



**The Bahamas
Maritime Authority**

THE COMMONWEALTH OF THE BAHAMAS

“M.V. Atlantic Hero”



**IMO Number: 9291119
Official Number: 8001512**

**Report of the investigation into the collision between the
Atlantic Hero and *Oriental Pioneer* in the approaches to the
Singapore Pilot Station on 2nd July 2013**

The Bahamas Maritime Authority investigates incidents at sea for the sole purpose of discovering any lessons which may be learned with a view to preventing any repetition. It is not the purpose of the investigation to establish liability or to apportion blame, except in so far as emerges as part of the process of investigating that incident.

It should be noted that the Bahamas Merchant Shipping Act, Para 170 (2) requires officers of a ship involved in an accident to answer an Inspector's questions fully and truly. If the contents of a report were subsequently submitted as evidence in court proceedings relating to an accident this could offend the principle that a person cannot be required to give evidence against himself. The Bahamas Maritime Authority makes this report available to any interested parties on the strict understanding that it will not be used as evidence in any legal proceedings anywhere in the world

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Note: During the course of the investigation, requests were made to obtain VDR Data recordings and supporting documentary evidence for the *Oriental Pioneer*. At no stage however, were these made available to the Bahamas casualty investigator for reference or inclusion into the final report.

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SUMMARY

- 1.1 At 0530 LT on the 2nd July 2013, the bulk carrier *Atlantic Hero* collided with the bulk carrier *Oriental Pioneer* in the approaches to the Eastern Boarding Ground (EBG 'B') of the Singapore Pilot station (**Appendix 3**). At the time of the collision, both vessels were in a loaded condition and were inward bound to Singapore to receive bunkers.
- 1.2 The *Atlantic Hero*, on passage from Banjarmasin, Indonesia, was approaching the Pilot station from the East in the West bound traffic lane of the Traffic Separation Scheme (TSS). The *Oriental Pioneer*, on passage from Paranagua Port, Brazil, was approaching the Pilot station from the West and had lined up on a Northerly course that would take her across the West bound traffic lane and place her on the port bow of the *Atlantic Hero*.
- 1.3 The collision occurred during the hours of darkness in moderate visibility of approximately 6nm. A light SW breeze was prevailing with a negligible tidal stream.
- 1.4 Although the collision resulted in structural damage to the bow of the *Atlantic Hero*, the vessel suffered only a minor breach in its watertight integrity. Repairs were conducted in the Singapore Eastern anchorage (**Appendix 2**) and the *Atlantic Hero* was cleared to proceed on passage to Ennore, India at 0500 LT on the 15th July 2013.
- 1.5 As a result of the impact, the *Oriental Pioneer* suffered a breach in the Starboard side hull plating in way of the Number 1 Fuel Oil tank. Consequently, a pollution incident occurred with approximately 100 MT of Heavy Fuel Oil (HFO) spilling into the sea.
- 1.6 During the course of the investigation it became evident that a potentially hazardous situation did exist in that two vessels were planned to arrive at the same position at the same time with neither one aware of the others presence until the last moment. This situation was exacerbated with the distraction of a series of confusing multi-recipient VHF transmissions.
- 1.7 With no clear exchange of information in place, time was spent on clarifying these transmissions, in particular the order of Pilot embarkation rather than monitoring the collision situation that was developing and taking appropriate avoiding action.

