

Not lost without a trace. The DEIC ship *Vlissingen*, assumed to have foundered near Meob Bay in 1747*

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Abstract

The Meob Bay shipwreck project was initiated in January 1993, when some copper coins that had been washed ashore were identified by the author. All coins are VOC (Verenigde Oostindische Compagnie, United Dutch East India Company or DEIC) doits, minted in the town of Middelburg in the Netherlands in 1746. Research revealed that they most probably originate from a VOC ship that foundered during the outward-bound voyage. All leads point to the Vlissingen, a vessel that was lost with all hands in 1747. This article describes the identification process, the results of archival research into the historical background of the Vlissingen, as well as some aspects of archaeological fieldwork undertaken on site to date.

Introduction

During the nearly two centuries of its existence, from 1602 to 1799, the *Verenigde Oostindische Compagnie* focused on the trade with Asia. During the long sea voyages, ships often called at Table Bay near the southern tip of Africa. At this half-way station, fresh provisions and drinking water were taken on board, while crew members who were too sick to continue the journey often found temporary relief. This was especially the case from 1652 onwards, when the VOC established a permanent refreshment station on the shores of Table Bay.¹ In some cases, vessels did not enter the bay but used other ports of call, such as St Helena or Saldanha Bay, on the west coast of southern Africa. Other ships never made it to a safe anchorage or sailed past, due to navigational errors, problems aboard or adverse weather conditions, and some foundered as a result. Indications of one such unfortunate incident are given by a substantial number of

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¹ Bruno E.J.S. Werz, *Diving up the Human Past. Perspectives of maritime archaeology, with specific reference to developments in South Africa until 1996*, Oxford, British Archaeological Reports, 1999: 36, 71.

copper coins, some silver coins and other materials that have been washed ashore over decades on a remote beach in Namibia, southern Africa.

Identification

The coins

In January 1993, the author was approached by Dr Dieter Noli, an archaeologist who had previously secured a number of coins from Meob Bay, Namibia. The coins lay exposed on the beach and were collected during a coastal survey of the area. According to Dr Noli, similar coins had been found on the same beach over a period of many years. This was corroborated by references in the literature and eye witness accounts.² Dr Noli requested the author to identify the coins and suggest a plausible explanation for the presence of these objects on this deserted coastline.



1 A. Dutch East India Company doits from Meob Bay. 1 A. Obverse with the coat of arms of the Province of Zeeland; a left-facing lion rampant in waves that symbolizes the Low Countries' perennial struggle against the sea (scale in mm).



1 B. Reverse showing the VOC monogram. The mint mark and date have corroded away on these specific samples (scale in mm)

A total of 71 coins were presented for identification. Of these, 15 were complete while the remainder showed substantial physical damage. All of them were severely corroded. The average diameter of the complete coins is 21mm, with a thickness of 1mm and a weight ranging between 1.84 and 2.81gr. All coins are made of copper and show

² Dr Dieter Noli, pers. comm., 1993; Theo Schoeman, Gunter von Schumann, *Meob 'VOC' Survey. March/April 1993*, Windhoek, Namibia Underwater Federation, 2001: 1, 9-10.

identical marks. On the obverse, the coins show a crowned shield of the province of Zeeland in the Netherlands; a lion rampant in waves facing left. The reverse shows the monogram of the Dutch East India Company, 'VOC', whereby the 'V' takes up a central position and is bigger than the other letters. The letter 'o' is superimposed on the left fork of the 'V' and the letter 'c' on the right. Above this monogram is a smaller depiction of a tower and below the year '1746'. The tower is flanked by two six-pointed stars (*-*). This tower is the heraldic symbol for the city of Middelburg, the capital of the province of Zeeland, and represents the mintmark. The year, between dots (•-•), indicates the year when the coin was struck. On the basis of this information, it could be deduced that the coins were struck in 1746, in the city of Middelburg in the Netherlands. The coins were specifically manufactured for the VOC and could be identified as *duiten* or doits.³ Throughout the seventeenth and eighteenth centuries, doits represented one of the smallest monetary units in circulation in the Dutch Republic. The basic unit was the *stuiver*, from which the value of other coins was determined. On average, 8 doits were equal to 1 *stuiver*.⁴

DEIC doits

The DEIC was a decentralized organization. This was a direct result of the amalgamation of different trading companies that led to the formation of the United East India Company in 1602. Although overall management and control was in the hands of a board of directors, the *Heren XVII* or Gentlemen XVII, daily affairs were handled by six individual offices or *kamers*. These appointed their own personnel, constructed and equipped their own ships, managed and corresponded with the various trading stations in the East, and organized their own auctions of imported goods. The Zeeland regional office was the second largest of the six offices, after the Amsterdam *kamer*, and held 25 percent of the shares. This office came into being after smaller trading companies based in three different towns in that province: Middelburg, Vlissingen and Veere, were amalgamated and elected Middelburg as seat of the Zeeland *kamer* of the VOC.

The essence of VOC business was to make a profit on the sale of imported Asiatic goods. In order to purchase these goods, money was exported to Asia in the form of gold and silver bars and coins, as there was little demand for European products. For that reason, outward-bound VOC ships carried specie and bar metal. The value of these consignments was often considerably more than the value of other export products. Money was also needed to pay wages to overseas VOC employees and to cover other costs. The demand for bar metal and coinage was reflected in the annual *Eijsch der*

³ Arent Pol, *Schepen met geld. De handelsmunten van de Verenigde Oostindische Compagnie 1602–1799*, 's-Gravenhage, SDU Uitgeverij, 1989: 19; C. Scholten, *The Coins of the Dutch Overseas Territories 1601–1948*, Amsterdam, Schulman, 1953: 46-47.

⁴ Bert van Beek, Hans Jacobi, Marjan Scharloo, *Geld door de eeuwen heen. Geschiedenis van het geld in de Lage Landen*, Amsterdam, Pampus Associates, 1984: 106; Jaap R. Bruijn, Femme Gaastra, Ivo Schöffner, (eds.), *Dutch-Asiatic Shipping in the 17th and 18th Centuries*, vol. I, The Hague, Rijks Geschiedkundige Publicatiën 165, 1987: 225.

contanter; a detailed request from the VOC authorities in Asia to the *Heren XVII* in the Dutch Republic.⁵

