

**MARITIME
ARCHAEOLOGICAL
ASSOCIATION
REPORTS**

Volume 4 : July 1989 - June 1990



MARITIME ARCHAEOLOGICAL ASSOCIATION REPORTS

Volume 4 : July 1989 - June 1990

Notes on projects of the Maritime Archaeological Association of Western Australia

INTRODUCTION

This fourth volume of MAAWA notes continues the trend towards more drawings of wreck sites and artefacts in addition to writing-up historical research.

A new development in MAAWA's activities which emerges in this volume is the attempt to draw individual artefacts as they can be seen on site. With legislation preventing the removal of artefacts from sites, and photography often being inadequate due to limited visibility and concretion and plant growth obscuring the true shapes of the objects, sketching is one way of representing them in a more recognisable form.

FRONT COVER

The masts and rigging of the barque Sepia above the water the day after she sank behind Carnac Island in 1898. The original photograph appeared in the Western Mail newspaper and is in the Battye Library collection.

CONTENTS

| | Page |
|-----------------------------------|------|
| The Sepia | 2 |
| The Ulidia | 12 |
| The Macedon and Denton Holme | 18 |
| The City of Perth and Mayfield | 22 |
| The Raven | 24 |
| The Mira Flores | 26 |
| The Ville De Rouen | 28 |
| The Europa | 34 |
| The Cambria | 37 |

PROJECT LEADERS

Rottneest Wrecks :
Ulidia and Stragglers :
Sepia :
Cambria :

Colin Cockram
Steve Wells
Mike Murphy
Mike Murphy

Dive team members: Milton Clark, Maeve Harvey, Nola Farrell, Lyn Stephens, Ross McGuffie, Shane Lake, Ian Warne.

THE SEPIA

By Mike Murphy

Historical research by Chris Buhagiar.

There are stories by divers who claim to have been able to swim along passageways and look into rooms in the wreck of the Sepia in the 1940s and 50s but this is impossible to believe given the flattened state of the wreckage today.

It is true that it is possible to swim below the decks and to see stacks of bottles and hardened cement in the shape of the barrels which once contained it, but the space available is less than two metres in most places and there is nothing to indicate where passageways and rooms might have been.

The prominent features of the Sepia site are a stern post standing up about three metres, clearly identifiable deck framing, mast sections approximately where the mizzen, main and fore masts would have been, a deck winch, an anchor and a prominent bow section.

During the late months of winter when weed no longer covers the wreck and the sand has been extensively scoured out, it is possible to see ink bottles and ink wells, remains of clay pipes and many fragments of glass and pottery.

At this time of the year pieces of wreckage are visible over a much wider area, with sections of deck and other framework on the port side and a long length of cable on the starboard side.

There are also a large number of round objects near the stern and other items which remain to be identified on further dives.

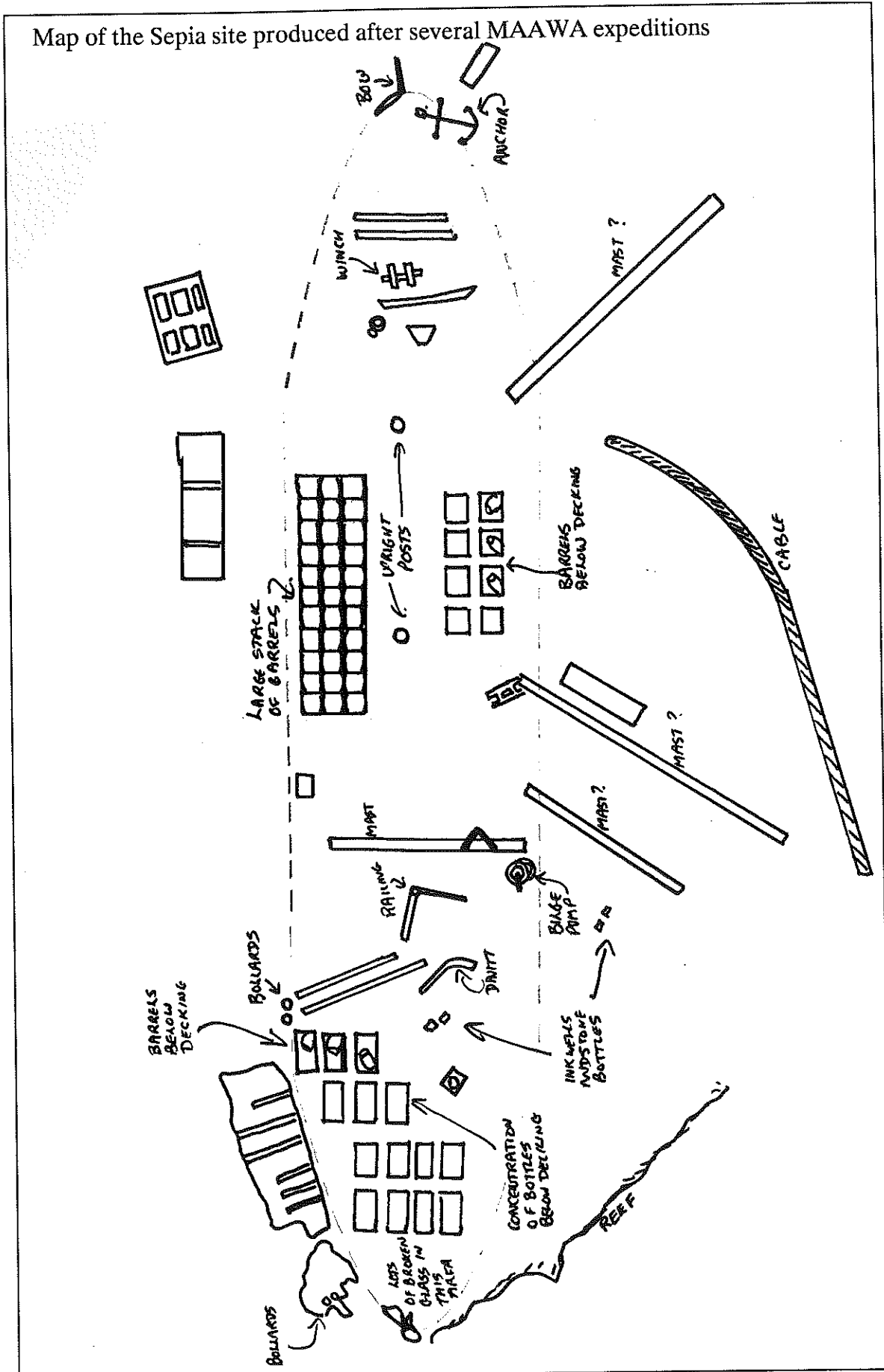
Wine bottles can be found all over the wreck site. Beneath the deck they are stacked one up one down as they were originally packed in their crates. Most of the bottles on the site itself have lost their corks and are empty but it is possible to find an occasional corked bottle with its contents intact under reef ledges some distance from the wreck.

Hardened cement in the shape of barrels is also to be found in many places about the wreck but the biggest concentration is on the port side about amidships or slightly forward.

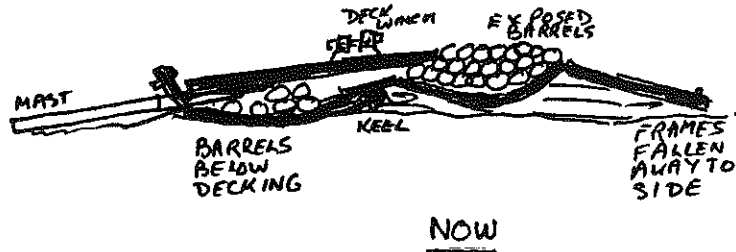
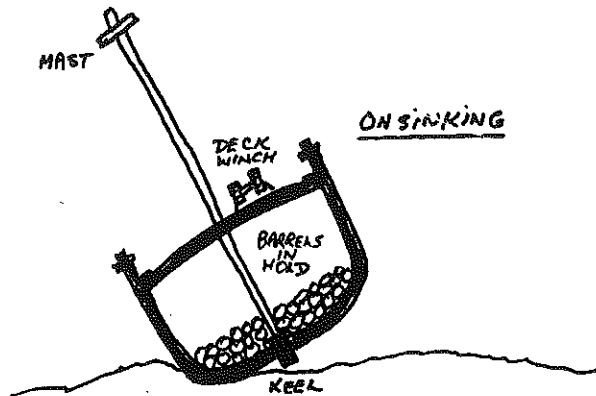
Barrels were raised from the wreck some years ago and are in the Maritime Museum.

The Underwater Explorers Club also attempted to raise a barrel and towed it as far as the south end of Carnac Island where it still lies.

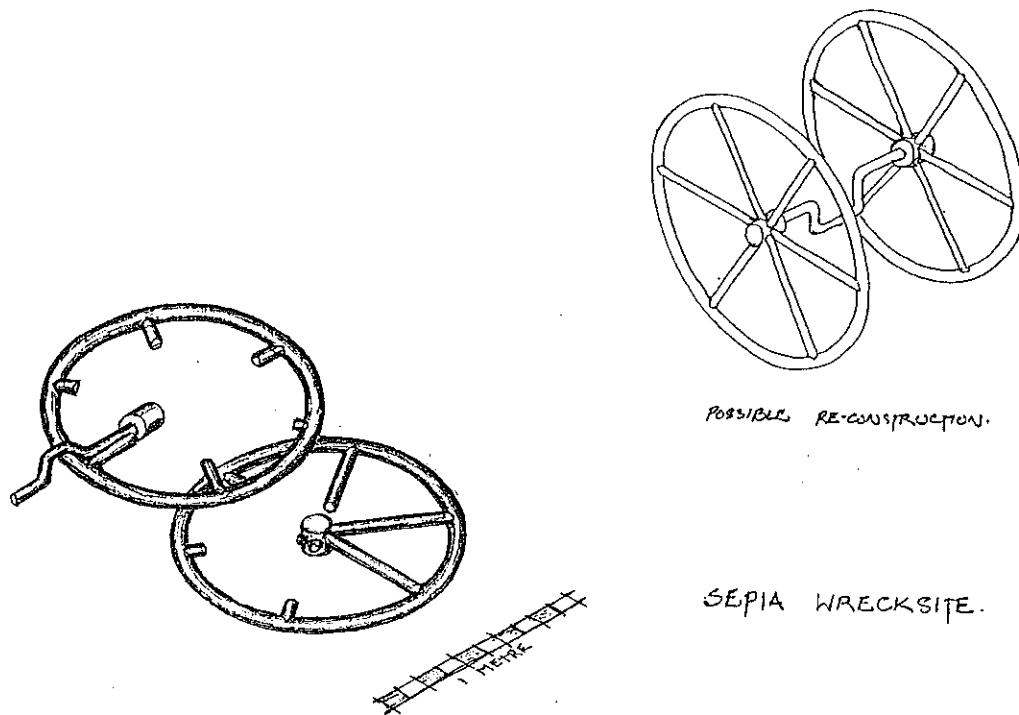
Map of the Sepia site produced after several MAAWA expeditions



Tentative illustration of how the Sepia may have settled. This would explain the conglomeration of barrels visible on the port side, while they are found below the deck and superstructure on the starboard side. However, the site is more complicated than this. The wreck may have broken in a number of places and be lying at different angles along its length.



A photograph of the wheel-shaped object, heavily concreted and obscured by weed, located on the starboard side of the Sepia site.

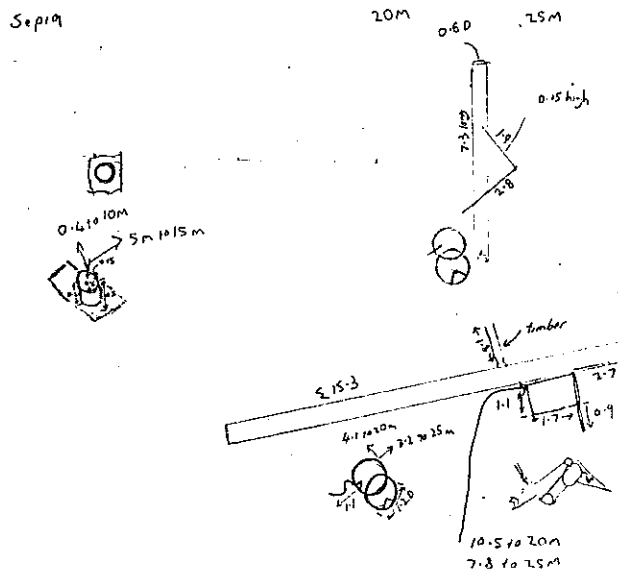


POSSIBLE RE-CONSTRUCTION.

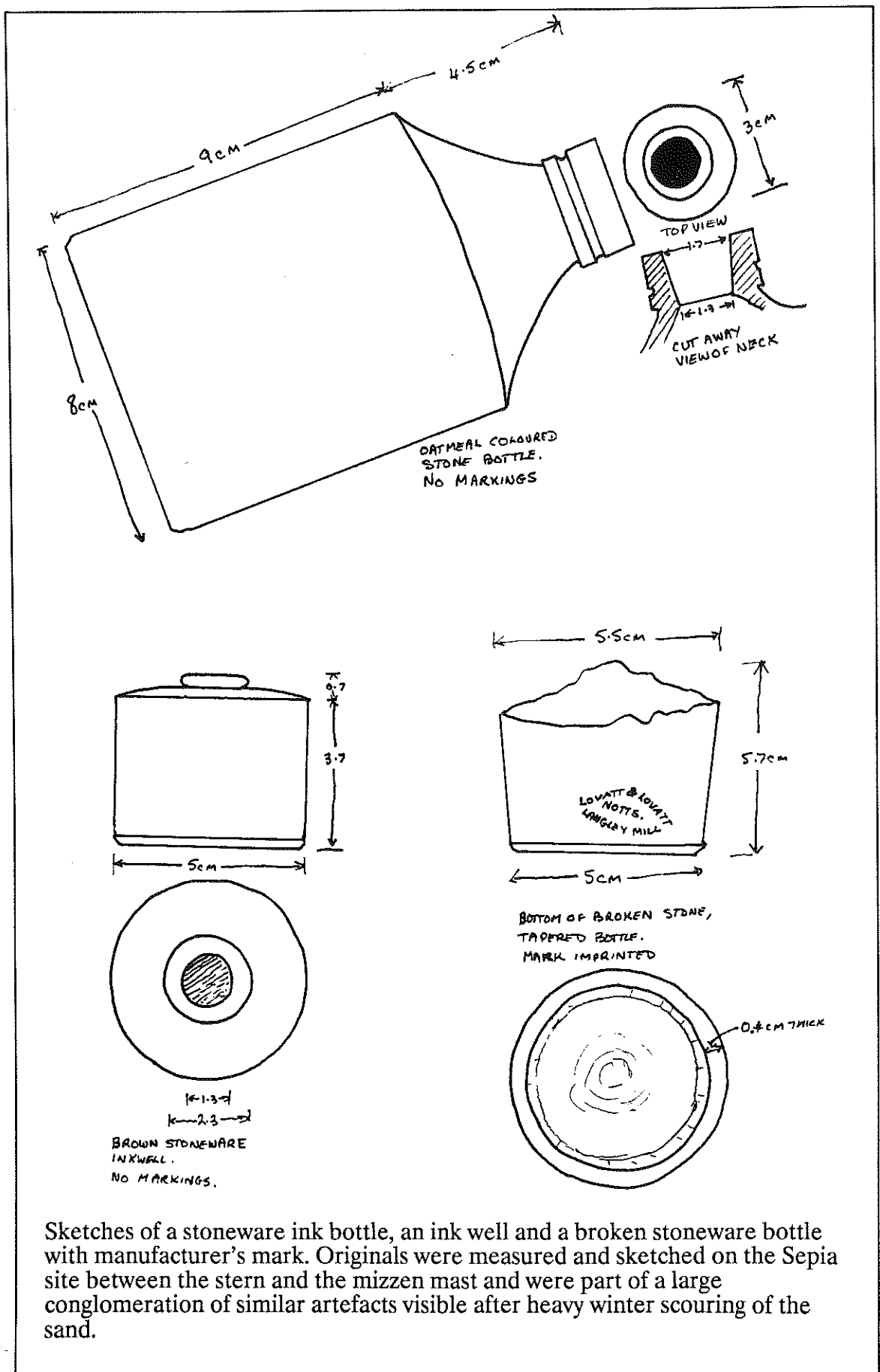
SEPIA WRECKSITE.

