

MARINE CASUALTY REPORT

FISHING VESSEL MERRY JANE, O.N. 596815,

BROACHING ON 8 FEBRUARY 1986 APPROACHING BODEGA BAY, CALIFORNIA BETWEEN BODEGA HEAD AND BODEGA ROCK WITH MULTIPLE LOSS OF LIFE AND INJURIES TO PASSENGERS

U.S. COAST GUARD

Marine Board of Investigation Report and Commandant's Action REPORT NO. USCG 16732/0001 HQS 87

Technical Report Documentation Page

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•	lty Report, F/V MERRY JANE,	5. Report Date
	8 February 1986 approaching	
Bodega Bay, California, w	ith multiple loss of life	6. Performing Organization Code
and injuries to passenger	S	G-MMI-1/24
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M/V MERRY JANE. O.N. 596815, BROACHING ON 8 FEBRUARY 1986 APPROACHING BODEGA BAY, CALIFORNIA WITH LOSS OF LIFE AND INJURIES TO PASSENGERS

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Washington, D.C. 20593-0001 Staff Symbol: G-C/22 Phone: (202) 267-2380

16732/MERRY JANE

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Commandant's Action

on

The Marine Board of Investigation convened to investigate the circumstances surrounding the broaching of the M/V MERRY JANE in Bodega Bay, California on 8 February 1986 with multiple loss of life

The report of the marine board of investigation convened to investigate the subject casualty has been reviewed and the record, including the findings of fact, conclusions and recommendations, is approved subject to the following comments.

CAUSE OF THE CASUALTY

The cause of the casualty was the failure of the operator to accurately assess his position during the approach to the opening between Bodega Head and Bodega Rock. This failure resulted in the vessel being positioned outside the area of calmest water (commonly referred to as the "slot"). This in turn allowed a surf generated wave and a quartering sea to broach the vessel and heel it violently, ejecting 18 persons into the water.

REMARKS

While the MERRY JANE's exact position in relation to the slot cannot be determined with certainty, it is clear from photographic and other evidence taken by the marine board that the vessel was toward the surf line and away from the center of the slot. The operator of the MERRY JANE, instead of navigating through the slot, an area of smoother water between Bodega Head and Bodega Rock where safe passage is possible, navigated the vessel into the surf line formed by shallow water in the vicinity of Bodega Rock. According to the U. S. Coast Pilot, Volume 7, the passage between Bodega Head and Bodega Rock is 325 yards wide and "In good weather small boats having local knowledge sometimes use (this) passage. . ., but the passage is dangerous during periods of heavy ground swells. . . Approximately two hours before the casualty, the National Weather Service (NWS) issued a small craft advisory for hazardous seas with westerly swells of 8 to 13 feet. Wave data from the three NWS buoys in the area recorded significant wave heights of 10 to 11 feet. Expert witnesses estimated that the swell direction was 255 degrees TRUE, with 240 degrees TRUE presenting the most dangerous situation to transiting vessels. Under these sea conditions, and in light of the cautionary information presented in the Coast Pilot and the NWS small craft advisory, passage through the slot should have been considered dangerous and use of the alternate approach to Bodega Bay would have been prudent. Although he opted for the more hazardous route through the slot, the operator could have lessened the risk to his vessel by ensuring that it was navigated in the area of calmest water.

COMMENTS ON CONCLUSIONS

Conclusion 8: Identification of persons in the water and especially the persons missing was hampered by lack of a complete person-by-person passenger list either on board the vessel or at the shoreside location.

Comment: This conclusion is concurred with. The Coast Guard will propose in its revision of 46 CFR, Subchapter T a requirement that a list of persons carried on small passenger vessels (excluding ferries and those vessels making trips of 30 minutes duration or less) be kept ashore for use in the event that a search and rescue case should develop.

Conclusion 18: By virtue of her stability characteristics, vessel outfit and lifesaving equipment the M/V MERRY JANE is capable of operating beyond 20 miles offshore. The route limitations on this vessel were based on operator preference so as to comply with a lesser 46 CFR, Subchapter T lifesaving equipment requirement rather than actual vessel performance capability.

Comment: The phrase "and lifesaving equipment" should be deleted from the first sentence of this conclusion. As explained in the following sentence of the conclusion, the operator chose to comply with a less stringent 46 CFR, Subchapter T lifesaving equipment requirement, thus limiting his route to 20 miles or less from shore.

COMMENTS ON RECOMMENDATIONS

Recommendation 1: That the Coast Guard amend 46 CFR, Subchapter T to require that in addition to providing instructive placards, vessel operators insure a public announcement similar to that given commercial airline passengers is made at the beginning of each trip to afford all passengers knowledge of the stowage location of life preservers, the proper method of donning and adjusting life preservers, the type and location of all lifesaving devices carried on the vessel, and the location and contents of the "Emergency Checkoff List". This public announcement should be identified as a "Safety Briefing in compliance with Coast Guard regulations" so as to differentiate it from a general information announcement.

Comment: This recommendation is concurred with. An amendment proposing a safety orientation briefing on certain small passenger vessels (excluding ferries and those vessels making trips of 30 minutes duration or less) prior to their getting underway will be included in the Coast Guard's revision of 46 CFR, Subchapter T.

Recommendation 2: That 46 CFR, Subchapter T be amended such that vessel routes be determined by vessel performance characteristics rather than reference to geographic position. After making such determination the route can be stated in terms of geographic limitations.

Comment: This recommendation is not concurred with. Vessel performance characteristics are currently considered in determining a vessel's route. However, there are many other factors which must be taken into account such as the vessel's scantlings, equipment installed, lifesaving equipment and subdivision. The officer in charge, marine inspection (OCMI) presently has the flexibility to consider these factors in combination with his local knowledge to determine the routes of small passenger vessels in his zone. The Coast Guard Marine Safety Center can then evaluate a particular vessel's stability based on the requirements for the service that the OCMI deems appropriate. Based on these factors, no amendment to Subchapter T is required.

Recommendation 3: That 46 CFR, Subchapter T be amended so that operator license route limitations be made consistent with vessel route limitations to the greatest extent possible.

Comment: This recommendation is not concurred with. The criteria for determining license and vessel route limitations are not related. Licenses are issued for classes of waters based upon experience on those waters and requisite skills demonstrated through examination. Vessel routes are based upon the factors discussed in the comments on recommendation 2 above.

Recommendation 4: That the Coast Guard amend 46 USC 3502 and 46 CFR, Subchapter T to the effect that all small passenger vessel operators on trips over 30 minutes duration, other than ferry service, be required to record the names of all personnel on board at the time of departure, and keep the list on board and in a safe shoreside location until the vessel safely completes its trip.

