TREASURY DEPARTMENT
UNITED STATES COAST GUARD

ADDRESS REPLY TO:
COMMANDANT
U.S. COAST GUARD
HEADQUARTERS
WASHINGTON 25, D.C.

.MVI-3
(OLYMPIC ROCK -
PRINCESS - W. L.
GRAHAM a-3 Bd)
13 FEB 1963

Commandant's Action

on

Marine Board of Investigation; collision between SS OLYMPIC ROCK, Liberian flag, and the tug PRINCESS with the tank barge W. L. GRAHAM in tow in the Delaware River on 21 February 1962 with loss of life

1. The record of the Marine Board of Investigation convened to investigate subject casualty, together with its Findings of Fact, Conclusions and Recommendations has been reviewed.

2. On the morning of 21 February 1962, during periods of low visibility, the Liberian tanker OLYMPIC ROCK, bound for Puerto La Cruz, Venezuela, in ballast, was proceeding down the Delaware River under the direction and control of a pilot, having discharged her cargo at Philadelphia. All navigational equipment was in good operating order with the exception of the course recorder. The radar was being operated by the master on the 2, 4 and 8 mile scales. The vessel's speed was changed from time to time to allow for variable visibility limitations and traffic conditions. A lookout was posted on the bow and, except for a speed reduction while passing an upbound vessel, the voyage was without incident until the vessel reached the northern section of Bellevue Range. At this time two targets were observed ahead on radar at a distance of approximately 2 miles and in a position which was estimated to be approximately at the junction of Bellevue and Cherry Island Ranges. Shortly thereafter these targets were visually sighted at an estimated range of slightly over one mile. They were identified as two upbound tugs with tows one of which was dead ahead and the other slightly off the port bow. The vessels ahead were later identified as the tug PRINCESS with the barge W. L. GRAHAM in tow, and the others, off the port bow, as the tug B. M. THOMAS with three barges in tow. The pilot of the OLYMPIC ROCK, then proceeding at an estimated speed of 7 knots over the ground against a flood current of approximately one and one-half knots ordered speed reduced to slow ahead, sounded a single blast on the whistle and simultaneously executed a slight course alteration to starboard. The PRINCESS, with its tow made fast to her starboard side, appeared to be in a position close to the center of the dredged

channel and on a collision course. Receiving no response to the first whistle signal and having observed no course change by the PRINCESS, the OLYMPIC ROCK sounded a second single blast and again altered course to starboard. Shortly thereafter, observing what appeared to be a course alteration to port by the PRINCESS, and having received no answer to the second whistle signal, the OLYMPIC ROCK again sounded a single blast and altered course again to starboard. Receiving no response to this third signal, the pilot of the OLYMPIC ROCK sounded the danger signal and ordered the engines full astern. At 1041, approximately three minutes following the initial whistle signal of the OLYMPIC ROCK, the two vessels collided in a position nearby Buoy 1D located in Bellevue Range on the western edge of the dredged channel. Physical contact was made between the stem of the OLYMPIC ROCK and the port side of the PRINCESS at an angle of approximately 30 to 40 degrees between centerlines of the two vessels. The shock of impact parted the tow lines to the barge W. L. GRAHAM setting her adrift while the PRINCESS heeled to starboard rolling under the bow of the OLYMPIC ROCK and shortly thereafter surfaced off the OLYMPIC ROCK's starboard bow. Upon surfacing the PRINCESS capsized, disappeared beneath the surface and came to rest on the bottom with its mast remaining visible above water. Upon sighting one survivor from the PRINCESS aboard a life float and two others in the water in close proximity to the capsized tug, crewmen of the OLYMPIC ROCK tossed life rings overboard and made preparations for launching a boat. Shortly thereafter a Corps of Engineers motor vessel arrived on the scene to assist while the OLYMPIC ROCK was maneuvered to Cherry Island Flats where she anchored and stood by to render such additional assistance as might be needed.

3. On the morning of 21 February 1962, the tug PRINCESS with the light tank barge W. L. GRAHAM in tow on the starboard side departed an area just north of Federal Anchorage No. 5 in the vicinity of New Castle Range, Delaware River, bound for Chester, Pennsylvania. The PRINCESS, manned by a crew of four, was encountering intermittent snow flurries with resultant limited visibility and, when in a position on the right hand side of Deepwater Point Range, in the vicinity of Penns Beach, the operator considered anchoring until visibility improved. Although the operator ordered a deckhand to proceed to the bow of the barge to stand lookout watch, visibility conditions improved before he had manned his station and he was subsequently ordered below. The PRINCESS, with wheelhouse doors and windows closed, continued on its voyage, navigating the right hand side of the dredged channel. The tug B. M. THOMAS with three barges in tow astern entered the Delaware River from Christina River and fell in astern of the PRINCESS. Upon reaching a position approximately abeam of Buoy 4C, Cherry Island Range, the operator of the PRINCESS observed a buoy tender approximately one mile distant upriver and close aboard Bellevue Range Lighted Buoy 2B. Shortly thereafter the operator of the PRINCESS altered course slightly to left to cross to the left side of Bellevue Range, ostensibly to give the buoy tender a wide berth since that vessel was displaying the prescribed signal for a Coast Guard vessel