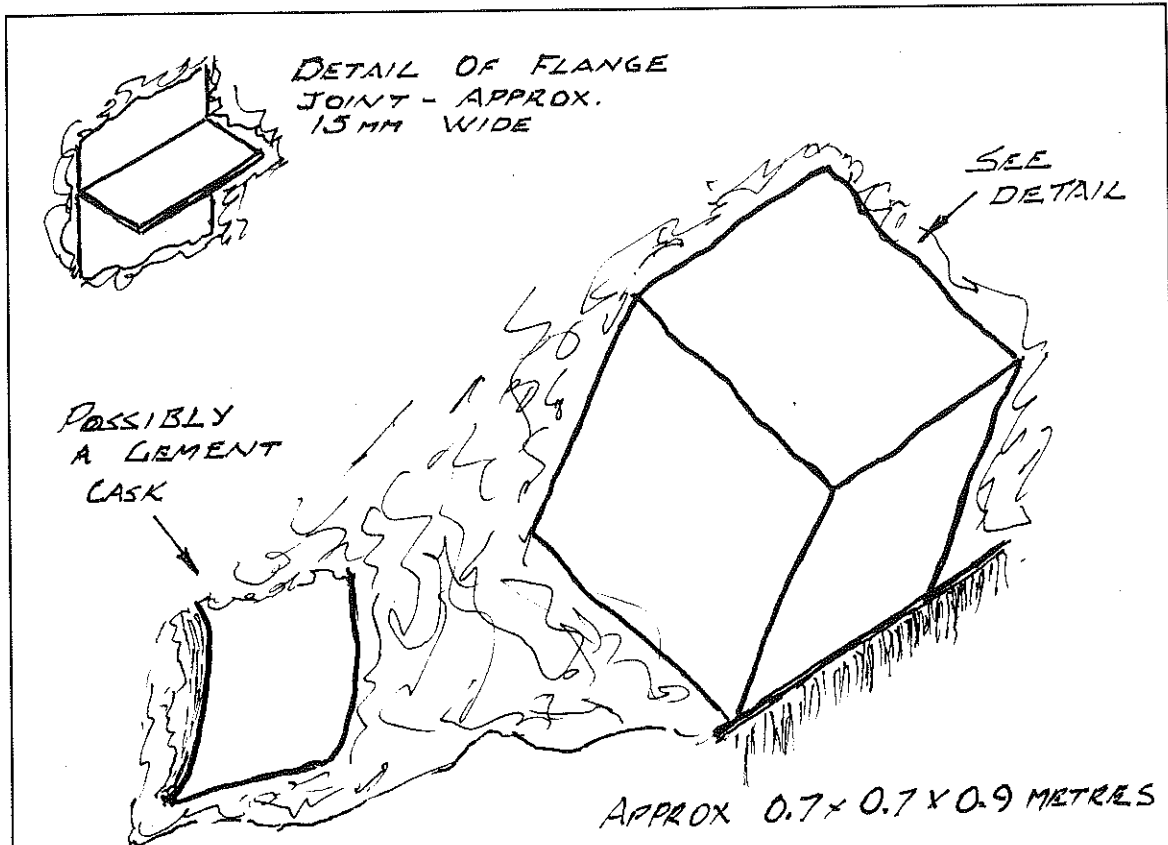
COCKRAM.
MAY 1990.

Drawing of the two wheel-shaped objects and an associated axle-like bar eventually distinguished, with a reconstruction of how it probably appeared as part of a bilge pump.

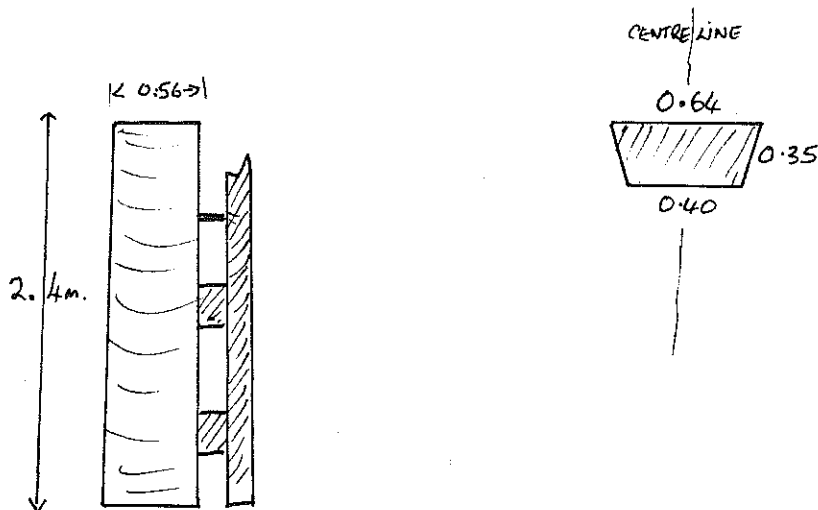


Drawings taken from measurements showing the relationship of the bilge pump to other significant site features, a plate with a hollow upright towards the stern of the vessel and a possible mast section lying off from the site to starboard.

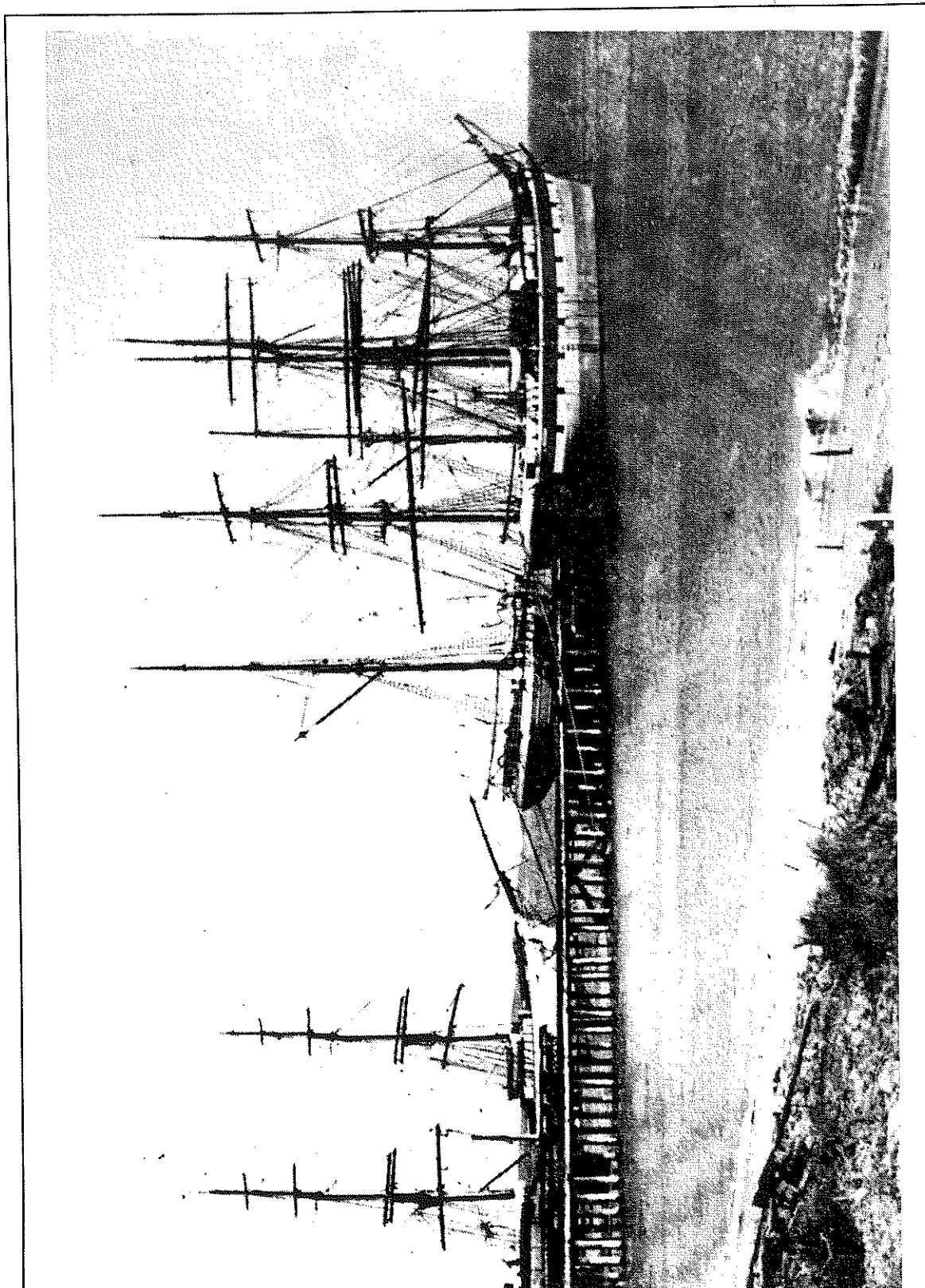




Drawing produced by Milton Clark from site measurements of the small water tank on the port side of the Sepia site, believed to have been a cistern for a toilet.



Measurements taken by Shane Lake on an upright hollow post near the winch on the Sepia site, and a trapezoid-shaped plate in the same vicinity.



This photograph which appears in "The Sea and the Forest" by V.G. Fall is said to show the Sepia on the right with other barques at Rockingham jetty in 1895. Doubt has been expressed that it is the Sepia, however.

The story of the Sepia

The Sepia was an iron barque of 616 tons which sank a kilometre east of Carnac Island off the coast from Fremantle on December 29, 1898.

Her dimensions were length 177ft 3ins, breadth 29ft 4ins and a depth of hold 18ft. She had a moulded depth of 19ft and a 3ft 6.5ins freeboard amidships.

She first left the slips as the Dalhousie in 1864 in Hartlepool in the UK where she was the first iron barque built by Denton Grey and Co.

The first owner, Matthew Wilson of Liverpool, quickly sold her to the firm of Stewart and Douglas who renamed her the Sepia.

The only voyage of which we have records in the next ten years was one to Calcutta in January 1867, but the records of that voyage are considerable and include an account of a drunken steward being kept in irons for having used up six months stores in 100 days.

The master on that voyage was Robert Milligan - only 24 years old.

In 1874 the Sepia was sold to Taylor and Sons and her port of registry changed from Liverpool to London.

That company, through various incarnations including Taylor, Bethell and Roberts, Charles Bethell and Co and Bethell Gwynn and Co, became extensively involved in shipping between the U.K. and W.A. and in 1882 was involved in a freight war with the West Australian Shipping Association, comprising most of the WA shipping companies.

In 1886 it joined the WA firm of Trinder Anderson and Co to establish the West Australian Steam Navigation Company and went on into the 20th Century to be involved in refrigerated meat shipping.

Fremantle

It was in 1886 that the Sepia first appeared in Fremantle and for the next twelve years she was a regular and well-known visitor to the WA coast.

When not able to immediately turn around with a cargo for the UK she would trade up and down the coast, visiting ports like Geraldton and Cossack to the north and often loading timber at Rockingham.

Some of her masters included C. Maitland, James Beckett, L. Bissell, a Captain Heather and David Le Sauvage, who also served as mate before becoming master of the ship. Beckett was drowned at Cossack in November 1889. Le Sauvage commanded the ship for the first time in 1891 and continued until 1894.

From crew lists obtained by Chris Buhagiar we know that she carried a crew of many nationalities and few remained aboard for more than one voyage. Some who did stay with her for several years included a carpenter named Freudenstein and second mate Martin Lose.

Others did not complete their voyages, some dying at sea and others deserting or remaining behind in Fremantle Gaol.

While the Sepia was in Fremantle between December and February 1898 Captain L. Bissell left his command for reasons unexplained, the first mate also departed, five crewmen deserted and four ended up in gaol. David Le Sauvage, who had commanded the Sepia four years before, returned to take her back to England.

Last voyage

The Sepia's last voyage began in London on September 12, 1898, with a welshman, Hugh Thomas, as master, and George Boresham, who had joined the ship with Le Sauvage in Fremantle earlier that year, as first mate.

L. Olson, the carpenter, had also sailed on the Sepia previously. According to the crew list when she sailed and the rest of the crew were second mate John Grantor, third mate A.C. Kennedy, cook Inox Collings, steward C. Langstrom and crewmen H. Hansen, C. Robinson, Thomas Carney and James Masterson. A.W. Roe, aged 16, was Ship's Boy and Edward Penrose, aged 21, and James Newman, aged 18, were apprentices.

Although he had never been to Fremantle before Capt. Thomas had 28 years experience as a master and was confident he had sufficient information on the approaches to the port.

The Sepia came up to about four miles off Carnac Island, travelling in a northerly direction with a strong westerly wind behind her. A seaman named Nelson was at the wheel giving a steering lesson to the boy, Roe.

At about 6 p.m., without any warning, she struck with a terrific crash. Captain Thomas rushed on deck and ordered the pumps to be started but there was already three feet of water in the hold. Seeing she was sinking fast the crew tried to free the lifeboats but a heavy sea washed over the deck and two boats were stove in. Two boats were disentangled from the rigging, however, and Captain Thomas, with Boresham, Grantor and nine others got into them.

Four failed to get into the boat and took to the rigging as the ship sank beneath them. The others tried to get close to get them off but it was too dangerous and two of the four could not swim. Those in the boats made sure that the ship had settled on the bottom and did not look like moving any more, then began rowing to Fremantle to get help.

According to the report in the Western Mail of January 6 1899 the four left behind were the two apprentices Penrose and Rowe, a cook named Den and the helmsman, Nelson. The latter two names did not appear in the original crew listing but Den and Nelson may have joined the ship in Cape Town or somewhere else on the voyage. Naming Rowe as an apprentice instead of Ship's Boy may simply have been a mistake. Den was described as an elderly man about 60 years of age.

Settled

Fortunately for the four their ship settled on the bottom with its masts sticking above the waves and they were able to remain in the mizzen rigging until they were rescued soon after midnight by the steamer Penguin.

"Paddy" Penrose is reported to have worked hard to keep the others cheerful during their ordeal but "their hearts began to fail and even Penrose was giving up in despair."

The ship was rasping on the reef and it seemed to them that the mast would be swept away at any moment.

The rescue was not an easy one. A boat had to be lowered with great difficulty from the *Penquin* in a heavy swell and its crew risked their lives getting across to take the four to safety.

The following day salvage crews visited the site because there had been reports of cargo floating free but there was no cargo or wreckage to be seen and it was assumed the *Sepia* had settled intact on the bottom.

The rigging and sails were cut free to reduce the movement of the ship until calmer weather when divers could go down to inspect her.

On January 18 Captain Thomas was found guilty of gross negligence and his captain's certificate was suspended for six months.

