

DISTURBANCE

by

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of the requirements for the degree

of

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in

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November 2010

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ABSTRACT

I am interested in the interaction of the cultural and natural landscape and how we perceive it, due to my experiences working for the Forest Service as a wildland firefighter. I use basic techniques of cartography and other processes used to study the earth to explore one small irrelevant place – a small crack in my concrete driveway. I use the crack in my driveway as a case study or metaphor for larger places of the earth. Through materials such as mylar, colored pencil and ink, I create visual abstractions of the crack in my driveway. Unlike a true map, I do not reference the scale of the works allowing them to resemble large or small places of the earth. The scale on a map indicates the relationship between a certain distance on the map and the actual distance on the ground. When in the gallery the viewer sees large-scale topographical drawings and diagrams resembling rivers, canyons, mountain peaks, valleys, fault lines etc. Other works are abstractions of colored-shapes that create patterns, a concrete cube - the volume of the crack, perspective drawings and diagrams. But like a map, the viewer is only able to process the information through the translations I have made of the space.

My current body of work uses a small narrow meandering crack in the surface of my concrete driveway as a source for exploration of the relationship between the cultural and natural landscape. This crack has a length 275 cm, and ranges from .3 cm to 2.3 cm in width and .4 cm to 2.5 cm in depth. It is a small mark on the landscape, evidence left by an event. When concrete, a man-made material is laid over the soil it is only a matter of time before natural processes of our environment take over and slowly wear away the soil, causing the base of the concrete to weaken and show signs of stress fractures on the surface, thus leaving behind a flaw or scar in the cement. I use this small space as a starting place, collecting data from the actual site. The observation of this crack serves a metaphoric function, alluding to my interest in the interaction of natural and human disturbances, time based concepts, map-making/recording, wildfire, and my experiences as a wildland firefighter, as well as using the crack in my driveway as an indexical sign. Through Pierce's study of semiotics, the index is a sign, which does not resemble the object, but provides evidence of its existence or presence.

In the beginning of graduate school I began to explore some of my interests by creating my own fossils. Remnants of the past continue to be discovered and give us some insight to what happened before our lifetime. I investigated this concept, recording a part of my current personal history, while thinking about the past, present and what the future might hold. This was explored by collecting my trash each week and embedding it in plaster, layer after layer, creating a timeline. Additionally, the use of a Global Positioning System (GPS) tracked my day-to-day activity digitally on a map program.

Thinking about fossils I began embedding books in concrete, then burned the books out of the concrete, leaving only remnants of paper and impressions of the objects. I am attracted to concrete as a medium, because of its permanence and frequent use in our culture for construction of foundations, roads, walkways, etc. Simultaneously, I began to take rubbings of sections of ground such as ice, rock, concrete and asphalt with a pencil on paper. Then translating each mark created into topographical maps of these small spaces. This exercise of taking rubbings of small sections of ground heightened my awareness of the small spaces, of the earth, leading me to notice the small cracks in my driveway. I discovered I could use one crack in my driveway as a case study or metaphor for larger landscapes of the earth.

Landscape can be broken down into two types, both cultural and natural. Cultural landscapes are considered to be man-made places, such as cities, agriculture, roads, etc, while natural landscape is considered something devoid of human activity, which may include ice caps, and Antarctic regions (Bell 241). D.W. Meinig believes there are different ways of seeing the landscape. “Any landscape is composed not only of what lies before our eyes, but what lies within our heads. We can gather together and look in the same direction at the same instant, we will not – we cannot see the same landscape. We may certainly agree we will see the same elements – houses, roads, trees, hills – in terms of such denotations as number, form dimension and color, but such facts take on meaning only by association; they must be fitted together by some coherent body of ideas (Meinig 33).” The idea of distinguishing between natural and cultural or man-made places stems from philosophers who sought to separate man from the rest of creation,

raising humanity above the level of animals and placing people in a position of power and authority over nature. This could mean that people either had responsibility for the well being of the world or the freedom to exploit it as they saw fit. Though there is physically a cultural landscape and a natural landscape. In Meinig's paper Ten Versions of the Same Scene, the interpretation of the landscape by humans can be broken down into 10 different categories. Landscape as nature, landscape as habitat, landscape as artifact, landscape as system, landscape as problem, landscape as wealth, landscape as ideology, landscape as history, landscape as place and landscape as aesthetic (Meinig 36-47). Whether one sees the landscape as a resource ready to be used, a historical artifact that should be preserved, or a place that should be void of humans, the physical landscape will continue to change, due to humans alterations of the landscape and those occurring naturally, whether they are wanted or not.

I would not have made my current body of work without my research and experiences working for the USDA Forest Service as a wildland firefighter. Like the crack that formed in the cement, fire is a natural process that changes or alters the landscape. Today there is still much debate over how to control fire and when to let it burn naturally. There is historical documentation that fire was used by people in the Ponderosa Pine forests of western North America for hunting clearances, which in turn supported large number of herbivores such as bison. This disturbance, controlled by people, would tend to reduce the risk of large-scale natural fires, and lead to a patchier landscape that in turn affected the populations of animals and birds. These changes to the pattern of the landscape would have been sustainable, whilst human populations

remained at relatively low levels (Bell 204). Native Americans used this technique before Europeans started to move west from eastern North America. What has varied greatly since this time is the population size and mentality about what is landscape? In the 1800's the western North American landscape overall was looked at as a resource to be used. On August 20, 1910, only five years after the establishment of the Forest Service, the "big blow up" happened. Due to little rain, dry lightning and gale force winds, 1,736 fires broke out over the landscape in Washington, Idaho and Montana, and burned three million acres of private and federal land. It consumed an estimated 7.5 billion board feet of timber, and killed at least eighty-five people. This explains the policy started by the USDA Forest Service after these fires, called the ten A.M. policy. Fires were to be put out by ten A.M. the next morning to protect the timber for harvest. As an employee of the Forest Service in 2010, one hundred years later, I live in a time when the policy and the understanding of fire in the ecosystem are continuing to change. The fear and message that "fire is bad" is changing. In the 1990's to the present, much more care and research is taken, and it is now understood that fire is needed for a healthy ecosystem. The USDA Forest Service now tries to let natural lightning fires burn, and an introduction of fire by the Forest Service is also implemented. The problem we are faced with today is an ecosystem that has not had significant fire for over 100 years, and an increase in population and growth. This increase in the cultural landscape means that the proximity of man made environments and National Forest and State Lands are closer together. This area is called the wildland urban interface. Because of this interface, most fires cannot burn naturally, sometimes houses burn down, and a beautiful landscape of

green trees and foliage is altered and blackened by fire. This change in the aesthetics of the landscape is still not accepted as a positive occurrence by a majority of people. Is this because we want to live in a static world, allowing nature to change or evolve only when it does not affect us directly?

