

NATIONAL REGISTER ELIGIBILITY ASSESSMENT

VESSEL: SS *Cape Avinof*, ex SS *African Sun*



Left: SS Cape Avinof underway. Right: SS Cape Avinof. Maritime Administration photos.

Vessel History

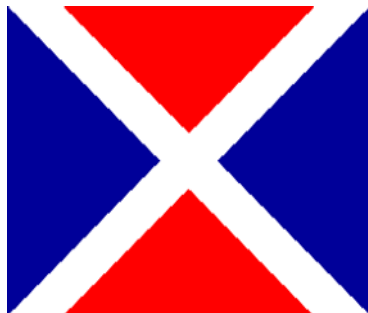
The *African Sun*, later renamed *Cape Avinof*, was designed by New York naval architects, Gibbs and Cox, Inc. It was built by the Ingalls Shipbuilding Corporation in Pascagoula, Mississippi in 1962 for Farrell Lines, Inc., a steamship company then headquartered in New York, which operated principally in the U.S. East Coast-Africa trade. The ship was built under several Federal ship subsidy and financing programs.¹ After serving Farrell Lines in commercial trade, the *African Sun* was acquired by the government under the terms of the Ship Exchange Program of the Merchant Marine Act of 1936.² It was renamed *Cape Avinof* and placed into defense sealift service with the Ready Reserve Force (RRF). The ship was downgraded from active service in 2006 and is now a non-retention vessel located in the Maritime Administration's National Defense Reserve Fleet (NDRF) at Fort Eustis, Virginia.

¹ 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.

² Under Section 510(i) of the Merchant Marine Act of 1936, as amended, the Maritime Administration upgraded the National Defense Reserve Fleet by acquiring "newer" vessels in exchange for obsolescent WW2-era tonnage.

The *Cape Avinof* is one in a group of six general cargo/break-bulk³ vessels classified as C4-S-58a under the Maritime Administration's design classification scheme. The other five ships included the *African Comet* (*Cape Alava*), *African Meteor* (*Cape Alexander*), *African Neptune* (*Cape Archway*), *African Mercury* (*Cape Ann*) and *African Dawn*. The ships were constructed for Farrell Lines in 1962 and 1963 for operation on its subsidized African trade routes. Collectively the ships were known as the *African Comet* class. Eventually five of the six were acquired by the government, placed into the RRF, and renamed the *Cape A* class. The last of the six, the *African Dawn*, was not acquired for the RRF. It was renamed the *SS Dawn*, and operated under military charters into the 1990's before being acquired by the Maritime Administration. The five *Cape A* class vessels are located at James River, while the *Dawn* is located at the Suisun Bay Reserve Fleet in California.

Prior to 1948, Farrell Lines was known as the American South African Line. It was the main U.S. flag steamship line that provided cargo and passenger service between the U.S. and Africa from 1926-1948. Its cargo generally consisted of manufactured goods outbound from the U.S., and raw materials inbound from Africa. The vessels had a deep tank capacity capable of carrying such commodities as tallow, lubricating oil, and cashew oil, as well as fruit, flowers, and lobster tails.



Far right: Cover of a route map of the Farrell Lines, probably from the mid-1950s. **Near right:** General information & rates brochure/deck plan (no sailings listed) (undated; rubber stamped August 1949). www.timetablesimages.com
Above: Farrell Lines flag. Image by Joe McMillan. <http://flagspot.net>



³ 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.

In 1965 Farrell Lines acquired the Australia-U.S. East coast service of the United States Lines (USL) and the company continued to grow with the 1975 acquisition of the West Coast Australia Service of the Pacific Far East Line (PFEL). In 1978, due to the acquisition of a number of vessels from the bankrupt American Export Lines, Farrell was operating many vessels capable of carrying containers or LASH barges,⁴ a more efficient method of delivering cargo than break-bulk freighters such as the *African Comet* class. By 1978 Farrell Lines had a fleet of 44 vessels, making it the second largest U.S.-flag merchant fleet. With these additional, more-efficient vessels, Farrell Lines relinquished ownership of the *African Comet* class to the U.S. Maritime Administration in 1980, along with a number of the former American Export fleet deemed unnecessary for the combined operation. When the *African Comet* class was transferred, the prefix “African” was removed from their names. Soon afterward, they were renamed the *Cape “A”* class. *Cape Avinof* entered the Maritime Administration’s James River Reserve Fleet at Fort Eustis, Virginia on April 14, 1980.