Anchors near the Sepia

On one occasion when the MAAWA team missed the markings and entered the water some distance from the *Sepia* site a ship's anchor was located.

The anchor is relatively small and may have belonged to one of the salvage vessels working the site, or to another vessel altogether. It is about 200 m north west of the *Sepia* site.

On a reef nearby was a much smaller admiralty type anchor with a length of chain attached. This is more likely to have come from a pleasure boat, fishing boat or yacht.



A photograph of the heavily concreted anchor to the north west of the *Sepia* site.

THE ULIDIA

By Steve Wells

The Ulidia was engaged in trading on a trans-global route called the Horn or Cape Horn Route.

The route consisted of three sections - Europe, Australia and South America.

Generally, a ship would load up with manufactured product in Europe for the colonies where it would be off-loaded to be replaced by coal or other primary produce. From here it would head for South America to change its cargo for fertiliser for the industrial and agricultural needs of Europe.

As noted in previous reports the Ulidia was carrying rails and railway goods. These came from Newport in England and were intended for use in the upgrading and extension of the South West timber network.

After discharge of her sand ballast at Newcastle she was meant to take on a coal cargo but luck was not with her.

At the time of wrecking the Ulidia was one of many ships which were bringing railway cargoes to WA.

The information below provides some comparative data.

Year 1893

Ulidia - Newport to Bunbury - 87 days

Damson Hills (1984tons) - Barrow to Gage Roads - 86 days

Cargo - railway goods

6 Weeks to unload

4 weeks in Careening Bay

Left in ballast for Newcastle

Passage times, London to Fremantle

Helena Mana - 95 days

Golden Gate - 102 days

Charlotte Padbury - 103 days

West Australian - 105 days

Earlshall - 111 days.

Final Hours

1893 May 18 - clear and starry sky, winds NE by N and falling barometer.

3.30 a.m. Order given to set sails

4.45 a.m. Under way with all sails set, steering NW by 1/2N for half hour at 3-4 knots.

Wind is now starting to haul more northerly, thus breaking the ship off and preventing her from keeping her course.

5.15 a.m. Orders given to tack as wind continues to haul to north. Unable to tack - misses her stays.

Orders given to put helm up and wear her - take down all after stay sails and square after yards.

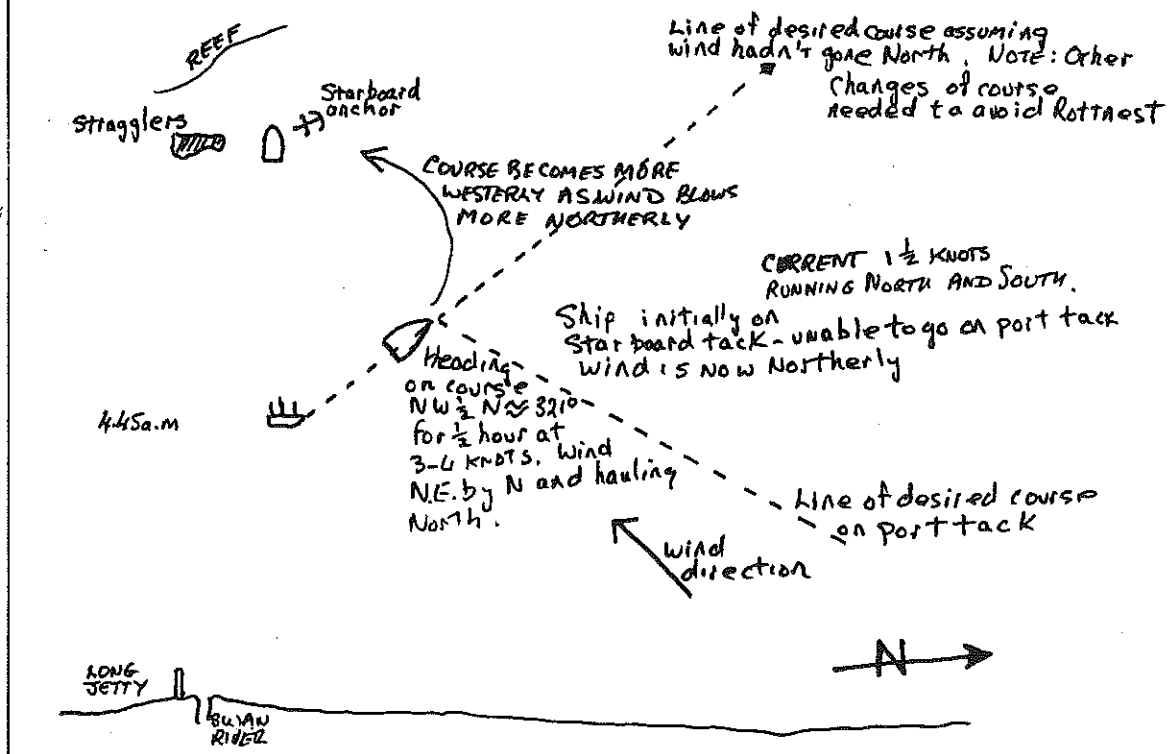
Went off about 4 points (i.e. 45 deg. - Note: 1 point = 11 deg. 15') then stayed in this position heading west.

5.30 a.m. Attempting to stop her the starboard anchor is let go and the helm put hard to port. Cable snaps after 129 fathoms are played out.

Port anchor is let go but before it was brought up she was grounded on the Stragglers.

6.00 a.m. Daylight reveals the ship is bumping heavily, oozing ballast and the Captain is a worried man.

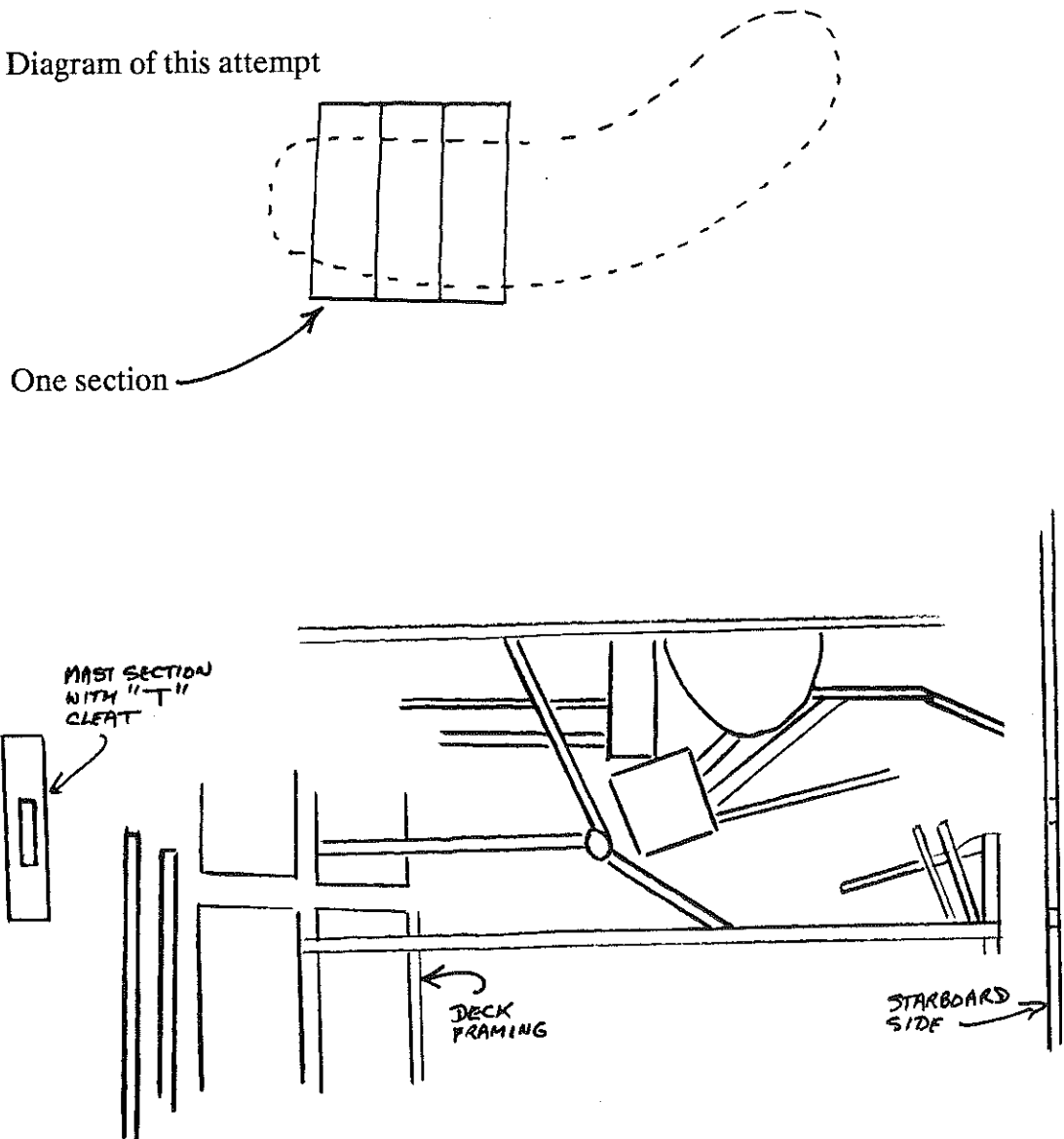
DIAGRAM TO REPRESENT FINAL HOURS



Site methodology

An attempt was made to divide the site into starboard to port sections which would be accurately drawn then pieced together. Lack of time, different degrees of detail and scale led to abandoning this method though it may have promise on other sites.

Diagram of this attempt

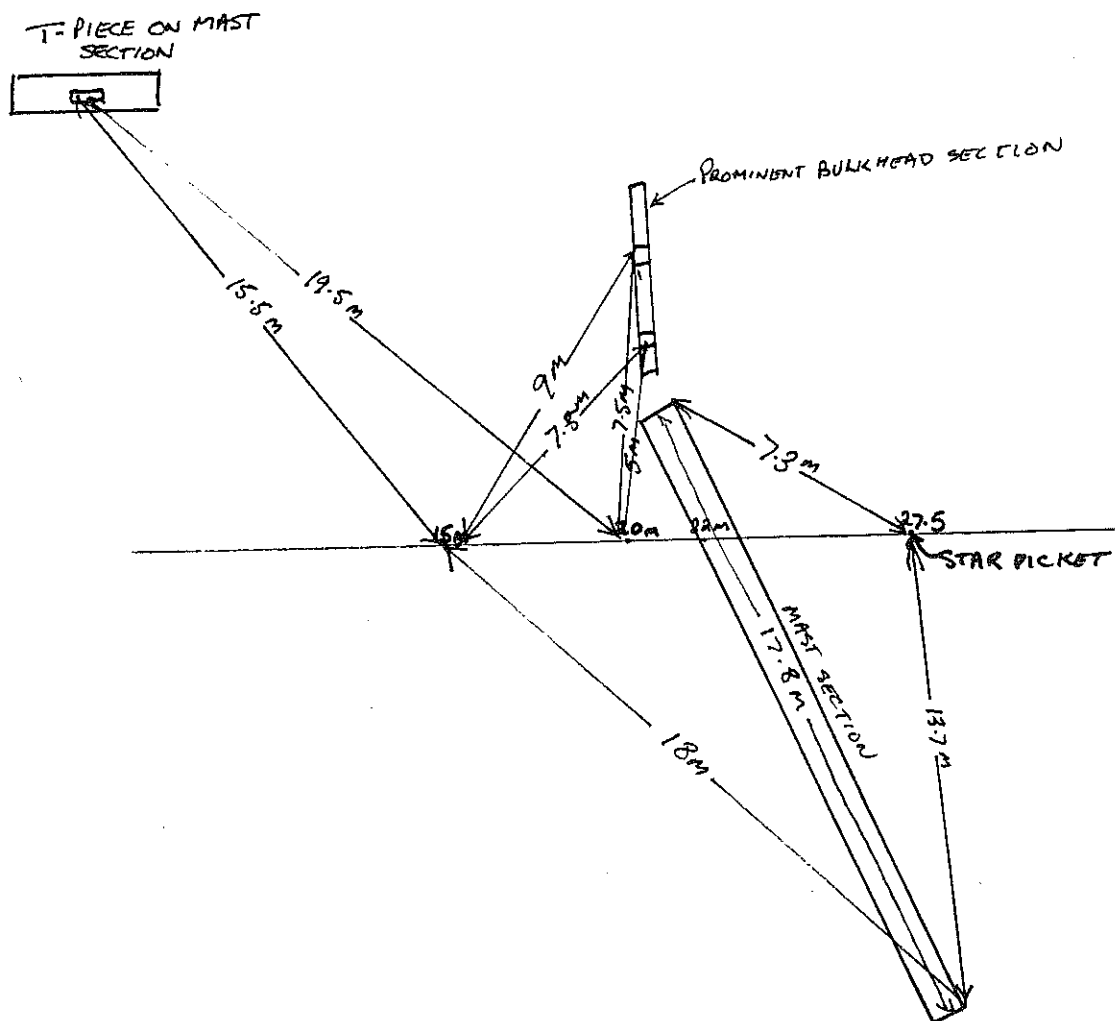


One of the section drawings that was prepared showing beams and plating. This shows the full width of the site level with the mast or boom section with a "T" cleat lying along the port side. Unfortunately, due to selection of details and errors of scale, this could not be matched accurately with drawings made of sections on either side of it by different divers.

Site

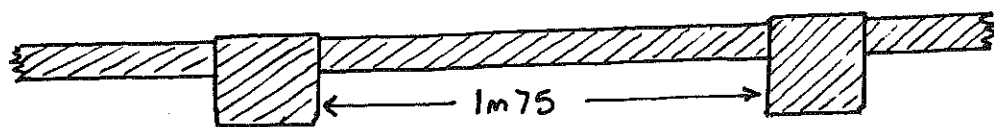
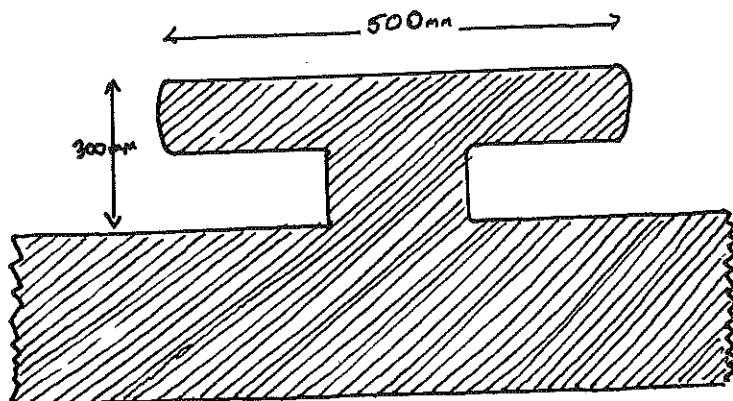
Three star pickets were placed at intervals along the starboard side of the wreck. From these reference points and tapes along them it has been possible to make progress using the standard triangulation referencing method.

This success, combined with a few very still clear dive days has begun to reveal some detail from the maze of wreckage.

