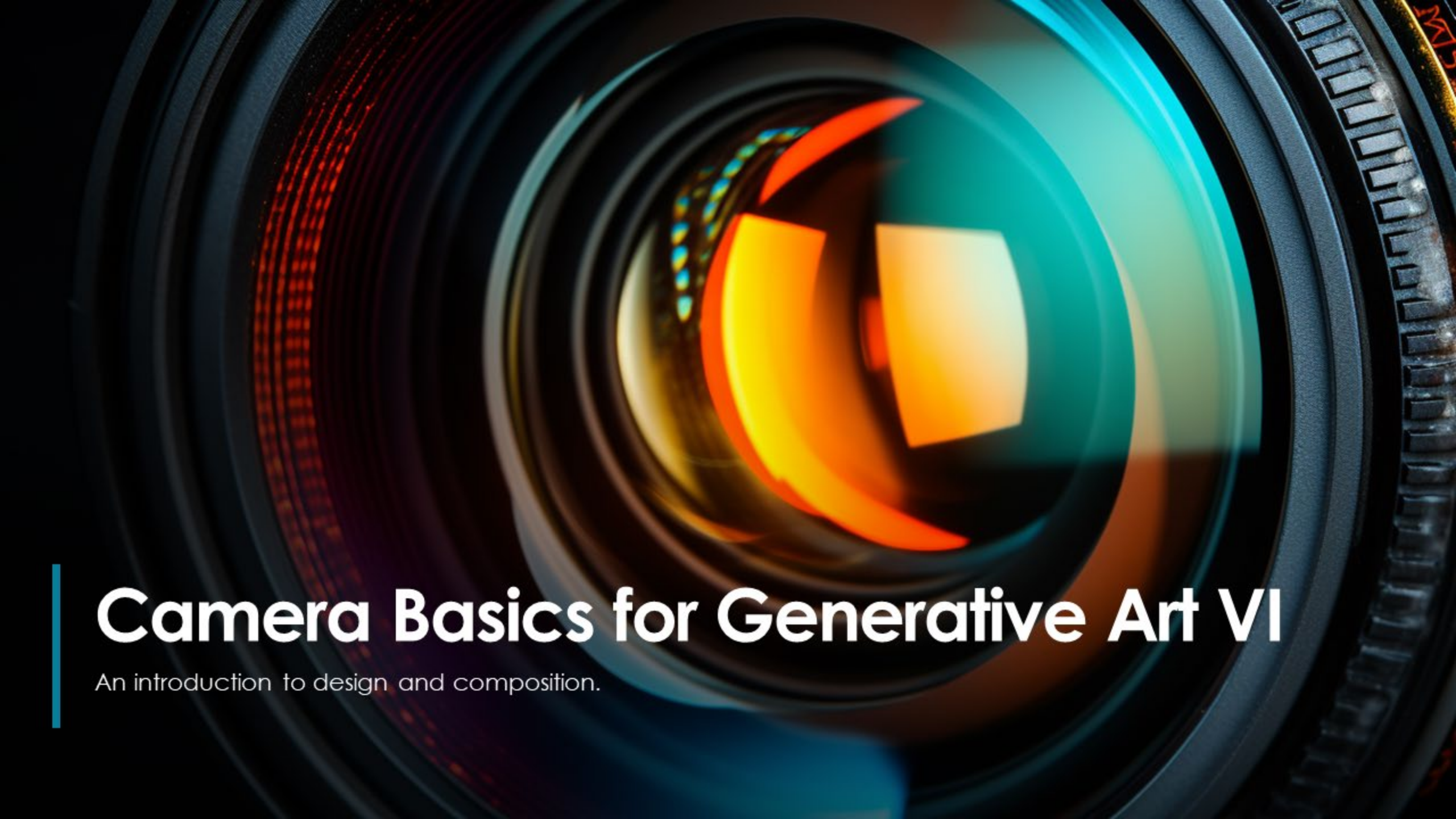


# Camera Basics for Generative Art VI

An introduction to design and composition.

# THE HUMAN IMPRINT

Large-scale textures created by industrialization, ecological degradation, and warfare.

# The Textures of Human Influence

**From the vantage point of space, Landsat satellites provide a unique lens through which to observe these transformations. Overpopulation** presents itself through densely packed cities, and the contours of the land adapt to meet the growing human footprint. **War**, in its wake, leaves physical scars — cratered terrains and structures that bear the weight of conflict's history. The mark of **industrialization** appears as sprawling urban areas, marked by geometric precision, interconnected by a lattice of roads and infrastructure. Hidden within these patterns are the far-reaching consequences of **global warming**, driven by greenhouse gas emissions from industrial processes. This climate change not only accelerates the melting of glaciers but also generates increasingly severe floods and storm systems, droughts, and other extreme weather events, altering the Earth's textures and shapes in profound ways.

**Aerial photography, whether captured from aircraft or drones, offers an intimate look at the diverse textures of human impact.** Industrialization becomes vivid through the intricate details of factories, refineries, and the interplay of light and shadow within industrial complexes. But it is not just the sprawling urban landscapes that bear witness to industrialization; it's also the blight it leaves on the environment. Strip mining scars the land, leaving behind exposed earth and open pits, while pollution taints the air and water. These are the by-products of factories, chemical plants, and industries that shape our modern world, and they too play a role in redefining the textures and shapes of the Earth's surface.

Landing • 4032 x 23024 • The French Riviera, France • 5.24.2023 • f/1.8 • 1/4000 sec • 64 ISO • 6.86 mm • iPhone 14 • Jazno Francoeur

# The Textures of Human Influence: Cause and Effect

**Commercial Farming:** Commercial farming involves large-scale agricultural operations for profit. It often leads to deforestation, habitat loss, excessive water use, and the use of chemical fertilizers and pesticides. These practices can result in soil degradation, water pollution, and decreased biodiversity, contributing to environmental degradation and ecosystem disruption.

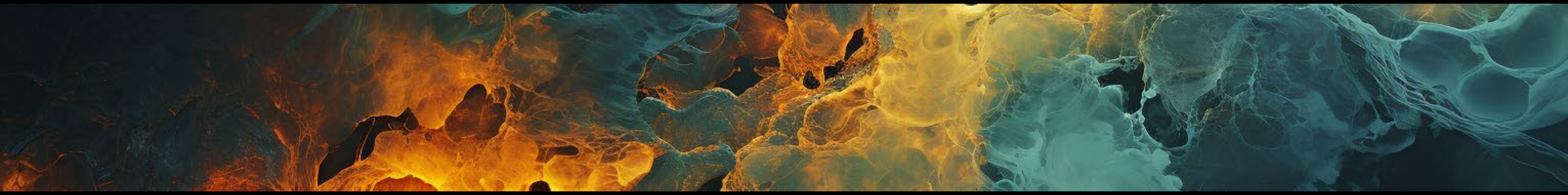
**Deforestation and Logging:** Deforestation is the deliberate removal of forests for various purposes, including agriculture and urban development. Logging is the extraction of trees for timber and wood products. Both activities contribute to habitat loss, biodiversity decline, carbon emissions, and disrupted ecosystems, harming the planet's climate, biodiversity, and overall environmental health.

**Droughts:** Humans contribute to droughts associated with El Niño by exacerbating climate change. Increased greenhouse gas emissions from activities like burning fossil fuels intensify El Niño's warming effect, altering weather patterns and causing prolonged droughts in some regions. This highlights the interconnectedness of human activities and natural phenomena in shaping global weather patterns.

**Forest Fires:** Man-made fires, whether intentional (arson or controlled burns to clear undergrowth) or accidental (e.g., campfires, discarded cigarettes), can result in large-scale wildfires. These fires devastate ecosystems, causing habitat destruction, loss of biodiversity, air pollution, and releasing massive amounts of carbon dioxide. They pose severe environmental and economic consequences, impacting both immediate and long-term ecological health.

**Oil Fields:** Oil fields are underground or underwater sites where significant quantities of petroleum are extracted. Their development and operation lead to various environmental issues, including habitat destruction, water and soil pollution, greenhouse gas emissions, and the risk of oil spills, which can harm ecosystems, wildlife, and contribute to climate change.

# The Textures of Human Influence: Cause and Effect



**Oil Spills:** An oil spill is the release of petroleum products, such as crude oil, into water bodies, often due to accidents involving ships, pipelines, or drilling platforms. These spills harm the environment by smothering marine life, contaminating water, damaging ecosystems, and affecting birds and aquatic organisms, leading to long-lasting ecological and economic damage.

**Quarries:** A quarry is a site where large quantities of rocks, minerals, or construction materials are extracted, typically through mining or blasting. This practice can lead to significant environmental impacts, including habitat destruction, soil erosion, water pollution, and landscape alteration. Proper regulations and reclamation efforts are essential for mitigating these effects.

**Salt Pans:** A manmade salt pan is an artificial, often rectangular area designed for salt production. It involves evaporating brine or seawater to extract salt. These pans can negatively impact the environment by altering local ecosystems, disrupting habitats, and potentially causing pollution. However, their effects depend on management practices and can be mitigated through responsible resource management.

**Surface Mining:** This includes open-pit and strip mining, which remove large portions of soil and rock to access shallow mineral deposits. It often leads to habitat destruction, soil erosion, and water pollution, as exposed materials can leach harmful substances into the environment.

**Tailing:** Tailing, in mining, refers to the waste material left over after valuable minerals or metals are extracted. It consists of finely ground rock, water, and chemicals. Tailing disposal can lead to environmental issues, including water contamination, soil degradation, and habitat disruption, if not managed properly, posing long-term risks to ecosystems and human health.

**Warfare:** Modern warfare inflicts grave environmental harm, causing deforestation, habitat destruction, soil and water contamination from chemical weapons, and pollution from explosives and infrastructure damage. These impacts disrupt ecosystems, threaten wildlife, and have long-term consequences for biodiversity and human health in conflict-affected regions.

# ECOLOGICAL DEGRADATION

From deforestation to pollution, human endeavors leave lasting scars on Earth's canvas, eroding biodiversity and endangering ecosystems.

# Yann Arthus-Bertrand, Early Pioneer of Environmental Photography

**Yann Arthus-Bertrand's pioneering work revolves around his ability to showcase the Earth's beauty and fragility through a bird's-eye view.** His photography, often taken from helicopters, hot air balloons, and drones, offers a sweeping and panoramic perspective that emphasizes the intricate connection between humans and their environment. His project "Earth from Above" stands as a testament to his dedication to environmental issues. What sets Yann Arthus-Bertrand apart is his commitment to using photography as a tool for environmental education and advocacy. His aerial imagery not only captures the Earth's natural beauty but also highlights the consequences of human activities, such as industrialization, deforestation, and climate change. He shares these images with a global audience, making them accessible to all and inspiring action to protect our planet. On 19 March 2008, he was given the Georges Pompidou Award which rewards a cultural personality each year. Since 2008, he has participated in the board of directors of the Fondation Chirac, a foundation launched in 2008 by former French President Jacques Chirac in order to promote world peace through five advocacy programs, two of which deal with environmental issues such as access to fresh water, desertification and deforestation.

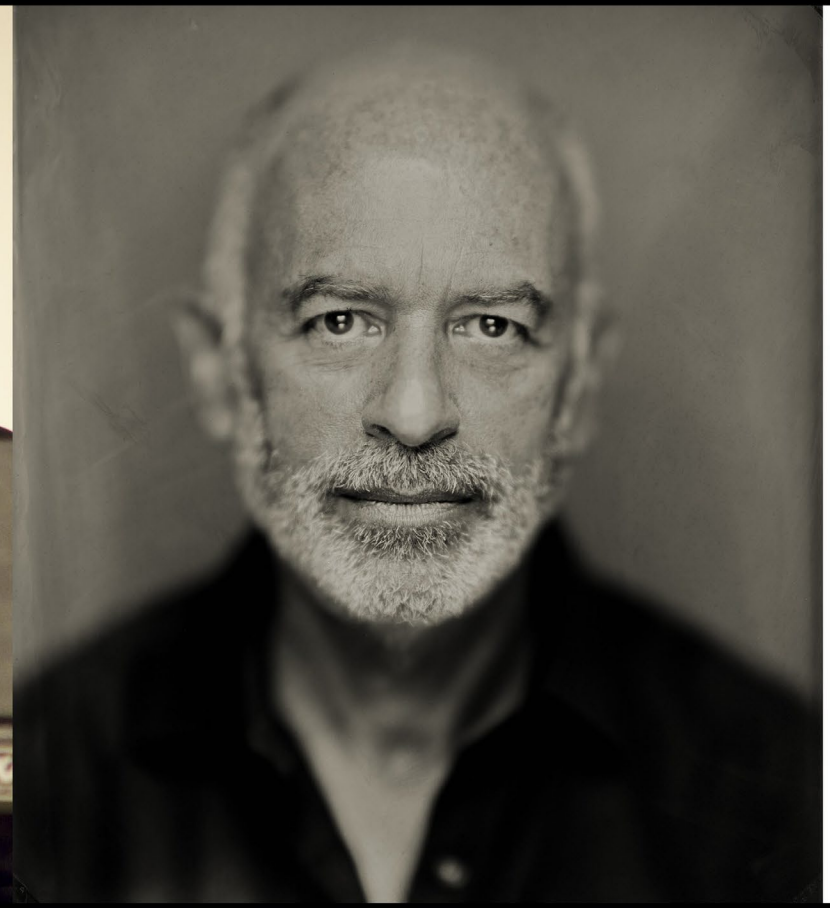


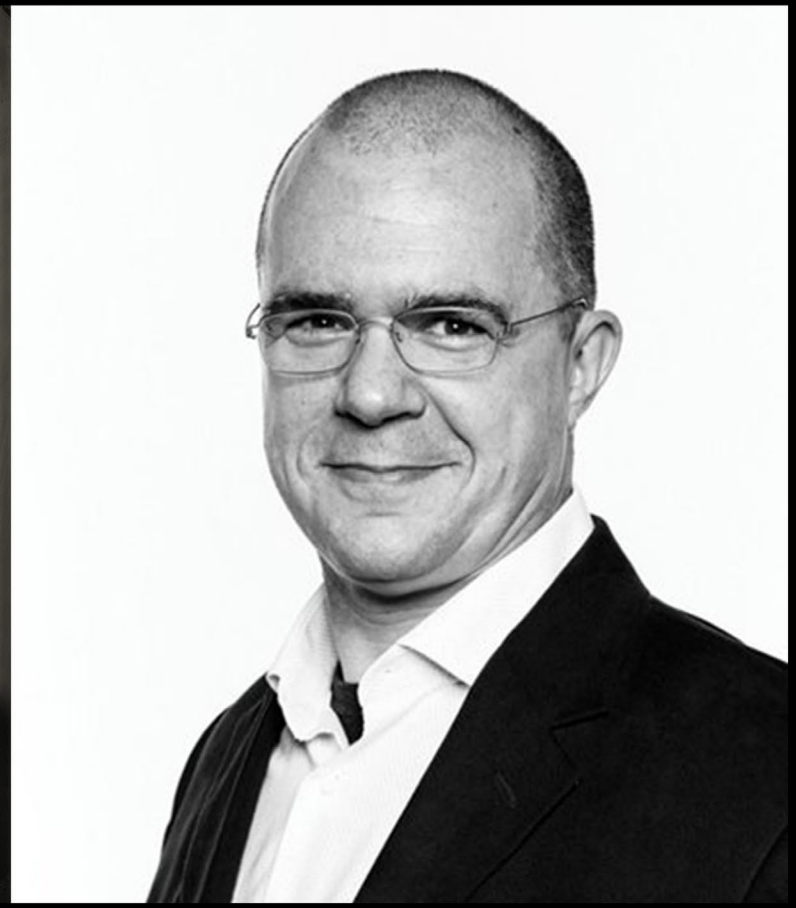




# Modern Pioneers of Environmental Photography

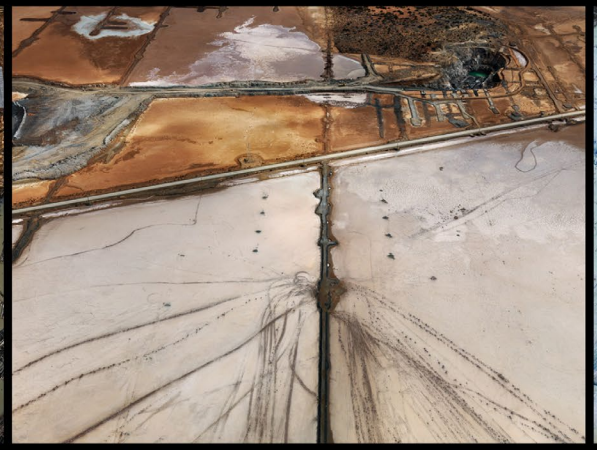
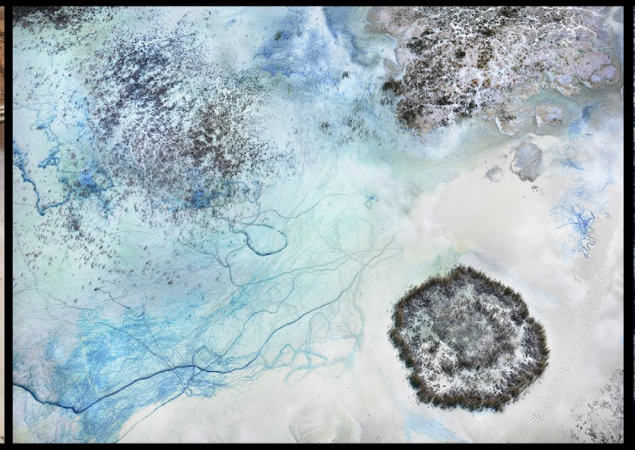
**Edward Burtynsky, David Maisel, and Daniel Beltrá are pioneering photographers who have collectively transformed the field of environmental photography by capturing the impact of human activity on the natural world from an aerial perspective.** Their work goes beyond documentation; it represents a unique blend of artistry and activism. **Edward Burtynsky's** photography is characterized by its sweeping landscapes that reveal the intricate patterns of industrialization and human intervention. He combines aesthetic abstraction with a stark depiction of altered environments. **David Maisel,** known for his "Black Maps" series, creates images that verge on abstraction, turning landscapes into textured, ethereal compositions. Meanwhile, **Daniel Beltrá's** work focuses on environmental crises, such as oil spills and deforestation, using aerial shots to unveil abstract patterns that symbolize both the devastation and resilience of the Earth.





# Aerial Photography & Large Scale Textures: Edward Burtynsky

*https://www.edwardburtynsky.com/*

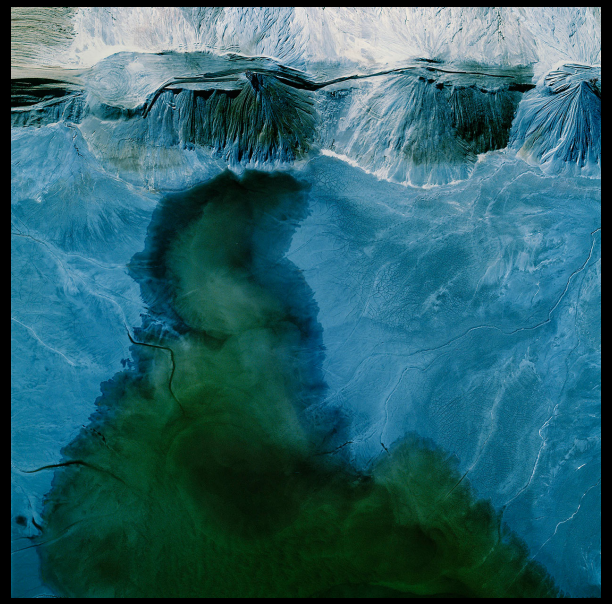
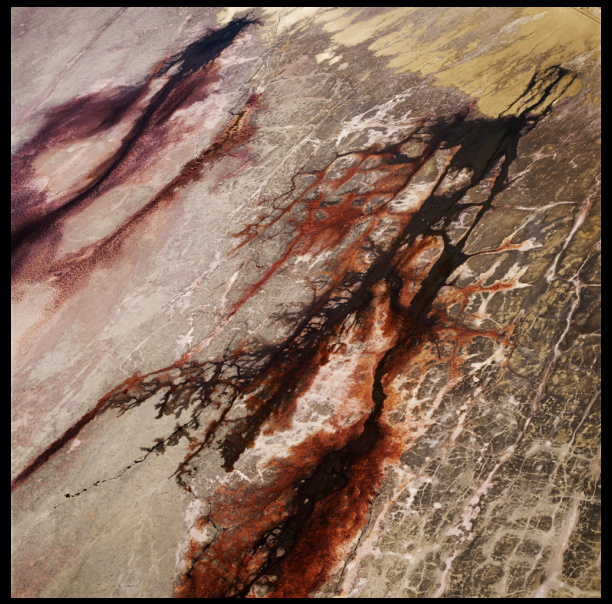
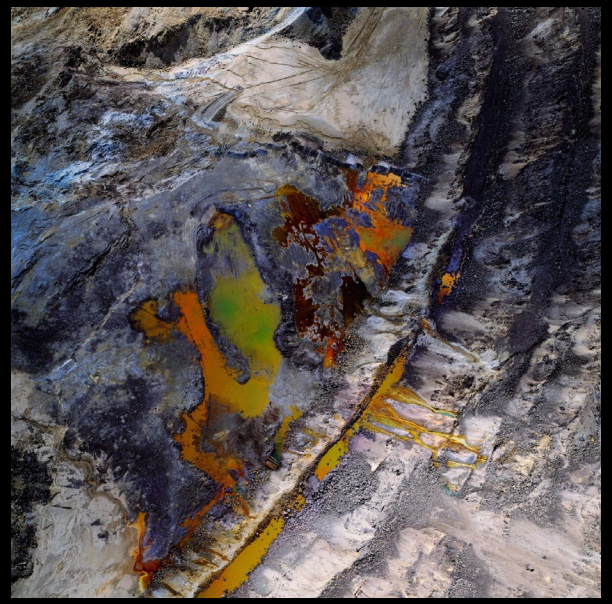
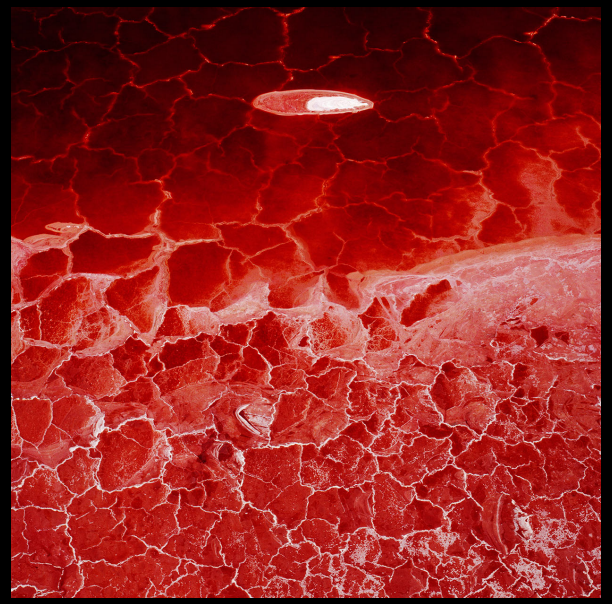


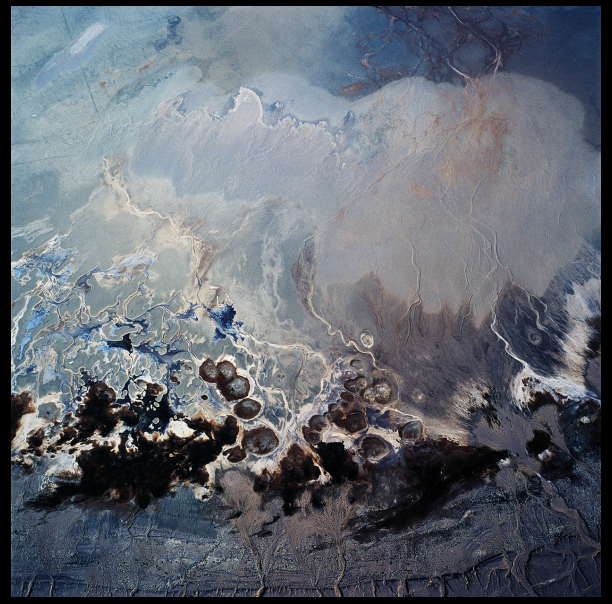
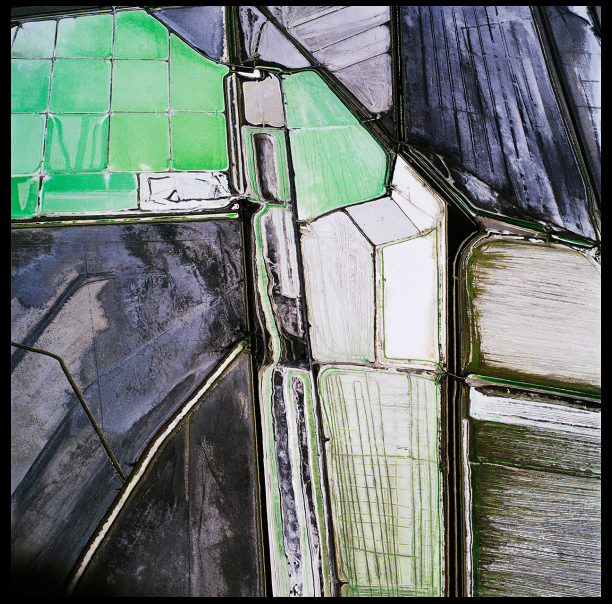

*"Nature transformed through industry is a predominant theme in my work. I set course to intersect with a contemporary view of the great ages of man; from stone, to minerals, oil, transportation, silicon, and so on. To make these ideas visible I search for subjects that are rich in detail and scale yet open in their meaning. Recycling yards, mine tailings, quarries and refineries are all places that are outside of our normal experience, yet we partake of their output on a daily basis. These images are meant as metaphors to the dilemma of our modern existence; they search for a dialogue between attraction and repulsion, seduction and fear. We are drawn by desire - a chance at good living, yet we are consciously or unconsciously aware that the world is suffering for our success. Our dependence on nature to provide the materials for our consumption and our concern for the health of our planet sets us into an uneasy contradiction. For me, these images function as reflecting pools of our times." Equipment from right to left: Hasselblad H6D-100C, Linhof 0054 Master Technika, Phase One IQ4, Sikorsky helicopter, H System Lenses. Large image to right is also the H6D-100C.*



# Aerial Photography & Large Scale Textures: David Maisel

https://davidmaisel.com

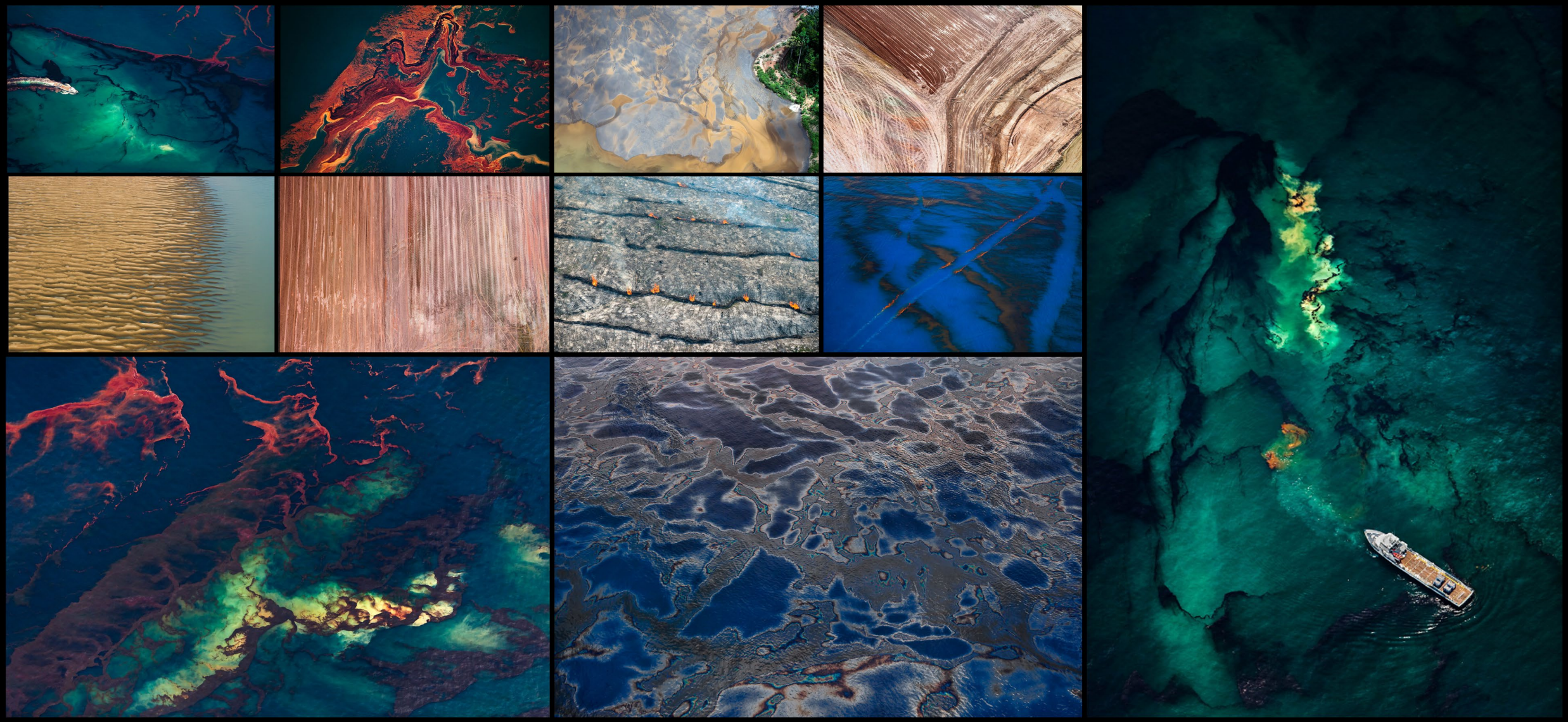






*David Maisel is an artist working in photography, painting, and video, and the recipient of a 2018 Guggenheim Fellowship in the Creative Arts. His aerial photographs address the aesthetics and environmental impact of radically human-altered landscapes, while his recent abstract paintings respond to catastrophic climate change events such as wildfire and flood. Maisel brings his focus to sites and objects that are unknown, off-limits, or scarred. His photographic explorations of hidden institutional archives reveal the capacity of artifacts to transmit meaning across time. Maisel's work serves as a black map — picturing the sublime and the unimaginable. Below, Hasselblad with H Series Lenses, Cessna 172 Skyhawk.*


