INTERIM

WRECK INSPECTION REPORT

19 Mile Broome Unidentified

Report-Department of Maritime Archaeology
Western Australian Maritime Museum No. 177.

Gainsford, M. & Kimpton, G.

Table of contents

List of Figures

Figure **Page**

Technical Data

Site Name: 19 Mile unidentified **Date lost:** Unknown

Date of Inspection:
Personnel: Geoff Kimpton, Matthew Gainsford (WAMM), Steve, Leigh, Alex (DMB Crew).

OIC: G. Kimpton

Approximate Location:
Ca 19nm Offshore from the 80 Mile Beach between Port Hedland and Cape Bossut.

GPS: DMB: 19°10.761'S 121°09.185'E
Datum Used: WGS 84

Chart No's: Aus 415 & 324 **Lat/Long:** As Above

File No: 204/03 **File Name:** Broome 19 Mile - Unidentified

Sailing Directions: Sailing from Roebuck Bay, head past Cape Bossut. The site lies approximately 26 nautical miles from Cape Jaubert at a bearing of 235° and 19 nautical miles offshore.

Compass Bearing:
No compass bearings were taken. Land not visible from the wrecks location.

Sextant angles for A - D Above:
As Above

Visual Transits:
As Above

Site Photographs:
Black & White: Not Taken
Colour: Digital stills from video
Transit Photos: Not taken
Video: Taken by Geoff Kimpton (ca. 5 minutes video)
See attached CD (some segments of footage; in Quicktime)

Site Conditions on inspection
Sea and Swell: 1.5m swells
Surge: minimal surge
Visibility: 3-5m
Current: minimal (though during peak tides or when the tide is running the conditions can become difficult)
Seabed coverage: Mainly sand. Quite a lot of coral growth.

Chemical Measurements:
Not Taken

Biological Data:
Flora: Coral cups, coral fans, sponges, sea squirts, sea weed.

Fauna: Dominated by fish life several species evident, but unidentified.

Site Condition and Integrity:
Minimal material remains. The site is dominated by three coral 'bombies' and scattered materials. The site has a low profile and is mostly covered with sediment. There are scatterings of pearl shell, ballast, anchors and pulley blocks that are mostly or partially covered with sand. The integrity of the site seems relatively sound as it is largely covered with sediments.

Management considerations:
(i) Natural Forces: The seabed composition is light coloured fine-grained sand. Sand is the dominant feature of the seabed at the site, which has buried most materials either partially or fully. Since the site lies at a minimum depth of 18 metres and a maximum of ca. 23 metres (peak, spring tides) it is affected by tide and currents. The tidal ranges in this latitude are large and as such during big tides there is significant water movement across the site. This large tidal environment would increase the rate of decomposition of the site; compared to a site in a less tidal region. However this effect has most likely passed its critical stage and the tides most likely have minimal effect on the site now as most of the wreckage has broken up and dispersed. This site has most probably reached a state of equillibrium with its environment.

(ii) Present and future Human forces: The site's location should not result in high diver pressure. The remoteness, its depth and tidal range would detract divers from visiting the site. Little in the way of attractive loose artefacts appear on the site; therefore diver pressure would be minimal. There appears to be no interference on the site apart from some fish plates and rope on the site left by the finders for ease of relocation by Maritime Archaeology Department Western Australian Maritime Musuem.

(iii) Projected General site Stability: Due to its current condition, the tidal range on the site, its depth and the diver interference considerations the site is in a reasonably stable state. If disturbed this will alter significantly as the site once exposed will change in its equilibrium balance, degrading at a significantly incresed rate.

Site Conditions & Diving:
The method for the location of the wreck was to utilise the DMB and the GPS location provided by Steve Arrow in conjunction with a buoy left on the site. Once we had reached the co-ordinates provided the buoy was unlocatable.

This problem was solved by conducting a series of runs across the position with the sounder. This was achieved, but there was still no buoy to provide an accurate position for the divers. The DMB pearl divers Alex and Leigh, geared up and conducted a drift dive over the sounder anomaly. Once they had seen the site then they would signal the boat and a buoy with a weight would be dropped. However the movement of the boat, the location of the diver relative to the boat and the time lag between the signal and the releasing of the weighted buoy led to a discrepancy in position.

