



REPUBLIC OF THE MARSHALL ISLANDS

Maritime Administrator

CAPE MORETON CASUALTY INVESTIGATION REPORT

Collision with Fishing Vessel

East China Sea | 23 January 2019

Official Number: 90306

IMO Number: 9308405



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AUTHORITY

An investigation, under the authority of the Republic of the Marshall Islands laws and regulations, including all international instruments to which the Republic of the Marshall Islands is a Party, was conducted to determine the cause of the casualty.



Maritime Administrator

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PART 1: EXECUTIVE SUMMARY

The Republic of the Marshall Islands-registered container ship CAPE MORETON, managed by Ahrenkiel Steamship GmbH & Co. KG (the “Company”), was sailing from Hong Kong, bound for Tianjin, People’s Republic of China (PRC), when it collided with MIN XIA YU 04555, a PRC-registered fishing vessel, at about 0416¹ on 23 January 2019.

As a result of the collision, two fishermen from MIN XIA YU 04555 were swept overboard. A search for the missing fishermen was coordinated by authorities in the PRC. They were not located, and the search was suspended after six days. The fishermen are considered missing at sea.

The marine safety investigation conducted by the Republic of the Marshall Islands Maritime Administrator (the “Administrator”) identified the following:

1 Unless otherwise stated, all times are ship’s local time (UTC -8).

1. Causal factors which contributed to this collision include:
 - (a) failure of MIN XIA YU 04555, as the give-way vessel in a crossing situation, to take adequate action to keep clear of CAPE MORETON;
 - (b) CAPE MORETON’s decision to turn to port as the stand-on vessel;
 - (c) failure of MIN XIA YU 04555 and CAPE MORETON to take early, positive action to avoid collision;
 - (d) failure of CAPE MORETON to reduce speed when approaching the dense fleet of fishing vessels;
 - (e) failure of MIN XIA YU 04555 and CAPE MORETON to sound the warning signal when unsure of the other’s intentions; and
 - (f) failure to adequately identify the risk posed by navigating through a dense fishing fleet.

An additional factor identified, but which did not contribute to this collision, was MIN XIA YU 04555’s failure, while actively fishing, to display the lights required by the International Maritime Organization’s (IMO’s) Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs) for “vessels engaged in fishing, other than trawling.” At the time of the collision, MIN XIA YU 04555 was not actively fishing, having finished with its nets. Because of this, MIN XIA YU 04555 was considered a power-driven vessel underway before the crossing situation was identified.

PART 2: FINDINGS OF FACT

The following Findings of Fact are based on the information obtained during the Administrator’s marine safety investigation.

1. Ship particulars for CAPE MORETON: *see* chart to right.
2. Vessel particulars for MIN XIA YA 04555: *see* chart on page 8.
3. On 21 January 2019, CAPE MORETON departed Hong Kong, bound for Tianjin, PRC, laden with containers. On the same day, MIN XIA YU 04555 departed Fuding Taishan Island, PRC, and headed southeast towards the intended fishing grounds.

SHIP PARTICULARS		
Ship Name CAPE MORETON		
Registered Owner MS “CAPE MORETON” Schiffahrts GmbH & Co. KG		
ISM Ship Management Ahrenkiel Steamship GmbH & Co. KG		
Flag State Republic of the Marshall Islands		
IMO No. 9308405	Official No. 90306	Call Sign V7IT9
Year of Build 2005	Gross Tonnage 27,786	
Net Tonnage 13,574	Deadweight Tonnage 38,835	
Length x Breadth x Depth 210.9 x 29.8 x 16.4 meters		
Ship Type Container		
Document of Compliance Recognized Organization DNV GL		
Safety Management Certificate Recognized Organization DNV GL		
Classification Society DNV GL		
Persons on Board 23		

VESSEL PARTICULARS

Vessel Name
MIN XIA YU 04555

Registered Owner
Zhizhi Wang

Flag State
People’s Republic of China

Year of Build
2014

Gross Tonnage 202	Net Tonnage 70
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Length x Breadth x Depth
32.4 x 6.3 x 3.3 meters

Vessel Type
Fishing Vessel

Persons on Board
10

4. The Master issued night orders covering the period of 21-26 January 2019, which included an order to “avoid area with fishing boats/nets as much as possible.”
5. Weather on the morning of 23 January 2019 was reported as 5 nautical mile (NM) visibility, wind northeast Beaufort Force 5, 1-2 meter seas, and northeast current of 1 knot.
6. The area where the collision occurred is about 100 NM east of Changbiao Island, Xiapu County, PRC. It is reported that fishing vessel density in this area is typically high.
7. The requirements set forth in COLREGs are applicable to the CAPE MORETON and MIN XIA YU 04555 while underway in the area of the collision.