# Aerial Photography & Large Scale Textures: Daniel Beltrá

*https://danielbeltra.photoshelter.com/index*



*"I find inspiration in the beauty and complexity of nature. The fragility of our ecosystems is a continuous thread throughout my work. My photographs show the vast scale of transformation our world is under from human-made stresses. To capture this, I often work from the air, which more easily allows for the juxtaposition of nature with the destruction wrought by unsustainable development. The unique perspective of aerial photography helps emphasize that the Earth and its resources are finite. By bringing images from remote locations where human and business interests and nature are at odds, I hope to instill a deeper appreciation for nature and an understanding of the precarious balance our lifestyle has placed on the planet". Below left, Daniel in the Amazon (documenting deforestation). Below right: 4 Seat Floatplane, Canon 5D Mark II, Canon 24-70mm f/2.8L lens, and 100-400mm f/4.5-5.6L IS telephoto lens.*

# LARGE SCALE TEXTURES, DEFORESTATION & LOGGING:

**[INSERT BLEND IMAGES]** **DEFORESTATION OF AMAZON**, AERIAL VIEW, TOP DOWN, LANDSAT 9 VIEW, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, GREEN AND BROWN GUM BICHROMATE PRINT --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, DEFORESTATION & LOGGING:

**[INSERT BLEND IMAGES]** **DEFORESTATION OF AMAZON**, AERIAL VIEW, TOP DOWN, LANDSAT 9 VIEW, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, GREEN AND BROWN GUM BICHROMATE PRINT --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, DEFORESTATION & LOGGING:

**DEFORESTATION OF AMAZON,** AERIAL VIEW, TOP DOWN, LANDSAT 9 VIEW, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, GREEN AND BROWN GUM BICHROMATE PRINT **[DALL-E 3]**

# LARGE SCALE TEXTURES, FOREST FIRES:

**[INSERT BLEND IMAGES]** **DEFORESTATION OF AMAZON**, AERIAL VIEW, TOP DOWN, LANDSAT 9 VIEW, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, GREEN AND BROWN GUM BICHROMATE PRINT --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, FOREST FIRES:

**[INSERT BLEND IMAGES]** **MASSIVE FOREST FIRE,** AERIAL VIEW, TOP DOWN, LANDSAT 9 VIEW FALSE COLOR, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, RAY TRACING, ORANGES AND PURPLES, MICROWAVED POLAROID --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, OIL SPILLS:

**[INSERT BLEND IMAGES]** **DEEPWATER HORIZON OIL SPILL**, DANIEL BELTRA, AERIAL VIEW, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, SUBSURFACE SCATTERING, BLUE AND GREEN GUM BICHROMATE PRINT, CARL ZEISS PLANAR 50MM F/0.7 --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, OIL SPILLS:

**[INSERT BLEND IMAGES]** **DEEPWATER HORIZON OIL SPILL**, DANIEL BELTRA, AERIAL VIEW, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, SUBSURFACE SCATTERING, BLUE AND GREEN GUM BICHROMATE PRINT, CARL ZEISS PLANAR 50MM F/0.7 --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, OIL FIELDS:

**[INSERT BLEND IMAGES]** **POLLUTED OIL FIELDS,** TOP DOWN VIEW, LANDSAT 9 VIEW OF OIL FIELDS, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, PURPLE AND BLACK GUM BICHROMATE PRINT, CARL ZEISS PLANAR 50MM F/0.7, GOLDEN HOUR --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, OIL FIELDS:

**[INSERT BLEND IMAGES]** **POLLUTED OIL FIELDS,** TOP DOWN VIEW, LANDSAT 9 VIEW OF OIL FIELDS, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, PURPLE AND BLACK GUM BICHROMATE PRINT, CARL ZEISS PLANAR 50MM F/0.7, GOLDEN HOUR --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

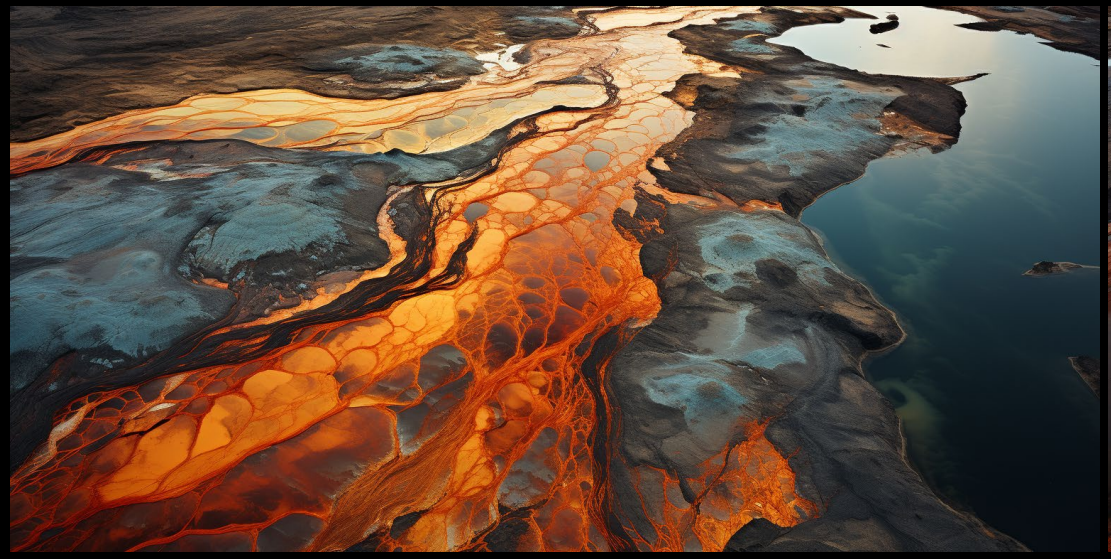



# LARGE SCALE TEXTURES, IRON ORE TAILINGS:

**[INSERT BLEND IMAGES]** **IRON ORE TAILINGS,** LANDSAT 9 VIEW, LOMOGRAPHY REDSCALE XR 50-200 35MM, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, GUM BICHROMATE PRINT, CARL ZEISS PLANAR 50MM F/0.7, BLUE INTERPOLATING TO PINK + ORANGE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, IRON ORE TAILINGS:

**[INSERT BLEND IMAGES]** **IRON ORE TAILINGS,** LANDSAT 9 VIEW, LOMOGRAPHY REDSCALE XR 50-200 35MM, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, GUM BICHROMATE PRINT, CARL ZEISS PLANAR 50MM F/0.7, BLUE INTERPOLATING TO PINK + ORANGE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**




# LARGE SCALE TEXTURES, SURFACE MINING:

**[INSERT BLEND IMAGES]** **SATELLITE VIEW OF OPEN PIT MINING OPERATION,** AERIAL VIEW, LANDSAT 9, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, SURFACE MINING:

**[INSERT BLEND IMAGES]** **SATELLITE VIEW OF OPEN PIT MINING OPERATION,** AERIAL VIEW, LANDSAT 9, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, MANMADE SALT PANS:

**[INSERT BLEND IMAGES]** LANDSAT 9, **AERIAL VIEW OF SALT PANS,** 35MM FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, CARL ZEISS PLANAR 50MM F/0.7 --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, MANMADE SALT PANS:

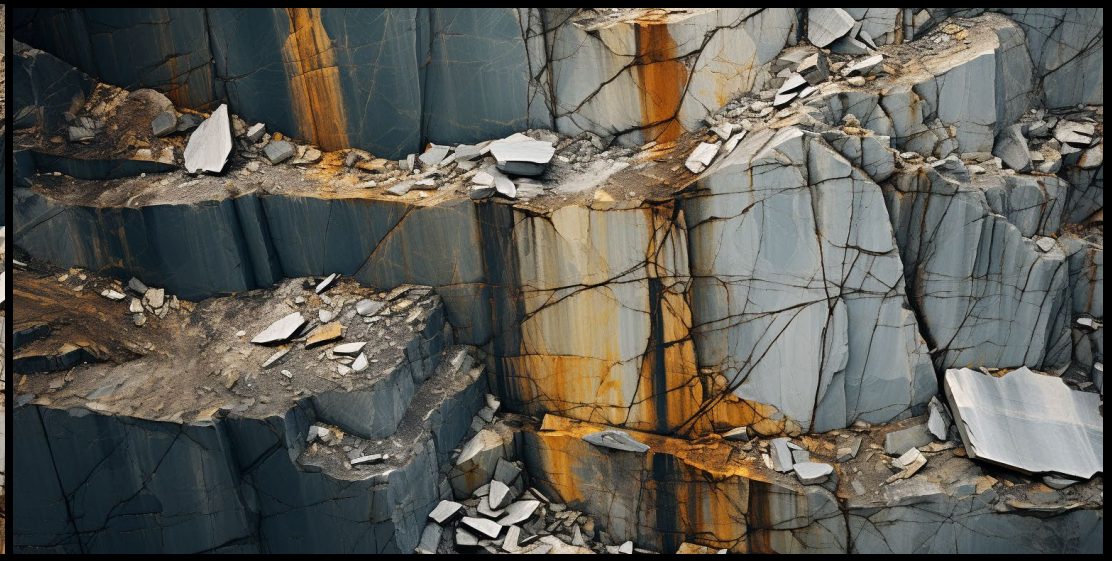
**[INSERT BLEND IMAGES]** LANDSAT 9, **AERIAL VIEW OF SALT PANS,** 35MM FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, CARL ZEISS PLANAR 50MM F/0.7 --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ROCK QUARRIES:

**[INSERT BLEND IMAGES]** **IRON ORE TAILINGS,** LANDSAT 9 VIEW, LOMOGRAPHY REDSCALE XR 50-200 35MM, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, GUM BICHROMATE PRINT, CARL ZEISS PLANAR 50MM F/0.7, BLUE INTERPOLATING TO PINK + ORANGE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ROCK QUARRIES:

**[INSERT BLEND IMAGES]** **IRON ORE TAILINGS,** LANDSAT 9 VIEW, LOMOGRAPHY REDSCALE XR 50-200 35MM, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, GUM BICHROMATE PRINT, CARL ZEISS PLANAR 50MM F/0.7, BLUE INTERPOLATING TO PINK + ORANGE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**



# LARGE SCALE TEXTURES, OVERPOPULATION:

**[INSERT BLEND IMAGES]** SATELLITE VIEW, **DYSTOPIAN OVERCROWDING IN JUNKYARDS,** ENDLESS POLLUTION, JUNK YARDS, AERIAL VIEW, LANDSAT 9, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 75 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, OVERPOPULATION:

**[INSERT BLEND IMAGES]** SATELLITE VIEW, **DYSTOPIAN OVERCROWDING IN JUNKYARDS,** ENDLESS POLLUTION, JUNK YARDS, AERIAL VIEW, LANDSAT 9, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 75 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, OVERPOPULATION:

**[INSERT BLEND IMAGES]** SATELLITE VIEW, **DYSTOPIAN OVERCROWDING IN JUNKYARDS,** ENDLESS POLLUTION, JUNK YARDS, AERIAL VIEW, LANDSAT 9, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 75 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, CORPORATE FARMING:

**[INSERT BLEND IMAGES]** **AERIAL VIEWS OF COMMERCIAL FARMING AND IRRIGATION**, LANDSAT 9, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, CORPORATE FARMING:

**[INSERT BLEND IMAGES]** **AERIAL VIEWS OF COMMERCIAL FARMING AND IRRIGATION**, LANDSAT 9, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, CORPORATE FARMING:

**AERIAL VIEWS OF COMMERCIAL FARMING AND IRRIGATION,** LANDSAT 9, FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM **[DALL-E 3]**

# LARGE SCALE TEXTURES, DROUGHTS:

**SATELLITE VIEW OF DROUGHTS, AERIAL VIEW, LANDSAT 9,** FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, DROUGHTS:

**SATELLITE VIEW OF DROUGHTS, AERIAL VIEW, LANDSAT 9,** FILM GRAIN, ANAMORPHIC LENS, CINEMATIC COLOR, TOP DOWN VIEW, FUJI SUSPIRIA FILM --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# WARSCAPES

The tortured landscapes left from conventional war, nuclear war, and reactor disasters—and their lingering consequences.

# About This Section

I recognize that delving into the exploration of nuclear weaponry inevitably confronts the moral and ethical complexities of their historical use in WWII. **This module, however, does not aim to engage deeply with these issues but rather aims to underscore the folly of amassing weapons of such magnitude.** The focus is on raising awareness by illustrating their detrimental effects on our planet through photos and generative imagery. Sensitivity is exercised by refraining from depicting the devastating consequences of nuclear bombings in Hiroshima and Nagasaki. Similarly, the module on incendiary effects will omit the 9-11 attacks, and the section on waterscapes will avoid Phuket and Fukushima, covering flooding and tsunamis. Nonetheless, the module will explore the artifacts of conflict, encompassing both conventional bombing. nuclear testing, and nuclear reactor failures.


*Rie Ishii/AFP/Getty Images*

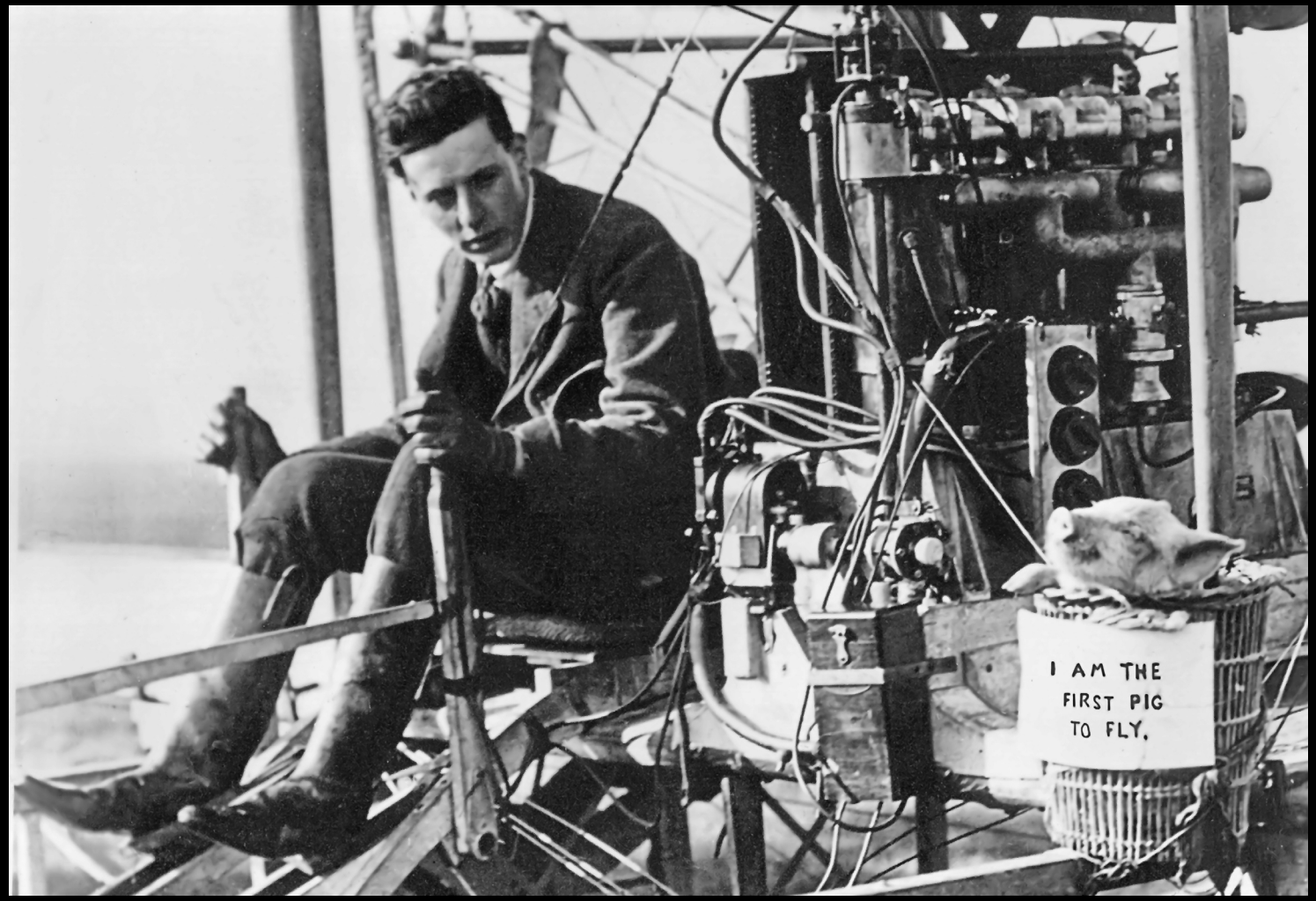
# Warscapes:
# The Textures of Destruction

From an aerial view— or even from an unusual angle at ground level— war's aftermath may appear formally arranged, akin to an abstract artwork, as the destruction takes on a surreal quality. **Yet, it is crucial to remember the true horror of war—the lives lost, the suffering endured, and the communities shattered. The aesthetic detachment cannot obscure the human tragedy and the irreplaceable loss experienced on the ground.** In the end, war is a tragedy that no abstraction can fully mask.

James Dickey's poem, "The Firebombing," encapsulates this phenomenon as he explores the aftermath of war through a pilot's perspective. Dickey's poem delves into the pilot's experience of a firebombing raid, portraying the devastation below with a chilling detachment. The vivid descriptions of fire and destruction create an otherworldly, abstract tableaux in the reader's mind. The pilot's detachment mirrors the emotional disconnection often required in warfare, where the human cost can be numbed. No less controversial than his poem was the firebombing itself, the allied response to Axis aggressions in Europe and the Pacific that initiated the conflict. London, Hamburg, Dresden, Tokyo (seen in the image to the right), and many more cities were raised to the ground during WWII.

# John Moore-Brabazon, Early Pioneer of Wartime Aerial Photography

**Sir John Moore-Brabazon, a British aviator during WWI, pioneered aerial photography techniques.** He equipped aircraft with cameras, developing methods to capture images from above. This innovation significantly improved reconnaissance and intelligence gathering during the war, contributing to better strategic planning. Moore-Brabazon's work in aerial photography laid the foundation for modern aerial surveillance and reconnaissance techniques used in subsequent conflicts.

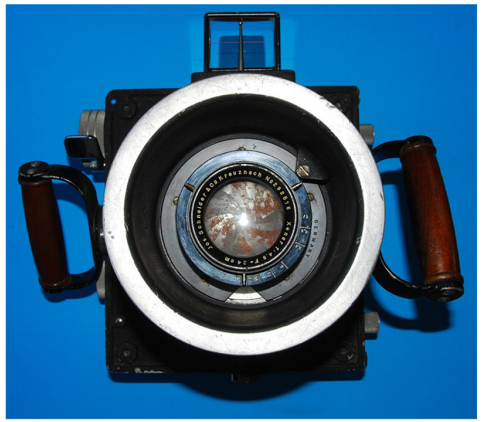



# Margaret Bourke-White, Early Pioneer of Wartime Aerial Photography

**Margaret Bourke-White, a groundbreaking American photojournalist, made significant contributions to aerial photography during WWII.** She was the first female war correspondent and the first woman to fly on a combat mission. Her iconic images, taken from aircraft during the war, provided unique perspectives on battlefields, military operations, and the lives of soldiers. Bourke-White's pioneering work in aerial photography captured the realities of WWII and influenced the way conflicts were documented, expanding the role of women in photojournalism.

# Margaret Bourke-White, Early Pioneer of Wartime Aerial Photography

***Margaret Bourke-White used the enormous Keystone F8 Aerial camera with a Wollensak lens. The Keystone f/8 camera is a large format camera renowned for its robust build and sizable dimensions. It excels in capturing high-quality images, particularly in specialized fields like aerial photography. Its size and weight make it suitable for stability and precision, allowing photographers to achieve detailed and sharp images, though it's not a portable option due to its substantial bulk. The Wollensak 15-inch f/5.6 lens is a large format lens with a 15-inch focal length and an f/5.6 maximum aperture, suitable for low light and shallow depth of field. Bourke-White also used a Rolleiflex Automat (Type 3) twin lens reflex camera with a Tessar 1:3.5/f=7.5cm by Carl Zeiss Jena lens. She shot from a B-17F 'Flying Fortress' for many of her aerial war photos (the first woman to step foot on such an aircraft).***



Keystone F8 Aerial Camera


Wollensak 15 inch f/5.6 Lens

# Modern Pioneers of Wartime Photography

**Ashley Gilbertson's** aerial wartime photography in Nigeria captures the harrowing realities of conflict, offering a poignant perspective from above that exposes the impact on both land and lives. The stark contrast between the once serene landscapes and the ravages of war is vividly depicted, emphasizing the transformation wrought by human conflict. In a similar vein, **Kyōichi Sawada's** aerial photography in Vietnam unveils the haunting scars of war, portraying the intricate textures of a landscape altered by violence. His lens captures the juxtaposition of beauty and destruction, revealing the resilience of nature amidst the chaos of conflict.

# Aerial Photography & Large Scale Textures: Ashley Gilbertson

*https://www.ashleygilbertson.com/*

# Aerial Photography & Large Scale Textures: Ashley Gilbertson

*https://www.ashleygilbertson.com/*



Canon 5D Mark IV


Canon 28mm 1.8

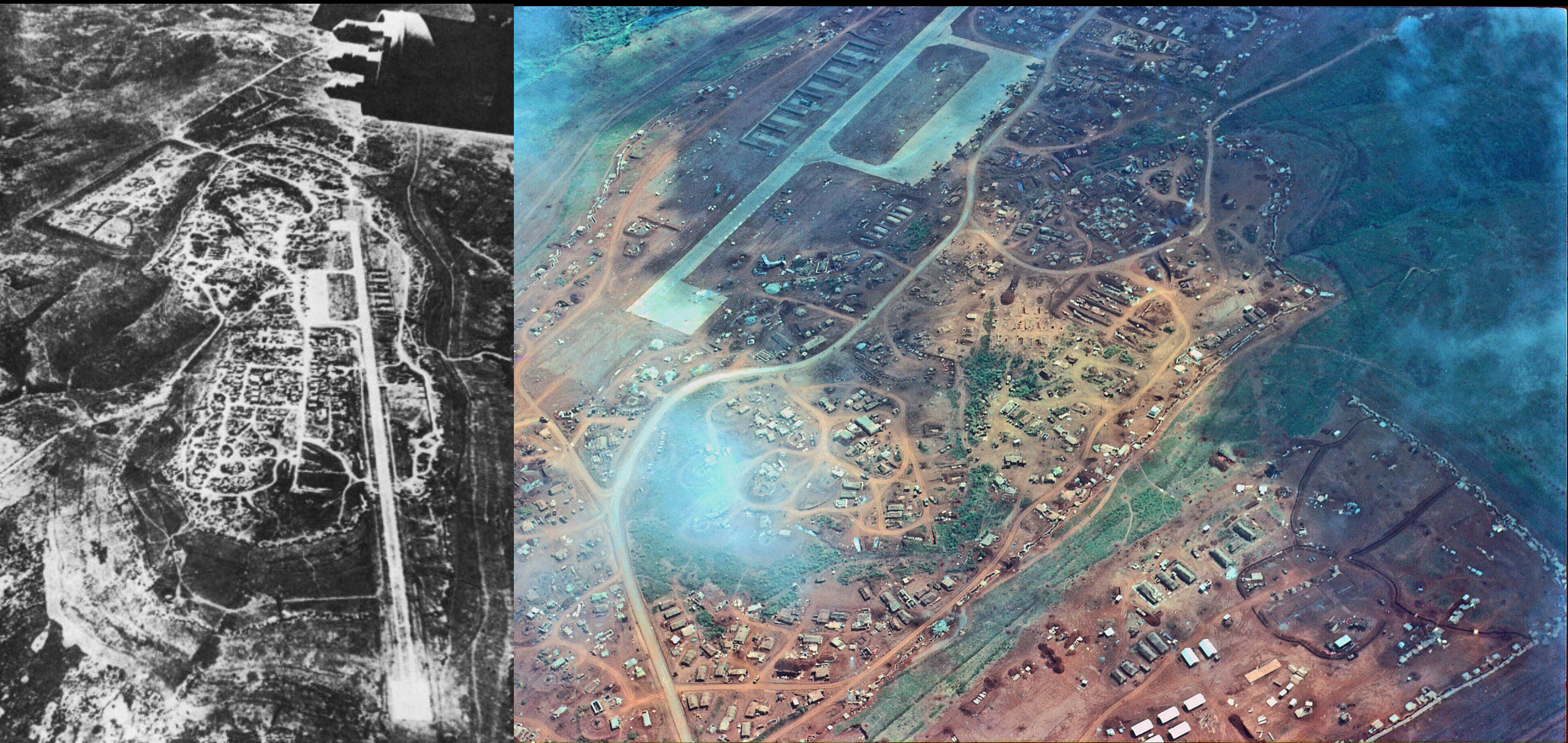

Canon 35mm 1.4L

***'Nigeria's Battles With Boko Haram Scar The Land And Its People' by Ashley Gilbertson: "From the sky, Borno State, the region where Boko Haram is most active, is a patchwork of fallow farmland, swathes of desert and a few swampy areas. Famine-like conditions are raging in the area, a region with a rich history of agriculture. Boko Haram has chased off all the farmers, and the militants themselves have fallen victim to food shortages. We spotted only a handful of vehicles on the roads as we passed overhead. The area is mostly a ghost town." Ashley Gilbertson (b. 1978) is an Australian photographer and writer living in New York City recognized for his critical eye and unique approach to social issues. Gilbertson is a member of VII Photo, a frequent contributor to major media outlets and a collaborator with the United Nations. For over twenty years, Gilbertson's work focused on refugees and conflict, an interest that in 2002, led him to Iraq. His work from that country was awarded the Robert Capa Gold Medal, and in 2007, Gilbertson's first book, Whiskey Tango Foxtrot, was released, going on to become a best seller. Today, Gilbertson documents global migration in Africa and Europe, and works on climate, social and health issues in the United States and Asia.***

https://www.worldphoto.org/
https://medium.com/vantage/7-with-vii-all-about-gear-2e55bbef6c96

# Aerial Photography & Large Scale Textures: Kyōichi Sawada

*https://en.wikipedia.org/wiki/Kyōichi_Sawada*



# Aerial Photography & Large Scale Textures: Kyōichi Sawada

*https://en.wikipedia.org/wiki/Kyōichi_Sawada*

*"I was stationed at Tan Son Nhut AB from July 1970 to July 1971 and assigned to the 7th Air Force Office of Information, initially serving as a combat reporter and finishing as the 7th Air Force newspaper editor. Journalists and photojournalists not affiliated with major news companies would come to our office to get press credentials and sometimes ask for help to arrange air transportation. Other people in our office assisted them, so I usually paid no attention. That is, until one time when a Japanese photographer walked in and, speaking pretty good English, asked for assistance. I noticed he had a Nikon F with a 35mm wide angle lens. I asked how he was able to get correct exposure when his camera didn't have a meter. He pointed to his right eye and said that was his meter. I asked why he preferred the 35mm lens when a telephoto would bring the action closer. He pointed to his feet and said they got him close to the action." - Randall Kusaka*

*Kyōichi Sawada, a Japanese photojournalist, achieved prominence for his compelling images of the Vietnam War. His courageous and empathetic approach garnered him the 1966 Pulitzer Prize for Photography. Sawada's career, tragically cut short in 1970 during the conflict, left an enduring legacy in the realm of war photography. His work stands as a witness to the human cost of war and the enduring power of visual storytelling.*

https://en.wikipedia.org/wiki/Kyōichi_Sawada


**Nikon F**


**Nikon 35mm Wide Angle Lens**

# Artillery Barrages and Aerial Bombings

**The history of artillery barrages and conventional bombing on civilian targets is a grim narrative intertwined with the evolution of warfare.** While the targeting of civilians has been condemned in modern times, its historical roots trace back to early conflicts. In ancient warfare, besieging armies often subjected civilian populations to the horrors of artillery barrages and sieges as a means of breaking the enemy's will. The 20th century marked a shift in the scale and brutality of attacks on civilians. World War I witnessed the introduction of **long-range artillery**, and cities such as London and Paris experienced bombardments that targeted both military and civilian areas. The horror reached a new level during World War II with the advent of **strategic bombing campaigns.**

**Fire bombing**, epitomized by the devastating attacks on cities like Dresden, Tokyo, and London, became a gruesome tactic. The intent was not only to destroy military infrastructure but also to break the morale of civilian populations. The bombing of Guernica during the Spanish Civil War and the Blitz on London exemplify the deliberate targeting of civilians to instill fear and weaken resolve. Post-World War II, the Geneva Conventions and international law sought to curb the deliberate targeting of civilians, emphasizing the protection of non-combatants. However, conflicts in Korea, Vietnam, and more recent instances in the Middle East have witnessed controversial incidents, raising questions about adherence to these principles.

The history of targeting civilian populations reflects the dark side of warfare, where technological advancements in artillery and aerial bombing have often resulted in devastating consequences for innocent lives. The ethical and legal dimensions surrounding these practices continue to be subjects of global debate and efforts to establish norms that safeguard civilians during times of conflict.