Atlantic Hero



- 2.1 The *Atlantic Hero* is a 7 hold, gearless Bulk Carrier of all steel construction registered in the port of Nassau, Bahamas
- 2.2 The vessel was constructed in 2005 in Okayama, Japan and at the time of the incident, was under classification with Nippon Kaiji Kyokai (Class NK). The vessel was owned by the Overseas Marine Company and was managed and operated by Sun Enterprises Ltd. The following principal particulars were noted:

- Official Number - 8001515
- IMO Number - 9291119
- Length overall - 225.0 metres
- Breadth - 32.27 metres
- Depth - 19.30 metres
- Gross Tonnage - 38871 tons
- Net Tonnage - 25194 tons
- Deadweight - 75804 tonnes
- Call Sign - C6XD5

Oriental Pioneer



- 2.3 The Oriental Pioneer is a 7 hold, gearless Bulk Carrier of all steel construction registered in the port of Jeju, South Korea.
- 2.4 The vessel was constructed in 1996 and at the time of the incident, was under classification with the Korean Register of Shipping. The vessel was owned by the NYK Bulk ship Korea Company Ltd and was managed and operated by STX Marine Services Ltd. The following principal particulars were noted:

•	IMO Number	-	9139983
•	Length overall	-	225.0 metres
•	Breadth	-	32.00 metres
•	Gross Tonnage	-	36604 tons
•	Net Tonnage	-	25194 tons
•	Deadweight	-	69606 tonnes
•	Call Sign	-	DSPN6

3 NARRATIVE OF EVENTS

- 3.1 All times noted in the narrative are given in the style of the 24 hour clock without additional annotation and as local time in Singapore (UTC +8).
- 3.2 The narrative content is based upon documentary evidence collected during the investigation including statements taken from crew and officers as well as from Voyage Data Recorder (VDR) records which were retrieved both on board the *Atlantic Hero* and from the Vessel Traffic Information Service (VTIS) based in Singapore. Requests were made to obtain similar data for the *Oriental Pioneer* but these were not provided to the investigator.
- 3.3 At 0145 on the 2nd July 2013, the Master assumed the responsibility for the navigational conduct of the *Atlantic Hero* from the Officer of the Watch (OOW), the 2nd Officer, in preparation for arrival at the Eastern boarding ground of the Singapore Pilot station. In accordance with the Safety Management System (SMS) and following an appraisal of the surrounding traffic density at the time, the bridge watch manning had been increased to watch condition 2, the requirements of which state:
- 'Two properly qualified and licenced deck officers on the bridge. The Master is normally one of them but he may delegate this post to the Chief Officer. The Master or Chief Officer must be the conning officer'*
- 3.4 At 0400 the 2nd Officer was relieved by the Chief Officer as the OOW. Given the proximity to the pilot station however, and the need to comply with the provisions of the assigned watch condition, the 2nd Officer remained on the bridge so that he could relieve the Chief Officer who would supervise the pilot embarkation operation.
- 3.5 At 0417 the engines were placed on standby and in preparation for arrival, the propeller pitch was gradually reduced. In accordance with the mandatory reporting requirements imposed by STRAITREP, VHF contact was maintained with the Singapore VTIS at periodic intervals to advise the vessel's estimated arrival time at the Eastern Boarding ground. There were however, no reports of any conflicting traffic movements that would affect the *Atlantic Hero*.
- 3.6 At 0511 the *Atlantic Hero* had cleared the West bound lane of the Traffic Separation Scheme (TSS) and was proceeding at a reduced speed towards the Pilot station. The *Oriental Pioneer* had commenced an alteration of course to the North so that she could depart the East bound traffic lane and cross the West bound lane in accordance with the provisions of Rule 10 (c) of the

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International Regulations for the Prevention of Collisions at Sea (IRPCS), the content of which requires a vessel that is crossing traffic lanes to do so on a heading '*as nearly as practicable at right angles to the general direction of traffic flow*'.

- 3.7 At 0519 in recognising that the *Oriental Pioneer* was now closing on its port bow, a VHF call was made to the *Atlantic Hero* by the Singapore VTIS station to report the developing traffic situation and to instruct the vessel to stop.

VTIS: '*Traffic Information on your port bow bearing from your ship 220 degrees at a range of 1.0 nautical mile, you have one Oriental Pioneer coming to the EBG B to pick up a pilot, please keep a good lookout. You can stop your vessel now and wait for your pilot*'.

