

S. S. Pevensey

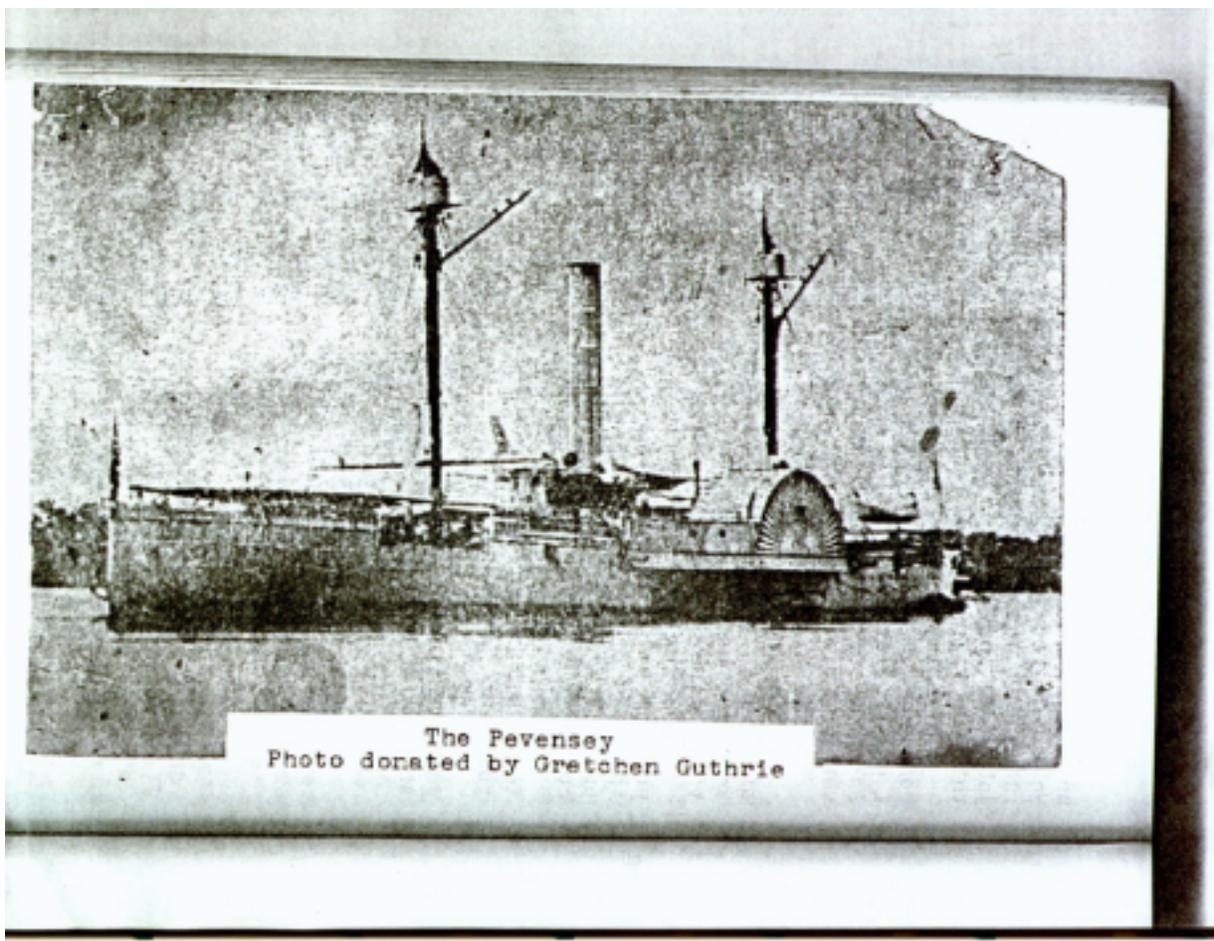
A stealth machine of the Confederacy

A Preliminary Archaeological Assessment of the “Iron Steamer” Wreck, Sunk at Pine Knoll Shores, NC

A History of the Vessel

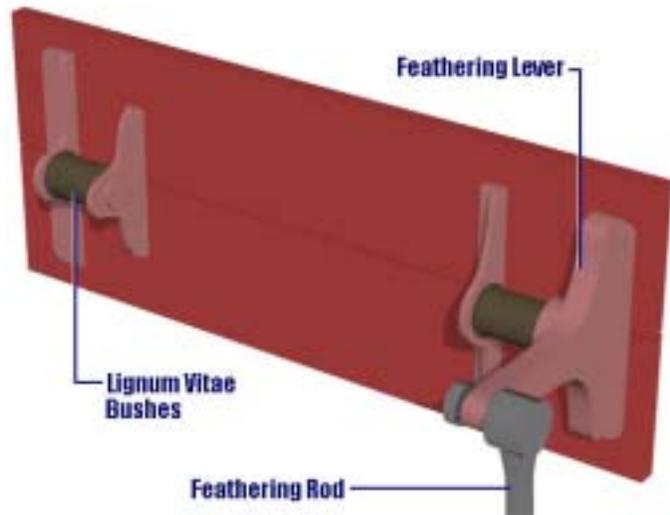
The SS Pevensey was an iron hulled side-wheel steamer used to run the Union blockade during the US Civil War. She measured 224.2 X 26.6 X 12.6 and was built by Charles Lungley of Deptford (London), sometime in early 1864. She was configured with a single smoke stack forward of the sidewheels and a simple schooner rig, consisting of two masts. She had two boats with square sterns on davits located starboard side aft, two surfboats located on her quarters and two more surf-boats on either side of her forward quarters. The vessel drew over eight feet fully loaded and was marked to draw up to 10 feet. She had the same shallow draft as other runners of her class, but had greater beam and depth of hold than others her size. This was an innovation used specifically on vessels in the cotton trade and allowed more of the product to be carried below deck, out of the weather.

Supposed photo of the *Pevensey*, donated by local sources. No date, origin or remarks were available.



This deep hold design was also used on *Pevensey's* sister ship, the *Nutfield*. The *Pevensey* also had full bulwarks, while others had only flush decks surrounded by pipe rails. Other near sisters from the same yard included *North Heath*, *Ellen*, and *Helen*.¹

The *Pevensey* may also have had another innovation particularly suited for running the blockade. The paddlewheels of the ship were fitted with a newly invented device called “Feathering paddlewheels”. These devices were an attempt to “re-angle” the paddles or floats of a paddlewheel so that it would strike the water with the most efficient angle of attack, thus causing less splash, less noise and better use of engine power, as it improved the “bite” that the float took of the water. The device used pivots and bronze bushings on the end of each float, making them swivel on the wheel frame, much like a Ferris wheel. The swivel angle was controlled by a second, much smaller wheel or gear that was



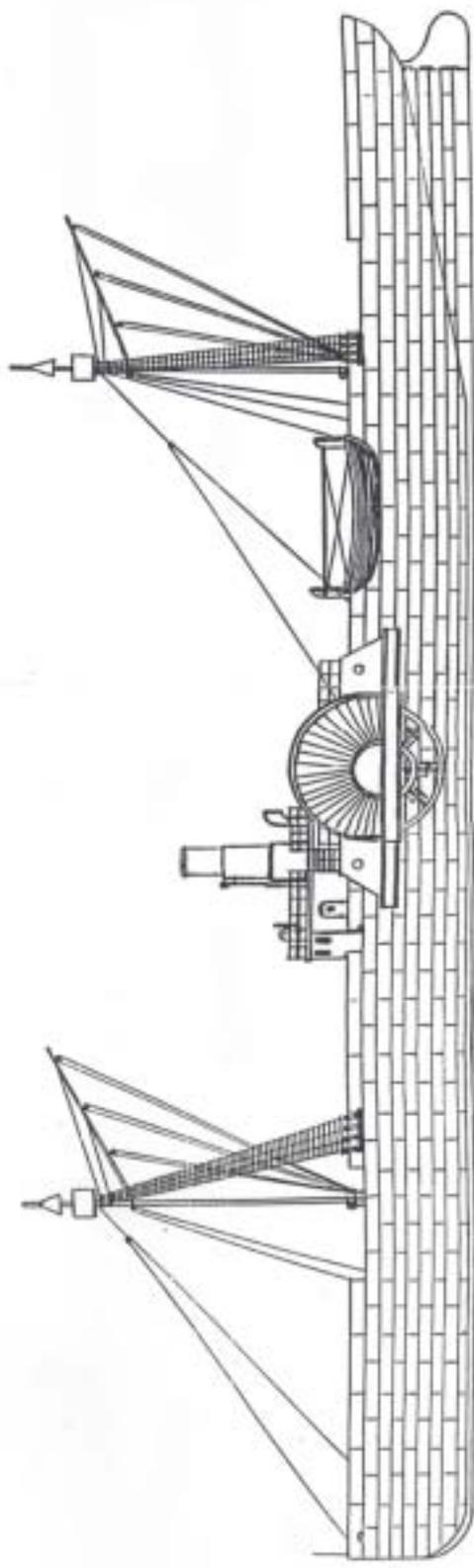
shaped into a lobe and connected to long connecting rods with ball joint ends, which in turn, connected to the paddles. As each paddle struck the water, it was rotated into a perpendicular angle to the water, while the paddle on the top rotation of the wheel, was angled somewhat out of position. The system was most effective, but was troublesome and often broke down.