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**AERIAL VIEW OF WARTORN HONG KONG**, TOP DOWN, **BOMBED OUT BUILDINGS, MASSIVE CRATERS, SCORCH MARKS,** INTERPOLATING FROM ORANGE TO DEEP GREEN, HELLSCAPE, 35MM, ANAMORPHIC LENS, BARREL DISTORTION, LOMOGRAPHY REDSCALE XR 50-200 35MM --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**AERIAL VIEW OF WARTORN HONG KONG**, TOP DOWN, **BOMBED OUT BUILDINGS, MASSIVE CRATERS, SCORCH MARKS,** INTERPOLATING FROM ORANGE TO DEEP GREEN, HELLSCAPE, 35MM, ANAMORPHIC LENS, BARREL DISTORTION, LOMOGRAPHY REDSCALE XR 50-200 35MM --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**AERIAL VIEW OF WARTORN HONG KONG**, TOP DOWN, **BOMBED OUT BUILDINGS, MASSIVE CRATERS, SCORCH MARKS,** INTERPOLATING FROM ORANGE TO DEEP GREEN, HELLSCAPE, 35MM, ANAMORPHIC LENS, BARREL DISTORTION, LOMOGRAPHY REDSCALE XR 50-200 35MM --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**AERIAL VIEW OF WARTORN HONG KONG**, TOP DOWN, **BOMBED OUT BUILDINGS, MASSIVE CRATERS, SCORCH MARKS,** INTERPOLATING FROM ORANGE TO DEEP GREEN, HELLSCAPE, 35MM, ANAMORPHIC LENS, BARREL DISTORTION, LOMOGRAPHY REDSCALE XR 50-200 35MM --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**AERIAL VIEW OF WARTORN HONG KONG**, TOP DOWN, **BOMBED OUT BUILDINGS, MASSIVE CRATERS, SCORCH MARKS,** INTERPOLATING FROM ORANGE TO DEEP GREEN, HELLSCAPE, 35MM, ANAMORPHIC LENS, BARREL DISTORTION, LOMOGRAPHY REDSCALE XR 50-200 35MM --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**AERIAL VIEW OF WARTORN HONG KONG**, TOP DOWN, **BOMBED OUT BUILDINGS, MASSIVE CRATERS, SCORCH MARKS,** INTERPOLATING FROM ORANGE TO DEEP GREEN, HELLSCAPE, 35MM, ANAMORPHIC LENS, BARREL DISTORTION, LOMOGRAPHY REDSCALE XR 50-200 35MM --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**AERIAL VIEW OF WARTORN HONG KONG**, TOP DOWN, **BOMBED OUT BUILDINGS, MASSIVE CRATERS, SCORCH MARKS,** INTERPOLATING FROM ORANGE TO DEEP GREEN, HELLSCAPE, 35MM, ANAMORPHIC LENS, BARREL DISTORTION, LOMOGRAPHY REDSCALE XR 50-200 35MM --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

LANDSAT 9, **DRESDEN FIREBOMBING AT NIGHT, SMOLDERING RUINS,** AERIAL TOP DOWN PHOTO, ROLLEFLEX AUTOMAT, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, AEROCHROME, SUBSURFACE SCATTERING --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

LANDSAT 9, **DRESDEN FIREBOMBING AT NIGHT, SMOLDERING RUINS,** AERIAL TOP DOWN PHOTO, ROLLEFLEX AUTOMAT, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, AEROCHROME, SUBSURFACE SCATTERING --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**




# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**HTTPS://S.MJ.RUN/C5DNXWT5FQM HTTPS://S.MJ.RUN/1WH9BZRQIB0 WWI AERIAL PHOTOGRAPH OF TRENCH WARFARE, MAGINOT LINE, CRATERS, SCARRED EARTH,** NO MAN'S LAND, VINTAGE WAR PHOTOGRAPHY, VAST RUINS, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**HTTPS://S.MJ.RUN/C5DNXWT5FQM HTTPS://S.MJ.RUN/1WH9BZRQIB0 WWI AERIAL PHOTOGRAPH OF TRENCH WARFARE, MAGINOT LINE, CRATERS, SCARRED EARTH,** NO MAN'S LAND, VINTAGE WAR PHOTOGRAPHY, VAST RUINS, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**HTTPS://S.MJ.RUN/F_HX87VLGLI HTTPS://S.MJ.RUN/QKHZISCLQ9Q HTTPS://S.MJ.RUN/P-KZ2RIRONY LANDSAT 9 TOP DOWN VIEW OF BATTLE OF STALINGRAD, STRATETGIC BOMBING, SNOW-LADEN LANDSCAPES, CRATERS, SCARRED EARTH, EXPLOSIONS, SCORCH MARKS, NO MAN'S LAND,** VINTAGE WAR PHOTOGRAPHY, VAST RUINS, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

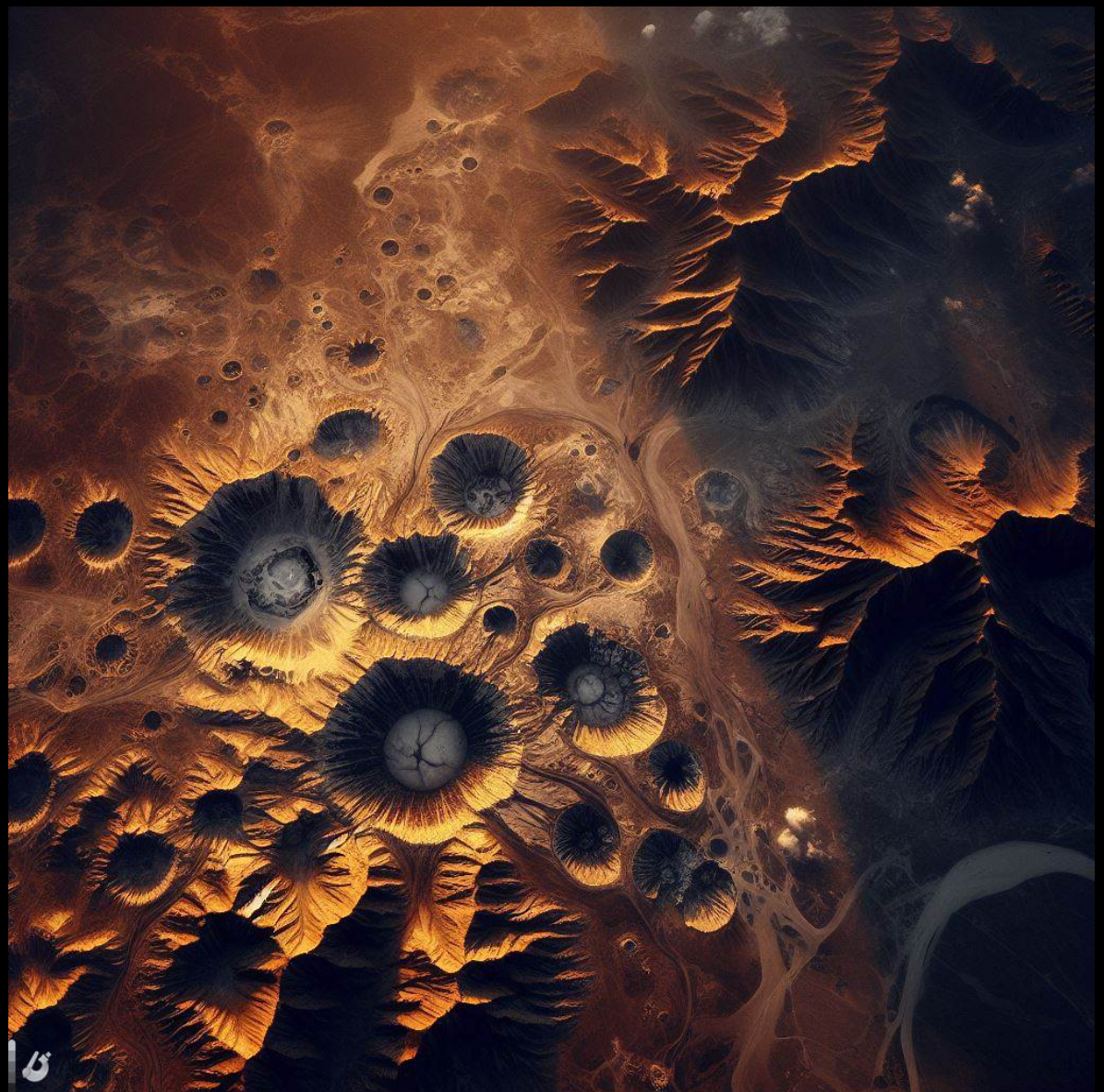
**HTTPS://S.MJ.RUN/F_HX87VLGLI HTTPS://S.MJ.RUN/QKHZISCLQ9Q HTTPS://S.MJ.RUN/P-KZ2RIRONY LANDSAT 9 TOP DOWN VIEW OF BATTLE OF STALINGRAD, STRATETGIC BOMBING, SNOW-LADEN LANDSCAPES, CRATERS, SCARRED EARTH, EXPLOSIONS, SCORCH MARKS, NO MAN'S LAND,** VINTAGE WAR PHOTOGRAPHY, VAST RUINS, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**LANDSAT 9 TOP DOWN VIEW OF BATTLE OF STALINGRAD, STRATETGIC BOMBING, SNOW-LADEN LANDSCAPES, CRATERS, SCARRED EARTH, EXPLOSIONS, SCORCH MARKS, NO MAN'S LAND,** VINTAGE WAR PHOTOGRAPHY, VAST RUINS, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, GREEN GUM BICHROMATE PRINT **[DALL-E 3]**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**TOP DOWN SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS,** LANDSAT 9 VIEW, **CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, RED AND ORANGE GUM BICHROMATE PRINT **[DALL-E 3]**



# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**MULTIPLE LARGE AFTERMATH SCORCH MARK CRATERS, EXTREMELY LARGE CONVENTIONAL BOMBS SCARRING SANDY EARTH IN ASH AND DEBRIS,** LOW BIRD'S EYE VIEW, **HIGH CONTRAST BETWEEN SCORCH AND EARTH, ORDINANCE TESTING,** DISPOSABLE GRAINY PHOTOGRAPH --AR 4:3 --C 10 **[MIDJOURNEY 5.2]**

**Renders by guest contributor Ethan Koss**

# LARGE SCALE TEXTURES, ARTILLERY & AERIAL BOMBARDMENT:

**LARGE YIELD CONVENTIONAL BOMB TESTING,** LOW BIRDS EYE VIEW, **HIGH CONTRAST BETWEEN SCORCH AND EARTH, MILITARY TESTING FOOTAGE,** DISPOSABLE GRAINY PHOTOGRAPH --C 10 --V 5.2 --AR 4:3 **[MIDJOURNEY 5.2]**

**MULTIPLE LARGE AFTERMATH SCORCH MARK CRATERS, EXTREMELY LARGE CONVENTIONAL BOMBS SCARRING SANDY EARTH IN ASH AND DEBRIS,** LOW BIRD'S EYE VIEW, **HIGH CONTRAST BETWEEN SCORCH AND EARTH, ORDINANCE TESTING,** DISPOSABLE GRAINY PHOTOGRAPH --AR 4:3 --C 10 **[MIDJOURNEY 5.2]**

Renders by guest contributor Ethan Koss

# LARGE SCALE TEXTURES, NUCLEAR WAR:

WWII DOCUMENTARY FOOTAGE, **LANDSAT 9 SATELLITE VIEW OF MUTUALLY ASSURED DESTRUCTION, MULTIPLE NUKES EXPLODING ALL OVER THE EARTH, ARMAGEDDON,** AEROCHROME, BLUE INTERPOLATING TO RED, CINEMATIC COLOR CORRECTION, DYNAMIC ANGLE --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, NUCLEAR WAR:

**SATELLITE VIEW OF MUTUALLY ASSURED DESTRUCTION**, **MULTIPLE NUKES EXPLODING ALL OVER THE EARTH, ARMAGEDDON,** AEROCHROME, BLUE INTERPOLATING TO RED, CINEMATIC COLOR CORRECTION, DYNAMIC ANGLE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# Nuclear Tests

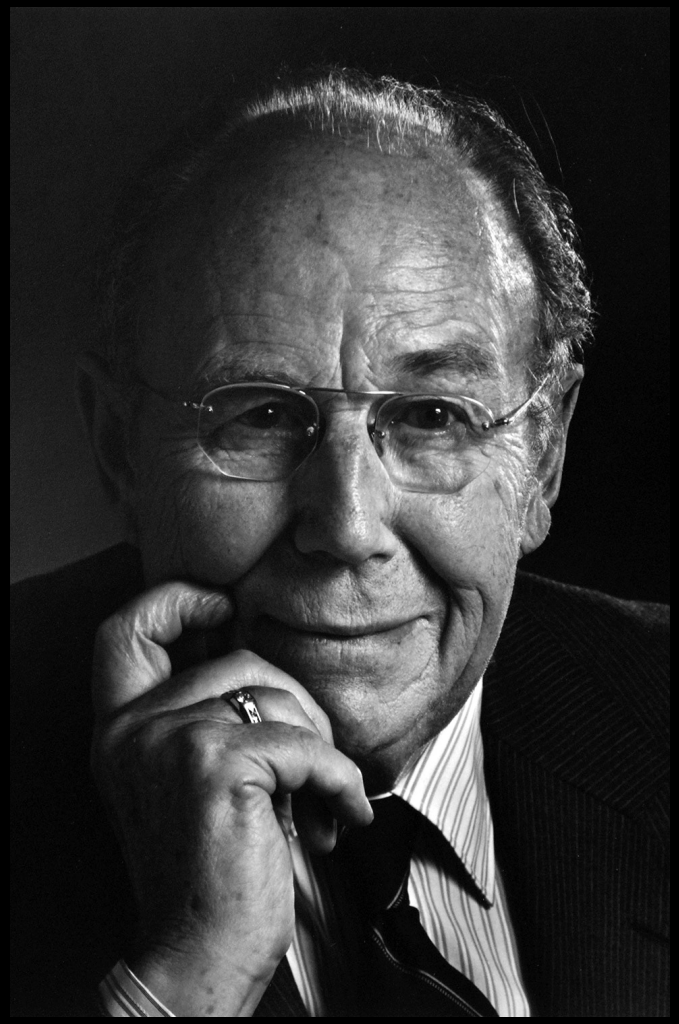
**The Trinity explosion**, the first nuclear test in 1945, created a towering mushroom cloud, symbolizing the birth of atomic weaponry. Subsequent atmospheric tests, such as those during the Cold War, displayed mushroom clouds of varying shapes and sizes, revealing the intensity of the detonations.

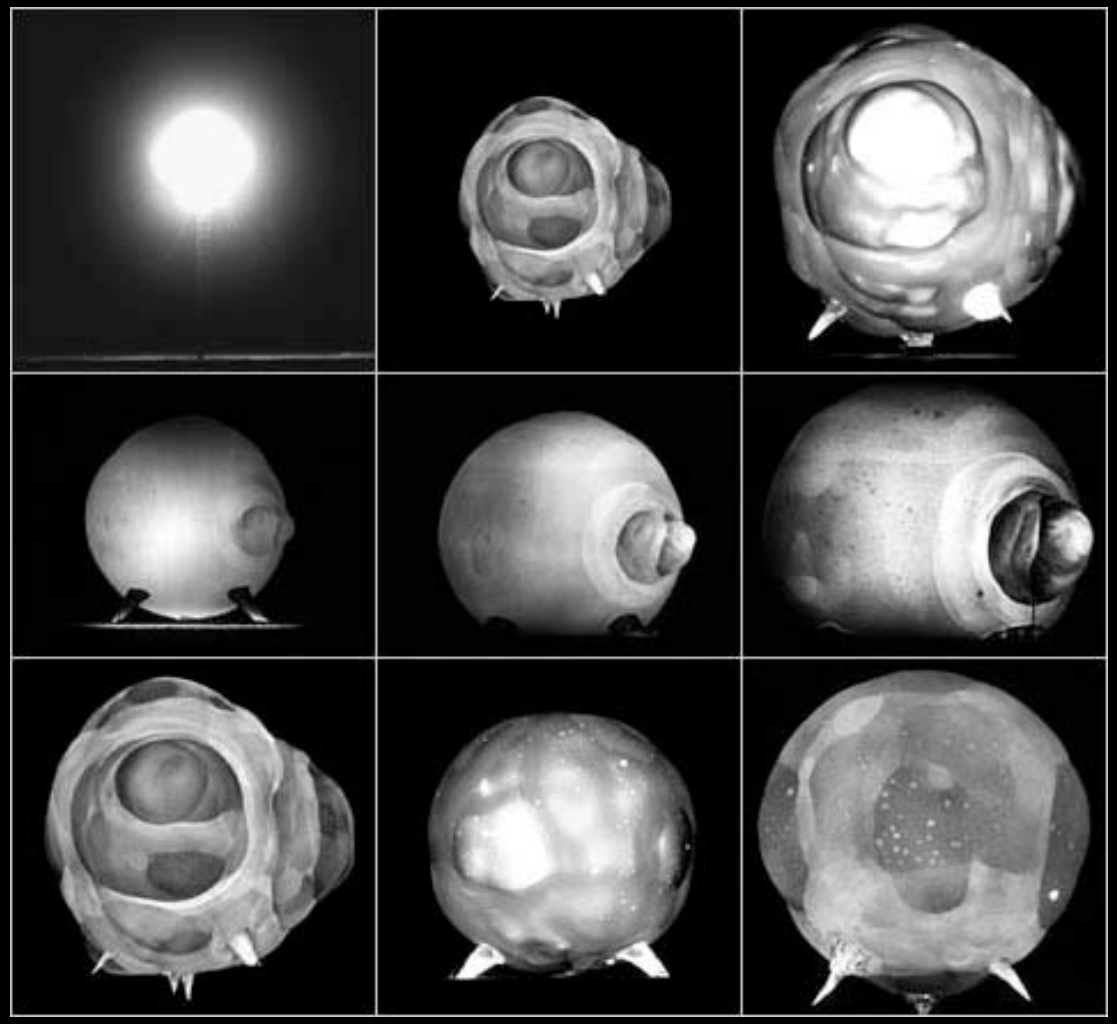
**Underwater tests** (such as the Oak Test from Operation Hardtack to the right) introduced distinctive characteristics, with colossal water plumes replacing traditional mushroom clouds. These detonations showcased the devastating potential of nuclear weapons in maritime environments, emphasizing their versatility. **Space tests**, conducted during the Cold War, displayed a surreal absence of a mushroom cloud due to the vacuum, highlighting the unique challenges and implications of nuclear warfare in outer space. **Neutron bombs**, designed for enhanced radiation effects while minimizing blast damage, exhibited a more discreet visual impact. **Hydrogen bombs**, on the other hand, unleashed colossal fireballs, mushroom clouds, and intense thermal effects, showcasing their unprecedented destructive power.

# Dr. Harold Edgerton, Pioneer of Rapatronic Photography

*https://webmuseum.mit.edu/*
*https://interestingengineering.com/*
*https://karsh.org/photographs/harold-edgerton/*

**Dr. Harold Edgerton played a pivotal role in developing the rapatronic camera for capturing images of nuclear tests.** Edgerton, known for his innovations in high-speed photography, collaborated with **Herbert Grier and Kenneth Germeshausen** to create the **rapatronic camera** during the Manhattan Project. The camera employed an innovative shutter system capable of exposures as short as a few microseconds, allowing it to capture detailed images of the extremely rapid events associated with nuclear detonations. Edgerton to left, Operation Tumbler- Snapper middle, Grier and Germeshausen to right.





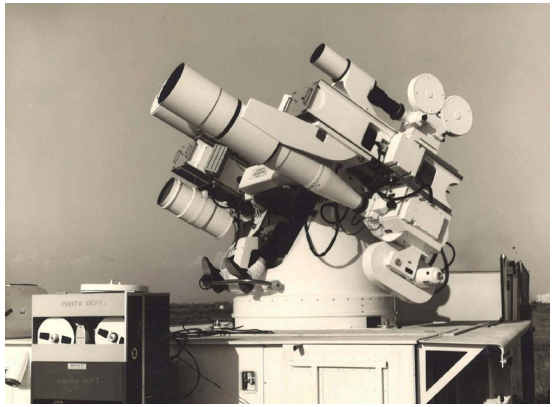
# Cameras Used for Documenting Nuclear Tests

**Prominent brands in high-speed cinematography, including Mitchell Camera Corporation and Bell & Howell, produced cameras widely used for capturing dynamic events like nuclear tests. Fastax, a specialized camera by the Eastman Kodak Company, and Photo-Sonics, known for high-speed cine and streak cameras, were integral in recording rapid sequences. Other contributors included Hycam, Éclair, NAC (Nihon Cine Industry), and modern innovators like Vision Research with the Phantom series. Together, these cameras revolutionized the field, providing crucial tools for researchers to capture and analyze fast-paced phenomena, influencing scientific understanding and technological development.**


**Vision Research- Pantom VE0 440**


**Mitchell GC #427**


**HyCam Photo 16mm**

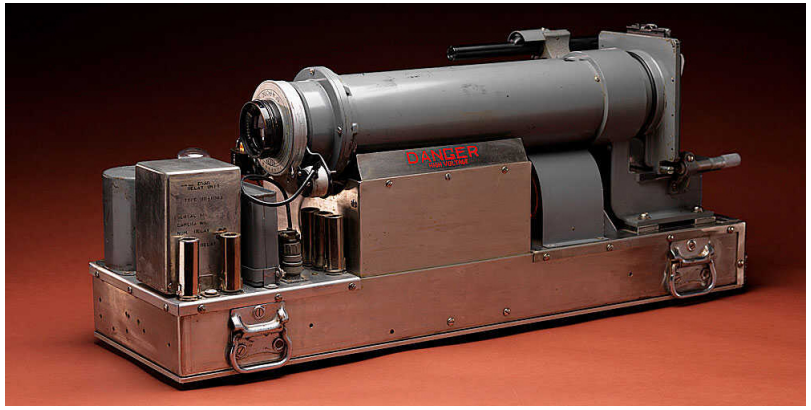


**Cine-Sextant- Photosonics**


**Jelco Triple Turret Lenses, NAC**


**NPR- Éclair 16mm Cameflex Camerette**


**Fastax Camera, Eastman Kodak**




**Rapatronic Camera, Dr. Edgerton**

# The Textures of Destruction: 1 Megaton vs. 20 Megatons

**The visual difference between a 1-megaton and a 20-megaton nuclear explosion is substantial.** A 20-megaton blast produces a significantly larger and more intense fireball than a 1-megaton explosion. The 20-megaton detonation exhibits more dynamic and turbulent textures at the edges of the fireball, reflecting increased shockwave dynamics and air density fluctuations. The shimmering effect in the surrounding air is more pronounced due to higher heat levels. Overall, the visual impact of the 20-megaton blast is far more dramatic, with larger-scale distortions and a more ominous display of destructive power compared to the 1-megaton explosion.

**[insert numeral megatons here] nuclear bomb blast mushroom cloud over ocean** interpolating from red to blue against fiery sky, looking down from bird's eye view, reflections in ocean, extreme detail, 35mm anamorphic, film grain, canon 5, dramatic lighting --ar 2:1 --s 750 **[Midjourney 5.2]**

# The Textures of Destruction: 50 Megatons

**The visual difference between a 50-megaton blast and a 1-megaton blast is stark.** The 50-megaton explosion generates a much larger fireball with more dynamic and turbulent textures at its edges. The shimmering effect in the surrounding air is intensified, reflecting the higher heat levels. The shockwaves and air density fluctuations create more pronounced distortions, while debris and dust contribute to a dramatic and ominous visual texture. In contrast, the 1-megaton explosion, while still devastating, presents a smaller and less turbulent fireball with comparatively milder visual distortions, showcasing the significant escalation in destructive power with the larger blast.

**50 megaton nuclear bomb blast mushroom cloud over ocean** interpolating from red to blue against fiery sky, looking down from bird's eye view, reflections in ocean, extreme detail, 35mm anamorphic, film grain, canon 5, dramatic lighting --ar 2:1 --s 750 **[Midjourney 5.2]**

# The Textures of Destruction: 100 Megatons

**The disparity between a 50-megaton and a 100-megaton nuclear blast is immense.** A 100-megaton explosion yields a fireball double the size of the 50-megaton counterpart, radiating intense heat and light. The 100-megaton detonation engenders more turbulent textures at the fireball's edges due to heightened shockwaves and air density fluctuations. The shimmering effect in the surrounding air becomes more pronounced, distorting the visual texture on a grander scale. The destructive shockwave and thermal effects extend over a vastly larger area, resulting in a broader radius of devastation. The aftermath of the 100-megaton blast showcases a more extensive and severe landscape transformation, with an increased dispersion of debris and dust contributing to a more chaotic and ominous visual texture. Overall, the visual difference underscores the exponential escalation in destructive power between these two megaton ranges, emphasizing the profound impact and devastation associated with a 100-megaton nuclear explosion compared to a 50-megaton blast.

**100 megaton nuclear bomb blast mushroom cloud over ocean** interpolating from red to blue against fiery sky, looking down from bird's eye view, reflections in ocean, extreme detail, 35mm anamorphic, film grain, canon 5, dramatic lighting --ar 2:1 --s 750 **[Midjourney 5.2]**

# Nuclear Textures: Desert Tests

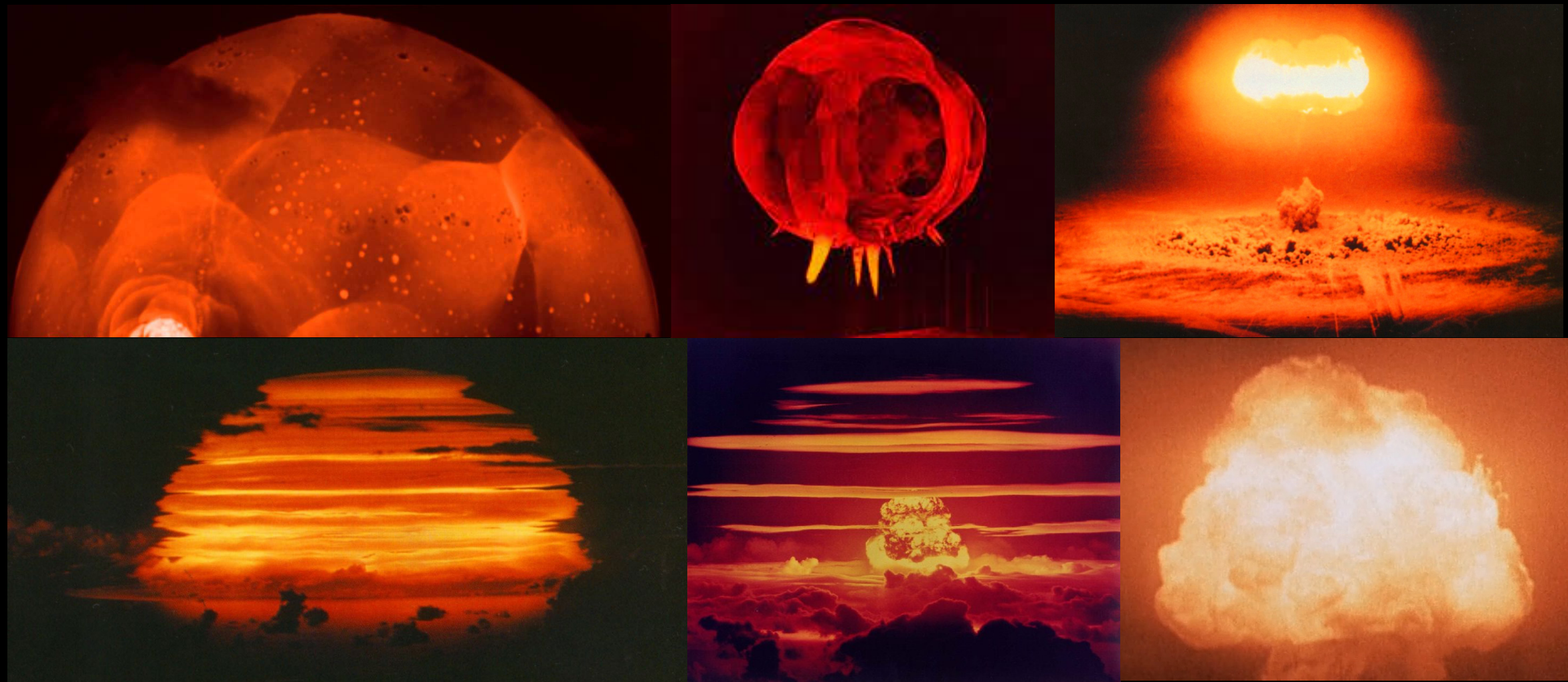
**The Nevada Test Site (NTS), established in 1951, played a pivotal role in the history of nuclear testing.** Initially named the Nevada Proving Grounds, it became the primary location for U.S. nuclear tests during the Cold War. Over 1,000 nuclear explosions occurred at the site, ranging from atmospheric tests in the early years to later underground tests. During the 1950s and early 1960s, atmospheric tests at NTS were conducted to understand nuclear weapon effects and validate designs. The infamous Operation Tumbler-Snapper and Operation Upshot-Knothole were among the early series. As awareness of radioactive fallout grew, testing shifted underground in 1963, with over 800 subterranean detonations taking place by 1992.

The Comprehensive Test Ban Treaty led to a testing moratorium in 1992, halting nuclear explosions at NTS. The site transitioned to environmental cleanup and non-nuclear activities. NTS, renamed the Nevada National Security Site in 2010, continues as a testing ground for non-nuclear experiments, ensuring the safety and reliability of the U.S. nuclear stockpile.

To the right:  Operation Ivy, Ivy Mike Test, 1952.

