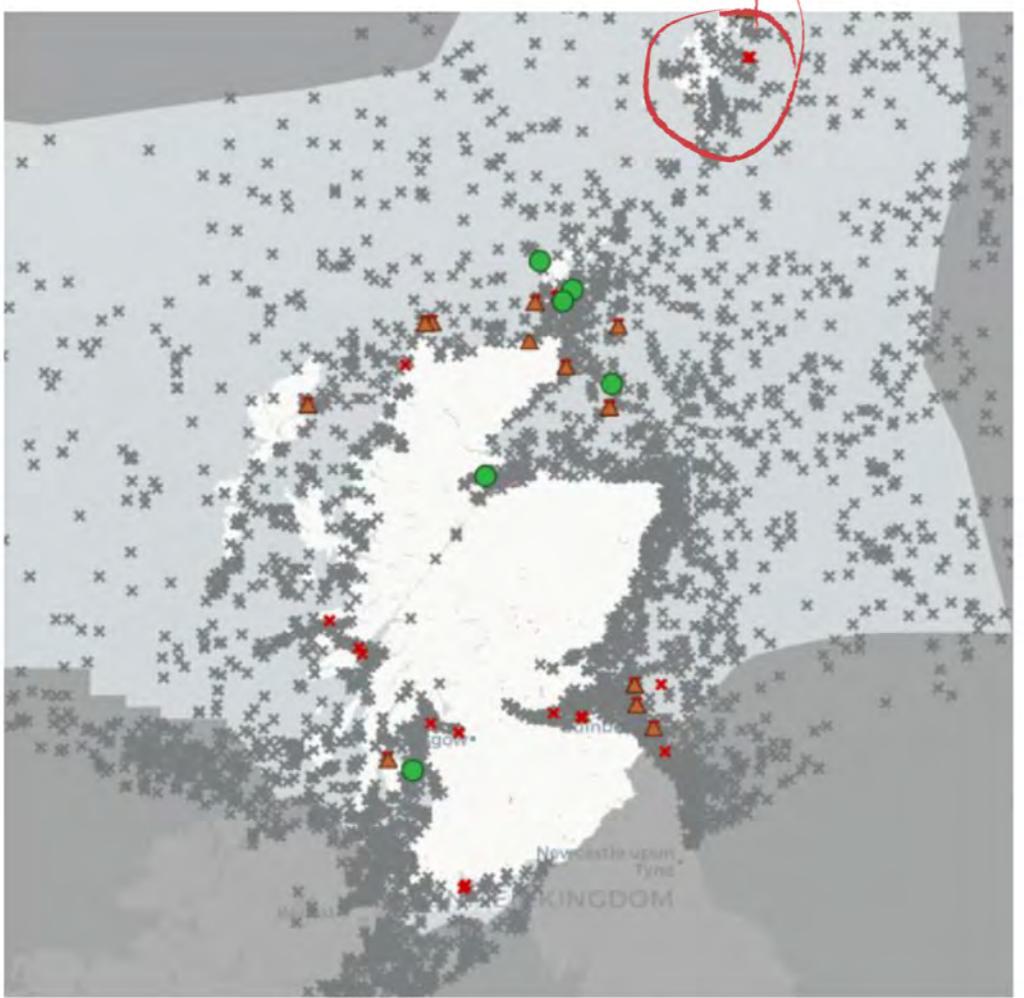


Resources: looking at archives and available data

(x)	HMS Exmoor	25th February 1941
(y)	HMS E6	26th December 1915
(z)	HMS E18	26th May 1916
(aa)	HMS E47	20th August 1917
(ab)	HMS E49	12th March 1917
(ac)	HMS E50	31st January 1918
(ad)	HMS Falmouth	20th August 1916



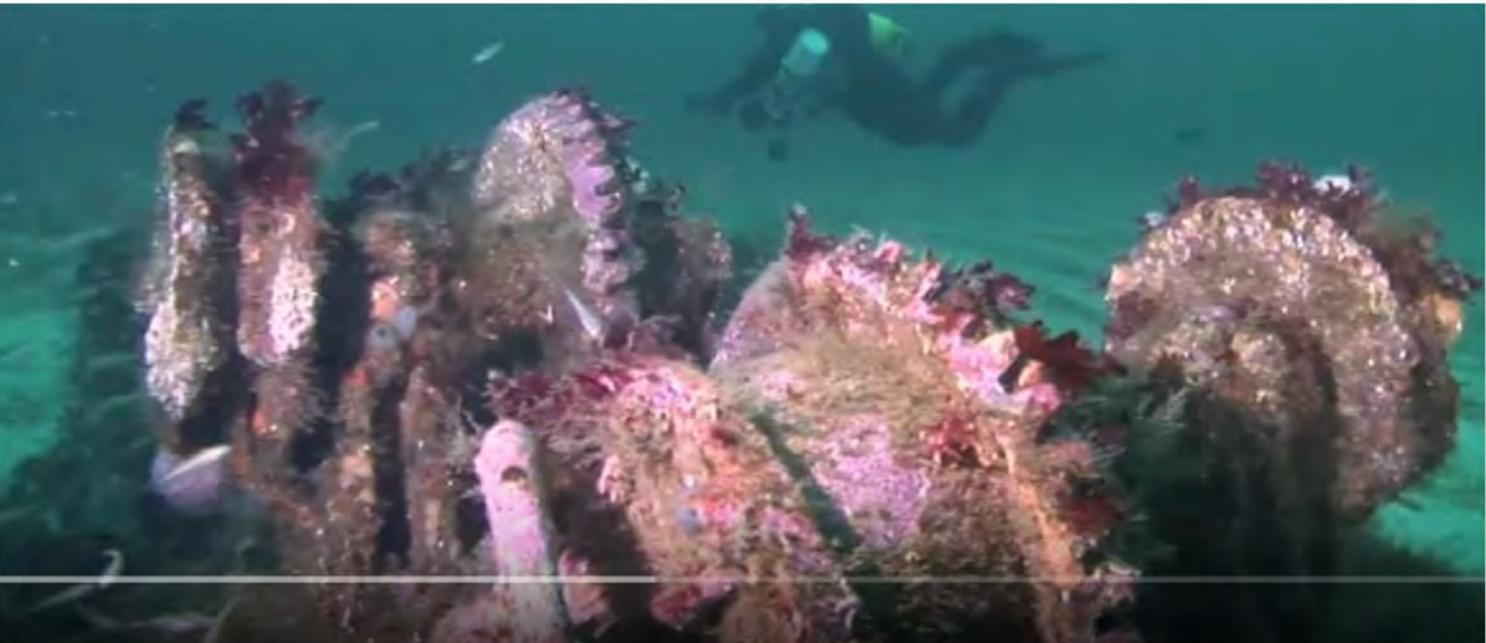
NMPI Scotland Maps: filter 'military wrecks'



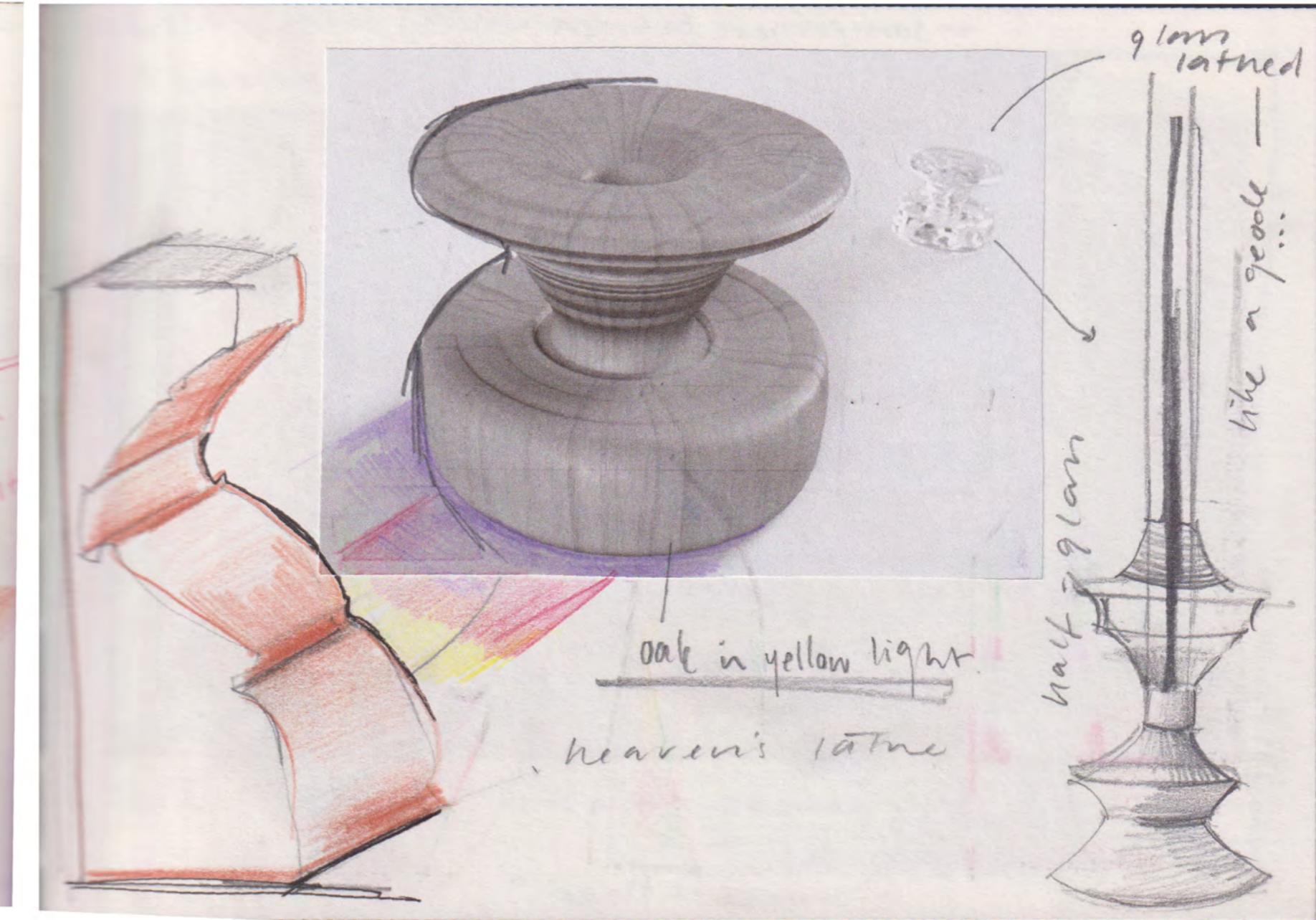
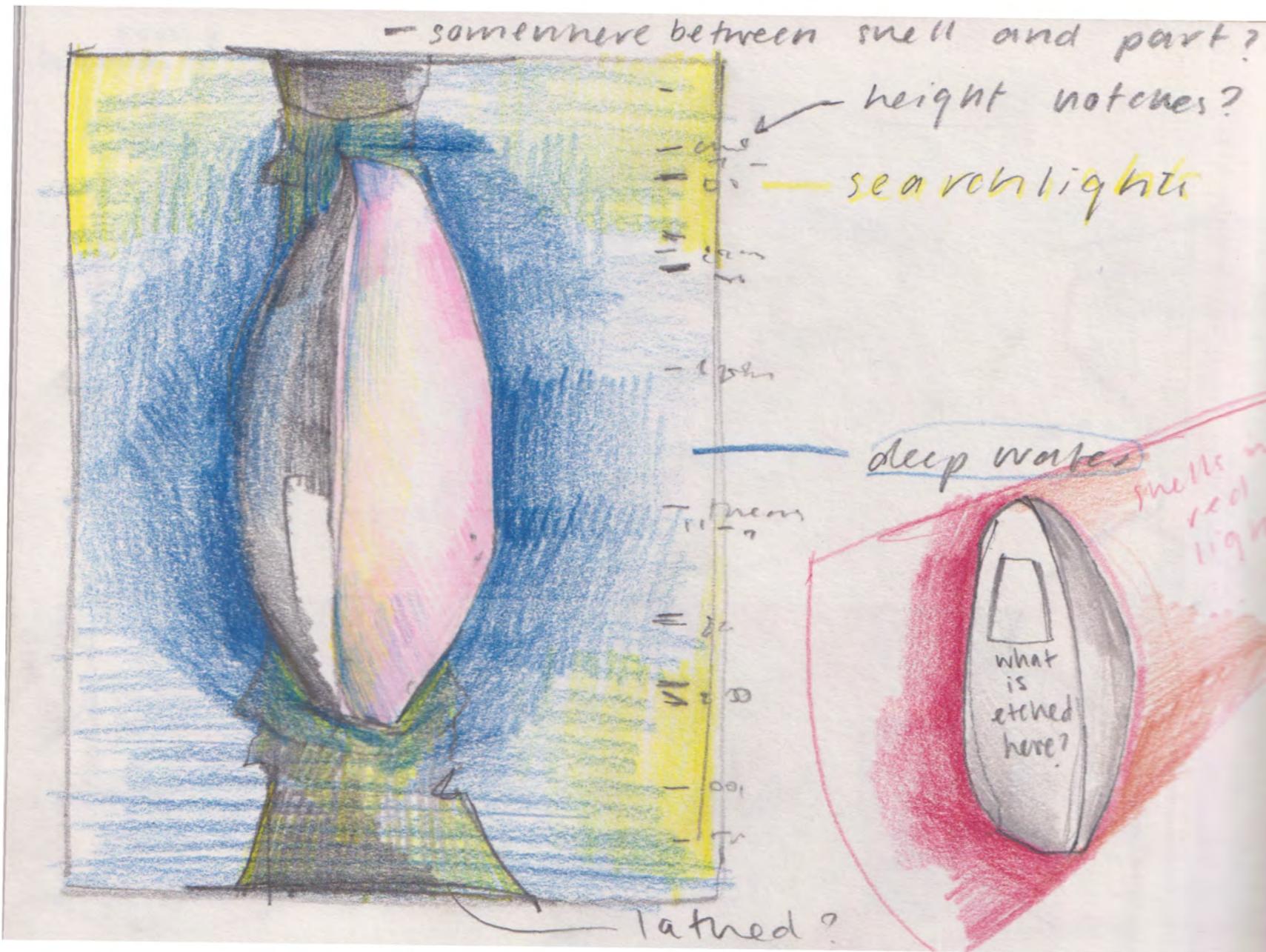
Dive on the British Submarine HMS E49 Balta Sound, Unst, Shetland.