- 3.8 In an attempt to confirm this instruction, the Chief Officer on board the *Atlantic Hero* responded to query which vessel would be embarking the Pilot first. The VTIS operator advised that both vessels would have the same embarkation time but did not clarify which vessel would proceed ahead of the other. As instructed, the Master proceeded to stop engines.

- 3.9 At 0521 the OOW on board the *Atlantic Hero* attempted to contact an approaching Pilot launch to clarify the order of embarkation. With no response, the Master instructed the OOW to contact the *Oriental Pioneer* directly and request that they allow his vessel to pass ahead. Although the passing arrangement was agreed in Tagalog, the statements that were provided by those present on the Bridge would suggest that this request was both acknowledged and agreed.

- 3.10 At 0526 a Singapore pilot reported that he had now embarked the *Oriental Pioneer*, identifying the vessel only as '*one from the West*'. The Master of the *Atlantic Hero* attempted to contact the *Oriental Pioneer* once more for clarification over what was happening but was interrupted by the VTIS operator confirming the pilotage order. Given that by this time the two vessels were now less than 0.5nm apart, the Master of the *Atlantic Hero* was becoming increasingly concerned.

Atlantic Hero: '*Oriental Pioneer did not take action to give a good lee to the Atlantic Hero, CPA is very near*'

VTIS: '*Captain, she don't take action, you take action, you take immediate action now and comply with collision regulation....over*'.

- 3.11 The proximity of the two vessels coupled with their limited manoeuvring capabilities however, prevented any effective avoiding action from being taken and at 0530 the bow of the *Atlantic Hero* collided with the starboard side mid ship section of the *Oriental Pioneer*. A VHF report to the Singapore VTIS station was made immediately after impact by the Pilot who was on board the *Oriental Pioneer* to advise the situation.

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- 3.12 At 0536 a Singapore Pilot embarked the *Atlantic Hero*. Both vessels were subsequently taken to the Eastern Anchorage to ensure repairs could be completed and a full investigation undertaken. The structural damage that was sustained on board the *Atlantic Hero* was restricted to the bulbous bow and surrounding shell plating allowing temporary structural repairs to be completed in 10 days.
- 3.13 At 0500 on the 15th July 2013 the *Atlantic Hero* was issued with the appropriate clearance documentation and resumed her passage towards Ennore, India.

4 ANALYSIS

ALCOHOL

- 4.1 During the course of the investigation, there was no evidence to suggest that the effect of drugs or alcohol may have contributed to this accident.

MANNING & FATIGUE

- 4.2 In preparation for arrival at the Eastern Boarding Ground of the Singapore Pilot station and in accordance with the company operating requirements, the Master had increased the watch manning level to a condition 2, whereby he would assume the navigational conduct of the vessel with support from the OOW.
- 4.3 During the course of the investigation and following a complete review of all associated documentation, the statutory hours of rest for all crew members were found to comply fully with the minimum requirements specified in Section A-VIII/1 of the STCW Convention. There was no evidence to suggest that fatigue therefore, may have contributed to this accident.

VHF REPORTING

- 4.4 The reporting requirements for transiting the Singapore Straits (STRAITREP) as contained in the Maritime and Port Authority of Singapore (MPA) circular 20/2008 specify the procedures for confirmation of a vessels planned arrival time at the Pilot station (**Appendix 1**). These periodic VHF reports were made by the *Atlantic Hero* as required.
- 4.5 It was not until 10 minutes prior to arrival however, that the *Atlantic Hero* was made aware of another inbound vessel, the *Oriental Pioneer*. Both vessels were destined for the same position with the same planned arrival time, a potentially hazardous situation in itself. With no clear instruction as to the order of progression, both vessels continued to close on one another until the VTIS operator instructed the *Atlantic Hero* to stop. Although this instruction was indeed complied with, no further clarification of any Pilot embarkation arrangements was made.
- 4.6 However, the Port state maintains that VTIS had given timely advice for both Master to assess the situation and take necessary actions in compliance with COLREGS. II. It has also been VTIS guiding principle to provide timely and relevant traffic information to ships.
- 4.7 Further, the Port state argues that due to dynamic situation in the port of Singapore, the time interval for the advice (about 10 minutes) was

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appropriate and sufficient for both Masters i.e. to assess the situation and take the necessary actions in compliance with COLREGS.