Incident

8. At about 0300 on 23 January 2019, MIN XIA YU 04555 began deploying a fishing net with the vessel’s Chief Officer (C/O) at the helm. It was reported that the vessel’s port and starboard sidelights and masthead lights were on. It is also reported that the required lights for a vessel engaged in fishing, other than trawling, were not energized.²
9. At about 0352, CAPE MORETON was steaming on a north-northeast heading at a speed of 16.8 knots when a fleet of fishing vessels was identified by radar directly ahead (*see Figure 1*). The Second Officer (2/O) was the Officer on Watch (OOW) at the time.

² COLREGs Rule 26(c) requires that a vessel engaged in fishing, other than trawling, exhibit two all-around lights in a vertical line, the upper being red and the lower white.

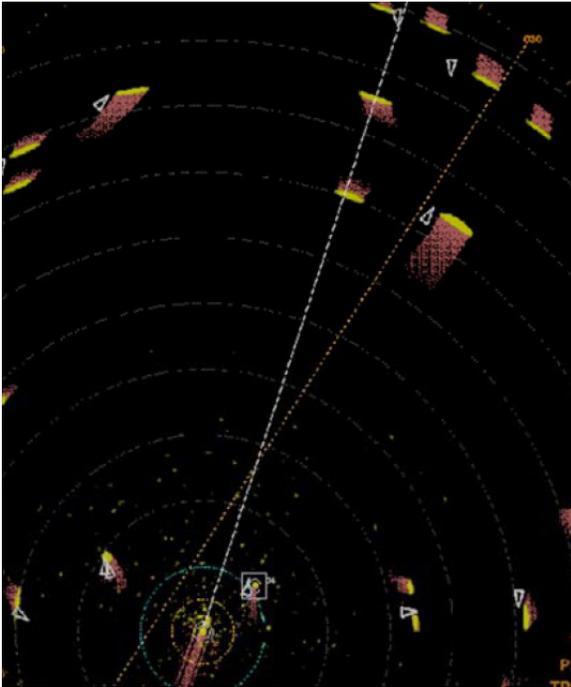


Figure 1: Radar image from CAPE MORETON at 0352 showing the fishing vessels ahead.

10. At about 0357, the C/O arrived on the Bridge of CAPE MORETON for the 0400-0800 watch.
11. By 0357, CAPE MORETON's automatic radar plotting aid (ARPA) displayed the relative motion of the fishing vessels (see Figure 2).

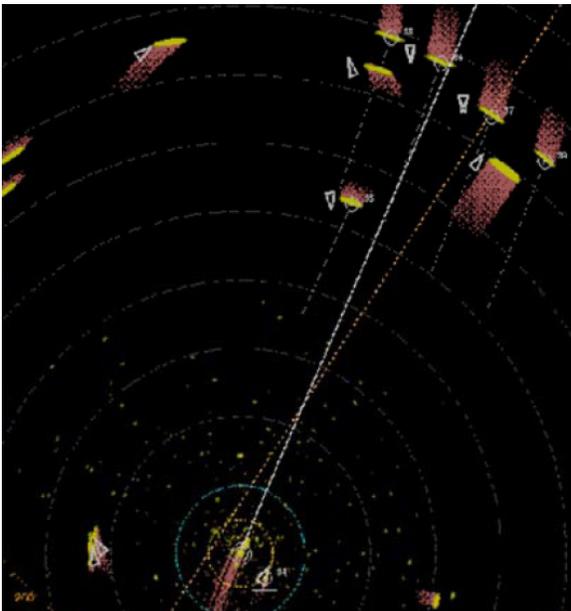


Figure 2: Radar image from CAPE MORETON at 0357.