engaged in servicing an aid to navigation. The operator of the PRINCESS related that he proceeded to the western extremity of the dredged channel, passed the dredge COMBER, moored to the Corps of Engineers' installation, at a distance of 20 to 50 yards and thereafter left the black channel Buoy 1C on his starboard side. Further, that upon sighting the downbound vessel ahead, later identified as the OLYMPIC ROCK, the PRINCESS was actually beyond the western extremity of the dredged channel, that no attempt was made to alter course to starboard until immediately preceding impact, and that the collision actually occurred outside the dredged channel. However, the preponderance of evidence clearly demonstrates that, when first within sight of one another, both vessels were in an approximate mid-channel position with the upbound tug on a course as to allow for gradual passage to the western edge of the dredged channel. The OLYMPIC ROCK, upon sighting the tug in a mid-channel position, altered to starboard for a normal port to port passage. While the course of the tug was not readily apparent, it was reasonable to assume that, in response to the OLYMPIC ROCK's single blast on the whistle, the tug would so maneuver as to comply with the narrow channel rule. Instead, the operator of the PRINCESS failed to hear any of the three single blasts sounded by the OLYMPIC ROCK and, except for a slight alteration further to the left in an effort to reach the western extremity of the channel more rapidly, he failed to exercise any further evasive maneuvers until the two vessels were in extremis. As the PRINCESS approached a position immediately upstream from Buoy 1C, the range of the two vessels had closed to approximately 75 yards. Upon closing to about 20 yards, the operator of the PRINCESS sounded one blast on his whistle and attempted to maneuver to the right with hard right rudder. Upon impact the PRINCESS heeled to starboard and went under and when the operator surfaced he found himself on the starboard side of the OLYMPIC ROCK and managed to swim to a life raft from the PRINCESS which he observed floating nearby. As the PRINCESS momentarily surfaced, three other crewmembers were observed, but they subsequently disappeared after entering the water.

4. As the result of the casualty three lives were lost, the OLYMPIC ROCK suffered structural damage to its bow section, the barge W. L. GRAHAM sustained plate and internal damage and the PRINCESS, though subsequently salvaged, suffered extensive hull and machinery damage.

REMARKS

1. Concurring with the Board, it is considered that the PRINCESS failed to comply with Article 25, Inland Rules (33 USC 210) which provides "In narrow channels every steam vessel shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such vessel." More specifically, it is clearly evident that the chain of events which led to this collision first began when the operator of the PRINCESS elected to proceed to the left hand side of the

channel. The subsequent failure to alter course to starboard upon first sighting the OLYMPIC ROCK in a meeting situation merely aggravated what was already a potentially hazardous condition. The presence of the buoy tender is considered insufficient justification for having departed from established rules, particularly since the evidence indicates the B. M. THOMAS effected a successful passage without incident.

2. Nothwithstanding an unobstructed view from the pilothouse of the PRINCESS, the operator's failure to hear the whistle signals of the OLYMPIC ROCK constitutes evidence of a failure to provide a proper lookout. Numerous Court decisions support the contention that a proper lookout must include audio as well as visual capabilities. While largely conjecture, it is reasonable to suppose that, had a lookout been posted as far forward as possible, the intention of the OLYMPIC ROCK would have been known to the PRINCESS in sufficient time as to avert a casualty. A further contributory factor was the failure of the PRINCESS to render a whistle signal of intent upon first sighting the oncoming vessel.

3. The Board's conclusion that the OLYMPIC ROCK failed to comply with the provisions of Article 18, Rule III, Inland Rules (33 USC 203) is concurred in. The evidence clearly demonstrates the doubt being experienced by the pilot of the OLYMPIC ROCK as to the intent of the PRINCESS when, on three successive occasions, he sounded a one blast signal and altered course to starboard without receiving a response. The above rule specifically provides that "if, when steam vessels are approaching each other, either vessel fails to understand the course or intention of the other, from any cause, the vessel so in doubt shall immediately signify the same by giving several short and rapid blasts, not less than four, of the steam whistle."

