



## Security Council

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### Letter dated 17 June 2019 from the Permanent Representatives of Norway, Saudi Arabia and the United Arab Emirates to the United Nations addressed to the President of the Security Council

On instructions from our respective Governments, we are writing further to: (a) our joint letter dated 15 May 2019 addressed to the President of the Security Council ([S/2019/392](#)); (b) our joint informal closed briefing to the members of the Council and the Under-Secretary-General for Political and Peacebuilding Affairs on 6 June 2019; and (c) our joint statement to the Maritime Safety Committee of the International Maritime Organization, delivered by the Permanent Representative of the United Arab Emirates to the International Maritime Organization on 11 June 2019. We are also transmitting herewith a report containing the preliminary findings of the United Arab Emirates-led investigations into the attacks on four oil tankers in the territorial waters of the United Arab Emirates, east of the port of Fujairah, on 12 May 2019 (see annex).

As the investigations continue, we will keep the members of the Security Council apprised of further findings.

We would be grateful if you could arrange for the present letter and its annex to be circulated as a document of the Security Council. We further request that the Council be seized of the matter.

*(Signed)* Mona **Juul**  
Permanent Representative  
Permanent Mission of Norway to the United Nations

*(Signed)* Abdallah Y. **Al-Mouallimi**  
Permanent Representative  
Permanent Mission of the Kingdom of Saudi Arabia to the United Nations

*(Signed)* Lana **Nusseibeh**  
Permanent Representative  
Permanent Mission of the United Arab Emirates to the United Nations



**Annex to the letter dated 17 June 2019 from the Permanent Representatives of Norway, Saudi Arabia and the United Arab Emirates to the United Nations addressed to the President of the Security Council**

**Initial report on the oil tanker attacks off the port of Fujairah, United Arab Emirates, on 12 May 2019**

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## Executive Summary

1. In a letter addressed to the President of the Security Council dated 15 May 2019 (S/2019/392), the Permanent Missions of the Kingdom of Norway, the Kingdom of Saudi Arabia and the United Arab Emirates drew the attention of the Security Council to a serious incident relating to international peace and security. On 12 May 2019, four oil tankers were attacked in the territorial waters of the United Arab Emirates, east of the Port of Fujairah: two Saudi-flagged vessels, one Norwegian-flagged vessel, and one Emirati-flagged vessel. These deliberate attacks posed a grave threat to international maritime navigation and global energy supply. The attacks are also offences under the International Maritime Organization's 1988 Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation.
2. Following the explosions, the area was secured by the United Arab Emirates Explosive Ordinance Disposal Team. The United Arab Emirates launched a thorough national investigation, and technical teams from several countries participated at the invitation of the United Arab Emirates.
3. This Report outlines the preliminary findings of the ongoing investigations undertaken by the United Arab Emirates. Members of the Security Council were briefed on these preliminary findings by the Permanent Missions of the Kingdom of Norway, the Kingdom of Saudi Arabia and the United Arab Emirates, in an informal closed meeting on 6 June 2019 at the Permanent Mission of the United Arab Emirates to the United Nations in New York. The United Nations Under-Secretary-General for Political and Peacebuilding Affairs, Ms. Rosemary A. Di Carlo also attended the closed meeting.
4. On the basis of the investigations undertaken to date:
  - (a) It is assessed as highly likely that limpet mines were used in all four attacks.
  - (b) It is assessed that the limpet mines were most likely attached to the vessels by one or more teams of divers, deployed from one or more fast boats that approached each vessel.
  - (c) It is assessed that the execution of these attacks required a high level of precision.
  - (d) It is assessed that the placement of the mines is consistent with the intention to incapacitate the vessels, rather than sink or destroy them, or cause an oil spillage.

Altogether, these are strong indications that the four attacks were part of a sophisticated and coordinated operation carried out by an actor with significant operational capacity in terms of intelligence, equipment, and training – most likely a state actor. Accordingly, the preliminary conclusion of the investigations undertaken to date is that the complex attacks off the Port of Fujairah were most likely carried out by a state actor.
5. As the investigations continue, the members of the Security Council will be apprised of further findings and conclusions.

## Methodology

6. On 12 May 2019, the United Arab Emirates authorities launched thorough investigations, conducted by a cross-agency team of experts, into the attacks on

the four vessels off the Port of Fujairah. Technical teams from several countries have also participated, at the invitation of the United Arab Emirates to independently verify the findings and conduct their own analysis.

7. To date, the investigations have included:
  - (a) The deployment of more than ten divers from different countries and a remotely-operated underwater vehicle to inspect the damage to the vessels.
  - (b) A two-step chemical analysis process, involving field analysis and analysis in specialised United Arab Emirates government laboratories, of samples taken from the hulls of the vessels and debris collected from the attack sites. This analysis is being verified by other countries that are conducting forensic tests in their own laboratories.
  - (c) Material testing, through X-ray fluorescence (XRF) elemental analysis, of the foreign debris from the attack sites.
  - (d) The conduct of approximately fifty interviews, including with all four captains of the targeted vessels, all chief engineers, and all crew members that were present in the engine chambers or on the decks of the vessels at the time of the attacks.
  - (e) A review of the log files of the vessels.
  - (f) Analysis of information collected by the vessels' voyage data recorders (VDRs) for the ten hours preceding the explosions.
8. Further searches for foreign debris are being conducted, and the vessels will be comprehensively inspected once they are dry-docked. As of 6 June 2019, the ANDREA VICTORY is currently dry-docked in Dubai for inspection.

