

## NATIONAL REGISTER ELIGIBILITY ASSESSMENT VESSEL: *Cape Breton*/ex-*Dolly Turman*



*Cape Breton* underway circa 1990s. Maritime Administration photograph.

### Vessel History

The break-bulk cargo vessel *Dolly Turman* was built at Avondale Shipyards near Westwego, Louisiana for Lykes Brothers Steamship Company in 1966. After serving Lykes Brothers in the commercial trade for nearly two decades, the U.S. government acquired the vessel and renamed it *Cape Breton*. It was assigned to the Maritime Administration's (MARAD) Ready Reserve Fleet (RRF)<sup>1</sup> in 1985.

*Cape Breton* is one in a group of 12 general cargo/break-bulk<sup>2</sup> vessels classified as C4-S-66a under MARAD's design classification scheme. The 11 vessels include the following: *Louise Lykes*; *Elizabeth Lykes*; *Ruth Lykes*; *Letitia Lykes*; *Genevieve Lykes*; *Mallory Lykes*; *Mason Lykes*; *Stella Lykes*; *Frederick Lykes*; *Howell Lykes*; and *Velma Lykes*. The ships were constructed for Lykes Brothers between 1965 and 1968. Collectively the ships were known as the *Louise Lykes* class.

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<sup>1</sup> The Ready Reserve Fleet later became known as the Ready Reserve Force.

<sup>2</sup> A break-bulk vessel is a cargo vessel that is designed to carry its cargo in a series of holds, which are large internal storage spaces. Cargo is handled using masts and booms with cables that are located at each side of each end. This design led to the popular nickname "stick freighter." Break-bulk vessels were effective at carrying cargo to largely undeveloped ports, locations lacking container handling facilities or good road and rail connections. Although less efficient than container ships, they continued to be of use in carrying military cargoes into those locations. With their multiple hatches and open deck space, they offered more flexibility in stowing cargo and were able to load and discharge cargo using their own booms and winches.



**Top: *Letitia Lykes* underway circa 1968. Lykes Lines vessels of the C4-S-66a class display many of the common features of the general cargo break-bulk vessel.**

**Bottom: *Louise Lykes* circa 1960s. Note the kingpost & booms with the heavy lift boom forward, raised forecandle and superstructure (with machinery below) at the 2/3 aft position. Maritime Administration photographs.**



Lykes Brothers traces its origins to 1898 when it began shipping cattle to Cuba to replace animals that were lost during the Spanish American War. Around 1902, Lykes Brothers purchased several Cuban ranches and began exporting cattle from the U.S. to Cuba and returning with cargoes of sugar for delivery to ports along the Gulf of Mexico. As its business grew, the company began shipping other commodities such as lumber, cotton, flour and rice.

Lykes Brothers served as a managing operator for the U.S. Shipping Board in World War I and operated vessels for the War Shipping Administration during World War II, both predecessors of MARAD. The company operated more than 100 government-owned and other vessels during the Second World War.

After World War II, Lykes concentrated on bulk shipments of cotton and other commodities in their B-2 line (known as the Continent Line), which served the Gulf of Mexico, the West Indies, England, and from Denmark to Portugal. Due to the steady demand for bulk shipments to these ports, Lykes contracted for the construction of the *Louise Lykes* class of ships. After decades of service, eight of the 12 vessels were acquired by the U.S. government. *Mason Lykes*, *Frederick Lykes*, *Howell Lykes*, and *Velma Lykes* were renamed *Cape Blanco*, *Cape Bover*, *Cape Borda* and *Cape Bon* respectively and placed into

the RRF. MARAD assigned *Cape Bon* to the Massachusetts Maritime Academy<sup>3</sup> as that school's training ship where it was renamed *Enterprise*. *Louise Lykes*, *Elizabeth Lykes*, and *Ruth Lykes* were transferred to MARAD and were subsequently scrapped.

### **Maritime Administration**

MARAD acquired *Dolly Turman* on January 11, 1985. It was renamed *Cape Breton* and assigned to Alameda, California as part of the RRF. The RRF, a subset of MARAD's National Defense Reserve Fleet (NDRF), was established under Section XI of the Merchant Ship Sales Act of 1946 to serve as a reserve of ships for national defense and national emergencies. An RRF component was established in 1976 as a subset of the NDRF, which is composed of vessels that can be activated on short notice to provide rapid deployment of military equipment during an emergency. When activated, the ships are transferred from MARAD to the Navy's Military Sealift Command (MSC).