12. At 0403, the C/O relieved the 2/O as the OOW. CAPE MORETON was heading 028 degrees True (°T) at 17.2 knots. The echoes of the fishing vessels, along with their history trail, were visible on the radar. The automatic identification system (AIS) information for MIN XIA YU 04555 was displayed on the radar and automatically acquired by the ARPA at 5.04 NM off CAPE MORETON's port bow. The fishing vessel was reported as heading 177 °T at 8.6 knots. The closest point of approach (CPA) was 0.14 NM (see Figure 3).

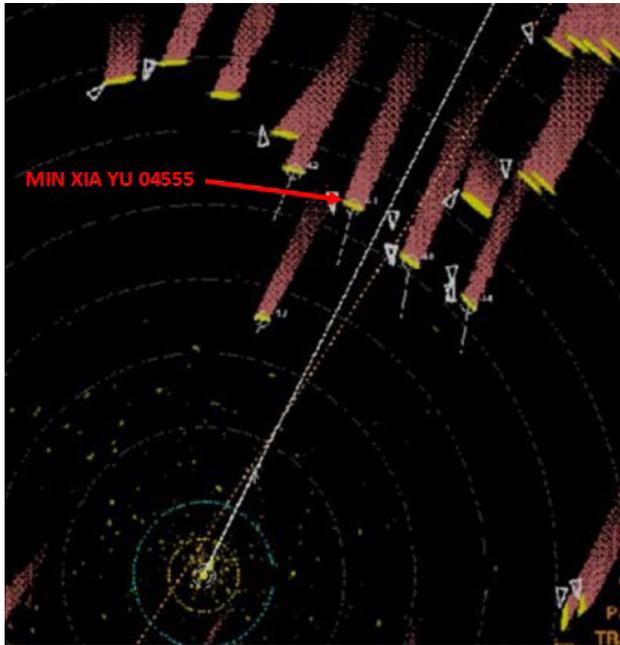


Figure 3: Radar image from CAPE MORETON at 0403.

13. At about 0405, MIN XIA YU 04555 finished setting its nets and was no longer actively fishing.³ Seven crewmembers remained on deck to clean. The MIN XIA YU 04555's C/O reported first observing CAPE MORETON off the starboard bow at about 4 NM. He also reported seeing CAPE MORETON's port sidelight and both masthead lights.
14. At 0409, MIN XIA YU 04555 was 2.88 NM from CAPE MORETON, with the same relative position. The CPA was 0.02 NM and the Time to CPA (TCPA) was just under 7 minutes. Both vessels maintained their course and speed.
15. At 0413, MIN XIA YU 04555 was 1.16 NM from CAPE MORETON, remaining off the port bow. The CPA was 0.07 NM and the TCPA was just under 3 minutes (see Figure 4).

³ It was reported that the port and starboard sidelights, and a masthead light, were energized on MIN XIA YU 04555.



Figure 4: Radar image from CAPE MORETON at 0413.

16. At about this time, MIN XIA YU 04555 began altering its course to starboard and reduced speed to 7 knots. The C/O altered CAPE MORETON's course to port while maintaining speed.
17. By 0414, the distance between the vessels had reduced to 0.85 NM. MIN XIA YU 04555 was on a course of 198.5 °T at 6.7 knots and CAPE MORETON was on a course of 014.2 °T at 16.6 knots.
18. MIN XIA YU 04555 continued to alter to starboard to 205 °T while maintaining speed. The vessels were less than 0.47 NM apart when the CAPE MORETON's C/O ordered the rudder hard to port while maintaining the same speed.
19. At 0415, the distance between the two vessels had reduced to 0.28 NM. MIN XIA YU 04555 was now on a course of 218.1 °T at 6.4 knots. CAPE MORETON was continuing to turn to port, now heading 000.5 °T at 16.7 knots. It is reported that MIN XIA YU 04555's main engine was ordered full astern to try to avoid a collision with CAPE MORETON.
20. At 0416, MIN XIA YU 04555 and CAPE MORETON were 0.03 NM apart. MIN XIA YU 04555 continued to turn to starboard and was heading 242 °T at a speed of 4 knots. CAPE MORETON continued turning to port and was heading 309 °T at 14.4 knots.
21. At about this time, CAPE MORETON's starboard quarter collided with the bow of MIN XIA YU 04555. The C/O of CAPE MORETON then ordered the rudder to hard starboard.

