on the recommendation of the Joint Chiefs of Staff, to receive the National Defense Transportation Association (NDTA) award, an honor given annually for achievements that have contributed most to the transportation and logistics industry in support of national security.

Ben Fasman Photos

Lester C. Bedient, pictured in 1967, began working for Harbor Tug & Barge Company in 1929 at the age of sixteen. He has continued with the company ever since, playing a key role in Crowley harbor and passenger services. Today he is a consultant to the corporation.



In the annals of ice and men, there has been no other event to compare with Crowley Maritime Corporation's 1975 sealift voyage, when the largest fleet of the multi-year project encountered the worst Arctic ice conditions of the century.



Chapter Nine 1973-1982

A network of services in and to Alaska

Mukluk trucks are loaded with forty-eight-inch pipe destined for the trans-Alaska pipeline. Mukluk Freight Lines was owned and operated by Crowley until 1987.

For three years, 1971-1973, the fate of the trans-Alaska pipeline was held in abeyance as U.S. lawmakers and environmentalists struggled with the energy vs. ecology issues. Finally in November 1973, the Trans-Alaska Pipeline Authorization Act was made into law and the largest commercial construction project ever undertaken anywhere in the world to that point resumed full speed ahead.

"We have built a substantial relationship with the oil companies over many years of reliable service."

By this time, Crowley had already completed six sealift voyages on behalf of the oil industry, and now it began to develop a network of services to support the oil companies' efforts on the Arctic Coast of Alaska.

In 1973 Crowley acquired Mukluk Freight Lines, an established Alaskan trucking firm, and in the following two years Mukluk hauled more of the forty-eight-inch pipe required for the 800-mile pipeline than any other carrier. By the late 1970s, Mukluk's expanded fleet included large vacuum trucks and water trucks to service rigs drilling in the Prudhoe Bay field. A Mukluk affiliate called Oilfield Services, Inc. was formed to provide a variety of landside services for the oil industry.

Northwestern Construction, headquartered in Anchorage with field offices in Valdez and Fairbanks, was acquired in 1974 to provide general contracting. Its primary activities were relocated to the North Slope in 1980.

In 1975 the sealift flotilla faced the worst Arctic ice conditions of the century. In fleet

Crowley Maritime collection

Preceding page: Photo by Wally Foxal

size, it was the largest sealift in the project's history, with forty-seven barges amassed to carry 160,000 tons of cargo. That included 179 modules reaching as tall as nine stories and weighing up to 1300 tons each, and 40,000 tons of general cargo—virtually everything necessary to sustain North Slope pipeline construction over the following twelve months.

Sealift tugs and barges stood by off Alaska's northwest coast for nearly two months waiting for the ice to retreat. Ten barges took advantage of a small lead in the ice in early September and arrived at Prudhoe Bay after a harrowing five days. At this point, general cargo barges carrying lesser-priority equipment and supplies were rerouted to Seward for overland transport of their cargoes, but the module barges continued the wait until late September when the ice floe finally moved back. At once, Crowley's tugs and module barges lined up behind a Coast Guard icebreaker for the slow and arduous haul. When the ice closed again, it took as many as four tugs to shove the barges, one at a time, through the ice.

Photo by Wally Foxal

The 1975 sealift module barges were stopped by ice within a mile of the discharge site. Some modules were lightered to the dock, but most remained offshore on barges frozen in place until the oil companies extended a gravel causeway from the dock to the captive vessels.

Photo by Wally Foxal

Oceangoing module barges wait together offshore as three tugs maneuver one barge at a time, lightering modules to the dock.

Crowley Maritime collection

The 9,000-h.p. tug Warrior, *newly built in time for the 1975 sealift, rushes to leave the Beaufort Sea as ice threatens its departure.*

"It was so late in the season and the ice was so thick we could only get within a mile of the dock, so we left the barges there, brought the tugs out, and during the winter the oil companies built a further ramp out to the barges."

By the 1976 sealift voyage, Crowley had designed and built the 310 x 105-ft. *Arctic Challenger*, an ice-breaking barge propelled by two 9,000-h.p. tugs to break a path through offshore ice. It has accompanied every sealift fleet since, often carrying cargo itself.

By the close of 1975 Crowley Maritime Corporation had acquired the oceangoing assets of Pacific Inland Navigation Company, a joint venture partner in APUTCO and Arctic Marine Freighters activities. Crowley not only assumed full responsibility for the DEW Line and Prudhoe Bay operations, but also formed new companies to utilize the added equipment. Arctic Lighterage was formed to engage in freight services at Bering Sea ports, and Pacific Alaska Line began providing general freight service from Portland to Alaska, and contract transports of bulk urea southbound from Kenai to West Coast ports. Two warehouse barges, *Oregon* and *Alaska*, were built for PAL service in 1975 and 1976.

Also in 1975, Crowley Maritime bought a fleet of all-weather, all-terrain Rolligons, which are vehicles that use large low-pressure rubber air bags to traverse unpacked snow or summer tundra, as well as sand or marshland. The company had first used Rolligons in the

Photo by Wally Foxal

Crowley's icebreaker barge Arctic Challenger, *pushed by two 9,000-h.p. tugs, opens a path through the ice for the 1976 sealift fleet.*

Photo by Wally Foxal

Barge 570 is loaded in Seattle with APUTCO cargoes bound for remote destinations in Alaska.

Photo by Wally Foxal

A 4,300-ft. gravel causeway was built by the oil companies in 1975-76 to provide for offshore docking and discharging of oceangoing barges.

early 1960s in the resupply of DEW Line sites. With the purchase of a fleet of Rolligons, a company called Crowley All Terrain Corporation (CATCO) was established to use the vehicles in the Arctic, providing transportation of personnel and supplies to remote sites. CATCO vehicles haul everything from fuel to housing, and are also used to build ice roads strong enough for conventional vehicles to travel. In 1982, Crowley designed and built light all-terrain vehicles (LATVs) to expand the capability of its

A tank truck is offloaded from APUTCO's landing craft Koyuk onto the beach at Barrow, Alaska, without benefit of docking facilities. The oceangoing barge 570 waits offshore.

Photo by Brian Moran

Pacific Alaska Line uses warehouse barges to haul bulk urea between Alaska and the U.S. West Coast. The barges also accommodate containers, modular units, and heavy or oversize cargoes.

Far right, a PAL-West barge departs from Seattle en route to Western Alaska with a load of containers, small boats, and building materials.

Ackroyd Photography, Inc.

Camera Craft, Inc./Bill Houlton

North Slope CATCO operation to construct ice roads on the Beaufort Sea.

Pacific Alaska Line-West was initiated as a seasonal common carrier service to carry general cargo from Seattle to Western Alaska ports on the Bering Sea from Bristol Bay to Barrow. In 1977, the company used the icebreaker *Arctic Challenger* to achieve the earliest spring delivery to Nome by sea on record.

In mid-summer 1977, the 800-mile trans-Alaska pipeline carried its first oil from Prudhoe Bay to Valdez. Crowley Maritime was selected by Alyeska to provide vessel assist and escort services at Valdez for tankers loading crude oil to transport to the Lower-48 states. Three 7,000-h.p. *Sea Swift*-class tugs were outfitted with firefighting equipment, including hydraulic telescoping masts that extend to seventy feet above the waterline. Pumping systems aboard the tugs deliver seawater at the rate of 3,500 gallons per minute and foam at 2,500 gallons per minute. Every tanker arrival and departure since the terminal commenced operations has been assisted by Crowley tugs.

Shaughnessy & Company, based in Auburn, Washington, was acquired in 1981 primarily to serve the heavy-lift/heavy-haul requirements of Crowley's land operations in Alaska, including loading/offloading and

Crowley tugs assist the loaded tanker Keystone Canyon *in its departure from Valdez Harbor.*

Photo by Brian Moran

Assigned to Valdez tanker-assist and escort services, the Sea Swift *is outfitted with firefighting capability.*

Photo by Brian Moran

Photo by Brian Moran

overland transports of sealift modules. Shaughnessy provides heavy-hauling, rigging, and millwright services throughout the western United States and Alaska. Today, its trailer fleet includes rubber-tired, hydraulic platform trailers (RTVs) that can haul modular units up to 3,200 tons and can be configured with as many axles as are needed for the cargo.

Despite the obvious success of its equipment at the North Slope, Crowley spent no time resting on its engineering laurels. In 1982, four *Point*-class tugs and a 205 x 90-ft. icebreaker barge were added to the Prudhoe Bay fleet specifically to perform shallow-water services in support of the oil industry.

Top, Shaughnessy & Company's rubber-tired trailers are used to offload modules from barges at Prudhoe Bay and transport them inland.

Bottom, rolling on large rubber bags, CATCO vehicles transport equipment, supplies, and personnel to remote regions of the Arctic at any time of the year, in any kind of weather. Because the imprint left by the bags is almost nil, the CATCO vehicle operates on delicate tundra with virtually no damage.

Crowley Maritime collection

State-of-the-art vessels

Perhaps more than any other single type of equipment, Crowley Maritime's *Invader*-class tugboats have come to symbolize the company. Powered by the largest General Motors engines built in the U.S. for ocean service, the tugs are well known in the industry for strength, quick response, maneuverability, and towing speed.