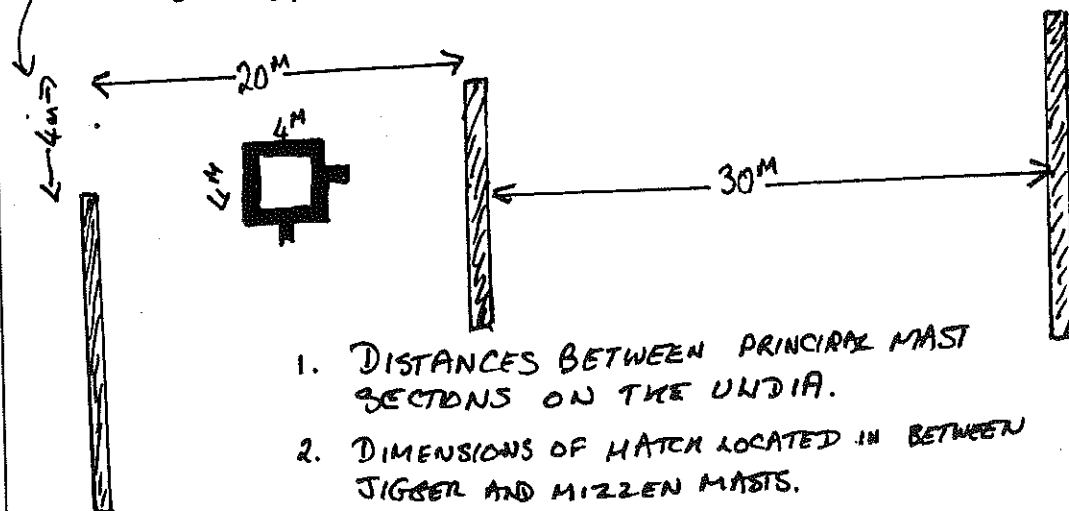


Some of the triangulations used to locate principal features of the Ulidia site

Measurements on the Ulida site - the relationship of a hatch to a mast section, the "T" cleat on one mast or boom section on the port side and the distance between ribbing on a "bulkhead" section running across the site.



FROM END OF MAST SECTION TO EDGE OF WRECKAGE.



1. DISTANCES BETWEEN PRINCIPAL MAST SECTIONS ON THE ULIDA.
2. DIMENSIONS OF HATCH LOCATED IN BETWEEN JIBBER AND MIZZEN MASTS.

What has been found

Remains of some super structure are now evident amidships on the starboard side. Included is a port hole minus any glass or fittings of 0.25 m. diameter.

Slightly forward of the superstructure on a mast is a band about 15 cm wide with a large shackle attached to it.

On the port side a little after of midships is a heavy piece of iron plate with six cables and deadeyes lying in the sand. These may give some indication of the location of the mizzen mast step.

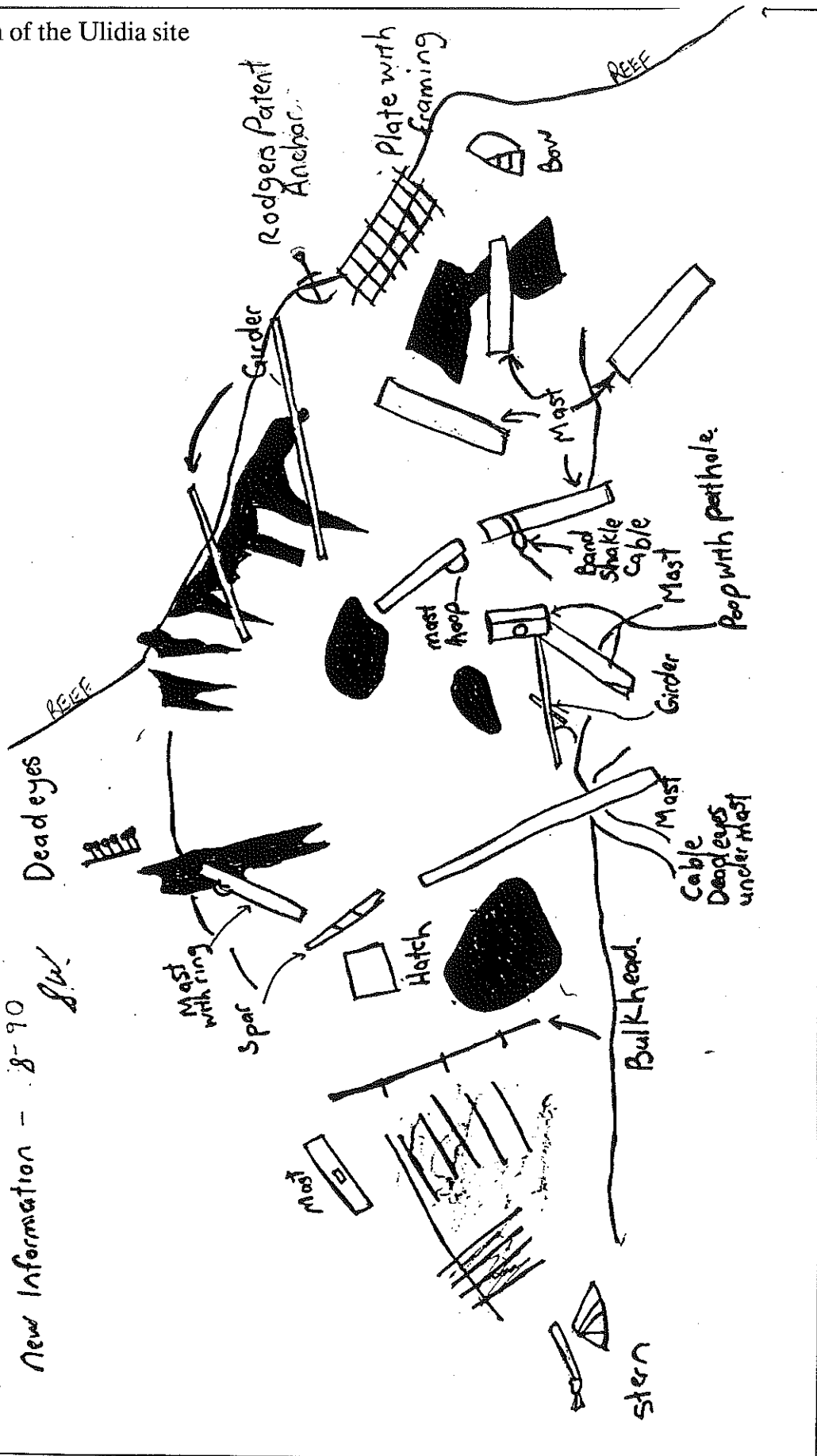
Overall work on the site is making progress with the hope that a completed plan and simplified isometric drawing may be produced by the end of the 1990/91 dive season.

A plan of the Ulidia site

Freehand Plan - Ulidia with

New Information - 8-90

SLW

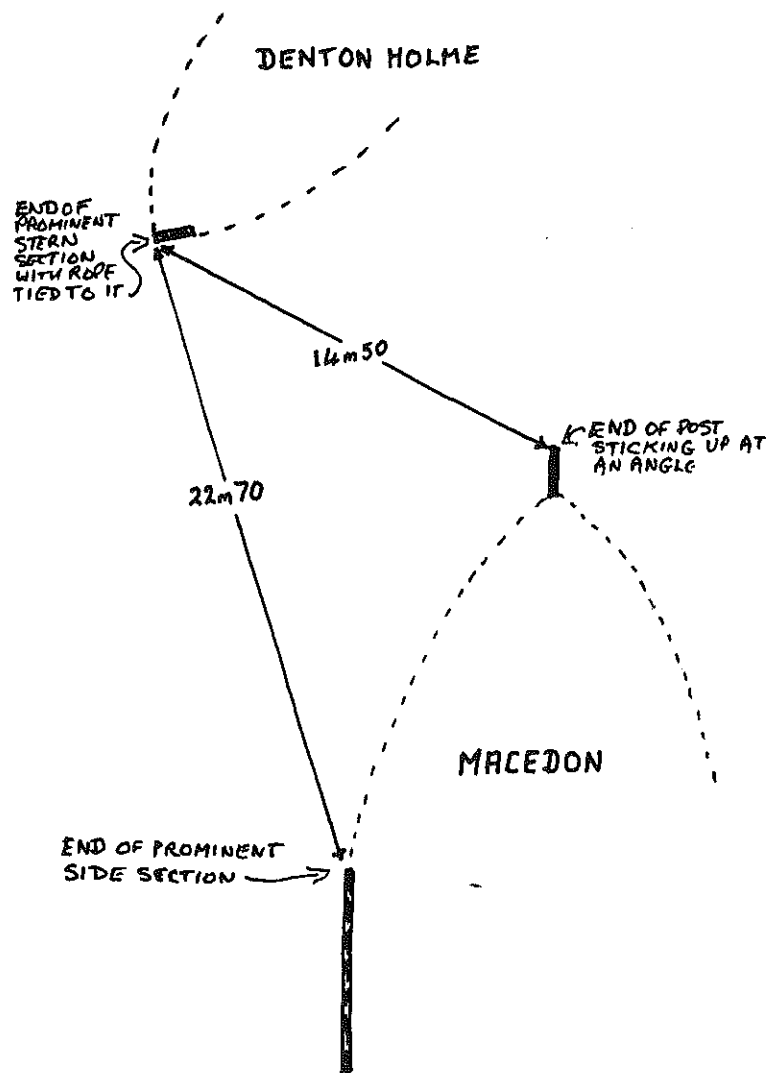


THE MACEDON and DENTON HOLME

Project leader : Colin Cockram

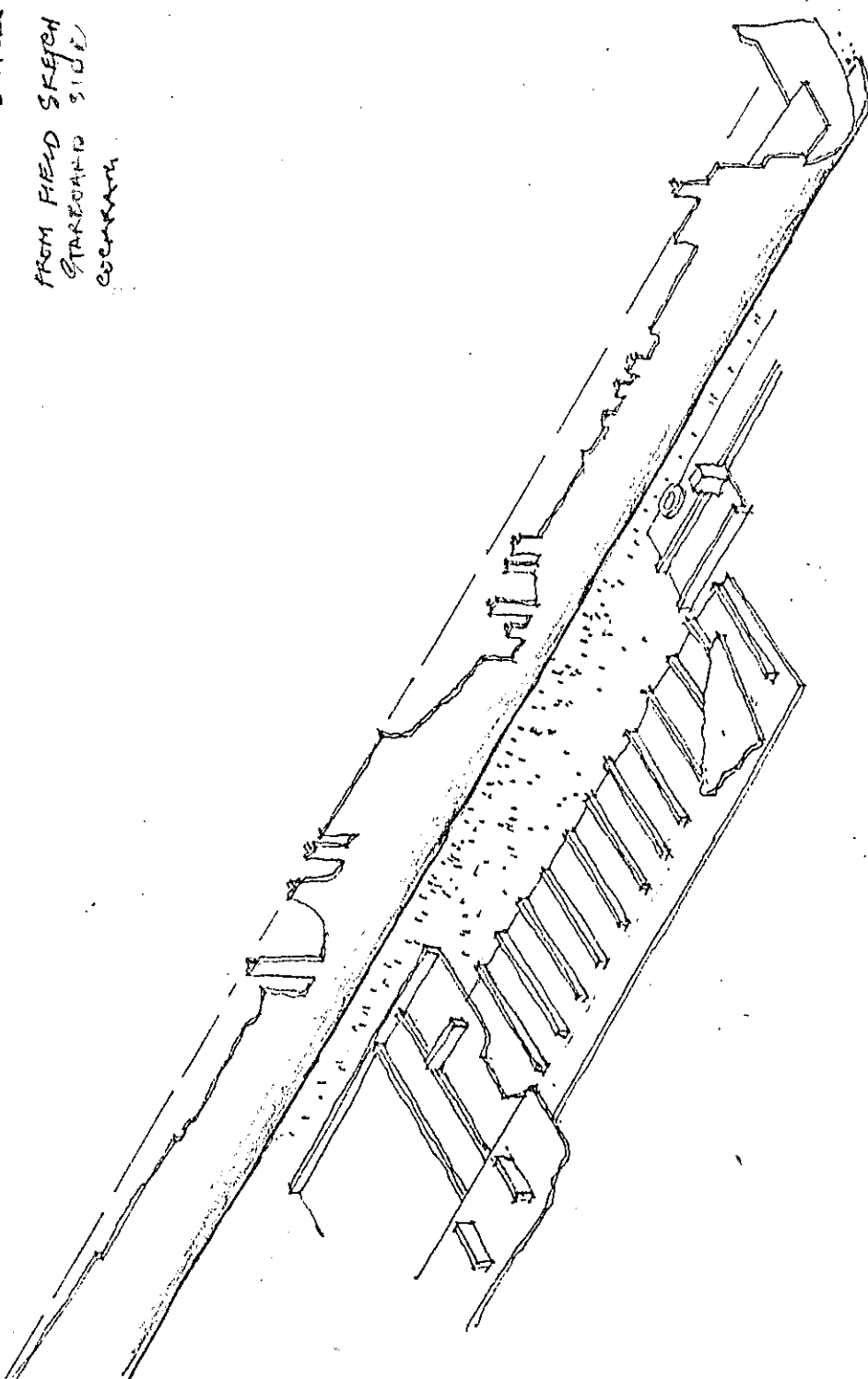
The Macedon and Denton Holme is one of the most well-known wreck sites, being in Thompsons Bay at Rottneest and visited regularly by sightseers in the glass bottomed "submarine".

MAAWA began to work on it for the first time in the period under review and found it a more interesting and rewarding site than had previously been expected.