Maritime Administration

The *Cape Avinof* was assigned to the Ready Reserve Fleet (RRF)⁵, a subset of the NDRF in 1980. The 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. A RRF component was established in 1976. RRF vessels can be activated on short notice to provide rapid deployment of military equipment during an emergency. When activated, operational control of the ships is transferred from the Maritime Administration to the Navy’s Military Sealift Command. The Ready Reserve Fleet later became known as the Ready Reserve Force.

Prior to RRF operations, NDRF vessels supported emergency shipping requirements in seven wars and crises. During the Korean War, 540 vessels were activated to support military forces. A worldwide tonnage shortfall from 1951 to 1953 required over 600 ship activations to lift coal to Northern Europe and grain to India. Another tonnage shortfall following the Suez Canal closing in 1956 activated 223 cargo ships and 29 tankers from the NDRF. From 1955 through 1964, another 698 ships stored grain for the Department of Agriculture. During the Berlin crisis of 1961, 18 vessels were activated and remained in service until 1970. During the Vietnam War 172 vessels were activated. The *Cape Avinof* arrived in the RRF too late to operate in those crises, but performed valuable service in the Desert Shield/Desert Storm international military operations to stop Iraqi military expansion in the Persian Gulf area and subsequently to liberate occupied Kuwait.

⁴ The lighter aboard ship (LASH) system refers to the practice of loading barges (lighters) aboard a larger vessel for transport. It was developed in response to a need to transport lighters, a type of unpowered barge, between inland waterways separated by open seas. Lighters are typically towed or pushed around harbors, canals or rivers and cannot be relocated under their own power.

⁵The Ready Reserve Fleet later became known as the Ready Reserve Force.

RRF Modifications

The *Cape A* class ships were among a large population of RRF break-bulk cargo ships modified during the middle to late 1980s under the Navy's "Sealift Enhancement Features" (SEF) program. The modifications were generally intended to allow these commercial vessels to better support military operations, particularly underway replenishment of stores and ammunition to naval auxiliary vessels such as fleet oilers, ammunition ships, and stores ships. The ships were fitted with dunnage systems in cargo holds to permit: secure handling of palletized ammunition; heat isolation bulkheads in the cargo holds bordering on the ship's engine room; two (2) receive-only underway replenishment rigs – one each forward and aft; main deck modifications to allow unobstructed fore and aft passage of electric forklifts; and in some cases the fitting of helicopter platforms for vertical replenishment at sea. All modified vessels had their personnel complements increased to support specialized Navy cargo handling battalions.

The modifications made under the SEF program did not significantly alter the ships, but instead were incremental improvements. There was little noticeable change to the ships exterior appearance, except for the addition of the aft helicopter platform. The *Capes Ann*, *Avinof* and *Archway* were fitted with the full suite of SEF modifications from

Operation Desert Shield/Desert Storm

In August 1990, the RRF consisted of 96 ships, 78 of which were activated to support Operation Desert Shield/Desert Storm. This was the first large-scale activation and employment of the RRF since it was separated from the NDRF. The vessels involved were roll-on/roll-off (Ro-Ro) vessels (which described how cargo is handled), break-bulk cargo ships, tankers, and barge carriers.

Five of the former Farrell Line vessels, the *Cape Alexander*, *Cape Archway*, *Cape Avinof*, *Cape Alava*, and *Cape Ann* were activated in 1990 and 1991 to provide logistical support for Operation Desert Shield/Desert Storm. The Navy's Military Sealift Command activated *Cape Avinof* on January 3, 1991. After the ship left its activation yard in Portland, Rhode Island, *Cape Avinof* arrived at Naval Station Norfolk to load ammunition and other supplies. The ship delivered its cargo to Augusta Bay, Sicily; Jebel Ali, United Arab Emirates; and Bahrain. The crew loaded and redistributed over six million pounds of cargo, ordnance, and provisions from the Persian Gulf. After leaving the Persian Gulf, the *Cape Avinof* proceeded to U.S. Naval Base, Subic Bay, Philippines via Singapore, stopping at ports along the way to discharge and load general cargo. *Cape Avinof* arrived at Naval Weapons Station Seal Beach in California in June of 1991 and Bayonne, New Jersey in August of 1991. According to a message from Naval Base Subic Bay to the crew, *Cape Avinof* earned the distinction of being "...The only ship that deployed around the world to support Operation Desert Storm." It returned to the James River Reserve Fleet in June of 1992.