4. Consistent with the recommendations of the Board, a copy of the Board report together with a copy of this action will be forwarded to the American Pilots' Association for referral to the cognizant State Pilot Authority and appropriate action concerning the performance of duty of the pilot of the OLYMPIC ROCK while acting under the authority of his State Pilot's license.

5. It is considered that the primary cause of this casualty was the failure of the tug PRINCESS to comply with Article 25, Inland Rules (33 USC 210) and, since loss of life resulted, this failure constitutes evidence of criminal negligence.

6. The Board's recommendation that appropriate action under the administrative penalty procedure be initiated against the owners of the OLYMPIC ROCK is not concurred in. 33 USC 159 provides for a penalty against a vessel for failure to comply with Inland Rules of the Road. However, from the evidence it would appear that, in this instance, the responsibility for any navigational faults of the OLYMPIC ROCK must rest entirely upon the officer under whose direction and control the vessel was being navigated.

7. Where not in conflict to the foregoing summary and remarks, the record of the Marine Board of Investigation is approved.

[redacted]

E. J. ROLAND
Admiral, U. S. Coast Guard
Commandant

The Marine Board of Investigation, after a careful scrutiny of all the testimony and evidence adduced, finds as follows:

FINDINGS OF FACT

1. At or about 1041 hours (EST) on 21 February 1962, during periods of low visibility, the Liberian Tanker OLYMPIC ROCK, while downbound, collided with the upbound diesel tug PRINCESS which was towing the Tank Barge W. L. GRAHAM. The collision occurred in the vicinity of Buoy 1B (LL 1914, page 316) located in Bellevue Range, Delaware River. As a result of the collision, the tug PRINCESS sank, resulting in loss of life of three crewmembers.

2. The SS OLYMPIC ROCK O.N. 380 (Liberia), is a steam driven tank vessel of 13,665 gross tons, length 590 feet, breadth 74 feet, depth 32 feet, built in Kiel, Germany in 1954 and develops 10,000 horsepower. While maneuvering in confined waters, her engines are placed on maneuvering speed and develop the following revolutions and approximate speeds through the water:

Full ahead	50 RPM	8.5 knots
Half ahead	40 RPM	6.8 knots
Slow ahead	30 RPM	5.1 knots
Dead Slow ahead	20 RPM	3.4 knots

She is owned by Seabrook Shipping Co. of Panama, Central America, with her port of registry Monrovia, Liberia. The United States Agent was Central American Steamship Agency, Inc. of 655 Madison Avenue, New York, N.Y. At the time of casualty she was under command of [redacted] of [redacted]. [redacted] of [redacted], member of the Pilots Association for the Bay and River Delaware, was aboard in the capacity of pilot and was acting under the authority of his State of Pennsylvania Pilot's license. [redacted] holds the following document and license issued by the Coast Guard: Validated Merchant Mariners' Document [redacted] issued 9 March 1953, endorsed as any unlicensed rating in Deck Dept. including Able Seaman, any waters, unlimited. License No. [redacted], Issue No. 3-6, Philadelphia File No [redacted] issued on 2 June 1960, Master of Steam and Motor Vessels of any gross tons upon Oceans; also First Class Pilot, Delaware Bay and River from Overfalls Light Vessel to Trenton, New Jersey, Chesapeake and Delaware Canal from Newcastle Channel to Courthouse Point.

3. The Tug PRINCESS O.N. 111443 is a diesel driven harbor tugboat of 91 gross tons, 62 net tons, length 78 feet, breadth 20.5 feet, depth 8.6 feet built in Philadelphia, Pennsylvania in 1903 and develops 600 horsepower. A valid permanent enrollment Customs document was in effect. While maneuvering with a barge in similar conditions as found on date of casualty, it is estimated she develops the following speeds through the water:

Full ahead	6 1/2 knots
Half ahead	3 knots
Slow ahead	1 knot
Full astern	3 knots
Half astern	1 1/2 to 2 knots
Slow astern	Less than 1 knot

She is owned and operated by [redacted] of [redacted]. At the time of the casualty she was under the command of [redacted], who was not acting under the authority of any Coast Guard license or document. However, [redacted] does hold the following document and license issued by the Coast Guard: Validated Merchant Mariner's Document [redacted] issued 18 March 1954 and endorsed as Ordinary Seaman, Wiper and Messman (FH). License No. [redacted] issued 28 August 1956, Motorboat Operator for the navigable waters of the United States with six or less passengers. License No. [redacted] issued 19 June 1958, Operator Mechanically Propelled passenger carrying vessel of not more than 100 gross tons upon waters other than ocean and coastwise, to carry over six passengers. All of the above were issued in the Port of Philadelphia.