22. MIN XIA YU 04555 listed heavily to port during the collision, causing two fishermen to be swept overboard as water rushed over the port rail. Two additional fishermen were injured when the vessel listed.
23. MIN XIA YU 04555's Master, who was in his cabin at the time of the collision, went to the Bridge and requested assistance from other nearby fishing vessels in searching for the missing fishermen.
24. At about 0437, the Ningde Maritime Search and Rescue Center was notified of the incident. An extensive search of the area was conducted by merchant ships, fishing vessels, and helicopters.
25. On 29 January 2020, the search for the missing fishermen was suspended. The two fishermen remain missing at sea.

Damage

26. As a result of the collision, CAPE MORETON suffered indents and a breach of the side shell along the starboard quarter (see Figure 5).



Figure 5: Damage to hull of CAPE MORETON.

27. MIN XIA YU 04555 suffered damage to the bow but was able to proceed to port under its own power (see Figure 6).



Figure 6: Damage to the bow of MIN XIA YU 04555.

CAPE MORETON Crew

28. CAPE MORETON's crew consisted of 23 officers and ratings, more than required by the Minimum Safe Manning Certificate issued by the Administrator.
29. The C/O had sailed on CAPE MORETON in that capacity for a total of 12 months over three contracts. He was promoted to C/O in January 2011.
30. The Administrator did not observe any indication that the C/O had failed to receive the amount of rest mandated by the IMO's Seafarers Training, Certification and Watchkeeping Code, Section A-VIII/1, paragraphs 2 and 3 and the International Labour Organization's Maritime Labour Convention, 2006, regulation 2.3.

MIN XIA YU 04555 Crew

31. MIN XIA YU 04555's crew consisted of 10 officers and fishermen. It is reported that the Master, C/O, Chief Engineer, and Second Engineer all held the required certificates in accordance with the relevant provisions of the "People's Republic of China Fisheries Crew Management Measures."
32. The work and rest hours for the crew of MIN XIA YU 04555 were not reported to the Administrator.

PART 3: ANALYSIS

The following Analysis is based on the above Findings of Fact.

MIN XIA YU 04555

At about 0405, the MIN XIA YU 04555 finished setting its nets and was no longer engaged in fishing. In accordance with COLREGs, MIN XIA YU 04555 was then considered a power-driven vessel. CAPE MORETON was about 4 NM away when MIN XIA YU 04555 completed fishing.

Although not a causal factor of this incident, it was reported that MIN XIA YU 04555 failed to display the lights required by COLREGs Rule 26 for a vessel engaged in fishing, other than trawling, when the nets were being set out. At the time of the collision, MIN XIA YU 04555 was not actively fishing, having finished with its nets. Because of this, MIN XIA YU 04555 was considered a power-driven vessel underway before the crossing situation was identified.

Crossing Situation

MIN XIA YU 04555's C/O reported that when he first saw CAPE MORETON, he saw the port sidelight and both masthead lights.

COLREGs Rule 14 states that a head-on situation exists when "a vessel sees the other ahead or nearly ahead and by night she could see the masthead lights of the other in a line or nearly in a line and/or both sidelights."

Since both masthead lights of CAPE MORETON were not in a line when seen off the starboard bow of MIN XIA YU 04555, this would be considered a crossing situation according to COLREGs Rule 15.

COLREGs Rule 15 requires "the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel."

Therefore, MIN XIA YU 04555 was the give-way vessel.

COLREGs Rule 16 requires "every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear."

Although MIN XIA YU 04555's C/O observed CAPE MORETON at almost 5 NM, he did not start avoidance maneuvering until they were about 1 NM apart. Additionally, the course change to starboard was not substantial enough to eliminate the risk of collision.

As the stand-on vessel, COLREGs Rule 17 required CAPE MORETON to maintain course and speed unless it becomes apparent that the give-way vessel is not taking adequate action to avoid collision. The stand-on vessel is also required, if the circumstances permit, to not alter course to port for a vessel on its own port side.