# Nuclear Textures: New Mexico and Nevada Desert Tests

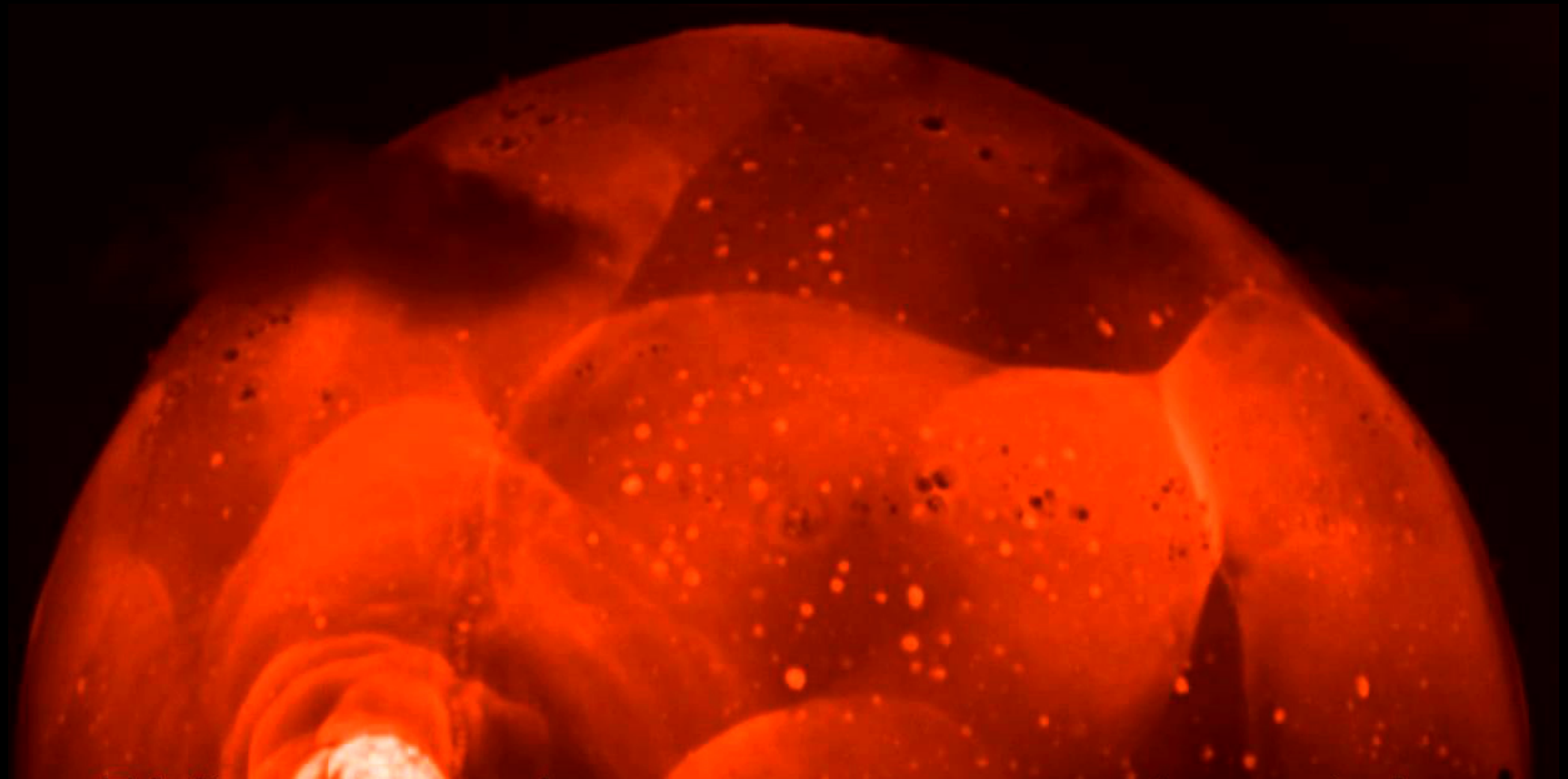
**Trinity, conducted on July 16, 1945, in the Jornada del Muerto desert of New Mexico, marked the world's first nuclear test. Deserts were chosen for early nuclear tests due to their isolation, sparse populations, and vast expanses, minimizing immediate risks to civilians.** Remote desert locations provided ideal settings for the secretive and extensive experiments that characterized early nuclear weapons development during the mid-20th century.
**One of the most significant desert nuclear tests was Operation Upshot-Knothole's "Annie" shot on March 17, 1953, at the Nevada Test Site. It marked the first test of a lightweight, deliverable hydrogen bomb.** From left to right, top row: Operation Ivy (Ivy Mike Test), Operation Tumbler-Snapper (with bottom spikes), Operation Plumbbob (STOKES Event). Bottom row: Operation Redwing (Apache Test and Dakota Test) and the Manhattan Project (Trinity Test).



# Nuclear Textures: The Atomic Fireball

https://www.atomicarchive.com/science/effects/fireball.html

**In the initial milliseconds of a nuclear blast, a gelatinous and almost membrane-like plasma ball materializes.** This remarkable phenomenon arises from the extreme temperatures and pressures generated during detonation. The intense heat triggers rapid ionization of the surrounding air and materials, giving rise to a luminous and dynamic plasma structure. The intricate interplay of energy release, shockwaves, and ionized particles orchestrates the formation of this transient yet visually arresting plasma ball. Its ephemeral nature serves as a tangible manifestation of the physical forces at play during the nascent moments of a nuclear explosion, creating a surreal spectacle in the blink of an eye.

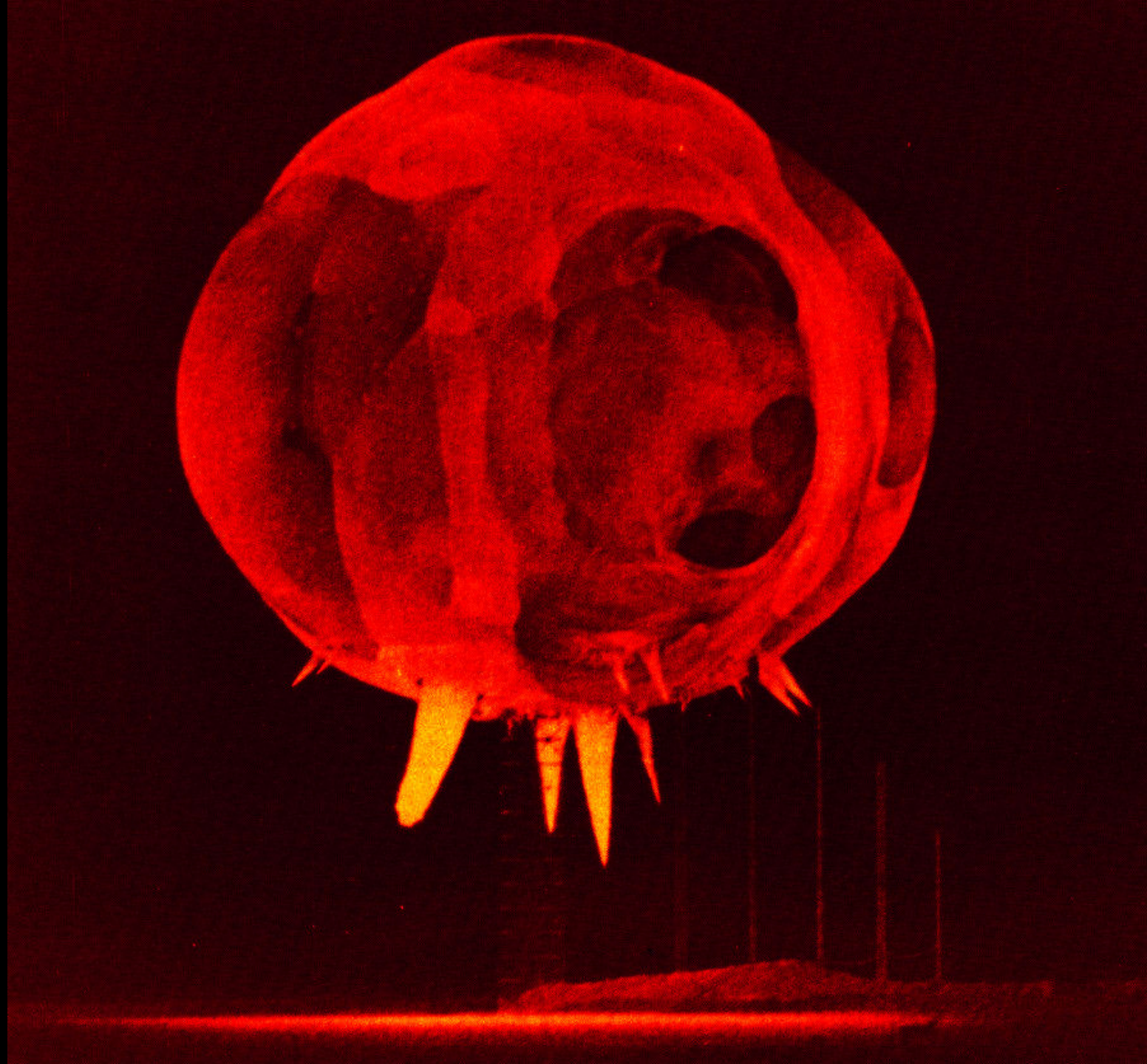


# Nuclear Textures: The Rope Trick Effect

In this 1952 photograph capturing a nuclear explosion in Nevada (Operation Tumbler-Snapper), a mere millisecond post-initiation, distinctive spikes emerge from the blast's base—an occurrence recognized as the **Rope Trick Effect.** Amidst the pervasive nuclear bomb testing of the 1940s and 1950s, including sites near Las Vegas and over Hawaii, scientists, despite suboptimal locations, were driven by the imperative to understand the repercussions of nuclear detonations. With advancing camera technology, the capability to capture detailed images of explosions increased, revealing peculiar spikes extending from the explosion's base milliseconds post-detonation.

**Dr. John Malik unraveled the mystery, correlating the spikes with cables on the bomb tower.** These metal cords, depicted as a faint ladder-like structure beneath the explosion, absorbed heat upon detonation, presenting as bright in photos when dark and vice versa. Coined the Rope Trick Effect by Malik, it serves as a visual testament to the intricate interplay between light, heat, and material properties in the extreme conditions of a nuclear blast.

*https://en.wikipedia.org/wiki/Rope_trick_effect*



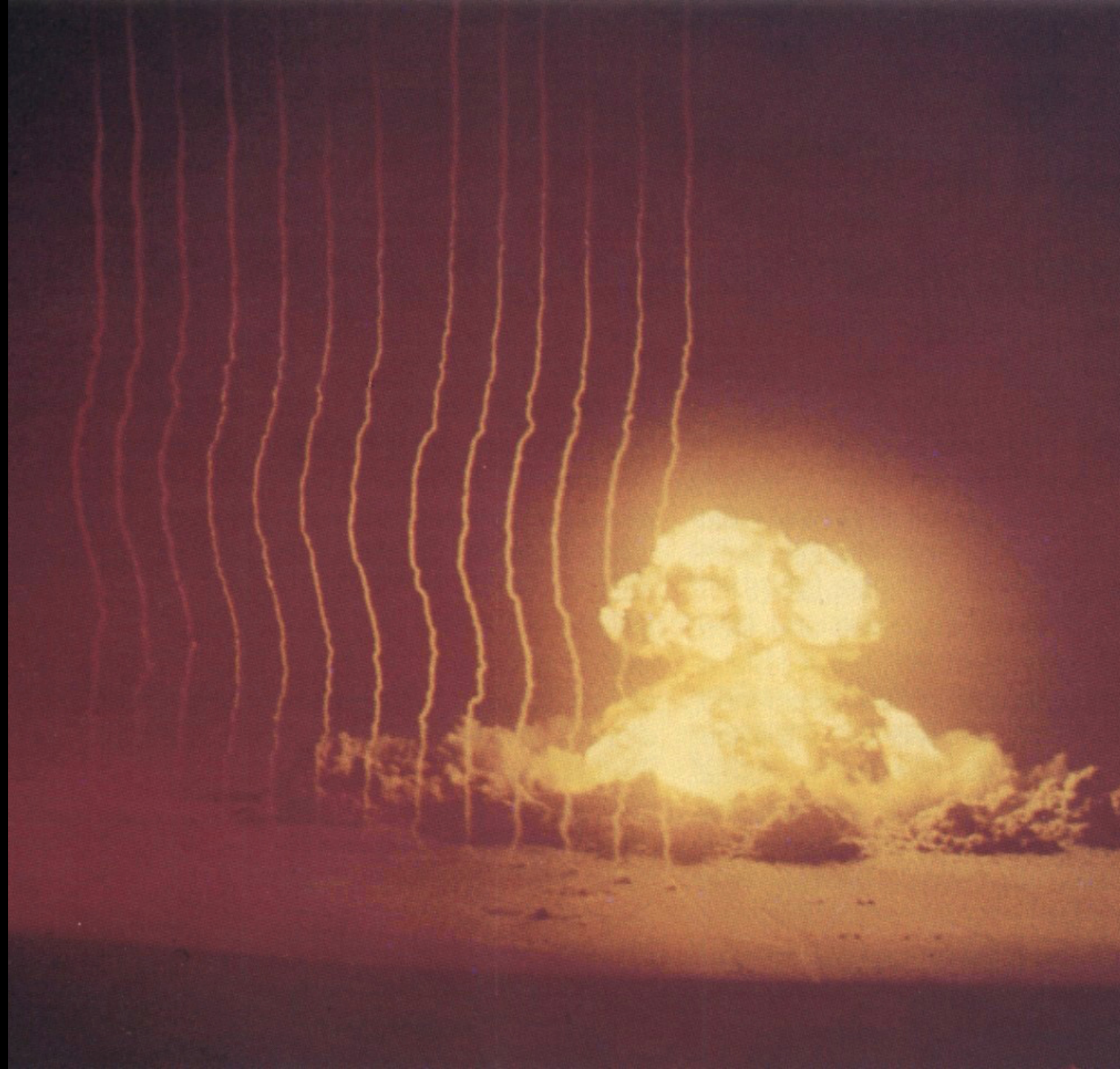
# Nuclear Textures: Shockwave Lines

The bizarre streamers often observed following a nuclear explosion, especially in parallel lines in the air, are known as **"shockwave shadowgraph lines"** or simply **"shockwave lines."** These distinctive features result from the interaction of the intense shockwave produced by the detonation with the surrounding air.

As the shockwave travels through the air, it compresses and heats the atmosphere along its path. The shockwave shadowgraph lines become visible due to the rapid changes in air density caused by the compression. These lines are essentially a visual representation of the shockwave's effects on the air, creating temporary, dynamic patterns that are particularly noticeable in certain atmospheric conditions. The shockwave lines offer valuable insights for researchers studying the behavior and characteristics of shockwaves generated by nuclear explosions. They contribute to the understanding of blast dynamics and help refine models used in nuclear explosion simulations and atmospheric studies.

To the right:  Operation Upshot-Knothole, Annie Upshot-Knothole Test.

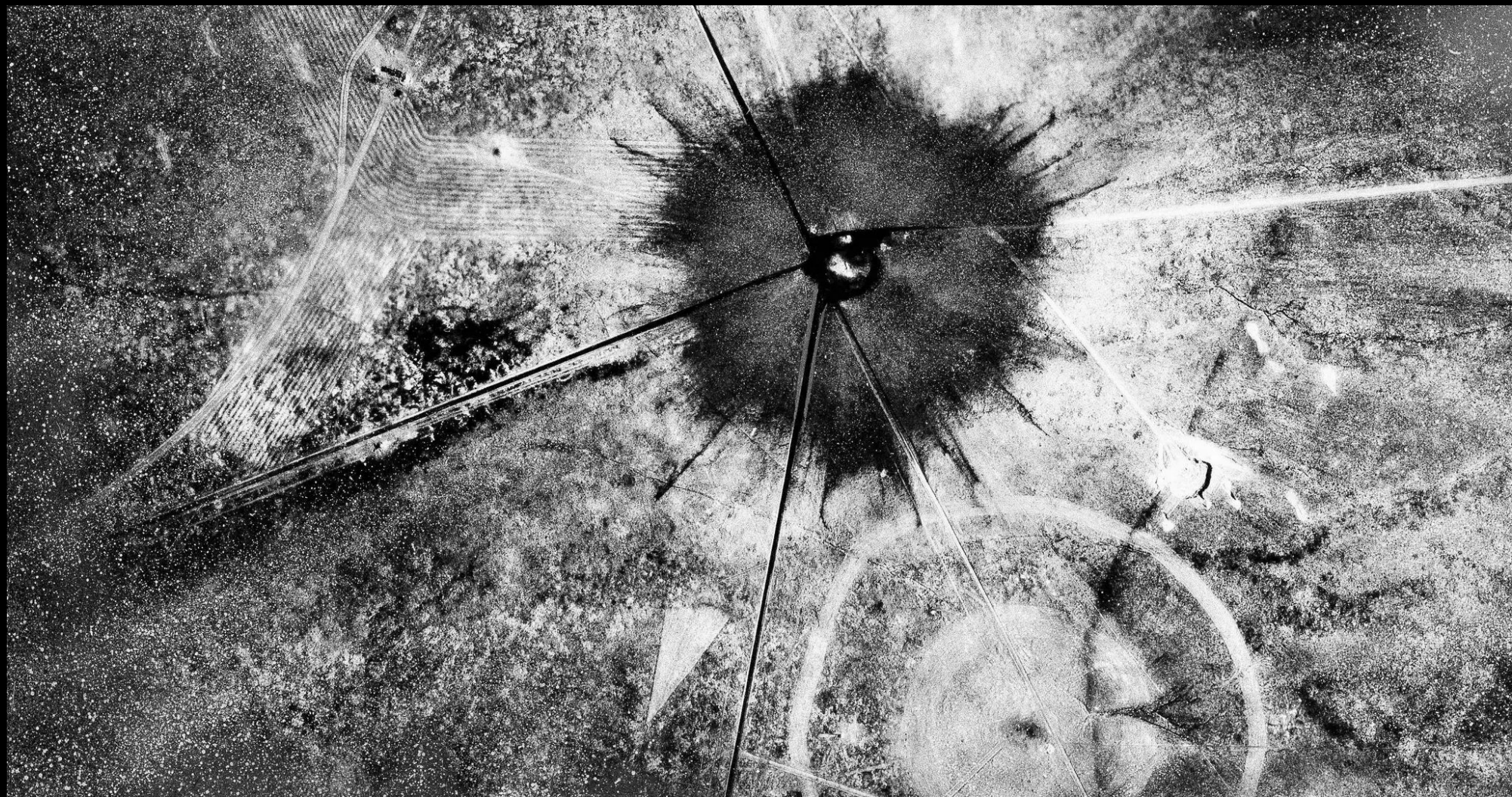
*https://nuclearweaponarchive.org/Usa/Tests/SmokeTrails.html*



# Scorched Earth Textures: Desert Testing Sites

*AP Photo, File- Uncredited Associated Press*

**Years of nuclear weapons testing in the Nevada desert left a haunting legacy etched into the landscape.** The surface, scarred by years of nuclear weapons testing, displays specific textures rooted in the scientific intricacies of atomic detonations. The **scorch marks** result from the incandescent heat of the explosions, literally burning the desert surface. **Craters** form as shockwaves and the release of immense energy create depressions, displacing and rearranging the soil. The shockwaves, traveling through the ground, induce **fractures**. The **fusion of soil particles** in the blast's epicenter forms glassy substances like trinitite. **Radioactive fallout**, settling on the ground, further alters the terrain.



# Scorched Earth Textures: Desert Testing Sites

*Left: Satellite Image*
Right: © Karen Kasmauski/Science Faction/Corbis

**The ecological damage wrought by nuclear weapons testing in the Nevada desert extends beyond the visible surface damage, posing long-term environmental challenges.** The detonations released radioactive contaminants into the soil, groundwater, and air, contributing to persistent ecological hazards. Native flora and fauna faced disruptions to their habitats, with potential impacts on biodiversity and ecosystem health. The lingering radioactivity raises concerns about the welfare of wildlife and the overall ecological balance. While there have been efforts to monitor and mitigate the environmental consequences, comprehensive plans for ecological restoration remain elusive. The complex nature of nuclear contamination poses significant challenges to restoring the Nevada desert to its pre-testing ecological state. Any rehabilitation initiatives would require extensive research, innovative technologies, and sustained commitment to address the intricate ecological disruptions caused by decades of nuclear weapons experimentation. Despite these challenges, acknowledging and addressing the ecological toll of nuclear weapons testing is crucial for preserving the delicate balance of ecosystems and ensuring the long-term health of the Nevada desert's environment.

# Cameras Used for Documenting the Trinity Test

https://www.lanl.gov/museum/
https://cinemagear.com/

**This Graflex Speed Graphic, Mitchell 35mm armored still camera was built in 1943 and used to photograph implosion experiments at Los Alamos. It was designed by Julian Mack, leader of the photography group, and armored to prevent its destruction by the explosive blast. Just six miles from Ground Zero, official Trinity Test photographer Berlyn Brixner sat in an observation bunker behind a 35mm Mitchell camera and four 16mm Kodak Cine E cameras. His assignment: to record the world's first nuclear explosion. In all, 37 motion-picture cameras were used to record the event. The Mitchell camera was a standard camera commonly used in Hollywood filming in the 1940s. Four, including this one, were used at the Trinity event.**

Graflex Speed Graphic, Mitchell 35mm
Armored Still Camera


16mm Kodak Cine E Camera

Julian Mack & Berlyn Brixner

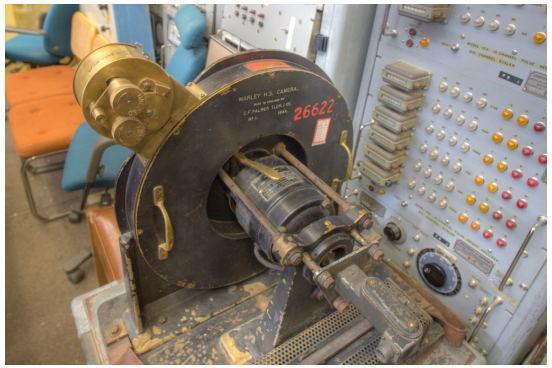
# Cameras Used for Documenting the Desert Tests

https://www.lanl.gov/museum/
https://cinemagear.com/

**The Graflex Pacemaker Speed Graphic 4x5 was used during the Ivy Mike test as part of Operation Ivy in 1952. This large-format camera, known for its versatility and portability, captured detailed images of the experimental hydrogen bomb detonation. The rapatronic camera, utilized in both Operation Plumbbob (1957) and Operation Redwing (1956), was instrumental in capturing high-speed images of nuclear detonations. Developed during the Manhattan Project, this innovative camera used an electro-optical shutter to achieve microsecond exposure times (15 million frames per second). Its rapid-fire capabilities allowed for the detailed documentation of the complex and dynamic events during the tests, providing crucial visual data for analyzing the behavior and effects of nuclear explosions. The Marley H.S. Camera was a rotating mirror precursor to the faster Eastman Kodak Fastax Camera and may have been used for tests other than Trinity. Many aerial shots of tests were taken with the Folmer Graflex Fairchild K-20, a large and cumbersome camera created for aerial surveillance, infamously used on the Enola Gay to record the Hiroshima blast.**

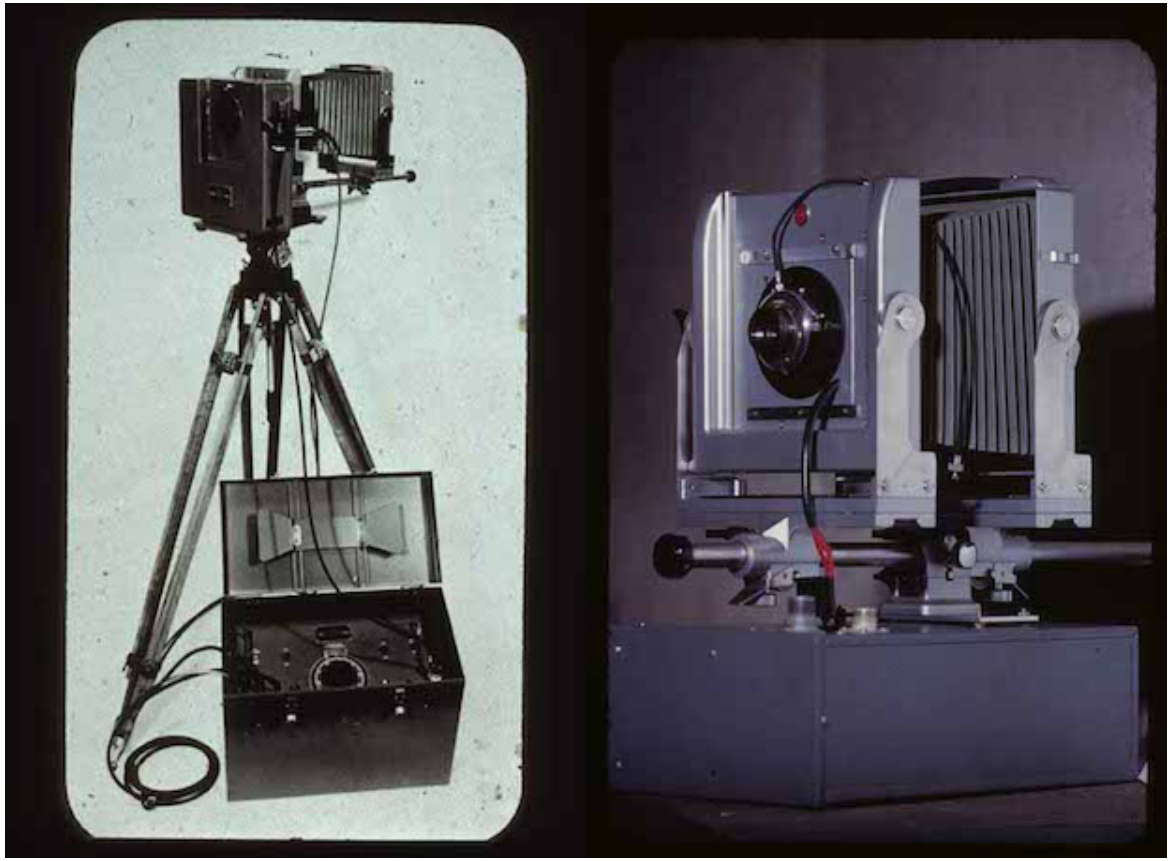
**Operation Ivy: Graflex Pacemaker Speed Graphic 4x5**


**Trinity: Fastax Camera**




**Marley H.S. Camera**

**Folmer Graflex Fairchild K-20**



**Operation Plumbbob and Redwing: Rapatronic Camera**

# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/5C9L0AA0NYI HTTPS://S.MJ.RUN/8QJCTGHFK14 HTTPS://S.MJ.RUN/4TG7TCCWQ6Y IVY MIKE NUCLEAR BOMB DETONATION, NEVADA DESERT**, INTERPOLATING BLUE TO YELLOW TO ORANGE, HASSELBLAD, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, SUBSURFACE SCATTERING --AR 2:3 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER DESERT INTERPOLATING FROM RED TO GREEN AGAINST FIERY SKY,** BIRD'S EYE VIEW, EXTREME DETAIL, CINEMATIC, CANON 5, DRAMATIC LIGHTING --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**NUCLEAR EXPLOSION FIREBALL, FIRST MILLISECONDS OF ATOMIC BLAST,** EXTREME CLOSE-UP, INTERPOLATING RED TO BLUE, **RAPATROPIC HIGH SPEED CAMERA, GRAFLEX PACEMAKER SPEED GRAPHIC 4X5**, AEROCHROME, GUM BICHROMATE PRINT, WWII DOCUMENTARY --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**




# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**NUCLEAR EXPLOSION FIREBALL, FIRST MILLISECONDS OF ATOMIC BLAST,** EXTREME CLOSE-UP, INTERPOLATING RED TO BLUE, **RAPATROPIC HIGH SPEED CAMERA, GRAFLEX PACEMAKER SPEED GRAPHIC 4X5**, AEROCHROME, GUM BICHROMATE PRINT, WWII DOCUMENTARY --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER DESERT INTERPOLATING FROM [CHOOSE COLORS, I.E. BLUE TO RED]** AGAINST FIERY SKY, BIRD'S EYE VIEW, EXTREME DETAIL, CINEMATIC, CANON 5, DRAMATIC LIGHTING **[STABLE DIFFUSION]**

# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**NUCLEAR EXPLOSION INTERPOLATING FROM WHITE TO ORANGE**, CINEMATIC, GOLDEN HOUR, WAR PHOTOGRAPHY, WIDE ANGLE, STYLE OF ANDREW WYETH, MAJESTIC CLOUDS IN BACKGROUND, BLUE + ORANGE HIGHLIGHTS, CANON 5, AWARD WINNING, DRAMATIC LIGHTING **[DALL-E 2]**

# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**NUCLEAR EXPLOSION INTERPOLATING FROM WHITE TO ORANGE,** CINEMATIC, GOLDEN HOUR, WAR PHOTOGRAPHY, WIDE ANGLE, STYLE OF MAXFIELD PARRISH, MAJESTIC CLOUDS IN BACKGROUND, BLUE + ORANGE HIGHLIGHTS, CURATED COLLECTION, CANON 5, DRAMATIC LIGHTING **[DALL-E 2]**





# LARGE SCALE TEXTURES, STYLIZED DESERT NUCLEAR TESTS:

**A PYROCUMULONIMBUS NUKE INDUCES AN INTENSE FIRE WHIRL WITH VORTICES**, EXTREME FIRE BEHAVIOR WITH EMBER SHOWERS AND RAPID FIRE SPREAD, YELLOW AND RED PALETTE, SATELLITE EYE VIEW --AR 2:1 --S 750 **[MIDJOURNEY NIJI 5]**