Once this buoy was released the Mueseum divers geared up for a dive using the DMB's tender 'the ute' as a platform. The dive was limited to ca. 20 minutes bottom time due to decompression issues and Museum safety standards. Once in the water two cicular searches were conducted in succession by the Musuem team. After this search there was only 5 minutes of bottom time remaining and it was decided to surface.

Alex from the DMB crew then assissted with a dive and located the site only a few metres from the second search; due to visibility this could not have been seen from the searches conducted by the team. Another dive was conducted by both Alex and Geoff that lasted ca. 5 minutes in which video and some measurements were taken of the site.

Due to the conditions, searching, visibility and limited bottom time the site was only inspected genrally and cursorily and as such more work could be conducted on the site.

Chart Excerpt

Aus 415: Cape Leveque to North West Cape

1:100 000

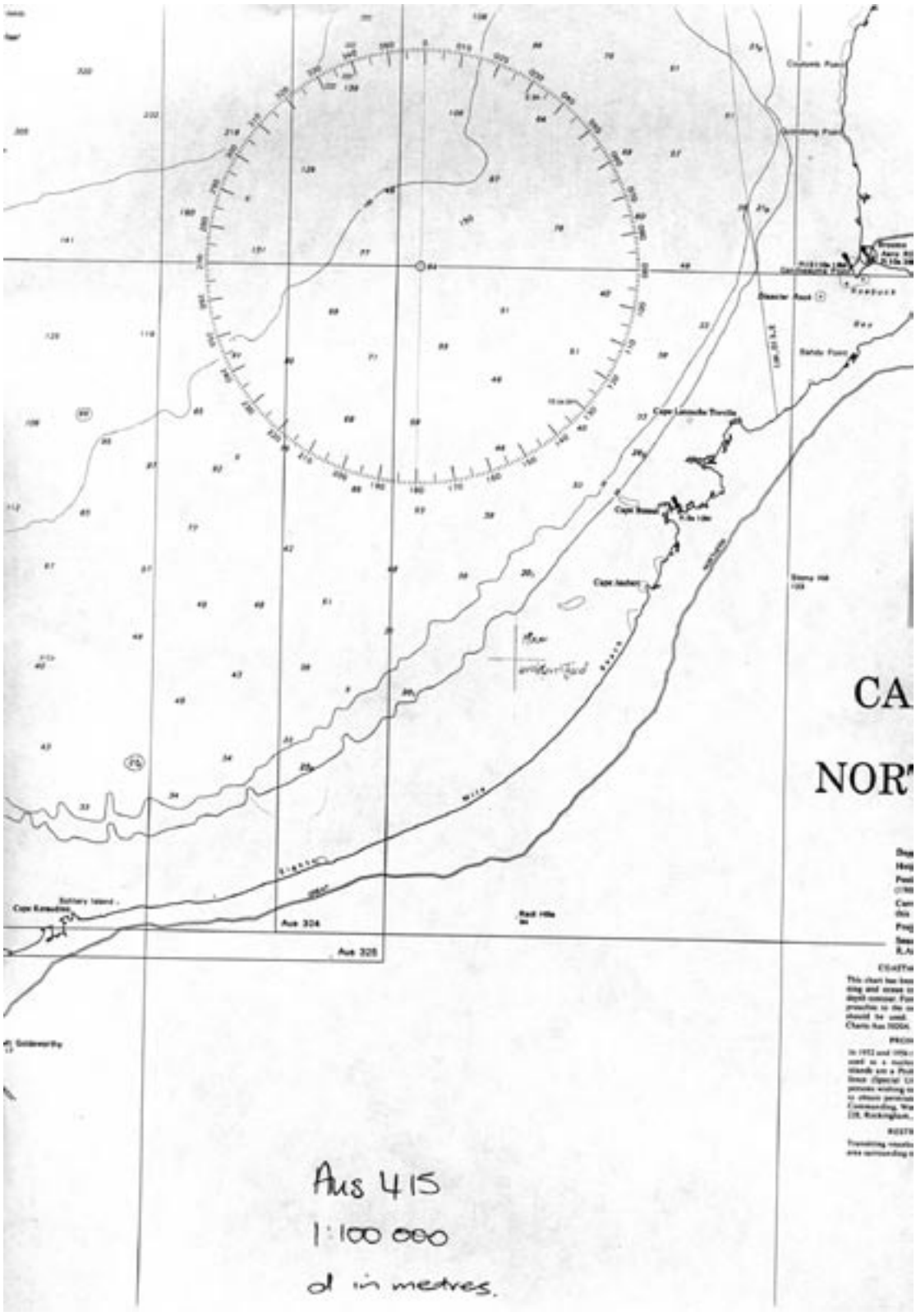

Figure 1. Chart excerpt Aus 415

Description of Site