As a young adult, living in Northern California, my perception of fire on the landscape was naive. In the media I heard only of houses burning down and resources being lost. I remember in my teens hiking and mountain biking frequently on the Clikapudi Trail near Shasta Lake, California. In the early 1990's a fire burned through the area, and destroyed parts of the trail. Hiking on the trail post-fire, the landscape had been drastically altered. I was looking at the landscape as something static, unaware that this change was a good thing at that time. Years later, My experiences as a wildland firefighter help me to see the landscape as sublime. Due to the power and importance of natural disturbances like fire, the cultural landscape and natural landscape are not separate, but interact and affect one another.

A disturbance is any event or series of events that alters the physical environment or landscape and can be both natural and human caused (EPA dictionary). A natural disturbance can be broken down into six types: Soil and earth movement, Water – as liquid, snow and ice, Wind, Fire, Pathogens, including fungi and bacteria, Animals and Insects (Bell 187). Examples of human disturbances are logging, farming/agriculture, construction of cities, roads, mining and prescribe fire, are some of the way in which humans contribute to these patterns. “The processes at work in the world produce landscapes where everything is in a constantly dynamic state. The competition for

resources, the interaction of organisms with each other and with inorganic, physical processes, the cycles of carbon, nitrogen and water, together with a wide range of weathering and erosion activities combine to drive the engine of the biosphere fuelled by the energy of the sun and of nuclear reactions deep in the earth. Out of this endlessly shifting cycle of growth and decay, a myriad of patterns is apparent, evolving at various rates into an uncertain future. Humans are a part of this world and contribute to the patterns and processes to varying degrees (Bell 14).” In a world that is in constant flux, how do our marks alter these natural processes? One mark or disturbance that is continuing to alter the environment is the use of cement.

This material is used to create walkways, roads, foundations etc. According to the US geological survey, in 2006, 2.6 billion tons of Portland cement was used worldwide (Khatib 120). To produce this material, the limestone and aggregate must be extracted from the earth, creating large pits in the ground. Then the raw materials must be baked in a cement clinker, which consumes significant amounts of energy and emits CO₂ into the atmosphere (Khatib 121). There is an element of time it takes for limestone to form (geological), a blink of an eye, comparatively, for us to take the material, break it down and create Portland cement (human time), and use it. Though there is research being done to search for alternatives, this process continues to alter and change the landscape. As humans, we tend to think linearly, and our grasp of time is most often related to our lifetime. The way in which we see the landscape is determined by the acuteness of the various senses we possess, our physical size relative to our surroundings and our position

in the world when we experience it. Until recently, we could only see the earth from ground level. Now we are able to see the world through a much larger scale. Through satellite imagery, Google earth and GIS (Geographic Information System), we can now see the world from above.

Since the beginning of civilization, humans have been making maps in order to have some sort of understanding of the world we inhabit. Since 1950, we have used cartography, a scientific art form, to breakdown the landscape into color, keys and topographic lines (Dodge 3). This form of code, gives us some sort of order, understanding and control over the landscape. However, due to natural and human disturbances, the earth continues to change, and these maps become outdated. Maps then become a record. They hold a linear timeline of change. Through satellite imagery and maps the human patterns or marks can be seen. For example the checkerboard landscape from logging, agriculture, cities and property boundaries are evident. “There are no secrets, all our cultural marks, or blemishes are there, and our glories too; but above all, our every day to day qualities are exhibited for anybody who wants to find them and knows how to look for them (Jackson 153). These marks and the patterns we create, are like the crack in my driveway evidence of the interaction of humans and the landscape.

According to Pierce and his study of semiotics, a sign can be broken down into three types: icon, index, and symbol. For my work, I am particularly interested in the sign as index. The index is a sign which does not resemble the object, but provides evidence of its existence or presence. For example, a hole nibbled in a geranium leaf is an indexical sign of the slug that ate it; a scar or cut. The crack in my driveway therefore

becomes an indexical sign, it is evidence of the interaction between the cultural and natural landscape. The natural disturbances of soil movement and water as liquid, snow and ice have interacted with the layer of cement, a human disturbance. This small crack in the driveway is evidence of this constant change, and is something we don't want to happen to our driveways, foundations, walkways etc, but it is something that is beyond our control. Just like wildfires, avalanches, landslides, earthquakes, and volcanic eruptions. These violent processes, on a large scale allow us to look at the landscape as sublime, putting into perspective our relationship to the natural processes of our environment. We tend to feel small, humble and helpless in the face of scale of these scenes or the awesome process of power (Bell 73). What about the things we see everyday? A landscape with less powerful qualities will invoke a sustained aesthetic response of lesser pleasure or displeasure. Without perhaps knowing it, there is a tendency to expect and accept dull mediocrity in our everyday surroundings (Bell 72). Through my thesis body of work, I have for over a year looked at one small irrelevant crack in my driveway as a source for exploration. My work invites the viewer to look at a part of the landscape most tend to ignore, but this small space is evidence of a Disturbance.

Through the application of simple line and soft color of the materials, it is my hope there will be a tension between the work and the word Disturbance, allowing the viewer to question what this means. The use of drafting film, a translucent material, allows me to work in layers, like the process of cartography. As the layers build, some of

the information becomes unclear. Like the natural landscape there are unknown factors that are beyond our understanding. This thesis exhibition is about one small space. Through a variety of mediums traditionally used in mapmaking, engineering and architecture, I explore the crack in my driveway using it as a metaphor.

The amount of time it took for the crack in my driveway to form (human time) is much different comparatively to the time it took for the Grand Canyon to form (geological). But each canyon, crack or fissure is evidence of the constant movement of the landscape. My work explores the importance of both the micro and macro process and patterns of the landscape. Therefore I use techniques of cartography, and other processes such as photo plots and measurements, all associated with the way we map the earth. Unlike a true map, I do not reference the scale of the works allowing them to resemble large or small places of the earth. The scale on a map indicates the relationship between a certain distance on the map and the actual distance on the ground. When in the gallery the viewer sees large-scale topographical drawings and diagrams resembling rivers, canyons, mountain peaks, valleys, fault lines etc. Other works are abstractions of colored-shapes that create patterns, a concrete cube - the volume of the crack, perspective drawings and diagrams. But like a map, the viewer is only able to process the information through the translations I have made of the space. In some ways the drawings and sculpture create a beautiful picture of the crack, yet if the viewer were to visit the latitude longitude point of the actual space, would they be able to see the power of nature, the sublimity of the landscape, like they would looking out over the grand canyon? Looking

at the crack in a driveway may seem irrelevant, but for me it is a case study, it holds the same basic principles of what is happening on a larger scale.

My influences stem from articles about the perception of the landscape by authors and geographers such as J.B Jackson and YI-FU-Tuan as well as scientific articles about fire ecology, cartography, geology and mapping. These articles research various natural disturbances on the landscape and are visually influential as well. Artist Maya Lin deals with the idea of mapping in large-scale installation. Her works, part of the Systematic Landscape series, are of great interest to me. These installations are based off research conducted by the National Oceanic Atmospheric Administration (NOAA) using sonar technology to explore the bottom of the ocean. Both visually and conceptually her landscape projects have influenced my work, and opened my eyes to new ways of seeing. Artist Mark Dion is also important as he goes out in the environment, bringing back into the studio objects that he uses as sources for his work. Some of his works also reference scientific study areas and natural history museums. Appropriating archaeological and other scientific methods of collecting, ordering, and exhibiting objects, Dion creates works that question the distinctions between ‘objective’ (‘rational’) scientific methods and ‘subjective’ (‘irrational’) influences (Art 21). Like Mark Dion, I am a field artist. My inspiration comes from outside the studio.