4. The Tug PRINCESS was towing the Tank Barge W. L. GRAHAM, O.N. 173806 which is a non-selfpropelled barge of 506 gross tons, 506 net tons, length 147 feet, breadth 36 feet, depth 11 feet, built in Mariner's Harbor, New York, in 1937. She has a valid permanent enrollment Customs Document and a Certificate of Inspection issued on 20 July 1960 at the Port of Philadelphia. She is classed as a tank barge for the carriage of Grade A inflammable or combustible liquids for route on Bays, Sounds and Rivers and requires one Ordinary Seaman with Tankerman endorsement in her crew. She was last inspected on 3 July 1961 at Philadelphia. She is owned and operated by the Graham Oil Barge Co. of Gladwyne, Pennsylvania. At the time of the casualty, [redacted]. of [redacted], was Barge Captain and is the holder of validated Merchant Mariner's Document [redacted] which is endorsed for Tankerman, Grade B and any lower grades, Ordinary Seaman, Messman (FH) and Wiper.

5. Three crewmembers from the tug PRINCESS were drowned following the disaster. The two surviving members of the crew of the tug and barge sustained injury of a minor nature, but none were reported as being incapacitated for any period. The deceased crewmembers from the Tug PRINCESS are as follows:

George B. Chadwick [redacted], Chief Engineer [redacted] any waters, Tankerman Grade A or below. License [redacted] Motorboat operator (1940) 6 or less passengers upon navigable waters of the U.S. dated 14 April 1959, second issue, issued at Philadelphia, Pa.

Wife - [redacted]

Louis Lyons [redacted] Deck Hand
not documented or licensed
by Coast Guard

Wife - [redacted]

Joseph Derrickson [redacted] Cook
reported to have held USMMD
but number and rating unknown

Wife - [redacted]

6. The OLYMPIC ROCK suffered bow damage on the port and starboard sides between the keel and the 29 foot mark. Approximately nine shell plates, seven frames and eight brackets were twisted, torn and bent. The structural damage to the OLYMPIC ROCK was estimated as $30,000. The Tug PRINCESS was holed at her upper rub rail strake, port side approximately midships. She received extensive hull damage, house damage and internal damage to all of her machinery and other equipment. The structural damage to the PRINCESS was estimated as $50,000. The Tank Barge W. L. GRAHAM suffered plate and internal damage, vicinity of No. 2 and 4 port cargo tanks. The structural damage to the W. L. GRAHAM was estimated as $28,000.

7. The weather at the time of the casualty was light snow, visibility 1 to 2 miles, no wind. The tide was near half flood with the current near maximum flood with a velocity of approximately 1.5 knots and general direction of flow 020°.

8. The OLYMPIC ROCK was the only vessel involved in the collision equipped with radar. The OLYMPIC ROCK had a Raytheon radar, year of manufacture and size of scope unknown. The radar is equipped with 1, 2, 4, 8, 12 and 40 mile range, scales true and relative bearing indicator, fixed range rings and variable range indicator. The radar had been overhauled the day before the casualty and was reported to be in excellent operating condition.

9. Bellevue Range is located approximately 12 miles down the Delaware River from the Hog Island Terminal, Philadelphia. This range is marked for safe navigation by the lateral system of buoyage, the dredged cut having a controlling depth of approximately 40 feet, width of about 800 feet, approximately 3 miles in length with the axis of direction 035°/215° true. All traffic on the Bellevue Range travels in a NE/SW direction. Proceeding southward, the western edge of the dredged cut is approximately 450 yards from the Delaware shoreline and progressively narrows its distance to approximately 300 yards when in the vicinity of Black Can Buoy 1B (LL 1914, Page 316); the eastern edge of the dredged cut is approximately 1100 yards from the Delaware shoreline at its closest point. At approximately 1100 yards south of Black Can Buoy 1B on the western side of the river, the U.S. Army, Corps of Engineers, have a sub office, locally known as the Edgemoor office. This plant consists of two piers, which are used

to moor dredges and other equipment. The western edge of the dredged cut is approximately 240 feet from the end of these piers. On the date of casualty the Army Corps of Engineers' Hopper Dredge COMBER was moored at the outer end of the Edgemoor piers, parallel to Bellevue Range, with her bow headed upriver in a northeasterly direction and with two Corps of Engineers barges abreast of one another and moored alongside her starboard side. The COMBER has a beam of 60 feet and each barge a beam of 30 feet. The total width of the equipment protruding from the end of piers was approximately 120 feet.