- 4.8 The Port state also advised the investigation that the *Oriental Pioneer* did not display the 3 green lights when crossing the TSS as recommended by the International Maritime Organisations Circular SN.1/Circ.317.
- 4.9 In the knowledge that the distance between the two vessels was continuing to close, the Master of the *Atlantic Hero* attempted to contact not only the VTIS operator and Pilot launch but also the *Oriental Pioneer* to agree on an order of progression. With no acknowledgement from either the VTIS operator or the Pilot launch, contact was established between the two approaching vessels.
- 4.10 The communications that followed however were conducted in Tagalog preventing the monitoring shore station from being able to intervene in the passing arrangement that was being agreed. The Master of the *Atlantic Hero* was under the impression therefore, that the *Oriental Pioneer* planned to give way and allow his safe passing as per the requirements of Rule 15 of the IRPCS, the content of which states that the give way vessel shall '*keep out of the way and, if the circumstances of the case admit, avoid crossing ahead of the other vessel*'.
- 4.11 Given that both Pilots were travelling on the same launch, the confusion over the order of progression continued. When the launch proceeded to alter towards the *Oriental Pioneer*, it is considered that the Master of the *Atlantic Hero* became further distracted, evident through his attempts to contact the VTIS operator once more to confirm the intentions for his vessel. This distraction prevented the Bridge team from taking any evasive action until the point they were instructed to do so by the shore side monitoring station.
- 4.12 Due to the proximity of the two vessels and their limited manoeuvring capabilities however, this evasive action proved insufficient and contact was made.

- 5.1 The Bridge watch manning conditions were seen to be in accordance with the company operating requirements. The Master had assumed the navigational conduct of the vessel with the OOW present to provide support and assistance.
- 5.2 It was considered however, that in assigning the OOW the responsibility to manage VHF communications, the Master no longer had the support structure in place to ensure that critical decision making was not susceptible to individual error.
- 5.3 While periodic VHF reports were made by the *Atlantic Hero* during the approaches to the Singapore Pilot station, no direct and specific warning was given of any conflicting traffic movements. Had this information been made available at an early stage, then perhaps any confusion could have been resolved and an agreed order of progression put in place before either vessel had arrived.
- 5.4 The overreliance that was placed on establishing VHF contact would seem to have become a distraction, one that prevented the Bridge team on board the *Atlantic Hero* from recognising the severity of the developing situation until such a time as the two vessels were so close that a collision could not be avoided.
- 5.5 In opting to communicate in Tagalog instead of the International Maritime communication language of English, the VTIS operator was unable to intervene in the passing arrangement that had been

6 RECOMMENDATIONS

Recommendations for the operator:

- 6.1 Masters and Watch-keeping officers should be apprised of the findings of this investigation and alerted to the navigational errors that have been identified within this report, in particular those associated with the distractions of VHF.
- 6.2 Bridge watch manning arrangements should be further defined within the SMS to ensure that the role of the conning officer and the supporting officer are more clearly understood by Bridge teams.

Recommendations for Vessel Traffic Service Operations and ship operators

- 6.3 The exchange of information between ship and shore should be conducted in such a way that wherever possible, sufficient time should be permitted for the Bridge team to fully prepare for any unexpected hazards to navigation that may be encountered.