## **Context**

### **The Port of Fujairah**

9. The Port of Fujairah is the largest port – and the only multi-purpose port – on the Eastern seaboard of the United Arab Emirates. The Port handles dry and liquid bulk, containers and project cargo. It is also one of the world's three largest bunkering hubs for the refuelling of vessels.<sup>1</sup>
10. The Port of Fujairah is particularly critical to global oil supply. The Port's two oil terminals have the capacity to accommodate super-tankers and very large crude carriers. It is also strategically located south of the Strait of Hormuz. Together with the Bab-Habshan-Fujairah Oil Pipeline, the Port provides a secure route for oil transportation that bypasses the Strait of Hormuz.

### **The targeted Vessels**

11. On 12 May 2019, four oil tankers were attacked within the United Arab Emirates' territorial waters off the coast of Fujairah. The flag states of the targeted vessels are the Kingdom of Saudi Arabia (2), the Kingdom of Norway (1) and the United Arab Emirates (1). At the time of the explosions, the four targeted vessels were all located within the crowded Fujairah Offshore Anchorage Area, east of the Port of Fujairah. On this day, there were approximately 185 large vessels present in the Anchorage Area. Many tugboats, fishing boats, and other civilian boats were also present. The two Saudi-flagged vessels were among the largest oil tankers present in the Anchorage Area at the

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<sup>1</sup> Organization of the Petroleum Exporting Countries, *2014 World Oil Outlook*, 117.

time. All four vessels were located close to either one of the two channels, North and South, used to enter and exit the Anchorage Area. The Saudi-flagged AMJAD was located close to the North channel, at the opposite end of the Anchorage Area to the other three targeted vessels, which were located close to the South channel.

## Incident Details

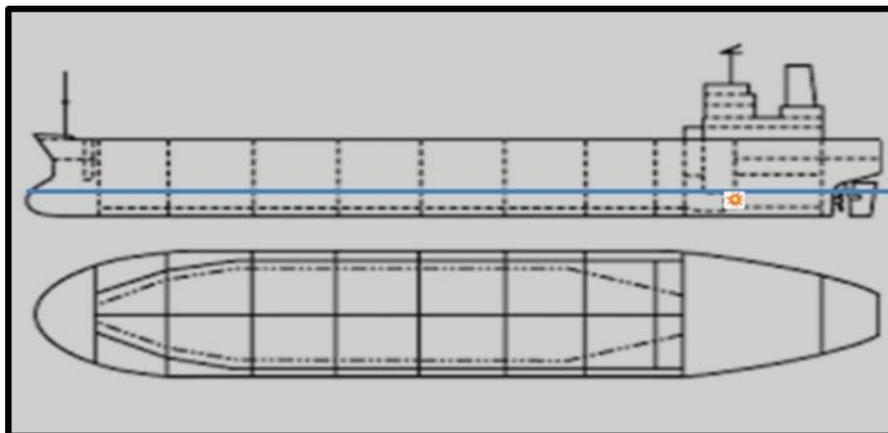
### The AMJAD

#### 12. Overview

The AMJAD (IMO 9779800; MMSI 403529000) is a Saudi-flagged crude oil tanker. It is approximately 330 metres by 60 metres. The AMJAD's port of departure was Singapore, and it was destined for the Kingdom of Saudi Arabia. The AMJAD was the first tanker to be struck by an explosion, at 0602 hours local time. At the time of the explosion, the AMJAD was located in the North channel of the Anchorage Area; it had been anchored in the same position within the Anchorage Area for approximately 35 hours.

