

Analysis of Artifacts

Item # 163

“Spike from old wharf at northwest corner of Island”

WHO FOUND	Dan Blankenship
WHEN FOUND	1971 (April)
WHERE FOUND	“A few hundred feet north of the causeway.”
FIRSTHAND/ SECONDHAND	
REFERENCES	Stelco Report dated April 22, 1971 Report on New Findings at North End of Oak Island dated April 22, 1971
LOCATION TODAY	
ODDITY FACTOR	
ASSESSMENT OF AUTHENTICITY	See Stelco Report of April 22, 1971
COMMENTS	Considered by Stelco to be “drift spike”

The Steel Company of Canada.
Limited



CANADA WORKS. Hamilton 23, Ontario

April 22, 1971

The Oak Island Exploration
6200 Grande Allee
ST. HUBERT, Quebec

ATTENTION: Mr. K. Ellard
Project Co-ordinator

Dear Mr. Ellard:

In reference to our telephone conversation and the samples which arrived April 19th. Following is the assessment of the samples as I see it at this time.

Spike From Old Wharf at Northwest Corner of Island

This is presumably a drift spike used to hold timbers in place which had been produced by the blacksmith specifically for the purpose. This material is definitely of wrought iron and we do not need a metallurgical examination in order to indicate that this is true. This is certainly pre-1850 because while wrought iron was certainly used after that time, it would not exhibit the longitudinal striations as a result of corrosion indicated in this sample.

Unidentified Metal Strap from Northwest Corner

This is an interesting piece of slit strap; its use I could not possibly guess. It is, however, very old wrought iron and was produced by early-type rolling. I would suggest that it is probably pre-1800 and certainly pre-1850. The slag in the material is very extensive as seen in photograph no. 2. These are slag inclusions of silicates which are the result of the rolling and pounding which are part of the process of rolling wrought iron. The material is very low in carbon value and for this reason would not corrode away nearly as badly as a modern material immersed in water.

Metal? From Northwest Corner of Island

This is apparently a small casting. It is certainly metal, although it is now encrusted with sea gravel and other forms of contamination. I did not wish to break the piece and have not done so.

(2)

Metal Brought up from 196 Ft. - Borehole 10X

This material is wrought iron, probably from a thin plate or strap. The condition of the material would seem to indicate that it is very early material, certainly pre-1850 and possibly pre-1800.

Metal Strap Attached to Stone from Northwest Corner


The metal strap is the same as that shown in photo no. 2, being a wrought iron of rather early vintage. Its method of attachment to the stone was rather interesting to me though and I note that whatever form of cement was used, it was composed of sand, sea gravel and appeared very similar to the molasses cement which I have seen in the Caribbean. Nelson's frigate, for example, at Kingston, Jamaica was built entirely using a cement between the stone construction composed of molasses and sand. This appears to be very similar.

Metal from 175 - 198 Ft.

This is composed of pieces of chain and wire samples. The two welded pieces of chain were very interesting. They were fire welded and case hardened after welding. As I stated in my last letter on this subject, the material had been pack hardened after the chain was formed, and these cross links, that were provided in this case, just crossed over and fire welded were later completely case hardened in a packed furnace. The material in this particular case is not as clean as the sample examined last time, but the structure is very much the same and is shown in photo no. 1. You will see that the intergranular areas are heavily burnt and cracked due to overheating and very long firing during the hardening process. For this reason, the chain has broken up rather badly as you have seen in the number of small samples that have been exhibited here. It is natural that the stock is very brittle and would not stand a great deal of strain before it gave way, particularly if subjected to bending stress. The wire samples are not wrought iron, but a cemented steel and that it contains inclusions of such size as shown in photo no. 3 where you will see that the grain structure flows around the inclusions. This is characteristic of older pieces of metal and would not be expected, even in highly drawn material of this sort, in a modern steel. I therefore consider this material to be pre-1850 and possibly pre-1800.

I trust that this information will be of value to you. Your samples are being returned under separate cover. Kindest regards.