# LARGE SCALE TEXTURES, STYLIZED DESERT NUCLEAR TESTS:

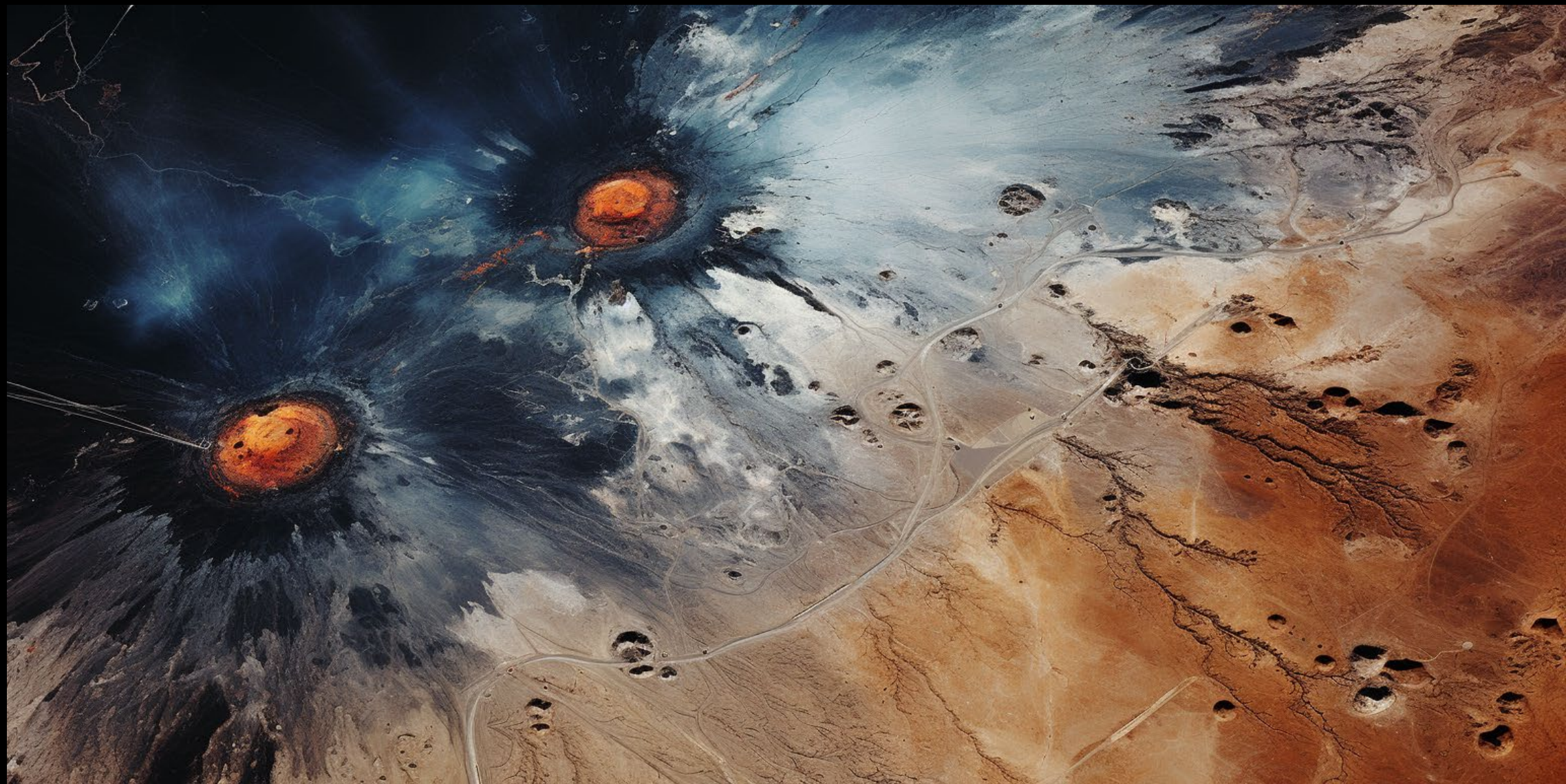
**A PYROCUMULONIMBUS NUKE INDUCES AN INTENSE FIRE WHIRL WITH VORTICES**, EXTREME FIRE BEHAVIOR WITH EMBER SHOWERS AND RAPID FIRE SPREAD, YELLOW AND RED PALETTE, SATELLITE EYE VIEW --AR 2:1 --S 750 **[MIDJOURNEY NIJI 5]**

# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/F8DTWUROB7Q HTTPS://S.MJ.RUN/QL0O4ZF0AMY HTTPS://S.MJ.RUN/ULPVL-MM6EM HTTPS://S.MJ.RUN/UPYICAKLIP8 TOP DOWN SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS, LANDSAT 9 VIEW, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, RED AND ORANGE GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

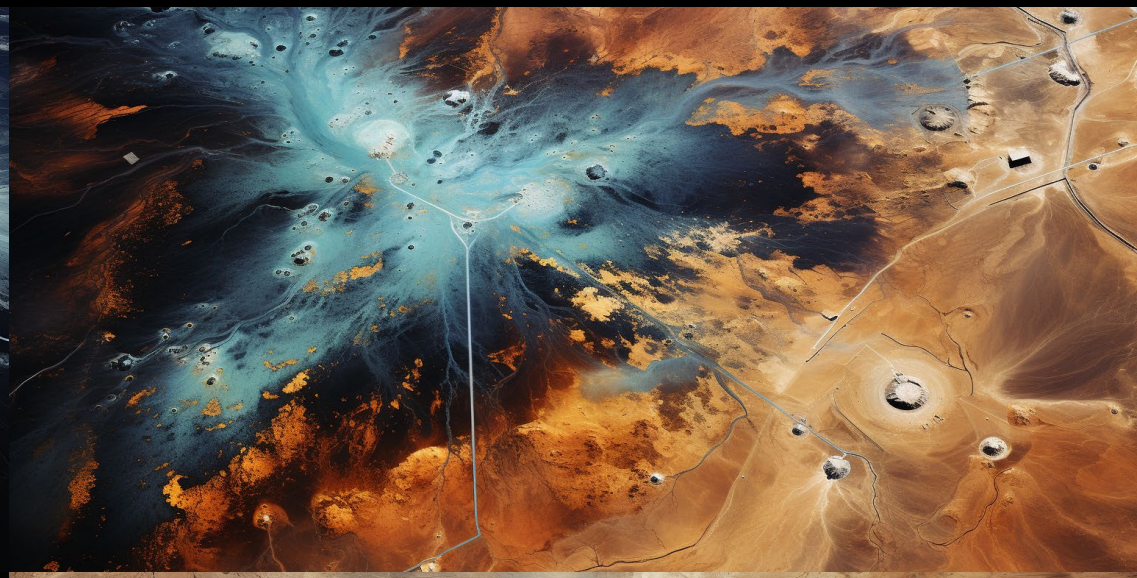
# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/F8DTWUROB7Q HTTPS://S.MJ.RUN/QL0O4ZF0AMY HTTPS://S.MJ.RUN/ULPVL-MM6EM HTTPS://S.MJ.RUN/UPYICAKLIP8 TOP DOWN SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS, LANDSAT 9 VIEW, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, RED AND ORANGE GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**



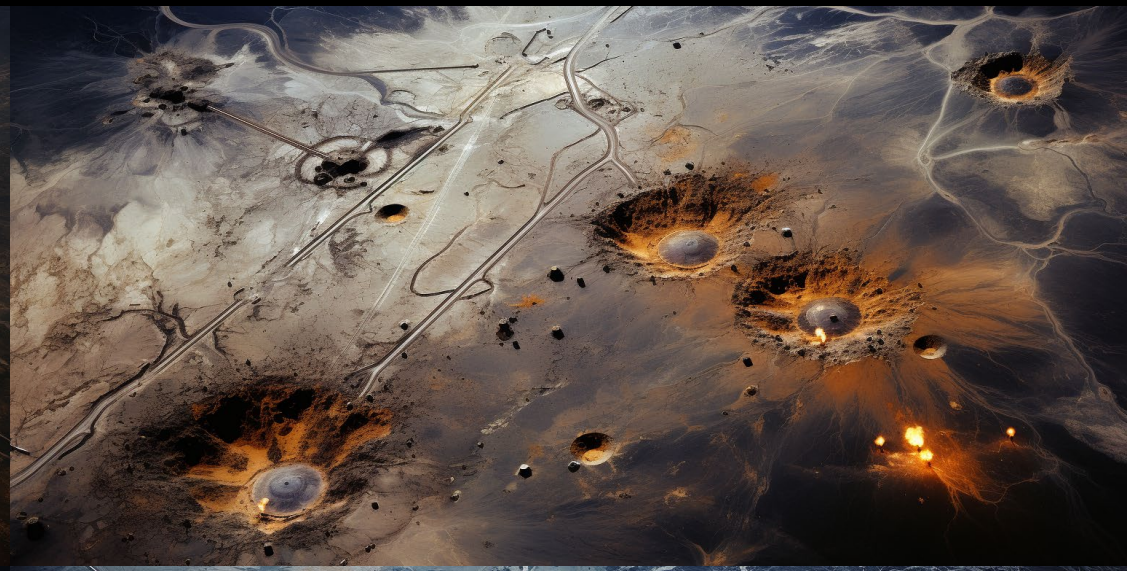
# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/F8DTWUROB7Q HTTPS://S.MJ.RUN/QL0O4ZF0AMY HTTPS://S.MJ.RUN/ULPVL-MM6EM HTTPS://S.MJ.RUN/UPYICAKLIP8 TOP DOWN SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS, LANDSAT 9 VIEW, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, RED AND ORANGE GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**



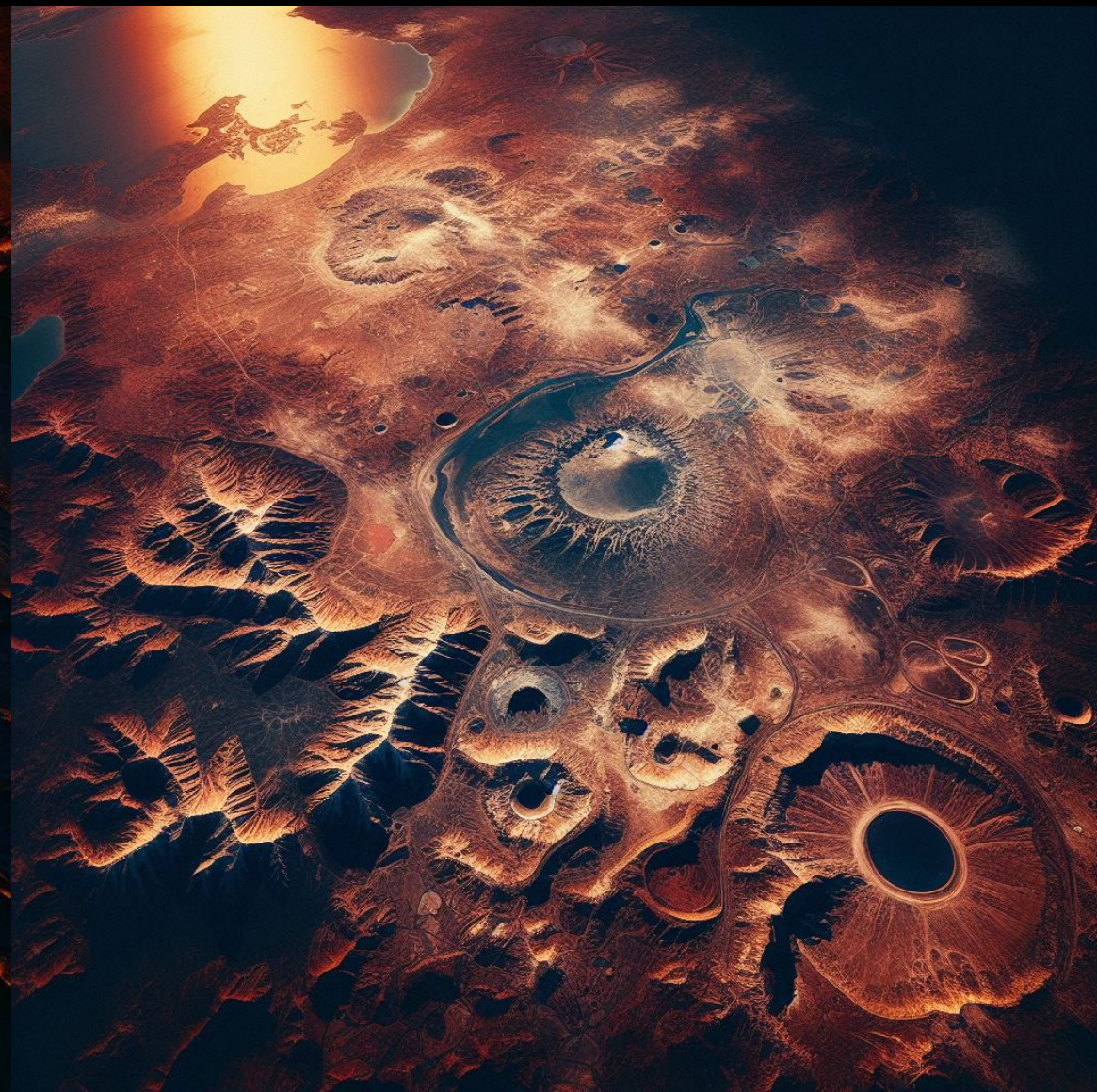
# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/F8DTWUROB7Q HTTPS://S.MJ.RUN/QL0O4ZF0AMY HTTPS://S.MJ.RUN/ULPVL-MM6EM HTTPS://S.MJ.RUN/UPYICAKLIP8 TOP DOWN SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS, LANDSAT 9 VIEW, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, RED AND ORANGE GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, DESERT NUCLEAR TESTS:

**TOP DOWN SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS, LANDSAT 9 VIEW, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, RED AND ORANGE GUM BICHROMATE PRINT **[DALL-E 3]**



# Nuclear Textures: Space Tests

**A nuclear explosion in outer space involves detonating a nuclear device beyond Earth's atmosphere.** Tests in 1962 aimed to understand the effects of nuclear weapons in space, addressing strategic and scientific curiosities during the Cold War. Conducted by the United States, these experiments sought to assess the potential impact of nuclear weapons on satellite communications and test the resilience of space-based assets.

**Results from these tests revealed unexpected phenomena.** In the absence of atmospheric constraints, **traditional mushroom clouds were absent**, replaced by bursts of intense light and radiation. The high-altitude detonations produced **artificial auroras**, demonstrating the ability of nuclear explosions to interact with the Earth's magnetic field. However, the tests also contributed to the creation of **artificial radiation belts** around the planet. While these experiments advanced scientific knowledge, they also underscored the potential environmental and geopolitical consequences of deploying nuclear weapons in space, shaping subsequent international discussions on arms control and space exploration.

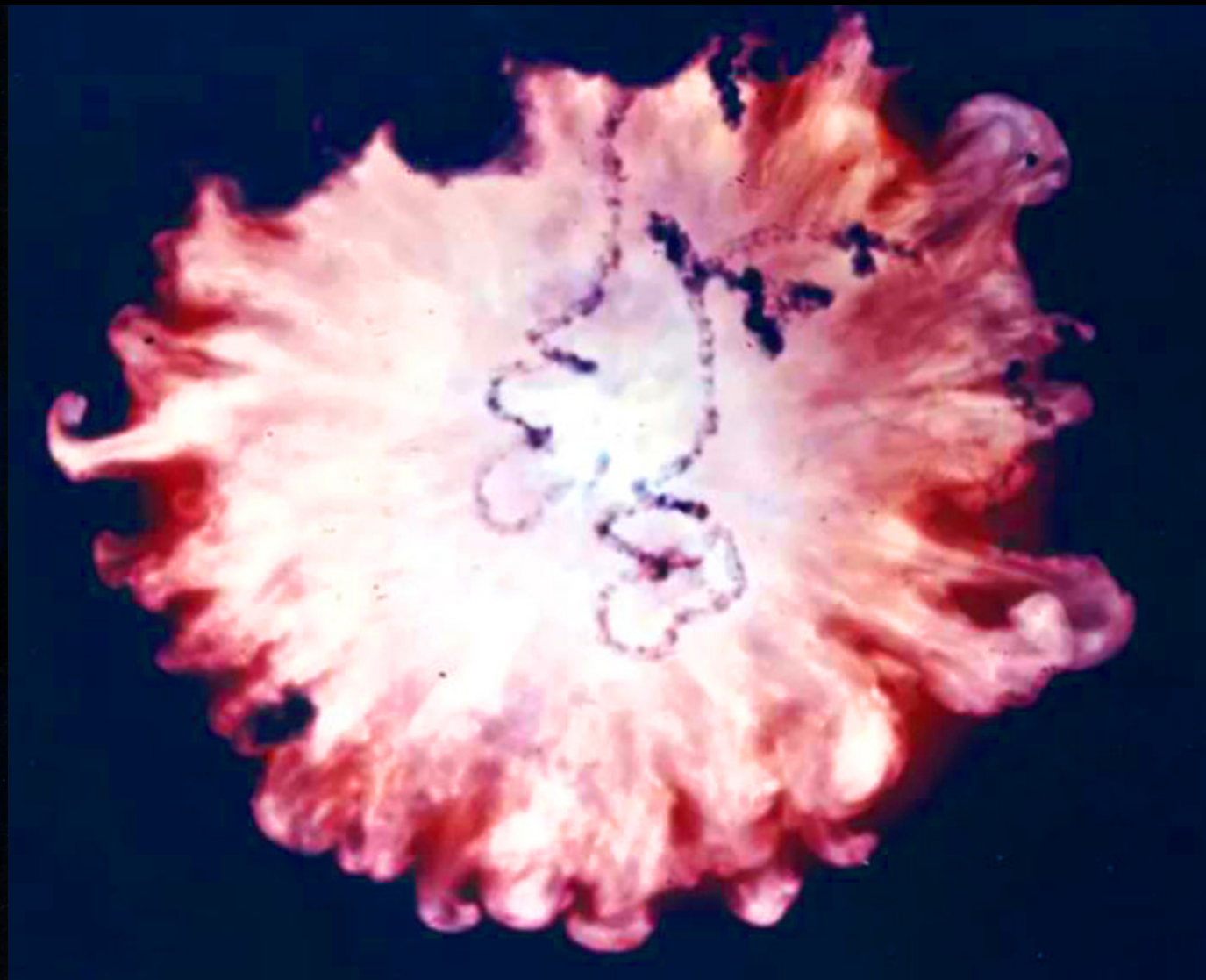
**Operation Fishbowl**, part of Operation Dominic in 1962, conducted five high-altitude nuclear tests: **Starfish Prime** on July 9, **Bluegill Triple Prime**, **Checkmate**, and **Bluegill Double Prime** on October 26, and **Kingfish** on November 1.

*https://en.wikipedia.org/wiki/Starfish_Prime*

https://en.wikipedia.org/wiki/Operation_Fishbowl

# Nuclear Textures: Operation Fishbowl- High Altitude Tests

**Operation Fishbowl, a series of nuclear tests conducted in outer space during the early 1960s, displayed a surreal and unprecedented visual appearance.** In the vacuum of space, absent of atmospheric constraints, these detonations showcased an eerie absence of the traditional mushroom cloud. Instead, bursts of intense light radiated in a unique and haunting manner, emphasizing the challenges of nuclear warfare beyond Earth's atmosphere.



# LARGE SCALE TEXTURES, OUTER SPACE NUCLEAR TESTS:

HTTPS://S.MJ.RUN/5C9L0AA0NYI HTTPS://S.MJ.RUN/8QJCTGHFK14 HTTPS://S.MJ.RUN/4TG7TCCWQ6Y **1962 OPERATION FISHBOWL NUCLEAR TEST IN OUTER SPACE, TEXTURED EXPLOSION IN THE VACUUM OF SPACE,** ELECTROLUMINESCENCE, RAINBOW REFRACTION, RISOGRAPH --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, OUTER SPACE NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/5C9L0AA0NYI HTTPS://S.MJ.RUN/8QJCTGHFK14 HTTPS://S.MJ.RUN/4TG7TCCWQ6Y 1962 OPERATION FISHBOWL NUCLEAR TEST IN OUTER SPACE, TEXTURED EXPLOSION IN THE VACUUM OF SPACE**, ELECTROLUMINESCENCE, RAINBOW REFRACTION, RISOGRAPH --AR 2:1 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, OUTER SPACE NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/5C9L0AA0NYI HTTPS://S.MJ.RUN/8QJCTGHFK14 HTTPS://S.MJ.RUN/4TG7TCCWQ6Y 1962 OPERATION FISHBOWL NUCLEAR TEST IN OUTER SPACE, TEXTURED EXPLOSION IN THE VACUUM OF SPACE,** INTERPOLATING BLUE TO YELLOW TO ORANGE, HASSELBLAD, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, SUBSURFACE SCATTERING --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

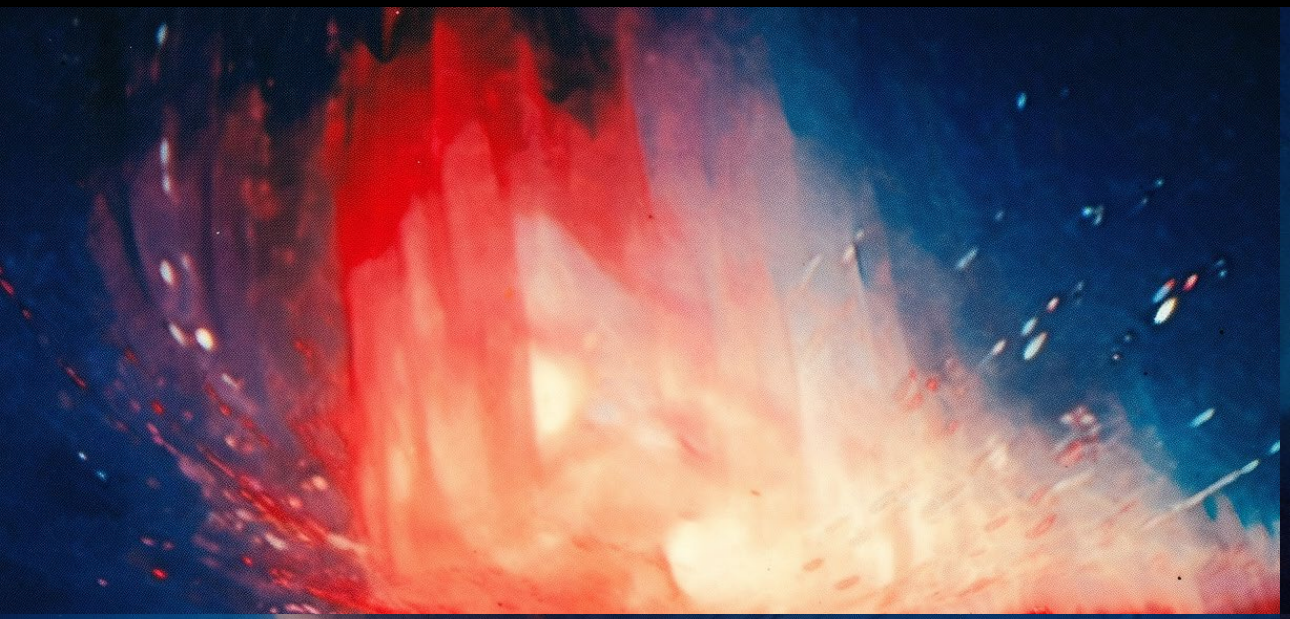
# LARGE SCALE TEXTURES, OUTER SPACE NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/5C9L0AA0NYI HTTPS://S.MJ.RUN/8QJCTGHFK14 HTTPS://S.MJ.RUN/4TG7TCCWQ6Y 1962 OPERATION FISHBOWL NUCLEAR TEST IN OUTER SPACE, TEXTURED EXPLOSION IN THE VACUUM OF SPACE,** BLUE GUM BICHROMATE PRINT, X-RAY PHOTOGRAM, AUTOCHROME LUMIÈRE, RISOGRAPH --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**




# LARGE SCALE TEXTURES, OUTER SPACE NUKE TESTS:

**HTTPS://S.MJ.RUN/5C9L0AA0NYI HTTPS://S.MJ.RUN/8QJCTGHFK14 HTTPS://S.MJ.RUN/4TG7TCCWQ6Y** LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, ELECTROLUMINESCENCE, CARL ZEISS PLANAR 50MM F/0.7, BOILED RED DIMENSIONAL EMULSION --AR 2:1 **[MIDJOURNEY NIJI 5]**

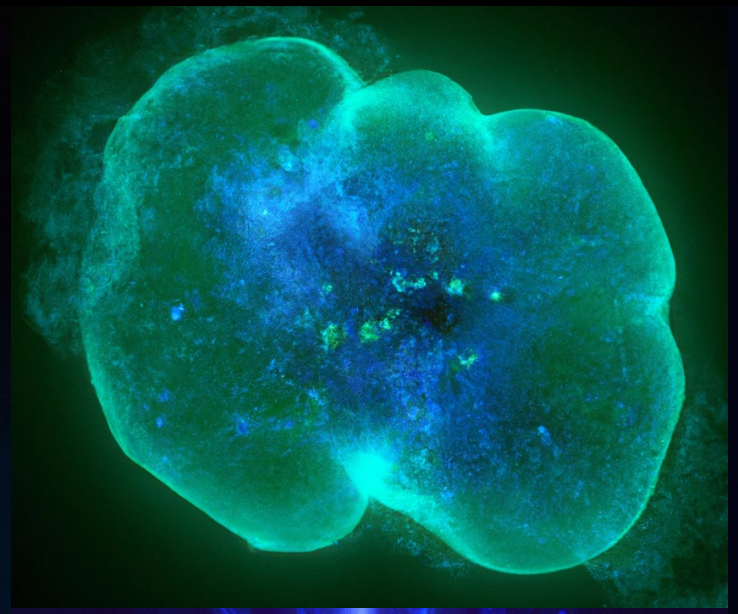


# LARGE SCALE TEXTURES, OUTER SPACE NUCLEAR TESTS:

NEBULAE, **NUCLEAR EXPLOSION AGAINST DARK BLUE BACKGROUND**, ART NOUVEAU SMOKE, SPARKS, HIGH RESOLUTION, DETAILED, REALISM, EXTREME DANGER, CURATED COLLECTION, ANNIE LEIBOWITZ, CANON 5, EMERGING FROM RED SMOKE, **BLUE EXPLOSION,** DRAMATIC LIGHTING, NAT GEO **[DALL-E 2]**

# LARGE SCALE TEXTURES, OUTER SPACE NUCLEAR TESTS:

NEBULAE, **NUCLEAR EXPLOSION AGAINST DARK BLUE BACKGROUND**, ART NOUVEAU SMOKE, SPARKS, HIGH RESOLUTION, DETAILED, REALISM, EXTREME, DANGER, CURATED COLLECTION, ANNIE LEIBOWITZ, CANON 5, EMERGING FROM RED SMOKE, **BLUE EXPLOSION,** DRAMATIC LIGHTING, NAT GEO **[DALL-E 2]**



# LARGE SCALE TEXTURES, OUTER SPACE NUCLEAR TESTS:

NEBULAE, **NUCLEAR EXPLOSION AGAINST DARK BLUE BACKGROUND**, ART NOUVEAU SMOKE, SPARKS, HIGH RESOLUTION, DETAILED, REALISM, EXTREME, DANGER, CURATED COLLECTION, ANNIE LEIBOWITZ, CANON 5, EMERGING FROM RED SMOKE, **BLUE EXPLOSION,** DRAMATIC LIGHTING, NAT GEO **[DALL-E 2]**

# LARGE SCALE TEXTURES, OUTER SPACE NUCLEAR TESTS:

**1962 OPERATION FISHBOWL NUCLEAR TEST IN OUTER SPACE,** BIZARRE TEXTURED EXPLOSION IN THE VACUUM OF SPACE, BLUE GUM BICHROMATE PRINT, X-RAY PHOTOGRAM, AUTOCHROME LUMIÈRE, RISOGRAPH, CANON 5, EMERGING FROM RED SMOKE, **BLUE EXPLOSION,** DRAMATIC LIGHTING, NAT GEO **[DALL-E 3]**

# Nuclear Textures- Island Tests

**The mid-20th century witnessed a dark chapter in history as numerous nations, notably the U.S. and France, conducted nuclear tests on islands.** Bikini Atoll in the Pacific became a focal point during the U.S. nuclear testing program, with multiple tests, including Operation Crossroads in 1946. These tests had devastating consequences on the environment and the health of local populations. French Polynesia, particularly Mururoa and Fangataufa atolls, hosted extensive French nuclear testing from 1966 to 1996. These activities sparked international protests and concerns about radiation's impact on health and ecosystems, eventually leading to the Comprehensive Nuclear-Test-Ban Treaty (CTBT) discussions. The legacy of nuclear testing on these islands includes environmental degradation, displaced populations, and enduring health issues, serving as a somber reminder of the human and ecological costs associated with nuclear weapons development.

**Bikini Atoll nuclear bomb test,** upshot, red interpolating to blue, subsurface scattering, ray tracing, elliptical lends flare, WWII documentary footage, film grain anamorphic lens, n --ar 2:1 --s 750 **[Midjourney 5.2]**

# Nuclear Textures: Operation Castle- Bikini Atoll, Marshall Islands

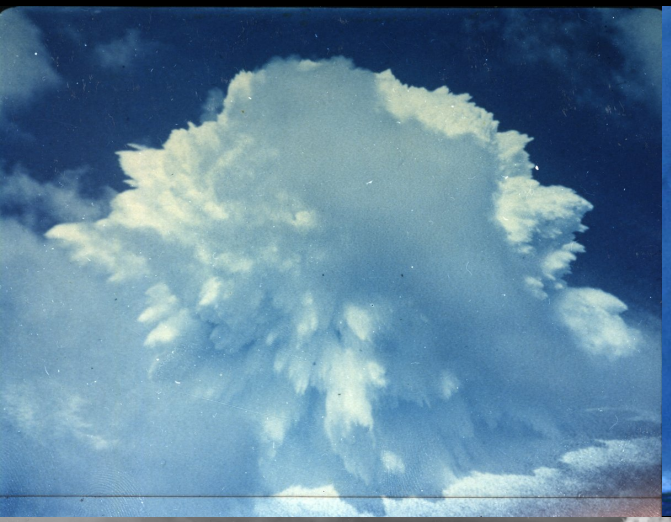
**Operation Castle, conducted by the U.S. in 1954 on Bikini Atoll, marked a significant phase in nuclear testing.** Castle Bravo, a part of this series, stands as one of the most powerful nuclear detonations in history. Intended as a test for a new lithium deuteride fuel, the bomb's yield surpassed expectations, reaching 15 megatons—far exceeding the predicted 6-megaton yield. The miscalculation led to unprecedented fallout, impacting nearby atolls and causing international concern. The fallout raised awareness about the destructive potential of nuclear weapons and fueled debates on their environmental and humanitarian consequences. The incident influenced subsequent nuclear testing policies and discussions about arms control and disarmament.