#### 13. Seat of the Explosion

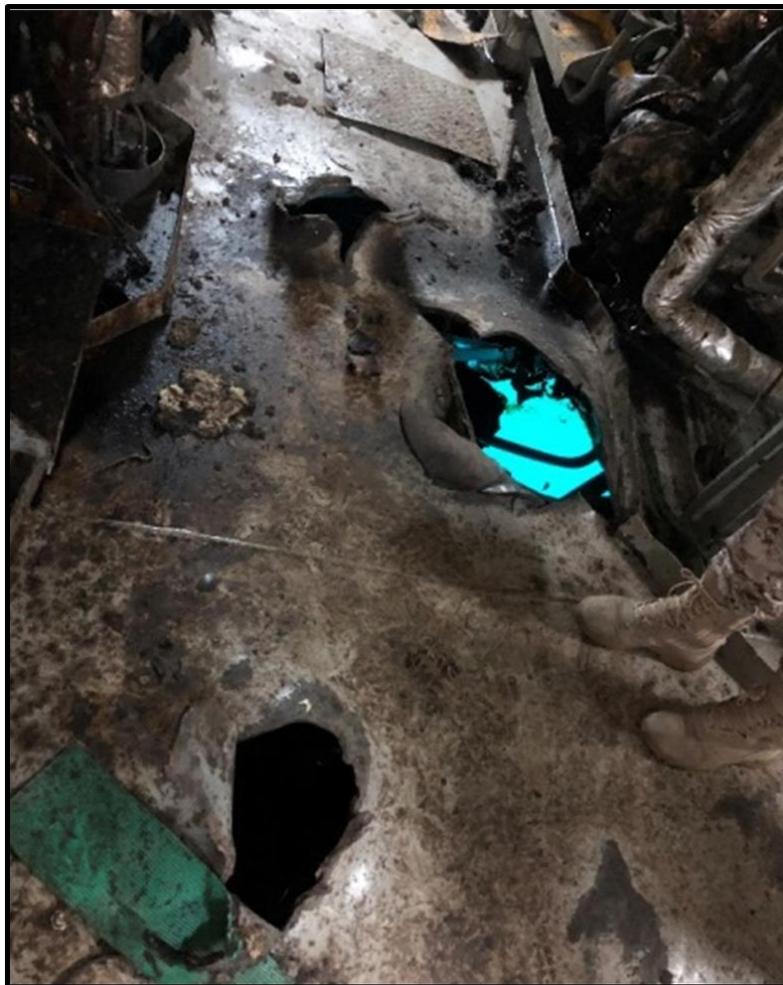
Investigation of the damage sustained by the AMJAD indicates that the seat of the explosion was located on the port side, approximately 3.30 metres below the waterline level, at the engine chamber. As with the other three explosions, this explosion caused the perforation of the vessel's outer hull. Of the four vessels, the AMJAD sustained the greatest amount of damage, with the largest-diameter hull breach, measuring approximately 4 metres by 4.9 metres. The damage caused the engine chamber to flood, disabling the vessel.



*Figure 1: Diagram of the AMJAD highlighting the seat of the explosion*



*Figure 2: Image depicting a diver in front of the damaged hull of the AMJAD*



*Figure 3: Damage sustained by the AMJAD under the purifier room, in the engine chamber*

14. **Fragmentation**

Foreign debris has been recovered from the AMJAD (i.e. remnants of the device used in the attack). XRF elemental analysis of the debris has revealed that it is composed of aluminium.



*Figure 4: Image depicting the recovery of foreign debris from the interior of the AMJAD*



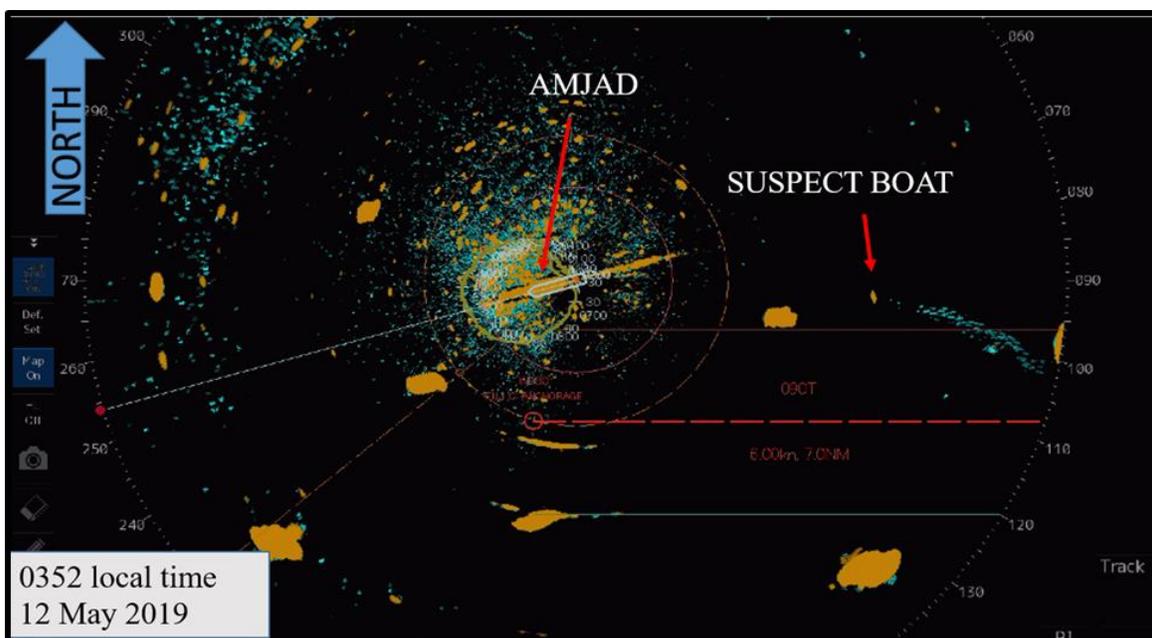
*Figure 5: Foreign debris recovered from the AMJAD*