Between 1974 and 1977, twenty-five *Invader*-class tugs were built for Crowley for ocean towing services in all types of locations and weather conditions. The tugs are fully instrumented with pilothouse control, and are designed with twin screws and triple rudders. Outfitted with double-drum towing winches, they are used to tow the company's large oceangoing barges either singly or in tandem.

To upgrade its oil barging services, Crowley added nine 450-series petroleum barges, each with a capacity of 16,200 long tons, to the fleet. Some of the vessels were built new and some were converted from existing 400 x 100-ft. barges. Four of the vessels were built with heating retort systems and coils for use in keeping black oil cargoes in a liquid state.

In 1980, Crowley converted for salvage service a 205-ft. trailer ship formerly used in the company's Caribbean operations. The *Arctic Salvor* was outfitted with four DTW-150 Skagit double-drum winches, each capable of pulling 350,000 pounds. The vessel was powered by two D-399 Caterpillar engines and equipped with a 200-h.p. bow thruster, a helicopter deck, an ice-strengthened hull for Arctic operations, and special ballasting capabilities. That summer it made its first of many trips north husbanding the sealift flotilla. Based in Seattle, the *Arctic Salvor* is the largest salvage vessel on the West Coast and provides more line pull for freeing grounded vessels than any other salvage vessel in the United States.

The tug Invader *was the first of a series of 9,000-h.p. tugs, the mainstay of Crowley's tug and barge operations.*

Ackroyd Photography, Inc.

Crowley Maritime collection

Crowley's 450-series petroleum barges offer a cubic capacity of 149,700 barrels each.

Camera Craft, Inc./Bill Houlton

The Arctic Salvor is outfitted for all types of heavy-duty marine salvage work, including wreck removal, raising sunken vessels, underwater repairs, and refloating grounded ships.

Making a big splash in the Caribbean trade

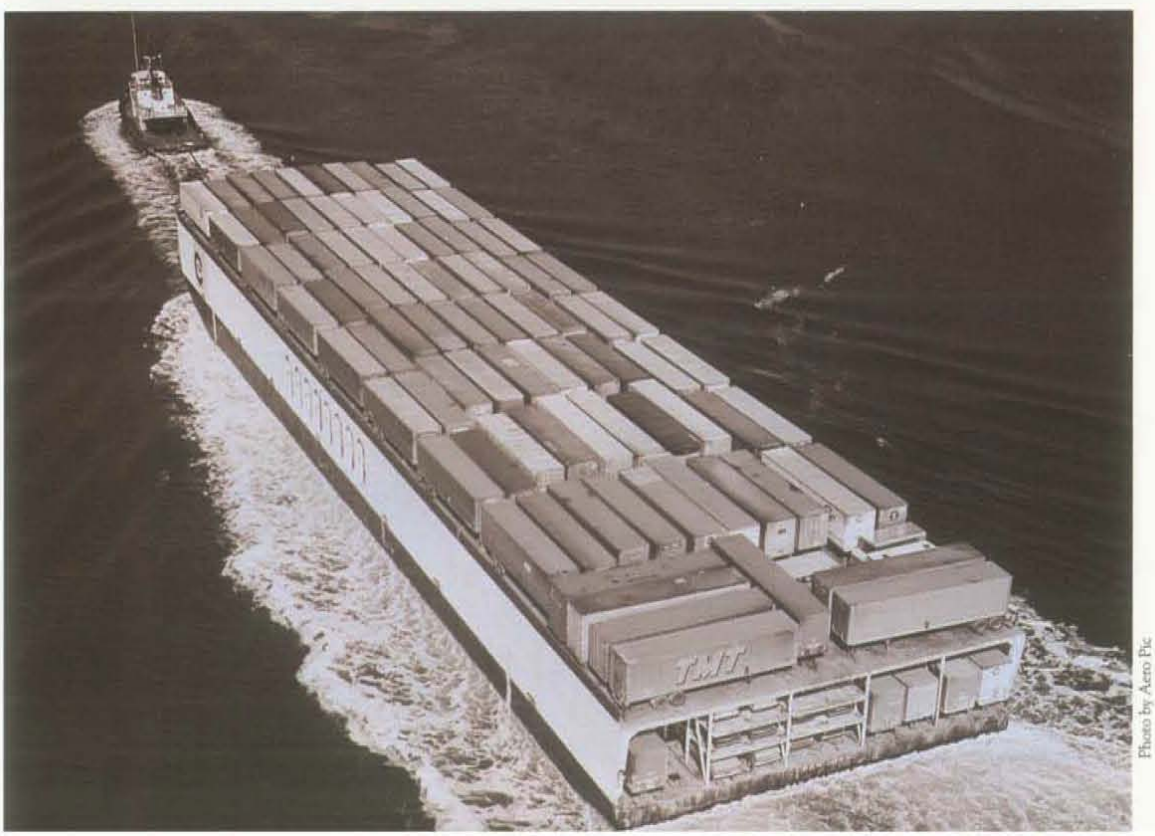
In 1974 Crowley Maritime Corporation acquired its former competitor in the Puerto Rico trade, TMT Trailer Ferry, which at the time was in bankruptcy court. Under Crowley ownership, the company was renamed Trailer Marine Transport (TMT) and became the focus of a concerted effort to develop marketshare.

Jacksonville, Florida, was added to Miami as a mainland port of call, and more single-deck, 400 x 100-ft. barges were added to the service. These barges were subsequently double-decked, then later triple-decked to increase TMT's trailer capacity. Several of the company's new 9,000-h.p. tugs were committed to TMT. In 1978, the company developed the world's largest roll-on/roll-off barges for the mainland/Puerto Rico service. At 580 x 105 x 57 feet and featuring three decks, the new barges carried up to 374 40-ft. highway trailers apiece. The first to come off the ways was *La Reina*, and all four were in service by early 1980.

New terminals in Jacksonville and San

Four 580 x 105 x 57-ft., triple-deck barges operate between the U.S. mainland and Puerto Rico, carrying up to 374 40-ft. trailers each.

Photo by Brian Moran



A second deck added to TMT's 400-ft. trailer barges doubled their capacity to 180 trailers each.

Photo by Aero Pic

Juan were constructed to support TMT's rapidly growing activities. In 1980 a new terminal, capable of handling TMT's world-class triple-deck barges, was built at Lake Charles, Louisiana, and the operations of Gulf Caribbean Marine Lines, formerly known as Puerto Rico Marine Lines, were rolled into TMT. In 1982, TMT established a terminal on Petty Island, near Philadelphia, and began providing roll-on/roll-off trailer service between the Northeast and Puerto Rico.

In the late 1970s, TMT established a trailer service to Venezuela, and CTMT, Inc. was formed to provide weekly sailings from Puerto Rico to the Dominican Republic. Feeder services from Puerto Rico to other islands in the Caribbean were performed by Interisland Intermodal Lines. Crowley Towing and Transportation was formed to provide contract tug and barge services, including movement of bulk petroleum cargoes, on the Gulf and East coasts.

By the end of the 1970s, TMT was the largest RO/RO carrier in the Caribbean trade operating out of the U.S. Southeast and Gulf. As an adjunct to its common carrier services, TMT had also begun to provide such ongoing contract services as the resupply of the U.S. Naval base at Guantanamo Bay, Cuba, and the movement of bulk mail to Puerto Rico for the U.S. Postal Service.

West Coast services continued to evolve

"What we try to do is give a good service to the customer no matter what we do, whether it's taking people to Alcatraz or moving gasoline to Crescent City or hauling modules up to the North Slope or railcars to Whittier or whatever."

At Pier 41, San Francisco, the company built a new terminal office and passenger facility.
Photo by Brian Moran

Crowley's San Francisco passenger services, previously identified as Harbor Tours, came to be known as the Red & White Fleet during the 1970s. The 500-passenger *Royal Star*, the 450-passenger *Royal Prince*, and 150-passenger *Royal Knight* were added to the fleet, and, in 1982, ferry services were initiated between Sausalito and Fisherman's Wharf. The company's Pier 41 facilities were upgraded with a new pier, pier platform, and two-story terminal building.

In Southern California, Catalina Cruises was continuing to grow at a record-breaking pace. The company was operating between Long Beach and San Pedro on the mainland and Avalon and Two Harbors on

Santa Catalina Island, as well as providing harbor cruises and whale-watching voyages. By 1981, the service was carrying over half a million passengers per year round-trip from Southern California to the island and back.

Columbia Marine Lines, formerly owned by Pacific Inland Navigation and acquired by Crowley Maritime in 1975, operated a fleet of grain/petroleum barges on the 700-mile-long Columbia/Snake river system in the Pacific Northwest. Under Crowley ownership, CML's fleet was enlarged and improved in efficiency, then finally sold in 1987.

Hawaiian Marine Lines (HML) was

A pusher tug maneuvers grain/petroleum barges on the Columbia River.