Yours very truly,
THE STEEL COMPANY OF CANADA, LIMITED


A. B. Dove
Senior Development Metallurgist
Wire and Fastener Divisions

ADD/ST
Att:

APR. 22, 1971

2-e

REPORT OF NEW FINDINGS AT THE NORTH END OF OAK ISLAND

Several weeks ago, in the course of digging sand and gravel to repair the causeway, a stone ramp was discovered, about 3 feet below the beach level at the north end of the island a few hundred feet north of the causeway. This ramp was made of boulders piled on long log stringers running down to the low tide level. Simple digging by hand around the ramp exposed an old spike and two pieces of metal strapping, one of which was attached to some cement-like material. There was also a lump of gravel-encrusted material which appeared to be metal. These samples were sent to Stelco and found to be very old (see attached report).

Further excavation last week at the seaward end of the ramp, uncovered what appears to be a cribbed shaft (see attached drawings) divided in 4 sections by crossed logs. One of these quadrants was dug down 6 feet by hand. A loose layer of logs was found at about the 3 foot level and another tightly-spaced layer of logs was found at 6 feet. Probing below this bottom layer with a 1" pipe showed the space below to be filled with soft, soupy material and also gave indications that the cribbing extends at least 8 feet below this level.

A check of the surrounding sea bed shows that solid bottom is about 4 feet below the surface silts and sands. The digging and probing done to date however, shows that the shaft we have discovered extends downward to a depth of at least 14 feet and probably much further. For this reason, we believe that this is not a pier constructed by previous seafarers or farmers for a dock, since it would not have been necessary to put it deeper than 4 feet to have a permanent, solid base.

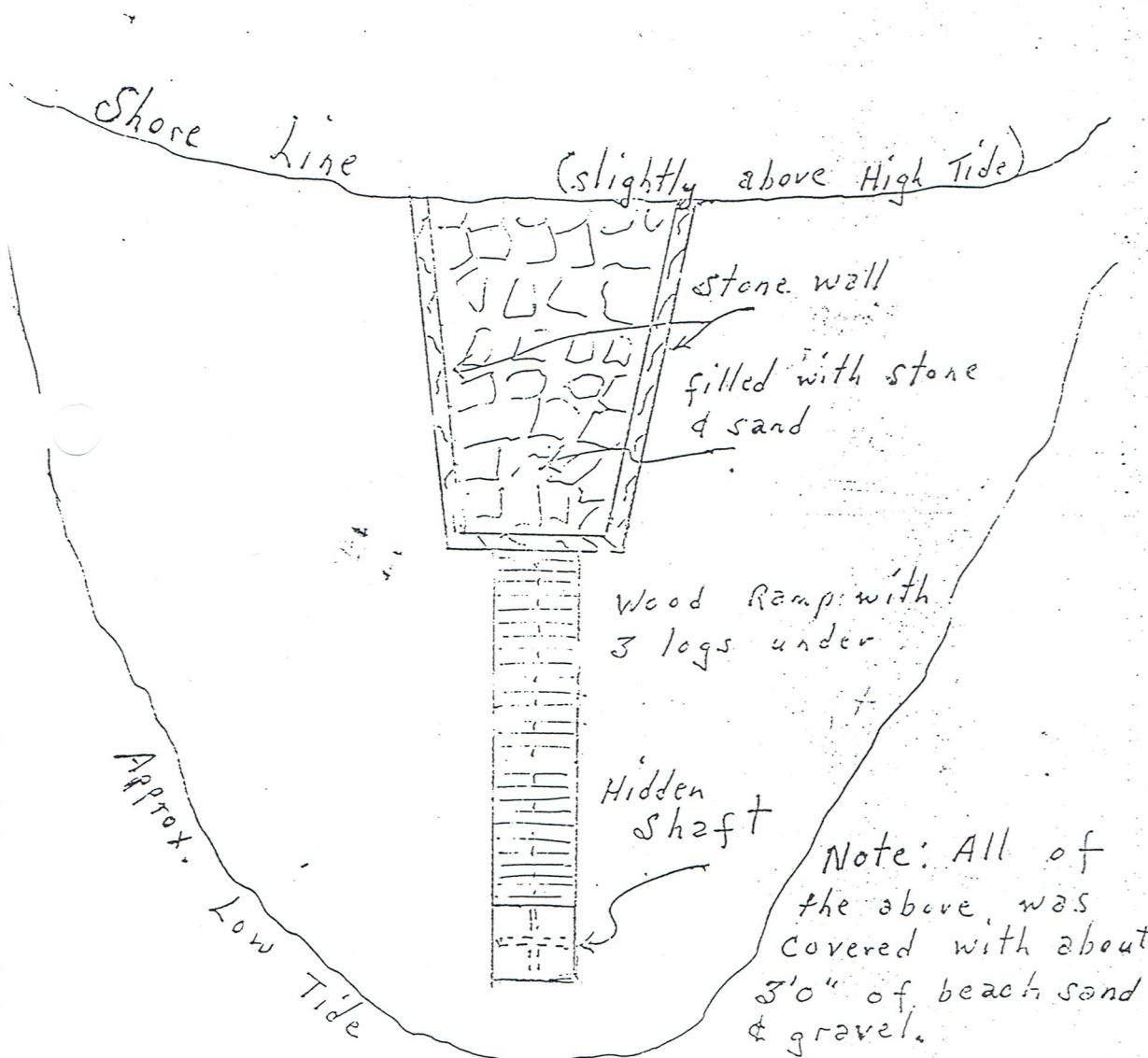
If, however, this is an original shaft, as the evidence seems to indicate, there is every possibility that it may hold the key to the Oak Island mystery. Exploration of this lead will be quite inexpensive and should not take much time. We believe that it is important to begin work on this as soon as possible.