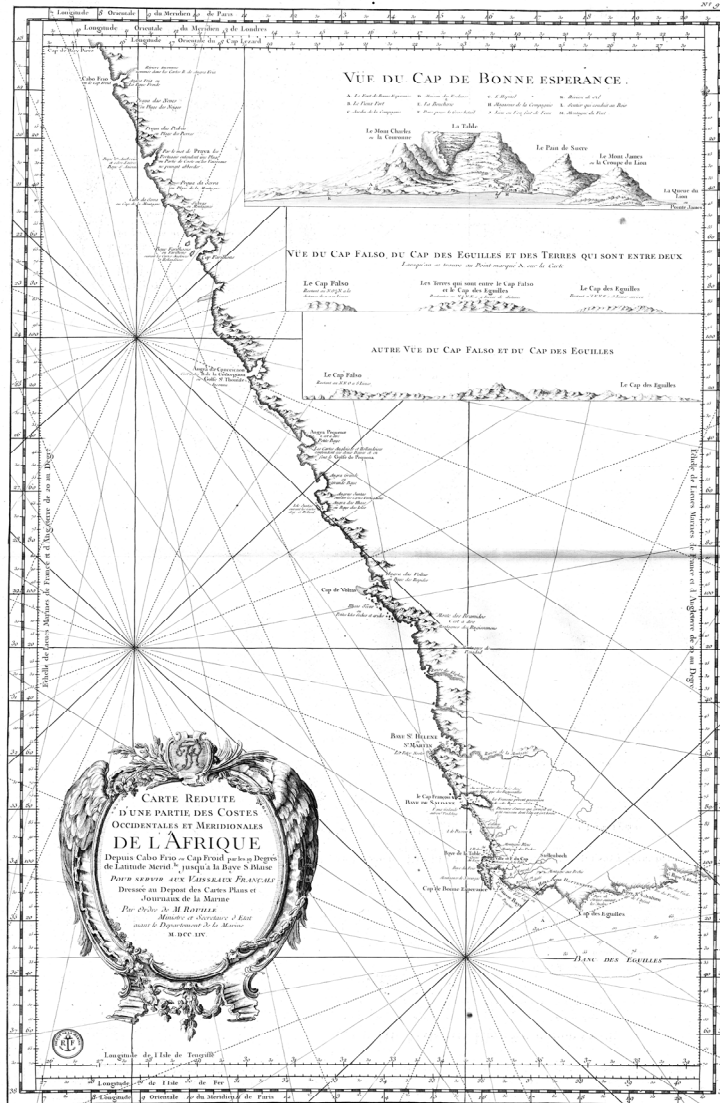
The export of copper doits to Asia only started in 1724, as Japan obstructed the export of *pitis* since about 1723. *Pitis* were lead coins of Chinese origin that were extensively used in the Dutch East Indies and elsewhere in Asia. At about the same time, Chinese merchants bought up *pitis* and other coins of little value, causing a shortage of small change. For this reason, the VOC management in the Dutch Republic was requested to send doits. These were put into circulation at a rate of 4 to the *stuiver*, whereas their exchange rate in the Netherlands was 8 to the *stuiver*. This measure was retracted as early as 1725 to prevent private individuals from smuggling doits. A year later, the mint in Dordrecht started to produce special doits. These coins, but also *dukatons* and *drieguldens*, were specifically ordered by the Company and marked with the VOC symbol. This was done to prevent the smuggling of currency, as often a substantial profit could be made on the exchange of coins in Asia. As the DEIC wanted to protect this profitable enterprise, it prohibited individuals from exchanging currency for private purposes and only accepted VOC coins which were not in use in the Netherlands. VOC doits were produced in large quantities by provincial mints in the provinces of Holland, Westfriesland and Zeeland until 1794. During the period 1745-1747 alone, doits to the value of 275,000 guilders were dispatched with the outgoing fleets. Bearing in mind that 1 guilder equaled 20 *stuivers*, a quantity of in between 22,000,000 to 44,000,000 doits were exported over a period of two years, depending on whether one applies the exchange rate in Asia or that in the Dutch Republic. Even so, this practice was not always successful and the smuggling of money continued throughout the Company's existence.⁶

The wreck

With the discovery of dozens of identical coins lying exposed on the beach in Meob Bay, the immediate question that arose was how these objects ended up here? The whole of the Namibian coastline was virtually *terra incognita* during the eighteenth century and had only been visited by passing ships on occasion. As nothing much was to be gained there, and because the shores are very inhospitable to this day, most mariners avoided these waters. No records exist, nor have any traces ever been found of a possible European settlement in the region of Meob Bay pre-dating the nineteenth century. The southernmost Portuguese strongholds on the African west coast only went as far south as Angola, whereas the Dutch station of the Cape of Good Hope was situated much further south.

⁵ Bruno E.J.S. Werz, '*Een bedroefd, en beclaaglijk ongeval*'. *De wrakken van de VOC-schepen Oosterland en Waddinxveen (1697) in de Tafelbaai*; Zutphen, De Walburg Pers, 2004: 17-18, 21.

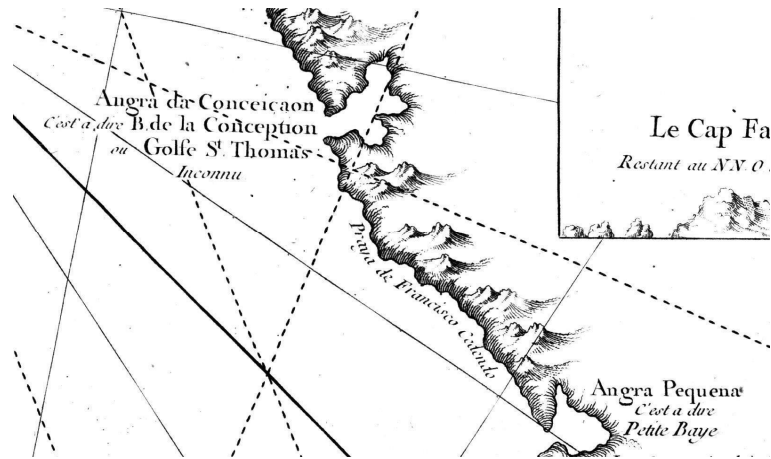
⁶ Beek et al, *Geld*: 106; Bruijn et al., *Shipping*, vol. I: 238, 244; Pol, *Schepen*: 20; Scholten, *Coins*: 31, 44.



2. French chart of the southwestern African coast, produced by the French Navy and published in 1754, only seven years after the *Vissingen* went missing. (*Carte Reduite d'une partie des Costes Occidentales et Meridionales de l'Afrique (...) Depost (sic) des Cartes, Plans et Journeaux de la Marine par ordre de M. Rouille, Ministre et Secrétaire d'Etat. Departement de la Marine 1754.*) (Private collection).

Despite the fact that occasional land and sea expeditions were undertaken, whites did not visit the area from the landward side until well into the nineteenth century. Some smaller vessels were dispatched from the Cape to explore parts of the Namibian coastline during the seventeenth and eighteenth centuries. These included exploratory voyages by the *Grundel* (1670), the *Boode* (1677) and the *Meermin* (1793), but these

vessels all returned safely and no records exist of any ship ever making a landfall at Meob Bay.⁷ The only logical conclusion therefore was that an outward-bound Dutch East Indiaman, carrying a cargo of specie, had met its demise here. This consignment included a batch of identical doits that were never put into circulation. This was confirmed by the appearance and distribution pattern of the coins. According to Dr Noli, these items had all been found in a strip several kilometers long, but only a few hundred metres wide. This strip runs parallel to the shoreline and borders on the high-water mark. Most coins were exposed and lying on the surface, while some were covered by only a few millimeters of beach sand. As far as he knew, coins that had been picked up by other people over the years were found under similar conditions and in the same general area.



3. Detail of the French chart of 1754, showing the Meob Bay area. It is clear from this that the chart is highly inaccurate when compared to modern counterparts. The comment 'inconnu' refers to the fact that this coast was unknown to mariners at the time. 'Angra da Conceicaoon' is Portuguese for Conception Bay and Luderitz is indicated as 'Angra Pequena'. The 'Praya de Francisco Cedendo' probably refers to a Portuguese explorer and seems to include Meob Bay and the Lange Wand sand dunes.

Using the year that was provided by the copper doits as a *terminus post quem*, initial searches in the VOC archives in the Hague focused on outward-bound ships that left the Dutch Republic in 1746 or thereafter, until 1758. This last year was chosen randomly as a *terminus ante quem*, as it seemed improbable that a substantial quantity of identical coins would have been kept in store for long. This was supported by the fact that the VOC obviously had an ongoing demand for doits during the period 1743 – 1757, as can be deduced from the annual *Eijsch der contanten* and the resolutions of meetings of

⁷ Wolfram Hartmann, "Early Dutch-Namibian encounters", in: Huub Hendrix, (ed.), *Namibia and The Netherlands. 350 Years of Relations*, Windhoek, Embassy of the Kingdom of the Netherlands, 2006: 11-13, 17, 19.

Heren XVII for that period. During 1743 – 1757, doits to a total value of 1,394,500 guilders were dispatched with the various outward-bound ships each year.⁸ This amounts to a quantity of in between 111,560,000 and 223,120,000 doits, depending on whether the exchange rate in Asia or that in the Dutch Republic is applied.