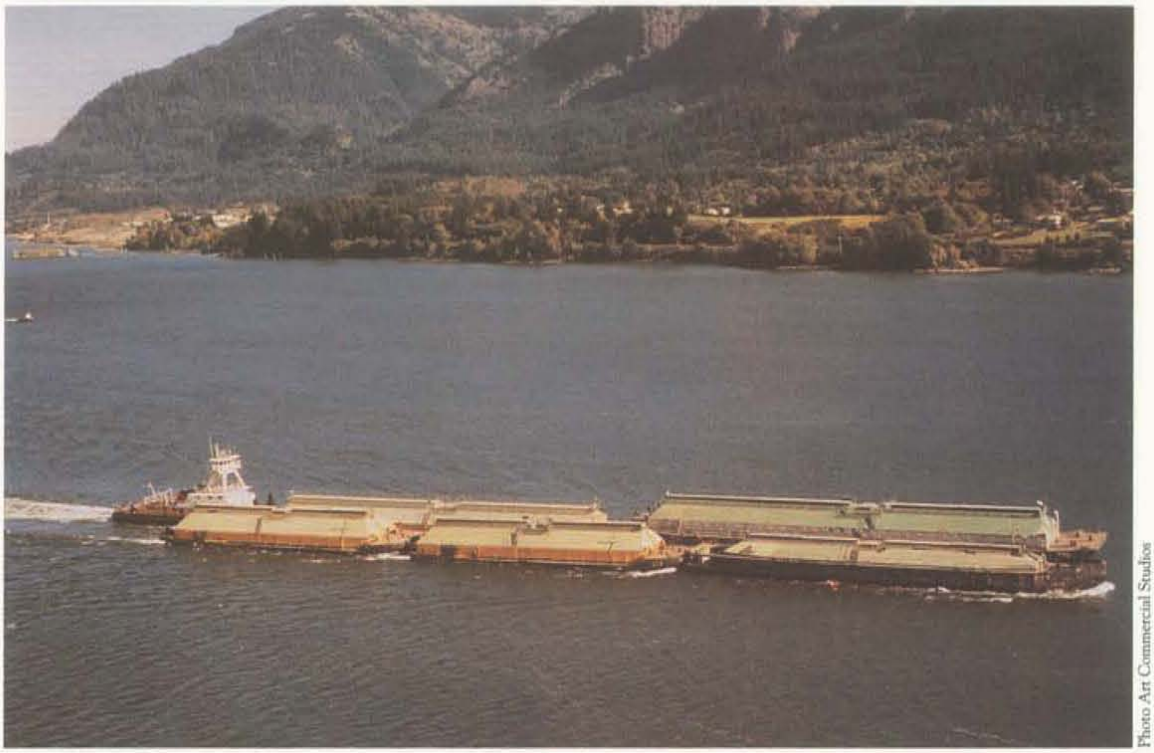


Photo Art Commercial Studios

Towed in tandem, a container barge and a warehouse barge deliver HML cargoes to Honolulu.

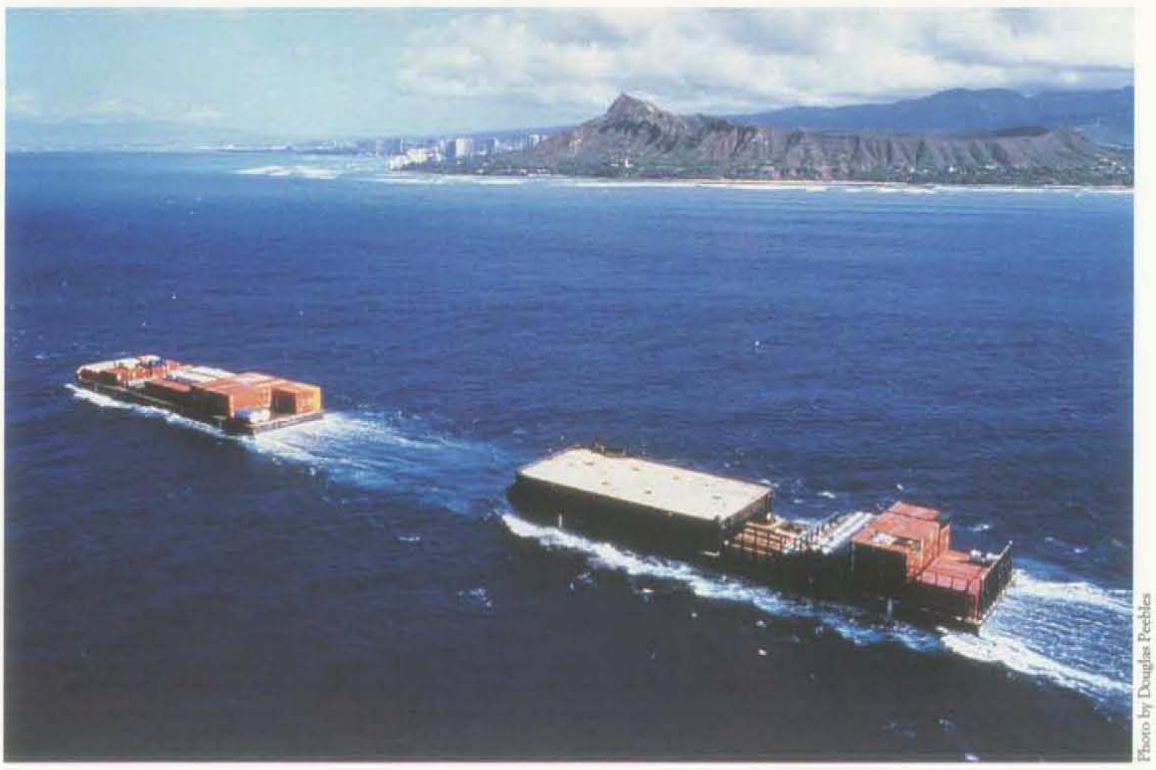


Photo by Douglas Peebles

Crowley Maritime collection

A CES workboat deploys oil spill containment boom.

established in 1975 to revive Pacific Inland Navigation's common carrier service for general cargoes from the Pacific Northwest to Hawaii. Using a warehouse barge, HML initiated a monthly service from Oakland and Portland to Honolulu.

Both Crowley Maritime Salvage and Crowley Environmental Services Corporation (CES) were established in 1975 to respond to maritime disasters. Though salvage services had been performed by the company as long as it had provided tug services, now there was a group of personnel dedicated to competing for salvage business worldwide. In 1978, the salvage group was awarded a U.S. Navy contract to man and maintain emergency ships salvage material (ESSM) at two warehouses, in California and Virginia.

CES was formed to expand the company's environmental services to the entire West Coast and Alaska. It encompassed environmental services formerly performed by MOPS in Seattle and Harbor Tug & Barge in San Francisco, and provided oil spill cleanup, dock and vessel booming, design and installation of protective facilities, contingency planning and consulting. Eventually CES offices were established on the U.S. East and Gulf coasts and in Puerto Rico, as well.

One of the early large oil spills on which CES and Crowley Maritime Salvage worked together was the 1979 spill in the Bay of Campeche, Mexico, the worst spill to that date in history.

In 1975 Smith-Rice Derrick Barges became a wholly owned Crowley Maritime company and was renamed Crowley Derrick Barges, Inc. The 350-ton-capacity derrick barge *DB 300* was built the following year. In 1979 the name was changed again to Crowley Constructors, and the company continued to pursue contracts in offshore construction. A key project in the early 1980s was the installation of the first single anchor leg mooring (SALM) system on the U.S. West Coast. The 500-ft. SALM riser buoy installed in the Santa Barbara Channel was designed to funnel crude oil from undersea oil pipelines to the surface and into a permanently moored tanker.

In the late 1970s, several consolidations of services were effected in California. Coastal Towing and Lighterage was formed to serve the oil companies' lighterage, bunkering, and tanker-towing requirements in

San Francisco. United Transportation Company and United River Lines were rolled into Coastal Towing and Lighterage, and four of the new 450-series oil barges were assigned to the service. Shipowners and Merchants Tugboat Company and Bay Cities Transportation Company were consolidated into Harbor Tug & Barge.