Based on the information available to the Administrator, it could not be established when CAPE MORETON's C/O first became aware of MIN XIA YU 04555. However, he was monitoring the fishing fleet and MIN XIA YU 04555 for about 10 minutes before deciding to take action to avoid collision. He decided to change CAPE MORETON's course to port even though MIN XIA YU 04555 was off the port bow. This decreased the CPA even further.

Actions to Avoid Collision

COLREGs Rule 8 requires that any actions taken to avoid collision be positive and made in ample enough time. It also requires that any speed and/or course change made to avoid collision be large enough to be readily apparent to another vessel. The actions to avoid collision taken by MIN XIA YU 04555 and CAPE MORETON were not positive and not executed in enough time to prevent the collision.

Safe Speed

COLREGs Rule 6 states "every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions." Rule 6 also requires that the traffic density, including concentrations of fishing vessels, be considered when determining safe speed. CAPE MORETON did not reduce speed when faced with a dense fleet of fishing vessels directly ahead. A reduction of speed would have allowed additional time for CAPE MORETON's C/O to determine how to safely reduce the risk of collision.

Additionally, COLREGs Rule 8 requires that a vessel slacken its speed or take all way off if more time is necessary to assess the situation and to avoid collision. Although MIN XIA YU 04555 initially slowed and then placed the main engine astern, it was not early enough to avoid collision. Early speed adjustment would have provided both C/Os more time to take actions to avoid collision.

Sound Signals

COLREGs Rule 34 requires that five short and rapid blasts of the whistle be made if in doubt whether sufficient action is being taken by the other to avoid collision. Prior to the collision, neither MIN XIA YU 04555 nor CAPE MORETON are reported as having sounded five short and rapid blasts of their whistle.

Bridge Team

The C/O of CAPE MORETON did not notify the Master or request any additional assistance on the Bridge while approaching and navigating through the dense fleet of fishing vessels. An additional navigation watch officer and/or lookout would likely have allowed the C/O to better monitor the fishing vessel and given him additional time to assess the information available on the ship's radars.

Additionally, the C/O failed to adequately identify the risk posed by navigating through a dense fishing fleet. A substantial alteration of course to starboard would likely have allowed CAPE MORETON to sail around the fishing fleet and eliminated the need for close quarters maneuvering.

PART 4: CONCLUSIONS

The following Conclusions are based on the above Findings of Fact and Analysis and shall in no way create a presumption of blame or apportion liability.

1. Causal factors that contributed to this marine casualty include:
 - (a) failure of MIN XIA YU 04555, as the give-way vessel, to take adequate action to keep clear of CAPE MORETON;
 - (b) CAPE MORETON's decision to turn to port as the stand-on vessel;
 - (c) failure of MIN XIA YU 04555 and CAPE MORETON to take positive actions in ample enough time to avoid collision;
 - (d) failure of CAPE MORETON to reduce speed when approaching the dense fleet of fishing vessels;
 - (e) failure of MIN XIA YU 04555 and CAPE MORETON to sound the warning signal when unsure of the other's intentions; and
 - (f) failure to adequately identify the risk posed by navigating through a dense fishing fleet.

An additional factor identified, but which did not contribute to this collision, was MIN XIA YU 04555's failure, while actively fishing, to display the lights required by COLREGs for "vessels engaged in fishing, other than trawling." At the time of the collision, MIN XIA YU 04555 was not actively fishing, having finished with its nets. Because of this, MIN XIA YU 04555 was considered a power-driven vessel underway before the crossing situation was identified.

PART 5: PREVENTIVE ACTIONS

In response to this very serious marine casualty, the Company has taken the following Preventive Actions.

1. A fleet-wide circular detailing the lessons learned was sent to all ships in the Company's managed fleet.
2. Navigation watch officers completed computer based COLREGs refresher training.

PART 6: RECOMMENDATION

The following Recommendation is based on the above Conclusions and in consideration of the Preventive Actions taken.

It is recommended that the Company review and amend, as necessary, the procedures related to navigation watchstanding during times of dense vessel traffic to ensure they are adequate to prevent a similar occurrence.

The Administrator's marine safety investigation is closed. It will be reopened if additional information is received that would warrant further review.