The site is located offshore from 80 Mile Beach in 18.5 metres of water (neap tide). The seabed consists of a fine to medium sand light brown in colour. Coral is a dominant feature of the site with fans, cups and like across its area. There are various species of fish that dominate the site together with unidentifiable flora e.g. seaweeds.

Material from the site is scattered over an area ca. 25 by 10 metres, with little structure remaining above the seabed. Wreckage most noticeable was a frame, some pulley blocks, pearl shell, machinery, anchors, a windlass?, stone blocks and some unidentifiable wreckage.

The site is subject a large tidal range, and therefore diving should be conducted either during neap tides or the change of the tide. The inspection dives were conducted on a neap tide during the change. Diving on the site in these conditions was manageable and if the same conditions were utilised for any future work then it should not be a problem to dive.

Material Raised

Field # 1	Piece of Wood	(possibly hull timber)
Field # 2	Copper Rod	(possible fastening)
Field # 3	Pearl Shell	(complete pearl shell)

Database #UNID4515	Piece of Wood	(possibly hull timber)
Database #UNID4516	Copper Rod	(possible fastening)
Database #UNID4517	Pearl Shell	(complete pearl shell)

Search Plan

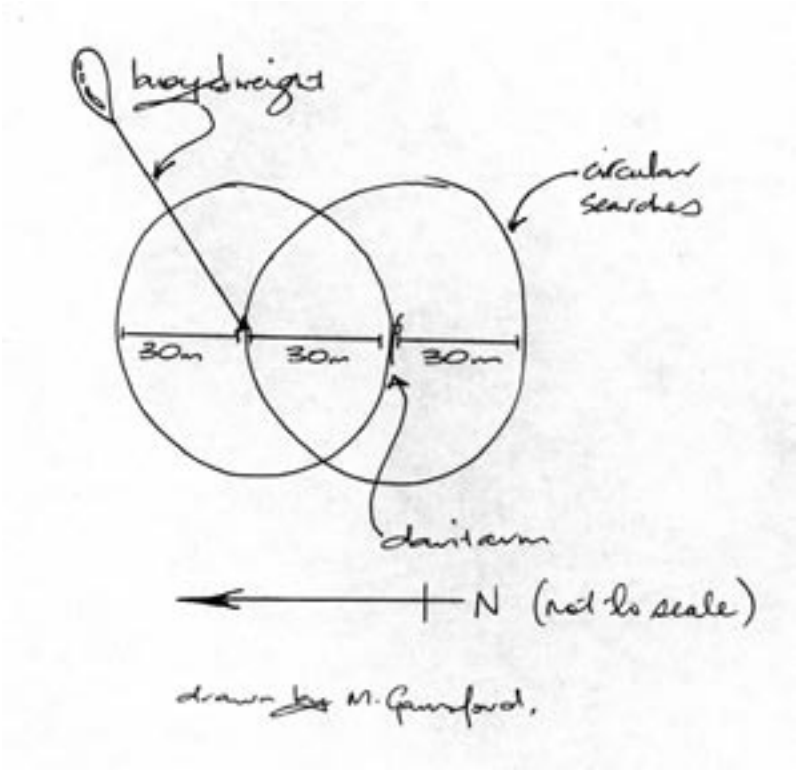

Figure 2. Circular search conducted to locate site (M. Gainsford)