10. On 21 February 1962 at 0905 the SS OLYMPIC ROCK departed her discharge berth at the Gulf Oil Co. Hog Island Terminal, Philadelphia, in ballast, bound for Puerto La Cruz, Venezuela, with a sailing draft of 19 feet forward and 22 feet aft. At 0910 hours, tugs placed the vessel in the channel for her passage down the Delaware River and the pilot took charge. The OLYMPIC ROCK encountered intermittent snow flurries and reduced visibility as she proceeded downriver. All navigation and steering gear with the exception of the course recorder was in constant use and performed satisfactorily. The radar had previously been repaired, was in good operating condition. The master was operating the radar, utilizing the 4 mile range scale and occasionally scanning the 2 and 8 mile range scales. The canopy-type hood on the radar was positioned so that all bridge personnel could conveniently observe the scope. No plots of observed radar targets were made nor were visual bearings taken. No one took any navigational bearings, noted the ship's position nor recorded the times buoys or other stationary objects were passed. There was no chart of the area on board. A bow lookout was on duty and making reports to the bridge via the sound powered telephone. Witnesses testified that the ship proceeded downriver at full ahead or half ahead, depending on the visibility and prior to collision reduced speed to slow ahead for passing an upbound ship. When the passing situations were successfully completed the OLYMPIC ROCK increased speed to half ahead and remained on this speed until the Tug PRINCESS was observed. The bell logs indicate the ship was reduced to slow ahead at 1003 and returned to half ahead at 1007. The OLYMPIC ROCK continued downriver on a half ahead bell in the center of the dredged channel of the northern section of Bellevue Range, steering 214° - 216° by gyro when they picked up two targets ahead on the scope at a distance of approximately 2 miles. When first observing these targets on radar the pilot determined they were approximately abeam of red lighted Buoy 2B (LL 1912) which is the turning buoy located at the junction of Bellevue and Cherry Island Ranges. Shortly after radar contact was made, these targets were visually sighted and it was estimated that the range at this time was slightly better than one mile. These targets observed were two tugs with tows, coming upriver, nearly abeam of each other and appeared to be proceeding at full speed, making an estimated speed of 8 to 10 knots. One tug was dead ahead of the OLYMPIC ROCK and the other on the OLYMPIC ROCK's port bow. It later developed that the tug dead ahead of the ship was the Tug PRINCESS and her tow W. L. GRAHAM. The tug on the ship's port bow was the B. M. THOMAS with three

barges in tow. When the tugs were visually sighted the OLYMPIC ROCK's personnel estimated they were making approximately 5 to 7 knots over the ground. At this time the OLYMPIC ROCK reduced her speed to slow ahead, sounded a single blast on her two steam whistles which sound simultaneously and altered her course slightly to starboard. The Tug PRINCESS appeared to be in the center of the dredged cut with her tow made fast on her starboard side and heading toward the OLYMPIC ROCK. Receiving no answer to the single blast and noticing no course change by the PRINCESS, the OLYMPIC ROCK sounded a second single blast and altered her course more to the starboard. Shortly after this second signal the personnel on the OLYMPIC ROCK observed the Tug PRINCESS alter course to port. Receiving no answer to the second signal the OLYMPIC ROCK again sounded a single blast and altered course to the starboard. Having sounded three separate single blasts and receiving no answer or observing no appreciable course change, the OLYMPIC ROCK sounded the danger signal and placed her engines on emergency full astern. At approximately the same time the danger signal was sounded the PRINCESS commenced a hard right turn and at 1041 the OLYMPIC ROCK and Tug PRINCESS made physical contact. Witnesses from the OLYMPIC ROCK testified that they estimated the time from sounding the first whistle signal to collision to be more than two or three minutes. They also indicate that at the time of physical contact with the Tug PRINCESS they were making a speed of less than five knots over the ground. The engine order telegraph bell logs record a slow ahead bell at 1024, stop bell at 1040 and emergency full astern bell at 1041. Moments before collision the Tug PRINCESS and her tow disappeared below the flare of the OLYMPIC ROCK's bow. Witnesses from the OLYMPIC ROCK indicate that the angle of impact at time of collision was approximately 30° - 40° between bow of OLYMPIC ROCK and PRINCESS. Within seconds after physical contact, the Barge W. L. GRAHAM sheered away in a direction toward the New Jersey side of the river while the Tug PRINCESS was observed 50 to 100 feet off the starboard bow of the OLYMPIC ROCK and nearly abeam in way of No. 2 or No. 3 cargo tanks. The Tug PRINCESS capsized in a sinking condition with her keel strake visible above the water's surface. Shortly after being observed in this condition the PRINCESS disappeared beneath the surface with her mast remaining visible above the water. Witnesses from the OLYMPIC ROCK sighted one crewmember from the PRINCESS aboard a life float and two other crewmembers in the water near the area of the capsized tug and life float. Immediately, various crewmembers on the OLYMPIC ROCK tossed life rings over the starboard side and commenced preparing a boat for launching. The tug's two crewmembers in the water disappeared from view when in the vicinity of the ship's stern. Witnesses from the OLYMPIC ROCK testified that at moment of collision the ship was headed for the Delaware shoreline with the Corps of Engineers Dredge COMBER, which was moored at the Edgemoor installation, one point on the port bow of the ship. At a very short time after the collision, an Army Corps of Engineers Motor Launch arrived on scene, picked up the man from the life float and then commenced search for other survivors. The OLYMPIC ROCK cautiously maneuvered to Cherry Island Flats where she anchored and stood by to render assistance if needed.