Because of this, they were not often used on transatlantic vessels. The device was patented in England in 1829, by Elijah Galloway, and by 1850 was becoming very popular.² Their use declined later as the advantages of screw propulsion began to be seen on newer ships.

Images of the Feathering Paddlewheel system. Note the system shown in gray, and the bronze bushings that allowed each float to swivel. Images courtesy the Denbigh Project.

¹ Letter from Kevin Foster, Historian, National Park Service.

² *Denbigh, Archaeology of a Civil War Blockade Runner*, web site, <http://nautarch.tamu.edu/projects/denbigh/>

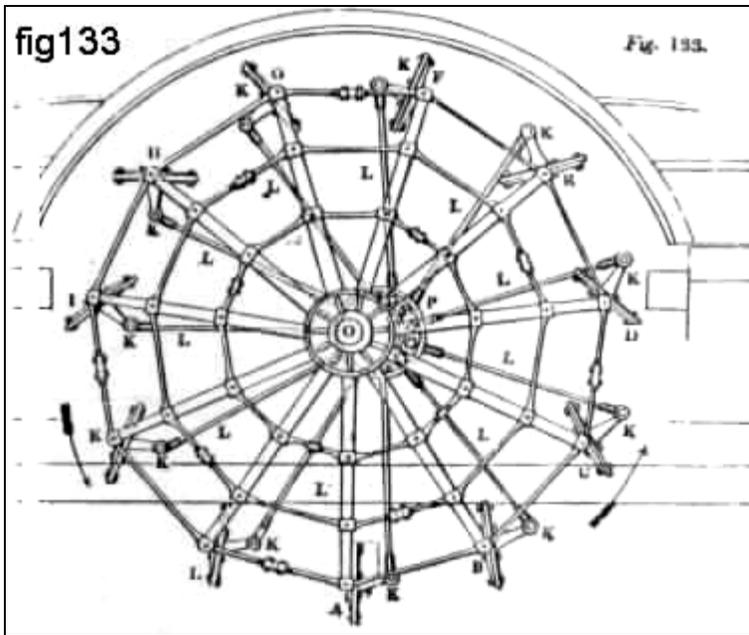


Artists conception of blockade runner
S. S. Pevensey
Drawing by Wayne Bobby Willis

The following account, by Dionysius Lardner, in *The Steam Engine Explained and Illustrated*, gives a more scientific explanation of the devices operation:

“The tendency, however, of the paddle entering the water at ii, in to form a hollow or trough, which the water, by its ordinary property, has a continual tendency to fill up. After passing the lowest Point A, " the paddle approaches the position is, where it as can be obtained at sea, would be attended with great objections; and the efficiency of its propelling action would not compensate for the dangers which must attend upon the helpless state of a sterner, deprived of her propelling agents.

Feathering paddle-boards must necessarily have a motion independently of the motion of the wheel, since any fixed position which could be given to them, though it might be most favourable to their action in one position would not be so in their whole course through the water. Thus the paddle board when at the lowest point should be in a vertical position, or so placed that its plane, if continued upwards, would pass through the axis of the wheel. In other positions, however, as it passes through the water, it should present its upper edge, not towards the wheel, but towards a point above the highest point of the wheel. The precise point to which the edge of the paddle-board should be directed is capable of mathematical determination. But it will vary according to circumstances, which depend on the motion of the vessel. The progressive motion of the vessel, independently of the wind or current, must obviously be slower than the motion of the paddle boards round the axle of the wheel; since it is by the difference of these velocities that the reaction of the water is produced by which the vessel is propelled. The proportion, however, between the progressive speed of the vessel and the rotative speed of the paddle boards is not fixed: it will vary with the shape and structure of the vessel, and with its depth of immersion ; nevertheless it is upon this proportion that the manner in which the paddle boards should shift their position must be determined. If the progressive speed of the vessel were nearly equal to the rotative speed of the paddle-boards, the latter should so shift their position that their upper edges should be presented to a point very little above the highest point of the wheel. This is a state of things which could only take place- in the case of a steamer. of a small draught of water, shallow-shaped, and so constructed as to suffer little resistance from the fluid. On the other hand, the greater the depth of immersion, and the less fine the lines of the vessel, the greater will be the resistance in passing through the water, and the greater will be the proportion which the rotative speed of the paddle-boards will bear to the progressive speed of the vessel. In this latter case the independent motion of the paddle board should be such that their edges, while in the water, be presented towards a point considerably above the highest point of the paddle wheel. A vast number of ingenious mechanical contrivances have been invented and patented for accomplishing the object just explained. Some of these have failed from the circumstance of their inventors not clearly understanding what precise motion it was meant to impart to the paddle board: others by which way for the paddle wheel with movable paddles, which patent granted to Elijah Gal was purchased by Mr. William Morgan, who made various alterations in the mechanism, not very materially departing from the principle of the invention. This paddle wheel is represented in fly. 133. The contrivance may be shortly stated to consist in causing the wheel which began the paddles to revolve on one centre, and the radial arms which move the paddles to revolve on another centre. A B C D E F O If I X L be the polygonal circumference of the paddle wheel, formed of straight bars, secured connected together at the extremities of the spokes or radii of the wheel which turns on the shaft which is worked by the engine; the centre of this wheel being at O. So far this wheel is similar to the common paddle wheel; but the paddle boards are not, as in the common wheel, fixed at A B C, so as to be always directed to the centre u, but so placed that they are capable of turning on an axis which are always horizontal, so that they can take any angle with respect to the water which may be given to them. From the centre, or the line joining the pivots on which these paddle-boards turn, there proceed short arms K, firmly fixed to the paddle boards at an angle of about 120°. On a motion given to this arm v., it will therefore give a corresponding angular motion θ the paddle board so as to make it turn on its pivots. At the extremities of the several arms marked x is a pin or pivot, which the extremities of the radial arms L are severally, attached, so that the angle between each radial L and the short paddle-arm x is capable of being changed by any force imparted to L; the radial arms are connected at the other end with a centre, round which they are capable of revolving. Now, since the points A B C, &c., which are the pivots on which the paddle-boards turn, are moved in the circumference I f a circle, of which the centre is o, they are always at the same distance from that point;



consequently they will continually vary their distance from the other centre P. Thus, when a paddle-board arrives at that point of its revolution at which the centre round which it revolves lies precisely be. I faced it to the centre O, its distance from the former centre 1 less than from any other position. As it departs from that outside, its distance from that centre gradually increases until it ,arrives at the opposite point of its revolution, where the centre o is exactly between it and the former centre then the distance of the paddle-board from the former centre is greatest.