Comments: This recommendation is concurred with in part. A change to 46 USC 3502 is not necessary to amend the regulations on this issue. A regulation change requiring that a list of persons on the vessel be deposited ashore for certain small passenger vessels (excluding ferries and those vessels making trips of 30 minutes duration or less) will be proposed as a part of the Coast Guard's revision of 46 CFR, Subchapter T.

Recommendation 5: That policy guidance on criteria for accepting "sister ship" stability tests be expanded to address simplified stability tests. Specifically, insuring that the sister vessels are in fact identical.

Comment: This recommendation is concurred with. Relatively small changes in weight and location of weight can significantly affect the stability of a small passenger vessel. Chapter 6 of the Marine Safety Manual, Volume IV, will be updated to include guidance to OCMI's for determining sister ship relationships.

Recommendation 6: That the Coast Guard amend 46 CFR, Subchapter T to require a minimum height float free arrangement for devices such as a buoyant apparatus which can be lifted and thrown to persons in the water.

Comments: This recommendation is concurred with and will be accomplished during the Coast Guard's revision of 46 CFR, Subchapter T.

Recommendation 7: That the Coast Guard advise the fishing vessel industry of the interference created by mounting unattended fishing poles along the rail. Consideration should also be given toward requiring inspectors to evaluate this situation at the next regularly scheduled inspection for all sportfishing vessels.

Comments: This recommendation is concurred with. A copy of this investigation will be forwarded to the National Association of Passenger Vessel Owners, National Party Boat Owners' Alliance, Boat Owners' Association of the United States and the Virgin Islands Charter Yacht League to facilitate dissemination of this information to their members. Additionally, OCMI's will be provided a copy of this report to enable them to include information in their informal newsletters regarding the potential danger of leaving mounted fishing poles unattended along the rail.

Recommendation 8: That no further action be taken and that this case be closed.

Comment: This recommendation is concurred with.

IF WIN

You Coast Guard

OMMANDANT



Commander Eleventh Coast Guard District Union Bank Bldg 400 Oceangate Long Beach, CA 90822-5399

16732/MERRYJANE 24 June 1986

From: Marine Board of Investigation

To: Commandant (G-MMI)

Subj. M/V MERRY JANE O.N. 596 815; BROACHING ON 8 FEBRUARY 1986 APPROACHING BODEGA BAY BETWEEN BODEGA HEAD AND BODEGA ROCK,

38 17' 45" N 123 03' 10.8" W, WITH LOSS OF LIFE AND INJURIES TO PASSENGERS.

FINDINGS OF FACT

1. SUMMARY
At approximately 1611 (all times are local Pacific Coast Times) on 8 February 1986, the M/V MERRY JANE, O.N. 596 815 broached while approaching Bodega Bay. The vessel was returning from a day of fishing at the Cordell Bank area with 48 passengers, two crew and one operator onboard. As the vessel was approaching the passage between Bodega Head and Bodega Rock the vessel was broached and heeled sharply to starboard. A total of 19 persons were thrown or fell from the vessel. A "Mayday" call was broadcast and responded to by two boats from Coast Guard Station Bodega Bay, two charter fishing boats from Bodega Harbor and several smaller craft. Ten survivors were rescued, five bodies were recovered and four persons were listed as missing. Three bodies were later recovered on 18 February 1986 and 23 February 1986. One person is still missing.

2. VESSEL DATA

MERRY JANE Name 596815 Official Number Coastwise and Fishery Service: Gross Tons. 68 53 Net Tons. 62.1 feet Length 19.1 feet Breadth 8.0 feet Depth: 1977 Year Builte Westport, WA, and Tacoma, WA. Place Built. Diesel, Twin Screw Propulsion: 600 Horsepower: San Francisco, CA. Home Port:

Owners:

Richard C. and

Tiesso

Operator:

Richard C. Tiesso

License:

Ocean Operator

75 gross tons Pacific Ocean not more than 25 miles offshore between Pigeon Point and Point Arena. Date of issue: 30 SEP 85 Place: San Francisco

CA

Certificate of Inspection: Issued 11 May 1983 San Francisco, CA

(SFC)

Last Inspection:

- 14 May 1985, Second Reinspection,

(SFC)

Last Drydock

- 10 April 1985 (SFC)

Route:

- Coastwise: Pacific Ocean between Pt. St. George and Pt. San Luis, California including the FARRALLO ISLANDS. Not more than 20 miles from a mainland safe harbor.

Required Crew:

- One licensed Ocean Operator

- One deckhand

- When vessel is operated in excess of 12 hours in any 24-hour period, an alternate crew shall be provided.

3. The following passengers are deceased:

Manuel Everette Anderson

George William Bell

John Haley

Walter Heydon

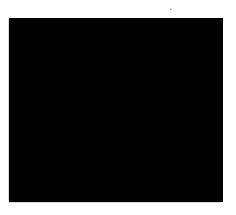


Charles Holzberger

Scott Huddleston

Edward L. Luiz

Xavier Fernando Tirado

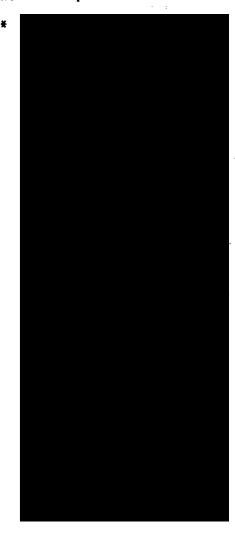


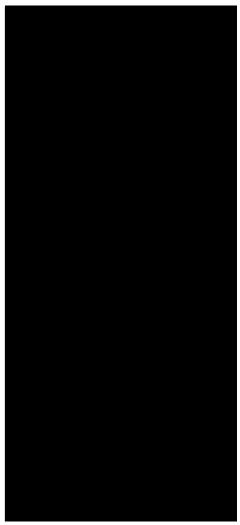
Death Certificates and/or Autopsy Reports indicate drowning as the cause of death for all deceased.