This thesis body of work demonstrates my interest in the natural occurrence of change and humans influence on the landscape, as well as how we perceive it. After graduate school I will be attending a residency on the Oregon Coast, called Sitka Center for Art and Ecology. Being placed in a new environment I want to continue to explore

the interactions of the cultural and natural landscape, diving further into my ideas, questions, and use of mediums. My interests in science and art are closely intertwined, and it is my hope I will have opportunities for collaboration with other disciplines in the future.

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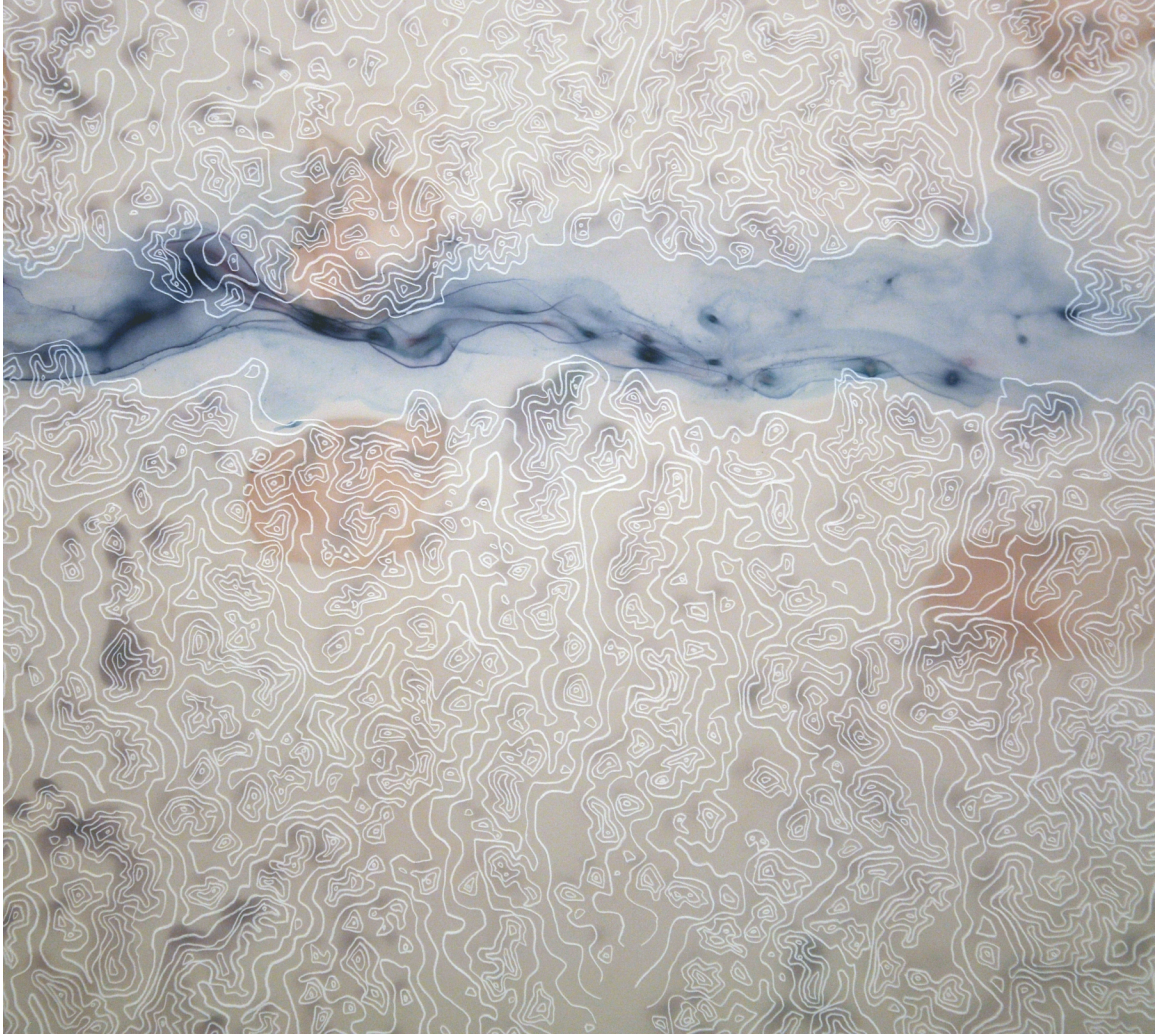
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Spatial 1 – Image 1

Disturbance - Any event or series of events that disrupts ecosystem, population structure and alters the physical environment or landscape.