This constant change of distance between each paddle-board and the centre P is accommodated by the variation of the angle he short paddle-board arm K; between the radial arm L and t -as. the paddle-board approaches the centre, r this gradually diminishes; and as the distance of the paddle-board increases, the angle is likewise augmented. This change in the magnitude of the angle, which thus accommodates the varying position of the paddle-board with respect to the centre P, will he observed in the figure. The paddle-board D is nearest to P; and it will be observed that the angle contained between L and K in there very acute; at B the angle between L and x is to a right angle; increases, but is still acute ; at G it increases at H it becomes obtuse; and at v., where it is most distant from the centre r, it becomes most obtuse. It again diminishes, and becomes a right angle between A and B. Now 14' this continual shifting of the direction of the short arm Y. is necessarily accompanied by an equivalent change of position in the paddle-board to which it is attached and the position of the second centre P is, or may be, so adjusted that this paddle-board, as it enters the water and emerges from it, shall be such as shall be most advantageous for propelling the vessel, and therefore attended with less of that vibration which arises chiefly from the alternate depression and elevation of the water, owing to the oblique action of the paddle- (225.) In the year 1833, Mr. Field, of the firm of Maudslay and field, constructed a paddle wheel with fixed paddle-boards, but each board 'being divided into several narrow slips arranged one a little behind the other, u represented in jig. 134. These divided bows he proposed to arrange in such cylindrical curves that they must all enter the 135. water at the same place in immediate succession, avoiding the shock produced by the entrance of the common board. These split paddle-boards are as efficient in propelling when at the lowest point as the common paddle-boards, and when they emerge the water escapes simultaneously front each narrow board, and is not thrown up, as is the case with common paddle(s)-³

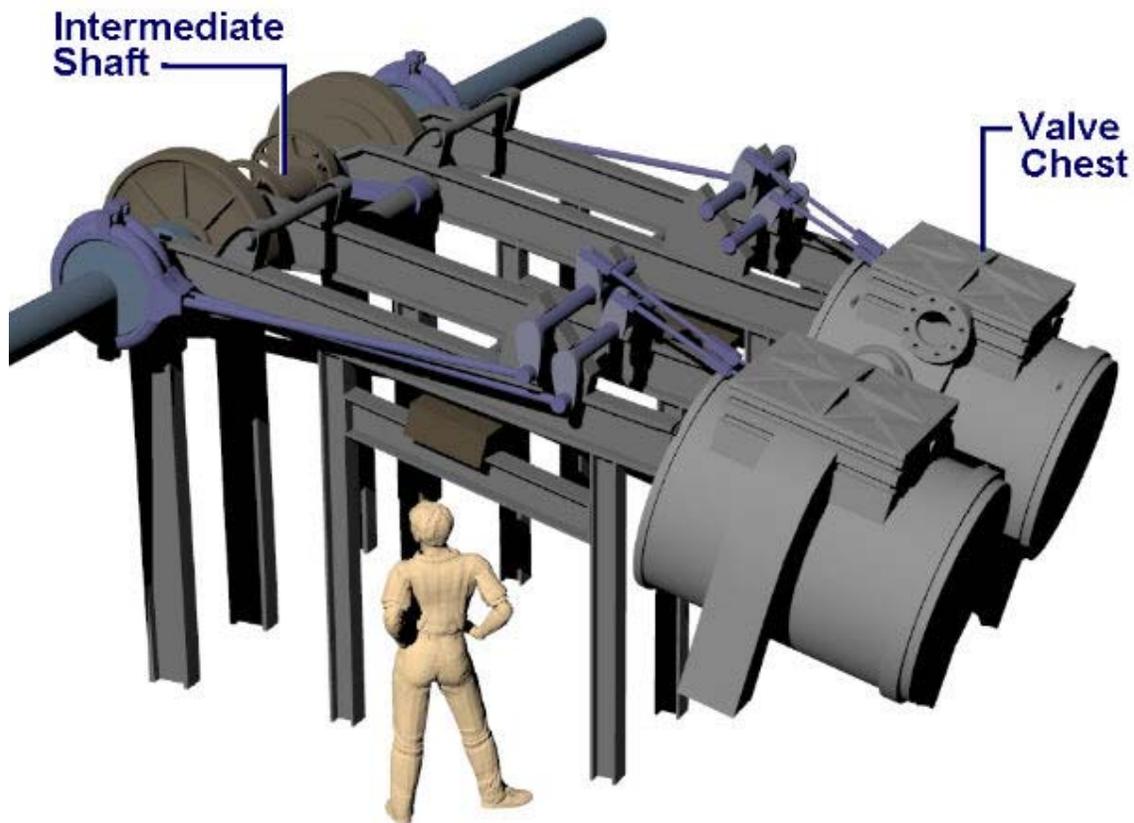
Powerplants...

Steam engines are a remarkable and yet perplexing subject. It seems that under normal circumstances, the engines were built first, and the ship built around them, or at the very least, the engines were assembled and custom-built to suit the builder, owner and captain.

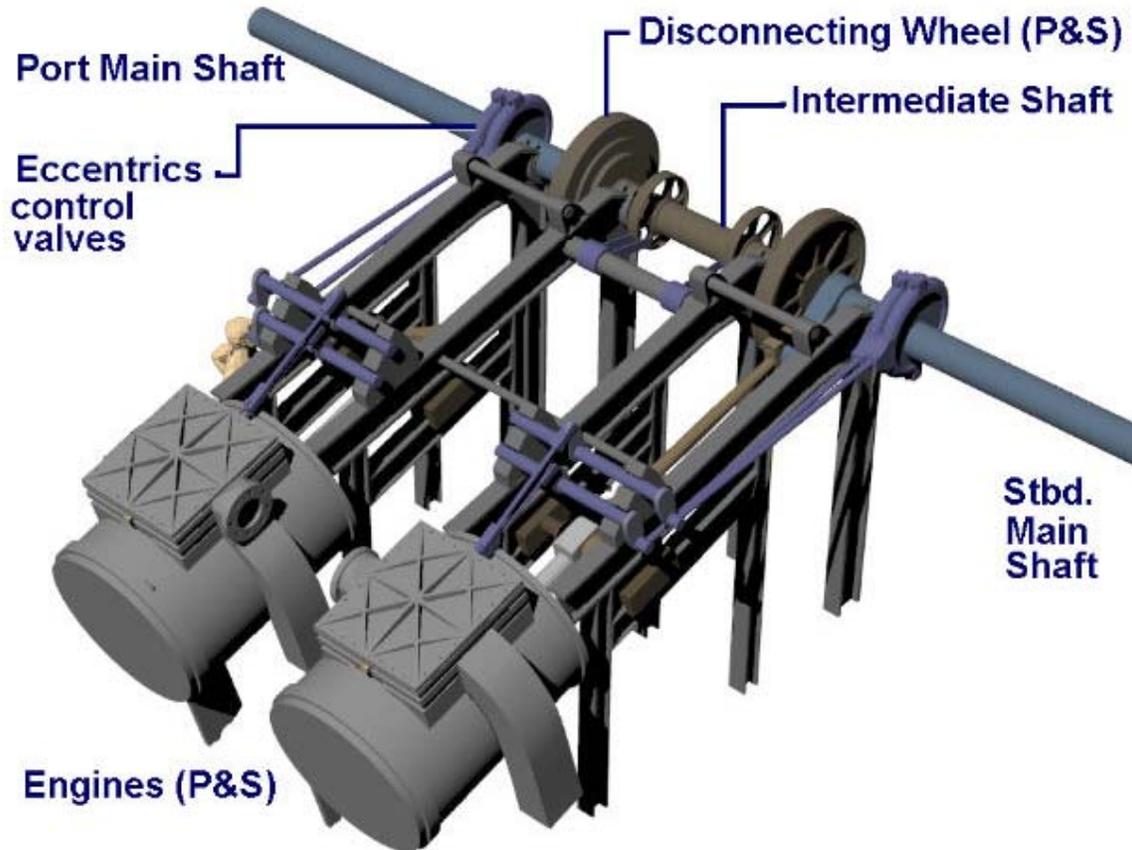
³ *The Steam Engine Explained and Illustrated*, Dionysius Lardner, 7th edition, London, 1840. 522 pages <http://www.history.rochester.edu/steam/lardner/>

In that, very few early steam engines were alike. There were differences ranging from small subtle changes to a system that looked nothing like another engine of the same horsepower rating. Some engines were *direct-acting* or directly connected from the steam piston to a crankshaft that drove the paddlewheels, others used a system of levers and cams called a “*walking-beam*” where a huge pivoting arm drove the crankshaft from an engine levered from below. This particular system closely resembled a modern oil well as it rocked up and down with the motion of the crankshaft lying below it.

The *Pevensey* was a bit of a mystery all during the survey because there was so much written about her and only some of it was fact. With the engines, one source reported that the engines were two 130- horsepower “*oscillating*” engines, which act on the principle that the cylinders must pivot on two large pins or rollers in order to move with the revolutions of the crankshaft. They are very similar to other engines, however, with this ship, there is a small difference. Our divers found no evidence of the large pivots anywhere around the cylinders and they did find the key element; the hinged, two-piece connecting rods. These rods are “hinged” or jointed in the middle so that the connecting rod shafts will “bend” in the middle and flex in a manner that the cylinders did not have to swivel to match the rotation of the crankshaft. It is possible that the cylinder pivots were buried by sediment or debris, but the presence of the two-piece connecting rods strongly suggest that these were *inclined direct-acting* steam engines.