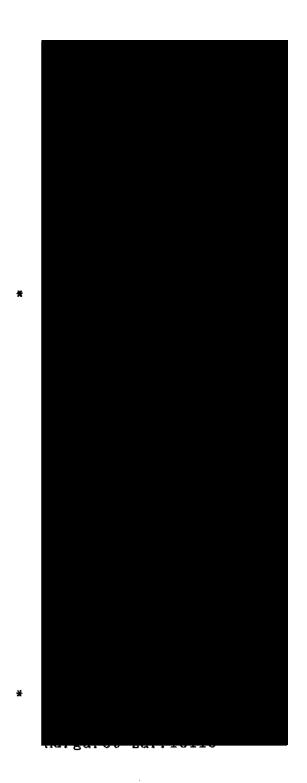
4. The following passenger is missing:

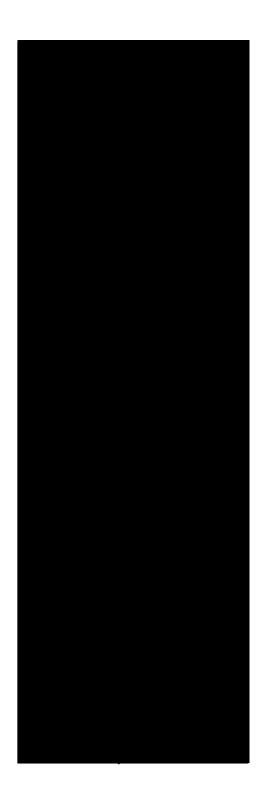


5. The following passengers were injured and required medical attention at local hospitals. An asterisk (*) indicates a person was incapacitated for 72 hours on more:









4. WEATHER CONDITIONS

Weather conditions forecast for the time of the casualty obtained from the National Weather Service's Coastal Forecast for Point Arena to Point Pinos out 60 miles issued at 1400, Saturday, 8 February 1986 were as follows:

" Small craft advisory for hazardous seas. Swell west 8 to 13 feet decreasing to 5 to 9 feet Sunday night.

Wind east to northeast 10 to 20 knots Waves 2 to 4 feet shifting to east to southeast Sunday night. Fair through Sunday night."

Previous weather forecasts for 0800 Saturday indicated light and variable winds. On scene weather estimates from the coxswains of Coast Guard boats responding within six to ten minutes of the casualty were wave heights of 14-16 feet and 15-18 feet. On scene wind and wave estimates by the operator and two sportfishing vessel operators entering the area prior to the M/V MERRY JANE were west to northwest winds of 4 to 6 miles per hour and westerly swells of 8 to 10 feet with a 20 second period. Air temperature was approximately 70 degrees Fahrenheit. Water temperature was 52-55 degrees Fahrenheit. At the time of the casualty the tide was ebbing. The preceding high tide occurred at 0950 with a height of 6.6 feet. The low tide occurred at 1657 with a height of -1.0 feet. Peak ebb tide occurred at 1422 and slack water occurred at 1818. At 1611, the time of the casualty, the tide was -.75 feet and .875 knots, ebbing.

Wave action from westerly swells passing through the passage between Bodega Head and Bodega Rock has a venturi-like effect. Waves are refracted or bent toward shallow water. Waves tend to wrap around Bodega Head and Bodega rock leaving a section of smoother water or "slot" in the center of the passage. Expert witness testimony states this is the most probable wave action. The wave data from the three National Weather Service buoys in the area recorded significant wave heights of 10 to 11 feet with a wave period of 17 seconds for the 4 PM observations on 8 rebruary 1986. Wave speed for 17 second period waves in water over 740 feet deep is 51.5 knots. (Wave speed =wave period x 3.03; wave length =wave period 2 x 5.12; Deep water = depth greater than one-half the wave length). As the waves enter shallower water the waves decrease then increase in height as well as decreasing in speed.

An analysis of photos taken just before and during the accident estimated direction of wave travel to be 240 degrees TRUE, a wave height of 15 feet as referenced to the MERRY JANE's starboard corner, and a distance between crests of 630 feet. Expert witness testimony hindcasted a swell direction of 255 degrees TRUE. Expert Witness testimony also indicated swell direction of 240 degrees TRUE would be the most dangerous situation.

5. THE CASUALTY

The M/V MERRY JANE departed the dock at Bodega Harbor at approximately 0710, 8 February 1986 with forty eight passengers, two crew and one operator onboard. The operator gave a brief safety orientation in conjunction with a general information greeting. The only other safety information available to passengers were placards on stowage and use of safety equipment. The vessel cleared Bodega Harbor jetty about 0730 and proceeded to Cordell Bank. The operator maintained a fishing line along the 80 fathom curve. Cordell Bank bears 227 degrees TRUE and approximately 25 nautical miles from Bodega Head. Cordell Bank is 22.5 miles offshore from Point Reyes, the closest point of land. The vessel began its return trip to Bodega Harbor from Cordell Bank at approximately 1415, estimated time of arrival was 1630.

As the vessel approached, it passed BUOY "R12" approximately 100 yards to port. The operator of M/V MERRY JANE, Mr. Richard Tiesso, was steering his normal course of 020 degrees MAGNETIC PSTG enroute to Bodega. According to the vessel's deviation table, the amount of deviation in the vessel's steering compass ranges randomly from 22 degrees east to 18 degrees west. A course line from the northeast corner of Cordell Bank in 80 fathoms of water to Bodega Head is approximately 053.8 degrees TRUE and 037.5 degrees MAGNETIC. Mr. Tiesso was operating the vessel from the wheelhouse and upon passing BUOY "R12", went up to the flying bridge control station. The operator stated he steered toward the "slot" in the channel, which he described as the area of calm water between the breaking waves on Bodega Head and Bodega Rocks. The M/V MERRY JANE was preceded into Bodega Harbor by the M/V SEA DOG III, a 60 foot vessel, operated by Mr. and the M/V CDYSTAL "C", a 42 foot

vessel, operated by Mr. The M/V SEA DOG III passed through the entrance between Bodega Head and Bodega Rock at approximately 1603. The CRYSTAL "C" passed through the entrance at approximately 1607.

The M/V MERRY JANE passed BUOY "R12" about 100 yards to port and continued to head toward the "slot" in the channel. The operator's point of reference for selecting his approach course was the "slot" in the channel. The M/V MERRY JANE continued until the vessel was in a position south of the center of the "slot" and approximately 600 yards south (approximately 173° T) of Bodega Head with the vessel pointing toward the center of the "slot". The swells were generally westerly.

At approximately 1611 a wave broached the M/V MERRY JANE, heeled the vessel sharply to starboard and slewed the bow of the vessel to port. The vessel was carried along by the wave. The wave then broke over the M/V MERRY JANE on her port side approximately amidships and aft to the afterdeck area. Eighteen of the nineteen persons thrown from the vessel were thrown into the water at this time by the rapid heeling of the boat and waterbreaking over the vessel.

When the vessel heeled, the operator, Mr. Tiesso, was knocked off his feet but managed to stay on board the vessel by maintaining a firm hold on the vessel's wheel. Mr. Tiesso had pulled the throttles back to neutral when he felt the boat being lifted up by the wave and the vessel felt unstable. Upon regaining his footing, Mr. Tiesso saw a wave coming toward the vessel's port side and he put the engines ahead and turned the wheel hard left. The M/V MERRY JANE went through the next wave bow first.

As the wave broached and carried the M/V MERRY JANE, the vessel heeled sharply to starboard and several passengers were thrown or catapulted into the water. Mr. was standing on the foredeck of the vessel with seven members of his party. When the vessel heeled, Mr. was catapulted from his port side position on the vessel's foredeck over the starboard rail in a long trajectory into the water. Mr. cleared a row of fishing poles extending approximately four and one half feet above the rail and spaced about four feet apart. Mr. weight is about 160 pounds.