Up next

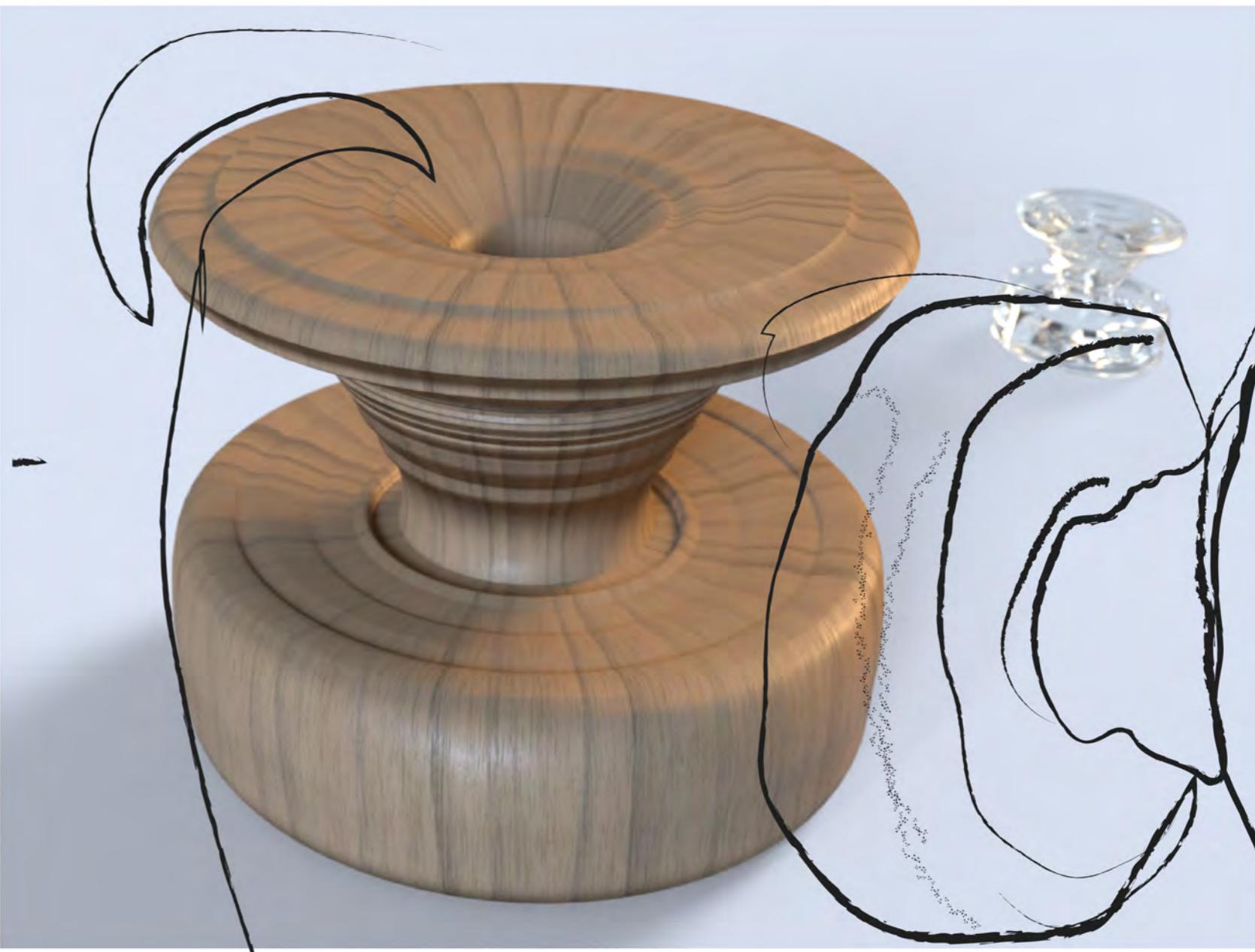
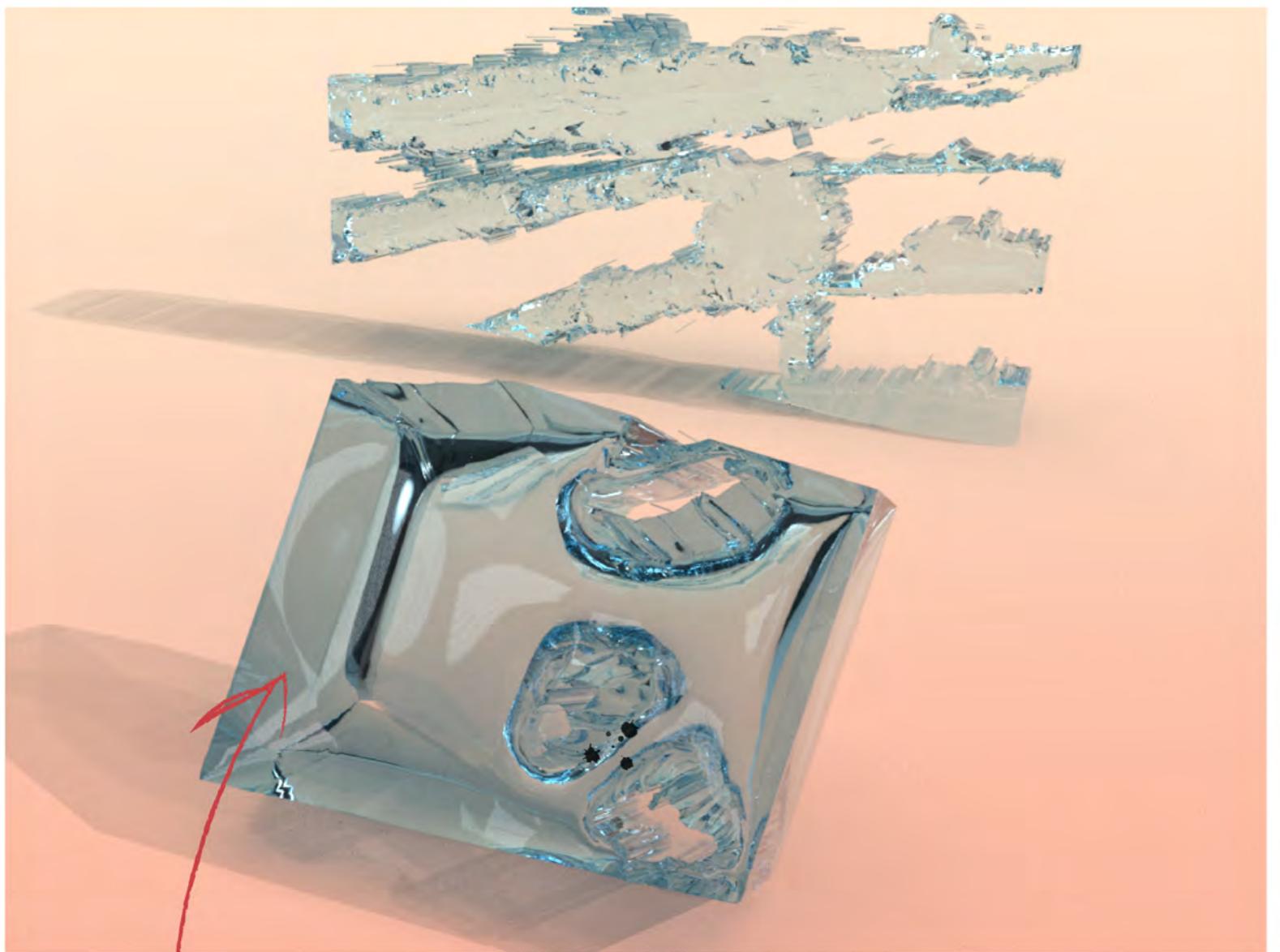
footage of a dive:



Notes on reconstruction:



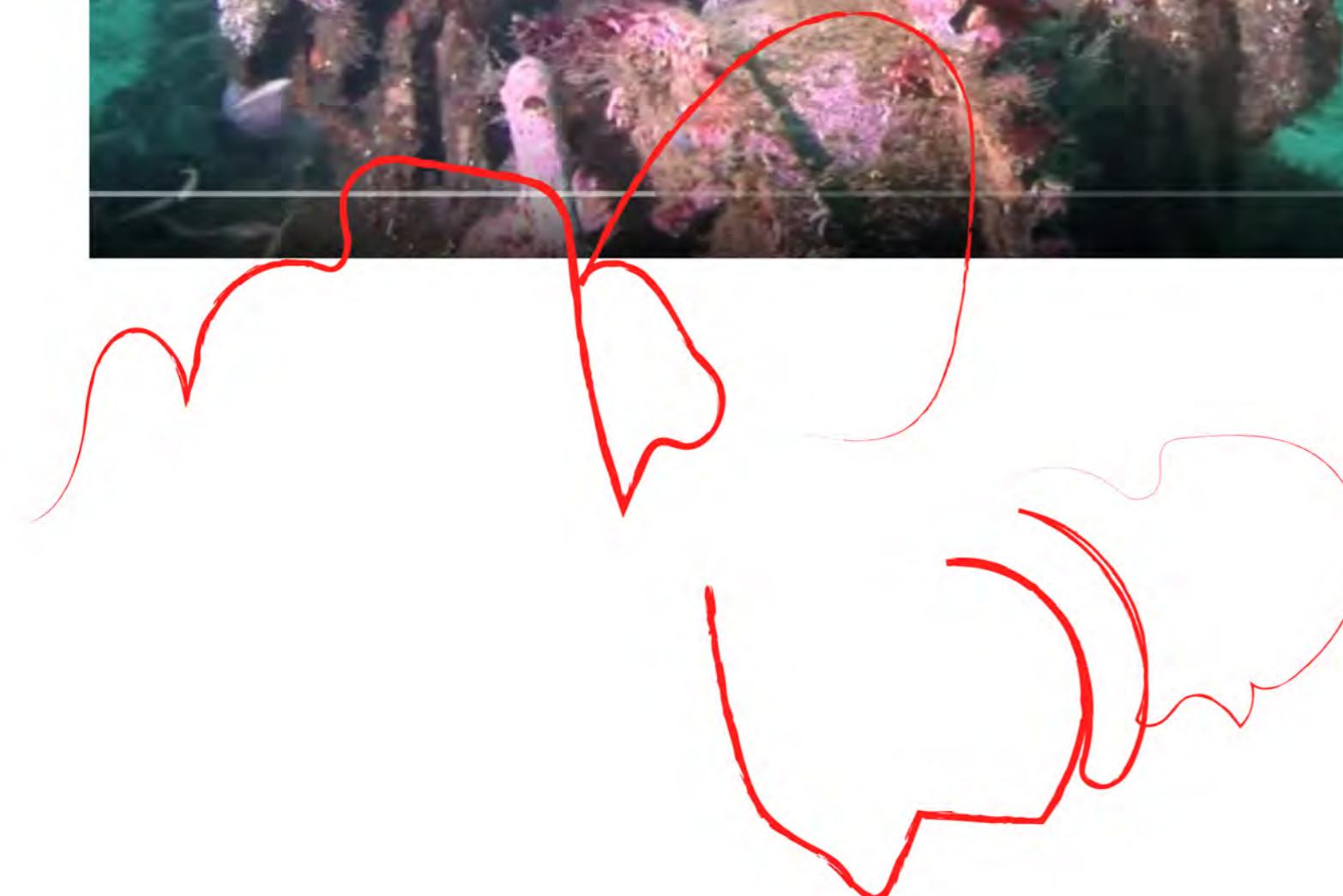
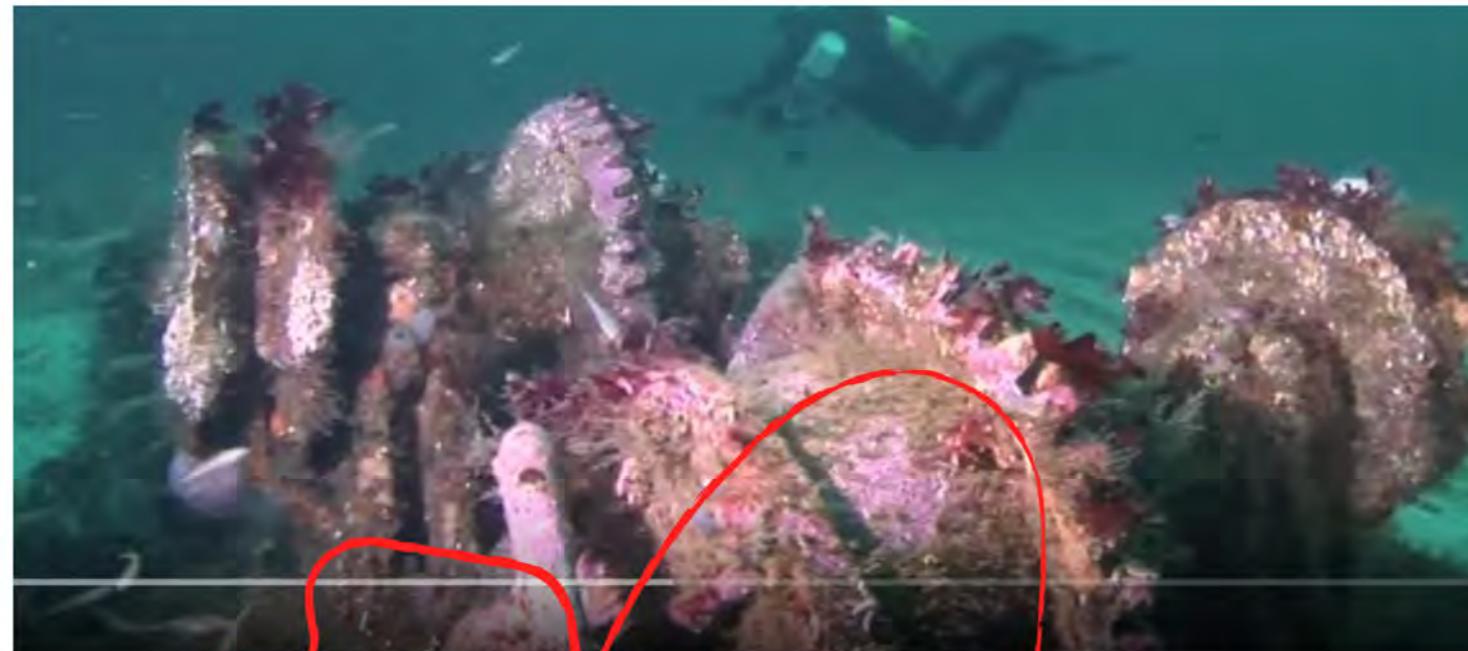
Early Blender tests and sketches



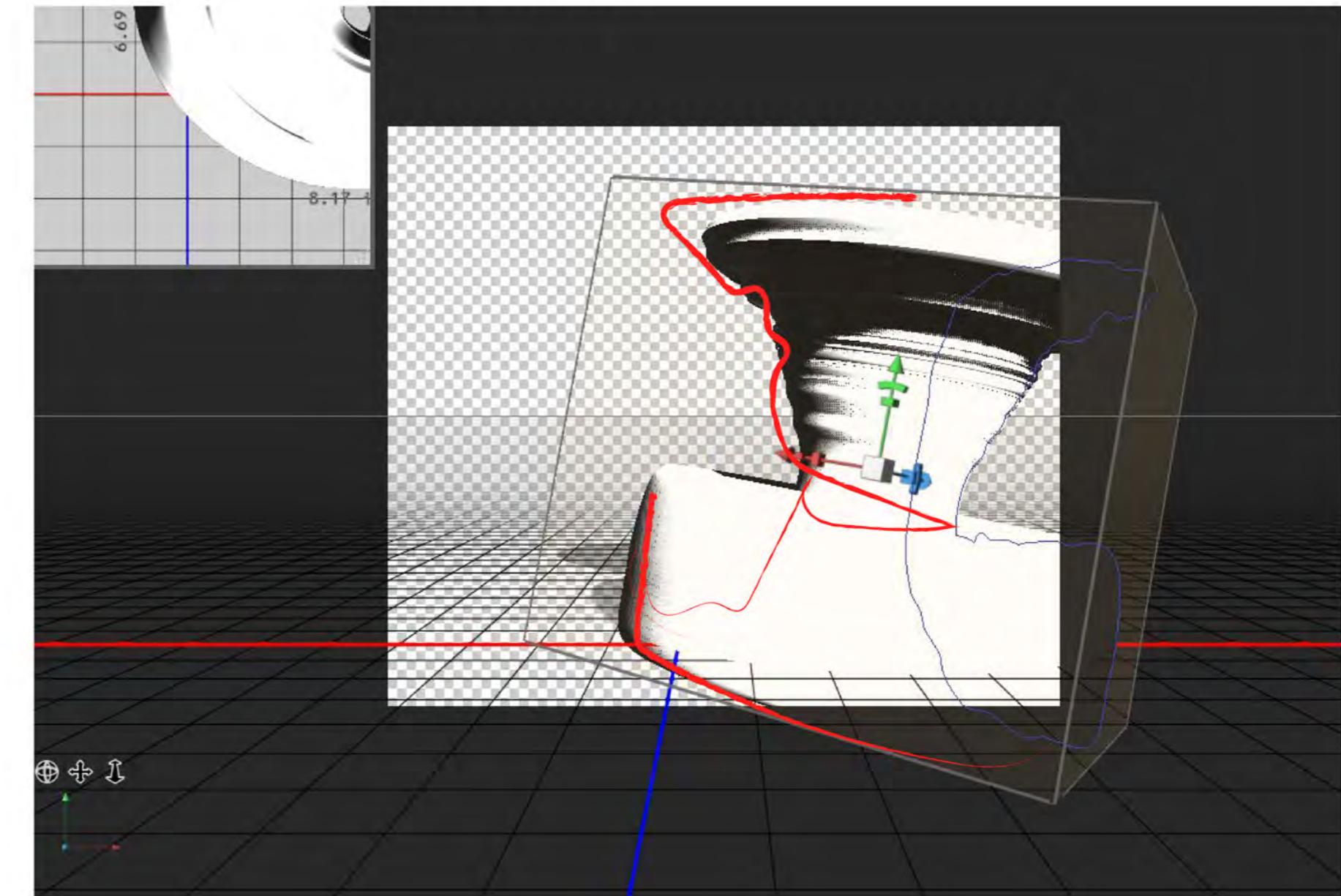
Thinking about water as negative space around the wreck. What image would you get if you solidified it, made cavities?