11. On 21 February 1962, at approximately 0930, the Tug PRINCESS with light Tank Barge W. L. GRAHAM in tow, departed the Corps of Engineers Dredge NEW ORLEANS with a draft of 7 1/2 feet forward and 9 feet aft, bound for Graham Transportation Co. piers located at the foot of Yarnall Street, Chester, Pa. On this date, the Dredge NEW ORLEANS was working in an area locally known as Goose Island Flats, which is located north of Federal Anchorage No. 5, in the vicinity of New Castle Range. The Tank Barge W. L. GRAHAM was secured port side to the starboard side of the Tug PRINCESS with three lines as follows: The bow line and towing strap of 5 1/2 inch polypropylene line and the stern line of 5 1/2 inch manila line. The tug's starboard bow fenders were hard against the port side of the barge at a point approximately amidships on the barge. The sterns of both vessels were nearly abreast of each other and slightly open. In this manner the tow proceeded with the barge slightly angled across the bow of the tug from starboard to port. The wheelhouse of the PRINCESS was clear of all obstructions and afforded a clear view to the operator. The PRINCESS encountered intermittent snow flurries with reduced visibility on her passage up the Delaware River. A chart of the area was not used as the operator was experienced and familiar with the route. The tug was proceeding into the wind which was northeasterly. The wheelhouse windows and door were closed. The tug was not equipped with radar and while on the righthand side of Deepwater Point Range, in the vicinity of Penns Beach, consideration was given by her operator to anchoring until the visibility improved. The deckhand was notified by the operator to go on lookout on the bow of the barge and the tug's navigation lights were energized. Before the lookout manned his station, the visibility increased and he was sent below. The PRINCESS continued her voyage, maintaining her position on the righthand side of the dredged channel. On Cherry Island Range and slightly south of the Christina River, [redacted], the tug's operator, observed the Tug B. M. THOMAS, owned by Taylor and Anderson Towing and Literage Co. of 15 Lombard Street, Philadelphia, Pa. outbound in the Christina River towing three barges astern. When the Tug B. M. THOMAS entered the Delaware River, she fell in astern of the PRINCESS and proceeded up the Delaware River. [redacted] further stated that when the PRINCESS was approximately abeam of red nun Buoy 4C (LL 1911, page 316) Cherry Island Range, the Coast Guard Buoy Tender ZINNIA was observed approximately one mile distant upstream and within the limits of the dredged navigable channel, close aboard Bellevue Range Lighted Buoy 2B (LL 1912). On first sighting the buoy tender it was noted that she was displaying the prescribed warning signal for a Coast Guard vessel engaged in servicing an aid to navigation. The channel north of the buoy tender indicated there was no moving traffic in the area and the channel south of the PRINCESS indicated the Tug B. M. THOMAS appeared to be in an overtaking position although the THOMAS had not sounded her whistle to indicate any such intention. At this time the PRINCESS was experiencing the first stage of a flood tide and making a speed of approximately 6 to 6 1/2 knots over the