Mr. was standing on the starboard side of the flying bridge next to the operator, Mr. Tiesso. Mr. was thrown into the water over the starboard side and landed in the water approximately fifteen feet from the vessel.

Mr. deckhand on the M/V MERRY JANE, was filleting fish on the afterdeck of the vessel when the wave struck. Mr. was standing facing forward at the table. The filleting table was located just aft of the engine compartment and on the centerline of the vessel. As the vessel heeled, Mr. was ejected from the vessel into the water.

Ms. was also on the afterdeck of the vessel, standing at the forward end of the engine compartment opposite Mr. When the wave struck the M/V MERRY JANE, Ms. slid to the starboard side of the vessel and went over the starboard rail into the water.

Mr. was on the afterdeck area with three companions when the wave struck the M/V MERRY JANE. Mr. and his three companions, Mr. Jim Tirado, Mr. Evevett Anderson and Mr. Charles Holzberger slid to the starboard side and were dumped or thrown over the side. All three of Mr. companions were unhurt and assembled together in the water. Wave action separated the group. Mr. three companions were among the deceased.

Mr. was a passenger standing on the starboard side of the foredeck when the wave struck the vessel. Mr. was knocked down to the deck. During the period between the wave striking the vessel and the vessel being turned into the next wave, Mr. heard someone remark that no one was steering the

vessel. Mr. entered the wheelhouse of the vessel and turned the ship's wheel hard right. The operator of the M/V MERRY JANE was on the flying bridge at this time turning the flying bridge wheel hard left. The operator, Mr. Tiesso, noticed the wheel response felt different than usual. Mr. Tiesso started down through the hatchway in the deck on the starboard side of the flying bridge and observed Mr. Engle at the wheel. Tiesso told Mr. to get away from the wheel. The steering stations on the M/V MERRY JANE have independent pumps, one in the wheelhouse and one on the flying bridge which feed to a common steering ram. The M/V MERRY JANE turned to port to pass through the next wave. This is the direction Mr. Tiesso was turning the flying bridge wheel. Mr. went out of the wheelhouse, was handed and donned a life preserver, and went to the bow of the boat. The vessel's movement caused Mr. air, strike his back on the bow area of the boat and fall into the water. Mr. was the only passenger who ended up in the water who was not thrown into the water on the initial wave that heeled the M/V MERRY JANE sharply to starboard.

A total of nineteen passengers were thrown or fell into the water. Ten survivors were rescued and five bodies were discovered within ten minutes of the casualty. Four persons were missing when the search was terminated on 9 February 1986.

Mr. deckhand on M/V MERRY JANE, was standing amidships by the aft cabin door getting ready to weigh fish for the days fishing pool. He was knocked down by the wave's effect on the boat. After getting to his feet, he began passing out life jackets and went forward to the wheel house to make a MAYDAY call on the vessel, VHF-FM radio using channel 16. Radio tapes from Coast Guard Group San Francisco indicate the radio call was placed at approximately 16:11:34. There was no one else in the wheelhouse when Mr.

Persons in the water were subjected to several waves which forced them under the surface of the water. Mr. struck the bottom with his feet as he was forced down. Wave action separated the people in the water from each other and moved the people and debris through the passage between Bodega Head and Bodega Rock.

The M/V SEA DOG III was in Bodega Harbor just past the Coast Guard Station when the operator, Mr. the Mayday call from M/V MERRY JANE. Mr. came about with a full load of 42 passengers and proceeded to the scene to render assistance. The M/V SEA DOG III rescued one survivor, Mr. and recovered one body. The SEA DOG III's deckhand, Mr. donned a lifejacket and went over the side to retrieve an apparently unconscious victim. The person was deceased. The M/V SEA DOG III was on scene approximately eight minutes from receipt of the Mayday call by M/V MERRY JANE. Time on scene would be about 1620.

The M/V CRYSTAL "C" was in Bodega Harbor when the operator, Mr.
heard the Mayday call from M/V MERRY JANE. Mr.
discharged his passengers and proceeded back out of the
harbor to the accident scene to render assistance.

The M/V STARDUST, a 56.6 foot vessel operated by Mr., was inbound toward Bodega Head at the time of the casualty. The M/V STARDUST proceeded around BUOY "BA", nicknamed "JINGLE BELLS", enroute Bodega Harbor rather than transit the approach between Bodega Head and Bodega Rock where the M/V MERRY JANE was.

Coast Guard Station Bodega Bay received the Mayday call by M/V MERRY JANE at about 1617. The station's 44 foot motor lifeboat, CG-44324, coxswained by SN Land a 16-foot skiff, CG-165012, coxswained by BM3 Dominic D. N. Were on scene within 165012, coxswained by BM3 Dominio B. eight minutes. The station's 30 foot utility boat, CG-30614, coxswained by BM2 was on scene within twenty-four minutes. CG-44324 recovered five survivors and four bodies. CGutilized a personal 165012 recovered two survivors. BM3 utili surfboard to reach two victims, Mr. and a boy, and bring them to CG-165012. Survivors were recovered shoreward of a line drawn between Bodega Head and Bodega Rock. People, debris and life jackets were carried through the passage to the shoreward side of Bodega Rock. The Sonoma County Sherriff's Department had a helicopter on scene at approximately 1630 to assist in the rescue effort. CG-44324 returned to Coast Guard Station Bodega Bay to disembark survivors and deceased. A Coast Guard helicopter, CG-1388, was onscene at approximately 1700 to conduct a search of the area in conjunction with the CG-30614. CG-44324 and CG-30614, were back on scene at 1718 and 1821 respectively to conduct extended search patterns. A beach patrol of Doran Beach was also considucted. The search efforts were secured at approximately 0030, 9 February 1986 and reinstituted at 0700, 9 February 1986. Search was suspended at 1745, 9 February 1986. The bodies of Walter Heydon, Scott Huddleston and George Bell were recovered on 18 February 1986, 23 February 1986 was not recovered as and 6 March 1986. The body of of the date of this report.

The M/V Merry Jane returned to the area to attempt rescue of persons in the water and recovered two survivors. During the rescue attempt, the operator had great difficulty deploying the buoyant apparatus from its approved float free arrangement due to the weight of the buoyant apparatus and the height of the pipe rack. In addition, fishing poles stowed along the rail further hampered the deploying of the buoyant apparatus and the throwing of lifejackets to persons in the water. The fishing poles were stowed in holders spaced about four feet apart along the rail and the poles extended approximately four and one-half feet above the rail.

Identification of persons on board the M/V MERRY JANE was made by using a list held at the Tides Landing, Bodega Bay, California, and by questioning survivors. The list indicated persons by groups of passengers rather than by individual name.