visual references for modelling the pipe section



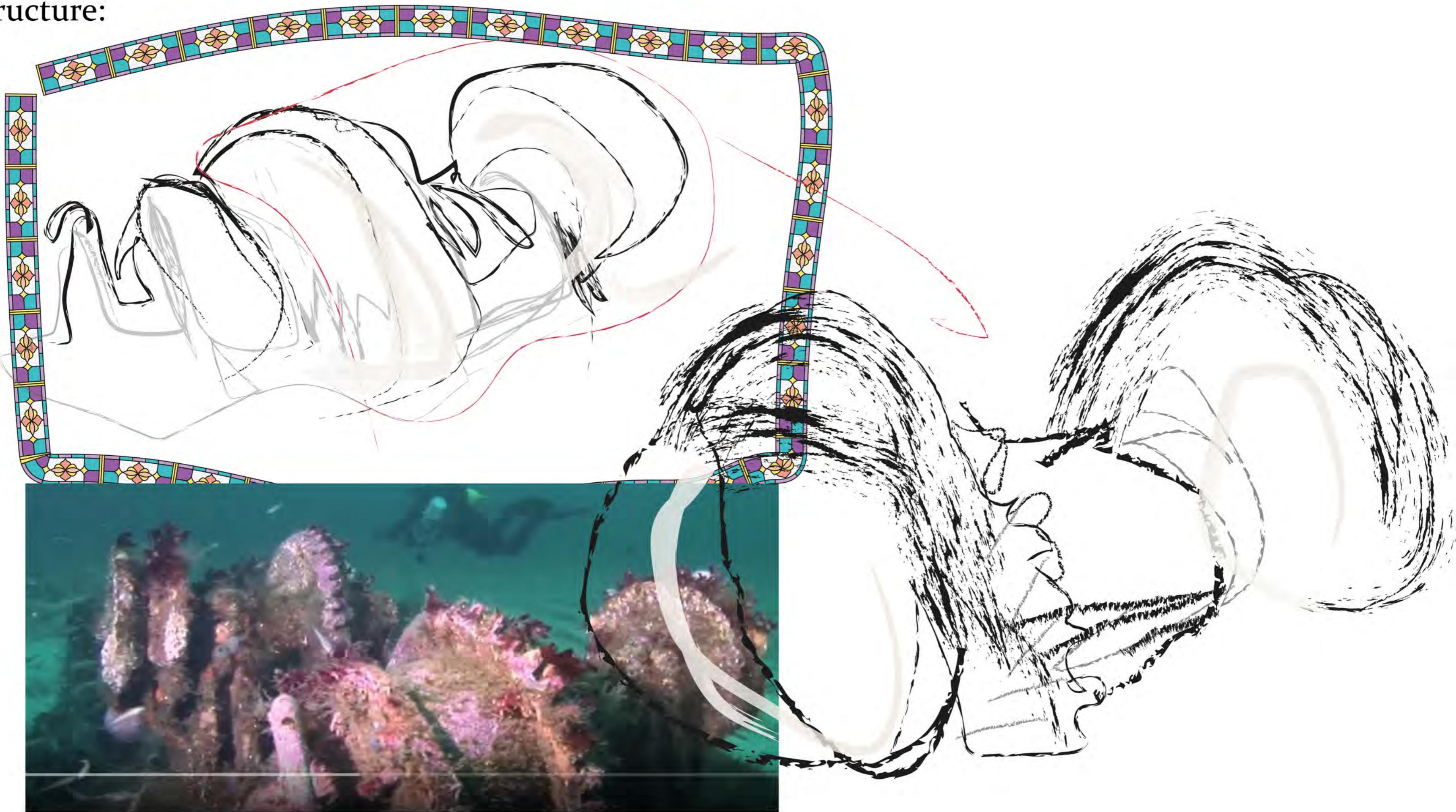
snapshot of initial Blender model



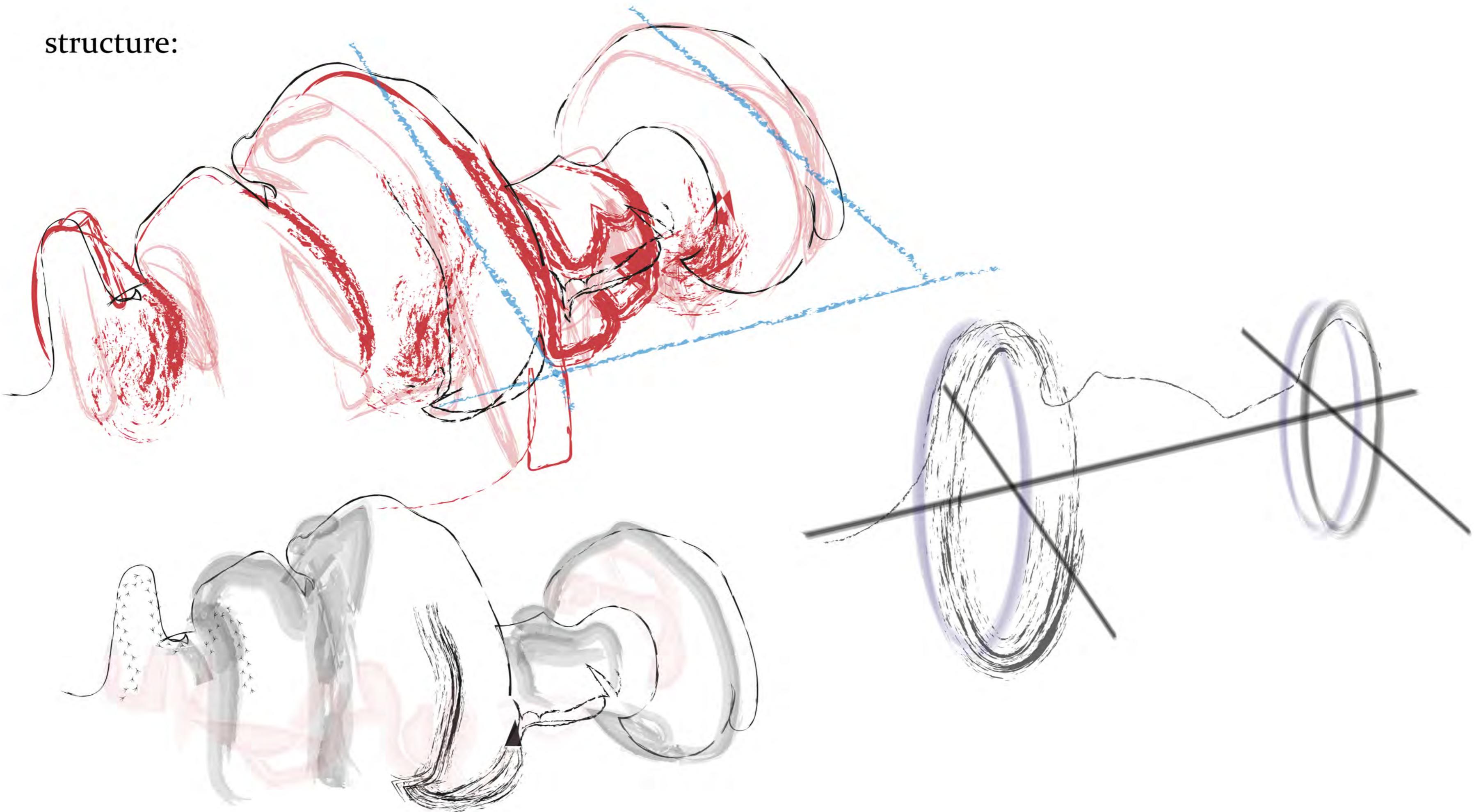
V

'pressure' applied in Blender to model the hypothetical weight of the water over time on a material which is less dense than metal- basically tried to track how the pipe would bloat if made from paper/fabric/other

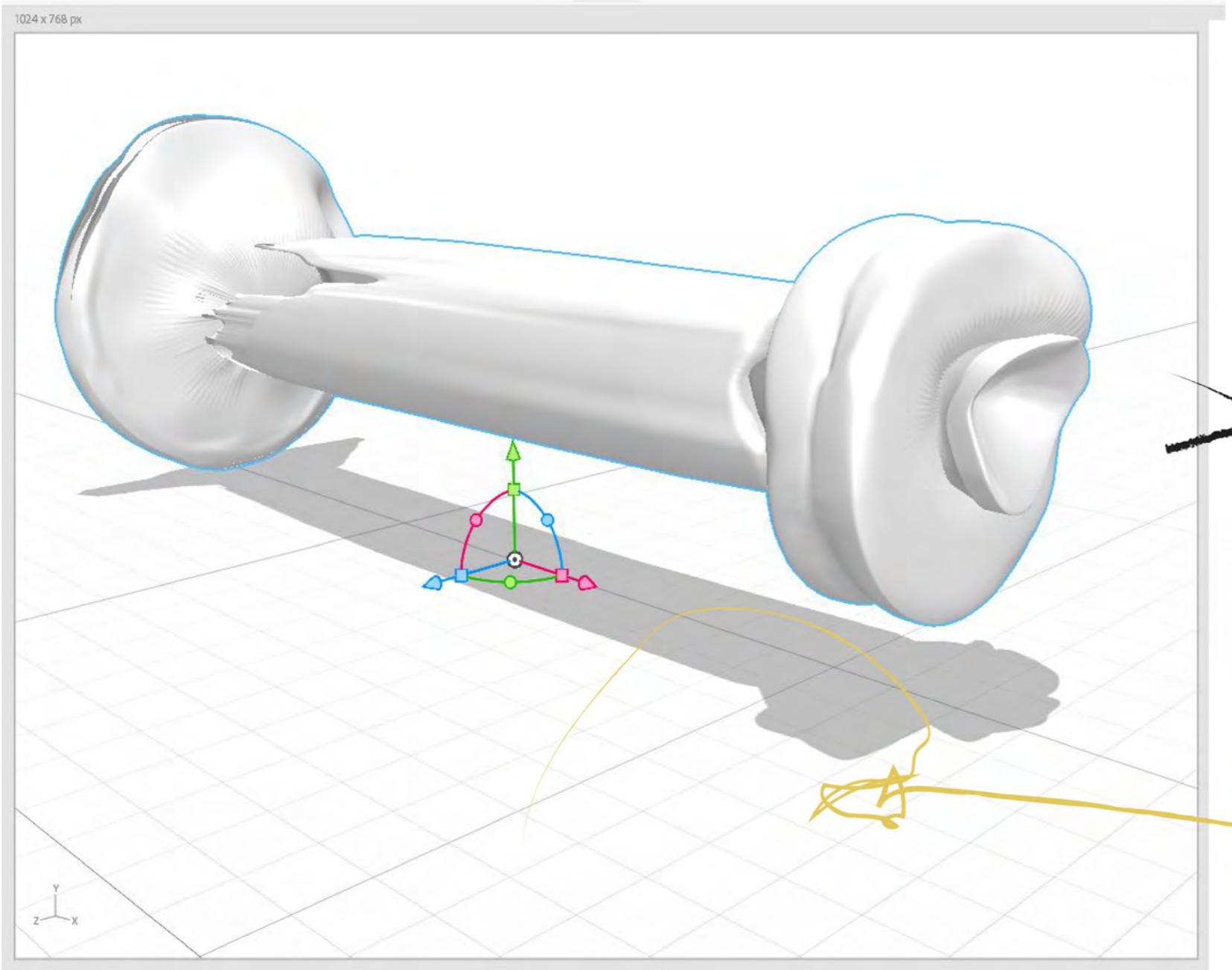
structure:

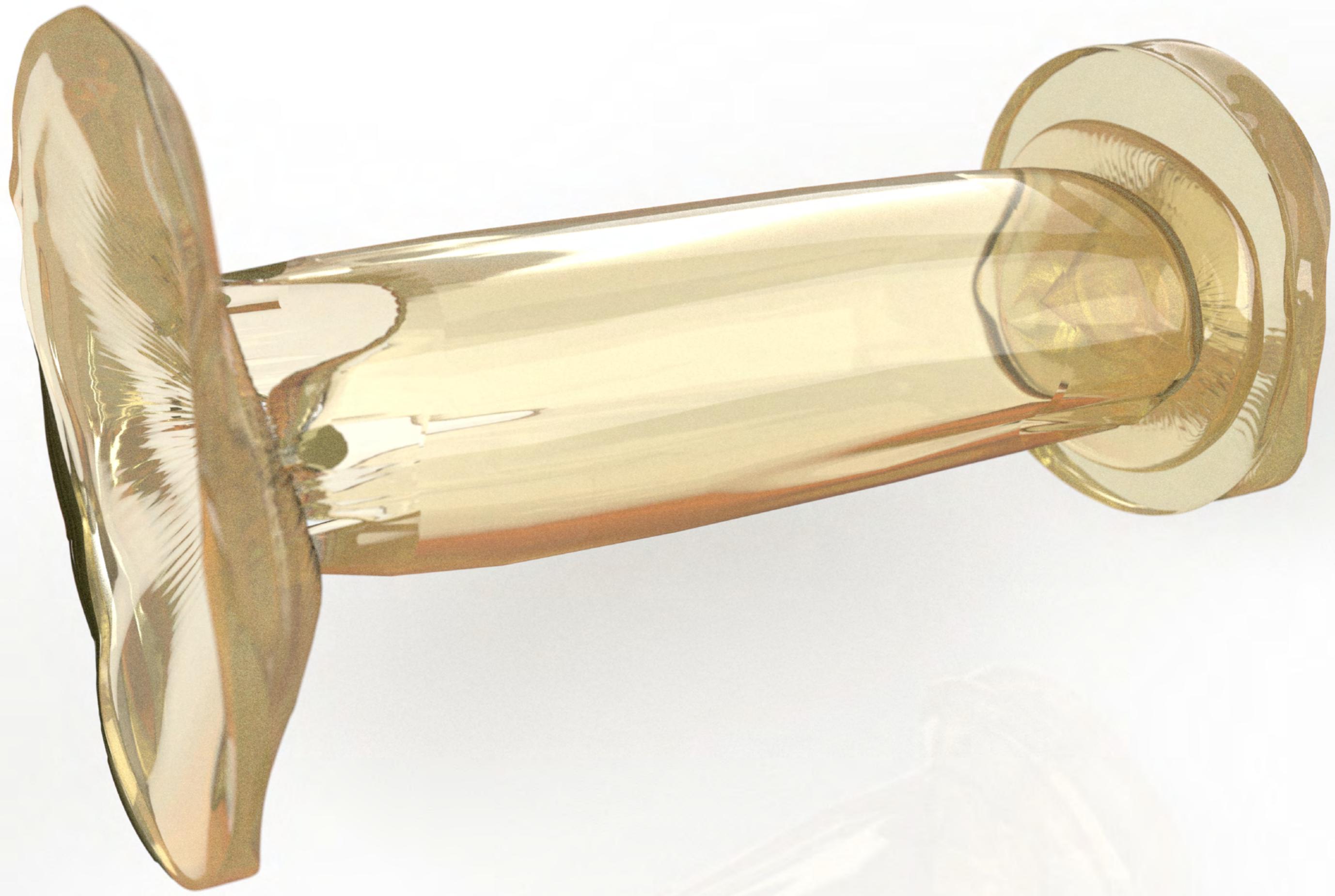


structure:



1024 x 768 px





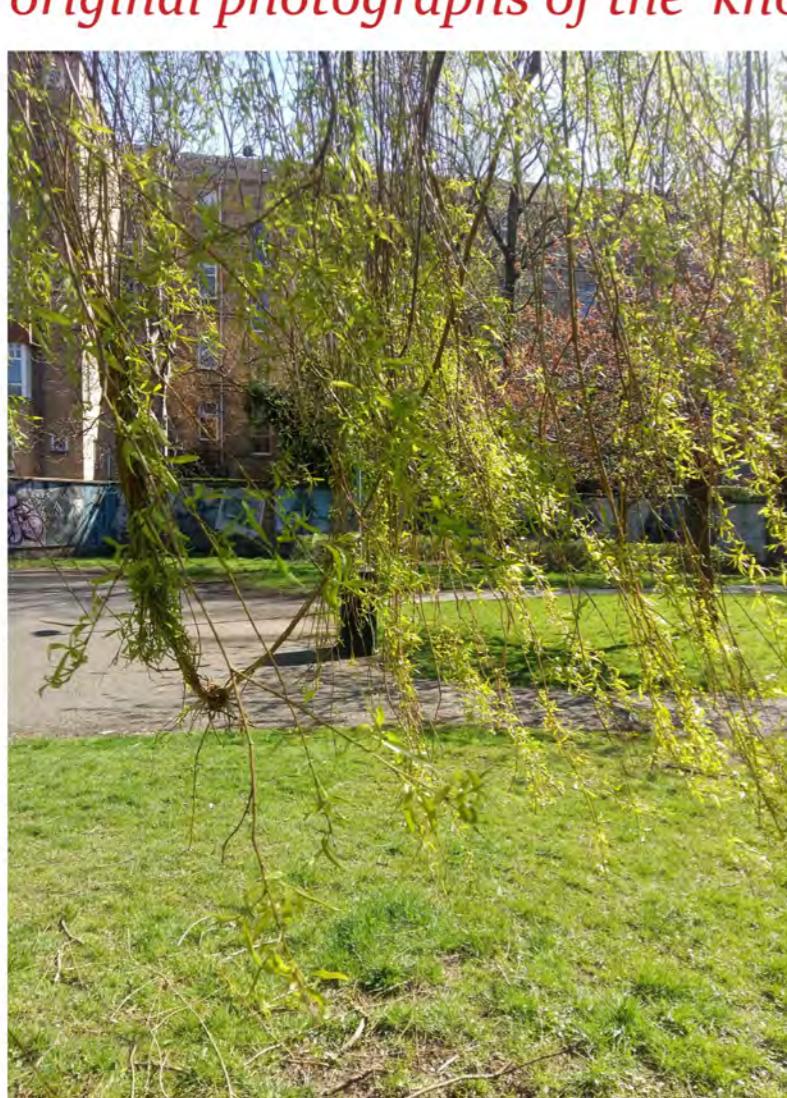


Thinking about how to pull apart the wreck like this with it still holding together in a circuit of images...

how to scatter images across huge distances?

secrecy: how are things covered and obscured from view?

notes on diffusion integration into landscape



what does it mean to put a wreck on land?

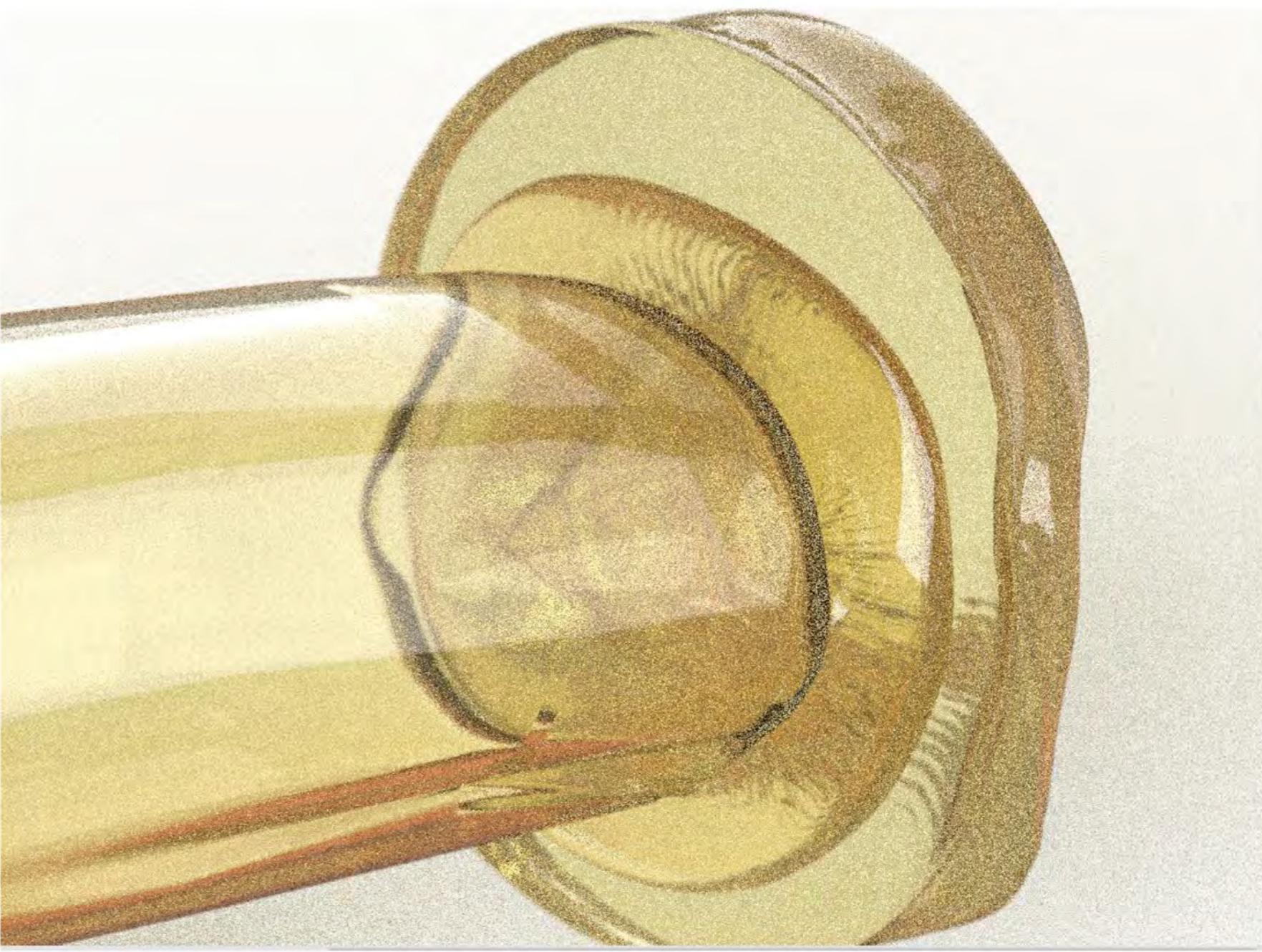
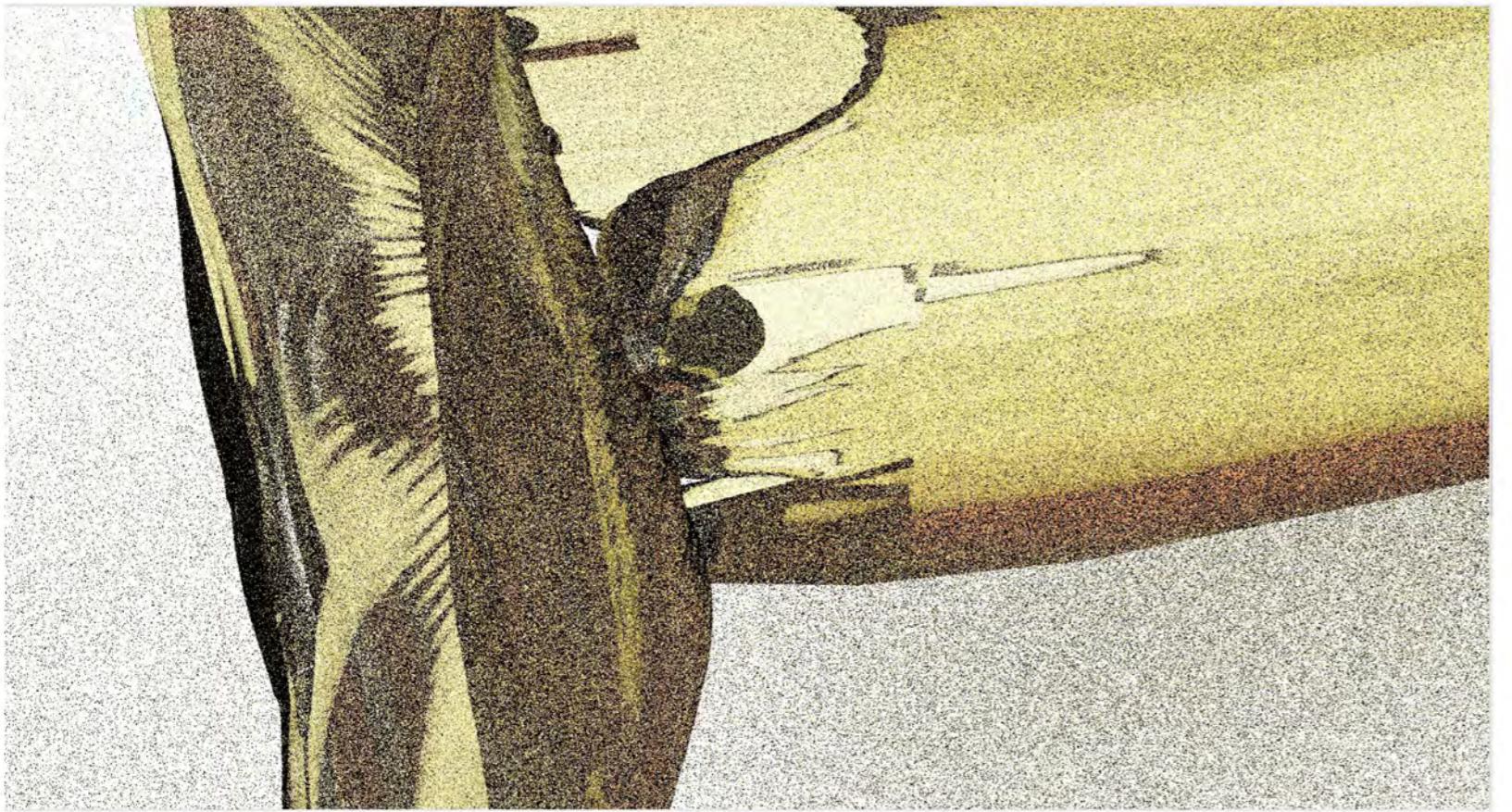
is it a disintegration of its duty?





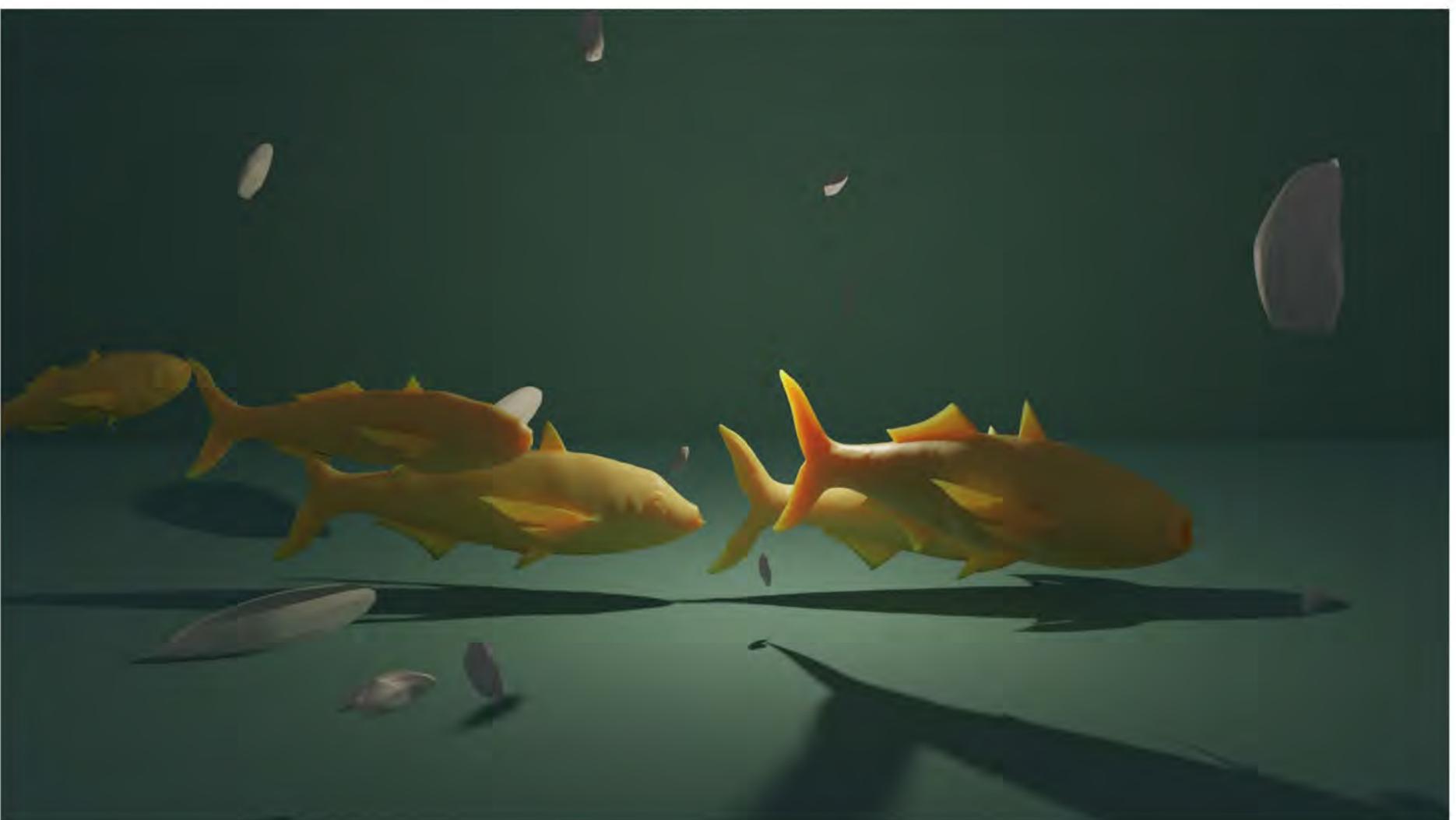
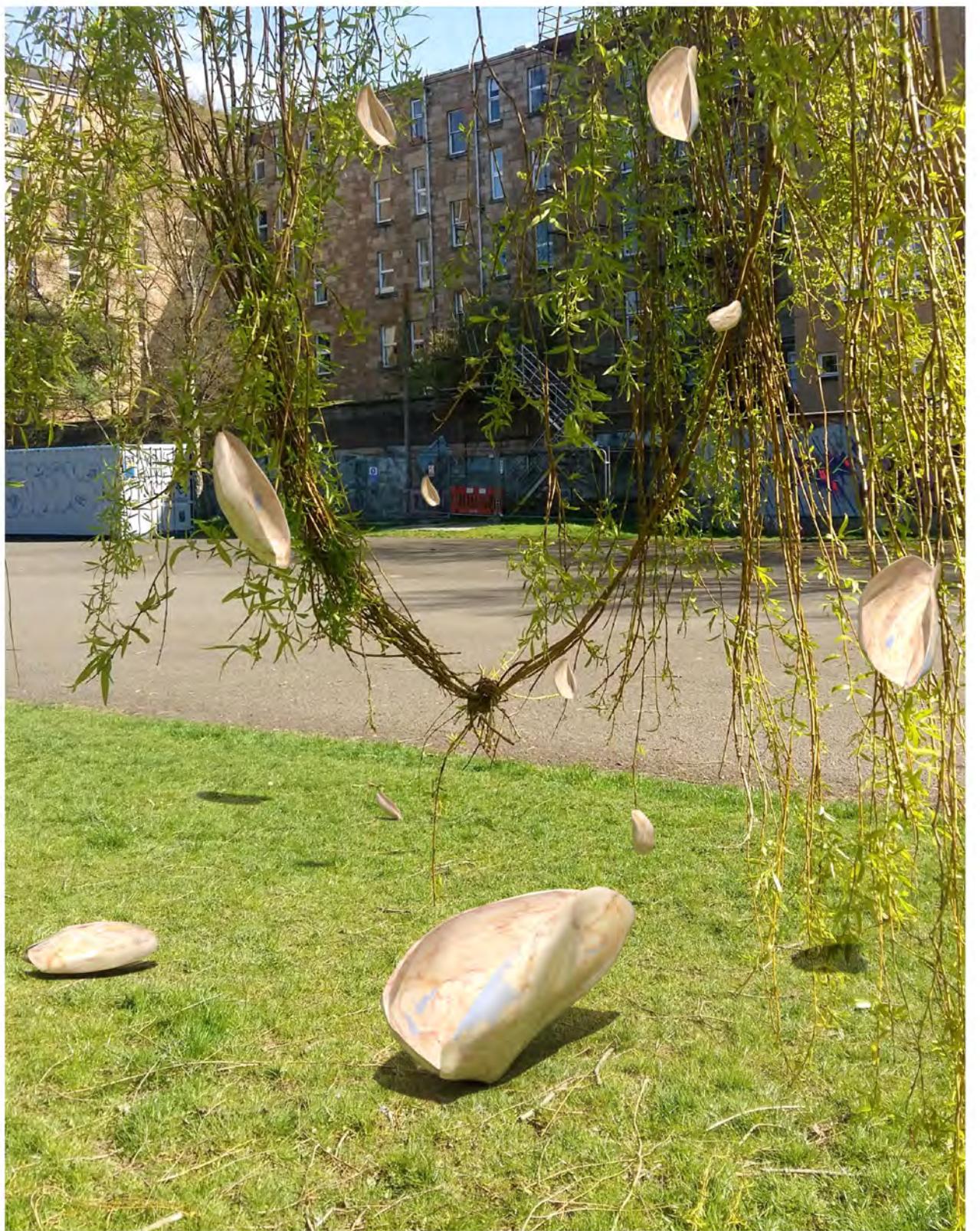
paper boat hull