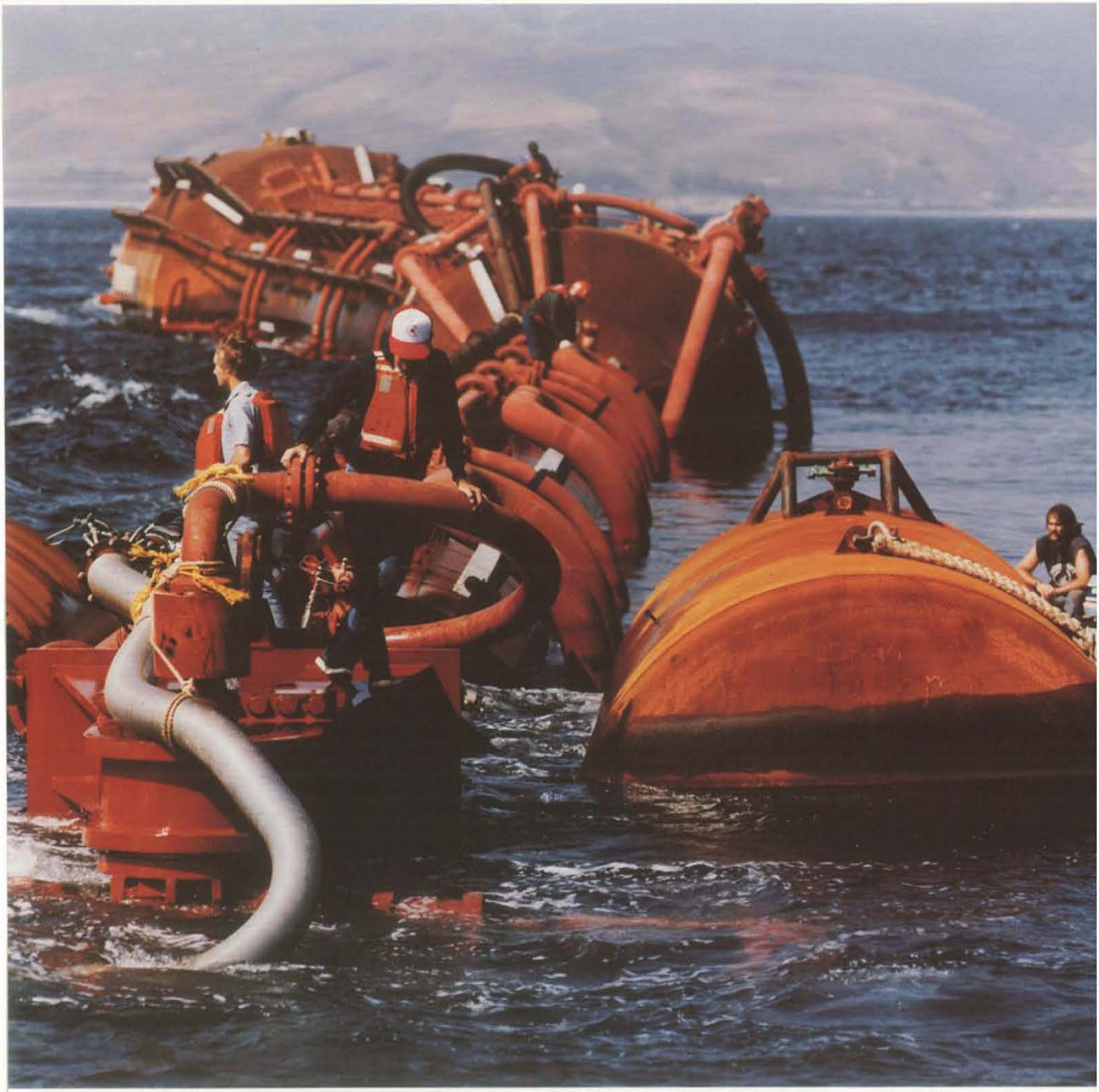
In Southern California, United Towing Company and San Diego Transportation Company, both of which had been formed to provide harbor and river oil barging, were consolidated into Crowley Towing and Transportation. CTT also provided tanker services, support services for offshore oil platforms in the Santa Barbara Channel, and other tug and barge operations in Southern California.

The derrick barge DB 300, *outfitted with a 188-ft. floating revolving crane, offers a lift capacity to 350 tons and four-point mooring.*

Crowley Maritime collection

A 450-series petroleum barge lighters cargo from a tanker in San Francisco Bay.

Photo by Brian Moran



The 500-ft. SALM riser, on site for submersion and installation in the Santa Barbara Channel.

Photo by Brian Moran

International services

As Crowley Maritime Corporation became increasingly known for its abilities in handling difficult projects in challenging environments, the company's participation was sought for numerous ventures all over the world.

The Union Towing and Transportation Company was a joint venture uniting Crowley Maritime with a Belgian corporation and a Canadian company to provide anchor-moving services for pipe-laying barges in the North Sea, where powerful equipment was required to withstand oceanic conditions. In the early 1970s, PST&B furnished most of the tugs for this demanding operation.

Crowley's Arctic experience brought about the company's participation in a Canadian joint venture, Arctic Transportation Ltd., based in Vancouver, British Columbia. ATL was formed in 1973 to provide coordinated transportation to the Western Arctic, using the combined equipment and resources of the four companies in the consortium.

In 1974, Crowley formed a joint venture

A powerful Crowley tug holds its own during anchor-moving activities in the tempestuous North Sea.

Crowley Maritime collection

Camera Craft, Inc./Bill Houlton

The 400-ft. drill barge Brinkerhoff I *is capable of drilling to 20,000 feet into the ocean floor.*

called Brinkerhoff Maritime Drilling to provide drilling services in Indonesian waters, and subsequently in Papua New Guinea and elsewhere. Brinkerhoff became a wholly owned Crowley Maritime company operating a 400-ft. offshore drill barge, *Brinkerhoff I*, a drilling tender, *Brinkerhoff II*, and other rig inventory. In 1982 Crowley sold its rigs and operating contracts to P.T. Patra Drilling Contractor, an Indonesian company in which Crowley Maritime Corporation continues to hold an ownership interest.

In 1975 a joint venture named Global Transport Organisation (GTO) was formed with two Canadian firms to perform international tug and barge transportation. One of GTO's biggest rig transport projects was the 1977 move of the *Interocean II*, an 11,500-ton, 280-ft.-tall rig moved from Nihama, Japan, to Coatzalcoalcos, Mexico. Using a Crowley-pioneered loading technique, the company loaded the rig onto a 400 x 100-ft. barge and towed it 15,250 miles in seventy-seven days.

Two companies that operated briefly as affiliates of GTO were Euro-Arab Sea Trailer (EAST), which carried containers and trailers by triple-deck barge between Europe and Saudi Arabia, and Trans-Arabia Trucking Company (TATCO), which provided trucking services for EAST cargoes arriving in Saudi Arabia. Subsequent changes of ownership made GTO a wholly owned Crowley company.

Several international joint venture partners joined with Crowley Maritime to perform five transports of record-breaking modules from Japan to Saudi Arabia in 1980-1981. Weighing 1,485 tons each, the modules—boilers for the Yenbu-Medina Desalination and Power Plant—were the largest single pieces of cargo ever transported into the Kingdom of Saudi Arabia. Loaded in Japan by Sankyu, Inc., the modules were transported by Crowley Maritime. On arrival at Yenbu, the modules were

offloaded and hauled overland by Crowley-affiliate Saudi Arabia Transport Organisation, Ltd. (SATOL), which provided a range of cargo-handling services in the Kingdom. Customs clearance was provided by yet another affiliate, SALACON, Ltd.

In 1979 and 1980, Crowley was a fifty-fifty joint venture partner in TAB, a company formed to pursue tug and barge services in Mexico and Central America in support of construction and drilling operations. TAB's principal activity was hauling 410,000 metric tons of rock for a tanker terminal in Mexico.

Having successfully initiated crew boat and supply boat services in Singapore in 1971, Crowley expanded its overseas activities, first by forming P.T. Rig Tenders to provide offshore support services in Indonesia, then by mobilizing vessels from General Marine International Services in Singapore to perform marine services in Bahrain, on the Persian Gulf.

In the early 1980s, Crowley completed a unique "design-buy-build" project for Chevron Oil Company operations on the White Nile River in Sudan, Africa. The company designed tugs and barges for operation on a 456-mile stretch of the river, then obtained bids worldwide for the manufacture of the vessels. A shipyard in Holland won the bid and constructed the equipment in modular and panel form so that it could be transported overland in Africa to Kosti for erection and launching on the Nile. Crowley established a shipyard in Kosti and assembled the vessels, then operated them for Chevron for one year.

Of the company's many developments during the early 1980s, one of the most far-reaching for the company's future was the acquisition in 1982 of Delta Steamship Lines, a U.S.-flag service operating with twenty-four vessels on five trade routes between the United States and South America, Central America, the Caribbean, and West Africa. Delta's operations were severely restricted by its operating subsidy contracts, which continued to hamper its efficiency and profitability under Crowley ownership. The steamship line was sold in 1984, but not before Crowley had designed and built new vessels which eventually were returned to Crowley and were the foundation of a new era in Crowley international operations. *(Chapter Ten outlines the evolution of Crowley's successful liner services.)*

Far right, Crowley barge 450-10 hauls heavy modules from Japan to Saudi Arabia for the Yenbu-Medina Desalination and Power Plant.

Bottom, more than 300 modular office buildings were transported aboard Crowley 400-ft. barges from the U.S. West Coast to Damman, Saudi Arabia, in a 1975 project.

Crowley Maritime collection

Photo by Brian Moran

The triple-deck barge Arab Falcon *was used by EAST to carry cargoes from France and Italy to Saudi Arabia.*

Gilbert Film Productions

Using its float-on/float-off technique, Crowley loaded this entire dredge fleet onto a single barge for transportation from the U.S. to Kenya.

Photo by Aero Pic

Specialized ocean transports

Crowley Maritime's experience in ocean towing extends to all major oceans of the world and encompasses the transportation of cargoes that, often, no other maritime company would attempt. In the performance of these projects, the company pioneered many load/offload techniques for handling drilling rigs, dredge fleets, huge pressure vessels, processing plants, heavy-lift modules, and other large and unwieldy cargoes.

"The company is a fairly large, experienced, and, in my opinion, excellent organization that can do things a little better than the next fellow."

Among these techniques is float-on/float-off loading, a process by which an oceangoing barge is ballasted down in a controlled sinking so that cargo can be floated into place over the deck. Deballasting lifts the barge and loads the cargo on deck, where it is then secured for the ocean voyage. Crowley used this method in the mid-1970s to load an entire dredge fleet, including dredges, dredging equipment, pipe, and pusher tugs, for transport aboard two barges towed in tandem from New Orleans to Iquitos, Peru, South America. The tow navigated some 2,200 miles of the Amazon River without benefit of a navigational-aids infrastructure.

In 1981 another entire dredge fleet, this one owned by Great Lakes Dredge and Dock, was floated onto a CMC barge for a 10,200-mile transport from Morgan City,

Crowley Maritime collection

The 9,000-h.p. tug Explorer *tows a barge loaded with the three-leg, jack-up rig* Shenandoah *en route in 1976 from Houston to Bombay, India.*

Louisiana, to Mombasa, Kenya.