Damage to the vessel included breakage of two of three windows on the port side of the vessel, loss of a bench located on the starboard side of the afterdeck, breaking and bending of the transom railing on the starboard side and shifting of the engines on their engine mounts.

Onshore witnesses to the accident included Mr.

who took several photos of the accident scene and Ms.

who also rendered aid to survivors at Coast Guard

Station Bodega Bay. Mr. and Ms.

were at
different locations on Bodega Head when the accident occured.

6. VESSEL HISTORY
The M/V MERRY JANE was built at Westport, Washington, and Tacoma, Washington, by Kelly Enterprises, Inc., Jones-Goodell Corp. and Martinson Launch Co. in 1977. The vessel was documented with the U.S. Coast Guard on 22 August 1978 at San Francisco. The vessel was originally owned by and Mary Jane Hanlon until sold to Art C. and Marlene G. and Marlene G. September 1981. Mr. Hagstrom sold the M/V MERRY JANE to Richard C. and Catherine M. Tiesso on 3 December 1984.

The M/V MERRY JANE was first certificated by the Coast Guard on 22 August 1978 at Portland, Oregon. The M/V MERRY JANE was certificated for

"Oceans: between Point St. George California and Angels Point, Washington not to exceed 100 miles from land. When operating on a Coastwise route, not to exceed 20 miles from a harbor of safe refuge: Maximum Passengers allowed: 40. Total persons allowed: 43. When operating more than 12 hours in any 24 hours, an alternate crew shall be provided. When less than 30 passengers are aboard, only one deckhand is required."

On 18 September 1978 OCMI San Francisco amended the route to "Pacific Ocean between Point St. George and Point San Luis, California, not more than 100 miles from a mainland shore".

On 15 October 1980 the Certificate of Inspection was amended to a route of

"Coastwise: Pacific Ocean between Point St. George and Point San Luis, California, including the Farallon Islands not more than twenty (20) miles from a mainland safe harbor."

On 8 October 1982 the Certificate of Inspectionwas amended to show

"required crew: one licensed ocean operator, one deckhand, one additional deckhand may be carried. Passengers allowed may not exceed 49. Total persons allowed: 52".

M/V MERRY JANE's current Certificate of Inspection was issued on 11 May 1983 by OCMI San Francisco. Periodic reinspections were conducted on 8 May 1984 and 14 May 1985. The vessel was last drydocked for credit on 10 April 1985.

7. STABILITY

According to the Coast Guard vessel inspection file for the M/V MERRY JANE, the vessel could have been certificated to carry 60 passengers based on the successful completion of a simplified stability test for a sister vessel, the M/V NEDDIE ROSE, O.N. 574 139. When the MERRY JANE was actually certificated, however, the owner opted to carry only 40 passengers and so the simplified test was not required.

In order to verify the intact stability of the M/V MERRY JANE an inclining test and a simplified stability test were conducted jointly by the Twelfth Coast Guard District's Merchant Marine Technical Office and the Marine Board of Investigation on 25 April 1986. The results of those tests demonstrated that the M/V MERRY JANE has intact stability exceeding the requirements of the simplified stability criterion of 46 CFR 171.020 and the weather criterion of 46 CFR 170.160. In addition, by raising the vent located on the step between the focsle deck and the main deck 2.5 inches or eliminating the vent, the vessel also meets the more restrictive criterion for vessels of Unusual Proportion and Form of 46 CFR 170.173. Compliance with this criterion would not normally be required on small passenger vessels with a displacement type mono hull simular to that of the M/V MERRY JANE.

The M/V MERRY JANE has less righting energy than her sister vessel the M/V NEDDIE ROSE. The M/V NEDDIE ROSE carries an additional 1200 gallons of fuel which lowers her center of gravity considerably. The difference in stability was not enough to cause the M/V MERRY JANE to fail the simplified stability test but did result in the M/V MERRY JANE having 3.67 inches less freeboard in the test condition.

10. WATERWAY INFORMATION

The casualty occurred as the vessel was attempting to transit the passage between Bodega Head and Bodega Rock. This area is depicted in the Bodega Harbor insert on NOAA Chart No. 18643 (Bodega and Tomales Bays). The United States Coast Pilot, Volume 7 states "In good weather small boats having local knowledge sometimes use the passage between Bodega Head and Bodega Rock, but the passage is dangerous during periods of heavy ground swells because of the combers." Bodega Rock bears 130 degrees TRUE and 575 yards from Bodega Head light, a flashing six second light, 110 ft above mean high water with a nominal range of seven nautical miles. The navigable passage between Bodega Head and Bodega Rock is approximately 325 yards wide. Charted depths through the center of the passage from the approximate location of the casualty to the approximate area where survivors were

recovered, range from 33 to 29 feet at mean lower low water. Data for this chart was taken from a hydrographic survey done in 1931 for the offshore area and from a survey done in 1957 for the inshore area including some of the area between Bodega Head and Bodega Rock. A topographic survey in 1955 was used to update offshore data concerning breakers.

Cordell Bank is depicted on NOAA chart No. 18640. All areas in excess of 80 fathoms deep surrounding Cordell Banks are more than twenty miles from a mainland safe harbor.

Testimony from several sportfishing vessel operators out of Bodega Bay and from Coast Guard coxswains at Coast Guard Station Bodega Bay states that they routinely use the passage "between the Head and the Rock". The operator of the M/V STARDUST, which was behind the M/V MERRY JANE on the date of the accident, stated he goes through this passage only on calm days. He goes around the "BA" BUOY through the southern approach to Bodega Bay whenever there is a swell system in effect at the passage "between the Head and the Rock".

Traveling around the "BA" buoy and using the southern approach when coming into Bodega Bay from the north or west adds approximately 10 minutes travel time into Bodega Harbor.

11. PHOTOGRAPHIC EVIDENCE

Mr. was on Bodega Head at the time of the accident and photographed the accident. He had taken one photo of the SEA DOG III and two photos of the M/V MERRY JANE. One photo of the M/V MERRY JANE was taken prior to to the vessel being struck by the wave and the second photo just as the vessel was being struck by the wave. A photogrammetry study of the photos was done by the National Transportation Safety Board, Bureau of Technology, Washington, D. C. A report of this study stated the heading of the M/V MERRY JANE approaching the channelbetween Bodega Head and Bodega Rock was about 013 to 018 degrees TRUE. The heading of the M/V MERRY JANE as the vessel was being struck by the wave was 354 degrees TRUE. The course line of the M/V MERRY JANE based on the apparent wake was about 011 to 014 degrees TRUE.