Close-Ups and Stills (mid-render)



>this honey colour...

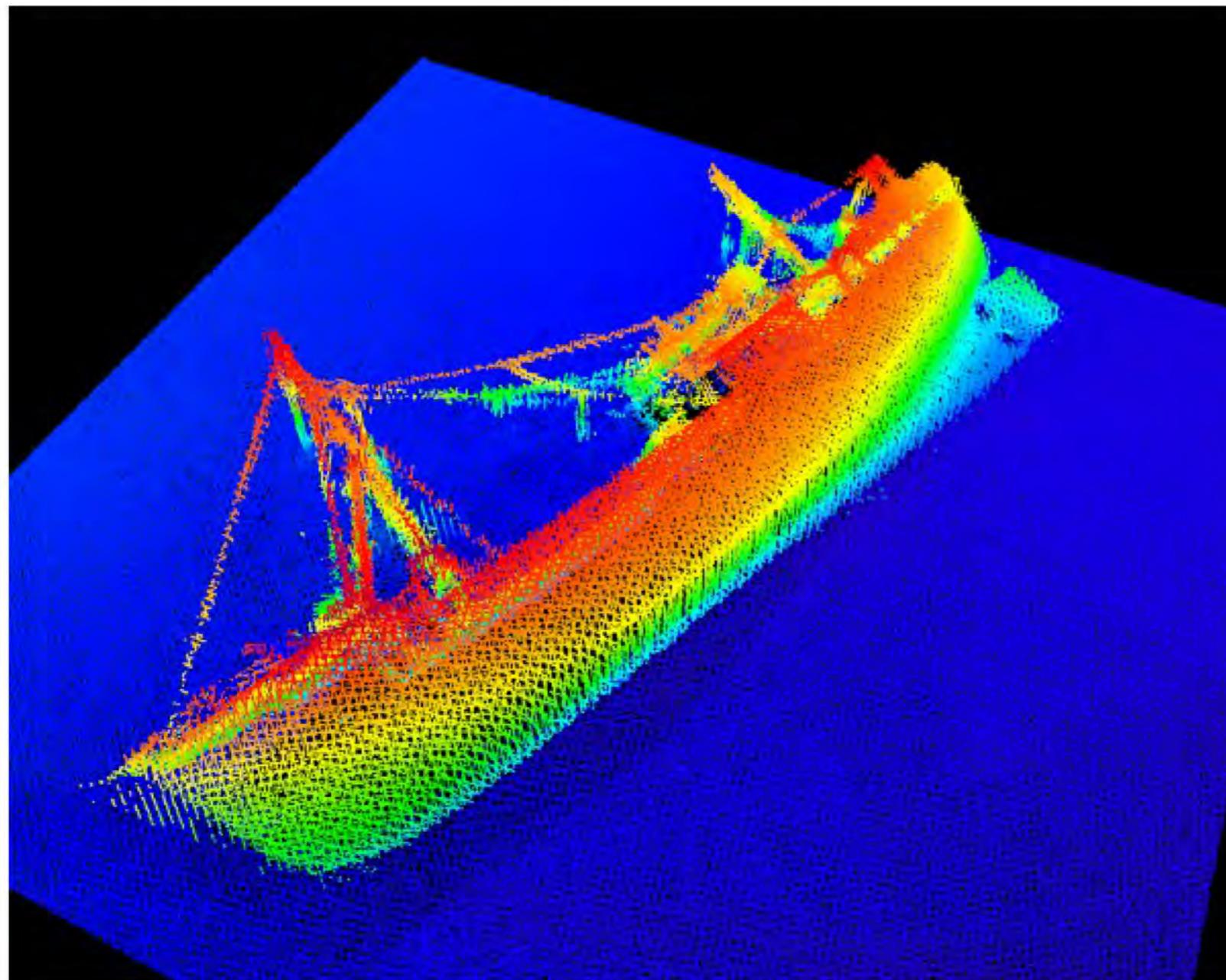
Additional Blender experiments: some tries at reconstructing the sealife around HMSE49:



**A Detour into LiDar/Military Vision:
some more notes and alternative renders,
thinking about burial in earth instead of water.**

Some thoughts on Bathymetry and Lidar (light sensing structures in the dark)

reconstructions of wrecks produced by Naval bathymetry,
a high-power sonar which grades water depth by colour

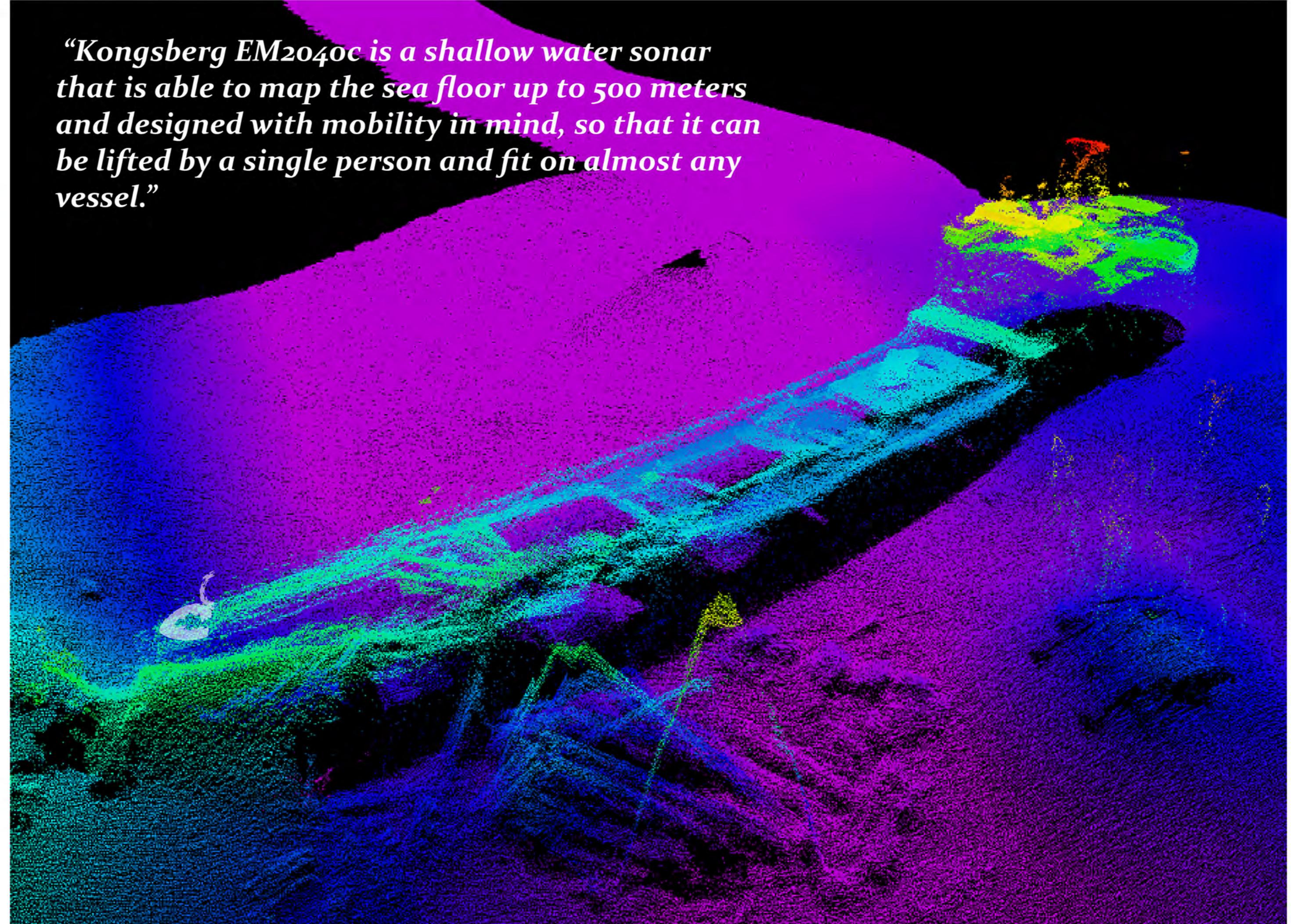


what defines these images?

>depth = colour?

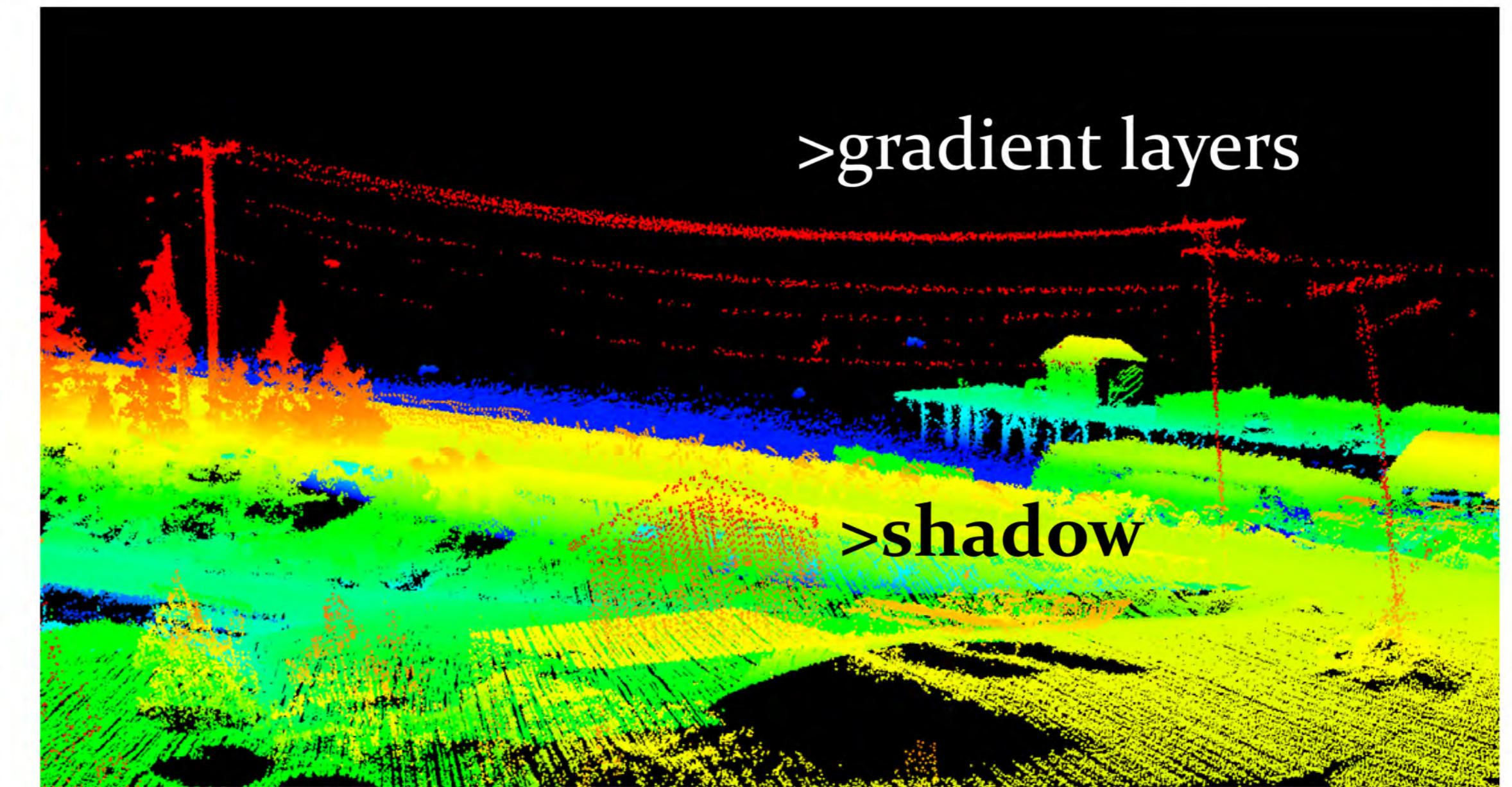
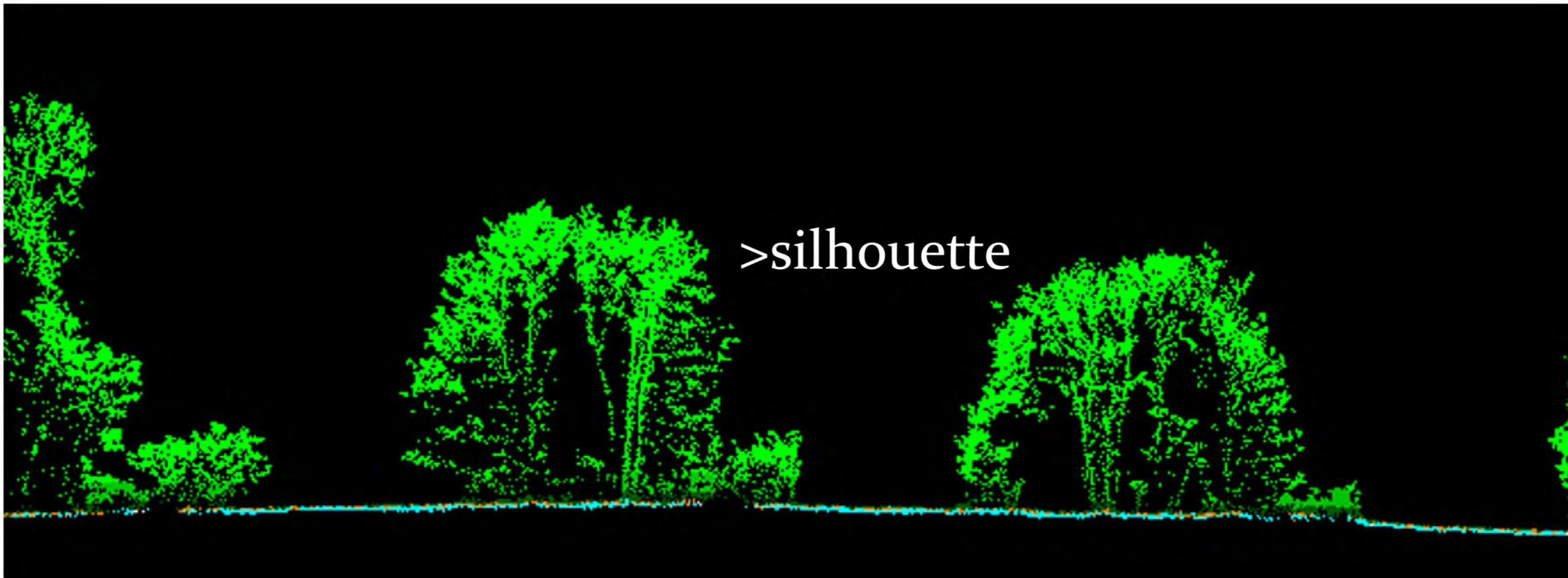
>shadow disrupts the machine eye

>sensing bodies in water...