Two views of steam engines, very close kin to those on board *Pevensy*. Note that these engines have structures resembling the two large pivots, but that the structure is also mounted on large engine beds or mounts (not shown). Graphics compliments of the *Denbigh Project*.



The Pevensey at sea...

The *Pevensey* was dispatched by Stringer, Pembroke and Co. under a contract with the Confederate government which called for the ownership of the vessel to be transferred to the Confederacy after profits from her voyages paid for the cost of her being built, which at the time of her grounding, apparently had not yet happened. She had previously made three successful runs through the blockade, in May and earlier in June, and was on her fourth attempt when she was run aground. Sometime during this voyage her name was apparently changed to *Kangaroo*. The following entry appears in the *Bermuda Historical Quarterly*:

Pavensey/Pevensey, later Kangaroo

7 May 1864, stmr "Pavensey/Pevensey, " left this am for Wilmington, "commanded by Capt **Burroughs**". 310 May 1864, "Stmr Pevensey, **Burroughs** arr here ex Wilmington with over 1,000 bales cotton." 4 Jun 1864, "name of "Pevensey" now changed to "Kangaroo". (Bermuda Hist Quarterly Vol 19, no 1, 1962)

In the early hours of the morning of June 9, 1864, the *Pevensey* was chased and run ashore by Union vessels while she was attempting to find her way into the Confederate port of Wilmington, NC. Somehow, the crew had miscalculated their course and the ship was much too far North. They had evidently changed course and running south, trying to find protection under the guns of Fort Fisher and the entrance to the Cape Fear River. Many of the details of that ill-fated mission are missing, but several accounts of the vessels destruction are found in the *Official Records of the Union and Confederate Navies in the War of the Rebellion*. The first account is taken from Series 1, Volume 10, pages 136, 137 and 138.

From the "ORN", and continued from PP. 136, Series 1, Volume 10

Destruction of the blockade runner Pevensey, June 9, 1864.

Report of Acting Volunteer Lieutenant Harris, U. S. Navy.

U. S. S. NEW BERNH,

Hampton Roads, Virginia, June 16, 1864.

SIR: I have the honor to report the stranding, on the 9th instant, of the blockade runner *Pevensey* (named *Pearcersey* in the extracts April 16, 1864), under the following circumstances:

3:30 a. m., steering N. E. by N., Beaufort 45 miles distant, made a steamer bearing N. E. by E., 4 miles distant, running slow and heading E. N. E.; she being to the eastward did not immediately discover this vessel. Hauled up E. N. E., when, gaining on her within 2½ miles, she made all speed, steering E. Opened fire and stood E. by N. The

second shot carried away the forward davit of her quarter boat. She immediately changed her course, steered N., and struck the beach 9 miles west of Beaufort at 8:05 a. m. Her crew took to the boats at once, this vessel at the time being 1½ miles distant. Ran into 3½ fathoms, and when within 100 yards of the strand, she blew up.

Sent in three boats, boarded her, and found her engines and boilers completely blown out. Plugged up the pipes; anchored in 3 fathoms, and made arrangements to pull her off. 9 a. m., tug *Violet* came down from Beaufort and anchored on the quarter. 9:30 a. m., Commander R. M. Dove arrived in the *Cherokee*, came on board and said he would take charge of the wreck, and the *New Bern* would proceed to Beaufort, it being then high water, to save the tide in. Recalled boats and arrived at Beaufort at 11 a. m., anchoring outside too late for the tide.

One prisoner was found on board the vessel, unharmed from the explosion, who proved himself to be an escaped prisoner from Johnson's Island, of Morgan's guerrillas. One body was found upon the beach, and 35 prisoners were captured on shore by the cavalry, three of whom are supposed to be Confederate officers, one of them adjutant-general to Magruder. She was loaded on Confederate account, cargo consisting of arms, blankets, shoes, cloth, clothing, lead, bacon, and numerous packages marked to individuals. She had been chased on the 7th instant by the *Quaker City*, and had thrown overboard, by log book, 30 tons lead and 20 tons bacon; was 543 tons, of English register; no manifest of cargo found. Gunner S. D. Hines has discovered seven Whitworth tompons tied together, bright, and in good condition, which suggests the possibility of that number of guns being under the musket boxes.

The prisoners captured ashore were held in Fort Macon, and the one secured on board was transferred there by order of Commander Dove. I understood that after the army authorities had satisfied themselves with regard to the identity of the prisoners they were to be transferred to this [place], per *Keystone State*.

I have learned since leaving Beaufort that the reputed mate is the real captain; that he is a Captain Long, the outdoor agent of Major Walker (the Confederate agent at Bermuda), a citizen of New York, and having formerly commanded a ship from there. The reputed captain (an Englishman) was merely the paper or clearing captain. Of these facts I have informed Captain Gansevoort.

It will not now be possible to get the vessel off, but a large amount of the cargo can be saved, if properly guarded.

Had the after 30-pound Parrott, for which the requisition was approved by you April 22, been furnished, his chances of reaching the shore would have been reduced. He evidently was ignorant of his position, as the first question asked was, "How far is it to Fort Caswell?"

Very respectfully, your obedient servant,

T. A. HARRIS,

Acting Volunteer Lieutenant, Commanding.

Acting Rear-Admiral S. P. LEE,

Commanding North Atlantic Blockading Squadron.

Report of Acting Rear-Admiral Lee, U. S. Navy.

FLAGSHIP NORTH ATLANTIC BLOCKADING SQUADRON,

Washington, D. C., July 14, 1864.

SIR: Enclosed I forward to the Department a list of those of the crew of the blockade runner *Perceuse*, which ran on shore and was

destroyed by her crew near Beaufort, N. C., on the 9th ultimo, who are now detained at Camp Hamilton, Fort Monroe, and at Point Lookout. The late master of the *Perceuse* was detained by Captain Gansevoort as a witness, he supposing that a portion of the cargo of the blockade runner was saved and would be sent North as prize.

The others are detained as habitual violators of the blockade under the instructions of the Department, dated May 9, 1864, to Rear-Admiral Farragut, forwarded to me for my information May 16, 1864.

The examination of these men took place in presence of Commander Peirce Crosby and Lieutenant-Commander Chester Hatfield. The chief officer of the *Perceuse*, Joseph Brown, is detained at Camp Hamilton as an habitual violator of the blockade; all the others are detained at Point Lookout. I have requested the commandant of the post at Fort Monroe to discharge the master of the *Perceuse*, as there is no longer any reason for detaining him, the vessel and cargo having proved a total loss.

I have the honor to be, sir, very respectfully,

S. P. LEE,

Acty. Rear-Admiral, Comdg. North Atlantic Blockading Squadron.

HON. GIDEON WELLES,

Secretary of the Navy.

Report of Acting Volunteer Lieutenant Foster, U. S. Navy, regarding a cooperative attack upon Fort Clifton, Virginia, June 9, 1864.

U. S. S. COMMODORE PERRY, June 10, 1864.

SIR: I have the honor to report that, in compliance with a request from Major-General Butler, I cooperated with the land forces on the morning of the 9th instant.

At 8:30 a. m. I opened on Fort Clifton, [Virginia], and at 11:15 a. m. and dismounted one of the enemy's guns and had struck another, scattering the pieces over the fort.

At 2 p. m. the enemy had left the fort.

The shots they fired at me all fell short, I having dropped down the river [Appomattox] out of range early in the morning.

Enclosed you will please find a list of ammunition expended.

The enemy have been hard at work repairing the fort.

I am, sir, very respectfully, your obedient servant,

AMOS P. FOSTER,

Acting Volunteer Lieutenant, Commanding.

Acting Rear-Admiral S. P. LEE,

Comdg. North Atlantic Blockading Squadron, James River.

Abstract log of the U. S. S. Commodore Perry, June 9-10, 1864.

June 9.—At 9 a. m. opened fire on Fort Clifton; dropped down the river 200 yards and continued firing with 100-pounder Parrott; the enemy replied with their batteries. From 12 to 4 p. m. engaged in bombarding Fort Clifton; at 6 p. m. ceased firing. Expended 22 rounds 1X-inch shell, 144 rounds 100-pounder Parrott shell.