## 15. Chemical Analysis

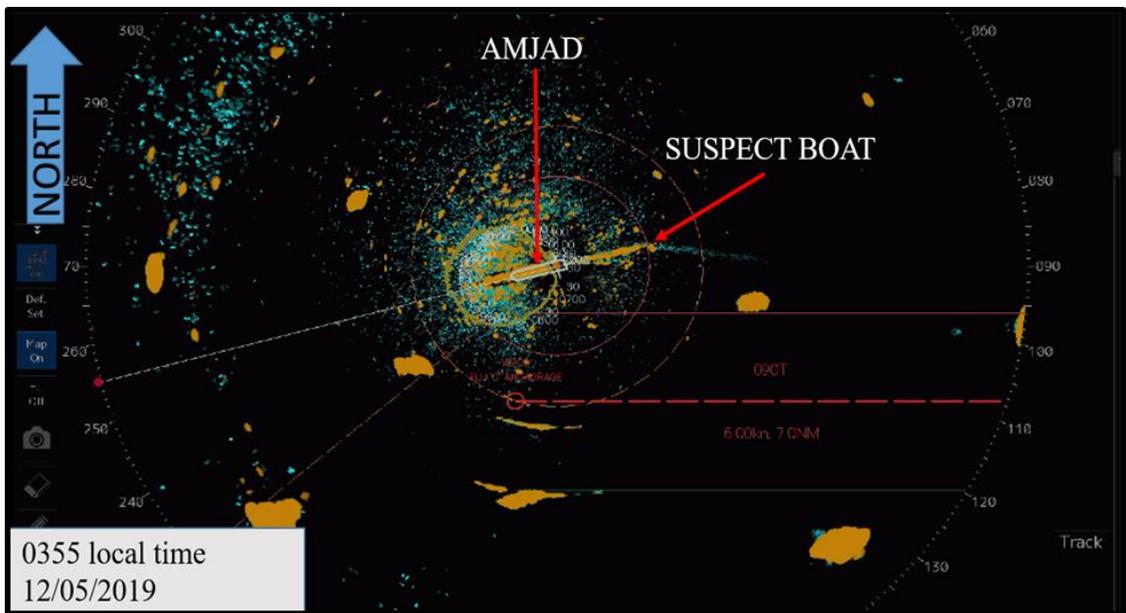
A two-step process of chemical analysis of samples recovered to date from the attack site of the AMJAD has detected the presence of the explosive 2,4,6-Trinitrotoluene (TNT). The presence of the explosive materials RDX, Pentaerythritol tetranitrate (PETN), Propylene glycol dinitrate (PGDN) and 1,3 Dinitrobenzene (DNB) has also been detected.

## 16. VDR

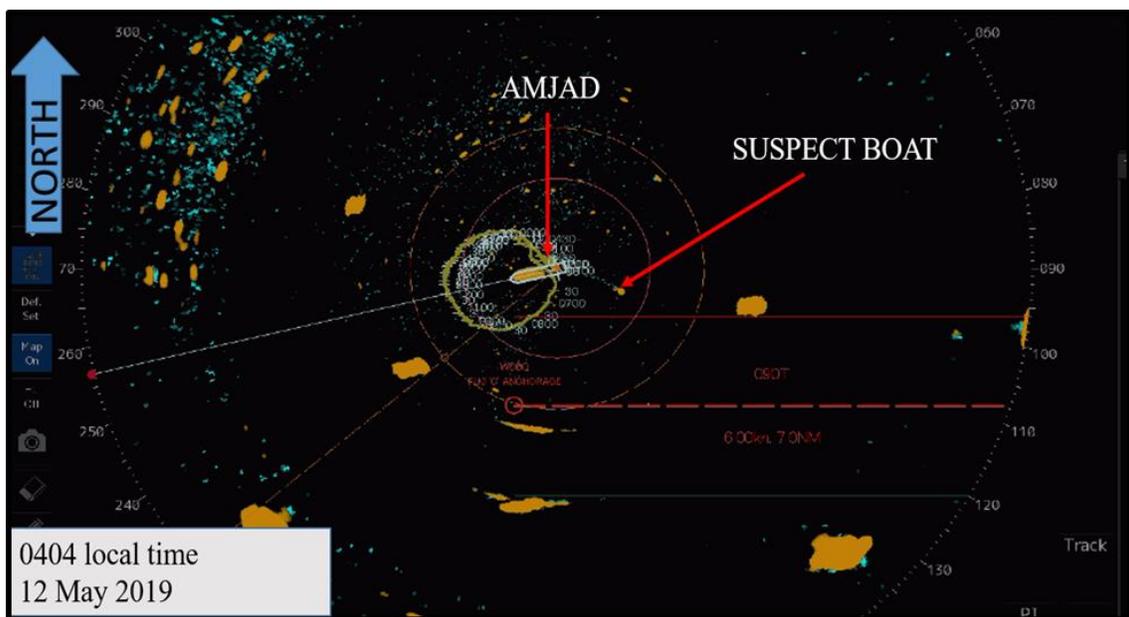
The AMJAD's VDR depicts a suspect fast boat approaching the AMJAD at high speed from the East at 0352 hours local time on 12 May 2019, and staying near the vessel for nine minutes, before departing to the East at 0404 hours at a high speed. The last detection of this suspect fast boat by the AMJAD's VDR is at 0407 hours local time. (For video footage of the AMJAD's VDR, please go to: <https://www.un.int/uae/media/amjad-vdr>.)