ground. [redacted] additionally indicated that shortly after sighting the buoy tender, the PRINCESS altered her course slightly to her left and crossed to the west side of the Bellevue Range. This maneuver kept the PRINCESS well clear of the buoy tender and also gave the Tug B. M. THOMAS ample passing room. The PRINCESS then shaped up outside the dredged channel limits on the west side of Bellevue Range and passed the Corps of Engineers piers, Edgemoor installation, approximately 20 to 50 yards to the east of the Dredge COMBER. [redacted], the tug operator, states that when passing the COMBER, his tug and tow were outside the dredged cut and to the west of Bellevue Range. The PRINCESS maintained her course and speed but the tide caused her to drift to the left toward the west side of the Delaware River and shortly after passing the Corps of Engineers installation she observed Bellevue Range Black Can Buoy 1B (LL 1914, Page 316) approximately 850 yards distant, about 5-6 points on her starboard bow and also sighted the SS OLYMPIC ROCK for the first time approximately 1 1/4 miles distant. The SS OLYMPIC ROCK, when first observed, appeared to be approximately in the center of the dredged cut of Bellevue Range, heading downriver and about mid way between Bellevue Range Black Can Buoy 3B (LL 1914, Page 316) and Bellevue Range Lighted Red Nun Buoy 6B (LL 1915). The OLYMPIC ROCK appeared to be in ballast, to have "a wash on her bow", maintaining her course and speed. At the time of sighting the OLYMPIC ROCK, the Tug B. M. THOMAS was in the eastern limits of Bellevue Range Dredged Channel approximately 900 yards south of the PRINCESS and about 400 yards north of Buoy 2B (LL 1912). The THOMAS appeared to be maintaining her course upriver with a speed slightly faster than the PRINCESS' 6 1/2 knots. At thistime the PRINCESS intended to maintain her course and speed, to pass to the westward of Black Can Buoy 1B (LL 1914, Page 316), pass the OLYMPIC ROCK starboard to starboard, allow the Tug THOMAS to overtake her and then return to the eastern side of the Bellevue Range. The PRINCESS maintained her course and speed and proceeded upriver outside the western limits ofthe dredged channel. As she passed Buoy 1B, leaving it to starboard, the OLYMPIC ROCK, which was estimated as being 50 to 75 yards distant, was altering her course to the right and the PRINCESS did not hear the prescribed whistle signals. The PRINCESS continued to hold course and speed until it was obvious both vessels were on a collision course. Immediately the TUG PRINCESS sounded one blast on her air whistle and put herself and tow in a hard right turn in an attempt to clear the OLYMPIC ROCK, which at this time was estimated to be 20 yards distant. The master of the PRINCESS also indicated it takes approximately one minute for the Sperry electric steering wheel to start the tug and barge in a swing to the right and at this time it appeared that she was not swinging fast enough. He further indicates that in view of this observation he immediately sounded the general alarm to alert the crew but did not have the opportunity to sound

the prescribed danger signal. The operator of the PRINCESS testified that when physical contact was made with the OLYMPIC ROCK the tug was in a right turn and he did not know whether the ship made initial contact with the tug or barge. The Tug PRINCESS felt one crash and immediately the tug's bow submerged below the water surface with water pouring into the wheelhouse. The tug appeared to jump out of the water, then commenced to settle with a starboard list and within seconds she sank. The collision caused the tug's whistle to sound continuously until she submerged. The operator of the PRINCESS states that at the time of collision he was at the wheel and the next thing he recalls was coming to the surface and sighting a small life raft approximately 10 to 20 yards distant. This raft was identified as lifesaving equipment from the PRINCESS. The operator of the PRINCESS swam to the raft, climbed aboard and then he saw two of the crew, [redacted] and [redacted], come out of the forward port side galley door and also saw [redacted] come on deck from the after port engine room door. All three crewmembers assembled on the open deck port side as Hays commenced waving his arms and trying to yell, above the sound of the tug whistle, instructions to abandon the tug. He saw [redacted] and [redacted] walk in the after direction, enter the water in the vicinity of the port quarter bitts and commence drifting upriver. [redacted] walked forward and appeared to step on the bow as the tug sank from sight. [redacted] could not recall when he lost sight of his crew. He could recall that when seen on deck all crewmembers appeared dry and none were utilizing any lifesaving equipment. [redacted] was rescued by the Corps of Engineers power launch WILMINGTON and subsequently taken ashore at the Edgemoor installation where he was transported to a hospital in Wilmington, Delaware. He was treated for exposure, shock and released that same afternoon.