June 10.—At 2 p. m. dropped down the stream a short distance, so as bring our guns to bear upon the enemy, and opened fire. Expended 100-pounder rifle shell, 11 rounds of 1X-inch shell.

June 11.—Fired a 1X-inch gun at rebel battery; no reply.

Another account comes from Series 1, Volume 27, page 700 of the *Official Record*. This account is taken directly from the ships logs dated June 9th.

May 14.—At 4:30 a. m. weighed anchor and proceeded down the harbor. At 9:15 a. m. boat returned and found the schooner to be *Alex. Young*, lying at anchor near the beach, recently got off, having been on shore for some time, now waiting for steamer to tow her into Hampton Roads.

May 17.—At 4:40 a. m. made the fleet bearing N. N. E. and steered for them. At 5:30 a. m. came to anchor off Old Inlet Bar. Received on board 42 prisoners, captured on blockade runner *Young Republic* by the U. S. S. *Grand Gulf*; also received from U. S. S. *Calypso* one sick man for passage to Norfolk hospital. At 12:40 p. m. got underway and proceeded to sea.

May 19.—Off Cape Lookout, North Carolina. At 10:30 a. m. weighed anchor. At 10:40 steered ahead; received 45 blockade prisoners and 3 sick men for Norfolk hospital and 4 men for New York, to be discharged, whose term of enlistment having expired.

June 2.—Lying at navy-yard dock, Brooklyn, N. Y. At 3:30 p. m. went ahead and proceeded down the harbor.

June 8.—Off Western Bar, Wilmington, N. C. At 10:15 a. m. made the fleet. At 11 a. m. exchanged signals with the *State of Georgia* and came to anchor. Commenced to supply the fleet with fresh provisions, ice, etc.

June 9.—Six miles west of Beaufort Bar, N. C. At 4:10 a. m. made a strange steamer to the N. E., steering E. S. E., and burning black smoke. Gave chase and called to quarters. At 5:30 a. m. hauled up to N. N. E. and made sail. At 6 a. m. hauled up to N. At 7:30 a. m. cleared away all boats and made preparations to board; fired 17 shots from forward rifle during chase, which continued in a northerly direction. At 8:10 a. m. saw the steamer had run ashore on the beach about 7 miles to westward of Beaufort, N. C., this vessel being about 2½ miles distant. Called away and sent in three boats in charge of executive officer, crew well armed; brought ship to in 5 fathoms water. At 8:30 a. m. an explosion took place on board the steamer. At 8:45 a. m. boats arrived and found the steamer to be the *Perenssey*, of London, from Bermuda, bound to run the blockade at Wilmington, N. C. Officers and crew had all left their boats and gone on shore except one, who reported himself as second officer; brought him on board. At 10 a. m. tug *Alert* came down from Beaufort; got underway and stood in and brought to in 3½ fathoms water, and made arrangements for getting the steamer off, she being loaded with a valuable cargo of arms, assorted goods, etc. At 11 a. m. U. S. S. *Cherokee* came near and anchored. Captain Dove, U. S. Navy, and senior officer at Beaufort, came on board, and in obedience to his orders recalled boats, got underway, and proceeded toward Beaufort Bar. Mr. Holley, executive officer, reported the *Perenssey* had exploded both boilers, injuring her machinery considerably. At 1 p. m. arrived off Beaufort Bar and anchored outside the outer buoy.

June 10.—At 10 a. m. got underway and proceeded in over the bar and up to Beaufort; arrived at 11:30 a. m. and made fast alongside the U. S. storeship *William Badger*.

June 15.—At 4:15 a. m. cast off from the *Badger* and proceeded out the harbor over the bar. At 5 a. m. stopped the engines and discharged the pilot. Received from the U. S. storeship *Badger* 41

Another eyewitness account is given by Paymaster William Frederick Keeler, in his letters home to his wife Anna. Keeler was the Paymaster aboard the *USS Monitor* and after she was lost, he transferred to the *USS Florida*. His letters home are archived at the U.S. Naval Academy, at Annapolis, MD.

U.S. Naval Warehouse
Fort Macon, NC
June 12th, 1864

“Dear Anna,

We left this place (Beaufort) last Sunday (a week ago today) for the blockade. The following Tuesday the *Newbern* came down & finding it necessary to return to Beaufort on business I took passage in her...

The accommodations on the *Newbern* I found to be much inferior to what's on the *Florida*. The vessel, which is a propeller, rolling badly in the sea, breaking crockery and furniture & making it very disagreeable eating & sleeping. Any one who supposes it is an agreeable sensation to a child to be rocked or that it is an extra inducement to sleep I would advise to try a sea voyage in the class of vessels.

The next morning after leaving the blockade for Beaufort I was suddenly awakened by a cutlass which had been stuck up over my bed, slipping out of its sheath & falling across my head simultaneously with the firing of one of the guns. It cut quite a gash which bled profusely for a time. As soon as I could check it I

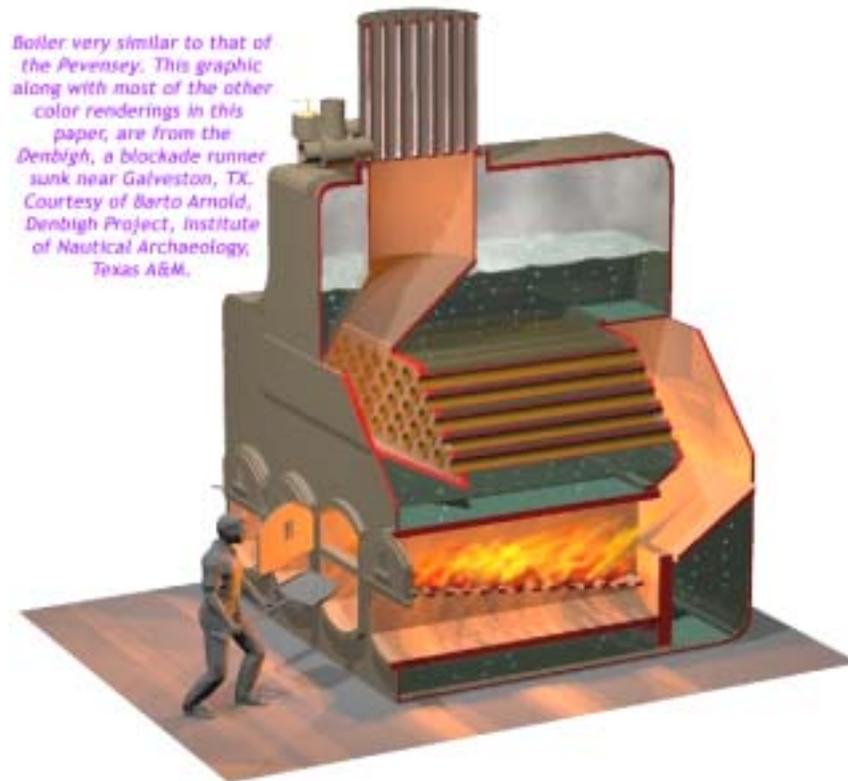
dressed & went on deck & found them in full chase of a blockade runner from three to four miles off.

The second shell fired exploded on her deck still she kept on. It was uncertain whether we were gaining on her or not. Both vessels kept gradually working in nearer the shore which we sighted about seven o'clock when the chase headed directly for it having apparently given up the idea of escaping, either as we supposed because they were out of coal or did not know where they were.

We kept on after her & at about half past eight she struck on the beach. We ran in as near her as we could & were just lowering our boats

to send on board when she blew up. Masts, smoke pipe & pieces of the vessel shot up into the air from out a cloud of steam & when it had passed away we could see her crew running across the beach into the bushes.

Boats were soon sent on board & found the boilers had exploded completely destroying the midship section of the vessel. But one person was found on board of her who said he had been left asleep in the cabin when the others abandoned the vessel. He represented himself as her second mate.



There was heavy surf running at the time so that it was with the greatest difficulty that the boats could go back & forth, so but little was brought off.

A short time after she struck a squad of cavalry was seen coming at full gallop down the beach from Fort Macon, for we were within sight of the fort & we knew that her crew would soon be “gobbled” up by them, as afterwards proved to be the case.

A tug from the harbour & the (600-ton screw steamer) *Cherokee* shortly after make their appearance for the scene of action. Capt. (Commander Benjamin M.) Dove, the senior officer of the station came down in the tug & ordered the vessel (the *Newbern*) to Beaufort so that we were obliged to leave the prize after one or two ineffectual attempts to get her off.