More than seventy-five percent of the RRF provided sealift to support the U.S. effort's in the Persian Gulf between August 1990 and April 1991. The ships transported 750,000

short tons of dry cargo, which was one-fifth of the total dry cargo sealifted during the conflict. The Ro-Ros proved to be the most effective vessels and they delivered nearly twenty percent of Central Command's material and other support during the first phase of the operations.

Unfortunately, there is very little published on the role of the Maritime Administration's RRF during the Gulf War. Locating information that details individual ship operations has proved difficult. One of the better books published on the subject is, *Shield and Sword: The United States Navy and the Persian Gulf War*, by Edward J. Marolda and Robert J. Schneller. While this book does not discuss details of a specific ship's operations, it does provide an excellent overview of the logistical build-up to the war and the RRF's role. Several of the topics that the book discusses include the difficulties encountered during the vessels' activation into the Navy's Military Sealift Command, their successes, and the amount and kind of material they carried.

Description/Characteristics of Vessel Type

Type: Break Bulk (C4-S-58a)

Hull Number: 5013

Official Number: 291026

Previous name: *African Sun*

Builder: Ingalls Shipbuilding Corp., Pascagoula, MS.

Year: 1963

Sister Ships: *Cape Alexander; Cape Archway; Cape Alava; Cape Ann*

Location: James River Reserve Fleet, Fort Eustis, VA.

Length: 541'

Beam: 75'

Depth: 42.8'

Draft, full load: 30'-10"

Displacement, loaded: 20,110 LT

Deadweight: 17,379 LT

Gross Tonnage (GRT): 11,309

Net Tonnage (NRT): 6,809

Gross Tonnage (GT ITC International tonnage certificate): 9,613

Cargo Cubic Capacity: 671,000 cubic feet

Speed: 20 Knots

Main Engine: General Electric Geared Turbine.

Shaft Horsepower: 18,150 SHP

Ship Service Generators: Three at 600 KW

Boilers: Two Water Tube

Boiler Manufacturer: Foster Wheeler

The *African Comet* class was Farrell Line's initial venture into new vessel construction. The *Cape Avinof*, ex-*African Sun* is a two-deck, break-bulk turbine steamship with seven cargo holds and facilities for 12 passengers. The class was specifically designed for the African trade, and in particular, was intended to operate at a somewhat higher speed than contemporary break-bulk vessels. At the time that these ships were designed, most break-bulk vessels being built in the United States were modifications of or derivatives from the Maritime Administration's basic "*Mariner*" design. The C4-S-1a *Mariner* program of the mid-1950s was the first new line of vessels built after World War II.

They were designed to be faster and capable of carrying more cargo than the WWII-era standardized Maritime Commission ship designs. The *Mariners* proved to be very popular ships, and through the early 1960s a total of about 65 modified and derivative *Mariner* class vessels were built for several U.S. steamship companies.

Prior to the construction of the *African Comet* class, Farrell's fleet consisted of 14 standard C-2 and C-3 cargo vessels, largely veterans of WWII service, plus two passenger-cargo ships, the *African Endeavor* and the *African Enterprise*, which dated from the early days of the Maritime Commission's prewar program. Farrell also operated the *Free State Mariner* and *Hawkeye Mariner* during the 1950s, and from that experience, they were able to create a vessel that would serve their business as well as, or better than the *Mariners*. The vessels were designed from the keel up to be compatible with the cargo mix found in the company's African services, while maintaining the basic characteristics of the earlier *Mariner* design.