Definition on wall



Spatial 1 (Detail) – Image 2



Inventory 1 – Image 3



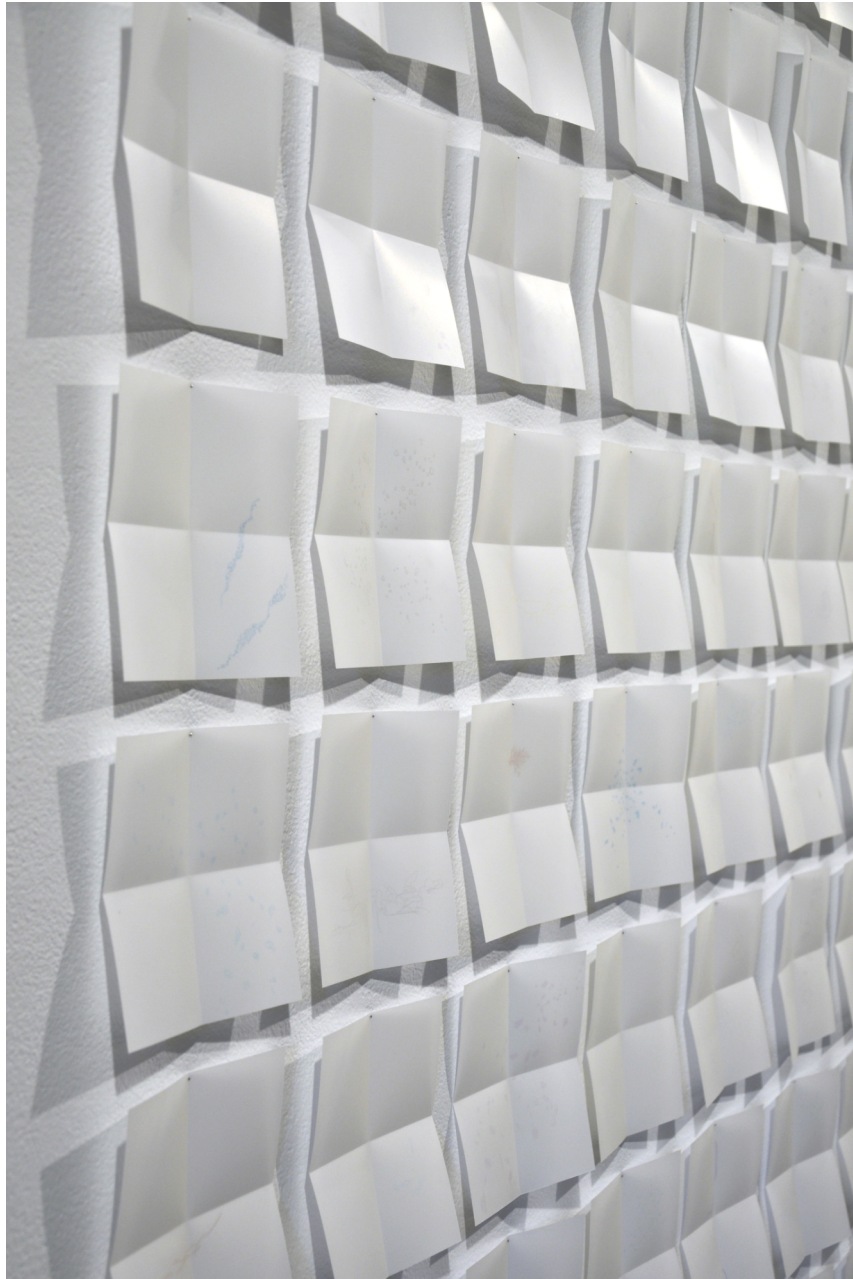
Inventory 1 (Detail) – Image 4



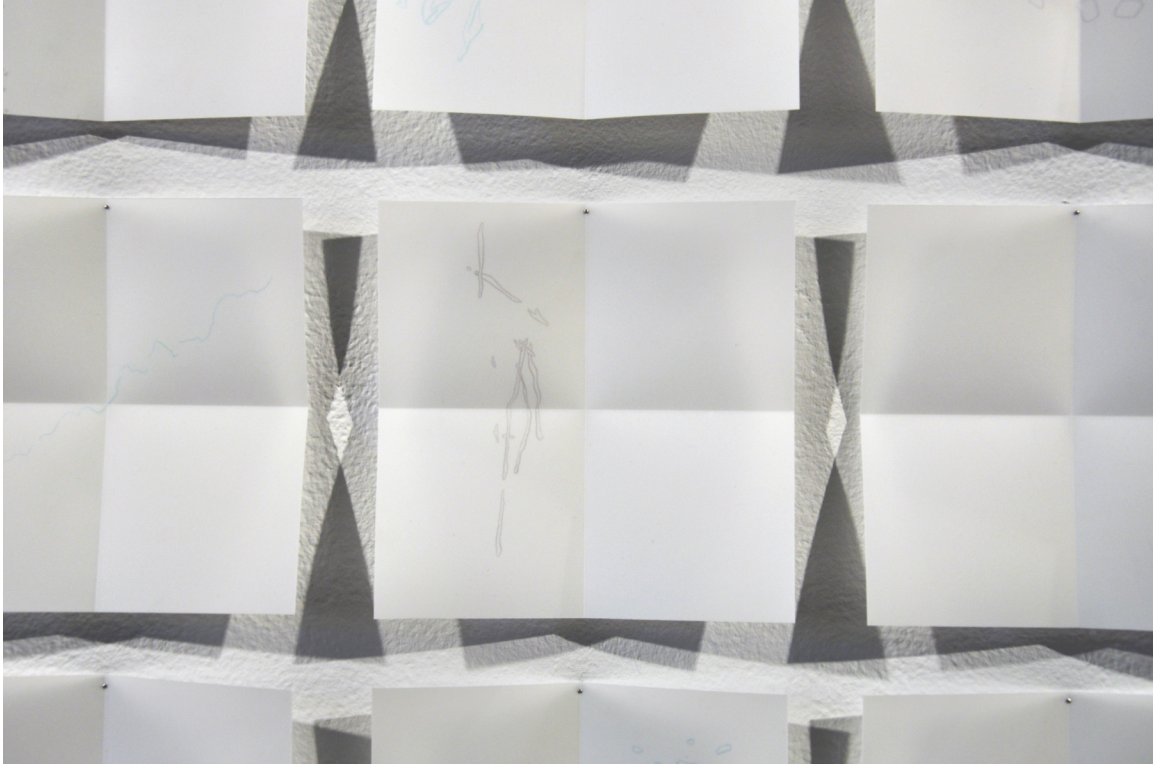
Inventory 1 (Detail) – Image 5



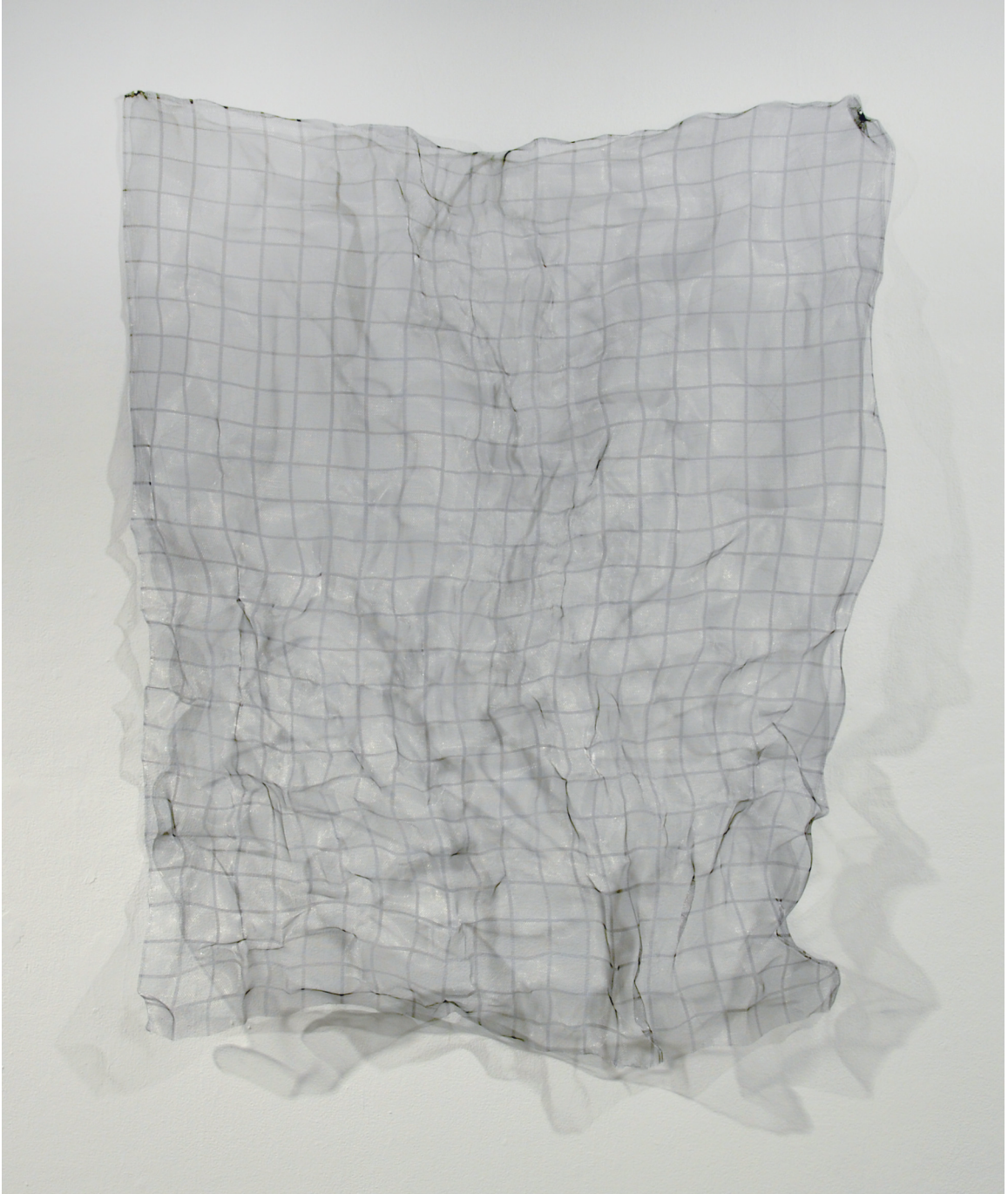