We went up to the entrance of the harbour & found so heavy a sea on the bar that we could not get in & were obliged to lie at anchor all that day & the following night when the sea went down & we succeeded in getting in. We found that the cavalry had captured most of the officers & crew, in fact it was a difficult matter to escape as they were on the same island as Fort Macon from which it was no easy matter to get off without a boat.

Paymaster [Samuel S.] Wood[s] who has charge of the naval stores at this place went down with the cavalry & was riding through the brush when the Captain of the blockade runner & six of the crew came out of the bushes & enquired how far it was to “the fort”—eight or ten miles says Wood. “Well,” says the Capt., “I have blown her up so she won’t do the cussed Yankees much good” & this style of conversation was kept up for some time, Wood riding along on his horse & they walking by his side.

They finally came to our pickets & Wood says, “Well, you have probably taken me for a Confederate officer but you are mistaken for I am a ‘cussed’ Yankee one. Here are our pickets & you are on your way as my prisoners to Fort Macon.”

They were as a sailor says, taken completely aback and tried to take back their *compliments* to the Yankee Nation. Wood took them to the fort & turned them over to the commanding officer.

The Capt. said he did not know where he was but supposed he was in the vicinity of Fort Caswell [at Wilmington entrance] & thought after running his vessel ashore they would be able to make their way to the Fort.

The person who was left on board & who claimed to be the Second mate has turned out to be the chief of Magruder’s staff & others who passed as firemen &c have proved to be persons of consequence in the Confederacy.

She had been chased the previous day by one of our vessels [the 1,600-ton, 9-gun, side-wheeler *Quaker City*] & had thrown overboard all her weighty cargo consisting of lead & bacon but had a good deal of value left, cloths, silks, arms &c. The vessel which was a side wheel iron steamer of about six hundred tons & called the *Pevensey* is fast breaking up on the beach, a portion of the cargo has been taken out & part of the balance may be saved in a damaged state.

I shall leave here next Wednesday or Thursday in the *Mercedita* for “home” again....

I did not go on board the *Pevensey* & got nothing from her but two or three little articles as mementoes. The *Dacotah* sent in a boat for plunder & loaded her so deep that she swamped in the surf & lost all they had in it & one of the officers [Acting Master’s Mate Jarvis G. Farrar] was drowned. He was buried yesterday....”

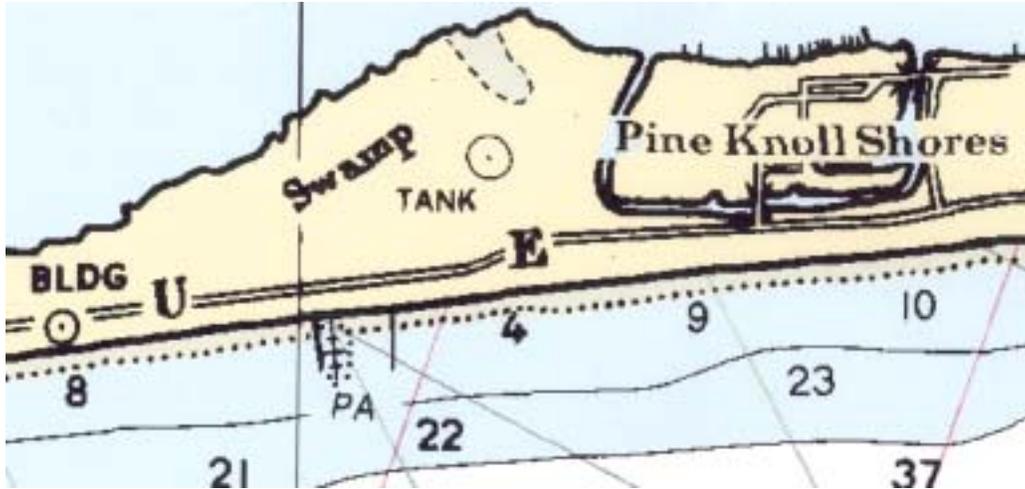
The records also show that one Thomas Harding, Captain of the Forecastle, U.S. Navy, born 1837 in Middletown, Conn. was awarded the Civil War Medal of Honor, On occasion of the destruction of the blockade runner *Pevensey*, near Beaufort, NC, 9 June, 1864, “Learning that one of the officers in the boat, which was in danger of being, and subsequently was, swamped, could not swim, Harding remarked to him; “If we are swamped, sir, I shall carry you in to the beach or I will never go there myself.” He did not succeed in carrying out his promise, but made desperate efforts to do so, while others thought only of themselves. Such conduct is worthy of appreciation and admiration- a sailor risking his own life to save that of an officer.”

E. H. “Ned” Cushing, a Naval Officer aboard the *U.S.S. Newbern*, ignores this accident and states only the following account in his personal diary:

Thursday, 9 June, 1864

“Chased blockade runner Str boat *Pevensey*- she was blown up on shore just below Beaufort- abt. 12 miles from Beaufort-“⁴

The Wreck Today...



The site today as it appears on NOAA Chart 11541, and a second view above. Note the angle at which the wreck lies in comparison to the nearby *Iron Steamer Pier*. The wreck is designated by the NC Underwater Archaeology Unit as site number 0001BBB.

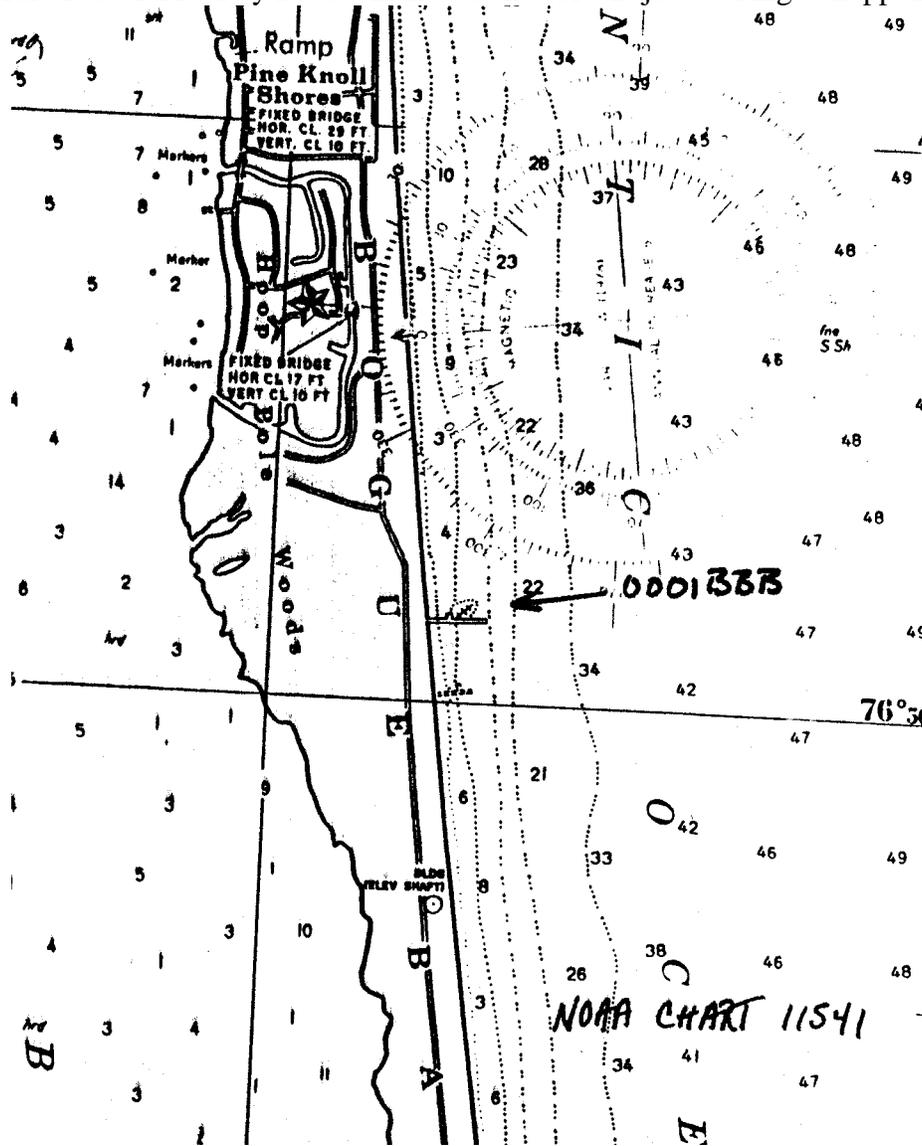


The lower right corner of this satellite image shows the dark colored “cigar-shaped” remains of the wreck thought to be *Pevensey* at the end of the “Iron Steamer Pier”. The pier and motel (see circular swimming pool) has recently gone out of business.