MV Lake Illawarra bulk carrier

Examples of images produced by LiDAR (Light Detection and Ranging) which uses light in the form of a pulsed laser to measure variable distances



Some notes on location, being local, disjointing...

extract:

"We have to follow the flows of the toxic industries whose by-products seep into foods, forests, and aquifers, and visit the viral transit lounges that join species through disease vectors.

As we **stretch the local** across these seeping transits we need not scale up to the Human or the global, but **we cannot remain in the local. We can only remain hereish.**"

e-flux journal #81 — april 2017 Elizabeth A. Povinelli
Geontologies: The Concept and Its Territories

notes:

in militarised vision, to be local(near/nearing) is maybe also to be endangered. Systems like Lidar and Sonar are increasingly used as threat-detection, *you watch the vehicle draw near.* (quote). So: *evaluating closeness vs. distance has some link to military logistics, and Sonar/lidar make that apparent?*



being 'hereish' versus being truly local

feels like it gets at something difficult to negotiate when making images of landscape/ecological situations...

I suppose locality seen, in env. art especially, as 'social good (ref this!). But maybe when working with the strange formation of these Lidar/Sonar images and the legacy of military/transit vehicles (total journey, total speed, see Virilio), to aim at 'locality' is to misfire... is incorrect.

'Here-ish' seems more accurate to the threads running in and out of the situation, and to the audience themselves. (mediated, ofc, mediated.

Because military images cannot be local?

Do ships become 'local' to the shore when they're wrecked?

Is local somethin which echoes close to you (as opposed to echoes far?)

Some theoretical background:

[Operational Images, e-flux journal #59](#) N november 2014,
Trevor Paglen.

had passed since *Eye/Machine* is an awfully long time in technology). After about six months of research, I came to a rather dramatic conclusion. Increasingly, operational images are not simply alien to humans – they are literally invisible. In retrospect, there's a kind of irony in Farocki's *Eye/Machine*. Farocki's film is not actually a film composed of operational images. It's a film composed of operational images that have been configured by machines to be interpretable by humans. Machines don't need funny animated

We're quickly approaching (and have in fact probably long past) a moment where most of the images in the world are descendants of the "operational" images in *Eye/Machine*: namely images made by machines for other machines. From quality control systems in manufacturing to Automated License Plate Readers (ALPR) throughout cities, and from retail motion

>the actual basis of operational images is statistical, not actually visual, it's just coded into a picture at the end. The 'operation' originally performed by the image can't be visible naturally. Are they a bit ghostly then, or a bit angelic, as per. Serres ('the good angel is the one who disappears')...

> so how could you disrupt the 'operation' of operational images: make them beautiful but unreadable by machine vision?



[Violence at the Threshold of Detectability, e-flux journal #64](#) N april 2015, Eyal Weizman

disrupt prosecution cases: no body, no gun, no holes. In legal terms, it is a kind of antibody that comes to disrupt and dismantle complex epistemological assemblages of networked evidence. Furthermore, given that a hole is not matter, but a gap within material continuity, the issue at stake was not a simple absence but a certain "absence of an absence." Throughout the trial, Irving also seemed obsessed by the metaphorical power of holes: "I am going to keep on driving holes in this case until your Lordship appreciates the significance of the holes, or their absence."⁸

casualties.¹⁷ Seen from above, the hole in the roof is the only visible trace that the building was attacked by drones. But this hole, and the violence it evidences, are also at the threshold of detectability. This is because the size of the hole that a missile makes in a roof is smaller than that of a single pixel in the resolution to which publicly available satellite images are degraded.

>in this case holes (and thus DEPTH) are at the absolute centre of a court proceeding deciding massive events in human history. The 'operational' image must act, or else be forgotten. It's interesting how much cultural/social/historical weight and pressure can be put on the pixels of an image.

>I like the idea of **threshold**, and the duty Weizman feels to record the '**abscence of absence**'.

1970s, Bryant used state-of-the-art digital magnification to peer into the "molecular composition of the film." At stake was the way in which concrete elements got recorded by the silver halide crystals, the very chemical composition of a film, with about fifteen thousand feet of atmosphere in between. From this altitude and at the resolution of the specific negative used by the US Air Force, a single grain represented an area about of about half a meter squared on the ground.

person as seen from above. The hole was thus approximately the size of a silver salt grain. When an object photographed approximates the recording ability of a negative, it is in a condition that we can refer to as the **threshold of detectability**. In this condition, the materiality of the object represented (the concrete roof/hole) and the materiality of the surface representing it (the surface of the negative/silver salt grains) should be considered both as *presence* and as *representation*. Each surface must be equally

wreck part as archaeological object (as if dug up)

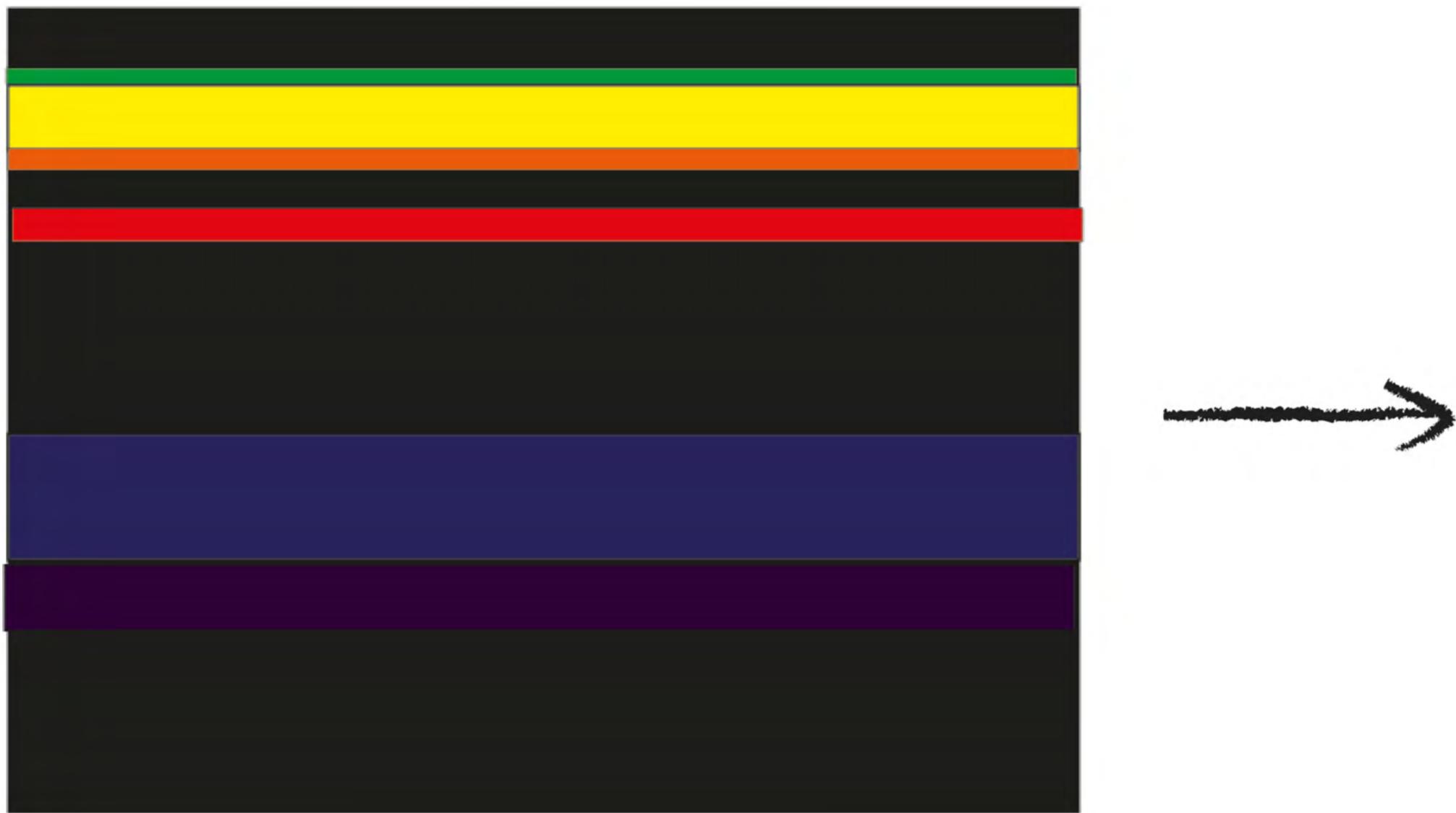


- re-imagining it in the context of being buried, not sunken.
is there a semantic difference?
I think there's definitely some semantic gap between burial
at sea vs. burial under earth-can be traced through mythological
representations? Classic, very old Earth/Water symbols, etc.
- Also worth noting that (in general) **Buried** things would be
detected with LIDAR, and **Sunken** things would be detected
with SONAR. I think this is a simple but nice distinction to
make, and it's interesting to soften the tech by association with
these romantic categories.

Equally, makes you wonder how the military fits in. Not neatly
- nothing 'fits in'!

Because there's also valuable CHRONOLOGICAL differences:
Lidar can be used to salvage, reconstruct, discover buried things
AFTER the event (eg. Irving trial), but is also v. frequently used
as 'threat-detection' or ranging, in drones (eg. gunsscopes),
BEFORE the event. I suppose at both point, it is always
constructing images... a 'looking' process. ?

Using the Lidar spectrum as a physical object:

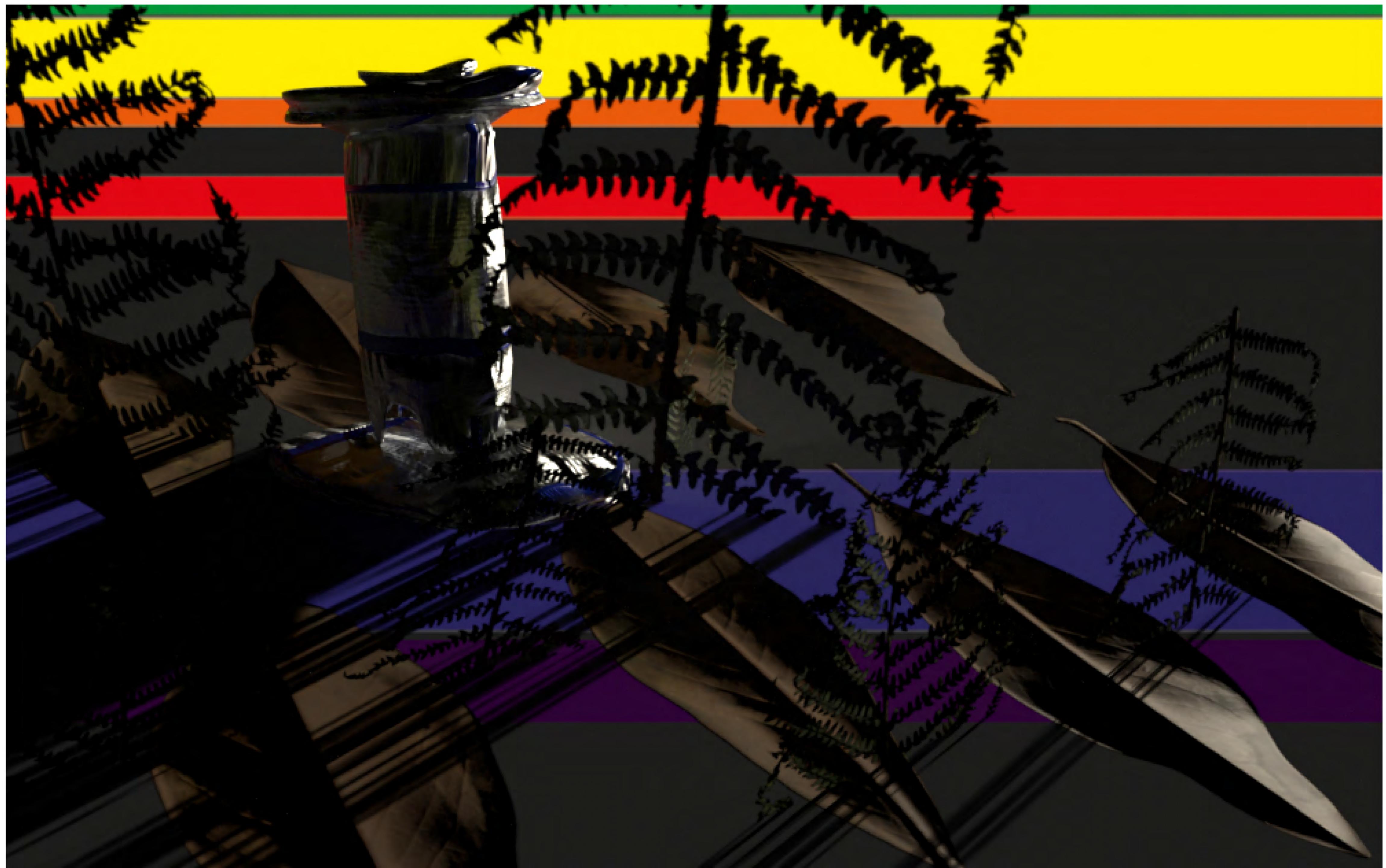


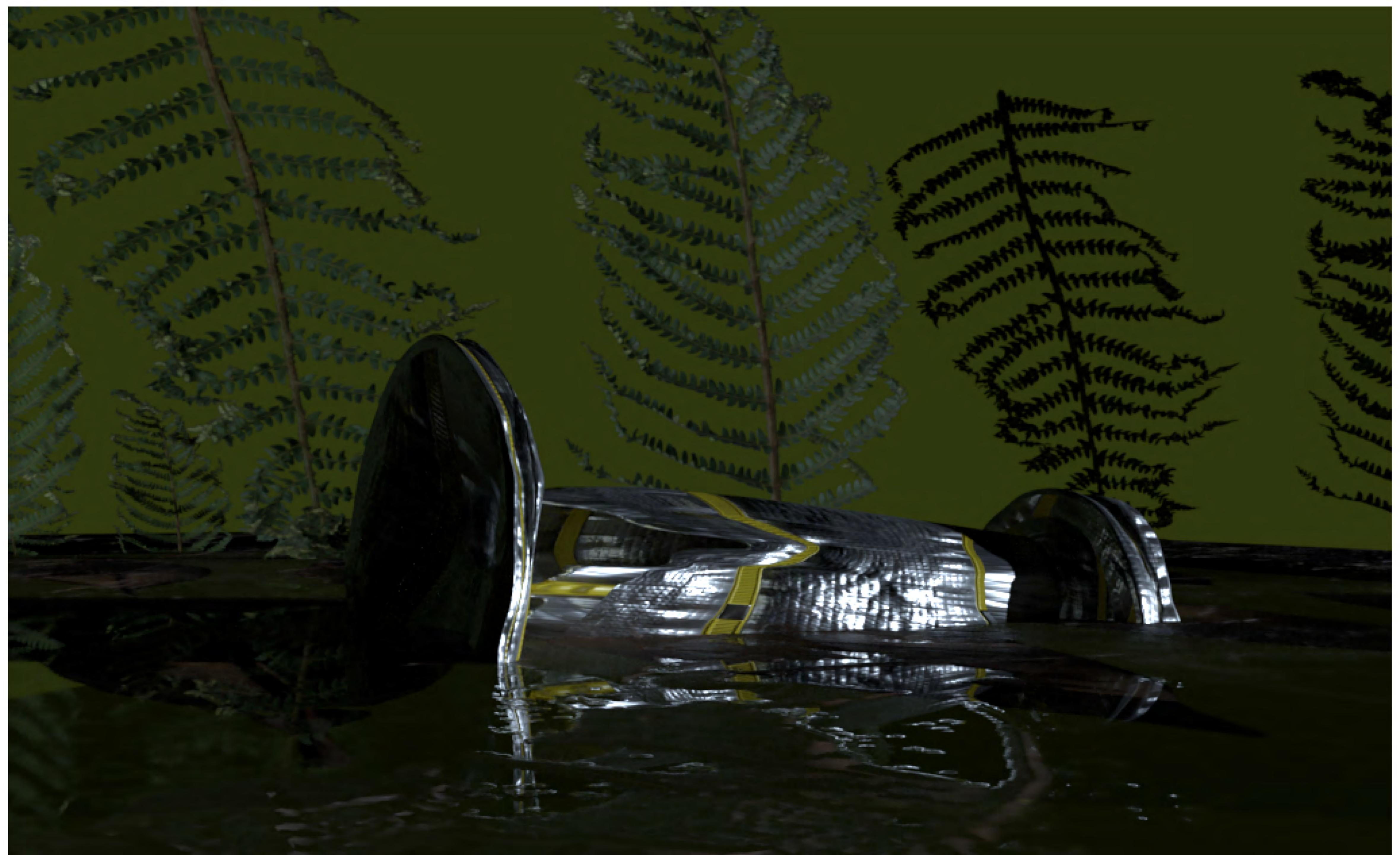
> I've taken the color map from Lidar images and rendered it as a new object (fabric backdrop)

> trying to de-construct its function: it is no longer a visual language which is produced by an algorithm, rather a mysterious- and manipulatable- object.

I guess it's an attempt to collapse the process of making these images into a single product.









Notes on approaching ‘military vision’ *or: how to tackle an ‘operational image’?*

What are the ethics, dynamics, logistics?

can you ever get at the mechanisms behind these images only using the imagery they produce?
probs. more importantly- should you? (as a ‘civilian’ removed from conflict, w. a government that uses these tools)

what are the **clues** that ‘military visions’ have entered into the general public’s perception?

(Arguably - as testified by Virilio- military visualisation has already been here for a while. And has tendrils in every facet of image/land presentation. Including urban planning, his bunkers, mapping software. So to make work about military vision is not to analyse something distant from our daily life, rather to get at the subconscious patterning that is marking everybody’s communications. Having said that, I do think that the dynamic of power is still a huge factor to consider.)

But equally I think the focus of this work may be more on the tools at their source- **the FORM of the actual software, and how it turns ‘real life’ into image at the beginning of the process.** If you can intercept it here, you might be able to learn something different. And I think it’s at this point that the dynamics of TESTIMONY and EVIDENCE/RE-MEMBRANCE come into play. I reckon there is also a slight philosophical difference between using these **imaging software as threat-detection vs. using them for recovery** (eg. Lidar in the Irving trial). In the latter, in a military/governmental context, the **actual material truth of the image becomes its function.**

Notes going forwards: how to develop further?

>I'd like to find a way of re-inserting the wrecks into the 'real world'- in a way which **mirrors how they came into it** (clandestine, sneaky, shadowy, sunken, half-seen, buried)



*how do you hide an image?
and document sightings of it*

> would be great to cast (in resin? pewter?) but not really that feasible with current restrictions... another way of making multiples and replicas?



*some kind of printing?
paper...fabric...*

> how does all of this intersect with the archive?
big compulsion to collect and store lots of images.



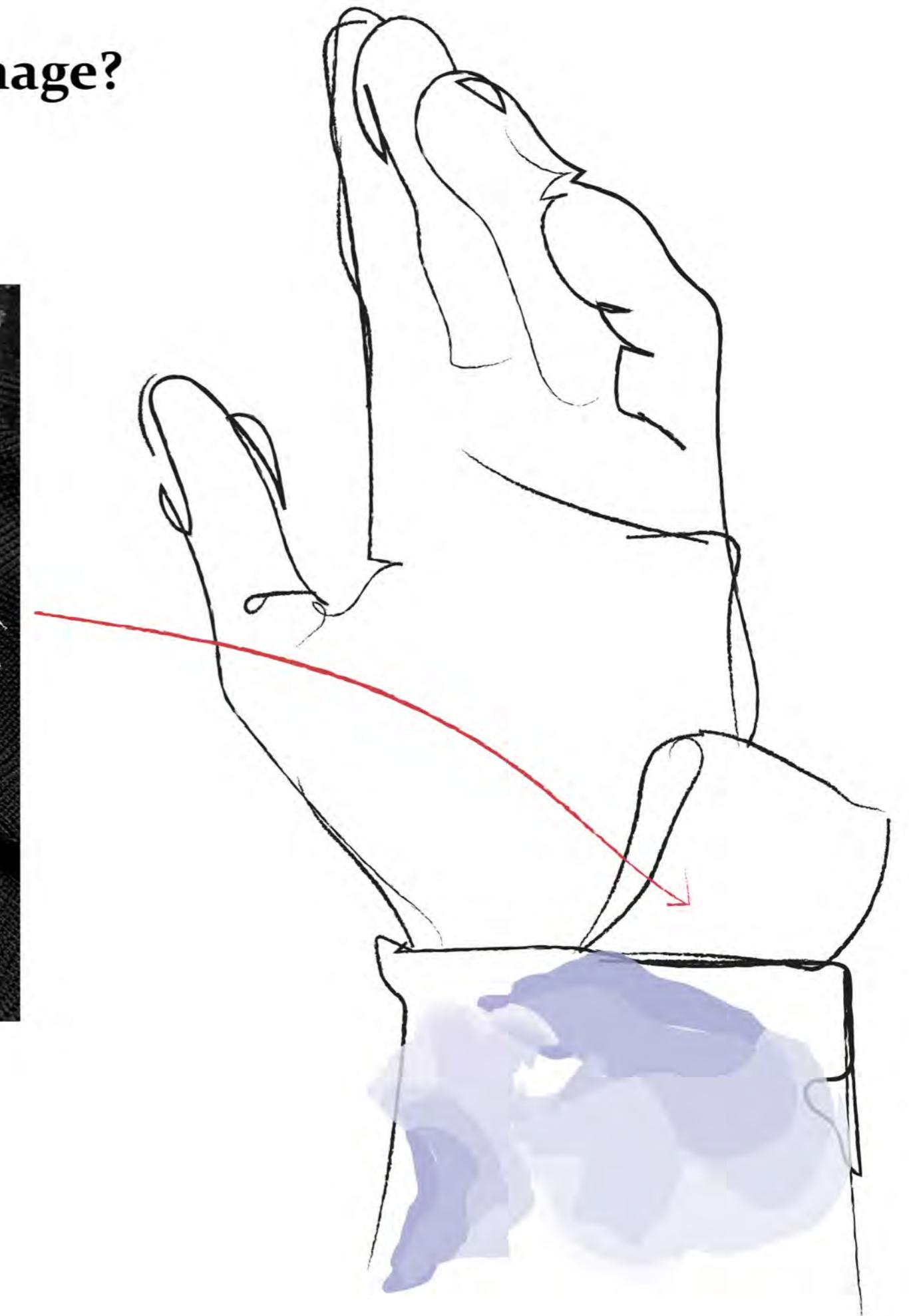
*repetition?
make my own web archive-
kind of a weird alternative?*

>also- would like to do more research into military databases (see Eyal Weiszman) and how that info is visually communicated, what structures it makes...

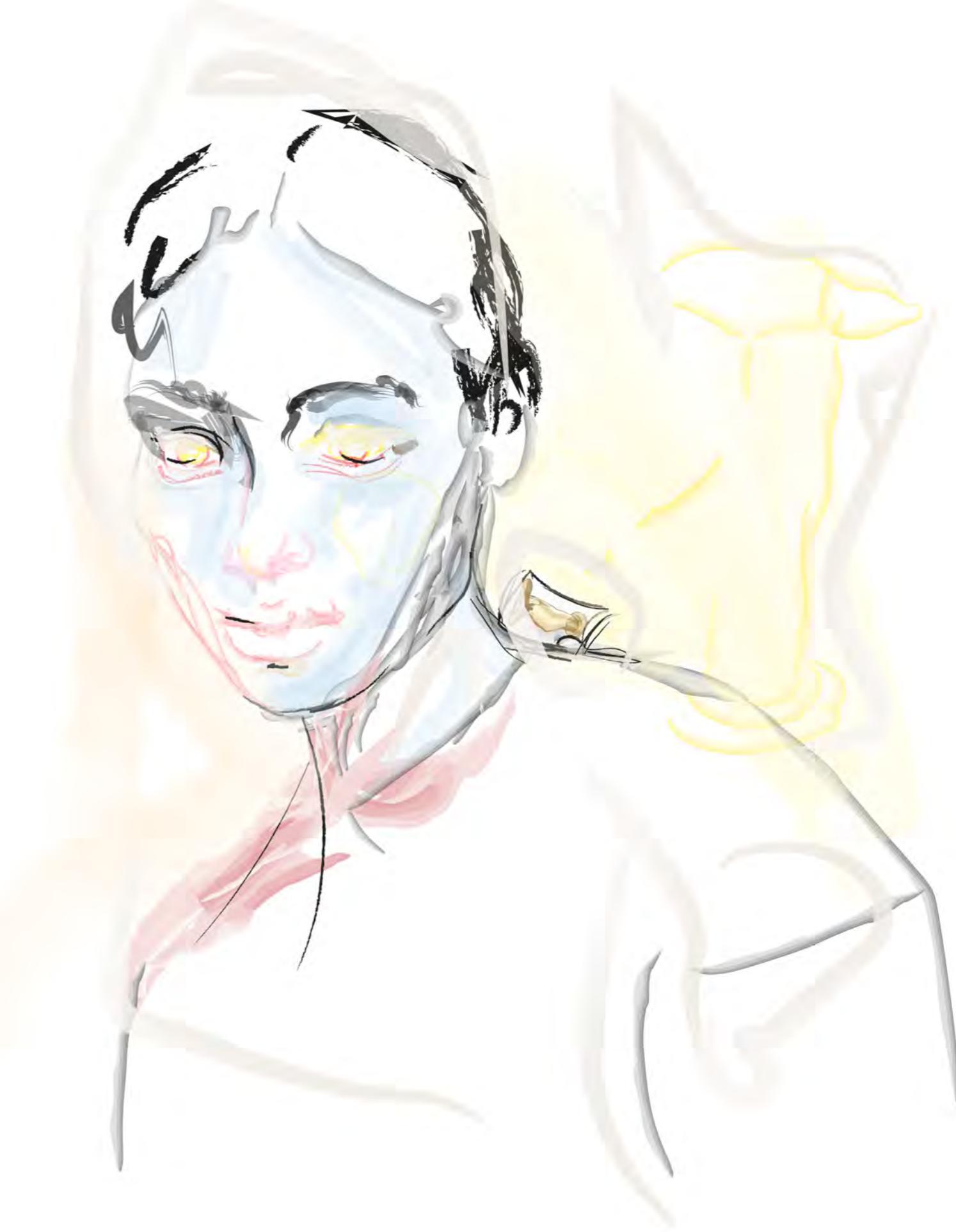
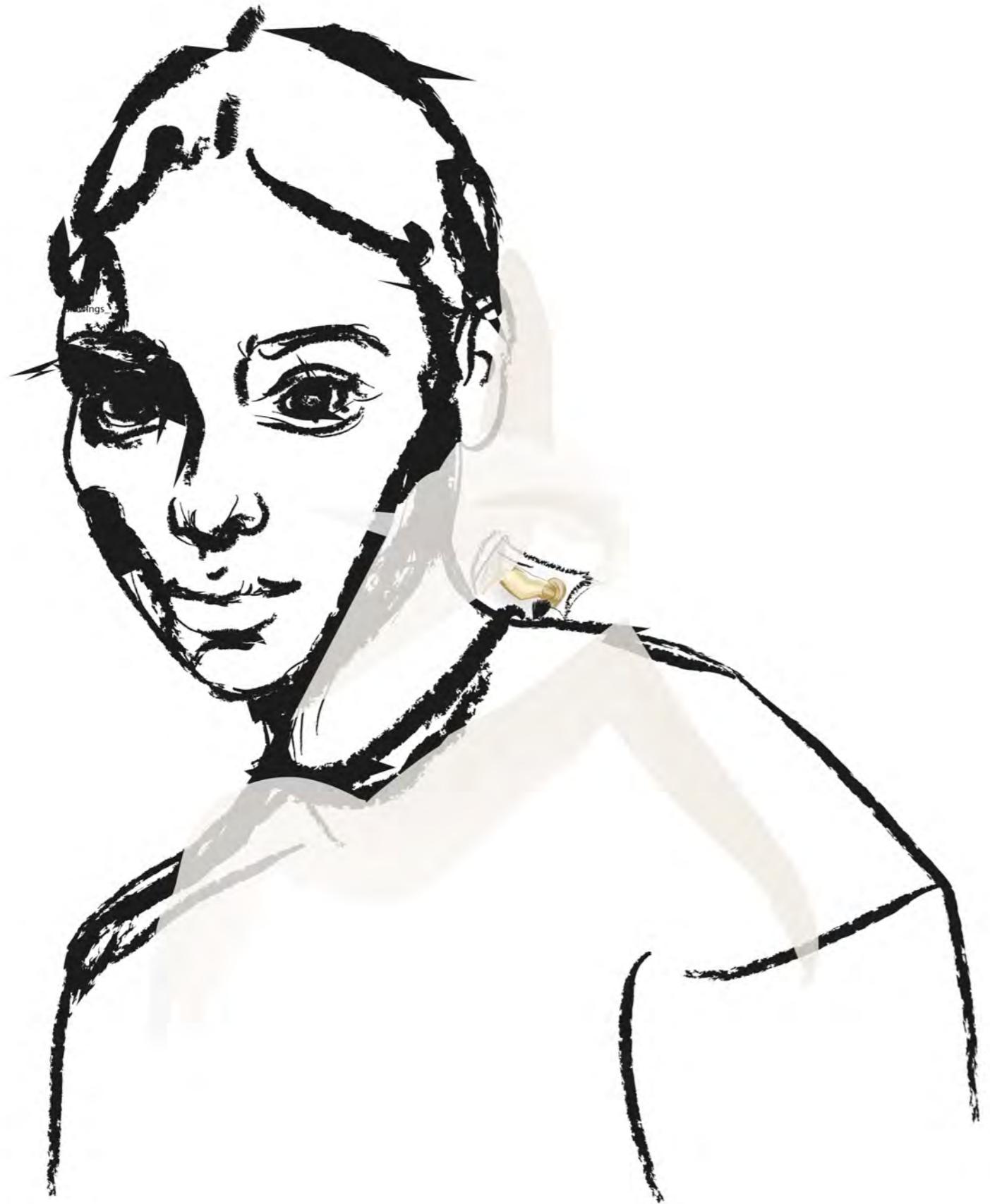
>keen to continue some research into Lidar, maybe in a different context, less connected to military?