For loading certain types of offshore drilling rigs, Crowley developed the technique of jacking the rigs up out of the water, positioning an oceangoing barge between the rig legs, and jacking the units down to rest on deck.

Innovation was also required when the company transported four bargeloads of construction equipment and housing from Jacksonville, Florida, to a remote beach near Les Cayes, Haiti, in 1978. Because no dock facilities existed, the barge was beached and sand ramps were constructed so that cargo could be rolled off the barge.

Crowley has built a reputation that is respected industrywide not only for its innovative cargo-handling techniques, but also for its ability to handle all aspects of the cargo move from point of origin to final destination.

At a remote beach in Haiti in 1978, Crowley constructed sand ramps to discharge barges loaded with construction equipment and housing.

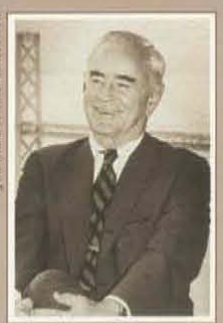
Crowley Maritime collection

HISTORICAL PERSPECTIVE

1973	Peace pacts signed in Paris were intended to end the war in Vietnam, the longest war in U.S. history.
1974	Richard Nixon resigned as President in the wake of the Watergate scandal.
1975	After frequent violations of cease-fire agreements, war resumed briefly in Vietnam. American troops were evacuated in April.
1976	The United States marked its Bicentennial.
1976	The Viking I landing craft touched down on the surface of Mars and began transmitting photographs to earth.
1978	The U.S. Senate voted to accept a treaty which will turn the Panama Canal over to Panama at the end of 1999.
1980	Mount St. Helens, a volcano in the state of Washington, erupted.
1981	Ronald Reagan became President of the U.S. Fifty-two U.S. hostages were freed from Iran after 444 days of captivity.

The various Crowley companies and business lines were consolidated under a new corporation, Crowley Maritime Corporation, formed January 1, 1973. The corporation's head office was moved in 1976 to One Market Plaza in San Francisco.

Joanna DeMaris collection



Thomas B. Crowley Sr. at corporate headquarters.

Photo by Brian Moran

Pictured at the North Slope of Alaska, left to right, Jim Rettig, Leo Collar, and Tom Crowley Sr. were part of a Management Committee, formed in 1975, to review and make executive decisions concerning the corporation's growth and direction.

In the 1980s, Crowley Maritime Corporation expanded into the international liner trade, operating from the U.S. East Coast. Within four years of establishing a new liner service to South America, the company was carrying more than half of the containerized cargo between Argentina, Brazil, Venezuela, and the United States. Here, the Crowley ship Sea Fox *enters Rio de Janeiro.*

Chapter Ten 1983-1992

Liner services to South America

Crowley Maritime's acquisition of Delta Lines in the early 1980s introduced the company to liner activity and, though the waters were rough at the outset, it served as a springboard for the liner operations that today cover the entire Western Hemisphere and have become the corporation's major emphasis in the early 1990s.

"I am concerned that there is not a proper appreciation by the American people of the need for an American-flag fleet of ships: American-built, American-manned, American-owned. Our country is gradually gravitating to fewer and fewer American-flag ships, and I think this is a real disaster for the United States."

In an effort to increase the efficiency of the Delta operation and bring containerization to the Latin American trade, Crowley introduced intermodal methods and built three containerships ideally suited to the South American trade. The three ships, *Sea Wolf*, *Sea Fox*, and *Sea Lion*, were designed as 2,000-TEU (20-ft.-equivalent units) vessels, giving them the largest TEU capacity of all vessels operating between North and South America. Built at Odense Shipyard in Denmark, the 643-ft. ships accommodate heavy-lift cargo, 200 refrigerated containers, and thirty 40-ft. roll-on/roll-off trailers as part of the overall capacity. They are equipped with container-handling gantry cranes, enabling them to load and offload containers without shore-based assistance.

The first *Sea Wolf*-class ship went into service in 1984 and two more were delivered in 1985, but by then, Crowley Maritime had negotiated an agreement with United States Lines. Having determined that the Delta trade routes, as structured and constrained under subsidy agreements, could not be made profitable, Crowley chartered the three new ships to U.S. Lines, which also acquired Delta's existing fleet, trade routes to South America and West Africa, and operating differential subsidy contracts.

When U.S. Lines went into bankruptcy less than two years later, the three vessels were returned to Crowley Maritime, which made the bold decision to use the ships in the trade for which they were designed. Establishing a company called American Transport Lines, Crowley added three chartered ships to the *Sea Wolf* containerships and started a new weekly liner service out of the Atlantic Coast to South America.

American Transport Lines (AmTrans) was

Preceding page: Photo by Brian Moran

Photo by Brian Moran

The 2,000-TEU ship Sea Lion *calls at Puerto Cabello, Venezuela.*

initiated to provide express container service between the United States, Venezuela, and the East Coast of South America, including Brazil, Uruguay, and Argentina, with service overland from Buenos Aires to Paraguay. From the beginning the service—the first weekly operation ever to this region from the United States—was well received, and even though it had started from scratch, in just four years it was carrying more containerized cargo between the U.S. and these South American ports than any other carrier.

The South America service became known as American Transport Lines SA when the company initiated service on a second trade route, serving North Europe and the Azores. This service was suspended when the U.S. military requested the company's vessels in that trade for use in the Persian Gulf mobilization during operations Desert Shield and Desert Storm. The Military Sealift Command chartered from Crowley not only the two AmTrans ships, but also the 553-ft. roll-on/roll-off ship *Senator*, a 16,000-dwt barge, and a tugboat. In late 1991 and early 1992, the vessels were returned to Crowley operations serving the Americas.

The self-sustaining Sea Wolf *loads roll-on/roll-off cargo and containers at the same time.*
Photo by Byron Lemmon

Container yards, like this one in Venezuela, and dedicated inland terminals in South America, lend to the overall efficiency of the liner service operation.

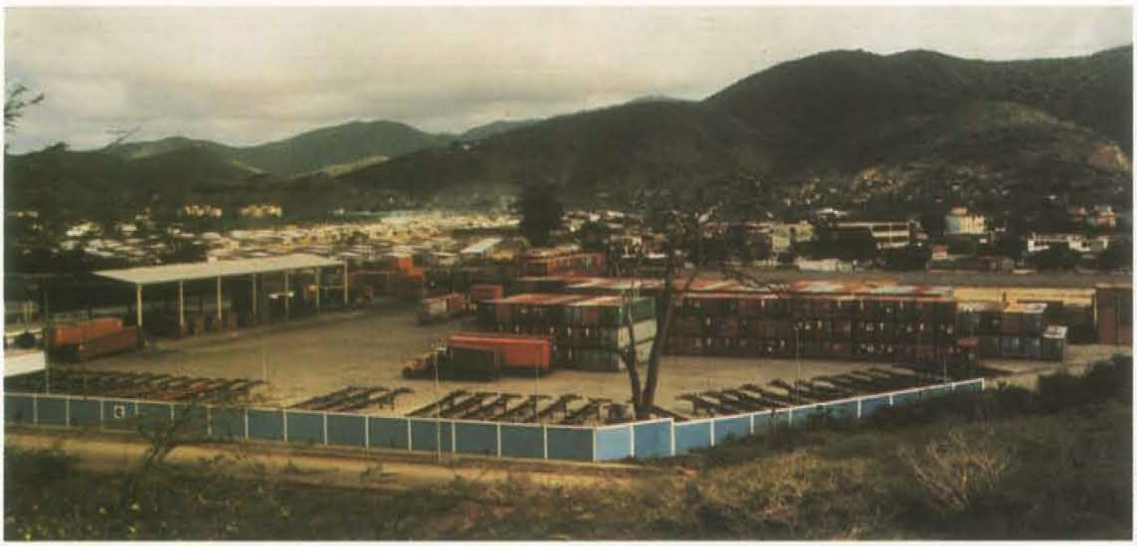


Photo by Byron Lemmon

Containers are loaded aboard the Sea Lion *by both a dockside crane and the vessel's own gantry crane.*

Photo by Brian Moran

Photo by Brian Moran

The American Falcon, *formerly used by Crowley in service to Europe, was one of three roll-on/roll-off ships chartered to the U.S. Military Sealift Command to support military actions in the Persian Gulf.*

Liner services to Central America and points beyond

The east coast of South America was just one arena of Crowley Maritime's advancement in liner services in the late 1980s. Another was a vast area encompassing the western Caribbean, Central America, and the north and west coasts of South America. In 1986, Crowley acquired CCT, which had introduced roll-on/roll-off service between the United States and Central America some years before. The company's acronym remained the same when the name changed to Crowley Caribbean Transport. Based in Miami, Florida, CCT transports containers, trailers, and all types of rolling cargoes. Its refrigerated trailers provide the safe, swift, and reliable transportation essential for Central America's perishable cargoes.

Using roll-on/roll-off ships, Crowley provides direct service from the U.S. East and Gulf coasts to Panama, Costa Rica, Guatemala, and Honduras, with service overland to El Salvador and Nicaragua. For the West Coast of South America, Crowley sails two 650-TEU vessels calling fortnightly at Philadelphia, Jacksonville, and Port Everglades in the U.S., and at ports in Ecuador, Peru, and Colombia. In the Caribbean, Crowley roll-on/roll-off ships call regularly at Montego Bay and Kingston, Jamaica.

