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REMOTE SENSING FOR SHIPWRECK LOCATION

Or, all your problems solved

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Abstract

A routine site inspection of a proposed shipwreck salvage excavation revealed a technique with important ramifications for survey archaeology. Its potential may prove disastrous to the present job market for field archaeologists.

Following a local authority report to the Southland Museum of Invercargill, New Zealand that a ship wrecked in 1881 was to be salvaged, a standard check of the site was made on 3.2.79 for the purpose of recording the findings. The wreck was located on the Waikawa Estuary, Southland, New Zealand.

Once the vicinity of the wreck was reached, the actual site was located by the authors from the noise of heavy machinery. In operation were two large earthmoving machines - an Hitachi Himac excavator, fitted with a 0.5m³ bucket, and a D7 Caterpillar bulldozer. At least one of us approved of the choice of machinery (Stockton 1974). Delicacy of operation did not seem to be of concern to the excavation team. In any case, the wreck was only 98 years old, and as the New Zealand Historic Places Amendment Act 1975 says, this age does not count as historically significant. Why muck around?

Their choice of wreck was excellent. Not only had they managed to find one of no historical significance, they also chose one which was buried 5m down in the foredunes of a beach - none of this nasty mucking around in water. If the Creation Spirit had meant good archaeologists to work underwater s/he would have given them gills.

On our arrival, the excavator was standing on the edge of the dunes beside an enormous hole about 3 x JBJC's deep (metric equivalent 5m) and 12m wide. The excavation crew were faced with a problem or two: the bulldozer had broken down and the Himac's boom could not reach any deeper. As well, the sides of the hole were collapsing. Time out for a cup of tea.

Being just a little naive and new to the game of field archaeology, and not seeing any visible signs of the wreck, we asked how they knew the wreck was there. It was really very simple. To those of us who were slow it was carefully explained.

The scheme all began with a photograph. This was taken six years ago of another wreck which was probably the brigantine *Seagull* (1886). She was wrecked on the same beach a few hundred metres away and actually became buried in the foredune. In 1972, during a severe storm, the duneface migrated inland, exposing the wooden sides of the ship. A clairvoyant lady saw an article and

photograph about this in a local newspaper and whilst looking at the photograph felt a strange sensation connected with a spot not far away along the beach. It did not take much research to learn that another ship, the *Eliza McPhee*, a locally built schooner had gone ashore in the vicinity in 1881. Bypassing a few logical steps, the clairvoyant experience was directly associated with the *Eliza McPhee*.

The problem now was to accurately locate the second ship. This was done by the revolutionary new method of archaeological remote sensing – she moved her hands over an inch to the mile map of the area and clairvoyantly sensed the precise location of the wreck. The position was ground truthed by traversing on foot, searching for verification by sensation, of the exact site. The spot was pinpointed by the lady and a colleague who shares the same skills. They agreed on many points, including the depth of the wreck, type of cargo (tin, iron and lead, not to mention gold doubloons) and the ship's length.

Some hard evidence was provided by numerous auger holes which struck obstacles several metres down. One of these produced wood, this must be the ship. Another struck something very hard, this has to be metal, the cargo! Arrangements were then made to buy a bulldozer, a contract digger was brought in, and the salvage rights obtained. Work commenced.

Alas, sand is a fickle medium, unlike water in which objects can be located to within the inch. By the time of our departure late that afternoon, no positive sign of the wreck had been found. The wood was drift material, possibly shaped, the metal was a gravel hard pan. Perhaps then there is an uncertain future for this type of survey archaeology. We can cease holding our breath.

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Reference

Stockton, J. 1974 Earth moving equipment in archaeological excavation. *Archaeology and Physical Anthropology in Oceania* 9:238-41