# Nuclear Textures: French Polynesia Tests- Mururoa and Fangatauta Atolls

**France conducted a series of nuclear tests in French Polynesia, specifically at Mururoa and Fangataufa atolls, from 1966 to 1996.** This extensive testing program included atmospheric and underground tests, causing environmental and health concerns. The French government faced international criticism, and protests against the tests were widespread. In 1996, France declared a moratorium on nuclear testing, and in 2010, it officially ended nuclear testing in the region. French Polynesia's nuclear tests caused long lasting harm, impacting health, environment, & sparking debates on ethical implications of testing.

# Nuclear Textures: Enewetak Atoll and Bikini Atolls, Marshall Islands

**Wahoo, Umbrella, and Baker were nuclear tests conducted during the mid-20th century as part of the U.S. nuclear weapons testing program.** Wahoo (1958) and Umbrella (1958) were components of Operation Hardtack I, exploring the effects of nuclear detonations underwater and in the atmosphere. Baker (1946) was part of Operation Crossroads, investigating the impact of nuclear weapons on naval vessels. Tests from left to right: Operation Hardtack I at Enewetak Atoll (first two images are the Wahoo Test, third is the Umbrella Test); bottom is Operation Crossroads at Bikini Atoll (Baker Test).



# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/EB0KB7WEEQY HTTPS://S.MJ.RUN/AZVQUU741TG HTTPS://S.MJ.RUN/VUYRR44RJ8I 75 MEGATON NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER OCEAN INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY, RAPATROPIC HIGH SPEED EDGERTON CAMERA, GRAFLEX PACEMAKER SPEED GRAPHIC 4X5,** AEROCHROME, SALT PRINT, WWII DOCUMENTARY COLOR FOOTAGE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**HTTPS://S.MJ.RUN/EB0KB7WEEQY HTTPS://S.MJ.RUN/AZVQUU741TG HTTPS://S.MJ.RUN/VUYRR44RJ8I 75 MEGATON NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER OCEAN INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY, RAPATROPIC HIGH SPEED EDGERTON CAMERA, GRAFLEX PACEMAKER SPEED GRAPHIC 4X5,** AEROCHROME, SALT PRINT, WWII DOCUMENTARY COLOR FOOTAGE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**75 MEGATON NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER OCEAN INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY,** LOOKING DOWN FROM BIRD'S EYE VIEW, REFLECTIONS IN OCEAN, EXTREME DETAIL, 35MM ANAMORPHIC, CANON 5, DRAMATIC LIGHTING --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**SUBAQUEOUS NUCLEAR DETONATION INDUCES A CAVITATION BUBBLE**, FOLLOWED BY BUBBLE COLLAPSE AND SHOCK WAVE PROPAGATION, MAJESTIC THERMODYNAMICS OF PLASMA FORMATION AND HYDRODYNAMICS OF THE WATER MEDIUM AS THE BLAST GENERATES MULTIPLE PHENOMENA, STYLE OF LUCASFILM, STYLE OF PORTUGUESE MAN O' WAR --AR 3:2 --S 750 **[MIDJOURNEY NIJI 5]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**SUBAQUEOUS NUCLEAR DETONATION INDUCES A CAVITATION BUBBLE**, FOLLOWED BY BUBBLE COLLAPSE AND SHOCK WAVE PROPAGATION, MAJESTIC THERMODYNAMICS OF PLASMA FORMATION AND HYDRODYNAMICS OF THE WATER MEDIUM AS THE BLAST GENERATES MULTIPLE PHENOMENA, STYLE OF LUCASFILM, STYLE OF PORTUGUESE MAN O' WAR --AR 3:2 --S 750 **[MIDJOURNEY NIJI 5]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**WORM'S EYE VIEW OF SUBAQUEOUS NUCLEAR DETONATION INDUCES A CAVITATION BUBBLE**, FOLLOWED BY BUBBLE COLLAPSE AND SHOCK WAVE PROPAGATION, MAJESTIC THERMODYNAMICS OF PLASMA FORMATION AND HYDRODYNAMICS OF THE WATER MEDIUM, AS THE BLAST GENERATES MULTIPLE PHENOMENA, STYLE OF LUCASFILM --AR 3:2 **[MIDJOURNEY NIJI 5]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

REALISTIC WWII WAR FOOTAGE, **NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER OCEAN** INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY, LOOKING DOWN FROM BIRD'S EYE VIEW, REFLECTIONS IN OCEAN, EXTREME DETAIL, CINEMATIC, CANON 5, DRAMATIC LIGHTING **[DALL-E 2]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

REALISTIC WWII WAR FOOTAGE, **NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER OCEAN** INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY, LOOKING DOWN FROM BIRD'S EYE VIEW, REFLECTIONS IN OCEAN, EXTREME DETAIL, CINEMATIC, CANON 5, DRAMATIC LIGHTING **[DALL-E 2]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

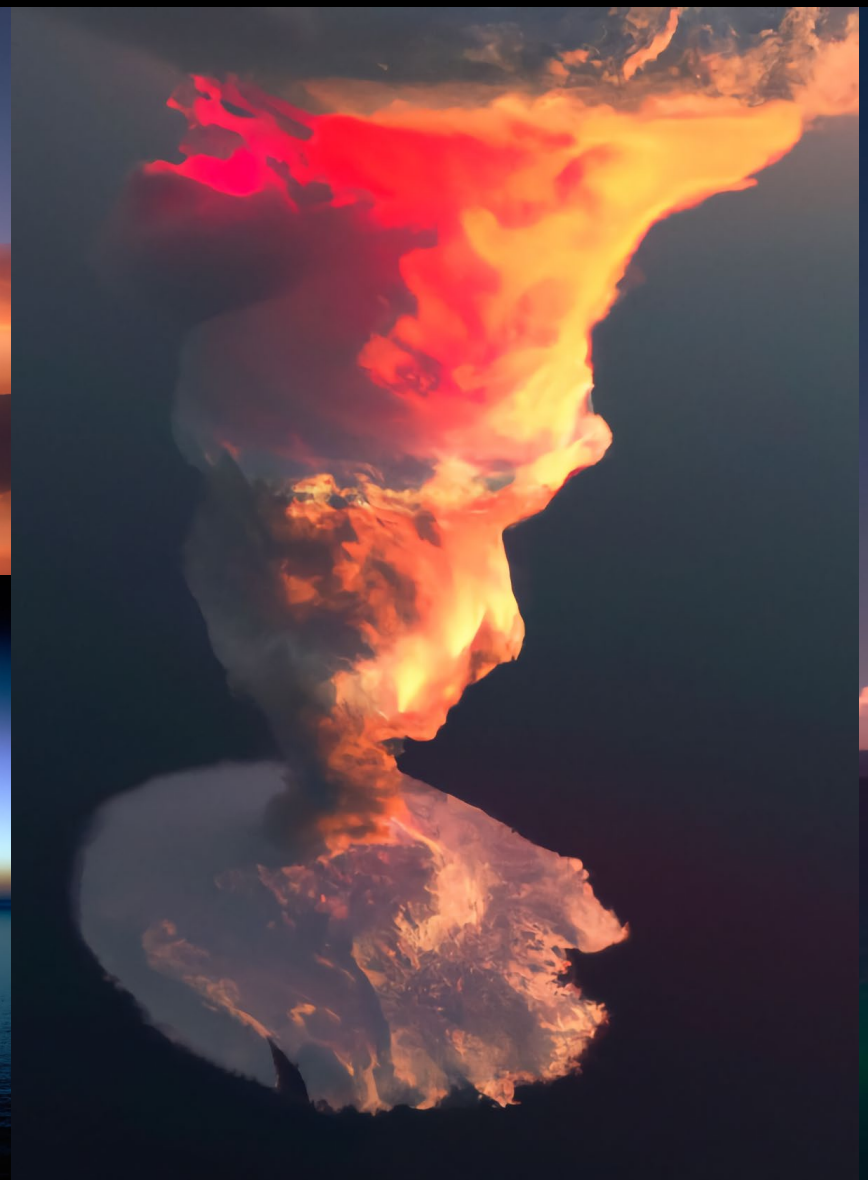
REALISTIC WWII WAR FOOTAGE, **UNDERWATER NUCLEAR BOMB BLAST INTERPOLATING FROM WHITE TO ORANGE**, CANON 5, DRAMATIC LIGHTING **[DALL-E 2]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

REALISTIC WWII WAR FOOTAGE, **NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER OCEAN** INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY, LIGHTNING STRIKES, UPSHOT, REFLECTIONS IN OCEAN, CINEMATIC, CANON 5, DRAMATIC LIGHTING **[DALL-E 2]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

REALISTIC WWII WAR FOOTAGE, **NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER OCEAN** INTERPOLATING FROM RED TO BLUE AGAINST TWILIGHT SKY, LOOKING DOWN FROM BIRD'S EYE VIEW, REFLECTIONS IN OCEAN, EXTREME DETAIL, CINEMATIC, CANON 5, DRAMATIC LIGHTING **[MIDJOURNEY 5.2]**



# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**SUBAQUEOUS NUCLEAR DETONATION FOLOOWED BY A SHOCK WAVE PROPAGATION,** MAJESTIC THERMODYNAMICS OF PLASMA FORMATION AND HYDRODYNAMICS OF THE WATER MEDIUM AS THE BLAST GENERATES MULTIPLE PHENOMENA, STYLE OF LUCASFILM **[DALL-E 3]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**SUBAQUEOUS NUCLEAR DETONATION FOLOOWED BY A SHOCK WAVE PROPAGATION,** MAJESTIC THERMODYNAMICS OF PLASMA FORMATION AND HYDRODYNAMICS OF THE WATER MEDIUM AS THE BLAST GENERATES MULTIPLE PHENOMENA, STYLE OF LUCASFILM **[DALL-E 3]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**NUCLEAR EXPLOSION INTERPOLATING FROM WHITE TO PURPLE TO BLACK**, MUSHROOM CLOUD, BIRD'S EYE VIEW, CINEMATIC, GOLDEN HOUR, WAR PHOTOGRAPHY, WIDE ANGLE, STYLE OF MAXFIELD PARRISH, **PACIFIC ISLAND**, HIGHLIGHTS, CANON 5, DRAMATIC LIGHTING **[DALL-E 2]**

# LARGE SCALE TEXTURES, ISLAND NUCLEAR TESTS:

**NUCLEAR BOMB BLAST MUSHROOM CLOUD OVER OCEAN INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY**, LIGHTNING STRIKES, LOOKING DOWN FROM BIRD'S EYE VIEW, REFLECTIONS IN OCEAN, EXTREME DETAIL, CINEMATIC **[STABLE DIFFUSION]**

# Whiteboard Extrapolations: Using Original Art for Stylized Results

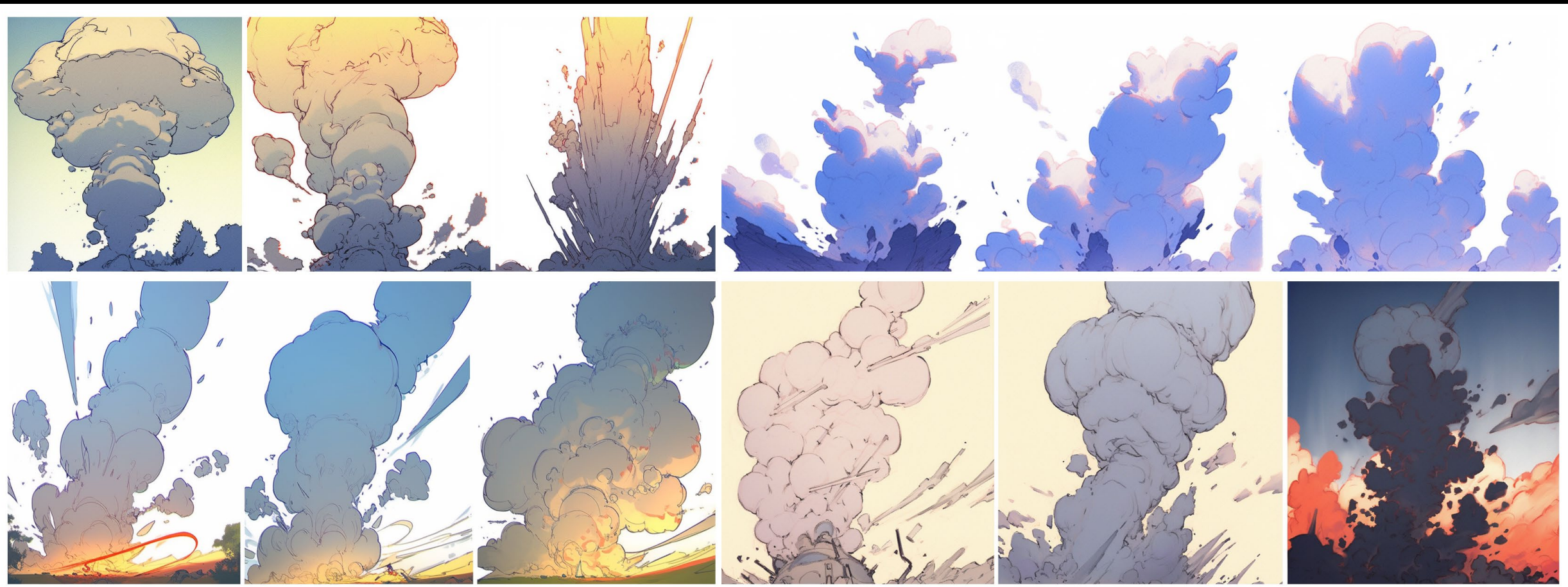
**This is a stylized whiteboard demo I drew for my ANI 398 Designing Nature module for 2D VFX.** I was approximating an Edgerton-type progression of a mid-air nuclear detonation, consisting of the rope-trick effect in the early stages (imagining milliseconds), and culminating in a standard mushroom cloud. I used this as a blend image with the following prompts, which resulted in a series of tests in the following slides:

**four stages of a nuke,** 90's Disney, **an explosion in an atom bomb shaped drawing,** in the style of ethereal cloudscapes, glazed earthenware, repetitive rephotography, whimsical ink drawings, navy and gray, traditional animation, process art --ar 54:19 --**seed 1031979867** **[MIDJOURNEY NIJI 5]**

**https://s.mj.run/XmwXM6xHphU https://s.mj.run/JKz8xm7KXJo https://s.mj.run/Y7YBUS-7imk five million megaton hydrogen bomb blast mushroom cloud over ocean interpolating from red to blue against fiery sky**, looking down from bird's eye view, reflections in ocean, extreme detail, 35mm anamorphic, film grain, canon 5, dramatic lighting, reaching to horizon --ar 2:1 --s 750 **[MIDJOURNEY 5.2]**

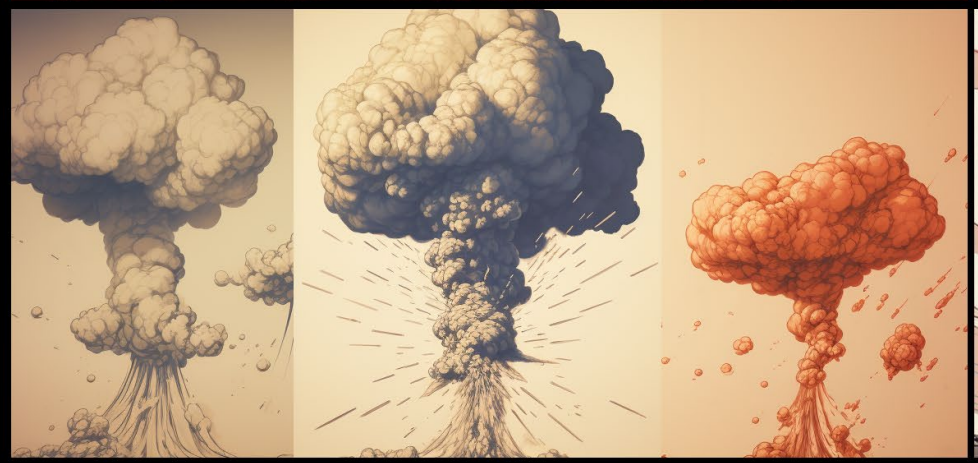
# LARGE SCALE TEXTURES, WHITEBOARD EXTRAPOLATIONS:

**FOUR STAGES OF A NUKE,** 90'S DISNEY, **AN EXPLOSION IN AN ATOM BOMB SHAPED DRAWING,** IN THE STYLE OF ETHEREAL CLOUDSCAPES, GLAZED EARTHENWARE, REPETITIVE REPHOTOGRAPHY, WHIMSICAL INK DRAWINGS, NAVY AND GRAY, TRADITIONAL ANIMATION, PROCESS ART --AR 54:19 --**SEED 1031979867** **[MIDJOURNEY NIJI 5]**



# LARGE SCALE TEXTURES, WHITEBOARD EXTRAPOLATIONS:

**FOUR STAGES OF A NUKE,** 90'S DISNEY, **AN EXPLOSION IN AN ATOM BOMB SHAPED DRAWING,** IN THE STYLE OF ETHEREAL CLOUDSCAPES, GLAZED EARTHENWARE, REPETITIVE REPHOTOGRAPHY, WHIMSICAL INK DRAWINGS, NAVY AND GRAY, TRADITIONAL ANIMATION, PROCESS ART --AR 54:19 --**SEED 1031979867** **[MIDJOURNEY NIJI 5]**



# LARGE SCALE TEXTURES, WHITEBOARD EXTRAPOLATIONS:

**HTTPS://S.MJ.RUN/XMWXM6XHPHU HTTPS://S.MJ.RUN/JKZ8XM7KXJO HTTPS://S.MJ.RUN/Y7YBUS-7IMK FIVE MILLION MEGATON HYDROGEN BOMB BLAST MUSHROOM CLOUD OVER OCEAN INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY**, LOOKING DOWN FROM BIRD'S EYE VIEW, REFLECTIONS IN OCEAN, EXTREME DETAIL, 35MM ANAMORPHIC, FILM GRAIN, CANON 5, DRAMATIC LIGHTING, REACHING TO HORIZON --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, WHITEBOARD EXTRAPOLATIONS:

**HTTPS://S.MJ.RUN/XMWXM6XHPHU HTTPS://S.MJ.RUN/JKZ8XM7KXJO HTTPS://S.MJ.RUN/Y7YBUS-7IMK FIVE MILLION MEGATON HYDROGEN BOMB BLAST MUSHROOM CLOUD OVER OCEAN INTERPOLATING FROM RED TO BLUE AGAINST FIERY SKY**, LOOKING DOWN FROM BIRD'S EYE VIEW, REFLECTIONS IN OCEAN, EXTREME DETAIL, 35MM ANAMORPHIC, FILM GRAIN, CANON 5, DRAMATIC LIGHTING, REACHING TO HORIZON --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# Nuclear Textures- Reactor Disasters

©Jeff Fusco- 2011 Getty Images

**The Three Mile Island (TMI) and Chernobyl incidents were both nuclear accidents but had different causes and consequences.** In the case of **Three Mile Island** in 1979, a partial meltdown of the reactor core occurred due to a combination of equipment malfunctions, design-related problems, and operator errors. A cooling malfunction led to the exposure of the reactor core, causing a release of radioactive gases. Fortunately, the containment structure prevented a more significant release, and the health impacts on the surrounding population were minimal. The TMI accident prompted significant changes in nuclear safety regulations and procedures. **Chernobyl**, in 1986, involved a more severe accident. A reactor at the Chernobyl Nuclear Power Plant in Ukraine experienced a catastrophic explosion during a safety test. The explosion ruptured the reactor vessel and released a substantial amount of radioactive material into the environment. The lack of a containment structure at Chernobyl exacerbated the consequences, leading to immediate fatalities, long-term health effects, and the evacuation of a large area. It remains one of the most severe nuclear disasters in history, highlighting the importance of safety measures and the risks associated with certain reactor designs.

# LARGE SCALE TEXTURES, CHERNOBYL DISASTER:

TIEPOLO UPSHOT, **MASSIVE FIERY CHERNOBYL EXPLOSION, SOVIET REACTOR, RADIATION LEAK,** DUTCH ANGLE, HASSLEBLAD, INTERPOLATING BLUE TO ORANGE, WIDE ANGLE, DRAMATIC LIGHTING, BLUE GUM BICHROMATE PRINT, ELLIPTICAL LENS FLARE, ANAMORPHIC, FILM GRAIN, GRITTY **[DALL-E 3]**

# LARGE SCALE TEXTURES, CHERNOBYL DISASTER:

TIEPOLO UPSHOT, **MASSIVE FIERY CHERNOBYL EXPLOSION, SOVIET REACTOR, RADIATION LEAK,** DUTCH ANGLE, HASSLEBLAD, INTERPOLATING BLUE TO ORANGE, WIDE ANGLE, DRAMATIC LIGHTING, BLUE GUM BICHROMATE PRINT, ELLIPTICAL LENS FLARE, ANAMORPHIC, FILM GRAIN, GRITTY, EXTREME CLOSE-UP --AR 2:3 --S 750 **[MIDJOURNEY 5.2]**

# LARGE SCALE TEXTURES, CHERNOBYL DISASTER:

TIEPOLO UPSHOT, **MASSIVE FIERY CHERNOBYL EXPLOSION, SOVIET REACTOR, RADIATION LEAK,** DUTCH ANGLE, HASSLEBLAD, INTERPOLATING BLUE TO ORANGE, WIDE ANGLE, DRAMATIC LIGHTING, BLUE GUM BICHROMATE PRINT, ELLIPTICAL LENS FLARE, ANAMORPHIC, FILM GRAIN, GRITTY, EXTREME CLOSE-UP --AR 2:3 --S 750 **[MIDJOURNEY 5.2]**

# THE RESILIENT EARTH

As humans withdraw from scenes of their destruction, Earth weaves new tapestries of healing, regrowth, and restoration. However, a dedicated few are compelled to contribute to its recovery.

# The Resilient Earth: The Textures of Reclamation

**The departure of humans from areas negatively impacted by their presence initiates a natural recovery process.** Soil undergoes purification, vegetation re-establishes, and ecosystems undergo rebalancing. Even following nuclear incidents, flora and fauna display adaptability, facilitating recolonization. Nature gradually reclaims spaces abandoned by humans, encroaching on ruins and transforming them. The resilience of Earth is evident as vegetation extends over remnants of human habitation, and wildlife resettles in areas formerly dominated by human activities. This underscores the planet's capacity to recover in the absence of human-induced stressors.

The **'anthropause'** during the pandemic further exemplified nature's predisposition for balance. With reduced human activity, urban spaces witnessed unexpected transformations. Emissions decreased, and animals, emboldened by quieter surroundings, ventured into areas previously avoided, sometimes even traversing highways in a rare display of reclamation. **Anthropogenic intervention** refers to deliberate human actions or alterations in the environment, often addressing, mitigating, or causing ecological changes, emphasizing human influence on natural systems.

Beng Mealea • 4288 x 2848 • Siem Reap, Cambodia • 2.3.2011 • f/4 • 1/2000 sec • 800 ISO • 18 mm • Nikon D300 • Jazno Francoeur

# Richard Misrach, Pioneer of Existential Ecological Photography

**Richard Misrach, born in 1949, stands as a significant figure in American photography, renowned for his exploration of the nation's landscapes.** Notably, his "Bravo 20" series from the 1980s scrutinizes the aftermath of military bomb tests in the Nevada desert, exposing haunting scenes of abandoned structures and vehicles, offering a poignant commentary on the enduring impact of war on the environment. In his ongoing project, "Desert Cantos," initiated in the late 1970s, Misrach captures the delicate balance between nature and human intervention in the American Southwest. His evocative images unveil the beauty and challenges of the desert, solidifying Misrach's legacy as a visionary in contemporary ecological photography.

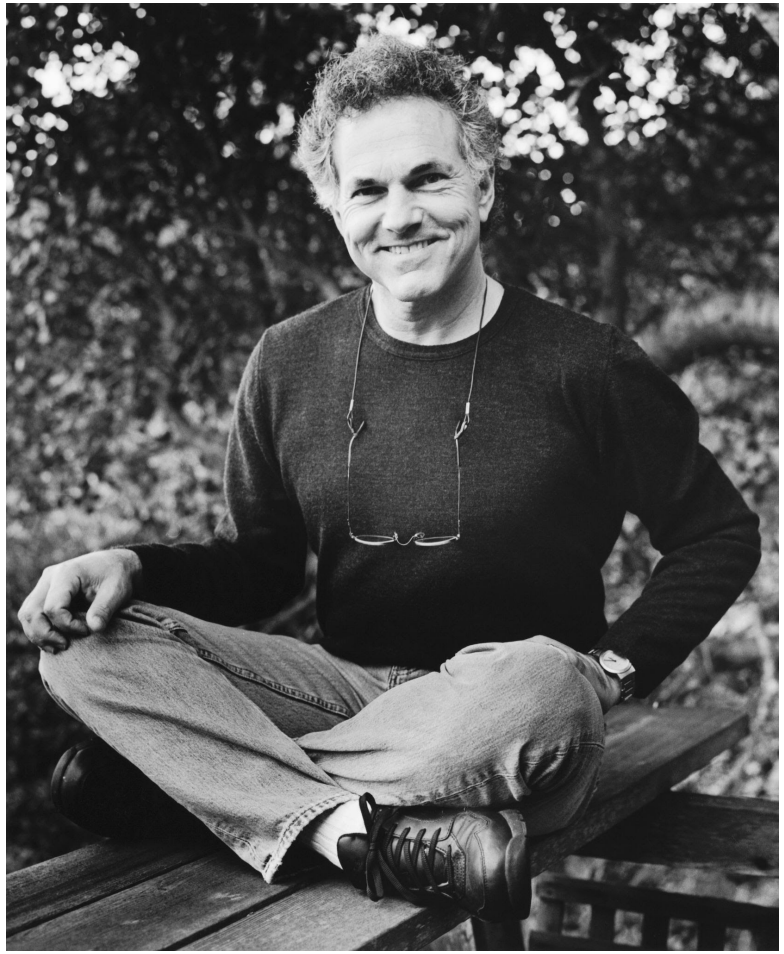







https://en.wikipedia.org/wiki/Richard_Misrach

*"To me, the work I do is a means of interpreting unsettling truths, of bearing witness, and of sounding an alarm. The beauty of formal representation both carries an affirmation of life and subversively brings us face to face with news from our besieged world. I am not unaware that I have the mindset, as contradictory as it may sound, to discover in the world what I am in fact looking for. Perhaps the best pictures are a seamless hybrid of discovery and construction. In spite of recent trends towards fabricating photographic narratives, I find, more than ever, traditional photographic capture, the 'discovery' of found narratives, deeply compelling. People have responded to the pictures I make as mystical things, and they somehow carry the illusion further thinking that the place is this mystical, magical place. The desert is also a very barren place, a very lonely place, a very boring, uneventful place."*




**Hasselblad**

**8×10 Deardorff view camera**

**Hasselblad Telephoto**

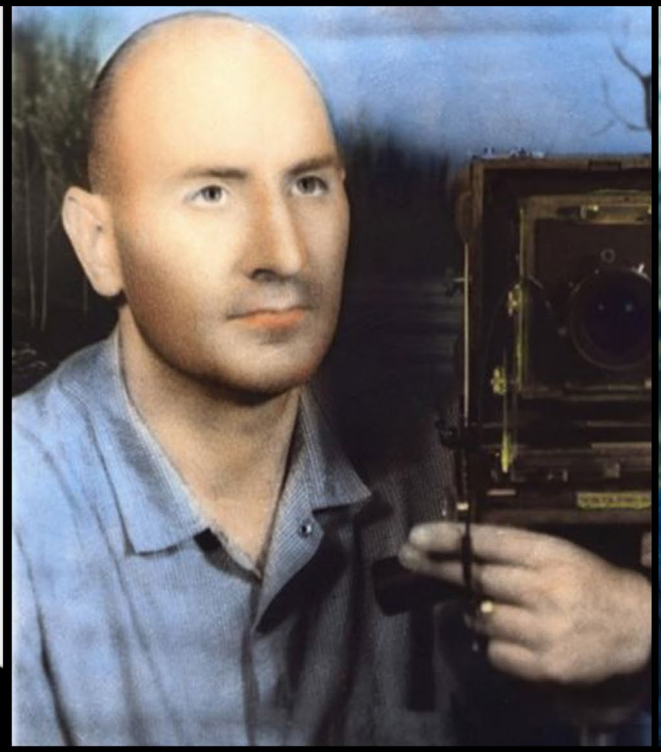
**iPhone**

*https://fraenkelgallery.com/artists/richard-misrach*

# Modern Pioneers of Existential Ecological Photography

**David McMillan**, a Canadian photographer, is acclaimed for his compelling series "Seabird Island." Documenting the landscape surrounding the Chernobyl nuclear disaster site over several decades, McMillan's work encapsulates the haunting beauty of a region forever altered by human-made catastrophe. His photographs reveal the enduring impact on the environment and the slow process of nature reclaiming the abandoned spaces. **Mykhaylo Palinchak,** a Ukrainian photographer, focuses on environmental and social issues. His work often reflects the consequences of industrial activity on nature and communities. Through his lens, Palinchak captures the juxtaposition of human development and the natural world, raising awareness about the ecological challenges faced by various regions. **Simon Norfolk and Klaus Thymann** collaborated on "Shroud," examining the Greenland ice sheet's vulnerability. Norfolk's lens revealed the ice's delicate beauty, complemented by Thymann's use of technology to expose hidden structures beneath. Their work illuminates the urgent environmental threat of climate change, emphasizing the impact on polar landscapes. Through innovative photographic techniques, they contribute to a heightened awareness of the complex interplay between human activities and the fragility of Earth's ecosystems.