Crowley Maritime collection

Above, Crowley is presently adding 9,000 new steel containers to its equipment in service between the U.S. and Latin America.

Photo by Brian Moran

Above right, the roll-on/roll-off ship Senator *is used in service to Central America.*

Crowley Maritime collection

Two CCT roll-on/roll-off ships at Crowley's 58-acre South Florida terminal, in Port Everglades.

Crowley Maritime collection

Crowley's terminal in Lake Charles, Louisiana, accommodates a CCT ship and a 730-ft. barge at the same time.

World-class service to Puerto Rico

In 1984 Crowley Maritime topped its own achievement of building and operating the world's largest RO/RO barges. Five 400-ft., triple-deck barges were "stretched" to 730 feet with the addition of 330-ft. midbody sections. Conversion of the five barges was contracted to J.R. McDermott shipyards in Morgan City, Louisiana, and the first to undergo the stretching was the barge *San Juan*.

All five barges were put into service for Trailer Marine Transport in the Caribbean trade between the U.S. mainland and Puerto Rico. The capacity of each vessel increased by 78 percent from 288 to 512 FEUs (40-ft.-equivalent units). Added to the four 580-ft. barges already in service, the converted vessels brought TMT's triple-deck barge fleet to nine vessels.

Today, Crowley serves the Caribbean trade on three barge routes from the U.S. to Puerto Rico. Barges bound for San Juan sail from Jacksonville three times a week; from Pennsauken, New Jersey, weekly; and from Lake Charles, Louisiana, every eight days. From San Juan, service continues to other islands; in all, twenty-two Caribbean islands are served by the company.

From Port Everglades, in South Florida, Crowley provides direct services to the Dominican Republic on a weekly basis and to the U.S. Virgin Islands twice a week. A Crowley containership service

Each of five 730-ft., triple-deck barges in service between the U.S. mainland and Puerto Rico carries up to 512 trailers.

John Tannock Photography

Trailers are loaded or offloaded on all three decks of a triple-deck barge simultaneously by means of triple-deck ramps at all company terminals serving the mainland/Puerto Rico trade route. Shown is the Northeast terminal, a 58-acre site at Pennsauken, New Jersey, near Philadelphia.

Photo by Brian Moran

established in 1985 to carry cargo between the U.S. and Colombia now makes a stop en route in the Netherlands Antilles.

Not only have Crowley's liner and common carrier services become increasingly sophisticated, so have the computer technologies that support them. The company has automated tariff retrieval systems, automated booking, electronic data interchange, and data communications. Crowley was first in the industry to establish a data input program accepted by the Federal Maritime Commission.

Personnel dedicated to intermodal operations use electronic means to monitor 3,000 transportation moves a day through more than forty inland terminals in the United States. Imaging technology is used not only to track equipment, but also to recover costs of repairs.

Pedro Martinez Aerial-Architectural Photography

The company's 52-acre terminal at Isla Grande, San Juan, Puerto Rico.

Photo by Byron Lemmon

American Marine Transport (AMT), a Crowley company, holds ICC operating authority in all forty-eight contiguous states. AMT operates a fleet of trucks in support of Crowley's water services between the U.S. and the Caribbean, Central America, and South America.

Continued commitment to Alaska

In more than twenty summer sealifts, utilizing a fleet of 400-ft. barges and 9,000-h.p. tugs, Crowley has transported some 315 bargeloads of oil field modules and supplies, totaling over 1,185,000 tons. Sophisticated sealift modules, weighing up to 5,400 tons and towering 121 feet high (eleven stories tall), have originated at numerous U.S. West Coast ports and, on occasion, the U.S. Gulf and the Far East. Full responsibility for all aspects of the sealift, from points of origin to final placement in the oil fields of Prudhoe Bay and other Beaufort Sea points, has rested with Crowley Maritime Corporation.

In the course of performing the annual transport project and the APUTCO resupply, Crowley has written the history of marine transportation in the Arctic.

Over the winter of 1988, Chevron wanted an economical and environmentally sound platform from which to drill an exploratory well in twenty-four feet of water in Prudhoe Bay. Crowley All Terrain Corporation used its high-volume pumps to build a 13-mile ice road to the offshore site, with five miles of the road grounded and eight floating. Once the road was completed, CATCO began

The 1983 sealift was composed of a flotilla of twenty-six barges, fourteen tugs, and accompanying vessels. Here, the fleet has just arrived in the icy waters of the Beaufort Sea.

Photo by Brian Moran

The 9,000-h.p. tug Warrior *tows a 400 x 100-ft. barge loaded with a drilling rig broken down into modular components, 1991.*

Camera Craft, Inc./Bill Houlton

The cartoon character Snoopy —an oil company mascot—rides atop a 117 x 58 x 94-ft. module. The tallest module transported in 1983 rose to 121 feet. The heaviest module was 5,400 tons, which, when added to the crawler transporter, resulted in a total of 5,800 tons in a single unit.

Photo by Brian Moran

construction of an island made completely of ice, forty-six feet deep and 890 feet across. Anchored by its weight to the ocean floor, the ice platform rose twenty-three feet above sea level. The island remained a solid structure throughout the drilling phase, and in the spring, well after all drilling equipment had been removed, it began to disintegrate. By summer it was completely gone.

CATCO's high-volume pumps have also found other uses. In late 1987, a well blowout caused fire to erupt on the platform *Steelhead* in Cook Inlet. The largest pumps in the firefighting effort were CATCO's,

Right, Alaska Hydro-Train's 400 x 105-ft., double-deck barges carry 105 highway trailers on the top deck and fifty to fifty-five railcars on the lower deck.

capable of spraying 5,000 gallons of seawater per minute.

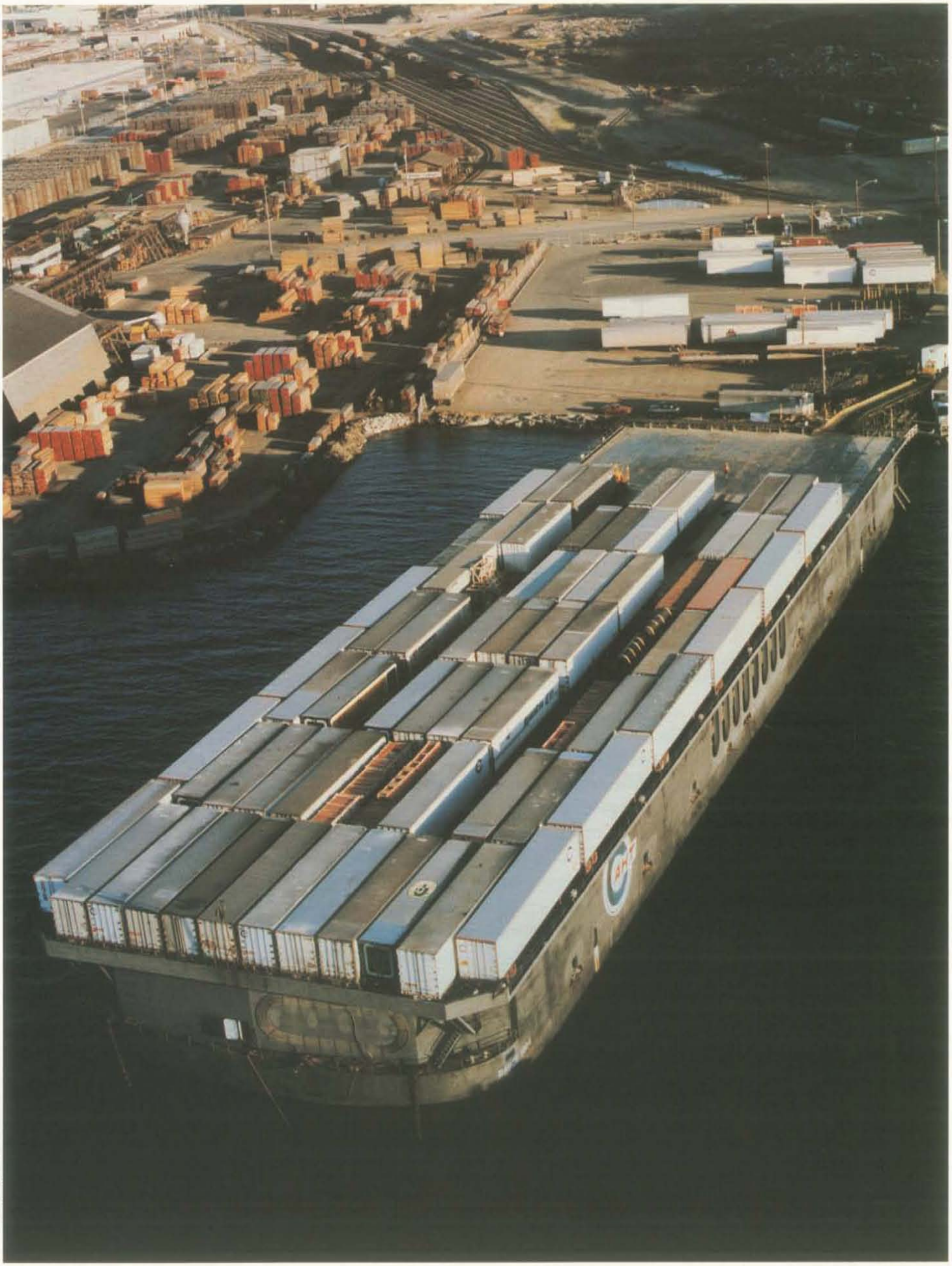
In 1983, Alaska Hydro-Train celebrated its twentieth anniversary and carried its 100,000th railcar. The following year, it expanded its operations to provide highway trailer service. Three of AHT's six barges were outfitted with a second deck for carriage of up to 105 trailers on the top deck along with the usual fifty to fifty-five railcars on the lower deck. Though one of the double-deck barges was subsequently removed from service after a grounding, AHT continues to provide regular departures, year-round. Today it holds the record among Northwest carriers for the longest continuous service to Alaska.

