



WAYS OF KNOWING // DUE DILIGENCE DISPATCH

BOMBSHELLTOE

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On August 2018, the Bombshelltoe team traveled to New Mexico to share the first rough cut of a 360-virtual reality film to a select group of nuclear scholars and Navajo community members. The film is a part of *Ways of Knowing* – a larger project by Bombshelltoe that explores Navajo Nation’s health and tradition through its enduring and traumatic encounter with uranium mining for nuclear weapons.

This trip is part of the project’s due diligence commitment to the local community – to ensure that they are included in the creative production at every step of the process.

During this due diligence trip, we were inspired by community suggestions to pair local and national film screenings with roundtable discussions and workshops that would help viewers learn about the small, actionable steps that can help towards environmental rehabilitation.

As Bombshelltoe enters the new year, we will take great care to consider these ideas and present a project that stays true to the narrative of the land, and encourages renewed discussion about an issue that deserves attention.





One of my favorite memories of 2018 is driving through the winding roads of Interstate 40 en route to Albuquerque, New Mexico with my film team. The dark skies warned us of a storm ahead. I remember lazily watching gray clouds cast shadows on the red and brown rock of every hill, mountain, and mesa we passed. A few moments later, the landscape shifted abruptly — we found ourselves underneath a thick sheet of rain, water droplets hitting the car so hard that they rattled the windows. The storm reduced the terrain around us into ominous gray silhouettes, blending with the black pavement. The previous image was taken by our resident photographer as the weather began to calm, an intimate snapshot of the landscape looking desolate and alive at the same time.

I must admit that I was both awestruck and frightened to witness how the land can quickly change moods. It was a humbling reminder that I am — we are — but tiny specs of matter privileged enough to call this sublime place home.



Hozhóogo Silá

are sacred.
walk,
en may follow,
walk in beauty.

Perry H. Charley
Director
Diné Environmental Institute Research & Outreach

WARRIORS

Navajo Wholistic Approach

Traditional Ecological Knowledge

Three men standing together

Sheep in a field





So it is all the more heartbreaking to know how this particular area of the United States was forced to play a role in building one of the most violent weapons: the atom bomb.

Earlier the same day before the storm, a friend guided us around Shiprock, New Mexico, to show us the 77-acre site that currently holds approximately 2.5 million wet tons of contaminated material, off-site and on-site byproducts after milling uranium ore to a more usable product.¹

This site is one of four milling facilities across Navajo territory that contributed the necessary ingredient — uranium — to create the United States' first nuclear stockpile. Being part of the nuclear weapons production process comes with a harrowing price: Decades later, the Navajo territory is home to more than 500 abandoned uranium mines, some of which have seeped into waterways, contaminating land and community.² Shiprock's 8,000 residents are ill-fated to live next to the waste site indefinitely, since moving its radioactive contents would be too dangerous.



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As our team learned more about the contamination, we also encountered the many ways local community rallies together to take action.

We watched documentaries about personal accounts living with the effects of uranium mining. We saw activists take climbing lessons, so that they can collect soil samples in difficult terrain as part of a citizen-science effort to monitor the health of the land. We spoke to scholars who are tracking the legislative process to amend the U.S. Radiation Exposure Compensation Act, which would expand the scope to include new communities in the Southwest United States affected by uranium mining and nuclear weapons testing.³ We read through papers published by Navajo scientists who are developing a Diné glossary of geological terms to facilitate conversations about uranium mining and radioactivity in the Navajo native language.⁴ We met artists who are thinking deeply about the relationships between ancestral practices and emerging technology.

We look forward to getting in touch with more organizations as this project unfolds.



As a nuclear policy practitioner, I have read countless documents that explain the legacy of the Manhattan Project and the various sites in the Southwest United States that contributed to the “birth” of the bomb. But to visit these places and observe how life continues to thrive despite its tragic past is a lesson no textbook or government document can impart.

Since starting *Ways of Knowing*, I've had to wrestle with the limitations of my nuclear expertise and acknowledge that there exists nuclear knowledge that I will never fully comprehend because I do not share the lived experience that bonds nuclear history, land, and people.

I am eternally grateful for the people in Navajo Nation and New Mexico who welcomed us into their lives, so that we could understand a fraction of their knowledge and lived expertise.

– Lovely Umayam, producer of *Ways of Knowing*



A dispatch from Kayla Briët, director of *Ways of Knowing*

Sunny Dooley reminds us that to know who you are, you have to know your past to keep from feeling lost. In *Ways of Knowing*, she details the meaning of the six sacred mountains, introducing us to another thread that ties Diné to this land. Her storytelling and cadence gives the world rhythm.

I feel immense gratitude for those we've met along the journey of *Ways of Knowing*, not only for sharing their world view and relationship with the land, but for teaching me more about celebrating the roots I have and owning them as part of my identity.

As a filmmaker, I feel an urgency to not only create space for this story to exist in the VR medium, but more importantly, to highlight pre-existing work by and for the Diné community surrounding nuclear issues. By uniting technology and nature, we can together define the future of this medium by inviting others to look inward and ask themselves "What do we want to see our world look like?"

When you are in the summer of your life,
you are utilizing all of your gifts. And
now you are beginning to implement your
contribution to Earth.

– Sunny Dooley, excerpt from *Ways of Knowing*



Sources

¹ U.S. Department of Energy, Legacy Management. "Shiprock, New Mexico, Disposal Site Fact Sheet," June 2017.

² U.S. Environmental Protection Agency, "Navajo Nation: Cleaning up Abandoned Uranium Mines," <https://www.epa.gov/navajo-nation-uranium-cleanup>, last accessed January 2019.

³ Myrriah Gómez et al., "Unknowing, Unwilling and Uncompensated: The Effects of the Trinity Test on New Mexicans and the Potential Benefits of a Radiation Exposure Compensation Act Amendment," February 2017.

⁴ Blackhorse, Alfred & Semken, Steven & Charley, Perry. (2013). A Navajo-English Thesaurus of Geological Terms.

Photos

Front cover: Navajo activist and drone operator Bobby Leonard Mason at Sacred Shiprock Rock Formation, Navajo homeland (Shiprock, New Mexico)

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Back cover: Rocks and dust, Bisti Badlands, Navajo Homeland (New Mexico)

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Ways of Knowing production team:

Producers: Lovely Umayam, Adriel Luis & Sunny Dooley

Director: Kayla Briët

Photographer: Carmille Garcia

The Stimson Center will serve as convener of DC-based policy experts and community-based nuclear experts to discuss nuclear weapons legacy sites.

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Ways of Knowing is a project of Bombshelltoe.

Bombshelltoe pairs nuclear policy experts with artists to explore how nuclear nonproliferation, arms control, and disarmament policies are connected to today's most pressing local and global issues.

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