Some ships were reported to have been lost between 1746 and 1758, the approximate places of their demise, however, were recorded. None of these coincided with the Meob Bay area, or in fact with any position along the Namibian coast. It soon became clear that there was only one likely candidate; the VOC ship *Vlissingen*. The fact that all reported doits were minted in Middelburg concentrated the search on vessels from the *kamer Zeeland*, but again only the *Vlissingen* fitted the picture. Further archival research therefore concentrated on this ship.⁹

Results of the archival research

The ship

Information recovered to date from the available archival documentation pertaining to the construction of the *Vlissingen* is scanty. A first reference to the ship can be found in the resolutions of the meetings of the directors of the DEIC. During the morning of Saturday 1 March 1732, it was decided that eleven new ships had to be constructed for that year, including the *Vlissingen* of 130 feet. Five-and-a-half months later, it was recorded that the ship was under construction under the supervision of the regional office of Zeeland. It measured 130 feet and had a cargo-carrying capacity of 100 *last* or 200 tons. One week later, it seems that the ship was nearing completion and the *Vlissingen* was earmarked to leave the Dutch Republic as part of an outward-bound fleet in the months to come.¹⁰

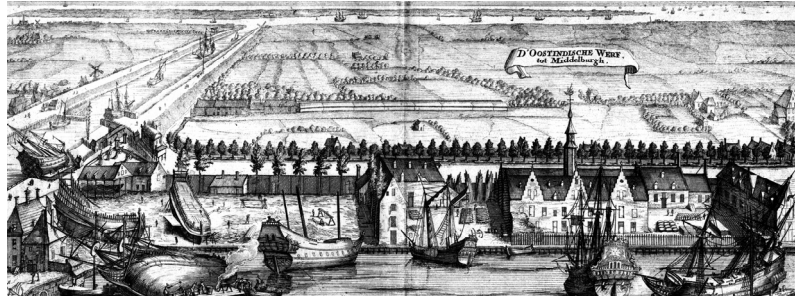
During this period, the VOC generally built four classes of ships. These were those larger than 1,000 tons (I); 800 – 1,000 tons (II); 500 – 800 tons (III) and smaller than 500 tons (IV). The *Vlissingen* had a displacement of approximately 650 tons and, according to this classification, was therefore a ship of the third class or rate. During the period of VOC existence, 374 ships of the third rate were constructed and 41 of these were built during the decade 1730 – 1739. Its length, from stem to stern but excluding the bow sprit, was 130 Amsterdam feet. The minimum value of the ship, when new, was estimated at between F82 and F85,000 for the hull, F4,297 for the rigging and F1,900 for the anchors.¹¹

⁸ Bruijn et al., *Shipping*, vol. I: 240-241.

⁹ Bruno E.J.S. Werz, *De 'Vlissingen'. Report on initial archival research in the Algemeen Rijksarchief*, The Hague, The Hague/Weert, 2001.

¹⁰ VOC 165, Resoluties van de ordinaris en extra-ordinaris vergaderingen van de Heren XVII (en halve, kleine XVII), 1731 maart 19 – 1736 maart 27, 1 March, 18 August 1732, 24 August 1733.

¹¹ Bruijn et al., *Shipping*, vol. I: 27-28, 52; RAD 250, Lijsten van schepen van kamer Zeeland, die reeds vertrokken zijn, tot vertrek gereed liggen of in voorraad worden gehouden, etc. 1738 – 1750; VOC 4933,



4. The DEIC dockyard in Middelburg where the *Vlissingen* was constructed in 1732. In the background is the Rammekens roadstead and left the Canal of Welsingen that connected Middelburg to the sea. (M.Smallegange, *Nieuwe Cronijk van Zeeland*, Middelburg, 1696). (Private collection)

Another source, however, mentions five classes of VOC ships for the period. The fifth and smallest were those of 125 feet. Their length and average number of people aboard were indicated as follows.

| | | |
|-----------|----------|----------------|
| Class I | 150 feet | complement 300 |
| Class II | 145 feet | complement 275 |
| Class III | 136 feet | complement 225 |
| Class IV | 130 feet | complement 180 |
| Class V | 125 feet | complement 125 |

According to this source, the *Vlissingen* was a vessel of the fourth class.¹² As the length as stated provides for the most important datum from which the original size of a VOC ship can be reconstructed, the following dimensions can be deduced. A ship of 130 feet had a length of approximately 36.40 metres, a width of 9.10m, and a *holte* of about 3.65m. This last measurement was the height between the keel and the underside of the main deck.¹³

To date, no inventory specifically relating to the *Vlissingen* could be traced. Nevertheless, the archives did reveal an inventory for the *Huijs ten Duijnen*. This ship was slightly smaller, measuring 550 tons, with a length of 125 feet. In January 1748, it was recorded that the *Huijs ten Duijnen* carried five heavy anchors and three smaller ones,

'Uitloopboekje', lijsten van voor de VOC uitgevaren schepen, met aantekeningen etc., 1701 (najaar) – 1796; VOC 4935, Lijsten van voor de VOC uitgevaren schepen, met aantekening betreffende het aantal bemanningsleden, de data van vertrek en aankomst in de Republiek, etc., 1673 – 1796.

¹² VOC 331, Kopieboek van uitgaande missiven van de Heren XVII en de kamer Amsterdam aan de kantoren in Indie, 1746 maart 24 - 1750 november 21.

¹³ J. van Beylen, "Scheepstypen", in: G. Asaert et al., (eds.), *Maritieme Geschiedenis der Nederlanden*, volume III, Bussum, De Boer Maritiem, 1977: 11; Bruijn et al., *Shipping*, vol. I: 41-47; Bruno E.J.S. Werz, *Met man en muis. Enkele facetten rond het zinken van twee V.O.C.-schepen nader belicht*, Dissertation, Nijmegen, University of Nijmegen, 1983: 35, 176-179. The feet mentioned in this context are Amsterdam feet of approx. 0.28m.

twelve cannon with a calibre of 8 pounds, ten 6 pounders, six 3 pounders and eight swivel guns. In addition, the vessel carried a substantial amount of shot. This included 1,430 canon balls for the guns, 600 shot for the swivel guns and 100 hand grenades.¹⁴ This amounts to a substantial amount of ferrous metal, which could well assist in detecting possible wreckage during the marine survey phase of the project. In addition, it should be taken into account that the *Vlissingen* possibly carried more anchors and ammunition than the *Huijs ten Duijnen*, and that she might have had more or heavier guns.

Previous journeys, 1734 – 1745

The first outward-bound journey started from the roadstead of Rammekens, near the town of Vlissingen, under the command of Levinus de Heere on 21 January 1734. On 25 July, the ship arrived at Batavia (Djakarta) on the island of Java, where the headquarters of the DEIC in Asia were located. On board the vessel were 123 seafarers, 51 military personnel and seven craftsmen. She sailed for the Zeeland chamber of the VOC and carried cargo for the same. Only two-and-a-half months later, on 7-10-1734, the *Vlissingen* left Batavia under the command of Jan de Roeper. More than nine months later, on 17 July 1735, she reached Rammekens. On board the ship were 67 seafarers, 16 military, four craftsmen, six *impotenten* or people unfit for further duty, and two passengers. The ship again carried cargo for Zeeland to the value of F111,574.¹⁵



5. 18th century engraving of a view of Batavia, the DEIC headquarters in Asia. In the foreground a departing VOC ship, while other vessels are being repaired at the Onrust dockyard, left back. (Cape Archives Depot).

¹⁴ VOC 7565, Missiven van gouverneur-generaal en raden [...] aan de Heren XVII of de kamer Zeeland. 1748 januari 13 en 23, January 1748.

¹⁵ Bruijn et al., *Shipping*, vol. II, 1979: 434-435; idem, vol. III, 1979: 322-323.

The second journey started on 3 January 1736, when the ship left Rammekens under the command of Pieter Bruis with 116 seafarers, 63 military personnel and 15 craftsmen. She reached Batavia on 11 September. The stop-over was short, as on 2 November, the vessel set sail again and arrived at Rammekens on 6-6-1738. On board were 65 seafarers, 12 military personnel, five craftsmen, seven *impotenten* and nine passengers. The cargo that was transported amounted to a value of F153,214.¹⁶

On 29-9-1738, the vessel departed Rammekens again. This time, the *Vlissingen* was under the command of Anthonie Uiterschouw. The ship arrived at Batavia seven months later, on 2 May 1739. On board were 115 seafarers, 60 military and three craftsmen. As on all of its voyages, the ship sailed for Zeeland and carried cargo for that same regional office. After arrival, the *Vlissingen* was despatched to Bengal, which she left again on 25-11-1739. The ship arrived at Rammekens on 10 July 1740, with 85 people on board. Their ranks were not specified for this trip. The estimated value of the cargo was F417,182.¹⁷

The fourth and last successful return journey of the *Vlissingen* started on 22-5-1741 from Rammekens under the command of Huibert Tiebout, with 102 seafarers and 55 military. This time, the voyage to Batavia took more than a year. On 12 June 1742, the ship reached the headquarters of the VOC in the Dutch East Indies. She was apparently engaged in inner-Asian shipping thereafter, as the vessel departed from Bengal on 1-2-1745. After a journey of nearly nine months, the roads at Rammekens were reached on 22 October of that year. On board were 78 persons but their ranks were not specified. On this last homeward voyage, the *Vlissingen* carried cargo for Zeeland to the value of F642,945.¹⁸

The last journey of the *Vlissingen*; 1747

In 1746, it was decided to make an inventory of the ships that were available for fleets that were to be dispatched in the months to come. The directors of the regional offices made several suggestions, which were approved during the meetings of the *Heren XVIII*. One document mentions the ships from the Zeeland chamber that were available for the winter fleet:¹⁹

Lijste van schepen [...] ter camer Zeeland in voorraet tot de Equipagie Ao 1746
Westcappel 145 vt
Woitkensdorp 145 vt
Nieuw Walcheren 145 vt
Gustaaf Wilhem (sic) 150 vt
Vlissingen 130 vt.