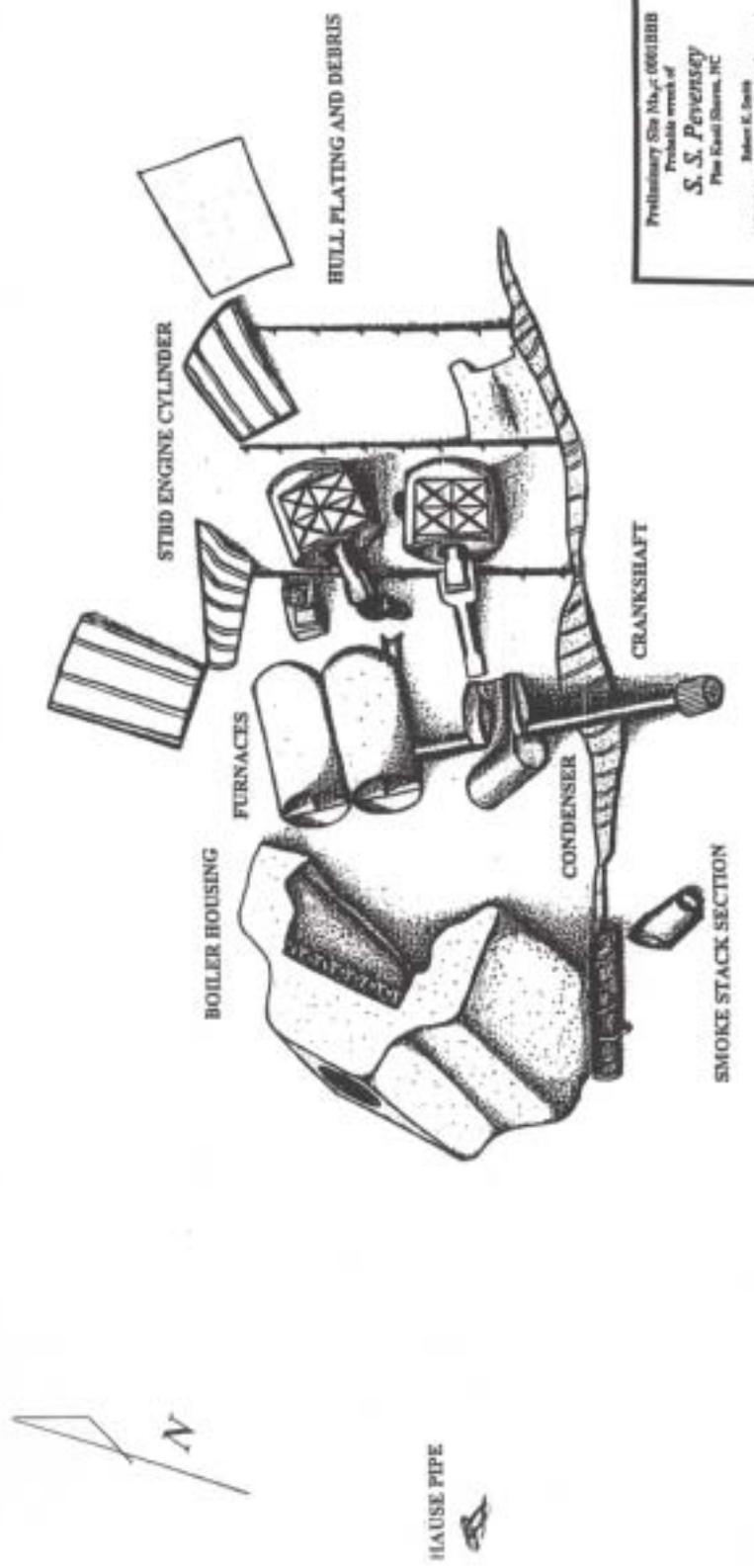
After several dives in the 2001 dive season (usually 1 June to 1 November) we collected enough information for a preliminary assessment only. During the winter of

⁴ Information provided by Joyce Higgins, President, Charlestown Historical Society, Charlestown N.H.

2001, the U.S. Army Corps of Engineers pumped millions of yards of mud and sand on the beaches of Pine Knoll Shores and Emerald Isle in the name of “Beach Renourishment”. This effectively ended any archaeological work on the Pevensey site by destroying visibility and covering key points of the wreck. The sheer difficulty of diving this site was bad enough, with an unruly tidal current that seemed to have a mind of its own, regardless of the wind direction, but when you factor in no visibility, it is a recipe for disaster. A safety issue which was an accident just waiting to happen.



There seems to be no good time to plan to dive this site. We waited for a NE wind, which would blow from off the shore and give us an excellent sea condition, only to enter the water and find a 2 knot long-shore current. Several times, after calling-off a dive for the weekend, on a Saturday, the wind would shift to the SW and the site was beautiful. This happened on four separate occasions in the 2002 dive season.



Preliminary Site Map: 0001000
 Provides sketch of
S. S. Pevensy
 New Island Station, NC
 Robert E. Smith
 EEO/CE (Equal Opportunity/Employee Complaint)
 November 2002



Another logistical problem was the gigantic amount of “trash” on the site. In ten years of this kind of work, I have never seen anything like it. It was very similar to diving in a “Dempsey dumpster”. There was every kind of beach debris you could imagine. Golf balls, shoes, cameras, lawn chairs, fishing poles and reels, sunglasses, clothing, beach towels, rusty knives, and I even saw a complete tackle box. There were lead sinkers in every possible nook and cranny, the wreck was “covered” in them. The site was so dirty that at times it made my skin crawl, as though I were swimming in a landfill. The only thing missing was the stench. We should ALL be ashamed of how terribly this historic landmark had been treated.

Today the wreck lies at **N34 41'.458 W076 49'.644** or 35 feet ESE of the end of the Iron Steamer Pier, in Pine Knoll Shores, North Carolina. Only her port paddle wheel hub is seen from the surface at low tide. Substantial wreckage was exposed below the surface though and several huge features adorn the site during the 2001 survey.

As a diver approaches the site from the West, from bow to stern, the first structure noted is what looks like a single hausepipe protruding from the sand. This pipe device was the guide through which the anchor chain passed from locker to open sea.

Next there is open sandy bottom for about 20 feet, until suddenly the hull opens from somewhere abaft of the bow and the iron outer hull rises from the seabed. Inside there are iron futtocks and related structural members.