In 1990, the RRF consisted of 96 ships, 79 of which were activated to support Operations DESERT SHIELD/DESERT STORM, the U.S.-led coalition's response to Iraq's invasion of Kuwait. This was the first large-scale activation and employment of the RRF since it was established in 1976. The vessels involved were roll-on/roll-off (Ro-Ro) vessels (which describe how cargo is handled), break-bulk cargo ships, tankers and barge carriers. In August 1990, MSC activated *Cape Breton*. Between September 1990 and August 1991, *Cape Breton* transported military supplies from the U.S. to Ad Damman Saudi Arabia, the Netherlands and Italy in support of U.S. and coalition forces.

More than 75% of the RRF provided sealift to support the U.S. effort's in the Persian Gulf between from 1990-1991. The ships transported 750,000 short tons of dry cargo, which was one-fifth of the total dry cargo sealifted during the conflict. Ro-Ro vessels proved to be the most effective vessels and they delivered nearly 20% of Central Command's material and other support during the first phase of the operation.

MARAD maintained *Cape Breton* in a reduced operating status (partially crewed) in Alameda, California, after which it was laid-up in the Suisun Bay Reserve Fleet. The ship was downgraded from retention status to non-retention status on July 31, 2006. *Cape Breton* is currently located at MARAD's Suisun Bay Reserve Fleet in Benicia, California.

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<sup>3</sup> MARAD operates the United States Merchant Marine Academy at Kings Point, New York, and provides and maintains training ships and funding for the six state maritime academies that include: the State University of New York (SUNY) Maritime College; Massachusetts Maritime Academy; California Maritime Academy; Maine Maritime Academy; Texas Maritime Academy; and the Great Lakes Maritime Academy.

## Description/Characteristics of Vessel Type

**Type:** C4-S-66A (Cape "B" Class)  
**Official Number:** 507344  
**Previous name:** *Howell Lykes*  
**Builder:** Avondale Shipyards, Avondale, Louisiana  
**Year:** 1967  
**Location:** Suisan Bay Reserve Fleet  
**Length B.P.:** 514'  
**Beam Moulded:** 76'  
**Depth:** 42'-6"  
**Draft, scantling:** 32'  
**Displacement, loaded:** 21,014 LT  
**Deadweight:** 13,669 LT  
**Gross Tonnage:** 10,723 Measurement Tons  
**Net Tonnage:** 6,159 Measurement Tons  
**Cargo Cubic Capacity:** 727,950 Cubic Feet  
**Speed:** 20 knots  
**Main Engine:** DeLaval Geared Turbine  
**Shaft Horsepower:** 15,500 SHP  
**Ship Service Generators:** Two at 750KW  
**Boilers:** Two Water Tube Foster-Wheeler

The 12 C4-S-66a vessels built for Lykes Brothers Steamship Company were characterized as "Mini-Mariners." However, the term referred mainly to the vessels' dimensions, capacity and speed. This class of ships actually had many characteristics that were improvements upon, or were never featured on the *Mariners*.

The *Mariner* class (C4-S-1a) was the U.S. government's first and only effort to build standardized cargo ships for the country's merchant marine after World War II. The basic plans were prepared by MARAD and the shipbuilding division of the Bethlehem Steel Corporation. The *Mariners* were faster and more modern than previous U.S. cargo vessels, but did not represent any major advances in cargo ship design. They had the standard profile with a unified superstructure aft of amidships containing the navigating bridge, upper machinery spaces, and quarters for a crew of 58 and 12 passengers. There were four hatches forward of the superstructure and three aft, all served by the standard gear of kingposts, booms and winches. They were 563.5 feet in length overall with a beam of 76 feet and a depth of hold of 44.5 feet. They were powered by high-pressure cross-compound steam turbines providing 17,500 horsepower for an operating speed of 20 knots.