In the mid-1980s, Crowley services to Western Alaska became a new emphasis. Pacific Alaska Fuel Services (PAFS) was established in 1985 to store, transport, and sell petroleum products, operating from tank farm facilities at Nome, Kotzebue, and Captains Bay, near Dutch Harbor. In all, the company manages a total of 331,000 barrels of bulk storage capacity at the three tank farms, which also serve as marine cargo terminals for breakbulk and containerized cargoes.

PAFS provides direct-delivery barge service to over 100 coastal and river villages throughout Western Alaska, performed in conjunction with Crowley's lighterage services: Arctic Lighterage, operating out of Nome and Kotzebue, and Kuskokwim Transportation Company, based in Bethel. The company performs offshore vessel-fueling services wherever needed in Western Alaska and stations a "floating fueler" barge in Bristol Bay during the herring and salmon seasons. PAFS's terminal at Captains Bay emphasizes support services for the fishing industry.

In Alaska's Harrison Bay, Crowley's Arctic Marine Freighters used a total of twenty-nine vessels to transport gravel for construction of Mukluk Island in forty-six feet of water.

Photo by Brian Moran



Camera Craft, Inc./Bill Houlton

Photo by Brian Moran

Three Crowley tugs, capable of generating over 20,000 combined horsepower, tow the 290 x 274-ft. Concrete Island Drilling Structure (C.I.D.S.) in the Beaufort Sea.

Emergency response and environmental protection

On March 24, 1989, when the 987-ft. tanker *Exxon Valdez*, en route southbound in Prince William Sound, went aground on Bligh Reef, Crowley tugs were first on the scene to take up position alongside the stricken tanker. The tugs were used during the transfer of oil from the tanker to smaller vessels, and provided the power to guide the crippled tanker off the reef and get it under tow. In 1989 and 1990, Crowley was the principal contractor of equipment and personnel to provide marine support for the spill cleanup, a massive effort spread throughout Prince William Sound. At the peak of operations, sixty-six Crowley vessels were deployed, mobilized from Crowley operations as far away as Los Angeles.

Since the grounding of the *Exxon Valdez*, all loaded tankers outbound from Valdez Harbor and all partially loaded inbound tankers are escorted by Crowley tugs a distance of sixty-seven miles to and from a point in Prince William Sound. Crowley's Valdez operation has also expanded its role with a standby emergency oil spill response program.

Even before the oil spill in Prince William Sound, Crowley had designed the world's first fully self-contained oil spill contingency barge, the *Responder*. Built to specifications provided by Shell Western, the barge has a variety of critical capabilities: it can rapidly deploy containment boom and skimmers to pick up spilled oil, store and transport large quantities of oil, house sufficient personnel to respond immediately to a spill, and provide for helicopter delivery of additional crews and supplies.

Shell Western used the *Responder* in three seasons of exploratory drilling in the Chukchi Sea, above the Arctic Circle. After a demonstration of the barge in deployment exercises, U.S. Secretary of the Interior Manuel Lujan declared that the Shell Western oil spill contingency plan "meets or exceeds

Crowley Maritime collection

Crowley tugs tow the crippled tanker Exxon Valdez.

Camera Crafts, Inc./Bill Houlton

The 9,000-h.p. tug Stalwart *demonstrates some of its firefighting capability. Assigned to Valdez Harbor, the tug is specially equipped to perform rescue towing, as well as tanker docking and escort services.*

every regulatory requirement in a thoughtful and comprehensive manner..."

Another vessel designed by Crowley, though not yet built, is a 42,000-dwt, double-hull tanker with built-in redundancy in operating systems, developed in keeping with requirements for oil transportation spelled out in the Oil Pollution Act of 1990.

Designing new vessels is just one element of Crowley's involvement in oil spill prevention and containment. In 1991, while the war in the Persian Gulf was still in progress, Crowley personnel were at work on the coast of Saudi Arabia, cleaning up the massive oil spill caused by the war-related destruction of Kuwaiti oil installations and tankers. More than twenty-six times greater than the volume of oil spilled in the *Exxon Valdez* grounding, the spill presented an immediate threat to Saudi Arabian desalination plants and industrial installations. As the prime contractor to Saudi Arabia's Meteorology and Environmental Protection Administration, Crowley spent nine months in the Kingdom of Saudi Arabia managing the oil cleanup project over a 400-mile stretch of coastline. The company set a world record for oil recovery, capturing 1.4 million barrels—approximately 20 percent of the spilled volume.

In 1992, after a three-year hiatus, Crowley re-established the West Coast and Alaska operations of Crowley Environmental Services (CES) to provide emergency response and site management services. CES's operations in Puerto Rico have continued without interruption since the business line was first developed in the 1970s.

Photo by Brian Moran

The world's first self-contained oil spill contingency barge, Responder.

Back where it all began

Back on the West Coast, where the Crowley businesses have their earliest roots, the company has continued to break records and make history. In 1984, Crowley amassed personnel and tugs to move the 720-ft. oil platform jacket *Eureka*, the largest offshore structure built to that date on the West

Photo by Brian Moran

Coast and one of the tallest conventional steel platforms in the world. The 22,000-ton jacket measured 280 x 180 feet at the base. The route from Vallejo to Port Hueneme required an extremely close-quarters pass under the Richmond-San Rafael Bridge. Keeping a balance of low tide, adequate water depth, and vessel stability, Crowley ballasted the loaded barge and floated the structure under the bridge with only six feet of clearance.

Harbor operations, including ship assist, bunkering, lightering, and towing, are provided at several West Coast harbors, including all Puget Sound ports. In Northern California, harbor services vessels are based at Alameda and operate from Redwood City in the south Bay to Stockton/Sacramento in the northern reaches of the Delta. Crowley Towing and Transportation, based in Long Beach, performs services in the Los Angeles/Long Beach harbors.

"My proudest achievement over six decades is keeping the company thriving, growing, and willing to be innovative to meet customer needs in a very difficult industry with very different and changing circumstances."

In 1983, Crowley founded a company called Merlin Petroleum to perform oil and gas exploration, development, and production. Based in San Francisco, the company operated through the mid-1980s with partial ownership in numerous wells in the United States and abroad. Despite the high-risk nature of the industry and its economic demands, Merlin had a very favorable rate of success in finding and developing oil and gas.

The company's common carrier service to Hawaii has evolved through several changes in service structure in response to its changing market. During 1988 the company performed container barge services between Southern California and Hawaii in addition to its operations out of Northern California and the Northwest. Presently, the company uses two 400 x 100-ft. house barges on a regular route, calling every three weeks at Oakland, Coos Bay, Portland, and Honolulu.

The Military Support Division was formed

Thomas B. Crowley Sr. beside the "red stack" of a company tug.

in 1984 to bid for and perform military support projects. The group presently operates tug and barge equipment for the U.S. Military Sealift Command, transporting various grades of fuel between military bases in Japan and Korea. For the U.S. Maritime Administration, the company maintains three T-1-class tankers in Ready Reserve Fleet status, two in Yokohama and one in San Francisco.

The Red & White Fleet, Crowley's San Francisco Bay passenger service, conducted trials of high-speed catamarans in 1984 and ordered construction of the 400-passenger *M/V CataMarin*, which entered service between San Francisco and Tiburon in 1985 as the nation's largest catamaran in daily commuter services. The 86 x 32-ft., twin-hulled catamaran features three decks and cruises at twenty-eight knots. A sister vessel, *M/V Dolphin*, soon followed.

"Just as I began my career scraping barnacles off barges in a dry dock, my son, Tom Jr., who joined the company as a career decision when he graduated from college, has also been working his way up in the company."

The platform Eureka, cantilevered aboard a 600-ft. barge towed by two Crowley tugs, moves under the Richmond-San Rafael Bridge, which it will clear by less than six feet. Two more tugs pull from the stern to keep the rig straight against a diagonal current.

Photo by Brian Moran

In the immediate aftermath of the 1989 San Francisco earthquake, a fifteen-second quake registering 7.1 on the Richter scale, Red & White Fleet provided free transportation to 15,000 stranded commuters and initiated new service routes with an expanded fleet.

Today, Red & White Fleet operates ten vessels in ferry, cruise, and charter services on the Bay. Regular sailings connect San

Photo by Wally Foxal

Puget Sound Tug & Barge tugs assist the 770 x 102-ft. tanker Baltimore Trader *through the opened Blair Bridge in Tacoma, Washington.*

APL photo

A Crowley tug assists the 903-ft. APL ship President Kennedy.

Photo by Chris Gilbert/courtesy of Matson Navigation

Left, a Crowley tug with the new Matson ship R.J.Pfeiffer *before her maiden voyage.*

Right, the 450-10 was converted from a deck-cargo barge to an oil barge in 1988, and carries many grades of clean petroleum products and chemicals.