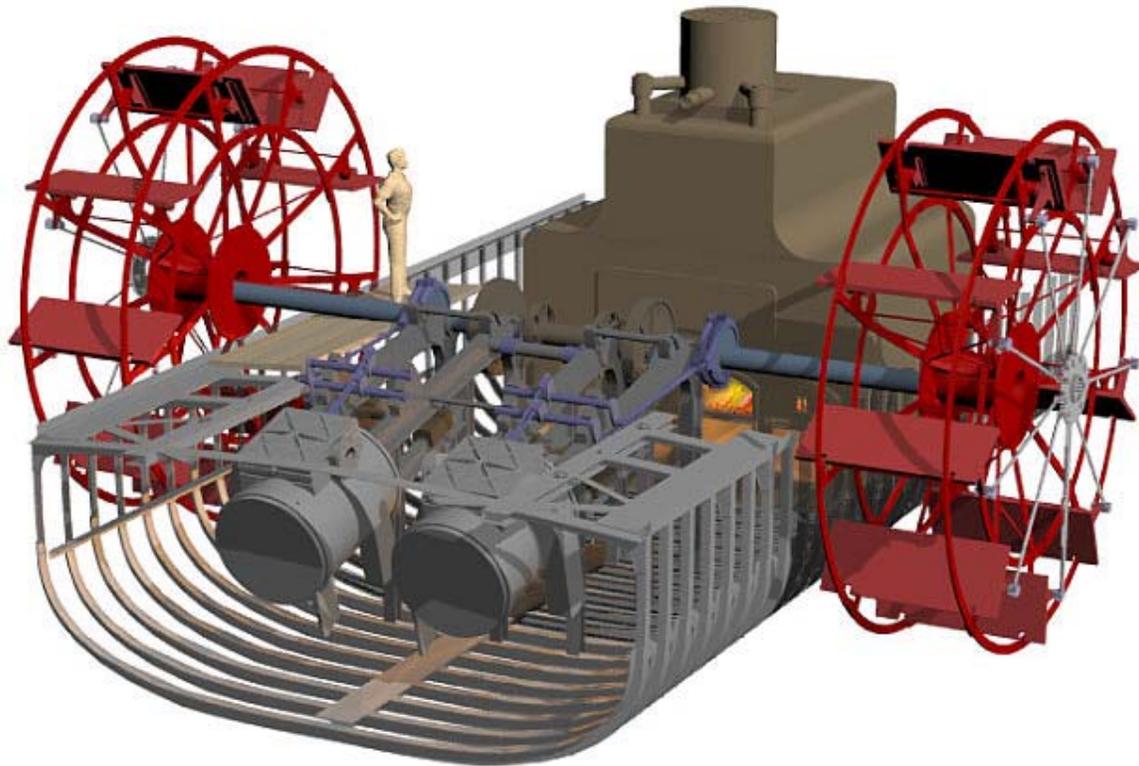
Aft of a bulkhead is the boiler room. The vessel had been blown up by its chief engineer, and upon entering this area of the wreck, you can tell it. The boiler assembly is torn asunder. The outer skin and boiler pipes lie in a massive pile on the port side, just forward of the paddlewheel crankshaft. The furnaces, two assemblies of four each burners, sit upright on the starboard side of the engine room, next to the boiler's outer structure.

Behind this debris is the huge crankshaft. It has journals or stroke positions for two piston crankshafts and numerous support mains, in which the crank rode. The shaft has become dislodged from these supports and lies just forward of them. The crank is at an angle so that at low tide, the port paddlewheel hub can be seen from the surface. The depth of the water here is around 24 feet, giving you some idea of how massive this machinery is.

Aft or East of the shaft are the twin drive cylinders. The connecting rods have long ago broken and fallen to the bilge of the wreck. Between them and the crankshaft, on the starboard side is a tangle of brass steam pipes and fittings. Many of them appear to have been broken or blown off and the pipes bent together in an odd array as though they were pins in a cushion. Some or all of the destroying blast must have been directed toward this steam apparatus. The feature is adorned by a huge butterfly valve staring straight up toward the surface. The valve body is 6 inches in diameter and the butterfly is forever set in the open position.

Further aft of this are the two independent cylinders, mounted on short “I-beam” struts that make up the engine. Each has a shaft protruding from the upper or bow side of the device that makes up the connecting rod, which in turn would have attached to the paddlewheel crankshaft. The crankshaft-side of the starboard-side connecting rod is broken in half and is lying on the bottom, below the cylinder. A multitude of mechanical gear, broken hull plates, hardware and, surprisingly, a number of parts from the Feathering Paddlewheel assembly, all litter the sandy bottom of the hull below the engine

cylinder struts. A shortened bulkhead runs across the engine room, just in front of the cylinders. The port connecting rod rests on top of the bulkhead, from the crankshaft journal, to the piston side of the rod. The starboard cylinder is displaced from its mounting I-beams and is rotated to port with its connecting rod lying on the sandy bottom, pointing toward the port connecting rod. Broken pieces of engine room catwalk also lay haphazardly about the compartment, broken and fallen from the self-destructive blast.



Engine and machinery of the blockade runner, *Denbigh*. This configuration is nearly exactly like what would have been seen on the *Pevensey*.

Two more bulkheads run from side to side forming two more compartments aft of the engine room, most likely the coalbunker. These two bulkheads are twisted and broken and probably were much taller than the engine room partition. The area between the aft two walls is clean sandy bottom. A most curious feature, after finding so much small, broken debris among the rest of the ship's fittings. Here the hull "fades" gradually into the surrounding sediment. Very little debris was found much farther East of the coalbunker, the rest of the hull most probably broken down and lying below the sand. No part of the ship's cargo has been seen by any of our team members. One wonders what could have happened to so much material. Also a subject of debate was the possible existence of heavy *Whitworth* guns suggested to be lying under the other cargo. If recovered, these guns would be incredibly valuable for their historic importance. The author has never even SEEN a *Whitworth* gun. No evidence of munitions for such weapons was seen on the site either. An important point because the odd looking, breach loading *Whitworth* fired a special round called a "bolt", that was actually a six-sided, elongated iron pellet.

The hexagon shape fit inside the breach of the gun and meshed into the rifling of the barrel, allowing it to rotate with the rifle effect, without using a sabot.

Project Conclusions

For many years, our team members have had a huge interest in this wreck site. A majority of our projects have been Civil War oriented and our work has followed that theme for most of SIDCO's existence. One enjoys the irony of the site characteristics. Here lies a 200-foot long Civil War shipwreck, within decent "beach dive" parameters, with a pretty long historical paper trail, which is good for research, all with a huge wooden pier overlying the site. What a wonderful opportunity for the public to stand and watch, while an active archaeological operation is carried out in the clear waters just a few feet below them. However, SIDCO, in its nearly 8 years of archaeological research, has never worked a project with so many obstacles, all fighting to disrupt operations at every level, to the point that we finally had to finish up with the data we had collected and abandon the project. Weather, politics, site conditions, logistics, public interference, equipment failures, safety problems all did their best to prevent a complete and proper survey. Even though we had only planned to do a preliminary assessment, we would have liked to have a few more dives on the site.

Weather: On most Carteret County beachfront dives, a light to moderate Northeast wind is best, as it blows out, over the water, which is "shaded" or protected by the landmass of the Outer Banks. The seas are usually much calmer and the water clarity is drastically improved under the NE wind conditions. Most of the time, any undertow or "long-shore current" is very slight or nonexistent, and diving conditions are excellent. Not on this site, though. Any wind, out of any direction clouds the water and creates a staggering 2-3 knot long-shore current on this wreck. If there was a period of sustained moderate to fresh winds (10-25 knots), we had to suspend operations until a long period of slight to no wind could calm down the seas. We had four suspended dives during the 2002 season due to bad diving conditions!

Site Conditions: The wreck lies in about 25 feet of water, very near the shore and its associated rough water conditions. Low visibility, wave action, breakers, the close proximity to the pier, the heavy concentration of lost fishing equipment, all combine to give a thrill even for the most experienced Divemaster. If conditions are JUST right, the dive is pleasant, but the incredible amount of beach trash in the site perimeter made the dive more like work. Planning a dive here is frustrating beyond description. Often, a dive is cancelled for bad current and low visibility and within minutes of returning home and

planning something else, the conditions on the site would become “perfect”, only to go bad again in the time it took to reorganize and head back to the site.

The bottom line...

The *Iron Steamer Pier* was a favorite fishing spot for generations because it had something no other pier on Bogue Banks had, a shipwreck for the fish to gather in. Over the years, several members of the pier management made feeble attempts to do proper research, recover and safeguard artifacts, and promote the site as a historical deposit. One “illustration” printed on a huge metal sign, nailed to the pier, depicted the *Pevensey* as a double-deck stern-wheeled riverboat. Cork bulletin boards, stuffed with “eye-witnessed” exaggerations were the meager showcases of amateur efforts to display the true accents of this site. In contrast, some very good articles have been written and published in various magazines, but even these fell short of the true nature of this wreck. Even politically inclined individuals tried to strongly dictate that this site had “never been of any historical value”

All of these things are very false and nowhere near the actual cultural importance that our survey found.

The wreck, when the diving conditions are right, is a magnificent example of mid-1800’s steam propulsion vessels. Though not intact, most of the engineering equipment is present, and can be partially pieced together by the average diver’s imagination. Also, the discovery of the unique “feathered paddlewheel” system is a historians dream.

Though our survey did not allow any excavation, some of the shipwreck reports and accounts mentioned earlier, suggest the possible presents of small arms, ammunition, and even “seven whitworth cannon” within her hold. At the risk of catching the eye of the average Civil War relic hunter, I can only imagine that anyone trying to loot artifacts from this wreck would run into the same problems we did, and that should prevent much pilfering of the site.

It is out determination, that this site is not only an important historic site, but that further survey work should be conducted and more precise site mapping be done to more fully illustrate the impressive cultural deposits lying here.