CONCLUSIONS

- 1. The proximate cause of the accident was the failure of the operator to accurately assess his position during the approach to the opening between Bodega Head and Bodega Rock. Contributing to this was his failure to use fixed reference points while making the approach, thereby being unaware of the set and drift affecting his vessel which was moving the vessel to the south.
- 2. Contributing to the severity of the accident was the operator being unaware that his vessel was gradually presenting a beam to quarter aspect to the swell system as the vessel was being set to the south.
- 3. It is also concluded that the M/V MERRY JANE was broached by a wave, carried in the direction of wave travel and violently heeled to starboard causing persons on board to be ejected. The vessel was then overcome by the boarding sea from that same breaking wave.
- 4. Based upon the available evidence and witness testimony, the M/V MERRY JANE was not the victim of a "rogue wave".
 - 5. Eighteen of the nineteen persons ending up in the water were thrown into the water as a result of the wave. The remaining person was thrown or fell from the vessel as a result of the vessel's coming about and passing through the next wave. No person entered the water solely by being washed over the side.
 - 6. Wave action broke two port side cabin windows. The starboard side bench located on the afterdeck by the engine compartment was broken off during the violent roll and went over the side carrying the fish table and breaking the transom railing.
 - 7. Eight persons in the water died as a result of drowning. Mr. is missing and presumed dead.
 - 8. Identification of persons in the water and especially the persons missing was hampered by lack of a complete person-by-person passenger list either on board the vessel or at a shoreside location.
 - 9. Wave conditions were as forecast, the wind velocity was less than forecast and wind direction was westerly rather than easterly as forecast.
 - 10. The vessel was properly inspected and certificated under 46 CFR Subchapter T.
 - 11. The vessel meets all three of the small passenger vessel intact stability criteria found in 46 CFR Subchapter S even though the vessel is not required to do so by virtue of her route and service.

- 12. The M/V MERRY JANE was not an identical sister vessel to the M/V NEDDIE ROSE.
- 13. The operator of the M/V MERRY JANE rendered immediate and proper rescue action to victims.
- 14. The Coast Guard search and rescue response was prompt and proper.
- 15. The operator of the M/V SEA DOG III, the operator of the M/V CRYSTAL C and the deckhand of the SEA DOG III rendered extraordinary assistance and are worthy of recognition. Their efforts have been made the subject of separate correspondence.
- 16. Performance of Coast Guard Station Bodega Bay and personnel at Station Bodega Bay were noteworthy and deserving of recognition and have been made the subject of separate correspondence.
- 17. During the rescue effort the stowage arrangement and presence of fishing poles along the rail hampered efforts to deploy the buoyant apparatus and throw lifejackets to persons in the water.
- 18. By virtue of her stability characteristics, vessel outfit and lifesaving equipment the M/V MERRY JANE is capable of operating beyond 20 miles offshore. The route limitations on this vessel were based on operator preference so as to comply with a lesser 46 CFR, Subchapter T lifesaving equipment requirement rather than actual vessel performance capability.
- 19. The passage "between the Bodega Head and the Rock" is dangerous during certain sea conditions. These hazards are known and the warning given in the Coast Pilot. Local area operators using this passage are aware of the hazards and routinely use the passage. Consideration was given to controlling the waterway through regulations but since the proximate cause of this accident was attributable to the operator of the vessel, such control of the waterway was not considered appropriate.
- 20. There is no evidence that failure of inspected equipment or any personnel of the Coast Guard or any other government agency caused or contributed to the casualty.
- 21. There is evidence of negligence on the part of the operator of the M/V MERRY JANE concerning his part in the casualty as stated in conclusions 1 and 2.
- 22. There is evidence that the operator of the M/V MERRY JANE exceeded the route permitted by the Certificate of Inspection. The evidence in this matter and conclusion #21 have been forwarded to Commander, Twelfth Coast Guard District.
- 23. Other than the above, there is no evidence of any act of misconduct, inattention to duty, negligence, incompetence or willful violation of law or regulation on the part of licensed or certificated personnel that contributed to the casualty.

RECOMMENDATIONS

- 1. That the Coast Guard amend 46 CFR Subchapter T to require that in addition to providing instructive placards, vessel operators insure a public announcement similar to that given commercial airline passengers is made at the beginning of each trip to afford all passengers knowledge of the stowage location of life preservers, the proper method of donning and adjusting life preservers, the type and location of all lifesaving devices carried on the vessel, and the location and contents of the "Emergency Checkoff List". This public announcement should identified as a "Safety Briefing in compliance with Coast Guard regulations" so as to differentiate it from a general information announcement.
- 2. That 46 CFR Subchapter T be amended such that vessel routes be determined by vessel performance characteristics rather than reference to geographic position. After making such determination the route can be stated in terms of geographic limitations.
- 3. That 46 CFR Subchapter T be amended so that operator license route limitations be made consistent with vessel route limitations to the greatest extent possible.
- 4. That the Coast Guard amend 46 USC 3502 and 46 CFR, Subchapter T to the effect that all small passenger vessel operators on trips over 30 minutes duration, other than ferry service, be required to record the names of all personnel on board at the time of departure, and keep the list onboard and in a safe shoreside location until the vessel safely completes its trip.
- 5. That policy guidance on criteria for accepting "sister ship" stability tests be expanded to address simplified stability tests. Specifically, insuring that the sister vessels are in fact identical.

- 6. That the Coast Guard amend 49 CFR Subchapter T to require a minimum height float free arrangement for devices such as buoyant apparatus which can be lifted and thrown to persons in the water.
- 7. That the Coast Guard advise the fishing vessel industry of the interference created by mounting unattended fishing poles along the rail. Consideration should also be given toward requiring inspectors to evaluate this situation at the next regularly scheduled inspection for all sportfishing vessels.
- 8. That no further action be taken and that this case be closed.

EDWARD V. GRACE
Captain, U.S. Coast Guard
Chairman
Lieutenant Commander U.S. Coast Guard
Member

ROBERT W. BRACH

Lieutenant Commander, U.S. Coast Guard Member/Recorder

Enclosures: (1) Appointing Order

(2) CG-2692 for M/V MERRY JANE

(3) Exhibit List



Washington, DC 20593 Staff Symbol: G-C/22 Phone: (202) 426-2380

16732/MERRY JANE

FEB [] 1986

From: Commandant

To : CAPT Edward V. GRACE, USCG

Subj: Marine Board of Investigation concerning persons falling overboard from the F/V MERRY JANE, O.N. 596815 on 8 February 1986 with multiple loss of

life

1. Pursuant to the authority vested in me by 46 USC 6301 and the regulations thereunder, a Marine Board of Investigation consisting of yourself as Chairman, LCDR William J. CHANG, USCG, Member and LCDR Robert W. BRACH, USCG, Member and Recorder, is hereby ordered to convene as soon as practicable to inquire into all aspects of subject casualty at such times and places as directed by you.