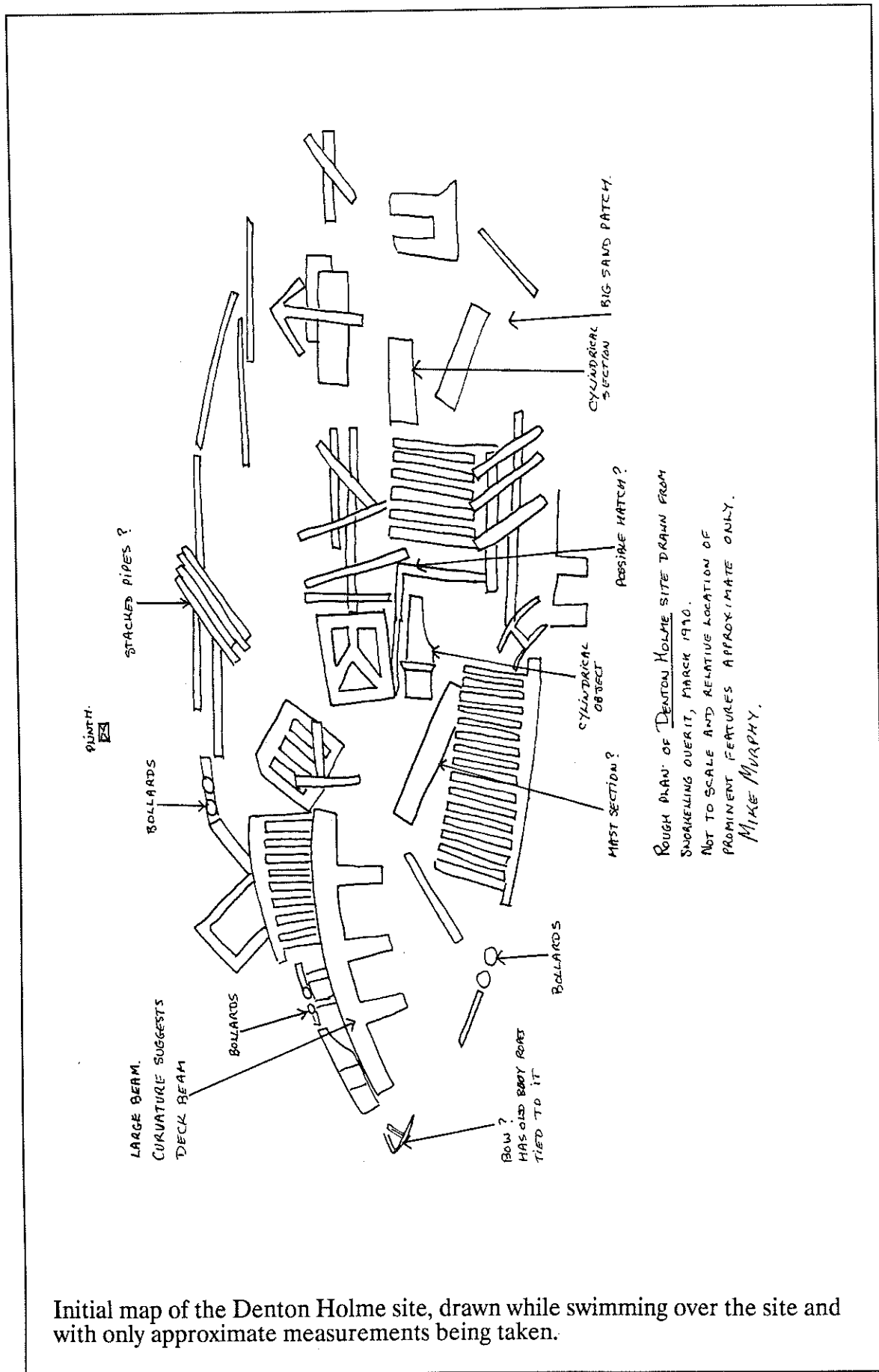


The relative positions of the Macedon and Denton Holme wrecks

MACEDON. SCALE 1:100
FROM FIELD SKETCH
31.5.90
STRENGTH SIDE
COCORAM

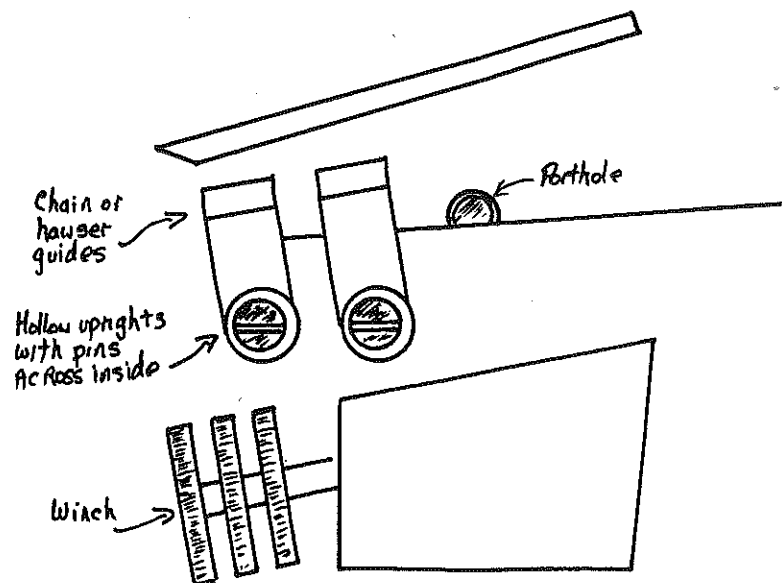
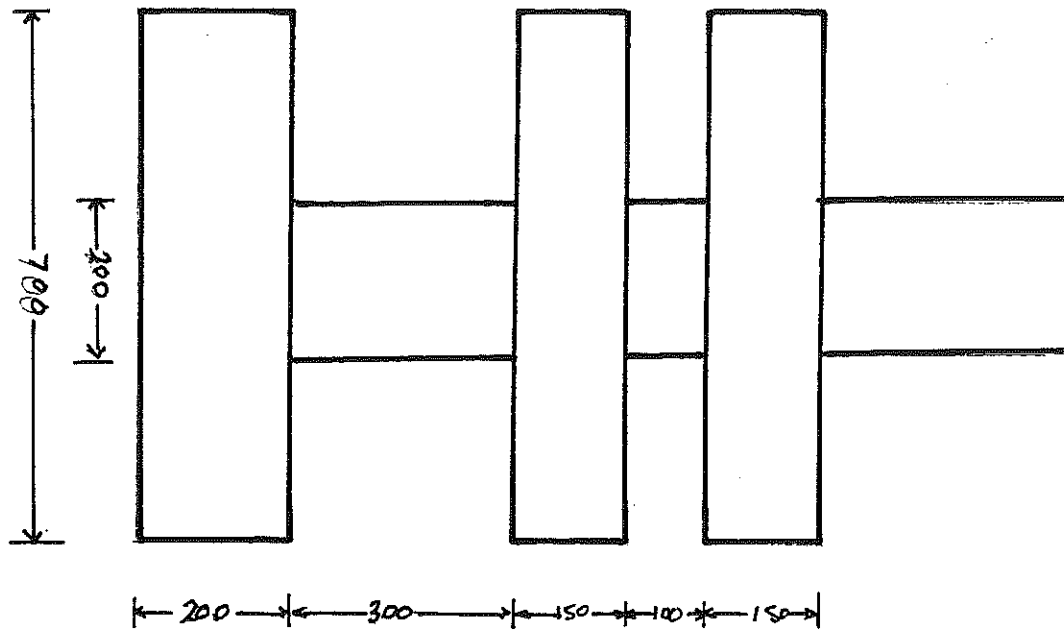


Isometric drawing of the main section of the Macedon site



Initial map of the Denton Holme site, drawn while swimming over the site and with only approximate measurements being taken.

MEASUREMENTS OF WINCH ON
 MACEDON, MARCH 1990
 MIKE MURPHY.



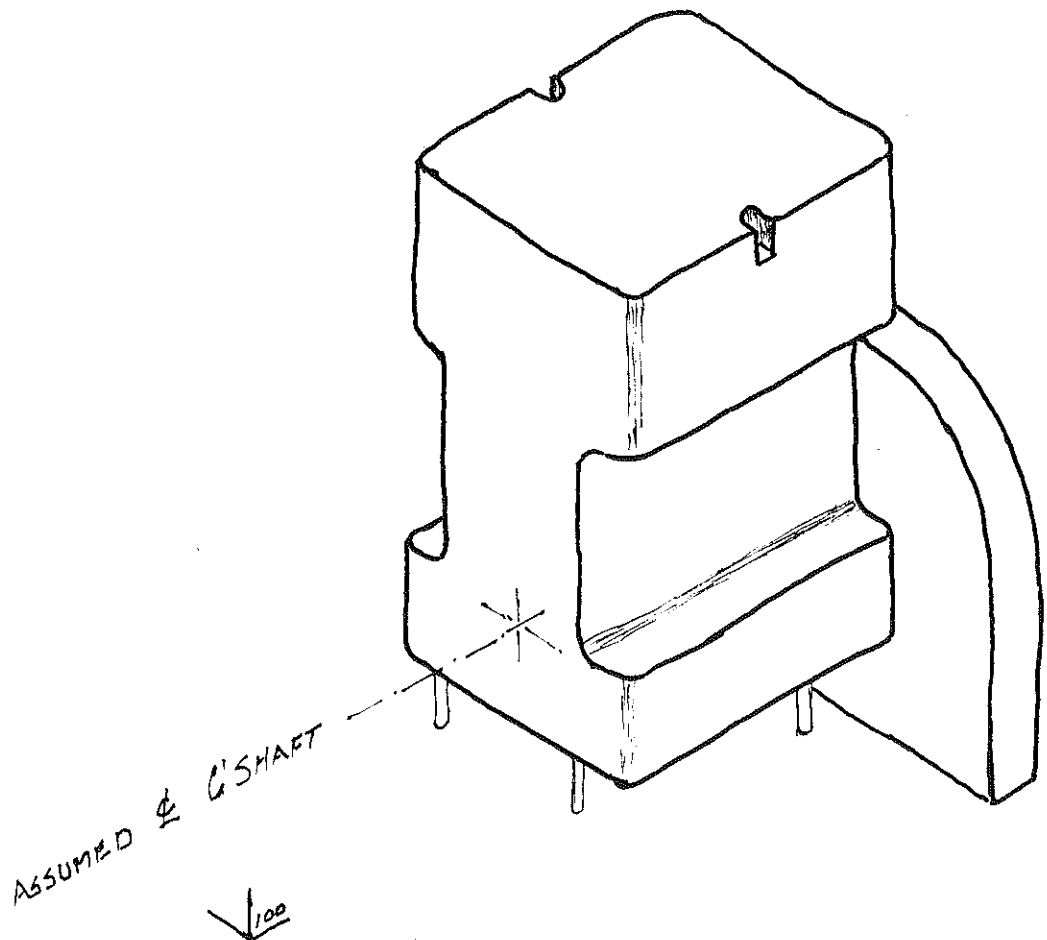
Measurements of a winch on the Macedon site and a sketch showing the relationship of the winch to two anchor chain guides and a porthole.

THE CITY OF PERTH AND THE MAYFIELD

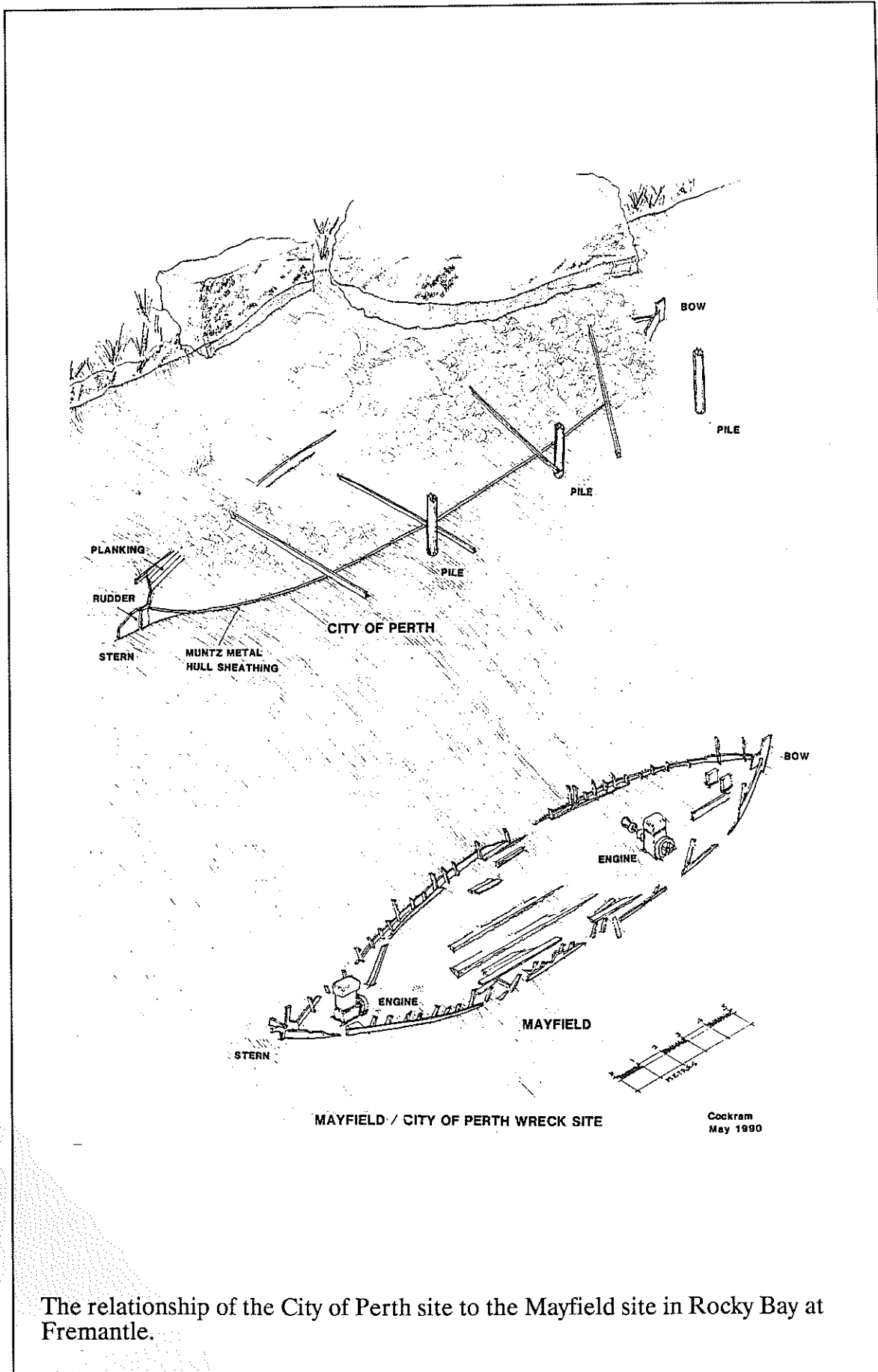
Project leader : Colin Cockram

A preliminary map showing the relative positions of these two wrecks in the Swan River appeared in Volume 3.

This more detailed map and associated drawings completes this project.



One of the engines on the Mayfield wreck site drawn by Milton Clark.



The relationship of the City of Perth site to the Mayfield site in Rocky Bay at Fremantle.

THE RAVEN

By Mike Murphy

The Raven is one of the sites on the Rottneest wreck trail but being one of the least intact, with small pieces of wreckage spread over a wide area, it does not lend itself to mapping.

All that has been attempted so far has been the location and drawing in-situ of some of the small remnants which consist mainly of brass or bronze bolts with wooden fragments attached and some larger pieces of wood and twisted tubing.

A larger section of the wreckage is reportedly located near the plaque, to the south of the area visited so far by MAAWA and an attempt to relocate it and perhaps draw will be made in 1990/91.

The Raven was a wooden barque of 362 tons gross, built in Sunderland in 1864 and owned by Messrs W.R. Cave and Co. of Adelaide.

She arrived at Fremantle on Wednesday, March 3rd 1891 in ballast from Pt Albert, Natal.

Her master, Captain H. Swan, reported they had been 40 days out with fairly good weather throughout the trip.

On the Thursday, March 12th, the Raven was cleared for Bunbury where she was to take on a load of piles and was then expected at Rockingham to load timber for South Africa.

According to The West Australia of March 13th, the news of the wreck of the Raven was brought by the SS Albany.

It was reported that the Raven had been sailing through South Passage when it became apparent she was too close to the breakers.

"An attempt was made to tack but the vessel missed her stays and there was no room to wear."

She struck the south side of Direction Island and began making water quickly.

The captain and crew took the boats and were recovered in Gage Roads the next morning.

The SS Dolphin, which visited the site the next morning reported that the Raven had sunk into deep water and was breaking up. A heavy sea was running and wreckage was being washed ashore. Only one mast was left standing.

An official party which arrived later aboard the SS Maid of Lincoln found the barque broadside on, a portion of her left above water, while all that was left was the hulk.

The foremast and topmast had completely gone, only the stump of the mizzen mast was left and the yards were floating about.

A report in the newspaper on March 16th said the wreckage was bought by the Denton Holme Wreckage Company for ten pounds.

On March 20th at the Fremantle Police Court Captain Swan faced charges of drunkenness and carelessness.

By this report the site of the wreck is located on or near Dyer Island instead of Direction Island.

John Johnston, boatswain of the *Laughing Wave*, reported that Capt. Swan was "in liquor" when he went aboard the *Raven* at 1.30 p.m. on the day of the wreck and he later went ashore again.

Charles Watson said Capt. Swan was walking unsteadily along the jetty and John Ley, a shipping clerk, said he showed signs of having been drinking when he called into the offices of Mr J.M.Ferguson's.