Quarter Section – Image 6



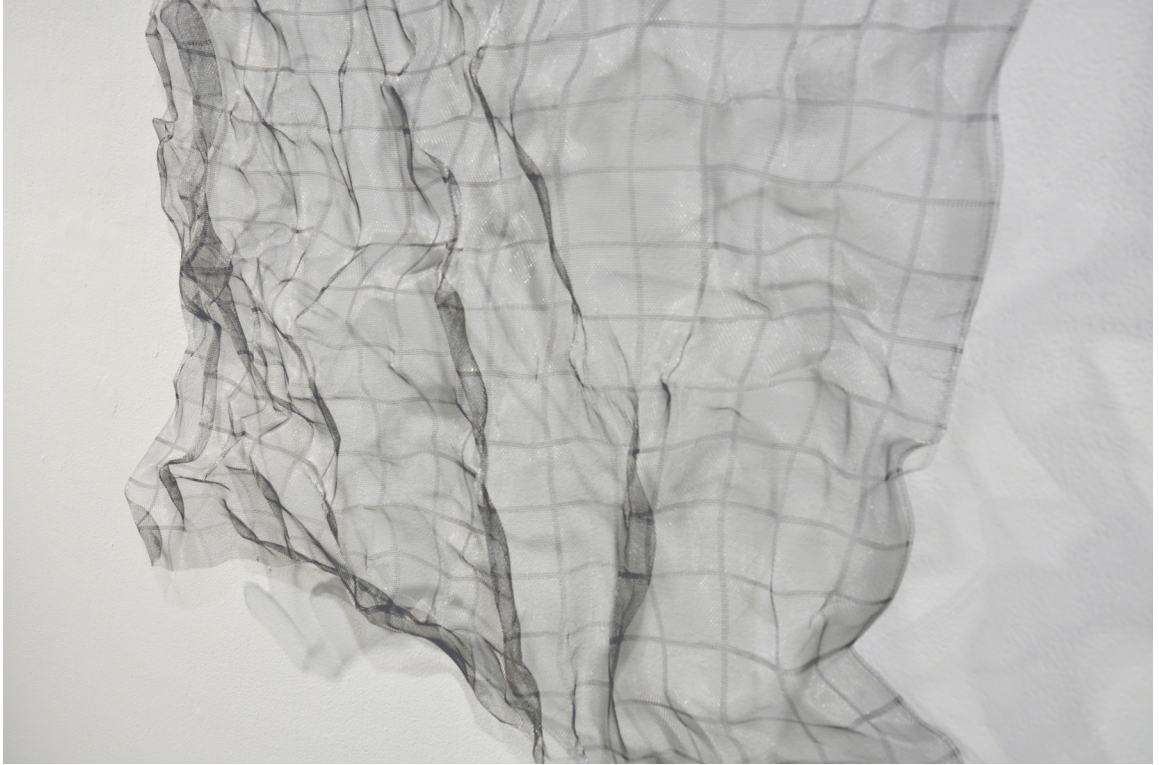
Quarter Section (Detail) – Image 7



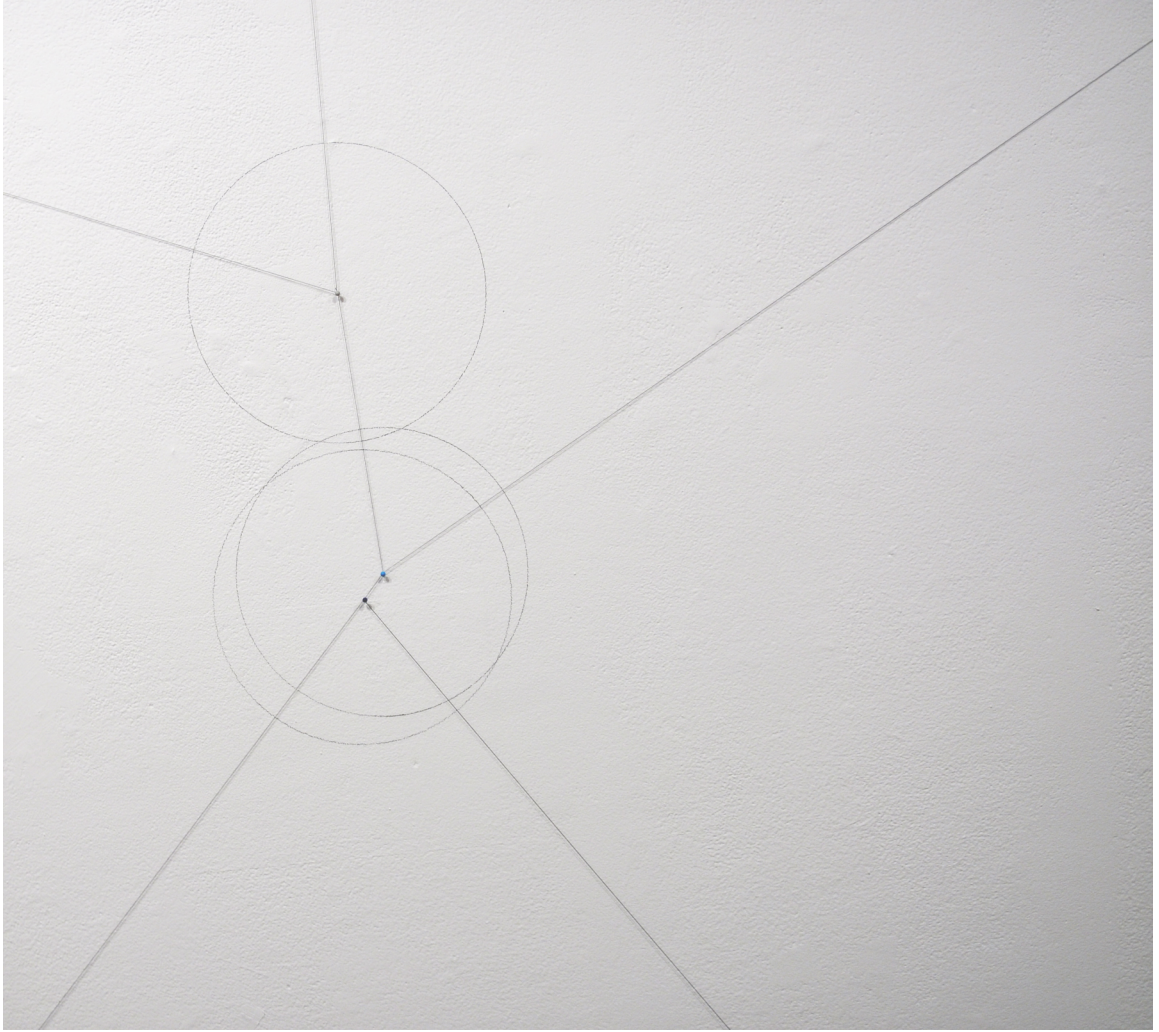
Quarter Section (Detail) – Image 8



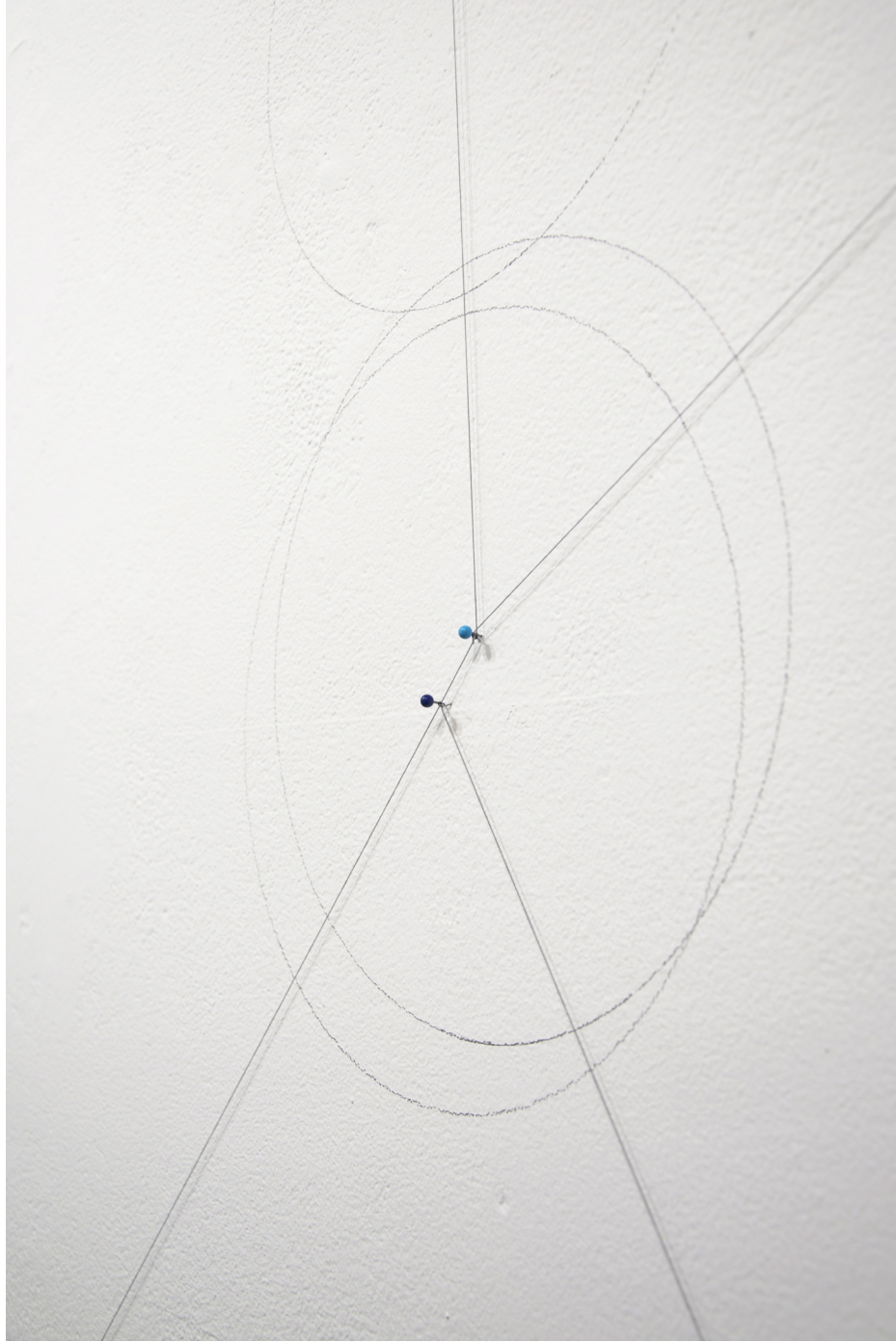
System – Image 9



System (Detail) – Image 10