Plan of Site

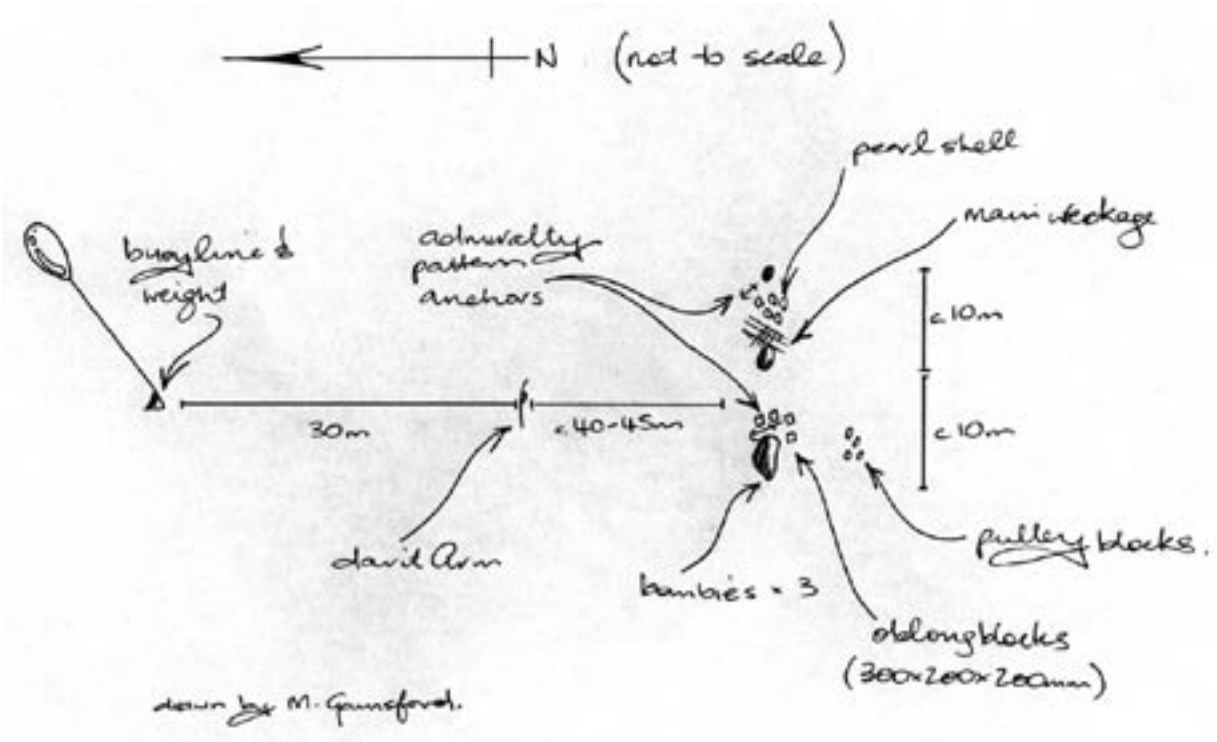

Figure 3. Plan of the 19 nm Unidentified Site (M. Gainsford)

Site Identification Comments

The vessel that lies off 80 Mile Beach investigated by MADWAM and DMB Crew, on the 1 December 2003

is currently unidentifiable. However some inferences can be made due to the nature of the site, the activities in the area (during its use) and the weather patterns that frequent the area.

It appears to be either a pearling lugger, mother ship or similar, identified as such from the large quantity of pearl shell at the site. Another indicating factor is the davit arm; used to haul shell over the side of a vessel when the divers bags were full of shell.

It would have been a wooden vessel. Some wood at the site corroborates this. A wood sample was acquired during the inspection but thi sample is quite degraded. There is also a frame that appears to be joined to perhaps a keel or keelson; also wooden. Wooden pulley blocks are also evident indicating that the vessel was both wooden construction and sail driven.

Several anchors are evident at the site; these perhaps were not all in use by the vessel and could have been used as ballast in conjunction with the stone blocks (300x200x200mm). These anchors are of admiralty pattern and are about a metre to 1.2 metres long.

The shipwreck that lies off 80 mile beach could be any number of vessels, however after researching the topic a few possibilities are listed below:

Nineteenth Century:

Ruby: *Ruby* left Cossack for pearling grounds two days before a cyclone hit in March 1882. The *Ruby* was a composite cutter built in 1880 of 31 tons, measuring 51.2 x 16.1 x 6.6 feet. Captain Topper was her master, O/No. 753089.

Surprise: Cutter of 28 tons, dimensions of 18.2 x 4.8 x 1.2 metres. Wrecked NW coast of WA 4/11/1883 (Cape Bossut?), O/No. 61100.

Pearl: Schooner of 65 tons, lost on the north western coast during October 1892. The vessel was Sydney built with dimensions 74.5 x 16.8 x 7.1 feet & O/No.89265.