LIST OF APPENDICES

- I. MPA Singapore Port Marine Circular 20/2008 Revised reporting and notification procedures.**
- II. MPA Chart-let: Singapore Anchorages**
- III. MPA Chart-let: Singapore Pilot Stations**

Appendix I: MPA Singapore Port Circular 20/2008 Revised Reporting Procedures

MARITIME AND PORT AUTHORITY OF SINGAPORE

PORT MARINE CIRCULAR NO. 20 OF 2008

10 November 2008

To: Shipping Community
Harbour Craft Community

REVISED REPORTING PROCEDURES FOR NOTIFICATION AND CONFIRMATION OF A VESSEL'S ARRIVAL IN SINGAPORE

INTRODUCTION

1 Pursuant to Sections 10 and 44 of the Maritime and Port Authority of Singapore Act (Cap.170A) and Regulation 3 of the Maritime and Port Authority of Singapore (Port) Regulations 1997, the Port Master hereby directs that with immediate effect, all vessels to which this circular applies shall comply with the reporting procedures specified as follows:

Part A - REPORTING PROCEDURES FOR NOTIFICATION OF VESSEL'S ARRIVAL AT SINGAPORE

Part B - REPORTING PROCEDURES FOR A VESSEL'S CONFIRMATION OF ARRIVAL

2 For the purposes of this Circular, the following terms are used:

- (a) NOTIFICATION OF ARRIVAL - this is the advance notice given by a vessel to the Port Master informing of the vessel's intention to enter Singapore
- (b) CONFIRMATION OF ARRIVAL - this is the VHF radiotelephone report given through Vessel Traffic Information Service (VTIS) to the Port Master when the vessel is within VTIS operational area.
- (c) PASSENGER VESSEL - a passenger vessel is defined as any vessel carrying more than 12 passengers.
- (d) HEIGHT - refers to the height declared by the vessel, measured vertically from the water-line to the highest point of the vessel including its cargo, structure or equipment on board. If there are extendible structures and the extended height exceeds the height of its cargo or fixed structures or equipment on board, the highest point shall be the maximum height attainable by these structures when fully extended. The height must be verifiable with the appropriate plans or documents carried on board the vessel.

3 All reports made to the designated communications centre shall be in English. Timings shall be reported in local time following the 24-hour clock system.

4 All positions in Lat. and Long. given in this circular are based on WGS 84 datum.

5 With effect from 21 Nov 08, all ships will need to indicate in the NOA, if the ship possesses a valid CLC 92 or a valid BCC issued by a Convention Party.

PART A - REPORTING PROCEDURES FOR NOTIFICATION OF A VESSEL'S ARRIVAL AT SINGAPORE

Application

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6 The owner, agent, master or person-in-charge of any passenger vessel or a vessel of 300 GT or more shall notify the Port Master at least 12 hours prior to the arrival of the vessel. A vessel coming from a nearby port, with less than 12 hours steaming time to Singapore, shall immediately on departure from such port notify the Port Master.

Notification of Arrival

7 The Notification of Arrival report shall be addressed to the Port Master and provide the information in the reporting format as shown in **Appendix A**. It shall be transmitted by any of the following means:

- (a) E-mail :noa@mpa.gov.sg
- (b) Telefax :(65) 6224 5776
- (c) Telex :RS 34970 (Answer Back PORTPM 34970)
- (d) MARINET :an Electronic Data Interchange system for electronic transaction between shipping community and MPA

8 Owners, agents, masters or person-in-charge of vessels carrying hazardous and noxious substances in bulk are reminded of the requirement to provide 24 hours advance notification on the details of such cargoes they are carrying as stated in Port Marine Circular No. 15 of 1998.

PART B - REPORTING PROCEDURES FOR A VESSEL'S CONFIRMATION OF ARRIVAL

Application

9 The master of every vessel of 300 GT or more or tug engaged in towing or Pushing, if the combined GT of the tug and tow or vessel(s) being pushed is 300 GT or more or any passenger vessel intending to call at Singapore shall report by VHF radiotelephone the Confirmation of Arrival to VTIS together with information on the vessel's particulars.