Inventory 2 (Detail) – Image 11



Inventory 2 (Detail) – Image 12



Spatial 2 – Image 13



Spatial 2 – Image 14



Spatial 2 – Image 15



Installation View – Image 16



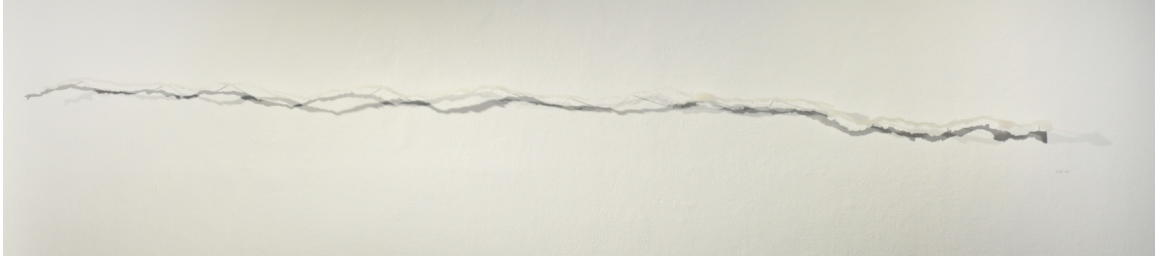
Installation View – Image 17



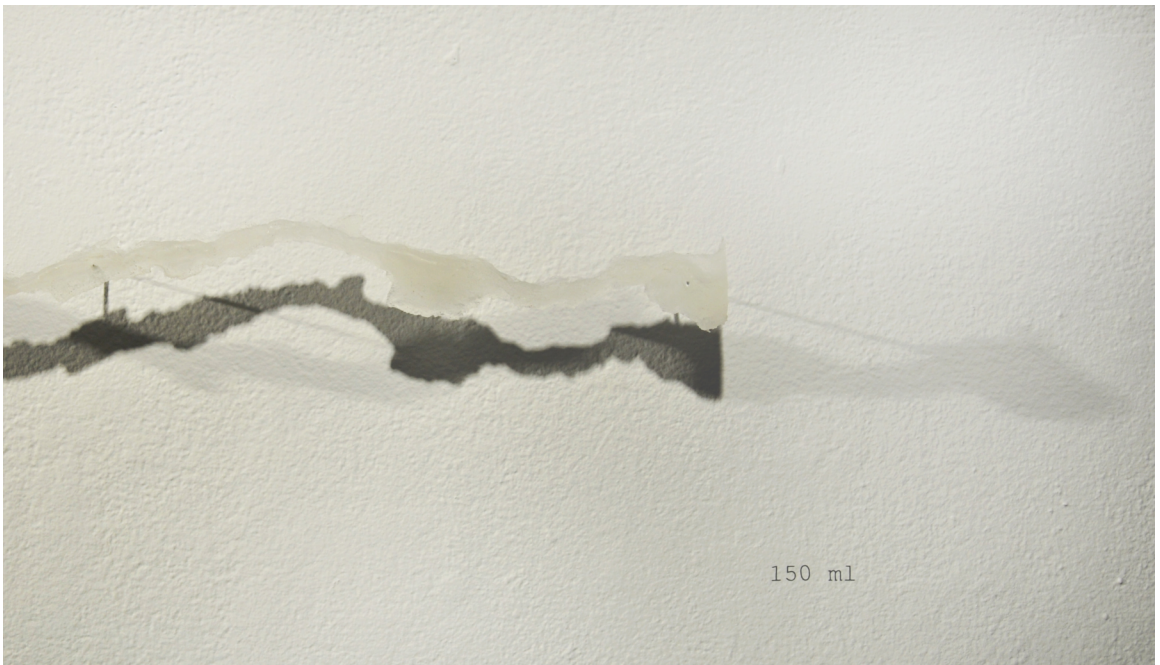