- 2. The Board will investigate thoroughly the matter hereby submitted to it in accordance with the provisions of 46 USC 6301, et. seq., and the regulations thereunder. Upon completion of its investigation, the Board will report to the Commandant the evidence adduced, the facts established thereby, and its conclusions and recommendations with respect thereto, except that any conclusions or recommendations concerning commendatory actions or misconduct which would warrant further inquiry for possible civil or criminal proceedings, shall be referred by separate correspondence to the cognizant district commander. The Board's report will be submitted to Commandant (G-MMI) with a copy to the Commander, Pacific Area and Commander, Twelfth Coast Guard District. A daily summary of what has occurred before the Board shall be transmitted to the Commandant (G-MMI).
- 3. Every effort shall be made to complete this investigation and submit your report within five months of the convening date. If the report cannot be completed within that time, a written explanation for the delay and the date you expect to have it completed will be provided to me. I encourage you to submit interim recommendations intended to prevent future casualties of this type early in your investigation.
- 4. The National Transportation Safety Board (NTSB) is also charged with the responsibility of determining the cause or probable cause of this casualty by the Independent Safety Board Act of 1974 (49 USC 1901, et. seq.). NTSB has designated representatives for this investigation. The designated NTSB representatives will participate fully in this investigation and may make recommendations about the scope of this investigation, may call and examine witnesses, and submit or request additional evidence.
- 5. The Commander, Twelfth Coast Guard District will furnish such legal, technical, and clerical assistance as may be required by the Board when deemed appropriate and within the prerequisite requirements for the scope and orderly

Subj: Marine Board of Investigation concerning persons falling overboard from the F/V MERRY JANE, O.N. 596815 on 8 February 1986 with multiple loss of life

functioning of this Board. If Coast Guard personnel are called to testify, they shall be provided legal representation by the Commander, Twelfth Coast Guard District. The District Commander is authorized to negotiate for commercial court reporting services pursuant to 10 USC 2304(a)(4) and 41 CFR 12-50.3. If District funds are not available, comply with the Manual of Budgetary Administration (COMDTINST. M07100.3), paragraph 5203. Refer to 72-3-35D of the Marine Safety Manual (COMDTINST. M16000.3) for guidance.

J. S. GRACEY

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er. Conditions	я.	WEATH	FD	,	. TIME	ο.	V1816	HLITY E		TANCO	(miles)	Appr	ox. 20	
				•						visibility				
		CLE	AR		E DAYLIGH	DAYLIGHT GOOD F. AIR TEM				65-75°				
A. Sea or Rive		□ RAH						'. AIF (F)	TEMP	ERATUR	· E			
Conditions		□ 5NO	w		□ NIGHT		□ ec	OR						
(wave heigh river stage, e	to 1	□ ros						G		ND SPE		3-5	knots NW	l
General	conditi	ίΩгьтн	ER (Spec	ify)						RECTIO				
6-10 fee				-				н			SPEED.			
17-25 se					-				DIE	RECTIO		unk	nown W	
23. Navigation Info	ormation				Apr	prox. I	24. L	ist n		D	mia-	7.71-	24a. Time and	Date
☐ MOORED,					AND APP	r ök tö f	O Po	rt ROGE	:ga	pay	1106	: wna	rofDeparture Approx.	2/8/
ANCHORE	10 M UND	ERWAY (OR DRIF	TING	COURSE DE	ship	co	Pass	Tie	des 1	Wharf	: ,	86 0710	
25.	25a.				25b.	25c.					scribe in			
	*********	Empty	Loaded	TOTAL		MAXIM	UM	Length Wic	dth	D PUS	HING A	HEAD		
FOR TOWING	NUMBER OF				TOTAL H.P. OF	SIZE OF	TOW		\neg	□ TOY	ING AS	TERN		
ONLY	VESSELS	1			TOWING	WITH TO		İ	- 1	□ tov	ING AL	ONGSIE	DE	
N/A	TOWED	1			UNITS	BOAT	رد	i					OW-BOAT ON	wor
/		<u> </u>	<u> </u>											
		SI			BARGE INFOR	MATION						26e.	USCG Certificat	ie it:
26. Name			26a. O	ficial N	lumber	26b. Typ	•	26c, Løngth	· [26d, Gr	oss Tons]		
N/A						<u> </u>								
26f. Year Built	269.		26 h. D	raft		261. Opera	ting C	ompany						
į	D SINGLE		~~`	•	AFT	1								
'26]. Damage Amou	D DOUBL	E SKIN	l		26k. Describe	Damage to	Barne						• • • • • • • • • • • • • • • • • • • •	
					200, 000,100						2" k	ini c	Mine/	
BARGE \$_											LA	!LL	ISURE(4	-)

OTHER \$

EVERSE OF CG-2692 (REV.	6-82) SECTION III I	PERSONNEL ACCIDEN	T INFORMATION	ON		
7. Person Involved	274. Name (L N. liddle	Name) Particula	rs not a	A KHOMIN	27c. Status	
MALE OF THEMALE	but see wetached		Erom-o 10	OF OF	☐ CREW ☐ PASSENGER	f
DEAD INJURED	27b. Address (City, State, Zip (onoma-Cour	ty WB	OTHER (Spec	
8. Birth Date 29. T	elephone No.	30. Job Position			31. (Check here if off d	uty)
) n Block 18., fill in Name, Address	Telephone Na.)				
2. Employer -{If different from	Unknown	, 10,00,000				
3. Person's Time		YEAR(S)	MONTH(5) 34.	. Industry of Empl Crew Supply, Dr	loyer (Towing, Fishing, S illing, etc.)	hipping,
A. IN THIS INDUST	rry - N/A			N/A		•
B. WITH THIS COM					Person Incapacitated 72 F	lours
C. IN PRESENT JO					YES D NO N/A	
D. ON PRESENT V	Y WHEN ACCIDENT OCCURRI	ED -	36.	Date of Death		
E. MOURS ON DO	: Murit Magne and a series				Unknown	
7. Activity of Person at Time	of Accident		•••			- 1
Aboard	enroute to Tides	s wnari				
38, Specific Location of Accid	eck Level					
9. Type of Accident (Fall, Co		40. Resi	ilting Injury (Cut, 1	Bruise, Fracture, B	urn, etc.)	
See Se	c. 21 above		known	Analda - 4		
1. Part of Body Injured			el MERRY			1
unknow	N e Equipment in Block 42., or Sub	vess stance (Chemical, Solvent,	etc.) that directly	produced the Injur	у.	
13. Specific Object, Part of th なわかれな	SEA CONDITION	1				
	SECTIO	N IV. DESCRIPTION	OF CASUALTY			
Danage	vill roughly appr					
	Telephone No. 1					
45. Witness (Name, Address,	of persons who	tootified at b	earing		. 	
45. Witness (Name, Address	, Telephone No.)					
•				47c. Ti		
	SECTION V. PERSON A	MAKING THIS REPORT	n Code		r and Captai	ւ[
47. Name (PRINT) (Last, F. Richard C. Ti		JD. Address (City, State, 21)	, 5027	· · · · · · · · · · · · · · · · · · ·	lephone No.	
Richard C. Ti	<u> </u>			478.35%	F/86	
-	OR COAST GUARD USE O	NLY	REPORTI	NG OFFICE:		
APPARENT CAUSE						
See repor	t of Marine Board o	of Investigation.				
1				ROVED BY (Nam	P) DATE	
AO	R. W. BRACH	, LCDR, USCG 4/3	14/86			
CASUALTY CODE A B	Member/Reco	mier Marine Roar	<u> </u>			