The C4-S-66a design differs from the *Mariner* design in that the ships are shorter in length, with equivalent beam but two-feet less draft. Consequently the ship carried less cargo and weighed less than the *Mariner*. Six cargo holds are arranged with four forward and two aft of the deck house. The class has upper and lower tween decks that were built without sheer in order to make access to cargo stowage in those spaces somewhat easier. The *Mariners* had sheer in the upper tween (or second) deck, but were flat on the lower tween (or third) deck. The hatch covers on the Cape Bs were hydraulically and remotely operated. The Cape Bs each has an 80-ton Stulcken heavy-

lift boom that served Holds 2 and 3. Like the *Mariner*, the 66a used mast booms; however, while it has the same number forward as the *Mariner*, it has one less aft due to its cargo hatch configuration. Like on the *Mariner*, there are mast booms attached to the fore and aft of the deck house.

Like ships built in the days prior to the development of today's higher performance coatings, the steel surfaces above the main deck are coated with inorganic zinc silicate without a conventional top coat (white in the case of Lykes Brothers vessels) in order to reduce maintenance costs.

*Cape Breton* is propelled by a geared steam turbine driving a single propeller. The main propulsion machinery could deliver a maximum of 15,500 shaft hp but was designed to operate at optimum efficiency of 12,500 shaft hp. Steam is generated by two oil fired, two drum, bent tube, marine type boilers with double cavity, walk-in superheaters. The ships have two turbine driven auxiliary generators and an emergency diesel generator, which was also used for automatic or manual hydraulic starting.

Passenger accommodations on the Cape Bs were limited to four persons who were housed in 2 two-person rooms. This made economic sense in the twilight of passenger travel on cargo ships in that it may have been possible to reduce the manning of the steward's department by one or two people.

One of the features that made the Cape B class unusual, if not unique, included the wheelhouse. Although vessels of many types had wheelhouses that were focused entirely upon the forward movement of the vessel with a clear view dead ahead, the wheelhouse of the Cape Bs was essentially pentagonal in shape, with the port and starboard sides consisting of two planes that met at apex on nearly halfway to the bridge wing. This allowed the watch officer and others to have some vision outboard and aft without leaving the wheelhouse ---seemingly not a great advantage, but it was a step toward 360° vision from the wheelhouse.

It is of interest to note that after Lykes contracted for the 12 C4-S-66a vessels, just 20 additional break-bulk cargo vessels were ordered under MARAD's CDS/ODS programs.<sup>4</sup> The last vessel, *American Mail*, was delivered in October 1969. The world had changed; the container ship was quickly eclipsing the break-bulk cargo ship rendering it obsolete, which soon revolutionized the entire shipping industry.

### **Historical Integrity**

The overall condition of *Cape Breton* is good; it has experienced only normal wear and aging for a vessel of its age. The ship did not undergo any substantial modifications

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<sup>4</sup> Subsidy programs under the Merchant Marine Act of 1936, as amended, included Construction Differential Subsidy (CDS) and Operating Differential Subsidy (ODS). Another form of financing included Federal Ship Financing Guarantees, more commonly known as "Title XI" loan guarantees.

during its service life, other than modifications made for Operations DESERT SHIELD/DESERT STORM; consequently, *Cape Breton* has retained much of its original form and its overall historical integrity.

### **Statement of Significance**

*Cape Breton* is a good example of the final evolutionary development of the break-bulk general cargo ship in the age just before the containerization revolution. It is an equally good representative of the domestic Mariner design, which dominated the U.S. foreign trade in the latter half of the 1950s and through the mid-1960s.

It was activated for service during Operations DESERT SHIELD/DESERT STORM, where it, along with 79 others, provided war materiel in support of U.S. and coalition forces.

### **National Register Eligibility Statement**

*Cape Breton* is not 50-years-old and it does not possess the extraordinary historical significance necessary under Criteria Consideration G or in any category necessary to be eligible for listing on the National Register of Historic Places. It remains a fairly typical break-bulk ship, similar in size, construction, machinery, propulsion, cargo capacity and other features to many of the 100 or so other break-bulk vessels constructed domestically in the 1960s. While it did participate in DESERT SHIELD/DESERT STORM it was one of 79 RRF vessels activated by the Navy to support those operations and its role was not significant enough to qualify under Criteria A, particularly considering the recent nature of those operations.

**Date:** 14 September 2012

**Determination:** NOT ELIGIBLE

### **Sources**

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