Installation View – Image 18



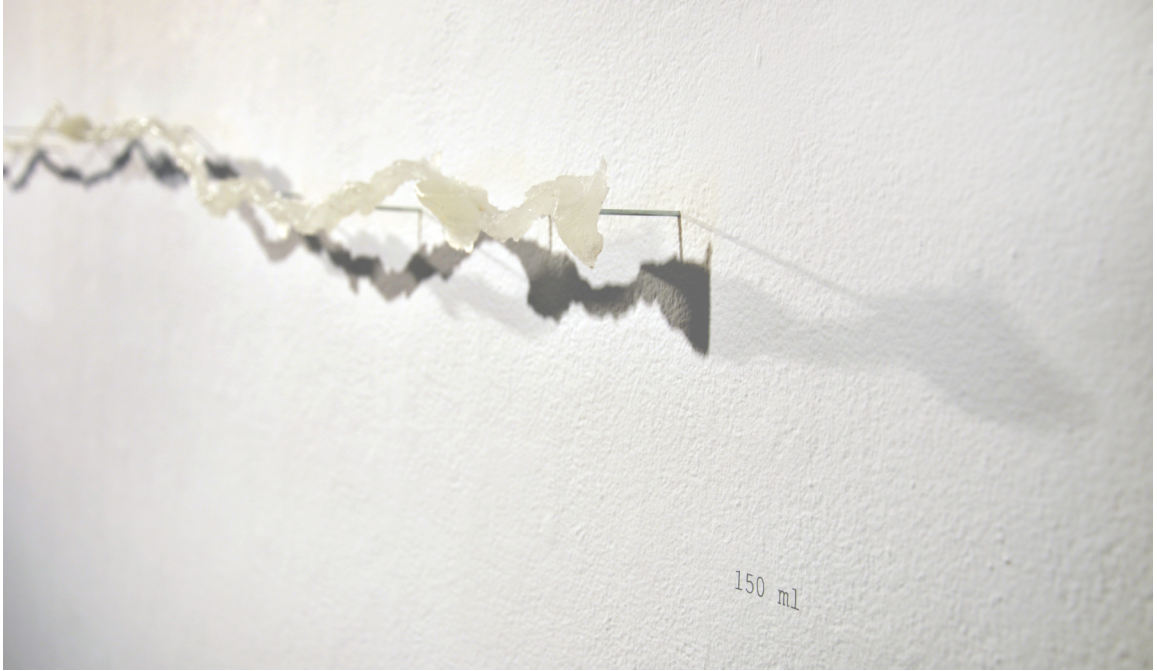
Installation View – Image 19



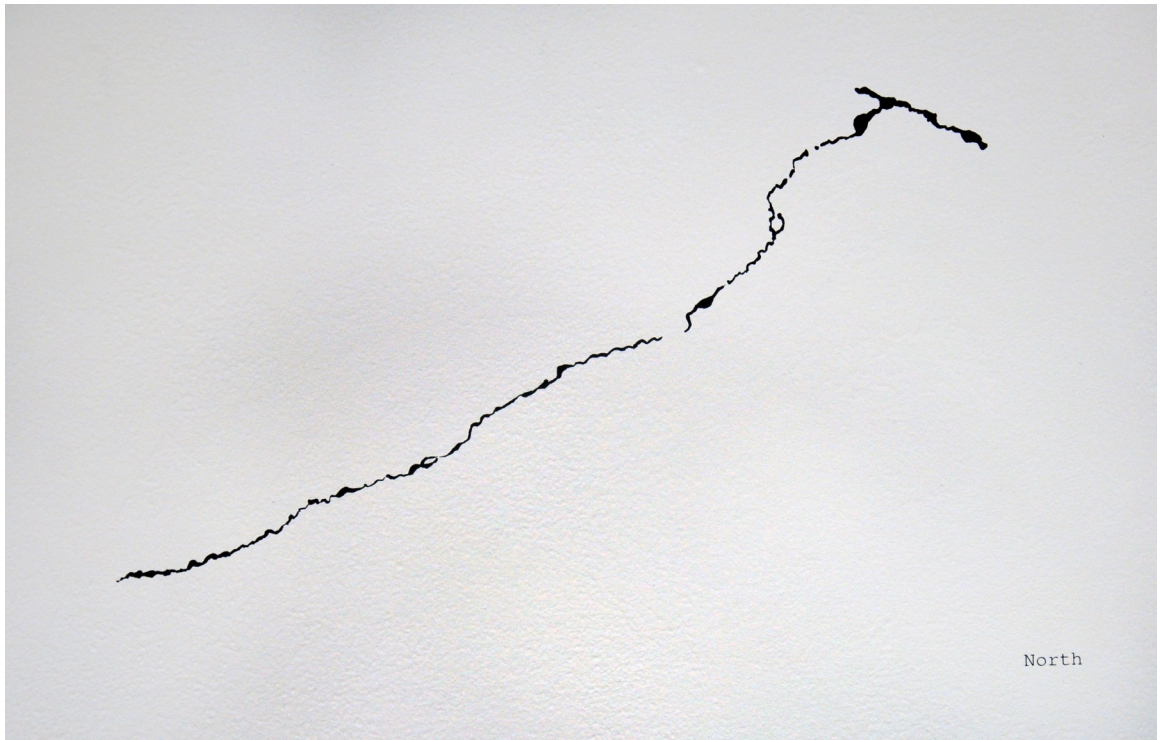
150 ml – Image 20



150 ml (Detail) – Image 21



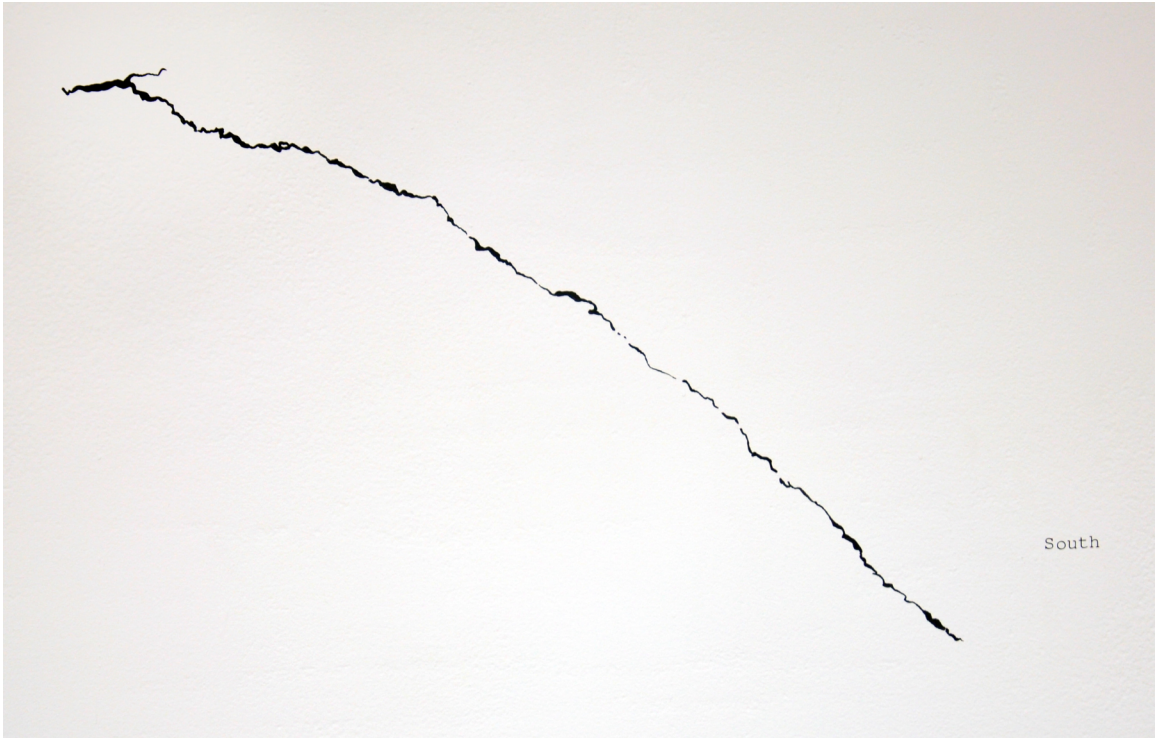
150 ml (Detail) – Image 22