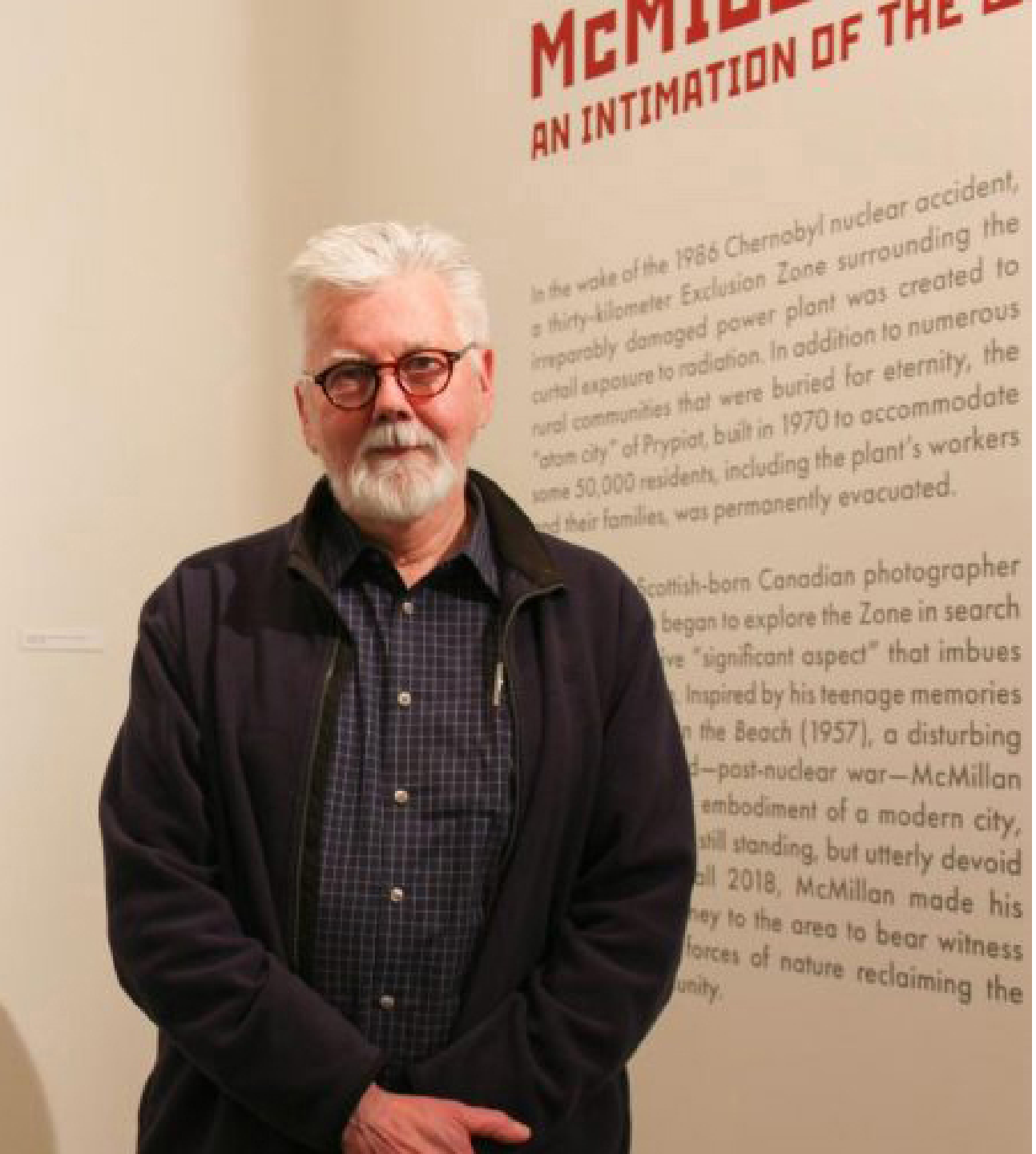



# Existential Ecological Textures: David McMillan

*https://www.dsmcmillan.com/*

# Existential Ecological Textures: David McMillan

*https://www.dsmcmillan.com/*




***THE CHERNOBYL EXCLUSION ZONE***

***"Shortly after the 1986 accident at the Chernobyl Nuclear Power Plant, 135,000 people were evacuated from an area extending 30 kilometers around the damaged reactor. I first photographed there in 1994 and even though the so-called exclusion zone was closely guarded, I was permitted to travel and photograph freely. I soon realized the subject was large and complex, causing me to return frequently.***

***The city of Pripyat, where most of these photographs were made, was home to the employees of the nuclear power plant and their families. Known as the Atomic City, Pripyat was considered one of the finest places to live in the former Soviet Union. The first apartments were built in the mid-seventies, when the power plant was still under construction. There were all the amenities of a modern Soviet city, with many schools, stores, hospitals, and recreational and cultural facilities. At the time of the accident, it was home to 45,000 people but it will never be lived in again.***

***I had never intended to re-photograph these places over time. In some cases, the changes had transformed a location so substantially, I didn't recognize it as a place I had previously photographed. The buildings are crumbling and the vegetation is proliferating. At a certain point, the distinction between indoors and outdoors will be obliterated, returning the city known as Pripyat to a natural landscape with only vestiges of the lives it had once housed."***

# Existential Ecological Textures: Mykhaylo Palinchak

https://palinchak.com.ua/

# Existential Ecological Textures: Mykhaylo Palinchak

https://palinchak.com.ua/


https://palinchak.com.ua/

***Mykhaylo Palinchak, a Ukrainian photographer of profound vision, has curated a diverse body of work that encompasses both environmental and social narratives, with a focus on the impact of war. His war photography, notably during the conflict in Ukraine, serves as a visual chronicle of the human toll and environmental ramifications of conflict. Through his lens, Palinchak captures the resilience and endurance of communities amidst the chaos, revealing the symbiotic relationship between war and the environment.***

***Beyond the battleground, Palinchak's environmental photography meticulously documents the consequences of unchecked industrialization. His images serve as a reminder of the delicate equilibrium between progress and the ecological well-being of landscapes and communities. Palinchak's work encourages viewers to confront the environmental consequences of human development, fostering a heightened awareness of the interplay between societal progress and the preservation of the natural world.***

***In intertwining his war photography with environmental consciousness, Palinchak creates a narrative that transcends immediate conflicts. His images chronicle the interconnectedness of the human experience and the environment, urging viewers to reflect not only on the immediate horrors of war but also on the broader implications for humanity and the planet. Through this multifaceted approach, Palinchak's photography emerges as a powerful tool for storytelling, provoking contemplation and fostering a deeper understanding of the complex intersections between human existence, conflict, and the environment.***

# Existential Ecological Textures: Simon Norfolk & Klaus Thyumann

*https://www.creativereview.co.uk/simon-norfolk-klaus-thymann-shroud-photography/*

# Existential Ecological Textures: Simon Norfolk & Klaus Thyumann

*https://www.creativereview.co.uk/simon-norfolk-klaus-thymann-shroud-photography/*

https://www.simonnorfolk.com/

***2018: "With climate change standing as one of the most pressing issues facing our future, photography is being increasingly used as a catalyst to create the positive reaction required to instigate change. I just returned from a trip to Switzerland with Klaus Thymann of Project Pressure to photograph the Rhône Glacier in southern Switzerland, which is disappearing at a colossal rate. Because there is a small shop at the glacier that carves an ice grotto into the ice and charges tourists to experience inside the blue ice, it has been worth their money attempting to slow the glacier's retreat. They have invested heavily in a special thermal blanket that has kept about 25m (82ft, in depth) of ice from disappearing, and has kept the ice grotto intact."***

***"However, after a few harsh winters on the mountain, the blanket is starting to disintegrate. And unfortunately the method is not scaleable: we cannot do this to all the world's ice; the gesture is as forlorn and doomed as the glacier itself. So with heavy lament, this glacier, which has existed for millennia, will die within the lifetime of children born today."***



**Gear-Sony Phase One and Sony A711**

**P45 Back**

**90 mm G-Series Macro Lens**

***With a granular knowledge about environmental projects across the globe and wanting to create a project addressing adaptation, Klaus Thymann conceptualized the idea of human adjustments to climate change with the financial issues as driving forces behind it. The collaborative work Shroud focuses on the Rhône Glacier in Switzerland and its tourist attraction, the ice grotto. In an attempt to preserve an ice-grotto tourist attraction at the Rhône Glacier from melting, local Swiss entrepreneurs wrapped a significant section of the ice-body in a thermal blanket – white geosynthetic blankets that reflect the sun's heat. While this slows the retreat, it is only a temporary fix. The sole purpose behind adding the blankets was to try and keep the business going and entrance fees flowing. The small-scale adaptation does illustrate how financial incentives are the driving forces in most, if not all, climate responses. A thermal 24-hour time-lapse film was also created for Shroud. Using thermal image technology the film shows how the surrounding landscape's temperature warms and cools rapidly as the sun moves in and out of the clouds, while the ice keeps a near constant temperature. When looking glaciers over years they are sensitive to even small changes in temperature and precipitation, meaning that even subtle shifts in climate can have significant impacts on their size and behavior.***

**Klaus Thyumann's Hasselblad Gear**


X1D II 50C →

XCD 1,9 80


XCD 3,5/120

https://www.simonnorfolk.com/

# ECOLOGICAL TEXTURES, OVERGROWN BATTLEGROUNDS:

EXTREME CLOSE-UP, MACRO LENS, **BATTLE-WORN RUSTED METAL SURFACE WITH ARTILLERY DAMAGE OVERTAKEN BY MOSS AND NATURAL ELEMENTS OVER TIME, LICHENS, FLORA,** AUTOCHROME LUMIÈRE, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, OVERGROWN BATTLEGROUNDS:

EXTREME CLOSE-UP, MACRO LENS, **BATTLE-WORN RUSTED METAL SURFACE WITH ARTILLERY DAMAGE OVERTAKEN BY MOSS AND NATURAL ELEMENTS OVER TIME, LICHENS, FLORA,** AUTOCHROME LUMIÈRE, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, OVERGROWN BATTLEGROUNDS:

**WAR-RUSTED AND HALF-SHATTERED TANK COVERED IN MOSS AND LICHENS, ARTILLERY DAMAGE,** WORM'S EYE VIEW, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE **[DALL-E 3]**

# ECOLOGICAL TEXTURES, OVERGROWN BATTLEGROUNDS:

**WAR-RUSTED SUKHOI SU-27 RUSSIAN WARPLANE, ROTTING, HIDDEN IN MOSS AND LICHENS, ARTILLERY DAMAGE,** WORM'S EYE VIEW, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY REDSCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, FUJI SUSPIRIA, GUM BICHROMATE PRINT **[DALL-E 3]**

# ECOLOGICAL TEXTURES, OVERGROWN BATTLEGROUNDS:

**WAR-RUSTED BLACKHAWK HELICOPTER IN WOODS, HIDDEN IN MOSS AND LICHENS, ARTILLERY DAMAGE,** WORM'S EYE VIEW, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE **[DALL-E 3]**

# ECOLOGICAL TEXTURES, OVERGROWN BATTLEGROUNDS:

**HTTPS://S.MJ.RUN/8L46PFI6MJQ HTTPS://S.MJ.RUN/5J5BGGNPHAW HTTPS://S.MJ.RUN/UUEG2ZH4KAE HTTPS://S.MJ.RUN/KMBUTJSKUA8**
**HTTPS://S.MJ.RUN/0V9KCLOSSOC VINES AND VEGETATION OVERTAKING RUSTED BATTLE DAMAGED WAR MACHINE,** GOLDEN HOUR, SUBSURFACE SCATTERING, CHROMOGENIC PRINT, INSTAX, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, OVERGROWN BATTLEGROUNDS:

**HTTPS://S.MJ.RUN/8L46PFI6MJQ HTTPS://S.MJ.RUN/5J5BGGNPHAW HTTPS://S.MJ.RUN/UUEG2ZH4KAE HTTPS://S.MJ.RUN/KMBUTJSKUA8**
**HTTPS://S.MJ.RUN/0V9KCLOSSOC VINES AND VEGETATION OVERTAKING RUSTED BATTLE DAMAGED WAR MACHINE,** GOLDEN HOUR, SUBSURFACE SCATTERING, CHROMOGENIC PRINT, INSTAX, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, OVERGROWN BATTLEGROUNDS:

**HTTPS://S.MJ.RUN/8L46PFI6MJQ HTTPS://S.MJ.RUN/5J5BGGNPHAW HTTPS://S.MJ.RUN/UUEG2ZH4KAE HTTPS://S.MJ.RUN/KMBUTJSKUA8**
**HTTPS://S.MJ.RUN/0V9KCLOSSOC VINES AND VEGETATION OVERTAKING RUSTED BATTLE DAMAGED WAR MACHINE,** GOLDEN HOUR, SUBSURFACE SCATTERING, CHROMOGENIC PRINT, INSTAX, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**




# The Chernobyl Exclusion Zone

*https://travanietravels.com/chernobyl-reflections/*

**The Chernobyl Exclusion Zone, established after the 1986 nuclear disaster, showcases a complex tapestry of ecological recovery and persistent challenges.** Over time, some areas have witnessed the resilience of nature, with forests regrowing and wildlife returning. However, the process of healing is intricate, influenced by radiation levels and varying degrees of contamination. Certain flora and fauna have adapted to the conditions, indicating a degree of ecological restoration. Conversely, the human-made structures within the zone, particularly Pripyat, stand as haunting reminders of the disaster's lasting impact. The town's buildings and infrastructure remain largely untouched, frozen in time due to the evacuation. While wildlife has flourished in the absence of human presence, some areas still exhibit elevated radiation levels, hindering a complete return to normalcy. The Chernobyl Exclusion Zone, paradoxically, reflects nature's ability to recover amidst adversity while underscoring the persistent scars left by human-made disasters. Monitoring and understanding the zone's dynamic ecological processes contribute to broader discussions on the long-term consequences of nuclear accidents and the coexistence of nature and contamination in post-disaster landscapes.

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**HTTPS://S.MJ.RUN/TZZ_SPFZ3ZY HTTPS://S.MJ.RUN/9Z30-WZOU5Y HTTPS://S.MJ.RUN/_6KRWE2ALHG HTTPS://S.MJ.RUN/USR_W5OQ47U**
**HTTPS://S.MJ.RUN/EDCXGLUVWVC CHERNOBYL EXCLUSION ZONE, OVERGROWN + DILAPIDATED RUINS**, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**HTTPS://S.MJ.RUN/TZZ_SPFZ3ZY HTTPS://S.MJ.RUN/9Z30-WZOU5Y HTTPS://S.MJ.RUN/_6KRWE2ALHG HTTPS://S.MJ.RUN/USR_W5OQ47U**
**HTTPS://S.MJ.RUN/EDCXGLUVWVC CHERNOBYL EXCLUSION ZONE, OVERGROWN + DILAPIDATED RUINS**, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**HTTPS://S.MJ.RUN/TZZ_SPFZ3ZY HTTPS://S.MJ.RUN/9Z30-WZOU5Y HTTPS://S.MJ.RUN/_6KRWE2ALHG HTTPS://S.MJ.RUN/USR_W5OQ47U**
**HTTPS://S.MJ.RUN/EDCXGLUVWVC CHERNOBYL EXCLUSION ZONE, OVERGROWN + DILAPIDATED RUINS**, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**




# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**HTTPS://S.MJ.RUN/TZZ_SPFZ3ZY HTTPS://S.MJ.RUN/9Z30-WZOU5Y HTTPS://S.MJ.RUN/_6KRWE2ALHG HTTPS://S.MJ.RUN/USR_W5OQ47U**
**HTTPS://S.MJ.RUN/EDCXGLUVWVC CHERNOBYL EXCLUSION ZONE, OVERGROWN + DILAPIDATED RUINS**, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**TOP DOWN SATELLITE VIEW OF THE CHERNOBYL EXCLUSION ZONE, OVERGROWN AND DILAPIDATED RUINS,** DETAILED TEXTURES, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**TOP DOWN SATELLITE VIEW OF THE CHERNOBYL EXCLUSION ZONE, OVERGROWN AND DILAPIDATED RUINS,** DETAILED TEXTURES, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**




# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**CHERNOBYL EXCLUSION ZONE, OVERGROWN AND DILAPIDATED RUINS,** WORM'S EYE VIEW, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**CHERNOBYL EXCLUSION ZONE, OVERGROWN AND DILAPIDATED RUINS,** WORM'S EYE VIEW, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**CHERNOBYL EXCLUSION ZONE, OVERGROWN AND DILAPIDATED RUINS,** WORM'S EYE VIEW, EXTREME CLOSE-UP, CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**CHERNOBYL EXCLUSION ZONE, OVERGROWN + DILAPIDATED RUINS,** EXTREME CLOSE-UP, CINEMATIC ANGLE, SUBSURFACE SCATTERING, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM **[DALL-E 3]**

# ECOLOGICAL TEXTURES, CHERNOBYL EXCLUSION ZONE:

**CHERNOBYL EXCLUSION ZONE, OVERGROWN + DILAPIDATED RUINS,** EXTREME CLOSE-UP, CINEMATIC ANGLE, SUBSURFACE SCATTERING, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM **[DALL-E 3]**

# Bikini Atoll Aftermath

**The Bikini Atoll testing, including the ZEBRA test, resulted in enduring environmental consequences.** The construction of **'The Tomb,'** a concrete containment structure, aimed to manage radioactive debris from nuclear tests. This **anthropogenic intervention** remains a significant element in the post-testing landscape. Adjacent to this, the ZEBRA test crater bears witness to the alterations induced by nuclear experiments.

Such sites embody the environmental impact of nuclear activities, necessitating ongoing scientific scrutiny and environmental management. Analyzing these remnants academically provides insight into the intricate challenges associated with nuclear testing legacies, emphasizing the importance of sustained investigation and remediation efforts to comprehend and mitigate the lasting consequences of these anthropogenic activities.

Image to the right is from Google Maps.

# Bikini Atoll Aftermath

**Castle Bravo, a nuclear test conducted in 1954, left imprints on the Bikini Atoll ecosystem.** The detonation created a massive crater, disturbing the marine environment. Over time, the ecosystem has shown signs of recovery, with coral reefs demonstrating resilience by reconstituting and regenerating. However, lingering contamination persists in the sediment and some marine life due to radioactive fallout. This contamination poses ongoing challenges to the full restoration of the ecosystem.

The crater itself, known as the **Bravo Crater,** has evolved into a unique underwater feature, but its formation disrupted the surrounding marine environment. While nature has displayed remarkable adaptability, the persistent contamination serves as a reminder of the lingering consequences of nuclear testing, emphasizing the need for continued monitoring and remediation efforts to understand and address the long-term ecological impacts of anthropogenic activities in the Bikini Atoll.

Image to the right is from Google Maps.

# ECOLOGICAL TEXTURES, MARSHALL ISLANDS AFTERMATH:

**HTTPS://S.MJ.RUN/UW1TXBKMUTM TOP DOWN LANDSAT 9 SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS AT BIKINI ATOLL, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, BLUE AND GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, MARSHALL ISLANDS AFTERMATH:

**HTTPS://S.MJ.RUN/UW1TXBKMUTM TOP DOWN LANDSAT 9 SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS AT BIKINI ATOLL, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, BLUE AND GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, MARSHALL ISLANDS AFTERMATH:

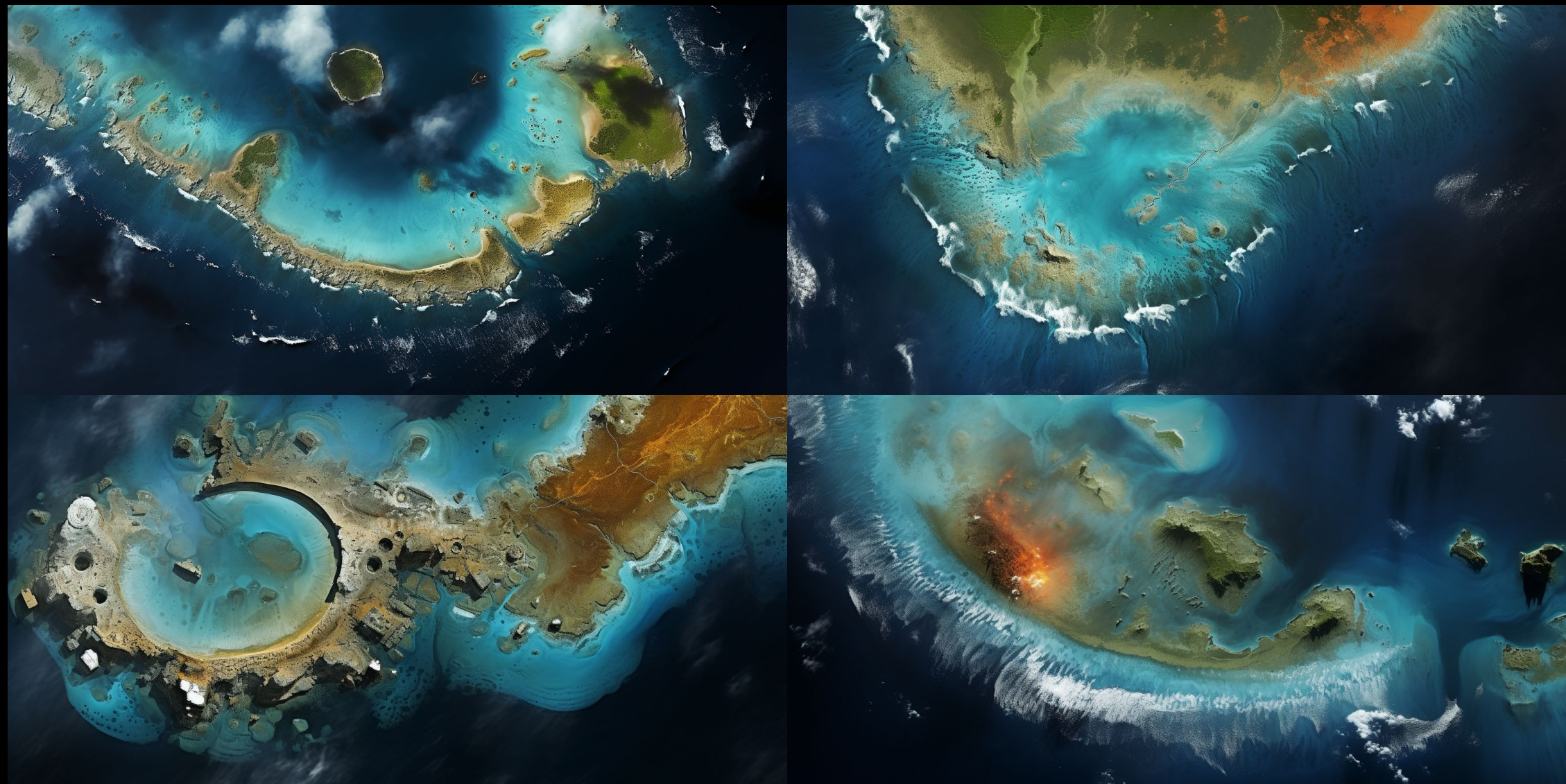
**HTTPS://S.MJ.RUN/UW1TXBKMUTM TOP DOWN LANDSAT 9 SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS AT BIKINI ATOLL, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, BLUE AND GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, MARSHALL ISLANDS AFTERMATH:

**HTTPS://S.MJ.RUN/UW1TXBKMUTM TOP DOWN LANDSAT 9 SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS AT BIKINI ATOLL, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, BLUE AND GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

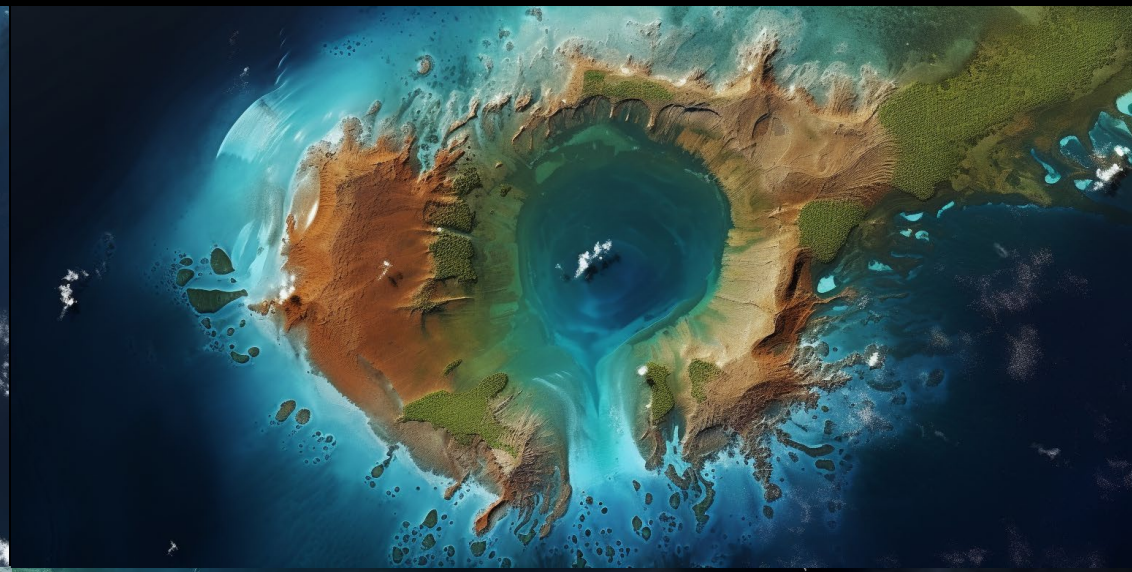
# ECOLOGICAL TEXTURES, MARSHALL ISLANDS AFTERMATH:

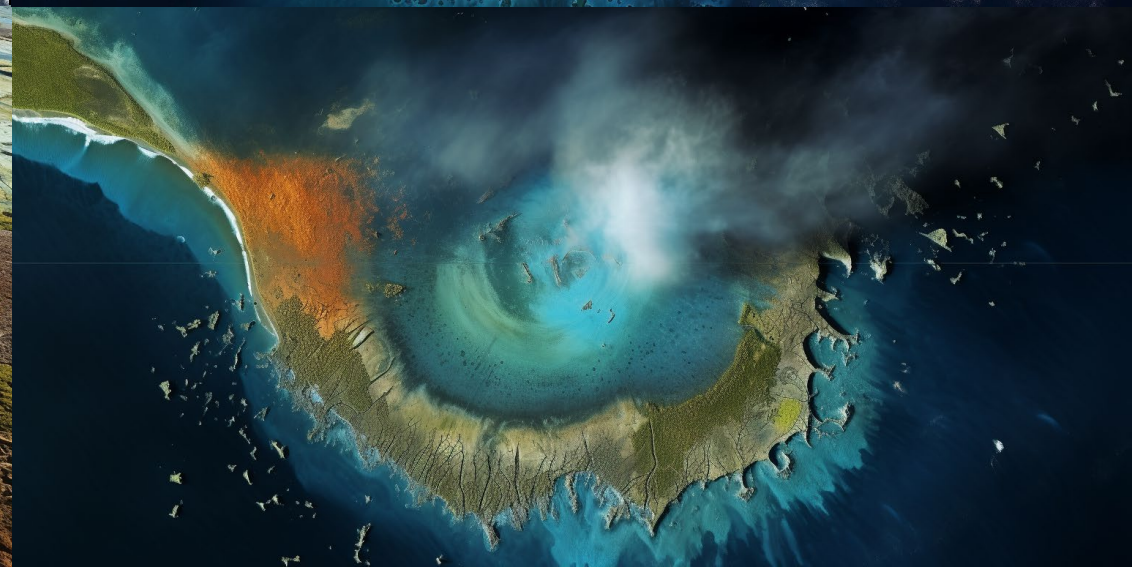
**HTTPS://S.MJ.RUN/UW1TXBKMUTM TOP DOWN LANDSAT 9 SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS AT BIKINI ATOLL, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, BLUE AND GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**



# ECOLOGICAL TEXTURES, MARSHALL ISLANDS AFTERMATH:

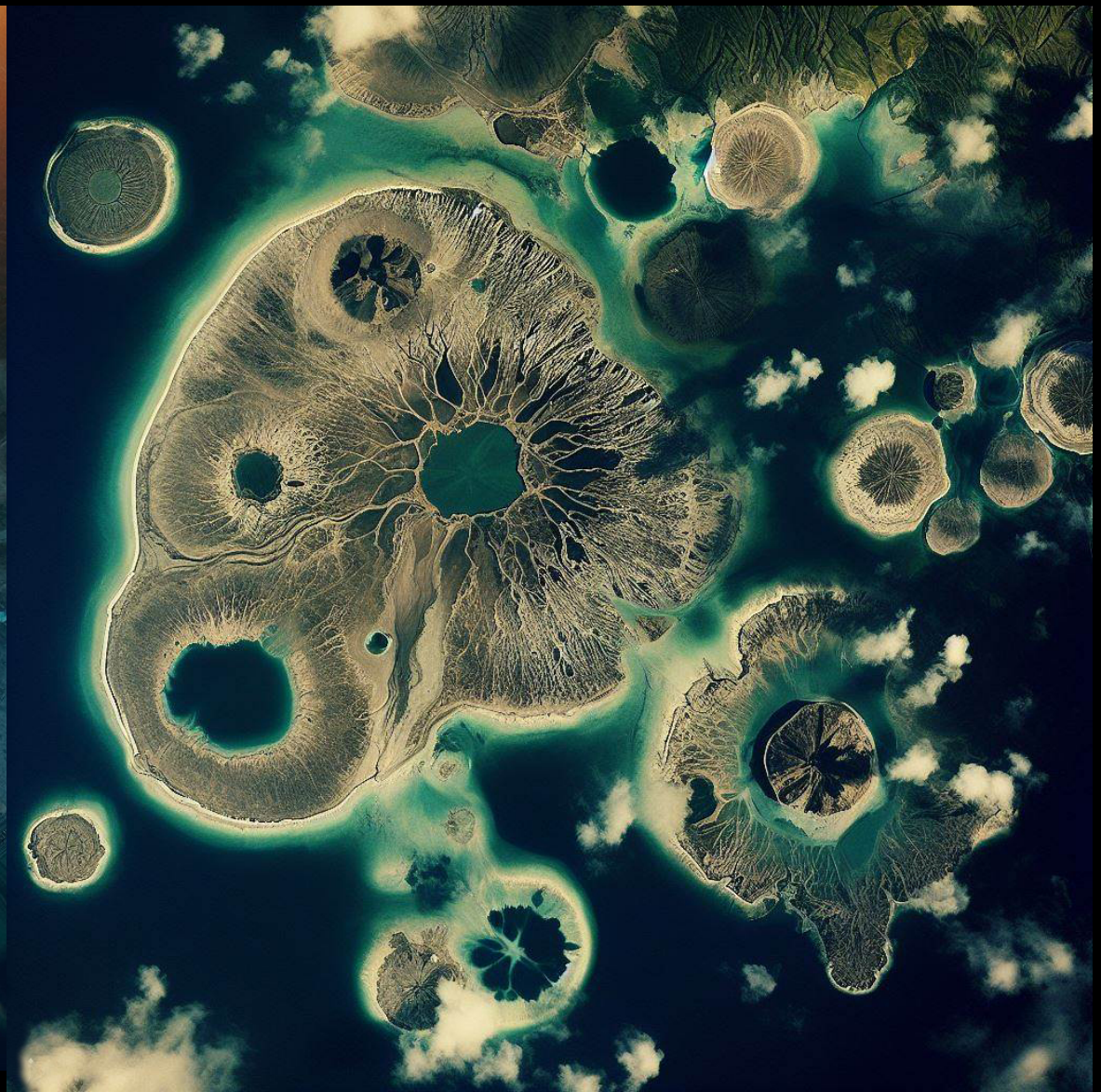
**HTTPS://S.MJ.RUN/UW1TXBKMUTM TOP DOWN LANDSAT 9 SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS AT BIKINI ATOLL, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, BLUE AND GREEN GUM BICHROMATE PRINT --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**





# ECOLOGICAL TEXTURES, MARSHALL ISLANDS AFTERMATH:

**TOP DOWN LANDSAT 9 SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS AT BIKINI ATOLL, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, BLUE AND GREEN GUM BICHROMATE PRINT **[DALL-E 3]**



# ECOLOGICAL TEXTURES, MARSHALL ISLANDS AFTERMATH:

**TOP DOWN LANDSAT 9 SATELLITE VIEW OF NUCLEAR DEVASTATION AND SCORCH MARKS AT BIKINI ATOLL, CRATERS AND GOUGES IN THE EARTH,** HARD LIGHTING, DRAMATIC LIGHTING, GOLDEN HOUR, 35MM ANAMORPHIC LENS, FILM GRAIN, BLUE AND GREEN GUM BICHROMATE PRINT **[DALL-E 3]**

# Glacial Melt

Mendenhall Glacier • 2306 x 925 • Juneau, Alaska • 5.27.22 • f/2.2 • 1/1553 sec • 20 ISO • 8 mm • iPhone 12 Pro Max • Jazno Francoeur

**The tragedy of glacial melting lies in the irreversible loss of Earth's ancient ice masses.** Accelerated by climate change, this phenomenon disrupts ecosystems, contributes to rising sea levels, and endangers biodiversity. Glacial retreat poses severe threats to communities relying on glacial meltwater, impacting water supply and agriculture. The loss of iconic glaciers diminishes natural beauty and cultural significance. As glaciers vanish, the reflective surfaces that regulate climate diminish, exacerbating global warming. The tragedy extends beyond environmental consequences, symbolizing the tangible effects of human-induced climate change and the urgent need for sustainable practices to preserve these vital components of our planet.