Crowley Maritime collection

Francisco with Vallejo, Sausalito, Tiburon, Angel Island, and Alcatraz Island. Two 700-passenger, three-deck cruise ships have been redeployed to San Francisco from Southern California passenger services. The vessels, renamed *Bay Flyer* and *Bay Clipper* after sailing schooners that called at San Francisco in the early 1900s, cruise at seventeen knots and were reassigned to upgrade the Bay Area fleet. Under the direction of General Manager Tom Crowley Jr., Red & White Fleet has embarked on several improvements during 1992, including the refurbishing of four vessels.

Crowley's Catalina Cruises continues to carry passengers to Santa Catalina Island from Long Beach, using the three remaining 700-passenger cruise ships.

In 1990, Crowley's oldest company facility in the San Francisco Bay Area ceased its operations and is presently undergoing changes for new utilization. Pacific Dry Dock and Repair Company closed as a commercial ship repair yard after seventy-eight years of operation.

Crowley Maritime collection

The M/V CataMarin, one of two 400-passenger, high-speed catamarans operated by Red & White Fleet on San Francisco Bay.

Photo by Brian Moran

In 1983, Thomas B. Crowley Jr. began spending his summers working at various company locations to become familiar with the organization his father and grandfather built. Following graduation from the University of Washington and in-house management training, he became General Manager of the San Francisco passenger service, Red & White Fleet, in 1991.

Restructuring for the new era

"As a priority, we will endeavor to continue to give the customer excellent, dependable, and responsive service wherever we go, and wherever we can, we will continue to be a great American company making a contribution to the maritime industry."

In the summer of 1992, the corporation completed an organizational restructuring to separate its numerous businesses into two major operating units: liner services, to be conducted by Crowley American Transport, Inc., and contract services, to be performed by Crowley Marine Services, Inc.

Crowley American Transport, Inc. absorbed the activities of American Transport Lines, CCT, TMT, and the Caribbean island feeder services. It conducts all liner and common carrier services between the United States, Central America, South America, and the Caribbean. A supporting business line, American Marine Transport, has authority to provide local, over-the-road, and commercial trucking services in the forty-eight contiguous states. Operational headquarters are in Jacksonville, Florida.

Crowley Marine Services provides worldwide contract and specialized marine transportation services, including all ocean tug and barge services from the U.S. West Coast, oil transportation, petroleum terminaling and distribution, passenger services, vessel assist, bunkering/lightering, environmental cleanup, and salvage. Crowley Marine Services' operational headquarters are in Seattle, Washington, and its subsidiaries and divisions are as follows:

Crowley Towing & Transportation Co.

Catalina Cruises, Inc., a Crowley company

Red and White Fleet, Inc., a Crowley company

Crowley All Terrain Corporation

Crowley Environmental Services, a division of Crowley Marine Services, Inc. on the Pacific Coast

Crowley Environmental Services, a division of Crowley Towing & Transportation Co. serving the Caribbean

P.T. Patra, an Indonesian joint venture

Shaughnessy & Company, a division of Crowley Marine Services, Inc.

Except for the above company identities, all business lines are continuing operations in the marketplace under the name Crowley Marine Services or Crowley American Transport, both of which are wholly owned subsidiaries of Crowley Maritime Corporation, now a holding company. Executive offices for Crowley Maritime Corporation and the two operating subsidiaries are in Oakland, California.

Thomas B. Crowley Sr. and a Crowley tug captain in a tug wheelhouse.

Photo by Byron Lemmon

Photo by Aero Pic

One of Crowley's Sea Wolf-class container ships calls at the 25-acre Talleyrand container terminal in Jacksonville, Florida, north of the company's 63-acre RO/RO terminal.

Photo by Brian Moran

The Sea Swift at work in Valdez, Alaska.

HISTORICAL PERSPECTIVE

1989	The grounding of the tanker *Exxon Valdez* resulted in the worst oil spill in U.S. history.
1989	The Berlin Wall was dismantled.
1990-91	Iraq's Saddam Hussein ordered the invasion of Kuwait. Empowered by U.N. resolutions, a coalition of nations led by the United States embarked upon Desert Shield and Desert Storm, and forced Iraq to retreat.
1991	With the demise of communism in Russia, the dismantling of the Soviet Union began.

Thomas B. Crowley Sr. with his wife, Molly, and Thomas B. Crowley Jr.

Flying Camera

Crowley's corporate headquarters were moved to 101 California Street in San Francisco in 1983, then were relocated again in 1990 to the present offices at Lake Merritt Towers, 155 Grand Avenue, Oakland.

Molly Crowley and Thomas B. Crowley Sr. with the AOTOS award.

Flying Camera

Thomas B. Crowley Sr., Chairman and Chief Executive Officer of Crowley Maritime Corporation, was one of two recipients of the 1988 Admiral of the Ocean Sea (AOTOS) award. The prestigious award is bestowed each year by the U.S. maritime community and honors individuals who have advanced the role of the U.S. flag in ocean shipping.

Leo L. Collar

Photo by Marshall H. Cohen

In 1991, Leo L. Collar retired from his position as President and Chief Operating Officer of Crowley Maritime Corporation, to which he was appointed in 1987. He was with the company for forty-three years and contributed significantly to its expansions in the latter decades. He continues to serve as a member of the Board of Directors.

James B. Rettig

Photo by Brian Moran

James B. Rettig, Vice Chairman of the Board, assumed the position of President and Chief Operating Officer in 1991. Having served the company in engineering, management, and executive positions for fifty-three years, he has spearheaded the company's many innovations in vessel design and played a key role in the corporation's direction from the 1950s to the present.

EPILOGUE

The legacy of Thomas Crowley is apparent in the spirit and dedication of the Crowley employees, and in the steady growth of the company—from one location in San Francisco to some sixty-five offices worldwide; from a single 18-ft. boat to over 400 vessels; from a single service performed by one young man to a multiplicity of services, more than forty business units, and a team of over 5,000 employees.

"Our company has been around 100 years, but that's only because of the work of a lot of people who have shown a lot of loyalty and enthusiasm for our company. We'd like to see that continue as long as we can."

In 1985, Crowley Maritime established an award program to honor employees with outstanding performance, whose dedication, leadership, initiative, and productivity most clearly reflect those of the company's founder. An award called the Thomas Crowley Trophy was commissioned. The trophy is a limited-edition, bronze sculpture depicting young Thomas Crowley as he ferried goods to and from ships on San Francisco Bay in the early 1890s. It is a reminder of the indomitable spirit that built the company, as well as a means of recognizing the present-day efforts of the people who carry forward the company heritage.

All employees with two or more years of continuous service are eligible for nomination, though no more than three may be honored with the award in a given year. The criteria for selection include demonstration of excellence and significant contributions to the progress and success of Crowley Maritime.

The Thomas Crowley Trophy is as much a tribute to the founder of the company as it is to the winners of the award. It honors the spirit and commitment that are enduring elements of the company's tradition and keys to the continuing success of the corporation.

The Thomas Crowley Trophy is a bronze sculpture depicting the founder performing the company's initial services. Winners of the award receive individual trophies and their names are engraved on showcase trophies housed at various office locations.

Crowley Maritime collection

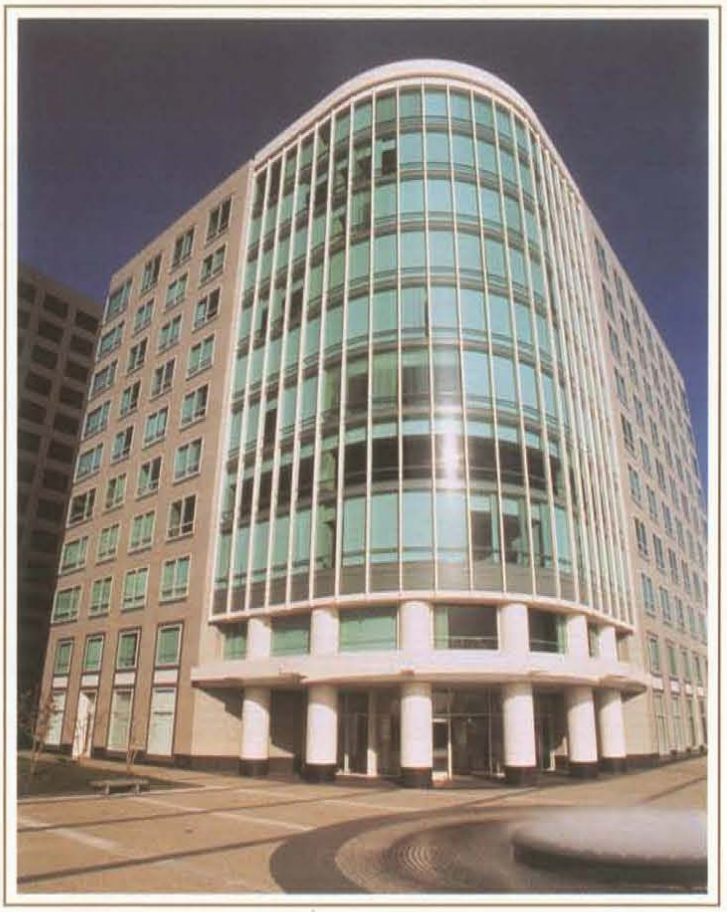


Photo by Byron Lemmon

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