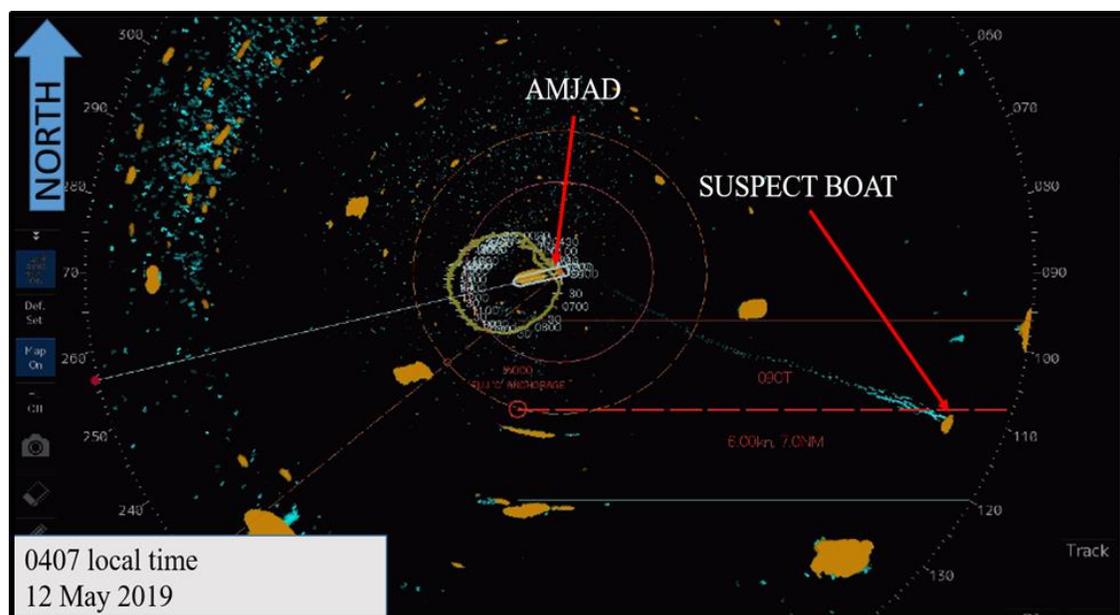
**Figure 6:** Image from the AMJAD's VDR depicting the first detection of the suspect fast boat [Note: The large orange shape with a light blue outline at the centre of the image is the AMJAD. The large orange shapes around the AMJAD are other vessels. The small orange specks are 'radar clutter' (waves and water movement picked up as radar noise). The suspect fast boat is identified by a red arrow.]



*Figure 7: Image from the AMJAD's VDR depicting the suspect fast boat approaching near the AMJAD*



*Figure 8: Image from AMJAD's VDR depicting the suspect boat departing from the AMJAD, nine minutes later*



*Figure 9: Image from the AMJAD's VDR, depicting the last detection of the suspect fast boat, departing to the East*

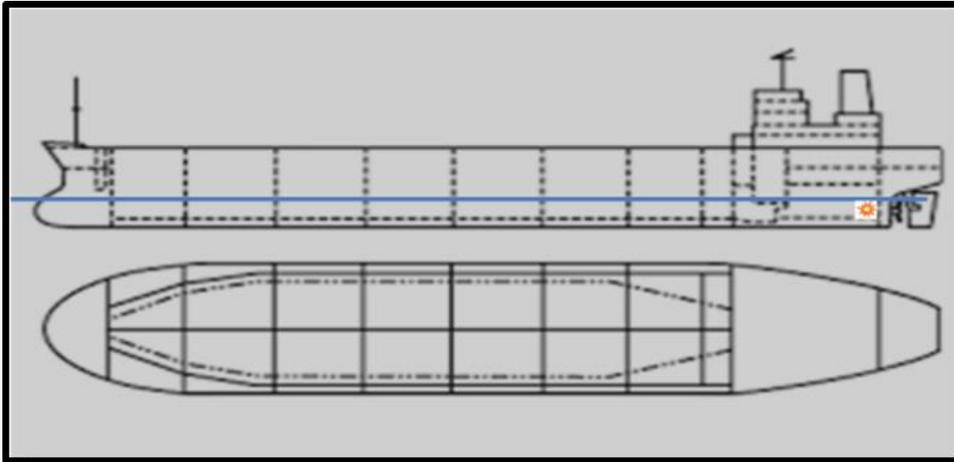
## The AL MARZOQAH

### 17. Overview

The AL MARZOQAH (IMO 9165762; MMSI 403044000) is a Saudi-flagged crude oil tanker. It is approximately 244 metres by 42 metres. The AL MARZOQAH's port of departure was Yanbu Port, in the Kingdom of Saudi Arabia, and it was destined for the Sultanate of Oman. The AL MARZOQAH was the second tanker to be struck by an explosion, at 0622 hours local time, 20 minutes after the explosion that struck the AMJAD. At the time of the explosion, the AL MARZOQAH was located in the South channel of the Anchorage Area; it had been in anchored in that position within the Anchorage Area for approximately 32 hours.