Nellie: O/No.75319, built in 1884, a fore and aft schooner of 67.4 tons. Dimensions were 73.5 x 17.29 x 7.92 feet. Utilised for carrying cargo and passengers up and down the coast. After a few years put into the pearling industry at Broome where she acted as a mother ship, her fate is unknown. Date of wrecking unknown.

Twentieth Century:

Anne: Schooner of 71 tons, O/No.120006, lost 26 April 1908.

Bedout: Schooner of 35 tons, wrecked at Point Smith south of Broome, 1918.

Wreck- site History

(i) Contemporary Salvage
Unknown whether there has been any contemporary salvage. Large numbers of wrecks abound in this area; salvage is a possibility but unlikely. Known wrecks may have been salvaged, but the nature of wrecking for a significant proportion (in cyclones) lessens the chance of their being found or salvaged.

(ii) When found in modern times and by whom (usually reporters)
Found by Steve Arrow, Arrow Pearling Company, Broome; and reported in August 2003.

(iii) Modern Salvage
See above (contemporary salvage).

(iv) Casual Diver interference, if any.
Aside from the divers that have seen the wreck from Arrow Pearls and the Museum there appears to be little or no diver interference at the site. There is little in the way of interest for many divers as much of the wreck has disintegrated or lies below the seabed.

(v) Modern diver use, if any.
The site does not constitute a site of great interest for modern divers. Therefore there does not appear to be or should be any modern diver use.

Assessment of Site Significance

(i) Archaeological:
The site represents a period in Australian history that has great historical and archaeological significance. This particular vessel is possibly either a lugger or schooner mother-ship. If it is the former there is less significance attributable. Luggers comprised the majority of the fleet and were the common vessel. Pearling mother ships were not as prevalent - even disappearing after c. 1920 – (Streeter, 1876) and therefore have more archaeological significance attributable to them. Therefore depending on the site that seems to be more the nature of a lugger it is therefore stated that the level of archaeological significance for this vessel is lower than for other vessels of the same period.

(ii) Technological:
As stated above the type of technology during this period was used by a significant number of vessels. This technology was also utilised right up until the late 20th Century. Therefore the vessels technological significance is not high. It represents a type of vessel used over a large timeframe with many vessels of the same type in use. There are most probably more significant vessels in terms of their technology around the same area.

(iii) Scientific:
There are not that many diagnostic features of the site that lend a great deal of scientific significance. Some features that could be determined of significance are; the amount of timber remaining and its condition, how the site is affected by its environment, and an analysis of its machinery and unidentifiable materials.

(iv) Educational:
In terms of education the site does not offer much in the way of a teaching aid. Apart from site formation processes, it offers little. Its remoteness and lack of visible structure further negate its use as an educational aid.

(v) Recreational:
Recreationally this vessel is too remote to be of recreational benefit. Also the site is not what recreational divers would be interested in.

(vi) Cultural:
The cultural significance of the vessel is probably the highest significance of the whole. The vessel is most probably historic (older than 75 years) and represents a period in Australian history where Broome and the pearling fleets were supplying up to 80 percent of the worlds pearl shell. It played an integral part in an industry that was world renowned for both the quality of its shell and its divers. The impact that this industry had on the surrounding area was significant. People moved to Broome etc., settled, lived and partook in the pearling of the region. Culturally this vessel, although it is one of many, shares in this industry from its own niche and as such is significant.

Management Proposals

The vessel located off 80 mile beach, thought to be either a lugger or pearling mother schooner should be managed *insitu*. The best environmental state for the vessel to be left in is the state it is presently, which is a state of equilibrium in/under the water or sediment. This situation should remain relatively the same for many years with little or no change if left undisturbed. Due to its nature and abundance of these types of vessels there is not a high priority for its (from its condition) raising and conserving.

Since this has been only a cursory inspection further work is needed.

Recommendations

This particular site represents a significant period in Western Australia's history. The sheer number of vessels that were lost during the pearling boom were phenomenal. These vessels were also alike in many aspects being a stock standard form of vessel. However designs did change and vessels varied from luggers or schooners to cutters.

It is recommended by the team that further work be conducted on the wreck off 80 Mile Beach. It lies in 18.5 metres of water (neap tides, low tide) and as such apart from the tide there are not a lot of factors influencing the site. If the WA Museum is in the area a reinspection would reccommended as the information to date on the vessel is limited.