¹⁶ Bruijn et al., Shipping, vol. II: 446-447; idem, vol. III: 340-341.

¹⁷ Bruijn et al., Shipping, vol. II: 464-465; idem, vol. III: 352-353.

¹⁸ Bruijn et al., Shipping, vol. II: 480-481; idem, vol. III: 376-377.

¹⁹ RAD 250, Lijsten van schepen van kamer Zeeland, 1738-1750.

The *Vlissingen* formed part of the so-called 141st. *equipage* for the period 1745 – 1746. The various tasks necessary to prepare the ship were executed under the overall supervision of Director Schorer, of the Zeeland office of the VOC. Parallel to the preparations that were necessary to equip the vessels of the outward-bound fleet, other tasks were also executed. These included the engagement of officers and crew. As early as 3 February 1746, the master of the *Vlissingen*, Adriaan Kakelaar from Middelburg, was signed on by Director Matthias. Several months later, the assistant-merchant Jacob Cornelis Ockersse from Amsterdam signed his contract under the watchful eye of Director N.Reijgersberge.²⁰

Nearer to the time of departure, other senior staff was engaged. These included the First Mate, Jacob Rijx from Veere; the Second Mate, Pieter van den Eede from Vlissingen; the Third Mate, Daniel Roelvink from Amsterdam; the first barber-surgeon, Anthonij de Maar from Middelburg; sick comforter Georg van Diest, who originated from Delft; and Georg Diderik Zand from Breda, the commander of the military. VOC director Van de Manderen engaged the first and second mates, while Director Matthias did the same for the first barber-surgeon and the commanding officer of the military. Shortly before the planned departure, the crew was engaged to reduce wages and to prevent desertion. During a meeting on Thursday 15 December, approval was given for the recruitment of prospective seamen the following week. Nevertheless, there were some problems as far as personnel were concerned. In the case of the *Vlissingen*, no senior sailmaker could be found to travel with the ship. Eventually, a suitable candidate was selected, but had to return immediately to the Dutch Republic after arrival in Batavia. In another case, a passenger who was travelling on the vessel to start new employment as an assayer in Ceylon, applied to the directors for permission to transport extra personal belongings. This was unanimously declined. A rather critical comment in the minutes of the meeting of 2 January 1747 reads that this person, Loijs Herze, acted: "...as if he was a junior-merchant". The directors were much more courteous towards the wardens of the orphanage of Dordrecht, who requested to convey several letters and documentation, destined for the orphanage in Batavia. The directors of the Zeeland chamber of the VOC decided to approve this request and informed the orphanage in Dordrecht accordingly.²¹

In the mean time, the *Vlissingen* had already been towed from Middelburg to the roadstead, through the canal of Welsingen. Permission for this was granted on Monday

²⁰ RAD 235, Ontwerpen voor de begeving van officiersplaatsen op de schepen van kamer Zeeland. 1730 – 1761; RAD 246, Stukken betreffende uitgevaren schepen van kamer Zeeland met aantekeningen omtrent de data van vertrek, lengte in voeten, enz. 1687 – 1752; VOC 7262, Minuut-resoluties van de kamer Zeeland, 1745 januari 4 – 1749 maart 24, 3 February 1746.

²¹ RAD 172, Minuut notulen van de vergaderingen der bewindhebbers van de kamer Zeeland, opgesteld door S.Radermacher, 1838 – 1754, 10 October 1746, 2 January 1747; RAD 235, Ontwerpen voor de begeving (...), 1730 – 1761; VOC 7262, Minuut-resoluties (...), 1745 januari 4 – 1749 maart 24, 12 September, 5 December, 15 December, 19 December, 22 December 1746; VOC 7301, Kopieboek van uitgaande missiven van de kamer Zeeland aan de Heren XVII, de verschillende kamers en anderen, 1746 januari 4 – 1751 december 30, 22 December 1746.

31 October 1746. On the roadstead, the crew was taken aboard, together with additional equipment and money for the East. For security reasons, this was only done shortly before departure. In the minutes of the meetings it is recorded that on Thursday 29 December 1746 the instructions for the ship had been compiled. These contained sailing instructions, code books and other documents. That same day, the treasurers were allowed to dispatch F50,000 with the *Vlissingen*. This money may have been used as part payment for the deficit that the Zeeland office had in contributing to the *Eijsch der contanten*. This annual request from the Asian offices of the VOC shows the shortage of currency during specific periods. The resolutions of the meetings of the *Heren XVII* of 13 March, 28 August and 1 September 1747, indicate that especially Zeeland had a serious shortage. It is therefore not illogical to assume that the *Vlissingen* may well have carried a substantial amount of coinage. This could explain why large quantities of copper doits have been found in the Meob Bay area over the years.²²

Exactly one week later, final preparations for departure were approved. The pilot Pieter Joossen had been selected to guide the ship through the English Channel, and some of the directors of the Zeeland chamber had been chosen to bid farewell to officers and crew of the vessel. At 08.00hrs on the morning of 9 January 1747, the *Vlissingen* finally raised anchor and headed for the open sea. That same day, after prayers had been said and the meeting of the Zeeland *kamer* continued, the directors who had seen the vessel off reported that everything had been finalised according to plan. The departure of the ship was also reported to the *Heren XVII* and the other regional offices. This was combined with a New Year's wish. Two days after departure, the *Vlissingen* had passed the English Channel and was sailing in the northern part of the Atlantic Ocean. On that day, Master Adriaan Kakelaar wrote to the directors of the Zeeland office to report that after the ship had left the roads, he had found that two able seamen, or *bosschieters*, were missing. As a replacement, he had entered three new crew members on the musterroll. It was also reported that pilot Pieter Joossen had left the ship near the Scilly Isles. Kakelaar concluded his letter with: "all is well".²³

Some time after this message, fate struck, though it is not clear what exactly happened to the *Vlissingen* and its crew. An anonymous and undated reference in one of the shipping lists states that the ship, while outward-bound, "sprang" in the English Channel: "Uijtzeilende in 't canaal gesprongen". This indicates that material damage was done to the vessel, possibly due to its age or as a result of collision with a sand bank. The poor state of ship and crew was confirmed in a letter from the officers aboard, who

²² VOC 222, Zakenindex op de resoluties van de Heren XVII, 1737 – 1784; VOC 7262, Minuut-resoluties (...) 1745 januari 4 – 1749 maart 24, 31 October, 29 December 1746.