Confirmation of Arrival

10 The Confirmation of Arrival report shall be made when the vessel is at any of the following points as shown in the attached **Chartlet**:

(a) Reporting to VTIS East on VHF CH 10 - (Sector 9 of STRAITREP)

- (i) Approaching from the East (South China Sea) when Horsburgh Lighthouse (01° 19.814'N 104° 24.337'E) is abeam.
- (ii) Approaching from the South via Selat Riau when Karang Galang Lt (01° 09.577'N 104° 11.365'E) is abeam.
- (iii) Approaching from the East Johor Strait when Eastern Buoy (01° 17.865'N 104° 05.894'E) is abeam.

(b) Reporting to VTIS Central on VHF CH 14 - (Sector 8 of STRAITREP)

Vessels intending to join the traffic lane of the Traffic Separation Scheme (TSS) in the Singapore Strait between Longitudes 103° 44.6'E and 104° 02.1'E shall immediately report to VTIS Central on VHF Ch 14 after departing from the port or anchorages north or south of the TSS.

(c) Reporting to VTIS West on VHF CH 73 - (Sector 7 of STRAITREP)

- (i) Approaching from the South via Selat Durian when Pulau Jangkat Beacon (00° 57.895'N 103° 42.619'E) is abeam.
- (ii) Approaching from the West (Malacca Strait) when Pulau Iyu Kechil (01° 11.479'N 103° 21.140'E) is abeam.

11 Vessels approaching from another direction other than that specified above shall on approaching the VTIS operational area call the appropriate VTIS operator (East,

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West or Central) and provide the vessel's position by bearing and distance from one of the following reference points:

- (a) Pu lyu Kechil (01° 11.466'N 103° 21.141'E)
- (b) Sultan Shoal Lt (01° 14.377'N 103° 38.884'E)
- (c) Raffles Lt (01° 09.606'N 103° 44.450'E)
- (d) Sakijang Lt Bn (01° 13.305'N 103° 51.275'E)
- (e) Bedok Lt (01° 18.544'N 103° 55.965'E)
- (f) Tg Setapa Lt (01° 20.574'N 104° 08.135'E)
- (g) Horsburgh Lt (01° 19.814'N 104° 24.337'E)

Reporting Format

12 The VHF Confirmation of Arrival report shall contain the following information:

- (a) Vessel's name;
- (b) Call sign;
- (c) Present location (with reference to any one of the designated reporting points, e.g. when Horsburgh Lt is abeam);
- (d) Number of passengers and crew (applicable only for passenger vessels calling at Singapore);
- (e) Estimated Time of Arrival (ETA) at the first destination in the Port or the name of the pilot boarding ground for a vessel engaging the service of a pilot; and
- (f) Height of the vessel (applicable if height differs from that provided in the notification of arrival report)

ePANS

13 With reference to Port Marine Notice No. 45 of 2008, the master, owner and agent of the following vessels who submit ePANS instead of the manual PANS need not submit an NOA again, provided that the necessary information for NOA as described in this circular are included in the ePANS;

- (a) Passenger ships, including high-speed passenger craft;
- (b) Cargo vessels, including high-speed craft, of 500 gross tonnage and upwards; and
- (c) Mobile Offshore Drilling Units.