Site Photographs:

Figure 4. Admiralty pattern anchor, one of many on the site (G. Kimpton)

Figure 5. Main wreckage pile, includes a ships frame (G. Kimpton)

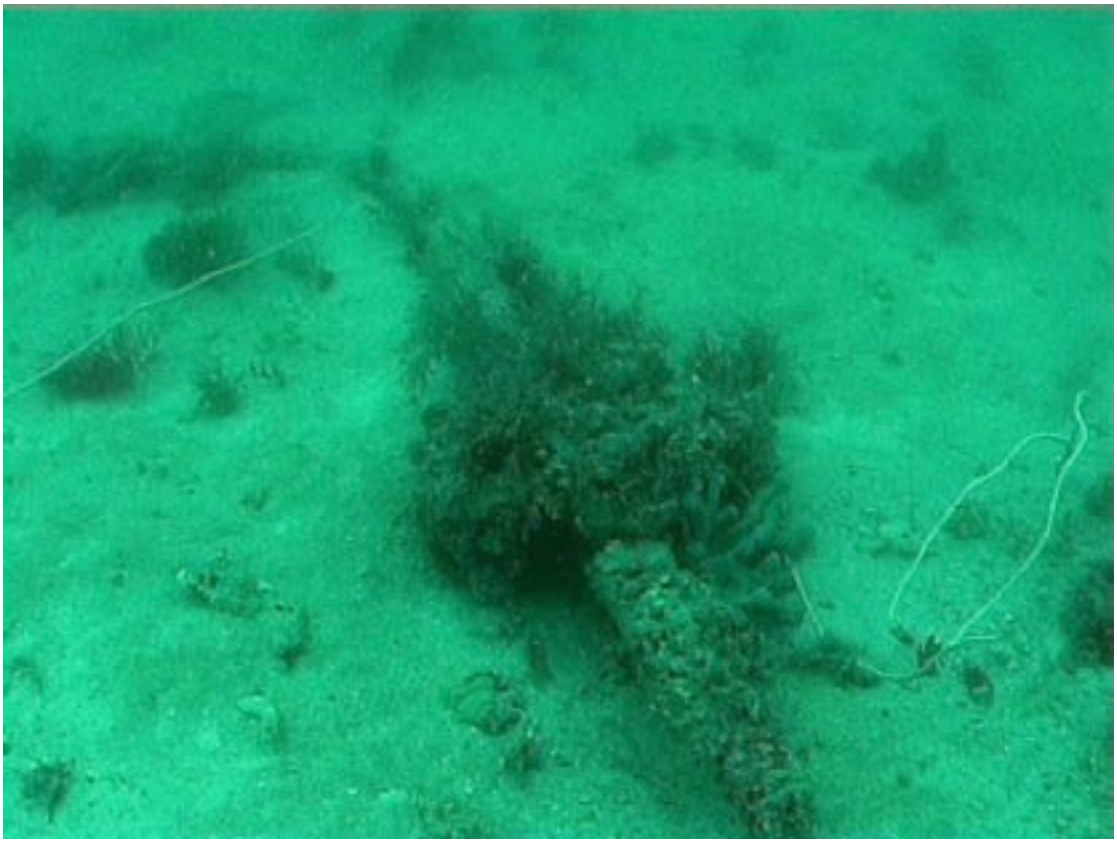

Figure 6. Davit? (G. Kimpton)