However, Thomas Igo, the boatswain of the *Raven*, said that although Capt. Swan had been drinking he performed his duties in a seamanlike manner. Thomas Hay, steward, said Capt. Swan was quite capable of looking after the vessel and had a few hours sleep before the ship sailed.

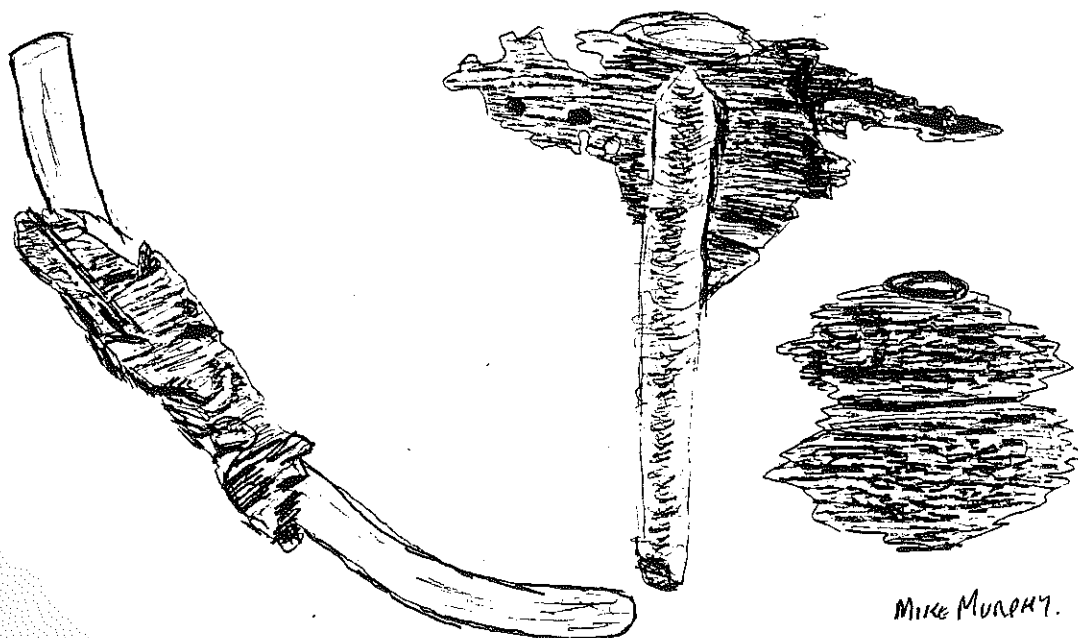
The Inquiry debated whether it was safe to attempt South Passage at night. The *Raven*'s first mate, Thomas Hale, suggested he would have taken the North Passage. Hale also said he could not say Capt. Swan was perfectly sober.

Mr Gawler, representing Capt. Swan, roundly condemned the system under which the Inquiry was held, saying that the members of the tribunal had first laid the charges and then heard the case themselves. He said Capt. Swan might have had a drink but we was well able to look after the ship.

Mr Leake, for the prosecution, accused Capt Swan of being so excited by drink that "he wanted to astonish the natives by an extraordinary piece of navigation."

He said the South Passage was dangerous at night and "No one but a Don Quixote would have attempted such a feat under such circumstances".

The Inquiry agreed with him and Capt. Swan's captains certificate was cancelled.



Sketch of fragments of timber attached to bronze bolts. Many such fragments are scattered around the *Raven* site. The bolt on the left was about 30 cm long and the one in the middle 20 cm.

THE MIRA FLORES

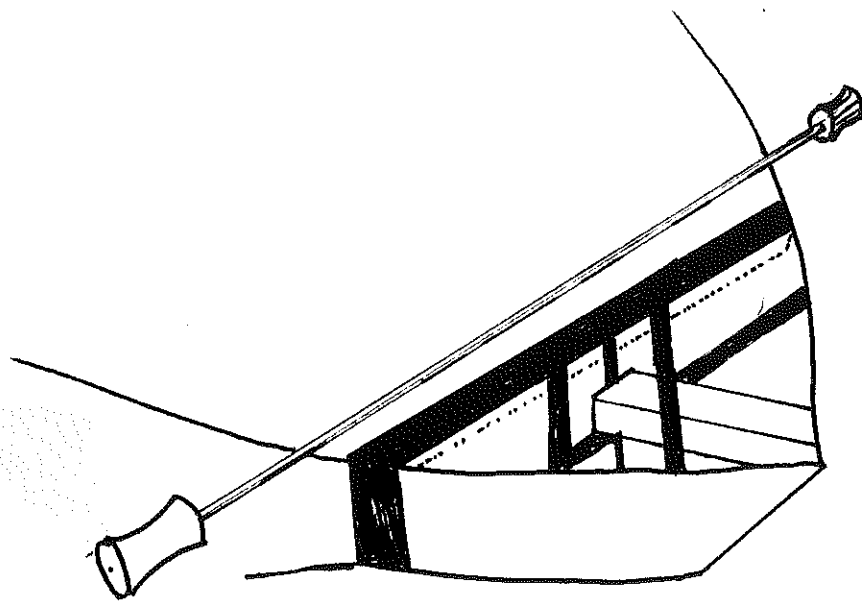
By Steve Wells

On an exceptionally calm, clear Saturday on the last day of March a party of MAAWA divers headed for and successfully located the Mira Flores.

The wreck can be divided into two sections. These are the bow, which has broken away from the rest of the ship and now sits proud of the bottom in a 12 m. sandy bottomed hole in the reef, and the remaining flat wreckage consisting of the rest of the ship's remains lying 15 m. sternwards of the bow.

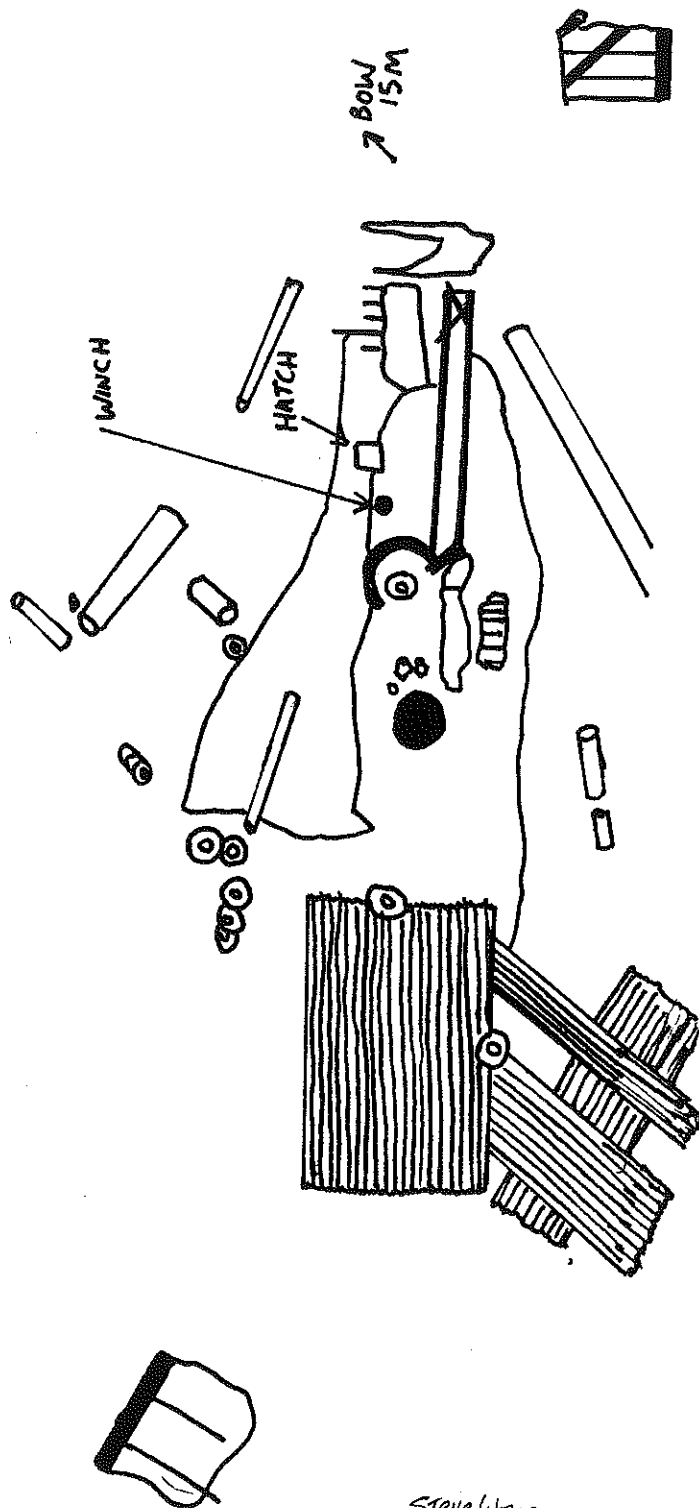
The bow has collapsed back on itself but is fairly intact with much plating still in place. A square shaped hollow structure about 3m. long protruding from supporting frames runs at an angle upwards to the tip of the bow and appears to be a bow sprit housing. The remains of a donkey engine winch are also evident in this section.

Frames and plating are evident over the 60m by 25m site. Several sections of mast and a winch were seen amongst the wreckage. A cargo of heavy corrugated iron and grind stones are clearly visible.



The bow section of the Mira Flores

A map of the main section of the Mira Flores site



The story of the Mira Flores

By Mike Murphy

The Mira Flores was an iron barque of 500 tons which was built in Liverpool in 1867 but operated mainly from German ports.

She struck the Horseshoe Reef at Rottneat at 6 a.m. on January 30th 1886. The hold was flooded and she went down about a quarter of a mile off the beach on the inside of the reef.

Descriptions of the wreck say it was sitting on the bottom with the water up to the bulwarks and most of the cargo of coke floating on the surface. Salvage crews standing on the deck were up to their necks in water as they cleared most of the cargo.

THE VILLE DE ROUEN

By Richard McKenna

The following information comes from the Lloyds Register 1899-1900

Signal letters L.K.G.T. 100A1 (4/1899)

Steel-hulled barque rigged sailing ship.

Master :G. Letestu (1897)

1 deck and 1 bulkhead

1303 tons gross, 1114 tons under deck, 1125 tons net.

Built August 1891 by Atel & Chant de la Loire at St Nazaire, France.

Owner H. Prentout-Leblond and E. Boniface

219.4ft x 34.6ft x 21ft (22ft5ins mid depth)

Registered at Rouen, France

The entry in the Lloyds Register of 1897-98 gives:

Master - H. Rehel

The Ville De Rouen is shown as 2 tr B in both registers.

"tr B" means tiers of beams with number of same prefixed (thus 2 tr B) with or without decks laid on them.

In "The Bounty Ships of France" by A. Villiers and Henri Picard on page 234 it states that the Ville De Rouen lasted ten years and that on October 30th 1901, while bound from Cardiff towards Fremantle, she stranded and sank in the Moore River, near Fremantle and became a total loss. Her wreck was sold for one hundred and one pounds.

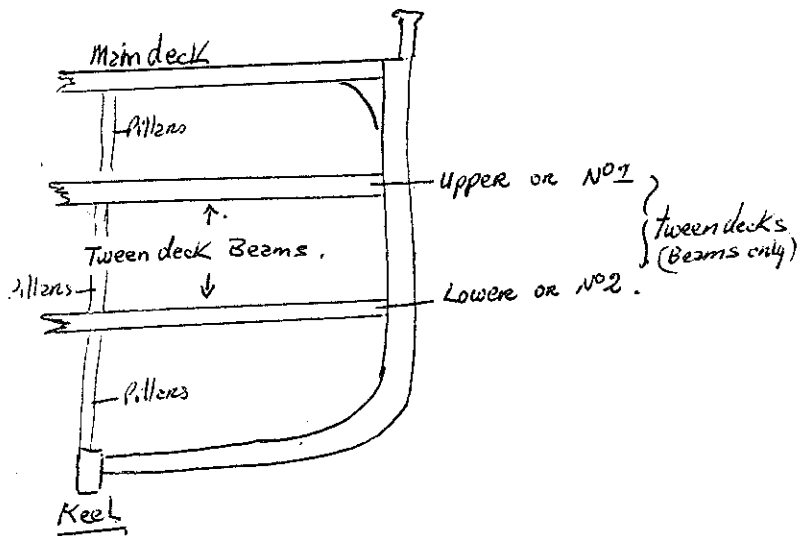
In H.M.Customs Wrecks and Strandings and Mishaps book the Ville De Rouen is listed at 1127 tons with a crew of 18.

Owner : Prentout, Leblond and E. Boniface

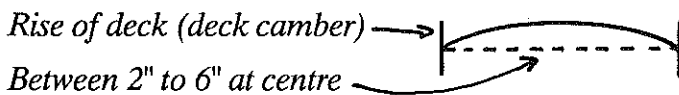
Master : E. Barthelmebs

28/10/1901 Near Moore River, Strong currents and heavy mist; became total loss; value ten thousand pounds.

If any reasonable section of the Ville De Rouen remains the beams would normally show three decks as above. If they be collapsed down and be lying together such beams may appear to be too many for one (main) or more decks.