### 18. Seat of the explosion

Investigation of the damage sustained by the AL MARZOQAH indicates the seat of the explosion was located on the port side, approximately 1.60 metres below the waterline level, at the engine chamber. As with the other three explosions, this explosion perforated the vessel's outer hull. The AL MARZOQAH sustained a hull breach measuring approximately 3.7 metres by 3.5 metres. The damage caused the engine chamber to flood, disabling the vessel.



*Figure 10: Diagram of the AL MARZOQAH highlighting the seat of the explosion*



*Figure 11: Image depicting a diver in front of the damaged hull of the AL MARZOQAH*



*Figure 12: Damage to the floor of the engine chamber sustained by the AL MARZOQAH*

#### 19. Fragmentation

Foreign debris has been recovered from the AL MARZOQAH. XRF elemental analysis of the debris has revealed that it is composed of aluminium.



*Figure 13: Foreign debris recovered from the AL MARZOQAH*

## 20. Chemical Analysis

A two-step process of chemical analysis of samples recovered to date from the attack site of the AL MARZOQAH has detected the presence of TNT, RDX, and DNT.

## 21. VDR

In reviewing the data from the AL MARZOQAH's VDR for the ten hours preceding the explosion, the United Arab Emirates authorities have identified several instances of a suspect fast boat approaching the vessel at high speed. The United Arab Emirates authorities are continuing to analyse the VDR data from the AL MARZOQAH.

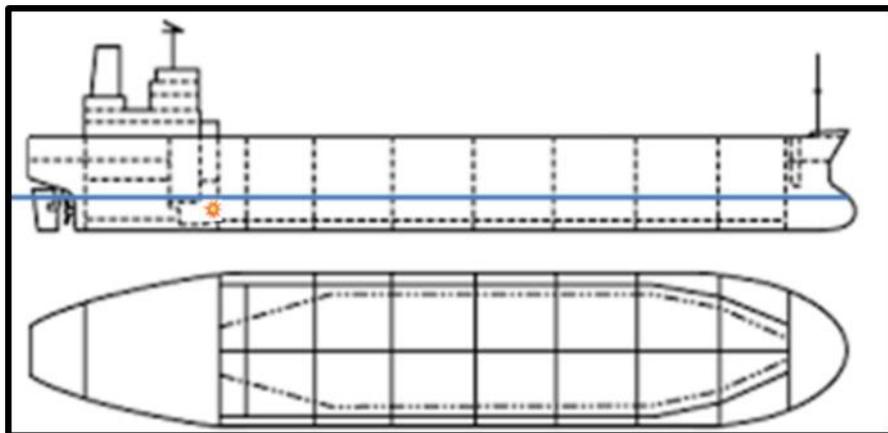
## The A.MICHEL

### 22. Overview

The A.MICHEL (IMO 9177674; MMSI 470718000) is an Emirati-flagged bunkering tanker used to refuel vessels in the Anchorage Area. It is approximately 109 metres by 17 metres. The A.MICHEL was the third tanker to be struck by an explosion, at 0640 hours local time, 18 minutes after the explosion that struck the AL MARZOQAH. At the time of the explosion, the A.MICHEL was located in the South channel of the Anchorage Area; it had been in motion for approximately ten minutes when the explosion occurred.

### 23. Seat of the explosion

Investigation of the damage sustained by the A.MICHEL indicates that the seat of the explosion was located on the starboard side, approximately 1.1 metres below the waterline level, at the engine chamber. As with the other three explosions, this explosion perforated the vessel's outer hull. The A.MICHEL sustained a hull breach measuring approximately 4 metres by 3 metres. The damage caused the engine chamber to flood, disabling the vessel.



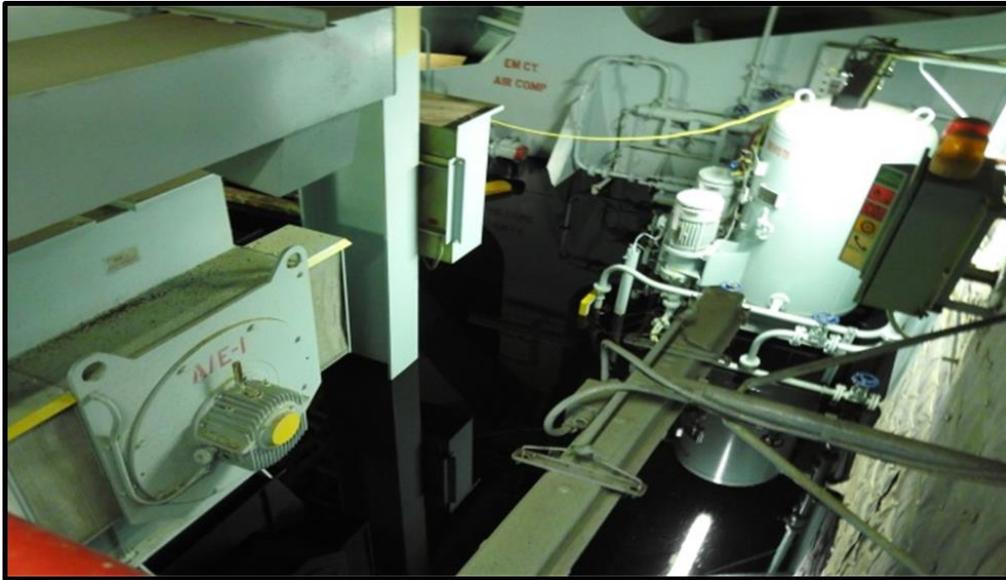
*Figure 14: Diagram of the A.MICHEL highlighting the seat of the explosion*