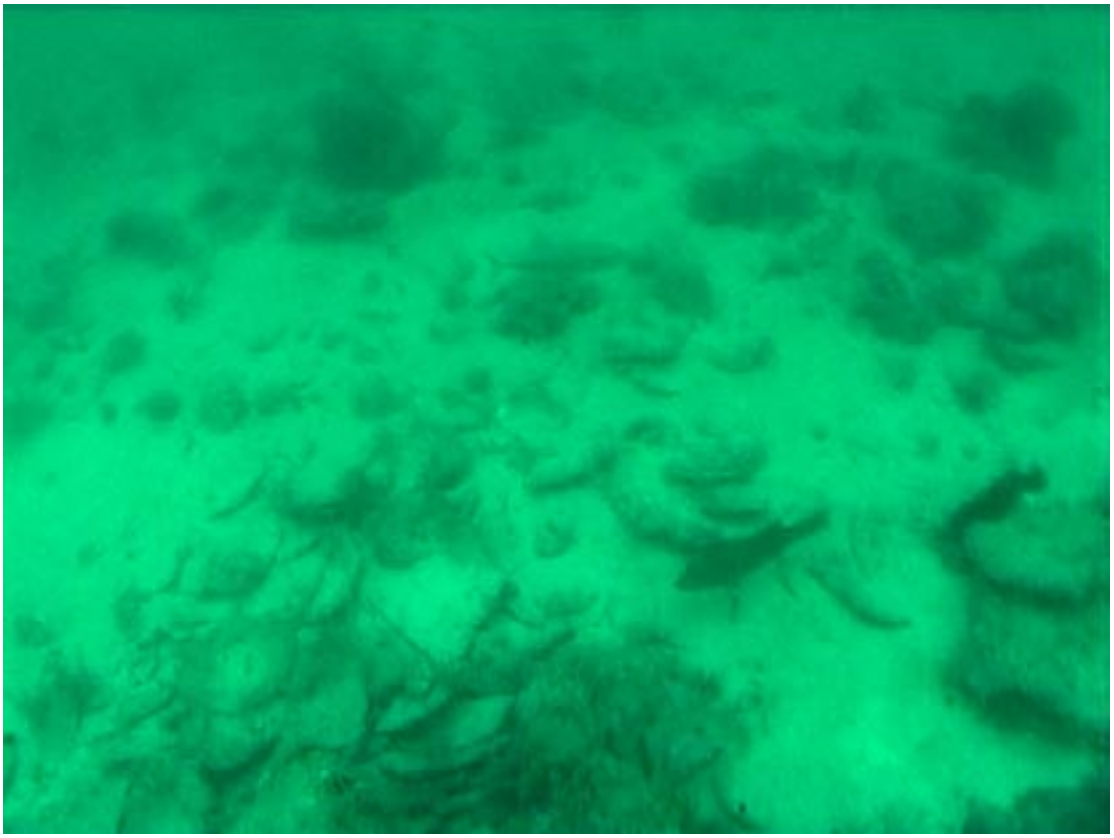

Figure 7. Piles of Pearl Shell (G. Kimpton)