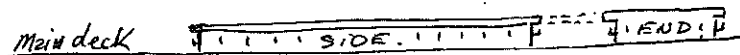


Also too, main deck beams will often show an upward curve across their length

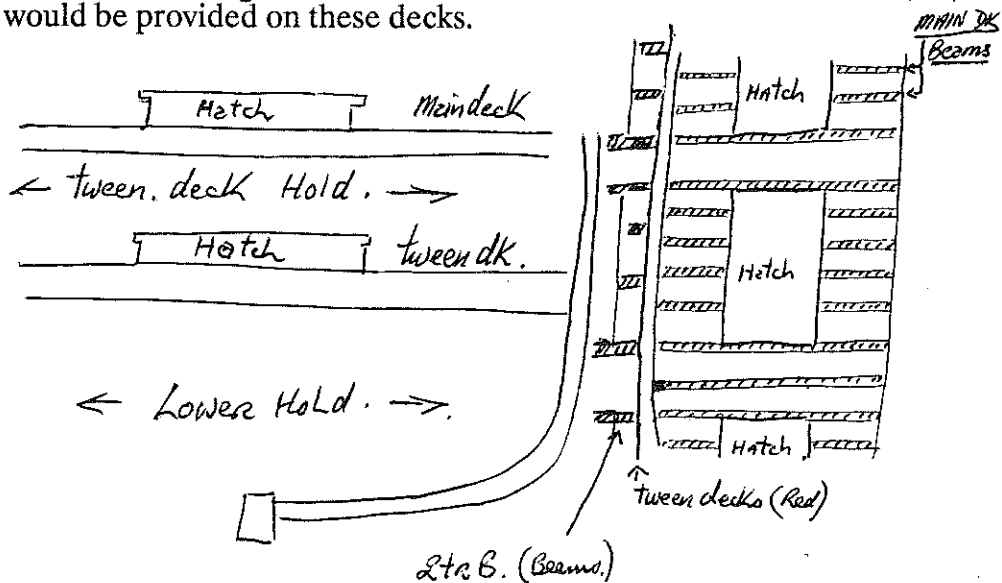


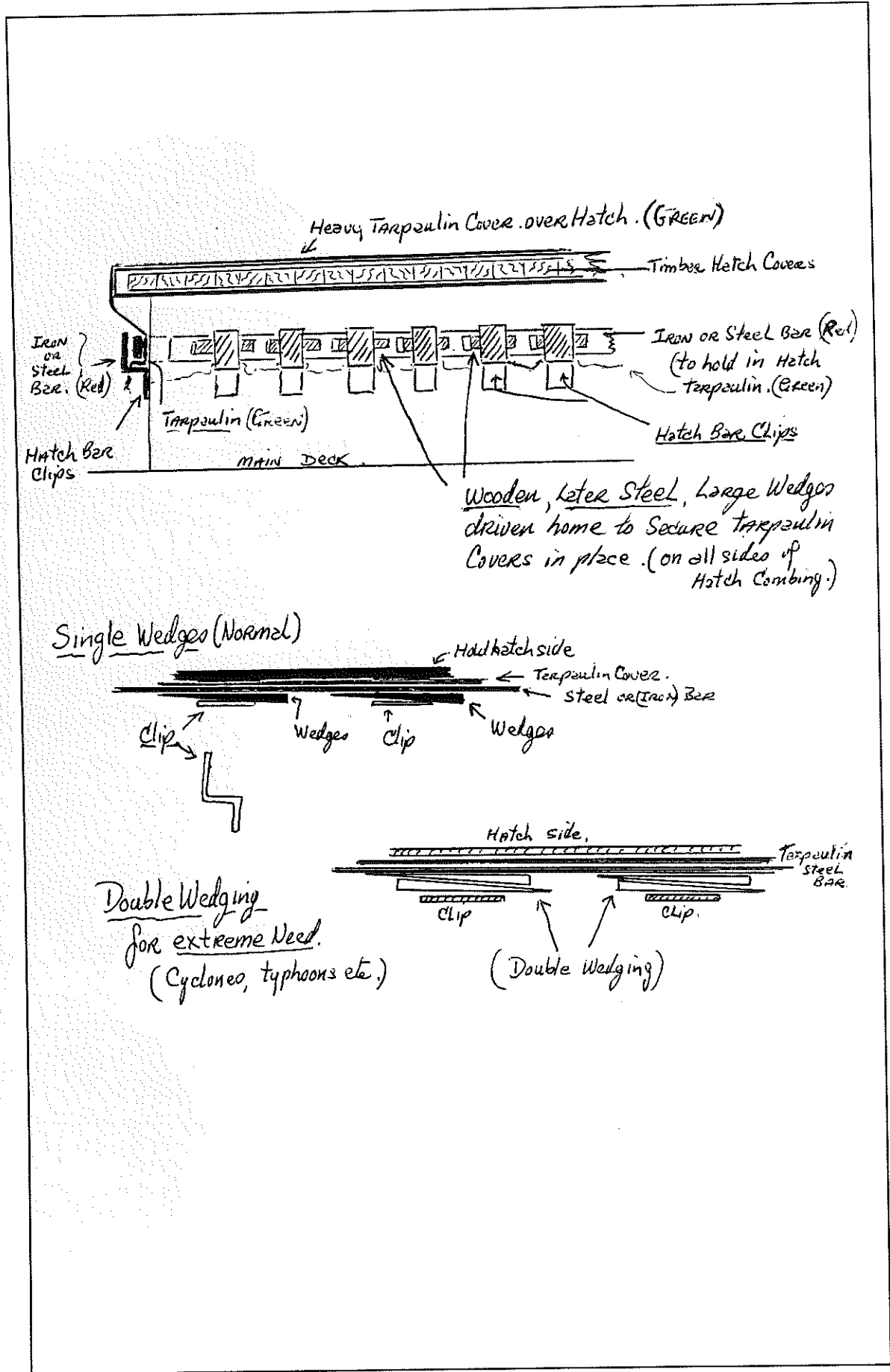
Tween deck beams are invariably level and if no decking be placed thereon invariably they are placed wider apart than the main deck beams and are usually of the same dimensions as the main deck beams so as to be quickly adapted for heavy loads etc.

Main deck beams will often show hatch combings.

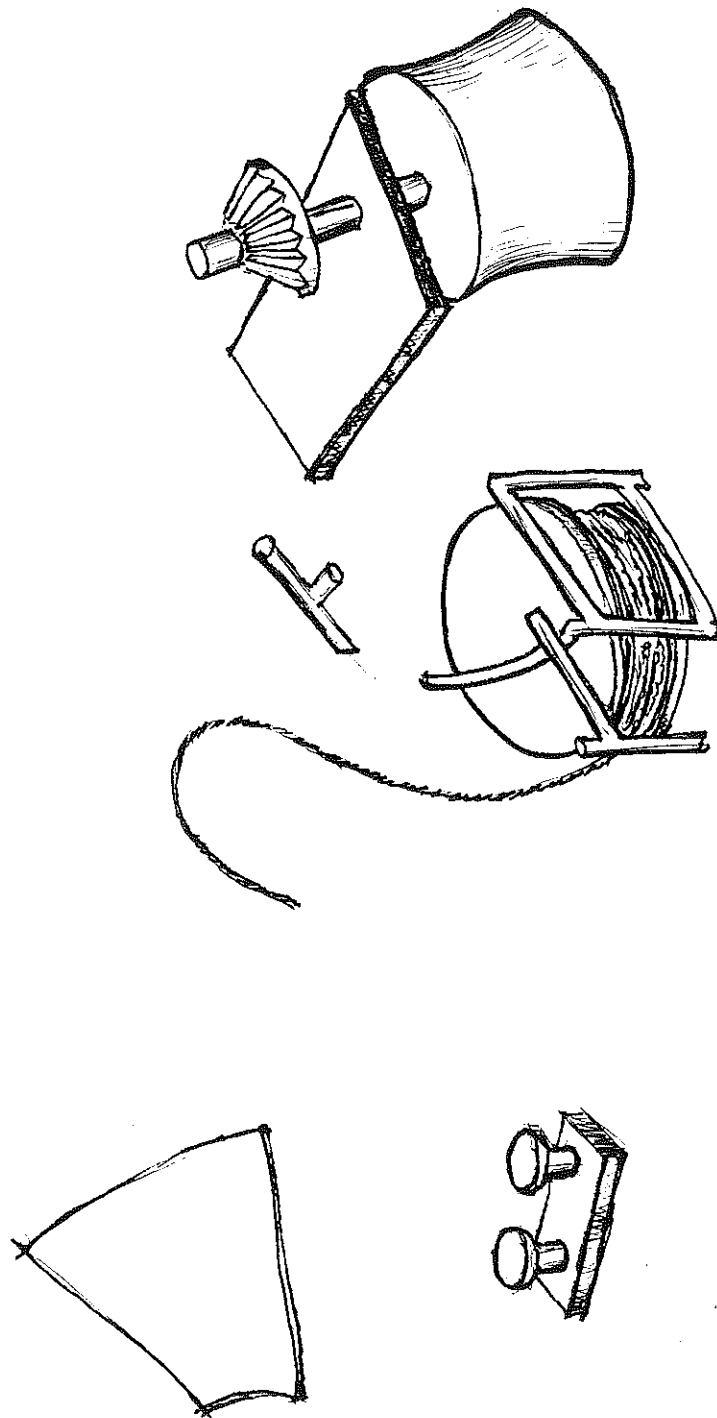


Now, with the 2 tr B there will be no signs of hatch combings as there would be with a tween deck ship as in this case the beams being further apart will allow greater freedom of cargo movement than a tween deck vessel. However, hatch sizes would be provided on these decks.



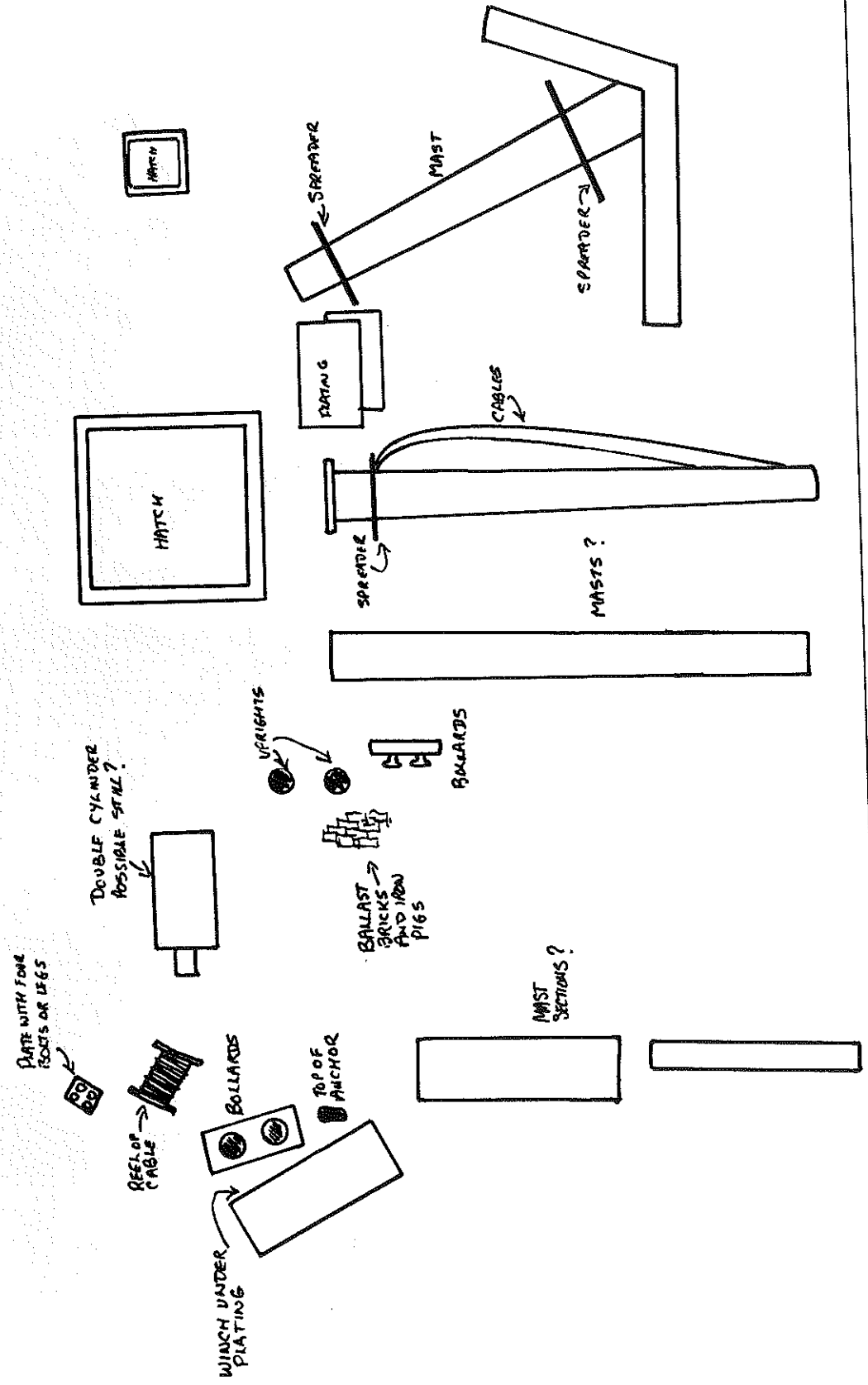


A sketch of some of the principle features of the bow area of the Ville De Rouen.

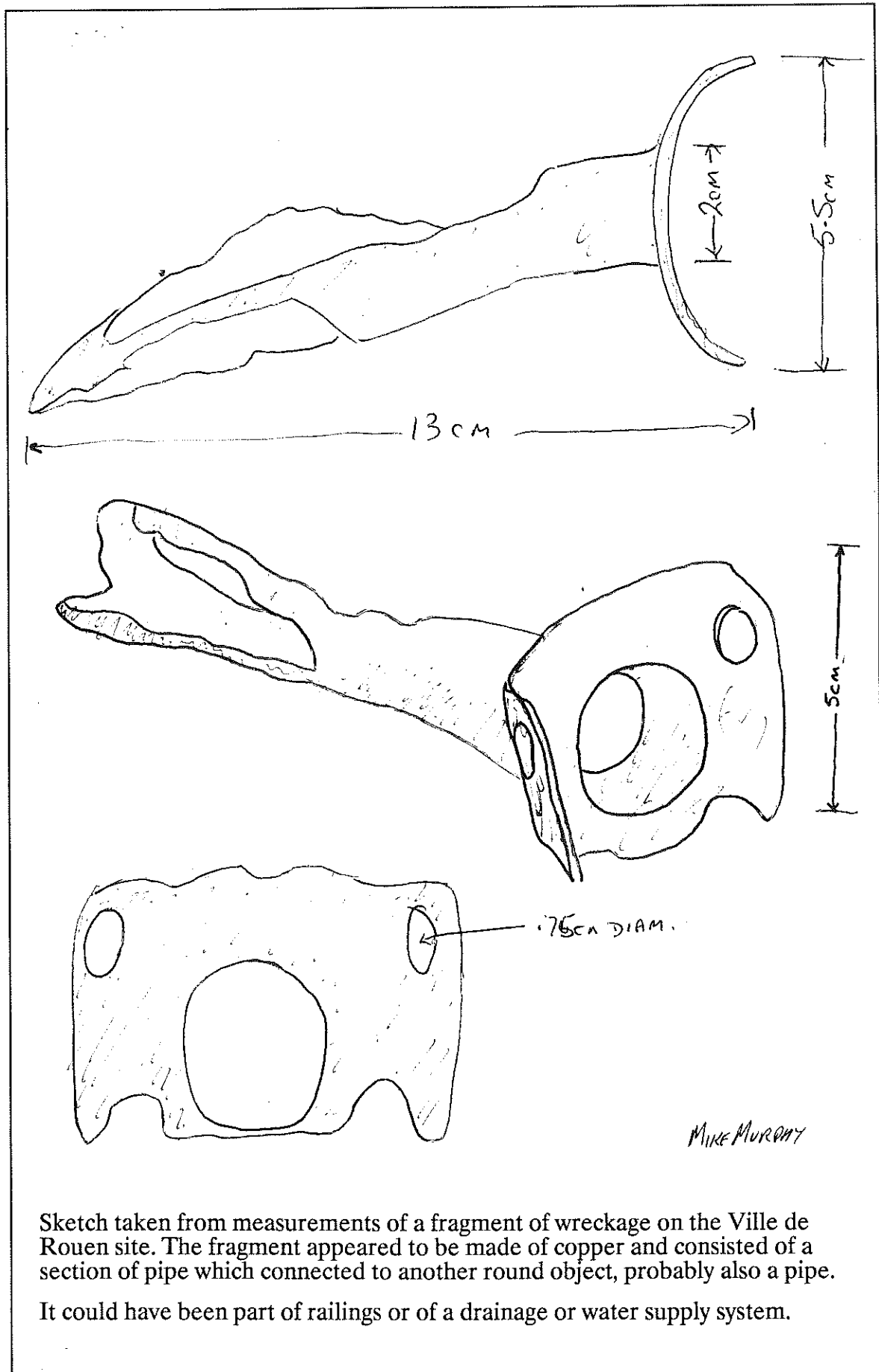


Steve Wells

An initial map of the Ville De Rouen site.



Mike Muron 7



Sketch taken from measurements of a fragment of wreckage on the Ville de Rouen site. The fragment appeared to be made of copper and consisted of a section of pipe which connected to another round object, probably also a pipe. It could have been part of railings or of a drainage or water supply system.

THE EUROPA

By Steve Wells

MAAWA members were fortunate enough to dive on the wreck of the Europa during late March this year.

The ship was Italian built, of iron construction and barque rigged.

According to local information she was carrying a varied cargo which included crockery and weighing scales destined for the goldfields of WA.

She was wrecked a little north of Cervantes in 1884.