²³ RAD 171, Particuliere notulen, voor het grootste gedeelte opgemaakt door S. en D. Radermacher van de vergaderingen van bewindhebbers der kamer Zeeland, 1670, 1730 – 1800, 9 January 1747; 7262, Minuut-resoluties (...) 1745 januari 4 – 1749 maart 24, 5 January, 9 January 1747; VOC 7301, Kopieboek van uitgaande missiven (...) 1746 januari 4 – 1751 december 30, 9 January 1747; VOC 12.123, Aanneem-, betaals- en belastrollen en sterflijsten van de opvarenden op voor de kamer Zeeland uitgevaren schepen, met aantekeningen betreffende ontvangen voorschotten, under Vlissingen, 1746.

wrote to the Zeeland *kamer* on 13 March. At the time, not much progress had been made and the *Vlissingen* was still in the North Atlantic. As a result of this, the Zeeland office dispatched a vessel to render assistance, but no further reference to this mission could be traced. On 4 May, a letter from the VOC correspondent in England, Gerard Bolwerk, was received. From this, it becomes clear that the ship took on an English pilot, probably because the vessel was having severe problems. The next day, the directors answered to Bolwerk that he was allowed to pay the pilot, Mr. Bowden, the salary he had requested. In correspondence from the governor at the Cape of Good Hope to the governor-general and council in Batavia, dated 6 October 1747, reference is made to the bad condition of the ship: "after having endured a lot". The letter continues by stating that the ship finally entered an English port.²⁴

What happened afterwards is not known, but it is clear that the *Vlissingen* did not return to the Dutch Republic. It might be that repairs were undertaken while in port, but at some stage her master decided to continue the voyage. Nothing more was heard of the ship and people back home started becoming worried. An indication of this is given in a seemingly insignificant, anonymous note that has been preserved in one of the musterrolls of the *Vlissingen*. It states that no news was received and that in all probability the vessel had perished: "...en van welk schip tot nog toe niets is vernomen, en dus na alle aparentie daarmede verongelukt is". Soon, rumours developed and a reference to this is made in correspondence between the governor at the Cape, H. Swellengrebel, to the governor-general and council in Batavia. In this letter, Swellengrebel refers to the fact that he had received news from the arriving ship *Baarsande* that had left the Dutch Republic one-and-a-half months after the *Vlissingen*. He was told that the rumour was spreading in the Netherlands that the *Vlissingen* had exploded. This assumption may be explained by the word 'springen', which at the time could both mean 'explode' or 'spring'. Other references only make mention of the fact that the *Vlissingen* was missing. Letters from the Cape of Good Hope to the *Heren XVII* and the Amsterdam office, as well as to the *kamer* Zeeland, refer to this fact.²⁵

Nearly two years later, the *Vlissingen* was not yet erased from memory. On 31 December 1748, the governor-general and council in Batavia wrote to the *Heren XVII*, stating that the ship had not arrived at its destination. Finally, the directors of the VOC gave up all hope that the *Vlissingen* and its crew would ever be seen again. Although no

²⁴ VOC 4934, Lijsten van voor de VOC uitgevaren schepen, met aantekening betreffende het jaar van uitvaren, van de kamers waarvoor werd uitgevaren en van het uiteindelijke lot van het schip, 1603 – 1794, under *Vlissingen*; VOC 7262, Minuut-resoluties (...) 1745 januari 4 – 1749 maart 24, 10 April, 4 May 1747; VOC 7301, Kopieboek (...) 1746 januari 4 – 1751 december 30, 5 May 1747; VOC 9160, Kopie-missiven en -rapporten ingekomen bij gouverneur-generaal en raden uit Kaap de Goede Hoop, 1747 oktober 6 – 1748 september 30, 6 October 1747.

²⁵ VOC 9159, Kopie-missiven en -rapporten ingekomen bij gouverneur-generaal en raden uit Kaap de Goede Hoop. 1746 september 28 - 1747 september 7, 227; VOC 10.870, Kopieboek van uitgaande missiven van de gouverneur en raden van Kaap de Goede Hoop, 1747, 12 August 1747; VOC 12.123, Aanneem-, betaals- en belastrollen en sterflijsten (...) 1746, under *Vlissingen*.

further references to the ship were found, the documents give an indication of possible reasons for its loss.²⁶

On the same day that the ship departed the roadstead at Rammekens, the governor and council at the Cape wrote to the governor-general and council in Batavia. They stated that aboard the vessels calling at Table Bay in 1746 were many sick, while a great number of deaths had occurred during the journeys. Of those who had been brought ashore and had barely survived, several collapsed and died. The same applied to many ships that called there during 1747. An example is the *Oud Berkenroode*, arriving with 30 sick, while 70 of the crew had died on the way to the Cape. This ship had left two days before the *Vlissingen* from the roadstead at Texel. Other ships with similar problems were the *Domburg*, with 14 dead and 20 sick; the *Hagedis*, 14 dead and 2 sick; the *Duijnhof*, with 38 dead and 9 ill people; and the *Hogersmilde*, with 82 dead and 50 sick. Bearing in mind that the *Vlissingen* reported that many of its crew were already in a bad shape when still in the North Atlantic, it is highly likely that illness and death played a role in the demise of the vessel, besides the structural damage that the ship had obviously incurred.²⁷

Another contributing factor might have been bad weather at the time that the *Vlissingen* was crossing the Atlantic. An indication of this is given in further correspondence from the Cape, where, it is mentioned that during the evening of 1 June 1747, a ship was observed near Robben Island. Two days later, the people in the Cape Castle received a letter, informing them that the vessel was the *Westhoven*. The people aboard had first sighted the African mainland on 3 May and from this observation it turned out that they were close to Cape Agulhas. Shortly thereafter, a storm picked up from the NNE and NNW, as a result of which they set out to sea under a westerly course. The *Westhoven* had to stay at sea for several weeks before the bad weather conditions abated, and it wasn't until 31 May that they approached the shore again, this time near Table Bay.²⁸

People on board

Archival documentation scrutinized to date has allowed for an impression of events that occurred shortly before the *Vlissingen* sailed and the first few weeks at sea. In the above, reference was also occasionally made to some of the people who were aboard. With the discovery of the complete muster rolls of the officers, crew and soldiers who departed with the ship to Batavia on 9 January 1747, a most important addition to the vessel's history has been secured. These rolls will not be presented here *in toto*. Nevertheless, their existence must be mentioned, as they may provide valuable

²⁶ J.E. Schooneveld-Oosterling, (ed.), *Generale missiven van Gouverneurs-Generaal en Raden aan Heren XVII der Verenigde Oostindische Compagnie*, The Hague, Rijks Geschiedkundige Publicatiën 232, 1997: 725; VOC 7263, Minuut-resoluties van de kamer Zeeland, 1749 maart 27 – 1755 december 29, 41.

²⁷ VOC 7262, Minuut-resoluties (...) 1745 januari 4 – 1749 maart 24, 10 April 1747; VOC 10.870, Kopieboek (...). 1747, 9 January, 29 May, 20 June 1747.

²⁸ VOC 10.870, Kopieboek (...). 1747, 6 June 1747.

information at a later date, especially if archaeological work on the assumed wreck site can be undertaken. The specific value of the muster rolls for this phase is that they provide an opportunity to correlate names of individuals to potential finds that may have been marked with their names or initials. This would allow for positive identification of the site as that of the *Vlissingen*.²⁹

As was already indicated above, a ship of 130 feet had an average complement of 180 people, divided into 120 seafarers and 60 military personnel. The muster rolls of the *Vlissingen* nevertheless show greater numbers. A total of 139 seafaring officers and sailors are mentioned, as well as a complement of 84 military personnel and four artisans who were obviously destined to work in Asia. This last group included one blacksmith, two bricklayers and one carpenter. The total number of those aboard was thus 227. It is highly likely that this increase in personnel was due to the fact that many people fell ill during the voyage or were already sick before departure. Mortality rates during the eighteenth century were higher than during the preceding century, particularly after 1730. In fact, the period 1740 – 1750 was extreme when compared to other periods. During this decade, 10.2% of those aboard died before the Cape of Good Hope was reached and about 13.3% during the total outward-bound voyage. This is considerably more than the average mortality rate of 4%. Although an adequate explanation for this has not been established yet, greater overcrowding, deteriorating physical quality of the crews, epidemics such as typhoid and other negative factors may well have played a role.³⁰

The muster rolls from the *Vlissingen* confirm general patterns in the employment of VOC personnel. The majority of seafarers came from the coastal provinces of the Dutch Republic. Nevertheless, there was also a contingent of foreigners aboard that originated from other coastal areas along the North Sea (Hamburg, Bremen), the Baltic (Riga, Koningsbergen, Stockholm), England (Bristol) and even the Mediterranean (Genoa). The percentage of foreigners among the military personnel was higher. These came from such places as Germany, Austria, France, Italy, Spain and Switzerland. The rolls are quite extensive and state not only the names of individuals, their place of origin and their rank and pay. In many cases previous seafaring experience and the quantity of luggage that individuals were allowed to take with were also recorded. In addition to this, the rolls indicate debts that were incurred and that had to be repaid to sureties whose names have been recorded as well.³¹

²⁹ VOC 12.064, Betaalsrollen van de opvarenden op voor de kamer Zeeland uitgevaren schepen. Vlissingen, 1746; VOC 12.123, Aanneem-, betaals- en belastrollen en sterflijsen (...). 1746, under Vlissingen; VOC 12.276, 'Verzoekboeken' bevattende verzoeken van VOC-dienaren om overmaking van een deel van de verdiende gage aan personen in de Republiek, under Vlissingen, 1746.