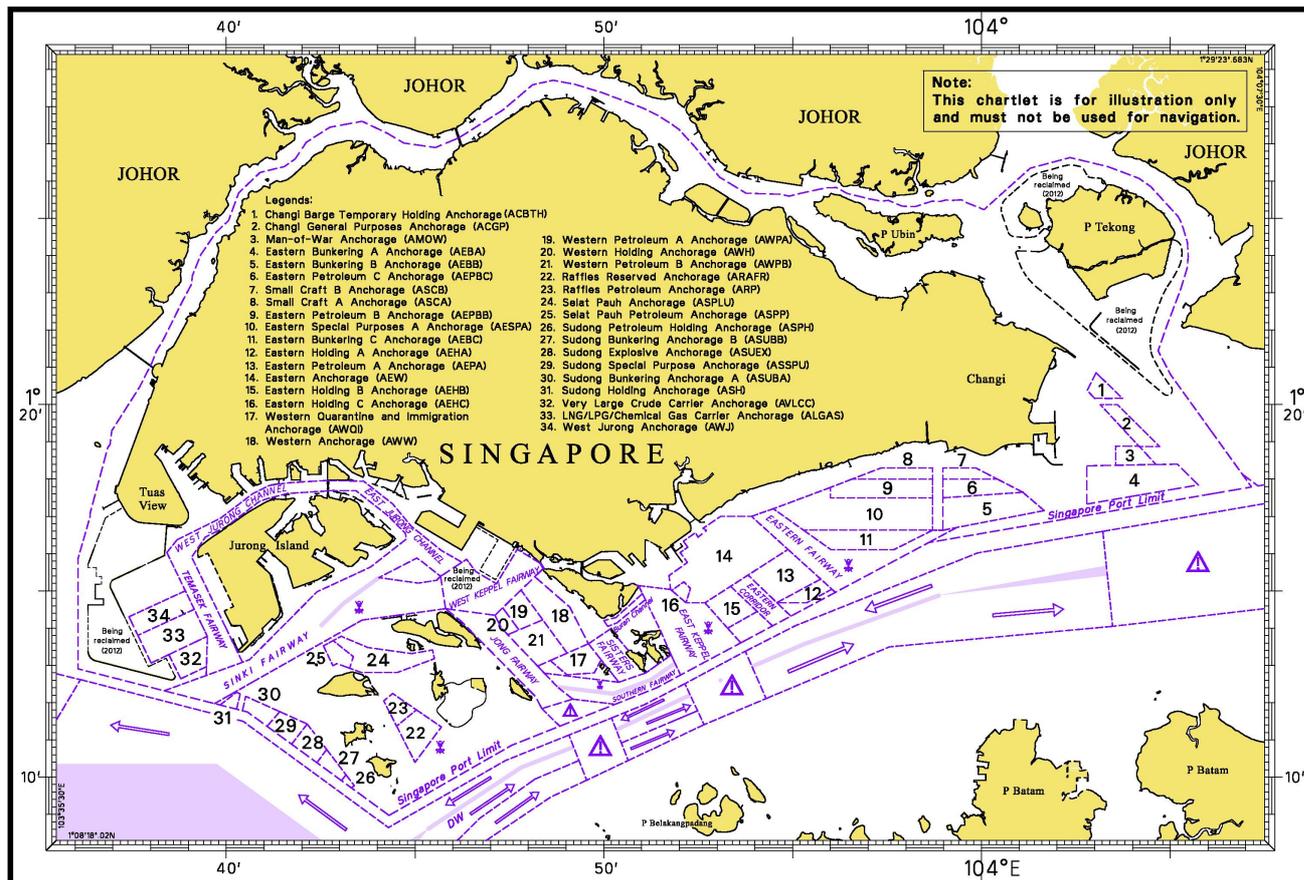
QUERIES

14 Any queries concerning this circular may be directed to Vessel Traffic Management Department at Tel. Nos. 6325 2450 or 6325 2453 (Office hours), 6325 2493 or 6325 2494 (After office hours) or Fax No. 6325 2454.

15 This circular supersedes Port Marine Circular No.09 of 2004.

DJIE KWANG LIONG
for PORT MASTER
MARITIME AND PORT AUTHORITY OF SINGAPORE
TEL: 6325 2450 FAX: 6325 2454

Appendix II: MPA Chart-let of Singapore Anchorages



Appendix III: MPA Chart-let of Singapore Pilot Stations