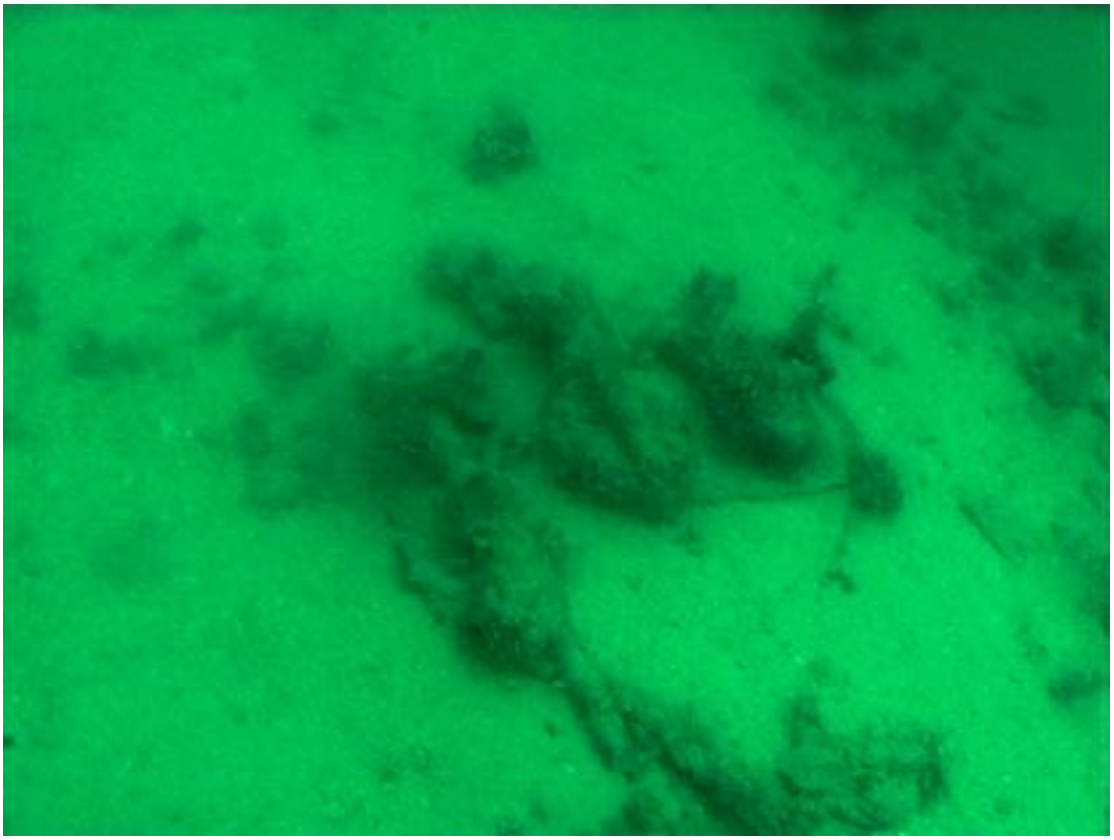

Figure 8. Wooden pulley blocks (G. Kimpton)

Figure 9. Stone blocks 300x200x200mm, which litter the site (G. Kimpton)

Figure 10. Unidentified wreckage (G. Kimpton)

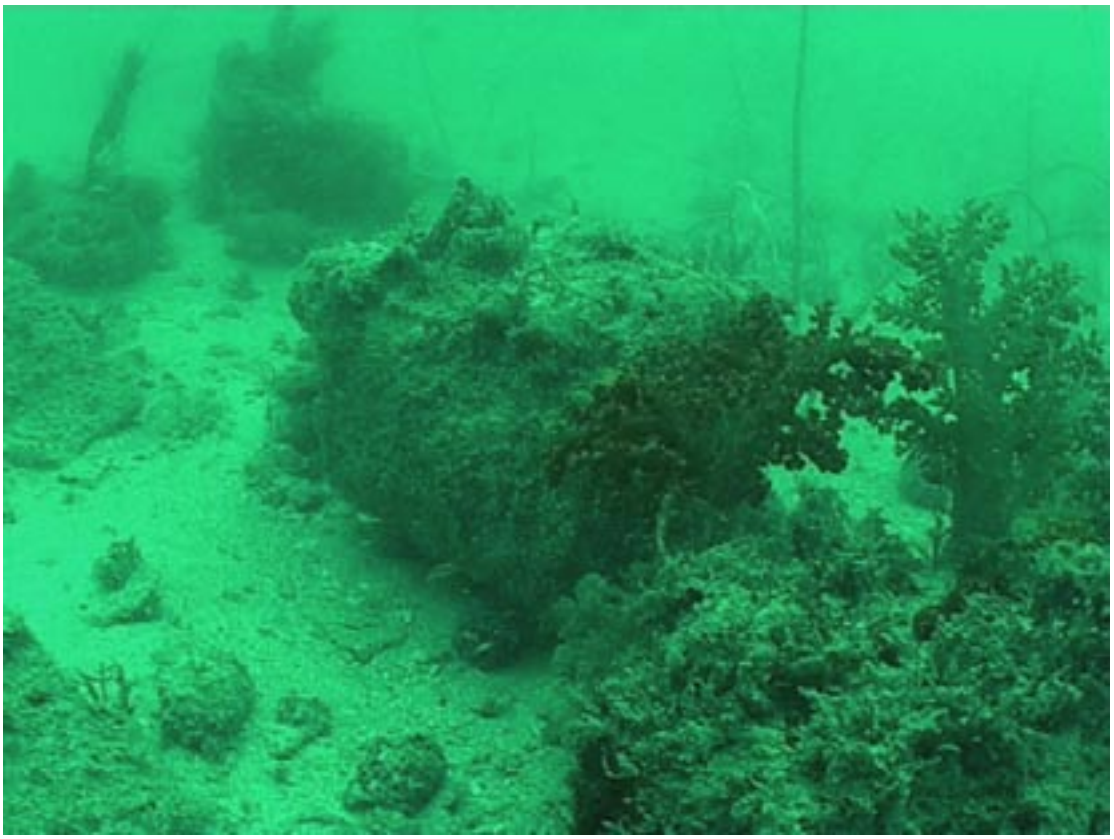

Figure 11. Piece of machinery, possibly a windlass (G. Kimpton)

Figure 12. One of the DMB divers Alex, helping during the survey (G. Kimpton)

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Appendix A