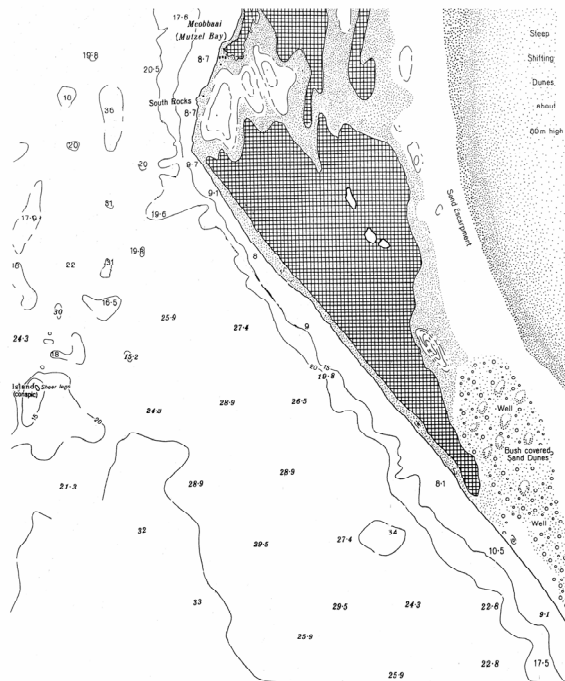
³⁰ Bruijn et al., *Shipping*, vol. I: 145, 162-163.

³¹ VOC 12.064, Betaalsrollen (...), under Vlissingen; VOC 12.123, Aanneem-, betaals- en belastrollen en sterflijsen (...) 1746, under Vlissingen.

Fieldwork in Meob Bay

Location and description of the site

Meob Bay is situated some 180km from Walvisbaai, to the north, and 250km from Luderitz to the south. The area is divided by a headland, located at approximately 24°36'45" south and 14°35'40" east. To the south of the headland, the shoreline is relatively straight and runs in a northwesterly to southeasterly direction. The approximately 20km long stretch of beach, from the headland to the turn-off for the old Consolidated Diamond Mines camp at Fischersbrunn, consists of a narrow band of sand which is less than 50m wide in places. Behind this, large salt pans stretch in an easterly direction over a distance of some kilometres.³²



6. Detail of a modern chart of the Meob Bay area, showing the headland and the band of sand adjacent to the high-water mark in the southern section. At this place, many coins were found over the years. (South African Navy, Chart SAN 109 1:150,000 South Rocks to Spencer Bay, Cape Town, 1975).

³² Director-General of Surveys, *Map South West Africa 1:50,000*, sheet 2414DA, Pretoria, 1980; South African Navy, *Chart SAN 109 1:150,000 South Rocks to Spencer Bay*, Cape Town, 1975; Mary K. Seely, "Namib Dune Coast reconnaissance 1973", *Namib und Meer*, 1974-1975, 5-6: 17; The Hydrographer S.A. Navy, *South African Sailing Directions*, Volume I, *General information*, Kenwyn, Directorate of Hydrography, 1975: 29-30; idem, Volume II, *The coasts of South West Africa and the Republic of South Africa from the Kunene River to Cape Hangklip*, Kenwyn, Directorate of Hydrography, 1975: 31.

The narrow sand band consists of yellow-coarse sand, probably of both marine and aeolian origin, intermixed with thin patches of dark-grey and blackish deposits. These consist of eroded mica and possibly magnetite. Magnetite has also been reported by geophysicists and the presence of this mineral must be noted as it could possibly cause interference with a suggested future magnetometer survey in the nearshore zone.³³

The narrow band that presently forms the beach may originally have been part of a series of sandbanks that were formed as a result of sediment accumulation. Part of this sediment originates from the Lange Wand area, to the south, and was transported by the prevailing northerly current. As a result, the shallow inshore zone became separated from the sea and was transformed into the large salt pans that nowadays separate the beach from the interior.³⁴

Previous fieldwork

The September 2001 survey that is described in more detail hereafter was not the first archaeological project that was undertaken in the area. In 1968, Sandelowsky and Pendleton reported on fieldwork in the area, focussing on prehistoric remains of hunter-gatherer cultures, also referred to as *Strandlopers*.³⁵ These concern mainly midden sites, together with associated artifacts such as stone tools, worked animal bone and pottery, as well as human skeletal remains. They also reported finding copper VOC coins, copper wire and iron fragments. These artifacts obviously represent a European influence, dating to the last 350 years or so. During a field trip undertaken in 1973, extensive middens were reported in the area, containing potshards, bone, ostrich eggshell material and stone tools. Reference was also made to relatively recent features, but coins were not mentioned in this report.³⁶

In 1993, after it had been established that the VOC coins most probably originate from the *Vlissingen*, The Namibia Underwater Federation (NUF) undertook a project that was aimed specifically at finding their source.³⁷ This project was approved by the Namibian National Monuments Council and a permit was issued. Work focussed on a sample survey of a stretch of beach where numerous coins had been observed in the past. A total of ten grid squares were laid out. From a randomly selected mid-point (BO), four of these were situated to the north and recorded as N1 to N4. The same procedure was

³³ W.S. Barnard, "Die fisiografie van die Sentrale Duinsee van die Namib", in: Suid-Afrikaanse Geografiese Vereniging, (ed.), *Suid-Afrikaanse Geografiese Vereniging Konferensie 1972*, s.l., Suid-Afrikaanse Geografiese Vereniging, 1972: 3-4, 17-18; Geological Survey of Namibia, *Map 1:250,000 geological series*, sheet 2414 Meob Bay, Windhoek, 2000; Bruno E.J.S. Werz, *The 'Vlissingen' project. Report on the 2001 fieldwork phase in Meob Bay; 16-21 September 2001*, Cape Town, 2001.

³⁴ Mr G. Scholtz, pers. comm., 2001; The Hydrographer S.A. Navy, *Sailing Directions*, vol. I: 47-50.

³⁵ Beatrice H. Sandelowsky, Wade C. Pendleton, "Field work at Meob Bay", *Namib und Meer*, 1970, 1: 48-51, 53.

³⁶ Seely, "Namib": 22.

³⁷ Schoeman, von Schumann, *Meob*.

followed south of the mid-point and these grids were recorded as S1 to S4, although an additional grid, SS1, was positioned between S2 and S3. Each grid measured 30 x 30m and was subdivided in nine 10 x 10m squares. Within these grids, the number of coins that were discovered was recorded (Appendix 1).³⁸

During this survey, 928 items were recovered. Of these, 916 were copper VOC doits. Other finds consisted of three copper coins that were referred to as either *stuivers* or *rijders*, and two silver coins, dating from 1740. These were correctly identified as pillar dollars. These coins also provide for a *terminus post quem* for the shipwreck and further support the theory that the wreck is indeed that of the *Vlissingen* (Appendix 3).³⁹

The follow-up project that was undertaken a year later followed a very similar methodology. During this phase, four additional grids were demarcated in between some of those that had been established during 1993.⁴⁰ Details of the nature and number of artifacts that were found, as well as additional information on the procedures followed at the time are still outstanding. Nevertheless, should this information become available in future, it is not expected that it will shed more light on the position of the wreck.