Thinking about labels- a way of communicating this image?

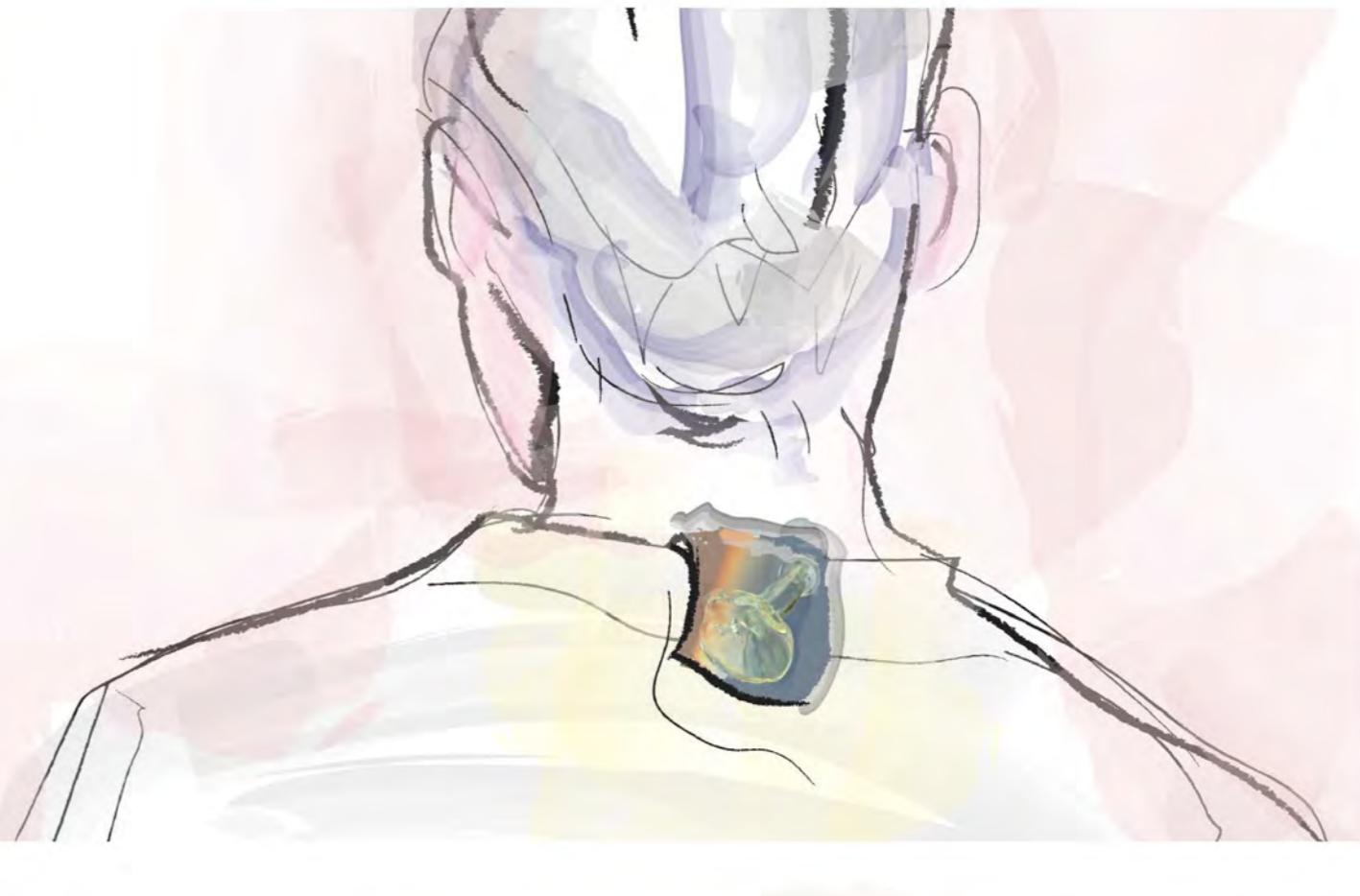
removal and replacement:



sketches:

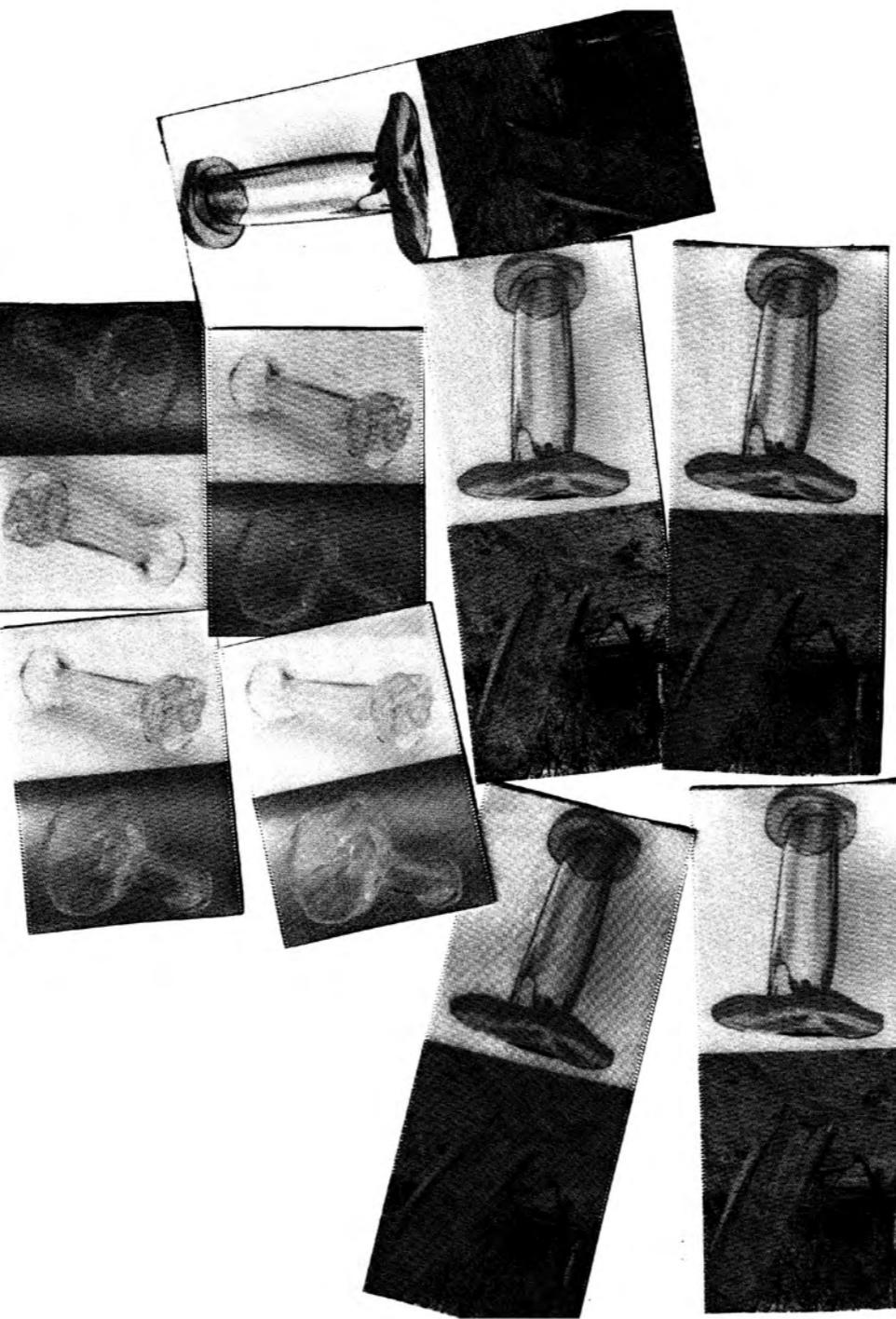


sketches:

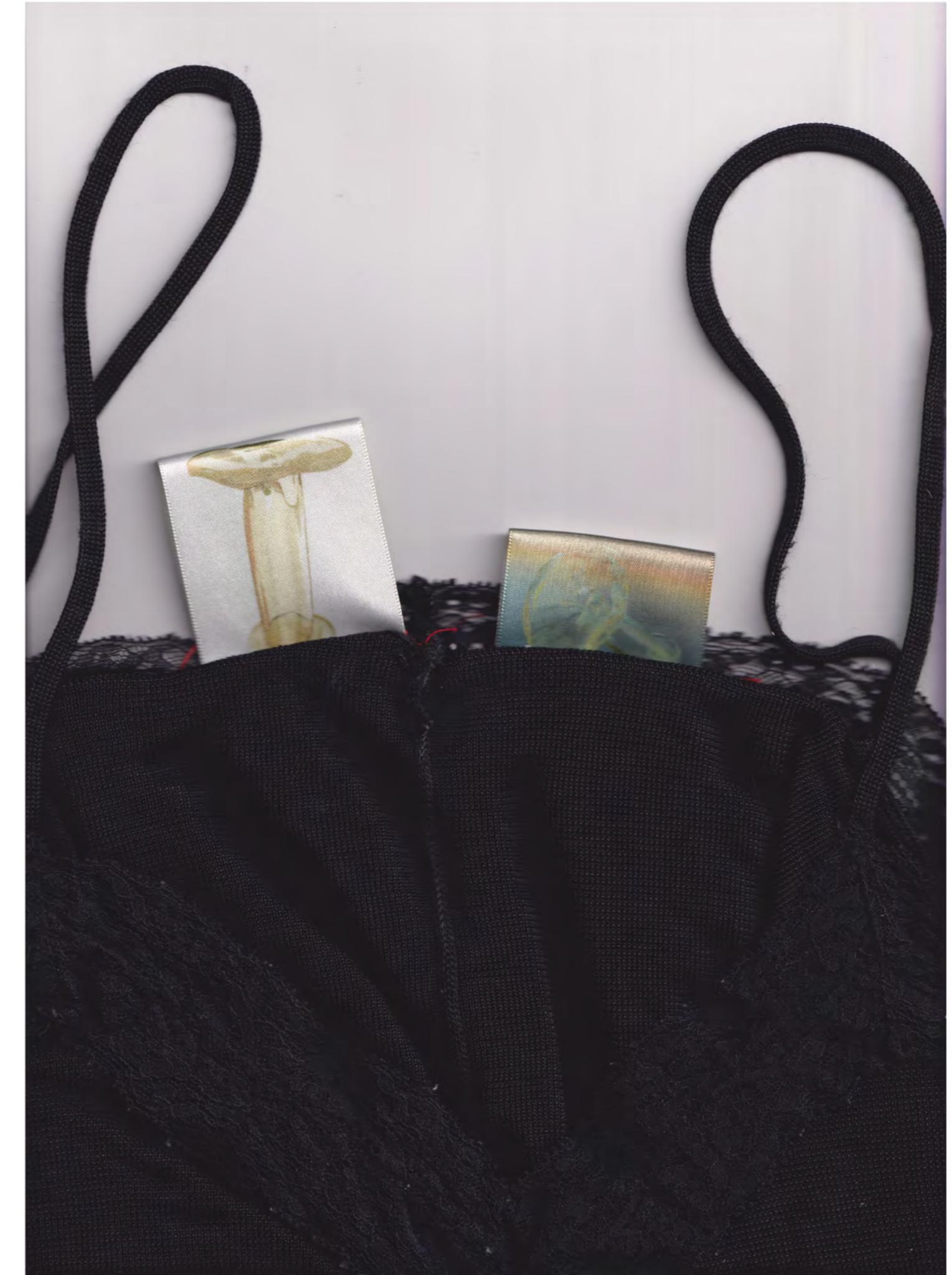


Renders of the pipe section printed as double-sided labels:

they would peek out from your collar, a secret image...



stitched in: wearing the wrecks



How to document?

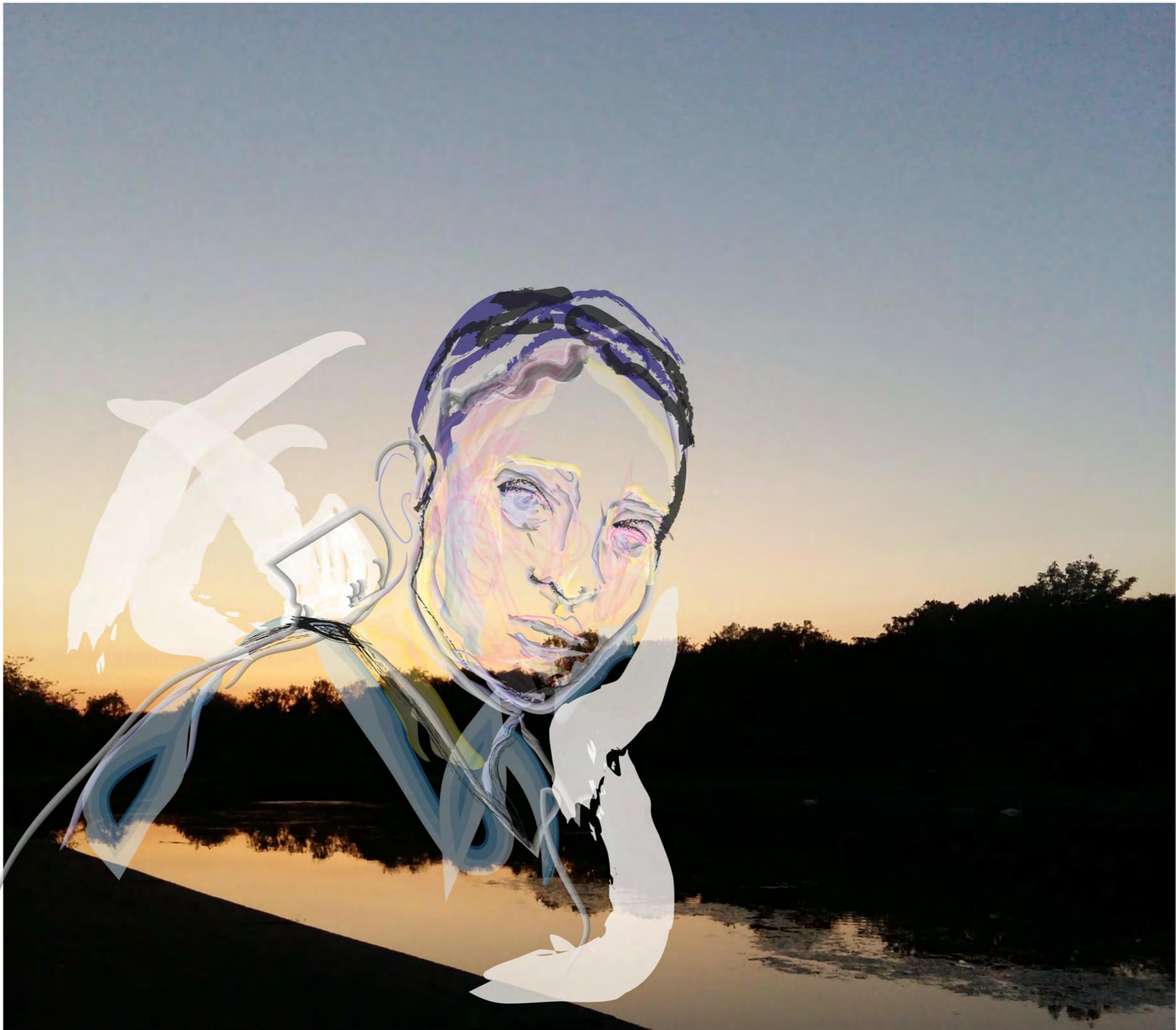
>*bring the wreck back to a body of water?*

>*wear it for hours and hours*

>*sunset or sunrise? Half-light? for some more obscured and secret vision..*

>*I like the idea of the wreck being still hidden in the documentation of this wreck*
<, removed so many times from the source.

This feels kind of truer to the way operational images work: removed again and again from the actual physical object.





the wreck labels peeking out in a domestic context



leaving messages on your neck...



close-up at the neck: a nice resolution.