12. The PRINCESS' log books and other documentary records were lost and not available during this investigation.

13. The personnel on the Tug B. M. THOMAS, who witnessed the collision and events leading thereto, testified that the Coast Guard Buoy Tender ZINNIA was not obstructing traffic in the dredged channel and that Bellevue Range Lighted Buoy 2B was on station. They further stated they were not overtaking the PRINCESS, that neither the OLYMPIC ROCK nor the PRINCESS displayed navigation lights, that the PRINCESS crossed the bow of the OLYMPIC ROCK contrary to the rules of the road, and that when collision was inevitable the PRINCESS went into a hard right turn. They also state the OLYMPIC ROCK sounded whistle signals and the PRINCESS did not answer or sound any signals whatsoever. They indicate the collision occurred at approximately 1045 and from the time they heard the

first whistle signal from the OLYMPIC ROCK until collision occurred, the lapse of time was approximately five minutes. Witnesses on the THOMAS further indicate that at time of collision it appeared that the Tug PRINCESS made physical contact with the OLYMPIC ROCK approximately 20 to 30 feet aft of the tanker's port bow. The OLYMPIC ROCK appeared to strike the tug on the tug's port side. The barge attached to the PRINCESS immediately broke loose at the time of collision. The PRINCESS' wheelhouse rolled to starboard, away from the ship and the tug appeared to roll under the ship's bow, beneath the keel. The THOMAS reduced her speed, altered her course to port and went around the stern of the OLYMPIC ROCK. She commenced searching the area for survivors and observed debris in the water. They saw the Tug PRINCESS surface then sink. The port side of the tug came up above the water's surface a couple of feet and settled again below the surface with her mast visible above water.

14. The master and pilot of the OLYMPIC ROCK indicate the collision occurred approximately 825 yards, bearing 159°T from Cherry Island Rear Range Light (LL 1902). The tug operator indicates the collision occurred approximately 625 yards, bearing 154° from the after Cherry Island Range Light (LL 1902). The Corps of Engineers, Notice to Mariners, dated 23 February 1962 indicates a buoy marking the PRINCESS was located in a position 1050 yards, 045°T from Cherry Island Front Light (LL 1901).

CONCLUSIONS

1. The Board concludes the Tug PRINCESS did not alter her course to the right when sighting the OLYMPIC ROCK and this is considered to constitute evidence of failure to comply with the narrow channel rule 33 USC 210 (Article 25).

2. The Board further concludes the OLYMPIC ROCK and Tug PRINCESS when first sighting each other were in a head and head or nearly so, situation.

3. It is concluded that when the OLYMPIC ROCK first sighted the Tug PRINCESS, she (OLYMPIC ROCK) indicated her intentions by sounding the appropriate whistle signal and altered her course to her starboard.

4. The Board concludes the Tug B. M. THOMAS was on the righthand side of the channel, was astern and well clear of the Tug PRINCESS and her personnel observed the events leading up to and including the collision.

5. The Board concludes the Tug PRINCESS, with the OLYMPIC ROCK in visual sight, altered her course to her left without sounding a whistle signal and this is considered to constitute evidence of failure to comply with 33 USC 203 (Art. 18) Rule 1.

6. The Board concludes the OLYMPIC ROCK did not see or hear an answer to her whistle signal that indicated a port to port passing. Furthermore, she altered her course to her right and continued sounding a port to port passing signal. This action is considered to constitute evidence of failure to comply with 33 USC 203 (Art. 18) Rule III.

7. [redacted], acting under authority of his state pilot's license, was conning the OLYMPIC ROCK preceding the collision and at time of collision.

8. The Board concludes all aids to navigation were on station and in no way contributed to this casualty.

9. As a result of this casualty, the Board concludes the following named persons lost their lives:

George B. Chadwick, Chief Engineer, Tug PRINCESS
Louis Lyons, Deckhand, Tug PRINCESS
Joseph Derrickson, Cook, Tug PRINCESS

10. It is concluded the collision occurred in approximately a position 1050 yards, bearing 045° T from Cherry Island Front Range Light (1901).

11. It is concluded that other than the course recorder on the OLYMPIC ROCK not functioning, there was no machinery or equipment failure on either vessel.

12. The Board concludes the life float on the PRINCESS functioned properly and contributed to saving the life of [redacted], the owner/operator.

13. The Board further concludes the search and rescue efforts conducted by the Corps of Army Engineers, Coast Guard, Delaware State Police and local volunteer fire and rescue organizations were adequate.

RECOMMENDATIONS

1. It is recommended that a copy of this report be forwarded to the Commandant (MVI) for further appropriate action in the case of the Pilot of the OLYMPIC ROCK.

2. It is recommended that further appropriate action under the administrative penalty procedure be initiated in the case of [redacted] concerning his part in the casualty.

3. It is recommended that further appropriate action under the administrative penalty procedure be initiated in the case of the owners of the SS OLYMPIC ROCK, concerning her part in the casualty.

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4. Other than the above, it is recommended that no further action be taken and the case be closed.

[redacted]

JESSE O. THOMPSON
Captain, USCG
Chairman

[redacted]

RUSSELL O. FOSTER
Commander, USCG
Member

[redacted]

LT USCG
Member and Recorder