The 2001 survey

During the course of September 2001, members of the NUF and the Namibian National Monuments Council undertook an archaeological survey in the Meob Bay area under supervision of the author. The aim was to collect further information to assist in the formulation of a plan to locate the shipwreck of the *Vlissingen*. To this effect, terrestrial archaeological test excavations, field walks and aerial as well as underwater observations were conducted. The survey was undertaken from 16 to 21 September 2001 and formed a logical progression to work that had been undertaken previously.⁴¹

Test excavations

The first objective of the 2001 campaign was to observe the sites at which the 1993 and 1994 surveys had been undertaken. It soon became clear that the lack of suitable datum points had proved a problem for the earlier surveys. Only one fixed datum point was established at the time but the position of this point was incorrectly recorded. The 2001 survey re-established its position as 24°36'23/2"S and 14°38'24/9"E, resulting in a discrepancy of between 175m in a north-south direction and 430m east-west. A

³⁸ Ibid.: 10, 12-14.

³⁹ Ibid.: 14-18.

⁴⁰ Mr G. von Schumann, pers. comm., 2001.

⁴¹ Bruno E.J.S. Werz, *First interim report on the Meob Bay shipwreck project, Namibia*, Cape Town, 2001, 1-3, 5; idem, '*Vlissingen*' project; Bruno E.J.S. Werz, Gunter von Schumann, *The VOC ship Vlissingen, s.l.*, 2001.

direct result of this was that the exact positions of the 1993 grids could only be reconstructed approximately.⁴²



7. Systematic metal detector searches in a grid section before excavation is undertaken. (Meob Bay 2001 Survey participants, Namibia Underwater Federation).

After the main datum point for the 2001 survey had been established, the approximate positions of grids N1 and mid-point were reconstructed and marked. In between these points, at which major concentrations of coins had been discovered in 1993, new excavation areas were demarcated (Appendix 1). These were coded Alpha, Bravo and Charlie. The reasoning behind the establishing of additional grid sections in between N1 and mid-point was to observe if a more detailed concentration pattern of coins could possibly be distinguished. Each of these areas consisted of two sections; one grid section on the beach adjacent to the high-watermark and one further inland. The corner points of all grids were recorded by GPS, except for the beach grid at location Delta which was destroyed by high water soon after it was established. The same procedure was followed for excavation areas Delta, Echo and Foxtrot (Appendices 1-2).⁴³

Excavation commenced in section Delta, as a project participant indicated that a substantial number of coins had previously been recovered at this location in 1992. This had resulted in the 1993 Meob Survey. Grid section Delta was located opposite a hillock, situated approximately 90m from the high-water mark at 24°37'16/6"S and 14°39'19/5"E. A first section, consisting of three adjacent 10 x 10m squares, was positioned close to the high-water mark in a west-east direction, towards the hillock. This section did not reveal any material. Next, a larger grid, measuring 31 x 50m and orientated 247°-67°, was demarcated between the beach grid and the hillock. Within this grid, 29 VOC coins were recovered from depths ranging in between 0.03-0.17m.

Work continued along these lines at point Charlie. First, three 10 x 10m squares were established on the beach, at a distance of 25-55m from the high-water mark, but these

⁴² Werz, *'Vlissingen' project*: 13-14.

⁴³ Schoeman, von Schumann, *Meob*: 12-13; Werz, *'Vlissingen' project*: 13-14.

did not reveal any material. Further inland, at 60m from the shore, a 30 x 100m grid was opened up. Only 45 coins and one small brass object were recovered from it as was the case with sections Charlie and Delta, nothing was found in the smaller beach grid at point Alpha. In the bigger inland section however, which measured 4,500 square metres, a total of 23 coins were found. When work on Alpha was completed, the team moved to Echo where a total of 28 coins were recovered.



8. Excavation in one of the grid sections by members of the Namibia Underwater Federation (NUF). (Meob Bay 2001 Survey participants, Namibia Underwater Federation).

The last section to be excavated was Foxtrot. Foxtrot was positioned in between the sea and the location where a large fragment of a copper cauldron, which may well have originated from a VOC ship, had been discovered some days previously. As this position was only 100m from the position that had been planned for Foxtrot originally this slight adjustment seemed justified. Even more so as it was hoped that more objects, other than coins, would have been deposited in this section. Foxtrot proved to be the area with the highest density of coins. In this section, one coin was located per 46 square metres on average and a total of 97 coins were found (Appendix 3).⁴⁴

Field walks

The objective of field walks that were undertaken was to search for remains of the wreck and a possible survivor camp, as some people could possibly have survived the foundering of the ship at the time. Upon reaching shore, their first objective would have been to find food and drinking water, as well as shelter from the elements and protection against animals and indigenous people.

The departure point was the fixed datum point, in between grids Echo and N1, and from there in a southerly direction along the beach. The emphasis was on this section, as analysis of the 1993 results had led to the conclusion that the shipwreck must have been deposited somewhere to the south-southwest of N1. Due to good visibility and the

⁴⁴ Werz, *'Vlissingen' project*: 15-16.

flat landscape, many items were observed farther into the interior. In most cases the positions of these were recorded, to a maximum distance of approximately 1km from the high-water mark.

Most of the material located on the beach and in the salt pans consisted of flotsam. Few items were diagnostic. Their general appearance and the fact that several pieces contained brass pins indicated that the finds probably date to the 19th or 20th century. None of the wood pieces that were found gave any indication of having been part of an 18th century Dutch East-Indiaman.

An interesting find was a large fragment of a copper cauldron. Its position was recorded as 24°37'24/2"S and 14°39'28/2"E. The fact that the fragment showed fairly recent breaks and was not oxidized indicates that it must have been buried for most of its life. It is quite possible that it was preserved in the sea, under a layer of sand, and was only washed out relatively recently. Even though it can not be stated with absolute certainty that the cauldron fragment originates from the *Vlissingen*, it is virtually identical to similar items recovered from other VOC shipwrecks, including the *Oosterland* and the *Waddinxveen* in Table Bay.⁴⁵ Another find consisted of a silver coin that was identified as a pillar dollar minted during the 1730s. The coin's location was approximately 1,220m south of Foxtrot, at 24°38'04/3"S and 14°40'03/1"E. The discovery of the cauldron fragment and the silver coin thus provide further indications for the approximate location of the shipwreck that will be described hereafter.



9. The copper cauldron fragment that was located during the 2001 campaign. In the background, the salt pans that border on the band of sand adjacent to the high-water mark. (Meob Bay 2001 Survey participants, Namibia Underwater Federation).

Diving survey

Parallel to the excavations and field walks that were undertaken, several dives were made. The objective was to obtain more information on underwater conditions. A total of

⁴⁵ Werz, *'Een bedroefd*: 72-73, 113.

five dives were executed from the beach. Shore entries were made from Echo, N1, Mid-point and Foxtrot.

On the basis of shore observations and specifically the wave pattern, it was assumed that the bottom in the nearshore zone is not flat but characterized by large sandbanks that run more or less parallel to the beach. This was confirmed during the diving survey. Upon leaving the shore, the part of the beach that is submerged shows a steep incline. This leads down to a gully of 4-6m deep, only metres away from the low-watermark. Further out to the west and behind the gully, a first row of sandbanks is situated. Water depth on top of these banks ranges from 2m to less than half-a-metre. Behind this is a second gully, also with a depth of 5-6m. Further westwards is a second row of sandbanks, also orientated in a south-north direction.



10. From l. to r. F.Krenz, G.Scholtz and the author, preparing for a dive to check the underwater conditions. (Meob Bay 2001 Survey participants, Namibia Underwater Federation).

The sandbanks off Meob do not seem to be stable. It may be assumed that they change shape regularly, being constantly eroded. By the same token, there is a constant supply of sediment to the area from the Lange Wand. These circumstances cause a constantly changing pattern, with sandbanks being formed, eroded away and new ones being created in the place of older banks. Similar circumstances, although over a much larger area, are known elsewhere in the world. The Waddenzee, in the Netherlands, and the Goodwin Sands in the English Channel are cases in point. It has been observed that in these areas, shipwrecks that were deposited during the last 500 years or so are sometimes uncovered and subsequently covered again.⁴⁶

Aerial survey

As part of the 2001 survey, use was also made of a small plane to observe the area of interest from above. Two runs were made over the area, from the Meob headland to the

⁴⁶ Werz, 'Vlissingen' project: 17-19.