# Glacial Blankets

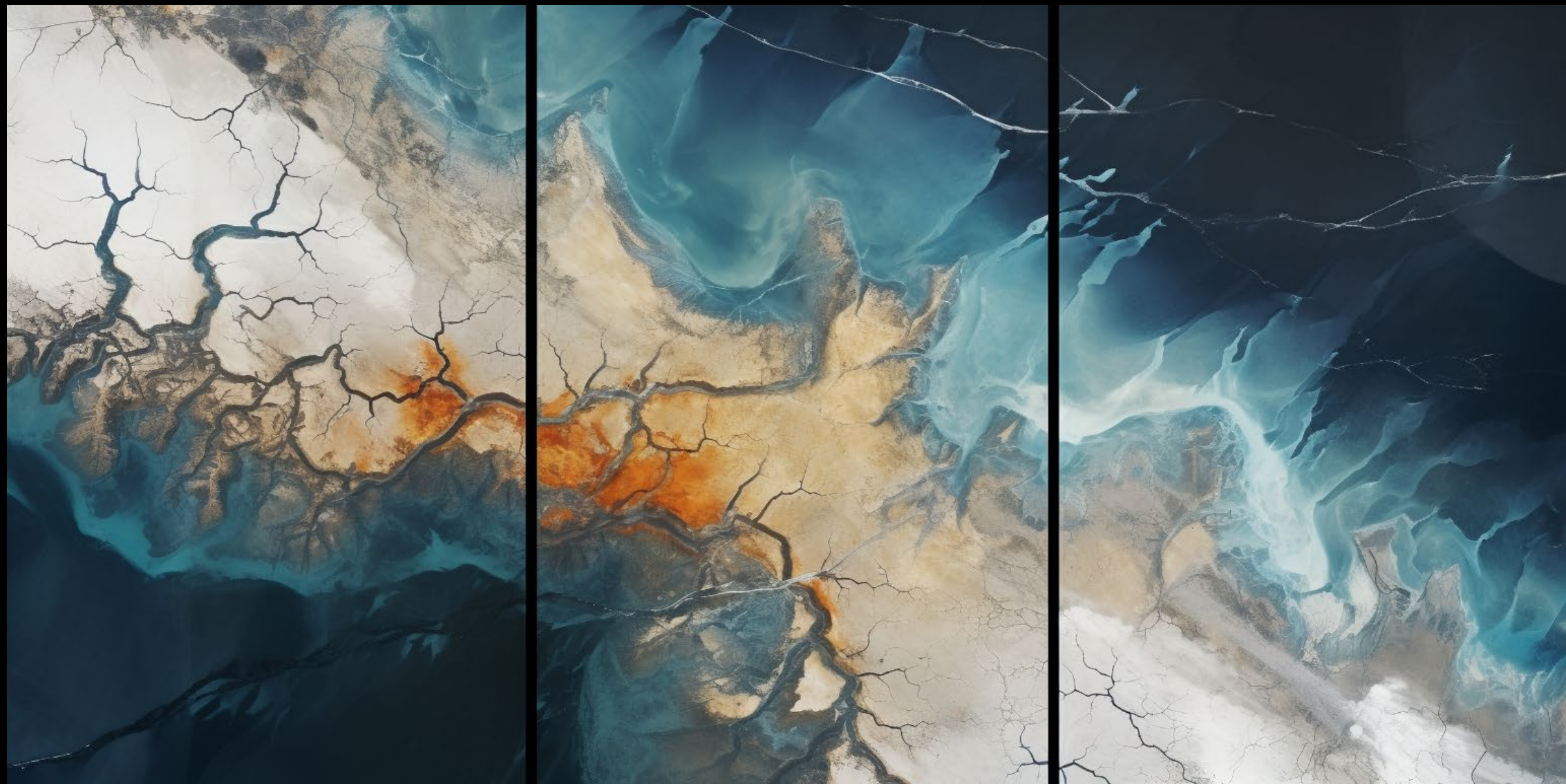
**The origin of glacial blankets traces back to Switzerland in the late 20th century, with Swiss glaciologist Konrad Steffen at the forefront of their development. These innovative covers, composed of reflective materials like foam or high-albedo fabric, were conceptualized as a proactive measure to counteract the detrimental effects of glacial melt induced by climate change.** The blankets function by physically covering glacier surfaces, aiming to reduce the absorption of direct sunlight. The underlying principle is to enhance the albedo, the ice's reflective capacity, thereby curbing heat absorption and, consequently, slowing down the melting process.

The initial deployment of glacial blankets occurred on the Rhone Glacier in the Swiss Alps, where Steffen conducted pioneering research. Early findings suggested that these covers could effectively reduce ice melt, providing a promising tool for glacier preservation. However, ongoing research is essential to assess their long-term efficacy and potential environmental impacts comprehensively. The invention of glacial blankets marks a significant step in the quest to protect glaciers from the escalating impacts of climate change. As a localized intervention, these blankets offer insights into strategies for mitigating immediate threats to glacier health and contribute to broader discussions on adapting to the rapidly changing conditions of Earth's cryosphere.

*Flueeler/Keystone via AP*

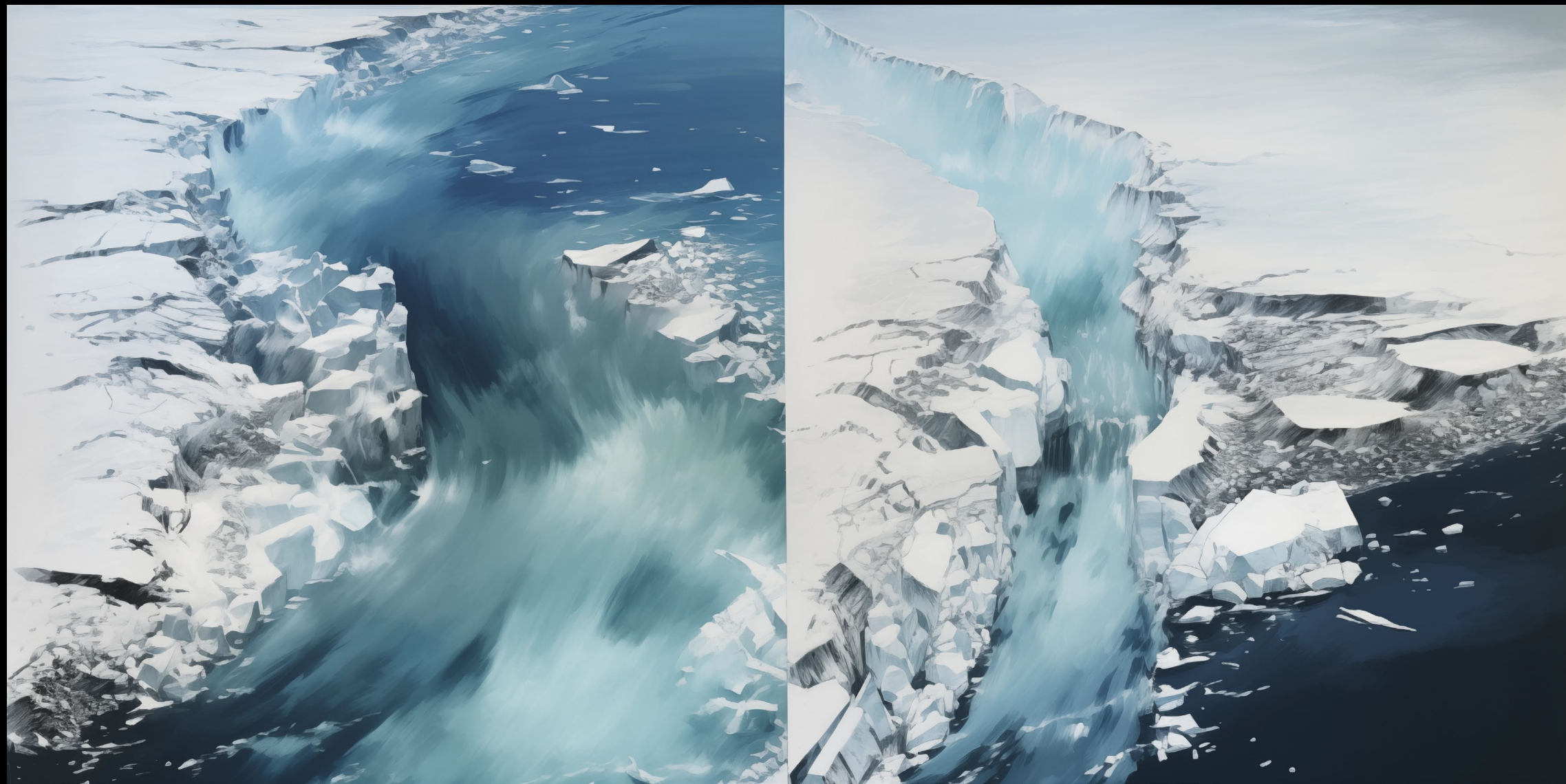
# ECOLOGICAL TEXTURES, GLACIAL MELT:

**HTTPS://S.MJ.RUN/-2I89YJFSHC HTTPS://S.MJ.RUN/K5SJ8N-9FR8 HTTPS://S.MJ.RUN/J0N7TZH6ELA LANDSAT 9 TOP DOWN TRIPTYCH OF A MELTING GLACIER IN VARIOUS PHASES,** BLUE GUM BICHROMATE PRINT, DETAILED TEXTURES, GOOGLE EARTH, NAT GEO, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, AEROCHROME --AR 2:1 --S 75**0** **[MIDJOURNEY 5.2]**



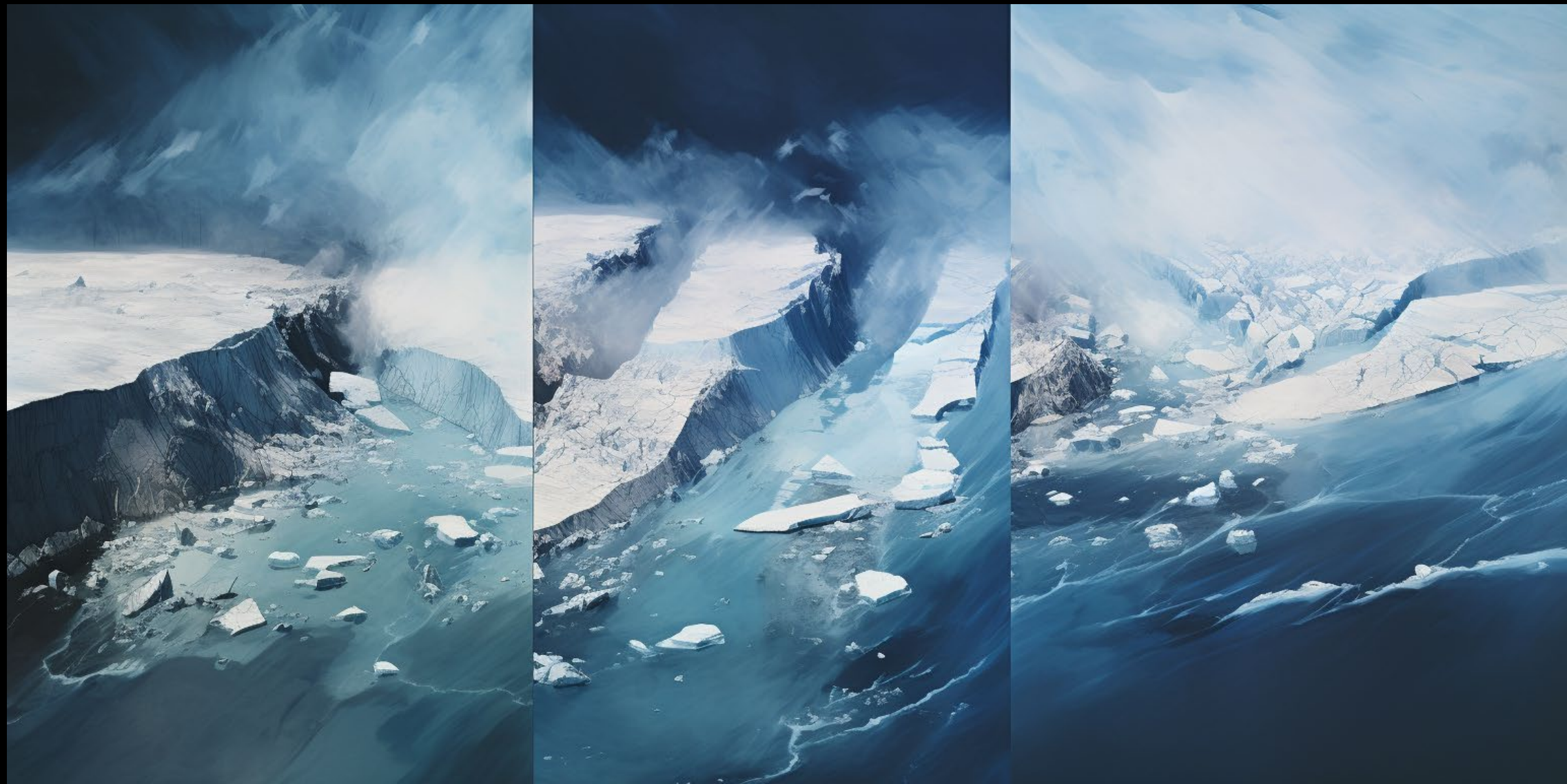
# ECOLOGICAL TEXTURES, GLACIAL MELT:

**HTTPS://S.MJ.RUN/-2I89YJFSHC HTTPS://S.MJ.RUN/K5SJ8N-9FR8 HTTPS://S.MJ.RUN/J0N7TZH6ELA TRIPTYCH OF A MELTING GLACIER IN VARIOUS PHASES,** BLUE GUM BICHROMATE PRINT, DETAILED TEXTURES, GOOGLE EARTH, NAT GEO, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, AEROCHROME --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**



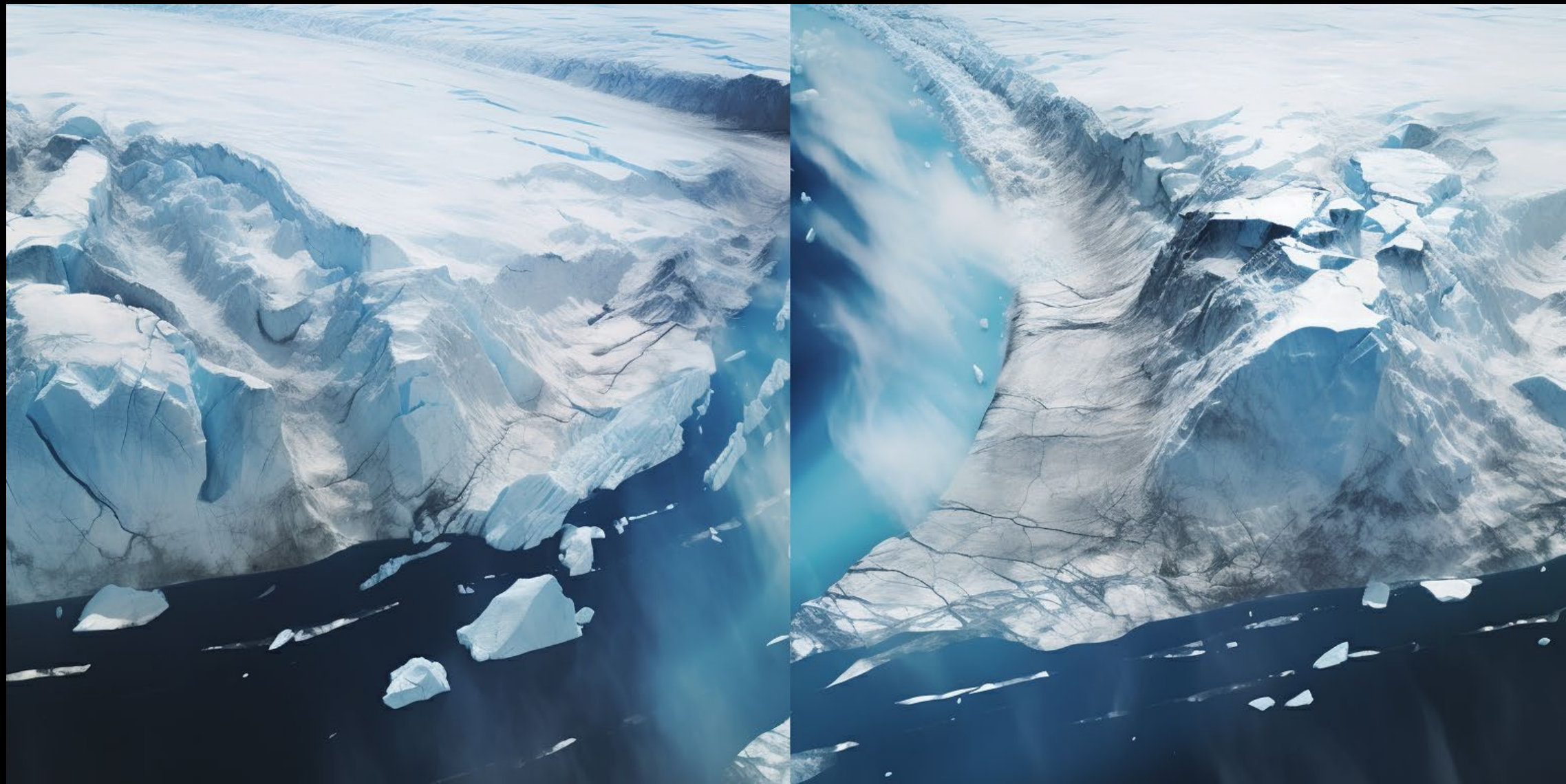
# ECOLOGICAL TEXTURES, GLACIAL MELT:

**HTTPS://S.MJ.RUN/-2I89YJFSHC HTTPS://S.MJ.RUN/K5SJ8N-9FR8 HTTPS://S.MJ.RUN/J0N7TZH6ELA TRIPTYCH OF A MELTING GLACIER IN VARIOUS PHASES,** BLUE GUM BICHROMATE PRINT, DETAILED TEXTURES, GOOGLE EARTH, NAT GEO, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, AEROCHROME --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**



# ECOLOGICAL TEXTURES, GLACIAL MELT:

**HTTPS://S.MJ.RUN/-2I89YJFSHC HTTPS://S.MJ.RUN/K5SJ8N-9FR8 HTTPS://S.MJ.RUN/J0N7TZH6ELA TRIPTYCH OF A MELTING GLACIER IN VARIOUS PHASES,** BLUE GUM BICHROMATE PRINT, DETAILED TEXTURES, GOOGLE EARTH, NAT GEO, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, AEROCHROME --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**



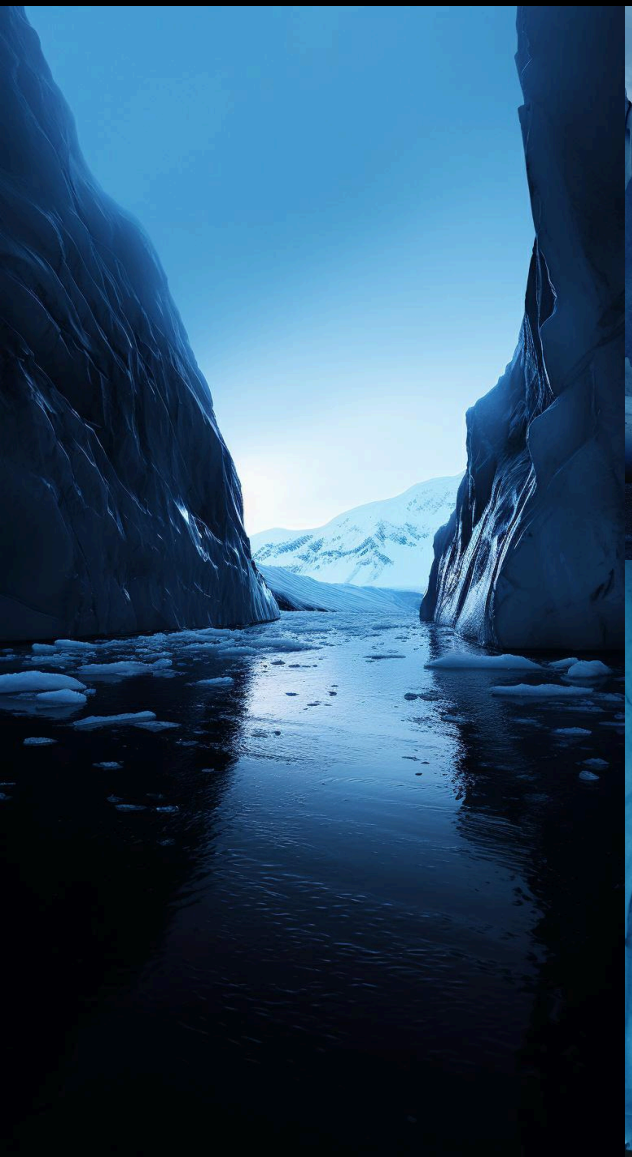
# ECOLOGICAL TEXTURES, GLACIAL MELT:

**HTTPS://S.MJ.RUN/-2I89YJFSHC HTTPS://S.MJ.RUN/K5SJ8N-9FR8 HTTPS://S.MJ.RUN/J0N7TZH6ELA TRIPTYCH OF A MELTING GLACIER IN VARIOUS PHASES,** BLUE GUM BICHROMATE PRINT, DETAILED TEXTURES, GOOGLE EARTH, NAT GEO, KEYSTONE F8 AERIAL CAMERA WITH A WOLLENSAK LENS, CARL ZEISS PLANAR 50MM F/0.7, SHOT WITH LOMO LC-WIDE 35MM, LIGHT LEAKS, AEROCHROME --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, GLACIAL MELT:

Renders by guest contributor Ethan Koss

**DRAMATIC BLACK AND BLUE PHOTOGRAPH OF GLACIER,** EXTREME LONG SHOT, BRIGHT BLUE HIGHLIGHTS, DEEP BLACK SHADOWS, STYLE OF FRANK THIEL, 35MM FILM --AR 3:4 --C 20 **[MIDJOURNEY 5.2]**



# ECOLOGICAL TEXTURES, GLACIAL BLANKETS:

**HTTPS://S.MJ.RUN/1B_RHLTVMC8 HTTPS://S.MJ.RUN/RW4-JHKQECM HTTPS://S.MJ.RUN/DEG_ROWOC1U HTTPS://S.MJ.RUN/HP46XQTFLCI**
**HTTPS://S.MJ.RUN/OFLMYWIPWPK GLACIAL BLANKETS COVERING GLACIERS, VAST WHITE PROTECTIVE BLANKETS ON TARPS COVERING GLACIERS,** CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, GLACIAL BLANKETS:

**HTTPS://S.MJ.RUN/1B_RHLTVMC8 HTTPS://S.MJ.RUN/RW4-JHKQECM HTTPS://S.MJ.RUN/DEG_ROWOC1U HTTPS://S.MJ.RUN/HP46XQTFLCI HTTPS://S.MJ.RUN/OFLMYWIPWPK GLACIAL BLANKETS COVERING GLACIERS, VAST WHITE PROTECTIVE BLANKETS ON TARPS COVERING GLACIERS,** CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, GLACIAL BLANKETS:

**HTTPS://S.MJ.RUN/1B_RHLTVMC8 HTTPS://S.MJ.RUN/RW4-JHKQECM HTTPS://S.MJ.RUN/DEG_ROWOC1U HTTPS://S.MJ.RUN/HP46XQTFLCI**
**HTTPS://S.MJ.RUN/OFLMYWIPWPK GLACIAL BLANKETS COVERING GLACIERS, VAST WHITE PROTECTIVE BLANKETS ON TARPS COVERING GLACIERS,** CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, GLACIAL BLANKETS:

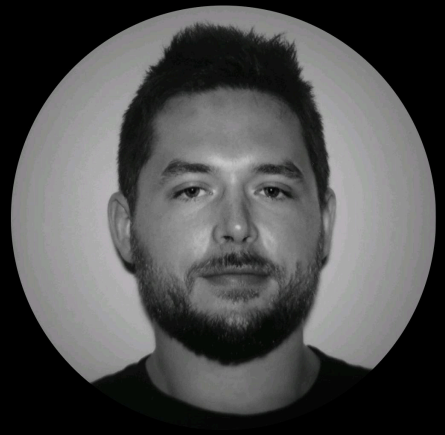
**HTTPS://S.MJ.RUN/1B_RHLTVMC8 HTTPS://S.MJ.RUN/RW4-JHKQECM HTTPS://S.MJ.RUN/DEG_ROWOC1U HTTPS://S.MJ.RUN/HP46XQTFLCI HTTPS://S.MJ.RUN/OFLMYWIPWPK GLACIAL BLANKETS COVERING GLACIERS, VAST WHITE PROTECTIVE BLANKETS ON TARPS COVERING GLACIERS,** CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[MIDJOURNEY 5.2]**

# ECOLOGICAL TEXTURES, GLACIAL BLANKETS:

**GLACIAL BLANKETS COVERING GLACIERS, VAST WHITE PROTECTIVE BLANKETS ON TARPS COVERING GLACIERS,** CINEMATIC ANGLE, PURPLE DUSK, KODAK VISION3 200T COLOR NEGATIVE FILM 5213, LOMO LC-WIDE 35MM, LIGHT LEAKS, LOMOGRAPHY BLUESCALE XR 50-200 35MM, TESSAR 1:3.5/F=7.5CM BY CARL ZEISS JENA LENS, CYANOTYPE --AR 2:1 --S 750 **[DALL-E 3]**

# ACKNOWLEDGMENTS:

MANY OF MY LIVE-ACTION PHOTOS TAKEN IN THIS SERIES CAN BE VIEWED AT **JAZNO.COM**. THANK YOU TO OUR NEW GUEST CONTRIBUTOR, **ETHAN KOSS**. A NOD TO **WIKIPEDIA** FOR PROVIDING A FAIR AMOUNT OF CONTENT/CONTEXT (ALL IMAGES AND TEXT HAVE BEEN ATTRIBUTED ON RESPECTIVE SLIDES, UNLESS CREATIVE COMMONS). MUCH APPRECIATION TO **GIL ALTER** AND **DAVID JACQUES** FROM THE **MIDJOURNEY: PROMPT TRICKS** FORUM FOR THEIR INSPIRATIONAL AND GRANULAR PROMPT-ENGINEERING RESEARCH. LASTLY, KUDOS TO **CHAT GPT,** NOW A VALUABLE EDITING RESOURCE FOR THIS SERIES.



**Guest contributor Ethan Koss, slides 69, 70, and 188**

The next lecture in this series continues the elements of design from **Camera Basics for Generative Art VI**, where we will cover more natural large-scale textures.