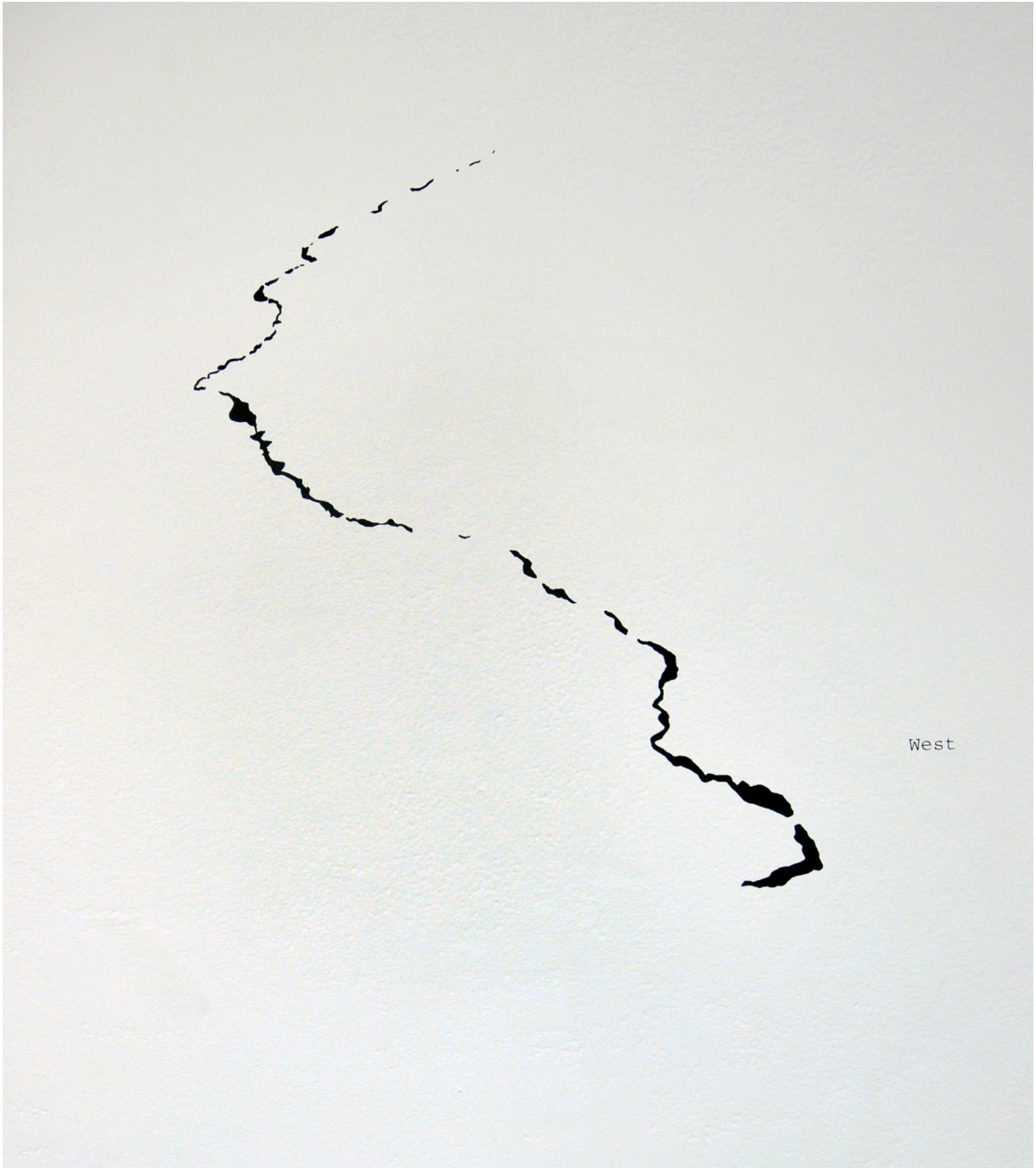
North – Image 23



East – Image 24



South – Image 25



West – Image 26



150 ml – Image 27



150 ml (Detail) – Image 28



Installation View – Image 29



Installation View – Image 30



Installation View – Image 31