*Figure 15: Exterior of the A.MICHEL, depicting the damage to the hull of the vessel*



*Figure 16: Image depicting a diver in front of the damaged hull of the A.MICHEL*



*Figure 17: Flooding to the engine chamber sustained by the A.MICHEL*

#### 24. **Fragmentation**

Foreign debris has been recovered from the A.MICHEL. XRF elemental analysis of the debris has revealed that it is composed of aluminium.



*Figure 18: Foreign debris recovered from the A.MICHEL*

#### 25. **Chemical Analysis**

A two-step process of chemical analysis of samples recovered to date from the attack site of the A.MICHEL has detected the presence of TNT, RDX, and DNT.

### **The ANDREA VICTORY**

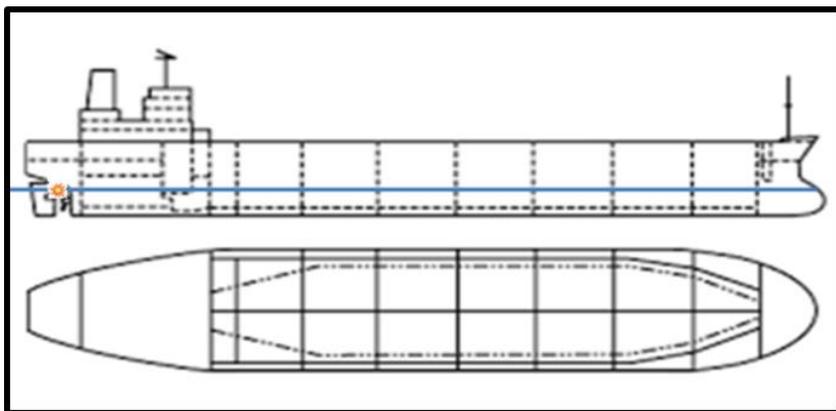
#### 26. **Overview**

The ANDREA VICTORY (IMO 9288849; MMSI 257358000) is a Norwegian-flagged crude oil tanker. It is approximately 183 metres by 32 metres. The ANDREA VICTORY was the fourth tanker to be struck by an explosion, at 0655 hours local time, 15 minutes after the explosion that struck the A.MICHEL. The ANDREA VICTORY's port of departure was the Port of Durban, in the Republic of South Africa, and it was refuelling in the Anchorage Area before heading back to international waters. At the time of the explosion,

the ANDREA VICTORY was located in the South channel of the Anchorage Area; it had been in anchored in that position within the Anchorage Area for approximately eight hours.

27. **Seat of the explosion**

Investigation of the damage sustained by the ANDREA VICTORY indicates that the location of the explosion was on the stern, below or at the waterline level, at the engine chamber. As with the other three explosions, this explosion perforated the vessel's outer hull. The ANDREA VICTORY sustained a hull breach measuring approximately 2.6 metres by 3 metres. As soon as the explosion occurred, the crew of the vessel responded by sealing the area, preventing flooding to the engine chamber. The internal chamber below the engine chamber sustained some flooding.



*Figure 19: Diagram of the ANDREA VICTORY highlighting the seat of the explosion*



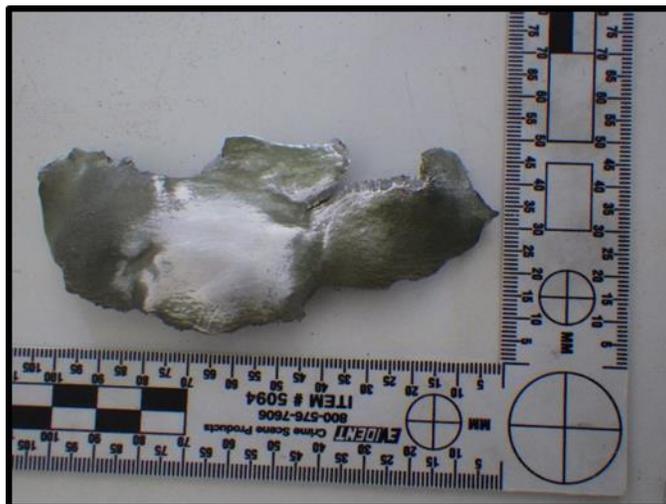
*Figure 20: Exterior of the ANDREA VICTORY, depicting the damage to the hull of the vessel*



*Figure 21: Hull damage sustained by the ANDREA VICTORY*

**28. Fragmentation**

Foreign debris has been recovered from the ANDREA VICTORY. XRF elemental analysis of the debris has revealed that it is composed of aluminium.