Lange Wand. The first run was made in a southerly direction, to the seaside of the nearshore zone at a height of 1000 feet. The whole coastal stretch was thus covered and recorded on video. Specific points of interest, such as rocky outcrops, were also recorded by still photography. The aerial observations further confirmed the presence of a double row of sandbanks parallel to the beach in most places. It also showed that a band of sand covers the nearshore zone and the area slightly further out. Beyond that, in deeper water, visibility seemed to improve considerably.⁴⁷

Summary and conclusions

The presence of large quantities of 18th century Dutch coins on a deserted beach in Namibia has been baffling people for many years. By identifying these coins, noting the conditions under which they were found and correlating the information obtained in this way with archival sources, a plausible explanation has been given for this occurrence. It seems highly likely that the coins were washed out from the wreck of a ship that foundered off Meob Bay. Through archival research, it was possible to identify the most probable candidate. The wreck in question is very likely that of the DEIC ship *Vlissingen* that was lost with all hands in 1747.

Initial fieldwork was undertaken in 1993. This focused on the retrieval of archaeological material under controlled conditions. By far the majority of these items consisted of coins. Their approximate positions were recorded and the finds documented, but hardly any analytical work was undertaken. A further fieldwork project was executed in September 2001. This aimed at accumulating information that will be vital for a future underwater investigation. It included terrestrial excavation and field walks, as well as diving and aerial surveys. Excavations were undertaken in five sections spread over a distance of approx. 3,290m along the shore. A total of 222 coins were excavated from the grids. Their dispersal pattern indicated that these finds are concentrated near the high-watermark, with densities decreasing further inland. This supports the viewpoint that their source is situated offshore. Based on the results of the surveys it can be concluded that the wreck or substantial parts thereof were most probably deposited south of grid sections N1-Mid-point. The distance between these points is approximately 2,220m. Future marine magnetometer scans will therefore have to concentrate on this area in an attempt to locate the wreck.

⁴⁷ Ibid.: 19.

Appendix 1. Relative grid positions 1993 and 2001 seasons.

| NORTH | | | |
|-------------|--------------------------|------------------|-------------|
| | Grid N4 (1993) | | |
| | Grid N3 (1993) | | |
| | Grid N2 (1993) | | |
| | Grids Echo (2001) | | |
| | | Approx. 500m | |
| | Grid N1 (1993) | | |
| | | Approx. 500m | |
| | Grids Charlie (2001) | | |
| | | 500m | |
| | Grids Bravo (2001) | | |
| | | 500m | |
| WEST | Grids Alpha (2001) | | EAST |
| | | Approx. 720-730m | |
| | Grid mid-point/BO (1993) | | |
| | | Approx. 160m | |
| | Grids Delta (2001) | | |
| | | 400m | |
| | Grids Foxtrot (2001) | | |
| | Grid S1 (1993) | | |
| | Grid S2 (1993) | | |
| | Grid SS1 (1993) | | |
| | Grid S3 (1993) | | |
| | Grid S4 (1993) | | |
| SOUTH | | | |

Appendix 2. 2001 grid positions, surface area and orientations.

| | |
|---|---|
| <p>Grids Alpha; Orientation 65° / 245°</p> <p><i>Beach:</i> 10 x 30m</p> <p>NW24° 36'55/4"S 14° 38'53/5"E NE 24° 36'54/8"S 14° 38'54/3"E SW24° 36'55/7"S 14° 38'53/8"E SE 24° 36'55/0"S 14° 38'54/6"E</p> | <p><i>Inland:</i> 30 x 150m</p> <p>NW24° 36'55/4"S 14° 38'54/6"E NE 24° 36'51/1"S 14° 38'58/6"E SW24° 36'55/0"S 14° 38'55/4"E SE 24° 36'51/8"S 14° 38'59/3"E</p> |
| <p>Grids Bravo; not excavated</p> | |
| <p>Grids Charlie; Orientation 60° / 240°</p> <p><i>Beach:</i> 10 x 30m</p> <p>NW24° 36'33/2"S 14° 38'32/5"E NE 24° 36'32/6"S 14° 38'33/4"E SW24° 36'33/4"S 14° 38'32/8"E SE 24° 36'32/8"S 14° 38'33/7"E</p> | <p><i>Inland:</i> 30 x 100m</p> <p>NW24° 36'32/3"S 14° 38'33/5"E NE 24° 36'30/1"S 14° 38'36/3"E SW24° 36'33/0"S 14° 38'34/2"E SE 24° 36'30/7"S 14° 38'37/0"E</p> |
| <p>Grids Delta; Orientation 67° / 247°</p> <p><i>Beach:</i> 10 x 30m</p> <p>NW NE SW 24° 37'19/0"S 14° 39'16/8"E SE</p> | <p><i>Inland:</i> 31 x 50m</p> <p>NW24° 37'17/6"S 14° 39'17/3"E NE 24° 37'16/3"S 14° 39'18/9"E SW24° 37'18/4"S 14° 39'17/9"E SE 24° 37'17/4"S 14° 39'19/6"E</p> |
| <p>Grids Echo; Orientation 43° / 223°</p> <p><i>Beach:</i> 10 x 30m</p> <p>NW24° 36'09/8"S 14° 38'09/8"E NE 24° 36'09/2"S 14° 38'10/5"E SW24° 36'10/0"S 14° 38'10/1"E SE 24° 36'09/4"S 14° 38'10/8"E</p> | <p><i>Inland:</i> 30 x 150m</p> <p>NW24° 36'09/0"S 14° 38'10/4"E NE 24° 36'05/8"S 14° 38'14/5"E SW24° 36'09/7"S 14° 38'11/2"E SE 24° 36'06/7"S 14° 38'15/2"E</p> |
| <p>Grids Foxtrot; Orientation 69° / 249°</p> <p><i>Beach:</i> 10 x 30m</p> <p>NW24° 37'27/0"S 14° 39'24/5"E NE 24° 37'26/3"S 14° 39'25/3"E SW24° 37'27/3"S 14° 39'24/7"E SE 24° 37'26/6"S 14° 39'25/5"E</p> | <p><i>Inland:</i> 30 x 150m</p> <p>NW24° 37'26/2"S 14° 39'25/2"E NE 24° 37'22/9"S 14° 39'29/3"E SW24° 37'26/9"S 14° 39'25/7"E SE 24° 37'23/6"S 14° 39'29/8"E</p> |

Appendix 3. Coin densities 1993 and 2001 seasons (from highest to lowest density)

| 1993 | | | |
|------|---------------|----------------------|------------------------------|
| 1 | Grid N1 | 900 sq m / 426 coins | 1 coin per 2 sq m |
| 2 | Grid Mid-P | 900 sq m / 261 coins | 1 coin per 3 sq m |
| 3 | Grid N2 | 900 sq m / 73 coins | 1 coin per 12 sq m |
| 4 | Grid S1 | 900 sq m / 70 coins | 1 coin per 13 sq m |
| 5 | Grid S2 | 900 sq m / 31 coins | 1 coin per 29 sq m |
| 6 | Grid N3 | 900 sq m / 24 coins | 1 coin per 38 sq m |
| 7 | Grid S3 | 900 sq m / 18 coins | 1 coin per 50 sq m |
| 8 | Grid SS1 | 900 sq m / 9 coins | 1 coin per 100 sq m |
| 9 | Grid N4 | 900 sq m / 8 coins | 1 coin per 113 sq m |
| 10 | Grid S4 | 900 sq m / 1 coin | 1 coin per 900 sq m |
| | | <i>Totals</i> | <i>9000 sq m/921 coins</i> |
| 2001 | | | |
| 1 | Grids Foxtrot | 4500 sq m / 97 coins | 1 coin per 46 sq m |
| 2 | Grids Delta | 1550 sq m / 29 coins | 1 coin per 53 sq m |
| 3 | Grids Charlie | 3000 sq m / 45 coins | 1 coin per 67 sq m |
| 4 | Grids Echo | 4500 sq m / 28 coins | 1 coin per 160 sq m |
| 5 | Grids Alpha | 4500 sq m / 23 coins | 1 coin per 196 sq m |
| | | <i>Totals</i> | <i>18,050 sq m/222 coins</i> |

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