Shaft & Ramp

Sheet #1

found April 28, 71

plan view - Scale: 1" = 20'0"



Note: All of the above was covered with about 3'0" of beach sand & gravel.

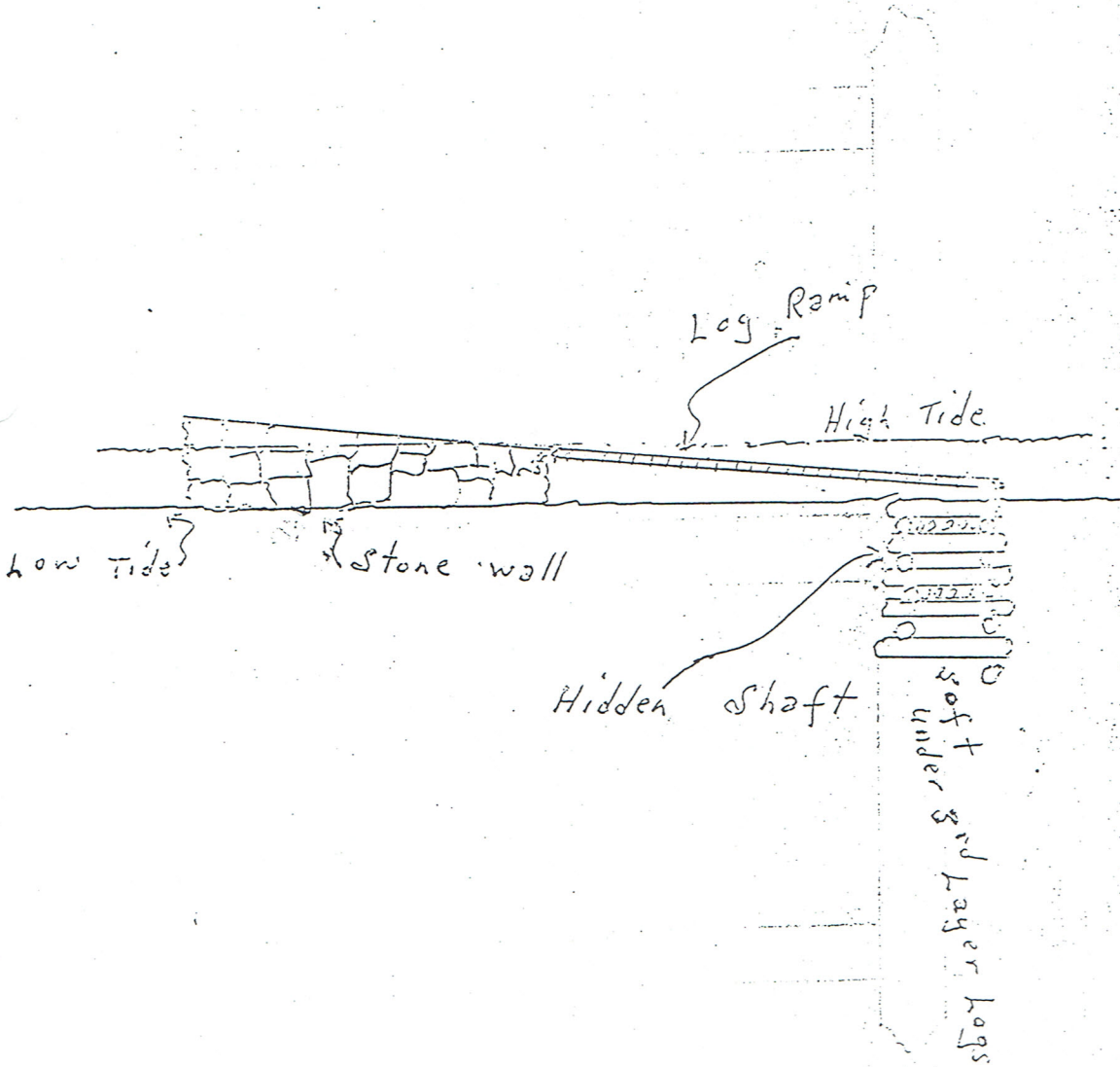
May 2-71
DCB

Shaft & Ramp

Sheet #2

Profile

Scale: 1"=20'0"



SHAFT
Cross-Section
1/2" = 1'0"

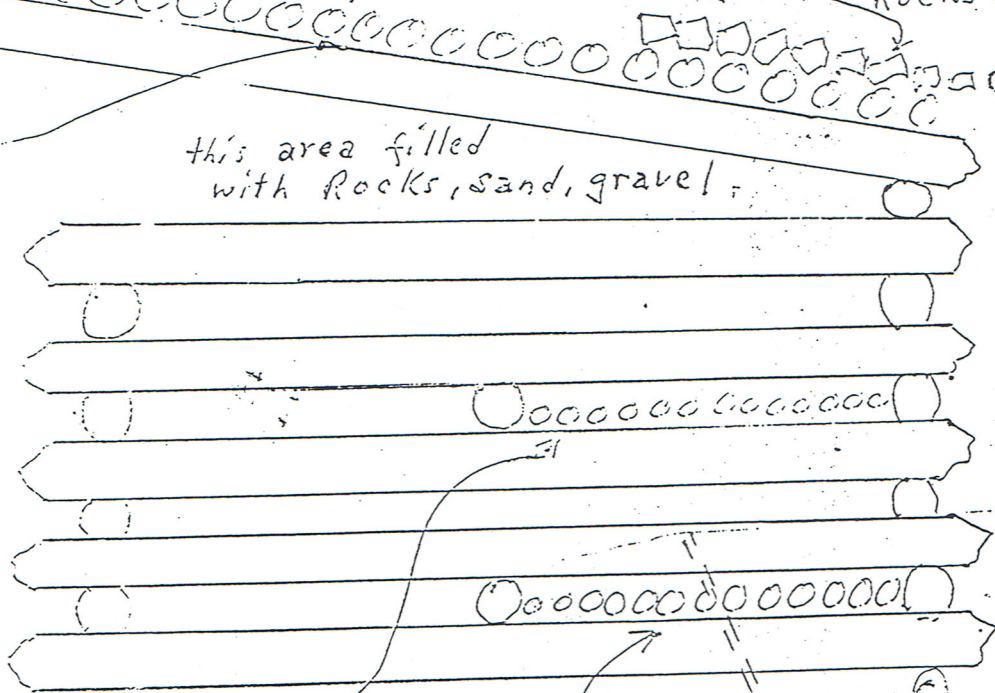
Sheet #4

ORIGINAL Beach

This sand & gravel, removed by repeated bull-dozing this past winter & spring & used for fill on Causeway. covered with Rocks

Log Ramp

this area filled with Rocks, sand, gravel;



- Note:
- ① Middle layer logs, loose & decayed
 - ② Bottom layer logs, tight together with layer of peat on top
 - ③ Steel pipe 10' long used for probe - hit logs 8' down

Very soupy Below logs

Shaft

Sheet #3

Plan View

Scale - $\frac{1}{2}'' = 1'0''$