Apparently she ran up onto a reef and stayed stuck with all the sails up as the Italian crew lost no time in getting into boats and making for shore (about 2 km east) with all haste.

The captain was unable to get the crew back to the ship to attempt to save the vessel. Before any remedial action could be undertaken a cyclone or storm came along and turned the remains into a total wreck.

The above information comes from local knowledge. Any member wishing to undertake a research-based project should consider an accurate history of the Europa as a possibility.

Dive site

The main wreckage lies in an E-W direction with the bow pointing towards shore.

The wreck sits on top of the southern edge of a plateau about 100m wide. This plateau, like the rest of the area, is covered with weeds.

The wreck is in 5-6 m of water.

A vertical wall up to 5m high separates the plateau from the rest of the area.

A dive on the site reveals little structural remains other than a length of I-beam iron keelson extending about 30 metres. From this protrude frames up to 4m in length but now collapsed. Plating is attached to some frames.

Several circular iron rods (diam about 4 cm) protrude outwards from the central bulk of the wreckage at various angles towards the surface. These may be the remains of staunchions.

Strengthening beams are evident towards the western end of the plateau wreckage. These extend outwards at 45 deg. from the keel.

A separate piece of wreckage with intact keel runs off at about 40deg. to the port side. This is clear evidence of the ship breaking its back in at least one place.

Moving further West and in line with the keelson of the major wreckage one finds further frames and plating in a deeper section of the site i.e off the plateau. When the ship went up onto the reef it would appear her stern hung

off the shallows in water up to 12 m deep., The force encountered on the wreck have led to the stern breaking away and collapsing into the "deep".

Signs of framing and plating are to be seen in the deeper "off plateau" along the starboard side of the wreck.

Three anchors were observed on the site.

Two anchors are to be found in weed to the NW of the main wreckage. These are both 2m high and 1.5 across the flukes. One which is 100m away has a length of heavy cable running towards the wreck. These anchors may have been set after the ship was grounded in the hope of pulling her off.

A third, larger anchor is set at right angles to what would be expected. Possible this was thrown over the side to lighten the ship.

No masts or any other fittings were seen, hence it seems likely that salvaging took place.

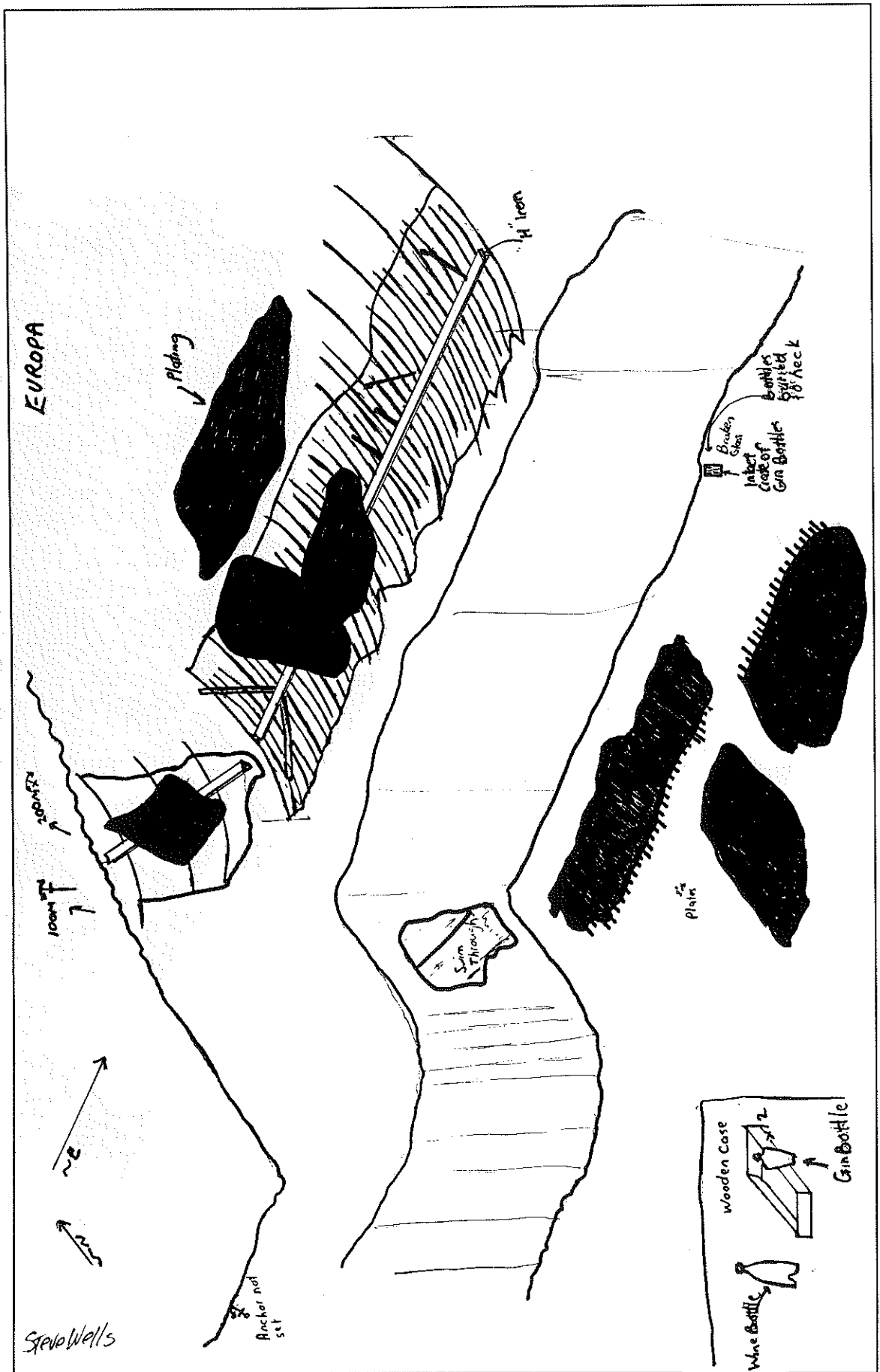
Many small artefacts were to be seen on the site. In 12 m i.e. below the plateau are thousands of fragments of glass bottles of various colours including cobalt blue, green and clear. One section of the vertical wall is slightly hollowed out to form a small "bay" towards the starboard bow section of the wreck. Due to local currents or else a spewing out of a cargo hold many intact bottles were seen. These were buried to the neck in sand. Amongst the bottles seen were a case of clear square gin bottles with their wooden box still intact around the sides at least and the champagne/wine bottles so commonly seen on sites like the Long Jetty and Sepia.

In weed well away from framing and plating were located at least 10 intact circular porcelain plates about 24cm in diameter. These were of a cream white colour and golden edging. The glaze appeared to be in good condition.

A swim through also appears to be a repository for artefacts and may yield intact items. Lack of time prevented full investigation of this area.

It must be noted that all artefacts were left in situ. Any material removed from around them for observation was immediately returned to protect them.

Of interest to the non-diver, one can view a recovered anchor which stands opposite the local shopping centre.



THE CAMBRIA

By Mike Murphy

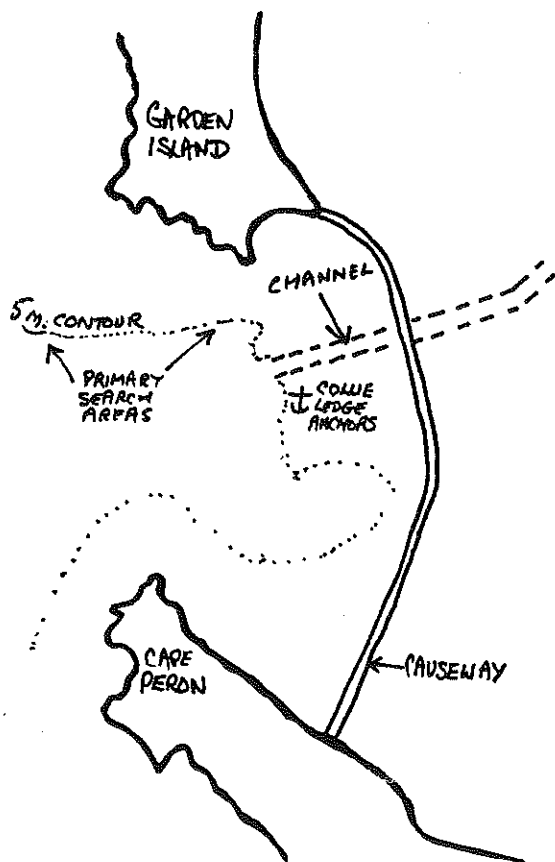
Research in the Batty Library has produced an old map of the Point Peron area and the south end of Garden Island which suggests MAAWA has been searching in the wrong area for wreckage of the CAMBRIA.

Soundings on the map indicate that the passage between the point and the island swung further to the south as vessels entered Cockburn Sound from the west.

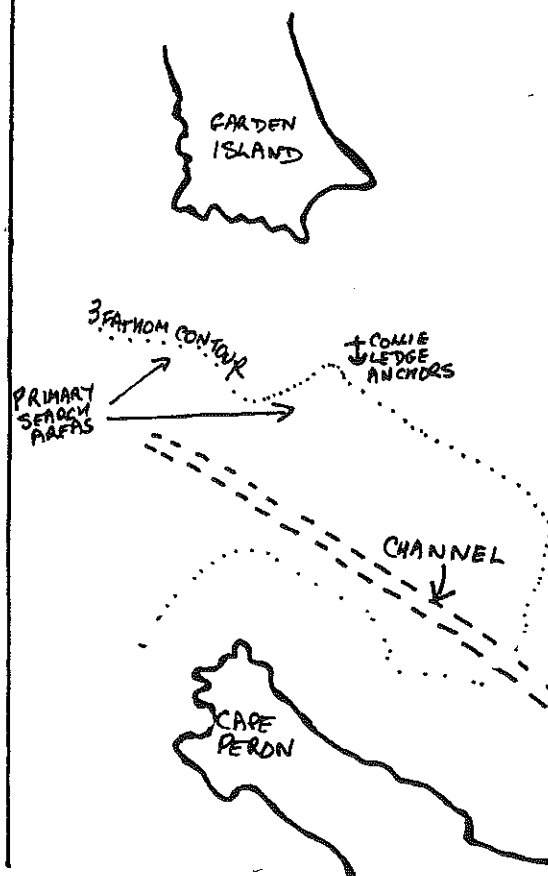
The revised route of the channel explains the presence of the anchors on Collie Ledge located by Graham Anderton in 1981 and relocated by a MAAWA team in 1988.

These anchors can now be seen to be more likely to have held the marker bouys on the north side of the channel.

PRIMARY SEARCH AREAS BASED ON POSITION OF CHANNEL TODAY.



BASED ON OLD MAP SHOWING DEPTHS BEFORE CAUSEWAY WAS CONSTRUCTED



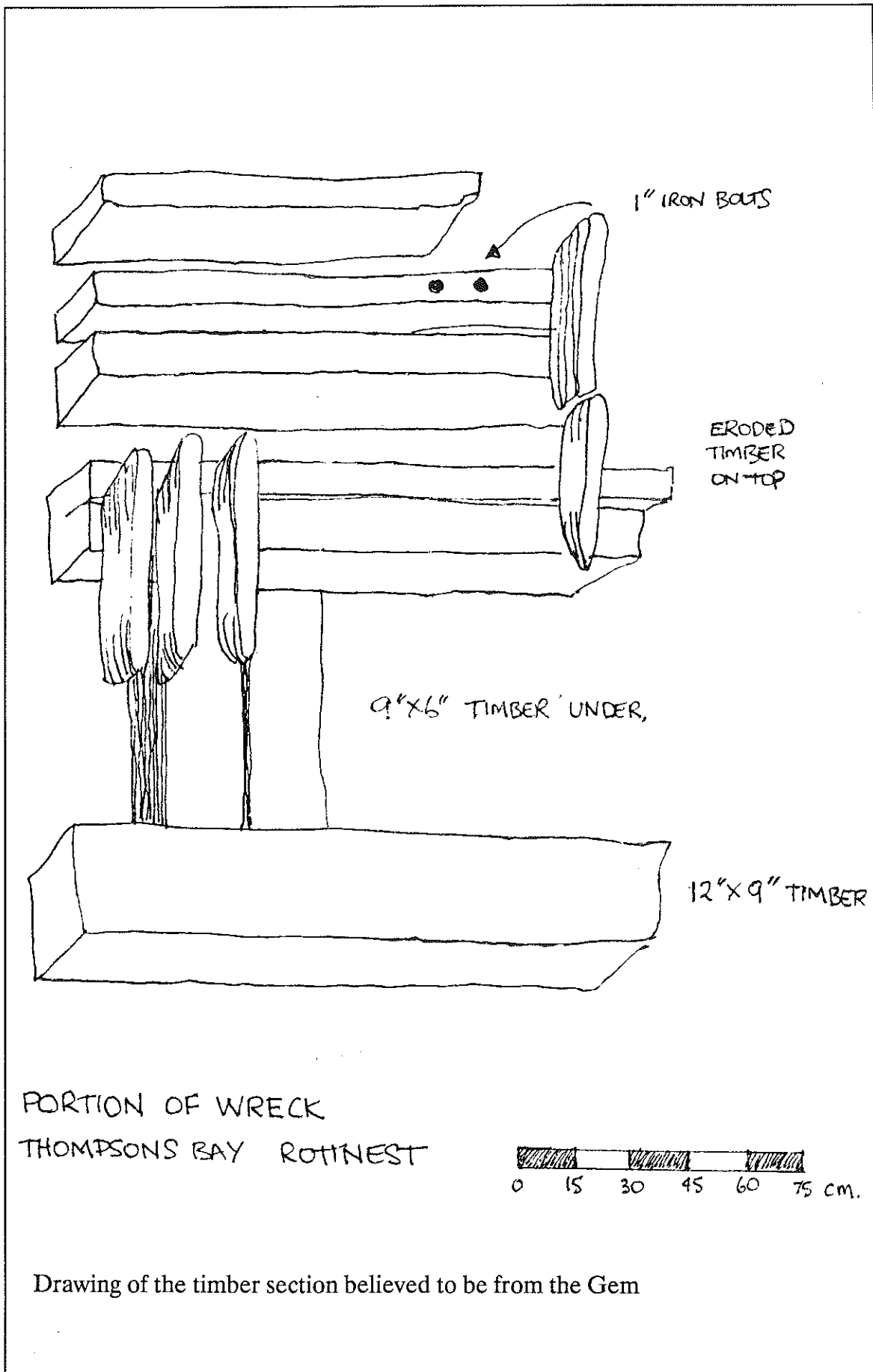
THE GEM

During a dive at Rottneest Ian Warne took a party to view a section of wreckage he found some years ago and which he believes to be part of the Gem.

The Gem was a major MAAWA project undertaken by Neville Passmore and has been reported in one of the Five Year Reports, with Neville's map of the wreck site appearing in Graham Henderson's "Unfinished Voyages 1851 - 1880."



Map showing location of new wreckage in relation to main Gem site and other wrecks in Thomsons Bay.



The Maritime Archaeological Association of W.A.

President : Steve Wells

Vice President : Colin Cockram

Secretary : Mike Murphy

Treasurer : Richard McKenna

Address for correspondence:

C/- The Secretary

8 Rabone Way,

Boya,

Western Australia 6056

Tel: 2996602

Monthly meetings:

Third Tuesday of each month

7.30 p.m.

The Education Centre

W.A. Maritime Museum

Cliff Street

Fremantle