Farrell's trade routes to southern Africa were quite long; consequently one major change that Farrell wanted was to increase the speed of their new ships. This required several adjustments to the *Mariner* design, one of which involved its hull form. The *African Comet*'s hull was designed to be longer and narrower than the common *Mariner*-class design, and wound up nearly nine feet longer in overall length, with one less foot of beam. Like the *Mariners*, the six *African Comet* class ships carried substantially more cargo than the WW II-era C-2 and C3 ships that they replaced, thus the six new ships were able to replace seven older ships. The increased speed also allowed Farrell to reduce the number of ships necessary to maintain the frequency of service. This next generation of ships improved on the successful features of its predecessors and utilized state-of-the-art technology, but made no radical departures from proven designs, which were rapidly superseded over the next decade.

Another feature of the *African Comet* class that differed from the *Mariner* was the passenger accommodations. When the ships were built, there was still a need for transportation for Americans conducting business in Africa and for travel between African ports. At that time, traveling between African coastal nations by land was very difficult and air service had not been fully established. As a result, Farrell lines arranged the passenger spaces to make them more flexible than those of the *Mariner* design. The earlier vessels had six two-person staterooms clustered around a passenger lounge on the upper deck. The Farrell Lines were fitted with four single-person rooms as well as four rooms capable of accommodating three people (in a two-plus-one mode). Because the vessels were only permitted to carry 12 persons in addition to the crew, this allowed single persons to travel without having to share a room with a stranger, or the ship having to sacrifice revenue because of an unoccupied berth. Alternatively, a three-person family could occupy a single room, again without leaving an unoccupied berth. It was a relatively simple solution to a potentially costly problem, but steamship operators did not predict the future dominance of jet aircraft, and the passenger berthing solution Farrell invented would later prove of little use.

Although specifically tailored for the needs of the African trade route, the 58a class ships were otherwise conventional. The most unusual aspect of their structural design was the use of an aluminum midships superstructure, rather than a more conventional steel deckhouse. Contemporary literature reveals that the choice of an aluminum deckhouse reduced topweight, allowing a slight reduction in beam and thus a corresponding reduction in the horsepower required to reach the design speed. Machinery, equipment and controls were all conventional. The use of aluminum, although unusual, was neither unique nor revolutionary.

Statement of Significance

The *African Comet* class design was the result of Farrell Lines, Inc. adapting it to its requirements; in this case its African trade route. This was one of the last classes designed to carry bulk cargo and packaged military supplies, which was still handled with booms and winches. By 1964, the maritime industry was already experimenting with more efficient designs, such as Ro/Ros, and barge-carrying LASH (lighter aboard ship), vessels capable of carrying both barges and containers. The break-bulk cargo ships were the last of their type built in the U.S. to carry bulk, palletized, and packaged cargoes. As such they are examples of the last of a type once dominant at sea, but now obsolete.

The activation of *Cape Avinof* during the build-up for Desert Shield/Desert Storm was the RRF's first large-scale activation since its creation in 1976. *Cape Avinof* delivered cargoes of military supplies and ammunition without incident and provided desperately needed services in a time of national need. Subsequent crises involving the Maritime Administration's role of assisting the military during national emergencies have generally utilized more efficient ship types more in keeping with modern logistics operations.

Historical Integrity

The overall condition of the *Cape Avinof* is good; it has experienced only normal wear and aging for a vessel of its age, and routine upgrades to navigation and communications systems. The hull, machinery, passenger and crew accommodations are largely intact. The late 1980s SEF program did not significantly change the ship's structure, arrangements or equipment. The ship retains integrity precisely because it is now obsolete and is unlikely to meet any further national or economic need. At less than 50 years old the vessel is not of sufficient antiquity or interest to warrant preservation.

National Register Eligibility Statement

The *Cape Avinof* may possess sufficient integrity of design and materials necessary for listing; however the ship is not 50-years-old and does not possess the extraordinary historical significance 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 Storm from 1991-1992, it was one of 78 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: 18 December 2008

Determination: NOT ELIGIBLE

Sources

Secondary sources

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Miramar Ship Index: New Zealand Ship & Marine Society, Inc.:
www.miramarshipindex.org.nz

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Primary Source

Cape Avinof file located at the Maritime Administration's Headquarters, Washington, D.C.