Section III - Personnel Accident Information - Block 27-31

1. The following passengers are deceased:

GEORGE WILLIAM BELL

JOHN HALEY

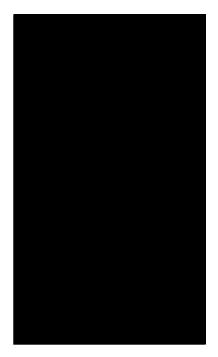
WALTER HEYDON

CHARLES HOLZBERGER

SCOTT HUDDLESTON

EDWARD L. LUIZ

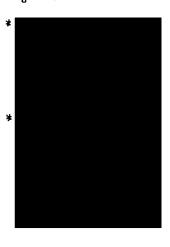
XAVIER FERNANDO TIRADO



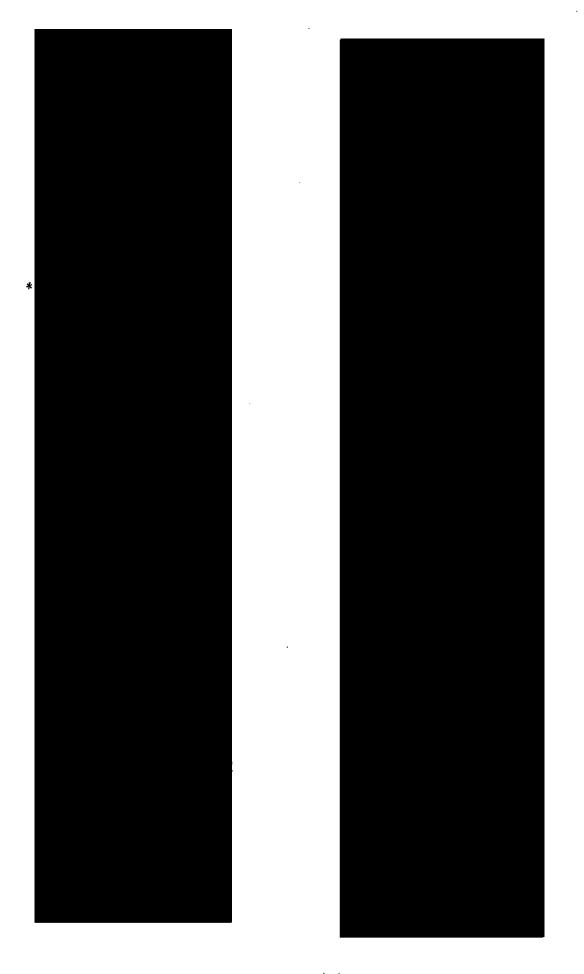
2. The following passenger is missing:



3. The following passengers were injured and required medical attention at local hospitals. An asterisk (*) indicates a person was incapacitated for 72 hours or more:







Page 2 06 4

Section IV - Witnesses - Block 45

Crewman	
Crewman	
Passenger	
Witness	
Witness	
Witness	



EXHIBIT LIST

Exhibit #	Date	DESCRIPTION	Witness
1	13FEB86	11x14 notepaper with sketch of Bodega Head and Rock	
2	13FEB86	Photocopy of Chart with sketch of Yellow boat course, Merry Jane location, breakers	
3	13FEB86	Chart with sketch by the operator, Mr. Tiesso	
4	13FEB86	Photocopy of chart section- Bodega Bay - sketch of 30' actions	BM2
5A-G	13FEB86	Sitrep one to seven	
6A-F	13FEB86	National Weather Service messages	
7	13FEB86	Photocopy of chart section- Bodega Bay - sketch of 16' actions	ВМ3
8	13FEB86	Photocopy of chart section- Bodega Bay - sketch of 44' actions	SN SN
9	13FEB86	Photocopy of chart section- Bodega Bay sketch - Merry Jane location	
10	14FEB86	Photocopy of chart section- Bodega Bay sketch - Merry Jane location	
11	14FEB86	Photocopy of chart	
12	14FEB86	Ships wheel diagram	
13	14FEB86	Three position diagram of Merry Jane	
14	14FEB86	Diagram of M/V Merry Jane by NTSB	Various
15	20FEB86	8X10 photo - M/V Merry Jane approaching Bodega Bay	
16	20FEB86	5X7 photo - M/V Merry Jane - Blow up of vessel in exhibit 1	5

17	20FEB86	8X10 photo - M/V Merry Jane heeling to STBD	
18	20FEB86	5X7 Blow up of vessel in Exhibit 17	
19	20FEB86	Photocopy of Chart showing Mr. location	
20	20FEB86	Slide of Exhibit 15	
21	20FEB86	Slide of Exhibit 17	
22A-B	20FEB86	8X10 photo of Sea Dog III Exhibit 22B is slide of same	
23	20FEB86	Photo of wheel in cabin	Tiesso/Counsel
24	20FEB86	Resume' Dr.	Counsel/C
25	20FEB86	Hand printed buoy data	Counsel/(
26	20FEB86	Chart No. 18640 with overlay	Counsel/(
27	20FEB86	Chart No. 18643 with overlay	Counsel/(
28	20FEB86	H.O. 603 (pages 9-11)	Counsel/(
29	20FEB86	"Oceanographical Engineering", (pages 114-115)	Counsel/(
30	20FEB86	Surface weather chart 6AM FEB 07 1986	
31	20FEB86	Marine Weather Services Chart	
32A-B	20FEB86	Buoy data for 4PM and 5PM FEB 8 1986	
33A-B	20FEB86	Weather forcasts for 8PM Fri/2AM Sat/2PM Sat (4 pages)	
34	21FEB86	SAR Report-Bodega Station Case # 0056, (2 pages)	Board
35	28FEB86	Sonoma County Sheriff Case # 860208-43 "Passenger List- Merry Jane"	Board
36	9MAY86	8X11 paper with sketch of Merry Jane	

	37	3JUN86	Stability test results report with four encl. by U. S. Coast Guard	Board
ş	38	3JUN86	Photograph Reconstruction Factual Report by NTSB	Board
	39	4JUN86	Merry Jane Deviation Chart (copy)	Tiesso

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