*Figure 22: Foreign debris recovered from the ANDREA VICTORY*

**29. Chemical Analysis**

A two-step process of chemical analysis of samples recovered to date from the attack site of the ANDREA VICTORY has detected the presence of TNT and RDX.

**30. VDR**

In reviewing the data from the ANDREA VICTORY's VDR, the United Arab Emirates authorities have identified several instances of a suspect fast boat approaching the vessel at high speed. The United Arab Emirates authorities are continuing to analyse the VDR data from the ANDREA VICTORY.

## Assessment of Findings

31. It is assessed as highly likely that limpet mines were used in all four attacks. This assessment is corroborated by the following findings revealed by the investigations to date:
- (a) The presence of TNT at all four attack sites, as detected by the two-step chemical analysis of samples taken from the attack sites,<sup>2</sup> confirms that explosives were used in all four attacks.
  - (b) The damage sustained by each of the four vessels, in particular the extent of the damage and the way in which the damaged parts of the hull bend inwards, into the vessel,<sup>3</sup> indicates a specific, fixed point of detonation originating at the surface of the hull of each vessel.
  - (c) The foreign debris recovered from all four attack sites is consistent with components of limpet mines. Careful examination and XRF elemental analysis show that the debris recovered from all four attack sites closely resembles, in size, shape, dimensions,<sup>4</sup> and material composition,<sup>5</sup> pieces of a known type of limpet mine.
  - (d) The location of the explosion below or at the waterline of the vessels<sup>6</sup> indicates the use of mines capable of being attached to a vessel below the waterline in all four attacks.
  - (e) The sequencing of the attacks<sup>7</sup> indicates the use of mines detonated by a timer in all four attacks.
32. It is assessed that the mines were most likely attached to the targeted vessels by one or more teams of divers deployed from one or more fast boats that approached each vessel. This assessment is based on the type of explosive device used – limpet mines<sup>8</sup> – and the seats of the explosions on the targeted vessels, below or at the waterline,<sup>9</sup> and is supported by the analysis of the vessels' VDRs undertaken to date.<sup>10</sup>
33. It is assessed that the execution of these attacks required a high level of precision, as demonstrated by the placement of the limpet mine on the hull of each vessel, specifically targeting the engine chamber in each case.<sup>11</sup>
34. It is assessed that the precise placement of the limpet mines is consistent with the intention to incapacitate the vessels, rather than destroy or sink them, detonate their cargoes, cause a spillage of oil, or cause widespread destruction in the Anchorage Area. Given the close proximity of vessels of different flags to the four targeted vessels, the explosions could have had catastrophic results, had the perpetrators so desired.

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<sup>2</sup> See paragraphs 15, 20, 25 and 29 above.

<sup>3</sup> See Figure 2, Figure 3, Figure 11, Figure 12, Figure 15, Figure 16, Figure 20 and Figure 21 above.

<sup>4</sup> See Figure 4, Figure 5, Figure 13, Figure 18 and Figure 22 above.

<sup>5</sup> See paragraphs 14, 19, 24 and 28 above.

<sup>6</sup> See paragraphs 13, 18, 23 and 27 above.

<sup>7</sup> See paragraphs 12, 17, 22 and 26 above.

<sup>8</sup> See paragraph 31 above.

<sup>9</sup> See paragraph 31(d) above.

<sup>10</sup> See paragraphs 16, 21 and 30 above.

<sup>11</sup> See Figure 1, Figure 10, Figure 14 and Figure 19 above.

## Preliminary Conclusion

35. In sum, based on the totality of the evidence gathered to date, there are strong indications that the four attacks were part of a sophisticated and coordinated operation carried out by an actor with significant operational capacity in terms of intelligence, equipment, and training – most likely a state actor.
36. This preliminary conclusion is supported by the following elements demonstrating a sophisticated operation:
  - (a) the careful selection of the four targeted oil tankers, located at different ends of the Anchorage Area, among the approximately 185 large vessels present in the Anchorage Area of the Port of Fujairah at the time of the explosions;<sup>12</sup>
  - (b) the extensive real time reconnaissance required to identify and precisely target these four vessels in the crowded environment, within the relative short window of time that the vessels were in their respective positions, including the A.MICHEL, which was regularly moving to undertake its refuelling activities;
  - (c) the precise placement of limpet mines<sup>13</sup> by divers with the requisite experience and expertise, including knowledge of the vessel, and the training and understanding of how to convey, fix, and activate the mines;
  - (d) the specific and intentional physical placement of the mines, which is consistent with the intention to incapacitate – but not physically destroy – each vessel;<sup>14</sup> and
  - (e) the high-level of coordination and expertise, as demonstrated by the withdrawal of the perpetrators and the detonation of the limpet mines sequenced within 53 minutes, each one 15 to 20 minutes apart.<sup>15</sup>
37. The preliminary conclusion of the investigations is therefore that the complex attacks in the Port of Fujairah were most likely carried out by a state actor.

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<sup>12</sup> See paragraph 11 above.

<sup>13</sup> See paragraph 33 above.

<sup>14</sup> See paragraph 34 above.

<sup>15</sup> See paragraphs 12, 17, 22 and 26 above.